SOLID CARBIDE DRILLS



Solid carbide drills

Product overview	**C34-C36**
Grade overview	**C37**
System code – solide carbide drills	**C38-C40**
SU series	**C41-C78**
SP/SL/UL series	**C79-C106**
GD series	**C107-C116**
UD series	**C117-C128**
FD series	**C129-C131**
SH series	**C132**
SC series	**C133-C137**
NC-tapping device – SC series	**C138-C141**
Recommended cutting data	**C142-C147**
Trouble shooting	**C194-C197**
Technical information	**C199-C201**
Special tools	**C148-C149**

C

Solid carbide drills Product overview

	Products	Solid Carbide Drills	L/D	✻	Ø	Application						Type	Page
						P	M	K	N	S	H		
SU	1534SU03		3xD		0.9-20	✓	✓	✓				Twist drills	C42
	1534SU03C		3xD	✻	3-20	✓	✓	✓				Twist drills	C42
	1634SU03		3xD		3-21	✓	✓	✓				Twist drills	C68
	1634SU03C		3xD		3-20	✓	✓	✓				Twist drills	C68
	1536SU05		5xD		2-20	✓	✓	✓				Twist drills	C54
	1536SU05C		5xD	✻	3-20	✓	✓	✓				Twist drills	C54
	1636SU05C		5xD	✻	3-20	✓	✓	✓				Twist drills	C73
	1538SU08C		8xD	✻	3-18	✓	✓	✓				Twist drills	C65
	1557SU03		3xD		M4-M16	✓	✓	✓				Step drills	C77
SP SL UL	1588SL10C		10xD	✻	3-14	✓	✓	✓	✓	✓		Deep hole drills	C83
	1588SL12C		12xD	✻	3-21	✓	✓	✓	✓	✓		Deep hole drills	C86
	1588SL15C		15xD	✻	3-14	✓	✓	✓	✓	✓		Deep hole drills	C90
	1588SL20C		20xD	✻	3-14	✓	✓	✓	✓	✓		Deep hole drills	C93
	1588SL30C		30xD	✻	3-10	✓	✓	✓	✓	✓		Deep hole drills	C96
	1588UL10C		10xD	✻	3-20	✓	✓			✓		Deep hole drills	C98
	1588UL20C		20xD	✻	3-14	✓	✓			✓		Deep hole drills	C101
	1588UL30C		30xD	✻	3-10	✓	✓			✓		Deep hole drills	C104
	1534SP03C		3xD	✻	3.03-20.03	✓	✓	✓	✓	✓		Pilot drills	C80
GD	1534GD03C		3xD	✻	3-20	✓		✓				Twist drills	C108
	1536GD05C		5xD	✻	3-20	✓		✓				Twist drills	C111
	1636GD05C		5xD	✻	5-20	✓		✓				Twist drills	C115
UD	1534UD03C		3xD	✻	3-20	✓	✓			✓		Twist drills	C118
	1536UD05C		5xD	✻	3-20	✓	✓			✓		Twist drills	C123
FD	1534FD03C		3xD	✻	3-20	✓	✓	✓	✓			Twist drills	C130
SH	1534SH03		3xD		3-16						✓	Twist drills	C132
SC	1101SC05		5xD		2-16				✓			Twist drills	C136
	1105SC03		3xD		2-16				✓			Twist drills	C133

✓ Very suitable ✓ Suitable

✻ With internal cooling SC*: Centuring drillsCenturing drills

	Products	Solid Carbide Drills	L/D	✲	Ø	Application						Type	Page
						P	M	K	N	S	H		
SC*	1143SC90		-		5-20	✓	✓	✓	✓			Centuring drills	C138
	1143SC120		-	✲	5-20	✓	✓	✓	✓			Centuring drills	C139
	1143SC142			✲	5-20	✓	✓	✓	✓			Centuring drills	C140

✓ Very suitable ✓ Suitable

✲ With internal cooling SC*: Centuring drillsCenturing drills

Notes

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.
KDG304	PVD coated carbide substrate for machining caststeel and cast iron. Optimised toughness for high feeds.
KDG305	PVD coated carbide substrate for machining stainless steel and HRSA. High process reliability due to improved wear resistance.

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.

Solid carbide drills

System code – solid carbide drills

1	5	3	6	SU	05	(C)	–	0850	(S)
1	2	3	4	5	6	7		8	9

Type	
Code	Description
1	Forets

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
FD	Flat drills with 180° for any application
UD	Twist drills for tough materials
GD	Twist drills for high feeds
SU	Twist drill for general machining
SL	Twist drill for deep hole drilling
SLK	Deep hole drill for cast iron
SP	Pilot drill
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

5

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

6

With inner cooling

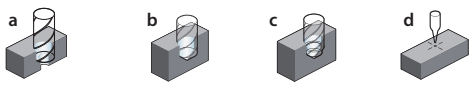
7

Bore diameter [mm]	
Code	Description
0200	2,0
0850	8,5
1800	18,0
...	

8

Shank diameter [mm]	
Code	Description
S	4,0
XS	3,0

9



a Boring **b** Drilling **c** Profile drilling **d** Centering

Notes

IMPORTANT INFORMATION

Recommended applications for the **SU series**

Feed calculator

ISO group	Material	Cutting speed v_c (m/min)	Feed factor F_m
P	Low-alloy steel	180	0,015
	High-alloy steel	120	0,012
M	Stainless steels	80	0,01
K	Cast iron	250	0,018
	Cast steel	180	0,015
S	HRSA	45	0,008
N	Aluminium	400	0,02

Formula:	feed per revolution (F_n)	$D \times F_m$
Example:	drill diameter (D)	10 mm
	material	high-alloy steel

F_n = 10 mm × 0,012 = 0,12 mm/rev.



Fig.: **1536SU05C**

SU drill 3xD General machining

1534SU03/1534SU03C



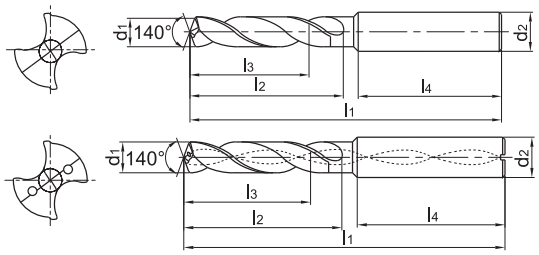
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



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	●
1534SU03-0205		2.05	6	62	20	14	36	○
1534SU03-0207		2.07	6	62	20	14	36	○
1534SU03-0210		2.1	6	62	20	14	36	●
1534SU03-0215		2.15	6	62	20	14	36	○
1534SU03-0220		2.2	6	62	20	14	36	●
1534SU03-0225		2.25	6	62	20	14	36	○
1534SU03-0230		2.33	3	59	13.8	14	36	●
1534SU03-0240		2.4	6	62	20	14	36	●
1534SU03-0245		2.45	6	62	20	14	36	○
1534SU03-0250		2.5	6	62	20	14	36	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SU drill 3xD General machining

1534SU03/1534SU03C



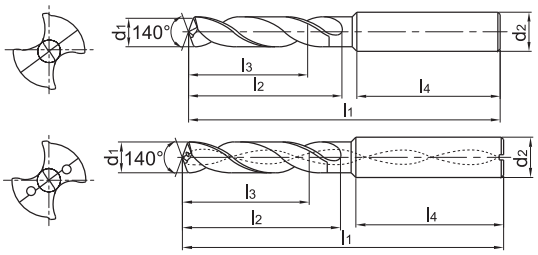
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-0255		2.55	6	62	20	14	36	○
1534SU03-0260		2.6	6	62	20	14	36	●
1534SU03-0270		2.7	6	62	20	14	36	●
1534SU03-0275		2.75	6	62	20	14	36	○
1534SU03-0280		2.8	6	62	20	14	36	●
1534SU03-0285		2.85	6	62	20	14	36	○
1534SU03-0290		2.9	6	62	20	14	36	●
1534SU03-0295		2.95	6	62	20	14	36	○
1534SU03-0300		3	6	62	20	14	36	●
1534SU03C-0300	✻	3	6	62	20	14	36	●
1534SU03-0305		3.05	6	62	20	14	36	○
1534SU03C-0305	✻	3.05	6	62	20	14	36	○
1534SU03-0310		3.1	6	62	20	14	36	●
1534SU03C-0310	✻	3.1	6	62	20	14	36	●
1534SU03-0315		3.15	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	●
1534SU03-0335		3.35	6	62	20	14	36	○
1534SU03-0340		3.4	6	62	20	14	36	●
1534SU03C-0340	✻	3.4	6	62	20	14	36	●
1534SU03-0345		3.45	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	●
1534SU03-0365		3.65	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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SU drill 3xD — General machining

1534SU03/1534SU03C



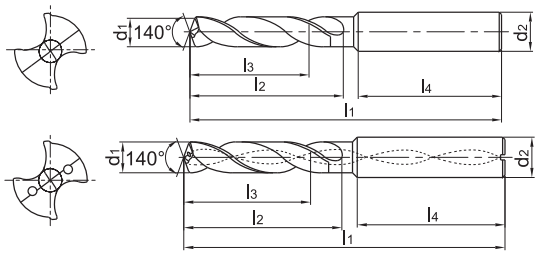
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03C-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	●
1534SU03-0405		4.05	6	66	24	17	36	○
1534SU03-0410		4.1	6	66	24	17	36	●
1534SU03C-0410	✲	4.1	6	66	24	17	36	●
1534SU03-0415		4.15	6	66	24	17	36	○
1534SU03-0420		4.2	6	66	24	17	36	●
1534SU03C-0420	✲	4.2	6	66	24	17	36	●
1534SU03-0425		4.25	6	66	24	17	36	○
1534SU03C-0425	✲	4.25	6	66	24	17	36	○
1534SU03-0430		4.3	6	66	24	17	36	●
1534SU03C-0430	✲	4.3	6	66	24	17	36	●
1534SU03-0435		4.35	6	66	24	17	36	○
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	●
1534SU03-0455		4.55	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	●
1534SU03-0475		4.75	6	66	28	20	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	●

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SU drill 3xD General machining

1534SU03/1534SU03C



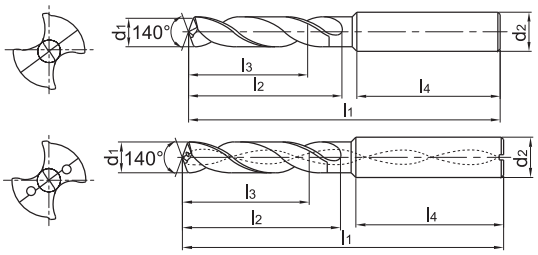
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03C-0500	✻	5	6	66	28	20	36	●
1534SU03C-0504		5.04	6	66	28	20	36	○
1534SU03-0505		5.05	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	●
1534SU03-0525		5.25	6	66	28	20	36	●
1534SU03-0530		5.3	6	66	28	20	36	●
1534SU03C-0530	✻	5.3	6	66	28	20	36	●
1534SU03-0535		5.35	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	●
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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SU drill 3xD — General machining

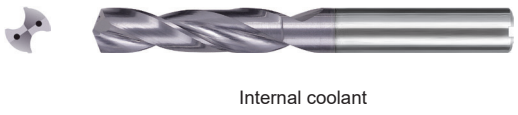
1534SU03/1534SU03C



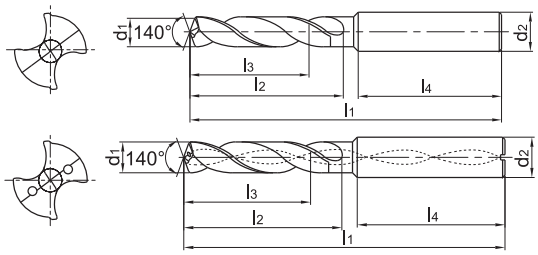
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03C-0635	✻	6.35	8	79	34	24	36	○
1534SU03-0640		6.4	8	79	34	24	36	●
1534SU03C-0640	✻	6.4	8	79	34	24	36	●
1534SU03-0645		6.45	8	79	34	24	36	●
1534SU03-0650		6.5	8	79	34	24	36	●
1534SU03C-0650	✻	6.5	8	79	34	24	36	●
1534SU03C-0657		6.57	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	●
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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SU drill 3xD General machining

1534SU03/1534SU03C



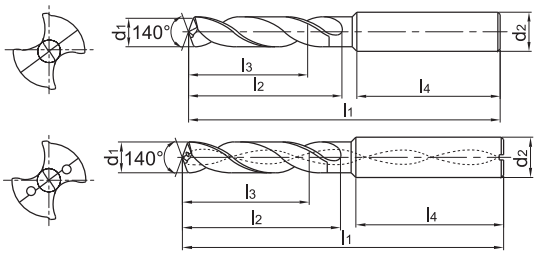
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-0770		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	●
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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SU drill 3xD — General machining

1534SU03/1534SU03C



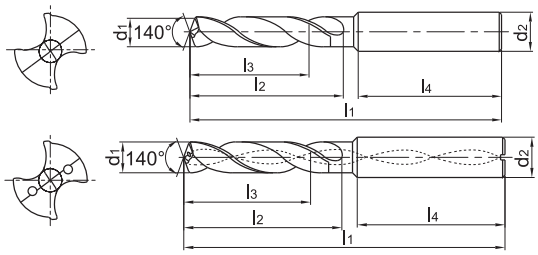
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03C-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	●
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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SU drill 3xD General machining

1534SU03/1534SU03C



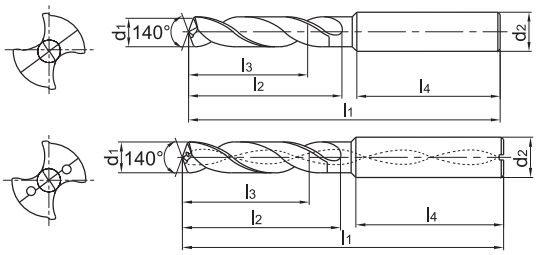
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-1070		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	●
1534SU03C-1105	✻	11.05	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	●
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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SU drill 3xD — General machining

1534SU03/1534SU03C



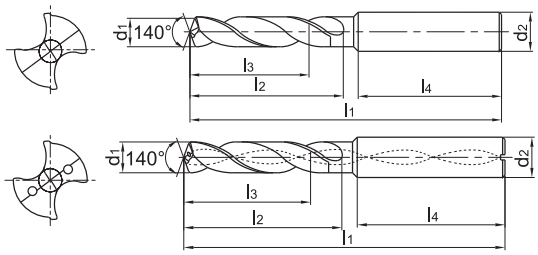
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-1200		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	●
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	●
1534SU03-1290		12.9	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	●
1534SU03-1330		13.3	14	107	60	43	45	●
1534SU03C-1330	✻	13.3	14	107	60	43	45	●
1534SU03C-1335	✻	13.35	14	107	60	43	45	●
1534SU03-1340		13.4	14	107	60	43	45	●
1534SU03-1350		13.5	14	107	60	43	45	●
1534SU03C-1350	✻	13.5	14	107	60	43	45	●
1534SU03-1360		13.6	14	107	60	43	45	●
1534SU03-1370		13.7	14	107	60	43	45	●
1534SU03C-1370	✻	13.7	14	107	60	43	45	●
1534SU03-1380		13.8	14	107	60	43	45	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SU drill 3xD General machining

1534SU03/1534SU03C



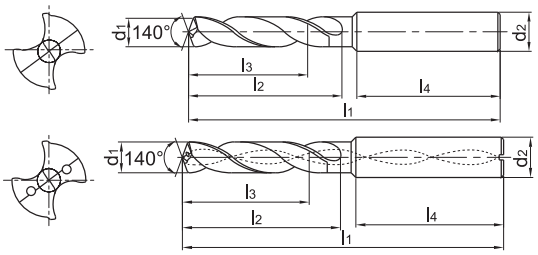
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03C-1380	✻	13.8	14	107	60	43	45	●
1534SU03-1390		13.9	14	107	60	43	45	●
1534SU03-1400		14	14	107	60	43	45	●
1534SU03C-1400	✻	14	14	107	60	43	45	●
1534SU03-1410		14.1	14	107	60	43	45	●
1534SU03C-1410	✻	14.1	16	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	●
1534SU03-1440		14.4	16	115	65	45	48	●
1534SU03-1450		14.5	16	115	65	45	48	●
1534SU03C-1450	✻	14.5	16	115	65	45	48	●
1534SU03-1460		14.6	16	115	65	45	48	●
1534SU03-1470		14.7	16	115	65	45	48	●
1534SU03C-1470	✻	14.7	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	●
1534SU03-1490		14.9	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	●
1534SU03C-1510	✻	15.1	16	115	65	45	48	●
1534SU03C-1520	✻	15.2	16	115	65	45	48	○
1534SU03-1530		15.3	16	115	65	45	48	●
1534SU03C-1535	✻	15.35	16	115	65	45	48	○
1534SU03-1540		15.4	16	115	65	45	48	●
1534SU03-1550		15.5	16	115	65	45	48	●
1534SU03C-1550	✻	15.5	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 C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SU drill 3xD — General machining

1534SU03/1534SU03C



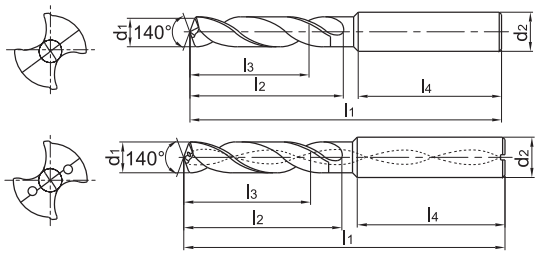
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-1560		15.6	16	115	65	45	48	●
1534SU03-1570		15.7	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	●
1534SU03-1640		16.4	18	123	73	51	48	●
1534SU03C-1640	✻	16.4	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	●
1534SU03C-1720	✻	17.2	18	123	73	51	48	○
1534SU03-1750		17.5	18	123	73	51	48	●
1534SU03C-1750	✻	17.5	18	123	73	51	48	●
1534SU03-1770		17.7	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	●
1534SU03-1950		19.5	20	131	79	55	50	●
1534SU03C-1950	✻	19.5	20	131	79	55	50	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SU drill 3xD General machining

1534SU03/1534SU03C



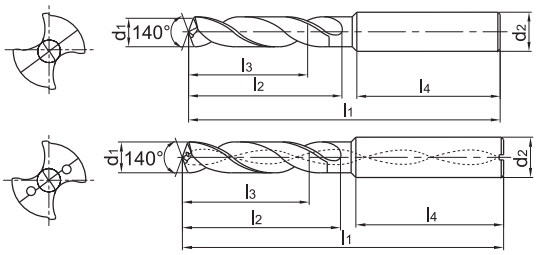
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1534SU03-1980		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
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SU drill 5xD — General machining

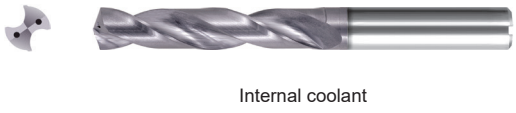
1536SU05/1536SU05C



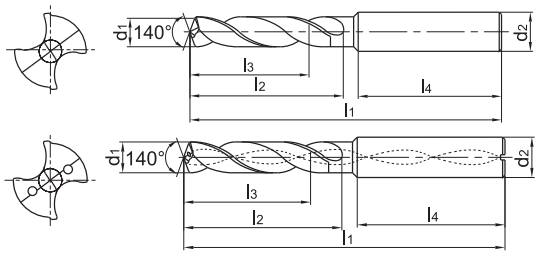
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



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	●
1536SU05-0205		2.05	6	66	28	23	36	○
1536SU05-0210		2.1	6	66	28	23	36	●
1536SU05-0215		2.15	6	66	28	23	36	○
1536SU05-0220		2.2	6	66	28	23	36	●
1536SU05-0230		2.3	6	66	28	23	36	●
1536SU05-0235		2.35	6	66	28	23	36	○
1536SU05-0240		2.4	6	66	28	23	36	●
1536SU05-0245		2.45	6	66	28	23	36	○
1536SU05-0250		2.5	6	66	28	23	36	●
1536SU05-0255		2.55	6	66	28	23	36	○
1536SU05-0260		2.6	6	66	28	23	36	●
1536SU05-0265		2.65	6	66	28	23	36	○
1536SU05-0270		2.7	6	66	28	23	36	●
1536SU05-0275		2.75	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	●
1536SU05-0305		3.05	6	66	28	23	36	○
1536SU05-0310		3.1	6	66	28	23	36	●
1536SU05C-0310	✻	3.1	6	66	28	23	36	●
1536SU05-0315		3.15	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	●
1536SU05-0335		3.35	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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SU drill 5xD General machining

