

DORMER PRAMET

BORING

2021 – 2022



 **DORMER**

 **PRAMET**

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A094	166	A402	151	B481	201	M	
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A101	103	A510	111	B953	215	M200-1	187
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A110	122	A530	140	B955	226	M200-3	188
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A119	77	A620	84	B957	228	R100	34
A120	80	A720	91	G		R120	32
A122	78	A723	76	G106	238	R122	27
A123	79	A730	141	G107	242	R123	28
A124	90	A777	108	G125	249	R125	29
A125	128	A900	114	G129	234	R200	26
A130	134	A901	116	G132	244	R453	52
A147	106	A920	92	G135	230	R454	48
A160	110	A921	94	G136	236	R457	44
A166	143	A940	124	G137	232	R458	40
A170	118	A941	126	G138	245	R459	56
A188	172	A951	148	G142	240	R463	62
A190	170	A952	149	G149	235	R467	59
A191	171	A976	130	G154	233	R510	38
A199	169	A977	132	G171	247	R520	36
A200	155	A978	133	G236	250	R6011	30
A201	160	B		G314	248	R7131	31
A205	156	B100	206	G335	231	R950	281
A206	157	B101	222	G338	246	R960	283
A210	159	B121	224	G400	229	R970	285
A225	161	B122	214	G506	239		
A237	162	B157	220	G560	237		
A238	163	B161	221	G570	241		
A242	164	B170	218	G600	243		

PRODUCT FAMILY		PRODUCT FAMILY		PRODUCT FAMILY		PRODUCT FAMILY	
2		BS 54 KIT TC 8-210	427	EXT-BS	415	M	
2080-BS	411	BT-BS	408	F		MB-H	373
69871-BS	406	C		F75	367	MOR-BS	413
802D	313	CART-BS-SPC	378	F75-BB	369	R	
803D	315	CART-BS-STD	379	F75-C	368	RED-BS	416
804D	318	CHAM-BS	380	F90	370	W	
805D	320	D		F90-BB	372	WEL-BS	414
B		D75	361	F90-C	371		
BS 54 KIT RC 8-043	420	D75-BB	363	H			
BS 54 KIT RC 8-100	421	D75-C	362	HSK-BS	410		
BS 54 KIT RC 8-170	422	D90	364	I			
BS 54 KIT RC 8-210	423	D90-BB	366	ISO BARS	374		
BS 54 KIT TC 8-043	424	D90-C	365	ISO BARS A042	375		
BS 54 KIT TC 8-100	425	E		L			
BS 54 KIT TC 8-170	426	EP	322	LA-BS	417		

PRODUCT FAMILY		PRODUCT FAMILY	
C		S	
CCGT	388	SCET	323
CCGW CBN	390	T	
CCMT	390	TCGT	401
CCMW	393	TCMT	402
CNGA CBN	394	TCMW	403
CNGG	395	W	
CNMA	395	WCMT-ID	325
CNMG	396	WCMX	326
D		X	
DCMT	398	XPET	324
DCMW	399		
DCMW PCD	399		
E			
EPGX	400		
EPMT	400		



POCKET SAVER

Our machining calculator allows you to measure the savings based on different products and applications. A useful pocket-sized tool, which will help keep cash in your pockets! **Simply Reliable.**

15:20

DORMER PRAMET

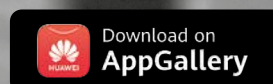
Savings Calculator

Price per insert or tool	Existing 0,00 EUR	New 0,00 EUR
Number of inserts per tool	Existing 0,00	New 0,00
Number of components per edge set (tool life)	Existing 0,00	New 0,00
Max. indexes per insert or tool	Existing 0,00	New 0,00
Tool or insert cost per component	Existing 0,0000	New 0,00

Free machine capacity 0.00

Savings per component 0.00 EUR

Savings per batch or year 0.00 EUR



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TECHNICAL INFORMATION
DRILLS
**INDEXABLE
DRILLS**
BORING SYSTEMS



WORKPIECE MATERIAL GROUPS (WMG)

ISO

To select a cutting grade and geometry for a broad range of workpiece materials

General definition

i.e. Steel, Stainless Steel...

P M K N S H

Subgroup

To navigate and select a tool by suitability for a more specific range of workpiece materials

Definition

by structure/composition

i.e. Plain Carbon Steel, Alloy Steel...

P M K N S H

P1

P2

P3

P4

WMG

To select and provide cutting conditions within a bandwidth of $\pm 10\%$

Definition

by hardness/ultimate tensile strength

i.e. $160 < 220 \text{ HB}$, $620 < 900 \text{ N/mm}^2$...

P

P1

P1.1

P1.2

P1.3

P2

P2.1

P2.2

P2.3

P3

P3.1

P3.2

P3.3

P4

P4.1

P4.2

P4.3

ABOUT DORMER PRAMET'S WORKPIECE MATERIAL CLASSIFICATION

Workpiece Material Groups (WMG) are used to support easy and reliable selection of the right cutting tool and starting values for machining conditions in particular applications.

Dormer Pramet classifies workpiece materials into six different coloured groups;

- **Blue:** Steel and cast steel (P-group)
- **Yellow:** Stainless steel (M-group)
- **Red:** Cast iron (K-group)
- **Green:** Non-ferrous metals (N-group)
- **Brown:** High-temperature alloys (S-group)
- **Grey:** Hardened materials (H-group)

Each of these are divided into subgroups on the basis of their structure and/or composition. For example, P-group steel and cast steel is split into four subgroups, namely;

- **P1** – Free machining steel
- **P2** – Plain carbon steel
- **P3** – Alloy steel
- **P4** – Tool steel

A final division includes material properties, such as hardness and ultimate tensile strength. This is to provide our customers with a complete tool recommendation, including starting values for cutting speed and feed.

The table on the next page includes a description of each workpiece material group, as well as examples of commonly used designations.



WMG (WORK MATERIAL GROUP)

ISO group	WMG (Work Material Group)			Hardness (HB or HRC)	Ultimate Tensile Strength (MPa)
P	P1	P1.1	Sulfurized	< 240 HB	≤ 830
		P1.2	Sulfurized and phosphorized	< 180 HB	≤ 620
		P1.3	Sulfurized/phosphorized and leaded	< 180 HB	≤ 620
	P2	P2.1	Containing <0.25 % C	< 180 HB	≤ 620
		P2.2	Containing <0.55 % C	< 240 HB	≤ 830
		P2.3	Containing >0.55 % C	< 300 HB	≤ 1030
	P3	P3.1	Annealed	< 180 HB	≤ 620
		P3.2	Hardened and tempered	180 – 260 HB	> 620 ≤ 900
		P3.3		260 – 360 HB	> 900 ≤ 1240
M	M1	M1.1	Ferritic stainless steel	< 160 HB	≤ 520
		M1.2	(straight chromium non-hardenable alloys)	160 – 220 HB	> 520 ≤ 700
		M2.1	Annealed	< 200 HB	≤ 670
	M2	M2.2	Quenched and tempered	200 – 280 HB	> 670 ≤ 950
		M2.3	Precipitation-hardened	280 – 380 HB	> 950 ≤ 1300
	M3	M3.1	Austenitic stainless steel (chromium-nickel and chromium-nickel-manganese alloys)	< 200 HB	≤ 750
		M3.2		200 – 260 HB	> 750 ≤ 870
		M3.3		260 – 300 HB	> 870 ≤ 1040
	M4	M4.1	Austenitic-ferritic (DUPLEX) or super-austenitic stainless steel	< 300 HB	≤ 990
		M4.2	Precipitation hardening austenitic stainless steel	300 – 380 HB	≤ 1320
K	K1	K1.1	Ferritic or ferritic-pearlitic	< 180 HB	≤ 190
		K1.2	Ferritic-pearlitic or pearlitic	180 – 240 HB	> 190 ≤ 310
		K1.3	Pearlitic	240 – 280 HB	> 310 ≤ 390
	K2	K2.1	Ferritic	< 160 HB	≤ 400
		K2.2	Ferritic or pearlitic	160 – 200 HB	> 400 ≤ 550
		K2.3	Pearlitic	200 – 240 HB	> 550 ≤ 660
	K3	K3.1	Ferritic	< 180 HB	≤ 560
		K3.2	Ferritic or pearlitic	180 – 220 HB	> 560 ≤ 680
		K3.3	Pearlitic	220 – 260 HB	> 680 ≤ 800
	K4	K4.1	Austenitic gray iron (ASTM A436) (iron-carbon alloy castings with an austenitic lamellar graphite microstructure)	< 180 HB	≤ 190
		K4.2	Austenitic ductile iron (ASTM A439 or ASTM A571) (iron-carbon alloy castings with an austenitic nodular graphite microstructure)	< 240 HB	≤ 740
		K4.3	Austempered ductile iron (ASTM A897) (iron-carbon alloy castings with an ausferrite microstructure)	< 280 HB	> 840 ≤ 980
		K4.4		280 – 320 HB	> 980 ≤ 1130
		K4.5		320 – 360 HB	> 1130 ≤ 1280
	K5	K5.1	Ferritic	< 180 HB	≤ 400
		K5.2	Ferritic-pearlitic	180 – 220 HB	> 400 ≤ 450
		K5.3	Pearlitic	220 – 260 HB	> 450 ≤ 500
N	N1	N1.1	Commercially pure wrought aluminium	< 60 HB	≤ 240
		N1.2	Wrought aluminium alloys	60 – 100 HB	> 240 ≤ 400
		N1.3		100 – 150 HB	> 400 ≤ 590
	N2	N2.1	Cast aluminium alloys	< 75 HB	≤ 240
		N2.2		75 – 90 HB	> 240 ≤ 270
		N2.3		90 – 140 HB	> 270 ≤ 440
	N3	N3.1	Free-cutting copper-alloys materials with excellent machining properties	–	–
		N3.2	Short-chip copper-alloys with good to moderate machining properties	–	–
		N3.3	Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties	–	–
	N4	N4.1	Thermoplastic polymers	–	–
		N4.2	Thermosetting polymers	–	–
		N4.3	Reinforced polymers or composites	–	–
S	S1	S1.1	Titanium or titanium alloys	< 200 HB	≤ 660
		S1.2		200 – 280 HB	> 660 ≤ 950
		S1.3		280 – 360 HB	> 950 ≤ 1200
	S2	S2.1	Fe-based high-temperature alloys	< 200 HB	≤ 690
		S2.2		200 – 280 HB	> 690 ≤ 970
		S2.3		< 280 HB	≤ 940
	S3	S3.1	Ni-based high-temperature alloys	280 – 360 HB	> 940 ≤ 1200
		S3.2		< 240 HB	≤ 800
		S3.3		240 – 320 HB	> 800 ≤ 1070
H	H1	H1.1	Chilled cast iron	< 440 HB	–
		H1.2	Hardened cast iron	< 55 HRC	–
	H2	H2.1		> 55 HRC	–
		H2.2	Hardened steel < 55 HRC	< 51 HRC	–
	H3	H3.1		51 – 55 HRC	–
		H3.2	Hardened steel > 55 HRC	55 – 59 HRC	–
	H4	H4.1		> 59 HRC	–
		H4.2			

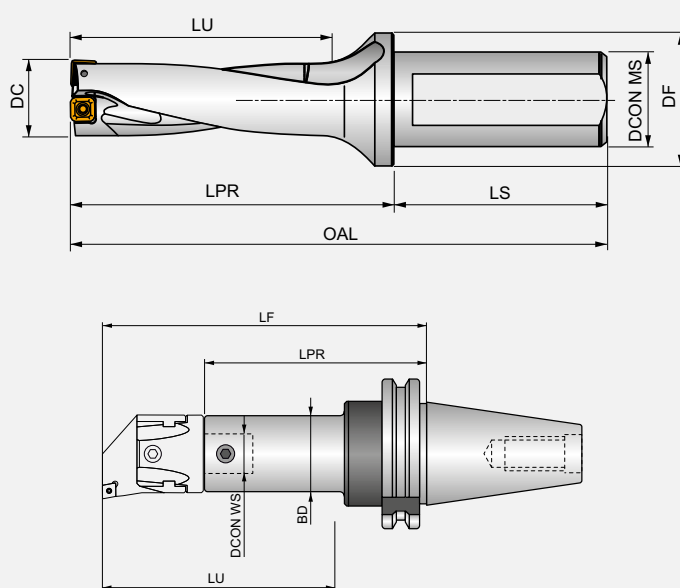
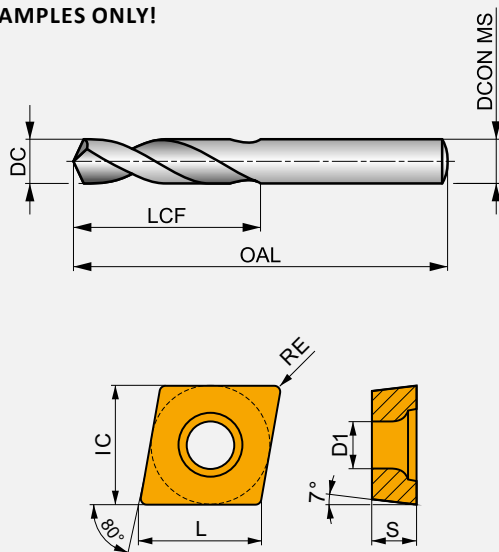
CUTTING TOOL PARAMETERS ACCORDING TO ISO 13399

All cutting tools are defined by a number of parameters according to the standard ISO 13399. This list contains all the parameters used in this catalogue and their definitions.

ISO 13399 is an international cutting tool information standard. It provides dimensions and parameters in a neutral format that is independent of any particular system or company nomenclature. When cutting tools are clearly defined according to a global standard, all types of software can process the electronic data more quickly, improving the quality of communication and helping to make the exchange of

information run smoothly. By supporting a common language in our cutting tool descriptions will assist this system to system communication. It will save you significant amount of time, providing an easier gathering of high-quality data across our 40,000 solid and indexable tools. By using a ISO 13399 compliant system, there will be no need to manually interpret data and key-enter it into your system.

EXAMPLES ONLY!



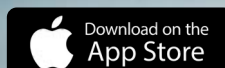
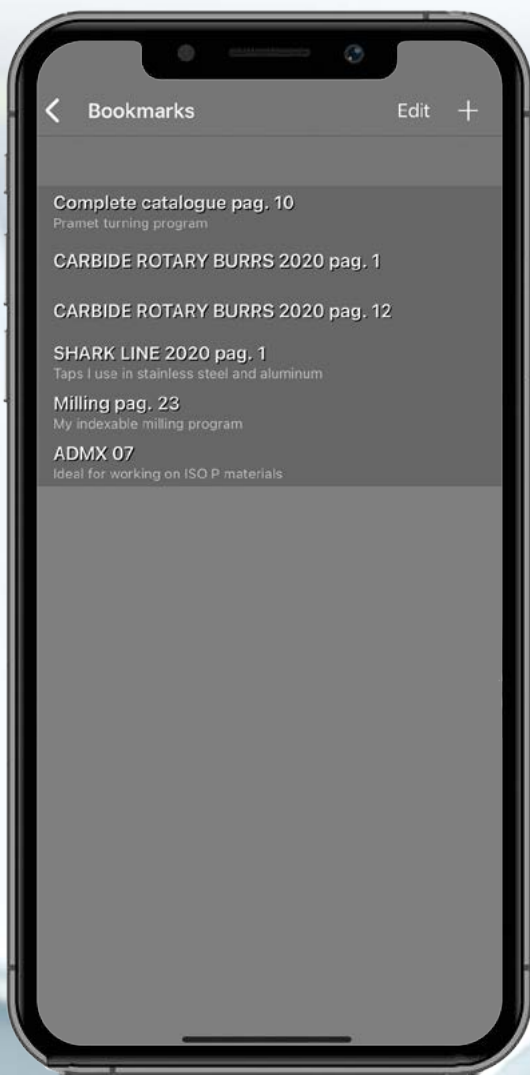
ISO 13399	description
BD	Body diameter
BDX	Body diameter maximum
CZC MS	Connection size code machine side
D1	Fixing hole diameter
DC	Cutting diameter
DCN	Cutting diameter minimum
DCON MS	Connection diameter machine side
DCON WS	Connection diameter workpiece side
DCX	Cutting diameter maximum
DHUB	Hub diameter
FLGT	Flange thickness
IC	Inscribed circle diameter
L	Cutting edge length
LB	Body length
LF	Functional length
LPR	Protruding length
LU	Usable length
OAL	Overall length
RE	Corner radius
S	Insert thickness
WF	Functional width
APMX	Depth of cut maximum
D1	Fixing hole diameter
DC_1	Cutting diameter first cutting step
DC_2	Cutting diameter second cutting step

ISO 13399	description
DF	Flange diameter
DH	Head diameter
GPD	Guide pilot diameter
GPL	Guide pilot length
H	Shank height
HSD	Size of drive part
IC	Inscribed circle diameter
LCF	Length chip flute
LCOL	Collet length
LDC	Distance reference point PK
LH	Head length
LS	Shank length
LSC	Clamping length
NOF	Number of flutes
PLGL	Plug length
RCSK	Radius countersunk
RE	Corner radius
SDI	Step diameter increments
SDL	Step diameter length
SDL_1	Step diameter length first cutting step
SDL_2	Step diameter length second cutting step
TDZ	Thread diameter size
THLGTH	Thread length
WSC	Clamping width



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SOLID CARBIDE DRILLS
HSS DRILLS



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1

R100

DORMER

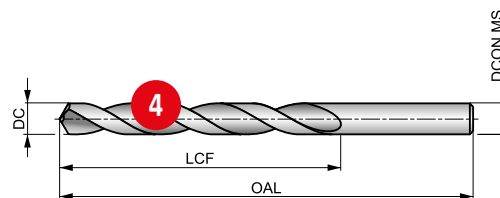


3

Massiv hårdmetalbor, blank finish

Forbedret slidstyrke for øget produktivitet og forlænget værktøjslevetid. En 120 ° spids med 4 facetter hjælper med selvcentreret ring og reducerer skærekrafter. Kan bruges med alle CNC-maskinapplikationer.

2



HM	DIN 338	4xD
120°	Bright	
20-35°	R	DC h7

5

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	K1.1	K1.2
99 S	111 S	115 S	85 S	75 S	66 S	66 S	53 S	45 S	40 S	34 S	27 S	75 T	56 T
K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2
42 T	68 T	55 T	44 T	60 T	46 T	37 T	55 T	42 T	31 T	26 T	22 T	63 T	47 T
K5.3	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	H1.1	H2.1	H2.2
37 T	200 V	150 V	100 V	172 V	155 V	112 V	423 V	250 V	60 X	100 V	56 S	33 S	36 S
H3.1	H3.2												
37 S	30 S												

6

Product	DC	DC	LCF	OAL	DCON MS
	[mm]	[inch]	[mm]	[mm]	[mm]
R1001.0	1.00	0.0394	12.0	34.0	1.00
R1001.1	1.10	0.0433	14.0	36.0	1.10
R1001.2	1.20	0.0472	16.0	38.0	1.20
R1001.3	1.30	0.0512	16.0	38.0	1.30
R1001.4	1.40	0.0551	18.0	40.0	1.40
R1001.5	1.50	0.0591	18.0	40.0	1.50
R1001.6	1.60	0.0630	20.0	43.0	1.60
R1001.7	1.70	0.0669	20.0	43.0	1.70
R1001.8	1.80	0.0709	22.0	46.0	1.80
R1001.9	1.90	0.0748	22.0	46.0	1.90
R1002.0	2.00	0.0787	24.0	49.0	2.00

7

8

Product	DC	DC	LCF	OAL	DCON MS
	[mm]	[inch]	[mm]	[mm]	[mm]
R1003.6	3.60	0.1417	39.0	70.0	3.60
R1003.7	3.70	0.1457	39.0	70.0	3.70
R1003.8	3.80	0.1496	43.0	75.0	3.80
R1003.9	3.90	0.1535	43.0	75.0	3.90
R1004.0	4.00	0.1575	43.0	75.0	4.00
R1004.1	4.10	0.1614	43.0	75.0	4.10
R1004.2	4.20	0.1654	43.0	75.0	4.20
R1004.3	4.30	0.1693	47.0	80.0	4.30
R1004.4	4.40	0.1732	47.0	80.0	4.40
R1004.5	4.50	0.1772	47.0	80.0	4.50
R1004.6	4.60	0.1811	47.0	80.0	4.60

Pos.	Description
1	Designation of drill
2	Product description
3	Illustrative picture
4	Schematic drawing of tool

Pos.	Description
5	Product features
6	Material group recommendations incl. speed and feed guidance
7	Product code
8	Product dimensions

SOLID CARBIDE & HSS DRILLS – ICONS OVERVIEW

GENERAL ICONS

	Primary use		Possible use
---	-------------	---	--------------

APPLICATION ANGLE

	60° Countersink Centre Drill		Radius Countersink Centre Drill		Pre-Drill with 90° Chamfer (for tapping)
	Drill Point 118°		Spot Drill Point 90°/120°		Spot Drill Point 150°
	Drill Point 120°		Spot-weld Drill Point 180°		Spot Drill Point 90°
	Drill Point 122°		Step-drill (for fasteners) 180° Counterbore		Spot Drill Point 120°
	Drill Point 130°		Step-drill (for fasteners) 90° Counterbore		
	Drill Point 135°		Drill Point 140°		

BASIC STANDARD GROUP (BSG)

	BS 328 – Drills and Reamers Standards		DIN 1899 – Micro Drill Standards		DIN 8037 – Carbide Tipped Drill Standards
	DIN 1869 / 1 – Straight Shank Extra Long Drill Standards		DIN 333A – Centre Drill Standards		DIN 8374 – Subland Drill Standards
	DIN 1869 / 2 – Straight Shank Extra Long Drill Standards		DIN 333R – Straight Shank Countersink Standards		DIN 8376 – Step Drill Standards
	DIN 1869 / 3 – Straight Shank Extra Long Drill Standards		DIN 338 – Straight Shank Drill Standards		DIN 8377 – Subland Drill Standards
	DIN 1870 (1) – Morse Taper Shank Extra Long Drill Standards		DIN 340 – Taper Length Drill Standards		DIN/ANSI Standards
	DIN 1870 (2) – Morse Taper Shank Extra Long Drill Standards		DIN 341 – Morse Taper Shank Long Drill Standards		Dormer Standards
	DIN 1897 – Stub Drill Standards		DIN 345 – Morse Taper Shank Drill Standards		NAS907 – Aerospace Drill Standards

COATING

	Aluminium Chromium Nitride (with smoothing process)		Bronze Tempered (Bronze Oxide) Surface Treatment		Titanium Aluminium Nitride (with smoothing process)
	Bright (uncoated)		Combination Bright and Steam Tempered		Titanium Aluminium Nitride Coating
	Bright and TiN (Tip Coating)		Steam Tempered (Steam Oxide) Surface Treatment		Titanium Nitride Coating

SOLID CARBIDE & HSS DRILLS – ICONS OVERVIEW

COOLANT SUPPLY PROPERTY (CSP)



Through Tool Coolant

CUTTING DIRECTION



Left Hand Rotation / Cutting



Right Hand Rotation / Cutting

CUTTING DIAMETER TOLERANCE ZONE CLASS (TCDC)



h8 – Industry Standard Tool Tolerance Zone (based on diameter range)



h7 – Industry Standard Tool Tolerance Zone (based on diameter range)



m7 – Industry Standard Tool Tolerance Zone (based on diameter range)



h6 – Industry Standard Tool Tolerance Zone (based on diameter range)

MATERIAL CODE (BMC)



Hard Material (Solid Carbide)



High Speed Steel (tool body) with Solid Carbide (cutting tool material)



High Speed Steel Tool Material



High Speed Cobalt Steel Tool Material

SHANK



Cylindrical Shank / Straight Shank



Cylindrical Shank with Tang



Morse Taper Shank



Cylindrical Shank with Flat



DIN 6535 HA Cylindrical Shank



Reduced Cylindrical Shank

SPIRAL FORM



Quick Spiral Flute Design



Standard Spiral Flute Design



Continuously Thinned Web Flute Design



Slow Spiral Flute Design



Quick Spiral Flute Design



Special Point Thinning Design

USABLE LENGTH DIAMETER RATIO (ULDR)



1.25xD Usable Tool Depth to Diameter Ratio



2.5xD Usable Tool Depth to Diameter Ratio



5xD Usable Tool Depth to Diameter Ratio



1.5xD Usable Tool Depth to Diameter Ratio



20xD Usable Tool Depth to Diameter Ratio



6xD Usable Tool Depth to Diameter Ratio



10xD Usable Tool Depth to Diameter Ratio



25xD Usable Tool Depth to Diameter Ratio



8xD Usable Tool Depth to Diameter Ratio



15xD Usable Tool Depth to Diameter Ratio



3xD Usable Tool Depth to Diameter Ratio



1xD Usable Tool Depth to Diameter Ratio



4xD Usable Tool Depth to Diameter Ratio



SOLID CARBIDE DRILLS

VERSATILE PRODUCTION DRILLS FOR A WIDE RANGE OF MATERIALS

FORCE X carbide drills are developed for high performance machining applications in a wide variety of work-materials such as Carbon and Alloy Steels up to 1500 MPa and Cast-Iron. FORCE X drills also perform well in Stainless Steel and Aluminium making them an ideal first choice for subcontract machining companies.

FEATURES AND BENEFITS

- CTW  – Unique Flute Construction with a continuously thinned web and rolled heel design.
- Modified 4-Facet Split Point with large secondary chisel edge angle.
- Premium micrograin carbide substrate with TiAlN coating.
- 3xD and 5xD options available in solid and coolant-feed variants.
- 8xD with coolant-feed.

COMPARED TO CONVENTIONAL DRILLS FORCE X ARE:

- **Outstandingly economical** – Able to be re-ground multiple times, this significantly increases total tool life.
- **Consistently high quality and performance** – with excellent positional accuracy and swarf control, ensuring a superior quality hole tolerance and surface finish.
- **More productive** – with high drilling speeds and prolonged tool-life.



RANGE DETAILS

3xD



R457

Coolant-feed

R458

Solid

- 3.00 – 20.00 mm
- 1/8 – 3/4 inch, N30 – N1, A – Z

5xD



R453

Coolant-feed

R454

Solid

- 3.00 – 20.00 mm
- 1/8 – 3/4 inch, N30 – N1, A – Z

8xD



R459

Coolant-feed

- 3.00 – 16.00 mm
- 1/8 – 5/8 inch



MACHINING EXAMPLE

			Free Machining Steel P1.3	Alloy Steel P3.3	Gray Iron K1.2
Workpiece			1.0718 (11SMnPb30)	1.6582 (34CrNiMo6)	0.6025 (GG-25)
Hardness		HB	180	325	215
Tensile strength		MPa	620	1120	260
Diameter		mm	8 (R4578.0)	8 (R4598.0)	8 (R4538.0)
Hole depth		mm	3×D (24)	8×D (64)	5×D (40)
Cutting speed	v_c	m/min	207	73	77
Feed	f	mm/rev	0.26	0.14	0.26
Coolant			Emulsion 8 % through coolant	Emulsion 8 % through coolant	Emulsion 8 % through coolant

FORCE M

HIGH VOLUME PRODUCTION DRILLS FOR STAINLESS STEEL

FORCE M carbide drills have been engineered to provide the highest performance and process reliability when drilling Stainless steels and Heat resistant super alloys. FORCE M drills are ideal for applications where it is necessary to drill a large number of holes with high and constant accuracy.

FEATURES AND BENEFITS

- CTW  – Unique Flute Construction with a continuously thinned web and rolled heel design.
- S-Shape 4-Facet Split Point with precise thin edge honing and strong outer corner design.
- Premium micrograin carbide substrate with TiAlN coating.
- 3×D and 5×D with coolant-feed.
- 8×D with coolant-feed available upon request.

COMPARED TO CONVENTIONAL DRILLS FORCE M PROVIDE:

- **Reliable performance** – with a smooth cutting action to prevent onset of work-hardening and built up edge.
- **Optimized productivity** – with excellent chip-management and a better force distribution to allow high penetration rates.
- **Exceptional tool life** – with stronger corner and cutting edges to withstand deformation wear.



RANGE DETAILS

3×D



R467

Coolant-feed

- 3.00 – 16.00 mm
- 1/8 – 5/8 inch

5×D



R463

Coolant-feed

- 3.00 – 16.00 mm
- 1/8 – 5/8 inch

8×D



R469

Coolant-feed

- Available upon request**
- 3.00 – 16.00 mm
 - 1/8 – 5/8 inch

FORCE M



MACHINING EXAMPLE

			Ferritic SST M1.2	Austenitic SST M3.2	High Strength SST M4.1
Workpiece			1.4104 (AISI 430F)	1.4401 (AISI 316)	1.4501 (Super DUPLEX)
Hardness		HB	220	200	240
Tensile strength		MPa	700	750	770
Diameter		mm	8 (R4678.0)	8 (S-R4698.0)	8 (R4638.0)
Hole depth		mm	3×D (24)	8×D (64)	5×D (40)
Cutting speed	v_c	m/min	99	74	57
Feed	f	mm/rev	0.16	0.14	0.12
Coolant			Emulsion 8 % through coolant	Emulsion 8 % through coolant	Emulsion 8% through coolant

FORCE N

HIGH PENETRATION RATE DRILLS FOR ALUMINIUM

FORCE N carbide drills are recommended for high speed drilling operations in wrought and cast aluminium alloys. The flute and cutting geometry are specifically designed to break the swarf into small manageable chips to enhance chip-
evacuation. FORCE N drills provide superior performance and tool life for mid-high volume manufacturing companies.

FEATURES AND BENEFITS

- Special web thinning with higher than standard helix angle.
- Unique geometry with convex cutting edges and 4-facet self-centering point.
- Premium micrograin carbide substrate with bright finish.
- 5×D and 8×D with coolant-feed available upon request.

COMPARED TO CONVENTIONAL DRILLS FORCE N DELIVER:

- **Superior performance** – with high drilling speeds and long tool life.
- **Economical solution** – which can be used across all types of aluminium from soft through to abrasive grades.
- **Optimized process** – designed to reduce thrust force improving hole quality and reducing exit burr which occurs when drilling soft materials.



RANGE DETAILS

5×D



R445

Coolant-feed

Available upon request

- 3.00 – 16.00 mm
- 1/8 – 5/8 inch

8×D



R448

Coolant-feed

Available upon request

- 3.00 – 16.00 mm
- 1/8 – 5/8 inch

**Up
to
12×D**

**Longer lengths available
upon request**

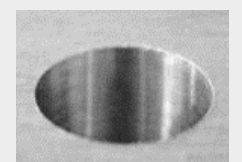


MACHINING EXAMPLE

			Wrought Aluminium N1.2	Cast Aluminium N2.2
Workpiece			AW 2024-O (3.1355)	A242.0
Hardness		HB	50	75
Tensile strength		MPa	200	220
Diameter		mm	8 mm (R4458.0)	8 mm (S-R4488.0)
Hole depth		mm	5×D (40)	8×D (64)
Cutting speed	v_c	m/min	357	374
Feed	f	mm/rev	0.80	0.33
Coolant			Emulsion 8 % through coolant	Emulsion 8 % through coolant



Exit burr with conventional drill



Exit burr with FORCE N drill



DORMER PRAMET

FOLLOW US



SHARE



LIKE



COMMENT



TAG



RE-TWEET



SOLID CARBIDE – NAVIGATOR TOOL MATERIALS

Carbide materials

Carbide Materials (or Hard Materials)		A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together. Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.
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Surface Coatings

Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials, plastics and composites while maintaining sharp cutting edges.
Titanium Nitride coating (TiN)		Titanium Nitride is a gold coloured ceramic coating applied by physical vapor deposition (PVD). High hardness combined with low friction properties ensures longer tool life and/or better cutting performance from tools which have not been coated.
Titanium Aluminium Nitride coatings (TiAlN)		Titanium Aluminium Nitride is a multi layer ceramic coating applied by PVD coating technology, which exhibits high toughness and oxidation stability. These properties make it ideal for higher speeds and feeds, while at the same time improving tool life. TiAlN is used in drilling, tapping, and milling applications and can be suitable for use when machining without coolant. TiAlN-Top coating is the same as TiAlN but with a post-coating process designed to smooth out imperfections, enhance chip flow and reduce built up edge.

Materiale kode (BMC)	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM
Grundlæggende standard-gruppe (BSG)	DIN 333A	DORMER	DORMER	DORMER	DORMER	DORMER	DIN 6539	DIN 338	DIN 6539	DIN 338	DIN 6537K	DIN 6537K	DIN 6537L
Brugbar længde (ULDR)	1xD	1xD	1xD	1xD	1xD	3xD	2.5xD	4xD	2.5xD	4xD	3xD	3xD	5xD
Anvendelsesvinkel	60°	120°	90°	150°	90°	90°	120°	120°	130°	130°	140°	140°	140°
Belægning	Bright	Bright	Bright	TIAIN	TIAIN	TIAIN	Bright	Bright	TIN	TIN	TIAIN	TIAIN	TIAIN
Skaft					DIN 6535HA	DIN 6535HA					DIN 6535HA	DIN 6535HA	DIN 6535HA
Spiral form		λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	CTW	CTW	CTW
Hånd (skæreretning)	R	R	R	R	R	R	R	R	R	R	R	R	R
Køling (CSP)													
				NEW					CDX	CDX	FORCE X	FORCE X	FORCE X
Produktfamiliekode	R200	R122	R123	R125	R6011	R7131	R120	R100	R520	R510	R458	R457	R454
	1.00 - 5.00	5.00 - 20.00	5.00 - 20.00	6.00 - 16.00	6.00 - 16.00	3.30 - 10.40	1.00 - 12.00	1.00 - 14.00	3.00 - 16.50	3.00 - 14.25	3.00 - 20.00	3.00 - 20.00	3.00 - 20.00
	26	27	28	29	30	31	32	34	36	38	40	44	48
P	P1	■	■	■	■	■	■	■	■	■	■	■	■
	P2	■	■	■	■	■	■	■	■	■	■	■	■
	P3	■	■	■	■	■	■	■	■	■	■	■	■
	P4	■	■	■	■	■	■	■	■	■	■	■	■
M	M1		■	■	■	■			■	■	■	■	■
	M2		■	■	■	■			■	■	■	■	■
	M3		■	■	■	■					■	■	■
	M4					■					■	■	■
K	K1	■	■	■	■	■	■	■	■	■	■	■	■
	K2	■	■	■	■	■	■	■	■	■	■	■	■
	K3	■	■	■	■	■	■	■	■	■	■	■	■
	K4	■	■	■	■	■	■	■	■	■	■	■	■
	K5	■	■	■	■	■	■	■	■	■	■	■	■
N	N1	■	■	■	■	■	■	■	■	■	■	■	■
	N2	■	■	■	■	■	■	■	■	■	■	■	■
	N3	■	■	■	■	■	■	■	■	■	■	■	■
	N4		■	■	■	■		■	■	■		■	■
	N5												
S	S1		■	■	■	■	■		■	■	■	■	■
	S2		■	■	■	■	■						
	S3		■	■	■	■	■						
	S4		■	■	■	■	■						
H	H1		■	■	■	■	■	■	■	■	■	■	■
	H2		■	■	■	■	■	■	■	■	■	■	■
	H3		■	■	■	■	■	■	■	■	■	■	■
	H4												

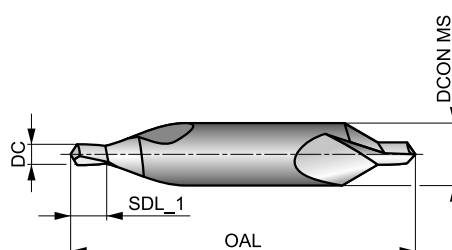
Primær brug Mulig brug

R200



HM Pinolbor med 118° punktvinkel og 60° undersænkning, blank finish

Anbefales til start af et præcist hul i enden af en aksel, så det kan holdes sikkert inden bearbejdning. Velegnet til bearbejdning af et antal materialer og har to borender, der giver øget produktivitet pr. Værktøj. Inkluderer en 118° spidsvinkel og 60° forsænkning. Velegnet til alle CNC-maskiner.



HM	DIN 333A	1xD
60°	Bright	
R		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	K1.1	K1.2
■ 60 H	■ 67 H	■ 69 H	■ 51 H	■ 45 F	■ 40 D	■ 44 E	■ 36 E	■ 30 D	■ 26 E	■ 22 D	■ 18 C	■ 40 H	■ 30 E
K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2
■ 22 E	■ 37 D	■ 30 D	■ 24 D	■ 33 D	■ 25 D	■ 20 D	■ 30 D	■ 23 D	■ 17 D	■ 14 D	■ 12 D	■ 34 D	■ 26 D
K5.3	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3				
■ 20 D	■ 120 I	■ 90 I	■ 60 H	■ 154 G	■ 138 G	■ 100 G	■ 169 G	■ 100 H	■ 50 F				

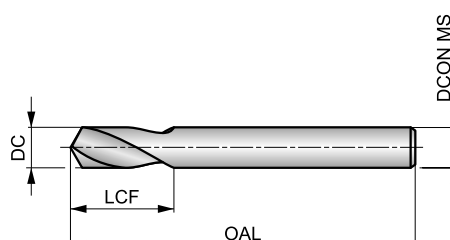
Product	DC (mm)	DC (inch)	SDL_1 (mm)	OAL (mm)	DCON MS (mm)
R2001.0X3.15	1.00	0.0394	1.7 - 1.3	31.0	3.15
R2001.25X3.15	1.25	0.0492	2.0 - 1.6	31.0	3.15
R2001.6X4.0	1.60	0.0630	2.6 - 2.0	35.0	4.00
R2002.0X5.0	2.00	0.0787	3.1 - 2.5	40.0	5.00
R2002.5X6.3	2.50	0.0984	3.8 - 3.1	45.0	6.30
R2003.15X8.0	3.15	0.1240	4.6 - 3.9	50.0	8.00
R2004.0X10.0	4.00	0.1575	5.9 - 5.0	55.0	10.00
R2005.0X12.5	5.00	0.1969	7.2 - 6.3	63.0	12.50

R122



HM NC forbor hårdmetal, 120 ° spids

Den nøjagtigt konstruerede spidsvinkel giver en nøjagtig punkt, der hjælper med centrering af opfølgingsboringen af hullet. En vinkel på 120 ° hjælper med selvcentrering og reducerer skærekraften ved boring af forskellige materialer.



HM	DORMER	1xD
120°	Bright	
λ 20-35°	R	DC h6

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 99 S	■ 111 S	■ 115 S	■ 85 S	■ 75 S	■ 66 S	■ 66 S	■ 53 S	■ 45 S	■ 40 S	■ 34 S	■ 27 S	■ 73 S	■ 61 S
M2.1	M2.2	M3.1	M3.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1
■ 65 S	■ 53 S	■ 52 S	■ 45 S	■ 75 T	■ 56 T	■ 42 T	■ 68 T	■ 55 T	■ 44 T	■ 60 T	■ 46 T	■ 37 T	■ 55 T
K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1
■ 42 T	■ 31 T	■ 26 T	■ 22 T	■ 63 T	■ 47 T	■ 37 T	■ 200 V	■ 150 V	■ 100 V	■ 172 V	■ 155 V	■ 112 V	■ 423 V
N3.2	N3.3	N4.1	N4.2	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2	H1.1
■ 250 V	■ 125 V	■ 60 X	■ 100 V	■ 45 T	■ 35 T	■ 25 S	■ 40 S	■ 28 S	■ 30 S	■ 20 S	■ 23 S	■ 16 S	■ 56 S
H2.1	H2.2	H3.1	H3.2										
■ 33 S	■ 36 S	■ 37 S	■ 30 S										

Product	DC	DC	LCF	OAL	DCON MS
	(mm)	(inch)	(mm)	(mm)	(mm)
R1225.0	5.00	0.1969	16.0	62.0	5.00
R1226.0	6.00	0.2362	17.0	66.0	6.00
R1228.0	8.00	0.3150	22.0	79.0	8.00
R12210.0	10.00	0.3937	26.0	89.0	10.00
R12212.0	12.00	0.4724	30.0	102.0	12.00
R12216.0	16.00	0.6299	34.0	115.0	16.00
R12220.0	20.00	0.7874	40.0	131.0	20.00

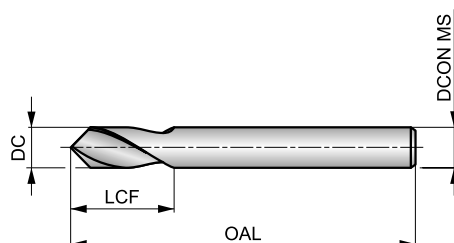
R123

DORMER



HM NC forbor hårdmetal, 90° spids

Den nøjagtigt konstruerede spidsvinkel giver et nøjagtigt punkt, der hjælper med centrering af opfølgingsboringen af hullet. Et 90° spids hjælper med selvcentrering og reducerer skærekrafterne, når der bores i forskellige materialer.



HM		1xD
90°	Bright	
		DC h6

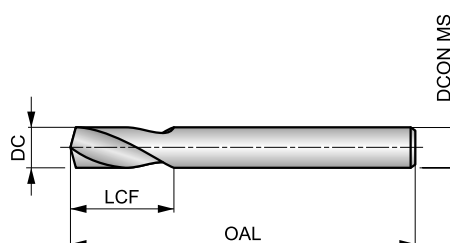
Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1 ■ 99 S	P1.2 ■ 111 S	P1.3 ■ 115 S	P2.1 ■ 85 S	P2.2 ■ 75 S	P2.3 ■ 66 S	P3.1 ■ 66 S	P3.2 ■ 53 S	P3.3 ■ 45 S	P4.1 ■ 40 S	P4.2 ■ 34 S	P4.3 ■ 27 S	M1.1 ■ 73 S	M1.2 ■ 61 S
M2.1 ■ 65 S	M2.2 ■ 53 S	M3.1 ■ 52 S	M3.2 ■ 45 S	K1.1 ■ 75 T	K1.2 ■ 56 T	K1.3 ■ 42 T	K2.1 ■ 68 T	K2.2 ■ 55 T	K2.3 ■ 44 T	K3.1 ■ 60 T	K3.2 ■ 46 T	K3.3 ■ 37 T	K4.1 ■ 55 T
K4.2 ■ 42 T	K4.3 ■ 31 T	K4.4 ■ 26 T	K4.5 ■ 22 T	K5.1 ■ 63 T	K5.2 ■ 47 T	K5.3 ■ 37 T	N1.1 ■ 200 V	N1.2 ■ 150 V	N1.3 ■ 100 V	N2.1 ■ 172 V	N2.2 ■ 155 V	N2.3 ■ 112 V	N3.1 ■ 423 V
N3.2 ■ 250 V	N3.3 ■ 125 V	N4.1 ■ 60 X	N4.2 ■ 100 V	S1.1 ■ 45 T	S1.2 ■ 35 T	S1.3 ■ 25 S	S2.1 ■ 40 S	S2.2 ■ 28 S	S3.1 ■ 30 S	S3.2 ■ 20 S	S4.1 ■ 23 S	S4.2 ■ 16 S	H1.1 ■ 56 S
H2.1 ■ 33 S	H2.2 ■ 36 S	H3.1 ■ 37 S	H3.2 ■ 30 S										

Product	DC	DC	LCF	OAL	DCON MS
	(mm)	(inch)	(mm)	(mm)	(mm)
R1235.0	5.00	0.1969	16.0	62.0	5.00
R1236.0	6.00	0.2362	17.0	66.0	6.00
R1238.0	8.00	0.3150	22.0	79.0	8.00
R12310.0	10.00	0.3937	26.0	89.0	10.00
R12312.0	12.00	0.4724	30.0	102.0	12.00
R12316.0	16.00	0.6299	34.0	115.0	16.00
R12320.0	20.00	0.7874	40.0	131.0	20.00

NEW**R125****DORMER****HM NC forbor hårdmetal, 150 ° spids. TiAlN belægning**

Den nøjagtigt konstruerede spidstvinkel giver et nøjagtigt punkt, der hjælper med centrering af opfølgningsboringen af hullet. Et 150 ° spids hjælper med selvcentrering og reducerer skærekraften, når der bores i materialet. TiAlN-belægning forbedrer ydeevnen og forlænger værktøjets levetid. Velegnet til boring af mange materialer.



HM	DORMER	1×D
150°	TiAlN	
λ _{20-35°}	R	DC h6

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1 ■ 119 S	P1.2 ■ 134 S	P1.3 ■ 138 S	P2.1 ■ 102 S	P2.2 ■ 90 S	P2.3 ■ 80 S	P3.1 ■ 81 S	P3.2 ■ 65 S	P3.3 ■ 55 S	P4.1 ■ 48 S	P4.2 ■ 41 S	P4.3 ■ 34 S	M1.1 ■ 82 S	M1.2 ■ 70 S
M2.1 ■ 73 S	M2.2 ■ 60 S	M3.1 ■ 58 S	M3.2 ■ 50 S	K1.1 ■ 80 T	K1.2 ■ 59 T	K1.3 ■ 44 T	K2.1 ■ 86 T	K2.2 ■ 70 T	K2.3 ■ 56 T	K3.1 ■ 76 T	K3.2 ■ 58 T	K3.3 ■ 47 T	K4.1 ■ 71 T
K4.2 ■ 53 T	K4.3 ■ 39 T	K4.4 ■ 33 T	K4.5 ■ 28 T	K5.1 ■ 80 T	K5.2 ■ 60 T	K5.3 ■ 46 T	N1.1 ■ 200 V	N1.2 ■ 150 V	N1.3 ■ 100 V	N2.1 ■ 172 V	N2.2 ■ 155 V	N2.3 ■ 112 V	N3.1 ■ 423 V
N3.2 ■ 250 V	N3.3 ■ 125 V	N4.1 ■ 60 X	N4.2 ■ 100 V	S1.1 ■ 55 T	S1.2 ■ 45 T	S1.3 ■ 35 S	S2.1 ■ 53 S	S2.2 ■ 42 S	S3.1 ■ 40 S	S3.2 ■ 30 S	S4.1 ■ 31 S	S4.2 ■ 24 S	H1.1 ■ 56 S
H2.1 ■ 33 S	H2.2 ■ 36 S	H3.1 ■ 37 S	H3.2 ■ 30 S										

DCON MS tolerance h6.

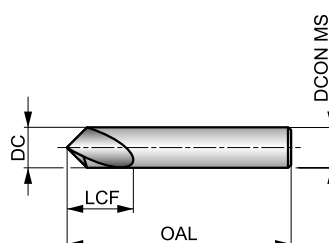
Product	DC (mm)	LCF (mm)	OAL (mm)	DCON MS (mm)
R1255.0	5.00	16.0	62.0	5.00
R1256.0	6.00	17.0	66.0	6.00
R1258.0	8.00	22.0	79.0	8.00
R12510.0	10.00	26.0	89.0	10.00
R12512.0	12.00	30.0	102.0	12.00
R12516.0	16.00	34.0	115.0	16.00

R6011

DORMER

HM NC forbor hårdmetal, 90 ° spids. TiAlN belægning

Den nøjagtigt konstruerede spidstvinkel giver et nøjagtigt punkt, der hjælper med centrering af opfølgingsboringen af hullet. Et 90 ° spids hjælper med selvcentrering og reducerer skærekraften, når der børes i materialet. TiAlN-belægning forbedrer ydeevnen og forlænger værktøjets levetid. Velegnet til boring af mange materialer.



HM		1xD
90°	TiAlN	DIN 6535HA
λ_{20-35°	R	DC h6

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1 ■ 119 S	P1.2 ■ 134 S	P1.3 ■ 138 S	P2.1 ■ 102 S	P2.2 ■ 90 S	P2.3 ■ 80 S	P3.1 ■ 81 S	P3.2 ■ 65 S	P3.3 ■ 55 S	P4.1 ■ 48 S	P4.2 ■ 41 S	P4.3 ■ 34 S	M1.1 ■ 82 S	M1.2 ■ 70 S
M2.1 ■ 73 S	M2.2 ■ 60 S	M3.1 ■ 58 S	M3.2 ■ 50 S	K1.1 ■ 80 T	K1.2 ■ 59 T	K1.3 ■ 44 T	K2.1 ■ 86 T	K2.2 ■ 70 T	K2.3 ■ 56 T	K3.1 ■ 76 T	K3.2 ■ 58 T	K3.3 ■ 47 T	K4.1 ■ 71 T
K4.2 ■ 53 T	K4.3 ■ 39 T	K4.4 ■ 33 T	K4.5 ■ 28 T	K5.1 ■ 80 T	K5.2 ■ 60 T	K5.3 ■ 46 T	N1.1 ■ 200 V	N1.2 ■ 150 V	N1.3 ■ 100 V	N2.1 ■ 172 V	N2.2 ■ 155 V	N2.3 ■ 112 V	N3.1 ■ 423 V
N3.2 ■ 250 V	N3.3 ■ 125 V	N4.1 ■ 60 X	N4.2 ■ 100 V	S1.1 ■ 55 T	S1.2 ■ 45 T	S1.3 ■ 35 S	S2.1 ■ 53 S	S2.2 ■ 42 S	S3.1 ■ 40 S	S3.2 ■ 30 S	S4.1 ■ 31 S	S4.2 ■ 24 S	H1.1 ■ 56 S
H2.1 ■ 33 S	H2.2 ■ 36 S	H3.1 ■ 37 S	H3.2 ■ 30 S										

DCON MS tolerance h6.

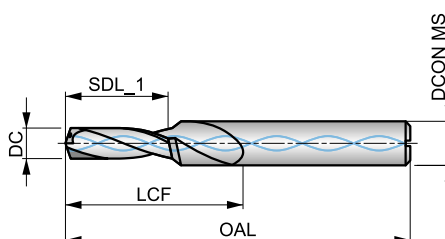
Product	DC	DC	LCF	OAL	DCON MS
	(mm)	(inch)	(mm)	(mm)	(mm)
R60116.0	6.00	0.2362	16.0	50.0	6.00
R601110.0	10.00	0.3937	25.0	70.0	10.00
R601116.0	16.00	0.6299	26.0	90.0	16.00

R7131



Trinbor i hårdmetal, TiAlN belagt med indvendig kølemiddeltilførsel

Alsiddig med specifikke diametre og -længder til opnåelse af hulstørrelse og dybde for metriske gevind. Boring og affasning i en operation reducerer cyklustid og værktøjsopgørelse. En 140° spidstvinkel og 90° forsækning. TiAlN-belægning forbedrer ydeevnen og forlænger værktøjets levetid. Velegnet til boring af mange materialer.



HM	DORMER	3xD
90°	TiAlN	DIN 6535HA
20-35°	R	
DC m7		

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1 ■ 139 W	P1.2 ■ 156 W	P1.3 ■ 161 W	P2.1 ■ 119 W	P2.2 ■ 105 W	P2.3 ■ 93 V	P3.1 ■ 96 V	P3.2 ■ 77 V	P3.3 ■ 65 V	P4.1 ■ 57 V	P4.2 ■ 48 V	M1.1 ■ 62 V	M1.2 ■ 52 V	M2.1 ■ 55 V
M2.2 ■ 45 V	M3.1 ■ 47 V	M3.2 ■ 40 V	M3.3 ■ 36 U	M4.1 ■ 35 U	K1.1 ■ 90 W	K1.2 ■ 67 W	K1.3 ■ 50 W	K2.1 ■ 92 V	K2.2 ■ 75 V	K2.3 ■ 60 V	K3.1 ■ 82 V	K3.2 ■ 62 V	K3.3 ■ 50 V
K4.1 ■ 76 V	K4.2 ■ 57 V	K4.3 ■ 42 V	K4.4 ■ 36 V	K4.5 ■ 30 V	K5.1 ■ 86 V	K5.2 ■ 64 V	K5.3 ■ 50 V	N1.1 ■ 250 W	N1.2 ■ 188 W	N1.3 ■ 125 W	N2.1 ■ 308 V	N2.2 ■ 277 V	N2.3 ■ 200 V
N3.1 ■ 373 W	N3.2 ■ 220 W	N3.3 ■ 110 W											

DCON MS tolerance h6.

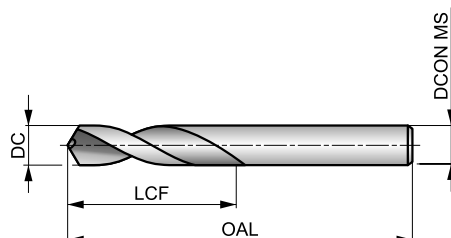
Product	DC (mm)	DC (inch)	SDL_1 (mm)	LCF (mm)	OAL (mm)	DCON MS (mm)	TDZ
R71313.3	3.30	0.1299	11.40	20.0	66.0	6.00	M4
R71314.2	4.20	0.1654	13.60	24.0	66.0	6.00	M5
R71315.0	5.00	0.1969	16.50	28.0	79.0	8.00	M6
R71316.8	6.80	0.2677	21.00	34.0	89.0	10.00	M8
R71318.5	8.50	0.3346	25.50	47.0	102.0	12.00	M10
R713110.2	10.20	0.4016	30.00	55.0	107.0	14.00	M12
R713110.4	10.40	0.4094	30.00	55.0	107.0	14.00	M12

R120



Massiv hårdmetal stubbor, blank finish

Forbedret slidstyrke for øget produktivitet og forlænget værktøjslevetid. Et 120 °, 4-spidspunkt hjælper med selvcentrering og reducerer skærekrafter. Velegnet til boring af hårde og slibende materialer og kan bruges med alle CNC-maskinapplikationer.



HM	DIN 6539	2.5xD
	Bright	
	R	DC h7

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	K1.1	K1.2
99 S	111 S	115 S	85 S	75 S	66 S	66 S	53 S	45 S	40 S	34 S	27 S	75 U	56 U
K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2
42 U	68 U	55 U	44 U	60 U	46 U	37 U	55 U	42 U	31 U	26 U	22 U	63 U	47 U
K5.3	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	S1.1	S1.2
37 U	200 W	150 W	100 W	172 W	155 W	112 W	466 W	275 W	138 W	60 U	100 U	45 T	35 T
S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2	H1.1	H2.1	H2.2	H3.1	H3.2		
25 T	40 T	28 T	30 T	20 T	23 T	16 T	56 S	33 S	36 S	37 S	30 S		

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
R1201.0	1.00	0.0394	6.0	26.0	1.00
R1201.1	1.10	0.0433	7.0	28.0	1.10
R1201.2	1.20	0.0472	8.0	30.0	1.20
R1201.3	1.30	0.0512	8.0	30.0	1.30
R1201.4	1.40	0.0551	9.0	32.0	1.40
R1201.5	1.50	0.0591	9.0	32.0	1.50
R1201.6	1.60	0.0630	10.0	34.0	1.60
R1201.7	1.70	0.0669	10.0	34.0	1.70
R1201.8	1.80	0.0709	11.0	36.0	1.80
R1201.9	1.90	0.0748	11.0	36.0	1.90
R1202.0	2.00	0.0787	12.0	38.0	2.00
R1202.1	2.10	0.0827	12.0	38.0	2.10
R1202.2	2.20	0.0866	13.0	40.0	2.20
R1202.3	2.30	0.0906	13.0	40.0	2.30
R1202.4	2.40	0.0945	14.0	43.0	2.40
R1202.5	2.50	0.0984	14.0	43.0	2.50
R1202.6	2.60	0.1024	14.0	43.0	2.60
R1202.7	2.70	0.1063	16.0	46.0	2.70
R1202.8	2.80	0.1102	16.0	46.0	2.80
R1202.9	2.90	0.1142	16.0	46.0	2.90
R1203.0	3.00	0.1181	16.0	46.0	3.00
R1203.1	3.10	0.1220	18.0	49.0	3.10
R1203.2	3.20	0.1260	18.0	49.0	3.20
R1203.3	3.30	0.1299	18.0	49.0	3.30
R1203.4	3.40	0.1339	20.0	52.0	3.40
R1203.5	3.50	0.1378	20.0	52.0	3.50

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
R1203.6	3.60	0.1417	20.0	52.0	3.60
R1203.7	3.70	0.1457	20.0	52.0	3.70
R1203.8	3.80	0.1496	22.0	55.0	3.80
R1203.9	3.90	0.1535	22.0	55.0	3.90
R1204.0	4.00	0.1575	22.0	55.0	4.00
R1204.1	4.10	0.1614	22.0	55.0	4.10
R1204.2	4.20	0.1654	22.0	55.0	4.20
R1204.3	4.30	0.1693	24.0	58.0	4.30
R1204.4	4.40	0.1732	24.0	58.0	4.40
R1204.5	4.50	0.1772	24.0	58.0	4.50
R1204.6	4.60	0.1811	24.0	58.0	4.60
R1204.7	4.70	0.1850	24.0	58.0	4.70
R1204.8	4.80	0.1890	26.0	62.0	4.80
R1204.9	4.90	0.1929	26.0	62.0	4.90
R1205.0	5.00	0.1969	26.0	62.0	5.00
R1205.1	5.10	0.2008	26.0	62.0	5.10
R1205.2	5.20	0.2047	26.0	62.0	5.20
R1205.3	5.30	0.2087	26.0	62.0	5.30
R1205.4	5.40	0.2126	28.0	66.0	5.40
R1205.5	5.50	0.2165	28.0	66.0	5.50
R1205.6	5.60	0.2205	28.0	66.0	5.60
R1205.7	5.70	0.2244	28.0	66.0	5.70
R1205.8	5.80	0.2283	28.0	66.0	5.80
R1205.9	5.90	0.2323	28.0	66.0	5.90
R1206.0	6.00	0.2362	28.0	66.0	6.00
R1206.1	6.10	0.2402	31.0	70.0	6.10

Product	DC	DC	LCF	OAL	DCON MS
	(mm)	(inch)	(mm)	(mm)	(mm)
R1206.2	6.20	0.2441	31.0	70.0	6.20
R1206.3	6.30	0.2480	31.0	70.0	6.30
R1206.4	6.40	0.2520	31.0	70.0	6.40
R1206.5	6.50	0.2559	31.0	70.0	6.50
R1206.6	6.60	0.2598	31.0	70.0	6.60
R1206.7	6.70	0.2638	31.0	70.0	6.70
R1206.8	6.80	0.2677	34.0	74.0	6.80
R1206.9	6.90	0.2717	34.0	74.0	6.90
R1207.0	7.00	0.2756	34.0	74.0	7.00
R1207.1	7.10	0.2795	34.0	74.0	7.10
R1207.2	7.20	0.2835	34.0	74.0	7.20
R1207.3	7.30	0.2874	34.0	74.0	7.30
R1207.4	7.40	0.2913	34.0	74.0	7.40
R1207.5	7.50	0.2953	34.0	74.0	7.50
R1207.6	7.60	0.2992	37.0	79.0	7.60
R1207.7	7.70	0.3031	37.0	79.0	7.70
R1207.8	7.80	0.3071	37.0	79.0	7.80
R1207.9	7.90	0.3110	37.0	79.0	7.90
R1208.0	8.00	0.3150	37.0	79.0	8.00
R1208.1	8.10	0.3189	37.0	79.0	8.10
R1208.2	8.20	0.3228	37.0	79.0	8.20
R1208.3	8.30	0.3268	37.0	79.0	8.30

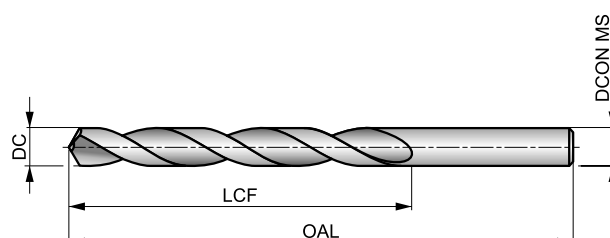
Product	DC	DC	LCF	OAL	DCON MS
	(mm)	(inch)	(mm)	(mm)	(mm)
R1208.4	8.40	0.3307	37.0	79.0	8.40
R1208.5	8.50	0.3346	37.0	79.0	8.50
R1208.6	8.60	0.3386	40.0	84.0	8.60
R1208.7	8.70	0.3425	40.0	84.0	8.70
R1208.8	8.80	0.3465	40.0	84.0	8.80
R1208.9	8.90	0.3504	40.0	84.0	8.90
R1209.0	9.00	0.3543	40.0	84.0	9.00
R1209.1	9.10	0.3583	40.0	84.0	9.10
R1209.2	9.20	0.3622	40.0	84.0	9.20
R1209.3	9.30	0.3661	40.0	84.0	9.30
R1209.4	9.40	0.3701	40.0	84.0	9.40
R1209.5	9.50	0.3740	40.0	84.0	9.50
R1209.6	9.60	0.3780	43.0	89.0	9.60
R1209.7	9.70	0.3819	43.0	89.0	9.70
R1209.8	9.80	0.3858	43.0	89.0	9.80
R1209.9	9.90	0.3898	43.0	89.0	9.90
R12010.0	10.00	0.3937	43.0	89.0	10.00
R12010.2	10.20	0.4016	43.0	89.0	10.20
R12010.5	10.50	0.4134	43.0	89.0	10.50
R12011.0	11.00	0.4331	47.0	95.0	11.00
R12011.5	11.50	0.4528	47.0	95.0	11.50
R12012.0	12.00	0.4724	51.0	102.0	12.00

R100



Massiv hårdmetalbor, blank finish

Forbedret slidstyrke for øget produktivitet og forlænget værktøjslevetid. En 120° spids med 4 facetter hjælper med selvcentrering og reducerer skærekrafter. Kan bruges med alle CNC-maskinapplikationer.



HM	DIN 338	4xD
120°	Bright	
λ 20-35°	R	DC h7

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	K1.1	K1.2
99 S	111 S	115 S	85 S	75 S	66 S	66 S	53 S	45 S	40 S	34 S	27 S	75 T	56 T
K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2
42 T	68 T	55 T	44 T	60 T	46 T	37 T	55 T	42 T	31 T	26 T	22 T	63 T	47 T
K5.3	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N4.1	N4.2	H1.1	H2.1	H2.2
37 T	200 V	150 V	100 V	172 V	155 V	112 V	423 V	250 V	60 X	100 V	56 S	33 S	36 S
H3.1	H3.2												
37 S	30 S												

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
R1001.0	1.00	0.0394	12.0	34.0	1.00
R1001.1	1.10	0.0433	14.0	36.0	1.10
R1001.2	1.20	0.0472	16.0	38.0	1.20
R1001.3	1.30	0.0512	16.0	38.0	1.30
R1001.4	1.40	0.0551	18.0	40.0	1.40
R1001.5	1.50	0.0591	18.0	40.0	1.50
R1001.6	1.60	0.0630	20.0	43.0	1.60
R1001.7	1.70	0.0669	20.0	43.0	1.70
R1001.8	1.80	0.0709	22.0	46.0	1.80
R1001.9	1.90	0.0748	22.0	46.0	1.90
R1002.0	2.00	0.0787	24.0	49.0	2.00
R1002.1	2.10	0.0827	24.0	49.0	2.10
R1002.2	2.20	0.0866	27.0	53.0	2.20
R1002.3	2.30	0.0906	27.0	53.0	2.30
R1002.4	2.40	0.0945	30.0	57.0	2.40
R1002.5	2.50	0.0984	30.0	57.0	2.50
R1002.6	2.60	0.1024	30.0	57.0	2.60
R1002.7	2.70	0.1063	33.0	61.0	2.70
R1002.8	2.80	0.1102	33.0	61.0	2.80
R1002.9	2.90	0.1142	33.0	61.0	2.90
R1003.0	3.00	0.1181	33.0	61.0	3.00
R1003.1	3.10	0.1220	36.0	65.0	3.10
R1003.2	3.20	0.1260	36.0	65.0	3.20
R1003.3	3.30	0.1299	36.0	65.0	3.30
R1003.4	3.40	0.1339	39.0	70.0	3.40
R1003.5	3.50	0.1378	39.0	70.0	3.50

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
R1003.6	3.60	0.1417	39.0	70.0	3.60
R1003.7	3.70	0.1457	39.0	70.0	3.70
R1003.8	3.80	0.1496	43.0	75.0	3.80
R1003.9	3.90	0.1535	43.0	75.0	3.90
R1004.0	4.00	0.1575	43.0	75.0	4.00
R1004.1	4.10	0.1614	43.0	75.0	4.10
R1004.2	4.20	0.1654	43.0	75.0	4.20
R1004.3	4.30	0.1693	47.0	80.0	4.30
R1004.4	4.40	0.1732	47.0	80.0	4.40
R1004.5	4.50	0.1772	47.0	80.0	4.50
R1004.6	4.60	0.1811	47.0	80.0	4.60
R1004.7	4.70	0.1850	47.0	80.0	4.70
R1004.8	4.80	0.1890	52.0	86.0	4.80
R1004.9	4.90	0.1929	52.0	86.0	4.90
R1005.0	5.00	0.1969	52.0	86.0	5.00
R1005.1	5.10	0.2008	52.0	86.0	5.10
R1005.2	5.20	0.2047	52.0	86.0	5.20
R1005.3	5.30	0.2087	52.0	86.0	5.30
R1005.4	5.40	0.2126	57.0	93.0	5.40
R1005.5	5.50	0.2165	57.0	93.0	5.50
R1005.6	5.60	0.2205	57.0	93.0	5.60
R1005.7	5.70	0.2244	57.0	93.0	5.70
R1005.8	5.80	0.2283	57.0	93.0	5.80
R1005.9	5.90	0.2323	57.0	93.0	5.90
R1006.0	6.00	0.2362	57.0	93.0	6.00
R1006.1	6.10	0.2402	63.0	101.0	6.10

Product	DC	DC	LCF	OAL	DCON MS
	(mm)	(inch)	(mm)	(mm)	(mm)
R1006.2	6.20	0.2441	63.0	101.0	6.20
R1006.3	6.30	0.2480	63.0	101.0	6.30
R1006.4	6.40	0.2520	63.0	101.0	6.40
R1006.5	6.50	0.2559	63.0	101.0	6.50
R1006.6	6.60	0.2598	63.0	101.0	6.60
R1006.7	6.70	0.2638	63.0	101.0	6.70
R1006.8	6.80	0.2677	69.0	109.0	6.80
R1006.9	6.90	0.2717	69.0	109.0	6.90
R1007.0	7.00	0.2756	69.0	109.0	7.00
R1007.1	7.10	0.2795	69.0	109.0	7.10
R1007.2	7.20	0.2835	69.0	109.0	7.20
R1007.3	7.30	0.2874	69.0	109.0	7.30
R1007.4	7.40	0.2913	69.0	109.0	7.40
R1007.5	7.50	0.2953	69.0	109.0	7.50
R1007.6	7.60	0.2992	75.0	117.0	7.60
R1007.7	7.70	0.3031	75.0	117.0	7.70
R1007.8	7.80	0.3071	75.0	117.0	7.80
R1007.9	7.90	0.3110	75.0	117.0	7.90
R1008.0	8.00	0.3150	75.0	117.0	8.00
R1008.1	8.10	0.3189	75.0	117.0	8.10
R1008.2	8.20	0.3228	75.0	117.0	8.20
R1008.3	8.30	0.3268	75.0	117.0	8.30
R1008.4	8.40	0.3307	75.0	117.0	8.40

Product	DC	DC	LCF	OAL	DCON MS
	(mm)	(inch)	(mm)	(mm)	(mm)
R1008.5	8.50	0.3346	75.0	117.0	8.50
R1008.6	8.60	0.3386	81.0	125.0	8.60
R1008.7	8.70	0.3425	81.0	125.0	8.70
R1008.8	8.80	0.3465	81.0	125.0	8.80
R1008.9	8.90	0.3504	81.0	125.0	8.90
R1009.0	9.00	0.3543	81.0	125.0	9.00
R1009.1	9.10	0.3583	81.0	125.0	9.10
R1009.2	9.20	0.3622	81.0	125.0	9.20
R1009.3	9.30	0.3661	81.0	125.0	9.30
R1009.4	9.40	0.3701	81.0	125.0	9.40
R1009.5	9.50	0.3740	81.0	125.0	9.50
R1009.6	9.60	0.3780	87.0	133.0	9.60
R1009.7	9.70	0.3819	87.0	133.0	9.70
R1009.8	9.80	0.3858	87.0	133.0	9.80
R1009.9	9.90	0.3898	87.0	133.0	9.90
R10010.0	10.00	0.3937	87.0	133.0	10.00
R10010.2	10.20	0.4016	87.0	133.0	10.20
R10010.5	10.50	0.4134	87.0	133.0	10.50
R10011.0	11.00	0.4331	94.0	142.0	11.00
R10011.5	11.50	0.4528	94.0	142.0	11.50
R10012.0	12.00	0.4724	101.0	151.0	12.00
R10013.0	13.00	0.5118	101.0	151.0	13.00
R10014.0	14.00	0.5512	108.0	160.0	14.00

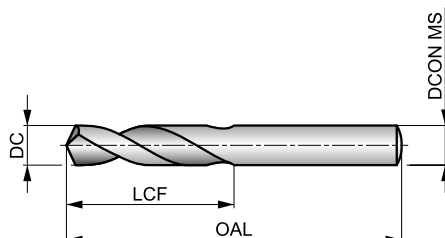
R520

DORMER

CDX massiv hårdmetal stubbor, TiN-belagt

Højtydende stubbor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og tilspændninger (H8 hulltolerance). Vinklen på 130 ° hjælper med selvcentrering og reducerer skærekrafterne. TiN-belægning forbedrer ydeevnen og forlænger værktøjets levetid. Velegnet til alle CNC-maskiner og mange materialer.

CDX



HM	DIN 6539	2.5×D
130°	TiN	
λ 20-35°	R	DC h7

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1 ■ 119 X	P1.2 ■ 134 X	P1.3 ■ 138 X	P2.1 ■ 102 X	P2.2 ■ 90 X	P2.3 ■ 80 X	P3.1 ■ 81 X	P3.2 ■ 65 X	P3.3 ■ 55 X	P4.1 ■ 48 X	P4.2 ■ 41 X	P4.3 ■ 34 W	M1.1 ■ 69 W	M1.2 ■ 58 W
M2.1 ■ 61 W	M2.2 ■ 50 W	K1.1 ■ 90 Y	K1.2 ■ 67 Y	K1.3 ■ 50 Y	K2.1 ■ 80 X	K2.2 ■ 65 X	K2.3 ■ 52 X	K3.1 ■ 71 X	K3.2 ■ 54 X	K3.3 ■ 44 X	K4.1 ■ 66 X	K4.2 ■ 49 X	K4.3 ■ 36 X
K4.4 ■ 31 X	K4.5 ■ 26 X	K5.1 ■ 74 X	K5.2 ■ 56 X	K5.3 ■ 43 X	N1.1 ■ 225 Z	N1.2 ■ 169 Z	N1.3 ■ 113 Z	N2.1 ■ 231 Y	N2.2 ■ 208 Y	N2.3 ■ 150 Y	N4.1 ■ 75 Z	N4.2 ■ 115 V	S1.1 ■ 60 W
S1.2 ■ 45 V	S1.3 ■ 35 U	H1.1 ■ 65 U	H2.1 ■ 38 U	H2.2 ■ 36 T	H3.1 ■ 43 U	H3.2 ■ 35 U							

DCON MS tolerance h7.

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
R5203.0	—	3.00	0.1181	16.0	46.0	3.00
R5203.1	—	3.10	0.1220	18.0	49.0	3.10
R5201/8	1/8	3.18	0.1252	18.0	49.0	3.18
R5203.2	—	3.20	0.1260	18.0	49.0	3.20
R5203.3	—	3.30	0.1299	18.0	49.0	3.30
R5203.4	—	3.40	0.1339	20.0	52.0	3.40
R5203.5	—	3.50	0.1378	20.0	52.0	3.50
R5203.6	—	3.60	0.1417	20.0	52.0	3.60
R5203.7	—	3.70	0.1457	20.0	52.0	3.70
R5203.8	—	3.80	0.1496	22.0	55.0	3.80
R5203.9	—	3.90	0.1535	22.0	55.0	3.90
R5204.0	—	4.00	0.1575	22.0	55.0	4.00
R5204.1	—	4.10	0.1614	22.0	55.0	4.10
R5204.2	—	4.20	0.1654	22.0	55.0	4.20
R5204.3	—	4.30	0.1693	24.0	58.0	4.30
R5204.4	—	4.40	0.1732	24.0	58.0	4.40
R5204.5	—	4.50	0.1772	24.0	58.0	4.50
R5204.6	—	4.60	0.1811	24.0	58.0	4.60
R5204.7	—	4.70	0.1850	24.0	58.0	4.70
R5204.8	—	4.80	0.1890	26.0	62.0	4.80
R5204.9	—	4.90	0.1929	26.0	62.0	4.90
R5205.0	—	5.00	0.1969	26.0	62.0	5.00
R5205.1	—	5.10	0.2008	26.0	62.0	5.10
R5205.2	—	5.20	0.2047	26.0	62.0	5.20
R5205.3	—	5.30	0.2087	26.0	62.0	5.30

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
R5205.4	—	5.40	0.2126	28.0	66.0	5.40
R5205.5	—	5.50	0.2165	28.0	66.0	5.50
R5205.6	—	5.60	0.2205	28.0	66.0	5.60
R5205.7	—	5.70	0.2244	28.0	66.0	5.70
R5205.8	—	5.80	0.2283	28.0	66.0	5.80
R5205.9	—	5.90	0.2323	28.0	66.0	5.90
R5206.0	—	6.00	0.2362	28.0	66.0	6.00
R5206.1	—	6.10	0.2402	31.0	70.0	6.10
R5206.2	—	6.20	0.2441	31.0	70.0	6.20
R5206.3	—	6.30	0.2480	31.0	70.0	6.30
R5201/4	1/4	6.35	0.2500	31.0	70.0	6.35
R5206.4	—	6.40	0.2520	31.0	70.0	6.40
R5206.5	—	6.50	0.2559	31.0	70.0	6.50
R5206.6	—	6.60	0.2598	31.0	70.0	6.60
R5206.7	—	6.70	0.2638	31.0	70.0	6.70
R5206.8	—	6.80	0.2677	34.0	74.0	6.80
R5206.9	—	6.90	0.2717	34.0	74.0	6.90
R5207.0	—	7.00	0.2756	34.0	74.0	7.00
R5207.1	—	7.10	0.2795	34.0	74.0	7.10
R5207.2	—	7.20	0.2835	34.0	74.0	7.20
R5207.3	—	7.30	0.2874	34.0	74.0	7.30
R5207.4	—	7.40	0.2913	34.0	74.0	7.40
R5207.5	—	7.50	0.2953	34.0	74.0	7.50
R5207.6	—	7.60	0.2992	37.0	79.0	7.60
R5207.7	—	7.70	0.3031	37.0	79.0	7.70

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
R5207.8	—	7.80	0.3071	37.0	79.0	7.80
R5207.9	—	7.90	0.3110	37.0	79.0	7.90
R5205/16	5/16	7.94	0.3126	37.0	79.0	7.94
R5208.0	—	8.00	0.3150	37.0	79.0	8.00
R5208.1	—	8.10	0.3189	37.0	79.0	8.10
R5208.2	—	8.20	0.3228	37.0	79.0	8.20
R5208.3	—	8.30	0.3268	37.0	79.0	8.30
R5208.4	—	8.40	0.3307	37.0	79.0	8.40
R5208.5	—	8.50	0.3346	37.0	79.0	8.50
R5208.6	—	8.60	0.3386	40.0	84.0	8.60
R5208.7	—	8.70	0.3425	40.0	84.0	8.70
R5208.8	—	8.80	0.3465	40.0	84.0	8.80
R5208.9	—	8.90	0.3504	40.0	84.0	8.90
R5209.0	—	9.00	0.3543	40.0	84.0	9.00
R5209.1	—	9.10	0.3583	40.0	84.0	9.10
R5209.2	—	9.20	0.3622	40.0	84.0	9.20
R5209.3	—	9.30	0.3661	40.0	84.0	9.30
R5209.4	—	9.40	0.3701	40.0	84.0	9.40
R5209.5	—	9.50	0.3740	40.0	84.0	9.50
R5203/8	3/8	9.52	0.3748	43.0	89.0	9.52
R5209.6	—	9.60	0.3780	43.0	89.0	9.60
R5209.7	—	9.70	0.3819	43.0	89.0	9.70
R5209.8	—	9.80	0.3858	43.0	89.0	9.80
R5209.9	—	9.90	0.3898	43.0	89.0	9.90

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
R52010.0	—	10.00	0.3937	43.0	89.0	10.00
R52010.1	—	10.10	0.3976	43.0	89.0	10.10
R52010.2	—	10.20	0.4016	43.0	89.0	10.20
R52010.3	—	10.30	0.4055	43.0	89.0	10.30
R52010.4	—	10.40	0.4094	43.0	89.0	10.40
R52010.5	—	10.50	0.4134	43.0	89.0	10.50
R52011.0	—	11.00	0.4331	47.0	95.0	11.00
R5207/16	7/16	11.11	0.4374	47.0	95.0	11.11
R52011.2	—	11.20	0.4409	47.0	95.0	11.20
R52011.5	—	11.50	0.4528	47.0	95.0	11.50
R52012.0	—	12.00	0.4724	51.0	102.0	12.00
R52012.5	—	12.50	0.4921	51.0	102.0	12.50
R5201/2	1/2	12.70	0.5000	51.0	102.0	12.70
R52013.0	—	13.00	0.5118	51.0	102.0	13.00
R52013.5	—	13.50	0.5315	54.0	107.0	13.50
R52014.0	—	14.00	0.5512	54.0	107.0	14.00
R52014.2	—	14.20	0.5591	56.0	111.0	14.20
R52014.25	—	14.25	0.5610	56.0	111.0	14.25
R52014.5	—	14.50	0.5709	56.0	111.0	14.50
R52015.0	—	15.00	0.5906	56.0	111.0	15.00
R52015.1	—	15.10	0.5945	58.0	115.0	15.10
R5205/8	5/8	15.88	0.6252	58.0	115.0	15.88
R52016.0	—	16.00	0.6299	58.0	115.0	16.00
R52016.5	—	16.50	0.6496	60.0	119.0	16.50

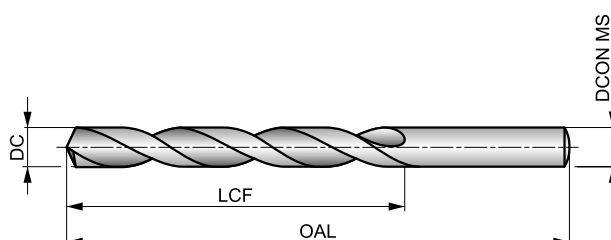
R510



CDX Solid HM-bor, TiN-belagt

Højtydende bor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og tilspændinger (H8 hultolerance). 130 ° spids hjælper med selvcentring og reducerer skærekraften. TiN-belægning forbedrer ydeevnen og forlænger værktøjets levetid. Velegnet til alle CNC-maskiner og mange materialer.

CDX



HM	DIN 338	4xD
130°	TiN	
λ 20-35°	R	DC h7

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1 ■ 119 W	P1.2 ■ 134 W	P1.3 ■ 138 W	P2.1 ■ 102 W	P2.2 ■ 90 W	P2.3 ■ 80 V	P3.1 ■ 81 W	P3.2 ■ 65 W	P3.3 ■ 55 V	P4.1 ■ 48 W	P4.2 ■ 41 V	P4.3 ■ 34 V	M1.1 ■ 69 V	M1.2 ■ 58 V
M2.1 ■ 61 V	M2.2 ■ 50 V	K1.1 ■ 90 X	K1.2 ■ 67 X	K1.3 ■ 50 X	K2.1 ■ 80 W	K2.2 ■ 65 W	K2.3 ■ 52 W	K3.1 ■ 71 W	K3.2 ■ 54 W	K3.3 ■ 44 W	K4.1 ■ 66 W	K4.2 ■ 49 W	K4.3 ■ 36 W
K4.4 ■ 31 W	K4.5 ■ 26 W	K5.1 ■ 74 W	K5.2 ■ 56 W	K5.3 ■ 43 W	N1.1 ■ 225 Y	N1.2 ■ 169 Y	N1.3 ■ 113 Y	N2.1 ■ 231 X	N2.2 ■ 208 X	N2.3 ■ 150 X	N4.1 ■ 75 X	N4.2 ■ 115 V	S1.1 ■ 45 V
H1.1 ■ 65 T	H2.1 ■ 38 T	H2.2 ■ 36 S	H3.1 ■ 43 T	H3.2 ■ 35 T									

DCON MS tolerance h7.

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
R5103.0	—	3.00	0.1181	33.0	61.0	3.00
R5101/8	1/8	3.18	0.1252	36.0	65.0	3.18
R5103.2	—	3.20	0.1260	36.0	65.0	3.20
R5103.3	—	3.30	0.1299	36.0	65.0	3.30
R5103.4	—	3.40	0.1339	39.0	70.0	3.40
R5103.5	—	3.50	0.1378	39.0	70.0	3.50
R5103.7	—	3.70	0.1457	39.0	70.0	3.70
R5103.9	—	3.90	0.1535	43.0	75.0	3.90
R5104.0	—	4.00	0.1575	43.0	75.0	4.00
R5104.1	—	4.10	0.1614	43.0	75.0	4.10
R5104.2	—	4.20	0.1654	43.0	75.0	4.20
R5104.3	—	4.30	0.1693	47.0	80.0	4.30
R5104.5	—	4.50	0.1772	47.0	80.0	4.50
R5104.6	—	4.60	0.1811	47.0	80.0	4.60
R5104.7	—	4.70	0.1850	47.0	80.0	4.70
R5103/16	3/16	4.76	0.1874	52.0	86.0	4.76
R5104.9	—	4.90	0.1929	52.0	86.0	4.90
R5105.0	—	5.00	0.1969	52.0	86.0	5.00
R5105.1	—	5.10	0.2008	52.0	86.0	5.10
R5105.5	—	5.50	0.2165	57.0	93.0	5.50
R5105.6	—	5.60	0.2205	57.0	93.0	5.60
R5105.7	—	5.70	0.2244	57.0	93.0	5.70
R5106.0	—	6.00	0.2362	57.0	93.0	6.00
R5101/4	1/4	6.35	0.2500	63.0	101.0	6.35
R5106.5	—	6.50	0.2559	63.0	101.0	6.50

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
R5106.6	—	6.60	0.2598	63.0	101.0	6.60
R5106.8	—	6.80	0.2677	69.0	109.0	6.80
R5106.9	—	6.90	0.2717	69.0	109.0	6.90
R5107.0	—	7.00	0.2756	69.0	109.0	7.00
R5107.3	—	7.30	0.2874	69.0	109.0	7.30
R5107.4	—	7.40	0.2913	69.0	109.0	7.40
R5107.5	—	7.50	0.2953	69.0	109.0	7.50
R5107.8	—	7.80	0.3071	75.0	117.0	7.80
R5107.9	—	7.90	0.3110	75.0	117.0	7.90
R5105/16	5/16	7.94	0.3126	75.0	117.0	7.94
R5108.0	—	8.00	0.3150	75.0	117.0	8.00
R5108.5	—	8.50	0.3346	75.0	117.0	8.50
R5108.7	—	8.70	0.3425	81.0	125.0	8.70
R5108.8	—	8.80	0.3465	81.0	125.0	8.80
R5109.0	—	9.00	0.3543	81.0	125.0	9.00
R5109.2	—	9.20	0.3622	81.0	125.0	9.20
R5109.3	—	9.30	0.3661	81.0	125.0	9.30
R5109.4	—	9.40	0.3701	81.0	125.0	9.40
R5109.5	—	9.50	0.3740	81.0	125.0	9.50
R5103/8	3/8	9.52	0.3748	87.0	133.0	9.52
R5109.9	—	9.90	0.3898	87.0	133.0	9.90
R51010.0	—	10.00	0.3937	87.0	133.0	10.00
R51010.2	—	10.20	0.4016	87.0	133.0	10.20
R51010.3	—	10.30	0.4055	87.0	133.0	10.30
R51010.4	—	10.40	0.4094	87.0	133.0	10.40

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
R51010.5	—	10.50	0.4134	87.0	133.0	10.50
R51010.8	—	10.80	0.4252	94.0	142.0	10.80
R51011.0	—	11.00	0.4331	94.0	142.0	11.00
R5107/16	7/16	11.11	0.4374	94.0	142.0	11.11
R51011.2	—	11.20	0.4409	94.0	142.0	11.20
R51011.5	—	11.50	0.4528	94.0	142.0	11.50

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
R51012.0	—	12.00	0.4724	101.0	151.0	12.00
R5101/2	1/2	12.70	0.5000	101.0	151.0	12.70
R51013.0	—	13.00	0.5118	101.0	151.0	13.00
R51014.0	—	14.00	0.5512	108.0	160.0	14.00
R51014.25	—	14.25	0.5610	114.0	169.0	14.25

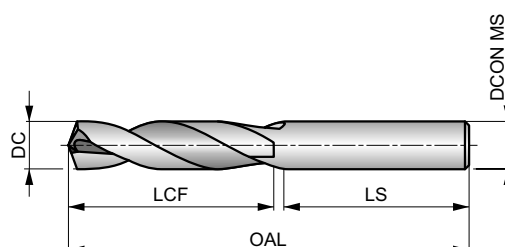
R458



FORCE X solid hårdmetal 5XD bor, TiAIN belagt

Højtydende bor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og tilspændninger (H9 hultolerance). Selvcenterende 140 °, 4-facets spidspunkt og CTW-skærkonstruktion for forbedret gennemtrængningshastighed. Kølemiddelhuller til forbedring af spånevakuering. TiAIN-belægning øger overfladens hårdhed og forbedrer værktøjs levetid.

FORCE X



HM	DIN 6537K	3xD
140°	TiAIN	DIN 6535HA
CTW	DC m7	

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1 ■ 143 W	P1.2 ■ 160 W	P1.3 ■ 166 W	P2.1 ■ 122 W	P2.2 ■ 108 W	P2.3 ■ 95 V	P3.1 ■ 106 V	P3.2 ■ 86 V	P3.3 ■ 72 V	P4.1 ■ 63 V	P4.2 ■ 54 V	P4.3 ■ 44 U	M1.1 ■ 60 U	M1.2 ■ 51 U
M2.1 ■ 54 U	M2.2 ■ 44 U	M2.3 ■ 37 T	M3.1 ■ 33 T	M3.2 ■ 28 T	M3.3 ■ 26 T	M4.1 ■ 24 T	M4.2 ■ 21 T	K1.1 ■ 88 W	K1.2 ■ 65 W	K1.3 ■ 49 W	K2.1 ■ 78 V	K2.2 ■ 64 V	K2.3 ■ 51 V
K3.1 ■ 70 V	K3.2 ■ 54 V	K3.3 ■ 43 V	K4.1 ■ 65 V	K4.2 ■ 49 V	K4.3 ■ 36 V	K4.4 ■ 30 V	K4.5 ■ 26 V	K5.1 ■ 73 V	K5.2 ■ 55 V	K5.3 ■ 42 V	N1.1 ■ 200 W	N1.2 ■ 150 W	N1.3 ■ 100 W
N2.1 ■ 246 V	N2.2 ■ 222 V	N2.3 ■ 160 V	N3.1 ■ 298 V	N3.2 ■ 176 V	N3.3 ■ 88 V	S1.1 ■ 44 U	S1.2 ■ 36 U	S1.3 ■ 32 T	H1.1 ■ 45 U	H2.1 ■ 26 U	H2.2 ■ 24 U	H3.1 ■ 30 U	H3.2 ■ 24 U

DCON MS tolerance h6.

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	LS (mm)	DCON MS (mm)
R4583.0	—	3.00	0.1181	20.0	62.0	36.0	6.00
R4583.1	—	3.10	0.1220	20.0	62.0	36.0	6.00
R4581/8	1/8	3.18	0.1250	20.0	62.0	36.0	6.00
R4583.2	—	3.20	0.1260	20.0	62.0	36.0	6.00
R458N30	N30	3.26	0.1283	20.0	62.0	36.0	6.00
R4583.3	—	3.30	0.1299	20.0	62.0	36.0	6.00
R4583.4	—	3.40	0.1339	20.0	62.0	36.0	6.00
R458N29	N29	3.45	0.1360	20.0	62.0	36.0	6.00
R4583.5	—	3.50	0.1378	20.0	62.0	36.0	6.00
R458N28	N28	3.57	0.1406	20.0	62.0	36.0	6.00
R4589/64	9/64	3.57	0.1406	20.0	62.0	36.0	6.00
R4583.6	—	3.60	0.1417	20.0	62.0	36.0	6.00
R458N27	N27	3.66	0.1441	20.0	62.0	36.0	6.00
R4583.7	—	3.70	0.1457	20.0	62.0	36.0	6.00
R4583.73	—	3.73	0.1469	24.0	66.0	36.0	6.00
R458N26	N26	3.73	0.1469	24.0	66.0	36.0	6.00
R458N25	N25	3.80	0.1496	24.0	66.0	36.0	6.00
R4583.8	—	3.80	0.1496	24.0	66.0	36.0	6.00
R458N24	N24	3.86	0.1520	24.0	66.0	36.0	6.00
R4583.9	—	3.90	0.1535	24.0	66.0	36.0	6.00
R458N23	N23	3.91	0.1539	24.0	66.0	36.0	6.00
R4585/32	5/32	3.97	0.1563	24.0	66.0	36.0	6.00
R458N22	N22	3.99	0.1571	24.0	66.0	36.0	6.00
R4584.0	—	4.00	0.1575	24.0	66.0	36.0	6.00
R458N21	N21	4.04	0.1591	24.0	66.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R458N20	N20	4.09	0.1610	24.0	66.0	36.0	6.00
R4584.1	—	4.10	0.1614	24.0	66.0	36.0	6.00
R4584.2	—	4.20	0.1654	24.0	66.0	36.0	6.00
R458N19	N19	4.22	0.1661	24.0	66.0	36.0	6.00
R4584.3	—	4.30	0.1693	24.0	66.0	36.0	6.00
R458N18	N18	4.31	0.1697	24.0	66.0	36.0	6.00
R45811/64	11/64	4.37	0.1719	24.0	66.0	36.0	6.00
R458N17	N17	4.39	0.1728	24.0	66.0	36.0	6.00
R4584.4	—	4.40	0.1732	24.0	66.0	36.0	6.00
R4584.5	—	4.50	0.1772	24.0	66.0	36.0	6.00
R458N16	N16	4.50	0.1772	24.0	66.0	36.0	6.00
R458N15	N15	4.57	0.1799	24.0	66.0	36.0	6.00
R4584.6	—	4.60	0.1811	24.0	66.0	36.0	6.00
R458N14	N14	4.62	0.1819	24.0	66.0	36.0	6.00
R458N13	N13	4.70	0.1850	24.0	66.0	36.0	6.00
R4584.7	—	4.70	0.1850	24.0	66.0	36.0	6.00
R4583/16	3/16	4.76	0.1875	28.0	66.0	36.0	6.00
R4584.8	—	4.80	0.1890	28.0	66.0	36.0	6.00
R458N12	N12	4.80	0.1890	28.0	66.0	36.0	6.00
R458N11	N11	4.85	0.1909	28.0	66.0	36.0	6.00
R4584.9	—	4.90	0.1929	28.0	66.0	36.0	6.00
R458N10	N10	4.92	0.1937	28.0	66.0	36.0	6.00
R458N9	N9	4.98	0.1961	28.0	66.0	36.0	6.00
R4585.0	—	5.00	0.1969	28.0	66.0	36.0	6.00
R458N8	N8	5.06	0.1992	28.0	66.0	36.0	6.00
R4585.1	—	5.10	0.2008	28.0	66.0	36.0	6.00
R458N7	N7	5.11	0.2010	28.0	66.0	36.0	6.00
R45813/64	13/64	5.16	0.2031	28.0	66.0	36.0	6.00
R458N6	N6	5.18	0.2039	28.0	66.0	36.0	6.00
R4585.2	—	5.20	0.2047	28.0	66.0	36.0	6.00
R458N5	N5	5.22	0.2055	28.0	66.0	36.0	6.00
R4585.3	—	5.30	0.2087	28.0	66.0	36.0	6.00
R458N4	N4	5.31	0.2091	28.0	66.0	36.0	6.00
R4585.4	—	5.40	0.2126	28.0	66.0	36.0	6.00
R458N3	N3	5.41	0.2130	28.0	66.0	36.0	6.00
R4585.5	—	5.50	0.2165	28.0	66.0	36.0	6.00
R4587/32	7/32	5.56	0.2188	28.0	66.0	36.0	6.00
R4585.6	—	5.60	0.2205	28.0	66.0	36.0	6.00
R458N2	N2	5.61	0.2209	28.0	66.0	36.0	6.00
R4585.7	—	5.70	0.2244	28.0	66.0	36.0	6.00
R458N1	N1	5.79	0.2280	28.0	66.0	36.0	6.00
R4585.8	—	5.80	0.2283	28.0	66.0	36.0	6.00
R4585.9	—	5.90	0.2323	28.0	66.0	36.0	6.00
R458A	A	5.94	0.2339	28.0	66.0	36.0	6.00
R45815/64	15/64	5.95	0.2344	28.0	66.0	36.0	6.00
R4586.0	—	6.00	0.2362	28.0	66.0	36.0	6.00
R458B	B	6.05	0.2380	34.0	79.0	36.0	8.00
R4586.1	—	6.10	0.2402	34.0	79.0	36.0	8.00
R458C	C	6.15	0.2421	34.0	79.0	36.0	8.00
R4586.2	—	6.20	0.2441	34.0	79.0	36.0	8.00
R458D	D	6.25	0.2461	34.0	79.0	36.0	8.00
R4586.3	—	6.30	0.2480	34.0	79.0	36.0	8.00
R4581/4	1/4	6.35	0.2500	34.0	79.0	36.0	8.00
R458E	E	6.35	0.2500	34.0	79.0	36.0	8.00
R4586.4	—	6.40	0.2520	34.0	79.0	36.0	8.00
R4586.5	—	6.50	0.2559	34.0	79.0	36.0	8.00
R458F	F	6.53	0.2571	34.0	79.0	36.0	8.00
R4586.6	—	6.60	0.2598	34.0	79.0	36.0	8.00
R458G	G	6.63	0.2610	34.0	79.0	36.0	8.00
R4586.7	—	6.70	0.2638	34.0	79.0	36.0	8.00
R45817/64	17/64	6.75	0.2656	34.0	79.0	36.0	8.00
R458H	H	6.76	0.2661	34.0	79.0	36.0	8.00
R4586.8	—	6.80	0.2677	34.0	79.0	36.0	8.00
R4586.9	—	6.90	0.2717	34.0	79.0	36.0	8.00
R458I	I	6.91	0.2720	34.0	79.0	36.0	8.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R4587.0	—	7.00	0.2756	34.0	79.0	36.0	8.00
R458J	J	7.04	0.2772	34.0	79.0	36.0	8.00
R4587.1	—	7.10	0.2795	41.0	79.0	36.0	8.00
R458K	K	7.14	0.2811	41.0	79.0	36.0	8.00
R4589/32	9/32	7.14	0.2813	41.0	79.0	36.0	8.00
R4587.2	—	7.20	0.2835	41.0	79.0	36.0	8.00
R4587.3	—	7.30	0.2874	41.0	79.0	36.0	8.00
R458L	L	7.37	0.2902	41.0	79.0	36.0	8.00
R4587.4	—	7.40	0.2913	41.0	79.0	36.0	8.00
R458M	M	7.49	0.2949	41.0	79.0	36.0	8.00
R4587.5	—	7.50	0.2953	41.0	79.0	36.0	8.00
R45819/64	19/64	7.54	0.2969	41.0	79.0	36.0	8.00
R4587.6	—	7.60	0.2992	41.0	79.0	36.0	8.00
R458N	N	7.67	0.3020	41.0	79.0	36.0	8.00
R4587.7	—	7.70	0.3031	41.0	79.0	36.0	8.00
R4587.8	—	7.80	0.3071	41.0	79.0	36.0	8.00
R4587.9	—	7.90	0.3110	41.0	79.0	36.0	8.00
R4585/16	5/16	7.94	0.3125	41.0	79.0	36.0	8.00
R4588.0	—	8.00	0.3150	41.0	79.0	36.0	8.00
R4580	O	8.03	0.3161	47.0	89.0	40.0	10.00
R4588.1	—	8.10	0.3189	47.0	89.0	40.0	10.00
R4588.2	—	8.20	0.3228	47.0	89.0	40.0	10.00
R458P	P	8.20	0.3228	47.0	89.0	40.0	10.00
R4588.3	—	8.30	0.3268	47.0	89.0	40.0	10.00
R45821/64	21/64	8.33	0.3281	47.0	89.0	40.0	10.00
R4588.4	—	8.40	0.3307	47.0	89.0	40.0	10.00
R458Q	Q	8.43	0.3319	47.0	89.0	40.0	10.00
R4588.5	—	8.50	0.3346	47.0	89.0	40.0	10.00
R4588.6	—	8.60	0.3386	47.0	89.0	40.0	10.00
R458R	R	8.61	0.3390	47.0	89.0	40.0	10.00
R4588.7	—	8.70	0.3425	47.0	89.0	40.0	10.00
R45811/32	11/32	8.73	0.3438	47.0	89.0	40.0	10.00
R4588.8	—	8.80	0.3465	47.0	89.0	40.0	10.00
R458S	S	8.84	0.3480	47.0	89.0	40.0	10.00
R4588.9	—	8.90	0.3504	47.0	89.0	40.0	10.00
R4589.0	—	9.00	0.3543	47.0	89.0	40.0	10.00
R458T	T	9.09	0.3579	47.0	89.0	40.0	10.00
R4589.1	—	9.10	0.3583	47.0	89.0	40.0	10.00
R45823/64	23/64	9.13	0.3594	47.0	89.0	40.0	10.00
R4589.2	—	9.20	0.3622	47.0	89.0	40.0	10.00
R4589.3	—	9.30	0.3661	47.0	89.0	40.0	10.00
R458U	U	9.35	0.3681	47.0	89.0	40.0	10.00
R4589.4	—	9.40	0.3701	47.0	89.0	40.0	10.00
R4589.5	—	9.50	0.3740	47.0	89.0	40.0	10.00
R4583/8	3/8	9.53	0.3750	47.0	89.0	40.0	10.00
R458V	V	9.58	0.3772	47.0	89.0	40.0	10.00
R4589.6	—	9.60	0.3780	47.0	89.0	40.0	10.00
R4589.7	—	9.70	0.3819	47.0	89.0	40.0	10.00
R4589.8	—	9.80	0.3858	47.0	89.0	40.0	10.00
R458W	W	9.80	0.3858	47.0	89.0	40.0	10.00
R4589.9	—	9.90	0.3898	47.0	89.0	40.0	10.00
R45825/64	25/64	9.92	0.3906	47.0	89.0	40.0	10.00
R45810.0	—	10.00	0.3937	47.0	89.0	40.0	10.00
R458X	X	10.08	0.3969	55.0	102.0	45.0	12.00
R45810.1	—	10.10	0.3976	55.0	102.0	45.0	12.00
R45810.2	—	10.20	0.4016	55.0	102.0	45.0	12.00
R458Y	Y	10.26	0.4039	55.0	102.0	45.0	12.00
R45810.3	—	10.30	0.4055	55.0	102.0	45.0	12.00
R45813/32	13/32	10.32	0.4063	55.0	102.0	45.0	12.00
R45810.4	—	10.40	0.4094	55.0	102.0	45.0	12.00
R458Z	Z	10.49	0.4130	55.0	102.0	45.0	12.00
R45810.5	—	10.50	0.4134	55.0	102.0	45.0	12.00
R45810.6	—	10.60	0.4173	55.0	102.0	45.0	12.00
R45810.7	—	10.70	0.4213	55.0	102.0	45.0	12.00
R45827/64	27/64	10.72	0.4219	55.0	102.0	45.0	12.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R45810.8	—	10.80	0.4252	55.0	102.0	45.0	12.00
R45810.9	—	10.90	0.4291	55.0	102.0	45.0	12.00
R45811.0	—	11.00	0.4331	55.0	102.0	45.0	12.00
R45811.1	—	11.10	0.4370	55.0	102.0	45.0	12.00
R4587/16	7/16	11.11	0.4375	55.0	102.0	45.0	12.00
R45811.2	—	11.20	0.4409	55.0	102.0	45.0	12.00
R45811.3	—	11.30	0.4449	55.0	102.0	45.0	12.00
R45811.4	—	11.40	0.4488	55.0	102.0	45.0	12.00
R45811.5	—	11.50	0.4528	55.0	102.0	45.0	12.00
R45829/64	29/64	11.51	0.4531	55.0	102.0	45.0	12.00
R45811.6	—	11.60	0.4567	55.0	102.0	45.0	12.00
R45811.7	—	11.70	0.4606	55.0	102.0	45.0	12.00
R45811.8	—	11.80	0.4646	55.0	102.0	45.0	12.00
R45811.9	—	11.90	0.4685	55.0	102.0	45.0	12.00
R45815/32	15/32	11.91	0.4688	55.0	102.0	45.0	12.00
R45812.0	—	12.00	0.4724	55.0	102.0	45.0	12.00
R45812.1	—	12.10	0.4764	60.0	107.0	45.0	14.00
R45812.2	—	12.20	0.4803	60.0	107.0	45.0	14.00
R45831/64	31/64	12.30	0.4844	60.0	107.0	45.0	14.00
R45812.5	—	12.50	0.4921	60.0	107.0	45.0	14.00
R45812.7	—	12.70	0.5000	60.0	107.0	45.0	14.00
R4581/2	1/2	12.70	0.5000	60.0	107.0	45.0	14.00
R45812.8	—	12.80	0.5039	60.0	107.0	45.0	14.00
R45813.0	—	13.00	0.5118	60.0	107.0	45.0	14.00
R45833/64	33/64	13.10	0.5156	60.0	107.0	45.0	14.00
R45813.3	—	13.30	0.5236	60.0	107.0	45.0	14.00
R45817/32	17/32	13.49	0.5313	60.0	107.0	45.0	14.00
R45813.5	—	13.50	0.5315	60.0	107.0	45.0	14.00
R45813.8	—	13.80	0.5433	60.0	107.0	45.0	14.00
R45835/64	35/64	13.89	0.5469	60.0	107.0	45.0	14.00
R45814.0	—	14.00	0.5512	60.0	107.0	45.0	14.00
R45814.25	—	14.25	0.5610	65.0	115.0	48.0	16.00
R4589/16	9/16	14.29	0.5625	65.0	115.0	48.0	16.00
R45814.5	—	14.50	0.5709	65.0	115.0	48.0	16.00
R45837/64	37/64	14.68	0.5781	65.0	115.0	48.0	16.00
R45814.8	—	14.80	0.5827	65.0	115.0	48.0	16.00
R45815.0	—	15.00	0.5906	65.0	115.0	48.0	16.00
R45819/32	19/32	15.08	0.5938	65.0	115.0	48.0	16.00
R45815.1	—	15.10	0.5945	65.0	115.0	48.0	16.00
R45815.3	—	15.30	0.6024	65.0	115.0	48.0	16.00
R45839/64	39/64	15.48	0.6094	65.0	115.0	48.0	16.00
R45815.5	—	15.50	0.6102	65.0	115.0	48.0	16.00
R45815.8	—	15.80	0.6220	65.0	115.0	48.0	16.00
R4585/8	5/8	15.88	0.6250	65.0	115.0	48.0	16.00
R45816.0	—	16.00	0.6299	65.0	115.0	48.0	16.00
R45841/64	41/64	16.27	0.6406	73.0	123.0	48.0	18.00
R45816.5	—	16.50	0.6496	73.0	123.0	48.0	18.00
R45821/32	21/32	16.67	0.6563	73.0	123.0	48.0	18.00
R45817.0	—	17.00	0.6693	73.0	123.0	48.0	18.00
R45843/64	43/64	17.07	0.6720	73.0	123.0	48.0	18.00
R45811/16	11/16	17.46	0.6874	73.0	123.0	48.0	18.00
R45817.5	—	17.50	0.6890	73.0	123.0	48.0	18.00
R45817.8	—	17.80	0.7008	73.0	123.0	48.0	18.00
R45845/64	45/64	17.86	0.7031	73.0	123.0	48.0	18.00
R45818.0	—	18.00	0.7087	73.0	123.0	48.0	18.00
R45823/32	23/32	18.26	0.7189	79.0	131.0	50.0	20.00
R45818.5	—	18.50	0.7283	79.0	131.0	50.0	20.00
R45847/64	47/64	18.65	0.7343	79.0	131.0	50.0	20.00
R45819.0	—	19.00	0.7480	79.0	131.0	50.0	20.00
R4583/4	—	19.05	0.7500	79.0	131.0	50.0	20.00
R45819.5	—	19.50	0.7677	79.0	131.0	50.0	20.00
R45819.8	—	19.80	0.7795	79.0	131.0	50.0	20.00
R45820.0	—	20.00	0.7874	79.0	131.0	50.0	20.00

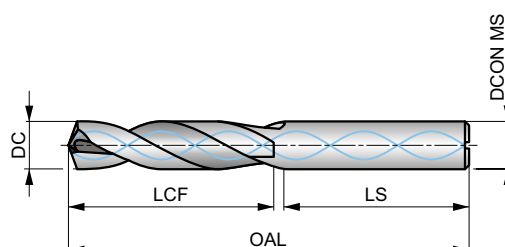
R457



FORCE X solid hårdmetal 5XD bor med indvendig kølemiddeltilførsel, TiAlN belagt

Højtydende bor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og tilspændninger (H9 hulltolerance). Selvcentrerende 140 °, 4-facets spidspunkt og CTW-skærkonstruktion for forbedret gennemtrængningshastighed. Kølemiddelhuller til forbedring af spånevakuering. TiAlN-belægning øger overfladens hårdhed og forbedrer værktøjets levetid.

FORCE X



HM	DIN 6537K	3xD
140°	TiAlN	DIN 6535HA
CTW	DC m7	

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1 ■ 179 W	P1.2 ■ 200 W	P1.3 ■ 207 W	P2.1 ■ 153 W	P2.2 ■ 135 W	P2.3 ■ 119 V	P3.1 ■ 133 V	P3.2 ■ 107 V	P3.3 ■ 90 V	P4.1 ■ 79 V	P4.2 ■ 67 V	P4.3 ■ 55 U	M1.1 ■ 75 V	M1.2 ■ 64 V
M2.1 ■ 67 V	M2.2 ■ 55 V	M2.3 ■ 46 U	M3.1 ■ 41 V	M3.2 ■ 35 V	M3.3 ■ 32 V	M4.1 ■ 30 U	M4.2 ■ 26 U	K1.1 ■ 110 W	K1.2 ■ 81 W	K1.3 ■ 61 W	K2.1 ■ 98 V	K2.2 ■ 80 V	K2.3 ■ 64 V
K3.1 ■ 87 V	K3.2 ■ 67 V	K3.3 ■ 54 V	K4.1 ■ 81 V	K4.2 ■ 61 V	K4.3 ■ 45 V	K4.4 ■ 38 V	K4.5 ■ 32 V	K5.1 ■ 91 V	K5.2 ■ 69 V	K5.3 ■ 53 V	N1.1 ■ 250 W	N1.2 ■ 188 W	N1.3 ■ 125 W
N2.1 ■ 308 V	N2.2 ■ 277 V	N2.3 ■ 200 V	N3.1 ■ 373 W	N3.2 ■ 220 W	N3.3 ■ 110 W	S1.1 ■ 55 V	S1.2 ■ 45 V	S1.3 ■ 40 U	H1.1 ■ 56 U	H2.1 ■ 33 U	H2.2 ■ 30 U	H3.1 ■ 37 U	H3.2 ■ 30 U

DCON MS tolerance h6.

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	LS (mm)	DCON MS (mm)
R4573.0	—	3.00	0.1181	20.0	62.0	36.0	6.00
R4573.1	—	3.10	0.1220	20.0	62.0	36.0	6.00
R4571/8	1/8	3.18	0.1250	20.0	62.0	36.0	6.00
R4573.2	—	3.20	0.1260	20.0	62.0	36.0	6.00
R457N30	N30	3.26	0.1283	20.0	62.0	36.0	6.00
R4573.3	—	3.30	0.1299	20.0	62.0	36.0	6.00
R4573.4	—	3.40	0.1339	20.0	62.0	36.0	6.00
R457N29	N29	3.45	0.1360	20.0	62.0	36.0	6.00
R4573.5	—	3.50	0.1378	20.0	62.0	36.0	6.00
R457N28	N28	3.57	0.1406	20.0	62.0	36.0	6.00
R4579/64	9/64	3.57	0.1406	20.0	62.0	36.0	6.00
R4573.6	—	3.60	0.1417	20.0	62.0	36.0	6.00
R457N27	N27	3.66	0.1441	20.0	62.0	36.0	6.00
R4573.7	—	3.70	0.1457	20.0	62.0	36.0	6.00
R457N26	N26	3.73	0.1469	24.0	66.0	36.0	6.00
R457N25	N25	3.80	0.1496	24.0	66.0	36.0	6.00
R4573.8	—	3.80	0.1496	24.0	66.0	36.0	6.00
R457N24	N24	3.86	0.1520	24.0	66.0	36.0	6.00
R4573.9	—	3.90	0.1535	24.0	66.0	36.0	6.00
R457N23	N23	3.91	0.1539	24.0	66.0	36.0	6.00
R4575/32	5/32	3.97	0.1563	24.0	66.0	36.0	6.00
R457N22	N22	3.99	0.1571	24.0	66.0	36.0	6.00
R4574.0	—	4.00	0.1575	24.0	66.0	36.0	6.00
R457N21	N21	4.04	0.1591	24.0	66.0	36.0	6.00
R4574.05	—	4.05	0.1594	24.0	66.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R457N20	N20	4.09	0.1610	24.0	66.0	36.0	6.00
R4574.1	—	4.10	0.1614	24.0	66.0	36.0	6.00
R4574.2	—	4.20	0.1654	24.0	66.0	36.0	6.00
R457N19	N19	4.22	0.1661	24.0	66.0	36.0	6.00
R4574.3	—	4.30	0.1693	24.0	66.0	36.0	6.00
R457N18	N18	4.31	0.1697	24.0	66.0	36.0	6.00
R45711/64	11/64	4.37	0.1719	24.0	66.0	36.0	6.00
R457N17	N17	4.39	0.1728	24.0	66.0	36.0	6.00
R4574.4	—	4.40	0.1732	24.0	66.0	36.0	6.00
R4574.5	—	4.50	0.1772	24.0	66.0	36.0	6.00
R457N16	N16	4.50	0.1772	24.0	66.0	36.0	6.00
R457N15	N15	4.57	0.1799	24.0	66.0	36.0	6.00
R4574.6	—	4.60	0.1811	24.0	66.0	36.0	6.00
R457N14	N14	4.62	0.1819	24.0	66.0	36.0	6.00
R457N13	N13	4.70	0.1850	24.0	66.0	36.0	6.00
R4574.7	—	4.70	0.1850	24.0	66.0	36.0	6.00
R4573/16	3/16	4.76	0.1875	28.0	66.0	36.0	6.00
R4574.8	—	4.80	0.1890	28.0	66.0	36.0	6.00
R457N12	N12	4.80	0.1890	28.0	66.0	36.0	6.00
R457N11	N11	4.85	0.1909	28.0	66.0	36.0	6.00
R4574.9	—	4.90	0.1929	28.0	66.0	36.0	6.00
R457N10	N10	4.92	0.1937	28.0	66.0	36.0	6.00
R457N9	N9	4.98	0.1961	28.0	66.0	36.0	6.00
R4575.0	—	5.00	0.1969	28.0	66.0	36.0	6.00
R4575.05	—	5.05	0.1988	28.0	66.0	36.0	6.00
R457N8	N8	5.06	0.1992	28.0	66.0	36.0	6.00
R4575.1	—	5.10	0.2008	28.0	66.0	36.0	6.00
R457N7	N7	5.11	0.2010	28.0	66.0	36.0	6.00
R45713/64	13/64	5.16	0.2031	28.0	66.0	36.0	6.00
R457N6	N6	5.18	0.2039	28.0	66.0	36.0	6.00
R4575.2	—	5.20	0.2047	28.0	66.0	36.0	6.00
R457N5	N5	5.22	0.2055	28.0	66.0	36.0	6.00
R4575.3	—	5.30	0.2087	28.0	66.0	36.0	6.00
R457N4	N4	5.31	0.2091	28.0	66.0	36.0	6.00
R4575.4	—	5.40	0.2126	28.0	66.0	36.0	6.00
R457N3	N3	5.41	0.2130	28.0	66.0	36.0	6.00
R4575.5	—	5.50	0.2165	28.0	66.0	36.0	6.00
R4577/32	7/32	5.56	0.2188	28.0	66.0	36.0	6.00
R4575.6	—	5.60	0.2205	28.0	66.0	36.0	6.00
R457N2	N2	5.61	0.2209	28.0	66.0	36.0	6.00
R4575.7	—	5.70	0.2244	28.0	66.0	36.0	6.00
R457N1	N1	5.79	0.2280	28.0	66.0	36.0	6.00
R4575.8	—	5.80	0.2283	28.0	66.0	36.0	6.00
R4575.9	—	5.90	0.2323	28.0	66.0	36.0	6.00
R457A	A	5.94	0.2339	28.0	66.0	36.0	6.00
R45715/64	15/64	5.95	0.2344	28.0	66.0	36.0	6.00
R4576.0	—	6.00	0.2362	28.0	66.0	36.0	6.00
R457B	B	6.05	0.2380	34.0	79.0	36.0	8.00
R4576.05	—	6.05	0.2382	34.0	79.0	36.0	8.00
R4576.1	—	6.10	0.2402	34.0	79.0	36.0	8.00
R457C	C	6.15	0.2421	34.0	79.0	36.0	8.00
R4576.2	—	6.20	0.2441	34.0	79.0	36.0	8.00
R457D	D	6.25	0.2461	34.0	79.0	36.0	8.00
R4576.3	—	6.30	0.2480	34.0	79.0	36.0	8.00
R4571/4	1/4	6.35	0.2500	34.0	79.0	36.0	8.00
R457E	E	6.35	0.2500	34.0	79.0	36.0	8.00
R4576.4	—	6.40	0.2520	34.0	79.0	36.0	8.00
R4576.5	—	6.50	0.2559	34.0	79.0	36.0	8.00
R457F	F	6.53	0.2571	34.0	79.0	36.0	8.00
R4576.6	—	6.60	0.2598	34.0	79.0	36.0	8.00
R457G	G	6.63	0.2610	34.0	79.0	36.0	8.00
R4576.7	—	6.70	0.2638	34.0	79.0	36.0	8.00
R45717/64	17/64	6.75	0.2656	34.0	79.0	36.0	8.00
R457H	H	6.76	0.2661	34.0	79.0	36.0	8.00
R4576.8	—	6.80	0.2677	34.0	79.0	36.0	8.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R4576.9	—	6.90	0.2717	34.0	79.0	36.0	8.00
R457I	I	6.91	0.2720	34.0	79.0	36.0	8.00
R4577.0	—	7.00	0.2756	34.0	79.0	36.0	8.00
R457J	J	7.04	0.2772	41.0	79.0	36.0	8.00
R4577.1	—	7.10	0.2795	41.0	79.0	36.0	8.00
R457K	K	7.14	0.2811	41.0	79.0	36.0	8.00
R4579/32	9/32	7.14	0.2813	41.0	79.0	36.0	8.00
R4577.2	—	7.20	0.2835	41.0	79.0	36.0	8.00
R4577.3	—	7.30	0.2874	41.0	79.0	36.0	8.00
R457L	L	7.37	0.2902	41.0	79.0	36.0	8.00
R4577.4	—	7.40	0.2913	41.0	79.0	36.0	8.00
R457M	M	7.49	0.2949	41.0	79.0	36.0	8.00
R4577.5	—	7.50	0.2953	41.0	79.0	36.0	8.00
R45719/64	19/64	7.54	0.2969	41.0	79.0	36.0	8.00
R4577.6	—	7.60	0.2992	41.0	79.0	36.0	8.00
R457N	N	7.67	0.3020	41.0	79.0	36.0	8.00
R4577.7	—	7.70	0.3031	41.0	79.0	36.0	8.00
R4577.8	—	7.80	0.3071	41.0	79.0	36.0	8.00
R4577.9	—	7.90	0.3110	41.0	79.0	36.0	8.00
R4575/16	5/16	7.94	0.3125	41.0	79.0	36.0	8.00
R4578.0	—	8.00	0.3150	41.0	79.0	36.0	8.00
R457O	O	8.03	0.3161	47.0	89.0	40.0	10.00
R4578.05	—	8.05	0.3169	47.0	89.0	40.0	10.00
R4578.1	—	8.10	0.3189	47.0	89.0	40.0	10.00
R4578.2	—	8.20	0.3228	47.0	89.0	40.0	10.00
R457P	P	8.20	0.3228	47.0	89.0	40.0	10.00
R4578.3	—	8.30	0.3268	47.0	89.0	40.0	10.00
R45721/64	21/64	8.33	0.3281	47.0	89.0	40.0	10.00
R4578.4	—	8.40	0.3307	47.0	89.0	40.0	10.00
R457Q	Q	8.43	0.3319	47.0	89.0	40.0	10.00
R4578.5	—	8.50	0.3346	47.0	89.0	40.0	10.00
R4578.6	—	8.60	0.3386	47.0	89.0	40.0	10.00
R457R	R	8.61	0.3390	47.0	89.0	40.0	10.00
R4578.7	—	8.70	0.3425	47.0	89.0	40.0	10.00
R45711/32	11/32	8.73	0.3438	47.0	89.0	40.0	10.00
R4578.8	—	8.80	0.3465	47.0	89.0	40.0	10.00
R457S	S	8.84	0.3480	47.0	89.0	40.0	10.00
R4578.9	—	8.90	0.3504	47.0	89.0	40.0	10.00
R4579.0	—	9.00	0.3543	47.0	89.0	40.0	10.00
R457T	T	9.09	0.3579	47.0	89.0	40.0	10.00
R4579.1	—	9.10	0.3583	47.0	89.0	40.0	10.00
R45723/64	23/64	9.13	0.3594	47.0	89.0	40.0	10.00
R4579.2	—	9.20	0.3622	47.0	89.0	40.0	10.00
R4579.3	—	9.30	0.3661	47.0	89.0	40.0	10.00
R457U	U	9.35	0.3681	47.0	89.0	40.0	10.00
R4579.4	—	9.40	0.3701	47.0	89.0	40.0	10.00
R4579.5	—	9.50	0.3740	47.0	89.0	40.0	10.00
R4573/8	3/8	9.53	0.3750	47.0	89.0	40.0	10.00
R457V	V	9.58	0.3772	47.0	89.0	40.0	10.00
R4579.6	—	9.60	0.3780	47.0	89.0	40.0	10.00
R4579.7	—	9.70	0.3819	47.0	89.0	40.0	10.00
R4579.8	—	9.80	0.3858	47.0	89.0	40.0	10.00
R457W	W	9.80	0.3858	47.0	89.0	40.0	10.00
R4579.9	—	9.90	0.3898	47.0	89.0	40.0	10.00
R45725/64	25/64	9.92	0.3906	47.0	89.0	40.0	10.00
R45710.0	—	10.00	0.3937	47.0	89.0	40.0	10.00
R45710.05	—	10.05	0.3957	55.0	102.0	45.0	12.00
R457X	X	10.08	0.3969	55.0	102.0	45.0	12.00
R45710.1	—	10.10	0.3976	55.0	102.0	45.0	12.00
R45710.2	—	10.20	0.4016	55.0	102.0	45.0	12.00
R457Y	Y	10.26	0.4039	55.0	102.0	45.0	12.00
R45710.3	—	10.30	0.4055	55.0	102.0	45.0	12.00
R45713/32	13/32	10.32	0.4063	55.0	102.0	45.0	12.00
R45710.4	—	10.40	0.4094	55.0	102.0	45.0	12.00
R457Z	Z	10.49	0.4130	55.0	102.0	45.0	12.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R45710.5	—	10.50	0.4134	55.0	102.0	45.0	12.00
R45710.6	—	10.60	0.4173	55.0	102.0	45.0	12.00
R45727/64	27/64	10.72	0.4219	55.0	102.0	45.0	12.00
R45710.8	—	10.80	0.4252	55.0	102.0	45.0	12.00
R45711.0	—	11.00	0.4331	55.0	102.0	45.0	12.00
R4577/16	7/16	11.11	0.4375	55.0	102.0	45.0	12.00
R45711.2	—	11.20	0.4409	55.0	102.0	45.0	12.00
R45711.3	—	11.30	0.4449	55.0	102.0	45.0	12.00
R45711.4	—	11.40	0.4488	55.0	102.0	45.0	12.00
R45711.5	—	11.50	0.4528	55.0	102.0	45.0	12.00
R45729/64	29/64	11.51	0.4531	55.0	102.0	45.0	12.00
R45711.6	—	11.60	0.4567	55.0	102.0	45.0	12.00
R45711.8	—	11.80	0.4646	55.0	102.0	45.0	12.00
R45715/32	15/32	11.91	0.4688	55.0	102.0	45.0	12.00
R45712.0	—	12.00	0.4724	55.0	102.0	45.0	12.00
R45712.05	—	12.05	0.4744	60.0	107.0	45.0	14.00
R45712.1	—	12.10	0.4764	60.0	107.0	45.0	14.00
R45712.2	—	12.20	0.4803	60.0	107.0	45.0	14.00
R45731/64	31/64	12.30	0.4844	60.0	107.0	45.0	14.00
R45712.5	—	12.50	0.4921	60.0	107.0	45.0	14.00
R45712.7	—	12.70	0.5000	60.0	107.0	45.0	14.00
R4571/2	1/2	12.70	0.5000	60.0	107.0	45.0	14.00
R45712.8	—	12.80	0.5039	60.0	107.0	45.0	14.00
R45713.0	—	13.00	0.5118	60.0	107.0	45.0	14.00
R45733/64	33/64	13.10	0.5156	60.0	107.0	45.0	14.00
R45713.3	—	13.30	0.5236	60.0	107.0	45.0	14.00
R45717/32	17/32	13.49	0.5313	60.0	107.0	45.0	14.00
R45713.5	—	13.50	0.5315	60.0	107.0	45.0	14.00
R45713.8	—	13.80	0.5433	60.0	107.0	45.0	14.00
R45735/64	35/64	13.89	0.5469	60.0	107.0	45.0	14.00
R45714.0	—	14.00	0.5512	60.0	107.0	45.0	14.00
R45714.25	—	14.25	0.5610	65.0	115.0	48.0	16.00
R4579/16	9/16	14.29	0.5625	65.0	115.0	48.0	16.00
R45714.5	—	14.50	0.5709	65.0	115.0	48.0	16.00
R45737/64	37/64	14.68	0.5781	65.0	115.0	48.0	16.00
R45714.8	—	14.80	0.5827	65.0	115.0	48.0	16.00
R45715.0	—	15.00	0.5906	65.0	115.0	48.0	16.00
R45719/32	19/32	15.08	0.5938	65.0	115.0	48.0	16.00
R45715.1	—	15.10	0.5945	65.0	115.0	48.0	16.00
R45715.3	—	15.30	0.6024	65.0	115.0	48.0	16.00
R45739/64	39/64	15.48	0.6094	65.0	115.0	48.0	16.00
R45715.5	—	15.50	0.6102	65.0	115.0	48.0	16.00
R45715.8	—	15.80	0.6220	65.0	115.0	48.0	16.00
R4575/8	5/8	15.88	0.6250	65.0	115.0	48.0	16.00
R45716.0	—	16.00	0.6299	65.0	115.0	48.0	16.00
R45741/64	41/64	16.27	0.6406	73.0	123.0	48.0	18.00
R45716.5	—	16.50	0.6496	73.0	123.0	48.0	18.00
R45721/32	21/32	16.67	0.6563	73.0	123.0	48.0	18.00
R45717.0	—	17.00	0.6693	73.0	123.0	48.0	18.00
R45743/64	43/64	17.07	0.6720	73.0	123.0	48.0	18.00
R45711/16	11/16	17.46	0.6874	73.0	123.0	48.0	18.00
R45717.5	—	17.50	0.6890	73.0	123.0	48.0	18.00
R45745/64	45/64	17.86	0.7031	73.0	123.0	48.0	18.00
R45718.0	—	18.00	0.7087	73.0	123.0	48.0	18.00
R45723/32	23/32	18.26	0.7189	79.0	131.0	50.0	20.00
R45718.5	—	18.50	0.7283	79.0	131.0	50.0	20.00
R45747/64	47/64	18.65	0.7343	79.0	131.0	50.0	20.00
R45718.8	—	18.80	0.7402	79.0	131.0	50.0	20.00
R45719.0	—	19.00	0.7480	79.0	131.0	50.0	20.00
R4573/4	3/4	19.05	0.7500	79.0	131.0	50.0	20.00
R45719.5	—	19.50	0.7677	79.0	131.0	50.0	20.00
R45719.8	—	19.80	0.7795	79.0	131.0	50.0	20.00
R45720.0	—	20.00	0.7874	79.0	131.0	50.0	20.00

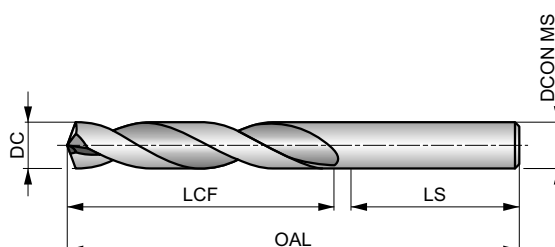
R454



FORCE X solid hårdmetal 5XD bor, TiAlN belagt

Højtydende bor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og tilspændninger (H9 hultolerance). Selvcentrerende 140 °, 4-facets spidspunkt og CTW-skærkonstruktion for forbedret gennemtrængningshastighed. Kølemiddelhuller til forbedring af spånevakuering. TiAlN-belægning øger overfladens hårdhed og forbedrer værktøjets levetid.

FORCE X



HM	DIN 6537L	5xD
140°	TiAlN	DIN 6535HA
CTW	DC m7	

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1 ■ 134 V	P1.2 ■ 150 V	P1.3 ■ 155 V	P2.1 ■ 115 V	P2.2 ■ 101 V	P2.3 ■ 89 V	P3.1 ■ 100 V	P3.2 ■ 80 V	P3.3 ■ 68 V	P4.1 ■ 59 V	P4.2 ■ 50 V	P4.3 ■ 41 U	M1.1 ■ 56 U	M1.2 ■ 48 U
M2.1 ■ 50 U	M2.2 ■ 41 U	M2.3 ■ 35 T	M3.1 ■ 31 T	M3.2 ■ 26 T	M3.3 ■ 24 T	M4.1 ■ 23 T	M4.2 ■ 20 T	K1.1 ■ 83 W	K1.2 ■ 61 W	K1.3 ■ 46 W	K2.1 ■ 74 V	K2.2 ■ 60 V	K2.3 ■ 48 V
K3.1 ■ 65 V	K3.2 ■ 50 V	K3.3 ■ 41 V	K4.1 ■ 61 V	K4.2 ■ 46 V	K4.3 ■ 34 V	K4.4 ■ 29 V	K4.5 ■ 24 V	K5.1 ■ 68 V	K5.2 ■ 52 V	K5.3 ■ 40 V	N1.1 ■ 188 W	N1.2 ■ 141 W	N1.3 ■ 94 W
N2.1 ■ 231 V	N2.2 ■ 208 V	N2.3 ■ 150 V	N3.1 ■ 280 V	N3.2 ■ 165 V	N3.3 ■ 83 V	S1.1 ■ 41 U	S1.2 ■ 34 U	S1.3 ■ 30 T	H1.1 ■ 42 U	H2.1 ■ 25 U	H2.2 ■ 23 U	H3.1 ■ 28 U	H3.2 ■ 23 U

DCON MS tolerance h6.

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	LS (mm)	DCON MS (mm)
R4543.0	—	3.00	0.1181	28.0	66.0	36.0	6.00
R4543.1	—	3.10	0.1220	28.0	66.0	36.0	6.00
R4541/8	1/8	3.18	0.1250	28.0	66.0	36.0	6.00
R4543.2	—	3.20	0.1260	28.0	66.0	36.0	6.00
R454N30	N30	3.26	0.1283	28.0	66.0	36.0	6.00
R4543.3	—	3.30	0.1299	28.0	66.0	36.0	6.00
R4543.4	—	3.40	0.1339	28.0	66.0	36.0	6.00
R454N29	N29	3.45	0.1360	28.0	66.0	36.0	6.00
R4543.5	—	3.50	0.1378	28.0	66.0	36.0	6.00
R454N28	N28	3.57	0.1406	28.0	66.0	36.0	6.00
R4549/64	9/64	3.57	0.1406	28.0	66.0	36.0	6.00
R4543.6	—	3.60	0.1417	28.0	66.0	36.0	6.00
R454N27	N27	3.66	0.1441	28.0	66.0	36.0	6.00
R4543.7	—	3.70	0.1457	28.0	66.0	36.0	6.00
R454N26	N26	3.73	0.1469	36.0	74.0	36.0	6.00
R454N25	N25	3.80	0.1496	36.0	74.0	36.0	6.00
R4543.8	—	3.80	0.1496	36.0	74.0	36.0	6.00
R454N24	N24	3.86	0.1520	36.0	74.0	36.0	6.00
R4543.9	—	3.90	0.1535	36.0	74.0	36.0	6.00
R454N23	N23	3.91	0.1539	36.0	74.0	36.0	6.00
R4545/32	5/32	3.97	0.1563	36.0	74.0	36.0	6.00
R454N22	N22	3.99	0.1571	36.0	74.0	36.0	6.00
R4544.0	—	4.00	0.1575	36.0	74.0	36.0	6.00
R454N21	N21	4.04	0.1591	36.0	74.0	36.0	6.00
R454N20	N20	4.09	0.1610	36.0	74.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R4544.1	—	4.10	0.1614	36.0	74.0	36.0	6.00
R4544.2	—	4.20	0.1654	36.0	74.0	36.0	6.00
R454N19	N19	4.22	0.1661	36.0	74.0	36.0	6.00
R4544.3	—	4.30	0.1693	36.0	74.0	36.0	6.00
R454N18	N18	4.31	0.1697	36.0	74.0	36.0	6.00
R45411/64	11/64	4.37	0.1719	36.0	74.0	36.0	6.00
R454N17	N17	4.39	0.1728	36.0	74.0	36.0	6.00
R4544.4	—	4.40	0.1732	36.0	74.0	36.0	6.00
R4544.5	—	4.50	0.1772	36.0	74.0	36.0	6.00
R454N16	N16	4.50	0.1772	36.0	74.0	36.0	6.00
R454N15	N15	4.57	0.1799	36.0	74.0	36.0	6.00
R4544.6	—	4.60	0.1811	36.0	74.0	36.0	6.00
R454N14	N14	4.62	0.1819	36.0	74.0	36.0	6.00
R454N13	N13	4.70	0.1850	36.0	74.0	36.0	6.00
R4544.7	—	4.70	0.1850	36.0	74.0	36.0	6.00
R4543/16	3/16	4.76	0.1875	44.0	82.0	36.0	6.00
R454N12	N12	4.80	0.1890	44.0	82.0	36.0	6.00
R4544.8	—	4.80	0.1890	44.0	82.0	36.0	6.00
R454N11	N11	4.85	0.1909	44.0	82.0	36.0	6.00
R4544.9	—	4.90	0.1929	44.0	82.0	36.0	6.00
R454N10	N10	4.92	0.1937	44.0	82.0	36.0	6.00
R454N9	N9	4.98	0.1961	44.0	82.0	36.0	6.00
R4545.0	—	5.00	0.1969	44.0	82.0	36.0	6.00
R454N8	N8	5.06	0.1992	44.0	82.0	36.0	6.00
R4545.1	—	5.10	0.2008	44.0	82.0	36.0	6.00
R454N7	N7	5.11	0.2010	44.0	82.0	36.0	6.00
R45413/64	13/64	5.16	0.2031	44.0	82.0	36.0	6.00
R454N6	N6	5.18	0.2039	44.0	82.0	36.0	6.00
R4545.2	—	5.20	0.2047	44.0	82.0	36.0	6.00
R454N5	N5	5.22	0.2055	44.0	82.0	36.0	6.00
R454N4	N4	5.31	0.2091	44.0	82.0	36.0	6.00
R454N3	N3	5.41	0.2130	44.0	82.0	36.0	6.00
R4545.5	—	5.50	0.2165	44.0	82.0	36.0	6.00
R4547/32	7/32	5.56	0.2188	44.0	82.0	36.0	6.00
R4545.6	—	5.60	0.2205	44.0	82.0	36.0	6.00
R454N2	N2	5.61	0.2209	44.0	82.0	36.0	6.00
R4545.7	—	5.70	0.2244	44.0	82.0	36.0	6.00
R454N1	N1	5.79	0.2280	44.0	82.0	36.0	6.00
R4545.8	—	5.80	0.2283	44.0	82.0	36.0	6.00
R454A	A	5.94	0.2339	44.0	82.0	36.0	6.00
R45415/64	15/64	5.95	0.2344	44.0	82.0	36.0	6.00
R4546.0	—	6.00	0.2362	44.0	82.0	36.0	6.00
R454B	B	6.05	0.2380	53.0	91.0	36.0	8.00
R4546.1	—	6.10	0.2402	53.0	91.0	36.0	8.00
R454C	C	6.15	0.2421	53.0	91.0	36.0	8.00
R4546.2	—	6.20	0.2441	53.0	91.0	36.0	8.00
R454D	D	6.25	0.2461	53.0	91.0	36.0	8.00
R4546.3	—	6.30	0.2480	53.0	91.0	36.0	8.00
R4541/4	1/4	6.35	0.2500	53.0	91.0	36.0	8.00
R454E	E	6.35	0.2500	53.0	91.0	36.0	8.00
R4546.4	—	6.40	0.2520	53.0	91.0	36.0	8.00
R4546.5	—	6.50	0.2559	53.0	91.0	36.0	8.00
R454F	F	6.53	0.2571	53.0	91.0	36.0	8.00
R4546.6	—	6.60	0.2598	53.0	91.0	36.0	8.00
R454G	G	6.63	0.2610	53.0	91.0	36.0	8.00
R4546.7	—	6.70	0.2638	53.0	91.0	36.0	8.00
R45417/64	17/64	6.75	0.2656	53.0	91.0	36.0	8.00
R454H	H	6.76	0.2661	53.0	91.0	36.0	8.00
R4546.8	—	6.80	0.2677	53.0	91.0	36.0	8.00
R4546.9	—	6.90	0.2717	53.0	91.0	36.0	8.00
R454I	I	6.91	0.2720	53.0	91.0	36.0	8.00
R4547.0	—	7.00	0.2756	53.0	91.0	36.0	8.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R454J	J	7.04	0.2772	53.0	91.0	36.0	8.00
R4547.1	—	7.10	0.2795	53.0	91.0	36.0	8.00
R454K	K	7.14	0.2811	53.0	91.0	36.0	8.00
R4549/32	9/32	7.14	0.2813	53.0	91.0	36.0	8.00
R4547.3	—	7.30	0.2874	53.0	91.0	36.0	8.00
R454L	L	7.37	0.2902	53.0	91.0	36.0	8.00
R4547.4	—	7.40	0.2913	53.0	91.0	36.0	8.00
R454M	M	7.49	0.2949	53.0	91.0	36.0	8.00
R4547.5	—	7.50	0.2953	53.0	91.0	36.0	8.00
R45419/64	19/64	7.54	0.2969	53.0	91.0	36.0	8.00
R4547.6	—	7.60	0.2992	53.0	91.0	36.0	8.00
R454N	N	7.67	0.3020	53.0	91.0	36.0	8.00
R4547.7	—	7.70	0.3031	53.0	91.0	36.0	8.00
R4547.8	—	7.80	0.3071	53.0	91.0	36.0	8.00
R4547.9	—	7.90	0.3110	53.0	91.0	36.0	8.00
R4545/16	5/16	7.94	0.3125	53.0	91.0	36.0	8.00
R4548.0	—	8.00	0.3150	53.0	91.0	36.0	8.00
R4540	O	8.03	0.3161	61.0	103.0	40.0	10.00
R4548.1	—	8.10	0.3189	61.0	103.0	40.0	10.00
R4548.2	—	8.20	0.3228	61.0	103.0	40.0	10.00
R454P	P	8.20	0.3228	61.0	103.0	40.0	10.00
R45421/64	21/64	8.33	0.3281	61.0	103.0	40.0	10.00
R4548.4	—	8.40	0.3307	61.0	103.0	40.0	10.00
R454Q	Q	8.43	0.3319	61.0	103.0	40.0	10.00
R4548.5	—	8.50	0.3346	61.0	103.0	40.0	10.00
R4548.6	—	8.60	0.3386	61.0	103.0	40.0	10.00
R454R	R	8.61	0.3390	61.0	103.0	40.0	10.00
R4548.7	—	8.70	0.3425	61.0	103.0	40.0	10.00
R45411/32	11/32	8.73	0.3438	61.0	103.0	40.0	10.00
R4548.8	—	8.80	0.3465	61.0	103.0	40.0	10.00
R454S	S	8.84	0.3480	61.0	103.0	40.0	10.00
R4548.9	—	8.90	0.3504	61.0	103.0	40.0	10.00
R4549.0	—	9.00	0.3543	61.0	103.0	40.0	10.00
R454T	T	9.09	0.3579	61.0	103.0	40.0	10.00
R4549.1	—	9.10	0.3583	61.0	103.0	40.0	10.00
R45423/64	23/64	9.13	0.3594	61.0	103.0	40.0	10.00
R4549.3	—	9.30	0.3661	61.0	103.0	40.0	10.00
R454U	U	9.35	0.3681	61.0	103.0	40.0	10.00
R4549.4	—	9.40	0.3701	61.0	103.0	40.0	10.00
R4549.5	—	9.50	0.3740	61.0	103.0	40.0	10.00
R4543/8	3/8	9.53	0.3750	61.0	103.0	40.0	10.00
R454V	V	9.58	0.3772	61.0	103.0	40.0	10.00
R4549.6	—	9.60	0.3780	61.0	103.0	40.0	10.00
R4549.7	—	9.70	0.3819	61.0	103.0	40.0	10.00
R4549.8	—	9.80	0.3858	61.0	103.0	40.0	10.00
R4549.9	—	9.90	0.3898	61.0	103.0	40.0	10.00
R454W	W	9.80	0.3858	61.0	103.0	40.0	10.00
R45425/64	25/64	9.92	0.3906	61.0	103.0	40.0	10.00
R45410.0	—	10.00	0.3937	61.0	103.0	40.0	10.00
R454X	X	10.08	0.3969	70.0	118.0	45.0	12.00
R45410.1	—	10.10	0.3976	70.0	118.0	45.0	12.00
R45410.2	—	10.20	0.4016	70.0	118.0	45.0	12.00
R454Y	Y	10.26	0.4039	70.0	118.0	45.0	12.00
R45410.3	—	10.30	0.4055	70.0	118.0	45.0	12.00
R45413/32	13/32	10.32	0.4063	70.0	118.0	45.0	12.00
R45410.4	—	10.40	0.4094	70.0	118.0	45.0	12.00
R454Z	Z	10.49	0.4130	70.0	118.0	45.0	12.00
R45410.5	—	10.50	0.4134	70.0	118.0	45.0	12.00
R45410.6	—	10.60	0.4173	70.0	118.0	45.0	12.00
R45427/64	27/64	10.72	0.4219	70.0	118.0	45.0	12.00
R45411.0	—	11.00	0.4331	70.0	118.0	45.0	12.00
R4547/16	7/16	11.11	0.4375	70.0	118.0	45.0	12.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R45411.2	—	11.20	0.4409	70.0	118.0	45.0	12.00
R45411.4	—	11.40	0.4488	70.0	118.0	45.0	12.00
R45411.5	—	11.50	0.4528	70.0	118.0	45.0	12.00
R45429/64	29/64	11.51	0.4531	70.0	118.0	45.0	12.00
R45411.6	—	11.60	0.4567	70.0	118.0	45.0	12.00
R45411.8	—	11.80	0.4646	70.0	118.0	45.0	12.00
R45415/32	15/32	11.91	0.4688	70.0	118.0	45.0	12.00
R45412.0	—	12.00	0.4724	70.0	118.0	45.0	12.00
R45412.1	—	12.10	0.4764	76.0	124.0	45.0	14.00
R45412.2	—	12.20	0.4803	76.0	124.0	45.0	14.00
R45431/64	31/64	12.30	0.4844	76.0	124.0	45.0	14.00
R45412.5	—	12.50	0.4921	76.0	124.0	45.0	14.00
R45412.7	—	12.70	0.5000	76.0	124.0	45.0	14.00
R4541/2	1/2	12.70	0.5000	76.0	124.0	45.0	14.00
R45412.8	—	12.80	0.5039	76.0	124.0	45.0	14.00
R45413.0	—	13.00	0.5118	76.0	124.0	45.0	14.00
R45433/64	33/64	13.10	0.5156	76.0	124.0	45.0	14.00
R45417/32	17/32	13.49	0.5313	76.0	124.0	45.0	14.00
R45413.5	—	13.50	0.5315	76.0	124.0	45.0	14.00
R45413.8	—	13.80	0.5433	76.0	124.0	45.0	14.00
R45435/64	35/64	13.89	0.5469	76.0	124.0	45.0	14.00
R45414.0	—	14.00	0.5512	76.0	124.0	45.0	14.00
R45414.25	—	14.25	0.5610	82.0	133.0	48.0	16.00
R4549/16	9/16	14.29	0.5625	82.0	133.0	48.0	16.00
R45414.5	—	14.50	0.5709	82.0	133.0	48.0	16.00
R45437/64	37/64	14.68	0.5781	82.0	133.0	48.0	16.00
R45414.8	—	14.80	0.5827	82.0	133.0	48.0	16.00
R45415.0	—	15.00	0.5906	82.0	133.0	48.0	16.00
R45419/32	19/32	15.08	0.5938	82.0	133.0	48.0	16.00
R45415.1	—	15.10	0.5945	82.0	133.0	48.0	16.00
R45439/64	39/64	15.48	0.6094	82.0	133.0	48.0	16.00
R45415.5	—	15.50	0.6102	82.0	133.0	48.0	16.00
R45415.8	—	15.80	0.6220	82.0	133.0	48.0	16.00
R4545/8	5/8	15.88	0.6250	82.0	133.0	48.0	16.00
R45416.0	—	16.00	0.6299	82.0	133.0	48.0	16.00
R45441/64	41/64	16.27	0.6406	91.0	143.0	48.0	18.00
R45416.5	—	16.50	0.6496	91.0	143.0	48.0	18.00
R45421/32	21/32	16.67	0.6563	91.0	143.0	48.0	18.00
R45417.0	—	17.00	0.6693	91.0	143.0	48.0	18.00
R45443/64	43/64	17.07	0.6720	91.0	143.0	48.0	18.00
R45411/16	11/16	17.46	0.6874	91.0	143.0	48.0	18.00
R45417.5	—	17.50	0.6890	91.0	143.0	48.0	18.00
R45417.8	—	17.80	0.7008	91.0	143.0	48.0	18.00
R45445/64	45/64	17.86	0.7031	91.0	143.0	48.0	18.00
R45418.0	—	18.00	0.7087	91.0	143.0	48.0	18.00
R45423/32	23/32	18.26	0.7189	99.0	153.0	50.0	20.00
R45418.5	—	18.50	0.7283	99.0	153.0	50.0	20.00
R45447/64	47/64	18.65	0.7343	99.0	153.0	50.0	20.00
R45419.0	—	19.00	0.7480	99.0	153.0	50.0	20.00
R4543/4	3/4	19.05	0.7500	99.0	153.0	50.0	20.00
R45419.5	—	19.50	0.7677	99.0	153.0	50.0	20.00
R45419.8	—	19.80	0.7795	99.0	153.0	50.0	20.00
R45420.0	—	20.00	0.7874	99.0	153.0	50.0	20.00

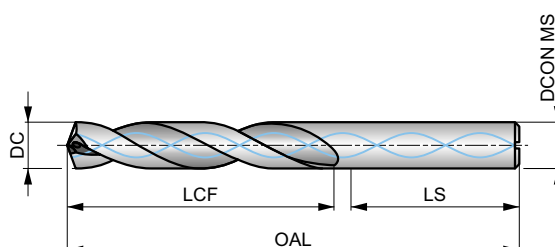
R453



FORCE X solid hårdmetal 5XD bor med indvendig kølemiddeltilførsel, TiAlN belagt

Højtydende bor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og tilspændninger (H9 hultolerance). Selvcenterende 140 °, 4-facets spidspunkt og CTW-skærkonstruktion for forbedret gennemtrængningshastighed. Kølemiddelhuller til forbedring af spånevakuering. TiAlN-belægning øger overfladens hårdhed og forbedrer værktøjets levetid.

FORCE X



HM	DIN 6537L	5xD
140°	TiAlN	DIN 6535HA
CTW	DC m7	

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1 ■ 170 V	P1.2 ■ 190 V	P1.3 ■ 197 V	P2.1 ■ 145 V	P2.2 ■ 128 V	P2.3 ■ 113 V	P3.1 ■ 126 V	P3.2 ■ 102 V	P3.3 ■ 86 V	P4.1 ■ 75 V	P4.2 ■ 64 V	P4.3 ■ 52 U	M1.1 ■ 71 V	M1.2 ■ 61 V
M2.1 ■ 64 V	M2.2 ■ 52 V	M2.3 ■ 44 U	M3.1 ■ 39 V	M3.2 ■ 33 V	M3.3 ■ 30 V	M4.1 ■ 29 U	M4.2 ■ 25 U	K1.1 ■ 105 W	K1.2 ■ 77 W	K1.3 ■ 58 W	K2.1 ■ 93 V	K2.2 ■ 76 V	K2.3 ■ 61 V
K3.1 ■ 83 V	K3.2 ■ 64 V	K3.3 ■ 51 V	K4.1 ■ 77 V	K4.2 ■ 58 V	K4.3 ■ 43 V	K4.4 ■ 36 V	K4.5 ■ 30 V	K5.1 ■ 86 V	K5.2 ■ 66 V	K5.3 ■ 50 V	N1.1 ■ 238 W	N1.2 ■ 179 W	N1.3 ■ 119 W
N2.1 ■ 293 V	N2.2 ■ 263 V	N2.3 ■ 190 V	N3.1 ■ 354 W	N3.2 ■ 209 W	N3.3 ■ 105 W	S1.1 ■ 52 V	S1.2 ■ 43 V	S1.3 ■ 38 U	H1.1 ■ 53 U	H2.1 ■ 31 U	H2.2 ■ 29 U	H3.1 ■ 35 U	H3.2 ■ 29 U

DCON MS tolerance h6.

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	LS (mm)	DCON MS (mm)
R4533.0	—	3.00	0.1181	28.0	66.0	36.0	6.00
R4533.1	—	3.10	0.1220	28.0	66.0	36.0	6.00
R4531/8	1/8	3.18	0.1250	28.0	66.0	36.0	6.00
R4533.2	—	3.20	0.1260	28.0	66.0	36.0	6.00
R453N30	N30	3.26	0.1283	28.0	66.0	36.0	6.00
R4533.3	—	3.30	0.1299	28.0	66.0	36.0	6.00
R4533.4	—	3.40	0.1339	28.0	66.0	36.0	6.00
R453N29	N29	3.45	0.1360	28.0	66.0	36.0	6.00
R4533.5	—	3.50	0.1378	28.0	66.0	36.0	6.00
R453N28	N28	3.57	0.1406	28.0	66.0	36.0	6.00
R4539/64	9/64	3.57	0.1406	28.0	66.0	36.0	6.00
R4533.6	—	3.60	0.1417	28.0	66.0	36.0	6.00
R453N27	N27	3.66	0.1441	28.0	66.0	36.0	6.00
R4533.7	—	3.70	0.1457	28.0	66.0	36.0	6.00
R453N26	N26	3.73	0.1469	36.0	74.0	36.0	6.00
R453N25	N25	3.80	0.1496	36.0	74.0	36.0	6.00
R4533.8	—	3.80	0.1496	36.0	74.0	36.0	6.00
R453N24	N24	3.86	0.1520	36.0	74.0	36.0	6.00
R4533.9	—	3.90	0.1535	36.0	74.0	36.0	6.00
R453N23	N23	3.91	0.1539	36.0	74.0	36.0	6.00
R4535/32	5/32	3.97	0.1563	36.0	74.0	36.0	6.00
R453N22	N22	3.99	0.1571	36.0	74.0	36.0	6.00
R4534.0	—	4.00	0.1575	36.0	74.0	36.0	6.00
R453N21	N21	4.04	0.1591	36.0	74.0	36.0	6.00
R4534.05	—	4.05	0.1594	36.0	74.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R453N20	N20	4.09	0.1610	36.0	74.0	36.0	6.00
R4534.1	—	4.10	0.1614	36.0	74.0	36.0	6.00
R4534.2	—	4.20	0.1654	36.0	74.0	36.0	6.00
R453N19	N19	4.22	0.1661	36.0	74.0	36.0	6.00
R4534.3	—	4.30	0.1693	36.0	74.0	36.0	6.00
R453N18	N18	4.31	0.1697	36.0	74.0	36.0	6.00
R45311/64	11/64	4.37	0.1719	36.0	74.0	36.0	6.00
R453N17	N17	4.39	0.1728	36.0	74.0	36.0	6.00
R4534.4	—	4.40	0.1732	36.0	74.0	36.0	6.00
R4534.5	—	4.50	0.1772	36.0	74.0	36.0	6.00
R453N16	N16	4.50	0.1772	36.0	74.0	36.0	6.00
R453N15	N15	4.57	0.1799	36.0	74.0	36.0	6.00
R4534.6	—	4.60	0.1811	36.0	74.0	36.0	6.00
R453N14	N14	4.62	0.1819	36.0	74.0	36.0	6.00
R453N13	N13	4.70	0.1850	36.0	74.0	36.0	6.00
R4534.7	—	4.70	0.1850	36.0	74.0	36.0	6.00
R4533/16	3/16	4.76	0.1875	44.0	82.0	36.0	6.00
R4534.8	—	4.80	0.1890	44.0	82.0	36.0	6.00
R453N12	N12	4.80	0.1890	44.0	82.0	36.0	6.00
R453N11	N11	4.85	0.1909	44.0	82.0	36.0	6.00
R4534.9	—	4.90	0.1929	44.0	82.0	36.0	6.00
R453N10	N10	4.92	0.1937	44.0	82.0	36.0	6.00
R453N9	N9	4.98	0.1961	44.0	82.0	36.0	6.00
R4535.0	—	5.00	0.1969	44.0	82.0	36.0	6.00
R4535.05	—	5.05	0.1988	44.0	82.0	36.0	6.00
R453N8	N8	5.06	0.1992	44.0	82.0	36.0	6.00
R4535.1	—	5.10	0.2008	44.0	82.0	36.0	6.00
R453N7	N7	5.11	0.2010	44.0	82.0	36.0	6.00
R45313/64	13/64	5.16	0.2031	44.0	82.0	36.0	6.00
R453N6	N6	5.18	0.2039	44.0	82.0	36.0	6.00
R4535.2	—	5.20	0.2047	44.0	82.0	36.0	6.00
R453N5	N5	5.22	0.2055	44.0	82.0	36.0	6.00
R4535.3	—	5.30	0.2087	44.0	82.0	36.0	6.00
R453N4	N4	5.31	0.2091	44.0	82.0	36.0	6.00
R4535.4	—	5.40	0.2126	44.0	82.0	36.0	6.00
R453N3	N3	5.41	0.2130	44.0	82.0	36.0	6.00
R4535.5	—	5.50	0.2165	44.0	82.0	36.0	6.00
R4537/32	7/32	5.56	0.2188	44.0	82.0	36.0	6.00
R4535.6	—	5.60	0.2205	44.0	82.0	36.0	6.00
R453N2	N2	5.61	0.2209	44.0	82.0	36.0	6.00
R4535.7	—	5.70	0.2244	44.0	82.0	36.0	6.00
R453N1	N1	5.79	0.2280	44.0	82.0	36.0	6.00
R4535.8	—	5.80	0.2283	44.0	82.0	36.0	6.00
R4535.9	—	5.90	0.2323	44.0	82.0	36.0	6.00
R453A	A	5.94	0.2339	44.0	82.0	36.0	6.00
R45315/64	15/64	5.95	0.2344	44.0	82.0	36.0	6.00
R4536.0	—	6.00	0.2362	44.0	82.0	36.0	6.00
R453B	B	6.05	0.2380	53.0	91.0	36.0	8.00
R4536.05	—	6.05	0.2382	53.0	91.0	36.0	8.00
R4536.1	—	6.10	0.2402	53.0	91.0	36.0	8.00
R453C	C	6.15	0.2421	53.0	91.0	36.0	8.00
R4536.2	—	6.20	0.2441	53.0	91.0	36.0	8.00
R453D	D	6.25	0.2461	53.0	91.0	36.0	8.00
R4536.3	—	6.30	0.2480	53.0	91.0	36.0	8.00
R4531/4	1/4	6.35	0.2500	53.0	91.0	36.0	8.00
R453E	E	6.35	0.2500	53.0	91.0	36.0	8.00
R4536.4	—	6.40	0.2520	53.0	91.0	36.0	8.00
R4536.5	—	6.50	0.2559	53.0	91.0	36.0	8.00
R453F	F	6.53	0.2571	53.0	91.0	36.0	8.00
R4536.6	—	6.60	0.2598	53.0	91.0	36.0	8.00
R453G	G	6.63	0.2610	53.0	91.0	36.0	8.00
R4536.7	—	6.70	0.2638	53.0	91.0	36.0	8.00
R45317/64	17/64	6.75	0.2656	53.0	91.0	36.0	8.00
R453H	H	6.76	0.2661	53.0	91.0	36.0	8.00
R4536.8	—	6.80	0.2677	53.0	91.0	36.0	8.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R4536.9	—	6.90	0.2717	53.0	91.0	36.0	8.00
R453I	I	6.91	0.2720	53.0	91.0	36.0	8.00
R4537.0	—	7.00	0.2756	53.0	91.0	36.0	8.00
R453J	J	7.04	0.2772	53.0	91.0	36.0	8.00
R4537.1	—	7.10	0.2795	53.0	91.0	36.0	8.00
R453K	K	7.14	0.2811	53.0	91.0	36.0	8.00
R4539/32	9/32	7.14	0.2813	53.0	91.0	36.0	8.00
R4537.2	—	7.20	0.2835	53.0	91.0	36.0	8.00
R4537.3	—	7.30	0.2874	53.0	91.0	36.0	8.00
R453L	L	7.37	0.2902	53.0	91.0	36.0	8.00
R4537.4	—	7.40	0.2913	53.0	91.0	36.0	8.00
R453M	M	7.49	0.2949	53.0	91.0	36.0	8.00
R4537.5	—	7.50	0.2953	53.0	91.0	36.0	8.00
R45319/64	19/64	7.54	0.2969	53.0	91.0	36.0	8.00
R4537.6	—	7.60	0.2992	53.0	91.0	36.0	8.00
R453N	N	7.67	0.3020	53.0	91.0	36.0	8.00
R4537.7	—	7.70	0.3031	53.0	91.0	36.0	8.00
R4537.8	—	7.80	0.3071	53.0	91.0	36.0	8.00
R4537.9	—	7.90	0.3110	53.0	91.0	36.0	8.00
R4535/16	5/16	7.94	0.3125	53.0	91.0	36.0	8.00
R4538.0	—	8.00	0.3150	53.0	91.0	36.0	8.00
R4530	O	8.03	0.3161	61.0	103.0	40.0	10.00
R4538.05	—	8.05	0.3169	61.0	103.0	40.0	10.00
R4538.1	—	8.10	0.3189	61.0	103.0	40.0	10.00
R4538.2	—	8.20	0.3228	61.0	103.0	40.0	10.00
R453P	P	8.20	0.3228	61.0	103.0	40.0	10.00
R4538.3	—	8.30	0.3268	61.0	103.0	40.0	10.00
R45321/64	21/64	8.33	0.3281	61.0	103.0	40.0	10.00
R4538.4	—	8.40	0.3307	61.0	103.0	40.0	10.00
R453Q	Q	8.43	0.3319	61.0	103.0	40.0	10.00
R4538.5	—	8.50	0.3346	61.0	103.0	40.0	10.00
R4538.6	—	8.60	0.3386	61.0	103.0	40.0	10.00
R453R	R	8.61	0.3390	61.0	103.0	40.0	10.00
R4538.7	—	8.70	0.3425	61.0	103.0	40.0	10.00
R45311/32	11/32	8.73	0.3438	61.0	103.0	40.0	10.00
R4538.8	—	8.80	0.3465	61.0	103.0	40.0	10.00
R453S	S	8.84	0.3480	61.0	103.0	40.0	10.00
R4538.9	—	8.90	0.3504	61.0	103.0	40.0	10.00
R4539.0	—	9.00	0.3543	61.0	103.0	40.0	10.00
R453T	T	9.09	0.3579	61.0	103.0	40.0	10.00
R4539.1	—	9.10	0.3583	61.0	103.0	40.0	10.00
R45323/64	23/64	9.13	0.3594	61.0	103.0	40.0	10.00
R4539.2	—	9.20	0.3622	61.0	103.0	40.0	10.00
R4539.3	—	9.30	0.3661	61.0	103.0	40.0	10.00
R453U	U	9.35	0.3681	61.0	103.0	40.0	10.00
R4539.4	—	9.40	0.3701	61.0	103.0	40.0	10.00
R4539.5	—	9.50	0.3740	61.0	103.0	40.0	10.00
R4533/8	3/8	9.53	0.3750	61.0	103.0	40.0	10.00
R453V	V	9.58	0.3772	61.0	103.0	40.0	10.00
R4539.6	—	9.60	0.3780	61.0	103.0	40.0	10.00
R4539.7	—	9.70	0.3819	61.0	103.0	40.0	10.00
R4539.8	—	9.80	0.3858	61.0	103.0	40.0	10.00
R453W	W	9.80	0.3858	61.0	103.0	40.0	10.00
R4539.9	—	9.90	0.3898	61.0	103.0	40.0	10.00
R45325/64	25/64	9.92	0.3906	61.0	103.0	40.0	10.00
R45310.0	—	10.00	0.3937	61.0	103.0	40.0	10.00
R45310.05	—	10.05	0.3957	70.0	118.0	45.0	12.00
R453X	X	10.08	0.3969	70.0	118.0	45.0	12.00
R45310.1	—	10.10	0.3976	70.0	118.0	45.0	12.00
R45310.2	—	10.20	0.4016	70.0	118.0	45.0	12.00
R453Y	Y	10.26	0.4039	70.0	118.0	45.0	12.00
R45310.3	—	10.30	0.4055	70.0	118.0	45.0	12.00
R45313/32	13/32	10.32	0.4063	70.0	118.0	45.0	12.00
R45310.4	—	10.40	0.4094	70.0	118.0	45.0	12.00
R453Z	Z	10.49	0.4130	70.0	118.0	45.0	12.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R45310.5	—	10.50	0.4134	70.0	118.0	45.0	12.00
R45310.6	—	10.60	0.4173	70.0	118.0	45.0	12.00
R45327/64	27/64	10.72	0.4219	70.0	118.0	45.0	12.00
R45310.8	—	10.80	0.4252	70.0	118.0	45.0	12.00
R45311.0	—	11.00	0.4331	70.0	118.0	45.0	12.00
R4537/16	7/16	11.11	0.4375	70.0	118.0	45.0	12.00
R45311.2	—	11.20	0.4409	70.0	118.0	45.0	12.00
R45311.3	—	11.30	0.4449	70.0	118.0	45.0	12.00
R45311.4	—	11.40	0.4488	70.0	118.0	45.0	12.00
R45311.5	—	11.50	0.4528	70.0	118.0	45.0	12.00
R45329/64	29/64	11.51	0.4531	70.0	118.0	45.0	12.00
R45311.6	—	11.60	0.4567	70.0	118.0	45.0	12.00
R45311.8	—	11.80	0.4646	70.0	118.0	45.0	12.00
R45315/32	15/32	11.91	0.4688	70.0	118.0	45.0	12.00
R45312.0	—	12.00	0.4724	70.0	118.0	45.0	12.00
R45312.05	—	12.05	0.4744	76.0	124.0	45.0	14.00
R45312.2	—	12.20	0.4803	76.0	124.0	45.0	14.00
R45331/64	31/64	12.30	0.4844	76.0	124.0	45.0	14.00
R45312.5	—	12.50	0.4921	76.0	124.0	45.0	14.00
R45312.7	—	12.70	0.5000	76.0	124.0	45.0	14.00
R4531/2	1/2	12.70	0.5000	76.0	124.0	45.0	14.00
R45312.8	—	12.80	0.5039	76.0	124.0	45.0	14.00
R45313.0	—	13.00	0.5118	76.0	124.0	45.0	14.00
R45333/64	33/64	13.10	0.5156	76.0	124.0	45.0	14.00
R45313.3	—	13.30	0.5236	76.0	124.0	45.0	14.00
R45317/32	17/32	13.49	0.5313	76.0	124.0	45.0	14.00
R45313.5	—	13.50	0.5315	76.0	124.0	45.0	14.00
R45313.8	—	13.80	0.5433	76.0	124.0	45.0	14.00
R45335/64	35/64	13.89	0.5469	76.0	124.0	45.0	14.00
R45314.0	—	14.00	0.5512	76.0	124.0	45.0	14.00
R45314.25	—	14.25	0.5610	82.0	133.0	48.0	16.00
R4539/16	9/16	14.29	0.5625	82.0	133.0	48.0	16.00
R45314.5	—	14.50	0.5709	82.0	133.0	48.0	16.00
R45337/64	37/64	14.68	0.5781	82.0	133.0	48.0	16.00
R45314.8	—	14.80	0.5827	82.0	133.0	48.0	16.00
R45315.0	—	15.00	0.5906	82.0	133.0	48.0	16.00
R45319/32	19/32	15.08	0.5938	82.0	133.0	48.0	16.00
R45315.1	—	15.10	0.5945	82.0	133.0	48.0	16.00
R45315.3	—	15.30	0.6024	82.0	133.0	48.0	16.00
R45339/64	39/64	15.48	0.6094	82.0	133.0	48.0	16.00
R45315.5	—	15.50	0.6102	82.0	133.0	48.0	16.00
R45315.8	—	15.80	0.6220	82.0	133.0	48.0	16.00
R4535/8	5/8	15.88	0.6250	82.0	133.0	48.0	16.00
R45316.0	—	16.00	0.6299	82.0	133.0	48.0	16.00
R45341/64	41/64	16.27	0.6406	91.0	143.0	48.0	18.00
R45316.5	—	16.50	0.6496	91.0	143.0	48.0	18.00
R45321/32	21/32	16.67	0.6563	91.0	143.0	48.0	18.00
R45317.0	—	17.00	0.6693	91.0	143.0	48.0	18.00
R45343/64	43/64	17.07	0.6720	91.0	143.0	48.0	18.00
R45311/16	11/16	17.46	0.6874	91.0	143.0	48.0	18.00
R45317.5	—	17.50	0.6890	91.0	143.0	48.0	18.00
R45317.8	—	17.80	0.7008	91.0	143.0	48.0	18.00
R45345/64	45/64	17.86	0.7031	91.0	143.0	48.0	18.00
R45318.0	—	18.00	0.7087	91.0	143.0	48.0	18.00
R45323/32	23/32	18.26	0.7189	99.0	143.0	48.0	20.00
R45318.5	—	18.50	0.7283	99.0	153.0	50.0	20.00
R45347/64	47/64	18.65	0.7343	99.0	153.0	50.0	20.00
R45319.0	—	19.00	0.7480	99.0	153.0	50.0	20.00
R4533/4	3/4	19.05	0.7500	99.0	153.0	50.0	20.00
R45319.5	—	19.50	0.7677	99.0	153.0	50.0	20.00
R45319.8	—	19.80	0.7795	99.0	153.0	50.0	20.00
R45320.0	—	20.00	0.7874	99.0	153.0	50.0	20.00

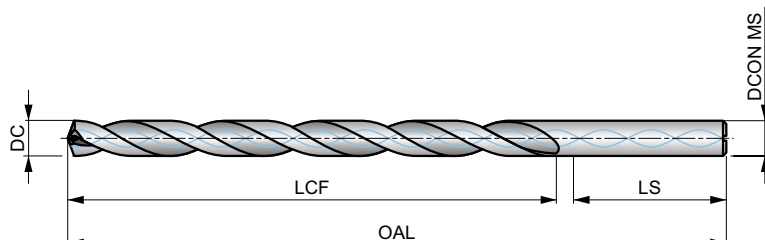
R459



FORCE X solid hårdmetal 8XD bor med indvendig kølemiddeltilførsel, TiAlN belagt

Højtydende bor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og tilspændninger (H9 hultolerance). Selvcentrerende 140 °, 4-facets spidspunkt og CTW-skærkonstruktion for forbedret gennemtrængningshastighed. Kølemiddelhuller til forbedring af spånevakuering. TiAlN-belægning øger overfladens hårdhed og forbedrer værktøjets levetid.

FORCE X



HM	DORMER	8xD
140°	TiAlN	DIN 6535HA
CTW	DC m7	

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

P1.1 ■ 143 V	P1.2 ■ 160 V	P1.3 ■ 166 V	P2.1 ■ 122 V	P2.2 ■ 108 U	P2.3 ■ 95 U	P3.1 ■ 106 U	P3.2 ■ 86 U	P3.3 ■ 72 U	P4.1 ■ 63 U	P4.2 ■ 54 U	P4.3 ■ 44 T	M1.1 ■ 60 V	M1.2 ■ 51 V
M2.1 ■ 54 V	M2.2 ■ 44 V	M2.3 ■ 37 U	M3.1 ■ 33 V	M3.2 ■ 28 V	M3.3 ■ 26 V	M4.1 ■ 24 U	M4.2 ■ 21 U	K1.1 ■ 88 W	K1.2 ■ 65 W	K1.3 ■ 49 W	K2.1 ■ 78 V	K2.2 ■ 64 V	K2.3 ■ 51 V
K3.1 ■ 70 V	K3.2 ■ 54 V	K3.3 ■ 43 V	K4.1 ■ 65 V	K4.2 ■ 49 V	K4.3 ■ 36 V	K4.4 ■ 30 V	K4.5 ■ 26 V	K5.1 ■ 73 V	K5.2 ■ 55 V	K5.3 ■ 42 V	N1.1 ■ 200 W	N1.2 ■ 150 W	N1.3 ■ 100 W
N2.1 ■ 246 V	N2.2 ■ 222 V	N2.3 ■ 160 V	N3.1 ■ 298 V	N3.2 ■ 176 V	N3.3 ■ 88 V								

DCON MS tolerance h6.

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	LS (mm)	DCON MS (mm)
R4593.0	—	3.00	0.1181	37.0	79.0	36.0	6.00
R4593.1	—	3.10	0.1220	37.0	79.0	36.0	6.00
R4591/8	1/8	3.18	0.1250	37.0	79.0	36.0	6.00
R4593.2	—	3.20	0.1260	37.0	79.0	36.0	6.00
R4593.3	—	3.30	0.1299	37.0	79.0	36.0	6.00
R4593.4	—	3.40	0.1339	37.0	79.0	36.0	6.00
R4593.5	—	3.50	0.1378	37.0	79.0	36.0	6.00
R4599/64	9/64	3.57	0.1406	37.0	79.0	36.0	6.00
R4593.6	—	3.60	0.1417	37.0	79.0	36.0	6.00
R4593.7	—	3.70	0.1457	37.0	79.0	36.0	6.00
R4593.8	—	3.80	0.1496	48.0	90.0	36.0	6.00
R4593.9	—	3.90	0.1535	48.0	90.0	36.0	6.00
R4595/32	5/32	3.97	0.1563	48.0	90.0	36.0	6.00
R4594.0	—	4.00	0.1575	48.0	90.0	36.0	6.00
R4594.1	—	4.10	0.1614	48.0	90.0	36.0	6.00
R4594.2	—	4.20	0.1654	48.0	90.0	36.0	6.00
R4594.3	—	4.30	0.1693	48.0	90.0	36.0	6.00
R45911/64	11/64	4.37	0.1719	48.0	90.0	36.0	6.00
R4594.4	—	4.40	0.1732	48.0	90.0	36.0	6.00
R4594.5	—	4.50	0.1772	48.0	90.0	36.0	6.00
R4594.6	—	4.60	0.1811	48.0	90.0	36.0	6.00
R4594.7	—	4.70	0.1850	62.0	104.0	36.0	6.00
R4593/16	3/16	4.76	0.1875	62.0	104.0	36.0	6.00
R4594.8	—	4.80	0.1890	62.0	104.0	36.0	6.00
R4594.9	—	4.90	0.1929	62.0	104.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R4595.0	—	5.00	0.1969	62.0	104.0	36.0	6.00
R4595.1	—	5.10	0.2008	62.0	104.0	36.0	6.00
R45913/64	13/64	5.16	0.2031	62.0	104.0	36.0	6.00
R4595.2	—	5.20	0.2047	62.0	104.0	36.0	6.00
R4595.3	—	5.30	0.2087	62.0	104.0	36.0	6.00
R4595.4	—	5.40	0.2126	62.0	104.0	36.0	6.00
R4595.5	—	5.50	0.2165	62.0	104.0	36.0	6.00
R4597/32	7/32	5.56	0.2188	62.0	104.0	36.0	6.00
R4595.6	—	5.60	0.2205	62.0	104.0	36.0	6.00
R4595.7	—	5.70	0.2244	62.0	104.0	36.0	6.00
R4595.8	—	5.80	0.2283	62.0	104.0	36.0	6.00
R4595.9	—	5.90	0.2323	62.0	104.0	36.0	6.00
R45915/64	15/64	5.95	0.2344	62.0	104.0	36.0	6.00
R4596.0	—	6.00	0.2362	62.0	104.0	36.0	6.00
R4596.1	—	6.10	0.2402	84.0	126.0	36.0	8.00
R4596.2	—	6.20	0.2441	84.0	126.0	36.0	8.00
R4596.3	—	6.30	0.2480	84.0	126.0	36.0	8.00
R4591/4	1/4	6.35	0.2500	84.0	126.0	36.0	8.00
R4596.4	—	6.40	0.2520	84.0	126.0	36.0	8.00
R4596.5	—	6.50	0.2559	84.0	126.0	36.0	8.00
R4596.6	—	6.60	0.2598	84.0	126.0	36.0	8.00
R4596.7	—	6.70	0.2638	84.0	126.0	36.0	8.00
R45917/64	17/64	6.75	0.2656	84.0	126.0	36.0	8.00
R4596.8	—	6.80	0.2677	84.0	126.0	36.0	8.00
R4596.9	—	6.90	0.2717	84.0	126.0	36.0	8.00
R4597.0	—	7.00	0.2756	84.0	126.0	36.0	8.00
R4597.1	—	7.10	0.2795	84.0	126.0	36.0	8.00
R4599/32	9/32	7.14	0.2813	84.0	126.0	36.0	8.00
R4597.2	—	7.20	0.2835	84.0	126.0	36.0	8.00
R4597.3	—	7.30	0.2874	84.0	126.0	36.0	8.00
R4597.4	—	7.40	0.2913	84.0	126.0	36.0	8.00
R4597.5	—	7.50	0.2953	84.0	126.0	36.0	8.00
R45919/64	19/64	7.54	0.2969	84.0	126.0	36.0	8.00
R4597.6	—	7.60	0.2992	84.0	126.0	36.0	8.00
R4597.7	—	7.70	0.3031	84.0	126.0	36.0	8.00
R4597.8	—	7.80	0.3071	84.0	126.0	36.0	8.00
R4597.9	—	7.90	0.3110	84.0	126.0	36.0	8.00
R4595/16	5/16	7.94	0.3125	84.0	126.0	36.0	8.00
R4598.0	—	8.00	0.3150	84.0	126.0	36.0	8.00
R4598.1	—	8.10	0.3189	106.0	152.0	40.0	10.00
R4598.2	—	8.20	0.3228	106.0	152.0	40.0	10.00
R4598.3	—	8.30	0.3268	106.0	152.0	40.0	10.00
R45921/64	21/64	8.33	0.3281	106.0	152.0	40.0	10.00
R4598.4	—	8.40	0.3307	106.0	152.0	40.0	10.00
R4598.5	—	8.50	0.3346	106.0	152.0	40.0	10.00
R4598.6	—	8.60	0.3386	106.0	152.0	40.0	10.00
R4598.7	—	8.70	0.3425	106.0	152.0	40.0	10.00
R45911/32	11/32	8.73	0.3438	106.0	152.0	40.0	10.00
R4598.8	—	8.80	0.3465	106.0	152.0	40.0	10.00
R4598.9	—	8.90	0.3504	106.0	152.0	40.0	10.00
R4599.0	—	9.00	0.3543	106.0	152.0	40.0	10.00
R4599.1	—	9.10	0.3583	106.0	152.0	40.0	10.00
R45923/64	23/64	9.13	0.3594	106.0	152.0	40.0	10.00
R4599.2	—	9.20	0.3622	106.0	152.0	40.0	10.00
R4599.3	—	9.30	0.3661	106.0	152.0	40.0	10.00
R4599.4	—	9.40	0.3701	106.0	152.0	40.0	10.00
R4599.5	—	9.50	0.3740	106.0	152.0	40.0	10.00
R4593/8	3/8	9.53	0.3750	106.0	152.0	40.0	10.00
R4599.6	—	9.60	0.3780	106.0	152.0	40.0	10.00
R4599.7	—	9.70	0.3819	106.0	152.0	40.0	10.00
R4599.8	—	9.80	0.3858	106.0	152.0	40.0	10.00
R4599.9	—	9.90	0.3898	106.0	152.0	40.0	10.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R45925/64	25/64	9.92	0.3906	106.0	152.0	40.0	10.00
R45910.0	—	10.00	0.3937	106.0	152.0	40.0	10.00
R45910.2	—	10.20	0.4016	128.0	180.0	45.0	12.00
R45910.3	—	10.30	0.4055	128.0	180.0	45.0	12.00
R45913/32	13/32	10.32	0.4063	128.0	180.0	45.0	12.00
R45910.4	—	10.40	0.4094	128.0	180.0	45.0	12.00
R45910.5	—	10.50	0.4134	128.0	180.0	45.0	12.00
R45927/64	27/64	10.72	0.4219	128.0	180.0	45.0	12.00
R45910.8	—	10.80	0.4252	128.0	180.0	45.0	12.00
R45911.0	—	11.00	0.4331	128.0	180.0	45.0	12.00
R4597/16	7/16	11.11	0.4375	128.0	180.0	45.0	12.00
R45911.2	—	11.20	0.4409	128.0	180.0	45.0	12.00
R45911.3	—	11.30	0.4449	128.0	180.0	45.0	12.00
R45911.5	—	11.50	0.4528	128.0	180.0	45.0	12.00
R45929/64	29/64	11.51	0.4531	128.0	180.0	45.0	12.00
R45911.8	—	11.80	0.4646	128.0	180.0	45.0	12.00
R45915/32	15/32	11.91	0.4688	128.0	180.0	45.0	12.00
R45912.0	—	12.00	0.4724	128.0	180.0	45.0	12.00
R45912.2	—	12.20	0.4803	151.0	202.0	48.0	14.00
R45931/64	31/64	12.30	0.4844	151.0	202.0	48.0	14.00
R45912.5	—	12.50	0.4921	151.0	202.0	48.0	14.00
R4591/2	1/2	12.70	0.5000	151.0	202.0	48.0	14.00
R45912.8	—	12.80	0.5039	151.0	202.0	48.0	14.00
R45913.0	—	13.00	0.5118	151.0	202.0	48.0	14.00
R45933/64	33/64	13.10	0.5156	151.0	202.0	48.0	14.00
R45917/32	17/32	13.49	0.5313	151.0	202.0	48.0	14.00
R45913.5	—	13.50	0.5315	151.0	202.0	48.0	14.00
R45935/64	35/64	13.89	0.5469	151.0	202.0	48.0	14.00
R45914.0	—	14.00	0.5512	151.0	202.0	48.0	14.00
R45914.25	—	14.25	0.5610	172.0	227.0	48.0	16.00
R4599/16	9/16	14.29	0.5625	172.0	227.0	48.0	16.00
R45914.5	—	14.50	0.5709	172.0	227.0	48.0	16.00
R45937/64	37/64	14.68	0.5781	172.0	227.0	48.0	16.00
R45915.0	—	15.00	0.5906	172.0	227.0	48.0	16.00
R45919/32	19/32	15.08	0.5938	172.0	227.0	48.0	16.00
R45915.1	—	15.10	0.5945	172.0	227.0	48.0	16.00
R45939/64	39/64	15.48	0.6094	172.0	227.0	48.0	16.00
R45915.5	—	15.50	0.6102	172.0	227.0	48.0	16.00
R4595/8	5/8	15.88	0.6250	172.0	227.0	48.0	16.00
R45916.0	—	16.00	0.6299	172.0	227.0	48.0	16.00

R467

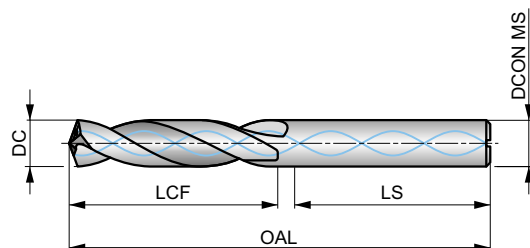
DORMER



FORCE M massiv hårdmetal 3XD bor med indvendig kølemiddeltilførsel. TiAlN Belagt

Højtstående bor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og tilspændninger (H9-hultolerance i rustfrit stål og varmebestandige materialer). En spidspunkt på 140°, 4 facetter og CTW-skærkonstruktion. Kølemiddelhuller forbedrer spånevakuering. TiAlN-belægning øger overfladens hårdhed og forbedrer værktøjets levetid.

