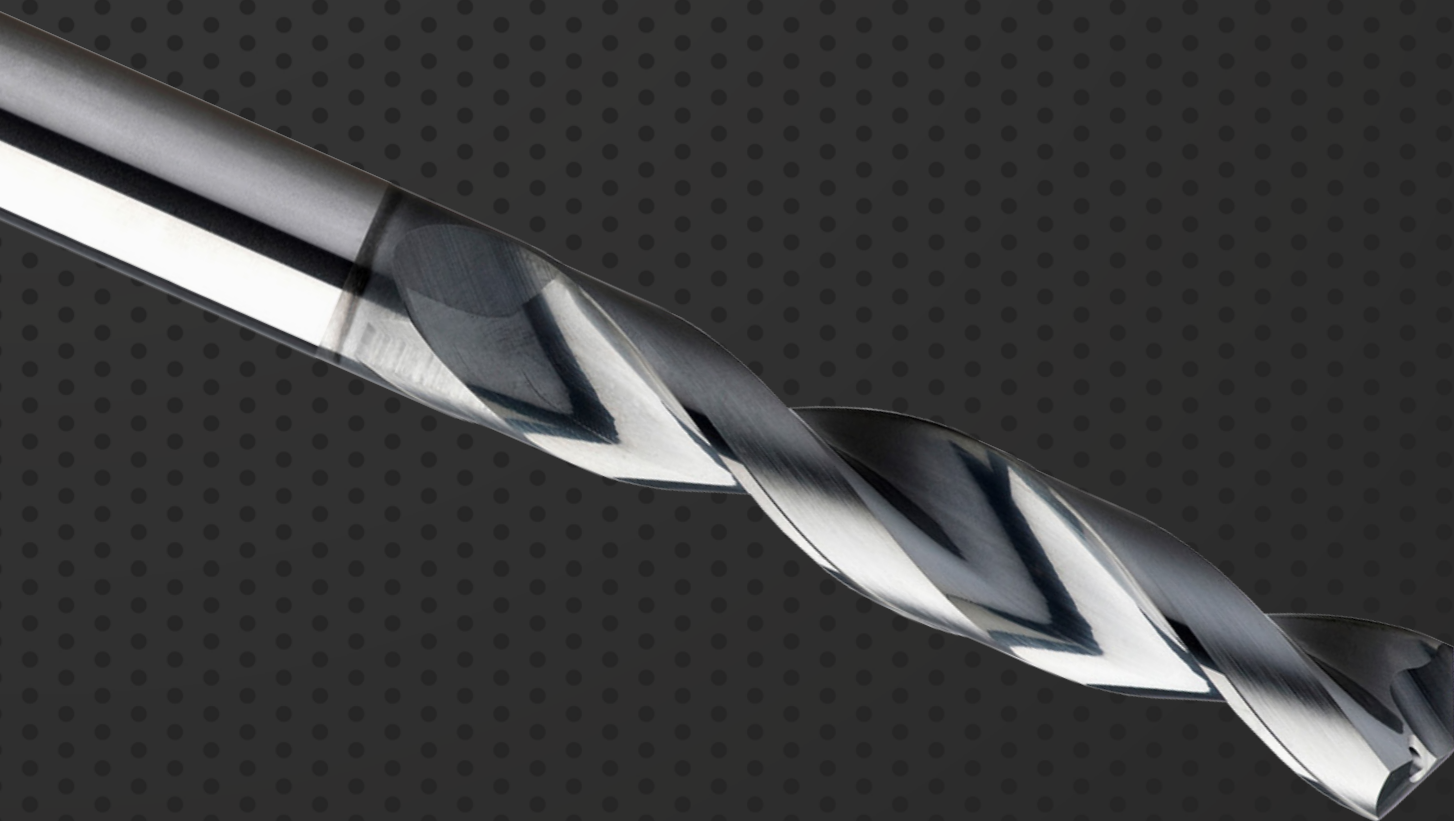




DRILLS

DR NiTiCo

High performance drill suitable for superalloys materials

Index - Drills, For 35 - 68 HRC

Suitable for Material Groups
 Adapté pour les matériaux
 适用于材料
 Geeignet für die Materialgruppen
 Adatto per il materiale

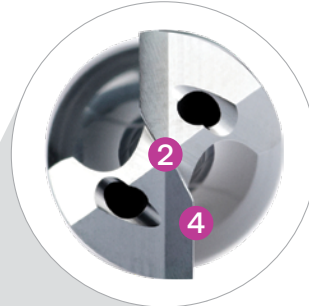
P	M	K	N
S	H	O	

EDP Number	Hardness		Type	No. Z	Helix Angle	Coating	Performance	Page Number
662	≤ 35 HRC		DR NC 60°	2	30°	UC	G	443
953			DR NC 60°	2	30°	B0819	G	443
664			DR NC 90°	2	30°	UC	G	444
955			DR NC 90°	2	30°	B0819	G	444
666			DR NC 120°	2	30°	UC	G	445
957			DR NC 120°	2	30°	B0819	G	445
D09	Non Ferrous Metal		DR ALU OF - 3 x Ø	2	30°	UC	P	449
D10			DR ALU OF - 5 x Ø	2	30°	UC	P	450
NEW W16	≤ 35 HRC		EZ Drill - 3 x Ø	2	30°	T8090	G	454
NEW W17			EZ Drill - 5 x Ø	2	30°	T8090	G	456
D07			DR NiTiCo OF - 3 x Ø	2	30°	T8090	P	459
D08			DR NiTiCo OF - 5 x Ø	2	30°	T8090	P	460
C73	≤ 45 HRC		DR VA OF- 3 x Ø	2	30°	T8090	P	464
C77			DR VA OF- 5 x Ø	2	30°	T8090	P	465
W08			DR-S - 3 x Ø	2	30°	T8090	P	469
W09			DR-S - 5 x Ø	2	30°	T8090	P	470
W10			DR-S OF - 3 x Ø	2	30°	T8090	P	471
W11			DR-S OF - 5 x Ø	2	30°	T8090	P	472
H03			DR MINI OF - 5 x Ø, 8x Ø, 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø	2	30°	T8090	P	479
NEW W05			DR-LX OF - 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø	2	30°	T8090	P	485
F33			DR 45 SB OF - 8 x Ø	2	30°	T8090	P	493
821	≤ 60 HRC		DR 60 - 5 x Ø	2	15°	D0120	P	497
823			DR 60 - 3 x Ø	2	15°	D0120	P	498

G - General P - Performance

FEATURES & BENEFITS

DR VA



1 Radius Gash Design

- Edge protection for that particular area
- Generate shorter chip for better chip evacuation

2 X-Thinning

Better self-centering on initial cutting

3 Highly Polished Flutes

Ensures fast, efficient chips evacuation and drastically reduces built-up edge

4 Straight Edge Profile

Shorter chip and reinforced cutting edge

5 Regrind and honing friendly

6 Suitable for Material Groups





1. Radius-Spannutengeometrie
Kantenschutz für diesen speziellen Bereich
Erzeugt kleinere Späne die besseren Spänefluß
2. X-Ausspitzung
Bessere Selbstzentrierung beim Anschnitt
3. Polierte Schneiden
Sorgt für schnellen effizienten Spänefluß und reduziert die Bildung von Aufbauschneiden
4. Gerades Kantenprofil
Kürzerer Span und verstärkte Schneidkante
5. Leicht nachzuschleifen
6. Geeignet für die Materialgruppen P, M, S



1. 半径沟槽设计
该特定区域的边缘保护。
产生更短的碎屑, 以实现更好的排屑。
2. X 变薄
初始切割时更好的自定心能力。
3. 高度抛光的排屑槽
确保快速、高效的排屑和极大减少铁屑堆积。
4. 直边轮廓
较短的碎屑和强化的切削刃。
5. 易于研磨和珩磨
6. 适用于材料 P、M、S



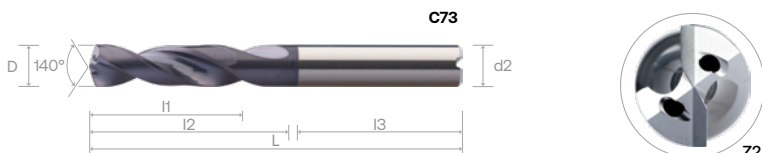
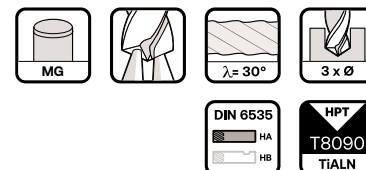
1. Struttura sgrossatura raggio
Protezione angoli per quell'area specifica
Genera trucioli più piccoli per una migliore evacuazione
2. X-assottigliamento
Miglior autocentraggio al taglio iniziale
3. Scanalature altamente levigate
Assicura una evacuazione rapida ed efficace e riduce enormemente
4. Profilo dritto
Trucioli più corti e angolo di taglio rinforzato
5. Riaffilatura e rifinitura
6. Adatto per il materiale P, M, S



1. Conception des goujures rayonnées
Protection des arêtes pour cette zone en particulier
Génère des copeaux plus courts pour une meilleure évacuation
2. Amincissement en X
Meilleur auto-centrage à l'attaque du perçage
3. Goujures hautement polies
Garantit une évacuation des copeaux rapide et efficace et réduit radicalement
4. Profil d'arête droite
Copeaux plus courts et arête de coupe renforcée
5. Compatible avec le réaffûtage et le pierrage
6. Adapté aux matériaux P, M, S

DR VA OIL FEED TWIST DRILLS - DIN 6537K - 140° POINT ANGLE - 3 X Ø

-  VHM DR VA Kühlkanalbohrer nach DIN 6537K, 140° Spitzenwinkel, Schaft nach DIN 6535HA
-  Punta elicoidali DR 45 norma DIN 6537K - 3 x Ø con foro di lubrificazione, angolo di punta 140°, codolo DIN 6535HA
-  Forets hélicoïdaux DR VA à trous d'huile selon DIN 6537K - 3 x Ø, angle de pointe 140°, queue selon DIN 6535HA
-  整体硬质合金DRVA 系列 内冷孔钻头-相等于DIN6537K2刃-加工深度3xD, 柄部标准DIN6535HA, 顶角140°



Order Number	Dimension (mm)						T8090		Order Number	Dimension (mm)						T8090	
	D (m7)	I1	I2	I3	L	d2 (h6)				D (m7)	I1	I2	I3	L	d2 (h6)		
C73 0300 062 03	3	14	20	36	62	3	○		C73 0790 *	7.9	29	41	36	79	8	○	
C73 0300 *	3		20	36	62	6	●		C73 0800 *	8		41	36	79	8	○	
C73 0310 062 03	3.1		20	36	62	3	○		C73 0810 079 08 *	8.1		41	36	79	8	○	
C73 0310 *	3.1		20	36	62	6	○		C73 0810 *	8.1		47	40	89	10	○	
C73 0320 062 03	3.2		20	36	62	3	○		C73 0820 *	8.2		47	40	89	10	○	
C73 0320 *	3.2		20	36	62	6	●		C73 0830 *	8.3		47	40	89	10	○	
C73 0330 *	3.3		20	36	62	6	○		C73 0840 *	8.4		47	40	89	10	○	
C73 0340 *	3.4		20	36	62	6	●		C73 0850 *	8.5		47	40	89	10	○	
C73 0350 *	3.5		20	36	62	6	●		C73 0860 *	8.6		47	40	89	10	●	
C73 0360 *	3.6		20	36	62	6	○		C73 0870 *	8.7		47	40	89	10	●	
C73 0370 *	3.7	17	20	36	62	6	○		C73 0880 *	8.8	35	47	40	89	10	●	
C73 0380 *	3.8		24	36	66	6	○		C73 0890 *	8.9		47	40	89	10	○	
C73 0390 *	3.9		24	36	66	6	○		C73 0900 *	9		47	40	89	10	○	
C73 0400 066 04	4		24	36	66	4	○		C73 0910 *	9.1		47	40	89	10	○	
C73 0400 *	4		24	36	66	6	●		C73 0920 *	9.2		47	40	89	10	○	
C73 0410 066 04	4.1		24	36	66	4	○		C73 0930 *	9.3		47	40	89	10	●	
C73 0410 *	4.1		24	36	66	6	○		C73 0940 *	9.4		47	40	89	10	●	
C73 0420 066 04	4.2		24	36	66	4	○		C73 0950 *	9.5		47	40	89	10	○	
C73 0420 *	4.2		24	36	66	6	●		C73 0960 *	9.6		47	40	89	10	●	
C73 0430 *	4.3		24	36	66	6	●		C73 0970 *	9.7		47	40	89	10	○	
C73 0440 *	4.4	20	24	36	66	6	○		C73 0980 *	9.8	40	47	40	89	10	○	
C73 0450 *	4.5		24	36	66	6	○		C73 0990 *	9.9		47	40	89	10	●	
C73 0460 *	4.6		24	36	66	6	○		C73 1000 *	10		47	40	89	10	●	
C73 0470 *	4.7		24	36	66	6	●		C73 1020 *	10.2		55	45	102	12	○	
C73 0480 *	4.8		28	36	66	6	●		C73 1050 *	10.5		55	45	102	12	●	
C73 0490 *	4.9		28	36	66	6	●		C73 1080 *	10.8		55	45	102	12	○	
C73 0500 *	5		28	36	66	6	●		C73 1100 *	11		55	45	102	12	●	
C73 0510 *	5.1		28	36	66	6	●		C73 1120 *	11.2		55	45	102	12	○	
C73 0520 *	5.2		28	36	66	6	●		C73 1130 *	11.3		55	45	102	12	○	
C73 0530 *	5.3		28	36	66	6	○		C73 1150 *	11.5	43	55	45	102	12	●	
C73 0540 *	5.4		28	36	66	6	○		C73 1180 *	11.8		55	45	102	12	●	
C73 0550 *	5.5		28	36	66	6	○		C73 1200 *	12		55	45	102	12	●	
C73 0560 *	5.6		28	36	66	6	○		C73 1220 *	12.2		60	45	107	14	●	
C73 0570 *	5.7		28	36	66	6	○		C73 1250 *	12.5		60	45	107	14	○	
C73 0580 *	5.8		28	36	66	6	○		C73 1270 *	12.7		60	45	107	14	○	
C73 0590 *	5.9		28	36	66	6	○		C73 1280 *	12.8		60	45	107	14	○	
C73 0600 *	6		28	36	66	6	●		C73 1300 *	13		60	45	107	14	●	
C73 0610 066 06 *	6.1	24	28	36	66	6	○		C73 1330 *	13.3		60	45	107	14	○	
C73 0610 *	6.1		34	36	79	8	●		C73 1350 *	13.5		60	45	107	14	●	
C73 0620 *	6.2		34	36	79	8	●		C73 1370 *	13.7		60	45	107	14	○	
C73 0630 *	6.3		34	36	79	8	○		C73 1380 *	13.8		60	45	107	14	●	
C73 0640 *	6.4		34	36	79	8	○		C73 1400 *	14		60	45	107	14	○	
C73 0650 *	6.5		34	36	79	8	●		C73 1450 *	14.5	45	65	48	115	16	●	
C73 0660 *	6.6		34	36	79	8	○		C73 1500 *	15		65	48	115	16	○	
C73 0670 *	6.7		34	36	79	8	○		C73 1530 *	15.3		65	48	115	16	○	
C73 0680 *	6.8		34	36	79	8	●		C73 1550 *	15.5		65	48	115	16	○	
C73 0690 *	6.9		34	36	79	8	●		C73 1580 *	15.8		65	48	115	16	●	
C73 0700 *	7		34	36	79	8	●		C73 1600 *	16		65	48	115	16	●	
C73 0710 *	7.1	29	41	36	79	8	●		C73 1650 *	16.5		73	48	123	18	○	
C73 0720 *	7.2		41	36	79	8	○		C73 1700 *	17	51	73	48	123	18	●	
C73 0730 *	7.3		41	36	79	8	○		C73 1750 *	17.5		73	48	123	18	○	
C73 0740 *	7.4		41	36	79	8	○		C73 1800 *	18		73	48	123	18	○	
C73 0750 *	7.5		41	36	79	8	●		C73 1850 *	18.5	55	79	50	131	20	○	
C73 0760 *	7.6		41	36	79	8	○		C73 1900 *	19		79	50	131	20	○	
C73 0770 *	7.7		41	36	79	8	○		C73 1950 *	19.5		79	50	131	20	○	
C73 0780 *	7.8		41	36	79	8	○		C73 2000 *	20		79	50	131	20	●	

