



SOLID CARBIDE DRILLS

suttontools

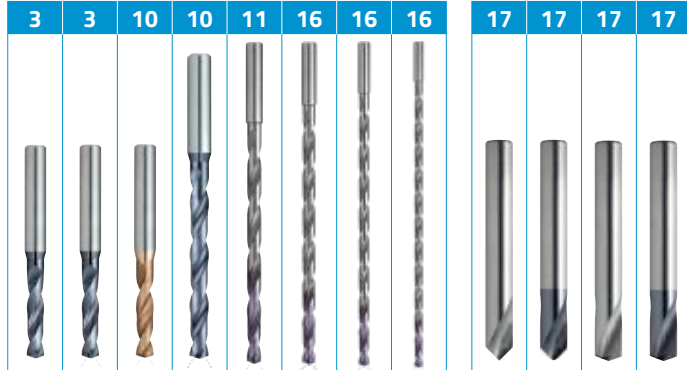
ISO VDI Material Group

Sutton

Page

P	A	Steel	N	ISO
M	R	Stainless Steel	VA	
K	F	Cast Iron	GG	
N	S	Non-Ferrous Metals, Aluminiums & Coppers	Al W	
S	S	Titaniums & Super Alloys	Ti Ni	
H	H	Hard Materials (≥ 45 HRC)	H	

^ VDI 3323 material groups can also be determined by referring to the material cross reference listing in the application guide at the back of this catalogue.



Catalogue Code
Material
Surface Finish
Sutton Designation
Standard
Depth of Cut
Shank Form (DIN 6535)

D323	D329	D356	D335	D371	D372	D373	D375	D355	D364	D365	D366	
VHM	VHM	VHM	VHM	VHM				VHM	VHM			
AICrN	AICrN	Helica	AICrN	Pertura Tip				Brt	AICrN	Brt	AICrN	
N	N	VA	N	VA				NC	NC	NC	NC	
DIN 6537				-				-				
3 x D	3 x D	3 x D	8 x D	12 x D	15 x D	20 x D	30 x D					
HA	HA	HA	HA	HA								

ISO	VDI ³³²³	Material	Condition	HB	N/mm ²													
P	1	Steel - Non-alloy, cast & free cutting	~ 0.15 %C	A	125	440	●	●	●	●	●	●	●	●				
	2		~ 0.45 %C	A	190	640	●	●	●	●	●	●	●	●				
	3			QT	250	840	●	●	●	●	●	●	●	●				
	4		~ 0.75 %C	A	270	910	●	●	●	●	●	●	●	●				
	5			QT	300	1010	●	●	○	●	●	●	●	●				
	6	Steel - Low alloy & cast < 5% of alloying elements		A	180	610	●	●	●	●	●	●	●	●				
	7			QT	275	930	●	●	○	●	●	●	●	●				
	8			QT	300	1010	●	●	○	●	●	●	●	●				
	9			QT	350	1180	●	●		●	●	●	●	●				
	10	Steel - High alloy, cast & tool		A	200	680	●	●	○	●	●	●	●	●				
	11			HT	325	1100	●	●		●	○	○	○	○				
	12	Steel - Corrosion resistant & cast	Ferritic / Martensitic	A	200	680		○	○	○	○	○	○	○				
	13		Martensitic	QT	240	810	●	●	○	●	○	○	○	○				
M	14.1	Stainless Steel	Austenitic	AH	180	610		○	●	○	○	○	○	○				
	14.2		Duplex		250	840		○	●		○	○	○	○				
	14.3		Precipitation Hardening		250	840	○	●	●		○	○	○	○				
K	15	Cast Iron - Grey (GG)	Ferritic / Pearlitic		180	610	●	●		●	●	●	●	●				
	16		Pearlitic		260	880	●	●		●	○	○	○	○				
	17	Cast Iron - Nodular (GGG)	Ferritic		160	570	●	●		●	●	●	●	●				
	18		Pearlitic		250	840	●	●		●	○	○	○	○				
	19		Cast Iron - Malleable	Ferritic		130	460	●	●		●	○	○	○				
20		Pearlitic		230	780	●	●		●	○	○	○	○					
N	21	Aluminum & Magnesium - wrought alloy	Non Heat Treatable		60	210			●		○	○	○	○				
	22		Heat Treatable	AH	100	360			●		○	○	○	○				
	23	Aluminum & Magnesium - cast alloy ≤12% Si	Non Heat Treatable		75	270			●		○	○	○	○				
	24		Heat Treatable	AH	90	320			●		○	○	○	○				
	25	Al & Mg - cast alloy >12% Si	Non Heat Treatable		130	460		○	●		○	○	○	○				
	26	Copper & Cu alloys (Brass/Bronze)	Free cutting, Pb > 1%		110	390		○										
	27		Brass (CuZn, CuSnZn)		90	320		○										
	28		Bronze (CuSn)		100	360		○										
	29	Non-metallic - Thermosetting & fiber-reinforced plastics																
30	Non-metallic - Hard rubber, wood etc.																	
S	31	High temp. alloys	Fe based	A	200	680		○	●									
	32			AH	280	950		○	○									
	33		Ni / Co based	A	250	840		○	●									
	34			AH	350	1180		○	○									
	35			C	320	1080		○	○									
	36	Titanium & Ti alloys	CP Titanium		400 MPa		○	○	●									
	37.1			Alpha alloys		860 MPa		○	○	●								
	37.2		Alpha / Beta alloys	A	960 MPa		○	○	●									
37.3	AH			1170 MPa		○	○	●										
37.4	Beta alloys			A	830 MPa		○	○	●									
37.5		AH	1400 MPa			○	●											
H	38.1	Hardened steel		HT	45 HRC		○	●										
	38.2			HT	55 HRC													
	39.1			HT	58 HRC													
	39.2			HT	62 HRC													
	40	Cast Iron	Chilled	C	400	1350	●	●										
41	HT			55 HRC														

VDI ³³²³	ISO
1	1
2	2
3	3
4	4
5	5
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9	9
10	10
11	11
12	12
13	13
14.1	14.1
14.2	14.2
14.3	14.3
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32	32
33	33
34	34
35	35
36	36
37.1	37.1
37.2	37.2
37.3	37.3
37.4	37.4
37.5	37.5
38.1	38.1
38.2	38.2
39.1	39.1
39.2	39.2
40	40
41	41

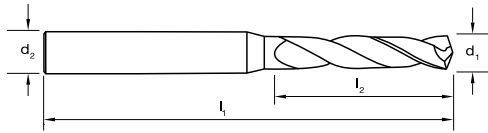
Condition: A (Annealed), AH (Age Hardened), C (Cast), HT (Hardened & Tempered), QT (Quenched & Tempered)

● Optimal ○ Effective

Drills Carbide 3 x d₁

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 - AlCrN for maximum tool life
- D356
 - Excellent solution for stainless steels & difficult super alloy type materials
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Catalogue Code	D323	D329	D356
Product Group	A0210	A0210	A0210
Material	VHM	VHM	VHM
Surface Finish	AlCrN	AlCrN	HELICA
Application	N	N	VA
Geometry	R30	R30 - IK	R30 - IK
Point Type	140° Form C	140° Form C	140° 4 Facet Form C
Shank Form (DIN 6535)	HA	HA	HA
ISO Materials	P K H	P M K H	M N S

Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)	Item #	Item #	Item #
0100	1,0	55	7	4	D323 0100	•	•
0110	1,1	55	7	4	D323 0110	•	•
0120	1,2	55	7	4	D323 0120	•	•
0130	1,3	55	7	4	D323 0130	•	•
0140	1,4	55	7	4	D323 0140	•	•
0150	1,5	55	14	4	D323 0150	•	•
0160	1,6	55	14	4	D323 0160	•	•
0170	1,7	55	14	4	D323 0170	•	•
0180	1,8	55	14	4	D323 0180	•	•
0190	1,9	55	14	4	D323 0190	•	•
0200	2,0	55	20	4	D323 0200	•	•
0210	2,1	55	20	4	D323 0210	•	•
0220	2,2	55	20	4	D323 0220	•	•
0230	2,3	55	20	4	D323 0230	•	•
0240	2,4	55	20	4	D323 0240	•	•
0250	2,5	55	20	4	D323 0250	•	•
0260	2,6	55	20	4	D323 0260	•	•
0270	2,7	55	20	4	D323 0270	•	•
0280	2,8	55	20	4	D323 0280	•	•
0290	2,9	55	20	4	D323 0290	•	•
0300	3,0	62	20	6	D323 0460	D329 0300	D356 0300
0310	3,1	62	20	6	D323 0470	D329 0310	D356 0310
0318	1/8	62	20	6	D323 0476	D329 0318	D356 0318
0320	3,2	62	20	6	D323 0480	D329 0320	D356 0320
0330	3,3	62	20	6	D323 0490	D329 0330	D356 0330
0340	3,4	62	20	6	D323 0340	D329 0340	D356 0340
0350	3,5	62	20	6	D323 0350	D329 0350	D356 0350
0357	9/64	62	20	6	D323 0357	D329 0357	D356 0357
0360	3,6	62	20	6	D323 0360	D329 0360	D356 0360
0370	3,7	62	20	6	D323 0370	D329 0370	D356 0370
0380	3,8	66	24	6	D323 0380	D329 0380	D356 0380
0390	3,9	66	24	6	D323 0390	D329 0390	D356 0390
0397	5/32	66	24	6	D323 0397	D329 0397	D356 0397
0400	4,0	66	24	6	D323 0400	D329 0400	D356 0400
0410	4,1	66	24	6	D323 0410	D329 0410	D356 0410
0420	4,2	66	24	6	D323 0420	D329 0420	D356 0420
0430	4,3	66	24	6	D323 0430	D329 0430	D356 0430
0437	11/64	66	24	6	D323 0437	D329 0437	D356 0437
0440	4,4	66	24	6	D323 0440	D329 0440	D356 0440
0450	4,5	66	24	6	D323 0450	D329 0450	D356 0450
0460	4,6	66	24	6	D323 0460	D329 0460	D356 0460
0470	4,7	66	24	6	D323 0470	D329 0470	D356 0470
0476	3/16	66	24	6	D323 0476	D329 0476	D356 0476
0480	4,8	66	28	6	D323 0480	D329 0480	D356 0480