FORCE M



HM	DIN 6537K	3xD
140°	TIAlN	DIN 6535HA
CTW	DC m7	

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

M1.1 ■ 117 G	M1.2 ■ 99 G	M2.1 ■ 104 G	M2.2 ■ 85 G	M2.3 ■ 71 E	M3.1 ■ 87 G	M3.2 ■ 75 G	M3.3 ■ 68 F	M4.1 ■ 60 F	M4.2 ■ 52 E	S1.1 ■ 55 V	S1.2 ■ 45 V	S1.3 ■ 40 U	S2.1 ■ 60 U
S2.2 ■ 56 U	S3.1 ■ 45 U	S3.2 ■ 40 U	S4.1 ■ 35 U	S4.2 ■ 32 U									

DCON MS tolerance h6.

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	LS (mm)	DCON MS (mm)
R4673.0	—	3.00	0.1181	20.0	62.0	36.0	6.00
R4673.1	—	3.10	0.1220	20.0	62.0	36.0	6.00
R4671/8	1/8	3.18	0.1250	20.0	62.0	36.0	6.00
R4673.2	—	3.20	0.1260	20.0	62.0	36.0	6.00
R4673.3	—	3.30	0.1299	20.0	62.0	36.0	6.00
R4673.4	—	3.40	0.1339	20.0	62.0	36.0	6.00
R467N29	N29	3.45	0.1360	20.0	62.0	36.0	6.00
R4673.5	—	3.50	0.1378	20.0	62.0	36.0	6.00
R4679/64	9/64	3.57	0.1406	20.0	62.0	36.0	6.00
R4673.6	—	3.60	0.1417	20.0	62.0	36.0	6.00
R4673.7	—	3.70	0.1457	20.0	62.0	36.0	6.00
R4673.8	—	3.80	0.1496	24.0	66.0	36.0	6.00
R4673.9	—	3.90	0.1535	24.0	66.0	36.0	6.00
R4675/32	5/32	3.97	0.1563	24.0	66.0	36.0	6.00
R4674.0	—	4.00	0.1575	24.0	66.0	36.0	6.00
R4674.05	—	4.05	0.1594	24.0	66.0	36.0	6.00
R4674.1	—	4.10	0.1614	24.0	66.0	36.0	6.00
R4674.2	—	4.20	0.1654	24.0	66.0	36.0	6.00
R4674.3	—	4.30	0.1693	24.0	66.0	36.0	6.00
R46711/64	11/64	4.37	0.1719	24.0	66.0	36.0	6.00
R4674.4	—	4.40	0.1732	24.0	66.0	36.0	6.00
R4674.5	—	4.50	0.1772	24.0	66.0	36.0	6.00
R4674.6	—	4.60	0.1811	24.0	66.0	36.0	6.00
R4674.7	—	4.70	0.1850	24.0	66.0	36.0	6.00
R4673/16	3/16	4.76	0.1875	28.0	66.0	36.0	6.00
R4674.8	—	4.80	0.1890	28.0	66.0	36.0	6.00
R4674.9	—	4.90	0.1929	28.0	66.0	36.0	6.00
R4675.0	—	5.00	0.1969	28.0	66.0	36.0	6.00
R4675.05	—	5.05	0.1988	28.0	66.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R4675.1	—	5.10	0.2008	28.0	66.0	36.0	6.00
R467N7	N7	5.11	0.2010	28.0	66.0	36.0	6.00
R46713/64	13/64	5.16	0.2031	28.0	66.0	36.0	6.00
R4675.2	—	5.20	0.2047	28.0	66.0	36.0	6.00
R467N5	N5	5.22	0.2055	28.0	66.0	36.0	6.00
R4675.3	—	5.30	0.2087	28.0	66.0	36.0	6.00
R4675.4	—	5.40	0.2126	28.0	66.0	36.0	6.00
R4675.5	—	5.50	0.2165	28.0	66.0	36.0	6.00
R4677/32	7/32	5.56	0.2188	28.0	66.0	36.0	6.00
R4675.6	—	5.60	0.2205	28.0	66.0	36.0	6.00
R4675.7	—	5.70	0.2244	28.0	66.0	36.0	6.00
R4675.8	—	5.80	0.2283	28.0	66.0	36.0	6.00
R4675.9	—	5.90	0.2323	28.0	66.0	36.0	6.00
R46715/64	15/64	5.95	0.2344	28.0	66.0	36.0	6.00
R4676.0	—	6.00	0.2362	28.0	66.0	36.0	6.00
R4676.05	—	6.05	0.2382	34.0	79.0	36.0	8.00
R4676.1	—	6.10	0.2402	34.0	79.0	36.0	8.00
R4676.2	—	6.20	0.2441	34.0	79.0	36.0	8.00
R4676.3	—	6.30	0.2480	34.0	79.0	36.0	8.00
R4671/4	1/4	6.35	0.2500	34.0	79.0	36.0	8.00
R4676.4	—	6.40	0.2520	34.0	79.0	36.0	8.00
R4676.5	—	6.50	0.2559	34.0	79.0	36.0	8.00
R4676.6	—	6.60	0.2598	34.0	79.0	36.0	8.00
R4676.7	—	6.70	0.2638	34.0	79.0	36.0	8.00
R46717/64	17/64	6.75	0.2656	34.0	79.0	36.0	8.00
R4676.8	—	6.80	0.2677	34.0	79.0	36.0	8.00
R4676.9	—	6.90	0.2717	34.0	79.0	36.0	8.00
R4677.0	—	7.00	0.2756	34.0	79.0	36.0	8.00
R4677.1	—	7.10	0.2795	41.0	79.0	36.0	8.00
R4679/32	9/32	7.14	0.2813	41.0	79.0	36.0	8.00
R4677.2	—	7.20	0.2835	41.0	79.0	36.0	8.00
R4677.3	—	7.30	0.2874	41.0	79.0	36.0	8.00
R4677.4	—	7.40	0.2913	41.0	79.0	36.0	8.00
R4677.5	—	7.50	0.2953	41.0	79.0	36.0	8.00
R46719/64	19/64	7.54	0.2969	41.0	79.0	36.0	8.00
R4677.6	—	7.60	0.2992	41.0	79.0	36.0	8.00
R4677.7	—	7.70	0.3031	41.0	79.0	36.0	8.00
R4677.8	—	7.80	0.3071	41.0	79.0	36.0	8.00
R4677.9	—	7.90	0.3110	41.0	79.0	36.0	8.00
R4675/16	5/16	7.94	0.3125	41.0	79.0	36.0	8.00
R4678.0	—	8.00	0.3150	41.0	79.0	36.0	8.00
R4678.05	—	8.05	0.3169	47.0	89.0	40.0	10.00
R4678.1	—	8.10	0.3189	47.0	89.0	40.0	10.00
R4678.2	—	8.20	0.3228	47.0	89.0	40.0	10.00
R4678.3	—	8.30	0.3268	47.0	89.0	40.0	10.00
R46721/64	21/64	8.33	0.3281	47.0	89.0	40.0	10.00
R4678.4	—	8.40	0.3307	47.0	89.0	40.0	10.00
R4678.5	—	8.50	0.3346	47.0	89.0	40.0	10.00
R4678.6	—	8.60	0.3386	47.0	89.0	40.0	10.00
R4678.7	—	8.70	0.3425	47.0	89.0	40.0	10.00
R46711/32	11/32	8.73	0.3438	47.0	89.0	40.0	10.00
R4678.8	—	8.80	0.3465	47.0	89.0	40.0	10.00
R4678.9	—	8.90	0.3504	47.0	89.0	40.0	10.00
R4679.0	—	9.00	0.3543	47.0	89.0	40.0	10.00
R4679.1	—	9.10	0.3583	47.0	89.0	40.0	10.00
R46723/64	23/64	9.13	0.3594	47.0	89.0	40.0	10.00
R4679.2	—	9.20	0.3622	47.0	89.0	40.0	10.00
R4679.3	—	9.30	0.3661	47.0	89.0	40.0	10.00
R4679.4	—	9.40	0.3701	47.0	89.0	40.0	10.00
R4679.5	—	9.50	0.3740	47.0	89.0	40.0	10.00
R4673/8	3/8	9.53	0.3750	47.0	89.0	40.0	10.00
R4679.6	—	9.60	0.3780	47.0	89.0	40.0	10.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R4679.7	—	9.70	0.3819	47.0	89.0	40.0	10.00
R4679.8	—	9.80	0.3858	47.0	89.0	40.0	10.00
R4679.9	—	9.90	0.3898	47.0	89.0	40.0	10.00
R46725/64	25/64	9.92	0.3906	47.0	89.0	40.0	10.00
R46710.0	—	10.00	0.3937	47.0	89.0	40.0	10.00
R46710.05	—	10.05	0.3957	55.0	102.0	45.0	12.00
R46710.1	—	10.10	0.3976	55.0	102.0	45.0	12.00
R46710.2	—	10.20	0.4016	55.0	102.0	45.0	12.00
R46710.3	—	10.30	0.4055	55.0	102.0	45.0	12.00
R46713/32	13/32	10.32	0.4063	55.0	102.0	45.0	12.00
R46710.4	—	10.40	0.4094	55.0	102.0	45.0	12.00
R46710.5	—	10.50	0.4134	55.0	102.0	45.0	12.00
R46710.6	—	10.60	0.4173	55.0	102.0	45.0	12.00
R46727/64	27/64	10.72	0.4219	55.0	102.0	45.0	12.00
R46710.8	—	10.80	0.4252	55.0	102.0	45.0	12.00
R46710.9	—	10.90	0.4291	55.0	102.0	45.0	12.00
R46711.0	—	11.00	0.4331	55.0	102.0	45.0	12.00
R4677/16	7/16	11.11	0.4375	55.0	102.0	45.0	12.00
R46711.2	—	11.20	0.4409	55.0	102.0	45.0	12.00
R46711.3	—	11.30	0.4449	55.0	102.0	45.0	12.00
R46711.4	—	11.40	0.4488	55.0	102.0	45.0	12.00
R46711.5	—	11.50	0.4528	55.0	102.0	45.0	12.00
R46729/64	29/64	11.51	0.4531	55.0	102.0	45.0	12.00
R46711.6	—	11.60	0.4567	55.0	102.0	45.0	12.00
R46711.8	—	11.80	0.4646	55.0	102.0	45.0	12.00
R46715/32	15/32	11.91	0.4688	55.0	102.0	45.0	12.00
R46712.0	—	12.00	0.4724	55.0	102.0	45.0	12.00
R46712.05	—	12.05	0.4744	60.0	107.0	45.0	14.00
R46712.1	—	12.10	0.4764	60.0	107.0	45.0	14.00
R46712.2	—	12.20	0.4803	60.0	107.0	45.0	14.00
R46731/64	31/64	12.30	0.4844	60.0	107.0	45.0	14.00
R46712.5	—	12.50	0.4921	60.0	107.0	45.0	14.00
R46712.7	—	12.70	0.5000	60.0	107.0	45.0	14.00
R4671/2	1/2	12.70	0.5000	60.0	107.0	45.0	14.00
R46712.8	—	12.80	0.5039	60.0	107.0	45.0	14.00
R46713.0	—	13.00	0.5118	60.0	107.0	45.0	14.00
R46733/64	33/64	13.10	0.5156	60.0	107.0	45.0	14.00
R46713.3	—	13.30	0.5236	60.0	107.0	45.0	14.00
R46717/32	17/32	13.49	0.5313	60.0	107.0	45.0	14.00
R46713.5	—	13.50	0.5315	60.0	107.0	45.0	14.00
R46713.8	—	13.80	0.5433	60.0	107.0	45.0	14.00
R46735/64	35/64	13.89	0.5469	60.0	107.0	45.0	14.00
R46714.0	—	14.00	0.5512	60.0	107.0	45.0	14.00
R46714.25	—	14.25	0.5610	65.0	115.0	48.0	16.00
R4679/16	9/16	14.29	0.5625	65.0	115.0	48.0	16.00
R46714.5	—	14.50	0.5709	65.0	115.0	48.0	16.00
R46737/64	37/64	14.68	0.5781	65.0	115.0	48.0	16.00
R46714.8	—	14.80	0.5827	65.0	115.0	48.0	16.00
R46715.0	—	15.00	0.5906	65.0	115.0	48.0	16.00
R46719/32	19/32	15.08	0.5938	65.0	115.0	48.0	16.00
R46715.1	—	15.10	0.5945	65.0	115.0	48.0	16.00
R46715.3	—	15.30	0.6024	65.0	115.0	48.0	16.00
R46739/64	39/64	15.48	0.6094	65.0	115.0	48.0	16.00
R46715.5	—	15.50	0.6102	65.0	115.0	48.0	16.00
R46715.8	—	15.80	0.6220	65.0	115.0	48.0	16.00
R4675/8	5/8	15.88	0.6250	65.0	115.0	48.0	16.00
R46716.0	—	16.00	0.6299	65.0	115.0	48.0	16.00

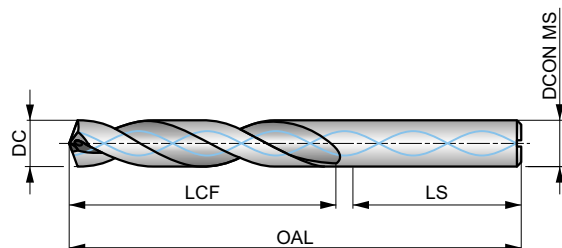
R463



FORCE M massiv hårdmetal 5XD bor med indvendig kølemiddeltilførsel. TiAIN Belagt

Højtydende bor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og tilspændinger (H9-hultolerance i rustfrit stål og varmebestandige materialer). En spidspunkt på 140 °, 4 facetter og CTW-skærkonstruktion. Kølemiddelhuller forbedrer spånevakuering. TiAIN-belægning øger overfladens hårdhed og forbedrer værktøjets levetid.

FORCE M



HM	DIN 6537L	5xD
140°	TiAIN	DIN 6535HA
CTW	DC m7	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 65.

M1.1 ■ 111 G	M1.2 ■ 94 G	M2.1 ■ 99 G	M2.2 ■ 81 G	M2.3 ■ 67 E	M3.1 ■ 83 G	M3.2 ■ 71 G	M3.3 ■ 65 F	M4.1 ■ 57 F	M4.2 ■ 49 E	S1.1 ■ 52 V	S1.2 ■ 43 V	S1.3 ■ 38 U	S2.1 ■ 57 U
S2.2 ■ 53 U	S3.1 ■ 43 U	S3.2 ■ 38 U	S4.1 ■ 33 U	S4.2 ■ 30 U									

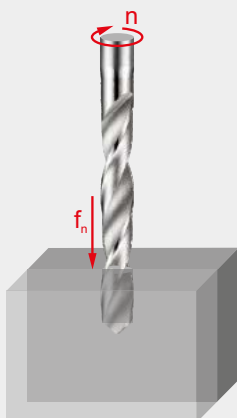
DCON MS tolerance h6.

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	LS (mm)	DCON MS (mm)
R4633.0	—	3.00	0.1181	28.0	66.0	36.0	6.00
R4633.1	—	3.10	0.1220	28.0	66.0	36.0	6.00
R4631/8	1/8	3.18	0.1250	28.0	66.0	36.0	6.00
R4633.2	—	3.20	0.1260	28.0	66.0	36.0	6.00
R4633.3	—	3.30	0.1299	28.0	66.0	36.0	6.00
R4633.4	—	3.40	0.1339	28.0	66.0	36.0	6.00
R463N29	N29	3.45	0.1360	28.0	66.0	36.0	6.00
R4633.5	—	3.50	0.1378	28.0	66.0	36.0	6.00
R4639/64	9/64	3.57	0.1406	28.0	66.0	36.0	6.00
R4633.6	—	3.60	0.1417	28.0	66.0	36.0	6.00
R4633.7	—	3.70	0.1457	28.0	66.0	36.0	6.00
R4633.8	—	3.80	0.1496	36.0	74.0	36.0	6.00
R4633.9	—	3.90	0.1535	36.0	74.0	36.0	6.00
R4635/32	5/32	3.97	0.1563	36.0	74.0	36.0	6.00
R4634.0	—	4.00	0.1575	36.0	74.0	36.0	6.00
R4634.05	—	4.05	0.1594	36.0	74.0	36.0	6.00
R4634.1	—	4.10	0.1614	36.0	74.0	36.0	6.00
R4634.2	—	4.20	0.1654	36.0	74.0	36.0	6.00
R4634.3	—	4.30	0.1693	36.0	74.0	36.0	6.00
R46311/64	11/64	4.37	0.1719	36.0	74.0	36.0	6.00
R4634.4	—	4.40	0.1732	36.0	74.0	36.0	6.00
R4634.5	—	4.50	0.1772	36.0	74.0	36.0	6.00
R4634.6	—	4.60	0.1811	36.0	74.0	36.0	6.00
R4634.7	—	4.70	0.1850	36.0	74.0	36.0	6.00
R4633/16	3/16	4.76	0.1875	44.0	82.0	36.0	6.00
R4634.8	—	4.80	0.1890	44.0	82.0	36.0	6.00
R4634.9	—	4.90	0.1929	44.0	82.0	36.0	6.00
R4635.0	—	5.00	0.1969	44.0	82.0	36.0	6.00
R4635.05	—	5.05	0.1988	44.0	82.0	36.0	6.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R4635.1	—	5.10	0.2008	44.0	82.0	36.0	6.00
R463N7	N7	5.11	0.2010	44.0	82.0	36.0	6.00
R46313/64	13/64	5.16	0.2031	44.0	82.0	36.0	6.00
R4635.2	—	5.20	0.2047	44.0	82.0	36.0	6.00
R463N5	N5	5.22	0.2055	44.0	82.0	36.0	6.00
R4635.3	—	5.30	0.2087	44.0	82.0	36.0	6.00
R4635.4	—	5.40	0.2126	44.0	82.0	36.0	6.00
R4635.5	—	5.50	0.2165	44.0	82.0	36.0	6.00
R4637/32	7/32	5.56	0.2188	44.0	82.0	36.0	6.00
R4635.6	—	5.60	0.2205	44.0	82.0	36.0	6.00
R4635.7	—	5.70	0.2244	44.0	82.0	36.0	6.00
R4635.8	—	5.80	0.2283	44.0	82.0	36.0	6.00
R4635.9	—	5.90	0.2323	44.0	82.0	36.0	6.00
R46315/64	15/64	5.95	0.2344	44.0	82.0	36.0	6.00
R4636.0	—	6.00	0.2362	44.0	82.0	36.0	6.00
R4636.05	—	6.05	0.2382	53.0	91.0	36.0	8.00
R4636.1	—	6.10	0.2402	53.0	91.0	36.0	8.00
R4636.2	—	6.20	0.2441	53.0	91.0	36.0	8.00
R4636.3	—	6.30	0.2480	53.0	91.0	36.0	8.00
R4631/4	1/4	6.35	0.2500	53.0	91.0	36.0	8.00
R4636.4	—	6.40	0.2520	53.0	91.0	36.0	8.00
R4636.5	—	6.50	0.2559	53.0	91.0	36.0	8.00
R4636.6	—	6.60	0.2598	53.0	91.0	36.0	8.00
R4636.7	—	6.70	0.2638	53.0	91.0	36.0	8.00
R46317/64	17/64	6.75	0.2656	53.0	91.0	36.0	8.00
R4636.8	—	6.80	0.2677	53.0	91.0	36.0	8.00
R4636.9	—	6.90	0.2717	53.0	91.0	36.0	8.00
R4637.0	—	7.00	0.2756	53.0	91.0	36.0	8.00
R4637.1	—	7.10	0.2795	53.0	91.0	36.0	8.00
R4639/32	9/32	7.14	0.2813	53.0	91.0	36.0	8.00
R4637.2	—	7.20	0.2835	53.0	91.0	36.0	8.00
R4637.3	—	7.30	0.2874	53.0	91.0	36.0	8.00
R4637.4	—	7.40	0.2913	53.0	91.0	36.0	8.00
R4637.5	—	7.50	0.2953	53.0	91.0	36.0	8.00
R46319/64	19/64	7.54	0.2969	53.0	91.0	36.0	8.00
R4637.6	—	7.60	0.2992	53.0	91.0	36.0	8.00
R4637.7	—	7.70	0.3031	53.0	91.0	36.0	8.00
R4637.8	—	7.80	0.3071	53.0	91.0	36.0	8.00
R4637.9	—	7.90	0.3110	53.0	91.0	36.0	8.00
R4635/16	5/16	7.94	0.3125	53.0	91.0	36.0	8.00
R4638.0	—	8.00	0.3150	53.0	91.0	36.0	8.00
R4638.05	—	8.05	0.3169	61.0	103.0	40.0	10.00
R4638.1	—	8.10	0.3189	61.0	103.0	40.0	10.00
R4638.2	—	8.20	0.3228	61.0	103.0	40.0	10.00
R4638.3	—	8.30	0.3268	61.0	103.0	40.0	10.00
R46321/64	21/64	8.33	0.3281	61.0	103.0	40.0	10.00
R4638.4	—	8.40	0.3307	61.0	103.0	40.0	10.00
R4638.5	—	8.50	0.3346	61.0	103.0	40.0	10.00
R4638.6	—	8.60	0.3386	61.0	103.0	40.0	10.00
R4638.7	—	8.70	0.3425	61.0	103.0	40.0	10.00
R46311/32	11/32	8.73	0.3438	61.0	103.0	40.0	10.00
R4638.8	—	8.80	0.3465	61.0	103.0	40.0	10.00
R4638.9	—	8.90	0.3504	61.0	103.0	40.0	10.00
R4639.0	—	9.00	0.3543	61.0	103.0	40.0	10.00
R4639.1	—	9.10	0.3583	61.0	103.0	40.0	10.00
R46323/64	23/64	9.13	0.3594	61.0	103.0	40.0	10.00
R4639.2	—	9.20	0.3622	61.0	103.0	40.0	10.00
R4639.3	—	9.30	0.3661	61.0	103.0	40.0	10.00
R4639.4	—	9.40	0.3701	61.0	103.0	40.0	10.00
R4639.5	—	9.50	0.3740	61.0	103.0	40.0	10.00
R4633/8	3/8	9.53	0.3750	61.0	103.0	40.0	10.00
R4639.6	—	9.60	0.3780	61.0	103.0	40.0	10.00

Product	DC	DC	DC	LCF	OAL	LS	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
R4639.7	—	9.70	0.3819	61.0	103.0	40.0	10.00
R4639.8	—	9.80	0.3858	61.0	103.0	40.0	10.00
R4639.9	—	9.90	0.3898	61.0	103.0	40.0	10.00
R46325/64	25/64	9.92	0.3906	61.0	103.0	40.0	10.00
R46310.0	—	10.00	0.3937	61.0	103.0	40.0	10.00
R46310.05	—	10.05	0.3957	70.0	118.0	45.0	12.00
R46310.1	—	10.10	0.3976	70.0	118.0	45.0	12.00
R46310.2	—	10.20	0.4016	70.0	118.0	45.0	12.00
R46310.3	—	10.30	0.4055	70.0	118.0	45.0	12.00
R46313/32	13/32	10.32	0.4063	70.0	118.0	45.0	12.00
R46310.4	—	10.40	0.4094	70.0	118.0	45.0	12.00
R46310.5	—	10.50	0.4134	70.0	118.0	45.0	12.00
R46310.6	—	10.60	0.4173	70.0	118.0	45.0	12.00
R46327/64	27/64	10.72	0.4219	70.0	118.0	45.0	12.00
R46310.8	—	10.80	0.4252	70.0	118.0	45.0	12.00
R46310.9	—	10.90	0.4291	70.0	118.0	45.0	12.00
R46311.0	—	11.00	0.4331	70.0	118.0	45.0	12.00
R4637/16	7/16	11.11	0.4375	70.0	118.0	45.0	12.00
R46311.2	—	11.20	0.4409	70.0	118.0	45.0	12.00
R46311.3	—	11.30	0.4449	70.0	118.0	45.0	12.00
R46311.4	—	11.40	0.4488	70.0	118.0	45.0	12.00
R46311.5	—	11.50	0.4528	70.0	118.0	45.0	12.00
R46329/64	29/64	11.51	0.4531	70.0	118.0	45.0	12.00
R46311.6	—	11.60	0.4567	70.0	118.0	45.0	12.00
R46311.8	—	11.80	0.4646	70.0	118.0	45.0	12.00
R46315/32	15/32	11.91	0.4688	70.0	118.0	45.0	12.00
R46312.0	—	12.00	0.4724	70.0	118.0	45.0	12.00
R46312.05	—	12.05	0.4744	76.0	124.0	45.0	14.00
R46312.2	—	12.20	0.4803	76.0	124.0	45.0	14.00
R46331/64	31/64	12.30	0.4844	76.0	124.0	45.0	14.00
R46312.5	—	12.50	0.4921	76.0	124.0	45.0	14.00
R46312.7	—	12.70	0.5000	76.0	124.0	45.0	14.00
R4631/2	1/2	12.70	0.5000	76.0	124.0	45.0	14.00
R46312.8	—	12.80	0.5039	76.0	124.0	45.0	14.00
R46313.0	—	13.00	0.5118	76.0	124.0	45.0	14.00
R46333/64	33/64	13.10	0.5156	76.0	124.0	45.0	14.00
R46313.3	—	13.30	0.5236	76.0	124.0	45.0	14.00
R46317/32	17/32	13.49	0.5313	76.0	124.0	45.0	14.00
R46313.5	—	13.50	0.5315	76.0	124.0	45.0	14.00
R46313.8	—	13.80	0.5433	76.0	124.0	45.0	14.00
R46335/64	35/64	13.89	0.5469	76.0	124.0	45.0	14.00
R46314.0	—	14.00	0.5512	76.0	124.0	45.0	14.00
R46314.25	—	14.25	0.5610	82.0	133.0	48.0	16.00
R4639/16	9/16	14.29	0.5625	82.0	133.0	48.0	16.00
R46314.5	—	14.50	0.5709	82.0	133.0	48.0	16.00
R46337/64	37/64	14.68	0.5781	82.0	133.0	48.0	16.00
R46314.8	—	14.80	0.5827	82.0	133.0	48.0	16.00
R46315.0	—	15.00	0.5906	82.0	133.0	48.0	16.00
R46319/32	19/32	15.08	0.5938	82.0	133.0	48.0	16.00
R46315.1	—	15.10	0.5945	82.0	133.0	48.0	16.00
R46315.3	—	15.30	0.6024	82.0	133.0	48.0	16.00
R46339/64	39/64	15.48	0.6094	82.0	133.0	48.0	16.00
R46315.5	—	15.50	0.6102	82.0	133.0	48.0	16.00
R46315.8	—	15.80	0.6220	82.0	133.0	48.0	16.00
R4635/8	5/8	15.88	0.6250	82.0	133.0	48.0	16.00
R46316.0	—	16.00	0.6299	82.0	133.0	48.0	16.00

DRILLING FEED RATE CHART



Feed per revolution (f_n in mm/rev)
Depending on the working conditions
it might be necessary to adjust these
values $\pm 25\%$.

How to use this table to find the feed per revolution (f_n):

1. Find your Alpha Code on the product page (example: 46J, "J" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per revolution (f_n).

		ø DC (mm)																		
		0.15	0.50	1.00	2.00	3.00	4.00	5.00	6.00	8.00	10.00	12.00	15.00	16.00	20.00	25.00	30.00	40.00	50.00	100.00
Feed rates	A	0.003	0.006	0.012	0.023	0.029	0.032	0.036	0.042	0.054	0.062	0.069	0.082	0.086	0.110	0.125	0.135	0.155	0.175	0.263
	B	0.004	0.007	0.014	0.028	0.037	0.041	0.046	0.053	0.067	0.080	0.090	0.103	0.108	0.135	0.153	0.165	0.188	0.208	0.312
	C	0.004	0.008	0.015	0.032	0.044	0.050	0.056	0.064	0.080	0.098	0.110	0.125	0.130	0.160	0.180	0.195	0.220	0.240	0.360
	D	0.004	0.008	0.016	0.038	0.053	0.060	0.068	0.078	0.098	0.119	0.130	0.149	0.155	0.188	0.210	0.228	0.253	0.275	0.413
	E	0.004	0.009	0.017	0.043	0.062	0.071	0.080	0.092	0.115	0.140	0.150	0.173	0.180	0.215	0.240	0.260	0.285	0.310	0.465
	F	0.005	0.009	0.018	0.050	0.073	0.084	0.095	0.109	0.138	0.165	0.178	0.202	0.210	0.248	0.275	0.295	0.320	0.343	0.515
	G	0.005	0.010	0.019	0.056	0.084	0.096	0.109	0.126	0.160	0.190	0.205	0.231	0.240	0.280	0.310	0.330	0.355	0.375	0.563
	H	0.005	0.010	0.020	0.066	0.102	0.116	0.130	0.150	0.190	0.228	0.243	0.271	0.280	0.320	0.355	0.375	0.398	0.418	0.627
	I	0.005	0.011	0.021	0.076	0.119	0.134	0.150	0.173	0.220	0.265	0.280	0.310	0.320	0.360	0.400	0.420	0.440	0.460	0.690
	J	0.006	0.012	0.024	0.084	0.135	0.152	0.170	0.197	0.250	0.298	0.315	0.349	0.360	0.405	0.445	0.465	0.485	0.503	0.755
	K	0.007	0.013	0.026	0.092	0.150	0.170	0.190	0.220	0.280	0.330	0.350	0.388	0.400	0.450	0.490	0.510	0.530	0.545	0.818
	L	0.007	0.014	0.028	0.101	0.165	0.186	0.208	0.240	0.305	0.360	0.385	0.419	0.430	0.485	0.525	0.545	0.568	0.588	0.882
	M	0.008	0.015	0.030	0.110	0.180	0.202	0.225	0.260	0.330	0.390	0.420	0.450	0.460	0.520	0.560	0.580	0.605	0.630	0.945
	N	0.008	0.016	0.032	0.119	0.195	0.218	0.242	0.280	0.355	0.420	0.455	0.481	0.490	0.555	0.595	0.615	0.642	0.672	1.008
	S	0.002	0.004	0.008	0.014	0.020	0.025	0.030	0.037	0.050	0.080	0.100	0.123	0.130	0.150	0.170	0.190	0.220	0.240	–
	T	0.004	0.008	0.015	0.028	0.040	0.050	0.060	0.070	0.090	0.110	0.130	0.160	0.170	0.190	0.210	0.230	0.260	0.275	–
	U	0.007	0.013	0.026	0.048	0.070	0.080	0.090	0.107	0.140	0.170	0.200	0.223	0.230	0.240	0.270	0.300	0.360	0.375	–
	V	0.010	0.019	0.038	0.069	0.100	0.115	0.130	0.153	0.200	0.250	0.280	0.310	0.320	0.340	0.400	0.440	0.510	0.530	–
	W	0.012	0.025	0.049	0.089	0.130	0.150	0.170	0.200	0.260	0.330	0.380	0.418	0.430	0.450	0.470	0.490	0.520	0.540	–
	X	0.014	0.028	0.056	0.103	0.150	0.180	0.210	0.250	0.330	0.420	0.480	0.533	0.550	0.580	–	–	–	–	–
	Y	0.017	0.034	0.068	0.124	0.180	0.220	0.260	0.317	0.430	0.550	0.700	0.700	0.700	0.740	–	–	–	–	–
	Z	0.024	0.047	0.094	0.172	0.250	0.325	0.400	0.533	0.800	1.000	1.100	1.175	1.200	1.200	–	–	–	–	–



HSS DRILLS

HSS DRILLS – NAVIGATOR TOOL MATERIALS

Tool materials

High Speed Steel		A medium-alloyed high speed steel that has good machinability and good performance. HSS exhibits hardness, toughness and wear resistance characteristics that make it attractive in a wide range of applications, for example in drills and taps.
Cobalt High Speed Steel		This high speed steel contains cobalt for increased hot hardness. The composition of HSCo is a good combination of toughness and hardness. It has good machinability and good wear resistance, which makes it usable for drills, taps, milling cutters and reamers.

Carbide materials

Carbide and High Speed Steel		Combined carbide and high speed steel materials typically joined together with high temperature braze alloy as the interface. This brazed combination of tool materials offers a solid carbide cutting portion which provides high compression strength, hardness and wear resistance attached to a high speed steel body which provides flexural strength and toughness in the tool body.
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Surface Treatments

Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials, plastics and composites while maintaining sharp cutting edges.
Combination Bright and Steam Tempered		Combination of bright and steam tempering can be effective as the blue oxide more porous surface acts to retain and pull cutting fluid into the hole while the bright surface assists in chip evacuation. This combination is achieved by grinding the bright surface after tempering.
Steam Tempering		Steam tempering gives a strongly adhering blue oxide surface that acts to retain cutting fluid and prevent chip to tool welding, thereby counteracting the formation of a built-up edge. Steam tempering can be applied to any bright tool but is most effective on drills and taps.
Bronze Tempering		Bronze tempering creates a smooth thin bronze oxide layer on the tool surface. Similar to Steam Tempering it helps to prevent chip to tool welding and aids in chip evacuation. Bronze tempering can be applied to any bright tool and can also be applied in combination with Steam Tempering on some tools.

Surface Coatings

Bright and TiN (Tip Coating)		Titanium Nitride is a gold coloured ceramic coating applied by physical vapor deposition (PVD). High hardness combined with low friction properties ensures longer tool life and/or better cutting performance over tools which have not been coated.
Titanium Nitride (TiN)		Titanium Nitride is a gold coloured ceramic coating applied by physical vapor deposition (PVD). High hardness combined with low friction properties ensures longer tool life and/or better cutting performance over tools which have not been coated.
Titanium Aluminium Nitride coatings (TiAlN, TiAlN-Top & X-CEED)		Titanium Aluminium Nitride is a multi layer ceramic coating applied by PVD coating technology, which exhibits high toughness and oxidation stability. These properties make it ideal for higher speeds and feeds, while at the same time improving tool life. TiAlN is used in drilling, tapping, and milling applications and can be suitable for use when machining without coolant. TiAlN-Top coating is the same as TiAlN but with a post-coating process designed to smooth out imperfections, enhance chip flow and reduce built up edge.
Alcrona coatings (Alcrona-Top)		The Alcrona (AlCrN) family of coatings are aluminium chromium nitride coatings mostly used for milling cutters. The two unique properties of these coatings are high hot hardness and high oxidation resistance. When used on tools for machining applications involving heavy mechanical and thermal stresses, these properties translate into superior wear resistance. Multiple levels or specific versions of these coatings are available and specific for various tools and applications.

Materiale kode (BMC)	HSS-E	HSS	HSS	HSS	HSS	HSS	HSS-E	HSS-E	HSS	HSS HM	HSS-E	HSS-E	HSS-E
Grundlæggende standard-gruppe (BSG)		DIN 1897	DIN 1897	DIN 1897	DIN 1897	DIN ANSI	DIN 1897	DIN 1897	DIN 1897	DIN 8037	DIN 1899	DIN ANSI	DIN ANSI
Brugbar længde (ULDR)	1xD	1.25xD	1xD	1.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	2.5xD	3xD	3xD
Anvendelsesvinkel													
Belægning													
Skaft													
Spiral form													
Hånd (skæreretning)													
Køling (CSP)													
									ADX			PFX	PFX
Produktfamiliekode	A723	A119	A122	A123	A120	A022	A620	A117	A520	A124	A720	A920	A921
	6.00 - 8.00	3.30 - 5.10	6.00 - 20.00	3/32 - 1/4	0.50 - 25.00	0.50 - 16.00	2.50 - 13.00	1.00 - 13.00	3.00 - 13.00	3.00 - 16.00	0.15 - 1.40	1.00 - 20.00	2.50 - 16.00
P	P1	■	■	■	■	■	■	■	■	■	■	■	■
	P2	■	■	■	■	■	■	■	■	■	■	■	■
	P3	■	■	■	■	■	■	■	■	■	■	■	■
	P4	■	■	■	■	■	■	■	■	■	■	■	■
M	M1		■	■	■	■	■	■	■		■	■	■
	M2		■	■	■	■	■	■	■		■	■	■
	M3		■	■	■	■	■	■	■	■	■	■	■
	M4		■	■	■	■	■	■	■	■	■	■	■
K	K1			■	■	■	■	■	■	■	■	■	■
	K2			■	■	■	■	■	■	■	■	■	■
	K3			■	■	■	■	■	■	■	■	■	■
	K4			■	■	■	■	■	■	■	■	■	■
	K5			■	■	■	■	■	■	■	■	■	■
N	N1		■	■	■	■	■	■	■		■	■	
	N2		■	■	■	■	■	■	■		■	■	
	N3		■	■	■	■	■	■	■	■	■	■	
	N4		■	■	■	■	■	■	■	■	■	■	
	N5												
S	S1		■	■	■	■	■	■	■	■	■	■	■
	S2		■	■	■	■	■	■	■	■	■	■	■
	S3		■	■	■	■	■	■	■	■	■	■	■
	S4		■	■	■	■	■	■	■	■	■	■	■
H	H1												
	H2												
	H3												
	H4												

Primær brug Mulig brug

	HSS	HSS	HSS	HSS	HSS	HSS-E	HSS-E	HSS HM	HSS	HSS-E	HSS-E	HSS-E	HSS	HSS	HSS
	DIN 338	DIN 338	DIN 338	DIN 338	DIN 338	DIN 338	DIN 338	DIN 338	DIN 338	DORMER	DIN ANSI	DIN ANSI	DORMER	NAS 907	NAS 907
	4xD	4xD	4xD	4xD	4xD	4xD	4xD	4xD	4xD	5xD	6xD	6xD	4xD	4xD	4xD
	118°	118°	118°	118°	135°	130°	135°	118°	130°	130°	130°	130°	118°	135°	118°
	TiN-Tip	TiN-Tip	ST	ST	ST	Bright	Bronze	Bright ST	TiN	TiAlN Top	Bright	Alcrona Top	ST	Bright	Bright
										DIN 6535MA					
	λ>20-35°	λ>20-35°	λ>20-35°	λ>20-35°	λ>35°	VA	λ>20-35°	λ>20-35°	λ>32-40°	λ>35°	λ>35°	λ>35°	λ>20-35°	λ>20-35°	λ>20-35°
	R	R	R	L	R	R	R	R	R	R	R	R	R	R	R
									ADX	ADX	PFX	PFX			
	A002	A002S	A100	A101	A108	A147	A777	A160	A510	A553	A900	A901	A170	A243	A244
	1.00 - 16.00	2.00 - 13.00	0.20 - 20.00	1.00 - 12.00	1.00 - 16.00	0.30 - 15.0	0.30 - 16.00	4.00 - 16.00	3.00 - 14.00	5.00 - 20.00	1.00 - 20.00	1.50 - 16.00	13.00 - 1.1/2	3/32 - 1/4	1/8 - 1/4
	96	98	99	103	104	106	108	110	111	113	114	116	118	120	121
P1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
M1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
M3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
M4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K5	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N5	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
S1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
S2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
S3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
S4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
H1															
H2															
H3															
H4															

Materiale kode (BMC)	HSS	HSS-E	HSS-E	HSS	HSS-E	HSS-E	HSS-E	HSS	HSS	HSS-E	HSS HM	HSS	HSS
Grundlæggende standard-gruppe (BSG)	DIN 340	DIN ANSI	DIN ANSI	BS 328	DIN 1869-1	DIN 1869-2	DIN 1869-3	DIN 345	DIN 345	DIN 345	DIN 345	DIN 341	DIN 1870(1)
Brugbar længde (ULDR)	6×D	10×D	10×D	10×D	15×D	20×D	25×D	4×D	4×D	4×D	4×D	6×D	10×D
Anvendelsesvinkel													
Belægning	ST	Bright	Alcrona Top	ST	Bright	Bright	Bright	ST	TiN	Bronze	Bright ST	ST	ST
Skaft													
Spiral form													
Hånd (skæreretning)													
Køling (CSP)													
	PFX	PFX		PFX	PFX	PFX							
Produktfamiliekode	A110	A940	A941	A125	A976	A977	A978	A130	A530	A730	A166	A350	A345
	0.50 - 1"	1.00 - 20.00	1.00 - 16.00	1.40 - 1"	1.50 - 14.00	1.50 - 14.00	3.00 - 10.00	3.00 - 50.80	8.50 - 40.00	10.00 - 32.00	10.00 - 33.00	5.00 - 50.00	8.00 - 50.00
P	P1	■	■	■	■	■	■	■	■	■	■	■	■
	P2	■	■	■	■	■	■	■	■	■	■	■	■
	P3	■	■	■	■	■	■	■	■	■	■	■	■
	P4	■	■	■	■	■	■	■	■	■	■	■	■
M	M1	■	■	■	■	■	■	■	■	■	■	■	■
	M2	■	■	■	■	■	■	■	■	■	■	■	■
	M3	■	■	■	■	■	■	■	■	■	■	■	■
	M4	■	■	■	■	■	■	■	■	■	■	■	■
K	K1	■	■	■	■	■	■	■	■	■	■	■	■
	K2	■	■	■	■	■	■	■	■	■	■	■	■
	K3	■	■	■	■	■	■	■	■	■	■	■	■
	K4	■	■	■	■	■	■	■	■	■	■	■	■
	K5	■	■	■	■	■	■	■	■	■	■	■	■
N	N1	■	■	■	■	■	■	■	■	■	■	■	■
	N2	■	■	■	■	■	■	■	■	■	■	■	■
	N3	■	■	■	■	■	■	■	■	■	■	■	■
	N4	■	■	■	■	■	■	■	■	■	■	■	■
	N5	■	■	■	■	■	■	■	■	■	■	■	■
S	S1	■	■	■	■	■	■	■	■	■	■	■	■
	S2	■	■	■	■	■	■	■	■	■	■	■	■
	S3	■	■	■	■	■	■	■	■	■	■	■	■
	S4	■	■	■	■	■	■	■	■	■	■	■	■
H	H1												
	H2												
	H3												
	H4												

Primær brug Mulig brug

	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS	HSS-E	HSS-E	HSS	HSS	HSS	HSS-E
	DIN 1870(1)	DIN 1870(2)	DIN 8374	DIN 8376	DIN 8377	DORMER	DORMER	DIN 333A	DIN 333A	DIN 333A	DIN 333A	DIN 333R	DORMER	BS 328	DIN 333A
	15xD	20xD	4xD	4xD	4xD	2.5xD	2.5xD	1xD	1xD	1xD	1xD	1xD	1xD	1xD	1xD
	130°	130°	90°	180°	180°	90°	180°	60°	60°	60°	60°	R	60°	60°	60°
	Bright ST	Bright ST	ST	ST	ST	ST	ST	Bright	TIN	Bright	TAIN	Bright	Bright	Bright	Bright
	$\lambda > 35^\circ$	$\lambda > 35^\circ$	$\lambda 20-35^\circ$	$\lambda 20-35^\circ$	$\lambda 20-35^\circ$										
	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
															
	A951	A952	A400	A402	A405	A412	A413	A200	A205	A206	A266	A210	A201	A225	A237
	10.00 - 30.00	8.00 - 40.00	M3 - M10	M3 - M10	M6 - M18	M3 - M10	M3 - M10	0.50 - 12.50	1.00 - 5.00	1.00 - 5.00	1.00 - 5.00	0.50 - 10.00	0.63 - 6.00	3/64 - 5/16	1.60 - 10.00
	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162
P1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
M1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
M3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
M4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
K5	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
N5	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
S1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
S2	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
S3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
S4	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
H1															
H2															
H3															
H4															

Materiale kode (BMC)		HSS-E	HSS-E	HSS	HSS	HSS	HSS	HSS
Grundlæggende standard-gruppe (BSG)		DIN 333R	DORMER	DIN ANSI	DIN 338	DIN 338	DIN 338	DIN 338
Brugbar længde (ULDR)		1×D	1×D	2.5×D	4×D	4×D	4×D	4×D
Anvendelsesvinkel		R	60°	135°	118°	118°	118°	118°
Belægning		Bright	Bright	TiN-Tip	TiN-Tip	TiN-Tip	TiN-Tip	TiN-Tip
Skaf		H						
Spiral form				λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°	λ 20-35°
Hånd (skæreretning)		R	R	R	R	R	R	R
Køling (CSP)								
								
Produktfamiliekode		A238	A242	A088	A095	A087	A094	A089
		1.60 - 8.00	1.00 - 5.00	Set	Set	Set	Set	Set
		 163	 164	 165	 165	 166	 166	 167
P	P1	■	■					
	P2	■	■					
	P3	■	■					
	P4	■	■					
M	M1	■	■					
	M2	■	■					
	M3	■	■					
	M4	■	■					
K	K1	■	■					
	K2	■	■					
	K3	■	■					
	K4	■	■					
	K5	■	■					
N	N1	■	■					
	N2	■	■					
	N3	■	■					
	N4	■	■					
	N5							
S	S1	■	■					
	S2	■	■					
	S3	■	■					
	S4	■	■					
H	H1							
	H2							
	H3							
	H4							

	HSS DIN 338 4xD 118° TiN-Tip λ 20-35° R	HSS DIN 338 4xD 118° TiN-Tip λ 20-35° R	HSS DIN 338 4xD 118° ST λ 20-35° R	HSS DIN 338 4xD 118° ST λ 20-35° R	
					
	A099	A099	A199	A080	A190
	Set	Drillboy	Set	Set	Set
	 168	 168	 169	 169	 170
P1					
P2					
P3					
P4					
M1					
M2					
M3					
M4					
K1					
K2					
K3					
K4					
K5					
N1					
N2					
N3					
N4					
N5					
S1					
S2					
S3					
S4					
H1					
H2					
H3					
H4					

Materiale kode (BMC)	HSS	HSS	HSS	HSS-E			
Grundlæggende standard-gruppe (BSG)	DIN 338	DIN 338	DIN 338	DIN 338			
Brugbar længde (ULDR)	4×D	4×D	4×D	4×D			
Anvendelsesvinkel	 118°	 118°	 135°	 135°	 60°		
Belægning	 ST	 ST	 ST	 Bronze			
Skaft							
Spiral form	 λ 20-35°	 λ 20-35°	 λ >35°	 λ 20-35°			
Hånd (skæreretning)	 R	 R	 R	 R			
Køling (CSP)							
Produktfamiliekode							
	A191	A191	A188	A295	A296	M150	M151
	Set	Set	Set	Set	Set		
	 171	 171	 172	 172	 173	 173	 174
P	P1						
	P2						
	P3						
	P4						
M	M1						
	M2						
	M3						
	M4						
K	K1						
	K2						
	K3						
	K4						
	K5						
N	N1						
	N2						
	N3						
	N4						
	N5						
S	S1						
	S2						
	S3						
	S4						
H	H1						
	H2						
	H3						
	H4						

Primær brug Mulig brug



M152

174

P1

P2

P3

P4

M1

M2

M3

M4

K1

K2

K3

K4

K5

N1

N2

N3

N4

N5

S1

S2

S3

S4

H1

H2

H3

H4

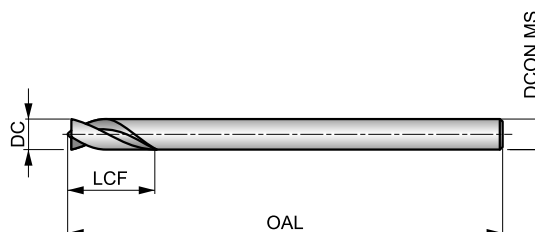
A723

DORMER



HSS-E (5% kobolt) punktsvejsningsbor, Bronzehærdet finish

Bor med specialdesignet læbe- og spids for at fjerne eller "bore ud" punktsvejsede områder, ofte til fjernelse af svejsninger i et bilværksted. Kort skærlængde gør det mere robust og mindre tilbøjeligt til at knuses, når det bruges i en håndholdt enhed Bronzefinishen er et tyndt oxidlag og en indikation for kobolt.



HSS-E		1xD
Bronze		20-35°
	DC h8	

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

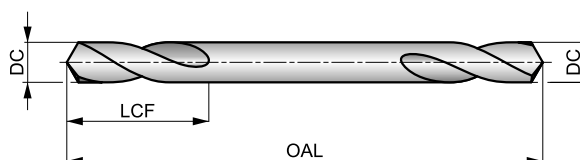
P1.1 ■ 33 D	P1.2 ■ 37 D	P1.3 ■ 38 D	P2.1 ■ 28 D	P2.2 ■ 25 C	P3.1 ■ 20 C	P3.2 ■ 20 C	P4.1 ■ 20 C
Product		DC	DC	LCF	OAL	DCON MS	
		(mm)	(inch)	(mm)	(mm)	(mm)	
A7236.0X66		6.00	0.2362	18.0	66.0	6.00	
A7236.0X93		6.00	0.2362	18.0	93.0	6.00	
A7238.0X79		8.00	0.3150	24.0	79.0	8.00	
A7238.0X117		8.00	0.3150	24.0	117.0	8.00	

A119



HSS dobbeltsidet bor, damphærdet finish

En kort dobbeltbor designet til at bore huller gennem metalplader. Det er muligt at bruge begge ender, hvilket giver dobbelt så lang levetid. Et konventionelt spids på 120° for at hjælpe med selvcentrering. Velegnet til boring i mange materialer. Damphærdet finish bevarer skærevæske og forhindrer svejsning af spån til værktøj.



HSS	DIN 1897	1.25xD
120°	ST	
20-35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 31 C	P1.2 ■ 34 C	P1.3 ■ 35 C	P2.1 ■ 26 C	P2.2 ■ 23 C	P2.3 ■ 20 C	P3.1 ■ 12 C	P3.2 ■ 9 C	P3.3 ■ 8 C	P4.1 ■ 7 C	P4.2 ■ 6 C	P4.3 ■ 5 A	M1.1 ■ 21 A	M1.2 ■ 17 A
M2.1 ■ 18 A	M2.2 ■ 15 A	M3.1 ■ 8 C	M3.2 ■ 7 C	M3.3 ■ 6 C	M4.1 ■ 10 A	N1.1 ■ 33 C	N1.2 ■ 25 C	N1.3 ■ 17 C	N2.1 ■ 46 C	N2.2 ■ 42 C	N2.3 ■ 30 C	N3.1 ■ 56 C	N3.2 ■ 33 C
N3.3 ■ 17 A	N4.1 ■ 30 I	N4.2 ■ 35 C	S1.1 ■ 27 A	S1.2 ■ 12 A	S1.3 ■ 7 A	S2.1 ■ 5 C	S2.2 ■ 4 C	S3.1 ■ 4 C	S3.2 ■ 3 C	S4.1 ■ 3 C	S4.2 ■ 2 C		

Pladebor.

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A1193.3	3.30	0.1299	11.0	49.0	3.30
A1193.6	3.60	0.1417	12.0	52.0	3.60
A1194.1	4.10	0.1614	14.0	55.0	4.10
A1194.2	4.20	0.1654	14.0	55.0	4.20
A1194.9	4.90	0.1929	17.0	62.0	4.90
A1195.1	5.10	0.2008	17.0	62.0	5.10

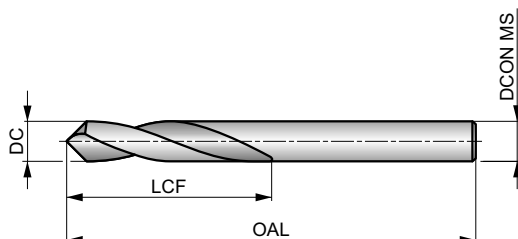
A122

DORMER



HSS Centrerbør, Blank Finish

Bruges til at skabe et hul i materialet, der skal bores for at sikre, at startpunktet er nøjagtigt. Leveres med enten en 90° eller 120° vinkel, hvilket giver dig to muligheder for forsækning. Blank overfladefinish. Velegnet til boring i mange materialer.



HSS	DIN 1897	1xD
90°/120°	Bright	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 36 E	P1.2 ■ 40 E	P1.3 ■ 41 E	P2.1 ■ 31 E	P2.2 ■ 27 C	P2.3 ■ 24 C	P3.1 ■ 21 C	P3.2 ■ 17 C	P3.3 ■ 14 C	P4.1 ■ 12 C	P4.2 ■ 10 C	P4.3 ■ 9 B	M1.1 ■ 22 C	M1.2 ■ 19 C
M2.1 ■ 20 C	M2.2 ■ 16 C	M3.1 ■ 10 D	M3.2 ■ 9 D	M3.3 ■ 8 D	M4.1 ■ 10 B	K1.1 ■ 32 E	K1.2 ■ 24 C	K1.3 ■ 18 C	K2.1 ■ 25 C	K2.2 ■ 20 C	K2.3 ■ 16 B	K3.1 ■ 22 C	K3.2 ■ 17 C
K3.3 ■ 13 B	K4.1 ■ 20 C	K4.2 ■ 15 C	K4.3 ■ 11 B	K4.4 ■ 10 B	K4.5 ■ 8 B	K5.1 ■ 23 C	K5.2 ■ 17 C	K5.3 ■ 13 B	N1.1 ■ 33 E	N1.2 ■ 25 E	N1.3 ■ 17 E	N2.1 ■ 46 D	N2.2 ■ 42 D
N2.3 ■ 30 D	N3.1 ■ 56 D	N3.2 ■ 33 E	N3.3 ■ 17 D	N4.1 ■ 30 F	N4.2 ■ 35 E	N4.3 ■ 17 D	S1.1 ■ 27 C	S1.2 ■ 12 B	S1.3 ■ 7 A	S2.1 ■ 11 C	S2.2 ■ 6 A	S3.1 ■ 8 C	S3.2 ■ 4 A
S4.1 ■ 6 C	S4.2 ■ 3 A												

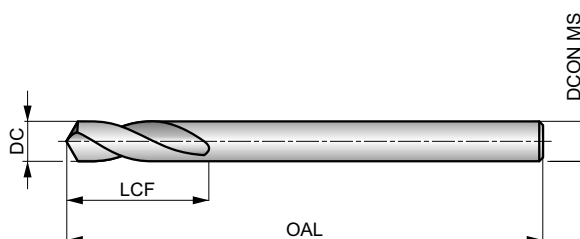
Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A1226.0X90	6.00	0.2362	30.0	66.0	6.00
A1226.0X120	6.00	0.2362	30.0	66.0	6.00
A1228.0X90	8.00	0.3150	33.0	79.0	8.00
A1228.0X120	8.00	0.3150	33.0	79.0	8.00
A12210.0X90	10.00	0.3937	35.0	89.0	10.00
A12210.0X120	10.00	0.3937	35.0	89.0	10.00
A12212.0X90	12.00	0.4724	40.0	102.0	12.00
A12212.0X120	12.00	0.4724	40.0	102.0	12.00
A12216.0X90	16.00	0.6299	40.0	115.0	16.00
A12216.0X120	16.00	0.6299	40.0	115.0	16.00
A12220.0X90	20.00	0.7874	55.0	131.0	20.00
A12220.0X120	20.00	0.7874	55.0	131.0	20.00

A123



HSS stubbor, damphærdet finish, til metalplader

Specielt designet til boring af tynde materialer og metalplader. Et 120° spids og en damphærdet finish, der forhindrer emnet i at klæbe til forkant, hvilket giver en bedre hulfinish og mere nøjagtig diameter. Velegnet til boring i mange materialer.



HSS	DIN 1897	1.5xD
120°	ST	
20-35°	R	DC h8

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 36 E	P1.2 ■ 40 E	P1.3 ■ 41 E	P2.1 ■ 31 E	P2.2 ■ 27 C	P2.3 ■ 24 C	P3.1 ■ 21 C	P3.2 ■ 17 C	P3.3 ■ 14 C	P4.1 ■ 12 C	P4.2 ■ 10 C	P4.3 ■ 9 B	M1.1 ■ 22 C	M1.2 ■ 19 C
M2.1 ■ 20 C	M2.2 ■ 16 C	M3.1 ■ 10 D	M3.2 ■ 9 D	M3.3 ■ 8 D	M4.1 ■ 10 B	N1.1 ■ 33 E	N1.2 ■ 25 E	N1.3 ■ 17 E	N2.1 ■ 46 D	N2.2 ■ 42 D	N2.3 ■ 30 D	N3.1 ■ 56 D	N3.2 ■ 33 E
N3.3 ■ 17 D	N4.1 ■ 30 F	N4.2 ■ 35 E	N4.3 ■ 17 D	S1.1 ■ 27 C	S1.2 ■ 12 B	S1.3 ■ 7 A	S2.1 ■ 11 C	S2.2 ■ 6 A	S3.1 ■ 8 C	S3.2 ■ 4 A	S4.1 ■ 6 C	S4.2 ■ 3 A	

Pladebor.

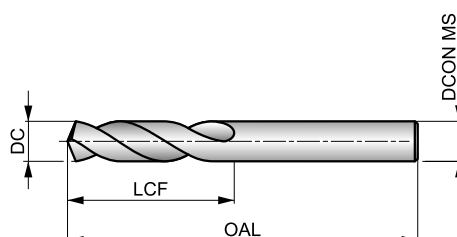
Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A1233/32S	3/32	2.38	0.0937	14.0	43.0	2.38
A1232.5S	—	2.50	0.0984	14.0	43.0	2.50
A1233.0S	—	3.00	0.1181	16.0	46.0	3.00
A1231/8S	1/8	3.18	0.1252	18.0	49.0	3.18
A1233.2S	—	3.20	0.1260	18.0	49.0	3.20
A1233.3S	—	3.30	0.1299	18.0	49.0	3.30
A1233.5S	—	3.50	0.1378	18.0	52.0	3.50
A1233.7S	—	3.70	0.1457	18.0	52.0	3.70
A1235/32S	5/32	3.97	0.1563	18.0	55.0	3.97
A1234.0S	—	4.00	0.1575	18.0	55.0	4.00
A1234.1S	—	4.10	0.1614	18.0	55.0	4.10
A1234.2S	—	4.20	0.1654	18.0	55.0	4.20
A1234.5S	—	4.50	0.1772	18.0	58.0	4.50
A1233/16S	3/16	4.76	0.1875	18.0	62.0	4.76
A1234.8S	—	4.80	0.1890	18.0	62.0	4.80
A1234.9S	—	4.90	0.1929	18.0	62.0	4.90
A1235.0S	—	5.00	0.1969	18.0	62.0	5.00
A1235.5S	—	5.50	0.2165	18.0	66.0	5.50
A1237/32S	7/32	5.56	0.2188	18.0	66.0	5.56
A1236.0S	—	6.00	0.2362	18.0	66.0	6.00
A1231/4S	1/4	6.35	0.2500	19.0	70.0	6.35

A120

DORMER

HSS stub bor, damphærdet finish

Alsiddig bor med damphærdet finish. En spids på 135° reducerer kræfterne under boring og forhindrer boret i at vandre over materialets overflade. Damphærdet finish bevarer skærevæske og forhindrer svejsning fra spån til værktøj. Velegnet til håndholdt og maskinboring af mange materialer.



HSS	DIN 1897	2.5xD
135°	ST	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 36 J	P1.2 ■ 40 J	P1.3 ■ 41 J	P2.1 ■ 31 J	P2.2 ■ 27 G	P2.3 ■ 24 F	P3.1 ■ 21 G	P3.2 ■ 17 G	P3.3 ■ 14 F	P4.1 ■ 12 G	P4.2 ■ 10 F	P4.3 ■ 9 E	M1.1 ■ 22 F	M1.2 ■ 19 F
M2.1 ■ 20 F	M2.2 ■ 16 F	M3.1 ■ 10 H	M3.2 ■ 9 H	M3.3 ■ 8 H	M4.1 ■ 10 D	K1.1 ■ 32 J	K1.2 ■ 24 G	K1.3 ■ 18 G	K2.1 ■ 25 F	K2.2 ■ 20 F	K2.3 ■ 16 F	K3.1 ■ 22 F	K3.2 ■ 17 F
K3.3 ■ 13 F	K4.1 ■ 20 F	K4.2 ■ 15 F	K4.3 ■ 11 F	K4.4 ■ 10 F	K4.5 ■ 8 F	K5.1 ■ 23 F	K5.2 ■ 17 F	K5.3 ■ 13 F	N1.1 ■ 33 K	N1.2 ■ 25 K	N1.3 ■ 17 J	N2.1 ■ 46 I	N2.2 ■ 42 I
N2.3 ■ 30 I	N3.1 ■ 64 I	N3.2 ■ 38 J	N3.3 ■ 19 H	N4.1 ■ 30 K	N4.2 ■ 35 I	N4.3 ■ 17 G	S1.1 ■ 27 G	S1.2 ■ 16 E	S1.3 ■ 8 C	S2.1 ■ 11 F	S2.2 ■ 6 B	S3.1 ■ 8 F	S3.2 ■ 4 B
S4.1 ■ 6 F	S4.2 ■ 3 B												

DC <= 1mm Blank; 2.9mm => DC >= 13.0mm 118° Spids.

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A120.5	—	0.50	0.0197	3.0	20.0	0.50
A120.6	—	0.60	0.0236	3.5	21.0	0.60
A120.7	—	0.70	0.0276	4.5	23.0	0.70
A1201/32	1/32	0.79	0.0313	5.0	24.0	0.79
A120.8	—	0.80	0.0315	5.0	24.0	0.80
A120.9	—	0.90	0.0354	5.5	25.0	0.90
A1201.0	—	1.00	0.0394	6.0	26.0	1.00
A1201.1	—	1.10	0.0433	7.0	28.0	1.10
A1203/64	3/64	1.19	0.0469	8.0	30.0	1.19
A1201.2	—	1.20	0.0472	8.0	30.0	1.20
A1201.3	—	1.30	0.0512	8.0	30.0	1.30
A1201.4	—	1.40	0.0551	9.0	32.0	1.40
A1201.5	—	1.50	0.0591	9.0	32.0	1.50
A1201/16	1/16	1.59	0.0625	10.0	34.0	1.59
A1201.6	—	1.60	0.0630	10.0	34.0	1.60
A1201.7	—	1.70	0.0669	10.0	34.0	1.70
A1201.8	—	1.80	0.0709	11.0	36.0	1.80
A1201.9	—	1.90	0.0748	11.0	36.0	1.90
A1205/64	5/64	1.98	0.0781	12.0	38.0	1.98
A1202.0	—	2.00	0.0787	12.0	38.0	2.00
A1202.1	—	2.10	0.0827	12.0	38.0	2.10
A1202.2	—	2.20	0.0866	13.0	40.0	2.20
A1202.25	—	2.25	0.0886	13.0	40.0	2.25

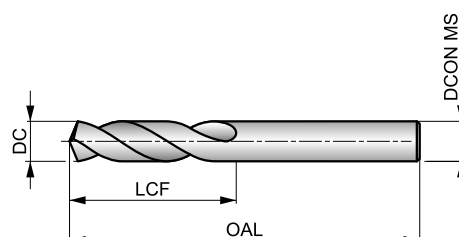
Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1202.3	—	2.30	0.0906	13.0	40.0	2.30
A1203/32	3/32	2.38	0.0938	14.0	43.0	2.38
A1202.4	—	2.40	0.0945	14.0	43.0	2.40
A1202.5	—	2.50	0.0984	14.0	43.0	2.50
A1202.6	—	2.60	0.1024	14.0	43.0	2.60
A1202.65	—	2.65	0.1043	14.0	43.0	2.65
A1202.7	—	2.70	0.1063	16.0	46.0	2.70
A1207/64	7/64	2.78	0.1094	16.0	46.0	2.78
A1202.8	—	2.80	0.1102	16.0	46.0	2.80
A1202.9	—	2.90	0.1142	16.0	46.0	2.90
A1203.0	—	3.00	0.1181	16.0	46.0	3.00
A1203.1	—	3.10	0.1220	18.0	49.0	3.10
A1201/8	1/8	3.18	0.1252	18.0	49.0	3.18
A1203.2	—	3.20	0.1260	18.0	49.0	3.20
A1203.25	—	3.25	0.1280	18.0	49.0	3.25
A1203.3	—	3.30	0.1299	18.0	49.0	3.30
A1203.4	—	3.40	0.1339	20.0	52.0	3.40
A1203.5	—	3.50	0.1378	20.0	52.0	3.50
A1209/64	9/64	3.57	0.1406	20.0	52.0	3.57
A1203.6	—	3.60	0.1417	20.0	52.0	3.60
A1203.7	—	3.70	0.1457	20.0	52.0	3.70
A1203.8	—	3.80	0.1496	22.0	55.0	3.80
A1203.9	—	3.90	0.1535	22.0	55.0	3.90

A022

DORMER

HSS stub bor, TiN-Tip belagt

Alsidig bor med et specielt designet 135° spids, der hjælper med selvcentrering, når man borer i hånden og i maskiner, giver et mere nøjagtigt hul med en bedre kvalitet af finish. Velegnet til boring af mange materialer. TiN-Tip belægning forbedrer ydeevnen og forlænger værktøjets levetid.



HSS	DIN ANSI	2.5×D
135°	TiN-Tip	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 33 K	P1.2 ■ 37 K	P1.3 ■ 38 K	P2.1 ■ 28 K	P2.2 ■ 25 I	P2.3 ■ 22 G	P3.1 ■ 24 H	P3.2 ■ 19 H	P3.3 ■ 16 G	P4.1 ■ 14 H	P4.2 ■ 12 G	P4.3 ■ 10 E	M1.1 ■ 21 G	M1.2 ■ 17 G
M2.1 ■ 18 G	M2.2 ■ 15 G	M3.1 ■ 9 I	M3.2 ■ 8 I	M3.3 ■ 7 I	M4.1 ■ 9 E	K1.1 ■ 32 K	K1.2 ■ 24 I	K1.3 ■ 18 I	K2.1 ■ 25 G	K2.2 ■ 20 G	K2.3 ■ 16 G	K3.1 ■ 22 G	K3.2 ■ 17 G
K3.3 ■ 13 G	K4.1 ■ 20 G	K4.2 ■ 15 G	K4.3 ■ 11 G	K4.4 ■ 10 G	K4.5 ■ 8 G	K5.1 ■ 23 G	K5.2 ■ 17 G	K5.3 ■ 13 G	N1.1 ■ 40 F	N1.2 ■ 30 F	N1.3 ■ 20 K	N2.1 ■ 49 J	N2.2 ■ 44 J
N2.3 ■ 32 J	N3.1 ■ 64 I	N3.2 ■ 38 K	N3.3 ■ 19 H	N4.1 ■ 30 K	N4.2 ■ 35 I	N4.3 ■ 17 G	S1.1 ■ 25 I	S1.2 ■ 14 F	S1.3 ■ 8 C	S2.1 ■ 11 F	S2.2 ■ 6 B	S3.1 ■ 8 F	S3.2 ■ 4 B
S4.1 ■ 6 F	S4.2 ■ 3 B												

DC <2 mm lys; DC> = 2 mm TiN belagt og krydsslebet.
Produkter fra denne serie fås også i sæt. Se venligst A088.

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A022.5	—	0.50	0.0197	3.0	20.0	0.50
A022.6	—	0.60	0.0236	3.5	21.0	0.60
A022.7	—	0.70	0.0276	4.5	23.0	0.70
A0221/32	1/32	0.79	0.0313	13.0	35.0	0.79
A022.8	—	0.80	0.0315	5.0	24.0	0.80
A022.9	—	0.90	0.0354	5.5	25.0	0.90
A0221.0	—	1.00	0.0394	6.0	26.0	1.00
A0221.1	—	1.10	0.0433	7.0	28.0	1.10
A0223/64	3/64	1.19	0.0469	13.0	35.0	1.19
A0221.2	—	1.20	0.0472	8.0	30.0	1.20
A0221.3	—	1.30	0.0512	8.0	30.0	1.30
A0221.4	—	1.40	0.0551	9.0	32.0	1.40
A0221.5	—	1.50	0.0591	9.0	32.0	1.50
A0221/16	1/16	1.59	0.0625	16.0	41.0	1.59
A0221.6	—	1.60	0.0630	10.0	34.0	1.60
A0221.7	—	1.70	0.0669	10.0	34.0	1.70
A0221.8	—	1.80	0.0709	11.0	36.0	1.80
A0221.9	—	1.90	0.0748	11.0	36.0	1.90
A0225/64	5/64	1.98	0.0781	17.0	43.0	1.98
A0222.0	—	2.00	0.0787	12.0	38.0	2.00
A0222.1	—	2.10	0.0827	12.0	38.0	2.10
A0222.2	—	2.20	0.0866	13.0	40.0	2.20

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A0222.25	—	2.25	0.0886	13.0	40.0	2.25
A0222.3	—	2.30	0.0906	13.0	40.0	2.30
A0223/32	3/32	2.38	0.0938	20.0	45.0	2.38
A0222.4	—	2.40	0.0945	14.0	43.0	2.40
A0222.5	—	2.50	0.0984	14.0	43.0	2.50
A0222.6	—	2.60	0.1024	14.0	43.0	2.60
A0222.65	—	2.65	0.1043	14.0	43.0	2.65
A0222.7	—	2.70	0.1063	16.0	46.0	2.70
A0227/64	7/64	2.78	0.1094	22.0	47.0	2.78
A0222.8	—	2.80	0.1102	16.0	46.0	2.80
A0222.9	—	2.90	0.1142	16.0	46.0	2.90
A0223.0	—	3.00	0.1181	16.0	46.0	3.00
A0223.1	—	3.10	0.1220	18.0	49.0	3.10
A0221/8	1/8	3.18	0.1250	23.0	49.0	3.18
A0223.2	—	3.20	0.1260	18.0	49.0	3.20
A0223.25	—	3.25	0.1280	18.0	49.0	3.25
A0223.3	—	3.30	0.1299	18.0	49.0	3.30
A0223.4	—	3.40	0.1339	20.0	52.0	3.40
A0223.5	—	3.50	0.1378	20.0	52.0	3.50
A0229/64	9/64	3.57	0.1406	25.0	50.0	3.57
A0223.6	—	3.60	0.1417	20.0	52.0	3.60
A0223.7	—	3.70	0.1457	20.0	52.0	3.70

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A0223.8	—	3.80	0.1496	22.0	55.0	3.80
A0223.9	—	3.90	0.1535	22.0	55.0	3.90
A0225/32	5/32	3.97	0.1563	26.0	53.0	3.97
A0224.0	—	4.00	0.1575	22.0	55.0	4.00
A0224.1	—	4.10	0.1614	22.0	55.0	4.10
A0224.2	—	4.20	0.1654	22.0	55.0	4.20
A0224.3	—	4.30	0.1693	24.0	58.0	4.30
A02211/64	11/64	4.37	0.1719	28.0	55.0	4.37
A0224.4	—	4.40	0.1732	24.0	58.0	4.40
A0224.5	—	4.50	0.1772	24.0	58.0	4.50
A0224.6	—	4.60	0.1811	24.0	58.0	4.60
A0224.7	—	4.70	0.1850	24.0	58.0	4.70
A0223/16	3/16	4.76	0.1875	30.0	57.0	4.76
A0224.8	—	4.80	0.1890	26.0	62.0	4.80
A0224.9	—	4.90	0.1929	26.0	62.0	4.90
A0225.0	—	5.00	0.1969	26.0	62.0	5.00
A0225.1	—	5.10	0.2008	26.0	62.0	5.10
A02213/64	13/64	5.16	0.2031	31.0	58.0	5.16
A0225.2	—	5.20	0.2047	26.0	62.0	5.20
A0225.3	—	5.30	0.2087	26.0	62.0	5.30
A0225.4	—	5.40	0.2126	28.0	66.0	5.40
A0225.5	—	5.50	0.2165	28.0	66.0	5.50
A0227/32	7/32	5.56	0.2188	33.0	61.0	5.56
A0225.6	—	5.60	0.2205	28.0	66.0	5.60
A0225.7	—	5.70	0.2244	28.0	66.0	5.70
A0225.8	—	5.80	0.2283	28.0	66.0	5.80
A0225.9	—	5.90	0.2323	28.0	66.0	5.90
A02215/64	15/64	5.95	0.2344	34.0	63.0	5.95
A0226.0	—	6.00	0.2362	28.0	66.0	6.00
A0226.1	—	6.10	0.2402	31.0	70.0	6.10
A0226.2	—	6.20	0.2441	31.0	70.0	6.20
A0226.3	—	6.30	0.2480	31.0	70.0	6.30
A0221/4	1/4	6.35	0.2500	36.0	65.0	6.35
A0226.4	—	6.40	0.2520	31.0	70.0	6.40
A0226.5	—	6.50	0.2559	31.0	70.0	6.50
A0226.6	—	6.60	0.2598	31.0	70.0	6.60
A0226.7	—	6.70	0.2638	31.0	70.0	6.70
A0226.8	—	6.80	0.2677	34.0	74.0	6.80
A0226.9	—	6.90	0.2717	34.0	74.0	6.90
A0227.0	—	7.00	0.2756	34.0	74.0	7.00
A0227.1	—	7.10	0.2795	34.0	74.0	7.10
A0229/32	9/32	7.14	0.2813	40.0	70.0	7.14
A0227.2	—	7.20	0.2835	34.0	74.0	7.20
A0227.3	—	7.30	0.2874	34.0	74.0	7.30
A0227.4	—	7.40	0.2913	34.0	74.0	7.40
A0227.5	—	7.50	0.2953	34.0	74.0	7.50
A0227.6	—	7.60	0.2992	37.0	79.0	7.60
A0227.7	—	7.70	0.3031	37.0	79.0	7.70
A0227.8	—	7.80	0.3071	37.0	79.0	7.80
A0227.9	—	7.90	0.3110	37.0	79.0	7.90
A0225/16	5/16	7.94	0.3125	43.0	73.0	7.94
A0228.0	—	8.00	0.3150	37.0	79.0	8.00
A0228.1	—	8.10	0.3189	37.0	79.0	8.10
A0228.2	—	8.20	0.3228	37.0	79.0	8.20

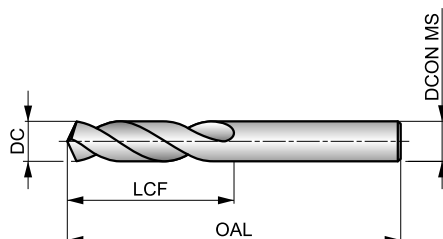
Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A0228.3	—	8.30	0.3268	37.0	79.0	8.30
A0228.4	—	8.40	0.3307	37.0	79.0	8.40
A0228.5	—	8.50	0.3346	37.0	79.0	8.50
A0228.6	—	8.60	0.3386	40.0	84.0	8.60
A0228.7	—	8.70	0.3425	40.0	84.0	8.70
A02211/32	11/32	8.73	0.3438	45.0	78.0	8.73
A0228.8	—	8.80	0.3465	40.0	84.0	8.80
A0228.9	—	8.90	0.3504	40.0	84.0	8.90
A0229.0	—	9.00	0.3543	40.0	84.0	9.00
A0229.1	—	9.10	0.3583	40.0	84.0	9.10
A0229.2	—	9.20	0.3622	40.0	84.0	9.20
A0229.3	—	9.30	0.3661	40.0	84.0	9.30
A0229.4	—	9.40	0.3701	40.0	84.0	9.40
A0229.5	—	9.50	0.3740	40.0	84.0	9.50
A0223/8	3/8	9.52	0.3750	48.0	81.0	9.52
A0229.6	—	9.60	0.3780	43.0	89.0	9.60
A0229.7	—	9.70	0.3819	43.0	89.0	9.70
A0229.8	—	9.80	0.3858	43.0	89.0	9.80
A0229.9	—	9.90	0.3898	43.0	89.0	9.90
A02210.0	—	10.00	0.3937	43.0	89.0	10.00
A02210.1	—	10.10	0.3976	43.0	89.0	10.10
A02210.2	—	10.20	0.4016	43.0	89.0	10.20
A02210.3	—	10.30	0.4055	43.0	89.0	10.30
A02213/32	13/32	10.32	0.4063	51.0	86.0	10.32
A02210.4	—	10.40	0.4094	43.0	89.0	10.40
A02210.5	—	10.50	0.4134	43.0	89.0	10.50
A02210.6	—	10.60	0.4173	43.0	89.0	10.60
A02210.7	—	10.70	0.4213	47.0	95.0	10.70
A02210.8	—	10.80	0.4252	47.0	95.0	10.80
A02210.9	—	10.90	0.4291	47.0	95.0	10.90
A02211.0	—	11.00	0.4331	47.0	95.0	11.00
A02211.1	—	11.10	0.4370	47.0	95.0	11.10
A0227/16	7/16	11.11	0.4375	54.0	89.0	11.11
A02211.2	—	11.20	0.4409	47.0	95.0	11.20
A02211.3	—	11.30	0.4449	47.0	95.0	11.30
A02211.5	—	11.50	0.4528	47.0	95.0	11.50
A02211.6	—	11.60	0.4567	47.0	95.0	11.60
A02211.7	—	11.70	0.4606	47.0	95.0	11.70
A02211.8	—	11.80	0.4646	47.0	95.0	11.80
A02211.9	—	11.90	0.4685	51.0	102.0	11.90
A02212.0	—	12.00	0.4724	51.0	102.0	12.00
A02212.1	—	12.10	0.4764	51.0	102.0	12.10
A02212.2	—	12.20	0.4803	51.0	102.0	12.20
A02212.5	—	12.50	0.4921	51.0	102.0	12.50
A0221/2	1/2	12.70	0.5000	60.0	98.0	12.70
A02213.0	—	13.00	0.5118	51.0	102.0	13.00
A02213.5	—	13.50	0.5315	54.0	107.0	13.50
A02214.0	—	14.00	0.5512	54.0	107.0	14.00
A0229/16	9/16	14.29	0.5625	67.0	105.0	14.29
A02214.5	—	14.50	0.5709	56.0	111.0	14.50
A02215.0	—	15.00	0.5906	56.0	111.0	15.00
A02215.5	—	15.50	0.6102	58.0	115.0	15.50
A0225/8	5/8	15.88	0.6250	73.0	111.0	15.88
A02216.0	—	16.00	0.6299	58.0	115.0	16.00

A620



HSS-E (5% kobolt) stubbor, bronze hærdet finish

Bor med 130° spids, som hjælper med selvcentrering og reducerer skærekrafterne. Bronze belægningen er et tyndt oxidlag, og det er en indikation for kobolt. Velegnet til boring i mange materialer. Bør ikke bruges i håndholdte enheder.



HSS-E	DIN 1897	2.5xD
130°	Bronze	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 40 H	P1.2 45 H	P1.3 46 H	P2.1 34 H	P2.2 30 G	P2.3 27 F	P3.1 27 G	P3.2 21 G	P3.3 18 F	P4.1 16 G	P4.2 13 F	P4.3 11 E	M1.1 30 F	M1.2 26 F
M2.1 27 F	M2.2 22 F	M3.1 13 H	M3.2 11 H	M3.3 10 H	M4.1 15 D	K1.1 34 K	K1.2 25 F	K1.3 19 F	K2.1 27 F	K2.2 22 F	K2.3 18 F	K3.1 24 F	K3.2 18 F
K3.3 15 F	K4.1 22 F	K4.2 17 F	K4.3 12 F	K4.4 11 F	K4.5 9 F	K5.1 25 F	K5.2 19 F	K5.3 15 F	N1.1 40 K	N1.2 30 K	N1.3 20 J	N2.1 49 I	N2.2 44 I
N2.3 32 I	N3.1 68 J	N3.2 40 K	N3.3 20 I	N4.1 40 L	N4.2 32 K	N4.3 18 I	S1.1 30 G	S1.2 18 F	S1.3 10 C	S2.1 12 F	S2.2 8 C	S3.1 9 F	S3.2 6 C
S4.1 7 F	S4.2 5 C												

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A6202.5	2.50	0.0984	14.0	43.0	2.50
A6202.6	2.60	0.1024	14.0	43.0	2.60
A6202.7	2.70	0.1063	16.0	46.0	2.70
A6202.8	2.80	0.1102	16.0	46.0	2.80
A6202.9	2.90	0.1142	16.0	46.0	2.90
A6203.0	3.00	0.1181	16.0	46.0	3.00
A6203.1	3.10	0.1220	18.0	49.0	3.10
A6203.2	3.20	0.1260	18.0	49.0	3.20
A6203.3	3.30	0.1299	18.0	49.0	3.30
A6203.4	3.40	0.1339	20.0	52.0	3.40
A6203.5	3.50	0.1378	20.0	52.0	3.50
A6203.6	3.60	0.1417	20.0	52.0	3.60
A6203.7	3.70	0.1457	20.0	52.0	3.70
A6203.8	3.80	0.1496	22.0	55.0	3.80
A6203.9	3.90	0.1535	22.0	55.0	3.90
A6204.0	4.00	0.1575	22.0	55.0	4.00
A6204.1	4.10	0.1614	22.0	55.0	4.10
A6204.2	4.20	0.1654	22.0	55.0	4.20
A6204.3	4.30	0.1693	24.0	58.0	4.30
A6204.4	4.40	0.1732	24.0	58.0	4.40
A6204.5	4.50	0.1772	24.0	58.0	4.50
A6204.6	4.60	0.1811	24.0	58.0	4.60
A6204.7	4.70	0.1850	24.0	58.0	4.70
A6204.8	4.80	0.1890	26.0	62.0	4.80

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A6204.9	4.90	0.1929	26.0	62.0	4.90
A6205.0	5.00	0.1969	26.0	62.0	5.00
A6205.1	5.10	0.2008	26.0	62.0	5.10
A6205.2	5.20	0.2047	26.0	62.0	5.20
A6205.3	5.30	0.2087	26.0	62.0	5.30
A6205.4	5.40	0.2126	28.0	66.0	5.40
A6205.5	5.50	0.2165	28.0	66.0	5.50
A6205.6	5.60	0.2205	28.0	66.0	5.60
A6205.7	5.70	0.2244	28.0	66.0	5.70
A6205.8	5.80	0.2283	28.0	66.0	5.80
A6205.9	5.90	0.2323	28.0	66.0	5.90
A6206.0	6.00	0.2362	28.0	66.0	6.00
A6206.1	6.10	0.2402	31.0	70.0	6.10
A6206.2	6.20	0.2441	31.0	70.0	6.20
A6206.3	6.30	0.2480	31.0	70.0	6.30
A6206.4	6.40	0.2520	31.0	70.0	6.40
A6206.5	6.50	0.2559	31.0	70.0	6.50
A6206.6	6.60	0.2598	31.0	70.0	6.60
A6206.7	6.70	0.2638	31.0	70.0	6.70
A6206.8	6.80	0.2677	34.0	74.0	6.80
A6206.9	6.90	0.2717	34.0	74.0	6.90
A6207.0	7.00	0.2756	34.0	74.0	7.00
A6207.1	7.10	0.2795	34.0	74.0	7.10
A6207.2	7.20	0.2835	34.0	74.0	7.20

Product	DC	DC	LCF	OAL	DCON MS
	(mm)	(inch)	(mm)	(mm)	(mm)
A6207.3	7.30	0.2874	34.0	74.0	7.30
A6207.4	7.40	0.2913	34.0	74.0	7.40
A6207.5	7.50	0.2953	34.0	74.0	7.50
A6207.6	7.60	0.2992	37.0	79.0	7.60
A6207.7	7.70	0.3031	37.0	79.0	7.70
A6207.8	7.80	0.3071	37.0	79.0	7.80
A6207.9	7.90	0.3110	37.0	79.0	7.90
A6208.0	8.00	0.3150	37.0	79.0	8.00
A6208.1	8.10	0.3189	37.0	79.0	8.10
A6208.2	8.20	0.3228	37.0	79.0	8.20
A6208.3	8.30	0.3268	37.0	79.0	8.30
A6208.4	8.40	0.3307	37.0	79.0	8.40
A6208.5	8.50	0.3346	37.0	79.0	8.50
A6208.6	8.60	0.3386	40.0	84.0	8.60
A6208.7	8.70	0.3425	40.0	84.0	8.70
A6208.8	8.80	0.3465	40.0	84.0	8.80
A6208.9	8.90	0.3504	40.0	84.0	8.90
A6209.0	9.00	0.3543	40.0	84.0	9.00
A6209.1	9.10	0.3583	40.0	84.0	9.10
A6209.2	9.20	0.3622	40.0	84.0	9.20

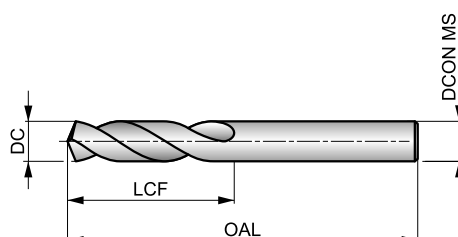
Product	DC	DC	LCF	OAL	DCON MS
	(mm)	(inch)	(mm)	(mm)	(mm)
A6209.3	9.30	0.3661	40.0	84.0	9.30
A6209.4	9.40	0.3701	40.0	84.0	9.40
A6209.5	9.50	0.3740	40.0	84.0	9.50
A6209.6	9.60	0.3780	43.0	89.0	9.60
A6209.7	9.70	0.3819	43.0	89.0	9.70
A6209.8	9.80	0.3858	43.0	89.0	9.80
A6209.9	9.90	0.3898	43.0	89.0	9.90
A62010.0	10.00	0.3937	43.0	89.0	10.00
A62010.2	10.20	0.4016	43.0	89.0	10.20
A62010.3	10.30	0.4055	43.0	89.0	10.30
A62010.4	10.40	0.4094	43.0	89.0	10.40
A62010.5	10.50	0.4134	43.0	89.0	10.50
A62010.8	10.80	0.4252	47.0	95.0	10.80
A62011.0	11.00	0.4331	47.0	95.0	11.00
A62011.5	11.50	0.4528	47.0	95.0	11.50
A62012.0	12.00	0.4724	51.0	102.0	12.00
A62012.2	12.20	0.4803	51.0	102.0	12.20
A62012.5	12.50	0.4921	51.0	102.0	12.50
A62012.8	12.80	0.5039	51.0	102.0	12.80
A62013.0	13.00	0.5118	51.0	102.0	13.00

A117

DORMER

HSS-E (8% kobolt) stubbor, bronze hærdet finish

Bor anbefales til brug i vanskelige materialer og applikationer. Et spids på 135° letter selvcentrering og reducerer også skærekrafterne. Kan stole på for at producere et præcist hul og kvalitetsfinish. Bronze belægning er et tyndt oxidlag, og det er en indikation for kobolt.



HSS-E	DIN 1897	2.5xD
135°	Bronze	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
40 H	45 H	46 H	34 H	30 G	27 F	27 G	21 G	18 F	16 G	13 F	11 E	30 F	26 F
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
27 F	22 F	13 H	11 H	10 H	15 D	34 K	25 F	19 F	27 F	22 F	18 F	24 F	18 F
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
15 F	22 F	17 F	12 F	11 F	9 F	25 F	19 F	15 F	35 K	26 K	18 J	48 I	43 I
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
31 I	68 J	40 K	20 I	35 M	28 K	17 I	30 G	18 F	10 C	12 F	8 C	9 F	6 C
S4.1	S4.2												
7 F	5 C												

DC ≤ 1.5mm 118° spids; DC < 3.00mm 5% kobolt.

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1171.0	—	1.00	0.0394	6.0	26.0	1.00
A1171.1	—	1.10	0.0433	7.0	28.0	1.10
A1171.2	—	1.20	0.0472	8.0	30.0	1.20
A1171.3	—	1.30	0.0512	8.0	30.0	1.30
A1171.4	—	1.40	0.0551	9.0	32.0	1.40
A1171.5	—	1.50	0.0591	9.0	32.0	1.50
A1171.6	—	1.60	0.0630	10.0	34.0	1.60
A1171.7	—	1.70	0.0669	10.0	34.0	1.70
A1171.8	—	1.80	0.0709	11.0	36.0	1.80
A1171.9	—	1.90	0.0748	11.0	36.0	1.90
A1172.0	—	2.00	0.0787	12.0	38.0	2.00
A1172.1	—	2.10	0.0827	12.0	38.0	2.10
A1172.2	—	2.20	0.0866	13.0	40.0	2.20
A1172.3	—	2.30	0.0906	13.0	40.0	2.30
A1172.4	—	2.40	0.0945	14.0	43.0	2.40
A1172.5	—	2.50	0.0984	14.0	43.0	2.50
A1172.6	—	2.60	0.1024	14.0	43.0	2.60
A1172.7	—	2.70	0.1063	16.0	46.0	2.70
A1172.8	—	2.80	0.1102	16.0	46.0	2.80
A1172.9	—	2.90	0.1142	16.0	46.0	2.90
A1173.0	—	3.00	0.1181	16.0	46.0	3.00
A1173.1	—	3.10	0.1220	18.0	49.0	3.10
A1171/8	1/8	3.18	0.1250	18.0	49.0	3.18

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1173.2	—	3.20	0.1260	18.0	49.0	3.20
A1173.3	—	3.30	0.1299	18.0	49.0	3.30
A1173.4	—	3.40	0.1339	20.0	52.0	3.40
A1173.5	—	3.50	0.1378	20.0	52.0	3.50
A1173.6	—	3.60	0.1417	20.0	52.0	3.60
A1173.7	—	3.70	0.1457	20.0	52.0	3.70
A1173.8	—	3.80	0.1496	22.0	55.0	3.80
A1173.9	—	3.90	0.1535	22.0	55.0	3.90
A1175/32	5/32	3.97	0.1563	22.0	55.0	3.97
A1174.0	—	4.00	0.1575	22.0	55.0	4.00
A1174.1	—	4.10	0.1614	22.0	55.0	4.10
A1174.2	—	4.20	0.1654	22.0	55.0	4.20
A1174.3	—	4.30	0.1693	24.0	58.0	4.30
A1174.4	—	4.40	0.1732	24.0	58.0	4.40
A1174.5	—	4.50	0.1772	24.0	58.0	4.50
A1174.6	—	4.60	0.1811	24.0	58.0	4.60
A1174.7	—	4.70	0.1850	24.0	58.0	4.70
A1173/16	3/16	4.76	0.1875	26.0	62.0	4.76
A1174.8	—	4.80	0.1890	26.0	62.0	4.80
A1174.9	—	4.90	0.1929	26.0	62.0	4.90
A1175.0	—	5.00	0.1969	26.0	62.0	5.00
A1175.1	—	5.10	0.2008	26.0	62.0	5.10
A1175.2	—	5.20	0.2047	26.0	62.0	5.20

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1175.3	—	5.30	0.2087	26.0	62.0	5.30
A1175.4	—	5.40	0.2126	28.0	66.0	5.40
A1175.5	—	5.50	0.2165	28.0	66.0	5.50
A1175.6	—	5.60	0.2205	28.0	66.0	5.60
A1175.7	—	5.70	0.2244	28.0	66.0	5.70
A1175.8	—	5.80	0.2283	28.0	66.0	5.80
A1175.9	—	5.90	0.2323	28.0	66.0	5.90
A1176.0	—	6.00	0.2362	28.0	66.0	6.00
A1176.1	—	6.10	0.2402	31.0	70.0	6.10
A1176.2	—	6.20	0.2441	31.0	70.0	6.20
A1176.3	—	6.30	0.2480	31.0	70.0	6.30
A1171/4	1/4	6.35	0.2500	31.0	70.0	6.35
A1176.4	—	6.40	0.2520	31.0	70.0	6.40
A1176.5	—	6.50	0.2559	31.0	70.0	6.50
A1176.6	—	6.60	0.2598	31.0	70.0	6.60
A1176.7	—	6.70	0.2638	31.0	70.0	6.70
A1176.8	—	6.80	0.2677	34.0	74.0	6.80
A1176.9	—	6.90	0.2717	34.0	74.0	6.90
A1177.0	—	7.00	0.2756	34.0	74.0	7.00
A1177.1	—	7.10	0.2795	34.0	74.0	7.10
A1177.2	—	7.20	0.2835	34.0	74.0	7.20
A1177.3	—	7.30	0.2874	34.0	74.0	7.30
A1177.4	—	7.40	0.2913	34.0	74.0	7.40
A1177.5	—	7.50	0.2953	34.0	74.0	7.50
A1177.6	—	7.60	0.2992	37.0	79.0	7.60
A1177.7	—	7.70	0.3031	37.0	79.0	7.70
A1177.8	—	7.80	0.3071	37.0	79.0	7.80
A1177.9	—	7.90	0.3110	37.0	79.0	7.90
A1175/16	5/16	7.94	0.3125	37.0	79.0	7.94

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1178.0	—	8.00	0.3150	37.0	79.0	8.00
A1178.1	—	8.10	0.3189	37.0	79.0	8.10
A1178.2	—	8.20	0.3228	37.0	79.0	8.20
A1178.3	—	8.30	0.3268	37.0	79.0	8.30
A1178.4	—	8.40	0.3307	37.0	79.0	8.40
A1178.5	—	8.50	0.3346	37.0	79.0	8.50
A1178.6	—	8.60	0.3386	40.0	84.0	8.60
A1178.7	—	8.70	0.3425	40.0	84.0	8.70
A1178.8	—	8.80	0.3465	40.0	84.0	8.80
A1178.9	—	8.90	0.3504	40.0	84.0	8.90
A1179.0	—	9.00	0.3543	40.0	84.0	9.00
A1179.1	—	9.10	0.3583	40.0	84.0	9.10
A1179.2	—	9.20	0.3622	40.0	84.0	9.20
A1179.3	—	9.30	0.3661	40.0	84.0	9.30
A1179.4	—	9.40	0.3701	40.0	84.0	9.40
A1179.5	—	9.50	0.3740	40.0	84.0	9.50
A1173/8	3/8	9.52	0.3750	43.0	89.0	9.52
A1179.6	—	9.60	0.3780	43.0	89.0	9.60
A1179.7	—	9.70	0.3819	43.0	89.0	9.70
A1179.8	—	9.80	0.3858	43.0	89.0	9.80
A1179.9	—	9.90	0.3898	43.0	89.0	9.90
A11710.0	—	10.00	0.3937	43.0	89.0	10.00
A11710.2	—	10.20	0.4016	43.0	89.0	10.20
A11710.5	—	10.50	0.4134	43.0	89.0	10.50
A11711.0	—	11.00	0.4331	47.0	95.0	11.00
A11711.5	—	11.50	0.4528	47.0	95.0	11.50
A11712.0	—	12.00	0.4724	51.0	102.0	12.00
A1171/2	1/2	12.70	0.5000	51.0	102.0	12.70
A11713.0	—	13.00	0.5118	51.0	102.0	13.00

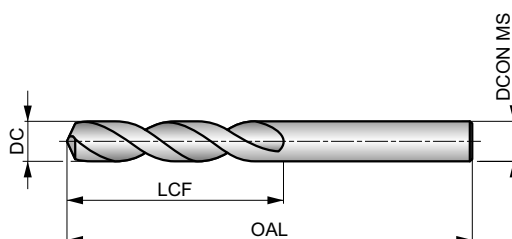
A520

DORMER

ADX HSS stubbor, TiN Belagt

Højtydende bor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og tilspændinger (H9 hultolerance). En tynd spids på 130°, som hjælper med selvcentrering og reducerer skærekrafter. Dette bor skal kun bruges i maskiner med konstant tilspændning. TiN-belægning forlænger værktøjets levetid.

ADX



HSS	DIN 1897	2.5xD
130°	TiN	
λ 32-40°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 53 M	P1.2 ■ 59 M	P1.3 ■ 61 M	P2.1 ■ 45 M	P2.2 ■ 40 K	P2.3 ■ 35 G	P3.1 ■ 31 I	P3.2 ■ 25 I	P3.3 ■ 21 G	P4.1 ■ 19 I	P4.2 ■ 16 G	P4.3 ■ 13 E	M1.1 ■ 41 I	M1.2 ■ 35 I
M2.1 ■ 37 I	M2.2 ■ 30 I	M3.1 ■ 19 I	M3.2 ■ 16 I	M3.3 ■ 14 I	M4.1 ■ 20 G	K1.1 ■ 48 M	K1.2 ■ 36 K	K1.3 ■ 27 K	K2.1 ■ 37 J	K2.2 ■ 30 J	K2.3 ■ 24 F	K3.1 ■ 33 J	K3.2 ■ 25 J
K3.3 ■ 20 F	K4.1 ■ 30 J	K4.2 ■ 23 J	K4.3 ■ 17 F	K4.4 ■ 14 F	K4.5 ■ 12 F	K5.1 ■ 34 J	K5.2 ■ 26 J	K5.3 ■ 20 F	N1.1 ■ 55 I	N1.2 ■ 41 I	N1.3 ■ 28 M	N2.1 ■ 57 K	N2.2 ■ 51 K
N2.3 ■ 37 K	N3.1 ■ 85 K	N3.2 ■ 50 I	N3.3 ■ 25 E	N4.1 ■ 65 G	N4.2 ■ 50 G	N4.3 ■ 35 F	S1.1 ■ 34 I	S1.2 ■ 20 G	S1.3 ■ 4 B	S2.1 ■ 15 G	S2.2 ■ 10 E	S3.1 ■ 11 G	S3.2 ■ 7 E
S4.1 ■ 9 G	S4.2 ■ 6 E												

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A5203.0	—	3.00	0.1181	16.0	46.0	3.00
A5203.1	—	3.10	0.1220	18.0	49.0	3.10
A5201/8	1/8	3.18	0.1250	18.0	49.0	3.18
A5203.2	—	3.20	0.1260	18.0	49.0	3.20
A5203.3	—	3.30	0.1299	18.0	49.0	3.30
A5203.4	—	3.40	0.1339	20.0	52.0	3.40
A5203.5	—	3.50	0.1378	20.0	52.0	3.50
A5209/64	9/64	3.57	0.1406	20.0	52.0	3.57
A5203.6	—	3.60	0.1417	20.0	52.0	3.60
A5203.7	—	3.70	0.1457	20.0	52.0	3.70
A5203.8	—	3.80	0.1496	22.0	55.0	3.80
A5203.9	—	3.90	0.1535	22.0	55.0	3.90
A5205/32	5/32	3.97	0.1563	22.0	55.0	3.97
A5204.0	—	4.00	0.1575	22.0	55.0	4.00
A5204.1	—	4.10	0.1614	22.0	55.0	4.10
A5204.2	—	4.20	0.1654	22.0	55.0	4.20
A5204.3	—	4.30	0.1693	24.0	58.0	4.30
A52011/64	11/64	4.37	0.1719	24.0	58.0	4.37
A5204.4	—	4.40	0.1732	24.0	58.0	4.40
A5204.5	—	4.50	0.1772	24.0	58.0	4.50
A5204.6	—	4.60	0.1811	24.0	58.0	4.60
A5204.7	—	4.70	0.1850	24.0	58.0	4.70
A5203/16	3/16	4.76	0.1875	26.0	62.0	4.76
A5204.8	—	4.80	0.1890	26.0	62.0	4.80

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A5204.9	—	4.90	0.1929	26.0	62.0	4.90
A5205.0	—	5.00	0.1969	26.0	62.0	5.00
A5205.1	—	5.10	0.2008	26.0	62.0	5.10
A52013/64	13/64	5.16	0.2031	26.0	62.0	5.16
A5205.2	—	5.20	0.2047	26.0	62.0	5.20
A5205.3	—	5.30	0.2087	26.0	62.0	5.30
A5205.4	—	5.40	0.2126	28.0	66.0	5.40
A5205.5	—	5.50	0.2165	28.0	66.0	5.50
A5207/32	7/32	5.56	0.2188	28.0	66.0	5.56
A5205.6	—	5.60	0.2205	28.0	66.0	5.60
A5205.7	—	5.70	0.2244	28.0	66.0	5.70
A5205.8	—	5.80	0.2283	28.0	66.0	5.80
A5205.9	—	5.90	0.2323	28.0	66.0	5.90
A52015/64	15/64	5.95	0.2344	28.0	66.0	5.95
A5206.0	—	6.00	0.2362	28.0	66.0	6.00
A5206.1	—	6.10	0.2402	31.0	70.0	6.10
A5206.2	—	6.20	0.2441	31.0	70.0	6.20
A5206.3	—	6.30	0.2480	31.0	70.0	6.30
A5201/4	1/4	6.35	0.2500	31.0	70.0	6.35
A5206.4	—	6.40	0.2520	31.0	70.0	6.40
A5206.5	—	6.50	0.2559	31.0	70.0	6.50
A5206.6	—	6.60	0.2598	31.0	70.0	6.60
A5206.7	—	6.70	0.2638	31.0	70.0	6.70
A52017/64	17/64	6.75	0.2656	34.0	74.0	6.75

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A5206.8	—	6.80	0.2677	34.0	74.0	6.80
A5206.9	—	6.90	0.2717	34.0	74.0	6.90
A5207.0	—	7.00	0.2756	34.0	74.0	7.00
A5207.1	—	7.10	0.2795	34.0	74.0	7.10
A5209/32	9/32	7.14	0.2813	34.0	74.0	7.14
A5207.2	—	7.20	0.2835	34.0	74.0	7.20
A5207.3	—	7.30	0.2874	34.0	74.0	7.30
A5207.4	—	7.40	0.2913	34.0	74.0	7.40
A5207.5	—	7.50	0.2953	34.0	74.0	7.50
A52019/64	19/64	7.54	0.2969	37.0	79.0	7.54
A5207.6	—	7.60	0.2992	37.0	79.0	7.60
A5207.7	—	7.70	0.3031	37.0	79.0	7.70
A5207.8	—	7.80	0.3071	37.0	79.0	7.80
A5207.9	—	7.90	0.3110	37.0	79.0	7.90
A5205/16	5/16	7.94	0.3125	37.0	79.0	7.94
A5208.0	—	8.00	0.3150	37.0	79.0	8.00
A5208.1	—	8.10	0.3189	37.0	79.0	8.10
A5208.2	—	8.20	0.3228	37.0	79.0	8.20
A5208.3	—	8.30	0.3268	37.0	79.0	8.30
A52021/64	21/64	8.33	0.3281	37.0	79.0	8.33
A5208.4	—	8.40	0.3307	37.0	79.0	8.40
A5208.5	—	8.50	0.3346	37.0	79.0	8.50
A5208.6	—	8.60	0.3386	40.0	84.0	8.60
A5208.7	—	8.70	0.3425	40.0	84.0	8.70
A52011/32	11/32	8.73	0.3438	40.0	84.0	8.73
A5208.8	—	8.80	0.3465	40.0	84.0	8.80
A5208.9	—	8.90	0.3504	40.0	84.0	8.90
A5209.0	—	9.00	0.3543	40.0	84.0	9.00
A5209.1	—	9.10	0.3583	40.0	84.0	9.10
A52023/64	23/64	9.13	0.3594	40.0	84.0	9.13
A5209.2	—	9.20	0.3622	40.0	84.0	9.20
A5209.3	—	9.30	0.3661	40.0	84.0	9.30
A5209.4	—	9.40	0.3701	40.0	84.0	9.40
A5209.5	—	9.50	0.3740	40.0	84.0	9.50
A5203/8	3/8	9.52	0.3750	43.0	89.0	9.52
A5209.6	—	9.60	0.3780	43.0	89.0	9.60
A5209.7	—	9.70	0.3819	43.0	89.0	9.70
A5209.8	—	9.80	0.3858	43.0	89.0	9.80
A5209.9	—	9.90	0.3898	43.0	89.0	9.90

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A52025/64	25/64	9.92	0.3906	43.0	89.0	9.92
A52010.0	—	10.00	0.3937	43.0	89.0	10.00
A52010.1	—	10.10	0.3976	43.0	89.0	10.10
A52010.2	—	10.20	0.4016	43.0	89.0	10.20
A52010.3	—	10.30	0.4055	43.0	89.0	10.30
A52013/32	13/32	10.32	0.4063	43.0	89.0	10.32
A52010.4	—	10.40	0.4094	43.0	89.0	10.40
A52010.5	—	10.50	0.4134	43.0	89.0	10.50
A52010.6	—	10.60	0.4173	43.0	89.0	10.60
A52010.7	—	10.70	0.4213	47.0	95.0	10.70
A52027/64	27/64	10.72	0.4219	47.0	95.0	10.72
A52010.8	—	10.80	0.4252	47.0	95.0	10.80
A52010.9	—	10.90	0.4291	47.0	95.0	10.90
A52011.0	—	11.00	0.4331	47.0	95.0	11.00
A52011.1	—	11.10	0.4370	47.0	95.0	11.10
A5207/16	7/16	11.11	0.4375	47.0	95.0	11.11
A52011.2	—	11.20	0.4409	47.0	95.0	11.20
A52011.3	—	11.30	0.4449	47.0	95.0	11.30
A52011.4	—	11.40	0.4488	47.0	95.0	11.40
A52011.5	—	11.50	0.4528	47.0	95.0	11.50
A52029/64	29/64	11.51	0.4531	47.0	95.0	11.51
A52011.6	—	11.60	0.4567	47.0	95.0	11.60
A52011.7	—	11.70	0.4606	47.0	95.0	11.70
A52011.8	—	11.80	0.4646	47.0	95.0	11.80
A52011.9	—	11.90	0.4685	51.0	102.0	11.90
A52015/32	15/32	11.91	0.4688	51.0	102.0	11.91
A52012.0	—	12.00	0.4724	51.0	102.0	12.00
A52012.1	—	12.10	0.4764	51.0	102.0	12.10
A52012.2	—	12.20	0.4803	51.0	102.0	12.20
A52012.3	—	12.30	0.4843	51.0	102.0	12.30
A52031/64	31/64	12.30	0.4844	51.0	102.0	12.30
A52012.4	—	12.40	0.4882	51.0	102.0	12.40
A52012.5	—	12.50	0.4921	51.0	102.0	12.50
A52012.6	—	12.60	0.4961	51.0	102.0	12.60
A52012.7	—	12.70	0.5000	51.0	102.0	12.70
A5201/2	1/2	12.70	0.5000	51.0	102.0	12.70
A52012.8	—	12.80	0.5039	51.0	102.0	12.80
A52012.9	—	12.90	0.5079	51.0	102.0	12.90
A52013.0	—	13.00	0.5118	51.0	102.0	13.00

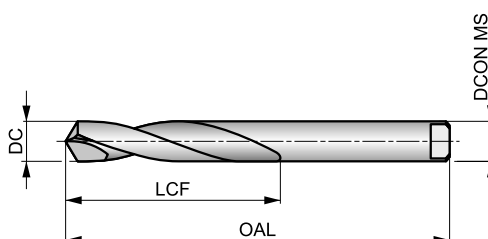
A124

DORMER



HSS stubbor, damphærdet finish, med hårdlodet hårdmetal

Lodet hårdmetalspids giver den høje ydeevne ved en hårdmetalboret med en stærk og mindre HSS-krop. Et 118°, 4-facets spids hjælper med selvcentrering, hvilket gør det til et økonomisk valg. Det kan bruges i både konventionelle og CNC-maskiner. Damphærdet finish bevarer skærevæksen.



HSS HM	DIN 8037	2.5×D
118°	Bright ST	
λ 10-20°		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P2.3 40 C	P3.3 40 C	P4.2 30 C	P4.3 24 A	M3.1 41 C	M3.2 35 C	M3.3 32 C	M4.1 35 C	K1.1 55 C	K1.2 41 C	K1.3 31 C	K2.1 49 C	K2.2 40 C	K2.3 32 A
K3.1 44 C	K3.2 33 C	K3.3 27 A	K4.1 40 C	K4.2 30 C	K4.3 22 A	K4.4 19 A	K4.5 16 A	K5.1 46 C	K5.2 34 C	K5.3 27 A	N3.1 119 E	N3.2 70 G	N4.2 60 E
S1.1 40 A	S1.2 35 A	S1.3 25 A	S2.1 33 A	S2.2 28 A	S3.1 25 A	S3.2 20 A	S4.1 20 A	S4.2 16 A					

Tunge til DIN 1809.

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A1243.0	3.00	0.1181	20.0	50.0	3.00
A1243.2	3.20	0.1260	25.0	56.0	3.20
A1243.5	3.50	0.1378	25.0	56.0	3.50
A1244.0	4.00	0.1575	25.0	56.0	4.00
A1244.2	4.20	0.1654	28.0	63.0	4.20
A1244.5	4.50	0.1772	28.0	63.0	4.50
A1244.8	4.80	0.1890	28.0	63.0	4.80
A1245.0	5.00	0.1969	28.0	63.0	5.00
A1245.2	5.20	0.2047	32.0	71.0	5.20
A1245.5	5.50	0.2165	32.0	71.0	5.50
A1245.8	5.80	0.2283	32.0	71.0	5.80
A1246.0	6.00	0.2362	32.0	71.0	6.00
A1246.5	6.50	0.2559	32.0	71.0	6.50
A1246.8	6.80	0.2677	40.0	80.0	6.80
A1247.0	7.00	0.2756	40.0	80.0	7.00

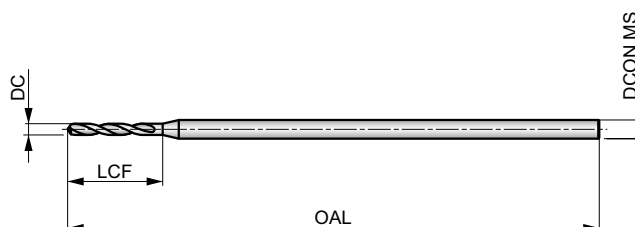
Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A1247.5	7.50	0.2953	40.0	80.0	7.50
A1248.0	8.00	0.3150	40.0	80.0	8.00
A1248.5	8.50	0.3346	50.0	90.0	8.50
A1249.0	9.00	0.3543	50.0	90.0	9.00
A1249.5	9.50	0.3740	50.0	90.0	9.50
A12410.0	10.00	0.3937	56.0	100.0	10.00
A12410.5	10.50	0.4134	56.0	100.0	10.50
A12411.0	11.00	0.4331	56.0	100.0	11.00
A12411.5	11.50	0.4528	63.0	112.0	11.50
A12412.0	12.00	0.4724	63.0	112.0	12.00
A12413.0	13.00	0.5118	63.0	112.0	13.00
A12414.0	14.00	0.5512	71.0	125.0	14.00
A12415.0	15.00	0.5906	71.0	125.0	15.00
A12416.0	16.00	0.6299	80.0	140.0	16.00

A720

DORMER

HSS-E (5% kobolt) mikrobor, blank finish

Mikrobor i meget små diameter fra 0,15 mm til 1,40 mm. For at gøre værktøjsholdningen nemmere har alle bor enten en skaftdiameter på 1,00 mm eller 1,50 mm. Borene har alle et 118°, 4-spidspunkt, hvilket er en stor hjælp til selvcentrering og reducerer skærekrafterne.



HSS-E	DIN 1899	2.5xD
118°	Bright	
λ 20-35°	R	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 36 A	P1.2 ■ 40 A	P1.3 ■ 41 A	P2.1 ■ 31 A	P2.2 ■ 27 A	P2.3 ■ 24 A	P3.1 ■ 25 A	P3.2 ■ 20 A	P3.3 ■ 17 A	P4.1 ■ 15 A	P4.2 ■ 13 A	P4.3 ■ 10 A	M1.1 ■ 30 A	M1.2 ■ 26 A
M2.1 ■ 27 A	M2.2 ■ 22 A	M3.1 ■ 12 A	M3.2 ■ 10 A	M3.3 ■ 9 A	M4.1 ■ 15 A	K1.1 ■ 30 A	K1.2 ■ 22 A	K1.3 ■ 17 A	K2.1 ■ 25 A	K2.2 ■ 20 A	K2.3 ■ 16 A	K3.1 ■ 22 A	K3.2 ■ 17 A
K3.3 ■ 13 A	K4.1 ■ 20 A	K4.2 ■ 15 A	K4.3 ■ 11 A	K4.4 ■ 10 A	K4.5 ■ 8 A	K5.1 ■ 23 A	K5.2 ■ 17 A	K5.3 ■ 13 A	N1.1 ■ 35 A	N1.2 ■ 26 A	N1.3 ■ 18 A	N2.1 ■ 42 A	N2.2 ■ 37 A
N2.3 ■ 27 A	N3.1 ■ 68 A	N3.2 ■ 40 A	N3.3 ■ 20 A	N4.1 ■ 48 A	N4.2 ■ 25 A	S1.1 ■ 23 A	S1.2 ■ 17 A	S1.3 ■ 8 A	S2.1 ■ 9 A	S2.2 ■ 6 A	S3.1 ■ 7 A	S3.2 ■ 4 A	S4.1 ■ 5 A
S4.2 ■ 3 A													

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A720.15	0.15	0.0059	1.0	25.0	1.00
A720.16	0.16	0.0063	1.4	25.0	1.00
A720.17	0.17	0.0067	1.4	25.0	1.00
A720.18	0.18	0.0070	1.4	25.0	1.00
A720.2	0.20	0.0079	1.8	25.0	1.00
A720.22	0.22	0.0087	1.8	25.0	1.00
A720.25	0.25	0.0098	2.2	25.0	1.00
A720.27	0.27	0.0106	2.2	25.0	1.00
A720.28	0.28	0.0110	2.2	25.0	1.00
A720.3	0.30	0.0118	2.2	25.0	1.00
A720.35	0.35	0.0138	2.8	25.0	1.00
A720.38	0.38	0.0150	2.8	25.0	1.00
A720.39	0.39	0.0154	3.6	25.0	1.00
A720.4	0.40	0.0157	3.6	25.0	1.00
A720.45	0.45	0.0177	3.6	25.0	1.00
A720.5	0.50	0.0197	4.0	25.0	1.00

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A720.55	0.55	0.0217	4.5	25.0	1.00
A720.6	0.60	0.0236	4.5	25.0	1.00
A720.62	0.62	0.0244	5.0	25.0	1.00
A720.65	0.65	0.0256	5.0	25.0	1.00
A720.7	0.70	0.0276	5.6	25.0	1.00
A720.75	0.75	0.0295	5.6	25.0	1.00
A720.8	0.80	0.0315	6.3	25.0	1.50
A720.85	0.85	0.0335	6.3	25.0	1.50
A720.9	0.90	0.0354	7.1	25.0	1.50
A720.95	0.95	0.0374	7.1	25.0	1.50
A7201.0	1.00	0.0394	8.0	25.0	1.50
A7201.05	1.05	0.0413	8.0	25.0	1.50
A7201.1	1.10	0.0433	9.0	25.0	1.50
A7201.2	1.20	0.0472	10.0	25.0	1.50
A7201.3	1.30	0.0512	10.0	25.0	1.50
A7201.4	1.40	0.0551	11.2	25.0	1.50

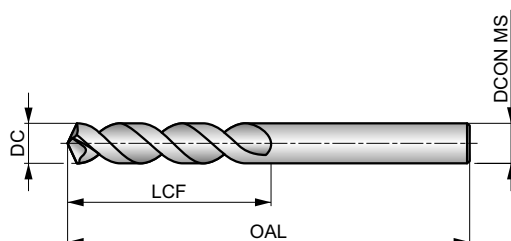
A920



PFX HSS-E (5% kobolt) stubbor, blank finish

Højtydende boremaskine, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og fremførsler (H10 hultolerance). Selvcentrerende 130° punktsvinkel og specielt parabolisk fløjtdesign hjælper med at bore dybe huller i en enkelt passage. Velegnet til mange materialer.

PFX



HSS-E	DIN ANSI	3×D
130°	Bright	
λ>35°		DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 42 J	P1.2 ■ 47 J	P1.3 ■ 49 J	P2.1 ■ 36 J	P2.2 ■ 32 I	P2.3 ■ 28 E	P3.1 ■ 34 I	P3.2 ■ 27 I	P3.3 ■ 23 E	P4.1 ■ 20 I	P4.2 ■ 17 E	P4.3 ■ 14 E	M1.1 ■ 21 F	M1.2 ■ 17 F
M2.1 ■ 18 F	M2.2 ■ 15 F	M3.1 ■ 8 F	M3.2 ■ 7 F	M3.3 ■ 6 F	M4.1 ■ 9 D	K1.1 ■ 34 L	K1.2 ■ 25 L	K1.3 ■ 19 L	K2.1 ■ 32 L	K2.2 ■ 26 L	K2.3 ■ 21 J	K3.1 ■ 28 L	K3.2 ■ 22 L
K3.3 ■ 17 J	K4.1 ■ 126 L	K4.2 ■ 20 L	K4.3 ■ 14 J	K4.4 ■ 12 J	K4.5 ■ 10 J	K5.1 ■ 30 L	K5.2 ■ 22 L	K5.3 ■ 17 J	N1.1 ■ 75 L	N1.2 ■ 56 L	N1.3 ■ 38 N	N2.1 ■ 62 N	N2.2 ■ 55 N
N2.3 ■ 40 N	N3.1 ■ 112 J	N3.2 ■ 66 J	N3.3 ■ 33 H	N4.1 ■ 55 J	N4.2 ■ 40 H	S1.1 ■ 30 G	S1.2 ■ 18 G	S1.3 ■ 10 C	S2.1 ■ 12 G	S2.2 ■ 8 E	S3.1 ■ 9 G	S3.2 ■ 6 E	S4.1 ■ 7 G
S4.2 ■ 5 E													

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9201.0	—	1.00	0.0394	6.0	26.0	1.00
A9201.1	—	1.10	0.0433	7.0	28.0	1.10
A9203/64	3/64	1.19	0.0469	13.0	35.0	1.19
A9201.2	—	1.20	0.0472	8.0	30.0	1.20
A9201.25	—	1.25	0.0492	8.0	30.0	1.25
A9201.3	—	1.30	0.0512	8.0	30.0	1.30
A9201.35	—	1.35	0.0531	9.0	32.0	1.35
A9201.4	—	1.40	0.0551	9.0	32.0	1.40
A9201.5	—	1.50	0.0591	9.0	32.0	1.50
A9201.55	—	1.55	0.0610	10.0	34.0	1.55
A9201/16	1/16	1.59	0.0625	16.0	41.0	1.59
A9201.6	—	1.60	0.0630	10.0	34.0	1.60
A9201.7	—	1.70	0.0669	10.0	34.0	1.70
A9201.75	—	1.75	0.0689	11.0	36.0	1.75
A9201.8	—	1.80	0.0709	11.0	36.0	1.80
A9201.9	—	1.90	0.0748	11.0	36.0	1.90
A9205/64	5/64	1.98	0.0781	17.0	43.0	1.98
A9202.0	—	2.00	0.0787	12.0	38.0	2.00
A9202.1	—	2.10	0.0827	12.0	38.0	2.10
A9202.15	—	2.15	0.0846	13.0	40.0	2.15
A9202.2	—	2.20	0.0866	13.0	40.0	2.20
A9202.3	—	2.30	0.0906	13.0	40.0	2.30
A9202.35	—	2.35	0.0925	14.0	43.0	2.35
A9203/32	3/32	2.38	0.0938	19.0	41.0	2.38

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9202.4	—	2.40	0.0945	14.0	43.0	2.40
A9202.5	—	2.50	0.0984	14.0	43.0	2.50
A9202.6	—	2.60	0.1024	14.0	43.0	2.60
A9202.7	—	2.70	0.1063	16.0	46.0	2.70
A9207/64	7/64	2.78	0.1094	21.0	46.0	2.78
A9202.8	—	2.80	0.1102	16.0	46.0	2.80
A9202.9	—	2.90	0.1142	16.0	46.0	2.90
A9203.0	—	3.00	0.1181	16.0	46.0	3.00
A9203.1	—	3.10	0.1220	18.0	49.0	3.10
A9201/8	1/8	3.18	0.1250	22.0	48.0	3.18
A9203.2	—	3.20	0.1260	18.0	49.0	3.20
A9203.3	—	3.30	0.1299	18.0	49.0	3.30
A9203.4	—	3.40	0.1339	20.0	52.0	3.40
A9203.5	—	3.50	0.1378	20.0	52.0	3.50
A9209/64	9/64	3.57	0.1406	24.0	49.0	3.57
A9203.6	—	3.60	0.1417	20.0	52.0	3.60
A9203.7	—	3.70	0.1457	20.0	52.0	3.70
A9203.8	—	3.80	0.1496	22.0	55.0	3.80
A9203.9	—	3.90	0.1535	22.0	55.0	3.90
A9205/32	5/32	3.97	0.1563	25.0	52.0	3.97
A9204.0	—	4.00	0.1575	22.0	55.0	4.00
A9204.1	—	4.10	0.1614	22.0	55.0	4.10
A9204.2	—	4.20	0.1654	22.0	55.0	4.20
A9204.3	—	4.30	0.1693	24.0	58.0	4.30

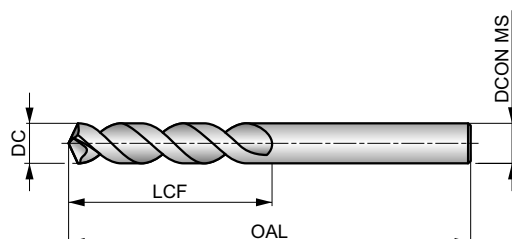
A921



PFX HSS-E (5% kobolt) stubbor, Alcrona top belægning

Højtydende bor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og tilspændning (H10 hulltolerance). Selvcentrerende 130° spidsvinkel og specielt parabolisk skærdesign. Velegnet til mange materialer. Alcrona-TOP-belægning forbedrer ydeevnen og forlænger værktøjets levetid.

PFX



HSS-E	DIN ANSI	3xD
130°	Alcrona Top	
λ>35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 70 M	P1.2 ■ 79 M	P1.3 ■ 81 M	P2.1 ■ 60 M	P2.2 ■ 53 J	P2.3 ■ 47 G	P3.1 ■ 56 J	P3.2 ■ 45 J	P3.3 ■ 38 G	P4.1 ■ 33 J	P4.2 ■ 28 G	P4.3 ■ 23 G	M1.1 ■ 23 F	M1.2 ■ 20 F
M2.1 ■ 21 F	M2.2 ■ 17 F	M3.1 ■ 10 F	M3.2 ■ 9 F	M3.3 ■ 8 F	M4.1 ■ 11 D	K1.1 ■ 53 L	K1.2 ■ 39 L	K1.3 ■ 29 L	K2.1 ■ 52 L	K2.2 ■ 42 L	K2.3 ■ 33 J	K3.1 ■ 46 L	K3.2 ■ 35 L
K3.3 ■ 28 J	K4.1 ■ 42 L	K4.2 ■ 32 L	K4.3 ■ 23 J	K4.4 ■ 20 J	K4.5 ■ 17 J	K5.1 ■ 48 L	K5.2 ■ 36 L	K5.3 ■ 28 J	S1.1 ■ 48 I	S1.2 ■ 29 I	S1.3 ■ 16 E	S2.1 ■ 19 I	S2.2 ■ 14 G
S3.1 ■ 14 I	S3.2 ■ 10 G	S4.1 ■ 11 I	S4.2 ■ 8 G										

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9212.5	—	2.50	0.0984	14.0	43.0	2.50
A9212.6	—	2.60	0.1024	14.0	43.0	2.60
A9212.7	—	2.70	0.1063	16.0	46.0	2.70
A9217/64	7/64	2.78	0.1094	21.0	46.0	2.78
A9212.9	—	2.90	0.1142	16.0	46.0	2.90
A9213.0	—	3.00	0.1181	16.0	46.0	3.00
A9213.1	—	3.10	0.1220	18.0	49.0	3.10
A9211/8	1/8	3.18	0.1250	22.0	48.0	3.18
A9213.2	—	3.20	0.1260	18.0	49.0	3.20
A9213.3	—	3.30	0.1299	18.0	49.0	3.30
A9213.4	—	3.40	0.1339	20.0	52.0	3.40
A9213.5	—	3.50	0.1378	20.0	52.0	3.50
A9219/64	9/64	3.57	0.1406	24.0	49.0	3.57
A9213.6	—	3.60	0.1417	20.0	52.0	3.60
A9213.7	—	3.70	0.1457	20.0	52.0	3.70
A9213.8	—	3.80	0.1496	22.0	55.0	3.80
A9213.9	—	3.90	0.1535	22.0	55.0	3.90
A9215/32	5/32	3.97	0.1563	25.0	52.0	3.97
A9214.0	—	4.00	0.1575	22.0	55.0	4.00
A9214.1	—	4.10	0.1614	22.0	55.0	4.10
A9214.2	—	4.20	0.1654	22.0	55.0	4.20
A9214.3	—	4.30	0.1693	24.0	58.0	4.30
A92111/64	11/64	4.37	0.1719	27.0	54.0	4.37
A9214.4	—	4.40	0.1732	24.0	58.0	4.40
A9214.5	—	4.50	0.1772	24.0	58.0	4.50
A9214.6	—	4.60	0.1811	24.0	58.0	4.60

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9214.7	—	4.70	0.1850	24.0	58.0	4.70
A9213/16	3/16	4.76	0.1875	29.0	56.0	4.76
A9214.8	—	4.80	0.1890	26.0	62.0	4.80
A9214.9	—	4.90	0.1929	26.0	62.0	4.90
A9215.0	—	5.00	0.1969	26.0	62.0	5.00
A9215.1	—	5.10	0.2008	26.0	62.0	5.10
A92113/64	13/64	5.16	0.2031	30.0	57.0	5.16
A9215.2	—	5.20	0.2047	26.0	62.0	5.20
A9215.3	—	5.30	0.2087	26.0	62.0	5.30
A9215.4	—	5.40	0.2126	28.0	66.0	5.40
A9215.5	—	5.50	0.2165	28.0	66.0	5.50
A9217/32	7/32	5.56	0.2188	32.0	60.0	5.56
A9215.6	—	5.60	0.2205	28.0	66.0	5.60
A9215.7	—	5.70	0.2244	28.0	66.0	5.70
A9215.8	—	5.80	0.2283	28.0	66.0	5.80
A9215.9	—	5.90	0.2323	28.0	66.0	5.90
A92115/64	15/64	5.95	0.2344	33.0	62.0	5.95
A9216.0	—	6.00	0.2362	28.0	66.0	6.00
A9216.1	—	6.10	0.2402	31.0	70.0	6.10
A9216.2	—	6.20	0.2441	31.0	70.0	6.20
A9216.3	—	6.30	0.2480	31.0	70.0	6.30
A9211/4	1/4	6.35	0.2500	35.0	64.0	6.35
A9216.4	—	6.40	0.2520	31.0	70.0	6.40
A9216.5	—	6.50	0.2559	31.0	70.0	6.50
A9216.6	—	6.60	0.2598	31.0	70.0	6.60
A9216.7	—	6.70	0.2638	31.0	70.0	6.70

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A92117/64	17/64	6.75	0.2656	37.0	67.0	6.75
A9216.8	—	6.80	0.2677	34.0	74.0	6.80
A9216.9	—	6.90	0.2717	34.0	74.0	6.90
A9217.0	—	7.00	0.2756	34.0	74.0	7.00
A9217.1	—	7.10	0.2795	34.0	74.0	7.10
A9219/32	9/32	7.14	0.2813	38.0	68.0	7.14
A9217.2	—	7.20	0.2835	34.0	74.0	7.20
A9217.3	—	7.30	0.2874	34.0	74.0	7.30
A9217.4	—	7.40	0.2913	34.0	74.0	7.40
A9217.5	—	7.50	0.2953	34.0	74.0	7.50
A92119/64	19/64	7.54	0.2969	40.0	70.0	7.54
A9217.6	—	7.60	0.2992	37.0	79.0	7.60
A9217.7	—	7.70	0.3031	37.0	79.0	7.70
A9217.8	—	7.80	0.3071	37.0	79.0	7.80
A9217.9	—	7.90	0.3110	37.0	79.0	7.90
A9215/16	5/16	7.94	0.3125	41.0	71.0	7.94
A9218.0	—	8.00	0.3150	37.0	79.0	8.00
A9218.1	—	8.10	0.3189	37.0	79.0	8.10
A9218.2	—	8.20	0.3228	37.0	79.0	8.20
A9218.3	—	8.30	0.3268	37.0	79.0	8.30
A92121/64	21/64	8.33	0.3281	43.0	75.0	8.33
A9218.4	—	8.40	0.3307	37.0	79.0	8.40
A9218.5	—	8.50	0.3346	37.0	79.0	8.50
A9218.6	—	8.60	0.3386	40.0	84.0	8.60
A9218.7	—	8.70	0.3425	40.0	84.0	8.70
A92111/32	11/32	8.73	0.3438	43.0	76.0	8.73
A9218.8	—	8.80	0.3465	40.0	84.0	8.80
A9218.9	—	8.90	0.3504	40.0	84.0	8.90
A9219.0	—	9.00	0.3543	40.0	84.0	9.00
A9219.1	—	9.10	0.3583	40.0	84.0	9.10
A92123/64	23/64	9.13	0.3594	44.0	78.0	9.13
A9219.2	—	9.20	0.3622	40.0	84.0	9.20
A9219.3	—	9.30	0.3661	40.0	84.0	9.30
A9219.4	—	9.40	0.3701	40.0	84.0	9.40
A9219.5	—	9.50	0.3740	40.0	84.0	9.50
A9213/8	3/8	9.52	0.3750	46.0	79.0	9.52
A9219.6	—	9.60	0.3780	43.0	89.0	9.60

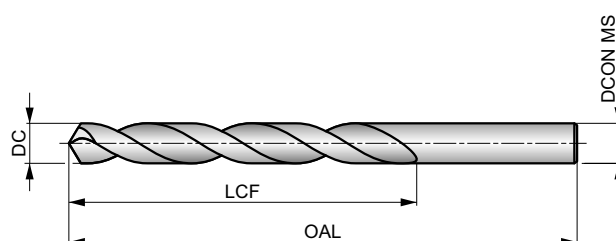
Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A9219.7	—	9.70	0.3819	43.0	89.0	9.70
A9219.8	—	9.80	0.3858	43.0	89.0	9.80
A9219.9	—	9.90	0.3898	43.0	89.0	9.90
A92125/64	25/64	9.92	0.3906	48.0	83.0	9.92
A92110.0	—	10.00	0.3937	43.0	89.0	10.00
A92110.2	—	10.20	0.4016	43.0	89.0	10.20
A92110.3	—	10.30	0.4055	43.0	89.0	10.30
A92113/32	13/32	10.32	0.4063	49.0	84.0	10.32
A92110.5	—	10.50	0.4134	43.0	89.0	10.50
A92127/64	27/64	10.72	0.4219	51.0	86.0	10.72
A92110.8	—	10.80	0.4252	47.0	95.0	10.80
A92111.0	—	11.00	0.4331	47.0	95.0	11.00
A9217/16	7/16	11.11	0.4375	52.0	87.0	11.11
A92111.5	—	11.50	0.4528	47.0	95.0	11.50
A92129/64	29/64	11.51	0.4531	54.0	90.0	11.51
A92111.8	—	11.80	0.4646	47.0	95.0	11.80
A92115/32	15/32	11.91	0.4688	54.0	92.0	11.91
A92112.0	—	12.00	0.4724	51.0	102.0	12.00
A92131/64	31/64	12.30	0.4844	56.0	94.0	12.30
A92112.5	—	12.50	0.4921	51.0	102.0	12.50
A9211/2	1/2	12.70	0.5000	57.0	95.0	12.70
A92113.0	—	13.00	0.5118	51.0	102.0	13.00
A92133/64	33/64	13.10	0.5156	60.0	98.0	13.10
A92113.5	—	13.50	0.5315	54.0	107.0	13.50
A92135/64	35/64	13.89	0.5469	64.0	102.0	13.89
A92114.0	—	14.00	0.5512	54.0	107.0	14.00
A9219/16	9/16	14.29	0.5625	64.0	102.0	14.29
A92114.5	—	14.50	0.5709	56.0	111.0	14.50
A92137/64	37/64	14.68	0.5781	67.0	105.0	14.68
A92114.75	—	14.75	0.5807	56.0	111.0	14.75
A92115.0	—	15.00	0.5906	56.0	111.0	15.00
A92119/32	19/32	15.08	0.5938	67.0	105.0	15.08
A92139/64	39/64	15.48	0.6094	70.0	108.0	15.48
A92115.5	—	15.50	0.6102	58.0	115.0	15.50
A9215/8	5/8	15.88	0.6250	70.0	108.0	15.88
A92116.0	—	16.00	0.6299	58.0	115.0	16.00

A002

DORMER

HSS bor, TiN-Tip belagt

Alsidig bor til både håndboring og maskinboring. Et specielt designet 118° spids, der hjælper med at centrere boret selv ved boring i hånden og giver et mere nøjagtigt hul i størrelse. Velegnet til mange materialer. TiN-Tip belægning forbedrer ydeevnen og forlænger værktøjets levetid.



HSS	DIN 338	4xD
118°	TiN-Tip	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 46 J	P1.2 ■ 52 J	P1.3 ■ 54 J	P2.1 ■ 40 J	P2.2 ■ 35 F	P2.3 ■ 31 F	P3.1 ■ 27 F	P3.2 ■ 21 F	P3.3 ■ 18 F	P4.1 ■ 16 F	P4.2 ■ 13 F	P4.3 ■ 11 E	M1.1 ■ 27 F	M1.2 ■ 23 F
M2.1 ■ 24 F	M2.2 ■ 20 F	M3.1 ■ 14 G	M3.2 ■ 12 G	M3.3 ■ 11 G	M4.1 ■ 16 C	K1.1 ■ 40 J	K1.2 ■ 30 E	K1.3 ■ 22 E	K2.1 ■ 34 E	K2.2 ■ 28 E	K2.3 ■ 22 E	K3.1 ■ 30 E	K3.2 ■ 23 E
K3.3 ■ 19 E	K4.1 ■ 28 E	K4.2 ■ 21 E	K4.3 ■ 16 E	K4.4 ■ 13 E	K4.5 ■ 11 E	K5.1 ■ 32 E	K5.2 ■ 24 E	K5.3 ■ 19 E	N1.1 ■ 41 K	N1.2 ■ 31 K	N1.3 ■ 21 J	N2.1 ■ 51 I	N2.2 ■ 46 I
N2.3 ■ 33 I	N3.1 ■ 56 H	N3.2 ■ 33 I	N3.3 ■ 17 G	N4.1 ■ 30 I	N4.2 ■ 50 H	N4.3 ■ 35 F	S1.1 ■ 23 F	S1.2 ■ 13 D	S1.3 ■ 7 B	S2.1 ■ 9 E	S2.2 ■ 4 A	S3.1 ■ 7 E	S3.2 ■ 3 A
S4.1 ■ 5 E	S4.2 ■ 2 A												

DC <2 mm lys; DC> = 2 mm TiN belagt og krydsslebet.

Produkter fra denne serie fås også i sæt. Se A087, A089 A094, A095 eller A099.

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A0021.0	—	1.00	0.0394	12.0	34.0	1.00
A0021.1	—	1.10	0.0433	14.0	36.0	1.10
A0023/64	3/64	1.19	0.0469	16.0	38.0	1.19
A0021.2	—	1.20	0.0472	16.0	38.0	1.20
A0021.3	—	1.30	0.0512	16.0	38.0	1.30
A0021.4	—	1.40	0.0551	18.0	40.0	1.40
A0021.5	—	1.50	0.0591	18.0	40.0	1.50
A0021/16	1/16	1.59	0.0625	20.0	43.0	1.59
A0021.6	—	1.60	0.0630	20.0	43.0	1.60
A0021.7	—	1.70	0.0669	20.0	43.0	1.70
A0021.8	—	1.80	0.0709	22.0	46.0	1.80
A0021.9	—	1.90	0.0748	22.0	46.0	1.90
A0025/64	5/64	1.98	0.0781	24.0	49.0	1.98
A0022.0	—	2.00	0.0787	24.0	49.0	2.00
A0022.1	—	2.10	0.0827	24.0	49.0	2.10
A0022.2	—	2.20	0.0866	27.0	53.0	2.20
A0022.3	—	2.30	0.0906	27.0	53.0	2.30
A0023/32	3/32	2.38	0.0938	30.0	57.0	2.38
A0022.4	—	2.40	0.0945	30.0	57.0	2.40
A0022.5	—	2.50	0.0984	30.0	57.0	2.50
A0022.6	—	2.60	0.1024	30.0	57.0	2.60
A0022.7	—	2.70	0.1063	33.0	61.0	2.70
A0027/64	7/64	2.78	0.1094	33.0	61.0	2.78
A0022.8	—	2.80	0.1102	33.0	61.0	2.80

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A0022.9	—	2.90	0.1142	33.0	61.0	2.90
A0023.0	—	3.00	0.1181	33.0	61.0	3.00
A0023.1	—	3.10	0.1220	36.0	65.0	3.10
A0021/8	1/8	3.18	0.1250	36.0	65.0	3.18
A0023.2	—	3.20	0.1260	36.0	65.0	3.20
A0023.25	—	3.25	0.1280	36.0	65.0	3.25
A0023.3	—	3.30	0.1299	36.0	65.0	3.30
A0023.4	—	3.40	0.1339	39.0	70.0	3.40
A0023.5	—	3.50	0.1378	39.0	70.0	3.50
A0029/64	9/64	3.57	0.1406	39.0	70.0	3.57
A0023.6	—	3.60	0.1417	39.0	70.0	3.60
A0023.7	—	3.70	0.1457	39.0	70.0	3.70
A0023.8	—	3.80	0.1496	43.0	75.0	3.80
A0023.9	—	3.90	0.1535	43.0	75.0	3.90
A0025/32	5/32	3.97	0.1563	43.0	75.0	3.97
A0024.0	—	4.00	0.1575	43.0	75.0	4.00
A0024.1	—	4.10	0.1614	43.0	75.0	4.10
A0024.2	—	4.20	0.1654	43.0	75.0	4.20
A0024.3	—	4.30	0.1693	47.0	80.0	4.30
A00211/64	11/64	4.37	0.1719	47.0	80.0	4.37
A0024.4	—	4.40	0.1732	47.0	80.0	4.40
A0024.5	—	4.50	0.1772	47.0	80.0	4.50
A0024.6	—	4.60	0.1811	47.0	80.0	4.60
A0024.7	—	4.70	0.1850	47.0	80.0	4.70

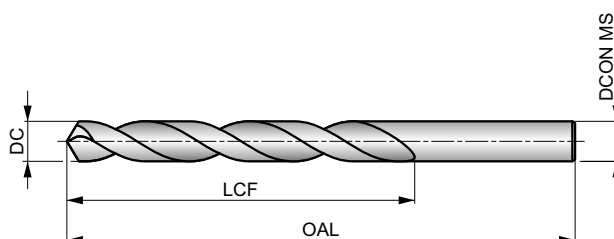
A002S

DORMER



HSS bor, TiN-Tip belagt

Alsidig bor til både håndboring og maskinboring. Et specielt designet 118° spids, der hjælper med at centrere boret selv ved boring i hånden og giver et mere nøjagtigt hul i størrelse. Velegnet til mange materialer. TiN-Tip belægning forbedrer ydeevnen og forlænger værktøjets levetid.



HSS	DIN 338	4xD
118°	TiN-Tip	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 46 J	P1.2 ■ 52 J	P1.3 ■ 54 J	P2.1 ■ 40 J	P2.2 ■ 35 F	P2.3 ■ 31 F	P3.1 ■ 27 F	P3.2 ■ 21 F	P3.3 ■ 18 F	P4.1 ■ 16 F	P4.2 ■ 13 F	P4.3 ■ 11 E	M1.1 ■ 27 F	M1.2 ■ 23 F
M2.1 ■ 24 F	M2.2 ■ 20 F	M3.1 ■ 14 G	M3.2 ■ 12 G	M3.3 ■ 11 G	M4.1 ■ 16 C	K1.1 ■ 40 J	K1.2 ■ 30 E	K1.3 ■ 22 E	K2.1 ■ 34 E	K2.2 ■ 28 E	K2.3 ■ 22 E	K3.1 ■ 30 E	K3.2 ■ 23 E
K3.3 ■ 19 E	K4.1 ■ 28 E	K4.2 ■ 21 E	K4.3 ■ 16 E	K4.4 ■ 13 E	K4.5 ■ 11 E	K5.1 ■ 32 E	K5.2 ■ 24 E	K5.3 ■ 19 E	N1.1 ■ 41 K	N1.2 ■ 31 K	N1.3 ■ 21 J	N2.1 ■ 51 I	N2.2 ■ 46 I
N2.3 ■ 33 I	N3.1 ■ 56 H	N3.2 ■ 33 I	N3.3 ■ 17 G	N4.1 ■ 30 I	N4.2 ■ 50 H	N4.3 ■ 35 F	S1.1 ■ 23 F	S1.2 ■ 13 D	S1.3 ■ 7 B	S2.1 ■ 9 E	S2.2 ■ 4 A	S3.1 ■ 7 E	S3.2 ■ 3 A
S4.1 ■ 5 E	S4.2 ■ 2 A												

DC <= 5mm Salges i pakker med 2 stk.

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A002S2.0	—	2.00	0.0787	24.0	49.0	2.00
A002S2.5	—	2.50	0.0984	30.0	57.0	2.50
A002S3.0	—	3.00	0.1181	33.0	61.0	3.00
A002S1/8	1/8	3.18	0.1250	36.0	65.0	3.18
A002S3.2	—	3.20	0.1260	36.0	65.0	3.20
A002S3.3	—	3.30	0.1299	36.0	65.0	3.30
A002S3.5	—	3.50	0.1378	39.0	70.0	3.50
A002S5/32	5/32	3.97	0.1563	43.0	75.0	3.97
A002S4.0	—	4.00	0.1575	43.0	75.0	4.00
A002S4.1	—	4.10	0.1614	43.0	75.0	4.10
A002S4.2	—	4.20	0.1654	43.0	75.0	4.20
A002S4.5	—	4.50	0.1772	47.0	80.0	4.50
A002S3/16	3/16	4.76	0.1875	52.0	86.0	4.76
A002S5.0	—	5.00	0.1969	52.0	86.0	5.00
A002S13/64	13/64	5.16	0.2031	52.0	86.0	5.16
A002S5.5	—	5.50	0.2165	57.0	93.0	5.50
A002S7/32	7/32	5.56	0.2188	57.0	93.0	5.56
A002S6.0	—	6.00	0.2362	57.0	93.0	6.00
A002S1/4	1/4	6.35	0.2500	63.0	101.0	6.35
A002S6.5	—	6.50	0.2559	63.0	101.0	6.50

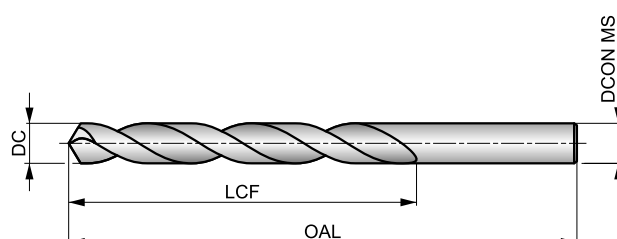
Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A002S17/64	17/64	6.75	0.2656	69.0	109.0	6.75
A002S6.8	—	6.80	0.2677	69.0	109.0	6.80
A002S7.0	—	7.00	0.2756	69.0	109.0	7.00
A002S7.5	—	7.50	0.2953	69.0	109.0	7.50
A002S5/16	5/16	7.94	0.3125	75.0	117.0	7.94
A002S8.0	—	8.00	0.3150	75.0	117.0	8.00
A002S8.2	—	8.20	0.3228	75.0	117.0	8.20
A002S8.5	—	8.50	0.3346	75.0	117.0	8.50
A002S9.0	—	9.00	0.3543	81.0	125.0	9.00
A002S9.5	—	9.50	0.3740	81.0	125.0	9.50
A002S3/8	3/8	9.52	0.3750	87.0	133.0	9.52
A002S10.0	—	10.00	0.3937	87.0	133.0	10.00
A002S10.2	—	10.20	0.4016	87.0	133.0	10.20
A002S10.5	—	10.50	0.4134	87.0	133.0	10.50
A002S11.0	—	11.00	0.4331	94.0	142.0	11.00
A002S11.5	—	11.50	0.4528	94.0	142.0	11.50
A002S12.0	—	12.00	0.4724	101.0	151.0	12.00
A002S12.5	—	12.50	0.4921	101.0	151.0	12.50
A002S1/2	1/2	12.70	0.5000	101.0	151.0	12.70
A002S13.0	—	13.00	0.5118	101.0	151.0	13.00

A100



HSS bor, damphærdet finish

En stor og alsidig allroundbor med et konventionelt spids på 118°, der giver styrke og er let at genopskære med, hvilket gør det meget omkostningseffektivt. Anvendelig til håndboring og maskinboring. Damphærdet finish bevarer skærevæske og forhindrer svejsning af spåner. Velegnet til mange materialer.



HSS	DIN 338	4×D
118°	ST	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 33 H	■ 37 H	■ 38 H	■ 28 H	■ 25 F	■ 22 E	■ 19 F	■ 15 F	■ 13 E	■ 11 F	■ 10 E	■ 8 D	■ 21 E	■ 17 E
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■ 18 E	■ 15 E	■ 9 G	■ 8 G	■ 7 G	■ 9 C	■ 30 H	■ 22 F	■ 17 F	■ 25 E	■ 20 E	■ 16 E	■ 22 E	■ 17 E
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■ 13 E	■ 20 E	■ 15 E	■ 11 E	■ 10 E	■ 8 E	■ 23 E	■ 17 E	■ 13 E	■ 33 J	■ 25 J	■ 17 I	■ 42 H	■ 37 H
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
■ 27 H	■ 59 H	■ 35 I	■ 18 G	■ 30 J	■ 28 H	■ 14 F	■ 23 E	■ 12 D	■ 6 B	■ 8 E	■ 4 A	■ 6 E	■ 3 A
S4.1	S4.2												
■ 5 E	■ 2 A												

DC ≤ 1mm; 3/64"; N60. Blank.

Produkter fra denne serie fås også i sæt. Se A190, A191 eller A199.

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A100.2	—	0.20	0.0079	2.5	19.0	0.20
A100.25	—	0.25	0.0098	3.0	19.0	0.25
A100.3	—	0.30	0.0118	3.0	19.0	0.30
A100.32	—	0.32	0.0126	4.0	19.0	0.32
A100N80	N80	0.34	0.0135	4.0	19.0	0.34
A100.35	—	0.35	0.0138	4.0	19.0	0.35
A100N79	N79	0.37	0.0145	4.0	19.0	0.37
A100.38	—	0.38	0.0150	4.0	19.0	0.38
A1001/64	1/64	0.40	0.0156	5.0	20.0	0.40
A100.4	—	0.40	0.0157	5.0	20.0	0.40
A100N78	N78	0.41	0.0160	5.0	20.0	0.41
A100.42	—	0.42	0.0165	5.0	20.0	0.42
A100.45	—	0.45	0.0177	5.0	20.0	0.45
A100N77	N77	0.46	0.0180	5.0	20.0	0.46
A100.48	—	0.48	0.0189	5.0	20.0	0.48
A100.5	—	0.50	0.0197	6.0	22.0	0.50
A100N76	N76	0.51	0.0200	6.0	22.0	0.51
A100.52	—	0.52	0.0205	6.0	22.0	0.52
A100N75	N75	0.53	0.0210	6.0	22.0	0.53
A100.55	—	0.55	0.0217	7.0	24.0	0.55
A100N74	N74	0.57	0.0225	7.0	24.0	0.57
A100.58	—	0.58	0.0228	7.0	24.0	0.58

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A100.6	—	0.60	0.0236	7.0	24.0	0.60
A100N73	N73	0.61	0.0240	8.0	26.0	0.61
A100.62	—	0.62	0.0244	8.0	26.0	0.62
A100N72	N72	0.64	0.0250	8.0	26.0	0.64
A100.65	—	0.65	0.0256	8.0	26.0	0.65
A100N71	N71	0.66	0.0260	8.0	26.0	0.66
A100.68	—	0.68	0.0268	9.0	28.0	0.68
A100.7	—	0.70	0.0276	9.0	28.0	0.70
A100N70	N70	0.71	0.0280	9.0	28.0	0.71
A100.72	—	0.72	0.0283	9.0	28.0	0.72
A100N69	N69	0.74	0.0292	9.0	28.0	0.74
A100.75	—	0.75	0.0295	9.0	28.0	0.75
A100.78	—	0.78	0.0307	10.0	30.0	0.78
A1001/32	1/32	0.79	0.0313	10.0	30.0	0.79
A100N68	N68	0.79	0.0310	10.0	30.0	0.79
A100.8	—	0.80	0.0315	10.0	30.0	0.80
A100N67	N67	0.81	0.0320	10.0	30.0	0.81
A100.82	—	0.82	0.0323	10.0	30.0	0.82
A100N66	N66	0.84	0.0330	10.0	30.0	0.84
A100.85	—	0.85	0.0335	10.0	30.0	0.85
A100.88	—	0.88	0.0346	11.0	32.0	0.88
A100N65	N65	0.89	0.0350	11.0	32.0	0.89

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A100.9	—	0.90	0.0354	11.0	32.0	0.90
A100N64	N64	0.91	0.0360	11.0	32.0	0.91
A100.92	—	0.92	0.0362	11.0	32.0	0.92
A100N63	N63	0.94	0.0370	11.0	32.0	0.94
A100.95	—	0.95	0.0374	11.0	32.0	0.95
A100N62	N62	0.97	0.0380	12.0	34.0	0.97
A100.98	—	0.98	0.0386	12.0	34.0	0.98
A100N61	N61	0.99	0.0390	12.0	34.0	0.99
A1001.0	—	1.00	0.0394	12.0	34.0	1.00
A100N60	N60	1.02	0.0400	12.0	34.0	1.02
A100N59	N59	1.04	0.0410	12.0	34.0	1.04
A1001.05	—	1.05	0.0413	12.0	34.0	1.05
A100N58	N58	1.07	0.0420	14.0	36.0	1.07
A100N57	N57	1.09	0.0430	14.0	36.0	1.09
A1001.1	—	1.10	0.0433	14.0	36.0	1.10
A1001.15	—	1.15	0.0453	14.0	36.0	1.15
A100N56	N56	1.18	0.0465	14.0	36.0	1.18
A1003/64	3/64	1.19	0.0469	16.0	38.0	1.19
A1001.2	—	1.20	0.0472	16.0	38.0	1.20
A1001.25	—	1.25	0.0492	16.0	38.0	1.25
A1001.3	—	1.30	0.0512	16.0	38.0	1.30
A100N55	N55	1.32	0.0520	16.0	38.0	1.32
A1001.35	—	1.35	0.0531	18.0	40.0	1.35
A1001.4	—	1.40	0.0551	18.0	40.0	1.40
A100N54	N54	1.40	0.0550	18.0	40.0	1.40
A1001.45	—	1.45	0.0571	18.0	40.0	1.45
A1001.5	—	1.50	0.0591	18.0	40.0	1.50
A100N53	N53	1.51	0.0595	20.0	43.0	1.51
A1001.55	—	1.55	0.0610	20.0	43.0	1.55
A1001/16	1/16	1.59	0.0625	20.0	43.0	1.59
A1001.6	—	1.60	0.0630	20.0	43.0	1.60
A100N52	N52	1.61	0.0635	20.0	43.0	1.61
A1001.65	—	1.65	0.0650	20.0	43.0	1.65
A1001.7	—	1.70	0.0669	20.0	43.0	1.70
A100N51	N51	1.70	0.0670	22.0	46.0	1.70
A1001.75	—	1.75	0.0689	22.0	46.0	1.75
A100N50	N50	1.78	0.0700	22.0	46.0	1.78
A1001.8	—	1.80	0.0709	22.0	46.0	1.80
A1001.85	—	1.85	0.0728	22.0	46.0	1.85
A100N49	N49	1.85	0.0730	22.0	46.0	1.85
A1001.9	—	1.90	0.0748	22.0	46.0	1.90
A100N48	N48	1.93	0.0760	24.0	49.0	1.93
A1001.95	—	1.95	0.0768	24.0	49.0	1.95
A1005/64	5/64	1.98	0.0781	24.0	49.0	1.98
A100N47	N47	1.99	0.0785	24.0	49.0	1.99
A1002.0	—	2.00	0.0787	24.0	49.0	2.00
A1002.05	—	2.05	0.0807	24.0	49.0	2.05
A100N46	N46	2.06	0.0810	24.0	49.0	2.06
A100N45	N45	2.08	0.0820	24.0	49.0	2.08
A1002.1	—	2.10	0.0827	24.0	49.0	2.10
A1002.15	—	2.15	0.0846	27.0	53.0	2.15
A100N44	N44	2.18	0.0860	27.0	53.0	2.18
A1002.2	—	2.20	0.0866	27.0	53.0	2.20
A1002.25	—	2.25	0.0886	27.0	53.0	2.25
A100N43	N43	2.26	0.0890	27.0	53.0	2.26
A1002.3	—	2.30	0.0906	27.0	53.0	2.30
A1002.35	—	2.35	0.0925	27.0	53.0	2.35
A1003/32	3/32	2.38	0.0938	30.0	57.0	2.38
A100N42	N42	2.38	0.0935	30.0	57.0	2.38
A1002.4	—	2.40	0.0945	30.0	57.0	2.40
A100N41	N41	2.44	0.0960	30.0	57.0	2.44
A1002.45	—	2.45	0.0965	30.0	57.0	2.45

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A100N40	N40	2.49	0.0980	30.0	57.0	2.49
A1002.5	—	2.50	0.0984	30.0	57.0	2.50
A100N39	N39	2.53	0.0995	30.0	57.0	2.53
A1002.55	—	2.55	0.1004	30.0	57.0	2.55
A100N38	N38	2.58	0.1015	30.0	57.0	2.58
A1002.6	—	2.60	0.1024	30.0	57.0	2.60
A100N37	N37	2.64	0.1040	30.0	57.0	2.64
A1002.65	—	2.65	0.1043	30.0	57.0	2.65
A1002.7	—	2.70	0.1063	33.0	61.0	2.70
A100N36	N36	2.71	0.1065	33.0	61.0	2.71
A1002.75	—	2.75	0.1083	33.0	61.0	2.75
A1007/64	7/64	2.78	0.1094	33.0	61.0	2.78
A100N35	N35	2.79	0.1100	33.0	61.0	2.79
A1002.8	—	2.80	0.1102	33.0	61.0	2.80
A100N34	N34	2.82	0.1110	33.0	61.0	2.82
A1002.85	—	2.85	0.1122	33.0	61.0	2.85
A100N33	N33	2.87	0.1130	33.0	61.0	2.87
A1002.9	—	2.90	0.1142	33.0	61.0	2.90
A1002.95	—	2.95	0.1161	33.0	61.0	2.95
A100N32	N32	2.95	0.1160	33.0	61.0	2.95
A1003.0	—	3.00	0.1181	33.0	61.0	3.00
A100N31	N31	3.05	0.1200	36.0	65.0	3.05
A1003.1	—	3.10	0.1220	36.0	65.0	3.10
A1003.15	—	3.15	0.1240	36.0	65.0	3.15
A1001/8	1/8	3.18	0.1250	36.0	65.0	3.18
A1003.2	—	3.20	0.1260	36.0	65.0	3.20
A1003.25	—	3.25	0.1280	36.0	65.0	3.25
A100N30	N30	3.26	0.1285	36.0	65.0	3.26
A1003.3	—	3.30	0.1299	36.0	65.0	3.30
A1003.4	—	3.40	0.1339	39.0	70.0	3.40
A100N29	N29	3.45	0.1360	39.0	70.0	3.45
A1003.5	—	3.50	0.1378	39.0	70.0	3.50
A1009/64	9/64	3.57	0.1406	39.0	70.0	3.57
A100N28	N28	3.57	0.1405	39.0	70.0	3.57
A1003.6	—	3.60	0.1417	39.0	70.0	3.60
A100N27	N27	3.66	0.1440	39.0	70.0	3.66
A1003.7	—	3.70	0.1457	39.0	70.0	3.70
A100N26	N26	3.73	0.1470	39.0	70.0	3.73
A1003.75	—	3.75	0.1476	39.0	70.0	3.75
A1003.8	—	3.80	0.1496	43.0	75.0	3.80
A100N25	N25	3.80	0.1495	43.0	75.0	3.80
A100N24	N24	3.86	0.1520	43.0	75.0	3.86
A1003.9	—	3.90	0.1535	43.0	75.0	3.90
A100N23	N23	3.91	0.1540	43.0	75.0	3.91
A1005/32	5/32	3.97	0.1563	43.0	75.0	3.97
A100N22	N22	3.99	0.1570	43.0	75.0	3.99
A1004.0	—	4.00	0.1575	43.0	75.0	4.00
A100N21	N21	4.04	0.1590	43.0	75.0	4.04
A100N20	N20	4.09	0.1610	43.0	75.0	4.09
A1004.1	—	4.10	0.1614	43.0	75.0	4.10
A1004.2	—	4.20	0.1654	43.0	75.0	4.20
A100N19	N19	4.22	0.1660	43.0	75.0	4.22
A1004.25	—	4.25	0.1673	43.0	75.0	4.25
A1004.3	—	4.30	0.1693	47.0	80.0	4.30
A100N18	N18	4.31	0.1695	47.0	80.0	4.31
A10011/64	11/64	4.37	0.1719	47.0	80.0	4.37
A100N17	N17	4.39	0.1730	47.0	80.0	4.39
A1004.4	—	4.40	0.1732	47.0	80.0	4.40
A1004.5	—	4.50	0.1772	47.0	80.0	4.50
A100N16	N16	4.50	0.1770	47.0	80.0	4.50
A100N15	N15	4.57	0.1800	47.0	80.0	4.57
A1004.6	—	4.60	0.1811	47.0	80.0	4.60

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A100N14	N14	4.62	0.1820	47.0	80.0	4.62
A1004.7	—	4.70	0.1850	47.0	80.0	4.70
A100N13	N13	4.70	0.1850	47.0	80.0	4.70
A1004.75	—	4.75	0.1870	47.0	80.0	4.75
A1003/16	3/16	4.76	0.1875	52.0	86.0	4.76
A1004.8	—	4.80	0.1890	52.0	86.0	4.80
A100N12	N12	4.80	0.1890	52.0	86.0	4.80
A100N11	N11	4.85	0.1910	52.0	86.0	4.85
A1004.9	—	4.90	0.1929	52.0	86.0	4.90
A100N10	N10	4.92	0.1935	52.0	86.0	4.92
A100N9	N9	4.98	0.1960	52.0	86.0	4.98
A1005.0	—	5.00	0.1969	52.0	86.0	5.00
A100N8	N8	5.06	0.1990	52.0	86.0	5.06
A1005.1	—	5.10	0.2008	52.0	86.0	5.10
A100N7	N7	5.11	0.2010	52.0	86.0	5.11
A10013/64	13/64	5.16	0.2031	52.0	86.0	5.16
A100N6	N6	5.18	0.2040	52.0	86.0	5.18
A1005.2	—	5.20	0.2047	52.0	86.0	5.20
A100N5	N5	5.22	0.2055	52.0	86.0	5.22
A1005.25	—	5.25	0.2067	52.0	86.0	5.25
A1005.3	—	5.30	0.2087	52.0	86.0	5.30
A100N4	N4	5.31	0.2090	57.0	93.0	5.31
A1005.4	—	5.40	0.2126	57.0	93.0	5.40
A100N3	N3	5.41	0.2130	57.0	93.0	5.41
A1005.5	—	5.50	0.2165	57.0	93.0	5.50
A1007/32	7/32	5.56	0.2188	57.0	93.0	5.56
A1005.6	—	5.60	0.2205	57.0	93.0	5.60
A100N2	N2	5.61	0.2210	57.0	93.0	5.61
A1005.7	—	5.70	0.2244	57.0	93.0	5.70
A1005.75	—	5.75	0.2264	57.0	93.0	5.75
A100N1	1	5.79	0.2280	57.0	93.0	5.79
A1005.8	—	5.80	0.2283	57.0	93.0	5.80
A1005.9	—	5.90	0.2323	57.0	93.0	5.90
A100A	A	5.94	0.2340	57.0	93.0	5.94
A10015/64	15/64	5.95	0.2344	57.0	93.0	5.95
A1006.0	—	6.00	0.2362	57.0	93.0	6.00
A100B	B	6.03	0.2380	63.0	101.0	6.03
A1006.1	—	6.10	0.2402	63.0	101.0	6.10
A100C	C	6.15	0.2420	63.0	101.0	6.15
A1006.2	—	6.20	0.2441	63.0	101.0	6.20
A1006.25	—	6.25	0.2461	63.0	101.0	6.25
A100D	D	6.25	0.2460	63.0	101.0	6.25
A1006.3	—	6.30	0.2480	63.0	101.0	6.30
A1001/4	1/4	6.35	0.2500	63.0	101.0	6.35
A100E	E	6.35	0.2500	63.0	101.0	6.35
A1006.4	—	6.40	0.2520	63.0	101.0	6.40
A1006.5	—	6.50	0.2559	63.0	101.0	6.50
A100F	F	6.53	0.2570	63.0	101.0	6.53
A1006.6	—	6.60	0.2598	63.0	101.0	6.60
A100G	G	6.63	0.2610	63.0	101.0	6.63
A1006.7	—	6.70	0.2638	63.0	101.0	6.70
A10017/64	17/64	6.75	0.2656	69.0	109.0	6.75
A1006.75	—	6.75	0.2657	69.0	109.0	6.75
A100H	H	6.76	0.2660	69.0	109.0	6.76
A1006.8	—	6.80	0.2677	69.0	109.0	6.80
A1006.9	—	6.90	0.2717	69.0	109.0	6.90
A100I	I	6.91	0.2720	69.0	109.0	6.91
A1007.0	—	7.00	0.2756	69.0	109.0	7.00
A100J	J	7.04	0.2770	69.0	109.0	7.04
A1007.1	—	7.10	0.2795	69.0	109.0	7.10
A1009/32	9/32	7.14	0.2813	69.0	109.0	7.14
A100K	K	7.14	0.2810	69.0	109.0	7.14

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1007.2	—	7.20	0.2835	69.0	109.0	7.20
A1007.25	—	7.25	0.2854	69.0	109.0	7.25
A1007.3	—	7.30	0.2874	69.0	109.0	7.30
A100L	L	7.37	0.2900	69.0	109.0	7.37
A1007.4	—	7.40	0.2913	69.0	109.0	7.40
A100M	M	7.49	0.2949	69.0	109.0	7.49
A1007.5	—	7.50	0.2953	69.0	109.0	7.50
A10019/64	19/64	7.54	0.2969	75.0	117.0	7.54
A1007.6	—	7.60	0.2992	75.0	117.0	7.60
A100N	N	7.67	0.3020	75.0	117.0	7.67
A1007.7	—	7.70	0.3031	75.0	117.0	7.70
A1007.75	—	7.75	0.3051	75.0	117.0	7.75
A1007.8	—	7.80	0.3071	75.0	117.0	7.80
A1007.9	—	7.90	0.3110	75.0	117.0	7.90
A1005/16	5/16	7.94	0.3125	75.0	117.0	7.94
A1008.0	—	8.00	0.3150	75.0	117.0	8.00
A100O	O	8.03	0.3160	75.0	117.0	8.03
A1008.1	—	8.10	0.3189	75.0	117.0	8.10
A1008.2	—	8.20	0.3228	75.0	117.0	8.20
A100P	P	8.20	0.3230	75.0	117.0	8.20
A1008.25	—	8.25	0.3248	75.0	117.0	8.25
A1008.3	—	8.30	0.3268	75.0	117.0	8.30
A10021/64	21/64	8.33	0.3281	75.0	117.0	8.33
A1008.4	—	8.40	0.3307	75.0	117.0	8.40
A100Q	Q	8.43	0.3320	75.0	117.0	8.43
A1008.5	—	8.50	0.3346	75.0	117.0	8.50
A1008.6	—	8.60	0.3386	81.0	125.0	8.60
A100R	R	8.61	0.3390	81.0	125.0	8.61
A1008.7	—	8.70	0.3425	81.0	125.0	8.70
A10011/32	11/32	8.73	0.3438	81.0	125.0	8.73
A1008.75	—	8.75	0.3445	81.0	125.0	8.75
A1008.8	—	8.80	0.3465	81.0	125.0	8.80
A100S	S	8.84	0.3480	81.0	125.0	8.84
A1008.9	—	8.90	0.3504	81.0	125.0	8.90
A1009.0	—	9.00	0.3543	81.0	125.0	9.00
A100T	T	9.09	0.3580	81.0	125.0	9.09
A1009.1	—	9.10	0.3583	81.0	125.0	9.10
A10023/64	23/64	9.13	0.3594	81.0	125.0	9.13
A1009.2	—	9.20	0.3622	81.0	125.0	9.20
A1009.25	—	9.25	0.3642	81.0	125.0	9.25
A1009.3	—	9.30	0.3661	81.0	125.0	9.30
A100U	U	9.35	0.3680	81.0	125.0	9.35
A1009.4	—	9.40	0.3701	81.0	125.0	9.40
A1009.5	—	9.50	0.3740	81.0	125.0	9.50
A1003/8	3/8	9.52	0.3750	87.0	133.0	9.52
A100V	V	9.58	0.3770	87.0	133.0	9.58
A1009.6	—	9.60	0.3780	87.0	133.0	9.60
A1009.7	—	9.70	0.3819	87.0	133.0	9.70
A1009.75	—	9.75	0.3839	87.0	133.0	9.75
A1009.8	—	9.80	0.3858	87.0	133.0	9.80
A100W	W	9.80	0.3860	87.0	133.0	9.80
A1009.9	—	9.90	0.3898	87.0	133.0	9.90
A10025/64	25/64	9.92	0.3906	87.0	133.0	9.92
A10010.0	—	10.00	0.3937	87.0	133.0	10.00
A100X	X	10.08	0.3970	87.0	133.0	10.08
A10010.1	—	10.10	0.3976	87.0	133.0	10.10
A10010.2	—	10.20	0.4016	87.0	133.0	10.20
A10010.25	—	10.25	0.4035	87.0	133.0	10.25
A100Y	Y	10.26	0.4040	87.0	133.0	10.26
A10010.3	—	10.30	0.4055	87.0	133.0	10.30
A10013/32	13/32	10.32	0.4063	87.0	133.0	10.32
A10010.4	—	10.40	0.4094	87.0	133.0	10.40

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A100Z	Z	10.49	0.4130	87.0	133.0	10.49
A10010.5	—	10.50	0.4134	87.0	133.0	10.50
A10010.6	—	10.60	0.4173	87.0	133.0	10.60
A10010.7	—	10.70	0.4213	94.0	142.0	10.70
A10027/64	27/64	10.72	0.4219	94.0	142.0	10.72
A10010.75	—	10.75	0.4232	94.0	142.0	10.75
A10010.8	—	10.80	0.4252	94.0	142.0	10.80
A10010.9	—	10.90	0.4291	94.0	142.0	10.90
A10011.0	—	11.00	0.4331	94.0	142.0	11.00
A10011.1	—	11.10	0.4370	94.0	142.0	11.10
A1007/16	7/16	11.11	0.4375	94.0	142.0	11.11
A10011.2	—	11.20	0.4409	94.0	142.0	11.20
A10011.25	—	11.25	0.4429	94.0	142.0	11.25
A10011.3	—	11.30	0.4449	94.0	142.0	11.30
A10011.4	—	11.40	0.4488	94.0	142.0	11.40
A10011.5	—	11.50	0.4528	94.0	142.0	11.50
A10029/64	29/64	11.51	0.4531	94.0	142.0	11.51
A10011.6	—	11.60	0.4567	94.0	142.0	11.60
A10011.7	—	11.70	0.4606	94.0	142.0	11.70
A10011.75	—	11.75	0.4626	94.0	142.0	11.75
A10011.8	—	11.80	0.4646	94.0	142.0	11.80
A10011.9	—	11.90	0.4685	101.0	151.0	11.90
A10015/32	15/32	11.91	0.4688	101.0	151.0	11.91
A10012.0	—	12.00	0.4724	101.0	151.0	12.00
A10012.1	—	12.10	0.4764	101.0	151.0	12.10
A10012.2	—	12.20	0.4803	101.0	151.0	12.20
A10012.25	—	12.25	0.4823	101.0	151.0	12.25
A10012.3	—	12.30	0.4843	101.0	151.0	12.30
A10031/64	31/64	12.30	0.4844	101.0	151.0	12.30
A10012.4	—	12.40	0.4882	101.0	151.0	12.40
A10012.5	—	12.50	0.4921	101.0	151.0	12.50
A10012.6	—	12.60	0.4961	101.0	151.0	12.60
A10012.7	—	12.70	0.5000	101.0	151.0	12.70
A1001/2	1/2	12.70	0.5000	101.0	151.0	12.70
A10012.75	—	12.75	0.5020	101.0	151.0	12.75
A10012.8	—	12.80	0.5039	101.0	151.0	12.80
A10012.9	—	12.90	0.5079	101.0	151.0	12.90
A10013.0	—	13.00	0.5118	101.0	151.0	13.00
A10033/64	33/64	13.10	0.5156	101.0	151.0	13.10

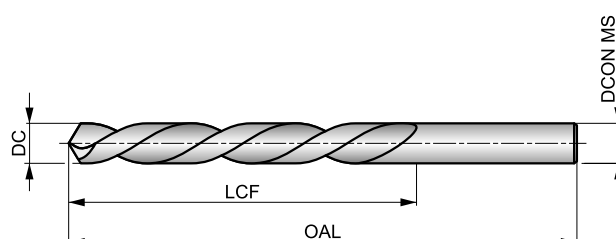
Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A10013.1	—	13.10	0.5157	101.0	151.0	13.10
A10013.2	—	13.20	0.5197	101.0	151.0	13.20
A10013.25	—	13.25	0.5217	108.0	160.0	13.25
A10013.3	—	13.30	0.5236	108.0	160.0	13.30
A10013.4	—	13.40	0.5276	108.0	160.0	13.40
A10017/32	17/32	13.49	0.5313	108.0	160.0	13.49
A10013.5	—	13.50	0.5315	108.0	160.0	13.50
A10013.6	—	13.60	0.5354	108.0	160.0	13.60
A10013.7	—	13.70	0.5394	108.0	160.0	13.70
A10013.75	—	13.75	0.5413	108.0	160.0	13.75
A10013.8	—	13.80	0.5433	108.0	160.0	13.80
A10035/64	35/64	13.89	0.5469	108.0	160.0	13.89
A10013.9	—	13.90	0.5472	108.0	160.0	13.90
A10014.0	—	14.00	0.5512	108.0	160.0	14.00
A10014.25	—	14.25	0.5610	114.0	169.0	14.25
A1009/16	9/16	14.29	0.5625	114.0	169.0	14.29
A10014.5	—	14.50	0.5709	114.0	169.0	14.50
A10037/64	37/64	14.68	0.5781	114.0	169.0	14.68
A10014.75	—	14.75	0.5807	114.0	169.0	14.75
A10015.0	—	15.00	0.5906	114.0	169.0	15.00
A10019/32	19/32	15.08	0.5938	120.0	178.0	15.08
A10015.25	—	15.25	0.6004	120.0	178.0	15.25
A10039/64	39/64	15.48	0.6094	120.0	178.0	15.48
A10015.5	—	15.50	0.6102	120.0	178.0	15.50
A10015.75	—	15.75	0.6201	120.0	178.0	15.75
A1005/8	5/8	15.88	0.6250	120.0	178.0	15.88
A10016.0	—	16.00	0.6299	120.0	178.0	16.00
A10041/64	41/64	16.27	0.6406	125.0	184.0	16.27
A10016.5	—	16.50	0.6496	125.0	184.0	16.50
A10021/32	21/32	16.67	0.6563	125.0	184.0	16.67
A10017.0	—	17.00	0.6693	125.0	184.0	17.00
A10043/64	43/64	17.07	0.6719	130.0	191.0	17.07
A10011/16	11/16	17.46	0.6875	130.0	191.0	17.46
A10017.5	—	17.50	0.6890	130.0	191.0	17.50
A10018.0	—	18.00	0.7087	130.0	191.0	18.00
A10018.5	—	18.50	0.7283	135.0	198.0	18.50
A10019.0	—	19.00	0.7480	135.0	198.0	19.00
A10019.5	—	19.50	0.7677	140.0	205.0	19.50
A10020.0	—	20.00	0.7874	140.0	205.0	20.00

A101



HSS venstre bor, damphærdet finish

Alsiddig venstrehåndsbør med damphærdet finish til håndholdt og maskinboring. Konventionelt 118° spids giver styrke og er let at genopslibe, hvilket gør det meget omkostningseffektivt. Damphærdet finish bevarer skærevæske og forhindrer svejsning fra spån til værktøj. Velegnet til boring af mange materialer.