* - DIN 6535

Material Group | Material-Gruppe | Groupe Matiere | Gruppo Materiali | 材质主类

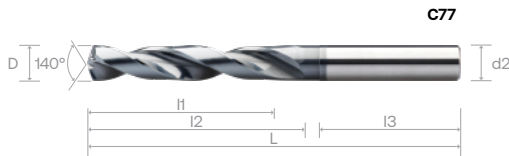
N01	N02	N03	K01	K02	P01	P02	P03	M01	M02	S01	S02	S03	H01	H02	O01	O02
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Cutting Parameter

466

DR VA OIL FEED TWIST DRILLS - DIN 6537L - 140° POINT ANGLE - 5 X Ø

-  VHM DR VA Kühlkanalbohrer nach DIN 6537L, 140° Spitzenwinkel, Schaft nach DIN 6535HA
-  Punte elicoidali DR VA a norma DIN 6537L- 5 x Ø, con foro di lubrificazione, angolo di punta 140°, codolo DIN 6535HA
-  Forets hélicoïdaux DR VA à trous d'huile selon DIN 6537L - 5 x Ø, angle de pointe 140°, queue selon DIN 6535HA
-  整体硬质合金 DR V A 系列 内冷孔钻头-相等于DIN6537L 2刃-加工深度5xD, 柄部标准DIN6535HA, 顶角140°



Order Number	Dimension (mm)						T8090
	D (m7)	I1	I2	I3	L	d2 (h6)	
C77 0300 062 03	3	23	28	36	66	3	○
C77 0300 *	3		28	36	66	6	●
C77 0310 062 03	3.1		28	36	66	3	○
C77 0310 *	3.1		28	36	66	6	●
C77 0320 062 03	3.2		28	36	66	3	○
C77 0320 *	3.2		28	36	66	6	●
C77 0330 *	3.3		28	36	66	6	●
C77 0340 *	3.4		28	36	66	6	○
C77 0350 *	3.5		28	36	66	6	●
C77 0360 *	3.6		28	36	66	6	○
C77 0370 *	3.7	29	28	36	66	6	●
C77 0380 *	3.8		36	36	74	6	○
C77 0390 *	3.9		36	36	74	6	○
C77 0400 066 04	4		36	36	74	4	○
C77 0400 *	4		36	36	74	6	●
C77 0410 066 04	4.1		36	36	74	4	○
C77 0410 *	4.1		36	36	74	6	○
C77 0420 066 04	4.2		36	36	74	4	○
C77 0420 *	4.2		36	36	74	6	●
C77 0430 *	4.3		36	36	74	6	●
C77 0440 *	4.4		36	36	74	6	○
C77 0450 *	4.5	35	36	36	74	6	○
C77 0460 *	4.6		36	36	74	6	○
C77 0470 *	4.7		36	36	74	6	●
C77 0480 *	4.8		44	36	82	6	●
C77 0490 *	4.9		44	36	82	6	●
C77 0500 *	5		44	36	82	6	●
C77 0510 *	5.1		44	36	82	6	●
C77 0520 *	5.2		44	36	82	6	●
C77 0530 *	5.3		44	36	82	6	○
C77 0540 *	5.4		44	36	82	6	○
C77 0550 *	5.5	43	44	36	82	6	○
C77 0560 *	5.6		44	36	82	6	○
C77 0570 *	5.7		44	36	82	6	○
C77 0580 *	5.8		44	36	82	6	●
C77 0590 *	5.9		44	36	82	6	○
C77 0600 *	6		44	36	82	6	●
C77 0610 066 06 *	6.1		44	36	82	6	○
C77 0610 *	6.1		53	36	91	8	●
C77 0620 *	6.2		53	36	91	8	●
C77 0630 *	6.3		53	36	91	8	●
C77 0640 *	6.4	60	53	36	91	8	○
C77 0650 *	6.5		53	36	91	8	○
C77 0660 *	6.6		53	36	91	8	●
C77 0670 *	6.7		53	36	91	8	○
C77 0680 *	6.8		53	36	91	8	●
C77 0690 *	6.9		53	36	91	8	○
C77 0700 *	7		53	36	91	8	●
C77 0710 *	7.1		53	36	91	8	○
C77 0720 *	7.2		53	36	91	8	○
C77 0730 *	7.3		53	36	91	8	○
C77 0740 *	7.4	63	53	36	91	8	●
C77 0750 *	7.5		53	36	91	8	○
C77 0760 *	7.6		53	36	91	8	○
C77 0770 *	7.7		53	36	91	8	○
C77 0780 *	7.8		53	36	91	8	●
C77 0790 *	7.9	43	53	36	91	8	○
C77 0800 *	8		53	36	91	8	●
C77 0810 079 08 *	8.1		53	36	91	8	●
C77 0810 *	8.1		61	40	103	10	●
C77 0820 *	8.2		61	40	103	10	●
C77 0830 *	8.3		61	40	103	10	○
C77 0840 *	8.4		61	40	103	10	●
C77 0850 *	8.5		61	40	103	10	●
C77 0860 *	8.6		61	40	103	10	○
C77 0870 *	8.7		61	40	103	10	●
C77 0880 *	8.8	49	61	40	103	10	○
C77 0890 *	8.9		61	40	103	10	○
C77 0900 *	9		61	40	103	10	●
C77 0910 *	9.1		61	40	103	10	○
C77 0920 *	9.2		61	40	103	10	○
C77 0930 *	9.3		61	40	103	10	○
C77 0940 *	9.4		61	40	103	10	●
C77 0950 *	9.5		61	40	103	10	●
C77 0960 *	9.6		61	40	103	10	○
C77 0970 *	9.7		61	40	103	10	○
C77 0980 *	9.8	56	61	40	103	10	●
C77 0990 *	9.9		61	40	103	10	●
C77 1000 *	10		61	40	103	10	○
C77 1020 *	10.2		71	45	118	12	○
C77 1050 *	10.5		71	45	118	12	●
C77 1080 *	10.8		71	45	118	12	○
C77 1100 *	11		71	45	118	12	○
C77 1120 *	11.2		71	45	118	12	○
C77 1130 *	11.3		71	45	118	12	●
C77 1150 *	11.5		71	45	118	12	●
C77 1180 *	11.8	60	71	45	118	12	●
C77 1200 *	12		71	45	118	12	●
C77 1220 *	12.2		77	45	124	14	●
C77 1250 *	12.5		77	45	124	14	○
C77 1270 *	12.7		77	45	124	14	○
C77 1280 *	12.8		77	45	124	14	○
C77 1300 *	13		77	45	124	14	○
C77 1330 *	13.3		77	45	124	14	○
C77 1350 *	13.5		77	45	124	14	○
C77 1370 *	13.7		77	45	124	14	○
C77 1380 *	13.8	63	77	45	124	14	●
C77 1400 *	14		77	45	124	14	●
C77 1450 *	14.5		83	48	133	16	●
C77 1500 *	15		83	48	133	16	○
C77 1530 *	15.3		83	48	133	16	○
C77 1550 *	15.5		83	48	133	16	○
C77 1580 *	15.8		83	48	133	16	○
C77 1600 *	16		83	48	133	16	○
C77 1650 *	16.5		93	48	143	18	○
C77 1700 *	17		93	48	143	18	●
C77 1750 *	17.5	71	93	48	143	18	○
C77 1800 *	18		93	48	143	18	○
C77 1850 *	18.5		101	50	153	20	○
C77 1900 *	19		101	50	153	20	○
C77 1950 *	19.5		101	50	153	20	○
C77 2000 *	20		101	50	153	20	○

* - DIN 6535

Material Group | Material-Gruppe | Groupe Matiere | Gruppo Materiali | 材质主类

N01	N02	N03	K01	K02	P01	P02	P03	M01	M02	S01	S02	S03	H01	H02	O01	O02
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Cutting Parameter

466

Recommended Cutting Data



Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition



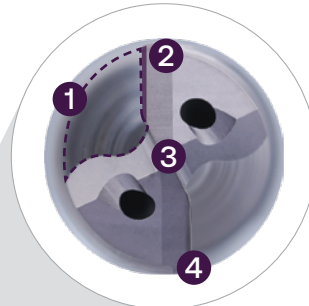
DR VA Oil Feed Twist Drills, 3xD & 5xD, 2 Flutes - C73, C77

Drilling	M				S	
Working Material	Stainless Steel		Stainless Steel		Nickel Alloy	
Properties	High Machinability		Low Machinability		-	
D	Vc	fn	Vc	fn	Vc	fn
3	80	0.045	55	0.042	40	0.030
4		0.067		0.060		0.040
5		0.086		0.080		0.052
6		0.110		0.102		0.062
7		0.130		0.120		0.078
8		0.160		0.150		0.092
9		0.175		0.170		0.105
10		0.195		0.188		0.120
11		0.220		0.210		0.132
12		0.245		0.242		0.155
13		0.252		0.249		0.162
14		0.258		0.255		0.168
15		0.280		0.275		0.172
16		0.292		0.285		0.185
17		0.307		0.290		0.186
18		0.308		0.303		0.187
19		0.320		0.310		0.192
20		0.330		0.325		0.200

NC SPOT
DR ALU
EZ LINE -
DRILL
DR NITCo
DR VA
DR-S
DR MINI
DR-LX
DR 45 SB
DR 60

FEATURES & BENEFITS

DR-S



1 Wider Chip Pocket

Enhances and smoother chip evacuation

2 Straight Edge Profile

Shorter chip and reinforced cutting edge

3 Bigger K-Value

Suitable for higher feed rate and enhances tool durability

4 Corner Chamfer Edge

Ideal for cast iron and better surface finishing

5 Versatile

Suitable for 5 material groups





1. Größere Spantasche
Verbesserter problemloser Spänefluß
 2. Gerades Schneidkantenprofil
Kürzere Späne und verstärkte Schneidkanten
 3. Größere K-Ausprägung
für höhere Vorschubgeschwindigkeit und verbesserte die Haltbarkeit des Werkzeugs
 4. Schneideckenfase
Ideal für Gussbearbeitung und bessere Oberflächengüte
 5. Vielseitig
Geeignet für 5 Materialgruppen
-



1. 更宽的碎屑袋
增强和更顺畅的排屑。
 2. 直边轮廓
较短的碎屑和强化的切削刃。
 3. 更大的 K 值
适用于较高的进料速率和提高刀具耐用性。
 4. 角倒角边
铸铁和更好的表面处理的理想选择。
 5. 多功能
适用于 5 个材料组
-



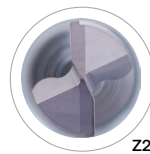
1. Tasca trucioli più ampia
Migliora e semplifica l'evacuazione dei trucioli
2. Profilo dritto
Trucioli più corti e angolo di taglio rinforzato
3. Valore K più grande
Adatto per velocità di avanzamento più grandi e migliora la durata dello strumento
4. Tagliente di smusso
Ideale per ghisa e migliore finitura superficiale
5. Versatile
Adatto per gruppi di 5 materiali



1. Récupérateur de copeaux plus large
Évacuation des copeaux plus facile et plus fluide
2. Profil d'arête droite
Copeaux plus courts et arête tranchante renforcée
3. Coefficient K supérieur
Adapté pour un débit plus élevé et améliore la durabilité de l'outil
4. Arête chanfrein de coin
Idéal pour la fonte et meilleure finition de surface
5. Polyvalent
Adapté au 5 groupes de matériaux

DR-S TWIST DRILLS - DIN 6537K - 3 X Ø

-  VHM DR-S Spiralbohrer nach DIN 6537K, 140° Spitzenwinkel, Schaft nach DIN 6535HA
-  Punte elicoidali DR-S a norma DIN 6537K, 3 x ø, angolo di punta 140°, codolo DIN 6535HA
-  Forets hélicoïdaux DR-S selon DIN 6537K - 3 x Ø, angle de pointe 140°, queue selon DIN 6535HA
-  整体硬质合金 DR-S 系列 钻头-相等于DIN6537K-加工深度3xD, 柄部标准DIN6535HA, 油料麻花钻-相等于2刃, 柄部标准DIN6535HA, 顶角140°



Order Number	Dimension (mm)						T8090
	D (m7)	I1	I2	I3	L	d2 (h6)	
W08 0300 *	3	14	20	36	62	6	•
W08 0310 *	3.1		20	36	62	6	•
W08 0320 *	3.2		20	36	62	6	•
W08 0330 *	3.3		20	36	62	6	•
W08 0340 *	3.4		20	36	62	6	•
W08 0350 *	3.5		20	36	62	6	•
W08 0360 *	3.6	17	20	36	62	6	•
W08 0370 *	3.7		20	36	62	6	•
W08 0380 *	3.8		24	36	66	6	•
W08 0390 *	3.9		24	36	66	6	•
W08 0400 *	4		24	36	66	6	•
W08 0410 *	4.1		24	36	66	6	•
W08 0420 *	4.2	20	24	36	66	6	•
W08 0430 *	4.3		24	36	66	6	•
W08 0440 *	4.4		24	36	66	6	•
W08 0450 *	4.5		24	36	66	6	•
W08 0460 *	4.6		24	36	66	6	•
W08 0470 *	4.7		24	36	66	6	•
W08 0480 *	4.8	24	28	36	66	6	•
W08 0490 *	4.9		28	36	66	6	•
W08 0500 *	5		28	36	66	6	•
W08 0510 *	5.1		28	36	66	6	•
W08 0520 *	5.2		28	36	66	6	•
W08 0530 *	5.3		28	36	66	6	•
W08 0540 *	5.4	29	28	36	66	6	•
W08 0550 *	5.5		28	36	66	6	•
W08 0560 *	5.6		28	36	66	6	•
W08 0570 *	5.7		28	36	66	6	•
W08 0580 *	5.8		28	36	66	6	•
W08 0590 *	5.9		28	36	66	6	•
W08 0600 *	6	35	28	36	66	6	•
W08 0610 *	6.1		34	36	79	8	•
W08 0620 *	6.2		34	36	79	8	•
W08 0630 *	6.3		34	36	79	8	•
W08 0640 *	6.4		34	36	79	8	•
W08 0650 *	6.5		34	36	79	8	•
W08 0660 *	6.6	43	34	36	79	8	•
W08 0670 *	6.7		34	36	79	8	•
W08 0680 *	6.8		34	36	79	8	•
W08 0690 *	6.9		34	36	79	8	•
W08 0700 *	7.0		34	36	79	8	•
W08 0710 *	7.1		41	36	79	8	•
W08 0720 *	7.2	45	41	36	79	8	•
W08 0730 *	7.3		41	36	79	8	•
W08 0740 *	7.4		41	36	79	8	•
W08 0750 *	7.5		41	36	79	8	•
W08 0760 *	7.6		41	36	79	8	•
W08 0770 *	7.7		41	36	79	8	•
W08 0780 *	7.8	51	41	36	79	8	•
W08 0790 *	7.9		41	36	79	8	•
W08 0800 *	8.0		41	36	79	8	•
W08 0810 *	8.1		47	40	89	10	•
W08 0820 *	8.2		47	40	89	10	•
W08 0830 *	8.3		47	40	89	10	•
W08 0840 *	8.4	55	47	40	89	10	•
W08 0850 *	8.5		47	40	89	10	•
W08 0860 *	8.6		47	40	89	10	•
W08 0870 *	8.7		47	40	89	10	•
W08 0880 *	8.8		47	40	89	10	•
W08 0890 *	8.9		47	40	89	10	•
W08 0900 *	9	35	47	40	89	10	•
W08 0910 *	9.1		47	40	89	10	•
W08 0920 *	9.2		47	40	89	10	•
W08 0930 *	9.3		47	40	89	10	•
W08 0940 *	9.4		47	40	89	10	•
W08 0950 *	9.5		47	40	89	10	•
W08 0960 *	9.6	40	47	40	89	10	•
W08 0970 *	9.7		47	40	89	10	•
W08 0980 *	9.8		47	40	89	10	•
W08 0990 *	9.9		47	40	89	10	•
W08 1000 *	10		47	40	89	10	•
W08 1010 *	10.1	43	55	45	102	12	•
W08 1020 *	10.2		55	45	102	12	•
W08 1030 *	10.3		55	45	102	12	•
W08 1040 *	10.4		55	45	102	12	•
W08 1050 *	10.5		55	45	102	12	•
W08 1060 *	10.6		55	45	102	12	•
W08 1070 *	10.7	45	55	45	102	12	•
W08 1080 *	10.8		55	45	102	12	•
W08 1090 *	10.9		55	45	102	12	•
W08 1100 *	11		55	45	102	12	•
W08 1110 *	11.1		55	45	102	12	•
W08 1120 *	11.2		55	45	102	12	•
W08 1130 *	11.3	51	55	45	102	12	•
W08 1140 *	11.4		55	45	102	12	•
W08 1150 *	11.5		55	45	102	12	•
W08 1160 *	11.6		55	45	102	12	•
W08 1170 *	11.7		55	45	102	12	•
W08 1180 *	11.8		55	45	102	12	•
W08 1190 *	11.9	55	55	45	102	12	•
W08 1200 *	12		55	45	102	12	•
W08 1250 *	12.5		60	45	107	14	•
W08 1270 *	12.7		60	45	107	14	•
W08 1300 *	13		60	45	107	14	•
W08 1350 *	13.5		60	45	107	14	•
W08 1370 *	13.7	55	60	45	107	14	•
W08 1400 *	14		60	45	107	14	•
W08 1450 *	14.5		65	48	115	16	•
W08 1500 *	15		65	48	115	16	•
W08 1550 *	15.5		65	48	115	16	•
W08 1600 *	16		65	48	115	16	•
W08 1650 *	16.5	55	73	48	123	18	•
W08 1700 *	17		73	48	123	18	•
W08 1750 *	17.5		73	48	123	18	•
W08 1800 *	18		73	48	123	18	•
W08 1850 *	18.5		79	50	131	20	•
W08 1900 *	19		79	50	131	20	•
W08 1950 *	19.5	55	79	50	131	20	•
W08 2000 *	20		79	50	131	20	•

