



孔加工刀具

Professional Tool Manufacturer

刀具专业制造商



硬质合金钻头目录 Catalogue of Solid Carbide Drills

适应加工材料	名称	编码	图形	顶角	柄部尺寸标准	钻削深度	钻尖形状	涂层	刃径范围 mm	尺寸页码	切削参数页码
to be cut Materials	Name	Code	Figure	Point angle	Standard of Demension of Toolholder	Drilling Depth	Form of drill point	Coating	Arrange of cutting edge diameter	Page of Size	Page of Cutting data

D2100 系 钢用麻花钻 D2100 Series Twist Drills for Steels

钢件 Steels	3D 外冷麻花钻 3XD Twist Drills	D2103-NHA		140	DIN 6535HA	3D		HELICA	3-20	10	68
钢件 Steels	5D 外冷麻花钻 5XD Twist Drills	D2105-NHA		140	DIN 6535HA	5D		HELICA	3-20	13	68
钢件 Steels	3D 内冷麻花钻 3XD Twist Drills with internal cooling	D2103-CHA		140	DIN 6535HA	3D		HELICA	5-20	16	68
钢件 Steels	5D 内冷麻花钻 5XD Twist Drills with Internal Cooling	D2105-CHA		140	DIN 6535HA	5D		HELICA	5-20	19	68

D2300 系 钢用麻花钻 D2300 Series Twist Drills for Steels

钢件 Steels	3D 外冷麻花钻 3XD Twist Drills	D2303-NHA		140	DIN 6535HA	3D		ALTIN NANO	3-20	22	68
钢件 Steels	5D 外冷麻花钻 5XD Twist Drills	D2305-NHA		140	DIN 6535HA	5D		ALTIN NANO	3-20	25	68
钢件 Steels	3D 内冷麻花钻 3XD Twist Drills with internal cooling	D2303-CHA		140	DIN 6535HA	3D		ALTIN NANO	5-20	28	68
钢件 Steels	5D 内冷麻花钻 5XD Twist Drills with Internal Cooling	D2305-CHA		140	DIN 6535HA	5D		ALTIN NANO	5-20	31	68

D2500 系列铝合金用麻花钻 D2500 Series Twist Drills for Al.

铝合金 Al.	5D 外冷麻花钻 5XD Twist Drills	D2505-NHA		140	DIN 6535HA	5D			3-20	34	68
铝合金 Al.	5D 内冷麻花钻 5XD Twist Drills with Internal Cooling	D2505-CHA		140	DIN 6535HA	5D			3-20	37	68

D2600 系列 锈钢用麻花钻 D2600 Series Twist Drills for Stainless Steels

不锈钢 Stainless Steels	3D 外冷麻花钻 3XD Twist Drills	D2603-NHA		140	DIN 6535HA	3D		HELICA	3-20	40	40
不锈钢 Stainless Steels	3D 内冷麻花钻 3XD Twist Drills with Internal Cooling	D2603-CHA		140	DIN 6535HA	3D		HELICA	5-20	43	43
不锈钢 Stainless Steels	5D 内冷麻花钻 5XD Twist Drills with Internal Cooling	D2605-CHA		140	DIN 6535HA	5D		HELICA	5-20	45	45

工件材料 Workpiece Materials																										
钢 Steels							不锈钢 Stainless Steels			铸铁 Cast Iron			非铁材料 Non-ferrous metal						超级合金 Super Alloys				硬材料 Hard Materials			
P1	P2	P3	P4	P5	P6	P7	M1	M2	M3	K1	K2	K3	N1	N2	N3	N4	N5	N6	S1	S2	S3	S4	H1	H2	H3	H4

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● 最适应
Best suitable

○ 适应
Suitable

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适应加工材料	名称	编码	图形	顶角	柄部尺寸标准	钻削深度	钻尖形状	涂层	刃径范围 mm	尺寸页码	切削参数页码
to be cut Materials	Name	Code	Figure	Point angle	Standard of Demension of Toolholder	Drilling Depth	Form of drill point	Coating	Arrange of cutting edge diameter	Page of Size	Page of Cutting data

D1300 系列小麻花钻 D1300 Series small Twist Drills

Steels. Stainless Steels. Cast Iron. Al. Alloys. Ti-Alloys	6XD Twist Drills	D1306-NYZ		130	JIN00				0.2-2	47	68
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D3000 系列深孔钻 D3000 Series Drills for Deephole

铸铁 Cast Iron	20D 内冷深孔钻 20XD Drills for deephole with Internal Cooling	D3020-CHA		135	DIN 6535HA	20D		ALTIN NANO	3-12	51	68
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D3100 系列阶梯钻 D3100 Series Step drills

Steels. Cast Iron. Al. Alloys	3D 外冷阶梯钻 3XD Step drills	D3103-NHA		140	DIN 6535HA	3D		TIALN	M4-M16	53	68
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D7300 系列直槽钻 D7300 Series Drills with straight flutes

Cast Iron. Silicon Al. Alloys	5D 外冷直槽钻 5XD Drills with straight flutes	D7305-NHA		120	DIN 6535HA	5D			4-20	54	68
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D7200 系列直槽钻 D7200 Series Drills with straight flutes

Cast Iron. Silicon Al. Alloys	5D 内冷直槽钻 5XD Drills with straight flutes and Internal Cooling	D7205-CHA		130	DIN 6535HA	5D		TIALN	4-20	55	68
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D5200 系列三刃钻 D5200 Series Drills with 3 fluts

Cast Iron. Silicon Al. Alloys	3D 外冷三刃钻 3XD Drills with 3 fluts	D5203-NYZ		150	JIN00	3D		TIALN	3-20	56	68
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D9100 系列 NC 中心钻 D9100 Series NC centre drills

Steels. Cast Iron. Al. Alloys	NC 中心钻 NC centre drills	D9100-090		90	DIN 6535HA	90°		TIALN	5-20	58	68
Steels. Cast Iron. Al. Alloys	NC 中心钻 NC centre drills	D9100-120		120	DIN 6535HA	120°		TIALN	5-20	58	68

工件材料 Workpiece Materials																											
钢 Steels							不锈钢 Stainless Steels			铸铁 Cast Iron			非铁材料 Non-ferrous metal						超级合金 Super Alloys				硬材料 Hard Materials				
P1	P2	P3	P4	P5	P6	P7	M1	M2	M3	K1	K2	K3	N1	N2	N3	N4	N5	N6	S1	S2	S3	S4	H1	H2	H3	H4	
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● 最适应 Best suitable

○ 适应 Suitable

● 最适应
Best suitable

○ 适应
Suitable

钻头编码规则：Regulation of drill code

D	2	6	0	5	-	C	H	A	-	0	8	0	0
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(1)	(2)	(3)	(4)	(5)	(6)
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(1)	-	Type of drills	D	钻头 Drills
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(2)	-	Products Series	21	钢用系列麻花钻 Series Twist Drills for Steels
			23	钢用系列麻花钻 Series Twist Drills for Steels
			25	铝合金用系列麻花钻 Series Twist Drills for Al. Alloys
			26	不锈钢用系列麻花钻 Series Twist Drills for Stainless Steels
			13	小直径麻花钻 Twist Drills with small Dia.
			30	深孔麻花钻 Twist Drills for deep Holes
			31	阶梯麻花钻 Step Twist Drills
			73	铝用直槽钻 Drills with straight flutes for AL.
			72	铸铁用直槽钻 Drills with straight flutes for Cast Iron
			52	三刃钻 Drills with 3 flutes
			91	NC 中心钻 NC centre drills

(3)	-	Cutting Depth	00	中心钻 Centre drills
			03	3xd
			05	5xd
			08	8xd
			20	20xd

(4)	-	Methods of cooling	N	外冷 External Cooling
			C	内冷 Internal Cooling

(5)	-	Form of shank	HA	DIN6535HA
			HB	DIN6535HB
			HE	DIN6535HE
			YZ	普通圆柱柄 Straight shank

(6)	-	Diameter of Shank	0050	0.5mm
			0100	1mm
			0800	8mm
			1000	10mm

整体硬质合金钻头应用一览表 List of application of Solid Carbide Drills

Materials	MC	工件材料 Workpiece Materials	布氏硬度 Brinell hardness	洛氏硬度 Rockwell hardness / HRC	钻头型号 Types of Drills				
			HB	HRC	内冷 Internal Cooling		外冷 External Cooling		
P Steel	P1	Low carbon Steels with lang chips	<125		D2603-CHA D2605-CHA		D2603-NHA	D1306-NYZ	D9100-090 D9100-120
	P2	Low carbon Steels with short chips, free cutting steels	<125						
	P3	High carbon Steels and medium carbon Steels	<220	<25	D2103-CHA D2105-CHA D2303-CHA D2305-CHA	D3020-CHA	D2103-NHA D2105-NHA D2303-NHA D2305-NHA	D3103-NHA D1306-NYZ	
	P4	Alloys、 Tool Steels	<330	<35					
	P5	Alloys、 Tool Steels	340-450	35-48				D1306-NYZ	
	P6	Ferritic Stainless Steels, martensite, Stainless Steels, PH Stainless Steels	<330	<35					
	P7	High-tensile ferritic Stainless Steels, martensite Stainless Steels, PH Stainless Steels	330-450	35-48					
M Stainless Steels	M1	Austenitic Stainless Steels	130-200		D2603-CHA D2605-CHA		D2603-NHA	D1306-NYZ	
	M2	High-tensile austenitic und Cast Stainless Steels	150-230	<25					
	M3	Dual-phase Stainless Steels	135-275	<30					
K Cast Iron	K1	Cast Iron	120-290	<32	D2103-CHA D2105-CHA D2303-CHA D2305-CHA	D3020-CHA	D2103-NHA D2105-NHA D2303-NHA D2305-NHA	D1306-NYZ D3103-NHA	D5203-NYZ D9100-090 D9100-120
	K2	Medium difficulty to be cut alloyed cast iron and cast iron with nodular graphite	130-260	<28					
	K3	High difficulty to be cut high alloyed cast iron and cast iron with nodular graphite	180-350	<43					
N Non-ferrous metal	N1	Forged Al. Alloys	60-90		D2505-CHA		D2505-NHA	D1306-NYZ	D9100-090 D9100-120
	N2	Cast Al. Alloys	70-100		D2103-CHA D2105-CHA D2303-CHA D2305-CHA	D3020-CHA	D2103-NHA D2105-NHA D2303-NHA D2305-NHA	D1306-NYZ D3103-NHA D7305-NHA	D5203-NYZ D9100-090 D9100-120
	N3	Cast Al. Alloys	60-120			D7205-CHA			
	N4	Copper、 copper alloys	60-200		D2505-CHA		D2505-NHA		D9100-090 D9100-120
	N5	Graphite、 compound Materials Graphite, CFK, CFRP							
	N6	Al. based compound Materials GFK, CFK	<210						

D2103-NHA



3D 外冷直柄麻花钻 3XD Twist Drills with straight flank

HELICA 涂层 HELICA Coating

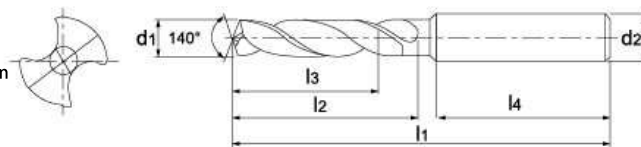
曲线刃口, 铲磨后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
34567	12	123	23

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2103-NHA-D0300	3		6	62	20	14	36
D2103-NHA-D0325	3.25		6	62	20	14	36
D2103-NHA-D0330	3.3	M4	6	62	20	14	36
D2103-NHA-D0340	3.4		6	62	20	14	36
D2103-NHA-D0350	3.5		6	62	20	14	36
D2103-NHA-D0370	3.7		6	62	20	14	36
D2103-NHA-D0400	4		6	66	24	17	36
D2103-NHA-D0420	4.2	M5	6	66	24	17	36
D2103-NHA-D0430	4.3		6	66	24	17	36
D2103-NHA-D0450	4.5		6	66	24	17	36
D2103-NHA-D0465	4.65		6	66	24	17	36
D2103-NHA-D0480	4.8		6	66	28	20	36
D2103-NHA-D0500	5	M6	6	66	28	20	36
D2103-NHA-D0510	5.1		6	66	28	20	36
D2103-NHA-D0520	5.2		6	66	28	20	36
D2103-NHA-D0550	5.5		6	66	28	20	36
D2103-NHA-D0555	5.55		6	66	28	20	36
D2103-NHA-D0580	5.8		6	66	28	20	36
D2103-NHA-D0600	6		6	66	28	20	36
D2103-NHA-D0610	6.1		8	79	34	24	36
D2103-NHA-D0620	6.2		8	79	34	24	36
D2103-NHA-D0630	6.3		8	79	34	24	36
D2103-NHA-D0650	6.5		8	79	34	24	36
D2103-NHA-D0660	6.6		8	79	34	24	36
D2103-NHA-D0680	6.8	M8	8	79	34	24	36
D2103-NHA-D0690	6.9		8	79	34	24	36
D2103-NHA-D0700	7	M8X1	8	79	34	24	36
D2103-NHA-D0710	7.1		8	79	41	29	36
D2103-NHA-D0740	7.4		8	79	41	29	36
D2103-NHA-D0750	7.5		8	79	41	29	36

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2103-NHA



3D 外冷直柄麻花钻 3XD Twist Drills with straight flank

HELICA 涂层 HELICA Coating

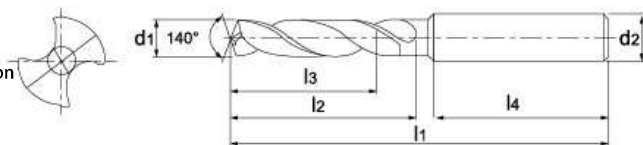
曲线刃口, 铲磨后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
34567	12	123	23

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2103-NHA-D0780	7.80		8.00	79	41	29	36
D2103-NHA-D0800	8.00		8.00	79	41	29	36
D2103-NHA-D0810	8.10		10.00	89	47	35	40
D2103-NHA-D0840	8.40		10.00	89	47	35	40
D2103-NHA-D0850	8.50	M10	10.00	89	47	35	40
D2103-NHA-D0860	8.60		10.00	89	47	35	40
D2103-NHA-D0870	8.70		10.00	89	47	35	40
D2103-NHA-D0880	8.80		10.00	89	47	35	40
D2103-NHA-D0900	9.00	M10X1	10.00	89	47	35	40
D2103-NHA-D0930	9.30		10.00	89	47	35	40
D2103-NHA-D0950	9.50		10.00	89	47	35	40
D2103-NHA-D0960	9.60		10.00	89	47	35	40
D2103-NHA-D0980	9.80		10.00	89	47	35	40
D2103-NHA-D1000	10.00		10.00	89	47	35	40
D2103-NHA-D1025	10.25	M12	12.00	102	55	40	45
D2103-NHA-D1040	10.40		12.00	102	55	40	45
D2103-NHA-D1050	10.50	M12X1.5	12.00	102	55	40	45
D2103-NHA-D1060	10.60		12.00	102	55	40	45
D2103-NHA-D1080	10.80		12.00	102	55	40	45
D2103-NHA-D1100	11.00		12.00	102	55	40	45
D2103-NHA-D1120	11.20		12.00	102	55	40	45
D2103-NHA-D1150	11.50		12.00	102	55	40	45
D2103-NHA-D1180	11.80		12.00	102	55	40	45
D2103-NHA-D1200	12.00	M14	12.00	102	55	40	45
D2103-NHA-D1225	12.25		14.00	107	60	43	45
D2103-NHA-D1250	12.50	M14X1.5	14.00	107	60	43	45
D2103-NHA-D1270	12.70		14.00	107	60	43	45
D2103-NHA-D1275	12.75		14.00	107	60	43	45
D2103-NHA-D1280	12.80		14.00	107	60	43	45
D2103-NHA-D1300	13.00		14.00	107	60	43	45

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
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>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2103-NHA



3D 外冷直柄麻花钻 3XD Twist Drills with straight flank

HELICA 涂层 HELICA Coating

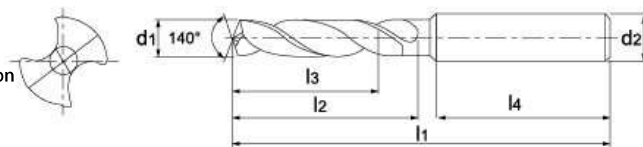
曲线刃口, 铲磨后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

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Steels	Stainless Steels	Cast Iron	Non-ferrous metals
34567	12	123	23

最适合 Best suitable
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工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2103-NHA-D1310	13.10		14.00	107	60	43	45
D2103-NHA-D1350	13.50		14.00	107	60	43	45
D2103-NHA-D1380	13.80		14.00	107	60	43	45
D2103-NHA-D1400	14.00	M16	14.00	107	60	43	45
D2103-NHA-D1425	14.25		16.00	115	65	45	48
D2103-NHA-D1450	14.50	M16X1.5	16.00	115	65	45	48
D2103-NHA-D1475	14.75		16.00	115	65	45	48
D2103-NHA-D1480	14.80		16.00	115	65	45	48
D2103-NHA-D1500	15.00		16.00	115	65	45	48
D2103-NHA-D1510	15.10		16.00	115	65	45	48
D2103-NHA-D1550	15.50		16.00	115	65	45	48
D2103-NHA-D1580	15.80		16.00	115	65	45	48
D2103-NHA-D1600	16.00		16.00	115	65	45	48
D2103-NHA-D1650	16.50		18.00	123	73	51	48
D2103-NHA-D1675	16.75		18.00	123	73	51	48
D2103-NHA-D1680	16.80		18.00	123	73	51	48
D2103-NHA-D1700	17.00		18.00	123	73	51	48
D2103-NHA-D1750	17.50		18.00	123	73	51	48
D2103-NHA-D1780	17.80		18.00	123	73	51	48
D2103-NHA-D1800	18.00		18.00	123	73	51	48
D2103-NHA-D1850	18.50		20.00	131	79	55	50
D2103-NHA-D1880	18.80		20.00	131	79	55	50
D2103-NHA-D1900	19.00		20.00	131	79	55	50
D2103-NHA-D1950	19.50		20.00	131	79	55	50
D2103-NHA-D1980	19.80		20.00	131	79	55	50
D2103-NHA-D2000	20.00		20.00	131	79	55	50

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2105-NHA

5D 外冷直柄麻花钻 5XD Twist Drills with straight flank

HELICA 涂层 HELICA Coating

曲线刃口, 铲磨后角 Linear cutting edge, flach relief

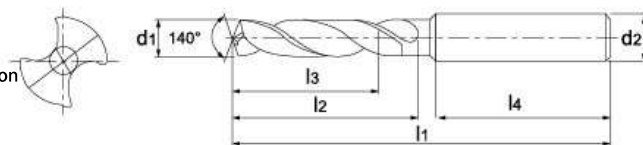
适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
34567	12	123	23

最适合
 Best suitable

适合
 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2105-NHA-D0300	3.00		6.00	66	28	23	36
D2105-NHA-D0325	3.25		6.00	66	28	23	36
D2105-NHA-D0330	3.30	M4	6.00	66	28	23	36
D2105-NHA-D0340	3.40		6.00	66	28	23	36
D2105-NHA-D0350	3.50		6.00	66	28	23	36
D2105-NHA-D0370	3.70		6.00	66	28	23	36
D2105-NHA-D0400	4.00		6.00	74	36	29	36
D2105-NHA-D0420	4.20	M5	6.00	74	36	29	36
D2105-NHA-D0430	4.30		6.00	74	36	29	36
D2105-NHA-D0450	4.50		6.00	74	36	29	36
D2105-NHA-D0465	4.65		6.00	74	36	29	36
D2105-NHA-D0480	4.80		6.00	82	44	35	36
D2105-NHA-D0500	5.00	M6	6.00	82	44	35	36
D2105-NHA-D0510	5.10		6.00	82	44	35	36
D2105-NHA-D0520	5.20		6.00	82	44	35	36
D2105-NHA-D0550	5.50		6.00	82	44	35	36
D2105-NHA-D0555	5.55		6.00	82	44	35	36
D2105-NHA-D0580	5.80		6.00	82	44	35	36
D2105-NHA-D0600	6.00		6.00	82	44	35	36
D2105-NHA-D0610	6.10		8.00	91	53	43	36
D2105-NHA-D0620	6.20		8.00	91	53	43	36
D2105-NHA-D0630	6.30		8.00	91	53	43	36
D2105-NHA-D0650	6.50		8.00	91	53	43	36
D2105-NHA-D0660	6.60		8.00	91	53	43	36
D2105-NHA-D0680	6.80	M8	8.00	91	53	43	36
D2105-NHA-D0690	6.90		8.00	91	53	43	36
D2105-NHA-D0700	7.00	M8X1	8.00	91	53	43	36
D2105-NHA-D0710	7.10		8.00	91	53	43	36
D2105-NHA-D0740	7.40		8.00	91	53	43	36
D2105-NHA-D0750	7.50		8.00	91	53	43	36

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2105-NHA



5D 外冷直柄麻花钻 5XD Twist Drills with straight flank

HELICA 涂层 HELICA Coating

曲线刃口, 铲磨后角 Linear cutting edge, flach relief

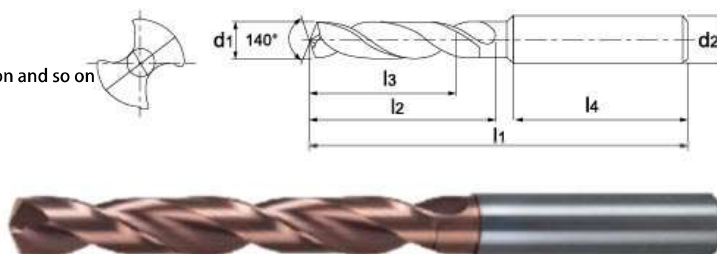
适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
34567	12	123	23
			

 最适合 Best suitable

 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2105-NHA-D0780	7.80		8.00	91	53	43	36
D2105-NHA-D0800	8.00		8.00	91	53	43	36
D2105-NHA-D0810	8.10		10.00	103	61	49	40
D2105-NHA-D0840	8.40		10.00	103	61	49	40
D2105-NHA-D0850	8.50	M10	10.00	103	61	49	40
D2105-NHA-D0860	8.60		10.00	103	61	49	40
D2105-NHA-D0870	8.70		10.00	103	61	49	40
D2105-NHA-D0880	8.80		10.00	103	61	49	40
D2105-NHA-D0900	9.00	M10X1	10.00	103	61	49	40
D2105-NHA-D0930	9.30		10.00	103	61	49	40
D2105-NHA-D0950	9.50		10.00	103	61	49	40
D2105-NHA-D0960	9.60		10.00	103	61	49	40
D2105-NHA-D0980	9.80		10.00	103	61	49	40
D2105-NHA-D1000	10.00		10.00	103	61	49	40
D2105-NHA-D1025	10.25	M12	12.00	118	71	56	45
D2105-NHA-D1040	10.40		12.00	118	71	56	45
D2105-NHA-D1050	10.50	M12X1.5	12.00	118	71	56	45
D2105-NHA-D1060	10.60		12.00	118	71	56	45
D2105-NHA-D1080	10.80		12.00	118	71	56	45
D2105-NHA-D1100	11.00		12.00	118	71	56	45
D2105-NHA-D1120	11.20		12.00	118	71	56	45
D2105-NHA-D1150	11.50		12.00	118	71	56	45
D2105-NHA-D1180	11.80		12.00	118	71	56	45
D2105-NHA-D1200	12.00	M14	12.00	118	71	56	45
D2105-NHA-D1220	12.20		14.00	124	77	60	45
D2105-NHA-D1225	12.25		14.00	124	77	60	45
D2105-NHA-D1250	12.50	M14X1.5	14.00	124	77	60	45
D2105-NHA-D1270	12.70		14.00	124	77	60	45
D2105-NHA-D1275	12.75		14.00	124	77	60	45
D2105-NHA-D1280	12.80		14.00	124	77	60	45