HSS	DIN 338	4×D
118°	ST	
20-35°	L	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 33 H	P1.2 ■ 37 H	P1.3 ■ 38 H	P2.1 ■ 28 H	P2.2 ■ 25 F	P2.3 ■ 22 E	P3.1 ■ 19 F	P3.2 ■ 15 F	P3.3 ■ 13 E	P4.1 ■ 11 F	P4.2 ■ 10 E	P4.3 ■ 8 D	M1.1 ■ 21 E	M1.2 ■ 17 E
M2.1 ■ 18 E	M2.2 ■ 15 E	M3.1 ■ 9 G	M3.2 ■ 8 G	M3.3 ■ 7 G	M4.1 ■ 9 C	K1.1 ■ 30 H	K1.2 ■ 22 F	K1.3 ■ 17 F	K2.1 ■ 25 E	K2.2 ■ 20 E	K2.3 ■ 16 E	K3.1 ■ 22 E	K3.2 ■ 17 E
K3.3 ■ 13 E	K4.1 ■ 20 E	K4.2 ■ 15 E	K4.3 ■ 11 E	K4.4 ■ 10 E	K4.5 ■ 8 E	K5.1 ■ 23 E	K5.2 ■ 17 E	K5.3 ■ 13 E	N1.1 ■ 33 J	N1.2 ■ 25 J	N1.3 ■ 17 I	N2.1 ■ 42 H	N2.2 ■ 37 H
N2.3 ■ 27 H	N3.1 ■ 59 H	N3.2 ■ 35 I	N3.3 ■ 18 G	N4.1 ■ 30 J	N4.2 ■ 28 H	N4.3 ■ 14 F	S1.1 ■ 23 E	S1.2 ■ 12 D	S1.3 ■ 6 B	S2.1 ■ 8 E	S2.2 ■ 4 A	S3.1 ■ 6 E	S3.2 ■ 3 A
S4.1 ■ 5 E	S4.2 ■ 2 A												

DC <= 3mm Blank.

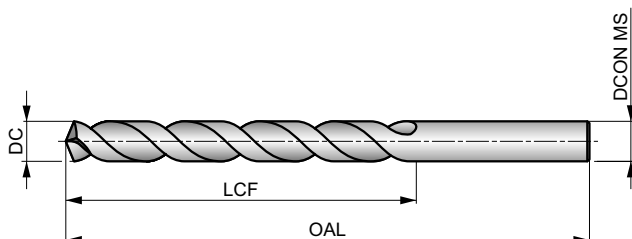
Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A1011.0	1.00	0.0394	12.0	34.0	1.00
A1011.1	1.10	0.0433	14.0	36.0	1.10
A1011.2	1.20	0.0472	16.0	38.0	1.20
A1011.25	1.25	0.0492	16.0	38.0	1.25
A1011.3	1.30	0.0512	16.0	38.0	1.30
A1011.4	1.40	0.0551	18.0	40.0	1.40
A1011.5	1.50	0.0591	18.0	40.0	1.50
A1011.6	1.60	0.0630	20.0	43.0	1.60
A1011.7	1.70	0.0669	20.0	43.0	1.70
A1011.8	1.80	0.0709	22.0	46.0	1.80
A1011.9	1.90	0.0748	22.0	46.0	1.90
A1012.0	2.00	0.0787	24.0	49.0	2.00
A1012.1	2.10	0.0827	24.0	49.0	2.10
A1012.2	2.20	0.0866	27.0	53.0	2.20
A1012.3	2.30	0.0906	27.0	53.0	2.30
A1012.4	2.40	0.0945	30.0	57.0	2.40
A1012.5	2.50	0.0984	30.0	57.0	2.50
A1012.6	2.60	0.1024	30.0	57.0	2.60
A1012.7	2.70	0.1063	33.0	61.0	2.70
A1012.8	2.80	0.1102	33.0	61.0	2.80
A1012.9	2.90	0.1142	33.0	61.0	2.90
A1013.0	3.00	0.1181	33.0	61.0	3.00
A1013.2	3.20	0.1260	36.0	65.0	3.20
A1013.3	3.30	0.1299	36.0	65.0	3.30
A1013.5	3.50	0.1378	39.0	70.0	3.50
A1013.8	3.80	0.1496	43.0	75.0	3.80
A1014.0	4.00	0.1575	43.0	75.0	4.00
A1014.2	4.20	0.1654	43.0	75.0	4.20
A1014.5	4.50	0.1772	47.0	80.0	4.50
A1014.8	4.80	0.1890	52.0	86.0	4.80
A1015.0	5.00	0.1969	52.0	86.0	5.00
A1015.1	5.10	0.2008	52.0	86.0	5.10
A1015.2	5.20	0.2047	52.0	86.0	5.20
A1015.5	5.50	0.2165	57.0	93.0	5.50
A1016.0	6.00	0.2362	57.0	93.0	6.00
A1016.5	6.50	0.2559	63.0	101.0	6.50
A1017.0	7.00	0.2756	69.0	109.0	7.00
A1017.5	7.50	0.2953	69.0	109.0	7.50
A1018.0	8.00	0.3150	75.0	117.0	8.00
A1018.5	8.50	0.3346	75.0	117.0	8.50
A1019.0	9.00	0.3543	81.0	125.0	9.00
A10110.0	10.00	0.3937	87.0	133.0	10.00
A10111.0	11.00	0.4331	94.0	142.0	11.00
A10112.0	12.00	0.4724	101.0	151.0	12.00

A108

DORMER

HSS bor, damphærdet finish (designet til rustfrit stål)

Første valg ved boring af rustfrit stål med håndholdte applikationer, men kan også bruges effektivt i maskiner. Spids på 135° hjælper med at centrere sig selv og reducerer skærekrafterne. Damphærdet finish hjælper med at forhindre emnet i at klæbe til forkant.



HSS	DIN 338	4xD
135°	ST	
>35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 33 I	P1.2 37 I	P1.3 38 I	P2.1 28 I	P2.2 25 G	P2.3 22 E	P3.1 19 F	P3.2 15 F	P3.3 13 E	P4.1 11 F	P4.2 10 E	P4.3 8 D	M1.1 21 E	M1.2 17 E
M2.1 18 E	M2.2 15 E	M3.1 10 G	M3.2 9 G	M3.3 8 G	M4.1 10 D	K1.1 30 H	K1.2 22 F	K1.3 17 F	K2.1 25 E	K2.2 20 E	K2.3 16 E	K3.1 22 E	K3.2 17 E
K3.3 13 E	K4.1 20 E	K4.2 15 E	K4.3 11 E	K4.4 10 E	K4.5 8 E	K5.1 23 E	K5.2 17 E	K5.3 13 E	N1.1 33 J	N1.2 25 J	N1.3 17 I	N2.1 42 H	N2.2 37 H
N2.3 27 H	N3.1 59 H	N3.2 35 I	N3.3 18 G	N4.1 30 J	N4.2 28 H	N4.3 14 F	S1.1 25 G	S1.2 16 E	S1.3 7 B	S2.1 9 G	S2.2 8 E	S3.1 7 G	S3.2 6 E
S4.1 5 G	S4.2 5 E												

C> 1,5 mm (1/16") krydspids.

Produkter fra denne serie fås også i sæt. Se venligst A188.

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1081.0	—	1.00	0.0394	12.0	34.0	1.00
A1081.1	—	1.10	0.0433	14.0	36.0	1.10
A1081.2	—	1.20	0.0472	16.0	38.0	1.20
A1081.3	—	1.30	0.0512	16.0	38.0	1.30
A1081.4	—	1.40	0.0551	18.0	40.0	1.40
A1081.5	—	1.50	0.0591	18.0	40.0	1.50
A1081/16	1/16	1.59	0.0625	20.0	43.0	1.59
A1081.6	—	1.60	0.0630	20.0	43.0	1.60
A1081.7	—	1.70	0.0669	20.0	43.0	1.70
A1081.8	—	1.80	0.0709	22.0	46.0	1.80
A1081.9	—	1.90	0.0748	22.0	46.0	1.90
A1085/64	5/64	1.98	0.0781	24.0	49.0	1.98
A1082.0	—	2.00	0.0787	24.0	49.0	2.00
A1082.1	—	2.10	0.0827	24.0	49.0	2.10
A1082.2	—	2.20	0.0866	27.0	53.0	2.20
A1082.3	—	2.30	0.0906	27.0	53.0	2.30
A1083/32	3/32	2.38	0.0938	30.0	57.0	2.38
A1082.4	—	2.40	0.0945	30.0	57.0	2.40
A1082.5	—	2.50	0.0984	30.0	57.0	2.50
A1082.6	—	2.60	0.1024	30.0	57.0	2.60
A1082.7	—	2.70	0.1063	33.0	61.0	2.70
A1087/64	7/64	2.78	0.1094	33.0	61.0	2.78

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1082.8	—	2.80	0.1102	33.0	61.0	2.80
A1082.9	—	2.90	0.1142	33.0	61.0	2.90
A1083.0	—	3.00	0.1181	33.0	61.0	3.00
A1083.1	—	3.10	0.1220	36.0	65.0	3.10
A1081/8	1/8	3.18	0.1250	36.0	65.0	3.18
A1083.2	—	3.20	0.1260	36.0	65.0	3.20
A1083.3	—	3.30	0.1299	36.0	65.0	3.30
A1083.4	—	3.40	0.1339	39.0	70.0	3.40
A1083.5	—	3.50	0.1378	39.0	70.0	3.50
A1089/64	9/64	3.57	0.1406	39.0	70.0	3.57
A1083.6	—	3.60	0.1417	39.0	70.0	3.60
A1083.7	—	3.70	0.1457	39.0	70.0	3.70
A1083.8	—	3.80	0.1496	43.0	75.0	3.80
A1083.9	—	3.90	0.1535	43.0	75.0	3.90
A1085/32	5/32	3.97	0.1563	43.0	75.0	3.97
A1084.0	—	4.00	0.1575	43.0	75.0	4.00
A1084.1	—	4.10	0.1614	43.0	75.0	4.10
A1084.2	—	4.20	0.1654	43.0	75.0	4.20
A1084.3	—	4.30	0.1693	47.0	80.0	4.30
A10811/64	11/64	4.37	0.1719	47.0	80.0	4.37
A1084.4	—	4.40	0.1732	47.0	80.0	4.40
A1084.5	—	4.50	0.1772	47.0	80.0	4.50

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1084.6	—	4.60	0.1811	47.0	80.0	4.60
A1084.7	—	4.70	0.1850	47.0	80.0	4.70
A1083/16	3/16	4.76	0.1875	52.0	86.0	4.76
A1084.8	—	4.80	0.1890	52.0	86.0	4.80
A1084.9	—	4.90	0.1929	52.0	86.0	4.90
A108N10	N10	4.92	0.1935	52.0	86.0	4.92
A1085.0	—	5.00	0.1969	52.0	86.0	5.00
A1085.1	—	5.10	0.2008	52.0	86.0	5.10
A10813/64	13/64	5.16	0.2031	52.0	86.0	5.16
A1085.2	—	5.20	0.2047	52.0	86.0	5.20
A1085.3	—	5.30	0.2087	52.0	86.0	5.30
A1085.4	—	5.40	0.2126	57.0	93.0	5.40
A1085.5	—	5.50	0.2165	57.0	93.0	5.50
A1087/32	7/32	5.56	0.2188	57.0	93.0	5.56
A1085.6	—	5.60	0.2205	57.0	93.0	5.60
A1085.7	—	5.70	0.2244	57.0	93.0	5.70
A1085.8	—	5.80	0.2283	57.0	93.0	5.80
A1085.9	—	5.90	0.2323	57.0	93.0	5.90
A10815/64	15/64	5.95	0.2344	57.0	93.0	5.95
A1086.0	—	6.00	0.2362	57.0	93.0	6.00
A1086.1	—	6.10	0.2402	63.0	101.0	6.10
A1086.2	—	6.20	0.2441	63.0	101.0	6.20
A1086.3	—	6.30	0.2480	63.0	101.0	6.30
A1081/4	1/4	6.35	0.2500	63.0	101.0	6.35
A1086.4	—	6.40	0.2520	63.0	101.0	6.40
A1086.5	—	6.50	0.2559	63.0	101.0	6.50
A1086.6	—	6.60	0.2598	63.0	101.0	6.60
A1086.7	—	6.70	0.2638	63.0	101.0	6.70
A10817/64	17/64	6.75	0.2656	69.0	109.0	6.75
A1086.8	—	6.80	0.2677	69.0	109.0	6.80
A1086.9	—	6.90	0.2717	69.0	109.0	6.90
A1087.0	—	7.00	0.2756	69.0	109.0	7.00
A1087.1	—	7.10	0.2795	69.0	109.0	7.10
A1089/32	9/32	7.14	0.2813	69.0	109.0	7.14
A1087.2	—	7.20	0.2835	69.0	109.0	7.20
A1087.3	—	7.30	0.2874	69.0	109.0	7.30
A1087.4	—	7.40	0.2913	69.0	109.0	7.40
A1087.5	—	7.50	0.2953	69.0	109.0	7.50
A10819/64	19/64	7.54	0.2969	75.0	117.0	7.54
A1087.6	—	7.60	0.2992	75.0	117.0	7.60
A1087.7	—	7.70	0.3031	75.0	117.0	7.70
A1087.8	—	7.80	0.3071	75.0	117.0	7.80
A1087.9	—	7.90	0.3110	75.0	117.0	7.90
A1085/16	5/16	7.94	0.3125	75.0	117.0	7.94
A1088.0	—	8.00	0.3150	75.0	117.0	8.00
A1088.1	—	8.10	0.3189	75.0	117.0	8.10
A1088.2	—	8.20	0.3228	75.0	117.0	8.20
A1088.3	—	8.30	0.3268	75.0	117.0	8.30

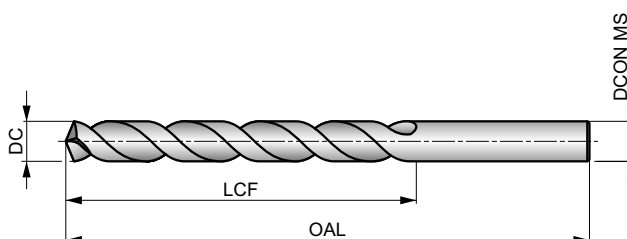
Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A10821/64	21/64	8.33	0.3281	75.0	117.0	8.33
A1088.4	—	8.40	0.3307	75.0	117.0	8.40
A1088.5	—	8.50	0.3346	75.0	117.0	8.50
A1088.6	—	8.60	0.3386	81.0	125.0	8.60
A1088.7	—	8.70	0.3425	81.0	125.0	8.70
A10811/32	11/32	8.73	0.3438	81.0	125.0	8.73
A1088.8	—	8.80	0.3465	81.0	125.0	8.80
A1088.9	—	8.90	0.3504	81.0	125.0	8.90
A1089.0	—	9.00	0.3543	81.0	125.0	9.00
A1089.1	—	9.10	0.3583	81.0	125.0	9.10
A10823/64	23/64	9.13	0.3594	81.0	125.0	9.13
A1089.2	—	9.20	0.3622	81.0	125.0	9.20
A1089.3	—	9.30	0.3661	81.0	125.0	9.30
A1089.4	—	9.40	0.3701	81.0	125.0	9.40
A1089.5	—	9.50	0.3740	81.0	125.0	9.50
A1083/8	3/8	9.52	0.3750	87.0	133.0	9.52
A1089.6	—	9.60	0.3780	87.0	133.0	9.60
A1089.7	—	9.70	0.3819	87.0	133.0	9.70
A1089.8	—	9.80	0.3858	87.0	133.0	9.80
A1089.9	—	9.90	0.3898	87.0	133.0	9.90
A10825/64	25/64	9.92	0.3906	87.0	133.0	9.92
A10810.0	—	10.00	0.3937	87.0	133.0	10.00
A10810.2	—	10.20	0.4016	87.0	133.0	10.20
A10813/32	13/32	10.32	0.4063	87.0	133.0	10.32
A10810.5	—	10.50	0.4134	87.0	133.0	10.50
A10827/64	27/64	10.72	0.4219	94.0	142.0	10.72
A10810.8	—	10.80	0.4252	94.0	142.0	10.80
A10811.0	—	11.00	0.4331	94.0	142.0	11.00
A1087/16	7/16	11.11	0.4375	94.0	142.0	11.11
A10811.5	—	11.50	0.4528	94.0	142.0	11.50
A10829/64	29/64	11.51	0.4531	94.0	142.0	11.51
A10811.8	—	11.80	0.4646	94.0	142.0	11.80
A10815/32	15/32	11.91	0.4688	101.0	151.0	11.91
A10812.0	—	12.00	0.4724	101.0	151.0	12.00
A10812.2	—	12.20	0.4803	101.0	151.0	12.20
A10831/64	31/64	12.30	0.4844	101.0	151.0	12.30
A10812.5	—	12.50	0.4921	101.0	151.0	12.50
A1081/2	1/2	12.70	0.5000	101.0	151.0	12.70
A10812.8	—	12.80	0.5039	101.0	151.0	12.80
A10812.9	—	12.90	0.5079	101.0	151.0	12.90
A10813.0	—	13.00	0.5118	101.0	151.0	13.00
A10813.5	—	13.50	0.5315	108.0	160.0	13.50
A10814.0	—	14.00	0.5512	108.0	160.0	14.00
A10814.5	—	14.50	0.5709	114.0	169.0	14.50
A10815.0	—	15.00	0.5906	114.0	169.0	15.00
A10815.25	—	15.25	0.6004	120.0	178.0	15.25
A10815.5	—	15.50	0.6102	120.0	178.0	15.50
A10816.0	—	16.00	0.6299	120.0	178.0	16.00

A147

DORMER

HSS-E (5% kobolt) bor, blank finish (designet til rustfrit stål)

Alsiddig og hårdtarbejdende bor, der opfylder alle krav til maskinboring i rustfrit stål, men kan også bruges til håndholdte operationer. Et spidst på 130° hjælper med at centrere boret selv og reducerer skærekrafterne. Blank finish.



HSS-E	DIN 338	4xD
130°	Bright	
VA	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
33 I	37 I	38 I	28 I	25 G	22 E	19 F	15 F	13 E	11 F	10 E	8 D	21 E	17 E
M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3
18 E	15 E	13 B	10 G	9 G	8 G	10 D	9 B	30 H	22 F	17 F	25 E	20 E	16 E
K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3
22 E	17 E	13 E	20 E	15 E	11 E	10 E	8 E	23 E	17 E	13 E	33 J	25 J	17 I
N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2
42 H	37 H	27 H	59 H	35 I	18 G	30 J	28 H	14 F	25 G	16 E	7 B	9 G	8 E
S3.1	S3.2	S4.1	S4.2										
7 G	6 E	5 G	5 E										

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A147.3	—	0.30	0.0118	3.0	19.0	0.30
A147.4	—	0.40	0.0157	5.0	20.0	0.40
A147.5	—	0.50	0.0197	6.0	22.0	0.50
A147.6	—	0.60	0.0236	7.0	24.0	0.60
A147.7	—	0.70	0.0276	9.0	28.0	0.70
A147.8	—	0.80	0.0315	10.0	30.0	0.80
A147.9	—	0.90	0.0354	11.0	32.0	0.90
A1471.0	—	1.00	0.0394	12.0	34.0	1.00
A1471.1	—	1.10	0.0433	14.0	36.0	1.10
A1471.2	—	1.20	0.0472	16.0	38.0	1.20
A1471.3	—	1.30	0.0512	16.0	38.0	1.30
A1471.4	—	1.40	0.0551	18.0	40.0	1.40
A1471.5	—	1.50	0.0591	18.0	40.0	1.50
A1471/16	1/16	1.59	0.0625	20.0	43.0	1.59
A1471.6	—	1.60	0.0630	20.0	43.0	1.60
A1471.7	—	1.70	0.0669	20.0	43.0	1.70
A1471.8	—	1.80	0.0709	22.0	46.0	1.80
A1471.9	—	1.90	0.0748	22.0	46.0	1.90
A1472.0	—	2.00	0.0787	24.0	49.0	2.00
A1472.1	—	2.10	0.0827	24.0	49.0	2.10
A1472.2	—	2.20	0.0866	27.0	53.0	2.20
A1472.3	—	2.30	0.0906	27.0	53.0	2.30
A1473/32	3/32	2.38	0.0938	30.0	57.0	2.38
A1472.4	—	2.40	0.0945	30.0	57.0	2.40

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A1472.5	—	2.50	0.0984	30.0	57.0	2.50
A1472.6	—	2.60	0.1024	30.0	57.0	2.60
A1472.7	—	2.70	0.1063	33.0	61.0	2.70
A1472.8	—	2.80	0.1102	33.0	61.0	2.80
A1472.9	—	2.90	0.1142	33.0	61.0	2.90
A1473.0	—	3.00	0.1181	33.0	61.0	3.00
A1473.1	—	3.10	0.1220	36.0	65.0	3.10
A1471/8	1/8	3.18	0.1250	36.0	65.0	3.18
A1473.2	—	3.20	0.1260	36.0	65.0	3.20
A1473.3	—	3.30	0.1299	36.0	65.0	3.30
A1473.4	—	3.40	0.1339	39.0	70.0	3.40
A1473.5	—	3.50	0.1378	39.0	70.0	3.50
A1473.6	—	3.60	0.1417	39.0	70.0	3.60
A1473.7	—	3.70	0.1457	39.0	70.0	3.70
A1473.8	—	3.80	0.1496	43.0	75.0	3.80
A1473.9	—	3.90	0.1535	43.0	75.0	3.90
A1475/32	5/32	3.97	0.1563	43.0	75.0	3.97
A1474.0	—	4.00	0.1575	43.0	75.0	4.00
A1474.1	—	4.10	0.1614	43.0	75.0	4.10
A1474.2	—	4.20	0.1654	43.0	75.0	4.20
A1474.3	—	4.30	0.1693	47.0	80.0	4.30
A1474.4	—	4.40	0.1732	47.0	80.0	4.40
A1474.5	—	4.50	0.1772	47.0	80.0	4.50
A1474.6	—	4.60	0.1811	47.0	80.0	4.60

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1474.7	–	4.70	0.1850	47.0	80.0	4.70
A1473/16	3/16	4.76	0.1875	52.0	86.0	4.76
A1474.8	–	4.80	0.1890	52.0	86.0	4.80
A1474.9	–	4.90	0.1929	52.0	86.0	4.90
A1475.0	–	5.00	0.1969	52.0	86.0	5.00
A1475.1	–	5.10	0.2008	52.0	86.0	5.10
A1475.2	–	5.20	0.2047	52.0	86.0	5.20
A1475.3	–	5.30	0.2087	52.0	86.0	5.30
A1475.4	–	5.40	0.2126	57.0	93.0	5.40
A1475.5	–	5.50	0.2165	57.0	93.0	5.50
A1475.6	–	5.60	0.2205	57.0	93.0	5.60
A1475.7	–	5.70	0.2244	57.0	93.0	5.70
A1475.8	–	5.80	0.2283	57.0	93.0	5.80
A1475.9	–	5.90	0.2323	57.0	93.0	5.90
A1476.0	–	6.00	0.2362	57.0	93.0	6.00
A1476.1	–	6.10	0.2402	63.0	101.0	6.10
A1476.2	–	6.20	0.2441	63.0	101.0	6.20
A1476.3	–	6.30	0.2480	63.0	101.0	6.30
A1471/4	1/4	6.35	0.2500	63.0	101.0	6.35
A1476.4	–	6.40	0.2520	63.0	101.0	6.40
A1476.5	–	6.50	0.2559	63.0	101.0	6.50
A1476.6	–	6.60	0.2598	63.0	101.0	6.60
A1476.7	–	6.70	0.2638	63.0	101.0	6.70
A1476.8	–	6.80	0.2677	69.0	109.0	6.80
A1476.9	–	6.90	0.2717	69.0	109.0	6.90
A1477.0	–	7.00	0.2756	69.0	109.0	7.00
A1477.1	–	7.10	0.2795	69.0	109.0	7.10
A1477.2	–	7.20	0.2835	69.0	109.0	7.20
A1477.3	–	7.30	0.2874	69.0	109.0	7.30
A1477.4	–	7.40	0.2913	69.0	109.0	7.40
A1477.5	–	7.50	0.2953	69.0	109.0	7.50
A1477.6	–	7.60	0.2992	75.0	117.0	7.60
A1477.7	–	7.70	0.3031	75.0	117.0	7.70
A1477.8	–	7.80	0.3071	75.0	117.0	7.80

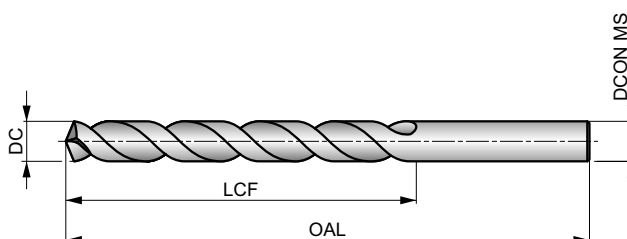
Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1477.9	–	7.90	0.3110	75.0	117.0	7.90
A1478.0	–	8.00	0.3150	75.0	117.0	8.00
A1478.1	–	8.10	0.3189	75.0	117.0	8.10
A1478.2	–	8.20	0.3228	75.0	117.0	8.20
A1478.3	–	8.30	0.3268	75.0	117.0	8.30
A1478.4	–	8.40	0.3307	75.0	117.0	8.40
A1478.5	–	8.50	0.3346	75.0	117.0	8.50
A1478.6	–	8.60	0.3386	81.0	125.0	8.60
A1478.7	–	8.70	0.3425	81.0	125.0	8.70
A1478.8	–	8.80	0.3465	81.0	125.0	8.80
A1478.9	–	8.90	0.3504	81.0	125.0	8.90
A1479.0	–	9.00	0.3543	81.0	125.0	9.00
A1479.1	–	9.10	0.3583	81.0	125.0	9.10
A1479.2	–	9.20	0.3622	81.0	125.0	9.20
A1479.3	–	9.30	0.3661	81.0	125.0	9.30
A1479.4	–	9.40	0.3701	81.0	125.0	9.40
A1479.5	–	9.50	0.3740	81.0	125.0	9.50
A1479.6	–	9.60	0.3780	87.0	133.0	9.60
A1479.7	–	9.70	0.3819	87.0	133.0	9.70
A1479.8	–	9.80	0.3858	87.0	133.0	9.80
A1479.9	–	9.90	0.3898	87.0	133.0	9.90
A14710.0	–	10.00	0.3937	87.0	133.0	10.00
A14710.2	–	10.20	0.4016	87.0	133.0	10.20
A14710.5	–	10.50	0.4134	87.0	133.0	10.50
A14711.0	–	11.00	0.4331	94.0	142.0	11.00
A14711.2	–	11.20	0.4409	94.0	142.0	11.20
A14711.5	–	11.50	0.4528	94.0	142.0	11.50
A14712.0	–	12.00	0.4724	101.0	151.0	12.00
A14712.5	–	12.50	0.4921	101.0	151.0	12.50
A14713.0	–	13.00	0.5118	101.0	151.0	13.00
A14713.5	–	13.50	0.5315	108.0	160.0	13.50
A14714.0	–	14.00	0.5512	108.0	160.0	14.00
A14714.5	–	14.50	0.5709	114.0	169.0	14.50
A14715.0	–	15.00	0.5906	114.0	169.0	15.00

A777

DORMER

HSS-E (8% kobolt) bor med A777 bor, Bronze overfladefinish

En top performer, der producerer nøjagtige størrelse huller med en kvalitetsfinish i materialer med høj styrke. Spids på 135° hjælper med at centrere sig selv. Bronzefinishen er et tyndt oxidlag dannet på værktøjsoverfladen og er en indikation for 8% kobolt HSS-E bor.



HSS-E	DIN 338	4xD
135°	Bronze	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
36 H	40 H	41 H	31 H	27 G	24 E	25 F	20 F	17 E	15 F	13 E	10 D	30 E	26 E
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
27 E	22 E	13 G	11 G	10 G	15 C	35 H	26 D	19 D	27 E	22 E	18 E	24 E	18 E
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
15 E	22 E	17 E	12 E	11 E	9 E	25 E	19 E	15 E	33 J	25 J	17 I	46 H	42 H
N2.3	N3.1	N3.2	N3.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2	
30 H	68 H	40 F	20 H	28 F	20 D	11 C	9 E	8 B	7 E	6 B	5 E	5 B	

NAS907J. DC <= 1.4mm 4 Facet spids.

Produkter fra denne serie fås også i sæt. Se venligst A295.

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A777.3	—	0.30	0.0118	3.0	19.0	0.30
A777.35	—	0.35	0.0138	4.0	19.0	0.35
A777.4	—	0.40	0.0157	5.0	20.0	0.40
A777.45	—	0.45	0.0177	5.0	20.0	0.45
A777.5	—	0.50	0.0197	6.0	22.0	0.50
A777.55	—	0.55	0.0217	7.0	24.0	0.55
A777.6	—	0.60	0.0236	7.0	24.0	0.60
A777.65	—	0.65	0.0256	8.0	26.0	0.65
A777.7	—	0.70	0.0276	9.0	28.0	0.70
A777.8	—	0.80	0.0315	10.0	30.0	0.80
A777.9	—	0.90	0.0354	11.0	32.0	0.90
A777.95	—	0.95	0.0374	11.0	32.0	0.95
A7771.0	—	1.00	0.0394	12.0	34.0	1.00
A7771.1	—	1.10	0.0433	14.0	36.0	1.10
A7771.2	—	1.20	0.0472	16.0	38.0	1.20
A7771.3	—	1.30	0.0512	16.0	38.0	1.30
A7771.4	—	1.40	0.0551	18.0	40.0	1.40
A7771.5	—	1.50	0.0591	18.0	40.0	1.50
A7771/16	1/16	1.59	0.0625	20.0	43.0	1.59
A7771.6	—	1.60	0.0630	20.0	43.0	1.60
A7771.7	—	1.70	0.0669	20.0	43.0	1.70
A7771.8	—	1.80	0.0709	22.0	46.0	1.80
A7771.9	—	1.90	0.0748	22.0	46.0	1.90
A7775/64	5/64	1.98	0.0781	24.0	49.0	1.98

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A7772.0	—	2.00	0.0787	24.0	49.0	2.00
A7772.1	—	2.10	0.0827	24.0	49.0	2.10
A7772.2	—	2.20	0.0866	27.0	53.0	2.20
A7772.3	—	2.30	0.0906	27.0	53.0	2.30
A7773/32	3/32	2.38	0.0938	30.0	57.0	2.38
A7772.4	—	2.40	0.0945	30.0	57.0	2.40
A7772.5	—	2.50	0.0984	30.0	57.0	2.50
A7772.6	—	2.60	0.1024	30.0	57.0	2.60
A7772.7	—	2.70	0.1063	33.0	61.0	2.70
A7777/64	7/64	2.78	0.1094	33.0	61.0	2.78
A7772.8	—	2.80	0.1102	33.0	61.0	2.80
A7772.9	—	2.90	0.1142	33.0	61.0	2.90
A7773.0	—	3.00	0.1181	33.0	61.0	3.00
A7773.1	—	3.10	0.1220	36.0	65.0	3.10
A7771/8	1/8	3.18	0.1250	36.0	65.0	3.18
A7773.2	—	3.20	0.1260	36.0	65.0	3.20
A7773.3	—	3.30	0.1299	36.0	65.0	3.30
A7773.4	—	3.40	0.1339	39.0	70.0	3.40
A7773.5	—	3.50	0.1378	39.0	70.0	3.50
A7779/64	9/64	3.57	0.1406	39.0	70.0	3.57
A7773.6	—	3.60	0.1417	39.0	70.0	3.60
A7773.7	—	3.70	0.1457	39.0	70.0	3.70
A7773.8	—	3.80	0.1496	43.0	75.0	3.80
A7773.9	—	3.90	0.1535	43.0	75.0	3.90

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A7775/32	5/32	3.97	0.1563	43.0	75.0	3.97
A7774.0	—	4.00	0.1575	43.0	75.0	4.00
A7774.1	—	4.10	0.1614	43.0	75.0	4.10
A7774.2	—	4.20	0.1654	43.0	75.0	4.20
A7774.3	—	4.30	0.1693	47.0	80.0	4.30
A77711/64	11/64	4.37	0.1719	47.0	80.0	4.37
A7774.4	—	4.40	0.1732	47.0	80.0	4.40
A7774.5	—	4.50	0.1772	47.0	80.0	4.50
A7774.6	—	4.60	0.1811	47.0	80.0	4.60
A7774.7	—	4.70	0.1850	47.0	80.0	4.70
A7773/16	3/16	4.76	0.1875	52.0	86.0	4.76
A7774.8	—	4.80	0.1890	52.0	86.0	4.80
A7774.9	—	4.90	0.1929	52.0	86.0	4.90
A7775.0	—	5.00	0.1969	52.0	86.0	5.00
A7775.1	—	5.10	0.2008	52.0	86.0	5.10
A77713/64	13/64	5.16	0.2031	52.0	86.0	5.16
A7775.2	—	5.20	0.2047	52.0	86.0	5.20
A7775.3	—	5.30	0.2087	52.0	86.0	5.30
A7775.4	—	5.40	0.2126	57.0	93.0	5.40
A7775.5	—	5.50	0.2165	57.0	93.0	5.50
A7777/32	7/32	5.56	0.2188	57.0	93.0	5.56
A7775.6	—	5.60	0.2205	57.0	93.0	5.60
A7775.7	—	5.70	0.2244	57.0	93.0	5.70
A7775.8	—	5.80	0.2283	57.0	93.0	5.80
A7775.9	—	5.90	0.2323	57.0	93.0	5.90
A77715/64	15/64	5.95	0.2344	57.0	93.0	5.95
A7776.0	—	6.00	0.2362	57.0	93.0	6.00
A7776.1	—	6.10	0.2402	63.0	101.0	6.10
A7776.2	—	6.20	0.2441	63.0	101.0	6.20
A7776.3	—	6.30	0.2480	63.0	101.0	6.30
A7771/4	1/4	6.35	0.2500	63.0	101.0	6.35
A7776.4	—	6.40	0.2520	63.0	101.0	6.40
A7776.5	—	6.50	0.2559	63.0	101.0	6.50
A7776.6	—	6.60	0.2598	63.0	101.0	6.60
A7776.7	—	6.70	0.2638	63.0	101.0	6.70
A77717/64	17/64	6.75	0.2656	69.0	109.0	6.75
A7776.8	—	6.80	0.2677	69.0	109.0	6.80
A7776.9	—	6.90	0.2717	69.0	109.0	6.90
A7777.0	—	7.00	0.2756	69.0	109.0	7.00
A7777.1	—	7.10	0.2795	69.0	109.0	7.10
A7779/32	9/32	7.14	0.2813	69.0	109.0	7.14
A7777.2	—	7.20	0.2835	69.0	109.0	7.20
A7777.3	—	7.30	0.2874	69.0	109.0	7.30
A7777.4	—	7.40	0.2913	69.0	109.0	7.40
A7777.5	—	7.50	0.2953	69.0	109.0	7.50
A77719/64	19/64	7.54	0.2969	75.0	117.0	7.54
A7777.6	—	7.60	0.2992	75.0	117.0	7.60
A7777.7	—	7.70	0.3031	75.0	117.0	7.70
A7777.8	—	7.80	0.3071	75.0	117.0	7.80
A7777.9	—	7.90	0.3110	75.0	117.0	7.90
A7775/16	5/16	7.94	0.3125	75.0	117.0	7.94
A7778.0	—	8.00	0.3150	75.0	117.0	8.00

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A7778.1	—	8.10	0.3189	75.0	117.0	8.10
A7778.2	—	8.20	0.3228	75.0	117.0	8.20
A7778.3	—	8.30	0.3268	75.0	117.0	8.30
A77721/64	21/64	8.33	0.3281	75.0	117.0	8.33
A7778.4	—	8.40	0.3307	75.0	117.0	8.40
A7778.5	—	8.50	0.3346	75.0	117.0	8.50
A7778.6	—	8.60	0.3386	81.0	125.0	8.60
A7778.7	—	8.70	0.3425	81.0	125.0	8.70
A77711/32	11/32	8.73	0.3438	81.0	125.0	8.73
A7778.8	—	8.80	0.3465	81.0	125.0	8.80
A7778.9	—	8.90	0.3504	81.0	125.0	8.90
A7779.0	—	9.00	0.3543	81.0	125.0	9.00
A7779.1	—	9.10	0.3583	81.0	125.0	9.10
A77723/64	23/64	9.13	0.3594	81.0	125.0	9.13
A7779.2	—	9.20	0.3622	81.0	125.0	9.20
A7779.3	—	9.30	0.3661	81.0	125.0	9.30
A7779.4	—	9.40	0.3701	81.0	125.0	9.40
A7779.5	—	9.50	0.3740	81.0	125.0	9.50
A7773/8	3/8	9.52	0.3750	87.0	133.0	9.52
A7779.6	—	9.60	0.3780	87.0	133.0	9.60
A7779.7	—	9.70	0.3819	87.0	133.0	9.70
A7779.8	—	9.80	0.3858	87.0	133.0	9.80
A7779.9	—	9.90	0.3898	87.0	133.0	9.90
A77725/64	25/64	9.92	0.3906	87.0	133.0	9.92
A77710.0	—	10.00	0.3937	87.0	133.0	10.00
A77710.1	—	10.10	0.3976	87.0	133.0	10.10
A77710.2	—	10.20	0.4016	87.0	133.0	10.20
A77713/32	13/32	10.32	0.4063	87.0	133.0	10.32
A77710.5	—	10.50	0.4134	87.0	133.0	10.50
A77727/64	27/64	10.72	0.4219	94.0	142.0	10.72
A77710.8	—	10.80	0.4252	94.0	142.0	10.80
A77711.0	—	11.00	0.4331	94.0	142.0	11.00
A7777/16	7/16	11.11	0.4375	94.0	142.0	11.11
A77711.2	—	11.20	0.4409	94.0	142.0	11.20
A77711.5	—	11.50	0.4528	94.0	142.0	11.50
A77729/64	29/64	11.51	0.4531	94.0	142.0	11.51
A77711.8	—	11.80	0.4646	94.0	142.0	11.80
A77715/32	15/32	11.91	0.4688	101.0	151.0	11.91
A77712.0	—	12.00	0.4724	101.0	151.0	12.00
A77712.2	—	12.20	0.4803	101.0	151.0	12.20
A77731/64	31/64	12.30	0.4844	101.0	151.0	12.30
A77712.5	—	12.50	0.4921	101.0	151.0	12.50
A7771/2	1/2	12.70	0.5000	101.0	151.0	12.70
A77712.8	—	12.80	0.5039	101.0	151.0	12.80
A77713.0	—	13.00	0.5118	101.0	151.0	13.00
A77713.5	—	13.50	0.5315	108.0	160.0	13.50
A77714.0	—	14.00	0.5512	108.0	160.0	14.00
A77714.5	—	14.50	0.5709	114.0	169.0	14.50
A77715.0	—	15.00	0.5906	114.0	169.0	15.00
A77715.5	—	15.50	0.6102	120.0	178.0	15.50
A77716.0	—	16.00	0.6299	120.0	178.0	16.00

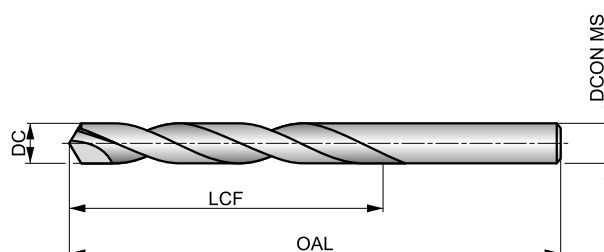
A160

DORMER



HSS Bor, damphærdet finish, med loddet hårdmetal

HSS-krop med en loddet hårdmetalskær, der giver ydeevnen som et hårdmetalbor med en stærk og fleksibel krop. Den har et selvcentrerende punkt på 118°, 4 facetter, hvilket gør det til et økonomisk valg ved boring af støbejernsmaterialer. Det kan bruges i både konventionelle og CNC-maskiner.



HSS HM	DIN 338	4xD
118°	Bright ST	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 73 E	P1.2 82 E	P1.3 85 E	P2.1 63 E	P2.2 55 D	P2.3 49 C	P3.1 59 D	P3.2 47 D	P3.3 40 C	P4.1 35 D	P4.2 30 C	P4.3 24 A	M1.1 55 B	M1.2 46 B
M2.1 49 B	M2.2 40 B	M3.1 41 C	M3.2 35 C	M3.3 32 C	M4.1 35 A	K1.1 50 C	K1.2 37 A	K1.3 28 A	K2.1 43 A	K2.2 35 A	K2.3 28 A	K3.1 38 A	K3.2 29 A
K3.3 24 A	K4.1 35 A	K4.2 27 A	K4.3 20 A	K4.4 17 A	K4.5 14 A	K5.1 40 A	K5.2 30 A	K5.3 23 A	N1.1 50 I	N1.2 38 I	N1.3 25 H	N2.1 62 G	N2.2 55 G
N2.3 40 G	N3.1 119 C	N3.2 70 G	N3.3 35 D	N4.2 60 E	S1.1 35 A	S1.2 35 A	S1.3 25 A	S2.1 33 A	S2.2 28 A	S3.1 25 A	S3.2 20 A	S4.1 20 A	S4.2 16 A

Product	DC	DC	LCF	OAL	DCON MS
	(mm)	(inch)	(mm)	(mm)	(mm)
A1604.0	4.00	0.1575	43.0	75.0	4.00
A1604.5	4.50	0.1772	47.0	80.0	4.50
A1605.0	5.00	0.1969	52.0	86.0	5.00
A1605.5	5.50	0.2165	57.0	93.0	5.50
A1606.0	6.00	0.2362	57.0	93.0	6.00
A1606.5	6.50	0.2559	63.0	101.0	6.50
A1606.8	6.80	0.2677	69.0	109.0	6.80
A1607.0	7.00	0.2756	69.0	109.0	7.00
A1607.5	7.50	0.2953	69.0	109.0	7.50
A1608.0	8.00	0.3150	75.0	117.0	8.00
A1608.5	8.50	0.3346	75.0	117.0	8.50
A1609.0	9.00	0.3543	81.0	125.0	9.00
A1609.5	9.50	0.3740	81.0	125.0	9.50
A16010.0	10.00	0.3937	87.0	133.0	10.00
A16010.2	10.20	0.4016	87.0	133.0	10.20
A16010.5	10.50	0.4134	87.0	133.0	10.50
A16011.0	11.00	0.4331	94.0	142.0	11.00
A16011.5	11.50	0.4528	94.0	142.0	11.50
A16012.0	12.00	0.4724	101.0	151.0	12.00
A16013.0	13.00	0.5118	101.0	151.0	13.00
A16014.0	14.00	0.5512	108.0	160.0	14.00
A16015.0	15.00	0.5906	114.0	169.0	15.00
A16016.0	16.00	0.6299	120.0	178.0	16.00

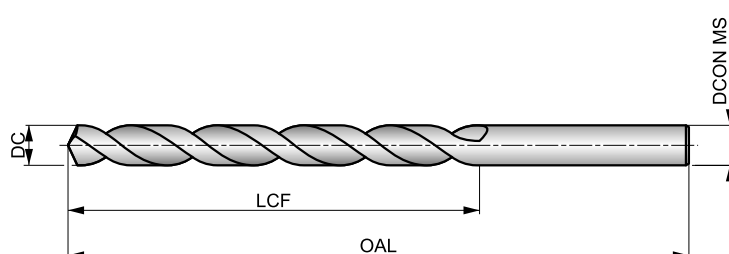
A510



ADX HSS bor, TiN Belagt

Højtstående bor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og tilspændinger (H9 hulltolerance). En tynd spids på 130 ° hjælper med selvcentrering. Dette bor skal kun bruges i maskiner med konstant tilspændning. TiN-belægning forbedrer ydeevnen og forlænger værktøjets levetid. Velegnet til boring af mange materialer.

ADX



HSS	DIN 338	4×D
130°	TiN	
λ 32-40°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 53 M	■ 59 M	■ 61 M	■ 45 M	■ 40 K	■ 35 F	■ 31 H	■ 25 H	■ 21 F	■ 19 H	■ 16 F	■ 13 D	■ 38 G	■ 32 G
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■ 34 G	■ 28 G	■ 16 I	■ 14 I	■ 13 I	■ 19 G	■ 42 K	■ 31 J	■ 23 J	■ 34 J	■ 28 J	■ 22 F	■ 30 J	■ 23 J
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■ 19 F	■ 28 J	■ 21 J	■ 16 F	■ 13 F	■ 11 F	■ 32 J	■ 24 J	■ 19 F	■ 50 G	■ 38 G	■ 25 M	■ 48 I	■ 43 I
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
■ 31 I	■ 85 I	■ 50 I	■ 25 D	■ 65 G	■ 50 G	■ 35 F	■ 32 G	■ 20 H	■ 4 B	■ 12 E	■ 8 E	■ 9 E	■ 6 E
S4.1	S4.2												
■ 7 E	■ 5 E												

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A5103.0	—	3.00	0.1181	33.0	61.0	3.00
A5103.1	—	3.10	0.1220	36.0	65.0	3.10
A5101/8	1/8	3.18	0.1250	36.0	65.0	3.18
A5103.2	—	3.20	0.1260	36.0	65.0	3.20
A5103.3	—	3.30	0.1299	36.0	65.0	3.30
A5103.4	—	3.40	0.1339	39.0	70.0	3.40
A5103.5	—	3.50	0.1378	39.0	70.0	3.50
A5109/64	9/64	3.57	0.1406	39.0	70.0	3.57
A5103.6	—	3.60	0.1417	39.0	70.0	3.60
A5103.7	—	3.70	0.1457	39.0	70.0	3.70
A5103.8	—	3.80	0.1496	43.0	75.0	3.80
A5103.9	—	3.90	0.1535	43.0	75.0	3.90
A5105/32	5/32	3.97	0.1563	43.0	75.0	3.97
A5104.0	—	4.00	0.1575	43.0	75.0	4.00
A5104.1	—	4.10	0.1614	43.0	75.0	4.10
A5104.2	—	4.20	0.1654	43.0	75.0	4.20
A5104.3	—	4.30	0.1693	47.0	80.0	4.30
A51011/64	11/64	4.37	0.1719	47.0	80.0	4.37
A5104.4	—	4.40	0.1732	47.0	80.0	4.40
A5104.5	—	4.50	0.1772	47.0	80.0	4.50
A5104.6	—	4.60	0.1811	47.0	80.0	4.60
A5104.7	—	4.70	0.1850	47.0	80.0	4.70
A5103/16	3/16	4.76	0.1875	52.0	86.0	4.76
A5104.8	—	4.80	0.1890	52.0	86.0	4.80

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A5104.9	—	4.90	0.1929	52.0	86.0	4.90
A5105.0	—	5.00	0.1969	52.0	86.0	5.00
A5105.1	—	5.10	0.2008	52.0	86.0	5.10
A51013/64	13/64	5.16	0.2031	52.0	86.0	5.16
A5105.2	—	5.20	0.2047	52.0	86.0	5.20
A5105.3	—	5.30	0.2087	52.0	86.0	5.30
A5105.4	—	5.40	0.2126	57.0	93.0	5.40
A5105.5	—	5.50	0.2165	57.0	93.0	5.50
A5107/32	7/32	5.56	0.2188	57.0	93.0	5.56
A5105.6	—	5.60	0.2205	57.0	93.0	5.60
A5105.7	—	5.70	0.2244	57.0	93.0	5.70
A5105.8	—	5.80	0.2283	57.0	93.0	5.80
A5105.9	—	5.90	0.2323	57.0	93.0	5.90
A51015/64	15/64	5.95	0.2344	57.0	93.0	5.95
A5106.0	—	6.00	0.2362	57.0	93.0	6.00
A5106.1	—	6.10	0.2402	63.0	101.0	6.10
A5106.2	—	6.20	0.2441	63.0	101.0	6.20
A5106.3	—	6.30	0.2480	63.0	101.0	6.30
A5101/4	1/4	6.35	0.2500	63.0	101.0	6.35
A5106.4	—	6.40	0.2520	63.0	101.0	6.40
A5106.5	—	6.50	0.2559	63.0	101.0	6.50
A5106.6	—	6.60	0.2598	63.0	101.0	6.60
A5106.7	—	6.70	0.2638	63.0	101.0	6.70
A51017/64	17/64	6.75	0.2656	69.0	109.0	6.75

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A5106.8	—	6.80	0.2677	69.0	109.0	6.80
A5106.9	—	6.90	0.2717	69.0	109.0	6.90
A5107.0	—	7.00	0.2756	69.0	109.0	7.00
A5107.1	—	7.10	0.2795	69.0	109.0	7.10
A5109/32	9/32	7.14	0.2813	69.0	109.0	7.14
A5107.2	—	7.20	0.2835	69.0	109.0	7.20
A5107.3	—	7.30	0.2874	69.0	109.0	7.30
A5107.4	—	7.40	0.2913	69.0	109.0	7.40
A5107.5	—	7.50	0.2953	69.0	109.0	7.50
A51019/64	19/64	7.54	0.2969	75.0	117.0	7.54
A5107.6	—	7.60	0.2992	75.0	117.0	7.60
A5107.7	—	7.70	0.3031	75.0	117.0	7.70
A5107.8	—	7.80	0.3071	75.0	117.0	7.80
A5107.9	—	7.90	0.3110	75.0	117.0	7.90
A5105/16	5/16	7.94	0.3125	75.0	117.0	7.94
A5108.0	—	8.00	0.3150	75.0	117.0	8.00
A5108.1	—	8.10	0.3189	75.0	117.0	8.10
A5108.2	—	8.20	0.3228	75.0	117.0	8.20
A5108.3	—	8.30	0.3268	75.0	117.0	8.30
A51021/64	21/64	8.33	0.3281	75.0	117.0	8.33
A5108.4	—	8.40	0.3307	75.0	117.0	8.40
A5108.5	—	8.50	0.3346	75.0	117.0	8.50
A5108.6	—	8.60	0.3386	81.0	125.0	8.60
A5108.7	—	8.70	0.3425	81.0	125.0	8.70
A51011/32	11/32	8.73	0.3438	81.0	125.0	8.73
A5108.8	—	8.80	0.3465	81.0	125.0	8.80
A5108.9	—	8.90	0.3504	81.0	125.0	8.90
A5109.0	—	9.00	0.3543	81.0	125.0	9.00
A5109.1	—	9.10	0.3583	81.0	125.0	9.10
A51023/64	23/64	9.13	0.3594	81.0	125.0	9.13
A5109.2	—	9.20	0.3622	81.0	125.0	9.20
A5109.3	—	9.30	0.3661	81.0	125.0	9.30
A5109.4	—	9.40	0.3701	81.0	125.0	9.40
A5109.5	—	9.50	0.3740	81.0	125.0	9.50
A5103/8	3/8	9.52	0.3750	87.0	133.0	9.52
A5109.6	—	9.60	0.3780	87.0	133.0	9.60
A5109.7	—	9.70	0.3819	87.0	133.0	9.70
A5109.8	—	9.80	0.3858	87.0	133.0	9.80
A5109.9	—	9.90	0.3898	87.0	133.0	9.90
A51025/64	25/64	9.92	0.3906	87.0	133.0	9.92

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A51010.0	—	10.00	0.3937	87.0	133.0	10.00
A51010.1	—	10.10	0.3976	87.0	133.0	10.10
A51010.2	—	10.20	0.4016	87.0	133.0	10.20
A51010.3	—	10.30	0.4055	87.0	133.0	10.30
A51013/32	13/32	10.32	0.4063	87.0	133.0	10.32
A51010.4	—	10.40	0.4094	87.0	133.0	10.40
A51010.5	—	10.50	0.4134	87.0	133.0	10.50
A51010.6	—	10.60	0.4173	87.0	133.0	10.60
A51010.7	—	10.70	0.4213	94.0	142.0	10.70
A51027/64	27/64	10.72	0.4219	94.0	142.0	10.72
A51010.8	—	10.80	0.4252	94.0	142.0	10.80
A51010.9	—	10.90	0.4291	94.0	142.0	10.90
A51011.0	—	11.00	0.4331	94.0	142.0	11.00
A51011.1	—	11.10	0.4370	94.0	142.0	11.10
A5107/16	7/16	11.11	0.4375	94.0	142.0	11.11
A51011.2	—	11.20	0.4409	94.0	142.0	11.20
A51011.3	—	11.30	0.4449	94.0	142.0	11.30
A51011.4	—	11.40	0.4488	94.0	142.0	11.40
A51011.5	—	11.50	0.4528	94.0	142.0	11.50
A51029/64	29/64	11.51	0.4531	94.0	142.0	11.51
A51011.6	—	11.60	0.4567	94.0	142.0	11.60
A51011.7	—	11.70	0.4606	94.0	142.0	11.70
A51011.8	—	11.80	0.4646	94.0	142.0	11.80
A51011.9	—	11.90	0.4685	101.0	151.0	11.90
A51015/32	15/32	11.91	0.4688	101.0	151.0	11.91
A51012.0	—	12.00	0.4724	101.0	151.0	12.00
A51012.1	—	12.10	0.4764	101.0	151.0	12.10
A51012.2	—	12.20	0.4803	101.0	151.0	12.20
A51012.3	—	12.30	0.4843	101.0	151.0	12.30
A51031/64	31/64	12.30	0.4844	101.0	151.0	12.30
A51012.4	—	12.40	0.4882	101.0	151.0	12.40
A51012.5	—	12.50	0.4921	101.0	151.0	12.50
A51012.6	—	12.60	0.4961	101.0	151.0	12.60
A51012.7	—	12.70	0.5000	101.0	151.0	12.70
A5101/2	1/2	12.70	0.5000	101.0	151.0	12.70
A51012.8	—	12.80	0.5039	101.0	151.0	12.80
A51012.9	—	12.90	0.5079	101.0	151.0	12.90
A51013.0	—	13.00	0.5118	101.0	151.0	13.00
A51014.0	—	14.00	0.5512	108.0	160.0	14.00

A553

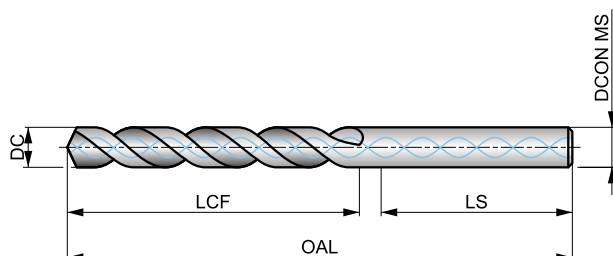
DORMER

ADX HSS-E (5% kobolt) bor, TiAlN top belagt med indvendig kølemiddeltilførsel

Højtstående bor, der er i stand til at producere nøjagtige huller i høj kvalitet ved høje hastigheder og tilspændinger (H9 hulltolerance). En tynd spids på 130° og TiAlN Topcoating forbedrer ydeevnen og forlænger værktøjets levetid. Dette bor bør kun bruges i CNC-maskiner. Velegnet til boring af mange materialer.

ADX

HSS-E		5xD
	TiAlN Top	
DC h8		



Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 80 L	P1.2 ■ 89 L	P1.3 ■ 92 L	P2.1 ■ 68 L	P2.2 ■ 60 L	P2.3 ■ 53 F	P3.1 ■ 41 H	P3.2 ■ 33 H	P3.3 ■ 28 F	P4.1 ■ 25 H	P4.2 ■ 21 F	P4.3 ■ 17 D	M1.1 ■ 55 G	M1.2 ■ 46 G
M2.1 ■ 49 G	M2.2 ■ 40 G	M3.1 ■ 22 I	M3.2 ■ 19 I	M3.3 ■ 17 I	M4.1 ■ 27 G	K1.1 ■ 70 K	K1.2 ■ 52 J	K1.3 ■ 39 J	K2.1 ■ 55 J	K2.2 ■ 45 J	K2.3 ■ 36 F	K3.1 ■ 49 J	K3.2 ■ 37 J
K3.3 ■ 30 F	K4.1 ■ 45 J	K4.2 ■ 34 J	K4.3 ■ 25 F	K4.4 ■ 22 F	K4.5 ■ 18 F	K5.1 ■ 51 J	K5.2 ■ 39 J	K5.3 ■ 30 F	N1.1 ■ 70 H	N1.2 ■ 53 H	N1.3 ■ 35 M	N2.1 ■ 85 I	N2.2 ■ 76 I
N2.3 ■ 55 I	N3.1 ■ 144 I	N3.2 ■ 85 I	N3.3 ■ 43 G	N4.1 ■ 90 G	S1.1 ■ 45 G	S1.2 ■ 30 E	S1.3 ■ 8 C	S2.1 ■ 20 E	S2.2 ■ 14 G	S3.1 ■ 15 E	S3.2 ■ 10 G	S4.1 ■ 12 E	S4.2 ■ 8 G

DCON MS tolerance h6.

Product	DC	DC	LCF	OAL	LS	DCON MS
	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
A5535.0	5.00	0.1969	36.0	79.0	36.0	6.00
A5535.2	5.20	0.2047	38.0	79.0	36.0	6.00
A5535.5	5.50	0.2165	40.0	79.0	36.0	6.00
A5536.0	6.00	0.2362	43.0	79.0	36.0	6.00
A5536.3	6.30	0.2480	46.0	87.0	36.0	8.00
A5536.5	6.50	0.2559	47.0	87.0	36.0	8.00
A5536.8	6.80	0.2677	48.0	87.0	36.0	8.00
A5536.9	6.90	0.2717	48.0	87.0	36.0	8.00
A5537.0	7.00	0.2756	48.0	87.0	36.0	8.00
A5537.4	7.40	0.2913	54.0	94.0	36.0	8.00
A5537.5	7.50	0.2953	54.0	94.0	36.0	8.00
A5538.0	8.00	0.3150	58.0	94.0	36.0	8.00
A5538.5	8.50	0.3346	75.0	130.0	40.0	10.00
A5538.7	8.70	0.3425	75.0	130.0	40.0	10.00
A5539.0	9.00	0.3543	75.0	130.0	40.0	10.00
A5539.5	9.50	0.3740	75.0	130.0	40.0	10.00
A55310.0	10.00	0.3937	75.0	130.0	40.0	10.00
A55310.2	10.20	0.4016	87.0	150.0	45.0	12.00
A55310.3	10.30	0.4055	87.0	150.0	45.0	12.00
A55310.5	10.50	0.4134	87.0	150.0	45.0	12.00
A55311.0	11.00	0.4331	94.0	150.0	45.0	12.00

Product	DC	DC	LCF	OAL	LS	DCON MS
	(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
A55311.3	11.30	0.4449	94.0	150.0	45.0	12.00
A55311.5	11.50	0.4528	94.0	150.0	45.0	12.00
A55312.0	12.00	0.4724	94.0	150.0	45.0	12.00
A55312.5	12.50	0.4921	101.0	160.0	45.0	14.00
A55313.0	13.00	0.5118	101.0	160.0	45.0	14.00
A55313.5	13.50	0.5315	101.0	160.0	45.0	14.00
A55314.0	14.00	0.5512	101.0	160.0	45.0	14.00
A55314.25	14.25	0.5610	108.0	170.0	48.0	16.00
A55314.5	14.50	0.5709	108.0	170.0	48.0	16.00
A55315.0	15.00	0.5906	108.0	170.0	48.0	16.00
A55315.25	15.25	0.6004	108.0	170.0	48.0	16.00
A55315.5	15.50	0.6102	108.0	170.0	48.0	16.00
A55316.0	16.00	0.6299	108.0	170.0	48.0	16.00
A55316.5	16.50	0.6496	125.0	190.0	48.0	18.00
A55317.0	17.00	0.6693	125.0	190.0	48.0	18.00
A55317.5	17.50	0.6890	130.0	190.0	48.0	18.00
A55317.75	17.75	0.6988	130.0	190.0	48.0	18.00
A55318.0	18.00	0.7087	130.0	190.0	48.0	18.00
A55319.0	19.00	0.7480	135.0	200.0	50.0	20.00
A55319.25	19.25	0.7579	140.0	200.0	50.0	20.00
A55320.0	20.00	0.7874	140.0	200.0	50.0	20.00

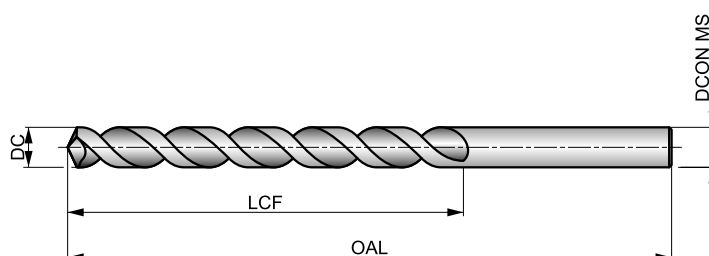
A900



PFX HSS-E (5% kobolt) bor, blank finish

Højtydende bor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og skærehastigheder (H10 hultolerance). Selvcentrerende 130° spidsvinkel og specielt parabolisk skæredesign hjælper med at bore dybe huller i en enkelt passage. Velegnet til mange materialer.

PFX



HSS-E	DIN ANSI	6×D
130°	Bright	
λ>35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 34 H	P1.2 ■ 39 H	P1.3 ■ 40 H	P2.1 ■ 30 H	P2.2 ■ 26 H	P2.3 ■ 23 E	P3.1 ■ 31 H	P3.2 ■ 25 H	P3.3 ■ 21 E	P4.1 ■ 19 H	P4.2 ■ 16 E	P4.3 ■ 13 E	M1.1 ■ 21 E	M1.2 ■ 17 E
M2.1 ■ 18 E	M2.2 ■ 15 E	M3.1 ■ 8 E	M3.2 ■ 7 E	M3.3 ■ 6 E	M4.1 ■ 9 C	K1.1 ■ 24 J	K1.2 ■ 18 J	K1.3 ■ 13 J	K2.1 ■ 23 J	K2.2 ■ 19 J	K2.3 ■ 15 I	K3.1 ■ 21 J	K3.2 ■ 16 J
K3.3 ■ 13 I	K4.1 ■ 19 J	K4.2 ■ 14 J	K4.3 ■ 11 I	K4.4 ■ 9 I	K4.5 ■ 8 I	K5.1 ■ 22 J	K5.2 ■ 16 J	K5.3 ■ 13 I	N1.1 ■ 60 J	N1.2 ■ 45 J	N1.3 ■ 30 N	N2.1 ■ 62 N	N2.2 ■ 55 N
N2.3 ■ 40 N	N3.1 ■ 90 H	N3.2 ■ 53 I	N3.3 ■ 27 G	N4.1 ■ 55 I	N4.2 ■ 40 G	S1.1 ■ 22 E	S1.2 ■ 15 E	S1.3 ■ 6 C	S2.1 ■ 9 G	S2.2 ■ 8 C	S3.1 ■ 7 G	S3.2 ■ 6 C	S4.1 ■ 5 G
S4.2 ■ 5 C													

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9001.0	—	1.00	0.0394	12.0	34.0	1.00
A9001.1	—	1.10	0.0433	14.0	36.0	1.10
A9003/64	3/64	1.19	0.0469	19.0	44.0	1.19
A9001.2	—	1.20	0.0472	16.0	38.0	1.20
A9001.25	—	1.25	0.0492	16.0	36.0	1.25
A9001.3	—	1.30	0.0512	16.0	38.0	1.30
A9001.4	—	1.40	0.0551	18.0	40.0	1.40
A9001.5	—	1.50	0.0591	18.0	40.0	1.50
A9001.55	—	1.55	0.0610	20.0	43.0	1.55
A9001/16	1/16	1.59	0.0625	22.0	48.0	1.59
A9001.6	—	1.60	0.0630	20.0	43.0	1.60
A9001.7	—	1.70	0.0669	20.0	43.0	1.70
A9001.75	—	1.75	0.0689	22.0	46.0	1.75
A9001.8	—	1.80	0.0709	22.0	46.0	1.80
A9001.9	—	1.90	0.0748	22.0	46.0	1.90
A9005/64	5/64	1.98	0.0781	25.0	51.0	1.98
A9002.0	—	2.00	0.0787	24.0	49.0	2.00
A9002.1	—	2.10	0.0827	24.0	49.0	2.10
A9002.15	—	2.15	0.0846	27.0	53.0	2.15
A9002.2	—	2.20	0.0866	27.0	53.0	2.20
A9002.3	—	2.30	0.0906	27.0	53.0	2.30
A9003/32	3/32	2.38	0.0937	32.0	57.0	2.38
A9002.4	—	2.40	0.0945	30.0	57.0	2.40
A9002.5	—	2.50	0.0984	30.0	57.0	2.50

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9002.6	—	2.60	0.1024	30.0	57.0	2.60
A9002.7	—	2.70	0.1063	33.0	61.0	2.70
A9007/64	7/64	2.78	0.1094	38.0	67.0	2.78
A9002.8	—	2.80	0.1102	33.0	61.0	2.80
A9002.9	—	2.90	0.1142	33.0	61.0	2.90
A9003.0	—	3.00	0.1181	33.0	61.0	3.00
A9003.1	—	3.10	0.1220	36.0	65.0	3.10
A9001/8	1/8	3.18	0.1250	41.0	70.0	3.18
A9003.2	—	3.20	0.1260	36.0	65.0	3.20
A9003.3	—	3.30	0.1299	36.0	65.0	3.30
A9003.4	—	3.40	0.1339	39.0	70.0	3.40
A9003.5	—	3.50	0.1378	39.0	70.0	3.50
A9009/64	9/64	3.57	0.1406	44.0	73.0	3.57
A9003.6	—	3.60	0.1417	39.0	70.0	3.60
A9003.7	—	3.70	0.1457	39.0	70.0	3.70
A9003.8	—	3.80	0.1496	43.0	75.0	3.80
A9003.9	—	3.90	0.1535	43.0	75.0	3.90
A9005/32	5/32	3.97	0.1563	51.0	79.0	3.97
A9004.0	—	4.00	0.1575	43.0	75.0	4.00
A9004.1	—	4.10	0.1614	43.0	75.0	4.10
A9004.2	—	4.20	0.1654	43.0	75.0	4.20
A9004.3	—	4.30	0.1693	47.0	80.0	4.30
A90011/64	11/64	4.37	0.1719	54.0	83.0	4.37
A9004.4	—	4.40	0.1732	47.0	80.0	4.40

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A9004.5	—	4.50	0.1772	47.0	80.0	4.50
A9004.6	—	4.60	0.1811	47.0	80.0	4.60
A9004.7	—	4.70	0.1850	47.0	80.0	4.70
A9003/16	3/16	4.76	0.1875	59.0	89.0	4.76
A9004.8	—	4.80	0.1890	52.0	86.0	4.80
A9004.9	—	4.90	0.1929	52.0	86.0	4.90
A9005.0	—	5.00	0.1969	52.0	86.0	5.00
A9005.1	—	5.10	0.2008	52.0	86.0	5.10
A90013/64	13/64	5.16	0.2031	62.0	92.0	5.16
A9005.2	—	5.20	0.2047	52.0	86.0	5.20
A9005.3	—	5.30	0.2087	52.0	86.0	5.30
A9005.4	—	5.40	0.2126	57.0	93.0	5.40
A9005.5	—	5.50	0.2165	57.0	93.0	5.50
A9007/32	7/32	5.56	0.2188	64.0	95.0	5.56
A9005.6	—	5.60	0.2205	57.0	93.0	5.60
A9005.7	—	5.70	0.2244	57.0	93.0	5.70
A9005.8	—	5.80	0.2283	57.0	93.0	5.80
A9005.9	—	5.90	0.2323	57.0	93.0	5.90
A90015/64	15/64	5.95	0.2344	67.0	98.0	5.95
A9006.0	—	6.00	0.2362	57.0	93.0	6.00
A9006.1	—	6.10	0.2402	63.0	101.0	6.10
A9006.2	—	6.20	0.2441	63.0	101.0	6.20
A9006.3	—	6.30	0.2480	63.0	101.0	6.30
A9001/4	1/4	6.35	0.2500	70.0	102.0	6.35
A9006.4	—	6.40	0.2520	63.0	101.0	6.40
A9006.5	—	6.50	0.2559	63.0	101.0	6.50
A9006.6	—	6.60	0.2598	63.0	101.0	6.60
A9006.7	—	6.70	0.2638	63.0	101.0	6.70
A90017/64	17/64	6.75	0.2656	73.0	105.0	6.75
A9006.8	—	6.80	0.2677	69.0	109.0	6.80
A9006.9	—	6.90	0.2717	69.0	109.0	6.90
A9007.0	—	7.00	0.2756	69.0	109.0	7.00
A9007.1	—	7.10	0.2795	69.0	109.0	7.10
A9009/32	9/32	7.14	0.2813	75.0	108.0	7.14
A9007.2	—	7.20	0.2835	69.0	109.0	7.20
A9007.3	—	7.30	0.2874	69.0	109.0	7.30
A9007.4	—	7.40	0.2913	69.0	109.0	7.40
A9007.5	—	7.50	0.2953	69.0	109.0	7.50
A90019/64	19/64	7.54	0.2969	78.0	111.0	7.54
A9007.6	—	7.60	0.2992	75.0	117.0	7.60
A9007.7	—	7.70	0.3031	75.0	117.0	7.70
A9007.8	—	7.80	0.3071	75.0	117.0	7.80
A9007.9	—	7.90	0.3110	75.0	117.0	7.90
A9005/16	5/16	7.94	0.3125	81.0	114.0	7.94
A9008.0	—	8.00	0.3150	75.0	117.0	8.00
A9008.1	—	8.10	0.3189	75.0	117.0	8.10
A9008.2	—	8.20	0.3228	75.0	117.0	8.20
A9008.3	—	8.30	0.3268	75.0	117.0	8.30
A90021/64	21/64	8.33	0.3281	84.0	117.0	8.33
A9008.4	—	8.40	0.3307	75.0	117.0	8.40
A9008.5	—	8.50	0.3346	75.0	117.0	8.50
A9008.6	—	8.60	0.3386	81.0	125.0	8.60
A9008.7	—	8.70	0.3425	81.0	125.0	8.70
A90011/32	11/32	8.73	0.3438	87.0	121.0	8.73
A9008.8	—	8.80	0.3465	81.0	125.0	8.80
A9008.9	—	8.90	0.3504	81.0	125.0	8.90
A9009.0	—	9.00	0.3543	81.0	125.0	9.00
A9009.1	—	9.10	0.3583	81.0	125.0	9.10
A90023/64	23/64	9.13	0.3594	89.0	124.0	9.13
A9009.2	—	9.20	0.3622	81.0	125.0	9.20

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A9009.3	—	9.30	0.3661	81.0	125.0	9.30
A9009.4	—	9.40	0.3701	81.0	125.0	9.40
A9009.5	—	9.50	0.3740	81.0	125.0	9.50
A9003/8	3/8	9.52	0.3750	92.0	127.0	9.52
A9009.6	—	9.60	0.3780	87.0	133.0	9.60
A9009.7	—	9.70	0.3819	87.0	133.0	9.70
A9009.8	—	9.80	0.3858	87.0	133.0	9.80
A9009.9	—	9.90	0.3898	87.0	133.0	9.90
A90025/64	25/64	9.92	0.3906	95.0	130.0	9.92
A90010.0	—	10.00	0.3937	87.0	133.0	10.00
A90010.2	—	10.20	0.4016	87.0	133.0	10.20
A90010.3	—	10.30	0.4055	87.0	133.0	10.30
A90013/32	13/32	10.32	0.4063	98.0	133.0	10.32
A90010.4	—	10.40	0.4094	87.0	133.0	10.40
A90010.5	—	10.50	0.4134	87.0	133.0	10.50
A90027/64	27/64	10.72	0.4219	100.0	137.0	10.72
A90010.8	—	10.80	0.4252	94.0	142.0	10.80
A90011.0	—	11.00	0.4331	94.0	142.0	11.00
A9007/16	7/16	11.11	0.4375	103.0	140.0	11.11
A90011.5	—	11.50	0.4528	94.0	142.0	11.50
A90029/64	29/64	11.51	0.4531	106.0	143.0	11.51
A90011.8	—	11.80	0.4646	94.0	142.0	11.80
A90015/32	15/32	11.91	0.4688	110.0	146.0	11.91
A90012.0	—	12.00	0.4724	101.0	151.0	12.00
A90031/64	31/64	12.30	0.4844	111.0	149.0	12.30
A90012.5	—	12.50	0.4921	101.0	151.0	12.50
A9001/2	1/2	12.70	0.5000	101.0	151.0	12.70
A90013.0	—	13.00	0.5118	101.0	151.0	13.00
A90033/64	33/64	13.10	0.5156	122.0	168.0	13.10
A90013.5	—	13.50	0.5315	108.0	160.0	13.50
A90035/64	35/64	13.89	0.5469	122.0	168.0	13.89
A90014.0	—	14.00	0.5512	108.0	160.0	14.00
A9009/16	9/16	14.29	0.5625	122.0	168.0	14.29
A90014.5	—	14.50	0.5709	114.0	169.0	14.50
A90037/64	37/64	14.68	0.5781	122.0	168.0	14.68
A90015.0	—	15.00	0.5906	114.0	169.0	15.00
A90019/32	19/32	15.08	0.5938	132.0	181.0	15.08
A90039/64	39/64	15.48	0.6094	132.0	181.0	15.48
A90015.5	—	15.50	0.6102	120.0	178.0	15.50
A9005/8	5/8	15.88	0.6250	132.0	181.0	15.88
A90016.0	—	16.00	0.6299	120.0	178.0	16.00
A90041/64	41/64	16.27	0.6406	132.0	181.0	16.27
A90016.5	—	16.50	0.6496	125.0	184.0	16.50
A90021/32	21/32	16.67	0.6563	132.0	181.0	16.67
A90017.0	—	17.00	0.6693	125.0	184.0	17.00
A90043/64	43/64	17.07	0.6719	143.0	194.0	17.07
A90011/16	11/16	17.46	0.6875	143.0	194.0	17.46
A90017.5	—	17.50	0.6890	130.0	191.0	17.50
A90045/64	45/64	17.86	0.7031	130.0	191.0	17.86
A90018.0	—	18.00	0.7087	130.0	191.0	18.00
A90023/32	23/32	18.26	0.7188	130.0	191.0	18.26
A90018.5	—	18.50	0.7283	135.0	198.0	18.50
A90047/64	47/64	18.65	0.7344	135.0	198.0	18.65
A90019.0	—	19.00	0.7480	135.0	198.0	19.00
A9003/4	3/4	19.05	0.7500	135.0	198.0	19.05
A90049/64	49/64	19.45	0.7656	135.0	198.0	19.45
A90019.5	—	19.50	0.7677	140.0	205.0	19.50
A90025/32	25/32	19.84	0.7813	140.0	205.0	19.84
A90020.0	—	20.00	0.7874	140.0	205.0	20.00

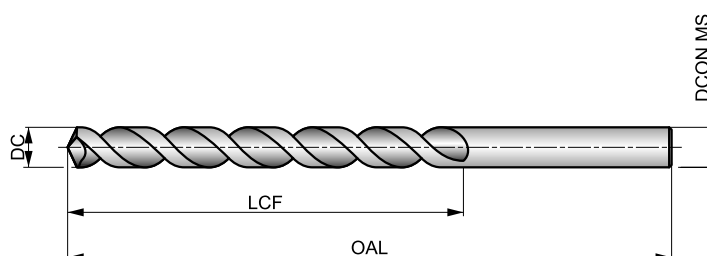
A901



PFX HSS-E (5% kobolt) bor, Alcrona top belægning

Højtydende bor, der er i stand til at producere nøjagtige huller i høj kvalitet ved høje hastigheder og skærehastigheder (H10 hultolerance). En 130° spids vinkel og specielt parabolisk skæredesign. Velegnet til mange materialer. Alcrona-TOP-belægning forbedrer ydeevnen og forlænger værktøjets levetid.

PFX



HSS-E	DIN ANSI	6×D
130°	Alcrona Top	
λ>35°	R	DC h8

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 58 J	P1.2 ■ 65 J	P1.3 ■ 68 J	P2.1 ■ 50 J	P2.2 ■ 44 I	P2.3 ■ 39 G	P3.1 ■ 49 I	P3.2 ■ 39 I	P3.3 ■ 33 G	P4.1 ■ 29 I	P4.2 ■ 25 G	P4.3 ■ 20 G	M1.1 ■ 23 E	M1.2 ■ 20 E
M2.1 ■ 21 E	M2.2 ■ 17 E	M3.1 ■ 10 E	M3.2 ■ 9 E	M3.3 ■ 8 E	M4.1 ■ 11 C	K1.1 ■ 58 I	K1.2 ■ 43 I	K1.3 ■ 32 I	K2.1 ■ 42 J	K2.2 ■ 34 J	K2.3 ■ 27 I	K3.1 ■ 37 J	K3.2 ■ 28 J
K3.3 ■ 23 I	K4.1 ■ 34 J	K4.2 ■ 26 J	K4.3 ■ 19 I	K4.4 ■ 16 I	K4.5 ■ 14 I	K5.1 ■ 39 J	K5.2 ■ 29 J	K5.3 ■ 23 I	S1.1 ■ 35 G	S1.2 ■ 24 G	S1.3 ■ 10 E	S2.1 ■ 15 I	S2.2 ■ 14 E
S3.1 ■ 11 I	S3.2 ■ 10 E	S4.1 ■ 9 I	S4.2 ■ 8 E										

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9011.5	—	1.50	0.0591	18.0	40.0	1.50
A9011.55	—	1.55	0.0610	20.0	43.0	1.55
A9011/16	1/16	1.59	0.0625	22.0	48.0	1.59
A9011.6	—	1.60	0.0630	20.0	43.0	1.60
A9011.75	—	1.75	0.0689	22.0	46.0	1.75
A9011.8	—	1.80	0.0709	22.0	46.0	1.80
A9011.9	—	1.90	0.0748	22.0	46.0	1.90
A9015/64	5/64	1.98	0.0781	25.0	51.0	1.98
A9012.0	—	2.00	0.0787	24.0	49.0	2.00
A9012.1	—	2.10	0.0827	24.0	49.0	2.10
A9012.15	—	2.15	0.0846	27.0	53.0	2.15
A9013/32	3/32	2.38	0.0937	32.0	57.0	2.38
A9012.4	—	2.40	0.0945	30.0	57.0	2.40
A9012.5	—	2.50	0.0984	30.0	57.0	2.50
A9012.6	—	2.60	0.1024	30.0	57.0	2.60
A9012.7	—	2.70	0.1063	33.0	61.0	2.70
A9017/64	7/64	2.78	0.1094	38.0	67.0	2.78
A9012.9	—	2.90	0.1142	33.0	61.0	2.90
A9013.0	—	3.00	0.1181	33.0	61.0	3.00
A9013.1	—	3.10	0.1220	36.0	65.0	3.10
A9011/8	1/8	3.18	0.1250	41.0	70.0	3.18
A9013.2	—	3.20	0.1260	36.0	65.0	3.20
A9013.3	—	3.30	0.1299	36.0	65.0	3.30
A9013.4	—	3.40	0.1339	39.0	70.0	3.40
A9013.5	—	3.50	0.1378	39.0	70.0	3.50
A9013.6	—	3.60	0.1417	39.0	70.0	3.60

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9019/64	9/64	3.57	0.1406	44.0	73.0	3.57
A9013.7	—	3.70	0.1457	39.0	70.0	3.70
A9013.8	—	3.80	0.1496	43.0	75.0	3.80
A9013.9	—	3.90	0.1535	43.0	75.0	3.90
A9015/32	5/32	3.97	0.1563	51.0	79.0	3.97
A9014.0	—	4.00	0.1575	43.0	75.0	4.00
A9014.1	—	4.10	0.1614	43.0	75.0	4.10
A9014.2	—	4.20	0.1654	43.0	75.0	4.20
A9014.3	—	4.30	0.1693	47.0	80.0	4.30
A90111/64	11/64	4.37	0.1719	54.0	83.0	4.37
A9014.4	—	4.40	0.1732	47.0	80.0	4.40
A9014.5	—	4.50	0.1772	47.0	80.0	4.50
A9014.6	—	4.60	0.1811	47.0	80.0	4.60
A9014.7	—	4.70	0.1850	47.0	80.0	4.70
A9013/16	3/16	4.76	0.1875	59.0	89.0	4.76
A9014.8	—	4.80	0.1890	52.0	86.0	4.80
A9014.9	—	4.90	0.1929	52.0	86.0	4.90
A9015.0	—	5.00	0.1969	52.0	86.0	5.00
A9015.1	—	5.10	0.2008	52.0	86.0	5.10
A90113/64	13/64	5.16	0.2031	62.0	92.0	5.16
A9015.2	—	5.20	0.2047	52.0	86.0	5.20
A9015.3	—	5.30	0.2087	52.0	86.0	5.30
A9015.4	—	5.40	0.2126	57.0	93.0	5.40
A9015.5	—	5.50	0.2165	57.0	93.0	5.50
A9017/32	7/32	5.56	0.2188	64.0	95.0	5.56
A9015.6	—	5.60	0.2205	57.0	93.0	5.60

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A9015.7	—	5.70	0.2244	57.0	93.0	5.70
A9015.8	—	5.80	0.2283	57.0	93.0	5.80
A9015.9	—	5.90	0.2323	57.0	93.0	5.90
A90115/64	15/64	5.95	0.2344	67.0	98.0	5.95
A9016.0	—	6.00	0.2362	57.0	93.0	6.00
A9016.1	—	6.10	0.2402	63.0	101.0	6.10
A9016.2	—	6.20	0.2441	63.0	101.0	6.20
A9016.3	—	6.30	0.2480	63.0	101.0	6.30
A9011/4	1/4	6.35	0.2500	70.0	102.0	6.35
A9016.4	—	6.40	0.2520	63.0	101.0	6.40
A9016.5	—	6.50	0.2559	63.0	101.0	6.50
A9016.6	—	6.60	0.2598	63.0	101.0	6.60
A9016.7	—	6.70	0.2638	63.0	101.0	6.70
A90117/64	17/64	6.75	0.2656	73.0	105.0	6.75
A9016.8	—	6.80	0.2677	69.0	109.0	6.80
A9016.9	—	6.90	0.2717	69.0	109.0	6.90
A9017.0	—	7.00	0.2756	69.0	109.0	7.00
A9017.1	—	7.10	0.2795	69.0	109.0	7.10
A9019/32	9/32	7.14	0.2813	75.0	108.0	7.14
A9017.2	—	7.20	0.2835	69.0	109.0	7.20
A9017.3	—	7.30	0.2874	69.0	109.0	7.30
A9017.4	—	7.40	0.2913	69.0	109.0	7.40
A9017.5	—	7.50	0.2953	69.0	109.0	7.50
A90119/64	19/64	7.54	0.2969	78.0	111.0	7.54
A9017.6	—	7.60	0.2992	75.0	117.0	7.60
A9017.7	—	7.70	0.3031	75.0	117.0	7.70
A9017.8	—	7.80	0.3071	75.0	117.0	7.80
A9017.9	—	7.90	0.3110	75.0	117.0	7.90
A9015/16	5/16	7.94	0.3125	81.0	114.0	7.94
A9018.0	—	8.00	0.3150	75.0	117.0	8.00
A9018.1	—	8.10	0.3189	75.0	117.0	8.10
A9018.2	—	8.20	0.3228	75.0	117.0	8.20
A9018.3	—	8.30	0.3268	75.0	117.0	8.30
A90121/64	21/64	8.33	0.3281	84.0	117.0	8.33
A9018.4	—	8.40	0.3307	75.0	117.0	8.40
A9018.5	—	8.50	0.3346	75.0	117.0	8.50
A9018.6	—	8.60	0.3386	81.0	125.0	8.60
A9018.7	—	8.70	0.3425	81.0	125.0	8.70
A90111/32	11/32	8.73	0.3438	87.0	121.0	8.73
A9018.8	—	8.80	0.3465	81.0	125.0	8.80
A9018.9	—	8.90	0.3504	81.0	125.0	8.90
A9019.0	—	9.00	0.3543	81.0	125.0	9.00
A9019.1	—	9.10	0.3583	81.0	125.0	9.10

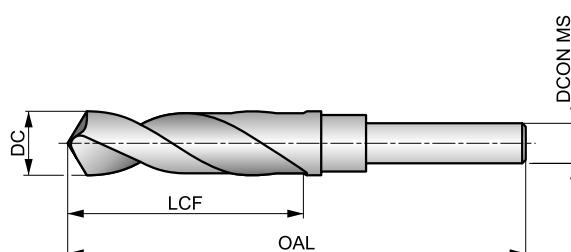
Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A90123/64	23/64	9.13	0.3594	89.0	124.0	9.13
A9019.2	—	9.20	0.3622	81.0	125.0	9.20
A9019.3	—	9.30	0.3661	81.0	125.0	9.30
A9019.4	—	9.40	0.3701	81.0	125.0	9.40
A9019.5	—	9.50	0.3740	81.0	125.0	9.50
A9013/8	3/8	9.52	0.3750	92.0	127.0	9.52
A9019.6	—	9.60	0.3780	87.0	133.0	9.60
A9019.7	—	9.70	0.3819	87.0	133.0	9.70
A9019.8	—	9.80	0.3858	87.0	133.0	9.80
A9019.9	—	9.90	0.3898	87.0	133.0	9.90
A90125/64	25/64	9.92	0.3906	95.0	130.0	9.92
A90110.0	—	10.00	0.3937	87.0	133.0	10.00
A90110.2	—	10.20	0.4016	87.0	133.0	10.20
A90110.3	—	10.30	0.4055	87.0	133.0	10.30
A90113/32	13/32	10.32	0.4063	98.0	133.0	10.32
A90110.4	—	10.40	0.4094	87.0	133.0	10.40
A90110.5	—	10.50	0.4134	87.0	133.0	10.50
A90127/64	27/64	10.72	0.4219	100.0	137.0	10.72
A90110.8	—	10.80	0.4252	94.0	142.0	10.80
A90111.0	—	11.00	0.4331	94.0	142.0	11.00
A9017/16	7/16	11.11	0.4375	103.0	140.0	11.11
A90111.5	—	11.50	0.4528	94.0	142.0	11.50
A90129/64	29/64	11.51	0.4531	106.0	143.0	11.51
A90111.8	—	11.80	0.4646	94.0	142.0	11.80
A90115/32	15/32	11.91	0.4688	110.0	146.0	11.91
A90112.0	—	12.00	0.4724	101.0	151.0	12.00
A90131/64	31/64	12.30	0.4844	111.0	149.0	12.30
A90112.5	—	12.50	0.4921	101.0	151.0	12.50
A9011/2	1/2	12.70	0.5000	101.0	151.0	12.70
A90113.0	—	13.00	0.5118	101.0	151.0	13.00
A90133/64	33/64	13.10	0.5156	122.0	168.0	13.10
A90113.5	—	13.50	0.5315	108.0	160.0	13.50
A90135/64	35/64	13.89	0.5469	122.0	168.0	13.89
A90114.0	—	14.00	0.5512	108.0	160.0	14.00
A9019/16	9/16	14.29	0.5625	122.0	168.0	14.29
A90114.5	—	14.50	0.5709	114.0	169.0	14.50
A90137/64	37/64	14.68	0.5781	122.0	168.0	14.68
A90115.0	—	15.00	0.5906	114.0	169.0	15.00
A90119/32	19/32	15.08	0.5938	132.0	181.0	15.08
A90139/64	39/64	15.48	0.6094	132.0	181.0	15.48
A90115.5	—	15.50	0.6102	120.0	178.0	15.50
A9015/8	5/8	15.88	0.6250	132.0	181.0	15.88
A90116.0	—	16.00	0.6299	120.0	178.0	16.00

A170

DORMER

HSS reduceret skaft bior, damphærdet finish

Et ½ tomme parallel skaft gør det muligt at fastspænde dette bor, selv med en stor skærediameter, i konventionelle, håndholdte elværktøjer. Et 118° spids gør det let at genopslibe. Damphærdet finish bevarer skærevæske og forhindrer svejsning af spån til værktøj. Velegnet til boring af mange materialer.



HSS	DORMER	4×D
118°	ST	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 33 H	P1.2 ■ 37 H	P1.3 ■ 38 H	P2.1 ■ 28 H	P2.2 ■ 25 F	P2.3 ■ 22 D	P3.1 ■ 19 E	P3.2 ■ 15 E	P3.3 ■ 13 D	P4.1 ■ 11 E	P4.2 ■ 10 D	P4.3 ■ 8 C	M1.1 ■ 21 D	M1.2 ■ 17 D
M2.1 ■ 18 D	M2.2 ■ 15 D	M3.1 ■ 8 F	M3.2 ■ 7 F	M3.3 ■ 6 F	M4.1 ■ 7 B	K1.1 ■ 27 H	K1.2 ■ 20 E	K1.3 ■ 15 E	K2.1 ■ 23 D	K2.2 ■ 19 D	K2.3 ■ 15 D	K3.1 ■ 21 D	K3.2 ■ 16 D
K3.3 ■ 13 D	K4.1 ■ 19 D	K4.2 ■ 14 D	K4.3 ■ 11 D	K4.4 ■ 9 D	K4.5 ■ 8 D	K5.1 ■ 22 D	K5.2 ■ 16 D	K5.3 ■ 13 D	N1.1 ■ 33 I	N1.2 ■ 25 I	N1.3 ■ 17 H	N2.1 ■ 42 G	N2.2 ■ 37 G
N2.3 ■ 27 G	N3.1 ■ 56 G	N3.2 ■ 33 H	N3.3 ■ 17 F	N4.1 ■ 30 I	N4.2 ■ 28 G	N4.3 ■ 14 E	S1.1 ■ 17 E	S1.2 ■ 9 C	S1.3 ■ 5 A	S2.1 ■ 5 D	S2.2 ■ 4 A	S3.1 ■ 4 D	S3.2 ■ 3 A
S4.1 ■ 3 D	S4.2 ■ 2 A												

Product	DC (inch)	DC (mm)	DC (inch)	LCF (inch)	OAL (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A17013.0	—	13.00	0.5118	—	—	83.0	156.0	12,7
A17033/64	33/64	13.10	0.5156	3.1/8	6"	—	—	12,7
A17017/32	17/32	13.49	0.5313	3.1/8	6"	—	—	12,7
A17013.5	—	13.50	0.5315	—	—	83.0	156.0	12,7
A17035/64	35/64	13.89	0.5469	3.1/8	6"	—	—	12,7
A17014.0	—	14.00	0.5512	—	—	83.0	156.0	12,7
A1709/16	9/16	14.29	0.5625	3.1/8	6"	—	—	12,7
A17014.5	—	14.50	0.5709	—	—	83.0	156.0	12,7
A17037/64	37/64	14.68	0.5781	3.1/8	6"	—	—	12,7
A17015.0	—	15.00	0.5906	—	—	83.0	156.0	12,7
A17019/32	19/32	15.08	0.5938	3.1/8	6"	—	—	12,7
A17039/64	39/64	15.48	0.6094	3.1/8	6"	—	—	12,7
A17015.5	—	15.50	0.6102	—	—	83.0	156.0	12,7
A1705/8	5/8	15.88	0.6250	3.1/8	6"	—	—	12,7
A17016.0	—	16.00	0.6299	—	—	84.0	157.0	12,7
A17041/64	41/64	16.27	0.6406	3.1/8	6"	—	—	12,7
A17016.5	—	16.50	0.6496	—	—	84.0	157.0	12,7
A17021/32	21/32	16.67	0.6563	3.1/8	6"	—	—	12,7
A17017.0	—	17.00	0.6693	—	—	84.0	157.0	12,7
A17043/64	43/64	17.07	0.6719	3.1/8	6"	—	—	12,7
A17011/16	11/16	17.46	0.6875	3.1/8	6"	—	—	12,7
A17017.5	—	17.50	0.6890	—	—	84.0	157.0	12,7
A17045/64	45/64	17.86	0.7031	3.1/8	6"	—	—	12,7
A17018.0	—	18.00	0.7087	—	—	84.0	157.0	12,7

Product	DC	DC	DC	LCF	OAL	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(inch)	(inch)	(mm)	(mm)	(mm)
A17023/32	23/32	18.26	0.7188	3.1/8	6"	—	—	12,7
A17018.5	—	18.50	0.7283	—	—	84.0	157.0	12,7
A17047/64	47/64	18.65	0.7344	3.1/8	6"	—	—	12,7
A17019.0	—	19.00	0.7480	—	—	84.0	157.0	12,7
A1703/4	3/4	19.05	0.7500	3.1/8	6"	—	—	12,7
A17049/64	49/64	19.45	0.7656	3"	6"	—	—	12,7
A17019.5	—	19.50	0.7677	—	—	81.0	158.0	12,7
A17025/32	25/32	19.84	0.7813	3"	6"	—	—	12,7
A17020.0	—	20.00	0.7874	—	—	81.0	158.0	12,7
A17051/64	51/64	20.24	0.7969	3"	6"	—	—	12,7
A17013/16	13/16	20.64	0.8125	3"	6"	—	—	12,7
A17021.0	—	21.00	0.8268	—	—	82.0	158.0	12,7
A17053/64	53/64	21.03	0.8281	3"	6"	—	—	12,7
A17027/32	27/32	21.43	0.8437	3"	6"	—	—	12,7
A17055/64	55/64	21.83	0.8594	3"	6"	—	—	12,7
A17022.0	—	22.00	0.8661	—	—	82.0	158.0	12,7
A1707/8	7/8	22.22	0.8750	3"	6"	—	—	12,7
A17057/64	57/64	22.62	0.8906	3"	6"	—	—	12,7
A17023.0	—	23.00	0.9055	—	—	82.0	158.0	12,7
A17029/32	29/32	23.02	0.9063	3"	6"	—	—	12,7
A17059/64	59/64	23.42	0.9219	3"	6"	—	—	12,7
A17015/16	15/16	23.81	0.9375	3"	6"	—	—	12,7
A17024.0	—	24.00	0.9449	—	—	83.0	159.0	12,7
A17061/64	61/64	24.21	0.9531	3"	6"	—	—	12,7
A17031/32	31/32	24.61	0.9688	3"	6"	—	—	12,7
A17025.0	—	25.00	0.9843	—	—	83.0	159.0	12,7
A17063/64	63/64	25.00	0.9844	3"	6"	—	—	12,7
A1701	1"	25.40	1.0000	3"	6"	—	—	12,7
A1701.1/32	1.1/32	26.19	1.0313	3"	6"	—	—	12,7
A1701.1/16	1.1/16	26.99	1.0625	3"	6"	—	—	12,7
A1701.7/64	1.7/64	28.18	1.1094	3"	6"	—	—	12,7
A1701.1/8	1.1/8	28.58	1.1250	3"	6"	—	—	12,7
A1701.9/64	1.9/64	28.97	1.1406	3"	6"	—	—	12,7
A1701.5/32	1.5/32	29.37	1.1563	3"	6"	—	—	12,7
A1701.3/16	1.3/16	30.16	1.1875	3"	6"	—	—	12,7
A1701.7/32	1.7/32	30.96	1.2188	3"	6"	—	—	12,7
A1701.1/4	1.1/4	31.75	1.2500	3"	6"	—	—	12,7
A1701.5/16	1.5/16	33.34	1.3125	3"	6"	—	—	12,7
A1701.3/8	1.3/8	34.93	1.3750	3"	6"	—	—	12,7
A1701.7/16	1.7/16	36.51	1.4375	3"	6"	—	—	12,7
A1701.1/2	1.1/2	38.10	1.5000	3"	6"	—	—	12,7

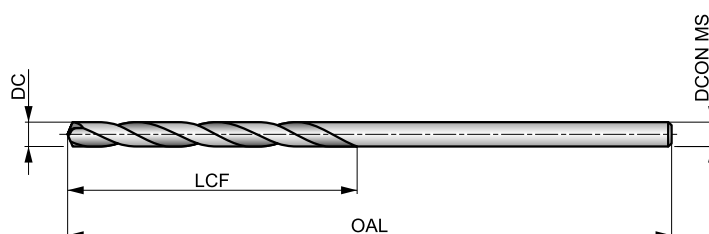
A243

DORMER



HSS Lang Serie Aircraft Extension Drill, Blank Finish

NAS907-standard med et spidspunkt på 135°, som hjælper med selvcentrering, hvilket forhindrer borepunktet i at glide over overfladen af materialet. Lang samlet længde kombineret med en kort skærlængde gør den ideel til boring i vanskeligt tilgængelige områder og er velegnet til mange materialer.



HSS	NAS 907	4×D
135°	Bright	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P2.2 25 F	P2.3 22 E	P3.1 19 F	P3.2 15 F	P3.3 13 E	P4.1 11 F	P4.2 10 E	P4.3 8 D	M1.1 21 E	M1.2 17 E	M2.1 18 E	M2.2 15 E	M3.1 9 G	M3.2 8 G
M3.3 7 G	M4.1 9 C	K1.1 30 I	K1.2 22 F	K1.3 17 F	K2.1 25 E	K2.2 20 E	K2.3 16 E	K3.1 22 E	K3.2 17 E	K3.3 13 E	K4.1 20 E	K4.2 15 E	K4.3 11 E
K4.4 10 E	K4.5 8 E	K5.1 23 E	K5.2 17 E	K5.3 13 E	N3.1 27 H	S1.1 23 F	S1.2 12 D	S1.3 6 B	S2.1 8 E	S2.2 4 A	S3.1 6 E	S3.2 3 A	S4.1 5 E
S4.2 2 A													

6" OAL.

Product	DC (inch)	DC (inch)	LCF (inch)	OAL (inch)	DCON MS (inch)
A2433/32X6	3/32	0.0938	1.1/4	6"	0.0938
A243N40X6	N40	0.0980	1.3/8	6"	0.0980
A2431/8X6	1/8	0.1250	1.5/8	6"	0.1250
A243N30X6	N30	0.1285	1.5/8	6"	0.1285
A2435/32X6	5/32	0.1563	2"	6"	0.1563
A243N21X6	N21	0.1590	2.1/8	6"	0.1590

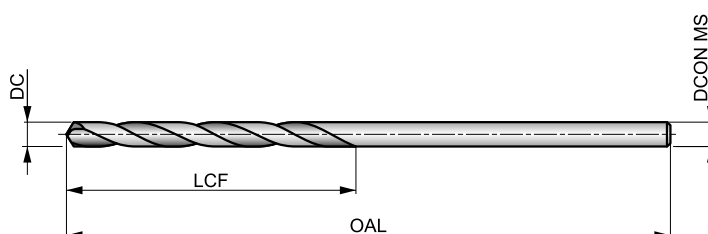
Product	DC (inch)	DC (inch)	LCF (inch)	OAL (inch)	DCON MS (inch)
A243N20X6	N20	0.1610	2.1/8	6"	0.1610
A2433/16X6	3/16	0.1875	2.5/16	6"	0.1875
A243N11X6	N11	0.1910	2.5/16	6"	0.1910
A243N10X6	N10	0.1935	2.7/16	6"	0.1935
A2431/4X6	1/4	0.2500	2.3/4	6"	0.2500

A244



HSS Lang Serie Aircraft Extension Drill, Blank Finish

NAS907-standard med et spidspunkt på 118°, som hjælper med selvcentrering, hvilket forhindrer borepunktet i at glide over overfladen af materialet. Lang samlet længde kombineret med en kort skærlængde gør den ideel til boring i vanskeligt tilgængelige områder og er velegnet til mange materialer.



HSS	NAS 907	4xD
118°	Bright	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P2.2 ■ 25 F	P2.3 ■ 22 E	P3.1 ■ 19 F	P3.2 ■ 15 F	P3.3 ■ 13 E	P4.1 ■ 11 F	P4.2 ■ 10 E	P4.3 ■ 8 D	M1.1 ■ 21 E	M1.2 ■ 17 E	M2.1 ■ 18 E	M2.2 ■ 15 E	M3.1 ■ 9 G	M3.2 ■ 8 G
M3.3 ■ 7 G	M4.1 ■ 9 C	K1.1 ■ 30 I	K1.2 ■ 22 F	K1.3 ■ 17 F	K2.1 ■ 25 E	K2.2 ■ 20 E	K2.3 ■ 16 E	K3.1 ■ 22 E	K3.2 ■ 17 E	K3.3 ■ 13 E	K4.1 ■ 20 E	K4.2 ■ 15 E	K4.3 ■ 11 E
K4.4 ■ 10 E	K4.5 ■ 8 E	K5.1 ■ 23 E	K5.2 ■ 17 E	K5.3 ■ 13 E	N3.1 ■ 27 H	S1.1 ■ 23 F	S1.2 ■ 12 D	S1.3 ■ 6 B	S2.1 ■ 8 E	S2.2 ■ 4 A	S3.1 ■ 6 E	S3.2 ■ 3 A	S4.1 ■ 5 E
S4.2 ■ 2 A													

6" OAL

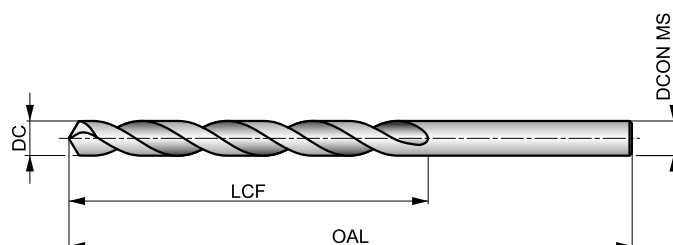
Product	DC (inch)	DC (inch)	LCF (inch)	OAL (inch)	DCON MS (inch)
A2441/8X6	1/8	0.1250	1.5/8	6"	0.1250
A2445/32X6	5/32	0.1563	2"	6"	0.1563
A2443/16X6	3/16	0.1875	2.5/16	6"	0.1875
A2441/4X6	1/4	0.2500	2.3/4	6"	0.2500

A110



HSS Lang Serie Bor, damphærdet finish

Til boring af dybere huller. Konventionelt 118° -spids giver styrke og betyder en let boring, hvilket gør det meget omkostningseffektivt. Velegnet til boring af mange materialer. Damphærdet finish bevarer skærevæske og forhindrer svejsning af spån til værktøj. Til håndboring og maskinboring.



HSS	DIN 340	6xD
118°	ST	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 27 G	P1.2 ■ 30 G	P1.3 ■ 31 G	P2.1 ■ 23 G	P2.2 ■ 20 E	P2.3 ■ 18 D	P3.1 ■ 13 E	P3.2 ■ 11 E	P3.3 ■ 9 D	P4.1 ■ 8 E	P4.2 ■ 7 D	P4.3 ■ 5 B	M1.1 ■ 14 D	M1.2 ■ 12 D
M2.1 ■ 12 D	M2.2 ■ 10 D	M3.1 ■ 7 F	M3.2 ■ 6 F	M3.3 ■ 5 F	M4.1 ■ 4 B	K1.1 ■ 28 H	K1.2 ■ 21 E	K1.3 ■ 16 E	K2.1 ■ 18 D	K2.2 ■ 15 D	K2.3 ■ 12 D	K3.1 ■ 16 D	K3.2 ■ 12 D
K3.3 ■ 10 D	K4.1 ■ 15 D	K4.2 ■ 11 D	K4.3 ■ 8 D	K4.4 ■ 7 D	K4.5 ■ 6 D	K5.1 ■ 17 D	K5.2 ■ 13 D	K5.3 ■ 10 D	N1.1 ■ 32 I	N1.2 ■ 24 I	N1.3 ■ 16 H	N2.1 ■ 42 G	N2.2 ■ 37 G
N2.3 ■ 27 G	N3.1 ■ 54 G	N3.2 ■ 32 H	N3.3 ■ 16 E	N4.1 ■ 35 I	N4.2 ■ 26 G	N4.3 ■ 12 E	S1.1 ■ 17 E	S1.2 ■ 9 C	S1.3 ■ 4 A	S2.1 ■ 5 D	S2.2 ■ 4 A	S3.1 ■ 4 D	S3.2 ■ 3 A
S4.1 ■ 3 D	S4.2 ■ 2 A												

DC ≤ 1mm; 1/16" Blank.

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A110.5	—	0.50	0.0197	12.0	32.0	0.50
A110.6	—	0.60	0.0236	15.0	35.0	0.60
A110.7	—	0.70	0.0276	21.0	42.0	0.70
A1101/32	1/32	0.79	0.0313	25.0	46.0	0.79
A110.8	—	0.80	0.0315	25.0	46.0	0.80
A110.9	—	0.90	0.0354	29.0	51.0	0.90
A1101.0	—	1.00	0.0394	33.0	56.0	1.00
A1101.1	—	1.10	0.0433	37.0	60.0	1.10
A1101.2	—	1.20	0.0472	41.0	65.0	1.20
A1101.3	—	1.30	0.0512	41.0	65.0	1.30
A1101.4	—	1.40	0.0551	45.0	70.0	1.40
A1101.5	—	1.50	0.0591	45.0	70.0	1.50
A1101/16	1/16	1.59	0.0625	50.0	76.0	1.59
A1101.6	—	1.60	0.0630	50.0	76.0	1.60
A1101.7	—	1.70	0.0669	50.0	76.0	1.70
A1101.75	—	1.75	0.0689	53.0	80.0	1.75
A1101.8	—	1.80	0.0709	53.0	80.0	1.80
A1101.9	—	1.90	0.0748	53.0	80.0	1.90
A1105/64	5/64	1.98	0.0781	56.0	85.0	1.98
A1102.0	—	2.00	0.0787	56.0	85.0	2.00
A1102.05	—	2.05	0.0807	56.0	85.0	2.05
A1102.1	—	2.10	0.0827	56.0	85.0	2.10
A1102.2	—	2.20	0.0866	59.0	90.0	2.20
A1102.25	—	2.25	0.0886	59.0	90.0	2.25

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1102.3	—	2.30	0.0906	59.0	90.0	2.30
A1103/32	3/32	2.38	0.0938	62.0	95.0	2.38
A1102.4	—	2.40	0.0945	62.0	95.0	2.40
A1102.5	—	2.50	0.0984	62.0	95.0	2.50
A1102.6	—	2.60	0.1024	62.0	95.0	2.60
A1102.7	—	2.70	0.1063	66.0	100.0	2.70
A1107/64	7/64	2.78	0.1094	66.0	100.0	2.78
A1102.8	—	2.80	0.1102	66.0	100.0	2.80
A1102.9	—	2.90	0.1142	66.0	100.0	2.90
A1103.0	—	3.00	0.1181	66.0	100.0	3.00
A1103.1	—	3.10	0.1220	69.0	106.0	3.10
A1101/8	1/8	3.18	0.1250	69.0	106.0	3.18
A1103.2	—	3.20	0.1260	69.0	106.0	3.20
A1103.25	—	3.25	0.1280	69.0	106.0	3.25
A1103.3	—	3.30	0.1299	69.0	106.0	3.30
A1103.4	—	3.40	0.1339	73.0	112.0	3.40
A1103.5	—	3.50	0.1378	73.0	112.0	3.50
A1109/64	9/64	3.57	0.1406	73.0	112.0	3.57
A1103.6	—	3.60	0.1417	73.0	112.0	3.60
A1103.7	—	3.70	0.1457	73.0	112.0	3.70
A1103.75	—	3.75	0.1476	73.0	112.0	3.75
A1103.8	—	3.80	0.1496	78.0	119.0	3.80
A1103.9	—	3.90	0.1535	78.0	119.0	3.90
A1105/32	5/32	3.97	0.1563	78.0	119.0	3.97

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1104.0	—	4.00	0.1575	78.0	119.0	4.00
A1104.1	—	4.10	0.1614	78.0	119.0	4.10
A1104.2	—	4.20	0.1654	78.0	119.0	4.20
A1104.25	—	4.25	0.1673	78.0	119.0	4.25
A1104.3	—	4.30	0.1693	82.0	126.0	4.30
A11011/64	11/64	4.37	0.1719	82.0	126.0	4.37
A1104.4	—	4.40	0.1732	82.0	126.0	4.40
A1104.5	—	4.50	0.1772	82.0	126.0	4.50
A1104.6	—	4.60	0.1811	82.0	126.0	4.60
A1104.7	—	4.70	0.1850	82.0	126.0	4.70
A1104.75	—	4.75	0.1870	82.0	126.0	4.75
A1103/16	3/16	4.76	0.1875	87.0	132.0	4.76
A1104.8	—	4.80	0.1890	87.0	132.0	4.80
A1104.9	—	4.90	0.1929	87.0	132.0	4.90
A1105.0	—	5.00	0.1969	87.0	132.0	5.00
A1105.1	—	5.10	0.2008	87.0	132.0	5.10
A11013/64	13/64	5.16	0.2031	87.0	132.0	5.16
A1105.2	—	5.20	0.2047	87.0	132.0	5.20
A1105.25	—	5.25	0.2067	87.0	132.0	5.25
A1105.3	—	5.30	0.2087	87.0	132.0	5.30
A1105.4	—	5.40	0.2126	91.0	139.0	5.40
A1105.5	—	5.50	0.2165	91.0	139.0	5.50
A1107/32	7/32	5.56	0.2188	91.0	139.0	5.56
A1105.6	—	5.60	0.2205	91.0	139.0	5.60
A1105.7	—	5.70	0.2244	91.0	139.0	5.70
A1105.75	—	5.75	0.2264	91.0	139.0	5.75
A1105.8	—	5.80	0.2283	91.0	139.0	5.80
A1105.9	—	5.90	0.2323	91.0	139.0	5.90
A11015/64	15/64	5.95	0.2344	91.0	139.0	5.95
A1106.0	—	6.00	0.2362	91.0	139.0	6.00
A1106.1	—	6.10	0.2402	97.0	148.0	6.10
A1106.2	—	6.20	0.2441	97.0	148.0	6.20
A1106.25	—	6.25	0.2461	97.0	148.0	6.25
A1106.3	—	6.30	0.2480	97.0	148.0	6.30
A1101/4	1/4	6.35	0.2500	97.0	148.0	6.35
A1106.4	—	6.40	0.2520	97.0	148.0	6.40
A1106.5	—	6.50	0.2559	97.0	148.0	6.50
A1106.6	—	6.60	0.2598	97.0	148.0	6.60
A1106.7	—	6.70	0.2638	97.0	148.0	6.70
A11017/64	17/64	6.75	0.2656	102.0	156.0	6.75
A1106.75	—	6.75	0.2657	102.0	156.0	6.75
A1106.8	—	6.80	0.2677	102.0	156.0	6.80
A1106.9	—	6.90	0.2717	102.0	156.0	6.90
A1107.0	—	7.00	0.2756	102.0	156.0	7.00
A1107.1	—	7.10	0.2795	102.0	156.0	7.10
A1109/32	9/32	7.14	0.2813	102.0	156.0	7.14
A1107.2	—	7.20	0.2835	102.0	156.0	7.20
A1107.25	—	7.25	0.2854	102.0	156.0	7.25
A1107.3	—	7.30	0.2874	102.0	156.0	7.30
A1107.4	—	7.40	0.2913	102.0	156.0	7.40
A1107.5	—	7.50	0.2953	102.0	156.0	7.50
A1107.6	—	7.60	0.2992	109.0	165.0	7.60
A1107.7	—	7.70	0.3031	109.0	165.0	7.70
A1107.75	—	7.75	0.3051	109.0	165.0	7.75
A1107.8	—	7.80	0.3071	109.0	165.0	7.80
A1107.9	—	7.90	0.3110	109.0	165.0	7.90
A1105/16	5/16	7.94	0.3125	109.0	165.0	7.94
A1108.0	—	8.00	0.3150	109.0	165.0	8.00
A1108.1	—	8.10	0.3189	109.0	165.0	8.10
A1108.2	—	8.20	0.3228	109.0	165.0	8.20
A1108.25	—	8.25	0.3248	109.0	165.0	8.25
A1108.3	—	8.30	0.3268	109.0	165.0	8.30
A1108.4	—	8.40	0.3307	109.0	165.0	8.40
A1108.5	—	8.50	0.3346	109.0	165.0	8.50
A1108.6	—	8.60	0.3386	115.0	175.0	8.60

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1108.7	—	8.70	0.3425	115.0	175.0	8.70
A11011/32	11/32	8.73	0.3438	115.0	175.0	8.73
A1108.75	—	8.75	0.3445	115.0	175.0	8.75
A1108.8	—	8.80	0.3465	115.0	175.0	8.80
A1108.9	—	8.90	0.3504	115.0	175.0	8.90
A1109.0	—	9.00	0.3543	115.0	175.0	9.00
A1109.1	—	9.10	0.3583	115.0	175.0	9.10
A1109.2	—	9.20	0.3622	115.0	175.0	9.20
A1109.25	—	9.25	0.3642	115.0	175.0	9.25
A1109.3	—	9.30	0.3661	115.0	175.0	9.30
A1109.4	—	9.40	0.3701	115.0	175.0	9.40
A1109.5	—	9.50	0.3740	115.0	175.0	9.50
A1103/8	3/8	9.52	0.3750	121.0	184.0	9.52
A1109.6	—	9.60	0.3780	121.0	184.0	9.60
A1109.7	—	9.70	0.3819	121.0	184.0	9.70
A1109.75	—	9.75	0.3839	121.0	184.0	9.75
A1109.8	—	9.80	0.3858	121.0	184.0	9.80
A1109.9	—	9.90	0.3898	121.0	184.0	9.90
A11010.0	—	10.00	0.3937	121.0	184.0	10.00
A11010.1	—	10.10	0.3976	121.0	184.0	10.10
A11010.2	—	10.20	0.4016	121.0	184.0	10.20
A11010.25	—	10.25	0.4035	121.0	184.0	10.25
A11010.3	—	10.30	0.4055	121.0	184.0	10.30
A11013/32	13/32	10.32	0.4063	121.0	184.0	10.32
A11010.5	—	10.50	0.4134	121.0	184.0	10.50
A11010.75	—	10.75	0.4232	128.0	195.0	10.75
A11010.8	—	10.80	0.4252	128.0	195.0	10.80
A11011.0	—	11.00	0.4331	128.0	195.0	11.00
A1107/16	7/16	11.11	0.4375	128.0	195.0	11.11
A11011.25	—	11.25	0.4429	128.0	195.0	11.25
A11011.4	—	11.40	0.4488	128.0	195.0	11.40
A11011.5	—	11.50	0.4528	128.0	195.0	11.50
A11011.75	—	11.75	0.4626	128.0	195.0	11.75
A11012.0	—	12.00	0.4724	134.0	205.0	12.00
A11012.1	—	12.10	0.4764	134.0	205.0	12.10
A11012.25	—	12.25	0.4823	134.0	205.0	12.25
A11012.5	—	12.50	0.4921	134.0	205.0	12.50
A1101/2	1/2	12.70	0.5000	134.0	205.0	12.70
A11013.0	—	13.00	0.5118	134.0	205.0	13.00
A11017/32	17/32	13.49	0.5313	140.0	214.0	13.49
A11013.5	—	13.50	0.5315	140.0	214.0	13.50
A11014.0	—	14.00	0.5512	140.0	214.0	14.00
A1109/16	9/16	14.29	0.5625	144.0	220.0	14.29
A11014.5	—	14.50	0.5709	144.0	220.0	14.50
A11015.0	—	15.00	0.5906	144.0	220.0	15.00
A11015.5	—	15.50	0.6102	149.0	227.0	15.50
A1105/8	5/8	15.88	0.6250	149.0	227.0	15.88
A11016.0	—	16.00	0.6299	149.0	227.0	16.00
A11016.5	—	16.50	0.6496	154.0	235.0	16.50
A11017.0	—	17.00	0.6693	154.0	235.0	17.00
A11011/16	11/16	17.46	0.6875	158.0	241.0	17.46
A11017.5	—	17.50	0.6890	158.0	241.0	17.50
A11018.0	—	18.00	0.7087	158.0	241.0	18.00
A11018.5	—	18.50	0.7283	162.0	247.0	18.50
A11019.0	—	19.00	0.7480	162.0	247.0	19.00
A1103/4	3/4	19.05	0.7500	166.0	254.0	19.05
A11019.5	—	19.50	0.7677	166.0	254.0	19.50
A11020.0	—	20.00	0.7874	166.0	254.0	20.00
A11021.0	—	21.00	0.8268	171.0	261.0	21.00
A11022.0	—	22.00	0.8661	176.0	268.0	22.00
A1107/8	7/8	22.22	0.8750	176.0	268.0	22.22
A11015/16	15/16	23.81	0.9375	185.0	282.0	23.81
A1101	1"	25.40	1.0000	190.0	290.0	25.40

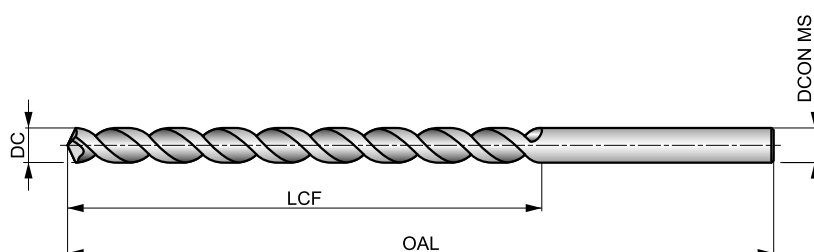
A940



PFX HSS-E (5% kobolt) langt bor, blank finish

Højtydende boremaskine, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og fremførsler (H10 hultolerance). Selvcentrerende 130° punktsvinkel og specielt parabolisk fløjtdesign hjælper med at bore dybe huller i en enkelt passage. Velegnet til mange materialer.

PFX



HSS-E	DIN ANSI	10×D
130°	Bright	
λ>35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 29 F	P1.2 ■ 33 F	P1.3 ■ 34 F	P2.1 ■ 25 F	P2.2 ■ 22 G	P2.3 ■ 19 C	P3.1 ■ 25 G	P3.2 ■ 20 G	P3.3 ■ 17 C	P4.1 ■ 15 G	P4.2 ■ 13 C	P4.3 ■ 10 C	M1.1 ■ 21 C	M1.2 ■ 17 C
M2.1 ■ 18 C	M2.2 ■ 15 C	M3.1 ■ 8 E	M3.2 ■ 7 E	M3.3 ■ 6 E	M4.1 ■ 9 B	K2.1 ■ 20 I	K2.2 ■ 16 I	K2.3 ■ 13 H	K3.1 ■ 17 I	K3.2 ■ 13 I	K3.3 ■ 11 H	K4.1 ■ 16 I	K4.2 ■ 12 I
K4.3 ■ 9 H	K4.4 ■ 8 H	K4.5 ■ 6 H	K5.1 ■ 18 I	K5.2 ■ 14 I	K5.3 ■ 11 H	N1.1 ■ 53 H	N1.2 ■ 40 H	N1.3 ■ 27 N	N2.1 ■ 62 N	N2.2 ■ 55 N	N2.3 ■ 40 N	N3.1 ■ 119 G	N3.2 ■ 70 F
N3.3 ■ 35 F	N4.1 ■ 55 H	N4.2 ■ 40 F	S1.1 ■ 18 E	S1.2 ■ 13 C	S1.3 ■ 6 C								

DC > = 9,6 mm mindre end 10xD.

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9401.0	—	1.00	0.0394	33.0	56.0	1.00
A9401.1	—	1.10	0.0433	37.0	60.0	1.10
A9403/64	3/64	1.19	0.0469	29.0	57.0	1.19
A9401.2	—	1.20	0.0472	41.0	65.0	1.20
A9401.3	—	1.30	0.0512	41.0	65.0	1.30
A9401.4	—	1.40	0.0551	45.0	70.0	1.40
A9401.5	—	1.50	0.0591	45.0	70.0	1.50
A9401/16	1/16	1.59	0.0625	44.0	76.0	1.59
A9401.6	—	1.60	0.0630	50.0	76.0	1.60
A9401.7	—	1.70	0.0669	50.0	76.0	1.70
A9401.8	—	1.80	0.0709	53.0	80.0	1.80
A9401.9	—	1.90	0.0748	53.0	80.0	1.90
A9405/64	5/64	1.98	0.0781	51.0	95.0	1.98
A9402.0	—	2.00	0.0787	56.0	85.0	2.00
A9402.1	—	2.10	0.0827	56.0	85.0	2.10
A9402.2	—	2.20	0.0866	59.0	90.0	2.20
A9402.3	—	2.30	0.0906	59.0	90.0	2.30
A9403/32	3/32	2.38	0.0938	57.0	108.0	2.38
A9402.4	—	2.40	0.0945	62.0	95.0	2.40
A9402.5	—	2.50	0.0984	62.0	95.0	2.50
A9402.6	—	2.60	0.1024	62.0	95.0	2.60
A9402.7	—	2.70	0.1063	66.0	100.0	2.70
A9407/64	7/64	2.78	0.1094	64.0	117.0	2.78
A9402.8	—	2.80	0.1102	66.0	100.0	2.80
A9402.9	—	2.90	0.1142	66.0	100.0	2.90

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9403.0	—	3.00	0.1181	66.0	100.0	3.00
A9403.1	—	3.10	0.1220	69.0	106.0	3.10
A9401/8	1/8	3.18	0.1250	70.0	130.0	3.18
A9403.2	—	3.20	0.1260	69.0	106.0	3.20
A9403.3	—	3.30	0.1299	69.0	106.0	3.30
A9403.4	—	3.40	0.1339	73.0	112.0	3.40
A9403.5	—	3.50	0.1378	73.0	112.0	3.50
A9409/64	9/64	3.57	0.1406	76.0	137.0	3.57
A9403.6	—	3.60	0.1417	73.0	112.0	3.60
A9403.7	—	3.70	0.1457	73.0	112.0	3.70
A9403.8	—	3.80	0.1496	78.0	119.0	3.80
A9403.9	—	3.90	0.1535	78.0	119.0	3.90
A9405/32	5/32	3.97	0.1563	76.0	137.0	3.97
A9404.0	—	4.00	0.1575	78.0	119.0	4.00
A9404.1	—	4.10	0.1614	78.0	119.0	4.10
A9404.2	—	4.20	0.1654	78.0	119.0	4.20
A9404.3	—	4.30	0.1693	82.0	126.0	4.30
A94011/64	11/64	4.37	0.1719	86.0	146.0	4.37
A9404.4	—	4.40	0.1732	82.0	126.0	4.40
A9404.5	—	4.50	0.1772	82.0	126.0	4.50
A9404.6	—	4.60	0.1811	82.0	126.0	4.60
A9404.7	—	4.70	0.1850	82.0	126.0	4.70
A9403/16	3/16	4.76	0.1875	86.0	146.0	4.76
A9404.8	—	4.80	0.1890	87.0	132.0	4.80
A9404.9	—	4.90	0.1929	87.0	132.0	4.90

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A9405.0	—	5.00	0.1969	87.0	132.0	5.00
A9405.1	—	5.10	0.2008	87.0	132.0	5.10
A94013/64	13/64	5.16	0.2031	92.0	152.0	5.16
A9405.2	—	5.20	0.2047	87.0	132.0	5.20
A9405.3	—	5.30	0.2087	87.0	132.0	5.30
A9405.4	—	5.40	0.2126	91.0	139.0	5.40
A9405.5	—	5.50	0.2165	91.0	139.0	5.50
A9407/32	7/32	5.56	0.2188	92.0	152.0	5.56
A9405.6	—	5.60	0.2205	91.0	139.0	5.60
A9405.7	—	5.70	0.2244	91.0	139.0	5.70
A9405.8	—	5.80	0.2283	91.0	139.0	5.80
A9405.9	—	5.90	0.2323	91.0	139.0	5.90
A94015/64	15/64	5.95	0.2344	95.0	156.0	5.95
A9406.0	—	6.00	0.2362	91.0	139.0	6.00
A9406.1	—	6.10	0.2402	97.0	148.0	6.10
A9406.2	—	6.20	0.2441	97.0	148.0	6.20
A9406.3	—	6.30	0.2480	97.0	148.0	6.30
A9401/4	1/4	6.35	0.2500	95.0	156.0	6.35
A9406.4	—	6.40	0.2520	97.0	148.0	6.40
A9406.5	—	6.50	0.2559	97.0	148.0	6.50
A9406.6	—	6.60	0.2598	97.0	148.0	6.60
A9406.7	—	6.70	0.2638	97.0	148.0	6.70
A94017/64	17/64	6.75	0.2656	98.0	159.0	6.75
A9406.8	—	6.80	0.2677	102.0	156.0	6.80
A9406.9	—	6.90	0.2717	102.0	156.0	6.90
A9407.0	—	7.00	0.2756	102.0	156.0	7.00
A9407.1	—	7.10	0.2795	102.0	156.0	7.10
A9409/32	9/32	7.14	0.2813	98.0	159.0	7.14
A9407.2	—	7.20	0.2835	102.0	156.0	7.20
A9407.3	—	7.30	0.2874	102.0	156.0	7.30
A9407.4	—	7.40	0.2913	102.0	156.0	7.40
A9407.5	—	7.50	0.2953	102.0	156.0	7.50
A94019/64	19/64	7.54	0.2969	102.0	162.0	7.54
A9407.6	—	7.60	0.2992	109.0	165.0	7.60
A9407.7	—	7.70	0.3031	109.0	165.0	7.70
A9407.8	—	7.80	0.3071	109.0	165.0	7.80
A9407.9	—	7.90	0.3110	109.0	165.0	7.90
A9405/16	5/16	7.94	0.3125	102.0	162.0	7.94
A9408.0	—	8.00	0.3150	109.0	165.0	8.00
A9408.1	—	8.10	0.3189	109.0	165.0	8.10
A9408.2	—	8.20	0.3228	109.0	165.0	8.20
A9408.3	—	8.30	0.3268	109.0	165.0	8.30
A94021/64	21/64	8.33	0.3281	105.0	165.0	8.33
A9408.4	—	8.40	0.3307	109.0	165.0	8.40
A9408.5	—	8.50	0.3346	109.0	165.0	8.50
A9408.6	—	8.60	0.3386	115.0	175.0	8.60
A9408.7	—	8.70	0.3425	115.0	175.0	8.70
A94011/32	11/32	8.73	0.3438	105.0	165.0	8.73
A9408.8	—	8.80	0.3465	115.0	175.0	8.80
A9408.9	—	8.90	0.3504	115.0	175.0	8.90
A9409.0	—	9.00	0.3543	115.0	175.0	9.00
A9409.1	—	9.10	0.3583	115.0	175.0	9.10
A94023/64	23/64	9.13	0.3594	108.0	171.0	9.13
A9409.2	—	9.20	0.3622	115.0	175.0	9.20
A9409.3	—	9.30	0.3661	115.0	175.0	9.30
A9409.4	—	9.40	0.3701	115.0	175.0	9.40

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A9409.5	—	9.50	0.3740	115.0	175.0	9.50
A9403/8	3/8	9.52	0.3750	108.0	171.0	9.52
A9409.6	—	9.60	0.3780	121.0	184.0	9.60
A9409.7	—	9.70	0.3819	121.0	184.0	9.70
A9409.8	—	9.80	0.3858	121.0	184.0	9.80
A9409.9	—	9.90	0.3898	121.0	184.0	9.90
A94025/64	25/64	9.92	0.3906	111.0	178.0	9.92
A94010.0	—	10.00	0.3937	121.0	184.0	10.00
A94010.2	—	10.20	0.4016	121.0	184.0	10.20
A94010.3	—	10.30	0.4055	121.0	184.0	10.30
A94013/32	13/32	10.32	0.4063	111.0	178.0	10.32
A94010.5	—	10.50	0.4134	121.0	184.0	10.50
A94027/64	27/64	10.72	0.4219	117.0	184.0	10.72
A94011.0	—	11.00	0.4331	128.0	195.0	11.00
A9407/16	7/16	11.11	0.4375	117.0	184.0	11.11
A94011.2	—	11.20	0.4409	128.0	195.0	11.20
A94011.5	—	11.50	0.4528	128.0	195.0	11.50
A94029/64	29/64	11.51	0.4531	121.0	190.0	11.51
A94011.8	—	11.80	0.4646	128.0	195.0	11.80
A94015/32	15/32	11.91	0.4688	121.0	190.0	11.91
A94012.0	—	12.00	0.4724	134.0	205.0	12.00
A94012.2	—	12.20	0.4803	134.0	205.0	12.20
A94031/64	31/64	12.30	0.4844	121.0	197.0	12.30
A94012.5	—	12.50	0.4921	134.0	205.0	12.50
A9401/2	1/2	12.70	0.5000	121.0	197.0	12.70
A94013.0	—	13.00	0.5118	134.0	205.0	13.00
A94033/64	33/64	13.10	0.5156	121.0	203.0	13.10
A94017/32	17/32	13.49	0.5313	121.0	203.0	13.49
A94013.5	—	13.50	0.5315	140.0	214.0	13.50
A94035/64	35/64	13.89	0.5469	124.0	210.0	13.89
A94014.0	—	14.00	0.5512	140.0	214.0	14.00
A9409/16	9/16	14.29	0.5625	124.0	210.0	14.29
A94014.5	—	14.50	0.5709	144.0	220.0	14.50
A94037/64	37/64	14.68	0.5781	124.0	222.0	14.68
A94015.0	—	15.00	0.5906	144.0	220.0	15.00
A94019/32	19/32	15.08	0.5938	124.0	222.0	15.08
A94039/64	39/64	15.48	0.6094	124.0	222.0	15.48
A94015.5	—	15.50	0.6102	149.0	227.0	15.50
A9405/8	5/8	15.88	0.6250	124.0	222.0	15.88
A94016.0	—	16.00	0.6299	149.0	227.0	16.00
A94041/64	41/64	16.27	0.6406	130.0	229.0	16.27
A94016.5	—	16.50	0.6496	154.0	235.0	16.50
A94021/32	21/32	16.67	0.6563	130.0	229.0	16.67
A94017.0	—	17.00	0.6693	154.0	235.0	17.00
A94043/64	43/64	17.07	0.6719	137.0	235.0	17.07
A94011/16	11/16	17.46	0.6875	137.0	235.0	17.46
A94017.5	—	17.50	0.6890	158.0	241.0	17.50
A94045/64	45/64	17.86	0.7031	143.0	241.0	17.86
A94018.0	—	18.00	0.7087	158.0	241.0	18.00
A94023/32	23/32	18.26	0.7188	143.0	241.0	18.26
A94047/64	47/64	18.65	0.7344	149.0	248.0	18.65
A94019.0	—	19.00	0.7480	162.0	247.0	19.00
A9403/4	3/4	19.05	0.7500	149.0	248.0	19.05
A94049/64	49/64	19.45	0.7656	152.0	251.0	19.45
A94025/32	25/32	19.84	0.7813	152.0	251.0	19.84
A94020.0	—	20.00	0.7874	166.0	254.0	20.00

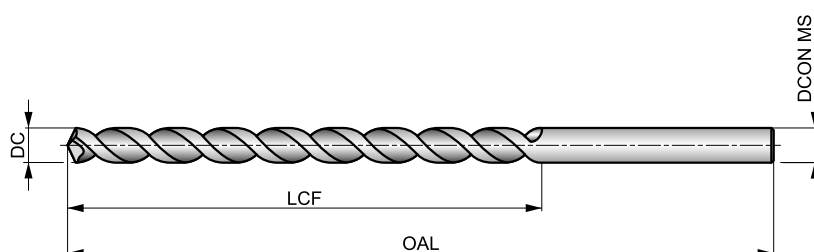
A941



PFX HSS-E (5% kobolt) langt bor, Alcrona top belægning

Højtydende bor, der er i stand til at producere nøjagtige huller af høj kvalitet ved høje hastigheder og tilspændning (H10 hultolerance). Selvcentrerende 130° spidsvinkel og specielt parabolisk skærdesign. Velegnet til mange materialer. Alcrona-TOP-belægning forbedrer ydeevnen og forlænger værktøjets levetid.

PFX



HSS-E	DIN ANSI	10xD
130°	Alcrona Top	
$\lambda > 35^\circ$	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 48 G	P1.2 ■ 53 G	P1.3 ■ 55 G	P2.1 ■ 41 G	P2.2 ■ 36 G	P2.3 ■ 32 D	P3.1 ■ 34 G	P3.2 ■ 27 G	P3.3 ■ 23 D	P4.1 ■ 20 G	P4.2 ■ 17 D	P4.3 ■ 14 D	M1.1 ■ 23 C	M1.2 ■ 20 C
M2.1 ■ 21 C	M2.2 ■ 17 C	M3.1 ■ 10 E	M3.2 ■ 9 E	M3.3 ■ 8 E	M4.1 ■ 11 B	K1.1 ■ 36 I	K1.2 ■ 27 I	K1.3 ■ 20 I	K2.1 ■ 37 I	K2.2 ■ 30 I	K2.3 ■ 24 H	K3.1 ■ 33 I	K3.2 ■ 25 I
K3.3 ■ 20 H	K4.1 ■ 30 I	K4.2 ■ 23 I	K4.3 ■ 17 H	K4.4 ■ 14 H	K4.5 ■ 12 H	K5.1 ■ 34 I	K5.2 ■ 26 I	K5.3 ■ 20 H	S1.1 ■ 25 F	S1.2 ■ 18 D	S1.3 ■ 8 D		

DC > = 9,6 mm mindre end 10xD.

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A9411.0	—	1.00	0.0394	33.0	56.0	1.00
A9413/64	3/64	1.19	0.0469	29.0	57.0	1.19
A9411.5	—	1.50	0.0591	45.0	70.0	1.50
A9411/16	1/16	1.59	0.0625	44.0	76.0	1.59
A9415/64	5/64	1.98	0.0781	51.0	95.0	1.98
A9412.0	—	2.00	0.0787	56.0	85.0	2.00
A9413/32	3/32	2.38	0.0938	57.0	108.0	2.38
A9412.5	—	2.50	0.0984	62.0	95.0	2.50
A9417/64	7/64	2.78	0.1094	64.0	117.0	2.78
A9413.0	—	3.00	0.1181	66.0	100.0	3.00
A9413.1	—	3.10	0.1220	69.0	106.0	3.10
A9411/8	1/8	3.18	0.1250	70.0	130.0	3.18
A9413.2	—	3.20	0.1260	69.0	106.0	3.20
A9413.3	—	3.30	0.1299	69.0	106.0	3.30
A9413.4	—	3.40	0.1339	73.0	112.0	3.40
A9413.5	—	3.50	0.1378	73.0	112.0	3.50
A9419/64	9/64	3.57	0.1406	76.0	137.0	3.57
A9413.6	—	3.60	0.1417	73.0	112.0	3.60
A9413.7	—	3.70	0.1457	73.0	112.0	3.70
A9413.8	—	3.80	0.1496	78.0	119.0	3.80
A9413.9	—	3.90	0.1535	78.0	119.0	3.90
A9415/32	5/32	3.97	0.1563	76.0	137.0	3.97
A9414.0	—	4.00	0.1575	78.0	119.0	4.00
A9414.1	—	4.10	0.1614	78.0	119.0	4.10
A9414.2	—	4.20	0.1654	78.0	119.0	4.20
A9414.3	—	4.30	0.1693	82.0	126.0	4.30
A94111/64	11/64	4.37	0.1719	86.0	146.0	4.37

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A9414.4	—	4.40	0.1732	82.0	126.0	4.40
A9414.5	—	4.50	0.1772	82.0	126.0	4.50
A9414.6	—	4.60	0.1811	82.0	126.0	4.60
A9414.7	—	4.70	0.1850	82.0	126.0	4.70
A9413/16	3/16	4.76	0.1875	86.0	146.0	4.76
A9414.8	—	4.80	0.1890	87.0	132.0	4.80
A9414.9	—	4.90	0.1929	87.0	132.0	4.90
A9415.0	—	5.00	0.1969	87.0	132.0	5.00
A9415.1	—	5.10	0.2008	87.0	132.0	5.10
A94113/64	13/64	5.16	0.2031	92.0	152.0	5.16
A9415.2	—	5.20	0.2047	87.0	132.0	5.20
A9415.3	—	5.30	0.2087	87.0	132.0	5.30
A9415.4	—	5.40	0.2126	91.0	139.0	5.40
A9415.5	—	5.50	0.2165	91.0	139.0	5.50
A9417/32	7/32	5.56	0.2188	92.0	152.0	5.56
A9415.6	—	5.60	0.2205	91.0	139.0	5.60
A9415.7	—	5.70	0.2244	91.0	139.0	5.70
A9415.8	—	5.80	0.2283	91.0	139.0	5.80
A9415.9	—	5.90	0.2323	91.0	139.0	5.90
A94115/64	15/64	5.95	0.2344	95.0	156.0	5.95
A9416.0	—	6.00	0.2362	91.0	139.0	6.00
A9416.1	—	6.10	0.2402	97.0	148.0	6.10
A9416.2	—	6.20	0.2441	97.0	148.0	6.20
A9416.3	—	6.30	0.2480	97.0	148.0	6.30
A9411/4	1/4	6.35	0.2500	95.0	156.0	6.35
A9416.4	—	6.40	0.2520	97.0	148.0	6.40
A9416.5	—	6.50	0.2559	97.0	148.0	6.50

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A9416.6	—	6.60	0.2598	97.0	148.0	6.60
A9416.7	—	6.70	0.2638	97.0	148.0	6.70
A94117/64	17/64	6.75	0.2656	98.0	159.0	6.75
A9416.8	—	6.80	0.2677	102.0	156.0	6.80
A9416.9	—	6.90	0.2717	102.0	156.0	6.90
A9417.0	—	7.00	0.2756	102.0	156.0	7.00
A9417.1	—	7.10	0.2795	102.0	156.0	7.10
A9419/32	9/32	7.14	0.2813	98.0	159.0	7.14
A9417.2	—	7.20	0.2835	102.0	156.0	7.20
A9417.3	—	7.30	0.2874	102.0	156.0	7.30
A9417.4	—	7.40	0.2913	102.0	156.0	7.40
A9417.5	—	7.50	0.2953	102.0	156.0	7.50
A94119/64	19/64	7.54	0.2969	102.0	162.0	7.54
A9417.6	—	7.60	0.2992	109.0	165.0	7.60
A9417.7	—	7.70	0.3031	109.0	165.0	7.70
A9417.8	—	7.80	0.3071	109.0	165.0	7.80
A9417.9	—	7.90	0.3110	109.0	165.0	7.90
A9415/16	5/16	7.94	0.3125	102.0	162.0	7.94
A9418.0	—	8.00	0.3150	109.0	165.0	8.00
A9418.1	—	8.10	0.3189	109.0	165.0	8.10
A9418.2	—	8.20	0.3228	109.0	165.0	8.20
A9418.3	—	8.30	0.3268	109.0	165.0	8.30
A94121/64	21/64	8.33	0.3281	105.0	165.0	8.33
A9418.4	—	8.40	0.3307	109.0	165.0	8.40
A9418.5	—	8.50	0.3346	109.0	165.0	8.50
A9418.6	—	8.60	0.3386	115.0	175.0	8.60
A9418.7	—	8.70	0.3425	115.0	175.0	8.70
A94111/32	11/32	8.73	0.3438	105.0	165.0	8.73
A9418.8	—	8.80	0.3465	115.0	175.0	8.80
A9418.9	—	8.90	0.3504	115.0	175.0	8.90
A9419.0	—	9.00	0.3543	115.0	175.0	9.00
A9419.1	—	9.10	0.3583	115.0	175.0	9.10
A94123/64	23/64	9.13	0.3594	108.0	171.0	9.13
A9419.2	—	9.20	0.3622	115.0	175.0	9.20
A9419.3	—	9.30	0.3661	115.0	175.0	9.30
A9419.4	—	9.40	0.3701	115.0	175.0	9.40
A9419.5	—	9.50	0.3740	115.0	175.0	9.50
A9413/8	3/8	9.52	0.3750	108.0	171.0	9.52

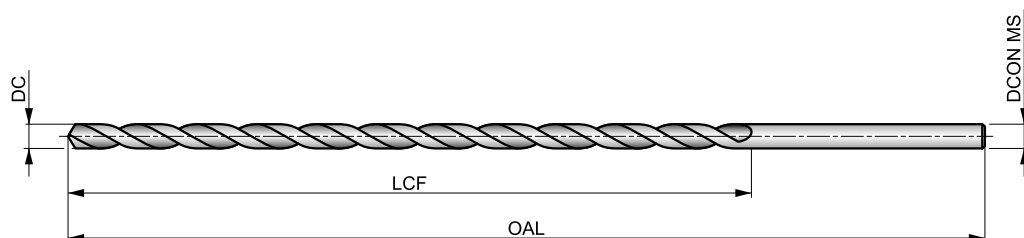
Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A9419.6	—	9.60	0.3780	121.0	184.0	9.60
A9419.7	—	9.70	0.3819	121.0	184.0	9.70
A9419.8	—	9.80	0.3858	121.0	184.0	9.80
A9419.9	—	9.90	0.3898	121.0	184.0	9.90
A94125/64	25/64	9.92	0.3906	111.0	178.0	9.92
A94110.0	—	10.00	0.3937	121.0	184.0	10.00
A94110.2	—	10.20	0.4016	121.0	184.0	10.20
A94110.3	—	10.30	0.4055	121.0	184.0	10.30
A94113/32	13/32	10.32	0.4063	111.0	178.0	10.32
A94110.5	—	10.50	0.4134	121.0	184.0	10.50
A94127/64	27/64	10.72	0.4219	117.0	184.0	10.72
A94111.0	—	11.00	0.4331	128.0	195.0	11.00
A9417/16	7/16	11.11	0.4375	117.0	184.0	11.11
A94111.2	—	11.20	0.4409	128.0	195.0	11.20
A94111.5	—	11.50	0.4528	128.0	195.0	11.50
A94129/64	29/64	11.51	0.4531	121.0	190.0	11.51
A94111.8	—	11.80	0.4646	128.0	195.0	11.80
A94115/32	15/32	11.91	0.4688	121.0	190.0	11.91
A94112.0	—	12.00	0.4724	134.0	205.0	12.00
A94112.2	—	12.20	0.4803	134.0	205.0	12.20
A94131/64	31/64	12.30	0.4844	121.0	197.0	12.30
A94112.5	—	12.50	0.4921	134.0	205.0	12.50
A9411/2	1/2	12.70	0.5000	121.0	197.0	12.70
A94113.0	—	13.00	0.5118	134.0	205.0	13.00
A94133/64	33/64	13.10	0.5156	121.0	203.0	13.10
A94113.5	—	13.50	0.5315	140.0	214.0	13.50
A94135/64	35/64	13.89	0.5469	124.0	210.0	13.89
A94114.0	—	14.00	0.5512	140.0	214.0	14.00
A9419/16	9/16	14.29	0.5625	124.0	210.0	14.29
A94114.5	—	14.50	0.5709	144.0	220.0	14.50
A94137/64	37/64	14.68	0.5781	124.0	222.0	14.68
A94115.0	—	15.00	0.5906	144.0	220.0	15.00
A94119/32	19/32	15.08	0.5938	124.0	222.0	15.08
A94139/64	39/64	15.48	0.6094	124.0	222.0	15.48
A94115.5	—	15.50	0.6102	149.0	227.0	15.50
A9415/8	5/8	15.88	0.6250	124.0	222.0	15.88
A94116.0	—	16.00	0.6299	149.0	227.0	16.00

A125

DORMER

HSS ekstra langt bor, damphærdet finish

Med damphærdet finish, anbefales til meget dybe eller vanskelige huller. Konventionelt 118° spids, der giver styrke og sparer penge på let genopretning. Velegnet til mange materialer. Damphærdet finish bevarer skærevæske og forhindrer svejsning af spån til værktøj. Mindre egnet til håndholdt boring.



HSS	BS 328	10×D
118°	ST	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 21 E	P1.2 ■ 24 E	P1.3 ■ 25 E	P2.1 ■ 18 E	P2.2 ■ 16 C	P2.3 ■ 14 A	P3.1 ■ 9 C	P3.2 ■ 7 C	P3.3 ■ 6 A	P4.1 ■ 5 C	P4.2 ■ 4 A	P4.3 ■ 4 A	M1.1 ■ 12 C	M1.2 ■ 10 C
M2.1 ■ 11 C	M2.2 ■ 9 C	M3.1 ■ 5 E	M3.2 ■ 4 E	M3.3 ■ 4 E	M4.1 ■ 8 A	K1.1 ■ 22 G	K1.2 ■ 16 D	K1.3 ■ 12 D	K2.1 ■ 16 C	K2.2 ■ 13 C	K2.3 ■ 10 C	K3.1 ■ 14 C	K3.2 ■ 11 C
K3.3 ■ 9 C	K4.1 ■ 13 C	K4.2 ■ 10 C	K4.3 ■ 7 C	K4.4 ■ 6 C	K4.5 ■ 5 C	K5.1 ■ 15 C	K5.2 ■ 11 C	K5.3 ■ 9 C	N1.1 ■ 24 H	N1.2 ■ 18 H	N1.3 ■ 12 G	N2.1 ■ 34 F	N2.2 ■ 30 F
N2.3 ■ 22 F	N3.1 ■ 56 F	N3.2 ■ 33 G	N3.3 ■ 17 D	N4.1 ■ 30 H	N4.2 ■ 26 F	N4.3 ■ 10 D	S1.1 ■ 11 D	S1.2 ■ 9 B	S1.3 ■ 5 A	S2.1 ■ 5 C	S2.2 ■ 4 A	S3.1 ■ 4 C	S3.2 ■ 3 A
S4.1 ■ 3 C	S4.2 ■ 2 A												

DC <= 2,2mm; 5/64" Blank.

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1251.4X160	—	1.40	0.0551	100.0	160.0	1.40
A1251.5X125	—	1.50	0.0591	80.0	125.0	1.50
A1251.5X160	—	1.50	0.0591	100.0	160.0	1.50
A1251/16X125	1/16	1.59	0.0625	80.0	125.0	1.59
A1251/16X160	1/16	1.59	0.0625	100.0	160.0	1.59
A1251.8X160	—	1.80	0.0709	100.0	160.0	1.80
A1255/64X125	5/64	1.98	0.0781	80.0	125.0	1.98
A1255/64X160	5/64	1.98	0.0781	100.0	160.0	1.98
A1252.0X125	—	2.00	0.0787	80.0	125.0	2.00
A1252.0X160	—	2.00	0.0787	100.0	160.0	2.00
A1252.2X160	—	2.20	0.0866	100.0	160.0	2.20
A1253/32X125	3/32	2.38	0.0938	80.0	125.0	2.38
A1253/32X160	3/32	2.38	0.0938	100.0	160.0	2.38
A1252.5X125	—	2.50	0.0984	80.0	125.0	2.50
A1252.5X160	—	2.50	0.0984	100.0	160.0	2.50
A1257/64X125	7/64	2.78	0.1094	80.0	125.0	2.78
A1257/64X160	7/64	2.78	0.1094	100.0	160.0	2.78
A1253.0X160	—	3.00	0.1181	100.0	160.0	3.00
A1253.0X200	—	3.00	0.1181	150.0	200.0	3.00
A1253.0X250	—	3.00	0.1181	200.0	250.0	3.00
A1251/8X160	1/8	3.18	0.1252	100.0	160.0	3.18
A1251/8X200	1/8	3.18	0.1252	150.0	200.0	3.18
A1251/8X250	1/8	3.18	0.1252	200.0	250.0	3.18
A1251/8X315	1/8	3.18	0.1252	250.0	310.0	3.18
A1253.3X160	—	3.30	0.1299	100.0	160.0	3.30
A1253.5X160	—	3.50	0.1378	100.0	160.0	3.50

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A1253.5X200	—	3.50	0.1378	150.0	200.0	3.50
A1253.5X250	—	3.50	0.1378	200.0	250.0	3.50
A1259/64X160	9/64	3.57	0.1406	100.0	160.0	3.57
A1259/64X200	9/64	3.57	0.1406	150.0	200.0	3.57
A1259/64X315	9/64	3.57	0.1406	250.0	310.0	3.57
A1255/32X160	5/32	3.97	0.1563	100.0	160.0	3.97
A1255/32X200	5/32	3.97	0.1563	150.0	200.0	3.97
A1255/32X250	5/32	3.97	0.1563	200.0	250.0	3.97
A1255/32X315	5/32	3.97	0.1563	250.0	310.0	3.97
A1254.0X160	—	4.00	0.1575	100.0	160.0	4.00
A1254.0X200	—	4.00	0.1575	150.0	200.0	4.00
A1254.0X250	—	4.00	0.1575	200.0	250.0	4.00
A1254.0X315	—	4.00	0.1575	250.0	310.0	4.00
A12511/64X160	11/64	4.37	0.1719	100.0	160.0	4.37
A12511/64X200	11/64	4.37	0.1719	150.0	200.0	4.37
A12511/64X315	11/64	4.37	0.1719	250.0	310.0	4.37
A1254.5X160	—	4.50	0.1772	100.0	160.0	4.50
A1254.5X200	—	4.50	0.1772	150.0	200.0	4.50
A1254.5X250	—	4.50	0.1772	200.0	250.0	4.50
A1254.5X315	—	4.50	0.1772	250.0	310.0	4.50
A1253/16X160	3/16	4.76	0.1875	100.0	160.0	4.76
A1253/16X200	3/16	4.76	0.1875	150.0	200.0	4.76
A1253/16X250	3/16	4.76	0.1875	200.0	250.0	4.76
A1253/16X315	3/16	4.76	0.1875	250.0	310.0	4.76
A1253/16X400	3/16	4.76	0.1875	300.0	400.0	4.76
A1255.0X160	—	5.00	0.1969	100.0	160.0	5.00

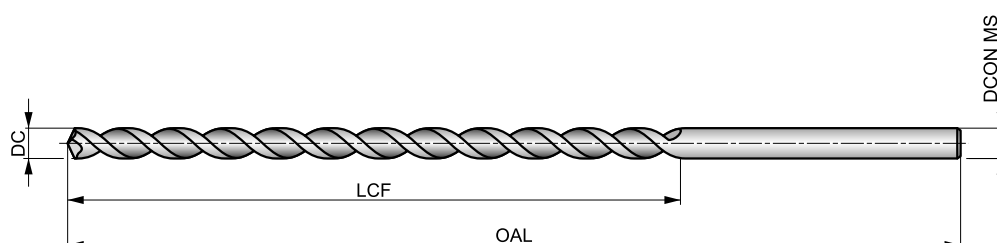
A976



PFX HSS-E (5% kobolt) ekstra langt bor (DIN 1869 serie 1), blank finish

Anbefales til boring af meget dybe huller og i applikationer, hvor der er behov for ekstra rækkevidde. Specielt designet parabolske skær fjerner behovet for at bore dybe huller i korte trin (hakke). Et 130° spids. Det anbefales at centrere med en kort 3xD PFX-bor (for at holde samme DC-tolerance). Velegnet til boring af mange materialer.

PFX



HSS-E	DIN 1869-1	15×D
130°	Bright	
λ>35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 29 C	P1.2 33 C	P1.3 34 C	P2.1 25 C	P2.2 22 C	P2.3 19 A	P3.1 18 C	P3.2 14 C	P3.3 12 A	P4.1 11 C	P4.2 9 A	P4.3 7 A	M1.1 16 B	M1.2 14 B
M2.1 15 B	M2.2 12 B	M3.1 8 C	M3.2 7 C	M3.3 6 C	M4.1 8 A	K2.1 20 C	K2.2 16 C	K2.3 13 A	K3.1 17 C	K3.2 13 C	K3.3 11 A	K4.1 16 C	K4.2 12 C
K4.3 9 A	K4.4 8 A	K4.5 6 A	K5.1 18 C	K5.2 14 C	K5.3 11 A	N3.1 30 D	S1.1 15 C	S1.2 11 A	S1.3 5 A				

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9761.5	—	1.50	0.0591	75.0	115.0	1.50
A9762.0X125	—	2.00	0.0787	85.0	125.0	2.00
A9762.1X125	—	2.10	0.0827	85.0	125.0	2.10
A9762.2X135	—	2.20	0.0866	90.0	135.0	2.20
A9762.3X135	—	2.30	0.0906	90.0	135.0	2.30
A9762.4X140	—	2.40	0.0945	95.0	140.0	2.40
A9762.5X140	—	2.50	0.0984	95.0	140.0	2.50
A9762.6X140	—	2.60	0.1024	95.0	140.0	2.60
A9762.7X150	—	2.70	0.1063	100.0	150.0	2.70
A9762.8X150	—	2.80	0.1102	100.0	150.0	2.80
A9762.9X150	—	2.90	0.1142	100.0	150.0	2.90
A9763.0X150	—	3.00	0.1181	100.0	150.0	3.00
A9763.1X155	—	3.10	0.1220	105.0	155.0	3.10
A9761/8	1/8	3.18	0.1252	105.0	155.0	3.18
A9763.2X155	—	3.20	0.1260	105.0	155.0	3.20
A9763.3X155	—	3.30	0.1299	105.0	155.0	3.30
A9763.4X165	—	3.40	0.1339	115.0	165.0	3.40
A9763.5X165	—	3.50	0.1378	115.0	165.0	3.50
A9763.6X165	—	3.60	0.1417	115.0	165.0	3.60
A9763.7X165	—	3.70	0.1457	115.0	165.0	3.70
A9763.8X175	—	3.80	0.1496	120.0	175.0	3.80
A9763.9X175	—	3.90	0.1535	120.0	175.0	3.90
A9765/32	5/32	3.97	0.1563	120.0	175.0	3.97
A9764.0X175	—	4.00	0.1575	120.0	175.0	4.00
A9764.1X175	—	4.10	0.1614	120.0	175.0	4.10
A9764.2X175	—	4.20	0.1654	120.0	175.0	4.20
A9764.3X185	—	4.30	0.1693	125.0	185.0	4.30
A9764.4X185	—	4.40	0.1732	125.0	185.0	4.40

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9764.5X185	—	4.50	0.1772	125.0	185.0	4.50
A9764.6X185	—	4.60	0.1811	125.0	185.0	4.60
A9764.7X185	—	4.70	0.1850	125.0	185.0	4.70
A9763/16	3/16	4.76	0.1875	135.0	195.0	4.76
A9764.8X195	—	4.80	0.1890	135.0	195.0	4.80
A9764.9X195	—	4.90	0.1929	135.0	195.0	4.90
A9765.0X195	—	5.00	0.1969	135.0	195.0	5.00
A9765.1X195	—	5.10	0.2008	135.0	195.0	5.10
A9765.2X195	—	5.20	0.2047	135.0	195.0	5.20
A9765.3X195	—	5.30	0.2087	135.0	195.0	5.30
A9765.4X205	—	5.40	0.2126	140.0	205.0	5.40
A9765.5X205	—	5.50	0.2165	140.0	205.0	5.50
A9765.6X205	—	5.60	0.2205	140.0	205.0	5.60
A9765.7X205	—	5.70	0.2244	140.0	205.0	5.70
A9765.8X205	—	5.80	0.2283	140.0	205.0	5.80
A9765.9X205	—	5.90	0.2323	140.0	205.0	5.90
A9766.0X205	—	6.00	0.2362	140.0	205.0	6.00
A9766.1X215	—	6.10	0.2402	150.0	215.0	6.10
A9766.2X215	—	6.20	0.2441	150.0	215.0	6.20
A9766.3X215	—	6.30	0.2480	150.0	215.0	6.30
A9761/4	1/4	6.35	0.2500	150.0	215.0	6.35
A9766.4X215	—	6.40	0.2520	150.0	215.0	6.40
A9766.5X215	—	6.50	0.2559	150.0	215.0	6.50
A9766.6X215	—	6.60	0.2598	150.0	215.0	6.60
A9766.7X215	—	6.70	0.2638	150.0	215.0	6.70
A9766.8X225	—	6.80	0.2677	155.0	225.0	6.80
A9766.9X225	—	6.90	0.2717	155.0	225.0	6.90
A9767.0X225	—	7.00	0.2756	155.0	225.0	7.00

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A9767.5X225	—	7.50	0.2953	155.0	225.0	7.50
A9765/16	5/16	7.94	0.3125	165.0	240.0	7.94
A9768.0X240	—	8.00	0.3150	165.0	240.0	8.00
A9768.5X240	—	8.50	0.3346	165.0	240.0	8.50
A97611/32	11/32	8.73	0.3438	175.0	250.0	8.73
A9769.0X250	—	9.00	0.3543	175.0	250.0	9.00
A9769.5X250	—	9.50	0.3740	175.0	250.0	9.50
A9763/8	3/8	9.52	0.3750	185.0	265.0	9.52
A97610.0X265	—	10.00	0.3937	185.0	265.0	10.00

¹⁾ Dormer Standard.

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A97610.5	—	10.50	0.4134	185.0	265.0	10.50
A97611.0	—	11.00	0.4331	195.0	280.0	11.00
A9767/16	7/16	11.11	0.4375	195.0	280.0	11.11
A97611.5	—	11.50	0.4528	195.0	280.0	11.50
A97612.0	—	12.00	0.4724	205.0	295.0	12.00
A97612.5	—	12.50	0.4921	205.0	295.0	12.50
A9761/2	1/2	12.70	0.5000	205.0	295.0	12.70
A97613.0	—	13.00	0.5118	205.0	295.0	13.00
A97614.0 ¹⁾	—	14.00	0.5512	215.0	310.0	14.00

A977

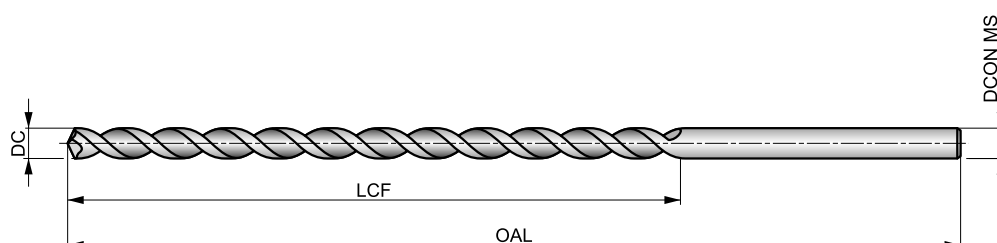
DORMER



PFX HSS-E (5% kobolt) ekstra langt bor (DIN 1869 serie 2), blank finish

Anbefales til boring af meget dybe huller og i applikationer, hvor der er behov for ekstra rækkevidde. Specielt designet parabolske skær fjerner behovet for at bore dybe huller i korte trin (hakke). Et 130° spids. Det anbefales at centrere med en kort 3xD PFX-bor (for at holde samme DC-tolerance). Velegnet til boring af mange materialer.

PFX



HSS-E	DIN 1869-2	20xD
130°	Bright	
λ>35°	R	DC h8

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 29 B	P1.2 33 B	P1.3 34 B	P2.1 25 B	P2.2 22 B	P2.3 19 A	P3.1 18 B	P3.2 14 B	P3.3 12 A	P4.1 11 B	P4.2 9 A	P4.3 7 A	M1.1 16 B	M1.2 14 B
M2.1 15 B	M2.2 12 B	M3.1 8 B	M3.2 7 B	M3.3 6 B	M4.1 8 A	K2.1 20 B	K2.2 16 B	K2.3 13 A	K3.1 17 B	K3.2 13 B	K3.3 11 A	K4.1 16 B	K4.2 12 B
K4.3 9 A	K4.4 8 A	K4.5 6 A	K5.1 18 B	K5.2 14 B	K5.3 11 A	N3.1 30 C	S1.1 15 B	S1.2 11 A	S1.3 5 A				

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9771.5 ¹⁾	—	1.50	0.0591	100.0	150.0	1.50
A9771/16 ¹⁾	1/16	1.59	0.0625	100.0	150.0	1.59
A9772.0 ¹⁾	—	2.00	0.0787	110.0	160.0	2.00
A9773/32 ¹⁾	3/32	2.38	0.0938	115.0	170.0	2.38
A9773.0X190	—	3.00	0.1181	130.0	190.0	3.00
A9771/8	1/8	3.18	0.1250	135.0	200.0	3.18
A9773.5X210	—	3.50	0.1378	145.0	210.0	3.50
A9774.0X220	—	4.00	0.1575	150.0	220.0	4.00
A9774.5X235	—	4.50	0.1772	160.0	235.0	4.50
A9773/16	3/16	4.76	0.1875	170.0	245.0	4.76
A9775.0X245	—	5.00	0.1969	170.0	245.0	5.00
A9775.5X260	—	5.50	0.2165	180.0	260.0	5.50
A9776.0X260	—	6.00	0.2362	180.0	260.0	6.00
A9771/4	1/4	6.35	0.2500	190.0	275.0	6.35
A9776.5X275	—	6.50	0.2559	190.0	275.0	6.50

¹⁾ Dormer Standard.

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	DCON MS (mm)
A9777.0X290	—	7.00	0.2756	200.0	290.0	7.00
A9777.5X290	—	7.50	0.2953	200.0	290.0	7.50
A9778.0X305	—	8.00	0.3150	210.0	305.0	8.00
A9778.5X305	—	8.50	0.3346	210.0	305.0	8.50
A97711/32	11/32	8.73	0.3438	220.0	320.0	8.73
A9779.0X320	—	9.00	0.3543	220.0	320.0	9.00
A9779.5X320	—	9.50	0.3740	220.0	320.0	9.50
A97710.0X340	—	10.00	0.3937	235.0	340.0	10.00
A97710.5	—	10.50	0.4134	235.0	340.0	10.50
A97711.0	—	11.00	0.4331	250.0	365.0	11.00
A97711.5	—	11.50	0.4528	250.0	365.0	11.50
A97712.0	—	12.00	0.4724	260.0	375.0	12.00
A97712.5	—	12.50	0.4921	260.0	375.0	12.50
A97713.0	—	13.00	0.5118	260.0	375.0	13.00
A97714.0 ¹⁾	—	14.00	0.5512	270.0	390.0	14.00

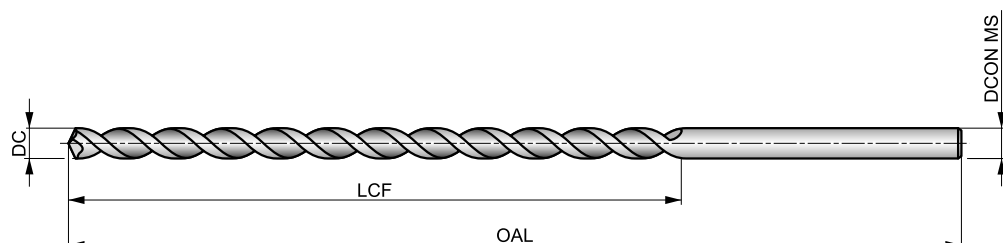
A978

DORMER

PFX HSS-E (5% kobolt) ekstra langt bor (DIN 1869 serie 3), blank finish

Anbefales til boring af meget dybe huller og i applikationer, hvor der er behov for ekstra rækkevidde. Specielt designet paraboliske skær fjerner behovet for at bore dybe huller i korte trin (hakke). Et 130° spids. Det anbefales at centrere med en kort 3xD PFX-bor (for at holde samme DC-tolerance). Velegnet til boring af mange materialer.

PFX



HSS-E	DIN 1869-3	25xD
130°	Bright	
$\lambda > 35^\circ$	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 29 A	P1.2 33 A	P1.3 34 A	P2.1 25 A	P2.2 22 A	P2.3 19 A	P3.1 18 A	P3.2 14 A	P3.3 12 A	P4.1 11 A	P4.2 9 A	P4.3 7 A	M1.1 16 A	M1.2 14 A
M2.1 15 A	M2.2 12 A	M3.1 8 A	M3.2 7 A	M3.3 6 A	M4.1 8 A	K2.1 20 A	K2.2 16 A	K2.3 13 A	K3.1 17 A	K3.2 13 A	K3.3 11 A	K4.1 16 A	K4.2 12 A
K4.3 9 A	K4.4 8 A	K4.5 6 A	K5.1 18 A	K5.2 14 A	K5.3 11 A	N3.1 30 B	S1.1 15 A	S1.2 11 A	S1.3 5 A				

Product	DC	DC	DC	LCF	OAL	DCON MS
	(inch)	(mm)	(inch)	(mm)	(mm)	(mm)
A9783.0 ¹⁾	—	3.00	0.1181	160.0	240.0	3.00
A9783.5X265	—	3.50	0.1378	180.0	265.0	3.50
A9784.0X280	—	4.00	0.1575	190.0	280.0	4.00
A9784.5X295	—	4.50	0.1772	200.0	295.0	4.50
A9785.0X315	—	5.00	0.1969	210.0	315.0	5.00
A9785.5X330	—	5.50	0.2165	225.0	330.0	5.50
A9786.0X330	—	6.00	0.2362	225.0	330.0	6.00
A9781/4	1/4	6.35	0.2500	235.0	350.0	6.35
A9786.5X350	—	6.50	0.2559	235.0	350.0	6.50
A9787.0X370	—	7.00	0.2756	250.0	370.0	7.00
A9787.5X370	—	7.50	0.2953	250.0	370.0	7.50
A9788.0X390	—	8.00	0.3150	265.0	390.0	8.00
A9788.5X390	—	8.50	0.3346	265.0	390.0	8.50
A9789.0X410	—	9.00	0.3543	280.0	410.0	9.00
A9789.5X410	—	9.50	0.3740	280.0	410.0	9.50
A97810.0X430	—	10.00	0.3937	295.0	430.0	10.00

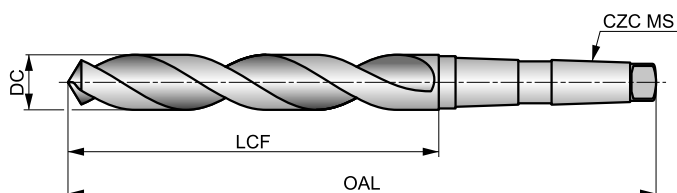
¹⁾ Dormer Standard.

A130

DORMER

HSS MK bor, damphærdet finish

Alsiddig bor med større diametre - op til 50,80 mm (2 tommer). MK skaft giver bedre greb til at holde det i maskinen. Konventionelt 118° spids giver styrke og gør det let at genopslibe. Damphærdet finish bevarer skærevæske og forhindrer svejsning af spån til værktøj. Velegnet til boring af mange materialer.



HSS	DIN 345	4xD
118°	ST	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 33 I	P1.2 ■ 37 I	P1.3 ■ 38 I	P2.1 ■ 28 I	P2.2 ■ 25 F	P2.3 ■ 22 E	P3.1 ■ 18 F	P3.2 ■ 14 F	P3.3 ■ 12 E	P4.1 ■ 11 F	P4.2 ■ 9 E	P4.3 ■ 7 D	M1.1 ■ 21 E	M1.2 ■ 17 E
M2.1 ■ 18 E	M2.2 ■ 15 E	M3.1 ■ 10 G	M3.2 ■ 9 G	M3.3 ■ 8 G	M4.1 ■ 10 C	K1.1 ■ 30 I	K1.2 ■ 22 E	K1.3 ■ 17 E	K2.1 ■ 25 E	K2.2 ■ 20 E	K2.3 ■ 16 E	K3.1 ■ 22 E	K3.2 ■ 17 E
K3.3 ■ 13 E	K4.1 ■ 20 E	K4.2 ■ 15 E	K4.3 ■ 11 E	K4.4 ■ 10 E	K4.5 ■ 8 E	K5.1 ■ 23 E	K5.2 ■ 17 E	K5.3 ■ 13 E	N1.1 ■ 26 J	N1.2 ■ 20 J	N1.3 ■ 13 I	N2.1 ■ 43 H	N2.2 ■ 39 H
N2.3 ■ 28 H	N3.1 ■ 59 H	N3.2 ■ 35 I	N3.3 ■ 18 F	N4.1 ■ 30 K	N4.2 ■ 28 J	N4.3 ■ 14 H	S1.1 ■ 23 F	S1.2 ■ 13 D	S1.3 ■ 7 B	S2.1 ■ 9 E	S2.2 ■ 6 A	S3.1 ■ 7 E	S3.2 ■ 4 A
S4.1 ■ 5 E	S4.2 ■ 3 A												

DC > 14 mm udspidsede.