* - DIN 6535

Material Group | Material-Gruppe | Groupe Matiere | Gruppo Materiali | 材质主类

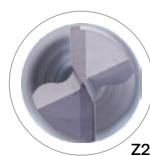
N01	N02	N03	K01	K02	P01	P02	P03	M01	M02	S01	S02	S03	H01	H02	O01	O02
○	○	○	●	●	●	●	●	○	○	●	●					

Cutting Parameter

475 - 476

DR-S TWIST DRILLS - DIN 6537L - 5 X Ø

- 🇩🇪 VHM DR-S Spiralbohrer nach DIN 6537L, 140° Spitzenwinkel, Schaft nach DIN 6535HA
- 🇮🇹 Punte elicoidali DR-S a norma DIN 6537L, 5 x ø, angolo di punta 140°, codolo DIN 6535HA
- 🇫🇷 Forets hélicoïdaux DR-S selon DIN 6537L - 5 x Ø, angle de pointe 140°, queue selon DIN 6535HA
- 🇨🇳 整体硬质合金 DR-S 系列 钻头-相等于DIN6537L-加工深度5xD,柄部标准DIN 6535L,顶角140°



Order Number	Dimension (mm)						T8090
	D (m7)	I1	I2	I3	L	d2 (h6)	
W09 0300 *	3	23	28	36	66	6	•
W09 0310 *	3.1		28	36	66	6	•
W09 0320 *	3.2		28	36	66	6	•
W09 0330 *	3.3		28	36	66	6	•
W09 0340 *	3.4		28	36	66	6	•
W09 0350 *	3.5		28	36	66	6	•
W09 0360 *	3.6		28	36	66	6	•
W09 0370 *	3.7	29	28	36	66	6	•
W09 0380 *	3.8		36	36	74	6	•
W09 0390 *	3.9		36	36	74	6	•
W09 0400 *	4		36	36	74	6	•
W09 0410 *	4.1		36	36	74	6	•
W09 0420 *	4.2		36	36	74	6	•
W09 0430 *	4.3		36	36	74	6	•
W09 0440 *	4.4		36	36	74	6	•
W09 0450 *	4.5	35	36	36	74	6	•
W09 0460 *	4.6		36	36	74	6	•
W09 0470 *	4.7		36	36	74	6	•
W09 0480 *	4.8		44	36	82	6	•
W09 0490 *	4.9		44	36	82	6	•
W09 0500 *	5		44	36	82	6	•
W09 0510 *	5.1		44	36	82	6	•
W09 0520 *	5.2	43	44	36	82	6	•
W09 0530 *	5.3		44	36	82	6	•
W09 0540 *	5.4		44	36	82	6	•
W09 0550 *	5.5		44	36	82	6	•
W09 0560 *	5.6		44	36	82	6	•
W09 0570 *	5.7		44	36	82	6	•
W09 0580 *	5.8		44	36	82	6	•
W09 0590 *	5.9	49	44	36	82	6	•
W09 0600 *	6		53	36	91	8	•
W09 0610 *	6.1		53	36	91	8	•
W09 0620 *	6.2		53	36	91	8	•
W09 0630 *	6.3		53	36	91	8	•
W09 0640 *	6.4		53	36	91	8	•
W09 0650 *	6.5		53	36	91	8	•
W09 0660 *	6.6	60	53	36	91	8	•
W09 0670 *	6.7		53	36	91	8	•
W09 0680 *	6.8		53	36	91	8	•
W09 0690 *	6.9		53	36	91	8	•
W09 0700 *	7.0		53	36	91	8	•
W09 0710 *	7.1		53	36	91	8	•
W09 0720 *	7.2		53	36	91	8	•
W09 0730 *	7.3	63	53	36	91	8	•
W09 0740 *	7.4		53	36	91	8	•
W09 0750 *	7.5		53	36	91	8	•
W09 0760 *	7.6		53	36	91	8	•
W09 0770 *	7.7		53	36	91	8	•
W09 0780 *	7.8		53	36	91	8	•
W09 0790 *	7.9		53	36	91	8	•
W09 0800 *	8.0	71	53	36	91	8	•
W09 0810 *	8.1		53	36	91	8	•
W09 0820 *	8.2	49	61	40	103	10	•
W09 0830 *	8.3		61	40	103	10	•
W09 0840 *	8.4		61	40	103	10	•
W09 0850 *	8.5		61	40	103	10	•
W09 0860 *	8.6		61	40	103	10	•
W09 0870 *	8.7		61	40	103	10	•
W09 0880 *	8.8		61	40	103	10	•
W09 0890 *	8.9	56	61	40	103	10	•
W09 0900 *	9.0		61	40	103	10	•
W09 0910 *	9.1		61	40	103	10	•
W09 0920 *	9.2		61	40	103	10	•
W09 0930 *	9.3		61	40	103	10	•
W09 0940 *	9.4		61	40	103	10	•
W09 0950 *	9.5		61	40	103	10	•
W09 0960 *	9.6	60	61	40	103	10	•
W09 0970 *	9.7		61	40	103	10	•
W09 0980 *	9.8		61	40	103	10	•
W09 0990 *	9.9		61	40	103	10	•
W09 1000 *	10		61	40	103	10	•
W09 1020 *	10.2		71	45	118	12	•
W09 1050 *	10.5	56	71	45	118	12	•
W09 1080 *	10.8		71	45	118	12	•
W09 1100 *	11		71	45	118	12	•
W09 1120 *	11.2		71	45	118	12	•
W09 1130 *	11.3		71	45	118	12	•
W09 1150 *	11.5		71	45	118	12	•
W09 1180 *	11.8		71	45	118	12	•
W09 1200 *	12.0	60	71	45	118	12	•
W09 1220 *	12.2		77	45	124	14	•
W09 1250 *	12.5		77	45	124	14	•
W09 1270 *	12.7		77	45	124	14	•
W09 1280 *	12.8		77	45	124	14	•
W09 1300 *	13		77	45	124	14	•
W09 1330 *	13.3		77	45	124	14	•
W09 1350 *	13.5	63	77	45	124	14	•
W09 1370 *	13.7		77	45	124	14	•
W09 1380 *	13.8		77	45	124	14	•
W09 1400 *	14.0		77	45	124	14	•
W09 1450 *	14.5		83	48	133	16	•
W09 1500 *	15.0		83	48	133	16	•
W09 1530 *	15.3		83	48	133	16	•
W09 1550 *	15.5	71	83	48	133	16	•
W09 1580 *	15.8		83	48	133	16	•
W09 1600 *	16		83	48	133	16	•
W09 1650 *	16.5		93	48	143	18	•
W09 1700 *	17		93	48	143	18	•
W09 1750 *	17.5		93	48	143	18	•
W09 1800 *	18		93	48	143	18	•
W09 1850 *	18.5	77	101	50	153	20	•
W09 1900 *	19		101	50	153	20	•
W09 1950 *	19.5		101	50	153	20	•
W09 2000 *	20		101	50	153	20	•

* - DIN 6535

Material Group | Material-Gruppe | Groupe Matiere | Gruppo Materiali | 材质主类

N01	N02	N03	K01	K02	P01	P02	P03	M01	M02	S01	S02	S03	H01	H02	O01	O02
○	○	○	●	●	●	●	●	○	○	●	●					

Cutting Parameter

475 - 476

DR-S OIL FEED TWIST DRILLS - DIN 6537K - 3 X Ø

-  VHM DR-S Spiralbohrer nach DIN 6537K, 140° Spitzenwinkel, Schaft nach DIN 6535HA
-  Punta elicoidali DR-S a norma DIN 6537K, 3 x Ø, con foro di lubrificazione, angolo di punta 140°, codolo DIN 6535HA
-  Forets hélicoïdaux DR-S selon DIN 6537K - 3 x Ø, angle de pointe 140°, queue selon DIN 6535HA
-  整体硬质合金 DR-S 系列 钻头-相等于DIN6537K-加工深度3xD,柄部标准DIN 6535K,顶角140°



Order Number	Dimension (mm)						T8090
	D (m7)	I1	I2	I3	L	d2 (h6)	
W10 0300 *	3	14	20	36	62	6	•
W10 0310 *	3.1		20	36	62	6	•
W10 0320 *	3.2		20	36	62	6	•
W10 0330 *	3.3		20	36	62	6	•
W10 0340 *	3.4		20	36	62	6	•
W10 0350 *	3.5		20	36	62	6	•
W10 0360 *	3.6		20	36	62	6	•
W10 0370 *	3.7	17	20	36	62	6	•
W10 0380 *	3.8		24	36	66	6	•
W10 0390 *	3.9		24	36	66	6	•
W10 0400 *	4		24	36	66	6	•
W10 0410 *	4.1		24	36	66	6	•
W10 0420 *	4.2		24	36	66	6	•
W10 0430 *	4.3		24	36	66	6	•
W10 0440 *	4.4		24	36	66	6	•
W10 0450 *	4.5	20	24	36	66	6	•
W10 0460 *	4.6		24	36	66	6	•
W10 0470 *	4.7		24	36	66	6	•
W10 0480 *	4.8		28	36	66	6	•
W10 0490 *	4.9		28	36	66	6	•
W10 0500 *	5		28	36	66	6	•
W10 0510 *	5.1		28	36	66	6	•
W10 0520 *	5.2	24	28	36	66	6	•
W10 0530 *	5.3		28	36	66	6	•
W10 0540 *	5.4		28	36	66	6	•
W10 0550 *	5.5		28	36	66	6	•
W10 0560 *	5.6		28	36	66	6	•
W10 0570 *	5.7		28	36	66	6	•
W10 0580 *	5.8		28	36	66	6	•
W10 0590 *	5.9	29	28	36	66	6	•
W10 0600 *	6		28	36	66	6	•
W10 0610 *	6.1		34	36	79	8	•
W10 0620 *	6.2		34	36	79	8	•
W10 0630 *	6.3		34	36	79	8	•
W10 0640 *	6.4		34	36	79	8	•
W10 0650 *	6.5		34	36	79	8	•
W10 0660 *	6.6	35	34	36	79	8	•
W10 0670 *	6.7		34	36	79	8	•
W10 0680 *	6.8		34	36	79	8	•
W10 0690 *	6.9		34	36	79	8	•
W10 0700 *	7		34	36	79	8	•
W10 0710 *	7.1		41	36	79	8	•
W10 0720 *	7.2		41	36	79	8	•
W10 0730 *	7.3	43	41	36	79	8	•
W10 0740 *	7.4		41	36	79	8	•
W10 0750 *	7.5		41	36	79	8	•
W10 0760 *	7.6		41	36	79	8	•
W10 0770 *	7.7		41	36	79	8	•
W10 0780 *	7.8		41	36	79	8	•
W10 0790 *	7.9		41	36	79	8	•
W10 0800 *	8	45	41	36	79	8	•
W10 0810 *	8.1		41	36	79	8	•
W10 0820 *	8.2	47	47	40	89	10	•
W10 0830 *	8.3		47	40	89	10	•
W10 0840 *	8.4		47	40	89	10	•
W10 0850 *	8.5		47	40	89	10	•
W10 0860 *	8.6		47	40	89	10	•
W10 0870 *	8.7		47	40	89	10	•
W10 0880 *	8.8		47	40	89	10	•
W10 0890 *	8.9	49	47	40	89	10	•
W10 0900 *	9		47	40	89	10	•
W10 0910 *	9.1		47	40	89	10	•
W10 0920 *	9.2		47	40	89	10	•
W10 0930 *	9.3		47	40	89	10	•
W10 0940 *	9.4		47	40	89	10	•
W10 0950 *	9.5		47	40	89	10	•
W10 0960 *	9.6	51	47	40	89	10	•
W10 0970 *	9.7		47	40	89	10	•
W10 0980 *	9.8		47	40	89	10	•
W10 0990 *	9.9		47	40	89	10	•
W10 1000 *	10		47	40	89	10	•
W10 1020 *	10.2		55	45	102	12	•
W10 1050 *	10.5		55	45	102	12	•
W10 1080 *	10.8	53	55	45	102	12	•
W10 1100 *	11		55	45	102	12	•
W10 1120 *	11.2		55	45	102	12	•
W10 1130 *	11.3		55	45	102	12	•
W10 1150 *	11.5		55	45	102	12	•
W10 1180 *	11.8		55	45	102	12	•
W10 1200 *	12		55	45	102	12	•
W10 1220 *	12.2	55	60	45	107	14	•
W10 1250 *	12.5		60	45	107	14	•
W10 1270 *	12.7		60	45	107	14	•
W10 1280 *	12.8		60	45	107	14	•
W10 1300 *	13		60	45	107	14	•
W10 1330 *	13.3		60	45	107	14	•
W10 1350 *	13.5		60	45	107	14	•
W10 1370 *	13.7	57	60	45	107	14	•
W10 1400 *	14		60	45	107	14	•
W10 1450 *	14.5		65	48	115	16	•
W10 1500 *	15		65	48	115	16	•
W10 1530 *	15.3		65	48	115	16	•
W10 1550 *	15.5		65	48	115	16	•
W10 1580 *	15.8		65	48	115	16	•
W10 1600 *	16	59	65	48	115	16	•
W10 1650 *	16.5		73	48	123	18	•
W10 1700 *	17		73	48	123	18	•
W10 1750 *	17.5		73	48	123	18	•
W10 1800 *	18		79	50	131	20	•
W10 1850 *	18.5		79	50	131	20	•
W10 1900 *	19		79	50	131	20	•
W10 1950 *	19.5	61	79	50	131	20	•
W10 2000 *	20		79	50	131	20	•

* - DIN 6535

Material Group | Material-Gruppe | Groupe Matiere | Gruppo Materiali | 材质主类

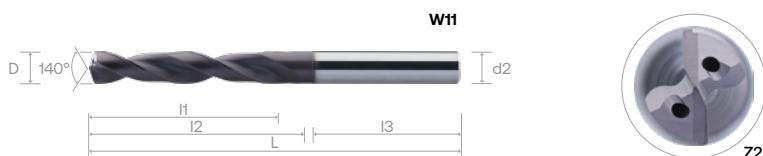
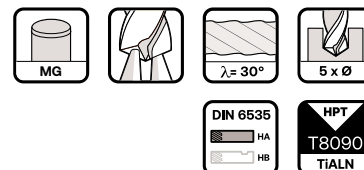
N01	N02	N03	K01	K02	P01	P02	P03	M01	M02	S01	S02	S03	H01	H02	O01	O02
○	○	○	●	●	●	●	●	○	○	●	●					