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2105-NHA



5D 外冷直柄麻花钻 5XD Twist Drills with straight flank

HELICA 涂层 HELICA Coating

曲线刃口, 铲磨后角 Linear cutting edge, flach relief

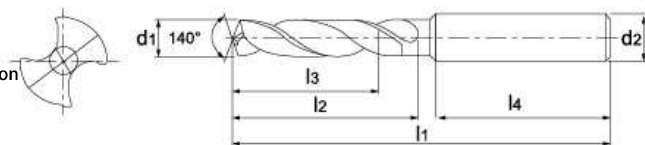
适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
34567	12	123	23
			

 最适合 Best suitable

 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2105-NHA-D1310	13.00		14.00	124	77	60	45
D2105-NHA-D1350	13.50		14.00	124	77	60	45
D2105-NHA-D1380	13.80		14.00	124	77	60	45
D2105-NHA-D1400	14.00	M16	14.00	124	77	60	45
D2105-NHA-D1425	14.25		16.00	133	83	63	48
D2105-NHA-D1450	14.50	M16X1.5	16.00	133	83	63	48
D2105-NHA-D1475	14.75		16.00	133	83	63	48
D2105-NHA-D1480	14.80		16.00	133	83	63	48
D2105-NHA-D1500	15.00		16.00	133	83	63	48
D2105-NHA-D1510	15.10		16.00	133	83	63	48
D2105-NHA-D1550	15.50		16.00	133	83	63	48
D2105-NHA-D1580	15.80		16.00	133	83	63	48
D2105-NHA-D1600	16.00		16.00	133	83	63	48
D2105-NHA-D1650	16.50		18.00	143	93	71	48
D2105-NHA-D1675	16.75		18.00	143	93	71	48
D2105-NHA-D1680	16.80		18.00	143	93	71	48
D2105-NHA-D1700	17.00		18.00	143	93	71	48
D2105-NHA-D1750	17.50		18.00	143	93	71	48
D2105-NHA-D1780	17.80		18.00	143	93	71	48
D2105-NHA-D1800	18.00		18.00	143	93	71	48
D2105-NHA-D1850	18.50		20.00	153	101	77	50
D2105-NHA-D1900	19.00		20.00	153	101	77	50
D2105-NHA-D1950	19.50		20.00	153	101	77	50
D2105-NHA-D1980	19.80		20.00	153	101	77	50
D2105-NHA-D2000	20.00		20.00	153	101	77	50

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.006/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2103-CHA



3D 内冷直柄麻花钻 3XD Twist Drills with straight flank and Internal Cooling

HELICA 涂层 HELICA Coating

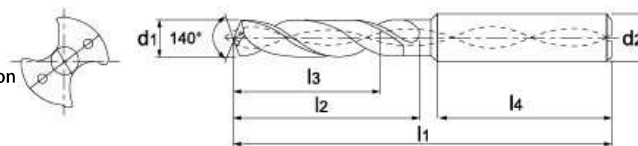
曲线刃口, 铲磨后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
34567	12	123	23	1234

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2103-CHA-D0500	5.00	M6	6.00	66	28	20	36
D2103-CHA-D0510	5.10		6.00	66	28	20	36
D2103-CHA-D0520	5.20		6.00	66	28	20	36
D2103-CHA-D0550	5.50		6.00	66	28	20	36
D2103-CHA-D0555	5.55		6.00	66	28	20	36
D2103-CHA-D0580	5.80		6.00	66	28	20	36
D2103-CHA-D0600	6.00		6.00	66	28	20	36
D2103-CHA-D0610	6.10		8.00	79	34	24	36
D2103-CHA-D0620	6.20		8.00	79	34	24	36
D2103-CHA-D0630	6.30		8.00	79	34	24	36
D2103-CHA-D0650	6.50		8.00	79	34	24	36
D2103-CHA-D0660	6.60		8.00	79	34	24	36
D2103-CHA-D0680	6.80	M8	8.00	79	34	24	36
D2103-CHA-D0690	6.90		8.00	79	34	24	36
D2103-CHA-D0700	7.00	M8X1	8.00	79	34	24	36
D2103-CHA-D0710	7.10		8.00	79	41	29	36
D2103-CHA-D0740	7.40		8.00	79	41	29	36
D2103-CHA-D0750	7.50		8.00	79	41	29	36
D2103-CHA-D0780	7.80		8.00	79	41	29	36
D2103-CHA-D0800	8.00		8.00	79	41	29	36
D2103-CHA-D0810	8.10		10.00	89	47	35	40
D2103-CHA-D0840	8.40		10.00	89	47	35	40
D2103-CHA-D0850	8.50	M10	10.00	89	47	35	40
D2103-CHA-D0860	8.60		10.00	89	47	35	40
D2103-CHA-D0870	8.70		10.00	89	47	35	40
D2103-CHA-D0880	8.80		10.00	89	47	35	40
D2103-CHA-D0900	9.00	M10X1	10.00	89	47	35	40
D2103-CHA-D0930	9.30		10.00	89	47	35	40
D2103-CHA-D0950	9.50		10.00	89	47	35	40
D2103-CHA-D0960	9.60		10.00	89	47	35	40

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2103-CHA



3D 内冷直柄麻花钻 3XD Twist Drills with straight flank and Internal Cooling

HELICA 涂层 HELICA Coating

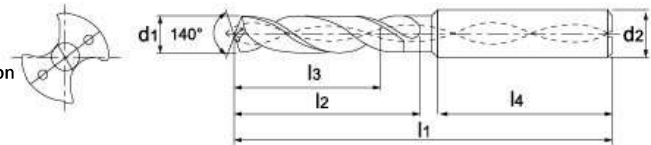
曲线刃口, 铲磨后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
34567	12	123	23	1234

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2103-CHA-D0980	9.80		10.00	89	47	35	40
D2103-CHA-D1000	10.00		10.00	89	47	35	40
D2103-CHA-D1025	10.25	M12	12.00	102	55	40	45
D2103-CHA-D1040	10.40		12.00	102	55	40	45
D2103-CHA-D1050	10.50	M12X1.5	12.00	102	55	40	45
D2103-CHA-D1060	10.60		12.00	102	55	40	45
D2103-CHA-D1080	10.80		12.00	102	55	40	45
D2103-CHA-D1100	11.00		12.00	102	55	40	45
D2103-CHA-D1120	11.20		12.00	102	55	40	45
D2103-CHA-D1150	11.50		12.00	102	55	40	45
D2103-CHA-D1180	11.80		12.00	102	55	40	45
D2103-CHA-D1200	12.00	M14	12.00	102	55	40	45
D2103-CHA-D1225	12.25		14.00	107	60	43	45
D2103-CHA-D1250	12.50	M14X1.5	14.00	107	60	43	45
D2103-CHA-D1270	12.70		14.00	107	60	43	45
D2103-CHA-D1275	12.75		14.00	107	60	43	45
D2103-CHA-D1280	12.80		14.00	107	60	43	45
D2103-CHA-D1300	13.00		14.00	107	60	43	45
D2103-CHA-D1310	13.10		14.00	107	60	43	45
D2103-CHA-D1350	13.50		14.00	107	60	43	45
D2103-CHA-D1380	13.80		14.00	107	60	43	45
D2103-CHA-D1400	14.00	M16	14.00	107	60	43	45
D2103-CHA-D1425	14.25		16.00	115	65	45	48
D2103-CHA-D1450	14.50	M16X1.5	16.00	115	65	45	48
D2103-CHA-D1475	14.75		16.00	115	65	45	48
D2103-CHA-D1480	14.80		16.00	115	65	45	48
D2103-CHA-D1500	15.00		16.00	115	65	45	48
D2103-CHA-D1510	15.10		16.00	115	65	45	48
D2103-CHA-D1550	15.50		16.00	115	65	45	48
D2103-CHA-D1580	15.80		16.00	115	65	45	48

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2103-CHA



3D 内冷直柄麻花钻 3XD Twist Drills with straight flank and Internal Cooling

HELICA 涂层 HELICA Coating

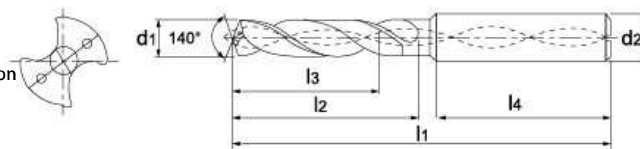
曲线刃口, 铲磨后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Super alloys
34567	12	123	23	1234

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2103-CHA-D1600	16.00		16.00	115	65	45	48
D2103-CHA-D1650	16.50		18.00	123	73	51	48
D2103-CHA-D1675	16.75		18.00	123	73	51	48
D2103-CHA-D1680	16.80		18.00	123	73	51	48
D2103-CHA-D1700	17.00		18.00	123	73	51	48
D2103-CHA-D1750	17.50		18.00	123	73	51	48
D2103-CHA-D1780	17.80		18.00	123	73	51	48
D2103-CHA-D1800	18.00		18.00	123	73	51	48
D2103-CHA-D1850	18.50		20.00	131	79	55	50
D2103-CHA-D1880	18.80		20.00	131	79	55	50
D2103-CHA-D1900	19.00		20.00	131	79	55	50
D2103-CHA-D1950	19.50		20.00	131	79	55	50
D2103-CHA-D1980	19.80		20.00	131	79	55	50
D2103-CHA-D2000	20.00		20.00	131	79	55	50

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.006/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2105-CHA



5D 内冷直柄麻花钻 5XD Twist Drills with straight flank and Internal Cooling

HELICA 涂层 HELICA Coating

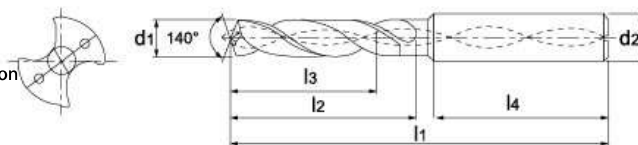
曲线刃口, 铲磨后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Super alloys
34567	12	123	23	1234

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2105-CHA-D0500	5.00	M6	6.00	82	44	35	36
D2105-CHA-D0510	5.10		6.00	82	44	35	36
D2105-CHA-D0520	5.20		6.00	82	44	35	36
D2105-CHA-D0550	5.50		6.00	82	44	35	36
D2105-CHA-D0555	5.55		6.00	82	44	35	36
D2105-CHA-D0580	5.80		6.00	82	44	35	36
D2105-CHA-D0600	6.00		6.00	82	44	35	36
D2105-CHA-D0610	6.10		8.00	91	53	43	36
D2105-CHA-D0620	6.20		8.00	91	53	43	36
D2105-CHA-D0630	6.30		8.00	91	53	43	36
D2105-CHA-D0650	6.50		8.00	91	53	43	36
D2105-CHA-D0660	6.60		8.00	91	53	43	36
D2105-CHA-D0680	6.80	M8	8.00	91	53	43	36
D2105-CHA-D0690	6.90		8.00	91	53	43	36
D2105-CHA-D0700	7.00	M8X1	8.00	91	53	43	36
D2105-CHA-D0710	7.10		8.00	91	53	43	36
D2105-CHA-D0740	7.40		8.00	91	53	43	36
D2105-CHA-D0750	7.50		8.00	91	53	43	36
D2105-CHA-D0780	7.80		8.00	91	53	43	36
D2105-CHA-D0800	8.00		8.00	91	53	43	36
D2105-CHA-D0810	8.10		10.00	103	61	49	40
D2105-CHA-D0840	8.40		10.00	103	61	49	40
D2105-CHA-D0850	8.50	M10	10.00	103	61	49	40
D2105-CHA-D0860	8.60		10.00	103	61	49	40
D2105-CHA-D0870	8.70		10.00	103	61	49	40
D2105-CHA-D0880	8.80		10.00	103	61	49	40
D2105-CHA-D0900	9.00	M10X1	10.00	103	61	49	40
D2105-CHA-D0930	9.30		10.00	103	61	49	40
D2105-CHA-D0950	9.50		10.00	103	61	49	40
D2105-CHA-D0960	9.60		10.00	103	61	49	40

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2105-CHA



5D 内冷直柄麻花钻 5XD Twist Drills with straight flank and Internal Cooling

HELICA 涂层 HELICA Coating

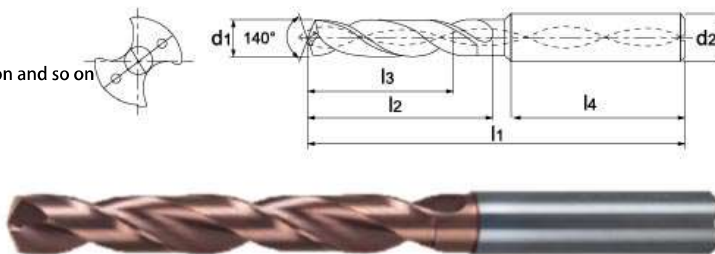
曲线刃口, 铲磨后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Super alloys
34567	12	123	23	1234
				

 最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2105-CHA-D0980	9.80		10.00	103	61	49	40
D2105-CHA-D1000	10.00		10.00	103	61	49	40
D2105-CHA-D1025	10.25	M12	12.00	118	71	56	45
D2105-CHA-D1040	10.40		12.00	118	71	56	45
D2105-CHA-D1050	10.50	M12X1.5	12.00	118	71	56	45
D2105-CHA-D1060	10.60		12.00	118	71	56	45
D2105-CHA-D1080	10.80		12.00	118	71	56	45
D2105-CHA-D1100	11.00		12.00	118	71	56	45
D2105-CHA-D1120	11.20		12.00	118	71	56	45
D2105-CHA-D1150	11.50		12.00	118	71	56	45
D2105-CHA-D1180	11.80		12.00	118	71	56	45
D2105-CHA-D1200	12.00	M14	12.00	118	71	56	45
D2105-CHA-D1220	12.20		14.00	124	77	60	45
D2105-CHA-D1225	12.25		14.00	124	77	60	45
D2105-CHA-D1250	12.50	M14X1.5	14.00	124	77	60	45
D2105-CHA-D1270	12.70		14.00	124	77	60	45
D2105-CHA-D1275	12.75		14.00	124	77	60	45
D2105-CHA-D1280	12.80		14.00	124	77	60	45
D2105-CHA-D1300	13.00		14.00	124	77	60	45
D2105-CHA-D1350	13.50		14.00	124	77	60	45
D2105-CHA-D1380	13.80		14.00	124	77	60	45
D2105-CHA-D1400	14.00	M16	14.00	124	77	60	45
D2105-CHA-D1425	14.25		16.00	133	83	63	48
D2105-CHA-D1450	14.50	M16X1.5	16.00	133	83	63	48
D2105-CHA-D1475	14.75		16.00	133	83	63	48
D2105-CHA-D1480	14.80		16.00	133	83	63	48
D2105-CHA-D1500	15.00		16.00	133	83	63	48
D2105-CHA-D1510	15.10		16.00	133	83	63	48
D2105-CHA-D1550	15.50		16.00	133	83	63	48
D2105-CHA-D1580	15.80		16.00	133	83	63	48

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2105-CHA



5D 内冷直柄麻花钻 5XD Twist Drills with straight flank and Internal Cooling

HELICA 涂层 HELICA Coating

曲线刃口, 铲磨后角 Linear cutting edge, flach relief

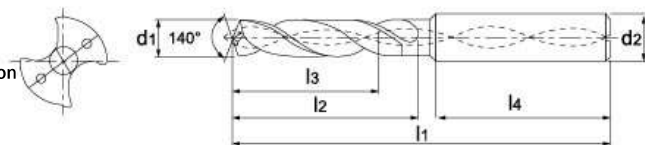
适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Super alloys
34567	12	123	23	1234

最适合
Best suitable

适合
Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2105-CHA-D1600	16.00		16.00	133	83	63	48
D2105-CHA-D1650	16.50		18.00	143	93	71	48
D2105-CHA-D1675	16.75		18.00	143	93	71	48
D2105-CHA-D1680	16.80		18.00	143	93	71	48
D2105-CHA-D1700	17.00		18.00	143	93	71	48
D2105-CHA-D1750	17.50		18.00	143	93	71	48
D2105-CHA-D1780	17.80		18.00	143	93	71	48
D2105-CHA-D1800	18.00		18.00	143	93	71	48
D2105-CHA-D1850	18.50		20.00	153	101	77	50
D2105-CHA-D1900	19.00		20.00	153	101	77	50
D2105-CHA-D1950	19.50		20.00	153	101	77	50
D2105-CHA-D1980	19.80		20.00	153	101	77	50
D2105-CHA-D2000	20.00		20.00	153	101	77	50

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2303-NHA



3D 外冷直柄麻花钻 3XD Twist Drills with straight flank

AITiN-nano 涂层 AITiN-nano Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

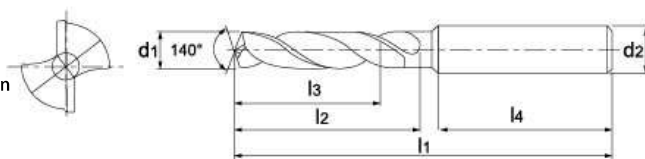
适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
34567	12	123	23
			

 最适合 Best suitable

 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2303-NHA-D0300	3.00		6.00	62	20	14	36
D2303-NHA-D0325	3.25		6.00	62	20	14	36
D2303-NHA-D0330	3.30	M4	6.00	62	20	14	36
D2303-NHA-D0340	3.40		6.00	62	20	14	36
D2303-NHA-D0350	3.50		6.00	62	20	14	36
D2303-NHA-D0370	3.70		6.00	62	20	14	36
D2303-NHA-D0400	4.00		6.00	66	24	17	36
D2303-NHA-D0420	4.20	M5	6.00	66	24	17	36
D2303-NHA-D0430	4.30		6.00	66	24	17	36
D2303-NHA-D0450	4.50		6.00	66	24	17	36
D2303-NHA-D0465	4.65		6.00	66	24	17	36
D2303-NHA-D0480	4.80		6.00	66	28	20	36
D2303-NHA-D0500	5.00	M6	6.00	66	28	20	36
D2303-NHA-D0510	5.10		6.00	66	28	20	36
D2303-NHA-D0520	5.20		6.00	66	28	20	36
D2303-NHA-D0550	5.50		6.00	66	28	20	36
D2303-NHA-D0555	5.55		6.00	66	28	20	36
D2303-NHA-D0580	5.80		6.00	66	28	20	36
D2303-NHA-D0600	6.00		6.00	66	28	20	36
D2303-NHA-D0610	6.10		8.00	79	34	24	36
D2303-NHA-D0620	6.20		8.00	79	34	24	36
D2303-NHA-D0630	6.30		8.00	79	34	24	36
D2303-NHA-D0650	6.50		8.00	79	34	24	36
D2303-NHA-D0660	6.60		8.00	79	34	24	36
D2303-NHA-D0680	6.80	M8	8.00	79	34	24	36
D2303-NHA-D0690	6.90		8.00	79	34	24	36
D2303-NHA-D0700	7.00	M8X1	8.00	79	34	24	36
D2303-NHA-D0710	7.10		8.00	79	41	29	36
D2303-NHA-D0740	7.40		8.00	79	41	29	36
D2303-NHA-D0750	7.50		8.00	79	41	29	36

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2303-NHA

3D 外冷直柄麻花钻 3XD Twist Drills with straight flank

AlTiN-nano 涂层 AlTiN-nano Coating

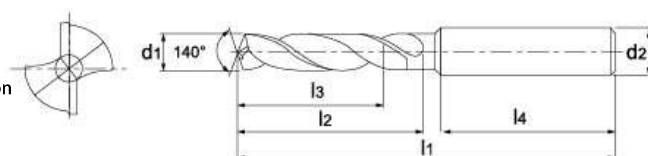
直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
34567	12	123	23

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2303-NHA-D0780	7.80		8.00	79	41	29	36
D2303-NHA-D0800	8.00		8.00	79	41	29	36
D2303-NHA-D0810	8.10		10.00	89	47	35	40
D2303-NHA-D0840	8.40		10.00	89	47	35	40
D2303-NHA-D0850	8.50	M10	10.00	89	47	35	40
D2303-NHA-D0860	8.60		10.00	89	47	35	40
D2303-NHA-D0870	8.70		10.00	89	47	35	40
D2303-NHA-D0880	8.80		10.00	89	47	35	40
D2303-NHA-D0900	9.00	M10X1	10.00	89	47	35	40
D2303-NHA-D0930	9.30		10.00	89	47	35	40
D2303-NHA-D0950	9.50		10.00	89	47	35	40
D2303-NHA-D0960	9.60		10.00	89	47	35	40
D2303-NHA-D0980	9.80		10.00	89	47	35	40
D2303-NHA-D1000	10.00		10.00	89	47	35	40
D2303-NHA-D1025	10.25	M12	12.00	102	55	40	45
D2303-NHA-D1040	10.40		12.00	102	55	40	45
D2303-NHA-D1050	10.50	M12X1.5	12.00	102	55	40	45
D2303-NHA-D1060	10.60		12.00	102	55	40	45
D2303-NHA-D1080	10.80		12.00	102	55	40	45
D2303-NHA-D1100	11.00		12.00	102	55	40	45
D2303-NHA-D1120	11.20		12.00	102	55	40	45
D2303-NHA-D1150	11.50		12.00	102	55	40	45
D2303-NHA-D1180	11.80		12.00	102	55	40	45
D2303-NHA-D1200	12.00	M14	12.00	102	55	40	45
D2303-NHA-D1225	12.25		14.00	107	60	43	45
D2303-NHA-D1250	12.50	M14X1.5	14.00	107	60	43	45
D2303-NHA-D1270	12.70		14.00	107	60	43	45
D2303-NHA-D1275	12.75		14.00	107	60	43	45
D2303-NHA-D1280	12.80		14.00	107	60	43	45
D2303-NHA-D1300	13.00		14.00	107	60	43	45

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrage of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2303-NHA



3D 外冷直柄麻花钻 3XD Twist Drills with straight flank

AITiN-nano 涂层 AITiN-nano Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
34567	12	123	23
			