1536SU05/1536SU05C



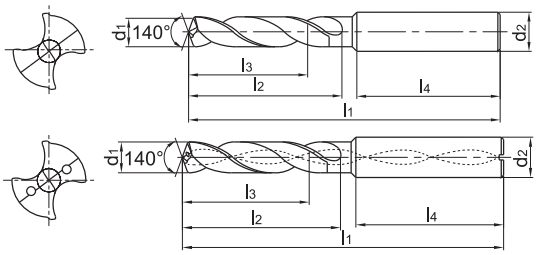
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05C-0350	✻	3.5	6	66	28	23	36	●
1536SU05-0355		3.55	6	66	28	23	36	○
1536SU05-0360		3.6	6	66	28	23	36	●
1536SU05C-0360	✻	3.6	6	66	28	23	36	●
1536SU05C-0362		3.62	6	66	28	23	36	○
1536SU05-0365		3.65	6	66	28	23	36	○
1536SU05-0370		3.7	6	66	28	23	36	●
1536SU05C-0370	✻	3.7	6	66	28	23	36	●
1536SU05-0375		3.75	6	74	36	29	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	●
1536SU05C-0390	✻	3.9	6	74	36	29	36	●
1536SU05-0395		3.95	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	●
1536SU05-0425		4.25	6	74	36	29	36	●
1536SU05C-0425	✻	4.25	6	74	36	29	36	○
1536SU05-0430		4.3	6	74	36	29	36	●
1536SU05C-0430	✻	4.3	6	74	36	29	36	●
1536SU05-0435		4.35	6	74	36	29	36	○
1536SU05-0440		4.4	6	74	36	29	36	●
1536SU05C-0440	✻	4.4	6	74	36	29	36	●
1536SU05-0445		4.45	6	74	36	29	36	○
1536SU05-0450		4.5	6	74	36	29	36	●
1536SU05C-0450	✻	4.5	6	74	36	29	36	●
1536SU05-0455		4.55	6	74	36	29	36	○
1536SU05-0460		4.6	6	74	36	29	36	●
1536SU05C-0460	✻	4.6	6	74	36	29	36	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SU drill 5xD — General machining

1536SU05/1536SU05C



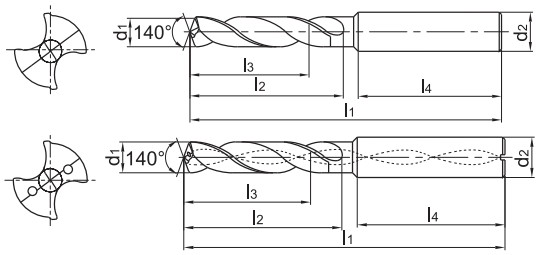
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05-0465		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	●
1536SU05-0475		4.75	6	82	44	35	36	○
1536SU05-0480		4.8	6	82	44	35	36	●
1536SU05C-0480	✻	4.8	6	82	44	35	36	●
1536SU05-0485		4.85	6	82	44	35	36	○
1536SU05-0490		4.9	6	82	44	35	36	●
1536SU05C-0490	✻	4.9	6	82	44	35	36	●
1536SU05-0495		4.95	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	●
1536SU05C-0525	✻	5.25	6	82	44	35	36	○
1536SU05-0530		5.3	6	82	44	35	36	●
1536SU05C-0530	✻	5.3	6	82	44	35	36	●
1536SU05-0535		5.35	6	82	44	35	36	○
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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SU drill 5xD General machining

1536SU05/1536SU05C



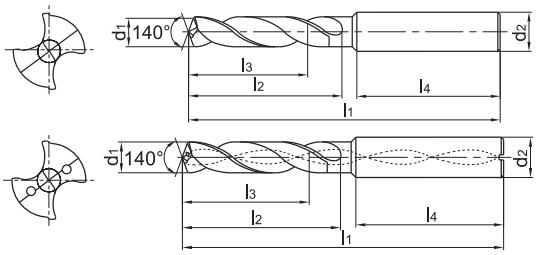
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05-0590		5.9	6	82	44	35	36	●
1536SU05C-0590	✻	5.9	6	82	44	35	36	●
1536SU05-0595		5.95	6	82	44	35	36	○
1536SU05-0600		6	6	82	44	35	36	●
1536SU05C-0600	✻	6	6	82	44	35	36	●
1536SU05C-0605		6.05	8	91	53	43	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	●
1536SU05C-0635	✻	6.35	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	●
1536SU05C-0655	✻	6.55	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	●
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	●
1536SU05-0705		7.05	8	91	53	43	36	●
1536SU05-0710		7.1	8	91	53	43	36	●
1536SU05C-0710	✻	7.1	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 C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SU drill 5xD General machining

1536SU05/1536SU05C



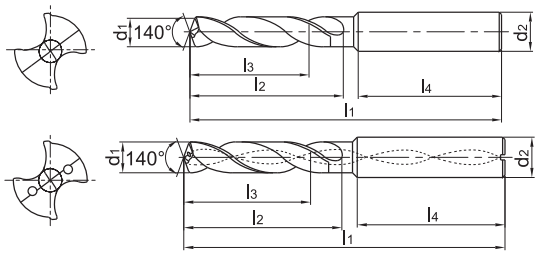
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05-0720		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	●
1536SU05-0745		7.45	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	●
1536SU05-0815		8.15	10	103	61	49	40	○
1536SU05C-0815	✻	8.15	10	103	61	49	40	○
1536SU05-0820		8.2	10	103	61	49	40	●
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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SU drill 5xD General machining

1536SU05/1536SU05C



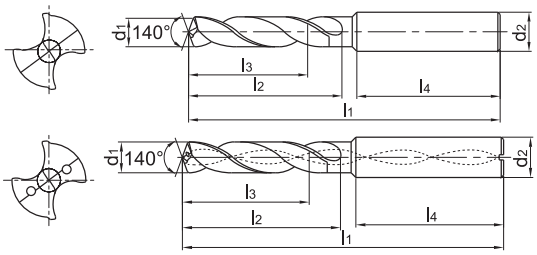
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05C-0860	✻	8.6	10	103	61	49	40	●
1536SU05-0865		8.65	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	●
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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

Solid carbide drills SU series

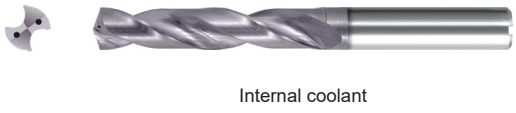
SU drill 5xD General machining

1536SU05/1536SU05C

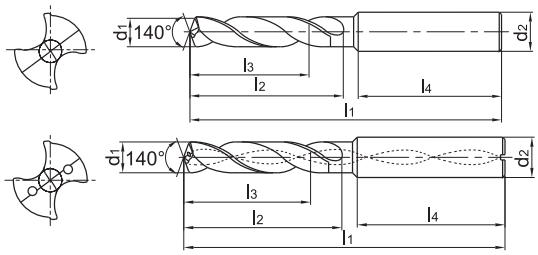
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05C-1000	✻	10	10	103	61	49	40	●
1536SU05C-1005	✻	10.05	12	118	71	56	45	○
1536SU05-1010		10.1	12	118	71	56	45	●
1536SU05C-1010	✻	10.1	12	118	71	56	45	●
1536SU05-1015		10.15	12	118	71	56	45	○
1536SU05C-1015	✻	10.15	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	●
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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SU drill 5xD — General machining

1536SU05/1536SU05C



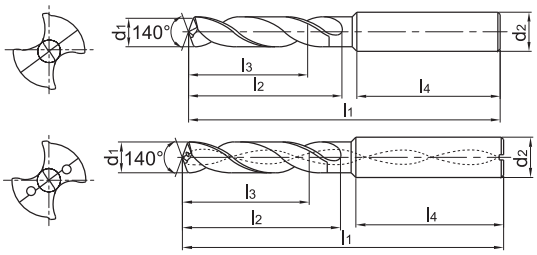
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05C-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	●
1536SU05C-1215	✻	12.15	14	124	77	60	45	○
1536SU05-1220		12.2	14	124	77	60	45	●
1536SU05C-1220	✻	12.2	14	124	77	60	45	●
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	●
1536SU05-1320		12.4	14	124	77	60	45	○
1536SU05-1265		12.4	14	124	77	60	45	○
1536SU05-1240		12.4	14	124	77	60	45	○
1536SU05C-1240	✻	12.4	14	124	77	60	45	○
1536SU05-1250		12.5	14	124	77	60	45	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SU drill 5xD — General machining

1536SU05/1536SU05C



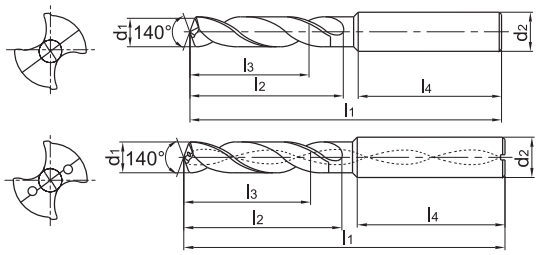
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05C-1250	✻	12.5	14	124	77	60	45	●
1536SU05C-1260	✻	12.6	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	●
1536SU05C-1320	✻	13.2	14	124	77	60	45	○
1536SU05C-1330	✻	13.3	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	●
1536SU05C-1390	✻	13.9	14	124	77	60	45	●
1536SU05-1400		14	14	124	77	60	45	●
1536SU05C-1400	✻	14	14	124	77	60	45	●
1536SU05-1410		14.1	16	124	77	60	45	●
1536SU05C-1410	✻	14.1	16	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	●
1536SU05C-1440	✻	14.4	16	133	83	63	48	●
1536SU05-1450		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 > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SU drill 5xD — General machining

1536SU05/1536SU05C



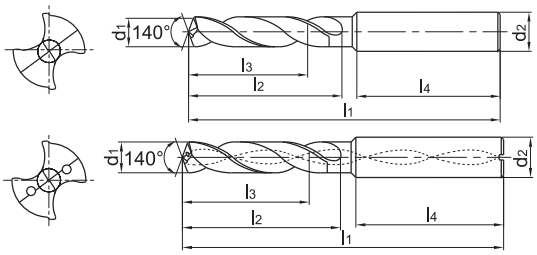
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



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	●
1536SU05-1460		14.6	16	133	83	63	48	○
1536SU05C-1470	✻	14.7	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	●
1536SU05-1515		15.15	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	●
1536SU05-1560		15.6	16	133	83	63	48	●
1536SU05C-1560	✻	15.6	16	133	83	63	48	●
1536SU05C-1570	✻	15.7	16	133	83	63	48	○
1536SU05-1580		15.8	16	133	83	63	48	●
1536SU05C-1580	✻	15.8	16	133	83	63	48	●
1536SU05C-1590	✻	15.9	16	133	83	63	48	○
1536SU05-1600		16	16	133	83	63	48	●
1536SU05C-1600	✻	16	16	133	83	63	48	●
1536SU05-1710		16.2	18	143	93	71	48	●
1536SU05-1620		16.2	18	143	93	71	48	○
1536SU05C-1620	✻	16.2	18	143	93	71	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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SU drill 5xD — General machining

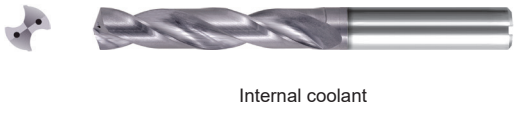
1536SU05/1536SU05C



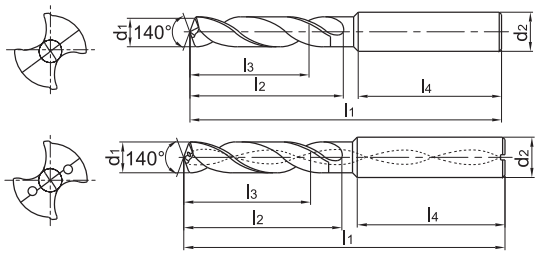
– Type of shank DIN 6535HA
– Coolant exit, axial concentric



External coolant



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1536SU05C-1680	✲	16.8	18	143	93	71	48	●
1536SU05-1700		17	18	143	93	71	48	●
1536SU05C-1700	✲	17	18	143	93	71	48	●
1536SU05C-1710	✲	17.1	18	143	93	71	48	●
1536SU05C-1730	✲	17.3	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	●
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	●
1536SU05-1860		18.6	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	●
1536SU05C-1930	✲	19.3	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
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SU drill 8xD General machining

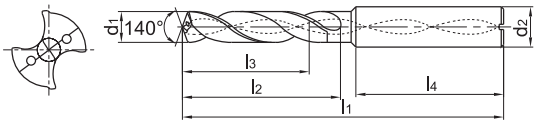
1538SU08C



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



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	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-0505	✻	5.05	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
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

Solid carbide drills SU series

SU drill 8xD General machining

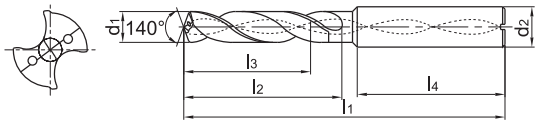
1538SU08C



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



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	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	●
1538SU08C-1020	✲	10.2	12	162	114	99	45	●

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SU drill 8xD General machining

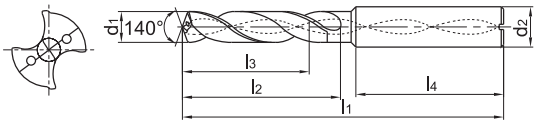
1538SU08C



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



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG303
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-1220	✲	12.2	14	178	133	116	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-1310		13.1	14	178	133	116	45	○
1538SU08C-1350	✲	13.5	14	178	133	116	45	●
1538SU08C-1400	✲	14	14	178	133	116	45	●
1538SU08C-1420	✲	14.2	16	204	152	132	48	○
1538SU08C-1450	✲	14.5	16	204	152	132	48	●
1538SU08C-1460	✲	14.6	16	204	152	132	48	○
1538SU08C-1470	✲	14.7	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-1610	✲	16.1	18	223	171	149	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
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code C38 Machining instructions C193 Cutting data C142 Nonstandard order C148

SU drill 3xD — General machining

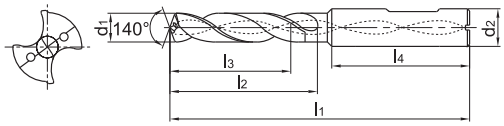
1634SU03C



– Type of shank: DIN 6535HB
– Coolant exit, axial concentric



External 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	●
1634SU03C-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 > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SU drill 3xD — General machining

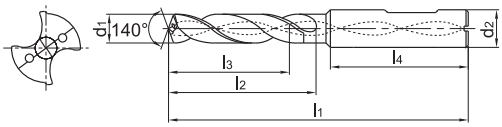
1634SU03C



– Type of shank: DIN 6535HB
– Coolant exit, axial concentric



External coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
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-0805		8.05	10	89	47	35	40	○
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-0940	✻	9.4	10	89	47	35	40	●
1634SU03C-0945	✻	9.45	10	89	47	35	40	○
1634SU03C-0950	✻	9.5	10	89	47	35	40	●
1634SU03C-0960	✻	9.6	10	89	47	35	40	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

Solid carbide drills SU series

SU drill 3xD General machining

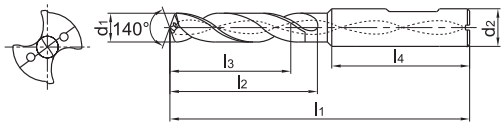
1634SU03C



– Type of shank: DIN 6535HB
– Coolant exit, axial concentric



External coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
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-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-1240	✲	12.4	14	107	60	43	45	○
1634SU03C-1250	✲	12.5	14	107	60	43	45	●
1634SU03C-1260	✲	12.6	14	107	60	43	45	○
1634SU03C-1270	✲	12.7	14	107	60	43	45	●
1634SU03C-1275	✲	12.75	14	107	60	43	45	○
1634SU03C-1280	✲	12.8	14	107	60	43	45	●

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SU drill 3xD General machining

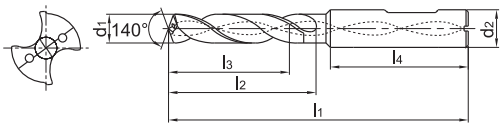
1634SU03C



– Type of shank: DIN 6535HB
– Coolant exit, axial concentric



External coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
1634SU03C-1290	✻	12.9	14	107	60	43	45	●
1634SU03C-1300	✻	13	14	107	60	43	45	●
1634SU03C-1310	✻	13.1	14	107	60	43	45	●
1634SU03C-1320	✻	13.2	14	107	60	43	45	●
1634SU03C-1330	✻	13.3	14	107	60	43	45	○
1634SU03C-1335	✻	13.35	14	107	60	43	45	○
1634SU03C-1340	✻	13.4	14	107	60	43	45	●
1634SU03C-1350	✻	13.5	14	107	60	43	45	●
1634SU03C-1360	✻	13.6	14	107	60	43	45	○
1634SU03C-1370	✻	13.7	14	107	60	43	45	○
1634SU03C-1380	✻	13.8	14	107	60	43	45	●
1634SU03C-1390	✻	13.9	14	107	60	43	45	○
1634SU03C-1400	✻	14	14	107	60	43	45	●
1634SU03C-1410	✻	14.1	16	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-1460	✻	14.6	16	115	65	45	48	○
1634SU03C-1470	✻	14.7	16	115	65	45	48	○
1634SU03C-1475	✻	14.75	16	115	65	45	48	○
1634SU03C-1480	✻	14.8	16	115	65	45	48	●
1634SU03C-1490	✻	14.9	16	115	65	45	48	○
1634SU03C-1500	✻	15	16	115	65	45	48	●
1634SU03C-1510	✻	15.1	16	115	65	45	48	○
1634SU03C-1530	✻	15.3	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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SU drill 3xD General machining

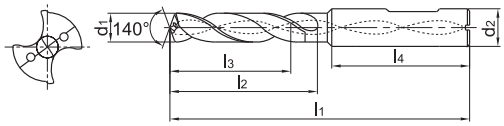
1634SU03C



– Type of shank: DIN 6535HB
– Coolant exit, axial concentric



External coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG303
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
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SU drill 5xD — General machining

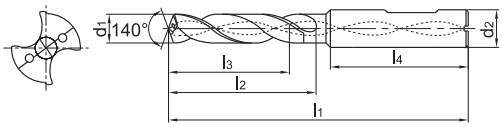
1636SU05C



– Type of shank: DIN 6535HB
– 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	●
1636SU05C-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 > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

Solid carbide drills SU series

SU drill 5xD General machining

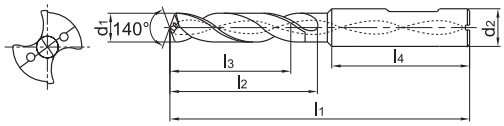
1636SU05C



– Type of shank: DIN 6535HB
– 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-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	○
1636SU05C-0950	✲	9.5	10	103	61	49	40	●
1636SU05C-0960	✲	9.6	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 C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SU drill 5xD — General machining

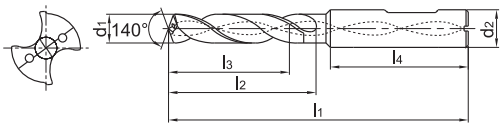
1636SU05C



– Type of shank: DIN 6535HB
– 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-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-1260	✻	12.6	14	124	77	60	45	●
1636SU05C-1270	✻	12.7	14	124	77	60	45	●
1636SU05C-1275	✻	12.75	14	124	77	60	45	○
1636SU05C-1280	✻	12.8	14	124	77	60	45	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SU drill 5xD General machining

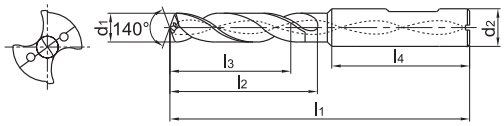
1636SU05C



– Type of shank: DIN 6535HB
– 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-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-1530	✲	15.3	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
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔			

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SU drill 3xD General machining

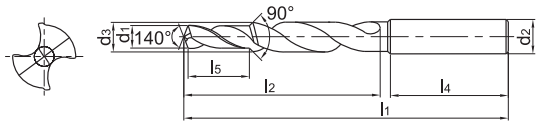
1557SU03



– 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-M14		12	16	16	115	65	48	34.5	●
1557SU03-M16		14	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

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

Notes

IMPORTANT INFORMATION

Recommended applications for the **UL series**

Feed calculator

ISO group	Material	Cutting speed v_c (m/min)	Feed factor F_m
M	Stainless steels	65	0,02
S	Ni- / Co-based alloys	30	0,01
S	Titanium alloys	50	0,012

Formula: feed per revolution (F_n) $D \times F_m$
Example: drill diameter (D) 10 mm
material stainless steel

$$F_n = 10\ mm \times 0{,}02 = 0{,}2\ mm/r$$

*The stated values are maximum values. For unstable clamping set-ups or low-powered machines, we recommend reducing the feed by around 30% for a drill diameter of Ø12 mm or greater.