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A1303.0	—	3.00	0.1181	33.0	114.0	MK 1
A1301/8	1/8	3.18	0.1252	36.0	117.0	MK 1
A1303.2	—	3.20	0.1260	36.0	117.0	MK 1
A1303.25	—	3.25	0.1280	36.0	117.0	MK 1
A1303.3	—	3.30	0.1299	36.0	117.0	MK 1
A1303.5	—	3.50	0.1378	39.0	120.0	MK 1
A1309/64	9/64	3.57	0.1406	39.0	120.0	MK 1
A1303.75	—	3.75	0.1476	39.0	120.0	MK 1
A1305/32	5/32	3.97	0.1563	43.0	124.0	MK 1
A1304.0	—	4.00	0.1575	43.0	124.0	MK 1
A1304.1	—	4.10	0.1614	43.0	124.0	MK 1
A1304.2	—	4.20	0.1654	43.0	124.0	MK 1
A1304.25	—	4.25	0.1673	43.0	124.0	MK 1
A13011/64	11/64	4.37	0.1719	47.0	128.0	MK 1
A1304.5	—	4.50	0.1772	47.0	128.0	MK 1
A1304.75	—	4.75	0.1870	52.0	128.0	MK 1
A1303/16	3/16	4.76	0.1875	52.0	133.0	MK 1
A1304.8	—	4.80	0.1890	52.0	133.0	MK 1
A1304.9	—	4.90	0.1929	52.0	133.0	MK 1
A1305.0	—	5.00	0.1969	52.0	133.0	MK 1
A1305.1	—	5.10	0.2008	52.0	133.0	MK 1
A13013/64	13/64	5.16	0.2031	52.0	133.0	MK 1
A1305.2	—	5.20	0.2047	52.0	133.0	MK 1

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A1305.25	—	5.25	0.2067	52.0	133.0	MK 1
A1305.4	—	5.40	0.2126	57.0	138.0	MK 1
A1305.5	—	5.50	0.2165	57.0	138.0	MK 1
A1307/32	7/32	5.56	0.2188	57.0	138.0	MK 1
A1305.7	—	5.70	0.2244	57.0	138.0	MK 1
A1305.75	—	5.75	0.2264	57.0	138.0	MK 1
A1305.8	—	5.80	0.2283	57.0	138.0	MK 1
A1305.9	—	5.90	0.2323	57.0	138.0	MK 1
A13015/64	15/64	5.95	0.2344	57.0	138.0	MK 1
A1306.0	—	6.00	0.2362	57.0	138.0	MK 1
A1306.1	—	6.10	0.2402	63.0	144.0	MK 1
A1306.2	—	6.20	0.2441	63.0	144.0	MK 1
A1306.25	—	6.25	0.2461	63.0	144.0	MK 1
A1306.3	—	6.30	0.2480	63.0	144.0	MK 1
A1301/4	1/4	6.35	0.2500	63.0	144.0	MK 1
A1306.4	—	6.40	0.2520	63.0	144.0	MK 1
A1306.5	—	6.50	0.2559	63.0	144.0	MK 1
A1306.6	—	6.60	0.2598	63.0	144.0	MK 1
A1306.7	—	6.70	0.2638	63.0	144.0	MK 1
A13017/64	17/64	6.75	0.2656	69.0	150.0	MK 1
A1306.75	—	6.75	0.2657	69.0	150.0	MK 1
A1306.8	—	6.80	0.2677	69.0	150.0	MK 1
A1306.9	—	6.90	0.2717	69.0	150.0	MK 1
A1307.0	—	7.00	0.2756	69.0	150.0	MK 1
A1309/32	9/32	7.14	0.2813	69.0	150.0	MK 1
A1307.2	—	7.20	0.2835	69.0	150.0	MK 1
A1307.25	—	7.25	0.2854	69.0	150.0	MK 1
A1307.3	—	7.30	0.2874	69.0	150.0	MK 1
A1307.4	—	7.40	0.2913	69.0	150.0	MK 1
A1307.5	—	7.50	0.2953	69.0	150.0	MK 1
A13019/64	19/64	7.54	0.2969	75.0	156.0	MK 1
A1307.7	—	7.70	0.3031	75.0	156.0	MK 1
A1307.75	—	7.75	0.3051	75.0	156.0	MK 1
A1307.8	—	7.80	0.3071	75.0	156.0	MK 1
A1307.9	—	7.90	0.3110	75.0	156.0	MK 1
A1305/16	5/16	7.94	0.3125	75.0	156.0	MK 1
A1308.0	—	8.00	0.3150	75.0	156.0	MK 1
A1308.1	—	8.10	0.3189	75.0	156.0	MK 1
A1308.2	—	8.20	0.3228	75.0	156.0	MK 1
A1308.25	—	8.25	0.3248	75.0	156.0	MK 1
A1308.3	—	8.30	0.3268	75.0	156.0	MK 1
A13021/64	21/64	8.33	0.3281	75.0	156.0	MK 1
A1308.4	—	8.40	0.3307	75.0	156.0	MK 1
A1308.5	—	8.50	0.3346	75.0	156.0	MK 1
A1308.6	—	8.60	0.3386	81.0	162.0	MK 1
A1308.7	—	8.70	0.3425	81.0	162.0	MK 1
A13011/32	11/32	8.73	0.3438	81.0	162.0	MK 1
A1308.75	—	8.75	0.3445	81.0	162.0	MK 1
A1308.8	—	8.80	0.3465	81.0	162.0	MK 1
A1308.9	—	8.90	0.3504	81.0	162.0	MK 1
A1309.0	—	9.00	0.3543	81.0	162.0	MK 1
A1309.1	—	9.10	0.3583	81.0	162.0	MK 1
A13023/64	23/64	9.13	0.3594	81.0	162.0	MK 1
A1309.2	—	9.20	0.3622	81.0	162.0	MK 1
A1309.25	—	9.25	0.3642	81.0	162.0	MK 1
A1309.3	—	9.30	0.3661	81.0	162.0	MK 1
A1309.5	—	9.50	0.3740	81.0	162.0	MK 1
A1303/8	3/8	9.52	0.3750	87.0	168.0	MK 1
A1309.6	—	9.60	0.3780	87.0	168.0	MK 1
A1309.7	—	9.70	0.3819	87.0	168.0	MK 1
A1309.75	—	9.75	0.3839	87.0	168.0	MK 1
A1309.8	—	9.80	0.3858	87.0	168.0	MK 1

Product	DC	DC	DC	LCF	OAL	CZC MS
	(inch)	(mm)	(inch)	(mm)	(mm)	
A1309.9	—	9.90	0.3898	87.0	168.0	MK 1
A13025/64	25/64	9.92	0.3906	87.0	168.0	MK 1
A13010.0	—	10.00	0.3937	87.0	168.0	MK 1
A13010.1	—	10.10	0.3976	87.0	168.0	MK 1
A13010.2	—	10.20	0.4016	87.0	168.0	MK 1
A13010.25	—	10.25	0.4035	87.0	168.0	MK 1
A13010.3	—	10.30	0.4055	87.0	168.0	MK 1
A13013/32	13/32	10.32	0.4063	87.0	168.0	MK 1
A13010.5	—	10.50	0.4134	87.0	168.0	MK 1
A13027/64	27/64	10.72	0.4219	94.0	175.0	MK 1
A13010.75	—	10.75	0.4232	94.0	175.0	MK 1
A13010.8	—	10.80	0.4252	94.0	175.0	MK 1
A13010.9	—	10.90	0.4291	94.0	175.0	MK 1
A13011.0	—	11.00	0.4331	94.0	175.0	MK 1
A13011.1	—	11.10	0.4370	94.0	175.0	MK 1
A1307/16	7/16	11.11	0.4375	94.0	175.0	MK 1
A13011.2	—	11.20	0.4409	94.0	175.0	MK 1
A13011.25	—	11.25	0.4429	94.0	175.0	MK 1
A13011.3	—	11.30	0.4449	94.0	175.0	MK 1
A13011.4	—	11.40	0.4488	94.0	175.0	MK 1
A13011.5	—	11.50	0.4528	94.0	175.0	MK 1
A13029/64	29/64	11.51	0.4531	94.0	175.0	MK 1
A13011.6	—	11.60	0.4567	94.0	175.0	MK 1
A13011.7	—	11.70	0.4606	94.0	175.0	MK 1
A13011.75	—	11.75	0.4626	94.0	175.0	MK 1
A13011.8	—	11.80	0.4646	94.0	175.0	MK 1
A13011.9	—	11.90	0.4685	101.0	182.0	MK 1
A13015/32	15/32	11.91	0.4688	101.0	182.0	MK 1
A13012.0	—	12.00	0.4724	101.0	182.0	MK 1
A13012.1	—	12.10	0.4764	101.0	182.0	MK 1
A13012.2	—	12.20	0.4803	101.0	182.0	MK 1
A13012.25	—	12.25	0.4823	101.0	182.0	MK 1
A13031/64	31/64	12.30	0.4844	101.0	182.0	MK 1
A13012.3	—	12.30	0.4843	101.0	182.0	MK 1
A13012.4	—	12.40	0.4882	101.0	182.0	MK 1
A13012.5	—	12.50	0.4921	101.0	182.0	MK 1
A13012.6	—	12.60	0.4961	101.0	182.0	MK 1
A13012.7	—	12.70	0.5000	101.0	182.0	MK 1
A1301/2	1/2	12.70	0.5000	101.0	182.0	MK 1
A13012.75	—	12.75	0.5020	101.0	182.0	MK 1
A13012.8	—	12.80	0.5039	101.0	182.0	MK 1
A13012.9	—	12.90	0.5079	101.0	182.0	MK 1
A13013.0	—	13.00	0.5118	101.0	182.0	MK 1
A13033/64	33/64	13.10	0.5156	101.0	182.0	MK 1
A13013.2	—	13.20	0.5197	101.0	182.0	MK 1
A13013.25	—	13.25	0.5217	108.0	189.0	MK 1
A13017/32	17/32	13.49	0.5313	108.0	189.0	MK 1
A13013.5	—	13.50	0.5315	108.0	189.0	MK 1
A13013.6	—	13.60	0.5354	108.0	189.0	MK 1
A13013.7	—	13.70	0.5394	108.0	189.0	MK 1
A13013.75	—	13.75	0.5413	108.0	189.0	MK 1
A13013.8	—	13.80	0.5433	108.0	189.0	MK 1
A13035/64	35/64	13.89	0.5469	108.0	189.0	MK 1
A13013.9	—	13.90	0.5472	108.0	189.0	MK 1
A13014.0	—	14.00	0.5512	108.0	189.0	MK 1
A13014.1	—	14.10	0.5551	114.0	212.0	MK 2
A13014.2	—	14.20	0.5591	114.0	212.0	MK 2
A13014.25	—	14.25	0.5610	114.0	212.0	MK 2
A1309/16	9/16	14.29	0.5625	114.0	212.0	MK 2
A13014.3	—	14.30	0.5630	114.0	212.0	MK 2
A13014.4	—	14.40	0.5669	114.0	212.0	MK 2
A13014.5	—	14.50	0.5709	114.0	212.0	MK 2

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A13014.6	—	14.60	0.5748	114.0	212.0	MK 2
A13037/64	37/64	14.68	0.5781	114.0	212.0	MK 2
A13014.7	—	14.70	0.5787	114.0	212.0	MK 2
A13014.75	—	14.75	0.5807	114.0	212.0	MK 2
A13014.8	—	14.80	0.5827	114.0	212.0	MK 2
A13014.9	—	14.90	0.5866	114.0	212.0	MK 2
A13015.0	—	15.00	0.5906	114.0	212.0	MK 2
A13019/32	19/32	15.08	0.5938	120.0	218.0	MK 2
A13015.1	—	15.10	0.5945	120.0	218.0	MK 2
A13015.2	—	15.20	0.5984	120.0	218.0	MK 2
A13015.25	—	15.25	0.6004	120.0	218.0	MK 2
A13039/64	39/64	15.48	0.6094	120.0	218.0	MK 2
A13015.5	—	15.50	0.6102	120.0	218.0	MK 2
A13015.7	—	15.70	0.6181	120.0	218.0	MK 2
A13015.75	—	15.75	0.6201	120.0	218.0	MK 2
A13015.8	—	15.80	0.6220	120.0	218.0	MK 2
A1305/8	5/8	15.88	0.6250	120.0	218.0	MK 2
A13015.9	—	15.90	0.6260	120.0	218.0	MK 2
A13016.0	—	16.00	0.6299	120.0	218.0	MK 2
A13016.1	—	16.10	0.6339	125.0	223.0	MK 2
A13016.2	—	16.20	0.6378	125.0	223.0	MK 2
A13016.25	—	16.25	0.6398	125.0	223.0	MK 2
A13041/64	41/64	16.27	0.6406	125.0	223.0	MK 2
A13016.5	—	16.50	0.6496	125.0	223.0	MK 2
A13021/32	21/32	16.67	0.6563	125.0	223.0	MK 2
A13016.75	—	16.75	0.6594	125.0	223.0	MK 2
A13017.0	—	17.00	0.6693	125.0	223.0	MK 2
A13043/64	43/64	17.07	0.6719	130.0	228.0	MK 2
A13017.25	—	17.25	0.6791	130.0	228.0	MK 2
A13011/16	11/16	17.46	0.6875	130.0	228.0	MK 2
A13017.5	—	17.50	0.6890	130.0	228.0	MK 2
A13017.75	—	17.75	0.6988	130.0	228.0	MK 2
A13045/64	45/64	17.86	0.7031	130.0	228.0	MK 2
A13018.0	—	18.00	0.7087	130.0	228.0	MK 2
A13018.25	—	18.25	0.7185	135.0	233.0	MK 2
A13023/32	23/32	18.26	0.7188	135.0	233.0	MK 2
A13018.5	—	18.50	0.7283	135.0	233.0	MK 2
A13047/64	47/64	18.65	0.7344	135.0	233.0	MK 2
A13018.75	—	18.75	0.7382	135.0	233.0	MK 2
A13019.0	—	19.00	0.7480	135.0	233.0	MK 2
A1303/4	3/4	19.05	0.7500	140.0	238.0	MK 2
A13019.25	—	19.25	0.7579	140.0	238.0	MK 2
A13049/64	49/64	19.45	0.7656	140.0	238.0	MK 2
A13019.5	—	19.50	0.7677	140.0	238.0	MK 2
A13019.75	—	19.75	0.7776	140.0	238.0	MK 2
A13025/32	25/32	19.84	0.7813	140.0	238.0	MK 2
A13020.0	—	20.00	0.7874	140.0	238.0	MK 2
A13051/64	51/64	20.24	0.7969	145.0	243.0	MK 2
A13020.25	—	20.25	0.7972	145.0	243.0	MK 2
A13020.4	—	20.40	0.8031	145.0	243.0	MK 2
A13020.5	—	20.50	0.8071	145.0	243.0	MK 2
A13013/16	13/16	20.64	0.8125	145.0	243.0	MK 2
A13020.75	—	20.75	0.8169	145.0	243.0	MK 2
A13021.0	—	21.00	0.8268	145.0	243.0	MK 2
A13053/64	53/64	21.03	0.8281	145.0	243.0	MK 2
A13021.25	—	21.25	0.8366	150.0	248.0	MK 2
A13027/32	27/32	21.43	0.8437	150.0	248.0	MK 2
A13021.5	—	21.50	0.8465	150.0	248.0	MK 2
A13021.75	—	21.75	0.8563	150.0	248.0	MK 2
A13055/64	55/64	21.83	0.8594	150.0	248.0	MK 2
A13022.0	—	22.00	0.8661	150.0	248.0	MK 2
A1307/8	7/8	22.22	0.8750	150.0	248.0	MK 2

Product	DC	DC	DC	LCF	OAL	CZC MS
	(inch)	(mm)	(inch)	(mm)	(mm)	
A13022.25	—	22.25	0.8760	150.0	248.0	MK 2
A13022.5	—	22.50	0.8858	155.0	253.0	MK 2
A13057/64	57/64	22.62	0.8906	155.0	253.0	MK 2
A13022.75	—	22.75	0.8957	155.0	253.0	MK 2
A13023.0	—	23.00	0.9055	155.0	253.0	MK 2
A13029/32	29/32	23.02	0.9063	155.0	253.0	MK 2
A13023.25	—	23.25	0.9154	155.0	276.0	MK 3
A13059/64	59/64	23.42	0.9219	155.0	276.0	MK 3
A13023.5	—	23.50	0.9252	155.0	276.0	MK 3
A13023.75	—	23.75	0.9350	160.0	281.0	MK 3
A13015/16	15/16	23.81	0.9375	160.0	281.0	MK 3
A13024.0	—	24.00	0.9449	160.0	281.0	MK 3
A13061/64	61/64	24.21	0.9531	160.0	281.0	MK 3
A13024.25	—	24.25	0.9547	160.0	281.0	MK 3
A13024.5	—	24.50	0.9646	160.0	281.0	MK 3
A13031/32	31/32	24.61	0.9688	160.0	281.0	MK 3
A13024.75	—	24.75	0.9744	160.0	281.0	MK 3
A13025.0	—	25.00	0.9843	160.0	281.0	MK 3
A13063/64	63/64	25.00	0.9844	160.0	286.0	MK 3
A13025.25	—	25.25	0.9941	165.0	286.0	MK 3
A1301	1"	25.40	1.0000	165.0	286.0	MK 3
A13025.5	—	25.50	1.0039	165.0	286.0	MK 3
A13025.75	—	25.75	1.0138	165.0	286.0	MK 3
A13026.0	—	26.00	1.0236	165.0	286.0	MK 3
A13026.25	—	26.25	1.0335	165.0	286.0	MK 3
A13026.5	—	26.50	1.0433	165.0	286.0	MK 3
A13026.75	—	26.75	1.0531	170.0	291.0	MK 3
A1301.1/16	1.1/16	26.99	1.0625	170.0	291.0	MK 3
A13027.0	—	27.00	1.0630	170.0	291.0	MK 3
A13027.25	—	27.25	1.0728	170.0	291.0	MK 3
A13027.5	—	27.50	1.0827	170.0	291.0	MK 3
A13027.75	—	27.75	1.0925	170.0	291.0	MK 3
A13028.0	—	28.00	1.1024	170.0	291.0	MK 3
A13028.25	—	28.25	1.1122	175.0	296.0	MK 3
A13028.5	—	28.50	1.1220	175.0	296.0	MK 3
A1301.1/8	1.1/8	28.58	1.1250	175.0	296.0	MK 3
A13028.75	—	28.75	1.1319	175.0	296.0	MK 3
A13029.0	—	29.00	1.1417	175.0	296.0	MK 3
A13029.25	—	29.25	1.1516	175.0	296.0	MK 3
A1301.5/32	1.5/32	29.37	1.1563	175.0	296.0	MK 3
A13029.5	—	29.50	1.1614	175.0	296.0	MK 3
A13029.75	—	29.75	1.1713	175.0	296.0	MK 3
A13030.0	—	30.00	1.1811	175.0	296.0	MK 3
A1301.3/16	1.3/16	30.16	1.1875	180.0	301.0	MK 3
A13030.25	—	30.25	1.1909	180.0	301.0	MK 3
A13030.5	—	30.50	1.2008	180.0	301.0	MK 3
A13030.75	—	30.75	1.2106	180.0	301.0	MK 3
A1301.7/32	1.7/32	30.96	1.2188	180.0	301.0	MK 3
A13031.0	—	31.00	1.2205	180.0	301.0	MK 3
A13031.25	—	31.25	1.2303	180.0	301.0	MK 3
A13031.5	—	31.50	1.2402	180.0	301.0	MK 3
A13031.75	—	31.75	1.2500	185.0	306.0	MK 3
A1301.1/4	1.1/4	31.75	1.2500	185.0	306.0	MK 3
A13032.0	—	32.00	1.2598	185.0	334.0	MK 4
A13032.5	—	32.50	1.2795	185.0	334.0	MK 4
A1301.9/32	1.9/32	32.54	1.2813	185.0	334.0	MK 4
A13033.0	—	33.00	1.2992	185.0	334.0	MK 4
A1301.5/16	1.5/16	33.34	1.3125	185.0	334.0	MK 4
A13033.5	—	33.50	1.3189	185.0	334.0	MK 4
A13034.0	—	34.00	1.3386	190.0	339.0	MK 4
A1301.11/32	1.11/32	34.13	1.3438	190.0	339.0	MK 4
A13034.5	—	34.50	1.3583	190.0	339.0	MK 4

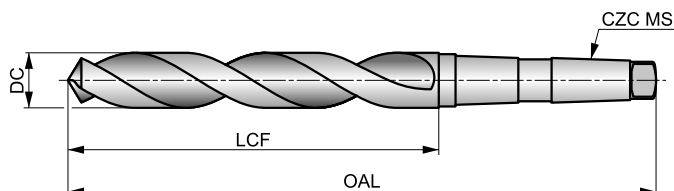
Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A1301.3/8	1.3/8	34.93	1.3750	190.0	339.0	MK 4
A13035.0	—	35.00	1.3780	190.0	339.0	MK 4
A13035.5	—	35.50	1.3976	190.0	339.0	MK 4
A1301.13/32	1.13/32	35.72	1.4063	195.0	344.0	MK 4
A13036.0	—	36.00	1.4173	195.0	344.0	MK 4
A13036.5	—	36.50	1.4370	195.0	344.0	MK 4
A1301.7/16	1.7/16	36.51	1.4375	195.0	344.0	MK 4
A13037.0	—	37.00	1.4567	195.0	344.0	MK 4
A13037.5	—	37.50	1.4764	195.0	344.0	MK 4
A13038.0	—	38.00	1.4961	200.0	349.0	MK 4
A1301.1/2	1.1/2	38.10	1.5000	200.0	349.0	MK 4
A13038.5	—	38.50	1.5157	200.0	349.0	MK 4
A13039.0	—	39.00	1.5354	200.0	349.0	MK 4
A13039.5	—	39.50	1.5551	200.0	349.0	MK 4
A1301.9/16	1.9/16	39.69	1.5625	200.0	349.0	MK 4
A13040.0	—	40.00	1.5748	200.0	349.0	MK 4
A13040.5	—	40.50	1.5945	205.0	354.0	MK 4
A13041.0	—	41.00	1.6142	205.0	354.0	MK 4
A1301.5/8	1.5/8	41.28	1.6250	205.0	354.0	MK 4
A13041.5	—	41.50	1.6339	205.0	354.0	MK 4
A13042.0	—	42.00	1.6535	205.0	354.0	MK 4
A13042.5	—	42.50	1.6732	205.0	354.0	MK 4
A1301.11/16	1.11/16	42.86	1.6875	210.0	359.0	MK 4
A13043.0	—	43.00	1.6929	210.0	359.0	MK 4
A13043.5	—	43.50	1.7126	210.0	359.0	MK 4
A13044.0	—	44.00	1.7323	210.0	359.0	MK 4
A1301.3/4	1.3/4	44.45	1.7500	210.0	359.0	MK 4
A13044.5	—	44.50	1.7520	210.0	359.0	MK 4
A13045.0	—	45.00	1.7717	210.0	359.0	MK 4
A13045.5	—	45.50	1.7913	215.0	364.0	MK 4
A13046.0	—	46.00	1.8110	215.0	364.0	MK 4
A13046.5	—	46.50	1.8307	215.0	364.0	MK 4
A13047.0	—	47.00	1.8504	215.0	364.0	MK 4
A13047.5	—	47.50	1.8701	215.0	364.0	MK 4
A13048.0	—	48.00	1.8898	220.0	369.0	MK 4
A13048.5	—	48.50	1.9094	220.0	369.0	MK 4
A13049.0	—	49.00	1.9291	220.0	369.0	MK 4
A13049.5	—	49.50	1.9488	220.0	369.0	MK 4
A13050.0	—	50.00	1.9685	220.0	369.0	MK 4
A1302	2"	50.80	2.0000	225.0	374.0	MK 4

A530

DORMER

HSS MK bor, TiN Coated

Et stærkt 118° -konventionelt spids, der er let at bruge, og det robuste design giver øget ydelse, når det bruges på konventionelle maskiner. Velegnet til boring af mange materialer. TiN-coating forbedrer ydeevnen og forlænger værktøjets levetid.



HSS	DIN 345	4xD
118°	TiN	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 40 I	P1.2 ■ 45 I	P1.3 ■ 46 I	P2.1 ■ 34 I	P2.2 ■ 30 F	P2.3 ■ 27 E	P3.1 ■ 29 F	P3.2 ■ 24 F	P3.3 ■ 20 E	P4.1 ■ 18 F	P4.2 ■ 15 E	P4.3 ■ 12 D	M1.1 ■ 33 E	M1.2 ■ 28 E
M2.1 ■ 29 E	M2.2 ■ 24 E	M3.1 ■ 15 G	M3.2 ■ 13 G	M3.3 ■ 12 G	M4.1 ■ 20 C	K1.1 ■ 36 I	K1.2 ■ 27 E	K1.3 ■ 20 E	K2.1 ■ 33 E	K2.2 ■ 27 E	K2.3 ■ 22 E	K3.1 ■ 29 E	K3.2 ■ 22 E
K3.3 ■ 18 E	K4.1 ■ 27 E	K4.2 ■ 21 E	K4.3 ■ 15 E	K4.4 ■ 13 E	K4.5 ■ 11 E	K5.1 ■ 31 E	K5.2 ■ 23 E	K5.3 ■ 18 E	N1.1 ■ 55 I	N1.2 ■ 41 I	N1.3 ■ 28 I	N2.1 ■ 54 G	N2.2 ■ 48 G
N2.3 ■ 35 G	N3.1 ■ 93 G	N3.2 ■ 55 I	N3.3 ■ 28 G	N4.1 ■ 50 J	N4.2 ■ 50 H	N4.3 ■ 35 F	S1.1 ■ 32 F	S1.2 ■ 18 D	S1.3 ■ 13 B	S2.1 ■ 8 E	S2.2 ■ 4 A	S3.1 ■ 6 E	S3.2 ■ 3 A
S4.1 ■ 5 E	S4.2 ■ 2 A												

DC > = 14mm udspidsede

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A5308.5	8.50	0.3346	75.0	156.0	MK 1
A5309.0	9.00	0.3543	81.0	162.0	MK 1
A53010.0	10.00	0.3937	87.0	168.0	MK 1
A53010.2	10.20	0.4016	87.0	168.0	MK 1
A53010.5	10.50	0.4134	87.0	168.0	MK 1
A53011.0	11.00	0.4331	94.0	175.0	MK 1
A53011.5	11.50	0.4528	94.0	175.0	MK 1
A53011.75	11.75	0.4626	94.0	175.0	MK 1
A53012.0	12.00	0.4724	101.0	182.0	MK 1
A53012.5	12.50	0.4921	101.0	182.0	MK 1
A53013.0	13.00	0.5118	101.0	182.0	MK 1
A53013.5	13.50	0.5315	108.0	189.0	MK 1
A53014.0	14.00	0.5512	108.0	189.0	MK 1
A53014.5	14.50	0.5709	114.0	212.0	MK 2
A53015.0	15.00	0.5906	114.0	212.0	MK 2
A53015.25	15.25	0.6004	120.0	218.0	MK 2
A53015.5	15.50	0.6102	120.0	218.0	MK 2
A53016.0	16.00	0.6299	120.0	218.0	MK 2
A53016.5	16.50	0.6496	125.0	223.0	MK 2
A53017.0	17.00	0.6693	125.0	223.0	MK 2
A53017.5	17.50	0.6890	130.0	228.0	MK 2
A53018.0	18.00	0.7087	130.0	228.0	MK 2
A53018.5	18.50	0.7283	135.0	233.0	MK 2
A53019.0	19.00	0.7480	135.0	233.0	MK 2
A53019.5	19.50	0.7677	140.0	238.0	MK 2
A53020.0	20.00	0.7874	140.0	238.0	MK 2

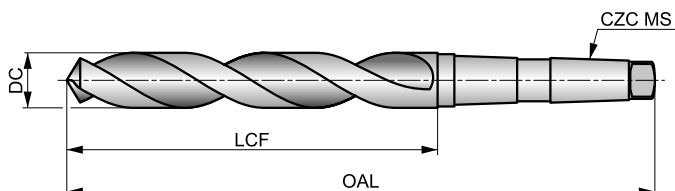
Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A53020.5	20.50	0.8071	145.0	243.0	MK 2
A53021.0	21.00	0.8268	145.0	243.0	MK 2
A53021.5	21.50	0.8465	150.0	248.0	MK 2
A53022.0	22.00	0.8661	150.0	248.0	MK 2
A53022.5	22.50	0.8858	155.0	253.0	MK 2
A53023.0	23.00	0.9055	155.0	253.0	MK 2
A53023.5	23.50	0.9252	155.0	276.0	MK 3
A53024.0	24.00	0.9449	160.0	281.0	MK 3
A53024.5	24.50	0.9646	160.0	281.0	MK 3
A53025.0	25.00	0.9843	160.0	281.0	MK 3
A53025.5	25.50	1.0039	165.0	286.0	MK 3
A53026.0	26.00	1.0236	165.0	286.0	MK 3
A53026.5	26.50	1.0433	165.0	286.0	MK 3
A53027.0	27.00	1.0630	170.0	291.0	MK 3
A53027.5	27.50	1.0827	170.0	291.0	MK 3
A53028.0	28.00	1.1024	170.0	291.0	MK 3
A53028.5	28.50	1.1220	175.0	296.0	MK 3
A53029.0	29.00	1.1417	175.0	296.0	MK 3
A53029.5	29.50	1.1614	175.0	296.0	MK 3
A53030.0	30.00	1.1811	175.0	296.0	MK 3
A53031.0	31.00	1.2205	180.0	301.0	MK 3
A53032.0	32.00	1.2598	185.0	334.0	MK 4
A53033.0	33.00	1.2992	185.0	334.0	MK 4
A53035.0	35.00	1.3780	190.0	339.0	MK 4
A53040.0	40.00	1.5748	200.0	349.0	MK 4

A730

DORMER

HSS-E (8% kobolt) konisk MK-Bor, bronzehærdet finish

Anbefales til vanskelige materialer og anvendelser. 118°-spids giver et stærkt punkt, der er let at bruge. Velegnet til boring af mange materialer. Bronzefinishen er et tyndt oxidlag, og det er en indikation for kobolt.



HSS-E	DIN 345	4×D
118°	Bronze	
20-35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 36 H	P1.2 40 H	P1.3 41 H	P2.1 31 H	P2.2 27 G	P2.3 24 E	P3.1 25 F	P3.2 20 F	P3.3 17 E	P4.1 15 F	P4.2 13 E	P4.3 10 D	M1.1 33 E	M1.2 28 E
M2.1 29 E	M2.2 24 E	M3.1 13 G	M3.2 11 G	M3.3 10 G	M4.1 17 C	K1.1 35 J	K1.2 26 G	K1.3 19 G	K2.1 27 E	K2.2 22 E	K2.3 18 E	K3.1 24 E	K3.2 18 E
K3.3 15 E	K4.1 22 E	K4.2 17 E	K4.3 12 E	K4.4 11 E	K4.5 9 E	K5.1 25 E	K5.2 19 E	K5.3 15 E	N1.1 33 J	N1.2 25 J	N1.3 17 I	N2.1 46 H	N2.2 42 H
N2.3 30 H	N3.1 68 H	N3.2 40 J	N3.3 20 L	N4.1 35 K	N4.2 28 J	N4.3 20 H	S1.1 28 G	S1.2 20 D	S1.3 11 C	S2.1 9 E	S2.2 8 B	S3.1 7 E	S3.2 6 B
S4.1 5 E	S4.2 5 B												

DC > = 14 mm udspidsede

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A73010.0	10.00	0.3937	87.0	168.0	MK 1
A73010.2	10.20	0.4016	87.0	168.0	MK 1
A73010.5	10.50	0.4134	87.0	168.0	MK 1
A73010.8	10.80	0.4252	94.0	175.0	MK 1
A73011.0	11.00	0.4331	94.0	175.0	MK 1
A73011.5	11.50	0.4528	94.0	175.0	MK 1
A73011.8	11.80	0.4646	94.0	175.0	MK 1
A73012.0	12.00	0.4724	101.0	182.0	MK 1
A73012.2	12.20	0.4803	101.0	182.0	MK 1
A73012.5	12.50	0.4921	101.0	182.0	MK 1
A73012.8	12.80	0.5039	101.0	182.0	MK 1
A73013.0	13.00	0.5118	101.0	182.0	MK 1
A73013.5	13.50	0.5315	108.0	189.0	MK 1
A73013.8	13.80	0.5433	108.0	189.0	MK 1
A73014.0	14.00	0.5512	108.0	189.0	MK 1
A73014.25	14.25	0.5610	114.0	212.0	MK 2
A73014.5	14.50	0.5709	114.0	212.0	MK 2
A73014.75	14.75	0.5807	114.0	212.0	MK 2
A73015.0	15.00	0.5906	114.0	212.0	MK 2
A73015.25	15.25	0.6004	120.0	218.0	MK 2
A73015.5	15.50	0.6102	120.0	218.0	MK 2
A73015.75	15.75	0.6201	120.0	218.0	MK 2
A73016.0	16.00	0.6299	120.0	218.0	MK 2

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A73016.25	16.25	0.6398	120.0	218.0	MK 2
A73016.5	16.50	0.6496	125.0	223.0	MK 2
A73017.0	17.00	0.6693	125.0	223.0	MK 2
A73017.25	17.25	0.6791	130.0	228.0	MK 2
A73017.5	17.50	0.6890	130.0	228.0	MK 2
A73017.75	17.75	0.6988	130.0	228.0	MK 2
A73018.0	18.00	0.7087	130.0	228.0	MK 2
A73018.25	18.25	0.7185	135.0	233.0	MK 2
A73018.5	18.50	0.7283	135.0	233.0	MK 2
A73018.75	18.75	0.7382	135.0	233.0	MK 2
A73019.0	19.00	0.7480	135.0	233.0	MK 2
A73019.25	19.25	0.7579	140.0	238.0	MK 2
A73019.5	19.50	0.7677	140.0	238.0	MK 2
A73019.75	19.75	0.7776	140.0	238.0	MK 2
A73020.0	20.00	0.7874	140.0	238.0	MK 2
A73020.25	20.25	0.7972	145.0	243.0	MK 2
A73020.5	20.50	0.8071	145.0	243.0	MK 2
A73020.75	20.75	0.8169	145.0	243.0	MK 2
A73021.0	21.00	0.8268	145.0	243.0	MK 2
A73021.5	21.50	0.8465	150.0	248.0	MK 2
A73022.0	22.00	0.8661	150.0	248.0	MK 2
A73022.5	22.50	0.8858	155.0	253.0	MK 2
A73023.0	23.00	0.9055	155.0	253.0	MK 2

Product	DC	DC	LCF	OAL	CZC MS
	(mm)	(inch)	(mm)	(mm)	
A73023.5	23.50	0.9252	155.0	276.0	MK 3
A73024.0	24.00	0.9449	160.0	281.0	MK 3
A73024.5	24.50	0.9646	160.0	281.0	MK 3
A73025.0	25.00	0.9843	160.0	281.0	MK 3
A73025.5	25.50	1.0039	165.0	286.0	MK 3
A73026.0	26.00	1.0236	165.0	286.0	MK 3
A73026.5	26.50	1.0433	165.0	286.0	MK 3
A73027.0	27.00	1.0630	170.0	291.0	MK 3

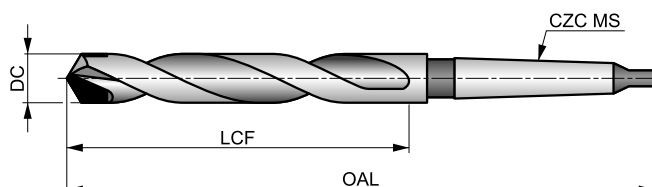
Product	DC	DC	LCF	OAL	CZC MS
	(mm)	(inch)	(mm)	(mm)	
A73027.5	27.50	1.0827	170.0	291.0	MK 3
A73028.0	28.00	1.1024	170.0	291.0	MK 3
A73028.5	28.50	1.1220	175.0	296.0	MK 3
A73029.0	29.00	1.1417	175.0	296.0	MK 3
A73030.0	30.00	1.1811	175.0	296.0	MK 3
A73031.0	31.00	1.2205	180.0	301.0	MK 3
A73032.0	32.00	1.2598	185.0	334.0	MK 4

A166

DORMER

HSS MK Bor, damphærdet finish med hårdlodet hårdmetal

Loddet hårdmetalspids giver den højere ydeevne med en stærk HSS-krop. Den har et 118° spids med fire facetter, som hjælper med selvcentrering og er let at genopslive, hvilket gør det til et økonomisk valg ved boring af støbejernsmaterialer.



HSS HM	DIN 345	4xD
118°	Bright ST	
20-35°	R	DC h8

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 73 E	P1.2 82 E	P1.3 85 E	P2.1 63 E	P2.2 55 D	P2.3 49 C	P3.1 59 D	P3.2 47 D	P3.3 40 C	P4.1 35 D	P4.2 30 C	P4.3 24 A	M1.1 55 B	M1.2 46 B
M2.1 49 B	M2.2 40 B	M3.1 41 C	M3.2 35 C	M3.3 32 C	M4.1 35 A	K1.1 50 C	K1.2 37 C	K1.3 28 C	K2.1 43 C	K2.2 35 C	K2.3 28 A	K3.1 38 C	K3.2 29 C
K3.3 24 A	K4.1 35 C	K4.2 27 C	K4.3 20 A	K4.4 17 A	K4.5 14 A	K5.1 40 C	K5.2 30 C	K5.3 23 A	N1.1 50 I	N1.2 38 I	N1.3 25 H	N2.1 62 G	N2.2 55 G
N2.3 40 G	N3.1 127 C	N3.2 75 G	N3.3 38 D	N4.2 60 E	S1.1 35 A	S1.2 35 A	S1.3 25 A	S2.1 33 A	S2.2 28 A	S3.1 25 A	S3.2 20 A	S4.1 20 A	S4.2 16 A

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A16610.0	10.00	0.3937	87.0	168.0	MK 1
A16610.5	10.50	0.4134	87.0	168.0	MK 1
A16611.0	11.00	0.4331	94.0	175.0	MK 1
A16611.5	11.50	0.4528	94.0	175.0	MK 1
A16612.0	12.00	0.4724	101.0	182.0	MK 1
A16613.0	13.00	0.5118	101.0	182.0	MK 1
A16613.5	13.50	0.5315	108.0	189.0	MK 1
A16614.0	14.00	0.5512	108.0	189.0	MK 1
A16615.0	15.00	0.5906	114.0	212.0	MK 2
A16616.0	16.00	0.6299	120.0	218.0	MK 2
A16617.0	17.00	0.6693	125.0	223.0	MK 2
A16617.5	17.50	0.6890	130.0	228.0	MK 2
A16618.0	18.00	0.7087	130.0	228.0	MK 2
A16619.0	19.00	0.7480	135.0	233.0	MK 2

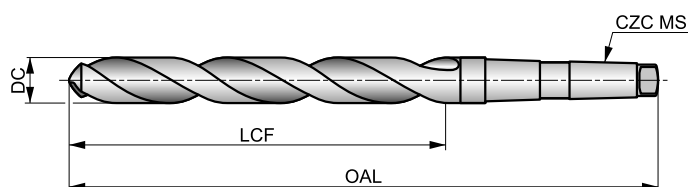
Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A16620.0	20.00	0.7874	140.0	238.0	MK 2
A16621.0	21.00	0.8268	145.0	243.0	MK 2
A16622.0	22.00	0.8661	150.0	248.0	MK 2
A16622.5	22.50	0.8858	155.0	253.0	MK 2
A16623.0	23.00	0.9055	155.0	253.0	MK 2
A16624.0	24.00	0.9449	160.0	281.0	MK 3
A16625.0	25.00	0.9843	160.0	281.0	MK 3
A16626.0	26.00	1.0236	165.0	286.0	MK 3
A16627.0	27.00	1.0630	170.0	291.0	MK 3
A16628.0	28.00	1.1024	170.0	291.0	MK 3
A16629.0	29.00	1.1417	175.0	296.0	MK 3
A16630.0	30.00	1.1811	175.0	296.0	MK 3
A16632.0	32.00	1.2598	185.0	334.0	MK 4
A16633.0	33.00	1.2992	185.0	334.0	MK 4

A350

DORMER

HSS Lang Serie MK-Skaft Bor, Dampanløbet Finish

Anbefales til boring af dybe huller eller til applikationer, hvor øget rækkevidde er påkrævet. Damphærdet finish bevarer skærevæske og forhindrer svejsning af spån til værktøj. En vinkel på 118° er let at genopgradere og giver styrke. Velegnet til boring af mange materialer.



HSS	DIN 341	6xD
118°	ST	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 27 I	P1.2 ■ 30 I	P1.3 ■ 31 I	P2.1 ■ 23 I	P2.2 ■ 20 G	P2.3 ■ 18 E	P3.1 ■ 15 F	P3.2 ■ 12 F	P3.3 ■ 10 E	P4.1 ■ 9 F	P4.2 ■ 7 E	P4.3 ■ 6 D	M1.1 ■ 18 E	M1.2 ■ 15 E
M2.1 ■ 16 E	M2.2 ■ 13 E	M3.1 ■ 5 G	M3.2 ■ 4 G	M3.3 ■ 4 G	M4.1 ■ 8 C	K1.1 ■ 26 I	K1.2 ■ 19 F	K1.3 ■ 14 F	K2.1 ■ 22 E	K2.2 ■ 18 E	K2.3 ■ 14 E	K3.1 ■ 20 E	K3.2 ■ 15 E
K3.3 ■ 12 E	K4.1 ■ 18 E	K4.2 ■ 14 E	K4.3 ■ 10 E	K4.4 ■ 9 E	K4.5 ■ 7 E	K5.1 ■ 21 E	K5.2 ■ 15 E	K5.3 ■ 12 E	N1.1 ■ 33 J	N1.2 ■ 25 J	N1.3 ■ 17 I	N2.1 ■ 42 H	N2.2 ■ 37 H
N2.3 ■ 27 H	N3.1 ■ 59 H	N3.2 ■ 35 I	N3.3 ■ 18 F	N4.1 ■ 35 L	N4.2 ■ 26 J	N4.3 ■ 12 H	S1.1 ■ 16 F	S1.2 ■ 9 D	S1.3 ■ 5 B	S2.1 ■ 5 E	S2.2 ■ 4 A	S3.1 ■ 4 E	S3.2 ■ 3 A
S4.1 ■ 3 E	S4.2 ■ 2 A												

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A3505.0	5.00	0.1969	74.0	155.0	MK 1
A3505.5	5.50	0.2165	80.0	161.0	MK 1
A3506.0	6.00	0.2362	80.0	161.0	MK 1
A3506.7	6.70	0.2638	86.0	167.0	MK 1
A3506.8	6.80	0.2677	93.0	174.0	MK 1
A3507.0	7.00	0.2756	93.0	174.0	MK 1
A3507.5	7.50	0.2953	93.0	174.0	MK 1
A3508.0	8.00	0.3150	100.0	181.0	MK 1
A3508.4	8.40	0.3307	100.0	181.0	MK 1
A3508.5	8.50	0.3346	100.0	181.0	MK 1
A3508.75	8.75	0.3445	107.0	188.0	MK 1
A3509.0	9.00	0.3543	107.0	188.0	MK 1
A3509.5	9.50	0.3740	107.0	188.0	MK 1
A3509.8	9.80	0.3858	116.0	197.0	MK 1
A35010.0	10.00	0.3937	116.0	197.0	MK 1
A35010.2	10.20	0.4016	116.0	197.0	MK 1
A35010.5	10.50	0.4134	116.0	197.0	MK 1
A35010.7	10.70	0.4213	125.0	206.0	MK 1
A35011.0	11.00	0.4331	125.0	206.0	MK 1
A35011.5	11.50	0.4528	125.0	206.0	MK 1
A35011.75	11.75	0.4626	125.0	206.0	MK 1
A35011.8	11.80	0.4646	125.0	206.0	MK 1
A35012.0	12.00	0.4724	134.0	215.0	MK 1
A35012.5	12.50	0.4921	134.0	215.0	MK 1

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A35013.0	13.00	0.5118	134.0	215.0	MK 1
A35013.5	13.50	0.5315	142.0	223.0	MK 1
A35014.0	14.00	0.5512	142.0	223.0	MK 1
A35014.25	14.25	0.5610	147.0	245.0	MK 2
A35014.5	14.50	0.5709	147.0	245.0	MK 2
A35014.75	14.75	0.5807	147.0	245.0	MK 2
A35015.0	15.00	0.5906	147.0	245.0	MK 2
A35015.25	15.25	0.6004	153.0	251.0	MK 2
A35015.5	15.50	0.6102	153.0	251.0	MK 2
A35015.75	15.75	0.6201	153.0	251.0	MK 2
A35016.0	16.00	0.6299	153.0	251.0	MK 2
A35016.25	16.25	0.6398	159.0	257.0	MK 2
A35016.5	16.50	0.6496	159.0	257.0	MK 2
A35016.75	16.75	0.6594	159.0	257.0	MK 2
A35017.0	17.00	0.6693	159.0	257.0	MK 2
A35017.25	17.25	0.6791	165.0	263.0	MK 2
A35017.5	17.50	0.6890	165.0	263.0	MK 2
A35018.0	18.00	0.7087	165.0	263.0	MK 2
A35018.5	18.50	0.7283	171.0	269.0	MK 2
A35019.0	19.00	0.7480	171.0	269.0	MK 2
A35019.5	19.50	0.7677	177.0	275.0	MK 2
A35019.75	19.75	0.7776	177.0	275.0	MK 2
A35020.0	20.00	0.7874	177.0	275.0	MK 2
A35020.25	20.25	0.7972	184.0	282.0	MK 2

Product	DC	DC	LCF	OAL	CZC MS
	(mm)	(inch)	(mm)	(mm)	
A35020.5	20.50	0.8071	184.0	282.0	MK 2
A35021.0	21.00	0.8268	184.0	282.0	MK 2
A35021.5	21.50	0.8465	191.0	289.0	MK 2
A35022.0	22.00	0.8661	191.0	289.0	MK 2
A35022.5	22.50	0.8858	198.0	296.0	MK 2
A35023.0	23.00	0.9055	198.0	296.0	MK 2
A35023.5	23.50	0.9252	198.0	319.0	MK 3
A35024.0	24.00	0.9449	206.0	327.0	MK 3
A35024.5	24.50	0.9646	206.0	327.0	MK 3
A35025.0	25.00	0.9843	206.0	327.0	MK 3
A35025.5	25.50	1.0039	214.0	335.0	MK 3
A35026.0	26.00	1.0236	214.0	335.0	MK 3
A35026.5	26.50	1.0433	214.0	335.0	MK 3
A35027.0	27.00	1.0630	222.0	343.0	MK 3
A35027.5	27.50	1.0827	222.0	343.0	MK 3
A35028.0	28.00	1.1024	222.0	343.0	MK 3
A35029.0	29.00	1.1417	230.0	351.0	MK 3
A35030.0	30.00	1.1811	230.0	351.0	MK 3
A35030.5	30.50	1.2008	239.0	360.0	MK 3
A35031.0	31.00	1.2205	239.0	360.0	MK 3

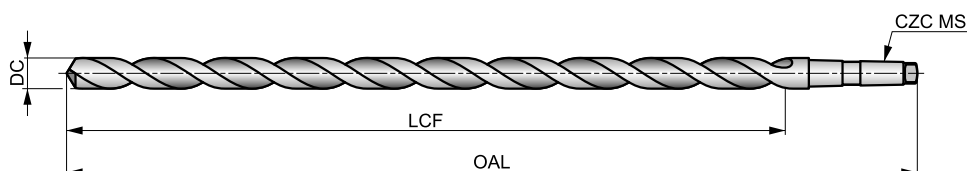
Product	DC	DC	LCF	OAL	CZC MS
	(mm)	(inch)	(mm)	(mm)	
A35031.5	31.50	1.2402	239.0	360.0	MK 3
A35032.0	32.00	1.2598	248.0	397.0	MK 4
A35033.0	33.00	1.2992	248.0	397.0	MK 4
A35034.0	34.00	1.3386	257.0	406.0	MK 4
A35035.0	35.00	1.3780	257.0	406.0	MK 4
A35036.0	36.00	1.4173	267.0	416.0	MK 4
A35037.0	37.00	1.4567	267.0	416.0	MK 4
A35038.0	38.00	1.4961	277.0	426.0	MK 4
A35039.0	39.00	1.5354	277.0	426.0	MK 4
A35040.0	40.00	1.5748	277.0	426.0	MK 4
A35041.0	41.00	1.6142	287.0	436.0	MK 4
A35042.0	42.00	1.6535	287.0	436.0	MK 4
A35043.0	43.00	1.6929	298.0	447.0	MK 4
A35044.0	44.00	1.7323	298.0	447.0	MK 4
A35045.0	45.00	1.7717	298.0	447.0	MK 4
A35046.0	46.00	1.8110	310.0	459.0	MK 4
A35047.0	47.00	1.8504	310.0	459.0	MK 4
A35048.0	48.00	1.8898	321.0	470.0	MK 4
A35050.0	50.00	1.9685	321.0	470.0	MK 4

A345

DORMER

PFX HSS-E (5% kobolt) ekstra langt bor (DIN 1870 serie 1), blank finish

Anbefales til boring af meget dybe huller eller til applikationer, hvor øget rækkevidde er påkrævet. En vinkel på 118° er let at bore med og giver styrke. Damphærdet finish bevarer skærevæske og forhindrer svejsning fra spån til værktøj. Velegnet til boring af mange materialer.



HSS	DIN 1870(1)	10xD
118°	ST	
λ 20-35°	R	DC h8

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 23 G	P1.2 ■ 25 G	P1.3 ■ 26 G	P2.1 ■ 19 G	P2.2 ■ 17 E	P2.3 ■ 15 C	P3.1 ■ 9 D	P3.2 ■ 7 D	P3.3 ■ 6 C	P4.1 ■ 5 D	P4.2 ■ 4 C	P4.3 ■ 4 B	M1.1 ■ 16 C	M1.2 ■ 14 C
M2.1 ■ 15 C	M2.2 ■ 12 C	M3.1 ■ 5 E	M3.2 ■ 4 E	M3.3 ■ 4 E	M4.1 ■ 8 A	K1.1 ■ 22 G	K1.2 ■ 16 D	K1.3 ■ 12 D	K2.1 ■ 16 C	K2.2 ■ 13 C	K2.3 ■ 10 C	K3.1 ■ 14 C	K3.2 ■ 11 C
K3.3 ■ 9 C	K4.1 ■ 13 C	K4.2 ■ 10 C	K4.3 ■ 7 C	K4.4 ■ 6 C	K4.5 ■ 5 C	K5.1 ■ 15 C	K5.2 ■ 11 C	K5.3 ■ 9 C	N1.1 ■ 33 H	N1.2 ■ 25 H	N1.3 ■ 17 G	N2.1 ■ 42 F	N2.2 ■ 37 F
N2.3 ■ 27 F	N3.1 ■ 56 F	N3.2 ■ 33 G	N3.3 ■ 17 D	N4.1 ■ 30 J	N4.2 ■ 30 H	N4.3 ■ 10 F	S1.1 ■ 15 D	S1.2 ■ 9 B	S1.3 ■ 5 A	S2.1 ■ 5 C	S2.2 ■ 4 A	S3.1 ■ 4 C	S3.2 ■ 3 A
S4.1 ■ 3 C	S4.2 ■ 2 A												

DC > 25,4mm mindre end 10xD.

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A3458.0	—	8.00	0.3150	165.0	265.0	MK 1
A3458.5	—	8.50	0.3346	165.0	265.0	MK 1
A3459.0	—	9.00	0.3543	175.0	275.0	MK 1
A3459.5	—	9.50	0.3740	175.0	275.0	MK 1
A3453/8	3/8	9.52	0.3750	185.0	285.0	MK 1
A34510.0	—	10.00	0.3937	185.0	285.0	MK 1
A34513/32	13/32	10.32	0.4063	185.0	285.0	MK 1
A34510.5	—	10.50	0.4134	185.0	285.0	MK 1
A34511.0	—	11.00	0.4331	195.0	300.0	MK 1
A3457/16	7/16	11.11	0.4375	195.0	300.0	MK 1
A34511.5	—	11.50	0.4528	195.0	300.0	MK 1
A34529/64	29/64	11.51	0.4531	205.0	310.0	MK 1
A34512.0	—	12.00	0.4724	205.0	310.0	MK 1
A34512.5	—	12.50	0.4921	205.0	310.0	MK 1
A3451/2	1/2	12.70	0.5000	205.0	310.0	MK 1
A34513.0	—	13.00	0.5118	205.0	310.0	MK 1
A34517/32	17/32	13.49	0.5313	220.0	325.0	MK 1
A34513.5	—	13.50	0.5315	220.0	325.0	MK 1
A34514.0	—	14.00	0.5512	220.0	325.0	MK 1
A3459/16	9/16	14.29	0.5625	220.0	340.0	MK 2
A34537/64	37/64	14.68	0.5781	220.0	340.0	MK 2
A34515.0	—	15.00	0.5906	220.0	340.0	MK 2
A34539/64	39/64	15.48	0.6094	230.0	355.0	MK 2

Product	DC (inch)	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A34515.5	—	15.50	0.6102	230.0	355.0	MK 2
A3455/8	5/8	15.88	0.6250	230.0	355.0	MK 2
A34516.0	—	16.00	0.6299	230.0	355.0	MK 2
A34541/64	41/64	16.27	0.6406	230.0	355.0	MK 2
A34516.5	—	16.50	0.6496	230.0	355.0	MK 2
A34521/32	21/32	16.67	0.6563	230.0	355.0	MK 2
A34517.0	—	17.00	0.6693	230.0	355.0	MK 2
A34511/16	11/16	17.46	0.6875	245.0	370.0	MK 2
A34517.5	—	17.50	0.6890	245.0	370.0	MK 2
A34518.0	—	18.00	0.7087	245.0	370.0	MK 2
A34518.5	—	18.50	0.7283	245.0	370.0	MK 2
A34519.0	—	19.00	0.7480	245.0	370.0	MK 2
A3453/4	3/4	19.05	0.7500	260.0	385.0	MK 2
A34519.5	—	19.50	0.7677	260.0	385.0	MK 2
A34520.0	—	20.00	0.7874	260.0	385.0	MK 2
A34520.5	—	20.50	0.8071	260.0	385.0	MK 2
A34521.0	—	21.00	0.8268	260.0	385.0	MK 2
A34521.5	—	21.50	0.8465	270.0	405.0	MK 2
A34522.0	—	22.00	0.8661	270.0	405.0	MK 2
A3457/8	7/8	22.22	0.8750	270.0	405.0	MK 2
A34522.5	—	22.50	0.8858	270.0	405.0	MK 3
A34523.0	—	23.00	0.9055	270.0	405.0	MK 3
A34523.5	—	23.50	0.9252	270.0	425.0	MK 3

Product	DC	DC	DC	LCF	OAL	CZC MS
	(inch)	(mm)	(inch)	(mm)	(mm)	
A34524.0	—	24.00	0.9449	290.0	440.0	MK 3
A34524.5	—	24.50	0.9646	290.0	440.0	MK 3
A34525.0	—	25.00	0.9843	290.0	440.0	MK 3
A3451	1"	25.40	1.0000	290.0	440.0	MK 3
A34525.5	—	25.50	1.0039	290.0	440.0	MK 3
A34526.0	—	26.00	1.0236	290.0	440.0	MK 3
A34526.5	—	26.50	1.0433	290.0	440.0	MK 3
A34527.0	—	27.00	1.0630	305.0	460.0	MK 3
A34528.0	—	28.00	1.1024	305.0	460.0	MK 3
A34529.0	—	29.00	1.1417	305.0	460.0	MK 3
A34530.0	—	30.00	1.1811	305.0	460.0	MK 3
A3451.1/4	1.1/4	31.75	1.2500	320.0	480.0	MK 3

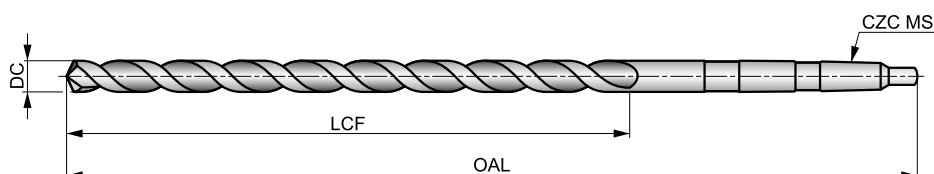
Product	DC	DC	DC	LCF	OAL	CZC MS
	(inch)	(mm)	(inch)	(mm)	(mm)	
A34531.0	—	31.00	1.2205	320.0	480.0	MK 3
A34532.0	—	32.00	1.2598	320.0	505.0	MK 4
A34533.0	—	33.00	1.2992	320.0	505.0	MK 4
A34534.0	—	34.00	1.3386	340.0	530.0	MK 4
A34535.0	—	35.00	1.3780	340.0	530.0	MK 4
A34536.0	—	36.00	1.4173	340.0	530.0	MK 4
A34537.0	—	37.00	1.4567	340.0	530.0	MK 4
A34538.0	—	38.00	1.4961	360.0	555.0	MK 4
A3451.1/2	1.1/2	38.10	1.5000	360.0	555.0	MK 4
A34539.0	—	39.00	1.5354	360.0	555.0	MK 4
A34540.0	—	40.00	1.5748	360.0	555.0	MK 4

A951

DORMER

HSS PFX ekstra lang serie MK skaftbor (DIN 1870 serie 1), blank finish

Et alsidig bor med et specielt parabolisk skærdesign til boring af dybe huller i en enkelt passage. Boret har et selvcentrerende 130° spids (det anbefales at centrere med en kort PFX-bor), så den krævede kraft til at bore hullet reduceres. Velegnet til boring af mange materialer.



HSS	DIN 1870(1)	15×D
130°	Bright ST	
λ>35°	R	DC h8

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 25 G	P1.2 ■ 28 G	P1.3 ■ 29 G	P2.1 ■ 22 G	P2.2 ■ 19 E	P2.3 ■ 17 C	P3.1 ■ 12 D	P3.2 ■ 9 D	P3.3 ■ 8 C	P4.1 ■ 7 D	P4.2 ■ 6 C	P4.3 ■ 5 B	M1.1 ■ 16 C	M1.2 ■ 14 C
M2.1 ■ 15 C	M2.2 ■ 12 C	M3.1 ■ 7 E	M3.2 ■ 6 E	M3.3 ■ 5 E	M4.1 ■ 12 A	K1.1 ■ 22 G	K1.2 ■ 16 D	K1.3 ■ 12 D	K2.1 ■ 16 C	K2.2 ■ 13 C	K2.3 ■ 10 C	K3.1 ■ 14 C	K3.2 ■ 11 C
K3.3 ■ 9 C	K4.1 ■ 13 C	K4.2 ■ 10 C	K4.3 ■ 7 C	K4.4 ■ 6 C	K4.5 ■ 5 C	K5.1 ■ 15 C	K5.2 ■ 11 C	K5.3 ■ 9 C	N1.1 ■ 30 H	N1.2 ■ 23 H	N1.3 ■ 15 G	N2.1 ■ 37 F	N2.2 ■ 33 F
N2.3 ■ 24 F	N3.1 ■ 56 F	N3.2 ■ 33 G	N3.3 ■ 17 D	N4.1 ■ 30 J	N4.2 ■ 30 H	N4.3 ■ 10 F	S1.1 ■ 18 D	S1.2 ■ 10 B	S1.3 ■ 6 A	S2.1 ■ 7 C	S2.2 ■ 4 A	S3.1 ■ 5 C	S3.2 ■ 3 A
S4.1 ■ 4 C	S4.2 ■ 2 A												

DC> = 14,5 mm mindre end 15xD; DC >23 mm blank.

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A95110.0	10.00	0.3937	185.0	285.0	MK 1
A95111.0	11.00	0.4331	195.0	300.0	MK 1
A95112.0	12.00	0.4724	205.0	310.0	MK 1
A95112.5	12.50	0.4921	205.0	310.0	MK 1
A95113.0	13.00	0.5118	205.0	310.0	MK 1
A95113.5	13.50	0.5315	220.0	325.0	MK 1
A95114.0	14.00	0.5512	220.0	325.0	MK 1
A95114.5	14.50	0.5709	220.0	340.0	MK 2
A95115.0	15.00	0.5906	220.0	340.0	MK 2
A95115.5	15.50	0.6102	230.0	355.0	MK 2
A95116.0	16.00	0.6299	230.0	355.0	MK 2
A95116.5	16.50	0.6496	230.0	355.0	MK 2
A95117.0	17.00	0.6693	230.0	355.0	MK 2
A95117.5	17.50	0.6890	245.0	370.0	MK 2
A95118.0	18.00	0.7087	245.0	370.0	MK 2

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A95118.5	18.50	0.7283	245.0	370.0	MK 2
A95119.0	19.00	0.7480	245.0	370.0	MK 2
A95119.5	19.50	0.7677	260.0	385.0	MK 2
A95120.0	20.00	0.7874	260.0	385.0	MK 2
A95121.0	21.00	0.8268	260.0	385.0	MK 2
A95122.0	22.00	0.8661	270.0	405.0	MK 2
A95123.0	23.00	0.9055	270.0	405.0	MK 2
A95124.0	24.00	0.9449	290.0	440.0	MK 3
A95125.0	25.00	0.9843	290.0	440.0	MK 3
A95126.0	26.00	1.0236	290.0	440.0	MK 3
A95127.0	27.00	1.0630	305.0	460.0	MK 3
A95128.0	28.00	1.1024	305.0	460.0	MK 3
A95129.0	29.00	1.1417	305.0	460.0	MK 3
A95130.0	30.00	1.1811	305.0	460.0	MK 3

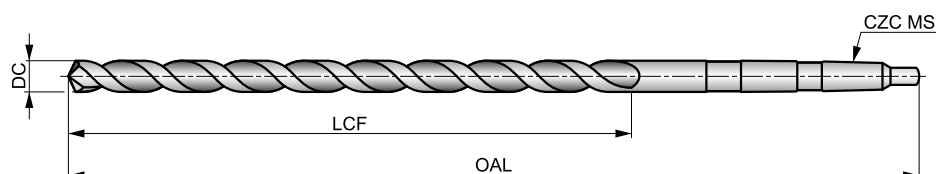
A952

DORMER



HSS PFX ekstra lang serie MK skaftbor (DIN 1870 serie 2), blank finish

Et alsidig bor med et specielt parabolisk skærdesign til boring af dybe huller i en enkelt passage. Boret har et selvcentrerende 130° spids (det anbefales at centrere med en kort PFX-bor), så den krævede kraft til at bore hullet reduceres. Velegnet til boring af mange materialer.



HSS	DIN 1870(2)	20xD
130°	Bright ST	
$\lambda > 35^\circ$	R	DC h8

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 25 G	P1.2 ■ 28 G	P1.3 ■ 29 G	P2.1 ■ 22 G	P2.2 ■ 19 E	P2.3 ■ 17 C	P3.1 ■ 12 D	P3.2 ■ 9 D	P3.3 ■ 8 C	P4.1 ■ 7 D	P4.2 ■ 6 C	P4.3 ■ 5 B	M1.1 ■ 16 C	M1.2 ■ 14 C
M2.1 ■ 15 C	M2.2 ■ 12 C	M3.1 ■ 7 E	M3.2 ■ 6 E	M3.3 ■ 5 E	M4.1 ■ 12 A	K1.1 ■ 22 G	K1.2 ■ 16 D	K1.3 ■ 12 D	K2.1 ■ 16 C	K2.2 ■ 13 C	K2.3 ■ 10 C	K3.1 ■ 14 C	K3.2 ■ 11 C
K3.3 ■ 9 C	K4.1 ■ 13 C	K4.2 ■ 10 C	K4.3 ■ 7 C	K4.4 ■ 6 C	K4.5 ■ 5 C	K5.1 ■ 15 C	K5.2 ■ 11 C	K5.3 ■ 9 C	N1.1 ■ 30 H	N1.2 ■ 23 H	N1.3 ■ 15 G	N2.1 ■ 37 F	N2.2 ■ 33 F
N2.3 ■ 24 F	N3.1 ■ 56 F	N3.2 ■ 33 G	N3.3 ■ 17 D	N4.1 ■ 30 J	N4.2 ■ 30 H	N4.3 ■ 10 F	S1.1 ■ 18 D	S1.2 ■ 10 B	S1.3 ■ 6 A	S2.1 ■ 7 C	S2.2 ■ 4 A	S3.1 ■ 5 C	S3.2 ■ 3 A
S4.1 ■ 4 C	S4.2 ■ 2 A												

DC > = 14,5 mm mindre end 20xD; DC > 23 mm blank.

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A9528.0	8.00	0.3150	210.0	330.0	MK 1
A9528.5	8.50	0.3346	210.0	330.0	MK 1
A9529.0	9.00	0.3543	220.0	345.0	MK 1
A95210.0	10.00	0.3937	235.0	360.0	MK 1
A95210.5	10.50	0.4134	235.0	360.0	MK 1
A95211.0	11.00	0.4331	250.0	375.0	MK 1
A95211.5	11.50	0.4528	250.0	375.0	MK 1
A95212.0	12.00	0.4724	260.0	395.0	MK 1
A95212.5	12.50	0.4921	260.0	395.0	MK 1
A95213.0	13.00	0.5118	260.0	395.0	MK 1
A95213.5	13.50	0.5315	275.0	410.0	MK 1
A95214.0	14.00	0.5512	275.0	410.0	MK 1
A95214.5	14.50	0.5709	275.0	425.0	MK 2
A95215.0	15.00	0.5906	275.0	425.0	MK 2
A95215.5	15.50	0.6102	295.0	445.0	MK 2
A95216.0	16.00	0.6299	295.0	445.0	MK 2
A95216.5	16.50	0.6496	295.0	445.0	MK 2
A95217.0	17.00	0.6693	295.0	445.0	MK 2
A95217.5	17.50	0.6890	310.0	465.0	MK 2
A95218.0	18.00	0.7087	310.0	465.0	MK 2
A95218.5	18.50	0.7283	310.0	465.0	MK 2

Product	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	CZC MS
A95219.0	19.00	0.7480	310.0	465.0	MK 2
A95219.5	19.50	0.7677	325.0	490.0	MK 2
A95220.0	20.00	0.7874	325.0	490.0	MK 2
A95221.0	21.00	0.8268	325.0	490.0	MK 2
A95222.0	22.00	0.8661	345.0	515.0	MK 2
A95223.0	23.00	0.9055	345.0	515.0	MK 2
A95224.0	24.00	0.9449	365.0	555.0	MK 3
A95225.0	25.00	0.9843	365.0	555.0	MK 3
A95226.0	26.00	1.0236	365.0	555.0	MK 3
A95227.0	27.00	1.0630	385.0	580.0	MK 3
A95228.0	28.00	1.1024	385.0	580.0	MK 3
A95229.0	29.00	1.1417	385.0	580.0	MK 3
A95230.0	30.00	1.1811	385.0	580.0	MK 3
A95231.0	31.00	1.2205	410.0	610.0	MK 3
A95232.0	32.00	1.2598	410.0	635.0	MK 4
A95233.0	33.00	1.2992	410.0	635.0	MK 4
A95234.0	34.00	1.3386	430.0	665.0	MK 4
A95235.0	35.00	1.3780	430.0	665.0	MK 4
A95238.0	38.00	1.4961	460.0	695.0	MK 4
A95240.0	40.00	1.5748	460.0	695.0	MK 4

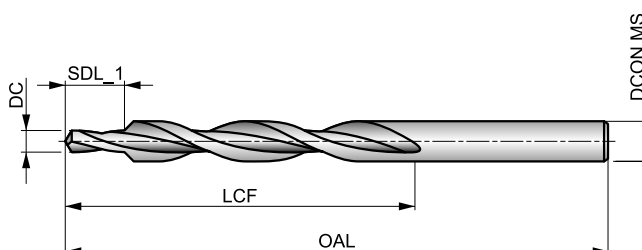
A400

DORMER



HSS Trinbor, damphærdet finish

Et alsidigt værktøj designet til at bore undersænkede frigangshuller til standard metriske skruer. En vinkel på 118° på boret spids og en 90° undersænkning. Velegnet til både CNC og konventionelle maskiner. Damphærdet finish bevarer skærevæske og forhindrer svejsning af spån til værktøj. Velegnet til boring af mange materialer.



HSS	DIN 8374	4xD
90°	ST	
λ 20-35°	R	118°

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 29 G	■ 33 G	■ 34 G	■ 25 G	■ 22 E	■ 19 C	■ 15 E	■ 12 E	■ 10 C	■ 9 E	■ 7 C	■ 6 C	■ 22 E	■ 19 E
■ 20 E	■ 16 E	■ 10 G	■ 9 G	■ 8 G	■ 12 C	■ 30 G	■ 22 E	■ 17 E	■ 23 E	■ 19 E	■ 15 C	■ 21 E	■ 16 E
■ 13 C	■ 19 E	■ 14 E	■ 11 C	■ 9 C	■ 8 C	■ 22 E	■ 16 E	■ 13 C	■ 45 E	■ 34 E	■ 23 E	■ 49 E	■ 44 E
■ 32 E	■ 68 E	■ 40 E	■ 20 E	■ 30 I	■ 23 E	■ 14 C	■ 8 A	■ 8 C	■ 6 A	■ 6 C	■ 4 A	■ 5 C	■ 3 A

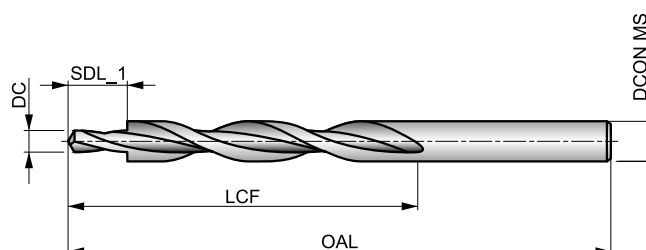
Product	TDZ	DC	DC	LCF	OAL	SDL_1	DCON MS
		(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
A400M3	M3	3.20	0.1260	57.0	93.0	9.00	6.00
A400M4	M4	4.30	0.1693	75.0	117.0	11.00	8.00
A400M5	M5	5.30	0.2087	87.0	133.0	13.00	10.00
A400M6	M6	6.40	0.2520	94.0	142.0	15.00	11.50
A400M8	M8	8.40	0.3307	114.0	169.0	19.00	15.00
A400M10	M10	10.50	0.4134	135.0	198.0	23.00	19.00

A402



HSS trinbor, damphærdet finish

Inkluderer en 118° spids- og 180° udboring med specifik spidsdiameter og -længde, der anbefales til at skabe modborede frigangshuller til standard metriske skruer. Damphærdet finish bevarer skærevæske og forhindrer svejsning fra spån til værktøj. Velegnet til boring af mange materialer.



HSS	DIN 8376	4×D
180°	ST	
λ 20-35°	R	118°

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 29 G	■ 33 G	■ 34 G	■ 25 G	■ 22 E	■ 19 C	■ 15 E	■ 12 E	■ 10 C	■ 9 E	■ 7 C	■ 6 C	■ 22 E	■ 19 E
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
■ 20 E	■ 16 E	■ 10 G	■ 9 G	■ 8 G	■ 12 C	■ 30 G	■ 22 E	■ 17 E	■ 23 E	■ 19 E	■ 15 C	■ 21 E	■ 16 E
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
■ 13 C	■ 19 E	■ 14 E	■ 11 C	■ 9 C	■ 8 C	■ 22 E	■ 16 E	■ 13 C	■ 45 E	■ 34 E	■ 23 E	■ 49 E	■ 44 E
N2.3	N3.1	N3.2	N3.3	N4.1	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2
■ 32 E	■ 68 E	■ 40 E	■ 20 E	■ 30 I	■ 23 E	■ 14 C	■ 8 A	■ 8 C	■ 6 A	■ 6 C	■ 4 A	■ 5 C	■ 3 A

Product	TDZ	DC	DC	LCF	OAL	SDL_1	DCON MS
		(mm)	(inch)	(mm)	(mm)	(mm)	(mm)
A402M3	M3	3.40	0.1339	57.0	93.0	9.00	6.00
A402M4	M4	4.50	0.1772	75.0	117.0	11.00	8.00
A402M5	M5	5.50	0.2165	87.0	133.0	13.00	10.00
A402M6	M6	6.60	0.2598	94.0	142.0	15.00	11.00
A402M8	M8	9.00	0.3543	114.0	169.0	19.00	15.00
A402M10	M10	11.00	0.4331	130.0	191.0	23.00	18.00

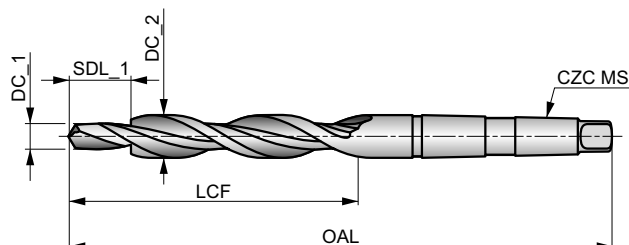
A405

DORMER



HSS trinbor, damphærdet finish

Et alsidigt værktøj, der anbefales til at skabe borede frigangshuller til standard metriske skruer. En 118° spids og 180° udboring. Damphærdet finish bevarer skærevæske og forhindrer svejsning af spån til værktøj. Velegnet til både CNC og konventionelle maskiner. Velegnet til boring af mange materialer.



HSS	DIN 8377	4xD
180°	ST	
λ 20-35°	R	118°

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 29 G	P1.2 ■ 33 G	P1.3 ■ 34 G	P2.1 ■ 25 G	P2.2 ■ 22 E	P2.3 ■ 19 C	P3.1 ■ 15 E	P3.2 ■ 12 E	P3.3 ■ 10 C	P4.1 ■ 9 E	P4.2 ■ 7 C	P4.3 ■ 6 C	M1.1 ■ 22 E	M1.2 ■ 19 E
M2.1 ■ 20 E	M2.2 ■ 16 E	M3.1 ■ 10 G	M3.2 ■ 9 G	M3.3 ■ 8 G	M4.1 ■ 12 C	K1.1 ■ 30 G	K1.2 ■ 22 E	K1.3 ■ 17 E	K2.1 ■ 23 E	K2.2 ■ 19 E	K2.3 ■ 15 C	K3.1 ■ 21 E	K3.2 ■ 16 E
K3.3 ■ 13 C	K4.1 ■ 19 E	K4.2 ■ 14 E	K4.3 ■ 11 C	K4.4 ■ 9 C	K4.5 ■ 8 C	K5.1 ■ 22 E	K5.2 ■ 16 E	K5.3 ■ 13 C	N1.1 ■ 45 E	N1.2 ■ 34 E	N1.3 ■ 23 E	N2.1 ■ 49 E	N2.2 ■ 44 E
N2.3 ■ 32 E	N3.1 ■ 68 E	N3.2 ■ 40 E	N3.3 ■ 20 E	N4.1 ■ 30 I	S1.1 ■ 23 E	S1.2 ■ 14 C	S1.3 ■ 8 A	S2.1 ■ 8 C	S2.2 ■ 6 A	S3.1 ■ 6 C	S3.2 ■ 4 A	S4.1 ■ 5 C	S4.2 ■ 3 A

Product	TDZ	DC_1 (mm)	DC_1 (inch)	DC_2 (mm)	LCF (mm)	OAL (mm)	SDL_1 (mm)	CZC MS
A405M6	M6	6.60	0.2598	11.00	94.0	175.0	15.00	MK 1
A405M8	M8	9.00	0.3543	15.00	114.0	212.0	19.00	MK 2
A405M10	M10	11.00	0.4331	18.00	130.0	228.0	23.00	MK 2
A405M12	M12	13.50	0.5315	20.00	140.0	238.0	27.00	MK 2
A405M14	M14	15.50	0.6102	24.00	160.0	281.0	31.00	MK 3
A405M16	M16	17.50	0.6890	26.00	165.0	286.0	35.00	MK 3
A405M18	M18	20.00	0.7874	30.00	175.0	296.0	39.00	MK 3

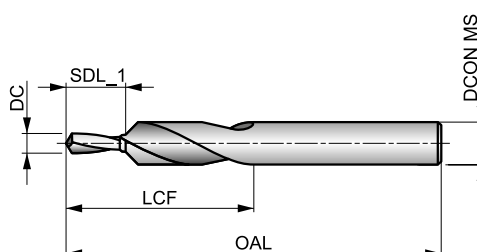
A412

DORMER



HSS tapbor, damphærdet finish

Tapbor designet til at bore affasede frigangshuller til standard metriske skruer. En vinkel på 118° på boret, trin med en 90° affasning. Damphærdet finish bevarer skærevæske og forhindrer svejsning af spån til værktøj. Velegnet til boring af mange materialer. Den er velegnet til både CNC og konventionelle maskiner.



HSS		2.5×D
90°	ST	
R	118°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 29 I	P1.2 ■ 33 I	P1.3 ■ 34 I	P2.1 ■ 25 I	P2.2 ■ 22 G	P2.3 ■ 19 E	P3.1 ■ 15 G	P3.2 ■ 12 G	P3.3 ■ 10 E	P4.1 ■ 9 G	P4.2 ■ 7 E	P4.3 ■ 6 C	M1.1 ■ 22 G	M1.2 ■ 19 G
M2.1 ■ 20 G	M2.2 ■ 16 G	M3.1 ■ 10 I	M3.2 ■ 9 I	M3.3 ■ 8 I	M4.1 ■ 12 E	K1.1 ■ 30 G	K1.2 ■ 22 E	K1.3 ■ 17 E	K2.1 ■ 23 E	K2.2 ■ 19 E	K2.3 ■ 15 E	K3.1 ■ 21 E	K3.2 ■ 16 E
K3.3 ■ 13 E	K4.1 ■ 19 E	K4.2 ■ 14 E	K4.3 ■ 11 E	K4.4 ■ 9 E	K4.5 ■ 8 E	K5.1 ■ 22 E	K5.2 ■ 16 E	K5.3 ■ 13 E	N1.1 ■ 45 G	N1.2 ■ 34 G	N1.3 ■ 23 G	N2.1 ■ 42 G	N2.2 ■ 37 G
N2.3 ■ 27 G	N3.1 ■ 68 G	N3.2 ■ 40 G	N3.3 ■ 20 G	N4.1 ■ 30 I	S1.1 ■ 27 G	S1.2 ■ 16 E	S1.3 ■ 8 C	S2.1 ■ 11 G	S2.2 ■ 6 C	S3.1 ■ 8 G	S3.2 ■ 4 C	S4.1 ■ 6 G	S4.2 ■ 3 C

Product	TDZ	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	SDL_1 (mm)	DCON MS (mm)
A412M3	M3	3.40	0.1339	31.0	70.0	9.00	6.60
A412M4	M4	4.50	0.1772	40.0	84.0	11.00	9.00
A412M5	M5	5.50	0.2165	47.0	95.0	13.00	11.00
A412M6	M6	6.60	0.2598	51.0	102.0	15.00	13.00
A412M8	M8	9.00	0.3543	62.0	123.0	19.00	17.20
A412M10	M10	11.00	0.4331	70.0	141.0	23.00	21.50

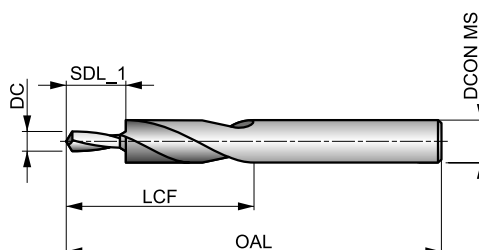
A413

DORMER



HSS trinbor, damphærdet finish

Et alsidigt værktøj, der anbefales til at skabe borede frigangshuller til standard metriske skruer. En 118° spids og 180° udboring. Damphærdet finish bevarer skærevæske og forhindrer svejsning af spån til værktøj. Velegnet til både CNC og konventionelle maskiner. Velegnet til boring af mange materialer.



HSS	DORMER	2.5xD
180°	ST	
R	118°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 29 I	P1.2 ■ 33 I	P1.3 ■ 34 I	P2.1 ■ 25 I	P2.2 ■ 22 G	P2.3 ■ 19 E	P3.1 ■ 15 G	P3.2 ■ 12 G	P3.3 ■ 10 E	P4.1 ■ 9 G	P4.2 ■ 7 E	P4.3 ■ 6 C	M1.1 ■ 22 G	M1.2 ■ 19 G
M2.1 ■ 20 G	M2.2 ■ 16 G	M3.1 ■ 10 I	M3.2 ■ 9 I	M3.3 ■ 8 I	M4.1 ■ 12 E	K1.1 ■ 30 G	K1.2 ■ 22 E	K1.3 ■ 17 E	K2.1 ■ 23 E	K2.2 ■ 19 E	K2.3 ■ 15 E	K3.1 ■ 21 E	K3.2 ■ 16 E
K3.3 ■ 13 E	K4.1 ■ 19 E	K4.2 ■ 14 E	K4.3 ■ 11 E	K4.4 ■ 9 E	K4.5 ■ 8 E	K5.1 ■ 22 E	K5.2 ■ 16 E	K5.3 ■ 13 E	N1.1 ■ 45 G	N1.2 ■ 34 G	N1.3 ■ 23 G	N2.1 ■ 42 G	N2.2 ■ 37 G
N2.3 ■ 27 G	N3.1 ■ 68 G	N3.2 ■ 40 G	N3.3 ■ 20 G	N4.1 ■ 30 I	S1.1 ■ 27 G	S1.2 ■ 16 E	S1.3 ■ 8 C	S2.1 ■ 11 G	S2.2 ■ 6 C	S3.1 ■ 8 G	S3.2 ■ 4 C	S4.1 ■ 6 G	S4.2 ■ 3 C

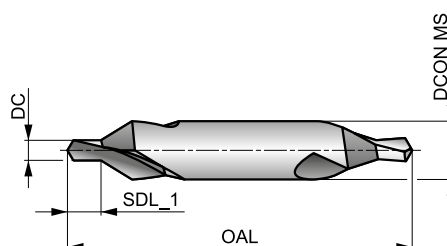
Product	TDZ	DC (mm)	DC (inch)	LCF (mm)	OAL (mm)	SDL_1 (mm)	DCON MS (mm)
A413M3	M3	3.40	0.1339	28.0	66.0	9.00	6.00
A413M4	M4	4.50	0.1772	37.0	79.0	11.00	8.00
A413M5	M5	5.50	0.2165	43.0	89.0	13.00	10.00
A413M6	M6	6.60	0.2598	47.0	95.0	15.00	11.00
A413M8	M8	9.00	0.3543	56.0	111.0	19.00	15.00
A413M10	M10	11.00	0.4331	62.0	123.0	23.00	18.00

A200



HSS Pinolbor med 118° punktsvinkel og 60° undersænkning, blank finish

Anbefales til start af et præcist hul i enden af en aksel, så det kan holdes sikkert inden bearbejdning. De to borender giver øget produktivitet pr. Værktøj. Velegnet til mange materialer.



HSS	DIN 333A	1xD
60°	Bright	
R	118°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 33 I	P1.2 ■ 37 I	P1.3 ■ 38 I	P2.1 ■ 28 I	P2.2 ■ 25 G	P2.3 ■ 22 E	P3.1 ■ 19 F	P3.2 ■ 15 F	P3.3 ■ 13 E	P4.1 ■ 11 F	P4.2 ■ 10 E	P4.3 ■ 8 D	M1.1 ■ 21 E	M1.2 ■ 17 E
M2.1 ■ 18 E	M2.2 ■ 15 E	M3.1 ■ 9 G	M3.2 ■ 8 G	M3.3 ■ 7 G	M4.1 ■ 10 C	K1.1 ■ 30 I	K1.2 ■ 22 F	K1.3 ■ 17 F	K2.1 ■ 25 E	K2.2 ■ 20 E	K2.3 ■ 16 E	K3.1 ■ 22 E	K3.2 ■ 17 E
K3.3 ■ 13 E	K4.1 ■ 20 E	K4.2 ■ 15 E	K4.3 ■ 11 E	K4.4 ■ 10 E	K4.5 ■ 8 E	K5.1 ■ 23 E	K5.2 ■ 17 E	K5.3 ■ 13 E	N1.1 ■ 33 J	N1.2 ■ 25 J	N1.3 ■ 17 I	N2.1 ■ 42 H	N2.2 ■ 37 H
N2.3 ■ 27 H	N3.1 ■ 56 H	N3.2 ■ 33 I	N3.3 ■ 17 G	N4.1 ■ 30 J	N4.2 ■ 28 H	N4.3 ■ 14 F	S1.1 ■ 24 F	S1.2 ■ 13 D	S1.3 ■ 7 B	S2.1 ■ 7 E	S2.2 ■ 6 A	S3.1 ■ 5 E	S3.2 ■ 4 A
S4.1 ■ 4 E	S4.2 ■ 3 A												

Produkter fra denne serie fås også i sæt. Se A296.

Product	DC (mm)	DC (inch)	SDL_1 (mm)	OAL (mm)	DCON MS (mm)
A200.5X3.15 ¹⁾	0.50	0.0197	0.9 - 0.6	25.0	3.15
A200.8X3.15 ¹⁾	0.80	0.0315	1.3 - 1.0	25.0	3.15
A2001.0X3.15	1.00	0.0394	1.7 - 1.3	31.0	3.15
A2001.25X3.15	1.25	0.0492	2.0 - 1.6	31.0	3.15
A2001.6X4.0	1.60	0.0630	2.6 - 2.0	35.0	4.00
A2002.0X5.0	2.00	0.0787	3.1 - 2.5	40.0	5.00
A2002.5X6.3	2.50	0.0984	3.8 - 3.1	45.0	6.30
A2003.15X8.0	3.15	0.1240	4.6 - 3.9	50.0	8.00
A2004.0X10.0	4.00	0.1575	5.9 - 5.0	55.0	10.00
A2005.0X12.5	5.00	0.1969	7.2 - 6.3	63.0	12.50
A2006.3X16.0	6.30	0.2480	8.9 - 8.0	71.0	16.00
A2008.0X20.0	8.00	0.3150	11.1 - 10.1	80.0	20.00
A20010.0X25.0	10.00	0.3937	13.8 - 12.8	100.0	25.00
A20012.5X31.5	12.50	0.4921	17.5 - 16.5	125.0	31.50

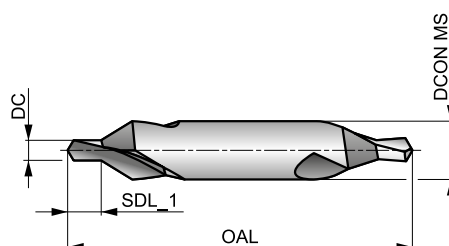
¹⁾ Single ende

A205



HSS-E Pinolbor med 118° punktsvinkel og 60° undersænkning, TiN belagt

Anbefales til start af et præcist hul i enden af en aksel, så det kan holdes sikkert inden bearbejdning. De to borender giver øget produktivitet pr. Værktøj. TiN-belægning forbedrer ydeevnen og forlænger værktøjets levetid. Velegnet til boring af mange materialer.



HSS	DIN 333A	1xD
60°	TiN	
R	118°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 40 I	P1.2 ■ 45 I	P1.3 ■ 46 I	P2.1 ■ 34 I	P2.2 ■ 30 G	P2.3 ■ 27 E	P3.1 ■ 24 F	P3.2 ■ 19 F	P3.3 ■ 16 E	P4.1 ■ 14 F	P4.2 ■ 12 E	P4.3 ■ 10 D	M1.1 ■ 25 E	M1.2 ■ 21 E
M2.1 ■ 22 E	M2.2 ■ 18 E	M3.1 ■ 12 G	M3.2 ■ 10 G	M3.3 ■ 9 G	M4.1 ■ 12 C	K1.1 ■ 36 I	K1.2 ■ 27 F	K1.3 ■ 20 F	K2.1 ■ 30 E	K2.2 ■ 24 E	K2.3 ■ 19 E	K3.1 ■ 26 E	K3.2 ■ 20 E
K3.3 ■ 16 E	K4.1 ■ 24 E	K4.2 ■ 18 E	K4.3 ■ 13 E	K4.4 ■ 11 E	K4.5 ■ 10 E	K5.1 ■ 27 E	K5.2 ■ 21 E	K5.3 ■ 16 E	N1.1 ■ 40 J	N1.2 ■ 30 J	N1.3 ■ 20 I	N2.1 ■ 49 H	N2.2 ■ 44 H
N2.3 ■ 32 H	N3.1 ■ 68 H	N3.2 ■ 40 I	N3.3 ■ 20 G	N4.1 ■ 36 J	N4.2 ■ 34 H	N4.3 ■ 17 F	S1.1 ■ 29 F	S1.2 ■ 16 D	S1.3 ■ 8 B	S2.1 ■ 8 E	S2.2 ■ 7 A	S3.1 ■ 6 E	S3.2 ■ 5 A
S4.1 ■ 5 E	S4.2 ■ 4 A												

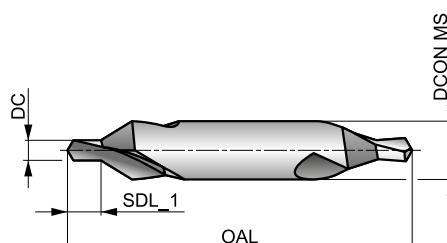
Product	DC (mm)	DC (inch)	SDL_1 (mm)	OAL (mm)	DCON MS (mm)
A2051.0X3.15	1.00	0.0394	1.7 - 1.3	31.0	3.15
A2051.25X3.15	1.25	0.0492	2.0 - 1.6	31.0	3.15
A2051.6X4.0	1.60	0.0630	2.6 - 2.0	35.0	4.00
A2052.0X5.0	2.00	0.0787	3.1 - 2.5	40.0	5.00
A2052.5X6.3	2.50	0.0984	3.8 - 3.1	45.0	6.30
A2053.15X8.0	3.15	0.1240	4.6 - 3.9	50.0	8.00
A2054.0X10.0	4.00	0.1575	5.9 - 5.0	55.0	10.00
A2055.0X12.5	5.00	0.1969	7.2 - 6.3	63.0	12.50

A206



HSS-E Pinolbor med 118° punktsvinkel og 60° undersænkning, blank finish

Anbefales til start af et præcist hul i enden af en aksel, så det kan holdes sikkert inden bearbejdning. De to boreender giver øget produktivitet pr. Værktøj. Velegnet til boring af mange materialer.



HSS-E	DIN 333A	1xD
60°	Bright	
R	118°	

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 40 I	P1.2 ■ 45 I	P1.3 ■ 46 I	P2.1 ■ 34 I	P2.2 ■ 30 G	P2.3 ■ 27 E	P3.1 ■ 24 F	P3.2 ■ 19 F	P3.3 ■ 16 E	P4.1 ■ 14 F	P4.2 ■ 12 E	P4.3 ■ 10 D	M1.1 ■ 25 E	M1.2 ■ 21 E
M2.1 ■ 22 E	M2.2 ■ 18 E	M3.1 ■ 12 G	M3.2 ■ 10 G	M3.3 ■ 9 G	M4.1 ■ 12 C	K1.1 ■ 36 I	K1.2 ■ 27 F	K1.3 ■ 20 F	K2.1 ■ 30 E	K2.2 ■ 24 E	K2.3 ■ 19 E	K3.1 ■ 26 E	K3.2 ■ 20 E
K3.3 ■ 16 E	K4.1 ■ 24 E	K4.2 ■ 18 E	K4.3 ■ 13 E	K4.4 ■ 11 E	K4.5 ■ 10 E	K5.1 ■ 27 E	K5.2 ■ 21 E	K5.3 ■ 16 E	N1.1 ■ 40 J	N1.2 ■ 30 J	N1.3 ■ 20 I	N2.1 ■ 49 H	N2.2 ■ 44 H
N2.3 ■ 32 H	N3.1 ■ 68 H	N3.2 ■ 40 I	N3.3 ■ 20 G	N4.1 ■ 36 J	N4.2 ■ 34 H	N4.3 ■ 17 F	S1.1 ■ 29 F	S1.2 ■ 16 D	S1.3 ■ 8 B	S2.1 ■ 8 E	S2.2 ■ 7 A	S3.1 ■ 6 E	S3.2 ■ 5 A
S4.1 ■ 5 E	S4.2 ■ 4 A												

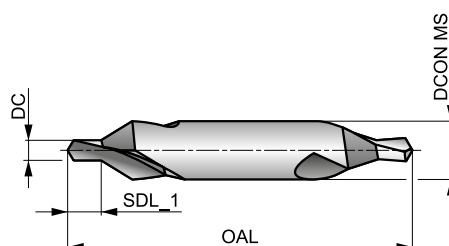
Product	DC (mm)	DC (inch)	SDL_1 (mm)	OAL (mm)	DCON MS (mm)
A2061.0X3.15	1.00	0.0394	1.7 - 1.3	31.0	3.15
A2061.25X3.15	1.25	0.0492	2.0 - 1.6	31.0	3.15
A2061.6X4.0	1.60	0.0630	2.6 - 2.0	35.0	4.00
A2062.0X5.0	2.00	0.0787	3.1 - 2.5	40.0	5.00
A2062.5X6.3	2.50	0.0984	3.8 - 3.1	45.0	6.30
A2063.15X8.0	3.15	0.1240	4.6 - 3.9	50.0	8.00
A2064.0X10.0	4.00	0.1575	5.9 - 5.0	55.0	10.00
A2065.0X12.5	5.00	0.1969	7.2 - 6.3	63.0	12.50

A266



HSS-E Pinolbor med 118° punktsvinkel og 60° undersænkning, TiALN belagt

Anbefales til start af et præcist hul i enden af en aksel, så det kan holdes sikkert inden bearbejdning. De to borender giver øget produktivitet pr. Værktøj. TiALN-belægning forbedrer ydeevnen og forlænger værktøjets levetid. Velegnet til boring af mange materialer.



HSS-E	DIN 333A	1xD
60°	TiALN	
R	118°	

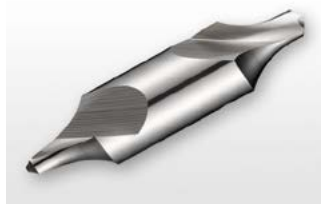
Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
40 I	45 I	46 I	34 I	30 G	27 E	24 F	19 F	16 E	14 F	12 E	10 D	25 E	21 E
M2.1	M2.2	M3.1	M3.2	M3.3	M4.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2
22 E	18 E	12 G	10 G	9 G	12 C	36 I	27 F	20 F	30 E	24 E	19 E	26 E	20 E
K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3	N1.1	N1.2	N1.3	N2.1	N2.2
16 E	24 E	18 E	13 E	11 E	10 E	27 E	21 E	16 E	40 J	30 J	20 I	49 H	44 H
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2	N4.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2
32 H	68 H	40 I	20 G	36 J	34 H	17 F	29 F	16 D	8 B	8 E	7 A	6 E	5 A
S4.1	S4.2												
5 E	4 A												

Product	DC (mm)	DC (inch)	SDL_1 (mm)	OAL (mm)	DCON MS (mm)
A2661.0X3.15	1.00	0.0394	1.7 - 1.3	31.0	3.15
A2661.25X3.15	1.25	0.0492	2.0 - 1.6	31.0	3.15
A2661.6X4.0	1.60	0.0630	2.6 - 2.0	35.0	4.00
A2662.0X5.0	2.00	0.0787	3.1 - 2.5	40.0	5.00
A2662.5X6.3	2.50	0.0984	3.8 - 3.1	45.0	6.30
A2663.15X8.0	3.15	0.1240	4.6 - 3.9	50.0	8.00
A2664.0X10.0	4.00	0.1575	5.9 - 5.0	55.0	10.00
A2665.0X12.5	5.00	0.1969	7.2 - 6.3	63.0	12.50

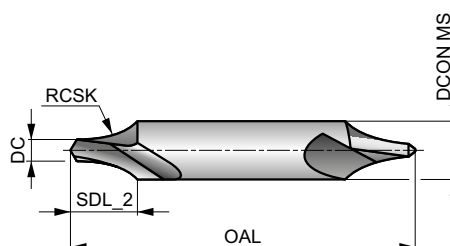
A210

DORMER



HSS Pinolbor med 118 ° punktsvinkel og konkav undersænkning, blank finish

Anbefales til start af et præcist hul i enden af en aksel, så det kan holdes sikkert inden bearbejdning. De to borender giver øget produktivitet pr. Værktøj. Kan bruges til at bearbejde et antal materialer.



HSS	DIN 333R	1xD
R	Bright	
R	118°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 33 I	P1.2 ■ 37 I	P1.3 ■ 38 I	P2.1 ■ 28 I	P2.2 ■ 25 G	P2.3 ■ 22 E	P3.1 ■ 19 F	P3.2 ■ 15 F	P3.3 ■ 13 E	P4.1 ■ 11 F	P4.2 ■ 10 E	P4.3 ■ 8 D	M1.1 ■ 21 E	M1.2 ■ 17 E
M2.1 ■ 18 E	M2.2 ■ 15 E	M3.1 ■ 9 G	M3.2 ■ 8 G	M3.3 ■ 7 G	M4.1 ■ 10 C	K1.1 ■ 30 I	K1.2 ■ 22 F	K1.3 ■ 17 F	K2.1 ■ 25 E	K2.2 ■ 20 E	K2.3 ■ 16 E	K3.1 ■ 22 E	K3.2 ■ 17 E
K3.3 ■ 13 E	K4.1 ■ 20 E	K4.2 ■ 15 E	K4.3 ■ 11 E	K4.4 ■ 10 E	K4.5 ■ 8 E	K5.1 ■ 23 E	K5.2 ■ 17 E	K5.3 ■ 13 E	N1.1 ■ 33 J	N1.2 ■ 25 J	N1.3 ■ 17 I	N2.1 ■ 42 H	N2.2 ■ 37 H
N2.3 ■ 27 H	N3.1 ■ 56 H	N3.2 ■ 33 I	N3.3 ■ 17 G	N4.1 ■ 30 J	N4.2 ■ 28 H	N4.3 ■ 14 F	S1.1 ■ 24 F	S1.2 ■ 13 D	S1.3 ■ 7 B	S2.1 ■ 7 E	S2.2 ■ 6 A	S3.1 ■ 5 E	S3.2 ■ 4 A
S4.1 ■ 4 E	S4.2 ■ 3 A												

Product	DC (mm)	DC (inch)	SDL_2 (mm)	OAL (mm)	RCSK (mm)	DCON MS (mm)
A210.5X3.15 ¹⁾	0.50	0.0197	2.6 - 2.3	25.0	2.50 - 2.00	3.15
A210.8X3.15 ¹⁾	0.80	0.0315	2.9 - 2.6	25.0	3.15 - 2.50	3.15
A2101.0X3.15	1.00	0.0394	3.3 - 3.0	31.0	3.65 - 2.90	3.15
A2101.25X3.15	1.25	0.0492	3.6 - 3.3	31.0	3.95 - 3.15	3.15
A2101.6X4.0	1.60	0.0630	4.7 - 4.2	35.0	5.00 - 4.00	4.00
A2102.0X5.0	2.00	0.0787	5.4 - 5.0	40.0	6.25 - 5.00	5.00
A2102.5X6.3	2.50	0.0984	6.8 - 6.3	45.0	7.88 - 6.30	6.30
A2103.15X8.0	3.15	0.1240	8.5 - 8.0	50.0	10.00 - 8.00	8.00
A2104.0X10.0	4.00	0.1575	10.6 - 10.0	55.0	12.50 - 10.00	10.00
A2105.0X12.5	5.00	0.1969	13.1 - 12.5	63.0	15.63 - 12.50	12.50
A2106.3X16.0	6.30	0.2480	16.6 - 16.0	71.0	20.00 - 16.00	16.00
A2108.0X20.0	8.00	0.3150	20.7 - 20.0	80.0	25.00 - 20.00	20.00
A21010.0X25.0	10.00	0.3937	25.7 - 25.0	100.0	31.25 - 25.00	25.00

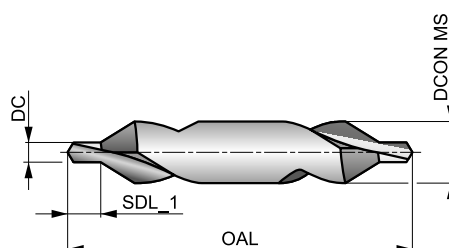
¹⁾ Single ende

A201

DORMER

HSS Pinolbor med 122° punktsvinkel og 60° undersænkning, blank finish

Anbefales til start af et præcist hul i enden af en aksel, så det kan holdes sikkert inden bearbejdning. De to borender giver øget produktivitet pr. Værktøj. Velegnet til boring af mange materialer.



HSS		1xD
60°	Bright	
R	122°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

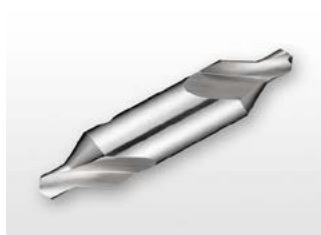
P1.1 ■ 33 I	P1.2 ■ 37 I	P1.3 ■ 38 I	P2.1 ■ 28 I	P2.2 ■ 25 G	P2.3 ■ 22 E	P3.1 ■ 19 F	P3.2 ■ 15 F	P3.3 ■ 13 E	P4.1 ■ 11 F	P4.2 ■ 10 E	P4.3 ■ 8 D	M1.1 ■ 21 E	M1.2 ■ 17 E
M2.1 ■ 18 E	M2.2 ■ 15 E	M3.1 ■ 9 G	M3.2 ■ 8 G	M3.3 ■ 7 G	M4.1 ■ 10 C	K1.1 ■ 30 I	K1.2 ■ 22 F	K1.3 ■ 17 F	K2.1 ■ 25 E	K2.2 ■ 20 E	K2.3 ■ 16 E	K3.1 ■ 22 E	K3.2 ■ 17 E
K3.3 ■ 13 E	K4.1 ■ 20 E	K4.2 ■ 15 E	K4.3 ■ 11 E	K4.4 ■ 10 E	K4.5 ■ 8 E	K5.1 ■ 23 E	K5.2 ■ 17 E	K5.3 ■ 13 E	N1.1 ■ 33 J	N1.2 ■ 25 J	N1.3 ■ 17 I	N2.1 ■ 42 H	N2.2 ■ 37 H
N2.3 ■ 27 H	N3.1 ■ 56 H	N3.2 ■ 33 I	N3.3 ■ 17 G	N4.1 ■ 30 J	N4.2 ■ 28 H	N4.3 ■ 14 F	S1.1 ■ 24 F	S1.2 ■ 13 D	S1.3 ■ 7 B	S2.1 ■ 7 E	S2.2 ■ 6 A	S3.1 ■ 5 E	S3.2 ■ 4 A
S4.1 ■ 4 E	S4.2 ■ 3 A												

Product	DC (mm)	DC (inch)	SDL_1 (mm)	OAL (mm)	DCON MS (mm)
A201.63X3.15 ¹⁾	0.63	0.0248	1.2 - 0.9	20.0	3.15
A201.75X3.5	0.75	0.0295	1.3 - 1.0	35.0	3.50
A2011.0X4.0	1.00	0.0394	2.1 - 1.5	35.0	4.00
A2011.5X5.0	1.50	0.0591	2.8 - 2.0	40.0	5.00
A2011.6X5.0	1.60	0.0630	2.4 - 2.0	40.0	5.00
A2012.0X6.0	2.00	0.0787	4.0 - 3.0	45.0	6.00
A2012.0X6.3	2.00	0.0787	2.9 - 2.5	45.0	6.30
A2012.5X8.0	2.50	0.0984	4.5 - 3.5	50.0	8.00
A2013.0X8.0	3.00	0.1181	4.4 - 3.9	50.0	8.00
A2013.0X10.0	3.00	0.1181	5.0 - 4.0	56.0	10.00
A2013.15X10.0	3.15	0.1240	4.4 - 3.9	56.0	10.00
A2014.0X12.0	4.00	0.1575	6.2 - 5.0	66.0	12.00
A2015.0X14.0	5.00	0.1969	7.7 - 6.5	78.0	14.00
A2016.0X18.0	6.00	0.2362	9.2 - 8.0	90.0	18.00

¹⁾ Single ende

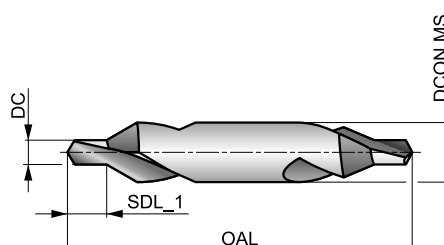
A225

DORMER



HSS Pinolbor med 120° punktsvinkel og 60° undersænkning, blank finish

Anbefales til start af et præcist hul i enden af en aksel, så det kan holdes sikkert inden bearbejdning. Britisk standard 328. De to borender giver øget produktivitet pr. Værktøj. Velegnet til boring af mange materialer.



HSS	BS 328	1×D
60°	Bright	
R	120°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 33 I	P1.2 ■ 37 I	P1.3 ■ 38 I	P2.1 ■ 28 I	P2.2 ■ 25 G	P2.3 ■ 22 E	P3.1 ■ 19 F	P3.2 ■ 15 F	P3.3 ■ 13 E	P4.1 ■ 11 F	P4.2 ■ 10 E	P4.3 ■ 8 D	M1.1 ■ 21 E	M1.2 ■ 17 E
M2.1 ■ 18 E	M2.2 ■ 15 E	M3.1 ■ 9 G	M3.2 ■ 8 G	M3.3 ■ 7 G	M4.1 ■ 10 C	K1.1 ■ 30 I	K1.2 ■ 22 F	K1.3 ■ 17 F	K2.1 ■ 25 E	K2.2 ■ 20 E	K2.3 ■ 16 E	K3.1 ■ 22 E	K3.2 ■ 17 E
K3.3 ■ 13 E	K4.1 ■ 20 E	K4.2 ■ 15 E	K4.3 ■ 11 E	K4.4 ■ 10 E	K4.5 ■ 8 E	K5.1 ■ 23 E	K5.2 ■ 17 E	K5.3 ■ 13 E	N1.1 ■ 33 J	N1.2 ■ 25 J	N1.3 ■ 17 I	N2.1 ■ 42 H	N2.2 ■ 37 H
N2.3 ■ 27 H	N3.1 ■ 56 H	N3.2 ■ 33 I	N3.3 ■ 17 G	N4.1 ■ 30 J	N4.2 ■ 28 H	N4.3 ■ 14 F	S1.1 ■ 24 F	S1.2 ■ 13 D	S1.3 ■ 7 B	S2.1 ■ 7 E	S2.2 ■ 6 A	S3.1 ■ 5 E	S3.2 ■ 4 A
S4.1 ■ 4 E	S4.2 ■ 3 A												

Produkter fra denne serie fås også i sæt. Se A296.

Product	Nr.	DC (inch)	DC (inch)	SDL_1 (inch)	OAL (inch)	DCONMS (inch)
A225BS1	BS1	3/64	0.0469	5/64 - 1/16	1.1/2	1/8
A225BS2	BS2	1/16	0.0625	3/32 - 5/64	1.3/4	3/16
A225BS3	BS3	3/32	0.0938	5/32 - 1/8	2"	1/4
A225BS4	BS4	1/8	0.1250	3/16 - 5/32	2.1/4	5/16
A225BS5	BS5	3/16	0.1875	9/32 - 1/4	2.1/2	7/16
A225BS5A	BS5A	7/32	0.2188	5/16 - 9/32	2.3/4	1/2
A225BS6	BS6	1/4	0.2500	3/8 - 5/16	3"	5/8
A225BS7	BS7	5/16	0.3125	15/32 - 13/32	3.1/2	3/4

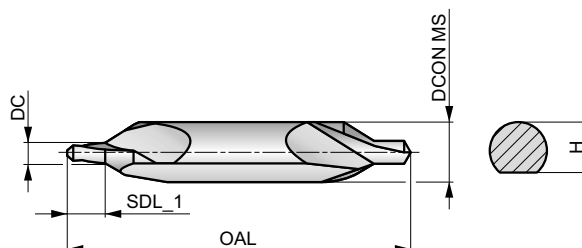
A237

DORMER



HSS-E (5% kobolt) pinolbor, 118° spids, 60° undersænket, blank finish

Designet til at starte et præcist hul i enden af en aksel, så det kan holdes sikkert inden bearbejdning. De to borender giver øget produktivitet pr. Værktøj. Det har en blank finish. Velegnet til boring af mange materialer.



HSS-E	DIN 333A	1×D
60°	Bright	H
R	118°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 33 I	P1.2 ■ 37 I	P1.3 ■ 38 I	P2.1 ■ 28 I	P2.2 ■ 25 G	P2.3 ■ 22 E	P3.1 ■ 19 F	P3.2 ■ 15 F	P3.3 ■ 13 E	P4.1 ■ 11 F	P4.2 ■ 10 E	P4.3 ■ 8 D	M1.1 ■ 21 E	M1.2 ■ 17 E
M2.1 ■ 18 E	M2.2 ■ 15 E	M3.1 ■ 9 G	M3.2 ■ 8 G	M3.3 ■ 7 G	M4.1 ■ 10 C	K1.1 ■ 30 I	K1.2 ■ 22 F	K1.3 ■ 17 F	K2.1 ■ 25 E	K2.2 ■ 20 E	K2.3 ■ 16 E	K3.1 ■ 22 E	K3.2 ■ 17 E
K3.3 ■ 13 E	K4.1 ■ 20 E	K4.2 ■ 15 E	K4.3 ■ 11 E	K4.4 ■ 10 E	K4.5 ■ 8 E	K5.1 ■ 23 E	K5.2 ■ 17 E	K5.3 ■ 13 E	N1.1 ■ 33 J	N1.2 ■ 25 J	N1.3 ■ 17 I	N2.1 ■ 42 H	N2.2 ■ 37 H
N2.3 ■ 27 H	N3.1 ■ 56 H	N3.2 ■ 33 I	N3.3 ■ 17 G	N4.1 ■ 30 J	N4.2 ■ 28 H	N4.3 ■ 14 F	S1.1 ■ 24 F	S1.2 ■ 13 D	S1.3 ■ 7 B	S2.1 ■ 7 E	S2.2 ■ 6 A	S3.1 ■ 5 E	S3.2 ■ 4 A
S4.1 ■ 4 E	S4.2 ■ 3 A												

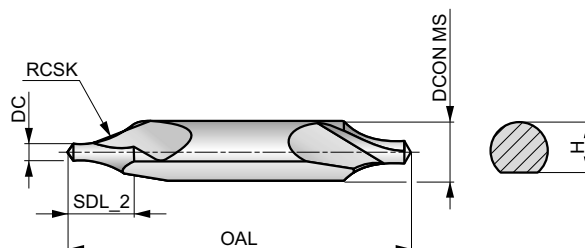
Product	DC (mm)	DC (inch)	SDL_1 (mm)	OAL (mm)	DCON MS (mm)	H (mm)
A2371.6X4.0	1.60	0.0630	2.6 - 2.0	35.0	4.00	3.25 - 3.15
A2372.0X5.0	2.00	0.0787	3.1 - 2.5	40.0	5.00	4.20 - 4.10
A2372.5X6.3	2.50	0.0984	3.8 - 3.1	45.0	6.30	5.35 - 5.25
A2373.15X8.0	3.15	0.1240	4.6 - 3.9	50.0	8.00	6.95 - 6.85
A2374.0X10.0	4.00	0.1575	5.9 - 5.0	55.0	10.00	8.40 - 8.30
A2375.0X12.5	5.00	0.1969	7.2 - 6.3	63.0	12.50	10.95 - 10.85
A2376.3X16.0	6.30	0.2480	8.9 - 8.0	71.0	16.00	14.00 - 13.90
A2378.0X20.0	8.00	0.3150	11.1 - 10.1	80.0	20.00	17.90 - 17.80
A23710.0X25.0	10.00	0.3937	13.8 - 12.8	100.0	25.00	22.50 - 22.40

A238



HSS-E (5% kobolt) pinolbor, 118° spids, konkav undersænket, blank finish

Designet til at starte et præcist hul i enden af en aksel, så det kan holdes sikkert inden bearbejdning. De to borender giver øget produktivitet pr. Værktøj. Velegnet til boring af mange materialer. Blank finish og kan bruges med specielle reifeadaptore.



HSS-E	DIN 333R	1×D
R	Bright	H
R	118°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 33 I	P1.2 ■ 37 I	P1.3 ■ 38 I	P2.1 ■ 28 I	P2.2 ■ 25 G	P2.3 ■ 22 E	P3.1 ■ 19 F	P3.2 ■ 15 F	P3.3 ■ 13 E	P4.1 ■ 11 F	P4.2 ■ 10 E	P4.3 ■ 8 D	M1.1 ■ 21 E	M1.2 ■ 17 E
M2.1 ■ 18 E	M2.2 ■ 15 E	M3.1 ■ 9 G	M3.2 ■ 8 G	M3.3 ■ 7 G	M4.1 ■ 10 C	K1.1 ■ 30 I	K1.2 ■ 22 F	K1.3 ■ 17 F	K2.1 ■ 25 E	K2.2 ■ 20 E	K2.3 ■ 16 E	K3.1 ■ 22 E	K3.2 ■ 17 E
K3.3 ■ 13 E	K4.1 ■ 20 E	K4.2 ■ 15 E	K4.3 ■ 11 E	K4.4 ■ 10 E	K4.5 ■ 8 E	K5.1 ■ 23 E	K5.2 ■ 17 E	K5.3 ■ 13 E	N1.1 ■ 33 J	N1.2 ■ 25 J	N1.3 ■ 17 I	N2.1 ■ 42 H	N2.2 ■ 37 H
N2.3 ■ 27 H	N3.1 ■ 56 H	N3.2 ■ 33 I	N3.3 ■ 17 G	N4.1 ■ 30 J	N4.2 ■ 28 H	N4.3 ■ 14 F	S1.1 ■ 24 F	S1.2 ■ 13 D	S1.3 ■ 7 B	S2.1 ■ 7 E	S2.2 ■ 6 A	S3.1 ■ 5 E	S3.2 ■ 4 A
S4.1 ■ 4 E	S4.2 ■ 3 A												

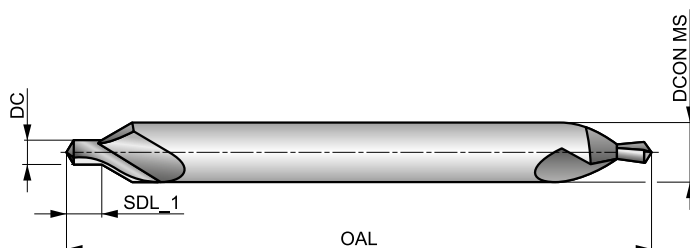
Product	DC (mm)	DC (inch)	SDL_2 (mm)	OAL (mm)	RCSK (mm)	DCON MS (mm)	H (mm)
A2381.6X4.0	1.60	0.0630	4.7 - 4.2	35.0	5.00 - 4.00	4.00	3.25 - 3.15
A2382.0X5.0	2.00	0.0787	5.4 - 5.0	40.0	6.25 - 5.00	5.00	4.20 - 4.10
A2382.5X6.3	2.50	0.0984	6.8 - 6.3	45.0	7.88 - 6.30	6.30	5.35 - 5.25
A2383.15X8.0	3.15	0.1240	8.5 - 8.0	50.0	10.00 - 8.00	8.00	6.95 - 6.85
A2384.0X10.0	4.00	0.1575	10.6 - 10.0	55.0	12.50 - 10.00	10.00	8.40 - 8.30
A2385.0X12.5	5.00	0.1969	13.1 - 12.5	63.0	15.63 - 12.50	12.50	10.95 - 10.85
A2386.3X16.0	6.30	0.2480	16.6 - 16.0	71.0	20.00 - 16.00	16.00	14.00 - 13.90
A2388.0X20.0	8.00	0.3150	20.7 - 20.0	80.0	25.00 - 20.00	20.00	17.90 - 17.80

A242

DORMER

HSS-E (5% kobolt) langt pinolbor, 118° spids, 60° undersænket, blank finish

Designet til at starte et præcist hul i enden af en aksel, så det kan holdes sikkert inden bearbejdning. De to borender giver øget produktivitet pr. Værktøj. Velegnet til boring af mange materialer.



HSS-E		1xD
60°	Bright	
R	118°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 175.

P1.1 ■ 33 I	P1.2 ■ 37 I	P1.3 ■ 38 I	P2.1 ■ 28 I	P2.2 ■ 25 G	P2.3 ■ 22 E	P3.1 ■ 19 F	P3.2 ■ 15 F	P3.3 ■ 13 E	P4.1 ■ 11 F	P4.2 ■ 10 E	P4.3 ■ 8 D	M1.1 ■ 21 E	M1.2 ■ 17 E
M2.1 ■ 18 E	M2.2 ■ 15 E	M3.1 ■ 9 G	M3.2 ■ 8 G	M3.3 ■ 7 G	M4.1 ■ 10 C	K1.1 ■ 30 I	K1.2 ■ 22 F	K1.3 ■ 17 F	K2.1 ■ 25 E	K2.2 ■ 20 E	K2.3 ■ 16 E	K3.1 ■ 22 E	K3.2 ■ 17 E
K3.3 ■ 13 E	K4.1 ■ 20 E	K4.2 ■ 15 E	K4.3 ■ 11 E	K4.4 ■ 10 E	K4.5 ■ 8 E	K5.1 ■ 23 E	K5.2 ■ 17 E	K5.3 ■ 13 E	N1.1 ■ 33 J	N1.2 ■ 25 J	N1.3 ■ 17 I	N2.1 ■ 42 H	N2.2 ■ 37 H
N2.3 ■ 27 H	N3.1 ■ 56 H	N3.2 ■ 33 I	N3.3 ■ 17 G	N4.1 ■ 30 J	N4.2 ■ 28 H	N4.3 ■ 14 F	S1.1 ■ 24 F	S1.2 ■ 13 D	S1.3 ■ 7 B	S2.1 ■ 7 E	S2.2 ■ 6 A	S3.1 ■ 5 E	S3.2 ■ 4 A
S4.1 ■ 4 E	S4.2 ■ 3 A												

Product	DC (mm)	DC (inch)	SDL_1 (mm)	OAL (mm)	DCON MS (mm)
A2421.0X4.0	1.00	0.0394	1.7 - 1.3	100.0	4.00
A2421.5X5.0	1.50	0.0591	2.6 - 2.0	100.0	5.00
A2422.0X6.0	2.00	0.0787	3.1 - 2.5	100.0	6.00
A2422.5X8.0	2.50	0.0984	3.8 - 3.1	100.0	8.00
A2423.0X8.0	3.00	0.1181	4.6 - 3.9	100.0	8.00
A2423.0X10.0	3.00	0.1181	4.6 - 3.9	100.0	10.00
A2424.0X10.0	4.00	0.1575	5.9 - 5.0	100.0	10.00
A2424.0X12.0	4.00	0.1575	5.9 - 5.0	100.0	12.00
A2425.0X12.0	5.00	0.1969	7.2 - 6.3	100.0	12.00

A088

DORMER



HSS boresæt med A022 bor, TiN-tip belagt

Et sæt indeholdende 24 forskellige diametre af det populære A022 bor i en let kompakt kasse med størrelser tydeligt vist for let valg. Borene er velegnede til brug både i maskiner og håndboringer og i mange andre anvendelser. TiN-Tip belægning forbedrer ydeevnen og forlænger værktøjets levetid.

HSS	DIN ANSI	2.5×D
135°	TiN-Tip	
20-35°	R	DC h8

A = forskellige i sæt, B = nej, i sæt, C = diametre i sæt.

Product	Nr.	A	B	C
A088200S	200S	A022	24	1.0 mm - 10.5 mm x 0.5 mm + 3.3 mm, 4.2 mm, 6.8 mm, 10.2 mm

A095

DORMER



HSS boresæt med A002 bor, TiN-tip belagt

Forskellige sæt i metriske eller tommestørrelser af vores A002 bor i et nyttigt plastopbevaringsetui. Sættet holder alle bor sammen, med størrelser tydeligt vist for let valg. Borene er velegnede til brug i både maskiner og håndholdte applikationer. TiN-Tip belægning forbedrer ydeevnen og forlænger værktøjets levetid.

HSS	DIN 338	4×D
118°	TiN-Tip	
20-35°	R	DC h8

1,0 mm = <DC> = 2,9 mm 118° 4 facet spids. A = forskellige i sæt, B = No. i sæt, C = diametre i sæt.

Product	Nr.	A	B	C
A09518	18	A002	29	1/16 inch - 1/2 inch x 1/64 inch
A09520	20	A002	15	1/16 inch - 1/2 inch x 1/32 inch
A095200	200	A002	24	1.0 mm - 10.5 mm x 0.5 mm + 3.3 mm, 4.2 mm, 6.8 mm, 10.2 mm
A095201	201	A002	19	1.0 mm - 10.0 mm x 0.5 mm
A095202	202	A002	51	1.0 mm - 6.0 mm x 0.1 mm
A095203	203	A002	41	6.0 mm - 10.0 mm x 0.1 mm
A095204	204	A002	25	1.0 mm - 13.0 mm x 0.5 mm
A095206	206	A002	29	1.0 mm - 13.0 mm x 0.5 mm + 3.3 mm, 4.2 mm, 6.8 mm, 10.2 mm
A095209	209	A002	91	1.0 mm - 10.0 mm x 0.1 mm

A087

DORMER



HSS boresæt med A002 bor, TiN-tip belagt

Et sæt indeholdende 19 forskellige diametre af det populære A002 bor i en let kompakt kasse med størrelser tydeligt vist for let valg. Borene er velegnede til brug både i maskiner og håndboringer og i mange andre anvendelser. TiN-Tip belægning forbedrer ydeevnen og forlænger værktøjets levetid.

HSS	DIN 338	4xD
118°	TiN-Tip	
λ 20-35°	R	DC h8

A = forskellige i sæt, B = No. i sæt, C = diametre i sæt. 1,0 mm = <DC> = 2,9 mm 118° 4 facetpunkt.

Product	Nr.	A	B	C
A087201	201	A002	19	1.0 mm - 10.0 mm x 0.5 mm

A094

DORMER



HSS boresæt med A002 bor, TiN-tip belagt

Et sæt indeholdende A002 bor med forskellige metriske diametre i en smart designet roterende dispenser, der gør valg af den ønskede størrelse meget enkel. Drej den klare plastikplade, indtil den ønskede størrelse fremhæves i hullet i kufferten, og vend sættet på hovedet for at fjerne boret.

HSS	DIN 338	4xD
118°	TiN-Tip	
λ 20-35°	R	DC h8

A = forskellige i sæt, B = No. i sæt, C = diametre i sæt. 1,0 mm = <DC> = 2,9 mm 118° 4 facetpunkt.

Product	Nr.	A	B	C
A094413	413	A002	13	1.5 mm - 6.5 mm x 0.5 mm + 3.3 mm, 4.2 mm
A094419	419	A002	19	1.0 mm - 10.0 mm x 0.5 mm

A089



HSS boresæt med A002 bor, TiN-tip belagt

Et sæt indeholdende 5 forskellige diametre af den populære A002 bor i en praktisk beholder, der dækker mange diametre med et enkelt køb. Borene er velegnede til brug i både maskiner og håndboringer i mange applikationer. TiN-Tip belægning forbedrer ydeevnen og forlænger værktøjets levetid.

HSS	DIN 338	4xD
118°	TiN-Tip	
20-35°	R	DC h8

A = forskellige i sæt, B = nej, i sæt, C = diametre i sæt.

Product	Nr.	A	B	C
A08910	10	A002	5	A0024.0, A0025.0, A0026.0, A0028.0, A00210.0

A099

DORMER



Borsæt dispenser med HSS bor A002 bor, TiN-Tip belagt

En fritstående borddispenser, der indeholder en bred vifte af størrelser af A002 bor. Designet til at stå på en bordplade eller en anden egnet flad overflade til et fremtrædende display, og hvor borene let kan fjernes efter behov. Let at genopfylde med yderligere A002 bor, det giver mange års god service.

HSS	DIN 338	4xD
118°	TiN-Tip	
λ 20-35°	R	DC h8

1,0 mm = <DC> = 2,9 mm 118° 4 facet spids. A = forskellige i sæt, B = No. i sæt, C = diameter i sæt.

Product	Nr.	A	B	C
A099F1	F1	A002	380	5 x (13/32, 7/16, 15/32, 1/2) inch; 10 x (5/64, 7/64, 9/64, 11/64, 13/64, 15/64, 17/64, 9/32, 19/64, 5/16, 21/64, 11/32, 23/64, 3/8) inch; 20 x (1/16, 7/32, 1/4) inch; 30 x 3/32 inch; 40 x (5/32, 3/16) inch; 50 x 1/8 inch
A099M1	M1	A002	340	5 x (10.50, 11.00, 11.50, 12.00, 12.50, 13.00) mm; 10 x (1.50, 2.50, 3.50, 4.50, 5.50, 6.50, 7.00, 7.50, 8.00, 8.50, 9.00, 9.50, 10.00) mm; 20 x (1.00, 5.00, 6.00) mm; 30 x 2.00 mm; 40 x 4.00 mm; 50 x 3.00 mm

A099

DORMER



Drillboy med HSS bor A002 bor, TiN-tip belagt

En fritstående borddispenser, der indeholder en bred vifte af størrelser af A002 bor. Designet til at stå på en bordplade eller en anden egnet flad overflade til et fremtrædende display, og hvor borene let kan fjernes efter behov. Let at genopfylde med yderligere A002 bor, det giver mange års god service.

HSS	DIN 338	4xD
118°	TiN-Tip	
λ 20-35°	R	DC h8

1,0 mm = <DC> = 2,9 mm 118° 4 facet spids. A = forskellige i sæt, B = No. i sæt, C = diameter i sæt.

Product	Nr.	A	B	C
A099DRILLBOY	DRILLBOY	A002	43	3 x (3.0 mm, 3.3 mm, 3.5 mm, 4.0 mm) + 2 x (4.2 mm, 4.5 mm, 5.0 mm, 5.5 mm, 6.0 mm, 6.5 mm, 6.8 mm, 7.0 mm, 7.5 mm, 8.0 mm) + 8.5 mm, 9.0 mm, 9.5 mm, 10.0 mm, 10.2 mm, 10.5 mm, 11.0 mm, 11.5 mm, 12.0 mm, 12.5 mm, 13.0 mm

A199



Borsæt Dispenser med HSS A100 bor til boremaskiner

En fritstående borddispenser, der indeholder en bred vifte af størrelser af A100 bor. Designet til at stå på en bordplade eller en anden egnet flad overflade til et fremtrædende display, og hvor borene let kan fjernes efter behov. Let at genopfylde med yderligere A100 bor, det giver mange års god service.

HSS	DIN 338	4xD
118°	ST	
20-35°	R	DC h8

A = forskellige i sæt, B = nej, i sæt, C = diameter i sæt.

Product	Nr.	A	B	C
A199F1	F1	A100	380	5 x (13/32, 7/16, 15/32, 1/2) inch; 10 x (5/64, 7/64, 9/64, 11/64, 13/64, 15/64, 17/64, 9/32, 19/64, 5/16, 21/64, 11/32, 23/64, 3/8) inch; 20 x (1/16, 7/32, 1/4) inch; 30 x 3/32 inch; 40 x (5/32, 3/16) inch; 50 x 1/8 inch
A199M1	M1	A100	340	5 x (10.50, 11.00, 11.50, 12.00, 12.50, 13.00) mm; 10 x (1.50, 2.50, 3.50, 4.50, 5.50, 6.50, 7.00, 7.50, 8.00, 8.50, 9.00, 9.50, 10.00) mm; 20 x (1.00, 5.00, 6.00) mm; 30 x 2.00 mm; 40 x 4.00 mm; 50 x 3.00mm

A080



Tom dispenser

Dispenseren leveres tom, så borene kan købes separat og vælger mængder, der passer til kontrasalg. Den kommer i rød plastik, markeret med et Dormer-logo og et billede af forskellige Dormer-bor. Metriske eller fraktionerede borediametre er markeret på de tre hylder.

Tom dispenser.

Product	Nr.	C
A080M1EMPTY	M1EMPTY	(1.00, 1.50, 2.00, 2.50, 3.00, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00, 6.50, 7.00, 7.50, 8.00, 8.50, 9.00, 9.50, 10.00, 10.50, 11.00, 11.50, 12.00) mm
A080F1EMPTY	F1EMPTY	(1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 11/64, 3/16, 13/64, 7/32, 15/64, 1/4, 17/64, 9/32, 19/64, 5/16, 21/64, 11/32, 3/8, 13/32, 7/16, 1/2) inch

A190



HSS boresæt med A100 bor, damphærdet finish

Boresæt indeholdende A100 bor med konventionelt 118° spids. Leveres i metriske eller tommestørrelsessæt i en praktisk plastkuffert, der gør valg af den nødvendige borestørrelse meget enkel.

HSS	DIN 338	4xD
118°	ST	
λ 20-35°	R	DC h8

A = forskellige i sæt, B = No. i sæt, C = diameter i sæt. DC ≤ 1 mm; 3/64"; N60 Blank.

Product	Nr.	A	B	C
A1903	3	A100	21	1/16 inch - 3/8 inch x 1/64 inch
A19012	12	A100	60	No.1 - No.60
A19018	18	A100	29	1/16 inch - 1/2 inch x 1/64 inch
A19020	20	A100	15	1/16 inch - 1/2 inch x 1/32 inch
A190201	201	A100	19	1.0 mm - 10.0 mm x 0.5 mm
A190202	202	A100	51	1.0 mm - 6.0 mm x 0.1 mm
A190203	203	A100	41	6.0 mm - 10.0 mm x 0.1 mm
A190204	204	A100	25	1.0 mm - 13.0 mm x 0.5 mm
A190206	206	A100	29	1.0 mm - 13.0 mm x 0.5 mm + 3.3 mm, 4.2 mm, 6.8 mm, 10.2 mm
A190209 ¹⁾	209	A100	91	1.0 mm - 10.0 mm x 0.1 mm

¹⁾ Sælges i 2 kasser: kasse 1 indeholder størrelser (1,0-5,9 x 0,1 mm); kasse 2 indeholder størrelser (6,0-10,0 x 0,1 mm).

A191



HSS boresæt med A100 bor, damphærdet finish

Et sæt indeholdende A100 bor med forskellige metriske diametre i en kompakt kasse, der er let at bære med tydeligt viste størrelser og let valg af bor. A100 bor med konventionelt 118° spids. Leveres i metriske eller gevindstørrelsessæt i en praktisk plastkasse, der gør valg af den nødvendige borestørrelse meget enkel.

HSS	DIN 338	4xD
118°	ST	
20-35°	R	DC h8

A = forskellige i sæt, B = No. i sæt, C = diametre i sæt. DC <= 1 mm; 3/64"; N60 Blank.

Product	Nr.	A	B	C
A19131M	31M	A100	20	0.3 mm - 1.0 mm x 0.05 mm + 0.38 mm, 0.52 mm, 0.58 mm, 0.78 mm, 0.82 mm
A19161-80	61-80	A100	20	No.61 - No. 80

A191



HSS boresæt med A100 bor, damphærdet finish

Et sæt indeholdende A100 bor med forskellige metriske diametre i en smart designet roterende dispenser, der gør valg af den ønskede størrelse meget enkel. Drej den klare plastikplade, indtil den ønskede størrelse fremhæves i hullet i kufferten, og vend sættet på hovedet for at fjerne boret.

HSS	DIN 338	4xD
118°	ST	
20-35°	R	DC h8

A = forskellige i sæt, B = No. i sæt, C = diametre i sæt. DC <= 1 mm; 3/64"; N60 Blank.

Product	Nr.	A	B	C
A191413	413	A100	13	1.5 mm - 6.5 mm x 0.5 mm + 3.3 mm, 4.2 mm
A191419	419	A100	19	1.0 mm - 10.0 mm x 0.5 mm

A188

DORMER



HSS boresæt med A108 bor, damphærdet finish

Et sæt forskellige brøkstørrelser af vores A108 bor i en nyttig plastikopbevaringsetui. Kan bruges i mange forskellige maskin- og håndholdte applikationer.

HSS	DIN 338	4xD
135°	ST	
$\lambda > 35^\circ$	R	DC h8

A = forskellige i sæt, B = No. i sæt, C = diameter i sæt. DC > 1,5 mm; 1/16" Splitpunkt

Product	Nr.	A	B	C
A188201	201	A108	19	1.0 mm - 10.0 mm x 0.5 mm
A188204	204	A108	25	1.0 mm - 13.0 mm x 0.5 mm

A295

DORMER



HSS-E (8% kobolt) boresæt med A777 bor, Bronze overfladefinish

Et sæt forskellige størrelser af vores A777 bor i en nyttig plastikopbevaringsetui. Sættet holder alle bor sammen i orden, med størrelser tydeligt vist for let valg. A777 bor er designet med et spids på 135° for at hjælpe med at centrere boret og reducere skærekrafterne.

HSS-E	DIN 338	4xD
135°	Bronze	
$\lambda 20-35^\circ$	R	DC h8

A = forskellige i sæt, B = No. i sæt, C = diameter i sæt. DC ≤ 1,4 mm 4 facet spids.

Product	Nr.	A	B	C
A295219	219	A777	19	1.0 mm - 10.0 mm x 0.5 mm
A295225	225	A777	25	1.0 mm - 13.0 mm x 0.5 mm

A296



HSS pinolboresæt

Et sæt af fem pinolbor, der kommer i en praktisk plastikui, der holder alle dine pinolbor sammen. Anbefales til start af et præcist hul i enden af en aksel, det kan holdes sikkert inden bearbejdning. De to borender giver øget produktivitet pr. Værktøj.

A296200 - 118° spids DIN333A, A296225 - 120° spids BS328. A = forskellige i sæt, B = nej i sæt, C = diametre i sæt.

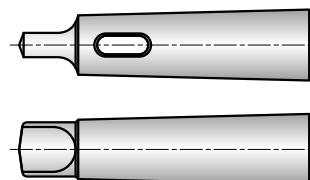
Product	Nr.	A	B	C
A296200	200	A200	5	1.00 mm, 2.00 mm, 2.50 mm, 3.15 mm, 4.00 mm
A296225	225	A225	5	BS1, BS2, BS3, BS4, BS5

M150



Morsekonus, olie hærde

Adapter, der bruges til at muliggøre, at bor med mindre koniske skaft holdes i maskinspindler med større morse-tilspidsninger.



K = Ekstern morsekonus; K1 = Intern morsekonus.

Product	Nr.	K = Nr.	K1 = Nr.
M1501-0	10	Nr. 1	Nr. 0
M1502-1	21	Nr. 2	Nr. 1
M1503-1	31	Nr. 3	Nr. 1
M1504-1	41	Nr. 4	Nr. 1
M1503-2	32	Nr. 3	Nr. 2
M1504-2	42	Nr. 4	Nr. 2
M1505-2	52	Nr. 5	Nr. 2
M1504-3	43	Nr. 4	Nr. 3
M1505-3	53	Nr. 5	Nr. 3
M1505-4	54	Nr. 5	Nr. 4
M1506-5	65	Nr. 6	Nr. 5

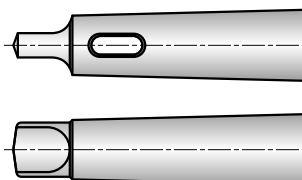
M151

DORMER



Morsekonus, olie hærdet

Adapter, der bruges til at muliggøre, at bor med mindre koniske skaft holdes i maskinspindler med større morse-tilspidsninger.



K = Ekstern morsekonus; K1 = Intern morsekonus.

Product	Nr.	K = Nr.	K1 = Nr.
M1511-0	10	Nr. 1	Nr. 0
M1512-1	21	Nr. 2	Nr. 1
M1513-1	31	Nr. 3	Nr. 1
M1514-1	41	Nr. 4	Nr. 1
M1513-2	32	Nr. 3	Nr. 2
M1514-2	42	Nr. 4	Nr. 2
M1515-2	52	Nr. 5	Nr. 2
M1514-3	43	Nr. 4	Nr. 3
M1515-3	53	Nr. 5	Nr. 3
M1515-4	54	Nr. 5	Nr. 4
M1516-5	65	Nr. 6	Nr. 5

M152

DORMER



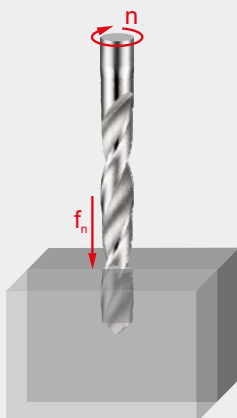
MK uddrivningskile

Bruges til at skubbe bor ud af maskinspindler og morse koniske adskillelse.



Product	Nr.
M1520	Nr. 0
M15212	Nr. 1 + 2
M15234	Nr. 3 + 4
M15245	Nr. 4 + 5
M1526	Nr. 6

DRILLING FEED RATE CHART



Feed per revolution (f_n in mm/rev)
Depending on the working conditions
it might be necessary to adjust these
values $\pm 25\%$.

How to use this table to find the feed per revolution (f_n):

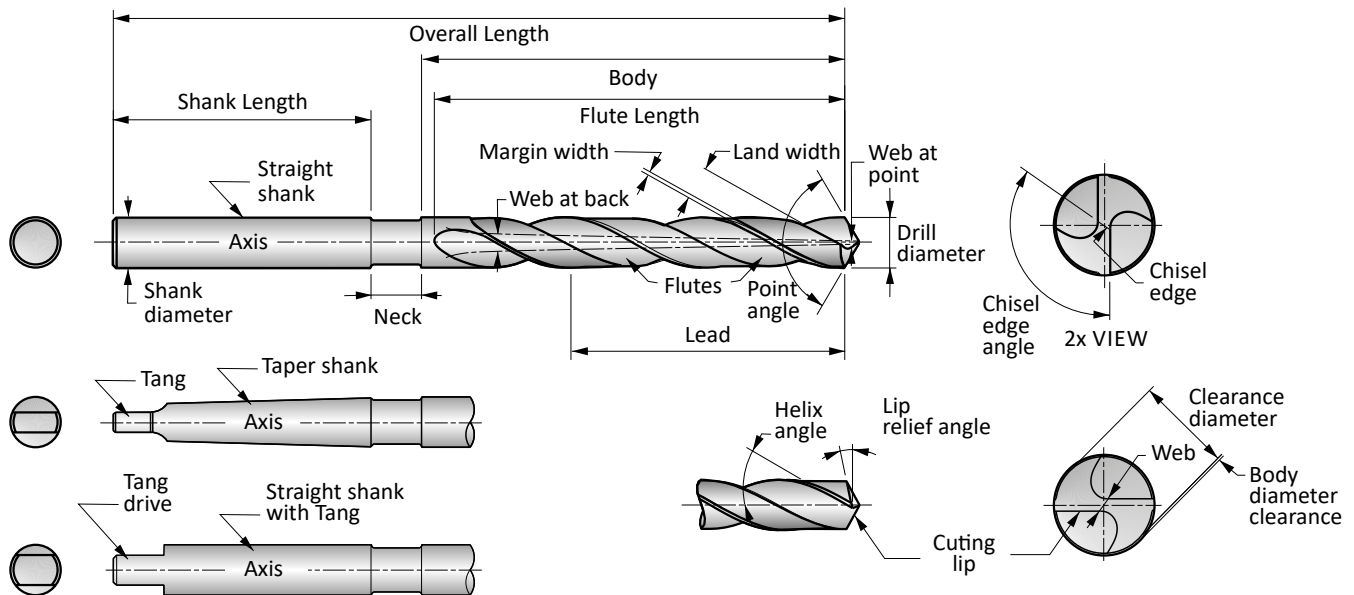
1. Find your Alpha Code on the product page (example: 46J, "J" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per revolution (f_n).

		ø DC (mm)																		
		0.15	0.50	1.00	2.00	3.00	4.00	5.00	6.00	8.00	10.00	12.00	15.00	16.00	20.00	25.00	30.00	40.00	50.00	100.00
Feed rates	A	0.003	0.006	0.012	0.023	0.029	0.032	0.036	0.042	0.054	0.062	0.069	0.082	0.086	0.110	0.125	0.135	0.155	0.175	0.263
	B	0.004	0.007	0.014	0.028	0.037	0.041	0.046	0.053	0.067	0.080	0.090	0.103	0.108	0.135	0.153	0.165	0.188	0.208	0.312
	C	0.004	0.008	0.015	0.032	0.044	0.050	0.056	0.064	0.080	0.098	0.110	0.125	0.130	0.160	0.180	0.195	0.220	0.240	0.360
	D	0.004	0.008	0.016	0.038	0.053	0.060	0.068	0.078	0.098	0.119	0.130	0.149	0.155	0.188	0.210	0.228	0.253	0.275	0.413
	E	0.004	0.009	0.017	0.043	0.062	0.071	0.080	0.092	0.115	0.140	0.150	0.173	0.180	0.215	0.240	0.260	0.285	0.310	0.465
	F	0.005	0.009	0.018	0.050	0.073	0.084	0.095	0.109	0.138	0.165	0.178	0.202	0.210	0.248	0.275	0.295	0.320	0.343	0.515
	G	0.005	0.010	0.019	0.056	0.084	0.096	0.109	0.126	0.160	0.190	0.205	0.231	0.240	0.280	0.310	0.330	0.355	0.375	0.563
	H	0.005	0.010	0.020	0.066	0.102	0.116	0.130	0.150	0.190	0.228	0.243	0.271	0.280	0.320	0.355	0.375	0.398	0.418	0.627
	I	0.005	0.011	0.021	0.076	0.119	0.134	0.150	0.173	0.220	0.265	0.280	0.310	0.320	0.360	0.400	0.420	0.440	0.460	0.690
	J	0.006	0.012	0.024	0.084	0.135	0.152	0.170	0.197	0.250	0.298	0.315	0.349	0.360	0.405	0.445	0.465	0.485	0.503	0.755
	K	0.007	0.013	0.026	0.092	0.150	0.170	0.190	0.220	0.280	0.330	0.350	0.388	0.400	0.450	0.490	0.510	0.530	0.545	0.818
	L	0.007	0.014	0.028	0.101	0.165	0.186	0.208	0.240	0.305	0.360	0.385	0.419	0.430	0.485	0.525	0.545	0.568	0.588	0.882
	M	0.008	0.015	0.030	0.110	0.180	0.202	0.225	0.260	0.330	0.390	0.420	0.450	0.460	0.520	0.560	0.580	0.605	0.630	0.945
	N	0.008	0.016	0.032	0.119	0.195	0.218	0.242	0.280	0.355	0.420	0.455	0.481	0.490	0.555	0.595	0.615	0.642	0.672	1.008
	S	0.002	0.004	0.008	0.014	0.020	0.025	0.030	0.037	0.050	0.080	0.100	0.123	0.130	0.150	0.170	0.190	0.220	0.240	–
	T	0.004	0.008	0.015	0.028	0.040	0.050	0.060	0.070	0.090	0.110	0.130	0.160	0.170	0.190	0.210	0.230	0.260	0.275	–
	U	0.007	0.013	0.026	0.048	0.070	0.080	0.090	0.107	0.140	0.170	0.200	0.223	0.230	0.240	0.270	0.300	0.360	0.375	–
	V	0.010	0.019	0.038	0.069	0.100	0.115	0.130	0.153	0.200	0.250	0.280	0.310	0.320	0.340	0.400	0.440	0.510	0.530	–
	W	0.012	0.025	0.049	0.089	0.130	0.150	0.170	0.200	0.260	0.330	0.380	0.418	0.430	0.450	0.470	0.490	0.520	0.540	–
	X	0.014	0.028	0.056	0.103	0.150	0.180	0.210	0.250	0.330	0.420	0.480	0.533	0.550	0.580	–	–	–	–	–
	Y	0.017	0.034	0.068	0.124	0.180	0.220	0.260	0.317	0.430	0.550	0.700	0.700	0.700	0.740	–	–	–	–	–
	Z	0.024	0.047	0.094	0.172	0.250	0.325	0.400	0.533	0.800	1.000	1.100	1.175	1.200	1.200	–	–	–	–	–

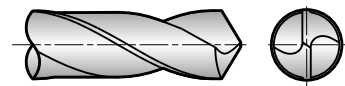
The background of the page is a complex, abstract geometric design. It features a central cluster of hexagons in various shades of orange, grey, and white. These hexagons are interconnected by a network of thin, grey lines that resemble technical drawings or circuitry. Scattered throughout the design are small circles, dots, and arrowheads, some pointing in different directions. The overall aesthetic is clean, modern, and technical, suggesting a focus on engineering or technology.

BORING TEKNISKE OPLYSNINGER

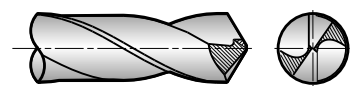
Drill Nomenclature



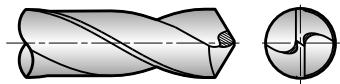
- **Axis** — The imaginary straight line which forms the longitudinal centre line of a drill.
- **Backtaper** — A slight decrease in diameter from front to back in the body of a drill.
- **Body** — The portion of a drill extending from the shank or neck to the outer corners of the cutting lips.
- **Body Clearance Diameter** — The portion of the land that has been cut away so it will not bind against the walls of the hole.
- **Chisel-Edge** — The edge at the end of the web that connects the cutting lips.
- **Chisel-Edge Angle** — The included angle between the chisel-edge and cutting lip, as viewed from the end of a drill.
- **Clearance Diameter** — The diameter over the cut away portion of the drill lands.
- **Drill** — A rotary end cutting tool having one or more cutting lips, and having one or more helical or straight flutes for the passage of chips and the admission of a cutting fluid.
- **Drill Diameter** — The diameter over the margins of a drill measured at the point.
- **Flute Length** — The length from the outer corners of the cutting lips to the extreme back of the flutes. Includes the sweep of the tool used to generate the flutes and therefore does not indicate the usable length of flutes.
- **Flutes** — Helical or straight grooves cut or formed in the body of a drill to provide cutting lips, permit removal of chips, and allow cutting fluid to reach the cutting lips.
- **Helix Angle** — The angle formed by the leading edge of the land with a plane containing the axis of a drill.
- **Land** — The peripheral portion of the body between adjacent flutes.
- **Land Width** — The distance between the leading edge and heel of the land; measured at a right angle to the leading edge.
- **Lead** — The axial advance of a leading edge of the land in one turn around the circumference.
- **Lip Relief Angle** — The axial relief angle at the outer corner of the lip; measured by projection to a plane tangent to the periphery at the outer corner of the lip.
- **Lips** — The cutting edges of a two flute drill extending from the chisel-edge to the periphery.
- **Margin** — The cylindrical portion of the land, which is not cut away, to provide clearance.
- **Neck** — The section of reduced diameter between the body and the shank of a drill.
- **Overall Length** — The length from the extreme end of the shank to the outer corners of the cutting lip. It does not include the conical shank end often used on straight shank drills, nor the conical cutting point used on both straight and taper shank drills.
- **Point** — The cutting end of a drill, made up of the ends of the lands and the web. In form, it resembles a cone, but departs from a true cone to furnish clearance behind the cutting lips.
- **Conventional** — Conventional Points with 118° included point angles are the most commonly used because they provide satisfactory results in a wide variety of materials. A possible limitation is that the straight chisel edge contributes to wandering at the drill point, often making it necessary to spot the hole for improved accuracy.



- **Split** — Split-Points (commonly called Crankshaft Points) were originally developed for use on drills designed for deep oil holes in automotive crankshafts. Since its inception, the split-point has gained widespread use and is applied to both 118° and 135° included point angles. Its main advantages are the ability to reduce thrust and eliminate wandering at the drill point. This is a distinct advantage when the drill is used in a portable drill or in drilling applications where bushings cannot be used. The split-point also has two positive rake cutting edges extending to the centre of the drill, which can assist as a chipbreaker to produce small chips which can readily be ejected.



- **Notched** — Notched Points were developed for drilling tough alloys. Commonly incorporated on heavy web drills, which allow the point to withstand the higher thrust loads required in drilling these materials. As with the split-point, the Notched Point contains two additional positive rake cutting edges extending toward the centre of the drill. These secondary cutting lips, which extend no further than half the original cutting lip, can assist in chip control and reduce the torque required in drilling tough materials. Notched Points can be incorporated on both 118° and 135° included point angles, making them suitable for drilling a wide variety of materials.



- **Point Angle** — The included angle between the cutting lips projected upon a plane parallel to the drill axis and parallel to the two cutting lips.
- **Relative Lip Height** — The difference in indicator reading between the cutting lips of a drill. Measured at a right angle to the cutting lip at a specific distance from the axis of the tool.
- **Shank** — The part of a drill by which it is held and driven.
- **Tang** — The flattened end of a taper shank, intended to fit into a driving slot in a socket.
- **Tang Drive** — Two opposite parallel driving flats on the extreme end of a straight shank.
- **Taper Shank** — Drills having conical shanks suitable for direct fitting in machine spindles, driving sleeves, or sockets. Tapered shanks generally have a tang.
- **Web** — The central portion of the body that joins the lands. The extreme end of the web forms the chisel-edge on a two flute drill.
- **Web Thickness** — The thickness of the web at the point, unless another specific location is indicated.

General hints on drilling

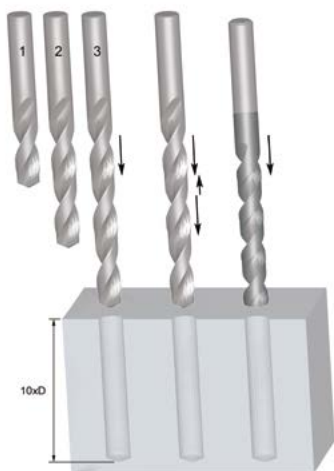
1. Select the most appropriate drill for the application, bearing in mind the material to be machined, the capability of the machine tool and the coolant to be used.
2. Flexibility within the component and machine tool spindle can cause damage to the drill as well as the component and machine - ensure maximum stability at all times. This can be improved by selecting the shortest possible drill for the application.
3. Tool holding is an important aspect of the drilling operation and the drill cannot be allowed to slip or move in the tool holder.
4. The correct use of Morse Taper Shank drills relies on an efficient fit between the taper surfaces of the tool and the tool holder. The use

of a soft-faced hammer should be used to drive the drill into the holder.

5. The use of suitable coolants and lubricants are recommended as required by the particular drilling operation. When using coolants and lubricants, ensure a copious supply, especially at the drill point.
6. Swarf evacuation whilst drilling is essential in ensuring the correct drilling procedure. Never allow the swarf to become stationary in the flute.
7. When regrinding a drill, always make sure that the correct point geometry is produced and that any wear has been removed.

Strategi ved dybhulsboring

Når der bores dybe huller, kan der anvendes mange forskellige metoder for at nå den krævede dybde. Eksemplet nedenfor viser fire forskellige måder at bore et hul, der er 10 x borets diameter.



	Serieboring	Serieboring
Antal bor	3 (2,5×D, 6×D, 10×D)	2 (2,5×D, 10×D)
Bortype	Standardgeometri, almindeligt formål	Standardgeometri, almindeligt formål
+ / -	Høj omkostning Stort tidsforbrug	Mere omkostningseffektiv Hurtig

	Intervalboring	Enkeltboring
Antal bor	1 (10×D)	1 (10×D)
Bortype	Standardgeometri, almindeligt formål	Formål konkrete værktøjer
+ / -	Stort tidsforbrug	Omkostningseffektive Hurtige

Fejlfinding ved boring

Problem	Årsag	Løsning
Brækkede eller vredet skaft	Dårlig pasform mellem skaft og bøsning	Vær sikker på, at skaftet og bøsningen er rene og uden skader
Ødelæggelse af borstangen	Tilspænding for høj	Reducer tilspænding til den optimale værdi
	Ustabil komponent	Efterslib til korrekt specifikation
	For tynd borstang	Efterslib til korrekt specifikation
	Tungt anslag på borespids	Undgå anslag på borespids. Vær forsigtig, når bor sættes i eller tages ud af spindelen
Slidte styrekanter	For høj skærehastighed	Reduce skærehastighed - kan bevirke, at tilspændingen kan øges
Brækkede styrekanter	Ustabil komponentopstilling	Reducer bevægelsen i komponenten
Hovedskær med skår	Efterslib til korrekt specifikation	Efterslib til korrekt specifikation
Brud ved sporudløb	Tilstopning af sporudløbet	Find den rigtige fremgangsmåde ved udspåning
	Boret løsner sig i holder	Sørg for, at boret fastholdes sikkert i borepatron og spindel
Spiral-finish i hul	For lav tilspænding	Øg tilspænding
	Dårlig positioneringspræcision	Brug et centerbor før boring
Hulstørrelse for stor	Ukorrekt spidsgeometri	Kontroller spidsgeometrien
	Dårlig fjernelse af spåner	Reguler hastighed, tilspænding og evt. udspåning for at opnå mere håndterlige spåner

SOLID CARBIDE & HSS DRILLS – TECHNICAL INFO

Hole Size / Achievable Hole Tolerances

As geometric, substrate and coating configurations become more advanced, the ability of a drill to produce a more accurate hole size increases. In general, a standard geometry tool will achieve a hole

size to H12. However as the configuration of the drill becomes more complex the achievable hole size, under favorable conditions, can be as good as H8.

To offer a better insight, listed below are the product types and their achievable hole tolerances:

HSS General Purpose drills – H12

HSS / HSCo Parabolic Flute Deep Hole Drills (PFX) – H10

HSS / HSCo High performance TiN/ TiAlN coated (ADX) – H10

Solid Carbide High Performance TiN / TiAlN coated (CDX, Force) – H8/H9

Nominal Hole Diameter (mm)

Ø (mm)	H8	H9	H10	H12
≤ 3	0 / +0.014	0 / +0.025	0 / +0.040	0 / +0.100
> 3 ≤ 6	0 / +0.018	0 / +0.030	0 / +0.048	0 / +0.120
> 6 ≤ 10	0 / +0.022	0 / +0.036	0 / +0.058	0 / +0.150
> 10 ≤ 18	0 / +0.027	0 / +0.043	0 / +0.070	0 / +0.180
> 18 ≤ 30	0 / +0.033	0 / +0.052	0 / +0.084	0 / +0.210

Nominal Hole Diameter (inches)

Ø (inch)	H8	H9	H10	H12
≤ .1181	0 / +0.0006"	0 / +0.0010"	0 / +0.0016"	0 / +0.0040"
>.1181≤.2362	0 / +0.0007"	0 / +0.0012"	0 / +0.0019"	0 / +0.0048"
>.2362≤.3937	0 / +0.0009"	0 / +0.0015"	0 / +0.0023"	0 / +0.0059"
>.3937≤.7087	0 / +0.0011"	0 / +0.0017"	0 / +0.0028"	0 / +0.0071"
>.7087≤1.1811	0 / +0.0013"	0 / +0.0021"	0 / +0.0033"	0 / +0.0083"

In view of the ability of some drills to produce a much tighter hole tolerance, due consideration should be given to drilled holes which are subject to secondary operations, eg. tapping, reaming. The diameter

of the drill will need to be increased from what is recommended to account for the fact that the hole size produced will be smaller.

Optimizing the Drilling Operation / Troubleshooting

Drill Selection

Use the shortest drill the application will permit in order to achieve maximum tool rigidity.

Holders

Tool holders and collets must provide good concentricity between the drill and the machine spindle. Use a positive back stop to prevent the tool from backing up into the holder. Never clamp the tool over the flutes or over-tighten the holder. Static runout in the tool assembly must be accurately checked and maintained.

Workpiece

A secure and rigid workpiece to minimize deflection is needed, particularly on through-hole applications.

Coolants

Coolants are recommended when drilling mild steel and high temperature alloys. The purpose of the coolant media is to direct the chips away from the cutting tool and workpiece. Excessive coolant pressure and/or too much volume can negatively affect performance. When using coolant fed drills, the coolant pressure that is required should be higher than normal. Suggested pressure for coolant fed drills is minimally 10.3 bar or 150 PSI. As the diameter of the drill is reduced, the higher the pressure. This is to assist the chip in evacuating from a more confined area.

Drilling Troubleshooting Guide

Problem	Solution
Wear on Outer Corners	Reduce cutting speed
	Increase feed (IPR)
	Improve direction of coolant flow
	Increase coolant pressure
	Add corner break
Chipping of Chisel Edge	Check accuracy of drill runout
	Check workpiece clamping accuracy and movement
	Check point centrality and lip height
	Increase feed rate
Chipping of Cutting Lips	Check accuracy of drill runout
	Check workpiece clamping accuracy and movement
	Reduce speed
	Reduce point clearance
	Increase hone
Cracking of Lands	Check movement of workpiece
	Increase back taper
	Check accuracy of drill runout
	Chip packing; increase flute form opening or peck drill (HSS or HSCO only)
	Slow down helix, horizontal drilling
	Increase feed
	When spot drilling, reduce feed
	Improve direction of coolant flow
	Increase coolant pressure
Oversize Hole	Increase speed, reduce feed
	Check workpiece clamping accuracy and movement
	Check accuracy of drill runout
	Chip packing, increase flute form opening or peck drill (HSS or HSCO only)
	Check point centrality and lip height
Undersize Hole	Improve direction of coolant flow
	Reduce cutting speed, increase feed
	Check drill diameter
Hole Not Round	Check accuracy of drill runout
	Check workpiece clamping accuracy and movement
	Check point centrality and lip height
	Chip packing, increase flute form opening or peck drill (HSS or HSCO only)
Drill Breakage	Chip packing, increase flute form opening or peck drill (HSS or HSCO only)
	Check workpiece clamping accuracy and movement
	Check accuracy of drill runout
	Reduce feed rate, increase feed rate
	Improve direction of coolant flow
	Increase coolant pressure

GENERAL – TECHNICAL INFO

	Grade	Hardness (HV10)	C %	W %	Mo %	Cr %	V %	Co %	Tool Material
	M2	810 – 850	0.9	6.4	5.0	4.2	1.8	–	HSS
	M35	830 – 870	0.93	6.4	5.0	4.2	1.8	4.8	HSCo
	M42	870 – 960	1.08	1.5	9.4	3.9	1.2	8.0	

Properties	HSS materials	Carbide materials	K10/30F (often used for solid tools)
Hardness (HV30)	800-950	1300 – 1800	1600
Density (g/cm ³)	8.0 – 9.0	7.2 – 15	14.45
Compressive strength (N/mm ²)	3000 – 4000	3000 – 8000	6250
Flexural strength, (bending) (N/mm ²)	2500 – 4000	1000 – 4700	4300
Heat resistance (°C)	550	1000	900
E-module (KN/mm ²)	260 – 300	460 – 630	580
Grain size (µm)	–	0.2 – 10	0.8

The combination of hard particle (WC) and binder metal (Co) give the following changes in characteristics.

Characteristic	Higher WC content give	Higher Co content give
Hardness	Higher hardness	Lower hardness
Compressive strength (CS)	Higher CS	Lower CS
Bending strength (BS)	Lower BS	Higher BS

Grain size also influences the material properties. Small grain sizes means higher hardness and coarse grains give more toughness.

Surface treatment / Coating properties examples

Surface Treatments	Colour	Coating material	Hardness (HV)	Thickness (µm)	Coating structure	Frict. coeff. against steel	Max. appl. temp. (°C)
	Dark grey	Fe ₃ O ₄	400	Max. 5	Conversion into the surface	–	550
	Bronze	Fe ₃ O ₄	400	Max. 5	Conversion into the surface	–	550
	Gold	TiN	2300	1 – 4	Mono-layer	0.4	600
	Black grey	TiAlN	3300	3	Nano structured	0.3 – 0.35	900

GENERAL – TECHNICAL INFO

Industry Standard tolerances For Shafts & Holes

Tolerance values are shown in Microns (µm)

Formula for Microns ...1 µm = 0.001 mm / 0.000039"

Tolerance	Diameter (mm)							
	> 1 ≤ 3	> 3 ≤ 6	> 6 ≤ 10	> 10 ≤ 18	> 18 ≤ 30	> 30 ≤ 50	> 50 ≤ 80	> 80 ≤ 120
	Diameter (inch)							
	> 0.039" ≤ 0.118"	> 0.118" ≤ 0.236"	> 0.236" ≤ 0.394"	> 0.394" ≤ 0.709"	> 0.709" ≤ 1.181"	> 1.181" ≤ 1.968"	> 1.968" ≤ 3.149"	> 3.149" ≤ 4.724"
	Tolerance values (µm)							
e8	-14 / -28	-20 / -38	-25 / -47	-32 / -59	-40 / -73	-50 / -89	-60 / -106	-72 / -126
f6	-6 / -12	-10 / -18	-13 / -22	-16 / -27	-20 / -33	-25 / -41	-30 / -49	-36 / -58
f7	-6 / -16	-10 / -22	-13 / -28	-16 / -34	-20 / -41	-25 / -50	-30 / -60	-36 / -71
h6	0 / -6	0 / -8	0 / -9	0 / -11	0 / -13	0 / -16	0 / -19	0 / -22
h7	0 / -10	0 / -12	0 / -15	0 / -18	0 / -21	0 / -25	0 / -30	0 / -35
h8	0 / -14	0 / -18	0 / -22	0 / -27	0 / -33	0 / -39	0 / -46	0 / -54
h9	0 / -25	0 / -30	0 / -36	0 / -43	0 / -52	0 / -62	0 / -74	0 / -87
h10	0 / -40	0 / -48	0 / -58	0 / -70	0 / -84	0 / -100	0 / -120	0 / -140
h11	0 / -60	0 / -75	0 / -90	0 / -110	0 / -130	0 / -160	0 / -190	0 / -220
h12	0 / -100	0 / -120	0 / -150	0 / -180	0 / -210	0 / -250	0 / -300	0 / -350
k10	+40 / 0	+48 / 0	+58 / 0	+70 / 0	+84 / 0	+100 / 0	+120 / 0	+140 / 0
k12	+100 / 0	+120 / 0	+150 / 0	+180 / 0	+210 / 0	+250 / 0	+300 / 0	+350 / 0
m7	+2 / +12	+4 / +16	+6 / +21	+7 / +25	+8 / +29	+9 / +34	+11 / +41	+13 / +48
js14	+/- 125	+/- 150	+/- 180	+/- 215	+/- 260	+/- 310	+/- 370	+/- 435
js16	+/- 300	+/- 375	+/- 450	+/- 550	+/- 650	+/- 800	+/- 950	+/- 1100
H7	+10 / 0	+12 / 0	+15 / 0	+18 / 0	+21 / 0	+25 / 0	+30 / 0	+35 / 0
H8	+14 / 0	+18 / 0	+22 / 0	+27 / 0	+33 / 0	+39 / 0	+46 / 0	+54 / 0
H9	+25 / 0	+30 / 0	+36 / 0	+43 / 0	+52 / 0	+62 / 0	+74 / 0	+87 / 0
H12	+100 / 0	+120 / 0	+150 / 0	+180 / 0	+210 / 0	+250 / 0	+300 / 0	+350 / 0
P9	-6 / -31	-12 / -42	-15 / -51	-18 / -61	-22 / -74	-26 / -86	-32 / -106	-37 / -124
S7	-13 / -22	-15 / -27	-17 / -32	-21 / -39	-27 / -48	-34 / -59	-42 / -72	-58 / -93

GENERAL – TECHNICAL INFO

Table of Cutting Speeds

Vc																
m/min.	5	8	10	15	20	25	30	40	50	60	70	80	90	100	110	150
SFM (feet/min.)	16	26	32	50	66	82	98	130	165	197	230	262	296	330	362	495
Ø		RPM														
mm	inch															
1.00	–	1592	2546	3183	4775	6366	7958	9549	12732	15916	19099	22282	25465	28648	31831	47747
1.50	–	1061	1698	2122	3183	4244	5305	6366	8488	10610	12732	14854	16977	19099	21221	31831
2.00	–	796	1273	1592	2387	3183	3979	4775	6366	7958	9549	11141	12732	14324	15916	23873
2.50	–	637	1019	1273	1910	2546	3183	3820	5093	6366	7639	8913	10186	11459	12732	19099
3.00	–	531	849	1061	1592	2122	2653	3183	4244	5305	6366	7427	8488	9549	10610	15916
3.18	1/8	500	801	1001	1501	2002	2502	3003	4004	5005	6006	7007	8008	9009	10010	15011
3.50	–	455	728	909	1364	1819	2274	2728	3638	4547	5457	6366	7276	8185	9095	13642
4.00	–	398	637	796	1194	1592	1989	2387	3183	3979	4775	5570	6366	7162	7958	11937
4.50	–	354	566	707	1061	1415	1768	2122	2829	3537	4244	4951	5659	6366	7074	10610
4.76	3/16	334	535	669	1003	1337	1672	2006	2675	3344	4012	4681	5350	6018	6687	10031
5.00	–	318	509	637	955	1273	1592	1910	2546	3183	3820	4456	5093	5730	6366	9549
6.00	–	265	424	531	796	1061	1326	1592	2122	2653	3183	3714	4244	4775	5305	7958
6.35	1/4	251	401	501	752	1003	1253	1504	2005	2506	3008	3509	4010	4511	5013	7519
7.00	–	227	364	455	682	909	1137	1364	1819	2274	2728	3183	3638	4093	4547	6821
7.94	5/16	200	321	401	601	802	1002	1203	1604	2004	2405	2806	3207	3608	4009	6013
8.00	–	199	318	398	597	796	995	1194	1592	1989	2387	2785	3183	3581	3979	5968
9.00	–	177	283	354	531	707	884	1061	1415	1768	2122	2476	2829	3183	3537	5305
9.53	3/8	167	267	334	501	668	835	1002	1336	1670	2004	2338	2672	3006	3340	5010
10.00		159	255	318	477	637	796	955	1273	1592	1910	2228	2546	2865	3183	4775
11.11	7/16	143	229	287	430	573	716	860	1146	1433	1719	2006	2292	2579	2865	4298
12.00		133	212	265	398	531	663	796	1061	1326	1592	1857	2122	2387	2653	3979
12.70	1/2	125	201	251	376	501	627	752	1003	1253	1504	1754	2005	2256	2506	3760
14.00		114	182	227	341	455	568	682	909	1137	1364	1592	1819	2046	2274	3410
14.29	9/16	111	178	223	334	446	557	668	891	1114	1337	1559	1782	2005	2228	3341
15.00	–	106	170	212	318	424	531	637	849	1061	1273	1485	1698	1910	2122	3183
15.88	5/8	100	160	200	301	401	501	601	802	1002	1203	1403	1604	1804	2004	3007
16.00	–	99	159	199	298	398	497	597	796	995	1194	1393	1592	1790	1989	2984
17.46	11/16	91	146	182	273	365	456	547	729	912	1094	1276	1458	1641	1823	2735
18.00	–	88	141	177	265	354	442	531	707	884	1061	1238	1415	1592	1768	2653
19.05	3/4	84	134	167	251	334	418	501	668	835	1003	1170	1337	1504	1671	2506
20.00	–	80	127	159	239	318	398	477	637	796	955	1114	1273	1432	1592	2387
24.00	–	66	106	133	199	265	332	398	531	663	796	928	1061	1194	1326	1989
25.00	–	64	102	127	191	255	318	382	509	637	764	891	1019	1146	1273	1910
27.00	–	59	94	118	177	236	295	354	472	589	707	825	943	1061	1179	1768
30.00	–	53	85	106	159	212	265	318	424	531	637	743	849	955	1061	1592
32.00	–	50	80	99	149	199	249	298	398	497	597	696	796	895	995	1492
36.00	–	44	71	88	133	177	221	265	354	442	531	619	707	796	884	1326
40.00	–	40	64	80	119	159	199	239	318	398	477	557	637	716	796	1194
50.00	–	32	51	64	95	127	159	191	255	318	382	446	509	573	637	955

GENERAL – TECHNICAL INFO

Hardness and Tensile Strength

HV	HRC	HB	Tensile Strength	
Vickers	Rockwell	Brinell	(N/mm ²)	(Tons/sq. in.)
940	68	—	—	—
900	67	—	—	—
864	66	—	—	—
829	65	—	—	—
800	64	—	—	—
773	63	—	—	—
745	62	—	—	—
720	61	—	—	—
698	60	—	—	—
675	59	—	—	—
655	58	—	2200	142
650	—	618	2180	141
640	—	608	2145	139
639	57	607	2140	138
630	—	599	2105	136
620	—	589	2070	134
615	56	584	2050	133
610	—	580	2030	131
600	—	570	1995	129
596	55	567	1980	128
590	—	561	1955	126
580	—	551	1920	124
578	54	549	1910	124
570	—	542	1880	122
560	53	532	1845	119
550	—	523	1810	117
544	52	517	1790	116
540	—	513	1775	115
530	—	504	1740	113
527	51	501	1730	112
520	—	494	1700	110
514	50	488	1680	109
510	—	485	1665	108
500	—	475	1630	105
497	49	472	1620	105
490	—	466	1595	103
484	48	460	1570	102
480	—	456	1555	101
473	47	449	1530	99
470	—	447	1520	98
460	—	437	1485	96
458	46	435	1480	96
450	—	428	1455	94
446	45	424	1440	93
440	—	418	1420	92

HV	HRC	HB	Tensile Strength	
Vickers	Rockwell	Brinell	(N/mm ²)	(Tons/sq. in.)
434	44	413	1400	91
423	43	402	1360	88
413	42	393	1330	86
403	41	383	1300	84
392	40	372	1260	82
382	39	363	1230	80
373	38	354	1200	78
364	37	346	1170	76
355	36	337	1140	74
350	—	333	1125	73
345	35	328	1110	72
340	—	323	1095	71
336	34	319	1080	70
330	—	314	1060	69
327	33	311	1050	68
320	—	304	1030	67
317	32	301	1020	66
310	31	295	995	64
302	30	287	970	63
300	—	285	965	62
295	—	280	950	61
293	29	278	940	61
290	—	276	930	60
287	28	273	920	60
285	—	271	915	59
280	27	266	900	58
275	—	261	880	57
272	26	258	870	56
270	—	257	865	56
268	25	255	860	56
265	—	252	850	55
260	24	247	835	54
255	23	242	820	53
250	22	238	800	52
245	—	233	785	51
243	21	231	780	50
240	—	228	770	50
235	—	223	755	49
230	—	219	740	48
225	—	214	720	47
220	—	209	705	46
215	—	204	690	45
210	—	199	675	44
205	—	195	660	43
200	—	190	640	41



CUTTING FLUIDS

M200-1



M200 nr. 1 Blå, skærevæske til kraftig bearbejdning

En højtydende skæreolie til vanskelige operationer, f.eks. gevind, rival og boring i hånden eller med en søjleboremaskine. For øget værktøjslevetid og forbedret overfladefinish. Første valgs anbefaling til højstyrkestål, rustfrit stål og superlegeringer.

Product	Nr.
M2000.25NR.1BLUE	1/4 Ltr. 12x
M2001.0NR.1BLUE	1 Ltr.
M2005.0NR.1BLUE	5 Ltr.
M20020.0NR.1BLUE	20 Ltr.

M200-2



M200 nr. 2 rød, skærevæske til ikke-jernholdige metaller

En pæn olie til bearbejdning, der kræver fjernelse af spåner i aluminium og dets legeringer. Til smøring og afkøling for at fremme lang værktøjslevetid og sikre fremragende overfladefinish. Lav miljøpåvirkning på grund af fremragende anti-mist-egenskaber, høj oxidationsstabilitet og ringe lugt.

Product	Nr.
M2000.25NR.2RED	1/4 Ltr. 12x
M2001.0NR.2RED	1 Ltr.
M2005.0NR.2RED	5 Ltr.

M200-3



M200 nr. 3 Grøn, skærevæske til bearbejdning til almindeligt bearbejdning

En højtydende skæreolie med ekstreme tryk (EP) additiver for at give længere værktøjslevetid. Til generelle skære- eller formningsoperationer, såsom gevind, rival og boring i stål eller støbt stål og rustfrit stål.

Product	Nr.
M2000.25NR.3GREEN	1/4 Ltr. 12x
M2001.0NR.3GREEN	1 Ltr.
M2005.0NR.3GREEN	5 Ltr.

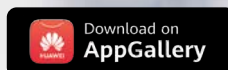
DORMER PRAMET



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REAMERS AND COUNTERSINKS



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1

B400

DORMER

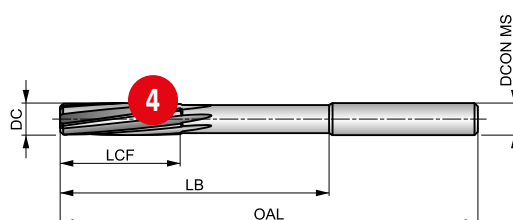


3

HM ligeskærs maskin rival med H7-tolerance, blank finish

Designet til at give en finish inden for grænserne for H7 hul tolerance. For overlegen ydeevne og forlænget værktøjslevetid, når du river hårde og slibende materialer. Spiralskæret med ekstremt forskellig afstand mellem skærende reducerer vibrationer og forbedrer hulens rundhed, størrelse og overfladefinish.

2



HM	Bright	DIN 8093
R	B	
H7		

5

Arbejdsmets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■ 23 B	■ 26 B	■ 27 B	■ 20 B	■ 18 B	■ 16 C	■ 16 B	■ 13 B	■ 11 C	■ 10 B	■ 8 C	■ 7 C	■ 10 C	■ 8 C
■ 9 C	■ 7 C	■ 6 B	■ 20 D	■ 15 D	■ 11 D	■ 2	■ 17 D	■ 14 D	■ 18 D	■ 11 D	■ 19 D	■ 15 D	
K5.3	N1.1	N1.2	N1.3	N2.1	N2.2	N2.3	N3.1	N3.2	N3.3	N4.1	N4.2		
■ 11 D	■ 60 D	■ 45 D	■ 30 D	■ 38 D	■ 35 D	■ 25 D	■ 64 E	■ 38 E	■ 19 E	■ 35 C	■ 30 C		

6

DCON MS tolerance h6; DC > = 14 mm hårdmetal påloddet.

Product	DC	OAL	LCF	LB	NOF	DCON MS
	[mm]	[mm]	[mm]	[mm]		[mm]
B4001.0	1.00	34.0	5.5	15.00	3	1.00
B4001.2	1.20	38.0	7.5	16.50	3	1.20
B4001.4	1.40	40.0	8.0	18.00	3	1.50
B4001.5	1.50	40.0	8.0	18.00	3	1.50
B4001.6	1.60	43.0	9.0	20.00	3	1.60
B4001.8	1.80	46.0	10.0	22.00	4	1.80
B4002.0	2.00	49.0	11.0	24.00	4	2.00
B4002.2	2.20	53.0	12.0	25.00	4	2.20
B4002.5	2.50	57.0	14.0	27.00	4	2.50
B4003.0	2.80	61.0	15.0	30.00	6	3.00
B4003.0	3.00	61.0	15.0	33.00	6	3.00
B4003.2	3.20	65.0	16.0	37.00	6	3.20

7

8

Product	DC	OAL	LCF	LB	NOF	DCON MS
	[mm]	[mm]	[mm]	[mm]		[mm]
B4004.5	4.50	80.0	21.0	52.00	6	4.50
B4005.0	5.00	86.0	23.0	58.00	6	5.00
B4005.5	5.50	93.0	26.0	57.00	6	5.60
B4006.0	6.00	93.0	26.0	57.00	6	5.60
B4006.5	6.50	101.0	28.0	65.00	6	6.30
B4007.0	7.00	109.0	31.0	73.00	6	7.10
B4008.0	8.00	117.0	33.0	81.00	6	8.00
B4009.0	9.00	125.0	36.0	85.00	6	9.00
B40010.0	10.00	133.0	38.0	93.00	6	10.00
B40012.0	12.00	151.0	44.0	111.00	6	10.00
B40014.0	14.00	160.0	47.0	115.00	6	12.50
B40016.0	16.00	170.0	52.0	125.00	6	12.50

Pos.	Description
1	Designation of drill
2	Product description
3	Illustrative picture
4	Schematic drawing of tool

Pos.	Description
5	Product features
6	Material group recommendations incl. speed and feed guidance
7	Product code
8	Product dimensions

REAMERS AND COUNTERSINKS – ICONS OVERVIEW

GENERAL ICONS

	Primary use
	Possible use

ACHIEVABLE HOLE TOLERANCE ZONE (TCHA)

	H7 – Industry Standard Hole Tolerance Zone (based on diameter range)		k11 – Industry Standard Tool Tolerance Zone (based on diameter range)
	High Precision Hole Tolerance Zone (based on diameter range)		

Application Angle

	100° Countersink		20° Conical Drill		82° Countersink
	180° Counterbore		60° Countersink		90° Countersink

BASIC STANDARD GROUP (BSG)

	ANSI – Tap Standards		DIN 219 – Shell Reamer Standards		DIN 8050 – Parallel Shank Reamer Standards
	BS 328 – Drills and Reamers Standards		DIN 311 – Morse Taper Shank Bridge Reamer Standards		DIN 8051 – Morse Taper Shank Reamer Standards
	DIN 206 – Hand Reamer Standards		DIN 334 C – Straight Shank Countersink Standards		DIN 8093 – Straight Shank Reamer Standards
	DIN 208 – Morse Taper Shank Chucking Reamer Standards		DIN 334 D – Morse Taper Shank Countersink Standards		DIN 8094 – Morse Taper Shank Reamer Standards
	DIN 212 – Machine Reamer Standards		DIN 335 A – Straight Shank Countersink Standards		DIN 9 – Taper Pin Reamer Standards
	DIN 217 – Shell Reamer Arbor Standards		DIN 335 C – Straight Shank Countersink Standards		Dormer Standards
	DIN 2179 – Parallel Shank Taper Pin Reamer Standards		DIN 335 D – Morse Taper Shank Countersink Standards		
	DIN 2180 – Morse Taper Shank Taper Pin Reamer Standards		DIN 373 – Counterbore Standards		

COATING

	Aluminium Titanium Carbon Nitride Coating		Combination Bright and Steam Oxide		Titanium Aluminium Nitride Coating
	Bright (uncoated)		Steam and Bronze Oxide Surface Treatment		Titanium Nitride Coated

CUTTING DIRECTION

	Right Hand Rotation / Cutting
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MATERIAL CODE (BMC)

	Hard Material (Solid Carbide)		High Speed Steel Tool Material
	High Speed Cobalt Steel Tool Material		

REAMERS AND COUNTERSINKS – ICONS OVERVIEW

REAMER FORM		SHANK	
A	DIN Form A – Straight Flute $\leq \varnothing 3.5\text{mm}$	 Cylindrical Shank / Straight Shank	 Cylindrical Shank with Tang
B	DIN Form B – Spiral Flute $\leq \varnothing 3.5\text{mm}$	 Cylindrical Shank with 3flat	 DIN 6535 HA Cylindrical Shank
E	DIN Form C – Straight Flute $\geq \varnothing 4.0\text{mm}$	 Cylindrical Shank with Hex	 Morse Taper Shank
		 Cylindrical Shank with Square	

TAPER GRADIENT (RATE OF TAPER)

1:48 	Taper Gradient (1/4" per foot taper)	1:50 	Taper Gradient (1 mm per 50 mm taper)
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REAMERS AND COUNTERSINKS – NAVIGATOR TOOL MATERIALS

Tool materials

High Speed Steel		A medium-alloyed high speed steel that has good machinability and good performance. HSS exhibits hardness, toughness and wear resistance characteristics that make it attractive in a wide range of applications, for example in drills and taps.
Cobalt High Speed Steel		This high speed steel contains cobalt for increased hot hardness. The composition of HSCo is a good combination of toughness and hardness. It has good machinability and good wear resistance, which makes it usable for drills, taps, milling cutters and reamers.

Carbide materials

Carbide Materials (or Hard Materials)		A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together. Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.
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Surface Coatings

Titanium Nitride (TiN)		Titanium Nitride is a gold coloured ceramic coating applied by physical vapour deposition (PVD). High hardness combined with low friction properties ensures considerably longer tool life, or alternatively, better cutting performance from tools which have not been coated. TiN coating is used mainly for drills and taps.
Aluminium Titanium Carbon Nitride (AlTiCN)		Aluminium Titanium Carbon-Nitride (AlTiCN) is a PVD coating which was specifically engineered to meet the rigorous requirements of the medical device industry. It is however equally applicable to certain cutting tool operations due to a high quality thin-film technology, with excellent micro-hardness and adhesion characteristics.
Titanium Aluminium Nitride coatings (TiAlN)		Titanium Aluminium Nitride is a multi layer ceramic coating applied by PVD coating technology, which exhibits high toughness and oxidation stability. These properties make it ideal for higher speeds and feeds, while at the same time improving tool life. TiAlN is used in drilling, tapping, and milling applications and can be suitable for use when machining without coolant.
Bright (uncoated)		Bright finish (uncoated surface) improves chip flow in soft or non-ferrous materials while maintaining sharp cutting edges.
Combination Bright and Steam Tempered		Combination of bright and steam tempering can be effective, as the blue oxide more porous surface acts to retain and pull cutting fluid into the hole while the bright surface assists in chip evacuation. This combination is achieved by grinding the bright surface after tempering.
Combination Steam and Bronze Tempered Surface Treatment		Combination of steam and bronze tempering can be effective, as the blue oxide more porous surface acts to retain and pull cutting fluid into the hole while the bronze surface assists in chip evacuation. Both surface treatments add a degree of surface protection to the tool. These combinations are achieved by using two different tempering cycles.

