



Carbide Drill Series

Vol.7

硬质合金钻头系列

ADO · AD · AD-LDS

• R Gash 式样实现低阻力和卓越的排屑性!

(ADO-3D ~ 50D采用)

• 对应2D ~ 50D的加工深度

• Achieves low resistance and exceptional chip evacuation with the R Gash specification (applies to ADO-3D to 50D)!

• For drilling depths of 2 x D up to 50 x D

共1,952款!

A total of 1,952 items!



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内冷油孔硬质合金钻头ADO

Carbide Drill with Oil Hole

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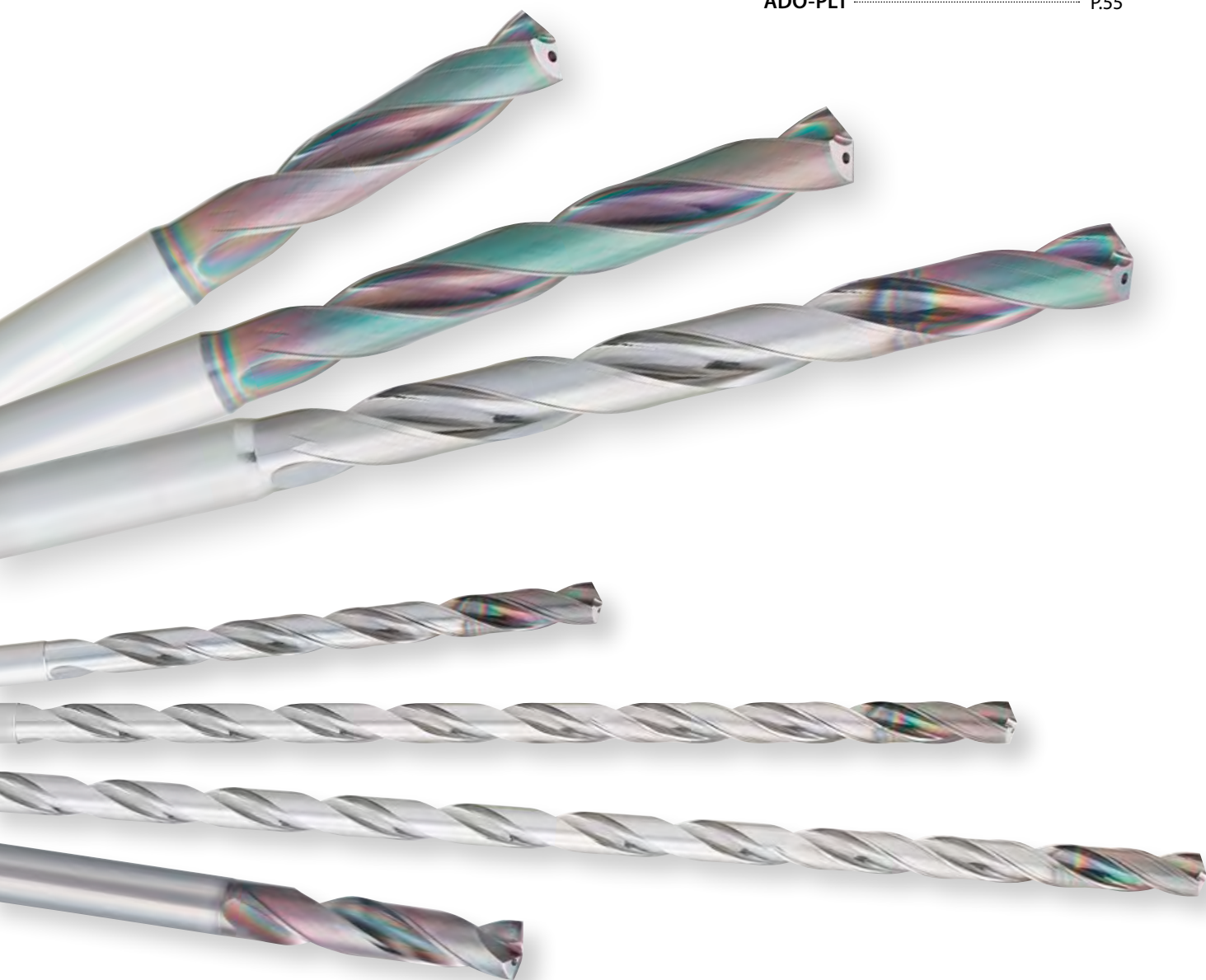
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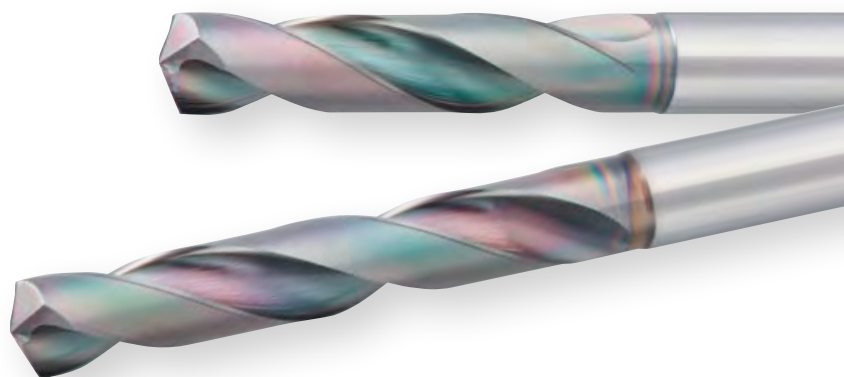
ADO-PLT P.55



硬质合金钻头AD

Carbide Drill

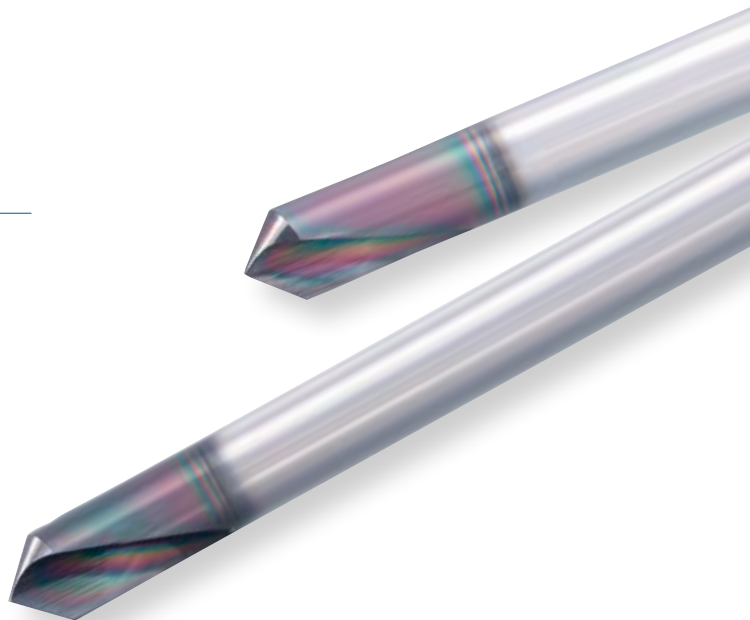
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硬质合金中心钻AD-LDS

Carbide Starter Drill

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标识种类 Guide for Icons

1 材质 Tool Materials

CARBIDE 硬质合金
Tungsten Carbide

2 表面处理 Surface Treatment

EgiAs EgiAs 涂层
EgiAs Coating

WXL WXL 涂层
WXL Coating

3 直径的容许差 Tolerance for Drill Diameter

h8 表示钻头直径的容许差
Tolerance for drill diameter

4 柄部 Shank

SHANK h7 表示柄部精度
Tolerance for shank diameter

SHRINK FIT 也推荐热缩刀柄
Suitable for the shrink holder system

5 螺旋角 Helix Angle

30° 表示钻头排屑槽的螺旋角
Helix angle of flute for drills

6 切削条件 Cutting Conditions

SPEED FEED 表示切削条件基准表所在页面
Indicates page number for cutting conditions

最适用于各种孔深的式样

Optimum specifications for every drilling depth

波纹刃形 Wavy Point Form

- 低阻力 · 稳定扭矩实现长寿命
Long tool life is possible by low thrust resistance and stable torque
- 切屑细小分断
Breaks chips into small manageable pieces

R Gash PAT. in Japan

实现低阻力和卓越的切屑稳定性
Unique R Gash geometry enables super low cutting resistance and exceptional chip control

提高排屑性的大容屑槽

Wide flute room facilitates stable chip evacuation

实现长寿命的EgiAs涂层

EgiAs coating enables long tool life

采用双刃带设计提高稳定性

Double margin improves stability

Point Specification

刃形式样

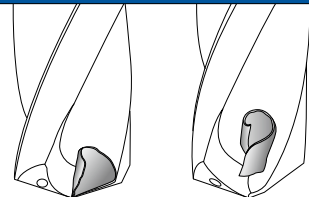
R Gash 形状 R Gash geometry

细小分断切屑，实现优异的排屑性

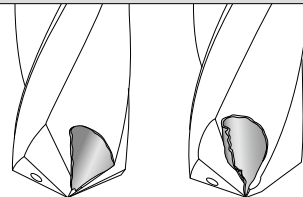
Breaks chips into small and manageable pieces with superior chip evacuation capability

ADO-3D/5D/8D/10D/15D/20D/25D/30D
(R Gash)

其他公司产品 (月牙槽)
Competitor (Straight Gash)



切屑卷曲紧密，没有伸长
Chips are curled tightly with no elongation



切屑卷曲松散，易伸长
Chips are loosely curled and are prone to elongation



加工材料：SUS304
Work Material

R Gash是OSG公司的注册商标。R Gash is a registered trademark of OSG Corporation.

Coating

涂层

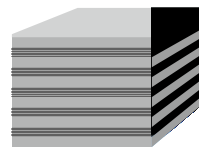
高耐磨损性·韧性的EgiAs涂层

EgiAs coating with high toughness and wear resistance characteristics

提高耐磨损性·耐热性，并优化韧性的涂层，实现长寿命及寿命稳定化。

Constructed with extreme toughness, high wear and heat resistance characteristics to ensure stable and consistent tool life

涂层构造 Coating Structure

耐磨损层
Wear Resistance纳米周期积层
防止裂纹传播
Periodic Nano-Layered Coating

涂层色 Coating Color	涂层构造 Coating Structure	硬度 (GPa) Hardness	氧化开始 温度 (°C) Oxidation Temperature	耐热性 Heat Resistance	附着力 Adhesion Strength	表面 粗糙度 Surface roughness	耐磨损性 Wear Resistance	耐溶着性 Welding Resistance	韧性 Toughness
干涉色 Interference Color	Cr, Si系 纳米周期积层 Nano Periodical Layer	40	1,100	◎	◎	○	◎	◎	◎

(标准)
(Fair) ○ → ◎ (最佳)
(Best)

EgiAs是OSG公司的注册商标。 EgiAs is a registered trademark of OSG Corporation.

Environmental Considerations
环境保护

详细请参考P.62
Refer to p.62 for details

R Gash实现卓越的低阻力和长寿命化

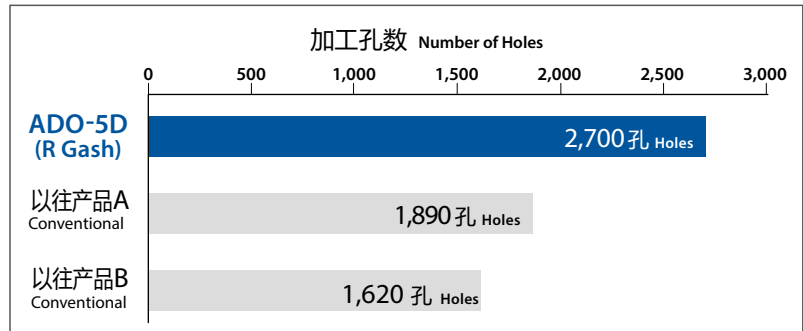
Achieves overwhelmingly low thrust and long tool life with the effect of the R Gash

通过低阻力的高效率加工，减少耗电。

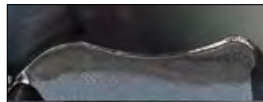
此外，刀具的长寿命化有助于减少废弃物和节约资源。

High-efficiency machining with low thrust leads to reduction of power consumption. In addition, extending the life of tools contributes to waste reduction and resource saving.

使用工具 Tool	ADO-5D $\phi 8$ (R Gash)
加工材料 Work Material	SCM440
切削速度 Cutting Speed	100m/min (3,979min ⁻¹)
进给速度 Feed	1,591mm/min (0.4mm/rev)
切削深度 Depth of Hole	40mm (盲孔) Blind
切削油剂 Coolant	水溶性切削油剂 (内部供油) Water-Soluble (Internal)
冷却液压力 Coolant Pressure	2MPa
使用机械 Machine	卧式加工中心 (HSK-A63) Horizontal Machining Center

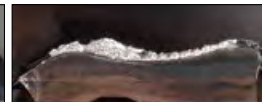


加工2,700孔后
After drilling 2,700 holes



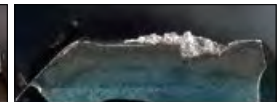
ADO-5D (R Gash)

加工1,890孔后
After drilling 1,890 holes

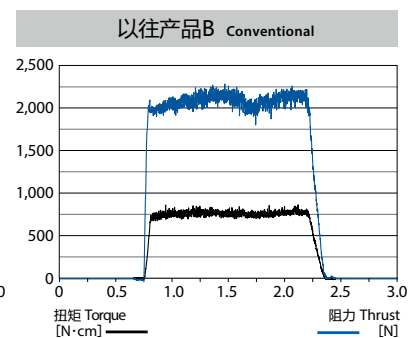
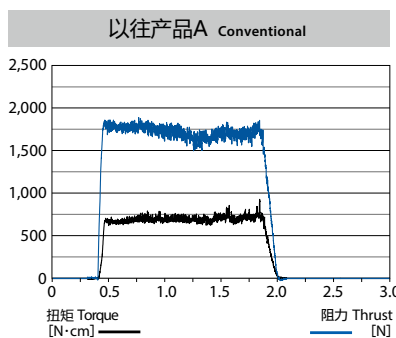
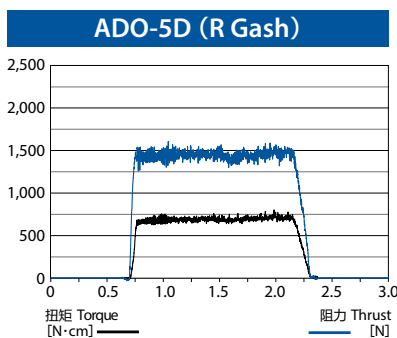