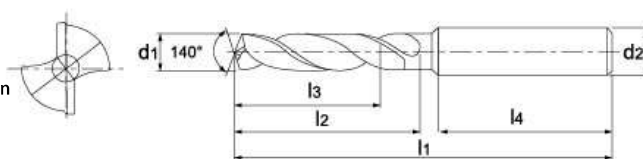
 最适合
Best suitable

 适合
Suitable

工件材料表见P69 Workpiece Materials, see Page 69

Best suitable
工件材料表见P69

Suitable
Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2303-NHA-D1310	13.10		14.00	107	60	43	45
D2303-NHA-D1350	13.50		14.00	107	60	43	45
D2303-NHA-D1380	13.80		14.00	107	60	43	45
D2303-NHA-D1400	14.00	M16	14.00	107	60	43	45
D2303-NHA-D1425	14.25		16.00	115	65	45	48
D2303-NHA-D1450	14.50	M16X1.5	16.00	115	65	45	48
D2303-NHA-D1475	14.75		16.00	115	65	45	48
D2303-NHA-D1480	14.80		16.00	115	65	45	48
D2303-NHA-D1500	15.00		16.00	115	65	45	48
D2303-NHA-D1510	15.10		16.00	115	65	45	48
D2303-NHA-D1550	15.50		16.00	115	65	45	48
D2303-NHA-D1580	15.80		16.00	115	65	45	48
D2303-NHA-D1600	16.00		16.00	115	65	45	48
D2303-NHA-D1650	16.50		18.00	123	73	51	48
D2303-NHA-D1675	16.75		18.00	123	73	51	48
D2303-NHA-D1680	16.80		18.00	123	73	51	48
D2303-NHA-D1700	17.00		18.00	123	73	51	48
D2303-NHA-D1750	17.50		18.00	123	73	51	48
D2303-NHA-D1780	17.80		18.00	123	73	51	48
D2303-NHA-D1800	18.00		18.00	123	73	51	48
D2303-NHA-D1850	18.50		20.00	131	79	55	50
D2303-NHA-D1880	18.80		20.00	131	79	55	50
D2303-NHA-D1900	19.00		20.00	131	79	55	50
D2303-NHA-D1950	19.50		20.00	131	79	55	50
D2303-NHA-D1980	19.80		20.00	131	79	55	50
D2303-NHA-D2000	20.00		20.00	131	79	55	50

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2305-NHA

5D 外冷直柄麻花钻 5XD Twist Drills with straight flank

AlTiN-nano 涂层 AlTiN-nano Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

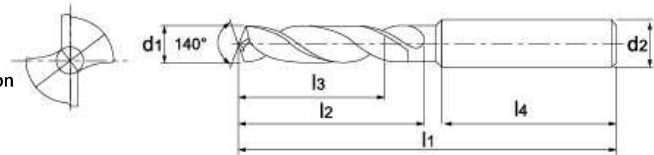


适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
34567	12	123	23

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2305-NHA-D0300	3.00		6.00	66	28	23	36
D2305-NHA-D0325	3.25		6.00	66	28	23	36
D2305-NHA-D0330	3.30	M4	6.00	66	28	23	36
D2305-NHA-D0340	3.40		6.00	66	28	23	36
D2305-NHA-D0350	3.50		6.00	66	28	23	36
D2305-NHA-D0370	3.70		6.00	66	28	23	36
D2305-NHA-D0400	4.00		6.00	74	36	29	36
D2305-NHA-D0420	4.20	M5	6.00	74	36	29	36
D2305-NHA-D0430	4.30		6.00	74	36	29	36
D2305-NHA-D0450	4.50		6.00	74	36	29	36
D2305-NHA-D0465	4.65		6.00	74	36	29	36
D2305-NHA-D0480	4.80		6.00	82	44	35	36
D2305-NHA-D0500	5.00	M6	6.00	82	44	35	36
D2305-NHA-D0510	5.10		6.00	82	44	35	36
D2305-NHA-D0520	5.20		6.00	82	44	35	36
D2305-NHA-D0550	5.50		6.00	82	44	35	36
D2305-NHA-D0555	5.55		6.00	82	44	35	36
D2305-NHA-D0580	5.80		6.00	82	44	35	36
D2305-NHA-D0600	6.00		6.00	82	44	35	36
D2305-NHA-D0610	6.10		8.00	91	53	43	36
D2305-NHA-D0620	6.20		8.00	91	53	43	36
D2305-NHA-D0630	6.30		8.00	91	53	43	36
D2305-NHA-D0650	6.50		8.00	91	53	43	36
D2305-NHA-D0660	6.60		8.00	91	53	43	36
D2305-NHA-D0680	6.80	M8	8.00	91	53	43	36
D2305-NHA-D0690	6.90		8.00	91	53	43	36
D2305-NHA-D0700	7.00	M8X1	8.00	91	53	43	36
D2305-NHA-D0710	7.10		8.00	91	53	43	36
D2305-NHA-D0740	7.40		8.00	91	53	43	36
D2305-NHA-D0750	7.50		8.00	91	53	43	36

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2305-NHA



5D 外冷直柄麻花钻 SXD Twist Drills with straight flank

AITiN-nano 涂层 AITiN-nano Coating

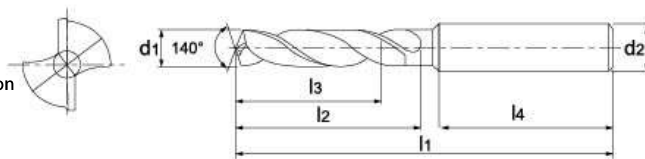
直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
34567	12	123	23

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2305-NHA-D0780	7.80		8.00	91	53	43	36
D2305-NHA-D0800	8.00		8.00	91	53	43	36
D2305-NHA-D0810	8.10		10.00	103	61	49	40
D2305-NHA-D0840	8.40		10.00	103	61	49	40
D2305-NHA-D0850	8.50	M10	10.00	103	61	49	40
D2305-NHA-D0860	8.60		10.00	103	61	49	40
D2305-NHA-D0870	8.70		10.00	103	61	49	40
D2305-NHA-D0880	8.80		10.00	103	61	49	40
D2305-NHA-D0900	9.00	M10X1	10.00	103	61	49	40
D2305-NHA-D0930	9.30		10.00	103	61	49	40
D2305-NHA-D0950	9.50		10.00	103	61	49	40
D2305-NHA-D0960	9.60		10.00	103	61	49	40
D2305-NHA-D0980	9.80		10.00	103	61	49	40
D2305-NHA-D1000	10.00		10.00	103	61	49	40
D2305-NHA-D1025	10.25	M12	12.00	118	71	56	45
D2305-NHA-D1040	10.40		12.00	118	71	56	45
D2305-NHA-D1050	10.50	M12X1.5	12.00	118	71	56	45
D2305-NHA-D1060	10.60		12.00	118	71	56	45
D2305-NHA-D1080	10.80		12.00	118	71	56	45
D2305-NHA-D1100	11.00		12.00	118	71	56	45
D2305-NHA-D1120	11.20		12.00	118	71	56	45
D2305-NHA-D1150	11.50		12.00	118	71	56	45
D2305-NHA-D1180	11.80		12.00	118	71	56	45
D2305-NHA-D1200	12.00	M14	12.00	118	71	56	45
D2305-NHA-D1220	12.20		14.00	124	77	60	45
D2305-NHA-D1225	12.25		14.00	124	77	60	45
D2305-NHA-D1250	12.50	M14X1.5	14.00	124	77	60	45
D2305-NHA-D1270	12.70		14.00	124	77	60	45
D2305-NHA-D1275	12.75		14.00	124	77	60	45
D2305-NHA-D1280	12.80		14.00	124	77	60	45

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2305-NHA

5D 外冷直柄麻花钻 5XD Twist Drills with straight flank

AlTiN-nano 涂层 AlTiN-nano Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

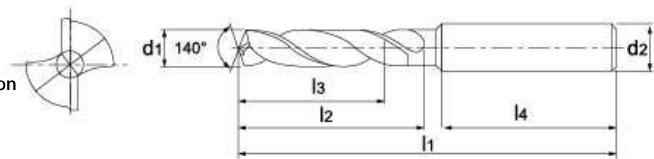


适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
34567	12	123	23

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2305-NHA-D1300	13.00		14.00	124	77	60	45
D2305-NHA-D1350	13.50		14.00	124	77	60	45
D2305-NHA-D1380	13.80		14.00	124	77	60	45
D2305-NHA-D1400	14.00	M16	14.00	124	77	60	45
D2305-NHA-D1425	14.25		16.00	133	83	63	48
D2305-NHA-D1450	14.50	M16X1.5	16.00	133	83	63	48
D2305-NHA-D1475	14.75		16.00	133	83	63	48
D2305-NHA-D1480	14.80		16.00	133	83	63	48
D2305-NHA-D1500	15.00		16.00	133	83	63	48
D2305-NHA-D1510	15.10		16.00	133	83	63	48
D2305-NHA-D1550	15.50		16.00	133	83	63	48
D2305-NHA-D1580	15.80		16.00	133	83	63	48
D2305-NHA-D1600	16.00		16.00	133	83	63	48
D2305-NHA-D1650	16.50		18.00	143	93	71	48
D2305-NHA-D1675	16.75		18.00	143	93	71	48
D2305-NHA-D1680	16.80		18.00	143	93	71	48
D2305-NHA-D1700	17.00		18.00	143	93	71	48
D2305-NHA-D1750	17.50		18.00	143	93	71	48
D2305-NHA-D1780	17.80		18.00	143	93	71	48
D2305-NHA-D1800	18.00		18.00	143	93	71	48
D2305-NHA-D1850	18.50		20.00	153	101	77	50
D2305-NHA-D1900	19.00		20.00	153	101	77	50
D2305-NHA-D1950	19.50		20.00	153	101	77	50
D2305-NHA-D1980	19.80		20.00	153	101	77	50
D2305-NHA-D2000	20.00		20.00	153	101	77	50

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.006/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2303-CHA



3D 内冷直柄麻花钻 3XD Twist Drills with straight flank and Internal Cooling

AITiN-nano 涂层 AITiN-nano Coating

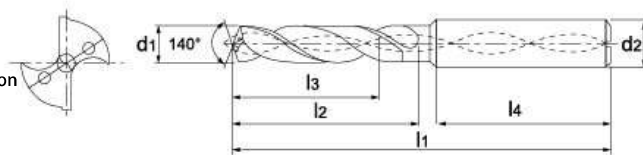
直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Super alloys
34567	12	123	23	1234

最适合 Best suitable 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2303-CHA-D0500	5.00	M6	6.00	66	28	20	36
D2303-CHA-D0510	5.10		6.00	66	28	20	36
D2303-CHA-D0520	5.20		6.00	66	28	20	36
D2303-CHA-D0550	5.50		6.00	66	28	20	36
D2303-CHA-D0555	5.55		6.00	66	28	20	36
D2303-CHA-D0580	5.80		6.00	66	28	20	36
D2303-CHA-D0600	6.00		6.00	66	28	20	36
D2303-CHA-D0610	6.10		8.00	79	34	24	36
D2303-CHA-D0620	6.20		8.00	79	34	24	36
D2303-CHA-D0630	6.30		8.00	79	34	24	36
D2303-CHA-D0650	6.50		8.00	79	34	24	36
D2303-CHA-D0660	6.60		8.00	79	34	24	36
D2303-CHA-D0680	6.80	M8	8.00	79	34	24	36
D2303-CHA-D0690	6.90		8.00	79	34	24	36
D2303-CHA-D0700	7.00	M8X1	8.00	79	34	24	36
D2303-CHA-D0710	7.10		8.00	79	41	29	36
D2303-CHA-D0740	7.40		8.00	79	41	29	36
D2303-CHA-D0750	7.50		8.00	79	41	29	36
D2303-CHA-D0780	7.80		8.00	79	41	29	36
D2303-CHA-D0800	8.00		8.00	79	41	29	36
D2303-CHA-D0810	8.10		10.00	89	47	35	40
D2303-CHA-D0840	8.40		10.00	89	47	35	40
D2303-CHA-D0850	8.50	M10	10.00	89	47	35	40
D2303-CHA-D0860	8.60		10.00	89	47	35	40
D2303-CHA-D0870	8.70		10.00	89	47	35	40
D2303-CHA-D0880	8.80		10.00	89	47	35	40
D2303-CHA-D0900	9.00	M10X1	10.00	89	47	35	40
D2303-CHA-D0930	9.30		10.00	89	47	35	40
D2303-CHA-D0950	9.50		10.00	89	47	35	40
D2303-CHA-D0960	9.60		10.00	89	47	35	40

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2303-CHA

3D 内冷直柄麻花钻 3XD Twist Drills with straight flank and Internal Cooling

AlTiN-nano 涂层 AlTiN-nano Coating

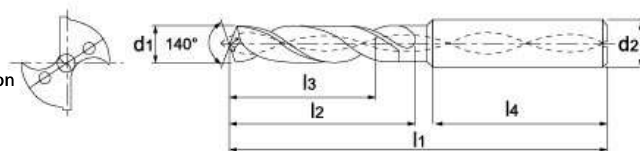
直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Super alloys
34567	12	123	23	1234

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2303-CHA-D0980	9.80		10.00	89	47	35	40
D2303-CHA-D1000	10.00		10.00	89	47	35	40
D2303-CHA-D1025	10.25	M12	12.00	102	55	40	45
D2303-CHA-D1040	10.40		12.00	102	55	40	45
D2303-CHA-D1050	10.50	M12X1.5	12.00	102	55	40	45
D2303-CHA-D1060	10.60		12.00	102	55	40	45
D2303-CHA-D1080	10.80		12.00	102	55	40	45
D2303-CHA-D1100	11.00		12.00	102	55	40	45
D2303-CHA-D1120	11.20		12.00	102	55	40	45
D2303-CHA-D1150	11.50		12.00	102	55	40	45
D2303-CHA-D1180	11.80		12.00	102	55	40	45
D2303-CHA-D1200	12.00	M14	12.00	102	55	40	45
D2303-CHA-D1225	12.25		14.00	107	60	43	45
D2303-CHA-D1250	12.50	M14X1.5	14.00	107	60	43	45
D2303-CHA-D1270	12.70		14.00	107	60	43	45
D2303-CHA-D1275	12.75		14.00	107	60	43	45
D2303-CHA-D1280	12.80		14.00	107	60	43	45
D2303-CHA-D1300	13.00		14.00	107	60	43	45
D2303-CHA-D1310	13.10		14.00	107	60	43	45
D2303-CHA-D1350	13.50		14.00	107	60	43	45
D2303-CHA-D1380	13.80		14.00	107	60	43	45
D2303-CHA-D1400	14.00	M16	14.00	107	60	43	45
D2303-CHA-D1425	14.25		16.00	115	65	45	48
D2303-CHA-D1450	14.50	M16X1.5	16.00	115	65	45	48
D2303-CHA-D1475	14.75		16.00	115	65	45	48
D2303-CHA-D1480	14.80		16.00	115	65	45	48
D2303-CHA-D1500	15.00		16.00	115	65	45	48
D2303-CHA-D1510	15.10		16.00	115	65	45	48
D2303-CHA-D1550	15.50		16.00	115	65	45	48
D2303-CHA-D1580	15.80		16.00	115	65	45	48

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2303-CHA



3D 内冷直柄麻花钻 3XD Twist Drills with straight flank and Internal Cooling

AITiN-nano 涂层 AITiN-nano Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
34567	12	123	23	1234

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69

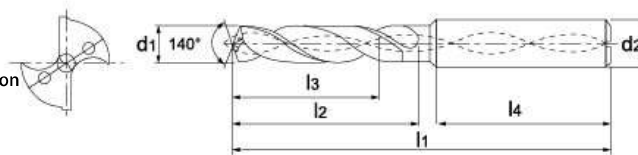
型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2303-CHA-D1600	16.00		16.00	115	65	45	48
D2303-CHA-D1650	16.50		18.00	123	73	51	48
D2303-CHA-D1675	16.75		18.00	123	73	51	48
D2303-CHA-D1680	16.80		18.00	123	73	51	48
D2303-CHA-D1700	17.00		18.00	123	73	51	48
D2303-CHA-D1750	17.50		18.00	123	73	51	48
D2303-CHA-D1780	17.80		18.00	123	73	51	48
D2303-CHA-D1800	18.00		18.00	123	73	51	48
D2303-CHA-D1850	18.50		20.00	131	79	55	50
D2303-CHA-D1880	18.80		20.00	131	79	55	50
D2303-CHA-D1900	19.00		20.00	131	79	55	50
D2303-CHA-D1950	19.50		20.00	131	79	55	50
D2303-CHA-D1980	19.80		20.00	131	79	55	50
D2303-CHA-D2000	20.00		20.00	131	79	55	50

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrage of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)



D2305-CHA

5D 内冷直柄麻花钻 5XD Twist Drills with straight flank and Internal Cooling

AlTiN-nano 涂层 AlTiN-nano Coating

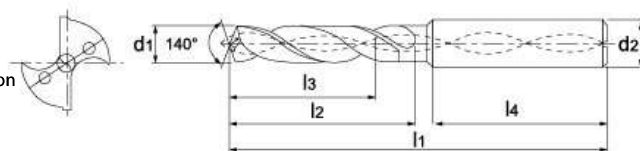
直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
34567	12	123	23	1234

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2305-CHA-D0500	5.00	M6	6.00	82	44	35	36
D2305-CHA-D0510	5.10		6.00	82	44	35	36
D2305-CHA-D0520	5.20		6.00	82	44	35	36
D2305-CHA-D0550	5.50		6.00	82	44	35	36
D2305-CHA-D0555	5.55		6.00	82	44	35	36
D2305-CHA-D0580	5.80		6.00	82	44	35	36
D2305-CHA-D0600	6.00		6.00	82	44	35	36
D2305-CHA-D0610	6.10		8.00	91	53	43	36
D2305-CHA-D0620	6.20		8.00	91	53	43	36
D2305-CHA-D0630	6.30		8.00	91	53	43	36
D2305-CHA-D0650	6.50		8.00	91	53	43	36
D2305-CHA-D0660	6.60		8.00	91	53	43	36
D2305-CHA-D0680	6.80	M8	8.00	91	53	43	36
D2305-CHA-D0690	6.90		8.00	91	53	43	36
D2305-CHA-D0700	7.00	M8X1	8.00	91	53	43	36
D2305-CHA-D0710	7.10		8.00	91	53	43	36
D2305-CHA-D0740	7.40		8.00	91	53	43	36
D2305-CHA-D0750	7.50		8.00	91	53	43	36
D2305-CHA-D0780	7.80		8.00	91	53	43	36
D2305-CHA-D0800	8.00		8.00	91	53	43	36
D2305-CHA-D0810	8.10		10.00	103	61	49	40
D2305-CHA-D0840	8.40		10.00	103	61	49	40
D2305-CHA-D0850	8.50	M10	10.00	103	61	49	40
D2305-CHA-D0860	8.60		10.00	103	61	49	40
D2305-CHA-D0870	8.70		10.00	103	61	49	40
D2305-CHA-D0880	8.80		10.00	103	61	49	40
D2305-CHA-D0900	9.00	M10X1	10.00	103	61	49	40
D2305-CHA-D0930	9.30		10.00	103	61	49	40
D2305-CHA-D0950	9.50		10.00	103	61	49	40
D2305-CHA-D0960	9.60		10.00	103	61	49	40

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.006/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2305-CHA



5D 内冷直柄麻花钻 5XD Twist Drills with straight flank and Internal Cooling

AITiN-nano 涂层 AITiN-nano Coating

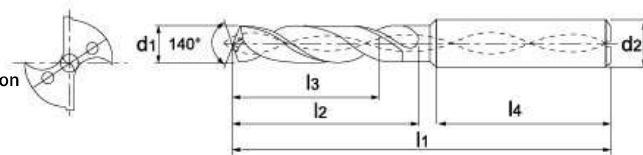
直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
34567	12	123	23	1234
				

 最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2305-CHA-D0980	9.80		10.00	103	61	49	40
D2305-CHA-D1000	10.00		10.00	103	61	49	40
D2305-CHA-D1025	10.25	M12	12.00	118	71	56	45
D2305-CHA-D1040	10.40		12.00	118	71	56	45
D2305-CHA-D1050	10.50	M12X1.5	12.00	118	71	56	45
D2305-CHA-D1060	10.60		12.00	118	71	56	45
D2305-CHA-D1080	10.80		12.00	118	71	56	45
D2305-CHA-D1100	11.00		12.00	118	71	56	45
D2305-CHA-D1120	11.20		12.00	118	71	56	45
D2305-CHA-D1150	11.50		12.00	118	71	56	45
D2305-CHA-D1180	11.80		12.00	118	71	56	45
D2305-CHA-D1200	12.00	M14	12.00	118	71	56	45
D2305-CHA-D1220	12.20		14.00	124	77	60	45
D2305-CHA-D1225	12.25		14.00	124	77	60	45
D2305-CHA-D1250	12.50	M14X1.5	14.00	124	77	60	45
D2305-CHA-D1270	12.70		14.00	124	77	60	45
D2305-CHA-D1275	12.75		14.00	124	77	60	45
D2305-CHA-D1280	12.80		14.00	124	77	60	45
D2305-CHA-D1300	13.00		14.00	124	77	60	45
D2305-CHA-D1350	13.50		14.00	124	77	60	45
D2305-CHA-D1380	13.80		14.00	124	77	60	45
D2305-CHA-D1400	14.00	M16	14.00	124	77	60	45
D2305-CHA-D1425	14.25		16.00	133	83	63	48
D2305-CHA-D1450	14.50	M16X1.5	16.00	133	83	63	48
D2305-CHA-D1475	14.75		16.00	133	83	63	48
D2305-CHA-D1480	14.80		16.00	133	83	63	48
D2305-CHA-D1500	15.00		16.00	133	83	63	48
D2305-CHA-D1510	15.10		16.00	133	83	63	48
D2305-CHA-D1550	15.50		16.00	133	83	63	48
D2305-CHA-D1580	15.80		16.00	133	83	63	48

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2305-CHA

5D 内冷直柄麻花钻 5XD Twist Drills with straight flank and Internal Cooling

AlTiN-nano 涂层 AlTiN-nano Coating

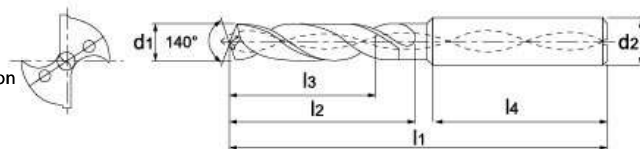
直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁等 Materials to be cut: Steels, Cast Iron and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
34567	12	123	23	1234

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2305-CHA-D1600	16.00		16.00	133	83	63	48
D2305-CHA-D1650	16.50		18.00	143	93	71	48
D2305-CHA-D1675	16.75		18.00	143	93	71	48
D2305-CHA-D1680	16.80		18.00	143	93	71	48
D2305-CHA-D1700	17.00		18.00	143	93	71	48
D2305-CHA-D1750	17.50		18.00	143	93	71	48
D2305-CHA-D1780	17.80		18.00	143	93	71	48
D2305-CHA-D1800	18.00		18.00	143	93	71	48
D2305-CHA-D1850	18.50		20.00	153	101	77	50
D2305-CHA-D1900	19.00		20.00	153	101	77	50
D2305-CHA-D1950	19.50		20.00	153	101	77	50
D2305-CHA-D1980	19.80		20.00	153	101	77	50
D2305-CHA-D2000	20.00		20.00	153	101	77	50

推荐切削用量见P59

Recommendation of cutting output see page P59

尺寸范围 Arrage of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2505-NHA

5D



5D 外冷直柄麻花钻 5XD Twist Drills with straight flank

无涂层 without coating

直线刃口, 平面后角 Linear cutting edge, flach relief

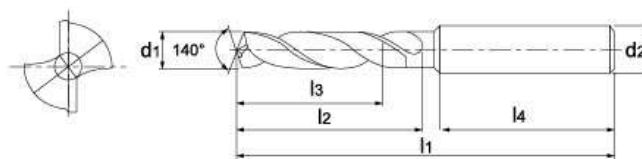
适用被加工材料: 铝合金, 铜合金等

Materials to be cut: Al. Alloys, copperalloys and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
			14	4