Fig.: **1588UL30C**

SP drill 3xD General machining

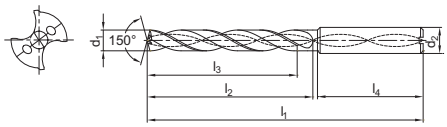
1534SP03C



– 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 mmPilot drill Ø = Deep drill Ø + 0,03 mm

✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SP drill 3xD — General machining

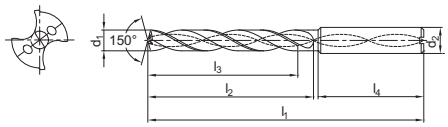
1534SP03C



– 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 mmPilot drill Ø = Deep drill Ø + 0,03 mm

✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

Solid carbide drills SP/SL/UL series

SP drill 3xD General machining

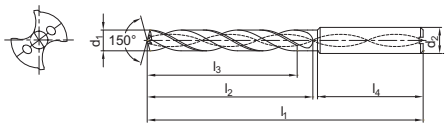
1534SP03C



– 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-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-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	○
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 mmPilot drill Ø = Deep drill Ø + 0,03 mm

✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SL drill 10xD General machining

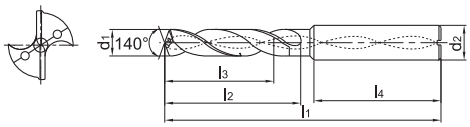
1588SL10C



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



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	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-0465	✻	4.65	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-0555	✻	5.55	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	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SL drill 10xD General machining

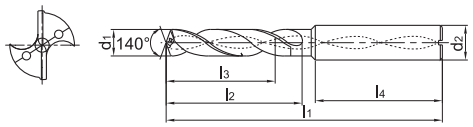
1588SL10C



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



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG303
1588SL10C-0650	✲	6.5	8	117	80	71	36	●
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
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SL drill 10xD — General machining

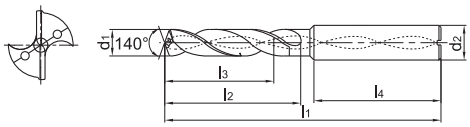
1588SL10C



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



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG303
1588SL10C-1020	✲	10.2	12	183	135	121	45	●
1588SL10C-1025	✲	10.25	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-1210	✲	12.1	14	209	160	144	45	●
1588SL10C-1220	✲	12.2	14	209	160	144	45	●
1588SL10C-1225	✲	12.25	14	209	160	144	45	●
1588SL10C-1230	✲	12.3	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
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SL drill 12xD General machining

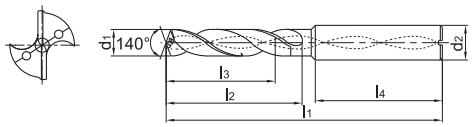
1588SL12C



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



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	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	●
1588SL12C-0660	✲	6.6	8	131	93	84	36	●

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SL drill 12xD — General machining

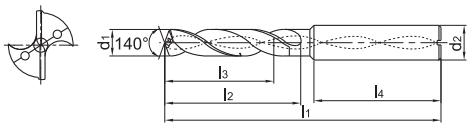
1588SL12C



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



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG303
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	●
1588SL12C-1020	✻	10.2	12	204	156	144	45	●
1588SL12C-1030	✻	10.3	12	204	156	144	45	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SL drill 12xD General machining

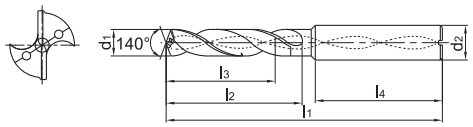
1588SL12C



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



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG303
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-1380	✲	13.8	14	230	182	168	45	○
1588SL12C-1400	✲	14	14	230	182	168	45	○
1588SL12C-1425	✲	14.25	16	260	208	194	48	○
1588SL12C-1450	✲	14.5	16	260	208	194	48	○
1588SL12C-1460	✲	14.6	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-1780	✲	17.8	18	286	234	218	48	○
1588SL12C-1800	✲	18	18	286	234	218	48	○
1588SL12C-1900	✲	19	20	310	258	240	48	○
1588SL12C-1950	✲	19.5	20	310	258	240	48	○

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SL drill 12xD General machining

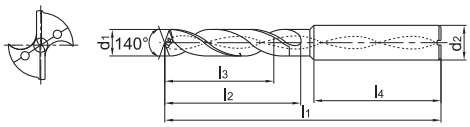
1588SL12C



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



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	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
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SL drill 15xD General machining

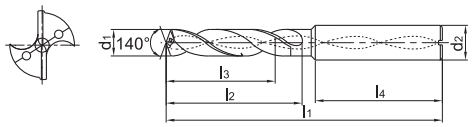
1588SL15C



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



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	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-0335		3.35	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
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SL drill 15xD General machining

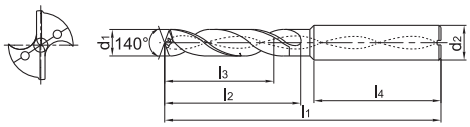
1588SL15C



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



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	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	○
1588SL15C-1020	✻	10.2	12	240	190	178	45	○

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SL drill 15xD — General machining

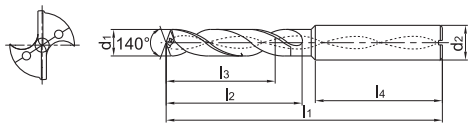
1588SL15C



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



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG303
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-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	●
1588SL15C-1400	✲	14	14	298	250	100	48	○

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SL drill 20xD — General machining

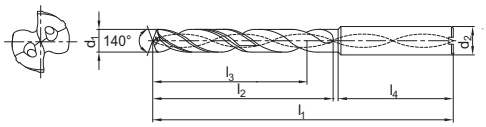
1588SL20C



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



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d1 (h7)	d_2 (h5)	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	●
1588SL20C-0660	✻	6.6	8	202	162	144	36	○

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SL drill 20xD — General machining

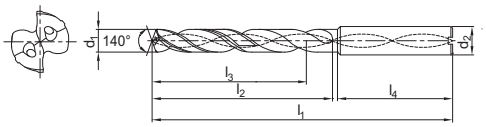
1588SL20C



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



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d1 (h7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG303
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-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	○
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	○

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

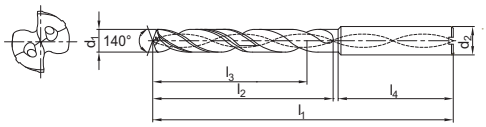
SL drill 20xD General machining

1588SL20C

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



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d1 (h7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG303
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-1270	✻	12.7	14	338	290	265	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	○
1588SL20C-1600	✻	16	16	415	361	100	54	○

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SL drill 30xD General machining

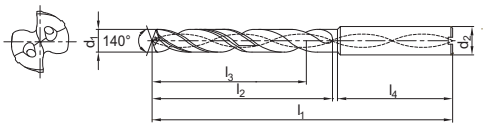
1588SL30C



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



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d1 (h7)	d_2 (h5)	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-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	●
1588SL30C-0660	✲	6.6	8	272	232	214	36	○
1588SL30C-0670	✲	6.7	8	272	232	214	36	○

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SL drill 30xD General machining

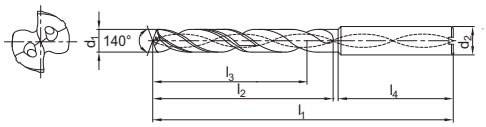
1588SL30C



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



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d1 (h7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG303
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-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
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔	✔	

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

UL drill 10xD General machining

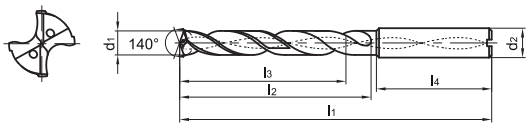
1588UL10C



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



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG305
1588UL10C-0300	✲	3	6	80	43	39	36	●
1588UL10C-0310	✲	3.1	6	80	43	39	36	●
1588UL10C-0320	✲	3.2	6	80	43	39	36	●
1588UL10C-0330	✲	3.3	6	80	43	39	36	●
1588UL10C-0340	✲	3.4	6	80	43	39	36	●
1588UL10C-0350	✲	3.5	6	80	43	39	36	●
1588UL10C-0360	✲	3.6	6	80	43	39	36	●
1588UL10C-0370	✲	3.7	6	80	43	39	36	●
1588UL10C-0380	✲	3.8	6	80	43	39	36	●
1588UL10C-0390	✲	3.9	6	80	43	39	36	●
1588UL10C-0400	✲	4	6	92	55	50	36	●
1588UL10C-0410	✲	4.1	6	92	55	50	36	●
1588UL10C-0420	✲	4.2	6	92	55	50	36	●
1588UL10C-0430	✲	4.3	6	92	55	50	36	●
1588UL10C-0440	✲	4.4	6	92	55	50	36	●
1588UL10C-0450	✲	4.5	6	92	55	50	36	●
1588UL10C-0460	✲	4.6	6	92	55	50	36	●
1588UL10C-0470	✲	4.7	6	92	55	50	36	●
1588UL10C-0480	✲	4.8	6	92	55	50	36	●
1588UL10C-0490	✲	4.9	6	92	55	50	36	●
1588UL10C-0500	✲	5	6	104	68	61	36	●
1588UL10C-0510	✲	5.1	6	104	68	61	36	●
1588UL10C-0520	✲	5.2	6	104	68	61	36	●
1588UL10C-0530	✲	5.3	6	104	68	61	36	●
1588UL10C-0540	✲	5.4	6	104	68	61	36	●
1588UL10C-0550	✲	5.5	6	104	68	61	36	●
1588UL10C-0560	✲	5.6	6	104	68	61	36	●
1588UL10C-0570	✲	5.7	6	104	68	61	36	●
1588UL10C-0580	✲	5.8	6	104	68	61	36	●
1588UL10C-0590	✲	5.9	6	104	68	61	36	●
1588UL10C-0600	✲	6	6	104	68	61	36	●
1588UL10C-0610	✲	6.1	8	117	80	71	36	●
1588UL10C-0620	✲	6.2	8	117	80	71	36	●
1588UL10C-0630	✲	6.3	8	117	80	71	36	●
1588UL10C-0640	✲	6.4	8	117	80	71	36	●
1588UL10C-0650	✲	6.5	8	117	80	71	36	●
1588UL10C-0660	✲	6.6	8	117	80	71	36	●

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

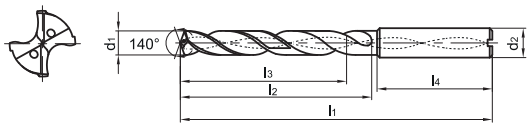
UL drill 10xD General machining

1588UL10C

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



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG305
1588UL10C-0670	✻	6.7	8	117	80	71	36	○
1588UL10C-0680	✻	6.8	8	117	80	71	36	●
1588UL10C-0690	✻	6.9	8	117	80	71	36	○
1588UL10C-0700	✻	7	8	117	80	71	36	●
1588UL10C-0710	✻	7.1	8	130	94	84	36	○
1588UL10C-0720	✻	7.2	8	130	94	84	36	○
1588UL10C-0730	✻	7.3	8	130	94	84	36	○
1588UL10C-0740	✻	7.4	8	130	94	84	36	○
1588UL10C-0750	✻	7.5	8	130	94	84	36	●
1588UL10C-0760	✻	7.6	8	130	94	84	36	○
1588UL10C-0770	✻	7.7	8	130	94	84	36	○
1588UL10C-0780	✻	7.8	8	130	94	84	36	○
1588UL10C-0790	✻	7.9	8	130	94	84	36	○
1588UL10C-0800	✻	8	8	130	94	84	36	●
1588UL10C-0810	✻	8.1	10	148	105	94	40	○
1588UL10C-0820	✻	8.2	10	148	105	94	40	○
1588UL10C-0830	✻	8.3	10	148	105	94	40	○
1588UL10C-0840	✻	8.4	10	148	105	94	40	○
1588UL10C-0850	✻	8.5	10	148	105	94	40	●
1588UL10C-0860	✻	8.6	10	148	105	94	40	○
1588UL10C-0870	✻	8.7	10	148	105	94	40	○
1588UL10C-0880	✻	8.8	10	148	105	94	40	○
1588UL10C-0890	✻	8.9	10	148	105	94	40	○
1588UL10C-0900	✻	9	10	148	105	94	40	●
1588UL10C-0910	✻	9.1	10	158	115	103	40	○
1588UL10C-0920	✻	9.2	10	158	115	103	40	○
1588UL10C-0930	✻	9.3	10	158	115	103	40	○
1588UL10C-0940	✻	9.4	10	158	115	103	40	○
1588UL10C-0950	✻	9.5	10	158	115	103	40	●
1588UL10C-0960	✻	9.6	10	158	115	103	40	○
1588UL10C-0970	✻	9.7	10	158	115	103	40	○
1588UL10C-0980	✻	9.8	10	158	115	103	40	○
1588UL10C-0990	✻	9.9	10	158	115	103	40	○
1588UL10C-1000	✻	10	10	158	115	103	40	●
1588UL10C-1050	✻	10.5	12	183	135	121	45	○
1588UL10C-1100	✻	11	12	183	135	121	45	○
1588UL10C-1150	✻	11.5	12	183	135	121	45	○

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

UL drill 10xD General machining

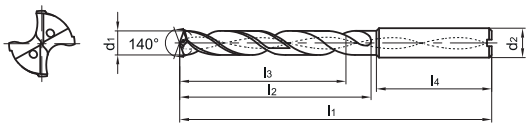
1588UL10C



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



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG305
1588UL10C-1200	✲	12	12	183	135	121	45	●
1588UL10C-1250	✲	12.5	14	209	160	144	45	○
1588UL10C-1300	✲	13	14	209	160	144	45	○
1588UL10C-1350	✲	13.5	14	209	160	144	45	○
1588UL10C-1400	✲	14	14	209	160	144	45	●
1588UL10C-1450	✲	14.5	16	234	184	145	48	○
1588UL10C-1500	✲	15	16	234	184	150	48	○
1588UL10C-1550	✲	15.5	16	234	184	155	48	○
1588UL10C-1600	✲	16	16	234	184	160	48	●
1588UL10C-1650	✲	16.5	18	258	208	165	48	○
1588UL10C-1700	✲	17	18	258	208	170	48	○
1588UL10C-1750	✲	17.5	18	258	208	175	48	○
1588UL10C-1800	✲	18	18	258	208	180	48	○
1588UL10C-1850	✲	18.5	20	284	232	185	50	○
1588UL10C-1900	✲	19	20	284	232	190	50	○
1588UL10C-1950	✲	19.5	20	284	232	195	50	○
1588UL10C-2000	✲	20	20	284	232	200	50	○

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

UL drill 20xD General machining

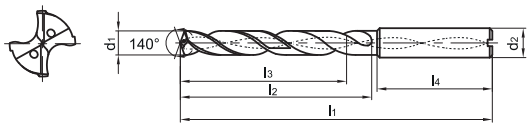
1588UL20C



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



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d1 (h7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG305
1588UL20C-0300	✻	3	6	110	70	62	36	●
1588UL20C-0310	✻	3.1	6	123	83	72	36	●
1588UL20C-0320	✻	3.2	6	123	83	72	36	●
1588UL20C-0330	✻	3.3	6	123	83	72	36	●
1588UL20C-0340	✻	3.4	6	123	83	72	36	●
1588UL20C-0350	✻	3.5	6	123	83	72	36	●
1588UL20C-0360	✻	3.6	6	136	96	84	36	●
1588UL20C-0370	✻	3.7	6	136	96	84	36	●
1588UL20C-0380	✻	3.8	6	136	96	84	36	●
1588UL20C-0390	✻	3.9	6	136	96	84	36	●
1588UL20C-0400	✻	4	6	136	96	84	36	●
1588UL20C-0410	✻	4.1	6	148	108	96	36	●
1588UL20C-0420	✻	4.2	6	148	108	96	36	●
1588UL20C-0430	✻	4.3	6	148	108	96	36	●
1588UL20C-0440	✻	4.4	6	148	108	96	36	●
1588UL20C-0450	✻	4.5	6	148	108	96	36	●
1588UL20C-0460	✻	4.6	6	158	118	106	36	●
1588UL20C-0470	✻	4.7	6	158	118	106	36	○
1588UL20C-0480	✻	4.8	6	158	118	106	36	○
1588UL20C-0490	✻	4.9	6	158	118	106	36	●
1588UL20C-0500	✻	5	6	158	118	106	36	●
1588UL20C-0510	✻	5.1	6	168	128	116	36	●
1588UL20C-0520	✻	5.2	6	168	128	116	36	●
1588UL20C-0530	✻	5.3	6	168	128	116	36	●
1588UL20C-0540	✻	5.4	6	168	128	116	36	○
1588UL20C-0550	✻	5.5	6	168	128	116	36	●
1588UL20C-0560	✻	5.6	6	180	140	126	36	●
1588UL20C-0570	✻	5.7	6	180	140	126	36	●
1588UL20C-0580	✻	5.8	6	180	140	126	36	●
1588UL20C-0590	✻	5.9	6	180	140	126	36	○
1588UL20C-0600	✻	6	6	180	140	126	36	●
1588UL20C-0610	✻	6.1	8	192	150	132	36	●
1588UL20C-0620	✻	6.2	8	192	150	132	36	●
1588UL20C-0630	✻	6.3	8	192	150	132	36	●
1588UL20C-0640	✻	6.4	8	192	150	132	36	●
1588UL20C-0650	✻	6.5	8	192	150	132	36	●
1588UL20C-0660	✻	6.6	8	202	162	144	36	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

UL drill 20xD General machining

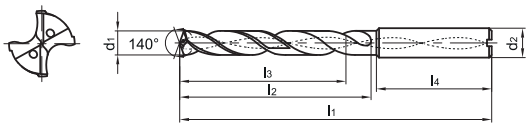
1588UL20C



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



Internal coolant



Article	✲	Dimensions [mm]						Grade
		d1 (h7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG305
1588UL20C-0670	✲	6.7	8	202	162	144	36	○
1588UL20C-0680	✲	6.8	8	202	162	144	36	●
1588UL20C-0690	✲	6.9	8	202	162	144	36	●
1588UL20C-0700	✲	7	8	202	162	144	36	●
1588UL20C-0710	✲	7.1	8	213	173	155	36	●
1588UL20C-0720	✲	7.2	8	213	173	155	36	○
1588UL20C-0730	✲	7.3	8	213	173	155	36	●
1588UL20C-0740	✲	7.4	8	213	173	155	36	○
1588UL20C-0750	✲	7.5	8	213	173	155	36	●
1588UL20C-0760	✲	7.6	8	223	183	165	36	○
1588UL20C-0770	✲	7.7	8	223	183	165	36	○
1588UL20C-0780	✲	7.8	8	223	183	165	36	●
1588UL20C-0790	✲	7.9	8	223	183	165	36	○
1588UL20C-0800	✲	8	8	223	183	165	36	●
1588UL20C-0810	✲	8.1	10	239	195	176	40	●
1588UL20C-0830	✲	8.3	10	239	195	176	40	○
1588UL20C-0840	✲	8.4	10	239	195	176	40	○
1588UL20C-0850	✲	8.5	10	239	195	176	40	●
1588UL20C-0860	✲	8.6	10	249	205	186	40	○
1588UL20C-0870	✲	8.7	10	249	205	186	40	○
1588UL20C-0880	✲	8.8	10	249	205	186	40	○
1588UL20C-0890	✲	8.9	10	249	205	186	40	○
1588UL20C-0900	✲	9	10	249	205	186	40	●
1588UL20C-0910	✲	9.1	10	262	218	196	36	○
1588UL20C-0920	✲	9.2	10	262	218	196	36	○
1588UL20C-0930	✲	9.3	10	262	218	196	36	○
1588UL20C-0940	✲	9.4	10	262	218	196	36	○
1588UL20C-0950	✲	9.5	10	262	218	196	36	●
1588UL20C-0960	✲	9.6	10	272	228	206	40	○
1588UL20C-0970	✲	9.7	10	272	228	206	40	○
1588UL20C-0980	✲	9.8	10	272	228	206	40	○
1588UL20C-0990	✲	9.9	10	272	228	206	40	○
1588UL20C-1000	✲	10	10	272	228	206	40	●
1588UL20C-1050	✲	10.5	12	292	242	220	45	●
1588UL20C-1100	✲	11	12	300	250	228	45	●
1588UL20C-1150	✲	11.5	12	315	265	240	45	●
1588UL20C-1200	✲	12	12	325	275	250	45	○

