



Catalogue

Version 2018

Solide Carbide Drills



ZCC Cutting Tools Europe GmbH

your Partner | your Value



WELCOME TO ZCC CUTTING TOOLS EUROPE

ZCC-CT, one of the World's leading carbide tooling manufacturers, welcomes you to its products. We are able to offer you a wide product range of high performance cutting tools at economic prices and a good supply service to support the production and productivity at your manufacturing facilities. You will find the main tool types in the various sections of the catalogue, Turning is in section A, Milling in section B and Drilling in section C of the catalogue.

We are looking forward to working with you and developing good cooperation together. Our team at ZCC Cutting Tools Europe is ready to support you in all of your requirements.





Member of Minmetals Group



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A

Turning

B

Milling

C

Drilling

D

Technical
Information

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SL SP	1588SL10C		10xD	*	3-14	✓	✓	✓	✓	✓		Deep hole drills	C72
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ST	1534ST03C		3xD	*	3-20	✓	✓			✓		Twist drills	C92
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	1143SC120		-	*	5-20	✓	✓	✓	✓			Centuring drills	C120

✓ Very suitable ✓ Suitable

* With internal cooling SC*: Centuring drills

Coated cemented carbide PVD

Grade	Grade description
KDG303	PVD coated P10–P20/M10–M20/K10–K20 carbide grade for steel, stainless steel and cast iron. Good wear resistance and toughness for a wide application field.

Uncoated cemented carbide

Grade	Grade description
YK20F	Uncoated K20 carbide substrate for steel, cast iron and non ferrous materials.
YK30F	Uncoated K30 carbide substrate for steel, stainless steel, cast iron and non ferrous materials.

A

Turning

B

Milling

C

Drilling

D

Technical
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1 5 3 6 SU 05 C – 0850 (S)

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Type	
Code	Description
1	Drill

1

Shank type	
Code	Description
1	Straight shank
2	Square shank DIN 10
3	Double flattened straight shank DIN 1809
5	Straight shank DIN 6535 HA
6	Weldon shank DIN 6535 HB
7	Whistle Notch shank DIN 6535 HE
9	Morse taper shank

2

Drill type	
Code	Description
0	Twist drill
3	Universal twist drill
4	NC tapping device
5	Step drill
6	Three-lips drill
7	Straight flute drill
8	Deep hole drill

3

Tool length	
Code	Description
1	DIN 338
2	DIN 1897
3	QJ / ZZQ(TO)01.001.002
4	DIN 6537 K
5	DIN 6539
6	DIN 6537 L
7	Factory standard ZCC-C
8	Factory standard ZCC-D
9	Factory standard ZCC-E

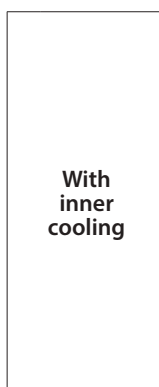
4

Application	
Code	Description
SU	Twist drill for general machining
SUK	Twist drill for cast iron
SL	Twist drill for deep hole drilling
SLK	Deep hole drill for cast iron
SP	Pilot drill
ST	Twist drill for soft steel and stainless steel
SH	Twist drill for hardened materials
SC	Twist drill for non-ferrous metals and cast iron
PA	Three-lips drill for non-ferrous metals and cast iron
PC	Straight flute drill for non-ferrous metals and cast iron

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L/D relation		Angle	
Drill		NC tapping device	
Code	Description	Code	Description
03	3xD	90	90°
05	5xD	120	120°
08	8xD		
10	10xD		
12	12xD		
15	15xD		
20	20xD		
30	30xD		

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7

Bore diameter [mm]	
Code	Description
0200	2.0
0850	8.5
1800	18.0
...	

8

Shank diameter [mm]	
Code	Description
S	4.0

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Machining operations			
Boring	Drilling	Profile drilling	Centering

SU series

Twist drills for general applications

- For high-speed machining of steel and stainless steel.
- Longer tool life with AlTiN coating.
- Diameter range 0.9–20.0 mm (3xD, 5xD, 8xD)



S cut

1538SU

SUK

DIN 1412 D

Twist drills for machining of cast iron

- Special cut for cast iron with ductile iron and malleable cast iron.
- Improved tool life due to impact resistant cutting edges.



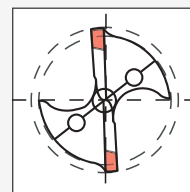
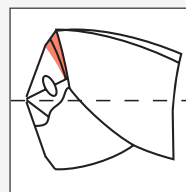
S cut

For cast iron



Twist drill

Form D: Cut for cast iron



All articles SUK on demand.

Please add K when ordering: 1534SUK03-0100

SU(K) drill 3xD

General machining

Add K (SUK) to the code for use on Cast Iron

1534SU03/1534SU03C



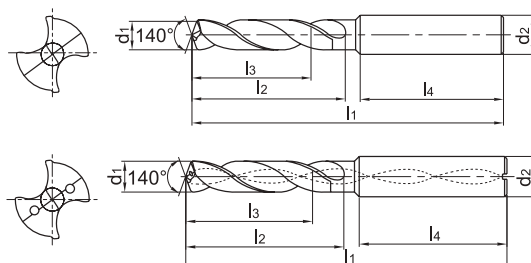
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade	
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303	
1534SU03-0090S		0.9	4	47	4.2	3.4	37.9	○	
1534SU03-0100S		1	4	47	4.7	3.8	37.6	●	
1534SU03-0105S		1.05	4	47	4.9	3.9	37.5	●	
1534SU03-0110S		1.1	4	47	5.2	4.1	37.2	○	
1534SU03-0115S		1.15	4	47	5.4	4.3	37.1	○	
1534SU03-0120S		1.2	4	47	5.6	4.5	37	●	
1534SU03-0125S		1.25	4	47	5.9	4.7	36.8	○	
1534SU03-0130S		1.3	4	47	6.1	4.9	36.6	●	
1534SU03-0135S		1.35	4	47	6.3	5.1	36.5	○	
1534SU03-0140S		1.4	4	47	6.6	5.3	36.3	○	
1534SU03-0145S		1.45	4	47	6.8	5.4	36.2	○	
1534SU03-0147S		1.47	4	47	6.9	5.5	36.1	●	
1534SU03-0150S		1.5	4	47	7.1	5.6	36	●	
1534SU03-0155S		1.55	4	47	7.3	5.8	35.8	○	
1534SU03-0160S		1.6	4	47	7.5	6	35.7	●	
1534SU03-0165S		1.65	4	47	7.8	6.2	35.5	○	
1534SU03-0170S		1.7	4	47	8	6.4	35.4	●	
1534SU03-0175S		1.75	4	47	8.2	6.6	35.2	○	
1534SU03-0180S		1.8	4	47	8.5	6.8	35	●	
1534SU03-0185S		1.85	4	47	8.7	6.9	34.9	○	
1534SU03-0190S		1.9	4	47	8.9	7.1	34.8	●	
1534SU03-0195S		1.95	4	47	9.2	7.3	34.5	○	
1534SU03-0200		2	6	62	20	14	36	●	
1534SU03-0210		2.1	6	62	20	14	36	●	
1534SU03-0220		2.2	6	62	20	14	36	●	
1534SU03-0230		2.3	3	59	13.8	14	36	●	
1534SU03-0240		2.4	6	62	20	14	36	●	
1534SU03-0250		2.5	6	62	20	14	36	●	
1534SU03-0260		2.6	6	62	20	14	36	●	
1534SU03-0270		2.7	6	62	20	14	36	●	
1534SU03-0280		2.8	6	62	20	14	36	●	

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1534SU*	✓	✓	✓			
1534SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

SU(K) drill 3xD**General machining****Add K (SUK) to the code for use on Cast Iron****1534SU03/1534SU03C**

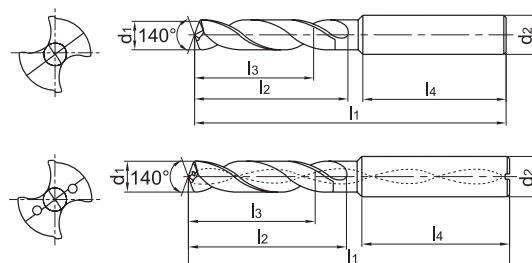
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	
1534SU03-0290		2.9	6	62	20	14	36	●
1534SU03-0300		3	6	62	20	14	36	●
1534SU03C-0300	*	3	6	62	20	14	36	●
1534SU03-0310		3.1	6	62	20	14	36	●
1534SU03C-0310	*	3.1	6	62	20	14	36	●
1534SU03-0320		3.2	6	62	20	14	36	●
1534SU03C-0320	*	3.2	6	62	20	14	36	●
1534SU03-0325		3.25	6	62	20	14	36	●
1534SU03C-0325	*	3.25	6	62	20	14	36	●
1534SU03-0330		3.3	6	62	20	14	36	●
1534SU03C-0330	*	3.3	6	62	20	14	36	●
1534SU03-0340		3.4	6	62	20	14	36	●
1534SU03C-0340	*	3.4	6	62	20	14	36	●
1534SU03-0350		3.5	6	62	20	14	36	●
1534SU03C-0350	*	3.5	6	62	20	14	36	●
1534SU03-0360		3.6	6	62	20	14	36	●
1534SU03C-0360	*	3.6	6	62	20	14	36	●
1534SU03-0370		3.7	6	62	20	14	36	●
1534SU03C-0370	*	3.7	6	62	20	14	36	●
1534SU03-0380		3.8	6	66	24	17	36	●
1534SU03C-0380	*	3.8	6	66	24	17	36	●
1534SU03-0390		3.9	6	66	24	17	36	●
1534SU03C-0390	*	3.9	6	66	24	17	36	●
1534SU03-0400		4	6	66	24	17	36	●
1534SU03C-0400	*	4	6	66	24	17	36	●
1534SU03-0410		4.1	6	66	24	17	36	●
1534SU03C-0410	*	4.1	6	66	24	17	36	●
1534SU03-0420		4.2	6	66	24	17	36	●
1534SU03C-0420	*	4.2	6	66	24	17	36	●
1534SU03-0430		4.3	6	66	24	17	36	●
1534SU03C-0430	*	4.3	6	66	24	17	36	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1534SU*	✓	✓	✓			
1534SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

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Nonstandard order > C177



SU(K) drill 3xD

General machining

Add K (SUK) to the code for use on Cast Iron

1534SU03/1534SU03C



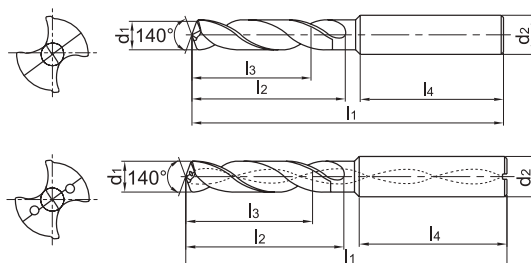
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade	
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303	
1534SU03-0440		4.4	6	66	24	17	36	●	
1534SU03C-0440	*	4.4	6	66	24	17	36	●	
1534SU03-0450		4.5	6	66	24	17	36	●	
1534SU03C-0450	*	4.5	6	66	24	17	36	●	
1534SU03-0460		4.6	6	66	24	17	36	●	
1534SU03C-0460	*	4.6	6	66	24	17	36	●	
1534SU03-0465		4.65	6	66	24	17	36	●	
1534SU03C-0465	*	4.65	6	66	24	17	36	●	
1534SU03-0470		4.7	6	66	24	17	36	●	
1534SU03C-0470	*	4.7	6	66	24	17	36	●	
1534SU03-0480		4.8	6	66	28	20	36	●	
1534SU03C-0480	*	4.8	6	66	28	20	36	●	
1534SU03-0490		4.9	6	66	28	20	36	●	
1534SU03C-0490	*	4.9	6	66	28	20	36	●	
1534SU03-0500		5	6	66	28	20	36	●	
1534SU03C-0500	*	5	6	66	28	20	36	●	
1534SU03-0510		5.1	6	66	28	20	36	●	
1534SU03C-0510	*	5.1	6	66	28	20	36	●	
1534SU03-0520		5.2	6	66	28	20	36	●	
1534SU03C-0520	*	5.2	6	66	28	20	36	●	
1534SU03-0530		5.3	6	66	28	20	36	●	
1534SU03C-0530	*	5.3	6	66	28	20	36	●	
1534SU03-0540		5.4	6	66	28	20	36	●	
1534SU03C-0540	*	5.4	6	66	28	20	36	●	
1534SU03-0550		5.5	6	66	28	20	36	●	
1534SU03C-0550	*	5.5	6	66	28	20	36	●	
1534SU03-0555		5.55	6	66	28	20	36	●	
1534SU03C-0555	*	5.55	6	66	28	20	36	●	
1534SU03-0560		5.6	6	66	28	20	36	●	
1534SU03C-0560	*	5.6	6	66	28	20	36	●	
1534SU03-0570		5.7	6	66	28	20	36	●	

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1534SU*	✓	✓	✓			
1534SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

SU(K) drill 3xD**General machining****Add K (SUK) to the code for use on Cast Iron****1534SU03/1534SU03C**

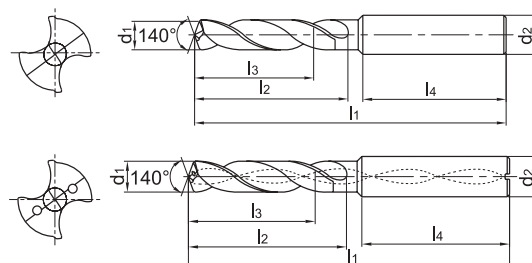
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534SU03C-0570	*	5.7	6	66	28	20	36	●
1534SU03-0580		5.8	6	66	28	20	36	●
1534SU03C-0580	*	5.8	6	66	28	20	36	●
1534SU03-0590		5.9	6	66	28	20	36	●
1534SU03C-0590	*	5.9	6	66	28	20	36	●
1534SU03-0600		6	6	66	28	20	36	●
1534SU03C-0600	*	6	6	66	28	20	36	●
1534SU03-0610		6.1	8	79	34	24	36	●
1534SU03C-0610	*	6.1	8	79	34	24	36	●
1534SU03-0620		6.2	8	79	34	24	36	●
1534SU03C-0620	*	6.2	8	79	34	24	36	●
1534SU03-0630		6.3	8	79	34	24	36	●
1534SU03C-0630	*	6.3	8	79	34	24	36	●
1534SU03-0640		6.4	8	79	34	24	36	●
1534SU03C-0640	*	6.4	8	79	34	24	36	●
1534SU03-0650		6.5	8	79	34	24	36	●
1534SU03C-0650	*	6.5	8	79	34	24	36	●
1534SU03-0660		6.6	8	79	34	24	36	●
1534SU03C-0660	*	6.6	8	79	34	24	36	●
1534SU03-0670		6.7	8	79	34	24	36	●
1534SU03C-0670	*	6.7	8	79	34	24	36	●
1534SU03-0675		6.75	8	79	34	24	36	●
1534SU03C-0675	*	6.75	8	79	34	24	36	●
1534SU03-0680		6.8	8	79	34	24	36	●
1534SU03C-0680	*	6.8	8	79	34	24	36	●
1534SU03-0690		6.9	8	79	34	24	36	●
1534SU03C-0690	*	6.9	8	79	34	24	36	●
1534SU03-0700		7	8	79	34	24	36	●
1534SU03C-0700	*	7	8	79	34	24	36	●
1534SU03-0710		7.1	8	79	41	29	36	●
1534SU03C-0710	*	7.1	8	79	41	29	36	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1534SU*	✓	✓	✓			
1534SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 3xD

General machining

Add K (SUK) to the code for use on Cast Iron

1534SU03/1534SU03C



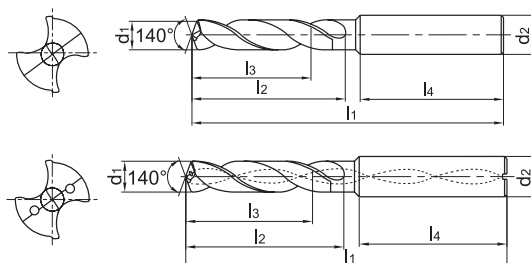
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade	
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303	
1534SU03-0720		7.2	8	79	41	29	36	●	
1534SU03C-0720	*	7.2	8	79	41	29	36	●	
1534SU03-0730		7.3	8	79	41	29	36	●	
1534SU03C-0730	*	7.3	8	79	41	29	36	●	
1534SU03-0740		7.4	8	79	41	29	36	●	
1534SU03C-0740	*	7.4	8	79	41	29	36	●	
1534SU03-0745		7.45	8	79	41	29	36	○	
1534SU03C-0745	*	7.45	8	79	41	29	36	○	
1534SU03-0750		7.5	8	79	41	29	36	●	
1534SU03C-0750	*	7.5	8	79	41	29	36	●	
1534SU03-0760		7.6	8	79	41	29	36	●	
1534SU03C-0760	*	7.6	8	79	41	29	36	●	
1534SU03-0770		7.7	8	79	41	29	36	●	
1534SU03C-0770	*	7.7	8	79	41	29	36	●	
1534SU03-0780		7.8	8	79	41	29	36	●	
1534SU03C-0780	*	7.8	8	79	41	29	36	●	
1534SU03-0790		7.9	8	79	41	29	36	●	
1534SU03C-0790	*	7.9	8	79	41	29	36	●	
1534SU03-0800		8	8	79	41	29	36	●	
1534SU03C-0800	*	8	8	79	41	29	36	●	
1534SU03-0810		8.1	10	89	47	35	40	●	
1534SU03C-0810	*	8.1	10	89	47	35	40	●	
1534SU03-0820		8.2	10	89	47	35	40	●	
1534SU03C-0820	*	8.2	10	89	47	35	40	●	
1534SU03-0830		8.3	10	89	47	35	40	●	
1534SU03C-0830	*	8.3	10	89	47	35	40	●	
1534SU03-0840		8.4	10	89	47	35	40	●	
1534SU03C-0840	*	8.4	10	89	47	35	40	●	
1534SU03-0850		8.5	10	89	47	35	40	●	
1534SU03C-0850	*	8.5	10	89	47	35	40	●	
1534SU03-0860		8.6	10	89	47	35	40	●	

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1534SU*	✓	✓	✓			
1534SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

SU(K) drill 3xD**General machining****Add K (SUK) to the code for use on Cast Iron****1534SU03/1534SU03C**

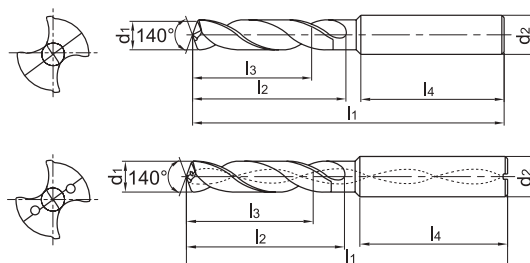
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534SU03C-0860	*	8.6	10	89	47	35	40	●
1534SU03-0870		8.7	10	89	47	35	40	●
1534SU03C-0870	*	8.7	10	89	47	35	40	●
1534SU03-0880		8.8	10	89	47	35	40	●
1534SU03C-0880	*	8.8	10	89	47	35	40	●
1534SU03-0890		8.9	10	89	47	35	40	●
1534SU03C-0890	*	8.9	10	89	47	35	40	●
1534SU03-0900		9	10	89	47	35	40	●
1534SU03C-0900	*	9	10	89	47	35	40	●
1534SU03-0910		9.1	10	89	47	35	40	●
1534SU03C-0910	*	9.1	10	89	47	35	40	●
1534SU03-0920		9.2	10	89	47	35	40	●
1534SU03C-0920	*	9.2	10	89	47	35	40	●
1534SU03-0930		9.3	10	89	47	35	40	●
1534SU03C-0930	*	9.3	10	89	47	35	40	●
1534SU03-0935		9.35	10	89	47	35	40	○
1534SU03C-0935	*	9.35	10	89	47	35	40	○
1534SU03-0940		9.4	10	89	47	35	40	●
1534SU03C-0940	*	9.4	10	89	47	35	40	●
1534SU03-0945		9.45	10	89	47	35	40	○
1534SU03C-0945	*	9.45	10	89	47	35	40	○
1534SU03-0950		9.5	10	89	47	35	40	●
1534SU03C-0950	*	9.5	10	89	47	35	40	●
1534SU03-0960		9.6	10	89	47	35	40	●
1534SU03C-0960	*	9.6	10	89	47	35	40	●
1534SU03-0970		9.7	10	89	47	35	40	●
1534SU03C-0970	*	9.7	10	89	47	35	40	●
1534SU03-0980		9.8	10	89	47	35	40	●
1534SU03C-0980	*	9.8	10	89	47	35	40	●
1534SU03-0990		9.9	10	89	47	35	40	●
1534SU03C-0990	*	9.9	10	89	47	35	40	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1534SU*	✓	✓	✓			
1534SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 3xD

General machining

Add K (SUK) to the code for use on Cast Iron

1534SU03/1534SU03C



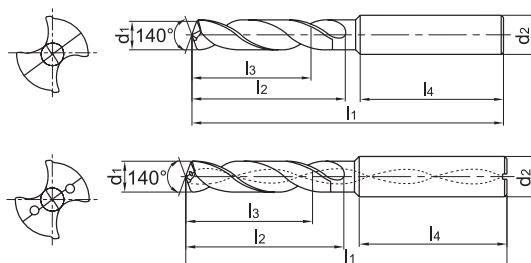
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade	
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303	
1534SU03-1000		10	10	89	47	35	40	●	
1534SU03C-1000	*	10	10	89	47	35	40	●	
1534SU03-1010		10.1	12	102	55	40	45	●	
1534SU03C-1010	*	10.1	12	102	55	40	45	●	
1534SU03-1020		10.2	12	102	55	40	45	●	
1534SU03C-1020	*	10.2	12	102	55	40	45	●	
1534SU03-1025		10.25	12	102	55	40	45	●	
1534SU03C-1025	*	10.25	12	102	55	40	45	●	
1534SU03-1030		10.3	12	102	55	40	45	●	
1534SU03C-1030	*	10.3	12	102	55	40	45	●	
1534SU03-1040		10.4	12	102	55	40	45	●	
1534SU03C-1040	*	10.4	12	102	55	40	45	●	
1534SU03-1050		10.5	12	102	55	40	45	●	
1534SU03C-1050	*	10.5	12	102	55	40	45	●	
1534SU03-1060		10.6	12	102	55	40	45	●	
1534SU03C-1060	*	10.6	12	102	55	40	45	●	
1534SU03-1070		10.7	12	102	55	40	45	●	
1534SU03C-1070	*	10.7	12	102	55	40	45	●	
1534SU03-1080		10.8	12	102	55	40	45	●	
1534SU03C-1080	*	10.8	12	102	55	40	45	●	
1534SU03-1090		10.9	12	102	55	40	45	●	
1534SU03C-1090	*	10.9	12	102	55	40	45	●	
1534SU03-1100		11	12	102	55	40	45	●	
1534SU03C-1100	*	11	12	102	55	40	45	●	
1534SU03-1110		11.1	12	102	55	40	45	●	
1534SU03C-1110	*	11.1	12	102	55	40	45	●	
1534SU03-1120		11.2	12	102	55	40	45	●	
1534SU03C-1120	*	11.2	12	102	55	40	45	●	
1534SU03-1125		11.25	12	102	55	40	45	○	
1534SU03C-1125	*	11.25	12	102	55	40	45	○	
1534SU03-1130		11.3	12	102	55	40	45	●	

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1534SU*	✓	✓	✓			
1534SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

SU(K) drill 3xD**General machining****Add K (SUK) to the code for use on Cast Iron****1534SU03/1534SU03C**

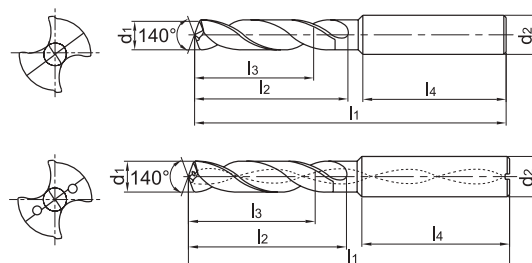
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534SU03C-1130	*	11.3	12	102	55	40	45	●
1534SU03-1135		11.35	12	102	55	40	45	○
1534SU03C-1135	*	11.35	12	102	55	40	45	○
1534SU03-1140		11.4	12	102	55	40	45	●
1534SU03C-1140	*	11.4	12	102	55	40	45	●
1534SU03-1145		11.45	12	102	55	40	45	○
1534SU03C-1145	*	11.45	12	102	55	40	45	○
1534SU03-1150		11.5	12	102	55	40	45	●
1534SU03C-1150	*	11.5	12	102	55	40	45	●
1534SU03-1160		11.6	12	102	55	40	45	●
1534SU03C-1160	*	11.6	12	102	55	40	45	●
1534SU03-1170		11.7	12	102	55	40	45	●
1534SU03C-1170	*	11.7	12	102	55	40	45	●
1534SU03-1180		11.8	12	102	55	40	45	●
1534SU03C-1180	*	11.8	12	102	55	40	45	●
1534SU03-1190		11.9	12	102	55	40	45	●
1534SU03C-1190	*	11.9	12	102	55	40	45	●
1534SU03-1200		12	12	102	55	40	45	●
1534SU03C-1200	*	12	12	102	55	40	45	●
1534SU03-1210		12.1	14	107	60	43	45	●
1534SU03C-1210	*	12.1	14	107	60	43	45	●
1534SU03-1220		12.2	14	107	60	43	45	●
1534SU03C-1220	*	12.2	14	107	60	43	45	●
1534SU03-1225		12.25	14	107	60	43	45	●
1534SU03C-1225	*	12.25	14	107	60	43	45	●
1534SU03-1230		12.3	14	107	60	43	45	●
1534SU03C-1230	*	12.3	14	107	60	43	45	●
1534SU03-1250		12.5	14	107	60	43	45	●
1534SU03C-1250	*	12.5	14	107	60	43	45	●
1534SU03-1270		12.7	14	107	60	43	45	●
1534SU03C-1270	*	12.7	14	107	60	43	45	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1534SU*	✓	✓	✓			
1534SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 3xD

General machining

Add K (SUK) to the code for use on Cast Iron

1534SU03/1534SU03C



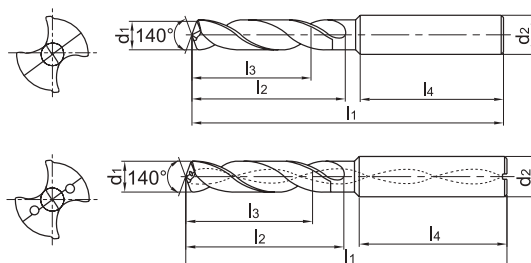
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade	
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303	
1534SU03-1275		12.75	14	107	60	43	45	●	
1534SU03C-1275	*	12.75	14	107	60	43	45	●	
1534SU03-1280		12.8	14	107	60	43	45	●	
1534SU03C-1280	*	12.8	14	107	60	43	45	●	
1534SU03-1300		13	14	107	60	43	45	●	
1534SU03C-1300	*	13	14	107	60	43	45	●	
1534SU03-1310		13.1	14	107	60	43	45	●	
1534SU03C-1310	*	13.1	14	107	60	43	45	●	
1534SU03-1335		13.35	14	107	60	43	45	○	
1534SU03C-1335	*	13.35	14	107	60	43	45	●	
1534SU03-1350		13.5	14	107	60	43	45	●	
1534SU03C-1350	*	13.5	14	107	60	43	45	●	
1534SU03-1380		13.8	14	107	60	43	45	●	
1534SU03C-1380	*	13.8	14	107	60	43	45	●	
1534SU03-1400		14	14	107	60	43	45	●	
1534SU03C-1400	*	14	14	107	60	43	45	●	
1534SU03-1420		14.2	16	107	60	43	45	●	
1534SU03C-1420	*	14.2	16	107	60	43	45	●	
1534SU03-1425		14.25	16	115	65	45	48	●	
1534SU03C-1425	*	14.25	16	115	65	45	48	●	
1534SU03-1430		14.3	16	115	65	45	48	●	
1534SU03C-1430	*	14.3	16	115	65	45	48	●	
1534SU03-1450		14.5	16	115	65	45	48	●	
1534SU03C-1450	*	14.5	16	115	65	45	48	●	
1534SU03-1475		14.75	16	115	65	45	48	●	
1534SU03C-1475	*	14.75	16	115	65	45	48	●	
1534SU03-1480		14.8	16	115	65	45	48	●	
1534SU03C-1480	*	14.8	16	115	65	45	48	●	
1534SU03-1500		15	16	115	65	45	48	●	
1534SU03C-1500	*	15	16	115	65	45	48	●	
1534SU03-1510		15.1	16	115	65	45	48	●	

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1534SU*	✓	✓	✓			
1534SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

SU(K) drill 3xD**General machining****Add K (SUK) to the code for use on Cast Iron****1534SU03/1534SU03C**

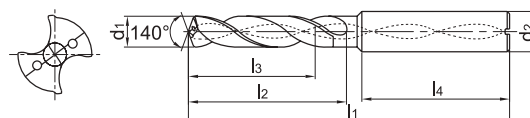
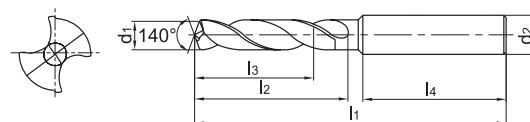
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534SU03C-1510	*	15.1	16	115	65	45	48	●
1534SU03-1530		15.3	16	115	65	45	48	●
1534SU03-1535		15.35	16	115	65	45	48	○
1534SU03C-1535	*	15.35	16	115	65	45	48	○
1534SU03-1550		15.5	16	115	65	45	48	●
1534SU03C-1550	*	15.5	16	115	65	45	48	●
1534SU03-1580		15.8	16	115	65	45	48	●
1534SU03C-1580	*	15.8	16	115	65	45	48	●
1534SU03-1600		16	16	115	65	45	48	●
1534SU03C-1600	*	16	16	115	65	45	48	●
1534SU03-1610		16.1	18	123	73	51	48	●
1534SU03-1650		16.5	18	123	73	51	48	●
1534SU03C-1650	*	16.5	18	123	73	51	48	●
1534SU03-1675		16.75	18	123	73	51	48	●
1534SU03C-1675	*	16.75	18	123	73	51	48	●
1534SU03-1680		16.8	18	123	73	51	48	●
1534SU03C-1680	*	16.8	18	123	73	51	48	●
1534SU03-1700		17	18	123	73	51	48	●
1534SU03C-1700	*	17	18	123	73	51	48	●
1534SU03-1750		17.5	18	123	73	51	48	●
1534SU03C-1750	*	17.5	18	123	73	51	48	●
1534SU03-1780		17.8	18	123	73	51	48	●
1534SU03C-1780	*	17.8	18	123	73	51	48	●
1534SU03-1800		18	18	123	73	51	48	●
1534SU03C-1800	*	18	18	123	73	51	48	●
1534SU03-1850		18.5	20	131	79	55	50	●
1534SU03C-1850	*	18.5	20	131	79	55	50	●
1534SU03-1880		18.8	20	131	79	55	50	●
1534SU03C-1880	*	18.8	20	131	79	55	50	●
1534SU03-1900		19	20	131	79	55	50	●
1534SU03C-1900	*	19	20	131	79	55	50	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1534SU*	✓	✓	✓			
1534SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 3xD

General machining

Add K (SUK) to the code for use on Cast Iron

1534SU03/1534SU03C



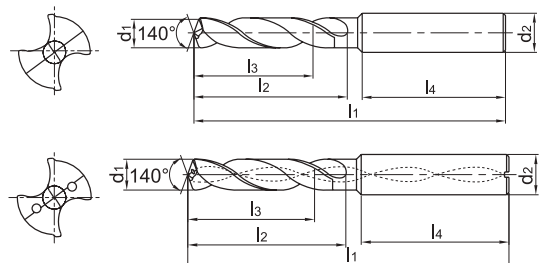
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article		Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534SU03-1950		19.5	20	131	79	55	50	●
1534SU03C-1950	*	19.5	20	131	79	55	50	●
1534SU03-1980		19.8	20	131	79	55	50	●
1534SU03C-1980	*	19.8	20	131	79	55	50	●
1534SU03-2000		20	20	131	79	55	50	●
1534SU03C-2000	*	20	20	131	79	55	50	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1534SU*	✓	✓	✓			
1534SUK*			✓			

✓ Very suitable

✓ Suitable

SU(K) drill 5xD**General machining****Add K (SUK) to the code for use on Cast Iron****1536SU05/1536SU05C**

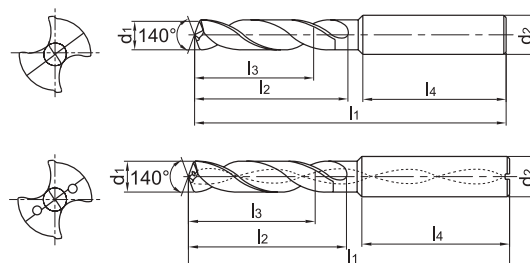
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1536SU05-0200		2	6	66	28	23	36	○
1536SU05-0210		2.1	6	66	28	23	36	●
1536SU05-0220		2.2	6	66	28	23	36	●
1536SU05-0230		2.3	6	66	28	23	36	●
1536SU05-0240		2.4	6	66	28	23	36	●
1536SU05-0250		2.5	6	66	28	23	36	●
1536SU05-0260		2.6	6	66	28	23	36	●
1536SU05-0270		2.7	6	66	28	23	36	●
1536SU05-0280		2.8	6	66	28	23	36	●
1536SU05-0290		2.9	6	66	28	23	36	●
1536SU05-0300		3	6	66	28	23	36	●
1536SU05C-0300	*	3	6	66	28	23	36	●
1536SU05-0310		3.1	6	66	28	23	36	●
1536SU05C-0310	*	3.1	6	66	28	23	36	●
1536SU05-0320		3.2	6	66	28	23	36	●
1536SU05C-0320	*	3.2	6	66	28	23	36	●
1536SU05-0325		3.25	6	66	28	23	36	●
1536SU05C-0325	*	3.25	6	66	28	23	36	●
1536SU05-0330		3.3	6	66	28	23	36	●
1536SU05C-0330	*	3.3	6	66	28	23	36	●
1536SU05-0340		3.4	6	66	28	23	36	●
1536SU05C-0340	*	3.4	6	66	28	23	36	●
1536SU05-0350		3.5	6	66	28	23	36	●
1536SU05C-0350	*	3.5	6	66	28	23	36	●
1536SU05-0360		3.6	6	66	28	23	36	●
1536SU05C-0360	*	3.6	6	66	28	23	36	●
1536SU05-0370		3.7	6	66	28	23	36	●
1536SU05C-0370	*	3.7	6	66	28	23	36	●
1536SU05-0380		3.8	6	74	36	29	36	●
1536SU05C-0380	*	3.8	6	74	36	29	36	●
1536SU05-0390		3.9	6	74	36	29	36	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1536SU*	✓	✓	✓			
1536SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 5xD

General machining

Add K (SUK) to the code for use on Cast Iron

1536SU05/1536SU05C



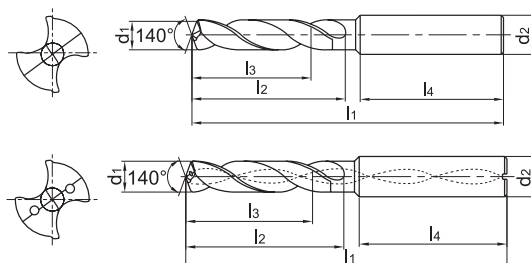
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade	
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303	
1536SU05C-0390	*	3.9	6	74	36	29	36	●	
1536SU05-0400		4	6	74	36	29	36	●	
1536SU05C-0400	*	4	6	74	36	29	36	●	
1536SU05-0410		4.1	6	74	36	29	36	●	
1536SU05C-0410	*	4.1	6	74	36	29	36	●	
1536SU05-0420		4.2	6	74	36	29	36	●	
1536SU05C-0420	*	4.2	6	74	36	29	36	●	
1536SU05-0430		4.3	6	74	36	29	36	●	
1536SU05C-0430	*	4.3	6	74	36	29	36	●	
1536SU05-0440		4.4	6	74	36	29	36	●	
1536SU05C-0440	*	4.4	6	74	36	29	36	●	
1536SU05-0450		4.5	6	74	36	29	36	●	
1536SU05C-0450	*	4.5	6	74	36	29	36	●	
1536SU05-0460		4.6	6	74	36	29	36	●	
1536SU05C-0460	*	4.6	6	74	36	29	36	●	
1536SU05-0465		4.65	6	74	36	29	36	●	
1536SU05C-0465	*	4.65	6	74	36	29	36	●	
1536SU05-0470		4.7	6	74	36	29	36	●	
1536SU05C-0470	*	4.7	6	74	36	29	36	●	
1536SU05-0480		4.8	6	82	44	35	36	●	
1536SU05C-0480	*	4.8	6	82	44	35	36	●	
1536SU05-0490		4.9	6	82	44	35	36	●	
1536SU05C-0490	*	4.9	6	82	44	35	36	●	
1536SU05-0500		5	6	82	44	35	36	●	
1536SU05C-0500	*	5	6	82	44	35	36	●	
1536SU05-0510		5.1	6	82	44	35	36	●	
1536SU05C-0510	*	5.1	6	82	44	35	36	●	
1536SU05-0520		5.2	6	82	44	35	36	●	
1536SU05C-0520	*	5.2	6	82	44	35	36	●	
1536SU05-0530		5.3	6	82	44	35	36	●	
1536SU05C-0530	*	5.3	6	82	44	35	36	●	

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1536SU*	✓	✓	✓			
1536SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

SU(K) drill 5xD
General machining
Add K (SUK) to the code for use on Cast Iron
1536SU05/1536SU05C

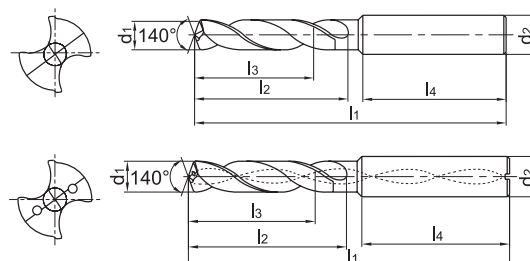

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1536SU05-0540		5.4	6	82	44	35	36	●
1536SU05C-0540	*	5.4	6	82	44	35	36	●
1536SU05-0550		5.5	6	82	44	35	36	●
1536SU05C-0550	*	5.5	6	82	44	35	36	●
1536SU05-0555		5.55	6	82	44	35	36	●
1536SU05C-0555	*	5.55	6	82	44	35	36	●
1536SU05-0560		5.6	6	82	44	35	36	●
1536SU05C-0560	*	5.6	6	82	44	35	36	●
1536SU05-0570		5.7	6	82	44	35	36	●
1536SU05C-0570	*	5.7	6	82	44	35	36	●
1536SU05-0580		5.8	6	82	44	35	36	●
1536SU05C-0580	*	5.8	6	82	44	35	36	●
1536SU05-0590		5.9	6	82	44	35	36	●
1536SU05C-0590	*	5.9	6	82	44	35	36	●
1536SU05-0600		6	6	82	44	35	36	●
1536SU05C-0600	*	6	6	82	44	35	36	●
1536SU05-0610		6.1	8	91	53	43	36	●
1536SU05C-0610	*	6.1	8	91	53	43	36	●
1536SU05-0620		6.2	8	91	53	43	36	●
1536SU05C-0620	*	6.2	8	91	53	43	36	●
1536SU05-0630		6.3	8	91	53	43	36	●
1536SU05C-0630	*	6.3	8	91	53	43	36	●
1536SU05-0640		6.4	8	91	53	43	36	●
1536SU05C-0640	*	6.4	8	91	53	43	36	●
1536SU05-0650		6.5	8	91	53	43	36	●
1536SU05C-0650	*	6.5	8	91	53	43	36	●
1536SU05-0660		6.6	8	91	53	43	36	●
1536SU05C-0660	*	6.6	8	91	53	43	36	●
1536SU05-0670		6.7	8	91	53	43	36	●
1536SU05C-0670	*	6.7	8	91	53	43	36	●
1536SU05-0675		6.75	8	91	53	43	36	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1536SU*	✓	✓	✓			
1536SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 5xD

General machining

Add K (SUK) to the code for use on Cast Iron

1536SU05/1536SU05C



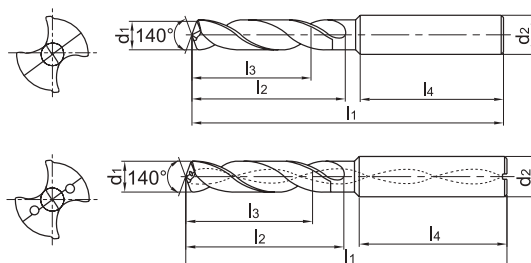
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade	
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303	
1536SU05C-0675	*	6.75	8	91	53	43	36	●	
1536SU05-0680		6.8	8	91	53	43	36	●	
1536SU05C-0680	*	6.8	8	91	53	43	36	●	
1536SU05-0690		6.9	8	91	53	43	36	●	
1536SU05C-0690	*	6.9	8	91	53	43	36	●	
1536SU05-0700		7	8	91	53	43	36	●	
1536SU05C-0700	*	7	8	91	53	43	36	●	
1536SU05-0710		7.1	8	91	53	43	36	●	
1536SU05C-0710	*	7.1	8	91	53	43	36	●	
1536SU05-0720		7.2	8	91	53	43	36	●	
1536SU05C-0720	*	7.2	8	91	53	43	36	●	
1536SU05-0730		7.3	8	91	53	43	36	●	
1536SU05C-0730	*	7.3	8	91	53	43	36	●	
1536SU05-0740		7.4	8	91	53	43	36	●	
1536SU05C-0740	*	7.4	8	91	53	43	36	●	
1536SU05C-0745	*	7.45	8	91	53	43	36	●	
1536SU05-0750		7.5	8	91	53	43	36	●	
1536SU05C-0750	*	7.5	8	91	53	43	36	●	
1536SU05-0760		7.6	8	91	53	43	36	●	
1536SU05C-0760	*	7.6	8	91	53	43	36	●	
1536SU05-0770		7.7	8	91	53	43	36	●	
1536SU05C-0770	*	7.7	8	91	53	43	36	●	
1536SU05-0780		7.8	8	91	53	43	36	●	
1536SU05C-0780	*	7.8	8	91	53	43	36	●	
1536SU05-0790		7.9	8	91	53	43	36	●	
1536SU05C-0790	*	7.9	8	91	53	43	36	●	
1536SU05-0800		8	8	91	53	43	36	●	
1536SU05C-0800	*	8	8	91	53	43	36	●	
1536SU05-0810		8.1	10	103	61	49	40	●	
1536SU05C-0810	*	8.1	10	103	61	49	40	●	
1536SU05-0820		8.2	10	103	61	49	40	●	

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1536SU*	✓	✓	✓			
1536SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

SU(K) drill 5xD
General machining
Add K (SUK) to the code for use on Cast Iron
1536SU05/1536SU05C

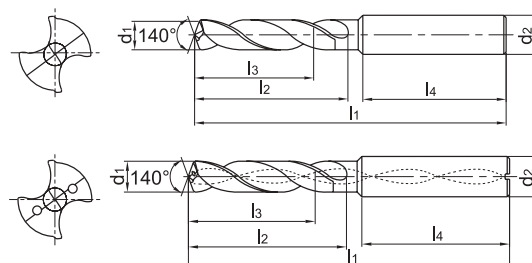

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1536SU05C-0820	*	8.2	10	103	61	49	40	●
1536SU05-0830		8.3	10	103	61	49	40	●
1536SU05C-0830	*	8.3	10	103	61	49	40	●
1536SU05-0840		8.4	10	103	61	49	40	●
1536SU05C-0840	*	8.4	10	103	61	49	40	●
1536SU05-0850		8.5	10	103	61	49	40	●
1536SU05C-0850	*	8.5	10	103	61	49	40	●
1536SU05-0860		8.6	10	103	61	49	40	●
1536SU05C-0860	*	8.6	10	103	61	49	40	●
1536SU05-0870		8.7	10	103	61	49	40	●
1536SU05C-0870	*	8.7	10	103	61	49	40	●
1536SU05-0880		8.8	10	103	61	49	40	●
1536SU05C-0880	*	8.8	10	103	61	49	40	●
1536SU05-0890		8.9	10	103	61	49	40	●
1536SU05C-0890	*	8.9	10	103	61	49	40	●
1536SU05-0900		9	10	103	61	49	40	●
1536SU05C-0900	*	9	10	103	61	49	40	●
1536SU05-0910		9.1	10	103	61	49	40	●
1536SU05C-0910	*	9.1	10	103	61	49	40	●
1536SU05-0920		9.2	10	103	61	49	40	●
1536SU05C-0920	*	9.2	10	103	61	49	40	●
1536SU05-0930		9.3	10	103	61	49	40	●
1536SU05C-0930	*	9.3	10	103	61	49	40	●
1536SU05-0935		9.35	10	103	61	49	40	●
1536SU05C-0935	*	9.35	10	103	61	49	40	○
1536SU05-0940		9.4	10	103	61	49	40	●
1536SU05C-0940	*	9.4	10	103	61	49	40	●
1536SU05-0945		9.45	10	103	61	49	40	●
1536SU05C-0945	*	9.45	10	103	61	49	40	○
1536SU05-0950		9.5	10	103	61	49	40	●
1536SU05C-0950	*	9.5	10	103	61	49	40	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1536SU*	✓	✓	✓			
1536SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 5xD

General machining

Add K (SUK) to the code for use on Cast Iron

1536SU05/1536SU05C



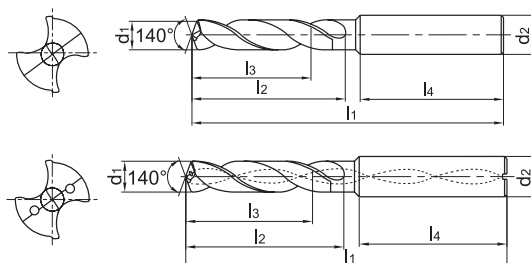
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade	
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303	
1536SU05-0960		9.6	10	103	61	49	40	●	
1536SU05C-0960	*	9.6	10	103	61	49	40	●	
1536SU05-0970		9.7	10	103	61	49	40	●	
1536SU05C-0970	*	9.7	10	103	61	49	40	●	
1536SU05-0980		9.8	10	103	61	49	40	●	
1536SU05C-0980	*	9.8	10	103	61	49	40	●	
1536SU05-0990		9.9	10	103	61	49	40	●	
1536SU05C-0990	*	9.9	10	103	61	49	40	●	
1536SU05-1000		10	10	103	61	49	40	●	
1536SU05C-1000	*	10	10	103	61	49	40	●	
1536SU05-1010		10.1	12	118	71	56	45	●	
1536SU05C-1010	*	10.1	12	118	71	56	45	●	
1536SU05-1020		10.2	12	118	71	56	45	●	
1536SU05C-1020	*	10.2	12	118	71	56	45	●	
1536SU05-1025		10.25	12	118	71	56	45	●	
1536SU05C-1025	*	10.25	12	118	71	56	45	●	
1536SU05-1030		10.3	12	118	71	56	45	●	
1536SU05C-1030	*	10.3	12	118	71	56	45	●	
1536SU05-1040		10.4	12	118	71	56	45	●	
1536SU05C-1040	*	10.4	12	118	71	56	45	●	
1536SU05-1050		10.5	12	118	71	56	45	●	
1536SU05C-1050	*	10.5	12	118	71	56	45	●	
1536SU05-1060		10.6	12	118	71	56	45	●	
1536SU05C-1060	*	10.6	12	118	71	56	45	●	
1536SU05-1070		10.7	12	118	71	56	45	●	
1536SU05C-1070	*	10.7	12	118	71	56	45	●	
1536SU05-1080		10.8	12	118	71	56	45	●	
1536SU05C-1080	*	10.8	12	118	71	56	45	●	
1536SU05-1090		10.9	12	118	71	56	45	●	
1536SU05C-1090	*	10.9	12	118	71	56	45	●	
1536SU05-1100		11	12	118	71	56	45	●	

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1536SU*	✓	✓	✓			
1536SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

SU(K) drill 5xD**General machining****Add K (SUK) to the code for use on Cast Iron****1536SU05/1536SU05C**

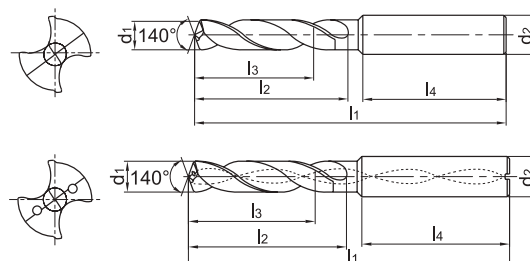
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1536SU05C-1100	*	11	12	118	71	56	45	●
1536SU05-1110		11.1	12	118	71	56	45	●
1536SU05C-1110	*	11.1	12	118	71	56	45	●
1536SU05-1120		11.2	12	118	71	56	45	●
1536SU05C-1120	*	11.2	12	118	71	56	45	●
1536SU05-1125		11.25	12	118	71	56	45	●
1536SU05C-1125	*	11.25	12	118	71	56	45	○
1536SU05-1130		11.3	12	118	71	56	45	●
1536SU05C-1130	*	11.3	12	118	71	56	45	●
1536SU05-1135		11.35	12	118	71	56	45	●
1536SU05C-1135	*	11.35	12	118	71	56	45	○
1536SU05-1140		11.4	12	118	71	56	45	●
1536SU05C-1140	*	11.4	12	118	71	56	45	●
1536SU05-1145		11.45	12	118	71	56	45	○
1536SU05C-1145	*	11.45	12	118	71	56	45	○
1536SU05-1150		11.5	12	118	71	56	45	●
1536SU05C-1150	*	11.5	12	118	71	56	45	●
1536SU05-1160		11.6	12	118	71	56	45	●
1536SU05C-1160	*	11.6	12	118	71	56	45	●
1536SU05-1170		11.7	12	118	71	56	45	●
1536SU05C-1170	*	11.7	12	118	71	56	45	●
1536SU05-1180		11.8	12	118	71	56	45	●
1536SU05C-1180	*	11.8	12	118	71	56	45	●
1536SU05-1190		11.9	12	118	71	56	45	●
1536SU05C-1190	*	11.9	12	118	71	56	45	●
1536SU05-1200		12	12	118	71	56	45	●
1536SU05C-1200	*	12	12	118	71	56	45	●
1536SU05-1210		12.1	14	124	77	60	45	●
1536SU05C-1210	*	12.1	14	124	77	60	45	●
1536SU05-1220		12.2	14	124	77	60	45	●
1536SU05C-1220	*	12.2	14	124	77	60	45	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1536SU*	✓	✓	✓			
1536SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 5xD