Cutting Parameter

473 - 474

DR-S OIL FEED TWIST DRILLS - DIN 6537L - 5 X Ø

- 🇩🇪 VHM DR-S Kühlkanalbohrer nach DIN 6537L, 140° Spitzenwinkel, Schaft nach DIN 6535HA
- 🇮🇹 Punta elicoidali DR-S a norma DIN 6537L, 5 x ø, con foro di lubrificazione, angolo di punta 140°, codolo DIN 6535HA
- 🇫🇷 Forets hélicoïdaux DR-S à trous d'huile carbure selon DIN 6537L - 5 x Ø, angle de pointe 140°, queue selon DIN 6535HA
- 🇨🇳 整体硬质合金 DR-S 系列 内冷孔钻头-相等于DIN6537L-加工深度5xD, 柄部标准DIN6535HA, 顶角140°



Order Number	Dimension (mm)						T8090
	D (m7)	I1	I2	I3	L	d2 (h6)	
W11 0300 066 03	3	23	28	36	66	3	•
W11 0300 *	3		28	36	66	6	•
W11 0310 066 03	3.1		28	36	66	3	•
W11 0310 *	3.1		28	36	66	6	•
W11 0320 066 03	3.2		28	36	66	3	•
W11 0320 *	3.2		28	36	66	6	•
W11 0330 *	3.3		28	36	66	6	•
W11 0340 *	3.4		28	36	66	6	•
W11 0350 *	3.5		28	36	66	6	•
W11 0360 *	3.6		28	36	66	6	•
W11 0370 *	3.7	29	28	36	66	6	•
W11 0380 *	3.8		36	36	74	6	•
W11 0390 *	3.9		36	36	74	6	•
W11 0400 074 04	4		36	36	74	4	•
W11 0400 *	4		36	36	74	6	•
W11 0410 074 04	4.1		36	36	74	4	•
W11 0410 *	4.1		36	36	74	6	•
W11 0420 074 04	4.2		36	36	74	4	•
W11 0420 *	4.2		36	36	74	6	•
W11 0430 *	4.3		36	36	74	6	•
W11 0440 *	4.4	35	36	36	74	6	•
W11 0450 *	4.5		36	36	74	6	•
W11 0460 *	4.6		36	36	74	6	•
W11 0470 *	4.7		36	36	74	6	•
W11 0480 *	4.8		44	36	82	6	•
W11 0490 *	4.9		44	36	82	6	•
W11 0500 *	5		44	36	82	6	•
W11 0510 *	5.1		44	36	82	6	•
W11 0520 *	5.2		44	36	82	6	•
W11 0530 *	5.3		44	36	82	6	•
W11 0540 *	5.4	43	44	36	82	6	•
W11 0550 *	5.5		44	36	82	6	•
W11 0560 *	5.6		44	36	82	6	•
W11 0570 *	5.7		44	36	82	6	•
W11 0580 *	5.8		44	36	82	6	•
W11 0590 *	5.9		44	36	82	6	•
W11 0600 *	6		44	36	82	6	•
W11 0610 082 06 *	6.1		44	36	82	6	•
W11 0610 *	6.1		53	36	91	8	•
W11 0620 *	6.2		53	36	91	8	•
W11 0630 *	6.3	60	53	36	91	8	•
W11 0640 *	6.4		53	36	91	8	•
W11 0650 *	6.5		53	36	91	8	•
W11 0660 *	6.6		53	36	91	8	•
W11 0670 *	6.7		53	36	91	8	•
W11 0680 *	6.8		53	36	91	8	•
W11 0690 *	6.9		53	36	91	8	•
W11 0700 *	7		53	36	91	8	•
W11 0710 *	7.1		53	36	91	8	•
W11 0720 *	7.2		53	36	91	8	•
W11 0730 *	7.3	63	53	36	91	8	•
W11 0740 *	7.4		53	36	91	8	•
W11 0750 *	7.5		53	36	91	8	•
W11 0760 *	7.6		53	36	91	8	•
W11 0770 *	7.7		53	36	91	8	•
W11 0780 *	7.8		53	36	91	8	•
W11 0790 *	7.9	43	53	36	91	8	•
W11 0800 *	8		53	36	91	8	•
W11 0810 091 08 *	8.1		53	36	91	8	•
W11 0810 *	8.1		61	40	103	10	•
W11 0820 *	8.2		61	40	103	10	•
W11 0830 *	8.3		61	40	103	10	•
W11 0840 *	8.4		61	40	103	10	•
W11 0850 *	8.5		61	40	103	10	•
W11 0860 *	8.6		61	40	103	10	•
W11 0870 *	8.7		61	40	103	10	•
W11 0880 *	8.8	49	61	40	103	10	•
W11 0890 *	8.9		61	40	103	10	•
W11 0900 *	9		61	40	103	10	•
W11 0910 *	9.1		61	40	103	10	•
W11 0920 *	9.2		61	40	103	10	•
W11 0930 *	9.3		61	40	103	10	•
W11 0940 *	9.4		61	40	103	10	•
W11 0950 *	9.5		61	40	103	10	•
W11 0960 *	9.6		61	40	103	10	•
W11 0970 *	9.7		61	40	103	10	•
W11 0980 *	9.8	56	61	40	103	10	•
W11 0990 *	9.9		61	40	103	10	•
W11 1000 *	10		61	40	103	10	•
W11 1020 *	10.2		71	45	118	12	•
W11 1050 *	10.5		71	45	118	12	•
W11 1080 *	10.8		71	45	118	12	•
W11 1100 *	11		71	45	118	12	•
W11 1120 *	11.2		71	45	118	12	•
W11 1130 *	11.3		71	45	118	12	•
W11 1150 *	11.5		71	45	118	12	•
W11 1180 *	11.8	60	71	45	118	12	•
W11 1200 *	12		71	45	118	12	•
W11 1220 *	12.2		77	45	124	14	•
W11 1250 *	12.5		77	45	124	14	•
W11 1270 *	12.7		77	45	124	14	•
W11 1280 *	12.8		77	45	124	14	•
W11 1300 *	13		77	45	124	14	•
W11 1330 *	13.3		77	45	124	14	•
W11 1350 *	13.5		77	45	124	14	•
W11 1370 *	13.7		77	45	124	14	•
W11 1380 *	13.8	63	77	45	124	14	•
W11 1400 *	14		77	45	124	14	•
W11 1450 *	14.5		83	48	133	16	•
W11 1500 *	15		83	48	133	16	•
W11 1530 *	15.3		83	48	133	16	•
W11 1550 *	15.5		83	48	133	16	•
W11 1580 *	15.8		83	48	133	16	•
W11 1600 *	16		83	48	133	16	•
W11 1650 *	16.5		93	48	143	18	•
W11 1700 *	17		93	48	143	18	•
W11 1750 *	17.5	71	93	48	143	18	•
W11 1800 *	18		93	48	143	18	•
W11 1850 *	18.5		101	50	153	20	•
W11 1900 *	19		101	50	153	20	•
W11 1950 *	19.5		101	50	153	20	•
W11 2000 *	20		101	50	153	20	•

* - DIN 6535

Material Group | Material-Gruppe | Groupe Matiere | Gruppo Materiali | 材质主类

N01	N02	N03	K01	K02	P01	P02	P03	M01	M02	S01	S02	S03	H01	H02	O01	O02
○	○	○	●	●	●	●	●	○	○	●	●					

Cutting Parameter

473 - 474

Recommended Cutting Data



Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition



DR-S Twist Drills, 3xD & 5xD Internal Coolant, 2 Flutes - W10, W11



Aggressive	N						K				S	
Working Material	Wrought Aluminium		Cast Aluminium		Copper Alloy		Grey Cast Iron		Ductile Cast Iron		Titanium alloy	
Properties	Si < 9%		Si ≥ 9%		-		-		-		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
3	310	0.076	220	0.073	190	0.077	140	0.073	105	0.071	40	0.047
4		0.107		0.102		0.107		0.104		0.099		0.066
5		0.140		0.134		0.139		0.136		0.128		0.085
6		0.176		0.169		0.172		0.172		0.160		0.105
7		0.216		0.204		0.206		0.211		0.194		0.126
8		0.256		0.244		0.245		0.252		0.230		0.166
9		0.301		0.287		0.281		0.297		0.268		0.173
10		0.347		0.327		0.324		0.344		0.308		0.208
11		0.397		0.377		0.369		0.394		0.351		0.233
12		0.446		0.424		0.408		0.447		0.395		0.255
13		0.471		0.450		0.434		0.472		0.415		0.280
14		0.486		0.461		0.452		0.495		0.433		0.270
15		0.505		0.483		0.472		0.517		0.449		0.289
16		0.516		0.500		0.499		0.537		0.463		0.313
17		0.522		0.505		0.513		0.554		0.475		0.313
18		0.536		0.526		0.531		0.570		0.485		0.300
19		0.544		0.532		0.548		0.585		0.494		0.329
20		0.540		0.525		0.549		0.597		0.500		0.314

DR-S Twist Drills, 3xD & 5xD Internal Coolant, 2 Flutes - W10, W11



Aggressive	P						M				S	
Working Material	Carbon Steel		Alloy Steel		Prehardened Steel		Stainless Steel		Stainless Steel		Nickel Alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High Machinability		Low Machinability		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
3	175	0.063	120	0.068	65	0.080	60	0.048	50	0.054	35	0.026
4		0.090		0.098		0.110		0.067		0.075		0.039
5		0.119		0.132		0.143		0.085		0.094		0.048
6		0.151		0.171		0.178		0.106		0.115		0.058
7		0.185		0.214		0.215		0.125		0.135		0.075
8		0.222		0.261		0.253		0.150		0.160		0.086
9		0.262		0.312		0.294		0.168		0.178		0.092
10		0.304		0.368		0.337		0.190		0.206		0.108
11		0.349		0.427		0.382		0.217		0.220		0.118
12		0.396		0.491		0.429		0.250		0.236		0.130
13		0.417		0.503		0.457		0.267		0.254		0.133
14		0.437		0.511		0.484		0.279		0.275		0.150
15		0.454		0.515		0.509		0.292		0.291		0.150
16		0.470		0.514		0.534		0.317		0.320		0.157
17		0.484		0.509		0.557		0.308		0.320		0.157
18		0.496		0.499		0.578		0.336		0.344		0.157
19		0.506		0.485		0.599		0.327		0.344		0.183
20		0.514		0.466		0.618		0.350		0.375		0.183

Recommended Cutting Data



Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition



DR-S Twist Drills, 3xD & 5xD Internal Coolant, 2 Flutes - W10, W11

Conventional	N						K				S	
Working Material	Wrought Aluminium		Cast Aluminium		Copper Alloy		Grey Cast Iron		Ductile Cast Iron		Titanium alloy	
Properties	Si < 9%		Si ≥ 9%		-		-		-		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
3	240	0.069	200	0.065	160	0.050	85	0.058	65	0.046	22	0.046
4		0.097		0.091		0.073		0.081		0.063		0.067
5		0.127		0.120		0.098		0.104		0.081		0.080
6		0.159		0.150		0.126		0.128		0.100		0.108
7		0.195		0.184		0.158		0.156		0.120		0.118
8		0.232		0.216		0.191		0.185		0.142		0.156
9		0.273		0.254		0.226		0.210		0.165		0.175
10		0.314		0.292		0.269		0.239		0.186		0.188
11		0.359		0.334		0.306		0.276		0.211		0.214
12		0.406		0.370		0.351		0.309		0.222		0.250
13		0.431		0.400		0.365		0.333		0.250		0.250
14		0.451		0.417		0.381		0.345		0.267		0.250
15		0.475		0.437		0.400		0.353		0.279		0.300
16		0.492		0.460		0.406		0.388		0.300		0.280
17		0.511		0.474		0.417		0.406		0.300		0.280
18		0.521		0.489		0.414		0.394		0.317		0.350
19		0.532		0.506		0.426		0.413		0.345		0.350
20		0.541		0.522		0.419		0.429		0.336		0.325

DR-S Twist Drills, 3xD & 5xD Internal Coolant, 2 Flutes - W10, W11



Conventional	P						M				S	
Working Material	Carbon Steel		Alloy Steel		Prehardened Steel		Stainless Steel		Stainless Steel		Nickel Alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High Machinability		Low Machinability		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
3	110	0.069	80	0.065	40	0.073	35	0.039	30	0.044	15	0.038
4		0.099		0.095		0.100		0.057		0.067		0.058
5		0.131		0.128		0.130		0.074		0.080		0.070
6		0.166		0.166		0.162		0.089		0.100		0.088
7		0.204		0.208		0.196		0.113		0.121		0.100
8		0.244		0.253		0.230		0.129		0.142		0.133
9		0.288		0.303		0.268		0.146		0.164		0.133
10		0.334		0.357		0.307		0.158		0.180		0.160
11		0.384		0.414		0.348		0.182		0.211		0.160
12		0.436		0.476		0.390		0.200		0.225		0.200
13		0.459		0.488		0.416		0.222		0.225		0.200
14		0.481		0.496		0.440		0.250		0.257		0.200
15		0.499		0.499		0.463		0.238		0.243		0.200
16		0.517		0.498		0.486		0.271		0.283		0.267
17		0.532		0.493		0.507		0.271		0.283		0.267
18		0.546		0.484		0.526		0.257		0.267		0.267
19		0.557		0.471		0.545		0.300		0.267		0.267
20		0.565		0.452		0.562		0.283		0.300		0.233

Recommended Cutting Data



Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition



DR-S Twist Drills, 3xD & 5xD External Coolant, 2 Flutes - W08, W09



Aggressive	N						K				S	
Working Material	Wrought Aluminium		Cast Aluminium		Copper Alloy		Grey Cast Iron		Ductile Cast Iron		Titanium alloy	
Properties	Si < 9%		Si ≥ 9%		-		-		-		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
3	200	0.058	165	0.063	140	0.062	95	0.070	70	0.052	25	0.037
4		0.081		0.087		0.085		0.095		0.073		0.055
5		0.104		0.111		0.110		0.120		0.096		0.069
6		0.128		0.138		0.136		0.145		0.119		0.086
7		0.155		0.164		0.165		0.170		0.144		0.100
8		0.183		0.194		0.194		0.200		0.171		0.130
9		0.211		0.222		0.224		0.226		0.200		0.144
10		0.241		0.254		0.257		0.252		0.230		0.175
11		0.272		0.287		0.290		0.282		0.263		0.175
12		0.300		0.321		0.318		0.308		0.296		0.200
13		0.322		0.339		0.339		0.333		0.314		0.200
14		0.335		0.357		0.361		0.359		0.332		0.233
15		0.349		0.368		0.378		0.371		0.348		0.233
16		0.365		0.391		0.393		0.405		0.365		0.260
17		0.374		0.409		0.399		0.428		0.379		0.260
18		0.383		0.412		0.418		0.447		0.393		0.260
19		0.394		0.429		0.426		0.469		0.406		0.260
20		0.406		0.432		0.430		0.463		0.4178575		0.300

DR-S Twist Drills, 3xD & 5xD External Coolant, 2 Flutes - W08, W09



Aggressive	P						M				S	
Working Material	Carbon Steel		Alloy Steel		Prehardened Steel		Stainless Steel		Stainless Steel		Nickel Alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High Machinability		Low Machinability		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
3	105	0.072	80	0.061	50	0.060	40	0.049	35	0.042	20	0.036
4		0.100		0.085		0.083		0.069		0.061		0.056
5		0.128		0.111		0.107		0.088		0.074		0.069
6		0.157		0.138		0.132		0.109		0.095		0.082
7		0.188		0.166		0.157		0.132		0.113		0.090
8		0.221		0.197		0.184		0.156		0.136		0.125
9		0.250		0.230		0.212		0.173		0.146		0.125
10		0.285		0.264		0.241		0.208		0.167		0.143
11		0.319		0.300		0.272		0.233		0.182		0.167
12		0.361		0.338		0.303		0.255		0.200		0.167
13		0.385		0.357		0.323		0.280		0.222		0.200
14		0.413		0.375		0.342		0.270		0.250		0.200
15		0.422		0.391		0.360		0.300		0.238		0.200
16		0.457		0.406		0.377		0.325		0.271		0.250
17		0.475		0.419		0.394		0.313		0.271		0.250
18		0.489		0.431		0.409		0.313		0.257		0.250
19		0.511		0.442		0.423		0.343		0.300		0.250
20		0.529		0.452		0.437		0.329		0.283		0.225