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

UL drill 20xD General machining

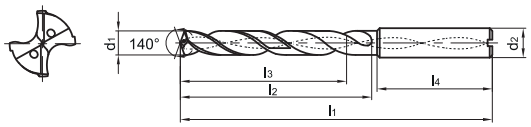
1588UL20C



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



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d1 (h7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG305
1588UL20C-1250	✻	12.5	14	325	275	250	45	○
1588UL20C-1300	✻	13	14	338	290	265	45	○
1588UL20C-1350	✻	13.5	14	338	290	265	45	○
1588UL20C-1400	✻	14	14	367	318	290	45	○

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

UL drill 30xD General machining

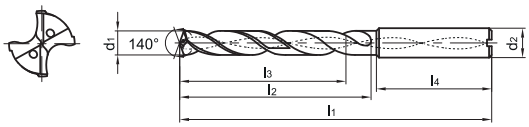
1588UL30C



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



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d1 (h7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG305
1588UL30C-0300	✻	3	6	140	100	92	36	●
1588UL30C-0310	✻	3.1	6	160	120	108	36	○
1588UL30C-0320	✻	3.2	6	160	120	108	36	●
1588UL30C-0330	✻	3.3	6	160	120	108	36	●
1588UL30C-0340	✻	3.4	6	160	120	108	36	●
1588UL30C-0360	✻	3.6	6	176	136	124	36	●
1588UL30C-0370	✻	3.7	6	176	136	124	36	○
1588UL30C-0380	✻	3.8	6	176	136	124	36	●
1588UL30C-0390	✻	3.9	6	176	136	124	36	●
1588UL30C-0410	✻	4.1	6	192	152	140	36	○
1588UL30C-0420	✻	4.2	6	192	152	140	36	●
1588UL30C-0430	✻	4.3	6	192	152	140	36	○
1588UL30C-0440	✻	4.4	6	192	152	140	36	○
1588UL30C-0450	✻	4.5	6	192	152	140	36	●
1588UL30C-0460	✻	4.6	6	208	168	156	36	○
1588UL30C-0470	✻	4.7	6	208	168	156	36	○
1588UL30C-0480	✻	4.8	6	208	168	156	36	●
1588UL30C-0490	✻	4.9	6	208	168	156	36	●
1588UL30C-0500	✻	5	6	208	168	156	36	●
1588UL30C-0510	✻	5.1	6	228	188	170	36	●
1588UL30C-0520	✻	5.2	6	228	188	170	36	●
1588UL30C-0530	✻	5.3	6	228	188	170	36	○
1588UL30C-0540	✻	5.4	6	228	188	170	36	○
1588UL30C-0550	✻	5.5	6	228	188	170	36	●
1588UL30C-0560	✻	5.6	6	240	200	182	36	○
1588UL30C-0570	✻	5.7	6	240	200	182	36	○
1588UL30C-0580	✻	5.8	6	240	200	182	36	○
1588UL30C-0590	✻	5.9	6	240	200	182	36	○
1588UL30C-0600	✻	6	6	240	200	182	36	●
1588UL30C-0610	✻	6.1	8	260	220	202	36	○
1588UL30C-0620	✻	6.2	8	260	220	202	36	●
1588UL30C-0630	✻	6.3	8	260	220	202	36	●
1588UL30C-0640	✻	6.4	8	260	220	202	36	●
1588UL30C-0650	✻	6.5	8	260	220	202	36	●
1588UL30C-0660	✻	6.6	8	272	232	214	36	●
1588UL30C-0670	✻	6.7	8	272	232	214	36	○
1588UL30C-0680	✻	6.8	8	272	232	214	36	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

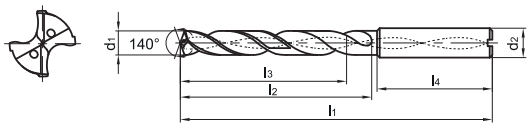
UL drill 30xD General machining

1588UL30C

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



Internal coolant



Article	✻	Dimensions [mm]						Grade
		d1 (h7)	d_2 (h5)	l_1	l_2	l_3	l_4	KDG305
1588UL30C-0690	✻	6.9	8	272	232	214	36	○
1588UL30C-0700	✻	7	8	272	232	214	36	●
1588UL30C-0710	✻	7.1	8	290	250	232	36	○
1588UL30C-0720	✻	7.2	8	290	250	232	36	○
1588UL30C-0730	✻	7.3	8	290	250	232	36	○
1588UL30C-0740	✻	7.4	8	290	250	232	36	○
1588UL30C-0750	✻	7.5	8	290	250	232	36	●
1588UL30C-0760	✻	7.6	8	305	265	246	36	○
1588UL30C-0770	✻	7.7	8	305	265	246	36	○
1588UL30C-0780	✻	7.8	8	305	265	246	36	○
1588UL30C-0790	✻	7.9	8	305	265	246	36	○
1588UL30C-0800	✻	8	8	305	265	246	36	●
1588UL30C-0810	✻	8.1	10	330	285	265	40	○
1588UL30C-0820	✻	8.2	10	330	285	265	40	●
1588UL30C-0830	✻	8.3	10	330	285	265	40	○
1588UL30C-0840	✻	8.4	10	330	285	265	40	○
1588UL30C-0850	✻	8.5	10	330	285	265	40	●
1588UL30C-0860	✻	8.6	10	340	295	275	40	●
1588UL30C-0870	✻	8.7	10	340	295	275	40	○
1588UL30C-0880	✻	8.8	10	340	295	275	40	○
1588UL30C-0890	✻	8.9	10	340	295	275	40	○
1588UL30C-0900	✻	9	10	340	295	275	40	●
1588UL30C-0910	✻	9.1	10	360	315	292	40	○
1588UL30C-0920	✻	9.2	10	360	315	292	40	○
1588UL30C-0930	✻	9.3	10	360	315	292	40	○
1588UL30C-0940	✻	9.4	10	360	315	292	40	○
1588UL30C-0950	✻	9.5	10	360	315	292	40	○
1588UL30C-0960	✻	9.6	10	372	328	305	40	○
1588UL30C-0970	✻	9.7	10	372	328	305	40	○
1588UL30C-0980	✻	9.8	10	372	328	305	40	○
1588UL30C-0990	✻	9.9	10	372	328	305	40	○
1588UL30C-1000	✻	10	10	372	328	305	40	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

Notes

IMPORTANT INFORMATION

Recommended applications for the **GD series**

Feed calculator

ISO group	Material	Cutting speed v_c (m/min)	Feed factor* F_m
P	Low-alloy steel	130	0,04
	High-alloy steel	100	0,03
K	Cast iron	160	0,04
	Cast steel	130	0,03

Formula:	feed per revolution (F_n)	$D \times F_m$
Example:	drill diameter (D)	10 mm
	material	high-alloy steel

F_n = 10 mm × 0,03 = 0,3 mm/rev.

*The stated values are maximum values. For unstable clamping set-ups or low-powered machines, we recommend reducing the feed by around 30% for a drill diameter of Ø12 mm or greater.



Fig.: **1536GD05C**

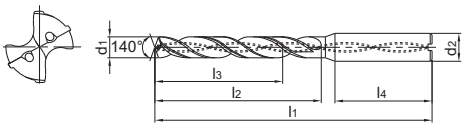
GD drill 3xD — Steel, cast iron

1534GD03C

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



External coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1534GD03C-0300	✲	3	6	62	20	14	36	●
1534GD03C-0310	✲	3.1	6	62	20	14	36	●
1534GD03C-0320	✲	3.2	6	62	20	14	36	●
1534GD03C-0330	✲	3.3	6	62	20	14	36	●
1534GD03C-0340	✲	3.4	6	62	20	14	36	●
1534GD03C-0350	✲	3.5	6	62	20	14	36	●
1534GD03C-0360	✲	3.6	6	62	20	14	36	●
1534GD03C-0370	✲	3.7	6	62	20	14	36	●
1534GD03C-0380	✲	3.8	6	66	24	17	36	●
1534GD03C-0390	✲	3.9	6	66	24	17	36	●
1534GD03C-0400	✲	4	6	66	24	17	36	●
1534GD03C-0410	✲	4.1	6	66	24	17	36	●
1534GD03C-0420	✲	4.2	6	66	24	17	36	●
1534GD03C-0430	✲	4.3	6	66	24	17	36	●
1534GD03C-0440	✲	4.4	6	66	24	17	36	●
1534GD03C-0450	✲	4.5	6	66	24	17	36	●
1534GD03C-0460	✲	4.6	6	66	24	17	36	●
1534GD03C-0465	✲	4.65	6	66	24	17	36	●
1534GD03C-0470	✲	4.7	6	66	24	17	36	●
1534GD03C-0480	✲	4.8	6	66	28	20	36	●
1534GD03C-0490	✲	4.9	6	66	28	20	36	●
1534GD03C-0500	✲	5	6	66	28	20	36	●
1534GD03C-0510	✲	5.1	6	66	28	20	36	●
1534GD03C-0520	✲	5.2	6	66	28	20	36	●
1534GD03C-0530	✲	5.3	6	66	28	20	36	●
1534GD03C-0540	✲	5.4	6	66	28	20	36	●
1534GD03C-0550	✲	5.5	6	66	28	20	36	●
1534GD03C-0560	✲	5.6	6	66	28	20	36	●
1534GD03C-0570	✲	5.7	6	66	28	20	36	●
1534GD03C-0580	✲	5.8	6	66	28	20	36	●
1534GD03C-0590	✲	5.9	6	66	28	20	36	●
1534GD03C-0600	✲	6	6	66	28	20	36	●
1534GD03C-0610	✲	6.1	8	79	34	24	36	●
1534GD03C-0620	✲	6.2	8	79	34	24	36	●
1534GD03C-0630	✲	6.3	8	79	34	24	36	●
1534GD03C-0640	✲	6.4	8	79	34	24	36	●
1534GD03C-0650	✲	6.5	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 > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

GD drill 3xD — Steel, cast iron

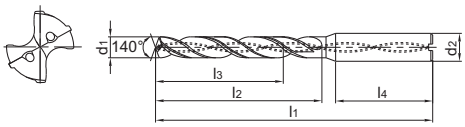
1534GD03C



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



External coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1534GD03C-0660	✻	6.6	8	79	34	24	36	●
1534GD03C-0670	✻	6.7	8	79	34	24	36	●
1534GD03C-0680	✻	6.8	8	79	34	24	36	●
1534GD03C-0690	✻	6.9	8	79	34	24	36	●
1534GD03C-0700	✻	7	8	79	34	24	36	●
1534GD03C-0710	✻	7.1	8	79	41	29	36	●
1534GD03C-0720	✻	7.2	8	79	41	29	36	●
1534GD03C-0730	✻	7.3	8	79	41	29	36	●
1534GD03C-0740	✻	7.4	8	79	41	29	36	●
1534GD03C-0750	✻	7.5	8	79	41	29	36	●
1534GD03C-0760	✻	7.6	8	79	41	29	36	●
1534GD03C-0770	✻	7.7	8	79	41	29	36	●
1534GD03C-0780	✻	7.8	8	79	41	29	36	●
1534GD03C-0790	✻	7.9	8	79	41	29	36	●
1534GD03C-0800	✻	8	8	79	41	29	36	●
1534GD03C-0810	✻	8.1	10	89	47	35	40	●
1534GD03C-0820	✻	8.2	10	89	47	35	40	●
1534GD03C-0830	✻	8.3	10	89	47	35	40	●
1534GD03C-0840	✻	8.4	10	89	47	35	40	●
1534GD03C-0850	✻	8.5	10	89	47	35	40	●
1534GD03C-0860	✻	8.6	10	89	47	35	40	●
1534GD03C-0870	✻	8.7	10	89	47	35	40	●
1534GD03C-0880	✻	8.8	10	89	47	35	40	●
1534GD03C-0890	✻	8.9	10	89	47	35	40	●
1534GD03C-0900	✻	9	10	89	47	35	40	●
1534GD03C-0910	✻	9.1	10	89	47	35	40	●
1534GD03C-0920	✻	9.2	10	89	47	35	40	●
1534GD03C-0930	✻	9.3	10	89	47	35	40	●
1534GD03C-0940	✻	9.4	10	89	47	35	40	●
1534GD03C-0950	✻	9.5	10	89	47	35	40	●
1534GD03C-0960	✻	9.6	10	89	47	35	40	●
1534GD03C-0970	✻	9.7	10	89	47	35	40	●
1534GD03C-0980	✻	9.8	10	89	47	35	40	●
1534GD03C-0990	✻	9.9	10	89	47	35	40	●
1534GD03C-1000	✻	10	10	89	47	35	40	●
1534GD03C-1020	✻	10.2	12	102	55	40	45	●
1534GD03C-1050	✻	10.5	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 C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

GD drill 3xD

Steel, cast iron

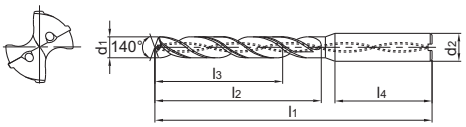
1534GD03C



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



External coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1534GD03C-1055	✲	10.55	12	102	55	40	45	○
1534GD03C-1100	✲	11	12	102	55	40	45	●
1534GD03C-1140	✲	11.4	12	102	55	40	45	●
1534GD03C-1150	✲	11.5	12	102	55	40	45	●
1534GD03C-1180	✲	11.8	12	102	55	40	45	○
1534GD03C-1200	✲	12	12	102	55	40	45	●
1534GD03C-1250	✲	12.5	14	107	60	43	45	●
1534GD03C-1260	✲	12.6	14	107	60	43	45	●
1534GD03C-1300	✲	13	14	107	60	43	45	●
1534GD03C-1330	✲	13.3	14	107	60	43	45	○
1534GD03C-1350	✲	13.5	14	107	60	43	45	●
1534GD03C-1400	✲	14	14	107	60	43	45	●
1534GD03C-1450	✲	14.5	16	115	65	45	48	●
1534GD03C-1500	✲	15	16	115	65	45	48	●
1534GD03C-1525	✲	15.25	16	115	65	45	48	○
1534GD03C-1550	✲	15.5	16	115	65	45	48	●
1534GD03C-1600	✲	16	16	115	65	45	48	●
1534GD03C-1650	✲	16.5	18	123	73	51	48	●
1534GD03C-1700	✲	17	18	123	73	51	48	●
1534GD03C-1750	✲	17.5	18	123	73	51	48	●
1534GD03C-1800	✲	18	18	123	73	51	48	●
1534GD03C-1850	✲	18.5	20	131	79	55	50	●
1534GD03C-1900	✲	19	20	131	79	55	50	●
1534GD03C-1950	✲	19.5	20	131	79	55	50	●
1534GD03C-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

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

GD drill 5xD — Steel, cast iron

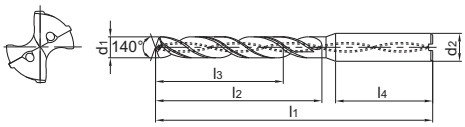
1536GD05C



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



External coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1536GD05C-0300	✻	3	6	66	28	23	36	●
1536GD05C-0310	✻	3.1	6	66	28	23	36	●
1536GD05C-0320	✻	3.2	6	66	28	23	36	●
1536GD05C-0330	✻	3.3	6	66	28	23	36	●
1536GD05C-0340	✻	3.4	6	66	28	23	36	●
1536GD05C-0345	✻	3.45	6	66	28	23	36	○
1536GD05C-0350	✻	3.5	6	66	28	23	36	●
1536GD05C-0360	✻	3.6	6	66	28	23	36	●
1536GD05C-0370	✻	3.7	6	66	28	23	36	●
1536GD05C-0380	✻	3.8	6	74	36	29	36	●
1536GD05C-0390	✻	3.9	6	74	36	29	36	●
1536GD05C-0400	✻	4	6	74	36	29	36	●
1536GD05C-0410	✻	4.1	6	74	36	29	36	●
1536GD05C-0420	✻	4.2	6	74	36	29	36	●
1536GD05C-0430	✻	4.3	6	74	36	29	36	●
1536GD05C-0440	✻	4.4	6	74	36	29	36	●
1536GD05C-0450	✻	4.5	6	74	36	29	36	●
1536GD05C-0460	✻	4.6	6	74	36	29	36	●
1536GD05C-0465	✻	4.65	6	74	36	29	36	●
1536GD05C-0470	✻	4.7	6	74	36	29	36	●
1536GD05C-0480	✻	4.8	6	82	44	35	36	●
1536GD05C-0490	✻	4.9	6	82	44	35	36	●
1536GD05C-0500	✻	5	6	82	44	35	36	●
1536GD05C-0508	✻	5.08	6	82	44	35	36	○
1536GD05C-0510	✻	5.1	6	82	44	35	36	●
1536GD05C-0518	✻	5.18	6	82	44	35	36	○
1536GD05C-0520	✻	5.2	6	82	44	35	36	●
1536GD05C-0530	✻	5.3	6	82	44	35	36	●
1536GD05C-0540	✻	5.4	6	82	44	35	36	●
1536GD05C-0550	✻	5.5	6	82	44	35	36	●
1536GD05C-0560	✻	5.6	6	82	44	35	36	●
1536GD05C-0570	✻	5.7	6	82	44	35	36	●
1536GD05C-0580	✻	5.8	6	82	44	35	36	●
1536GD05C-0590	✻	5.9	6	82	44	35	36	●
1536GD05C-0600	✻	6	6	82	44	35	36	●
1536GD05C-0610	✻	6.1	8	91	53	43	36	●
1536GD05C-0620	✻	6.2	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 C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

GD drill 5xD — Steel, cast iron

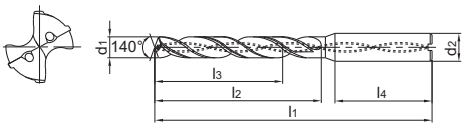
1536GD05C



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



External coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1536GD05C-0630	✲	6.3	8	91	53	43	36	●
1536GD05C-0640	✲	6.4	8	91	53	43	36	●
1536GD05C-0650	✲	6.5	8	91	53	43	36	●
1536GD05C-0660	✲	6.6	8	91	53	43	36	●
1536GD05C-0670	✲	6.7	8	91	53	43	36	●
1536GD05C-0680	✲	6.8	8	91	53	43	36	●
1536GD05C-0690	✲	6.9	8	91	53	43	36	●
1536GD05C-0700	✲	7	8	91	53	43	36	●
1536GD05C-0710	✲	7.1	8	91	53	43	36	●
1536GD05C-0720	✲	7.2	8	91	53	43	36	●
1536GD05C-0730	✲	7.3	8	91	53	43	36	●
1536GD05C-0740	✲	7.4	8	91	53	43	36	●
1536GD05C-0750	✲	7.5	8	91	53	43	36	●
1536GD05C-0760	✲	7.6	8	91	53	43	36	●
1536GD05C-0770	✲	7.7	8	91	53	43	36	●
1536GD05C-0780	✲	7.8	8	91	53	43	36	●
1536GD05C-0790	✲	7.9	8	91	53	43	36	●
1536GD05C-0800	✲	8	8	91	53	43	36	●
1536GD05C-0810	✲	8.1	10	103	61	49	40	●
1536GD05C-0820	✲	8.2	10	103	61	49	40	●
1536GD05C-0830	✲	8.3	10	103	61	49	40	●
1536GD05C-0840	✲	8.4	10	103	61	49	40	●
1536GD05C-0850	✲	8.5	10	103	61	49	40	●
1536GD05C-0860	✲	8.6	10	103	61	49	40	●
1536GD05C-0870	✲	8.7	10	103	61	49	40	●
1536GD05C-0880	✲	8.8	10	103	61	49	40	●
1536GD05C-0890	✲	8.9	10	103	61	49	40	●
1536GD05C-0900	✲	9	10	103	61	49	40	●
1536GD05C-0910	✲	9.1	10	103	61	49	40	●
1536GD05C-0920	✲	9.2	10	103	61	49	40	●
1536GD05C-0930	✲	9.3	10	103	61	49	40	●
1536GD05C-0940	✲	9.4	10	103	61	49	40	●
1536GD05C-0950	✲	9.5	10	103	61	49	40	●
1536GD05C-0960	✲	9.6	10	103	61	49	40	●
1536GD05C-0970	✲	9.7	10	103	61	49	40	●
1536GD05C-0980	✲	9.8	10	103	61	49	40	●
1536GD05C-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 > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