General machining

Add K (SUK) to the code for use on Cast Iron

1536SU05/1536SU05C



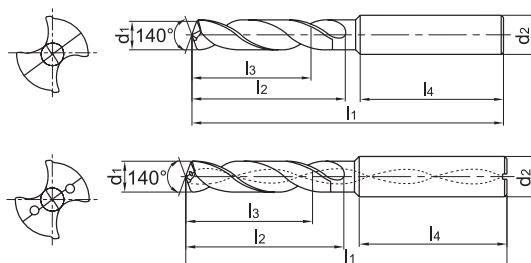
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade	
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303	
1536SU05-1225		12.25	14	124	77	60	45	●	
1536SU05C-1225	*	12.25	14	124	77	60	45	●	
1536SU05-1230		12.3	14	124	77	60	45	●	
1536SU05C-1230	*	12.3	14	124	77	60	45	●	
1536SU05-1250		12.5	14	124	77	60	45	●	
1536SU05C-1250	*	12.5	14	124	77	60	45	●	
1536SU05-1270		12.7	14	124	77	60	45	●	
1536SU05C-1270	*	12.7	14	124	77	60	45	●	
1536SU05-1275		12.75	14	124	77	60	45	●	
1536SU05C-1275	*	12.75	14	124	77	60	45	●	
1536SU05-1280		12.8	14	124	77	60	45	●	
1536SU05C-1280	*	12.8	14	124	77	60	45	●	
1536SU05-1300		13	14	124	77	60	45	●	
1536SU05C-1300	*	13	14	124	77	60	45	●	
1536SU05-1310		13.1	14	124	77	60	45	●	
1536SU05C-1310	*	13.1	14	124	77	60	45	●	
1536SU05-1335		13.35	14	124	77	60	56	○	
1536SU05C-1335	*	13.35	14	124	77	60	56	○	
1536SU05-1350		13.5	14	124	77	60	45	●	
1536SU05C-1350	*	13.5	14	124	77	60	45	●	
1536SU05-1380		13.8	14	124	77	60	45	●	
1536SU05C-1380	*	13.8	14	124	77	60	45	●	
1536SU05-1400		14	14	124	77	60	45	●	
1536SU05C-1400	*	14	14	124	77	60	45	●	
1536SU05-1420		14.2	16	124	77	60	45	●	
1536SU05C-1420	*	14.2	16	124	77	60	45	●	
1536SU05-1425		14.25	16	133	83	63	48	●	
1536SU05C-1425	*	14.25	16	133	83	63	48	●	
1536SU05-1430		14.3	16	133	83	63	48	●	
1536SU05C-1430	*	14.3	16	133	83	63	48	●	
1536SU05-1450		14.5	16	133	83	63	48	●	

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1536SU*	✓	✓	✓			
1536SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

SU(K) drill 5xD**General machining****Add K (SUK) to the code for use on Cast Iron****1536SU05/1536SU05C**

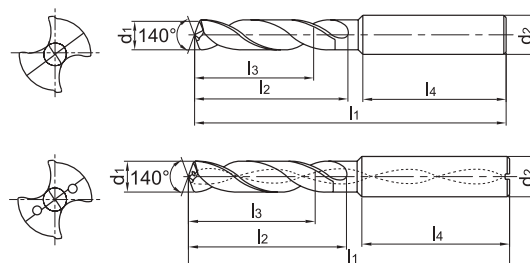
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1536SU05C-1450	*	14.5	16	133	83	63	48	●
1536SU05-1475		14.75	16	133	83	63	48	●
1536SU05C-1475	*	14.75	16	133	83	63	48	●
1536SU05-1480		14.8	16	133	83	63	48	●
1536SU05C-1480	*	14.8	16	133	83	63	48	●
1536SU05-1500		15	16	133	83	63	48	●
1536SU05C-1500	*	15	16	133	83	63	48	●
1536SU05-1510		15.1	16	133	83	63	48	●
1536SU05C-1510	*	15.1	16	133	83	63	48	●
1536SU05C-1530	*	15.3	16	133	83	63	48	●
1536SU05-1535		15.35	16	133	83	63	48	○
1536SU05C-1535	*	15.35	16	133	83	63	48	○
1536SU05-1550		15.5	16	133	83	63	48	●
1536SU05C-1550	*	15.5	16	133	83	63	48	●
1536SU05-1580		15.8	16	133	83	63	48	●
1536SU05C-1580	*	15.8	16	133	83	63	48	●
1536SU05-1600		16	16	133	83	63	48	●
1536SU05C-1600	*	16	16	133	83	63	48	●
1536SU05-1650		16.5	18	143	93	71	48	●
1536SU05C-1650	*	16.5	18	143	93	71	48	●
1536SU05-1675		16.75	18	143	93	71	48	●
1536SU05C-1675	*	16.75	18	143	93	71	48	●
1536SU05-1680		16.8	18	143	93	71	48	●
1536SU05C-1680	*	16.8	18	143	93	71	48	●
1536SU05-1700		17	18	143	93	71	48	●
1536SU05C-1700	*	17	18	143	93	71	48	●
1536SU05-1750		17.5	18	143	93	71	48	●
1536SU05C-1750	*	17.5	18	143	93	71	48	●
1536SU05-1780		17.8	18	143	93	71	48	●
1536SU05C-1780	*	17.8	18	143	93	71	48	●
1536SU05-1800		18	18	143	93	71	48	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1536SU*	✓	✓	✓			
1536SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 5xD

General machining

Add K (SUK) to the code for use on Cast Iron

1536SU05/1536SU05C



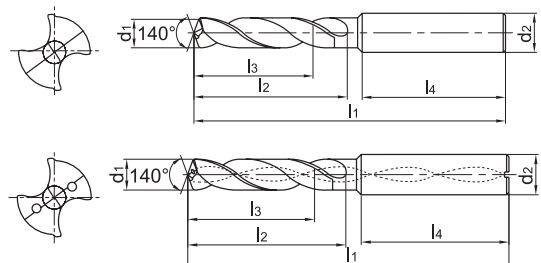
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1536SU05C-1800	*	18	18	143	93	71	48	●
1536SU05-1850		18.5	20	153	101	77	50	●
1536SU05C-1850	*	18.5	20	153	101	77	50	●
1536SU05-1880		18.8	20	153	101	77	50	●
1536SU05C-1880	*	18.8	20	153	101	77	50	●
1536SU05-1900		19	20	153	101	77	50	●
1536SU05C-1900	*	19	20	153	101	77	50	●
1536SU05-1950		19.5	20	153	101	77	50	●
1536SU05C-1950	*	19.5	20	153	101	77	50	●
1536SU05-1980		19.8	20	153	101	77	50	●
1536SU05C-1980	*	19.8	20	153	101	77	50	●
1536SU05-2000		20	20	153	101	77	50	●
1536SU05C-2000	*	20	20	153	101	77	50	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1536SU*	✓	✓	✓			
1536SUK*			✓			

✓ Very suitable

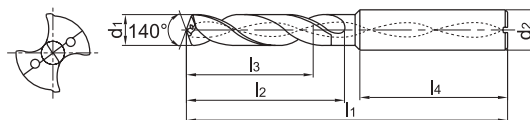
✓ Suitable

SU(K) drill 8xD**General machining****Add K (SUK) to the code for use on Cast Iron****1538SU08C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1538SU08C-0300	*	3	6	72	34	29	36	●
1538SU08C-0310	*	3.1	6	72	34	29	36	●
1538SU08C-0320	*	3.2	6	72	34	29	36	●
1538SU08C-0330	*	3.3	6	72	34	29	36	●
1538SU08C-0340	*	3.4	6	72	34	29	36	●
1538SU08C-0350	*	3.5	6	72	34	29	36	●
1538SU08C-0360	*	3.6	6	72	34	29	36	●
1538SU08C-0370	*	3.7	6	72	34	29	36	●
1538SU08C-0380	*	3.8	6	81	43	36	36	●
1538SU08C-0390	*	3.9	6	81	43	36	36	●
1538SU08C-0400	*	4	6	81	43	36	36	●
1538SU08C-0410	*	4.1	6	81	43	36	36	●
1538SU08C-0420	*	4.2	6	81	43	36	36	●
1538SU08C-0430	*	4.3	6	81	43	36	36	●
1538SU08C-0440	*	4.4	6	81	43	36	36	●
1538SU08C-0450	*	4.5	6	81	43	36	36	●
1538SU08C-0460	*	4.6	6	81	43	36	36	●
1538SU08C-0470	*	4.7	6	81	43	36	36	●
1538SU08C-0480	*	4.8	6	95	57	48	36	●
1538SU08C-0490	*	4.9	6	95	57	48	36	●
1538SU08C-0500	*	5	6	95	57	48	36	●
1538SU08C-0510	*	5.1	6	95	57	48	36	●
1538SU08C-0520	*	5.2	6	95	57	48	36	●
1538SU08C-0530	*	5.3	6	95	57	48	36	●
1538SU08C-0540	*	5.4	6	95	57	48	36	●
1538SU08C-0550	*	5.5	6	95	57	48	36	●
1538SU08C-0560	*	5.6	6	95	57	48	36	●
1538SU08C-0570	*	5.7	6	95	57	48	36	●
1538SU08C-0580	*	5.8	6	95	57	48	36	●
1538SU08C-0590	*	5.9	6	95	57	48	36	●
1538SU08C-0600	*	6	6	95	57	48	36	●
1538SU08C-0610	*	6.1	8	114	76	66	36	●
1538SU08C-0620	*	6.2	8	114	76	66	36	●
1538SU08C-0630	*	6.3	8	114	76	66	36	●
1538SU08C-0640	*	6.4	8	114	76	66	36	●
1538SU08C-0650	*	6.5	8	114	76	66	36	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1538SU*	✓	✓	✓			
1538SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 8x2

General machining

Add K (SUK) to the code for use on Cast Iron

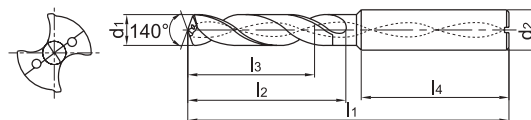
1538SU08C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1538SU08C-0660	*	6.6	8	114	76	66	36	●
1538SU08C-0670	*	6.7	8	114	76	66	36	●
1538SU08C-0680	*	6.8	8	114	76	66	36	●
1538SU08C-0690	*	6.9	8	114	76	66	36	●
1538SU08C-0700	*	7	8	116	76	66	36	●
1538SU08C-0710	*	7.1	8	116	76	66	36	●
1538SU08C-0720	*	7.2	8	116	76	66	36	●
1538SU08C-0730	*	7.3	8	116	76	66	36	●
1538SU08C-0740	*	7.4	8	116	76	66	36	●
1538SU08C-0750	*	7.5	8	116	76	66	36	●
1538SU08C-0760	*	7.6	8	116	76	66	36	●
1538SU08C-0770	*	7.7	8	116	76	66	36	●
1538SU08C-0780	*	7.8	8	116	76	66	36	●
1538SU08C-0790	*	7.9	8	116	76	66	36	●
1538SU08C-0800	*	8	8	116	76	66	36	●
1538SU08C-0810	*	8.1	10	142	95	83	40	●
1538SU08C-0820	*	8.2	10	142	95	83	40	●
1538SU08C-0830	*	8.3	10	142	95	83	40	●
1538SU08C-0840	*	8.4	10	142	95	83	40	●
1538SU08C-0850	*	8.5	10	142	95	83	40	●
1538SU08C-0860	*	8.6	10	142	95	83	40	●
1538SU08C-0870	*	8.7	10	142	95	83	40	●
1538SU08C-0880	*	8.8	10	142	95	83	40	●
1538SU08C-0890	*	8.9	10	142	95	83	40	●
1538SU08C-0900	*	9	10	142	95	83	40	●
1538SU08C-0910	*	9.1	10	142	95	83	40	●
1538SU08C-0920	*	9.2	10	142	95	83	40	●
1538SU08C-0930	*	9.3	10	142	95	83	40	●
1538SU08C-0940	*	9.4	10	142	95	83	40	●
1538SU08C-0950	*	9.5	10	142	95	83	40	●
1538SU08C-0960	*	9.6	10	142	95	83	40	●
1538SU08C-0970	*	9.7	10	142	95	83	40	●
1538SU08C-0980	*	9.8	10	142	95	83	40	●
1538SU08C-0990	*	9.9	10	142	95	83	40	●
1538SU08C-1000	*	10	10	142	95	83	40	●
1538SU08C-1010	*	10.1	12	162	114	99	45	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1538SU*	✓	✓	✓			
1538SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

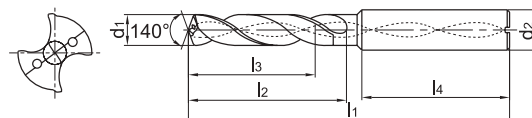
Nonstandard order > C177

SU(K) drill 8xD**General machining****Add K (SUK) to the code for use on Cast Iron****1538SU08C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1538SU08C-1020	*	10.2	12	162	114	99	45	●
1538SU08C-1030	*	10.3	12	162	114	99	45	●
1538SU08C-1040	*	10.4	12	162	114	99	45	●
1538SU08C-1050	*	10.5	12	162	114	99	45	●
1538SU08C-1060	*	10.6	12	162	114	99	45	●
1538SU08C-1070	*	10.7	12	162	114	99	45	●
1538SU08C-1080	*	10.8	12	162	114	99	45	●
1538SU08C-1090	*	10.9	12	162	114	99	45	●
1538SU08C-1100	*	11	12	162	114	99	45	●
1538SU08C-1110	*	11.1	12	162	114	99	45	●
1538SU08C-1120	*	11.2	12	162	114	99	45	●
1538SU08C-1130	*	11.3	12	162	114	99	45	●
1538SU08C-1140	*	11.4	12	162	114	99	45	●
1538SU08C-1150	*	11.5	12	162	114	99	45	●
1538SU08C-1160	*	11.6	12	162	114	99	45	●
1538SU08C-1170	*	11.7	12	162	114	99	45	●
1538SU08C-1180	*	11.8	12	162	114	99	45	●
1538SU08C-1190	*	11.9	12	162	114	99	45	●
1538SU08C-1200	*	12	12	162	114	99	45	●
1538SU08C-1250	*	12.5	14	178	133	116	45	●
1538SU08C-1270	*	12.7	14	178	133	116	45	●
1538SU08C-1280	*	12.8	14	178	133	116	45	●
1538SU08C-1300	*	13	14	178	133	116	45	●
1538SU08C-1350	*	13.5	14	178	133	116	45	●
1538SU08C-1400	*	14	14	178	133	116	45	●
1538SU08C-1450	*	14.5	16	204	152	132	48	●
1538SU08C-1480	*	14.8	16	204	152	132	48	●
1538SU08C-1500	*	15	16	204	152	132	48	●
1538SU08C-1550	*	15.5	16	204	152	132	48	●
1538SU08C-1600	*	16	16	204	152	132	48	●
1538SU08C-1650	*	16.5	18	223	171	149	48	●
1538SU08C-1700	*	17	18	223	171	149	48	●
1538SU08C-1750	*	17.5	18	223	171	149	48	●
1538SU08C-1800	*	18	18	223	171	149	48	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1538SU*	✓	✓	✓			
1538SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 3xD

General machining

Add K (SUK) to the code for use on Cast Iron

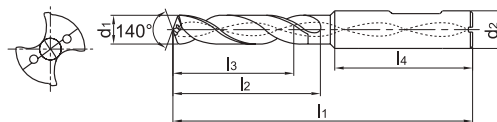
1634SU03C



- Weldon clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1634SU03C-0300	*	3	6	62	20	14	36	●
1634SU03C-0310	*	3.1	6	62	20	14	36	●
1634SU03C-0320	*	3.2	6	62	20	14	36	●
1634SU03C-0325	*	3.25	6	62	20	14	36	○
1634SU03C-0330	*	3.3	6	62	20	14	36	●
1634SU03C-0340	*	3.4	6	62	20	14	36	●
1634SU03C-0350	*	3.5	6	62	20	14	36	●
1634SU03C-0360	*	3.6	6	62	20	14	36	●
1634SU03C-0370	*	3.7	6	62	20	14	36	●
1634SU03C-0380	*	3.8	6	66	24	17	36	●
1634SU03C-0390	*	3.9	6	66	24	17	36	●
1634SU03C-0400	*	4	6	66	24	17	36	●
1634SU03C-0410	*	4.1	6	66	24	17	36	●
1634SU03C-0420	*	4.2	6	66	24	17	36	●
1634SU03C-0430	*	4.3	6	66	24	17	36	●
1634SU03C-0440	*	4.4	6	66	24	17	36	●
1634SU03C-0450	*	4.5	6	66	24	17	36	●
1634SU03C-0460	*	4.6	6	66	24	17	36	●
1634SU03C-0465	*	4.65	6	66	24	17	36	○
1634SU03C-0470	*	4.7	6	66	24	17	36	●
1634SU03C-0480	*	4.8	6	66	28	20	36	●
1634SU03C-0490	*	4.9	6	66	28	20	36	●
1634SU03C-0500	*	5	6	66	28	20	36	●
1634SU03C-0510	*	5.1	6	66	28	20	36	●
1634SU03C-0520	*	5.2	6	66	28	20	36	●
1634SU03C-0530	*	5.3	6	66	28	20	36	●
1634SU03C-0540	*	5.4	6	66	28	20	36	●
1634SU03C-0550	*	5.5	6	66	28	20	36	●
1634SU03C-0555	*	5.55	6	66	28	20	36	●
1634SU03C-0560	*	5.6	6	66	28	20	36	●
1634SU03C-0570	*	5.7	6	66	28	20	36	●
1634SU03C-0580	*	5.8	6	66	28	20	36	●
1634SU03C-0590	*	5.9	6	66	28	20	36	●
1634SU03C-0600	*	6	6	66	28	20	36	●
1634SU03C-0610	*	6.1	8	79	34	24	36	●
1634SU03C-0620	*	6.2	8	79	34	24	36	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1634SU*	✓	✓	✓			
1634SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

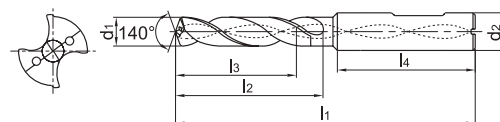
Nonstandard order > C177

SU(K) drill 3xD**General machining****Add K (SUK) to the code for use on Cast Iron****1634SU03C**

- Weldon clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1634SU03C-0630	*	6.3	8	79	34	24	36	●
1634SU03C-0640	*	6.4	8	79	34	24	36	●
1634SU03C-0650	*	6.5	8	79	34	24	36	●
1634SU03C-0660	*	6.6	8	79	34	24	36	●
1634SU03C-0670	*	6.7	8	79	34	24	36	●
1634SU03C-0675	*	6.75	8	79	34	24	36	○
1634SU03C-0680	*	6.8	8	79	34	24	36	●
1634SU03C-0690	*	6.9	8	79	34	24	36	●
1634SU03C-0700	*	7	8	79	34	24	36	●
1634SU03C-0710	*	7.1	8	79	41	29	36	●
1634SU03C-0720	*	7.2	8	79	41	29	36	●
1634SU03C-0730	*	7.3	8	79	41	29	36	●
1634SU03C-0740	*	7.4	8	79	41	29	36	●
1634SU03C-0745	*	7.45	8	79	41	29	36	○
1634SU03C-0750	*	7.5	8	79	41	29	36	●
1634SU03C-0760	*	7.6	8	79	41	29	36	●
1634SU03C-0770	*	7.7	8	79	41	29	36	●
1634SU03C-0780	*	7.8	8	79	41	29	36	●
1634SU03C-0790	*	7.9	8	79	41	29	36	●
1634SU03C-0800	*	8	8	79	41	29	36	●
1634SU03C-0810	*	8.1	10	89	47	35	40	●
1634SU03C-0820	*	8.2	10	89	47	35	40	●
1634SU03C-0830	*	8.3	10	89	47	35	40	●
1634SU03C-0840	*	8.4	10	89	47	35	40	●
1634SU03C-0850	*	8.5	10	89	47	35	40	●
1634SU03C-0860	*	8.6	10	89	47	35	40	●
1634SU03C-0870	*	8.7	10	89	47	35	40	●
1634SU03C-0880	*	8.8	10	89	47	35	40	●
1634SU03C-0890	*	8.9	10	89	47	35	40	●
1634SU03C-0900	*	9	10	89	47	35	40	●
1634SU03C-0910	*	9.1	10	89	47	35	40	●
1634SU03C-0920	*	9.2	10	89	47	35	40	●
1634SU03C-0930	*	9.3	10	89	47	35	40	●
1634SU03C-0935	*	9.35	10	89	47	35	40	○
1634SU03C-0940	*	9.4	10	89	47	35	40	●
1634SU03C-0945	*	9.45	10	89	47	35	40	○

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1634SU*	✓	✓	✓			
1634SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 3xD

General machining

Add K (SUK) to the code for use on Cast Iron

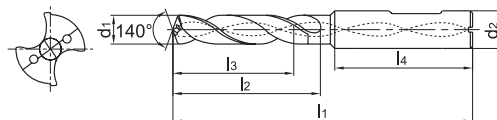
1634SU03C



- Weldon clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1634SU03C-0950	*	9.5	10	89	47	35	40	●
1634SU03C-0960	*	9.6	10	89	47	35	40	●
1634SU03C-0970	*	9.7	10	89	47	35	40	●
1634SU03C-0980	*	9.8	10	89	47	35	40	●
1634SU03C-0990	*	9.9	10	89	47	35	40	●
1634SU03C-1000	*	10	10	89	47	35	40	●
1634SU03C-1010	*	10.1	12	102	55	40	45	●
1634SU03C-1020	*	10.2	12	102	55	40	45	●
1634SU03C-1025	*	10.25	12	102	55	40	45	●
1634SU03C-1030	*	10.3	12	102	55	40	45	●
1634SU03C-1040	*	10.4	12	102	55	40	45	●
1634SU03C-1050	*	10.5	12	102	55	40	45	●
1634SU03C-1060	*	10.6	12	102	55	40	45	●
1634SU03C-1070	*	10.7	12	102	55	40	45	●
1634SU03C-1080	*	10.8	12	102	55	40	45	●
1634SU03C-1090	*	10.9	12	102	55	40	45	●
1634SU03C-1100	*	11	12	102	55	40	45	●
1634SU03C-1110	*	11.1	12	102	55	40	45	●
1634SU03C-1120	*	11.2	12	102	55	40	45	●
1634SU03C-1125	*	11.25	12	102	55	40	45	○
1634SU03C-1130	*	11.3	12	102	55	40	45	●
1634SU03C-1135	*	11.35	12	102	55	40	45	○
1634SU03C-1140	*	11.4	12	102	55	40	45	●
1634SU03C-1145	*	11.45	12	102	55	40	45	○
1634SU03C-1150	*	11.5	12	102	55	40	45	●
1634SU03C-1160	*	11.6	12	102	55	40	45	●
1634SU03C-1170	*	11.7	12	102	55	40	45	●
1634SU03C-1180	*	11.8	12	102	55	40	45	●
1634SU03C-1190	*	11.9	12	102	55	40	45	●
1634SU03C-1200	*	12	12	102	55	40	45	●
1634SU03C-1210	*	12.1	14	107	60	43	45	●
1634SU03C-1220	*	12.2	14	107	60	43	45	●
1634SU03C-1225	*	12.25	14	107	60	43	45	○
1634SU03C-1230	*	12.3	14	107	60	43	45	●
1634SU03C-1250	*	12.5	14	107	60	43	45	●
1634SU03C-1270	*	12.7	14	107	60	43	45	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1634SU*	✓	✓	✓			
1634SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

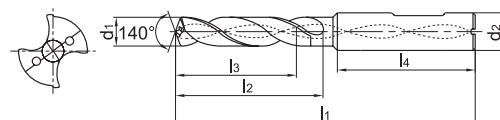
Nonstandard order > C177

SU(K) drill 3xD
General machining
Add K (SUK) to the code for use on Cast Iron
1634SU03C


- Weldon clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1634SU03C-1275	*	12.75	14	107	60	43	45	○
1634SU03C-1280	*	12.8	14	107	60	43	45	●
1634SU03C-1300	*	13	14	107	60	43	45	●
1634SU03C-1310	*	13.1	14	107	60	43	45	●
1634SU03C-1335	*	13.35	14	107	60	43	45	○
1634SU03C-1350	*	13.5	14	107	60	43	45	●
1634SU03C-1380	*	13.8	14	107	60	43	45	●
1634SU03C-1400	*	14	14	107	60	43	45	●
1634SU03C-1420	*	14.2	16	107	60	43	45	○
1634SU03C-1425	*	14.25	16	115	65	45	48	○
1634SU03C-1430	*	14.3	16	115	65	45	48	○
1634SU03C-1450	*	14.5	16	115	65	45	48	●
1634SU03C-1475	*	14.75	16	115	65	45	48	○
1634SU03C-1480	*	14.8	16	115	65	45	48	●
1634SU03C-1500	*	15	16	115	65	45	48	●
1634SU03C-1510	*	15.1	16	115	65	45	48	●
1634SU03C-1535	*	15.35	16	115	65	45	48	○
1634SU03C-1550	*	15.5	16	115	65	45	48	○
1634SU03C-1580	*	15.8	16	115	65	45	48	○
1634SU03C-1600	*	16	16	115	65	45	48	●
1634SU03C-1650	*	16.5	18	123	73	51	48	○
1634SU03C-1675	*	16.75	18	123	73	51	48	○
1634SU03C-1680	*	16.8	18	123	73	51	48	○
1634SU03C-1700	*	17	18	123	73	51	48	●
1634SU03C-1750	*	17.5	18	123	73	51	48	○
1634SU03C-1780	*	17.8	18	123	73	51	48	○
1634SU03C-1800	*	18	18	123	73	51	48	●
1634SU03C-1850	*	18.5	20	131	79	55	50	○
1634SU03C-1880	*	18.8	20	131	79	55	50	○
1634SU03C-1900	*	19	20	131	79	55	50	○
1634SU03C-1950	*	19.5	20	131	79	55	50	●
1634SU03C-1980	*	19.8	20	131	79	55	50	○
1634SU03C-2000	*	20	20	131	79	55	50	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1634SU*	✓	✓	✓			
1634SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 5xD

General machining

Add K (SUK) to the code for use on Cast Iron

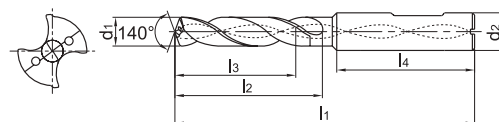
1636SU05C



- Weldon clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1636SU05C-0300	*	3	6	62	20	14	36	●
1636SU05C-0310	*	3.1	6	66	28	23	36	●
1636SU05C-0320	*	3.2	6	66	28	23	36	●
1636SU05C-0325	*	3.25	6	66	28	23	36	○
1636SU05C-0330	*	3.3	6	66	28	23	36	●
1636SU05C-0340	*	3.4	6	66	28	23	36	●
1636SU05C-0350	*	3.5	6	66	28	23	36	●
1636SU05C-0360	*	3.6	6	66	28	23	36	●
1636SU05C-0370	*	3.7	6	66	28	23	36	●
1636SU05C-0380	*	3.8	6	74	36	29	36	●
1636SU05C-0390	*	3.9	6	74	36	29	36	●
1636SU05C-0400	*	4	6	74	36	29	36	●
1636SU05C-0410	*	4.1	6	74	36	29	36	●
1636SU05C-0420	*	4.2	6	74	36	29	36	●
1636SU05C-0430	*	4.3	6	74	36	29	36	●
1636SU05C-0440	*	4.4	6	74	36	29	36	●
1636SU05C-0450	*	4.5	6	74	36	29	36	●
1636SU05C-0460	*	4.6	6	74	36	29	36	●
1636SU05C-0465	*	4.65	6	74	36	29	36	●
1636SU05C-0470	*	4.7	6	74	36	29	36	●
1636SU05C-0480	*	4.8	6	82	44	35	36	●
1636SU05C-0490	*	4.9	6	82	44	35	36	●
1636SU05C-0500	*	5	6	82	44	35	36	●
1636SU05C-0510	*	5.1	6	82	44	35	36	●
1636SU05C-0520	*	5.2	6	82	44	35	36	●
1636SU05C-0530	*	5.3	6	82	44	35	36	●
1636SU05C-0540	*	5.4	6	82	44	35	36	●
1636SU05C-0550	*	5.5	6	82	44	35	36	●
1636SU05C-0555	*	5.55	6	82	44	35	36	●
1636SU05C-0560	*	5.6	6	82	44	35	36	●
1636SU05C-0570	*	5.7	6	82	44	35	36	●
1636SU05C-0580	*	5.8	6	82	44	35	36	●
1636SU05C-0590	*	5.9	6	82	44	35	36	●
1636SU05C-0600	*	6	6	82	44	35	36	●
1636SU05C-0610	*	6.1	8	91	53	43	36	●
1636SU05C-0620	*	6.2	8	91	53	43	36	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1636SU*	✓	✓	✓			
1636SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

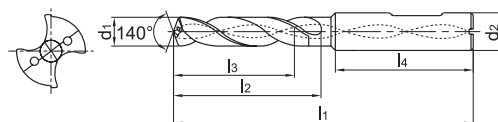
Nonstandard order > C177

SU(K) drill 5xD
General machining
Add K (SUK) to the code for use on Cast Iron
1636SU05C


- Weldon clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1636SU05C-0630	*	6.3	8	91	53	43	36	●
1636SU05C-0640	*	6.4	8	91	53	43	36	●
1636SU05C-0650	*	6.5	8	91	53	43	36	●
1636SU05C-0660	*	6.6	8	91	53	43	36	●
1636SU05C-0670	*	6.7	8	91	53	43	36	●
1636SU05C-0675	*	6.75	8	91	53	43	36	●
1636SU05C-0680	*	6.8	8	91	53	43	36	●
1636SU05C-0690	*	6.9	8	91	53	43	36	●
1636SU05C-0700	*	7	8	91	53	43	36	●
1636SU05C-0710	*	7.1	8	91	53	43	36	●
1636SU05C-0720	*	7.2	8	91	53	43	36	●
1636SU05C-0730	*	7.3	8	91	53	43	36	●
1636SU05C-0740	*	7.4	8	91	53	43	36	●
1636SU05C-0745	*	7.45	8	91	53	43	36	●
1636SU05C-0750	*	7.5	8	91	53	43	36	●
1636SU05C-0760	*	7.6	8	91	53	43	36	●
1636SU05C-0770	*	7.7	8	91	53	43	36	●
1636SU05C-0780	*	7.8	8	91	53	43	36	●
1636SU05C-0790	*	7.9	8	91	53	43	36	●
1636SU05C-0800	*	8	8	91	53	43	36	●
1636SU05C-0810	*	8.1	10	103	61	49	40	●
1636SU05C-0820	*	8.2	10	103	61	49	40	●
1636SU05C-0830	*	8.3	10	103	61	49	40	●
1636SU05C-0840	*	8.4	10	103	61	49	40	●
1636SU05C-0850	*	8.5	10	103	61	49	40	●
1636SU05C-0860	*	8.6	10	103	61	49	40	●
1636SU05C-0870	*	8.7	10	103	61	49	40	●
1636SU05C-0880	*	8.8	10	103	61	49	40	●
1636SU05C-0890	*	8.9	10	103	61	49	40	●
1636SU05C-0900	*	9	10	103	61	49	40	●
1636SU05C-0910	*	9.1	10	103	61	49	40	●
1636SU05C-0920	*	9.2	10	103	61	49	40	●
1636SU05C-0930	*	9.3	10	103	61	49	40	●
1636SU05C-0935	*	9.35	10	103	61	49	40	○
1636SU05C-0940	*	9.4	10	103	61	49	40	●
1636SU05C-0945	*	9.45	10	103	61	49	40	○

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field						
Type	P	M	K	N	S	H
1636SU*	✓	✓	✓			
1636SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



A

Turning

B

Milling

C

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SU(K) drill 5xD

General machining

Add K (SUK) to the code for use on Cast Iron

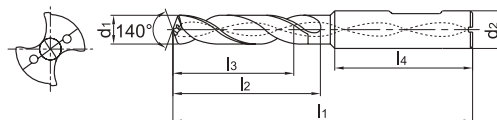
1636SU05C



- Weldon clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1636SU05C-0950	*	9.5	10	103	61	49	40	●
1636SU05C-0960	*	9.6	10	103	61	49	40	●
1636SU05C-0970	*	9.7	10	103	61	49	40	●
1636SU05C-0980	*	9.8	10	103	61	49	40	●
1636SU05C-0990	*	9.9	10	103	61	49	40	●
1636SU05C-1000	*	10	10	103	61	49	40	●
1636SU05C-1010	*	10.1	12	118	71	56	45	●
1636SU05C-1020	*	10.2	12	118	71	56	45	●
1636SU05C-1025	*	10.25	12	118	71	56	45	●
1636SU05C-1030	*	10.3	12	118	71	56	45	●
1636SU05C-1040	*	10.4	12	118	71	56	45	●
1636SU05C-1050	*	10.5	12	118	71	56	45	●
1636SU05C-1060	*	10.6	12	118	71	56	45	●
1636SU05C-1070	*	10.7	12	118	71	56	45	●
1636SU05C-1080	*	10.8	12	118	71	56	45	●
1636SU05C-1090	*	10.9	12	118	71	56	45	●
1636SU05C-1100	*	11	12	118	71	56	45	●
1636SU05C-1110	*	11.1	12	118	71	56	45	●
1636SU05C-1120	*	11.2	12	118	71	56	45	●
1636SU05C-1125	*	11.25	12	118	71	56	45	○
1636SU05C-1130	*	11.3	12	118	71	56	45	●
1636SU05C-1135	*	11.35	12	118	71	56	45	○
1636SU05C-1140	*	11.4	12	118	71	56	45	●
1636SU05C-1145	*	11.45	12	118	71	56	45	○
1636SU05C-1150	*	11.5	12	118	71	56	45	●
1636SU05C-1160	*	11.6	12	118	71	56	45	●
1636SU05C-1170	*	11.7	12	118	71	56	45	●
1636SU05C-1180	*	11.8	12	118	71	56	45	●
1636SU05C-1190	*	11.9	12	118	71	56	45	●
1636SU05C-1200	*	12	12	118	71	56	45	●
1636SU05C-1210	*	12.1	14	124	77	60	45	●
1636SU05C-1220	*	12.2	14	124	77	60	45	●
1636SU05C-1225	*	12.25	14	124	77	60	45	●
1636SU05C-1230	*	12.3	14	124	77	60	45	●
1636SU05C-1250	*	12.5	14	124	77	60	45	●
1636SU05C-1270	*	12.7	14	124	77	60	45	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1636SU*	✓	✓	✓			
1636SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

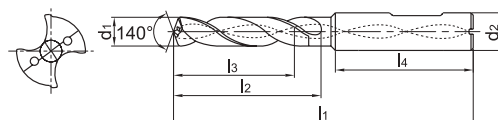
Nonstandard order > C177

SU(K) drill 5xD
General machining
Add K (SUK) to the code for use on Cast Iron
1636SU05C


- Weldon clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1636SU05C-1275	*	12.75	14	124	77	60	45	○
1636SU05C-1280	*	12.8	14	124	77	60	45	●
1636SU05C-1300	*	13	14	124	77	60	45	●
1636SU05C-1310	*	13.1	14	124	77	60	45	●
1636SU05C-1335	*	13.35	14	124	77	60	56	○
1636SU05C-1350	*	13.5	14	124	77	60	45	●
1636SU05C-1380	*	13.8	14	124	77	60	45	●
1636SU05C-1400	*	14	14	124	77	60	45	●
1636SU05C-1420	*	14.2	16	124	77	60	45	●
1636SU05C-1425	*	14.25	16	133	83	63	48	●
1636SU05C-1430	*	14.3	16	133	83	63	48	●
1636SU05C-1450	*	14.5	16	133	83	63	48	●
1636SU05C-1475	*	14.75	16	133	83	63	48	○
1636SU05C-1480	*	14.8	16	133	83	63	48	●
1636SU05C-1500	*	15	16	133	83	63	48	●
1636SU05C-1510	*	15.1	16	133	83	63	48	●
1636SU05C-1535	*	15.35	16	133	83	63	48	○
1636SU05C-1550	*	15.5	16	133	83	63	48	●
1636SU05C-1580	*	15.8	16	133	83	63	48	●
1636SU05C-1600	*	16	16	133	83	63	48	●
1636SU05C-1650	*	16.5	18	143	93	71	48	●
1636SU05C-1675	*	16.75	18	143	93	71	48	○
1636SU05C-1680	*	16.8	18	143	93	71	48	●
1636SU05C-1700	*	17	18	143	93	71	48	●
1636SU05C-1750	*	17.5	18	143	93	71	48	●
1636SU05C-1780	*	17.8	18	143	93	71	48	●
1636SU05C-1800	*	18	18	143	93	71	48	●
1636SU05C-1850	*	18.5	20	153	101	77	50	●
1636SU05C-1880	*	18.8	20	153	101	77	50	●
1636SU05C-1900	*	19	20	153	101	77	50	●
1636SU05C-1950	*	19.5	20	153	101	77	50	●
1636SU05C-1980	*	19.8	20	153	101	77	50	●
1636SU05C-2000	*	20	20	153	101	77	50	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1636SU*	✓	✓	✓			
1636SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



A

Turning

B

Milling

C

Drilling

D

Technical
Information

E

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SU(K) drill 3xD

General machining

Add K (SUK) to the code for use on Cast Iron

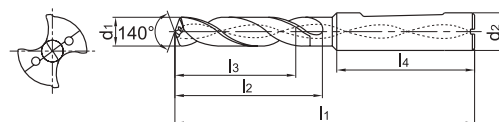
1734SU03C



- Whistle Notch clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1734SU03C-0300	*	3	6	66	28	23	36	●
1734SU03C-0310	*	3.1	6	62	20	14	36	●
1734SU03C-0320	*	3.2	6	62	20	14	36	●
1734SU03C-0325	*	3.25	6	62	20	14	36	●
1734SU03C-0330	*	3.3	6	62	20	14	36	●
1734SU03C-0340	*	3.4	6	62	20	14	36	●
1734SU03C-0350	*	3.5	6	62	20	14	36	●
1734SU03C-0360	*	3.6	6	62	20	14	36	●
1734SU03C-0370	*	3.7	6	62	20	14	36	●
1734SU03C-0380	*	3.8	6	66	24	17	36	●
1734SU03C-0390	*	3.9	6	66	24	17	36	●
1734SU03C-0400	*	4	6	66	24	17	36	●
1734SU03C-0410	*	4.1	6	66	24	17	36	●
1734SU03C-0420	*	4.2	6	66	24	17	36	●
1734SU03C-0430	*	4.3	6	66	24	17	36	●
1734SU03C-0440	*	4.4	6	66	24	17	36	●
1734SU03C-0450	*	4.5	6	66	24	17	36	●
1734SU03C-0460	*	4.6	6	66	24	17	36	●
1734SU03C-0465	*	4.65	6	66	24	17	36	●
1734SU03C-0470	*	4.7	6	66	24	17	36	●
1734SU03C-0480	*	4.8	6	66	28	20	36	●
1734SU03C-0490	*	4.9	6	66	28	20	36	●
1734SU03C-0500	*	5	6	66	28	20	36	●
1734SU03C-0510	*	5.1	6	66	28	20	36	●
1734SU03C-0520	*	5.2	6	66	28	20	36	●
1734SU03C-0530	*	5.3	6	66	28	20	36	●
1734SU03C-0540	*	5.4	6	66	28	20	36	●
1734SU03C-0550	*	5.5	6	66	28	20	36	●
1734SU03C-0555	*	5.55	6	66	28	20	36	●
1734SU03C-0560	*	5.6	6	66	28	20	36	●
1734SU03C-0570	*	5.7	6	66	28	20	36	●
1734SU03C-0580	*	5.8	6	66	28	20	36	●
1734SU03C-0590	*	5.9	6	66	28	20	36	●
1734SU03C-0600	*	6	6	66	28	20	36	●
1734SU03C-0610	*	6.1	8	79	34	24	36	●
1734SU03C-0620	*	6.2	8	79	34	24	36	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1734SU*	✓	✓	✓			
1734SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

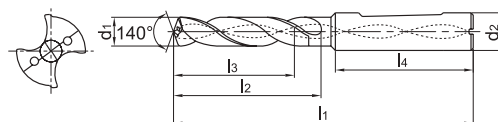
Nonstandard order > C177

SU(K) drill 3xD**General machining****Add K (SUK) to the code for use on Cast Iron****1734SU03C**

- Whistle Notch clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1734SU03C-0630	*	6.3	8	79	34	24	36	●
1734SU03C-0640	*	6.4	8	79	34	24	36	●
1734SU03C-0650	*	6.5	8	79	34	24	36	●
1734SU03C-0660	*	6.6	8	79	34	24	36	●
1734SU03C-0670	*	6.7	8	79	34	24	36	●
1734SU03C-0675	*	6.75	8	79	34	24	36	●
1734SU03C-0680	*	6.8	8	79	34	24	36	●
1734SU03C-0690	*	6.9	8	79	34	24	36	●
1734SU03C-0700	*	7	8	79	34	24	36	●
1734SU03C-0710	*	7.1	8	79	41	29	36	●
1734SU03C-0720	*	7.2	8	79	41	29	36	●
1734SU03C-0730	*	7.3	8	79	41	29	36	●
1734SU03C-0740	*	7.4	8	79	41	29	36	●
1734SU03C-0745	*	7.45	8	79	41	29	36	○
1734SU03C-0750	*	7.5	8	79	41	29	36	●
1734SU03C-0760	*	7.6	8	79	41	29	36	●
1734SU03C-0770	*	7.7	8	79	41	29	36	●
1734SU03C-0780	*	7.8	8	79	41	29	36	●
1734SU03C-0790	*	7.9	8	79	41	29	36	●
1734SU03C-0800	*	8	8	79	41	29	36	●
1734SU03C-0810	*	8.1	10	89	47	35	40	●
1734SU03C-0820	*	8.2	10	89	47	35	40	●
1734SU03C-0830	*	8.3	10	89	47	35	40	●
1734SU03C-0840	*	8.4	10	89	47	35	40	●
1734SU03C-0850	*	8.5	10	89	47	35	40	●
1734SU03C-0860	*	8.6	10	89	47	35	40	●
1734SU03C-0870	*	8.7	10	89	47	35	40	●
1734SU03C-0880	*	8.8	10	89	47	35	40	●
1734SU03C-0890	*	8.9	10	89	47	35	40	●
1734SU03C-0900	*	9	10	89	47	35	40	●
1734SU03C-0910	*	9.1	10	89	47	35	40	●
1734SU03C-0920	*	9.2	10	89	47	35	40	●
1734SU03C-0930	*	9.3	10	89	47	35	40	●
1734SU03C-0935	*	9.35	10	89	47	35	40	○
1734SU03C-0940	*	9.4	10	89	47	35	40	●
1734SU03C-0945	*	9.45	10	89	47	35	40	○

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1734SU*	✓	✓	✓			
1734SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 3xD

General machining

Add K (SUK) to the code for use on Cast Iron

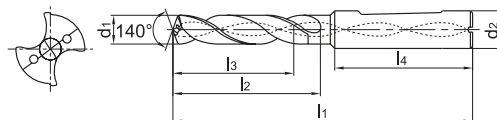
1734SU03C



- Whistle Notch clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1734SU03C-0950	*	9.5	10	89	47	35	40	●
1734SU03C-0960	*	9.6	10	89	47	35	40	●
1734SU03C-0970	*	9.7	10	89	47	35	40	●
1734SU03C-0980	*	9.8	10	89	47	35	40	●
1734SU03C-0990	*	9.9	10	89	47	35	40	●
1734SU03C-1000	*	10	10	89	47	35	40	●
1734SU03C-1010	*	10.1	12	102	55	40	45	●
1734SU03C-1020	*	10.2	12	102	55	40	45	●
1734SU03C-1025	*	10.25	12	102	55	40	45	●
1734SU03C-1030	*	10.3	12	102	55	40	45	●
1734SU03C-1040	*	10.4	12	102	55	40	45	●
1734SU03C-1050	*	10.5	12	102	55	40	45	●
1734SU03C-1060	*	10.6	12	102	55	40	45	●
1734SU03C-1070	*	10.7	12	102	55	40	45	●
1734SU03C-1080	*	10.8	12	102	55	40	45	●
1734SU03C-1090	*	10.9	12	102	55	40	45	●
1734SU03C-1100	*	11	12	102	55	40	45	●
1734SU03C-1110	*	11.1	12	102	55	40	45	●
1734SU03C-1120	*	11.2	12	102	55	40	45	●
1734SU03C-1125	*	11.25	12	102	55	40	45	○
1734SU03C-1130	*	11.3	12	102	55	40	45	●
1734SU03C-1135	*	11.35	12	102	55	40	45	○
1734SU03C-1140	*	11.4	12	102	55	40	45	●
1734SU03C-1145	*	11.45	12	102	55	40	45	○
1734SU03C-1150	*	11.5	12	102	55	40	45	●
1734SU03C-1160	*	11.6	12	102	55	40	45	●
1734SU03C-1170	*	11.7	12	102	55	40	45	●
1734SU03C-1180	*	11.8	12	102	55	40	45	●
1734SU03C-1190	*	11.9	12	102	55	40	45	●
1734SU03C-1200	*	12	12	102	55	40	45	●
1734SU03C-1210	*	12.1	14	107	60	43	45	●
1734SU03C-1220	*	12.2	14	107	60	43	45	●
1734SU03C-1225	*	12.25	14	107	60	43	45	●
1734SU03C-1230	*	12.3	14	107	60	43	45	●
1734SU03C-1250	*	12.5	14	107	60	43	45	●
1734SU03C-1270	*	12.7	14	107	60	43	45	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1734SU*	✓	✓	✓			
1734SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

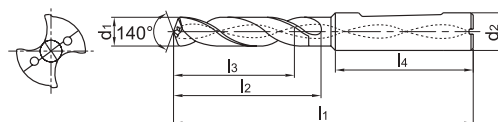
Nonstandard order > C177

SU(K) drill 3xD
General machining
Add K (SUK) to the code for use on Cast Iron
1734SU03C


- Whistle Notch clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1734SU03C-1275	*	12.75	14	107	60	43	45	●
1734SU03C-1280	*	12.8	14	107	60	43	45	●
1734SU03C-1300	*	13	14	107	60	43	45	●
1734SU03C-1310	*	13.1	14	107	60	43	45	●
1734SU03C-1335	*	13.35	14	107	60	43	45	○
1734SU03C-1350	*	13.5	14	107	60	43	45	●
1734SU03C-1380	*	13.8	14	107	60	43	45	●
1734SU03C-1400	*	14	14	107	60	43	45	●
1734SU03C-1420	*	14.2	16	107	60	43	45	●
1734SU03C-1425	*	14.25	16	115	65	45	48	●
1734SU03C-1430	*	14.3	16	115	65	45	48	●
1734SU03C-1450	*	14.5	16	115	65	45	48	●
1734SU03C-1475	*	14.75	16	115	65	45	48	●
1734SU03C-1480	*	14.8	16	115	65	45	48	●
1734SU03C-1500	*	15	16	115	65	45	48	●
1734SU03C-1510	*	15.1	16	115	65	45	48	●
1734SU03C-1535	*	15.35	16	115	65	45	48	○
1734SU03C-1550	*	15.5	16	115	65	45	48	●
1734SU03C-1580	*	15.8	16	115	65	45	48	●
1734SU03C-1600	*	16	16	115	65	45	48	●
1734SU03C-1650	*	16.5	18	123	73	51	48	●
1734SU03C-1675	*	16.75	18	123	73	51	48	●
1734SU03C-1680	*	16.8	18	123	73	51	48	●
1734SU03C-1700	*	17	18	123	73	51	48	●
1734SU03C-1750	*	17.5	18	123	73	51	48	●
1734SU03C-1780	*	17.8	18	123	73	51	48	●
1734SU03C-1800	*	18	18	123	73	51	48	●
1734SU03C-1850	*	18.5	20	131	79	55	50	●
1734SU03C-1880	*	18.8	20	131	79	55	50	●
1734SU03C-1900	*	19	20	131	79	55	50	●
1734SU03C-1950	*	19.5	20	131	79	55	50	●
1734SU03C-1980	*	19.8	20	131	79	55	50	●
1734SU03C-2000	*	20	20	131	79	55	50	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1734SU*	✓	✓	✓			
1734SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 5xD

General machining

Add K (SUK) to the code for use on Cast Iron

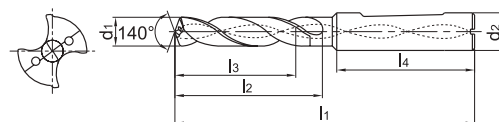
1736SU05C



- Whistle Notch clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1736SU05C-0300	*	3	6	66	28	23	36	●
1736SU05C-0310	*	3.1	6	66	28	23	36	●
1736SU05C-0320	*	3.2	6	66	28	23	36	●
1736SU05C-0325	*	3.25	6	66	28	23	36	○
1736SU05C-0330	*	3.3	6	66	28	23	36	●
1736SU05C-0340	*	3.4	6	66	28	23	36	●
1736SU05C-0350	*	3.5	6	66	28	23	36	●
1736SU05C-0360	*	3.6	6	66	28	23	36	●
1736SU05C-0370	*	3.7	6	66	28	23	36	●
1736SU05C-0380	*	3.8	6	74	36	29	36	●
1736SU05C-0390	*	3.9	6	74	36	29	36	●
1736SU05C-0400	*	4	6	74	36	29	36	●
1736SU05C-0410	*	4.1	6	74	36	29	36	●
1736SU05C-0420	*	4.2	6	74	36	29	36	●
1736SU05C-0430	*	4.3	6	74	36	29	36	●
1736SU05C-0440	*	4.4	6	74	36	29	36	●
1736SU05C-0450	*	4.5	6	74	36	29	36	●
1736SU05C-0460	*	4.6	6	74	36	29	36	●
1736SU05C-0465	*	4.65	6	74	36	29	36	●
1736SU05C-0470	*	4.7	6	74	36	29	36	●
1736SU05C-0480	*	4.8	6	82	44	35	36	●
1736SU05C-0490	*	4.9	6	82	44	35	36	●
1736SU05C-0500	*	5	6	82	44	35	36	●
1736SU05C-0510	*	5.1	6	82	44	35	36	●
1736SU05C-0520	*	5.2	6	82	44	35	36	●
1736SU05C-0530	*	5.3	6	82	44	35	36	●
1736SU05C-0540	*	5.4	6	82	44	35	36	●
1736SU05C-0550	*	5.5	6	82	44	35	36	●
1736SU05C-0555	*	5.55	6	82	44	35	36	●
1736SU05C-0560	*	5.6	6	82	44	35	36	●
1736SU05C-0570	*	5.7	6	82	44	35	36	●
1736SU05C-0580	*	5.8	6	82	44	35	36	●
1736SU05C-0590	*	5.9	6	82	44	35	36	●
1736SU05C-0600	*	6	6	82	44	35	36	●
1736SU05C-0610	*	6.1	8	91	53	43	36	●
1736SU05C-0620	*	6.2	8	91	53	43	36	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1736SU*	✓	✓	✓			
1736SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