Materiale kode (BMC)	HM	HM	HM	HM	HM	HSS	HSS	HSS	HSS-E	HSS	HSS	HSS	HSS
Belægning	Bright	Bright	Bright	Bright	Bright	Bright ST	Bright		Bright ST	Bright ST	Bright ST	Bright	ST Bronze
Grundlæggende standard-gruppe (BSG)	DIN 8093	DIN 8093	DIN 8050	DIN 8094	DIN 8051	DIN 206	DORMER	DORMER	BS 328	BS 328	DIN 9	DIN 9	ANSI
Hånd (skæreretning)	R	R	R	R	R	R	R		R	R	R	R	R
Skaft		DIN 6535HA											
Anvendelsesvinkel													
Rival form	B	B	A	B	A	B			B	A	A	B	
Opnåelig hultolerance (TCHA)	H7	$\begin{matrix} \phi 95-5.5 \\ +0.004 \\ \phi 5.51-12 \\ +0.005 \end{matrix}$	H7	H7	H7	H7			H7				
Konisk stigning - millimeter (konisk spids)										1:48	1:50	1:50	
													
Produktfamiliekode	B400	B481	B441	B411	B442	B100	B334	B335	B901	B301	B903	B952	B122
	1.00 - 20.00	0.98 - 12.05	10.00 - 20.00	5.00 - 30.00	10.00 - 20.00	1.50 - 50.00	N000 - N16	N000BLADES - N16NUT	1.50 - 1/2	1/16 - 1/2	1.50 - 20.00	1.20 - 50.00	3/8 - 1.1/16
	 200	 201	 203	 204	 205	 206	 208	 209	 210	 211	 212	 213	 214
P	P1	■	■	■	■	■	■		■	■	■	■	■
	P2	■	■	■	■	■	■		■	■	■	■	■
	P3	■	■	■	■	■	■		■	■	■	■	■
	P4	■	■	■	■	■	■		■	■	■	■	■
M	M1	■	■	■	■	■	■		■	■	■	■	■
	M2	■	■	■	■	■	■		■	■	■	■	■
	M3												
	M4												
K	K1	■	■	■	■	■	■		■	■	■	■	
	K2	■	■	■	■	■	■		■	■	■	■	
	K3	■	■	■	■	■	■		■	■	■	■	
	K4												
	K5	■	■	■	■	■							
N	N1	■	■	■	■	■	■		■	■	■	■	■
	N2	■	■	■	■	■	■		■	■	■	■	■
	N3	■	■	■	■	■	■		■	■	■	■	■
	N4	■	■	■	■	■	■		■	■	■	■	■
	N5												
S	S1												
	S2												
	S3												
	S4												
H	H1												
	H2												
	H3												
	H4												

Primær brug Mulig brug

	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS-E	HSS	HSS-E	HSS-E	HSS-E		HM	HSS	HSS
	DIN 2179	DIN 212	DIN 212	DIN 212	DIN 208	BS 328	DIN 311	DIN 2180	DIN 219	DIN 217		DIN 335C	DIN 334C	DIN 334C
		B	B	E	B	B			B			90°	60°	60°
	H7	H7	$\begin{matrix} \phi .95-5.5 \\ +0.004 \\ \phi 5.51-12 \\ +0.005 \end{matrix}$	H7	H7	H7	k11		H7					
	1:50							1:50						
	B953	B180	B170	B157	B161	B101	B121	B954	B955	B956	B957	G400	G135	G335
	1.00 - 12.00	1.50 - 20.00	0.98 - 12.00	2.00 - 20.00	3.00 - 50.00	3.00 - 2"	10.00 - 30.00	5.00 - 30.00	25.00 - 80.00	13.00 - 40.00	N3DRIVER - N9WASHER	6.30 - 31.00	6.30 - 25.00	6.30 - 25.00
	215	216	218	220	221	222	224	225	226	227	228	229	230	231
P1	■	■	■	■	■	■	■	■	■			■	■	■
P2	■	■	■	■	■	■	■	■	■			■	■	■
P3	■	■	■	■	■	■	■	■	■			■	■	■
P4	■	■	■	■	■	■	■	■	■			■	■	■
M1	■	■	■	■	■	■		■	■			■	■	■
M2	■	■	■	■	■			■	■			■	■	■
M3												■		■
M4												■		
K1	■	■	■		■	■	■	■	■			■	■	■
K2	■	■	■		■	■	■	■	■			■	■	■
K3	■	■	■		■	■	■	■	■			■	■	■
K4												■		■
K5												■	■	■
N1	■	■	■	■	■	■	■	■	■			■	■	■
N2	■	■	■	■	■	■	■	■	■			■	■	■
N3	■	■	■		■	■	■	■	■			■	■	■
N4	■	■	■		■	■	■	■	■			■	■	■
N5												■		
S1												■		
S2												■		
S3												■		
S4												■		
H1												■		
H2												■		
H3												■		
H4												■		

Materiale kode (BMC)		HSS	HSS	HSS	HSS-E	HSS	HSS	HSS	HSS	HSS-E	HSS-E	HSS
Belægning		Bright	Bright	Bright	Bright	Bright	TIAIN	Bright	TIAIN	Bright	ALTiCN	Bright
Grundlæggende standard-gruppe (BSG)		DIN 334D	DIN 335C	DORMER	DORMER	DIN 335C	DIN 335C	DIN 335C	DIN 335C	DIN 335C	DIN 335C	DORMER
Hånd (skæreretning)												
Skaft												
Anvendelsesvinkel		60°	82°	90°	90°	90°	90°	90°	90°	90°	90°	90°
Rival form												
Opnåelig hultolerance (TCH)												
Konisk stigning - millimeter (konisk spids)												
Produktfamiliekode		G137	G154	G129	G149	G136	G560	G106	G506	G142	G570	G107
		16.00 - 80.00	6.30 - 25.00	6.00 - 31.50	5.00 - 50.00	4.30 - 31.00	6.30 - 31.00	6.30 - 50.00	6.30 - 50.00	4.80 - 31.00	6.30 - 31.00	6.30 - 20.50
		232	233	234	235	236	237	238	239	240	241	242
P	P1	■	■	■	■	■	■	■	■	■	■	■
	P2	■	■	■	■	■	■	■	■	■	■	■
	P3	■	■	■	■	■	■	■	■	■	■	■
	P4	■	■	■	■	■	■	■	■	■	■	■
M	M1	■	■	■	■	■	■	■	■	■	■	■
	M2	■	■	■	■	■	■	■	■	■	■	■
	M3									■		
	M4									■		
K	K1	■	■	■	■	■	■	■	■		■	■
	K2	■	■	■	■	■	■	■	■		■	■
	K3	■	■	■	■	■	■	■	■		■	■
	K4						■		■		■	■
	K5	■	■		■	■	■	■	■		■	■
N	N1	■	■	■	■	■	■	■	■	■	■	■
	N2	■	■	■	■	■	■	■	■	■	■	■
	N3	■	■	■	■	■	■	■	■	■	■	■
	N4	■	■	■	■	■	■	■	■	■	■	■
	N5											
S	S1											
	S2											
	S3											
	S4											
H	H1											
	H2											
	H3											
	H4											

Primær brug Mulig brug

	HSS	HSS	HSS	HSS	HSS	HSS														
	Bright	Bright	TiN	TiAlN	Bright	Bright														
	DIN 335A	DIN 335D	DIN 335D	DIN 335C	DORMER	DIN 373														
																				
																				
	90°	90°	90°	100°	20°	180°														
																				
	G132	G138	G338	G171	G314	G125	G236													
	8.00 - 20.00	25.00 - 80.00	25.00 - 63.00	6.30 - 25.00	4.00 - 9.00	6.50 - 20.00	Set													
	 244	 245	 246	 247	 248	 249	 250													
P1		■	■	■	■	■														
P2	■	■	■	■	■	■														
P3	■	■	■	■	■	■														
P4	■	■	■	■	■	■														
M1		■	■	■	■	■														
M2		■	■	■	■	■														
M3	■																			
M4	■																			
K1	■	■	■	■	■	■														
K2	■	■	■	■	■	■														
K3	■	■	■	■	■	■														
K4	■	■	■	■	■	■														
K5	■	■	■	■	■	■														
N1	■	■	■	■	■	■														
N2	■	■	■	■	■	■														
N3	■	■	■	■	■	■														
N4	■	■	■	■	■	■														
N5																				
S1																				
S2																				
S3																				
S4																				
H1																				
H2																				
H3																				
H4																				

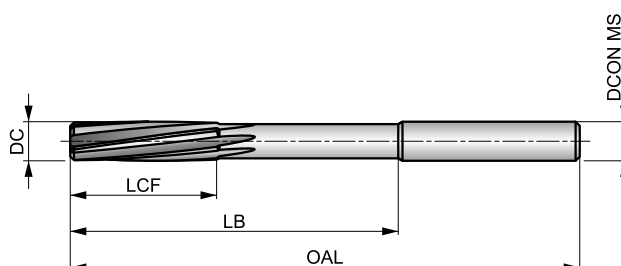
B400

DORMER



HM ligeskærs maskin rival med H7-tolerance, blank finish

Designet til at give en finish inden for grænserne for H7 hul tolerance. For overlegen ydeevne og forlænget værktøjslevetid, når du river hårde og slibende materialer. Spiralskæret med ekstremt forskellig afstand mellem skærende reducerer vibrationer og forbedrer hulens rundhed, størrelse og overfladefinish.



HM	Bright	DIN 8093
R		B
H7		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 23 B	P1.2 ■ 26 B	P1.3 ■ 27 B	P2.1 ■ 20 B	P2.2 ■ 18 B	P2.3 ■ 16 C	P3.1 ■ 16 B	P3.2 ■ 13 B	P3.3 ■ 11 C	P4.1 ■ 10 B	P4.2 ■ 8 C	P4.3 ■ 7 C	M1.1 ■ 10 C	M1.2 ■ 8 C
M2.1 ■ 9 C	M2.2 ■ 7 C	M2.3 ■ 6 B	K1.1 ■ 20 D	K1.2 ■ 15 D	K1.3 ■ 11 D	K2.1 ■ 21 D	K2.2 ■ 17 D	K2.3 ■ 14 D	K3.1 ■ 18 D	K3.2 ■ 14 D	K3.3 ■ 11 D	K5.1 ■ 19 D	K5.2 ■ 15 D
K5.3 ■ 11 D	N1.1 ■ 60 D	N1.2 ■ 45 D	N1.3 ■ 30 D	N2.1 ■ 38 D	N2.2 ■ 35 D	N2.3 ■ 25 D	N3.1 ■ 64 E	N3.2 ■ 38 E	N3.3 ■ 19 E	N4.1 ■ 35 C	N4.2 ■ 30 C		

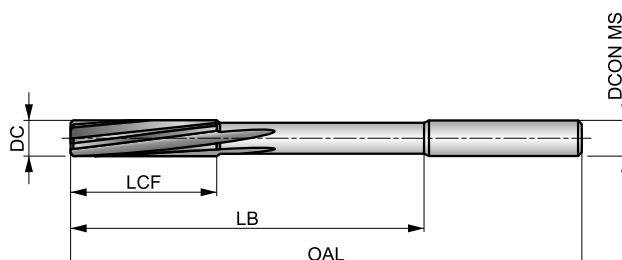
DCON MS tolerance h6; DC> = 14 mm hårdmetal påloddet.

Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B4001.0	1.00	34.0	5.5	15.00	3	1.00
B4001.2	1.20	38.0	7.5	16.50	3	1.20
B4001.4	1.40	40.0	8.0	18.00	3	1.50
B4001.5	1.50	40.0	8.0	18.00	3	1.50
B4001.6	1.60	43.0	9.0	20.00	3	1.60
B4001.8	1.80	46.0	10.0	22.00	4	1.80
B4002.0	2.00	49.0	11.0	24.00	4	2.00
B4002.2	2.20	53.0	12.0	25.00	4	2.20
B4002.5	2.50	57.0	14.0	29.00	4	2.50
B4002.8	2.80	61.0	15.0	33.00	6	3.00
B4003.0	3.00	61.0	15.0	33.00	6	3.00
B4003.2	3.20	65.0	16.0	37.00	6	3.20
B4003.5	3.50	70.0	18.0	42.00	6	3.50
B4004.0	4.00	75.0	19.0	47.00	6	4.00

Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B4004.5	4.50	80.0	21.0	52.00	6	4.50
B4005.0	5.00	86.0	23.0	58.00	6	5.00
B4005.5	5.50	93.0	26.0	57.00	6	5.60
B4006.0	6.00	93.0	26.0	57.00	6	5.60
B4006.5	6.50	101.0	28.0	65.00	6	6.30
B4007.0	7.00	109.0	31.0	73.00	6	7.10
B4008.0	8.00	117.0	33.0	81.00	6	8.00
B4009.0	9.00	125.0	36.0	85.00	6	9.00
B40010.0	10.00	133.0	38.0	93.00	6	10.00
B40012.0	12.00	151.0	44.0	111.00	6	10.00
B40014.0	14.00	160.0	47.0	115.00	6	12.50
B40016.0	16.00	170.0	52.0	125.00	6	12.50
B40018.0	18.00	182.0	56.0	137.00	6	14.00
B40020.0	20.00	195.0	60.0	147.00	6	16.00

B481**DORMER****Hårdmetal maskinerival - 0,01 mm intervaller, blank finish**

Lige skaft til høj ydeevne ved CNC-bearbejdning. Forskellige stigningsstørrelser gør det muligt at producere nøjagtige hulstørrelser og tolerancer. Premium hårdmetal giver stærkt forbedret ydeevne og forlænget værktøjslevetid, når man river i hårde og slibende materialer. Ekstremt forskellig afstand på skær for at reducere vibrationer.



HM	Bright	DIN 8093
R	DIN 6535HA	B
$\begin{matrix} \phi 95-5.5 \\ +0.004 \\ \phi 5.51-12 \\ +0.005 \end{matrix}$		

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 23 B	P1.2 ■ 26 B	P1.3 ■ 27 B	P2.1 ■ 20 B	P2.2 ■ 18 B	P2.3 ■ 16 C	P3.1 ■ 16 B	P3.2 ■ 13 B	P3.3 ■ 11 C	P4.1 ■ 10 B	P4.2 ■ 8 C	P4.3 ■ 7 C	M1.1 ■ 10 C	M1.2 ■ 8 C
M2.1 ■ 9 C	M2.2 ■ 7 C	M2.3 ■ 6 B	K1.1 ■ 20 D	K1.2 ■ 15 D	K1.3 ■ 11 D	K2.1 ■ 21 D	K2.2 ■ 17 D	K2.3 ■ 14 D	K3.1 ■ 18 D	K3.2 ■ 14 D	K3.3 ■ 11 D	K5.1 ■ 19 D	K5.2 ■ 15 D
K5.3 ■ 11 D	N1.1 ■ 60 D	N1.2 ■ 45 D	N1.3 ■ 30 D	N2.1 ■ 38 D	N2.2 ■ 35 D	N2.3 ■ 25 D	N3.1 ■ 64 E	N3.2 ■ 38 E	N3.3 ■ 19 E	N4.1 ■ 35 C	N4.2 ■ 30 C		

DCON MS tolerance h6.

Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B4810.98	0.98	50.0	6.0	28.00	3	3.00
B4810.99	0.99	50.0	6.0	28.00	3	3.00
B4811.00	1.00	50.0	6.0	28.00	3	3.00
B4811.01	1.01	50.0	6.0	28.00	3	3.00
B4811.02	1.02	50.0	6.0	28.00	3	3.00
B4811.03	1.03	50.0	6.0	28.00	3	3.00
B4811.48	1.48	50.0	9.0	28.00	3	3.00
B4811.49	1.49	50.0	9.0	28.00	3	3.00
B4811.50	1.50	50.0	9.0	28.00	3	3.00
B4811.51	1.51	50.0	10.0	28.00	3	3.00
B4811.52	1.52	50.0	10.0	28.00	3	3.00
B4811.53	1.53	50.0	10.0	28.00	3	3.00
B4811.98	1.98	50.0	12.0	28.00	4	3.00
B4811.99	1.99	50.0	12.0	28.00	4	3.00
B4812.00	2.00	50.0	12.0	28.00	4	3.00
B4812.01	2.01	50.0	12.0	28.00	4	3.00
B4812.02	2.02	50.0	12.0	28.00	4	3.00
B4812.03	2.03	50.0	12.0	28.00	4	3.00
B4812.48	2.48	60.0	16.0	28.00	4	3.00
B4812.49	2.49	60.0	16.0	28.00	4	3.00
B4812.50	2.50	60.0	16.0	28.00	4	3.00
B4812.51	2.51	60.0	16.0	28.00	4	3.00
B4812.52	2.52	60.0	16.0	28.00	4	3.00
B4812.53	2.53	60.0	16.0	28.00	4	3.00
B4812.97	2.97	65.0	17.0	28.00	6	4.00
B4812.98	2.98	65.0	17.0	28.00	6	4.00
B4812.99	2.99	65.0	17.0	28.00	6	4.00

Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B4813.00	3.00	65.0	17.0	28.00	6	4.00
B4813.01	3.01	65.0	17.0	28.00	6	4.00
B4813.02	3.02	65.0	17.0	28.00	6	4.00
B4813.03	3.03	65.0	17.0	28.00	6	4.00
B4813.97	3.97	75.0	19.0	28.00	6	4.00
B4813.98	3.98	75.0	19.0	28.00	6	4.00
B4813.99	3.99	75.0	19.0	28.00	6	4.00
B4814.00	4.00	75.0	19.0	28.00	6	4.00
B4814.01	4.01	75.0	19.0	28.00	6	4.00
B4814.02	4.02	75.0	19.0	28.00	6	4.00
B4814.03	4.03	75.0	19.0	28.00	6	4.00
B4814.97	4.97	93.0	23.0	36.00	6	6.00
B4814.98	4.98	93.0	23.0	36.00	6	6.00
B4814.99	4.99	93.0	23.0	36.00	6	6.00
B4815.00	5.00	93.0	23.0	36.00	6	6.00
B4815.01	5.01	93.0	23.0	36.00	6	6.00
B4815.02	5.02	93.0	23.0	36.00	6	6.00
B4815.03	5.03	93.0	23.0	36.00	6	6.00
B4815.97	5.97	93.0	26.0	36.00	6	6.00
B4815.98	5.98	93.0	26.0	36.00	6	6.00
B4815.99	5.99	93.0	26.0	36.00	6	6.00
B4816.00	6.00	93.0	26.0	36.00	6	6.00
B4816.01	6.01	93.0	26.0	36.00	6	6.00
B4816.02	6.02	93.0	26.0	36.00	6	6.00
B4816.03	6.03	93.0	26.0	36.00	6	6.00
B4817.97	7.97	117.0	33.0	36.00	6	8.00
B4817.98	7.98	117.0	33.0	36.00	6	8.00

Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B4817.99	7.99	117.0	33.0	36.00	6	8.00
B4818.00	8.00	117.0	33.0	36.00	6	8.00
B4818.01	8.01	117.0	33.0	36.00	6	8.00
B4818.02	8.02	117.0	33.0	36.00	6	8.00
B4818.03	8.03	117.0	33.0	36.00	6	8.00
B4818.04	8.04	117.0	33.0	36.00	6	8.00
B4819.97	9.97	133.0	38.0	40.00	6	10.00
B4819.98	9.98	133.0	38.0	40.00	6	10.00
B4819.99	9.99	133.0	38.0	40.00	6	10.00
B48110.00	10.00	133.0	38.0	40.00	6	10.00
B48110.01	10.01	133.0	38.0	40.00	6	10.00
B48110.02	10.02	133.0	38.0	40.00	6	10.00

Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B48110.03	10.03	133.0	38.0	40.00	6	10.00
B48110.04	10.04	133.0	38.0	40.00	6	10.00
B48110.05	10.05	133.0	38.0	40.00	6	10.00
B48111.97	11.97	151.0	44.0	45.00	6	12.00
B48111.98	11.98	151.0	44.0	45.00	6	12.00
B48111.99	11.99	151.0	44.0	45.00	6	12.00
B48112.00	12.00	151.0	44.0	45.00	6	12.00
B48112.01	12.01	151.0	44.0	45.00	6	12.00
B48112.02	12.02	151.0	44.0	45.00	6	12.00
B48112.03	12.03	151.0	44.0	45.00	6	12.00
B48112.04	12.04	151.0	44.0	45.00	6	12.00
B48112.05	12.05	151.0	44.0	45.00	6	12.00

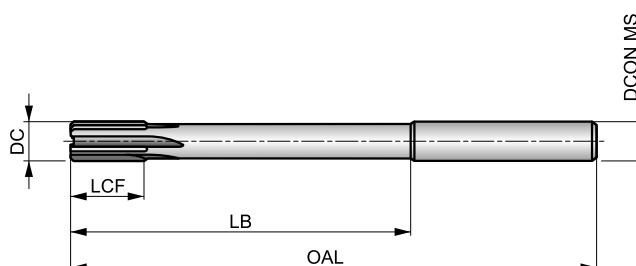
B441

DORMER



Hårdmetalrival med lige skaft, H7-tolerance, blank finish

Den hårdlodde hårdmetalspids giver forlænget værktøjslevetid og en overlegen ydelse, når man river huller inden for grænserne for H7-hultolerance. Det yderst ulige design af skærreducerer vibrationer og forbedrer hulens rundhed, overfladefinish og størrelse. Værktøjet tilbyder fremragende ydelse i CNC-maskiner.



HM	Bright	DIN 8050
R		A
H7		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 23 B	P1.2 ■ 26 B	P1.3 ■ 27 B	P2.1 ■ 20 B	P2.2 ■ 18 B	P2.3 ■ 16 C	P3.1 ■ 16 B	P3.2 ■ 13 B	P3.3 ■ 11 C	P4.1 ■ 10 B	P4.2 ■ 8 C	P4.3 ■ 7 C	M1.1 ■ 10 C	M1.2 ■ 8 C
M2.1 ■ 9 C	M2.2 ■ 7 C	M2.3 ■ 6 B	K1.1 ■ 20 D	K1.2 ■ 15 D	K1.3 ■ 11 D	K2.1 ■ 21 D	K2.2 ■ 17 D	K2.3 ■ 14 D	K3.1 ■ 18 D	K3.2 ■ 14 D	K3.3 ■ 11 D	K5.1 ■ 19 D	K5.2 ■ 15 D
K5.3 ■ 11 D	N1.1 ■ 60 D	N1.2 ■ 45 D	N1.3 ■ 30 D	N2.1 ■ 38 D	N2.2 ■ 35 D	N2.3 ■ 25 D	N3.1 ■ 64 E	N3.2 ■ 38 E	N3.3 ■ 19 E	N4.1 ■ 35 C	N4.2 ■ 30 C		

DCON MS tolerance h9; hårdmetal påloddet.

Product	DC (mm)	OAL (mm)	LCF (mm)	LB (mm)	NOF	DCON MS (mm)
B44110.0	10.00	133.0	19.0	87.00	6	10.00
B44111.0	11.00	142.0	19.0	96.00	6	10.00
B44112.0	12.00	151.0	19.0	105.00	6	10.00
B44113.0	13.00	151.0	19.0	105.00	6	10.00
B44114.0	14.00	160.0	19.0	110.00	6	12.50
B44115.0	15.00	162.0	19.0	112.00	6	12.50
B44116.0	16.00	170.0	22.0	120.00	6	12.50
B44117.0	17.00	175.0	22.0	123.00	6	14.00
B44118.0	18.00	182.0	22.0	130.00	6	14.00
B44119.0	19.00	189.0	22.0	131.00	6	16.00
B44120.0	20.00	195.0	22.0	137.00	6	16.00

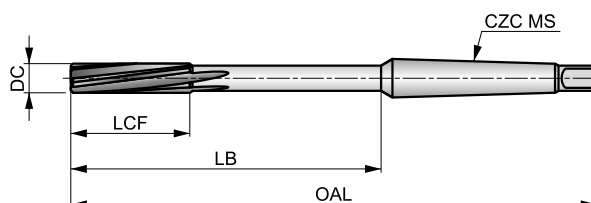
B411

DORMER



Hårdmetalrival påloddet HM med lige skaft, H7-tolerance, blank finish

De hårdlodde hårdmetal-spids giver betydelige forbedringer i ydeevne og en længere værktøjslevetid, når du river hårde og slibende materialer. Spiralskærene har ulige mellemrum mellem dem, hvilket effektivt reducerer vibrationer og forbedrer hulssymmetri, størrelse og finish.



HM	Bright	DIN 8094
R		B
H7		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 23 B	P1.2 ■ 26 B	P1.3 ■ 27 B	P2.1 ■ 20 B	P2.2 ■ 18 B	P2.3 ■ 16 C	P3.1 ■ 16 B	P3.2 ■ 13 B	P3.3 ■ 11 C	P4.1 ■ 10 B	P4.2 ■ 8 C	P4.3 ■ 7 C	M1.1 ■ 10 C	M1.2 ■ 8 C
M2.1 ■ 9 C	M2.2 ■ 7 C	M2.3 ■ 6 B	K1.1 ■ 20 D	K1.2 ■ 15 D	K1.3 ■ 11 D	K2.1 ■ 21 D	K2.2 ■ 17 D	K2.3 ■ 14 D	K3.1 ■ 18 D	K3.2 ■ 14 D	K3.3 ■ 11 D	K5.1 ■ 19 D	K5.2 ■ 15 D
K5.3 ■ 11 D	N1.1 ■ 60 D	N1.2 ■ 45 D	N1.3 ■ 30 D	N2.1 ■ 38 D	N2.2 ■ 35 D	N2.3 ■ 25 D	N3.1 ■ 64 E	N3.2 ■ 38 E	N3.3 ■ 19 E	N4.1 ■ 35 C	N4.2 ■ 30 C		

DC <= 16mm hårdmetalhoved; DC > 16 mm hårdmetal påloddet.

Product	DC	OAL	LCF	LB	NOF	CZC MS
	(mm)	(mm)	(mm)	(mm)		
B4115.0	5.00	133.0	23.0	67.50	6	MK 1
B4116.0	6.00	138.0	26.0	72.50	6	MK 1
B4117.0	7.00	150.0	31.0	84.50	6	MK 1
B4118.0	8.00	156.0	33.0	90.50	6	MK 1
B4119.0	9.00	162.0	36.0	96.50	6	MK 1
B41110.0	10.00	168.0	38.0	102.50	6	MK 1
B41112.0	12.00	182.0	44.0	116.50	6	MK 1
B41114.0	14.00	189.0	47.0	123.50	8	MK 1
B41115.0	15.00	204.0	50.0	124.00	8	MK 2
B41116.0	16.00	210.0	52.0	130.00	8	MK 2
B41117.0	17.00	214.0	54.0	134.00	6	MK 2
B41118.0	18.00	219.0	56.0	139.00	6	MK 2
B41119.0	19.00	223.0	58.0	143.00	6	MK 2
B41120.0	20.00	228.0	60.0	148.00	6	MK 2
B41122.0	22.00	237.0	64.0	157.00	6	MK 2
B41124.0	24.00	268.0	68.0	169.00	8	MK 3
B41125.0	25.00	268.0	68.0	169.00	8	MK 3
B41126.0	26.00	273.0	70.0	174.00	8	MK 3
B41130.0	30.00	281.0	73.0	182.00	8	MK 3

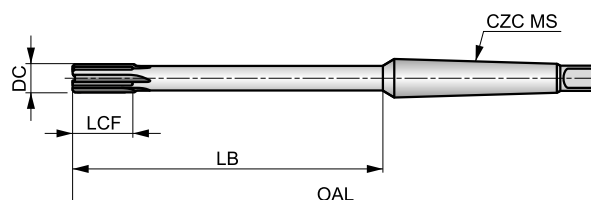
B442

DORMER



HM rival med hårdmetalsskær med H7-tolerance, blank finish

Designet med ekstremt ulige skær for at reducere vibrationer og forbedre hulstørrelse, rundhed og overfladefinish. 45 ° skrålledning sikrer nøjagtig placering og centrering for at give dig forbedret hulkvalitet og ydeevne. Den hårdlodde hårdmetalskær giver forlænget værktøjslevetid og en overlegen ydelse.



HM	Bright	DIN 8051
R		A
H7		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 23 B	P1.2 ■ 26 B	P1.3 ■ 27 B	P2.1 ■ 20 B	P2.2 ■ 18 B	P2.3 ■ 16 C	P3.1 ■ 16 B	P3.2 ■ 13 B	P3.3 ■ 11 C	P4.1 ■ 10 B	P4.2 ■ 8 C	P4.3 ■ 7 C	M1.1 ■ 10 C	M1.2 ■ 8 C
M2.1 ■ 9 C	M2.2 ■ 7 C	M2.3 ■ 6 B	K1.1 ■ 20 D	K1.2 ■ 15 D	K1.3 ■ 11 D	K2.1 ■ 21 D	K2.2 ■ 17 D	K2.3 ■ 14 D	K3.1 ■ 18 D	K3.2 ■ 14 D	K3.3 ■ 11 D	K5.1 ■ 19 D	K5.2 ■ 15 D
K5.3 ■ 11 D	N1.1 ■ 60 D	N1.2 ■ 45 D	N1.3 ■ 30 D	N2.1 ■ 38 D	N2.2 ■ 35 D	N2.3 ■ 25 D	N3.1 ■ 64 E	N3.2 ■ 38 E	N3.3 ■ 19 E	N4.1 ■ 35 C	N4.2 ■ 30 C		

Product	DC (mm)	OAL (mm)	LCF (mm)	LB (mm)	NOF	CZC MS
B44210.0	10.00	168.0	19.0	102.50	6	MK 1
B44212.0	12.00	182.0	19.0	116.50	6	MK 1
B44214.0	14.00	189.0	19.0	123.50	6	MK 1
B44215.0	15.00	204.0	19.0	124.00	6	MK 2
B44216.0	16.00	210.0	22.0	130.00	6	MK 2
B44217.0	17.00	214.0	22.0	134.00	6	MK 2
B44218.0	18.00	219.0	22.0	139.00	6	MK 2
B44219.0	19.00	223.0	22.0	143.00	6	MK 2
B44220.0	20.00	228.0	22.0	148.00	6	MK 2

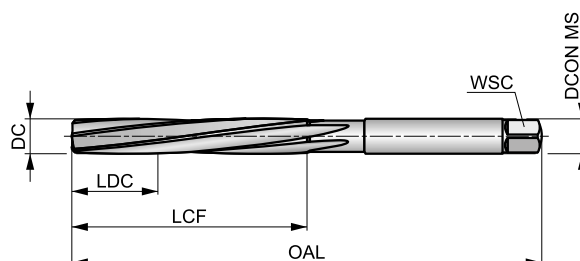
B100

DORMER



HSS Lige Skaft Hånd Rival med H7-tolerance, blank og ST-finish

Primært designet til rivning i hånden. Den har en præcisionspunkt, venstre spiral med højre (med uret) skæring for jævn rivning, hvilket skaber en mere nøjagtig hulstørrelse og god overfladefinish. Velegnet til rivning af mange materialer, herunder stål.



HSS	Bright ST	DIN 206
R		B
H7		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	N1.1	N1.2	N1.3	N2.1	N2.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2								
■	■	■	■	■	■								

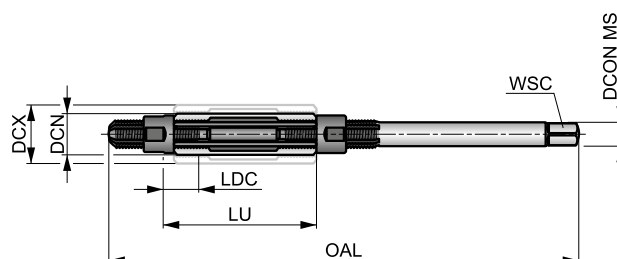
DCON MS tolerance e9.

Product	DC	DC	OAL	LCF	LDC	NOF	WSC	DCON MS
	(inch)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)
B1001.5	—	1.50	41.0	20.0	5.00	3	1.12	1.50
B1001/16	1/16	1.59	41.0	20.0	5.00	3	1.12	1.59
B1001.6	—	1.60	44.0	21.0	5.00	3	1.25	1.60
B1005/64	5/64	1.98	47.0	23.0	6.00	4	1.40	1.98
B1002.0	—	2.00	50.0	25.0	6.00	4	1.60	2.00
B1003/32	3/32	2.38	54.0	27.0	7.00	4	1.80	2.38
B1002.5	—	2.50	58.0	29.0	7.00	4	2.10	2.50
B1007/64	7/64	2.78	62.0	31.0	8.00	6	2.10	2.78
B1003.0	—	3.00	62.0	31.0	8.00	6	2.40	3.00
B1001/8	1/8	3.18	66.0	33.0	8.00	6	2.40	3.18
B1003.2	—	3.20	66.0	33.0	8.00	6	2.40	3.20
B1003.5	—	3.50	71.0	35.0	9.00	6	2.70	3.50
B1009/64	9/64	3.57	71.0	35.0	9.00	6	2.70	3.57
B1005/32	5/32	3.97	76.0	38.0	10.00	6	3.00	3.97
B1004.0	—	4.00	76.0	38.0	10.00	6	3.00	4.00
B10011/64	11/64	4.37	81.0	41.0	10.00	6	3.40	4.37
B1004.5	—	4.50	81.0	41.0	10.00	6	3.40	4.50
B1003/16	3/16	4.76	87.0	44.0	11.00	6	3.80	4.76
B1005.0	—	5.00	87.0	44.0	11.00	6	3.80	5.00
B10013/64	13/64	5.16	87.0	44.0	11.00	6	3.80	5.16
B1005.5	—	5.50	93.0	47.0	12.00	6	4.30	5.50
B1007/32	7/32	5.56	93.0	47.0	12.00	6	4.30	5.56
B10015/64	15/64	5.95	93.0	47.0	12.00	6	4.90	5.95
B1006.0	—	6.00	93.0	47.0	12.00	6	4.90	6.00
B1001/4	1/4	6.35	100.0	50.0	13.00	6	4.90	6.35
B1006.5	—	6.50	100.0	50.0	13.00	6	4.90	6.50
B10017/64	17/64	6.75	107.0	54.0	14.00	6	5.50	6.75

Product	DC	DC	OAL	LCF	LDC	NOF	WSC	DCON MS
	(inch)	(mm)	(mm)	(mm)	(mm)		(mm)	(mm)
B1007.0	—	7.00	107.0	54.0	14.00	6	5.50	7.00
B1009/32	9/32	7.14	107.0	54.0	14.00	6	6.20	7.14
B1007.5	—	7.50	107.0	54.0	14.00	6	6.20	7.50
B10019/64	19/64	7.54	115.0	58.0	15.00	6	6.20	7.54
B1005/16	5/16	7.94	115.0	58.0	15.00	6	6.20	7.94
B1008.0	—	8.00	115.0	58.0	15.00	6	6.20	8.00
B10021/64	21/64	8.33	115.0	58.0	15.00	6	7.00	8.33
B1008.5	—	8.50	115.0	58.0	15.00	6	7.00	8.50
B10011/32	11/32	8.73	124.0	62.0	16.00	6	7.00	8.73
B1009.0	—	9.00	124.0	62.0	16.00	6	7.00	9.00
B10023/64	23/64	9.13	124.0	62.0	16.00	6	8.00	9.13
B1009.5	—	9.50	124.0	62.0	16.00	6	8.00	9.50
B1003/8	3/8	9.52	124.0	62.0	17.00	6	8.00	9.52
B10025/64	25/64	9.92	133.0	66.0	17.00	6	8.00	9.92
B10010.0	—	10.00	133.0	66.0	17.00	6	8.00	10.00
B10013/32	13/32	10.32	133.0	66.0	17.00	6	8.00	10.32
B10010.5	—	10.50	133.0	66.0	17.00	6	8.00	10.50
B10011.0	—	11.00	142.0	71.0	18.00	6	9.00	11.00
B1007/16	7/16	11.11	142.0	71.0	18.00	6	9.00	11.11
B10011.5	—	11.50	142.0	71.0	18.00	6	9.00	11.50
B10012.0	—	12.00	152.0	76.0	19.00	6	9.00	12.00
B10012.5	—	12.50	152.0	76.0	19.00	6	10.00	12.50
B1001/2	1/2	12.70	152.0	76.0	19.00	6	10.00	12.70
B10013.0	—	13.00	152.0	76.0	19.00	6	10.00	13.00
B10017/32	17/32	13.49	163.0	81.0	20.00	8	11.00	13.49
B10013.5	—	13.50	163.0	81.0	20.00	8	11.00	13.50
B10014.0	—	14.00	163.0	81.0	20.00	8	11.00	14.00
B1009/16	9/16	14.29	163.0	81.0	20.00	8	11.00	14.29
B10014.5	—	14.50	163.0	81.0	20.00	8	11.00	14.50
B10015.0	—	15.00	163.0	81.0	20.00	8	12.00	15.00
B10019/32	19/32	15.08	163.0	81.0	22.00	8	12.00	15.08
B1005/8	5/8	15.88	175.0	87.0	22.00	8	12.00	15.88
B10016.0	—	16.00	175.0	87.0	22.00	8	12.00	16.00
B10017.0	—	17.00	175.0	87.0	22.00	8	13.00	17.00
B10011/16	11/16	17.46	188.0	93.0	23.00	8	14.50	17.46
B10018.0	—	18.00	188.0	93.0	23.00	8	14.50	18.00
B10019.0	—	19.00	188.0	93.0	23.00	8	14.50	19.00
B1003/4	3/4	19.05	188.0	93.0	25.00	8	14.50	19.05
B10020.0	—	20.00	201.0	100.0	25.00	8	16.00	20.00
B10013/16	13/16	20.64	201.0	100.0	25.00	8	16.00	20.64
B10021.0	—	21.00	201.0	100.0	25.00	8	16.00	21.00
B10022.0	—	22.00	215.0	107.0	27.00	8	18.00	22.00
B1007/8	7/8	22.22	215.0	107.0	27.00	8	18.00	22.22
B10023.0	—	23.00	215.0	107.0	27.00	8	18.00	23.00
B10024.0	—	24.00	231.0	115.0	29.00	8	18.00	24.00
B10025.0	—	25.00	231.0	115.0	29.00	8	20.00	25.00
B1001	1"	25.40	231.0	115.0	29.00	8	20.00	25.40
B10026.0	—	26.00	231.0	115.0	29.00	8	20.00	26.00
B10027.0	—	27.00	247.0	124.0	31.00	10	22.00	27.00
B10028.0	—	28.00	247.0	124.0	31.00	10	22.00	28.00
B10029.0	—	29.00	247.0	124.0	31.00	10	22.00	29.00
B10030.0	—	30.00	247.0	124.0	31.00	10	24.00	30.00
B10031.0	—	31.00	265.0	133.0	33.00	10	24.00	31.00
B10032.0	—	32.00	265.0	133.0	33.00	10	24.00	32.00
B10033.0	—	33.00	265.0	133.0	33.00	10	26.00	33.00
B10034.0	—	34.00	284.0	142.0	36.00	10	26.00	34.00
B10035.0	—	35.00	284.0	142.0	36.00	10	29.00	35.00
B10036.0	—	36.00	284.0	142.0	36.00	10	29.00	36.00
B10037.0	—	37.00	284.0	142.0	36.00	10	29.00	37.00
B10038.0	—	38.00	305.0	152.0	38.00	10	29.00	38.00
B10039.0	—	39.00	305.0	152.0	38.00	10	32.00	39.00
B10040.0	—	40.00	305.0	152.0	38.00	10	32.00	40.00
B10045.0	—	45.00	326.0	163.0	41.00	12	35.00	45.00
B10050.0	—	50.00	347.0	174.0	44.00	12	39.00	50.00

B334**DORMER****HSS lige skaft Justerbar hånddriv**

Denne hånddriv kan let justeres og hjælper med at afslutte mange forskellige huller med en diameter. Med præcise knive og lige skæergeometri opnås glat rivning og forbedret hulstørrelse og overfladefinish. Velegnet til reaming i mange materialer.



Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	N1.1	N1.2	N1.3	N2.1	N2.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2								
■	■	■	■	■	■								

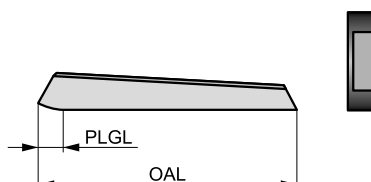
Product	Nr.	DCN	DCX	OAL	LU	LDC	NOF	WSC
		(mm)	(mm)	(mm)	(mm)	(mm)		(mm)
B334000	000	6.40	7.20	110.0	32.00	7.00	4	3.00
B33400	00	7.20	8.00	110.0	32.00	7.00	4	3.40
B3340	0	8.00	9.00	115.0	34.00	9.00	5	3.80
B3341	1	9.00	10.00	115.0	34.00	9.00	5	4.30
B3342	2	10.00	11.00	115.0	34.00	9.00	5	4.90
B3343	3	11.00	12.00	125.0	35.00	9.00	5	4.90
B3344	4	12.00	13.50	135.0	41.00	9.00	5	6.20
B3345	5	13.50	15.50	146.0	50.00	12.00	5	7.00
B3346	6	15.50	18.00	166.0	60.00	12.00	5	8.00
B3347	7	18.00	21.00	178.0	65.00	15.00	5	9.00
B3348	8	21.00	24.00	195.0	76.00	15.00	5	11.00
B3349	9	24.00	27.50	218.0	82.00	18.00	5	12.00
B33410	10	27.50	31.50	245.0	86.00	18.00	5	14.50
B33411	11	31.50	37.00	280.0	98.00	18.00	6	18.00
B33412	12	37.00	45.00	325.0	108.00	20.00	6	20.00
B33413	13	45.00	55.00	370.0	118.00	20.00	6	26.00
B33414	14	55.00	67.00	400.0	125.00	20.00	6	32.00
B33415	15	67.00	80.00	435.0	140.00	23.00	8	39.00
B33416	16	80.00	95.00	475.0	155.00	23.00	8	49.00

B335



Udskiftnings blade og møtrikker til brug i den justerbare håndrival, B334

Møtrikken og knivene kan købes separat og fås hver i 19 størrelser.



Product	Nr.	PLGL	OAL
		(mm)	(mm)
B335000BLADES	000	7.00	32.0
B335000NUT	000	—	—
B33500BLADES	00	7.00	32.0
B33500NUT	00	—	—
B3350BLADES	0	9.00	34.0
B3350NUT	0	—	—
B3351BLADES	1	9.00	34.0
B3351NUT	1	—	—
B3352BLADES	2	9.00	34.0
B3352NUT	2	—	—
B3353BLADES	3	9.00	35.0
B3353NUT	3	—	—
B3354BLADES	4	9.00	41.0
B3354NUT	4	—	—
B3355BLADES	5	12.00	50.0
B3355NUT	5	—	—
B3356BLADES	6	12.00	60.0
B3356NUT	6	—	—
B3357BLADES	7	15.00	65.0

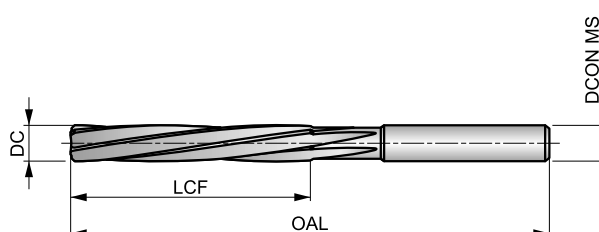
Product	Nr.	PLGL	OAL
		(mm)	(mm)
B3357NUT	7	—	—
B3358BLADES	8	15.00	76.0
B3358NUT	8	—	—
B3359BLADES	9	18.00	82.0
B3359NUT	9	—	—
B33510BLADES	10	18.00	86.0
B33510NUT	10	—	—
B33511BLADES	11	18.00	98.0
B33511NUT	11	—	—
B33512BLADES	12	20.00	108.0
B33512NUT	12	—	—
B33513BLADES	13	20.00	118.0
B33513NUT	13	—	—
B33514BLADES	14	20.00	125.0
B33514NUT	14	—	—
B33515BLADES	15	23.00	140.0
B33515NUT	15	—	—
B33516BLADES	16	23.00	155.0
B33516NUT	16	—	—

B901



HSS-E Lige skaft Maskin Rival, H7-tolerance, blank og ST-finish

Præcisions rival geometrien med venstre spiral og højre skæring forbedrer hulstørrelse og overfladefinish. Rivalen har et lige skaft til højtydende maskinindrivning. Velegnet til rivning i mange materialer.



HSS-E	Bright ST	BS 328
R		B
H7		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 15 C	P1.2 ■ 16 C	P1.3 ■ 17 C	P2.1 ■ 13 C	P2.2 ■ 11 C	P2.3 ■ 10 B	P3.1 ■ 7 B	P3.2 ■ 6 B	P3.3 ■ 5 B	P4.1 ■ 4 B	P4.2 ■ 4 B	P4.3 ■ 3 A	M1.1 ■ 10 C	M1.2 ■ 8 C
M2.1 ■ 9 C	K1.1 ■ 14 E	K1.2 ■ 10 D	K1.3 ■ 8 D	K2.1 ■ 12 C	K2.2 ■ 10 C	K2.3 ■ 8 C	K3.1 ■ 11 C	K3.2 ■ 8 C	N1.1 ■ 23 F	N1.2 ■ 17 F	N1.3 ■ 12 F	N2.1 ■ 25 E	N2.2 ■ 22 E
N2.3 ■ 14 E	N3.1 ■ 34 D	N3.2 ■ 20 E	N3.3 ■ 10 D	N4.1 ■ 22 B	N4.2 ■ 21 B								

Product	DC (inch)	DC (mm)	OAL (mm)	LCF (mm)	NOF	DCON MS (mm)
B9011.5	—	1.50	44.0	21.0	4	1.50
B9011/16	1/16	1.59	44.0	21.0	4	1.59
B9012.0	—	2.00	50.0	25.0	4	2.00
B9013/32	3/32	2.38	58.0	29.0	4	2.38
B9012.5	—	2.50	58.0	29.0	4	2.50
B9013.0	—	3.00	62.0	31.0	4	3.00
B9011/8	1/8	3.18	66.0	33.0	4	3.18
B9013.5	—	3.50	71.0	35.0	4	3.50
B9015/32	5/32	3.97	76.0	38.0	6	3.97
B9014.0	—	4.00	76.0	38.0	6	4.00
B9014.5	—	4.50	81.0	41.0	6	4.50
B9013/16	3/16	4.76	87.0	44.0	6	4.76
B9015.0	—	5.00	87.0	44.0	6	5.00
B90113/64	13/64	5.16	87.0	44.0	6	5.16
B9015.5	—	5.50	93.0	47.0	6	5.50

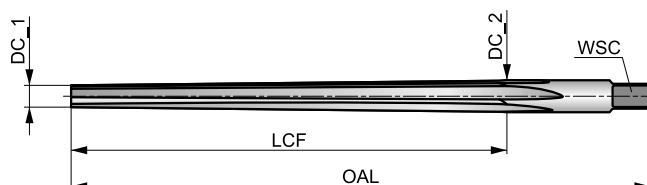
Product	DC (inch)	DC (mm)	OAL (mm)	LCF (mm)	NOF	DCON MS (mm)
B9017/32	7/32	5.56	93.0	47.0	6	5.56
B90115/64	15/64	5.95	93.0	47.0	6	5.95
B9016.0	—	6.00	93.0	47.0	6	6.00
B9011/4	1/4	6.35	100.0	50.0	6	6.35
B9017.0	—	7.00	107.0	54.0	6	7.00
B9019/32	9/32	7.14	107.0	54.0	6	7.14
B9015/16	5/16	7.94	115.0	58.0	6	7.94
B9018.0	—	8.00	115.0	58.0	6	8.00
B9019.0	—	9.00	124.0	62.0	6	9.00
B9013/8	3/8	9.52	133.0	66.0	6	9.52
B90110.0	—	10.00	133.0	66.0	6	10.00
B90111.0	—	11.00	142.0	71.0	6	11.00
B9017/16	7/16	11.11	142.0	71.0	6	11.11
B90112.0	—	12.00	152.0	76.0	6	12.00
B9011/2	1/2	12.70	152.0	76.0	6	12.70

B301



HSS ligeskær konisk hånddriaval 1:48 , Blank og ST Finish

Designet til at afslutte tilspidsede huller til standard 1 til 48 til koniske stifter. Med en reduceret lille diameter lokaliserer og centrerer værktøjet let i det forborede hul for at forbedre nøjagtigheden og ydeevnen. Velegnet til rivning i mange materialer.



HSS	Bright ST	BS 328
R		A
1:48		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	N1.1	N1.2	N1.3	N2.1	N2.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2								
■	■	■	■	■	■								

DC <= 1/4 tolerancegrænse +0,0030; DC >= 9/32 tolerance grænse +0,0050.

Product	nom d	DC_1	DC_2	OAL	LCF	NOF	WSC	DCON MS
		(mm)	(mm)	(mm)	(mm)		(mm)	(mm)
B3011/16	1/16	1.10	1.63	51.0	25.0	4	1.20	1.63
B3015/64	5/64	1.50	2.03	51.0	25.0	4	1.60	2.03
B3013/32	3/32	1.75	2.41	57.0	32.0	4	2.00	2.41
B3017/64	7/64	2.03	2.82	64.0	38.0	4	2.20	2.82
B3011/8	1/8	2.30	3.23	70.0	44.0	4	2.50	3.23
B3019/64	9/64	2.64	3.63	73.0	48.0	4	2.80	3.63
B3015/32	5/32	2.95	4.01	76.0	51.0	4	3.10	4.01
B30111/64	11/64	3.23	4.42	89.0	57.0	4	3.60	4.42
B3013/16	3/16	3.50	4.95	102.0	70.0	4	4.00	4.95
B3017/32	7/32	4.13	5.59	102.0	70.0	6	4.50	5.59
B3011/4	1/4	4.64	6.43	117.0	86.0	6	5.00	6.43
B3019/32	9/32	5.23	7.42	143.0	105.0	6	5.60	7.42
B3015/16	5/16	5.84	8.03	143.0	105.0	6	6.30	8.03
B30111/32	11/32	6.43	8.81	152.0	114.0	6	7.10	8.81
B3013/8	3/8	7.03	9.68	165.0	127.0	6	8.00	9.68
B30113/32	13/32	7.42	10.46	191.0	146.0	6	8.00	10.46
B3017/16	7/16	8.21	11.25	191.0	146.0	6	9.00	11.25
B3011/2	1/2	9.41	12.85	210.0	165.0	6	10.00	12.85

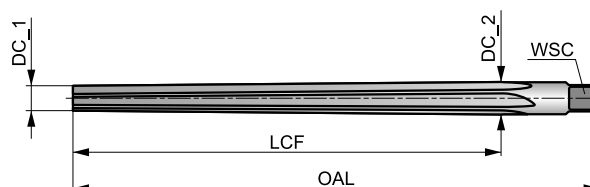
B903

DORMER



HSS ligeskærs konisk håndriaval 1:50 , Blank og ST Finish

Designet til at afslutte koniske huller til standard metriske koniske stifter. Diameteren på den lille ende reduceres for at gøre det lettere at lokalisere og centrere rivalen i hullet. Velegnet til rivning i mange materialer.



HSS	Bright ST	DIN 9
R		A
1:50		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	N1.1	N1.2	N1.3	N2.1	N2.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2								
■	■	■	■	■	■								

DCON MS tolerance h11; DC ≤ 5 mm tolerance grænse +0,0750; DC < 5 mm tolerance grænse +0,1250.

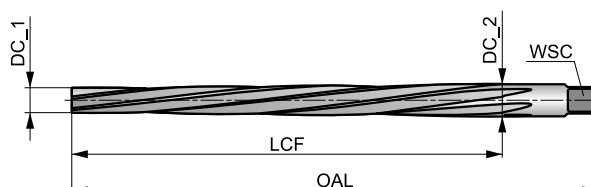
Product	nom d	DC_1	DC_2	OAL	LCF	NOF	WSC	DCON MS
		(mm)	(mm)	(mm)	(mm)		(mm)	(mm)
B9031.5	1.5	1.40	2.14	57.0	37.0	4	1.80	2.14
B9032.0	2.0	1.90	2.86	68.0	48.0	4	2.24	2.86
B9032.5	2.5	2.40	3.36	68.0	48.0	4	2.80	3.36
B9033.0	3.0	2.90	4.06	80.0	58.0	4	3.15	4.00
B9034.0	4.0	3.90	5.26	93.0	68.0	4	4.00	5.00
B9035.0	5.0	4.90	6.36	100.0	73.0	4	5.00	6.30
B9036.0	6.0	5.90	8.00	135.0	105.0	6	6.30	7.90
B9038.0	8.0	7.90	10.80	180.0	145.0	6	8.00	10.50
B90310.0	10.0	9.90	13.40	215.0	175.0	6	10.00	13.30
B90312.0	12.0	11.80	16.00	255.0	210.0	8	11.20	16.00
B90313.0	13.0	12.86	16.74	255.0	210.0	8	12.50	16.74
B90314.0	14.0	13.86	17.74	255.0	210.0	8	12.50	17.74
B90316.0	16.0	15.80	20.40	280.0	230.0	8	14.00	20.40
B90320.0	20.0	19.80	24.80	310.0	250.0	8	18.00	24.80

B952



HSS lige skaft maskinrival 1:50 Konisk, Blank Finish

Med venstre spiral og højre skæring giver glat rivning for en mere nøjagtig hulstørrelse og bedre finish. Den lille endediameter er reduceret, hvilket gør det lettere at centrere og centrere rivalen i hullet. Velegnet til rivning i mange materialer.



HSS	Bright	DIN 9
		B
1:50		

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M1.1	M1.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
M2.1	K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	N1.1	N1.2	N1.3	N2.1	N2.2
■	■	■	■	■	■	■	■	■	■	■	■	■	■
N2.3	N3.1	N3.2	N3.3	N4.1	N4.2								
■	■	■	■	■	■								

DCON MS tolerance h11; DC <= 2,5 mm lige skær, form A.

Product	nom d	DC_1	DC_2	OAL	LCF	NOF	WSC	DCON MS
		(mm)	(mm)	(mm)	(mm)		(mm)	(mm)
B9521.2	1.2	1.10	1.74	50.0	32.0	3	2.40	3.15
B9521.5	1.5	1.40	2.14	57.0	37.0	3	2.40	3.15
B9522.0	2.0	1.90	2.86	68.0	48.0	3	2.40	3.15
B9522.5	2.5	2.40	3.36	68.0	48.0	4	2.40	3.15
B9523.0	3.0	2.90	4.06	80.0	58.0	5	3.00	4.00
B9523.5	3.5	3.40	4.66	87.0	63.0	5	3.40	4.50
B9524.0	4.0	3.90	5.26	93.0	68.0	5	3.80	5.00
B9524.5	4.5	4.40	5.80	95.0	70.0	5	4.30	5.60
B9525.0	5.0	4.90	6.36	100.0	73.0	5	4.90	6.30
B9525.5	5.5	5.40	7.20	118.0	90.0	6	5.50	7.10
B9526.0	6.0	5.90	8.00	135.0	105.0	6	6.20	8.00
B9526.5	6.5	6.40	8.60	140.0	110.0	6	6.20	8.00
B9527.0	7.0	6.90	9.40	160.0	125.0	6	7.00	9.00
B9528.0	8.0	7.90	10.80	180.0	145.0	6	8.00	10.00
B9529.0	9.0	8.90	12.10	195.0	160.0	6	9.00	11.20
B95210.0	10.0	9.90	13.40	215.0	175.0	6	10.00	12.50
B95212.0	12.0	11.80	16.00	255.0	210.0	8	11.00	14.00
B95213.0	13.0	12.80	17.00	255.0	210.0	8	12.00	16.00
B95214.0	14.0	13.80	18.00	255.0	210.0	8	12.00	16.00
B95216.0	16.0	15.80	20.40	280.0	230.0	8	14.50	18.00
B95220.0	20.0	19.80	24.80	310.0	250.0	8	18.00	22.40
B95225.0	25.0	24.70	30.70	370.0	300.0	10	22.00	28.00
B95230.0	30.0	29.70	36.10	400.0	320.0	10	24.00	31.50
B95240.0	40.0	39.70	46.50	430.0	340.0	12	32.00	40.00
B95250.0	50.0	49.70	56.90	460.0	360.0	12	39.00	50.00

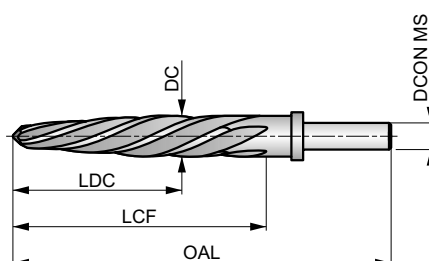
B122

DORMER



HSS Reduceret skaft rival, damp og bronze hærdet finish

Designet til at justere huller i tyndvæggede stålplader, inden de boltes eller nites sammen. Det er designet til at blive brugt i hånden. Den lille styrdiameter gør det let at lokalisere og justere værktøjet i forborede huller. Velegnet i mange materialer.



HSS	ST Bronze	ANSI
R		

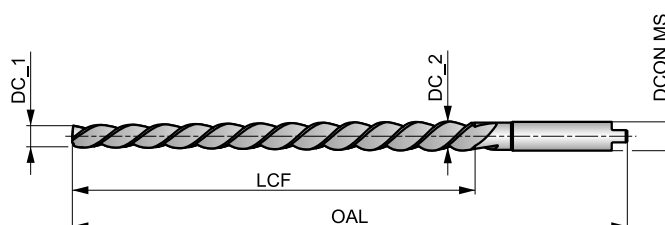
Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 15 C	P1.2 ■ 16 C	P1.3 ■ 17 C	P2.1 ■ 13 C	P2.2 ■ 11 C	P3.1 ■ 7 B	M1.1 ■ 11 C	M1.2 ■ 10 B	M2.1 ■ 9 B	N1.1 ■ 23 F	N1.2 ■ 17 F	N2.1 ■ 23 E	N2.2 ■ 21 E	N3.1 ■ 34 D
N3.2 ■ 20 E	N4.1 ■ 22 B	N4.2 ■ 21 B											

Product	DC (inch)	DC (inch)	OAL (inch)	LCF (inch)	NOF	DCONMS (inch)
B1223/8	3/8	0.3750	4.5/8	2.1/2	4	3/8
B1221/2	1/2	0.5000	5.7/8	3.3/4	5	1/2
B1229/16	9/16	0.5625	5.7/8	3.3/4	5	1/2
B1225/8	5/8	0.6250	6.3/8	4.1/4	5	1/2
B12211/16	11/16	0.6875	6.3/8	4.1/4	5	1/2
B1223/4	3/4	0.7500	6.7/8	4.1/2	5	1/2
B12213/16	13/16	0.8125	6.7/8	4.1/2	5	1/2
B1227/8	7/8	0.8750	6.7/8	4.1/2	5	1/2
B12215/16	15/16	0.9375	6.7/8	4.1/2	5	1/2
B1221	1"	1.0000	6.7/8	4.1/2	5	1/2
B1221.1/16	1.1/16	1.0625	6.7/8	4.1/2	5	1/2

B953**DORMER****HSS-E lige skaft maskinrival 1:50 Konisk, Blank Finish**

Med en høj spiral, venstre spiral og højre skæring. Tilspidsningen på rivalen er designet til at afslutte tilspidsede huller for at tage standard metriske koniske stifter i forholdet 1 til 50, mens tilspidsen har en reduceret diameter for at forbedre ydeevnen. Velegnet til rivning i mange materialer.



HSS-E	Bright	DIN 2179
R		1:50

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 10 B	P1.2 ■ 12 B	P1.3 ■ 13 B	P2.1 ■ 9 B	P2.2 ■ 8 B	P2.3 ▣ 6 A	P3.1 ■ 7 A	P3.2 ▣ 6 A	P3.3 ▣ 3 A	P4.1 ■ 4 A	P4.2 ▣ 3 A	P4.3 ▣ 2 A	M1.1 ▣ 11 C	M1.2 ▣ 10 B
M2.1 ▣ 9 B	M2.2 ▣ 8 B	K1.1 ■ 10 C	K1.2 ■ 6 B	K1.3 ▣ 4 B	K2.1 ■ 8 A	K2.2 ■ 6 A	K2.3 ▣ 4 A	K3.1 ■ 7 A	K3.2 ▣ 4 A	N1.1 ▣ 14 D	N1.2 ■ 12 D	N1.3 ■ 9 D	N2.1 ■ 16 C
N2.2 ■ 14 C	N2.3 ▣ 10 C	N3.1 ■ 22 B	N3.2 ■ 14 C	N3.3 ▣ 6 B	N4.1 ▣ 22 B								

DCON MS tolerance h9.

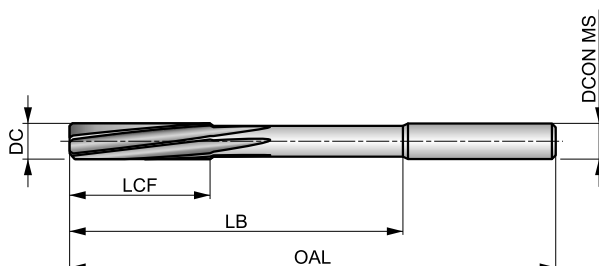
Product	nom d	DC_1	DC_2	OAL	LCF	NOF	DCON MS
		(mm)	(mm)	(mm)	(mm)		(mm)
B9531.0	1.0	0.80	1.46	60.0	33.0	2	1.40
B9531.5	1.5	1.40	2.14	70.0	37.0	2	2.10
B9532.0	2.0	1.90	2.86	86.0	48.0	3	3.15
B9532.5	2.5	2.40	3.36	86.0	48.0	3	3.15
B9533.0	3.0	2.90	4.06	100.0	58.0	3	4.00
B9534.0	4.0	3.90	5.26	112.0	68.0	3	5.00
B9535.0	5.0	4.90	6.36	122.0	73.0	3	6.30
B9536.0	6.0	5.90	8.00	160.0	105.0	3	8.00
B9536.5	6.5	6.40	8.78	188.0	119.0	3	8.50
B9538.0	8.0	7.90	10.80	207.0	145.0	3	10.00
B95310.0	10.0	9.90	13.40	245.0	175.0	3	12.50
B95312.0	12.0	11.80	16.00	290.0	210.0	3	16.00

B180

DORMER

HSS-E lige skaft maskin rival med H7 tolerance, blank finish

Højtydende rival til CNC-maskiner, holdes i værktøjsholdere eller patroner med høj nøjagtighed. Den nøjagtige venstre spiral og højre skærevirkning sikrer jævn rivning og forbedret overfladefinish og hulstørrelse. Velegnet til rivning i mange materialer.



HSS-E	Bright	DIN 212
R	DIN 6535HA	B
H7		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 21 C	P1.2 ■ 24 C	P1.3 ■ 25 C	P2.1 ■ 18 C	P2.2 ■ 16 C	P2.3 ■ 14 B	P3.1 ■ 13 B	P3.2 ■ 11 B	P3.3 ■ 9 B	P4.1 ■ 8 B	P4.2 ■ 7 B	P4.3 ■ 5 A	M1.1 ■ 11 C	M1.2 ■ 10 B
M2.1 ■ 9 B	K1.1 ■ 16 E	K1.2 ■ 12 D	K1.3 ■ 9 D	K2.1 ■ 16 C	K2.2 ■ 13 C	K2.3 ■ 10 C	K3.1 ■ 14 C	K3.2 ■ 11 C	N1.1 ■ 24 F	N1.2 ■ 18 F	N1.3 ■ 11 F	N2.1 ■ 27 E	N2.2 ■ 24 E
N2.3 ■ 16 E	N3.1 ■ 47 D	N3.2 ■ 28 E	N3.3 ■ 14 D	N4.1 ■ 30 B									

DCON MS tolerance h6.

Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B1801.5	1.50	40.0	8.0	18.00	3	2.00
B1801.6	1.60	43.0	9.0	20.00	3	2.00
B1801.7	1.70	43.0	9.0	20.00	3	2.00
B1801.8	1.80	46.0	10.0	22.00	4	2.00
B1801.9	1.90	46.0	10.0	22.00	4	2.00
B1802.0	2.00	49.0	11.0	24.00	4	2.00
B1802.1	2.10	49.0	11.0	24.00	4	2.00
B1802.2	2.20	53.0	12.0	26.00	4	3.00
B1802.3	2.30	53.0	12.0	26.00	4	3.00
B1802.4	2.40	57.0	14.0	28.00	4	3.00
B1802.5	2.50	57.0	14.0	28.00	4	3.00
B1802.6	2.60	57.0	14.0	28.00	4	3.00
B1802.7	2.70	61.0	15.0	32.00	6	3.00
B1802.8	2.80	61.0	15.0	32.00	6	3.00
B1802.9	2.90	61.0	15.0	32.00	6	3.00
B1803.0	3.00	61.0	15.0	32.00	6	3.00
B1803.1	3.10	65.0	16.0	35.00	6	4.00
B1803.2	3.20	65.0	16.0	35.00	6	4.00
B1803.3	3.30	65.0	16.0	35.00	6	4.00
B1803.4	3.40	70.0	18.0	40.00	6	4.00
B1803.5	3.50	70.0	18.0	40.00	6	4.00
B1803.6	3.60	70.0	18.0	40.00	6	4.00
B1803.7	3.70	70.0	18.0	40.00	6	4.00
B1803.8	3.80	75.0	19.0	43.00	6	4.00
B1803.9	3.90	75.0	19.0	43.00	6	4.00
B1804.0	4.00	75.0	19.0	43.00	6	4.00
B1804.1	4.10	75.0	19.0	43.00	6	4.00

Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B1804.2	4.20	75.0	19.0	43.00	6	4.00
B1804.3	4.30	80.0	21.0	47.00	6	5.00
B1804.4	4.40	80.0	21.0	47.00	6	5.00
B1804.5	4.50	80.0	21.0	47.00	6	5.00
B1804.6	4.60	80.0	21.0	47.00	6	5.00
B1804.7	4.70	80.0	21.0	47.00	6	5.00
B1804.8	4.80	86.0	23.0	52.00	6	5.00
B1804.9	4.90	86.0	23.0	52.00	6	5.00
B1805.0	5.00	86.0	23.0	52.00	6	5.00
B1805.1	5.10	86.0	23.0	52.00	6	5.00
B1805.2	5.20	86.0	23.0	52.00	6	5.00
B1805.3	5.30	86.0	23.0	52.00	6	5.00
B1805.4	5.40	93.0	26.0	57.00	6	6.00
B1805.5	5.50	93.0	26.0	57.00	6	6.00
B1805.6	5.60	93.0	26.0	57.00	6	6.00
B1805.7	5.70	93.0	26.0	57.00	6	6.00
B1805.8	5.80	93.0	26.0	57.00	6	6.00
B1805.9	5.90	93.0	26.0	57.00	6	6.00
B1806.0	6.00	93.0	26.0	57.00	6	6.00
B1806.1	6.10	101.0	28.0	63.00	6	6.00
B1806.2	6.20	101.0	28.0	63.00	6	6.00
B1806.3	6.30	101.0	28.0	63.00	6	6.00
B1806.4	6.40	101.0	28.0	63.00	6	6.00
B1806.5	6.50	101.0	28.0	63.00	6	6.00
B1806.6	6.60	101.0	28.0	63.00	6	6.00
B1806.7	6.70	101.0	28.0	63.00	6	6.00
B1806.8	6.80	109.0	31.0	69.00	6	8.00

Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B1806.9	6.90	109.0	31.0	69.00	6	8.00
B1807.0	7.00	109.0	31.0	69.00	6	8.00
B1807.1	7.10	109.0	31.0	69.00	6	8.00
B1807.2	7.20	109.0	31.0	69.00	6	8.00
B1807.3	7.30	109.0	31.0	69.00	6	8.00
B1807.4	7.40	109.0	31.0	69.00	6	8.00
B1807.5	7.50	109.0	31.0	69.00	6	8.00
B1807.6	7.60	117.0	33.0	75.00	6	8.00
B1807.7	7.70	117.0	33.0	75.00	6	8.00
B1807.8	7.80	117.0	33.0	75.00	6	8.00
B1807.9	7.90	117.0	33.0	75.00	6	8.00
B1808.0	8.00	117.0	33.0	75.00	6	8.00
B1808.1	8.10	117.0	33.0	75.00	6	8.00
B1808.2	8.20	117.0	33.0	75.00	6	8.00
B1808.3	8.30	117.0	33.0	75.00	6	8.00
B1808.4	8.40	117.0	33.0	75.00	6	8.00
B1808.5	8.50	117.0	33.0	75.00	6	8.00
B1808.6	8.60	125.0	36.0	81.00	6	10.00
B1808.7	8.70	125.0	36.0	81.00	6	10.00
B1808.8	8.80	125.0	36.0	81.00	6	10.00
B1808.9	8.90	125.0	36.0	81.00	6	10.00

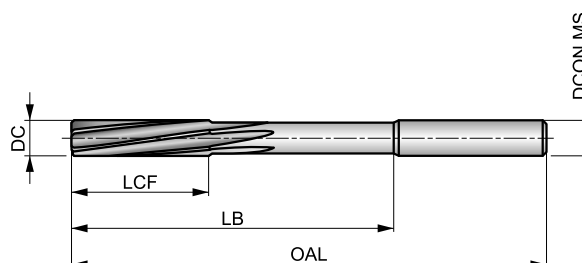
Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B1809.0	9.00	125.0	36.0	81.00	6	10.00
B1809.1	9.10	125.0	36.0	81.00	6	10.00
B1809.2	9.20	125.0	36.0	81.00	6	10.00
B1809.3	9.30	125.0	36.0	81.00	6	10.00
B1809.4	9.40	125.0	36.0	81.00	6	10.00
B1809.5	9.50	125.0	36.0	81.00	6	10.00
B1809.6	9.60	133.0	38.0	87.00	6	10.00
B1809.7	9.70	133.0	38.0	87.00	6	10.00
B1809.8	9.80	133.0	38.0	87.00	6	10.00
B1809.9	9.90	133.0	38.0	87.00	6	10.00
B18010.0	10.00	133.0	38.0	87.00	6	10.00
B18011.0	11.00	142.0	41.0	96.00	6	10.00
B18012.0	12.00	151.0	44.0	105.00	6	10.00
B18013.0	13.00	151.0	44.0	105.00	6	10.00
B18014.0	14.00	160.0	47.0	110.00	8	14.00
B18015.0	15.00	162.0	50.0	112.00	8	14.00
B18016.0	16.00	170.0	52.0	120.00	8	14.00
B18017.0	17.00	175.0	54.0	123.00	8	14.00
B18018.0	18.00	182.0	56.0	130.00	8	14.00
B18019.0	19.00	189.0	58.0	131.00	8	16.00
B18020.0	20.00	195.0	60.0	137.00	8	16.00

B170

DORMER

HSS-E ligeskaft maskinrival - 0,01 mm intervaller, blank finish

Forskellige trin i størrelsen giver dig mulighed for at producere nøjagtige hulstørrelser og yderligere hultolerancer. Med en venstre spiral og en højre skærevirkning giver den præcise grundgeometri glat rivning og forbedrer hulstørrelse og overfladefinish. Velegnet til rivning i mange materialer.



HSS-E	Bright	DIN 212
		B
$\phi 95-5.5$ $+0.004$ $\phi 5.51-12$ $+0.005$		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 21 C	P1.2 ■ 24 C	P1.3 ■ 25 C	P2.1 ■ 18 C	P2.2 ■ 16 C	P2.3 ■ 14 B	P3.1 ■ 13 B	P3.2 ■ 11 B	P3.3 ■ 9 B	P4.1 ■ 8 B	P4.2 ■ 7 B	P4.3 ■ 5 A	M1.1 ■ 11 C	M1.2 ■ 10 B
M2.1 ■ 9 B	K1.1 ■ 16 E	K1.2 ■ 12 D	K1.3 ■ 9 D	K2.1 ■ 16 C	K2.2 ■ 13 C	K2.3 ■ 10 C	K3.1 ■ 14 C	K3.2 ■ 11 C	N1.1 ■ 24 D	N1.2 ■ 18 F	N1.3 ■ 11 F	N2.1 ■ 27 E	N2.2 ■ 24 E
N2.3 ■ 16 E	N3.1 ■ 47 D	N3.2 ■ 28 E	N3.3 ■ 14 D	N4.1 ■ 30 B									

DCON MS tolerance h9.

Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B170.98	0.98	34.0	5.5	15.00	3	1.00
B170.99	0.99	34.0	5.5	15.00	3	1.00
B1701.0	1.00	34.0	5.5	15.00	3	1.00
B1701.01	1.01	34.0	5.5	15.00	3	1.00
B1701.02	1.02	34.0	5.5	15.00	3	1.00
B1701.03	1.03	34.0	5.5	15.00	3	1.00
B1701.04	1.04	34.0	5.5	15.00	3	1.00
B1701.05	1.05	34.0	5.5	15.00	3	1.00
B1701.49	1.49	40.0	8.0	18.00	3	1.50
B1701.5	1.50	40.0	8.0	18.00	3	1.50
B1701.51	1.51	43.0	9.0	20.00	3	1.60
B1701.52	1.52	43.0	9.0	20.00	3	1.60
B1701.98	1.98	49.0	11.0	24.00	4	2.00
B1701.99	1.99	49.0	11.0	24.00	4	2.00
B1702.0	2.00	49.0	11.0	24.00	4	2.00
B1702.01	2.01	49.0	11.0	24.00	4	2.00
B1702.02	2.02	49.0	11.0	24.00	4	2.00
B1702.03	2.03	49.0	11.0	24.00	4	2.00
B1702.04	2.04	49.0	11.0	24.00	4	2.00
B1702.05	2.05	49.0	11.0	24.00	4	2.00
B1702.49	2.49	57.0	14.0	28.00	4	2.50
B1702.5	2.50	57.0	14.0	28.00	4	2.50
B1702.51	2.51	57.0	14.0	28.00	4	2.50
B1702.52	2.52	57.0	14.0	28.00	4	2.50
B1702.98	2.98	61.0	15.0	32.00	6	3.00
B1702.99	2.99	61.0	15.0	32.00	6	3.00
B1703.0	3.00	61.0	15.0	32.00	6	3.00

Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B1703.01	3.01	65.0	16.0	35.00	6	3.20
B1703.02	3.02	65.0	16.0	35.00	6	3.20
B1703.03	3.03	65.0	16.0	35.00	6	3.20
B1703.04	3.04	65.0	16.0	35.00	6	3.20
B1703.05	3.05	65.0	16.0	35.00	6	3.20
B1703.49	3.49	70.0	18.0	40.00	6	3.50
B1703.5	3.50	70.0	18.0	40.00	6	3.50
B1703.51	3.51	70.0	18.0	40.00	6	3.50
B1703.52	3.52	70.0	18.0	40.00	6	3.50
B1703.98	3.98	75.0	19.0	43.00	6	4.00
B1703.99	3.99	75.0	19.0	43.00	6	4.00
B1704.0	4.00	75.0	19.0	43.00	6	4.00
B1704.01	4.01	75.0	19.0	43.00	6	4.00
B1704.02	4.02	75.0	19.0	43.00	6	4.00
B1704.03	4.03	75.0	19.0	43.00	6	4.00
B1704.04	4.04	75.0	19.0	43.00	6	4.00
B1704.05	4.05	75.0	19.0	43.00	6	4.00
B1704.49	4.49	80.0	21.0	47.00	6	4.50
B1704.5	4.50	80.0	21.0	47.00	6	4.50
B1704.51	4.51	80.0	21.0	47.00	6	4.50
B1704.52	4.52	80.0	21.0	47.00	6	4.50
B1704.98	4.98	86.0	23.0	52.00	6	5.00
B1704.99	4.99	86.0	23.0	52.00	6	5.00
B1705.0	5.00	86.0	23.0	52.00	6	5.00
B1705.01	5.01	86.0	23.0	52.00	6	5.00
B1705.02	5.02	86.0	23.0	52.00	6	5.00
B1705.03	5.03	86.0	23.0	52.00	6	5.00

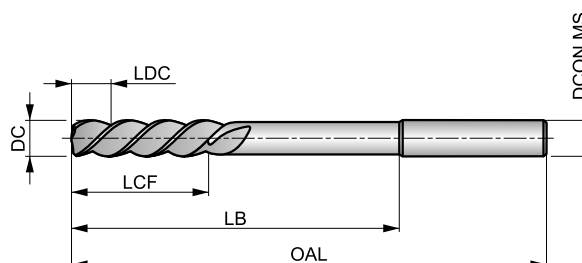
Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B1705.04	5.04	86.0	23.0	52.00	6	5.00
B1705.05	5.05	86.0	23.0	52.00	6	5.00
B1705.49	5.49	93.0	26.0	57.00	6	5.60
B1705.5	5.50	93.0	26.0	57.00	6	5.60
B1705.51	5.51	93.0	26.0	57.00	6	5.60
B1705.52	5.52	93.0	26.0	57.00	6	5.60
B1705.98	5.98	93.0	26.0	57.00	6	5.60
B1705.99	5.99	93.0	26.0	57.00	6	5.60
B1706.0	6.00	93.0	26.0	57.00	6	5.60
B1706.01	6.01	101.0	28.0	63.00	6	6.30
B1706.02	6.02	101.0	28.0	63.00	6	6.30
B1706.03	6.03	101.0	28.0	63.00	6	6.30
B1706.04	6.04	101.0	28.0	63.00	6	6.30
B1706.05	6.05	101.0	28.0	63.00	6	6.30
B1706.49	6.49	101.0	28.0	63.00	6	6.30
B1706.5	6.50	101.0	28.0	63.00	6	6.30
B1706.51	6.51	101.0	28.0	63.00	6	6.30
B1706.52	6.52	101.0	28.0	63.00	6	6.30
B1706.98	6.98	109.0	31.0	69.00	6	7.10
B1706.99	6.99	109.0	31.0	69.00	6	7.10
B1707.0	7.00	109.0	31.0	69.00	6	7.10
B1707.01	7.01	109.0	31.0	69.00	6	7.10
B1707.02	7.02	109.0	31.0	69.00	6	7.10
B1707.03	7.03	109.0	31.0	69.00	6	7.10
B1707.04	7.04	109.0	31.0	69.00	6	7.10
B1707.05	7.05	109.0	31.0	69.00	6	7.10
B1707.49	7.49	109.0	31.0	69.00	6	7.10
B1707.5	7.50	109.0	31.0	69.00	6	7.10
B1707.51	7.51	117.0	33.0	75.00	6	8.00
B1707.52	7.52	117.0	33.0	75.00	6	8.00
B1707.98	7.98	117.0	33.0	75.00	6	8.00
B1707.99	7.99	117.0	33.0	75.00	6	8.00
B1708.0	8.00	117.0	33.0	75.00	6	8.00
B1708.01	8.01	117.0	33.0	75.00	6	8.00
B1708.02	8.02	117.0	33.0	75.00	6	8.00
B1708.03	8.03	117.0	33.0	75.00	6	8.00
B1708.04	8.04	117.0	33.0	75.00	6	8.00
B1708.05	8.05	117.0	33.0	75.00	6	8.00
B1708.49	8.49	117.0	33.0	75.00	6	8.00
B1708.5	8.50	117.0	33.0	75.00	6	8.00

Product	DC	OAL	LCF	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)		(mm)
B1708.51	8.51	125.0	36.0	81.00	6	9.00
B1708.52	8.52	125.0	36.0	81.00	6	9.00
B1708.98	8.98	125.0	36.0	81.00	6	9.00
B1708.99	8.99	125.0	36.0	81.00	6	9.00
B1709.0	9.00	125.0	36.0	81.00	6	9.00
B1709.01	9.01	125.0	36.0	81.00	6	9.00
B1709.02	9.02	125.0	36.0	81.00	6	9.00
B1709.03	9.03	125.0	36.0	81.00	6	9.00
B1709.04	9.04	125.0	36.0	81.00	6	9.00
B1709.05	9.05	125.0	36.0	81.00	6	9.00
B1709.49	9.49	125.0	36.0	81.00	6	9.00
B1709.5	9.50	125.0	36.0	81.00	6	9.00
B1709.51	9.51	133.0	38.0	87.00	6	10.00
B1709.52	9.52	133.0	38.0	87.00	6	10.00
B1709.98	9.98	133.0	38.0	87.00	6	10.00
B1709.99	9.99	133.0	38.0	87.00	6	10.00
B17010.0	10.00	133.0	38.0	87.00	6	10.00
B17010.01	10.01	133.0	38.0	87.00	6	10.00
B17010.02	10.02	133.0	38.0	87.00	6	10.00
B17010.03	10.03	133.0	38.0	87.00	6	10.00
B17010.04	10.04	133.0	38.0	87.00	6	10.00
B17010.05	10.05	133.0	38.0	87.00	6	10.00
B17010.49	10.49	133.0	38.0	87.00	6	10.00
B17010.51	10.51	133.0	38.0	87.00	6	10.00
B17010.52	10.52	133.0	38.0	87.00	6	10.00
B17010.98	10.98	142.0	41.0	96.00	6	10.00
B17010.99	10.99	142.0	41.0	96.00	6	10.00
B17011.0	11.00	142.0	41.0	96.00	6	10.00
B17011.01	11.01	142.0	41.0	96.00	6	10.00
B17011.02	11.02	142.0	41.0	96.00	6	10.00
B17011.03	11.03	142.0	41.0	96.00	6	10.00
B17011.04	11.04	142.0	41.0	96.00	6	10.00
B17011.05	11.05	142.0	41.0	96.00	6	10.00
B17011.49	11.49	142.0	41.0	96.00	6	10.00
B17011.5	11.50	142.0	41.0	96.00	6	10.00
B17011.51	11.51	142.0	41.0	96.00	6	10.00
B17011.52	11.52	142.0	41.0	96.00	6	10.00
B17011.98	11.98	151.0	44.0	105.00	6	10.00
B17011.99	11.99	151.0	44.0	105.00	6	10.00
B17012.0	12.00	151.0	44.0	105.00	6	10.00

B157**DORMER**

HSS-E Lige skaft maskinrival Helix, H7-tolerance, blank finish

Den høje spiralformede venstre spiral og den høje skærevirkning giver fremragende ydelse, især ved bearbejdning af ikke-jernholdige materialer såsom aluminium. Det er også velegnet til rivning af andre materialer. Det koniske indløb gør det let at lokalisere og centrere, hvilket sikrer bedre ydelse og hulkvalitet.



HSS-E	Bright	DIN 212
R		E
H7		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 21 C	P1.2 ■ 24 C	P1.3 ■ 25 C	P2.1 ■ 18 C	P2.2 ■ 16 C	P3.1 ■ 13 B	P3.2 ■ 11 B	M1.1 ■ 11 C	M1.2 ■ 10 C	M2.1 ■ 9 C	M2.2 ■ 8 B	M2.3 ■ 7 B	N1.1 ■ 28 F	N1.2 ■ 21 F
N1.3 ■ 14 F	N2.1 ■ 31 E	N2.2 ■ 28 E	N2.3 ■ 20 E										

DCON MS tolerance h9.

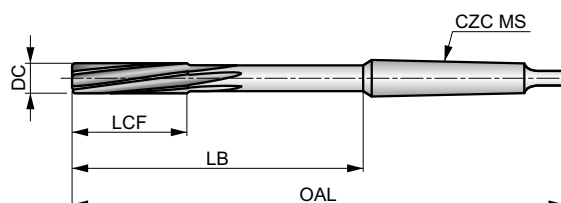
Product	DC	OAL	LCF	LDC	LB	NOF	DCON MS
	(mm)	(mm)	(mm)	(mm)	(mm)		(mm)
B1572.0	2.00	49.0	11.0	3.50	24.00	3	2.00
B1573.0	3.00	61.0	15.0	4.00	32.00	3	3.00
B1574.0	4.00	75.0	19.0	4.00	43.00	3	4.00
B1575.0	5.00	86.0	23.0	4.50	52.00	3	5.00
B1576.0	6.00	93.0	26.0	6.00	57.00	3	5.60
B1577.0	7.00	109.0	31.0	7.00	69.00	3	7.10
B1578.0	8.00	117.0	33.0	9.00	75.00	3	8.00
B1579.0	9.00	125.0	36.0	9.50	81.00	3	9.00
B15710.0	10.00	133.0	38.0	10.00	87.00	3	10.00
B15711.0	11.00	142.0	41.0	10.50	96.00	3	10.00
B15712.0	12.00	151.0	44.0	11.00	105.00	3	10.00
B15713.0	13.00	151.0	44.0	11.50	105.00	3	10.00
B15714.0	14.00	160.0	47.0	12.00	110.00	3	12.50
B15715.0	15.00	162.0	50.0	12.50	112.00	3	12.50
B15716.0	16.00	170.0	52.0	13.00	120.00	3	12.50
B15717.0	17.00	175.0	54.0	13.50	123.00	3	14.00
B15718.0	18.00	182.0	56.0	14.00	130.00	3	14.00
B15719.0	19.00	189.0	58.0	14.50	131.00	3	16.00
B15720.0	20.00	195.0	60.0	15.00	137.00	3	16.00

B161

DORMER

HSS-E Taper lige Maskin Rival med H7-tolerance, blank finish

Den nøjagtige rival i venstre spiral og højre skærevirkning sikrer jævn rivning og forbedret overfladefinish og hulstørrelse. Velegnet til rivning i mange materialer.



HSS-E	Bright	DIN 208
R		B
H7		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 21 C	P1.2 ■ 24 C	P1.3 ■ 25 C	P2.1 ■ 18 C	P2.2 ■ 16 C	P2.3 ■ 14 B	P3.1 ■ 13 B	P3.2 ■ 11 B	P3.3 ■ 9 B	P4.1 ■ 8 B	P4.2 ■ 7 B	P4.3 ■ 5 A	M1.1 ■ 11 C	M1.2 ■ 10 B
M2.1 ■ 9 B	K1.1 ■ 16 E	K1.2 ■ 12 D	K1.3 ■ 9 D	K2.1 ■ 16 C	K2.2 ■ 13 C	K2.3 ■ 10 C	K3.1 ■ 14 C	K3.2 ■ 11 C	N1.1 ■ 24 F	N1.2 ■ 18 F	N1.3 ■ 11 F	N2.1 ■ 27 E	N2.2 ■ 24 E
N2.3 ■ 16 E	N3.1 ■ 47 D	N3.2 ■ 28 E	N3.3 ■ 14 D	N4.1 ■ 30 B									

Product	DC (mm)	OAL (mm)	LCF (mm)	LB (mm)	NOF	CZC MS
B1613.0	3.00	113.0	15.0	47.50	6	MK 1
B1614.0	4.00	124.0	19.0	58.50	6	MK 1
B1615.0	5.00	133.0	23.0	67.50	6	MK 1
B1616.0	6.00	138.0	26.0	72.50	6	MK 1
B1617.0	7.00	150.0	31.0	84.50	6	MK 1
B1618.0	8.00	156.0	33.0	90.50	6	MK 1
B1619.0	9.00	162.0	36.0	96.50	6	MK 1
B16110.0	10.00	168.0	38.0	102.50	6	MK 1
B16111.0	11.00	175.0	41.0	109.50	6	MK 1
B16112.0	12.00	182.0	44.0	116.50	6	MK 1
B16113.0	13.00	182.0	44.0	116.50	6	MK 1
B16114.0	14.00	189.0	47.0	123.50	8	MK 1
B16115.0	15.00	204.0	50.0	124.00	8	MK 2
B16116.0	16.00	210.0	52.0	130.00	8	MK 2
B16117.0	17.00	214.0	54.0	134.00	8	MK 2
B16118.0	18.00	219.0	56.0	139.00	8	MK 2
B16119.0	19.00	223.0	58.0	143.00	8	MK 2
B16120.0	20.00	228.0	60.0	148.00	8	MK 2
B16121.0	21.00	232.0	62.0	152.00	8	MK 2
B16122.0	22.00	237.0	64.0	157.00	8	MK 2
B16123.0	23.00	241.0	66.0	161.00	8	MK 2
B16124.0	24.00	268.0	68.0	169.00	8	MK 3

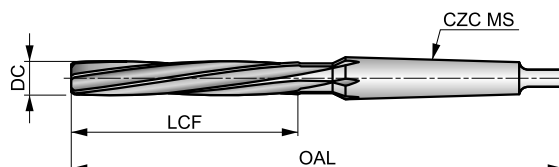
Product	DC (mm)	OAL (mm)	LCF (mm)	LB (mm)	NOF	CZC MS
B16125.0	25.00	268.0	68.0	169.00	8	MK 3
B16126.0	26.00	273.0	70.0	174.00	8	MK 3
B16127.0	27.00	277.0	71.0	178.00	10	MK 3
B16128.0	28.00	277.0	71.0	178.00	10	MK 3
B16129.0	29.00	281.0	73.0	182.00	10	MK 3
B16130.0	30.00	281.0	73.0	182.00	10	MK 3
B16131.0	31.00	285.0	75.0	186.00	10	MK 3
B16132.0	32.00	317.0	77.0	193.00	10	MK 4
B16133.0	33.00	317.0	77.0	193.00	10	MK 4
B16134.0	34.00	321.0	78.0	197.00	10	MK 4
B16135.0	35.00	321.0	78.0	197.00	10	MK 4
B16136.0	36.00	325.0	79.0	201.00	10	MK 4
B16138.0	38.00	329.0	81.0	205.00	10	MK 4
B16140.0	40.00	329.0	81.0	205.00	10	MK 4
B16142.0	42.00	333.0	82.0	209.00	12	MK 4
B16144.0	44.00	336.0	83.0	212.00	12	MK 4
B16145.0	45.00	336.0	83.0	212.00	12	MK 4
B16146.0	46.00	340.0	84.0	216.00	12	MK 4
B16147.0	47.00	340.0	84.0	216.00	12	MK 4
B16148.0	48.00	344.0	86.0	220.00	12	MK 4
B16150.0	50.00	344.0	86.0	220.00	12	MK 4

B101

DORMER

HSS-E konisk skafrival med H7-tolerance

MK maskinrival i henhold til BS 328. Den nøjagtige venstre spiral og højre skærevirkning sikrer jævn rivning og forbedret overfladefinish og hultørrelse. Velegnet til rivning i mange materialer.



HSS-E	Bright ST	BS 328
R		B
H7		

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 15 C	P1.2 ■ 16 C	P1.3 ■ 17 C	P2.1 ■ 13 C	P2.2 ■ 11 C	P2.3 ■ 10 B	P3.1 ■ 7 B	P3.2 ■ 6 B	P3.3 ■ 5 B	P4.1 ■ 4 B	P4.2 ■ 4 B	P4.3 ■ 3 A	M1.1 ■ 7 B	M1.2 ■ 6 A
K1.1 ■ 14 E	K1.2 ■ 10 D	K1.3 ■ 8 D	K2.1 ■ 12 C	K2.2 ■ 10 C	K2.3 ■ 8 C	K3.1 ■ 11 C	K3.2 ■ 8 C	N1.1 ■ 23 F	N1.2 ■ 17 F	N1.3 ■ 9 F	N2.1 ■ 25 E	N2.2 ■ 18 E	N2.3 ■ 14 E
N3.1 ■ 34 D	N3.2 ■ 20 E	N3.3 ■ 10 D	N4.1 ■ 22 B										

Product	DC (inch)	DC (mm)	OAL (mm)	LCF (mm)	NOF	CZC MS
B1013.0	—	3.00	112.0	33.0	4	MK 1
B1011/8	1/8	3.18	112.0	33.0	4	MK 1
B1013.5	—	3.50	115.0	35.0	6	MK 1
B1014.0	—	4.00	117.0	38.0	6	MK 1
B1014.5	—	4.50	120.0	41.0	6	MK 1
B1013/16	3/16	4.76	124.0	44.0	6	MK 1
B1015.0	—	5.00	124.0	44.0	6	MK 1
B1015.5	—	5.50	127.0	47.0	6	MK 1
B1016.0	—	6.00	127.0	47.0	6	MK 1
B1011/4	1/4	6.35	130.0	50.0	6	MK 1
B1016.5	—	6.50	130.0	50.0	6	MK 1
B1017.0	—	7.00	134.0	54.0	6	MK 1
B1015/16	5/16	7.94	138.0	58.0	6	MK 1
B1018.0	—	8.00	138.0	58.0	6	MK 1
B1018.5	—	8.50	138.0	58.0	6	MK 1
B1019.0	—	9.00	142.0	62.0	6	MK 1
B1019.5	—	9.50	142.0	62.0	6	MK 1
B1013/8	3/8	9.52	146.0	66.0	6	MK 1
B10110.0	—	10.00	146.0	66.0	6	MK 1
B10110.5	—	10.50	146.0	66.0	6	MK 1
B10111.0	—	11.00	151.0	71.0	6	MK 1
B1017/16	7/16	11.11	151.0	71.0	6	MK 1
B10112.0	—	12.00	156.0	76.0	6	MK 1
B10112.5	—	12.50	156.0	76.0	6	MK 1
B1011/2	1/2	12.70	156.0	76.0	6	MK 1
B10113.0	—	13.00	156.0	76.0	6	MK 1
B10113.5	—	13.50	161.0	81.0	6	MK 1
B10114.0	—	14.00	161.0	81.0	8	MK 1

Product	DC (inch)	DC (mm)	OAL (mm)	LCF (mm)	NOF	CZC MS
B1019/16	9/16	14.29	181.0	81.0	8	MK 2
B10114.5	—	14.50	181.0	81.0	8	MK 2
B10115.0	—	15.00	181.0	81.0	8	MK 2
B10115.5	—	15.50	187.0	87.0	8	MK 2
B1015/8	5/8	15.88	187.0	87.0	8	MK 2
B10116.0	—	16.00	187.0	87.0	8	MK 2
B10116.5	—	16.50	187.0	87.0	8	MK 2
B10117.0	—	17.00	187.0	87.0	8	MK 2
B10118.0	—	18.00	193.0	93.0	8	MK 2
B10119.0	—	19.00	193.0	93.0	8	MK 2
B1013/4	3/4	19.05	200.0	100.0	8	MK 2
B10120.0	—	20.00	200.0	100.0	8	MK 2
B10113/16	13/16	20.64	200.0	100.0	8	MK 2
B10121.0	—	21.00	200.0	100.0	8	MK 2
B10122.0	—	22.00	207.0	107.0	8	MK 2
B1017/8	7/8	22.22	207.0	107.0	8	MK 2
B10123.0	—	23.00	207.0	107.0	8	MK 2
B10124.0	—	24.00	242.0	115.0	8	MK 3
B10125.0	—	25.00	242.0	115.0	10	MK 3
B1011	1"	25.40	242.0	115.0	10	MK 3
B10126.0	—	26.00	242.0	115.0	10	MK 3
B10127.0	—	27.00	251.0	124.0	10	MK 3
B10128.0	—	28.00	251.0	124.0	10	MK 3
B1011.1/8	1.1/8	28.58	251.0	124.0	10	MK 3
B10129.0	—	29.00	251.0	124.0	10	MK 3
B10130.0	—	30.00	251.0	124.0	10	MK 3
B10131.0	—	31.00	260.0	133.0	10	MK 3
B1011.1/4	1.1/4	31.75	260.0	133.0	10	MK 3

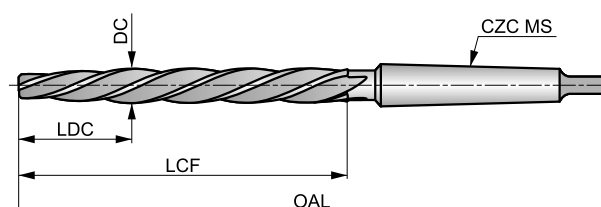
Product	DC	DC	OAL	LCF	NOF	CZC MS
	(inch)	(mm)	(mm)	(mm)		
B10132.0	—	32.00	293.0	133.0	10	MK 4
B10134.0	—	34.00	302.0	142.0	10	MK 4
B1011.3/8	1.3/8	34.93	302.0	142.0	10	MK 4
B10135.0	—	35.00	302.0	142.0	10	MK 4
B10136.0	—	36.00	302.0	142.0	10	MK 4
B10137.0	—	37.00	302.0	142.0	10	MK 4
B10138.0	—	38.00	312.0	152.0	10	MK 4
B1011.1/2	1.1/2	38.10	312.0	152.0	10	MK 4
B10139.0	—	39.00	312.0	152.0	10	MK 4
B10140.0	—	40.00	312.0	152.0	10	MK 4
B10141.0	—	41.00	312.0	152.0	10	MK 4

Product	DC	DC	OAL	LCF	NOF	CZC MS
	(inch)	(mm)	(mm)	(mm)		
B10142.0	—	42.00	312.0	152.0	10	MK 4
B10143.0	—	43.00	323.0	163.0	10	MK 4
B10144.0	—	44.00	323.0	163.0	10	MK 4
B1011.3/4	1.3/4	44.45	323.0	163.0	10	MK 4
B10145.0	—	45.00	323.0	163.0	12	MK 4
B10146.0	—	46.00	323.0	163.0	12	MK 4
B10147.0	—	47.00	323.0	163.0	12	MK 4
B10148.0	—	48.00	334.0	174.0	12	MK 4
B10150.0	—	50.00	334.0	174.0	12	MK 4
B1012	2"	50.80	334.0	174.0	12	MK 4



HSS MK konisk maskin rival

Designet til at justere huller i store fabrikationer, hvor to eller flere emner er forbundet, før de boltes eller nites. Den lille dyrdiameter fra 1 til 10 konisk rivning forenkler behovet for at placere og justere værktøjet i forborede huller. Velegnet til rivning i mange materialer.



HSS	Bright ST	DIN 311
R		k11

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 15 C	P1.2 ■ 16 C	P1.3 ■ 17 C	P2.1 ■ 13 C	P2.2 ■ 11 C	P2.3 ■ 10 B	P3.1 ■ 7 B	P3.2 ■ 6 B	P3.3 ■ 5 B	P4.1 ■ 4 B	P4.2 ■ 4 B	P4.3 ■ 3 A	K1.1 ■ 14 E	K1.2 ■ 10 D
K1.3 ■ 8 D	K2.1 ■ 12 C	K2.2 ■ 10 C	K2.3 ■ 8 C	K3.1 ■ 11 C	K3.2 ■ 8 C	N1.1 ■ 23 F	N1.2 ■ 17 F	N1.3 ■ 9 F	N2.1 ■ 21 E	N2.2 ■ 18 E	N2.3 ■ 14 E	N3.1 ■ 34 D	N3.2 ■ 20 E
N3.3 ■ 10 D	N4.1 ■ 21 B												

Med 1:10 starter (LDC).

Product	DC (mm)	OAL (mm)	LCF (mm)	LDC (mm)	NOF	CZC MS
B12110.0	10.00	171.0	95.0	30.00	4	MK 1
B12111.0	11.00	176.0	100.0	33.00	4	MK 1
B12112.0	12.00	199.0	105.0	39.00	4	MK 2
B12113.0	13.00	199.0	105.0	39.00	4	MK 2
B12114.0	14.00	209.0	115.0	42.00	4	MK 2
B12115.0	15.00	219.0	125.0	45.00	4	MK 2
B12116.0	16.00	229.0	135.0	48.00	4	MK 2
B12117.0	17.00	251.0	135.0	51.00	4	MK 3
B12118.0	18.00	261.0	145.0	58.00	4	MK 3
B12119.0	19.00	261.0	145.0	58.00	4	MK 3
B12120.0	20.00	271.0	155.0	62.00	4	MK 3
B12121.0	21.00	271.0	155.0	62.00	4	MK 3
B12122.0	22.00	281.0	165.0	66.00	4	MK 3
B12123.0	23.00	281.0	165.0	66.00	4	MK 3
B12124.0	24.00	296.0	180.0	72.00	4	MK 3
B12125.0	25.00	296.0	180.0	72.00	4	MK 3
B12126.0	26.00	296.0	180.0	72.00	4	MK 3
B12130.0	30.00	311.0	195.0	78.00	5	MK 3

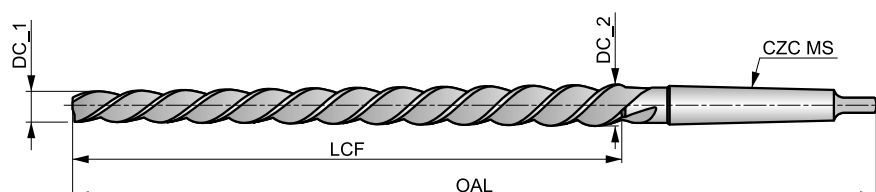
B954

DORMER



HSS-E Maskinrival konisk 1:50

Jævn rivning med forbedret nøjagtighed og ydeevne opnås gennem den specialdesignede høj spiral venstre spiral og højre skæring. Designet til at færdiggøre koniske huller og accepterer standard metriske koniske stifter 1 til 50-forhold. Velegnet til rivning i mange materialer.



HSS-E	Bright	DIN 2180
R		1:50

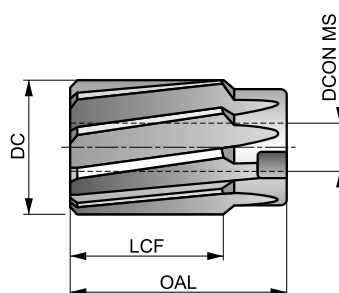
Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 10 B	P1.2 ■ 12 B	P1.3 ■ 13 B	P2.1 ■ 9 B	P2.2 ■ 8 B	P2.3 ■ 6 A	P3.1 ■ 7 A	P3.2 ■ 6 A	P3.3 ■ 3 A	P4.1 ■ 4 A	P4.2 ■ 3 A	P4.3 ■ 2 A	M1.1 ■ 11 C	M1.2 ■ 10 B
M2.1 ■ 9 B	M2.2 ■ 8 B	K1.1 ■ 10 C	K1.2 ■ 6 B	K1.3 ■ 4 B	K2.1 ■ 8 A	K2.2 ■ 6 A	K2.3 ■ 4 A	K3.1 ■ 11 A	K3.2 ■ 8 A	N1.1 ■ 14 F	N1.2 ■ 12 F	N1.3 ■ 9 F	N2.1 ■ 16 E
N2.2 ■ 14 E	N2.3 ■ 10 E	N3.1 ■ 22	N3.2 ■ 14 E	N3.3 ■ 16	N4.1 ■ 22 B								

Product	nom d	DC_1	DC_2	OAL	LCF	NOF	CZC MS
		(mm)	(mm)	(mm)	(mm)		
B9545.0	5.0	4.90	6.36	155.0	73.0	3	MK 1
B9546.0	6.0	5.90	8.00	187.0	105.0	3	MK 1
B9548.0	8.0	7.90	10.80	227.0	145.0	3	MK 1
B95410.0	10.0	9.90	13.40	257.0	175.0	3	MK 1
B95412.0	12.0	11.80	16.00	315.0	210.0	3	MK 2
B95413.0	13.0	12.86	16.74	295.0	194.0	3	MK 2
B95414.0	14.0	13.86	17.74	295.0	194.0	3	MK 2
B95416.0	16.0	15.80	20.40	335.0	230.0	3	MK 2
B95420.0	20.0	19.80	24.80	377.0	250.0	3	MK 3
B95425.0	25.0	24.70	30.70	427.0	300.0	3	MK 3
B95430.0	30.0	29.70	36.10	475.0	320.0	4	MK 4

B955**DORMER****HSS-E skalrival med H7-tolerance, blank og damphærdet**

Skalrival, der skal bruges sammen med en holder, der passer til hullet i rivalen. De er præcisionsslibet med en venstre spiral og højre skæring for at give en jævn reaming. Med en 45° skråledning til nøjagtig placering og centrering i hullet for at forbedre ydeevnen og hulkvaliteten. Velegnet til rivning i mange materialer.



HSS-E	Bright ST	DIN 219
R	B	H7

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

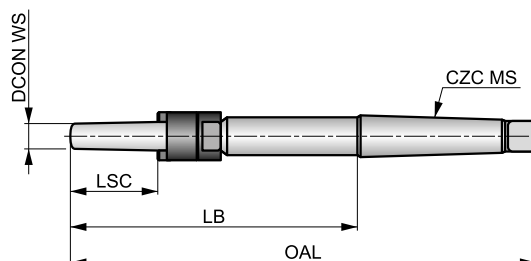
P1.1 ■ 15 C	P1.2 ■ 16 C	P1.3 ■ 17 C	P2.1 ■ 13 C	P2.2 ■ 11 C	P2.3 ■ 10 B	P3.1 ■ 7 B	P3.2 ■ 6 B	P3.3 ■ 5 B	P4.1 ■ 4 B	P4.2 ■ 4 B	P4.3 ■ 3 A	M1.1 ■ 11 C	M1.2 ■ 10 B
M2.1 ■ 9 B	K1.1 ■ 10 E	K1.2 ■ 8 D	K1.3 ■ 7 D	K2.1 ■ 10 C	K2.2 ■ 9 C	K2.3 ■ 6 C	K3.1 ■ 10 C	K3.2 ■ 7 C	N1.1 ■ 17 F	N1.2 ■ 17 F	N1.3 ■ 10 F	N2.1 ■ 23 E	N2.2 ■ 21 E
N2.3 ■ 13 E	N3.1 ■ 34 D	N3.2 ■ 20 E	N3.3 ■ 10 D	N4.1 ■ 24 C									

Product	DC (mm)	OAL (mm)	LCF (mm)	NOF	DCON MS (mm)
B95525.0	25.00	45.0	32.0	8	13.00
B95526.0	26.00	45.0	32.0	8	13.00
B95527.0	27.00	45.0	32.0	8	13.00
B95528.0	28.00	45.0	32.0	8	13.00
B95529.0	29.00	45.0	32.0	8	13.00
B95530.0	30.00	45.0	32.0	8	13.00
B95531.0	31.00	50.0	36.0	10	16.00
B95532.0	32.00	50.0	36.0	10	16.00
B95534.0	34.00	50.0	36.0	10	16.00
B95535.0	35.00	50.0	36.0	10	16.00
B95536.0	36.00	56.0	40.0	10	19.00
B95537.0	37.00	56.0	40.0	10	19.00
B95538.0	38.00	56.0	40.0	10	19.00
B95540.0	40.00	56.0	40.0	10	19.00

Product	DC (mm)	OAL (mm)	LCF (mm)	NOF	DCON MS (mm)
B95542.0	42.00	56.0	40.0	10	19.00
B95544.0	44.00	63.0	45.0	12	22.00
B95545.0	45.00	63.0	45.0	12	22.00
B95548.0	48.00	63.0	45.0	12	22.00
B95550.0	50.00	63.0	45.0	12	22.00
B95552.0	52.00	71.0	50.0	12	27.00
B95555.0	55.00	71.0	50.0	12	27.00
B95558.0	58.00	71.0	50.0	12	27.00
B95560.0	60.00	71.0	50.0	12	27.00
B95565.0	65.00	80.0	56.0	14	32.00
B95570.0	70.00	80.0	56.0	14	32.00
B95575.0	75.00	90.0	63.0	14	40.00
B95580.0	80.00	90.0	63.0	14	40.00

B956**DORMER****Holder til skalrival for B955**

Holder bruges til at holde skalrival i maskinen.. Den har et konisk skaft, der skal holdes direkte i maskinens spindel. For skalrivalholder reservedele (drivere, møtrikker og skiver) se Dormers B957-serie for tilgængelighed.

**HSS-E**

Bright

**DIN
217**

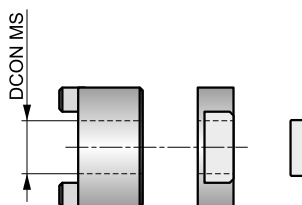
Product	DCON WS	OAL	LSC	LB	CZC MS
	(mm)	(mm)	(mm)	(mm)	
B95613.0	13.00	250.0	45	151.00	MK 3
B95616.0	16.00	261.0	50	162.00	MK 3
B95619.0	19.00	298.0	56	174.00	MK 4
B95622.0	22.00	312.0	63	188.00	MK 4
B95627.0	27.00	359.0	71	203.00	MK 5
B95632.0	32.00	376.0	80	220.00	MK 5
B95640.0	40.00	396.0	90	240.00	MK 5

B957



Reserve dele til B956 skalrival holder

B957-reservedelsserien til B956-holder består af drivere, møtrikker og skiver. De kan købes individuelt efter størrelse, hvilket sikrer fortsat brug sikkert og sikkert. B957-drivere, møtrikker og skiver er fremstillet til de krævede standarder.



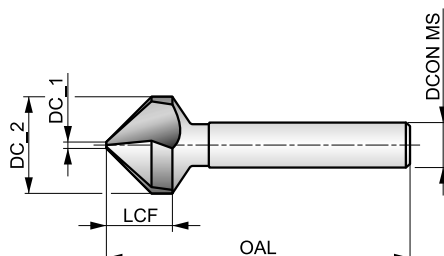
Product	Nr.	DCON MS
		(mm)
B957N3DRIVER	3	13.00
B957N3NUT	3	—
B957N3WASHER	3	—
B957N4DRIVER	4	16.00
B957N4NUT	4	—
B957N4WASHER	4	—
B957N5DRIVER	5	19.00
B957N5NUT	5	—
B957N5WASHER	5	—
B957N6DRIVER	6	22.00
B957N6NUT	6	—
B957N6WASHER	6	—
B957N7DRIVER	7	27.00
B957N7NUT	7	—
B957N7WASHER	7	—
B957N8DRIVER	8	32.00
B957N8NUT	8	—
B957N8WASHER	8	—
B957N9DRIVER	9	40.00
B957N9NUT	9	—
B957N9WASHER	9	—

G400



Hårdmetal lige skaft 90° forsænker, blank finish

Højtstående 90° forsænker med blank finish designet til brug med CNC-maskiner, hvor der kræves høj produktivitet og kvalitet. Kan bruges til affasning af huller i hårde og slibende materialer. En 90° vinkel er designet til at affase huller til standard med 90° hoved.



HM	Bright	DIN 335C
R	90°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 64 E	P1.2 ■ 72 E	P1.3 ■ 74 E	P2.1 ■ 55 E	P2.2 ■ 48 D	P2.3 ■ 43 B	P3.1 ■ 45 D	P3.2 ■ 36 D	P3.3 ■ 30 B	P4.1 ■ 26 D	P4.2 ■ 23 B	P4.3 ■ 18 A	M1.1 ■ 24 C	M1.2 ■ 21 C
M2.1 ■ 22 C	M2.2 ▣ 18 C	M2.3 ▣ 15 B	M3.1 ■ 20 B	M3.2 ▣ 17 B	M3.3 ▣ 15 B	M4.1 ▣ 15 A	M4.2 ▣ 13 A	K1.1 ■ 45 F	K1.2 ■ 33 D	K1.3 ■ 25 D	K2.1 ■ 46 C	K2.2 ■ 37 C	K2.3 ▣ 30 C
K3.1 ■ 41 C	K3.2 ■ 31 C	K3.3 ▣ 25 C	K4.1 ■ 38 C	K4.2 ■ 28 C	K4.3 ■ 21 C	K4.4 ▣ 18 C	K4.5 ▣ 15 C	K5.1 ■ 43 C	K5.2 ■ 32 C	K5.3 ■ 25 C	N1.1 ▣ 75 G	N1.2 ■ 55 G	N1.3 ■ 40 F
N2.1 ■ 40 F	N2.2 ■ 36 F	N2.3 ■ 26 F	N3.1 ■ 42 F	N3.2 ■ 25 F	N3.3 ▣ 13 D	N4.3 ■ 17 E	S1.1 ■ 12 C	S1.2 ■ 10 A	S1.3 ▣ 9 A	S2.1 ■ 8 B	S2.2 ▣ 7 A	S3.1 ■ 6 B	S3.2 ▣ 5 A
S4.1 ■ 5 B	S4.2 ▣ 4 A	H1.1 ■ 12 A	H2.1 ■ 7 A	H2.2 ▣ 6 B	H3.1 ■ 8 A	H3.2 ▣ 7 B	H4.1 ■ 5 A	H4.2 ▣ 4 B					

DCON MS tolerance h6.

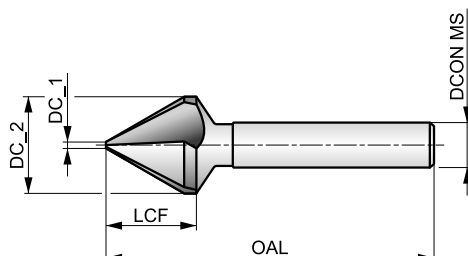
Product	DC_2	DC_1	LCF	OAL	DCON MS	NOF
	(mm)	(mm)	(mm)	(mm)	(mm)	
G4006.3	6.30	1.50	5.0	45.0	5.00	3
G4008.3	8.30	2.00	6.0	50.0	6.00	3
G40010.4	10.40	2.50	7.1	50.0	6.00	3
G40012.4	12.40	2.80	8.0	56.0	8.00	3
G40016.5	16.50	3.20	10.0	60.0	10.00	3
G40020.5	20.50	3.50	12.5	63.0	10.00	3
G40025.0	25.00	3.80	15.0	67.0	10.00	3
G40031.0	31.00	4.20	18.0	71.0	12.00	3

G135



HSS lige skaft 60° forsænker, blank finish

Med en 60° vinkel til reifning af huller til fjernelse af grater fra borede huller i diametre op til 25,0 mm. Til brug i både maskine og håndholdt drift. Velegnet til reifning af huller i mange materialer.



HSS	Bright	DIN 334C
R	60°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 23 E	P1.2 ■ 26 E	P1.3 ■ 27 E	P2.1 ■ 20 E	P2.2 ■ 18 D	P2.3 ■ 16 B	P3.1 ■ 16 D	P3.2 ■ 13 D	P3.3 ■ 11 B	P4.1 ■ 10 D	P4.2 ■ 8 B	M1.1 ■ 8 C	M1.2 ■ 6 C	M2.1 ■ 7 C
M2.2 ■ 6 C	K1.1 ■ 20 F	K1.2 ■ 15 D	K2.1 ■ 21 C	K2.2 ■ 17 C	K3.1 ■ 18 C	K3.2 ■ 14 C	K5.1 ■ 19 C	K5.2 ■ 15 C	N1.1 ■ 40 G	N1.2 ■ 30 G	N1.3 ■ 20 F	N2.1 ■ 20 F	N2.2 ■ 18 F
N3.1 ■ 21 F	N3.2 ■ 12 F	N3.3 ■ 6 D	N4.1 ■ 40 G	N4.2 ■ 35 G									

DCON MS tolerance h9.

Product	DC_2 (mm)	DC_1 (mm)	LCF (mm)	OAL (mm)	DCON MS (mm)	NOF
G1356.3	6.30	1.60	6.8	45.0	5.00	3
G1358.0	8.00	2.00	8.5	50.0	6.00	3
G13510.0	10.00	2.50	7.6	50.0	6.00	3
G13512.5	12.50	3.20	11.7	56.0	8.00	3
G13516.0	16.00	4.00	14.5	63.0	10.00	3
G13520.0	20.00	5.00	17.5	67.0	10.00	3
G13525.0	25.00	6.30	20.5	71.0	10.00	3

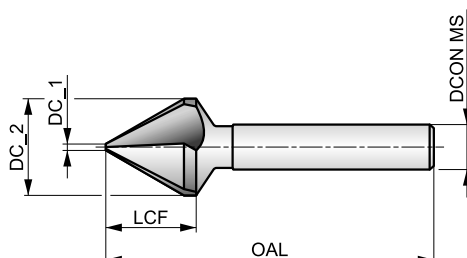
G335

DORMER



HSS lige skaft 60° forsænker, TiN belagt

Til 60° forsænkede huller til og fjernelse af grater fra borede huller. TiN-belægning forbedrer ydeevnen og forlænger værktøjets levetid. Alsidigt værktøj, der kan bruges i både håndholdte og maskinapplikationer. Velegnet til reifning af huller i mange materialer.



HSS	TiN	DIN 334C
R	60°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 33 E	P1.2 ■ 37 E	P1.3 ■ 38 E	P2.1 ■ 28 E	P2.2 ■ 25 D	P2.3 ■ 22 B	P3.1 ■ 23 D	P3.2 ■ 18 D	P3.3 ■ 15 B	P4.1 ■ 13 D	P4.2 ■ 11 B	P4.3 ■ 9 B	M1.1 ■ 10 C	M1.2 ■ 8 C
M2.1 ■ 9 C	M3.1 ■ 8 B	K1.1 ■ 34 F	K1.2 ■ 25 D	K1.3 ■ 19 D	K2.1 ■ 35 C	K2.2 ■ 28 C	K2.3 ■ 23 C	K3.1 ■ 31 C	K3.2 ■ 24 C	K3.3 ■ 19 C	K4.1 ■ 29 C	K4.2 ■ 22 C	K4.3 ■ 16 C
K5.1 ■ 32 C	K5.2 ■ 24 C	K5.3 ■ 19 C	N1.1 ■ 53 G	N1.2 ■ 40 G	N1.3 ■ 27 F	N2.1 ■ 27 F	N2.2 ■ 24 F	N2.3 ■ 17 F	N3.1 ■ 28 F	N3.2 ■ 16 F	N3.3 ■ 8 D	N4.1 ■ 58 G	N4.2 ■ 50 G

DCON MS tolerance h9.

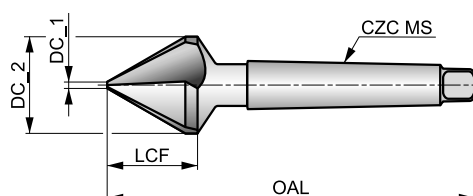
Product	DC_2	DC_1	LCF	OAL	DCON MS	NOF
	(mm)	(mm)	(mm)	(mm)	(mm)	
G3356.3	6.30	1.60	6.8	45.0	5.00	3
G3358.0	8.00	2.00	8.5	50.0	6.00	3
G33510.0	10.00	2.50	7.6	50.0	6.00	3
G33512.5	12.50	3.20	11.7	56.0	8.00	3
G33516.0	16.00	4.00	14.5	63.0	10.00	3
G33520.0	20.00	5.00	17.5	67.0	10.00	3
G33525.0	25.00	6.30	20.5	71.0	10.00	3

G137



HSS MK skaft 60° forsænker, blank finish

Forsænker med blank finish og en vinkel på 60° til reifning af huller og fjernelse af grater fra borede huller. Konisk MK skaftdesign gør det muligt at bruge værktøjet til maskinapplikationer, hvor det holdes direkte i spindlen. Velegnet til affasning af huller i mange materialer.



HSS	Bright	DIN 334D
R	60°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 23 E	P1.2 ■ 26 E	P1.3 ■ 27 E	P2.1 ■ 20 E	P2.2 ■ 18 D	P2.3 ■ 16 B	P3.1 ■ 16 D	P3.2 ■ 13 D	P3.3 ■ 11 B	P4.1 ■ 10 D	P4.2 ■ 8 B	M1.1 ■ 8 C	M1.2 ■ 6 C	M2.1 ■ 7 C
M2.2 ■ 6 C	K1.1 ■ 20 F	K1.2 ■ 15 D	K2.1 ■ 21 C	K2.2 ■ 17 C	K3.1 ■ 18 C	K3.2 ■ 14 C	K5.1 ■ 19 C	K5.2 ■ 15 C	N1.1 ■ 40 G	N1.2 ■ 30 G	N1.3 ■ 20 F	N2.1 ■ 20 F	N2.2 ■ 18 F
N3.1 ■ 21 F	N3.2 ■ 12 F	N3.3 ■ 6 D	N4.1 ■ 40 G	N4.2 ■ 35 G									

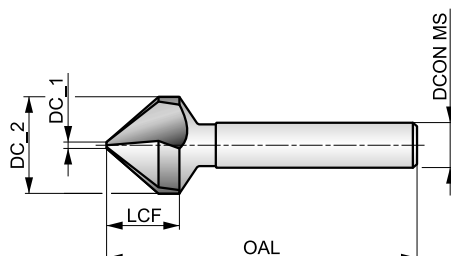
Product	DC_2 (mm)	DC_1 (mm)	LCF (mm)	OAL (mm)	CZC MS	NOF
G13716.0	16.00	4.00	14.5	90.0	MK 1	3
G13720.0	20.00	5.00	17.5	106.0	MK 2	3
G13725.0	25.00	6.30	20.0	112.0	MK 2	3
G13731.5	31.50	10.00	23.0	118.0	MK 2	3
G13740.0	40.00	12.50	28.5	150.0	MK 3	3
G13750.0	50.00	16.00	36.0	160.0	MK 3	3
G13763.0	63.00	20.00	43.0	190.0	MK 4	3
G13780.0	80.00	25.00	54.0	200.0	MK 4	3

G154



HSS lige skaft 82° forsænker, blank finish

En 82° forsænker til flade hovedskruer og til affasningshuller. Alsidigt værktøj, der kan bruges i både håndholdte og maskinapplikationer. Velegnet til affasning af huller i mange materialer.



HSS	Bright	DIN 335C
R	82°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 23 E	P1.2 ■ 26 E	P1.3 ■ 27 E	P2.1 ■ 20 E	P2.2 ■ 18 D	P2.3 ■ 16 B	P3.1 ■ 16 D	P3.2 ■ 13 D	P3.3 ■ 11 B	P4.1 ■ 10 D	P4.2 ■ 8 B	M1.1 ■ 8 C	M1.2 ■ 6 C	M2.1 ■ 7 C
M2.2 ■ 6 C	K1.1 ■ 20 F	K1.2 ■ 15 D	K2.1 ■ 21 C	K2.2 ■ 17 C	K3.1 ■ 18 C	K3.2 ■ 14 C	K5.1 ■ 14 C	K5.2 ■ 10 C	N1.1 ■ 40 G	N1.2 ■ 30 G	N1.3 ■ 20 F	N2.1 ■ 20 F	N2.2 ■ 18 F
N3.1 ■ 21 F	N3.2 ■ 12 F	N3.3 ■ 6 D	N4.1 ■ 40 G	N4.2 ■ 35 G									

DCON MS tolerance h9.

Product	DC_2	DC_1	LCF	OAL	DCON MS	NOF
	(mm)	(mm)	(mm)	(mm)	(mm)	
G1546.3	6.30	1.50	5.5	45.0	5.00	3
G1548.3	8.30	2.00	6.5	50.0	6.00	3
G15410.4	10.40	2.50	7.6	50.0	6.00	3
G15412.4	12.40	2.80	8.5	56.0	8.00	3
G15416.5	16.50	3.20	10.5	60.0	10.00	3
G15420.5	20.50	3.50	13.0	63.0	10.00	3
G15425.0	25.00	3.80	15.5	67.0	10.00	3

G129

DORMER



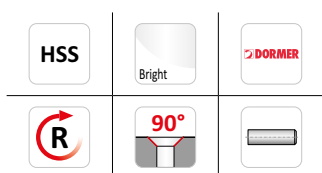
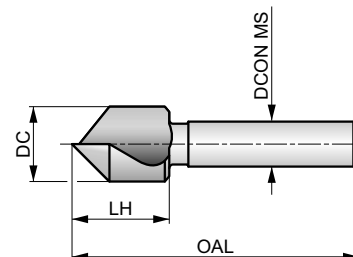
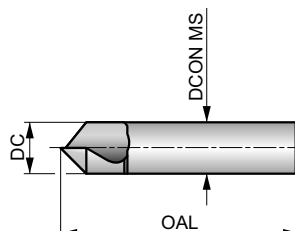
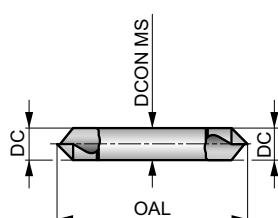
HSS lige skaft Enkelt skær 90° Forsænker, Blank Finish

En 90° forsænker med blank finish til reifning og til fjernelse af grater fra borede huller. Designet med et skær reducerer vibrationer og larm for en jævn affasningsoperation. Velegnet til reifning af huller i blødt stål og ikke-jernholdige materialer med mellemstyrke, såsom aluminium.

DC = 6 mm

DC = 8 mm

DC ≥ 10 mm



Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 21 D	P1.2 ■ 24 D	P1.3 ■ 25 D	P2.1 ■ 18 D	P2.2 ■ 16 C	P2.3 ■ 14 A	P3.1 ■ 13 B	P3.2 ■ 11 B	M1.1 ■ 8 B	M1.2 ■ 6 B	M2.1 ■ 7 B	K1.1 ■ 18 D	K1.2 ■ 13 C	K2.1 ■ 19 A
K2.2 ■ 15 A	K3.1 ■ 16 A	K3.2 ■ 12 A	N1.1 ■ 34 D	N1.2 ■ 25 D	N1.3 ■ 16 C	N2.1 ■ 16 C	N2.2 ■ 14 C	N3.1 ■ 17 C	N3.2 ■ 9 C	N3.3 ■ 5 B	N4.1 ■ 35 D	N4.2 ■ 30 D	

DCON MS tolerance h9.

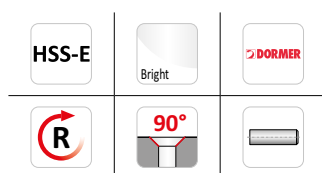
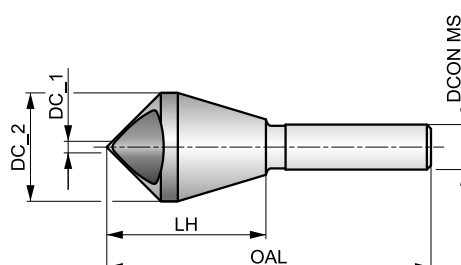
Product	DC	LH	OAL	DCON MS	NOF
	(mm)	(mm)	(mm)	(mm)	
G1296.0	6.00	—	45.0	6.00	1
G1298.0	8.00	—	50.0	8.00	1
G12910.0	10.00	17.0	49.0	8.00	1
G12912.5	12.50	17.0	49.0	8.00	1
G12916.0	16.00	20.0	56.0	10.00	1
G12920.0	20.00	24.0	60.0	10.00	1
G12925.0	25.00	25.0	75.0	12.00	1
G12931.5	31.50	29.0	80.0	12.00	1

G149



HSS-E Lige skaft med tværhul 90° forsækning, blank finish

En 90° forsænke designet til at reife huller og til at fjerne grater fra borede huller. Det specielle tværhullede design styrer spåner væk fra forkant for at give en jævn affasningsoperation. Velegnet til reifning af huller i mange materialer.



Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ▣ 21 D	P1.2 ▣ 24 D	P1.3 ▣ 25 D	P2.1 ▣ 18 D	P2.2 ▣ 16 C	P2.3 ▣ 14 A	P3.1 ▣ 16 B	P3.2 ▣ 13 B	M1.1 ▣ 8 B	M1.2 ▣ 6 B	M2.1 ▣ 7 B	K1.1 ▣ 18 D	K2.1 ▣ 19 A	K3.1 ▣ 16 A
K5.1 ▣ 14 A	N1.1 ▣ 34 D	N1.2 ▣ 25 D	N1.3 ▣ 16 C	N2.1 ▣ 16 C	N2.2 ▣ 14 C	N3.1 ▣ 17 C	N3.2 ▣ 9 C	N3.3 ▣ 5 B	N4.1 ▣ 17 D	N4.2 ▣ 5 D			

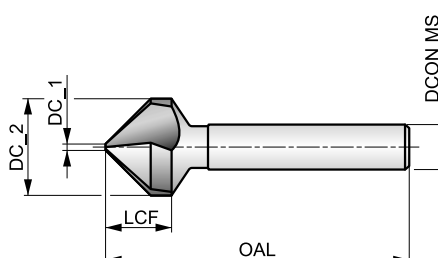
Product	DC_2 (mm)	DC_1 (mm)	LH (mm)	OAL (mm)	DCON MS (mm)	DC (mm)	NOF
G1495	5.00	2.00	19.0	45.0	6.00	10.00	1
G14910	10.00	5.00	23.0	48.0	8.00	14.00	1
G14915	15.00	10.00	34.0	65.0	10.00	21.00	1
G14920	20.00	15.00	43.0	84.0	12.00	28.00	1
G14925	25.00	20.00	48.0	102.0	15.00	35.00	1
G14930	30.00	25.00	61.0	115.0	15.00	44.00	1
G14935	35.00	30.00	65.0	127.0	15.00	48.00	1
G14940	40.00	35.00	66.0	136.0	15.00	53.00	1
G14950	50.00	40.00	85.0	166.0	20.00	60.00	1

G136

DORMER

HSS lige skaft 90° forsænker, blank finish

En 90° forsænker designet til at reife huller og til at fjerne grater fra borede huller. Reduceret skaft muliggør forsænkninger med større diameter i standardholdere og borepatroner. Alsidigt værktøj, som kan bruges i håndholdte applikationer og maskiner. Velegnet til reifning af huller i mange materialer.



HSS	Bright	DIN 335C
R	90°	

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 23 E	P1.2 ■ 26 E	P1.3 ■ 27 E	P2.1 ■ 20 E	P2.2 ■ 18 D	P2.3 ■ 16 B	P3.1 ■ 16 D	P3.2 ■ 13 D	P3.3 ■ 11 B	P4.1 ■ 10 D	P4.2 ■ 8 B	M1.1 ■ 8 C	M1.2 ■ 6 C	M2.1 ■ 7 C
M2.2 ■ 6 C	K1.1 ■ 20 F	K1.2 ■ 15 D	K2.1 ■ 21 C	K2.2 ■ 17 C	K3.1 ■ 18 C	K3.2 ■ 14 C	K5.1 ■ 19 C	K5.2 ■ 15 C	N1.1 ■ 40 G	N1.2 ■ 30 G	N1.3 ■ 20 F	N2.1 ■ 20 F	N2.2 ■ 18 F
N3.1 ■ 21 F	N3.2 ■ 12 F	N3.3 ■ 6 D	N4.1 ■ 40 G	N4.2 ■ 35 G									

DCON MS tolerance h9.

Produkter fra denne serie fås også i sæt. Se G236.

Product	DC_2	DC_1	LCF	OAL	DCON MS	NOF
	(mm)	(mm)	(mm)	(mm)	(mm)	
G1364.3	4.30	1.30	4.0	40.0	4.00	3
G1365.0	5.00	1.50	4.5	40.0	4.00	3
G1365.3	5.30	1.50	4.5	40.0	4.00	3
G1365.8	5.80	1.50	5.0	45.0	5.00	3
G1366.0	6.00	1.50	5.0	45.0	5.00	3
G1366.3	6.30	1.50	5.5	45.0	5.00	3
G1367.0	7.00	1.80	5.5	50.0	6.00	3
G1367.3	7.30	1.80	6.1	50.0	6.00	3
G1368.0	8.00	2.00	6.1	50.0	6.00	3
G1368.3	8.30	2.00	6.5	50.0	6.00	3
G1369.4	9.40	2.20	7.2	50.0	6.00	3
G13610.0	10.00	2.50	7.6	50.0	6.00	3
G13610.4	10.40	2.50	7.6	50.0	6.00	3

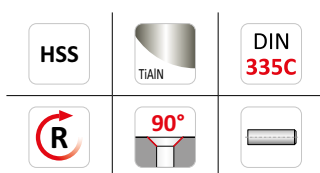
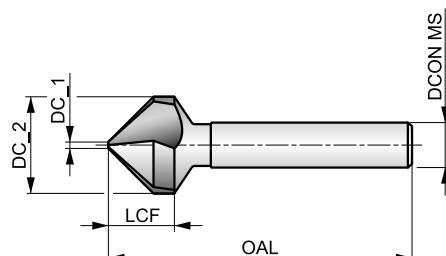
Product	DC_2	DC_1	LCF	OAL	DCON MS	NOF
	(mm)	(mm)	(mm)	(mm)	(mm)	
G13611.5	11.50	2.80	8.0	56.0	8.00	3
G13612.4	12.40	2.80	8.5	56.0	8.00	3
G13613.4	13.40	2.90	9.0	56.0	8.00	3
G13615.0	15.00	3.20	9.5	60.0	10.00	3
G13616.5	16.50	3.20	10.5	60.0	10.00	3
G13619.0	19.00	3.50	11.7	63.0	10.00	3
G13620.5	20.50	3.50	13.0	63.0	10.00	3
G13623.0	23.00	3.80	13.7	67.0	10.00	3
G13625.0	25.00	3.80	15.5	67.0	10.00	3
G13626.0	26.00	3.80	15.5	67.0	10.00	3
G13628.0	28.00	4.00	16.5	71.0	12.00	3
G13630.0	30.00	4.20	18.5	71.0	12.00	3
G13631.0	31.00	4.20	18.5	71.0	12.00	3

G560



HSS lige skaft 90° forsænker, TiAlN belagt

En 90° forsænker designet til reifning og fjernelse af grater fra borede huller. Reduceret skaft muliggør reifning med større diameter i standardholdere og borepatroner. Alsidigt værktøj, som kan bruges i håndholdte applikationer og maskiner. TiAlN-belægning forbedrer ydeevnen og forlænger værktøjets levetid.



Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 40 E	P1.2 ■ 45 E	P1.3 ■ 46 E	P2.1 ■ 34 E	P2.2 ■ 30 D	P2.3 ■ 27 B	P3.1 ■ 28 D	P3.2 ■ 22 D	P3.3 ■ 19 B	P4.1 ■ 16 D	P4.2 ■ 14 B	P4.3 ■ 11 B	M1.1 ■ 11 C	M1.2 ■ 9 C
M2.1 ■ 10 C	M2.2 ■ 9 C	M2.3 ■ 8 B	K1.1 ■ 41 F	K1.2 ■ 30 D	K1.3 ■ 23 D	K2.1 ■ 42 C	K2.2 ■ 34 C	K2.3 ■ 27 C	K3.1 ■ 37 C	K3.2 ■ 28 C	K3.3 ■ 23 C	K4.1 ■ 34 C	K4.2 ■ 26 C
K4.3 ■ 19 C	K5.1 ■ 39 C	K5.2 ■ 29 C	K5.3 ■ 23 C	N1.1 ■ 60 G	N1.2 ■ 45 G	N1.3 ■ 30 F	N2.1 ■ 30 F	N2.2 ■ 27 F	N2.3 ■ 19 F	N3.1 ■ 32 F	N3.2 ■ 18 F	N3.3 ■ 9 D	N4.1 ■ 62 G
N4.2 ■ 55 G													

DCON MS tolerance h9.

Produkter fra denne serie fås også i sæt. Se G236.

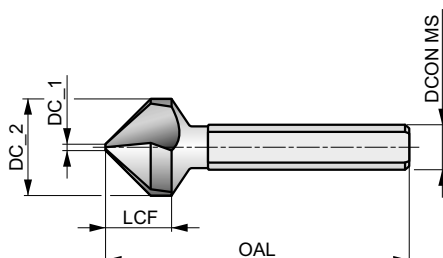
Product	DC_2	DC_1	LCF	OAL	DCON MS	NOF
	(mm)	(mm)	(mm)	(mm)	(mm)	
G5606.3	6.30	1.50	5.5	45.0	5.00	3
G5608.0	8.00	2.00	6.1	50.0	6.00	3
G5608.3	8.30	2.00	6.5	50.0	6.00	3
G56010.0	10.00	2.50	7.6	50.0	6.00	3
G56010.4	10.40	2.50	7.6	50.0	6.00	3
G56012.4	12.40	2.80	8.5	56.0	8.00	3
G56016.5	16.50	3.20	10.5	60.0	10.00	3
G56020.5	20.50	3.50	13.0	63.0	10.00	3
G56025.0	25.00	3.80	15.5	67.0	10.00	3
G56031.0	31.00	4.20	18.5	71.0	12.00	3

G106



HSS 3-fladet lige skaft 90° forsænker, Blank finish

En 90° forsænker designet til reifning af huller og fjernelse af grater fra borede huller. Skaft med tre flader giver forbedret fastgørelse i borepatron. Velegnet til reifning af huller i mange materialer.



HSS	Bright	DIN 335C
R	90°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 23 E	P1.2 ■ 26 E	P1.3 ■ 27 E	P2.1 ■ 20 E	P2.2 ■ 18 D	P2.3 ■ 16 B	P3.1 ■ 16 D	P3.2 ■ 13 D	P3.3 ■ 11 B	P4.1 ■ 10 D	P4.2 ■ 8 B	M1.1 ■ 8 C	M1.2 ■ 6 C	M2.1 ■ 7 C
M2.2 ■ 6 C	K1.1 ■ 20 F	K1.2 ■ 15 D	K2.1 ■ 21 C	K2.2 ■ 17 C	K3.1 ■ 18 C	K3.2 ■ 14 C	K5.1 ■ 19 C	K5.2 ■ 15 C	N1.1 ■ 40 G	N1.2 ■ 30 G	N1.3 ■ 20 F	N2.1 ■ 20 F	N2.2 ■ 18 F
N3.1 ■ 21 F	N3.2 ■ 12 F	N3.3 ■ 6 D	N4.1 ■ 40 G	N4.2 ■ 35 G									

DCON MS tolerance h9.

Produkter fra denne serie fås også i sæt. Se G236.

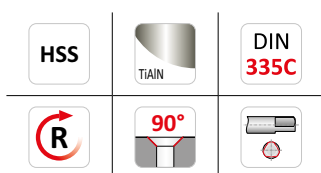
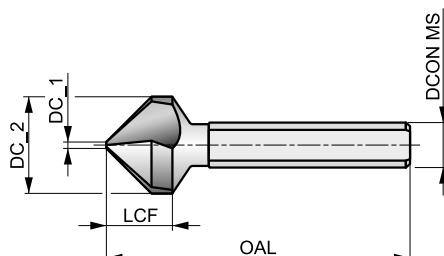
Product	DC_2 (mm)	DC_1 (mm)	LCF (mm)	OAL (mm)	DCON MS (mm)	NOF
G1066.3	6.30	1.50	5.6	45.0	5.00	3
G1068.3	8.30	2.00	6.9	50.0	6.00	3
G10610.4	10.40	2.50	7.8	50.0	6.00	3
G10612.4	12.40	2.80	8.6	56.0	8.00	3
G10616.5	16.50	3.20	11.1	60.0	10.00	3
G10620.5	20.50	3.50	12.9	63.0	10.00	3
G10625.0	25.00	3.80	15.7	67.0	10.00	3
G10631.0	31.00	4.20	18.5	71.0	12.00	3
G10634.0	34.00	4.50	19.0	103.0	16.00	3
G10637.0	37.00	4.50	21.2	118.0	16.00	3
G10640.0	40.00	4.50	20.0	118.0	16.00	3
G10650.0	50.00	5.00	23.6	126.0	16.00	3

G506



HSS 3-Fladet lige skaft 90° Forsænker, TiAlN belagt

En 90° forsænker designet til reifning af huller og fjernelse af grater fra borede huller. Skaft med tre slebet flader giver forbedret hold i borepatron, især når det bruges i håndholdt elværktøj. TiAlN-belægning forlænger værktøjets levetid. Velegnet til reifning af huller i mange materialer.



Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 40 E	P1.2 ■ 45 E	P1.3 ■ 46 E	P2.1 ■ 34 E	P2.2 ■ 30 D	P2.3 ■ 27 B	P3.1 ■ 28 D	P3.2 ■ 22 D	P3.3 ■ 19 B	P4.1 ■ 16 D	P4.2 ■ 14 B	P4.3 ■ 11 B	M1.1 ■ 11 C	M1.2 ■ 9 C
M2.1 ■ 10 C	M2.2 ■ 9 C	M2.3 ■ 8 B	K1.1 ■ 41 F	K1.2 ■ 30 D	K1.3 ■ 23 D	K2.1 ■ 42 C	K2.2 ■ 34 C	K2.3 ■ 27 C	K3.1 ■ 37 C	K3.2 ■ 28 C	K3.3 ■ 23 C	K4.1 ■ 34 C	K4.2 ■ 26 C
K4.3 ■ 19 C	K5.1 ■ 39 C	K5.2 ■ 29 C	K5.3 ■ 23 C	N1.1 ■ 60 G	N1.2 ■ 45 G	N1.3 ■ 30 F	N2.1 ■ 30 F	N2.2 ■ 27 F	N2.3 ■ 19 F	N3.1 ■ 32 F	N3.2 ■ 18 F	N3.3 ■ 9 D	N4.1 ■ 62 G
N4.2 ■ 55 G													

DCON MS tolerance h9.

Produkter fra denne serie fås også i sæt. Se G236.

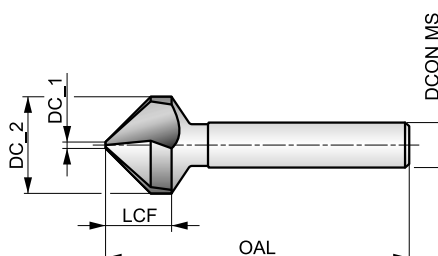
Product	DC_2	DC_1	LCF	OAL	DCON MS	NOF
	(mm)	(mm)	(mm)	(mm)	(mm)	
G5066.3	6.30	1.50	5.6	45.0	5.00	3
G5068.3	8.30	2.00	6.9	50.0	6.00	3
G50610.4	10.40	2.50	7.8	50.0	6.00	3
G50612.4	12.40	2.80	8.6	56.0	8.00	3
G50616.5	16.50	3.20	11.1	60.0	10.00	3
G50620.5	20.50	3.50	12.9	63.0	10.00	3
G50625.0	25.00	3.80	15.7	67.0	10.00	3
G50631.0	31.00	4.20	18.5	71.0	12.00	3
G50634.0	34.00	4.50	19.0	103.0	16.00	3
G50637.0	37.00	4.50	21.2	118.0	16.00	3
G50640.0	40.00	4.50	20.0	118.0	16.00	3
G50650.0	50.00	5.00	23.6	126.0	16.00	3

G142



HSS lige skaft, 90° forsænker, blank finish, til rustfrit stål

En 90° forsænker designet til reifning af huller og til rengøring af grater fra borede huller. Ekstra radiel frigang for at give en skarpere kant, hvilket forbedrer ydeevnen ved bearbejdning af klæbrige materialer, såsom rustfrit stål og ikke-jernholdige materialer. Kan bruges i håndholdte applikationer og maskiner.



HSS	Bright	DIN 335C
R	90°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 23 E	P1.2 ■ 26 E	P1.3 ■ 27 E	P2.1 ■ 20 E	P2.2 ■ 18 D	P2.3 ■ 16 B	P3.1 ■ 16 D	P3.2 ■ 13 D	P3.3 ■ 11 B	P4.1 ■ 10 D	P4.2 ■ 8 B	M1.1 ■ 11 C	M1.2 ■ 9 C	M2.1 ■ 10 C
M2.2 ■ 8 C	M3.1 ■ 7 B	M3.2 ■ 6 B	M4.1 ■ 4 A	N1.1 ■ 40 G	N1.2 ■ 30 G	N1.3 ■ 20 F	N2.1 ■ 20 F	N2.2 ■ 18 F	N2.3 ■ 20 F	N3.1 ■ 34 F	N3.2 ■ 20 F	N3.3 ■ 10 D	N4.1 ■ 40 G
N4.2 ■ 35 G													

DCON MS tolerance h9.

Product	DC_2 (mm)	DC_1 (mm)	LCF (mm)	OAL (mm)	DCON MS (mm)	NOF
G1424.8	4.80	1.30	4.5	40.0	4.00	3
G1425.0	5.00	1.50	4.5	40.0	4.00	3
G1426.0	6.00	1.50	5.0	45.0	5.00	3
G1426.3	6.30	1.50	5.5	45.0	5.00	3
G1427.0	7.00	1.80	5.5	50.0	6.00	3
G1427.3	7.30	1.80	6.1	50.0	6.00	3
G1428.0	8.00	2.00	6.1	50.0	6.00	3
G1428.3	8.30	2.00	6.5	50.0	6.00	3
G14210.0	10.00	2.50	7.6	50.0	6.00	3
G14210.4	10.40	2.50	7.6	50.0	6.00	3
G14211.5	11.50	2.80	8.0	56.0	8.00	3
G14212.4	12.40	2.80	8.5	56.0	8.00	3
G14215.0	15.00	3.20	9.5	60.0	10.00	3
G14216.5	16.50	3.20	10.5	60.0	10.00	3
G14219.0	19.00	3.50	11.7	63.0	10.00	3
G14220.5	20.50	3.50	13.0	63.0	10.00	3
G14223.0	23.00	3.80	13.7	67.0	10.00	3
G14225.0	25.00	3.80	15.5	67.0	10.00	3
G14231.0	31.00	4.20	18.5	71.0	12.00	3

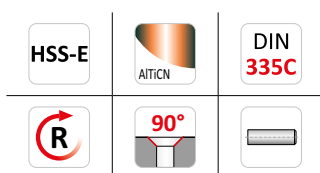
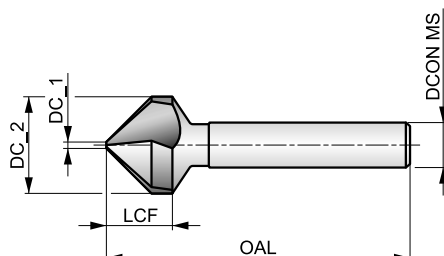
G570

DORMER



HSS-E lige skaft 90° forsænker, AlTiCN belagt

En 90° forsænker designet til reifning af huller og rense grater fra borede huller. Kan bruges i maskin- og håndholdte applikationer. Særligt velegnet til reifning af huller i hårde og slidende materialer. AlTiCN-belægning forbedrer ydeevnen og forlænger værktøjets levetid.



Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 40 E	P1.2 ■ 45 E	P1.3 ■ 46 E	P2.1 ■ 34 E	P2.2 ■ 30 D	P2.3 ■ 27 B	P3.1 ■ 28 D	P3.2 ■ 22 D	P3.3 ■ 19 B	P4.1 ■ 16 D	P4.2 ■ 14 B	P4.3 ■ 11 B	M1.1 ■ 23 C	M1.2 ■ 20 C
M2.1 ■ 21 C	M2.2 ■ 17 C	M2.3 ■ 14 A	M3.1 ■ 14 B	M3.2 ■ 12 B	M3.3 ■ 11 B	M4.1 ■ 15 A	M4.2 ■ 13 A	K1.1 ■ 41 C	K1.2 ■ 30 C	K1.3 ■ 23 C	K2.1 ■ 42 C	K2.2 ■ 34 C	K2.3 ■ 27 C
K3.1 ■ 37 C	K3.2 ■ 28 C	K3.3 ■ 23 C	K4.1 ■ 34 C	K4.2 ■ 26 C	K4.3 ■ 19 C	K5.1 ■ 39 C	K5.2 ■ 29 C	K5.3 ■ 23 C	N1.1 ■ 60 G	N1.2 ■ 45 G	N1.3 ■ 30 F	N2.1 ■ 30 F	N2.2 ■ 27 F
N2.3 ■ 19 F	N3.1 ■ 32 F	N3.2 ■ 18 F	N3.3 ■ 9 D										

DCON MS tolerance h9.

Product	DC_2	DC_1	LCF	OAL	DCON MS	NOF
	(mm)	(mm)	(mm)	(mm)	(mm)	
G5706.3	6.30	1.50	6.5	45.0	5.00	3
G5708.3	8.30	2.00	8.2	50.0	6.00	3
G57010.4	10.40	2.50	9.7	50.0	6.00	3
G57012.4	12.40	2.80	10.6	56.0	8.00	3
G57016.5	16.50	3.20	13.9	60.0	10.00	3
G57020.5	20.50	3.50	17.1	63.0	10.00	3
G57025.0	25.00	3.80	21.4	67.0	10.00	3
G57031.0	31.00	4.20	24.4	71.0	12.00	3

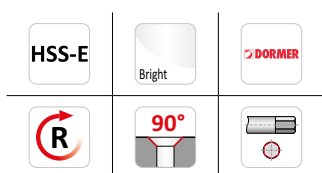
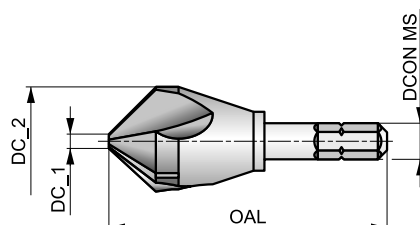
G107

DORMER



HSS-E Hexagon 90° forsænker, blank finish

En alsidig forsænker med et sekskantet skaft, der gør det lettere at holde med elektriske skruetrækkeradapters. 90°-reifer producerer affasninger til standard og rene grater fra borede huller. Velegnet til affasning af huller i mange materialer.



Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 23 E	P1.2 ■ 26 E	P1.3 ■ 27 E	P2.1 ■ 20 E	P2.2 ■ 18 D	P2.3 ▣ 16 B	P3.1 ■ 16 D	P3.2 ■ 13 D	P3.3 ▣ 11 B	P4.1 ■ 10 D	P4.2 ▣ 8 B	M1.1 ▣ 11 C	M1.2 ▣ 9 C	M2.1 ▣ 10 C
M2.2 ▣ 9 C	M2.3 ▣ 8 B	K1.1 ■ 20 F	K1.2 ▣ 15 D	K2.1 ■ 21 C	K2.2 ▣ 17 C	K3.1 ■ 18 C	K3.2 ▣ 14 C	K4.1 ▣ 15 C	K5.1 ■ 19 C	K5.2 ▣ 15 C	N1.1 ▣ 40 G	N1.2 ■ 30 G	N1.3 ▣ 20 F
N2.1 ▣ 20 F	N2.2 ▣ 18 F	N2.3 ▣ 20 F	N3.1 ■ 21 F	N3.2 ▣ 12 F	N3.3 ▣ 6 D	N4.1 ▣ 40 G	N4.2 ▣ 35 G						

6,35; 1/4" sekskantskaft; DIN 74.

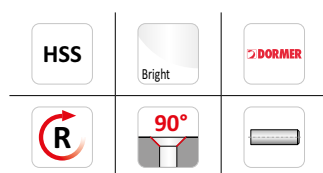
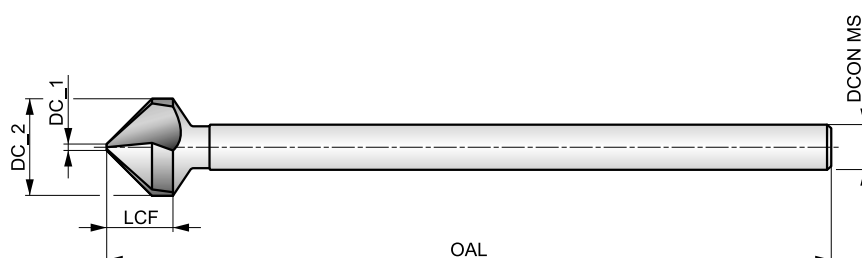
Product	DC_2	DC_1	OAL	DCONMS	CZC MS	NOF
	(mm)	(mm)	(mm)	(inch)		
G1076.3	6.30	1.50	50.0	1/4"	M2-M3	3
G1078.3	8.30	2.00	50.0	1/4"	M4	3
G10710.4	10.40	2.50	50.0	1/4"	M5	3
G10712.4	12.40	2.80	50.0	1/4"	M6	3
G10716.5	16.50	3.20	50.0	1/4"	M8	3
G10720.5	20.50	3.50	50.0	1/4"	M10	3

G600



HSS forsænker lige skaft Lang rækkevidde 90° forsænket, blank finish

Det udvidede skaft giver mulighed for at affase huller i områder, der er svære at nå. 90° -forsænkningen producerer affasninger til standardforsækning og rene grater fra borede huller. Velegnet til reifning af huller i mange materialer.



Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 20 E	P1.2 ■ 22 E	P1.3 ■ 23 E	P2.1 ■ 17 E	P2.2 ■ 15 D	P2.3 ■ 13 B	P3.1 ■ 12 D	P3.2 ■ 9 D	P3.3 ■ 8 B	P4.1 ■ 7 D	P4.2 ■ 6 B	M1.1 ■ 8 C	M1.2 ■ 6 C	M2.1 ■ 7 C
M2.2 ■ 16 C	K1.1 ■ 17 E	K1.2 ■ 12 C	K2.1 ■ 18 B	K2.2 ■ 14 B	K3.1 ■ 15 B	K3.2 ■ 11 B	K5.1 ■ 16 B	K5.2 ■ 12 B	N1.1 ■ 35 G	N1.2 ■ 25 G	N1.3 ■ 15 F	N2.1 ■ 15 F	N2.2 ■ 13 F
N3.1 ■ 16 E	N3.2 ■ 10 E	N3.3 ■ 5 C											

DCON MS tolerance h9.

Product	DC_2	DC_1	LCF	OAL	DCON MS	NOF
	(mm)	(mm)	(mm)	(mm)	(mm)	
G6006.3	6.30	1.30	5.6	154.0	5.00	3
G6008.3	8.30	1.80	6.9	155.0	6.00	3
G60010.4	10.40	2.20	7.8	157.0	6.00	3
G60012.4	12.40	2.50	8.6	158.0	8.00	3
G60015.0	15.00	2.80	10.3	159.0	10.00	3
G60016.5	16.50	2.80	11.1	161.0	10.00	3
G60020.5	20.50	3.00	12.9	164.0	10.00	3
G60025.0	25.00	3.20	15.7	168.0	10.00	3

G132

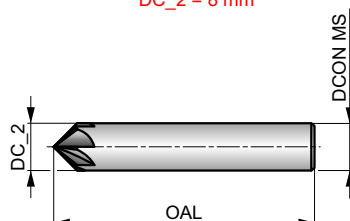
DORMER



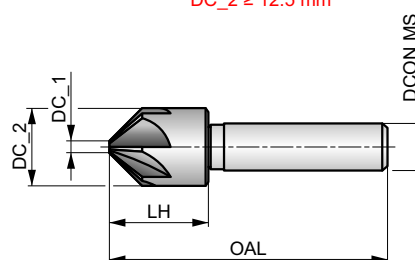
HSS Lige skaft Multi-Flute 90° forsænker, blank finish

En 90° forsænker designet til reifning af huller og rensse grater fra borede huller. Flere skær for at reducere larm og vibrationer, hvilket giver en jævn reifning. Alsidigt værktøj til brug i håndholdte applikationer og maskiner. Velegnet til reifning af huller i mange materialer.

DC_2 = 8 mm



DC_2 ≥ 12.5 mm



HSS	Bright	DIN 335A
R	90°	

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P2.2 18 E	P2.3 16 D	P3.2 13 D	P3.3 11 B	P4.1 10 D	P4.2 8 C	P4.3 7 B	M3.3 3 A	M4.1 4 A	K1.1 20 F	K1.2 15 D	K1.3 11 D	K2.2 17 C	K2.3 14 D
K3.1 18 E	K3.2 14 E	K3.3 11 D	K4.1 17 C	K4.2 13 C	K5.1 19	K5.2 15	K5.3 11 D	N1.3 20 F	N2.3 13 F	N3.2 12 F	N4.3 5 G		

DCON MS tolerance h9.

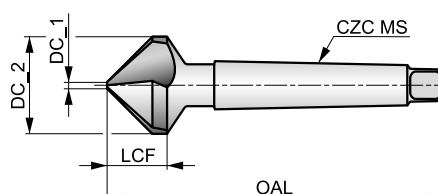
Product	DC_2 (mm)	DC_1 (mm)	LH (mm)	OAL (mm)	DCON MS (mm)	NOF
G1328.0	8.00	—	—	48.0	8.00	5
G13212.5	12.50	2.00	15.5	48.0	8.00	5
G13216.0	16.00	3.20	19.5	56.0	10.00	7
G13220.0	20.00	5.00	23.0	60.0	10.00	7

G138



HSS konisk skaft 90° forsænker, Blank finish

En 90° forsænker designet til reifning af huller og fjernelse af grater fra borede huller. Konisk skaftdesign gør det muligt at bruge værktøjet til maskinapplikationer, hvor det holdes direkte i spindlen. Velegnet til affasning af huller i mange materialer.



HSS	Bright	DIN 335D
R	90°	

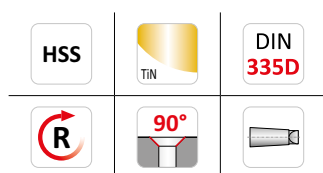
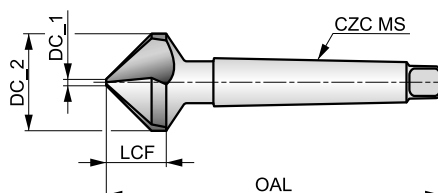
Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 23 E	P1.2 ■ 26 E	P1.3 ■ 27 E	P2.1 ■ 20 E	P2.2 ■ 18 D	P2.3 ■ 16 B	P3.1 ■ 16 D	P3.2 ■ 13 D	P3.3 ■ 11 B	P4.1 ■ 10 D	P4.2 ■ 8 B	M1.1 ■ 8	M1.2 ■ 6	M2.1 ■ 7
M2.2 ■ 6	K1.1 ■ 20 F	K1.2 ■ 15 D	K2.1 ■ 21 C	K2.2 ■ 17 C	K3.1 ■ 18 C	K3.2 ■ 14 C	K5.1 ■ 19 C	K5.2 ■ 15 C	N1.1 ■ 40 G	N1.2 ■ 30 G	N1.3 ■ 20 F	N2.1 ■ 20 F	N2.2 ■ 18 F
N3.1 ■ 21 F	N3.2 ■ 12 F	N3.3 ■ 6 D	N4.1 ■ 40 G	N4.2 ■ 35 G									

Product	DC_2 (mm)	DC_1 (mm)	LCF (mm)	OAL (mm)	CZC MS	NOF
G13825.0	25.00	3.80	15.5	106.0	MK 2	3
G13830.0	30.00	4.20	18.5	112.0	MK 2	3
G13831.0	31.00	4.20	20.0	112.0	MK 2	3
G13834.0	34.00	4.50	19.5	118.0	MK 2	3
G13837.0	37.00	4.80	21.7	118.0	MK 2	3
G13840.0	40.00	10.00	20.5	140.0	MK 3	3
G13850.0	50.00	14.00	24.1	150.0	MK 3	3
G13863.0	63.00	16.00	28.5	180.0	MK 4	3
G13880.0	80.00	22.00	36.0	190.0	MK 4	3

G338**DORMER****HSS konisk skaft 90 ° forsænker, TiN belagt**

En 90 ° forsænker designet til reifning af huller og fjernelse af grater. Forbedret ydelse ved bearbejdning i lange perioder med høj hastighed. Konisk skaftdesign gør det muligt at holde det direkte i spindlen. TiN Coating forbedrer ydeevnen og forlænger værktøjets levetid. Velegnet til mange materialer.



Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 33 E	P1.2 ■ 37 E	P1.3 ■ 38 E	P2.1 ■ 28 E	P2.2 ■ 25 D	P2.3 ■ 22 B	P3.1 ■ 23 D	P3.2 ■ 18 D	P3.3 ■ 15 B	P4.1 ■ 13 D	P4.2 ■ 11 B	P4.3 ■ 9 B	M1.1 ■ 11 C	M1.2 ■ 9 C
M2.1 ■ 10 C	M2.2 ■ 9 C	M2.3 ■ 8 B	K1.1 ■ 34 F	K1.2 ■ 25 D	K1.3 ■ 19 D	K2.1 ■ 35 C	K2.2 ■ 28 C	K2.3 ■ 23 C	K3.1 ■ 31 C	K3.2 ■ 24 C	K3.3 ■ 19 C	K4.1 ■ 29 C	K4.2 ■ 22 C
K4.3 ■ 16 C	K5.1 ■ 32 C	K5.2 ■ 24 C	K5.3 ■ 19 C	N1.1 ■ 53 G	N1.2 ■ 40 G	N1.3 ■ 27 F	N2.1 ■ 27 F	N2.2 ■ 24 F	N2.3 ■ 17 F	N3.1 ■ 28 F	N3.2 ■ 16 F	N3.3 ■ 8 D	N4.1 ■ 58 G
N4.2 ■ 50 G													

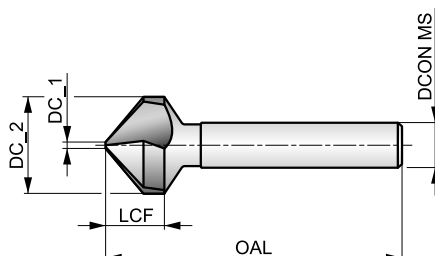
Product	DC_2 (mm)	DC_1 (mm)	LCF (mm)	OAL (mm)	CZC MS	NOF
G33825.0	25.00	3.80	15.5	106.0	MK 2	3
G33831.0	31.00	4.20	20.0	112.0	MK 2	3
G33837.0	37.00	4.80	21.7	118.0	MK 2	3
G33840.0	40.00	10.00	20.5	140.0	MK 3	3
G33850.0	50.00	14.00	24.1	150.0	MK 3	3
G33863.0	63.00	16.00	28.5	180.0	MK 4	3

G171



HSS lige skaft 100° forsænker, TiAlN belagt

En 100° forsænker designet til reifning af standard huller og fjernelse af grater. Et alsidigt værktøj med en TiAlN-belægning, der forbedrer ydeevnen og forlænger værktøjets levetid. Alsidigt værktøj, der kan bruges i både håndholdte og maskinapplikationer. Velegnet til reifning af huller i mange materialer.



Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 40 E	P1.2 ■ 45 E	P1.3 ■ 46 E	P2.1 ■ 34 E	P2.2 ■ 30 D	P2.3 ■ 27 B	P3.1 ■ 28 D	P3.2 ■ 22 D	P3.3 ■ 19 B	P4.1 ■ 16 D	P4.2 ■ 14 B	P4.3 ■ 11 B	M1.1 ■ 11 C	M1.2 ■ 9 C
M2.1 ■ 10 C	K1.1 ■ 41 F	K1.2 ■ 30 D	K1.3 ■ 23 D	K2.1 ■ 42 C	K2.2 ■ 34 C	K2.3 ■ 27 C	K3.1 ■ 37 C	K3.2 ■ 28 C	K3.3 ■ 23 C	K4.1 ■ 34 C	K4.2 ■ 26 C	K4.3 ■ 19 C	K5.1 ■ 39 C
K5.2 ■ 29 C	K5.3 ■ 23 C	N1.1 ■ 60 G	N1.2 ■ 45 G	N1.3 ■ 30 F	N2.1 ■ 30 F	N2.2 ■ 27 F	N2.3 ■ 19 F	N3.1 ■ 32 F	N3.2 ■ 18 F	N3.3 ■ 9 D	N4.1 ■ 62 G	N4.2 ■ 55 G	

DCON MS tolerance h9.

Product	DC_2	DC_1	LCF	OAL	DCON MS	NOF
	(mm)	(mm)	(mm)	(mm)	(mm)	
G1716.3	6.30	1.50	4.5	44.0	5.00	3
G1718.3	8.30	2.00	5.5	49.0	6.00	3
G17110.4	10.40	2.50	6.6	49.0	6.00	3
G17112.4	12.40	2.80	7.0	53.0	8.00	3
G17116.5	16.50	3.20	9.0	56.0	10.00	3
G17120.5	20.50	3.50	11.0	61.0	10.00	3
G17125.0	25.00	3.80	13.5	65.0	10.00	3

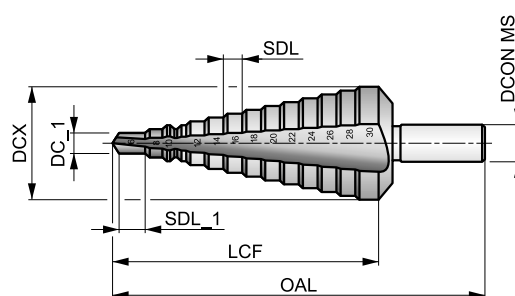
G314

DORMER



HSS konisk pladebor til tynde materialer, blank finish

Konisk pladebor har et flertrinsdesign, der muliggør en gradvis forstørrelse af huller til den krævede diameter. Det reducerede glatte skaft betyder, at alle diametre kan holdes i en standard borepatron og holder. Velegnet til at forstørre huller i mange materialer.



HSS	Bright	
	20°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 20	P1.2 ■ 22	P1.3 ■ 23	P2.1 ■ 17	P2.2 ■ 15	P2.3 ■ 13	P3.1 ■ 12	P3.2 ■ 9	M1.1 ■ 8	M1.2 ■ 6	M2.1 ■ 7	K1.1 ■ 17	N1.1 ■ 30	N1.2 ■ 23
N1.3 ■ 15	N2.1 ■ 31	N2.2 ■ 28	N3.1 ■ 34	N3.2 ■ 20	N3.3 ■ 10	N4.1 ■ 30	N4.2 ■ 20						

SDI = trin i trindiameter.

Product	Nr.	DC_1	DCX	SDL	SDI	SDL_1	LCF	OAL	DCON MS
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
G314412	412	4.00	12.00	5.00	4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12	5.00	61.0	80.0	6.00
G3141220	1220	12.00	20.00	4.00	12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 20	4.00	55.0	76.0	9.00
G3142030	2030	20.00	30.00	4.00	20 - 21 - 22 - 23 - 24 - 25 - 26 - 27 - 28 - 29 - 30	4.00	67.0	88.0	12.00
G3143040	3040	30.00	40.00	4.00	30 - 31 - 32 - 33 - 34 - 35 - 36 - 37 - 38 - 39 - 40	4.00	74.0	98.0	13.00
G314420	420	4.00	20.00	4.00	4 - 6 - 8 - 10 - 12 - 14 - 16 - 18 - 20	4.00	48.0	76.0	8.00
G314630	630	6.00	30.00	4.00	6 - 8 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24 - 26 - 28 - 30	4.00	73.0	98.0	10.00
G314M	M	9.00	36.00	3.00	9 - 12 - 15 - 18 - 21 - 24 - 27 - 30 - 33 - 36	3.00	57.0	86.0	12.00

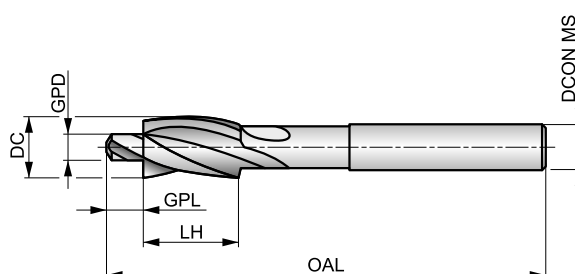
G125

DORMER



HSS lige skaft 180° Tapforsænker, blank finish

Tapforsænker med en 180° vinkel, designet til at skabe huller til standard sokkelhoved- og dækselskruer. Den har et solidt styr (fås til forskellige præ-bearbejdede hulstørrelsestolerancer), som hjælper med nøjagtigt at styre boringen i standardhuller i metrisk størrelse. Velegnet til at bore huller i mange materialer.



HSS	Bright	DIN 373
R	180°	

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side 251.

P1.1 ■ 20 E	P1.2 ■ 22 E	P1.3 ■ 23 E	P2.1 ■ 17 E	P2.2 ■ 15 D	P2.3 ■ 13 C	P3.1 ■ 12 D	P3.2 ■ 9 D	P3.3 ■ 8 C	P4.1 ■ 7 D	P4.2 ■ 6 C	M1.1 ■ 8 D	M1.2 ■ 6 D	M2.1 ■ 7 D
M2.2 ■ 6 D	M2.3 ■ 5 C	K1.1 ■ 17 E	K1.2 ■ 12 E	K1.3 ■ 11 E	K2.1 ■ 15 D	K2.2 ■ 12 D	K2.3 ■ 10 C	K3.1 ■ 13 D	K3.2 ■ 10 D	K4.1 ■ 12 D	K4.2 ■ 9 D	K5.1 ■ 14 D	K5.2 ■ 10 D
N1.1 ■ 30 G	N1.2 ■ 23 G	N1.3 ■ 15 G	N2.1 ■ 31 G	N2.2 ■ 28 G	N2.3 ■ 20 G	N3.1 ■ 34 C	N3.2 ■ 20 C	N3.3 ■ 10 C	N4.1 ■ 30 C	N4.2 ■ 20 C			

DCON MS tolerance h9.

Product	DC	GPD	CZC MS	GPL	OAL	LH	DCON MS	NOF
	(mm)	(mm)		(mm)	(mm)	(mm)	(mm)	
G1256.5X2.5 ³⁾	6.50	2.50	M 3 t	4.50	71.0	14.0	5.00	3
G1256.5X3.2 ¹⁾	6.50	3.20	M 3 f	4.50	71.0	14.0	5.00	3
G1256.5X3.4 ²⁾	6.50	3.40	M 3 m	4.50	71.0	14.0	5.00	3
G1258.0X3.3 ³⁾	8.00	3.30	M 4 t	5.00	71.0	14.0	5.00	3
G1258.0X4.3 ¹⁾	8.00	4.30	M 4 f	5.00	71.0	14.0	5.00	3
G1258.0X4.5 ²⁾	8.00	4.50	M 4 m	5.00	71.0	14.0	5.00	3
G12510.0X4.2 ³⁾	10.00	4.20	M 5 t	5.50	80.0	18.0	8.00	3
G12510.0X5.3 ¹⁾	10.00	5.30	M 5 f	5.50	80.0	18.0	8.00	3
G12510.0X5.5 ²⁾	10.00	5.50	M 5 m	5.50	80.0	18.0	8.00	3
G12511.0X5.0 ³⁾	11.00	5.00	M 6 t	6.00	80.0	18.0	8.00	3
G12511.0X6.4 ¹⁾	11.00	6.40	M 6 f	6.00	80.0	18.0	8.00	3
G12511.0X6.6 ²⁾	11.00	6.60	M 6 m	6.00	80.0	18.0	8.00	3
G12515.0X6.8 ³⁾	15.00	6.80	M 8 t	8.00	100.0	22.0	12.50	3
G12515.0X8.4 ¹⁾	15.00	8.40	M 8 f	8.00	100.0	22.0	12.50	3
G12515.0X9.0 ²⁾	15.00	9.00	M 8 m	8.00	100.0	22.0	12.50	3
G12518.0X8.5 ³⁾	18.00	8.50	M 10 t	10.00	100.0	22.0	12.50	3
G12518.0X10.5 ¹⁾	18.00	10.50	M 10 f	10.00	100.0	22.0	12.50	3
G12518.0X11.0 ²⁾	18.00	11.00	M 10 m	10.00	100.0	22.0	12.50	3
G12520.0X10.2 ³⁾	20.00	10.20	M 12 t	10.00	100.0	22.0	12.50	3
G12520.0X13.0 ¹⁾	20.00	13.00	M 12 f	10.00	100.0	22.0	12.50	3
G12520.0X13.5 ²⁾	20.00	13.50	M 12 m	10.00	100.0	22.0	12.50	3

¹⁾ f = for gennemgående hul fin.

²⁾ m = til gennemgående hul medium.

³⁾ t = til taphul.

G236



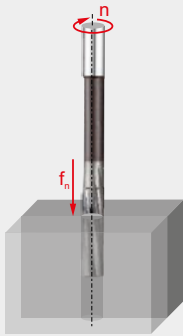
Sæt af forsænkere i en cylindrisk plasttromle

Sæt, der indeholder forskellige størrelser af forskellige 90° forsænkere. Der er 5 forskellige sæt, enten med G106, G136 eller G560. Velegnet til mange materialer.

A = forskellige i sæt, B = nej i sæt, C = diameter i sæt.

Product	Nr.	A	B	C
G2361	1	G136	6	6.30 mm, 8.30 mm, 10.40 mm, 12.40 mm, 16.50 mm, 20.50 mm
G2362	2	G136	4	6.30 mm, 10.40 mm, 16.50 mm, 20.50 mm
G2363	3	G560	6	6.30 mm, 8.30 mm, 10.40 mm, 12.40 mm, 16.50 mm, 20.50 mm
G2364	4	G106	6	6.30 mm, 8.30 mm, 10.40 mm, 12.40 mm, 16.50 mm, 20.50 mm
G2365	5	G506	6	6.30 mm, 8.30 mm, 10.40 mm, 12.40 mm, 16.50 mm, 20.50 mm

REAMERS FEED RATE CHART

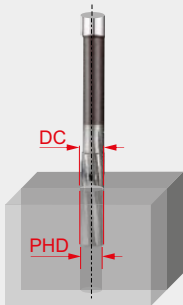


Feed per revolution (f_n in mm/rev)
Depending on the working conditions
it might be necessary to adjust these
values $\pm 15\%$.

How to use this table to find the feed per revolution (f_n):

1. Find your Alpha Code on the product page (example: 21C, "C" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per revolution (f_n).

		ø DC (mm)																		
		1.00	1.50	2.00	3.00	4.00	5.00	6.00	7.00	8.00	10.00	12.00	15.00	16.00	20.00	25.00	30.00	40.00	50.00	80.00
Feed rates	A	0.030	0.045	0.055	0.078	0.090	0.100	0.125	0.137	0.150	0.170	0.185	0.210	0.220	0.250	0.280	0.320	0.390	0.440	0.500
	B	0.035	0.055	0.072	0.110	0.130	0.150	0.165	0.172	0.180	0.210	0.240	0.270	0.280	0.310	0.360	0.400	0.500	0.550	0.600
	C	0.040	0.065	0.085	0.135	0.160	0.185	0.200	0.210	0.220	0.260	0.285	0.325	0.335	0.390	0.440	0.480	0.600	0.680	0.750
	D	0.050	0.080	0.110	0.160	0.180	0.200	0.235	0.253	0.270	0.320	0.360	0.400	0.410	0.470	0.540	0.600	0.730	0.850	0.950
	E	0.065	0.100	0.140	0.180	0.215	0.250	0.300	0.325	0.350	0.390	0.430	0.485	0.500	0.530	0.640	0.750	0.910	1.100	1.200
	F	0.090	0.140	0.180	0.260	0.305	0.350	0.395	0.417	0.440	0.500	0.550	0.610	0.630	0.700	0.800	0.930	1.200	1.500	1.650



Machining allowance when using
a **machine reamer** (MA in mm)
Premachined hole diameter
 $PHD = DC - MA$.

How to use this table to get to the right premachined hole diameter (PHD):

1. Find the diameter range for your cutting application in the top row of the table.
2. Find your ISO Group Code in the left column of the table (example: For Stainless Steel the ISO Group Code is "M")
3. The intersection (cell) of the Diameter Range and ISO Group Code is the Machining Allowance (MA)
4. Subtract the Machining Allowance from the reaming diameter to get to the premachined hole diameter (PHD).

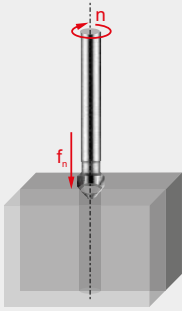
(example: for a 6mm hole in steel (P) the PHD is 5.85mm)

		ø DC (mm)											
		1.00	5.00	5.00	8.00	8.00	12.00	12.00	16.00	16.00	30.00	30.00	80.00
ISO group	P	0.10		0.15		0.20		0.20		0.30		0.30	
	M	0.08		0.10		0.10		0.20		0.20		0.30	
	K	0.10		0.15		0.20		0.20		0.30		0.30	
	N	0.10		0.15		0.20		0.20		0.30		0.30	
	S	0.05		0.10		0.10		0.15		0.20		0.20	
	H	0.05		0.05		0.10		0.10		0.15		0.20	

Be cautious with the machining tolerances of drills, the tool diameter is not the same as the hole diameter produced!

Note: The recommended allowance when using a hand reamer is 0.05 to 0.10 mm.

COUNTERSINKS FEED RATE CHART



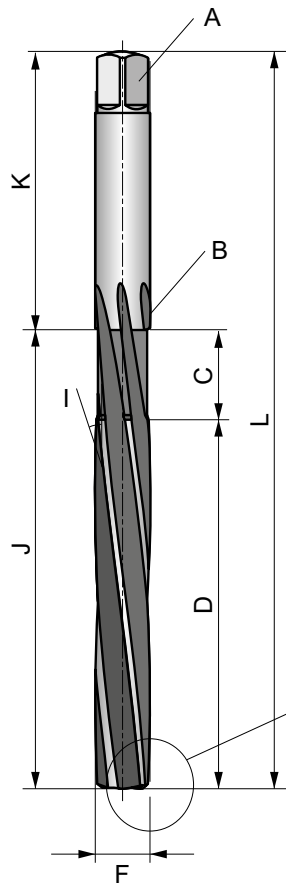
Feed per revolution (f_n in mm/rev)
Depending on the working conditions
it might be necessary to adjust these
values $\pm 15\%$.

How to use this table to find the feed per revolution (f_n):

1. Find your Alpha Code on the product page (example: 23E, "E" is the Alpha Code).
2. Find the closest diameter for your cutting application in the top row of the table.
3. Find your Alpha Code in the left column of the table.
4. The intersection (cell) of the Diameter and Alpha Code is the feed per revolution (f_n).