最适合 Best suitable 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2505-NHA-D0300	3.00		6.00	66	28	23	36
D2505-NHA-D0325	3.25		6.00	66	28	23	36
D2505-NHA-D0330	3.30	M4	6.00	66	28	23	36
D2505-NHA-D0340	3.40		6.00	66	28	23	36
D2505-NHA-D0350	3.50		6.00	66	28	23	36
D2505-NHA-D0370	3.70		6.00	66	28	23	36
D2505-NHA-D0400	4.00		6.00	74	36	29	36
D2505-NHA-D0420	4.20	M5	6.00	74	36	29	36
D2505-NHA-D0430	4.30		6.00	74	36	29	36
D2505-NHA-D0450	4.50		6.00	74	36	29	36
D2505-NHA-D0465	4.65		6.00	74	36	29	36
D2505-NHA-D0480	4.80		6.00	82	44	35	36
D2505-NHA-D0500	5.00	M6	6.00	82	44	35	36
D2505-NHA-D0510	5.10		6.00	82	44	35	36
D2505-NHA-D0520	5.20		6.00	82	44	35	36
D2505-NHA-D0550	5.50		6.00	82	44	35	36
D2505-NHA-D0555	5.55		6.00	82	44	35	36
D2505-NHA-D0580	5.80		6.00	82	44	35	36
D2505-NHA-D0600	6.00		6.00	82	44	35	36
D2505-NHA-D0610	6.10		8.00	91	53	43	36
D2505-NHA-D0620	6.20		8.00	91	53	43	36
D2505-NHA-D0630	6.30		8.00	91	53	43	36
D2505-NHA-D0650	6.50		8.00	91	53	43	36
D2505-NHA-D0660	6.60		8.00	91	53	43	36
D2505-NHA-D0680	6.80	M8	8.00	91	53	43	36
D2505-NHA-D0690	6.90		8.00	91	53	43	36
D2505-NHA-D0700	7.00	M8X1	8.00	91	53	43	36
D2505-NHA-D0710	7.10		8.00	91	53	43	36
D2505-NHA-D0740	7.40		8.00	91	53	43	36
D2505-NHA-D0750	7.50		8.00	91	53	43	36

推荐切削用量见P60

Recommendation of cutting output see page P60

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2505-NHA

5D



5D 外冷直柄麻花钻 5XD Twist Drills with straight flank

无涂层 without coating

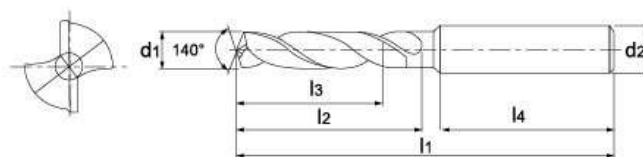
直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 铝合金, 铜合金等
Materials to be cut: Al. Alloys, copper alloys and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
			14	4
				

 最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2505-NHA-D0780	7.80		8.00	91	53	43	36
D2505-NHA-D0800	8.00		8.00	91	53	43	36
D2505-NHA-D0810	8.10		10.00	103	61	49	40
D2505-NHA-D0840	8.40		10.00	103	61	49	40
D2505-NHA-D0850	8.50	M10	10.00	103	61	49	40
D2505-NHA-D0860	8.60		10.00	103	61	49	40
D2505-NHA-D0870	8.70		10.00	103	61	49	40
D2505-NHA-D0880	8.80		10.00	103	61	49	40
D2505-NHA-D0900	9.00	M10X1	10.00	103	61	49	40
D2505-NHA-D0930	9.30		10.00	103	61	49	40
D2505-NHA-D0950	9.50		10.00	103	61	49	40
D2505-NHA-D0960	9.60		10.00	103	61	49	40
D2505-NHA-D0980	9.80		10.00	103	61	49	40
D2505-NHA-D1000	10.00		10.00	103	61	49	40
D2505-NHA-D1025	10.25	M12	12.00	118	71	56	45
D2505-NHA-D1040	10.40		12.00	118	71	56	45
D2505-NHA-D1050	10.50	M12X1.5	12.00	118	71	56	45
D2505-NHA-D1060	10.60		12.00	118	71	56	45
D2505-NHA-D1080	10.80		12.00	118	71	56	45
D2505-NHA-D1100	11.00		12.00	118	71	56	45
D2505-NHA-D1120	11.20		12.00	118	71	56	45
D2505-NHA-D1150	11.50		12.00	118	71	56	45
D2505-NHA-D1180	11.80		12.00	118	71	56	45
D2505-NHA-D1200	12.00	M14	12.00	118	71	56	45
D2505-NHA-D1220	12.20		14.00	124	77	60	45
D2505-NHA-D1225	12.25		14.00	124	77	60	45
D2505-NHA-D1250	12.50	M14X1.5	14.00	124	77	60	45
D2505-NHA-D1270	12.70		14.00	124	77	60	45
D2505-NHA-D1275	12.75		14.00	124	77	60	45
D2505-NHA-D1280	12.80		14.00	124	77	60	45

推荐切削用量见P60

Recommendation of cutting output see page P60

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2505-NHA

5D



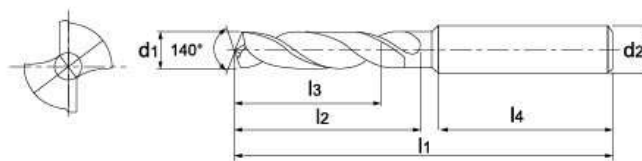
5D 外冷直柄麻花钻 5XD Twist Drills with straight flank
 无涂层 without coating
 直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 铝合金, 铜合金等
 Materials to be cut: Al. Alloys, copperalloys and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
			14	4

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2505-NHA-D1300	13.00		14.00	124	77	60	45
D2505-NHA-D1350	13.50		14.00	124	77	60	45
D2505-NHA-D1380	13.80		14.00	124	77	60	45
D2505-NHA-D1400	14.00	M16	14.00	124	77	60	45
D2505-NHA-D1425	14.25		16.00	133	83	63	48
D2505-NHA-D1450	14.50	M16X1.5	16.00	133	83	63	48
D2505-NHA-D1475	14.75		16.00	133	83	63	48
D2505-NHA-D1480	14.80		16.00	133	83	63	48
D2505-NHA-D1500	15.00		16.00	133	83	63	48
D2505-NHA-D1510	15.10		16.00	133	83	63	48
D2505-NHA-D1550	15.50		16.00	133	83	63	48
D2505-NHA-D1580	15.80		16.00	133	83	63	48
D2505-NHA-D1600	16.00		16.00	133	83	63	48
D2505-NHA-D1650	16.50		18.00	143	93	71	48
D2505-NHA-D1675	16.75		18.00	143	93	71	48
D2505-NHA-D1680	16.80		18.00	143	93	71	48
D2505-NHA-D1700	17.00		18.00	143	93	71	48
D2505-NHA-D1750	17.50		18.00	143	93	71	48
D2505-NHA-D1780	17.80		18.00	143	93	71	48
D2505-NHA-D1800	18.00		18.00	143	93	71	48
D2505-NHA-D1850	18.50		20.00	153	101	77	50
D2505-NHA-D1900	19.00		20.00	153	101	77	50
D2505-NHA-D1950	19.50		20.00	153	101	77	50
D2505-NHA-D1980	19.80		20.00	153	101	77	50
D2505-NHA-D2000	20.00		20.00	153	101	77	50

推荐切削用量见P60

Recommendation of cutting output see page P60

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2505-CHA

5D



5D 内冷直柄麻花钻 5XD Twist Drills with straight flank

无涂层 without coating

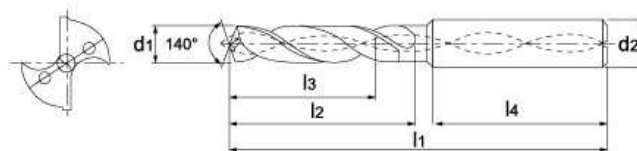
直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 铝合金, 铜合金等
Materials to be cut: Al. Alloys, copperalloys and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
			14	4

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2505-CHA-D0500	5.00	M6	6.00	82	44	35	36
D2505-CHA-D0510	5.10		6.00	82	44	35	36
D2505-CHA-D0520	5.20		6.00	82	44	35	36
D2505-CHA-D0550	5.50		6.00	82	44	35	36
D2505-CHA-D0555	5.55		6.00	82	44	35	36
D2505-CHA-D0580	5.80		6.00	82	44	35	36
D2505-CHA-D0600	6.00		6.00	82	44	35	36
D2505-CHA-D0610	6.10		8.00	91	53	43	36
D2505-CHA-D0620	6.20		8.00	91	53	43	36
D2505-CHA-D0630	6.30		8.00	91	53	43	36
D2505-CHA-D0650	6.50		8.00	91	53	43	36
D2505-CHA-D0660	6.60		8.00	91	53	43	36
D2505-CHA-D0675	6.75	M8	8.00	91	53	43	36
D2505-CHA-D0690	6.90		8.00	91	53	43	36
D2505-CHA-D0700	7.00	M8X1	8.00	91	53	43	36
D2505-CHA-D0710	7.10		8.00	91	53	43	36
D2505-CHA-D0740	7.40		8.00	91	53	43	36
D2505-CHA-D0750	7.50		8.00	91	53	43	36
D2505-CHA-D0780	7.80		8.00	91	53	43	36
D2505-CHA-D0800	8.00		8.00	91	53	43	36
D2505-CHA-D0810	8.10		10.00	103	61	49	40
D2505-CHA-D0840	8.40		10.00	103	61	49	40
D2505-CHA-D0850	8.50	M10	10.00	103	61	49	40
D2505-CHA-D0860	8.60		10.00	103	61	49	40
D2505-CHA-D0870	8.70		10.00	103	61	49	40
D2505-CHA-D0880	8.80		10.00	103	61	49	40
D2505-CHA-D0900	9.00	M10X1	10.00	103	61	49	40
D2505-CHA-D0930	9.30		10.00	103	61	49	40
D2505-CHA-D0950	9.50		10.00	103	61	49	40
D2505-CHA-D0960	9.60		10.00	103	61	49	40

推荐切削用量见P60

Recommendation of cutting output see page P60

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2505-CHA

5D



5D 内冷直柄麻花钻 5XD Twist Drills with straight flank

无涂层 without coating

直线刃口, 平面后角 Linear cutting edge, flach relief

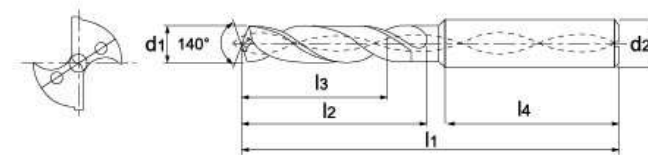
适用被加工材料: 铝合金, 铜合金等

Materials to be cut: Al. Alloys, copperalloys and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
			14	4

● 最适合 Best suitable
 ● 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2505-CHA-D0980	9.80		10.00	103	61	49	40
D2505-CHA-D1000	10.00		10.00	103	61	49	40
D2505-CHA-D1025	10.25	M12	12.00	118	71	56	45
D2505-CHA-D1040	10.40		12.00	118	71	56	45
D2505-CHA-D1050	10.50	M12X1.5	12.00	118	71	56	45
D2505-CHA-D1060	10.60		12.00	118	71	56	45
D2505-CHA-D1080	10.80		12.00	118	71	56	45
D2505-CHA-D1100	11.00		12.00	118	71	56	45
D2505-CHA-D1120	11.20		12.00	118	71	56	45
D2505-CHA-D1150	11.50		12.00	118	71	56	45
D2505-CHA-D1180	11.80		12.00	118	71	56	45
D2505-CHA-D1200	12.00	M14	12.00	118	71	56	45
D2505-CHA-D1220	12.20		14.00	124	77	60	45
D2505-CHA-D1225	12.25		14.00	124	77	60	45
D2505-CHA-D1250	12.50	M14X1.5	14.00	124	77	60	45
D2505-CHA-D1270	12.70		14.00	124	77	60	45
D2505-CHA-D1275	12.75		14.00	124	77	60	45
D2505-CHA-D1280	12.80		14.00	124	77	60	45
D2505-CHA-D1300	13.00		14.00	124	77	60	45
D2505-CHA-D1350	13.50		14.00	124	77	60	45
D2505-CHA-D1380	13.80		14.00	124	77	60	45
D2505-CHA-D1400	14.00	M16	14.00	124	77	60	45
D2505-CHA-D1425	14.25		16.00	133	83	63	48
D2505-CHA-D1450	14.50	M16X1.5	16.00	133	83	63	48
D2505-CHA-D1475	14.75		16.00	133	83	63	48
D2505-CHA-D1480	14.80		16.00	133	83	63	48
D2505-CHA-D1500	15.00		16.00	133	83	63	48
D2505-CHA-D1510	15.10		16.00	133	83	63	48
D2505-CHA-D1550	15.50		16.00	133	83	63	48
D2505-CHA-D1580	15.80		16.00	133	83	63	48

推荐切削用量见P60

Recommendation of cutting output see page P60

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2505-CHA

5D



5D 内冷直柄麻花钻 5XD Twist Drills with straight flank

无涂层 without coating

直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 铝合金, 铜合金等

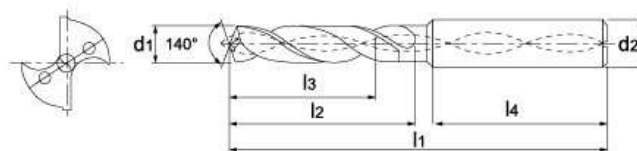
Materials to be cut: Al. Alloys, copperalloys and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
			14	4

最适合 Best suitable

适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2505-CHA-D1600	16.00		16.00	133	83	63	48
D2505-CHA-D1650	16.50		18.00	143	93	71	48
D2505-CHA-D1675	16.75		18.00	143	93	71	48
D2505-CHA-D1680	16.80		18.00	143	93	71	48
D2505-CHA-D1700	17.00		18.00	143	93	71	48
D2505-CHA-D1750	17.50		18.00	143	93	71	48
D2505-CHA-D1780	17.80		18.00	143	93	71	48
D2505-CHA-D1800	18.00		18.00	143	93	71	48
D2505-CHA-D1850	18.50		20.00	153	101	77	50
D2505-CHA-D1900	19.00		20.00	153	101	77	50
D2505-CHA-D1950	19.50		20.00	153	101	77	50
D2505-CHA-D1980	19.80		20.00	153	101	77	50
D2505-CHA-D2000	20.00		20.00	153	101	77	50

推荐切削用量见P60

Recommendation of cutting output see page P60

尺寸范围 Arrage of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2603-NHA



3D 外冷直柄麻花钻 3XD Twist Drills with straight flank

HELICA 涂层 HELICA Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 不锈钢, 软钢等

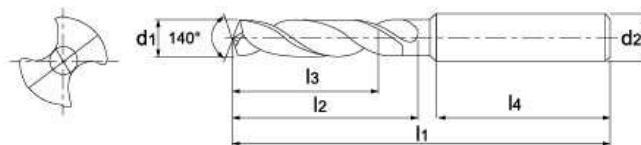
Materials to be cut: Stainless Steels, soft Steels and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
12	123	12	23
			

 最适合 Best suitable

 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2603-NHA-D0300	3.00		6.00	62	20	14	36
D2603-NHA-D0325	3.25		6.00	62	20	14	36
D2603-NHA-D0330	3.30	M4	6.00	62	20	14	36
D2603-NHA-D0340	3.40		6.00	62	20	14	36
D2603-NHA-D0350	3.50		6.00	62	20	14	36
D2603-NHA-D0370	3.70		6.00	62	20	14	36
D2603-NHA-D0400	4.00		6.00	66	24	17	36
D2603-NHA-D0420	4.20	M5	6.00	66	24	17	36
D2603-NHA-D0430	4.30		6.00	66	24	17	36
D2603-NHA-D0450	4.50		6.00	66	24	17	36
D2603-NHA-D0465	4.65		6.00	66	24	17	36
D2603-NHA-D0480	4.80		6.00	66	28	20	36
D2603-NHA-D0500	5.00	M6	6.00	66	28	20	36
D2603-NHA-D0510	5.10		6.00	66	28	20	36
D2603-NHA-D0520	5.20		6.00	66	28	20	36
D2603-NHA-D0550	5.50		6.00	66	28	20	36
D2603-NHA-D0555	5.55		6.00	66	28	20	36
D2603-NHA-D0580	5.80		6.00	66	28	20	36
D2603-NHA-D0600	6.00		6.00	66	28	20	36
D2603-NHA-D0610	6.10		8.00	79	34	24	36
D2603-NHA-D0620	6.20		8.00	79	34	24	36
D2603-NHA-D0630	6.30		8.00	79	34	24	36
D2603-NHA-D0650	6.50		8.00	79	34	24	36
D2603-NHA-D0660	6.60		8.00	79	34	24	36
D2603-NHA-D0680	6.80	M8	8.00	79	34	24	36
D2603-NHA-D0690	6.90		8.00	79	34	24	36
D2603-NHA-D0700	7.00	M8X1	8.00	79	34	24	36
D2603-NHA-D0710	7.10		8.00	79	41	29	36
D2603-NHA-D0740	7.40		8.00	79	41	29	36
D2603-NHA-D0750	7.50		8.00	79	41	29	36

推荐切削用量见P60

Recommendation of cutting output see page P60

尺寸范围 Arrage of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2603-NHA

3D 外冷直柄麻花钻 3XD Twist Drills with straight flank

HELICA 涂层 HELICA Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

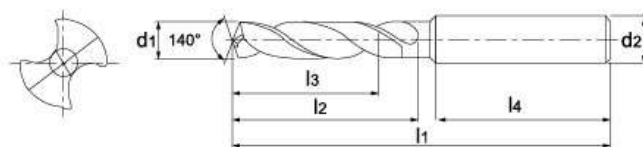
适用被加工材料: 不锈钢, 软钢等

Materials to be cut: Stainless Steels, soft Steels and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
12	123	12	23

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2603-NHA-D0780	7.80		8.00	79	41	29	36
D2603-NHA-D0800	8.00		8.00	79	41	29	36
D2603-NHA-D0810	8.10		10.00	89	47	35	40
D2603-NHA-D0840	8.40		10.00	89	47	35	40
D2603-NHA-D0850	8.50	M10	10.00	89	47	35	40
D2603-NHA-D0860	8.60		10.00	89	47	35	40
D2603-NHA-D0870	8.70		10.00	89	47	35	40
D2603-NHA-D0880	8.80		10.00	89	47	35	40
D2603-NHA-D0900	9.00	M10X1	10.00	89	47	35	40
D2603-NHA-D0930	9.30		10.00	89	47	35	40
D2603-NHA-D0950	9.50		10.00	89	47	35	40
D2603-NHA-D0960	9.60		10.00	89	47	35	40
D2603-NHA-D0980	9.80		10.00	89	47	35	40
D2603-NHA-D1000	10.00		10.00	89	47	35	40
D2603-NHA-D1025	10.25	M12	12.00	102	55	40	45
D2603-NHA-D1040	10.40		12.00	102	55	40	45
D2603-NHA-D1050	10.50	M12X1.5	12.00	102	55	40	45
D2603-NHA-D1060	10.60		12.00	102	55	40	45
D2603-NHA-D1080	10.80		12.00	102	55	40	45
D2603-NHA-D1100	11.00		12.00	102	55	40	45
D2603-NHA-D1120	11.20		12.00	102	55	40	45
D2603-NHA-D1150	11.50		12.00	102	55	40	45
D2603-NHA-D1180	11.80		12.00	102	55	40	45
D2603-NHA-D1200	12.00	M14	12.00	102	55	40	45
D2603-NHA-D1225	12.25		14.00	107	60	43	45
D2603-NHA-D1250	12.50	M14X1.5	14.00	107	60	43	45
D2603-NHA-D1270	12.70		14.00	107	60	43	45
D2603-NHA-D1275	12.75		14.00	107	60	43	45
D2603-NHA-D1280	12.80		14.00	107	60	43	45
D2603-NHA-D1300	13.00		14.00	107	60	43	45

推荐切削用量见P61

Recommendation of cutting output see page P61

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2603-NHA



3D 外冷直柄麻花钻 3XD Twist Drills with straight flank

HELICA 涂层 HELICA Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

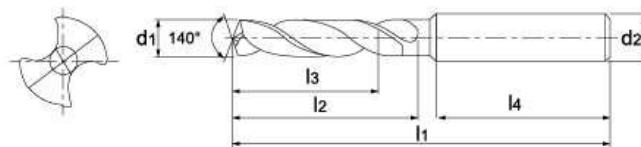
适用被加工材料: 不锈钢, 软钢等

Materials to be cut: Stainless Steels, soft Steels and so on

P	M	K	N
Steels	Stainless Steels	Cast Iron	Non-ferrous metals
12	123	12	23
			

 最适合 Best suitable
  适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2603-NHA-D1310	13.10		14.00	107	60	43	45
D2603-NHA-D1350	13.50		14.00	107	60	43	45
D2603-NHA-D1380	13.80		14.00	107	60	43	45
D2603-NHA-D1400	14.00	M16	14.00	107	60	43	45
D2603-NHA-D1425	14.25		16.00	115	65	45	48
D2603-NHA-D1450	14.50	M16X1.5	16.00	115	65	45	48
D2603-NHA-D1475	14.75		16.00	115	65	45	48
D2603-NHA-D1480	14.80		16.00	115	65	45	48
D2603-NHA-D1500	15.00		16.00	115	65	45	48
D2603-NHA-D1510	15.10		16.00	115	65	45	48
D2603-NHA-D1550	15.50		16.00	115	65	45	48
D2603-NHA-D1580	15.80		16.00	115	65	45	48
D2603-NHA-D1600	16.00		16.00	115	65	45	48
D2603-NHA-D1650	16.50		18.00	123	73	51	48
D2603-NHA-D1675	16.75		18.00	123	73	51	48
D2603-NHA-D1680	16.80		18.00	123	73	51	48
D2603-NHA-D1700	17.00		18.00	123	73	51	48
D2603-NHA-D1750	17.50		18.00	123	73	51	48
D2603-NHA-D1780	17.80		18.00	123	73	51	48
D2603-NHA-D1800	18.00		18.00	123	73	51	48
D2603-NHA-D1850	18.50		20.00	131	79	55	50
D2603-NHA-D1880	18.80		20.00	131	79	55	50
D2603-NHA-D1900	19.00		20.00	131	79	55	50
D2603-NHA-D1950	19.50		20.00	131	79	55	50
D2603-NHA-D1980	19.80		20.00	131	79	55	50
D2603-NHA-D2000	20.00		20.00	131	79	55	50