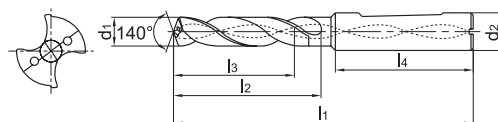
Nonstandard order > C177

SU(K) drill 5xD
General machining
Add K (SUK) to the code for use on Cast Iron
1736SU05C


- Whistle Notch clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1736SU05C-0630	*	6.3	8	91	53	43	36	●
1736SU05C-0640	*	6.4	8	91	53	43	36	●
1736SU05C-0650	*	6.5	8	91	53	43	36	●
1736SU05C-0660	*	6.6	8	91	53	43	36	●
1736SU05C-0670	*	6.7	8	91	53	43	36	●
1736SU05C-0675	*	6.75	8	91	53	43	36	●
1736SU05C-0680	*	6.8	8	91	53	43	36	●
1736SU05C-0690	*	6.9	8	91	53	43	36	●
1736SU05C-0700	*	7	8	91	53	43	36	●
1736SU05C-0710	*	7.1	8	91	53	43	36	●
1736SU05C-0720	*	7.2	8	91	53	43	36	●
1736SU05C-0730	*	7.3	8	91	53	43	36	●
1736SU05C-0740	*	7.4	8	91	53	43	36	●
1736SU05C-0745	*	7.45	8	91	53	43	36	○
1736SU05C-0750	*	7.5	8	91	53	43	36	●
1736SU05C-0760	*	7.6	8	91	53	43	36	●
1736SU05C-0770	*	7.7	8	91	53	43	36	●
1736SU05C-0780	*	7.8	8	91	53	43	36	●
1736SU05C-0790	*	7.9	8	91	53	43	36	●
1736SU05C-0800	*	8	8	91	53	43	36	●
1736SU05C-0810	*	8.1	10	103	61	49	40	●
1736SU05C-0820	*	8.2	10	103	61	49	40	●
1736SU05C-0830	*	8.3	10	103	61	49	40	●
1736SU05C-0840	*	8.4	10	103	61	49	40	●
1736SU05C-0850	*	8.5	10	103	61	49	40	●
1736SU05C-0860	*	8.6	10	103	61	49	40	●
1736SU05C-0870	*	8.7	10	103	61	49	40	●
1736SU05C-0880	*	8.8	10	103	61	49	40	●
1736SU05C-0890	*	8.9	10	103	61	49	40	●
1736SU05C-0900	*	9	10	103	61	49	40	●
1736SU05C-0910	*	9.1	10	103	61	49	40	●
1736SU05C-0920	*	9.2	10	103	61	49	40	●
1736SU05C-0930	*	9.3	10	103	61	49	40	●
1736SU05C-0935	*	9.35	10	103	61	49	40	○
1736SU05C-0940	*	9.4	10	103	61	49	40	●
1736SU05C-0945	*	9.45	10	103	61	49	40	○

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field						
Type	P	M	K	N	S	H
1736SU*	✓	✓	✓			
1736SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU(K) drill 5x2

General machining

Add K (SUK) to the code for use on Cast Iron

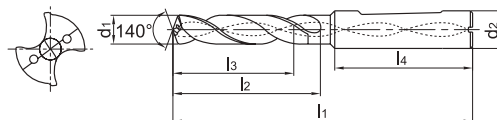
1736SU05C



- Whistle Notch clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1736SU05C-0950	*	9.5	10	103	61	49	40	●
1736SU05C-0960	*	9.6	10	103	61	49	40	●
1736SU05C-0970	*	9.7	10	103	61	49	40	●
1736SU05C-0980	*	9.8	10	103	61	49	40	●
1736SU05C-0990	*	9.9	10	103	61	49	40	●
1736SU05C-1000	*	10	10	103	61	49	40	●
1736SU05C-1010	*	10.1	12	118	71	56	45	●
1736SU05C-1020	*	10.2	12	118	71	56	45	●
1736SU05C-1025	*	10.25	12	118	71	56	45	●
1736SU05C-1030	*	10.3	12	118	71	56	45	●
1736SU05C-1040	*	10.4	12	118	71	56	45	●
1736SU05C-1050	*	10.5	12	118	71	56	45	●
1736SU05C-1060	*	10.6	12	118	71	56	45	●
1736SU05C-1070	*	10.7	12	118	71	56	45	●
1736SU05C-1080	*	10.8	12	118	71	56	45	●
1736SU05C-1090	*	10.9	12	118	71	56	45	●
1736SU05C-1100	*	11	12	118	71	56	45	●
1736SU05C-1110	*	11.1	12	118	71	56	45	●
1736SU05C-1120	*	11.2	12	118	71	56	45	●
1736SU05C-1125	*	11.25	12	118	71	56	45	○
1736SU05C-1130	*	11.3	12	118	71	56	45	●
1736SU05C-1135	*	11.35	12	118	71	56	45	○
1736SU05C-1140	*	11.4	12	118	71	56	45	●
1736SU05C-1145	*	11.45	12	118	71	56	45	○
1736SU05C-1150	*	11.5	12	118	71	56	45	●
1736SU05C-1160	*	11.6	12	118	71	56	45	●
1736SU05C-1170	*	11.7	12	118	71	56	45	●
1736SU05C-1180	*	11.8	12	118	71	56	45	●
1736SU05C-1190	*	11.9	12	118	71	56	45	●
1736SU05C-1200	*	12	12	118	71	56	45	●
1736SU05C-1210	*	12.1	14	124	77	60	45	●
1736SU05C-1220	*	12.2	14	124	77	60	45	●
1736SU05C-1225	*	12.25	14	124	77	60	45	○
1736SU05C-1230	*	12.3	14	124	77	60	45	●
1736SU05C-1250	*	12.5	14	124	77	60	45	●
1736SU05C-1270	*	12.7	14	124	77	60	45	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1736SU*	✓	✓	✓			
1736SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

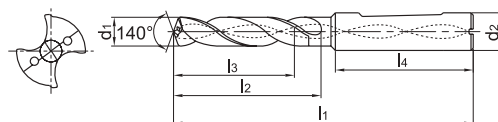
Nonstandard order > C177

SU(K) drill 5xD
General machining
Add K (SUK) to the code for use on Cast Iron
1736SU05C


- Whistle Notch clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1736SU05C-1275	*	12.75	14	124	77	60	45	●
1736SU05C-1280	*	12.8	14	124	77	60	45	●
1736SU05C-1300	*	13	14	124	77	60	45	●
1736SU05C-1310	*	13.1	14	124	77	60	45	●
1736SU05C-1335	*	13.35	14	124	77	60	56	○
1736SU05C-1350	*	13.5	14	124	77	60	45	●
1736SU05C-1380	*	13.8	14	124	77	60	45	●
1736SU05C-1400	*	14	14	124	77	60	45	●
1736SU05C-1420	*	14.2	16	124	77	60	45	●
1736SU05C-1425	*	14.25	16	133	83	63	48	●
1736SU05C-1430	*	14.3	16	133	83	63	48	●
1736SU05C-1450	*	14.5	16	133	83	63	48	●
1736SU05C-1475	*	14.75	16	133	83	63	48	●
1736SU05C-1480	*	14.8	16	133	83	63	48	●
1736SU05C-1500	*	15	16	133	83	63	48	●
1736SU05C-1510	*	15.1	16	133	83	63	48	●
1736SU05C-1535	*	15.35	16	133	83	63	48	○
1736SU05C-1550	*	15.5	16	133	83	63	48	●
1736SU05C-1580	*	15.8	16	133	83	63	48	●
1736SU05C-1600	*	16	16	133	83	63	48	●
1736SU05C-1650	*	16.5	18	143	93	71	48	●
1736SU05C-1675	*	16.75	18	143	93	71	48	●
1736SU05C-1680	*	16.8	18	143	93	71	48	●
1736SU05C-1700	*	17	18	143	93	71	48	●
1736SU05C-1750	*	17.5	18	143	93	71	48	●
1736SU05C-1780	*	17.8	18	143	93	71	48	●
1736SU05C-1800	*	18	18	143	93	71	48	●
1736SU05C-1850	*	18.5	20	153	101	77	50	●
1736SU05C-1880	*	18.8	20	153	101	77	50	●
1736SU05C-1900	*	19	20	153	101	77	50	●
1736SU05C-1950	*	19.5	20	153	101	77	50	●
1736SU05C-1980	*	19.8	20	153	101	77	50	●
1736SU05C-2000	*	20	20	153	101	77	50	●

● Ex stock ○ On demand

All articles SUK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1736SU*	✓	✓	✓			
1736SUK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SU drill 3xD

General machining

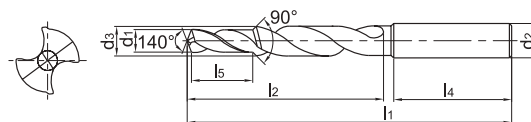
1557SU03



– Type of shank DIN 6535HA



External coolant



Article	*	Dimensions [mm]							Grade
		d ₁ (m8)	d ₂ (h6)	d ₃ (m7)	l ₁	l ₂	l ₄	l ₅	KDG303
1557SU03-M4		3.3	6	4.5	66	28	36	11.4	●
1557SU03-M5		4.2	6	6	66	28	36	13.6	●
1557SU03-M6		5	8	7	79	41	36	16.5	●
1557SU03-M8		6.75	10	9.5	89	47	40	21	●
1557SU03-M8x1.0		7	10	9.8	89	47	40	21	○
1557SU03-M10		8.5	12	12	102	55	45	25.5	●
1557SU03-M10x1.0		9	12	12	102	55	45	25.5	○
1557SU03-M12		10.25	14	14	107	60	45	30	●
1557SU03-M12x1.5		10.5	14	14	107	60	45	30	●
1557SU03-M14		12	16	16	115	65	48	34.5	●
1557SU03-M14x1.5		12.5	16	16	115	65	48	34.5	○
1557SU03-M16		14	18	18	123	73	48	38.5	●
1557SU03-M16x1.5		14.5	18	18	123	73	48	38.5	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓	✓			

✓ Very suitable

✓ Suitable

1588SL

For deep hole drilling

10xD, 12xD, 15xD, 20xD and 30xD drills

- For machining of steel, non-ferrous metals, stainless steel and heat-resistant alloys.
- Double margin for high accuracy and stable machining.
- Special flute design for less friction and good chip flow.

1588SLK

DIN 1412 D

Deep hole drills for machining of cast iron

- Special cut for cast iron with ductile iron and malleable cast iron.
- Improved tool life due to impact resistant cutting edges.



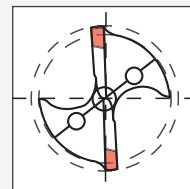
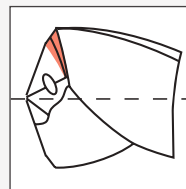
Straight cut

For cast iron



Deep hole drill

Form D: Cut for cast iron



All articles SUK on demand.
Please add K when ordering:

1588SLK10C-0300

1588SL

SP series

For drilling pilot holes

- Recommended for deep hole drills with 15xD and larger.

SL(K) drill 10xD

General machining

Add K (SLK) to the code for use on Cast Iron

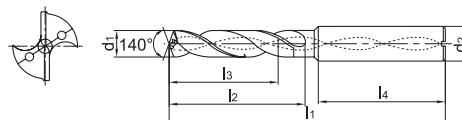
1588SL10C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL10C-0300	*	3	6	80	43	39	36	●
1588SL10C-0310	*	3.1	6	80	43	39	36	●
1588SL10C-0320	*	3.2	6	80	43	39	36	●
1588SL10C-0330	*	3.3	6	80	43	39	36	●
1588SL10C-0340	*	3.4	6	80	43	39	36	●
1588SL10C-0350	*	3.5	6	80	43	39	36	●
1588SL10C-0360	*	3.6	6	80	43	39	36	●
1588SL10C-0370	*	3.7	6	80	43	39	36	●
1588SL10C-0380	*	3.8	6	80	43	39	36	●
1588SL10C-0390	*	3.9	6	80	43	39	36	●
1588SL10C-0400	*	4	6	92	55	50	36	●
1588SL10C-0410	*	4.1	6	92	55	50	36	●
1588SL10C-0420	*	4.2	6	92	55	50	36	●
1588SL10C-0430	*	4.3	6	92	55	50	36	●
1588SL10C-0440	*	4.4	6	92	55	50	36	●
1588SL10C-0450	*	4.5	6	92	55	50	36	●
1588SL10C-0460	*	4.6	6	92	55	50	36	●
1588SL10C-0470	*	4.7	6	92	55	50	36	●
1588SL10C-0480	*	4.8	6	92	55	50	36	●
1588SL10C-0490	*	4.9	6	92	55	50	36	●
1588SL10C-0500	*	5	6	104	68	61	36	●
1588SL10C-0510	*	5.1	6	104	68	61	36	●
1588SL10C-0520	*	5.2	6	104	68	61	36	●
1588SL10C-0530	*	5.3	6	104	68	61	36	●
1588SL10C-0540	*	5.4	6	104	68	61	36	●
1588SL10C-0550	*	5.5	6	104	68	61	36	●
1588SL10C-0560	*	5.6	6	104	68	61	36	●
1588SL10C-0570	*	5.7	6	104	68	61	36	●
1588SL10C-0580	*	5.8	6	104	68	61	36	●
1588SL10C-0590	*	5.9	6	104	68	61	36	●
1588SL10C-0600	*	6	6	104	68	61	36	●
1588SL10C-0610	*	6.1	8	117	80	71	36	●
1588SL10C-0620	*	6.2	8	117	80	71	36	●
1588SL10C-0630	*	6.3	8	117	80	71	36	●
1588SL10C-0640	*	6.4	8	117	80	71	36	●
1588SL10C-0650	*	6.5	8	117	80	71	36	●

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

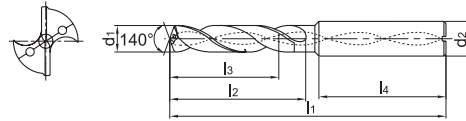
Nonstandard order > C177

SL(K) drill 10xD**General machining****Add K (SLK) to the code for use on Cast Iron****1588SL10C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL10C-0660	*	6.6	8	117	80	71	36	●
1588SL10C-0670	*	6.7	8	117	80	71	36	●
1588SL10C-0680	*	6.8	8	117	80	71	36	●
1588SL10C-0690	*	6.9	8	117	80	71	36	●
1588SL10C-0700	*	7	8	117	80	71	36	●
1588SL10C-0710	*	7.1	8	130	94	84	36	●
1588SL10C-0720	*	7.2	8	130	94	84	36	●
1588SL10C-0730	*	7.3	8	130	94	84	36	●
1588SL10C-0740	*	7.4	8	130	94	84	36	●
1588SL10C-0750	*	7.5	8	130	94	84	36	●
1588SL10C-0760	*	7.6	8	130	94	84	36	●
1588SL10C-0770	*	7.7	8	130	94	84	36	●
1588SL10C-0780	*	7.8	8	130	94	84	36	●
1588SL10C-0790	*	7.9	8	130	94	84	36	●
1588SL10C-0800	*	8	8	130	94	84	36	●
1588SL10C-0810	*	8.1	10	148	105	94	40	●
1588SL10C-0820	*	8.2	10	148	105	94	40	●
1588SL10C-0830	*	8.3	10	148	105	94	40	●
1588SL10C-0840	*	8.4	10	148	105	94	40	●
1588SL10C-0850	*	8.5	10	148	105	94	40	●
1588SL10C-0860	*	8.6	10	148	105	94	40	●
1588SL10C-0870	*	8.7	10	148	105	94	40	●
1588SL10C-0880	*	8.8	10	148	105	94	40	●
1588SL10C-0890	*	8.9	10	148	105	94	40	●
1588SL10C-0900	*	9	10	148	105	94	40	●
1588SL10C-0910	*	9.1	10	158	115	103	40	●
1588SL10C-0920	*	9.2	10	158	115	103	40	●
1588SL10C-0930	*	9.3	10	158	115	103	40	●
1588SL10C-0940	*	9.4	10	158	115	103	40	●
1588SL10C-0950	*	9.5	10	158	115	103	40	●
1588SL10C-0960	*	9.6	10	158	115	103	40	●
1588SL10C-0970	*	9.7	10	158	115	103	40	●
1588SL10C-0980	*	9.8	10	158	115	103	40	●
1588SL10C-0990	*	9.9	10	158	115	103	40	●
1588SL10C-1000	*	10	10	158	115	103	40	●
1588SL10C-1010	*	10.1	12	183	135	121	45	●

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SL(K) drill 10xD

General machining

Add K (SLK) to the code for use on Cast Iron

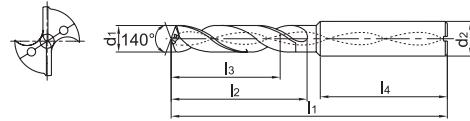
1588SL10C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL10C-1020	*	10.2	12	183	135	121	45	●
1588SL10C-1030	*	10.3	12	183	135	121	45	●
1588SL10C-1040	*	10.4	12	183	135	121	45	●
1588SL10C-1050	*	10.5	12	183	135	121	45	●
1588SL10C-1060	*	10.6	12	183	135	121	45	●
1588SL10C-1070	*	10.7	12	183	135	121	45	●
1588SL10C-1080	*	10.8	12	183	135	121	45	●
1588SL10C-1090	*	10.9	12	183	135	121	45	●
1588SL10C-1100	*	11	12	183	135	121	45	●
1588SL10C-1110	*	11.1	12	183	135	121	45	●
1588SL10C-1120	*	11.2	12	183	135	121	45	●
1588SL10C-1130	*	11.3	12	183	135	121	45	●
1588SL10C-1140	*	11.4	12	183	135	121	45	●
1588SL10C-1150	*	11.5	12	183	135	121	45	●
1588SL10C-1160	*	11.6	12	183	135	121	45	●
1588SL10C-1170	*	11.7	12	183	135	121	45	●
1588SL10C-1180	*	11.8	12	183	135	121	45	●
1588SL10C-1190	*	11.9	12	183	135	121	45	●
1588SL10C-1200	*	12	12	183	135	121	45	●
1588SL10C-1225	*	12.25	14	209	160	144	45	●
1588SL10C-1250	*	12.5	14	209	160	144	45	●
1588SL10C-1270	*	12.7	14	209	160	144	45	●
1588SL10C-1275	*	12.75	14	209	160	144	45	●
1588SL10C-1280	*	12.8	14	209	160	144	45	●
1588SL10C-1300	*	13	14	209	160	144	45	●
1588SL10C-1310	*	13.1	14	209	160	144	45	●
1588SL10C-1350	*	13.5	14	209	160	144	45	●
1588SL10C-1380	*	13.8	14	209	160	144	45	●
1588SL10C-1400	*	14	14	209	160	144	45	●

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

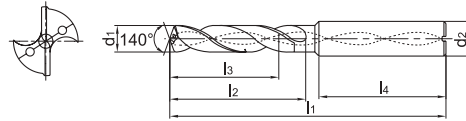
Nonstandard order > C177

SL(K) drill 12xD**General machining****Add K (SLK) to the code for use on Cast Iron****1588SL12C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL12C-0300	*	3	6	90	50	40	36	●
1588SL12C-0310	*	3.1	6	90	50	40	36	●
1588SL12C-0320	*	3.2	6	90	50	40	36	●
1588SL12C-0330	*	3.3	6	90	50	40	36	●
1588SL12C-0340	*	3.4	6	90	50	40	36	●
1588SL12C-0350	*	3.5	6	90	50	40	36	●
1588SL12C-0360	*	3.6	6	90	50	40	36	●
1588SL12C-0370	*	3.7	6	90	50	46	36	●
1588SL12C-0380	*	3.8	6	90	50	46	36	●
1588SL12C-0390	*	3.9	6	90	50	46	36	●
1588SL12C-0400	*	4	6	102	64	56	36	●
1588SL12C-0410	*	4.1	6	102	64	56	36	●
1588SL12C-0420	*	4.2	6	102	64	56	36	●
1588SL12C-0430	*	4.3	6	102	64	56	36	●
1588SL12C-0440	*	4.4	6	102	64	56	36	●
1588SL12C-0450	*	4.5	6	102	64	56	36	●
1588SL12C-0460	*	4.6	6	102	64	56	36	●
1588SL12C-0470	*	4.7	6	102	64	56	36	●
1588SL12C-0480	*	4.8	6	102	64	56	36	●
1588SL12C-0490	*	4.9	6	102	64	56	36	●
1588SL12C-0500	*	5	6	116	78	72	36	●
1588SL12C-0510	*	5.1	6	116	78	72	36	●
1588SL12C-0520	*	5.2	6	116	78	72	36	●
1588SL12C-0530	*	5.3	6	116	78	72	36	●
1588SL12C-0540	*	5.4	6	116	78	72	36	●
1588SL12C-0550	*	5.5	6	116	78	72	36	●
1588SL12C-0560	*	5.6	6	116	78	72	36	●
1588SL12C-0570	*	5.7	6	116	78	72	36	●
1588SL12C-0580	*	5.8	6	116	78	72	36	●
1588SL12C-0590	*	5.9	6	116	78	72	36	●
1588SL12C-0600	*	6	6	116	78	72	36	●
1588SL12C-0610	*	6.1	8	131	93	84	36	●
1588SL12C-0620	*	6.2	8	131	93	84	36	●
1588SL12C-0630	*	6.3	8	131	93	84	36	●
1588SL12C-0640	*	6.4	8	131	93	84	36	●
1588SL12C-0650	*	6.5	8	131	93	84	36	●

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SL(K) drill 12xD

General machining

Add K (SLK) to the code for use on Cast Iron

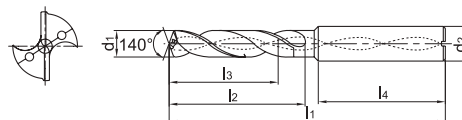
1588SL12C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL12C-0660	*	6.6	8	131	93	84	36	●
1588SL12C-0670	*	6.7	8	131	93	84	36	●
1588SL12C-0680	*	6.8	8	131	93	84	36	●
1588SL12C-0690	*	6.9	8	131	93	84	36	●
1588SL12C-0700	*	7	8	131	93	84	36	●
1588SL12C-0710	*	7.1	8	146	108	96	36	●
1588SL12C-0720	*	7.2	8	146	108	96	36	●
1588SL12C-0730	*	7.3	8	146	108	96	36	●
1588SL12C-0740	*	7.4	8	146	108	96	36	●
1588SL12C-0750	*	7.5	8	146	108	96	36	●
1588SL12C-0760	*	7.6	8	146	108	96	36	●
1588SL12C-0770	*	7.7	8	146	108	96	36	●
1588SL12C-0780	*	7.8	8	146	108	96	36	●
1588SL12C-0790	*	7.9	8	146	108	96	36	●
1588SL12C-0800	*	8	8	146	108	96	36	●
1588SL12C-0810	*	8.1	10	162	120	108	40	●
1588SL12C-0820	*	8.2	10	162	120	108	40	●
1588SL12C-0830	*	8.3	10	162	120	108	40	●
1588SL12C-0840	*	8.4	10	162	120	108	40	●
1588SL12C-0850	*	8.5	10	162	120	108	40	●
1588SL12C-0860	*	8.6	10	162	120	108	40	●
1588SL12C-0870	*	8.7	10	162	120	108	40	●
1588SL12C-0880	*	8.8	10	162	120	108	40	●
1588SL12C-0890	*	8.9	10	162	120	108	40	●
1588SL12C-0900	*	9	10	162	120	108	40	●
1588SL12C-0910	*	9.1	10	174	132	120	40	○
1588SL12C-0920	*	9.2	10	174	132	120	40	●
1588SL12C-0930	*	9.3	10	174	132	120	40	●
1588SL12C-0940	*	9.4	10	174	132	120	40	●
1588SL12C-0950	*	9.5	10	174	132	120	40	●
1588SL12C-0960	*	9.6	10	174	132	120	40	○
1588SL12C-0970	*	9.7	10	174	132	120	40	○
1588SL12C-0980	*	9.8	10	174	132	120	40	●
1588SL12C-0990	*	9.9	10	174	132	120	40	○
1588SL12C-1000	*	10	10	174	132	120	40	●
1588SL12C-1010	*	10.1	12	204	156	144	45	●

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

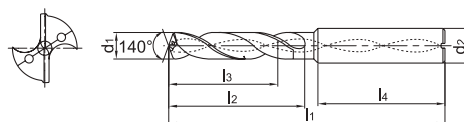
Nonstandard order > C177

SL(K) drill 12xD**General machining****Add K (SLK) to the code for use on Cast Iron****1588SL12C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL12C-1020	*	10.2	12	204	156	144	45	●
1588SL12C-1030	*	10.3	12	204	156	144	45	●
1588SL12C-1040	*	10.4	12	204	156	144	45	●
1588SL12C-1050	*	10.5	12	204	156	144	45	●
1588SL12C-1060	*	10.6	12	204	156	144	45	●
1588SL12C-1070	*	10.7	12	204	156	144	45	○
1588SL12C-1080	*	10.8	12	204	156	144	45	○
1588SL12C-1090	*	10.9	12	204	156	144	45	○
1588SL12C-1100	*	11	12	204	156	144	45	●
1588SL12C-1110	*	11.1	12	204	156	144	45	○
1588SL12C-1120	*	11.2	12	204	156	144	45	●
1588SL12C-1130	*	11.3	12	204	156	144	45	○
1588SL12C-1140	*	11.4	12	204	156	144	45	●
1588SL12C-1150	*	11.5	12	204	156	144	45	●
1588SL12C-1160	*	11.6	12	204	156	144	45	○
1588SL12C-1170	*	11.7	12	204	156	144	45	●
1588SL12C-1180	*	11.8	12	204	156	144	45	●
1588SL12C-1190	*	11.9	12	204	156	144	45	○
1588SL12C-1200	*	12	12	204	156	144	45	●
1588SL12C-1250	*	12.5	14	230	182	168	45	●
1588SL12C-1270	*	12.7	14	230	182	168	45	○
1588SL12C-1280	*	12.8	14	230	182	168	45	○
1588SL12C-1300	*	13	14	230	182	168	45	●
1588SL12C-1350	*	13.5	14	230	182	168	45	●
1588SL12C-1400	*	14	14	230	182	168	45	●
1588SL12C-1450	*	14.5	16	260	208	194	48	○
1588SL12C-1500	*	15	16	260	208	194	48	●
1588SL12C-1550	*	15.5	16	260	208	194	48	○
1588SL12C-1600	*	16	16	260	208	194	48	●
1588SL12C-1650	*	16.5	18	286	234	218	48	●
1588SL12C-1700	*	17	18	286	234	218	48	●
1588SL12C-1750	*	17.5	18	286	234	218	48	●
1588SL12C-1800	*	18	18	286	234	218	48	●
1588SL12C-1850	*	18.5	20	310	258	240	48	●
1588SL12C-1900	*	19	20	310	258	240	48	○
1588SL12C-1950	*	19.5	20	310	258	240	48	○

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field						
Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SL(K) drill 12xD

General machining

Add K (SLK) to the code for use on Cast Iron

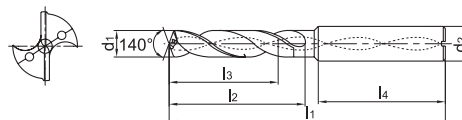
1588SL12C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL12C-2000	*	20	20	310	258	240	48	●
1588SL12C-2050	*	20.5	22	310	258	240	48	○
1588SL12C-2100	*	21	22	310	258	240	48	○

- Ex stock ○ On demand

All articles SLK on demand

- * With internal cooling

Application field

Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

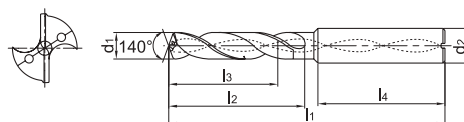
✓ Suitable

SL(K) drill 15xD**General machining****Add K (SLK) to the code for use on Cast Iron****1588SL15C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL15C-0300	*	3	6	100	60	50	36	●
1588SL15C-0310	*	3.1	6	105	65	55	36	●
1588SL15C-0320	*	3.2	6	105	65	55	36	●
1588SL15C-0330	*	3.3	6	105	65	55	36	●
1588SL15C-0340	*	3.4	6	105	65	55	36	●
1588SL15C-0350	*	3.5	6	105	65	55	36	●
1588SL15C-0360	*	3.6	6	112	72	62	36	○
1588SL15C-0370	*	3.7	6	112	72	68	36	●
1588SL15C-0380	*	3.8	6	112	72	68	36	●
1588SL15C-0390	*	3.9	6	112	72	68	36	●
1588SL15C-0400	*	4	6	112	72	64	36	●
1588SL15C-0410	*	4.1	6	120	80	72	36	●
1588SL15C-0420	*	4.2	6	120	80	72	36	●
1588SL15C-0430	*	4.3	6	120	80	72	36	○
1588SL15C-0440	*	4.4	6	120	80	72	36	○
1588SL15C-0450	*	4.5	6	120	80	72	36	●
1588SL15C-0460	*	4.6	6	128	88	80	36	●
1588SL15C-0470	*	4.7	6	128	88	80	36	○
1588SL15C-0480	*	4.8	6	128	88	80	36	●
1588SL15C-0490	*	4.9	6	128	88	80	36	●
1588SL15C-0500	*	5	6	128	88	82	36	●
1588SL15C-0510	*	5.1	6	136	96	90	36	●
1588SL15C-0520	*	5.2	6	136	96	90	36	○
1588SL15C-0530	*	5.3	6	136	96	90	36	●
1588SL15C-0540	*	5.4	6	136	96	90	36	○
1588SL15C-0550	*	5.5	6	136	96	90	36	●
1588SL15C-0560	*	5.6	6	144	104	98	36	○
1588SL15C-0570	*	5.7	6	144	104	98	36	○
1588SL15C-0580	*	5.8	6	144	104	98	36	○
1588SL15C-0590	*	5.9	6	144	104	98	36	○
1588SL15C-0600	*	6	6	144	104	98	36	●
1588SL15C-0610	*	6.1	8	152	112	103	36	○
1588SL15C-0620	*	6.2	8	152	112	103	36	●
1588SL15C-0630	*	6.3	8	152	112	103	36	○
1588SL15C-0640	*	6.4	8	152	112	103	36	●
1588SL15C-0650	*	6.5	8	152	112	103	36	●

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SL(K) drill 15xD

General machining

Add K (SLK) to the code for use on Cast Iron

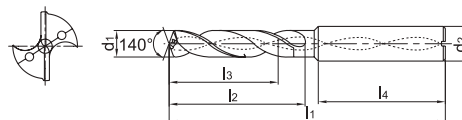
1588SL15C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL15C-0660	*	6.6	8	160	120	111	36	○
1588SL15C-0670	*	6.7	8	160	120	111	36	●
1588SL15C-0680	*	6.8	8	160	120	111	36	○
1588SL15C-0690	*	6.9	8	160	120	111	36	○
1588SL15C-0700	*	7	8	160	120	111	36	●
1588SL15C-0710	*	7.1	8	170	130	118	36	●
1588SL15C-0720	*	7.2	8	170	130	118	36	●
1588SL15C-0730	*	7.3	8	170	130	118	36	○
1588SL15C-0740	*	7.4	8	170	130	118	36	○
1588SL15C-0750	*	7.5	8	170	130	118	36	○
1588SL15C-0760	*	7.6	8	180	140	128	36	○
1588SL15C-0770	*	7.7	8	180	140	128	36	○
1588SL15C-0780	*	7.8	8	180	140	128	36	○
1588SL15C-0790	*	7.9	8	180	140	128	36	○
1588SL15C-0800	*	8	8	180	140	128	36	●
1588SL15C-0810	*	8.1	10	194	150	138	40	○
1588SL15C-0820	*	8.2	10	194	150	138	40	○
1588SL15C-0830	*	8.3	10	194	150	138	40	○
1588SL15C-0840	*	8.4	10	194	150	138	40	○
1588SL15C-0850	*	8.5	10	194	150	138	40	●
1588SL15C-0860	*	8.6	10	204	160	148	40	●
1588SL15C-0870	*	8.7	10	204	160	148	40	○
1588SL15C-0880	*	8.8	10	204	160	148	40	●
1588SL15C-0890	*	8.9	10	204	160	148	40	○
1588SL15C-0900	*	9	10	204	160	148	40	●
1588SL15C-0910	*	9.1	10	216	172	160	40	○
1588SL15C-0920	*	9.2	10	216	172	160	40	○
1588SL15C-0930	*	9.3	10	216	172	160	40	●
1588SL15C-0940	*	9.4	10	216	172	160	40	○
1588SL15C-0950	*	9.5	10	216	172	160	40	●
1588SL15C-0960	*	9.6	10	226	182	170	40	○
1588SL15C-0970	*	9.7	10	226	182	170	40	○
1588SL15C-0980	*	9.8	10	226	182	170	40	○
1588SL15C-0990	*	9.9	10	226	182	170	40	○
1588SL15C-1000	*	10	10	226	182	170	40	●
1588SL15C-1010	*	10.1	12	240	190	178	45	○

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

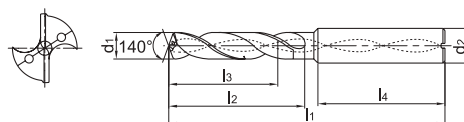
Nonstandard order > C177

SL(K) drill 15xD**General machining****Add K (SLK) to the code for use on Cast Iron****1588SL15C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL15C-1020	*	10.2	12	240	190	178	45	○
1588SL15C-1030	*	10.3	12	240	190	178	45	○
1588SL15C-1040	*	10.4	12	240	190	178	45	○
1588SL15C-1050	*	10.5	12	240	190	178	45	○
1588SL15C-1060	*	10.6	12	248	198	186	45	○
1588SL15C-1070	*	10.7	12	248	198	186	45	○
1588SL15C-1080	*	10.8	12	248	198	186	45	○
1588SL15C-1090	*	10.9	12	248	198	186	45	○
1588SL15C-1100	*	11	12	248	198	186	45	●
1588SL15C-1110	*	11.1	12	262	212	200	45	○
1588SL15C-1120	*	11.2	12	262	212	200	45	○
1588SL15C-1130	*	11.3	12	262	212	200	45	○
1588SL15C-1140	*	11.4	12	262	212	200	45	○
1588SL15C-1150	*	11.5	12	262	212	200	45	●
1588SL15C-1160	*	11.6	12	272	222	210	45	○
1588SL15C-1170	*	11.7	12	272	222	210	45	○
1588SL15C-1180	*	11.8	12	272	222	210	45	○
1588SL15C-1190	*	11.9	12	272	222	210	45	○
1588SL15C-1200	*	12	12	272	222	210	45	●

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field						
Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

✓ Suitable

SL(K) drill 20xD

General machining

Add K (SLK) to the code for use on Cast Iron

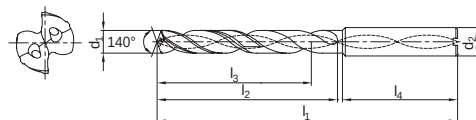
1588SL20C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL20C-0300	*	3	6	110	70	62	36	●
1588SL20C-0310	*	3.1	6	123	83	72	36	●
1588SL20C-0320	*	3.2	6	123	83	72	36	●
1588SL20C-0330	*	3.3	6	123	83	72	36	●
1588SL20C-0340	*	3.4	6	123	83	72	36	●
1588SL20C-0350	*	3.5	6	123	83	72	36	●
1588SL20C-0360	*	3.6	6	136	96	84	36	●
1588SL20C-0370	*	3.7	6	136	96	84	36	●
1588SL20C-0380	*	3.8	6	136	96	84	36	●
1588SL20C-0390	*	3.9	6	136	96	84	36	●
1588SL20C-0400	*	4	6	136	96	84	36	●
1588SL20C-0410	*	4.1	6	148	108	96	36	●
1588SL20C-0420	*	4.2	6	148	108	96	36	●
1588SL20C-0430	*	4.3	6	148	108	96	36	●
1588SL20C-0440	*	4.4	6	148	108	96	36	●
1588SL20C-0450	*	4.5	6	148	108	96	36	●
1588SL20C-0460	*	4.6	6	158	118	106	36	●
1588SL20C-0470	*	4.7	6	158	118	106	36	●
1588SL20C-0480	*	4.8	6	158	118	106	36	●
1588SL20C-0490	*	4.9	6	158	118	106	36	○
1588SL20C-0500	*	5	6	158	118	106	36	●
1588SL20C-0510	*	5.1	6	168	128	116	36	●
1588SL20C-0520	*	5.2	6	168	128	116	36	●
1588SL20C-0530	*	5.3	6	168	128	116	36	●
1588SL20C-0540	*	5.4	6	168	128	116	36	●
1588SL20C-0550	*	5.5	6	168	128	116	36	●
1588SL20C-0560	*	5.6	6	180	140	126	36	●
1588SL20C-0570	*	5.7	6	180	140	126	36	●
1588SL20C-0580	*	5.8	6	180	140	126	36	●
1588SL20C-0590	*	5.9	6	180	140	126	36	●
1588SL20C-0600	*	6	6	180	140	126	36	●
1588SL20C-0610	*	6.1	8	192	150	132	36	●
1588SL20C-0620	*	6.2	8	192	150	132	36	○
1588SL20C-0630	*	6.3	8	192	150	132	36	○
1588SL20C-0640	*	6.4	8	192	150	132	36	○
1588SL20C-0650	*	6.5	8	192	150	132	36	●

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

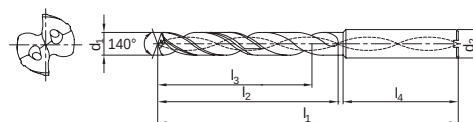
Nonstandard order > C177

SL(K) drill 20xD**General machining****Add K (SLK) to the code for use on Cast Iron****1588SL20C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL20C-0660	*	6.6	8	202	162	144	36	○
1588SL20C-0670	*	6.7	8	202	162	144	36	○
1588SL20C-0680	*	6.8	8	202	162	144	36	●
1588SL20C-0690	*	6.9	8	202	162	144	36	●
1588SL20C-0700	*	7	8	202	162	144	36	●
1588SL20C-0710	*	7.1	8	213	173	155	36	○
1588SL20C-0720	*	7.2	8	213	173	155	36	●
1588SL20C-0730	*	7.3	8	213	173	155	36	○
1588SL20C-0740	*	7.4	8	213	173	155	36	○
1588SL20C-0750	*	7.5	8	213	173	155	36	●
1588SL20C-0760	*	7.6	8	223	183	165	36	○
1588SL20C-0770	*	7.7	8	223	183	165	36	○
1588SL20C-0780	*	7.8	8	223	183	165	36	○
1588SL20C-0790	*	7.9	8	223	183	165	36	○
1588SL20C-0800	*	8	8	223	183	165	36	●
1588SL20C-0810	*	8.1	10	239	195	176	40	○
1588SL20C-0820	*	8.2	10	239	195	176	40	○
1588SL20C-0830	*	8.3	10	239	195	176	40	○
1588SL20C-0840	*	8.4	10	239	195	176	40	○
1588SL20C-0850	*	8.5	10	239	195	176	40	●
1588SL20C-0860	*	8.6	10	249	205	186	40	○
1588SL20C-0870	*	8.7	10	249	205	186	40	○
1588SL20C-0880	*	8.8	10	249	205	186	40	●
1588SL20C-0890	*	8.9	10	249	205	186	40	○
1588SL20C-0900	*	9	10	249	205	186	40	●
1588SL20C-0910	*	9.1	10	262	218	196	36	○
1588SL20C-0920	*	9.2	10	262	218	196	36	○
1588SL20C-0930	*	9.3	10	262	218	196	36	○
1588SL20C-0940	*	9.4	10	262	218	196	36	○
1588SL20C-0950	*	9.5	10	262	218	196	36	●
1588SL20C-0960	*	9.6	10	272	228	206	40	○
1588SL20C-0970	*	9.7	10	272	228	206	40	○
1588SL20C-0980	*	9.8	10	272	228	206	40	○
1588SL20C-0990	*	9.9	10	272	228	206	40	○
1588SL20C-1000	*	10	10	272	228	206	40	●
1588SL20C-1010	*	10.1	12	292	242	220	45	○

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SL(K) drill 20xD

General machining

Add K (SLK) to the code for use on Cast Iron

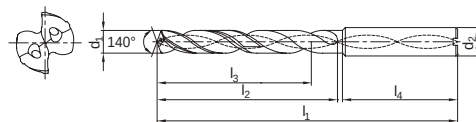
1588SL20C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL20C-1020	*	10.2	12	292	242	220	45	○
1588SL20C-1030	*	10.3	12	292	242	220	45	○
1588SL20C-1040	*	10.4	12	292	242	220	45	○
1588SL20C-1050	*	10.5	12	292	242	220	45	●
1588SL20C-1060	*	10.6	12	300	250	228	45	○
1588SL20C-1070	*	10.7	12	300	250	228	45	○
1588SL20C-1080	*	10.8	12	300	250	228	45	○
1588SL20C-1090	*	10.9	12	300	250	228	45	○
1588SL20C-1100	*	11	12	300	250	228	45	●
1588SL20C-1110	*	11.1	12	315	265	240	45	○
1588SL20C-1120	*	11.2	12	315	265	240	45	○
1588SL20C-1130	*	11.3	12	315	265	240	45	○
1588SL20C-1140	*	11.4	12	315	265	240	45	○
1588SL20C-1150	*	11.5	12	315	265	240	45	●
1588SL20C-1160	*	11.6	12	325	275	250	45	○
1588SL20C-1170	*	11.7	12	325	275	250	45	○
1588SL20C-1180	*	11.8	12	325	275	250	45	○
1588SL20C-1190	*	11.9	12	325	275	250	45	○
1588SL20C-1200	*	12	12	325	275	250	45	●
1588SL20C-1250	*	12.5	14	325	275	250	45	●
1588SL20C-1300	*	13	14	338	290	265	45	○
1588SL20C-1350	*	13.5	14	338	290	265	45	○
1588SL20C-1400	*	14	14	367	318	290	45	○

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

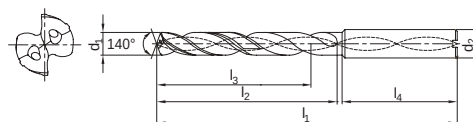
✓ Suitable

SL(K) drill 30xD**General machining****Add K (SLK) to the code for use on Cast Iron****1588SL30C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL30C-0300	*	3	6	140	100	92	36	●
1588SL30C-0310	*	3.1	6	160	120	108	36	●
1588SL30C-0320	*	3.2	6	160	120	108	36	●
1588SL30C-0330	*	3.3	6	160	120	108	36	○
1588SL30C-0340	*	3.4	6	160	120	108	36	●
1588SL30C-0350	*	3.5	6	160	120	108	36	●
1588SL30C-0360	*	3.6	6	176	136	124	36	○
1588SL30C-0370	*	3.7	6	176	136	124	36	○
1588SL30C-0380	*	3.8	6	176	136	124	36	●
1588SL30C-0390	*	3.9	6	176	136	124	36	●
1588SL30C-0400	*	4	6	176	136	124	36	●
1588SL30C-0410	*	4.1	6	192	152	140	36	○
1588SL30C-0420	*	4.2	6	192	152	140	36	○
1588SL30C-0430	*	4.3	6	192	152	140	36	○
1588SL30C-0440	*	4.4	6	192	152	140	36	○
1588SL30C-0450	*	4.5	6	192	152	140	36	●
1588SL30C-0460	*	4.6	6	208	168	156	36	○
1588SL30C-0470	*	4.7	6	208	168	156	36	●
1588SL30C-0480	*	4.8	6	208	168	156	36	●
1588SL30C-0490	*	4.9	6	208	168	156	36	●
1588SL30C-0500	*	5	6	208	168	156	36	●
1588SL30C-0510	*	5.1	6	228	188	170	36	○
1588SL30C-0520	*	5.2	6	228	188	170	36	●
1588SL30C-0530	*	5.3	6	228	188	170	36	●
1588SL30C-0540	*	5.4	6	228	188	170	36	○
1588SL30C-0550	*	5.5	6	228	188	170	36	●
1588SL30C-0560	*	5.6	6	240	200	182	36	○
1588SL30C-0570	*	5.7	6	240	200	182	36	○
1588SL30C-0580	*	5.8	6	240	200	182	36	●
1588SL30C-0590	*	5.9	6	240	200	182	36	○
1588SL30C-0600	*	6	6	240	200	182	36	●
1588SL30C-0610	*	6.1	8	260	220	202	36	●
1588SL30C-0620	*	6.2	8	260	220	202	36	●
1588SL30C-0630	*	6.3	8	260	220	202	36	●
1588SL30C-0640	*	6.4	8	260	220	202	36	○
1588SL30C-0650	*	6.5	8	260	220	202	36	●

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SL(K) drill 30xD

General machining

Add K (SLK) to the code for use on Cast Iron

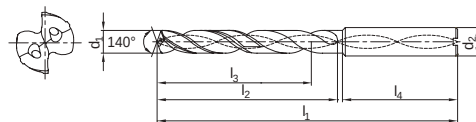
1588SL30C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1588SL30C-0660	*	6.6	8	272	232	214	36	○
1588SL30C-0670	*	6.7	8	272	232	214	36	○
1588SL30C-0680	*	6.8	8	272	232	214	36	●
1588SL30C-0690	*	6.9	8	272	232	214	36	○
1588SL30C-0700	*	7	8	272	232	214	36	●
1588SL30C-0710	*	7.1	8	290	250	232	36	○
1588SL30C-0720	*	7.2	8	290	250	232	36	○
1588SL30C-0730	*	7.3	8	290	250	232	36	○
1588SL30C-0740	*	7.4	8	290	250	232	36	○
1588SL30C-0750	*	7.5	8	290	250	232	36	●
1588SL30C-0760	*	7.6	8	305	265	246	36	○
1588SL30C-0770	*	7.7	8	305	265	246	36	○
1588SL30C-0780	*	7.8	8	305	265	246	36	●
1588SL30C-0790	*	7.9	8	305	265	246	36	○
1588SL30C-0800	*	8	8	305	265	246	36	●
1588SL30C-0810	*	8.1	10	330	285	265	40	●
1588SL30C-0820	*	8.2	10	330	285	265	40	○
1588SL30C-0830	*	8.3	10	330	285	265	40	○
1588SL30C-0840	*	8.4	10	330	285	265	40	○
1588SL30C-0850	*	8.5	10	330	285	265	40	●
1588SL30C-0860	*	8.6	10	340	295	275	40	○
1588SL30C-0870	*	8.7	10	340	295	275	40	○
1588SL30C-0880	*	8.8	10	340	295	275	40	○
1588SL30C-0890	*	8.9	10	340	295	275	40	○
1588SL30C-0900	*	9	10	340	295	275	40	●
1588SL30C-0910	*	9.1	10	360	315	292	40	○
1588SL30C-0920	*	9.2	10	360	315	292	40	○
1588SL30C-0930	*	9.3	10	360	315	292	40	○
1588SL30C-0940	*	9.4	10	360	315	292	40	○
1588SL30C-0950	*	9.5	10	360	315	292	40	○
1588SL30C-0960	*	9.6	10	372	328	305	40	○
1588SL30C-0970	*	9.7	10	372	328	305	40	○
1588SL30C-0980	*	9.8	10	372	328	305	40	○
1588SL30C-0990	*	9.9	10	372	328	305	40	○
1588SL30C-1000	*	10	10	372	328	305	40	●

● Ex stock ○ On demand

All articles SLK on demand

* With internal cooling

Application field

Type	P	M	K	N	S	H
1588SL*	✓	✓	✓	✓	✓	
1588SLK*			✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

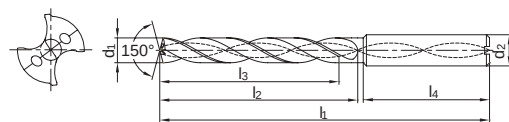
Nonstandard order > C177

SP drill 3xD**General machining****1534SP03C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (h7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534SP03C-0303	*	3.03	6	62	20	14	36	●
1534SP03C-0313	*	3.13	6	62	20	14	36	●
1534SP03C-0323	*	3.23	6	62	20	14	36	●
1534SP03C-0333	*	3.33	6	62	20	14	36	●
1534SP03C-0343	*	3.43	6	62	20	14	36	●
1534SP03C-0353	*	3.53	6	62	20	14	36	●
1534SP03C-0363	*	3.63	6	62	20	14	36	●
1534SP03C-0373	*	3.73	6	62	20	14	36	●
1534SP03C-0383	*	3.83	6	66	24	17	36	●
1534SP03C-0393	*	3.93	6	66	24	17	36	●
1534SP03C-0403	*	4.03	6	66	24	17	36	●
1534SP03C-0413	*	4.13	6	66	24	17	36	●
1534SP03C-0423	*	4.23	6	66	24	17	36	●
1534SP03C-0433	*	4.33	6	66	24	17	36	●
1534SP03C-0443	*	4.43	6	66	24	17	36	●
1534SP03C-0453	*	4.53	6	66	24	17	36	●
1534SP03C-0463	*	4.63	6	66	24	17	36	●
1534SP03C-0473	*	4.73	6	66	24	17	36	●
1534SP03C-0483	*	4.83	6	66	28	20	36	●
1534SP03C-0493	*	4.93	6	66	28	20	36	●
1534SP03C-0503	*	5.03	6	66	28	20	36	●
1534SP03C-0513	*	5.13	6	66	28	20	36	●
1534SP03C-0523	*	5.23	6	66	28	20	36	●
1534SP03C-0533	*	5.33	6	66	28	20	36	●
1534SP03C-0543	*	5.43	6	66	28	20	36	●
1534SP03C-0553	*	5.53	6	66	28	20	36	●
1534SP03C-0563	*	5.63	6	66	28	20	36	●
1534SP03C-0573	*	5.73	6	66	28	20	36	●
1534SP03C-0583	*	5.83	6	66	28	20	36	●
1534SP03C-0593	*	5.93	6	66	28	20	36	●
1534SP03C-0603	*	6.03	6	66	28	20	36	●
1534SP03C-0613	*	6.13	8	79	34	24	36	●
1534SP03C-0623	*	6.23	8	79	34	24	36	●
1534SP03C-0633	*	6.33	8	79	34	24	36	●
1534SP03C-0643	*	6.43	8	79	34	24	36	●
1534SP03C-0653	*	6.53	8	79	34	24	36	●
1534SP03C-0663	*	6.63	8	79	34	24	36	●