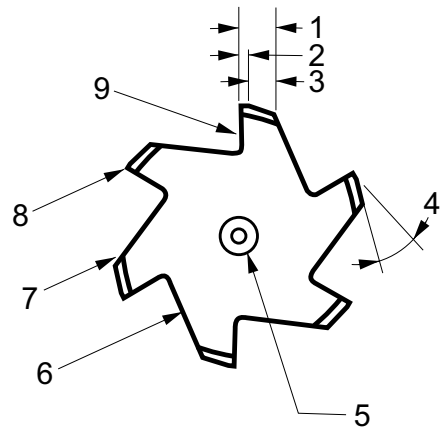
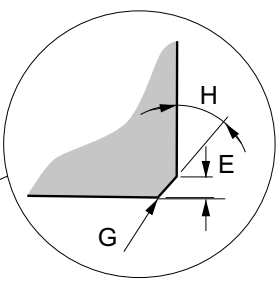
		$\varnothing$ DC (mm)									
		6.00	8.00	10.00	16.00	20.00	25.00	32.00	40.00	60.00	80.00
Feed rates	A	0.030	0.040	0.050	0.060	0.080	0.090	0.100	0.120	0.140	0.160
	B	0.040	0.050	0.060	0.080	0.100	0.120	0.140	0.160	0.180	0.200
	C	0.050	0.060	0.080	0.100	0.120	0.140	0.160	0.180	0.200	0.220
	D	0.060	0.080	0.100	0.120	0.150	0.180	0.200	0.220	0.250	0.280
	E	0.080	0.100	0.120	0.150	0.180	0.200	0.250	0.270	0.300	0.320
	F	0.090	0.110	0.130	0.160	0.190	0.210	0.260	0.290	0.330	0.360
	G	0.100	0.120	0.150	0.180	0.200	0.220	0.280	0.320	0.360	0.400
	H	0.120	0.150	0.180	0.200	0.220	0.250	0.300	0.350	0.400	0.450

Reamer Definitions / Nomenclature

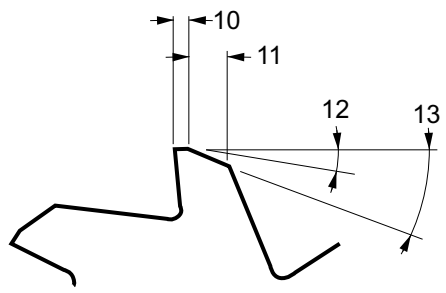


A	Tang or Square Drive
B	Recess Diameter
C	Recess Length
D	Cut Length
E	Bevel Lead Length
F	Diameter

G	Bevel Lead
H	Bevel Lead Angle
I	Helix Angle
J	Body Length
K	Shank Length
L	Overall Length



1	Width of Land
2	Circular Land
3	Clearance
4	Clearance Angle
5	Centre Hole
6	Flute
7	Heel
8	Cutting Edge
9	Face



10	Width of Primary Clearance
11	Width of Secondary Clearance
12	Primary Clearance Angle
13	Secondary Clearance Angle

Rivning

For at opnå det bedste resultat, når der anvendes rival (rømmere), er det vigtigt at de "har noget at arbejde med".. Det er en almindelig fejl at forberede hullerne til rivning så der er for lidt materiale at arbejde med. Hvis der er for lidt materiale i hullet før der rives (rømmes), vil sænkeren skrabe på, hurtigt vise tegn på slitage. Men det er lige så vigtigt for et godt resultat, at der ikke er for meget arbejdsmateriale i hullet. (Se fjernelse af materiale nedenfor).

1. Vælg den optimale rival og de optimale skærehastigheder og tilspændinger til anvendelsen. Sørg for, at de forborede huller har den rigtige diameter.
2. Arbejdsemnet skal holdes helt fast, og maskinens spindel må ikke have spil.
3. Borepatronen, som en lige skafrival opspændes i, skal være af en god kvalitet. Hvis rivalen glider i patronen og tilspændingen udføres automatisk, kan rivalen evt. knække.

4. Sørg for, at værktøjet har så lille en afstand som mulig mellem maskine og spindel.
5. Brug anbefalede smøremidler for at øge rivalens levetid, og sørg for, at væsken når ud til skærekanten. Da rivning ikke medfører svært spåntagende arbejde, er en opløselig olie i forholdet 40:1 normalt tilfredsstillende. Luftblæsning kan bruges i forbindelse med gråt støbejern, hvis bearbejdningen er tør.
6. Sørg for, at rivalens spor ikke tilstoppes af spåner.
7. Før rivalen slibes igen, skal koncentriciteten mellem centrene kontrolleres. I de fleste tilfælde er det kun skråkantens styrekant, der skal efterslibes.
8. Hold rivalen skarp. Der er god økonomi i at efterslibe ofte, men det er vigtigt at forstå, at sænkerne kun skærer med skråkantens- og spidsens styrekant og ikke med frigangen. Derfor er det kun disse styreskær, der skal efterslibes. En nøjagtig efterslibning er vigtig med henblik på hulkvalitet og værktøjets levetid.

Fjernelse af grundmateriale

Hvor meget grundmateriale der skal fjernes ved rivning, afhænger af emnets materiale og det forborede huls overfladefinish. Der vises generelle retningslinjer for fjernelse af grundmateriale i de følgende tabeller:

Størrelse af sænkningshul(mm)	Såfremt forboret	Såfremt forkerneboret
Under 4	0.1	0.1
Over 4 til 11	0.2	0.15
Over 11 til 39	0.3	0.2
Over 39 til 50	0.4	0.3

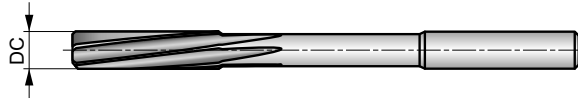
Størrelse af rivningshul (inches)	Såfremt forboret	Såfremt forkerneboret
Under 3/16"	0.004"	0.004"
3/16" til 1/2"	0.008"	0.006"
1/2" til 1 1/2"	0.010"	0.008"
1 1/2" til 2"	0.016"	0.010"

Hand/Machine reaming

Although both hand and machine reamers offer the same capability regarding finished hole size, the use of each must be considered according to the application. A hand reamer, for reasons of alignment, has a long taper lead, whereas a machine reamer has only a 45 degree bevel lead. A machine reamer cuts only on the bevel lead while a hand reamer cuts on the bevel lead as well as the taper lead.

REAMING – TOLERANCE LIMITS – TECHNICAL INFO

Tolerancegrænser



1. PÅ STANDARDRIVALENS SKÆREDIAMETER

Diameteren (DC) måles over den cirkulære frigang umiddelbart bag ved skråkantens eller spidsens styrekant. Tolerance iht. DIN 1420 er udlagt til at producere H7-huller.

Rivaltolerance			
Diameter (mm)		Tolerancegrænse (mm)	
Over	Op til og med	Høj +	Lav +
–	3	0.008	0.004
3	6	0.010	0.005
6	10	0.012	0.006
10	18	0.015	0.008

Rivaltolerance			
Diameter (mm)		Tolerancegrænse (mm)	
Over	Op til og med	Høj +	Lav +
18	30	0.017	0.009
30	50	0.021	0.012
50	80	0.025	0.014

2. PÅ ET H7-HUL

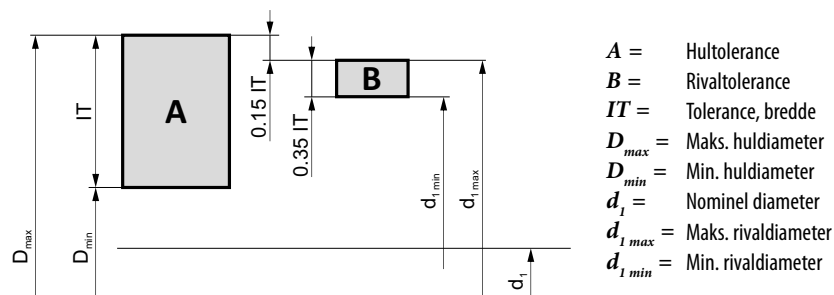
Den mest almindelige tolerance på et færdigt hul er H7 (se tabel nedenfor). Ved andre tolerancer kan illustrationen og skemaet ved siden af punkt 3 bruges til at beregne rivalens tolerance.

Hultolerance			
Diameter (mm)		Tolerancegrænse ((mm)	
Over	Op til og med	Høj +	Lav +
–	3	0.010	0
3	6	0.012	0
6	10	0.015	0
10	18	0.018	0

Hultolerance			
Diameter (mm)		Tolerancegrænse ((mm)	
Over	Op til og med	Høj +	Lav +
18	30	0.021	0
30	50	0.025	0
50	80	0.030	0

3. Hvis det er nødvendigt at definere målene på en specialrival, der skal skære med en specifik tolerance, f.eks. D8, kan følgende velafprøvede retningslinjer anvendes.

Diametertolerance, bredde (μm)								
Tolerance, bredde (μm)	Over 1 inkl. 3	Over 3 inkl. 6	Over 6 inkl. 10	Over 10 inkl. 18	Over 18 inkl. 30	Over 30 inkl. 50	Over 50 inkl. 80	Over 80 inkl. 120
IT5	4	5	6	8	9	11	13	15
IT6	6	8	9	11	13	16	19	22
IT7	10	12	15	18	21	25	30	35
IT8	14	18	22	27	33	39	46	54
IT9	25	30	36	43	52	62	74	87
IT10	40	48	58	70	84	100	120	140
IT11	60	75	90	110	130	160	190	220
IT12	100	120	150	180	210	250	300	350



Dvs. et 10 mm-hul med tolerancen D8, maks dia = 10.062, min dia = 10.040, hultolerance (IT8) = 0.022

Maks. grænse: $0,15 \times \text{hultolerance (IT8)} = 0.0033$, oprundet = 0.004

Min. grænse: $0,35 \times \text{hultolerance (IT8)} = 0.0077$, oprundet = 0.008

Maks. grænse for sænker = $10.062 - 0.004 = 10.058$

Min. grænse for sænker = $10.058 - 0.008 = 10.050$

Applications – Reamer Selection

The most common types of reamers have a left-hand spiral because the main applications involve through holes requiring chips to be pushed forward. For blind holes, reamers with straight flutes or right hand spirals are recommended.

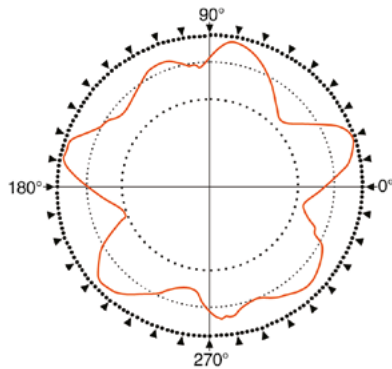
The most efficient reaming conditions depend on the application, material, quality of hole required, stock removal, lubrication and other factors. A general guide to surface speeds and feeds for

machine reamers is shown in the reamer WMG and feed charts (see Product Selector) and stock removal tables.

Extremely unequal spacing on reamers means that the divide is not the same for each tooth. As there are no two teeth diametrically opposite each other, the reamer produces a hole with a roundness variance of between 1 and 2 μm . This compared with a variance of up to 10 μm with conventional unequal spacing.

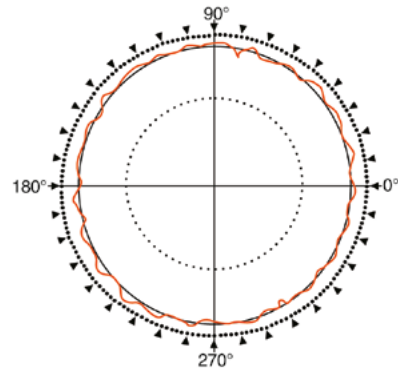
Carbide Reamers – Comparison spacing / EU spacing

Unequal spacing
Roundness error up to 10 μm



Results of roundness

Extremely unequal spacing
Roundness error up to 1 – 2 μm



Results of roundness

Fejlfinding ved rivning

Problem	Årsag	Løsning
Knækkede eller snoede tunger	Dårlig pasform mellem skaft og bøsning	Vær sikker på, at skaftet og bøsningen er rene og uden skader
Hurtig slitage af værktøjet	Ikke nok materiale at fjerne	Øg mængden af materiale, der skal fjernes
Hul i overstørrelse	For stor variation i kanthøjde	Efterslib til korrekt specifikation
	Maskinspindlen forskudt	Reparer, og korriger spindelforskydning
	Bøjer af på værktøjsholder	Udskift værktøjsholder
	Værktøjets skaft er beskadiget	Udskift eller efterslib skaftet
	Værktøjet udviser ovalitet	Udskift eller efterslib værktøjet
	Asymmetrisk vinkel på skråkantens styrekant	Efterslib til korrekt specifikation
	For stor tilspænding- eller skærehastighed	Juster skærebetingelserne iht. katalog
Hul i understørrelse	Ikke nok materiale at fjerne	Øg mængden af materiale, der skal fjernes
	Der frembringes for megen varme under rivningen. Hullet udvider sig og krymper	Øg kølevæskeflowet
	Værktøjets diameter er slidt og i understørrelse	Efterslib til korrekt specifikation
	For lav tilspænding- eller skærehastighed	Juster skærebetingelserne iht. katalog
	Forboret hul for lille	Minsk mængden af materiale, der skal fjernes
Ovale og koniske huller	Maskinspindlen forskudt	Reparer, og korriger spindelforskydning
	Værktøj og hul flugter ikke	Brug en konusrival
	Asymmetrisk vinkel på skråkantens styrekant	Efterslib til korrekt specifikation
Dårlig hulfinish	For meget materiale at fjerne	Minsk mængden af materiale, der skal fjernes
	Værktøj slidt	Efterslib til korrekt specifikation
	For lille skærehældningsvinkel	Efterslib til korrekt specifikation
	For tynd emulsion eller skæreolie	Øg %-koncentrationen
	For lav tilspænding- eller skærehastighed	Juster skærebetingelserne iht. katalog
	Skærehastigheden for høj	Juster skærebetingelserne iht. katalog
Værktøjet klemmer og går i stykker	Værktøj slidt	Efterslib til korrekt specifikation
	Bagenden af værktøjets spids er for lille	Kontrollér, og udskift/foretag ændring af værktøjet
	Frigangen for bred	Kontrollér, og udskift/foretag ændring af værktøjet
	Arbejdsemnematerialet har en tendens til at klemme	Brug en justerbar rival til at kompensere forskydningen
	Forboret hul for lille	Minsk mængden af materiale, der skal fjernes
	Heterogent materiale med hårde inklusioner	Brug en massiv HM rival

GENERAL – TECHNICAL INFO

	Grade	Hardness (HV10)	C %	W %	Mo %	Cr %	V %	Co %	Tool Material
	M2	810 – 850	0.9	6.4	5.0	4.2	1.8	–	HSS
	M35	830 – 870	0.93	6.4	5.0	4.2	1.8	4.8	HSCO
	M42	870 – 960	1.08	1.5	9.4	3.9	1.2	8.0	

Properties	HSS materials	Carbide materials	K10/30F (often used for solid tools)
Hardness (HV30)	800–950	1300 – 1800	1600
Density (g/cm ³)	8.0 – 9.0	7.2 – 15	14.45
Compressive strength (N/mm ²)	3000 – 4000	3000 – 8000	6250
Flexural strength, (bending) (N/mm ²)	2500 – 4000	1000 – 4700	4300
Heat resistance (°C)	550	1000	900
E-module (KN/mm ²)	260 – 300	460 – 630	580
Grain size (µm)	–	0.2 – 10	0.8

The combination of hard particle (WC) and binder metal (Co) give the following changes in characteristics.

Characteristic	Higher WC content give	Higher Co content give
Hardness	Higher hardness	Lower hardness
Compressive strength (CS)	Higher CS	Lower CS
Bending strength (BS)	Lower BS	Higher BS

Grain size also influences the material properties. Small grain sizes means higher hardness and coarse grains give more toughness.

Surface treatment / Coating properties examples

Surface Treatments	Colour	Coating material	Hardness (HV)	Thickness (µm)	Coating structure	Frict. coeff. against steel	Max. appl. temp. (°C)
	Gold	TiN	2300	1-4	Mono-layer	0.4	600
	Black grey	TiAlN	3300	3	Nano structured	0.3-0.35	900

GENERAL – TECHNICAL INFO

Industry Standard tolerances For Shafts & Holes

Tolerance values are shown in Microns (µm)

Formula for Microns ...1 µm = 0.001 mm / 0.000039"

Tolerance	Diameter (mm)							
	> 1 ≤ 3	> 3 ≤ 6	> 6 ≤ 10	> 10 ≤ 18	> 18 ≤ 30	> 30 ≤ 50	> 50 ≤ 80	> 80 ≤ 120
	Diameter (inch)							
	> 0.039" ≤ 0.118"	> 0.118" ≤ 0.236"	> 0.236" ≤ 0.394"	> 0.394" ≤ 0.709"	> 0.709" ≤ 1.181"	> 1.181" ≤ 1.968"	> 1.968" ≤ 3.149"	> 3.149" ≤ 4.724"
	Tolerance values (µm)							
e8	-14 / -28	-20 / -38	-25 / -47	-32 / -59	-40 / -73	-50 / -89	-60 / -106	-72 / -126
f6	-6 / -12	-10 / -18	-13 / -22	-16 / -27	-20 / -33	-25 / -41	-30 / -49	-36 / -58
f7	-6 / -16	-10 / -22	-13 / -28	-16 / -34	-20 / -41	-25 / -50	-30 / -60	-36 / -71
h6	0 / -6	0 / -8	0 / -9	0 / -11	0 / -13	0 / -16	0 / -19	0 / -22
h7	0 / -10	0 / -12	0 / -15	0 / -18	0 / -21	0 / -25	0 / -30	0 / -35
h8	0 / -14	0 / -18	0 / -22	0 / -27	0 / -33	0 / -39	0 / -46	0 / -54
h9	0 / -25	0 / -30	0 / -36	0 / -43	0 / -52	0 / -62	0 / -74	0 / -87
h10	0 / -40	0 / -48	0 / -58	0 / -70	0 / -84	0 / -100	0 / -120	0 / -140
h11	0 / -60	0 / -75	0 / -90	0 / -110	0 / -130	0 / -160	0 / -190	0 / -220
h12	0 / -100	0 / -120	0 / -150	0 / -180	0 / -210	0 / -250	0 / -300	0 / -350
k10	+ 40 / 0	+ 48 / 0	+ 58 / 0	+ 70 / 0	+ 84 / 0	+ 100 / 0	+ 120 / 0	+ 140 / 0
k12	+ 100 / 0	+ 120 / 0	+ 150 / 0	+ 180 / 0	+ 210 / 0	+ 250 / 0	+ 300 / 0	+ 350 / 0
m7	+ 2 / + 12	+ 4 / + 16	+ 6 / + 21	+ 7 / + 25	+ 8 / + 29	+ 9 / + 34	+ 11 / + 41	+ 13 / + 48
js14	+ / -125	+ / -150	+ / -180	+ / -215	+ / -260	+ / -310	+ / -370	+ / -435
js16	+ / -300	+ / -375	+ / -450	+ / -550	+ / -650	+ / -800	+ / -950	+ / -1100
H7	+ 10 / 0	+ 12 / 0	+ 15 / 0	+ 18 / 0	+ 21 / 0	+ 25 / 0	+ 30 / 0	+ 35 / 0
H8	+ 14 / 0	+ 18 / 0	+ 22 / 0	+ 27 / 0	+ 33 / 0	+ 39 / 0	+ 46 / 0	+ 54 / 0
H9	+ 25 / 0	+ 30 / 0	+ 36 / 0	+ 43 / 0	+ 52 / 0	+ 62 / 0	+ 74 / 0	+ 87 / 0
H12	+ 100 / 0	+ 120 / 0	+ 150 / 0	+ 180 / 0	+ 210 / 0	+ 250 / 0	+ 300 / 0	+ 350 / 0
P9	-6 / -31	-12 / -42	-15 / -51	-18 / -61	-22 / -74	-26 / -86	-32 / -106	-37 / -124
S7	-13 / -22	-15 / -27	-17 / -32	-21 / -39	-27 / -48	-34 / -59	-42 / -72	-58 / -93

GENERAL – TECHNICAL INFO

Table of Cutting Speeds

Vc																	
m/min.		5	8	10	15	20	25	30	40	50	60	70	80	90	100	110	150
SFM (feet/min.)		16	26	32	50	66	82	98	130	165	197	230	262	296	330	362	495
Ø		RPM															
mm	inch																
1.00	–	1592	2546	3183	4775	6366	7958	9549	12732	15916	19099	22282	25465	28648	31831	35014	47747
1.50	–	1061	1698	2122	3183	4244	5305	6366	8488	10610	12732	14854	16977	19099	21221	23343	31831
2.00	–	796	1273	1592	2387	3183	3979	4775	6366	7958	9549	11141	12732	14324	15916	17507	23873
2.50	–	637	1019	1273	1910	2546	3183	3820	5093	6366	7639	8913	10186	11459	12732	14006	19099
3.00	–	531	849	1061	1592	2122	2653	3183	4244	5305	6366	7427	8488	9549	10610	11671	15916
3.18	1/8	500	801	1001	1501	2002	2502	3003	4004	5005	6006	7007	8008	9009	10010	11011	15015
3.50	–	455	728	909	1364	1819	2274	2728	3638	4547	5457	6366	7276	8185	9095	10004	13642
4.00	–	398	637	796	1194	1592	1989	2387	3183	3979	4775	5570	6366	7162	7958	8754	11937
4.50	–	354	566	707	1061	1415	1768	2122	2829	3537	4244	4951	5659	6366	7074	7781	10610
4.76	3/16	334	535	669	1003	1337	1672	2006	2675	3344	4012	4681	5350	6018	6687	7356	10031
5.00	–	318	509	637	955	1273	1592	1910	2546	3183	3820	4456	5093	5730	6366	7003	9549
6.00	–	265	424	531	796	1061	1326	1592	2122	2653	3183	3714	4244	4775	5305	5836	7958
6.35	1/4	251	401	501	752	1003	1253	1504	2005	2506	3008	3509	4010	4511	5013	5514	7519
7.00	–	227	364	455	682	909	1137	1364	1819	2274	2728	3183	3638	4093	4547	5002	6821
7.94	5/16	200	321	401	601	802	1002	1203	1604	2004	2405	2806	3207	3608	4009	4410	6013
8.00	–	199	318	398	597	796	995	1194	1592	1989	2387	2785	3183	3581	3979	4377	5968
9.00	–	177	283	354	531	707	884	1061	1415	1768	2122	2476	2829	3183	3537	3890	5305
9.53	3/8	167	267	334	501	668	835	1002	1336	1670	2004	2338	2672	3006	3340	3674	5010
10.00		159	255	318	477	637	796	955	1273	1592	1910	2228	2546	2865	3183	3501	4775
11.11	7/16	143	229	287	430	573	716	860	1146	1433	1719	2006	2292	2579	2865	3152	4298
12.00		133	212	265	398	531	663	796	1061	1326	1592	1857	2122	2387	2653	2918	3979
12.70	1/2	125	201	251	376	501	627	752	1003	1253	1504	1754	2005	2256	2506	2757	3760
14.00		114	182	227	341	455	568	682	909	1137	1364	1592	1819	2046	2274	2501	3410
14.29	9/16	111	178	223	334	446	557	668	891	1114	1337	1559	1782	2005	2228	2450	3341
15.00	–	106	170	212	318	424	531	637	849	1061	1273	1485	1698	1910	2122	2334	3183
15.88	5/8	100	160	200	301	401	501	601	802	1002	1203	1403	1604	1804	2004	2205	3007
16.00	–	99	159	199	298	398	497	597	796	995	1194	1393	1592	1790	1989	2188	2984
17.46	11/16	91	146	182	273	365	456	547	729	912	1094	1276	1458	1641	1823	2005	2735
18.00	–	88	141	177	265	354	442	531	707	884	1061	1238	1415	1592	1768	1945	2653
19.05	3/4	84	134	167	251	334	418	501	668	835	1003	1170	1337	1504	1671	1838	2506
20.00	–	80	127	159	239	318	398	477	637	796	955	1114	1273	1432	1592	1751	2387
24.00	–	66	106	133	199	265	332	398	531	663	796	928	1061	1194	1326	1459	1989
25.00	–	64	102	127	191	255	318	382	509	637	764	891	1019	1146	1273	1401	1910
27.00	–	59	94	118	177	236	295	354	472	589	707	825	943	1061	1179	1297	1768
30.00	–	53	85	106	159	212	265	318	424	531	637	743	849	955	1061	1167	1592
32.00	–	50	80	99	149	199	249	298	398	497	597	696	796	895	995	1094	1492
36.00	–	44	71	88	133	177	221	265	354	442	531	619	707	796	884	973	1326
40.00	–	40	64	80	119	159	199	239	318	398	477	557	637	716	796	875	1194
50.00	–	32	51	64	95	127	159	191	255	318	382	446	509	573	637	700	955

GENERAL – TECHNICAL INFO

Hardness and Tensile Strength

HV	HRC	HB	Tensile Strength	
			(N/mm ²)	(Tons/sq. in.)
940	68	—	—	—
900	67	—	—	—
864	66	—	—	—
829	65	—	—	—
800	64	—	—	—
773	63	—	—	—
745	62	—	—	—
720	61	—	—	—
698	60	—	—	—
675	59	—	—	—
655	58	—	2200	142
650	—	618	2180	141
640	—	608	2145	139
639	57	607	2140	138
630	—	599	2105	136
620	—	589	2070	134
615	56	584	2050	133
610	—	580	2030	131
600	—	570	1995	129
596	55	567	1980	128
590	—	561	1955	126
580	—	551	1920	124
578	54	549	1910	124
570	—	542	1880	122
560	53	532	1845	119
550	—	523	1810	117
544	52	517	1790	116
540	—	513	1775	115
530	—	504	1740	113
527	51	501	1730	112
520	—	494	1700	110
514	50	488	1680	109
510	—	485	1665	108
500	—	475	1630	105
497	49	472	1620	105
490	—	466	1595	103
484	48	460	1570	102
480	—	456	1555	101
473	47	449	1530	99
470	—	447	1520	98
460	—	437	1485	96
458	46	435	1480	96
450	—	428	1455	94
446	45	424	1440	93
440	—	418	1420	92

HV	HRC	HB	Tensile Strength	
			(N/mm ²)	(Tons/sq. in.)
434	44	413	1400	91
423	43	402	1360	88
413	42	393	1330	86
403	41	383	1300	84
392	40	372	1260	82
382	39	363	1230	80
373	38	354	1200	78
364	37	346	1170	76
355	36	337	1140	74
350	—	333	1125	73
345	35	328	1110	72
340	—	323	1095	71
336	34	319	1080	70
330	—	314	1060	69
327	33	311	1050	68
320	—	304	1030	67
317	32	301	1020	66
310	31	295	995	64
302	30	287	970	63
300	—	285	965	62
295	—	280	950	61
293	29	278	940	61
290	—	276	930	60
287	28	273	920	60
285	—	271	915	59
280	27	266	900	58
275	—	261	880	57
272	26	258	870	56
270	—	257	865	56
268	25	255	860	56
265	—	252	850	55
260	24	247	835	54
255	23	242	820	53
250	22	238	800	52
245	—	233	785	51
243	21	231	780	50
240	—	228	770	50
235	—	223	755	49
230	—	219	740	48
225	—	214	720	47
220	—	209	705	46
215	—	204	690	45
210	—	199	675	44
205	—	195	660	43
200	—	190	640	41

**EXCHANGEABLE HEAD
INDEXABLE DRILLS**



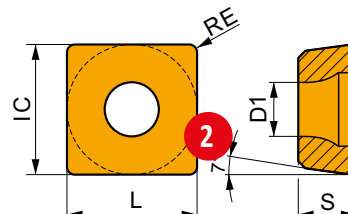
HOLEMAKING – GENERAL CONTENT

 6		WMG & ISO 13399
 12	DRILLS	INSTRUCTIONS
 15		SOLID CARBIDE DRILLS
 66		HSS DRILLS
 176		CUTTING FLUIDS
 186		TECHNICAL INFORMATION
 190		REAMERS AND COUNTERSINKS
 264	INDEXABLE DRILLS	INSTRUCTIONS
 271		HYDRA DRILLS
 297		TECHNICAL INFORMATION
 307		INDEXABLE DRILLS
 327		TECHNICAL INFORMATION
 350	BORING SYSTEMS	INSTRUCTIONS
 359		BORING HEADS
 376		BORING ACCESSORIES
 381		INSERTS
 404		ARBORS
 418		BORING KITS
 429		TECHNICAL INFORMATION

1

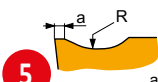
SCET

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
0502	5.556	2.40	5.56	2.38
0602	6.350	2.90	6.35	2.38
0703	7.937	3.50	7.94	3.18
09T3	9.525	4.50	9.53	3.97
1204	12.700	5.60	12.70	4.76
1505	15.875	5.60	15.88	5.56



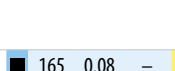
Egnethed og startværdier for skærehastighed (vc), tilførsel (f) og skæredybde (ap). Se vores app til bearbejdning af yderligere beregninger.

Product	RE	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]



UD-geometri med universelt design til periferiskær.

SCET 050204-UD	0,12
SCET 060204-UD	0,15
SCET 070308-UD	0,15
SCET 09T308-UD	0,15
SCET 120408-UD	0,20
SCET 150512-UD	0,20



10

11

Product	Grade	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]
SCET 050204-UD	D8330	0.4	165	0.08	—	—	—	—	—	—	155	0.08	—	—	—	—	—	—	—
	D9335	0.4	240	0.08	—	—	—	—	—	—	225	0.08	—	—	—	—	—	—	—
SCET 060204-UD	D8330	0.4	165	0.11	—	—	—	—	—	—	155	0.11	—	—	—	—	—	—	—
	D9335	0.4	240	0.11	—	—	—	—	—	—	225	0.11	—	—	—	—	—	—	—
SCET 070308-UD	D8330	0.8	165	0.13	—	—	—	—	—	—	155	0.13	—	—	—	—	—	—	—
	D9335	0.8	240	0.13	—	—	—	—	—	—	225	0.13	—	—	—	—	—	—	—
SCET 09T308-UD	D8330	0.8	165	0.14	—	—	—	—	—	—	155	0.14	—	—	—	—	—	—	—
	D9335	0.8	240	0.14	—	—	—	—	—	—	225	0.14	—	—	—	—	—	—	—
SCET 120408-UD	D8330	0.8	165	0.16	—	—	—	—	—	—	155	0.16	—	—	—	—	—	—	—
	D9335	0.8	240	0.16	—	—	—	—	—	—	225	0.16	—	—	—	—	—	—	—
SCET 150512-UD	D8330	1.2	165	0.18	—	—	—	—	—	—	155	0.18	—	—	—	—	—	—	—
	D9335	1.2	240	0.18	—	—	—	—	—	—	225	0.18	—	—	—	—	—	—	—

SCET120408-UD:D9335

Use full insert specification code when ordering!

Grade

Include colon

ISO insert code

INSERTS – PAGE OVERVIEW

Pos.	Description	Pos.	Description
1	Designation of insert	7	ISO insert code
2	Schematic drawing of insert	8	Grade
3	Table with insert sizes (mm)	9	Insert radii (mm)
4	Picture of representative insert	10	Geometry description
5	Profile of main cutting edge	11	Application area of insert
6	Icons – specific features and cutting edge type		

1

802D



PRAMET

3

S

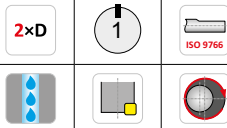
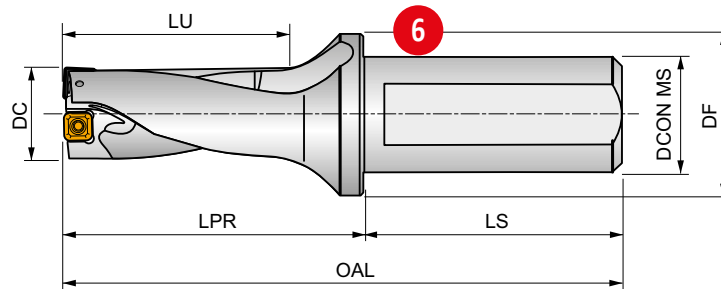


5

2xD 802D korthuls bor med indvendig kølevæskeindføring

Højtydende korthulsbor til boring af bund og gennemgående huller. Potentielt kryds hul, boring uden for midten, spiralformet interpolering, dybde, boring på konkave eller vinklede overflader, boring med afbrudte snit, affasning og boring. Fås fra Ø15 op til Ø40 mm i 2xD.

4



7



8

Product	DC	APMX	OAL	LPR	LS	LU	DCON MS	DF	$\vec{D}$	$\vec{D}^+$					
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]					
802D-15-30-S25	15	30.00	121	65	56	34.5	25	35	0.25	0.35	EP253253	GI300	GI313	0.30	HM001
802D-16-32-S25	16	32.00	123	67	56	37	25	35	0.45	0.45	EP253253	GI300	GI313	0.30	HM001
802D-17-34-S25	17	34.00	125	69	56	39.5	25	35	0.50	0.50	EP253253	GI301	GI314	0.31	HM002
802D-18-36-S25	18	36.00	127	71	56	42	25	35	0.35	0.25	EP253253	GI301	GI314	0.31	HM002
802D-19-38-S25	19	38.00	129	73	56	44.5	25	35	0.15	0.45	EP253253	GI301	GI314	0.32	HM002

GI300	XPET 0502AP	SCET 050204-UD
GI301	XPET 0602AP	SCET 050204-UD
GI302	XPET 0602AP	SCET 060204-UD
GI303	XPET 0703AP	SCET 060204-UD
GI304	XPET 0703AP	SCET 070308-UD
GI305	XPET 0903AP	SCET 070308-UD
GI306	XPET 0903AP	SCET 09T308-UD
GI307	XPET 11T3AP	SCET 09T308-UD
GI308	XPET 11T3AP	SCET 120408-UD
GI309	XPET 12T3AP	SCET 120408-UD
GI313	XPET 0502AP-SD	SCET 050204-SD
GI314	XPET 0602AP-SD	SCET 050204-SD
GI315	XPET 0602AP-SD	SCET 060204-SD
GI316	XPET 0703AP-SD	SCET 060204-SD
GI317	XPET 0703AP-SD	SCET 070308-SD
GI318	XPET 0903AP-SD	SCET 070308-SD
GI319	XPET 0903AP-SD	SCET 09T308-SD
GI320	XPET 11T3AP-SD	SCET 09T308-SD
GI321	XPET 11T3AP-SD	SCET 120408-SD
GI322	XPET 12T3AP-SD	SCET 120408-SD

GI300	XPET 0502AP	SCET 050204-UD
GI301	XPET 0602AP	SCET 050204-UD
GI302	XPET 0602AP	SCET 060204-UD
GI303	XPET 0703AP	SCET 060204-UD

INDEXABLE DRILLS – PAGE OVERVIEW

Pos.	Description	Pos.	Description
1	Designation of drill	11	Radial setting (mm)
2	Material group recommendations	12	Adjustable sleeve
3	Clamping system of insert	13	Group of compatible inserts with chip breaker UD ^{1), 2)}
4	Tool description	14	Group of compatible inserts with chip breaker SD ^{1), 2)}
5	Illustrative picture	15	Weight (kg)
6	Schematic drawing of tool	16	Group of spare parts ¹⁾
7	Product features	17	Compatible inserts with chip breaker UD
8	Product applications	18	Compatible inserts with chip breaker SD
9	Tool code	19	Spare parts
10	Tool dimensions		

¹⁾ Code of Group of compatible inserts and spare parts is used only for purposes of this catalogue. It cannot be used for orders.

²⁾ External (SCET) and internal (XPET) inserts must always have the same chip breaker (please note: UD chip breaker is not visibly included in designation of XPET inserts – e.g. XPET 0502AP); info needed for correct choice of chip breaker (UD vs SD) can be found on the insert packaging.

1

H851

DORMER



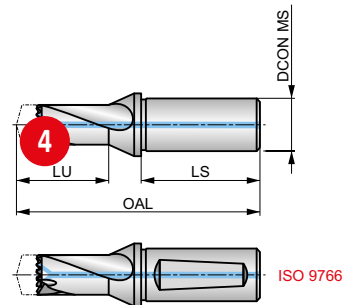
3

HYDRA holder 1,5XD, med kølemiddeltilførsel, blank fornikling

Bruges med R950, R960 og R970 HYDRA hoveder. En række hoveddiametre kan bruges med samme krop. Kølemiddelhuller på linje med hovederne giver effektiv køling. Flangeskafth forhindrer boret i at vandre i holderen. Forniklet overflade beskytter mod rust og korrosion og forbedrer spånevakuering.

2

HYDRA



HSS	DORMER	1.5×D
Bright Ni	ISO 9766	R

5

Fire (4) skruer og en (1) skruetrækker er inkluderet med et borholder, DCON MS tolerance h6.

Product	DCONMS [inch]	DCON MS [mm]	LU [mm]	OAL [mm]	LS [mm]	ADINTMS
H85131/64	5/8	15.88	25.50	88.5	47.6	Cylindrical
H8511/2	5/8	15.88	25.80	88.8	47.6	Cylindrical
H85117/32	5/8	15.88	30.90	93.9	47.6	Cylindrical
H85112.0	—	16.00	25.50	88.5	48.0	ISO 9766
H85112.5	—	16.00	25.80	88.8	48.0	ISO 9766
H85113.0	—	16.00	27.00	90.0	48.0	ISO 9766
H85114.0	—	16.00	30.90	93.9	48.0	ISO 9766
H8519/16	3/4	19.05	30.30	93.9	50.8	Cylindrical
H85139/64	3/4	19.05	32.30	97.3	50.8	Cylindrical
H8511/64	3/4	19.05	32.30	99.9	50.8	Cylindrical
H8511/16	3/4	19.05	32.30	101.4	50.8	Cylindrical
H85123/32	3/4	19.05	39.00	104.0	50.8	Cylindrical
H85115.0	—	20.00	32.30	97.3	50.0	ISO 9766
H85116.0	—	20.00	34.90	99.9	50.0	ISO 9766
H85117.0	—	20.00	36.40	101.4	50.0	ISO 9766
H85118.0	—	20.00	39.00	104.0	50.0	ISO 9766
H85119.0	—	25.00	40.40	111.4	56.0	ISO 9766
H85120.0	—	25.00	43.00	114.0	56.0	ISO 9766
H85121.0	—	25.00	44.50	115.5	56.0	ISO 9766

6

7

Pos.	Description
1	Designation of drill
2	Product description
3	Illustrative picture
4	Schematic drawing of tool

Pos.	Description
5	Product features
6	Product code
7	Product dimensions

EXCHANGEABLE HEAD & INDEXABLE DRILLS – ICONS OVERVIEW

GENERAL ICONS

	Primary use
---	-------------

	Possible use
---	--------------

APPLICATION ANGLE

	Drill Point 140°
---	------------------

BASIC STANDARD GROUP (BSG)

	Dormer Standards
---	------------------

CLAMPING DESIGNATION

	S – Screw clamp
---	-----------------

COATING

	Bright Nickel Plating
	Special TiAlN Coating (+ Silicon + Chromium)

COOLANT SUPPLY PROPERTY (CSP)

	Through Tool Coolant
---	----------------------

CUTTING DIAMETER TOLERANCE ZONE CLASS (TCDC)

	h7 – Industry Standard Tool Tolerance Zone (based on diameter range)
---	--

CUTTING DIRECTION

	Right Hand Rotation / Cutting
---	-------------------------------

GENERAL FEATURES OF TOOLS

	1 effective tooth per revolution
	Monoblock design

	Possibility of use for eccentric machining
	Universal shank

INSERT CUTTING EDGE

	Rounded edge with facet
---	-------------------------

INSERT FEATURES

	For tough machined materials (long chip)
	Heavy working conditions
	Universal wide range option

MATERIAL CODE (BMC)

	Hard Material (Solid Carbide)
	High Speed Steel Tool Material

OPERATIONS DRILLING

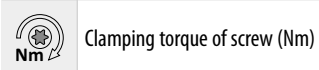
	Blind hole boring
	Blind hole drilling
	Boring
	Boring through cross holes
	Boring up to a shoulder
	Drill exit on inclined surface

	Drilling across an existing hole
	Drilling of stacked materials
	Drilling onto curved surface
	Drilling onto inclined surface
	Helical interpolation boring
	Helical interpolation drilling

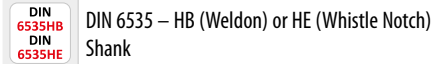
	Chamfering (beveling)
	Interrupted cut
	Through hole boring
	Through hole drilling
	Welded joint drilling

EXCHANGEABLE HEAD & INDEXABLE DRILLS – ICONS OVERVIEW

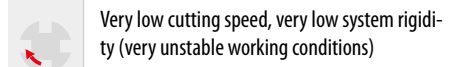
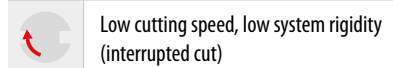
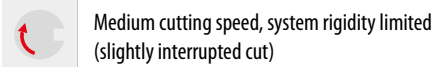
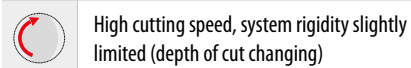
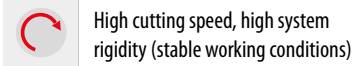
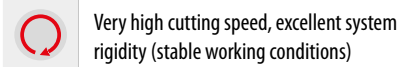
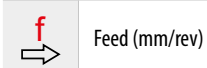
OTHER ICONS



SHANK



TECHNICAL PAGES



USABLE LENGTH DIAMETER RATIO (ULDR)





HYDRA DRILLS

HYDRA

HIGH PERFORMANCE REPLACEABLE HEAD DRILLS

Interchangeable solid carbide head drills for high performance machining of steels, stainless steels and cast iron. Fail-safe head location can be changed without ejecting the drill from the machine. Available with coolant feed and a choice of HSS bodies from 1.5×D for improved rigidity in shallow hole and plate drilling, through to 12×D for deeper hole applications.

FEATURES AND BENEFITS

- **Consistently high performance**, even after numerous head changes.
- **Reduction in inventory costs** – one body can fit multiple solid carbide head sizes.
- **Versatile** – cylindrical shank with flat allows use in multiple types of holder.
- **Easy and quick head changes** with minimal interruptions to the production process. Heads can be changed without removing the body from the machine.
- Exact fit of head to body maximises tool rigidity for **superior hole accuracy** and precise tolerances.

MATERIAL

PREMIUM MICROGRAIN CARBIDE (Heads)

- Micrograin carbide provides an excellent combination of hardness and toughness, resulting in high wear resistance and longer tool life.

HARDENED STEEL (Body)

- Hardened steel with high gloss nickel plating for high resistance to wear and corrosion.

COATING

TITANIUM ALUMINIUM NITRIDE BASED COATING PROVIDES:

- High toughness and oxidation resistance.
- Outstanding wear protection in abrasive materials like Cast Iron.
- High hardness at high temperatures created when drilling Cast Irons.
- Increased tool life and productivity.

HEAD TYPES



R950

STEEL



R960

STAINLESS STEEL



R970

CAST IRON

GEOMETRY

CORNER DESIGN

- A strong corner design increases stability during drilling and reduces the forces encountered during breakthrough of the exit surface.
- This improves the quality of the exit surface and helps prevent “exit burst” which can occur when drilling granular materials.

POINT GEOMETRY

- 140 degree split point geometry provides good centering capabilities and low thrust forces when drilling most materials.

A COMPLETE RANGE

- Available in 1.5xD, 3xD, 5xD, 8xD and 12xD lengths incorporating coolant holes to improve cutting efficiency and swarf evacuation, resulting in higher productivity.
- Metric: 12.00 mm to 42.00 mm.
- Fractional: 15/32 inch to 1.5/8 inch.
- Best results are obtained using hydraulic holders. Can also be held in ER and Weldon type toolholders.



BODY LENGTHS

1.5xD



3xD



5xD



8xD



12xD



HYDRA DRILLS – NAVIGATOR TOOL MATERIALS

Tool materials

High Speed Steel

HSS

A medium-alloyed high speed steel that has good machinability and good performance. HSS exhibits hardness, toughness and wear resistance characteristics that make it attractive in a wide range of applications, for example in drills and taps.

Carbide materials

Carbide Materials (or Hard Materials)

HM

A sintered powder metallurgy substrate, consisting of a metallic carbide composite with binder metal. The most central raw material is tungsten carbide (WC). Tungsten carbide contributes to the hardness of the material. Tantalum carbide (TaC), titanium carbide (TiC) and niobium carbide (NbC) complements WC and adjusts the properties to what is desired. These three materials are called cubic carbides. Cobalt (Co) acts as a binder and keeps the material together.

Carbide materials are often characterised by high compression strength, high hardness and therefore high wear resistance, but also by limited flexural strength and toughness. Carbide is used in taps, reamers, milling cutters, drills and thread milling cutters.

Surface Coatings

Bright Nickel Plating



Bright Nickel Plated surface protects hardened steel body from rust, corrosion and also improves chip evacuation.

Ti-phon (TiAlCrSiN)



Ti-phon Coating is a coating similar to TiAlN but with the addition of Chromium (Cr) and Silicon (Si) which is specially formulated for Hydra Heads to prevent edge build-up and greatly improve chip flow. This coating exhibits high hot hardness, high oxidation resistance and superior lubricity when used on tools for machining applications involving heavy mechanical and thermal stresses, high speeds and high feed rates. These coating properties translate into superior wear resistance and edge strength.



ALL TOOLS TOGETHER

Our entire assortment of rounds tools and indexables is included within the machining calculator app. That's more than **40,000** items! Whatever your machining we're likely to have something for it.
Simply Reliable.



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GET IT ON
Google Play



Download on
AppGallery

15:20 DORMER PRAMET

< Savings Calculator

	Existing	New
Price per insert or tool	0,00	0,00
	EUR	EUR
Number of inserts per tool	0,00	0,00
	Existing	New
Number of components per edge set (tool life)	0,00	0,00
	Existing	New
Max. indexes per insert or tool	0,00	0,00
	Existing	New
Tool or insert cost per component	0,0000	0,00
	Existing	New

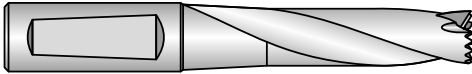
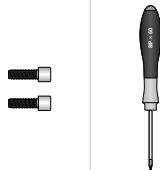
Free machine capacity 0.00

Savings per component 0.00 EUR

Savings per batch or year 0.00

Materiale kode (BMC)		HM	HM	HM	HSS	HSS	HSS	HSS	HSS				
Grundlæggende standard-gruppe (BSG)													
Brugbar længde (ULDR)					1.5xD	3xD	5xD	8xD	12xD				
Anvendelsesvinkel													
Belægning													
Skaft													
Hånd (skæreretning)													
Køling (CSP)													
		HYDRA	HYDRA	HYDRA	HYDRA	HYDRA	HYDRA	HYDRA	HYDRA	HYDRA	HYDRA		
					NEW				NEW				
Produktfamiliekode		R950	R960	R970	H851	H853	H855	H858	H8512	H860	H861		
		12.00 - 42.00, 15/32 - 1.5/8	12.00 - 30.50, 15/32 - 1.3/16	12.00 - 42.00, 15/32 - 1.5/8	12.00 - 30.50, 15/32 - 1.3/16	12.00 - 42.50, 15/32 - 1.5/8	12.00 - 42.50, 15/32 - 1.5/8	13.50 - 42.50, 35/64 - 1.5/8	13.50 - 25.65, 35/64 - 1.1/64	N1 - N7	N1 - N6		
		281	283	285	287	289	291	293	294	295	296		
P	P1	■	■										
	P2	■	■										
	P3	■											
	P4	■											
M	M1		■										
	M2		■										
	M3		■										
	M4		■										
K	K1		■	■									
	K2	■	■	■									
	K3	■	■	■									
	K4	■	■	■									
	K5	■	■	■									
N	N1												
	N2												
	N3												
	N4												
	N5												
S	S1		■										
	S2		■										
	S3		■										
	S4		■										
H	H1												
	H2												
	H3												
	H4												

HIGH PERFORMANCE REPLACEABLE HEAD DRILLS

SetUp										
DC	H851 1.5×D	H853 3×D	H855 5×D	H858 8×D	H8512 12×D	R950	R960	R970	H860	H861
										
Range	12.00 – 30.50 15/32" – 1.3/16"	12.00 – 42.50 15/32" – 1.5/8"	12.00 – 42.50 15/32" – 1.5/8"	13.50 – 42.50 35/64" – 1.5/8"	13.50 – 25.65 35/64" – 1.1/64"	12.00 – 42.00 15/32" – 1.5/8"	12.00 – 30.50 15/32" – 1.3/16"	12.00 – 42.00 15/32" – 1.5/8"	N1 – N7	N1 – N6
Pages	 287	 289	 291	 293	 294	 281	 283	 285	 295	 296

DC	H851 1.5×D	H853 3×D	H855 5×D	H858 8×D	H8512 12×D	R950	R960	R970	H860	H861
15/32"	H85112.0 H85131/64	H85312.0 H85331/64	H85512.0 H85531/64	–	–	R95015/32	R96015/32	R97015/32	H860N1	H861N1
12.0						R95012.0	R96012.0	R97012.0		
12.1						R95012.1	R96012.1	R97012.1		
12.2						R95012.2	R96012.2	R97012.2		
31/64"						R95031/64	R96031/64	R97031/64		
12.5	H85112.5 H8511/2	H85312.5 H8531/2	H85512.5 H8551/2	–	–	R95012.5	R96012.5	R97012.5		
12.6						R95012.6	R96012.6	R97012.6		
1/2"						R9501/2	R9601/2	R9701/2		
12.8						R95012.8	R96012.8	R97012.8		
12.9						R95012.9	R96012.9	R97012.9		
13.0	H85113.0 H85117/32	H85313.0 H85317/32	H85513.0 H85517/32	–	–	R95013.0	R96013.0	R97013.0		
33/64"						R95033/64	R96033/64	R97033/64		
13.2						R95013.2	R96013.2	R97013.2		
17/32"						R95017/32	R96017/32	R97017/32		
13.5	H85114.0 H8519/16	H85314.0 H8539/16	H85514.0 H8559/16	H85814.0	H851214.0	R95013.5	R96013.5	R97013.5		
13.6						R95013.6	R96013.6	R97013.6		
13.7						R95013.7	R96013.7	R97013.7		
13.8						R95013.8	R96013.8	R97013.8		
35/64"						R95035/64	R96035/64	R97035/64		
14.0						R95014.0	R96014.0	R97014.0		
14.1						R95014.1	R96014.1	R97014.1		
14.2						R95014.2	R96014.2	R97014.2		
9/16"						R9509/16	R9609/16	R9709/16		
14.5						R95014.5	R96014.5	R97014.5		
14.6	H85115.0 H85139/64	H85315.0 H85339/64	H85515.0 H85539/64	H85815.0	H851215.0	R95014.6	R96014.6	R97014.6		
37/64"						R95037/64	R96037/64	R97037/64		
14.7						R95014.7	R96014.7	R97014.7		
14.8						R95014.8	R96014.8	R97014.8		
15.0						R95015.0	R96015.0	R97015.0		
19/32"						R95019/32	R96019/32	R97019/32		
15.1						R95015.1	R96015.1	R97015.1		
15.2						R95015.2	R96015.2	R97015.2		
15.24						R95015.24	R96015.24	R97015.24		
39/64"						R95039/64	R96039/64	R97039/64		
15.5						R95015.5	R96015.5	R97015.5		

HIGH PERFORMANCE REPLACEABLE HEAD DRILLS

DC	H851 1.5×D	H853 3×D	H855 5×D	H858 8×D	H8512 12×D	R950	R960	R970	H860	H861
15.6	H85116.0 H85141/64	H85316.0 H85341/64	H85516.0 H85541/64	H85816.0	H851216.0	R95015.6	R96015.6	R97015.6	H860N2	H861N2
15.7						R95015.7	R96015.7	R97015.7		
5/8"						R9505/8	R9605/8	R9705/8		
16.0						R95016.0	R96016.0	R97016.0		
16.08						R95016.08	R96016.08	R97016.08		
16.1						R95016.1	R96016.1	R97016.1		
16.2						R95016.2	R96016.2	R97016.2		
16.3						R95016.3	R96016.3	R97016.3		
41/64"						R95041/64	R96041/64	R97041/64		
16.5						R95016.5	R96016.5	R97016.5		
16.6	H85117.0 H85111/16	H85317.0 H85311/16	H85517.0 H85511/16	H85817.0	H851217.0	R95016.6	R96016.6	R97016.6	H860N2	H861N2
21/32"						R95021/32	R96021/32	R97021/32		
16.7						R95016.7	R96016.7	R97016.7		
17.0						R95017.0	R96017.0	R97017.0		
43/64"						R95043/64	R96043/64	R97043/64		
17.1						R95017.1	R96017.1	R97017.1		
17.2						R95017.2	R96017.2	R97017.2		
11/16"						R95011/16	R96011/16	R97011/16		
17.5						R95017.5	R96017.5	R97017.5		
17.6	H85118.0 H85123/32	H85318.0 H85323/32	H85518.0 H85523/32	H85818.0	H851218.0	R95017.6	R96017.6	R97017.6	H860N2	H861N2
17.7						R95017.7	R96017.7	R97017.7		
45/64"						R95045/64	R96045/64	R97045/64		
18.0						R95018.0	R96018.0	R97018.0		
18.1						R95018.1	R96018.1	R97018.1		
18.2						R95018.2	R96018.2	R97018.2		
23/32"						R95023/32	R96023/32	R97023/32		
18.5						R95018.5	R96018.5	R97018.5		
18.6	H85119.0 H85149/64	H85319.0 H85349/64	H85519.0 H85549/64	H85819.0	H851219.0	R95018.6	R96018.6	R97018.6	H860N3	H861N3
47/64"						R95047/64	R96047/64	R97047/64		
18.7						R95018.7	R96018.7	R97018.7		
18.9						R95018.9	R96018.9	R97018.9		
19.0						R95019.0	R96019.0	R97019.0		
3/4"						R9503/4	R9603/4	R9703/4		
19.1						R95019.1	R96019.1	R97019.1		
19.2						R95019.2	R96019.2	R97019.2		
19.25						R95019.25	R96019.25	R97019.25		
19.3						R95019.3	R96019.3	R97019.3		
19.35	H85120.0 H85151/64	H85320.0 H85351/64	H85520.0 H85551/64	H85820.0	H851220.0	R95019.35	R96019.35	R97019.35	H860N3	H861N3
49/64"						R95049/64	R96049/64	R97049/64		
19.5						R95019.5	R96019.5	R97019.5		
19.6						R95019.6	R96019.6	R97019.6		
19.7						R95019.7	R96019.7	R97019.7		
25/32"						R95025/32	R96025/32	R97025/32		
20.0						R95020.0	R96020.0	R97020.0		
51/64"						R95051/64	R96051/64	R97051/64		
20.5						R95020.5	R96020.5	R97020.5		
13/16"						R95013/16	R96013/16	R97013/16		
21.0	H85121.0 H85127/32	H85321.0 H85327/32	H85521.0 H85527/32	H85821.0	H851221.0	R95021.0	R96021.0	R97021.0	H860N3	H861N3
53/64"						R95053/64	R96053/64	R97053/64		
27/32"						R95027/32	R96027/32	R97027/32		
21.5						R95021.5	R96021.5	R97021.5		
55/64"						R95055/64	R96055/64	R97055/64		
22.0	H85122.0 H85157/64	H85322.0 H85357/64	H85522.0 H85557/64	H85822.0	H851222.0	R95022.0	R96022.0	R97022.0	H860N4	H861N4
7/8"						R9507/8	R9607/8	R9707/8		
22.5						R95022.5	R96022.5	R97022.5		
57/64"						R95057/64	R96057/64	R97057/64		
22.7						R95022.7	R96022.7	R97022.7		
23.0	H85123.0 H85159/64	H85323.0 H85359/64	H85523.0 H85559/64	H85823.0	H851223.0	R95023.0	R96023.0	R97023.0	H860N4	H861N4
29/32"						R95029/32	R96029/32	R97029/32		
59/64"						R95059/64	R96059/64	R97059/64		
23.5						R95023.5	R96023.5	R97023.5		

HIGH PERFORMANCE REPLACEABLE HEAD DRILLS

DC	H851 1.5×D	H853 3×D	H855 5×D	H858 8×D	H8512 12×D	R950	R960	R970	H860	H861
15/16	H85124.0 H85131/32	H85324.0 H85331/32	H85524.0 H85531/32	H85824.0	H851224.0	R95015/16	R96015/16	R97015/16	H860N4	H861N3
24.0						R95024.0	R96024.0	R97024.0		
61/64						R95061/64	R96061/64	R97061/64		
24.5						R95024.5	R96024.5	R97024.5		
31/32"						R95031/32	R96031/32	R97031/32		
25.0	H85125.0 H8511.1/64	H85325.0 H8531.1/64	H85525.0 H8551.1/64	H85825.0	H851225.0	R95025.0	R96025.0	R97025.0	H860N5	H861N4
63/64"						R95063/64	R96063/64	R97063/64		
1"						R9501	R9601	R9701		
25.5						R95025.5	R96025.5	R97025.5		
25.6						R95025.6	—	—		
25.65						R95025.65	R96025.65	R97025.65		
1.1/64"						R9501.1/64	R9601.1/64	R9701.1/64		
26.0	H85126.0 H8511.3/64	H85326.0 H8531.3/64	H85526.0 H8551.3/64	H85826.0	—	R95026.0	R96026.0	R97026.0		
1.1/32"						R9501.1/32	R9601.1/32	R9701.1/32		
26.5						R95026.5	R96026.5	R97026.5		
1.3/64						R9501.3/64	R9601.3/64	R9701.3/64		
1.1/16"	H85127.0 H8511.3/32	H85327.0 H8531.3/32	H85527.0 H8551.3/32	H85827.0	—	R9501.1/16	R9601.1/16	R9701.1/16		
27.0						R95027.0	R96027.0	R97027.0		
1.5/64"						R9501.5/64	R9601.5/64	R9701.5/64		
27.5						R95027.5	R96027.5	R97027.5		
1.3/32"						R9501.3/32	R9601.3/32	R9701.3/32		
28.0	H85128.0 H8511.1/8	H85328.0 H8531.1/8	H85528.0 H8551.1/8	H85828.0	—	R95028.0	R96028.0	R97028.0	H860N6	H861N5
1.7/64"						R9501.7/64	R9601.7/64	R9701.7/64		
28.5						R95028.5	R96028.5	R97028.5		
1.1/8"						R9501.1/8	R9601.1/8	R9701.1/8		
1.9/64"	H85129.0 H8511.11/64	H85329.0 H8531.11/64	H85529.0 H8551.11/64	H85829.0	—	R9501.9/64	R9601.9/64	R9701.9/64		
29.0						R95029.0	R96029.0	R97029.0		
1.5/32"						R9501.5/32	R9601.5/32	R9701.5/32		
29.5						R95029.5	R96029.5	R97029.5		
1.11/64"						R9501.11/64	R9601.11/64	R9701.11/64		
30.0	H85130.0 H8511.3/16	H85330.0 H8531.3/16	H85530.0 H8551.3/16	H85830.0	—	R95030.0	R96030.0	R97030.0		
1.3/16"						R9501.3/16	R9601.3/16	R9701.3/16		
30.5						R95030.5	R96030.5	R97030.5		
1.7/32"	—	H85332.0	H85532.0	H85832.0	—	R9501.7/32	—	R9701.7/32	H860N7	H861N6
31.0						R95031.0	—	R97031.0		
1.1/4"						R9501.1/4	—	R9701.1/4		
32.0						R95032.0	—	R97032.0		
32.5	—	H85333.5	H85533.5	H85833.5	—	R95032.5	—	R97032.5		
1.19/64"						R9501.19/64	—	R9701.19/64		
33.0						R95033.0	—	R97033.0		
33.5						R95033.5	—	R97033.5		
34.0	—	H85335.0	H85535.0	H85835.0	—	R95034.0	—	R97034.0		
1.11/32"						R9501.11/32	—	R9701.11/32		
34.5						R95034.5	—	R97034.5		
1.3/8"						R9501.3/8	—	R9701.3/8		
35.0						R95035.0	—	R97035.0		
36.0	—	H85336.5	H85536.5	H85836.5	—	R95036.0	—	R97036.0		
1.27/64"						R9501.27/64	—	R9701.27/64		
36.5						R95036.5	—	R97036.5		
37.0	—	H85338.0	H85538.0	H85838.0	—	R95037.0	—	R97037.0		
1.15/32"						R9501.15/32	—	R9701.15/32		
37.5						R95037.5	—	R97037.5		
38.0						R95038.0	—	R97038.0		
1.1/2"	—	H85339.5	H85539.5	H85839.5	—	R9501.1/2	—	R9701.1/2		
38.5						R95038.5	—	R97038.5		
1.17/32"						R9501.17/32	—	R9701.17/32		
39.0						R95039.0	—	R97039.0		
39.5						R95039.5	—	R97039.5		
1.9/16"	—	H85341.0	H85541.0	H85841.0	—	R9501.9/16	—	R9701.9/16		
40.0						R95040.0	—	R97040.0		
41.0						R95041.0	—	R97041.0		

HIGH PERFORMANCE REPLACEABLE HEAD DRILLS

DC	H851 1.5×D	H853 3×D	H855 5×D	H858 8×D	H8512 12×D	R950	R960	R970	H860	H861
1.5/8"	—	H85342.5	H85542.5	H85842.5	—	R9501.5/8	—	R9701.5/8	H860N7	H861N6
42.0						R95042.0	—	R97042.0		

Accessories

H860	H861	Hydra Head DC range			Wrench Size / Bit
		Metric (min. – max.)	Fractional (min. – max.)	Decimal (min. – max.)	
H860N1	H861N1	12.0 mm – 15.5 mm	15/32" – 39/64"	0.4688" – 0.6102"	8IP
H860N2	H861N2	15.6 mm – 18.5 mm	5/8" – 23/32"	0.6142" – 0.7283"	10IP
H860N3	H861N3	18.6 mm – 21.5 mm	47/64" – 27/32"	0.7323" – 0.8465"	15IP
H860N4	H861N3	22.0 mm – 24.5 mm	55/64" – 31/32"	0.8594" – 0.9688"	15IP
H860N5	H861N4	25.0 mm – 27.5 mm	63/64" – 1-3/32"	0.9843" – 1.0938"	20IP
H860N6	H861N5	28.0 mm – 33.5 mm	1-7/64" – 1-19/64"	1.1024" – 1.3189"	25IP
H860N7	H861N6	34.0 mm – 42.0 mm	1-11/32" – 1-5/8"	1.3386" – 1.6535"	4 mm

R950

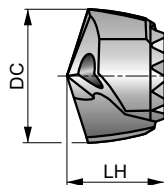
DORMER



HYDRA borehoved til stål, Ti-phon belagt

Meget omkostningseffektiv og nøjagtig udskiftelig hoved til høj ydeevne i stål og hårdere materialer. Et spidspunkt på 140 ° hjælper med selvcentrering og reducerer skærekrafter. Ti-phon-belægning forhindrer ophobning af kanter og forbedrer spånflowet i høj grad med overlegen slidstyrke og kantstyrke.

HYDRA



HM	DORMER	140°
Ti-phon	R	
DC h7		

H851	Apply starting values for speed and feed with a correction factor of 1.10
H853	Apply starting values for speed and feed with a correction factor of 1.00
H855	Apply starting values for speed and feed with a correction factor of 0.95
H858	Apply starting values for speed and feed with a correction factor of 0.90
H8512	Apply starting values for speed and feed with a correction factor of 0.80

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode.

P1.1	P1.2	P1.3	P2.1	P2.2	P2.3	P3.1	P3.2	P3.3	P4.1	P4.2	P4.3	M2.3	M4.2
133 W	148 W	154 W	114 W	100 W	88 W	125 W	101 W	85 W	75 W	63 W	52 T	41 T	35 T
K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5	K5.1	K5.2	K5.3
108 V	88 V	70 V	96 V	73 V	59 V	89 V	67 V	49 V	42 V	35 V	100 V	76 V	58 V

Product	DC (inch)	DC (mm)	DC (inch)	LH (mm)
R95015/32	15/32	11.91	0.4688	9.1
R95012.0	—	12.00	0.4724	9.1
R95012.1	—	12.10	0.4764	9.1
R95012.2	—	12.20	0.4803	9.1
R95031/64	31/64	12.30	0.4844	9.1
R95012.5	—	12.50	0.4921	9.4
R95012.6	—	12.60	0.4961	9.4
R9501/2	1/2	12.70	0.5000	9.4
R95012.8	—	12.80	0.5039	9.4
R95012.9	—	12.90	0.5079	9.4
R95013.0	—	13.00	0.5118	9.7
R95033/64	33/64	13.10	0.5156	9.7
R95013.2	—	13.20	0.5197	9.7
R95017/32	17/32	13.49	0.5313	9.7
R95013.5	—	13.50	0.5315	10.3
R95013.6	—	13.60	0.5354	10.3
R95013.7	—	13.70	0.5394	10.3
R95013.8	—	13.80	0.5433	10.3
R95035/64	35/64	13.89	0.5469	10.3
R95014.0	—	14.00	0.5512	10.3
R95014.1	—	14.10	0.5551	10.3
R95014.2	—	14.20	0.5591	10.3
R9509/16	9/16	14.29	0.5625	10.3
R95014.5	—	14.50	0.5709	10.3
R95014.6	—	14.60	0.5748	11.0
R95037/64	37/64	14.68	0.5781	11.0
R95014.7	—	14.70	0.5787	11.0
R95014.8	—	14.80	0.5827	11.0
R95015.0	—	15.00	0.5906	11.0
R95019/32	19/32	15.08	0.5938	11.0

Product	DC (inch)	DC (mm)	DC (inch)	LH (mm)
R95015.1	—	15.10	0.5945	11.0
R95015.2	—	15.20	0.5984	11.0
R95015.24	—	15.24	0.6000	11.0
R95039/64	39/64	15.48	0.6094	11.0
R95015.5	—	15.50	0.6102	11.0
R95015.6	—	15.60	0.6142	11.6
R95015.7	—	15.70	0.6181	11.6
R9505/8	5/8	15.88	0.6250	11.6
R95016.0	—	16.00	0.6299	11.6
R95016.08	—	16.08	0.6331	11.6
R95016.1	—	16.10	0.6339	11.6
R95016.2	—	16.20	0.6378	11.6
R95041/64	41/64	16.27	0.6406	11.6
R95016.3	—	16.30	0.6417	11.6
R95016.5	—	16.50	0.6496	11.6
R95016.6	—	16.60	0.6535	12.2
R95021/32	21/32	16.67	0.6563	12.2
R95016.7	—	16.70	0.6575	12.2
R95017.0	—	17.00	0.6693	12.2
R95043/64	43/64	17.07	0.6719	12.2
R95017.1	—	17.10	0.6732	12.2
R95017.2	—	17.20	0.6772	12.2
R95011/16	11/16	17.46	0.6875	12.2
R95017.5	—	17.50	0.6890	12.2
R95017.6	—	17.60	0.6929	12.9
R95017.7	—	17.70	0.6969	12.9
R95045/64	45/64	17.86	0.7031	12.9
R95018.0	—	18.00	0.7087	12.9
R95018.1	—	18.10	0.7126	12.9
R95018.2	—	18.20	0.7165	12.9

Product	DC	DC	DC	LH
	(inch)	(mm)	(inch)	(mm)
R95023/32	23/32	18.26	0.7188	12.9
R95018.5	—	18.50	0.7283	12.9
R95018.6	—	18.60	0.7323	13.5
R95047/64	47/64	18.65	0.7344	13.5
R95018.7	—	18.70	0.7362	13.5
R95018.9	—	18.90	0.7441	13.5
R95019.0	—	19.00	0.7480	13.5
R9503/4	3/4	19.05	0.7500	13.5
R95019.1	—	19.10	0.7520	13.5
R95019.2	—	19.20	0.7559	13.5
R95019.25	—	19.25	0.7579	13.5
R95019.3	—	19.30	0.7598	13.5
R95019.35	—	19.35	0.7618	13.5
R95049/64	49/64	19.45	0.7656	13.5
R95019.5	—	19.50	0.7677	13.5
R95019.6	—	19.60	0.7717	14.1
R95019.7	—	19.70	0.7756	14.1
R95025/32	25/32	19.84	0.7813	14.1
R95020.0	—	20.00	0.7874	14.1
R95051/64	51/64	20.24	0.7969	14.1
R95020.5	—	20.50	0.8071	14.1
R95013/16	13/16	20.64	0.8125	14.8
R95021.0	—	21.00	0.8268	14.8
R95053/64	53/64	21.03	0.8281	14.8
R95027/32	27/32	21.43	0.8438	14.8
R95021.5	—	21.50	0.8465	14.8
R95055/64	55/64	21.83	0.8594	15.0
R95022.0	—	22.00	0.8661	15.0
R9507/8	7/8	22.22	0.8750	15.0
R95022.5	—	22.50	0.8858	15.0
R95057/64	57/64	22.62	0.8906	15.0
R95022.7	—	22.70	0.8937	15.0
R95023.0	—	23.00	0.9055	15.1
R95029/32	29/32	23.02	0.9063	15.1
R95059/64	59/64	23.42	0.9219	15.1
R95023.5	—	23.50	0.9252	15.1
R95015/16	15/16	23.81	0.9375	15.4
R95024.0	—	24.00	0.9449	15.4
R95061/64	61/64	24.21	0.9531	15.4
R95024.5	—	24.50	0.9646	15.4
R95031/32	31/32	24.61	0.9688	15.4
R95025.0	—	25.00	0.9844	15.8
R95063/64	63/64	25.00	0.9844	15.8
R9501	1"	25.40	1.0000	15.8
R95025.5	—	25.50	1.0039	15.8
R95025.6	—	25.60	1.0079	15.8
R95025.65	—	25.65	1.0098	15.8
R9501.1/64	1.1/64	25.80	1.0156	15.8
R95026.0	—	26.00	1.0236	16.4
R9501.1/32	1.1/32	26.19	1.0313	16.4

Product	DC	DC	DC	LH
	(inch)	(mm)	(inch)	(mm)
R95026.5	—	26.50	1.0433	16.4
R9501.3/64	1.3/64	26.59	1.0469	16.4
R9501.1/16	1.1/16	26.99	1.0625	17.1
R95027.0	—	27.00	1.0630	17.1
R9501.5/64	1.5/64	27.38	1.0781	17.1
R95027.5	—	27.50	1.0827	17.1
R9501.3/32	1.3/32	27.78	1.0938	17.1
R95028.0	—	28.00	1.1024	17.7
R9501.7/64	1.7/64	28.18	1.1094	17.7
R95028.5	—	28.50	1.1220	17.7
R9501.1/8	1.1/8	28.58	1.1250	17.7
R9501.9/64	1.9/64	28.97	1.1406	18.3
R95029.0	—	29.00	1.1417	18.3
R9501.5/32	1.5/32	29.37	1.1563	18.3
R95029.5	—	29.50	1.1614	18.3
R9501.11/64	1.11/64	29.77	1.1719	18.3
R95030.0	—	30.00	1.1811	19.0
R9501.3/16	1.3/16	30.16	1.1875	19.0
R95030.5	—	30.50	1.2008	19.0
R9501.7/32	1.7/32	30.96	1.2188	21.0
R95031.0	—	31.00	1.2205	21.0
R9501.1/4	1.1/4	31.75	1.2500	21.0
R95032.0	—	32.00	1.2598	21.0
R95032.5	—	32.50	1.2795	21.0
R9501.19/64	1.19/64	32.94	1.2969	21.0
R95033.0	—	33.00	1.2992	21.0
R95033.5	—	33.50	1.3189	21.0
R95034.0	—	34.00	1.3386	23.0
R9501.11/32	1.11/32	34.13	1.3438	23.0
R95034.5	—	34.50	1.3583	23.0
R9501.3/8	1.3/8	34.93	1.3750	23.0
R95035.0	—	35.00	1.3780	23.0
R95036.0	—	36.00	1.4173	23.0
R9501.27/64	1.27/64	36.12	1.4219	23.0
R95036.5	—	36.50	1.4370	23.0
R95037.0	—	37.00	1.4567	25.0
R9501.15/32	1.15/32	37.31	1.4688	25.0
R95037.5	—	37.50	1.4764	25.0
R95038.0	—	38.00	1.4961	25.0
R9501.1/2	1.1/2	38.10	1.5000	25.0
R95038.5	—	38.50	1.5157	25.0
R9501.17/32	1.17/32	38.89	1.5313	25.0
R95039.0	—	39.00	1.5354	25.0
R95039.5	—	39.50	1.5551	25.0
R9501.9/16	1.9/16	39.69	1.5625	27.0
R95040.0	—	40.00	1.5748	27.0
R95041.0	—	41.00	1.6142	27.0
R9501.5/8	1.5/8	41.28	1.6250	27.0
R95042.0	—	42.00	1.6535	27.0

R960

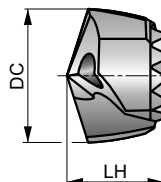
DORMER



HYDRA borehoved til rustfri, Ti-phon belagt

Meget omkostningseffektiv og nøjagtig udskiftelig hoved til høj ydeevne i rustfrit stål. Et spidspunkt på 140 ° hjælper med selvcentrering og reducerer skærekrafter. Ti-phon-belægning forhindrer ophobning af kanter og forbedrer spånflowet i høj grad med overlegen slidstyrke og kantstyrke.

HYDRA



HM	DORMER	140°
Ti-phon	R	
DC h7		

H851	Apply starting values for speed and feed with a correction factor of 1.10
H853	Apply starting values for speed and feed with a correction factor of 1.00
H855	Apply starting values for speed and feed with a correction factor of 0.95
H858	Apply starting values for speed and feed with a correction factor of 0.90
H8512	Apply starting values for speed and feed with a correction factor of 0.80

Arbejdsemnets materialegruppens egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side XY.

P1.1	P1.2	P1.3	P2.1	M1.1	M1.2	M2.1	M2.2	M2.3	M3.1	M3.2	M3.3	M4.1	M4.2
■ 133 W	■ 148 W	■ 154 W	■ 114 W	■ 82 V	■ 70 V	■ 73 V	■ 60 V	■ 50 T	■ 58 T	■ 50 T	■ 45 T	■ 40 T	■ 34 T
K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5
■ 120 V	■ 89 V	■ 67 V	■ 108 V	■ 88 V	■ 70 V	■ 96 V	■ 73 V	■ 59 V	■ 89 V	■ 67 V	■ 49 V	■ 42 V	■ 35 V
K5.1	K5.2	K5.3	S1.1	S1.2	S1.3	S2.1	S2.2	S3.1	S3.2	S4.1	S4.2		
■ 100 V	■ 76 V	■ 58 V	■ 45 T	■ 35 T	■ 30 S	■ 40 S	■ 35 S	■ 30 S	■ 25 S	■ 23 S	■ 20 S		

Product	DC	DC	DC	LH
	(inch)	(mm)	(inch)	(mm)
R96015/32	15/32	11.91	0.4688	9.1
R96012.0	—	12.00	0.4724	9.1
R96012.1	—	12.10	0.4764	9.1
R96012.2	—	12.20	0.4803	9.1
R96031/64	31/64	12.30	0.4844	9.1
R96012.5	—	12.50	0.4921	9.4
R96012.6	—	12.60	0.4961	9.4
R9601/2	1/2	12.70	0.5000	9.4
R96012.8	—	12.80	0.5039	9.4
R96012.9	—	12.90	0.5079	9.4
R96013.0	—	13.00	0.5118	9.7
R96033/64	33/64	13.10	0.5156	9.7
R96013.2	—	13.20	0.5197	9.7
R96017/32	17/32	13.49	0.5313	9.7
R96013.5	—	13.50	0.5315	10.3
R96013.6	—	13.60	0.5354	10.3
R96013.7	—	13.70	0.5394	10.3
R96013.8	—	13.80	0.5433	10.3
R96035/64	35/64	13.89	0.5469	10.3
R96014.0	—	14.00	0.5512	10.3
R96014.1	—	14.10	0.5551	10.3
R96014.2	—	14.20	0.5591	10.3
R9609/16	9/16	14.29	0.5625	10.3
R96014.5	—	14.50	0.5709	10.3
R96014.6	—	14.60	0.5748	11.0
R96037/64	37/64	14.68	0.5781	11.0
R96014.7	—	14.70	0.5787	11.0
R96014.8	—	14.80	0.5827	11.0

Product	DC	DC	DC	LH
	(inch)	(mm)	(inch)	(mm)
R96015.0	—	15.00	0.5906	11.0
R96019/32	19/32	15.08	0.5938	11.0
R96015.1	—	15.10	0.5945	11.0
R96015.2	—	15.20	0.5984	11.0
R96015.24	—	15.24	0.6000	11.0
R96039/64	39/64	15.48	0.6094	11.0
R96015.5	—	15.50	0.6102	11.0
R96015.6	—	15.60	0.6142	11.6
R96015.7	—	15.70	0.6181	11.6
R9605/8	5/8	15.88	0.6250	11.6
R96016.0	—	16.00	0.6299	11.6
R96016.08	—	16.08	0.6331	11.6
R96016.1	—	16.10	0.6339	11.6
R96016.2	—	16.20	0.6378	11.6
R96041/64	41/64	16.27	0.6406	11.6
R96016.3	—	16.30	0.6417	11.6
R96016.5	—	16.50	0.6496	11.6
R96016.6	—	16.60	0.6535	12.2
R96021/32	21/32	16.67	0.6563	12.2
R96016.7	—	16.70	0.6575	12.2
R96017.0	—	17.00	0.6693	12.2
R96043/64	43/64	17.07	0.6719	12.2
R96017.1	—	17.10	0.6732	12.2
R96017.2	—	17.20	0.6772	12.2
R96011/16	11/16	17.46	0.6875	12.2
R96017.5	—	17.50	0.6890	12.2
R96017.6	—	17.60	0.6929	12.9
R96017.7	—	17.70	0.6969	12.9

Product	DC	DC	DC	LH
	(inch)	(mm)	(inch)	(mm)
R96045/64	45/64	17.86	0.7031	12.9
R96018.0	—	18.00	0.7087	12.9
R96018.1	—	18.10	0.7126	12.9
R96018.2	—	18.20	0.7165	12.9
R96023/32	23/32	18.26	0.7188	12.9
R96018.5	—	18.50	0.7283	12.9
R96018.6	—	18.60	0.7323	13.5
R96047/64	47/64	18.65	0.7344	13.5
R96018.7	—	18.70	0.7362	13.5
R96018.9	—	18.90	0.7441	13.5
R96019.0	—	19.00	0.7480	13.5
R9603/4	3/4	19.05	0.7500	13.5
R96019.1	—	19.10	0.7520	13.5
R96019.2	—	19.20	0.7559	13.5
R96019.25	—	19.25	0.7579	13.5
R96019.3	—	19.30	0.7598	13.5
R96019.35	—	19.35	0.7618	13.5
R96049/64	49/64	19.45	0.7656	13.5
R96019.5	—	19.50	0.7677	13.5
R96019.6	—	19.60	0.7717	14.1
R96019.7	—	19.70	0.7756	14.1
R96025/32	25/32	19.84	0.7813	14.1
R96020.0	—	20.00	0.7874	14.1
R96051/64	51/64	20.24	0.7969	14.1
R96020.5	—	20.50	0.8071	14.1
R96013/16	13/16	20.64	0.8125	14.8
R96021.0	—	21.00	0.8268	14.8
R96053/64	53/64	21.03	0.8281	14.8
R96027/32	27/32	21.43	0.8438	14.8
R96021.5	—	21.50	0.8465	14.8
R96055/64	55/64	21.83	0.8594	15.0
R96022.0	—	22.00	0.8661	15.0
R9607/8	7/8	22.22	0.8750	15.0
R96022.5	—	22.50	0.8858	15.0
R96057/64	57/64	22.62	0.8906	15.0
R96022.7	—	22.70	0.8937	15.0

Product	DC	DC	DC	LH
	(inch)	(mm)	(inch)	(mm)
R96023.0	—	23.00	0.9055	15.1
R96029/32	29/32	23.02	0.9063	15.1
R96059/64	59/64	23.42	0.9219	15.1
R96023.5	—	23.50	0.9252	15.1
R96015/16	15/16	23.81	0.9375	15.4
R96024.0	—	24.00	0.9449	15.4
R96061/64	61/64	24.21	0.9531	15.4
R96024.5	—	24.50	0.9646	15.4
R96031/32	31/32	24.61	0.9688	15.4
R96025.0	—	25.00	0.9844	15.8
R96063/64	63/64	25.00	0.9844	15.8
R9601	1"	25.40	1.0000	15.8
R96025.5	—	25.50	1.0039	15.8
R96025.65	—	25.65	1.0098	15.8
R9601.1/64	1.1/64	25.80	1.0156	15.8
R96026.0	—	26.00	1.0236	16.4
R9601.1/32	1.1/32	26.19	1.0313	16.4
R96026.5	—	26.50	1.0433	16.4
R9601.3/64	1.3/64	26.59	1.0469	16.4
R9601.1/16	1.1/16	26.99	1.0625	17.1
R96027.0	—	27.00	1.0630	17.1
R9601.5/64	1.5/64	27.38	1.0781	17.1
R96027.5	—	27.50	1.0827	17.1
R9601.3/32	1.3/32	27.78	1.0938	17.1
R96028.0	—	28.00	1.1024	17.7
R9601.7/64	1.7/64	28.18	1.1094	17.7
R96028.5	—	28.50	1.1220	17.7
R9601.1/8	1.1/8	28.58	1.1250	17.7
R9601.9/64	1.9/64	28.97	1.1406	18.3
R96029.0	—	29.00	1.1417	18.3
R9601.5/32	1.5/32	29.37	1.1563	18.3
R96029.5	—	29.50	1.1614	18.3
R9601.11/64	1.11/64	29.77	1.1719	18.3
R96030.0	—	30.00	1.1811	19.0
R9601.3/16	1.3/16	30.16	1.1875	19.0
R96030.5	—	30.50	1.2008	19.0

R970

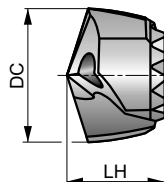
DORMER



HYDRA borehoved til støbejern, Ti-phon belagt

Meget omkostningseffektiv og nøjagtig udskiftelig hoved til høj ydeevne i støbejern. Et spidspunkt på 140 ° hjælper med selvcentrering og reducerer skærekrafter. Ti-phon-belægning forhindrer ophobning af kanter og forbedrer spånflowet i høj grad med overlegen slidstyrke og kantstyrke.

HYDRA



HM	DORMER	140°
Ti-phon	R	
DC h7		

H851	Apply starting values for speed and feed with a correction factor of 1.10
H853	Apply starting values for speed and feed with a correction factor of 1.00
H855	Apply starting values for speed and feed with a correction factor of 0.95
H858	Apply starting values for speed and feed with a correction factor of 0.90
H8512	Apply starting values for speed and feed with a correction factor of 0.80

Arbejdsemnets materialegruppes egnethed, startværdier for skærehastighed (m / min) og tilførsel af Alpha-kode. Tabeller med feed pr. Omdrejning kan findes fra side XY.

K1.1	K1.2	K1.3	K2.1	K2.2	K2.3	K3.1	K3.2	K3.3	K4.1	K4.2	K4.3	K4.4	K4.5
■ 120 V	■ 89 V	■ 67 V	■ 98 V	■ 80 V	■ 64 V	■ 97 V	■ 67 V	■ 54 V	■ 81 V	■ 61 V	■ 45 V	■ 38 V	■ 32 V
K5.1	K5.2	K5.3											
■ 91 V	■ 69 V	■ 53 V											

Product	DC	DC	DC	LH
	(inch)	(mm)	(inch)	(mm)
R97015/32	15/32	11.91	0.4688	9.1
R97012.0	—	12.00	0.4724	9.1
R97012.1	—	12.10	0.4764	9.1
R97012.2	—	12.20	0.4803	9.1
R97031/64	31/64	12.30	0.4844	9.1
R97012.5	—	12.50	0.4921	9.4
R97012.6	—	12.60	0.4961	9.4
R9701/2	1/2	12.70	0.5000	9.4
R97012.8	—	12.80	0.5039	9.4
R97012.9	—	12.90	0.5079	9.4
R97013.0	—	13.00	0.5118	9.7
R97033/64	33/64	13.10	0.5156	9.7
R97013.2	—	13.20	0.5197	9.7
R97017/32	17/32	13.49	0.5313	9.7
R97013.5	—	13.50	0.5315	10.3
R97013.6	—	13.60	0.5354	10.3
R97013.7	—	13.70	0.5394	10.3
R97013.8	—	13.80	0.5433	10.3
R97035/64	35/64	13.89	0.5469	10.3
R97014.0	—	14.00	0.5512	10.3
R97014.1	—	14.10	0.5551	10.3
R97014.2	—	14.20	0.5591	10.3
R9709/16	9/16	14.29	0.5625	10.3
R97014.5	—	14.50	0.5709	10.3
R97014.6	—	14.60	0.5748	11.0
R97037/64	37/64	14.68	0.5781	11.0
R97014.7	—	14.70	0.5787	11.0
R97014.8	—	14.80	0.5827	11.0
R97015.0	—	15.00	0.5906	11.0
R97019/32	19/32	15.08	0.5938	11.0

Product	DC	DC	DC	LH
	(inch)	(mm)	(inch)	(mm)
R97015.1	—	15.10	0.5945	11.0
R97015.2	—	15.20	0.5984	11.0
R97015.24	—	15.24	0.6000	11.0
R97039/64	39/64	15.48	0.6094	11.0
R97015.5	—	15.50	0.6102	11.0
R97015.6	—	15.60	0.6142	11.6
R97015.7	—	15.70	0.6181	11.6
R9705/8	5/8	15.88	0.6250	11.6
R97016.0	—	16.00	0.6299	11.6
R97016.08	—	16.08	0.6331	11.6
R97016.1	—	16.10	0.6339	11.6
R97016.2	—	16.20	0.6378	11.6
R97041/64	41/64	16.27	0.6406	11.6
R97016.3	—	16.30	0.6417	11.6
R97016.5	—	16.50	0.6496	11.6
R97016.6	—	16.60	0.6535	12.2
R97021/32	21/32	16.67	0.6563	12.2
R97016.7	—	16.70	0.6575	12.2
R97017.0	—	17.00	0.6693	12.2
R97043/64	43/64	17.07	0.6719	12.2
R97017.1	—	17.10	0.6732	12.2
R97017.2	—	17.20	0.6772	12.2
R97011/16	11/16	17.46	0.6875	12.2
R97017.5	—	17.50	0.6890	12.2
R97017.6	—	17.60	0.6929	12.9
R97017.7	—	17.70	0.6969	12.9
R97045/64	45/64	17.86	0.7031	12.9
R97018.0	—	18.00	0.7087	12.9
R97018.1	—	18.10	0.7126	12.9
R97018.2	—	18.20	0.7165	12.9

Product	DC	DC	DC	LH
	(inch)	(mm)	(inch)	(mm)
R97023/32	23/32	18.26	0.7188	12.9
R97018.5	—	18.50	0.7283	12.9
R97018.6	—	18.60	0.7323	13.5
R97047/64	47/64	18.65	0.7344	13.5
R97018.7	—	18.70	0.7362	13.5
R97018.9	—	18.90	0.7441	13.5
R97019.0	—	19.00	0.7480	13.5
R9703/4	3/4	19.05	0.7500	13.5
R97019.1	—	19.10	0.7520	13.5
R97019.2	—	19.20	0.7559	13.5
R97019.25	—	19.25	0.7579	13.5
R97019.3	—	19.30	0.7598	13.5
R97019.35	—	19.35	0.7618	13.5
R97049/64	49/64	19.45	0.7656	13.5
R97019.5	—	19.50	0.7677	13.5
R97019.6	—	19.60	0.7717	14.1
R97019.7	—	19.70	0.7756	14.1
R97025/32	25/32	19.84	0.7813	14.1
R97020.0	—	20.00	0.7874	14.1
R97051/64	51/64	20.24	0.7969	14.1
R97020.5	—	20.50	0.8071	14.1
R97013/16	13/16	20.64	0.8125	14.8
R97021.0	—	21.00	0.8268	14.8
R97053/64	53/64	21.03	0.8281	14.8
R97027/32	27/32	21.43	0.8438	14.8
R97021.5	—	21.50	0.8465	14.8
R97055/64	55/64	21.83	0.8594	15.0
R97022.0	—	22.00	0.8661	15.0
R9707/8	7/8	22.22	0.8750	15.0
R97022.5	—	22.50	0.8858	15.0
R97057/64	57/64	22.62	0.8906	15.0
R97022.7	—	22.70	0.8937	15.0
R97023.0	—	23.00	0.9055	15.1
R97029/32	29/32	23.02	0.9063	15.1
R97059/64	59/64	23.42	0.9219	15.1
R97023.5	—	23.50	0.9252	15.1
R97015/16	15/16	23.81	0.9375	15.4
R97024.0	—	24.00	0.9449	15.4
R97061/64	61/64	24.21	0.9531	15.4
R97024.5	—	24.50	0.9646	15.4
R97031/32	31/32	24.61	0.9688	15.4
R97025.0	—	25.00	0.9844	15.8
R97063/64	63/64	25.00	0.9844	15.8
R9701	1"	25.40	1.0000	15.8
R97025.5	—	25.50	1.0039	15.8
R97025.65	—	25.65	1.0098	15.8
R9701.1/64	1.1/64	25.80	1.0156	15.8
R97026.0	—	26.00	1.0236	16.4
R9701.1/32	1.1/32	26.19	1.0313	16.4

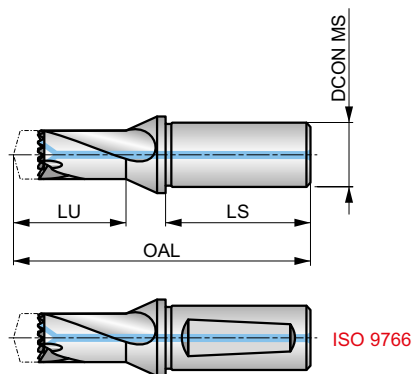
Product	DC	DC	DC	LH
	(inch)	(mm)	(inch)	(mm)
R97026.5	—	26.50	1.0433	16.4
R9701.3/64	1.3/64	26.59	1.0469	16.4
R9701.1/16	1.1/16	26.99	1.0625	17.1
R97027.0	—	27.00	1.0630	17.1
R9701.5/64	1.5/64	27.38	1.0781	17.1
R97027.5	—	27.50	1.0827	17.1
R9701.3/32	1.3/32	27.78	1.0938	17.1
R97028.0	—	28.00	1.1024	17.7
R9701.7/64	1.7/64	28.18	1.1094	17.7
R97028.5	—	28.50	1.1220	17.7
R9701.1/8	1.1/8	28.58	1.1250	17.7
R9701.9/64	1.9/64	28.97	1.1406	18.3
R97029.0	—	29.00	1.1417	18.3
R9701.5/32	1.5/32	29.37	1.1563	18.3
R97029.5	—	29.50	1.1614	18.3
R9701.11/64	1.11/64	29.77	1.1719	18.3
R97030.0	—	30.00	1.1811	19.0
R9701.3/16	1.3/16	30.16	1.1875	19.0
R97030.5	—	30.50	1.2008	19.0
R9701.7/32	1.7/32	30.96	1.2188	21.0
R97031.0	—	31.00	1.2205	21.0
R9701.1/4	1.1/4	31.75	1.2500	21.0
R97032.0	—	32.00	1.2598	21.0
R97032.5	—	32.50	1.2795	21.0
R9701.19/64	1.19/64	32.94	1.2969	21.0
R97033.0	—	33.00	1.2992	21.0
R97033.5	—	33.50	1.3189	21.0
R97034.0	—	34.00	1.3386	23.0
R9701.11/32	1.11/32	34.13	1.3438	23.0
R97034.5	—	34.50	1.3583	23.0
R9701.3/8	1.3/8	34.93	1.3750	23.0
R97035.0	—	35.00	1.3780	23.0
R97036.0	—	36.00	1.4173	23.0
R9701.27/64	1.27/64	36.12	1.4219	23.0
R97036.5	—	36.50	1.4370	23.0
R97037.0	—	37.00	1.4567	25.0
R9701.15/32	1.15/32	37.31	1.4688	25.0
R97037.5	—	37.50	1.4764	25.0
R97038.0	—	38.00	1.4961	25.0
R9701.1/2	1.1/2	38.10	1.5000	25.0
R97038.5	—	38.50	1.5157	25.0
R9701.17/32	1.17/32	38.89	1.5313	25.0
R97039.0	—	39.00	1.5354	25.0
R97039.5	—	39.50	1.5551	25.0
R9701.9/16	1.9/16	39.69	1.5625	27.0
R97040.0	—	40.00	1.5748	27.0
R97041.0	—	41.00	1.6142	27.0
R9701.5/8	1.5/8	41.28	1.6250	27.0
R97042.0	—	42.00	1.6535	27.0

NEW**H851****DORMER****HYDRA holder 1,5XD, med kølemiddeltilførsel, blank fornikling**

Bruges med R950, R960 og R970 HYDRA hoveder. En række hoveddiametre kan bruges med samme krop. Kølemiddelhuller på linje med hovederne giver effektiv køling. Flangeskaft forhindrer boret i at vandre i holderen. Forniklet overflade beskytter mod rust og korrosion og forbedrer spånevakuering.

HYDRA

HSS	 DORMER	1.5xD
Bright Ni	 ISO 9766	
		



Fire (4) skruer og en (1) skruetrækker er inkluderet med et borholder, DCON MS tolerance h6.

Product	DCONMS	DCON MS	LU	OAL	LS	ADINTMS
	(inch)	(mm)	(mm)	(mm)	(mm)	
H85131/64	5/8	15.88	25.50	88.5	47.6	Cylindrical
H8511/2	5/8	15.88	25.80	88.8	47.6	Cylindrical
H85117/32	5/8	15.88	30.90	93.9	47.6	Cylindrical
H85112.0	—	16.00	25.50	88.5	48.0	ISO 9766
H85112.5	—	16.00	25.80	88.8	48.0	ISO 9766
H85113.0	—	16.00	27.00	90.0	48.0	ISO 9766
H85114.0	—	16.00	30.90	93.9	48.0	ISO 9766
H8519/16	3/4	19.05	30.30	93.9	50.8	Cylindrical
H85139/64	3/4	19.05	32.30	97.3	50.8	Cylindrical
H85141/64	3/4	19.05	34.90	99.9	50.8	Cylindrical
H85111/16	3/4	19.05	36.40	101.4	50.8	Cylindrical
H85123/32	3/4	19.05	39.00	104.0	50.8	Cylindrical
H85115.0	—	20.00	32.30	97.3	50.0	ISO 9766
H85116.0	—	20.00	34.90	99.9	50.0	ISO 9766
H85117.0	—	20.00	36.40	101.4	50.0	ISO 9766
H85118.0	—	20.00	39.00	104.0	50.0	ISO 9766
H85119.0	—	25.00	40.40	111.4	56.0	ISO 9766
H85120.0	—	25.00	43.00	114.0	56.0	ISO 9766
H85121.0	—	25.00	44.50	115.5	56.0	ISO 9766
H85122.0	—	25.00	46.10	117.1	56.0	ISO 9766
H85123.0	—	25.00	47.00	118.0	56.0	ISO 9766
H85149/64	1"	25.40	40.40	111.4	57.1	Cylindrical
H85151/64	1"	25.40	43.00	114.0	57.1	Cylindrical
H85127/32	1"	25.40	44.50	115.5	57.1	Cylindrical
H85157/64	1"	25.40	46.10	117.1	57.1	Cylindrical
H85159/64	1"	25.40	47.00	118.0	57.1	Cylindrical
H85131/32	1"	25.40	49.30	124.3	57.1	Cylindrical
H8511.1/64	1.1/4	31.75	49.70	124.7	60.3	Cylindrical
H8511.3/64	1.1/4	31.75	52.30	127.3	60.3	Cylindrical
H8511.3/32	1.1/4	31.75	52.80	127.8	60.3	Cylindrical
H8511.1/8	1.1/4	31.75	54.40	129.4	60.3	Cylindrical
H8511.11/64	1.1/4	31.75	55.80	130.8	60.3	Cylindrical
H8511.3/16	1.1/4	31.75	58.40	133.4	60.3	Cylindrical
H85124.0	—	32.00	49.30	124.3	60.0	ISO 9766

Product	DCONMS	DCON MS	LU	OAL	LS	ADINTMS
	(inch)	(mm)	(mm)	(mm)	(mm)	
H85125.0	—	32.00	49.70	124.7	60.0	ISO 9766
H85126.0	—	32.00	52.30	127.3	60.0	ISO 9766
H85127.0	—	32.00	52.80	127.8	60.0	ISO 9766
H85128.0	—	32.00	54.40	129.4	60.0	ISO 9766
H85129.0	—	32.00	55.80	130.8	60.0	ISO 9766
H85130.0	—	32.00	58.40	133.4	60.0	ISO 9766

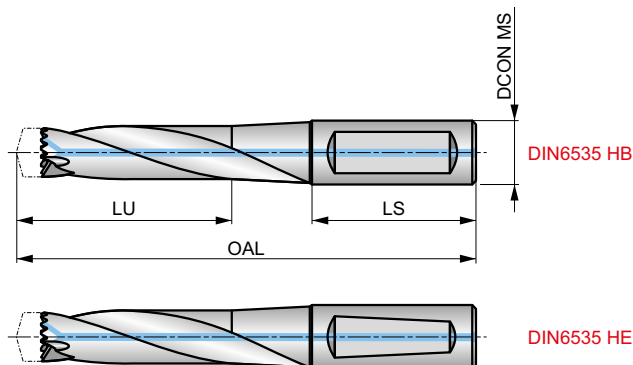
H853



HYDRA holder 3XD, med kølemiddeltilførsel, blank fornikling

Bruges med R950, R960 og R970 HYDRA hoveder. En række hoveddiametre kan bruges med samme krop. Kølemiddelhuller på linje med hovederne giver effektiv køling. Blank forniklet overflade beskytter mod rust og korrosion og forbedrer spånevakuering.

HYDRA



HSS	DORMER	3xD
Bright Ni	DIN 6535HB DIN 6535HE	R

Fire (4) skruer og en (1) skruetrækker er inkluderet med et borholder, DCON MS tolerance h6.

Product	DCONMS	DCON MS	LU	OAL	LS	ADINTMS
	(inch)	(mm)	(mm)	(mm)	(mm)	
H85312.0	—	16.00	44.00	105.0	48.0	DIN6535HE
H85331/64	5/8	15.88	44.00	105.0	48.0	DIN6535HB
H85312.5	—	16.00	44.00	105.0	48.0	DIN6535HE
H8531/2	5/8	15.88	44.00	105.0	48.0	DIN6535HB
H85313.0	—	16.00	47.00	110.0	48.0	DIN6535HE
H85317/32	5/8	15.88	47.00	110.0	48.0	DIN6535HB
H85314.0	—	16.00	52.50	116.5	48.0	DIN6535HE
H8539/16	3/4	19.05	52.50	116.5	48.0	DIN6535HB
H85315.0	—	20.00	55.50	126.5	50.0	DIN6535HE
H85339/64	3/4	19.05	55.50	126.5	50.0	DIN6535HB
H85316.0	—	20.00	59.50	131.5	50.0	DIN6535HE
H85341/64	3/4	19.05	59.50	131.5	50.0	DIN6535HB
H85317.0	—	20.00	62.50	136.5	50.0	DIN6535HE
H85311/16	3/4	19.05	62.50	136.5	50.0	DIN6535HB
H85318.0	—	20.00	66.50	141.5	50.0	DIN6535HE
H85323/32	3/4	19.05	66.50	141.5	50.0	DIN6535HB
H85319.0	—	25.00	69.50	156.5	56.0	DIN6535HE
H85349/64	1"	25.40	69.50	156.5	56.0	DIN6535HB
H85320.0	—	25.00	73.50	156.5	56.0	DIN6535HE
H85351/64	1"	25.40	73.50	156.5	56.0	DIN6535HB
H85321.0	—	25.00	76.50	156.5	56.0	DIN6535HE
H85327/32	1"	25.40	76.50	156.5	56.0	DIN6535HB
H85322.0	—	25.00	80.10	161.5	56.0	DIN6535HE
H85357/64	1"	25.40	80.10	161.5	56.0	DIN6535HB
H85323.0	—	25.00	82.50	160.5	56.0	DIN6535HE
H85359/64	1"	25.40	82.50	160.5	56.0	DIN6535HB
H85324.0	—	32.00	86.20	170.2	60.0	DIN6535HE
H85331/32	1"	25.40	86.20	170.2	60.0	DIN6535HB
H85325.0	—	32.00	88.00	170.0	60.0	DIN6535HE
H8531.1/64	1.1/4	31.75	88.00	170.0	60.0	DIN6535HB
H85326.0	—	32.00	92.00	175.0	60.0	DIN6535HE
H8531.3/64	1.1/4	31.75	92.00	175.0	60.0	DIN6535HB
H85327.0	—	32.00	94.00	175.0	60.0	DIN6535HE
H8531.3/32	1.1/4	31.75	94.00	175.0	60.0	DIN6535HB

Product	DCONMS	DCON MS	LU	OAL	LS	ADINTMS
	(inch)	(mm)	(mm)	(mm)	(mm)	
H85328.0	—	32.00	97.00	180.0	60.0	DIN6535HE
H8531.1/8	1.1/4	31.75	97.00	180.0	60.0	DIN6535HB
H85329.0	—	32.00	100.00	185.0	60.0	DIN6535HE
H8531.11/64	1.1/4	31.75	100.00	185.0	60.0	DIN6535HB
H85330.0	—	32.00	104.00	185.0	60.0	DIN6535HE
H8531.3/16	1.1/4	31.75	104.00	185.0	60.0	DIN6535HB
H85332.0	—	32.00	111.50	196.5	60.0	DIN6535HE
H85333.5	—	32.00	116.50	201.5	60.0	DIN6535HE
H85335.0	—	40.00	121.50	216.5	70.0	DIN6535HB
H85336.5	—	40.00	125.50	221.5	70.0	DIN6535HB
H85338.0	—	40.00	131.50	226.5	70.0	DIN6535HB
H85339.5	—	40.00	136.50	231.5	70.0	DIN6535HB
H85341.0	—	40.00	146.50	246.5	70.0	DIN6535HB
H85342.5	—	40.00	151.60	251.6	70.0	DIN6535HB

H855

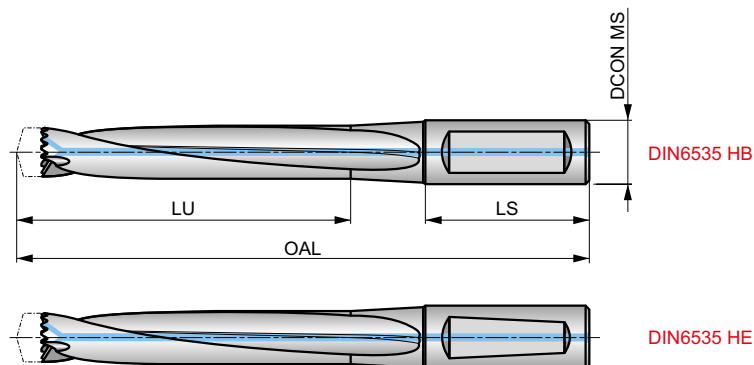


HYDRA holder 5XD, med kølemiddeltilførsel, blank fornikling

Bruges med R950, R960 og R970 HYDRA hoveder. En række hoveddiametre kan bruges med samme krop. Kølemiddelhuller på linje med hovederne giver effektiv køling. Blank forniklet overflade beskytter mod rust og korrosion og forbedrer spånevakuering.

HYDRA

HSS		5xD
Bright Ni	DIN 6535HB DIN 6535HE	



Fire (4) skruer og en (1) skruetrækker er inkluderet med et borholder, DCON MS tolerance h6.

Product	DCONMS	DCON MS	LU	OAL	LS	ADINTMS
	(inch)	(mm)	(mm)	(mm)	(mm)	
H85512.0	—	16.00	69.00	130.0	48.0	DIN6535HE
H85531/64	5/8	15.88	69.00	130.0	48.0	DIN6535HB
H85512.5	—	16.00	69.00	130.0	48.0	DIN6535HE
H8551/2	5/8	15.88	69.00	130.0	48.0	DIN6535HB
H85513.0	—	16.00	74.00	140.0	48.0	DIN6535HE
H85517/32	5/8	15.88	74.00	140.0	48.0	DIN6535HB
H85514.0	—	16.00	81.50	146.5	48.0	DIN6535HE
H8559/16	3/4	19.05	81.50	146.5	48.0	DIN6535HB
H85515.0	—	20.00	86.50	156.5	50.0	DIN6535HE
H85539/64	3/4	19.05	86.50	156.5	50.0	DIN6535HB
H85516.0	—	20.00	92.50	166.5	50.0	DIN6535HE
H85541/64	3/4	19.05	92.50	166.5	50.0	DIN6535HB
H85517.0	—	20.00	97.50	171.5	50.0	DIN6535HE
H85511/16	3/4	19.05	97.50	171.5	50.0	DIN6535HB
H85518.0	—	20.00	103.50	176.5	50.0	DIN6535HE
H85523/32	3/4	19.05	103.50	176.5	50.0	DIN6535HB
H85519.0	—	25.00	108.50	191.5	56.0	DIN6535HE
H85549/64	1"	25.40	108.50	191.5	56.0	DIN6535HB
H85520.0	—	25.00	114.50	196.5	56.0	DIN6535HE
H85551/64	1"	25.40	114.50	196.5	56.0	DIN6535HB
H85521.0	—	25.00	119.50	196.5	56.0	DIN6535HE
H85527/32	1"	25.40	119.50	196.5	56.0	DIN6535HB
H85522.0	—	25.00	125.10	201.1	56.0	DIN6535HE
H85557/64	1"	25.40	125.10	201.1	56.0	DIN6535HB
H85523.0	—	25.00	129.50	210.5	56.0	DIN6535HE
H85559/64	1"	25.40	129.50	210.5	56.0	DIN6535HB
H85524.0	—	32.00	135.20	220.2	60.0	DIN6535HE
H85531/32	1"	25.40	135.20	220.2	60.0	DIN6535HB
H85525.0	—	32.00	140.00	225.0	60.0	DIN6535HE
H8551.1/64	1.1/4	31.75	140.00	225.0	60.0	DIN6535HB
H85526.0	—	32.00	146.00	230.0	60.0	DIN6535HE
H8551.3/64	1.1/4	31.75	146.00	230.0	60.0	DIN6535HB
H85527.0	—	32.00	151.00	235.0	60.0	DIN6535HE
H8551.3/32	1.1/4	31.75	151.00	235.0	60.0	DIN6535HB

Product	DCONMS	DCON MS	LU	OAL	LS	ADINTMS
	(inch)	(mm)	(mm)	(mm)	(mm)	
H85528.0	—	32.00	157.00	240.0	60.0	DIN6535HE
H8551.1/8	1.1/4	31.75	157.00	240.0	60.0	DIN6535HB
H85529.0	—	32.00	162.00	245.0	60.0	DIN6535HE
H8551.11/64	1.1/4	31.75	162.00	245.0	60.0	DIN6535HB
H85530.0	—	32.00	167.00	255.0	60.0	DIN6535HE
H8551.3/16	1.1/4	31.75	167.00	255.0	60.0	DIN6535HB
H85532.0	—	32.00	176.50	261.5	60.0	DIN6535HE
H85533.5	—	32.00	186.50	271.5	60.0	DIN6535HE
H85535.0	—	40.00	196.50	291.5	70.0	DIN6535HB
H85536.5	—	40.00	201.50	296.5	70.0	DIN6535HB
H85538.0	—	40.00	211.50	306.5	70.0	DIN6535HB
H85539.5	—	40.00	221.50	316.5	70.0	DIN6535HB
H85541.0	—	40.00	226.50	325.6	70.0	DIN6535HB
H85542.5	—	40.00	236.50	336.5	70.0	DIN6535HB

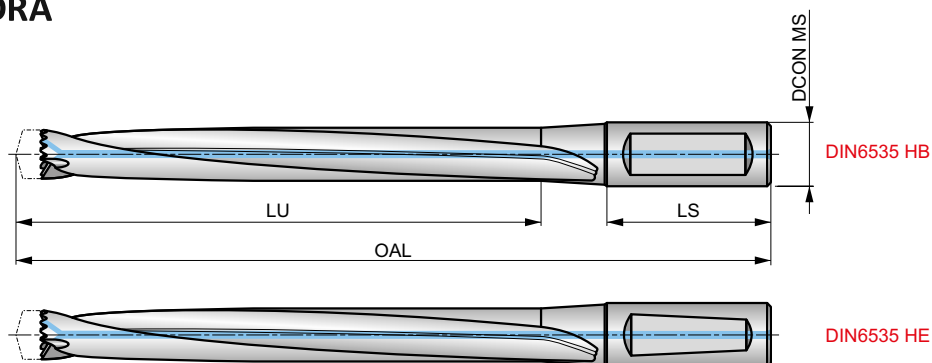
H858



HYDRA holder 8XD, med kølemiddeltilførsel, blank fornikling

Bruges med R950, R960 og R970 HYDRA hoveder. En række hoveddiametre kan bruges med samme krop. Kølemiddelhuller på linje med hovederne giver effektiv køling. Blank forniklet overflade beskytter mod rust og korrosion og forbedrer spånevakuering.

HYDRA



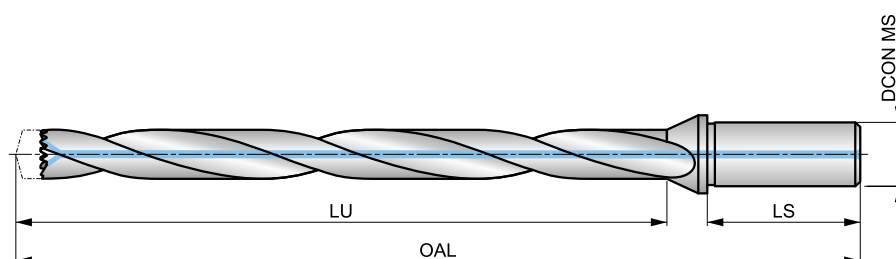
HSS		8xD
Bright Ni	DIN 6535HB DIN 6535HE	

Fire (4) skruer og en (1) skruetrækker er inkluderet med et borholder, DCON MS tolerance h6.

Product	DCON MS	LU	OAL	LS	ADINTMS
	(mm)	(mm)	(mm)	(mm)	
H85814.0	16.00	124.50	191.5	48.0	DIN6535HE
H85815.0	20.00	133.50	201.5	50.0	DIN6535HE
H85816.0	20.00	141.50	211.5	50.0	DIN6535HE
H85817.0	20.00	150.50	221.5	50.0	DIN6535HE
H85818.0	20.00	158.50	226.5	50.0	DIN6535HE
H85819.0	25.00	167.50	251.5	56.0	DIN6535HE
H85820.0	25.00	175.50	264.5	56.0	DIN6535HE
H85821.0	25.00	184.50	266.5	56.0	DIN6535HE
H85822.0	25.00	192.10	271.1	56.0	DIN6535HE
H85823.0	25.00	200.50	280.5	56.0	DIN6535HE
H85824.0	32.00	208.20	295.2	60.0	DIN6535HE
H85825.0	32.00	217.00	300.0	60.0	DIN6535HE
H85826.0	32.00	225.00	310.0	60.0	DIN6535HE
H85827.0	32.00	234.00	320.0	60.0	DIN6535HE
H85828.0	32.00	242.00	325.0	60.0	DIN6535HE
H85829.0	32.00	251.00	335.0	60.0	DIN6535HE
H85830.0	32.00	259.00	345.0	60.0	DIN6535HE
H85832.0	32.00	271.50	356.5	60.0	DIN6535HE
H85833.5	32.00	286.50	371.5	60.0	DIN6535HE
H85835.0	40.00	301.50	396.5	70.0	DIN6535HB
H85836.5	40.00	311.50	406.5	70.0	DIN6535HB
H85838.0	40.00	326.50	421.5	70.0	DIN6535HB
H85839.5	40.00	336.50	431.5	70.0	DIN6535HB
H85841.0	40.00	351.50	451.5	70.0	DIN6535HB
H85842.5	40.00	361.50	461.5	70.0	DIN6535HB

NEW**H8512****DORMER****HYDRA holder 12XD, med kølemiddeltilførsel, blank fornikling**

Bruges med R950, R960 og R970 HYDRA hoveder. En række hoveddiametre kan bruges med samme krop. Kølemiddelhuller på linje med hovederne giver effektiv køling. Flangeskaft forhindrer boret i at vandre i holderen. Forniklet overflade beskytter mod rust og korrosion og forbedrer spånevakuering.

HYDRA

HSS		12×D
Bright Ni		

Fire (4) skruer og en (1) skruetrækker er inkluderet med et borholder, DCON MS tolerance h6.

Product	DCON MS	LU	OAL	LS
	(mm)	(mm)	(mm)	(mm)
H851214.0	16.00	168.00	236.0	48.0
H851215.0	20.00	180.00	250.3	50.0
H851216.0	20.00	192.00	262.6	50.0
H851217.0	20.00	204.00	275.0	50.0
H851218.0	20.00	216.00	287.2	50.0
H851219.0	25.00	228.00	305.6	56.0
H851220.0	25.00	240.00	317.8	56.0
H851221.0	25.00	252.00	330.1	56.0
H851222.0	25.00	264.00	343.0	56.0
H851223.0	25.00	276.00	354.8	56.0
H851224.0	32.00	288.00	371.7	60.0
H851225.0	32.00	300.00	383.8	60.0

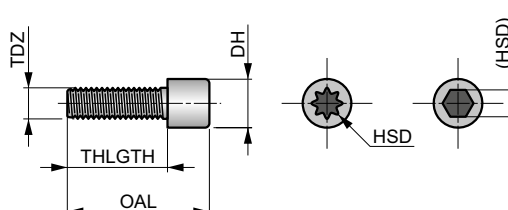
H860



Hydra skrue

Udskiftningsskruer, der bruges til sikkert at holde HYDRA hoveder på plads.

HYDRA



Product	Nr.	TDZ	OAL	THLGTH	DH	HSD
			(mm)	(mm)	(mm)	
H860N1	1	M2.2	7.5	5.70	3.5	8IP
H860N2	2	M2.5	9.0	7.00	4.1	10IP
H860N3	3	M3.0	10.5	8.00	4.9	15IP
H860N4	4	M3.5	11.5	8.80	5.5	15IP
H860N5	5	M4.0	12.5	9.50	6.0	20IP
H860N6	6	M4.5	14.3	10.80	6.8	25IP
H860N7	7	M5.0	20.0	15.00	8.5	4

H861

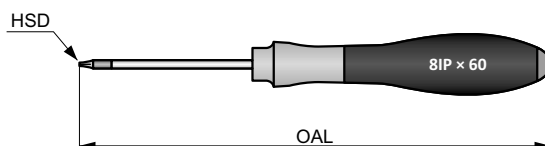
 **DORMER**



Hydra skrutrækker

Skrutetrækkere, der bruges til at stramme HYDRA-skruer.

HYDRA



Product	Nr.	HSD	OAL
			(mm)
H861N1	N1	8IP	164.0
H861N2	N2	10IP	191.0
H861N3	N3	15IP	191.0
H861N4	N4	20IP	218.0
H861N5	N5	25IP	218.0
H861N6	N6	4	186.0

CUTTING CONDITIONS CORRECTION FACTORS (BASED ON HYDRA BODY LENGTHS)

H851	Apply starting values for speed and feed with a correction factor of 1.10
H853	Apply starting values for speed and feed with a correction factor of 1.00
H855	Apply starting values for speed and feed with a correction factor of 0.95
H858	Apply starting values for speed and feed with a correction factor of 0.90
H8512	Apply starting values for speed and feed with a correction factor of 0.80

The background of the page is a complex, abstract geometric design. It features a central cluster of hexagons in various shades of orange, grey, and white. These hexagons are interconnected by a network of thin, grey lines that resemble technical drawings or circuitry. Scattered throughout the design are small circles, dots, and arrowheads, some pointing in different directions. The overall aesthetic is clean, modern, and technical, suggesting a focus on engineering or technology.

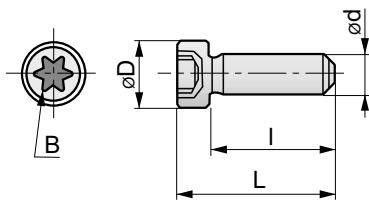
HYDRA

TECHNICAL INFORMATION

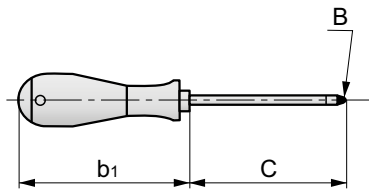
Torque table

					Torque Values Nm (Metric System)	Torque Values in/lbs (Inch System)
H860	H861	Hydra Head ø Metric Range	Hydra Head ø Fractional Range	Hydra Head ø Decimal Size Range (min. / max.)		
H860N1	H861N1	12.0 mm – 15.5 mm	15/32" – 39/64"	0.4688" – 0.6102"	0.75 – 0.99	6.6 – 8.8
H860N2	H861N2	15.6 mm – 18.5 mm	5/8" – 23/32"	0.6142" – 0.7283"	0.93 – 1.24	8.2 – 11.0
H860N3	H861N3	18.6 mm – 21.5 mm	47/64" – 27/32"	0.7323" – 0.8465"	1.84 – 2.44	16.3 – 21.6
H860N4	H861N3	22.0 mm – 24.5 mm	55/64" – 31/32"	0.8594" – 0.9688"	2.73 – 3.72	24.2 – 32.9
H860N5	H861N4	25.0 mm – 27.5 mm	63/64" – 1-3/32"	0.9843" – 1.0938"	4.14 – 5.52	36.6 – 48.8
H860N6	H861N5	28.0 mm – 33.5 mm	1-7/64" – 1-19/64"	1.1024" – 1.3189"	4.97 – 6.63	44.0 – 58.7
H860N7	H861N6	34.0 mm – 42.0 mm	1-11/32" – 1-5/8"	1.3386" – 1.6535"	7.2	63.7

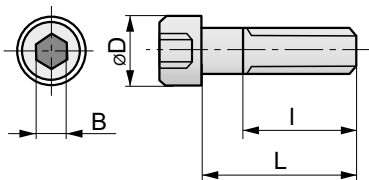
Screws and screw-driver data



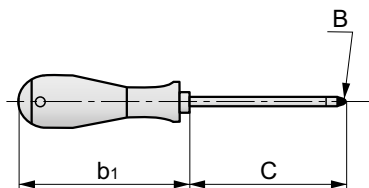
e-code	d	Pitch	L (mm)	I (mm)	D (mm)	B
H860N1	M2.2	0.45	7.5	5.7	3.5	8IP
H860N2	M2.5	0.45	9.0	7.0	4.1	10IP
H860N3	M3.0	0.50	10.5	8.0	4.9	15IP
H860N4	M3.5	0.60	11.5	8.8	5.5	15IP
H860N5	M4.0	0.70	12.5	9.5	6.0	20IP
H860N6	M4.5	0.75	14.3	10.8	6.8	25IP



e-code	B	C	b ₁
H861N1	8IP	60	104
H861N2	10IP	80	111
H861N3	15IP	80	111
H861N4	20IP	100	118
H861N5	25IP	100	118

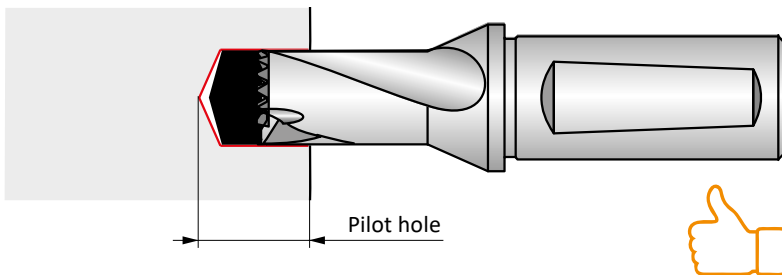


e-code	d	Pitch	L (mm)	I (mm)	D (mm)	B
H860N7	M5.0	0.8	15	full	8.5	4

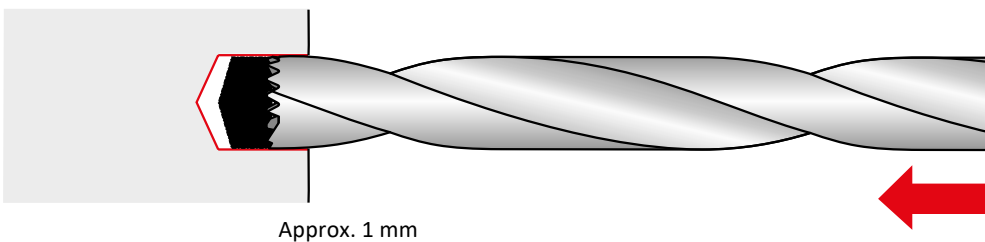


e-code	B	C	b ₁
H861N6	4	75	111

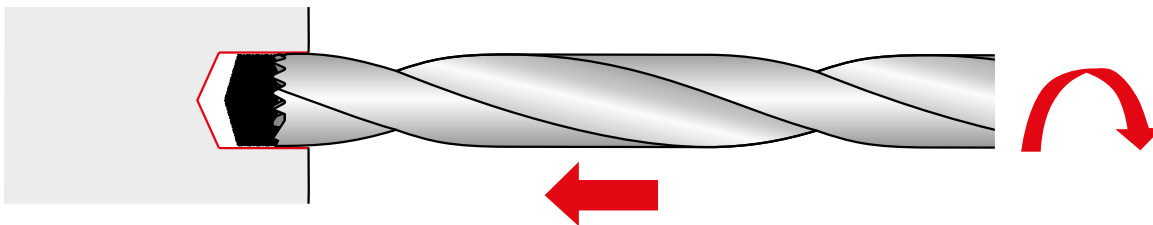
Apply special programming for 8xD and 12xD drilling



Drill a pilot hole ($1.5 \times D$ to $3 \times D$ depth) with the same HYDRA head diameter (if needed check the runout of the drill max. ± 0.05 mm).



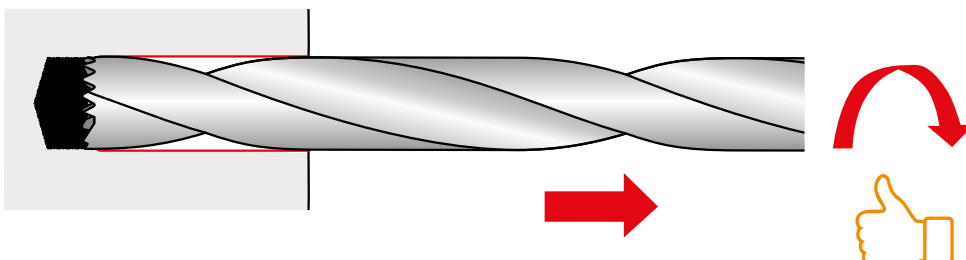
Enter the pilot hole with the 8xD or 12xD Body running a maximum of 500 rpm, to approximately 1mm above the pre-drilled pilot hole depth.



Start coolant flow and increase the rotational speed up to the recommended RPM.

Note: Apply a short dwell time don't start the feed before recommended RPM is reached.

Drill without pecking to the required depth.



When the required depth is reached, retract the drill by approximately 0.1 mm to 0.5 mm and reduce to 500 rpm followed by a complete retraction with normal feed. **Note: retracting the drill with a higher spindle speed may cause a shoulder damage from run out or destroy the hole surface and tolerance.**

Drilling hints & tips with the hydra drill**Coolants**

For maximum chip evacuation and tool performance, coolant use is recommended. Emulsion coolant concentration of 6 – 8% is recommended for most applications, with a coolant pressure of 20 bar (290 PSI) or higher. For high strength steel, stainless steels and tougher drilling applications, use a higher concentration of 10 – 12%. In these applications, particularly in stainless steels, it is recommended to use the maximum coolant pressure on the machine. The Hydra-drill coolant holes provide improved web strength and reduce heat at the cutting edges for increased productivity and longer tool life.

Holders

Always use tool holders and collets that provide good concentricity

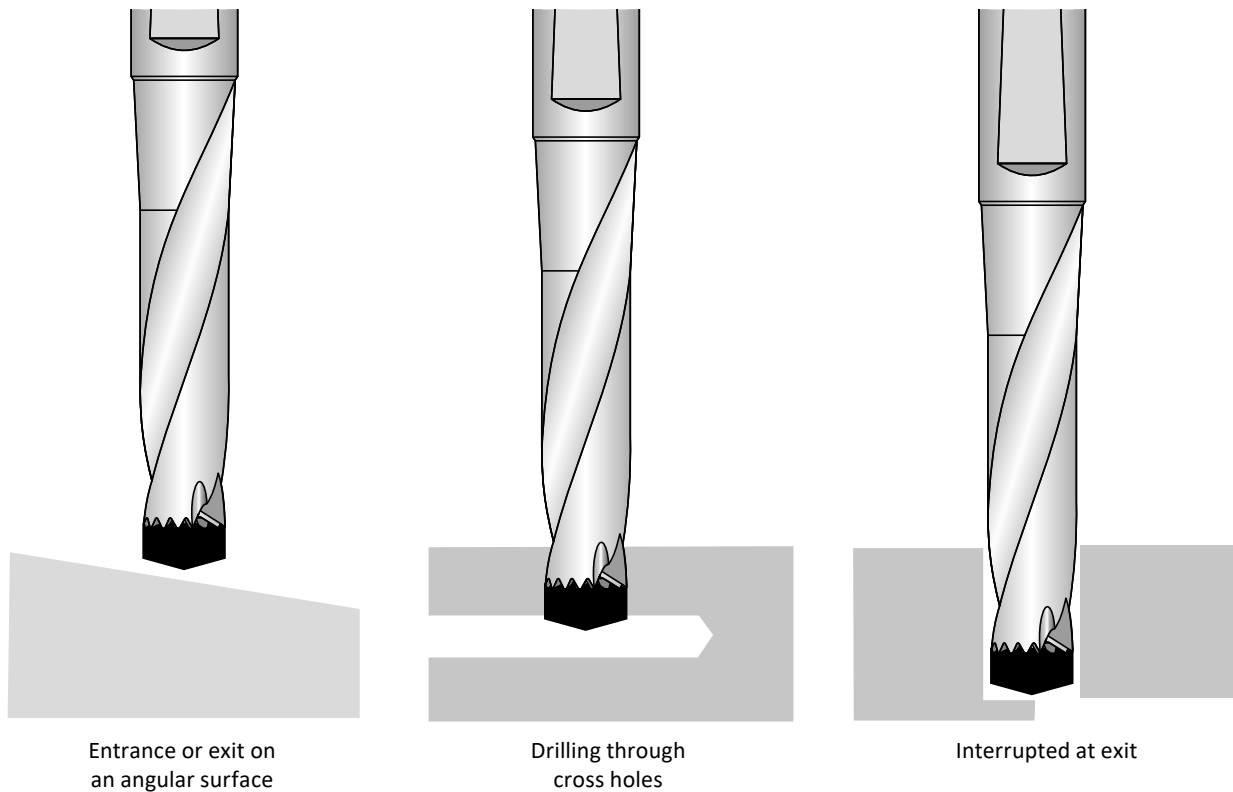
between the drill and the machine spindle. Use a positive stop to prevent the tool from backing up into the holder. Radial runout in the tool assembly must be accurately checked and maintained.

Workpiece

A secure and rigid workpiece will minimise deflection, and allow for better accuracy and true position of the hole.

Feeds

It is important not to underfeed the drill which will cause it to dwell and dull. This is particularly true in work hardening materials. Feed rates should be high enough for proper chip formation.



In these drilling scenarios, reducing feed rate to 1/3 (33%) is generally recommended. Drilling into an entry angle of more than 10° is NOT recommended – surface should be milled flat first.

GENERAL – TECHNICAL INFO

	Grade	Hardness (HV10)	C %	W %	Mo %	Cr %	V %	Co %	Tool Material
HSS	M2	810 – 850	0.9	6.4	5.0	4.2	1.8	–	HSS

Properties	HSS materials	Carbide materials	K10/30F (often used for solid tools)
Hardness (HV30)	800 – 950	1300 – 1800	1600
Density (g/cm ³)	8.0 – 9.0	7.2 – 15	14.45
Compressive strength (N/mm ²)	3000 – 4000	3000 – 8000	6250
Flexural strength, (bending) (N/mm ²)	2500 – 4000	1000 – 4700	4300
Heat resistance (°C)	550	1000	900
E-module (KN/mm ²)	260 – 300	460 – 630	580
Grain size (µm)	–	0.2 – 10	0.8

The combination of hard particle (WC) and binder metal (Co) give the following changes in characteristics.

Characteristic	Higher WC content give	Higher Co content give
Hardness	Higher hardness	Lower hardness
Compressive strength (CS)	Higher CS	Lower CS
Bending strength (BS)	Lower BS	Higher BS

Grain size also influences the material properties. Small grain sizes means higher hardness and coarse grains give more toughness.

GENERAL – TECHNICAL INFO

Industry Standard tolerances For Shafts & Holes

Tolerance values are shown in Microns (μm)

Formula for Microns ...1 $\mu\text{m} = 0.001 \text{ mm} / 0.000039''$

Tolerance	Diameter (mm)							
	> 1 ≤ 3	> 3 ≤ 6	> 6 ≤ 10	> 10 ≤ 18	> 18 ≤ 30	> 30 ≤ 50	> 50 ≤ 80	> 80 ≤ 120
	Diameter (inch)							
	> 0.039" ≤ 0.118"	> 0.118" ≤ 0.236"	> 0.236" ≤ 0.394"	> 0.394" ≤ 0.709"	> 0.709" ≤ 1.181"	> 1.181" ≤ 1.968"	> 1.968" ≤ 3.149"	> 3.149" ≤ 4.724"
	Tolerance values (μm)							
e8	-14 / -28	-20 / -38	-25 / -47	-32 / -59	-40 / -73	-50 / -89	-60 / -106	-72 / -126
f6	-6 / -12	-10 / -18	-13 / -22	-16 / -27	-20 / -33	-25 / -41	-30 / -49	-36 / -58
f7	-6 / -16	-10 / -22	-13 / -28	-16 / -34	-20 / -41	-25 / -50	-30 / -60	-36 / -71
h6	0 / -6	0 / -8	0 / -9	0 / -11	0 / -13	0 / -16	0 / -19	0 / -22
h7	0 / -10	0 / -12	0 / -15	0 / -18	0 / -21	0 / -25	0 / -30	0 / -35
h8	0 / -14	0 / -18	0 / -22	0 / -27	0 / -33	0 / -39	0 / -46	0 / -54
h9	0 / -25	0 / -30	0 / -36	0 / -43	0 / -52	0 / -62	0 / -74	0 / -87
h10	0 / -40	0 / -48	0 / -58	0 / -70	0 / -84	0 / -100	0 / -120	0 / -140
h11	0 / -60	0 / -75	0 / -90	0 / -110	0 / -130	0 / -160	0 / -190	0 / -220
h12	0 / -100	0 / -120	0 / -150	0 / -180	0 / -210	0 / -250	0 / -300	0 / -350
k10	+ 40 / 0	+ 48 / 0	+ 58 / 0	+ 70 / 0	+ 84 / 0	+ 100 / 0	+ 120 / 0	+ 140 / 0
k12	+ 100 / 0	+ 120 / 0	+ 150 / 0	+ 180 / 0	+ 210 / 0	+ 250 / 0	+ 300 / 0	+ 350 / 0
m7	+ 2 / + 12	+ 4 / + 16	+ 6 / + 21	+ 7 / + 25	+ 8 / + 29	+ 9 / + 34	+ 11 / + 41	+ 13 / + 48
js14	+ / -125	+ / -150	+ / -180	+ / -215	+ / -260	+ / -310	+ / -370	+ / -435
js16	+ / -300	+ / -375	+ / -450	+ / -550	+ / -650	+ / -800	+ / -950	+ / -1100
H7	+ 10 / 0	+ 12 / 0	+ 15 / 0	+ 18 / 0	+ 21 / 0	+ 25 / 0	+ 30 / 0	+ 35 / 0
H8	+ 14 / 0	+ 18 / 0	+ 22 / 0	+ 27 / 0	+ 33 / 0	+ 39 / 0	+ 46 / 0	+ 54 / 0
H9	+ 25 / 0	+ 30 / 0	+ 36 / 0	+ 43 / 0	+ 52 / 0	+ 62 / 0	+ 74 / 0	+ 87 / 0
H12	+ 100 / 0	+ 120 / 0	+ 150 / 0	+ 180 / 0	+ 210 / 0	+ 250 / 0	+ 300 / 0	+ 350 / 0
P9	-6 / -31	-12 / -42	-15 / -51	-18 / -61	-22 / -74	-26 / -86	-32 / -106	-37 / -124
S7	-13 / -22	-15 / -27	-17 / -32	-21 / -39	-27 / -48	-34 / -59	-42 / -72	-58 / -93

GENERAL – TECHNICAL INFO

Table of Cutting Speeds

Vc																
m/min.	5	8	10	15	20	25	30	40	50	60	70	80	90	100	110	150
SFM (feet/min.)	16	26	32	50	66	82	98	130	165	197	230	262	296	330	362	495
Ø		RPM														
mm	inch															
1.00	–	1592	2546	3183	4775	6366	7958	9549	12732	15916	19099	22282	25465	28648	31831	47747
1.50	–	1061	1698	2122	3183	4244	5305	6366	8488	10610	12732	14854	16977	19099	21221	31831
2.00	–	796	1273	1592	2387	3183	3979	4775	6366	7958	9549	11141	12732	14324	15916	23873
2.50	–	637	1019	1273	1910	2546	3183	3820	5093	6366	7639	8913	10186	11459	12732	19099
3.00	–	531	849	1061	1592	2122	2653	3183	4244	5305	6366	7427	8488	9549	10610	15916
3.18	1/8	500	801	1001	1501	2002	2502	3003	4004	5005	6006	7007	8008	9009	10010	15011
3.50	–	455	728	909	1364	1819	2274	2728	3638	4547	5457	6366	7276	8185	9095	13642
4.00	–	398	637	796	1194	1592	1989	2387	3183	3979	4775	5570	6366	7162	7958	11937
4.50	–	354	566	707	1061	1415	1768	2122	2829	3537	4244	4951	5659	6366	7074	10610
4.76	3/16	334	535	669	1003	1337	1672	2006	2675	3344	4012	4681	5350	6018	6687	10031
5.00	–	318	509	637	955	1273	1592	1910	2546	3183	3820	4456	5093	5730	6366	9549
6.00	–	265	424	531	796	1061	1326	1592	2122	2653	3183	3714	4244	4775	5305	7958
6.35	1/4	251	401	501	752	1003	1253	1504	2005	2506	3008	3509	4010	4511	5013	7519
7.00	–	227	364	455	682	909	1137	1364	1819	2274	2728	3183	3638	4093	4547	6821
7.94	5/16	200	321	401	601	802	1002	1203	1604	2004	2405	2806	3207	3608	4009	6013
8.00	–	199	318	398	597	796	995	1194	1592	1989	2387	2785	3183	3581	3979	5968
9.00	–	177	283	354	531	707	884	1061	1415	1768	2122	2476	2829	3183	3537	5305
9.53	3/8	167	267	334	501	668	835	1002	1336	1670	2004	2338	2672	3006	3340	5010
10.00		159	255	318	477	637	796	955	1273	1592	1910	2228	2546	2865	3183	4775
11.11	7/16	143	229	287	430	573	716	860	1146	1433	1719	2006	2292	2579	2865	4298
12.00		133	212	265	398	531	663	796	1061	1326	1592	1857	2122	2387	2653	3979
12.70	1/2	125	201	251	376	501	627	752	1003	1253	1504	1754	2005	2256	2506	3760
14.00		114	182	227	341	455	568	682	909	1137	1364	1592	1819	2046	2274	3410
14.29	9/16	111	178	223	334	446	557	668	891	1114	1337	1559	1782	2005	2228	3341
15.00	–	106	170	212	318	424	531	637	849	1061	1273	1485	1698	1910	2122	3183
15.88	5/8	100	160	200	301	401	501	601	802	1002	1203	1403	1604	1804	2004	3007
16.00	–	99	159	199	298	398	497	597	796	995	1194	1393	1592	1790	1989	2984
17.46	11/16	91	146	182	273	365	456	547	729	912	1094	1276	1458	1641	1823	2735
18.00	–	88	141	177	265	354	442	531	707	884	1061	1238	1415	1592	1768	2653
19.05	3/4	84	134	167	251	334	418	501	668	835	1003	1170	1337	1504	1671	2506
20.00	–	80	127	159	239	318	398	477	637	796	955	1114	1273	1432	1592	2387
24.00	–	66	106	133	199	265	332	398	531	663	796	928	1061	1194	1326	1989
25.00	–	64	102	127	191	255	318	382	509	637	764	891	1019	1146	1273	1910
27.00	–	59	94	118	177	236	295	354	472	589	707	825	943	1061	1179	1768
30.00	–	53	85	106	159	212	265	318	424	531	637	743	849	955	1061	1592
32.00	–	50	80	99	149	199	249	298	398	497	597	696	796	895	995	1492
36.00	–	44	71	88	133	177	221	265	354	442	531	619	707	796	884	1326
40.00	–	40	64	80	119	159	199	239	318	398	477	557	637	716	796	1194
50.00	–	32	51	64	95	127	159	191	255	318	382	446	509	573	637	955

GENERAL – TECHNICAL INFO

Hardness and Tensile Strength

HV	HRC	HB	Tensile Strength	
Vickers	Rockwell	Brinell	(N/mm ²)	(Tons/sq. in.)
940	68	—	—	—
900	67	—	—	—
864	66	—	—	—
829	65	—	—	—
800	64	—	—	—
773	63	—	—	—
745	62	—	—	—
720	61	—	—	—
698	60	—	—	—
675	59	—	—	—
655	58	—	2200	142
650	—	618	2180	141
640	—	608	2145	139
639	57	607	2140	138
630	—	599	2105	136
620	—	589	2070	134
615	56	584	2050	133
610	—	580	2030	131
600	—	570	1995	129
596	55	567	1980	128
590	—	561	1955	126
580	—	551	1920	124
578	54	549	1910	124
570	—	542	1880	122
560	53	532	1845	119
550	—	523	1810	117
544	52	517	1790	116
540	—	513	1775	115
530	—	504	1740	113
527	51	501	1730	112
520	—	494	1700	110
514	50	488	1680	109
510	—	485	1665	108
500	—	475	1630	105
497	49	472	1620	105
490	—	466	1595	103
484	48	460	1570	102
480	—	456	1555	101
473	47	449	1530	99
470	—	447	1520	98
460	—	437	1485	96
458	46	435	1480	96
450	—	428	1455	94
446	45	424	1440	93
440	—	418	1420	92

HV	HRC	HB	Tensile Strength	
Vickers	Rockwell	Brinell	(N/mm ²)	(Tons/sq. in.)
434	44	413	1400	91
423	43	402	1360	88
413	42	393	1330	86
403	41	383	1300	84
392	40	372	1260	82
382	39	363	1230	80
373	38	354	1200	78
364	37	346	1170	76
355	36	337	1140	74
350	—	333	1125	73
345	35	328	1110	72
340	—	323	1095	71
336	34	319	1080	70
330	—	314	1060	69
327	33	311	1050	68
320	—	304	1030	67
317	32	301	1020	66
310	31	295	995	64
302	30	287	970	63
300	—	285	965	62
295	—	280	950	61
293	29	278	940	61
290	—	276	930	60
287	28	273	920	60
285	—	271	915	59
280	27	266	900	58
275	—	261	880	57
272	26	258	870	56
270	—	257	865	56
268	25	255	860	56
265	—	252	850	55
260	24	247	835	54
255	23	242	820	53
250	22	238	800	52
245	—	233	785	51
243	21	231	780	50
240	—	228	770	50
235	—	223	755	49
230	—	219	740	48
225	—	214	720	47
220	—	209	705	46
215	—	204	690	45
210	—	199	675	44
205	—	195	660	43
200	—	190	640	41



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INDEXABLE DRILLS

OVERSICHT OVER VENDESKÆRSBOR

Bordybde	2×D	3×D	4×D	5×D	XPET..AP	SCET..-UD	XPET..AP-SD	SCET..-SD
Billede								
Kølemiddel					–	–	–	–
	313	315	318	320	324	323	324	323
Bortype	802D	803D	804D	805D	–	–	–	–
Bortolerance	± 0.05	± 0.05	± 0.05	± 0.05	–	–	–	–
Hultolerance *	0/+0.2	0/+0.3	0/+0.4	0/+0.5	–	–	–	–
Overfladefinish *	R _a 2–6 µm	R _a 2–6 µm	R _a 2–6 µm	R _a 2–6 µm	–	–	–	–
Diameterområde	15.0–40.0	15.0–58.0	17.0–58.0	19.0–31.0	–	–	–	–
Anvendelsesområder	P1				■	■	■	■
	P2				■	■	■	■
	P3				■	■	■	■
	P4				■	■	■	■
	M1						■	■
	M2						■	■
	M3						■	■
	M4						■	■
	K1				▣	■	▣	▣
	K2				▣	■	▣	▣
	K3				▣	■	▣	▣
	K4				▣	■	▣	▣
	K5				▣	■	▣	▣
	S1						▣	▣
	S2						▣	▣
	S3						▣	▣
	S4						▣	▣

* Tolerancen for boret hul og overfladefinish afhænger i vidt omfang af maskinbearbejdningsforholdene

INDEXABLE DRILLS – GRADES NAVIGATOR

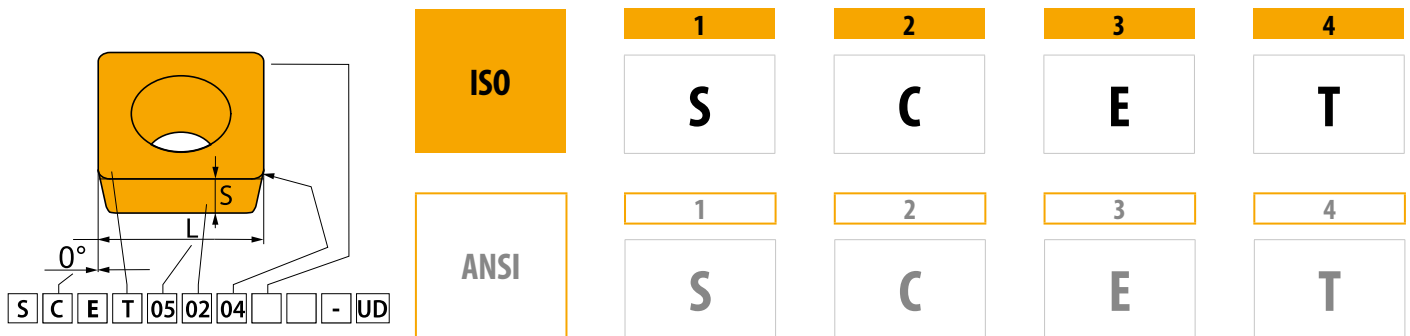
Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
D9335	P20 - P35	■				MT-CVD		FGM	+ + +	This grade is recommended for the peripheral insert in indexable drills, it is more suited to higher cutting speeds and feeds.
	M15 - M30	■								
	K15 - K35	■								
	S10 - S20	■								
D8330	P20 - P35	■				PVD		submicron H	+ + +	This is a universal grade for the peripheral insert in indexable drills, it can be used for most materials and stands out for its operational reliability.
	M15 - M30	■								
	K15 - K35	■								
	S10 - S20	■								
D8345	P30 - P50	■				PVD		submicron H	+ + +	This grade is a universal grade for the central insert in indexable drills, it is an extremely tough suited to most materials.
	M20 - M40	■								
	K30 - K40	■								
	S20 - S30	■								

Substrat	
submicron H	WC-Co-baseret substrat fintkornet (< 1 µm)
FGM	Substrat med funktionel klassificering

Coating	
MT-CVD	Kemikaliemetode til belægning ved mellemhøj temperatur
PVD	Fysisk metode til coating ved lav temperatur

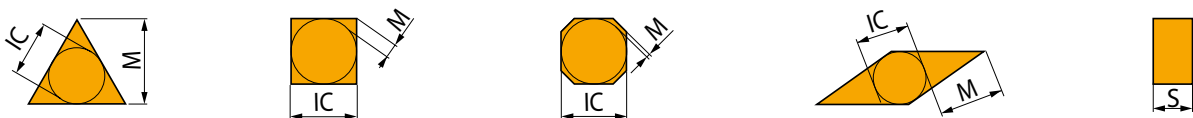
Benefits of cutting fluid	
+ + +	Use of coolant is essential

VENDESKÆR – ISO KODEBETEGNELSE



1				2		4	
Skærform				Frivinkel for skær		Skærtype	
H	O	P	R	A	B	N	
S	T	C	D	C	D	R	
E	M	V	W	E	F	F	
L	A	B	K	G	N	A	
				P	O	M	
						G	
						W	
						T	
						Q	
						U	
						B	
						H	
						C	
						J	
						X	Speciel

3				3		
Tolerancer						
	(mm)			(")		
	M (±)	S (±)	IC (±)	M (±)	S (±)	IC (±)
A	0.005	0.025	0.025	.0002"	.001"	.0010"
F	0.005	0.025	0.013	.0002"	.001"	.0005"
C	0.013	0.025	0.025	.0005"	.001"	.0010"
H	0.013	0.025	0.013	.0005"	.001"	.0005"
E	0.025	0.025	0.025	.0010"	.001"	.0010"
G	0.025	0.130	0.025	.0010"	.005"	.0010"
J	0.005	0.025	0.05 – 0.13	.0002"	.001"	.002 – 0.005"
K	0.013	0.025	0.05 – 0.13	.0005"	.001"	.002 – 0.005"
L	0.025	0.025	0.05 – 0.13	.0010"	.001"	.002 – 0.005"
M	0.08 – 0.18	0.130	0.05 – 0.13	.003 – 0.007"	.005"	.002 – 0.005"
N	0.08 – 0.18	0.025	0.05 – 0.13	.003 – 0.007"	.001"	.002 – 0.005"
U	0.05 – 0.38	0.130	0.05 – 0.13	.005 – 0.015"	.005"	.003 – 0.010"



VENDESKÆR – ISO KODEBETEGNELSE

5	6	7	8	9	-	10
05	02	04				UD
5	6	7	8	9	-	10
1.8	1.5	1				UD

5

Skærlængde (skærstørrelse)

d = I.C.		H	O	P	S	T	C	D	E	M	V	W	R	K
(mm)	(in)													
3.97	5/32"				03	06		04			06	02		
4.76	3/16"				04	08	04	05	04	04	08	L3		
5.56	7/32"				05	09	05	06	05	05	09	03		
6.35	1/4"	03	02	04	08	11	06	07	08	08	11	04	06	
7.94	5/16"	04	03	05	07	13	08	09	06	07	13	05	07	
9.525	3/8"	05	04	07	09	16	09	11	09	09	16	06	09	16
12.7	1/2"	07	05	09	12	22	12	15	13	12	22	08	12	
15.875	5/8"	09	06	11	15	27	16	19	16	15	27	10	15	
19.05	3/4"	11	07	13	19	33	19	23	19	19	33	13	19	
25.40	1"	14	10	18	25	44	25	31	26	25	44	17	25	
31.75	1 1/4"	18	13	23	31	54	32	38	32	31	54	21	31	

6

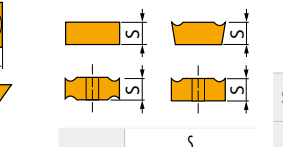
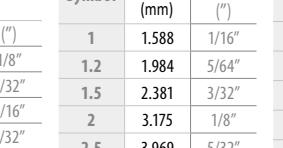
Skærtykkelse

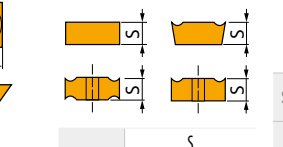
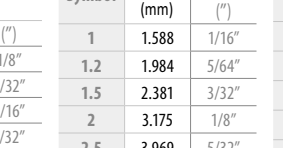
		
		
	S	
	(mm)	(")
01	1.59	1/16"
T1	1.98	5/64"
02	2.38	3/32"
03	3.18	1/8"
T3	3.97	5/32"
04	4.76	3/16"
05	5.56	7/32"
06	6.35	1/4"
07	7.94	5/16"
09	9.52	3/8"

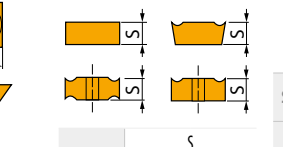
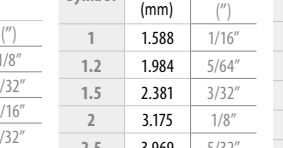
7

Næseradius

	RE		
	(mm)	(")	
00	0	0"	
02	0.2	1/128"	
04	0.4	1/64"	
08	0.8	1/32"	
12	1.2	3/64"	
16	1.6	1/16"	
24	2.4	3/32"	
32	3.2	1/8"	
Runde skær			
d = I.C.			
(")		00	
(mm)		M0	

ANSI					
5			6		
Indskrevet cirkel			Skærtykkelse		
					
Symbol	d = I.C.		Symbol	S	
	(mm)	(")		(mm)	(")
1	3.175	1/8"	1	1.588	1/16"
1.2	3.969	5/32"	1.2	1.984	5/64"
1.5	4.763	3/16"	1.5	2.381	3/32"
1.8	5.556	7/32"	2	3.175	1/8"
2	6.350	1/4"	2.5	3.969	5/32"
2.5	7.938	5/16"	3	4.763	3/16"
3	9.525	3/8"	3.5	5.556	7/32"
4	12.700	1/2"	4	6.350	1/4"
5	15.875	5/8"	5	7.938	5/16"
6	19.050	3/4"	6	9.525	3/8"
7	22.225	7/8"	7	11.113	7/16"
8	25.400	1"	8	12.700	1/2"
10	31.750	5/4"	9	14.288	9/16"
12	38.100	6/4"	10	15.875	5/8"

7			8		
Næseradius for skær			Skærdesign		
					
Symbol	RE				
	(mm)	(")			
0	0	0"			
0.2	0.099	1/256"			
0.5	0.198	1/128"			
1	0.397	1/64"			
2	0.794	1/32"			
3	1.191	3/64"			
4	1.588	1/16"			
5	1.984	5/64"			
6	2.381	3/32"			
7	2.778	7/64"			
8	3.175	1/8"			
10	3.969	5/32"			
12	4.763	3/16"			
14	5.556	7/32"			
16	6.350	1/4"			

9			10		
Tilspændingsretning			Spånbryderbetegnelse		
					
R	Tilspænding		N	Tilspænding	
L	Tilspænding			Tilspænding	

KODENØGLE FOR BOR

1	2	3		4		5		6	7
8	05	D	–	19	–	95	–	S	25

*Markering gælder for typer produceret fra 2011



Indekserbart bor *

1		2		3		4	
Værktøjstype		Omtrentlig længde		Variant		Skærediameter	
8	Vendeskærsbor	02	2 × DC	D	Bor	15.5	DC = 15.5 mm
		03	3 × DC			19	DC = 19 mm
		04	4 × DC				
		05	5 × DC				
5		6		7			
Maks. boreddybde		Skafttype		Skaftdiameter			
35	35 mm	E	Whistle Notch	25	DCON MS = 25 mm		
95	95 mm			32	DCON MS = 32 mm		
140	140 mm	S	ISO 9766	40	DCON MS = 40 mm		

802D



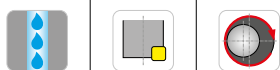
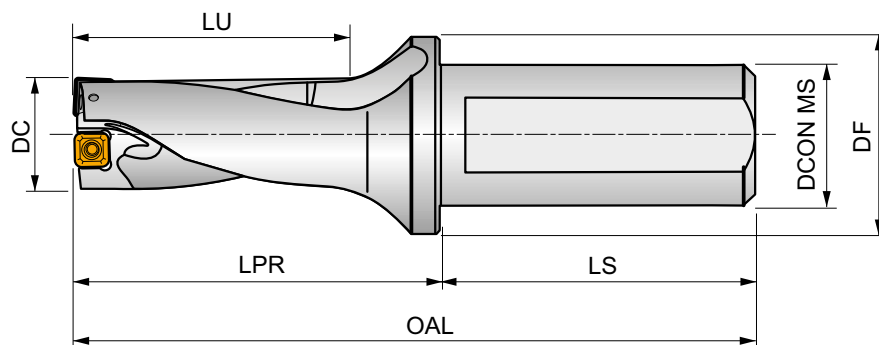
PRAMET

S



2xD 802D korthuls bor med indvendig kølevæskeindføring

Højtydende korthulsbor til boring af bund og gennemgående huller. Potentielt kryds hul, boring uden for midten, spiralformet interpolering, dybde, boring på konkave eller vinklede overflader, boring med afbrudte snit, affasning og boring. Fås fra Ø15 op til Ø40 mm i 2xD.



Product	DC	APMX	OAL	LPR	LS	LU	DCON MS	DF	$\vec{D}^-$	$\vec{D}^+$						
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)						
802D-15-30-S25	15	30.00	121	65	56	34.5	25	35	0.25	0.35	EP253253	GI300	GI313	0.30	HM001	
802D-16-32-S25	16	32.00	123	67	56	37	25	35	0.15	0.45	EP253253	GI300	GI313	0.30	HM001	
802D-17-34-S25	17	34.00	125	69	56	39.5	25	35	0.10	0.50	EP253253	GI300	GI313	0.31	HM001	
802D-18-36-S25	18	36.00	127	71	56	42	25	35	0.35	0.25	EP253253	GI301	GI314	0.31	HM002	
802D-19-38-S25	19	38.00	129	73	56	44.5	25	35	0.15	0.45	EP253253	GI301	GI314	0.32	HM002	
802D-20-40-S25	20	40.00	131	75	56	47	25	35	0.10	0.45	EP253253	GI302	GI315	0.33	HM003	
802D-21-42-S25	21	42.00	133	77	56	49.5	25	35	0.10	0.50	EP253253	GI302	GI315	0.34	HM003	
802D-22-44-S25	22	44.00	135	79	56	52	25	35	0.45	0.50	EP253253	GI303	GI316	0.35	HM004	
802D-23-46-S25	23	46.00	137	81	56	54.5	25	35	0.35	0.50	EP253253	GI304	GI317	0.36	HM005	
802D-24-48-S25	24	48.00	139	83	56	57	25	35	0.15	0.50	EP253253	GI304	GI317	0.37	HM005	
802D-25-50-S32	25	50.00	145	85	60	57	32	42	0.15	0.50	EP324058	GI304	GI317	0.57	HM005	
802D-26-52-S32	26	52.00	147	87	60	59.5	32	42	0.10	0.50	EP324058	GI304	GI317	0.58	HM005	
802D-27-54-S32	27	54.00	149	89	60	62	32	42	0.50	0.30	EP324058	GI305	GI318	0.59	HM006	
802D-28-56-S32	28	56.00	151	91	60	64.5	32	42	0.30	0.50	EP324058	GI306	GI319	0.61	HM007	
802D-29-58-S32	29	58.00	153	93	60	67	32	42	0.20	0.50	EP324058	GI306	GI319	0.62	HM007	
802D-30-60-S32	30	60.00	155	95	60	69.5	32	42	0.15	0.50	EP324058	GI306	GI319	0.67	HM007	
802D-32-64-S32	32	64.00	159	99	60	70	32	42	0.50	0.35	EP324058	GI307	GI320	0.68	HM008	
802D-32-64-S40	32	64.00	167	99	68	70	40	50	0.50	0.35	—	GI307	GI320	1.03	HM008	
802D-34-68-S32	34	68.00	163	103	60	75	32	42	0.25	0.50	EP324058	GI307	GI320	0.73	HM008	
802D-34-68-S40	34	68.00	171	103	68	75	40	50	0.25	0.50	—	GI307	GI320	1.07	HM008	
802D-36-72-S32	36	72.00	167	107	60	80	32	42	0.10	0.50	EP324058	GI308	GI321	0.76	HM009	
802D-36-72-S40	36	72.00	173	105	68	77.5	40	50	0.10	0.50	—	GI308	GI321	1.11	HM009	
802D-38-76-S32	38	76.00	171	111	60	85	32	42	0.50	0.50	EP324058	GI308	GI321	0.83	HM009	
802D-38-76-S40	38	76.00	179	111	68	85	40	50	0.50	0.50	—	GI308	GI321	1.17	HM009	
802D-40-80-S32	40	80.00	175	115	60	90	32	42	0.20	0.50	EP324058	GI309	GI322	0.91	HM009	
802D-40-80-S40	40	80.00	183	115	68	90	40	50	0.20	0.50	—	GI309	GI322	1.25	HM009	

		
GI300	XPET 0502AP	SCET 050204-UD
GI301	XPET 0602AP	SCET 050204-UD
GI302	XPET 0602AP	SCET 060204-UD
GI303	XPET 0703AP	SCET 060204-UD
GI304	XPET 0703AP	SCET 070308-UD
GI305	XPET 0903AP	SCET 070308-UD
GI306	XPET 0903AP	SCET 09T308-UD
GI307	XPET 11T3AP	SCET 09T308-UD
GI308	XPET 11T3AP	SCET 120408-UD
GI309	XPET 12T3AP	SCET 120408-UD
GI313	XPET 0502AP-SD	SCET 050204-SD
GI314	XPET 0602AP-SD	SCET 050204-SD
GI315	XPET 0602AP-SD	SCET 060204-SD
GI316	XPET 0703AP-SD	SCET 060204-SD
GI317	XPET 0703AP-SD	SCET 070308-SD
GI318	XPET 0903AP-SD	SCET 070308-SD
GI319	XPET 0903AP-SD	SCET 09T308-SD
GI320	XPET 11T3AP-SD	SCET 09T308-SD
GI321	XPET 11T3AP-SD	SCET 120408-SD
GI322	XPET 12T3AP-SD	SCET 120408-SD

					
HM001	US 2245-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM002	US 2205-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM003	US 2205-T07P	0.9	US 2205-T07P	0.9	FLAG T07P
HM004	US 2506-T07P	1.2	US 2506-T07P	1.2	FLAG T07P
HM005	US 2507-T08P	1.2	US 3007-T08P	2.0	FLAG T08P
HM006	US 3007-T09P	2.0	US 3007-T09P	2.0	FLAG T09P
HM007	US 3007-T09P	2.0	US 3009-T09P	2.0	FLAG T09P
HM008	US 3510-T15P	3.0	US 3508-T15P	3.0	FLAG T15P
HM009	US 3510-T15P	3.0	US 5012-T15P	5.0	FLAG T15P

803D

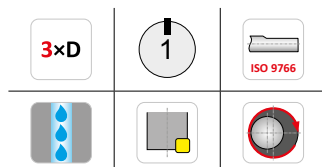
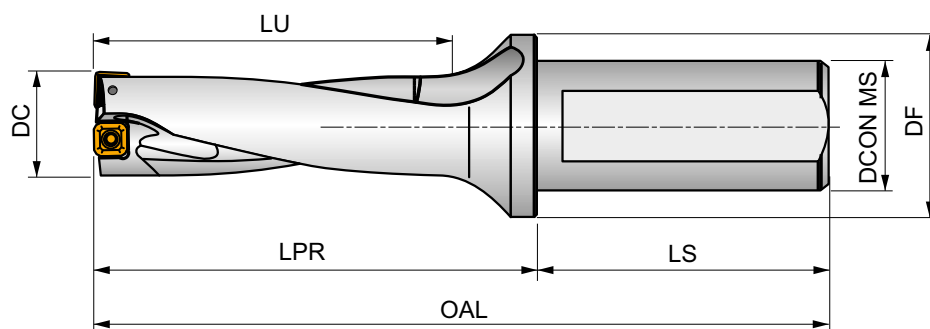


PRAMET

S

**3xD 803D korthuls bor med indvendig kølevæskeindføring**

Højtstående korthulsbor til boring af bund og gennemgående huller. Potentielt kryds hul, boring uden for midten, spiralformet interpolering, dybde, boring på konkave eller vinklede overflader, boring med afbrudte snit, affasning og boring. Fås fra Ø15 op til Ø58 mm i 3xD.



Product	DC	APMX	OAL	LPR	LS	LU	DCON MS	DF	$\vec{D}$	$\vec{D}^+$				kg	
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)					
803D-15-45-S25	15	45.00	136	80	56	49.5	25	35	0.25	0.35	EP253253	GI300	GI313	0.31	HM001
803D-15,5-46,5-S25	15.5	47.00	137.5	81.5	56	51.2	25	35	0.30	0.35	EP253253	GI300	GI313	0.31	HM001
803D-16-48-S25	16	48.00	139	83	56	53	25	35	0.15	0.45	EP253253	GI300	GI313	0.32	HM001
803D-16,5-49,5-S25	16.5	50.00	140.5	84.5	56	54.7	25	35	0.15	0.40	EP253253	GI300	GI313	0.32	HM001
803D-17-51-S25	17	51.00	142	86	56	56.5	25	35	0.10	0.50	EP253253	GI300	GI313	0.32	HM001
803D-17,5-52,5-S25	17.5	53.00	143.5	87.5	56	58.2	25	35	0.50	0.50	EP253253	GI301	GI314	0.32	HM002
803D-18-54-S25	18	54.00	145	89	56	60	25	35	0.35	0.25	EP253253	GI301	GI314	0.33	HM002
803D-18,5-55,5-S25	18.5	56.00	146.5	90.5	56	61.2	25	35	0.35	0.25	EP253253	GI301	GI314	0.34	HM002
803D-19-57-S25	19	57.00	148	92	56	63.5	25	35	0.15	0.45	EP253253	GI301	GI314	0.34	HM002
803D-19,5-58,5-S25	19.5	59.00	149.5	93.5	56	63.7	25	35	0.25	0.40	EP253253	GI302	GI315	0.34	HM003
803D-20-60-S25	20	60.00	151	95	56	67	25	35	0.10	0.45	EP253253	GI302	GI315	0.35	HM003
803D-20,5-61,5-S25	20.5	62.00	152.5	96.5	56	67.2	25	35	0.10	0.50	EP253253	GI302	GI315	0.36	HM003
803D-21-63-S25	21	63.00	154	98	56	70.5	25	35	0.10	0.50	EP253253	GI302	GI315	0.36	HM003
803D-21,5-64,5-S25	21.5	65.00	155.5	99.5	56	70.8	25	35	0.35	0.50	EP253253	GI303	GI316	0.37	HM004
803D-22-66-S25	22	66.00	157	101	56	74	25	35	0.45	0.50	EP253253	GI303	GI316	0.38	HM004
803D-22,5-67,5-S25	22.5	68.00	158.5	102.5	56	74.3	25	35	0.35	0.50	EP253253	GI304	GI317	0.39	HM005
803D-23-69-S25	23	69.00	160	104	56	77.5	25	35	0.35	0.50	EP253253	GI304	GI317	0.40	HM005
803D-23,5-70,5-S25	23.5	71.00	161.5	105.5	56	77.6	25	35	0.10	0.50	EP253253	GI304	GI317	0.40	HM005
803D-24-72-S25	24	72.00	163	107	56	81	25	35	0.15	0.50	EP253253	GI304	GI317	0.41	HM005
803D-24,5-73,5-S25	24.5	74.00	168.5	108.5	60	78.7	25	35	0.10	0.50	EP253253	GI304	GI317	0.42	HM005
803D-25-75-S32	25	75.00	170	110	60	82	32	42	0.15	0.50	EP324058	GI304	GI317	0.62	HM005
803D-25,5-76,5-S32	25.5	77.00	171.5	111.5	60	82.2	32	42	0.50	0.10	EP324058	GI304	GI317	0.63	HM005
803D-26-78-S32	26	78.00	173	113	60	85.5	32	42	0.10	0.50	EP324058	GI304	GI317	0.64	HM005
803D-26,5-79,5-S32	26.5	80.00	174.5	114.5	60	85.7	32	42	0.50	0.10	EP324058	GI305	GI318	0.65	HM006
803D-27-81-S32	27	81.00	176	116	60	89	32	42	0.50	0.30	EP324058	GI305	GI318	0.65	HM006
803D-28-84-S32	28	84.00	179	119	60	92.5	32	42	0.30	0.50	EP324058	GI306	GI319	0.68	HM007
803D-29-87-S32	29	87.00	182	122	60	96	32	42	0.20	0.50	EP324058	GI306	GI319	0.70	HM007

Product	DC	APMX	OAL	LPR	LS	LU	DCON MS	DF	$\vec{D}^-$	$\vec{D}^+$					
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)					
803D-30-90-S32	30	90.00	185	125	60	99.5	32	42	0.15	0.50	EP324058	GI306	GI319	0.73	HM007
803D-31-93-S32	31	93.00	188	128	60	103	32	42	0.15	0.50	EP324058	GI306	GI319	0.76	HM007
803D-32-96-S32	32	96.00	191	131	60	102	32	42	0.50	0.30	EP324058	GI307	GI320	0.79	HM008
803D-32-96-S40	32	96.00	199	131	68	102	40	50	0.50	0.30	—	GI307	GI320	1.14	HM008
803D-33-99-S32	33	99.00	194	134	60	105.5	32	42	0.50	0.50	EP324058	GI307	GI320	0.83	HM008
803D-33-99-S40	33	99.00	202	134	68	105.5	40	50	0.50	0.50	—	GI307	GI320	1.18	HM008
803D-34-102-S32	34	102.00	197	137	60	109	32	42	0.25	0.50	EP324058	GI307	GI320	0.86	HM008
803D-34-102-S40	34	102.00	205	137	68	109	40	50	0.25	0.50	—	GI307	GI320	1.12	HM008
803D-35-105-S32	35	105.00	200	140	60	112.5	32	42	0.25	0.50	EP324058	GI308	GI321	0.90	HM009
803D-35-105-S40	35	105.00	208	140	68	112.5	40	50	0.25	0.50	—	GI308	GI321	1.24	HM009
803D-36-108-S32	36	108.00	203	143	60	116	32	42	0.10	0.50	EP324058	GI308	GI321	0.91	HM009
803D-36-108-S40	36	108.00	211	143	68	116	40	50	0.10	0.50	—	GI308	GI321	1.25	HM009
803D-37-111-S32	37	111.00	206	146	60	119.5	32	42	0.10	0.50	EP324058	GI308	GI321	0.95	HM009
803D-37-111-S40	37	111.00	214	146	68	119.5	40	50	0.10	0.50	—	GI308	GI321	1.29	HM009
803D-38-114-S32	38	114.00	199	139	60	124.5	32	42	0.50	0.50	EP324058	GI308	GI321	1.00	HM009
803D-38-114-S40	38	114.00	217	149	68	123	40	50	0.50	0.50	—	GI308	GI321	1.34	HM009
803D-39-117-S32	38	114.00	209	149	60	123	32	42	0.40	0.50	EP324058	GI309	GI322	1.06	HM009
803D-39-117-S40	39	117.00	220	152	68	126.5	40	50	0.40	0.50	—	GI309	GI322	1.40	HM009
803D-40-120-S32	40	120.00	215	155	60	130	32	42	0.20	0.50	EP324058	GI309	GI322	1.12	HM009
803D-40-120-S40	40	120.00	223	155	68	130	40	50	0.20	0.50	—	GI309	GI322	1.46	HM009
803D-41-123-S40	41	123.00	219	149	70	133	40	50	0.20	0.50	—	GI309	GI322	1.48	HM009
803D-42-126-S40	42	126.00	221.5	152	70	136	40	50	0.15	0.50	—	GI309	GI322	1.52	HM009
803D-43-129-S40	43	129.00	224	154	70	139	40	50	0.10	0.50	—	GI309	GI322	1.58	HM009
803D-44-132-S40	44	132.00	226.5	157	70	142	40	50	0.50	0.50	—	GI310	GI323	1.63	HM010
803D-45-135-S40	45	135.00	230.5	161	70	144	40	55	0.50	0.50	—	GI311	GI324	1.73	HM010
803D-46-138-S40	46	138.00	235	165	70	148	40	55	0.50	0.50	—	GI311	GI324	1.82	HM010
803D-47-141-S40	47	141.00	237.5	168	70	151	40	55	0.50	0.50	—	GI311	GI324	1.90	HM010
803D-48-144-S40	48	144.00	240	170	70	154	40	55	0.50	0.50	—	GI311	GI324	1.98	HM010
803D-49-147-S40	49	147.00	242.5	173	70	157	40	55	0.30	0.50	—	GI311	GI324	2.06	HM010
803D-50-150-S40	50	150.00	246.5	177	70	160	40	58	0.15	0.50	—	GI311	GI324	2.18	HM010
803D-51-153-S40	51	153.00	249	179	70	163	40	58	0.15	0.50	—	GI311	GI324	2.24	HM010
803D-52-156-S40	52	156.00	251.5	182	70	166	40	58	0.50	0.50	—	GI312	GI325	2.20	HM010
803D-53-159-S40	53	159.00	254	184	70	169	40	58	0.50	0.50	—	GI312	GI325	2.29	HM010
803D-54-162-S40	54	162.00	257.5	188	70	173	40	58	0.50	0.50	—	GI312	GI325	2.39	HM010
803D-55-165-S40	55	165.00	260	190	70	176	40	58	0.50	0.50	—	GI312	GI325	2.46	HM010
803D-56-168-S40	56	168.00	264	194	70	179	40	58	0.50	0.50	—	GI312	GI325	2.59	HM010
803D-57-171-S40	57	171.00	266.5	197	70	182	40	58	0.35	0.50	—	GI312	GI325	2.70	HM010
803D-58-174-S40	58	174.00	270	200	70	186	40	58	0.15	0.50	—	GI312	GI325	2.83	HM010

		
GI300	XPET 0502AP	SCET 050204-UD
GI301	XPET 0602AP	SCET 050204-UD
GI302	XPET 0602AP	SCET 060204-UD
GI303	XPET 0703AP	SCET 060204-UD
GI304	XPET 0703AP	SCET 070308-UD
GI305	XPET 0903AP	SCET 070308-UD
GI306	XPET 0903AP	SCET 09T308-UD
GI307	XPET 11T3AP	SCET 09T308-UD
GI308	XPET 11T3AP	SCET 120408-UD
GI309	XPET 12T3AP	SCET 120408-UD
GI310	XPET 1504AP	SCET 120408-UD
GI311	XPET 1504AP	SCET 150512-UD
GI312	XPET 1904AP	SCET 150512-UD
GI313	XPET 0502AP-SD	SCET 050204-SD
GI314	XPET 0602AP-SD	SCET 050204-SD
GI315	XPET 0602AP-SD	SCET 060204-SD
GI316	XPET 0703AP-SD	SCET 060204-SD
GI317	XPET 0703AP-SD	SCET 070308-SD
GI318	XPET 0903AP-SD	SCET 070308-SD
GI319	XPET 0903AP-SD	SCET 09T308-SD

  		
GI320	XPET 11T3AP-SD	SCET 09T308-SD
GI321	XPET 11T3AP-SD	SCET 120408-SD
GI322	XPET 12T3AP-SD	SCET 120408-SD
GI323	XPET 1504AP-SD	SCET 120408-SD
GI324	XPET 1504AP-SD	SCET 150512-SD
GI325	XPET 1904AP-SD	SCET 150512-SD

     					
HM001	US 2245-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM002	US 2205-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM003	US 2205-T07P	0.9	US 2205-T07P	0.9	FLAG T07P
HM004	US 2506-T07P	1.2	US 2506-T07P	1.2	FLAG T07P
HM005	US 2507-T08P	1.2	US 3007-T08P	2.0	FLAG T08P
HM006	US 3007-T09P	2.0	US 3007-T09P	2.0	FLAG T09P
HM007	US 3007-T09P	2.0	US 3009-T09P	2.0	FLAG T09P
HM008	US 3510-T15P	3.0	US 3508-T15P	3.0	FLAG T15P
HM009	US 3510-T15P	3.0	US 5012-T15P	5.0	FLAG T15P
HM010	US 4011-T15P	3.5	US 5012-T15P	5.0	FLAG T15P

804D



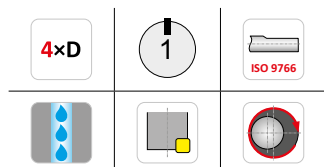
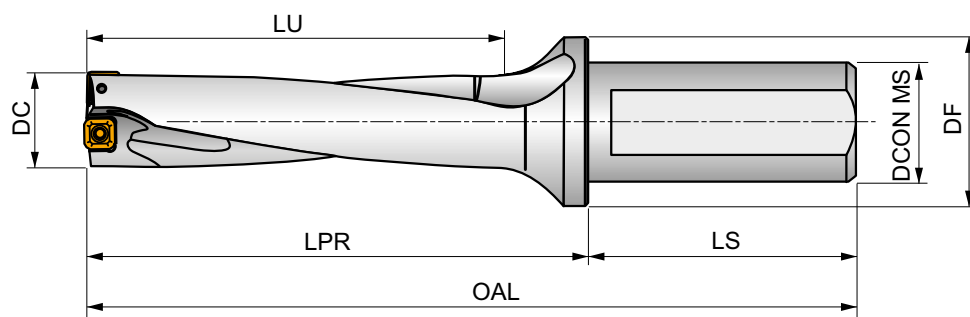
PRAMET

S



4xD 804D korthuls bor med indvendig kølevæskeindføring

Højtydende korthulsbor til boring af bund og gennemgående huller. Potentielt kryds hul, boring uden for midten, spiralformet interpolering, dybde, boring på konkave eller vinklede overflader, boring med afbrudte snit, affasning og boring. Fås fra Ø17 op til Ø58 mm i 4xD.