推荐切削用量见P61

Recommendation of cutting output see page P61

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2603-CHA



3D 内冷直柄麻花钻 3XD Twist Drills with straight flank

HELICA 涂层 HELICA Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

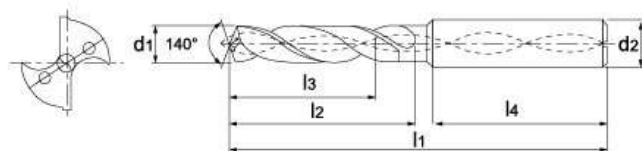
适用被加工材料: 不锈钢, 软钢等

Materials to be cut: Stainless Steels, soft Steels and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
12	123	12		123

最适合 Best suitable
 适合 Suitable

工件材料表P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2603-CHA-D0500	5.00	M6	6.00	66	28	20	36
D2603-CHA-D0510	5.10		6.00	66	28	20	36
D2603-CHA-D0520	5.20		6.00	66	28	20	36
D2603-CHA-D0550	5.50		6.00	66	28	20	36
D2603-CHA-D0555	5.55		6.00	66	28	20	36
D2603-CHA-D0580	5.80		6.00	66	28	20	36
D2603-CHA-D0600	6.00		6.00	66	28	20	36
D2603-CHA-D0610	6.10		8.00	79	34	24	36
D2603-CHA-D0620	6.20		8.00	79	34	24	36
D2603-CHA-D0630	6.30		8.00	79	34	24	36
D2603-CHA-D0650	6.50		8.00	79	34	24	36
D2603-CHA-D0660	6.60		8.00	79	34	24	36
D2603-CHA-D0680	6.80	M8	8.00	79	34	24	36
D2603-CHA-D0690	6.90		8.00	79	34	24	36
D2603-CHA-D0700	7.00	M8X1	8.00	79	34	24	36
D2603-CHA-D0710	7.10		8.00	79	41	29	36
D2603-CHA-D0740	7.40		8.00	79	41	29	36
D2603-CHA-D0750	7.50		8.00	79	41	29	36
D2603-CHA-D0780	7.80		8.00	79	41	29	36
D2603-CHA-D0800	8.00		8.00	79	41	29	36
D2603-CHA-D0810	8.10		10.00	89	47	35	40
D2603-CHA-D0840	8.40		10.00	89	47	35	40
D2603-CHA-D0850	8.50	M10	10.00	89	47	35	40
D2603-CHA-D0860	8.60		10.00	89	47	35	40
D2603-CHA-D0870	8.70		10.00	89	47	35	40
D2603-CHA-D0880	8.80		10.00	89	47	35	40
D2603-CHA-D0900	9.00	M10X1	10.00	89	47	35	40
D2603-CHA-D0930	9.30		10.00	89	47	35	40
D2603-CHA-D0950	9.50		10.00	89	47	35	40
D2603-CHA-D0960	9.60		10.00	89	47	35	40
D2603-CHA-D0980	9.80		10.00	89	47	35	40
D2603-CHA-D1000	10.00		10.00	89	47	35	40
D2603-CHA-D1025	10.25	M12	12.00	102	55	40	45
D2603-CHA-D1040	10.40		12.00	102	55	40	45
D2603-CHA-D1050	10.50	M12X1.5	12.00	102	55	40	45
D2603-CHA-D1060	10.60		12.00	102	55	40	45
D2603-CHA-D1080	10.80		12.00	102	55	40	45

推荐切削用量见P61

Recommendation of cutting output see page P61

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2603-CHA



3D 内冷直柄麻花钻 3XD Twist Drills with straight flank and Internal Cooling

HELICA 涂层 HELICA Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 不锈钢, 软钢等

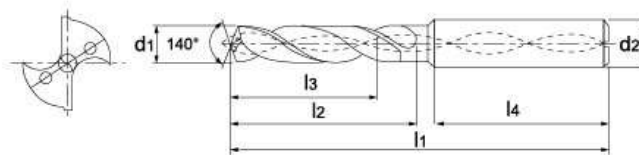
Materials to be cut: Stainless Steels, soft Steels and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
12	123	12		123
				

 最适合
Best suitable

 适合
Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2603-CHA-D1100	11.00		12.00	102	55	40	45
D2603-CHA-D1120	11.20		12.00	102	55	40	45
D2603-CHA-D1150	11.50		12.00	102	55	40	45
D2603-CHA-D1180	11.80		12.00	102	55	40	45
D2603-CHA-D1200	12.00	M14	12.00	102	55	40	45
D2603-CHA-D1225	12.25		14.00	107	60	43	45
D2603-CHA-D1250	12.50	M14X1.5	14.00	107	60	43	45
D2603-CHA-D1270	12.70		14.00	107	60	43	45
D2603-CHA-D1275	12.75		14.00	107	60	43	45
D2603-CHA-D1280	12.80		14.00	107	60	43	45
D2603-CHA-D1300	13.00		14.00	107	60	43	45
D2603-CHA-D1310	13.10		14.00	107	60	43	45
D2603-CHA-D1350	13.50		14.00	107	60	43	45
D2603-CHA-D1380	13.80		14.00	107	60	43	45
D2603-CHA-D1400	14.00	M16	14.00	107	60	43	45
D2603-CHA-D1425	14.25		16.00	115	65	45	48
D2603-CHA-D1450	14.50	M16X1.5	16.00	115	65	45	48
D2603-CHA-D1475	14.75		16.00	115	65	45	48
D2603-CHA-D1480	14.80		16.00	115	65	45	48
D2603-CHA-D1500	15.00		16.00	115	65	45	48
D2603-CHA-D1510	15.10		16.00	115	65	45	48
D2603-CHA-D1550	15.50		16.00	115	65	45	48
D2603-CHA-D1580	15.80		16.00	115	65	45	48
D2603-CHA-D1600	16.00		16.00	115	65	45	48
D2603-CHA-D1650	16.50		18.00	123	73	51	48
D2603-CHA-D1675	16.75		18.00	123	73	51	48
D2603-CHA-D1680	16.80		18.00	123	73	51	48
D2603-CHA-D1700	17.00		18.00	123	73	51	48
D2603-CHA-D1750	17.50		18.00	123	73	51	48
D2603-CHA-D1780	17.80		18.00	123	73	51	48
D2603-CHA-D1800	18.00		18.00	123	73	51	48
D2603-CHA-D1850	18.50		20.00	131	79	55	50
D2603-CHA-D1880	18.80		20.00	131	79	55	50
D2603-CHA-D1900	19.00		20.00	131	79	55	50
D2603-CHA-D1950	19.50		20.00	131	79	55	50
D2603-CHA-D1980	19.80		20.00	131	79	55	50
D2603-CHA-D2000	20.00		20.00	131	79	55	50

推荐切削用量见P61

Recommendation of cutting output see page P61

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2605-CHA



5D 内冷直柄麻花钻 5XD Twist Drills with straight flank and Internal Cooling

HELICA 涂层 HELICA Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

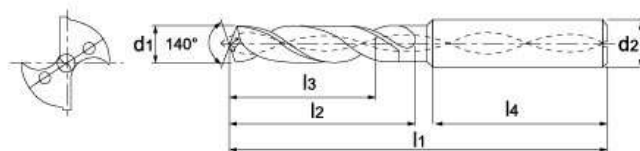
适用被加工材料: 不锈钢, 软钢等

Materials to be cut: Stainless Steels, soft Steels and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
12	123	12		123

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2605-CHA-D0500	5.00	M6	6.00	82	44	35	36
D2605-CHA-D0510	5.10		6.00	82	44	35	36
D2605-CHA-D0520	5.20		6.00	82	44	35	36
D2605-CHA-D0550	5.50		6.00	82	44	35	36
D2605-CHA-D0555	5.55		6.00	82	44	35	36
D2605-CHA-D0580	5.80		6.00	82	44	35	36
D2605-CHA-D0600	6.00		6.00	82	44	35	36
D2605-CHA-D0610	6.10		8.00	91	53	43	36
D2605-CHA-D0620	6.20		8.00	91	53	43	36
D2605-CHA-D0630	6.30		8.00	91	53	43	36
D2605-CHA-D0650	6.50		8.00	91	53	43	36
D2605-CHA-D0660	6.60		8.00	91	53	43	36
D2605-CHA-D0680	6.80	M8	8.00	91	53	43	36
D2605-CHA-D0690	6.90		8.00	91	53	43	36
D2605-CHA-D0700	7.00	M8X1	8.00	91	53	43	36
D2605-CHA-D0710	7.10		8.00	91	53	43	36
D2605-CHA-D0740	7.40		8.00	91	53	43	36
D2605-CHA-D0750	7.50		8.00	91	53	43	36
D2605-CHA-D0780	7.80		8.00	91	53	43	36
D2605-CHA-D0800	8.00		8.00	91	53	43	36
D2605-CHA-D0810	8.10		10.00	103	61	49	40
D2605-CHA-D0840	8.40		10.00	103	61	49	40
D2605-CHA-D0850	8.50	M10	10.00	103	61	49	40
D2605-CHA-D0860	8.60		10.00	103	61	49	40
D2605-CHA-D0870	8.70		10.00	103	61	49	40
D2605-CHA-D0880	8.80		10.00	103	61	49	40
D2605-CHA-D0900	9.00	M10X1	10.00	103	61	49	40
D2605-CHA-D0930	9.30		10.00	103	61	49	40
D2605-CHA-D0950	9.50		10.00	103	61	49	40
D2605-CHA-D0930	9.60		10.00	103	61	49	40
D2605-CHA-D0980	9.80		10.00	103	61	49	40
D2605-CHA-D1000	10.00		10.00	103	61	49	40
D2605-CHA-D1025	10.25	M12	12.00	118	71	56	45
D2605-CHA-D1040	10.40		12.00	118	71	56	45
D2605-CHA-D1050	10.50	M12X1.5	12.00	118	71	56	45
D2605-CHA-D1060	10.60		12.00	118	71	56	45
D2605-CHA-D1080	10.80		12.00	118	71	56	45

推荐切削用量见P61

Recommendation of cutting output see page P61

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D2605-CHA



5D 内冷直柄麻花钻 5XD Twist Drills with straight flank and Internal Cooling

HELICA 涂层 HELICA Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 不锈钢, 软钢等

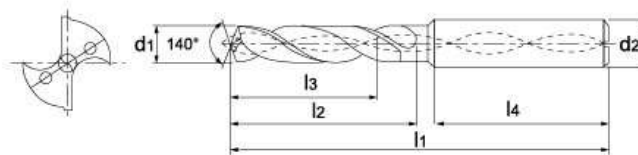
Materials to be cut: Stainless Steels, soft Steelss and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
12	123	12		123
				

 最适合 Best suitable

 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(m7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D2605-CHA-D1100	11.00		12.00	118	71	56	45
D2605-CHA-D1120	11.20		12.00	118	71	56	45
D2605-CHA-D1150	11.50		12.00	118	71	56	45
D2605-CHA-D1180	11.80		12.00	118	71	56	45
D2605-CHA-D1200	12.00	M14	12.00	118	71	56	45
D2605-CHA-D1220	12.20		14.00	124	77	60	45
D2605-CHA-D1225	12.25		14.00	124	77	60	45
D2605-CHA-D1250	12.50	M14X1.5	14.00	124	77	60	45
D2605-CHA-D1270	12.70		14.00	124	77	60	45
D2605-CHA-D1275	12.75		14.00	124	77	60	45
D2605-CHA-D1280	12.80		14.00	124	77	60	45
D2605-CHA-D1300	13.00		14.00	124	77	60	45
D2605-CHA-D1350	13.50		14.00	124	77	60	45
D2605-CHA-D1380	13.80		14.00	124	77	60	45
D2605-CHA-D1400	14.00	M16	14.00	124	77	60	45
D2605-CHA-D1425	14.25		16.00	133	83	63	48
D2605-CHA-D1450	14.50	M16X1.5	16.00	133	83	63	48
D2605-CHA-D1475	14.75		16.00	133	83	63	48
D2605-CHA-D1480	14.80		16.00	133	83	63	48
D2605-CHA-D150	15.00		16.00	133	83	63	48
D2605-CHA-D1510	15.10		16.00	133	83	63	48
D2605-CHA-D1550	15.50		16.00	133	83	63	48
D2605-CHA-D1580	15.80		16.00	133	83	63	48
D2605-CHA-D1600	16.00		16.00	133	83	63	48
D2605-CHA-D1650	16.50		18.00	143	93	71	48
D2605-CHA-D1675	16.75		18.00	143	93	71	48
D2605-CHA-D1680	16.80		18.00	143	93	71	48
D2605-CHA-D1700	17.00		18.00	143	93	71	48
D2605-CHA-D1750	17.50		18.00	143	93	71	48
D2605-CHA-D1780	17.80		18.00	143	93	71	48
D2605-CHA-D1800	18.00		18.00	143	93	71	48
D2605-CHA-D1850	18.50		20.00	153	101	77	50
D2605-CHA-D1900	19.00		20.00	153	101	77	50
D2605-CHA-D1950	19.50		20.00	153	101	77	50
D2605-CHA-D1980	19.80		20.00	153	101	77	50
D2605-CHA-D2000	20.00		20.00	153	101	77	50

推荐切削用量见P61

Recommendation of cutting output see page P61

尺寸范围 Arrange of size	D(m7)	d(h6)
≥2-3	+0.002/+0.012	0.000/-0.006
>3-6	+0.004/+0.016	0.000/-0.008
>6-10	+0.06/+0.021	0.000/-0.009
>10-18	+0.007/+0.025	0.000/-0.011
>18-20	+0.008/+0.029	0.000/-0.013

单位(mm)
Unit(mm)

D1306-NYZ

6D



6D 外冷直柄小麻花钻 6XD Small Twist Drills with straight flank

无涂层 without coating

直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 软钢, 不锈钢, 铸铁, 铝合金等

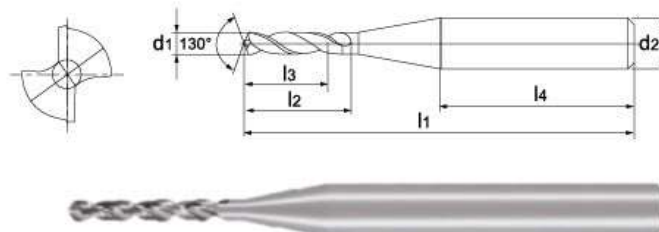
Materials to be cut: soft Steels, Stainless Steels, Cast Iron, Al. Alloys and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
123456	123	123	123	4
				

 最适合 Best suitable

 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(h7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D1306-NYZ-D0020	0.20		3	38	0.8	1.25	
D1306-NYZ-D0021	0.21		3	38	1.8	1.25	
D1306-NYZ-D0022	0.22		3	38	0.8	1.25	
D1306-NYZ-D0023	0.23		3	38	1.8	1.25	
D1306-NYZ-D0024	0.24		3	38	0.8	1.25	
D1306-NYZ-D0025	0.25		3	38	2.2	1.55	
D1306-NYZ-D0026	0.26		3	38	0.2	1.55	
D1306-NYZ-D0027	0.27		3	38	2.2	1.55	
D1306-NYZ-D0028	0.28		3	38	0.2	1.55	
D1306-NYZ-D0029	0.29		3	38	2.2	1.55	
D1306-NYZ-D0030	0.30		3	38	0.4	1.8	
D1306-NYZ-D0031	0.31		3	38	2.4	1.8	
D1306-NYZ-D0032	0.32		3	38	0.4	1.8	
D1306-NYZ-D0033	0.33		3	38	2.4	1.8	
D1306-NYZ-D0034	0.34		3	38	0.4	1.8	
D1306-NYZ-D0035	0.35		3	38	2.8	2.2	
D1306-NYZ-D0036	0.36		3	38	0.8	2.2	
D1306-NYZ-D0037	0.37		3	38	2.8	2.2	
D1306-NYZ-D0038	0.38		3	38	0.8	2.2	
D1306-NYZ-D0039	0.39		3	38	3.6	2.7	
D1306-NYZ-D0040	0.40		3	38	0.6	2.7	
D1306-NYZ-D0041	0.41		3	38	3.6	2.7	
D1306-NYZ-D0042	0.42		3	38	0.6	2.7	
D1306-NYZ-D0043	0.43		3	38	3.6	2.7	
D1306-NYZ-D0044	0.44		3	38	0.6	2.7	
D1306-NYZ-D0045	0.45		3	38	3.6	2.7	
D1306-NYZ-D0046	0.46		3	38	0.6	2.7	
D1306-NYZ-D0047	0.47		3	38	3.6	2.7	
D1306-NYZ-D0048	0.48		3	38	0.6	2.7	
D1306-NYZ-D0049	0.49		3	38	4	3.2	

推荐切削用量见P62

Recommendation of cutting output see page P62

D1306-NYZ



6D 外冷直柄小麻花钻 6XD Small Twist Drills with straight flank

无涂层 without coating

直线刃口, 平面后角 Linear cutting edge, flach relief

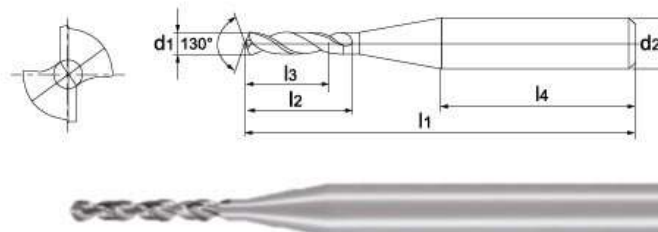
适用被加工材料: 软钢, 不锈钢, 铸铁, 铝合金等

Materials to be cut: soft Steels, Stainless Steels, Cast Iron, Al. Alloys and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metal	Superalloys
123456	123	123	123	4

最适合 Best suitable 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(h7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D1306-NYZ-D0050	0.50		3	38	4	3.2	
D1306-NYZ-D0051	0.51		3	38	4	3.2	
D1306-NYZ-D0052	0.52		3	38	4	3.2	
D1306-NYZ-D0053	0.53		3	38	4	3.2	
D1306-NYZ-D0054	0.54		3	38	0.5	3.6	
D1306-NYZ-D0055	0.55		3	38	4.5	3.6	
D1306-NYZ-D0056	0.56		3	38	0.5	3.6	
D1306-NYZ-D0057	0.57		3	38	4.5	3.6	
D1306-NYZ-D0058	0.58		3	38	0.5	3.6	
D1306-NYZ-D0059	0.59		3	38	4.5	3.6	
D1306-NYZ-D0060	0.60		3	38	0.5	3.6	
D1306-NYZ-D0061	0.61		3	38	4.5	3.9	
D1306-NYZ-D0062	0.62		3	38	5	3.9	
D1306-NYZ-D0063	0.63		3	38	5	3.9	
D1306-NYZ-D0064	0.64		3	38	5	3.9	
D1306-NYZ-D0065	0.65		3	38	5	3.9	
D1306-NYZ-D0066	0.66		3	38	5	3.9	
D1306-NYZ-D0067	0.67		3	38	5	3.9	
D1306-NYZ-D0068	0.68		3	38	0.6	4.5	
D1306-NYZ-D0069	0.69		3	38	5.6	4.5	
D1306-NYZ-D0070	0.70		3	38	0.6	4.5	
D1306-NYZ-D0071	0.71		3	38	5.6	4.5	
D1306-NYZ-D0072	0.72		3	38	0.6	4.5	
D1306-NYZ-D0073	0.73		3	38	5.6	4.5	
D1306-NYZ-D0074	0.74		3	38	0.6	4.5	
D1306-NYZ-D0075	0.75		3	38	5.6	4.5	
D1306-NYZ-D0076	0.76		3	38	0.3	5	
D1306-NYZ-D0077	0.77		3	38	6.3	5	
D1306-NYZ-D0078	0.78		3	38	0.3	5	
D1306-NYZ-D0079	0.79		3	38	6.3	5	

推荐切削用量见P62

Recommendation of cutting output see page P62

D1306-NYZ

6D



6D 外冷直柄小麻花钻 6XD Small Twist Drills with straight flank

无涂层 without coating

直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 软钢, 不锈钢, 铸铁, 铝合金等

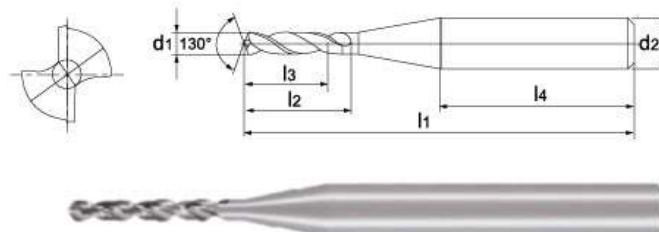
Materials to be cut: soft Steels, Stainless Steels, Cast Iron, Al. Alloys and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metal	Superalloys
123456	123	123	123	4
				

 最适合 Best suitable

 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(h7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D1306-NYZ-D0080	0.80		3	38	0.3	5	
D1306-NYZ-D0081	0.81		3	38	6.3	5	
D1306-NYZ-D0082	0.82		3	38	0.3	5	
D1306-NYZ-D0083	0.83		3	38	6.3	5	
D1306-NYZ-D0084	0.84		3	38	0.3	5	
D1306-NYZ-D0085	0.85		3	38	6.3	5	
D1306-NYZ-D0086	0.86		3	38	0.1	5.7	
D1306-NYZ-D0087	0.87		3	38	7.1	5.7	
D1306-NYZ-D0088	0.88		3	38	0.1	5.7	
D1306-NYZ-D0089	0.89		3	38	7.1	5.7	
D1306-NYZ-D0090	0.90		3	38	0.1	5.7	
D1306-NYZ-D0091	0.91		3	38	7.1	5.7	
D1306-NYZ-D0092	0.92		3	38	0.1	5.7	
D1306-NYZ-D0093	0.93		3	38	7.1	5.7	
D1306-NYZ-D0094	0.94		3	38	0.1	5.7	
D1306-NYZ-D0095	0.95		3	38	7.1	5.7	
D1306-NYZ-D0096	0.96		3	38	8	6.5	
D1306-NYZ-D0097	0.97		3	38	8	6.5	
D1306-NYZ-D0098	0.98		3	38	8	6.5	
D1306-NYZ-D0099	0.99		3	38	8	6.5	
D1306-NYZ-D0100	1.00		3	38	8	6.5	
D1306-NYZ-D0101	1.01		3	38	8	6.5	
D1306-NYZ-D0102	1.02		3	38	8	6.5	
D1306-NYZ-D0103	1.03		3	38	8	6.5	
D1306-NYZ-D0104	1.04		3	38	8	6.5	
D1306-NYZ-D0105	1.05		3	38	8	6.5	
D1306-NYZ-D0106	1.06		3	38	9	7.3	
D1306-NYZ-D0107	1.07		3	38	9	7.3	
D1306-NYZ-D0108	1.08		3	38	9	7.3	
D1306-NYZ-D0109	1.09		3	38	9	7.3	

推荐切削用量见P62

Recommendation of cutting output see page P62

D1306-NYZ



6D 外冷直柄小麻花钻 6XD Small Twist Drills with straight flank

无涂层 without coating

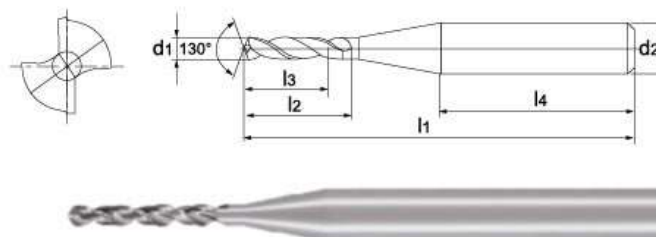
直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 软钢, 不锈钢, 铸铁, 铝合金等
Materials to be cut: soft Steels, Stainless Steels, Cast Iron, Al. Alloys and so on