● Ex stock ○ On demand

Pilot drill Ø = Deep drill Ø + 0,03 mm

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓	✓	✓	✓	

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SP drill 3xD

General machining

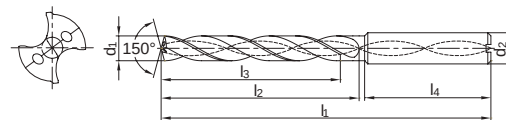
1534SP03C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (h7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534SP03C-0673	*	6.73	8	79	34	24	36	●
1534SP03C-0683	*	6.83	8	79	34	24	36	●
1534SP03C-0693	*	6.93	8	79	34	24	36	●
1534SP03C-0703	*	7.03	8	79	34	24	36	●
1534SP03C-0713	*	7.13	8	79	41	29	36	●
1534SP03C-0723	*	7.23	8	79	41	29	36	●
1534SP03C-0733	*	7.33	8	79	41	29	36	●
1534SP03C-0743	*	7.43	8	79	41	29	36	●
1534SP03C-0753	*	7.53	8	79	41	29	36	●
1534SP03C-0763	*	7.63	8	79	41	29	36	●
1534SP03C-0773	*	7.73	8	79	41	29	36	●
1534SP03C-0783	*	7.83	8	79	41	29	36	●
1534SP03C-0793	*	7.93	8	79	41	29	36	●
1534SP03C-0803	*	8.03	8	79	41	29	36	●
1534SP03C-0813	*	8.13	10	89	47	35	40	●
1534SP03C-0823	*	8.23	10	89	47	35	40	●
1534SP03C-0833	*	8.33	10	89	47	35	40	○
1534SP03C-0843	*	8.43	10	89	47	35	40	●
1534SP03C-0853	*	8.53	10	89	47	35	40	●
1534SP03C-0863	*	8.63	10	89	47	35	40	●
1534SP03C-0873	*	8.73	10	89	47	35	40	●
1534SP03C-0883	*	8.83	10	89	47	35	40	●
1534SP03C-0893	*	8.93	10	89	47	35	40	●
1534SP03C-0903	*	9.03	10	89	47	35	40	●
1534SP03C-0913	*	9.13	10	89	47	35	40	●
1534SP03C-0923	*	9.23	10	89	47	35	40	○
1534SP03C-0933	*	9.33	10	89	47	35	40	○
1534SP03C-0943	*	9.43	10	89	47	35	40	○
1534SP03C-0953	*	9.53	10	89	47	35	40	●
1534SP03C-0963	*	9.63	10	89	47	35	40	○
1534SP03C-0973	*	9.73	10	89	47	35	40	○
1534SP03C-0983	*	9.83	10	89	47	35	40	●
1534SP03C-0993	*	9.93	10	89	47	35	40	●
1534SP03C-1003	*	10.03	10	89	47	35	40	●
1534SP03C-1013	*	10.13	12	102	55	40	45	●
1534SP03C-1023	*	10.23	12	102	55	40	45	●
1534SP03C-1033	*	10.33	12	102	55	40	45	●

● Ex stock ○ On demand

Pilot drill Ø = Deep drill Ø + 0,03 mm

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓	✓	✓	✓	

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

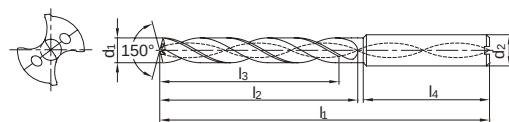
Nonstandard order > C177

SP drill 3xD**General machining****1534SP03C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (h7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534SP03C-1043	*	10.43	12	102	55	40	45	●
1534SP03C-1053	*	10.53	12	102	55	40	45	●
1534SP03C-1063	*	10.63	12	102	55	40	45	●
1534SP03C-1073	*	10.73	12	102	55	40	45	●
1534SP03C-1083	*	10.83	12	102	55	40	45	●
1534SP03C-1093	*	10.93	12	102	55	40	45	●
1534SP03C-1103	*	11.03	12	102	55	40	45	●
1534SP03C-1113	*	11.13	12	102	55	40	45	●
1534SP03C-1123	*	11.23	12	102	55	40	45	●
1534SP03C-1133	*	11.33	12	102	55	40	45	●
1534SP03C-1143	*	11.43	12	102	55	40	45	●
1534SP03C-1153	*	11.53	12	102	55	40	45	●
1534SP03C-1163	*	11.63	12	102	55	40	45	●
1534SP03C-1173	*	11.73	12	102	55	40	45	●
1534SP03C-1183	*	11.83	12	102	55	40	45	●
1534SP03C-1193	*	11.93	12	102	55	40	45	●
1534SP03C-1203	*	12.03	12	102	55	40	45	●
1534SP03C-1213	*	12.13	14	107	60	43	45	○
1534SP03C-1223	*	12.23	14	107	60	43	45	○
1534SP03C-1233	*	12.33	14	107	60	43	45	○
1534SP03C-1243	*	12.43	14	107	60	43	45	○
1534SP03C-1253	*	12.53	14	107	60	43	45	●
1534SP03C-1263	*	12.63	14	107	60	43	45	○
1534SP03C-1273	*	12.73	14	107	60	43	45	○
1534SP03C-1283	*	12.83	14	107	60	43	45	○
1534SP03C-1293	*	12.93	14	107	60	43	45	○
1534SP03C-1303	*	13.03	14	107	60	43	45	○
1534SP03C-1353	*	13.53	14	107	60	43	45	○
1534SP03C-1403	*	14.03	14	107	60	43	45	○
1534SP03C-1453	*	14.53	16	115	65	45	48	○
1534SP03C-1503	*	15.03	16	115	65	45	48	○
1534SP03C-1553	*	15.53	16	115	65	45	48	○
1534SP03C-1603	*	16.03	16	115	65	45	48	○
1534SP03C-1653	*	16.53	18	123	73	51	48	○
1534SP03C-1703	*	17.03	18	123	73	51	48	○
1534SP03C-1753	*	17.53	18	123	73	51	48	○
1534SP03C-1803	*	18.03	18	123	73	51	48	○

● Ex stock ○ On demand

Pilot drill Ø = Deep drill Ø + 0,03 mm

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓	✓	✓	✓	

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SP drill 3xD

General machining

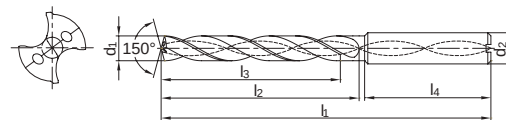
1534SP03C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article		Dimensions [mm]						Grade
		d ₁ (h7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534SP03C-1853	*	18.53	20	131	79	55	50	○
1534SP03C-1903	*	19.03	20	131	79	55	50	○
1534SP03C-1953	*	19.53	20	131	79	55	50	○
1534SP03C-2003	*	20.03	20	131	79	55	50	○

- Ex stock ○ On demand

Pilot drill Ø = Deep drill Ø + 0,03 mm

- * With internal cooling

Application field

P	M	K	N	S	H
✓	✓	✓	✓	✓	

✓ Very suitable

✓ Suitable

ST Serie

Twist drills with sharp cutting edge

- For machining of tough steel, stainless steel and heat-resistant alloys.
- Diameter range 3.0–20.0 mm (3xD, 5xD)



Straight cut

Chip comparison



Chip (competitor A)



1534ST03C-1000 chip (ZCC-CT)

1536ST

ST drill 3xD

Steel, stainless steel, heat-resistant alloys

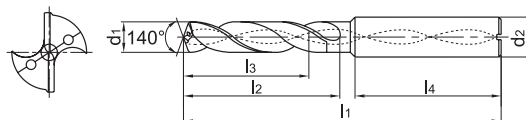
1534ST03C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534ST03C-0300	*	3	6	62	20	14	36	●
1534ST03C-0310	*	3.1	6	62	20	14	36	●
1534ST03C-0320	*	3.2	6	62	20	14	36	●
1534ST03C-0325	*	3.25	6	62	20	14	36	○
1534ST03C-0330	*	3.3	6	62	20	14	36	●
1534ST03C-0340	*	3.4	6	62	20	14	36	●
1534ST03C-0350	*	3.5	6	62	20	14	36	●
1534ST03C-0360	*	3.6	6	62	20	14	36	●
1534ST03C-0370	*	3.7	6	62	20	14	36	●
1534ST03C-0380	*	3.8	6	66	24	17	36	●
1534ST03C-0390	*	3.9	6	66	24	17	36	●
1534ST03C-0400	*	4	6	66	24	17	36	●
1534ST03C-0410	*	4.1	6	66	24	17	36	●
1534ST03C-0420	*	4.2	6	66	24	17	36	●
1534ST03C-0430	*	4.3	6	66	24	17	36	●
1534ST03C-0440	*	4.4	6	66	24	17	36	●
1534ST03C-0450	*	4.5	6	66	24	17	36	●
1534ST03C-0460	*	4.6	6	66	24	17	36	●
1534ST03C-0465	*	4.65	6	66	24	17	36	○
1534ST03C-0470	*	4.7	6	66	24	17	36	●
1534ST03C-0480	*	4.8	6	66	28	20	36	●
1534ST03C-0490	*	4.9	6	66	28	20	36	●
1534ST03C-0500	*	5	6	66	28	20	36	●
1534ST03C-0510	*	5.1	6	66	28	20	36	●
1534ST03C-0520	*	5.2	6	66	28	20	36	●
1534ST03C-0530	*	5.3	6	66	28	20	36	●
1534ST03C-0540	*	5.4	6	66	28	20	36	●
1534ST03C-0550	*	5.5	6	66	28	20	36	●
1534ST03C-0555	*	5.55	6	66	28	20	36	●
1534ST03C-0560	*	5.6	6	66	28	20	36	●
1534ST03C-0570	*	5.7	6	66	28	20	36	●
1534ST03C-0580	*	5.8	6	66	28	20	36	●
1534ST03C-0590	*	5.9	6	66	28	20	36	●
1534ST03C-0600	*	6	6	66	28	20	36	●
1534ST03C-0610	*	6.1	8	79	34	24	36	●
1534ST03C-0620	*	6.2	8	79	34	24	36	●
1534ST03C-0630	*	6.3	8	79	34	24	36	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓			✓	

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

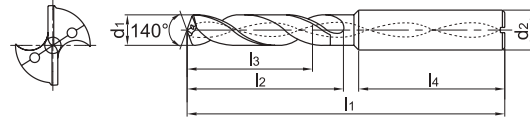
Nonstandard order > C177

ST drill 3xD**Steel, stainless steel, heat-resistant alloys****1534ST03C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534ST03C-0640	*	6.4	8	79	34	24	36	●
1534ST03C-0650	*	6.5	8	79	34	24	36	●
1534ST03C-0660	*	6.6	8	79	34	24	36	●
1534ST03C-0670	*	6.7	8	79	34	24	36	●
1534ST03C-0675	*	6.75	8	79	34	24	36	○
1534ST03C-0690	*	6.9	8	79	34	24	36	●
1534ST03C-0700	*	7	8	79	34	24	36	●
1534ST03C-0710	*	7.1	8	79	41	29	36	●
1534ST03C-0720	*	7.2	8	79	41	29	36	●
1534ST03C-0730	*	7.3	8	79	41	29	36	●
1534ST03C-0740	*	7.4	8	79	41	29	36	●
1534ST03C-0750	*	7.5	8	79	41	29	36	●
1534ST03C-0760	*	7.6	8	79	41	29	36	●
1534ST03C-0770	*	7.7	8	79	41	29	36	●
1534ST03C-0780	*	7.8	8	79	41	29	36	●
1534ST03C-0790	*	7.9	8	79	41	29	36	●
1534ST03C-0800	*	8	8	79	41	29	36	●
1534ST03C-0810	*	8.1	10	89	47	35	40	●
1534ST03C-0820	*	8.2	10	89	47	35	40	●
1534ST03C-0830	*	8.3	10	89	47	35	40	●
1534ST03C-0840	*	8.4	10	89	47	35	40	●
1534ST03C-0850	*	8.5	10	89	47	35	40	●
1534ST03C-0860	*	8.6	10	89	47	35	40	●
1534ST03C-0870	*	8.7	10	89	47	35	40	●
1534ST03C-0880	*	8.8	10	89	47	35	40	●
1534ST03C-0890	*	8.9	10	89	47	35	40	●
1534ST03C-0900	*	9	10	89	47	35	40	○
1534ST03C-0910	*	9.1	10	89	47	35	40	●
1534ST03C-0930	*	9.3	10	89	47	35	40	●
1534ST03C-0940	*	9.4	10	89	47	35	40	●
1534ST03C-0950	*	9.5	10	89	47	35	40	●
1534ST03C-0960	*	9.6	10	89	47	35	40	●
1534ST03C-0970	*	9.7	10	89	47	35	40	●
1534ST03C-0980	*	9.8	10	89	47	35	40	●
1534ST03C-0990	*	9.9	10	89	47	35	40	●
1534ST03C-1000	*	10	10	89	47	35	40	●
1534ST03C-1010	*	10.1	12	102	55	40	45	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓			✓	

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



ST drill 3xD

Steel, stainless steel, heat-resistant alloys

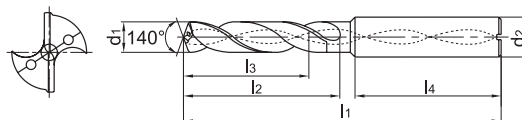
1534ST03C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534ST03C-1025	*	10.25	12	102	55	40	45	●
1534ST03C-1030	*	10.3	12	102	55	40	45	●
1534ST03C-1040	*	10.4	12	102	55	40	45	●
1534ST03C-1050	*	10.5	12	102	55	40	45	●
1534ST03C-1060	*	10.6	12	102	55	40	45	●
1534ST03C-1070	*	10.7	12	102	55	40	45	●
1534ST03C-1080	*	10.8	12	102	55	40	45	●
1534ST03C-1090	*	10.9	12	102	55	40	45	●
1534ST03C-1100	*	11	12	102	55	40	45	●
1534ST03C-1110	*	11.1	12	102	55	40	45	●
1534ST03C-1120	*	11.2	12	102	55	40	45	●
1534ST03C-1130	*	11.3	12	102	55	40	45	●
1534ST03C-1140	*	11.4	12	102	55	40	45	●
1534ST03C-1150	*	11.5	12	102	55	40	45	●
1534ST03C-1160	*	11.6	12	102	55	40	45	●
1534ST03C-1170	*	11.7	12	102	55	40	45	●
1534ST03C-1180	*	11.8	12	102	55	40	45	●
1534ST03C-1190	*	11.9	12	102	55	40	45	●
1534ST03C-1200	*	12	12	102	55	40	45	●
1534ST03C-1225	*	12.25	14	107	60	43	45	●
1534ST03C-1230	*	12.3	14	107	60	43	45	●
1534ST03C-1250	*	12.5	14	107	60	43	45	●
1534ST03C-1270	*	12.7	14	107	60	43	45	●
1534ST03C-1275	*	12.75	14	107	60	43	45	●
1534ST03C-1280	*	12.8	14	107	60	43	45	●
1534ST03C-1300	*	13	14	107	60	43	45	●
1534ST03C-1310	*	13.1	14	107	60	43	45	●
1534ST03C-1350	*	13.5	14	107	60	43	45	●
1534ST03C-1380	*	13.8	14	107	60	43	45	●
1534ST03C-1400	*	14	14	107	60	43	45	●
1534ST03C-1425	*	14.25	16	115	65	45	48	●
1534ST03C-1430	*	14.3	16	115	65	45	48	●
1534ST03C-1450	*	14.5	16	115	65	45	48	●
1534ST03C-1475	*	14.75	16	115	65	45	48	●
1534ST03C-1480	*	14.8	16	115	65	45	48	●
1534ST03C-1500	*	15	16	115	65	45	48	●
1534ST03C-1510	*	15.1	16	115	65	45	48	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓			✓	

✓ Very suitable

✓ Suitable

System code > C28

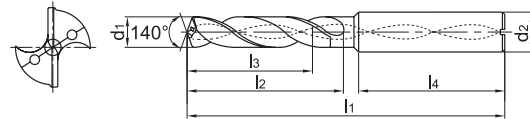
Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

ST drill 3xD**Steel, stainless steel, heat-resistant alloys****1534ST03C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534ST03C-1550	*	15.5	16	115	65	45	48	●
1534ST03C-1580	*	15.8	16	115	65	45	48	●
1534ST03C-1600	*	16	16	115	65	45	48	●
1534ST03C-1650	*	16.5	18	123	73	51	48	●
1534ST03C-1675	*	16.75	18	123	73	51	48	●
1534ST03C-1680	*	16.8	18	123	73	51	48	●
1534ST03C-1700	*	17	18	123	73	51	48	●
1534ST03C-1750	*	17.5	18	123	73	51	48	●
1534ST03C-1780	*	17.8	18	123	73	51	48	●
1534ST03C-1800	*	18	18	123	73	51	48	●
1534ST03C-1850	*	18.5	20	131	79	55	50	●
1534ST03C-1880	*	18.8	20	131	79	55	50	●
1534ST03C-1900	*	19	20	131	79	55	50	●
1534ST03C-1950	*	19.5	20	131	79	55	50	●
1534ST03C-1980	*	19.8	20	131	79	55	50	●
1534ST03C-2000	*	20	20	131	79	55	50	●

● Ex stock ○ On demand

* With internal cooling

Application field					
P	M	K	N	S	H
✓	✓			✓	

✓ Very suitable

✓ Suitable

A

Turning

B

Milling

C

Drilling

D

Technical
Information

E

Index

ST drill 5xD

Steel, stainless steel, heat-resistant alloys

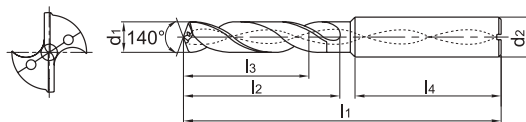
1536ST05C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1536ST05C-0300	*	3	6	66	28	23	36	●
1536ST05C-0310	*	3.1	6	66	28	23	36	●
1536ST05C-0320	*	3.2	6	66	28	23	36	●
1536ST05C-0325	*	3.25	6	66	28	23	36	○
1536ST05C-0330	*	3.3	6	66	28	23	36	●
1536ST05C-0340	*	3.4	6	66	28	23	36	●
1536ST05C-0350	*	3.5	6	66	28	23	36	●
1536ST05C-0360	*	3.6	6	66	28	23	36	●
1536ST05C-0370	*	3.7	6	66	28	23	36	●
1536ST05C-0380	*	3.8	6	74	36	29	36	●
1536ST05C-0390	*	3.9	6	74	36	29	36	●
1536ST05C-0400	*	4	6	74	36	29	36	●
1536ST05C-0410	*	4.1	6	74	36	29	36	●
1536ST05C-0420	*	4.2	6	74	36	29	36	●
1536ST05C-0430	*	4.3	6	74	36	29	36	●
1536ST05C-0440	*	4.4	6	74	36	29	36	●
1536ST05C-0450	*	4.5	6	74	36	29	36	●
1536ST05C-0460	*	4.6	6	74	36	29	36	●
1536ST05C-0465	*	4.65	6	74	36	29	36	○
1536ST05C-0470	*	4.7	6	74	36	29	36	●
1536ST05C-0480	*	4.8	6	82	44	35	36	●
1536ST05C-0490	*	4.9	6	82	44	35	36	●
1536ST05C-0500	*	5	6	82	44	35	36	●
1536ST05C-0510	*	5.1	6	82	44	35	36	●
1536ST05C-0520	*	5.2	6	82	44	35	36	●
1536ST05C-0530	*	5.3	6	82	44	35	36	●
1536ST05C-0540	*	5.4	6	82	44	35	36	●
1536ST05C-0550	*	5.5	6	82	44	35	36	●
1536ST05C-0555	*	5.55	6	82	44	35	36	○
1536ST05C-0560	*	5.6	6	82	44	35	36	●
1536ST05C-0570	*	5.7	6	82	44	35	36	●
1536ST05C-0580	*	5.8	6	82	44	35	36	●
1536ST05C-0590	*	5.9	6	82	44	35	36	●
1536ST05C-0600	*	6	6	82	44	35	36	●
1536ST05C-0610	*	6.1	8	91	53	43	36	●
1536ST05C-0620	*	6.2	8	91	53	43	36	●
1536ST05C-0630	*	6.3	8	91	53	43	36	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓			✓	

✓ Very suitable

✓ Suitable

System code > C28

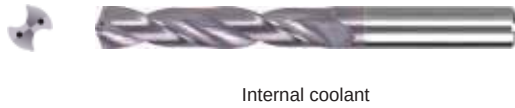
Machining instructions > C165

Cutting data > C122

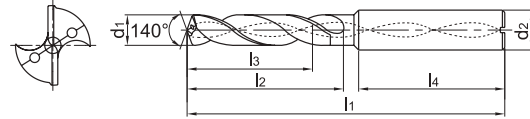
Nonstandard order > C177

ST drill 5xD**Steel, stainless steel, heat-resistant alloys****1536ST05C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1536ST05C-0640	*	6.4	8	91	53	43	36	●
1536ST05C-0650	*	6.5	8	91	53	43	36	●
1536ST05C-0660	*	6.6	8	91	53	43	36	●
1536ST05C-0670	*	6.7	8	91	53	43	36	●
1536ST05C-0675	*	6.75	8	91	53	43	36	○
1536ST05C-0680	*	6.8	8	91	53	43	36	●
1536ST05C-0690	*	6.9	8	91	53	43	36	●
1536ST05C-0700	*	7	8	91	53	43	36	●
1536ST05C-0710	*	7.1	8	91	53	43	36	●
1536ST05C-0720	*	7.2	8	91	53	43	36	●
1536ST05C-0730	*	7.3	8	91	53	43	36	●
1536ST05C-0740	*	7.4	8	91	53	43	36	●
1536ST05C-0750	*	7.5	8	91	53	43	36	●
1536ST05C-0760	*	7.6	8	91	53	43	36	●
1536ST05C-0770	*	7.7	8	91	53	43	36	●
1536ST05C-0780	*	7.8	8	91	53	43	36	●
1536ST05C-0790	*	7.9	8	91	53	43	36	●
1536ST05C-0800	*	8	8	91	53	43	36	●
1536ST05C-0810	*	8.1	10	103	61	49	40	●
1536ST05C-0820	*	8.2	10	103	61	49	40	●
1536ST05C-0830	*	8.3	10	103	61	49	40	●
1536ST05C-0840	*	8.4	10	103	61	49	40	●
1536ST05C-0850	*	8.5	10	103	61	49	40	●
1536ST05C-0860	*	8.6	10	103	61	49	40	●
1536ST05C-0870	*	8.7	10	103	61	49	40	●
1536ST05C-0880	*	8.8	10	103	61	49	40	●
1536ST05C-0890	*	8.9	10	103	61	49	40	●
1536ST05C-0900	*	9	10	103	61	49	40	●
1536ST05C-0910	*	9.1	10	103	61	49	40	●
1536ST05C-0920	*	9.2	10	103	61	49	40	●
1536ST05C-0930	*	9.3	10	103	61	49	40	●
1536ST05C-0940	*	9.4	10	103	61	49	40	●
1536ST05C-0950	*	9.5	10	103	61	49	40	●
1536ST05C-0960	*	9.6	10	103	61	49	40	●
1536ST05C-0970	*	9.7	10	103	61	49	40	●
1536ST05C-0980	*	9.8	10	103	61	49	40	●
1536ST05C-0990	*	9.9	10	103	61	49	40	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓			✓	

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



ST drill 5xD

Steel, stainless steel, heat-resistant alloys

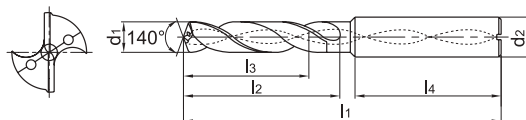
1536ST05C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1536ST05C-1000	*	10	10	103	61	49	40	●
1536ST05C-1010	*	10.1	12	118	71	56	45	●
1536ST05C-1020	*	10.2	12	118	71	56	45	●
1536ST05C-1025	*	10.25	12	118	71	56	45	○
1536ST05C-1030	*	10.3	12	118	71	56	45	●
1536ST05C-1040	*	10.4	12	118	71	56	45	●
1536ST05C-1050	*	10.5	12	118	71	56	45	●
1536ST05C-1060	*	10.6	12	118	71	56	45	●
1536ST05C-1070	*	10.7	12	118	71	56	45	●
1536ST05C-1080	*	10.8	12	118	71	56	45	●
1536ST05C-1090	*	10.9	12	118	71	56	45	●
1536ST05C-1100	*	11	12	118	71	56	45	●
1536ST05C-1110	*	11.1	12	118	71	56	45	●
1536ST05C-1120	*	11.2	12	118	71	56	45	●
1536ST05C-1130	*	11.3	12	118	71	56	45	●
1536ST05C-1140	*	11.4	12	118	71	56	45	●
1536ST05C-1150	*	11.5	12	118	71	56	45	●
1536ST05C-1160	*	11.6	12	118	71	56	45	●
1536ST05C-1170	*	11.7	12	118	71	56	45	●
1536ST05C-1180	*	11.8	12	118	71	56	45	●
1536ST05C-1190	*	11.9	12	118	71	56	45	●
1536ST05C-1200	*	12	12	118	71	56	45	●
1536ST05C-1220	*	12.2	14	124	77	60	45	●
1536ST05C-1225	*	12.25	14	124	77	60	45	○
1536ST05C-1230	*	12.3	14	124	77	60	45	●
1536ST05C-1250	*	12.5	14	124	77	60	45	●
1536ST05C-1270	*	12.7	14	124	77	60	45	●
1536ST05C-1275	*	12.75	14	124	77	60	45	○
1536ST05C-1280	*	12.8	14	124	77	60	45	●
1536ST05C-1300	*	13	14	124	77	60	45	●
1536ST05C-1310	*	13.1	14	124	77	60	45	●
1536ST05C-1350	*	13.5	14	124	77	60	45	●
1536ST05C-1380	*	13.8	14	124	77	60	45	●
1536ST05C-1400	*	14	14	124	77	60	45	●
1536ST05C-1425	*	14.25	16	133	83	63	48	○
1536ST05C-1430	*	14.3	16	133	83	63	48	●
1536ST05C-1450	*	14.5	16	133	83	63	48	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓			✓	

✓ Very suitable

✓ Suitable

System code > C28

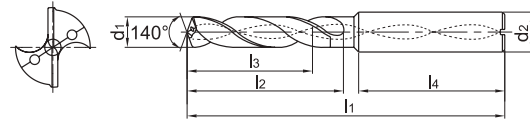
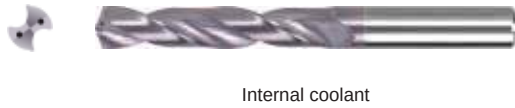
Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

ST drill 5xD**Steel, stainless steel, heat-resistant alloys****1536ST05C**

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1536ST05C-1475	*	14.75	16	133	83	63	48	○
1536ST05C-1480	*	14.8	16	133	83	63	48	●
1536ST05C-1500	*	15	16	133	83	63	48	●
1536ST05C-1510	*	15.1	16	133	83	63	48	●
1536ST05C-1550	*	15.5	16	133	83	63	48	●
1536ST05C-1580	*	15.8	16	133	83	63	48	●
1536ST05C-1600	*	16	16	133	83	63	48	●
1536ST05C-1650	*	16.5	18	143	93	71	48	●
1536ST05C-1675	*	16.75	18	143	93	71	48	○
1536ST05C-1680	*	16.8	18	143	93	71	48	●
1536ST05C-1700	*	17	18	143	93	71	48	●
1536ST05C-1750	*	17.5	18	143	93	71	48	●
1536ST05C-1780	*	17.8	18	143	93	71	48	●
1536ST05C-1800	*	18	18	143	93	71	48	●
1536ST05C-1850	*	18.5	20	153	101	77	50	●
1536ST05C-1880	*	18.8	20	153	101	77	50	●
1536ST05C-1900	*	19	20	153	101	77	50	●
1536ST05C-1950	*	19.5	20	153	101	77	50	●
1536ST05C-1980	*	19.8	20	153	101	77	50	○
1536ST05C-2000	*	20	20	153	101	77	50	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓			✓	

✓ Very suitable

✓ Suitable

ST drill 5xD

Steel, stainless steel, heat-resistant alloys

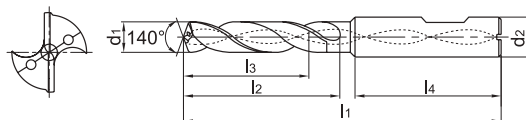
1636ST05C



- Weldon clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1636ST05C-0300	*	3	6	66	28	23	36	○
1636ST05C-0310	*	3.1	6	66	28	23	36	○
1636ST05C-0320	*	3.2	6	66	28	23	36	○
1636ST05C-0325	*	3.25	6	66	28	23	36	○
1636ST05C-0330	*	3.3	6	66	28	23	36	○
1636ST05C-0340	*	3.4	6	66	28	23	36	○
1636ST05C-0350	*	3.5	6	66	28	23	36	○
1636ST05C-0360	*	3.6	6	66	28	23	36	○
1636ST05C-0370	*	3.7	6	66	28	23	36	○
1636ST05C-0380	*	3.8	6	74	36	29	36	○
1636ST05C-0390	*	3.9	6	74	36	29	36	○
1636ST05C-0400	*	4	6	74	36	29	36	○
1636ST05C-0410	*	4.1	6	74	36	29	36	○
1636ST05C-0420	*	4.2	6	74	36	29	36	○
1636ST05C-0430	*	4.3	6	74	36	29	36	○
1636ST05C-0440	*	4.4	6	74	36	29	36	○
1636ST05C-0450	*	4.5	6	74	36	29	36	○
1636ST05C-0460	*	4.6	6	74	36	29	36	○
1636ST05C-0465	*	4.65	6	74	36	29	36	○
1636ST05C-0470	*	4.7	6	74	36	29	36	○
1636ST05C-0480	*	4.8	6	82	44	35	36	○
1636ST05C-0490	*	4.9	6	82	44	35	36	○
1636ST05C-0500	*	5	6	82	44	35	36	○
1636ST05C-0510	*	5.1	6	82	44	35	36	○
1636ST05C-0520	*	5.2	6	82	44	35	36	○
1636ST05C-0530	*	5.3	6	82	44	35	36	○
1636ST05C-0540	*	5.4	6	82	44	35	36	○
1636ST05C-0550	*	5.5	6	82	44	35	36	○
1636ST05C-0555	*	5.55	6	82	44	35	36	○
1636ST05C-0560	*	5.6	6	82	44	35	36	○
1636ST05C-0570	*	5.7	6	82	44	35	36	○
1636ST05C-0580	*	5.8	6	82	44	35	36	○
1636ST05C-0590	*	5.9	6	82	44	35	36	○
1636ST05C-0600	*	6	6	82	44	35	36	○
1636ST05C-0610	*	6.1	8	91	53	43	36	○
1636ST05C-0620	*	6.2	8	91	53	43	36	○
1636ST05C-0630	*	6.3	8	91	53	43	36	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓			✓	

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

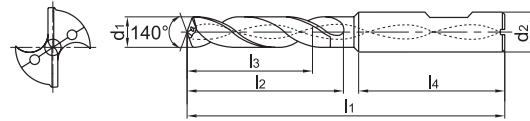
Nonstandard order > C177

ST drill 5xD**Steel, stainless steel, heat-resistant alloys****1636ST05C**

- Weldon clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1636ST05C-0640	*	6.4	8	91	53	43	36	o
1636ST05C-0650	*	6.5	8	91	53	43	36	o
1636ST05C-0660	*	6.6	8	91	53	43	36	o
1636ST05C-0670	*	6.7	8	91	53	43	36	o
1636ST05C-0675	*	6.75	8	91	53	43	36	o
1636ST05C-0690	*	6.9	8	91	53	43	36	o
1636ST05C-0700	*	7	8	91	53	43	36	o
1636ST05C-0710	*	7.1	8	91	53	43	36	o
1636ST05C-0720	*	7.2	8	91	53	43	36	o
1636ST05C-0730	*	7.3	8	91	53	43	36	o
1636ST05C-0740	*	7.4	8	91	53	43	36	o
1636ST05C-0750	*	7.5	8	91	53	43	36	o
1636ST05C-0760	*	7.6	8	91	53	43	36	o
1636ST05C-0770	*	7.7	8	91	53	43	36	o
1636ST05C-0780	*	7.8	8	91	53	43	36	o
1636ST05C-0790	*	7.9	8	91	53	43	36	o
1636ST05C-0800	*	8	8	91	53	43	36	o
1636ST05C-0810	*	8.1	10	103	61	49	40	o
1636ST05C-0820	*	8.2	10	103	61	49	40	o
1636ST05C-0830	*	8.3	10	103	61	49	40	o
1636ST05C-0840	*	8.4	10	103	61	49	40	o
1636ST05C-0850	*	8.5	10	103	61	49	40	o
1636ST05C-0860	*	8.6	10	103	61	49	40	o
1636ST05C-0870	*	8.7	10	103	61	49	40	o
1636ST05C-0880	*	8.8	10	103	61	49	40	o
1636ST05C-0890	*	8.9	10	103	61	49	40	o
1636ST05C-0900	*	9	10	103	61	49	40	o
1636ST05C-0910	*	9.1	10	103	61	49	40	o
1636ST05C-0930	*	9.3	10	103	61	49	40	o
1636ST05C-0940	*	9.4	10	103	61	49	40	o
1636ST05C-0950	*	9.5	10	103	61	49	40	o
1636ST05C-0960	*	9.6	10	103	61	49	40	o
1636ST05C-0970	*	9.7	10	103	61	49	40	o
1636ST05C-0980	*	9.8	10	103	61	49	40	o
1636ST05C-0990	*	9.9	10	103	61	49	40	o
1636ST05C-1000	*	10	10	103	61	49	40	o
1636ST05C-1010	*	10.1	12	118	71	56	45	o

• Ex stock o On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓			✓	

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



ST drill 5xD

Steel, stainless steel, heat-resistant alloys

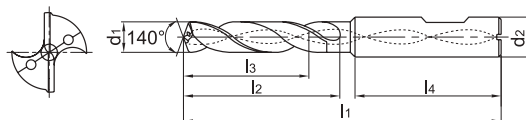
1636ST05C



- Weldon clamping surface
- Coolant exit, axial concentric



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1636ST05C-1025	*	10.25	12	118	71	56	45	○
1636ST05C-1030	*	10.3	12	118	71	56	45	○
1636ST05C-1040	*	10.4	12	118	71	56	45	○
1636ST05C-1050	*	10.5	12	118	71	56	45	○
1636ST05C-1060	*	10.6	12	118	71	56	45	○
1636ST05C-1070	*	10.7	12	118	71	56	45	○
1636ST05C-1080	*	10.8	12	118	71	56	45	○
1636ST05C-1090	*	10.9	12	118	71	56	45	○
1636ST05C-1100	*	11	12	118	71	56	45	○
1636ST05C-1110	*	11.1	12	118	71	56	45	○
1636ST05C-1120	*	11.2	12	118	71	56	45	○
1636ST05C-1130	*	11.3	12	118	71	56	45	○
1636ST05C-1140	*	11.4	12	118	71	56	45	○
1636ST05C-1150	*	11.5	12	118	71	56	45	○
1636ST05C-1160	*	11.6	12	118	71	56	45	○
1636ST05C-1170	*	11.7	12	118	71	56	45	○
1636ST05C-1180	*	11.8	12	118	71	56	45	○
1636ST05C-1190	*	11.9	12	118	71	56	45	○
1636ST05C-1200	*	12	12	118	71	56	45	○
1636ST05C-1225	*	12.25	14	124	77	60	45	○
1636ST05C-1230	*	12.3	14	124	77	60	45	○
1636ST05C-1250	*	12.5	14	124	77	60	45	○
1636ST05C-1270	*	12.7	14	124	77	60	45	○
1636ST05C-1275	*	12.75	14	124	77	60	45	○
1636ST05C-1280	*	12.8	14	124	77	60	45	○
1636ST05C-1300	*	13	14	124	77	60	45	○
1636ST05C-1310	*	13.1	14	124	77	60	45	○
1636ST05C-1350	*	13.5	14	124	77	60	45	○
1636ST05C-1380	*	13.8	14	124	77	60	45	○
1636ST05C-1400	*	14	14	124	77	60	45	○
1636ST05C-1425	*	14.25	16	133	83	63	48	○
1636ST05C-1430	*	14.3	16	133	83	63	48	○
1636ST05C-1450	*	14.5	16	133	83	63	48	○
1636ST05C-1475	*	14.75	16	133	83	63	48	○
1636ST05C-1480	*	14.8	16	133	83	63	48	○
1636ST05C-1500	*	15	16	133	83	63	48	○
1636ST05C-1510	*	15.1	16	133	83	63	48	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓			✓	

✓ Very suitable

✓ Suitable

System code > C28

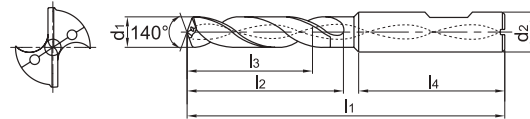
Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

ST drill 5xD**Steel, stainless steel, heat-resistant alloys****1636ST05C**

- Weldon clamping surface
- Coolant exit, axial concentric



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1636ST05C-1550	*	15.5	16	133	83	63	48	○
1636ST05C-1580	*	15.8	16	133	83	63	48	○
1636ST05C-1600	*	16	16	133	83	63	48	○
1636ST05C-1650	*	16.5	18	143	93	71	48	○
1636ST05C-1675	*	16.75	18	143	93	71	48	○
1636ST05C-1680	*	16.8	18	143	93	71	48	○
1636ST05C-1700	*	17	18	143	93	71	48	●
1636ST05C-1750	*	17.5	18	143	93	71	48	○
1636ST05C-1780	*	17.8	18	143	93	71	48	○
1636ST05C-1800	*	18	18	143	93	71	48	○
1636ST05C-1850	*	18.5	20	153	101	77	50	○
1636ST05C-1880	*	18.8	20	153	101	77	50	○
1636ST05C-1900	*	19	20	153	101	77	50	○
1636ST05C-1950	*	19.5	20	153	101	77	50	○
1636ST05C-1980	*	19.8	20	153	101	77	50	○
1636ST05C-2000	*	20	20	153	101	77	50	○

● Ex stock ○ On demand

* With internal cooling

Application field					
P	M	K	N	S	H
✓	✓			✓	

✓ Very suitable

✓ Suitable

A

Turning

B

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C

Drilling

D

Technical
Information

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Notes

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Technical
Information

E

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1534SH

SH series

Twist drills for hardened materials

- Specially designed chip geometry for very high stability.
- High performance coating for longer tool life.
- Diameter range 3.0–16.0 mm (3xD)



S cut

1105SC

SC series

Twist drills for aluminium alloys

- Equal nominal diameter and shank diameter.
- Diameter meter 2.0–16.0 mm (3xD, 5xD)



Straight cut

1165PA

PA series

Three-lips drills for aluminium alloys

- Three cutting edges provide high concentricity and therefore high feed rates.
- Equal nominal diameter and shank diameter.
- Diameter range 3.0–20.0 mm (3xD)



Straight cut

SH drill 3xD

Hard materials

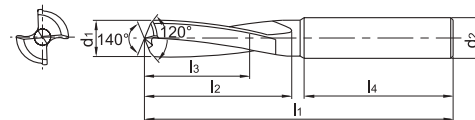
1534SH03



– Type of shank DIN 6535HA



External coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	KDG303
1534SH03-0300		3	6	62	20	14	36	●
1534SH03-0330		3.3	6	62	20	14	36	●
1534SH03-0400		4	6	66	24	17	36	●
1534SH03-0420		4.2	6	66	24	17	36	●
1534SH03-0500		5	6	66	28	20	36	●
1534SH03-0600		6	6	66	28	20	36	●
1534SH03-0675		6.75	8	79	34	24	36	●
1534SH03-0700		7	8	79	34	24	36	●
1534SH03-0800		8	8	79	41	29	36	●
1534SH03-0850		8.5	10	89	47	35	40	●
1534SH03-0900		9	10	89	47	35	40	●
1534SH03-1000		10	10	89	47	35	40	●
1534SH03-1025		10.25	12	102	55	40	45	●
1534SH03-1050		10.5	12	102	55	40	45	●
1534SH03-1200		12	12	102	55	40	45	●
1534SH03-1250		12.5	14	107	60	43	45	●
1534SH03-1400		14	14	107	60	43	45	●
1534SH03-1450		14.5	16	115	65	45	48	○
1534SH03-1600		16	16	115	65	45	48	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
					✓

✓ Very suitable

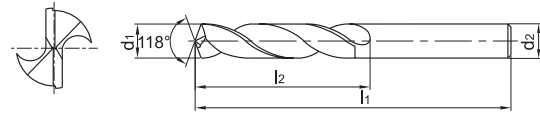
✓ Suitable

SC drill 3xD**Non-ferrous metals****1105SC03**

– Factory standard



External coolant



Article	*	Dimensions [mm]				Grade
		d ₁ (h8)	d ₂ (h7)	l ₁	l ₂	YK20F
1105SC03-0200		2	2	38	12	●
1105SC03-0250		2.5	2.5	43	14	●
1105SC03-0280		2.8	2.8	46	16	●
1105SC03-0300		3	3	46	16	●
1105SC03-0310		3.1	3.1	49	18	●
1105SC03-0320		3.2	3.2	49	18	●
1105SC03-0330		3.3	3.3	49	18	●
1105SC03-0340		3.4	3.4	52	20	●
1105SC03-0350		3.5	3.5	52	20	●
1105SC03-0360		3.6	3.6	52	20	●
1105SC03-0370		3.7	3.7	52	20	●
1105SC03-0380		3.8	3.8	55	22	●
1105SC03-0390		3.9	3.9	55	22	●
1105SC03-0400		4	4	55	22	●
1105SC03-0410		4.1	4.1	55	22	●
1105SC03-0420		4.2	4.2	55	22	●
1105SC03-0430		4.3	4.3	58	24	●
1105SC03-0440		4.4	4.4	58	24	●
1105SC03-0450		4.5	4.5	58	24	●
1105SC03-0460		4.6	4.6	58	24	●
1105SC03-0470		4.7	4.7	58	24	○
1105SC03-0480		4.8	4.8	62	26	●
1105SC03-0490		4.9	4.9	62	26	●
1105SC03-0500		5	5	62	26	●
1105SC03-0510		5.1	5.1	62	26	●
1105SC03-0520		5.2	5.2	62	26	●
1105SC03-0530		5.3	5.3	62	26	●
1105SC03-0540		5.4	5.4	66	28	●
1105SC03-0550		5.5	5.5	66	28	●
1105SC03-0560		5.6	5.6	66	28	●
1105SC03-0570		5.7	5.7	66	28	●
1105SC03-0580		5.8	5.8	66	28	●
1105SC03-0590		5.9	5.9	66	28	○
1105SC03-0600		6	6	66	28	●
1105SC03-0610		6.1	6.1	70	31	●
1105SC03-0620		6.2	6.2	70	31	●
1105SC03-0630		6.3	6.3	70	31	●
1105SC03-0640		6.4	6.4	70	31	●

● Ex stock ○ On demand

* With internal cooling

Application field					
P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SC drill 3xD

Non-ferrous metals

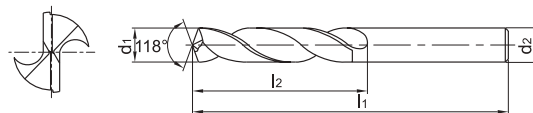
1105SC03



– Factory standard



External coolant



Article	*	Dimensions [mm]				Grade
		d ₁ (h8)	d ₂ (h7)	l ₁	l ₂	YK20F
1105SC03-0650		6.5	6.5	70	31	●
1105SC03-0660		6.6	6.6	70	31	●
1105SC03-0670		6.7	6.7	70	31	●
1105SC03-0680		6.8	6.8	74	34	●
1105SC03-0690		6.9	6.9	74	34	○
1105SC03-0700		7	7	74	34	●
1105SC03-0710		7.1	7.1	74	34	●
1105SC03-0720		7.2	7.2	74	34	○
1105SC03-0730		7.3	7.3	74	34	○
1105SC03-0740		7.4	7.4	74	34	●
1105SC03-0750		7.5	7.5	74	34	●
1105SC03-0760		7.6	7.6	79	37	○
1105SC03-0770		7.7	7.7	79	37	○
1105SC03-0780		7.8	7.8	79	37	●
1105SC03-0790		7.9	7.9	79	37	●
1105SC03-0800		8	8	79	37	●
1105SC03-0810		8.1	8.1	79	37	●
1105SC03-0820		8.2	8.2	79	37	●
1105SC03-0830		8.3	8.3	79	37	○
1105SC03-0840		8.4	8.4	79	37	●
1105SC03-0850		8.5	8.5	79	37	●
1105SC03-0860		8.6	8.6	84	40	●
1105SC03-0870		8.7	8.7	84	40	●
1105SC03-0880		8.8	8.8	84	40	○
1105SC03-0890		8.9	8.9	84	40	○
1105SC03-0900		9	9	84	40	●
1105SC03-0910		9.1	9.1	84	40	●
1105SC03-0920		9.2	9.2	84	40	●
1105SC03-0930		9.3	9.3	84	40	●
1105SC03-0940		9.4	9.4	84	40	○
1105SC03-0950		9.5	9.5	84	40	●
1105SC03-0960		9.6	9.6	89	43	○
1105SC03-0970		9.7	9.7	89	43	○
1105SC03-0980		9.8	9.8	89	43	●
1105SC03-0990		9.9	9.9	89	43	●
1105SC03-1000		10	10	89	43	●
1105SC03-1010		10.1	10.1	89	43	●
1105SC03-1020		10.2	10.2	89	43	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

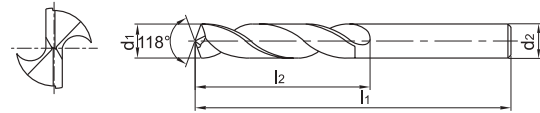
Nonstandard order > C177

SC drill 3xD
Non-ferrous metals
1105SC03


– Factory standard



External coolant



Article	*	Dimensions [mm]				Grade
		d ₁ (h8)	d ₂ (h7)	l ₁	l ₂	YK20F
1105SC03-1040		10.4	10.4	89	43	●
1105SC03-1050		10.5	10.5	89	43	●
1105SC03-1070		10.7	10.7	95	47	○
1105SC03-1080		10.8	10.8	95	47	○
1105SC03-1100		11	11	95	47	●
1105SC03-1150		11.5	11.5	95	47	●
1105SC03-1200		12	12	102	51	●
1105SC03-1250		12.5	12.5	102	51	●
1105SC03-1280		12.8	12.8	102	51	○
1105SC03-1300		13	13	102	51	●
1105SC03-1310		13.1	13.1	102	51	○
1105SC03-1350		13.5	13.5	107	54	○
1105SC03-1400		14	14	107	54	●
1105SC03-1430		14.3	14.3	111	56	○
1105SC03-1450		14.5	14.5	111	56	○
1105SC03-1500		15	15	111	56	●
1105SC03-1600		16	16	115	58	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



SC drill 5xD

Non-ferrous metals

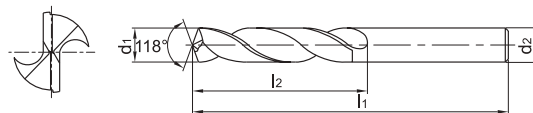
1101SC05



– Factory standard



External coolant



Article	*	Dimensions [mm]				Grade
		d ₁ (h8)	d ₂ (h7)	l ₁	l ₂	YK20F
1101SC05-0200		2	2	49	24	●
1101SC05-0250		2.5	2.5	57	30	●
1101SC05-0280		2.8	2.8	61	33	●
1101SC05-0300		3	3	61	33	●
1101SC05-0350		3.5	3.5	70	39	●
1101SC05-0380		3.8	3.8	75	43	●
1101SC05-0400		4	4	75	43	●
1101SC05-0420		4.2	4.2	75	43	●
1101SC05-0450		4.5	4.5	80	47	●
1101SC05-0480		4.8	4.8	86	52	●
1101SC05-0500		5	5	86	52	●
1101SC05-0550		5.5	5.5	93	57	●
1101SC05-0580		5.8	5.8	93	57	●
1101SC05-0600		6	6	93	57	●
1101SC05-0650		6.5	6.5	101	63	●
1101SC05-0680		6.8	6.8	109	69	●
1101SC05-0700		7	7	109	69	●
1101SC05-0750		7.5	7.5	109	69	●
1101SC05-0780		7.8	7.8	117	75	●
1101SC05-0800		8	8	117	75	●
1101SC05-0850		8.5	8.5	117	75	●
1101SC05-0880		8.8	8.8	125	81	○
1101SC05-0900		9	9	125	81	●
1101SC05-0950		9.5	9.5	125	81	●
1101SC05-0980		9.8	9.8	133	87	●
1101SC05-1000		10	10	133	87	●
1101SC05-1050		10.5	10.5	133	87	●
1101SC05-1080		10.8	10.8	142	94	○
1101SC05-1100		11	11	142	94	●
1101SC05-1150		11.5	11.5	142	94	○
1101SC05-1200		12	12	151	101	○
1101SC05-1250		12.5	12.5	151	101	●
1101SC05-1300		13	13	151	101	●
1101SC05-1350		13.5	13.5	160	108	●
1101SC05-1400		14	14	160	108	○
1101SC05-1450		14.5	14.5	169	114	●
1101SC05-1500		15	15	169	114	○
1101SC05-1550		15.5	15.5	178	120	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

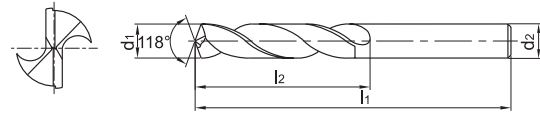
Nonstandard order > C177

SC drill 5xD
Non-ferrous metals
1101SC05


– Factory standard



External coolant



Article		Dimensions [mm]				Grade
		d ₁ (h8)	d ₂ (h7)	l ₁	l ₂	YK20F
1101SC05-1600	✱	16	16	178	120	●