Recommended Cutting Data



Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition



DR-S Twist Drills, 3xD & 5xD External Coolant, 2 Flutes - W08, W09



Conventional	N						K				S	
Working Material	Wrought Aluminium		Cast Aluminium		Copper Alloy		Grey Cast Iron		Ductile Cast Iron		Titanium alloy	
Properties	Si < 9%		Si ≥ 9%		-		-		-		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
3	150	0.055	130	0.062	100	0.060	75	0.061	70	0.039	20	0.032
4		0.077		0.085		0.082		0.083		0.055		0.050
5		0.100		0.109		0.106		0.104		0.072		0.062
6		0.124		0.135		0.131		0.126		0.089		0.073
7		0.149		0.161		0.158		0.149		0.108		0.090
8		0.177		0.190		0.187		0.174		0.128		0.113
9		0.204		0.218		0.215		0.197		0.150		0.113
10		0.235		0.249		0.246		0.219		0.172		0.143
11		0.266		0.281		0.278		0.246		0.196		0.167
12		0.300		0.314		0.306		0.268		0.221		0.167
13		0.319		0.332		0.326		0.290		0.235		0.200
14		0.329		0.350		0.347		0.313		0.248		0.200
15		0.350		0.360		0.363		0.324		0.261		0.200
16		0.363		0.383		0.377		0.353		0.273		0.250
17		0.369		0.401		0.383		0.373		0.284		0.250
18		0.385		0.403		0.401		0.389		0.294		0.250
19		0.388		0.421		0.409		0.408		0.304		0.250
20		0.408		0.423		0.413		0.403		0.313		0.225

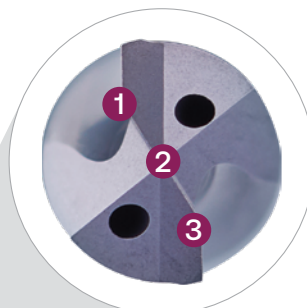
DR-S Twist Drills, 3xD & 5xD External Coolant, 2 Flutes - W08, W09



Conventional	P						M				S	
Working Material	Carbon Steel		Alloy Steel		Prehardened Steel		Stainless Steel		Stainless Steel		Nickel Alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High Machinability		Low Machinability		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
3	80	0.060	60	0.055	40	0.040	30	0.044	25	0.041	12	0.023
4		0.084		0.076		0.055		0.063		0.060		0.040
5		0.110		0.099		0.071		0.075		0.075		0.050
6		0.135		0.124		0.088		0.100		0.093		0.057
7		0.162		0.149		0.105		0.114		0.108		0.083
8		0.194		0.177		0.123		0.142		0.140		0.100
9		0.221		0.206		0.142		0.155		0.156		0.100
10		0.254		0.237		0.161		0.180		0.188		0.150
11		0.283		0.269		0.182		0.200		0.188		0.150
12		0.318		0.303		0.203		0.225		0.214		0.150
13		0.345		0.320		0.216		0.225		0.214		0.200
14		0.358		0.336		0.229		0.257		0.250		0.200
15		0.394		0.351		0.240		0.243		0.233		0.200
16		0.406		0.364		0.252		0.283		0.280		0.167
17		0.427		0.376		0.263		0.283		0.280		0.167
18		0.420		0.387		0.274		0.267		0.260		0.167
19		0.443		0.397		0.283		0.267		0.260		0.167
20		0.462		0.406		0.292		0.300		0.300		0.200

FEATURES & BENEFITS

DR Mini



1 Split Point Design

Provides self centering ability and reduced thrust

2 X-Thinning

Better self-centering on initial cutting

3 Straight Edge Profile

Shorter chip and reinforced cutting edge

4 Polished Flute

- Smoother chips evacuation
- Less build up edge

5 Suitable for Material





1. Kreuzanschliff
Bietet Selbstzentrierung und reduzierten Axialdruck
2. X-Ausspitzung
Bessere Selbstzentrierung beim Anschnitt
3. Gerades Kantenprofil
Kürzerer Span und verstärkte Schneidkante
4. Polierte Schneiden
Verbesserter problemloser Spänefluß
Weniger Aufbauschneiden
5. Geeignet für die Materialgruppen P, K, N, M, S



1. 分割点设计
提供自定心能力和减小推力。
2. X 变薄
初始切割时更好的自定心能力。
3. 直边轮廓
较短的碎屑和强化的切削刃。
4. 抛光槽
更顺畅的排屑。
更少的堆积边缘。
5. 适用于材料 P、K、N、M、S



1. 1.. Struttura del punto di ripartizione
Offre capacità autocentranti e spinta ridotta
2. X-assottigliamento
Miglior autocentraggio al taglio iniziale
3. Profilo dritto
Trucioli più corti e angolo di taglio rinforzato
4. Scanalature altamente levigate
Evacuazione dei trucioli più semplice
Meno formazione di materiale di riporto
5. Adatto per il materiale P, K, N, M, S



1. Conception à affûtage croisé
Permet une capacité de centrage automatique et une poussée réduite
2. Amincissement en X
Meilleur auto-centrage à l'attaque du perçage
3. Profil d'arête droite
Copeaux plus courts et arête de coupe renforcée
4. Goujures hautement polies
Évacuation des copeaux plus fluide
Moins d'accumulation sur les arêtes
5. Adapté aux matériaux P, K, N, M, S

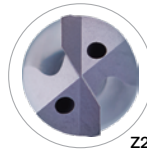
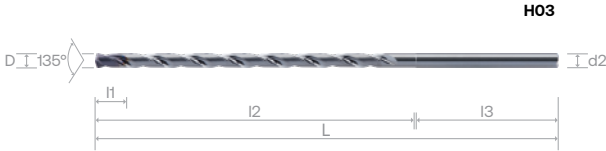
DR MINI OIL FEED MINIATURE TWIST DRILLS - 135° POINT ANGLE - 5 X Ø, 8X Ø, 12 X Ø, 15X Ø, 20X Ø, 25X Ø, 30X Ø

 VHM DR MINI Kühlkanalbohrer nach 135° Spitzenwinkel, Schaft nach DIN 6535HA 5 x Ø, 8x Ø, 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø

 Punte elicoidali DR MINI, con foro di lubrificazione, angolo di punta 135°, codolo DIN 6535HA- 5 x Ø, 8x Ø, 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø

 Forets hélicoïdaux DR MINI à trous d'huile angle de pointe 135°, queue selon DIN 6535HA- 5 x Ø, 8x Ø, 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø

 整体硬质合金 DR MINI 系列 内冷孔钻头-相等于2刃, 柄部标准DIN6535HA, 顶角135° 5 x Ø, 8x Ø, 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø



Order Number	Dimension (mm)						T8090
	Hole Depth I2 / D	D (h7)	I1	I2	L	d2 (h6)	
H03 0100 5	5 x D	100	6.5	8.0	50	3	•
H03 0100 8	8 x D		9.5	11.0	50	3	•
H03 0100 12	12 x D		13.5	15.0	55	3	•
H03 0100 20	20 x D		21.5	23.0	65	3	•
H03 0100 25	25 x D		26.5	28.0	70	3	•
H03 0100 30	30 x D	110	31.5	33.0	75	3	•
H03 0100 5	5 x D		7.2	8.7	50	3	•
H03 0100 8	8 x D		10.5	12.0	50	3	•
H03 0100 12	12 x D		14.9	16.4	55	3	•
H03 0100 20	20 x D		23.7	25.2	65	3	•
H03 0100 25	25 x D	120	29.2	30.7	70	3	•
H03 0100 30	30 x D		34.7	36.2	75	3	•
H03 0120 5	5 x D		7.8	9.3	50	3	•
H03 0120 8	8 x D		11.4	12.9	50	3	•
H03 0120 12	12 x D		16.2	17.7	55	3	•
H03 0120 20	20 x D	130	25.8	27.3	65	3	•
H03 0120 25	25 x D		31.8	33.3	75	3	•
H03 0120 30	30 x D		37.8	39.3	75	3	•
H03 0130 5	5 x D		8.5	10.0	50	3	•
H03 0130 8	8 x D		12.4	13.9	50	3	•
H03 0130 12	12 x D	140	17.6	19.1	55	3	•
H03 0130 20	20 x D		28.0	29.5	65	3	•
H03 0130 25	25 x D		34.5	36.0	75	3	•
H03 0130 30	30 x D		41.0	42.5	85	3	•
H03 0140 5	5 x D		9.1	10.6	50	3	•
H03 0140 8	8 x D	150	13.3	14.8	50	3	•
H03 0140 12	12 x D		18.9	20.4	55	3	•
H03 0140 20	20 x D		30.1	31.6	65	3	•
H03 0140 25	25 x D		37.1	38.6	75	3	•
H03 0140 30	30 x D		44.1	45.6	85	3	•
H03 0150 5	5 x D	160	9.8	11.3	50	3	•
H03 0150 8	8 x D		14.3	15.8	50	3	•
H03 0150 12	12 x D		20.3	21.8	55	3	•
H03 0150 20	20 x D		32.3	33.8	75	3	•
H03 0150 25	25 x D		39.8	41.3	80	3	•
H03 0150 30	30 x D	170	47.3	48.8	85	3	•
H03 0160 5	5 x D		10.4	11.9	50	3	•
H03 0160 8	8 x D		15.2	16.7	50	3	•
H03 0160 12	12 x D		21.6	23.1	65	3	•
H03 0160 20	20 x D		34.4	35.9	75	3	•
H03 0160 25	25 x D	240	42.4	43.9	80	3	•
H03 0160 30	30 x D		50.4	51.9	90	3	•
H03 0170 5	5 x D		11.1	12.6	55	3	•
H03 0170 8	8 x D		16.2	17.7	60	3	•
H03 0170 12	12 x D		23.0	24.5	65	3	•
H03 0170 20	20 x D	250	36.6	38.1	75	3	•
H03 0170 25	25 x D		45.1	46.6	80	3	•
H03 0170 30	30 x D		53.6	55.1	90	3	•
H03 0180 5	5 x D	180	11.7	13.2	55	3	•
H03 0180 8	8 x D		17.1	18.6	60	3	•
H03 0180 12	12 x D		24.3	25.8	65	3	•
H03 0180 20	20 x D		38.7	40.2	75	3	•
H03 0180 25	25 x D		47.7	49.2	90	3	•
H03 0180 30	30 x D	190	56.7	58.2	100	3	•
H03 0190 5	5 x D		12.4	13.9	55	3	•
H03 0190 8	8 x D		18.1	19.6	60	3	•
H03 0190 12	12 x D		25.7	27.2	65	3	•
H03 0190 20	20 x D		40.9	42.4	75	3	•
H03 0190 25	25 x D	200	50.4	51.9	90	3	•
H03 0190 30	30 x D		59.9	61.4	100	3	•
H03 0200 5	5 x D		13.0	16.0	55	3	•
H03 0200 8	8 x D		19.0	22.0	60	3	•
H03 0200 12	12 x D		27.0	30.0	65	3	•
H03 0200 20	20 x D	210	43.0	46.0	82	3	•
H03 0200 25	25 x D		53.0	56.0	90	3	•
H03 0200 30	30 x D		63.0	66.0	100	3	•
H03 0210 5	5 x D		13.7	16.9	55	3	•
H03 0210 8	8 x D		20.0	23.2	60	3	•
H03 0210 12	12 x D	220	28.4	31.6	65	3	•
H03 0210 20	20 x D		45.2	48.4	82	3	•
H03 0210 25	25 x D		55.7	58.8	100	3	•
H03 0210 30	30 x D		66.2	69.3	110	3	•
H03 0220 5	5 x D		14.3	17.6	55	3	•
H03 0220 8	8 x D	230	20.9	24.2	60	3	•
H03 0220 12	12 x D		29.7	33.0	65	3	•
H03 0220 20	20 x D		47.3	50.6	82	3	•
H03 0220 25	25 x D		58.3	61.6	100	3	•
H03 0220 30	30 x D		69.3	72.6	110	3	•
H03 0230 5	5 x D	240	15.0	18.5	55	3	•
H03 0230 8	8 x D		21.9	25.4	60	3	•
H03 0230 12	12 x D		31.1	34.6	65	3	•
H03 0230 20	20 x D		49.5	53.0	100	3	•
H03 0230 25	25 x D		61.0	64.4	100	3	•
H03 0230 30	30 x D	250	72.5	75.9	110	3	•
H03 0240 5	5 x D		15.6	19.2	55	3	•
H03 0240 8	8 x D		22.8	26.4	60	3	•
H03 0240 12	12 x D		32.4	36.0	75	3	•
H03 0240 20	20 x D		51.6	55.2	100	3	•
H03 0240 25	25 x D	260	63.6	67.2	100	3	•
H03 0240 30	30 x D		75.6	79.2	120	3	•
H03 0250 5	5 x D		16.3	20.1	55	3	•
H03 0250 8	8 x D		23.8	27.6	60	3	•
H03 0250 12	12 x D		33.8	37.6	75	3	•
H03 0250 20	20 x D		53.8	57.6	100	3	•
H03 0250 25	25 x D		66.3	70.0	110	3	•
H03 0250 30	30 x D		78.8	82.5	120	3	•

* - DIN 6535

cont'd ▶

Material Group | Material-Gruppe | Groupe Matière | Gruppo Materiali | 材质主类

Cutting Parameter

N01	N02	N03	K01	K02	P01	P02	P03	M01	M02	S01	S02	S03	H01	H02	O01	O02	481 - 482
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DR MINI OIL FEED MINIATURE TWIST DRILLS - 135° POINT ANGLE - 5 X Ø, 8X Ø, 12 X Ø, 15X Ø, 20X Ø, 25X Ø, 30X Ø

 VHM DR MINI Kühlkanalbohrer nach 135° Spitzenwinkel, Schaft nach DIN 6535HA 5 x Ø, 8x Ø, Ø12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø

 **Punte elicoidali DR MINI, con foro di lubrificazione, angolo di punta 135°, codolo DIN 6535HA-5 x Ø, 8 x Ø, 12 x Ø, 15 x Ø, 20 x Ø, 25 x Ø, 30 x Ø**

 Forêts hélicoïdaux DR MINI à trous d'huile angle de pointe 135°, queue selon DIN 6535HA- 5 x Ø, 8x Ø, 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø

 整体硬质合金 DR MINI 系列 内冷孔钻头-相等于2刃, 柄部标准DIN6535HA, 顶角135° 5 x Ø, 8x Ø, 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø

[illegible]

Material Group | Material-Gruppe | Groupe Matiere | Gruppo Materiali | 材质主类

Cutting Parameter

481 - 482

Recommended Cutting Data



Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition



DR Mini Oil Feed Twist Drill - Point Angle 135°, 5 × D, 8 × D - H03



Working Material	N						K				S	
	Wrought Aluminium		Cast Aluminium		Copper Alloy		Grey Cast Iron		Ductile Cast Iron		Titanium alloy	
Properties	Si < 9%		Si ≥ 9%		-		-		-		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
1.0	145	0.017	125	0.018	115	0.016	85	0.018	65	0.016	30	0.013
1.5		0.026		0.026		0.024		0.027		0.024		0.019
2.0		0.035		0.035		0.032		0.035		0.032		0.025
2.5		0.043		0.044		0.040		0.044		0.040		0.031
3.0		0.052		0.053		0.049		0.053		0.048		0.038

DR Mini Oil Feed Twist Drill - Point Angle 135°, 5 × D, 8 × D - H03



Working Material	P						M				S	
	Carbon Steel		Alloy Steel		Prehardened Steel		Stainless Steel		Stainless Steel		Nickel Alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High Machinability		Low Machinability		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
1.0	90	0.017	80	0.016	65	0.014	60	0.015	40	0.014	20	0.009
1.5		0.026		0.024		0.022		0.022		0.021		0.016
2.0		0.035		0.031		0.029		0.029		0.028		0.025
2.5		0.043		0.039		0.036		0.036		0.035		0.035
3.0		0.052		0.047		0.043		0.044		0.042		0.045