以往产品A Conventional

加工1,620孔后
After drilling 1,620 holes

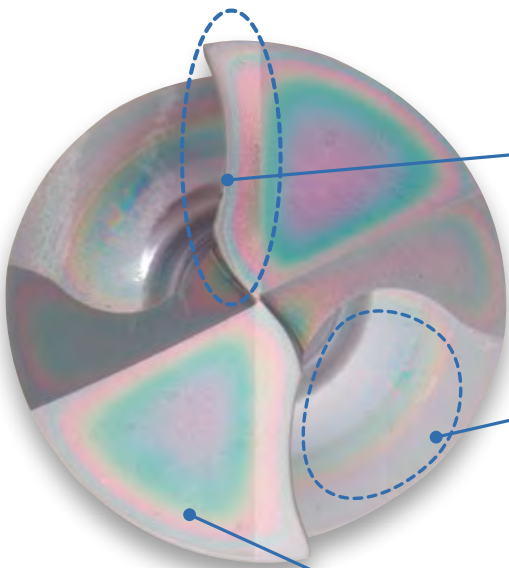


以往产品B Conventional



对应广泛的加工材料

Suitable for a wide variety of work materials



可以细小分断切屑的波状刃

Wavy point form breaks chip into small manageable pieces

*仅适用于φ4以上的尺寸
Applies only to diameter sizes over 4mm

提高排屑性的大容屑槽

Wide flute room facilitates stable chip evacuation

实现长寿命的EgiAs涂层

EgiAs coating enables long tool life

Point Specification

刀形式样

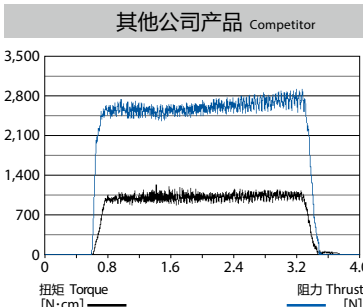
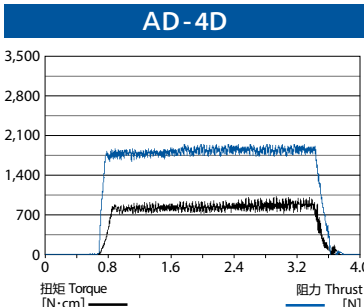
低阻力・稳定扭矩

Low thrust resistance and stable torque

波纹刃形结合低芯厚式样，实现低阻力・稳定加工

Low thrust resistance and stable torque are possible by the new wavy point form and low web thickness

使用工具 Tool	AD-4D φ10
加工材料 Work Material	SCM440
切削速度 Cutting Speed	70m/min (2,229min ⁻¹)
进给速度 Feed	668mm/min (0.3mm/rev)
切削深度 Depth of Hole	30mm (盲孔) Blind
切削油剂 Coolant	水溶性切削油剂 (外部供油) Water-Soluble (External)
使用机械 Machine	立式加工中心 (BT40) Vertical Machining Center



硬质合金中心钻AD-LDS

Carbide Starter Drill

特点
Feature

加工数据
Cutting Data

带油孔 with Oil Hole
3D/5D/8D

10D/15D/20D/25D/30D

40D/50D

导向钻
Pilot Drill

无油孔 Non Oil Hole
2D/4D

中心钻 Starter Drill

AD-LDS

切削条件表
Cutting Conditions

非标准对应表
Production Table
by Drill Diameter

采用EgiAs涂层^{*}，提高耐磨损性和韧性

Improved wear resistance and toughness with EgiAs coating

^{*} $\phi 2$ 以上的尺寸采用EgiAs涂层。
EgiAs coating applies only to diameter sizes above 2mm.

锋利性好，不易崩刃的刃尖形状

Cutting geometry with superior sharpness and high chipping resistance

Coating

涂层

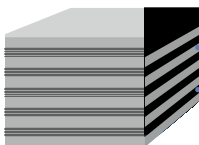
高耐磨损性·韧性的EgiAs涂层

EgiAs coating with high toughness and wear resistance characteristics

提高耐磨损性·耐热性，并优化韧性的涂层，实现长寿命及寿命稳定化。

Constructed with extreme toughness, high wear and heat resistance characteristics to ensure stable and consistent tool life

涂层构造 Coating Structure



耐磨损层
Wear Resistance

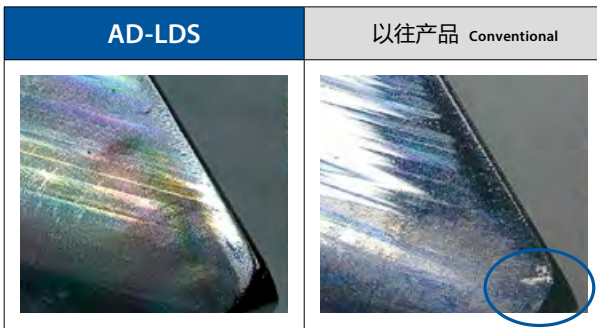
纳米周期积层
防止裂纹传播
Periodic Nano-Layered Coating

涂层色 Coating Color	涂层构造 Coating Structure	硬度 (GPa) Hardness	氧化开始 温度 (°C) Oxidation Temperature	耐热性 Heat Resistance	附着力 Adhesion Strength	表面 粗糙度 Surface roughness	耐磨损性 Wear Resistance	耐溶着性 Welding Resistance	韧性 Toughness
干涉色 Interference Color	Cr, Si系 纳米周期积层 Nano Periodical Layer	40	1,100	◎	◎	○	◎	◎	◎

(标准)
(Fair) ○ → ◎ (最佳)
(Best)

EgiAs是OSG公司的注册商标。 EgiAs is a registered trademark of OSG Corporation.

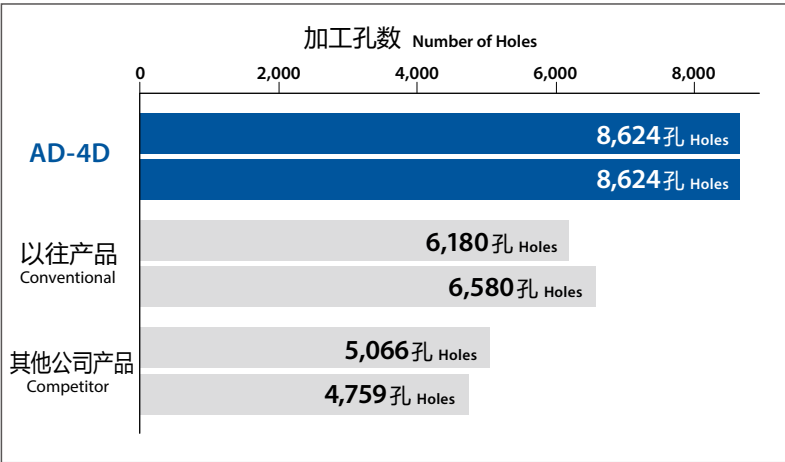
使用工具 Tool	AD-LDS $\phi 12 \times 90^\circ$
加工材料 Work Material	S50C
加工形态 Cutting Method	中心定位加工 Centering
切削速度 Cutting Speed	50m/min (1,326min ⁻¹)
进给速度 Feed	239mm/min (0.18mm/rev)
切削油剂 Coolant	水溶性切削油剂 Water-Soluble
使用机械 Machine	卧式加工中心 (BT40) Horizontal Machining Center



作为通用刀具进一步提高性能 An all-purpose tool upgraded with even greater capabilities

EgiAs涂层，对抑制磨损能发挥显著效果
Superior protection against friction with OSG's EgiAs coating

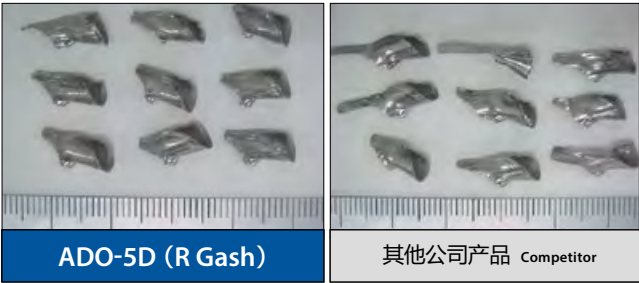
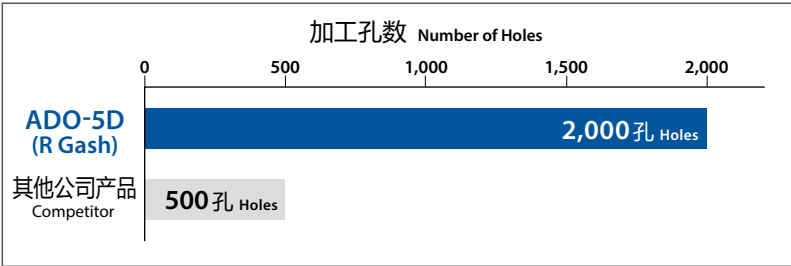
使用工具 Tool	AD-4D $\phi 6$
加工材料 Work Material	SCM440 (30HRC)
切削速度 Cutting Speed	70m/min (3,715min ⁻¹)
进给速度 Feed	668mm/min (0.18mm/rev)
切削深度 Depth of Hole	18mm (盲孔) Blind
切削油剂 Coolant	水溶性切削油剂 (外部供油) Water-Soluble (External)
使用机械 Machine	立式加工中心 (BT40) Vertical Machining Center



即使是小型加工中心也能实现高效率且稳定的加工 Achieves high efficiency and stable machining even in small machining centers

细小分断切屑，实现稳定长寿命化
Achieves stable and long tool life by finely dividing cutting chips

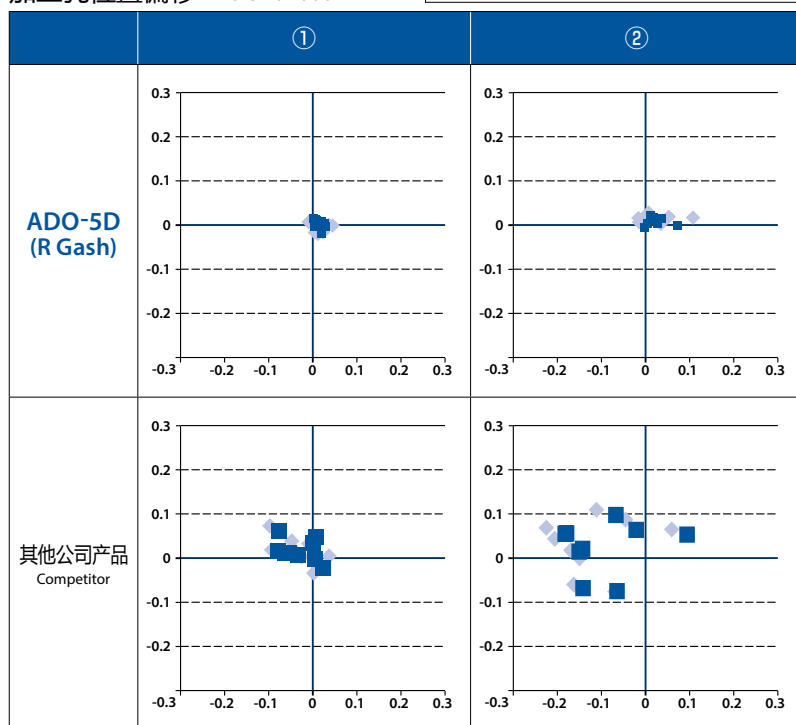
使用工具 Tool	ADO-5D $\phi 13$ (R Gash)	其他公司产品 $\phi 13$ Competitor
加工材料 Work Material	SCM415	
切削速度 Cutting Speed	60m/min (1,469min ⁻¹)	
进给速度 Feed	485mm/min (0.33mm/rev)	367mm/min (0.25mm/rev)
切削深度 Depth of Hole	65mm (盲孔) Blind	
切削油剂 Coolant	水溶性切削油剂 (内部供油) Water-Soluble (Internal)	
冷却液压力 Coolant Pressure	2.2MPa	
使用机械 Machine	立式加工中心 (BT30) Vertical Machining Center	



孔位精度高 High hole position accuracy

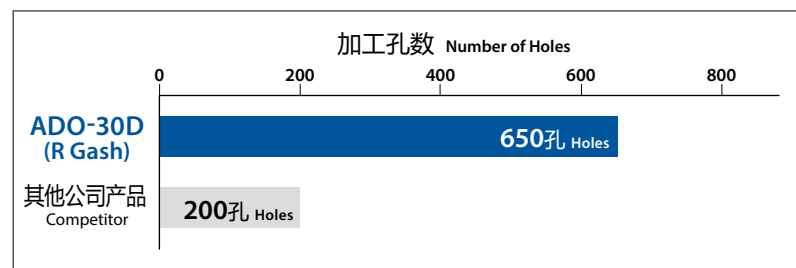
使用工具 Tool	ADO-5D $\phi 14$ (R Gash)	
加工材料 Work Material	S50C	
切削速度 Cutting Speed	80m/min (1,819min ⁻¹)	
进给速度 Feed	① 764mm/min (0.42mm/rev)	② 1,019mm/min (0.56mm/rev)
切削深度 Depth of Hole	50mm (通孔) Through	
切削油剂 Coolant	MQL (内部供油) (Internal)	
冷却液压力 Coolant Pressure	0.45MPa	
使用机械 Machine	卧式加工中心 (HSK-A63) Horizontal Machining Center	

加工孔位置偏移 Hole Runout



即使深孔也能实现高效率加工 Achieves high efficiency even in deep hole drilling

使用工具 Tool	ADO-30D $\phi 8$ (R Gash)	其他公司产品 $\phi 8$ Competitor
加工材料 Work Material	SCM440等效材料 SCM440 equivalent material	
切削速度 Cutting Speed	75m/min (2,984min ⁻¹)	50m/min (1,989min ⁻¹)
进给速度 Feed	1,223mm/min (0.41mm/rev)	318mm/min (0.16mm/rev)
切削深度 Depth of Hole	240mm (盲孔) Blind	
切削油剂 Coolant	水溶性切削油剂 (内部供油) Water-Soluble (Internal)	
冷却液压力 Coolant Pressure	3.8MPa	
使用机械 Machine	卧式加工中心 (BT50) Horizontal Machining Center	



加工650孔后 After drilling 650 holes



ADO-30D (R Gash)



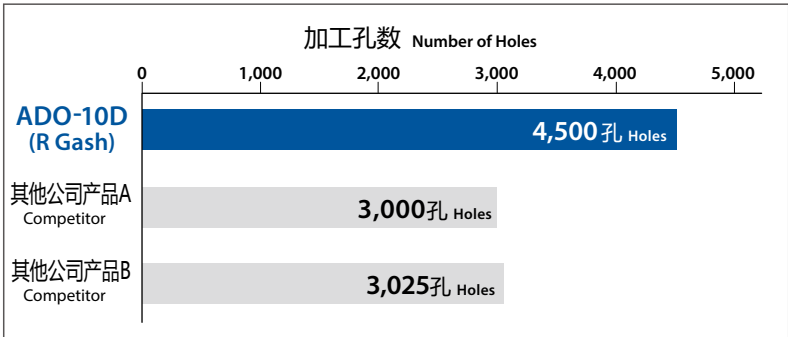
详情请参考P.62
Refer to p.62 for details

即便使用MQL，也有稳定的切屑形状和长寿命
Stable chip shape and long tool life even with MQL

即使采用油剂使用量极少且无需废弃处理的MQL，也能实现稳定加工。
此外，刀具的长寿命化有助于减少废弃物和节约资源。
Stable machining is possible even with MQL, which uses a very small amount of oil and does not require disposal. Furthermore, extending the life of tools leads to reduction of waste and contributes to resource saving.