● Ex stock ○ On demand

✱ With internal cooling

Application field					
P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

A

Turning

B

Milling

C

Drilling

D

Technical
Information

E

Index

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



PA drill 3xD

Non-ferrous metals

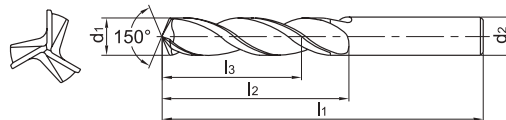
1165PA03



– Factory standard



External coolant



Article	*	Dimensions [mm]					Grade	
		d ₁ (h7)	d ₂ (h7)	l ₁	l ₂	l ₃	KDG303	YK30F
1165PA03-0300		3	3	46	16	12	●	●
1165PA03-0310		3.1	3.1	49	18	14		●
1165PA03-0320		3.2	3.2	49	18	14	●	●
1165PA03-0330		3.3	3.3	49	18	14	●	
1165PA03-0340		3.4	3.4	52	20	15	●	●
1165PA03-0350		3.5	3.5	52	20	15	●	
1165PA03-0360		3.6	3.6	52	20	15		○
1165PA03-0370		3.7	3.7	52	20	15		○
1165PA03-0380		3.8	3.8	55	22	17	●	
1165PA03-0390		3.9	3.9	55	22	17		●
1165PA03-0400		4	4	55	22	17	●	●
1165PA03-0410		4.1	4.1	55	22	17	●	●
1165PA03-0420		4.2	4.2	55	22	17	●	●
1165PA03-0430		4.3	4.3	58	24	18	●	●
1165PA03-0440		4.4	4.4	58	24	18		●
1165PA03-0450		4.5	4.5	58	24	18	●	●
1165PA03-0460		4.6	4.6	58	24	18		●
1165PA03-0470		4.7	4.7	58	24	18	●	●
1165PA03-0480		4.8	4.8	62	26	20		●
1165PA03-0490		4.9	4.9	62	26	20		●
1165PA03-0500		5	5	62	26	20	●	●
1165PA03-0510		5.1	5.1	62	26	20	●	●
1165PA03-0520		5.2	5.2	62	26	20	●	●
1165PA03-0530		5.3	5.3	62	26	20	●	
1165PA03-0540		5.4	5.4	66	28	21		●
1165PA03-0550		5.5	5.5	66	28	21	●	●
1165PA03-0560		5.6	5.6	66	28	21		●
1165PA03-0570		5.7	5.7	66	28	21	●	●
1165PA03-0580		5.8	5.8	66	28	21	●	
1165PA03-0590		5.9	5.9	66	28	21		●
1165PA03-0600		6	6	66	28	21	●	●
1165PA03-0610		6.1	6.1	70	31	23		●
1165PA03-0620		6.2	6.2	70	31	23		●
1165PA03-0630		6.3	6.3	70	31	23		○
1165PA03-0640		6.4	6.4	70	31	23	●	●
1165PA03-0650		6.5	6.5	70	31	23	●	●
1165PA03-0660		6.6	6.6	70	31	23	●	●
1165PA03-0670		6.7	6.7	70	31	23	●	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

PA drill 3xD

Non-ferrous metals

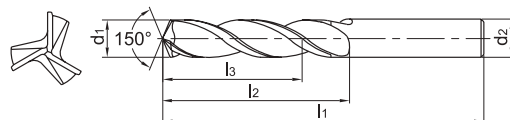
1165PA03



– Factory standard



External coolant



Article	*	Dimensions [mm]					Grade	
		d ₁ (h7)	d ₂ (h7)	l ₁	l ₂	l ₃	KDG303	YK30F
1165PA03-0680		6.8	6.8	74	34	25	●	●
1165PA03-0690		6.9	6.9	74	34	25		●
1165PA03-0700		7	7	74	34	25	●	●
1165PA03-0710		7.1	7.1	74	34	25		●
1165PA03-0720		7.2	7.2	74	34	25		○
1165PA03-0730		7.3	7.3	74	34	25		●
1165PA03-0740		7.4	7.4	74	34	25	●	●
1165PA03-0750		7.5	7.5	74	34	25	●	●
1165PA03-0760		7.6	7.6	79	37	27		●
1165PA03-0770		7.7	7.7	79	37	27		○
1165PA03-0780		7.8	7.8	79	37	27		●
1165PA03-0790		7.9	7.9	79	37	27		●
1165PA03-0800		8	8	79	37	27	●	●
1165PA03-0810		8.1	8.1	79	37	27	●	●
1165PA03-0820		8.2	8.2	79	37	27		●
1165PA03-0830		8.3	8.3	79	37	27		○
1165PA03-0840		8.4	8.4	79	37	27		○
1165PA03-0850		8.5	8.5	79	37	27	●	●
1165PA03-0860		8.6	8.6	84	40	29		●
1165PA03-0870		8.7	8.7	84	40	29	○	
1165PA03-0880		8.8	8.8	84	40	29		○
1165PA03-0890		8.9	8.9	84	40	29		○
1165PA03-0900		9	9	84	40	29	●	●
1165PA03-0910		9.1	9.1	84	40	29		○
1165PA03-0920		9.2	9.2	84	40	29		○
1165PA03-0930		9.3	9.3	84	40	29		○
1165PA03-0940		9.4	9.4	84	40	29		○
1165PA03-0950		9.5	9.5	84	40	29	●	
1165PA03-0960		9.6	9.6	89	43	31		○
1165PA03-0970		9.7	9.7	89	43	31		○
1165PA03-0980		9.8	9.8	89	43	31	●	
1165PA03-0990		9.9	9.9	89	43	31		●
1165PA03-1000		10	10	89	43	31	●	●
1165PA03-1010		10.1	10.1	89	43	31		○
1165PA03-1020		10.2	10.2	89	43	31	●	
1165PA03-1030		10.3	10.3	89	43	31	●	
1165PA03-1050		10.5	10.5	89	43	31	●	
1165PA03-1100		11	11	95	47	33	●	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177



PA drill 3xD

Non-ferrous metals

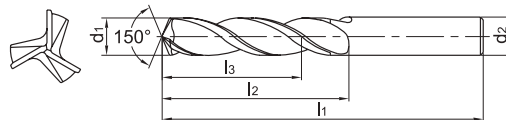
1165PA03



– Factory standard



External coolant



Article	*	Dimensions [mm]					Grade	
		d ₁ (h7)	d ₂ (h7)	l ₁	l ₂	l ₃	KDG303	YK30F
1165PA03-1120		11.2	11.2	95	47	33		○
1165PA03-1150		11.5	11.5	95	47	33	○	○
1165PA03-1180		11.8	11.8	95	47	33	○	○
1165PA03-1200		12	12	102	51	35	●	●
1165PA03-1210		12.1	12.1	102	51	35		○
1165PA03-1250		12.5	12.5	102	51	35	●	○
1165PA03-1300		13	13	102	51	35		●
1165PA03-1350		13.5	13.5	107	54	37	○	
1165PA03-1400		14	14	107	54	37	○	
1165PA03-1450		14.5	14.5	111	56	38	○	
1165PA03-1500		15	15	111	56	38	○	
1165PA03-1550		15.5	15.5	115	58	38		○
1165PA03-1600		16	16	115	58	38	○	
1165PA03-1650		16.5	16.5	119	60	39		○
1165PA03-1700		17	17	119	60	39		○
1165PA03-1750		17.5	17.5	123	62	40		○
1165PA03-1800		18	18	123	62	40	○	○
1165PA03-1850		18.5	18.5	127	64	41		○
1165PA03-1900		19	19	127	64	41		○
1165PA03-1950		19.5	19.5	131	66	42		○
1165PA03-2000		20	20	131	66	42	○	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

1576PC

PC series

Straight flute drill for cast iron

- High precision (hole quality up to H7) and good surface quality on the complete bore length.
- Diameter range 4.0–20.0 mm (5xD, 15xD)



Straight cut

1143SC

SC series

NC tapping device for steel, stainless steel, cast iron and non-ferrous metals

- For centring and chamfering.
- With 90° and 120° point angle.
- Diameter range 5.0–20.0 mm

PC drill 5xD

Cast iron

1576PC05/1576PC05C



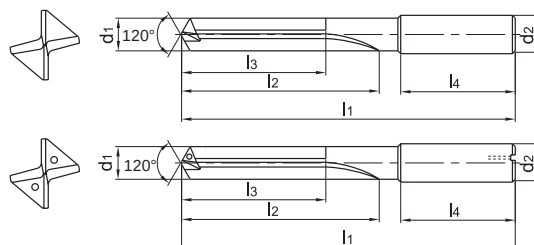
- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article	*	Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	YK20F
1576PC05-0400		4	6	74	36	29	36	○
1576PC05C-0400	*	4	6	74	36	29	36	●
1576PC05-0420		4.2	6	74	36	29	36	○
1576PC05C-0420	*	4.2	6	74	36	29	36	●
1576PC05-0500		5	6	82	44	35	36	○
1576PC05C-0500	*	5	6	82	44	35	36	●
1576PC05-0600		6	6	82	44	35	36	○
1576PC05C-0600	*	6	6	82	44	35	36	●
1576PC05-0675		6.75	8	91	53	43	36	○
1576PC05C-0675	*	6.75	8	91	53	43	36	●
1576PC05-0700		7	8	91	53	43	36	○
1576PC05C-0700	*	7	8	91	53	43	36	●
1576PC05-0800		8	8	91	53	43	36	○
1576PC05C-0800	*	8	8	91	53	43	36	●
1576PC05-0850		8.5	10	103	61	49	40	○
1576PC05C-0850	*	8.5	10	103	61	49	40	●
1576PC05-0900		9	10	103	61	49	40	○
1576PC05C-0900	*	9	10	103	61	49	40	●
1576PC05-1000		10	10	103	61	49	40	○
1576PC05C-1000	*	10	10	103	61	49	40	●
1576PC05-1025		10.25	12	118	71	56	45	○
1576PC05C-1025	*	10.25	12	118	71	56	45	●
1576PC05-1100		11	12	118	71	56	45	○
1576PC05C-1100	*	11	12	118	71	56	45	●
1576PC05-1200		12	12	118	71	56	45	○
1576PC05C-1200	*	12	12	118	71	56	45	●
1576PC05-1300		13	14	124	77	60	45	○
1576PC05C-1300	*	13	14	124	77	60	45	●
1576PC05-1400		14	14	124	77	60	45	○
1576PC05C-1400	*	14	14	124	77	60	45	●
1576PC05-1500		15	16	133	83	63	48	○
1576PC05C-1500	*	15	16	133	83	63	48	○
1576PC05-1550		15.5	16	133	83	63	48	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
		✓			

✓ Very suitable

✓ Suitable

System code > C28

Machining instructions > C165

Cutting data > C122

Nonstandard order > C177

PC drill 5xD
Cast iron
1576PC05/1576PC05C

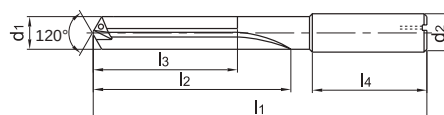
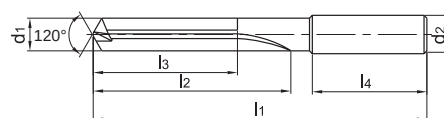

- Type of shank DIN 6535HA
- Coolant exit, axial concentric



External coolant



Internal coolant



Article		Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	YK20F
1576PC05C-1550	*	15.5	16	133	83	63	48	○
1576PC05-1600		16	16	133	83	63	48	○
1576PC05C-1600	*	16	16	133	83	63	48	○
1576PC05-1700		17	18	143	93	71	48	○
1576PC05C-1700	*	17	18	143	93	71	48	○
1576PC05-1750		17.5	18	143	93	71	48	○
1576PC05C-1750	*	17.5	18	143	93	71	48	○
1576PC05-1800		18	18	143	93	71	48	○
1576PC05C-1800	*	18	18	143	93	71	48	●
1576PC05-1950		19.5	20	153	101	77	50	○
1576PC05C-1950	*	19.5	20	153	101	77	50	○
1576PC05-2000		20	20	153	101	77	50	○
1576PC05C-2000	*	20	20	153	101	77	50	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
		✓			

✓ Very suitable

✓ Suitable

PC drill 15xD

Cast iron

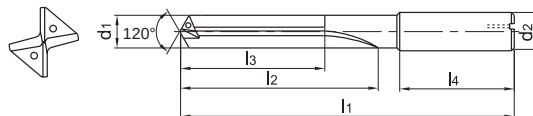
1579PC15C



- Type of shank DIN 6535HA
- Coolant exit, axial concentric



Internal coolant



Article		Dimensions [mm]						Grade
		d ₁ (m7)	d ₂ (h6)	l ₁	l ₂	l ₃	l ₄	YK20F
1579PC15C-0500	*	5	6	145	105	96	36	○
1579PC15C-0600	*	6	6	145	105	96	36	○
1579PC15C-0800	*	8	8	180	137	127	36	○
1579PC15C-0900	*	9	10	217	170	158	40	○
1579PC15C-1000	*	10	10	217	170	158	40	○
1579PC15C-1100	*	11	12	258	205	190	45	○
1579PC15C-1200	*	12	12	258	205	190	45	○
1579PC15C-1400	*	14	14	290	236	219	45	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
		✓			

✓ Very suitable

✓ Suitable

SC drill – NC tapping device 90°

General machining

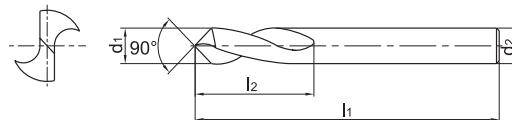
1143SC90



– Factory standard



External coolant



Article	*	Dimensions [mm]				Grade	
		d ₁ (h6)	d ₂ (h6)	l ₁	l ₂	KDG303	YK30F
1143SC90-0500		5	5	62	10	●	○
1143SC90-0600		6	6	66	15	●	○
1143SC90-0800		8	8	79	17	●	○
1143SC90-1000		10	10	89	20	●	○
1143SC90-1200		12	12	102	25	●	○
1143SC90-1400		14	14	107	30	●	○
1143SC90-1600		16	16	115	35	●	○
1143SC90-2000		20	20	131	40	●	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓	✓	✓		

✓ Very suitable

✓ Suitable

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SC drill – NC tapping device 120°

General machining

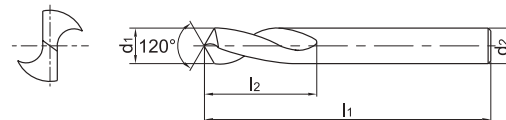
1143SC120



– Factory standard



External coolant



Article	*	Dimensions [mm]				Grade	
		d ₁ (h6)	d ₂ (h6)	l ₁	l ₂	KDG303	YK30F
1143SC120-0500		5	5	62	10	●	○
1143SC120-0600		6	6	66	15	●	○
1143SC120-0800		8	8	79	17	●	○
1143SC120-1000		10	10	89	20	●	○
1143SC120-1200		12	12	102	25	●	○
1143SC120-1400		14	14	107	30	●	○
1143SC120-1600		16	16	115	35	●	○
1143SC120-2000		20	20	131	42	●	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓	✓	✓		

✓ Very suitable

✓ Suitable

This image shows a full page of white paper with horizontal dotted lines. The lines are evenly spaced and run across the width of the page, providing a guide for handwriting practice. There are no margins, text, or other markings on the page.

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Guide for recommended cutting data – solid carbide drilling

Solid carbide drills

Material group	Composition / structure / heat treatment		Hardness HB	Machining group	Starting values for cutting speed v_c [m/min]								
					SU Series			SU-Drill			SU Step Drill		
					3-SxD			8xD			3xD		
					KDG 303			KDG 303			KDG 303		
				Coolant									
				internal	external	F-group	internal	external	F-group	internal	external	F-group	
P	Unalloyed steel	ca. 0,15 % C	annealed	150	135	8	135	125	7	150	135	8	
		ca. 0,45 % C	annealed	150	130	8	120	110	7	130	120	8	
		ca. 0,45 % C	tempered	150	120	6	110	100	5	120	110	6	
		ca. 0,75 % C	annealed	270	110	6	100	90	5	110	100	6	
		ca. 0,75 % C	tempered	300	90	6	90	85	5	100	90	6	
	Low-alloyed steel		annealed	180	130	8	120	110	7	130	120	8	
			tempered	275	110	6	100	90	5	110	100	6	
			tempered	300	100	6	90	85	5	100	90	6	
			tempered	350	90	6	85	80	5	90	85	6	
	High-alloyed steel and high-alloyed tool steel		annealed	200	120	8	110	100	7	120	110	8	
			hardened and tempered	325	100	6	90	85	5	100	90	6	
M	Stainless steel	ferritic/martensitic	annealed	200	80	5	75	70	5	80	75	5	
		martensitic	tempered	240	55	5	50	45	5	55	50	5	
		austenitic	quench hardened	180	60	5	55	50	5	60	55	5	
		austenitic-ferritic		230	50	5	45	45	5	50	45	5	
K	Grey cast iron	perlitic/ferritic	180	135	8	125	115	7	135	125	8		
		perlitic (martensitic)	260	110	8	100	90	7	110	100	8		
	Cast iron with spheroidal graphite	perlitic	160	120	8	110	100	7	120	110	8		
		perlitic	250	80	8	75	70	7	80	75	8		
	Malleable cast iron	perlitic	130	130	8	120	110	7	130	120	8		
N	Aluminium wrought alloys	cannot be hardened	60	22									
		hardenable	hardened	100	23								
	Cast aluminium alloys	≤ 12% Si, cannot be hardened	75	24									
		≤ 12% Si, hardenable	hardened	90	25								
		> 12% Si, cannot be hardened	130	26									
	Copper and copper alloys (bronze/brass)	machining steel, PB > 1%	110	27									
		CuZn, CuSnZn	90	28									
		CuSn, Pb-free copper, electrolytic copper	100	29									
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30								
			hardened	280	31								
		Ni or Co base	annealed	250	32								
			hardened	350	33								
			cast	320	34								
	Titanium alloys	pure titanium	R _m 400	35									
	α and β alloys	hardened	R _m 1050	36									
H	Hardened steel		hardened and tempered	55 HRC	37								
	Hard cast iron		hardened and tempered	60 HRC	38								
	Hardened cast iron		cast	400	39								
X	Non-metallic materials		hardened and tempered	55 HRC	40								
		Thermoplasts		41									
		Thermosetting plastics		42									
		Plastic, glass fibre reinforced GFRP		43									
		Plastic, carbon fibre reinforced CFRP		44									
		Graphite		45									
	Wood		46										

Note: The given cutting values are guide values, which were determined under ideal conditions. The values have to be adapted in individual cases.
With hole depths of 5xD adjust the cutting data accordingly to the application.
f-group = feed rate recommendations on page C126.
For examples of material for cutting tool groups view page D22.

Recommend feed rate

Solid carbide drilling

f-group	Feed rate [mm]																			
	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20
1	0,01	0,02	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10
2	0,01	0,02	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,09	0,10	0,10	0,10	0,11	0,11	0,11
3	0,01	0,02	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,10	0,10	0,11	0,11	0,12	0,12	0,12	0,13	0,13
4	0,02	0,03	0,04	0,06	0,06	0,07	0,08	0,09	0,09	0,10	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,14	0,15	0,15
5	0,02	0,03	0,05	0,06	0,07	0,09	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,14	0,15	0,15	0,16	0,16	0,17	0,17
6	0,02	0,04	0,06	0,07	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,17	0,18	0,18	0,19	0,19	0,20
7	0,02	0,04	0,06	0,09	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,18	0,19	0,20	0,20	0,21	0,22	0,22	0,23
8	0,03	0,05	0,07	0,10	0,11	0,13	0,14	0,15	0,16	0,17	0,18	0,20	0,21	0,22	0,23	0,23	0,24	0,25	0,26	0,26
9	0,03	0,06	0,08	0,11	0,13	0,15	0,16	0,17	0,18	0,20	0,21	0,23	0,24	0,25	0,26	0,27	0,28	0,29	0,29	0,30
10	0,04	0,07	0,10	0,13	0,15	0,17	0,19	0,20	0,21	0,23	0,24	0,26	0,27	0,29	0,30	0,31	0,32	0,33	0,34	0,35
11	0,04	0,07	0,11	0,15	0,17	0,20	0,21	0,23	0,24	0,26	0,28	0,30	0,32	0,33	0,35	0,36	0,37	0,38	0,39	0,40
12	0,05	0,09	0,13	0,17	0,20	0,23	0,25	0,26	0,28	0,30	0,32	0,35	0,36	0,38	0,40	0,41	0,42	0,44	0,45	0,46
13	0,05	0,10	0,15	0,20	0,23	0,26	0,28	0,30	0,32	0,35	0,37	0,40	0,42	0,44	0,46	0,47	0,49	0,50	0,52	0,53
14	0,06	0,11	0,17	0,23	0,26	0,30	0,33	0,35	0,37	0,40	0,43	0,46	0,48	0,50	0,53	0,54	0,56	0,58	0,59	0,61
15	0,07	0,13	0,20	0,26	0,30	0,35	0,37	0,40	0,43	0,46	0,49	0,53	0,55	0,58	0,61	0,62	0,64	0,66	0,68	0,70

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

1. Select the appropriate product series.
2. Determine the immersion.
3. Select the used material and read the cutting speed.
4. Determine the feed rate group and have a look at the appropriate feed rate recommendations.
5. Select the diameter of tool and determine the immersion.

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Solid carbide drills

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v _c [m/min]											
						SU Series			SU-Drill			SU Step Drill					
						3-5xD			8xD			3xD					
						KDG 303			KDG 303			KDG 303					
						Coolant											
internal	external	f-group	internal	external	f-group	internal	external	f-group									
P	Unalloyed steel	ca. 0,15 % C	annealed	125	1	150	135	8	135	125	7	150	135	8			
		ca. 0,45 % C	annealed	190	2	130	120	8	120	110	7	130	120	8			
		ca. 0,45 % C	tempered	250	3	120	110	6	110	100	5	120	110	6			
		ca. 0,75 % C	annealed	270	4	110	100	6	100	90	5	110	100	6			
		ca. 0,75 % C	tempered	300	5	100	90	6	90	85	5	100	90	6			
	Low-alloyed steel		annealed	180	6	130	120	8	120	110	7	130	120	8			
			tempered	275	7	110	100	6	100	90	5	110	100	6			
			tempered	300	8	100	90	6	90	85	5	100	90	6			
			tempered	350	9	90	85	6	85	80	5	90	85	6			
	High-alloyed steel and high-alloyed tool steel		annealed	200	10	120	110	8	110	100	7	120	110	8			
		hardened and tempered	325	11	100	90	6	90	85	5	100	90	6				
M	Stainless steel	ferritic/martensitic	annealed	200	12	80	75	5	75	70	5	80	75	5			
		martensitic	tempered	240	13	55	50	5	50	45	5	55	50	5			
		austenitic	quench hardened	180	14	60	55	5	55	50	5	60	55	5			
		austenitic-ferritic		230	15	50	45	5	45	45	5	50	45	5			
K	Grey cast iron	perlitic/ferritic		180	16	135	125	8	125	115	7	135	125	8			
		perlitic (martensitic)		260	17	110	100	8	100	90	7	110	100	8			
	Cast iron with spheroidal graphite	ferritic		160	18	120	110	8	110	100	7	120	110	8			
		perlitic		250	19	80	75	8	75	70	7	80	75	8			
	Malleable cast iron	ferritic		130	20	130	120	8	120	110	7	130	120	8			
		perlitic		230	21	80	75	8	75	70	7	80	75	8			
N	Aluminium wrought alloys	cannot be hardened		60	22												
		hardenable	hardened	100	23												
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24												
		≤ 12 % Si, hardenable	hardened	90	25												
		> 12 % Si, cannot be hardened		130	26												
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27												
		CuZn, CuSnZn		90	28												
		CuSn, Pb-free copper, electrolytic copper		100	29												
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30												
			hardened	280	31												
		Ni or Co bass	annealed	250	32												
			hardened	350	33												
			cast	320	34												
	Titanium alloys	pure titanium		R _m 400	35												
		α and β alloys	hardened	R _m 1050	36												
H	Hardened steel		hardened and tempered	55 HRC	37												
			hardened and tempered	60 HRC	38												
	Hard cast iron		cast	400	39												
	Hardened cast iron		hardened and tempered	55 HRC	40												
X	Non-metallic materials	Thermoplasts			41												
		Thermosetting plastics			42												
		Plastic, glass-fibre reinforced GFRP			43												
		Plastic, carbon fibre reinforced CFRP			44												
		Graphite			45												
		Wood			46												

Note: The given cutting values are guide values, which were determined under ideal conditions.

The values have to be adapted in individual cases.

With hole depths of 5xD adjust the cutting data accordingly to the application.

f-group = feed rate recommendations on page C126.

For examples of material for cutting tool groups view page D22.

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Recommended feed rate

Solid carbide drilling

f-group	Feed rate [mm]																			
	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20
1	0,01	0,02	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10
2	0,01	0,02	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,09	0,10	0,10	0,10	0,11	0,11	0,11
3	0,01	0,02	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,10	0,10	0,11	0,11	0,12	0,12	0,12	0,13	0,13
4	0,02	0,03	0,04	0,06	0,06	0,07	0,08	0,09	0,09	0,10	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,14	0,15	0,15
5	0,02	0,03	0,05	0,06	0,07	0,09	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,14	0,15	0,15	0,16	0,16	0,17	0,17
6	0,02	0,04	0,06	0,07	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,17	0,18	0,18	0,19	0,19	0,20
7	0,02	0,04	0,06	0,09	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,18	0,19	0,20	0,20	0,21	0,22	0,22	0,23
8	0,03	0,05	0,07	0,10	0,11	0,13	0,14	0,15	0,16	0,17	0,18	0,20	0,21	0,22	0,23	0,23	0,24	0,25	0,26	0,26
9	0,03	0,06	0,08	0,11	0,13	0,15	0,16	0,17	0,18	0,20	0,21	0,23	0,24	0,25	0,26	0,27	0,28	0,29	0,29	0,30
10	0,04	0,07	0,10	0,13	0,15	0,17	0,19	0,20	0,21	0,23	0,24	0,26	0,27	0,29	0,30	0,31	0,32	0,33	0,34	0,35
11	0,04	0,07	0,11	0,15	0,17	0,20	0,21	0,23	0,24	0,26	0,28	0,30	0,32	0,33	0,35	0,36	0,37	0,38	0,39	0,40
12	0,05	0,09	0,13	0,17	0,20	0,23	0,25	0,26	0,28	0,30	0,32	0,35	0,36	0,38	0,40	0,41	0,42	0,44	0,45	0,46
13	0,05	0,10	0,15	0,20	0,23	0,26	0,28	0,30	0,32	0,35	0,37	0,40	0,42	0,44	0,46	0,47	0,49	0,50	0,52	0,53
14	0,06	0,11	0,17	0,23	0,26	0,30	0,33	0,35	0,37	0,40	0,43	0,46	0,48	0,50	0,53	0,54	0,56	0,58	0,59	0,61
15	0,07	0,13	0,20	0,26	0,30	0,35	0,37	0,40	0,43	0,46	0,49	0,53	0,55	0,58	0,61	0,62	0,64	0,66	0,68	0,70

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

Solid carbide reamers

Product overview	C128
Grade overview	C129
System code – solid carbide reamers	C130
Solid carbide reamers	C131-C135
Recommended cutting data	C136-C140
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Form nonstandard order	C180

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Products	Solid carbide reamers	Ø	Application						Type	Page
			P	M	K	N	S	H		
3101H7		4-20			✓	✓			Right helical flute	C131
3102H7		4-20			✓	✓			Straight flute	C132
3112H7		4-20	✓		✓				Straight flute with inner hole	C133
3103H7		4-20			✓	✓			Left helical flute	C134

✓ Very suitable ✓ Suitable

B

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Coated cemented carbide PVD

Grade	Grade description
KRG102	PVD coated P10–P20/K10–K20 carbide substrate for steel and cast iron.

Uncoated cemented carbide

Grade	Grade description
YK10F	Uncoated N10/K10 carbide substrate for cast iron and non ferrous materials.

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Type

Code	Description
3	Reamer

Shank type

Code	Description
1	Straight shank
2	Straight shank DIN10
5	Straight shank DIN 6535 HA
9	Morse taper shank

Coolant supply

Code	Description
0	External
1	Internal

1

2

3

Flute

Code	Description
1	Right-hand twist
2	Straight flute
3	Left-hand twist

Tolerance class

Code	Description
H7	The tolerance class of the reamed hole is equivalent to H7 (GB/T1800-1804)

Diameter [mm]

Code	Description
0850	8.5
...	

4

5

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Machining operations



Reaming

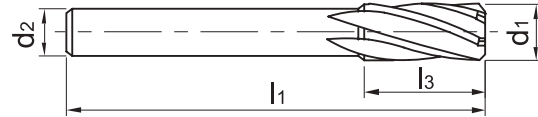
Reamer, right-hand twist

Cast iron, non-ferrous metals

3101H7



– Factory standard



Article	*	Dimensions [mm]				Teeth	Grade
		d ₁	d ₂ (h6)	l ₁	l ₃		YK10F
3101H7-0400		4	3.55	56	20	4	●
3101H7-0450		4.5	4	63	22	6	○
3101H7-0500		5	4	63	22	6	●
3101H7-0550		5.5	5	63	22	6	○
3101H7-0600		6	5	63	22	6	●
3101H7-0650		6.5	5	63	22	6	○
3101H7-0700		7	6.3	71	25	6	●
3101H7-0750		7.5	6.3	71	25	6	○
3101H7-0800		8	6.3	71	25	6	●
3101H7-0850		8.5	8	71	25	6	○
3101H7-0900		9	8	71	25	6	○
3101H7-0950		9.5	8	71	25	6	○
3101H7-1000		10	8	71	25	6	●
3101H7-1050		10.5	8	71	25	6	○
3101H7-1100		11	10	80	28	6	○
3101H7-1150		11.5	10	80	28	6	○
3101H7-1200		12	10	80	28	6	●
3101H7-1250		12.5	10	80	28	6	○
3101H7-1300		13	10	80	28	6	○
3101H7-1350		13.5	12.5	90	32	6	○
3101H7-1400		14	12.5	90	32	6	○
3101H7-1450		14.5	12.5	90	32	6	●
3101H7-1500		15	12.5	90	32	6	○
3101H7-1550		15.5	12.5	90	32	6	○
3101H7-1600		16	12.5	90	32	6	●
3101H7-1700		17	12.5	90	32	6	○
3101H7-1800		18	16	100	36	6	○
3101H7-1900		19	16	100	36	6	○
3101H7-2000		20	16	100	36	6	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
		✓	✓		

✓ Very suitable

✓ Suitable

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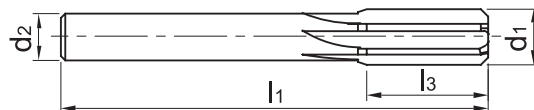
Reamer, straight flute

Cast iron, non-ferrous metals

3102H7



– Factory standard



Article	*	Dimensions [mm]				Teeth	Grade
		d ₁	d ₂ (h6)	l ₁	l ₃		YK10F
3102H7-0400		4	3.55	56	20	4	○
3102H7-0450		4.5	4	63	22	6	○
3102H7-0500		5	4	63	22	6	●
3102H7-0550		5.5	5	63	22	6	○
3102H7-0600		6	5	63	22	6	●
3102H7-0650		6.5	5	63	22	6	○
3102H7-0700		7	6.3	71	25	6	○
3102H7-0750		7.5	6.3	71	25	6	○
3102H7-0800		8	6.3	71	25	6	○
3102H7-0850		8.5	8	71	25	6	○
3102H7-0900		9	8	71	25	6	○
3102H7-0950		9.5	8	71	25	6	○
3102H7-1000		10	8	71	25	6	●
3102H7-1050		10.5	8	71	25	6	○
3102H7-1100		11	10	80	28	6	●
3102H7-1150		11.5	10	80	28	6	○
3102H7-1200		12	10	80	28	6	○
3102H7-1250		12.5	10	80	28	6	○
3102H7-1300		13	10	80	28	6	○
3102H7-1350		13.5	12.5	90	32	6	○
3102H7-1400		14	12.5	90	32	6	○
3102H7-1450		14.5	12.5	90	32	6	○
3102H7-1500		15	12.5	90	32	6	○
3102H7-1550		15.5	12.5	90	32	6	○
3102H7-1600		16	12.5	90	32	6	○
3102H7-1700		17	12.5	90	32	6	○
3102H7-1800		18	16	100	36	6	○
3102H7-1900		19	16	100	36	6	○
3102H7-2000		20	16	100	36	6	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
		✓	✓		

✓ Very suitable

✓ Suitable

System code > C130

Machining instructions > C165

Cutting data > C136

Nonstandard order > C180

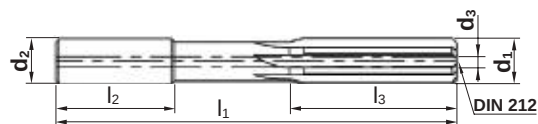
Reamer, straight flute

Steel, cast iron

3112H7



- Factory standard
- Coolant exit, axial concentric



Article	*	Dimensions [mm]						Teeth	Grade KRG102
		d ₁	d ₂ (h6)	d ₃ (m7)	l ₁	l ₂	l ₃		
3112H7-0400	*	4	4	0.6	70	28	20	6	●
3112H7-0500	*	5	5	1	70	28	22	6	●
3112H7-0600	*	6	6	1	100	36	22	6	●
3112H7-0700	*	7	8	1.3	110	42	25	6	●
3112H7-0800	*	8	8	1.3	110	42	25	6	●
3112H7-0900	*	9	10	2	110	42	25	6	●
3112H7-1000	*	10	10	2	110	38	25	6	●
3112H7-1100	*	11	12	2	110	38	28	6	●
3112H7-1200	*	12	12	2	110	38	28	6	●
3112H7-1300	*	13	14	2	110	38	28	6	●
3112H7-1400	*	14	14	2	110	38	32	6	●
3112H7-1500	*	15	16	2	110	38	32	6	●
3112H7-1600	*	16	16	2	150	52	32	6	●
3112H7-1800	*	18	18	3	150	52	36	6	●
3112H7-2000	*	20	20	3	150	50	36	6	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓		✓			

✓ Very suitable

✓ Suitable

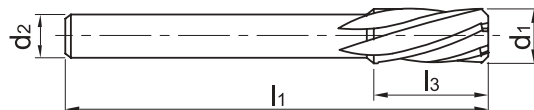
Reamer, left-hand twist

Cast iron, non-ferrous metals

3103H7



– Factory standard



Article	*	Dimensions [mm]				Teeth	Grade
		d ₁	d ₂ (h6)	l ₁	l ₃		YK10F
3103H7-0400		4	3.55	56	20	4	●
3103H7-0450		4.5	4	63	22	6	○
3103H7-0500		5	4	63	22	6	●
3103H7-0550		5.5	5	63	22	6	○
3103H7-0600		6	5	63	22	6	●
3103H7-0650		6.5	5	63	22	6	○
3103H7-0700		7	6.3	71	25	6	○
3103H7-0750		7.5	6.3	71	25	6	○
3103H7-0800		8	6.3	71	25	6	●
3103H7-0850		8.5	8	71	25	6	○
3103H7-0900		9	8	71	25	6	○
3103H7-0950		9.5	8	71	25	6	○
3103H7-1000		10	8	71	25	6	●
3103H7-1050		10.5	8	71	25	6	○
3103H7-1100		11	10	80	28	6	○
3103H7-1150		11.5	10	80	28	6	○
3103H7-1200		12	10	80	28	6	○
3103H7-1250		12.5	10	80	28	6	○
3103H7-1300		13	10	80	28	6	○
3103H7-1350		13.5	12.5	90	32	6	○
3103H7-1400		14	12.5	90	32	6	○
3103H7-1450		14.5	12.5	90	32	6	○
3103H7-1500		15	12.5	90	32	6	○
3103H7-1550		15.5	12.5	90	32	6	○
3103H7-1600		16	12.5	90	32	6	○
3103H7-1700		17	12.5	90	32	6	○
3103H7-1800		18	16	100	36	6	○
3103H7-1900		19	16	100	36	6	○
3103H7-2000		20	16	100	36	6	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
		✓	✓		

✓ Very suitable

✓ Suitable

System code > C130

Machining instructions > C165

Cutting data > C136

Nonstandard order > C180

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Guide for recommended cutting data – Solid carbide reamers

Solid carbide reamers

Material group	Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c (m/min)								
					3101H7	3102H7	3112H7	3103H7					
					YK10F	YK10F	KRG102	YK10F					
					Coolant								
				external f-group	external f-group	internal f-group	external f-group	external f-group	external f-group	external f-group			
P	Unalloyed steel	ca. 0,15 % C	annealed	125	1				85	5			
		ca. 0,45 % C	annealed	190	2				75	5			
		ca. 0,45 % C	tempered	250	3				70	5			
		ca. 0,75 % C	annealed	270	4				60	5			
		ca. 0,75 % C	tempered	300	5				55	5			
	Low-alloyed steel		annealed	180	6				75	5			
			tempered	275	7				60	5			
			tempered	300	8				55	5			
			tempered	350	9				55	5			
	High-alloyed steel and high-alloyed tool steel		annealed	200	10				70	5			
			hardened and tempered	325	11				55	5			
M	Stainless steel	ferritic/martensitic	annealed	200	12								
		martensitic	tempered	240	13								
		austenitic	quench hardened	180	14								
		austenitic-ferritic		230	15								
K	Grey cast iron	perlite/ferritic		180	16	23	5	23	5	75	5	23	5
	Cast iron with spheroidal graphite	perlite (martensitic)		260	17	19	5	19	5	60	5	19	5
		perlite		160	18	19	5	19	5	60	5	17	5
			perlite		250	19	17	5	17	5	50	5	
	Malleable cast iron	perlite		130	20	23	5	23	5	75	5	23	5
		perlite		230	21	14	5	14	5	55	5	14	5
N	Aluminium wrought alloys	cannot be hardened		60	22	45	6	45	6			45	6
		hardenable	hardened	100	23	40	6	40	6			40	6
	Cast aluminium alloys	≤ 12% Si, cannot be hardened		75	24	37	6	37	6			37	6
		≤ 12% Si, hardenable	hardened	90	25	35	6	35	6			35	6
		> 12% Si, cannot be hardened		130	26	32	6	32	6			32	6
	Copper and copper alloys (bronze/brass)	machining steel, Pb > 1%		110	27	37	6	37	6			37	6
		CuZn, CuSnZn		90	28	34	6	34	6			34	6
CuSn, Pb-free copper, electrolytic copper			100	29	37	6	37	6			37	6	
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30								
			hardened	280	31								
		Ni or Co base	annealed	250	32								
			hardened	350	33								
			cast	320	34								
	Titanium alloys	pure titanium		R _m 400	35								
		α and β alloys	hardened	R _m 1050	36								
H	Hardened steel		hardened and tempered	55 HRC	37								
	Hard cast iron		hardened and tempered	60 HRC	38								
	Hardened cast iron		cast	400	39								
X	Non-metallic materials		hardened and tempered	55 HRC	40								
		Thermoplasts			41								
		Thermosetting plastics			42								
		Plastic, glass fibre reinforced GFRP			43								
		Plastic, carbon fibre reinforced CFRP			44								
		Graphite			45								
		Wood			46								

Note: The given cutting values are guide values, which were determined under ideal conditions. The values have to be adapted in individual cases. With hole depths of 5xD adjust the cutting data accordingly to the application. f-group = feed rate recommendations on page C140. For examples of material for cutting tool groups view page D22.

Recommend feed rate

Solid carbide reamers

Feed rate group	Feed rate [mm]																			
	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20
1	0,01	0,02	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10
2	0,01	0,02	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,09	0,10	0,10	0,10	0,11	0,11	0,11
3	0,01	0,02	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,10	0,10	0,11	0,11	0,12	0,12	0,12	0,13	0,13
4	0,02	0,03	0,04	0,06	0,06	0,07	0,08	0,09	0,09	0,10	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,14	0,15	0,15
5	0,02	0,03	0,05	0,06	0,07	0,09	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,14	0,15	0,15	0,16	0,16	0,17	0,17
6	0,02	0,04	0,06	0,07	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,17	0,18	0,18	0,19	0,19	0,20
7	0,02	0,04	0,06	0,09	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,18	0,19	0,20	0,20	0,21	0,22	0,22	0,23
8	0,03	0,05	0,07	0,10	0,11	0,13	0,14	0,15	0,16	0,17	0,18	0,20	0,21	0,22	0,23	0,23	0,24	0,25	0,26	0,26
9	0,03	0,06	0,08	0,11	0,13	0,15	0,16	0,17	0,18	0,20	0,21	0,23	0,24	0,25	0,26	0,27	0,28	0,29	0,29	0,30
10	0,04	0,07	0,10	0,13	0,15	0,17	0,19	0,20	0,21	0,23	0,24	0,26	0,27	0,29	0,30	0,31	0,32	0,33	0,34	0,35
11	0,04	0,07	0,11	0,15	0,17	0,20	0,21	0,23	0,24	0,26	0,28	0,30	0,32	0,33	0,35	0,36	0,37	0,38	0,39	0,40
12	0,05	0,09	0,13	0,17	0,20	0,23	0,25	0,26	0,28	0,30	0,32	0,35	0,36	0,38	0,40	0,41	0,42	0,44	0,45	0,46
13	0,05	0,10	0,15	0,20	0,23	0,26	0,28	0,30	0,32	0,35	0,37	0,40	0,42	0,44	0,46	0,47	0,49	0,50	0,52	0,53
14	0,06	0,11	0,17	0,23	0,26	0,30	0,33	0,35	0,37	0,40	0,43	0,46	0,48	0,50	0,53	0,54	0,56	0,58	0,59	0,61
15	0,07	0,13	0,20	0,26	0,30	0,35	0,37	0,40	0,43	0,46	0,49	0,53	0,55	0,58	0,61	0,62	0,64	0,66	0,68	0,70

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

1. Select the appropriate product series.
2. Determine the immersion.
3. Select the used material and read the cutting speed.
4. Determine the feed rate group and have a look at the appropriate feed rate recommendations.
5. Select the diameter of tool and determine the immersion.

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Solid carbide reamers

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v _c [m/min]								
						3101H7		3102H7		3112H7		3103H7		
						YK10F		YK10F		KRG102		YK10F		
						Coolant								
						external	f-group	external	f-group	internal	f-group	external	f-group	
P	Unalloyed steel	ca. 0,15 % C	annealed	125	1					85	5			
		ca. 0,45 % C	annealed	190	2					75	5			
		ca. 0,45 % C	tempered	250	3					70	5			
		ca. 0,75 % C	annealed	270	4					60	5			
		ca. 0,75 % C	tempered	300	5					55	5			
	Low-alloyed steel		annealed	180	6					75	5			
			tempered	275	7					60	5			
			tempered	300	8					55	5			
			tempered	350	9					55	5			
	High-alloyed steel and high-alloyed tool steel		annealed	200	10					70	5			
		hardened and tempered	325	11					55	5				
M	Stainless steel	ferritic/martensitic	annealed	200	12									
		martensitic	tempered	240	13									
		austenitic	quench hardened	180	14									
		austenitic-ferritic		230	15									
K	Grey cast iron	perlitic/ferritic		180	16	23	5	23	5	75	5	23	5	
		perlitic (martensitic)		260	17	19	5	19	5	60	5	19	5	
	Cast iron with spheroidal graphite	ferritic		160	18	19	5	19	5	60	5	19	5	
		perlitic		250	19	17	5	17	5	50	5	17	5	
	Malleable cast iron	ferritic		130	20	23	5	23	5	75	5	23	5	
		perlitic		230	21	14	5	14	5	55	5	14	5	
N	Aluminium wrought alloys	cannot be hardened		60	22	45	6	45	6			45	6	
		hardenable	hardened	100	23	40	6	40	6			40	6	
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24	37	6	37	6			37	6	
		≤ 12 % Si, hardenable	hardened	90	25	35	6	35	6			35	6	
		> 12 % Si, cannot be hardened		130	26	32	6	32	6			32	6	
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27	37	6	37	6			37	6	
		CuZn, CuSnZn		90	28	34	6	34	6			34	6	
		CuSn, Pb-free copper, electrolytic copper		100	29	37	6	37	6			37	6	
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30									
			hardened	280	31									
		Ni or Co bass	annealed	250	32									
			hardened	350	33									
			cast	320	34									
	Titanium alloys	pure titanium		R _m 400	35									
		α and β alloys	hardened	R _m 1050	36									
H	Hardened steel		hardened and tempered	55 HRC	37									
			hardened and tempered	60 HRC	38									
	Hard cast iron		cast	400	39									
	Hardened cast iron		hardened and tempered	55 HRC	40									
X	Non-metallic materials	Thermoplasts			41									
		Thermosetting plastics			42									
		Plastic, glass-fibre reinforced GFRP			43									
		Plastic, carbon fibre reinforced CFRP			44									
		Graphite			45									
		Wood			46									

Note: The given cutting values are guide values, which were determined under ideal conditions.

The values have to be adapted in individual cases.

With hole depths of 5xD adjust the cutting data accordingly to the application.

f-group = feed rate recommendations on page C140.

For examples of material for cutting tool groups view page D22.

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Recommended feed rate

Solid carbide reamers

f-group	Feed rate [mm]																			
	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20
1	0,01	0,02	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10
2	0,01	0,02	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,09	0,10	0,10	0,10	0,11	0,11	0,11
3	0,01	0,02	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,10	0,10	0,11	0,11	0,12	0,12	0,12	0,13	0,13
4	0,02	0,03	0,04	0,06	0,06	0,07	0,08	0,09	0,09	0,10	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,14	0,15	0,15
5	0,02	0,03	0,05	0,06	0,07	0,09	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,14	0,15	0,15	0,16	0,16	0,17	0,17
6	0,02	0,04	0,06	0,07	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,17	0,18	0,18	0,19	0,19	0,20
7	0,02	0,04	0,06	0,09	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,18	0,19	0,20	0,20	0,21	0,22	0,22	0,23
8	0,03	0,05	0,07	0,10	0,11	0,13	0,14	0,15	0,16	0,17	0,18	0,20	0,21	0,22	0,23	0,23	0,24	0,25	0,26	0,26
9	0,03	0,06	0,08	0,11	0,13	0,15	0,16	0,17	0,18	0,20	0,21	0,23	0,24	0,25	0,26	0,27	0,28	0,29	0,29	0,30
10	0,04	0,07	0,10	0,13	0,15	0,17	0,19	0,20	0,21	0,23	0,24	0,26	0,27	0,29	0,30	0,31	0,32	0,33	0,34	0,35
11	0,04	0,07	0,11	0,15	0,17	0,20	0,21	0,23	0,24	0,26	0,28	0,30	0,32	0,33	0,35	0,36	0,37	0,38	0,39	0,40
12	0,05	0,09	0,13	0,17	0,20	0,23	0,25	0,26	0,28	0,30	0,32	0,35	0,36	0,38	0,40	0,41	0,42	0,44	0,45	0,46
13	0,05	0,10	0,15	0,20	0,23	0,26	0,28	0,30	0,32	0,35	0,37	0,40	0,42	0,44	0,46	0,47	0,49	0,50	0,52	0,53
14	0,06	0,11	0,17	0,23	0,26	0,30	0,33	0,35	0,37	0,40	0,43	0,46	0,48	0,50	0,53	0,54	0,56	0,58	0,59	0,61
15	0,07	0,13	0,20	0,26	0,30	0,35	0,37	0,40	0,43	0,46	0,49	0,53	0,55	0,58	0,61	0,62	0,64	0,66	0,68	0,70

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

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Solid carbide threading tools

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			P	M	K	N	S	H		
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4201C		M3-M16			✓				Solid carbide tap, right-hand twist	C151
4202C		M3-M16			✓				Solid carbide tap, straight flute	C153
4201A		M3-M16				✓			Solid carbide tap, right-hand twist	C155
4202A		M3-M16				✓			Solid carbide tap, straight flute	C157
4111		M3-M20	✓		✓	✓			Solid carbide thread milling cutters	C159

✓ Very suitable ✓ Suitable

Coated cemented carbide PVD

Grade	Grade description
KTG402	PVD coated P20–P30/M20–M30 carbide substrate for steel and stainless steel. Especially for thread forming tools.
KTG4015	PVD coated P20–P30/K20–K30 carbide substrate for steel and cast iron. Especially for thread forming tools.

Uncoated cemented carbide

Grade	Grade description
YK40F	Uncoated K20–K30/N20–N30 carbide substrate for cast iron and non ferrous materials.

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4 2 0 1 A C (S) – M5x0.8 – 6H

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Type

Code	Description
4	Threading tool

Shank type

Code	Description
1	Straight shank
2	Straight shank DIN10
5	Straight shank DIN 6535 HA
9	Conical shank

Tool type

Code	Description
0	Tap
1	Thread milling cutter
2	Thread former

1

2

3

Flute

Code	Description
1	Right-hand twist
2	Straight
3	Left-hand twist

Material

Code	Description
A	Aluminium alloy
C	Cast iron
M	Stainless steel
P	Steel
H	Hardened steel

Coolant supply

Code	Description
0	External
1	Internal

Blind hole

4

5

6

7

Thread type

Code	Description
M5x0.8	Nominal diameter x pitch
...	