GD drill 5xD — Steel, cast iron

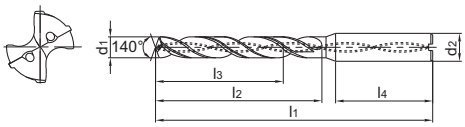
1536GD05C



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



External coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1536GD05C-1000	✻	10	10	103	61	49	40	●
1536GD05C-1010	✻	10.1	12	118	71	56	45	●
1536GD05C-1020	✻	10.2	12	118	71	56	45	●
1536GD05C-1030	✻	10.3	12	118	71	56	45	●
1536GD05C-1040	✻	10.4	12	118	71	56	45	●
1536GD05C-1050	✻	10.5	12	118	71	56	45	●
1536GD05C-1060	✻	10.6	12	118	71	56	45	●
1536GD05C-1070	✻	10.7	12	118	71	56	45	●
1536GD05C-1080	✻	10.8	12	118	71	56	45	●
1536GD05C-1090	✻	10.9	12	118	71	56	45	●
1536GD05C-1100	✻	11	12	118	71	56	45	●
1536GD05C-1120	✻	11.2	12	118	71	56	45	●
1536GD05C-1130	✻	11.3	12	118	71	56	45	●
1536GD05C-1140	✻	11.4	12	118	71	56	45	●
1536GD05C-1150	✻	11.5	12	118	71	56	45	●
1536GD05C-1180	✻	11.8	12	118	71	56	45	○
1536GD05C-1200	✻	12	12	118	71	56	45	●
1536GD05C-1250	✻	12.5	14	124	77	60	45	●
1536GD05C-1280	✻	12.8	14	124	77	60	45	●
1536GD05C-1300	✻	13	14	124	77	60	45	●
1536GD05C-1310	✻	13.1	14	124	77	60	45	○
1536GD05C-1335	✻	13.35	14	124	77	60	45	○
1536GD05C-1350	✻	13.5	14	124	77	60	45	●
1536GD05C-1380	✻	13.8	14	124	77	60	45	○
1536GD05C-1400	✻	14	14	124	77	60	45	●
1536GD05C-1420	✻	14.2	16	133	83	63	48	○
1536GD05C-1440	✻	14.4	16	133	83	63	48	○
1536GD05C-1450	✻	14.5	16	133	83	63	48	●
1536GD05C-1460	✻	14.6	16	133	83	63	48	○
1536GD05C-1500	✻	15	16	133	83	63	48	●
1536GD05C-1510	✻	15.1	16	133	83	63	48	○
1536GD05C-1530	✻	15.3	16	133	83	63	48	○
1536GD05C-1535	✻	15.35	16	133	83	63	48	○
1536GD05C-1550	✻	15.5	16	133	83	63	48	●
1536GD05C-1560	✻	15.6	16	133	83	63	48	○
1536GD05C-1600	✻	16	16	133	83	63	48	●
1536GD05C-1650	✻	16.5	18	143	93	71	48	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔		✔			

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

GD drill 5xD

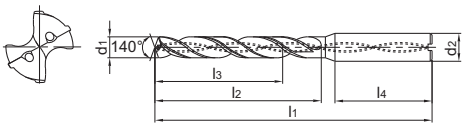
Steel, cast iron

1536GD05C

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



External coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1536GD05C-1655	✲	16.55	18	143	93	71	48	○
1536GD05C-1660	✲	16.6	18	143	93	71	48	○
1536GD05C-1670	✲	16.7	18	143	93	71	48	○
1536GD05C-1700	✲	17	18	143	93	71	48	●
1536GD05C-1707	✲	17.07	18	143	93	71	48	○
1536GD05C-1710	✲	17.1	18	143	93	71	48	○
1536GD05C-1750	✲	17.5	18	143	93	71	48	●
1536GD05C-1760	✲	17.6	18	143	93	71	48	○
1536GD05C-1800	✲	18	18	143	93	71	48	●
1536GD05C-1810	✲	18.1	20	153	101	77	50	○
1536GD05C-1850	✲	18.5	20	153	101	77	50	●
1536GD05C-1900	✲	19	20	153	101	77	50	●
1536GD05C-1910	✲	19.1	20	153	101	77	50	○
1536GD05C-1950	✲	19.5	20	153	101	77	50	●
1536GD05C-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

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

GD drill 5xD — Steel, cast iron

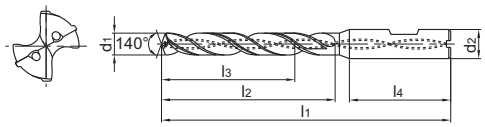
1636GD05C



– Type of shank DIN 6535HB
– Coolant exit, axial concentric



External coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1636GD05C-0450	✻	4.5	6	74	36	29	36	○
1636GD05C-0500	✻	5	6	82	44	35	36	●
1636GD05C-0510	✻	5.1	6	82	44	35	36	●
1636GD05C-0550	✻	5.5	6	82	44	35	36	●
1636GD05C-0560	✻	5.6	6	82	44	35	36	○
1636GD05C-0600	✻	6	6	82	44	35	36	●
1636GD05C-0650	✻	6.5	8	91	53	43	36	●
1636GD05C-0680	✻	6.8	8	91	53	43	36	●
1636GD05C-0690	✻	6.9	8	91	53	43	36	○
1636GD05C-0700	✻	7	8	91	53	43	36	●
1636GD05C-0740	✻	7.4	8	91	53	43	36	●
1636GD05C-0750	✻	7.5	8	91	53	43	36	●
1636GD05C-0780	✻	7.8	8	91	53	43	36	●
1636GD05C-0800	✻	8	8	91	53	43	36	●
1636GD05C-0850	✻	8.5	10	103	61	49	40	●
1636GD05C-0860	✻	8.6	10	103	61	49	40	○
1636GD05C-0880	✻	8.8	10	103	61	49	40	●
1636GD05C-0900	✻	9	10	103	61	49	40	●
1636GD05C-0930	✻	9.3	10	103	61	49	40	●
1636GD05C-0950	✻	9.5	10	103	61	49	40	●
1636GD05C-0980	✻	9.8	10	103	61	49	40	●
1636GD05C-1000	✻	10	10	103	61	49	40	●
1636GD05C-1010	✻	10.1	12	118	71	56	45	●
1636GD05C-1020	✻	10.2	12	118	71	56	45	●
1636GD05C-1030	✻	10.3	12	118	71	56	45	○
1636GD05C-1050	✻	10.5	12	118	71	56	45	●
1636GD05C-1080	✻	10.8	12	118	71	56	45	●
1636GD05C-1100	✻	11	12	118	71	56	45	●
1636GD05C-1110	✻	11.1	12	118	71	56	45	●
1636GD05C-1120	✻	11.2	12	118	71	56	45	○
1636GD05C-1150	✻	11.5	12	118	71	56	45	●
1636GD05C-1180	✻	11.8	12	118	71	56	45	●
1636GD05C-1200	✻	12	12	118	71	56	45	●
1636GD05C-1220	✻	12.2	14	124	77	60	45	○
1636GD05C-1250	✻	12.5	14	124	77	60	45	●
1636GD05C-1280	✻	12.8	14	124	77	60	45	○
1636GD05C-1300	✻	13	14	124	77	60	45	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔		✔			

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

GD drill 5xD — Steel, cast iron

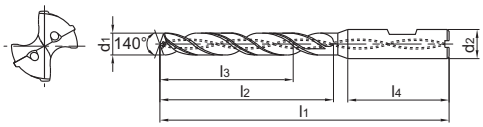
1636GD05C



– Type of shank DIN 6535HB
– Coolant exit, axial concentric



External coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG304
1636GD05C-1310	✻	13.1	14	124	77	60	45	○
1636GD05C-1350	✻	13.5	14	124	77	60	45	●
1636GD05C-1380	✻	13.8	14	124	77	60	45	●
1636GD05C-1400	✻	14	14	124	77	60	45	●
1636GD05C-1450	✻	14.5	16	133	83	63	48	●
1636GD05C-1480	✻	14.8	16	133	83	63	48	●
1636GD05C-1500	✻	15	16	133	83	63	48	●
1636GD05C-1550	✻	15.5	16	133	83	63	48	●
1636GD05C-1580	✻	15.8	16	133	83	63	48	●
1636GD05C-1600	✻	16	16	133	83	63	48	●
1636GD05C-1650	✻	16.5	18	143	93	71	48	●
1636GD05C-1680	✻	16.8	18	143	93	71	48	○
1636GD05C-1700	✻	17	18	143	93	71	48	●
1636GD05C-1750	✻	17.5	18	143	93	71	48	●
1636GD05C-1780	✻	17.8	18	143	93	71	48	●
1636GD05C-1800	✻	18	18	143	93	71	48	●
1636GD05C-1850	✻	18.5	20	153	101	77	50	●
1636GD05C-1880	✻	18.8	20	153	101	77	50	○
1636GD05C-1900	✻	19	20	153	101	77	50	●
1636GD05C-1950	✻	19.5	20	153	101	77	50	●
1636GD05C-1980	✻	19.8	20	153	101	77	50	●
1636GD05C-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

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

IMPORTANT INFORMATION

Recommended applications for the **UD series**

Feed calculator

ISO group	Material	Cutting speed v_c (m/min)	Feed factor F_m
M	Stainless steels	80	0,02
S	Ni- / Co-based alloys	40	0,01
S	Titanium alloys	60	0,012

Formula:	feed per revolution (F_n)	$D \times F_m$
Example:	drill diameter (D)	10 mm
	material	stainless steel

F_n = 10 mm × 0,02 = 0,2 mm/r



Fig.: **1536UD05C**

UD drill 3xD

Steel, stainless steel, heat-resistant alloys

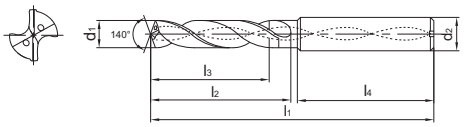
1534UD03C



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



External coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1534UD03C-0100XS	✲	1	3	45	6	4	37	○
1534UD03C-0110XS	✲	1.1	3	45	6.5	4	36.5	○
1534UD03C-0120XS	✲	1.2	3	45	7	5	36	○
1534UD03C-0130XS	✲	1.3	3	45	8	5	35	○
1534UD03C-0140XS	✲	1.4	3	45	8.5	5	34.5	○
1534UD03C-0150XS	✲	1.5	3	50	9	6	39	○
1534UD03C-0160S	✲	1.6	4	50	9.5	6	38.5	●
1534UD03C-0170S	✲	1.7	4	50	10	6	38	●
1534UD03C-0180S	✲	1.8	4	50	11	7	37	●
1534UD03C-0185S	✲	1.85	4	50	11	7	33	○
1534UD03C-0190S	✲	1.9	4	50	11.5	7	36.5	●
1534UD03C-0200S	✲	2	4	50	12	8	36	●
1534UD03C-0210S	✲	2.1	4	55	12.5	8	40.5	●
1534UD03C-0220S	✲	2.2	4	55	13	9	40	●
1534UD03C-0230S	✲	2.3	4	55	14	9	39	●
1534UD03C-0240S	✲	2.4	4	55	14.5	10	38.5	●
1534UD03C-0250S	✲	2.5	4	55	15	10	38	●
1534UD03C-0260S	✲	2.6	4	55	15.5	10	37.5	●
1534UD03C-0270S	✲	2.7	4	55	16	11	37	●
1534UD03C-0280S	✲	2.8	4	55	17	11	36	●
1534UD03C-0290S	✲	2.9	4	55	17.5	12	35.5	●
1534UD03C-0300	✲	3	6	62	20	14	36	●
1534UD03C-0305	✲	3.05	6	62	20	14	36	○
1534UD03C-0310	✲	3.1	6	62	20	14	36	○
1534UD03C-0320	✲	3.2	6	62	20	14	36	●
1534UD03C-0325	✲	3.25	6	62	20	14	36	○
1534UD03C-0330	✲	3.3	6	62	20	14	36	●
1534UD03C-0340	✲	3.4	6	62	20	14	36	○
1534UD03C-0350	✲	3.5	6	62	20	14	36	●
1534UD03C-0360	✲	3.6	6	62	20	14	36	○
1534UD03C-0370	✲	3.7	6	62	20	14	36	●
1534UD03C-0380	✲	3.8	6	66	24	17	36	○
1534UD03C-0390	✲	3.9	6	66	24	17	36	○
1534UD03C-0400	✲	4	6	66	24	17	36	●
1534UD03C-0410	✲	4.1	6	66	24	17	36	○
1534UD03C-0420	✲	4.2	6	66	24	17	36	●
1534UD03C-0430	✲	4.3	6	66	24	17	36	●

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

UD drill 3xD — Steel, stainless steel, heat-resistant alloys

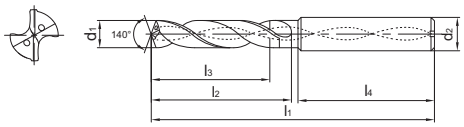
1534UD03C



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



External coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1534UD03C-0440	✻	4.4	6	66	24	17	36	○
1534UD03C-0450	✻	4.5	6	66	24	17	36	●
1534UD03C-0460	✻	4.6	6	66	24	17	36	○
1534UD03C-0465	✻	4.65	6	66	24	17	36	●
1534UD03C-0470	✻	4.7	6	66	24	17	36	○
1534UD03C-0480	✻	4.8	6	66	28	20	36	●
1534UD03C-0490	✻	4.9	6	66	28	20	36	○
1534UD03C-0500	✻	5	6	66	28	20	36	●
1534UD03C-0503	✻	5.03	6	66	28	20	36	○
1534UD03C-0510	✻	5.1	6	66	28	20	36	○
1534UD03C-0520	✻	5.2	6	66	28	20	36	○
1534UD03C-0530	✻	5.3	6	66	28	20	36	○
1534UD03C-0540	✻	5.4	6	66	28	20	36	○
1534UD03C-0550	✻	5.5	6	66	28	20	36	●
1534UD03C-0555	✻	5.55	6	66	28	20	36	●
1534UD03C-0560	✻	5.6	6	66	28	20	36	○
1534UD03C-0570	✻	5.7	6	66	28	20	36	●
1534UD03C-0580	✻	5.8	6	66	28	20	36	○
1534UD03C-0590	✻	5.9	6	66	28	20	36	●
1534UD03C-0600	✻	6	6	66	28	20	36	●
1534UD03C-0610	✻	6.1	8	79	34	24	36	○
1534UD03C-0620	✻	6.2	8	79	34	24	36	○
1534UD03C-0630	✻	6.3	8	79	34	24	36	○
1534UD03C-0640	✻	6.4	8	79	34	24	36	○
1534UD03C-0650	✻	6.5	8	79	34	24	36	●
1534UD03C-0660	✻	6.6	8	79	34	24	36	○
1534UD03C-0670	✻	6.7	8	79	34	24	36	○
1534UD03C-0675	✻	6.75	8	79	34	24	36	○
1534UD03C-0680	✻	6.8	8	79	34	24	36	●
1534UD03C-0690	✻	6.9	8	79	34	24	36	○
1534UD03C-0700	✻	7	8	79	34	24	36	●
1534UD03C-0710	✻	7.1	8	79	41	29	36	○
1534UD03C-0720	✻	7.2	8	79	41	29	36	○
1534UD03C-0730	✻	7.3	8	79	41	29	36	○
1534UD03C-0740	✻	7.4	8	79	41	29	36	●
1534UD03C-0750	✻	7.5	8	79	41	29	36	●
1534UD03C-0755	✻	7.55	8	79	41	29	36	●

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

UD drill 3xD

Steel, stainless steel, heat-resistant alloys

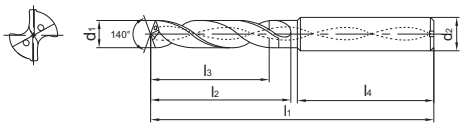
1534UD03C



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



External coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1534UD03C-0760	✲	7.6	8	79	41	29	36	○
1534UD03C-0770	✲	7.7	8	79	41	29	36	○
1534UD03C-0780	✲	7.8	8	79	41	29	36	○
1534UD03C-0790	✲	7.9	8	79	41	29	36	○
1534UD03C-0800	✲	8	8	79	41	29	36	●
1534UD03C-0810	✲	8.1	10	89	47	35	40	○
1534UD03C-0820	✲	8.2	10	89	47	35	40	○
1534UD03C-0830	✲	8.3	10	89	47	35	40	○
1534UD03C-0840	✲	8.4	10	89	47	35	40	○
1534UD03C-0850	✲	8.5	10	89	47	35	40	●
1534UD03C-0860	✲	8.6	10	89	47	35	40	○
1534UD03C-0870	✲	8.7	10	89	47	35	40	○
1534UD03C-0880	✲	8.8	10	89	47	35	40	●
1534UD03C-0890	✲	8.9	10	89	47	35	40	○
1534UD03C-0900	✲	9	10	89	47	35	40	●
1534UD03C-0910	✲	9.1	10	89	47	35	40	○
1534UD03C-0920	✲	9.2	10	89	47	35	40	○
1534UD03C-0930	✲	9.3	10	89	47	35	40	●
1534UD03C-0940	✲	9.4	10	89	47	35	40	○
1534UD03C-0950	✲	9.5	10	89	47	35	40	●
1534UD03C-0960	✲	9.6	10	89	47	35	40	○
1534UD03C-0970	✲	9.7	10	89	47	35	40	○
1534UD03C-0980	✲	9.8	10	89	47	35	40	○
1534UD03C-0990	✲	9.9	10	89	47	35	40	○
1534UD03C-1000	✲	10	10	89	47	35	40	●
1534UD03C-1010	✲	10.1	12	102	55	40	45	○
1534UD03C-1020	✲	10.2	12	102	55	40	45	●
1534UD03C-1025	✲	10.25	12	102	55	40	45	○
1534UD03C-1030	✲	10.3	12	102	55	40	45	○
1534UD03C-1040	✲	10.4	12	102	55	40	45	○
1534UD03C-1050	✲	10.5	12	102	55	40	45	●
1534UD03C-1060	✲	10.6	12	102	55	40	45	○
1534UD03C-1070	✲	10.7	12	102	55	40	45	○
1534UD03C-1080	✲	10.8	12	102	55	40	45	○
1534UD03C-1100	✲	11	12	102	55	40	45	●
1534UD03C-1110	✲	11.1	12	102	55	40	45	○
1534UD03C-1120	✲	11.2	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 > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