* HB & HE Shank styles available

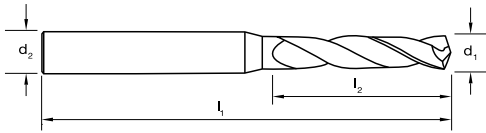
ISO Materials: **P** Steel **M** Stainless Steel **K** Cast Iron **N** Non-Ferrous Metals **S** Titanium & Super Alloys **H** Hard Materials

Refer to our complete catalogue online for entire range

Drills Carbide 3 x d₁

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Product Group	A0210	A0210	A0210
Material	VHM	VHM	VHM
Surface Finish	AlCrN	AlCrN	HELICA
Application	N	N	VA
Geometry	R30	R30 - IK	R30 - IK
Point Type	140° Form C	140° Form C	140° 4 Facet Form C
Shank Form (DIN 6535)	HA	HA	HA
ISO Materials	P K H	P M K H	M N S

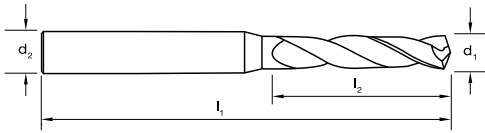
Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)	Item #	Item #	Item #
0490	4,9	66	28	6	D323 0490	D329 0490	D356 0490
0500	5,0	66	28	6	D323 0500	D329 0500	D356 0500
0510	5,1	66	28	6	D323 0510	D329 0510	D356 0510
0516	13/64	66	28	6	D323 0516	D329 0516	D356 0516
0520	5,2	66	28	6	D323 0520	D329 0520	D356 0520
0530	5,3	66	28	6	D323 0530	D329 0530	D356 0530
0540	5,4	66	28	6	D323 0540	D329 0540	D356 0540
0550	5,5	66	28	6	D323 0550	D329 0550	D356 0550
0556	7/32	66	28	6	D323 0556	D329 0556	D356 0556
0560	5,6	66	28	6	D323 0560	D329 0560	D356 0560
0570	5,7	66	28	6	D323 0570	D329 0570	D356 0570
0580	5,8	66	28	6	D323 0580	D329 0580	D356 0580
0590	5,9	66	28	6	D323 0590	D329 0590	D356 0590
0595	15/64	66	28	6	D323 0595	D329 0595	D356 0595
0600	6,0	66	28	6	D323 0600	D329 0600	D356 0600
0610	6,1	79	34	8	D323 0610	D329 0610	D356 0610
0620	6,2	79	34	8	D323 0620	D329 0620	D356 0620
0630	6,3	79	34	8	D323 0630	D329 0630	D356 0630
0635	1/4	79	34	8	D323 0635	D329 0635	D356 0635
0640	6,4	79	34	8	D323 0640	D329 0640	D356 0640
0650	6,5	79	34	8	D323 0650	D329 0650	D356 0650
0660	6,6	79	34	8	D323 0660	D329 0660	D356 0660
0670	6,7	79	34	8	D323 0670	D329 0670	D356 0670
0676	17/64	79	34	8	D323 0676	D329 0676	D356 0676
0680	6,8	79	34	8	D323 0680	D329 0680	D356 0680
0690	6,9	79	34	8	D323 0690	D329 0690	D356 0690
0700	7,0	79	34	8	D323 0700	D329 0700	D356 0700
0710	7,1	79	41	8	D323 0710	D329 0710	D356 0710
0714	9/32	79	41	8	D323 0714	D329 0714	D356 0714
0720	7,2	79	41	8	D323 0720	D329 0720	D356 0720
0730	7,3	79	41	8	D323 0730	D329 0730	D356 0730
0740	7,4	79	41	8	D323 0740	D329 0740	D356 0740
0750	7,5	79	41	8	D323 0750	D329 0750	D356 0750
0754	19/64	79	41	8	D323 0754	D329 0754	D356 0754
0760	7,6	79	41	8	D323 0760	D329 0760	D356 0760
0770	7,7	79	41	8	D323 0770	D329 0770	D356 0770
0780	7,8	79	41	8	D323 0780	D329 0780	D356 0780
0790	7,9	79	41	8	D323 0790	D329 0790	D356 0790
0794	5/16	79	41	8	D323 0794	D329 0794	D356 0794
0800	8,0	79	41	8	D323 0800	D329 0800	D356 0800
0810	8,1	89	47	10	D323 0810	D329 0810	D356 0810
0820	8,2	89	47	10	D323 0820	D329 0820	D356 0820
0830	8,3	89	47	10	D323 0830	D329 0830	D356 0830
0833	21/64	89	47	10	D323 0833	D329 0833	D356 0833

* HB & HE Shank styles available

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Catalogue Code	D323	D329	D356
Product Group	A0210	A0210	A0210
Material	VHM	VHM	VHM
Surface Finish	AlCrN	AlCrN	HELICA
Application	N	N	VA
Geometry	R30	R30 - IK	R30 - IK
Point Type	140° Form C	140° Form C	140° 4 Facet Form C
Shank Form (DIN 6535)	HA	HA	HA
ISO Materials	P K H	P M K H	M N S

Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)	Item #	Item #	Item #
0840	8,4	89	47	10	D323 0840	D329 0840	D356 0840
0850	8,5	89	47	10	D323 0850	D329 0850	D356 0850
0860	8,6	89	47	10	D323 0860	D329 0860	D356 0860
0870	8,7	89	47	10	D323 0870	D329 0870	D356 0870
0873	11/32	89	47	10	D323 0873	D329 0873	D356 0873
0880	8,8	89	47	10	D323 0880	D329 0880	D356 0880
0890	8,9	89	47	10	D323 0890	D329 0890	D356 0890
0900	9,0	89	47	10	D323 0900	D329 0900	D356 0900
0910	9,1	89	47	10	D323 0910	D329 0910	D356 0910
0913	23/64	89	47	10	D323 0913	D329 0913	D356 0913
0920	9,2	89	47	10	D323 0920	D329 0920	D356 0920
0930	9,3	89	47	10	D323 0930	D329 0930	D356 0930
0940	9,4	89	47	10	D323 0940	D329 0940	D356 0940
0950	9,5	89	47	10	D323 0950	D329 0950	D356 0950
0953	3/8	89	47	10	D323 0953	D329 0953	D356 0953
0960	9,6	89	47	10	D323 0960	D329 0960	D356 0960
0970	9,7	89	47	10	D323 0970	D329 0970	D356 0970
0980	9,8	89	47	10	D323 0980	D329 0980	D356 0980
0990	9,9	89	47	10	D323 0990	D329 0990	D356 0990
0992	25/64	89	47	10	D323 0992	D329 0992	D356 0992
1000	10,0	89	47	10	D323 1000	D329 1000	D356 1000
1010	10,1	102	55	12	D323 1010	D329 1010	D356 1010
1020	10,2	102	55	12	D323 1020	D329 1020	D356 1020
1030	10,3	102	55	12	D323 1030	D329 1030	D356 1030
1032	13/32	102	55	12	D323 1032	D329 1032	D356 1032
1040	10,4	102	55	12	D323 1040	D329 1040	D356 1040
1050	10,5	102	55	12	D323 1050	D329 1050	D356 1050
1060	10,6	102	55	12	D323 1060	D329 1060	D356 1060
1070	10,7	102	55	12	D323 1070	D329 1070	D356 1070
1072	27/64	102	55	12	•	•	D356 1072
1080	10,8	102	55	12	D323 1080	D329 1080	D356 1080
1090	10,9	102	55	12	D323 1090	D329 1090	D356 1090
1100	11,0	102	55	12	D323 1100	D329 1100	D356 1100
1110	11,1	102	55	12	D323 1110	D329 1110	D356 1110
1111	7/16	102	55	12	D323 1111	D329 1111	D356 1111
1120	11,2	102	55	12	D323 1120	D329 1120	D356 1120
1130	11,3	102	55	12	D323 1130	D329 1130	D356 1130
1140	11,4	102	55	12	D323 1140	D329 1140	D356 1140
1150	11,5	102	55	12	D323 1150	D329 1150	D356 1150
1151	29/64	102	55	12	•	•	D356 1151
1160	11,6	102	55	12	D323 1160	D329 1160	D356 1160
1170	11,7	102	55	12	D323 1170	D329 1170	D356 1170
1180	11,8	102	55	12	D323 1180	D329 1180	D356 1180
1190	11,9	102	55	12	D323 1190	D329 1190	D356 1190