Precision class

Code	Description
6H	Standard production tolerance
6HX	Fine production tolerance

8

9

Machining operations



Thread milling



Thread drilling



Thread forming

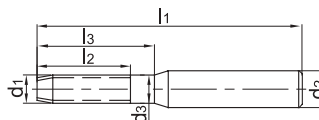
Thread former

Non-ferrous metals

4122A



– Factory standard



Article	*	Dimensions [mm]								Teeth	Coredrill		Grade
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃		d	YK40F	
4122A-M1*0.25-6H	*	3P	M1	0.25	3		40	5		3	0.9	●	
4122AS-M1*0.25-6H		1,5P	M1	0.25	3		40	5		3	0.9	●	
4122A-M1.2*0.25-6H	*	3P	M1.2	0.25	3		40	5		3	1.1	●	
4122AS-M1.2*0.25-6H		1,5P	M1.2	0.25	3		40	5		3	1.1	●	
4122AS-M1.6*0.35-6H		1,5P	M1.6	0.35	3	1.1	40	5	11	3	1.47	●	
4122A-M1.6*0.35-6H	*	3P	M1.6	0.35	3	1.1	40	5	11	3	1.47	●	
4122AS-M2*0.4-6H		1,5P	M2	0.4	3	1.5	45	6	12	3	1.85	●	
4122A-M2*0.4-6H	*	3P	M2	0.4	3	1.5	45	6	12	3	1.85	●	
4122AS-M2.5*0.45-6H		1,5P	M2.5	0.45	3	1.9	50	6	14	3	2.33	●	
4122A-M2.5*0.45-6H	*	3P	M2.5	0.45	3	1.9	50	6	14	3	2.33	●	

● Ex stock ○ On demand

* With internal cooling

Application field					
P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

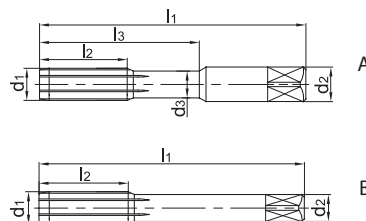
Thread former

Non-ferrous metals

4222A



- Type of shank DIN 10
- Coolant exit, axial concentric



Article	*	Dimensions [mm]								Teeth	Geometry	Coredrill d	Grade YK40F
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃				
4222AS-M3*0.5-6H		1,5P	M3	0.5	3.5	2.3	56	6	18	4	A	2.8	●
4222A-M3*0.5-6H		3P	M3	0.5	3.5	2.3	56	6	18	4	A	2.8	○
4222AS-M4*0.5-6H		1,5P	M4	0.5	4.5	3.1	63	8	21	4	A	3.8	○
4222A-M4*0.5-6H		3P	M4	0.5	4.5	3.1	63	8	21	4	A	3.8	●
4222A-M4*0.7-6H		3P	M4	0.7	4.5	3.1	63	8	21	4	A	3.7	●
4222AS-M4*0.7-6H		1,5P	M4	0.7	4.5	3.1	63	8	21	4	A	3.7	○
4222AS-M5*0.5-6H		1,5P	M5	0.5	6	4.3	70	10	25	4	A	4.8	●
4222A-M5*0.5-6H		3P	M5	0.5	6	4.3	70	10	25	4	A	4.8	●
4222A-M5*0.8-6H		3P	M5	0.8	6	4	70	10	25	4	A	4.65	●
4222AS-M5*0.8-6H		1,5P	M5	0.8	6	4	70	10	25	4	A	4.65	○
4222A-M6*0.75-6H		3P	M6	0.75	6	5	80	12	30	4	A	5.7	●
4222AS-M6*0.75-6H		1,5P	M6	0.75	6	5	80	12	30	4	A	5.7	●
4222A-M6*1-6H		3P	M6	1	6	4.7	80	12	30	4	A	5.6	○
4222AS-M6*1-6H		1,5P	M6	1	6	4.7	80	12	30	4	A	5.6	○
4222A-M7*1-6H		3P	M7	1	7	5.7	80	14	30	4	A	6.6	●
4222AS-M7*1-6H		1,5P	M7	1	7	5.7	80	14	30	4	A	6.6	●
4222A-M8*1-6H		3P	M8	1	8	6.7	90	16	35	4	A	7.6	●
4222AS-M8*1-6H		1,5P	M8	1	8	6.7	90	16	35	4	A	7.6	●
4222A-M8*1.25-6H		3P	M8	1.25	8	6.4	90	16	35	4	A	7.45	●
4222AS-M8*1.25-6H		1,5P	M8	1.25	8	6.4	90	16	35	4	A	7.45	○
4222A-M10*1-6H		3P	M10	1	10	8.7	100	20	39	5	A	9.6	●
4222AS-M10*1-6H		1,5P	M10	1	10	8.7	100	20	39	5	A	9.6	●
4222A-M10*1.25-6H		3P	M10	1.25	10	8.4	100	20	39	5	A	9.45	●
4222AS-M10*1.25-6H		1,5P	M10	1.25	10	8.4	100	20	39	5	A	9.45	●
4222A-M10*1.5-6H		3P	M10	1.5	10	8.1	100	20	39	5	A	9.35	●
4222AC-M10*1.5-6H	*	3P	M10	1.5	10	8.1	100	20	39	5	A	9.35	○
4222AS-M10*1.5-6H		1,5P	M10	1.5	10	8.1	100	20	39	5	A	9.35	○
4222ACS-M10*1.5-6H	*	1,5P	M10	1.5	10	8.1	100	20	39	5	A	9.35	○
4222A-M12*1.25-6H		3P	M12	1.25	9		110	24		5	B	11.45	●
4222AS-M12*1.25-6H		1,5P	M12	1.25	9		110	24		5	B	11.45	●
4222A-M12*1.5-6H		3P	M12	1.5	9		110	24		5	B	11.35	●
4222AS-M12*1.5-6H		1,5P	M12	1.5	9		110	24		5	B	11.35	●
4222A-M12*1.75-6H		3P	M12	1.75	9		110	24		5	B	11.25	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

System code > C144

Machining instructions > C165

Cutting data > C160

Nonstandard order > C181

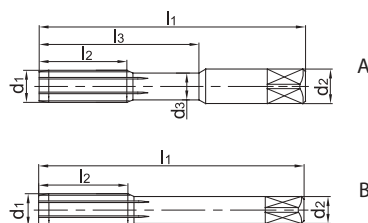
Thread former

Non-ferrous metals

4222A



- Type of shank DIN 10
- Coolant exit, axial concentric



Article	*	Dimensions [mm]								Teeth	Geometry	Core drill	Grade
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃			d	YK40F
4222AC-M12*1.75-6H	*	3P	M12	1.75	9		110	24		5	B	11.25	○
4222AS-M12*1.75-6H		1,5P	M12	1.75	9		110	24		5	B	11.25	○
4222ACS-M12*1.75-6H	*	1,5P	M12	1.75	9		110	24		5	B	11.25	○
4222A-M14*1.5-6H		3P	M14	1.5	11		110	26		6	B	13.35	●
4222AS-M14*1.5-6H		1,5P	M14	1.5	11		110	26		6	B	13.35	●
4222A-M14*2-6H		3P	M14	2	11		110	26		6	B	13.1	●
4222AS-M14*2-6H		1,5P	M14	2	11		110	26		6	B	13.1	●
4222A-M16*1.5-6H		3P	M16	1.5	12		110	27		6	B	15.35	●
4222AS-M16*1.5-6H		1,5P	M16	1.5	12		110	27		6	B	15.35	●
4222A-M16*2-6H		3P	M16	2	12		110	27		6	B	15.1	○
4222AC-M16*2-6H	*	3P	M16	2	12		110	27		6	B	15.1	○
4222AS-M16*2-6H		1,5P	M16	2	12		110	27		6	B	15.1	○
4222ACS-M16*2-6H	*	1,5P	M16	2	12		110	27		6	B	15.1	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
			✓		

✓ Very suitable

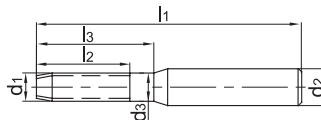
✓ Suitable

Thread former

Steel, stainless steel

4122M


– Factory standard



Article	*	Dimensions [mm]								Teeth	Coredrill	Grade	
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃		d	KTG402	YK40F
4122MS-M1*0.25-6H		2P	M1	0.25	3		40	5		4	0.9	●	○
4122M-M1*0.25-6H		3P	M1	0.25	3		40	5		4	0.9	●	○
4122MS-M1.2*0.25-6H		2P	M1.2	0.25	3		40	5		4	1.1	●	○
4122M-M1.2*0.25-6H		3P	M1.2	0.25	3		40	5		4	1.1	●	○
4122MS-M1.6*0.35-6H		2P	M1.6	0.35	3	1.1	40	5	11	4	1.47	●	○
4122M-M1.6*0.35-6H		3P	M1.6	0.35	3	1.1	40	5	11	4	1.47	●	○
4122MS-M2*0.4-6H		2P	M2	0.4	3	1.5	45	6	12	4	1.85	●	○
4122M-M2*0.4-6H		3P	M2	0.4	3	1.5	45	6	12	4	1.85	●	○
4122MS-M2.5*0.45-6H		2P	M2.5	0.45	3	1.9	50	6	14	4	2.33	●	○
4122M-M2.5*0.45-6H		3P	M2.5	0.45	3	1.9	50	6	14	4	2.33	●	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓				

✓ Very suitable

✓ Suitable

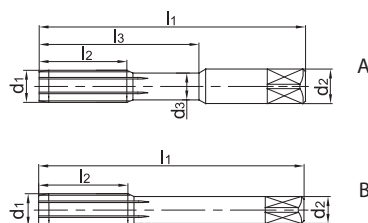
Thread former

Steel, stainless steel

4222M



- Type of shank DIN 10
- Coolant exit, axial concentric



Article	*	Dimensions [mm]								Teeth	Geometry	Coredrill d	Grade	
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃				KTG402	YK40F
4222MS-M3*0.5-6H		2P	M3	0.5	3.5	2.3	56	6	18	4	A	2.8	●	○
4222M-M3*0.5-6H		3P	M3	0.5	3.5	2.3	56	6	18	4	A	2.8	●	○
4222MS-M4*0.5-6H		2P	M4	0.5	4.5	3.1	63	8	21	4	A	3.8	●	○
4222M-M4*0.5-6H		3P	M4	0.5	4.5	3.1	63	8	21	4	A	3.8	●	○
4222M-M4*0.7-6H		3P	M4	0.7	4.5	3.1	63	8	21	4	A	3.7	●	○
4222MS-M4*0.7-6H		2P	M4	0.7	4.5	3.1	63	8	21	4	A	3.7	●	○
4222MS-M5*0.5-6H		2P	M5	0.5	6	4.3	70	10	25	4	A	4.8	●	○
4222M-M5*0.5-6H		3P	M5	0.5	6	4.3	70	10	25	4	A	4.8	●	○
4222M-M5*0.8-6H		3P	M5	0.8	6	4	70	10	25	4	A	4.65	●	○
4222MS-M5*0.8-6H		2P	M5	0.8	6	4	70	10	25	4	A	4.65	●	○
4222M-M6*0.75-6H		3P	M6	0.75	6	5	80	12	30	4	A	5.7	●	○
4222MS-M6*0.75-6H		2P	M6	0.75	6	5	80	12	30	4	A	5.7	●	○
4222MS-M6*1-6H		2P	M6	1	6	4.7	80	12	30	4	A	5.6	●	○
4222M-M6*1-6H		3P	M6	1	6	4.7	80	12	30	4	A	5.6	●	○
4222MS-M7*1-6H		2P	M7	1	7	5.7	80	14	30	4	A	6.6	●	○
4222M-M7*1-6H		3P	M7	1	7	5.7	80	14	30	4	A	6.6	●	○
4222MS-M8*1-6H		2P	M8	1	8	6.7	90	16	35	4	A	7.6	●	○
4222M-M8*1-6H		3P	M8	1	8	6.7	90	16	35	4	A	7.6	●	○
4222MS-M8*1.25-6H		2P	M8	1.25	8	6.4	90	16	35	4	A	7.45	●	○
4222M-M8*1.25-6H		3P	M8	1.25	8	6.4	90	16	35	4	A	7.45	●	○
4222MS-M10*1-6H		2P	M10	1	10	8.7	100	20	39	5	A	9.6	●	○
4222M-M10*1-6H		3P	M10	1	10	8.7	100	20	39	5	A	9.6	●	○
4222MS-M10*1.25-6H		2P	M10	1.25	10	8.4	100	20	39	5	A	9.45	●	○
4222M-M10*1.25-6H		3P	M10	1.25	10	8.4	100	20	39	5	A	9.45	●	○
4222M-M10*1.5-6H		3P	M10	1.5	10	8.1	100	20	39	5	A	9.35	●	○
4222MC-M10*1.5-6H	*	3P	M10	1.5	10	8.1	100	20	39	5	A	9.35	●	○
4222MS-M10*1.5-6H		2P	M10	1.5	10	8.1	100	20	39	5	A	9.35	●	○
4222MCS-M10*1.5-6H	*	2P	M10	1.5	10	8.1	100	20	39	5	A	9.35	●	○
4222MS-M12*1.25-6H		2P	M12	1.25	9		110	24		5	B	11.45	●	○
4222M-M12*1.25-6H		3P	M12	1.25	9		110	24		5	B	11.45	●	○
4222M-M12*1.5-6H		3P	M12	1.5	9		110	24		5	B	11.35	●	○
4222MS-M12*1.5-6H		2P	M12	1.5	9		110	24		5	B	11.35	●	○
4222M-M12*1.75-6H		3P	M12	1.75	9		110	24		5	B	11.25	●	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓				

✓ Very suitable

✓ Suitable

System code > C144

Machining instructions > C165

Cutting data > C160

Nonstandard order > C181

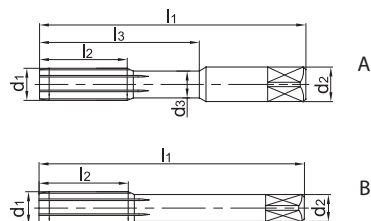


Thread former

Steel, stainless steel

4222M


- Type of shank DIN 10
- Coolant exit, axial concentric



Article		Dimensions [mm]								Teeth	Geometry	Coredrill	Grade	
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃			d	KTG402	YK40F
4222MC-M12*1.75-6H		3P	M12	1.75	9		110	24		5	B	11.25	●	○
4222MS-M12*1.75-6H		2P	M12	1.75	9		110	24		5	B	11.25	●	○
4222MCS-M12*1.75-6H		2P	M12	1.75	9		110	24		5	B	11.25	●	○
4222M-M14*1.5-6H		3P	M14	1.5	11		110	26		6	B	13.35	●	○
4222MS-M14*1.5-6H		2P	M14	1.5	11		110	26		6	B	13.35	●	○
4222MS-M14*2-6H		2P	M14	2	11		110	26		6	B	13.1	●	○
4222M-M14*2-6H		3P	M14	2	11		110	26		6	B	13.1	●	○
4222M-M16*1.5-6H		3P	M16	1.5	12		110	27		6	B	15.35	●	○
4222MS-M16*1.5-6H		2P	M16	1.5	12		110	27		6	B	15.35	●	○
4222MS-M16*2-6H		2P	M16	2	12		110	27		6	B	15.1	●	○
4222MCS-M16*2-6H		2P	M16	2	12		110	27		6	B	15.1	●	○
4222M-M16*2-6H		3P	M16	2	12		110	27		6	B	15.1	○	○
4222MC-M16*2-6H		3P	M16	2	12		110	27		6	B	15.1	●	○

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓	✓				

✓ Very suitable

✓ Suitable

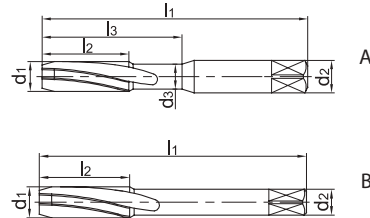
Tap, right-hand twist

Cast iron

4201C



- Type of shank DIN 10
- Coolant exit, axial concentric



Article	*	Dimensions [mm]								Teeth	Geometry	Coredrill		Grade
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃			d	YK40F	
4201CS-M3*0.5-6H		1,5P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	●	
4201CS-M3*0.5-6HX		1,5P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	●	
4201C-M3*0.5-6H		3P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	●	
4201C-M3*0.5-6HX		3P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	●	
4201C-M4*0.7-6H		3P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	●	
4201C-M4*0.7-6HX		3P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	●	
4201CS-M4*0.7-6H		1,5P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	●	
4201CS-M4*0.7-6HX		1,5P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	●	
4201C-M5*0.8-6H		3P	M5	0.8	6	4	70	16	25	3	A	4.2	●	
4201C-M5*0.8-6HX		3P	M5	0.8	6	4	70	16	25	3	A	4.2	●	
4201CS-M5*0.8-6H		1,5P	M5	0.8	6	4	70	16	25	3	A	4.2	●	
4201CS-M5*0.8-6HX		1,5P	M5	0.8	6	4	70	16	25	3	A	4.2	●	
4201C-M6*0.75-6H		3P	M6	0.75	6	5	80	19	30	3	A	5.25	●	
4201C-M6*0.75-6HX		3P	M6	0.75	6	5	80	19	30	3	A	5.25	●	
4201CS-M6*0.75-6H		1,5P	M6	0.75	6	5	80	19	30	3	A	5.25	●	
4201CS-M6*0.75-6HX		1,5P	M6	0.75	6	5	80	19	30	3	A	5.25	●	
4201C-M6*1-6H		3P	M6	1	6	4.7	80	19	30	3	A	5	●	
4201CC-M6*1-6H	*	3P	M6	1	6	4.7	80	19	30	3	A	5	●	
4201C-M6*1-6HX		3P	M6	1	6	4.7	80	19	30	3	A	5	●	
4201CS-M6*1-6H		1,5P	M6	1	6	4.7	80	19	30	3	A	5	●	
4201CCS-M6*1-6H	*	1,5P	M6	1	6	4.7	80	19	30	3	A	5	●	
4201CS-M6*1-6HX		1,5P	M6	1	6	4.7	80	19	30	3	A	5	●	
4201C-M7*1-6H		3P	M7	1	7	5.7	80	19	30	3	A	6	●	
4201CS-M7*1-6H		1,5P	M7	1	7	5.7	80	19	30	3	A	6	●	
4201C-M8*1-6H		3P	M8	1	8	6.7	90	20	35	3	A	7	●	
4201CS-M8*1-6H		1,5P	M8	1	8	6.7	90	20	35	3	A	7	●	
4201C-M8*1.25-6H		3P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●	
4201CC-M8*1.25-6H	*	3P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●	
4201C-M8*1.25-6HX		3P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●	
4201CS-M8*1.25-6H		1,5P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●	
4201CCS-M8*1.25-6H	*	1,5P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●	
4201CS-M8*1.25-6HX		1,5P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●	
4201C-M10*1-6H		3P	M10	1	10	8.7	100	20	39	4	A	9	●	

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
		✓			

✓ Very suitable

✓ Suitable

System code > C144

Machining instructions > C165

Cutting data > C160

Nonstandard order > C181



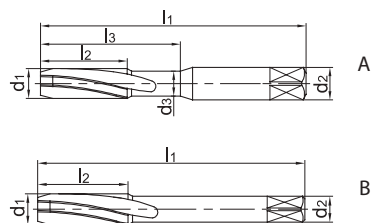
Tap, right-hand twist

Cast iron

4201C



- Type of shank DIN 10
- Coolant exit, axial concentric



Article	*	Dimensions [mm]								Teeth	Geometry	Coredrill d	Grade YK40F
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃				
4201CS-M10*1-6H		1,5P	M10	1	10	8.7	100	20	39	4	A	9	●
4201C-M10*1.25-6H		3P	M10	1.25	10	8.4	100	24	39	4	A	8.75	●
4201CS-M10*1.25-6H		1,5P	M10	1.25	10	8.4	100	24	39	4	A	8.75	●
4201C-M10*1.5-6H		3P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4201CC-M10*1.5-6H	*	3P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4201C-M10*1.5-6HX		3P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4201CS-M10*1.5-6H		1,5P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4201CCS-M10*1.5-6H	*	1,5P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4201CS-M10*1.5-6HX		1,5P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4201C-M12*1.25-6H		3P	M12	1.25	9		110	29		4	B	10.75	●
4201CS-M12*1.25-6H		1,5P	M12	1.25	9		110	29		4	B	10.75	●
4201C-M12*1.5-6H		3P	M12	1.5	9		110	29		4	B	10.5	●
4201CS-M12*1.5-6H		1,5P	M12	1.5	9		110	29		4	B	10.5	●
4201C-M12*1.75-6H		3P	M12	1.75	9		110	29		4	B	10.25	●
4201CC-M12*1.75-6H	*	3P	M12	1.75	9		110	29		4	B	10.25	●
4201C-M12*1.75-6HX		3P	M12	1.75	9		110	29		4	B	10.25	●
4201CS-M12*1.75-6H		1,5P	M12	1.75	9		110	29		4	B	10.25	●
4201CCS-M12*1.75-6H	*	1,5P	M12	1.75	9		110	29		4	B	10.25	●
4201CS-M12*1.75-6HX		1,5P	M12	1.75	9		110	29		4	B	10.25	●
4201C-M14*1.5-6H		3P	M14	1.5	11		110	30		4	B	12.5	●
4201CS-M14*1.5-6H		1,5P	M14	1.5	11		110	30		4	B	12.5	●
4201C-M14*2-6H		3P	M14	2	11		110	30		4	B	12	●
4201CS-M14*2-6H		1,5P	M14	2	11		110	30		4	B	12	●
4201C-M16*1.5-6H		3P	M16	1.5	12		110	32		4	B	14.5	●
4201CS-M16*1.5-6H		1,5P	M16	1.5	12		110	32		4	B	14.5	●
4201C-M16*2-6H		3P	M16	2	12		110	32		4	B	14	●
4201CS-M16*2-6H		1,5P	M16	2	12		110	32		4	B	14	●
4201C-M16*2-6HX		3P	M16	2	12		110	32		4	B	14	●
4201CS-M16*2-6H		1,5P	M16	2	12		110	32		4	B	14	●
4201CS-M16*2-6HX		1,5P	M16	2	12		110	32		4	B	14	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
		✓			

✓ Very suitable

✓ Suitable

System code > C144

Machining instructions > C165

Cutting data > C160

Nonstandard order > C181

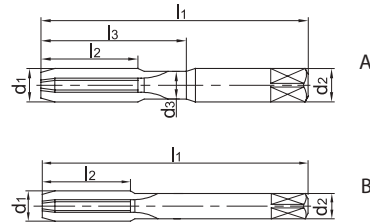
Tap, straight flute

Cast iron

4202C



- Type of shank DIN 10
- Coolant exit, axial concentric



Article	✱	Dimensions [mm]								Teeth	Geometry	Coredrill	Grade
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃			d	YK40F
4202CS-M3*0.5-6H		1,5P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	○
4202CS-M3*0.5-6HX		1,5P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	○
4202C-M3*0.5-6H		3P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	●
4202C-M3*0.5-6HX		3P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	○
4202C-M4*0.7-6H		3P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	●
4202C-M4*0.7-6HX		3P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	●
4202CS-M4*0.7-6H		1,5P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	●
4202CS-M4*0.7-6HX		1,5P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	●
4202C-M5*0.8-6H		3P	M5	0.8	6	4	70	16	25	3	A	4.2	●
4202C-M5*0.8-6HX		3P	M5	0.8	6	4	70	16	25	3	A	4.2	●
4202CS-M5*0.8-6H		1,5P	M5	0.8	6	4	70	16	25	3	A	4.2	●
4202CS-M5*0.8-6HX		1,5P	M5	0.8	6	4	70	16	25	3	A	4.2	●
4202C-M6*0.75-6H		3P	M6	0.75	6	5	80	19	30	3	A	5.25	●
4202C-M6*0.75-6HX		3P	M6	0.75	6	5	80	19	30	3	A	5.25	○
4202CS-M6*0.75-6H		1,5P	M6	0.75	6	5	80	19	30	3	A	5.25	○
4202CS-M6*0.75-6HX		1,5P	M6	0.75	6	5	80	19	30	3	A	5.25	○
4202C-M6*1-6H		3P	M6	1	6	4.7	80	19	30	3	A	5	○
4202CC-M6*1-6H	✱	3P	M6	1	6	4.7	80	19	30	3	A	5	○
4202C-M6*1-6HX		3P	M6	1	6	4.7	80	19	30	3	A	5	○
4202CS-M6*1-6H		1,5P	M6	1	6	4.7	80	19	30	3	A	5	○
4202CCS-M6*1-6H	✱	1,5P	M6	1	6	4.7	80	19	30	3	A	5	○
4202CS-M6*1-6HX		1,5P	M6	1	6	4.7	80	19	30	3	A	5	○
4202C-M7*1-6H		3P	M7	1	7	5.7	80	19	30	3	A	6	●
4202CS-M7*1-6H		1,5P	M7	1	7	5.7	80	19	30	3	A	6	●
4202C-M8*1-6H		3P	M8	1	8	6.7	90	20	35	3	A	7	●
4202CS-M8*1-6H		1,5P	M8	1	8	6.7	90	20	35	3	A	7	●
4202C-M8*1.25-6H		3P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●
4202CC-M8*1.25-6H	✱	3P	M8	1.25	8	6.4	90	22	35	3	A	6.75	○
4202C-M8*1.25-6HX		3P	M8	1.25	8	6.4	90	22	35	3	A	6.75	○
4202CS-M8*1.25-6H		1,5P	M8	1.25	8	6.4	90	22	35	3	A	6.75	○
4202CCS-M8*1.25-6H	✱	1,5P	M8	1.25	8	6.4	90	22	35	3	A	6.75	○
4202CS-M8*1.25-6HX		1,5P	M8	1.25	8	6.4	90	22	35	3	A	6.75	○
4202C-M10*1-6H		3P	M10	1	10	8.7	100	20	39	4	A	9	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
		✓			

✓ Very suitable

✓ Suitable

System code > C144

Machining instructions > C165

Cutting data > C160

Nonstandard order > C181



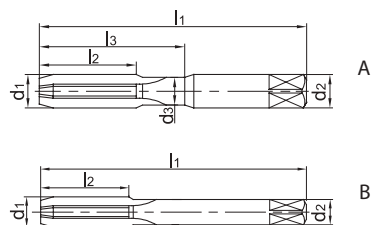
Tap, straight flute

Cast iron

4202C



- Type of shank DIN 10
- Coolant exit, axial concentric



Article	*	Dimensions [mm]								Teeth	Geometry	Coredrill d	Grade YK40F
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃				
4202CS-M10*1-6H		1,5P	M10	1	10	8.7	100	20	39	4	A	9	●
4202C-M10*1.25-6H		3P	M10	1.25	10	8.4	100	24	39	4	A	8.75	●
4202CS-M10*1.25-6H		1,5P	M10	1.25	10	8.4	100	24	39	4	A	8.75	●
4202C-M10*1.5-6H		3P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4202CC-M10*1.5-6H	*	3P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4202C-M10*1.5-6HX		3P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4202CS-M10*1.5-6H		1,5P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4202CCS-M10*1.5-6H	*	1,5P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4202CS-M10*1.5-6HX		1,5P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4202C-M12*1.25-6H		3P	M12	1.25	9		110	29		4	B	10.75	●
4202CS-M12*1.25-6H		1,5P	M12	1.25	9		110	29		4	B	10.75	●
4202C-M12*1.5-6H		3P	M12	1.5	9		110	29		4	B	10.5	●
4202CS-M12*1.5-6H		1,5P	M12	1.5	9		110	29		4	B	10.5	●
4202C-M12*1.75-6H		3P	M12	1.75	9		110	29		4	B	10.25	○
4202CC-M12*1.75-6H	*	3P	M12	1.75	9		110	29		4	B	10.25	○
4202C-M12*1.75-6HX		3P	M12	1.75	9		110	29		4	B	10.25	○
4202CS-M12*1.75-6H		1,5P	M12	1.75	9		110	29		4	B	10.25	○
4202CCS-M12*1.75-6H	*	1,5P	M12	1.75	9		110	29		4	B	10.25	○
4202CS-M12*1.75-6HX		1,5P	M12	1.75	9		110	29		4	B	10.25	○
4202C-M14*1.5-6H		3P	M14	1.5	11		110	30		4	B	12.5	●
4202CS-M14*1.5-6H		1,5P	M14	1.5	11		110	30		4	B	12.5	●
4202C-M14*2-6H		3P	M14	2	11		110	30		4	B	12	●
4202CS-M14*2-6H		1,5P	M14	2	11		110	30		4	B	12	●
4202C-M16*1.5-6H		3P	M16	1.5	12		110	32		4	B	14.5	●
4202CS-M16*1.5-6H		1,5P	M16	1.5	12		110	32		4	B	14.5	●
4202C-M16*2-6H		3P	M16	2	12		110	32		4	B	14	●
4202CS-M16*2-6H		1,5P	M16	2	12		110	32		4	B	14	●
4202C-M16*2-6HX		3P	M16	2	12		110	32		4	B	14	●
4202CS-M16*2-6H		1,5P	M16	2	12		110	32		4	B	14	●
4202CS-M16*2-6HX		1,5P	M16	2	12		110	32		4	B	14	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
		✓			

✓ Very suitable

✓ Suitable

System code > C144

Machining instructions > C165

Cutting data > C160

Nonstandard order > C181

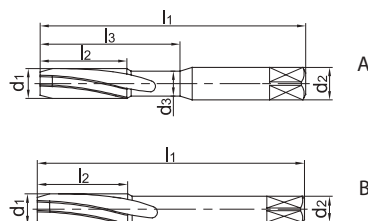
Tap, right-hand twist

Non-ferrous metals

4201A



- Type of shank DIN 10
- Coolant exit, axial concentric



Article	*	Dimensions [mm]								Teeth	Geometry	Coredrill		Grade
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃			d	YK40F	
4201AS-M3*0.5-6H		1,5P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	●	
4201AS-M3*0.5-6HX		1,5P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	●	
4201A-M3*0.5-6H		3P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	●	
4201A-M3*0.5-6HX		3P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	●	
4201A-M4*0.7-6H		3P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	●	
4201A-M4*0.7-6HX		3P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	●	
4201AS-M4*0.7-6H		1,5P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	●	
4201AS-M4*0.7-6HX		1,5P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	●	
4201A-M5*0.8-6H		3P	M5	0.8	6	4	70	16	25	3	A	4.2	●	
4201A-M5*0.8-6HX		3P	M5	0.8	6	4	70	16	25	3	A	4.2	●	
4201AS-M5*0.8-6H		1,5P	M5	0.8	6	4	70	16	25	3	A	4.2	●	
4201AS-M5*0.8-6HX		1,5P	M5	0.8	6	4	70	16	25	3	A	4.2	●	
4201A-M6*0.75-6H		3P	M6	0.75	6	5	80	19	30	3	A	5.25	●	
4201A-M6*0.75-6HX		3P	M6	0.75	6	5	80	19	30	3	A	5.25	●	
4201AS-M6*0.75-6H		1,5P	M6	0.75	6	5	80	19	30	3	A	5.25	●	
4201AS-M6*0.75-6HX		1,5P	M6	0.75	6	5	80	19	30	3	A	5.25	●	
4201A-M6*1-6H		3P	M6	1	6	4.7	80	19	30	3	A	5	●	
4201AC-M6*1-6H	*	3P	M6	1	6	4.7	80	19	30	3	A	5	●	
4201A-M6*1-6HX		3P	M6	1	6	4.7	80	19	30	3	A	5	●	
4201AS-M6*1-6H		1,5P	M6	1	6	4.7	80	19	30	3	A	5	●	
4201ACS-M6*1-6H	*	1,5P	M6	1	6	4.7	80	19	30	3	A	5	●	
4201AS-M6*1-6HX		1,5P	M6	1	6	4.7	80	19	30	3	A	5	●	
4201A-M7*1-6H		3P	M7	1	7	5.7	80	19	30	3	A	6	●	
4201AS-M7*1-6H		1,5P	M7	1	7	5.7	80	19	30	3	A	6	●	
4201A-M8*1-6H		3P	M8	1	8	6.7	90	20	35	3	A	7	●	
4201AS-M8*1-6H		1,5P	M8	1	8	6.7	90	20	35	3	A	7	●	
4201A-M8*1.25-6H		3P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●	
4201AC-M8*1.25-6H	*	3P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●	
4201A-M8*1.25-6HX		3P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●	
4201AS-M8*1.25-6H		1,5P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●	
4201ACS-M8*1.25-6H	*	1,5P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●	
4201AS-M8*1.25-6HX		1,5P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●	
4201A-M10*1-6H		3P	M10	1	10	8.7	100	20	39	4	A	9	●	

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

System code > C144

Machining instructions > C165

Cutting data > C160

Nonstandard order > C181



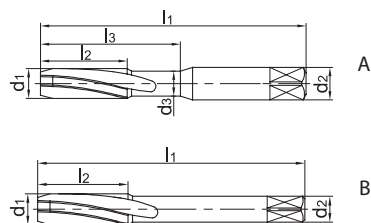
Tap, right-hand twist

Non-ferrous metals

4201A



- Type of shank DIN 10
- Coolant exit, axial concentric



Article	*	Dimensions [mm]								Teeth	Geometry	Coredrill d	Grade YK40F
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃				
4201AS-M10*1-6H		1,5P	M10	1	10	8.7	100	20	39	4	A	9	●
4201A-M10*1.25-6H		3P	M10	1.25	10	8.4	100	24	39	4	A	8.75	●
4201AS-M10*1.25-6H		1,5P	M10	1.25	10	8.4	100	24	39	4	A	8.75	●
4201A-M10*1.5-6H		3P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4201AC-M10*1.5-6H	*	3P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4201A-M10*1.5-6HX		3P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4201AS-M10*1.5-6H		1,5P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4201ACS-M10*1.5-6H	*	1,5P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4201AS-M10*1.5-6HX		1,5P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4201A-M12*1.25-6H		3P	M12	1.25	9		110	29		4	B	10.75	●
4201AS-M12*1.25-6H		1,5P	M12	1.25	9		110	29		4	B	10.75	●
4201A-M12*1.5-6H		3P	M12	1.5	9		110	29		4	B	10.5	●
4201AS-M12*1.5-6H		1,5P	M12	1.5	9		110	29		4	B	10.5	●
4201A-M12*1.75-6H		3P	M12	1.75	9		110	29		4	B	10.25	●
4201AC-M12*1.75-6H	*	3P	M12	1.75	9		110	29		4	B	10.25	●
4201A-M12*1.75-6HX		3P	M12	1.75	9		110	29		4	B	10.25	●
4201AS-M12*1.75-6H		1,5P	M12	1.75	9		110	29		4	B	10.25	●
4201ACS-M12*1.75-6H	*	1,5P	M12	1.75	9		110	29		4	B	10.25	●
4201AS-M12*1.75-6HX		1,5P	M12	1.75	9		110	29		4	B	10.25	●
4201A-M14*1.5-6H		3P	M14	1.5	11		110	30		4	B	12.5	●
4201AS-M14*1.5-6H		1,5P	M14	1.5	11		110	30		4	B	12.5	●
4201A-M14*2-6H		3P	M14	2	11		110	30		4	B	12	●
4201AS-M14*2-6H		1,5P	M14	2	11		110	30		4	B	12	●
4201A-M16*1.5-6H		3P	M16	1.5	12		110	32		4	B	14.5	●
4201AS-M16*1.5-6H		1,5P	M16	1.5	12		110	32		4	B	14.5	●
4201A-M16*2-6H		3P	M16	2	12		110	32		4	B	14	●
4201AS-M16*2-6H		1,5P	M16	2	12		110	32		4	B	14	●
4201A-M16*2-6HX		3P	M16	2	12		110	32		4	B	14	●
4201AS-M16*2-6H		1,5P	M16	2	12		110	32		4	B	14	●
4201AS-M16*2-6HX		1,5P	M16	2	12		110	32		4	B	14	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

System code > C144

Machining instructions > C165

Cutting data > C160

Nonstandard order > C181

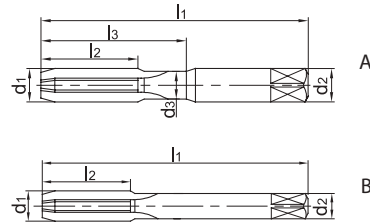
Tap, straight flute

Non-ferrous metals

4202A



- Type of shank DIN 10
- Coolant exit, axial concentric



Article	✱	Dimensions [mm]								Teeth	Geometry	Coredrill	Grade
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃			d	YK40F
4202AS-M3*0.5-6H		1,5P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	○
4202AS-M3*0.5-6HX		1,5P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	○
4202A-M3*0.5-6H		3P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	○
4202A-M3*0.5-6HX		3P	M3	0.5	3.5	2.3	56	11	18	3	A	2.5	○
4202A-M4*0.7-6H		3P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	●
4202A-M4*0.7-6HX		3P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	○
4202AS-M4*0.7-6H		1,5P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	○
4202AS-M4*0.7-6HX		1,5P	M4	0.7	4.5	3.1	63	13	21	3	A	3.3	○
4202A-M5*0.8-6H		3P	M5	0.8	6	4	70	16	25	3	A	4.2	●
4202A-M5*0.8-6HX		3P	M5	0.8	6	4	70	16	25	3	A	4.2	○
4202AS-M5*0.8-6H		1,5P	M5	0.8	6	4	70	16	25	3	A	4.2	●
4202AS-M5*0.8-6HX		1,5P	M5	0.8	6	4	70	16	25	3	A	4.2	○
4202A-M6*0.75-6H		3P	M6	0.75	6	5	80	19	30	3	A	5.25	○
4202A-M6*0.75-6HX		3P	M6	0.75	6	5	80	19	30	3	A	5.25	○
4202AS-M6*0.75-6H		1,5P	M6	0.75	6	5	80	19	30	3	A	5.25	○
4202AS-M6*0.75-6HX		1,5P	M6	0.75	6	5	80	19	30	3	A	5.25	○
4202A-M6*1-6H		3P	M6	1	6	4.7	80	19	30	3	A	5	○
4202AC-M6*1-6H	✱	3P	M6	1	6	4.7	80	19	30	3	A	5	○
4202A-M6*1-6HX		3P	M6	1	6	4.7	80	19	30	3	A	5	○
4202AS-M6*1-6H		1,5P	M6	1	6	4.7	80	19	30	3	A	5	○
4202ACS-M6*1-6H	✱	1,5P	M6	1	6	4.7	80	19	30	3	A	5	○
4202AS-M6*1-6HX		1,5P	M6	1	6	4.7	80	19	30	3	A	5	○
4202A-M7*1-6H		3P	M7	1	7	5.7	80	19	30	3	A	6	●
4202AS-M7*1-6H		1,5P	M7	1	7	5.7	80	19	30	3	A	6	●
4202A-M8*1-6H		3P	M8	1	8	6.7	90	20	35	3	A	7	●
4202AS-M8*1-6H		1,5P	M8	1	8	6.7	90	20	35	3	A	7	●
4202A-M8*1.25-6H		3P	M8	1.25	8	6.4	90	22	35	3	A	6.75	●
4202AC-M8*1.25-6H	✱	3P	M8	1.25	8	6.4	90	22	35	3	A	6.75	○
4202A-M8*1.25-6HX		3P	M8	1.25	8	6.4	90	22	35	3	A	6.75	○
4202AS-M8*1.25-6H		1,5P	M8	1.25	8	6.4	90	22	35	3	A	6.75	○
4202ACS-M8*1.25-6H	✱	1,5P	M8	1.25	8	6.4	90	22	35	3	A	6.75	○
4202AS-M8*1.25-6HX		1,5P	M8	1.25	8	6.4	90	22	35	3	A	6.75	○
4202A-M10*1-6H		3P	M10	1	10	8.7	100	20	39	4	A	9	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

System code > C144

Machining instructions > C165

Cutting data > C160

Nonstandard order > C181



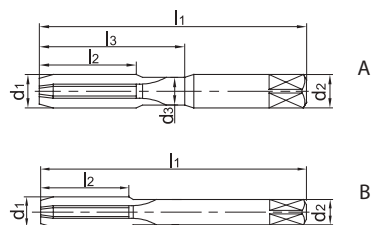
Tap, straight flute

Non-ferrous metals

4202A



- Type of shank DIN 10
- Coolant exit, axial concentric



Article	*	Dimensions [mm]								Teeth	Geometry	Coredrill	Grade
			d ₁	P	d ₂	d ₃	l ₁	l ₂	l ₃			d	YK40F
4202AS-M10*1-6H		1,5P	M10	1	10	8.7	100	20	39	4	A	9	●
4202A-M10*1.25-6H		3P	M10	1.25	10	8.4	100	24	39	4	A	8.75	●
4202AS-M10*1.25-6H		1,5P	M10	1.25	10	8.4	100	24	39	4	A	8.75	●
4202A-M10*1.5-6H		3P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4202AC-M10*1.5-6H	*	3P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4202A-M10*1.5-6HX		3P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4202AS-M10*1.5-6H		1,5P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4202ACS-M10*1.5-6H	*	1,5P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4202AS-M10*1.5-6HX		1,5P	M10	1.5	10	8.1	100	24	39	4	A	8.5	●
4202A-M12*1.25-6H		3P	M12	1.25	9		110	29		4	B	10.75	●
4202AS-M12*1.25-6H		1,5P	M12	1.25	9		110	29		4	B	10.75	●
4202A-M12*1.5-6H		3P	M12	1.5	9		110	29		4	B	10.5	●
4202AS-M12*1.5-6H		1,5P	M12	1.5	9		110	29		4	B	10.5	●
4202A-M12*1.75-6H		3P	M12	1.75	9		110	29		4	B	10.25	●
4202AC-M12*1.75-6H	*	3P	M12	1.75	9		110	29		4	B	10.25	●
4202A-M12*1.75-6HX		3P	M12	1.75	9		110	29		4	B	10.25	●
4202AS-M12*1.75-6H		1,5P	M12	1.75	9		110	29		4	B	10.25	●
4202ACS-M12*1.75-6H	*	1,5P	M12	1.75	9		110	29		4	B	10.25	●
4202AS-M12*1.75-6HX		1,5P	M12	1.75	9		110	29		4	B	10.25	●
4202A-M14*1.5-6H		3P	M14	1.5	11		110	30		4	B	12.5	●
4202AS-M14*1.5-6H		1,5P	M14	1.5	11		110	30		4	B	12.5	●
4202A-M14*2-6H		3P	M14	2	11		110	30		4	B	12	●
4202AS-M14*2-6H		1,5P	M14	2	11		110	30		4	B	12	●
4202A-M16*1.5-6H		3P	M16	1.5	12		110	32		4	B	14.5	●
4202AS-M16*1.5-6H		1,5P	M16	1.5	12		110	32		4	B	14.5	●
4202A-M16*2-6H		3P	M16	2	12		110	32		4	B	14	●
4202AS-M16*2-6H		1,5P	M16	2	12		110	32		4	B	14	●
4202A-M16*2-6HX		3P	M16	2	12		110	32		4	B	14	●
4202AS-M16*2-6H		1,5P	M16	2	12		110	32		4	B	14	●
4202AS-M16*2-6HX		1,5P	M16	2	12		110	32		4	B	14	●

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
			✓		

✓ Very suitable

✓ Suitable

System code > C144

Machining instructions > C165

Cutting data > C160

Nonstandard order > C181

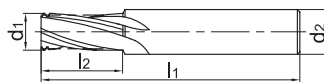
Thread milling cutter, coated

Steel, cast iron, non-ferrous metals

4111



– Factory standard



Article	*	Dimensions [mm]						Teeth	Coredrill		Grade	
		D	d ₁	P	d ₂	l ₁	l ₂		d	KTG4015	YK40F	
4111-M3*0.5		M3	2.35	0.5	4	50	6	3	2.5	●	○	
4111-M4*0.7		M4	3.15	0.7	4	50	8	3	3.3	●	○	
4111-M5*0.8		M5	4	0.8	6	50	10	3	4.2	●	○	
4111-M5*0.5		M5	4.3	0.5	6	50	10	3	4.5	●	○	
4111-M6*1		M6	4.75	1	6	60	12	4	5	●	●	
4111-M6*0.75		M6	5	0.75	6	60	12	4	5.25	●	○	
4111-M8*1.25		M8	6.45	1.25	8	60	16	4	6.75	●	●	
4111-M8*1		M8	6.65	1	8	60	16	4	7	●	○	
4111-M10*1.5		M10	8.1	1.5	10	75	20	4	8.5	●	○	
4111-M10*1		M10	8.55	1	10	75	20	4	9	●	○	
4111-M12*1.75		M12	9.75	1.75	12	75	24	4	10.25	●	○	
4111-M12*1.25		M12	10.25	1.25	12	75	24	4	10.75	●	○	
4111-M14*2		M14	11.4	2	14	75	28	4	12	●	○	
4111-M14*1.5		M14	11.9	1.5	14	75	28	4	12.5	●	○	
4111-M14*1		M14	12.35	1	14	75	20	4	13	●	○	
4111-M16*2		M16	13.3	2	16	90	32	6	14	●	○	
4111-M18*2.5		M18	14.75	2.5	18	90	36	6	15.5	●	○	
4111-M18*1		M18	16.15	1	18	90	20	6	17	●	○	
4111-M20*2.5		M20	16.65	2.5	18	100	40	6	17.5	●	○	
4111-M20*2		M20	17.1	2	18	100	40	6	18	●	○	

● Ex stock ○ On demand

* With internal cooling

Application field

P	M	K	N	S	H
✓		✓	✓		

✓ Very suitable

✓ Suitable

Guide for recommended cutting data – Solid carbide threading tools

Solid carbide threading tools

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c (m/min)								f-group
						Thread former		Thread former				Thread former		
						4122A 4222A YK40F	4122M 4222M YK40F	4201C YK40F	4201A YK40F	4122C YK40F	4122A YK40F	KTG40115		
						Coolant								
		external	external	external	external	external	external	external	external	external	external			
P	Unalloyed steel	ca. 0,15 % C	annealed	125	1		20					100	1	
		ca. 0,45 % C	annealed	190	2		20					90	1	
		ca. 0,45 % C	tempered	250	3		20					80	1	
		ca. 0,75 % C	annealed	270	4		20					70	1	
		ca. 0,75 % C	tempered	300	5		20					70	1	
	Low-alloyed steel		annealed	180	6		20					90	1	
			tempered	275	7		20					70	1	
			tempered	300	8		20					60	1	
			tempered	350	9		20					55	1	
	High-alloyed steel and high-alloyed tool steel		annealed	200	10		20					80	1	
			hardened and tempered	325	11		20					50	1	
M	Stainless steel	ferritic/martensitic	annealed	200	12		20							
		martensitic	tempered	240	13		20							
		austenitic	quench hardened	180	14		20							
		austenitic-ferritic		230	15		20							
K	Grey cast iron	perlitic/ferritic		180	16			20		20		80	1	
	Cast iron with spheroidal graphite	perlitic (martensitic)		260	17			20		20		60	1	
		perlitic		160	18			15		15		80	1	
		perlitic		250	19			15		15		60	1	
	Malleable cast iron	perlitic		130	20			20		20		60	1	
		perlitic		230	21			20		20		80	1	
N	Aluminium wrought alloys	cannot be hardened		60	22							180	1	
		hardenable	hardened	100	23							150	1	
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24	30	30		30		30	150	1	
		≤ 12 % Si, hardenable	hardened	90	25	25	25		25		25	150	1	
		> 12 % Si, cannot be hardened		130	26							150	1	
	Copper and copper alloys (bronze/brass)	machining steel, PB > 1%		110	27							150	1	
		CuZn, CuSnZn		90	28							150	1	
CuSn, Pb-free copper, electrolytic copper			100	29							150	1		
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30									
			hardened	280	31									
			annealed	250	32									
		Ni or Co base	hardened	350	33									
			cast	320	34									
	Titanium alloys	pure titanium		R _m 400	35									
	α and β alloys	hardened		R _m 1050	36									
H	Hardened steel		hardened and tempered		55 HRC	37								
	Hard cast iron		cast	400	39									
	Hardened cast iron		hardened and tempered	55 HRC	40									
X	Non-metallic materials	Thermoplasts			41									
		Thermosetting plastics			42									
		Plastic, glass-fibre reinforced GFRP			43									
		Plastic, carbon fibre reinforced CFRP			44									
		Graphite			45									
		Wood			46									

Note: The given cutting values are guide values, which were determined under ideal conditions.

The values have to be adapted in individual cases.

With hole depths of 5xD adjust the cutting data accordingly to the application.

f-group = feed rate recommendations on page C 164.

For examples of material for cutting tool groups view page D22.

Recommend feed rate
Solid carbide threading tools

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f-group	Feed rate [mm]																			
	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20
1	0,01	0,02	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10
2	0,01	0,02	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,09	0,10	0,10	0,10	0,11	0,11	0,11
3	0,01	0,02	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,10	0,10	0,11	0,11	0,12	0,12	0,12	0,13	0,13
4	0,02	0,03	0,04	0,06	0,06	0,07	0,08	0,09	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,15	0,16	0,17	0,17
5	0,02	0,03	0,05	0,06	0,07	0,09	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,15	0,16	0,18	0,18	0,19	0,20
6	0,02	0,04	0,06	0,07	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,17	0,18	0,18	0,19	0,19	0,20
7	0,02	0,04	0,06	0,09	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,18	0,19	0,20	0,20	0,21	0,22	0,22	0,23
8	0,03	0,05	0,07	0,10	0,11	0,13	0,14	0,15	0,16	0,17	0,18	0,20	0,21	0,22	0,23	0,23	0,24	0,25	0,26	0,26
9	0,03	0,06	0,08	0,11	0,13	0,15	0,16	0,17	0,18	0,20	0,21	0,23	0,24	0,25	0,26	0,27	0,28	0,29	0,29	0,30
10	0,04	0,07	0,10	0,13	0,15	0,17	0,19	0,20	0,21	0,23	0,24	0,26	0,27	0,29	0,30	0,31	0,32	0,33	0,34	0,35
11	0,04	0,07	0,11	0,15	0,17	0,20	0,21	0,23	0,24	0,26	0,28	0,30	0,32	0,33	0,35	0,36	0,37	0,38	0,39	0,40
12	0,05	0,09	0,13	0,17	0,20	0,23	0,25	0,26	0,28	0,30	0,32	0,35	0,36	0,38	0,40	0,41	0,42	0,44	0,45	0,46
13	0,05	0,10	0,15	0,20	0,23	0,26	0,28	0,30	0,32	0,35	0,37	0,40	0,42	0,44	0,46	0,47	0,49	0,50	0,52	0,53
14	0,06	0,11	0,17	0,23	0,26	0,30	0,33	0,35	0,37	0,40	0,43	0,46	0,48	0,50	0,53	0,54	0,56	0,58	0,59	0,61
15	0,07	0,13	0,20	0,26	0,30	0,35	0,37	0,40	0,43	0,46	0,49	0,53	0,55	0,58	0,61	0,62	0,64	0,66	0,68	0,70

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

1. Select the appropriate product series.
2. Determine the immersion.
3. Select the used material and read the cutting speed.
4. Determine the feed rate group and have a look at the appropriate feed rate recommendations.
5. Select the diameter of tool and determine the immersion.

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Solid carbide threading tools

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]								
						Thread former		Thread tap				Thread milling		
						4122A 4222A	4122M 4222M	4201C	4201A	4202C	4202A	4111		
						YK40F	YK40F	YK40F	YK40F	YK40F	YK40F	KTG4015		
						Coolant								
external	external	external	external	external	external	external	f-group							
P	Unalloyed steel	ca. 0,15 % C	annealed	125	1		20					100	1	
		ca. 0,45 % C	annealed	190	2		20					90	1	
		ca. 0,45 % C	tempered	250	3		20					80	1	
		ca. 0,75 % C	annealed	270	4		20					70	1	
		ca. 0,75 % C	tempered	300	5		20					70	1	
	Low-alloyed steel		annealed	180	6		20					90	1	
			tempered	275	7		20					70	1	
			tempered	300	8		20					60	1	
			tempered	350	9		20					55	1	
	High-alloyed steel and high-alloyed tool steel		annealed	200	10		20					80	1	
			hardened and tempered	325	11		20					50	1	
M	Stainless steel	ferritic/martensitic	annealed	200	12		20							
		martensitic	tempered	240	13		20							
		austenitic	quench hardened	180	14		20							
		austenitic-ferritic		230	15		20							
K	Grey cast iron	perlitic/ferritic		180	16				20			80	1	
		perlitic (martensitic)		260	17			20		20		60	1	
	Cast iron with spheroidal graphite	ferritic		160	18			15		15		80	1	
		perlitic		250	19			15		15		60	1	
	Malleable cast iron	ferritic		130	20			20		20		60	1	
		perlitic		230	21			20		20		80	1	
N	Aluminium wrought alloys	cannot be hardened		60	22							180	1	
		hardenable	hardened	100	23							150	1	
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24	30	30			30		150	1	
		≤ 12 % Si, hardenable	hardened	90	25	25	25			25		150	1	
		> 12 % Si, cannot be hardened		130	26							150	1	
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27							150	1	
		CuZn, CuSnZn		90	28							150	1	
		CuSn, Pb-free copper, electrolytic copper		100	29							150	1	
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30									
			hardened	280	31									
		Ni or Co bass	annealed	250	32									
			hardened	350	33									
		cast	320	34										
		Titanium alloys	pure titanium		R _m 400	35								
α and β alloys	hardened		R _m 1050	36										
H	Hardened steel		hardened and tempered	55 HRC	37									
			hardened and tempered	60 HRC	38									
	Hard cast iron		cast	400	39									
	Hardened cast iron		hardened and tempered	55 HRC	40									
X	Non-metallic materials	Thermoplasts			41									
		Thermosetting plastics			42									
		Plastic, glass-fibre reinforced GFRP			43									
		Plastic, carbon fibre reinforced CFRP			44									
		Graphite			45									
		Wood			46									

Note: The given cutting values are guide values, which were determined under ideal conditions.