UD drill 3xD — Steel, stainless steel, heat-resistant alloys

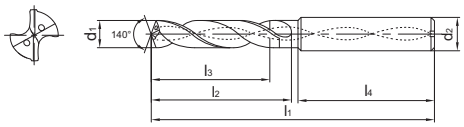
1534UD03C



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



External coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1534UD03C-1125	✻	11.25	12	102	55	40	45	○
1534UD03C-1130	✻	11.3	12	102	55	40	45	○
1534UD03C-1140	✻	11.4	12	102	55	40	45	○
1534UD03C-1150	✻	11.5	12	102	55	40	45	●
1534UD03C-1160	✻	11.6	12	102	55	40	45	○
1534UD03C-1170	✻	11.7	12	102	55	40	45	○
1534UD03C-1180	✻	11.8	12	102	55	40	45	○
1534UD03C-1190	✻	11.9	12	102	55	40	45	○
1534UD03C-1200	✻	12	12	102	55	40	45	●
1534UD03C-1220	✻	12.2	14	107	60	43	45	●
1534UD03C-1225	✻	12.25	14	107	60	43	45	○
1534UD03C-1230	✻	12.3	14	107	60	43	45	○
1534UD03C-1240	✻	12.4	14	107	60	43	45	○
1534UD03C-1250	✻	12.5	14	107	60	43	45	●
1534UD03C-1260	✻	12.6	14	107	60	43	45	○
1534UD03C-1270	✻	12.7	14	107	60	43	45	○
1534UD03C-1275	✻	12.75	14	107	60	43	45	○
1534UD03C-1280	✻	12.8	14	107	60	43	45	○
1534UD03C-1300	✻	13	14	107	60	43	45	●
1534UD03C-1310	✻	13.1	14	107	60	43	45	○
1534UD03C-1350	✻	13.5	14	107	60	43	45	●
1534UD03C-1380	✻	13.8	14	107	60	43	45	○
1534UD03C-1400	✻	14	14	107	60	43	45	●
1534UD03C-1425	✻	14.25	16	115	65	45	48	○
1534UD03C-1430	✻	14.3	16	115	65	45	48	○
1534UD03C-1450	✻	14.5	16	115	65	45	48	●
1534UD03C-1475	✻	14.75	16	115	65	45	48	○
1534UD03C-1480	✻	14.8	16	115	65	45	48	○
1534UD03C-1500	✻	15	16	115	65	45	48	●
1534UD03C-1510	✻	15.1	16	115	65	45	48	○
1534UD03C-1550	✻	15.5	16	115	65	45	48	●
1534UD03C-1580	✻	15.8	16	115	65	45	48	○
1534UD03C-1590	✻	15.9	16	115	65	45	48	○
1534UD03C-1600	✻	16	16	115	65	45	48	●
1534UD03C-1610	✻	16.1	16	115	65	45	48	○
1534UD03C-1650	✻	16.5	18	123	73	51	48	●
1534UD03C-1675	✻	16.75	18	123	73	51	48	○

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

UD drill 3xD

Steel, stainless steel, heat-resistant alloys

1534UD03C

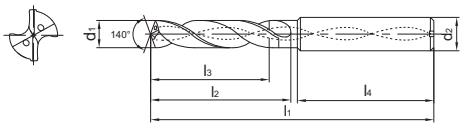


– Type of shank DIN 6535HA
– Coolant exit, axial concentric





External coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1534UD03C-1680	✻	16.8	18	123	73	51	48	○
1534UD03C-1700	✻	17	18	123	73	51	48	●
1534UD03C-1730	✻	17.3	18	123	73	51	48	○
1534UD03C-1750	✻	17.5	18	123	73	51	48	●
1534UD03C-1780	✻	17.8	18	123	73	51	48	○
1534UD03C-1790	✻	17.9	18	123	73	51	48	○
1534UD03C-1800	✻	18	18	123	73	51	48	●
1534UD03C-1850	✻	18.5	20	131	79	55	50	●
1534UD03C-1880	✻	18.8	20	131	79	55	50	○
1534UD03C-1900	✻	19	20	131	79	55	50	●
1534UD03C-1950	✻	19.5	20	131	79	55	50	●
1534UD03C-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

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

UD drill 5xD — Steel, stainless steel, heat-resistant alloys

1536UD05C

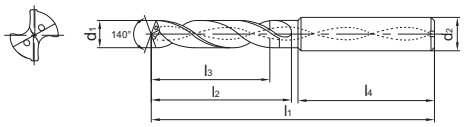


– Type of shank DIN 6535HA
– Coolant exit, axial concentric





External coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1536UD05C-0100XS	✻	1	3	45	8	6	35	○
1536UD05C-0110XS	✻	1.1	3	45	9	7	34	○
1536UD05C-0120XS	✻	1.2	3	45	9.5	7	33.5	○
1536UD05C-0130XS	✻	1.3	3	45	10.5	8	32.5	○
1536UD05C-0133XS	✻	1.33	3	45	10.5	8	29.4	○
1536UD05C-0140XS	✻	1.4	3	45	11	8	32	○
1536UD05C-0150XS	✻	1.5	3	50	12	9	36	○
1536UD05C-0163S	✻	1.6	4	50	13	10	30.6	○
1536UD05C-0160S	✻	1.6	4	50	13	10	35	●
1536UD05C-0170S	✻	1.7	4	50	13.5	10	34.5	●
1536UD05C-0180S	✻	1.8	4	50	14.5	11	33.5	●
1536UD05C-0190S	✻	1.9	4	50	15	11	33	●
1536UD05C-0200S	✻	2	4	50	16	12	32	●
1536UD05C-0210S	✻	2.1	4	55	17	13	36	●
1536UD05C-0220S	✻	2.2	4	55	17.5	13	35.5	●
1536UD05C-0230S	✻	2.3	4	55	18.5	14	34.5	●
1536UD05C-0240S	✻	2.4	4	55	19	14	34	●
1536UD05C-0243S	✻	2.43	4	55	19	14	31.1	○
1536UD05C-0250S	✻	2.5	4	55	20	15	33	●
1536UD05C-0260S	✻	2.6	4	55	21	16	32	●
1536UD05C-0270S	✻	2.7	4	55	21.5	16	31.5	●
1536UD05C-0280S	✻	2.8	4	55	22.5	17	30.5	●
1536UD05C-0290S	✻	2.9	4	55	23	17	30	●
1536UD05C-0300	✻	3	6	66	28	23	36	●
1536UD05C-0310	✻	3.1	6	66	28	23	36	●
1536UD05C-0320	✻	3.2	6	66	28	23	36	●
1536UD05C-0330	✻	3.3	6	66	28	23	36	●
1536UD05C-0340	✻	3.4	6	66	28	23	36	●
1536UD05C-0350	✻	3.5	6	66	28	23	36	●
1536UD05C-0360	✻	3.6	6	66	28	23	36	○
1536UD05C-0370	✻	3.7	6	66	28	23	36	●
1536UD05C-0380	✻	3.8	6	74	36	29	36	●
1536UD05C-0390	✻	3.9	6	74	36	29	36	○
1536UD05C-0400	✻	4	6	74	36	29	36	●
1536UD05C-0410	✻	4.1	6	74	36	29	36	○
1536UD05C-0420	✻	4.2	6	74	36	29	36	●
1536UD05C-0430	✻	4.3	6	74	36	29	36	○

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

UD drill 5xD — Steel, stainless steel, heat-resistant alloys

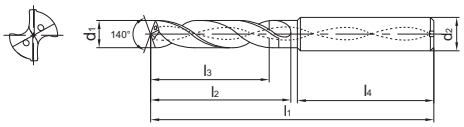
1536UD05C



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



External coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1536UD05C-0440	✲	4.4	6	74	36	29	36	○
1536UD05C-0450	✲	4.5	6	74	36	29	36	●
1536UD05C-0460	✲	4.6	6	74	36	29	36	○
1536UD05C-0465	✲	4.65	6	74	36	29	36	●
1536UD05C-0470	✲	4.7	6	74	36	29	36	○
1536UD05C-0480	✲	4.8	6	82	44	35	36	○
1536UD05C-0490	✲	4.9	6	82	44	35	36	○
1536UD05C-0500	✲	5	6	82	44	35	36	●
1536UD05C-0510	✲	5.1	6	82	44	35	36	●
1536UD05C-0520	✲	5.2	6	82	44	35	36	●
1536UD05C-0530	✲	5.3	6	82	44	35	36	○
1536UD05C-0540	✲	5.4	6	82	44	35	36	○
1536UD05C-0550	✲	5.5	6	82	44	35	36	●
1536UD05C-0555	✲	5.55	6	82	44	35	36	●
1536UD05C-0560	✲	5.6	6	82	44	35	36	○
1536UD05C-0570	✲	5.7	6	82	44	35	36	○
1536UD05C-0580	✲	5.8	6	82	44	35	36	●
1536UD05C-0590	✲	5.9	6	82	44	35	36	○
1536UD05C-0600	✲	6	6	82	44	35	36	●
1536UD05C-0610	✲	6.1	8	91	53	43	36	○
1536UD05C-0620	✲	6.2	8	91	53	43	36	○
1536UD05C-0630	✲	6.3	8	91	53	43	36	○
1536UD05C-0640	✲	6.4	8	91	53	43	36	○
1536UD05C-0650	✲	6.5	8	91	53	43	36	●
1536UD05C-0660	✲	6.6	8	91	53	43	36	○
1536UD05C-0670	✲	6.7	8	91	53	43	36	●
1536UD05C-0680	✲	6.8	8	91	53	43	36	●
1536UD05C-0690	✲	6.9	8	91	53	43	36	○
1536UD05C-0700	✲	7	8	91	53	43	36	●
1536UD05C-0710	✲	7.1	8	91	53	43	36	○
1536UD05C-0720	✲	7.2	8	91	53	43	36	○
1536UD05C-0730	✲	7.3	8	91	53	43	36	○
1536UD05C-0740	✲	7.4	8	91	53	43	36	●
1536UD05C-0750	✲	7.5	8	91	53	43	36	●
1536UD05C-0760	✲	7.6	8	91	53	43	36	○
1536UD05C-0770	✲	7.7	8	91	53	43	36	○
1536UD05C-0780	✲	7.8	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 > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

UD drill 5xD — Steel, stainless steel, heat-resistant alloys

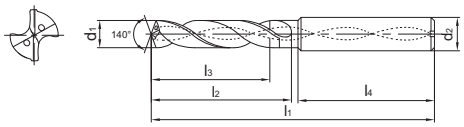
1536UD05C



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



External coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1536UD05C-0790	✻	7.9	8	91	53	43	36	○
1536UD05C-0800	✻	8	8	91	53	43	36	●
1536UD05C-0810	✻	8.1	10	103	61	49	40	○
1536UD05C-0820	✻	8.2	10	103	61	49	40	○
1536UD05C-0830	✻	8.3	10	103	61	49	40	●
1536UD05C-0840	✻	8.4	10	103	61	49	40	●
1536UD05C-0850	✻	8.5	10	103	61	49	40	●
1536UD05C-0860	✻	8.6	10	103	61	49	40	○
1536UD05C-0870	✻	8.7	10	103	61	49	40	○
1536UD05C-0880	✻	8.8	10	103	61	49	40	○
1536UD05C-0890	✻	8.9	10	103	61	49	40	○
1536UD05C-0900	✻	9	10	103	61	49	40	●
1536UD05C-0910	✻	9.1	10	103	61	49	40	○
1536UD05C-0920	✻	9.2	10	103	61	49	40	○
1536UD05C-0930	✻	9.3	10	103	61	49	40	●
1536UD05C-0940	✻	9.4	10	103	61	49	40	○
1536UD05C-0950	✻	9.5	10	103	61	49	40	●
1536UD05C-0960	✻	9.6	10	103	61	49	40	○
1536UD05C-0970	✻	9.7	10	103	61	49	40	○
1536UD05C-0980	✻	9.8	10	103	61	49	40	○
1536UD05C-0990	✻	9.9	10	103	61	49	40	○
1536UD05C-1000	✻	10	10	103	61	49	40	●
1536UD05C-1010	✻	10.1	12	118	71	56	45	○
1536UD05C-1020	✻	10.2	12	118	71	56	45	●
1536UD05C-1025	✻	10.25	12	118	71	56	45	○
1536UD05C-1030	✻	10.3	12	118	71	56	45	○
1536UD05C-1040	✻	10.4	12	118	71	56	45	○
1536UD05C-1050	✻	10.5	12	118	71	56	45	●
1536UD05C-1060	✻	10.6	12	118	71	56	45	○
1536UD05C-1070	✻	10.7	12	118	71	56	45	○
1536UD05C-1080	✻	10.8	12	118	71	56	45	○
1536UD05C-1090	✻	10.9	12	118	71	56	45	○
1536UD05C-1100	✻	11	12	118	71	56	45	●
1536UD05C-1110	✻	11.1	12	118	71	56	45	○
1536UD05C-1120	✻	11.2	12	118	71	56	45	○
1536UD05C-1130	✻	11.3	12	118	71	56	45	○
1536UD05C-1140	✻	11.4	12	118	71	56	45	○

● Ex stock ○ On demand
✻ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

UD drill 5xD

Steel, stainless steel, heat-resistant alloys

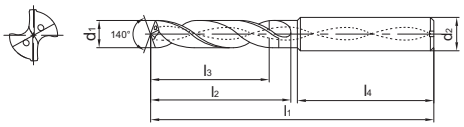
1536UD05C



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



External coolant



Article	✲	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1536UD05C-1150	✲	11.5	12	118	71	56	45	●
1536UD05C-1155	✲	11.55	12	118	71	56	45	○
1536UD05C-1160	✲	11.6	12	118	71	56	45	○
1536UD05C-1170	✲	11.7	12	118	71	56	45	○
1536UD05C-1180	✲	11.8	12	118	71	56	45	○
1536UD05C-1190	✲	11.9	12	118	71	56	45	○
1536UD05C-1200	✲	12	12	118	71	56	45	●
1536UD05C-1220	✲	12.2	14	124	77	60	45	●
1536UD05C-1225	✲	12.25	14	124	77	60	45	○
1536UD05C-1230	✲	12.3	14	124	77	60	45	○
1536UD05C-1240	✲	12.4	14	124	77	60	45	○
1536UD05C-1250	✲	12.5	14	124	77	60	45	●
1536UD05C-1270	✲	12.7	14	124	77	60	45	○
1536UD05C-1280	✲	12.8	14	124	77	60	45	○
1536UD05C-1300	✲	13	14	124	77	60	45	●
1536UD05C-1310	✲	13.1	14	124	77	60	45	○
1536UD05C-1330	✲	13.3	14	124	77	60	45	○
1536UD05C-1350	✲	13.5	14	124	77	60	45	●
1536UD05C-1380	✲	13.8	14	124	77	60	45	○
1536UD05C-1400	✲	14	14	124	77	60	45	●
1536UD05C-1425	✲	14.25	16	133	83	63	48	○
1536UD05C-1430	✲	14.3	16	133	83	63	48	○
1536UD05C-1450	✲	14.5	16	133	83	63	48	●
1536UD05C-1480	✲	14.8	16	133	83	63	48	○
1536UD05C-1490	✲	14.9	16	133	83	63	48	○
1536UD05C-1500	✲	15	16	133	83	63	48	●
1536UD05C-1510	✲	15.1	16	133	83	63	48	○
1536UD05C-1530	✲	15.3	16	133	83	63	48	○
1536UD05C-1550	✲	15.5	16	133	83	63	48	●
1536UD05C-1570	✲	15.7	16	133	83	63	48	○
1536UD05C-1580	✲	15.8	16	133	83	63	48	○
1536UD05C-1600	✲	16	16	133	83	63	48	●
1536UD05C-1620	✲	16.2	18	143	93	71	48	○
1536UD05C-1650	✲	16.5	18	143	93	71	48	●
1536UD05C-1680	✲	16.8	18	143	93	71	48	○
1536UD05C-1700	✲	17	18	143	93	71	48	●
1536UD05C-1750	✲	17.5	18	143	93	71	48	●

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔			✔	

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

UD drill 5xD — Steel, stainless steel, heat-resistant alloys

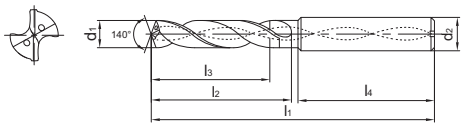
1536UD05C



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



External coolant



Article	✻	Dimensions [mm]						Grade
		d_1 (m7)	d_2 (h6)	l_1	l_2	l_3	l_4	KDG305
1536UD05C-1780	✻	17.8	18	143	93	71	48	○
1536UD05C-1790	✻	17.9	18	143	93	71	48	○
1536UD05C-1800	✻	18	18	143	93	71	48	●
1536UD05C-1850	✻	18.5	20	153	101	77	50	●
1536UD05C-1880	✻	18.8	20	153	101	77	50	○
1536UD05C-1900	✻	19	20	153	101	77	50	●
1536UD05C-1950	✻	19.5	20	153	101	77	50	●
1536UD05C-1980	✻	19.8	20	153	101	77	50	○
1536UD05C-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

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

Notes

IMPORTANT INFORMATION

Recommended applications for the **FD series**

Feed calculator

ISO group	Material	Cutting speed v_c (m/min)	Feed factor F_m
P	Low-alloy steel	80	0,015
P	High-alloy steel	60	0,012
K	Cast iron	80	0,015
K	Cast steel	60	0,015
M	Stainless steel	45	0,01
N	Aluminium	120	0,02

Formula: feed per revolution (F_n) $D \times F_m$
Example: drill diameter (D) 10 mm
material aluminium

$$F_n = 10\ mm \times 0{,}02 = 0{,}2\ mm/r$$

Reduce the feed rate by the following factor with inclined holes:

Angle	Feed rate multiplier
5°–30°	0,75
35°–50°	0,50

Formula: feed per revolution (F_n) $D \times F_m \times$ multiplier
Example: drill diameter (D) 10 mm
material aluminium
drilling angle 30°

$$F_n = 10\ mm \times 0{,}02 \times 0{,}75 = 0{,}15\ mm/r$$



Fig.: **1534FD03C**

FD drill 3xD — General machining

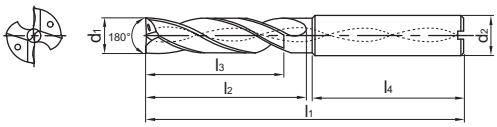
1534FD03C



– 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	KDG305
1534FD03-0200S		2	4	50	12	8	36	○
1534FD03C-0300	✲	3	6	62	20	14	36	●
1534FD03C-0350	✲	3.5	6	62	20	14	36	○
1534FD03C-0400	✲	4	6	66	24	17	36	●
1534FD03C-0450	✲	4.5	6	66	24	17	36	○
1534FD03C-0500	✲	5	6	66	28	20	36	●
1534FD03C-0520	✲	5.2	6	66	28	20	36	○
1534FD03C-0550	✲	5.5	6	66	28	20	36	○
1534FD03C-0600	✲	6	6	66	28	20	36	●
1534FD03C-0620	✲	6.2	8	79	34	24	36	○
1534FD03C-0640	✲	6.4	8	79	34	24	36	○
1534FD03C-0650	✲	6.5	8	79	34	24	36	●
1534FD03C-0700	✲	7	8	79	34	24	36	●
1534FD03C-0750	✲	7.5	8	79	41	29	36	○
1534FD03C-0800	✲	8	8	79	41	29	36	●
1534FD03C-0850	✲	8.5	10	89	47	35	40	○
1534FD03C-0880	✲	8.8	10	89	47	35	40	○
1534FD03C-0900	✲	9	10	89	47	35	40	●
1534FD03C-0950	✲	9.5	10	89	47	35	40	○
1534FD03C-0980	✲	9.8	10	89	47	35	40	○
1534FD03C-1000	✲	10	10	89	47	35	40	●
1534FD03C-1050	✲	10.5	12	102	55	40	45	○
1534FD03C-1100	✲	11	12	102	55	40	45	●
1534FD03C-1150	✲	11.5	12	102	55	40	45	○
1534FD03C-1180	✲	11.8	12	102	55	40	45	○
1534FD03C-1200	✲	12	12	102	55	40	45	●
1534FD03C-1250	✲	12.5	14	107	60	43	45	○
1534FD03C-1300	✲	13	14	107	60	43	45	●
1534FD03C-1350	✲	13.5	14	107	60	43	45	○
1534FD03C-1400	✲	14	14	107	60	43	45	●
1534FD03C-1450	✲	14.5	16	115	65	45	48	○
1534FD03C-1500	✲	15	16	115	65	45	48	●
1534FD03C-1550	✲	15.5	16	115	65	45	48	○
1534FD03C-1600	✲	16	16	115	65	45	48	●
1534FD03C-1650	✲	16.5	18	123	73	51	48	○
1534FD03C-1700	✲	17	18	123	73	51	48	●