P	M	K	N	S
Steels	Stain ess Steels	Cast Iron	Non-ferrous metal	Superalloys
123456	123	123	123	4

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(h7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D1306-NYZ-D0110	1.10		3	38	9	7.3	
D1306-NYZ-D0112	1.12		3	38	9	7.3	
D1306-NYZ-D0114	1.14		3	38	9	7.3	
D1306-NYZ-D0116	1.16		3	38	10	8.2	
D1306-NYZ-D0118	1.18		3	38	10	8.2	
D1306-NYZ-D0120	1.20		3	38	10	8.2	
D1306-NYZ-D0125	1.25		3	38	10	8.2	
D1306-NYZ-D0130	1.30		3	38	10	8.2	
D1306-NYZ-D0135	1.35		3	38	11.2	9.2	
D1306-NYZ-D0140	1.40		3	38	11.2	9.2	
D1306-NYZ-D0145	1.45		3	38	11.2	9.2	
D1306-NYZ-D0150	1.50		3	38	11.2	9.2	
D1306-NYZ-D0155	1.55		3	38	13.4	11.2	
D1306-NYZ-D0160	1.60		3	38	13.4	11.2	
D1306-NYZ-D0165	1.65		3	38	13.4	11.2	
D1306-NYZ-D0170	1.70		3	38	13.4	11.2	
D1306-NYZ-D0175	1.75		3	38	13.4	11.2	
D1306-NYZ-D0180	1.80		3	38	13.4	11.2	
D1306-NYZ-D0185	1.85		3	38	13.4	11.2	
D1306-NYZ-D0190	1.90		3	38	13.4	11.2	
D1306-NYZ-D0195	1.95		3	38	13.4	11.2	
D1306-NYZ-D0200	2.00		3	38	13.4	11.2	

推荐切削用量见P62

Recommendation of cutting output see page P62

D3020-CHA



20D 内冷深孔麻花钻 20XD Twist Drills for Deephole and with internal Cooling

AlTiN-nano 涂层 AlTiN-nano Coating

直线刃口, 平面后角, 4刃带 Linear cutting edge, flach relief, 4 edges

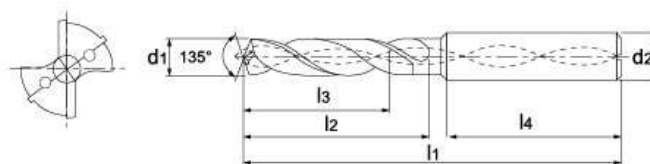
适用被加工材料: 钢, 铸铁, 铝合金等

Materials to be cut: Steels, Cast Iron, Al. Alloys and so on

P	M	K	N	S
Steels	Stain ess Steels	Cast Iron	Non-ferrous metal	Superalloys
34		123	23	

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(h7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D3020-CHA-D03000	3		6	107	65	60	36
D3020-CHA-D03175	3.175	1/8"	6	134	92	86	36
D3020-CHA-D03500	3.5		6	134	92	86	36
D3020-CHA-D03572	3.572	9/64"	6	134	92	86	36
D3020-CHA-D03969	3.969	5/32"	6	134	92	86	36
D3020-CHA-D04000	4		6	134	92	86	36
D3020-CHA-D04500	4.5		6	158	118	110	36
D3020-CHA-D04763	4.763	3/16"	6	158	118	110	36
D3020-CHA-D04800	4.8		6	158	118	110	36
D3020-CHA-D05000	5		6	158	118	110	36
D3020-CHA-D05500	5.5		6	170	132	123	36
D3020-CHA-D05556	5.556	7/32"	6	182	144	135	36
D3020-CHA-D05800	5.8		6	182	144	135	36
D3020-CHA-D06000	6		6	182	144	135	36
D3020-CHA-D06100	6.1		8	200	162	151	36
D3020-CHA-D06350	6.35	1/4"	8	200	162	151	36
D3020-CHA-D06500	6.5		8	200	162	151	36
D3020-CHA-D06800	6.8		8	200	162	151	36
D3020-CHA-D07000	7		8	200	162	151	36
D3020-CHA-D07144	7.144	9/32"	8	222	184	172	36
D3020-CHA-D07400	7.4		8	222	184	172	36
D3020-CHA-D07500	7.5		8	222	184	172	36
D3020-CHA-D07938	7.938	5/16"	8	222	184	172	36
D3020-CHA-D08000	8		8	222	184	172	36
D3020-CHA-D08300	8.3		10	240	198	184	40
D3020-CHA-D08500	8.5		10	240	198	184	40
D3020-CHA-D08731	8.731	11/32"	10	240	198	184	40
D3020-CHA-D09000	9		10	240	198	184	40
D3020-CHA-D09525	9.525	3/8"	10	262	220	205	40
D3020-CHA-D09800	9.8		10	262	220	205	40

推荐切削用量见P63

Recommendation of cutting output see page P63

D3020-CHA



20D 内冷深孔麻花钻 20XD Twist Drills for Deephole and with internal Cooling

AITiN-nano 涂层 AITiN-nano Coating

直线刃口, 平面后角, 4刃带 Linear cutting edge, flach relief, 4 edges

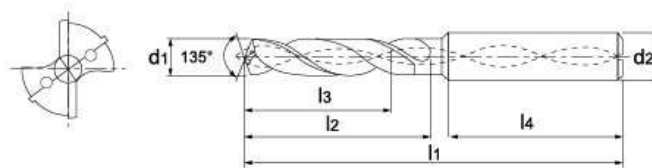
适用被加工材料: 钢, 铸铁, 铝合金等

Materials to be cut: Steels, Cast Iron, Al. Alloys and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
34		123	23	

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(h7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D3020-CHA-D10000	10		10	262	220	205	40
D3020-CHA-D10200	10.2		12	289	242	225	45
D3020-CHA-D10319	10.319	13/32"	12	289	242	225	45
D3020-CHA-D11000	11		12	289	242	225	45
D3020-CHA-D11113	11.113	7/16"	12	311	264	246	45
D3020-CHA-D11500	11.5		12	311	264	246	45
D3020-CHA-D11800	11.8		12	311	264	246	45
D3020-CHA-D11906	11.906	15/32"	12	311	264	246	45
D3020-CHA-D12000	12		12	311	264	246	45

推荐切削用量见P63

Recommendation of cutting output see page P63

D3103-NHA

3D 外冷阶梯钻(螺纹底孔钻) 3XD Step drills (tap drill hole)

AlTiN-nano 涂层 AlTiN-nano Coating

曲线刃口, 铲磨后角 Linear cutting edge, flach relief

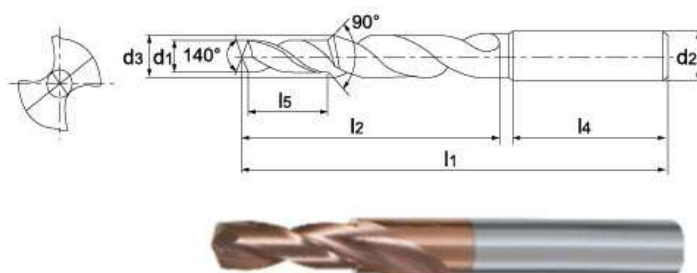
适用被加工材料: 钢, 铸铁, 铸造铝合金等

Materials to be cut: Steels, Cast Iron, Cast Al. Alloys and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
34	12	123	23	

最适合 Best suitable
 适合 Suitable

工件材料表见 P69 Workpiece Materials, see Page 69



型号 Type	螺纹尺寸M公制 Thread Size Metric	刃径 Diameter d1(h7)	柄径 Diameter of Holder d2(h6)	阶梯直径 d3	总长 Total Length l1	槽长 Length of flute l2	柄长 Length of shank l4	刃长 Cutting Length l5
DG-DSA03-M4	M4	3.30	6.00	4.50	66	28	36.0	11.4
DG-DSA03-M5	M5	4.20	6.00	6.00	66	28	36.0	13.6
DG-DSA03-M6	M6	5.00	8.00	7.00	79	41	36.0	16.5
DG-DSA03-M8	M8	6.80	10.00	9.50	89	47	40.0	21.0
DG-DSA03-M10	M10	8.50	12.00	12.00	102	55	45.0	25.5
DG-DSA03-M12	M12	10.25	14.00	14.00	107	60	45.0	30.0
DG-DSA03-M14	M14	12.00	16.00	16.00	115	65	48.0	34.5
DG-DSA03-M16	M16	14.00	18.00	18.00	123	73	48.0	38.5
DG-DSA03-M8×1.0	M8X1	7.00	10.00	9.80	89	47	40.0	21.0
DG-DSA03-M10×1.0	M10X1	9.00	12.00	12.00	102	55	45.0	25.5
DG-DSA03-M12×1.5	M12X1.5	10.50	14.00	14.00	107	60	45.0	30.0
DG-DSA03-M14×1.5	M14X1.5	12.50	16.00	16.00	115	65	48.0	34.5
DG-DSA03-M16×1.5	M16X1.5	14.50	18.00	18.00	123	73	48.0	38.5

推荐切削用量见 P64

Recommendation of cutting output see page P64

D7305-NHA

5D



5D 外冷直柄直槽钻 5XD Drills with straight flank and flutes

无涂层 without coating

直线刃口, 平面后角 Linear cutting edge, flach relief

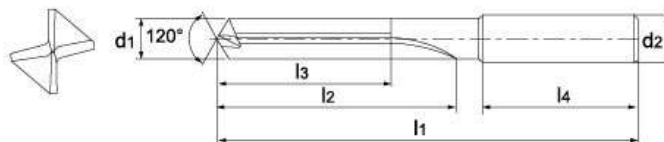
适用被加工材料: 钢, 铸铁, 铸造铝合金等

Materials to be cut: Steels, Cast Iron, Cast Al. Alloys and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
		12	23	

● 最适合 Best suitable
 ● 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(k6)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D7305-NHA-D0400	4.00		6.00	74	36	29	36
D7305-NHA-D0420	4.20	M5	6.00	74	36	29	36
D7305-NHA-D0500	5.00	M6	6.00	82	44	35	36
D7305-NHA-D0600	6.00		6.00	82	44	35	36
D7305-NHA-D0680	6.80	M8	8.00	91	53	43	36
D7305-NHA-D0700	7.00	M8X1	8.00	91	53	43	36
D7305-NHA-D0800	8.00		8.00	91	53	43	36
D7305-NHA-D0850	8.50	M10	10.00	103	61	49	40
D7305-NHA-D0900	9.00	M10X1	10.00	103	61	49	40
D7305-NHA-D1000	10.00		10.00	103	61	49	40
D7305-NHA-D1025	10.25	M12	12.00	118	71	56	45
D7305-NHA-D1100	11.00		12.00	118	71	56	45
D7305-NHA-D1200	12.00	M14	12.00	118	71	56	45
D7305-NHA-D1300	13.00		14.00	124	77	60	45
D7305-NHA-D1400	14.00	M16	14.00	124	77	60	45
D7305-NHA-D1500	15.00		16.00	133	83	63	48
D7305-NHA-D1550	15.50		16.00	133	83	63	48
D7305-NHA-D1600	16.00		16.00	133	83	63	48
D7305-NHA-D1700	17.00		18.00	143	93	71	48
D7305-NHA-D1750	17.50		18.00	143	93	71	48
D7305-NHA-D1800	18.00		18.00	143	93	71	48
D7305-NHA-D1950	19.50		20.00	153	101	77	50
D7305-NHA-D2000	20.00		20.00	153	101	77	50

推荐切削用量见P65

Recommendation of cutting output see page P65

尺寸范围 Arrange of size	D(k6)	d(h6)
≥2-3	+0.006/+0.000	0.000/-0.006
>3-6	+0.009/+0.001	0.000/-0.008
>6-10	+0.010/+0.001	0.000/-0.009
>10-18	+0.012/+0.001	0.000/-0.011
>18-20	+0.015/+0.002	0.000/-0.013

单位(mm)
Unit(mm)

D7205-CHA



5D 内冷直柄直槽钻 55XD Drills with straight flank and flutes and with Internal Cooling

TiAIN 涂层 AITIN-nano Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

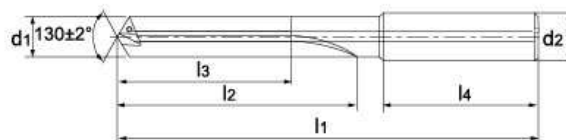
适用被加工材料: 铸铁等

Materials to be cut: Cast Iron and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
		12	23	

最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(k6)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3	柄长 Length of shank l4
D7205-CHA-D0400	4.00		6.00	74	36	29	36
D7205-CHA-D0420	4.20	M5	6.00	74	36	29	36
D7205-CHA-D0500	5.00	M6	6.00	82	44	35	36
D7205-CHA-D0600	6.00		6.00	82	44	35	36
D7205-CHA-D0680	6.80	M8	8.00	91	53	43	36
D7205-CHA-D0700	7.00	M8X1	8.00	91	53	43	36
D7205-CHA-D0800	8.00		8.00	91	53	43	36
D7205-CHA-D0850	8.50	M10	10.00	103	61	49	40
D7205-CHA-D0900	9.00	M10X1	10.00	103	61	49	40
D7205-CHA-D1000	10.00		10.00	103	61	49	40
D7205-CHA-D1025	10.25	M12	12.00	118	71	56	45
D7205-CHA-D1100	11.00		12.00	118	71	56	45
D7205-CHA-D1200	12.00	M14	12.00	118	71	56	45
D7205-CHA-D1300	13.00		14.00	124	77	60	45
D7205-CHA-D1400	14.00	M16	14.00	124	77	60	45
D7205-CHA-D1500	15.00		16.00	133	83	63	48
D7205-CHA-D1550	15.50		16.00	133	83	63	48
D7205-CHA-D1600	16.00		16.00	133	83	63	48
D7205-CHA-D1700	17.00		18.00	143	93	71	48
D7205-CHA-D1750	17.50		18.00	143	93	71	48
D7205-CHA-D1800	18.00		18.00	143	93	71	48
D7205-CHA-D1950	19.50		20.00	153	101	77	50
D7205-CHA-D2000	20.00		20.00	153	101	77	50

推荐切削用量见P65

Recommendation of cutting output see page P65

尺寸范围 Arrange of size	D(k6)	d(h6)
≥2-3	+0.006/+0.000	0.000/-0.006
>3-6	+0.009/+0.001	0.000/-0.008
>6-10	+0.010/+0.001	0.000/-0.009
>10-18	+0.012/+0.001	0.000/-0.011
>18-20	+0.015/+0.002	0.000/-0.013

单位(mm)
Unit(mm)

D5203-NYZ



3D 外冷直柄三刃钻 3XD Drills with 3 flutes and straight shank

TiAlN 涂层 TiAlN Coating

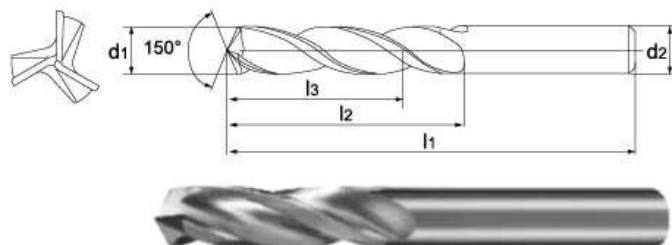
直线刃口, 平面后角 Linear cutting edge, flach relief

适用被加工材料: 铸铁, 铸造铝合金
Materials to be cut: Cast Iron, Cast Al. Alloys

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
		123	23	
				

 最适合 Best suitable
 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(h7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3
D5203-NYZ-D0300	3.00		3.00	46	16	12
D5203-NYZ-D0310	3.10		3.10	49	18	14
D5203-NYZ-D0320	3.20		3.20	49	18	14
D5203-NYZ-D0330	3.30		3.30	49	18	14
D5203-NYZ-D0340	3.40		3.40	52	20	15
D5203-NYZ-D0350	3.50		3.50	52	20	15
D5203-NYZ-D0360	3.60		3.60	52	20	15
D5203-NYZ-D0370	3.70		3.70	52	20	15
D5203-NYZ-D0380	3.80		3.80	55	22	17
D5203-NYZ-D0400	4.00		4.00	55	22	17
D5203-NYZ-D0410	4.10		4.10	55	22	17
D5203-NYZ-D0420	4.20		4.20	55	22	17
D5203-NYZ-D0450	4.50		4.50	58	24	18
D5203-NYZ-D0480	4.80		4.80	62	26	20
D5203-NYZ-D0500	5.00		5.00	62	26	20
D5203-NYZ-D0510	5.10		5.10	62	26	20
D5203-NYZ-D0520	5.20		5.20	62	26	20
D5203-NYZ-D0530	5.30		5.30	62	26	20
D5203-NYZ-D0550	5.50		5.50	66	28	21
D5203-NYZ-D0580	5.80		5.80	66	28	21
D5203-NYZ-D0600	6.00		6.00	66	28	21
D5203-NYZ-D0610	6.10		6.10	70	31	23
D5203-NYZ-D0620	6.20		6.20	70	31	23
D5203-NYZ-D0640	6.40		6.40	70	31	23
D5203-NYZ-D0650	6.50		6.50	70	31	23
D5203-NYZ-D0670	6.70		6.70	70	31	23
D5203-NYZ-D0680	6.80		6.80	74	34	25
D5203-NYZ-D0700	7.00		7.00	74	34	25
D5203-NYZ-D0710	7.10		7.10	74	34	25
D5203-NYZ-D0740	7.40		7.40	74	34	25

推荐切削用量见P66

Recommendation of cutting output see page P66

D5203-NYZ



3D 外冷直柄三刃钻 3XD Drills with 3 flutes and straight shank

TiAIN 涂层 TiAIN Coating

直线刃口, 平面后角 Linear cutting edge, flach relief

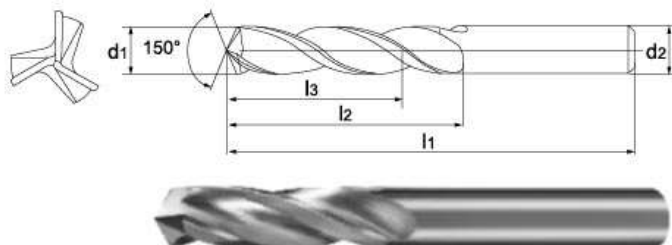
适用被加工材料: 铸铁, 铸造铝合金

Materials to be cut: Cast Iron, Cast Al. Alloys

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
		123	23	
				

 最适合 Best suitable
  适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69



型号 Type	刃径 Diameter d1(h7)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2	最大切深 Max. cutting depth l3
D5203-NYZ-D0750	7.50		7.50	74	34	25
D5203-NYZ-D0780	7.80		7.80	79	37	27
D5203-NYZ-D0800	8.00		8.00	79	37	27
D5203-NYZ-D0810	8.10		8.10	79	37	27
D5203-NYZ-D0820	8.20		8.20	79	37	27
D5203-NYZ-D0840	8.40		8.40	79	37	27
D5203-NYZ-D0850	8.50		8.50	79	37	27
D5203-NYZ-D0860	8.60		8.60	84	40	29
D5203-NYZ-D0870	8.70		8.70	84	40	29
D5203-NYZ-D0880	8.80		8.80	84	40	29
D5203-NYZ-D0900	9.00		9.00	84	40	29
D5203-NYZ-D0950	9.50		9.50	84	40	29
D5203-NYZ-D0980	9.80		9.80	89	43	31
D5203-NYZ-D1000	10.00		10.00	89	43	31
D5203-NYZ-D1010	10.10		10.10	89	43	31
D5203-NYZ-D1020	10.20		10.20	89	43	31
D5203-NYZ-D1040	10.40		10.40	89	43	31
D5203-NYZ-D1050	10.50		10.50	89	43	31
D5203-NYZ-D1100	11.00		11.00	95	47	33
D5203-NYZ-D1200	12.00		12.00	102	51	35
D5203-NYZ-D1300	13.00		13.00	102	51	35
D5203-NYZ-D1400	14.00		14.00	107	54	37
D5203-NYZ-D1500	15.00		15.00	111	54	37
D5203-NYZ-D1750	17.50		17.50	123	62	40
D5203-NYZ-D1950	19.50		19.50	131	66	42
D5203-NYZ-D2000	20.00		20.00	131	66	42

推荐切削用量见P66

Recommendation of cutting output see page P66

D9100-090



外冷直柄 90°NC 中心钻 90° NC centre drills with straight shank

TiAlN 涂层

AiTIN Coating

直线刃口, 铲磨后角

Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁, 铸造铝合金等

Materials to be cut: Steels, Cast Iron, Cast Al. Alloys and so on and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
12345		123	1234	

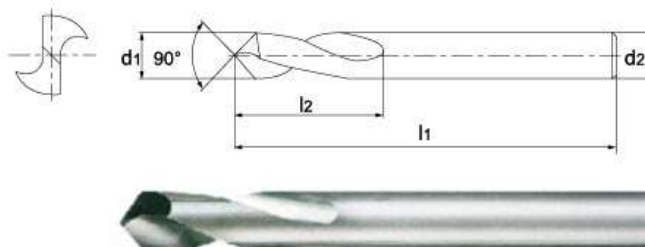
最适合 Best suitable 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69

型号 Type	刃径 Diameter d1(h6)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2
D9100-090-D0500	5.00		5.00	62	10
D9100-090-D0600	6.00		6.00	66	15
D9100-090-D0800	8.00		8.00	79	17
D9100-090-D1000	10.00		10.00	89	20
D9100-090-D1200	12.00		12.00	102	25
D9100-090-D1400	14.00		14.00	107	30
D9100-090-D1600	16.00		16.00	115	35
D9100-090-D2000	20.00		20.00	131	40

推荐切削用量见P67

Recommendation of cutting output see page P67



D9100-120



外冷直柄 120°NC 中心钻 120° NC centre drills with straight shank

TiAlN 涂层

AiTIN Coating

直线刃口, 铲磨后角

Linear cutting edge, flach relief

适用被加工材料: 钢, 铸铁, 铸造铝合金等

Materials to be cut: Steels, Cast Iron, Cast Al. Alloys and so on and so on

P	M	K	N	S
Steels	Stainless Steels	Cast Iron	Non-ferrous metals	Superalloys
12345		123	1234	

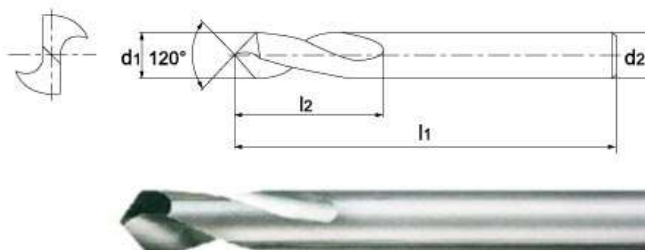
最适合 Best suitable 适合 Suitable

工件材料表见P69 Workpiece Materials, see Page 69

型号 Type	刃径 Diameter d1(h6)	螺纹尺寸M公制 Thread Size Metric	柄径 Diameter of Holder d2(h6)	总长 Total Length l1	槽长 Length of flute l2
D9100-120-D0500	5.00		5.00	62	10
D9100-120-D0600	6.00		6.00	66	15
D9100-120-D0800	8.00		8.00	79	17
D9100-120-D1000	10.00		10.00	89	20
D9100-120-D1200	12.00		12.00	102	25
D9100-120-D1400	14.00		14.00	107	30
D9100-120-D1600	16.00		16.00	115	35
D9100-120-D2000	20.00		20.00	131	40