The values have to be adapted in individual cases.

With hole depths of 5xD adjust the cutting data accordingly to the application.

f-group = feed rate recommendations on page C164.

For examples of material for cutting tool groups view page D22.

[illegible]

Recommended feed rate

Solid carbide threading tools

f-group	Feed rate [mm]																			
	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20
1	0,01	0,02	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,08	0,09	0,09	0,09	0,09	0,10	0,10
2	0,01	0,02	0,03	0,04	0,05	0,06	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,09	0,10	0,10	0,10	0,11	0,11	0,11
3	0,01	0,02	0,04	0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09	0,10	0,10	0,11	0,11	0,12	0,12	0,12	0,13	0,13
4	0,02	0,03	0,04	0,06	0,06	0,07	0,08	0,09	0,09	0,10	0,11	0,11	0,12	0,12	0,13	0,13	0,14	0,14	0,15	0,15
5	0,02	0,03	0,05	0,06	0,07	0,09	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,14	0,15	0,15	0,16	0,16	0,17	0,17
6	0,02	0,04	0,06	0,07	0,09	0,10	0,11	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,17	0,18	0,18	0,19	0,19	0,20
7	0,02	0,04	0,06	0,09	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,18	0,19	0,20	0,20	0,21	0,22	0,22	0,23
8	0,03	0,05	0,07	0,10	0,11	0,13	0,14	0,15	0,16	0,17	0,18	0,20	0,21	0,22	0,23	0,23	0,24	0,25	0,26	0,26
9	0,03	0,06	0,08	0,11	0,13	0,15	0,16	0,17	0,18	0,20	0,21	0,23	0,24	0,25	0,26	0,27	0,28	0,29	0,29	0,30
10	0,04	0,07	0,10	0,13	0,15	0,17	0,19	0,20	0,21	0,23	0,24	0,26	0,27	0,29	0,30	0,31	0,32	0,33	0,34	0,35
11	0,04	0,07	0,11	0,15	0,17	0,20	0,21	0,23	0,24	0,26	0,28	0,30	0,32	0,33	0,35	0,36	0,37	0,38	0,39	0,40
12	0,05	0,09	0,13	0,17	0,20	0,23	0,25	0,26	0,28	0,30	0,32	0,35	0,36	0,38	0,40	0,41	0,42	0,44	0,45	0,46
13	0,05	0,10	0,15	0,20	0,23	0,26	0,28	0,30	0,32	0,35	0,37	0,40	0,42	0,44	0,46	0,47	0,49	0,50	0,52	0,53
14	0,06	0,11	0,17	0,23	0,26	0,30	0,33	0,35	0,37	0,40	0,43	0,46	0,48	0,50	0,53	0,54	0,56	0,58	0,59	0,61
15	0,07	0,13	0,20	0,26	0,30	0,35	0,37	0,40	0,43	0,46	0,49	0,53	0,55	0,58	0,61	0,62	0,64	0,66	0,68	0,70

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.

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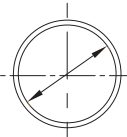
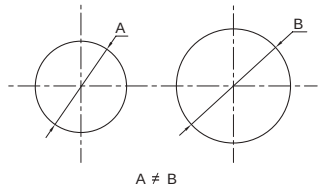
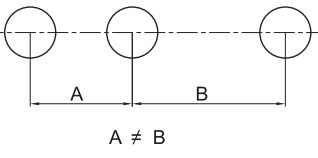
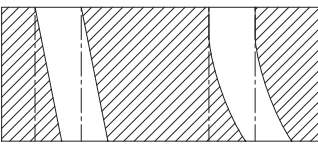
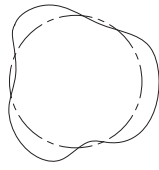
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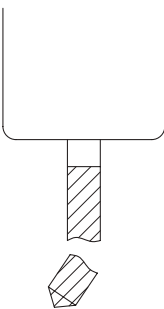
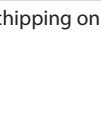
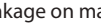
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Trouble shooting – solid carbide drills

Error	Reason	Countermeasure
Oversized holes 	– Insufficient clamping of workpiece and/or tool – Large radial run out – Point relief is off centre	– Use precision clamping – Reduce spindle play – Check and adjust clamped drill
Irregular hole size 	– Asymmetric point angle – Large radial run out – Point relief is off centre – High wear	– Regrind drill – Check quality of regrinding
Low position accuracy 	– Insufficient clamping of work piece and/or tool – Large radial run out of spindle	– Use precision clamping – Reduce spindle play – Check and adjust clamped drill
Bad drill run out 	– High tool wear – Poor drill accuracy	– Reduce feed rate – Increase amount of coolant or change coolant supply
Inaccurate hole (roundness) 	– The feed direction is not vertical to the workpiece surface – Tool isn't aligned with centre of spindle (lathe machines)	– Improve positioning of machine – Use precision clamping – Calibrate spindle – Check and adjust clamped drill
Bad surface quality	– Asymmetric point angle – Large radial run out – Point relief is off centre – High wear	– Regrind drill – Check quality of regrinding
	– Insufficient clamping of work piece and/or tool – Large radial run out of spindle	– Use precision clamping – Reduce spindle play – Check and adjust clamped drill
	– Clearance angle too large	– Regrind the drill
	– Insufficient tool stability	– Improve tool stability
	– Bad drill regrinding	– Improve regrinding
	– Insufficient amount of coolant or coolant method	– Change coolant supply – Increase amount of coolant
	– Insufficient clamping – Large radial run out of spindle	– Use precision clamping – Calibrate spindle
	– Feed rate too high	– Reduce feed rate
	– High wear of cutting edge – High welding	– Regrind drill – Use a coated drill
	– Bad chip removal	– Chose a suitable drill (with an accordingly flute, helical angle etc.) – Adjust cutting speed (reduce feed rate, etc.)

Trouble shooting – solid carbide drills

Problem	Reason	Countermeasure
Bad cylindricity 	– No symmetrical point angle – Large radial run out (drilling) – Centre insert is off centre – Large cutting edge wear – Feed rate too low	– Regrind drill – Check regrind – Increase feed rate
Breakage of drill 	– Insufficient clamping of tool and/or workpiece – Clearance angle too small – Feed rate too high – Excessive wear – Chip jamming – Drilling in uneven surfaces	– Improve stability of tool and clamping of workpiece – Use a drill with bigger clearance angle or regrind – Reduce feed rate – Regrind drill – Chose a suitable drill (considering flute geometry, helical angle, etc.) – Adjust cutting speed – Reduce feed rate – Increase rigidity of drill and clamping of machine and workpiece – Use drill with sharp centre insert – Pre-drill a centre hole – Create a straight surface (e.g. with solid carbide milling cutter) – Use a guide bush or bush plate
Chipping on the drill 	– Hard surface or blow holes – Feed rate too high – Insufficient coolant	– Check material and chose suitable grade – Change cutting conditions (cutting speed, feed rate or machining method) – Reduce feed rate – Improve/increase coolant supply
Chipping on the cutting edge 	– Poor clamping – Large radial run out – Cutting speed and feed rate too high – Clearance angle too large	– Use a more precise clamping device – Adjust the spindle – Reduce cutting speed and feed rate – Use a drill with smaller clearance angle or regrind
Excessive wear 	– Overdue regrinding – Drill tip not in centre position – Cutting speed too high – Cutting angle not suitable – Material not suitable – Insufficient cooling	– Regrind in time – Adjust drill with centre of spindle – Reduce cutting speed – Chose right cutting angle – Chose suitable material – Use suitable cooling
Wear and chipping on point relief 	– Feed rate too high – Cutting angle not suitable – Material not suitable – Clearance angle too small	– Reduce feed rate – Chose right cutting angle – Chose suitable material – Regrind drill
Breakage on margin 	– Guide bush too large	– Change guide bush
Built up edge on margin 	– High wear and heat – Insufficient cooling – Wrong coolant – Workpiece material is too soft	– Regrind drill – Change cooling method – Change coolant – Use drill with smaller clearance angle
High vibrations 	– Clearance angle too large – Drill stability too low	– Regrind drill – Improve stability
Swarf clogs the drill 	– Long chips – Chip removal not fluent	– Optimise cutting data – Change drill or adjust machine
One-side wear 	– Drill tip not centred – Poor clamping	– Adjust drill with centre of spindle – Improve drill clamping – Check concentricity

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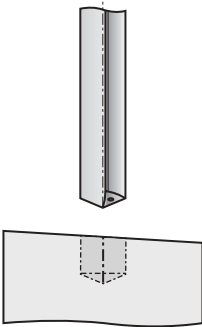
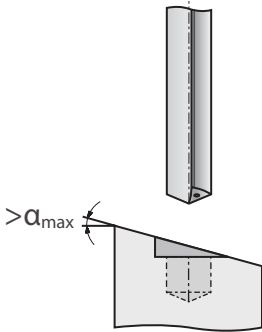
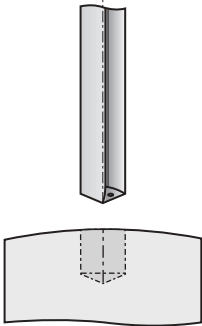
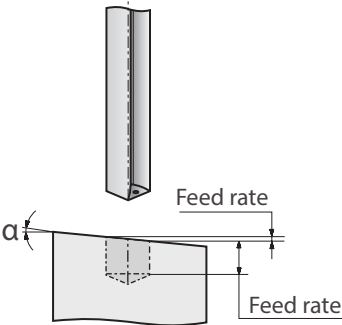
D

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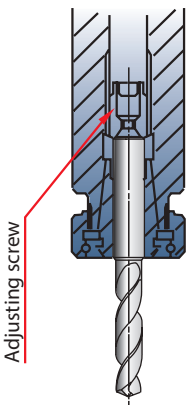
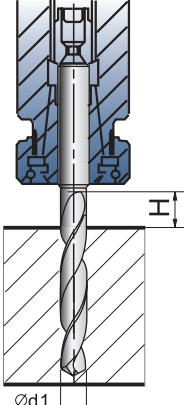
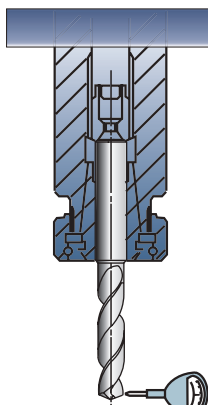
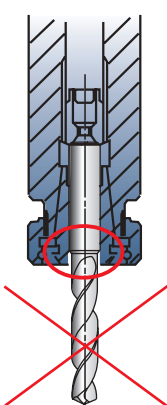
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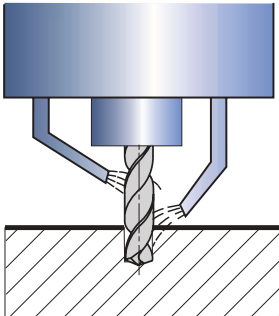
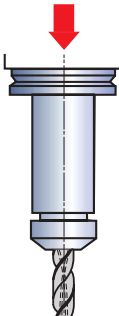
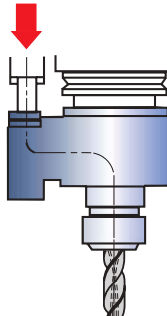
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Trouble shooting – PC series

Machining	Recommendation								
Sloped surface 	Inclined surfaces should be pre-machined (chamfering). 								
Inclined surface 	Reduce feed rate accordingly. <table><tr><th>Inclination angle</th><th>Max. feed rate</th></tr><tr><td>1°</td><td>80%</td></tr><tr><td>2°</td><td>50%</td></tr><tr><td>3°</td><td>30%</td></tr></table>	Inclination angle	Max. feed rate	1°	80%	2°	50%	3°	30%
Inclination angle	Max. feed rate								
1°	80%								
2°	50%								
3°	30%								

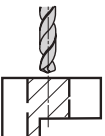
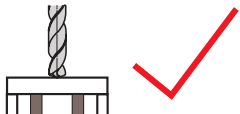
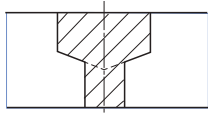
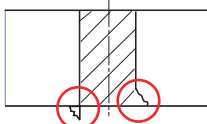
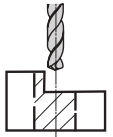
Operation notes

Correct drill clamping	Max. drilling length	Radial run-out	Wrong drill clamping
 Adjusting screw Use precision collets	 $H = 1.5 \times d1$	 Radial run-out < 0.02 mm	 Don't clamp on the drill flutes.

External coolant method	Internal coolant method	
 The coolant liquid should shoot to the end and the centre of the drill as shown in the figure.		 Coolant pressure is about 0.5–1 mpa (coolant pressure is 2–3 mpa when the diameter is less than 5 mm), coolant volume: 1.5–4 L/min

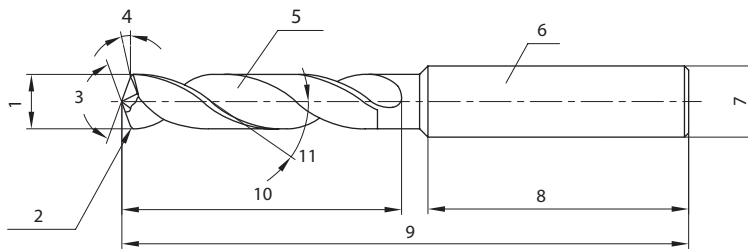
Handling of coolants:

- Small chip particles and dust can cause jamming in the oil hole. A fine mesh filter should be used.
- Dirt and dust particles will adhere to the oil hole and lead to unsmooth coolant flow. Regularly change the coolant. Please ensure proper coolant supply.

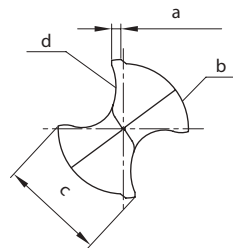
Interrupted cutting	Thin work pieces	Stepped holes	Burrs and work piece chippings on exit
 Reduce the feed rate when drilling interrupted cut.	  If bending occurs, add a supporter.	 - First drill the larger hole, then the smaller hole. - We can offer multiple step and chamfer drills on request.	 - Reduce the feed rate approx. by half when the drill exits. - Use a drill with a different point angle.
 Machine a countersink with an end mill prior to drilling.			

Solid carbide drills

Terminology



1. Drilling diameter
2. Chamfer
3. Point angle
4. Clearance angle
5. Chip pocket
6. Shank
7. Shank diameter
8. Shank length
9. Overall length
10. Flute length
11. Helical angle



- a. Margin width
- b. Body clearance
- c. Land width
- d. Primary cutting edge

Cutting edge type

Shape	(Conical)	(Dual flats)	(Centring tip)
Features	- The flank face is conical and the clearance angel increases toward the centre of drill. - Wide applications, commonly used both for soft and hard materials.	- The flank face is dual flats, to facilitate cutting and initial entering. - Often used for small diameter drills.	- This shape has two-stage point angles for perfect centring capabilities and reduces burrs. - It is the first choice for drilling thin plate.

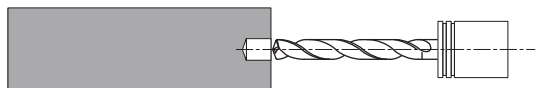
Solid carbide drills

Drill specification and cutting parameters

Chip pocket	The chip pocket ensures that the chips are removed out of the hole during processing.
Helical angle	The helical angle describes the pitch of the flute. It's specified according to the to be machined material. hardened materials small $\leftarrow$ helical angle $\rightarrow$ large tough materials
Cutting edge length or spiral length	The cutting edge length needs to be specified according to the drilling depth, guide bushing length and the whole regrinding length. The larger the helical angle, the lower the stability. Since it greatly influences the tool life, it should be as small as possible. The recommended min. spiral length is the drilling depth plus 1.5 times of the hole diameter.
Point angle	Generally the point angle is 140°, for special applications it should be set differently. tough materials, easy to machine small $\leftarrow$ point angle $\rightarrow$ large hardened materials and high-performance drilling
Core diameter	The core diameter is an important factor and influences the stability and the chip flow. low axial cutting force low stability for easy to machine materials small $\leftarrow$ core diameter $\rightarrow$ large high axial cutting force high stability for hardened materials or cross holes
Chamfer width	The chamfer width influences the guidance and friction of the drill during machining. low friction and bad drill guidance small $\leftarrow$ chamfer width $\rightarrow$ large high friction and good drill guidance
Back taper	The drill diameter is slightly reduced from cutting edge to shank to reduce friction during machining.
Body clearance	The area behind the chamfer width. The body clearance is necessary to reduce friction during machining.

Deep hole drilling

1 Preparation of the pilot hole with 1534SP03C*



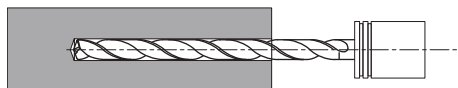
- Point angle of pilot drill must be bigger than SL drill.
- Diameter of pilot drill must be 0.01–0.04 mm bigger than SL drill.
- The pilot hole should be 1–3xD.

2 Entering the pilot hole with SL drill



- Entering the pilot hole with low cutting speed. (V_C : 20–30 m/min)
- Stop 1–3 mm before end of pilot hole. ($V_f = 0$)
- Increase cutting speed up to recommended parameter and then start drilling at feed rate.

3 Manufacturing the deep hole



- Drilling with suitable cutting speed and feed rate.
- In case of cross holes feed rate should be reduced to 0.05 mm/rev..

4 Pulling out the drill



- After reaching the required depth reduce the cutting speed (V_C : 20–30 m/min) and pull out the drill at high feed rate. (V_f : 2000 mm/min)

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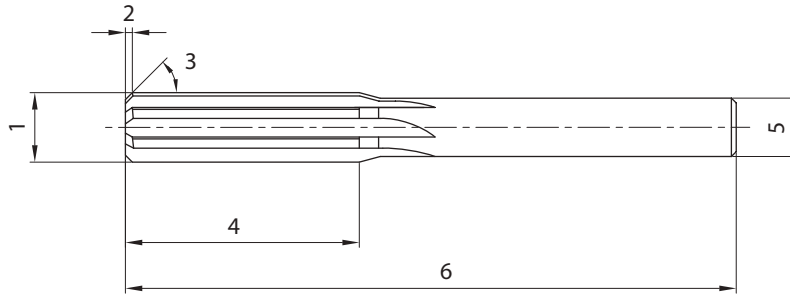
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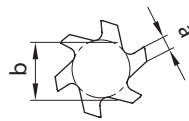
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Solid carbide reamers

Terminology

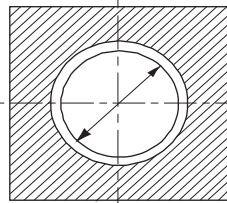


1. Nominal diameter
2. Chamfer length
3. Entry angle
4. Cutting edge length
5. Shank diameter
6. Total length

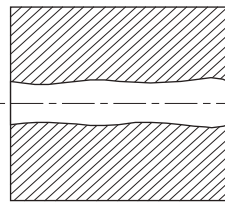


- a. Cutting edge thickness
- b. Core diameter

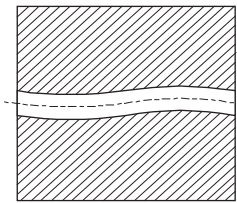
Reaming is semi-finishing and finishing of a previously formed hole within a narrow tolerance for higher surface quality, perfect roundness, cylindricity, etc.. To achieve a precisely reamed hole, the right choice of reamer and reamer diameter is important. In addition to that, the bore tolerance, the material and the machining conditions need to be taken into account. Furthermore the bore quality is strongly influenced by the radial run-out of the cutting tool.



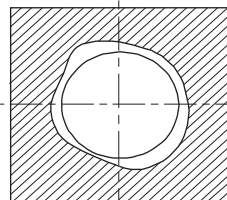
Diameter tolerance/Allowance



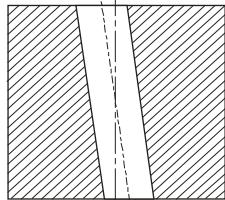
Cylindricity



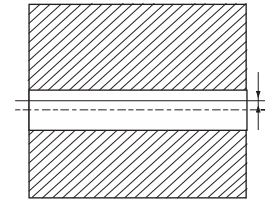
Straightness



Roundness



Vertical deviation



Off centre

Trouble shooting – solid carbide reamers

Problem	Solution
Oversized hole	– Reduce the diameter of the reamer. – Check concentricity of the reamer and hole. – Check the radial run-out of the reamer. – Check the shank of the reamer for scratches. – Select a suitable coolant. – Adjust the cutting parameters.
Hole too small	– Increase the diameter of the reamer. – Reduce the cutting speed. – Reduce allowance. – Regrind or replace the reamer. – Ensure sufficient cooling.
Poor hole roundness and straightness	– Guarantee concentricity of the reamer chamfer. – Reduce overhang. – Check radial run-out after the reamer is clamped. – Adjust concentricity of the reamer and hole. – Check and ensure drill geometry.
Poor surface quality	– Reduce the cutting speed. – Ensure correct reaming allowance. – Check the cutting chamfer length of the reamer for wear and built-up edge. – Ensure stability of the machine, tool holder and reamer. – Chose the reamer according to the application. – Check the hole allowance.
Poor bore quality	– Pull out the reamer in cutting direction. – Reduce the cutting speed. – Use reamers with more teeth. – Check for concentricity and radial run-out. – Improve coolant supply. – Chose the optimal coolant lubrication.
Reamer breakage and thermal damage	– The guide chamfer is insufficient. Check the drill and drilling axis. – Adjust machining allowance. – Ensure sufficient coolant supply. – Adjust the cutting speed and feed rate. – Improve the stability of the machine, the tool holder and the cutting tool. – Change or regrind the cutting tool if the cutter wear is too high.
Damage on reamer shank	– Check clamping sleeve and tool holder for damage.
Short tool life	– Check coolant supply. – Change from straight fluted to helical fluted reamers. – Check all factors affecting machining precision.
Scratched hole surface	– Check the cutting edge for built-up edges and if necessary correct the cutting data. – Improve clamping of the workpiece.
Trumpet-shaped entry hole	– Improve clamping of the workpiece. – Check radial run-out of the clamped reamer. – The centre of the reamer may not be aligned with the centre of the hole. Adjust concentricity.

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Solid carbide thread formers

What is thread forming?

The material fibres aren't severed but compressed at the base of the thread. This is why no material is lost unlike when thread cutting.

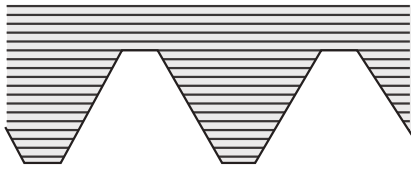
Advantages of thread forming:

- The thread is formed much more precisely.
- The thread is more resilient.
- The threads have a very smooth surface.
- Higher rotation speeds and feed rates possible than in thread cutting.
- Longer tool life increases the productivity.

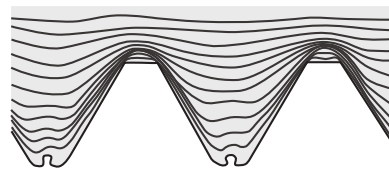
Disadvantages of thread forming:

- Higher requirements on the hole tolerance.
- Can't be used as hand tool.
- Greater heat build-up than in thread drilling.
- Limited material choice.
- Often the use of a release agent is necessary.

Thread formers should be used in materials with good cold formability. Next to steel, stainless steel and aluminium alloys, these include light metals and light metal alloys with a yield strength of 1200 N/mm². Basically, all long-chipping materials are suitable.



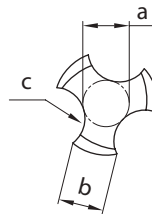
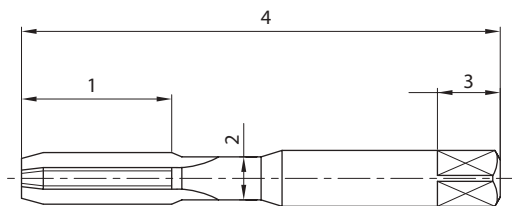
Fibre orientation after thread cutting



Fibre orientation after thread forming

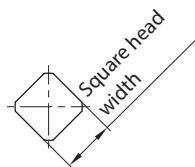
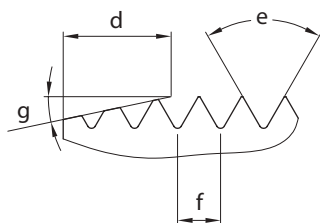
Solid carbide taps

Terminology



1. Thread length
2. Neck diameter
3. Square head length
4. Total length

- a. Core diameter
- b. Cutting edge thickness
- c. Chip pocket



- d. Chamfer length
- e. Thread profile angle
- f. Pitch
- g. Chamfer angle

Chamfer and thread profile

Chip space and application

Chip space type	Features	Application
 Helical flute tap	– Helical flute – No chips inside the hole – Good entering performance – Simple centring	– For long-chipping materials – Suitable for blind holes – Usage in holes with groove
 Straight flute tap	– Straight flute – Stable cutting edge – Easy regrinding	– For hard machining – For short-chipping materials – For through holes and blind holes – For wear material

A

Drehen

B

Fräsen

C

Bohren

D

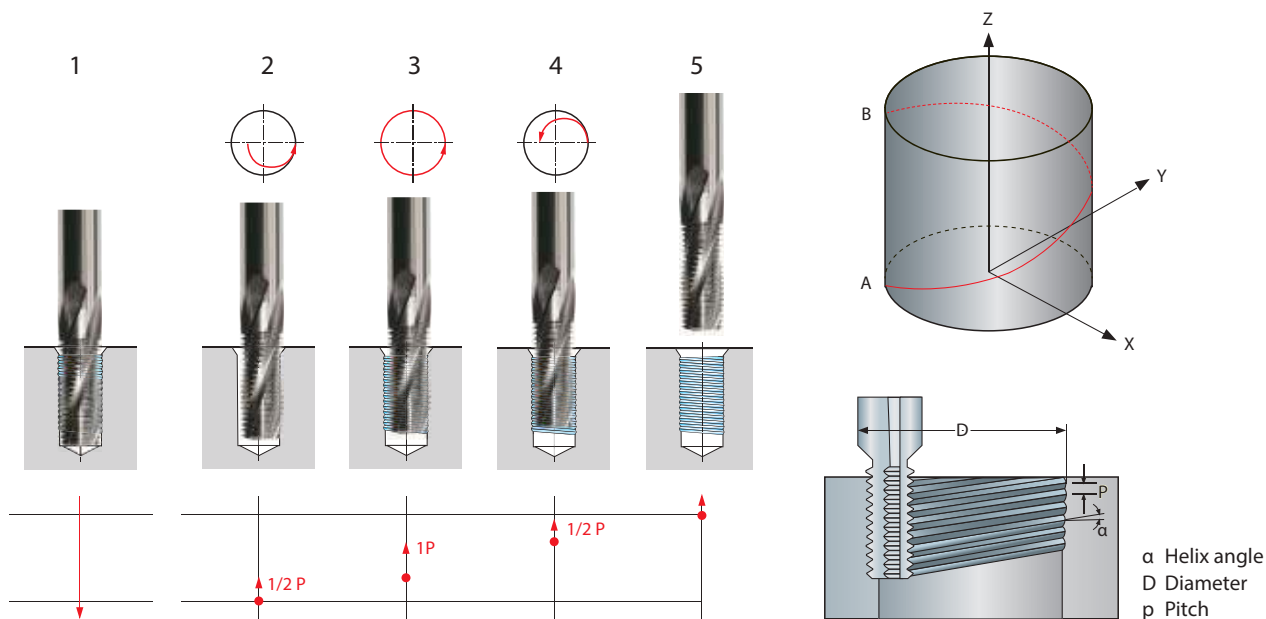
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Solid carbide thread milling cutters

Solid carbide thread milling cutters with cylindrical shank – example



Nonstandard – solid carbide drills

Name/Company:	 Wanheimer Str. 57 40472 Düsseldorf, Germany Fax: +49-(0)211-989240-111 E-mail: technik@zccct-europe.com	 Scan for PDF
Address:		
Tel.:		
Fax:		
E-mail:		

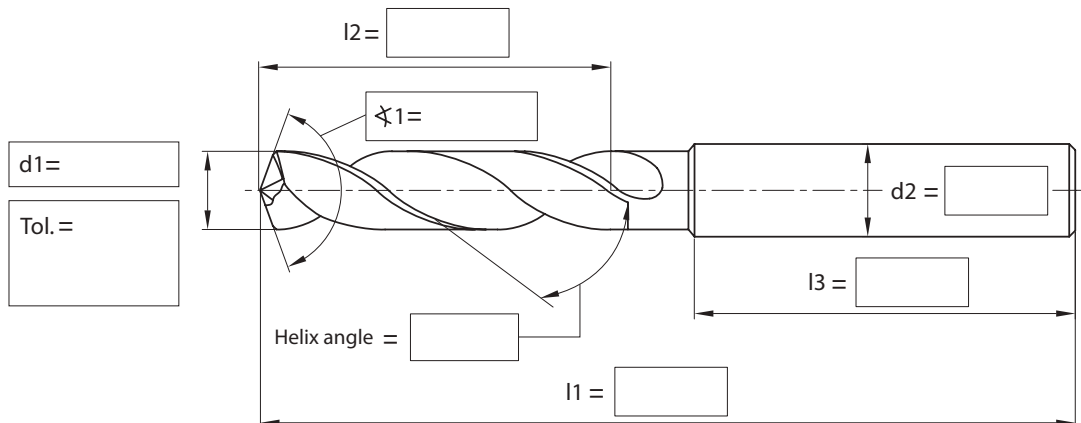
Material	
Material	
Tensile strength (N/mm ²)	
Hardness	

Twist drill series		
SU ☐	SH ☐	SL ☐
SUK ☐		SLK ☐
ST ☐	SC ☐	PA ☐

Cooling	
 External ☐	
 Internal ☐	

Tool holder type		
DIN6535		
 Form HA ☐	 Form HB ☐	 Form HE ☐

Coating	
Yes ☐	No ☐



Technical drawing of a twist drill with the following dimensions and labels:

- $d1 =$ []
- Tol. = []
- $l2 =$ []
- $\phi 1 =$ []
- Helix angle = []
- $l1 =$ []
- $d2 =$ []
- $l3 =$ []

Remarks:	
Order quantity:	Expected delivery date:
Date:	Confirmation:

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Nonstandard – solid carbide step drills

Name/Company:

Address:

Tel.:

Fax:

E-mail:



Wanheimer Str. 57
40472 Düsseldorf, Germany

Fax: +49-(0)211-989240-111

E-mail: technik@zccct-europe.com



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Material

Material	
Tensile strength (N/mm ²)	
Hardness	

Machining information

 Chamfering ☐	 Stepped hole ☐
--	--

Cooling

External	☐
Internal	☐

Tool holder type

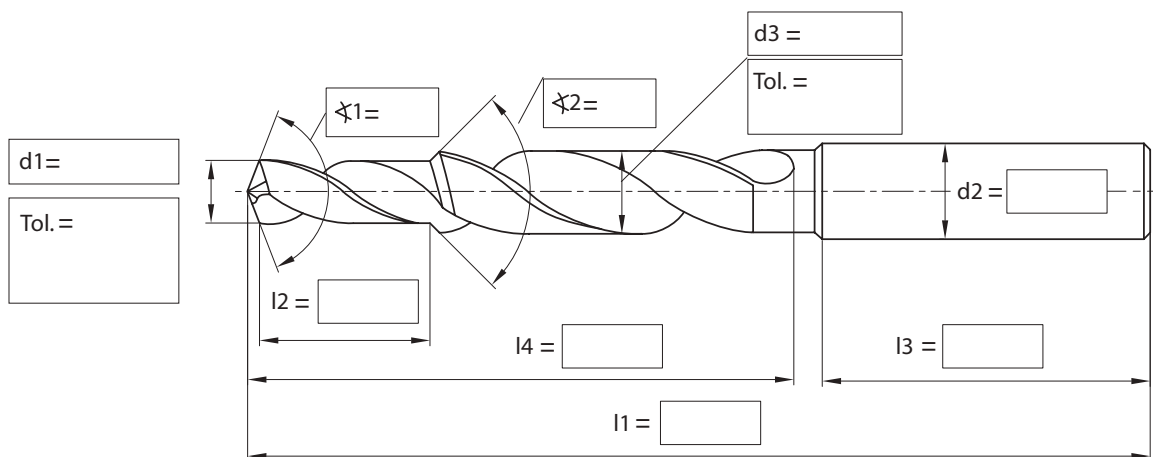
DIN6535		
 Form HA ☐	 Form HB ☐	 Form HE ☐

Twist drill series

SU	☐	ST	☐
SUK	☐		
PC	☐		

Coating

Yes	☐
No	☐



Remarks:

Order quantity:

Expected delivery date:

Date:

Confirmation:

Nonstandard – solid carbide three-lips drills

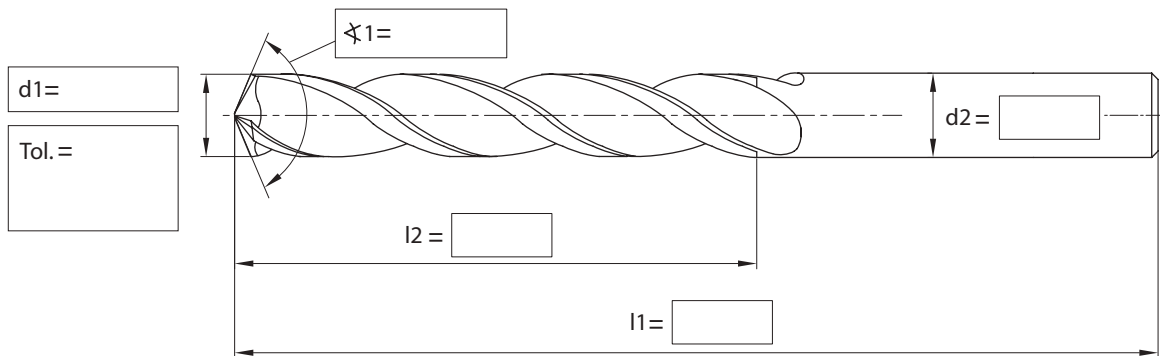
Name/Company: Address: Tel.: Fax: E-mail:	 Wanheimer Str. 57 40472 Düsseldorf, Germany Fax: +49-(0)211-989240-111 E-mail: technik@zccct-europe.com	 Scan for PDF
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Material	
Material	
Tensile strength (N/mm ²)	
Hardness	

Tool holder type		
DIN6535		
 Form HA ☐	 Form HB ☐	 Form HE ☐

Cooling	
 External ☐	
 Internal ☐	

Coating	
Yes ☐	No ☐



Remarks:	
Order quantity:	Desired delivery date:
Date:	Signature:

Nonstandard – solid carbide reamers

Name/Company:

Address:

Tel.:

Fax:

E-mail:



Wanheimer Str. 57
40472 Düsseldorf, Germany

Fax: +49-(0)211-989240-111

E-mail: technik@zccct-europe.com



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Material	
Material	
Tensile strength (N/mm ²)	
Hardness	

Coating	
Yes	☐
No	☐

Cooling	
External	☐
Internal	☐

Helix angle	
Right	☐
Straight	☐
Left	☐

Machining information	
Through hole ☐	Blind hole ☐

d1 =		d2 =
Tol. =		
	l2 =	l3 =
	l1 =	

Remarks:

Order quantity:

Desired delivery date:

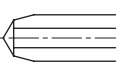
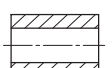
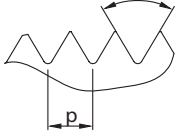
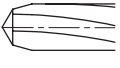
Date:

Signature:

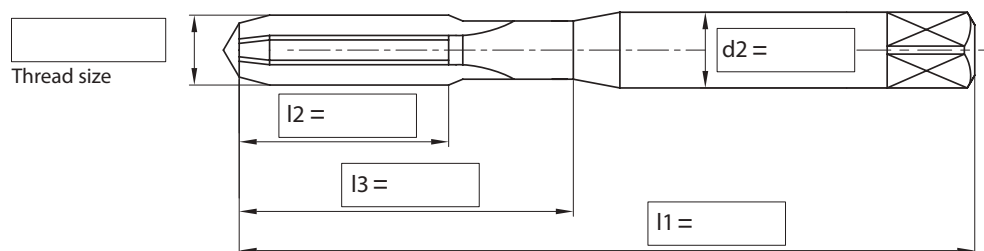
Nonstandard – solid carbide taps and thread formers

Name/Company:	 Wanheimer Str. 57 40472 Düsseldorf, Germany Fax: +49-(0)211-989240-111 E-mail: technik@zccct-europe.com	 Scan for PDF
Address:		
Tel.:		
Fax:		
E-mail:		

Material		Coating	Cooling
Material		Yes ☐	External ☐
Tensile strength (N/mm ²)		No ☐	Internal ☐
Hardness			

Helix angle	Machining information		Thread profile
 Straight ☐	 Through hole ☐	 Blind hole ☐	Thread angle = 60°  Pitch p =
 Right ☐			

Tool type	
Tap	☐
Thread former	☐



Remarks:	
Order quantity:	Desired delivery date:
Date:	Signature:

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Torque for screw	D24



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Comparison table materials

ISO	Country and standard											
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
P	Alloy steel											
	15	1015	1.0401	C15	080M15	-	1350	CC12	C15C16	F.111	-	-
	20	1020	1.0402	C22	050A20	2C	1450	CC20	C20C21	F.112	-	20
	35	1035	1.0501	C35	060A35	-	1550	CC35	C35	F.113	-	35
	45	1045	1.0503	C45	080M40	-	1650	CC45	C45	F.114	-	45
	55	1055	1.0535	C55	070M55	-	1655	-	C55	-	-	55
	60	1060	1.0601	C60	080A62	43D	-	CC55	C60	-	-	60
	Y15	1213	1.7015	9SMn28	230M07	-	1912	S250	CF9SMn28	11SMn28	SUM22	15Ch
	-	12L13	1.0718	9SMnPb28	-	-	1914	S250Pb	CF9MnPb28	11SMnPb28	SUM22L	-
	-	-	1.0722	10SPb20	-	-	-	10PbF2	CF10Pb20	10SPb20	-	-
	-	1140	1.0726	35S20	212M36	8M	1957	35MF4	-	F210G	-	-
	Y13	1215	1.0736	9SMn36	240M07	1B	-	S300	CF9SMn36	12SMn35	-	-
	-	12L14	1.0737	9SMnPb36	-	-	1926	S300Pb	CF9SMnPb36	12SMnP35	-	-
	55Si2Mn	9255	1.0904	55Si9	250A53	45	2085	55S7	55Si8	56Si7	-	-
	-	9262	1.0961	60SiCr7	-	-	-	60SC7	60SiCr8	60SiCr8	-	-
	15	1015	1.1141	Ck15	080M15	32C	1370	XC12	C16	C15K	S15C	15
	40Mn	1039	1.1157	40Mn4	150M36	15	-	35M5	-	-	-	40G
	25	1025	1.1158	Ck25	-	-	-	-	-	-	S25C	25
	35Mn2	1335	1.1167	36Mn5	-	-	2120	40Mn5	-	36Mn5	SMn438(H)	35G2,35GL
	30Mn	1330	1.1170	28Mn6	150M28	14A	-	20M5	C28Mn	-	SCMn1	30G
	35Mn	1035	1.1183	Cf35	060A35	-	1572	XS38TS	C36	-	S35C	-
	Ck45	1045	1.1191	45	080M46	-	1672	XC42	C45	C45K	S45C	-
	55	1055	1.1203	Ck55	070M55	-	-	XC45	C50	C55K	S55C	55
	50	1050	1.1213	Cf53	060A52	-	1674	XC48TS	C53	-	S50C	-
	60Mn	1060	1.1221	Ck60	080A62	43D	1678	XC60	C60	-	S58C	60,60G
	-	1095	1.1274	Ck101	060A96	-	1870	-	-	-	SUP4	-
	-	-	1.3401	X120Mn12	Z120M12	-	-	X120M12	XG120Mn12	X120Mn12	SCMnH/1	110G13L
	Gr15;45Gr	52100	1.3505	100Cr6	534A99	31	2258	100C6	100Cr6	F.131	SUJ2	SchCh 15
	-	ASTM A204Gr.A	1.5415	15Mo3	1501-240	-	2912	15D3	16Mo3KW	16Mo3	-	-
	-	4520	1.5426	16Mo5	1503-245-420	-	-	-	16Mo5	16Mo5	-	-
	-	ASTM A350LF5	1.5622	14Ni6	-	-	-	16N6	14Ni6	15Ni6	-	-
	-	ASTM A353	1.5662	X8Ni9	1501-509;510	-	-	-	X10Ni9	XBNI09	-	-

Comparison table materials

ISO	Country and standard											
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
P	Alloy steel											
	-	2515	1.5680	12Ni19	-	-	-	Z18N5	-	-	-	-
	-	3135	1.5710	36NiCr6	640A35	111A	-	35NC6	-	-	SNC236	-
	-	3415	1.5732	14NiCr10	-	-	-	14NC11	16NiCr11	15NiCr11	SNC415(H)	-
	-	3415 3310	1.5752	14NiCr14	655M13 655A12	36A	-	12NC15	-	-	SNC815(H)	-
	-	9840	1.6511	36CrNiMo4	816M40	110	-	40NCD3	38CrNiMo4(KB)	35CrNiMo4	-	40 ChN2MA
	-	8620	1.6523	21NiCrMo2	850M20	362	2503	20NCD2	20NiCrMo2	20NiCrMo2	SNCCM220(H)	-
	-	8740	1.6546	40NiCrMo2	311-Type7	-	-	-	40NiCrMo2(KB)	40NiCrMo2	SNC240	38ChGNM
	40CrNiMoA	4340	1.6582	34CrNiMo6	817M40	24	2541	35NCD6	35CrNiMo6(KB)	-	-	38Ch2N2MA
	-	-	1.6587	17CrNiMo6	820A16	-	-	18NCD6	-	14CrNiMo13	-	-
	15Cr	5015	1.7015	15Cr3	523M15	-	-	12C3	-	-	SCr415(H)	15Ch
	35Cr	5132	1.7033	34Cr4	530A32	18B	-	32C4	34Cr4(KB)	35Cr4	SCr430(H)	35Ch
	40Cr	5140	1.7035	41Cr4	530M40	18	-	42C4	41Cr4	42Cr4	SCr440(H)	40Ch
	40Cr	5140	1.7045	42Cr4	-	-	2245	-	-	42Cr4	SCr440	40Ch
	18CrMn	5115	1.7131	16MnCr15	(527M20)	-	2511	16MC5	16MnCr15	16MnCr15	-	18ChG
	20CrMn	5155	1.7176	55Cr3	527A60	48	-	55C3	-	-	SUP9(A)	50ChGA
	30CrMn	4130	1.7218	25CrMo4	1717CDS110	-	2225	25CD4	25CrMo4(KB)	55Cr3	SCM420; SCM430	30ChM
	35CrMo	4137;4135	1.7220	34CrMo4	708A37	19B	2234	35CD4	35CrMo4	34CrMo4	SCM432; SCRRM3	AS38ChGM
	40CrMoA	4140;4142	1.7223	41CrMo4	708M40	19A	2244	42CD4TS	41CrMo4	41CrMo4	SCM440	40 ChFA
	42CrMo 42CrMnMo	4140	1.7225	42CrMo4	708M40	19A	2244	42CD4	42CrMo4	42CrMo4	SCM440(H)	-
	-	-	1.7262	15CrMo5	-	-	2216	12CD4	-	12CrMo4	SCM415(H)	-
	-	ASTM A182 F11;F12	1.7335	13CrMo44	1501- 620Gr.27	-	-	15CD3.5; 15CD4.5	14CrMo44	14CrMo45	-	12ChM, 15ChM
	-	-	1.7361	32CrMo12	722M24	40B	2240	30CD12	32CrMo12	F.124.A	-	-
	-	ASTM A182 F.22	1.7380	10CrMo910	1501- 622Gr.31;45	-	2218	12CD9;10	12CrMo9,10	TU.H	-	-
	-	-	1.7715	14MoV63	1503-660-440	-	-	-	-	13MoCrV6	-	-
	50CrVA	6150	1.8159	50CrV4	735A50	47	2230	50CV4	50CrV4	51CrV4	SUP10	50ChGFA
	-	-	1.8509	41CrAlMo7	905M39	41B	2940	40CAD6,12	41CrAlMo7	41CrAlMo7	-	38ChMJuA
	-	-	1.8523	39CrMoV139	897M39	40C	-	-	36CrMoV12	-	-	-

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	GB	AISI/SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
P	Alloy steel											
	T10	W.110	1.1545	C105W1	-	-	1880	Y ₁ 105	C98KU C100KU	F.515 F.516	-	U10A
	T12A	W.112	1.1663	C125W	-	-	-	Y ₂ 120	C120KU	(C120)	SK2	U13
	CrV;9SiCr	L3	1.2067	100Cr6	BL3	-	-	Y100C6	-	100Cr6	-	-
	Cr12	D3	1.2080	X210Cr12	BD3	-	-	Z200Cr12	X210Cr13KU X250Cr12KU	X210Cr12	SKD1	Ch12
	4Cr5MoVSi	H13	1.2344	X40CrMoV5 1	BH13	-	2242	Z40CDV5	X35CrMoV05KU X40CrMoV51KU	X40CrMoV5	SKD61	4Ch5MF15
	Cr6WV	A2	1.2363	X100CrMoV5 1	BA2	-	2260	Z100CDV5	X100CrMoV51KU	X100CrMoV5	SKD12	-
	CrWMo	-	1.2419	105WCr6	-	-	2140	105WC13	10WCr6 107WCr5KU	105WCr5	SKS31 SKS2 SKS3	ChWG
	Cr12W	-	1.2436	X210CrW12	-	-	2312	-	X215CrW12 1KU	X210CrW12	SKD2	-
	5CrNiMo	S1	1.2542	45WCrV7	BS1	-	2710	-	45WCrV8KU	45WCrSi8	-	-
	3Cr2W8V	H21	1.2581	X30WCrV9 3 X30WCrV93KU	BH21	-	-	Z30WCV9	X28W09KU X30WCrV9 3KU	X30WCrV9	SKD5	3Ch2W8F
	Cr12MoV	-	1.2601	X165CrMoV 12	-	-	2310	-	X165CrMoW12KU	X160CrMoV12	SKD11	-
	5CrNiMo	L6	1.2713	55NiCrMoV6	-	-	-	55NCDV7	-	F.250.S	SKT4	5ChNM
	V	W210	1.2833	100V1	BW2	-	-	Y ₁ 105V	-	-	SKS43	-
	W6Mo5Cr4V2Co5	-	1.3243	S6-5-2-5	-	-	2723	Z85WDCV	HS6-5-2-5	HS6-5-2-5	SKH55	R6M5K5
	W18Cr4VCo5	T4	1.3255	S18-1-2-5	BT4	-	-	Z80WKC 10-05-04-01	X78WCo1805KU	HS18-1-1-5	SKH3	-
	W6Mo5Cr4V2	M2	1.3343	S6-5-2	BM2	-	2722	Z85WDCV 06-05-04-02	X82WMo0605KU	HS6-5-2	SKH9	R6M5
	-	M7	1.3348	S2-9-2	-	-Z-	2782	Z100WCWV 09-02-04-02	HS2-9-2	HS2-9-2	-	-
	W18Cr4V	T1	1.3355	S18-0-1	BT1	-	-	Z80WCV 18-04-01	X75W18KU	HS18-0-1	SKH2	-
	W6Mo5Cr4V3	M3	-	S6-5-3	-	-	-	-	-	-	SKH52	-
	-	M42	-	-	BM42	-	-	-	-	-	SKH59	-

Comparison table materials

ISO	Country and standard						Main application
	China	USA	Germany	Japan	Daido Steel Co., Ltd (Japan)	Russia	
	GB	AISI/SAE	DIN	JIS	DAIDO	GOST	
P	Plastic die steel						
	-	P20 mod.		-	PX5N		For mass production of large mirror dies. Automobile tail light, front fender of car, video camera, household electrical appliances etc
	-	-		-	NAK55		High precision mirror die. Video camera, music disc, Cosmetic Containers, transparent covers, transparent films etc
	-	-		-	NAK80		High precision mirror die. Video camera, music disc, Cosmetic Containers, transparent covers, transparent films etc
	3Cr13	420 mod.		SUS420J2 mod.	S-STAR		For ultra-mirror corrosion resistant precise dies. Accessories of camera, CD, lens, watch case.
	Cold-working die steel						
	-	02	-	SKS93	YK30		Stamping die, gauge calipers, paper cutter, auxiliary tools
	9CrWMn	01 mod.	-	SKS3 mod.	GOA		Blanking die, gauge calipers, drawing die, taps, Perforated punch.
	Cr12MoV	D2	X165CrMoV12	SKD11	DC11		Blanking die, cold forming die, cold drawing die, forming roller, punch
	-	D2 mod.	-	SKD11 mod.	DC53		Blanking die, cold forming die, cold drawing die, forming roll, punch
	Hot-working die steel						
	4Cr5MoSiV1	H13	X40CrMoV51	SKD61	DHA1		Aluminum-compression die, connecting parts of compression die, hot stamping die, hot extrusion die, thermal shear cutting blade
	-	-	-	-	DH21		Long life Aluminum compression die
	-	-	-	-	DH31-S		Compression die
	-	-	-	-	DH2F		Compression die, plastic die