● Ex stock ○ On demand
✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔		

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

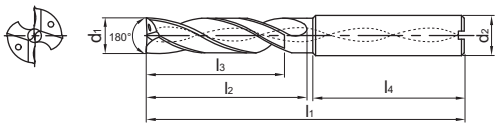
FD drill 3xD General machining

1534FD03C

– 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	KDG305
1534FD03C-1750	✻	17.5	18	123	73	51	48	○
1534FD03C-1800	✻	18	18	123	73	51	48	●
1534FD03C-1850	✻	18.5	20	131	79	55	50	○
1534FD03C-1900	✻	19	20	131	79	55	50	●
1534FD03C-1950	✻	19.5	20	131	79	55	50	○
1534FD03C-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

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SH drill 3xD — Hard materials

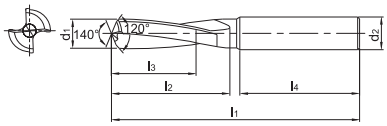
1534SH03



– 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	●
1534SH03-0350		3.5	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	○
1534SH03-1800		18	18	100	60	50	50	○
1534SH03-2000		20	20	131	79	53	50	○

● Ex stock ○ On demand

✻ With internal cooling

Application field

P	M	K	N	S	H
					✔

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SC drill 3xD — Non-ferrous metals

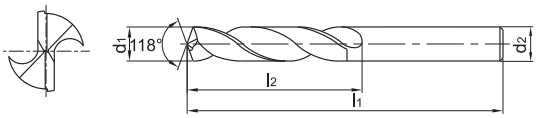
1105SC03



– 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	○
1105SC03-0220		2.2	2.2	43	14	○
1105SC03-0240		2.4	2.4	43	14	○
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	○

● Ex stock ○ On demand

✻ With internal cooling

Application field

P	M	K	N	S	H
			✔		

✔ Very suitable

✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

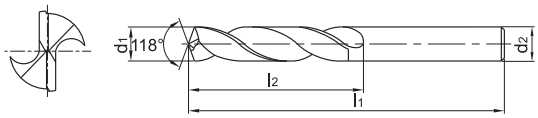
SC drill 3xD — Non-ferrous metals

1105SC03

– Factory standard



External coolant



Article	✻	Dimensions [mm]				Grade
		d_1 (h8)	d_2 (h7)	l_1	l_2	YK20F
1105SC03-0630		6.3	6.3	70	31	○
1105SC03-0640		6.4	6.4	70	31	○
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	○

● Ex stock ○ On demand

✻ With internal cooling

Application field

P	M	K	N	S	H
			✔		

✔ Very suitable
✔ Suitable

System code > C38 | Machining instructions > C193 | Cutting data > C142 | Nonstandard order > C148

SC drill 3xD — Non-ferrous metals

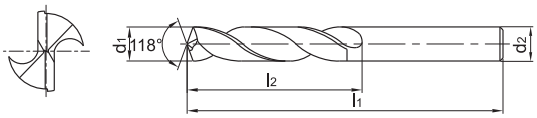
1105SC03



– Factory standard



External coolant



Article	✻	Dimensions [mm]				Grade
		d_1 (h8)	d_2 (h7)	l_1	l_2	YK20F
1105SC03-1010		10.1	10.1	89	43	○
1105SC03-1020		10.2	10.2	89	43	○
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	○
1105SC03-1210		12.1	12.1	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 C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SC drill 5xD — Non-ferrous metals

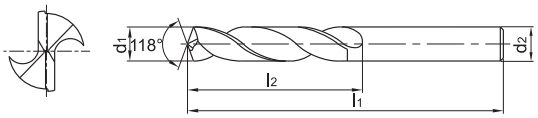
1101SC05



– 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	○
1101SC05-0330		3.3	3.3	70	39	○
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	○
1101SC05-0530		5.3	5.3	93	57	○
1101SC05-0540		5.4	5.4	93	57	○
1101SC05-0550		5.5	5.5	93	57	○
1101SC05-0580		5.8	5.8	93	57	○
1101SC05-0590		5.9	5.9	93	57	○
1101SC05-0600		6	6	93	57	○
1101SC05-0640		6.4	6.4	101	63	○
1101SC05-0650		6.5	6.5	101	63	○
1101SC05-0660		6.6	6.6	109	69	○
1101SC05-0680		6.8	6.8	109	69	○
1101SC05-0690		6.9	6.9	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	○
1101SC05-0820		8.2	8.2	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	○

● Ex stock ○ On demand

✻ With internal cooling

Application field

P	M	K	N	S	H
			✔		

✔ Very suitable
✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SC drill 5xD — Non-ferrous metals

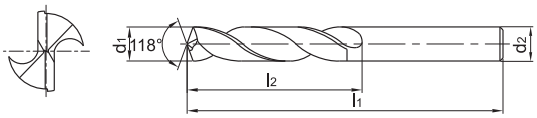
1101SC05



– Factory standard



External coolant



Article	✻	Dimensions [mm]				Grade
		d_1 (h8)	d_2 (h7)	l_1	l_2	YK20F
1101SC05-1180		11.8	11.8	151	101	○
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	○
1101SC05-1600		16	16	178	120	○

● Ex stock ○ On demand

✻ With internal cooling

Application field

P	M	K	N	S	H
			✔		

✔ Very suitable

✔ Suitable

System code C38 | Machining instructions C193 | Cutting data C142 | Nonstandard order C148

SC drill – NC tapping device 90° General machining

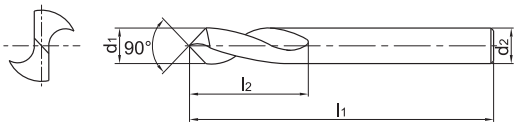
1143SC90



– Factory standard



External coolant



Article	✻	Dimensions [mm]				Grade	
		d_1 (h6)	d_2 (h6)	l_1	l_2	KDG303	YK20F
1143SC90-0300		3	3	46	10	○	
1143SC90-0400		4	4	62	10	●	
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

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

SC drill – NC tapping device 120° General machining

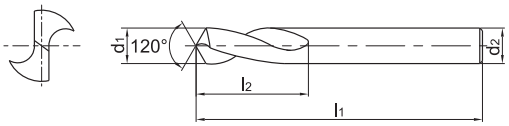


1143SC120

– Factory standard



External coolant



Article	✻	Dimensions [mm]				Grade	
		d_1 (h6)	d_2 (h6)	l_1	l_2	KDG303	YK20F
1143SC120-0300		3	4	63	10	○	
1143SC120-0400		4	4	62	10	○	
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

System code C38 Machining instructions C193 Cutting data C142 Nonstandard order C148

SC drill – NC tapping device 142° General machining

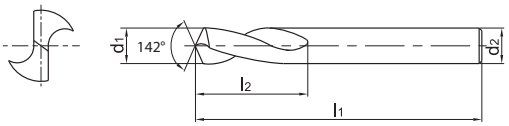
1143SC142



– Factory standard



External coolant



Article	✲	Dimensions [mm]				Grade
		d_1 (h6)	d_2 (h6)	l_1	l_2	KDG303
1143SC142-0500		5	5	62	10	●
1143SC142-0600		6	6	66	15	●
1143SC142-0800		8	8	79	17	●
1143SC142-1000		10	10	89	20	●
1143SC142-1200		12	12	102	25	●
1143SC142-1400		14	14	107	30	●
1143SC142-1600		16	16	115	35	●
1143SC142-2000		20	20	131	42	●

● Ex stock ○ On demand

✲ With internal cooling

Application field

P	M	K	N	S	H
✔	✔	✔	✔		

✔ Very suitable
✔ Suitable

System code > C38 Machining instructions > C193 Cutting data > C142 Nonstandard order > C148

Notes

Guide for recommended cutting data – solid carbide drilling

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.

Recommend feed rate

Solid carbide drilling

4

5

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.

Solid carbide drills

Material group		Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]							
						SL		SL		SP		SH	
						12-15xD		20-30xD		3xD		3xD	
						KDG303		KDG303		KDG303		KDG303	
						Coolant							
						Int.	f-group	Int.	f-group	Int.	f-group	Ext.	f-group
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1	130	7	95	7	165	8		
		approx. 0,45 % C	annealed	190	2	110	7	80	7	145	8		
		approx. 0,45 % C	tempered	250	3	100	5	70	5	135	6		
		approx. 0,75 % C	annealed	270	4	85	5	60	5	125	6		
		approx. 0,75 % C	tempered	300	5	75	5	55	5	110	6		
	Low-alloyed steel		annealed	180	6	110	7	80	7	145	8		
			tempered	275	7	85	5	60	5	125	6		
			tempered	300	8	75	5	55	5	110	6		
			tempered	350	9	65	5	50	5	100	6		
	High-alloyed steel and high-alloyed tool steel		annealed	200	10	100	7	70	7	135	8		
			hardened and tempered	325	11	75	5	55	5	110	6		
M	Stainless steel	ferritic/martensitic	annealed	200	12	60	4	55	4	90	5		
		martensitic	tempered	240	13	35	4	30	4	65	5		
		austenitic	quench hardened	180	14	40	4	35	4	70	5		
		austenitic-ferritic		230	15	35	4	35	4	55	5		
K	Grey cast iron	perlitic/ferritic		180	16	125	7	90	7	150	8		
		perlitic (martensitic)		260	17	100	7	70	7	125	8		
	Cast iron with spheroidal graphite	ferritic		160	18	110	7	80	7	135	8		
		perlitic		250	19	70	7	50	7	90	8		
	Malleable cast iron	ferritic		130	20	120	7	85	7	145	8		
		perlitic		230	21	70	7	50	7	90	8		
N	Aluminium wrought alloys	cannot be hardened		60	22	150	8	105	8	170	8		
		hardenable	hardened	100	23	150	8	105	8	170	8		
	Cast aluminium alloys	≤ 12 % Si, cannot be hardened		75	24	150	8	105	8	170	8		
		≤ 12 % Si, hardenable	hardened	90	25	150	8	105	8	170	8		
		> 12 % Si, cannot be hardened		130	26	150	8	105	8	170	8		
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27	150	8	105	8	170	8		
		CuZn, CuSnZn		90	28	150	8	105	8	170	8		
		CuSn, Pb-free copper, electrolytic copper		100	29	150	8	105	8	170	8		
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30	30	4	20	4	30	5		
			hardened	280	31	35	4	25	4	35	5		
		Ni or Co bass	annealed	250	32	35	4	25	4	35	5		
			hardened	350	33	15	4	10	4	15	5		
			cast	320	34	15	4	10	4	15	5		
	Titanium alloys	pure titanium		R_m 400	35	30	4	20	4	30	5		
		α and β alloys	hardened	R_m 1050	36	30	4	20	4	30	5		
H	Hardened steel		hardened and tempered	55 HRC	37							25	2
			hardened and tempered	60 HRC	38							20	1
	Hard cast iron		cast	400	39							50	3
	Hardened cast iron		hardened and tempered	55 HRC	40							25	2
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 C146.
For examples of material for cutting tool groups view page D11.

	Starting values for cutting speed v_c [m/min]																					
	SC		PA		SC		SU		GD		UD		UL		FD		FD		FD			
	3-5xD		3xD		Centering drill		3-8xD		3-5xD		3-5xD		10-30xD		0°-5°		5°-35°		35°-50°			
	YK20F		YK30F		KDG303		KDG303		KDG304		KDG305		KDG305		KDG305		KDG305		KDG305			
	Coolant																					
	Ext.	f-group	Ext.	f-group	Ext.	f-group	Ext.	f-group	Ext.	f-group	Ext.	f-group	Ext.	f-group	Ext.	f-group	Ext.	f-group				
					135	8	180	16	130	24	100	21	100	21	80	16	80	17	80	20		
					120	8	180	16	130	24	100	21	100	21	80	16	80	17	80	20		
					110	6	160	16	100	24	100	21	100	21	80	16	80	17	80	20		
					100	6	180	16	130	24	100	21	100	21	80	16	80	17	80	20		
					90	6	160	16	100	23	100	21	100	21	80	16	80	17	80	20		
					120	8	160	17	100	23	100	21	100	21	80	17	80	18	80	20		
					100	6	120	17	100	23	100	21	100	21	60	17	60	18	60	20		
					90	6	120	17	100	23	100	21	100	21	60	17	60	18	60	20		
					85	6	120	17	100	23	100	21	100	21	60	17	60	18	60	20		
					110	8	120	17	100	23	100	21	100	21	60	17	60	18	60	20		
					90	6	100	17	80	23	80	21	80	21	60	17	60	18	60	20		
					75	5	80	18			80	21	65	21	45	18	45	20	45	24		
					50	5	80	18			80	21	65	21	45	18	45	20	45	24		
					55	5	80	18			80	21	65	21	45	18	45	20	45	24		
					45	5	60	18			80	21	65	21	45	18	45	20	45	24		
					120	8	250	19	160	24					80	16	80	17	80	20		
					100	8	250	19	160	24					80	16	80	17	80	20		
					100	8	200	16	140	23					60	16	60	17	60	20		
					80	8	200	16	140	23					60	16	60	17	60	20		
					120	8	180	16	130	23					60	16	60	17	60	20		
					90	8	180	16	130	23					60	16	60	17	60	20		
	180	9	180	9	180	9	400	21							120	21	120	16	120	18		
	180	9	180	9	180	9	400	21							120	21	120	16	120	18		
	130	9	130	9	130	9	400	21							120	21	120	16	120	18		
	130	9	130	9	130	9	300	21							120	21	120	16	120	18		
	120	9	120	9	120	9	300	21							120	21	120	16	120	18		
	130	9	130	9	130	9	220	21							120	21	120	16	120	18		
	130	9	130	9	130	9	220	21							120	21	120	16	120	18		
	130	9	130	9	130	9	220	21							120	21	120	16	120	18		
							45	20			40	18	30	18								
							45	20			40	18	30	18								
							45	20			40	18	30	18								
							45	20			40	18	30	18								
							45	20			40	18	30	18								
							60	20			60	17	50	17								
							60	20			60	17	50	17								

You can also find our highly useful **feed rate calculator** for the **SU, GD, UD, UL and FD series** on the pages below.

SU series: Page C41
UL series: Page C79
GD series: Page C107
UD series: Page C117
FD series: Page C129

Recommended feed rate

Solid carbide drills

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
16	0,02	0,03	0,05	0,06	0,08	0,09	0,11	0,12	0,14	0,15	0,17	0,18	0,20	0,21	0,23	0,24	0,26	0,27	0,29	0,3
17	0,01	0,02	0,04	0,05	0,06	0,07	0,08	0,10	0,11	0,12	0,13	0,14	0,16	0,17	0,18	0,19	0,20	0,22	0,23	0,24
18	0,01	0,02	0,03	0,04	0,05	0,06	0,07	0,08	0,09	0,10	0,11	0,12	0,13	0,14	0,15	0,16	0,17	0,18	0,19	0,20
19	0,02	0,04	0,05	0,07	0,09	0,11	0,13	0,14	0,16	0,18	0,20	0,22	0,23	0,25	0,27	0,29	0,31	0,32	0,34	0,36
20	0,01	0,02	0,02	0,03	0,04	0,05	0,06	0,06	0,07	0,08	0,09	0,10	0,10	0,11	0,12	0,13	0,14	0,14	0,15	0,16
21	0,02	0,04	0,06	0,08	0,10	0,12	0,14	0,16	0,18	0,20	0,22	0,24	0,26	0,28	0,30	0,32	0,34	0,36	0,38	0,40
22	0,03	0,06	0,09	0,12	0,15	0,18	0,21	0,24	0,27	0,30	0,33	0,36	0,39	0,42	0,45	0,48	0,51	0,54	0,57	0,60
23	0,04	0,08	0,12	0,16	0,20	0,24	0,28	0,32	0,36	0,40	0,44	0,48	0,52	0,56	0,60	0,64	0,68	0,72	0,76	0,80
24	0,01	0,01	0,02	0,02	0,03	0,03	0,04	0,04	0,05	0,05	0,06	0,06	0,07	0,07	0,08	0,08	0,09	0,09	0,10	0,10

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

You can also find our highly useful **feed rate calculator** for the **SU, GD, UD, UL and FD series** on the pages below.

SU series: Page C41
UL series: Page C79
GD series: Page C107
UD series: Page C117
FD series: Page C129

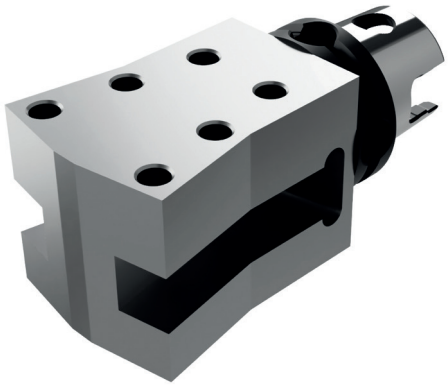
Notes

Special tools – fine-tuned to your specific application

Special applications call for special solutions optimised to the task. Special tools are able to deliver real benefits from a commercial, technical or process perspective over standard tool solutions in all industry sectors. We work with you to assess the potential in each individual case, taking into account the general conditions available at your company ZCC Cutting Tools Europe's R&D department then develops a custom solution for you at our EU headquarters in Düsseldorf to keep your machining costs as low as possible.

Why opt for special tools from ZCC Cutting Tools?

We develop customised tool solutions for you for a wide range of machining operations. We work closely with you from day one to design tools optimised to meet your needs and priorities. From design and production to logistics, we draw on many years of experience to offer a full range of expert services. Take advantage of our expertise to ensure the long-term success of your company.



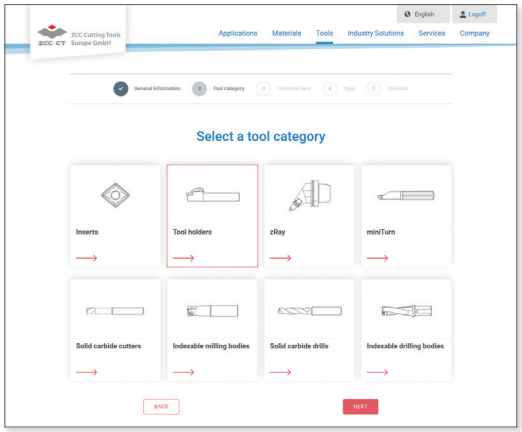
Example: Special tool holder



Example: Special solid carbide step drill

The easy way to order your custom-made special tool

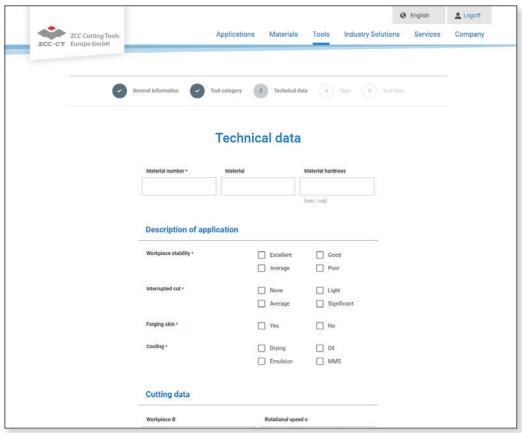
Are there specific applications at your company where having custom tools tailored to your unique needs would deliver real benefits both in terms of logistics and at a technical and commercial level? ZCC Cutting Tools is there to advise and assist you during the planning, development and ordering process. Use our new online tool to request a special tool and get your personal quotation in just a few short steps (www.zccct-europe.com).



'Online tool for special tools' launch page where you can select the tool category

Selecting the tool category

Scan the QR code on this page to go directly to the launch page of our online tool where you can request the special tool you need. You can begin by selecting the tool category you need. It's that easy.



Define the relevant tool parameters

Defining the tool parameters

You are now guided step by step through the process. You can also securely upload your drawings, diagrams and 3D models (where available).

The fast and direct way to order your special tool from ZCC Cutting Tools Europe.

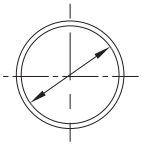
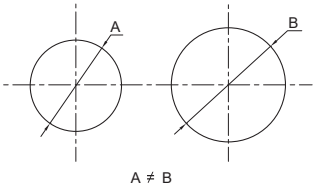
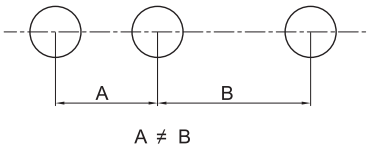
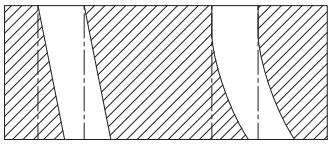
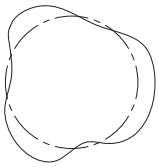
Now go directly to the new **special tool form** on our website and get started.