DR Mini Oil Feed Twist Drill - Point Angle 135°, 12 × D, 20 × D - H03



Working Material	N						K				S	
	Wrought Aluminium		Cast Aluminium		Copper Alloy		Grey Cast Iron		Ductile Cast Iron		Titanium alloy	
Properties	Si < 9%		Si ≥ 9%		-		-		-		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
1.0	130	0.016	115	0.016	105	0.015	80	0.014	55	0.014	30	0.010
1.5		0.025		0.024		0.022		0.021		0.021		0.016
2.0		0.033		0.032		0.029		0.028		0.028		0.021
2.5		0.041		0.039		0.037		0.035		0.035		0.026
3.0		0.049		0.047		0.044		0.042		0.042		0.031

DR Mini Oil Feed Twist Drill - Point Angle 135°, 12 × D, 20 × D - H03



Working Material	P						M				S	
	Carbon Steel		Alloy Steel		Prehardened Steel		Stainless Steel		Stainless Steel		Nickel Alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High Machinability		Low Machinability		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
1.0	85	0.014	65	0.014	55	0.010	50	0.010	40	0.009	15	0.010
1.5		0.021		0.020		0.015		0.015		0.014		0.016
2.0		0.028		0.027		0.020		0.020		0.019		0.025
2.5		0.035		0.034		0.025		0.025		0.024		0.035
3.0		0.042		0.041		0.031		0.030		0.028		0.044

Recommended Cutting Data



Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition



DR Mini Oil Feed Twist Drill - Point Angle 135°, 25 × D, 30 × D - H03



Working Material	N						K				S	
	Wrought Aluminium		Cast Aluminium		Copper Alloy		Grey Cast Iron		Ductile Cast Iron		Titanium alloy	
Properties	Si < 9%		Si ≥ 9%		-		-		-		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
1.0	125	0.014	105	0.014	95	0.012	75	0.010	50	0.013	30	0.006
1.5		0.021		0.021		0.018		0.015		0.019		0.009
2.0		0.028		0.027		0.024		0.020		0.025		0.013
2.5		0.035		0.034		0.030		0.025		0.031		0.015
3.0		0.042		0.041		0.036		0.030		0.037		0.019

DR Mini Oil Feed Twist Drill - Point Angle 135°, 25 × D, 30 × D - H03



Working Material	P						M				S	
	Carbon Steel		Alloy Steel		Prehardened Steel		Stainless Steel		Stainless Steel		Nickel Alloy	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45		High Machinability		Low Machinability		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
1.0	80	0.010	60	0.011	50	0.008	45	0.007	35	0.007	15	0.008
1.5		0.015		0.016		0.011		0.010		0.011		0.013
2.0		0.020		0.022		0.015		0.014		0.014		0.021
2.5		0.025		0.027		0.019		0.017		0.018		0.030
3.0		0.031		0.033		0.022		0.021		0.021		0.038

NC SPOT
DR ALU
EZ LINE -
DRILL
DR NITCO
DR VA
DR-S
DR MINI
DR-LX
DR 45 SB
DR 60

FEATURES & BENEFITS

DR-LX



3 Flexible Drilling

Able to drill reliably in continuous and peck drilling

1 Polished Flutes

Smoother chips evacuation and less built-up edge

2 Versatile Machining Condition

Able to drill reliably with various coolant pressure and cutting data

4 T8090 Tip Coating

Low friction, high wear resistance

5 State-of-the-Art Geometry

- For prolonged durability and excellent quality

Wider Flute Shape
- Better chip evacuation

Tougher Core Diameter
- Ensure chip can evacuate smooth yet rigid

GG Point Geometry
- Protect & Reduce Chipping

6 Suitable for Material





1. Polierte Schneide
Verbesserter problemloser Spänefluß
Weniger Aufbauschneiden
2. Vielseitige Bearbeitungsbedingungen
Kann mit verschiedenen Kühlmitteldruck- und
Schnittdaten zuverlässig bohren
3. Flexibles Bohren
Zuverlässiges Bohren im Dauer- und Hackbohren
4. T8090 Beschichtung
Mehrlagen AlTiN-Beschichtung verbessert die
Lebensdauer des Werkzeugs
5. Modernste Geometrie
Für längere Haltbarkeit und hervorragende Qualität

Breitere Flötenform
Bessere Spanabfuhr

Zäherer Kerndurchmesser
Stellen Sie sicher, dass der Chip glatt und dennoch
starr evakuiert werden kann

GG-Punktgeometrie
Absplintern schützen und reduzieren
6. Geeignet für die Materialien P, K, N, M, S



1. 拋光槽
更順暢的排屑。
減少堆積邊緣。
2. 多種加工條件
能夠可靠地進行各種鑽孔冷卻液壓力和切削數據。
3. 卓越的刀具塗層
多層 AlTiN 塗層可提高刀具壽命。
4. T8090 尖端塗層
多層 AlTiN 塗層可提高刀具壽命。
5. 最先進的幾何
延長耐用性和卓越品質。

長笛形狀
更好的排屑。

硬芯直徑
確保切屑能夠排出光滑而剛性的。

GG點幾何
保護和減少碎裂。
6. 适用于材料 P、K、N、M、S



1. Scanalatura levigata
Evacuazione dei trucioli più semplice
Meno formazione di materiale di riporto
2. Condizioni di lavorazione versatili
In grado di perforare in modo affidabile con vari dati di
pressione del refrigerante e di taglio
3. Foratura flessibile Flexible
In grado di perforare in modo affidabile nella
perforazione continua e beccata
4. T8090 Rivestimento della punta
Il rivestimento AlTiN multistrato migliora la durata dello
strumento
5. Geometria all'avanguardia
Per una durata prolungata e una qualità eccellente

Forma di flauto più ampia
Migliore evacuazione del truciolo

Diametro del nucleo più duro
Assicurarsi che il truciolo possa evacuare liscio ma
rigido

Geometria del punto GG
Proteggere e ridurre le scheggiature
6. Adatto per il materiale P, K, N, M, S



1. Goujure polie
Évacuation des copeaux plus fluide
Moins d'accumulation sur les arêtes
2. Condition d'usinage polyvalente
Capable de percer de manière fiable avec diverses
pressions d'arrosage et données de coupe
3. Forage flexible
Capable de percer de manière fiable en forage
continu et en perçage
4. T8090 Rivestimento della punta
Revêtement AlTiN multicouche pour une meilleure
durée de vie de l'outil
5. Géométrie de pointe
Pour une durabilité prolongée et une excellente qualité

Forme de flûte plus large
Meilleure évacuation des copeaux

Diamètre de noyau plus dur
Assurez-vous que la puce peut évacuer en douceur
mais rigide

Géométrie du point GG
Protéger et réduire l'écaillage
6. Adapté aux matériaux P, K, N, M, S



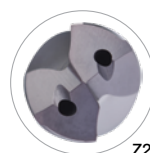
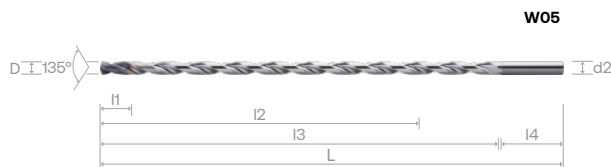
DR-LX SB OIL FEED TWIST DRILLS - 135° POINT ANGLE -12 X Ø, 15X Ø, 20X Ø, 25X Ø, 30X Ø

VHM DR-LX SB Kühlkanalbohrer nach 135° Spitzenwinkel, Schaft nach DIN 6535HA 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø

Punte elicoidali DR-LX SB, con foro di lubrificazione, angolo di punta 135°, codolo DIN 6535HA- 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø

Forets hélicoïdaux DR-LX SB à trous d'huile angle de pointe 135°, queue selon DIN 6535HA - 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø

整体硬质合金 DR-LX SB 系列 内冷孔钻头- 相当于2刃, 柄部标准DIN6535HA, 顶角135° 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø



Order Number	Dimension (mm)								T8090	Order Number	Dimension (mm)								T8090		
	DIN 6535	Hole Depth I2 / D	D (h7)	I1	I2 (Max. Drilling Depth)	I3	I4	L			d2 (h6)	DIN 6535	Hole Depth I2 / D	D (h7)	I1	I2 (Max. Drilling Depth)	I3	I4		L	d2 (h6)
W05 0310 12	12 x D	3.10	15.5	45	50	32	85	4	•	W05 0520 12 *	12 x D	5.20	26.0	72	81	36	120	6	•		
W05 0310 15	15 x D			50	55	32	90	4	◦	W05 0530 12 *		5.30	26.5	72	81	36	120	6	•		
W05 0310 20	20 x D			64	69	32	105	4	◦	W05 0540 12 *		5.40	27.0	72	81	36	120	6	•		
W05 0310 25	25 x D			79	83	32	120	4	◦	W05 0550 12 *		12 x D	72	81	36	120	6	◦			
W05 0310 30	30 x D	3.20	16.0	94	99	32	135	4	◦	W05 0550 15 *	15 x D	5.50	27.5	85	93	36	130	6	◦		
W05 0320 12	12 x D			45	50	32	85	4	•	W05 0550 20 *	20 x D			112	120	36	160	6	◦		
W05 0330 12	12 x D			3.30	16.5	45	50	32	85	4	◦			W05 0550 25 *	25 x D	139	147	36	185	6	•
W05 0340 12	12 x D			3.40	17.0	48	54	32	90	4	◦			W05 0550 30 *	30 x D	166	174	36	215	6	◦
W05 0350 12	12 x D	3.50	17.5	48	54	32	90	4	◦	W05 0560 12 *	12 x D	5.60	28.0	72	81	36	120	6	◦		
W05 0350 15	15 x D			55	60	32	95	4	◦	W05 0570 12 *		5.70	28.5	72	81	36	120	6	◦		
W05 0350 20	20 x D			72	77	32	110	4	•	W05 0580 12 *		5.80	29.0	72	81	36	120	6	◦		
W05 0350 25	25 x D			89	94	32	130	4	◦	W05 0590 12 *		5.90	29.5	72	81	36	120	6	•		
W05 0350 30	30 x D	3.60	18.0	106	111	32	145	4	◦	W05 0600 12 *	12 x D	6.00	30.0	72	81	36	120	6	◦		
W05 0360 12	12 x D			48	54	32	90	4	◦	W05 0600 15 *	15 x D			92	101	36	140	6	◦		
W05 0370 12	12 x D			3.70	18.5	48	54	32	90	4	◦			W05 0600 20 *	20 x D	122	131	36	170	6	◦
W05 0380 12	12 x D			57	64	32	100	4	◦	W05 0600 25 *	25 x D			151	160	36	200	6	◦		
W05 0380 25	25 x D	3.80	19.0	96	102	32	135	4	◦	W05 0600 30 *	30 x D	6.10	30.5	181	190	36	230	6	◦		
W05 0380 30	30 x D			115	121	32	155	4	◦	W05 0610 12 *	6.20			31.0	88	97	36	135	8	◦	
W05 0390 12	12 x D			57	64	32	100	4	◦	W05 0620 12 *	6.30			31.5	88	97	36	135	8	◦	
W05 0400 12	12 x D			57	64	32	100	4	◦	W05 0630 12 *	6.40			32.0	96	108	36	145	8	◦	
W05 0400 15	15 x D	4.00	20.0	62	68	32	105	4	•	W05 0640 12 *	12 x D	6.50	32.5	96	108	36	145	8	•		
W05 0400 20	20 x D			82	88	32	125	4	•	W05 0650 12 *	15 x D			100	110	36	150	8	•		
W05 0400 25	25 x D			101	107	32	140	4	◦	W05 0650 15 *	20 x D			132	142	36	180	8	•		
W05 0400 30	30 x D			121	127	32	160	4	◦	W05 0650 20 *	25 x D			164	173	36	210	8	◦		
W05 0410 12	12 x D	4.10	20.5	57	64	34	100	5	◦	W05 0650 25 *	30 x D	6.60	33.0	196	206	36	245	8	◦		
W05 0410 15	15 x D			64	70	34	105	5	◦	W05 0660 12 *	6.70			33.5	96	108	36	145	8	◦	
W05 0420 12	12 x D			57	64	34	100	5	◦	W05 0680 12 *	6.80			34.0	96	108	36	145	8	◦	
W05 0420 25	25 x D			106	112	34	150	5	◦	W05 0690 12 *	6.90			34.5	96	108	36	145	8	◦	
W05 0420 30	30 x D	4.20	21.0	127	133	34	170	5	◦	W05 0700 12 *	12 x D	7.00	35.0	96	108	36	145	8	◦		
W05 0430 12	12 x D			57	64	34	100	5	◦	W05 0700 15 *	15 x D			107	118	38	160	8	◦		
W05 0440 12	12 x D			4.30	21.5	57	64	34	100	5	•			W05 0700 20 *	20 x D	142	153	38	195	8	◦
W05 0440 15	15 x D			4.40	22.0	57	64	34	100	5	◦			W05 0700 25 *	25 x D	176	187	38	230	8	◦
W05 0450 12	12 x D	4.50	22.5	57	64	34	100	5	◦	W05 0700 30 *	30 x D	7.10	35.5	211	222	38	265	8	◦		
W05 0450 15	15 x D			70	76	34	115	5	◦	W05 0710 12 *	7.20			36.0	96	108	36	145	8	◦	
W05 0450 20	20 x D			92	99	34	135	5	◦	W05 0720 12 *	7.30			36.5	96	108	36	145	8	◦	
W05 0450 25	25 x D			114	120	34	155	5	◦	W05 0730 12 *	7.40			37.0	96	108	36	145	8	◦	
W05 0450 30	30 x D	4.60	23.0	136	143	34	180	5	•	W05 0740 12 *	12 x D	7.50	37.5	96	108	36	145	8	◦		
W05 0460 12	12 x D			57	64	34	100	5	◦	W05 0750 12 *	15 x D			115	126	38	165	8	◦		
W05 0470 12	12 x D			4.70	23.5	57	64	34	100	5	◦			W05 0750 20 *	20 x D	152	163	38	205	8	◦
W05 0480 12	12 x D			4.80	24.0	67	74	34	110	5	◦			W05 0750 25 *	25 x D	189	200	38	240	8	◦
W05 0490 12	12 x D	4.90	24.5	72	81	34	120	5	◦	W05 0760 12 *	30 x D	7.60	38.0	226	237	38	280	8	◦		
W05 0500 12	12 x D			72	81	34	120	5	◦	W05 0770 12 *	7.70			38.5	96	108	36	145	8	◦	
W05 0500 15	15 x D			77	85	34	120	5	◦	W05 0780 12 *	7.80			39.0	96	108	36	145	8	•	
W05 0500 20	20 x D			102	110	34	145	5	◦	W05 0790 12 *	7.90			39.5	96	108	36	145	8	•	
W05 0500 25	25 x D	5.00	25.0	126	134	34	170	5	◦	W05 0800 12 *	12 x D	8.00	40.0	96	108	36	145	8	•		
W05 0500 30	30 x D			151	159	34	195	5	◦												
W05 0510 12 *	12 x D			72	81	36	120	6	•												
W05 0510 15 *	15 x D			79	86	36	125	6	•												
W05 0510 25 *	25 x D	5.10	25.5	129	136	36	175	6	•												
W05 0510 30 *	30 x D			154	162	36	200	6	•												

DR-LX SB OIL FEED TWIST DRILLS - 135° POINT ANGLE -12 X Ø, 15X Ø, 20X Ø, 25X Ø, 30X Ø

 VHM DR-LX SB Kühlkanalbohrer nach 135° Spitzenwinkel, Schaft nach DIN 6535HA 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø

 **Punte elicoidali DR-LX SB, con foro di lubrificazione, angolo di punta 135°, codolo DIN 6535HA- 12 x Ø. 15x Ø. 20x Ø. 25x Ø. 30x Ø**

 **Forêts hélicoïdaux DR-LX SB à trous d'huile angle de pointe 135°, queue selon DIN 6535HA - 12 x Ø. 15x Ø. 20x Ø. 25x Ø. 30x Ø**

 整体硬质合金 DR-LX SB 系列 内冷孔钻头-相等于2刃, 柄部标准DIN6535HA, 顶角135° 12 x Ø, 15x Ø, 20x Ø, 25x Ø, 30x Ø

[illegible]

* - DIN 6535

Remark: I2 is just a guideline for maximum drilling depth, make adjustments accordingly to your machine or workpiece conditions and do not exceed the maximum values. Please find technical info (application) , page 517.