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	GB	AISI/ SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
M	Stainless steel											
	0Cr13; 1Cr12	403	1.4000	X6Cr13	403S17	-	2301	Z6C13	X6Cr13	F.3110	SUS403	08Ch13
	-	-	1.4001	X7Cr14	-	-	-	-	-	F.8401	-	-
	1Cr13	410	1.4006	X10Cr13	410S21	56A	2302	Z10C14	X12Cr13	F.3401	SUS410	12Ch13
	1Cr17	430	1.4016	X6Cr17	430S15	60	220	Z8C17	X8Cr17	F.3113	SUS430	12Ch17
	2Cr13	410	1.4021	X20Cr13	562	56B; 56C	-	Z20C13	X20C13	F.3401	SUS410	20Ch13
	-	-	1.4027	G-X20Cr14	420C29	56B	-	Z20C13M	-	-	SCS2	20Ch13L
	4Cr13	-	1.4034	X46Cr13	420S45	56D	2304	Z40CM Z38C13M	X40Cr14	F.3405	SUS420J2	40Ch13
	1Cr17Ni2	431	1.4057	X20CrNi172	431S29	57	2321	Z15CNi6.02	X16CNi16	F.3427	SUS431	20Ch17N2
	Y1Cr17	430F	1.4104	X12CrMoS17	-	-	2383	Z10CF17	X10CrS17	F.3117	SUS430F	-
	1Cr17Mo	434	1.4113	X6CrMo171	434S17	-	2325	Z8CD17.01	X8CrMo17	-	SUS434	-
	-	-	1.4313	X5CrNi134	425C11	-	-	Z4CND13.4M	-	-	SCS5	-
	-	-	1.4408	G-X6CrNiMo1810	316C16	-	-	-	-	F.8414	SCS14	07Ch18N10G2S2M2L
	4Cr9Si2	HW3	1.4718	X45CrSi93	401S45	52	-	Z45CS9	X45CrSi8	F.322	SUH1	40Ch9S2
	0Cr13Al	405	1.4724	X10CrAl13	403S17	-	-	Z10C13	X10CrAl12	F.311	SUS405	10Ch13SJ _u
	Cr17	430	1.4742	X10CrAl18	430S15	60	-	Z10CAS18	X8Cr17	F.3113	SUS430	15Ch18SJ _u
	8Cr20Si2Ni	HNV6	1.4757	X80CrNiSi20	443S65	59	-	Z80CSN20.02	X80CrSiNi20	F.320V	SUH4	-
	2Cr25N	446	1.4762	X10CrAl24	-	-	2322	Z10CAS24	X16Cr26	-	SUH446	-
	Austenitic stainless steel											
	0Cr18Ni9	304	1.4301	X5CrNi1810	304S15	58E	2332	Z6CN18.09	X5CrNi1810	F.3551; F.3541; F.3504	SUS304	08Ch18N10
	1Cr18Ni9MoZr	303	1.4305	X10CrNiS189	303S21	58M	2346	Z10CNF18.09	X10CrNiS18.09	F.3508	SUS303	-
	0Cr19Ni10	304L	1.4306	X2CrNi1911	304S12	-	2352	Z2CN18.10	X2CrNi18.11	F.3503	SCS19	03Ch18N11
	-	-	1.4308	G-X6CrNi189	304C15	-	-	Z6CN18.10M	-	-	SCS13	07Ch18N9L
	Cr17Ni7	301	1.4310	X12CrNi177	-	-	2331	Z12CN17.07	X12CrNi1707	F.3517	SUS301	-
	-	304LN	1.4311	X2CrNi1810	304S62	-	2371	Z2CN18.10	-	-	SUS304LN	-
	0Cr19Ni9	304	1.4350	X5CrNi189	304S31	58E	-	Z6CN18.09	X5CrNi1810	-	SUS304	-
	0Cr17Ni11Mo2	316	1.4401	X5CrNiMo1712	316S16	Z6CND17.11	2347	1.4401	X5CrNiMo1712	F.3543	SUS316	-
	00Cr17Ni13Mo2	316LN	1.4429	X2CrNiMo17133	-	-	2375	Z2CND17.13	-	-	SUS316LN	-
	0Cr27Ni12Mo3	316L	1.4435	X2CrNiMo18143	316S12	-	2353	Z2CDN17.13	X2CrNiMo1713	-	SCS16,	03Ch17N14M2
	00Cr19Ni13Mo3	317L	1.4438	X2CrNiMo17133	317S12	-	2367	Z2CND19.15	X2CrNiMo18.16	-	SUS317L	-
	-	329L	1.4460	X8CrNiMo275	-	-	2324	-	-	-	SUS329L; SCH11; SCS11	-
	1Cr18Ni9Ti	321	1.4541	X6CrNiTi1810	2337	321S12	58B	Z6CNT18.10	X6CrNiTi1811	F.3553	SUS321	12Ch18N10T
	1Cr18Ni11Nb	347	1.4550	X6CrNiNb1810	347S17	58F	2338	Z6CNNb18.1	X6CrNiTi1811	F.3552	SUS347	08Ch18N12B
	Cr18Ni12Mo2Ti	316Ti	1.4571	X6CrNiMoTi17122	320S17	58J	2350	Z6NDT17.12	X6CrNiMoTi17	F.3535	-	10Ch17N13M2T

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ISO	Country and standard											
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
M	Austenitic stainless steel											
	-	-	1.4581	G-X5CrNiMoNb1810	318C7	-	-	Z4CNDNb1812M	XG8CrNiMo18	-	SCS22	-
	Cr17Ni12Mo3Nb	318	1.4583	X10CrNiMoNb1812	-	-	-	Z6CNDNb1713B	X6CrNiMoTiNb17	-	-	-
	1Cr23Ni13	309	1.4828	X15CrNiSi2012	309S24	-	-	Z15CNS20.1	-	-	SUH309	20Ch20N14S2
	0Cr25Ni20	310S	1.4845	X12CrNi2521	310S24	-	2361	Z12CN2520	X6CrNi2520	F.331	SUH310	20Ch23N18
	Cr15Ni36W3Ti	330	1.4864	X12NiCrSi3616	-	-	-	Z12CNS35.1	-	-	SUH330	-
	-	-	1.4865	G-X40NiCrSi3818	330C11	-	-	-	XG50NiCr3919	-	SCH15	-
	5Cr2Mn9Ni4N	EV8	1.4871	X53CrMnNiN219	349S54; 321S12	- 58B	-	Z52CMN21.0	X53CrMnNiN219	-	SUH35	55Ch20G9AN4
	1Cr18Ni9Ti	321	1.4878	X12CrNiTi189	321S320	58C	-	Z6CNT18.12	X6CrNiTi1811	F.3523	SU321	09Ch18N10T

ISO	Country and standard									
	China	USA	Germany	Great Britain	Sweden	France	Italy	Spain	Japan	Russia
K	Nodular cast iron									
	QT400-18	60-40-18	GGG40	400/17	0717-02	FGS370-17	GS370-17	FGE38-17	FCD400	VC 42-12
	QT450-10	65-45-12	--	420/12	--	FGS400-12	GS400-12	FGE42-12	FCD450	-
	QT500-7	70-50-05	GGG50	500/7	0727-02	FGS500-7	GS500-7	FGE50-7	FCD500	VC 50-2
	QT600-3	80-60-03	GGG60	600/7	0732-03	FGS600-2	GS600-2	FGE60-2	FCD600	VC 60-2
	QT700-2	100-70-03	GGG70	700/2	0737-01	FGS700-2	GS700-2	FGE70-2	FCD700	VC 70-2
	QT800-2	120-90-02	GGG80	800/2	0864-03	FGS800-2	GS800-2	FGE80-2	FCD800	VC 80-2
	QT900-2	--	--	900/2	--	--	--	--	--	-
	Grey cast iron									
	--	NO.60	GG40	--	0140	FGL400	--	--	--	Sc 40
	HT350	NO.50	GG35	350	0135	FGL350	G35	FG35	FC350	Sc 35
	HT300	NO.45	GG30	300	0130	FGL300	G30	FG30	FC300	Sc 30
	HT250	NO.35	GG25	250	0125	FGL250	G25	FG25	FC250	Sc 25
	HT200	NO.30	GG20	200	0120	FGL200	G20	FG20	FC200	Sc 20
	HT150	NO.20	GG15	150	0115	FGL150	G15	FG15	FC150	Sc 15
	HT100	--	--	100	0110	--	G10	--	FC100	-

ISO	Country and standard											
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
H	Hardened materials											
	-	440A	1.4108	X100CrMo03	-	-	2258 08	-	-	-	C4BS	-
	-	610	1.4111	X100CrMoV15	-	-	2534 05	-	-		AC4A	-
	-	0-2	-	X65CrMo14	-	-	2541 06	-	-		AC4A	-

Comparison table materials

ISO	Country and standard											
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
N	Aluminium-based alloys											
	-	SC64D	3.2373	G-AISI9MGWA			4251	A-57G			C4BS	-
	-	DG-AISI12		G-ALMG5	LM5		4252	A-SU12			AC4A	
	-	356.1			LM25		4244				A5052	
	-	A413.0		GD-AISI12			4247				A6061	
	-	A380.1		GD-AISI8Cu3	LM24		4250				A7075	
	-	A413.1		G-AISI12(Cu)	LM20		4260				ADC12	
	-	A413.2		G-AISI12	LM6		4261					
	-	A360.2		G-AISI10Mg(Cu)	LM9		4253					

ISO	Country and standard											
	China	USA	Germany		Great Britain		Sweden	France	Italy	Spain	Japan	Russia
	GB	AISI/SAE	W.-nr	DIN	BS	EN	SS	AFNOR	UNI	UNE	JIS	GOST
S	Nickel based alloys											
	-	5391	LW2 4670	S-NiCr13A16MoNb	mar-46	-	-	NC12AD	-	-		
	-	AMS 5397	LW2 4674	NiCo15Cr10MoAlTi	-	-	-	-	-	-		
	-	5660	LW2.4662	NiFe35Cr14MoTi	-	-	-	ZSNCDT42	-	-		
	-	5383	LW2.4668	NiCr19Fe19NbMo	HR8	-	-	NC19eNB	-	-		
	-	-	2.4631	NiCr20TiAk	Hr401.601	-	-	NC20TA	-	-		-
	-	AMS 5399	2.4973	NiCr19Co11MoTi	-	-	-	NC19KDT	-	-		-
	-	AMS 5544	LW2.4668	NiCr19Fe19NbMo	-	-	-	NC20K14	-	-		
	-	5390A	2.4603	-	-	-	-	NC22FeD	-	-		-
	-	5666	2.4856	NiCr22Mo9Nb	-	-	-	NC22FeDNB	-	-		-
	-	-	2.4630	NiCr20Ti	HR5.2034	-	-	NC20T	-	-		-
	-	4676	2.4375	NiCu30AL3Ti	3072-76	-	-	-	-	-		-
	Cobalt based alloys											
	-	5537C AMS		CoCr20W15Ni	-	-	-	KC20WN	-	-		
	-	5772	LW2.4964	CoCr20W14Ni				KC22WN				
	Titanium alloys											
	-	UNS R54520	3.7115.1	TiAl5Sn2.5	TA14/17	-	-	T-A5E	-	-		
	-							UNS R56400				
	-	-	3.7165.1	TiAl6V4	TA10-13/ TA28		-	UNS R56401	T-A6V	-	-	
	-			TiAl5V5Mo5Cr3								
	-	-	3.7185	TiAl4Mo4Sn4Si0.5	-	-	-	-	-	-		

Comparison table hardness and tensile strength

Hardness				Tensile strength N/mm ²	Hardness				Tensile strength N/mm ²
Rockwell Hardness		Vickers Hardness	Brinell Hardness		Rockwell Hardness		Vickers Hardness	Brinell Hardness	
HRC	HRA	HV	HB		HRC	HRA	HV	HB	
70.0	86.6	1037	—	—	51.0	76.3	525	501	1780
69.5	86.3	1017	—	—	50.5	76.1	517	494	1750
69.0	86.1	997	—	—	50.0	75.8	509	488	1720
68.5	85.8	978	—	—	49.5	75.5	501	481	1690
68.0	85.5	959	—	—	49.0	75.3	493	474	1660
67.5	85.2	941	—	—	48.5	75.0	485	468	1630
67.0	85.0	923	—	—	48.0	74.7	478	461	1605
66.5	84.7	906	—	—	47.5	74.5	470	455	1575
66.0	84.4	889	—	—	47.0	74.2	463	449	1550
65.5	84.1	872	—	—	46.5	73.9	456	442	1525
65.0	83.9	856	—	—	46.0	73.7	449	436	1500
64.5	83.6	840	—	—	45.5	73.4	443	430	1475
64.0	83.3	825	—	—	45.0	73.2	436	424	1450
63.5	83.1	810	—	—	44.5	72.9	429	418	1430
63.0	82.8	795	—	—	44.0	72.6	423	413	1405
62.5	82.5	780	—	—	43.5	72.4	417	407	1385
62.0	82.2	766	—	—	43.0	72.1	411	401	1360
61.5	82.0	752	—	—	42.5	71.8	405	396	1340
61.0	81.7	739	—	—	42.0	71.6	399	391	1320
60.5	81.4	726	—	—	41.5	71.3	393	385	1300
60.0	81.2	713	—	2555	41.0	71.1	388	380	1280
59.5	80.9	700	—	2500	40.0	70.8	382	375	1260
59.0	80.6	688	—	2450	40.0	70.5	377	370	1245
58.5	80.3	676	—	2395	39.5	70.3	372	365	1225
58.0	80.1	664	—	2345	39.0	70.0	367	360	1210
57.5	79.8	653	—	2295	38.5	—	362	355	1190
57.0	79.5	642	—	2250	38.0	—	357	350	1175
56.5	79.3	631	—	2205	37.5	—	352	345	1160
56.0	79.0	620	—	2160	37.0	—	347	341	1140
55.5	78.7	609	—	2115	36.5	—	342	336	1125
55.0	78.5	599	—	2075	36.0	—	338	332	1110
54.5	78.2	589	—	2035	35.5	—	333	327	1095
54.0	77.9	579	—	1995	35.0	—	329	323	1080
53.5	77.7	570	—	1955	34.5	—	324	318	1065
53.0	77.4	561	—	1920	34.0	—	320	314	1050
52.5	77.1	551	—	1885	33.5	—	316	310	1035
52.0	76.9	543	—	1850	33.0	—	312	306	1020
51.5	76.6	534	—	1815	32.5	—	308	302	1010

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Comparison table hardness and tensile strength

Hardness				Tensile strength N/mm ²	Hardness				Tensile strength N/mm ²
Rockwell Hardness		Vickers Hardness	Brinell Hardness		Rockwell Hardness		Vickers Hardness	Brinell Hardness	
HRC	HRA	HV	HB		HRC	HRA	HV	HB	
32.0	—	304	298	995	24.0	—	249	245	820
31.5	—	300	294	980	23.5	—	246	242	810
31.0	—	296	291	970	23.0	—	243	240	800
30.5	—	292	287	960	22.5	—	240	237	790
30.0	—	289	283	950	22.0	—	237	234	785
29.5	—	285	280	935	21.5	—	234	232	775
29.0	—	281	276	920	21.0	—	231	229	765
28.5	—	278	273	910	20.5	—	229	227	760
28.0	—	274	269	900	20.0	—	226	225	750
27.5	—	271	266	890	19.5	—	223	222	745
27.0	—	268	263	880	19.0	—	221	220	735
26.5	—	264	260	870	18.5	—	218	218	730
26.0	—	261	257	860	18.0	—	216	216	725
25.5	—	258	254	850	17.5	—	214	214	715
25.0	—	255	251	835	17.0	—	211	211	710
24.5	—	252	248	830					

Note: The conversion values for steel in the table are commonly applicable for the steels with carbon from low to high.

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Conversion table chip breakers – turning

Comparison table for turning inserts chip breaker																									
ISO	Application	ZCC-CT		Sandvik		Seco		Kennametal		ISCAR		Walter		Mitsubishi		Sumitomo		Tungaloy		Kyocera		Korloy		Ingersoll Tague Tec	
		Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos
P	Wiper-finishing	WG		WF WL	WF WK	W-MF2	W-F1	FW MW	FW MW	WF		NF	PF	SW	FW	NLU-W	NLU-W	ASW		WP	VW LW		WS		
	Finishing	DF EF	SF HF	PF QF	PF UF 23	FF1 MF1	FF1 F1	FF FN	11 UF LF	SF		NF3 NS6	PF4 PF5	FH FS	FJ FV	NSE NSU NLU NFA NFL	NLU NFP NFK	TFTS 17	PF 01	DP GP VF	VG VF VL	VF	FG FC VF	FA SA FG	
	Semi-finishing	DM EM	HM	PM QM	PM UM	MF2	F2	FN	MF	NF TF SM	14 16 17 19	NS6	P55	SH SA MV	SW SV MV	NSX	NSU NSC NSK	TSTM AS	PS	HQ CQ CJ	VQ VC VB	HMP	WT ML	WT	
	Medium machining to light roughing	DM PM	HR	PM QM	PR UR	M3 MF3	F2	MN	MF	GN PP NR	17 19	NM4 NM6	PM5	MV MZ MA	MY MW	NGE NGU NUX	NMU NSF	TM DM	PM	GS CS HS PS	HQ XQ GK G	VM	C25	PC MC MT MG MF	PC MT PMR
	Wiper-medium			WR WM	WM	W-M3 W-R4 W-R7	W-F2	MW RW	MW	WG		NM	PM	MW		NGU-W				WQ					
M	Roughing	DR		PR QR 31		M5 MRS MR7		RP UN RN		TNM GN	19	NM9		GH MAT MT		NMU NMX		TH TR TU		PT GT HT	HR		RT		
	Single side roughing	HDR 31HPR DR LR		HR QR		R8 RB9 -56 -57 -UX		RH RM RP		NM		NR6 NR8		HA HZ HH HV HX		NMP NHG NHP NHU NHW				HX	GH VH VT			HT HD HY HZ RX RH	CMX
	Wiper-finishing	WG		WF WL WMX	WF WK	W-MF2		FW MW	FW MW	WF		PF	SW		FW	NLU-W									
	Finishing	EF DF	EF HF	MF	MF UF	FF1 F2 MF1	F1	FF FP	11 UF LF	NF VL	PF SM	NF4	PF4 PF5	FS	FJ FV	NSU NLU	NSU NLU	SS	SS	GU		VF	EA SF	FG	
	Semi-finishing	EF EM	EF EM HF HM	MF MM	MF MM UM	MF3	F2	FP	MF	PP TF 17 19	14 16 17 19	NM4	P55	SH MS MH	SW SV MV	NEXNUP	NSU	SS SM	PS	MS	CK DP GP VF XP	HMP			
Stainless steel	Medium machining to light roughing	EM DM	EM HM	MM	MM UM	R6 56	F2	MP	HP	PP TF	17 19	NM4 NR4	PM5	MS ES MH	MY/MW	NGU	NMU	SA S	PM	HQ XQ GK G	HS VP3	C25	EM SU MT	MT PMR WT	
	Wiper medium			WR WM	WM	W-M3		MW RW	MW	WG			PM	MW		NGU -W									
	Roughing	ER DR	HR	MR QR PR	MR	R7 R8		MP-P		HTW NR	19	NR4		GH HZ		NMU NMX NHG					VM		ET	CMX	
	Single side roughing	ER DR HDR LR		HR QR		-56		RP		NM						NMP NHG NHP NHU NHW	NMP NHG NHP NHU NHW								

Conversion table chip breakers – turning

Comparison table for turning inserts chip breaker																									
ISO	Application	ZCC-CT		Sandvik		Seco		Kennametal		ISCAR		Walter		Mitsubishi		Sumitomo		Tungaloy		Kyocera		Korloy		Ingersoll Tague Tec	
		Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos
K	Wiper-Finishing	WG		WF WM	WF	W-MF2	W-F1	FW MW	FW MW	WF						NLU-W	NLU-W								
	Finishing	DF	HF	KF	KF	F1	F1	FF FN	11 UF LF	NF SM	14 19		PSS			NSU	NSU			C		VM			
	Semi-finishing	PM	HM	KF KM	KF KM	M3	F2	FN	MF	GN	14 19	NM5	PSS	GH		NUX NGU	NSU	CM		C Stand. form	B25	HMP			
	Medium machining to light roughing	DR	HM HR	KM QM	KM	M3	F2	UN	HP	GN NR		NM6	PM5			NUZ NGU NMU	NMU	CM		GC ZS	VK GR	C25	MT MG	MT PMR WT	
	Wiper medium					W-M3 W-R4 W-R7		MW	MW	WG		NM	PM			NGU-W									
N	Roughing	DR *NMA	HR	KR QR	KR UR	M5				NR		NR6		GH		NMU				ZS		MA	RT	CMX	
	Finishing		LC		AL				LF	NF			PM2												
	Semi-finishing		LC		AL		AL	GP		NF PP	AS						NAG			AH	AH	HA	AK	FL SA	
	Medium machining to light roughing		LH		AL		AL	GG-FS MS	HP	NMS												AR			
	Finishing	NFEF	NF	NGP	MF	MF1		FS	GT-HP	SF PF	PF SM		PF4	FJ		NSU						VP1			
S	Semi-finishing	NF NM EM	NF	23	MM	MF1 M1		FS MS	GT-MF	SF PF	PF SM		PF5	MJ		NEXNUP	NSU NSK					VP2	AK		
	Medium machining to light roughing	NM EM		MF	MM UM	M1		MS	MT-LF	PP TF			PSS	MS		NMU	NSK					VP3	HMP	SU	
	Roughing	ER		SR		MR3 MR4		RP		TF HTW NR				GJ								VM			

Conversion table grades – turning

Coated cemented carbide CVD

ISO	ZCC-CT	Sandvik	Kennametal	Sumitomo	Mitsubishi	Toshiba Tungaloy	Kyocera	Walter	Iscar	SECO	Korloy	Ingersoll Tague Tec	Widia
P	P01-05	GC4205 GC4305	KCP05 KC9105	AC805P	UE6005 UE6105	T9005 T9105	CA5505	WPP01 WPP05	IC8150 IC9150 IC428	TP0500 TP0501			
	P10-15	GC4315 GC4215	KCP10 KC9110	AC810P AC700G	UC6110 MY5015	T9015 T9115	CA510 CA5515 CA510	WPP10 WPP10S	IC8150 IC8250 IC9150 IC9250 IC9015	TP1500 TP1501	NC3010	TT8115 TT8125	WP15CT
	P20-25	GC4325 GC4225 GC4025	KCP25 KC9125	AC820P AC8020P AC900G AC2000	UE6020 MC6025	T9025 T9125	CA5525 CA525 CR9025	WPP20 WPP20S	IC8150 IC8250 IC9250 IC9025	TP2501 TP2500 TP200	NC3220 NC3120	TT8125 TT3500	WP25CT
	P30-35	GC4335 GC4235 GC4035	KCP30 KC8050	AC830P AC3000	UE6035 UE6400	T903 T9135	CA530 CA5535 CA535	WPP30 WPP30S	IC8250 IC8350 IC9350	TP3500	NC3030 NC5330 NC500H	TT5100 TT8135	WP35CT
M	M10	GC2015 GC1515	KCM15	AC610M	MC7015	T9115			IC8250 IC9250 IC6015			TT9215	WM15CT
	M20	GC2015 GC2025	KCM25 KC9225	AC610M AC630M	US7020 MC7015 MC7025	T6020 T6120 T9125	CA6515	WAM20	IC8250 IC9350 IC9025 IC6025	TM 2000 TP200 TP2500	NC9025	TT5100 TT9225	WM25CT
	M30	GC2025 GC2035	KCM25 KCM35 KC9225	AC630M AC6030M AC830P AC3000	US735 US7025	T6030 T6130	CA6525	WAM30	IC8350 IC9350 IC9025	TP3500 TM 4000		TT5100 TT7100 TT9235	WM35CT
	M40	GC2035	KCM35 KC9240 KC9245	AC630M AC6030M AC830P AC3000	US735	T6030 T6130	CA6525		IC6025 IC9350	TP40		TT5100 TT7100 TT9235	
K	K01-05	GC3005 GC3205	KCK05	AC405K AC410K	UC5005 UC5105	T5105	CA4505		IC5005 IC9007		NC6205	TT1300 TT7005	WK05CT
	K10-15	GC3215	KCK15 KC9315	AC410K AC415K AC420K AC700G	MC5015 UC5115 MY5015	T5105 T5115	CA4010 CA4515 CA4115	WAK10 WAK10S	IC9015 IC9007 IC8150 IC5010 IC428 IC4028 IC9150	TK1001 TK1000	NC6210	TT1300 TT7310 T7015	
	K20-25	GC3225	KCK20 KC9320	AC420K AC900G	MC5015 UC5115 UE6110 MY5015	T5125 T9125	CA4125	WAK20 WKK20S	IC5010 IC428 IC4028 C9150	TK2000 TK2001	NC5330		WK20CT

Conversion table grades – turning

Coated cemented carbide PVD

ISO	ZCC-CT	Sandvik	Kennametal	Sumitomo	Mitsubishi	Toshiba Tungaloy	Kyocera	Walter	Iscar	SECO	Korloy	Ingersoll Tague Tec	Widia
P	P01-05	GC1105					PR1005						
	P10-15	GC1515 GC1115 GC1025	KC5010 KC5510 KC7215 KC7315	AC510U	VP10MF VP15TF	AH710	PR930 PR1005 PR930 PR115	WSM10 WXN10	IC520N IC507 IC570 IC807 IC907 IC908				
	P20-25	GC1515 GC1125 GC1025	KC5025 KC5525 KU25T	AC520U	VP20RT VP20MF	AH725 AH120	PR930 PR1025 PR1225	WSM20 WMP20S WSM21	IC228 IC250 IC308 IC828 IC350 IC354 IC507 IC807 IC808 IC907 IC908 IC928 IC1008 IC1028 IC3028	CP200 CP250 TP2000 TS2500		TT8020 TT19020	
Steel	P30-35	GC1125 GC2035	KC7335	AC530U		SH730 J740 GH130 AH740	PR660	WSM30	IC228 IC250 IC328 IC330 IC354 IC528 IC1008 IC1028 IC3028	CP500	PC5300		
	M10	GC1105 GC1115 GC1025 GC1125 GC1515	KCU10 KC5010 KC5510 KC6005 KC6015	EH110Z AC510U AC530U	VP10MF	AH710	PR915 PR1005	WSM10	IC330 IC354 IC507 IC520 IC570 IC807 IC1028 IC3028	CP500 TS2000	PC8110	TT5080	WS10PT
	M20	GC1025 GC1125	KC501 KCU25	AC520U AC530U	VP10RT VP15TF VP20RT VP20MF	AH120 AH725 SH730 AH710 AH630 GH330 J740	PR1025 PR1125 PR1225	WSM10 WMP20S WSM20 WSM21	IC228 IC250 IC354 IC808 IC908 IC1008 IC1028 IC3028	TS2000 TS2500 CP200 CP250		TT8020 TT9020 TT19080	WS25PT
Stainless steel	M30	GC2035	KC5025 KCU25		VP10RT VP15TF VP20RT VP20MF MP7035	AH12 AH725 SH730 AH710 AH630 GH330 J740	PR1025 PR1125	WSM20 WSM21 WSM30	IC228 IC250 IC328 IC330 IC1008 IC1028 IC3028	CP500 TS2500	PC5300 PC9030		
	S05	S05F			MP9005	AH905			IC507 IC907				
	S10	GC1105 GC1115	KC5010 KCU10 KC5510 KC510	AC510U EHS10Z	MP9015 VP10RT	AH905 SH730 AH110 AH120		WSM10	IC507 IC807 IC808 IC907	CP200 CP250 TS2000 TS2500	PC8110	TT5080	WS10PT
Heat-resistant alloys	S20	GC1025 GC1125 GC1515	KC5010 KCU10 KC5025 KCU25 KC5525	AC520U EHS20Z	MP9015 MT9015 VP20RT	AH120 AH725	PR1125	WSM20 WSM21 WSM30	IC507 IC807 IC907	CP250 TS2500 CP500	PC5300	TT5080 TT8020 TT9080	WS25PT
	S30	YBG302		AC520U	VP15TF	AH725	PR1125	WSM30	IC3028 IC808 IC830		PC5400	TT8020	
Non-ferrous metals	N10	GC1515	KC5410					WXN10	IC520				
		YBG101 YBG102 YBG105											

Conversion table grades – turning

Cermet

ISO	ZCC-CT	Sandvik	Kennametal	Sumitomo	Mitsubishi	Toshiba Tungaloy	Kyocera	Walter	Iscar	SECO	Korloy	Ingersoll Tague Tec	Widia
P	P01-05	CT5005		T110A T1000A	AP25N VP25N	NS520 AT520 GT520 GT720	TN30 TN6010 PV30 PV7010		IC20N IC520N		CN1000 CC105	CT3000 PV3010	
	P10-15	CT5015 CT530	KT315 KT125	T1200A T2000Z T1500A T1500Z	NX2525 AP25N VP25N	NS520 NS730 GT730 NS9530 GT9530	TN60 TN6010 PV60 PV6010		IC20N IC520N IC530N	CM TP1020 TP1030 CMP	CN1000 CT10 CN2000 CC115	CT3000 PV3010	TT115
	P20-25	GC1525	KT325 KT1120 KT5020	T1200A T2000Z T1500A T1500Z	NX2525 NX3035 AP25N VP25N MP3025	NS530 NS730 GT730 NS9530 GT9530	TN60 TN6020 PV60 PV7020 PV7025		IC20N IC30N IC75T IC520N IC530N	CM TP1020 TP1030 CMP	CN20 CN2000 CC115		TT115
	P30-35			T3000Z	MP3025 VP45N		PV7025 PV90		IC75T				
M	M10	GC1525	KT125	T110A T1000A T1500Z T2000Z	NX2525 AP25N VP25N	NS520 AT530 GT530 GT720	TN60 TN6020 PV60 PV7020			CM TP1020 TP1030 CMP		CT3000 PV3010	TT115
	M20	CT5015 CT530	HT2	T110A T1000A T1500Z T2000Z	NX2525 AP25N VP25N	NS530 GT730 NS730	TN90 TN6020 PV90 PV7020 PV7025					CT3000 PV3010	TT115
	M30			T3000Z									
	M40												
K	K01-05			T110A T1000A T2000Z T1500Z	NX2525 AP25N	NS520 GT730 NS730	TN30 TN6010 PV30 PV7005 PV7010				CN1000	CT3000 PV3010	
	K10-15	CT5015	KT325 KT125	T1200A T1500A T2000Z T1500Z	NX2525 AP25N	NS520 GT730 NS730	TN60 TN6020 PV60 PV7020 PV7025				CN1000	CT3000 PV3010	
	K20-25	CT5015		T3000Z	NX2525 AP25N								

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Conversion table grades – turning

Uncoated carbide

ISO	ZCC-CT	Sandvik	Kennametal	Sumitomo	Mitsubishi	Toshiba Tungaloy	Kyocera	Walter	Iscar	SECO	Korloy	Ingersoll Tague Tec	Widia
N01	YD101 YD201	H10 H13A	KF1	H1		KS05F				883 890			
N10	YD101 YD201	H10 H13A	K313 KF1 K68 THM-F	H1	HT110	KS15F	KW10	WK01 WK10	IC20	890 KX HX	H01	K10	THM
N20	YD101 YD201	H10 H13A	K313 KF1 K68 THM-F			KS15F	KW15		IC20	KX HX			

N

Non-ferrous metals

Conversion table grades – milling

CVD milling grades

Material / Class	ZCC-CT	Sandvik	Kennametal	Sumitomo	Mitsubishi	Toshiba Tungaloy	Kyocera	Walter	Iscar	SECO	Korloy	Ingersoll Tague Tec
P	P05	K20W GC4220			F7010							
	P10	K20W GC3040 GC4220 GC4230		ACP100	F7010				IC4100 IC5100	MP1500	NC5330 NCM325	IN6505 IN6520
	P20	YBC301 YBC302 YBC251 YBC253		CS3000	FH7020	T3130		WKP25 WKP25S	IC4050 IC4100 IC5100 IC5400	MP1500 MP2500 MS2500 T25M	NC5330 NCM325	IN6505 IN6520 IN7035
	P30	YBC301 YBC302 YBM253 YBM351	KC930M KC935M	CS3000	F7030	T3130		WKP35 WKP35S WTP35	IC4050 IC5400	MK3000 T25M T350M	NCM325	IN7035 IN6530
P40	YBC401 YBM351	GC2040 GC4240								T350M		IN6530
M	M10	GC4230			F7010					MP1500	NCM325 NC5330	IN6520
	M20	GC4230			F7020	T3130			IC4050	MP1500 MP2500 MS2500 T25M	NCM325 NCM335	IN7035 IN6520 IN6505
	M30	GC2040 GC4240	KC930M KC935M		F7030	T3130		WTP35		MP2500 MS2500 T25M T350M	NCM335	IN6530 IN7035 IN6505
	M40	GC2040 GC4240								T350M		IN6530
K	K05		KCK15		F7010 MC5020				DT7150 IC4100			
	K10	K20W	KCK15	ACK200	F7010 MC5020	T1115		WAK15	DT7150 IC4100 IC4010	MP1500 MK1500	NC5330	IN6520
	K20	K20W		ACK200		T1115		WKP25 WKP25S	DT7150 IC4100	MP1500 MP2500 MS2500 T25M MK1500	NC5330	IN6530 IN6515 IN6520
	K30		KC930M KC935M					WKP35 WKP35S	IC4050	MK3000 MP2500 MS2500		IN6530 IN6515

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Conversion table grades – milling

CVD milling grades

Material / Class	S05	S10	S20	S30	N05	N10	N20	H05	H10	H20
S Heat-resistant alloys										
ZCC-CT										
Sandvik				GC2040					K20W	K20W GC3040
Kennametal										
Sumitomo										
Mitsubishi										
Toshiba Tungaloy										
Kyocera										
Walter				WTP35						
Iscar										
SECO	MK3000		MP2500 MS2500 T25M	MM4500 T350M			MP2500 25M			
Korloy										
Ingersoll Tague Tec			IN7035 IN6520							

Conversion table grades – milling

PVD milling grades

Material / Class	ZCC-CT	Sandvik	Kennametal	Sumitomo	Mitsubishi	Toshiba Tungaloy	Kyocera	Walter	Iscar	SECO	Korloy	Ingersoll Tague Tec
P	P05			ACZ120	VP05HT	GH130			IC903			
	P10	GC1010 GC1025 GC1020	KC522M KC525M KC610M KC643M KC715M	ACZ10M ACZ20W	VP10H	AH120 GH130	PR730 PR1225 PR1525	WHX15 WHH15 WXM15	IC903 IC950 IC1008	F15M		IN2004 IN2006
	P20	GC1020 GC1025 GC1010 GC2030	KC522M KC525M KC643M KC715M KC725M	ACP200 ACZ330 ACX70 ACW30 AC350 ACZ50M	VP15TF VP20M VP20RT	AH725 AH120 AH130 AH330 AH725 AH730 GH330	PR630 PR830 PR730 PR1225 PR1230 PR1525	WXM15	IC810 IC380 IC830 IC900 IC908 IC910 IC950 IC1008	F25M MP3000	PC3500 PC3600	IN2006 IN1030 IN2004 IN2005 IN2015 IN2030 IN2505 IN2540
	P30	GC1030 GC2030	KC530M KC725M KC735M	ACP200 ACP300 ACZ50M ACZ330 ACZ350 ACX70 ACW30 AC350	VP30RT	AH740 AH130 AH140	PR630 PR660 PR830 PR1230	WXM35	IC300 IC328 IC830 IC900 IC928 IC350 IC808 IC908	F30M MP3000	PC3500 PC3600 PC3300 PC3545 PC9570T	IN1030 IN2005 IN2015 IN2030 IN2035 IN2040 IN2505 IN2530 IN4035
P40		GC1030	KC735M	ACP300 ACZ350		AH140 AH750		WXP45 WSP45 WSP46	IC300 IC328 IC928	F40M	PC5300 PC3545	IN2035 IN2040
M	M10	GC1020	KC522M KC610M KC643M KC715M	ACZ20W ACZ350 EH20Z		AH330 GH110 GH130	PR730 PR1225 PR660 PR1525		PR730 PR660 PR1025 PR1225 PR1525	F15M	PC8110	IN2505
	M20	GC1020 GC1025 GC1030 GC203	KC522M KC525M KC610M KC715M KC725M	ACP200 ACZ50M ACZ20M ACZ350 EH20Z AC350	VP15TF VP20RT	AH725 AH730 GH110	PR730 PR1025 PR660 PR1225 PR1525	WXM15		F25M MP3000	PC5300 PC8110 PC9530	IN2005 IN2015 IN2505
	M30	GC1040 GC203	KC525M KC530M KC725M KC735M	ACP300 ACZ50M ACX80 AC350	VP30RT	AH740 AH120 AH130 GH330 GH340				F30M MP3000	PC9530 PC3545 PC9570T	IN1030 IN2015 IN2030 IN2035 IN2530 IN4035
	M40	GC1040	KC530M KC735M	ACP300 ACX80		AH140 AH750 GH330 GH340		WSM35 WSM36 WXM35		F40M	PC3545	IN1030 IN2030 IN2035 IN2530 IN4035
K05		GC1010	KC510M	ACZ10M ACZ120 ACZ310		AH330	PR905 PR1210 PR1510			MH1000	PC8110	IN2510
K10	YBG102 YBG152	GC1010	KC510M KC520M KC620M KC643M	EH20Z ACZ310		AH120 AH330 AH725	PR905 PR1210 PR1510	WHX15 WHH15 WXM15	IC810 IC950 IC1008	F15M MK2000	PC6510	IN2004 IN2010 IN2510
K20		GC1020	KC520M KC620M KC725M	ACK300 EH20Z ACX80 ACW30	VP15TF	GH130		WKK25	IC328 IC830 IC950 IC350 IC808 IC908 IC1008	F25M MK2000 MO3000	PC6510 PC5300	IN1030 IN2004 IN2010 IN2015 IN2030 IN2505
K30		GC1020	KC620M KC725M	ACK300 ACZ50M					IC328 IC830 IC900 IC908 IC350 IC808 IC908	F30M F40M MP3000	PC5300 PC9570T	IN2005 IN2015 IN2030 IN2505

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PVD milling grades

Material / Class	ZCC-CT	Sandvik	Kennametal	Sumitomo	Mitsubishi	Toshiba Tungaloy	Kyocera	Walter	Iscar	SECO	Korloy	Ingersoll Tague Tec
S05	YBG102									MH1000 F15M	PC8110	
S10	YBG102 YBG202 YBG205		KC525M KC643M	ACZ20W	VP15TF		PR905 PR1210 PR1510		IC808	NH1000 F15M F25M	PC5300	
S20	YBG202 YBG205	S30T GC1025 GC1030 GC2030	KC525M KC643M	ACZ20W			PR905 PR1210 PR1510		IC908 IC380 IC900 IC903 IC908 IC928 IC830 IC808	F25M F30M	PC5300 PC3545	IN2005 IN2505
S30		GC2030	KC725M KC735M	ACZ50M				WSM35 WSM36 WSP45 WSP46 WXM35 WXP45	IC328 IC928 IC830	F40M	PC3545	IN1030 IN2030 IN2035 IN2530 IN4035
N05			KC510M							MH1000 F15M		
N10	YBG202	GC1025 GC1030	KC510M KC620M KC522M	EH20Z				WXN15		MH1000 F15M		
N20		GC1025 GC1030	KC620M KC522M KC525M KC651M							F25M F30M F40M MP3000		
H05					VP05HT				IC903	MH1000 F15M	PC210F	IN2004 IN2006
H10	YBG102	GC1010	KC643M		VP10MF			WXH15 WHH15	IC900 IC808	MK2000 F30M MP3000	PC210F	IN2004 IN2005 IN2006
H20	YBG202	GC1010 GC1025 GC1030			VP15TF				IC810 IC908	F30M F40M MK2000 MP3000		
Heat-resistant alloys												
Non-ferrous metals												
Hardened materials												

Conversion table grades – milling

Uncoated milling grades

ISO	ZCC-CT	Sandvik	Kennametal	Sumitomo	Mitsubishi	Toshiba Tungaloy	Walter	Kyocera	Iscar	SECO	Korloy	Ingersoll Tague Tec
N	N01	H10	K115M K110M				WK10		IC20N		H01	IN04S
	N10		K313	EH520	HT110		WKM	GW25	IC08	H15	G10	IN10K IN05S
	N20	H13A H10F	KMF	EH520	TF15		KMG40		IC28	H25		IN15K
Non-ferrous metals												

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Examples of materials for machining groups

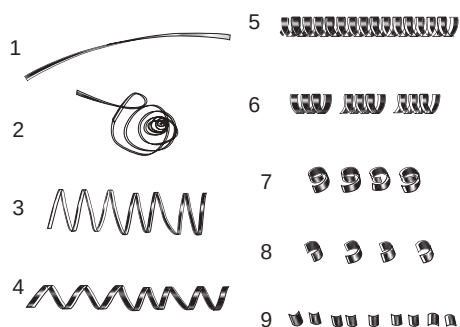
Material No.	Material	Machining group
1.0722	10SPb20	1
1.0715	9SMn28	1
1.0736	9SMn36	1
1.0718	9SMnPb28	1
1.0737	9SMnPb36	1
1.0401	C15	1
1.0402	C22	1
1.1141	Ck15	1
1.1170	28Mn6	2
1.0726	35S20	2 / 3
1.1167	36Mn5	2 / 3
1.1157	40Mn4	2 / 3
1.0501	C35	2 / 3
1.0503	C45	2 / 3
1.1191	Ck45	2 / 3
1.1183	Cf35	2 / 3
1.1213	Cf53	2 / 3
1.1545	C 105 W1	4 / 5
1.1663	C 125 W	4 / 5
1.0535	C55	4 / 5
1.0601	C60	4 / 5
1.1274	Ck101	4 / 5
1.1203	Ck55	4 / 5
1.1221	Ck60	4 / 5
1.5710	36NiCr6	5 / 9
1.5120	38MnSi 4	5 / 9
1.1545	C 105 W2	4 / 5
1.1663	C 125 W	4 / 5
1.0535	C65	4 / 5
1.0601	C70	4 / 5
1.1274	Ck101	4 / 5
1.1203	Ck55	4 / 5
1.1221	Ck60	4 / 5
1.5710	36NiCr7	5 / 9
1.5120	38MnSi 5	5 / 9
1.1545	C 105 W3	4 / 5
1.1663	C 125 W	4 / 5
1.0535	C75	4 / 5
1.0601	C80	4 / 5
1.1274	Ck101	4 / 5
1.1203	Ck55	4 / 5
1.1221	Ck60	4 / 5
1.5710	36NiCr8	5 / 9
1.5120	38MnSi 6	5 / 9
1.1545	C 105 W4	4 / 5
1.1663	C 125 W	4 / 5
1.0535	C85	4 / 5
1.0601	C90	4 / 5
1.1274	Ck101	4 / 5

Material No.	Material	Machining group
1.1203	Ck55	4 / 5
1.1221	Ck60	4 / 5
1.5710	36NiCr9	5 / 9
1.5120	38MnSi 7	5 / 9
1.1545	C 105 W5	4 / 5
1.1663	C 125 W	4 / 5
1.0535	C95	4 / 5
1.0601	C100	4 / 5
1.1274	Ck101	4 / 5
1.1203	Ck55	4 / 5
1.1221	Ck60	4 / 5
1.5710	36NiCr10	5 / 9
1.5120	38MnSi 8	5 / 9
1.5680	12Ni19	10 / 11
1.3255	S 18-1-2-5	10 / 11
1.3348	S 2-9-2	10 / 11
1.3343	S 6-5-2	10 / 11
1.3243	S 6-5-2-5	10 / 11
1.2363	X 100 CrMoV 5-1	10 / 11
1.2601	X165CrMoV12	10 / 11
1.2080	X210 Cr 12	10 / 11
1.2581	X30WCrV 9-3	10 / 11
1.2344	X40CrMoV 5-1	10 / 11
1.4718	X45CrSi9-3	10 / 11
1.3355	S 18-0-1	10 / 11
1.4027	G-X20Cr14	12 / 13
1.4006	X12 Cr 13	12 / 13
1.4104	X12CrMoS 17	12 / 13
1.4057	X19CrNi 17-2	12 / 13
1.4034	X46Cr 13	12 / 13
1.4871	X53 CrMnNiN 21-9	12 / 13
1.4113	X6CrMo 17	12 / 13
1.4000	X6CR 13	12 / 13
1.4001	X7Cr14	12 / 13
1.4016	X6Cr17	12 / 13
1.4581	G-X5CrNiMoNb 18	14
1.4308	G-X6CrNi 18-9	14
1.4408	G-X6CrNiMo 18-10	14
1.4583	X6CrNiMoNb 18-12	14
1.4571	X6CrNiMoTi 17-12-2	14
1.4550	X6CrNiNb 18-10	14
1.4541	X14CrNiTi 18-10	14
1.4845	X12CrNi 25-21	14
1.4310	X10CrNi 18-8	14
1.4305	X10CrNiS 18-10	14
1.4878	X12CrNiTi 18-9	14
1.4317	X2CrNi 18-8	14
1.4436	X3CrNiMo 17-13-3	14
1.4440	X2CrNiMo 18-16	14

Material No.	Material	Machining group
1.4429	X2CrNiMoN 17-13-3	14
1.4311	X2CrNiN 18 10	14
1.4301	X5CrNi 18-10	14
1.4401	X5CrNiMo 17-12-2	14
0.6010	GG10	16
0.6015	GG15	16
0.6020	GG20	16
0.6025	GG25	16 / 17
0.6030	GG30	17
0.6035	GG35	17
0.6040	GG40	17
1.4829	X12NiCrSi 22-12	17
1.4828	X15CrNiSi20-12	17
0.7033	GGG35.3	18
0.7040	GGG40	18
0.7043	GGG40.3	18
0.8135	GTS-35	18
0.7050	GGG50	19
0.7060	GGG60	19
0.7070	GGG70	19
0.7660	GGGNiCr 20-2	19
0.7652	GGGNiMn 13-7	19
0.8155	GTS-55	21
0.8165	GTS-65	21
0.8170	GTS-70	21
0.8145	GTS-45	21
3.0205	Al99	22
3.3315	AlMg 1	22
3.1325	AlCuMg 1	23
3.2315	AlMgSi 1	23
3.2581	G-AlSi12	24
3.2163	G-AlSi9Cu3	24
3.2381	G-AlSi10Mg	25
2.0375	CuZn36Pb 3	27
2.1096	G-CuSn5ZnPb	27
2.0590	G-CuZn40Fe	27
2.0240	CuZn15	28
2.0060	E-Cu 57	29
1.4865	G-X40NiCrSi 38-18	30
1.4864	X12NiCrSi 36-16	30
2.4631	NiCr20TiAl	32
2.4856	NiCr22Mo9Nb	32
2.4375	NiCu30Al	33
2.4955	NiFe25Cr20NbTi	33
2.4764	CoCr20W15Ni	34
1.3401	G-X120Mn12	34
3.7165	TiAl6V4	36

Test protocol

Date:		ZCC Cutting Tools Europe GmbH	
General	End User	Distributor	
Company			
Contact person			
Machine			
Type			
Producer			
Power [kW]			
Tooling system			
Work piece			
Material			
Hardness/Tensile strength [N/mm ²]			
Heat treatment/Surface			
Interrupt cutting			
Cutting tools			
Producer (holder)			
Toolholder (name)			
Teeth Z			
Producer/Supplier			
Insert type/Tool number			
Grade			
Solid carbide tools number			
Cooling			
Cutting Data			
RPM n [U/min]			
Cutting speed Vc [m/min]			
Feed rate f [mm/rpm]			
Feed rate Vf [mm/min]			
Depth of cut a _p [mm]			
Width of cut a _e [mm]			
Machining length [mm]			
Cutting time T [min]			
Results			
Machined pieces/Edges			
Surface quality			
Flankwear VB			
Criteria			
Notch wear			
Crater wear			
Plastic deformation			
Built-up edge			
Insert breakage			
Cutting edge breakage			
Chip forms			



Conclusion:

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E-mail: technik@zccct-europe.com

Signature:

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Torque for screw

Thread	M1,6	M1,8	M2	M2,2	M2,5	M3	M3,5	M4	M4,5	M5	M6	M7	M8	M10	M12
Torque [Nm]	0,2	0,3	0,4	0,7	0,8	1,5	2,3	3,4	5,0	6,7	11,4	19,2	27,0	55,8	85

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R/LT****N-BSPT	A417
R/LT****N-BSPTB	A434
R/LT****N-BUT	A428
R/LT****N-GM	A411
R/LT****N-GMB	A429
R/LT****N-NPT	A418
R/LT****N-NPTF	A419
R/LT****N-R	A420
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R/LT****N-WB	A432
R/LT****W-A(G)	A413
R/LT****W-A(G)B	A430
R/LT****W-AC	A424
R/LT****W-AP	A426
R/LT****W-BPTB	A435
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R/LT****W-BSPTB	A434
R/LT****W-BUT	A428
R/LT****W-GM	A411
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The Company

Zhuzhou Cemented Carbide Cutting Tools Co., Ltd. (ZCC-CT) is located in Zhuzhou, Hunan province, China and is the largest supplier of carbide tools into the Chinese market. The ZCC-CT cutting tool company is part of the "Zhuzhou cemented carbide Group" who manufacture carbide materials and powders. Both of these companies are part of the "Minmetals Corporation" who mine and produce raw tungsten carbide materials.

Since its foundation in 1953 ZCC-CT has developed rapidly by progressively using highly advanced modern production technology as well as having a highly qualified and committed workforce. With over 2,000 employees the company is now the largest producer of carbide cutting tools in China and one of the leading carbide manufacturers worldwide.

Using this advanced production technology, ZCC-CT products are manufactured to the highest quality standards to maintain a constant quality and high performance. The wide range of products contains indexable carbide inserts (coated and uncoated), inserts of Cermets, CBN, PCD and ceramics, solid carbide cutting tools as well as tool holders and milling bodies. The products are produced to various international standards such as ISO DIN, ANSI, JIS and BSI. Furthermore customised and special carbide product are also offered.

Research and development plays a major and significant role at ZCC-CT. The production facilities use the most sophisticated and advanced equipment available and this is supplied by the leading machine and equipment manufacturers in Germany and Switzerland. A highly qualified and skilled team of engineers in the R&D departments are constantly developing new and improved cutting tools. There is a constant desire to continually enhance the quality, to fulfill the ever increasing market requirements for new and initiative products and to achieve the best possible result for the customers.

The production and administration facilities in China are certified to ISO 9001:2000 and they maintain strict environmental management to ISO 14001:2004 standards.

Since 2003 ZCC Cutting Tools has operated a sales organisation in Europe. This sales and warehousing subsidiary of ZCC-CT is based in Düsseldorf (Germany) and has been progressively build up and expanded by Mr. Quanliang Zhao the European Managing Director.

Sales to all European countries, as well as Russia and Turkey, are controlled and managed from this European central warehouse in Düsseldorf, with the majority of the products being dispatched on the same day of ordering. The business operates under the quality management system for "Distribution and Logistics of Metal Cutting Tools" and is certified with DIN EN ISO 9001:2008.

ZCC Cutting Tools Europe has a constantly growing number of employees covering sales, marketing, warehouse and distribution, technical support, IT, HR and accounting. Our external sales team and our partners from around Europe are there to support you on-site in your production facilities or distribution operations. Our internal, highly qualified, technical application engineering staff are always available to give the customer technical advice and support via telephone, by email or in person. The internal sales team takes care of your enquiries and orders and together with dedicated warehouse staff they ensure that products are dispatched to you as quickly as possible.

The complete team at ZCC Cutting Tools Europe are there to support you and be your competent and efficient partner in the global Cutting Tool Industry.



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