* HB & HE Shank styles available

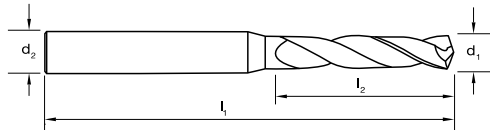
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Material	VHM	VHM	VHM
Surface Finish	AlCrN	AlCrN	HELICA
Application	N	N	VA
Geometry	R30	R30 - IK	R30 - IK
Point Type	140° Form C	140° Form C	140° 4 Facet Form C
Shank Form (DIN 6535)	HA	HA	HA
ISO Materials	P K H	P M K H	M N S

Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)	Item #	Item #	Item #
1191	15/32	102	55	12	D323 1191	D329 1191	D356 1191
1200	12,0	102	55	12	D323 1200	D329 1200	D356 1200
1231	31/64	107	60	14	•	•	D356 1231
1250	12,5	107	60	14	D323 1250	D329 1250	D356 1250
1269	1/2	107	60	14	D323 1269	D329 1269	D356 1269
1280	12,8	107	60	14	D323 1280	D329 1280	D356 1280
1300	13,0	107	60	14	D323 1300	D329 1300	D356 1300
1310	33/64	107	60	14	•	•	D356 1310
1349	17/32	107	60	14	D323 1349	D329 1349	D356 1349
1350	13,5	107	60	14	D323 1350	D329 1350	D356 1350
1380	13,8	107	60	14	D323 1380	•	•
1389	35/64	107	60	14	•	•	D356 1389
1400	14,0	107	60	14	D323 1400	D329 1400	D356 1400
1429	9/16	115	65	16	D323 1429	D329 1429	D356 1429
1450	14,5	115	65	16	D323 1450	D329 1450	D356 1450
1468	37/64	115	65	16	•	•	D356 1468
1480	14,8	115	65	16	D323 1480	•	•
1500	15,0	115	65	16	D323 1500	D329 1500	D356 1500
1508	19/32	115	65	16	•	•	D356 1508
1548	39/64	115	65	16	•	•	D356 1548
1550	15,5	115	65	16	D323 1550	D329 1550	D356 1550
1580	15,8	115	65	16	D323 1580	•	•
1588	5/8	115	65	16	D323 1588	D329 1588	D356 1588
1600	16,0	115	65	16	D323 1600	D329 1600	D356 1600
1650	16,5	123	73	18	D323 1650	D329 1650	D356 1650
1667	21/32	123	73	18	•	•	D356 1667
1680	16,8	123	73	18	D323 1680	•	•
1700	17,0	123	73	18	D323 1700	D329 1700	D356 1700
1746	11/16	123	73	18	D323 1746	D329 1746	D356 1746
1750	17,5	123	73	18	D323 1750	D329 1750	D356 1750
1780	17,8	123	73	18	D323 1780	•	•
1800	18,0	123	73	18	D323 1800	D329 1800	D356 1800
1826	23/32	131	79	20	•	•	D356 1826
1850	18,5	131	79	20	D323 1850	D329 1850	D356 1850
1900	19,0	131	79	20	D323 1900	D329 1900	D356 1900
1905	3/4	131	79	20	D323 1905	D329 1905	D356 1905
1950	19,5	131	79	20	D323 1950	D329 1950	D356 1950
2000	20,0	131	79	20	D323 2000	D329 2000	D356 2000

* HB & HE Shank styles available

Drills Carbide 5 x d₁

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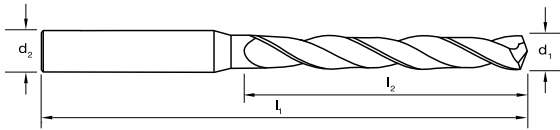
D326/D332 - Suitable for materials up to 1400N/mm²
 - Micro geometry & surface conditioning for optimal chip control
 - AlCrN for maximum tool life

D358
 - Excellent solution for stainless steels & difficult super alloy type materials
 - Optimised geometry ensures no work hardening and high productivity
 - HELICA for outstanding oxidation resistance and hot hardness

D358 Black Magic



watch the video



Catalogue Code	D326	D332	D358
Product Group	A0210	A0210	A0210
Material	VHM	VHM	VHM
Surface Finish	AlCrN	AlCrN	HELICA
Application	N	N	VA
Geometry	R30	R30 - IK	R30 - IK
Point Type	140° Form C	140° Form C	140° 4 Facet Form C
Shank Form (DIN 6535)	HA	HA	HA
ISO Materials	P K H	P M K H	M N S

Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)	Item #	Item #	Item #
0300	3,0	66	28	6	D326 0300	D332 0300	D358 0300
0310	3,1	66	28	6	D326 0310	D332 0310	D358 0310
0318	1/8	66	28	6	D326 0318	D332 0318	D358 0318
0320	3,2	66	28	6	D326 0320	D332 0320	D358 0320
0330	3,3	66	28	6	D326 0330	D332 0330	D358 0330
0340	3,4	66	28	6	D326 0340	D332 0340	D358 0340
0350	3,5	66	28	6	D326 0350	D332 0350	D358 0350
0357	9/64	66	28	6	D326 0357	D332 0357	D358 0357
0360	3,6	66	28	6	D326 0360	D332 0360	D358 0360
0370	3,7	66	28	6	D326 0370	D332 0370	D358 0370
0380	3,8	74	36	6	D326 0380	D332 0380	D358 0380
0390	3,9	74	36	6	D326 0390	D332 0390	D358 0390
0397	5/32	74	36	6	D326 0397	D332 0397	D358 0397
0400	4,0	74	36	6	D326 0400	D332 0400	D358 0400
0410	4,1	74	36	6	D326 0410	D332 0410	D358 0410
0420	4,2	74	36	6	D326 0420	D332 0420	D358 0420
0430	4,3	74	36	6	D326 0430	D332 0430	D358 0430
0437	11/64	74	36	6	D326 0437	D332 0437	D358 0437
0440	4,4	74	36	6	D326 0440	D332 0440	D358 0440
0450	4,5	74	36	6	D326 0450	D332 0450	D358 0450
0460	4,6	74	36	6	D326 0460	D332 0460	D358 0460
0470	4,7	74	36	6	D326 0470	D332 0470	D358 0470
0476	3/16	74	36	6	D326 0476	D332 0476	D358 0476
0480	4,8	82	44	6	D326 0480	D332 0480	D358 0480
0490	4,9	82	44	6	D326 0490	D332 0490	D358 0490
0500	5,0	82	44	6	D326 0500	D332 0500	D358 0500
0510	5,1	82	44	6	D326 0510	D332 0510	D358 0510
0516	13/64	82	44	6	D326 0516	D332 0516	D358 0516
0520	5,2	82	44	6	D326 0520	D332 0520	D358 0520
0530	5,3	82	44	6	D326 0530	D332 0530	D358 0530
0540	5,4	82	44	6	D326 0540	D332 0540	D358 0540
0550	5,5	82	44	6	D326 0550	D332 0550	D358 0550
0556	7/32	82	44	6	D326 0556	D332 0556	D358 0556
0560	5,6	82	44	6	D326 0560	D332 0560	D358 0560
0570	5,7	82	44	6	D326 0570	D332 0570	D358 0570
0580	5,8	82	44	6	D326 0580	D332 0580	D358 0580
0590	5,9	82	44	6	D326 0590	D332 0590	D358 0590
0595	15/64	82	44	6	D326 0595	D332 0595	D358 0595
0600	6,0	82	44	6	D326 0600	D332 0600	D358 0600
0610	6,1	91	53	8	D326 0610	D332 0610	D358 0610
0620	6,2	91	53	8	D326 0620	D332 0620	D358 0620
0630	6,3	91	53	8	D326 0630	D332 0630	D358 0630
0635	1/4	91	53	8	D326 0635	D332 0635	D358 0635
0640	6,4	91	53	8	D326 0640	D332 0640	D358 0640
0650	6,5	91	53	8	D326 0650	D332 0650	D358 0650
0660	6,6	91	53	8	D326 0660	D332 0660	D358 0660
0670	6,7	91	53	8	D326 0670	D332 0670	D358 0670
0676	17/64	91	53	8	D326 0676	D332 0676	D358 0676
0680	6,8	91	53	8	D326 0680	D332 0680	D358 0680
0690	6,9	91	53	8	D326 0690	D332 0690	D358 0690
0700	7,0	91	53	8	D326 0700	D332 0700	D358 0700
0710	7,1	91	53	8	D326 0710	D332 0710	D358 0710