使用工具 Tool	ADO-10D $\phi 4$ (R Gash)
加工材料 Work Material	S50C
切削速度 Cutting Speed	100m/min (7,958min ⁻¹)
进给速度 Feed	1,273mm/min (0.16mm/rev)
切削深度 Depth of Hole	40mm (盲孔) Blind
切削油剂 Coolant	MQL (内部供油) MQL (Internal)
冷却液压力 Coolant Pressure	0.45MPa
使用机械 Machine	卧式加工中心 (HSK-A63) Horizontal Machining Center



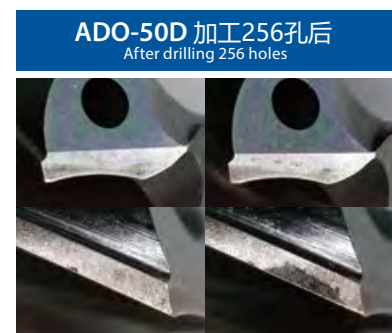
加工孔数 Number of Holes	3,000 孔 Holes		4,500 孔 Holes	
ADO-10D (R Gash)				
其他公司产品A Competitor				
其他公司产品B Competitor				



即使是超深孔加工也能长寿命 Long tool life even in ultra-deep-hole drilling applications

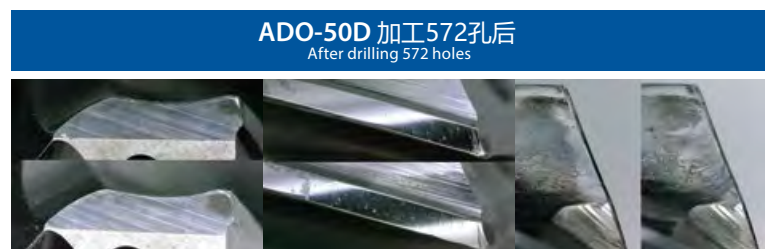
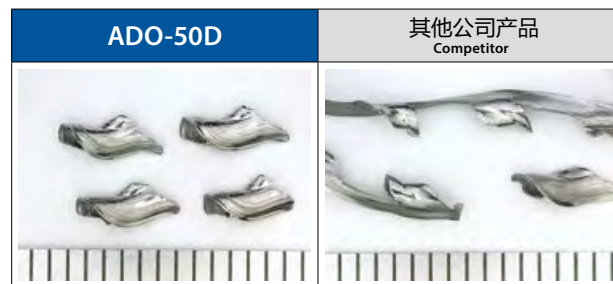
尺寸 Size	ADO-50D $\phi 8$ (R Gash)	使用工具 Tool	第2工序 Second Step		
			①	②	③
加工材料 Work Material	SCM440(生材)		ADO-50D	其他公司产品 (50D 型) Competitor	其他公司深孔钻 Gun Drill
切削深度 Depth of Cut	391mm	切削速度 Cutting Speed	62.8m/min (2,500min ⁻¹)	70m/min (2,787min ⁻¹)	60m/min (2,389min ⁻¹)
切削油剂 Coolant	水溶性切削油剂 Water-Soluble	进给速度 Feed	750mm/min (0.3mm/rev)	418mm/min (0.15mm/rev)	143mm/min (0.06mm/rev)
使用机械 Machine	卧式加工中心 Horizontal Machining Center	第1工序：导向孔深度40mm First Step : pilot hole at depth of 40mm			

		加工孔数 Number of Holes		加工时间 Cutting Time
		100	200	
①	ADO-50D	256孔 Holes 可继续加工 Still Running		1分04秒 1'4"
②	其他公司产品 (50D 型) Competitor	60孔 Holes	折损 Breakage	1分29秒 1'29"
③	其他公司深孔钻 Gun Drill	65孔 Holes	磨损·更换 Wear and replacement	3分17秒 3'17"



即使是黏的加工材料也能细小分断切屑 Effectively breaks chips into small and manageable pieces even in sticky work material

使用工具 Tool	ADO-50D (R Gash)	其他公司产品 (50D 型) Competitor
尺寸 Size	$\phi 5$	
加工材料 Work Material	SCM420H	
切削速度 Cutting Speed	60m/min (3,822min ⁻¹)	50m/min (3,185min ⁻¹)
进给速度 Feed	955mm/min (0.25mm/rev)	636mm/min (0.2mm/rev)
切削深度 Depth of Hole	250mm (盲孔) Blind	
切削油剂 Coolant	水溶性切削油剂 Water-Soluble	
使用机械 Machine	多功能车床 Multifunction Lathe	



	加工孔数 Number of Holes					
	100	200	300	400	500	600
ADO-50D	572孔 Holes 磨损·更换 Wear and replacement					
其他公司产品 Competitor	360孔 Holes 折损 Breakage					

ADO-3D/5D/8D

全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

ADO-3D



ADO-5D



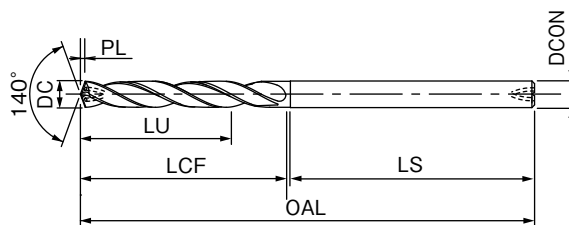
ADO-8D



R Gash



R形横刃
R thinning



商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	前刃宽 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8690200	2 - 3	3D	6	12	66	3	51.2	0.4	●
8692200		5D	10	18	70		49.2	0.4	B ●
8694200		8D	16	22	75		50.1	0.4	●
8690210	2.1 - 3	3D	7	13	66	3	50.3	0.4	●
8692210		5D	11	19	70		48.3	0.4	B ●
8694210		8D	17	24	75		48.3	0.4	●
8690220	2.2 - 3	3D	7	14	66	3	49.5	0.4	●
8692220		5D	11	20	70		47.5	0.4	B ●
8694220		8D	18	25	75		47.5	0.4	●
8690230	2.3 - 3	3D	7	14	66	3	49.7	0.4	●
8692230		5D	12	21	70		46.7	0.4	B ●
8694230		8D	19	26	75		46.7	0.4	●
8690240	2.4 - 3	3D	8	15	66	3	48.9	0.4	●
8692240		5D	12	22	70		45.9	0.4	B ●
8694240		8D	20	27	75		45.9	0.4	●
8690250	2.5 - 3	3D	8	15	66	3	49.1	0.5	●
8692250		5D	13	23	70		45.1	0.5	B ●
8694250		8D	20	28	75		45.1	0.5	●
8690260	2.6 - 3	3D	8	16	66	3	48.3	0.5	●
8692260		5D	13	24	78		52.3	0.5	B ●
8694260		8D	21	29	80		49.3	0.5	●

- 标识说明请参考p.2。
- 涂层可能会有颜色不均的情况，但这并不影响刀具的性能。
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	前刃宽 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8690265	2.65 - 3	3D	8	16	66	3	48.3	0.5	B ●
8692265		5D	14	24	78		52.3	0.5	●
8690270	2.7 - 3	3D	9	17	66	3	47.4	0.5	●
8692270		5D	14	25	78		51.4	0.5	B ●
8694270		8D	22	30	80		48.4	0.5	●
8692276	2.76 - 3	5D	14	25	78	3	51.6	0.5	B ●
8692278	2.78 - 3	5D	14	26	78	3	50.6	0.5	B ●
8690280	2.8 - 3	3D	9	17	66	3	47.6	0.5	●
8692280		5D	14	26	78		50.6	0.5	B ●
8694280		8D	23	31	80		47.6	0.5	●
8690290	2.9 - 3	3D	9	18	66	3	46.8	0.5	●
8692290		5D	15	27	78		49.8	0.5	B ●
8694290		8D	24	32	80		46.8	0.5	●
8690300	3 - 3	3D	9	18	66	3	47	0.5	●
8692300		5D	15	27	78		50	0.5	B ●
8694300		8D	24	33	80		46	0.5	●
8690310	3.1	3D	10	19	74	4	52.3	0.6	●
8692310		5D	16	28	86		55.3	0.6	B ●
8694310		8D	25	34	95		58.3	0.6	●
8690315	3.15	3D	10	19	74	4	52.4	0.6	●
8692315		5D	16	29	86		54.4	0.6	B ●

● = 标准库存品 ● = Standard stock item

NEXT



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	前刃宽 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8690320	3.2	3D	10	20	74	4	51.5	0.6	●
8692320		5D	16	29	86		54.5	0.6	B ●
8694320		8D	26	35	95		57.5	0.6	●
8690330	3.3	3D	10	20	74	4	51.7	0.6	●
8692330		5D	17	30	86		53.7	0.6	B ●
8694330		8D	27	36	95		56.7	0.6	●
8690340	3.4	3D	11	21	74	4	50.9	0.6	●
8692340		5D	17	31	86		52.9	0.6	B ●
8694340		8D	28	37	95		55.9	0.6	●
8690350	3.5	3D	11	21	74	4	51.1	0.6	●
8692350		5D	18	32	86		52.1	0.6	B ●
8694350		8D	28	39	95		55	0.6	●
8690360	3.6	3D	11	22	74	4	50.3	0.7	●
8692360		5D	18	33	86		51.3	0.7	B ●
8694360		8D	29	40	95		53.3	0.7	●
8692366	3.66	5D	19	33	86	4	51.4	0.7	B ●
8692368	3.68	5D	19	34	86	4	50.4	0.7	B ●
8690370	3.7	3D	12	23	74	4	49.4	0.7	●
8692370		5D	19	34	86		50.4	0.7	B ●
8694370		8D	30	41	95		52.4	0.7	●
8690375	3.75	3D	12	23	74	4	49.5	0.7	●
8692375		5D	19	34	86		50.5	0.7	B ●
8690380	3.8	3D	12	23	74	4	49.6	0.7	●
8692380		5D	19	35	86		49.6	0.7	B ●
8694380		8D	31	42	95		51.6	0.7	●
8690390	3.9	3D	12	24	74	4	48.8	0.7	●
8692390		5D	20	36	86		48.8	0.7	B ●
8694390		8D	32	43	95		50.8	0.7	●
8690400	4	3D	12	24	74	4	49	0.7	●
8692400		5D	20	36	86		49	0.7	B ●
8694400		8D	32	44	95		50	0.7	●
8690410	4.1 - 5	3D	13	25	80	5	52.3	0.7	●
8692410		5D	21	37	95		55.3	0.7	B ●
8694410		8D	33	45	105		57.3	0.7	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	前刃宽 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8700410	4.1	3D	13	25	80	6	50.5	0.7	●
8702410		5D	21	37	95		53.5	0.7	B ●
8704410		8D	33	45	105		55.5	0.7	●
8690420	4.2 - 5	3D	13	26	80	5	51.5	0.8	●
8692420		5D	21	38	95		54.5	0.8	B ●
8694420		8D	34	46	105		56.5	0.8	●
8700420	4.2	3D	13	26	80	6	49.6	0.8	●
8702420		5D	21	38	95		52.6	0.8	B ●
8704420		8D	34	46	105		54.6	0.8	●
8690430	4.3 - 5	3D	13	26	80	5	51.7	0.8	●
8692430		5D	22	39	95		53.7	0.8	B ●
8694430		8D	35	47	105		55.7	0.8	●
8700430	4.3	3D	13	26	80	6	49.8	0.8	●
8702430		5D	22	39	95		51.8	0.8	B ●
8704430		8D	35	47	105		53.8	0.8	●
8690440	4.4 - 5	3D	14	27	80	5	50.9	0.8	●
8692440		5D	22	40	95		52.9	0.8	B ●
8694440		8D	36	48	105		54.9	0.8	●
8700440	4.4	3D	14	27	80	6	49	0.8	●
8702440		5D	22	40	95		51	0.8	B ●
8704440		8D	36	48	105		53	0.8	●
8690450	4.5 - 5	3D	14	27	80	5	51.1	0.8	●
8692450		5D	23	41	95		52.1	0.8	B ●
8694450		8D	36	50	105		54	0.8	●
8700450	4.5	3D	14	27	80	6	49.2	0.8	●
8702450		5D	23	41	95		50.2	0.8	B ●
8704450		8D	36	50	105		51.2	0.8	●
8690460	4.6 - 5	3D	14	28	80	5	50.3	0.8	●
8692460		5D	23	42	95		51.3	0.8	B ●
8694460		8D	37	51	105		52.3	0.8	●
8700460	4.6	3D	14	28	80	6	48.4	0.8	●
8702460		5D	23	42	95		49.4	0.8	B ●
8704460		8D	37	51	105		50.4	0.8	●
8692462	4.62 - 5	5D	24	42	95	5	51.3	0.8	B ●
8692464	4.64 - 5	5D	24	42	95	5	51.3	0.8	B ●

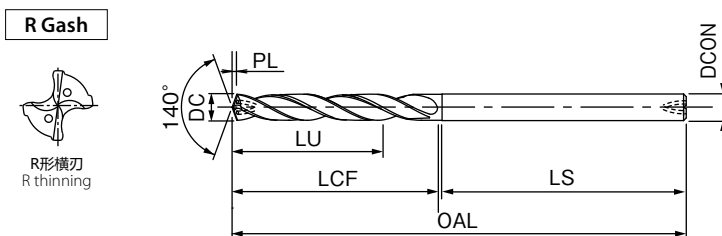
●=标准库存品 ●=Standard stock item

NEXT



ADO-3D/5D/8D

全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	槽长 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8690470	4.7 - 5	3D	15	29	80	5	49.4	0.9	●
8692470		5D	24	43	95		50.4	0.9	B ●
8694470		8D	38	52	105		51.4	0.9	●
8700470	4.7	3D	15	29	80	6	47.6	0.9	●
8702470		5D	24	43	95		48.6	0.9	B ●
8704470		8D	38	52	105		49.6	0.9	●
8690480	4.8 - 5	3D	15	29	80	5	49.6	0.9	●
8692480		5D	24	44	95		49.6	0.9	B ●
8694480		8D	39	53	105		50.6	0.9	●
8700480	4.8	3D	15	29	80	6	47.8	0.9	●
8702480		5D	24	44	95		47.8	0.9	B ●
8704480		8D	39	53	105		48.8	0.9	●
8690490	4.9 - 5	3D	15	30	80	5	48.8	0.9	●
8692490		5D	25	45	95		48.8	0.9	B ●
8694490		8D	40	54	105		49.8	0.9	●
8700490	4.9	3D	15	30	80	6	46.9	0.9	●
8702490		5D	25	45	95		46.9	0.9	B ●
8704490		8D	40	54	105		47.9	0.9	●
8690500	5 - 5	3D	15	25	80	5	54	0.9	●
8692500		5D	25	45	95		49	0.9	B ●
8694500		8D	40	55	105		49	0.9	●
8700500	5	3D	15	25	80	6	52.1	0.9	●
8702500		5D	25	45	95		47.1	0.9	B ●
8704500		8D	40	55	105		47.1	0.9	●
8690510	5.1	3D	16	26	82	6	53.3	0.9	●
8692510		5D	26	41	100		56.3	0.9	B ●
8704510		8D	41	56	115		56.3	0.9	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	槽长 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8690520	5.2	3D	16	26	82	6	53.5	0.9	●
8692520		5D	26	42	100		55.5	0.9	B ●
8704520		8D	42	57	115		55.5	0.9	●
8690525	5.25	3D	16	27	82	6	52.6	1	●
8692525		5D	27	42	100		55.6	1	B ●
8690530	5.3	3D	16	27	82	6	52.7	1	●
8692530		5D	27	43	100		54.7	1	B ●
8704530		8D	43	58	115		54.7	1	●
8690540	5.4	3D	17	27	82	6	52.9	1	●
8692540		5D	27	44	100		53.9	1	B ●
8704540		8D	44	59	115		53.9	1	●
8690550	5.5	3D	17	28	82	6	52.1	1	●
8692550		5D	28	44	100		54.1	1	B ●
8694550		8D	44	61	115		52.1	1	●
8692552	5.52	5D	28	45	100	6	53.1	1	B ●
8692554	5.54	5D	28	45	100	6	53.1	1	B ●
8690560	5.6	3D	17	28	82	6	52.3	1	●
8692560		5D	28	45	100		53.3	1	B ●
8704560		8D	45	62	115		51.3	1	●
8690570	5.7	3D	18	29	82	6	51.4	1	●
8692570		5D	29	46	100		52.4	1	B ●
8704570		8D	46	63	115		50.4	1	●
8690580	5.8	3D	18	29	82	6	51.6	1.1	●
8692580		5D	29	47	100		51.6	1.1	B ●
8704580		8D	47	64	115		49.6	1.1	●

● = 标准库存品 ● = Standard stock item

- 标识说明请参考p.2。
- 涂层可能会有颜色不均的情况，但这并不影响刀具的性能。
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.