Product	DC	APMX	OAL	LPR	LS	LU	DCON MS	DF	$\vec{D}$	$\vec{D}^+$				kg	
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)					
804D-17-68-S25	17	68.00	149	93	56	73	25	35	0.10	0.50	—	GI300	GI313	0.34	HM001
804D-18-72-S25	18	72.00	153	97	56	77	25	35	0.35	0.25	—	GI301	GI314	0.35	HM002
804D-19-76-S25	19	76.00	157	101	56	81.5	25	35	0.15	0.45	—	GI301	GI314	0.36	HM002
804D-20-80-S25	20	80.00	161	105	56	85	25	35	0.10	0.45	—	GI302	GI315	0.37	HM003
804D-21-84-S25	21	84.00	165	109	56	89.5	25	35	0.10	0.50	—	GI302	GI315	0.39	HM003
804D-22-88-S25	22	88.00	169	113	56	94	25	35	0.45	0.50	—	GI303	GI316	0.41	HM004
804D-23-92-S25	23	92.00	173	117	56	98.5	25	35	0.35	0.50	—	GI304	GI317	0.44	HM005
804D-24-96-S25	24	96.00	177	121	56	103	25	35	0.15	0.50	—	GI304	GI317	0.45	HM005
804D-25-100-S32	25	100.00	185	125	60	105	32	42	0.15	0.50	—	GI304	GI317	0.67	HM005
804D-26-104-S32	26	104.00	189	129	60	109.5	32	42	0.10	0.50	—	GI304	GI317	0.70	HM005
804D-27-108-S32	27	108.00	193	133	60	114	32	42	0.50	0.30	—	GI305	GI318	0.71	HM006
804D-28-112-S32	28	112.00	197	137	60	118.5	32	42	0.30	0.50	—	GI306	GI319	0.75	HM007
804D-29-116-S32	29	116.00	201	141	60	123	32	42	0.20	0.50	—	GI306	GI319	0.78	HM007
804D-30-120-S32	30	120.00	205	145	60	127.5	32	42	0.15	0.50	—	GI306	GI319	0.82	HM007
804D-31-124-S32	31	124.00	209	149	60	132	32	42	0.15	0.50	—	GI306	GI319	0.85	HM007
804D-32-128-S32	32	128.00	213	153	60	136.5	32	42	0.50	0.30	—	GI307	GI320	0.90	HM008
804D-33-132-S32	33	132.00	217	157	60	141	32	42	0.50	0.50	—	GI307	GI320	0.95	HM008
804D-34-136-S32	34	136.00	221	161	60	145.5	32	42	0.25	0.50	—	GI307	GI320	0.99	HM008
804D-35-140-S32	35	140.00	225	165	60	149	32	42	0.25	0.50	—	GI308	GI321	1.04	HM009
804D-36-144-S32	36	144.00	229	169	60	153.5	32	42	0.10	0.50	—	GI308	GI321	1.05	HM009
804D-37-148-S32	37	148.00	233	173	60	158	32	42	0.10	0.50	—	GI308	GI321	1.11	HM009
804D-38-152-S32	38	152.00	237	177	60	162.5	32	42	0.50	0.50	—	GI308	GI321	1.18	HM009
804D-39-156-S32	39	156.00	241	181	60	167	32	42	0.40	0.50	—	GI309	GI322	1.25	HM009
804D-40-160-S32	40	160.00	245	185	60	171.5	32	42	0.20	0.50	—	GI309	GI322	1.33	HM009
804D-41-164-S40	41	164.00	259	189	70	172	40	50	0.20	0.50	—	GI309	GI322	1.68	HM009
804D-42-168-S40	42	168.00	263	193	70	176.5	40	50	0.15	0.50	—	GI309	GI322	1.76	HM009
804D-43-172-S40	43	172.00	267	197	70	181	40	50	0.10	0.50	—	GI309	GI322	1.83	HM009

Product	DC	APMX	OAL	LPR	LS	LU	D CON MS	DF							
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)					
804D-44-176-S40	44	176.00	271	201	70	185.5	40	50	0.50	0.50	—	GI310	GI323	1.91	HM010
804D-45-180-S40	45	180.00	275	205	70	187.5	40	55	0.50	0.50	—	GI311	GI324	2.02	HM010
804D-46-184-S40	46	184.00	279	209	70	192	40	55	0.50	0.50	—	GI311	GI324	2.12	HM010
804D-47-188-S40	47	188.00	283	213	70	196.5	40	55	0.50	0.50	—	GI311	GI324	2.22	HM010
804D-48-192-S40	48	192.00	287	217	70	201	40	55	0.50	0.50	—	GI311	GI324	2.33	HM010
804D-49-196-S40	49	196.00	291	221	70	205.5	40	55	0.30	0.50	—	GI311	GI324	2.45	HM010
804D-50-200-S40	50	200.00	295	225	70	208.5	40	58	0.15	0.50	—	GI311	GI324	2.58	HM010
804D-51-204-S40	51	204.00	299	229	70	213	40	58	0.15	0.50	—	GI311	GI324	2.68	HM010
804D-52-208-S40	52	208.00	303	233	70	217.5	40	58	0.50	0.50	—	GI312	GI325	2.64	HM010
804D-53-212-S40	53	212.00	307	237	70	222	40	58	0.50	0.50	—	GI312	GI325	2.76	HM010
804D-54-216-S40	54	216.00	311	241	70	226.5	40	58	0.50	0.50	—	GI312	GI325	2.90	HM010
804D-55-220-S40	55	220.00	315	245	70	231	40	58	0.50	0.50	—	GI312	GI325	3.00	HM010
804D-56-224-S40	56	224.00	319	249	70	235.5	40	58	0.50	0.50	—	GI312	GI325	3.15	HM010
804D-57-228-S40	57	228.00	323	253	70	240	40	58	0.35	0.50	—	GI312	GI325	3.30	HM010
804D-58-232-S40	58	232.00	327	257	70	244.5	40	58	0.15	0.50	—	GI312	GI325	3.46	HM010

		
GI300	XPET 0502AP	SCET 050204-UD
GI301	XPET 0602AP	SCET 050204-UD
GI302	XPET 0602AP	SCET 060204-UD
GI303	XPET 0703AP	SCET 060204-UD
GI304	XPET 0703AP	SCET 070308-UD
GI305	XPET 0903AP	SCET 070308-UD
GI306	XPET 0903AP	SCET 09T308-UD
GI307	XPET 11T3AP	SCET 09T308-UD
GI308	XPET 11T3AP	SCET 120408-UD
GI309	XPET 12T3AP	SCET 120408-UD
GI310	XPET 1504AP	SCET 120408-UD
GI311	XPET 1504AP	SCET 150512-UD
GI312	XPET 1904AP	SCET 150512-UD
GI313	XPET 0502AP-SD	SCET 050204-SD
GI314	XPET 0602AP-SD	SCET 050204-SD
GI315	XPET 0602AP-SD	SCET 060204-SD
GI316	XPET 0703AP-SD	SCET 060204-SD
GI317	XPET 0703AP-SD	SCET 070308-SD
GI318	XPET 0903AP-SD	SCET 070308-SD
GI319	XPET 0903AP-SD	SCET 09T308-SD
GI320	XPET 11T3AP-SD	SCET 09T308-SD
GI321	XPET 11T3AP-SD	SCET 120408-SD
GI322	XPET 12T3AP-SD	SCET 120408-SD
GI323	XPET 1504AP-SD	SCET 120408-SD
GI324	XPET 1504AP-SD	SCET 150512-SD
GI325	XPET 1904AP-SD	SCET 150512-SD

					
HM001	US 2245-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM002	US 2205-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM003	US 2205-T07P	0.9	US 2205-T07P	0.9	FLAG T07P
HM004	US 2506-T07P	1.2	US 2506-T07P	1.2	FLAG T07P
HM005	US 2507-T08P	1.2	US 3007-T08P	2.0	FLAG T08P
HM006	US 3007-T09P	2.0	US 3007-T09P	2.0	FLAG T09P
HM007	US 3007-T09P	2.0	US 3009-T09P	2.0	FLAG T09P
HM008	US 3510-T15P	3.0	US 3508-T15P	3.0	FLAG T15P
HM009	US 3510-T15P	3.0	US 5012-T15P	5.0	FLAG T15P
HM010	US 4011-T15P	3.5	US 5012-T15P	5.0	FLAG T15P

805D



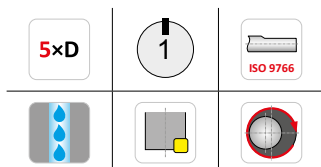
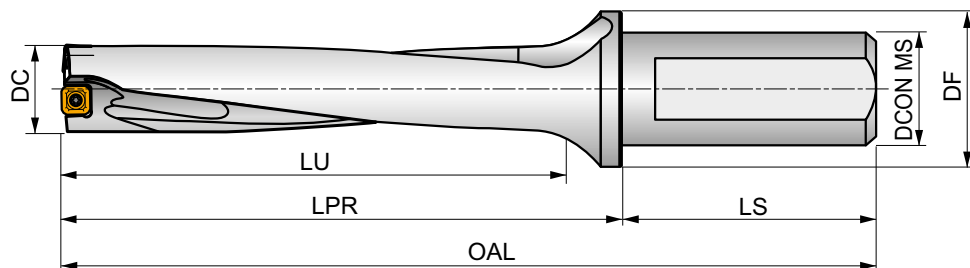
PRAMET

S



5xD 805D korthuls bor med indvendig kølevæskeindføring

Højtydende korthulsbor til boring af bund og gennemgående huller. Potentielt kryds hul, boring uden for midten, spiralformet interpolering, dybde, boring på konkave eller vinklede overflader, boring med afbrudte snit, affasning og boring. Fås fra Ø19 op til Ø31 mm i 5xD.



Product	DC (mm)	APMX (mm)	OAL (mm)	LPR (mm)	LS (mm)	LU (mm)	DCON MS (mm)	DF (mm)	$\vec{D}$ (mm)	$\vec{D}^+$ (mm)				kg	
805D-19-95-S25	19	95.00	176	120	56	100.5	25	35	0.15	0.45	—	GI301	GI314	0.38	HM002
805D-20-100-S25	20	100.00	181	125	56	105	25	35	0.10	0.45	—	GI302	GI315	0.40	HM003
805D-21-105-S25	21	105.00	186	130	56	110.5	25	35	0.10	0.50	—	GI302	GI315	0.42	HM003
805D-22-110-S25	22	110.00	191	135	56	116	25	35	0.45	0.50	—	GI303	GI316	0.45	HM004
805D-23-115-S25	23	115.00	196	140	56	121.5	25	35	0.35	0.50	—	GI304	GI317	0.48	HM005
805D-24-120-S25	24	120.00	201	145	56	127	25	35	0.15	0.50	—	GI304	GI317	0.49	HM005
805D-25-125-S32	25	125.00	210	150	60	130	32	42	0.15	0.50	—	GI304	GI317	0.72	HM005
805D-26-130-S32	26	130.00	215	155	60	135.5	32	42	0.10	0.50	—	GI304	GI317	0.75	HM005
805D-27-135-S32	27	135.00	220	160	60	141	32	42	0.50	0.30	—	GI305	GI318	0.78	HM006
805D-28-140-S32	28	140.00	225	165	60	146.5	32	42	0.30	0.50	—	GI306	GI319	0.82	HM007
805D-29-145-S32	29	145.00	230	170	60	152	32	42	0.20	0.50	—	GI306	GI319	0.86	HM007
805D-30-150-S32	30	150.00	235	175	60	157.5	32	42	0.15	0.50	—	GI306	GI319	0.90	HM007
805D-31-155-S32	31	155.00	240	180	60	163	32	42	0.15	0.50	—	GI306	GI319	0.95	HM007

GI301	XPET 0602AP	SCET 050204-UD
GI302	XPET 0602AP	SCET 060204-UD
GI303	XPET 0703AP	SCET 060204-UD
GI304	XPET 0703AP	SCET 070308-UD
GI305	XPET 0903AP	SCET 070308-UD
GI306	XPET 0903AP	SCET 09T308-UD
GI314	XPET 0602AP-SD	SCET 050204-SD
GI315	XPET 0602AP-SD	SCET 060204-SD
GI316	XPET 0703AP-SD	SCET 060204-SD
GI317	XPET 0703AP-SD	SCET 070308-SD
GI318	XPET 0903AP-SD	SCET 070308-SD

		
GI319	XPET 0903AP-SD	SCET 09T308-SD

					
HM002	US 2205-T07P	0.9	US 2245-T07P	0.9	FLAG T07P
HM003	US 2205-T07P	0.9	US 2205-T07P	0.9	FLAG T07P
HM004	US 2506-T07P	1.2	US 2506-T07P	1.2	FLAG T07P
HM005	US 2507-T08P	1.2	US 3007-T08P	2.0	FLAG T08P
HM006	US 3007-T09P	2.0	US 3007-T09P	2.0	FLAG T09P
HM007	US 3007-T09P	2.0	US 3009-T09P	2.0	FLAG T09P

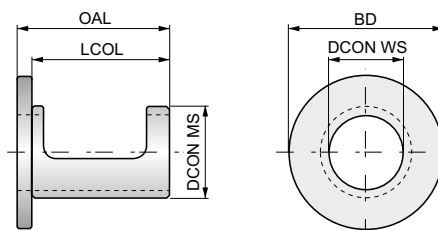
EP

PRAMET



EP - indekserbar justerings for indsatsbor

Bøsning til justering af finborediameter. Kan bruges i værktøjsholdere Ø32 eller Ø40 mm. Den udvendige borediameter justeres ved at dreje bøsningen.

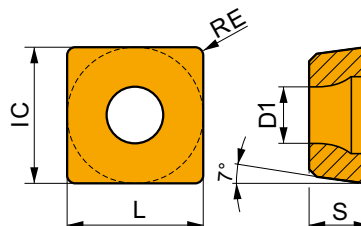


Diameterjusteringsområde er 0,4 - -0,2; centerhøjdejusteringsområde er 0,2 - -0,15.

Product	DCON WS (mm)	DCON MS (mm)	BD (mm)	OAL (mm)	LCOL (mm)	kg
EP253253	25.00	32.00	53.00	53.0	48	0.15
EP324058	32.00	40.00	58.00	58.0	53	0.20

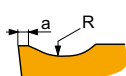
SCET

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0502	5.556	2.40	5.56	2.38
0602	6.350	2.90	6.35	2.38
0703	7.937	3.50	7.94	3.18
09T3	9.525	4.50	9.53	3.97
1204	12.700	5.60	12.70	4.76
1505	15.875	5.60	15.88	5.56



Egnethed og startværdier for skærehastighed (vc), tilførsel (f) og skæredybde (ap). Se vores app til bearbejdning af yderligere beregninger.

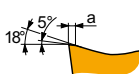
Product	RE	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)



SCET 050204-UD 0,12
SCET 060204-UD 0,15
SCET 070308-UD 0,15
SCET 09T308-UD 0,15
SCET 120408-UD 0,20
SCET 150512-UD 0,20

UD-geometri med universelt design til periferiskær.

SCET 050204-UD	D8330	0.4	165	0.08	—	—	—	—	155	0.08	—	—	—	—	—	—	—	—	—
	D9335	0.4	240	0.08	—	—	—	—	225	0.08	—	—	—	—	—	—	—	—	—
SCET 060204-UD	D8330	0.4	165	0.11	—	—	—	—	155	0.11	—	—	—	—	—	—	—	—	—
	D9335	0.4	240	0.11	—	—	—	—	225	0.11	—	—	—	—	—	—	—	—	—
SCET 070308-UD	D8330	0.8	165	0.13	—	—	—	—	155	0.13	—	—	—	—	—	—	—	—	—
	D9335	0.8	240	0.13	—	—	—	—	225	0.13	—	—	—	—	—	—	—	—	—
SCET 09T308-UD	D8330	0.8	165	0.14	—	—	—	—	155	0.14	—	—	—	—	—	—	—	—	—
	D9335	0.8	240	0.14	—	—	—	—	225	0.14	—	—	—	—	—	—	—	—	—
SCET 120408-UD	D8330	0.8	165	0.16	—	—	—	—	155	0.16	—	—	—	—	—	—	—	—	—
	D9335	0.8	240	0.16	—	—	—	—	225	0.16	—	—	—	—	—	—	—	—	—
SCET 150512-UD	D8330	1.2	165	0.18	—	—	—	—	155	0.18	—	—	—	—	—	—	—	—	—
	D9335	1.2	240	0.18	—	—	—	—	225	0.18	—	—	—	—	—	—	—	—	—



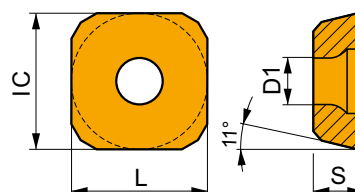
SCET 050204-SD 0,04
SCET 060204-SD 0,06
SCET 070308-SD 0,08
SCET 09T308-SD 0,10
SCET 120408-SD 0,10
SCET 150512-SD 0,10

SD-geometri med positivt design til periferiskær.

SCET 050204-SD	D8330	0.4	165	0.08	—	95	0.07	—	155	0.08	—	—	—	—	40	0.06	—	—	—
	D9335	0.4	240	0.08	—	140	0.07	—	225	0.08	—	—	—	—	60	0.06	—	—	—
SCET 060204-SD	D8330	0.4	165	0.11	—	95	0.09	—	155	0.11	—	—	—	—	40	0.07	—	—	—
	D9335	0.4	240	0.11	—	140	0.09	—	225	0.11	—	—	—	—	60	0.07	—	—	—
SCET 070308-SD	D8330	0.8	165	0.13	—	95	0.11	—	155	0.13	—	—	—	—	40	0.09	—	—	—
	D9335	0.8	240	0.13	—	140	0.11	—	225	0.13	—	—	—	—	60	0.09	—	—	—
SCET 09T308-SD	D8330	0.8	165	0.14	—	95	0.13	—	155	0.14	—	—	—	—	40	0.10	—	—	—
	D9335	0.8	240	0.14	—	140	0.13	—	225	0.14	—	—	—	—	60	0.10	—	—	—
SCET 120408-SD	D8330	0.8	165	0.16	—	95	0.14	—	155	0.16	—	—	—	—	40	0.11	—	—	—
	D9335	0.8	240	0.16	—	140	0.14	—	225	0.16	—	—	—	—	60	0.11	—	—	—
SCET 150512-SD	D8330	1.2	165	0.18	—	95	0.16	—	155	0.18	—	—	—	—	40	0.12	—	—	—
	D9335	1.2	240	0.18	—	140	0.16	—	225	0.18	—	—	—	—	60	0.12	—	—	—

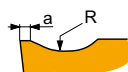
XPET

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0502	5.556	2.40	5.56	2.38
0602	6.350	2.60	6.35	2.38
0703	7.937	2.90	7.94	3.18
0903	9.525	3.50	9.53	3.18
11T3	11.509	3.90	11.50	3.97
12T3	12.700	3.90	12.70	3.97
1504	15.875	4.50	15.88	4.76
1904	19.050	4.50	19.05	4.76



Egnethed og startværdier for skærehastighed (vc), tilførsel (f) og skæredybde (ap). Se vores app til bearbejdning af yderligere beregninger.

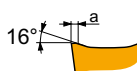
Product	RE (mm)	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)



XPET 0502AP	0,10
XPET 0602AP	0,10
XPET 0703AP	0,15
XPET 0903AP	0,25
XPET 11T3AP	0,25
XPET 12T3AP	0,25
XPET 1504AP	0,25
XPET 1904AP	0,25

Geometri med universelt design til centrale skær.

XPET 0502AP	D8345	—	165	0.08	—	—	—	155	0.08	—	—	—	—	—	—	—	—	—	—
XPET 0602AP	D8345	—	165	0.11	—	—	—	155	0.11	—	—	—	—	—	—	—	—	—	—
XPET 0703AP	D8345	—	165	0.13	—	—	—	155	0.13	—	—	—	—	—	—	—	—	—	—
XPET 0903AP	D8345	—	165	0.14	—	—	—	155	0.14	—	—	—	—	—	—	—	—	—	—
XPET 11T3AP	D8345	—	165	0.16	—	—	—	155	0.16	—	—	—	—	—	—	—	—	—	—
XPET 12T3AP	D8345	—	165	0.16	—	—	—	155	0.16	—	—	—	—	—	—	—	—	—	—
XPET 1504AP	D8345	—	165	0.18	—	—	—	155	0.18	—	—	—	—	—	—	—	—	—	—
XPET 1904AP	D8345	—	165	0.18	—	—	—	155	0.18	—	—	—	—	—	—	—	—	—	—



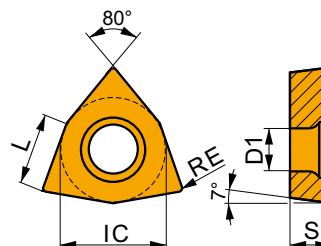
XPET 0502AP-SD	0,04
XPET 0602AP-SD	0,05
XPET 0703AP-SD	0,08
XPET 0903AP-SD	0,10
XPET 11T3AP-SD	0,10
XPET 12T3AP-SD	0,10
XPET 1504AP-SD	0,10
XPET 1904AP-SD	0,12

SD-geometri med positivt design til centrale skær.

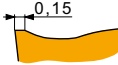
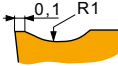
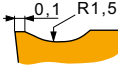
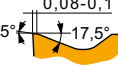
XPET 0502AP-SD	D8345	—	165	0.08	—	95	0.07	—	155	0.08	—	—	—	40	0.06	—	—	—	—
XPET 0602AP-SD	D8345	—	165	0.11	—	95	0.09	—	155	0.11	—	—	—	40	0.07	—	—	—	—
XPET 0703AP-SD	D8345	—	165	0.13	—	95	0.11	—	155	0.13	—	—	—	40	0.09	—	—	—	—
XPET 0903AP-SD	D8345	—	165	0.14	—	95	0.13	—	155	0.14	—	—	—	40	0.10	—	—	—	—
XPET 11T3AP-SD	D8345	—	165	0.16	—	95	0.14	—	155	0.16	—	—	—	40	0.11	—	—	—	—
XPET 12T3AP-SD	D8345	—	165	0.16	—	95	0.14	—	155	0.16	—	—	—	40	0.11	—	—	—	—
XPET 1504AP-SD	D8345	—	165	0.18	—	95	0.16	—	155	0.18	—	—	—	40	0.12	—	—	—	—
XPET 1904AP-SD	D8345	—	165	0.18	—	95	0.16	—	155	0.18	—	—	—	40	0.12	—	—	—	—

WCMT-ID

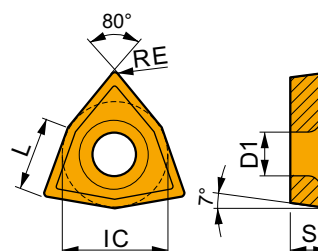
	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0402	6.350	2.90	4.30	2.38
0503	7.938	3.50	5.40	3.18
06T3	9.525	4.40	6.50	3.97
0804	12.700	5.50	8.70	4.76



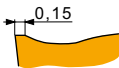
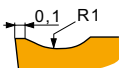
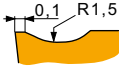
Egnethed og startværdier for skærehastighed (vc), tilførsel (f) og skæredybde (ap). Se vores app til bearbejdning af yderligere beregninger.

Product		RE (mm)	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
			(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)
					Geometri 45 til fin til hård bearbejdning og kontinuerlig til afbrudt spån.															
WCMT 06T308E-45	D8330	0.8	 165	0.15	—	 95	0.14	—	 155	0.15	—	—	—	—	—	—	—	—	—	
					Geometri 46 til finbearbejdning og kontinuerlig til afbrudt spån.															
WCMT 040208E-46	D8330	0.8	 165	0.15	—	 95	0.14	—	 155	0.15	—	—	—	—	—	—	—	—	—	
					Geometri 47 til fin til medium bearbejdning og kontinuerlig til afbrudt spån.															
WCMT 050308E-47	D8330	0.8	 165	0.20	—	 95	0.18	—	 155	0.20	—	—	—	—	—	—	—	—	—	
					Geometri 48 til fin til medium bearbejdning og kontinuerlig til afbrudt spån.															
WCMT 080412E-48	D8330	1.2	 165	0.22	—	 95	0.22	—	 155	0.22	—	—	—	—	—	—	—	—	—	
					Geometri UM til fin til halv ru bearbejdning og kontinuerlige til let afbrudte spåner.															
WCMT 040208E-UM	D8330	0.8	 165	0.20	—	 95	0.18	—	 155	0.20	—	—	—	—	—	—	—	—	—	
WCMT 050308E-UM	D8330	0.8	 165	0.20	—	 95	0.18	—	 155	0.20	—	—	—	—	—	—	—	—	—	

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0302	5.556	2.85	3.80	2.38
0402	6.350	3.15	4.30	2.38
0503	7.938	3.20	5.40	3.18
06T3	9.525	3.72	6.50	3.97
0804	12.700	4.30	8.70	4.76



Egnethed og startværdier for skærehastighed (vc), tilførsel (f) og skæredybde (ap). Se vores app til bearbejdning af yderligere beregninger.

Product	RE (mm)	P			M			K			N			S			H		
		vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)
				Geometri 45 til fin til hård bearbejdning og kontinuerlig til afbrudt spån.															
WCMX 06T308E-45	D8330 0.8	165	0.15	—	95	0.14	—	155	0.15	—	—	—	—	—	—	—	—	—	—
				Geometri 46 til finbearbejdning og kontinuerlig til afbrudt spån.															
WCMX 030208E-46	D8330 0.8	165	0.15	—	95	0.14	—	155	0.15	—	—	—	—	—	—	—	—	—	—
WCMX 040208E-46	D8330 0.8	165	0.15	—	95	0.14	—	155	0.15	—	—	—	—	—	—	—	—	—	—
				Geometri 47 til fin til medium bearbejdning og kontinuerlig til afbrudt spån.															
WCMX 050308E-47	D8330 0.8	165	0.20	—	95	0.18	—	155	0.20	—	—	—	—	—	—	—	—	—	—
				Geometri 48 til fin til medium bearbejdning og kontinuerlig til afbrudt spån.															
WCMX 080412E-48	D8330 1.2	165	0.22	—	95	0.20	—	155	0.22	—	—	—	—	—	—	—	—	—	—

The background of the page is a complex, abstract geometric pattern. It features a central cluster of hexagons in various shades of gray and orange. These hexagons are interconnected by a network of thin, light gray lines that form a grid-like structure. Scattered throughout the design are numerous small circles, some solid black and others white with black outlines. There are also larger, fainter hexagons and lines in the background, creating a sense of depth and technical precision. The overall aesthetic is clean, modern, and technical.

BORING TEKNISKE OPLYSNINGER

WORKPIECE MATERIAL GROUP (WMG)

ISO To select a cutting grade and geometry for a broad range of workpiece materials

General definition

i.e. Steel, Stainless Steel...

P M K N S H

Subgroup

To navigate and select a tool by suitability for a more specific range of workpiece materials

Definition

by structure/composition

i.e. Plain Carbon Steel, Alloy Steel...

P M K N S H

P1

P2

P3

P4

WMG

To select and provide cutting conditions within a bandwidth of $\pm 10\%$

Definition

by hardness/ultimate tensile strength

i.e. $160 < 220 \text{ HB}$, $620 < 900 \text{ N/mm}^2 \dots$

P

P1

P1.1

P1.2

P1.3

P2

P2.1

P2.2

P2.3

P3

P3.1

P3.2

P3.3

P4

P4.1

P4.2

P4.3

ABOUT DORMER PRAMET'S WORKPIECE MATERIAL CLASSIFICATION

Workpiece Material Groups (WMG) are used to support easy and reliable selection of the right cutting tool and starting values for machining conditions in particular applications.

Dormer Pramet classifies workpiece materials into six different coloured groups;

- **Blue:** Steel and cast steel (P-group)
- **Yellow:** Stainless steel (M-group)
- **Red:** Cast iron (K-group)
- **Green:** Non-ferrous metals (N-group)
- **Brown:** High-temperature alloys (S-group)
- **Grey:** Hardened materials (H-group)

Each of these are divided into subgroups on the basis of their structure and/or composition. For example, P-group steel and cast steel is split into four subgroups, namely;

- **P1** – Free machining steel
- **P2** – Plain carbon steel
- **P3** – Alloy steel
- **P4** – Tool steel

A final division includes material properties, such as hardness and ultimate tensile strength. This is to provide our customers with a complete tool recommendation, including starting values for cutting speed and feed.

The table on the next page includes a description of each workpiece material group, as well as examples of commonly used designations.

WORKPIECE MATERIAL GROUP (WMG)

ISO group	Subgroup	WMG (Work Material Group)	k_{wg}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
P Steel and cast steel (steels with alloy content ≤ 10 % and a hardness of < 45HRC)	P1 Free machining steel (carbon steels with increased machinability)	P1.1 Free machining sulfurized carbon steel with a hardness of < 240 HB	1.33	AISI 1108, EN 15522, DIN 1.0723, SS 1922, ČSN 11120, BS 210A15, UNE F.210F, GB Y15, AFNOR 10F1, GOST A30, UNI CF10S20
		P1.2 Free machining sulfurized and phosphorized carbon steel with a hardness of < 180 HB	1.49	AISI 1211, EN 115Mn30, DIN 1.0715, SS 1912, ČSN 11109, BS 230M7, UNE F.2111, GB Y15, AFNOR S250, GOST A40G, UNI CF95Mn28
		P1.3 Free machining sulfurized/phosphorized and leaded carbon steel with a hardness of < 180 HB	1.53	AISI 12L13, EN 115MnPh30, DIN 1.0718, SS 1914, ČSN 12110, BS 210M16, UNE F.2114, GB Y15Ph, AFNOR S250Ph, GOST A35G2, UNI CF10SPb20
	P2 Plain carbon steel (steels comprised of mainly iron and carbon)	P2.1 Plain low carbon steel containing < 0.25 % C with a hardness of < 180 HB	1.14	AISI 1015, EN C15, DIN 1.0401, SS 1350, ČSN 11301, BS 080A15, UNE F.111, GB 15, AFNOR C18R, GOST S22ps, UNI Fe360
		P2.2 Plain medium carbon steel containing < 0.55 % C with a hardness of < 240 HB	1.00	AISI 1030, EN C30, DIN 1.0528, SS 1550, ČSN 12031, BS 080M32, UNE F.1130, GB 30, AFNOR AF50C30, GOST 30G, UNI Fe590
		P2.3 Plain high carbon steel containing > 0.55 % C, with a hardness of < 300 HB	0.89	AISI 1060, EN C60, DIN 1.0601, SS 1655, ČSN 12061, BS 080A62, UNE F513, GB 60, AFNOR 1C60, GOST 60G, UNI C60
	P3 Alloy steel (carbon steels with an alloying content ≤ 10 %)	P3.1 Alloy steel with a hardness of < 180 HB	0.92	AISI 5015, EN 16Mo3, DIN 1.5415, SS 2912, ČSN 15020, BS 1501-240, UNE F.2601, GB 16Mo, AFNOR 15D3, GOST 15M, UNI 16Mo3KW
		P3.2 Alloy steel with a hardness of 180 – 260 HB	0.74	AISI 4140, EN 42CrMo4, DIN 1.7225, SS 2244, ČSN 15142, BS 708M40, UNE F.8232, GB 42CrMo, AFNOR 42CD4, GOST 40ChFA, UNI 42CrMo4
		P3.3 Alloy steel with a hardness of 260 – 360 HB	0.63	AISI 4140, EN 42CrMo4, DIN 1.7225, SS 2244, ČSN 15142, BS 708M40, UNE F.8232, GB 42CrMo, AFNOR 42CD4, GOST 40ChFA, UNI 42CrMo4
	P4 Tool steel (special alloy steel for tools, dies and molds)	P4.1 Tool steel with a hardness of < 26 HRC	0.55	AISI D2, EN X155CrVMo12-1, DIN 1.2370, SS 2736, ČSN 19573, BS BD2, UNE F.520A, GB Cr12Mo1V1, AFNOR Z160CDV12, GOST Ch12MF, UNI X155CrVMo121KU
		P4.2 Tool steel with a hardness of 26 – 39 HRC	0.47	AISI D2, EN X155CrVMo12-1, DIN 1.2370, SS 2736, ČSN 19573, BS BD2, UNE F.520A, GB Cr12Mo1V1, AFNOR Z160CDV12, GOST Ch12MF, UNI X155CrVMo121KU
		P4.3 Tool steel with a hardness of 39 – 45 HRC	0.38	AISI D2, EN X155CrVMo12-1, DIN 1.2370, SS 2736, ČSN 19573, BS BD2, UNE F.520A, GB Cr12Mo1V1, AFNOR Z160CDV12, GOST Ch12MF, UNI X155CrVMo121KU

WORKPIECE MATERIAL GROUP (WMG)

ISO group	Subgroup	WMG (Work Material Group)	k _{vg}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
M Stainless steel (corrosion resistant steels with ≥ 11 % chromium content)	M1 Ferritic stainless steel (straight chromium non-hardenable alloys)	M1.1 Stainless steel, ferritic with a hardness of < 160 HB	1.22	AISI 5429, EN X7Cr14, DIN 1.4001, SS 2326, BS 434517, UNE F.3401, AFNOR Z8C12, GOST 08Ch13, UNI X6CrTi12
		M1.2 Stainless steel, ferritic with a hardness of 160 – 220 HB	1.03	AISI 446, EN X10CrAl24, DIN 1.4762, SS 2322, ČSN 17113, BS 430517, UNE F.3154, GB 10Cr17, AFNOR Z10CA524, GOST 12Ch17, UNI X16Cr26
		M2.1 Stainless steel, martensitic with a hardness of < 200 HB	1.08	AISI 430F, EN X14CrMoS17, DIN 1.4104, SS 2383, ČSN 17140, BS 410521, UNE F.3117, AFNOR Z10CF17, UNI X10CrS17
	M2 Martensitic stainless steel (straight chromium hardenable alloys)	M2.2 Stainless steel, martensitic with a hardness of 200 – 280 HB	0.89	AISI 440C, EN X105CrMo17, DIN 1.4125, SS 2385, ČSN 17023, BS 425C11, UNE F.3402, GB 102Cr17Mo, AFNOR Z100CD17, GOST 95Ch18, UNI 6X6CrNi 13 04
		M2.3 Stainless steel, martensitic with a hardness of 280 – 380 HB	0.75	AISI 420, EN X45Cr13, DIN 1.4034, ČSN 17029, BS 425C11, UNE F.3405, AFNOR Z44C14, GOST 20X17H12, UNI X30Cr13
		M3.1 Stainless steel, austenitic with a hardness of < 200 HB	1.00	AISI 304, EN X5CrNi18-12, DIN 1.4303, SS 2352, ČSN 17249, BS 305517, UNE F.3513, GB 10Cr18Ni12, AFNOR Z8CN18.12, UNI X7CrNi18 10
	M3 Austenitic stainless steel (chromium-nickel and chromium-nickel- manganese alloys)	M3.2 Stainless steel, austenitic with a hardness of 200 – 260 HB	0.86	AISI 309, EN X15CrNiSi20-12, DIN 1.4828, ČSN 17251, BS 309S24, UNE F.3312, GB 1G23Ni13, AFNOR Z15CNS20.12, GOST 20Ch20N14S2, UNI 16CrNi23 14
		M3.3 Stainless steel, austenitic with a hardness of 260 – 300 HB	0.77	AISI 5848, EN X45CrNiW18-9, DIN 1.4873, BS 331540, UNE F.3211, AFNOR Z35CNWS14-4, UNI X45CrNiW 18 9
	M4 Super-austenitic, Duplex or Precipitation Hardening stainless steel (austenitic alloys with > 20 % Ni, austenitic-ferritic microstructure or precipitation hardened)	M4.1 Stainless steel, austenitic-ferritic or super- austenitic with a hardness of < 300 HB	0.75	AISI 329, EN X1-NiCrMoCu25-20-5, DIN 1.4539, SS 2562, ČSN 17265, BS 318513, UNE F.3552, GB 022Cr25NiMo2N, AFNOR Z1NCUDU25.20
		M4.2 Stainless steel, precipitation hardening austenitic with a hardness of 300 – 380 HB	0.64	AISI 631 (17-7PH), EN X7CrNiAl17-7, DIN 1.4568, SS 2388, ČSN 17465, BS 301513, UNE F.3217, GB 07Cr17Ni7Al, AFNOR Z9CNA17-07, GOST 09Ch17N7Jut, UNI X53CrMnNiN21 9

ISO group	Subgroup	WMG (Work Material Group)	k _{we}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
K Cast Iron (castings of iron and carbon alloys with > 2 % carbon content)	K1 Gray iron (GG) (iron-carbon castings with a lamellar graphite microstructure)	K1.1 Gray iron, ferritic or ferritic-pearlitic with a hardness of < 180 HB	1.35	ASTM A48 Grade 20 (F11401), EN-JL-100, DIN GG-10 (0.6010), SS 0110, STN 422410, BS Grade 150, UNE FG10, GB HAT 100, AFNOR Fc10D, GOST SC 10, UNI G10
		K1.2 Gray iron, ferritic-pearlitic or pearlitic with a hardness of 180 – 240 HB	1.00	ASTM A48 Grade 30 (F12101), EN-JL-1030, DIN GG-20 (0.6020), SS 0120, STN 422420, BS Grade 220, UNE FG20, GB HT200, AFNOR Fc20D, GOST Ч420, UNI G20
		K1.3 Gray iron, pearlitic with a hardness of 240 – 280 HB	0.75	ASTM A48 Grade 50 (F13501), EN-JL-1060, DIN GG-35 (0.6035), SS 0135, STN 422435, BS Grade 350, UNE FG35, GB HAT300, AFNOR Fc35D, GOST SC35, UNI G35
	K2 Malleable iron (GTS/GTW) (heat-treated iron-carbon castings with a graphite-free microstructure)	K2.1 Malleable iron, ferritic with a hardness of < 160 HB	1.39	ASTM A602 Grade M3210 (F20000), EN-JM-1130, DIN GTS-35 (0.8135), SS 0815, BS B340/12, UNE Type A, AFNOR MN 35-10, GOST K435-10
		K2.2 Malleable iron, ferritic or pearlitic with a hardness of 160 – 200 HB	1.13	ASTM A602 Grade M4504 (F20001), EN-JM-1040, DIN GTS-50-05 (0.8045), BS P50-05, AFNOR MB 45-7
		K2.3 Malleable iron, pearlitic with a hardness of 200 – 240 HB	0.90	ASTM A602 Grade M7002 (F20004), EN-JM-1140, DIN GTS-45 (0.8145), SS 0854, STN 422540, BS P 45-06, UNE Typ B, AFNOR MP 50-5, GOST K445-7, UNI GMN 45
	K3 Ductile iron (GGG) (iron-carbon castings with a nodular graphite microstructure)	K3.1 Ductile (nodular/spheroidal) iron, ferritic with a hardness of < 180 HB	1.23	ASTM A536 Grade 60-40-18 (F32800), EN-JS-1030, DIN GGG-40 (0.7040), SS 0717, STN 422304, BS 420/12, UNE FGE 42-12, GB QT 400, AFNOR FGS 400-12, GOST B440
		K3.2 Ductile (nodular/spheroidal) iron, ferritic or pearlitic with a hardness of 180 – 220 HB	0.94	ASTM A536 Grade 80-55-06 (F33800), EN-JS-1050, DIN GGG-50 (0.7050), SS 0727, STN 422305, BS 500/7, UNE FGE 50-7, GB QT 500-7, AFNOR FGS 500-7, GOST B450
		K3.3 Ductile (nodular/spheroidal) iron, pearlitic with a hardness of 220 – 260 HB	0.76	ASTM A536 Grade 100-70-03 (F34800), EN-JS-1060, DIN GGG-60 (0.7060), SS 0732, STN 422306, BS 600/3, UNE FG70-2, GB QT 600-3, AFNOR FGS 600-3, GOST B460
	K4 Austenitic or austempered ductile iron (NI-Resist/ADI) (iron-carbon alloy castings with an austenitic or ausferrite microstructure)	K4.1 Austenitic cast iron with a hardness of < 180 HB	1.14	ASTM A436 Type 1 (L-NiCuCr 15 6 2, F41000), EN-JL-3011, DIN GGL-NiMn 13 7 (0.6652), SS 0523, BS Grade F1, AFNOR FGL-Ni13Mn7, GOST S-NiMn 13 7
		K4.2 Austenitic cast iron with a hardness of 180 – 240 HB	0.86	ASTM A439 Type D-2B (S-NiCr 20 3, F43001), EN-JS-3021, DIN GGG-NiMn 23 4, SS 0776, BS Grade S2M, AFNOR FGS Ni23 Mn4, GOST ЧН19Х3Ш
		K4.3 Austempered ductile iron with a hardness of 240 – 280 HB	0.63	ASTM A897 Grade 110-70-11
	K5 Compacted graphite iron (CGI) (iron-carbon castings with a vermicular graphite structure)	K4.4 Austempered ductile iron with a hardness of 280 – 320 HB	0.54	ASTM A897 Grade 125-80-10, EN-JS-1100, DIN GGG-90 (5.3400)
		K4.5 Austempered ductile iron with a hardness of 320 – 360 HB	0.45	ASTM A897 Grade 2 (150-110-07), EN-JS-1110, DIN GGG-100 (5.3403)
		K5.1 Vermicular, compacted graphite iron with a hardness of < 180 HB	1.29	ASTM A842 Grade 300, EN-GJV-300, DIN GGV 30, GOST ЧВГ30,
	K5 Vermicular, compacted graphite iron with a hardness of 180 – 220 HB	K5.2 Vermicular, compacted graphite iron with a hardness of 180 – 220 HB	0.97	ASTM A842 Grade 350, EN-GJV-350, DIN GGV 35 (5.2200), GOST ЧВГ30,
		K5.3 Vermicular, compacted graphite iron with a hardness of 220 – 260 HB	0.75	ASTM A842 Grade 450, EN-GJV-450, DIN GGV 45, GOST ЧВГ45,

WORKPIECE MATERIAL GROUP (WMG)

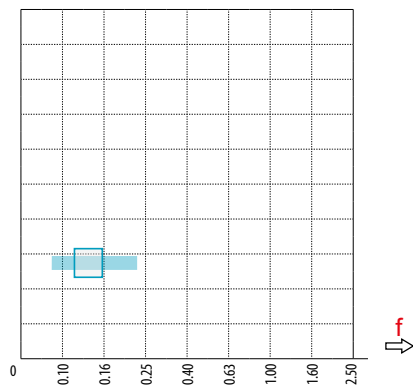
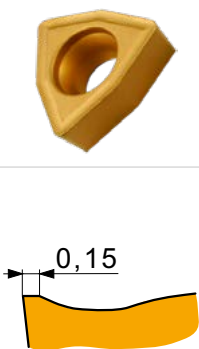
ISO group	Subgroup	WMG (Work Material Group)	k _{vc}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNI, ...)
N Non-ferrous metals (metals including alloys without an appreciable amount of iron)	N1 Wrought aluminium	N1.1 Pure aluminium and wrought aluminium alloys with a hardness of < 60 HB	1.33	UNS A91200, EN AL99.6, DIN 3.0205, SS 4010, STN 424009, BS 1C, UNE L-3001, GB L5, AFNOR A4, GOST ADC, UNI 3567
		N1.2 Wrought aluminium alloys with a hardness of 60 – 100 HB	1.00	UNS A93004, EN AlMn0.5Mg0.5, DIN 3.0505, SS 4054, STN 424432, BS N31, UNE L-3831, GB LF2, AFNOR A-M1, GOST AMu, UNI 3568
		N1.3 Wrought aluminium alloys with a hardness of 100 – 150 HB	0.67	UNS A95083, EN AlMg4.5Mn0.7, DIN 3.3547, SS 4140, STN 424415, BS N8, UNE L-3321, GB AlMg4.5Mn, AFNOR A-G4.5Mn, GOST Amg 4.5, UNI P-AlMg4.4
	N2 Cast aluminium	N2.1 Cast aluminium alloys with a hardness of < 75 HB	0.67	UNS A02080, EN AlCu45, BS LM11, STN 424331, UNE AlSi1Cu, GOST AMg5K, UNI G-AlSi7Mg
		N2.2 Cast aluminium alloys with a hardness of 75 – 90 HB	0.60	UNS A02420, EN AlCu4Ni2Mg2, SS AlSi7MgFe, BS LM6, STN 424519, UNE Al-7SiMg, AFNOR A-S7G, GOST AK7, UNI G-AlSi7Mg
		N2.3 Cast aluminium alloys with a hardness of 90 < 140 HB	0.43	UNS A03360, EN G-ALCu4NiMg2, SS AlSi10Mg, STN 424336, BS LM 30, AFNOR A-S10G, UNI G-AlSi9Mg
	N3 Copper or copper alloys	N3.1 Free-cutting copper-alloys materials with excellent machining properties	0.70	UNS C14700, EN CuPb1P, DIN 2.1498, STN 423214, BS C111, AFNOR CuZn35Pb2, GOST L63-3, UNI CuS(P0.01)
		N3.2 Short-chip copper-alloys with good to moderate machining properties	0.41	UNS C91540, EN CuNi25Cr, DIN 2.0857, STN 423220, BS NS113, UNE CuSn12, AFNOR CuZn40, GOST L60, UNI P-CuZn-40
		N3.3 Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties	0.21	UNS C10100, EN CuAg0.1, DIN 2.1203, SS 5010, UNE CUSi3Mn1, AFNOR Cu-C2, GOST M1f, UNI Cu-OF
	N4 Polymers (synthetic or semi-synthetic materials)	N4.1 Thermoplastic polymers	0.70	ABS, Acryl, Duraplast, Elastomer, EP Epoxid, FEP, Fluor, Gummi, Kautschuk, Latex, ME, MPF, PA, PAL, PC, PE, PEEK, PEI, PES, PET, PF, Phenolharze, PI, PMMA, Polyamide, Polyester, Polyolefine, Polysulfon, POM, PP, PPE, PPS, PS, PSU, PTFE, PU, PUR, PVDF, SAN, SI, Styrol, UF, Ureol
		N4.2 Thermosetting polymers	0.27	Aramid, Epoxy, Fluoropolymer, Methacrylate, Melamine, Phenolic, Polyester, Polyimide, Polymethacrylimide, Polyurethane
		N4.3 Reinforced polymers or composites	0.29	CFK, GFK, GMT, Honeycomb, Kevlar, LFT, Organo, SMC
	N5 Graphite	N5.1	1.0	CGM-1, CM-00, GM-10, GM-11, GR030, GR030PI, GR060, GR060PI, GR125, MC-01, MC-01R0, MC-03, MC-03M, IG11, IG-15, IG-32, IG-43, IG-45, IG-70, ISEM-1, ISEM-2, ISEM-3, R8340, R8500X, Technograph 15, Technograph 30, ISO-63, EDM C-3, EDM1, EDM3, ISO-90, ISO-93, ISO-95, R8510, R8650, R8650,

ISO group	Subgroup	WMG (Work Material Group)	k_{wg}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
S High-temperature alloys (superalloys with high temperature strength and corrosion resistant surpassing that of stainless steel)	S1 Titanium or titanium alloys	S1.1 Titanium or titanium alloys, with a hardness of <200 HB	1.94	UNS R50250 (Grade 1), EN Ti 99.6, DIN 3.7035, BS TA.2, UNE Ti-Po2, AFNOR T-40, GOST BT1-00, AISI R50250, 3.7025, T35, 2TA1, R50400, 3.7035, 2TA2,
		S1.2 Titanium alloys, with a hardness of 200 – 280 HB	1.72	UNS R56404 (Grade 29), EN Ti2Cu, DIN 3.7124, BS TA.21, UNE Ti-P11, AFNOR T-U2, AISI TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553
		S1.3 Titanium alloys, a hardness of 280 – 360 HB	1.44	UNS R54250 (Grade 38), EN TiAl6V4, DIN 3.7165, ČSN TiAl6VELL, BS TA. 13, UNE Ti-P63, AFNOR T-A6V, GOST BT6, AISI TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553
	S2 Fe-based high-temperature alloys	S2.1 High-temperature Fe-based alloys with a hardness of <200 HB	1.33	UNS N08801 (Incoloy 801), EN X8 NiCrAlTi31-21, DIN 1.4959, BS NA 15, AFNOR Z8NC33-21, AISI A-286, Discaloy, Haynes 556, Inconel 909, Greek Ascolloy
		S2.2 High-temperature Fe-based alloys with a hardness of 200 – 280 HB	1.17	UNS N19907, EN X6NiCrTiMoVB25-15-2, DIN 1.4980, SS 2570, BS HR52, AFNOR Z6NCTDV25.15B, GOST 36HXT10, AISI A-286, Discaloy, Haynes 556, Inconel 909, Greek Ascolloy
	S3 Ni-based high-temperature alloys	S3.1 High-temperature Ni-based alloys with a hardness of <280 HB	1.00	UNS A09706 (Inconel 706), EN NiCr25FeAl, DIN 2.4856, BS HR 6, ČSN Inconel 625, UNE F.3313, GB 1Cr16Ni35, AFNOR NC22FeDNB, GOST XH38BT, AISI Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625
		S3.2 High-temperature Ni-based alloys with a hardness of 280 – 360 HB	0.83	UNS N07001, EN NiCr20Co13Mo4Ti3Al, DIN 2.4654, BS HR 2, ČSN Waspalloy, AFNOR NCKD 20ATV, GOST XH80T5K0, AISI Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625
	S4 Co-based high-temperature alloys	S4.1 High-temperature Co-based alloys with a hardness of <240 HB	0.78	UNS R30016 (Stellite 6b), EN CoCr20W15Ni, DIN 2.4964, AFNOR KC 20 WN, GOST ЛК52, AISI Haynes 25, Stellite 21, 31
		S4.2 High-temperature Co-based alloys with a hardness of 240 – 320 HB	0.67	UNS R30016 (Stellite 6b), EN CoCr20W15Ni, DIN 2.4964, AFNOR KC 20 WN, GOST ЛК52, AISI Haynes 25, Stellite 21, 31

WORKPIECE MATERIAL GROUP (WMG)

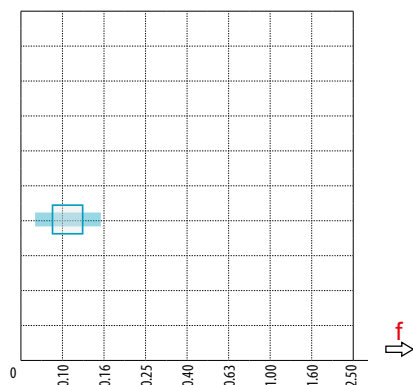
ISO group	Subgroup	WMG (Work Material Group)	k_{vg}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
H Hardened materials (any engineering metal with a hardness > 45 HRC)	H1 Chilled cast iron	H1.1 Chilled cast iron with a hardness of < 440 HB	1.52	UNS F45001, EN-GJS-1050-6, DIN 5.3406, SS 0512, BS Grade 2A
	H2 Hardened cast iron	H2.1 Hardened cast iron with a hardness < 55 HRC	0.90	UNS F45003, EN-GJS-1400-1, DIN 5.3405, SS 0457, BS Grade 3D
		H2.2 Hardened cast iron with a hardness > 55 HRC	0.77	UNS F45003, EN G-X260NiCr4-2, DIN 0.9620, SS 0466, BS Grade S
	H3 Hardened steel < 55 HRC	H3.1 Hardened steel with a hardness of < 51 HRC	1.00	AISI 4135, EN 34CrMo4, DIN 1.7220, SS 2234, STN 415131, BS 198, UNE F.1250, GB 35CrMo, AFNOR 35CD4, GOST AC38XTM, UNI 35CrMo4KB
		H3.2 Hardened steel with a hardness of 51 – 55 HRC	0.82	AISI 4135, EN 34CrMo4, DIN 1.7220, SS 2234, STN 415131, BS 198, UNE F.1250, GB 35CrMo, AFNOR 35CD4, GOST AC38XTM, UNI 35CrMo4KB
	H4 Hardened steel > 55 HRC	H4.1 Hardened steel with a hardness of 55 – 59 HRC	0.64	UNS T31501, EN 100MnCrW4, DIN 1.2510, SS 2140, STN 419413, BS B01, UNE F.5220, GB 9CrWMn, AFNOR 90MnWCrV5, GOST 9XBТ, UNI 95MnWCr5KU
		H4.2 Hardened steel with a hardness of > 59 HRC	0.54	UNS T31501, EN 100MnCrW4, DIN 1.2510, SS 2140, STN 419413, BS B01, UNE F.5220, GB 9CrWMn, AFNOR 90MnWCrV5, GOST 9XBТ, UNI 95MnWCr5KU

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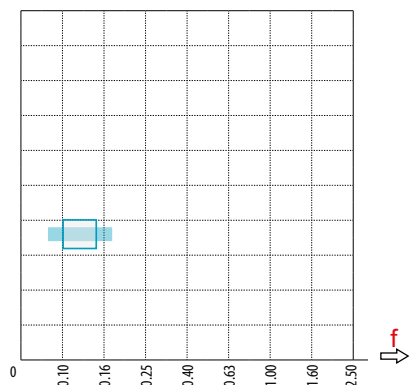
P	M	K	N	S	H
Se diagram					
WCMT 06, WCMX 06					

46



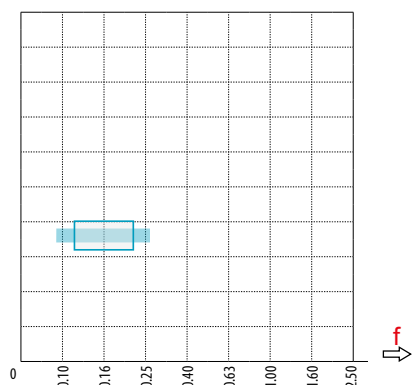
P	M	K	N	S	H
Se diagram					
WCMT 04, WCMX 03, WCMX 04					

47



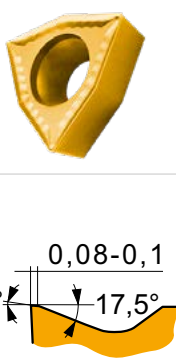
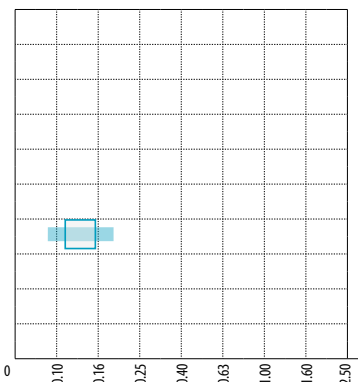
P	M	K	N	S	H
Se diagram					
WCMT 05, WCMX 05					

48



P	M	K	N	S	H
Se diagram					
WCMT 08, WCMX 08					

UM

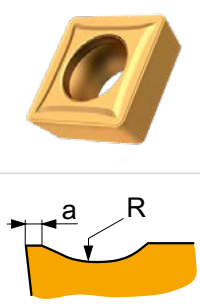
P	M	K	N	S	H
■	■	■	■	■	■

Se diagram

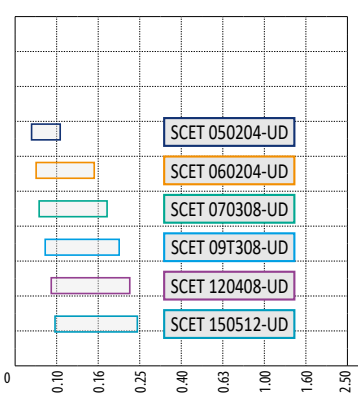



? WCMT 04, WCMT 05

SCET - UD



	a
SCET 050204-UD	0,12
SCET 060204-UD	0,15
SCET 070308-UD	0,15
SCET 09T308-UD	0,15
SCET 120408-UD	0,20
SCET 150512-UD	0,20



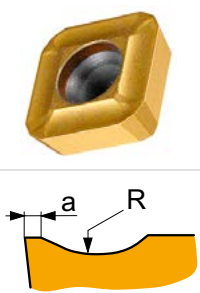
P	M	K	N	S	H
■	■	■	■	■	■

Se diagram

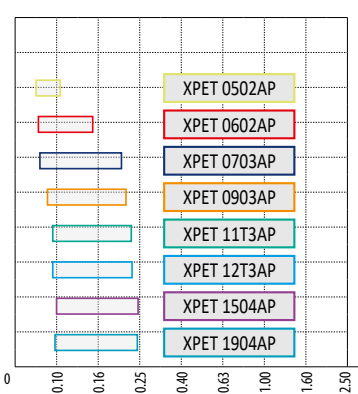



? SCET - UD

XPET AP



	a
XPET 0502AP	0,10
XPET 0602AP	0,10
XPET 0703AP	0,15
XPET 0903AP	0,25
XPET 11T3AP	0,25
XPET 12T3AP	0,25
XPET 1504AP	0,25
XPET 1904AP	0,25



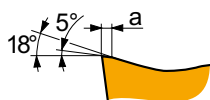
P	M	K	N	S	H
■	■	■	■	■	■

Se diagram

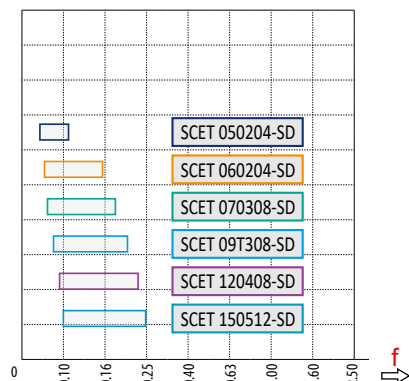



? XPET AP

SCET - SD

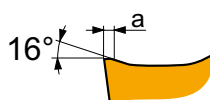


	a
SCET 050204-SD	0,04
SCET 060204-SD	0,06
SCET 070308-SD	0,08
SCET 09T308-SD	0,10
SCET 120408-SD	0,10
SCET 150512-SD	0,10

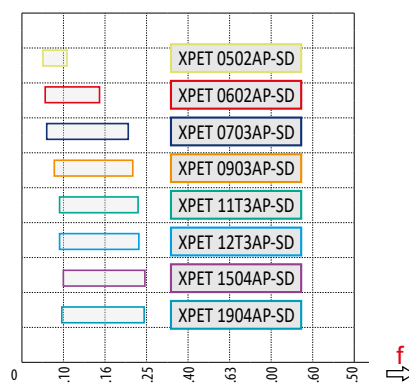


P	M	K	N	S	H
Se diagram					
SCET - SD					

XPETAP-SD



	a
XPET 0502AP-SD	0,04
XPET 0602AP-SD	0,05
XPET 0703AP-SD	0,08
XPET 0903AP-SD	0,10
XPET 11T3AP-SD	0,10
XPET 12T3AP-SD	0,10
XPET 1504AP-SD	0,10
XPET 1904AP-SD	0,12



P	M	K	N	S	H
Se diagram					
XPETAP - SD					

D

Operation


8

Belægning/substrat


3

Generation


3

ISO-område


0

D	Boring
M	Fræsning
T	Drejning
G	Grooving and Parting off

0 PVD 1 CVD	Specialanvendelse
2 PVD 3 CVD	Fri
4 PVD 5 CVD	Gruppe K, H
6 PVD 7 CVD	Gruppe M, S
8 PVD 9 CVD	Universel
B	CBN
C	Keramisk
D	PCD
T	Cermet

1 – 9
01 – 50

	01 – 05
	05 – 10
	10 – 20
	20 – 30
	30 – 40
	40 – 50

DRILLING GRADES

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
D9335	P20 - P35	■				MT-CVD	FGM	FGM	+ + +	This grade is recommended for the peripheral insert in indexable drills, it is more suited to higher cutting speeds and feeds.
	M15 - M30	■								
	K15 - K35	■								
	S10 - S20	■								
D8330	P20 - P35	■				PVD	submicron	H	+ + +	This is a universal grade for the peripheral insert in indexable drills, it can be used for most materials and stands out for its operational reliability.
	M15 - M30	■								
	K15 - K35	■								
	S10 - S20	■								
D8345	P30 - P50	■				PVD	submicron	H	+ + +	This grade is a universal grade for the central insert in indexable drills, it is an extremely tough suited to most materials.
	M20 - M40	■								
	K30 - K40	■								
	S20 - S30	■								

Substrat	
submicron H	WC-Co-baseret substrat fintkornet (< 1 µm)
FGM	Substrat med funktionel klassificering

Coating	
MT-CVD	Kemikaliemetode til belægning ved mellemhøj temperatur
PVD	Fysisk metode til coating ved lav temperatur

Benefits of cutting fluid	
+ + +	Use of coolant is essential

INDEXABLE DRILLS – RECOMMENDED CUTTING CONDITIONS

802D, 803D (XPET..AP, SCET..-UD)



	D9335	D8330	D8345	ø 15	ø 20	ø 25	ø 30	ø 40	ø 58
P1	■	■	■	0.07	0.08	0.09	0.10	0.12	0.16
P2	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
P3	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
P4	■	■	■	0.12	0.14	0.16	0.18	0.22	0.30
K1	■	■	■	0.14	0.16	0.19	0.21	0.26	0.34
K2	■	■	■	0.14	0.16	0.19	0.21	0.26	0.34
K3	■	■	■	0.14	0.16	0.19	0.21	0.26	0.34
K4	■	■	■	0.14	0.16	0.19	0.21	0.26	0.34
K5	■	■	■	0.14	0.16	0.19	0.21	0.26	0.34

802D, 803D (XPET..AP-SD, SCET..-SD)



	D9335	D8330	D8345	ø 15	ø 20	ø 25	ø 30	ø 40	ø 58
P1	■	■	■	0.08	0.09	0.10	0.11	0.14	0.18
P2	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
P3	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
P4	■	■	■	–	–	–	–	–	–
K1	▣	▣	▣	0.08	0.09	0.10	0.11	0.14	0.18
K2	▣	▣	▣	0.11	0.13	0.15	0.17	0.21	0.28
K3	▣	▣	▣	0.12	0.14	0.16	0.18	0.22	0.24
K4	▣	▣	▣	0.13	0.15	0.18	0.20	0.24	0.32
K5	▣	▣	▣	0.14	0.16	0.19	0.21	0.25	0.33
M1	■	■	■	0.12	0.14	0.16	0.18	0.22	0.30
M2	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
M3	■	■	■	0.07	0.08	0.09	0.10	0.12	0.16
M4	■	■	■	0.07	0.08	0.09	0.10	0.12	0.16
S1	▣	▣	▣	0.08	0.09	0.10	0.11	0.14	0.18
S2	▣	▣	▣	0.08	0.09	0.10	0.11	0.14	0.18
S3	▣	▣	▣	0.07	0.08	0.09	0.10	0.12	0.16
S4	▣	▣	▣	0.07	0.08	0.09	0.10	0.12	0.16

804D (XPET..AP, SCET..-UD)



	D9335	D8330	D8345	ø 15	ø 20	ø 25	ø 30	ø 40	ø 58
P1	■	■	■	0.06	0.07	0.08	0.09	0.10	0.14
P2	■	■	■	0.10	0.12	0.14	0.16	0.19	0.25
P3	■	■	■	0.12	0.14	0.16	0.18	0.22	0.30
P4	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
K1	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K2	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K3	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K4	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K5	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32

INDEXABLE DRILLS – RECOMMENDED CUTTING CONDITIONS

804D (XPET..AP-SD, SCET..-SD)



	D9335	D8330	D8345	ø 15	ø 20	ø 25	ø 30	ø 40	ø 58
P1	■	■	■	0.07	0.08	0.09	0.10	0.12	0.16
P2	■	■	■	0.10	0.12	0.14	0.16	0.19	0.25
P3	■	■	■	0.12	0.14	0.16	0.18	0.22	0.30
P4	■	■	■	–	–	–	–	–	–
K1	▣	▣	▣	0.07	0.08	0.09	0.10	0.12	0.16
K2	▣	▣	▣	0.10	0.12	0.14	0.16	0.19	0.25
K3	▣	▣	▣	0.11	0.13	0.15	0.17	0.20	0.27
K4	▣	▣	▣	0.12	0.14	0.16	0.18	0.22	0.30
K5	▣	▣	▣	0.14	0.16	0.19	0.21	0.25	0.33
M1	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
M2	■	■	■	0.10	0.12	0.14	0.16	0.19	0.25
M3	■	■	■	0.06	0.07	0.08	0.09	0.10	0.14
M4	■	■	■	0.06	0.07	0.08	0.09	0.10	0.14
S1	▣	▣	▣	0.07	0.08	0.09	0.10	0.12	0.16
S2	▣	▣	▣	0.07	0.08	0.09	0.10	0.12	0.16
S3	▣	▣	▣	0.06	0.07	0.08	0.09	0.10	0.14
S4	▣	▣	▣	0.06	0.07	0.08	0.09	0.10	0.14

805D (XPET..AP, SCET..-UD)



	D9335	D8330	D8345	ø 15	ø 20	ø 25	ø 30	ø 40	ø 58
P1	■	■	■	0.06	0.07	0.08	0.09	0.10	0.14
P2	■	■	■	0.10	0.12	0.14	0.16	0.19	0.25
P3	■	■	■	0.12	0.14	0.16	0.18	0.22	0.30
P4	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
K1	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K2	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K3	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K4	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32
K5	■	■	■	0.13	0.15	0.18	0.20	0.24	0.32

805D (XPET..AP-SD, SCET..-SD)



	D9335	D8330	D8345	ø 15	ø 20	ø 25	ø 30	ø 40	ø 58
P1	■	■	■	0.07	0.08	0.09	0.10	0.12	0.16
P2	■	■	■	0.10	0.12	0.14	0.16	0.19	0.25
P3	■	■	■	0.12	0.14	0.16	0.18	0.22	0.30
P4	■	■	■	–	–	–	–	–	–
K1	▣	▣	▣	0.07	0.08	0.09	0.10	0.12	0.16
K2	▣	▣	▣	0.10	0.12	0.14	0.16	0.19	0.25
K3	▣	▣	▣	0.11	0.13	0.15	0.17	0.20	0.27
K4	▣	▣	▣	0.12	0.14	0.16	0.18	0.22	0.30
K5	▣	▣	▣	0.12	0.14	0.16	0.18	0.22	0.30
M1	■	■	■	0.11	0.13	0.15	0.17	0.21	0.28
M2	■	■	■	0.10	0.12	0.14	0.16	0.19	0.25
M3	■	■	■	0.06	0.07	0.08	0.09	0.10	0.14
M4	■	■	■	0.06	0.07	0.08	0.09	0.10	0.14
S1	▣	▣	▣	0.07	0.08	0.09	0.10	0.12	0.16
S2	▣	▣	▣	0.07	0.08	0.09	0.10	0.12	0.16
S3	▣	▣	▣	0.06	0.07	0.08	0.09	0.10	0.14
S4	▣	▣	▣	0.06	0.07	0.08	0.09	0.10	0.14

FORMEL TIL BEREGNING AF SKÆREPARAMETRE

NOMENKLATUR OG FORMEL

Parameter	Formel	Enhed
RPM	$n = \frac{v_c \cdot 1000}{DC \cdot \pi}$	(omdr./min)
Skærehastighed	$v_c = \frac{\pi \cdot DC \cdot n}{1000}$	(m/min)
Bordtilspænding	$v_f = n \cdot f$	(mm/min)
Hullets tværsnitsområde	$A = \frac{\pi \cdot DC^2}{4}$	(mm ²)
Spånvolumen	$Q = \frac{v_f \cdot A}{1000}$	(cm ³ /min)
Maskinbearbejdningstid	$T_c = \frac{L + h}{v_f}$	(min/pièce)

DC Borediameter

(mm)

h Afstand fra borepunkt til arbejdsområde før tilspænding

(mm)

f Tilspænding pr. omdrejning

(mm/omdr.)

L Huldylde

(mm)

ANBEFALEDE TILSPÆNDINGSMOMENTER FOR SKRUE

	 Nm					
US 2245-T07P	0.9	FLAG T07P	M 2.2	5.3	D-T7P	MR-0.8-2.0 vario
US 2205-T07P	0.9	FLAG T07P	M2.2	5.4	D-T7P	MR-0.8-2.0 vario
US 2506-T07P	1.2	FLAG T07P	M 2.5	6	D-T7P	MR-0.8-2.0 vario
US 2507-T08P	1.2	FLAG T08P	M 2.5	7	D-T8P	MR-0.8-2.0 vario
US 3007-T08P	2.0	FLAG T08P	M 3	7	D-T8P	MR-1.0-5.0 vario
US 3007-T09P	2.0	FLAG T09P	M 3	7.4	D-T9P	MR-1.0-5.0 vario
US 3009-T09P	2.0	FLAG T09P	M 3	8.7	D-T9P	MR-1.0-5.0 vario
US 3508-T15P	3.0	FLAG T15P	M 3.5	8.3	D-T15P	MR-1.0-5.0 vario
US 3510-T15P	3.0	FLAG T15P	M 3.5	10.6	D-T15P	MR-1.0-5.0 vario
US 4011-T15P	3.5	FLAG T15P	M 4	10.7	D-T15P	MR-1.0-5.0 vario
US 5012-T15P	5.0	FLAG T15P	M 5	12.2	D-T15P	MR-1.0-5.0 vario

MASKINBEARBEJDNINGSDATA FOR INDSATSBOR

Radial justering

Anbefaling for hulddiameterjustering og opsætning

Radial justering er muligt med vendeskærsbor for at opnå en mindre eller større huldiameter end det faktiske bor.

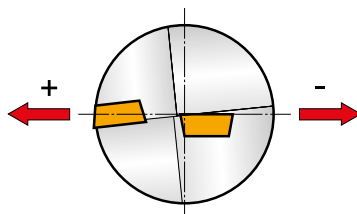
Radiale justeringsværdier kan findes i tabellerne med hovedboredata.

Roterende værktøj

Ved boring af huller med nøjagtighed IT10 og højere anbefales de justerbare holdere ved brug af 802D-, 803D-, 804D- og 805D-bor.

Stationært værktøj

Ved montering af boret skal borets midterlinje og arbejdsemnets midte være ud for hinanden. Forskyd boret for at opnå en større huldiameter, så den perifere vendeskær flytter et + væk fra arbejdsemnets midterlinje.



Værktøjslevetid

Vendeskær skal skiftes, når flankeslitagen måler 0,2 – 0,4 mm ved det største punkt.

Skæredataanbefalingerne i dette katalog har til formål at give en værktøjslevetid på 7 meter boreddybde for den perifere skær. (20-30 min. kontakt).

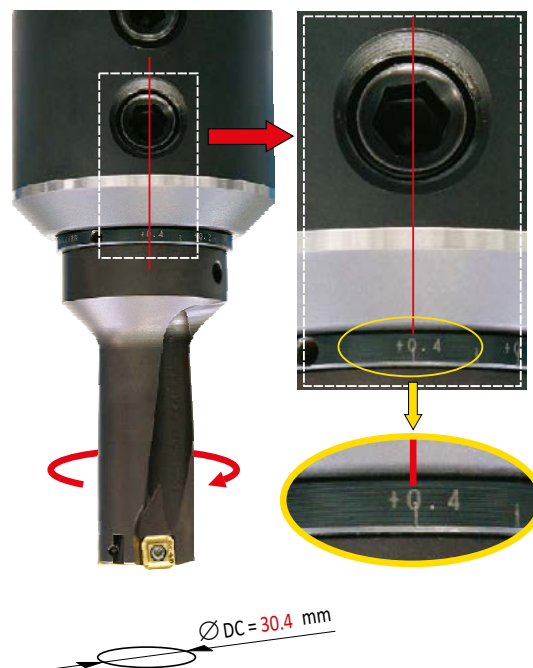
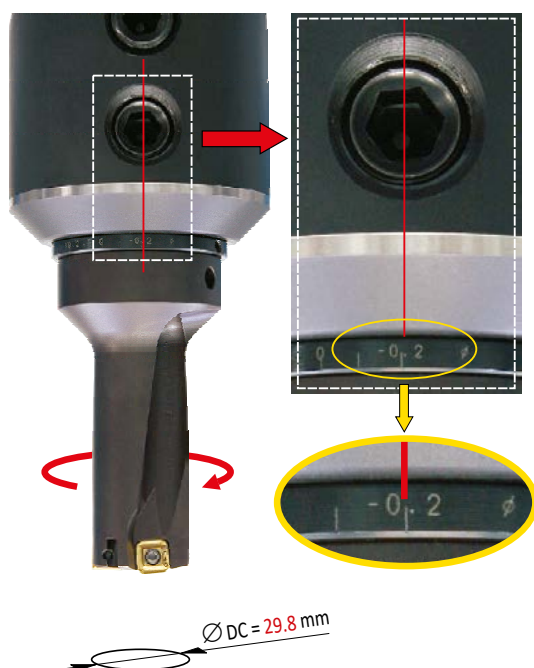
EP JUSTERBAR HOLDER

JUSTERBAR HOLDER

Skaft-dia.	Bor-dia.	Område
25	15 – 24	+0.4 – -0.2
32	24.5 – 40	+0.4 – -0.2

For fræsemaskiner

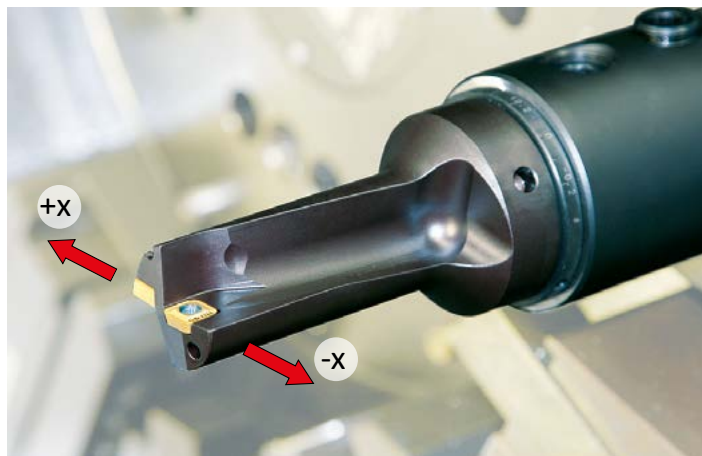
Justeringsområde for diameter



Skaft-dia.	Bor-dia.	Område
25	15 – 24	+0.2 – -0.15
32	24.5 – 40	+0.2 – -0.15

Justering af midterhøjde
– for drejbænksoperation

Justeringsområde for midterhøjde



MASKINBEARBEJDNINGSDATA FOR VENDESKÆRSBOR

Anbefalet tryk for tilført skærevæske

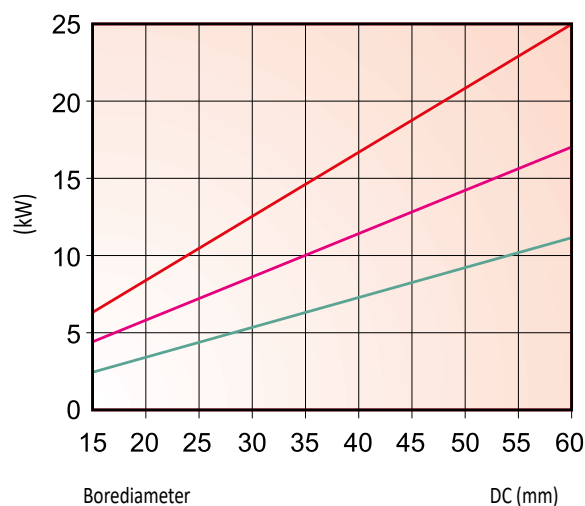
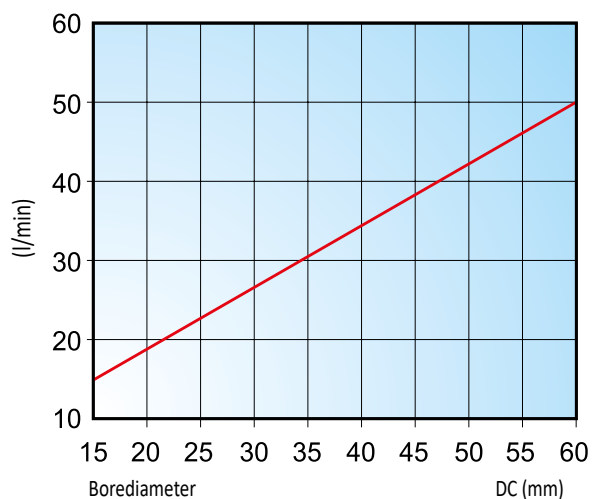
Borediameter DC (mm)	Tryk for skærevæske	
	Borelængde	
	2.0 – 2.5 DC	3.0 – 5.0 DC
15 – 25	6 bar	12 bar
26 – 40	4.5 bar	9 bar
> 40	3 bar	6 bar

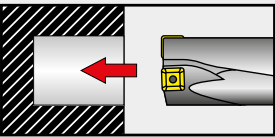
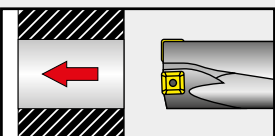
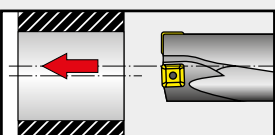
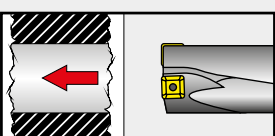
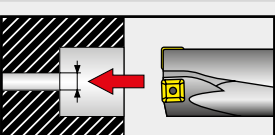
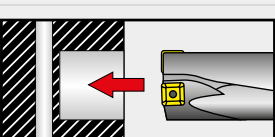
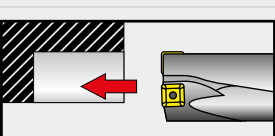
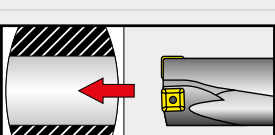
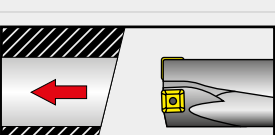
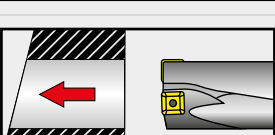
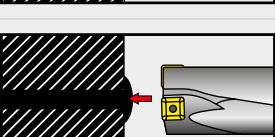
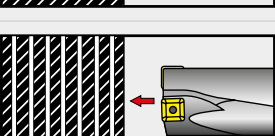
Krav til kølemiddelmængde

TØRBORING

Trykluft gennem boret anbefales, når der bores uden kølemiddel i støbejern og stål

Nettostrømforbrug



	BORING AF BUNDHUL Ved boring af huller, der er dybere end 1D, er indvendig køling påkrævet.
	BORING AF GENNEMGÅENDE HUL Der kan blive produceret en skive, når det indekserbare bor forlader materialet. Denne skive kan blive slynget ud ved høj hastighed, når arbejdsområdet roterer. Det er afgørende, at maskinen er tilstrækkeligt sikret, så operatøren ikke kommer til skade.
	EKSCENTERBORING Reducer tilspændingen til den lavere anbefalede værdi for bestemte vendeskær. Se data for vendeskæret. Overskrid ikke de radiale justeringsværdier.
	START PÅ UJÆVNE OG STØBTE OVERFLADER Reducer tilspændingen med 50 % ved indgangen for vendeskærbor, indtil begge indsætter er aktiveret.
	UDBORING OG BORING I STYREHULLER Hvis et forboret hul har en større diameter end 1/4 bor, skal tilspændingen reduceres.
	BORING AF KRYDSSHULLER Reducer tilspændingen med 50 % ved boring i et eksisterende hul. Diameteren for det eksisterende hul må ikke være større end 0,25 x D.
	AFBRUDT SKÆRING OG OPKRAVNING Reducer tilspændingen til den lavere anbefalede tilspænding for bestemte vendeskær. Se beskrivelsen af skær for vendeskærsbor.
	BORING PÅ BUET OVERFLADE Boring på midterlinjen kan foretages med reduceret tilspændingshastighed ned til 50 % under indgang og udgang.
	BORING PÅ VINKLEDE OVERFLADER Reducer tilspændingen med 50 % ved indgangen for vendeskærsbor, indtil begge skær er aktiveret, hvis indgangsvinklen er større end 5°.
	UDGANG PÅ VINKLET OVERFLADE Reducer tilspændingen med 50 % ved udgang, hvis udgangsvinklen er større end 5°.
	START PÅ EN SVEJSESØM Plandrejning anbefales før boring. Reducer tilspændingen med 50 % under boring i det svejsede materiale.
	DRILLING OF STACKED MATERIALS Avoid spaces larger than 0.2 mm between layers. The component must be securely fixed. If necessary reduce the feed.

FEJLFINDING FOR VENDESKÆRSBOR

LAV YDELSE FOR DRIVMOTOR (LAV SPINDELKRAFT)

- a) reducer skærehastighed = reduktion af spindlens omdrejningstal
- b) reducer tilspændingshastigheden

FOR MEGET SLID AF PERIFER INDSATS

- a) reducer skærehastighed = reduktion af spindlens omdrejningstal
- b) vælg en slidbestandig kvalitet
- a) øg kølemiddelmængde og tryk

SPÅNTAGNING FOR PERIFERISKÆRET

- a) reducer tilspændingshastigheden, indtil den periferiskæret er helt indkoblet
- b) vælg en mere robust vendeskærskvalitet
- c) reducer skærehastigheden

SPÅNTAGNING FOR CENTERSKÆRET

- a) reducer tilspændingshastigheden ved indgang
- b) kontrollér fastspænding for bor og arbejdsemne

KONTINUERLIGT, DÅRLIG SPÅNBRYDNING

- a) juster tilspændingshastigheden
- b) øg skærehastigheden, og reducer samtidig tilspændingshastigheden

OPHOBNING AF KORTE SPÅNER I SPORENE

- a) øg kølemiddelmængde og tryk
- b) reducer skærehastigheden
- c) juster tilspændingshastigheden

ANBEFALEDE TAPBORSTØRRELSER

Metriske ISO-gevind		Anbefalet bordiameter for	
Gevind	Stigning	Skæretap	Rulletap
M16 × 1.0	1.00	15.0	15.5
M16 × 0.75	0.75	15.3	–
M17 × 1.0	1.00	16.0	–
M18	2.50	15.5	16.8
M18 × 2.0	2.00	16.0	–
M18 × 1.5	1.50	16.5	17.3
M18 × 1.0	1.00	17.0	–
M20	2.50	17.5	18.8
M20 × 2.0	2.00	18.0	–
M20 × 1.5	1.50	18.5	19.3
M20 × 1.0	1.00	19.0	–
M22	2.50	19.5	20.8
M22 × 2.0	2.00	20.0	–
M22 × 1.5	1.50	20.5	21.3
M22 × 1.0	1.00	21.0	–
M24	3.00	21.0	22.5
M24 × 2.0	2.00	22.0	–
M24 × 1.5	1.50	22.5	23.3
M27	3.00	24.0	–
M27 × 2.0	2.00	25.0	–
M30	3.50	26.5	–
M30 × 2.0	2.00	28.0	–
M33	3.50	29.5	–
M36	4.00	32.0	–
M36 × 3.0	3.00	33.0	–
M39	4.00	35.0	–
M42	4.50	37.5	–
M42 × 3.0	3.00	39.0	–
M45	4.50	40.5	–
M48	5.00	43.0	–
M48 × 3.0	3.00	45.0	–
M52	5.00	47.0	–
M52 × 3.0	3.00	48.0	–

Tommegevind UNC		Anbefalet bordiameter for	
Gevind	Stigning	Skæretap	Rulletap
3/4"	10	16.7	17.8
7/8"	9	19.5	20.8
1"	8	22.2	23.8
1 1/8"	7	25.0	–
1 1/4"	7	28.2	–
1 3/8"	6	31.0	–
1 1/2"	6	34.0	–
1 3/4"	5	39.5	–
2"	4 1/2	45.2	–
2 1/4"	4 1/2	51.6	–
2 1/2"	4	57.2	–

Whitworth-rørgevind		Anbefalet bordiameter for	
Gevind	Stigning	Skæretap	Rulletap
G 3/8"	19	15.3	16.0
G 1/2"	14	19.0	20.0
G 5/8"	14	21.0	22.0
G 3/4"	14	24.5	25.5
G 7/8"	14	28.3	29.3
G 1"	11	30.8	32.0
G 1 1/8"	11	35.5	–
G 1 1/4"	11	39.5	–
G 1 3/8"	11	41.8	–
G 1 1/2"	11	45.3	–
G 1 3/4"	11	51.0	–
G 2"	11	57.0	–

Tommegevind UNF		Anbefalet bordiameter for	
Gevind	Stigning	Skæretap	Rulletap
3/4"	16	17.5	18.3
7/8"	14	20.5	21.3
1"	12	23.4	24.3
1 1/8"	12	26.5	–
1 1/4"	12	29.8	–
1 3/8"	12	33.0	–
1 1/2"	12	36.0	–

BORING SYSTEMS

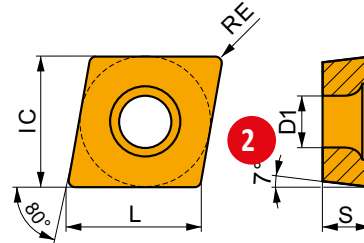


HOLEMAKING – GENERAL CONTENT

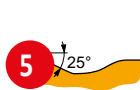
 6		WMG & ISO 13399
 12	DRILLS	INSTRUCTIONS
 15		SOLID CARBIDE DRILLS
 66		HSS DRILLS
 176		CUTTING FLUIDS
 186		TECHNICAL INFORMATION
 190		REAMERS AND COUNTERSINKS
 264	INDEXABLE DRILLS	INSTRUCTIONS
 271		HYDRA DRILLS
 297		TECHNICAL INFORMATION
 307		INDEXABLE DRILLS
 327		TECHNICAL INFORMATION
 350	BORING SYSTEMS	INSTRUCTIONS
 359		BORING HEADS
 376		BORING ACCESSORIES
 381		INSERTS
 404		ARBORS
 418		BORING KITS
 429		TECHNICAL INFORMATION

1 CCGT

	IC	D1	L	S
	[mm]	[mm]	[mm]	[mm]
0602	6.350	2.80	6.40	2.38
0602-SF3	6.350	2.80	6.40	2.58
0803-AL	7.940	3.40	8.10	3.43
0803-SF3	7.940	3.40	8.10	3.43
09T3	9.525	4.40	9.70	3.97
09T3-SF3	9.525	4.40	9.70	4.22
1204	12.700	5.50	12.90	4.76
1204-SF3	12.700	5.50	12.90	5.01



Product	RE	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]	[m/min]	[mm/rev]	[mm]



CCGT 060202F-AL	HF7	0.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CCGT 060204F-AL	T0315	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CCGT 080302F-AL	T0315	0.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CCGT 080304F-AL	HF7	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	T0315	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CCGT 09T302F-AL	HF7	0.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	T0315	0.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CCGT 09T304F-AL	HF7	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	T0315	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CCGT 09T308F-AL	HF7	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	T0315	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CCGT 120404F-AL	HF7	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	T0315	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CCGT 120408F-AL	HF7	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	T0315	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

CCGT120404F-AL:T0315

Use full insert specification code when ordering!

Grade

Include colon

ISO insert code

INSERTS – PAGE OVERVIEW

Pos.	Description
1	Designation of insert
2	Schematic drawing of insert
3	Table with insert sizes (mm)
4	Picture of representative insert
5	Profile of main cutting edge
6	Icons – specific features and cutting edge type

Pos.	Description
7	ISO insert code
8	Grade
9	Insert radii (mm)
10	Geometry description
11	Application area of insert

UDBORINGSVÆRKTØJER OG GRUNDHOLDERE – SIDEOVERSIGT

1

D75-BB

P M K N S H 2

PRAMET 3 S(P)

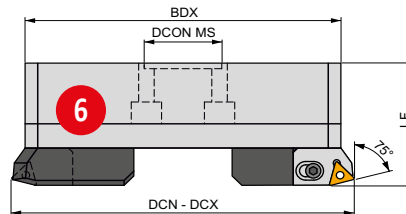


4

75° Grov Bore Hoved, Medium Bor - Ø80 op til Ø220 mm

Højtydende 75° lille bore hoved til skrubning. Velegnet til gennemgående, bund og tværgående huller og affasede. Fås til anvendelse af skær CC .., TC .. eller CN .. type, til huldiameterområde Ø80 op til Ø220 mm med størrelser fra 68 til 200 mm. Høj nøjagtighed og repeterbarhed.

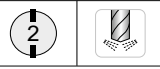
5



6



7



8



9

Product	CZC MS	DCN	DCX	BDX	DCON MS	LF											
		(mm)	(mm)	(mm)	(mm)	(mm)											
D 30075 300	300	220.00	320.00	202	60.00	90.00	3CT 75 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 5	HXX 4	9.40		
D 30075 402	300	220.00	320.00	202	60.00	90.00	3CT 75 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 5	HXX 4	9.37		
D 30075 402N	300	220.00	320.00	202	60.00	90.00	3CT 75 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4	9.37		
D 40075 300	400	290.00	400.00	272	60.00	90.00	3CT 75 402 N	US 0625	HXX 5	CM.. 1204..	US 0415-T15P	SDR T15P	HXX 5	HXX 4	9.37		
D 40075 402	400	290.00	400.00	272	60.00	90.00	3CT 75 402 N	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 5	HXX 4	9.37		
D 40075 402N	400	290.00	400.00	272	60.00	90.00	3CT 75 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4	9.37		

10

11

12

13

14

15

16

17

18

19

20

21

1

69871-BS

PRAMET

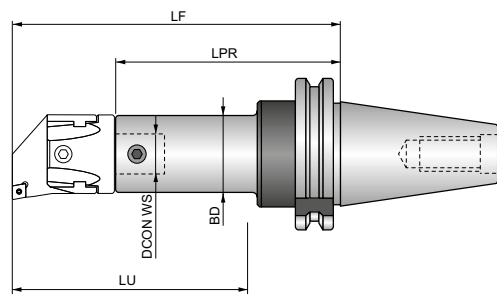


4

DIN 69871 skafværkøjtøjsholder til bore hoveder

DIN 69871 meget stiv værktøjsholder (til MTC) til borehoveder i 40 og 50 koniske. Holder med forskellig længde til rådighed. Koblingsstørrelser 22 - 160 mm kan bruges i kombination med EXT-BS forlængere, RED-BS reduktionsgear og LA-BS forstørrelser. Intern kølevæske til rådighed. Til applikationer, der kræver høj nøjagtighed og repeterbarhed.

5



6

Product		CZC MS	BD	DCON WS	LF	LPR	LU			
			(mm)	(mm)	(mm)	(mm)	(mm)			
AS 330 022 100 R	30	22	22.00	12.00	138.00	104	100.00	✓	US 0608	0.72
AS 330 027 055 R	30	27	27.00	15.00	90.00	48	55.00	✓	US 0609	0.56
AS 330 027 100 R	30	27	27.00	15.00	138.00	96	100.00	✓	US 0609	0.68
AS 330 060 R	30	27	27.00	15.00	138.00	96	100.00	✓	US 0609	0.68
AS 330 100 R	30	27	27.00	15.00	138.00	96	100.00	✓	US 0609	0.68
AS 340 022 080 R	40	22	22.00	12.00	118.00	84	80.00	✓	US 0608	1.14

10

24

11

12

22

23

21

UDBORINGSVÆRKTØJER OG GRUNDHOLDERE – SIDEOVERSIGT

Pos.	Designation	Pos.	Designation
1	Betegnelse for udboringshoved/dorn	13	Patron
2	Materialegrupper, som værktøjet er beregnet til	14	Patronskrue
3	Fastspændingssystem for skær	15	Nøgle til patronskrue
4	Illustrativt billede	16	Gruppe med kompatible indsatser
5	Tool description	17	Skrue til vendeskær
6	Schematic drawing of tool	18	Nøgle til vendeskær
7	Achievable quality of surface	19	Justerskrue til hoved
8	Product features	20	Låsenøgle til hoved
9	Product applications	21	Vægt (kg)
10	Værktøjskode ¹⁾	22	Indvendig kølemiddelforsyning
11	Størrelseskode for hoved/dorn ²⁾	23	Spændeskrue for hoved
12	Værktøjsmål (mm)	24	Grundholder størrelse ³⁾

¹⁾ Værktøjskodebetegnelse er inkluderet i den tekniske del

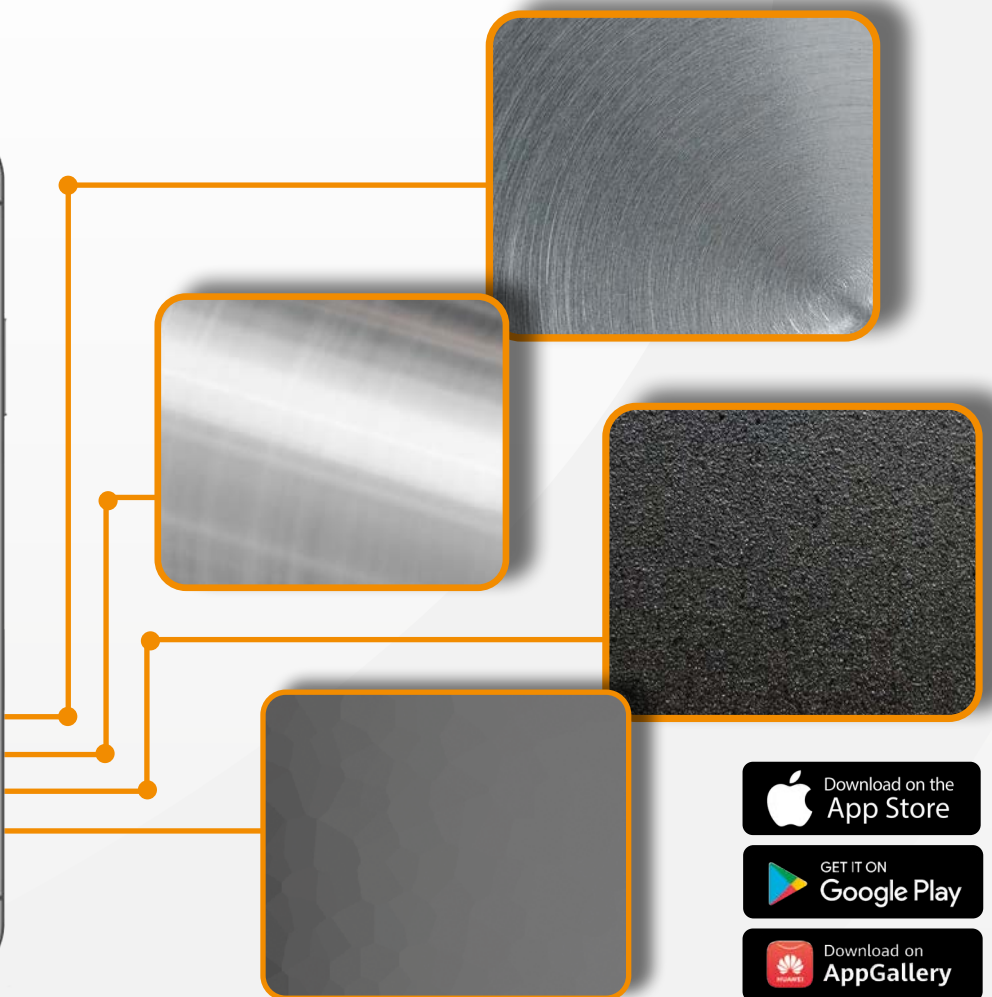
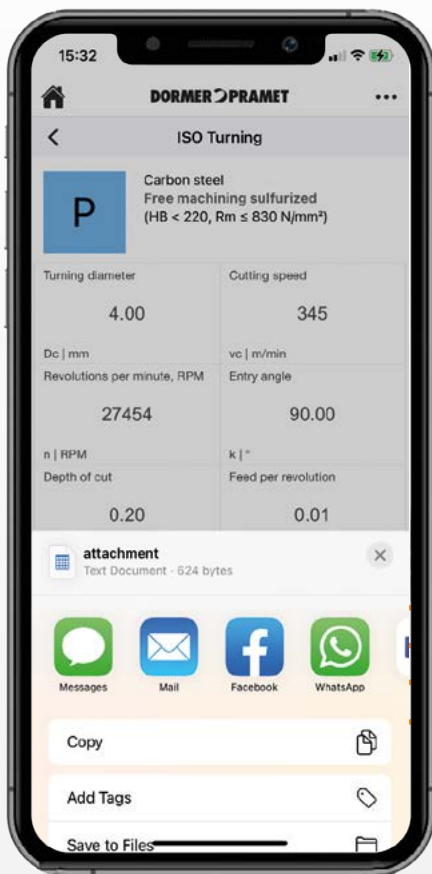
²⁾ Udboringshoved og grundholder skal have samme størrelseskode, hvis kompatibiliteten skal garanteres.

³⁾ Se skematisk tegning for grundholdere.



EVERY MATERIAL

Machining steel, stainless steel, cast iron, super-alloys or non-ferrous materials, all are covered within our calculator app. Download it from your app store today.
Simply Reliable.



BORING – ICONS OVERVIEW

GENERAL ICONS

	Primary use		Finishing – very good surface quality		Roughing – unlimited surface roughness
	Possible use		Medium machining – good surface quality		

GENERAL FEATURES OF TOOLS

	1 effective tooth per revolution		Adjustable diameter of tool
	2 effective teeth per revolution		

OPERATIONS DRILLING

	Blind hole boring		Boring up to a shoulder		Chamfering (beveling) in hole
	Boring through cross holes		Chamfering (beveling)		Through hole boring

FEATURES

	First choice		High Speed Cutting		Edge with facet
	For short chipping materials		Large overhang		Rounded edge
	For tough materials (long chipping)		Thin-walled and slim workpieces		Rounded edge with double facet
	Heavy working conditions		Universal wide range option		Rounded edge with facet
					Sharp edge

OTHER

	Taper size
---	------------

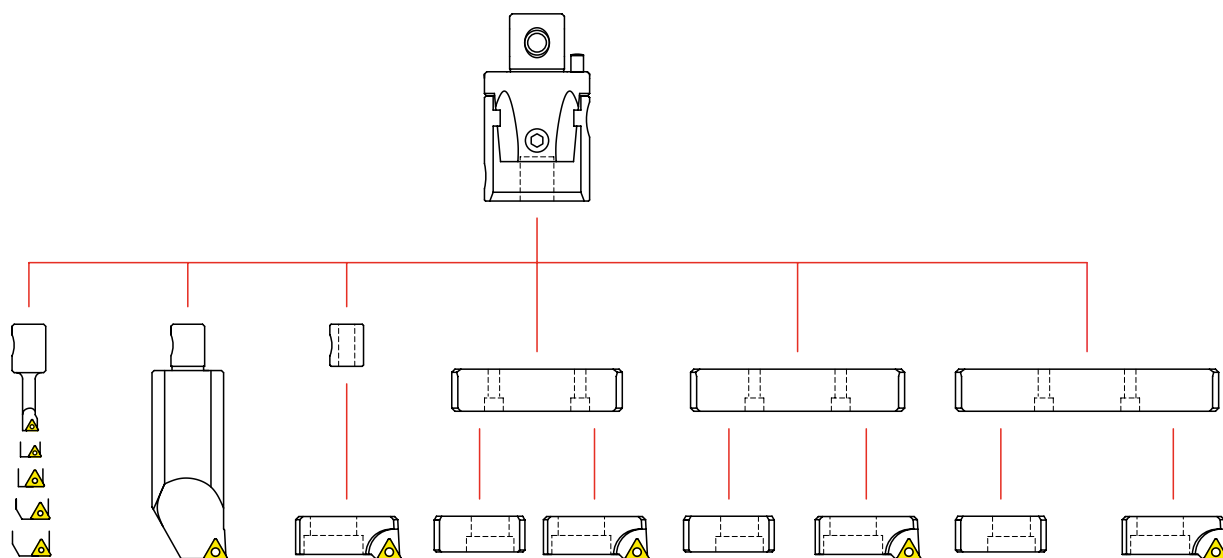
TEKNISK DEL

	Tilspænding (mm/omdr.)		Mellem skærehastighed, systemstivhed begrænset (let afbrudt skæring)
	Meget høj skærehastighed, fremragende systemstivhed (stabile arbejdsforhold)		Lav skærehastighed, lav systemstivhed (afbrudt skæring)
	Høj skærehastighed, høj systemstivhed (stabile arbejdsforhold)		Meget lav skærehastighed, meget lav systemstivhed (meget ustabile arbejdsforhold)
	Høj skærehastighed, systemstivhed let begrænset (skæredybde skiftende)		

UDBORINGSSYSTEM

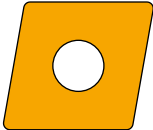
	GROVBÆRBEJDNINGSHOVEDER		
			
Beskrivelse	D75 / D90	D75-C/D90-C	D75-BB/D90-BB
Udboringsdiameter	24 – 82	80 – 220	220 – 500
Hultolerance	IT9	IT9	IT9
Maks. udboringsdybde	5×D	4×D	360 mm
Indgangsvinkel	75° / 90°	75° / 90°	75° / 90°
Justeringspræcision (mm/Ø)	–	–	–
	361, 364	362, 365	363, 366

UDBORINGSKITS – 420 – 427



FINISHHOVEDER			MIKROUDBORINGSHOVEDER
			
F75/F90	F75-C/F90-C	F75-BB/F90-BB	MB-H
24 – 82	80 – 220	220 – 500	8 – 38
IT7	IT7	IT7	IT6
5×D	4×D	–	104 mm
75° / 90°	75° / 90°	75° / 90°	–
0.002	0.002	0.002	0.002
367, 370	368, 371	369, 372	373

BORSTÆNGER

ISO-STÆNGER	ISO-STÆNGER A042	CHAM-BS	CART-BR	VENDESKÆR
				
				

GRUNDHOLDERE

69871-BS ISO 30, 40, 50	BT-BS ISO 30, 40, 50	HSK-BS 50A, 63A, 100A	2080-BS ISO 40, 50	MOR-BS MORSE	WEL-BS WELDON
 406	 408	 410	 411	 413	 414
					

TILBEHØR

EXT-BS	RED-BS	LA-BS
 415	 416	 417
		

UDBORINGSKITS – 420 – 427





UDBORINGSHOVERER

BESKRIVELSE AF UDBOREHOVED

1	2	3	4
D	042	75	402N

1		2	3	4	
Værktøjstype		Størrelse	Skærvinkel	Kode for vendeskær	
D	Grovbearbejdning	022	75	300	TC..16T3.
		027	90	400	CC..0602..
		032		401	CC..0803..
		042		402	CC..1204..
A	Finishbehandling	054		409	CC..09T3..
		068		402N	CN..1204..
		085			
		100			
		200			
		300			
		400			
		500			

D75



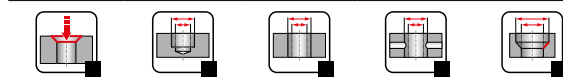
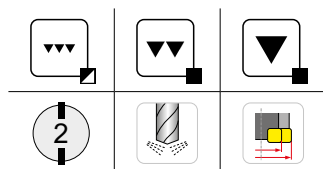
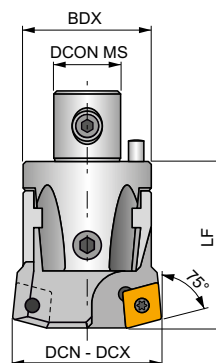
PRAMET

S(P)



75° Grov Bore Hoved, Lille Bor - Ø24 op til Ø82 mm

Højtydende 75° lille bore hoved til skrubning. Velegnet til gennemgående, bund og tværgående huller og affasede. Fås til brug af skær af typen CC .., TC .. eller CN .. og til hul diameterområde Ø24 op til Ø82 mm med størrelser fra 22 op til 54 mm. Høj nøjagtighed og repeterbarhed.



Product	CZC MS	DCN	DCX	BDX	DCON MS	LF						
		(mm)	(mm)	(mm)	(mm)	(mm)						
D 02275 400	22	24.00	30.00	22	12.00	34.00	CC.. 0602..	US 0206-T08P	SDR T08P	HXX 2	HXX 3	0.10
D 02775 401	27	29.00	40.00	27	15.00	42.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXX 2	HXX 4	0.17
D 02775 409	27	29.00	40.00	27	15.00	42.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXX 2	HXX 4	0.17
D 03275 401	32	39.00	50.00	32	20.00	45.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXX 2.5	HXX 4	0.27
D 03275 409	32	39.00	50.00	32	20.00	45.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXX 2.5	HXX 4	0.27
D 04275 300	42	49.00	65.00	42	24.00	56.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 3	HXX 5	0.54
D 04275 402	42	49.00	65.00	42	24.00	56.00	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 3	HXX 5	0.54
D 04275 402N	42	53.00	65.00	42	24.00	56.00	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 3	HXX 5	0.53
D 05475 300	54	63.00	82.00	54	28.00	66.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 3	HXX 6	1.07
D 05475 402	54	63.00	82.00	54	28.00	66.00	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 3	HXX 6	1.07
D 05475 402N	54	63.00	82.00	54	28.00	66.00	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 3	HXX 6	1.03

D75-C



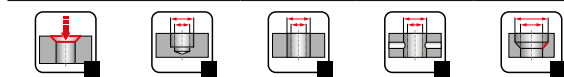
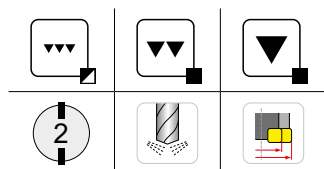
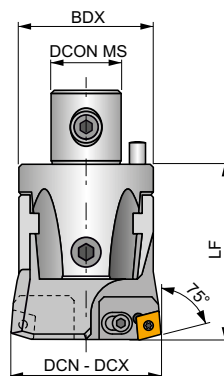
PRAMET

S(P)



75° Grov Bore Hoved, Medium Bor - Ø80 op til Ø220 mm

Højtydende 75° lille bore hoved til skrubning. Velegnet til gennemgående, bund og tværgående huller og affasede. Fås til anvendelse af skær CC .., TC .. eller CN .. type, til huldiameterområde Ø80 op til Ø220 mm med størrelser fra 68 til 200 mm. Høj nøjagtighed og repeterbarhed.



Product	CZC MS	DCN	DCX	BDX	DCON MS	LF										
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)										kg
D 06875 300	68	80.00	102.00	68	36.00	86.00	2CT 75 300	US 0616	HXX 5	TC.. 16T3..	US 0408-T15P	SDRT15P	HXX 4	HXX 8		2.16
D 06875 402	68	80.00	102.00	68	36.00	86.00	2CT 75 402	US 0616	HXX 5	CC.. 1204..	US 0509-T20P	SDRT20P	HXX 4	HXX 8		2.15
D 06875 402N	68	80.00	102.00	68	36.00	86.00	2CT 75 402 N	US 0616	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 4	HXX 8		2.21
D 08575 300	85	100.00	125.00	85	50.00	100.00	3CT 75 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDRT15P	HXX 5	HXX 8		4.16
D 08575 402	85	100.00	125.00	85	50.00	100.00	3CT 75 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDRT20P	HXX 5	HXX 8		4.13
D 08575 402N	85	100.00	125.00	85	50.00	100.00	3CT 75 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 8		4.23
D 10075 300	100	125.00	160.00	110	60.00	100.00	3CT 75 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDRT15P	HXX 5	HXX 8		6.57
D 10075 402	100	125.00	160.00	110	60.00	100.00	3CT 75 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDRT20P	HXX 5	HXX 8		6.55
D 10075 402N	100	125.00	160.00	110	60.00	100.00	3CT 75 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 8		6.57
D 20075 300	200	160.00	220.00	145	60.00	100.00	3CT 75 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDRT15P	HXX 5	HXX 8		8.87
D 20075 402	200	160.00	220.00	145	60.00	100.00	3CT 75 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDRT20P	HXX 5	HXX 8		8.88
D 20075 402N	200	160.00	220.00	145	60.00	100.00	3CT 75 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 8		8.95

D75-BB

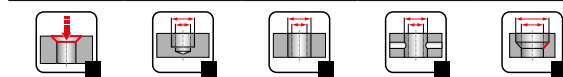
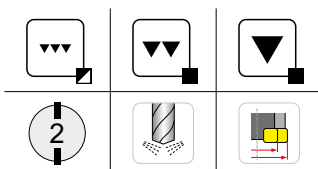
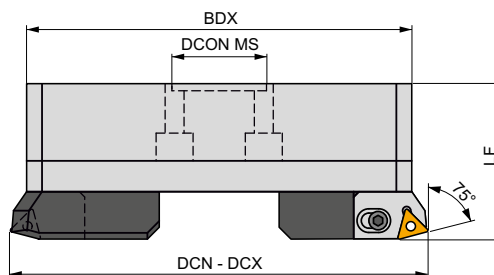


S(P)



75° Grov Bore Hoved, Stor Bor - Ø220 op til Ø500 mm

Højtydende 75° lille bore hoved til skrubning. Velegnet til gennemgående, bund og tværgående huller og affasede. Fås til brug til skær af typen CC.., TC.. eller CN.. og til huldiameterområde Ø220 op til Ø500 mm med størrelser fra 300 til 500 mm. Høj nøjagtighed og repeterbarhed.



Product	CZC MS	DCN	DCX	BDX	DCON MS	LF									
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)									
D 30075 300	300	220.00	320.00	202	60.00	90.00	3CT 75 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 5	HXX 4	9.40
D 30075 402	300	220.00	320.00	202	60.00	90.00	3CT 75 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 5	HXX 4	9.37
D 30075 402N	300	220.00	320.00	202	60.00	90.00	3CT 75 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4	9.37
D 40075 300	400	290.00	400.00	272	60.00	90.00	3CT 75 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 5	HXX 4	12.92
D 40075 402	400	290.00	400.00	272	60.00	90.00	3CT 75 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 5	HXX 4	12.95
D 40075 402N	400	290.00	400.00	272	60.00	90.00	3CT 75 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4	12.98
D 50075 300	500	370.00	500.00	352	60.00	90.00	3CT 75 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 5	HXX 4	16.74
D 50075 402	500	370.00	500.00	352	60.00	90.00	3CT 75 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 5	HXX 4	16.74
D 50075 402N	500	370.00	500.00	352	60.00	90.00	3CT 75 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4	16.74

D90



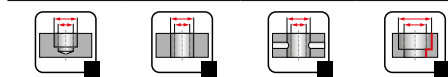
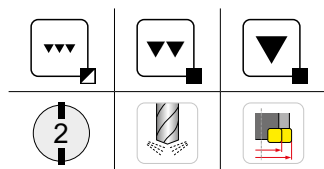
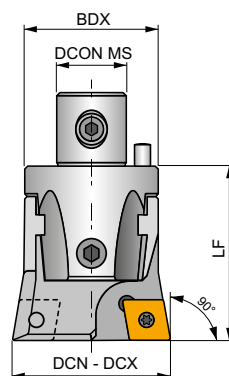
PRAMET

S(P)



90° Grov Bore Hoved, Lille Bor - Ø24 op til Ø82 mm

Højtydende 90° lille bore hoved til skrubning. Velegnet til gennemgående, bundhul og tværhul. Fås til brug af CC ..., TC ..., CN ... type skær og til huldiameterområde Ø24 op til Ø82 mm med størrelser fra 22 op til 54 mm. Høj nøjagtighed og repeterbarhed.



Product	CZC MS	DCN	DCX	BDX	DCON MS	LF						
		(mm)	(mm)	(mm)	(mm)	(mm)						
D 02290 400	22	24.00	30.00	22	12.00	34.00	CC.. 0602..	US 0206-T08P	SDT T08P	HXX 2	HXX 3	0.10
D 02790 401	27	29.00	40.00	27	15.00	42.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXX 2	HXX 4	0.17
D 02790 409	27	29.00	40.00	27	15.00	42.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXX 2	HXX 4	0.17
D 03290 401	32	39.00	50.00	32	20.00	45.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXX 2.5	HXX 4	0.03
D 03290 409	32	39.00	50.00	32	20.00	45.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXX 2.5	HXX 4	0.27
D 04290 300	42	49.00	65.00	42	24.00	56.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 3	HXX 5	0.54
D 04290 402	42	49.00	65.00	42	24.00	56.00	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 3	HXX 5	0.54
D 04290 402N	42	53.00	65.00	42	24.00	56.00	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 3	HXX 5	0.53
D 05490 300	54	63.00	82.00	54	28.00	66.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 3	HXX 6	1.06
D 05490 402	54	63.00	82.00	54	28.00	66.00	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 3	HXX 6	1.06
D 05490 402N	54	63.00	82.00	54	28.00	66.00	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 3	HXX 6	1.06

D90-C



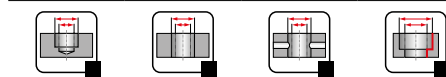
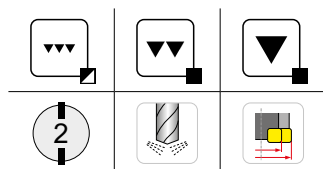
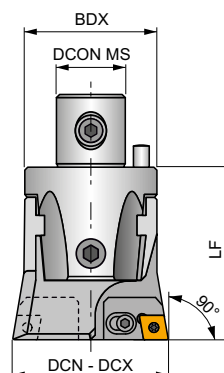
PRAMET

S(P)



90° Grov Bore Hoved, Medium Bor - Ø80 op til Ø220 mm

Højtydende 90° lille bore hoved til skrubning. Velegnet til gennemgående, bundhul og tværhul. Fås til brug af CC .., TC .., CN .. type skær og til hul diameterområde Ø80 op til Ø220 mm med størrelser fra 68 til 200 mm. Høj nøjagtighed og repeterbarhed.



Product	CZC MS	DCN	DCX	BDX	DCON MS	LF										
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)										
D 06890 300	68	80.00	102.00	68	36.00	86.00	2CT 90 300	US 0616	HXX 5	TC.. 16T3..	US 0408-T15P	SDRT15P	HXX 4	HXX 8	2.17	
D 06890 402	68	80.00	102.00	68	36.00	86.00	2CT 90 402	US 0616	HXX 5	CC.. 1204..	US 0509-T20P	SDRT20P	HXX 4	HXX 8	2.15	
D 06890 402N	68	80.00	102.00	68	36.00	86.00	2CT 90 402 N	US 0616	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 4	HXX 8	2.18	
D 08590 300	85	100.00	125.00	85	50.00	100.00	3CT 90 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDRT15P	HXX 5	HXX 8	4.52	
D 08590 402	85	100.00	125.00	85	50.00	100.00	3CT 90 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDRT20P	HXX 5	HXX 8	4.12	
D 08590 402 N	85	100.00	125.00	85	50.00	100.00	3CT 90 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 8	4.17	
D 10090 300	100	125.00	160.00	110	60.00	100.00	3CT 90 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDRT15P	HXX 5	HXX 8	6.54	
D 10090 402	100	125.00	160.00	110	60.00	100.00	3CT 90 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDRT20P	HXX 5	HXX 8	6.56	
D 10090 402 N	100	125.00	160.00	110	60.00	100.00	3CT 90 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 8	6.40	
D 20090 300	200	160.00	220.00	145	60.00	100.00	3CT 90 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDRT15P	HXX 5	HXX 8	8.90	
D 20090 402	200	160.00	220.00	145	60.00	100.00	3CT 90 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDRT20P	HXX 5	HXX 8	8.89	
D 20090 402 N	200	160.00	220.00	145	60.00	100.00	3CT 90 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 8	8.91	

D90-BB



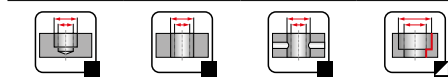
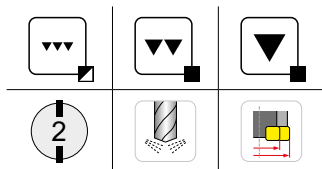
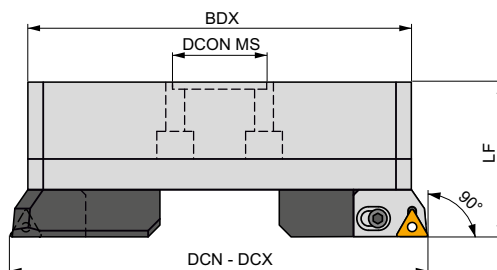
PRAMET

S(P)



90° Grov Bore Hoved, Stor Bor - Ø220 op til Ø500 mm

Højtydende 90° lille bore hoved til skrubning. Velegnet til gennemgående, bundhul og tværhul. Fås til brug af CC ..., TC ..., CN ... type skær og til huldiameterområde Ø220 op til Ø500 mm med størrelser fra 300 til 500 mm. Høj nøjagtighed og repeterbarhed.



Product	CZC MS	DCN	DCX	BDX	DCON MS	LF										
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)										kg
D 30090 300	300	220.00	320.00	202	60.00	90.00	3CT 90 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDRT15P	HXX 5	HXX 4	9.45	
D 30090 402	300	220.00	320.00	202	60.00	90.00	3CT 90 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDRT20P	HXX 5	HXX 4	9.47	
D 30090 402 N	300	220.00	320.00	202	60.00	90.00	3CT 90 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4	9.56	
D 40090 300	400	290.00	400.00	272	60.00	90.00	3CT 90 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDRT15P	HXX 5	HXX 4	12.98	
D 40090 402	400	290.00	400.00	272	60.00	90.00	3CT 90 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDRT20P	HXX 5	HXX 4	12.98	
D 40090 402 N	400	290.00	400.00	272	60.00	90.00	3CT 90 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4	12.98	
D 50090 300	500	370.00	500.00	352	60.00	90.00	3CT 90 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDRT15P	HXX 5	HXX 4	16.58	
D 50090 402	500	370.00	500.00	352	60.00	90.00	3CT 90 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDRT20P	HXX 5	HXX 4	16.74	
D 50090 402 N	500	370.00	500.00	352	60.00	90.00	3CT 90 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4	16.63	

F75



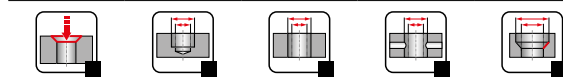
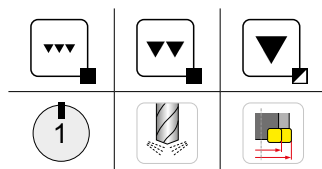
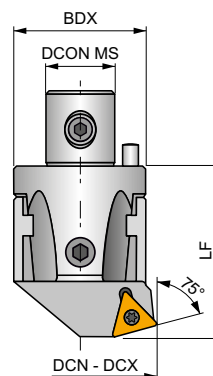
PRAMET

S



75° Fin Bore Hoved, Lille Bor - Ø24 op til Ø82 mm

Højtstående 75° lille bore hoved til efterbehandling. Velegnet til gennemgående og bund hulboring, affasning ved spiralformet interpolation og tværboring. Fås til skær af typen CC .. og TC ... Fås til huldiameterområde Ø24 op til Ø82 mm i størrelser fra 22 til 42 mm. Høj nøjagtighed og repeterbarhed.



Product	CZC MS	DCN	DCX	BDX	DCON MS	LF						
		(mm)	(mm)	(mm)	(mm)	(mm)						kg
A 02275 400	22	24.00	30.00	22	12.00	34.00	CC.. 0602..	US 0206-T08P	SDR T08P	HXX 2	HXX 3	0.10
A 02775 401	27	29.00	40.00	27	15.00	42.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXX 2	HXX 4	0.17
A 02775 409	27	29.00	40.00	27	15.00	42.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXX 2	HXX 4	0.17
A 03275 401	32	39.00	50.00	32	20.00	45.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXX 2.5	HXX 4	0.26
A 03275 409	32	39.00	50.00	32	20.00	45.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXX 2.5	HXX 4	0.26
A 04275 300	42	49.00	65.00	42	24.00	56.00	TC.. 16T3..	US 0307-T10P	SDR T10P	HXX 3	HXX 5	0.51
A 05475 300	54	63.00	82.00	54	28.00	66.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 3	HXX 6	1.01

F75-C



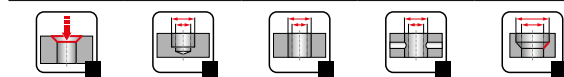
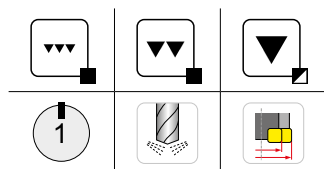
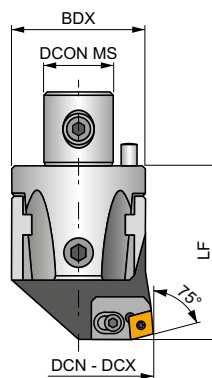
PRAMET

S(P)



75° Fin Bore Hoved, Medium Bor - Ø80 op til Ø220 mm

Højtydende 75° medieboringhoved til efterbehandling. Velegnet til gennemgående og bund hulboring, affasning ved spiralformet interpolation og tværboring. Fås til skær af typen CC .., TC .., CN .. Fås til hul diameterområde Ø80 op til Ø220 mm i størrelser fra 68 til 200 mm. Høj nøjagtighed og repeterbarhed.



Product	CZC MS	DCN	DCX	BDX	DCON MS	LF									
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)									kg
A 06875 300	68	80.00	102.00	68	36.00	86.00	2CT 75 300	US 0616	HXK 5	TC.. 16T3..	US 0408-T15P	SDR T15P	HXK 5	HXK 8	2.02
A 06875 402	68	80.00	102.00	68	36.00	86.00	2CT 75 402	US 0616	HXK 5	CC.. 1204..	US 0509-T20P	SDR T20P	HXK 5	HXK 8	2.03
A 06875 402 N	68	80.00	102.00	68	36.00	86.00	2CT 75 402 N	US 0616	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 5	HXK 8	2.04
A 08575 300	85	100.00	125.00	85	50.00	100.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 6	HXK 8	3.89
A 08575 402	85	100.00	125.00	85	50.00	100.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 6	HXK 8	3.88
A 08575 402 N	85	100.00	125.00	85	50.00	100.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 6	HXK 8	3.90
A 10075 300	100	125.00	160.00	110	60.00	100.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 6	HXK 8	6.22
A 10075 402	100	125.00	160.00	110	60.00	100.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 6	HXK 8	6.24
A 10075 402 N	100	125.00	160.00	110	60.00	100.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 6	HXK 8	6.25
A 20075 300	200	160.00	220.00	145	60.00	100.00	3CT 75 300	US 0625	HXK 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXK 6	HXK 8	8.30
A 20075 402	200	160.00	220.00	145	60.00	100.00	3CT 75 402	US 0625	HXK 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXK 6	HXK 8	8.33
A 20075 402 N	200	160.00	220.00	145	60.00	100.00	3CT 75 402 N	US 0625	HXK 5	CN.. 1204..	US 0613-H25	HXK 2.5	HXK 6	HXK 8	8.33

F75-BB



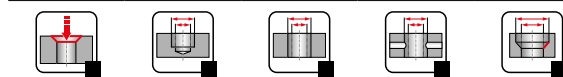
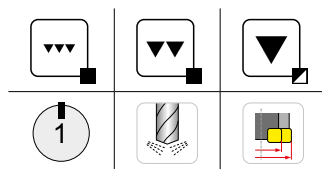
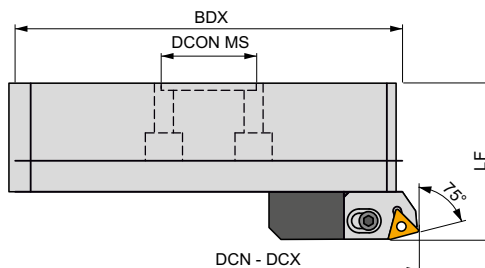
PRAMET

S(P)



75° Fin Bore Hoved, Stor Bor - Ø220 op til Ø500 mm

Højtydende 75° stort borhoved til efterbehandling. Velegnet til gennemgående og bund hulboring, affasning ved spiralformet interpolation og tværboring. Fås i indsatser af typen CC .., TC .., CN .. Fås til hul diameterområde Ø220 op til Ø500 mm i størrelser fra 300 til 500 mm. Høj nøjagtighed og repeterbarhed.



Product	CZC MS	DCN	DCX	BDX	DCON MS	LF										
		(mm)	(mm)	(mm)	(mm)	(mm)										kg
A 30075 300	300	220.00	320.00	202	60.00	90.00	3CT 75 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 5	HXX 4	8.75	
A 30075 402	300	220.00	320.00	202	60.00	90.00	3CT 75 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 5	HXX 4	8.75	
A 30075 402 N	300	220.00	320.00	202	60.00	90.00	3CT 75 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4	8.30	
A 40075 300	400	290.00	400.00	272	60.00	90.00	3CT 75 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 5	HXX 4	12.20	
A 40075 402	400	290.00	400.00	272	60.00	90.00	3CT 75 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 5	HXX 4	12.20	
A 40075 402 N	400	290.00	400.00	272	60.00	90.00	3CT 75 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4	12.15	
A 50075 300	500	370.00	500.00	352	60.00	90.00	3CT 75 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 5	HXX 4	16.31	
A 50075 402	500	370.00	500.00	352	60.00	90.00	3CT 75 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 5	HXX 4	16.31	
A 50075 402 N	500	370.00	500.00	352	60.00	90.00	3CT 75 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4	16.00	

F90



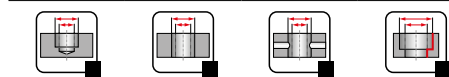
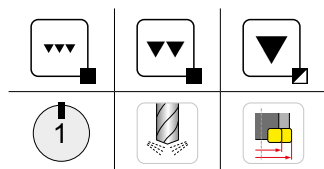
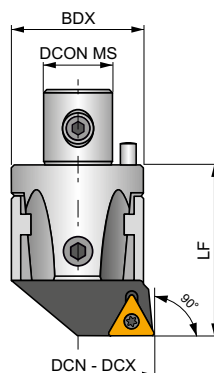
PRAMET

S(P)



90° Fin Bore Hoved, Lille Bor - Ø24 op til Ø82 mm

Højtydende 90° lille bore hoved til efterbehandling. Velegnet til gennemgående, bundhul og tværhul. Fås til skær af typen CC .., TC .., CN .. Fås til huldiameterområde Ø24 op til Ø82 mm i størrelser fra 22 til 54 mm. Høj nøjagtighed og repeterbarhed.



Product	CZC MS	DCN	DCX	BDX	DCON MS	LF						
		(mm)	(mm)	(mm)	(mm)	(mm)						kg
A 02290 400	22	24.00	30.00	22	12.00	34.00	CC.. 0602..	US 0206-T08P	SDR T08P	HXX 2	HXX 3	0.10
A 02790 401	27	29.00	40.00	27	15.00	42.00	CC.. 0803..	US 0307-T10P	SDR T10P	HXX 2	HXX 4	0.17
A 02790 409	27	29.00	40.00	27	15.00	42.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXX 2	HXX 4	0.16
A 03290 300	32	39.00	50.00	32	20.00	45.00	TC.. 16T3..	US 0408-T15P	SDR T15P	HXX 2.5	HXX 4	0.26
A 03290 401	32	39.00	50.00	32	20.00	45.00	CC.. 0803..	US 0206-T08P	SDR T08P	HXX 2.5	HXX 4	0.26
A 03290 409	32	39.00	50.00	32	20.00	45.00	CC.. 09T3..	US 0408-T15P	SDR T15P	HXX 2.5	HXX 4	0.26
A 04290 300	42	49.00	65.00	42	24.00	56.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 3	HXX 5	0.51
A 04290 402	42	49.00	65.00	42	24.00	56.00	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 3	HXX 5	0.51
A 04290 402 N	42	49.00	65.00	42	24.00	56.00	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 3	HXX 5	0.50
A 05490 300	54	63.00	82.00	54	28.00	66.00	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 3	HXX 6	1.01
A 05490 402	54	63.00	82.00	54	28.00	66.00	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 3	HXX 6	1.03
A 05490 402 N	54	63.00	82.00	54	28.00	66.00	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 3	HXX 6	1.01

F90-C



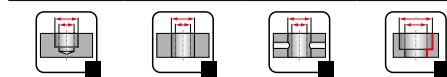
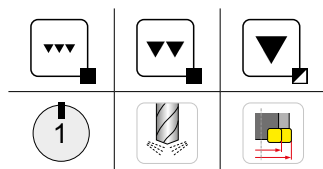
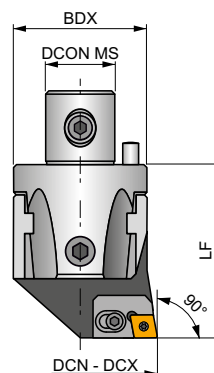
PRAMET

S(P)



90° Fin Bore Hoved, Medium Bor - Ø80 op til Ø220 mm

Højtydende 90° mediumborhoved til finish. Velegnet til gennemgående, bundhul og tværhul. Fås til skær af typen CC .., TC .., CN .. Fås til hul diameterområde Ø80 op til Ø220 mm i størrelser fra 68 til 145 mm. Høj nøjagtighed og repeterbarhed.



Product	CZC MS	DCN	DCX	BDX	DCON MS	LF										
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)										kg
A 06890 300	68	80.00	102.00	68	36.00	86.00	2CT 90 300	US 0616	HXX 5	TC.. 16T3..	US 0408-T15P	SDR T15P	HXX 5	HXX 8	2.03	
A 06890 402	68	80.00	102.00	68	36.00	86.00	2CT 90 402	US 0616	HXX 5	CC.. 1204..	US 0509-T15P	SDR T15P	HXX 5	HXX 8	2.03	
A 06890 402 N	68	80.00	102.00	68	36.00	86.00	2CT 90 402 N	US 0616	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 8	2.60	
A 08590 300	85	100.00	125.00	85	50.00	100.00	3CT 90 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 6	HXX 8	3.90	
A 08590 402	85	100.00	125.00	85	50.00	100.00	3CT 90 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 6	HXX 8	3.88	
A 08590 402 N	85	100.00	125.00	85	50.00	100.00	3CT 90 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 6	HXX 8	4.04	
A 10090 300	100	125.00	160.00	100	60.00	100.00	3CT 90 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 6	HXX 8	6.24	
A 10090 402	100	125.00	160.00	100	60.00	100.00	3CT 90 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 6	HXX 8	6.24	
A 10090 402 N	100	125.00	160.00	100	60.00	100.00	3CT 90 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 6	HXX 8	6.26	
A 20090 300	200	160.00	220.00	145	60.00	100.00	3CT 90 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 6	HXX 8	8.30	
A 20090 402	200	160.00	220.00	145	60.00	100.00	3CT 90 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 6	HXX 8	8.29	
A 20090 402 N	200	160.00	220.00	145	60.00	100.00	3CT 90 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 6	HXX 8	8.33	

F90-BB



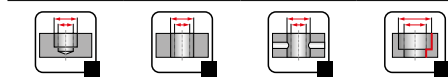
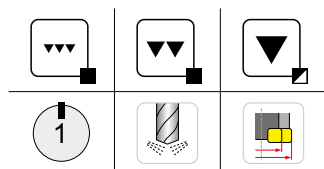
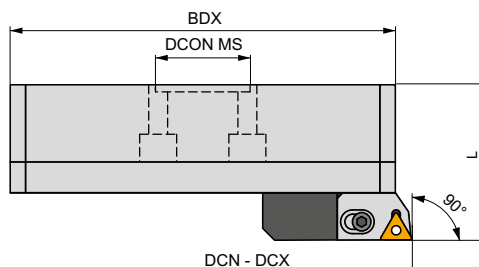
PRAMET

S(P)



90° Fin Bore Hoved, Stor Bor - Ø220 op til Ø500 mm

Højtydende 90° stort borhoved til efterbehandling Velegnet til gennemgående, bundhul og tværhul. Fås til skær af typen CC .., TC .., CN .. Fås til huldiameterområde Ø220 op til Ø500 mm i størrelser fra 202 til 352 mm. Høj nøjagtighed og repeterbarhed.



Product	CZC MS	DCN	DCX	BDX	DCON MS	LF										
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)										kg
A 30090 300	300	220.00	320.00	202	60.00	90.00	3CT 90 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 5	HXX 4		8.74
A 30090 402	300	220.00	320.00	202	60.00	90.00	3CT 90 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 5	HXX 4		8.82
A 30090 402 N	300	220.00	320.00	202	60.00	90.00	3CT 90 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4		8.75
A 40090 300	400	290.00	400.00	272	60.00	90.00	3CT 90 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 5	HXX 4		12.19
A 40090 402	400	290.00	400.00	272	60.00	90.00	3CT 90 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 5	HXX 4		12.50
A 40090 402 N	400	290.00	400.00	272	60.00	90.00	3CT 90 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4		12.20
A 50090 300	500	370.00	500.00	352	60.00	90.00	3CT 90 300	US 0625	HXX 5	TC.. 16T3..	US 0415-T15P	SDR T15P	HXX 5	HXX 4		16.08
A 50090 402	500	370.00	500.00	352	60.00	90.00	3CT 90 402	US 0625	HXX 5	CC.. 1204..	US 0513-T20P	SDR T20P	HXX 5	HXX 4		16.20
A 50090 402 N	500	370.00	500.00	352	60.00	90.00	3CT 90 402 N	US 0625	HXX 5	CN.. 1204..	US 0613-H25	HXX 2.5	HXX 5	HXX 4		16.00

MB-H



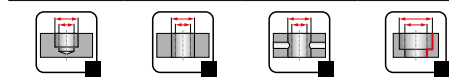
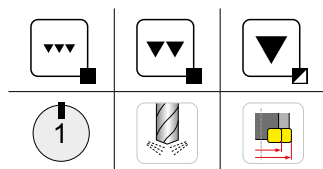
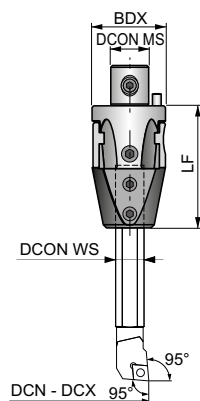
PRAMET

S



Micro Bore Hoved, Ultra Lille Bor - Ø8 op til Ø38 mm

Højtydende mikroborehoved med høj nøjagtighed og høj repeterbarhed. Velegnet til gennemgående, bund, plan og tværhul kedeligt. Hovedstørrelse kan bruges til borhoved værktøj fra Ø6,0 op til Ø16,0 mm. Fås i størrelser fra 27 til 42 mm.

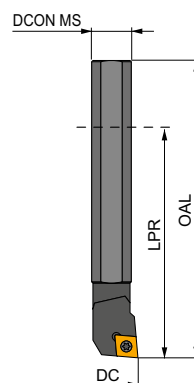


Product	CZC MS	DCN	DCX	BDX	DCON MS	DCON WS	LB			
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			
A 027 006	27	8.00	20.00	27	15.00	6.00	50.00	HXX 2	HXX 4	0.20
A 027 008	27	10.00	21.00	27	15.00	8.00	50.00	HXX 2	HXX 4	0.19
A 032 008	32	10.00	21.00	32	20.00	8.00	58.00	HXX 2.5	HXX 4	0.32
A 032 010	32	13.00	25.00	32	20.00	10.00	58.00	HXX 2.5	HXX 4	0.32
A 042 010	42	13.00	29.00	42	24.00	10.00	70.00	HXX 3	HXX 5	0.64
A 042 012	42	16.00	34.00	42	24.00	12.00	70.00	HXX 3	HXX 5	0.64
A 042 016	42	20.00	38.00	42	24.00	16.00	70.00	HXX 3	HXX 5	0.62



Borestænger til mikroborende hoved - Skaftdiameter Ø6 op til Ø16 mm

Velegnet til bund, igennem, plan og tværhul ved boring. Fås til skær EP ..., TC ... og CC ...

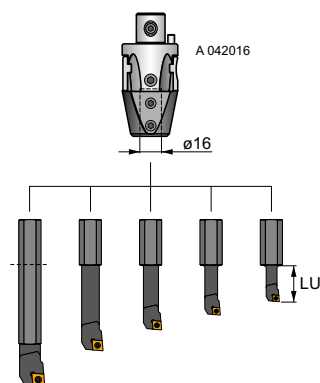


Product	DCON MS	DC	OAL	LPR				Carbide	
	(mm)	(mm)	(mm)	(mm)					
S06E SELPR 05-B	6.00	8.00	70.0	46	EP.. 0502..	US 0205-T07P	SDR T07P	—	0.04
S08F SCLCR 06-B	8.00	10.00	80.0	50	CC.. 0602..	US 0205-T08P	SDR T08P	—	0.04
S10G SCLCR 06-B	10.00	13.00	90.0	54	CC.. 0602..	US 0206-T08P	SDR T08P	—	0.06
S12H SCLCR 06-B	12.00	16.00	100.0	64	CC.. 0602..	US 0206-T08P	SDR T08P	—	0.11
S16J SCLCR 09-B	16.00	20.00	110.0	74	CC.. 09T3..	US 0408-T15P	SDR T15P	—	0.18
S16J STFCR 09-B	16.00	20.00	110.0	74	TC.. 0902..	US 0206-T07P	SDR T07P	—	0.18
S16J STFCR 16-B	16.00	20.00	110.0	74	TC.. 16T3..	US 0408-T15P	SDR T15P	—	0.18
C08G SCLCR 06	8.00	10.00	90.0	60	CC.. 0602..	US 0205-T08P	SDR T08P	✓	1.00
C10J SCLCR 06	10.00	13.00	110.0	74	CC.. 0602..	US 0206-T08P	SDR T08P	✓	0.13
C12K SCLCR 06	12.00	16.00	125.0	89	CC.. 0602..	US 0206-T08P	SDR T08P	✓	0.20
C16L SCLCR 09	16.00	20.00	140.0	104	CC.. 09T3..	US 0408-T15P	SDR T15P	✓	0.38

ISO BARS A042

Holder for Micro A042 Micro Boring Hoved

Borestænger med overdimensioneret skaftdiameter Ø16 mm. Velegnet til bund, gennemgående huller. Fås i EP .., TC .. og CC .. type skær.



Product	DCN	DCX	LU				
	(mm)	(mm)	(mm)				
S06/16 SELPR 05	8.00	26.00	25.00	EP.. 0502..	US 0205-T07P	SDR T07P	0.08
S06/16 STFCR 06	8.00	26.00	25.00	TC.. 06T1..	US 0405-T06P	SDR T06P	0.08
S08/16 SCLCR 06	10.00	28.00	35.00	CC.. 0602..	US 0205-T08P	SDR T08P	0.09
S08/16 STFCR 06	10.00	28.00	35.00	TC.. 06T1..	US 0405-T06P	SDR T06P	0.07
S10/16 SCLCR 06	13.00	31.00	45.00	CC.. 0602..	US 0206-T08P	SDR T08P	0.10
S10/16 STFCR 09	13.00	31.00	45.00	TC.. 0902..	US 0206-T07P	SDR T07P	0.10
S12/16 SCLCR 06	16.00	34.00	57.00	CC.. 0602..	US 0206-T08P	SDR T08P	0.13
S12/16 STFCR 09	16.00	34.00	57.00	TC.. 0902..	US 0206-T07P	SDR T07P	0.13
S16/16 SCLCR 09	20.00	38.00	73.00	CC.. 09T3..	US 0408-T15P	SDR T15P	0.18
S16/16 STFCR 09	20.00	38.00	73.00	TC.. 0902..	US 0206-T07P	SDR T07P	0.18
S16/16 STFCR 16	20.00	38.00	73.00	TC.. 0902..	US 0408-T15P	SDR T15P	0.18



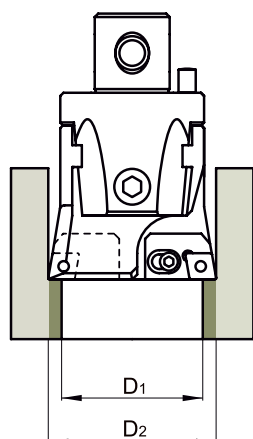
TILBEHØR

1	2	3	4
2CT	90	402 N	S

1	2	3	4
Værktøjstype	Skærvinkel	Kode for vendeskær	Variant
2CT	30	300 TC..16T3.	S Trininddelt
3CT	45	402 CC..1204..	
	75	402N CN..1204..	
	90		

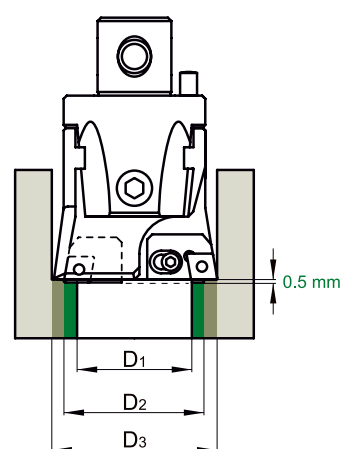


Symmetrisk udboring



2CT □□ □□ + 2CT □□ □□
 3CT □□ □□ + 3CT □□ □□

Trininddelt udboring

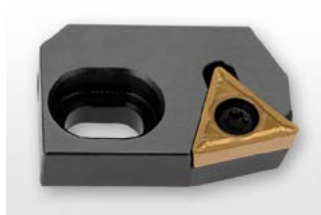


2CT □□ □□ S + 2CT □□ □□
 3CT □□ □□ S + 3CT □□ □□

CART-BS-SPC

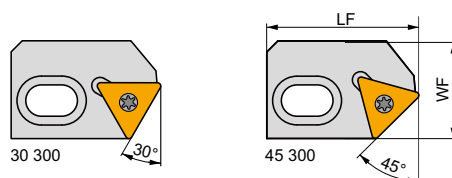


PRAMET



Speciale borehoveder 2CT og 3CT

Specielle borehoveder, størrelser 2CT og 3CT fås i forskellige indfaldsvinkler 30° eller 45°. Velegnet til TC .., CC .., CN .. skær til ru og efterbehandling fin applikationer.



Product	WF (mm)	LF (mm)								
2CT 30 300	22.5	35.00	US 0616	HXX 5	US 0430	HXX 2	TC.. 16T3..	US 0408-T15P	SDRT15P	0.59
2CT 45 300	22.5	35.00	US 0616	HXX 5	US 0430	HXX 2	TC.. 16T3..	US 0408-T15P	SDRT15P	0.05
2CT 90 300 S	23	33.00	US 0616	HXX 5	US 0430	HXX 2	TC.. 16T3..	US 0408-T15P	SDRT15P	0.05
2CT 90 402 N S	23	33.00	US 0616	HXX 5	US 0430	HXX 2	CN.. 1204.. L	US 0613-H25	HXX 2.5	0.07
2CT 90 402 S	23	33.00	US 0616	HXX 5	US 0430	HXX 2	CC.. 1204..	US 0509-T20P	SDRT20P	0.05
3CT 30 300	28	39.00	US 0625	HXX 5	US 0635	HXX 3	TC.. 16T3..	US 0415-T15P	SDRT15P	0.10
3CT 45 300	28	39.00	US 0625	HXX 5	US 0635	HXX 3	TC.. 16T3..	US 0415-T15P	SDRT15P	0.10
3CT 90 300 S	28.5	37.00	US 0625	HXX 5	US 0635	HXX 3	TC.. 16T3..	US 0415-T15P	SDRT15P	0.10
3CT 90 402 N S	28.5	37.00	US 0625	HXX 5	US 0635	HXX 3	CN.. 1204.. L	US 0613-H25	HXX 2.5	0.11
3CT 90 402 S	28.5	37.00	US 0625	HXX 5	US 0635	HXX 3	CC.. 1204..	US 0513-T20P	SDRT20P	0.09

CART-BS-STD

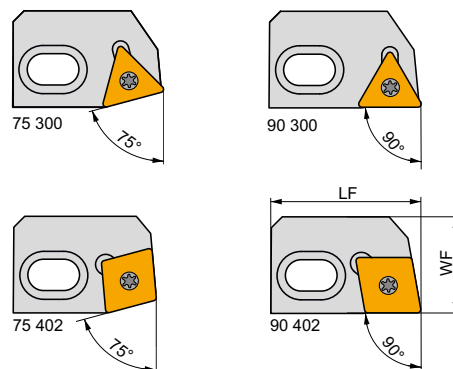


PRAMET



Standard borehoveder 2CT og 3CT

Standard borehoveder i størrelse 2CT og 3CT fås i forskellige indfaldsvinkler 75° eller 90°. Velegnet til TC .., CC .., CN .. skær til ru og efterbehandling fin applikationer.



Product	WF	LF								
	(mm)	(mm)								
2CT 75 300	22.5	35.00	US 0616	HXX 5	US 0430	HXX 2	TC.. 16T3..	US 0408-T15P	SDR T15P	0.06
2CT 75 402	22.5	35.00	US 0616	HXX 5	US 0430	HXX 2	CC.. 1204..	US 0509-T20P	SDR T20P	0.06
2CT 75 402 N	22.5	35.00	US 0616	HXX 5	US 0430	HXX 2	CN.. 1204.. R	US 0613-H25	HXX 2.5	0.07
2CT 90 300	22.5	35.00	US 0616	HXX 5	US 0430	HXX 2	TC.. 16T3..	US 0408-T15P	SDR T15P	0.05
2CT 90 402	22.5	35.00	US 0616	HXX 5	US 0430	HXX 2	CC.. 1204..	US 0509-T20P	SDR T20P	0.05
2CT 90 402 N	22.5	35.00	US 0616	HXX 5	US 0430	HXX 2	CN.. 1204.. L	US 0613-H25	HXX 2.5	0.07
3CT 75 300	28	39.00	US 0625	HXX 5	US 0635	HXX 3	TC.. 16T3..	US 0415-T15P	SDR T15P	0.10
3CT 75 402	28	39.00	US 0625	HXX 5	US 0635	HXX 3	CC.. 1204..	US 0509-T20P	SDR T20P	0.10
3CT 75 402 N	28	39.00	US 0625	HXX 5	US 0635	HXX 3	CN.. 1204.. R	US 0613-H25	HXX 2.5	0.12
3CT 90 300	28	39.00	US 0625	HXX 5	US 0635	HXX 3	TC.. 16T3..	US 0415-T15P	SDR T15P	0.11
3CT 90 402	28	39.00	US 0625	HXX 5	US 0635	HXX 3	CC.. 1204..	US 0509-T20P	SDR T20P	0.10
3CT 90 402 N	28	39.00	US 0625	HXX 5	US 0635	HXX 3	CN.. 1204.. L	US 0613-H25	HXX 2.5	0.12

CHAM-BS



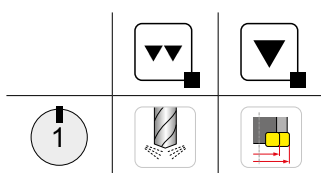
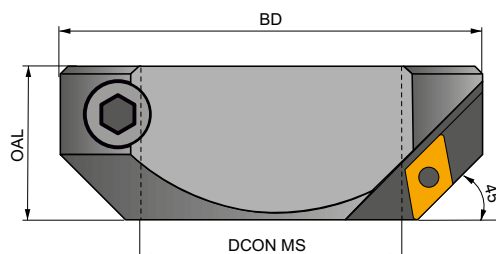
PRAMET

S



CH-BS affasningsring til bore hoveder

45 ° affasningsring til boresystem, størrelser fra 22 til 42 mm til at holde DC .. 11T3 .. platte og størrelser fra 54 til 200 mm til at holde DC .. 1504 .. platter.



Product	CZC MS	DCON MS	BD	OAL					
		(mm)	(mm)	(mm)					
CH 022	22	22.00	43.00	24.0	DC.. 11T3..	US 0408-T15P	SDR T15P	HXK 4	0.11
CH 027	27	27.00	48.00	24.0	DC.. 11T3..	US 0408-T15P	SDR T15P	HXK 4	0.13
CH 032	32	32.00	62.00	30.0	DC.. 11T3..	US 0408-T15P	SDR T15P	HXK 5	0.29
CH 042	42	42.00	72.00	30.0	DC.. 11T3..	US 0408-T15P	SDR T15P	HXK 5	0.38
CH 054	54	54.00	94.00	40.0	DC.. 1504..	US 0513-T20P	SDR T20P	HXK 6	0.89
CH 068	68	68.00	110.00	40.0	DC.. 1504..	US 0513-T20P	SDR T20P	HXK 8	1.23
CH 085	85	85.00	145.00	55.0	DC.. 1504..	US 0513-T20P	SDR T20P	HXK 10	2.70
CH 100	100	100.00	170.00	60.0	DC.. 1504..	US 0513-T20P	SDR T20P	HXK 14	4.14
CH 200	200	100.00	200.00	60.0	DC.. 1504..	US 0513-T20P	SDR T20P	HXK 14	5.80

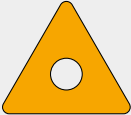


BORING INSERTS

BORING INSERTS – NAVIGATOR

CCGT   388	CCGW CBN   390	CCMT   390	CCMW   393
CNGA CBN   394	CNGG   395	CNMA   395	CNMG   396
DCMT   398	DCMW   399	DCMW PCD   399	
EPGX   400	EPMT   400		
TCGT   401	TCMT   402	TCMW   403	

INDEKSERBARE VENDESKÆR

Form	Betegnelse	ISO-kode
	300	TC.. 16T3..
	400 401 402 409	CC.. 0602.. CC.. 0803.. CC.. 1204.. CC.. 09T3..
	402N	CN.. 1204..
		EP.. 0502..
		DC..11T3.. DC..1504..

Yderligere valgmuligheder for Vendskær kan findes i produktdelen under Drejning. Der kan desuden findes oplysninger om geometrier i Drejning.

BORING GRADES – NAVIGATOR

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T9315	P05 - P25	■				MT-CVD		FGM	+ +	A versatile grade with excellent wear resistance properties even under intense cutting conditions. It can also be used for operations with interrupted cuts. With it's well balanced properties this grade can be first choice for a wide range of turning operations. Not suited to low cutting speeds.
	K05 - K25	■								
	H10 - H20	■								
T9325	P15 - P35	■				MT-CVD		FGM	+ +	From a technological perspective this is an extremely versatile grade with high resistance to mechanical damage in adverse cutting conditions and retains excellent wear resistance. The correct application of this material requires high cutting speeds.
	M10 - M30	■								
	K15 - K35	■								
	S10 - S20	■								
T9335	P20 - P45	■				MT-CVD		FGM	+ + +	One of the toughest grades which is especially suitable for adverse cutting conditions at medium to high feed rates and medium cutting speeds. Compared to its predecessors, M15 – M40 it is not only tougher, but also more abrasion resistant which will be useful when using intensive cutting conditions.
	M15 - M40	■								
	S15 - S25	■								
T7325	P15 - P35	■				MT-CVD		FGM	+ + +	One of the most universal turning grades. Especially designed for stainless steel machining. Optimal balance between wear resistance and performance reliability. Suitable for broad variety of application in turning operations.
	M10 - M25	■								
	S10 - S25	■								
T7335	P20 - P40	■				MT-CVD		FGM	+ + +	Grade with functionally graded substrate, featuring very high operational reliability and very good wear-resistance. It is best suited to use in the machining of very tough M20 – M40 materials.
	M20 - M40	■								
	S15 - S25	■								
T5305	P05 - P15	■				MT-CVD		H	+	Grade with very high resistance to chemical wear; suitable for finishing operations using high cutting speeds. With its high abrasion resistance, it is also suitable for productive K01 – K15, machining of hardened and treated materials.
	K01 - K15	■								
	H05 - H15	■								
T5315	P10 - P25	■				MT-CVD		H	+	Grade intended primarily for productive machining which has high abrasion resistance and good operational reliability. Due to its properties, this material is particularly suitable for roughing and finishing operations for good or slightly adverse cutting conditions.
	K10 - K25	■								
	H15 - H25	■								
T8315	P05 - P20	■				PVD		submicron H	+ +	Grade featuring excellent abrasion resistance while maintaining above average operational reliability, it is suitable for machining at medium to high cutting speeds in short chipping harder materials.
	M05 - M20	■								
	K05 - K25	■								
	N05 - N25	■								
	S05 - S15	■								
	H05 - H15	■								
T8330	P25 - P40	■				PVD		submicron H	+ + +	Undoubtedly the most versatile cutting material, this is useful for machining of all types of machined materials and is practically applicable in almost all types of turning operations. Its main benefits are its high operational reliability and very good frictional properties; it is therefore suitable for applications at medium and lower cutting speeds.
	M20 - M35	■								
	K20 - K40	■								
	N15 - N30	■								
	S15 - S25	■								
	H15 - H25	■								
T6310	P01 - P15	■				PVD		ultra submicron H	+ + +	High wear resistant turning grade with top PVD coating. Suitable for finishing operation and applications, where sharp cutting edge together with high flank wear resistance is of high importance
	M01 - M15	■								
	K05 - K20	■								
	N05 - N20	■								
	S01 - S15	■								
	H01 - H15	■								

BORING GRADES – NAVIGATOR

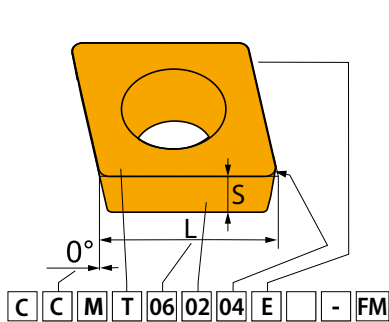
Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T0315	N05 - N20	■				PVD			++	Submicron grade for turning non-ferrous metals and their alloys with a balance of wear resistance and toughness. It is provided with a unique coating with excellent friction properties.
HF7	M10 - M20	■				×		submicron H	++	Uncoated grade which is primarily designed for machining non-ferrous metals; but can also be used for other machined materials (except steel). This material can be used in turning, milling, and even boring.
	K10 - K25	■								
	N10 - N25	■								
H07	M05 - M15	■				×		submicron H	++	Uncoated turning grade suitable for machining applications where oxidation resistance is not dominating criterion of tool life. Designed for machining of Ti-based alloys. Grade exhibits high strength of cutting edge together with good wear resistance.
	K10 - K25	■								
	N10 - N30	■								
	S01 - S20	■								
TT310	P10 - P25	■				PVD		cermet	+ / -	Coated cermet used for fine and finish turning of carbon and alloy steels (including stainless). Its excellent friction properties are further improved by the coating applied using the PVD technique.
	M15 - M25	■								
TT010	P01 - P10	■				×		cermet	+ / -	Uncoated cermet, which is suitable for fine machining of all types of steel (including stainless) at very low feed rates. Its main advantage is the minimal radius of the cutting edge and its high resistance to physical and chemical wear mechanisms.
	M01 - M10	■								
PD1	N05 - N25	■				×		PCD	-	PCD grade for turning non-ferrous materials. Ideal choice for working with high cutting speed and small feeds at stable conditions.
TB310	K01 - K10	■				×		CBN	--	CBN grade for machining of hardened materials. Suitable for machining with high cutting speed and small feeds at stable conditions.
	S05 - S10	■								
	H01 - H10	■								

Substrat	
H	WC-Co-baseret substrat
submicron H	WC-Co-baseret substrat fintkornet (< 1 µm)
ultra submicron H	WC-Co-baseret substrat meget fintkornet (< 0,5 µm)
FGM	Substrat med funktionel klassificering
Cermet	Hårdmetal uden WC
PCD	Polykrystallinsk diamant
CBN	Kubik bornitrid

Coating	
MT-CVD	Kemikalimetode til belægning ved mellemhøj temperatur
PVD	Fysisk metode til coating ved lav temperatur
×	Ubelagt kvalitet

Benefits of cutting fluid	
+++	Use of coolant is essential
++	Highly recommended
+ / -	Optional
--	Do not use coolant

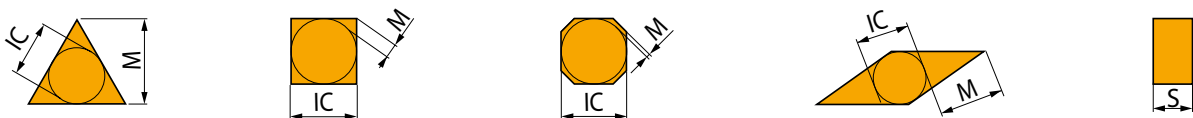
VENDESKÆR – ISO KODEBETEGNELSE



ISO	1	2	3	4
	C	C	M	T
ANSI	1	2	3	4
	C	C	M	T

1				2		4	
Skærform				Frivinkel for skær		Skærtype	
H	O	P	R	A	B	N	
S	T	C	D	C	D	R	
E	M	V	W	E	F	F	
L	A	B	K	G	N	A	
				P	O	M	
						G	
						W	
						T	
						Q	
						U	
						B	
						H	
						C	
						J	
						X	Speciel

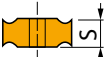
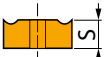
3				3		
Tolerancer						
	(mm)			(")		
	M (±)	S (±)	IC (±)	M (±)	S (±)	IC (±)
A	0.005	0.025	0.025	.0002"	.001"	.0010"
F	0.005	0.025	0.013	.0002"	.001"	.0005"
C	0.013	0.025	0.025	.0005"	.001"	.0010"
H	0.013	0.025	0.013	.0005"	.001"	.0005"
E	0.025	0.025	0.025	.0010"	.001"	.0010"
G	0.025	0.130	0.025	.0010"	.005"	.0010"
J	0.005	0.025	0.05 – 0.13	.0002"	.001"	.002 – 0.005"
K	0.013	0.025	0.05 – 0.13	.0005"	.001"	.002 – 0.005"
L	0.025	0.025	0.05 – 0.13	.0010"	.001"	.002 – 0.005"
M	0.08 – 0.18	0.130	0.05 – 0.13	.003 – 0.007"	.005"	.002 – 0.005"
N	0.08 – 0.18	0.025	0.05 – 0.13	.003 – 0.007"	.001"	.002 – 0.005"
U	0.05 – 0.38	0.130	0.05 – 0.13	.005 – 0.015"	.005"	.003 – 0.010"



VENDESKÆR – ISO KODEBETEGNELSE

5	6	7	8	9	10
06	02	04	E		FM
5	6	7	8	9	10
2	1.5	1	E		FM

5					5									
Skærlængde (skærstørrelse)														
d = IC		H	O	P	S	T	C	D	E	M	V	W	R	K
(mm)	(in)													
3.97					03	06		04			06	02		
	5/32"						1.2							
4.76					04	08	04	05	04	04	08	L3		
	3/16"						1.5							
5.56					05	09	05	06	05	05	09	03		
	7/32"						1.8							
6.35		03	02	04	08	11	06	07	08	08	11	04	06	
	1/4"						2							
7.94		04	03	05	07	13	08	09	06	07	13	05	07	
	5/16"						2.5							
9.525		05	04	07	09	16	09	11	09	09	16	06	09	16
	3/8"						3							
12.7		07	05	09	12	22	12	15	13	12	22	08	12	
	1/2"						4							
15.875		09	06	11	15	27	16	19	16	15	27	10	15	
	5/8"						5							
19.05		11	07	13	19	33	19	23	19	19	33	13	19	
	3/4"						6							
25.40		14	10	18	25	44	25	31	26	25	44	17	25	
	1"						8							
31.75		18	13	23	31	54	32	38	32	31	54	21	31	
	1 1/4"						10							

6		
Skærtykkelse		
		
		
	S	
	(mm)	(")
01	1.59	1/16"
T1	1.98	5/64"
02	2.38	3/32"
03	3.18	1/8"
T3	3.97	5.32"
04	4.76	3/16"
05	5.56	7/32"
06	6.35	1/4"
07	7.94	5/16"
09	9.52	3/8"

7			
Næseradius			
	RE		
	(mm)	(")	
00	0	0"	
02	0.2	1/128"	
04	0.4	1/64"	
08	0.8	1/32"	
12	1.2	3/64"	
16	1.6	1/16"	
24	2.4	3/32"	
32	3.2	1/8"	
Runde skær			
d = I.C.			
(")		00	
(mm)		M0	

ANSI

5

Indskrevet cirkel

Symbol	d = I.C.	
	(mm)	(")
1	3.175	1/8"
1.2	3.969	5/32"
1.5	4.763	3/16"
1.8	5.556	7/32"
2	6.350	1/4"
2.5	7.938	5/16"
3	9.525	3/8"
4	12.700	1/2"
5	15.875	5/8"
6	19.050	3/4"
7	22.225	7/8"
8	25.400	1"
10	31.750	5/4"
12	38.100	6/4"

6

Skærtykkelse

Symbol	S	
	(mm)	(")
1	1.588	1/16"
1.2	1.984	5/64"
1.5	2.381	3/32"
2	3.175	1/8"
2.5	3.969	5/32"
3	4.763	3/16"
3.5	5.556	7/32"
4	6.350	1/4"
5	7.938	5/16"
6	9.525	3/8"
7	11.113	7/16"
8	12.700	1/2"
9	14.288	9/16"
10	15.875	5/8"

7

Næseradius for skær

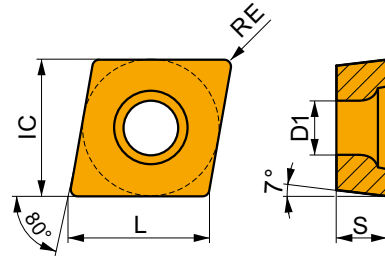
Symbol	RE	
	(mm)	(")
0	0	0"
0.2	0.099	1/256"
0.5	0.198	1/128"
1	0.397	1/64"
2	0.794	1/32"
3	1.191	3/64"
4	1.588	1/16"
5	1.984	5/64"
6	2.381	3/32"
7	2.778	7/64"
8	3.175	1/8"
10	3.969	5/32"
12	4.763	3/16"
14	5.556	7/32"
16	6.350	1/4"

8		8	
Skærdesign			
 Skarpe skær	 Afrundede skær		
 Skær med facet	 Afrundede skær med facet		
 Skær med dobbelt facet	 Afrundede skær med dobbelt facet		

9		9	
Tilspændingsretning			
 Tilspænding 			
  Tilspænding	 Tilspænding Tilspænding		

10		10	
Spånbryderbetegnelse			

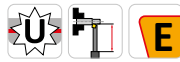
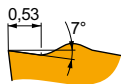
	IC (mm)	D1 (mm)	L (mm)	S (mm)
0602	6.350	2.80	6.40	2.38
0602-SF3	6.350	2.80	6.40	2.58
0803-AL	7.940	3.40	8.10	3.43
0803-SF3	7.940	3.40	8.10	3.43
09T3	9.525	4.40	9.70	3.97
09T3-SF3	9.525	4.40	9.70	4.22
1204	12.700	5.50	12.90	4.76
1204-SF3	12.700	5.50	12.90	5.01



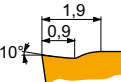
RE (mm)	P			M			K			N			S			H		
	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)



CCGT 060202F-AL	HF7	0.2	—	—	—	—	—	—	—	360	0.12	1.0	—	—	—	—	—	—
	T0315	0.2	—	—	—	—	—	—	—	360	0.12	1.0	—	—	—	—	—	—
CCGT 060204F-AL	HF7	0.4	—	—	—	—	—	—	—	300	0.24	1.0	—	—	—	—	—	—
	T0315	0.4	—	—	—	—	—	—	—	300	0.24	1.0	—	—	—	—	—	—
CCGT 080302F-AL	T0315	0.2	—	—	—	—	—	—	—	360	0.12	1.0	—	—	—	—	—	—
CCGT 080304F-AL	HF7	0.4	—	—	—	—	—	—	—	300	0.24	1.0	—	—	—	—	—	—
	T0315	0.4	—	—	—	—	—	—	—	300	0.24	1.0	—	—	—	—	—	—
CCGT 09T302F-AL	HF7	0.2	—	—	—	—	—	—	—	360	0.12	1.0	—	—	—	—	—	—
	T0315	0.2	—	—	—	—	—	—	—	360	0.12	1.0	—	—	—	—	—	—
CCGT 09T304F-AL	HF7	0.4	—	—	—	—	—	—	—	300	0.24	1.5	—	—	—	—	—	—
	T0315	0.4	—	—	—	—	—	—	—	300	0.24	1.5	—	—	—	—	—	—
CCGT 09T308F-AL	HF7	0.8	—	—	—	—	—	—	—	200	0.48	1.5	—	—	—	—	—	—
	T0315	0.8	—	—	—	—	—	—	—	200	0.48	1.5	—	—	—	—	—	—
CCGT 120404F-AL	HF7	0.4	—	—	—	—	—	—	—	300	0.24	2.4	—	—	—	—	—	—
	T0315	0.4	—	—	—	—	—	—	—	300	0.24	2.4	—	—	—	—	—	—
CCGT 120408F-AL	HF7	0.8	—	—	—	—	—	—	—	200	0.48	2.4	—	—	—	—	—	—
	T0315	0.8	—	—	—	—	—	—	—	200	0.48	2.4	—	—	—	—	—	—

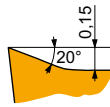


CCGT 09T302E-FF2	T7325	0.2	150	0.05	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—
	T9325	0.2	150	0.05	1.0	—	—	—	115	0.05	1.0	—	—	—	—	—	—	—



CCGT 060204E-NF1	T6310	0.4	140	0.10	0.8	110	0.09	0.8	—	—	—	360	0.12	0.8	38	0.07	0.6	25	0.15	1.0
	T7325	0.4	140	0.10	0.8	110	0.09	0.8	—	—	—	—	—	—	45	0.07	0.6	—	—	—
CCGT 060208E-NF1	T6310	0.8	140	0.12	0.8	110	0.11	0.8	—	—	—	360	0.14	0.8	45	0.11	0.6	30	0.15	1.0
	T7325	0.8	140	0.12	0.8	110	0.11	0.8	—	—	—	—	—	—	45	0.11	0.6	—	—	—
CCGT 09T304E-NF1	T6310	0.4	140	0.10	1.2	110	0.09	1.2	—	—	—	360	0.12	1.2	38	0.07	1.0	25	0.15	1.0
	T7325	0.4	140	0.10	1.2	110	0.09	1.2	—	—	—	—	—	—	45	0.07	1.0	—	—	—
CCGT 09T308E-NF1	T6310	0.8	140	0.14	1.2	100	0.13	1.2	—	—	—	330	0.17	1.2	41	0.13	1.0	25	0.15	1.0
	T7325	0.8	140	0.14	1.2	100	0.13	1.2	—	—	—	—	—	—	45	0.13	1.0	—	—	—

	RE  (mm)	P				M				K				N				S				H		
		vc (m/min)	f (mm/rev)	ap (mm)		vc (m/min)	f (mm/rev)	ap (mm)		vc (m/min)	f (mm/rev)	ap (mm)		vc (m/min)	f (mm/rev)	ap (mm)		vc (m/min)	f (mm/rev)	ap (mm)		vc (m/min)	f (mm/rev)	ap (mm)



CCGT 060202E-SF3	H07	0.2	—	—	—	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	45	0.04	0.6	—	—	—
	T6310	0.2	150	0.05	0.8	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	45	0.04	0.6	30	0.15	1.0
	T8315	0.2	150	0.05	0.8	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	38	0.04	0.6	30	0.15	1.0
CCGT 060204E-SF3	H07	0.4	—	—	—	95	0.09	0.8	115	0.10	0.8	360	0.12	0.8	34	0.07	0.6	—	—	—
	T6310	0.4	140	0.10	0.8	110	0.09	0.8	115	0.10	0.8	360	0.12	0.8	38	0.07	0.6	26	0.15	1.0
	T8315	0.4	140	0.10	0.8	110	0.09	0.8	115	0.10	0.8	360	0.12	0.8	34	0.07	0.6	26	0.15	1.0
CCGT 080302E-SF3	T6310	0.2	150	0.05	0.8	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	45	0.04	0.6	30	0.15	1.0
	T8315	0.2	150	0.05	0.8	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	38	0.04	0.6	30	0.15	1.0
CCGT 080304E-SF3	H07	0.4	—	—	—	95	0.09	1.0	115	0.10	1.0	360	0.12	1.0	34	0.07	0.8	—	—	—
	T6310	0.4	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	38	0.07	0.8	26	0.15	1.0
	T8315	0.4	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	34	0.07	0.8	26	0.15	1.0
CCGT 09T302E-SF3	H07	0.2	—	—	—	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	45	0.04	0.6	—	—	—
	T6310	0.2	150	0.05	0.8	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	45	0.04	0.6	30	0.15	1.0
	T8315	0.2	150	0.05	0.8	110	0.05	0.8	115	0.05	0.8	360	0.06	0.8	38	0.04	0.6	30	0.15	1.0
CCGT 09T304E-SF3	H07	0.4	—	—	—	95	0.09	1.0	115	0.10	1.0	360	0.12	1.0	34	0.07	0.8	—	—	—
	T6310	0.4	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	38	0.07	0.8	26	0.15	1.0
	T8315	0.4	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	34	0.07	0.8	26	0.15	1.0
CCGT 09T308E-SF3	H07	0.8	—	—	—	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	41	0.08	0.8	—	—	—
	T6310	0.8	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	45	0.08	0.8	30	0.15	1.0
	T8315	0.8	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	41	0.08	0.8	34	0.15	1.0
CCGT 120408E-SF3	H07	0.8	—	—	—	105	0.12	1.0	110	0.12	1.0	360	0.14	1.0	38	0.11	0.8	—	—	—
	T6310	0.8	140	0.12	1.0	110	0.12	1.0	110	0.12	1.0	360	0.14	1.0	45	0.11	0.8	30	0.15	1.0
	T8315	0.8	140	0.12	1.0	110	0.12	1.0	110	0.12	1.0	360	0.14	1.0	38	0.11	0.8	30	0.15	1.0

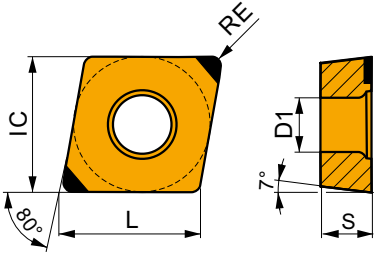
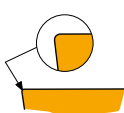


CCGT 060202EL-SI	T8330	0.2	140	0.10	0.8	110	0.09	0.8	115	0.10	0.8	—	—	—	38	0.08	0.6	—	—	—
	T8430	0.2	140	0.10	0.8	110	0.09	0.8	115	0.10	0.8	—	—	—	38	0.08	0.6	—	—	—
CCGT 060204EL-SI	T8315	0.4	140	0.12	0.8	110	0.11	0.8	110	0.12	0.8	—	—	—	41	0.10	0.6	—	—	—
	T8330	0.4	140	0.12	0.8	110	0.11	0.8	110	0.12	0.8	—	—	—	38	0.10	0.6	—	—	—
	T8430	0.4	140	0.12	0.8	110	0.11	0.8	110	0.12	0.8	—	—	—	38	0.10	0.6	—	—	—
CCGT 09T304EL-SI	T8315	0.4	130	0.17	0.8	100	0.15	0.8	105	0.17	0.8	—	—	—	38	0.15	0.6	—	—	—
	T8330	0.4	130	0.17	0.8	100	0.15	0.8	105	0.17	0.8	—	—	—	34	0.15	0.6	—	—	—
	T8430	0.4	130	0.17	0.8	100	0.15	0.8	105	0.17	0.8	—	—	—	34	0.15	0.6	—	—	—
CCGT 120408EL-SI	T8330	0.8	130	0.23	1.0	95	0.21	1.0	95	0.23	1.0	—	—	—	38	0.21	0.8	—	—	—
	T8430	0.8	130	0.24	1.0	95	0.22	1.0	95	0.24	1.0	—	—	—	34	0.22	0.8	—	—	—

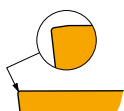
CCGW CBN



	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0602	6.350	2.80	6.50	2.38
09T3	9.525	4.50	9.70	3.97

[illegible]

CCGW 060204E-B	TB310	0.4		-	-	-		-	-	-	☑	115	0.10	0.4		-	-	-	☑	90	0.07	0.3	■	70	0.15	1.0
CCGW 09T304E-B	TB310	0.4		-	-	-		-	-	-	☑	115	0.10	0.4		-	-	-	☑	90	0.07	0.3	■	70	0.15	1.0

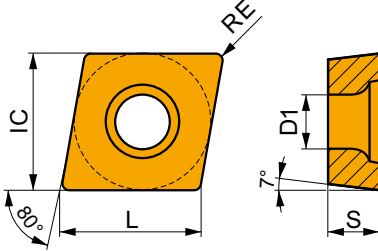
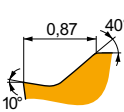


CCGW 060204S01020B	TB310	0.4										115	0.10	0.4					90	0.07	0.3		70	0.15	1.0
CCGW 09T304S01020B	TB310	0.4										115	0.10	0.4					90	0.07	0.3		70	0.15	1.0

CCMT

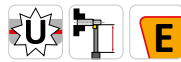
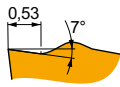


	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0602	6.350	2.80	6.40	2.38
0803	7.940	3.40	8.10	3.18
09T3	9.525	4.40	9.70	3.97
1204	12.700	5.50	12.90	4.76

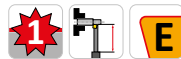
[illegible]

CCMT 060202E-FF	T8330	0.2	■	140	0.10	1.0	■	110	0.09	1.0	■	—	—	—	■	—	—	—	■	—	—	—
	T8430	0.2	■	140	0.10	1.0	■	110	0.09	1.0	■	—	—	—	■	—	—	—	■	—	—	—
CCMT 060204E-FF	T8330	0.4	■	140	0.12	1.0	■	110	0.11	1.0	■	—	—	—	■	—	—	—	■	—	—	—
	T8430	0.4	■	140	0.12	1.0	■	110	0.11	1.0	■	—	—	—	■	—	—	—	■	—	—	—
CCMT 09T304E-FF	T8330	0.4	■	140	0.12	1.2	■	110	0.11	1.2	■	—	—	—	■	—	—	—	■	—	—	—
	T8430	0.4	■	140	0.12	1.2	■	110	0.11	1.2	■	—	—	—	■	—	—	—	■	—	—	—

	RE  (mm)	P			M			K			N			S			H		
		vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)

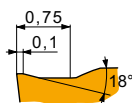


CCMT 060202E-FF2	T8330	0.2	150	0.05	0.8				115	0.05	0.8								
	T8430	0.2	150	0.05	0.8				115	0.05	0.8								
	T9325	0.2	150	0.05	0.8				115	0.05	0.8								
	TT010	0.2	150	0.05	0.5														
CCMT 060204E-FF2	T8330	0.4	140	0.12	1.0				110	0.12	1.0								
	T8430	0.4	140	0.12	1.0				110	0.12	1.0								
	T9325	0.4	140	0.12	1.0				110	0.12	1.0								
	TT010	0.4	140	0.12	0.5														
CCMT 080302E-FF2	T8330	0.2	150	0.05	0.8				115	0.05	0.8								
	T8430	0.2	150	0.05	0.8				115	0.05	0.8								
	T9325	0.2	150	0.05	0.8				115	0.05	0.8								
	TT010	0.2	150	0.05	0.5														
CCMT 080304E-FF2	T8330	0.4	140	0.12	1.0				110	0.12	1.0								
	T8430	0.4	140	0.12	1.0				110	0.12	1.0								
	T9325	0.4	140	0.12	1.0				110	0.12	1.0								
	TT010	0.4	150	0.06	0.5														
CCMT 080308E-FF2	T8330	0.8	130	0.17	1.0				105	0.17	1.0								
	T8430	0.8	130	0.17	1.0				105	0.17	1.0								
	T9325	0.8	130	0.17	1.0				105	0.17	1.0								
CCMT 09T304E-FF2	T8330	0.4	140	0.12	1.2				110	0.12	1.2								
	T8430	0.4	140	0.12	1.2				110	0.12	1.2								
	T9325	0.4	140	0.12	1.2				110	0.12	1.2								
	TT010	0.4	150	0.06	0.5														
CCMT 09T308E-FF2	T8330	0.8	130	0.17	1.2				105	0.17	1.2								
	T8430	0.8	130	0.17	1.2				105	0.17	1.2								
	T9325	0.8	130	0.17	1.2				105	0.17	1.2								
	TT010	0.8	140	0.10	0.8														



CCMT 060202E-FM	T8330	0.2	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0					
	T8430	0.2	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0					
	T9325	0.2	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0								
CCMT 060204E-FM	T8330	0.4	140	0.15	1.0	100	0.14	1.0	110	0.15	1.0	330	0.18	1.0					
	T8430	0.4	140	0.15	1.0	100	0.14	1.0	110	0.15	1.0	330	0.18	1.0					
	T9325	0.4	140	0.15	1.0	100	0.15	1.0	110	0.15	1.0								
CCMT 060208E-FM	T8330	0.8	130	0.20	1.0	100	0.18	1.0	100	0.20	1.0	300	0.24	1.0					
	T8430	0.8	130	0.20	1.0	100	0.18	1.0	100	0.20	1.0	300	0.24	1.0					
	T9325	0.8	130	0.20	1.0	100	0.18	1.0	100	0.20	1.0								
CCMT 09T302E-FM	T8330	0.2	140	0.10	1.2	105	0.09	1.2	115	0.10	1.2	360	0.12	1.2					
	T8430	0.2	140	0.10	1.2	110	0.09	1.2	115	0.10	1.2	360	0.12	1.2					
	T9325	0.2	140	0.10	1.2	110	0.09	1.2	115	0.10	1.2								
CCMT 09T304E-FM	T8330	0.4	140	0.15	1.2	100	0.14	1.2	110	0.15	1.2	330	0.18	1.2					
	T8430	0.4	140	0.15	1.2	100	0.14	1.2	110	0.15	1.2	330	0.18	1.2					
	T9325	0.4	140	0.15	1.2	100	0.15	1.2	110	0.15	1.2								
CCMT 09T308E-FM	T8330	0.8	130	0.20	1.2	100	0.18	1.2	100	0.20	1.2	300	0.24	1.2					
	T8430	0.8	130	0.20	1.2	100	0.18	1.2	100	0.20	1.2	300	0.24	1.2					
	T9325	0.8	130	0.20	1.2	100	0.18	1.2	100	0.20	1.2								
CCMT 120404E-FM	T8330	0.4	140	0.15	1.7	95	0.14	1.7	110	0.15	1.7	330	0.18	1.7					
	T8430	0.4	140	0.15	1.7	100	0.14	1.7	110	0.15	1.7	330	0.18	1.7					
	T9325	0.4	140	0.15	1.7	100	0.15	1.7	110	0.15	1.7								
CCMT 120408E-FM	T8330	0.8	130	0.20	1.7	100	0.18	1.7	100	0.20	1.7	300	0.24	1.7					
	T8430	0.8	130	0.20	1.7	100	0.18	1.7	100	0.20	1.7	300	0.24	1.7					
	T9325	0.8	130	0.20	1.7	100	0.18	1.7	100	0.20	1.7								

	RE  (mm)	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)