* HB & HE Shank styles available

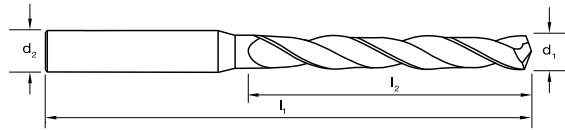
ISO Materials: **P** Steel **M** Stainless Steel **K** Cast Iron **N** Non-Ferrous Metals **S** Titanium & Super Alloys **H** Hard Materials

Refer to our complete catalogue online for entire range

Drills Carbide 5 x d₁

suttontools

- D326/D332 - Suitable for materials up to 1400N/mm²
 - Micro geometry & surface conditioning for optimal chip control
 - AlCrN for maximum tool life
- D358
 - Excellent solution for stainless steels & difficult super alloy type materials
 - Optimised geometry ensures no work hardening and high productivity
 - HELICA for outstanding oxidation resistance and hot hardness



Catalogue Code	D326	D332	D358
Product Group	A0210	A0210	A0210
Material	VHM	VHM	VHM
Surface Finish	AlCrN	AlCrN	HELICA
Application	N	N	VA
Geometry	R30	R30 - IK	R30 - IK
Point Type	140° Form C	140° Form C	140° 4 Facet Form C
Shank Form (DIN 6535)	HA	HA	HA
ISO Materials	P K H	P M K H	M N S

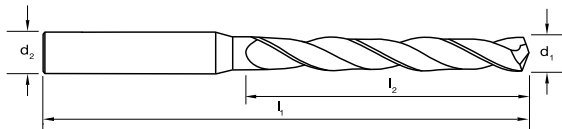
Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)	Item #	Item #	Item #
0714	9/32	91	53	8	D326 0714	D332 0714	D358 0714
0720	7,2	91	53	8	D326 0720	D332 0720	D358 0720
0730	7,3	91	53	8	D326 0730	D332 0730	D358 0730
0740	7,4	91	53	8	D326 0740	D332 0740	D358 0740
0750	7,5	91	53	8	D326 0750	D332 0750	D358 0750
0754	19/64	91	53	8	D326 0754	D332 0754	D358 0754
0760	7,6	91	53	8	D326 0760	D332 0760	D358 0760
0770	7,7	91	53	8	D326 0770	D332 0770	D358 0770
0780	7,8	91	53	8	D326 0780	D332 0780	D358 0780
0790	7,9	91	53	8	D326 0790	D332 0790	D358 0790
0794	5/16	91	53	8	D326 0794	D332 0794	D358 0794
0800	8,0	91	53	8	D326 0800	D332 0800	D358 0800
0810	8,1	103	61	10	D326 0810	D332 0810	D358 0810
0820	8,2	103	61	10	D326 0820	D332 0820	D358 0820
0830	8,3	103	61	10	D326 0830	D332 0830	D358 0830
0833	21/64	103	61	10	D326 0833	D332 0833	D358 0833
0840	8,4	103	61	10	D326 0840	D332 0840	D358 0840
0850	8,5	103	61	10	D326 0850	D332 0850	D358 0850
0860	8,6	103	61	10	D326 0860	D332 0860	D358 0860
0870	8,7	103	61	10	D326 0870	D332 0870	D358 0870
0873	11/32	103	61	10	D326 0873	D332 0873	D358 0873
0880	8,8	103	61	10	D326 0880	D332 0880	D358 0880
0890	8,9	103	61	10	D326 0890	D332 0890	D358 0890
0900	9,0	103	61	10	D326 0900	D332 0900	D358 0900
0910	9,1	103	61	10	D326 0910	D332 0910	D358 0910
0913	23/64	103	61	10	D326 0913	D332 0913	D358 0913
0920	9,2	103	61	10	D326 0920	D332 0920	D358 0920
0930	9,3	103	61	10	D326 0930	D332 0930	D358 0930
0940	9,4	103	61	10	D326 0940	D332 0940	D358 0940
0950	9,5	103	61	10	D326 0950	D332 0950	D358 0950
0953	3/8	103	61	10	D326 0953	D332 0953	D358 0953
0960	9,6	103	61	10	D326 0960	D332 0960	D358 0960
0970	9,7	103	61	10	D326 0970	D332 0970	D358 0970
0980	9,8	103	61	10	D326 0980	D332 0980	D358 0980
0990	9,9	103	61	10	D326 0990	D332 0990	D358 0990
0992	25/64	103	61	10	D326 0992	D332 0992	D358 0992
1000	10,0	103	61	10	D326 1000	D332 1000	D358 1000
1010	10,1	118	71	12	D326 1010	D332 1010	D358 1010
1020	10,2	118	71	12	D326 1020	D332 1020	D358 1020
1030	10,3	118	71	12	D326 1030	D332 1030	D358 1030
1032	13/32	118	71	12	D326 1032	D332 1032	D358 1032
1040	10,4	118	71	12	D326 1040	D332 1040	D358 1040
1050	10,5	118	71	12	D326 1050	D332 1050	D358 1050
1060	10,6	118	71	12	D326 1060	D332 1060	D358 1060
1070	10,7	118	71	12	D326 1070	D332 1070	D358 1070
1072	27/64	118	71	12	•	•	D358 1072
1080	10,8	118	71	12	D326 1080	D332 1080	D358 1080
1090	10,9	118	71	12	D326 1090	D332 1090	D358 1090
1100	11,0	118	71	12	D326 1100	D332 1100	D358 1100
1110	11,1	118	71	12	D326 1110	D332 1110	D358 1110
1111	7/16	118	71	12	D326 1111	D332 1111	D358 1111
1120	11,2	118	71	12	D326 1120	D332 1120	D358 1120

* HB & HE Shank styles available

Drills Carbide 5 x d₁

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Catalogue Code	D326	D332	D358
Product Group	A0210	A0210	A0210
Material	VHM	VHM	VHM
Surface Finish	AlCrN	AlCrN	HELICA
Application	N	N	VA
Geometry	R30	R30 - IK	R30 - IK
Point Type	140° Form C	140° Form C	140° 4 Facet Form C
Shank Form (DIN 6535)	HA	HA	HA
ISO Materials	P K H	P K H	M N S

Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)	Item #	Item #	Item #
1130	11,3	118	71	12	D326 1130	D332 1130	D358 1130
1140	11,4	118	71	12	D326 1140	D332 1140	D358 1140
1150	11,5	118	71	12	D326 1150	D332 1150	D358 1150
1151	29/64	118	71	12	•	•	D358 1151
1160	11,6	118	71	12	D326 1160	D332 1160	D358 1160
1170	11,7	118	71	12	D326 1170	D332 1170	D358 1170
1180	11,8	118	71	12	D326 1180	D332 1180	D358 1180
1190	11,9	118	71	12	D326 1190	D332 1190	D358 1190
1191	15/32	118	71	12	D326 1191	D332 1191	D358 1191
1200	12,0	118	71	12	D326 1200	D332 1200	D358 1200
1231	31/64	124	77	14	•	•	D358 1231
1250	12,5	124	77	14	D326 1250	D332 1250	D358 1250
1269	1/2	124	77	14	D326 1269	D332 1269	D358 1269
1280	12,8	124	77	14	D326 1280	D332 1280	D358 1280
1300	13,0	124	77	14	D326 1300	D332 1300	D358 1300
1310	33/64	124	77	14	•	•	D358 1310
1349	17/32	124	77	14	D326 1349	D332 1349	D358 1349
1350	13,5	124	77	14	D326 1350	D332 1350	D358 1350
1380	13,8	124	77	14	D326 1380	•	•
1389	35/64	124	77	14	•	•	D358 1389
1400	14,0	124	77	14	D326 1400	D332 1400	D358 1400
1429	9/16	133	83	16	D326 1429	D332 1429	D358 1429
1450	14,5	133	83	16	D326 1450	D332 1450	D358 1450
1468	37/64	133	83	16	•	•	D358 1468
1480	14,8	133	83	16	D326 1480	•	•
1500	15,0	133	83	16	D326 1500	D332 1500	D358 1500
1508	19/32	133	83	16	•	•	D358 1508
1548	39/64	133	83	16	•	•	D358 1548
1550	15,5	133	83	16	D326 1550	D332 1550	D358 1550
1580	15,8	133	83	16	D326 1580	•	•
1588	5/8	133	83	16	D326 1588	D332 1588	D358 1588
1600	16,0	133	83	16	D326 1600	D332 1600	D358 1600
1650	16,5	143	93	18	D326 1650	D332 1650	D358 1650
1667	21/32	143	93	18	•	•	D358 1667
1680	16,8	143	93	18	D326 1680	•	•
1700	17,0	143	93	18	D326 1700	D332 1700	D358 1700
1746	11/16	143	93	18	D326 1746	D332 1746	D358 1746
1750	17,5	143	93	18	D326 1750	D332 1750	D358 1750
1780	17,8	143	93	18	D326 1780	•	•
1800	18,0	143	93	18	D326 1800	D332 1800	D358 1800
1826	23/32	153	101	20	•	•	D358 1826
1850	18,5	153	101	20	D326 1850	D332 1850	D358 1850
1900	19,0	153	101	20	D326 1900	D332 1900	D358 1900
1905	3/4	153	101	20	D326 1905	D332 1905	D358 1905
1950	19,5	153	101	20	D326 1950	D332 1950	D358 1950
1980	19,8	153	101	20	•	•	•
2000	20,0	153	101	20	D326 2000	D332 2000	D358 2000