NEXT



全尺寸2021年10月以后的生产依次改为**R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	前刃宽 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8690590	5.9	3D	18	30	82	6	50.8	1.1	●
8692590		5D	30	48	100		50.8	1.1	B ●
8704590		8D	48	65	115		48.8	1.1	●
8690600	6	3D	18	30	82	6	51	1.1	●
8692600		5D	30	48	100		51	1.1	B ●
8694600		8D	48	66	115		48	1.1	●
8690610	6.1 - 7	3D	19	31	88	7	56	1.1	●
8692610		5D	31	49	109		59	1.1	B ●
8694610		8D	49	67	125		57	1.1	●
8700610	6.1	3D	19	31	88	8	52.5	1.1	●
8702610		5D	31	49	109		55.5	1.1	B ●
8704610		8D	49	67	125		53.5	1.1	●
8690620	6.2 - 7	3D	19	31	88	7	56	1.1	●
8692620		5D	31	50	109		58	1.1	B ●
8694620		8D	50	68	125		56	1.1	●
8700620	6.2	3D	19	31	88	8	52.6	1.1	●
8702620		5D	31	50	109		54.6	1.1	B ●
8704620		8D	50	68	125		52.6	1.1	●
8690625	6.25 - 7	3D	19	32	88	7	55	1.1	●
8692625		5D	32	50	109		58	1.1	B ●
8690630	6.3 - 7	3D	19	32	88	7	55	1.1	●
8692630		5D	32	51	109		57	1.1	B ●
8694630		8D	51	69	125		55	1.1	●
8700630	6.3	3D	19	32	88	8	51.8	1.1	●
8702630		5D	32	51	109		53.8	1.1	B ●
8704630		8D	51	69	125		51.8	1.1	●
8690640	6.4 - 7	3D	20	32	88	7	55	1.2	●
8692640		5D	32	52	109		56	1.2	B ●
8694640		8D	52	70	125		54	1.2	●
8700640	6.4	3D	20	32	88	8	52	1.2	●
8702640		5D	32	52	109		53	1.2	B ●
8704640		8D	52	70	125		51	1.2	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	前刃宽 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8690650	6.5 - 7	3D	20	33	88	7	54	1.2	●
8692650		5D	33	52	109		56	1.2	B ●
8694650		8D	52	72	125		52	1.2	●
8700650	6.5	3D	20	33	88	8	51.2	1.2	●
8702650		5D	33	52	109		53.2	1.2	B ●
8704650		8D	52	72	125		49.2	1.2	●
8690660	6.6 - 7	3D	20	33	88	7	54	1.2	●
8692660		5D	33	53	109		55	1.2	B ●
8694660		8D	53	73	125		51	1.2	●
8700660	6.6	3D	20	33	88	8	51.4	1.2	●
8702660		5D	33	53	109		52.4	1.2	B ●
8704660		8D	53	73	125		48.4	1.2	●
8690670	6.7 - 7	3D	21	34	88	7	53	1.2	●
8692670		5D	34	54	109		54	1.2	B ●
8694670		8D	54	74	125		50	1.2	●
8700670	6.7	3D	21	34	88	8	50.6	1.2	●
8702670		5D	34	54	109		51.6	1.2	B ●
8704670		8D	54	74	125		47.6	1.2	●
8690675	6.75 - 7	3D	21	34	88	7	53	1.2	●
8692675		5D	34	54	109		54	1.2	B ●
8690680	6.8 - 7	3D	21	34	88	7	53	1.2	●
8692680		5D	34	55	109		53	1.2	B ●
8694680		8D	55	75	125		49	1.2	●
8700680	6.8	3D	21	34	88	8	50.8	1.2	●
8702680		5D	34	55	109		50.8	1.2	B ●
8704680		8D	55	75	125		46.8	1.2	●
8690690	6.9 - 7	3D	21	35	88	7	52	1.3	●
8692690		5D	35	56	109		52	1.3	B ●
8694690		8D	56	76	125		48	1.3	●
8700690	6.9	3D	21	35	88	8	49.9	1.3	●
8702690		5D	35	56	109		49.9	1.3	B ●
8704690		8D	56	76	125		45.9	1.3	●

● = 标准库存品 ● = Standard stock item

特点
Feature

加工数据
Cutting Data

3D/5D/8D

10D/15D/20D/25D/30D

带油孔 with Oil Hole

导向钻
Pilot Drill

无油孔 Non Oil Hole

2D/4D

中心钻 Starter Drill

AD-LDS

切削条件表
Cutting Conditions

非标品对应表
Production Table
by Drill Diameter

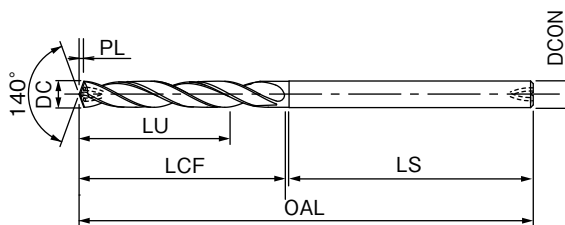
NEXT



ADO-3D/5D/8D

全尺寸2021年10月以后的生产依次改为**R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	切削刃宽 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8690700	7 - 7	3D	21	35	88	7	52	1.3	●
8692700		5D	35	56	109		52	1.3	B ●
8694700		8D	56	77	125		47	1.3	●
8700700	7	3D	21	35	88	8	50.1	1.3	●
8702700		5D	35	56	109		50.1	1.3	B ●
8704700		8D	56	77	125		45.1	1.3	●
8690710	7.1	3D	22	36	94	8	57	1.3	●
8692710		5D	36	57	118		60	1.3	B ●
8704710		8D	57	78	140		61	1.3	●
8690720	7.2	3D	22	36	94	8	57	1.3	●
8692720		5D	36	58	118		59	1.3	B ●
8704720		8D	58	79	140		60	1.3	●
8690725	7.25	3D	22	37	94	8	56	1.3	●
8692725		5D	37	58	118		59	1.3	B ●
8690730	7.3	3D	22	37	94	8	56	1.3	●
8692730		5D	37	59	118		58	1.3	B ●
8704730		8D	59	80	140		59	1.3	●
8692736	7.36	5D	37	59	118	8	58	1.3	B ●
8692738	7.38	5D	37	60	118	8	57	1.3	B ●
8690740	7.4	3D	23	37	94	8	56	1.3	●
8692740		5D	37	60	118		57	1.3	B ●
8704740		8D	60	81	140		58	1.3	●
8690750	7.5	3D	23	38	94	8	55	1.4	●
8692750		5D	38	60	118		57	1.4	B ●
8694750		8D	60	83	140		56	1.4	●
8692752	7.52	5D	38	61	118	8	56	1.4	B ●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	切削刃宽 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8692754	7.54	5D	38	61	118	8	56	1.4	B ●
8690760	7.6	3D	23	38	94	8	55	1.4	●
8692760		5D	38	61	118		56	1.4	B ●
8704760	7.6	8D	61	84	140	8	55	1.4	●
8690770		3D	24	39	94		54	1.4	●
8692770	7.7	5D	39	62	118	8	55	1.4	B ●
8704770		8D	62	85	140		54	1.4	●
8690775	7.75	3D	24	39	94	8	54	1.4	●
8692775		5D	39	62	118		55	1.4	B ●
8690780	7.8	3D	24	39	94	8	54	1.4	●
8692780		5D	39	63	118		54	1.4	B ●
8704780		8D	63	86	140		53	1.4	●
8690790	7.9	3D	24	40	94	8	53	1.4	●
8692790		5D	40	64	118		53	1.4	B ●
8704790		8D	64	87	140		52	1.4	●
8690800	8	3D	24	40	94	8	53	1.5	●
8692800		5D	40	64	118		53	1.5	B ●
8694800	8	8D	64	88	140	8	51	1.5	●
8690810		3D	25	41	101		59	1.5	●
8692810	8.1 - 9	5D	41	65	128	9	62	1.5	B ●
8694810		8D	65	89	150		60	1.5	●
8700810	8.1	3D	25	41	101	10	55.5	1.5	●
8702810		5D	41	65	128		58.5	1.5	B ●
8704810		8D	65	89	150		56.5	1.5	●

● = 标准库存品 ● = Standard stock item

- 标识说明请参考p.2.
- 涂层可能会有颜色不均的情况，但这并不影响刀具的性能。
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.

NEXT



全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	前加工 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8690820	8.2 - 9	3D	25	41	101	9	59	1.5	●
8692820		5D	41	66	128		61	1.5	B ●
8694820		8D	66	90	150		59	1.5	●
8700820	8.2	3D	25	41	101	10	55.6	1.5	●
8702820		5D	41	66	128		57.6	1.5	B ●
8704820		8D	66	90	150		55.6	1.5	●
8690825	8.25 - 9	3D	25	42	101	9	58	1.5	●
8692825		5D	42	66	128		61	1.5	B ●
8690830	8.3 - 9	3D	25	42	101	9	58	1.5	●
8692830		5D	42	67	128		60	1.5	B ●
8694830		8D	67	91	150		58	1.5	●
8700830	8.3	3D	25	42	101	10	54.8	1.5	●
8702830		5D	42	67	128		56.8	1.5	B ●
8704830		8D	67	91	150		54.8	1.5	●
8690840	8.4 - 9	3D	26	42	101	9	58	1.5	●
8692840		5D	42	68	128		59	1.5	B ●
8694840		8D	68	92	150		57	1.5	●
8700840	8.4	3D	26	42	101	10	55	1.5	●
8702840		5D	42	68	128		56	1.5	B ●
8704840		8D	68	92	150		54	1.5	●
8690850	8.5 - 9	3D	26	43	101	9	57	1.5	●
8692850		5D	43	68	128		59	1.5	B ●
8694850		8D	68	94	150		55	1.5	●
8700850	8.5	3D	26	43	101	10	54.2	1.5	●
8702850		5D	43	68	128		56.2	1.5	B ●
8704850		8D	68	94	150		52.2	1.5	●
8690860	8.6 - 9	3D	26	43	101	9	57	1.6	●
8692860		5D	43	69	128		58	1.6	B ●
8694860		8D	69	95	150		54	1.6	●
8700860	8.6	3D	26	43	101	10	54.4	1.6	●
8702860		5D	43	69	128		55.4	1.6	B ●
8704860		8D	69	95	150		51.4	1.6	●
8690870	8.7 - 9	3D	27	44	101	9	56	1.6	●
8692870		5D	44	70	128		57	1.6	B ●
8694870		8D	70	96	150		53	1.6	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	前加工 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8700870	8.7	3D	27	44	101	10	53.6	1.6	●
8702870		5D	44	70	128		54.6	1.6	B ●
8704870		8D	70	96	150		50.6	1.6	●
8690875	8.75 - 9	3D	27	44	101	9	56	1.6	●
8692875		5D	44	70	128		57	1.6	B ●
8690880	8.8 - 9	3D	27	44	101	9	56	1.6	●
8692880		5D	44	71	128		56	1.6	B ●
8694880		8D	71	97	150		52	1.6	●
8700880	8.8	3D	27	44	101	10	53.8	1.6	●
8702880		5D	44	71	128		53.8	1.6	B ●
8704880		8D	71	97	150		49.8	1.6	●
8690890	8.9 - 9	3D	27	45	101	9	55	1.6	●
8692890		5D	45	72	128		55	1.6	B ●
8694890		8D	72	98	150		51	1.6	●
8700890	8.9	3D	27	45	101	10	52.9	1.6	●
8702890		5D	45	72	128		52.9	1.6	B ●
8704890		8D	72	98	150		48.9	1.6	●
8690900	9 - 9	3D	27	45	101	9	55	1.6	●
8692900		5D	45	72	128		55	1.6	B ●
8694900		8D	72	99	150		50	1.6	●
8700900	9	3D	27	45	101	10	53.1	1.6	●
8702900		5D	45	72	128		53.1	1.6	B ●
8704900		8D	72	99	150		48.1	1.6	●
8690910	9.1	3D	28	46	106	10	59	1.7	●
8692910		5D	46	73	136		62	1.7	B ●
8704910		8D	73	100	160		59	1.7	●
8690920	9.2	3D	28	46	106	10	59	1.7	●
8692920		5D	46	74	136		61	1.7	B ●
8704920		8D	74	101	160		58	1.7	●
8692924	9.24	5D	47	74	136	10	61	1.7	B ●
8690925	9.25	3D	28	47	106	10	58	1.7	●
8692925		5D	47	74	136		61	1.7	B ●
8692926	9.26	5D	47	75	136	10	60	1.7	B ●
8690930	9.3	3D	28	47	106	10	58	1.7	●
8692930		5D	47	75	136		60	1.7	B ●
8704930		8D	75	102	160		57	1.7	●
8692936	9.36	5D	47	75	136	10	60	1.7	B ●