Technical information

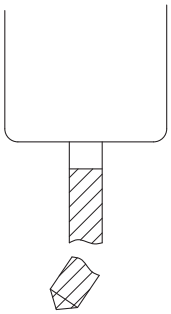
Trouble shooting – drilling	**C194-C198**
Technical information – drilling	**C199-C205**
Special tools – drilling	**C206**

C

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
	– Asymmetric point angle – Large radial run out – Point relief is off centre	– Regrind drill – Check quality of regrinding
Irregular hole size 	– Asymmetric point angle – Large radial run out – Point relief is off centre – High wear	– Use precision clamping – Reduce spindle play – Check and adjust clamped drill
	– Insufficient clamping of work piece and/or tool – Large radial run out – Point relief is off centre – High wear	– Use precision clamping – Reduce spindle play – Check and adjust clamped drill
	– Feed rate too high	– Reduce feed rate
	– Insufficient coolant	– Increase amount of coolant or change coolant supply
Low position accuracy 	– Insufficient clamping and spindle positio-ning – Large radial run out of spindle	– Improve positioning of machine – Use precision clamping – Calibrate spindle – Check and adjust clamped drill
	– The feed direction is not vertical to the workpiece surface	– Adjust feed rate vertically to workpiece surface
	– Tool isn't aligned with centre of spindle (lathe machines	– Centre the tool
Bad drill run out 	– High tool wear	– Regrind drill
	– Poor drill accuracy	– Improve positioning of drill
	– Asymmetric point angle – Large radial run out – Point relief is off centre	– Regrind drill – Check quality of regrinding
	– Insufficient tool stability	– Improve stability of tool
	– Uneven workpiece surface – Tool isn't aligned with centre of spindle (lathe machines)	– Before boring align the workpiece horizontally to the drill or pre-machine the workpiece
Inaccurate hole (roundness) 	– 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 – Calibrate spindle – Check and adjust clamped drill
	– Clearance angle too large	– Regrind the drill
	– Insufficient tool stability	– Improve tool stability

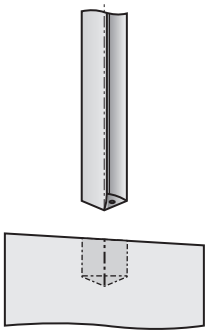
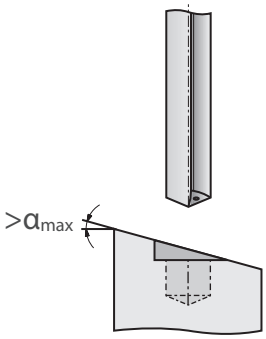
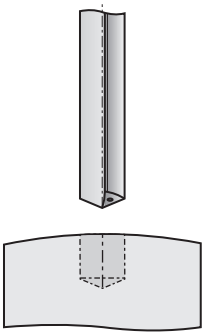
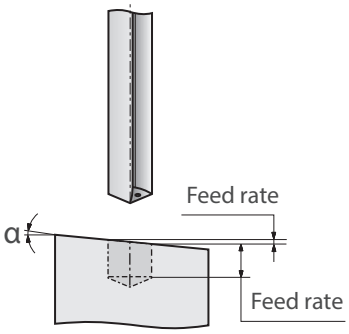
Trouble shooting – solid carbide drills

Error	Reason	Countermeasure
Bad surface quality	– 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.)
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	– Improve stability of tool and clamping of workpiece
	– Clearance angle too small	– Use a drill with bigger clearance angle or regrind
	– Feed rate too high	– Reduce feed rate
	– Excessive wear	– Regrind drill
	– Chip jamming	– Chose a suitable drill (considering flute geometry, helical angle, etc.) – Adjust cutting speed – Reduce feed rate
	– Drilling in uneven surfaces	– 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	– Check material and chose suitable grade – Change cutting conditions (cutting speed, feed rate or machining method)
	– Feed rate too high	– Reduce feed rate
	– Insufficient coolant	– Improve/increase coolant supply
Chipping on the cutting edge 	– Poor clamping – Large radial run out	– Use a more precise clamping device – Adjust the spindle
	– Cutting speed and feed rate too high	– Reduce cutting speed and feed rate
	– Clearance angle too large	– Use a drill with smaller clearance angle or regrind

Trouble shooting – solid carbide drills

Error	Reason	Countermeasure
Excessive wear 	– Overdue regrinding	– Regrind in time
	– Drill tip not in centre position	– Adjust drill with centre of spindle
	– Cutting speed too high	– Reduce cutting speed
	– Cutting angle not suitable	– Chose right cutting angle
	– Material not suitable	– Chose suitable material
	– Insufficient cooling	– Use suitable cooling
Wear and chipping on point relief	– Feed rate too high	– Reduce feed rate
	– Cutting angle not suitable	– Chose right cutting angle
	– Material not suitable	– Chose suitable material
	– Clearance angle too small	– Regrind drill
Breakage on margin	– Guide bush too large	– Change guide bush
Built up edge on margin	– High wear and heat	– Regrind drill
	– Insufficient cooling	– Change cooling method
	– Incorrect coolant	– Change coolant
	– Workpiece material is too soft	– Use drill with smaller clearance angle
High vibrations	– Clearance angle too large	– Regrind drill
	– Drill stability too low	– 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	– Adjust drill with centre of spindle
	– Poor clamping	– Improve drill clamping – Check concentricity

Trouble shooting – PC series

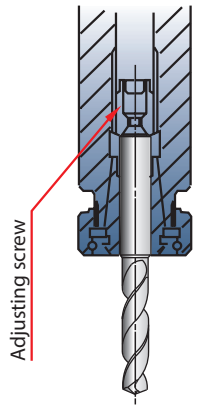
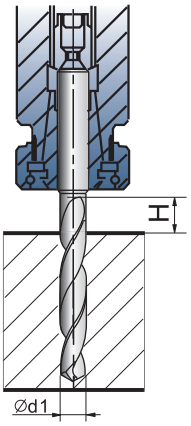
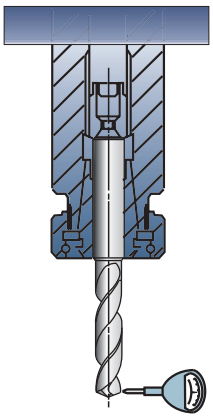
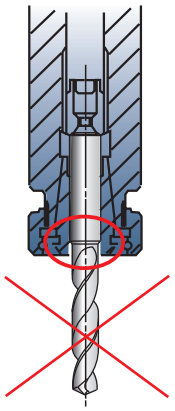
Machining	Recommendation
Sloped surface 	– Inclined surfaces should be pre-machined (chamfering). 
Inclined surface 	– Reduce feed rate accordingly.  Inclination angle / Max. feed rate 1° / 80% 2° / 50% 3° / 30%

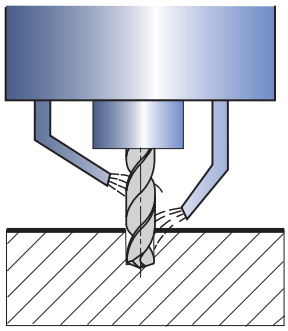
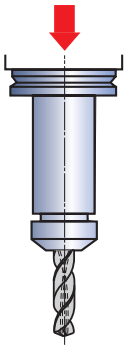
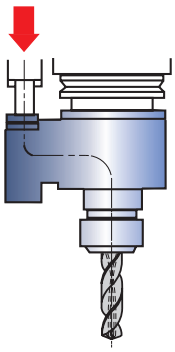
Trouble shooting – solid carbide reamers

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 work piece.
Trumpet-shaped entry hole	– Improve clamping of the work piece. – 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.

Solid carbide drills

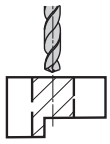
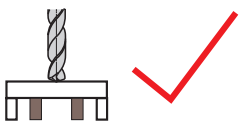
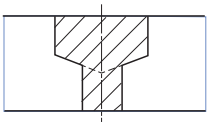
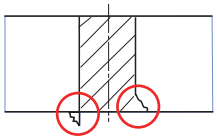
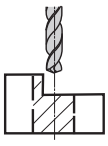
Operation notes

Correct drill clamping	Max. drilling length	Radial run-out	Wrong drill clamping
			
Use precision collets	H = 1,5 x 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	

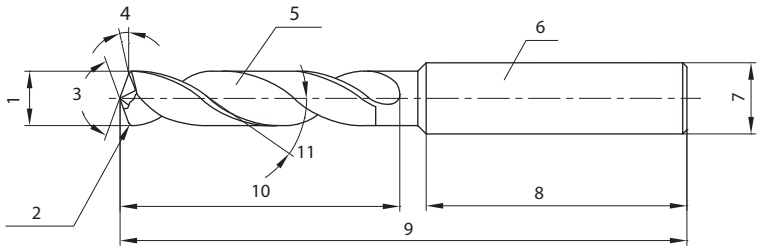
Handling of coolants:

1. Small chip particles and dust can cause jamming in the oil hole. A fine mesh filter should be used.
2. 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.

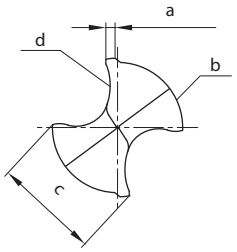
Interrupted cutting	Thin work pieces	Stepped holes	Burrs and work piece chippings on exit
 Reduce the feed rate when drilling interrupted cut.	  If bending occurs, add a supporter.	 – First drill the larger hole, then the smaller hole. – We can offer multiple step and chamfer drills on request.	 – Reduce 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

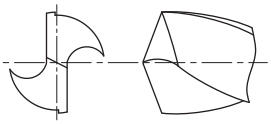
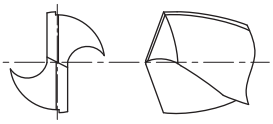
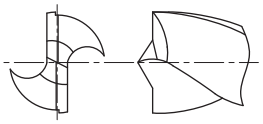


1. Drilling diameter
2. Chamfer
3. Point angle
4. Clearance angle
5. Chip pocket
6. Shank
7. Shank diameter
8. Shank length
9. Overall length
10. Flute length
11. Helical angle



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.

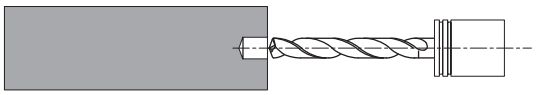
Solid carbide drills

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 ⟵ helical angle ⟶ 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 ⟵ point angle ⟶ 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 ⟵ core diameter ⟶ 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 ⟵ chamfer width ⟶ 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*



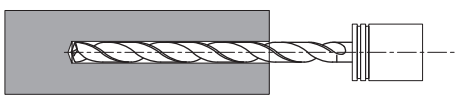
– Point angle of pilot drill must be bigger than SL drill.
– Diameter of pilot drill must be 0.01–0.04 mm bigger than SL drill.
– The pilot hole should be 1–3×D.

2 Entering the pilot hole with SL drill



– Entering the pilot hole with low cutting speed. (VC: 20–30 m/min)
– Stop 1–3 mm before end of pilot hole. (Vf = 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..

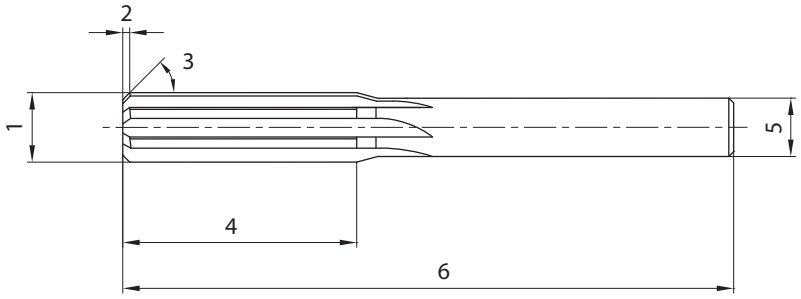
4 Pulling out the drill



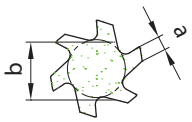
– After reaching the required depth reduce the cutting speed (VC: 20–30 m/min) and pull out the drill at high feed rate. (Vf: 2000 mm/min)

Solid carbide reamers

Terminology

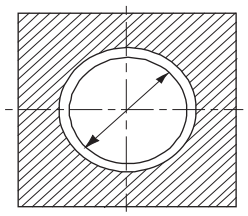


1.Nominal diameter
2.Chamfer length
3.Entry angle
4.Cutting edge length
5.Shank diameter
6.Total length

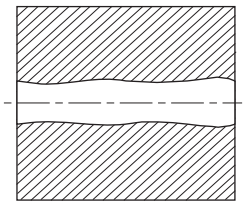


a.Cutting edge thickness
b.Core diameter

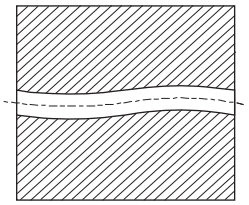
Reaming is semi-finishing and finishing of a previously formed hole within a narrow tolerance for higher surface quality, perfect roundness, cylindricity, etc.. To achieve a precisely reamed hole, the right choice of reamer and reamer diameter is important. In addition to that, the bore tolerance, the 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.



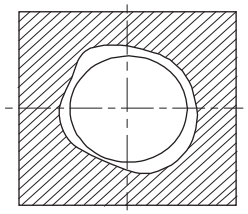
Diameter tolerance/Allowance



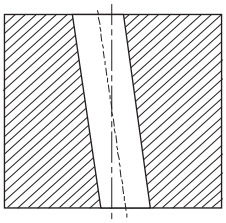
Cylindricity



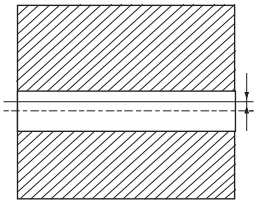
Straightness



Roundness



Vertical deviation



Off centre

Solid carbide thread formers

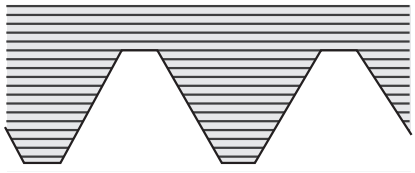
What is thread forming?

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.

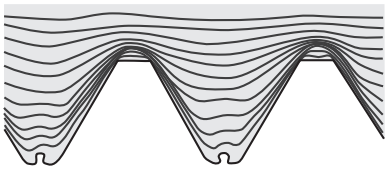
Advantages of thread forming:
- The thread is formed much more precisely.
- The thread is more resilient.
- The threads have a very smooth surface.
- Higher rotation speeds and feed rates possible than in thread cutting.
- Longer tool life increases the productivity.

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/mm^2. Basically, all long-chipping materials are suitable.



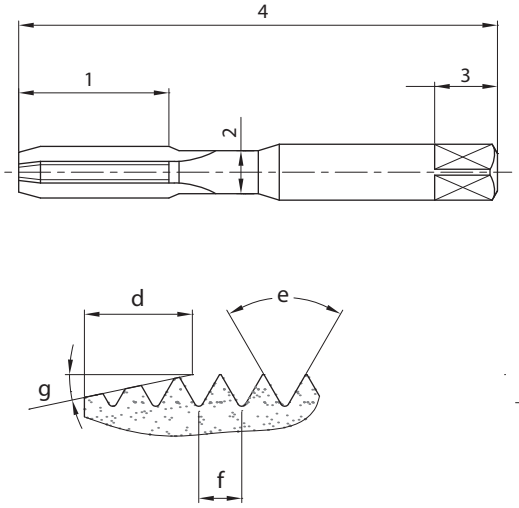
Fibre orientation after thread cutting



Fibre orientation after thread forming

Solid carbide taps

Terminology



Chamfer and thread profile

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

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

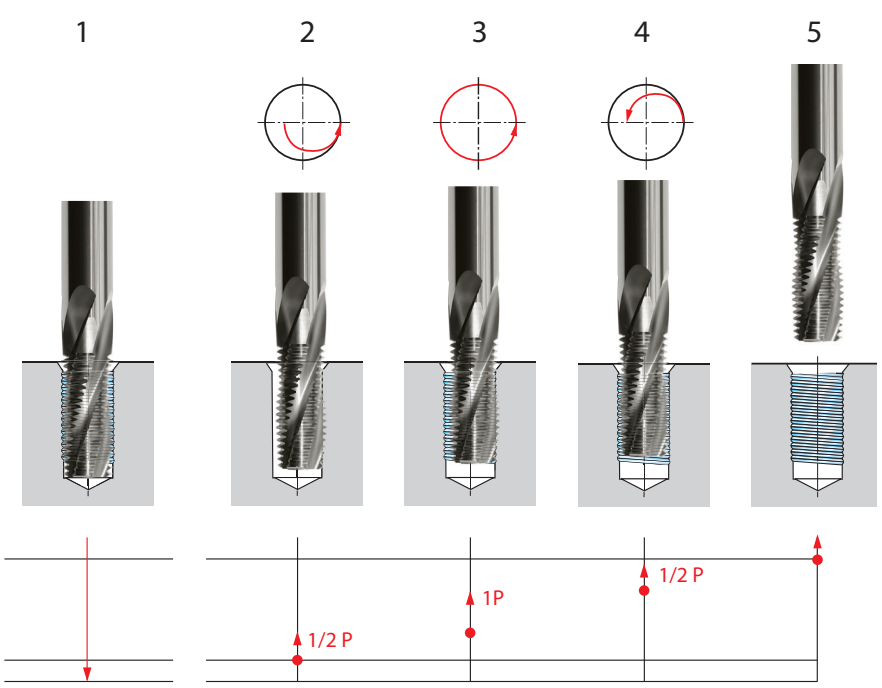
d.Chamfer length
e.Thread profile angle
f.Pitch
g.Chamfer angle

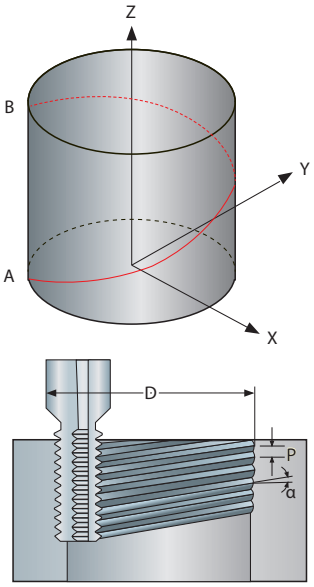
Chip space and application

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

Solid carbide thread milling cutters

Solid carbide thread milling cutters with cylindrical shank – example

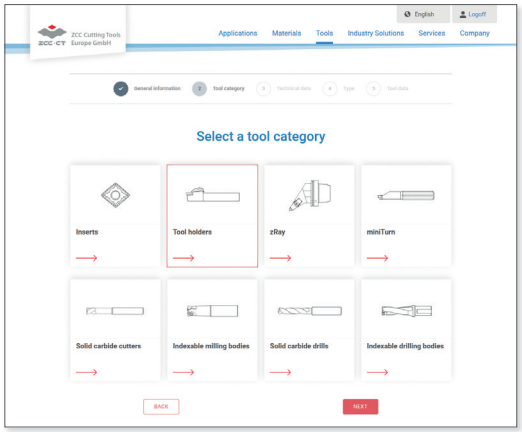




α Helix angle
D Diameter
p Pitch

Go directly to the special tool tailored for your drilling applications

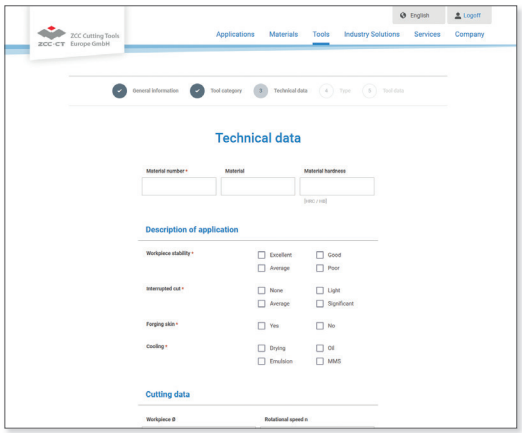
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Selecting the tool category

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Defining the tool parameters

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