* HB & HE Shank styles available

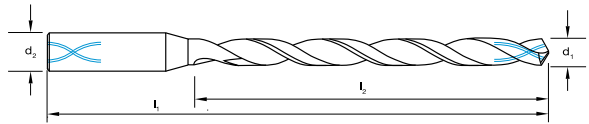
ISO Materials: **P** Steel **M** Stainless Steel **K** Cast Iron **N** Non-Ferrous Metals **S** Titanium & Super Alloys **H** Hard Materials

Refer to our complete catalogue online for entire range

Drills Carbide 8 x d₁

suttontools

- Suitable for materials up to 1400N/mm²
- Strong core with internal coolant supply
- Micro geometry & surface conditioning for optimal chip control
- AlCrN for maximum tool life



Catalogue Code	D335
Product Group	AO210
Material	VHM
Surface Finish	AlCrN
Application	N
Geometry	R30 - IK
Point Type	140° Form C
Shank Form	HA
ISO Materials	P M K

Size Ref.	d ₁ (m7)	l ₁	l ₂	d ₂ (h6)	Item #
0300	3,0	72	34	6	D335 0300
0310	3,1	72	34	6	D335 0310
0318	1/8	72	34	6	D335 0318
0320	3,2	72	34	6	D335 0320
0330	3,3	72	34	6	D335 0330
0340	3,4	72	34	6	D335 0340
0350	3,5	72	34	6	D335 0350
0357	9/64	72	34	6	D335 0357
0360	3,6	72	34	6	D335 0360
0370	3,7	72	34	6	D335 0370
0380	3,8	81	43	6	D335 0380
0390	3,9	81	43	6	D335 0390
0397	5/32	81	43	6	D335 0397
0400	4,0	81	43	6	D335 0400
0410	4,1	81	43	6	D335 0410
0420	4,2	81	43	6	D335 0420
0430	4,3	81	43	6	D335 0430
0437	11/64	81	43	6	D335 0437
0440	4,4	81	43	6	D335 0440
0450	4,5	81	43	6	D335 0450
0460	4,6	81	43	6	D335 0460
0470	4,7	81	43	6	D335 0470
0476	3/16	95	57	6	D335 0476
0480	4,8	95	57	6	D335 0480
0490	4,9	95	57	6	D335 0490
0500	5,0	95	57	6	D335 0500
0510	5,1	95	57	6	D335 0510
0516	13/64	95	57	6	D335 0516
0520	5,2	95	57	6	D335 0520
0530	5,3	95	57	6	D335 0530
0540	5,4	95	57	6	D335 0540
0550	5,5	95	57	6	D335 0550
0556	7/32	95	57	6	D335 0556
0560	5,6	95	57	6	D335 0560
0570	5,7	95	57	6	D335 0570
0580	5,8	95	57	6	D335 0580
0590	5,9	95	57	6	D335 0590
0595	15/64	95	57	6	D335 0595
0600	6,0	95	57	6	D335 0600
0610	6,1	114	76	8	D335 0610
0620	6,2	114	76	8	D335 0620
0630	6,3	114	76	8	D335 0630
0635	1/4	114	76	8	D335 0635
0640	6,4	114	76	8	D335 0640
0650	6,5	114	76	8	D335 0650
0660	6,6	114	76	8	D335 0660
0670	6,7	114	76	8	D335 0670
0676	17/64	114	76	8	D335 0676
0680	6,8	114	76	8	D335 0680
0690	6,9	114	76	8	D335 0690
0700	7,0	114	76	8	D335 0700
0710	7,1	114	76	8	D335 0710
0714	9/32	114	76	8	D335 0714
0720	7,2	114	76	8	D335 0720
0730	7,3	114	76	8	D335 0730
0740	7,4	114	76	8	D335 0740

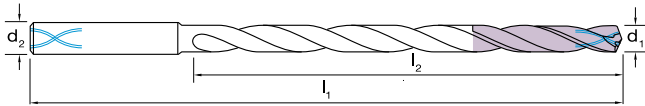
Size Ref.	d ₁	l ₁	l ₂	d ₂ (h6)	Item #
0750	7,5	114	76	8	D335 0750
0754	19/64	114	76	8	D335 0754
0760	7,6	114	76	8	D335 0760
0770	7,7	114	76	8	D335 0770
0780	7,8	114	76	8	D335 0780
0790	7,9	114	76	8	D335 0790
0794	5/16	114	76	8	D335 0794
0800	8,0	114	76	8	D335 0800
0810	8,1	142	95	10	D335 0810
0820	8,2	142	95	10	D335 0820
0830	8,3	142	95	10	D335 0830
0833	21/64	142	95	10	D335 0833
0840	8,4	142	95	10	D335 0840
0850	8,5	142	95	10	D335 0850
0860	8,6	142	95	10	D335 0860
0870	8,7	142	95	10	D335 0870
0873	11/32	142	95	10	D335 0873
0880	8,8	142	95	10	D335 0880
0890	8,9	142	95	10	D335 0890
0900	9,0	142	95	10	D335 0900
0910	9,1	142	95	10	D335 0910
0913	23/64	142	95	10	D335 0913
0920	9,2	142	95	10	D335 0920
0930	9,3	142	95	10	D335 0930
0940	9,4	142	95	10	D335 0940
0950	9,5	142	95	10	D335 0950
0953	3/8	142	95	10	D335 0953
0960	9,6	142	95	10	D335 0960
0970	9,7	142	95	10	D335 0970
0980	9,8	142	95	10	D335 0980
0990	9,9	142	95	10	D335 0990
0992	25/64	142	95	10	D335 0992
1000	10,0	142	95	10	D335 1000
1010	10,1	162	114	12	D335 1010
1020	10,2	162	114	12	D335 1020
1030	10,3	162	114	12	D335 1030
1032	13/32	162	114	12	D335 1032
1040	10,4	162	114	12	D335 1040
1050	10,5	162	114	12	D335 1050
1060	10,6	162	114	12	D335 1060
1070	10,7	162	114	12	D335 1070
1080	10,8	162	114	12	D335 1080
1090	10,9	162	114	12	D335 1090
1100	11,0	162	114	12	D335 1100
1110	11,1	162	114	12	D335 1110
1111	7/16	162	114	12	D335 1111
1120	11,2	162	114	12	D335 1120
1130	11,3	162	114	12	D335 1130
1140	11,4	162	114	12	D335 1140
1150	11,5	162	114	12	D335 1150
1160	29/64	162	114	12	D335 1160
1170	11,6	162	114	12	D335 1170
1180	11,7	162	114	12	D335 1180
1190	11,8	162	114	12	D335 1190
1191	11,9	162	114	12	D335 1191
1200	12,0	162	114	12	D335 1200

* HB & HE Shank styles available

Drills Carbide, 12 x D, R30 N, IK

suttontools **BLACKMAGIC_{XL}**

- Suitable for materials up to 1200N/mm²
- Strong core with internal coolant supply
- Micro geometry & surface conditioning for optimal chip control
- Pertura for maximum tool life



Catalogue Code	D371
Discount Group	A0210
Material	VHM
Surface Finish	Pertura Tip
Sutton Designation	Up to 1200N/mm²
Geometry	R30 - IK
Point Type	135° Form C
Shank Form (DIN 6535)	HA