●=标准库存品 ●=Standard stock item

NEXT

特点
Feature

加工数据
Cutting Data

带油孔 with Oil Hole

导向钻
Pilot Drill

无油孔 Non Oil Hole

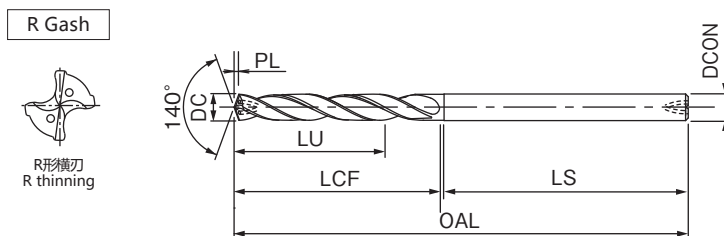
中心钻 Starter Drill

切削条件表
Cutting Conditions

非标准对应表
Production Table
by Drill Diameter

ADO-3D/5D/8D

全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效切削长度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8692938	9.38	5D	47	76	136	10	59	1.7	B ●
8690940	9.4	3D	29	47	106	10	58	1.7	●
8692940		5D	47	76	136		59	1.7	B ●
8704940		8D	76	103	160		56	1.7	●
8690950	9.5	3D	29	48	106	10	57	1.7	●
8692950		5D	48	76	136		59	1.7	B ●
8694950		8D	76	105	160		54	1.7	●
8692952	9.52	5D	48	77	136	10	58	1.7	B ●
8692954	9.54	5D	48	77	136	10	58	1.7	B ●
8690960	9.6	3D	29	48	106	10	57	1.7	●
8692960		5D	48	77	136		58	1.7	B ●
8704960		8D	77	106	160		53	1.7	●
8690970	9.7	3D	30	49	106	10	56	1.8	●
8692970		5D	49	78	136		57	1.8	B ●
8704970		8D	78	107	160		52	1.8	●
8690975	9.75	3D	30	49	106	10	56	1.8	B ●
8692975		5D	49	78	136		57	1.8	●
8690980	9.8	3D	30	49	106	10	56	1.8	●
8692980		5D	49	79	136		56	1.8	B ●
8704980		8D	79	108	160		51	1.8	●
8690990	9.9	3D	30	50	106	10	55	1.8	●
8692990		5D	50	80	136		55	1.8	B ●
8704990		8D	80	109	160		50	1.8	●
8691000	10	3D	30	50	106	10	55	1.8	●
8693000		5D	50	80	136		55	1.8	B ●
8695000		8D	80	110	160		49	1.8	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效切削长度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8691010	10.1 - 11	3D	31	51	113	11	61	1.8	●
8693010		5D	51	81	146		64	1.8	B ●
8695010		8D	81	111	182		70	1.8	●
8701010	10.1	3D	31	51	113	12	57.5	1.8	●
8703010		5D	51	81	146		60.5	1.8	B ●
8705010		8D	81	111	182		66.5	1.8	●
8691020	10.2 - 11	3D	31	51	113	11	61	1.9	●
8693020		5D	51	82	146		63	1.9	B ●
8695020		8D	82	112	182		69	1.9	●
8701020	10.2	3D	31	51	113	12	57.6	1.9	●
8703020		5D	51	82	146		59.6	1.9	B ●
8705020		8D	82	112	182		65.6	1.9	●
8691025	10.25 - 11	3D	31	52	113	11	60	1.9	B ●
8693025		5D	52	82	146		63	1.9	●
8691030	10.3 - 11	3D	31	52	113	11	60	1.9	●
8693030		5D	52	83	146		62	1.9	B ●
8695030		8D	83	113	182		68	1.9	●
8701030	10.3	3D	31	52	113	12	56.8	1.9	●
8703030		5D	52	83	146		58.8	1.9	B ●
8705030		8D	83	113	182		64.8	1.9	●
8691040	10.4 - 11	3D	32	52	113	11	60	1.9	●
8693040		5D	52	84	146		61	1.9	B ●
8695040		8D	84	114	182		67	1.9	●
8701040	10.4	3D	32	52	113	12	57	1.9	●
8703040		5D	52	84	146		58	1.9	B ●
8705040		8D	84	114	182		64	1.9	●

● = 标准库存品 ● = Standard stock item

- 标识说明请参考 p.2。
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NEXT



全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	切削刃 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8691050		3D	32	53	113		59	1.9	●
8693050	10.5 - 11	5D	53	84	146	11	61	1.9	B ●
8695050		8D	84	116	182		65	1.9	●
8701050		3D	32	53	113		56.2	1.9	●
8703050	10.5	5D	53	84	146	12	58.2	1.9	B ●
8705050		8D	84	116	182		62.2	1.9	●
8691060		3D	32	53	113		59	1.9	●
8693060	10.6 - 11	5D	53	85	146	11	60	1.9	B ●
8695060		8D	85	117	182		64	1.9	●
8701060		3D	32	53	113		56.4	1.9	●
8703060	10.6	5D	53	85	146	12	57.4	1.9	B ●
8705060		8D	85	117	182		61.4	1.9	●
8691070		3D	33	54	113		58	1.9	●
8693070	10.7 - 11	5D	54	86	146	11	59	1.9	B ●
8695070		8D	86	118	182		63	1.9	●
8701070		3D	33	54	113		55.6	1.9	●
8703070	10.7	5D	54	86	146	12	56.6	1.9	B ●
8705070		8D	86	118	182		60.6	1.9	●
8691075		3D	33	54	113		58	2	●
8693075	10.75 - 11	5D	54	86	146	11	59	2	B ●
8691080		3D	33	54	113		58	2	●
8693080	10.8 - 11	5D	54	87	146	11	58	2	B ●
8695080		8D	87	119	182		62	2	●
8701080		3D	33	54	113		55.8	2	●
8703080	10.8	5D	54	87	146	12	55.8	2	B ●
8705080		8D	87	119	182		59.8	2	●
8691090		3D	33	55	113		57	2	●
8693090	10.9 - 11	5D	55	88	146	11	57	2	B ●
8695090		8D	88	120	182		61	2	●
8701090		3D	33	55	113		54.9	2	●
8703090	10.9	5D	55	88	146	12	54.9	2	B ●
8705090		8D	88	120	182		58.9	2	●
8691100		3D	33	55	113		57	2	●
8693100	11 - 11	5D	55	88	146	11	57	2	B ●
8695100		8D	88	121	182		60	2	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	切削刃 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8701100		3D	33	55	113		55.1	2	●
8703100	11	5D	55	88	146	12	55.1	2	B ●
8705100		8D	88	121	182		58.1	2	●
8691110		3D	34	56	120		63	2	●
8693110	11.1	5D	56	89	156	12	66	2	B ●
8705110		8D	89	122	194		71	2	●
8691120		3D	34	56	120		63	2	●
8693120	11.2	5D	56	90	156	12	65	2	B ●
8705120		8D	90	123	194		70	2	●
8693122	11.22	5D	57	90	156	12	65	2	B ●
8693124	11.24	5D	57	90	156	12	65	2	B ●
8691130		3D	34	57	120		62	2.1	●
8693130	11.3	5D	57	91	156	12	64	2.1	B ●
8705130		8D	91	124	194		69	2.1	●
8693136	11.36	5D	57	91	156	12	64	2.1	B ●
8693138	11.38	5D	57	92	156	12	63	2.1	B ●
8691140		3D	35	57	120		62	2.1	●
8693140	11.4	5D	57	92	156	12	63	2.1	B ●
8705140		8D	92	125	194		68	2.1	●
8691150		3D	35	58	120		61	2.1	●
8693150	11.5	5D	58	92	156	12	63	2.1	B ●
8695150		8D	92	127	194		66	2.1	●
8691160		3D	35	58	120		61	2.1	●
8693160	11.6	5D	58	93	156	12	62	2.1	B ●
8705160		8D	93	128	194		65	2.1	●
8691170		3D	36	59	120		60	2.1	●
8693170	11.7	5D	59	94	156	12	61	2.1	B ●
8705170		8D	94	129	194		64	2.1	●
8691180		3D	36	59	120		60	2.1	●
8693180	11.8	5D	59	95	156	12	60	2.1	B ●
8705180		8D	95	130	194		63	2.1	●
8691190		3D	36	60	120		59	2.2	●
8693190	11.9	5D	60	96	156	12	59	2.2	B ●
8705190		8D	96	131	194		62	2.2	●

● = 标准库存品 ● = Standard stock item

特点
Feature

加工数据
Cutting Data

3D/5D/8D

10D/15D/20D/25D/30D

带油孔 with Oil Hole

40D/50D

导向钻
Pilot Drill

无油孔 Non Oil Hole

2D/4D

中心钻 Starter Drill

AD-LDS

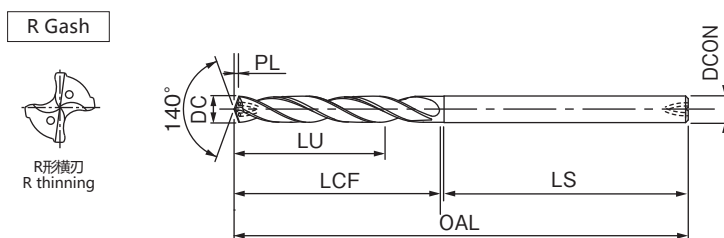
切削条件表
Cutting Conditions

非标品对应表
Production Table
by Drill Diameter

NEXT

ADO-3D/5D/8D

全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效切削长度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8691200	12	3D	36	60	120	12	59	2.2	●
8693200		5D	60	96	156		59	2.2	B ●
8695200		8D	96	132	194		61	2.2	●
8691210	12.1 - 13	3D	37	61	128	13	66	2.2	B ●
8693210		5D	61	97	167		69	2.2	●
8701210	12.1	3D	37	61	128	14	62.5	2.2	●
8703210		5D	61	97	167		65.5	2.2	B ●
8705210		8D	97	133	206		68.5	2.2	●
8691220	12.2 - 13	3D	37	61	128	13	66	2.2	B ●
8693220		5D	61	98	167		68	2.2	●
8701220	12.2	3D	37	61	128	14	62.6	2.2	●
8703220		5D	61	98	167		64.6	2.2	B ●
8705220		8D	98	134	206		67.6	2.2	●
8691230	12.3 - 13	3D	37	62	128	13	65	2.2	B ●
8693230		5D	62	99	167		67	2.2	●
8701230	12.3	3D	37	62	128	14	61.8	2.2	●
8703230		5D	62	99	167		63.8	2.2	B ●
8705230		8D	99	135	206		66.8	2.2	●
8691240	12.4 - 13	3D	38	62	128	13	65	2.3	B ●
8693240		5D	62	100	167		66	2.3	●
8701240	12.4	3D	38	62	128	14	62	2.3	●
8703240		5D	62	100	167		63	2.3	B ●
8705240		8D	100	136	206		66	2.3	●
8691250	12.5 - 13	3D	38	63	128	13	64	2.3	●
8693250		5D	63	100	167		66	2.3	B ●
8695250		8D	100	138	206		67	2.3	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效切削长度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8701250	12.5	3D	38	63	128	14	61.2	2.3	●
8703250		5D	63	100	167		63.2	2.3	B ●
8705250		8D	100	138	206		64.2	2.3	●
8691260	12.6 - 13	3D	38	63	128	13	64	2.3	B ●
8693260		5D	63	101	167		65	2.3	●
8701260	12.6	3D	38	63	128	14	61.4	2.3	●
8703260		5D	63	101	167		62.4	2.3	B ●
8705260		8D	101	139	206		63.4	2.3	●
8691270	12.7 - 13	3D	39	64	128	13	63	2.3	B ●
8693270		5D	64	102	167		64	2.3	●
8701270	12.7	3D	39	64	128	14	60.6	2.3	●
8703270		5D	64	102	167		61.6	2.3	B ●
8705270		8D	102	140	206		62.6	2.3	●
8691275	12.75 - 13	3D	39	64	128	13	63	2.3	B ●
8693275		5D	64	103	167		63	2.3	●
8691280	12.8 - 13	3D	39	64	128	13	63	2.3	B ●
8693280		5D	64	103	167		63	2.3	●
8701280	12.8	3D	39	64	128	14	60.8	2.3	●
8703280		5D	64	103	167		60.8	2.3	B ●
8705280		8D	103	141	206		61.8	2.3	●
8691290	12.9 - 13	3D	39	65	128	13	62	2.3	B ●
8693290		5D	65	104	167		62	2.3	●
8701290	12.9	3D	39	65	128	14	59.9	2.3	●
8703290		5D	65	104	167		59.9	2.3	B ●
8705290		8D	104	142	206		60.9	2.3	●
8691300	13 - 13	3D	39	65	128	13	62	2.4	●
8693300		5D	65	104	167		62	2.4	B ●
8695300		8D	104	143	206		62	2.4	●

● = 标准库存品 ● = Standard stock item

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- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.

NEXT



全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	前加工 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8701300	13	3D	39	65	128	14	60.1	2.4	●
8703300		5D	65	104	167		60.1	2.4	B ●
8705300		8D	104	143	206		60.1	2.4	●
8691310	13.1	3D	40	66	134	14	67	2.4	●
8693310		5D	66	105	176		70	2.4	B ●
8705310		8D	105	144	218		73	2.4	●
8691320	13.2	3D	40	66	134	14	67	2.4	●
8693320		5D	66	106	176		69	2.4	B ●
8705320		8D	106	145	218		72	2.4	●
8693325	13.25	5D	67	106	176	14	69	2.4	B ●
8691330	13.3	3D	40	67	134	14	66	2.4	●
8693330		5D	67	107	176		68	2.4	B ●
8705330		8D	107	146	218		71	2.4	●
8691340	13.4	3D	41	67	134	14	66	2.4	●
8693340		5D	67	108	176		67	2.4	B ●
8705340		8D	108	147	218		70	2.4	●
8691350	13.5	3D	41	68	134	14	65	2.5	●
8693350		5D	68	108	176		67	2.5	B ●
8705350		8D	108	149	218		68	2.5	●
8691360	13.6	3D	41	68	134	14	65	2.5	●
8693360		5D	68	109	176		66	2.5	B ●
8705360		8D	109	150	218		67	2.5	●
8691370	13.7	3D	42	69	134	14	64	2.5	●
8693370		5D	69	110	176		65	2.5	B ●
8705370		8D	110	151	218		66	2.5	●
8691380	13.8	3D	42	69	134	14	64	2.5	●
8693380		5D	69	111	176		64	2.5	B ●
8705380		8D	111	152	218		65	2.5	●
8691390	13.9	3D	42	70	134	14	63	2.5	●
8693390		5D	70	112	176		63	2.5	B ●
8705390		8D	112	153	218		64	2.5	●
8691400	14	3D	42	70	134	14	63	2.5	●
8693400		5D	70	112	176		63	2.5	B ●
8705400		8D	112	154	218		63	2.5	●
8691410	14.1 - 15	3D	43	71	140	15	68	2.6	●
8693410		5D	71	113	185		71	2.6	B ●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	前加工 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8701410	14.1	3D	43	71	140	16	64.5	2.6	●
8703410		5D	71	113	185		67.5	2.6	B ●
8705410		8D	113	155	230		70.5	2.6	●
8691420	14.2 - 15	3D	43	71	140	15	68	2.6	●
8693420		5D	71	114	185		70	2.6	B ●
8701420	14.2	3D	43	71	140	16	64.6	2.6	●
8703420		5D	71	114	185		66.6	2.6	B ●
8705420		8D	114	156	230		69.6	2.6	●
8691430	14.3 - 15	3D	43	72	140	15	67	2.6	●
8693430		5D	72	115	185		69	2.6	B ●
8701430	14.3	3D	43	72	140	16	63.8	2.6	●
8703430		5D	72	115	185		65.8	2.6	B ●
8705430		8D	115	157	230		68.8	2.6	●
8691440	14.4 - 15	3D	44	72	140	15	67	2.6	●
8693440		5D	72	116	185		68	2.6	B ●
8701440	14.4	3D	44	72	140	16	64	2.6	●
8703440		5D	72	116	185		65	2.6	B ●
8705440		8D	116	158	230		68	2.6	●
8691450	14.5 - 15	3D	44	73	140	15	66	2.6	●
8693450		5D	73	116	185		68	2.6	B ●
8701450	14.5	3D	44	73	140	16	63.2	2.6	●
8703450		5D	73	116	185		65.2	2.6	B ●
8705450		8D	116	160	230		66.2	2.6	●
8691460	14.6 - 15	3D	44	73	140	15	66	2.7	●
8693460		5D	73	117	185		67	2.7	B ●
8701460	14.6	3D	44	73	140	16	63.4	2.7	●
8703460		5D	73	117	185		64.4	2.7	B ●
8705460		8D	117	161	230		65.4	2.7	●
8691470	14.7 - 15	3D	45	74	140	15	65	2.7	●
8693470		5D	74	118	185		66	2.7	B ●
8701470	14.7	3D	45	74	140	16	62.6	2.7	●
8703470		5D	74	118	185		63.6	2.7	B ●
8705470		8D	118	162	230		64.6	2.7	●
8691480	14.8 - 15	3D	45	74	140	15	65	2.7	●
8693480		5D	74	119	185		65	2.7	B ●