Material Group | Material-Gruppe | Groupe Matiere | Gruppo Materiali | 材质主类

Cutting Parameter

487 - 490

Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition



DR-LX Oil Feed Twist Drills - Point Angle 135°, 12 × D - W05

Working Material	N					
	Wrought Aluminium		Cast Aluminium		Copper Alloy	
Properties	Si < 9%		Si ≥ 9%		-	
D	Vc	fn	Vc	fn	Vc	fn
3.0	120 - 170	0.084	105 - 150	0.083	90 - 140	0.081
4.0		0.120		0.119		0.116
5.0		0.161		0.160		0.155
6.0		0.209		0.203		0.196
7.0		0.259		0.253		0.245
8.0		0.311		0.305		0.298
9.0		0.332		0.323		0.321
10.0		0.351		0.350		0.340
12.0		0.381		0.371		0.365

DR-LX Oil Feed Twist Drills - Point Angle 135°, 12 × D - W05

Working Material	P					
	Carbon Steel		Alloy Steel		Prehardened Steel	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45	
D	Vc	fn	Vc	fn	Vc	fn
3.0	80 - 120	0.066	65 - 110	0.064	55 - 80	0.063
4.0		0.095		0.092		0.088
5.0		0.126		0.123		0.120
6.0		0.164		0.153		0.153
7.0		0.202		0.189		0.192
8.0		0.245		0.232		0.231
9.0		0.272		0.246		0.249
10.0		0.294		0.263		0.266
12.0		0.339		0.287		0.280

DR-LX Oil Feed Twist Drills - Point Angle 135°, 12 × D - W05

Working Material	K				M			
	Grey Cast Iron		Ductile Cast Iron		Stainless Steel		Stainless Steel	
Properties	-		-		High Machinability		Low Machinability	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn
3.0	70 - 110	0.067	55 - 80	0.067	50 - 75	0.066	35 - 50	0.062
4.0		0.097		0.094		0.094		0.088
5.0		0.130		0.126		0.122		0.113
6.0		0.164		0.160		0.158		0.147
7.0		0.209		0.200		0.190		0.176
8.0		0.251		0.242		0.234		0.218
9.0		0.262		0.262		0.248		0.224
10.0		0.280		0.273		0.259		0.248
12.0		0.304		0.288		0.298		0.267

Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition



DR-LX Oil Feed Twist Drills - Point Angle 135°, 12 × D - W05

Working Material	S			
	Titanium alloy		Nickel Alloy	
Properties	-		-	
D	Vc	fn	Vc	fn
3.0	25 - 35	0.062	20 - 30	0.052
4.0		0.088		0.077
5.0		0.112		0.097
6.0		0.158		0.120
7.0		0.190		0.140
8.0		0.234		0.182
9.0		0.242		0.202
10.0		0.252		0.210
12.0		0.280		0.220

DR-LX Oil Feed Twist Drills - Point Angle 135°, 15 × D, 20 × D - W05

Working Material	N					
	Wrought Aluminium		Cast Aluminium		Copper Alloy	
Properties	Si < 9%		Si ≥ 9%		-	
D	Vc	fn	Vc	fn	Vc	fn
3.0	115 - 160	0.102	100 - 140	0.098	85 - 130	0.095
4.0		0.132		0.126		0.123
5.0		0.193		0.186		0.181
6.0		0.227		0.218		0.210
7.0		0.255		0.248		0.248
8.0		0.311		0.304		0.300
9.0		0.340		0.325		0.316
10.0		0.398		0.381		0.370
12.0		0.454		0.437		0.421

DR-LX Oil Feed Twist Drills - Point Angle 135°, 15 × D, 20 × D - W05

Working Material	P					
	Carbon Steel		Alloy Steel		Prehardened Steel	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45	
D	Vc	fn	Vc	fn	Vc	fn
3.0	75 - 110	0.077	60 - 100	0.076	50 - 70	0.076
4.0		0.101		0.098		0.098
5.0		0.148		0.144		0.144
6.0		0.171		0.168		0.168
7.0		0.193		0.192		0.193
8.0		0.239		0.237		0.242
9.0		0.248		0.256		0.252
10.0		0.295		0.297		0.294
12.0		0.342		0.336		0.336

Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition



DR-LX Oil Feed Twist Drills - Point Angle 135°, 15 × D, 20 × D - W05

Working Material	K				M			
	Grey Cast Iron		Ductile Cast Iron		Stainless Steel		Stainless Steel	
Properties	-		-		High Machinability		Low Machinability	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn
3.0	65 - 100	0.081	50 - 70	0.081	45 - 65	0.073	30 - 45	0.060
4.0		0.105		0.105		0.095		0.078
5.0		0.154		0.154		0.140		0.115
6.0		0.179		0.179		0.161		0.133
7.0		0.204		0.204		0.189		0.147
8.0		0.249		0.255		0.231		0.183
9.0		0.260		0.266		0.249		0.186
10.0		0.309		0.309		0.286		0.227
12.0		0.358		0.358		0.322		0.266

DR-LX Oil Feed Twist Drills - Point Angle 135°, 15 × D, 20 × D - W05

Working Material	S			
	Titanium alloy		Nickel Alloy	
Properties	-		-	
D	Vc	fn	Vc	fn
3.0	20 - 30	0.078	15 - 25	0.049
4.0		0.102		0.063
5.0		0.150		0.091
6.0		0.174		0.109
7.0		0.190		0.116
8.0		0.234		0.154
9.0		0.242		0.171
10.0		0.294		0.196
12.0		0.347		0.218

DR-LX Oil Feed Twist Drills - Point Angle 135°, 25 × D, 30 × D - W05

Working Material	N					
	Wrought Aluminium		Cast Aluminium		Copper Alloy	
Properties	Si < 9%		Si ≥ 9%		-	
D	Vc	fn	Vc	fn	Vc	fn
3.0	100 - 130	0.110	85 - 115	0.107	70 - 100	0.104
4.0		0.150		0.146		0.143
5.0		0.209		0.205		0.199
6.0		0.259		0.251		0.242
7.0		0.309		0.301		0.295
8.0		0.373		0.366		0.359
9.0		0.402		0.389		0.383
10.0		0.445		0.435		0.423
12.0		0.493		0.478		0.466

Recommended Cutting Data



Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition



DR-LX Oil Feed Twist Drills - Point Angle 135°, 25 × D, 30 × D - W05

Working Material	P					
	Carbon Steel		Alloy Steel		Prehardened Steel	
Properties	-		520 < Rm < 1200		35 ≤ HRC < 45	
D	Vc	fn	Vc	fn	Vc	fn
3.0	60 - 85	0.085	45 - 70	0.083	35 - 45	0.082
4.0		0.117		0.114		0.111
5.0		0.162		0.158		0.156
6.0		0.200		0.191		0.191
7.0		0.238		0.228		0.231
8.0		0.291		0.281		0.283
9.0		0.314		0.301		0.300
10.0		0.354		0.333		0.333
12.0		0.408		0.369		0.364

DR-LX Oil Feed Twist Drills - Point Angle 135°, 25 × D, 30 × D - W05

Working Material	K				M			
	Grey Cast Iron		Ductile Cast Iron		Stainless Steel		Stainless Steel	
Properties	-		-		High Machinability		Low Machinability	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn
3.0	50 - 75	0.088	35 - 45	0.088	30 - 40	0.082	20 - 30	0.073
4.0		0.120		0.118		0.113		0.101
5.0		0.168		0.165		0.155		0.137
6.0		0.204		0.201		0.191		0.169
7.0		0.248		0.242		0.228		0.197
8.0		0.300		0.297		0.279		0.245
9.0		0.313		0.316		0.298		0.250
10.0		0.351		0.346		0.324		0.287
12.0		0.392		0.381		0.370		0.320

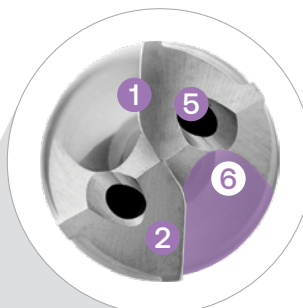
DR-LX Oil Feed Twist Drills - Point Angle 135°, 25 × D, 30 × D - W05

Working Material	S			
	Titanium alloy		Nickel Alloy	
Properties	-		-	
D	Vc	fn	Vc	fn
3.0	15 - 25	0.082	15 - 20	0.061
4.0		0.113		0.085
5.0		0.153		0.113
6.0		0.198		0.139
7.0		0.228		0.156
8.0		0.281		0.204
9.0		0.291		0.227
10.0		0.323		0.245
12.0		0.370		0.263

NC SPOT
DR ALU
EZ LINE -
DRILL
DR NITCo
DR VA
DR-S
DR MINI
DR-LX
DR 45 SB
DR 60

FEATURES & BENEFITS

DR 45 SB



1 Split Point Design

Provides self centering ability and reduced thrust

3 Effective Clearance and Gash

Ensures fast, efficient chips evacuation and drastically reduces built-up edge

5 Oil Hole V-Groove

Improves the flushing out of chips during drilling

7 Suitable for Material



9 Four Margin for Optimum Hole Quality

- Improve holes straightness
- Better holes tolerance
- Using on inclined hole exit
- Workpiece with cross holes

2 Straight Cutting Edge

- Produces small chips
- Improves chip evacuation

4 Corner Reinforcement

Adds protection during the drilling process

6 J Flute Shape

Provides better chip evacuation

8 Polished Flutes Passage

- Provides better chips evacuation
- Increases feeds and speeds possible for high performance drilling
- Less built-up edge

10 High Performance Drill with Internal Coolant

- Enhances hole quality
- Increases tool durability





1. Kreuzanschiff
Bietet Selbstzentrierung und reduzierten Axialdruck
2. Gerade Schneide
Erzeugt kleine Späne
verbessert den Spanabgang
3. Effektiver Abstand und Schnitt
Niedrigere Schnittkräfte
Verbessert die Spanbildung und Kontrolle
4. Schneideckenverstärkung
sorgt für mehr Schutz beim Bohren
5. Kühlkanäle in V-Stirnanschiff
besseres Ausspülen der Späne während des Bohrens
6. J-förmige Nuten
bietet einen verbesserten Spänefluß
7. Geeignet für die Materialgruppen P, M, K, S
8. Polierter Nutenübergang
Bietet einen verbesserten Spänefluß
Erhöht Vorschübe und Schnittgeschwindigkeiten beim Hochleistungsbohren
Weniger Aufbauschneiden
9. Vier Fasen für optimale Bohrungsqualität
Verbessert die Geradheit der Bohrung
Bessere Bohrungstoleranz
Einsatz bei schrägem Bohrausgang
Werkstücke mit Kreuzbohrungen
10. Hochleistungsbohrer mit Innenkühlung
Verbessert die Bohrungsqualität
Erhöht die Haltbarkeit des Werkzeugs



1. 不等分设计
提供自定心能力和减小推力。
2. 垂直切削刃
产生小碎屑。
改善排屑。
3. 有效排屑能力
加工切削阻力较低。
改善碎屑的形成和控制。
4. 刀尖加固
在钻孔过程中增加保护。
5. 油孔 V 型槽
改善钻孔过程中对碎屑的冲洗。
6. J 型槽
提供更好的排屑。
7. 适用于材料 P、M、K、S
8. 抛光排屑槽
提供更好的排屑。
提高切削速率, 实现高性能钻孔。
减少铁屑堆积。
9. 四个边刃, 确保最佳孔质量
提高孔垂直度。
更好的孔容差。
在倾斜孔出口使用。
带十字孔的工件。
10. 具有内冷却的高性能钻头
提高钻孔质量。
提高刀具耐用性。



1. Struttura del punto di ripartizione
Offre capacità autocentranti e spinta ridotta
2. Angolo di taglio dritto
Produce piccoli trucioli
Migliora l'evacuazione dei trucioli
3. Gioco e sgrossatura efficaci
Forze di taglio inferiori
Migliora la formazione e il controllo dei trucioli
4. Rafforzamento degli angoli
Aggiunge protezione durante il processo di foratura
5. Scanalatura a V del foro dell'olio
Migliora l'espulsione dei trucioli durante la foratura
6. Forma della scanalatura a J
Offre una migliore evacuazione dei trucioli
7. Adatto per il materiale P, M, K, S
8. Passaggio scanalature levigate
Offre una migliore evacuazione dei trucioli
Aumenta l'avanzamento e la velocità per una foratura ad alte prestazioni
Meno formazione di materiale di riporto
9. Quattro margini per una qualità dei fori ottimale
Migliora la linearità dei fori
Migliore tolleranza dei fori
Utilizzo su uscita foro inclinata
Pezzo con fori trasversali
10. Foratura ad alte prestazioni con liquido refrigerante interno
Migliora la qualità dei fori
Aumenta la resistenza dello strumento



1. Conception à affûtage 4 faces croisées
auto centrant, efforts de coupes réduit
2. Affûtage 4 faces croisées
Produit des copeaux de petite taille
Améliore l'évacuation des copeaux
3. Dégagement et rainure de logement efficaces
Forces de coupe inférieures
Améliore la formation et le contrôle des copeaux
4. Rayon torique sur les arêtes
pour une meilleur protection pendant le perçage
5. Scanalatura a V del foro dell'olio
Migliora l'espulsione dei trucioli durante la foratura
6. Forma della scanalatura a J
Offre una migliore evacuazione dei trucioli
7. Adapté aux matériaux P, M, K, S
8. Goujure poli
Permet une meilleure évacuation des copeaux
Améliore les débits et les vitesses possibles pour un perçage haute performance
Moins de collage sur les arêtes
9. Foret double listel pour qualité de trou
Améliore la rectitude des percages
Meilleure tolérance des trous
Utilisation pour trou débouchant sur une inclinaison
Peut être utilisé pour trous sécants
10. Perçage haute performance à trou d'huile
Améliore la qualité des percages
Augmente la durée de vie de l'outil

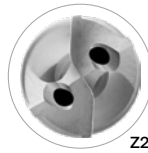
DR 45 SB LONG OF SPIRAL BURNISHING DRILLS - 140° POINT ANGLE - 8 X Ø

🇩🇪 VHM DR 45 SB OF Lange 4 Fasen-Spiralbohrer nach HPMT Norm, mit Kühlkanälen - 140° Spitzenwinkel, Schaft nach DIN 6535HA

🇮🇹 Punte elicoidali DR 45 SB OF a doppio margine, norma HPMT, con foro di lubrificazione, angolo di punta 140°, codolo DIN 6535HA - 8 x Ø

🇫🇷 DR 45 SB OF Foret hélicoïdal double listel à trou d'huile, selon norme HPMT, queue DIN 6535HA - 8 x Ø