Size Ref.	d ₁ (h7) mm inch	l ₁	l ₂	d ₂ (h6)	Max drill depth	Item #
0300	3.0	90	50	6	46	D371 0300
0310	3.1	90	50	6	45	D371 0310
0320	3.2	90	50	6	45	D371 0320
0330	3.3	90	50	6	45	D371 0330
0340	3.4	90	50	6	45	D371 0340
0350	3.5	90	50	6	45	D371 0350
0360	3.6	90	50	6	45	D371 0360
0370	3.7	90	50	6	44	D371 0370
0380	3.8	102	64	6	58	D371 0380
0390	3.9	102	64	6	58	D371 0390
0400	4.0	102	64	6	58	D371 0400
0410	4.1	102	64	6	58	D371 0410
0420	4.2	102	64	6	58	D371 0420
0430	4.3	102	64	6	58	D371 0430
0440	4.4	102	64	6	57	D371 0440
0450	4.5	102	64	6	57	D371 0450
0460	4.6	102	64	6	57	D371 0460
0470	4.7	102	64	6	57	D371 0470
0480	4.8	116	78	6	71	D371 0480
0490	4.9	116	78	6	71	D371 0490
0500	5.0	116	78	6	71	D371 0500
0510	5.1	116	78	6	70	D371 0510
0520	5.2	116	78	6	70	D371 0520
0530	5.3	116	78	6	70	D371 0530
0540	5.4	116	78	6	70	D371 0540
0550	5.5	116	78	6	70	D371 0550
0560	5.6	116	78	6	70	D371 0560
0570	5.7	116	78	6	69	D371 0570



Deep hole drilling up to 30xD depth

The Black Magic XL Series Carbide Drills are designed to reduce process times in demanding deep hole metal drilling. Internal coolant allows large material removal rate using high cutting speeds and feeds with specially designed flute ensures fast and short chip evacuations which eliminates jamming.



Applications

ISO	VDI	Material Group	Sutton	
P	A	Steel	N	IMU
M	R	Stainless Steel	VA	
K	F	Cast Iron	GG	

Drilling for increased tool life and reliability

Drilling deep holes is a demanding machining task. Sutton Tools recommends the following strategy to increase reliability and prevent breakage.

Step 1. Pilot drilling

- Choose the same diameter drill in Stub length (D323 or D329 Series).
- Drill pilot to a depth of 2xD, with recommended speed & feeds.

Step 2. Enter long drill

The longer drill should enter the hole with the through spindle coolant turned off & at approx. 500RPM & 50% feed-rate.

Step 3. Drill to depth

Once the longer drill has entered the pilot hole at approx. 1.5xD, the drilling can proceed to 100% speed & feed to the programmed hole depth with coolant turned on.

Step 4. Retract drill

Once the drill reaches the depth, it should be retracted at the maximum feed-rate & approx. 500 RPM, turning off the through spindle coolant before the drill leaves the hole.

Note:

- Always reduce ATC (Auto Tool Changer) to 10%, if left at 100% the fast tool change action will break long IK carbide drills eg 20xD, 30xD, etc.
- Check for clearance in the tool magazine.
- Above recommendations are based on high pressure coolant applications (1000 PSI min).

Characteristics

- Long tool life
- Precise hole quality
- Flute design and through-coolant ducts ensures efficient chip evacuation
- 4 guidance lands to stabilise drill point



2 helical coolant ducts

Pertura coated tip for enhanced reliability in deep hole drilling



Up to depths of 30×Diameter

Micro geometry and surface conditioning for optimal chip control

Pertura

Most advanced coating for deep-hole drilling

Pertura is a coating especially developed for extreme deep-hole carbide drilling applications. It is the result of the refinement process involving our Futura and Helica coatings. Regardless of whether for drilling in steels, stainless steels or cast irons, for new or recoating: With its unique nanolayer structure, Pertura enhances the stability and process reliability of your tools even under difficult machining conditions.

This means reduced tool changing and increased machine service life. Moreover, machining times are shortened, which in turn allows for maximum machine capacity utilisation as well as savings in production costs.

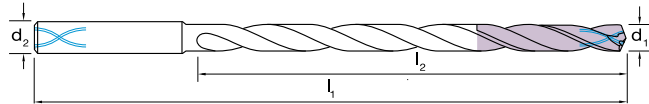
Every property is a factor for success

FEATURES	BENEFITS
Nanolayer structure and specific layer composition	Consistent prevention of crack growth Versatile application in high end drilling
Optimal balance between residual stress, hardness and fracture toughness	Applications at moderate and high cutting speeds possible
Enormous abrasion-resistance and high hot hardness	High tool lifetimes
Extremely smooth coating surface	Trouble-free chip transport Reduction of cutting forces
Outstanding oxidation resistance	Very high tool stability, especially of the cutting edges Extremely high service life, even with deep hole and dry drilling

Drills Carbide, 12 x D, R30 N, IK



- Suitable for materials up to 1200N/mm²
- Strong core with internal coolant supply
- Micro geometry & surface conditioning for optimal chip control
- Pertura for maximum tool life



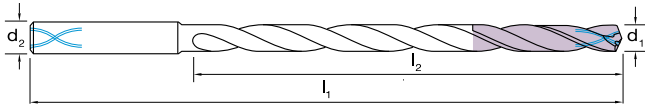
Catalogue Code	D371
Discount Group	A0210
Material	VHM
Surface Finish	Pertura Tip
Sutton Designation	Up to 1200N/mm²
Geometry	R30 - IK
Point Type	135° Form C
Shank Form (DIN 6535)	HA

Size Ref.	d ₁ (h7) mm inch	l ₁	l ₂	d ₂ (h6)	Max drill depth	Item #
0580	5.8	116	78	6	69	D371 0580
0590	5.9	116	78	6	69	D371 0590
0600	6.0	116	78	6	69	D371 0600
0610	6.1	146	108	8	99	D371 0610
0620	6.2	146	108	8	99	D371 0620
0630	6.3	146	108	8	99	D371 0630
0640	6.4	146	108	8	98	D371 0640
0650	6.5	146	108	8	98	D371 0650
0660	6.6	146	108	8	98	D371 0660
0670	6.7	146	108	8	98	D371 0670
0680	6.8	146	108	8	98	D371 0680
0690	6.9	146	108	8	98	D371 0690
0700	7.0	146	108	8	98	D371 0700
0710	7.1	146	108	8	97	D371 0710
0720	7.2	146	108	8	97	D371 0720
0730	7.3	146	108	8	97	D371 0730
0740	7.4	146	108	8	97	D371 0740
0750	7.5	146	108	8	97	D371 0750
0760	7.6	146	108	8	97	D371 0760
0770	7.7	146	108	8	96	D371 0770
0780	7.8	146	108	8	96	D371 0780
0790	7.9	146	108	8	96	D371 0790
0800	8.0	146	108	8	96	D371 0800
0810	8.1	162	120	10	108	D371 0810
0820	8.2	162	120	10	108	D371 0820
0830	8.3	162	120	10	108	D371 0830
0840	8.4	162	120	10	107	D371 0840
0850	8.5	162	120	10	107	D371 0850

Drills Carbide, 12 x D, R30 N, IK

suttontools **BLACKMAGIC_{XL}**

- Suitable for materials up to 1200N/mm²
- Strong core with internal coolant supply
- Micro geometry & surface conditioning for optimal chip control
- Pertura for maximum tool life



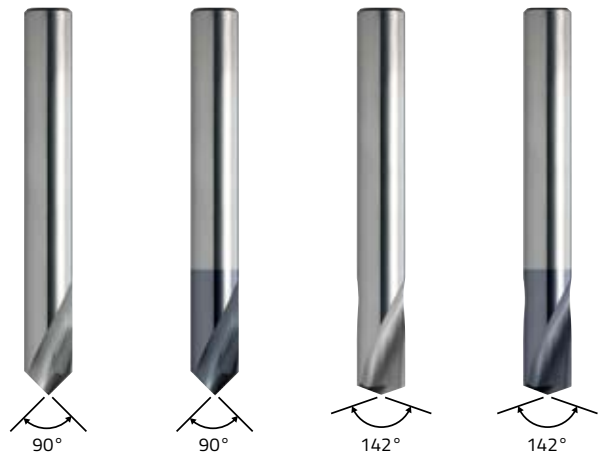
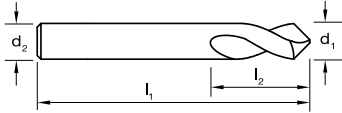
Catalogue Code	D371
Discount Group	A0210
Material	VHM
Surface Finish	Pertura Tip
Sutton Designation	Up to 1200N/mm²
Geometry	R30 - IK
Point Type	135° Form C
Shank Form (DIN 6535)	HA