推荐切削用量见P67

Recommendation of cutting output see page P67



推荐切削用量：D2100, D2300系列钢用麻花钻

Recommendation of cutting output: D2100, D2300 Series Twist Drills for Steels

材料组MC Materials Group		工件材料 Workpiece Materials	抗拉 强度 Tensile strength	布氏 硬度 Brinell hardness	洛氏 硬度 Rockwell hardness	切削速度Vc (m/min) Cutting Speed		每转进给量 fn(mm/rev) Infeed per rotation fn(mm/rev)									
						冷却方式 Cooling methods		钻头直径 d Dia. of Drills d									
ISO	JN		N/mm²	HB	HRC	外冷	内冷	3	4	6	8	10	12	14	16	18	20
Steels P	P1	Low carbon Steels with lang chips	<530	<125		140	180	0.13	0.15	0.19	0.25	0.30	0.33	0.38	0.42	0.42	0.43
	P2	Low carbon Steels with short chips, free cutting steels	<530	<125		130	160	0.13	0.15	0.19	0.25	0.30	0.33	0.38	0.42	0.42	0.43
	P3	High carbon Steels and medium carbon Steels	>530	<220	<25	130	160	0.13	0.15	0.19	0.25	0.30	0.33	0.38	0.42	0.42	0.43
	P4	Alloys、Tool Steels	600-850	<330	<35	100	130	0.12	0.14	0.17	0.23	0.28	0.30	0.35	0.37	0.38	0.39
	P5	Alloys、Tool Steels	850-1400	340-450	35-48	100	130	0.12	0.14	0.17	0.23	0.28	0.30	0.35	0.37	0.38	0.39
	P6	Ferritic Stainless Steels, martensite、Stainless Steels, PH Stainless Steels	600-900	<330	<35	80	100	0.10	0.12	0.15	0.20	0.24	0.26	0.30	0.32	0.33	0.34
	P7	High-tensile ferritic Stainless Steels, martensite Stainless Steels, PH Stainless Steels	900-1350	330-450	35-48	80	100	0.10	0.12	0.15	0.20	0.24	0.26	0.30	0.32	0.33	0.34
Stainless Steels M	M1	Austentic Stainless Steels	<600	130-200		60	80	0.09	0.11	0.14	0.17	0.21	0.23	0.26	0.28	0.3	0.30
	M2	High-tensile austentic und Cast Stainless Steels	600-800	150-230	<25	50	70	0.07	0.09	0.11	0.14	0.16	0.18	0.21	0.23	0.24	0.25
	M3	Dual-phase Stainless Steels	<800	135-275	<30												
Cast Iron K	K1	Cast Iron	125-500	120-290	<32	110	140	0.17	0.20	0.26	0.34	0.41	0.44	0.51	0.54	0.57	0.58
	K2	Medium difficulty to be cut alloyed cast iron and cast iron with nodular graphite	<600	130-260	<28	100	120	0.15	0.18	0.23	0.30	0.36	0.39	0.45	0.48	0.50	0.51
	K3	High difficulty to be cut high alloyed cast iron and cast iron with nodular graphite	>600	180-350	<43	70	90	0.09	0.10	0.13	0.17	0.20	0.22	0.26	0.27	0.28	0.29
Non-ferrous metal N	N1	Forged Al. Alloys	<520	60-90													
	N2	Cast Al. Alloys, Si<12%	<350	70-100		160	260	0.16	0.19	0.28	0.32	0.38	0.42	0.48	0.51	0.53	0.54
	N3	Cast Al. Alloys, Si>12%	200-320	60-120		160	260	0.16	0.19	0.28	0.32	0.38	0.42	0.48	0.51	0.53	0.54
	N4	Copper、copperalloys	200-650	60-200													
	N5	Graphite, compound Materials Graphlte, CFK, CFRP	600-1500														
	N6	Al. based compound Materials (MMCs) GFK, CFK	<700	<210													
Superalloy, Ti-Alloys S	S1	Iron-base superalloy	500-1200	160-260	25-48		35	0.05	0.06	0.06	0.08	0.11	0.13	0.15	0.16	0.16	0.17
	S2	Co-base superalloy	1000-1450	250-450	25-48		25	0.05	0.06	0.06	0.08	0.11	0.13	0.15	0.16	0.16	0.17
	S3	Ni-base superalloy	600-1700	160-450	<48		25	0.05	0.06	0.06	0.08	0.11	0.13	0.15	0.16	0.16	0.17
	S4	Ti and Ti-Alloys	900-1600	300-400	33-48		50	0.08	0.09	0.09	0.13	0.17	0.19	0.23	0.25	0.25	0.26

切削速度Vc及每转进给量fn视工况可在±(20-25)%范围内调整
Cutting Speed Vc and Infeed per rotation Fn could be adjusted in ±(20-25)% according to working condition

推荐切削用量：D2500系列铝合金用麻花钻

Recommendation of cutting output: D2500 Series Twist Drills for Al. Alloys

材料组MC Materials Group		工件材料 Workpiece Materials	抗拉 强度 Tensile strength	布氏 硬度 Brinell hardness	洛氏 硬度 Rockwell hardness	切削速度Vc (m/min) Cutting Speed		每转进给量 fn(mm/rev) Infeed per rotation fn(mm/rev)										
						冷却方式 Cooling methods		钻头直径 d Dia. of Drills d										
ISO	JN			N/mm²	HB	HRC	外冷 External Cooling	内冷 Internal Cooling	3	4	6	8	10	12	14	16	18	20
P Steels	P1	Low carbon Steels with lang chips	<530	<125														
	P2	Low carbon Steels with short chips, free cutting steels	<530	<125														
	P3	High carbon Steels and medium carbon Steels	>530	<220	<25													
	P4	Alloys, Tool Steels	600-850	<330	<35													
	P5	Alloys, Tool Steels	850-1400	340-450	35-48													
	P6	Ferritic Stainless Steels, martensite, Stainless Steels, PH Stainless Steels	600-900	<330	<35													
	P7	High-tensile ferritic Stainless Steels, martensite Stainless Steels, PH Stainless Steels	900-1350	330-450	35-48													
M Stainless Steels	M1	Austentic Stainless Steels	<600	130-200														
	M2	High-tensile austentic und Cast Stainless Steels	600-800	150-230	<25													
	M3	Dual-phase Stainless Steels	<800	135-275	<30													
K Cast Iron	K1	Cast Iron	125-500	120-290	< 32													
	K2	Medium difficulty to be cut alloyed cast iron and cast iron with nodular graphite	<600	130-260	<28													
	K3	High difficulty to be cut high alloyed cast iron and cast iron with nodular graphite	>600	180-350	<43													
N Non-ferrous metal	N1	Forged Al. Alloys	<520	60-90		160	260	0.16	0.19	0.28	0.32	0.38	0.42	0.48	0.51	0.53	0.54	
	N2	Cast Al. Alloys, Si<12%	<350	70-100														
	N3	Cast Al. Alloys, Si>12%	200-320	60-120														
	N4	Copper, copperalloys	200-650	60-200		160	260	0.16	0.19	0.28	0.32	0.38	0.42	0.48	0.51	0.53	0.54	
	N5	Graphite, compound Materials Graphlte, CFK, CFRP	600-1500															
	N6	Al. based compound Materials (MMCs) GFK, CFK	<700	<210														
S Superalloy, Ti-Alloys	S1	Iron-base superalloy	500-1200	160-260	25-48													
	S2	Co-base superalloy	1000-1450	250-450	25-48													
	S3	Ni-base superalloy	600-1700	160-450	<48													
	S4	Ti and Ti-Alloys	900-1600	300-400	33-48		50	0.08	0.09	0.10	0.13	0.17	0.19	0.23	0.25	0.25	0.26	

切削速度Vc及每转进给量fn视工况可在±(20-25)%范围内调整
Cutting Speed Vc and Infeed per rotation Fn could be adjusted in ± (20-25) % according to working condition

推荐切削用量：D2600系列不锈钢用麻花钻

Recommendation of cutting output: D2600 Series Twist Drills for Stainless Steels

材料组MC Materials Group		工件材料 Workpiece Materials	抗拉 强度 Tensile strength	布氏 硬度 Brinell hardness	洛氏 硬度 Rockwell hardness	切削速度Vc (m/min) Cutting Speed		每转进给量 fn(mm/rev) Infeed per rotation fn(mm/rev)									
						冷却方式 Cooling methods		钻头直径 d Dia. of Drills d									
ISO	JN			N/mm²	HB	HRC	外冷 External Cooling	内冷 Internal Cooling	3	4	6	8	10	12	14	16	18
P Steels	P1	Low carbon Steels with lang chips	<530	<125		140	180	0.13	0.15	0.19	0.25	0.30	0.33	0.38	0.42	0.42	0.43
	P2	Low carbon Steels with short chips, free cutting steels	<530	<125		130	160	0.13	0.15	0.19	0.25	0.30	0.33	0.38	0.42	0.42	0.43
	P3	High carbon Steels and medium carbon Steels	>530	<220	<25												
	P4	Alloys、 Tool Steels	600-850	<330	<35												
	P5	Alloys、 Tool Steels	850-1400	340-450	35-48												
	P6	Ferritic Stainless Steels, martensite、 Stainless Steels, PH Stainless Steels	600-900	<330	<35												
	P7	High-tensile ferritic Stainless Steels, martensite Stainless Steels, PH Stainless Steels	900-1350	330-450	35-48												
M Stainless Steels	M1	Austentic Stainless Steels	<600	130-200		60	80	0.09	0.11	0.14	0.17	0.21	0.23	0.26	0.28	0.3	0.30
	M2	High-tensile austentic und Cast Stainless Steels	600-800	150-230	<25	50	70	0.07	0.09	0.11	0.14	0.16	0.18	0.21	0.23	0.24	0.25
	M3	Dual-phase Stainless Steels	<800	135-275	<30	40	60	0.05	0.06	0.08	0.11	0.13	0.15	0.17	0.18	0.19	0.20
K Cast Iron	K1	Cast Iron	125-500	120-290	<32	110	140	0.17	0.20	0.26	0.34	0.41	0.44	0.51	0.54	0.57	0.58
	K2	Medium difficulty to be cut alloyed cast iron and cast iron with nodular graphite	<600	130-260	<28	100	120	0.15	0.18	0.23	0.30	0.36	0.39	0.45	0.48	0.50	0.51
	K3	High difficulty to be cut high alloyed cast iron and cast iron with nodular graphite	>600	180-350	<43												
N Non-ferrous metal	N1	Forged Al. Alloys	<520	60-90													
	N2	Cast Al. Alloys, Si<12%	<350	70-100													
	N3	Cast Al. Alloys, Si>12%	200-320	60-120													
	N4	Copper、 copperalloys	200-650	60-200													
	N5	Graphite, compound Materials Graphlte, CFK, CFRP	600-1500														
	N6	Al. based compound Materials (MMCs) GFK, CFK	<700	<210													
S Superalloy, Ti-Alloys	S1	Iron-base superalloy	500-1200	160-260	25-48		35	0.05	0.06	0.06	0.08	0.11	0.13	015	0.16	0.16	0.17
	S2	Co-base superalloy	1000-1450	250-450	25-48		25	0.05	0.06	0.06	0.08	0.11	0.13	015	0.16	0.16	0.17
	S3	Ni-base superalloy	600-1700	160-450	<48		25	0.05	0.06	0.06	0.08	0.11	0.13	015	0.16	0.16	0.17
	S4	Ti and Ti-Alloys	900-1600	300-400	33-48												

切削速度Vc及每转进给量fn视工况可在±(20-25)%范围内调整
Cutting Speed Vc and Infeed per rotation Fn could be adjusted in ± (20-25) % according to working condition

推荐切削用量：D1300系列小麻花钻

Recommendation of cutting output: D1300Series Small Twist Drills

材料组MC Materials Group		工件材料 Workpiece Materials	布氏 硬度 Brinell hardness	钻头直径 d(mm) Dia. of Drills d (mm)									
				0.10-0.30		0.31-0.50		0.51-0.80		0.81-1.10		1.11-2.00	
				切削速度 Cutting Speed	进给量 Infeed	切削速度 Cutting Speed	进给量 Infeed	切削速度 Cutting Speed	进给量 Infeed	切削速度 Cutting Speed	进给量 Infeed	切削速度 Cutting Speed	进给量 Infeed
ISO	JN		HB	Vc m/min	fn mm/rev	Vc m/min	fn mm/rev	Vc m/min	fn mm/rev	Vc m/min	fn mm/rev	Vc m/min	fn mm/rev
P Steels	P1	Low carbon Steels with long chips	<125	3-10-30	0,001-0,004	8-15-30	0,004-0,007	12-25-55	0,007-0,011	20-40-70	0,011-0,015	25-60-80	0,015-0,021
	P2	Low carbon Steels with short chips, free cutting steels	<125	3-10-30	0,001-0,004	8-15-30	0,004-0,007	12-25-55	0,007-0,011	20-40-70	0,011-0,015	25-60-80	0,015-0,021
	P3	High carbon Steels and medium carbon Steels	<220	3-10-30	0,001-0,004	8-15-30	0,004-0,007	12-25-55	0,007-0,011	20-40-70	0,011-0,015	25-60-80	0,015-0,021
	P4	Alloys. Tool Steels	<330	3-8-15	0,001-0,002	4-10-25	0,002-0,004	8-20-45	0,004-0,006	12-35-60	0,006-0,008	15-50-70	0,008-0,012
	P5	Alloys. Tool Steels	340-450	3-8-15	0,001-0,002	4-10-25	0,002-0,004	8-20-45	0,004-0,006	12-35-60	0,006-0,008	15-50-70	0,008-0,012
	P6	Ferritic Stainless Steels, martensite, Stainless Steels, PH Stainless Steels	<330	2-5-10	0,001-0,002	3-8-15	0,002-0,003	6-15-25	0,003-0,005	8-20-35	0,005-0,007	12-30-45	0,007-0,010
	P7	High-tensile ferritic Stainless Steels, martensite Stainless Steels, PH Stainless Steels	330-450										
M Stainless Steels	M1	Austenitic Stainless Steels	130-200	1-2-3	0,001-0,002	2-4-6	0,002-0,003	4-7-10	0,003-0,005	6-10-14	0,005-0,007	8-12-16	0,007-0,010
	M2	High-tensile austenitic und Cast Stainless Steels	150-230	1-2-3	0,001-0,002	2-4-6	0,002-0,003	4-7-10	0,003-0,005	6-10-14	0,005-0,007	8-12-16	0,007-0,010
	M3	Dual-phase Stainless Steels	135-275	1-2-3	0,001-0,002	2-4-6	0,002-0,003	4-7-10	0,003-0,005	6-10-14	0,005-0,007	8-12-16	0,007-0,010
K Cast Iron	K1	Cast Iron	120-290	4-10-14	0,001-0,004	8-15-25	0,004-0,007	10-25-40	0,007-0,011	15-40-54	0,011-0,015	20-50-65	0,015-0,021
	K2	Medium difficulty to be cut alloyed cast iron and cast iron with nodular graphite	130-260	3-6-10	0,001-0,002	4-10-18	0,002-0,004	8-15-35	0,004-0,006	12-20-45	0,006-0,008	20-35-50	0,008-0,012
	K3	High difficulty to be cut high alloyed cast iron and cast iron with nodular graphite	180-350	3-6-10	0,001-0,002	4-10-18	0,002-0,004	8-15-35	0,004-0,006	12-20-45	0,006-0,008	20-35-50	0,008-0,012
N Non-ferrous metal	N1	Forged Al. Alloys	60-90										
	N2	Cast Al. Alloys, Si<12%	70-100	5-15-30	0,001-0,004	10-30-60	0,004-0,007	10-30-60	0,004-0,007	25-80-120	0,011-0,015	30-100-140	0,015-0,021
	N3	Cast Al. Alloys, Si>12%	60-120	5-15-30	0,001-0,004	10-30-60	0,004-0,007	10-30-60	0,004-0,007	25-80-120	0,011-0,015	30-100-140	0,015-0,021
	N4	Copper, copperalloys	60-200										
	N5	Graphite, compound Materials Graphite, CFK, CFRP											
	N6	Al. based compound Materials (MMCs) GFK, CFK	<210										
S Superalloy, Ti-Alloys	S1	Iron-base superalloy	160-260										
	S2	Co-base superalloy	250-450										
	S3	Ni-base superalloy	160-450										
	S4	Ti and Ti-Alloys	300-400	3-3-5	0,001-0,002	3-6-10	0,002-0,004	4-10-15	0,004-0,006	6-15-20	0,006-0,008	8-20-25	0,008-0,012

切削速度Vc及每转进给量fn视工况可在±(20-25)%范围内调整

Cutting Speed Vc and Infeed per rotation Fn could be adjusted in ±(20-25)% according to working condition

推荐切削用量：D3020系列深孔钻

Recommendation of cutting output: D3020 Series Drills for Deephole

材料组MC Materials Group		工件材料 Workpiece Materials	抗拉 强度 Tensile strength	布氏 硬度 Brinell hardness	洛氏 硬度 Rockwell hardness	切削速度Vc (m/min) Cutting Speed		每转进给量 fn(mm/rev) Infeed per rotation fn(mm/rev)									
			N/mm²	HB	HRC	冷却方式 Cooling methods		钻头直径 d Dia. of Drills d									
ISO	JN					外冷 External Cooling	内冷 Internal Cooling	3	4	6	8	10	12	14	16	18	20
Steels	P1	Low carbon Steels with long chips	<530	<125													
	P2	Low carbon Steels with short chips, free cutting steels	<530	<125													
	P3	High carbon Steels and medium carbon Steels	>530	<220	<25		100	0.13	0.15	0.19	0.25	0.30	0.33				
	P4	Alloys、Tool Steels	600-850	<330	<35		100	0.12	0.14	0.17	0.23	0.28	0.30				
	P5	Alloys、Tool Steels	850-1400	340-450	35-48												
	P6	Ferritic Stainless Steels, martensite, Stainless Steels, PH Stainless Steels	600-900	<330	<35												
	P7	High-tensile ferritic Stainless Steels, martensite Stainless Steels, PH Stainless Steels	900-1350	330-450	35-48												
Stainless Steels	M1	Austenitic Stainless Steels	<600	130-200													
	M2	High-tensile austenitic und Cast Stainless Steels	600-800	150-230	<25												
	M3	Dual-phase Stainless Steels	<800	135-275	<30												
Cast Iron	K1	Cast Iron	125-500	120-290	<32		90	0.17	0.20	0.26	0.34	0.41	0.44				
	K2	Medium difficulty to be cut alloyed cast iron and cast iron with nodular graphite	<600	130-260	<28		80	0.15	0.18	0.23	0.30	0.36	0.39				
	K3	High difficulty to be cut high alloyed cast iron and cast iron with nodular graphite	>600	180-350	<43		60	0.09	0.10	0.13	0.17	0.20	0.22				
Non-ferrous metal	N1	Forged Al. Alloys	<520	60-90													
	N2	Cast Al. Alloys, Si<12%	<350	70-100			140	0.16	0.19	0.29	0.33	0.38	0.41				
	N3	Cast Al. Alloys, Si>12%	200-320	60-120			140	0.16	0.19	0.29	0.33	0.38	0.41				
	N4	Copper、copperalloys	200-650	60-200			175	0.16	0.19	0.29	0.33	0.38	0.41				
	N5	Graphite, compound Materials Graphlte, CFK, CFRP	600-1500														
	N6	Al. based compound Materials (MMCs) GFK, CFK	<700	<210													
Superalloy, Ti-Alloys	S1	Iron-base superalloy	500-1200	160-260	25-48												
	S2	Co-base superalloy	1000-1450	250-450	25-48												
	S3	Ni-base superalloy	600-1700	160-450	<48												
	S4	Ti and Ti-Alloys	900-1600	300-400	33-48												

切削速度Vc及每转进给量fn视工况可在±(20-25)%范围内调整
Cutting Speed Vc and Infeed per rotation Fn could be adjusted in ± (20-25) % according to working condition

推荐切削用量：D3100系列阶梯钻

Recommendation of cutting output: D3100 Series Step drills

材料组MC Materials Group		工件材料 Workpiece Materials	抗拉 强度 Tensile strength	布氏 硬度 Brinell hardness	洛氏 硬度 Rockwell hardness	切削速度Vc (m/min) Cutting Speed		每转进给量 fn(mm/rev) Infeed per rotation fn(mm/rev)									
						冷却方式 Cooling methods		钻头直径 d Dia. of Drills d									
ISO	JN			N/mm²	HB	HRC	外冷 External Cooling	内冷 Internal Cooling	3	4	6	8	10	12	14	16	18
Steels 钢	P1	Low carbon Steels with lang chips	<530	<125		140		0.13	0.15	0.19	0.25	0.30	0.33	0.38	0.42	0.42	0.43
	P2	Low carbon Steels with short chips, free cutting steels	<530	<125		130		0.13	0.15	0.19	0.25	0.30	0.33	0.38	0.42	0.42	0.43
	P3	High carbon Steels and medium carbon Steels	>530	<220	<25	130		0.13	0.15	0.19	0.25	0.30	0.33	0.38	0.42	0.42	0.43
	P4	Alloys、Tool Steels	600-850	<330	<35	100		0.12	0.14	0.17	0.23	0.28	0.30	0.35	0.37	0.38	0.39
	P5	Alloys、Tool Steels	850-1400	340-450	35-48												
	P6	Ferritic Stainless Steels, martensite, Stainless Steels, PH Stainless Steels	600-900	<330	<35												
	P7	High-tensile ferritic Stainless Steels, martensite Stainless Steels, PH Stainless Steels	900-1350	330-450	35-48												
Stainless Steels 不锈钢	M1	Austentic Stainless Steels	<600	130-200		60		0.09	0.11	0.14	0.17	0.21	0.23	0.26	0.28	0.3	0.30
	M2	High-tensile austentic und Cast Stainless Steels	600-800	150-230	<25	50		0.07	0.09	0.11	0.14	0.16	0.18	0.21	0.23	0.24	0.25
	M3	Dual-phase Stainless Steels	<800	135-275	<30												
Cast Iron 铸铁	K1	Cast Iron	125-500	120-290	<32	110		0.17	0.20	0.26	0.34	0.41	0.44	0.51	0.54	0.57	0.58
	K2	Medium difficulty to be cut alloyed cast iron and cast iron with nodular graphite	<600	130-260	<28	100		0.15	0.18	0.23	0.30	0.36	0.39	0.45	0.48	0.50	0.51
	K3	High difficulty to be cut high alloyed cast iron and cast iron with nodular graphite	>600	180-350	<43	70		0.09	0.10	0.13	0.17	0.20	0.22	0.26	0.27	0.28	0.29
Non-ferrous metal 有色金属	N1	Forged Al. Alloys	<520	60-90													
	N2	Cast Al. Alloys, Si<12%	<350	70-100		160		0.16	0.19	0.28	0.32	0.38	0.42	0.48	0.51	0.53	0.54
	N3	Cast Al. Alloys, Si>12%	200-320	60-120		160		0.16	0.19	0.28	0.32	0.38	0.42	0.48	0.51	0.53	0.54
	N4	Copper、copperalloys	200-650	60-200		160		0.16	0.19	0.28	0.32	0.38	0.42	0.48	0.51	0.53	0.54
	N5	Graphite, compound Materials Graphlte, CFK, CFRP	600-1500														
	N6	Al. based compound Materials (MMCs) GFK, CFK	<700	<210													
Superalloy、Ti-Alloys 钛合金	S1	Iron-base superalloy	500-1200	160-260	25-48												
	S2	Co-base superalloy	1000-1450	250-450	25-48												
	S3	Ni-base superalloy	600-1700	160-450	<48												
	S4	Ti and Ti-Alloys	900-1600	300-400	33-48												