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NEXT



特点
Feature

加工数据
Cutting Data

带油孔 with Oil Hole

导向钻
Pilot Drill

无油孔 Non Oil Hole

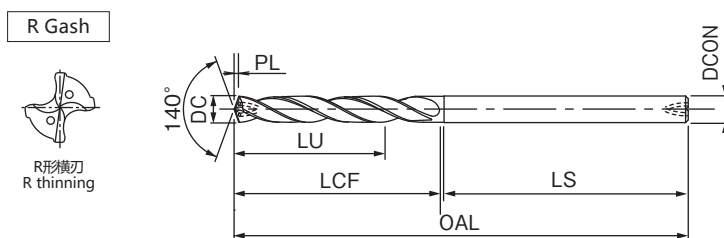
中心钻 Starter Drill

切削条件表
Cutting Conditions

非标品对应表
Production Table
by Drill Diameter

ADO-3D/5D/8D

全尺寸2021年10月以后的生产依次改为 **R Gash**。
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FROM

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效切削长度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8701480	14.8	3D	45	74	140	16	62.8	2.7	●
8703480		5D	74	119	185		62.8	2.7	B ●
8705480		8D	119	163	230		63.8	2.7	●
8691490	14.9 - 15	3D	45	75	140	15	64	2.7	B ●
8693490		5D	75	120	185		64	2.7	B ●
8701490	14.9	3D	45	75	140	16	61.9	2.7	●
8703490		5D	75	120	185		61.9	2.7	B ●
8705490		8D	120	164	230		62.9	2.7	●
8691500	15 - 15	3D	45	75	140	15	64	2.7	B ●
8693500		5D	75	120	185		64	2.7	B ●
8701500	15	3D	45	75	140	16	62.1	2.7	●
8703500		5D	75	120	185		62.1	2.7	B ●
8705500		8D	120	165	230		62.1	2.7	●
8691510	15.1	3D	46	76	145	16	68	2.7	●
8693510		5D	76	121	193		71	2.7	B ●
8705510		8D	121	166	241		74	2.7	●
8691520	15.2	3D	46	76	145	16	68	2.8	●
8693520		5D	76	122	193		70	2.8	B ●
8705520		8D	122	167	241		73	2.8	●
8693525	15.25	5D	77	122	193	16	70	2.8	B ●
8691530	15.3	3D	46	77	145	16	67	2.8	●
8693530		5D	77	123	193		69	2.8	B ●
8705530		8D	123	168	241		72	2.8	●
8691540	15.4	3D	47	77	145	16	67	2.8	●
8693540		5D	77	124	193		68	2.8	B ●
8705540		8D	124	169	241		71	2.8	●

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效切削长度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8691550	15.5	3D	47	78	145	16	66	2.8	●
8693550		5D	78	124	193		68	2.8	B ●
8705550		8D	124	171	241		69	2.8	●
8691560	15.6	3D	47	78	145	16	66	2.8	●
8693560		5D	78	125	193		67	2.8	B ●
8705560		8D	125	172	241		68	2.8	●
8691570	15.7	3D	48	79	145	16	65	2.9	●
8693570		5D	79	126	193		66	2.9	B ●
8705570		8D	126	173	241		67	2.9	●
8691580	15.8	3D	48	79	145	16	65	2.9	●
8693580		5D	79	127	193		65	2.9	B ●
8705580		8D	127	174	241		66	2.9	●
8691590	15.9	3D	48	80	145	16	64	2.9	●
8693590		5D	80	128	193		64	2.9	B ●
8705590		8D	128	175	241		65	2.9	●
8691600	16	3D	48	80	145	16	64	2.9	●
8693600		5D	80	128	193		64	2.9	B ●
8705600		8D	128	176	241		64	2.9	●
	16.1	3D	49	81	150	18	64.5	2.9	□
		5D	81	129	201		67.5	2.9	□
	16.2	3D	49	81	150	18	64.7	2.9	□
		5D	81	130	201		66.6	2.9	□
	16.3	3D	49	82	150	18	63.8	3	□
		5D	82	131	201		65.8	3	□
	16.4	3D	50	82	150	18	64	3	□
		5D	82	132	201		65	3	□

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Contact us for price & availability.

NEXT



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FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	前加工 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8691650	16.5 - 17	3D	50	83	150	17	66	3	●
8693650		5D	83	132	201		68	3	●
8701650	16.5	3D	50	83	150	18	63.2	3	●
8703650		5D	83	132	201		65.2	3	●
	16.6	3D	50	83	150	18	63.4	3	□
		5D	83	133	201		64.4	3	□
	16.7	3D	51	84	150	18	62.6	3	□
		5D	84	134	201		63.6	3	□
	16.8	3D	51	84	150	18	62.8	3.1	□
		5D	84	135	201		62.8	3.1	□
	16.9	3D	51	85	150	18	61.9	3.1	□
		5D	85	136	201		61.9	3.1	□
8691700	17 - 17	3D	51	85	150	17	64	3.1	●
8693700		5D	85	136	201		64	3.1	●
8701700	17	3D	51	85	150	18	62.1	3.1	●
8703700		5D	85	136	201		62.1	3.1	●
	17.1	3D	52	86	155	18	68	3.1	□
		5D	86	137	209		71	3.1	□
	17.2	3D	52	86	155	18	68	3.1	□
		5D	86	138	209		70	3.1	□
	17.3	3D	52	87	155	18	67	3.1	□
		5D	87	139	209		69	3.1	□
	17.4	3D	53	87	155	18	67	3.2	□
		5D	87	140	209		68	3.2	□
8691750	17.5	3D	53	88	155	18	66	3.2	●
8693750		5D	88	140	209		68	3.2	●
	17.6	3D	53	88	155	18	66	3.2	□
		5D	88	141	209		67	3.2	□
	17.7	3D	54	89	155	18	65	3.2	□
		5D	89	142	209		66	3.2	□

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	前加工 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
	17.8	3D	54	89	155	18	65	3.2	□
		5D	89	143	209		65	3.2	□
	17.9	3D	54	90	155	18	64	3.3	□
		5D	90	144	209		64	3.3	□
8691800	18	3D	54	90	155	18	64	3.3	●
8693800		5D	90	144	209		64	3.3	●
	18.1	3D	55	91	160	20	64.5	3.3	□
		5D	91	145	217		67.5	3.3	□
	18.2	3D	55	91	160	20	64.6	3.3	□
		5D	91	146	217		66.6	3.3	□
	18.3	3D	55	92	160	20	63.8	3.3	□
		5D	92	147	217		65.8	3.3	□
	18.4	3D	56	92	160	20	64	3.3	□
		5D	92	148	217		65	3.3	□
8691850	18.5 - 19	3D	56	93	160	19	66	3.4	●
8693850		5D	93	148	217		68	3.4	●
8701850	18.5	3D	56	93	160	20	63.2	3.4	●
8703850		5D	93	148	217		65.2	3.4	●
	18.6	3D	56	93	160	20	63.4	3.4	□
		5D	93	149	217		64.4	3.4	□
	18.7	3D	57	94	160	20	62.6	3.4	□
		5D	94	150	217		63.6	3.4	□
	18.8	3D	57	94	160	20	62.8	3.4	□
		5D	94	151	217		62.8	3.4	□
	18.9	3D	57	95	160	20	61.9	3.4	□
		5D	95	152	217		61.9	3.4	□
8691900	19 - 19	3D	57	95	160	19	64	3.5	●
8693900		5D	95	152	217		64	3.5	●
8701900	19	3D	57	95	160	20	62.1	3.5	●
8703900		5D	95	152	217		62.1	3.5	●

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NEXT



特点
Feature

加工数据
Cutting Data

3D/5D/8D

带油孔 with Oil Hole
10D/15D/20D/25D/30D

40D/50D
导向钻
Pilot Drill

无油孔 Non Oil Hole
2D/4D

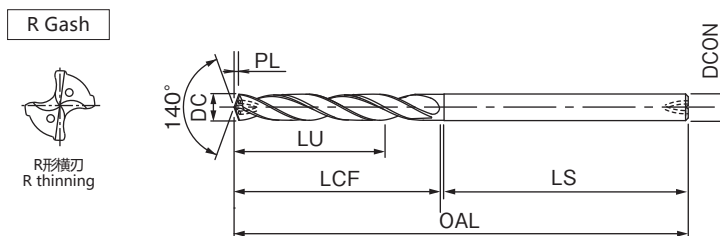
中心钻 Starter Drill
AD-LDS

切削条件表
Cutting Conditions

非标准对应表
Production Table
by Drill Diameter

ADO-3D/5D/8D

全尺寸2021年10月以后的生产依次改为 **R Gash**。
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FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工长度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
	19.1	3D	58	96	165	20	68	3.5	☐
		5D	96	153	225		71	3.5	☐
	19.2	3D	58	96	165	20	68	3.5	☐
		5D	96	154	225		70	3.5	☐
	19.3	3D	58	97	165	20	67	3.5	☐
		5D	97	155	225		69	3.5	☐
	19.4	3D	59	97	165	20	67	3.5	☐
		5D	97	156	225		68	3.5	☐
8691950	19.5	3D	59	98	165	20	66	3.5	●
8693950		5D	98	156	225		68	3.5	●

- 标识说明请参考 p.2。
- 涂层可能会有颜色不均的情况，但这并不影响刀具的性能。
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工长度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
	19.6	3D	59	98	165	20	66	3.6	☐
		5D	98	157	225		67	3.6	☐
	19.7	3D	60	99	165	20	65	3.6	☐
		5D	99	158	225		66	3.6	☐
	19.8	3D	60	99	165	20	65	3.6	☐
		5D	99	159	225		65	3.6	☐
	19.9	3D	60	100	165	20	64	3.6	☐
		5D	100	160	225		64	3.6	☐
8692000	20	3D	60	100	165	20	64	3.6	●
8694000		5D	100	160	225		64	3.6	●

- = 标准库存品 ● = Standard stock item
- = 特定代理店库存品 □ = Stocked by specific distributors.

Contact us for price & availability.



ADO-10D/15D/20D/25D/30D

ADO-10D



ADO-15D



ADO-20D



ADO-25D

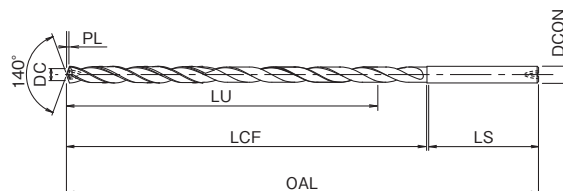


ADO-30D



全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash

R形横刃
R thinning

先端角的容许差为 $140^\circ \begin{smallmatrix} 0^\circ \\ -4^\circ \end{smallmatrix}$

Tolerance of the point angle is $140^\circ \begin{smallmatrix} 0^\circ \\ -4^\circ \end{smallmatrix}$



商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8696200	2 - 3	10D	20	26	75	3	40	0.4	●
8696210	2.1 - 3	10D	21	33	75	3	40	0.4	●
8696220	2.2 - 3	10D	22	33	75	3	40	0.4	●
8696230	2.3 - 3	10D	23	33	75	3	40	0.4	●
8696240	2.4 - 3	10D	24	33	75	3	40	0.4	●
8696250	2.5 - 3	10D	25	33	75	3	40	0.5	●
8696260	2.6 - 3	10D	26	40	90	3	40	0.5	●
8696270	2.7 - 3	10D	27	40	90	3	40	0.5	●
8696280	2.8 - 3	10D	28	40	90	3	40	0.5	●
8696290	2.9 - 3	10D	29	40	90	3	40	0.5	●
8696300	3 - 3	10D	30	40	90	3	50	0.5	●
8698300		15D	45	55	105		50	0.5	●
8706300		20D	60	70	120		48	0.5	●
8726300		25D	75	85	135		48	0.5	●
8708300		30D	90	100	150		50	0.5	●

- 标识说明请参考 p.2。
- 涂层可能会有颜色不均的情况，但这并不影响刀具的性能。
- 导向钻的推荐加工方法请参考 p.38。
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.
- About the recommended speed and feed rate for pilot drill, please refer p.38.

单位:mm Unit:mm

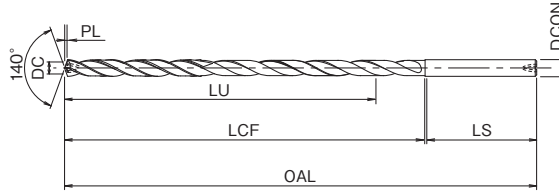
商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8696310	3.1	10D	31	45	100	4	50	0.6	●
8698310		15D	47	60	125		63	0.6	●
8706310		20D	62	80	140		58	0.6	●
8724310		25D	78	95	165		68	0.6	●
8708310		30D	93	102	185		81	0.6	●
8696320	3.2	10D	32	45	100	4	50	0.6	●
8698320		15D	48	60	125		63	0.6	●
8706320		20D	64	80	140		58	0.6	●
8724320		25D	80	95	165		68	0.6	●
8708320	3.3	30D	96	105	185	4	78	0.6	●
8696330		10D	33	45	100		50	0.6	●
8698330		15D	50	60	125		63	0.6	●
8706330		20D	66	80	140		58	0.6	●
8724330		25D	83	95	165		68	0.6	●
8708330		30D	99	109	185		74	0.6	●

● = 标准库存品 ● = Standard stock item

ADO-10D/15D/20D/25D/30D

全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



先端角的容许差为 $140^\circ \begin{smallmatrix} 0^\circ \\ -4^\circ \end{smallmatrix}$ Tolerance of the point angle is $140^\circ \begin{smallmatrix} 0^\circ \\ -4^\circ \end{smallmatrix}$

FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效切削深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8696340	3.4	10D	34	50	100	4	48	0.6	●
8698340		15D	51	65	125		58	0.6	●
8706340		20D	68	85	140		53	0.6	B ●
8724340		25D	85	105	165		58	0.6	●
8708340		30D	102	112	185		71	0.6	●
8696350	3.5	10D	35	50	100	4	48	0.6	●
8698350		15D	53	65	125		58	0.6	●
8706350		20D	70	85	140		53	0.6	B ●
8724350		25D	88	105	165		58	0.6	●
8708350		30D	105	116	185		67	0.6	●
8696360	3.6	10D	36	50	100	4	48	0.7	●
8698360		15D	54	65	125		58	0.7	●
8706360		20D	72	85	140		53	0.7	B ●
8724360		25D	90	105	165		58	0.7	●
8708360		30D	108	116	185		67	0.7	●
8696370	3.7	10D	37	50	100	4	48	0.7	●
8698370		15D	56	65	125		58	0.7	●
8706370		20D	74	85	140		53	0.7	B ●
8724370		25D	93	105	165		58	0.7	●
8708370		30D	111	116	185		67	0.7	●
8696380	3.8	10D	38	50	100	4	48	0.7	●
8698380		15D	57	75	125		48	0.7	●
8706380		20D	76	90	140		48	0.7	B ●
8724380		25D	95	115	165		48	0.7	●
8708380		30D	114	132	185		51	0.7	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效切削深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8696390	3.9	10D	39	50	100	4	48	0.7	●
8698390		15D	59	75	125		48	0.7	●
8706390		20D	78	90	140		48	0.7	B ●
8724390		25D	98	115	165		48	0.7	●
8708390		30D	117	132	185		51	0.7	●
8696400	4	10D	40	50	100	4	50	0.7	●
8698400		15D	60	75	125		50	0.7	●
8706400		20D	80	90	140		50	0.7	B ●
8724400		25D	100	115	165		48	0.7	●
8708400		30D	120	132	185		51	0.7	●
8696410	4.1 - 5	10D	41	55	115	5	58	0.7	●
8698410		15D	62	75	140		63	0.7	●
8706410		20D	82	100	165		63	0.7	B ●
8726410		25D	103	120	190		68	0.7	●
8708410		30D	123	140	215		73	0.7	●
8710410	4.1	10D	41	55	115	6	48.3	0.7	●
8712410		15D	62	75	140		45	0.7	●
8714410		20D	82	100	165		45	0.7	B ●
8724410		25D	103	120	190		45	0.7	●
8716410		30D	123	140	215		45	0.7	●
8696420	4.2 - 5	10D	42	55	115	5	58	0.8	●
8698420		15D	63	75	140		63	0.8	●
8706420		20D	84	100	165		63	0.8	B ●
8726420		25D	105	120	190		68	0.8	●
8708420		30D	126	140	215		73	0.8	●

● = 标准库存品 ● = Standard stock item

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- 导向钻的推荐加工方法请参考 p.38.
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.
- About the recommended speed and feed rate for pilot drill, please refer p.38.