Size Ref.	d ₁ (h7) mm inch	l ₁	l ₂	d ₂ (h6)	Max drill depth	Item #
0860	8.6	162	120	10	107	D371 0860
0870	8.7	162	120	10	107	D371 0870
0880	8.8	162	120	10	107	D371 0880
0890	8.9	162	120	10	107	D371 0890
0900	9.0	162	120	10	107	D371 0900
0910	9.1	162	120	10	106	D371 0910
0920	9.2	162	120	10	106	D371 0920
0930	9.3	162	120	10	106	D371 0930
0940	9.4	162	120	10	106	D371 0940
0950	9.5	162	120	10	106	D371 0950
0960	9.6	162	120	10	106	D371 0960
0970	9.7	162	120	10	105	D371 0970
0980	9.8	162	120	10	105	D371 0980
0990	9.9	162	120	10	105	D371 0990
1000	10.0	162	120	10	105	D371 1000
1010	10.1	204	156	12	141	D371 1010
1020	10.2	204	156	12	141	D371 1020
1030	10.3	204	156	12	141	D371 1030
1040	10.4	204	156	12	140	D371 1040
1050	10.5	204	156	12	140	D371 1050
1060	10.6	204	156	12	140	D371 1060
1070	10.7	204	156	12	140	D371 1070
1080	10.8	204	156	12	140	D371 1080
1090	10.9	204	156	12	140	D371 1090
1100	11.0	204	156	12	139	D371 1100
1110	11.1	204	156	12	139	D371 1110
1120	11.2	204	156	12	139	D371 1120
1130	11.3	204	156	12	139	D371 1130
1140	11.4	204	156	12	139	D371 1140
1150	11.5	204	156	12	139	D371 1150
1160	11.6	204	156	12	139	D371 1160
1170	11.7	204	156	12	138	D371 1170
1180	11.8	204	156	12	138	D371 1180
1190	11.9	204	156	12	138	D371 1190
1200	12.0	204	156	12	138	D371 1200

Drills Carbide, NC Spotting

suttontools

- Rigid design for "seat" position accuracy
- 90° offers hole chamfering & spotting with the one tool
- 142° for spotting, matching a typical drill point
- Only drill to the depth of the point



Catalogue Code
Discount Group
Material
Surface Finish
Sutton Designation
Geometry
Point Type
Shank Form (DIN 6535)

D355	D364	D365	D366
A0208	A0210	A0208	A0210
VHM	VHM	VHM	VHM
BrT	AICrN	BrT	AICrN
NC	NC	NC	NC
-	-	-	-
90° Form A	90° Form A	142° Form A	142° Form A
h9	h9	h9	h9

Size Ref.	d ₁ (h6) mm inch	l ₁	l ₂	d ₂	Item #	Item #	Item #	Item #
0300	3.0	46	9	3.0	D355 0300	D364 0300	D365 0300	D366 0300
0400	4.0	55	12	4.0	D355 0400	D364 0400	D365 0400	D366 0400
0500	5.0	62	15	5.0	D355 0500	D364 0500	D365 0500	D366 0500
0600	6.0	66	18	6.0	D355 0600	D364 0600	D365 0600	D366 0600
0800	8.0	79	23	8.0	D355 0800	D364 0800	D365 0800	D366 0800
1000	10.0	89	24	10.0	D355 1000	D364 1000	D365 1000	D366 1000
1200	12.0	102	24	12.0	D355 1200	D364 1200	D365 1200	D366 1200
1600	16.0	115	26	16.0	D355 1600	D364 1600	D365 1600	D366 1600
2000	20.0	131	35	20.0	D355 2000	D364 2000	D365 2000	D366 2000

Regrinding and Recoating Services

Regrinding

The relationship with you does not end after the delivery of our products. Sutton Tools supports you by reducing your production costs through our regrinding service of carbide tools available at our state-of-the-art facility.

Using our regrinding service means:

- ✓ Reground with original geometry
- ✓ Quality assured
- ✓ Handled by highly experienced personnel
- ✓ Lower tooling cost

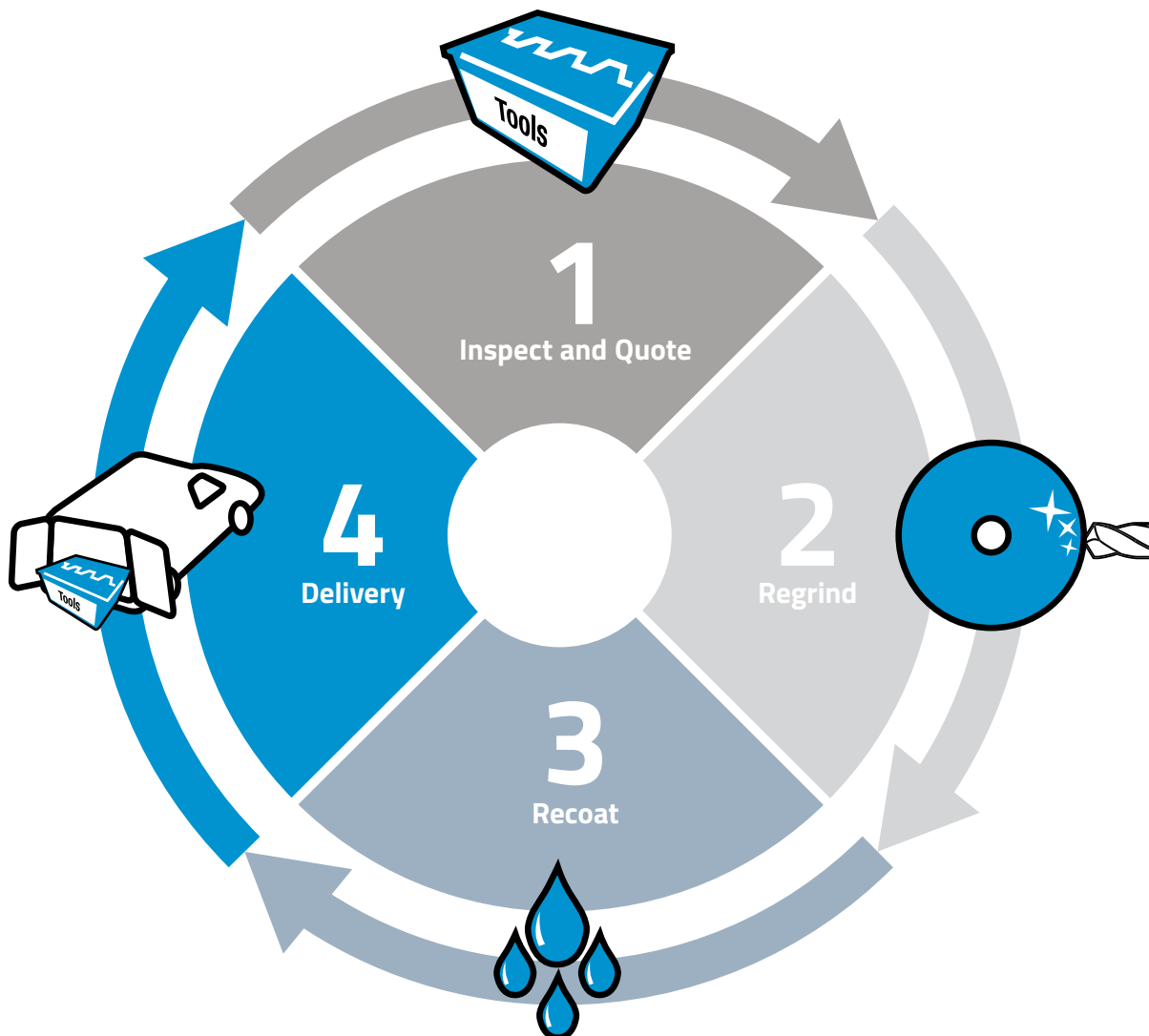
Recoating

As a total solution provider, Sutton Tools uses world leading heat treatment PVD coating (Physical Vapour Deposition) based on Oerlikon Balzers technology on their latest INNOVA coating machine to add life to our products.

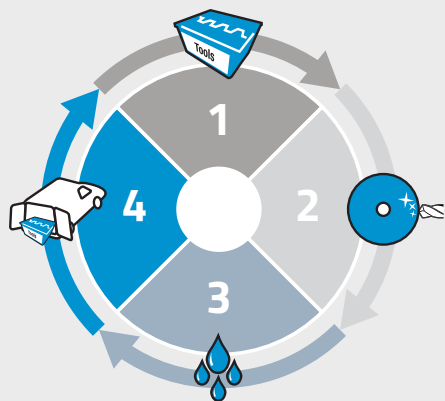
The benefits of PVD coatings include:

- ✓ 300%–1000% increase in tool life
- ✓ Increased productivity
- ✓ Uniform thickness
- ✓ Corrosion resistant
- ✓ Less tool changes due to less wear
- ✓ Better wear condition for regrinds

Tool Regrinding and Recoating Process



TOOLS SERVICING RETURN PROCEDURE



Tool Regrinding Procedure

1. Inspect and Quote

Old tools picked up

3. Recoat

To extend the life of the tool

2. Regrind

Tools sharpened

4. Delivery

Brought back to the customer

Please follow the below procedure to ensure a fast and reliable return of your tools to Sutton Tools for re-servicing.