切削速度Vc及每转进给量fn视工况可在±(20-25)%范围内调整
Cutting Speed Vc and Infeed per rotation Fn could be adjusted in ±(20-25)% according to working condition

推荐切削用量：D7300，D7200系列直槽钻

Recommendation of cutting output: D7300, D7200 Series Drills with straight flutes

材料组MC Materials Group		工件材料 Workpiece Materials	抗拉 强度 Tensile strength	布氏 硬度 Brinell hardness	洛氏 硬度 Rockwell hardness	切削速度Vc (m/min) Cutting Speed		每转进给量 fn(mm/rev) Infeed per rotation fn(mm/rev)									
			N/mm²	HB	HRC	冷却方式 Cooling methods		钻头直径 d Dia. of Drills d									
ISO	JN					外冷 External Cooling	内冷 Internal Cooling	3	4	6	8	10	12	14	16	18	20
P Steels	P1	Low carbon Steels with long chips	<530	<125													
	P2	Low carbon Steels with short chips, free cutting steels	<530	<125													
	P3	High carbon Steels and medium carbon Steels	>530	<220	<25												
	P4	Alloys、Tool Steels	600-850	<330	<35												
	P5	Alloys、Tool Steels	850-1400	340-450	35-48												
	P6	Ferritic Stainless Steels, martensite, Stainless Steels, PH Stainless Steels	600-900	<330	<35												
	P7	High-tensile ferritic Stainless Steels, martensite Stainless Steels, PH Stainless Steels	900-1350	330-450	35-48												
M Stainless Steels	M1	Austenitic Stainless Steels	<600	130-200													
	M2	High-tensile austenitic und Cast Stainless Steels	600-800	150-230	<25												
	M3	Dual-phase Stainless Steels	<800	135-275	<30												
K Cast Iron	K1	Cast Iron	125-500	120-290	<32	80	120	0.17	0.20	0.22	0.26	0.30	0.34	0.36	0.38	0.40	0.42
	K2	Medium difficulty to be cut alloyed cast iron and cast iron with nodular graphite	<600	130-260	<28	75	100	0.15	0.18	0.20	0.22	0.26	0.30	0.32	0.32	0.36	0.38
	K3	High difficulty to be cut high alloyed cast iron and cast iron with nodular graphite	>600	180-350	<43	70	80	0.08	0.10	0.13	0.17	0.20	0.22	0.26	0.27	0.28	0.29
N Non-ferrous metal	N1	Forged Al. Alloys	<520	60-90													
	N2	Cast Al. Alloys, Si<12%	<350	70-100													
	N3	Cast Al. Alloys, Si>12%	200-320	60-120		80	110	0.16	0.20	0.22	0.26	0.30	0.34	0.36	0.38	0.40	0.42
	N4	Copper、copper alloys	200-650	60-200													
	N5	Graphite, compound Materials Graphite, CFK, CFRP	600-1500														
	N6	Al. based compound Materials (MMCs) GFK, CFK	<700	<210													
S Superalloy, Ti-Alloys	S1	Iron-base superalloy	500-1200	160-260	25-48												
	S2	Co-base superalloy	1000-1450	250-450	25-48												
	S3	Ni-base superalloy	600-1700	160-450	<48												
	S4	Ti and Ti-Alloys	900-1600	300-400	33-48												

切削速度Vc及每转进给量fn视工况可在±(20-25)%范围内调整
Cutting Speed Vc and Infeed per rotation Fn could be adjusted in ±(20-25)% according to working condition

推荐切削用量：D5200系列三刃钻

Recommendation of cutting output: D5200 Series Drills with 3 fluts

材料组MC Materials Group		工件材料 Workpiece Materials	抗拉 强度 Tensile strength	布氏 硬度 Brinell hardness	洛氏 硬度 Rockwell hardness	切削速度Vc (m/min) Cutting Speed		每转进给量 fn(mm/rev) Infeed per rotation fn(mm/rev)									
						冷却方式 Cooling methods		钻头直径 d Dia. of Drills d									
ISO	JN			N/mm ²	HB	HRC	外冷 External Cooling	内冷 Internal Cooling	3	4	6	8	10	12	14	16	18
Steels	P1	Low carbon Steels with lang chips	<530	<125													
	P2	Low carbon Steels with short chips, free cutting steels	<530	<125													
	P3	High carbon Steels and medium carbon Steels	>530	<220	<25												
	P4	Alloys. Tool Steels	600-850	<330	<35												
	P5	Alloys. Tool Steels	850-1400	340-450	35-48												
	P6	Ferritic Stainless Steels, martensite, Stainless Steels, PH Stainless Steels	600-900	<330	<35												
	P7	High-tensile ferritic Stainless Steels, martensite Stainless Steels, PH Stainless Steels	900-1350	330-450	35-48												
Stainless Steels	M1	Austentic Stainless Steels	<600	130-200													
	M2	High-tensile austentic und Cast Stainless Steels	600-800	150-230	<25												
	M3	Dual-phase Stainless Steels	<800	135-275	<30												
Cast Iron	K1	Cast Iron	125-500	120-290	<32	90		0.10	0.13	0.15	0.20	0.25	0.30	0.28	0.32	0.36	0.40
	K2	Medium difficulty to be cut alloyed cast iron and cast iron with nodular graphite	<600	130-260	<28	75		0.10	0.13	0.15	0.20	0.25	0.30	0.28	0.32	0.36	0.40
	K3	High difficulty to be cut high alloyed cast iron and cast iron with nodular graphite	>600	180-350	<43	60		0.10	0.13	0.15	0.20	0.25	0.30	0.28	0.32	0.36	0.40
Non-ferrous metal	N1	Forged Al. Alloys	<520	60-90													
	N2	Cast Al. Alloys, Si<12%	<350	70-100		150		0.12	0.16	0.19	0.26	0.32	0.38	0.38	0.40	0.45	0.50
	N3	Cast Al. Alloys, Si>12%	200-320	60-120		120		0.10	0.13	0.15	0.20	0.25	0.30	0.28	0.32	0.36	0.40
	N4	Copper, copperalloys	200-650	60-200		180		0.10	0.13	0.15	0.20	0.25	0.30	0.28	0.32	0.36	0.40
	N5	Graphite, compound Materials Graphlte, CFK, CFRP	600-1500														
	N6	Al. based compound Materials (MMCs) GFK, CFK	<700	<210													
Superalloy, Ti-Alloys	S1	Iron-base superalloy	500-1200	160-260	25-48												
	S2	Co-base superalloy	1000-1450	250-450	25-48												
	S3	Ni-base superalloy	600-1700	160-450	<48												
	S4	Ti and Ti-Alloys	900-1600	300-400	33-48												

切削速度Vc及每转进给量fn视工况可在±（20-25）%范围内调整

Cutting Speed Vc and Infeed per rotation Fn could be adjusted in ±（20-25）% according to working condition

推荐切削用量：D9100系列NC中心钻

Recommendation of cutting output: D9100 Series NC centre drills

材料组MC Materials Group		工件材料 Workpiece Materials	抗拉 强度 Tensile strength	布氏 硬度 Brinell hardness	洛氏 硬度 Rockwell hardness	切削速度Vc (m/min) Cutting Speed		每转进给量 fn(mm/rev) Infeed per rotation fn(mm/rev)									
						冷却方式 Cooling methods		钻头直径 d Dia. of Drills d									
ISO	JN					N/mm²	HB	HRC	外冷 External Cooling	内冷 Internal Cooling	3	4	6	8	10	12	14
Steels	P1	Low carbon Steels with long chips	<530	<125		110		0.13	0.15	0.17	0.20	0.24	0.26	0.30	0.34	0.36	0.38
	P2	Low carbon Steels with short chips, free cutting steels	<530	<125		100		0.12	0.14	0.16	0.20	0.24	0.26	0.28	0.34	0.36	0.38
	P3	High carbon Steels and medium carbon Steels	>530	<220	<25	80		0.11	0.13	0.15	0.18	0.20	0.24	0.26	0.28	0.30	0.32
	P4	Alloys、 Tool Steels	600-850	<330	<35	80		0.11	0.13	0.15	0.18	0.20	0.24	0.26	0.28	0.30	0.32
	P5	Alloys、 Tool Steels	850-1400	340-450	35-48	80		0.10	0.12	0.14	0.16	0.20	0.24	0.26	0.28	0.30	0.32
	P6	Ferritic Stainless Steels, martensite、 Stainless Steels, PH Stainless Steels	600-900	<330	<35												
	P7	High-tensile ferritic Stainless Steels, martensite Stainless Steels, PH Stainless Steels	900-1350	330-450	35-48												
Stainless Steels	M1	Austenitic Stainless Steels	<600	130-200													
	M2	High-tensile austenitic und Cast Stainless Steels	600-800	150-230	<25												
	M3	Dual-phase Stainless Steels	<800	135-275	<30												
Cast Iron	K1	Cast Iron	125-500	120-290	<32	90		0.17	0.20	0.26	0.34	0.41	0.44	0.51	0.54	0.57	0.58
	K2	Medium difficulty to be cut alloyed cast iron and cast iron with nodular graphite	<600	130-260	<28	80		0.15	0.18	0.23	0.30	0.36	0.39	0.45	0.48	0.50	0.51
	K3	High difficulty to be cut high alloyed cast iron and cast iron with nodular graphite	>600	180-350	<43	70		0.09	0.10	0.13	0.17	0.20	0.22	0.26	0.27	0.28	0.29
Non-ferrous metal	N1	Forged Al. Alloys	<520	60-90		160		0.16	0.19	0.28	0.32	0.38	0.42	0.48	0.51	0.53	0.54
	N2	Cast Al. Alloys, Si<12%	<350	70-100		120		0.16	0.19	0.28	0.32	0.38	0.42	0.48	0.51	0.53	0.54
	N3	Cast Al. Alloys, Si>12%	200-320	60-120		120		0.16	0.19	0.28	0.32	0.38	0.42	0.48	0.51	0.53	0.54
	N4	Copper、 copper alloys	200-650	60-200		120		0.16	0.19	0.28	0.32	0.38	0.42	0.48	0.51	0.53	0.54
	N5	Graphite, compound Materials Graphlte, CFK, CFRP	600-1500														
	N6	Al. based compound Materials (MMCs) GFK, CFK	<700	<210													
Superalloy、 Ti-Alloys	S1	Iron-base superalloy	500-1200	160-260	25-48												
	S2	Co-base superalloy	1000-1450	250-450	25-48												
	S3	Ni-base superalloy	600-1700	160-450	<48												
	S4	Ti and Ti-Alloys	900-1600	300-400	33-48												

切削速度Vc及每转进给量fn视工况可在±(20-25)%范围内调整
Cutting Speed Vc and Infeed per rotation Fn could be adjusted in ±(20-25)% according to working condition

钻削参数计算 Calculation of drilling data

切削速度 V_c Cutting Speed V_c
(m/min)

$$V_c = \frac{D_c \times \pi \times n}{1000}$$

主轴转速 n Revolution of spindle n
(rpm)

$$n = \frac{V_c \times 1000}{\pi \times D_c}$$

每转进给量 f_n Infeed each rotation f_n
(mm/r)

$$f_n = \frac{V_f}{n}$$

进给速度 V_f Infeed speed V_f
(m/min)

$$V_f = f_n \times n$$

金属切除率 Q Metal removal rate Q
(cm³/min)

$$Q = \frac{D_c \times f_n \times V_c}{4}$$

加工时间 T_c Drilling time T_c
(min)

$$T_c = \frac{L_m}{V_f}$$

式中:

D_c 钻头直径 (mm) V_c 切削速度 (m/min)
 n 主轴转速 (rpm) f_n 每转进给量 (mm/rev)
 V_f 进给速度 (mm/min) L_m 钻削深度 (mm)
 Q 金属切除率 (cm³/min) T_c 加工时间 (min)
 π 常数=3.1415

In the form:

D_c Dia. of Drills(mm) V_c Cutting Speed(m/min)
 n Revolution of spindle(rpm) f_n Infeed per rotation(mm/rev)
 V_f Infeed speed(mm/min) L_m Cutting Depth(mm)
 Q Metal removal rate(cm³/min) T_c Drilling time(min)
 π Constant=3.1415

例: D2605-CHA-D10

D2600 不锈钢用麻花钻

05 - 可切削深度为 $5 \times D_c$ 5 倍刃径

C - 内冷 HA-DIN6535HA 直柄

D10- 钻头刃径 $D_c=10$

用此钻头加工奥氏体不锈钢, 从切削用量表查得推荐切削用量:

切削速度 $V_c=80$ m/min 每转进给量 $f_n=0.21$ mm/rev

钻削深度 L_m 此例取 $5 \times D_c=5 \times 10=50$ mm。

计算: 转速 n , 进给速度 V_f , 金属切除率 Q 和加工一个孔的时间 T_c

1 转速 n :

$$n = V_c \times 1000 / \pi / D_c = 80 \times 1000 / 3.1415 / 10 = 2547 \quad (\text{rpm})$$

2 进给速度 V_f :

$$V_f = f_n \times n = 0.21 \times 2547 = 535 \quad (\text{mm/min})$$

3 金属切除率 Q :

$$Q = D_c \times f_n \times V_c / 4 = 10 \times 0.21 \times 80 / 4 = 42 \quad (\text{cm}^3/\text{min})$$

4 加工一个孔的时间 T_c :

$$T_c = L_m / V_f = 50 / 535 = 0.093 \quad (\text{min})$$

For example: D2605-CHA-D10

D2600 Twist Drills for Stainless Steels

05-to be cut depth $5 \times D_c$ $5 \times D$

C-Internal Cooling HA-DIN6535HA straight shank

D10-Cutting Dia. of Drills $D_c=10$

With this drill to cut austenitic Stainless Steels, recommendation of cutting output:

Cutting Speed $V_c=80$ m/min

Infeed per rotation $f_n=0.21$ mm/rev

Drill depth L_m , take $5 \times D_c=5 \times 10=50$ mm

Calculation: revolution n , Infeed V_f , Metal removal rate Q and the time to cut one hole T_c

1 Revolution n :

$$n = V_c \times 1000 / \pi / D_c = 80 \times 1000 / 3.1415 / 10 = 2547 \quad (\text{rpm})$$

2 Infeed speed V_f :

$$V_f = f_n \times n = 0.21 \times 2547 = 535 \quad (\text{mm/min})$$

3 Metal removal rate Q :

$$Q = D_c \times f_n \times V_c / 4 = 10 \times 0.21 \times 80 / 4 = 42 \quad (\text{mm}^3/\text{min})$$

4 the time of cutting one hole T_c :

$$T_c = L_m / V_f = 50 / 535 = 0.093 \quad (\text{min})$$

工件材料表 Tabel of Workpiece Materials

材料组 ISO Materials	精诺 MC	工件材料 Workpiece Materials	含量 Content	抗拉强度 Tensile strength N/mm ²	布氏 硬度 Brinell hardness HB	洛氏 硬度 Rockwell hardness HRC
P Steels	P1	Low carbon Steels with lang chips	C<0.25%	<530	<125	
	P2	Low carbon Steels with short chips, free cutting steels	C<0.25%	<530	<125	
	P3	High carbon Steels and medium carbon Steels	C>0.25%	>530	<220	<25
	P4	Alloys, Tool Steels	C>0.25%	600-850	<330	<35
	P5	Alloys, Tool Steels	C>0.25%	850-1400	340-450	35-48
	P6	Ferritic Stainless Steels, martensite, Stainless Steels, PH Stainless Steels	C=(0-0.4)%	600-900	<330	<35
	P7	High-tensile ferritic Stainless Steels, martensite Stainless Steels, PH Stainless Steels	C=(0.1-0.6)%	900-1350	330-450	35-48
M Stainless Steels	M1	Austentic Stainless Steels	C=(0.05-0.15)%	<600	130-200	
	M2	High-tensile austentic und Cast Stainless Steels	C=(0.05-0.15)%	600-800	150-230	<25
	M3	Dual-phase Stainless Steels	C=(0.05-0.20)%	<800	135-275	<30
K Cast Iron	K1	Cast Iron		125-500	120-290	<32
	K2	Medium difficulty to be cut alloyed cast iron and cast iron with nodular graphite		<600	130-260	<28
	K3	High difficulty to be cut high alloyed cast iron and cast iron with nodular graphite		>600	180-350	<43
N Non-ferrous metal	N1	Forged Al. Alloys		<520	60-90	
	N2	Cast Al. Alloys	Si<12%	<350	70-100	
	N3	Cast Al. Alloys	Si>12%	200-320	60-120	
	N4	Copper, copperalloys		200-650	60-200	
	N5	Graphite, compound Materials Graphite, CFK, CFRP		600-1500		
	N6	Al. based compound Materials (MMCs) GFK, CFK		<700	<210	
S Superalloy, Ti-Alloys	S1	Iron-base superalloy		500-1200	160-260	25-48
	S2	Co-base superalloy		1000-1450	250-450	25-48
	S3	Ni-base superalloy		600-1700	160-450	<48
	S4	Ti and Ti-Alloys		900-1600	300-400	33-48
H Hard Materials	H1	Hardened steel				44-48
	H2	Hardened steel				48-55
	H3	Hardened steel				56-60
	H4	Hardened steel				>60

抗拉强度、布氏硬底、洛氏硬度对照表

Table of tensile strength 、Brinell hardness、Rockwell hardness

N/mm ²	HV10	HB	HRC
240	75	71	
255	80	76	
270	85	81	
285	90	86	
305	95	90	
320	100	95	
335	105	100	
350	110	105	
370	115	109	
385	120	114	
400	125	119	
415	130	124	
430	135	128	
450	140	133	
465	145	138	
480	150	143	
495	155	147	
510	160	152	
530	165	157	
545	170	162	
560	175	166	
575	180	171	
595	185	176	
610	190	181	
625	195	185	
640	200	190	
660	205	195	
675	210	199	
690	215	204	
705	220	209	
720	225	214	
740	230	219	
755	235	223	
770	240	228	
785	245	233	
800	250	238	22
820	255	242	23
835	260	247	24
860	268	255	25
870	272	258	26
900	280	266	27

N/mm ²	HV10	HB	HRC
920	287	273	28
940	293	278	29
970	302	287	30
995	310	295	31
1020	317	301	32
1050	327	311	33
1080	336	319	34
1110	345	328	35
1140	355	337	36
1170	364	346	37
1200	373	354	38
1230	382	363	39
1260	392	372	40
1260	403	383	41
1330	413	393	42
1360	423	402	43
1400	434	413	44
1440	446	424	45
1480	458	435	46
1530	473	449	47
1570	484	460	48
1620	497	472	49
1680	514	488	50
1730	527	501	51
1790	544	517	52
1845	560	632	53
1910	578	549	54
1980	596	567	55
2050	615	584	56
2140	639	607	57
	655	622	58
	675		59
	698		60
	720		61
	745		62
	773		63
	800		64
	829		65
	864		66
	900		67
	940		68

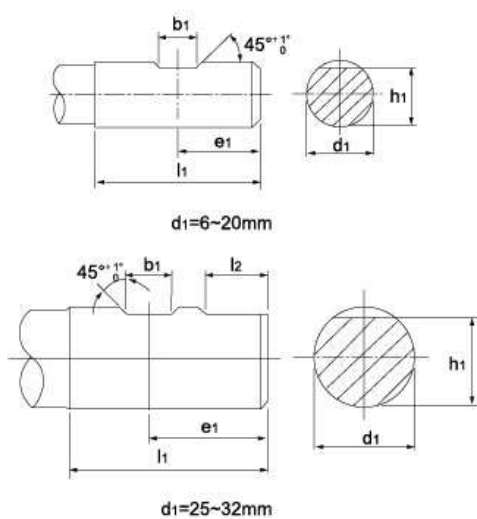
柄部标准 The structure of shank

DIN 6535-HA



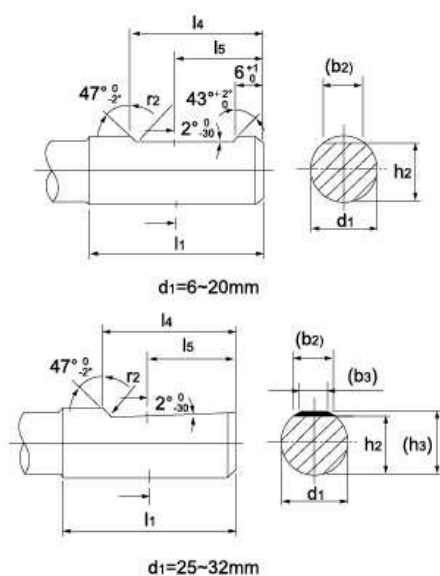
d1 h6	2	3	4	5	6	8	10	12	14	16	18	20	25	32
l1 $\begin{smallmatrix} +2 \\ 0 \end{smallmatrix}$			28			36	40	45		48	50	56	60	

DIN 6535-HB



d1 h6	b1 $\begin{smallmatrix} +0.05 \\ 0 \end{smallmatrix}$	e1 $\begin{smallmatrix} 0 \\ -1 \end{smallmatrix}$	h1 h11	l1 $\begin{smallmatrix} +2 \\ 0 \end{smallmatrix}$	l2 $\begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$
6	4.2	18.0	5.1	36.0	
8	5.5	18.0	6.9	36.0	
10	7.0	20.0	8.5	40.0	
12	8.0	22.5	10.4	45.0	
14	8.0	22.5	12.7	45.0	
16	10.0	24.0	14.2	48.0	
18	10.0	24.0	16.2	48.0	
20	11.0	25.0	18.2	50.0	
25	12.0	32.0	23.0	56.0	17.0
32	14.0	36.0	30.0	60.0	19.0

DIN 6535-HE



d1	(b2)	(b3)	(h2)	(h3)	l1	l4	l5	r2
6.0	4.3	-	5.1	-	36.0	25.0	18.0	1.2
8.0	5.5	-	6.9	-	36.0	25.0	18.0	1.2
10.0	7.1	-	8.5	-	40.0	28.0	20.0	1.2
12.0	8.2	-	10.4	-	45.0	33.0	22.5	1.2
14.0	8.1	-	12.7	-	45.0	33.0	22.5	1.2
16.0	10.1	-	14.2	-	48.0	36.0	24.0	1.6
18.0	10.8	-	16.2	-	48.0	36.0	24.0	1.6
20.0	11.4	-	18.2	-	50.0	38.0	25.0	1.6
25.0	13.6	9.3	23.0	24.1	56.0	44.0	32.0	1.6
32.0	15.5	9.9	30.0	31.2	60.0	48.0	35.0	1.6