NEXT



全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

推荐使用ADO-3D/5D作为长刃型ADO-10D~50D的导向钻(p.11~)

The ADO-3D and 5D can also be used as a pilot drill for the ADO-10D to 50D long drills (from p.11).

· ADO-3D $\phi 2 \sim \phi 20$



· ADO-5D $\phi 2 \sim \phi 20$



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	切削刃 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8710420	4.2	10D	42	55	115	6	48.4	0.8	●
8712420		15D	63	75	140		45	0.8	●
8714420		20D	84	100	165		45	0.8	●
8724420		25D	105	120	190		45	0.8	●
8716420		30D	126	140	215		45	0.8	●
8696430	4.3 - 5	10D	43	60	115	5	53	0.8	●
8698430		15D	65	85	140		53	0.8	●
8706430		20D	86	110	165		53	0.8	●
8726430		25D	108	135	190		53	0.8	●
8708430		30D	129	150	215		63	0.8	●
8710430	4.3	10D	43	60	115	6	48.4	0.8	●
8712430		15D	65	85	140		45	0.8	●
8714430		20D	86	110	165		45	0.8	●
8724430		25D	108	135	190		45	0.8	●
8716430		30D	129	150	215		45	0.8	●
8696440	4.4 - 5	10D	44	60	115	5	53	0.8	●
8698440		15D	66	85	140		53	0.8	●
8706440		20D	88	110	165		53	0.8	●
8726440		25D	110	135	190		53	0.8	●
8708440		30D	132	150	215		63	0.8	●
8710440	4.4	10D	44	60	115	6	48.5	0.8	●
8712440		15D	66	85	140		45	0.8	●
8714440		20D	88	110	165		45	0.8	●
8724440		25D	110	135	190		45	0.8	●
8716440		30D	132	150	215		45	0.8	●
8696450	4.5 - 5	10D	45	60	115	5	53	0.8	●
8698450		15D	68	85	140		53	0.8	●
8706450		20D	90	110	165		53	0.8	●
8726450		25D	113	135	190		53	0.8	●
8708450		30D	135	150	215		63	0.8	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	切削刃 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8710450	4.5	10D	45	60	115	6	48.6	0.8	●
8712450		15D	68	85	140		45	0.8	●
8714450		20D	90	110	165		45	0.8	●
8724450		25D	113	135	190		45	0.8	●
8716450		30D	135	150	215		45	0.8	●
8696460	4.6 - 5	10D	46	60	115	5	53	0.8	●
8698460		15D	69	85	140		53	0.8	●
8706460		20D	92	110	165		53	0.8	●
8726460		25D	115	135	190		53	0.8	●
8708460		30D	138	150	215		63	0.8	●
8710460	4.6	10D	46	60	115	6	48.7	0.8	●
8712460		15D	69	85	140		45	0.8	●
8714460		20D	92	110	165		45	0.8	●
8724460		25D	115	135	190		45	0.8	●
8716460		30D	138	150	215		45	0.8	●
8696470	4.7 - 5	10D	47	65	115	5	48	0.9	●
8698470		15D	71	85	140		53	0.9	●
8706470		20D	94	110	165		53	0.9	●
8726470		25D	118	135	190		53	0.9	●
8708470		30D	141	150	215		63	0.9	●
8710470	4.7	10D	47	65	115	6	46.8	0.9	●
8712470		15D	71	85	140		45	0.9	●
8714470		20D	94	110	165		45	0.9	●
8724470		25D	118	135	190		45	0.9	●
8716470		30D	141	150	215		45	0.9	●
8696480	4.8 - 5	10D	48	65	115	5	48	0.9	●
8698480		15D	72	90	140		48	0.9	●
8706480		20D	96	115	165		48	0.9	●
8726480		25D	120	140	190		48	0.9	●
8708480		30D	144	165	215		48	0.9	●

● = 标准库存品 ● = Standard stock item

· 导向钻的推荐加工方法请参考 p.38.

· About the recommended speed and feed rate for pilot drill, please refer p.38.

NEXT



特点
Feature

加工数据
Cutting Data

3D/5D/8D

带油孔 with Oil Hole
10D/15D/20D/25D/30D

40D/50D

导向钻
Pilot Drill

无油孔 Non Oil Hole

2D/4D

中心钻 Starter Drill
AD-LDS

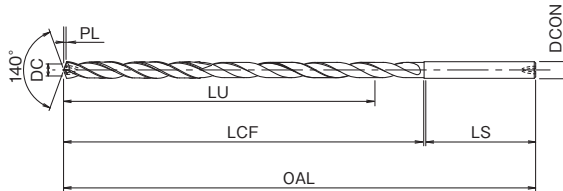
切削条件表
Cutting Conditions

非标准品对应表
Production Table
by Drill Diameter

ADO-10D/15D/20D/25D/30D

全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



先端角的容许差为 $140^\circ \begin{smallmatrix} 0^\circ \\ -4^\circ \end{smallmatrix}$ Tolerance of the point angle is $140^\circ \begin{smallmatrix} 0^\circ \\ -4^\circ \end{smallmatrix}$

FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8710480	4.8	10D	48	65	115	6	46.9	0.9	●
8712480		15D	72	90	140		45	0.9	●
8714480		20D	96	115	165		45	0.9	B ●
8724480		25D	120	140	190		45	0.9	●
8716480		30D	144	165	215		45	0.9	●
8696490	4.9 - 5	10D	49	65	115	5	48	0.9	●
8698490		15D	74	90	140		48	0.9	●
8706490		20D	98	115	165		48	0.9	B ●
8726490		25D	123	140	190		48	0.9	●
8708490		30D	147	165	215		48	0.9	●
8710490	4.9	10D	49	65	115	6	47	0.9	●
8712490		15D	74	90	140		45	0.9	●
8714490		20D	98	115	165		45	0.9	B ●
8724490		25D	123	140	190		45	0.9	●
8716490		30D	147	165	215		45	0.9	●
8696500	5 - 5	10D	50	65	115	5	50	0.9	●
8698500		15D	75	90	140		50	0.9	●
8706500		20D	100	115	165		50	0.9	B ●
8726500		25D	125	140	190		48	0.9	●
8708500		30D	150	165	215		50	0.9	●
8710500	5	10D	50	65	115	6	47	0.9	●
8712500		15D	75	90	140		45	0.9	●
8714500		20D	100	115	165		45	0.9	B ●
8724500		25D	125	140	190		45	0.9	●
8716500		30D	150	165	215		45	0.9	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8710510	5.1	10D	51	70	128	6	50	0.9	●
8712510		15D	77	95	160		63	0.9	●
8714510		20D	102	120	190		68	0.9	B ●
8724510		25D	128	150	220		68	0.9	●
8716510		30D	153	180	250		68	0.9	●
8710520	5.2	10D	52	70	128	6	50	0.9	●
8712520		15D	78	95	160		63	0.9	●
8714520		20D	104	120	190		68	0.9	B ●
8724520		25D	130	150	220		68	0.9	●
8716520		30D	156	180	250		68	0.9	●
8710530	5.3	10D	53	70	128	6	50	1	●
8712530		15D	80	95	160		63	1	●
8714530		20D	106	120	190		68	1	B ●
8724530		25D	133	150	220		68	1	●
8716530		30D	159	180	250		68	1	●
8710540	5.4	10D	54	78	128	6	48	1	●
8712540		15D	81	110	160		48	1	●
8714540		20D	108	140	190		48	1	B ●
8724540		25D	135	170	220		48	1	●
8716540		30D	162	200	250		48	1	●
8696550	5.5	10D	55	78	128	6	48	1	●
8698550		15D	83	110	160		48	1	●
8706550		20D	110	140	190		48	1	B ●
8724550		25D	138	170	220		48	1	●
8708550		30D	165	200	250		48	1	●

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NEXT



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推荐使用ADO-3D/5D作为长刃型ADO-10D~50D的导向钻(p.11~)

The ADO-3D and 5D can also be used as a pilot drill for the ADO-10D to 50D long drills (from p.11).

· ADO-3D $\phi 2 \sim \phi 20$



· ADO-5D $\phi 2 \sim \phi 20$



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	切削刃 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8710560	5.6	10D	56	78	128	6	48	1	●
8712560		15D	84	110	160		48	1	●
8714560		20D	112	140	190		48	1	B ●
8724560		25D	140	170	220		48	1	●
8716560		30D	168	200	250		48	1	●
8710570	5.7	10D	57	78	128	6	48	1	●
8712570		15D	86	110	160		48	1	●
8714570		20D	114	140	190		48	1	B ●
8724570		25D	143	170	220		48	1	●
8716570		30D	171	200	250		48	1	●
8710580	5.8	10D	58	78	128	6	48	1.1	●
8712580		15D	87	110	160		48	1.1	●
8714580		20D	116	140	190		48	1.1	B ●
8724580		25D	145	170	220		48	1.1	●
8716580		30D	174	200	250		48	1.1	●
8710590	5.9	10D	59	78	128	6	48	1.1	●
8712590		15D	89	110	160		48	1.1	●
8714590		20D	118	140	190		48	1.1	B ●
8724590		25D	148	170	220		48	1.1	●
8716590		30D	177	200	250		48	1.1	●
8696600	6	10D	60	78	128	6	50	1.1	●
8698600		15D	90	110	160		50	1.1	●
8706600		20D	120	140	190		50	1.1	B ●
8724600		25D	150	170	220		48	1.1	●
8708600		30D	180	200	250		50	1.1	●
8696610	6.1 - 7	10D	61	87	140	7	51	1.1	●
8698610		15D	92	120	175		53	1.1	●
8706610		20D	122	155	210		53	1.1	B ●
8726610		25D	153	190	250		58	1.1	●
8708610		30D	183	215	280		63	1.1	●

· 导向钻的推荐加工方法请参考 p.38。

· About the recommended speed and feed rate for pilot drill, please refer p.38.

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	切削刃 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8710610	6.1	10D	61	87	140	8	48.2	1.1	●
8712610		15D	92	120	175		45	1.1	●
8714610		20D	122	155	210		45	1.1	B ●
8724610		25D	153	190	250		45	1.1	●
8716610		30D	183	215	280		45	1.1	●
8696620	6.2 - 7	10D	62	87	140	7	51	1.1	●
8698620		15D	93	120	175		53	1.1	●
8706620		20D	124	155	210		53	1.1	B ●
8726620		25D	155	190	250		58	1.1	●
8708620		30D	186	215	280		63	1.1	●
8710620	6.2	10D	62	87	140	8	48.3	1.1	●
8712620		15D	93	120	175		45	1.1	●
8714620		20D	124	155	210		45	1.1	B ●
8724620		25D	155	190	250		45	1.1	●
8716620		30D	186	215	280		45	1.1	●
8696630	6.3 - 7	10D	63	87	140	7	51	1.1	●
8698630		15D	95	120	175		53	1.1	●
8706630		20D	126	155	210		53	1.1	B ●
8726630		25D	158	190	250		58	1.1	●
8708630		30D	189	215	280		63	1.1	●
8710630	6.3	10D	63	87	140	8	48.4	1.1	●
8712630		15D	95	120	175		45	1.1	●
8714630		20D	126	155	210		45	1.1	B ●
8724630		25D	158	190	250		45	1.1	●
8716630		30D	189	215	280		45	1.1	●
8696640	6.4 - 7	10D	64	87	140	7	51	1.2	●
8698640		15D	96	120	175		53	1.2	●
8706640		20D	128	155	210		53	1.2	B ●
8726640		25D	160	190	250		58	1.2	●
8708640		30D	192	215	280		63	1.2	●

● = 标准库存品 ● = Standard stock item

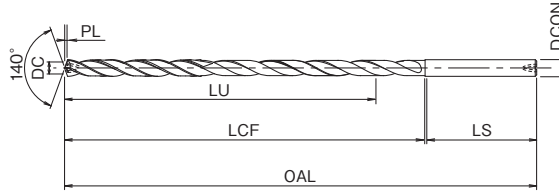
NEXT



ADO-10D/15D/20D/25D/30D

全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



先端角的容许差为 $140^{\circ} \begin{smallmatrix} 0^{\circ} \\ -4^{\circ} \end{smallmatrix}$ Tolerance of the point angle is $140^{\circ} \begin{smallmatrix} 0^{\circ} \\ -4^{\circ} \end{smallmatrix}$