🇪🇸 整体硬质合金DR 45 SB LONG OF 螺旋精加工钻头- 加工深度5xD, 柄部标准DIN6535HA, 顶角140°



Order Number	DIN 6535	Dimension (mm)						T8090	Order Number	DIN 6535	Dimension (mm)						T8090
		D (m7)	I1	I2	I3	L	d2 (h6)				D (m7)	I1	I2	I3	L	d2 (h6)	
F33 0300 085 03		3.0	32	40	36	85	3	•	F33 0730	*	7.3	64	76	36	116	8	•
F33 0300	*			40	36	85	6	◦	F33 0740	*	7.4		76	36	116	8	◦
F33 0310 085 03		3.1		40	36	85	3	•	F33 0750	*	7.5		76	36	116	8	•
F33 0310	*			40	36	85	6	•	F33 0760	*	7.6		76	36	116	8	◦
F33 0320 085 03		3.2		40	36	85	3	◦	F33 0770	*	7.7		76	36	116	8	◦
F33 0320	*			40	36	85	6	◦	F33 0780	*	7.8		76	36	116	8	•
F33 0330	*	3.3		40	36	85	6	◦	F33 0790	*	7.9		76	36	116	8	◦
F33 0340	*	3.4		40	36	85	6	•	F33 0800	*	8.0		76	36	116	8	•
F33 0350	*	3.5		40	36	85	6	•	F33 0810 116 08	*			76	36	116	8	◦
F33 0360	*	3.6	36	40	36	85	6	◦	F33 0810	*	8.1	80	95	40	142	10	•
F33 0370	*	3.7		40	36	85	6	•	F33 0820	*	8.2		95	40	142	10	•
F33 0380	*	3.8		40	36	85	6	◦	F33 0830	*	8.3		95	40	142	10	•
F33 0390	*	3.9		40	36	85	6	•	F33 0840	*	8.4		95	40	142	10	◦
F33 0400 085 04		4.0		40	36	85	4	◦	F33 0850	*	8.5		95	40	142	10	•
F33 0400	*		38	46	36	85	6	•	F33 0860	*	8.6		95	40	142	10	◦
F33 0410 085 04		4.1	36	40	36	85	4	◦	F33 0870	*	8.7		95	40	142	10	•
F33 0410	*		38	46	36	85	6	◦	F33 0880	*	8.8		95	40	142	10	◦
F33 0420 085 04		4.2	36	40	36	85	4	◦	F33 0890	*	8.9		95	40	142	10	◦
F33 0420	*		38	46	36	85	6	◦	F33 0900	*	9.0		95	40	142	10	•
F33 0430	*	4.3	40	46	36	97	6	◦	F33 0910	*	9.1	96	95	40	142	10	◦
F33 0440	*	4.4		46	36	97	6	◦	F33 0920	*	9.2		95	40	142	10	◦
F33 0450	*	4.5		46	36	97	6	◦	F33 0930	*	9.3		95	40	142	10	◦
F33 0460	*	4.6	44	46	36	97	6	•	F33 0940	*	9.4		95	40	142	10	◦
F33 0470	*	4.7		46	36	97	6	◦	F33 0950	*	9.5		95	40	142	10	•
F33 0480	*	4.8		46	36	97	6	•	F33 0960	*	9.6	95	40	142	10	◦	
F33 0490	*	4.9		46	36	97	6	◦	F33 0970	*	9.7		95	40	142	10	•
F33 0500	*	5.0	48	57	36	97	6	•	F33 0980	*	9.8		95	40	142	10	•
F33 0510	*	5.1		57	36	97	6	◦	F33 0990	*	9.9		95	40	142	10	◦
F33 0520	*	5.2		57	36	97	6	◦	F33 1000	*	10.0		95	40	142	10	◦
F33 0530	*	5.3		57	36	97	6	•	F33 1020	*	10.2		114	45	163	12	•
F33 0540	*	5.4		57	36	97	6	◦	F33 1050	*	10.5		114	45	163	12	•
F33 0550	*	5.5	56	57	36	97	6	•	F33 1080	*	10.8		114	45	163	12	◦
F33 0560	*	5.6		57	36	97	6	◦	F33 1100	*	11.0		114	45	163	12	•
F33 0570	*	5.7		57	36	97	6	•	F33 1120	*	11.2		114	45	163	12	•
F33 0580	*	5.8		57	36	97	6	•	F33 1130	*	11.3		114	45	163	12	◦
F33 0590	*	5.9		57	36	97	6	◦	F33 1150	*	11.5		114	45	163	12	•
F33 0600	*	6.0		57	36	97	6	•	F33 1180	*	11.8		114	45	163	12	•
F33 0610 097 06	*			57	36	97	6	◦	F33 1200	*	12.0		114	45	163	12	◦
F33 0610	*	6.1	64	76	36	116	8	•	F33 1220	*	12.2	112	133	45	182	14	◦
F33 0620	*	6.2		76	36	116	8	•	F33 1250	*	12.5		133	45	182	14	•
F33 0630	*	6.3		76	36	116	8	•	F33 1270	*	12.7		133	45	182	14	◦
F33 0640	*	6.4		76	36	116	8	•	F33 1280	*	12.8		133	45	182	14	◦
F33 0650	*	6.5		76	36	116	8	•	F33 1300	*	13.0		133	45	182	14	•
F33 0660	*	6.6		76	36	116	8	•	F33 1350	*	13.5		133	45	182	14	•
F33 0670	*	6.7		76	36	116	8	•	F33 1370	*	13.7		133	45	182	14	◦
F33 0680	*	6.8		76	36	116	8	•	F33 1400	*	14.0		133	45	182	14	◦
F33 0690	*	6.9		76	36	116	8	•	F33 1450	*	14.5	128	152	48	204	16	•
F33 0700	*	7.0		76	36	116	8	•	F33 1500	*	15.0		152	48	204	16	◦
F33 0710	*	7.1		76	36	116	8	•	F33 1550	*	15.5		152	48	204	16	◦
F33 0720	*	7.2		76	36	116	8	•	F33 1600	*	16.0		152	48	204	16	•

* - DIN 6535

Material Group | Material-Gruppe | Groupe Matiere | Gruppo Materiali | 材质主类

N01 N02 N03 K01 K02 P01 P02 P03 M01 M02 S01 S02 S03 H01 H02 O01 O02

Cutting Parameter

494

Recommended Cutting Data



Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition



DR 45 SB Oil Feed Spiral Burnishing Drills, 8xD, 2 Flutes - F33

Drilling	K				P					
Working Material	Grey Cast Iron		Ductile Cast Iron		Carbon Steel		Alloy Steel		Prehardened Steel	
Properties	-		-		-		520 < Rm < 1200		35 ≤ HRC < 45	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn	Vc	fn
3	120	0.058	55	0.050		0.062	105	0.054	95	0.053
4		0.082		0.067		0.086		0.073		0.072
5		0.107		0.085		0.110		0.094		0.091
6		0.132		0.106		0.136		0.114		0.110
7		0.158		0.122		0.162		0.135		0.130
8		0.182		0.150		0.187		0.155		0.152
9		0.210		0.165		0.212		0.175		0.172
10		0.235		0.188		0.240		0.200		0.192
11		0.265		0.210		0.272		0.218		0.215
12		0.302		0.240		0.307		0.250		0.242
13		0.315		0.250		0.321		0.262		0.258
14		0.333		0.260		0.340		0.282		0.276
15		0.348		0.270		0.352		0.295		0.288
16		0.366		0.282		0.370		0.315		0.312



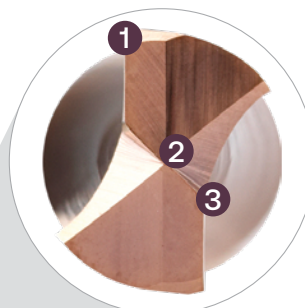
DR 45 SB Oil Feed Spiral Burnishing Drills, 8xD, 2 Flutes - F33

Drilling	M				S			
Working Material	Stainless Steel		Stainless Steel		Titanium Alloy		Nickel Alloy	
Properties	High Machinability		Low Machinability		-		-	
D	Vc	fn	Vc	fn	Vc	fn	Vc	fn
3	60	0.050	40	0.046	35	0.031	30	0.028
4		0.067		0.061		0.042		0.035
5		0.085		0.080		0.052		0.050
6		0.105		0.091		0.065		0.060
7		0.125		0.112		0.081		0.070
8		0.145		0.135		0.092		0.080
9		0.160		0.145		0.105		0.090
10		0.180		0.175		0.115		0.100
11		0.205		0.185		0.125		0.110
12		0.235		0.210		0.150		0.130
13		0.245		0.225		0.155		0.135
14		0.258		0.230		0.165		0.143
15		0.270		0.242		0.170		0.148
16		0.285		0.265		0.180		0.155

NC SPOT
DR ALU
EZ LINE -
DRILL
DR NITCo
DR VA
DR-S
DR MINI
DR-LX
DR 45 SB
DR 60

FEATURES & BENEFITS

DR 60



1 Corner Chamfer Edge

Edge protection when machining on hardened material

2 Thinning

Special Thinning for hardened material

3 Bigger Web Thickness

Increases the tool rigidity

4 Tough PVD Silicon Based Coating

- Prolong the tool life
- Enables higher cutting speeds
- Increases heat resistance

5 Suitable for Material Group

H





1. Eckenschutzfase
Kantenschutz bei der Bearbeitung von gehärtetem Material
 2. Ausspitzung
Spezielle Stirnausspitzung für gehärtetes Material
 3. Größerer Kerndurchmesser
Erhöht die Werkzeugsteifigkeit
 4. Robuste PVD-Siliziumbeschichtung
verlängert die Werkzeuglebensdauer
ermöglicht höhere Schnittgeschwindigkeiten
verbesserte Hitzebeständigkeit
 5. Geeignet für die Materialgruppen H
-



1. 刀尖倒角设计
在硬化材料上进行加工时的边刃保护。
 2. 变薄
硬化材料特殊变薄。
 3. 更大的腹板厚度
提高刀具刚性。
 4. 耐用的 PVD 硅基涂层
延长刀具寿命。
实现更高的切削速率。
增加耐热性。
 5. 适用于材料 H
-



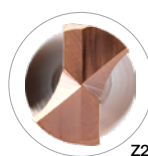
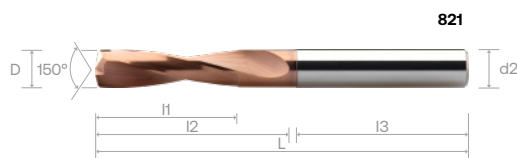
1. Tagliente di smusso
Protezione degli angoli durante la lavorazione su materiali induriti
 2. Assottigliamento
Assottigliamento specifico per materiale indurito
 3. Spessore del nocciolo più grande
Aumenta la rigidità dello strumento
 4. Rivestimento in silicone PVD resistente
Prolunga la vita dello strumento
Consente maggiori velocità di taglio
Aumenta la resistenza al calore
 5. Adatto per il materiale H
-



1. Rayon torique sur les arêtes
Protection de l'arête lors de l'usinage de matériaux plus durs
2. Amincissement
Amincissement spécial pour les matériaux durcis
3. Ame renforcée
Augmente la rigidité de l'outil
4. Revêtement à base de silicium sous forme de dépôt en phase vapeur résistant
Prolonge la durée de vie de l'outil
Permet des vitesses de coupe supérieures
Augmente la résistance à la chaleur
5. Adapté aux matériaux H

DR 60 TWIST DRILLS - DIN 6537L - 150° POINT ANGLE - 5 X Ø

- VHM Spiralbohrer nach DIN 6537L, 150° Spitzenwinkel, Schaft nach DIN 6535HA
- Punte elicoidali a norma DIN 6537L, 5 x ø, con angolo di punta 150°, codolo DIN 6535HA
- Forets hélicoïdaux selon DIN 6537L - 5 x Ø, angle de pointe 150°, queue selon DIN 6535HA
- 整体硬质合金钻头-相等于DIN 6537L 2刃-加工深度3xD, 柄部标准DIN 6535HA, 顶角150°



Order Number DIN 6535	Dimension (mm)						D0120
	D (m7)	I1	I2	I3	L	d2 (h6)	
821 0300 *	3.0	23	28	36	66	6	°
821 0330 *	3.3		28	36	66	6	°
821 0350 *	3.5		28	36	66	6	°
821 0380 *	3.8	29	36	36	74	6	°
821 0400 *	4.0		36	36	74	6	°
821 0420 *	4.2		36	36	74	6	°
821 0450 *	4.5	35	36	36	82	6	°
821 0480 *	4.8		44	36	82	6	°
821 0500 *	5.0		44	36	82	6	°
821 0550 *	5.5	43	44	36	82	6	°
821 0580 *	5.8		44	36	82	6	°
821 0600 *	6.0		44	36	82	6	°
821 0650 *	6.5	49	53	36	91	8	°
821 0680 *	6.8		53	36	91	8	°
821 0700 *	7.0		53	36	91	8	°
821 0750 *	7.5	56	53	36	91	8	°
821 0780 *	7.8		53	36	91	8	°
821 0800 *	8.0		53	36	91	8	°
821 0850 *	8.5	60	61	40	103	10	°
821 0880 *	8.8		61	40	103	10	°
821 0900 *	9.0		61	40	103	10	°
821 0950 *	9.5	60	61	40	103	10	°
821 0980 *	9.8		61	40	103	10	°
821 1000 *	10.0		61	40	103	10	°
821 1020 *	10.2	60	71	45	118	12	°
821 1050 *	10.5		71	45	118	12	°
821 1080 *	10.8		71	45	118	12	°
821 1100 *	11.0	60	71	45	118	12	°
821 1150 *	11.5		71	45	118	12	°
821 1180 *	11.8		71	45	118	12	°
821 1200 *	12.0	60	71	45	118	12	°
821 1250 *	12.5		77	45	124	14	°
821 1280 *	12.8		77	45	124	14	°
821 1300 *	13.0		77	45	124	14	°

* - DIN 6535

Material Group | Material-Gruppe | Groupe Matière | Gruppo Materiali | 材质主类

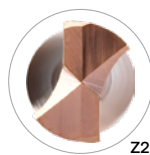
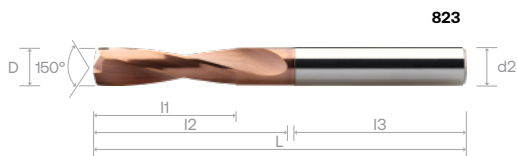
Cutting Parameter

N01 N02 N03 K01 K02 P01 P02 P03 M01 M02 S01 S02 S03 H01 H02 O01 O02

499

DR 60 TWIST DRILLS - DIN 6537K - 150° POINT ANGLE - 3 X Ø

-  VHM Spiralbohrer nach DIN 6537K, 150° Spitzenwinkel, Schaft nach DIN 6535HA
-  Punte elicoidali a norma DIN 6537K, 3 x Ø, con angolo di punta 150°, codolo DIN 6535HA
-  Forets hélicoïdaux selon DIN 6537K - 3 x Ø, angle de pointe 150°, queue selon DIN 6535HA
-  整体硬质合金钻头-相等于DIN 6537K 2刃-加工深度3xD, 顶角150°



Order Number DIN 6535	Dimension (mm)						D0120
	D (m7)	I1	I2	I3	L	d2 (h6)	
823 0300 *	3.0	14	20	36	62	6	°
823 0330 *	3.3		20	36	62	6	•
823 0350 *	3.5		20	36	62	6	•
823 0380 *	3.8	17	24	36	66	6	•
823 0400 *	4.0		24	36	66	6	•
823 0420 *	4.2		24	36	66	6	•
823 0450 *	4.5	20	24	36	66	6	•
823 0480 *	4.8		28	36	66	6	°
823 0500 *	5.0		28	36	66	6	°
823 0550 *	5.5	20	28	36	66	6	•
823 0580 *	5.8		28	36	66	6	•
823 0600 *	6.0		28	36	66	6	•
823 0650 *	6.5	29	34	36	79	8	•
823 0680 *	6.8		41	36	79	8	•
823 0700 *	7.0		41	36	79	8	•
823 0750 *	7.5	29	41	36	79	8	•
823 0780 *	7.8		41	36	79	8	°
823 0800 *	8.0		41	36	79	8	•
823 0850 *	8.5	35	47	40	89	10	•
823 0880 *	8.8		47	40	89	10	°
823 0900 *	9.0		47	40	89	10	°
823 0950 *	9.5	40	47	40	89	10	°
823 0980 *	9.8		47	40	89	10	°
823 1000 *	10.0		47	40	89	10	•
823 1020 *	10.2	40	55	45	102	12	°
823 1050 *	10.5		55	45	102	12	°
823 1080 *	10.8		55	45	102	12	•
823 1100 *	11.0	43	55	45	102	12	°
823 1150 *	11.5		55	45	102	12	°
823 1180 *	11.8		55	45	102	12	•
823 1200 *	12.0	43	55	45	102	12	•
823 1250 *	12.5		60	45	107	14	°
823 1280 *	12.8		60	45	107	14	°
823 1300 *	13.0		60	45	107	14	°

* - DIN 6535

Material Group | Material-Gruppe | Groupe Matière | Gruppo Materiali | 材质主类

N01 N02 N03 K01 K02 P01 P02 P03 M01 M02 S01 S02 S03 H01 H02 O01 O02

Cutting Parameter

499

Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition



H



DR 60 Twist Drills, 3xD & 5xD, 2 Flutes - 821, 823

Drilling	H			
Working Material	Hardened Steel		Hardened Steel	
Properties	45 ≤ HRC < 52		52 ≤ HRC < 68	
D	Vc	fn	Vc	fn
3	30	0.024	20	0.018
4		0.050		0.025
5		0.065		0.029
6		0.080		0.032
7		0.090		0.036
8		0.100		0.039
9		0.110		0.043
10		0.120		0.046
11		0.130		0.050
12		0.140		0.053
13		0.150		0.059

NC SPOT

DR ALU

EZ LINE -
DRILL

DR NITCo

DR VA

DR-S

DR MINI

DR-LX

DR 45 SB

DR 60