CCMT 080304E-FM2	T8330	0.4	140	0.12	1.0	95	0.11	1.0	110	0.12	1.0	—	—	—	—	—	—	—	—
	T8430	0.4	140	0.12	1.0	105	0.11	1.0	110	0.12	1.0	—	—	—	—	—	—	—	—
	T9325	0.4	140	0.12	1.0	110	0.11	1.0	110	0.12	1.0	—	—	—	—	—	—	—	—
CCMT 080308E-FM2	T8330	0.8	130	0.17	1.0	100	0.15	1.0	105	0.17	1.0	—	—	—	—	—	—	—	—
	T8430	0.8	130	0.17	1.0	100	0.15	1.0	105	0.17	1.0	—	—	—	—	—	—	—	—
	T9325	0.8	130	0.17	1.0	100	0.15	1.0	105	0.17	1.0	—	—	—	—	—	—	—	—
CCMT 09T304E-FM2	T8330	0.4	140	0.12	1.0	95	0.11	1.0	110	0.12	1.0	—	—	—	—	—	—	—	—
	T8430	0.4	140	0.12	1.0	105	0.11	1.0	110	0.12	1.0	—	—	—	—	—	—	—	—
	T9325	0.4	140	0.12	1.0	110	0.11	1.0	110	0.12	1.0	—	—	—	—	—	—	—	—
CCMT 09T308E-FM2	T8330	0.8	130	0.17	1.0	100	0.15	1.0	105	0.17	1.0	—	—	—	—	—	—	—	—
	T8430	0.8	130	0.17	1.0	100	0.15	1.0	105	0.17	1.0	—	—	—	—	—	—	—	—
	T9325	0.8	130	0.17	1.0	100	0.15	1.0	105	0.17	1.0	—	—	—	—	—	—	—	—
CCMT 120408E-FM2	T8330	0.8	130	0.20	1.5	95	0.18	1.5	100	0.20	1.5	—	—	—	—	—	—	—	—
	T8430	0.8	130	0.20	1.5	95	0.18	1.5	100	0.20	1.5	—	—	—	—	—	—	—	—
	T9325	0.8	130	0.20	1.5	100	0.18	1.5	100	0.20	1.5	—	—	—	—	—	—	—	—



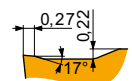
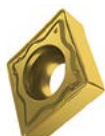
CCMT 060202E-NF2	T6310	0.2	140	0.10	0.8	110	0.09	0.8	115	0.10	0.8	360	0.12	0.8	38	0.08	0.6	—	—	—
	T9325	0.2	140	0.10	0.8	110	0.09	0.8	115	0.10	0.8	—	—	—	41	0.08	0.6	—	—	—
CCMT 060204E-NF2	H07	0.4	—	—	—	85	0.11	0.8	110	0.12	0.8	360	0.14	0.8	34	0.11	0.6	—	—	—
	T6310	0.4	140	0.12	0.8	110	0.11	0.8	110	0.12	0.8	360	0.14	0.8	38	0.11	0.6	—	—	—
	T9325	0.4	140	0.12	0.8	110	0.11	0.8	110	0.12	0.8	—	—	—	41	0.11	0.6	—	—	—
CCMT 080304E-NF2	T9325	0.4	140	0.12	1.0	110	0.11	1.0	110	0.12	1.0	—	—	—	41	0.11	0.8	—	—	—
CCMT 080308E-NF2	T9325	0.8	130	0.17	1.0	100	0.15	1.0	105	0.17	1.0	—	—	—	41	0.14	0.8	—	—	—
CCMT 09T304E-NF2	H07	0.4	—	—	—	85	0.11	1.2	110	0.12	1.2	360	0.14	1.2	30	0.11	1.0	—	—	—
	T6310	0.4	140	0.12	1.2	110	0.11	1.2	110	0.12	1.2	360	0.14	1.2	34	0.11	1.0	—	—	—
	T9325	0.4	140	0.12	1.2	110	0.11	1.2	110	0.12	1.2	—	—	—	41	0.11	1.0	—	—	—
CCMT 09T308E-NF2	T6310	0.8	140	0.14	1.2	100	0.13	1.2	110	0.14	1.2	330	0.17	1.2	41	0.13	1.0	—	—	—
	T9325	0.8	140	0.14	1.2	100	0.13	1.2	110	0.14	1.2	—	—	—	45	0.13	1.0	—	—	—



0.1	R
I. C.	R
6.35	1.0
9.525	1.5
12.7	2.5

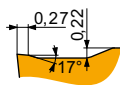
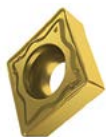


CCMT 060202E-RF	T7335	0.2	140	0.15	1.0	100	0.14	1.0	—	—	—	—	—	—	—	—	—	—	—
CCMT 060204E-RF	T5315	0.4	140	0.15	1.0	—	—	—	110	0.15	1.0	—	—	—	—	—	35	0.15	1.0
	T7335	0.4	140	0.15	1.0	100	0.15	1.0	—	—	—	—	—	—	—	—	—	—	—
CCMT 09T304E-RF	T7335	0.4	130	0.20	1.5	100	0.18	1.5	—	—	—	—	—	—	—	—	—	—	—
CCMT 09T308E-RF	T5315	0.8	130	0.20	1.5	—	—	—	100	0.20	1.5	—	—	—	—	—	35	0.15	1.0
	T7335	0.8	130	0.20	1.5	100	0.18	1.5	—	—	—	—	—	—	—	—	—	—	—
CCMT 120408E-RF	T5315	0.8	130	0.22	2.2	—	—	—	100	0.22	2.2	—	—	—	—	—	35	0.15	1.0
	T7335	0.8	130	0.22	2.2	95	0.22	2.2	—	—	—	—	—	—	—	—	—	—	—

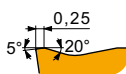


CCMT 09T304E-RM	T8330	0.4	120	0.27	2.2	80	0.24	2.2	95	0.27	2.2	—	—	—	26	0.19	1.8	20	0.15	1.0
	T8430	0.4	120	0.27	2.2	75	0.24	2.2	95	0.27	2.2	—	—	—	23	0.19	1.8	19	0.15	1.0
	T9325	0.4	120	0.27	2.2	95	0.24	2.2	95	0.27	2.2	—	—	—	30	0.19	1.8	—	—	—
CCMT 09T308E-RM	T8330	0.8	120	0.30	2.2	90	0.27	2.2	90	0.30	2.2	—	—	—	30	0.24	1.8	23	0.15	1.0
	T8430	0.8	120	0.30	2.2	90	0.27	2.2	90	0.30	2.2	—	—	—	26	0.24	1.8	23	0.15	1.0
	T9325	0.8	120	0.30	2.2	90	0.27	2.2	90	0.30	2.2	—	—	—	34	0.24	1.8	—	—	—

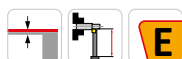
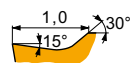
	RE	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)



CCMT 120408E-RM	T8330	0.8	■	120	0.30	2.7	■	90	0.27	2.7	■	90	0.30	2.7	■	—	—	—	■	30	0.24	2.2	■	23	0.15	1.0
	T8430	0.8	■	120	0.30	2.7	■	90	0.27	2.7	■	90	0.30	2.7		—	—	—	■	26	0.24	2.2	■	23	0.15	1.0
	T9325	0.8	■	120	0.30	2.7	■	90	0.27	2.7	■	90	0.30	2.7		—	—	—	■	34	0.24	2.2	■	—	—	—



CCMT 120404E-RM3	T9325	0.4	■	120	0.25	2.5	■	95	0.25	2.5	■	95	0.25	2.5		—	—	—		—	—	—		—	—	—
CCMT 120408E-RM3	T6310	0.8	■	120	0.27	2.5	■	90	0.27	2.5	■	95	0.27	2.5		—	—	—		—	—	—	■	19	0.15	1.0
	T9325	0.8	■	120	0.27	2.5	■	90	0.27	2.5	■	95	0.27	2.5		—	—	—		—	—	—		—	—	—

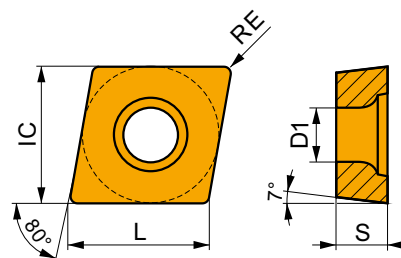


CCMT 060202E-UR	T8330	0.2	■	140	0.10	0.8	■	95	0.09	0.8	■	115	0.10	0.8		—	—	—		—	—	—
	TT310	0.2	■	140	0.10	0.5	■	110	0.09	0.5		—	—	—		—	—	—		—	—	—
CCMT 060204E-UR	T8330	0.4	■	140	0.15	1.0	■	90	0.14	1.0	■	110	0.15	1.0		—	—	—		—	—	—
	TT310	0.4	■	140	0.15	0.5	■	100	0.14	0.5		—	—	—		—	—	—		—	—	—
CCMT 060208E-UR	T8330	0.8	■	130	0.20	1.0	■	95	0.18	1.0	■	100	0.20	1.0		—	—	—		—	—	—
CCMT 09T302E-UR	TT310	0.2	■	140	0.10	1.0	■	110	0.09	1.0		—	—	—		—	—	—		—	—	—
CCMT 09T304E-UR	T8330	0.4	■	140	0.15	1.2	■	90	0.14	1.2	■	110	0.15	1.2		—	—	—		—	—	—
	TT310	0.4	■	140	0.15	1.2	■	100	0.14	1.2		—	—	—		—	—	—		—	—	—
CCMT 09T308E-UR	T8330	0.8	■	130	0.20	1.2	■	95	0.18	1.2	■	100	0.20	1.2		—	—	—		—	—	—
	TT310	0.8	■	130	0.20	1.2	■	100	0.18	1.2		—	—	—		—	—	—		—	—	—
CCMT 120404E-UR	T8330	0.4	■	140	0.15	1.7	■	80	0.14	1.7	■	110	0.15	1.7		—	—	—		—	—	—
CCMT 120408E-UR	T8330	0.8	■	130	0.20	1.7	■	90	0.18	1.7	■	100	0.20	1.7		—	—	—		—	—	—

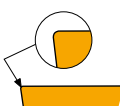
CCMW

PRAMET

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0602	6.350	2.80	6.40	2.38
09T3	9.525	4.40	9.70	3.97
1204	12.700	5.50	12.90	4.76

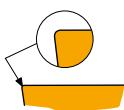


	RE	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)



CCMW 060204	T5315	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	■	30	0.15	1.0
CCMW 09T304	T5315	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	■	30	0.15	1.0
CCMW 09T308	T5315	0.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	■	26	0.15	1.0

		RE (mm)	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)

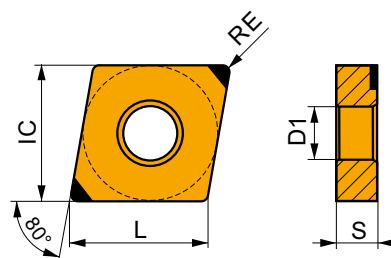


CCMW 120404	T5315	0.4	—	—	—	—	—	—	■	115	0.10	4.0	—	—	—	—	—	■	26	0.15	1.0
CCMW 120408	T5315	0.8	—	—	—	—	—	—	■	100	0.20	4.0	—	—	—	—	—	■	26	0.15	1.0

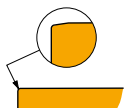
CNGA CBN

 PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
1204	12.700	5.16	12.90	4.76



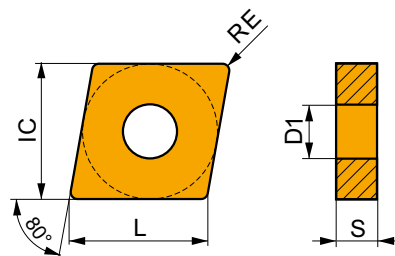
		RE (mm)	P			M			K			N			S			H		
			vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)	vc (m/min)	f (mm/rev)	ap (mm)



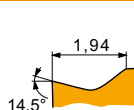
CNGA 120404S01020B	TB310	0.4	—	—	—	—	—	—	■	115	0.10	0.4	—	—	—	■	100	0.07	0.3	■	80	0.15	1.0
CNGA 120408S01020B	TB310	0.8	—	—	—	—	—	—	■	110	0.15	0.6	—	—	—	■	100	0.11	0.5	■	85	0.15	1.0

CNGG

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1204	12.700	5.16	12.90	4.76



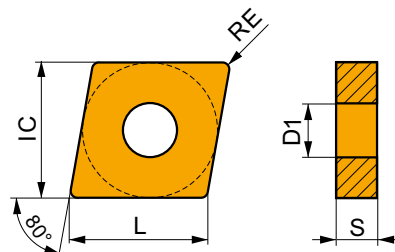
	RE	P	M	K	N	S	H
	(mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)



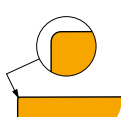
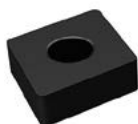
CNGG 120402E-SF	H07	0.2	—	—	—	105	0.09	1.0	115	0.10	1.0	360	0.12	1.0	38	0.08	0.8	—	—	—
	T6310	0.2	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	41	0.08	0.8	26	0.15	1.0
	T8330	0.2	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	34	0.08	0.8	26	0.15	1.0
	T8430	0.2	140	0.10	1.0	110	0.09	1.0	115	0.10	1.0	360	0.12	1.0	34	0.08	0.8	30	0.15	1.0

CNMA

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1204	12.700	5.16	12.90	4.76

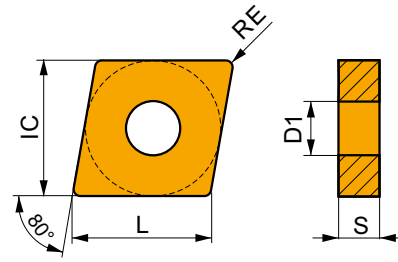


	RE	P	M	K	N	S	H
	(mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)

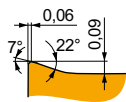
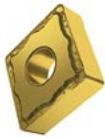


CNMA 120404	T5315	0.4	—	—	—	—	—	—	115	0.10	4.0	—	—	—	—	—	—	30	0.15	1.0
CNMA 120408	T5315	0.8	—	—	—	—	—	—	100	0.20	4.0	—	—	—	—	—	—	30	0.15	1.0
CNMA 120412	T5315	1.2	—	—	—	—	—	—	90	0.30	4.0	—	—	—	—	—	—	25	0.15	1.0

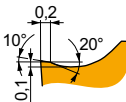
	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
1204	12.700	5.16	12.90	4.76



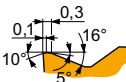
	RE	P			M			K			N			S			H		
	(mm)	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)



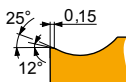
CNMG 120404E-FF	T7325	0.4	140	0.12	1.0	110	0.11	1.0	—	—	—	—	—	—	—	—	—	—	—
	T8315	0.4	140	0.12	1.0	110	0.11	1.0	110	0.12	1.0	—	—	—	—	—	—	—	—
CNMG 120408E-FF	T7325	0.8	140	0.15	1.0	100	0.14	1.0	—	—	—	—	—	—	—	—	—	—	—
	T8315	0.8	140	0.15	1.0	100	0.14	1.0	110	0.15	1.0	—	—	—	—	—	—	—	—



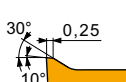
CNMG 120404E-FM	T9325	0.4	130	0.20	2.1	100	0.18	2.1	100	0.20	2.1	—	—	—	38	0.16	1.7	—	—
	TT310	0.4	130	0.20	2.1	100	0.18	2.1	—	—	—	—	—	—	—	—	—	—	—
CNMG 120408E-FM	T9325	0.8	130	0.20	2.1	100	0.18	2.1	100	0.20	2.1	—	—	—	45	0.16	1.7	—	—
	TT310	0.8	130	0.20	2.1	100	0.18	2.1	—	—	—	—	—	—	—	—	—	—	—



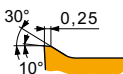
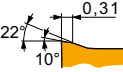
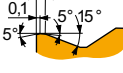
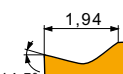
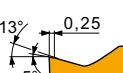
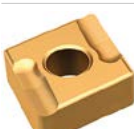
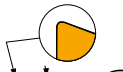
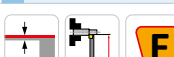
CNMG 120404E-M	T5315	0.4	130	0.20	2.1	—	—	—	100	0.20	2.1	—	—	—	—	—	35	0.15	1.0
	T9325	0.4	130	0.20	2.1	—	—	—	100	0.20	2.1	—	—	—	—	—	—	—	—
CNMG 120408E-M	T5315	0.8	120	0.32	2.1	—	—	—	90	0.32	2.1	—	—	—	—	—	38	0.15	1.0
	T9325	0.8	120	0.32	2.1	—	—	—	90	0.32	2.1	—	—	—	—	—	—	—	—



CNMG 120404E-NF	T7325	0.4	130	0.18	1.7	100	0.16	1.7	—	—	—	—	—	—	45	0.16	1.4	—	—
	T8330	0.4	130	0.17	1.7	100	0.15	1.7	105	0.17	1.7	330	0.20	1.7	34	0.14	1.4	—	—
	T8430	0.4	130	0.17	1.7	100	0.15	1.7	105	0.17	1.7	330	0.20	1.7	30	0.14	1.4	—	—
CNMG 120408E-NF	T7325	0.8	130	0.19	1.7	100	0.17	1.7	—	—	—	—	—	—	45	0.15	1.4	—	—
	T8330	0.8	130	0.19	1.7	100	0.17	1.7	100	0.19	1.7	300	0.23	1.7	38	0.15	1.4	—	—
	T8430	0.8	130	0.19	1.7	100	0.17	1.7	100	0.19	1.7	300	0.23	1.7	34	0.15	1.4	—	—

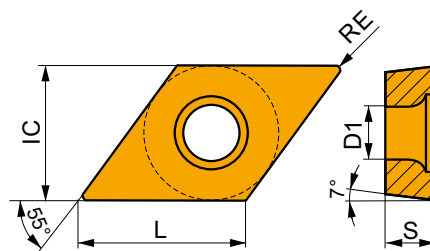


CNMG 120404E-NM	T7325	0.4	130	0.20	2.1	100	0.18	2.1	—	—	—	—	—	—	45	0.16	1.7	—	—
	T8330	0.4	130	0.20	2.1	100	0.18	2.1	—	—	—	300	0.24	2.1	30	0.16	1.7	—	—
	T8430	0.4	130	0.20	2.1	100	0.18	2.1	—	—	—	300	0.24	2.1	30	0.16	1.7	—	—

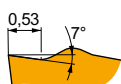
	RE (mm)	P			M			K			N			S			H					
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap			
		(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)			
  																						
CNMG 120408E-NM	T7325	0.8	✓	120	0.25	2.1	■	95	0.23	2.1	■	—	—	—	■	45	0.20	1.7	■	—	—	—
	T8330	0.8	■	120	0.25	2.1	■	95	0.23	2.1	■	—	—	—	✓	270	0.30	2.1	✓	34	0.20	1.7
	T8430	0.8	■	120	0.25	2.1	■	95	0.23	2.1	■	—	—	—	✓	270	0.30	2.1	✓	30	0.20	1.7
  																						
CNMG 120404E-NMR	T7325	0.4	✓	120	0.25	2.7	■	95	0.23	2.7	■	—	—	—	■	38	0.20	2.2	■	—	—	—
	T8330	0.4	■	120	0.25	2.0	■	80	0.23	2.0	■	—	—	—	✓	26	0.20	1.6	■	—	—	—
	T8430	0.4	■	120	0.25	2.7	■	75	0.23	2.7	■	—	—	—	✓	23	0.20	2.2	■	—	—	—
CNMG 120408E-NMR	T7325	0.8	✓	120	0.35	2.7	■	90	0.32	2.7	■	—	—	—	■	41	0.25	2.2	■	—	—	—
	T8330	0.8	■	120	0.35	2.7	■	90	0.32	2.7	■	—	—	—	✓	26	0.25	2.2	■	—	—	—
	T8430	0.8	■	120	0.35	2.7	■	80	0.32	2.7	■	—	—	—	✓	23	0.25	2.2	■	—	—	—
  																						
CNMG 120408E-R	T5315	0.8	✓	120	0.40	4.0	■	—	—	—	■	80	0.40	4.0	■	—	—	—	✓	30	0.15	1.0
	T9325	0.8	■	120	0.40	4.0	■	—	—	—	✓	80	0.40	4.0	■	—	—	—	■	—	—	—
  																						
CNMG 120404E-SF	H07	0.4	■	—	—	—	✓	90	0.14	1.0	■	110	0.15	1.0	✓	330	0.18	1.0	■	34	0.12	0.8
CNMG 120408E-SF	T6310	0.4	■	140	0.15	1.0	■	100	0.14	1.0	■	110	0.15	1.0	✓	330	0.18	1.0	■	38	0.12	0.8
	H07	0.8	■	—	—	—	✓	95	0.18	1.0	■	100	0.20	1.0	✓	300	0.24	1.0	■	38	0.14	0.8
T6310	0.8	■	130	0.20	1.0	■	100	0.18	1.0	■	100	0.20	1.0	✓	300	0.24	1.0	■	45	0.14	0.8	
  																						
CNMG 120404E-SM	T6310	0.4	■	130	0.22	2.0	■	95	0.20	2.0	■	100	0.22	2.0	✓	300	0.26	2.0	■	34	0.20	1.6
	T7325	0.4	✓	130	0.22	2.0	■	95	0.20	2.0	■	—	—	—	■	41	0.20	1.6	■	—	—	—
CNMG 120408E-SM	T6310	0.8	■	120	0.25	2.0	■	95	0.23	2.0	■	95	0.25	2.0	✓	270	0.30	2.0	■	38	0.20	1.6
	T7325	0.8	✓	120	0.25	2.0	■	95	0.23	2.0	■	—	—	—	■	45	0.20	1.6	■	—	—	—
  																						
CNMG 120404EL-SI	T7325	0.4	✓	130	0.20	1.7	■	100	0.18	1.7	■	—	—	—	✓	45	0.18	1.4	■	—	—	—
	T8330	0.4	■	130	0.20	1.7	■	100	0.18	1.7	■	—	—	—	✓	300	0.24	1.7	✓	34	0.18	1.4
	T8430	0.4	■	130	0.20	1.7	■	100	0.18	1.7	■	—	—	—	✓	300	0.24	1.7	✓	34	0.18	1.4
CNMG 120408EL-SI	T7325	0.8	✓	120	0.35	1.7	■	90	0.32	1.7	■	—	—	—	✓	45	0.25	1.4	■	—	—	—
	T8330	0.8	■	120	0.35	1.7	■	90	0.32	1.7	■	—	—	—	✓	220	0.42	1.7	✓	34	0.25	1.4
	T8430	0.8	■	120	0.35	1.7	■	90	0.32	1.7	■	—	—	—	✓	220	0.42	1.7	✓	30	0.25	1.4

DCMT

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
11T3	9.525	4.40	11.60	3.97
1504	12.700	5.50	15.50	4.76

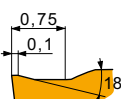


	RE	P	M	K	N	S	H
	(mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)



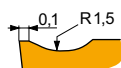
DCMT 11T308E-FF2

T7325	0.8	130	0.17	0.8	—	—	—	—	—	—	—	—	—	—	—	—
T8330	0.8	130	0.17	0.8	—	—	—	105	0.17	0.8	—	—	—	—	—	—
T8430	0.8	130	0.17	0.8	—	—	—	105	0.17	0.8	—	—	—	—	—	—



DCMT 150408E-FM2

T9325	0.8	130	0.20	1.5	100	0.18	1.5	100	0.20	1.5	—	—	—	—	—	—
T9335	0.8	130	0.20	1.5	95	0.18	1.5	—	—	—	—	—	—	—	—	—



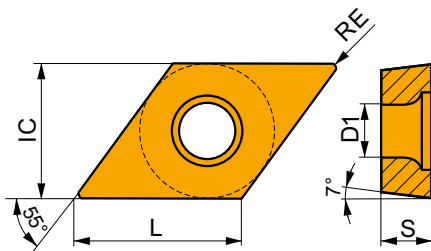
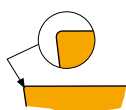
DCMT 11T308E-RF

T5315	0.8		130	0.20	0.8		—	—	—		100	0.20	0.8		—	—	—		—	—	—		30	0.15	1.0
T7335	0.8		130	0.20	0.8		100	0.18	0.8		—	—	—		—	—	—		—	—	—		—	—	—

DCMW



	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
11T3	9.525	4.40	11.60	3.97

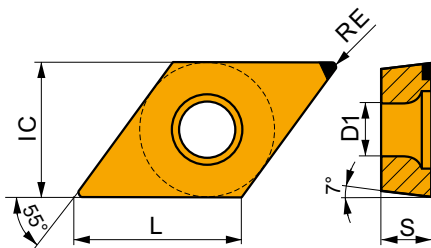
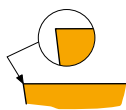
[illegible]

DCMW 11T304	T5315	0.4		–	–	–		–	–	–	■	115	0.10	1.2		–	–	–		–	–	–	■	26	0.15	1.0
	T6310	0.4		–	–	–		–	–	–	■	80	0.10	1.2		–	–	–		–	–	–	■	15	0.15	1.0
DCMW 11T308	T5315	0.8		–	–	–		–	–	–	■	105	0.18	1.2		–	–	–		–	–	–	■	23	0.15	1.0
	T6310	0.8		–	–	–		–	–	–	■	80	0.18	1.2		–	–	–		–	–	–	■	15	0.15	1.0

DCMW PCD



	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
11T3	9.525	4.40	11.60	3.97

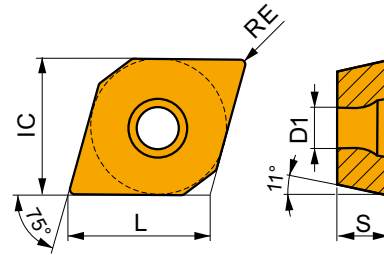
[illegible]

DCMW 11T304FN	PD1	0.4											360	0.12	0.5						
DCMW 11T308FN	PD1	0.8											360	0.12	1.0						

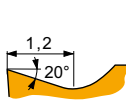
EPGX

PRAMET

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0502	5.560	2.50	5.70	2.38



 RE	P			M			K			N			S			H		
	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)

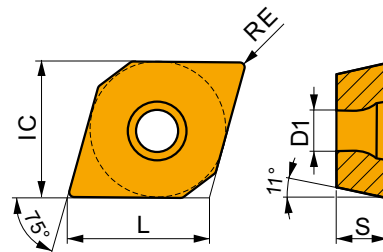


EPGX 050202FL-JZ	TT010	0.2	150	0.06	0.5	110	0.05	0.5	—	—	—	—	—	—	—	—	—	—
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EPMT

PRAMET

	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
0502	5.560	2.50	5.70	2.38



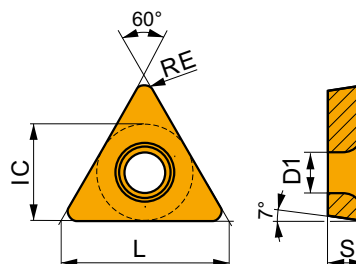
	RE	P			M			K			N			S			H		
		vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)



EPMT 050202E-NF2	H07	0.2	—	—	—	80	0.09	0.8	115	0.10	0.8	360	0.12	0.8	30	0.07	0.6	—	—	—
	T7325	0.2	150	0.07	0.8	110	0.06	0.8	—	—	—	—	—	—	45	0.06	0.6	—	—	—
	T7335	0.2	150	0.07	0.8	110	0.06	0.8	—	—	—	—	—	—	45	0.06	0.6	—	—	—
	T9315	0.2	150	0.05	0.8	—	—	—	115	0.05	0.8	—	—	—	—	—	—	—	—	—
	T9325	0.2	150	0.07	0.8	110	0.06	0.8	115	0.07	0.8	—	—	—	45	0.06	0.6	—	—	—
	T9335	0.2	140	0.10	0.8	110	0.09	0.8	—	—	—	—	—	—	34	0.07	0.6	—	—	—
	TT010	0.2	150	0.05	0.5	110	0.05	0.5	—	—	—	—	—	—	—	—	—	—	—	—

TCGT

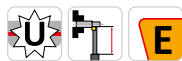
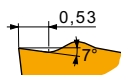
	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
06T1	3.970	2.20	6.90	1.98
0902	5.560	2.50	9.60	2.38
1102-SF3	6.350	2.80	11.00	2.58
16T3	9.525	4.40	16.50	3.97
16T3-SF3	9.525	4.40	16.50	4.22



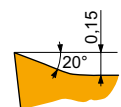
	RE	P			M			K			N			S			H		
	(mm)	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
		(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)



TCGT 090202F-AL	HF7	0.2	—	—	—	—	—	—	—	—	360	0.12	1.0	—	—	—	—	—	—
	T0315	0.2	—	—	—	—	—	—	—	—	360	0.12	1.0	—	—	—	—	—	—
TCGT 090204F-AL	HF7	0.4	—	—	—	—	—	—	—	—	300	0.24	1.0	—	—	—	—	—	—
	T0315	0.4	—	—	—	—	—	—	—	—	300	0.24	1.0	—	—	—	—	—	—
TCGT 16T304F-AL	HF7	0.4	—	—	—	—	—	—	—	—	300	0.24	2.4	—	—	—	—	—	—
	T0315	0.4	—	—	—	—	—	—	—	—	300	0.24	2.4	—	—	—	—	—	—
TCGT 16T308F-AL	HF7	0.8	—	—	—	—	—	—	—	—	200	0.48	2.4	—	—	—	—	—	—
	T0315	0.8	—	—	—	—	—	—	—	—	200	0.48	2.4	—	—	—	—	—	—



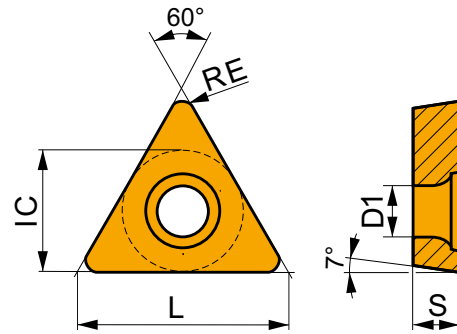
TCGT 06T102E-FF2	T8330	0.2	150	0.05	0.8	—	—	—	115	0.05	0.8	—	—	—	—	—	—	—	—
	T8430	0.2	150	0.05	0.8	—	—	—	115	0.05	0.8	—	—	—	—	—	—	—	—
	TT010	0.2	150	0.05	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCGT 090202E-FF2	TT010	0.2	150	0.05	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—



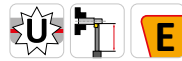
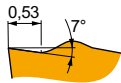
TCGT 110204E-SF3	H07	0.4	—	—	—	80	0.09	0.8	115	0.10	0.8	360	0.12	0.8	30	0.07	0.6	—	—
	T6310	0.4	140	0.10	0.8	110	0.09	0.8	115	0.10	0.8	360	0.12	0.8	34	0.07	0.6	23	0.15
TCGT 16T308E-SF3	H07	0.8	—	—	—	90	0.09	1.2	115	0.10	1.2	360	0.12	1.2	34	0.08	1.0	—	—
	T6310	0.8	140	0.10	1.2	110	0.09	1.2	115	0.10	1.2	360	0.12	1.2	38	0.08	1.0	26	0.15

TCMT

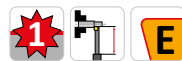
	IC	D1	L	S
	(mm)	(mm)	(mm)	(mm)
06T1	3.970	2.20	6.90	1.98
0902	5.560	2.50	9.60	2.38
16T3	9.525	4.40	16.50	3.97



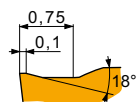
	RE	P	M	K	N	S	H
	(mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)	vc f ap (m/min) (mm/rev) (mm)



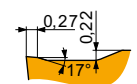
TCMT 06T102E-FF2	T8330	0.2	150	0.05	0.8	—	—	—	115	0.05	0.8	—	—	—	—	—	—
	T8430	0.2	150	0.05	0.8	—	—	—	115	0.05	0.8	—	—	—	—	—	—
	T9315	0.2	150	0.05	0.8	—	—	—	115	0.05	0.8	—	—	—	—	—	—
TCMT 06T104E-FF2	T8330	0.4	140	0.12	0.8	—	—	—	110	0.12	0.8	—	—	—	—	—	—
	T8430	0.4	140	0.12	0.8	—	—	—	110	0.12	0.8	—	—	—	—	—	—
	T9325	0.4	140	0.12	0.8	—	—	—	110	0.12	0.8	—	—	—	—	—	—
TCMT 090204E-FF2	T8330	0.4	140	0.12	1.0	—	—	—	110	0.12	1.0	—	—	—	—	—	—
	T8430	0.4	140	0.12	1.0	—	—	—	110	0.12	1.0	—	—	—	—	—	—
	T9325	0.4	140	0.12	1.0	—	—	—	110	0.12	1.0	—	—	—	—	—	—
TCMT 16T304E-FF2	T8330	0.4	140	0.12	0.8	—	—	—	110	0.12	0.8	—	—	—	—	—	—
	T8430	0.4	140	0.12	0.8	—	—	—	110	0.12	0.8	—	—	—	—	—	—
	T9325	0.4	140	0.12	0.8	—	—	—	110	0.12	0.8	—	—	—	—	—	—
TCMT 16T308E-FF2	TT010	0.4	150	0.06	0.5	—	—	—	—	—	—	—	—	—	—	—	—
	T8330	0.8	130	0.17	0.8	—	—	—	105	0.17	0.8	—	—	—	—	—	—
	T8430	0.8	130	0.17	0.8	—	—	—	105	0.17	0.8	—	—	—	—	—	—
	T9325	0.8	130	0.17	0.8	—	—	—	105	0.17	0.8	—	—	—	—	—	—



TCMT 16T304E-FM	T7325	0.4	130	0.19	1.7	100	0.17	1.7	—	—	—	—	—	—	—	—	—
	T8330	0.4	140	0.12	1.7	90	0.11	1.7	110	0.12	1.7	360	0.14	1.7	—	—	—
	T8430	0.4	140	0.12	1.7	90	0.11	1.7	110	0.12	1.7	360	0.14	1.7	—	—	—

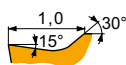


TCMT 16T308E-FM2	T8330	0.8	130	0.20	1.0	85	0.18	1.0	100	0.20	1.0	—	—	—	—	—	—
	T8430	0.8	130	0.20	1.0	85	0.18	1.0	100	0.20	1.0	—	—	—	—	—	—
	T9325	0.8	130	0.20	1.0	100	0.18	1.0	100	0.20	1.0	—	—	—	—	—	—



TCMT 16T308E-RM	T5315	0.8	120	0.27	1.9	—	—	—	95	0.27	1.9	—	—	—	35	0.15	1.0
	T8330	0.8	120	0.27	1.9	85	0.24	1.9	95	0.27	1.9	26	0.19	1.5	20	0.15	1.0
	T8430	0.8	120	0.27	1.9	85	0.24	1.9	95	0.27	1.9	23	0.19	1.5	19	0.15	1.0

		RE (mm)	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
			(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)

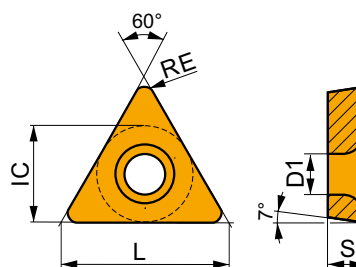


TCMT 16T304E-UR	T8330	0.4	135	0.12	0.8	80	0.11	0.8	110	0.12	0.8	—	—	—	—	—	—	—	—	—
	T8430	0.4	140	0.12	0.8	85	0.11	0.8	110	0.12	0.8	—	—	—	—	—	—	—	—	—
	T9325	0.4	130	0.18	0.8	100	0.16	0.8	105	0.18	0.8	—	—	—	—	—	—	—	—	—
	TT310	0.4	140	0.12	0.8	110	0.11	0.8	—	—	—	—	—	—	—	—	—	—	—	—
TCMT 16T308E-UR	T8330	0.8	130	0.17	0.8	90	0.15	0.8	105	0.17	0.8	—	—	—	—	—	—	—	—	—
	T8430	0.8	130	0.17	0.8	90	0.15	0.8	105	0.17	0.8	—	—	—	—	—	—	—	—	—
	T9325	0.8	130	0.17	0.8	100	0.15	0.8	105	0.17	0.8	—	—	—	—	—	—	—	—	—

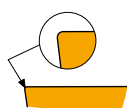
TCMW

PRAMET

	IC (mm)	D1 (mm)	L (mm)	S (mm)
16T3	9.525	4.40	16.50	3.97



		RE (mm)	P			M			K			N			S			H		
			vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap	vc	f	ap
			(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)	(m/min)	(mm/rev)	(mm)



TCMW 16T304	T5305	0.4	—	—	—	—	—	—	115	0.10	1.5	—	—	—	—	—	—	30	0.15	1.0
	T5315	0.4	—	—	—	—	—	—	115	0.10	1.5	—	—	—	—	—	—	26	0.15	1.0
	T6310	0.4	—	—	—	—	—	—	85	0.10	1.5	—	—	—	—	—	—	15	0.15	1.0
TCMW 16T308	T5305	0.8	—	—	—	—	—	—	105	0.18	1.5	—	—	—	—	—	—	30	0.15	1.0
	T5315	0.8	—	—	—	—	—	—	105	0.18	1.5	—	—	—	—	—	—	26	0.15	1.0
	T6310	0.8	—	—	—	—	—	—	85	0.18	1.5	—	—	—	—	—	—	15	0.15	1.0



GRUNDHOLDERE

BESKRIVELSE AF GRUNDHOLDERE

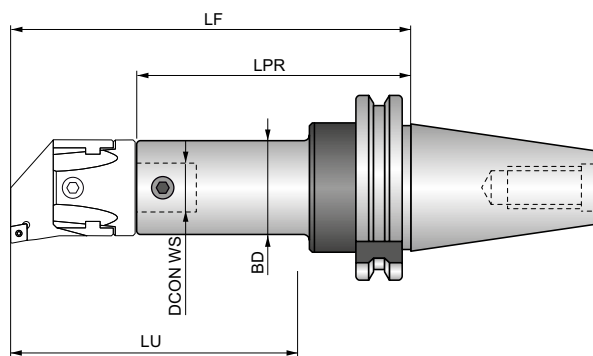
1	2	3	4	5
AS 3	30	022	100	R

1		2	3	4		5	
Grundholder type		Konus	Størrelse	Længde PM		Variant	
AS 3	DIN 69871	30	022	055	55 mm	R	indvendigt kølemiddel
BT 3	MAS BT	40	027	100	100 mm		
HSK	HSK	63A	032				
OTT 3	DIN 2080	50	042				
3	MORSE	05	054				
B	WELDON	25	068				
P	FORLÆNGER		085				
R	REDUKTION		100				
ADT	ADAPTER		200				
			300				
			400				
			500				



DIN 69871 skaftværktøjsholder til bore hoveder

DIN 69871 meget stiv værktøjsholder (til MTC) til borehoveder i 40 og 50 koniske. Holder med forskellig længde til rådighed. Koblingsstørrelser 22 - 160 mm kan bruges i kombination med EXT-BS forlængere, RED-BS reduktionsgear og LA-BS forstørrelse. Intern kølevæske til rådighed. Til applikationer, der kræver høj nøjagtighed og repetitbarhed.



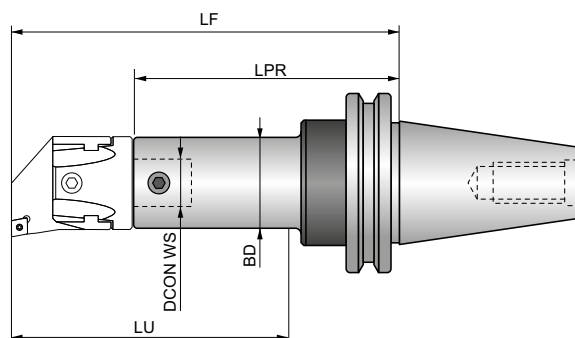
Product		CZC MS	BD	DCON WS	LF	LPR	LU			
			(mm)	(mm)	(mm)	(mm)	(mm)			
AS 330 022 100 R	30	22	22.00	12.00	138.00	104	100.00	✓	US 0608	0.72
AS 330 027 055 R	30	27	27.00	15.00	90.00	48	55.00	✓	US 0609	0.56
AS 330 027 100 R	30	27	27.00	15.00	138.00	96	100.00	✓	US 0609	0.68
AS 330 032 060 R	30	32	32.00	20.00	96.00	51	60.00	✓	US 0810	0.51
AS 330 032 100 R	30	32	32.00	20.00	138.00	93	100.00	✓	US 0810	0.74
AS 340 022 080 R	40	22	22.00	12.00	118.00	84	80.00	✓	US 0608	1.14
AS 340 022 100 R	40	22	22.00	12.00	138.00	104	100.00	✓	US 0608	1.24
AS 340 027 055 R	40	27	27.00	15.00	90.00	48	55.00	✓	US 0609	1.05
AS 340 027 100 R	40	27	27.00	15.00	138.00	96	100.00	✓	US 0609	1.30
AS 340 027 130 R	40	27	27.00	15.00	168.00	126	130.00	✓	US 0609	1.43
AS 340 032 060 R	40	32	32.00	20.00	96.00	51	60.00	✓	US 0810	1.10
AS 340 032 100 R	40	32	32.00	20.00	138.00	93	100.00	✓	US 0810	1.35
AS 340 032 130 R	40	32	32.00	20.00	168.00	123	130.00	✓	US 0810	1.52
AS 340 042 075 R	40	42	42.00	24.00	112.00	56	75.00	✓	US 1014	1.16
AS 340 042 160 R	40	42	42.00	24.00	182.00	126	160.00	✓	US 1014	1.90
AS 340 042 200 R	40	42	42.00	24.00	222.00	166	200.00	✓	US 1014	2.37
AS 340 054 120 R	40	54	54.00	28.00	142.00	76	120.00	✓	US 1219	1.58
AS 340 054 160 R	40	54	54.00	28.00	182.00	116	160.00	✓	US 1219	2.28
AS 340 054 200 R	40	54	54.00	28.00	222.00	156	200.00	✓	US 1219	2.93
AS 340 068 160 R	40	68	68.00	36.00	183.00	97	160.00	✓	US 1625	2.36
AS 340 068 200 R	40	68	68.00	36.00	223.00	137	200.00	✓	US 1625	3.50
AS 340 085 200 R	40	85	85.00	50.00	224.00	124	200.00	✓	US 1630	3.96
AS 340 100 200 R	40	100, 200	100.00	60.00	224.00	124	200.00	✓	US 2032	5.21
AS 350 022 080 R	50	22	22.00	12.00	118.00	84	80.00	✓	US 0608	3.43
AS 350 022 100 R	50	22	22.00	12.00	138.00	104	100.00	✓	US 0608	3.40
AS 350 027 055 R	50	27	27.00	15.00	90.00	48	55.00	✓	US 0609	3.30
AS 350 027 100 R	50	27	27.00	15.00	138.00	96	100.00	✓	US 0609	3.48
AS 350 027 130 R	50	27	27.00	15.00	168.00	126	130.00	✓	US 0609	3.48
AS 350 032 060 R	50	32	32.00	20.00	96.00	51	60.00	✓	US 0810	2.98
AS 350 032 130 R	50	32	32.00	20.00	168.00	123	130.00	✓	US 0810	3.71
AS 350 032 160 R	50	32	32.00	20.00	198.00	153	160.00	✓	US 0810	3.95
AS 350 042 075 R	50	42	42.00	24.00	112.00	56	75.00	✓	US 1014	3.32
AS 350 042 160 R	50	42	42.00	24.00	198.00	142	160.00	✓	US 1014	4.26
AS 350 042 200 R	50	42	42.00	24.00	238.00	182	200.00	✓	US 1014	4.74

Product		CZC MS	BD	DCON WS	LF	LPR	LU			
			(mm)	(mm)	(mm)	(mm)	(mm)			
AS 350 054 090 R	50	54	54.00	28.00	128.00	62	90.00	✓	US 1219	3.39
AS 350 054 160 R	50	54	54.00	28.00	198.00	132	160.00	✓	US 1219	4.74
AS 350 054 200 R	50	54	54.00	28.00	238.00	172	200.00	✓	US 1219	5.48
AS 350 068 115 R	50	68	68.00	36.00	151.00	65	115.00	✓	US 1625	3.66
AS 350 068 200 R	50	68	68.00	36.00	223.00	137	200.00	✓	US 1625	5.81
AS 350 068 260 R	50	68	68.00	36.00	283.00	197	260.00	✓	US 1625	7.48
AS 350 085 200 R	50	85	85.00	50.00	224.00	124	200.00	✓	US 1630	6.21
AS 350 085 260 R	50	85	85.00	50.00	284.00	184	260.00	✓	US 1630	8.91
AS 350 085 320 R	50	85	85.00	50.00	344.00	244	320.00	✓	US 1630	11.50
AS 350 100 190 R	50	100, 200	100.00	60.00	214.00	114	190.00	✓	US 2032	6.52
AS 350 100 260 R	50	100, 200	100.00	60.00	284.00	184	260.00	✓	US 2032	10.85
AS 350 100 320 R	50	100, 200	100.00	60.00	344.00	244	320.00	✓	US 2032	14.47
AS 550 160	50	300, 400, 500	100.00	60.00	160.00	70	125.00	–	US 1240	5.55



MAS 403-BT skaftværktøjsholder til bore hoveder

MAS 403-BT meget stiv værktøjsholder (til ATC) til borehoveder, fås i 30, 40 og 50 koniske. Forskellige længde er tilgængelige. Koblingsstørrelser 22-160 mm kan bruges med EXT-BS forlængere, RED-BS reduktions og LA-BS forstørrelse. Intern kølevæske til rådighed. Til applikationer, der kræver høj nøjagtighed og repeatabilitet.



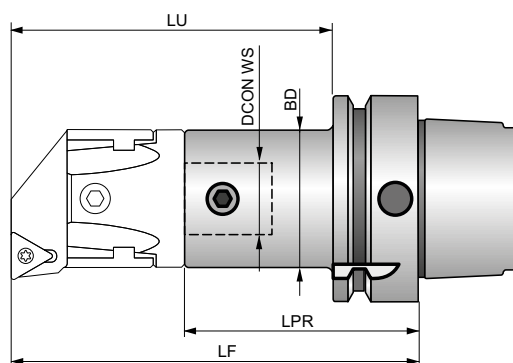
Product		CZC MS	BD	DCON WS	LF	LPR	LU			
			(mm)	(mm)	(mm)	(mm)	(mm)			
BT 330 022 100 R	30	22	22.00	12.00	125.00	91	100.00	✓	US 0608	0.56
BT 330 027 055 R	30	27	27.00	15.00	77.00	35	55.00	✓	US 0609	0.41
BT 330 027 100 R	30	27	27.00	15.00	125.00	83	100.00	✓	US 0609	0.69
BT 330 032 060 R	30	32	32.00	20.00	83.00	38	60.00	✓	US 0810	0.47
BT 330 032 100 R	30	32	32.00	20.00	125.00	80	100.00	✓	US 0810	0.70
BT 330 042 075 R	30	42	42.00	24.00	100.00	44	75.00	✓	US 1014	0.56
BT 340 022 050 R	40	22	22.00	12.00	80.00	46	50.00	✓	US 0608	1.02
BT 340 022 080 R	40	22	22.00	12.00	110.00	76	80.00	✓	US 0608	1.16
BT 340 022 100 R	40	22	22.00	12.00	130.00	96	100.00	✓	US 0608	1.14
BT 340 027 055 R	40	27	27.00	15.00	82.00	40	55.00	✓	US 0609	1.06
BT 340 027 100 R	40	27	27.00	15.00	130.00	88	100.00	✓	US 0609	1.26
BT 340 027 130 R	40	27	27.00	15.00	160.00	118	130.00	✓	US 0609	1.39
BT 340 032 060 R	40	32	32.00	20.00	88.00	43	60.00	✓	US 0810	1.00
BT 340 032 100 R	40	32	32.00	20.00	130.00	85	100.00	✓	US 0810	1.31
BT 340 032 130 R	40	32	32.00	20.00	160.00	115	130.00	✓	US 0810	1.50
BT 340 042 075 R	40	42	42.00	24.00	104.00	48	75.00	✓	US 1014	1.14
BT 340 042 160 R	40	42	42.00	24.00	190.00	134	160.00	✓	US 1014	2.05
BT 340 042 200 R	40	42	42.00	24.00	230.00	174	200.00	✓	US 1014	2.39
BT 340 054 090 R	40	54	54.00	28.00	120.00	54	90.00	✓	US 1219	1.13
BT 340 054 160 R	40	54	54.00	28.00	190.00	124	160.00	✓	US 1219	2.55
BT 340 054 200 R	40	54	54.00	28.00	230.00	164	200.00	✓	US 1219	3.10
BT 340 068 160 R	40	68	68.00	36.00	181.00	95	160.00	✓	US 1625	2.46
BT 340 068 200 R	40	68	68.00	36.00	221.00	135	200.00	✓	US 1625	3.64
BT 340 085 200 R	40	85	85.00	50.00	220.00	120	200.00	✓	US 1630	4.04
BT 340 100 200 R	40	100	100.00	60.00	220.00	120	200.00	✓	US 2032	4.95
BT 350 022 080 R	50	22	22.00	12.00	121.00	87	80.00	✓	US 0608	3.95
BT 350 022 100 R	50	22	22.00	12.00	141.00	107	100.00	✓	US 0608	3.50
BT 350 027 055 R	50	27	27.00	15.00	93.00	51	55.00	✓	US 0609	3.68
BT 350 027 100 R	50	27	27.00	15.00	141.00	99	100.00	✓	US 0609	4.00
BT 350 027 130 R	50	27	27.00	15.00	171.00	129	130.00	✓	US 0609	4.14
BT 350 032 060 R	50	32	32.00	20.00	99.00	54	60.00	✓	US 0810	3.67
BT 350 032 130 R	50	32	32.00	20.00	171.00	126	130.00	✓	US 0810	4.24
BT 350 032 160 R	50	32	32.00	20.00	201.00	156	160.00	✓	US 0810	4.56
BT 350 042 075 R	50	42	42.00	24.00	115.00	59	75.00	✓	US 1014	3.84

Product		CZC MS	BD	DCON WS	LF	LPR	LU			
			(mm)	(mm)	(mm)	(mm)	(mm)			
BT 350 042 160 R	50	42	42.00	24.00	201.00	145	160.00	✓	US 1014	4.89
BT 350 042 200 R	50	42	42.00	24.00	241.00	185	200.00	✓	US 1014	5.25
BT 350 054 090 R	50	54	54.00	28.00	131.00	65	90.00	✓	US 1219	3.90
BT 350 054 160 R	50	54	54.00	28.00	201.00	135	160.00	✓	US 1219	5.39
BT 350 054 200 R	50	54	54.00	28.00	241.00	175	200.00	✓	US 1219	5.98
BT 350 068 115 R	50	68	68.00	36.00	154.00	68	115.00	✓	US 1625	4.09
BT 350 068 200 R	50	68	68.00	36.00	242.00	156	200.00	✓	US 1625	6.66
BT 350 068 260 R	50	68	68.00	36.00	302.00	216	260.00	✓	US 1625	8.18
BT 350 085 200 R	50	85	85.00	50.00	242.00	142	200.00	✓	US 1630	7.40
BT 350 085 260 R	50	85	85.00	50.00	302.00	202	260.00	✓	US 1630	9.89
BT 350 085 320 R	50	85	85.00	50.00	362.00	262	320.00	✓	US 1630	12.76
BT 350 100 170 R	50	100, 200	100.00	60.00	195.00	95	170.00	✓	US 2032	5.71
BT 350 100 260 R	50	100, 200	100.00	60.00	302.00	202	260.00	✓	US 2032	12.34
BT 350 100 320 R	50	100, 200	100.00	60.00	362.00	262	320.00	✓	US 2032	14.50
BT 550 160	50	300, 400, 500	100.00	60.00	160.00	70	125.00	–	US 1240	6.05



HSK skafteværktøjsholder til bore hoveder

HSK meget stiv værktøjsholder (til ATC) til borehoveder, fås i 50A, 63A eller 100A tilspidsning. Koblingsstørrelser 22 op til 160 mm kan bruges i kombination med EXT-BS forlængere, RED-BS reduktionsholder og LA-BS forstørrelse. Intern kølevæske til rådighed. Til applikationer, der kræver høj nøjagtighed og repeterbarhed.



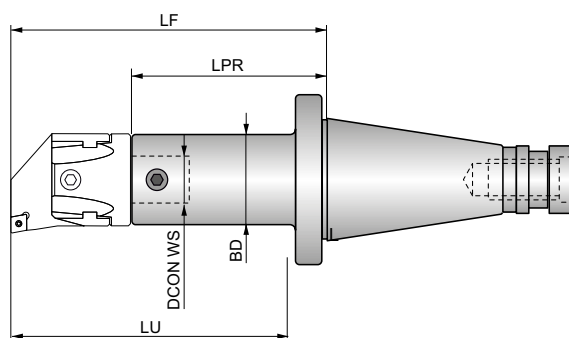
Product		CZC MS	BD	DCON WS	LF	LPR	LU			
			(mm)	(mm)	(mm)	(mm)	(mm)			
HSK 050A 022 055	50	22	22.00	12.00	81.00	47	55.00	—	US 0608	0.49
HSK 050A 027 065	50	27	27.00	15.00	91.00	49	65.00	—	US 0609	0.49
HSK 050A 032 075	50	32	32.00	20.00	101.00	56	75.00	—	US 0810	0.66
HSK 050A 042 090	50	42	42.00	24.00	116.00	60	90.00	—	US 1014	0.71
HSK 063A 022 055	63	22	22.00	12.00	81.00	47	55.00	—	US 0608	0.07
HSK 063A 027 065	63	27	27.00	15.00	91.00	49	65.00	—	US 0609	0.76
HSK 063A 032 075	63	32	32.00	20.00	101.00	56	75.00	—	US 0810	0.82
HSK 063A 042 090	63	42	42.00	24.00	116.00	60	90.00	—	US 1014	0.96
HSK 063A 054 110	63	54	54.00	28.00	136.00	70	110.00	—	US 1219	1.26
HSK 063A 068 145	63	68	68.00	36.00	171.00	85	145.00	—	US 1625	1.81
HSK 100A 022 055	100	22	22.00	12.00	89.00	55	55.00	—	US 0608	2.28
HSK 100A 027 065	100	27	27.00	15.00	99.00	57	65.00	—	US 0609	2.34
HSK 100A 032 075	100	32	32.00	20.00	104.00	59	75.00	—	US 0810	2.73
HSK 100A 042 090	100	42	42.00	24.00	119.00	63	90.00	—	US 1014	2.45
HSK 100A 054 110	100	54	54.00	28.00	139.00	73	110.00	—	US 1219	2.79
HSK 100A 068 145	100	68	68.00	36.00	174.00	88	145.00	—	US 1625	3.52
HSK 100A 085 165	100	85	85.00	50.00	194.00	94	165.00	—	US 1630	4.15
HSK 100A 100 185	100	100, 200	100.00	60.00	214.00	114	185.00	—	US 2032	5.63
HSK 550 160	100	300, 400, 500	100.00	60.00	170.00	80	140.00	—	US 1240	5.24

2080-BS



DIN 2080 skaftværktøjsholder til bore hoveder

DIN 2080 meget stiv værktøjsholder (til MTC) til borehoveder i 40 og 50 koniske. Holder med forskellig længde til rådighed. Koblingsstørrelser 22 - 160 mm kan bruges i kombination med EXT-BS forlængere, RED-BS reduktionsgear og LA-BS forstørrelser. Intern kølevæske til rådighed. Til applikationer, der kræver høj nøjagtighed og repeterbarhed.



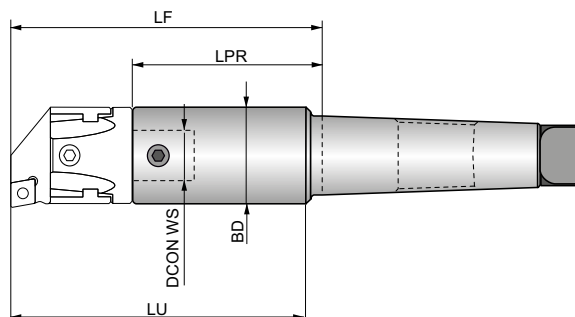
Product		CZC MS	BD	DCON WS	LF	LPR	LU			
			(mm)	(mm)	(mm)	(mm)	(mm)			kg
OTT 340 022 080 R	40	22	22.00	12.00	95.00	61	80.00	✓	US 0608	0.88
OTT 340 022 100 R	40	22	22.00	12.00	115.00	81	100.00	✓	US 0608	0.94
OTT 340 027 055 R	40	27	27.00	15.00	67.00	25	55.00	✓	US 0609	0.86
OTT 340 027 100 R	40	27	27.00	15.00	115.00	73	100.00	✓	US 0609	1.00
OTT 340 027 130 R	40	27	27.00	15.00	145.00	103	130.00	✓	US 0609	1.12
OTT 340 032 060 R	40	32	32.00	20.00	73.00	28	60.00	✓	US 0810	0.90
OTT 340 032 100 R	40	32	32.00	20.00	115.00	70	100.00	✓	US 0810	1.10
OTT 340 032 130 R	40	32	32.00	20.00	145.00	100	130.00	✓	US 0810	1.22
OTT 340 042 075 R	40	42	42.00	24.00	89.00	33	75.00	✓	US 1014	0.89
OTT 340 042 160 R	40	42	42.00	24.00	175.00	119	160.00	✓	US 1014	1.73
OTT 340 042 200 R	40	42	42.00	24.00	215.00	159	200.00	✓	US 1014	2.30
OTT 340 054 090 R	40	54	54.00	28.00	105.00	39	90.00	✓	US 1219	1.08
OTT 340 054 160 R	40	54	54.00	28.00	175.00	109	160.00	✓	US 1219	2.23
OTT 340 054 200 R	40	54	54.00	28.00	215.00	149	200.00	✓	US 1219	3.06
OTT 340 068 160 R	40	68	68.00	36.00	175.00	90	160.00	✓	US 1625	2.40
OTT 340 068 200 R	40	68	68.00	36.00	216.00	130	200.00	✓	US 1625	3.73
OTT 340 085 200 R	40	85	85.00	50.00	211.00	111	200.00	✓	US 1630	4.03
OTT 340 100 200 R	40	100, 200	100.00	60.00	211.00	111	200.00	✓	US 2032	5.05
OTT 350 022 080 R	50	22	22.00	12.00	99.00	65	80.00	✓	US 0608	2.98
OTT 350 022 100 R	50	22	22.00	12.00	119.00	85	100.00	✓	US 0608	2.97
OTT 350 027 055 R	50	27	27.00	15.00	71.00	29	55.00	✓	US 0609	2.93
OTT 350 027 100 R	50	27	27.00	15.00	119.00	77	100.00	✓	US 0609	3.01
OTT 350 027 130 R	50	27	27.00	15.00	149.00	107	130.00	✓	US 0609	3.10
OTT 350 032 060 R	50	32	32.00	20.00	77.00	32	60.00	✓	US 0810	2.81
OTT 350 032 130 R	50	32	32.00	20.00	149.00	104	130.00	✓	US 0810	3.24
OTT 350 032 160 R	50	32	32.00	20.00	179.00	134	160.00	✓	US 0810	3.26
OTT 350 042 075 R	50	42	42.00	24.00	93.00	37	75.00	✓	US 1014	2.74
OTT 350 042 160 R	50	42	42.00	24.00	179.00	123	160.00	✓	US 1014	3.64
OTT 350 042 200 R	50	42	42.00	24.00	219.00	163	200.00	✓	US 1014	4.05
OTT 350 054 090 R	50	54	54.00	28.00	109.00	43	90.00	✓	US 1219	3.02
OTT 350 054 160 R	50	54	54.00	28.00	179.00	113	160.00	✓	US 1219	4.15
OTT 350 054 200 R	50	54	54.00	28.00	219.00	153	200.00	✓	US 1219	5.08
OTT 350 068 115 R	50	68	68.00	36.00	132.00	46	115.00	✓	US 1625	3.20
OTT 350 068 200 R	50	68	68.00	36.00	220.00	134	200.00	✓	US 1625	5.54

Product		CZC MS	BD	DCON WS	LF	LPR	LU			
			(mm)	(mm)	(mm)	(mm)	(mm)			
OTT 350 068 260 R	50	68	68.00	36.00	280.00	194	260.00	✓	US 1625	7.22
OTT 350 085 200 R	50	85	85.00	50.00	221.00	121	200.00	✓	US 1630	6.21
OTT 350 085 260 R	50	85	85.00	50.00	281.00	181	260.00	✓	US 1630	9.07
OTT 350 085 320 R	50	85	85.00	50.00	341.00	241	320.00	✓	US 1630	11.84
OTT 350 100 170 R	50	100, 200	100.00	60.00	193.00	93	170.00	✓	US 2032	5.60
OTT 350 100 260 R	50	100, 200	100.00	60.00	281.00	181	260.00	✓	US 2032	10.78
OTT 350 100 320 R	50	100, 200	100.00	60.00	341.00	241	320.00	✓	US 2032	15.10
OTT 550 160	50	300, 400, 500	100.00	60.00	160.00	70	125.00	–	US 1240	5.90



Morse konisk skafteværktøjsholder til bore hoveder

MKS Holder meget stiv værktøjsholder til bore hoveder. Holder med forskellig længde til rådighed. Koblingsstørrelser 22 op til 160 mm kan bruges i kombination med EXT-BS forlængere, RED-BS reduktionsholder og LA-BS koblingsforstørrelser. Intern kølevæske til rådighed. Til applikationer, der kræver høj nøjagtighed.

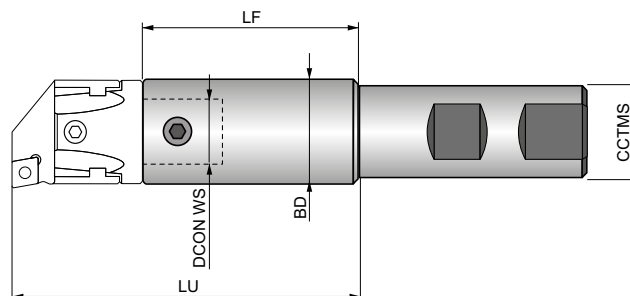


Product	CCTMS	CZC MS	BD	DCON WS	LF	LPR	LU			
			(mm)	(mm)	(mm)	(mm)	(mm)			kg
305 022 100	5	22	22.00	12.00	112.00	78	100.00	–	US 0608	1.64
305 022 130	5	22	22.00	12.00	142.00	108	130.00	–	US 0608	1.76
305 027 055	5	27	27.00	15.00	65.00	23	55.00	–	US 0609	1.58
305 027 100	5	27	27.00	15.00	113.00	71	100.00	–	US 0609	1.69
305 027 130	5	27	27.00	15.00	143.00	101	130.00	–	US 0609	1.84
305 032 060	5	32	32.00	20.00	70.00	25	60.00	–	US 0810	1.54
305 032 130	5	32	32.00	20.00	143.00	98	130.00	–	US 0810	1.95
305 032 160	5	32	32.00	20.00	173.00	128	160.00	–	US 0810	2.13
305 042 075	5	42	42.00	24.00	83.00	27	75.00	–	US 1014	1.50
305 042 130	5	42	42.00	24.00	188.00	86	130.00	–	US 1014	2.18
305 042 160	5	42	42.00	24.00	218.00	116	160.00	–	US 1014	2.51
305 054 160	5	54	54.00	28.00	172.00	106	160.00	–	US 1219	3.00
305 054 200	5	54	54.00	28.00	212.00	146	200.00	–	US 1219	3.63
305 068 140	5	68	68.00	36.00	146.00	60	140.00	–	US 1625	2.53
305 068 200	5	68	68.00	36.00	212.00	126	200.00	–	US 1625	4.47
305 068 260	5	68	68.00	36.00	272.00	186	260.00	–	US 1625	6.20
305 085 200	5	85	85.00	50.00	216.00	116	200.00	–	US 1630	5.40
305 085 260	5	85	85.00	50.00	276.00	176	260.00	–	US 1630	8.45
305 085 320	5	85	85.00	50.00	336.00	236	320.00	–	US 1630	0.01
305 100 260	5	100, 200	100.00	60.00	276.00	176	260.00	–	US 2032	7.95
305 100 320	5	100, 200	100.00	60.00	336.00	236	320.00	–	US 2032	11.39
505 160	5	300, 400, 500	100.00	60.00	146.00	56	140.00	–	US 2032	4.70



WELDON skaftværktøjsholder til bore hoveder

Weldon meget stive værktøjsholdere til bore hoveder, skaftdiametre fra 20 op til 40 mm. Bor med forskellig længde til rådighed. Koblingsstørrelser 22 op til 42 mm kan bruges i kombination med EXT-BS forlængere og RED-BS reduktions. Intern kølevæske til rådighed. Til applikationer, der kræver høj nøjagtighed og repeterbarhed.



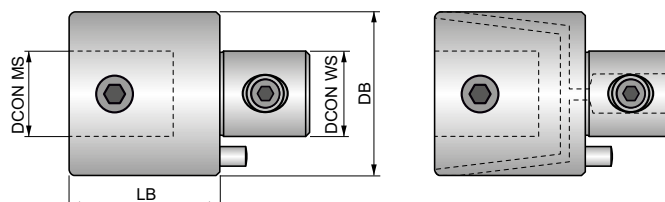
Product	CCTMS	CZC MS	BD	DCON WS	LU			
			(mm)	(mm)	(mm)			kg
B 020 022 050	20	22	22.00	12.00	50.00	—	US 0608	0.17
B 020 022 100	20	22	22.00	12.00	100.00	—	US 0608	0.34
B 025 027 055	25	27	27.00	15.00	55.00	—	US 0609	0.17
B 025 027 100	25	27	27.00	15.00	95.00	—	US 0609	0.46
B 032 032 060	32	32	32.00	20.00	60.00	—	US 0810	0.43
B 032 032 100	32	32	32.00	20.00	100.00	—	US 0810	0.69
B 032 032 160	32	32	32.00	20.00	160.00	—	US 0810	1.11
B 032 042 090	32	32	32.00	24.00	90.00	—	US 0810	0.71
B 040 042 090	40	42	42.00	24.00	90.00	—	US 1014	0.98
B 040 042 160	40	42	42.00	24.00	160.00	—	US 1014	1.79

EXT-BS



EXT-BS Bore Hoved forlænger Holder

Adapter til udvidelse af borehoved. Koblingsstørrelser fra 22 op til 200 mm og forskellige længder til rådighed. Indvendige og eksterne kølevæskemuligheder til rådighed. Velegnet til alle applikationer, der kræver høj nøjagtighed og repeterbarhed.

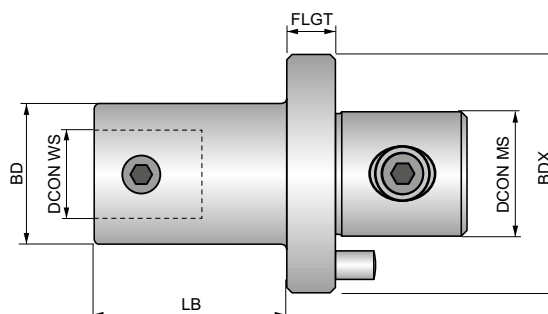


Product	CZC MS	BD	DCON MS	DCON WS	LB			
		(mm)	(mm)	(mm)	(mm)			kg
P 022 030 R	22	22.00	12.00	12.00	30.00	✓	US 0608	0.09
P 027 030 R	27	27.00	15.00	15.00	30.00	✓	US 0609	0.13
P 032 035 R	32	32.00	20.00	20.00	35.00	✓	US 0810	0.20
P 042 040 R	42	42.00	24.00	24.00	40.00	✓	US 1014	0.40
P 054 050 R	54	54.00	28.00	28.00	50.00	✓	US 1219	0.85
P 068 060 R	68	68.00	36.00	36.00	60.00	✓	US 1625	1.61
P 085 070 R	85	85.00	50.00	50.00	70.00	✓	US 1630	2.88
P 100 080 R	100, 200	100.00	60.00	60.00	80.00	✓	US 2032	4.48
P 022 020	22	22.00	12.00	12.00	20.00	–	US 0608	0.06
P 022 030	22	22.00	12.00	12.00	30.00	–	US 0608	0.09
P 027 030	27	27.00	15.00	15.00	30.00	–	US 0609	0.13
P 027 045	27	27.00	15.00	15.00	45.00	–	US 0609	0.19
P 032 035	32	32.00	20.00	20.00	35.00	–	US 0810	0.20
P 032 052	32	32.00	20.00	20.00	52.00	–	US 0810	0.30
P 042 040	42	42.00	24.00	24.00	40.00	–	US 1014	0.40
P 042 060	42	42.00	24.00	24.00	60.00	–	US 1014	0.60
P 054 050	54	54.00	28.00	28.00	50.00	–	US 1219	0.87
P 054 075	54	54.00	28.00	28.00	75.00	–	US 1219	1.30
P 068 060	68	68.00	36.00	36.00	60.00	–	US 1625	1.63
P 068 090	68	68.00	36.00	36.00	90.00	–	US 1625	2.44
P 085 070	85	85.00	50.00	50.00	70.00	–	US 1630	2.86
P 085 105	85	85.00	50.00	50.00	105.00	–	US 1630	4.46
P 100 080	100, 200	100.00	60.00	60.00	80.00	–	US 2032	4.44
P 100 120	100, 200	100.00	60.00	60.00	120.00	–	US 2032	6.91



RED-BS Bore Hoved Reducere Holder

Borehoved hovedreduktionsadapter. Koblingsstørrelser fra 27 til 100 mm og i forskellige længder. Kun eksternt kølevæske. Velegnet til alle applikationer, der kræver høj nøjagtighed og repeterbarhed.



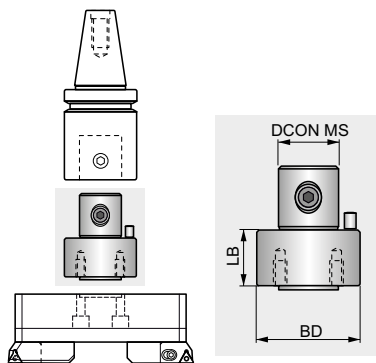
Product	CZC MS	BDX	DCON MS	BD	DCON WS	LB	FLGT			
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			kg
R 027 022 036	22	27.00	15.00	22	12.00	26.00	10	—	US 0608	0.11
R 042 022 058	22	42.00	24.00	22	12.00	48.00	10	—	US 0608	0.31
R 032 022 040	22	32.00	20.00	22	12.00	30.00	10	—	US 0608	0.17
R 054 022 086	22	54.00	28.00	22	12.00	76.00	10	—	US 0608	0.51
R 068 022 102	22	68.00	36.00	22	12.00	90.00	12	—	US 0608	0.90
R 054 027 080	27	54.00	28.00	27	15.00	70.00	10	—	US 0609	0.63
R 032 027 034	27	32.00	20.00	27	15.00	24.00	10	—	US 0609	0.18
R 042 027 050	27	42.00	24.00	27	15.00	40.00	10	—	US 0609	0.33
R 068 027 095	27	68.00	36.00	27	15.00	83.00	12	—	US 0609	0.97
R 042 032 046	32	42.00	24.00	32	20.00	36.00	10	—	US 0810	0.36
R 054 032 076	32	54.00	28.00	32	20.00	66.00	10	—	US 0810	0.63
R 068 032 090	32	68.00	36.00	32	20.00	78.00	12	—	US 0810	1.08
R 054 042 070	42	54.00	28.00	42	24.00	60.00	10	—	US 1014	0.81
R 068 042 082	42	68.00	36.00	42	24.00	70.00	12	—	US 1014	1.26
R 085 042 095	42	85.00	50.00	42	24.00	83.00	12	—	US 1014	2.06
R 068 054 072	54	68.00	36.00	54	28.00	60.00	12	—	US 1219	1.51
R 085 054 090	54	85.00	50.00	54	28.00	78.00	12	—	US 1219	2.44
R 085 068 100	68	85.00	50.00	68	36.00	88.00	12	—	US 1625	3.32
R 100 085 100	85	100.00	60.00	85	50.00	88.00	12	—	US 1630	5.05

LA-BS



LA-BS Bore Hoved forlænger Adapter

Borehoved hovedforstørrelsesadapter. Fås i koblingsstørrelse 100 mm og i forskellige længder for at øge alsidigheden. Kun eksternt kølevæske. Velegnet til alle applikationer, der kræver høj nøjagtighed og repeterbarhed.



Product	CZC MS	BD (mm)	DCON MS (mm)	LB (mm)			 kg
ADT 100 050	300, 400, 500	100.00	60.00	50.00	—	US 1240	4.35

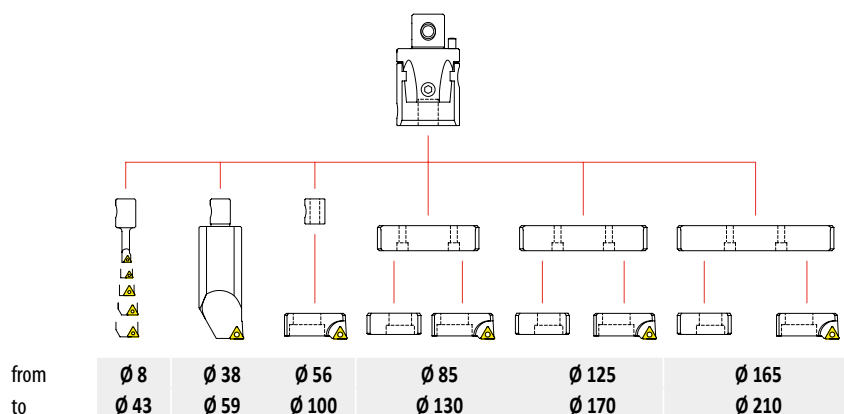


UDBORINGSKITS

BESKRIVELSE AF UDBORINGSKITS

1	2	3	4	5
BS	54	KIT	RC	8-43

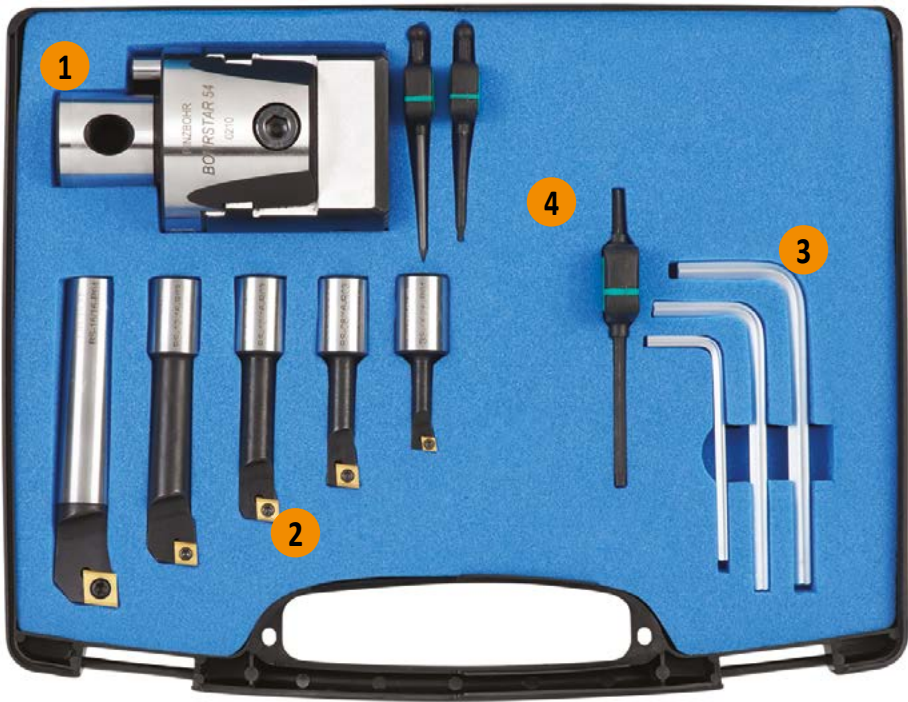
1		2	3		4		5
Værktøjstype		Størrelse	Type		Type af ISO-STÆNGER		Diameterområde
BS	Udboringssystemer	54	KIT	Værktøjssæt	RC	for indsatsform C κ = 95°	8 – 43 (mm)
						8 – 100 (mm)	
					TC	for skærform T κ = 90°	8 – 170 (mm)
						8 – 210 (mm)	



Område	Komponente	Bestillingsnummer	
Ø 8 ~ Ø 43		BS 54 KIT RC 8-043	420
		BS 54 KIT TC 8-043	424
Ø 8 ~ Ø 100		BS 54 KIT RC 8-100	421
		BS 54 KIT TC 8-100	425
Ø 8 ~ Ø 170		BS 54 KIT RC 8-170	422
		BS 54 KIT TC 8-170	426
Ø 8 ~ Ø 210		BS 54 KIT RC 8-210	423
		BS 54 KIT TC 8-210	427

BESTILLINGSNUMMER:

Ø 8 – 43

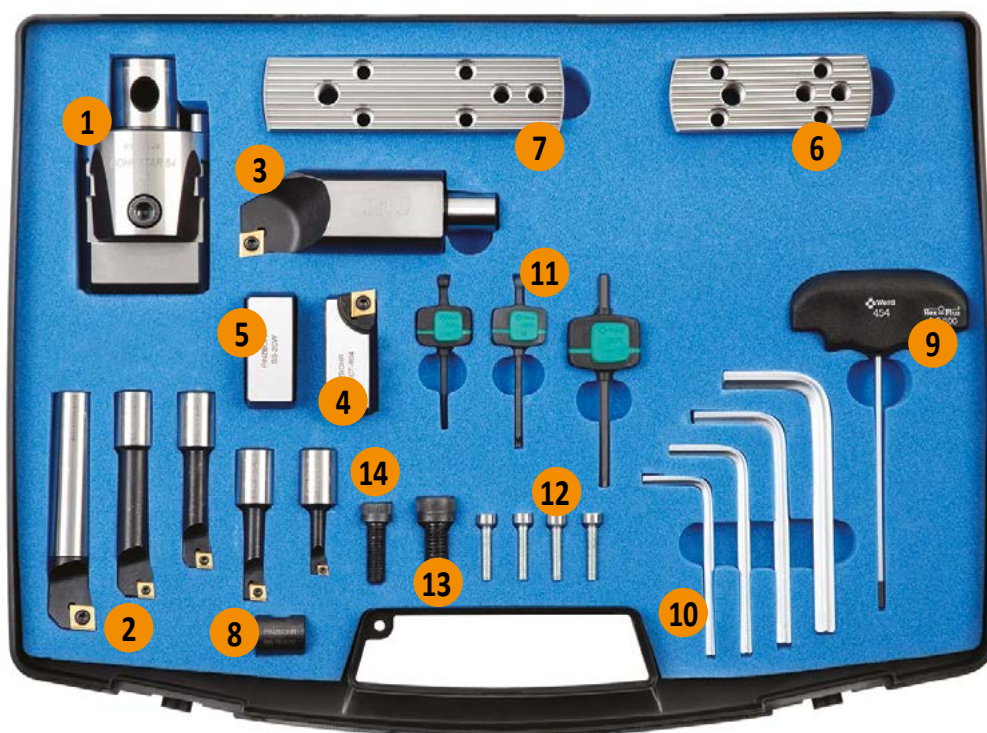
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Ø 8 – 100

421

Ø 8 – 170

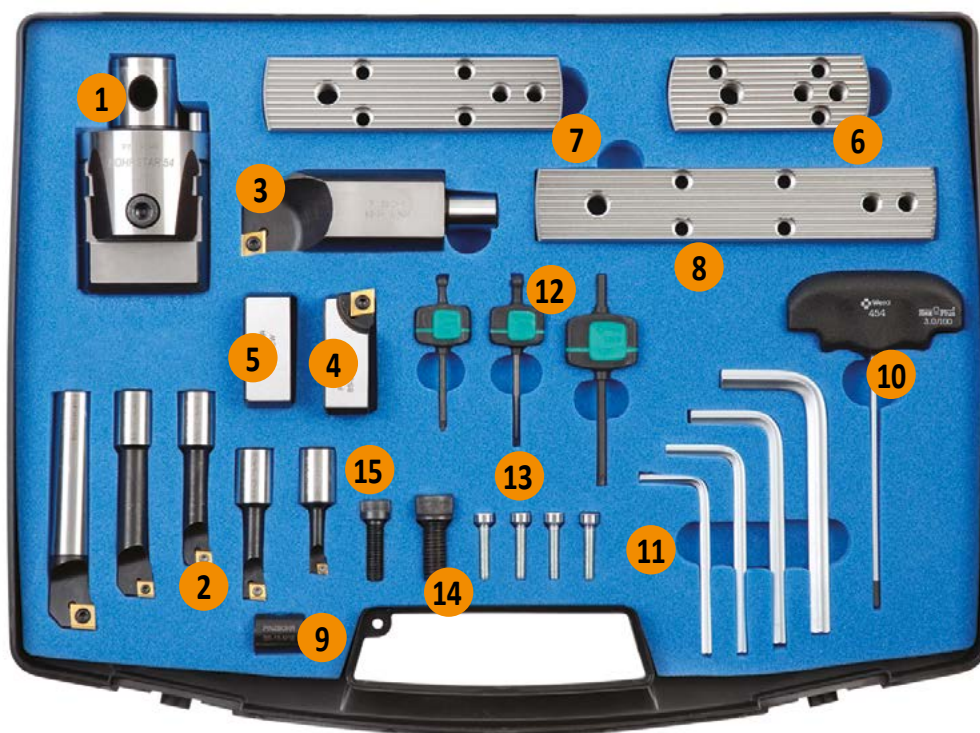
BESTILLINGSNUMMER:



	Beskrivelse	Mærkning	Vendeskær	stk.
1	Bohrstar-hoved	BS 054 16	–	1
2	Borestang 6 mm	BS 06 16 R02	EP.. 0502..	1
	Borestang 8 mm	BS 08 16 R03	CC.. 0602..	1
	Borestang 10 mm	BS 10 16 R03	CC.. 0602..	1
	Borestang 12 mm	BS 12 16 R03	CC.. 0602..	1
	Borestang 16 mm	BS 16 16 R04	CC.. 09T3..	1
3	Borestang 34 mm	BS 34 16 R04	CC.. 09T3..	2
4	Patron	BS 2CT R04	CC.. 09T3..	1
5	Modvægt	BS 2CW	–	1
6	Lille plade	BS SP 85 130	–	1
7	Mellem plade	BS SP 125 170	–	1
8	Placeringspinol	BS 16 M10	–	1
9	Justernøgle	AK 03	–	1
10	Sekskantnøgle 4	HK 04	–	1
	Sekskantnøgle 5	HK 05	–	1
	Sekskantnøgle 6	HK 06	–	1
	Sekskantnøgle 8	HK 08	–	1
11	Torxnøgle 7	TK07	–	1
	Torxnøgle 8	TK08	–	1
	Torxnøgle 15	TK15	–	1
12	Fastgørelsesskruer for indsats	D 27 21	–	4
13	Patronskruer	CS 10 25	–	1
14	Modvægtsskruer	CS 08 25	–	1

Ø 8 – 210

BESTILLINGSNUMMER:



	Beskrivelse	Mærkning	Vendeskær	stk.
1	Bohrstar-hoved	BS 054 16	–	1
2	Borestang 6 mm	BS 06 16 R02	EP.. 0502..	1
	Borestang 8 mm	BS 08 16 R03	CC.. 0602..	1
	Borestang 10 mm	BS 10 16 R03	CC.. 0602..	1
	Borestang 12 mm	BS 12 16 R03	CC.. 0602..	1
	Borestang 16 mm	BS 16 16 R04	CC.. 09T3..	1
3	Borestang 34 mm	BS 34 16 R04	CC.. 09T3..	2
4	Patron	BS 2CT R04	CC.. 09T3..	1
5	Modvægt	BS 2CW	–	1
6	Lille plade	BS SP 85 130	–	1
7	Mellem plade	BS SP 125 170	–	1
8	Stor plade	BS SP 165 210	–	1
9	Placeringspinol	BS 16 M10	–	1
10	Justernøgle	AK 03	–	1
11	Sekskantnøgle 4	HK 04	–	1
	Sekskantnøgle 5	HK 05	–	1
	Sekskantnøgle 6	HK 06	–	1
	Sekskantnøgle 8	HK 08	–	1
12	Torxnøgle 7	TK07	–	1
	Torxnøgle 8	TK08	–	1
	Torxnøgle 15	TK15	–	1
13	Fastgørelsesskruer for skær	D 27 21	–	4
14	Patronskrue	CS 10 25	–	1
15	Modvægtsskrue	CS 08 25	–	1

BESTILLINGSNUMMER:

Ø 8 – 43

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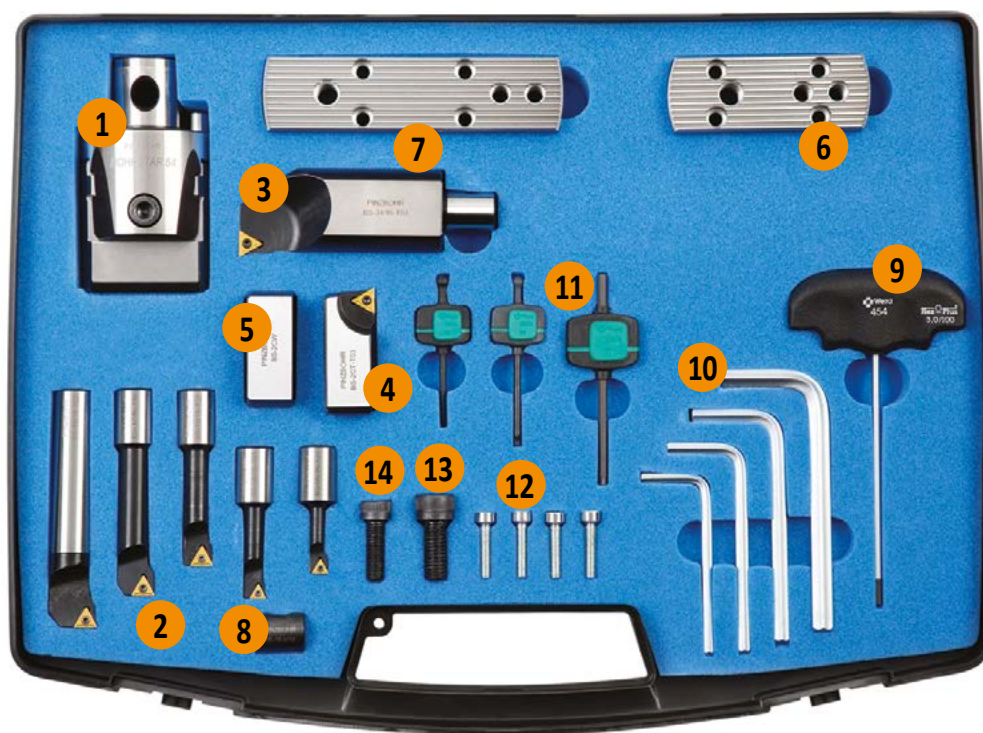
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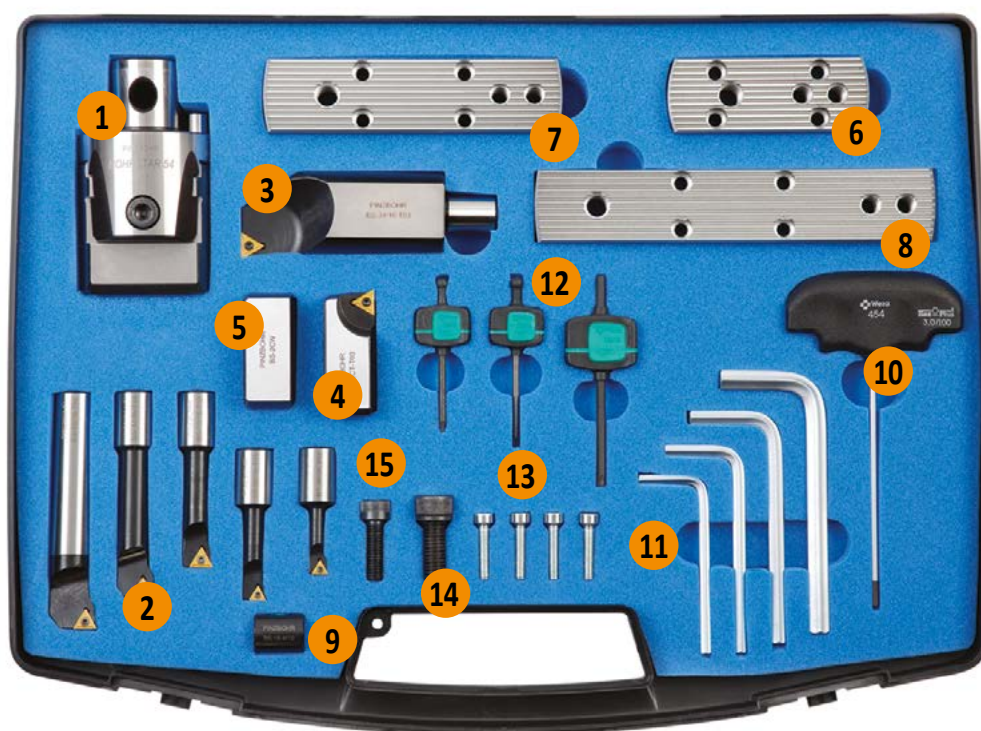
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	Beskrivelse	Mærkning	Vendeskær	stk.
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	Borestang 8 mm	BS 08 16 T01	TC.. 06T1..	1
	Borestang 10 mm	BS 10 16 T02	TC.. 0902..	1
	Borestang 12 mm	BS 12 16 T02	TC.. 0902..	1
	Borestang 16 mm	BS 16 16 T02	TC.. 0902..	1
3	Borestang 34 mm	BS 34 16 T04	TC.. 16T3..	1
4	Patron	BS 2CT T04	TC.. 16T3..	1
5	Modvægt	BS 2CW	–	1
6	Lille plade	BS SP 85 130	–	1
7	Mellem plade	BS SP 125 170	–	1
8	Placeringspinol	BS 16 M10	–	1
9	Justernøgle	AK 03	–	1
10	Sekskantnøgle 4	HK 04	–	1
	Sekskantnøgle 5	HK 05	–	1
	Sekskantnøgle 6	HK 06	–	1
	Sekskantnøgle 8	HK 08	–	1
11	Torxnøgle 6	TK06	–	1
	Torxnøgle 7	TK07	–	1
	Torxnøgle 15	TK15	–	1
12	Fastgørelsesskruer for skær	D 27 21	–	4
13	Patronskrue	CS 10 25	–	1
14	Modvægtsskrue	CS 08 25	–	1

Ø 8 – 210

BESTILLINGSNUMMER:

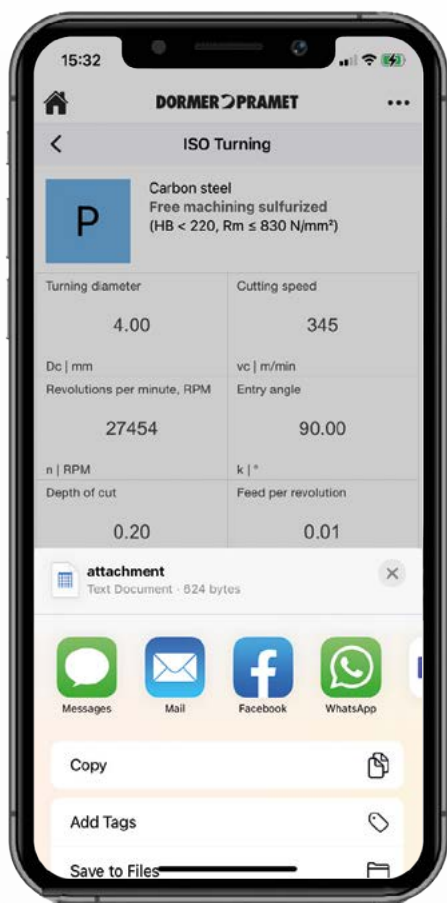


	Beskrivelse	Mærkning	Vendeskær	stk.
1	Bohrstar-hoved	BS 054 16	–	1
2	Borestang 6 mm	BS 06 16 T01	TC.. 06T1..	1
	Borestang 8 mm	BS 08 16 T01	TC.. 06T1..	1
	Borestang 10 mm	BS 10 16 T02	TC.. 0902..	1
	Borestang 12 mm	BS 12 16 T02	TC.. 0902..	1
	Borestang 16 mm	BS 16 16 T02	TC.. 0902..	1
3	Borestang 34 mm	BS 34 16 T04	TC.. 16T3..	1
4	Patron	BS 2CT T04	TC.. 16T3..	1
5	Modvægt	BS 2CW	–	1
6	Lille plade	BS SP 85 130	–	1
7	Mellem plade	BS SP 125 170	–	1
8	Stor plade	BS SP 165 210	–	1
9	Placeringspinol	BS 16 M10	–	1
10	Justernøgle	AK 03	–	1
11	Sekskantnøgle 4	HK 04	–	1
	Sekskantnøgle 5	HK 05	–	1
	Sekskantnøgle 6	HK 06	–	1
	Sekskantnøgle 8	HK 08	–	1
12	Torxnøgle 6	TK06	–	1
	Torxnøgle 7	TK07	–	1
	Torxnøgle 15	TK15	–	1
13	Fastgørelsesskruer for skær	D 27 21	–	4
14	Patronskrue	CS 10 25	–	1
15	Modvægtsskrue	CS 08 25	–	1



ALWAYS CONNECT

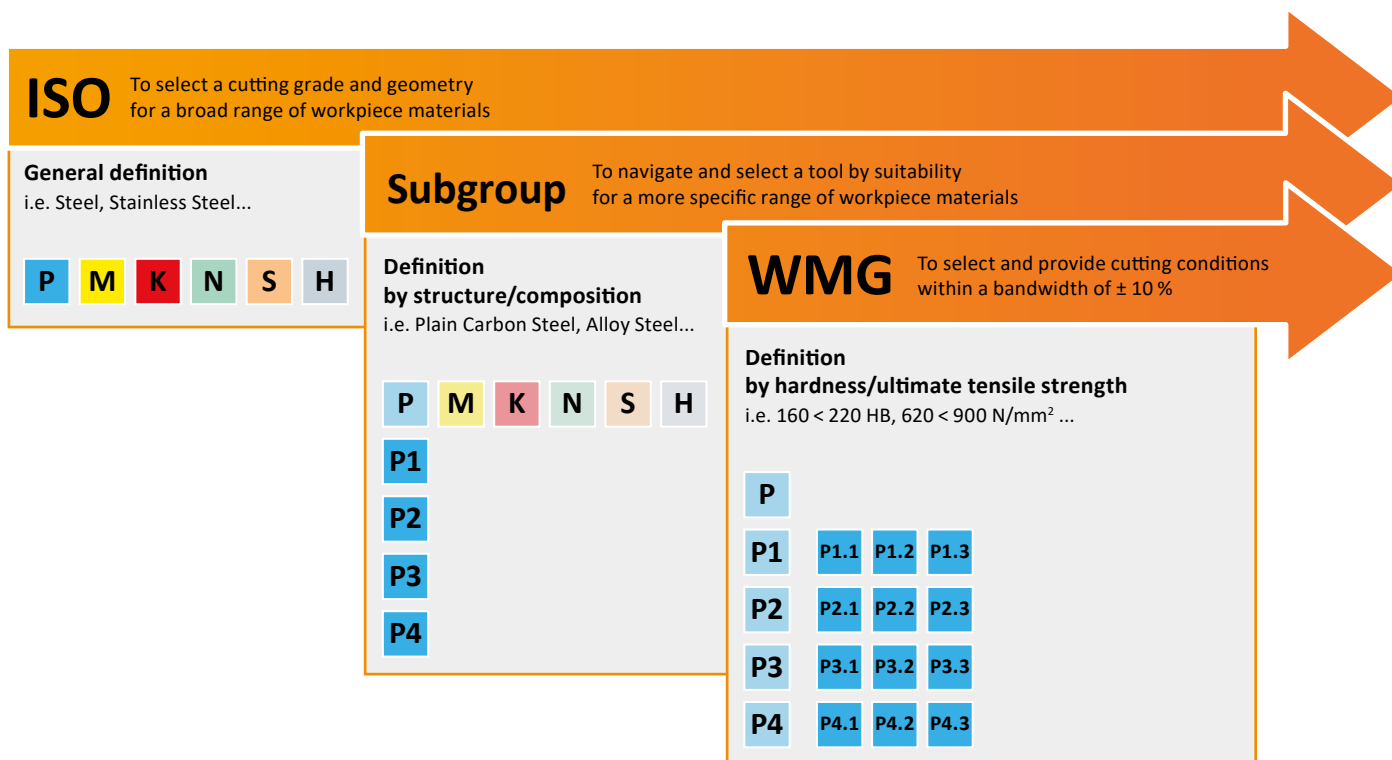
No wifi or internet connection? The machining calculator works perfectly even when you are offline, making sure it's always available when you need it. **Simply Reliable.**



The background of the page is a light gray with a complex, abstract geometric pattern. This pattern consists of various hexagons, some outlined in orange and others in gray, arranged in a cluster. Interspersed among these hexagons are numerous small, faint technical drawings and symbols, including circles, lines, and arrows, which give the overall design a technical or architectural feel. The design elements are concentrated in the lower half of the page, leaving the upper half mostly blank.

UDBORING TEKNISKE OPLYSNINGER

WORKPIECE MATERIAL GROUPS (WMG)



ABOUT DORMER PRAMET'S WORKPIECE MATERIAL CLASSIFICATION

Workpiece **M**aterial **G**roups (**WMG**) are used to support easy and reliable selection of the right cutting tool and starting values for machining conditions in particular applications.

Dormer Pramet classifies workpiece materials into six different coloured groups;

- **Blue:** Steel and cast steel (P-group)
- **Yellow:** Stainless steel (M-group)
- **Red:** Cast iron (K-group)
- **Green:** Non-ferrous metals (N-group)
- **Brown:** High-temperature alloys (S-group)
- **Grey:** Hardened materials (H-group)

Each of these are divided into subgroups on the basis of their structure and/or composition. For example, P-group steel and cast steel is split into four subgroups, namely;

- **P1** – Free machining steel
- **P2** – Plain carbon steel
- **P3** – Alloy steel
- **P4** – Tool steel

A final division includes material properties, such as hardness and ultimate tensile strength. This is to provide our customers with a complete tool recommendation, including starting values for cutting speed and feed.

The table on the next page includes a description of each workpiece material group, as well as examples of commonly used designations.

WORKPIECE MATERIAL GROUP (WMG)

ISO group	Subgroup	WMG (Work Material Group)	k _{pc}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
P Steel and cast steel (steels with alloy content ≤ 10 % and a hardness of < 45HRC)	P1 Free machining steel (carbon steels with increased machinability)	P1.1 Free machining sulfurized carbon steel with a hardness of < 240 HB	1.33	AISI 1108, EN 15522, DIN 1.0723, SS 1922, ČSN 11120, BS 210A15, UNE F.210F, GB Y15, AFNOR 10F1, GOST A30, UNI CF10S20
		P1.2 Free machining sulfurized and phosphorized carbon steel with a hardness of < 180 HB	1.49	AISI 1211, EN 115Mn30, DIN 1.0715, SS 1912, ČSN 11109, BS 230M7, UNE F.2111, GB Y15, AFNOR S250, GOST A40G, UNI CF95Mn28
		P1.3 Free machining sulfurized/phosphorized and leaded carbon steel with a hardness of < 180 HB	1.53	AISI 12L13, EN 115MnPh30, DIN 1.0718, SS 1914, ČSN 12110, BS 210M16, UNE F.2114, GB Y15Ph, AFNOR S250Ph, GOST A35G2, UNI CF10SPb20
	P2 Plain carbon steel (steels comprised of mainly iron and carbon)	P2.1 Plain low carbon steel containing < 0.25 % C with a hardness of < 180 HB	1.14	AISI 1015, EN C15, DIN 1.0401, SS 1350, ČSN 11301, BS 080A15, UNE F.111, GB 15, AFNOR C18RR, GOST S22ps, UNI Fe360
		P2.2 Plain medium carbon steel containing < 0.55 % C with a hardness of < 240 HB	1.00	AISI 1030, EN C30, DIN 1.0528, SS 1550, ČSN 12031, BS 080M32, UNE F.1130, GB 30, AFNOR AF50C30, GOST 30G, UNI Fe590
		P2.3 Plain high carbon steel containing > 0.55 % C, with a hardness of < 300 HB	0.89	AISI 1060, EN C60, DIN 1.0601, SS 1655, ČSN 12061, BS 080A62, UNE F513, GB 60, AFNOR 1C60, GOST 60G, UNI C60
	P3 Alloy steel (carbon steels with an alloying content ≤ 10 %)	P3.1 Alloy steel with a hardness of < 180 HB	0.92	AISI 5015, EN 16Mo3, DIN 1.5415, SS 2912, ČSN 15020, BS 1501-240, UNE F.2601, GB 16Mo, AFNOR 15D3, GOST 15M, UNI 16Mo3KW
		P3.2 Alloy steel with a hardness of 180 – 260 HB	0.74	AISI 4140, EN 42CrMo4, DIN 1.7225, SS 2244, ČSN 15142, BS 708M40, UNE F.8232, GB 42CrMo, AFNOR 42CD4, GOST 40ChFA, UNI 42CrMo4
		P3.3 Alloy steel with a hardness of 260 – 360 HB	0.63	AISI 4140, EN 42CrMo4, DIN 1.7225, SS 2244, ČSN 15142, BS 708M40, UNE F.8232, GB 42CrMo, AFNOR 42CD4, GOST 40ChFA, UNI 42CrMo4
	P4 Tool steel (special alloy steel for tools, dies and molds)	P4.1 Tool steel with a hardness of < 26 HRC	0.55	AISI D2, EN X155CrVMo12-1, DIN 1.2370, SS 2736, ČSN 19573, BS BD2, UNE F.520A, GB Cr12Mo1V1, AFNOR Z160CDV12, GOST Ch12MF, UNI X155CrVMo121KU
		P4.2 Tool steel with a hardness of 26 – 39 HRC	0.47	AISI D2, EN X155CrVMo12-1, DIN 1.2370, SS 2736, ČSN 19573, BS BD2, UNE F.520A, GB Cr12Mo1V1, AFNOR Z160CDV12, GOST Ch12MF, UNI X155CrVMo121KU
		P4.3 Tool steel with a hardness of 39 – 45 HRC	0.38	AISI D2, EN X155CrVMo12-1, DIN 1.2370, SS 2736, ČSN 19573, BS BD2, UNE F.520A, GB Cr12Mo1V1, AFNOR Z160CDV12, GOST Ch12MF, UNI X155CrVMo121KU

WORKPIECE MATERIAL GROUP (WMG)

ISO group	Subgroup	WMG (Work Material Group)	k _{vc}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
M Stainless steel (corrosion resistant steels with ≥ 11 % chromium content)	M1 Ferritic stainless steel (straight chromium non-hardenable alloys)	M1.1 Stainless steel, ferritic with a hardness of < 160 HB	1.22	AISI 5429, EN X7Cr14, DIN 1.4001, SS 2326, BS 434517, UNE F.3401, AFNOR Z8C12, GOST 08Ch13, UNI X6CrTi12
		M1.2 Stainless steel, ferritic with a hardness of 160 – 220 HB	1.03	AISI 446, EN X10CrAl24, DIN 1.4762, SS 2322, ČSN 17113, BS 430517, UNE F.3154, GB 10Cr17, AFNOR Z10CA524, GOST 12Ch17, UNI X16Cr26
		M2.1 Stainless steel, martensitic with a hardness of < 200 HB	1.08	AISI 430F, EN X14CrMoS17, DIN 1.4104, SS 2383, ČSN 17140, BS 410521, UNE F.3117, AFNOR Z10CF17, UNI X10CrS17
	M2 Martensitic stainless steel (straight chromium hardenable alloys)	M2.2 Stainless steel, martensitic with a hardness of 200 – 280 HB	0.89	AISI 440C, EN X105CrMo17, DIN 1.4125, SS 2385, ČSN 17023, BS 425C11, UNE F.3402, GB 102Cr17Mo, AFNOR Z100CD17, GOST 95Ch18, UNI 6X6CrNi 13 04
		M2.3 Stainless steel, martensitic with a hardness of 280 – 380 HB	0.75	AISI 420, EN X45Cr13, DIN 1.4034, ČSN 17029, BS 425C11, UNE F.3405, AFNOR Z44C14, GOST 20X17H12, UNI X30Cr13
		M3.1 Stainless steel, austenitic with a hardness of < 200 HB	1.00	AISI 304, EN X5CrNi18-12, DIN 1.4303, SS 2352, ČSN 17249, BS 305517, UNE F.3513, GB 10Cr18Ni12, AFNOR Z8CN18.12, UNI X7CrNi18 10
	M3 Austenitic stainless steel (chromium-nickel and chromium-nickel- manganese alloys)	M3.2 Stainless steel, austenitic with a hardness of 200 – 260 HB	0.86	AISI 309, EN X15CrNiSi20-12, DIN 1.4828, ČSN 17251, BS 309S24, UNE F.3312, GB 1G23Ni13, AFNOR Z15CNS20.12, GOST 20Ch20N14S2, UNI 16CrNi23 14
		M3.3 Stainless steel, austenitic with a hardness of 260 – 300 HB	0.77	AISI 5848, EN X45CrNiW18-9, DIN 1.4873, BS 331540, UNE F.3211, AFNOR Z35CNWS14-4, UNI X45CrNiW 18 9
	M4 Super-austenitic, Duplex or Precipitation Hardening stainless steel (austenitic alloys with > 20 % Ni, austenitic-ferritic microstructure or precipitation hardened)	M4.1 Stainless steel, austenitic-ferritic or super- austenitic with a hardness of < 300 HB	0.75	AISI 329, EN X1-NiCrMoCu25-20-5, DIN 1.4539, SS 2562, ČSN 17265, BS 318513, UNE F.3552, GB 022Cr25NiMo2N, AFNOR Z1NCUDU25.20
		M4.2 Stainless steel, precipitation hardening austenitic with a hardness of 300 – 380 HB	0.64	AISI 631 (17-7PH), EN X7CrNiAl17-7, DIN 1.4568, SS 2388, ČSN 17465, BS 301513, UNE F.3217, GB 07Cr17Ni7Al, AFNOR Z9CNA17-07, GOST 09Ch17N7Jut, UNI X53CrMnNiN21 9

ISO group	Subgroup	WMG (Work Material Group)	k _{we}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
K Cast Iron (castings of iron and carbon alloys with > 2 % carbon content)	K1 Gray iron (GG) (iron-carbon castings with a lamellar graphite microstructure)	K1.1 Gray iron, ferritic or ferritic-pearlitic with a hardness of < 180 HB	1.35	ASTM A48 Grade 20 (F11401), EN-JL-100, DIN GG-10 (0.6010), SS 0110, STN 422410, BS Grade 150, UNE FG10, GB HAT 100, AFNOR Fc10D, GOST SC 10, UNI G10
		K1.2 Gray iron, ferritic-pearlitic or pearlitic with a hardness of 180 – 240 HB	1.00	ASTM A48 Grade 30 (F12101), EN-JL-1030, DIN GG-20 (0.6020), SS 0120, STN 422420, BS Grade 220, UNE FG20, GB HT200, AFNOR Fc20D, GOST Ч420, UNI G20
		K1.3 Gray iron, pearlitic with a hardness of 240 – 280 HB	0.75	ASTM A48 Grade 50 (F13501), EN-JL-1060, DIN GG-35 (0.6035), SS 0135, STN 422435, BS Grade 350, UNE FG35, GB HAT300, AFNOR Fc35D, GOST SC35, UNI G35
	K2 Malleable iron (GTS/GTW) (heat-treated iron-carbon castings with a graphite-free microstructure)	K2.1 Malleable iron, ferritic with a hardness of < 160 HB	1.39	ASTM A602 Grade M3210 (F20000), EN-JM-1130, DIN GTS-35 (0.8135), SS 0815, BS B340/12, UNE Type A, AFNOR MN 35-10, GOST K435-10
		K2.2 Malleable iron, ferritic or pearlitic with a hardness of 160 – 200 HB	1.13	ASTM A602 Grade M4504 (F20001), EN-JM-1040, DIN GTS-50-05 (0.8045), BS P50-05, AFNOR MB 45-7
		K2.3 Malleable iron, pearlitic with a hardness of 200 – 240 HB	0.90	ASTM A602 Grade M7002 (F20004), EN-JM-1140, DIN GTS-45 (0.8145), SS 0854, STN 422540, BS P 45-06, UNE Typ B, AFNOR MP 50-5, GOST K445-7, UNI GMN 45
	K3 Ductile iron (GGG) (iron-carbon castings with a nodular graphite microstructure)	K3.1 Ductile (nodular/spheroidal) iron, ferritic with a hardness of < 180 HB	1.23	ASTM A536 Grade 60-40-18 (F32800), EN-JS-1030, DIN GGG-40 (0.7040), SS 0717, STN 422304, BS 420/12, UNE FGE 42-12, GB QT 400, AFNOR FGS 400-12, GOST B440
		K3.2 Ductile (nodular/spheroidal) iron, ferritic or pearlitic with a hardness of 180 – 220 HB	0.94	ASTM A536 Grade 80-55-06 (F33800), EN-JS-1050, DIN GGG-50 (0.7050), SS 0727, STN 422305, BS 500/7, UNE FGE 50-7, GB QT 500-7, AFNOR FGS 500-7, GOST B450
		K3.3 Ductile (nodular/spheroidal) iron, pearlitic with a hardness of 220 – 260 HB	0.76	ASTM A536 Grade 100-70-03 (F34800), EN-JS-1060, DIN GGG-60 (0.7060), SS 0732, STN 422306, BS 600/3, UNE FG70-2, GB QT 600-3, AFNOR FGS 600-3, GOST B460
	K4 Austenitic or austempered ductile iron (NI-Resist/ADI) (iron-carbon alloy castings with an austenitic or ausferrite microstructure)	K4.1 Austenitic cast iron with a hardness of < 180 HB	1.14	ASTM A436 Type 1 (L-NiCuCr 15 6 2, F41000), EN-JL-3011, DIN GGL-NiMn 13 7 (0.6652), SS 0523, BS Grade F1, AFNOR FGL-Ni13Mn7, GOST S-NiMn 13 7
		K4.2 Austenitic cast iron with a hardness of 180 – 240 HB	0.86	ASTM A439 Type D-2B (S-NiCr 20 3, F43001), EN-JS-3021, DIN GGG-NiMn 23 4, SS 0776, BS Grade S2M, AFNOR FGS Ni23 Mn4, GOST ЧН19Х3Ш
		K4.3 Austempered ductile iron with a hardness of 240 – 280 HB	0.63	ASTM A897 Grade 110-70-11
	K5 Compacted graphite iron (CGI) (iron-carbon castings with a vermicular graphite structure)	K4.4 Austempered ductile iron with a hardness of 280 – 320 HB	0.54	ASTM A897 Grade 125-80-10, EN-JS-1100, DIN GGG-90 (5.3400)
		K4.5 Austempered ductile iron with a hardness of 320 – 360 HB	0.45	ASTM A897 Grade 2 (150-110-07), EN-JS-1110, DIN GGG-100 (5.3403)
		K5.1 Vermicular, compacted graphite iron with a hardness of < 180 HB	1.29	ASTM A842 Grade 300, EN-GJV-300, DIN GGV 30, GOST ЧВГ30,
	K5	K5.2 Vermicular, compacted graphite iron with a hardness of 180 – 220 HB	0.97	ASTM A842 Grade 350, EN-GJV-350, DIN GGV 35 (5.2200), GOST ЧВГ30,
		K5.3 Vermicular, compacted graphite iron with a hardness of 220 – 260 HB	0.75	ASTM A842 Grade 450, EN-GJV-450, DIN GGV 45, GOST ЧВГ45,

WORKPIECE MATERIAL GROUP (WMG)

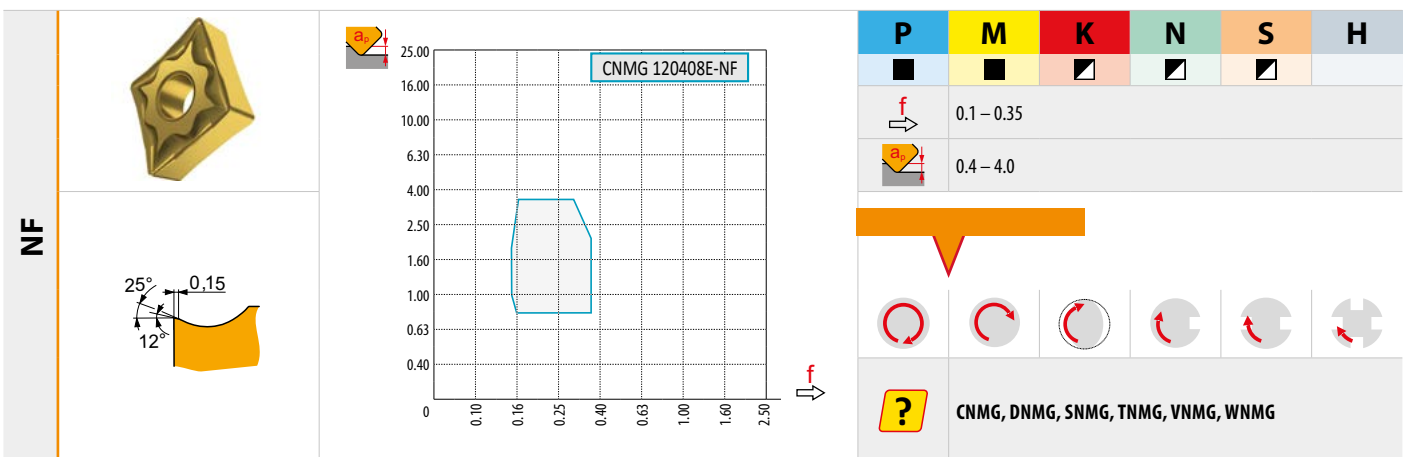
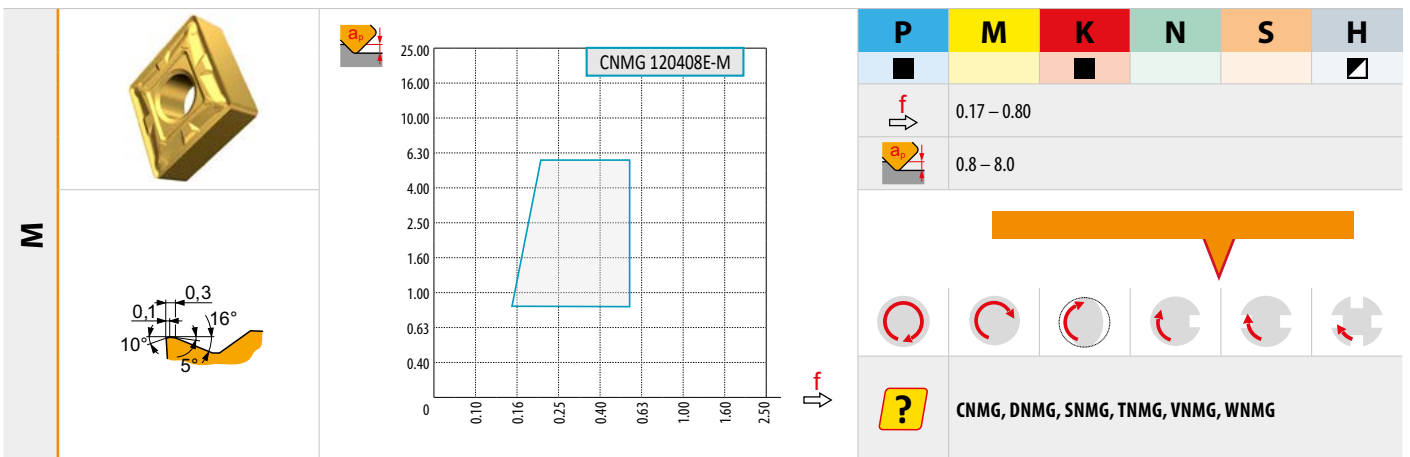
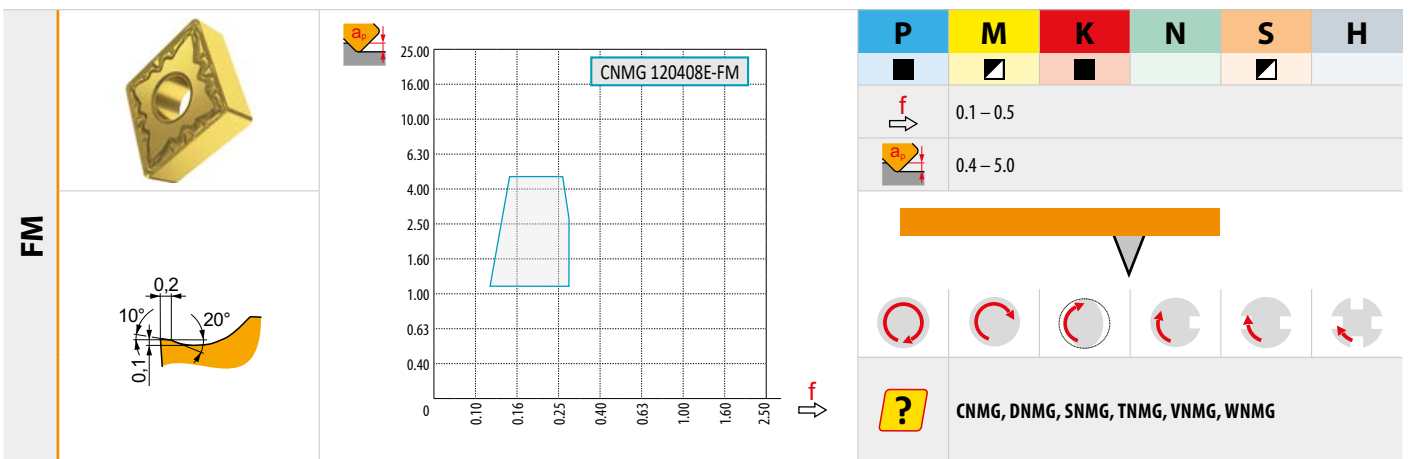
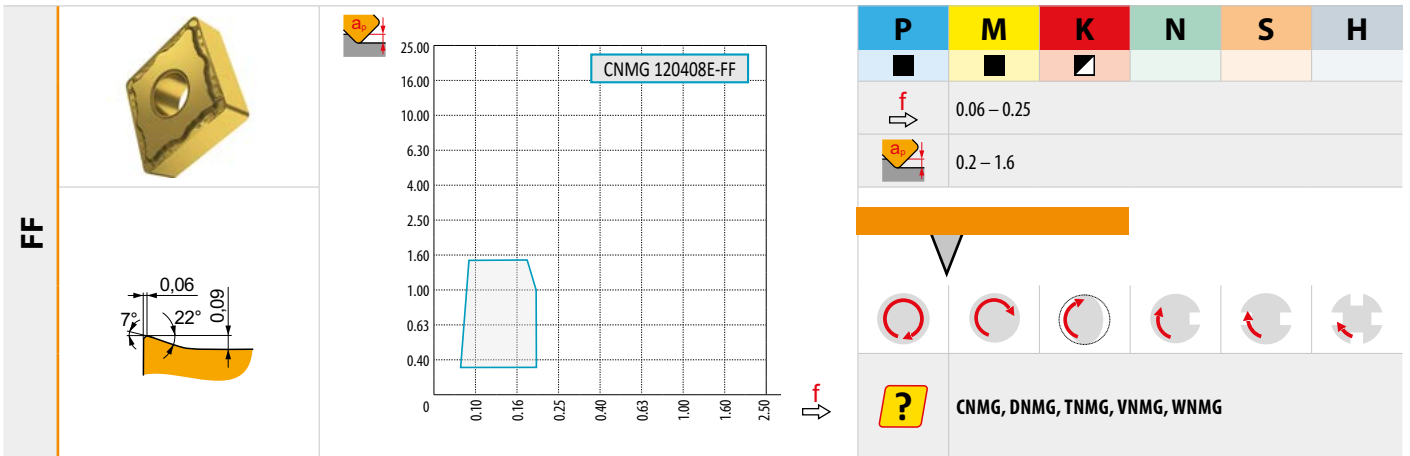
ISO group	Subgroup	WMG (Work Material Group)	k _{vc}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNI, ...)
N Non-ferrous metals (metals including alloys without an appreciable amount of iron)	N1 Wrought aluminium	N1.1 Pure aluminium and wrought aluminium alloys with a hardness of < 60 HB	1.33	UNS A91200, EN AL99.6, DIN 3.0205, SS 4010, STN 424009, BS 1C, UNE L-3001, GB L5, AFNOR A4, GOST ADC, UNI 3567
		N1.2 Wrought aluminium alloys with a hardness of 60 – 100 HB	1.00	UNS A93004, EN AlMn0.5Mg0.5, DIN 3.0505, SS 4054, STN 424432, BS N31, UNE L-3831, GB LF2, AFNOR A-M1, GOST AMu, UNI 3568
		N1.3 Wrought aluminium alloys with a hardness of 100 – 150 HB	0.67	UNS A95083, EN AlMg4.5Mn0.7, DIN 3.3547, SS 4140, STN 424415, BS N8, UNE L-3321, GB AlMg4.5Mn, AFNOR A-G4.5Mn, GOST Amg 4.5, UNI P-AlMg4.4
	N2 Cast aluminium	N2.1 Cast aluminium alloys with a hardness of < 75 HB	0.67	UNS A02080, EN AlCu45, BS LM11, STN 424331, UNE AlSi1Cu, GOST AMg5K, UNI G-AlSi7Mg
		N2.2 Cast aluminium alloys with a hardness of 75 – 90 HB	0.60	UNS A02420, EN AlCu4Ni2Mg2, SS AlSi7MgFe, BS LM6, STN 424519, UNE Al-7SiMg, AFNOR A-S7G, GOST AK7, UNI G-AlSi7Mg
		N2.3 Cast aluminium alloys with a hardness of 90 < 140 HB	0.43	UNS A03360, EN G-ALCu4NiMg2, SS AlSi10Mg, STN 424336, BS LM 30, AFNOR A-S10G, UNI G-AlSi9Mg
	N3 Copper or copper alloys	N3.1 Free-cutting copper-alloys materials with excellent machining properties	0.70	UNS C14700, EN CuPb1P, DIN 2.1498, STN 423214, BS C111, AFNOR CuZn35Pb2, GOST L63-3, UNI CuS(P0.01)
		N3.2 Short-chip copper-alloys with good to moderate machining properties	0.41	UNS C81540, EN CuNi25Cr, DIN 2.0857, STN 423220, BS NS113, UNE CuSn12, AFNOR CuZn40, GOST L60, UNI P-CuZn-40
		N3.3 Electrolytic copper and long-chip copper-alloys with moderate to poor machining properties	0.21	UNS C10100, EN CuAg0.1, DIN 2.1203, SS 5010, UNE CUSi3Mn1, AFNOR Cu-C2, GOST M1f, UNI Cu-OF
	N4 Polymers (synthetic or semi-synthetic materials)	N4.1 Thermoplastic polymers	0.70	ABS, Acryl, Duraplast, Elastomer, EP Epoxid, FEP, Fluor, Gummi, Kautschuk, Latex, ME, MPF, PA, PAL, PC, PE, PEEK, PEI, PES, PET, PF, Phenolharze, PI, PMMA, Polyamide, Polyester, Polyolefine, Polysulfon, POM, PP, PPE, PPS, PS, PSU, PTFE, PU, PUR, PVDF, SAN, SI, Styrol, UF, Ureol
		N4.2 Thermosetting polymers	0.27	Aramid, Epoxy, Fluoropolymer, Mehtacrylate, Melamine, Phenolic, Polyester, Polyimide, Polymethacrylimide, Polyurethane
		N4.3 Reinforced polymers or composites	0.29	CFK, GFK, GMT, Honeycomb, Kevlar, LFT, Organo, SMC
	N5 Graphite	N5.1	1.0	CGM-1, CM-00, GM-10, GM-11, GR030, GR030PI, GR060, GR060PI, GR125, MC-01, MC-01R0, MC-03, MC-03M, IG11, IG-15, IG-32, IG-43, IG-45, IG-70, ISEM-1, ISEM-2, ISEM-3, R8340, R8500X, Technograph 15, Technograph 30, ISO-63, EDM C-3, EDM1, EDM3, ISO-90, ISO-93, ISO-95, R8510, R8650, R8650,

ISO group	Subgroup	WMG (Work Material Group)	k_{wg}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
S High-temperature alloys (superalloys with high temperature strength and corrosion resistant surpassing that of stainless steel)	S1 Titanium or titanium alloys	S1.1 Titanium or titanium alloys, with a hardness of <200 HB	1.94	UNS R50250 (Grade 1), EN Ti 99.6, DIN 3.7035, BS TA.2, UNE Ti-Po2, AFNOR T-40, GOST BT1-00, AISI R50250, 3.7025, T35, 2TA1, R50400, 3.7035, 2TA2,
		S1.2 Titanium alloys, with a hardness of 200 – 280 HB	1.72	UNS R56404 (Grade 29), EN Ti2Cu, DIN 3.7124, BS TA.21, UNE Ti-P11, AFNOR T-U2, AISI TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553
		S1.3 Titanium alloys, a hardness of 280 – 360 HB	1.44	UNS R54250 (Grade 38), EN TiAl6V4, DIN 3.7165, ČSN TiAl6VELL, BS TA. 13, UNE Ti-P63, AFNOR T-A6V, GOST BT6, AISI TA6V, Ti-6Al-4V, Ti 10.2.3, Ti5553
	S2 Fe-based high-temperature alloys	S2.1 High-temperature Fe-based alloys with a hardness of <200 HB	1.33	UNS N08801 (Incoloy 801), EN X8 NiCrAlTi31-21, DIN 1.4959, BS NA 15, AFNOR Z8NC33-21, AISI A-286, Discaloy, Haynes 556, Inconel 909, Greek Ascolloy
		S2.2 High-temperature Fe-based alloys with a hardness of 200 – 280 HB	1.17	UNS N19907, EN X6NiCrTiMoVB25-15-2, DIN 1.4980, SS 2570, BS HR52, AFNOR Z6NCTDV25.15B, GOST 36HXT10, AISI A-286, Discaloy, Haynes 556, Inconel 909, Greek Ascolloy
	S3 Ni-based high-temperature alloys	S3.1 High-temperature Ni-based alloys with a hardness of <280 HB	1.00	UNS A09706 (Inconel 706), EN NiCr25FeAl, DIN 2.4856, BS HR 6, ČSN Inconel 625, UNE F.3313, GB 1Cr16Ni35, AFNOR NC22FeDNB, GOST XH38BT, AISI Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625
		S3.2 High-temperature Ni-based alloys with a hardness of 280 – 360 HB	0.83	UNS N07001, EN NiCr20Co13Mo4Ti3Al, DIN 2.4654, BS HR 2, ČSN Waspalloy, AFNOR NCKD 20ATV, GOST XH80T5K0, AISI Inconel 718, 706 Waspalloy, Udimet 720, Inconel 625
	S4 Co-based high-temperature alloys	S4.1 High-temperature Co-based alloys with a hardness of <240 HB	0.78	UNS R30016 (Stellite 6b), EN CoCr20W15Ni, DIN 2.4964, AFNOR KC 20 WN, GOST ЛК52, AISI Haynes 25, Stellite 21, 31
		S4.2 High-temperature Co-based alloys with a hardness of 240 – 320 HB	0.67	UNS R30016 (Stellite 6b), EN CoCr20W15Ni, DIN 2.4964, AFNOR KC 20 WN, GOST ЛК52, AISI Haynes 25, Stellite 21, 31

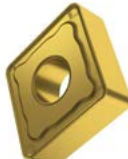
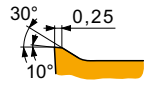
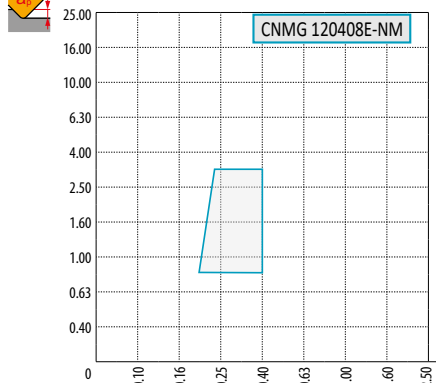
WORKPIECE MATERIAL GROUP (WMG)

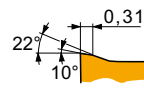
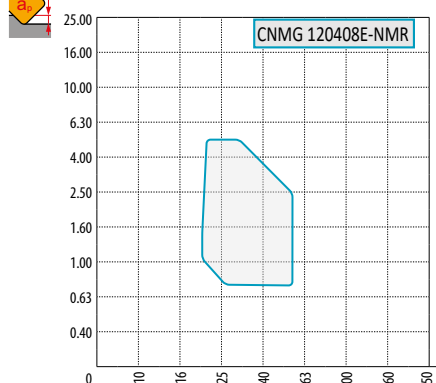
ISO group	Subgroup	WMG (Work Material Group)	k _{vc}	Examples of material (AISI, EN, DIN, ČSN, GB, SS, STN, BS, UNE, AFNOR, ASTM, GOST, UNS, UNI, ...)
H Hardened materials (any engineering metal with a hardness > 45 HRC)	H1 Chilled cast iron	H1.1 Chilled cast iron with a hardness of < 440 HB	1.52	UNS F45001, EN-GJS-1050-6, DIN 5.3406, SS 0512, BS Grade 2A
	H2 Hardened cast iron	H2.1 Hardened cast iron with a hardness < 55 HRC	0.90	UNS F45003, EN-GJS-1400-1, DIN 5.3405, SS 0457, BS Grade 3D
		H2.2 Hardened cast iron with a hardness > 55 HRC	0.77	UNS F45003, EN G-X260NiCr4-2, DIN 0.9620, SS 0466, BS Grade S
	H3 Hardened steel < 55 HRC	H3.1 Hardened steel with a hardness of < 51 HRC	1.00	AISI 4135, EN 34CrMo4, DIN 1.7220, SS 2234, STN 415131, BS 198, UNE F.1250, GB 35CrMo, AFNOR 35CD4, GOST AC38XTM, UNI 35CrMo4KB
		H3.2 Hardened steel with a hardness of 51 – 55 HRC	0.82	AISI 4135, EN 34CrMo4, DIN 1.7220, SS 2234, STN 415131, BS 198, UNE F.1250, GB 35CrMo, AFNOR 35CD4, GOST AC38XTM, UNI 35CrMo4KB
	H4 Hardened steel > 55 HRC	H4.1 Hardened steel with a hardness of 55 – 59 HRC	0.64	UNS T31501, EN 100MnCrW4, DIN 1.2510, SS 2140, STN 419413, BS B01, UNE F.5220, GB 9CrWMn, AFNOR 90MnWCrV5, GOST 9XBΓ, UNI 95MnWCr5KU
		H4.2 Hardened steel with a hardness of > 59 HRC	0.54	UNS T31501, EN 100MnCrW4, DIN 1.2510, SS 2140, STN 419413, BS B01, UNE F.5220, GB 9CrWMn, AFNOR 90MnWCrV5, GOST 9XBΓ, UNI 95MnWCr5KU

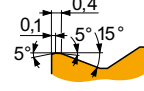
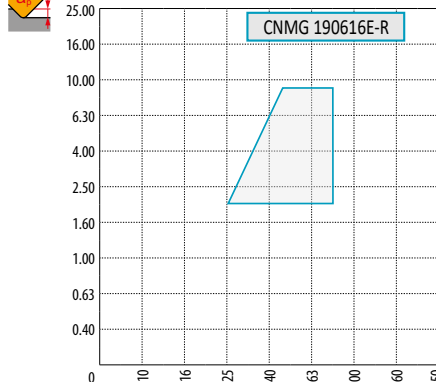
GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

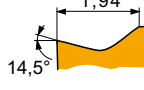
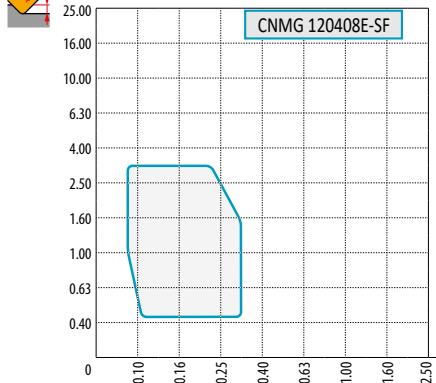


GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

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	0.5 – 8.0				

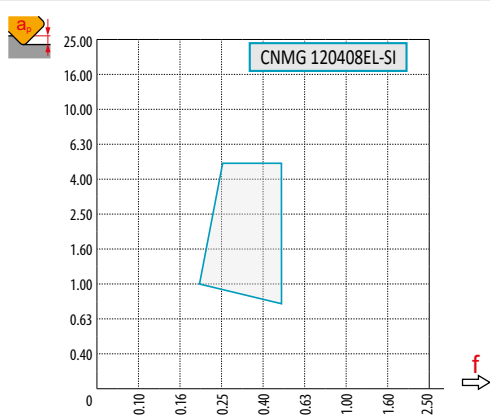
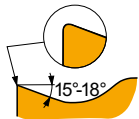
P	M	K	N	S	H
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P	M	K	N	S	H
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	2.0 – 9.0				

P	M	K	N	S	H
	0.08 – 0.35				
	0.2 – 3.5				

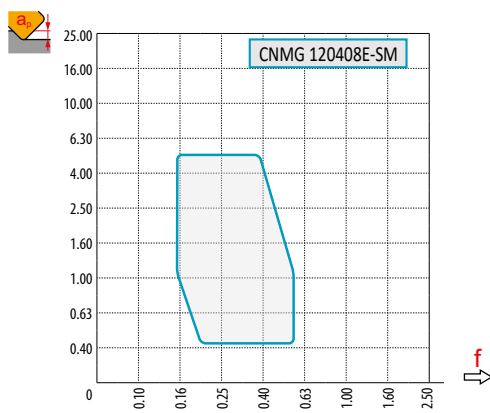
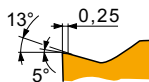
GEOMETRY OF CUTTING NEGATIVE INSERTS – CLAMPING DESIGNATION ISO P, M, D

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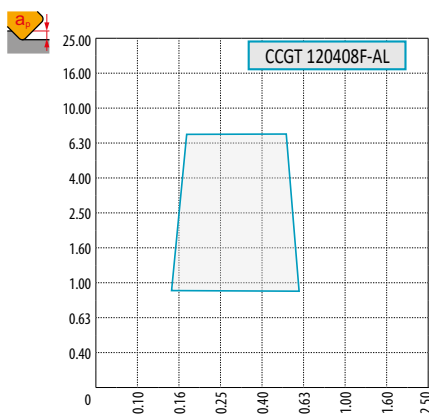
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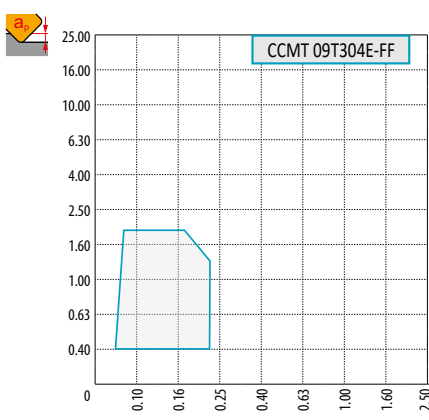
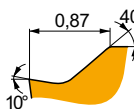
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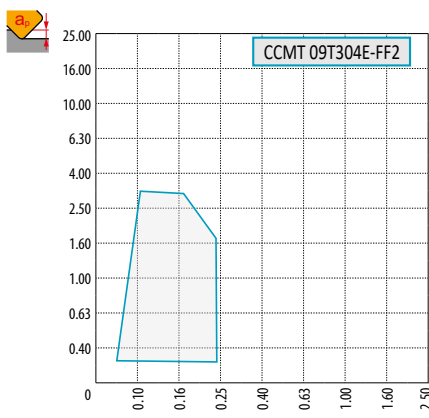
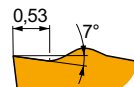


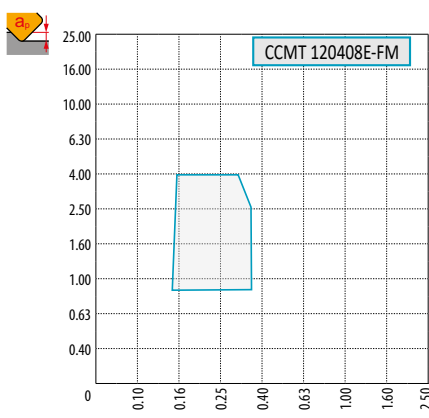
P	M	K	N	S	H
					
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	CNMG, DNMG, SNMG, TNMG, VNMG, WNMG				

GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

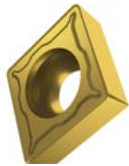
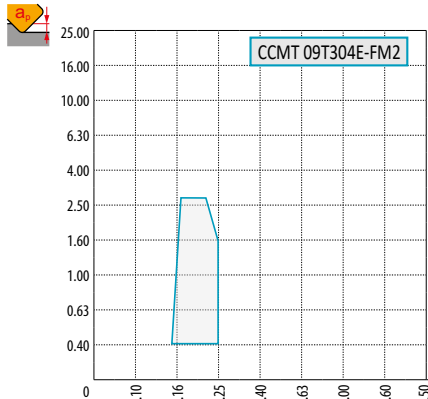
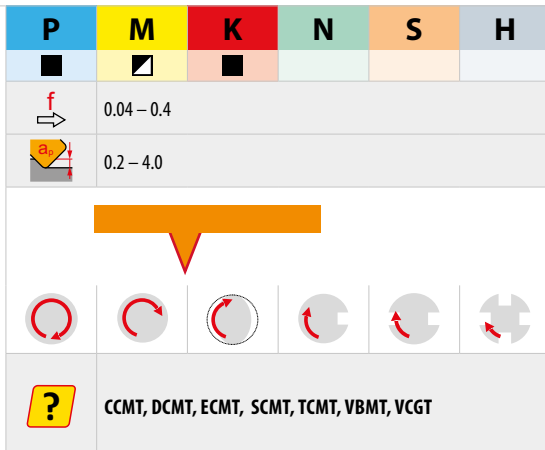
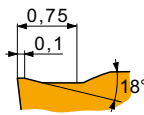
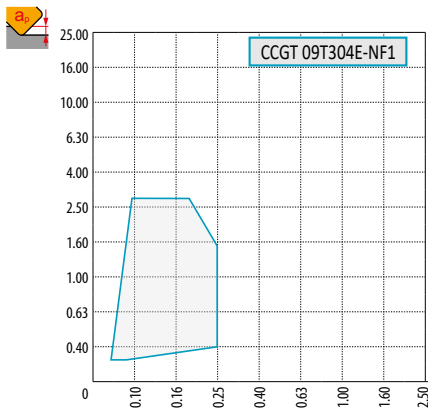
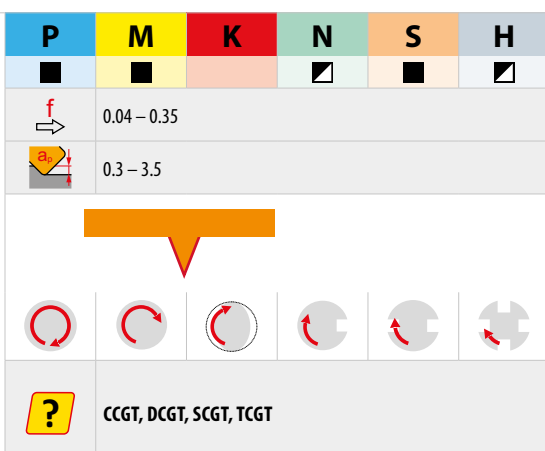
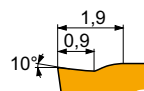
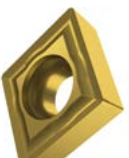
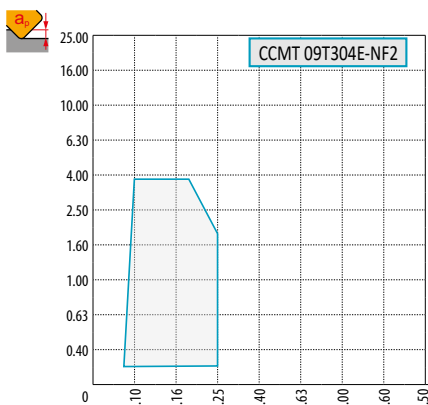
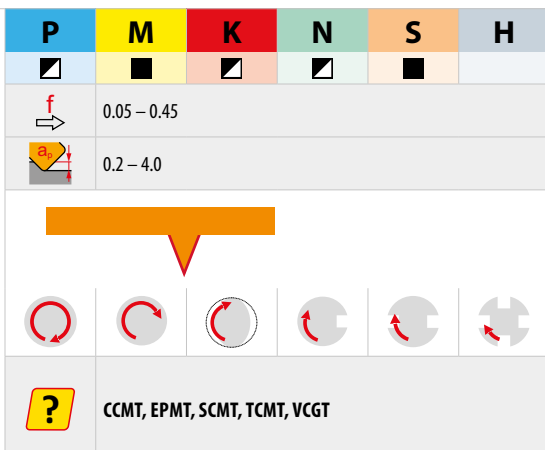
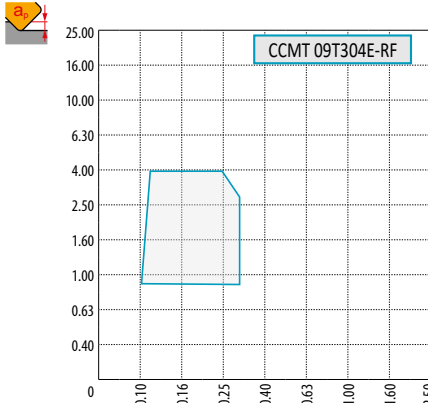
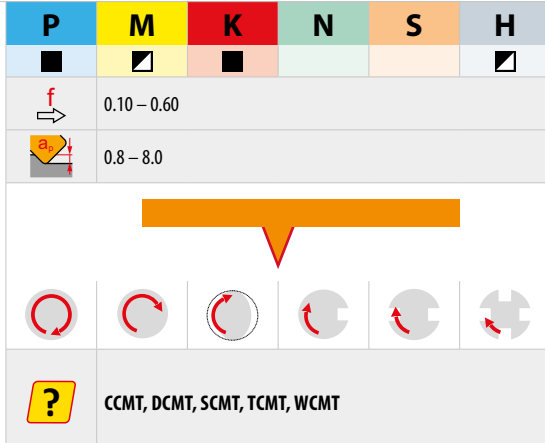
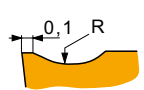
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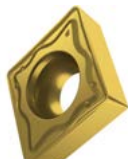
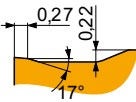
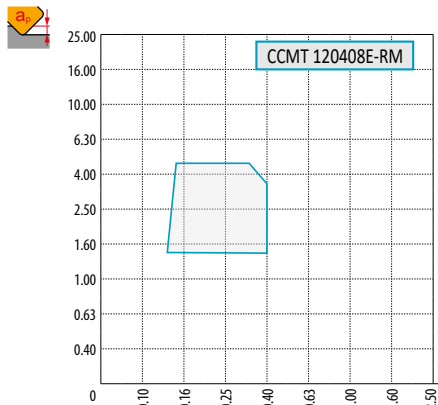
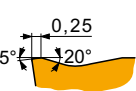
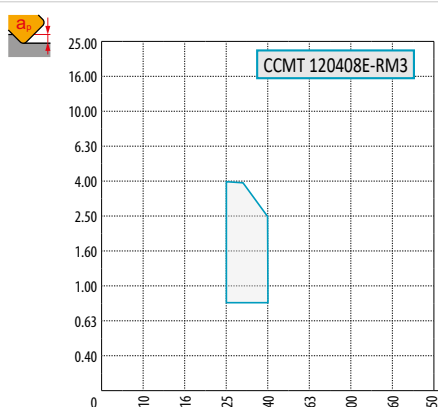
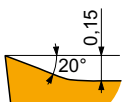
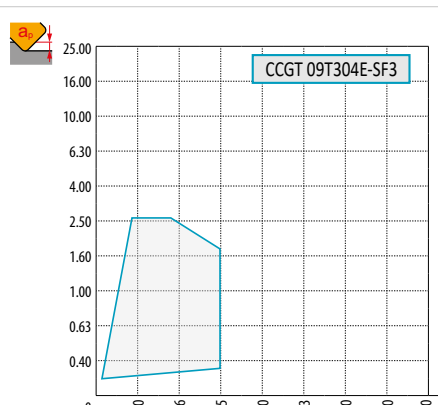
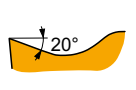
FF2		 CCMT 09T304E-FF2	<table><tr><th>P</th><th>M</th><th>K</th><th>N</th><th>S</th><th>H</th></tr><tr><td>■</td><td></td><td>■</td><td></td><td></td><td></td></tr><tr><td>f</td><td colspan="5">0.02 – 0.28</td></tr><tr><td>a_p</td><td colspan="5">0.20 – 3.0</td></tr></table>	P	M	K	N	S	H	■		■				f	0.02 – 0.28					a_p	0.20 – 3.0				
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GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

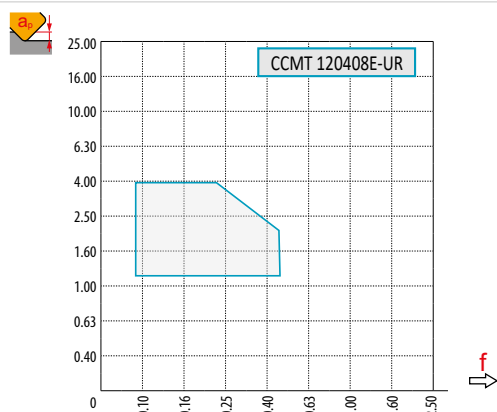
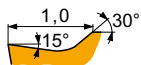
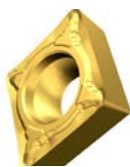
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GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

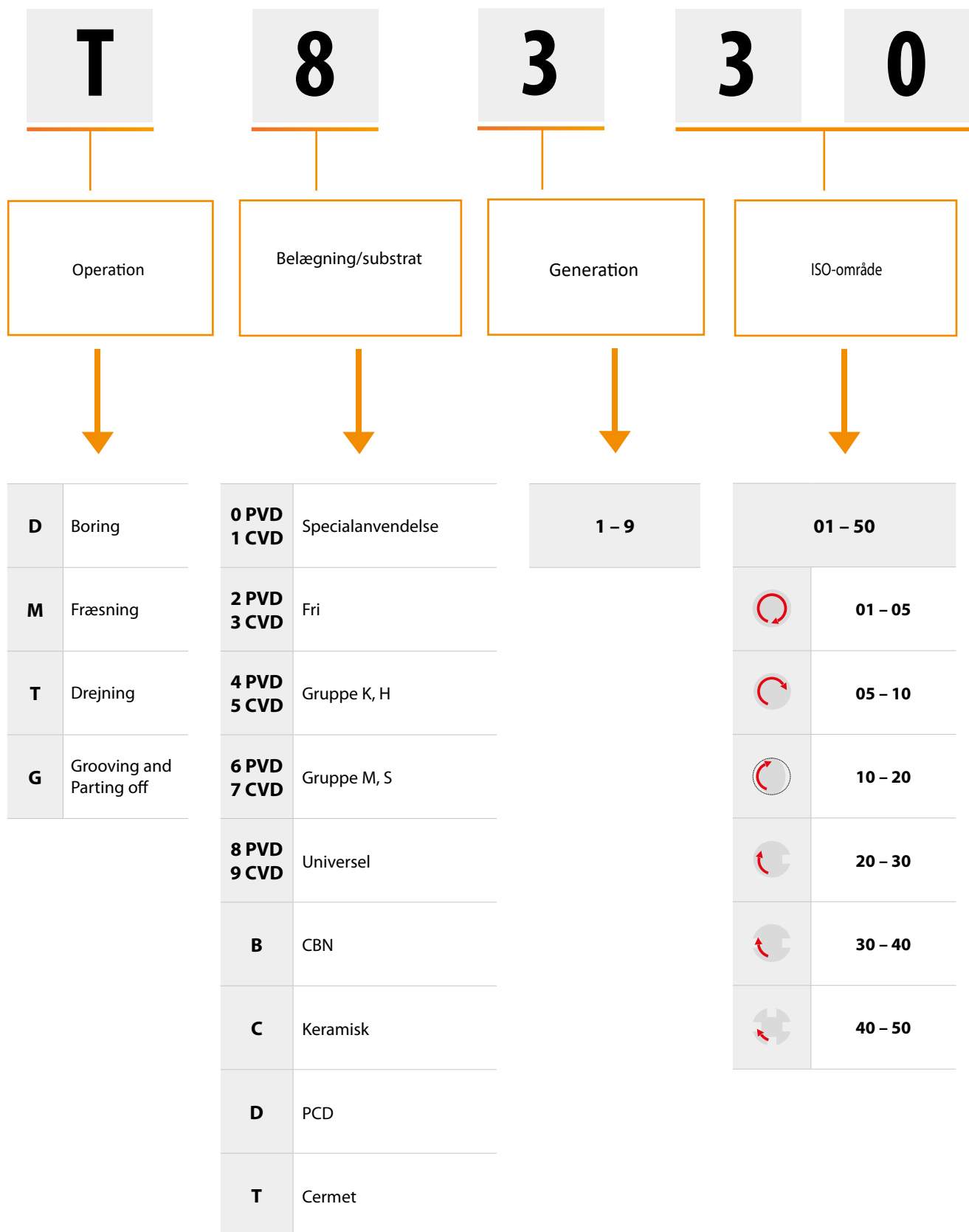
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GEOMETRY OF CUTTING POSITIVE INSERTS – CLAMPING DESIGNATION ISO S

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P	M	K	N	S	H
					
	0.10 – 0.40				
	1.0 – 4.0				
					
					
	CCMT, DCMT, RCMT, SCMT, TCMT, VCMT, VBMT, WCMT				



BORING GRADES

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T9315	P05 - P25	■				MT-CVD		FGM	+ +	A versatile grade with excellent wear resistance properties even under intense cutting conditions. It can also be used for operations with interrupted cuts. With it's well balanced properties this grade can be first choice for a wide range of turning operations. Not suited to low cutting speeds.
	K05 - K25	■	▴	▴	▴					
	H10 - H20	■								
T9325	P15 - P35	■				MT-CVD		FGM	+ +	From a technological perspective this is an extremely versatile grade with high resistance to mechanical damage in adverse cutting conditions and retains excellent wear resistance. The correct application of this material requires high cutting speeds.
	M10 - M30	■	▴	▴	▴					
	K15 - K35	■								
	S10 - S20	■								
T9335	P20 - P45	■				MT-CVD		FGM	+ + +	One of the toughest grades which is especially suitable for adverse cutting conditions at medium to high feed rates and medium cutting speeds. Compared to its predecessors, M15 – M40 it is not only tougher, but also more abrasion resistant which will be useful when using intensive cutting conditions.
	M15 - M40	■	▴	▴	▴					
	S15 - S25	■								
T7325	P15 - P35	■	▴	▴	▴	MT-CVD		FGM	+ + +	One of the most universal turning grades. Especially designed for stainless steel machining. Optimal balance between wear resistance and performance reliability. Suitable for broad variety of application in turning operations.
	M10 - M25	■								
	S10 - S25	■								
T7335	P20 - P40	■	▴	▴	▴	MT-CVD		FGM	+ + +	Grade with functionally graded substrate, featuring very high operational reliability and very good wear-resistance. It is best suited to use in the machining of very tough M20 – M40 materials.
	M20 - M40	■								
	S15 - S25	■								
T5305	P05 - P15	■				MT-CVD		H	+	Grade with very high resistance to chemical wear; suitable for finishing operations using high cutting speeds. With its high abrasion resistance, it is also suitable for productive K01 – K15, machining of hardened and treated materials.
	K01 - K15	■	▴	▴	▴					
	H05 - H15	■								
T5315	P10 - P25	■	▴	▴	▴	MT-CVD		H	+	Grade intended primarily for productive machining which has high abrasion resistance and good operational reliability. Due to its properties, this material is particularly suitable for roughing and finishing operations for good or slightly adverse cutting conditions.
	K10 - K25	■								
	H15 - H25	■								
T0315	N05 - N20	■	▴	▴	▴	PVD			+ +	Submicron grade for turning non-ferrous metals and their alloys with a balance of wear resistance and toughness. It is provided with a unique coating with excellent friction properties.
T6310	P01 - P15	■				PVD	ultra submicron H		+ + +	High wear resistant turning grade with top PVD coating. Suitable for finishing operation and applications, where sharp cutting edge together with high flank wear resistance is of high importance
	M01 - M15	■								
	K05 - K20	■	▴	▴	▴					
	N05 - N20	■								
	S01 - S15	■								
	H01 - H15	■								
T8315	P05 - P20	■				PVD	submicron H		+ +	Grade featuring excellent abrasion resistance while maintaining above average operational reliability, it is suitable for machining at medium to high cutting speeds in short chipping harder materials.
	M05 - M20	■								
	K05 - K25	■	▴	▴	▴					
	N05 - N25	■								
	S05 - S15	■								
	H05 - H15	■								

BORING GRADES

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T8330	P25 - P40	■				PVD		submicron H	+ + +	Undoubtedly the most versatile cutting material, this is useful for machining of all types of machined materials and is practically applicable in almost all types of turning operations. Its main benefits are its high operational reliability and very good frictional properties; it is therefore suitable for applications at medium and lower cutting speeds.
	M20 - M35	■								
	K20 - K40	■								
	N15 - N30	■								
	S15 - S25	■								
	H15 - H25	■								
T8430	P20 - P40	■				PVD		submicron H	+ + +	Undoubtedly the most versatile cutting material, this is useful for machining of all types of machined materials and is practically applicable in almost all types of turning operations. Its main benefits are its high operational reliability and very good frictional properties; it is therefore suitable for applications at medium and lower cutting speeds.
	M20 - M35	■								
	K25 - K40	■								
	N15 - N30	■								
	S15 - S25	■								
	H15 - H25	■								
HF7	M10 - M20	■				×		submicron H	+ +	Uncoated grade which is primarily designed for machining non-ferrous metals; but can also be used for other machined materials (except steel). This material can be used in turning, milling, and even boring.
	K10 - K25	■								
	N10 - N25	■								
H07	M05 - M15	■				×		submicron H	+ +	Uncoated turning grade suitable for machining applications where oxidation resistance is not dominating criterion of tool life. Designed for machining of Ti-based alloys. Grade exhibits high strength of cutting edge together with good wear resistance.
	K10 - K25	■								
	N10 - N30	■								
	S01 - S20	■								
TT310	P10 - P25	■				PVD		Cermet	+ / -	Coated cermet used for fine and finish turning of carbon and alloy steels (including stainless). Its excellent friction properties are further improved by the coating applied using the PVD technique.
	M15 - M25	■								
TT010	P01 - P10	■				×		Cermet	+ / -	Uncoated cermet, which is suitable for fine machining of all types of steel (including stainless) at very low feed rates. Its main advantage is the minimal radius of the cutting edge and its high resistance to physical and chemical wear mechanisms.
	M01 - M10	■								
PD1	N05 - N25	■				×		PCD	- -	PKD grade for turning non-ferrous materials. Ideal choice for working with high cutting speed and small feeds at stable conditions.
TB310	K01 - K10	■				×		CBN	- -	CBN grade for machining of hardened materials. Suitable for machining with high cutting speed and small feeds at stable conditions.
	S05 - S10	■								
	H01 - H10	■								

Substrat	
H	WC-Co-baseret substrat
submicron H	WC-Co-baseret substrat fintkornet (< 1 µm)
ultra submicron H	WC-Co-baseret substrat meget fintkornet (< 0,5 µm)
FGM	Substrat med funktionel klassificering
Cermet	Hårdmetal uden WC
PCD	Polykrystallinsk diamant
CBN	Kubik bornitrid

Coating	
MT-CVD	Kemikaliemetode til belægning ved mellemhøj temperatur
PVD	Fysisk metode til coating ved lav temperatur
×	Ubelagt kvalitet

Benefits of cutting fluid	
+ + +	Use of coolant is essential
+ +	Highly recommended
+ / -	Optional
- -	Do not use coolant

TABEL MED SKÆREFORHOLD FOR UDBORING

The standard turning inserts are used in the boring tools, but the conditions recommended for turning do not apply here (data given on the boxes), so please select the cutting conditions according to the following table.

Materiale	Finboring (med enkelt skær)				Grovdoboring (med dobbelte skær)			
	Diameter	Skærehastighed v_c	Tilspænding f_z	Skæredybde a_p	Diameter	Skærehastighed v_c	Tilspænding f_z	Maks. skæredybde $a_{p\max}$
P	24 – 30	110 – 140	0.05 – 0.15	0.05 – 0.30	24 – 30	110 – 140	0.15 – 0.25	4.2
	29 – 40	115 – 150			29 – 40	105 – 140	0.15 – 0.30	5.7
	39 – 50		105 – 150	39 – 50	0.20 – 0.30			
	49 – 102			49 – 102	0.25 – 0.35	6.3		
	100 – 220			100 – 220	0.30 – 0.40			
	220 – 500			220 – 500				
M	24 – 30	70 – 110	0.07 – 0.15	0.12 – 0.35	24 – 30	69 – 90	0.12 – 0.20	4.2
	29 – 40	80 – 110			29 – 40	70 – 100	0.15 – 0.25	5.7
	39 – 50		0.10 – 0.20	39 – 50	0.20 – 0.30		6.3	
	49 – 102			49 – 102	0.25 – 0.35			
	100 – 220		0.12 – 0.20	100 – 220	0.25 – 0.75			
	220 – 500			220 – 500				
K	24 – 30	70 – 110	0.07 – 0.15	0.12 – 0.35	24 – 30	60 – 110	0.20 – 0.30	4.2
	29 – 40	80 – 115			29 – 40		0.25 – 0.35	5.7
	39 – 50		0.12 – 0.20	39 – 50	0.30 – 0.40		6.3	
	49 – 102			49 – 102	0.30 – 0.45			
	100 – 220			100 – 220	0.30 – 0.45			
	220 – 500			220 – 500				
N	24 – 30	150 – 300	0.05 – 0.15	0.12 – 0.35	24 – 30	120 – 300	0.20 – 0.30	4.2
	29 – 40	150 – 360	0.10 – 0.20		29 – 40	150 – 370	0.25 – 0.35	5.7
	39 – 50			0.10 – 0.25	39 – 50		0.30 – 0.40	6.3
	49 – 102		49 – 102		0.30 – 0.45			
	100 – 220		100 – 220		0.30 – 0.40			
	220 – 500		220 – 500					
S	24 – 30	30 – 40	0.07 – 0.15	0.12 – 0.35	24 – 30	25 – 35	0.12 – 0.20	4.2
	29 – 40	30 – 45			29 – 40	30 – 40	0.15 – 0.25	5.7
	39 – 50		0.10 – 0.20	39 – 50	0.20 – 0.30		6.3	
	49 – 102			49 – 102	0.20 – 0.35			
	100 – 220			100 – 220	0.20 – 0.35			
	220 – 500			220 – 500				
H	24 – 30	30 – 40	0.07 – 0.15	0.12 – 0.35	24 – 30	25 – 35	0.12 – 0.20	4.2
	29 – 40	30 – 45			29 – 40	30 – 40	0.15 – 0.25	5.7
	39 – 50		0.10 – 0.20	39 – 50	0.20 – 0.30		6.3	
	49 – 102			49 – 102	0.20 – 0.35			
	100 – 220			100 – 220	0.20 – 0.35			
	220 – 500			220 – 500				

Justeringsinstruktioner – grovbearbejdningshoveder

- Monter nye vendeskær i lommer.
- Løsn glidebloklåseskruen/-skruerne, og stram dem meget let.
- Drej justerskruen for at flytte glideblokkene til en mindre diameter end påkrævet.
- Drej justerskruen tilbage, og indstil glideblokkene til den ønskede diameter.
- Indstilling kan ske med hoved og holder monteret i maskinen, ude af maskinen eller i en værktøjsindstiller.
- Stram låseskruen/-skruerne i en værktøjsindstiller

**Til hoveder i størrelsen 68 og større (patronstil)**

- Patroner har individuelle radiale justerskruer.
- Løsn låseskruen for en af de to patroner.
- Drej justerskruen (hoved)

Justeringsinstruktioner – finishhoveder

- Alle finish- og mikrohoveder har mikrometerjustering med 0,002 mm gradinddeling.
- Monter nye indsatser i lommer.
- Indstilling skal helst ske vha. komparator eller værktøjsindstiller
- Løsn glideblokskruen/-erne, og stram dem meget let.
- Drej justerskruen for at flytte glideblokken til en mindre diameter end påkrævet.
- Vend rotationen for justerskruen, og indstil glideblokken til den ønskede diameter ved at placere indsatsens O.D.-hjørne ud for trådkorset.
- Spænd låseskruer(ne).
- Ved anvendelser, som kan være udfordrende, når der skal holdes en bestemt hultolerance, anbefaler vi i første omgang at indstille hovedet til en mindre diameter, udbore et hul og måle. Juster derefter i det påkrævede omfang vha. mikrometerskiven på hovedet, og gennemfør en arbejdsgang mere.



Valg af stigningsvinkel

75°



90°



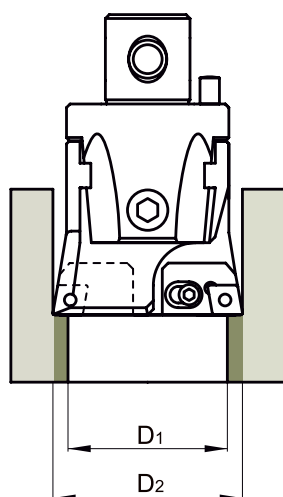
- Gennemgående huller
- Kraftig grovbearbejdning ved øgede tilspændingshastigheder
- Tendens til at følge eksisterende hul (kerneforskydning, forkert placering?)
- Dybe huller – lange udboringsværktøjer (selvcentrerings-effekt hjælper med indgang!)

- Blindhuller
- Trininddelt boring med 90° ansats
- Små huller – korte boreværktøjer (opretning og flytning af forkudte huller)
- Udboring med trininddelte patroner (størrelse 68 og større)

Disse typer udboringshoveder kan udstyres med én symmetrisk patron og én trininddelt patron. Bemærk, at trininddelte patroner har bogstavet "S" efter beskrivelsen.

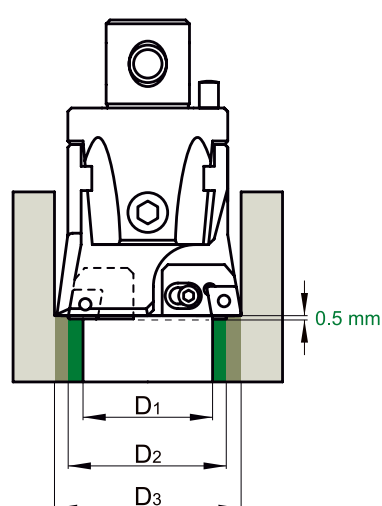
Eksempler: 2CT 90 402 N S; 2CT 90 300 S; 2CT 90 402 S.

Symmetrisk udboring



2CT □□ □□□ + 2CT □□ □□□
3CT □□ □□□ + 3CT □□ □□□

Trininddelt udboring



2CT □□ □□□ S + 2CT □□ □□□
3CT □□ □□□ S + 3CT □□ □□□

Trininddelt udboring betyder, at der fjernes mere metal mellem D1 og D3 i én arbejdsgang, ca. 4 til 6 mm sammenlignet med symmetrisk udboring.

Bemærk, at ved trininddelt udboring skal tilspændingen pr. minut beregnes som for et **værktøj med en enkelt tand**.

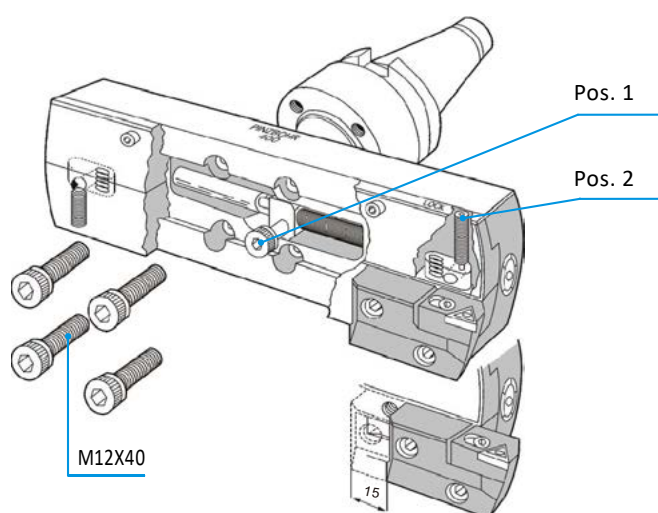
KONSTRUKTIONSSYSTEM FOR STORE UDBORINGSHOVEDER

Bemærk: Under hele monteringsprocessen skal bremseskruen (pos. 2) løsnes.

Sådan bruges udboringshoveder med stor diameter på konus

Fjern positionsskruerne (pos. 1), og tryk på glidelejerne, indtil de fire koblingsskruerhoveder bliver synlige. Saml konusfladen med de fire skruerhoveder ved hovedets bagside, og isæt og stram derefter de fire koblingsskruer.

FINISHBEHANDLING



Hastigheder og tilspændinger

Den ultimative eller optimale hastighed og tilspænding afhænger af materiale, maskine og opsætningsforhold samt værktøjsoverlappning

Udboringsdybde – værktøjsoverlappning ved grovbearbejdning og finishbehandling

Ved forhold, der er egnet til hårdmetal, kan der opnås bearbejdningsdybder på 5x Ø for grovudboring og 3x Ø for finishudboring. Ved øget overlappning reduceres værktøjets mekaniske stabilitet. Overlappede værktøjer har en tendens til afvigelse samt harmonisk (høj) vibration. Harmonisk vibration kan forårsage bevægelse af justeringskomponenter inde i borehovedet, hvilket medfører huller i den forkerte størrelse eller koniske huller.

I mange tilfælde kan høj harmonisk vibration reduceres ved at øge tilspændingen og (eller) reducere skærehastigheden.

Bemærk, at skæreadfærden også ændres afhængigt af, hvor meget glideblokken (indsatsholderen) stikker ud fra udboringshovedet og dermed kræver justering i forhold til hastigheder og tilspænding.

Udboringsdybde – værktøjsoverlappning for mikroudboringshoveder

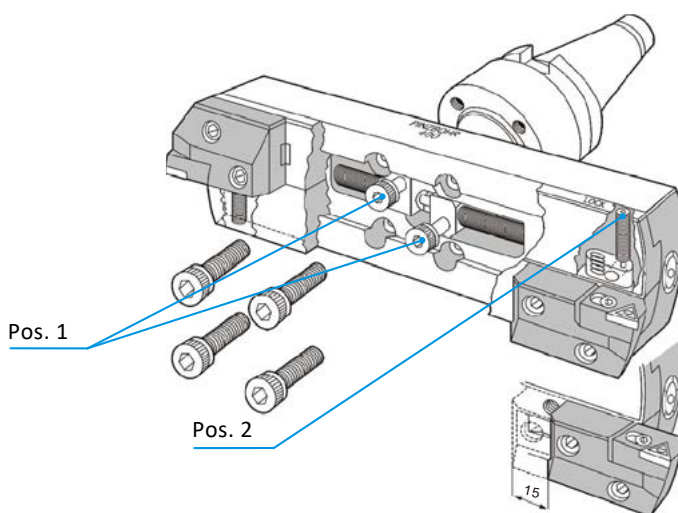
Den maksimale boreddybde ved stålboreskænder må ikke overstige 5x stangdiameter og 7x stangdiameter ved skænder i massiv hårdmetal. Vi anbefaler at afkorte skænderne, så de overlapper mindst muligt i forhold til den ønskede udboringsdybde.

Ved krævende grovbearbejdningsskæringer skal den største tilgængelige hjørneradius vælges, medmindre andet er angivet. Ved finishudboring med meget lidt materialefjernelse er det mest fordelagtigt at bruge den mindste tilgængelige hjørneradius for at minimere den sideværts værktøjsafvigelse. Dette kan være særligt vigtigt ved anvendelser, der involverer lange overlappninger.

Montering af glidelejerne på hovedet

Indfør begge glidelejer i V-rillerne, og tryk dem helt ind, indtil de er ud for møtrikgevindhullerne. Monter skruerne (pos. 1), og stram dem let. Disse skruer har en dobbelt funktion – de fastgør glidelejet i V-rillerne og forbinder glidelejet med bronzehovedmøtrikken. Kontrollér til sidst, at glidelejet (glidelejer ved grovbearbejdning) kører jævnt.

GROVBEARBEJDNING



Grovudboringshoved 75° vs. 90°

75°-grovudboringshovedet skal bruges, når der fjernes meget materiale, og der ikke kræves firkantet ansats ved blind udboring eller trininddelt udboring. 75°-stigningen har en tendens til selvcentrering til det allerede eksisterende hul og skærer derfor meget stabilt. Hvis dette allerede eksisterende hul er excentrisk, forskudt eller har en forkert vinkel, anbefales det at bruge 90°-udboringshovedet, da 90°-stigningsvinklen har mindre tendens til at følge det eksisterende hul.

Mængde af materialefjernelse

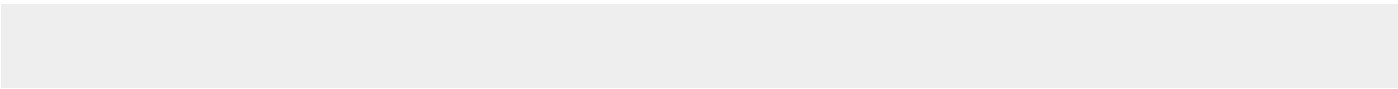
Det kan være nødvendigt at reducere den maksimale materialefjernelse ved meget krævende materialer, større overlappninger samt ved større glideblokke.

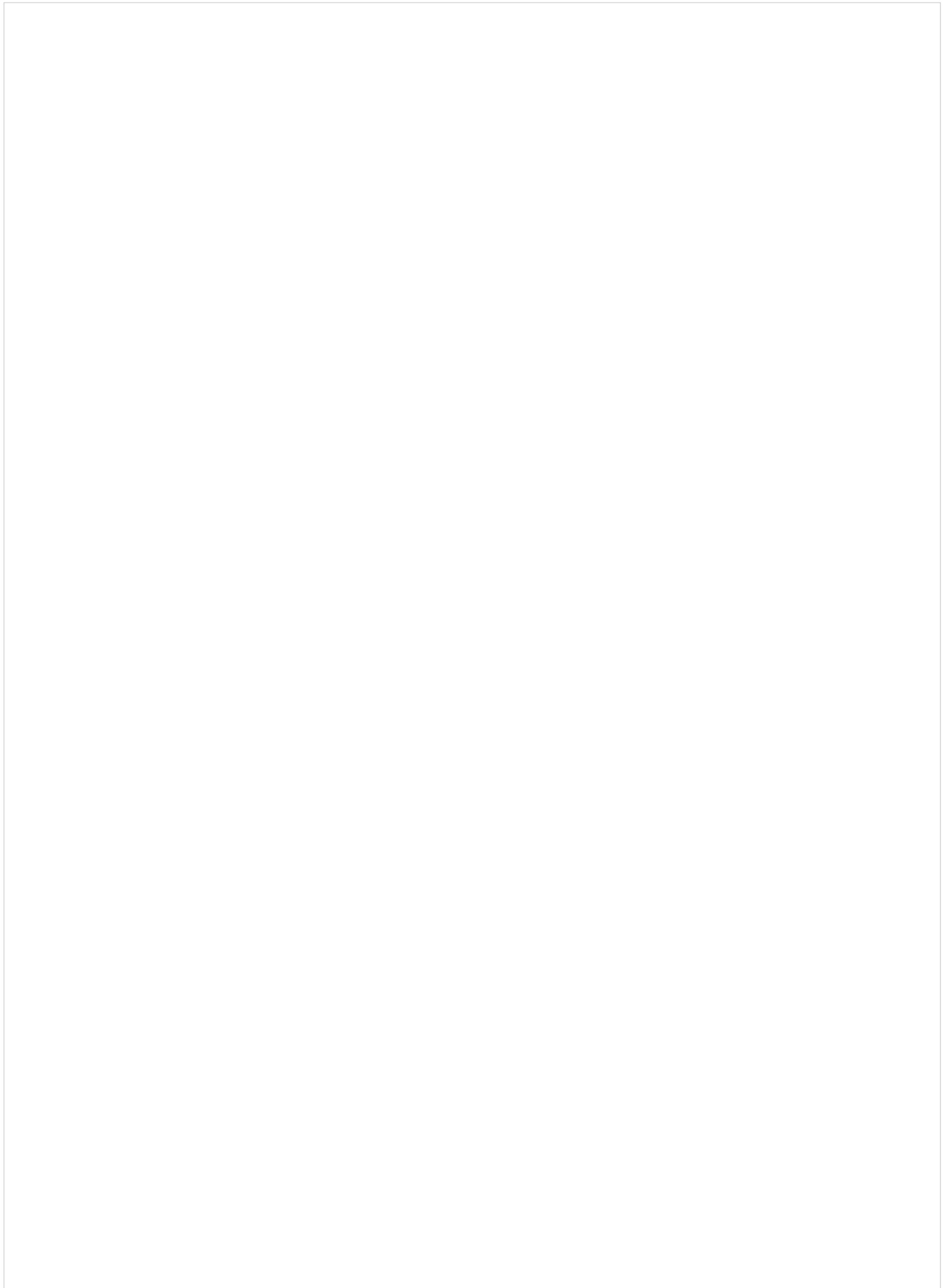
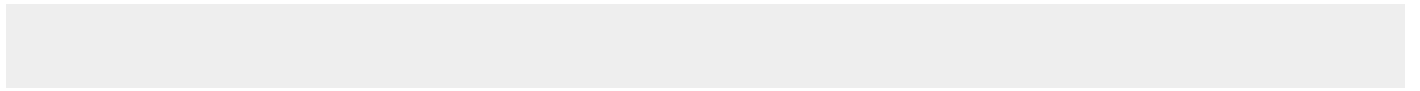
Indsatshjørneradius

Ved krævende grovbearbejdningsskæringer skal den største tilgængelige hjørneradius vælges, medmindre andet er angivet. Ved finishudboring med meget lidt materialefjernelse er det mest fordelagtigt at bruge den mindste tilgængelige hjørneradius for at minimere den sideværts værktøjsafvigelse. Dette kan være særligt vigtigt ved anvendelser, der involverer lange overlappninger.

4 skærende kanter pr. indsats

Den 80° diamantformede indsats giver normalt to skærende kanter. Alle fire skærende kanter kan dog bruges, hvis der benyttes et 75° og et 90° grovudboringshoved i det samme størrelsesområde. Det samme er muligt mellem et 75° grovudboringshoved og et 90° finishudboringshoved





SIMPLY RELIABLE

Som en professionel kan du vurdere kvaliteten af dit arbejde kun ved at studere metalspånen. Metalspånen har en ren og ukompliceret form, der fortæller en historie. Det er derfor, vi bruger dette symbol til at illustrere vores pålidelighed, «Simply Reliable».

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