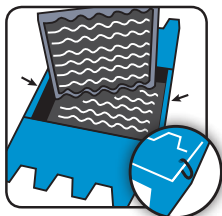
Step 1

suttontools
REQUEST FORM
Name: _____
Address: _____
Order no: _____

Tool Resharpener Request Form

Complete the form listing each different tool.

Step 2



Packing

Foam will be provided to help protect tools during transport. Ensure free space is adequately padded to minimise tool movement. With 2 cable ties secure lid on either side, cutting off any excess remainder if any.

Step 3



Email or Phone to arrange a pickup of your tools

E: regrind@sutton.com.au | T: 03 9466 3315 | Please provide these details

- | | | |
|----------------|-------------------|--------------------------|
| ▪ Company Name | ▪ Fax Number | ▪ Order Number |
| ▪ Contact Name | ▪ Pick-up address | ▪ Consignment Weight |
| ▪ Phone Number | ▪ Email Address | (Maximum 10Kg/Container) |

Step 4



Consignment Note

Once booked you will be sent a Consignment Note (C/N) either by email or fax. Fold in half (to A5 size) and affix to the side of the box, securely adhering with tape along each edge.

TOOL RESHARPENING REQUEST FORM

Company Name:

Address:

Pick up Address (if different from above) :

Contact: **Email:**

Phone: **Order #:**

Fax: ***Consignment Weight:**

Sutton Tools Representative:

Item #	Qty	Description	Material	Regrind	Coating
1.		<input type="checkbox"/> Drill <input type="checkbox"/> Endmill <input type="checkbox"/> Ballnose <input type="checkbox"/> Countersink <input type="checkbox"/> Reamer Diameter:∅ Corner Rad: # Flutes: Comments	<input type="checkbox"/> HSS <input type="checkbox"/> Carbide	<input type="checkbox"/> End only <input type="checkbox"/> End & Diameter <input type="checkbox"/> According to existing tool (drawing)	<input type="checkbox"/> TiAIN <input type="checkbox"/> AlCrN <input type="checkbox"/> TiCN <input type="checkbox"/> TiN
2.		<input type="checkbox"/> Drill <input type="checkbox"/> Endmill <input type="checkbox"/> Ballnose <input type="checkbox"/> Countersink <input type="checkbox"/> Reamer Diameter:∅ Corner Rad: # Flutes: Comments	<input type="checkbox"/> HSS <input type="checkbox"/> Carbide	<input type="checkbox"/> End only <input type="checkbox"/> End & Diameter <input type="checkbox"/> According to existing tool (drawing)	<input type="checkbox"/> TiAIN <input type="checkbox"/> AlCrN <input type="checkbox"/> TiCN <input type="checkbox"/> TiN
3.		<input type="checkbox"/> Drill <input type="checkbox"/> Endmill <input type="checkbox"/> Ballnose <input type="checkbox"/> Countersink <input type="checkbox"/> Reamer Diameter:∅ Corner Rad: # Flutes: Comments	<input type="checkbox"/> HSS <input type="checkbox"/> Carbide	<input type="checkbox"/> End only <input type="checkbox"/> End & Diameter <input type="checkbox"/> According to existing tool (drawing)	<input type="checkbox"/> TiAIN <input type="checkbox"/> AlCrN <input type="checkbox"/> TiCN <input type="checkbox"/> TiN
4.		<input type="checkbox"/> Drill <input type="checkbox"/> Endmill <input type="checkbox"/> Ballnose <input type="checkbox"/> Countersink <input type="checkbox"/> Reamer Diameter:∅ Corner Rad: # Flutes: Comments	<input type="checkbox"/> HSS <input type="checkbox"/> Carbide	<input type="checkbox"/> End only <input type="checkbox"/> End & Diameter <input type="checkbox"/> According to existing tool (drawing)	<input type="checkbox"/> TiAIN <input type="checkbox"/> AlCrN <input type="checkbox"/> TiCN <input type="checkbox"/> TiN
5.		<input type="checkbox"/> Drill <input type="checkbox"/> Endmill <input type="checkbox"/> Ballnose <input type="checkbox"/> Countersink <input type="checkbox"/> Reamer Diameter:∅ Corner Rad: # Flutes: Comments	<input type="checkbox"/> HSS <input type="checkbox"/> Carbide	<input type="checkbox"/> End only <input type="checkbox"/> End & Diameter <input type="checkbox"/> According to existing tool (drawing)	<input type="checkbox"/> TiAIN <input type="checkbox"/> AlCrN <input type="checkbox"/> TiCN <input type="checkbox"/> TiN
6.		<input type="checkbox"/> Drill <input type="checkbox"/> Endmill <input type="checkbox"/> Ballnose <input type="checkbox"/> Countersink <input type="checkbox"/> Reamer Diameter:∅ Corner Rad: # Flutes: Comments	<input type="checkbox"/> HSS <input type="checkbox"/> Carbide	<input type="checkbox"/> End only <input type="checkbox"/> End & Diameter <input type="checkbox"/> According to existing tool (drawing)	<input type="checkbox"/> TiAIN <input type="checkbox"/> AlCrN <input type="checkbox"/> TiCN <input type="checkbox"/> TiN
7.		<input type="checkbox"/> Drill <input type="checkbox"/> Endmill <input type="checkbox"/> Ballnose <input type="checkbox"/> Countersink <input type="checkbox"/> Reamer Diameter:∅ Corner Rad: # Flutes: Comments	<input type="checkbox"/> HSS <input type="checkbox"/> Carbide	<input type="checkbox"/> End only <input type="checkbox"/> End & Diameter <input type="checkbox"/> According to existing tool (drawing)	<input type="checkbox"/> TiAIN <input type="checkbox"/> AlCrN <input type="checkbox"/> TiCN <input type="checkbox"/> TiN

Comments

Tap prices on application. *Consignment weight must not exceed 10kg.
 For pick up, email: regrind@sutton.com.au or call +61 3 9466 3315

Standard Regrinds



INNOVA PVD coating unit
500kg capacity



	3xD / 5xD AlCrN / Helica	8xD / 12xD AlCrN / Perturua Tip	15xD / 30xD Perturua Tip
Shank (mm)	Item #	Item #	Item #
4.0	801040F27S	801040F27L	801040F27XL
6.0	801060F27S	801060F27L	801060F27XL
8.0	801080F27S	801080F27L	801080F27XL
10.0	801100F27S	801100F27L	801100F27XL
12.0	801120F27S	801120F27L	801120F27XL
14.0	801140F27S	801140F27L	801140F27XL
16.0	801160F27S	801160F27L	801160F27XL
18.0	801180F27S	801180F27L	801180F27XL
20.0	801200F27S	801200F27L	801200F27XL

Minimum Order Quantity

- 5 drills up to 12mm shank diameter
- 3 drills over 12mm shank diameter
- Minimum quantity must be of the same cutting diameter

Note: Drills with more than 1mm chip-off or broken cannot be accepted for reconditioning.

Case Study

Cost benefits of regrind and recoat

Example: D3581600 16mm 5xD IK R30VA Carbide Drill, Helica coated.

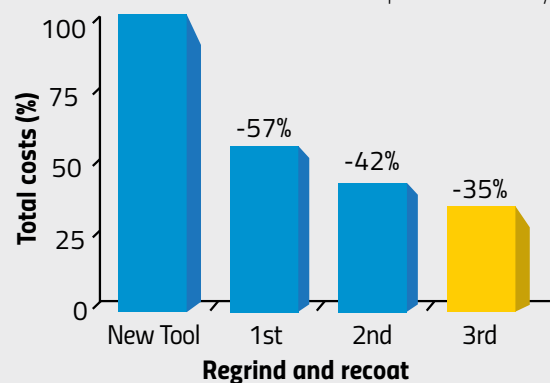


Before

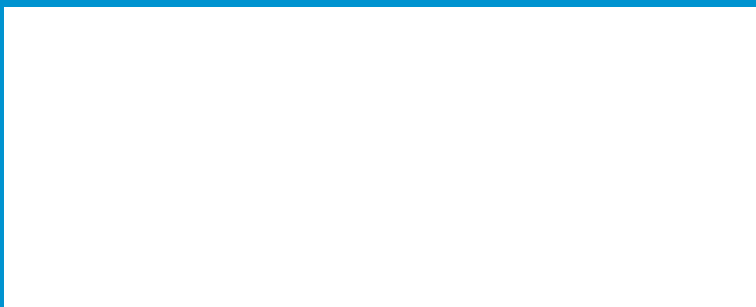
After

	New Tool Cost*	Regrind and Recoat Cost*	Total Cost*
New Tool	€229,65	€229,65	100%
1st	€229,65	€30,46	57%
2nd	€229,65	€30,46	42%
3rd	€229,65	€30,46	35%
Totals	€918,60	€321,03	35%

*Price for illustration only.



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