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8710640	6.4	10D	64	87	140	8	48.5	1.2	●
8712640		15D	96	120	175		45	1.2	●
8714640		20D	128	155	210		45	1.2	B ●
8724640		25D	160	190	250		45	1.2	●
8716640		30D	192	215	280		45	1.2	●
8696650	6.5 - 7	10D	65	87	140	7	51	1.2	●
8698650		15D	98	120	175		53	1.2	●
8706650		20D	130	155	210		53	1.2	B ●
8726650		25D	163	190	250		58	1.2	●
8708650		30D	195	215	280		63	1.2	●
8710650	6.5	10D	65	87	140	8	48.6	1.2	●
8712650		15D	98	120	175		45	1.2	●
8714650		20D	130	155	210		45	1.2	B ●
8724650		25D	163	190	250		45	1.2	●
8716650		30D	195	215	280		45	1.2	●
8696660	6.6 - 7	10D	66	87	140	7	51	1.2	●
8698660		15D	99	120	175		53	1.2	●
8706660		20D	132	155	210		53	1.2	B ●
8726660		25D	165	190	250		58	1.2	●
8708660		30D	198	215	280		63	1.2	●
8710660	6.6	10D	66	87	140	8	48.7	1.2	●
8712660		15D	99	120	175		45	1.2	●
8714660		20D	132	155	210		45	1.2	B ●
8724660		25D	165	190	250		45	1.2	●
8716660		30D	198	215	280		45	1.2	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8696670	6.7 - 7	10D	67	87	140	7	51	1.2	●
8698670		15D	101	120	175		53	1.2	●
8706670		20D	134	155	210		53	1.2	B ●
8726670		25D	168	190	250		58	1.2	●
8708670		30D	201	215	280		63	1.2	●
8710670	6.7	10D	67	87	140	8	48.7	1.2	●
8712670		15D	101	120	175		45	1.2	●
8714670		20D	134	155	210		45	1.2	B ●
8724670		25D	168	190	250		45	1.2	●
8716670		30D	201	215	280		45	1.2	●
8696680	6.8 - 7	10D	68	90	140	7	48	1.2	●
8698680		15D	102	125	175		48	1.2	●
8706680		20D	136	160	210		48	1.2	B ●
8726680		25D	170	200	250		48	1.2	●
8708680		30D	204	230	280		48	1.2	●
8710680	6.8	10D	68	90	140	8	46.8	1.2	●
8712680		15D	102	125	175		45	1.2	●
8714680		20D	136	160	210		45	1.2	B ●
8724680		25D	170	200	250		45	1.2	●
8716680		30D	204	230	280		45	1.2	●
8696690	6.9 - 7	10D	69	90	140	7	48	1.3	●
8698690		15D	104	125	175		48	1.3	●
8706690		20D	138	160	210		48	1.3	B ●
8726690		25D	173	200	250		48	1.3	●
8708690		30D	207	230	280		48	1.3	●

● = 标准库存品 ● = Standard stock item

- 标识说明请参考 p.2.
- 涂层可能会有颜色不均的情况, 但这并不影响刀具的性能。
- 导向钻的推荐加工方法请参考 p.38.
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.
- About the recommended speed and feed rate for pilot drill, please refer p.38.

NEXT



全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

推荐使用ADO-3D/5D作为长刃型ADO-10D~50D的导向钻(p.11~)

The ADO-3D and 5D can also be used as a pilot drill for the ADO-10D to 50D long drills (from p.11).

· ADO-3D $\phi 2 \sim \phi 20$



· ADO-5D $\phi 2 \sim \phi 20$



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	切削刃 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8710690	6.9	10D	69	90	140	8	46.9	1.3	●
8712690		15D	104	125	175		45	1.3	●
8714690		20D	138	160	210		45	1.3	B ●
8724690		25D	173	200	250		45	1.3	●
8716690		30D	207	230	280		45	1.3	●
8696700	7 - 7	10D	70	90	140	7	50	1.3	●
8698700		15D	105	125	175		48	1.3	●
8706700		20D	140	160	210		48	1.3	B ●
8726700		25D	175	200	250		48	1.3	●
8708700		30D	210	230	280		48	1.3	●
8710700	7	10D	70	90	140	8	47	1.3	●
8712700		15D	105	125	175		45	1.3	●
8714700		20D	140	160	210		45	1.3	B ●
8724700		25D	175	200	250		45	1.3	●
8716700		30D	210	230	280		45	1.3	●
8710710	7.1	10D	71	100	155	8	50	1.3	●
8712710		15D	107	135	195		58	1.3	●
8714710		20D	142	170	230		58	1.3	B ●
8724710		25D	178	210	275		63	1.3	●
8716710		30D	213	250	315		63	1.3	●
8710720	7.2	10D	72	100	155	8	50	1.3	●
8712720		15D	108	135	195		58	1.3	●
8714720		20D	144	170	230		58	1.3	B ●
8724720		25D	180	210	275		63	1.3	●
8716720		30D	216	250	315		63	1.3	●
8710730	7.3	10D	73	100	155	8	50	1.3	●
8712730		15D	110	135	195		58	1.3	●
8714730		20D	146	170	230		58	1.3	B ●
8724730		25D	183	210	275		63	1.3	●
8716730		30D	219	250	315		63	1.3	●

· 导向钻的推荐加工方法请参考 p.38。

· About the recommended speed and feed rate for pilot drill, please refer p.38.

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	切削刃 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8710740	7.4	10D	74	100	155	8	50	1.3	●
8712740		15D	111	135	195		58	1.3	●
8714740		20D	148	170	230		58	1.3	B ●
8724740		25D	185	210	275		63	1.3	●
8716740		30D	222	250	315		63	1.3	●
8696750	7.5	10D	75	100	155	8	53	1.4	●
8698750		15D	113	135	195		58	1.4	●
8706750		20D	150	170	230		58	1.4	B ●
8724750		25D	188	210	275		63	1.4	●
8708750		30D	225	250	315		63	1.4	●
8710760	7.6	10D	76	105	155	8	48	1.4	●
8712760		15D	114	145	195		48	1.4	●
8714760		20D	152	180	230		48	1.4	B ●
8724760		25D	190	225	275		48	1.4	●
8716760		30D	228	265	315		48	1.4	●
8710770	7.7	10D	77	105	155	8	48	1.4	●
8712770		15D	116	145	195		48	1.4	●
8714770		20D	154	180	230		48	1.4	B ●
8724770		25D	193	225	275		48	1.4	●
8716770		30D	231	265	315		48	1.4	●
8710780	7.8	10D	78	105	155	8	48	1.4	●
8712780		15D	117	145	195		48	1.4	●
8714780		20D	156	180	230		48	1.4	B ●
8724780		25D	195	225	275		48	1.4	●
8716780		30D	234	265	315		48	1.4	●
8710790	7.9	10D	79	105	155	8	48	1.4	●
8712790		15D	119	145	195		48	1.4	●
8714790		20D	158	180	230		48	1.4	B ●
8724790		25D	198	225	275		48	1.4	●
8716790		30D	237	265	315		48	1.4	●

● = 标准库存品 ● = Standard stock item

NEXT



特点
Feature

加工数据
Cutting Data

带油孔 with Oil Hole

3D/5D/8D

10D/15D/20D/25D/30D

40D/50D

导向钻
Pilot Drill

无油孔 Non Oil Hole

2D/4D

中心钻 Starter Drill

AD-LDS

切削条件表
Cutting Conditions

非标品对应表
Production Table
by Drill Diameter

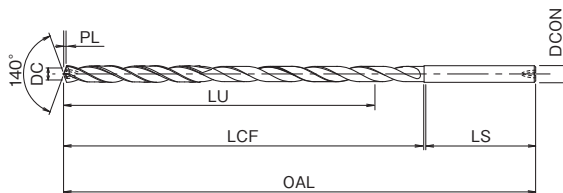
ADO-10D/15D/20D/25D/30D

全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



R形薄刃
R thinning



先端角的容许差为 $140^\circ \begin{smallmatrix} 0^\circ \\ -4^\circ \end{smallmatrix}$ Tolerance of the point angle is $140^\circ \begin{smallmatrix} 0^\circ \\ -4^\circ \end{smallmatrix}$

FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8696800	8	10D	80	105	155	8	50	1.5	●
8698800		15D	120	145	195		50	1.5	●
8706800		20D	160	180	230		50	1.5	B ●
8724800		25D	200	225	275		48	1.5	●
8708800		30D	240	265	315		50	1.5	●
8696810	8.1 - 9	10D	81	110	165	9	53	1.5	●
8698810		15D	122	155	210		53	1.5	●
8706810		20D	162	195	260		63	1.5	B ●
8726810		25D	203	240	305		63	1.5	●
8708810		30D	243	280	350		68	1.5	●
8710810	8.1	10D	81	110	165	10	48.2	1.5	●
8712810		15D	122	155	210		45	1.5	●
8714810		20D	162	195	260		45	1.5	B ●
8724810		25D	203	240	305		45	1.5	●
8716810		30D	243	280	350		45	1.5	●
8696820	8.2 - 9	10D	82	110	165	9	53	1.5	●
8698820		15D	123	155	210		53	1.5	●
8706820		20D	164	195	260		63	1.5	B ●
8726820		25D	205	240	305		63	1.5	●
8708820		30D	246	280	350		68	1.5	●
8710820	8.2	10D	82	110	165	10	48.3	1.5	●
8712820		15D	123	155	210		45	1.5	●
8714820		20D	164	195	260		45	1.5	B ●
8724820		25D	205	240	305		45	1.5	●
8716820		30D	246	280	350		45	1.5	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8696830	8.3 - 9	10D	83	110	165	9	53	1.5	●
8698830		15D	125	155	210		53	1.5	●
8706830		20D	166	195	260		63	1.5	B ●
8726830		25D	208	240	305		63	1.5	●
8708830		30D	249	280	350		68	1.5	●
8710830	8.3	10D	83	110	165	10	48.4	1.5	●
8712830		15D	125	155	210		45	1.5	●
8714830		20D	166	195	260		45	1.5	B ●
8724830		25D	208	240	305		45	1.5	●
8716830		30D	249	280	350		45	1.5	●
8696840	8.4 - 9	10D	84	110	165	9	53	1.5	●
8698840		15D	126	155	210		53	1.5	●
8706840		20D	168	195	260		63	1.5	B ●
8726840		25D	210	240	305		63	1.5	●
8708840		30D	252	280	350		68	1.5	●
8710840	8.4	10D	84	110	165	10	48.4	1.5	●
8712840		15D	126	155	210		45	1.5	●
8714840		20D	168	195	260		45	1.5	B ●
8724840		25D	210	240	305		45	1.5	●
8716840		30D	252	280	350		45	1.5	●
8696850	8.5 - 9	10D	85	110	165	9	53	1.5	●
8698850		15D	128	155	210		53	1.5	●
8706850		20D	170	195	260		63	1.5	B ●
8726850		25D	213	240	305		63	1.5	●
8708850		30D	255	280	350		68	1.5	●

● = 标准库存品 ● = Standard stock item

- 标识说明请参考 p.2.
- 涂层可能会有颜色不均的情况, 但这并不影响刀具的性能。
- 导向钻的推荐加工方法请参考 p.38.
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.
- About the recommended speed and feed rate for pilot drill, please refer p.38.

NEXT



全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

推荐使用ADO-3D/5D作为长刃型ADO-10D~50D的导向钻(p.11~)

The ADO-3D and 5D can also be used as a pilot drill for the ADO-10D to 50D long drills (from p.11).

· ADO-3D $\phi 2 \sim \phi 20$



· ADO-5D $\phi 2 \sim \phi 20$



FROM

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	切削刃 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8710850	8.5	10D	85	110	165	10	48.5	1.5	●
8712850		15D	128	155	210		45	1.5	●
8714850		20D	170	195	260		45	1.5	B ●
8724850		25D	213	240	305		45	1.5	●
8716850		30D	255	280	350		45	1.5	●
8696860	8.6 - 9	10D	86	115	165	9	48	1.6	●
8698860		15D	129	160	210		48	1.6	●
8706860		20D	172	210	260		48	1.6	B ●
8726860		25D	215	255	305		48	1.6	●
8708860		30D	258	300	350		48	1.6	●
8710860	8.6	10D	86	115	165	10	46.6	1.6	●
8712860		15D	129	160	210		45	1.6	●
8714860		20D	172	210	260		45	1.6	B ●
8724860		25D	215	255	305		45	1.6	●
8716860		30D	258	300	350		45	1.6	●
8696870	8.7 - 9	10D	87	115	165	9	48	1.6	●
8698870		15D	131	160	210		48	1.6	●
8706870		20D	174	210	260		48	1.6	B ●
8726870		25D	218	255	305		48	1.6	●
8708870		30D	261	300	350		48	1.6	●
8710870	8.7	10D	87	115	165	10	46.7	1.6	●
8712870		15D	131	160	210		45	1.6	●
8714870		20D	174	210	260		45	1.6	B ●
8724870		25D	218	255	305		45	1.6	●
8716870		30D	261	300	350		45	1.6	●
8696880	8.8 - 9	10D	88	115	165	9	48	1.6	●
8698880		15D	132	160	210		48	1.6	●
8706880		20D	176	210	260		48	1.6	B ●
8726880		25D	220	255	305		48	1.6	●
8708880		30D	264	300	350		48	1.6	●

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	切削刃 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8710880	8.8	10D	88	115	165	10	46.8	1.6	●
8712880		15D	132	160	210		45	1.6	●
8714880		20D	176	210	260		45	1.6	B ●
8724880		25D	220	255	305		45	1.6	●
8716880		30D	264	300	350		45	1.6	●
8696890	8.9 - 9	10D	89	115	165	9	48	1.6	●
8698890		15D	134	160	210		48	1.6	●
8706890		20D	178	210	260		48	1.6	B ●
8726890		25D	223	255	305		48	1.6	●
8708890		30D	267	300	350		48	1.6	●
8710890	8.9	10D	89	115	165	10	46.9	1.6	●
8712890		15D	134	160	210		45	1.6	●
8714890		20D	178	210	260		45	1.6	B ●
8724890		25D	223	255	305		45	1.6	●
8716890		30D	267	300	350		45	1.6	●
8696900	9 - 9	10D	90	115	165	9	50	1.6	●
8698900		15D	135	160	210		48	1.6	●
8706900		20D	180	210	260		48	1.6	B ●
8726900		25D	225	255	305		48	1.6	●
8708900		30D	270	300	350		48	1.6	●
8710900	9	10D	90	115	165	10	47	1.6	●
8712900		15D	135	160	210		45	1.6	●
8714900		20D	180	210	260		45	1.6	B ●
8724900		25D	225	255	305		45	1.6	●
8716900		30D	270	300	350		45	1.6	●
8710910	9.1	10D	91	125	190	10	60	1.7	●
8712910		15D	137	170	240		68	1.7	●
8714910		20D	182	220	290		68	1.7	B ●
8724910		25D	228	270	340		68	1.7	●
8716910		30D	273	315	390		73	1.7	●

● = 标准库存品 ● = Standard stock item

- 导向钻的推荐加工方法请参考 p.38。
- About the recommended speed and feed rate for pilot drill, please refer p.38.

NEXT



特点
Feature

加工数据
Cutting Data

3D/5D/8D

10D/15D/20D/25D/30D

带油孔 with Oil Hole

40D/50D

导向钻
Pilot Drill

无油孔 Non Oil Hole

2D/4D

中心钻 Starter Drill

AD-LDS

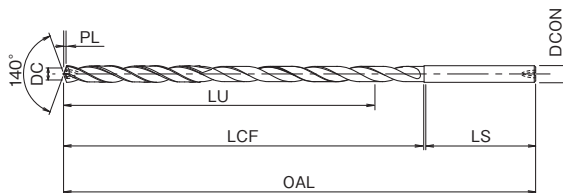
切削条件表
Cutting Conditions

非标品对应表
Production Table
by Drill Diameter

ADO-10D/15D/20D/25D/30D

全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



先端角的容许差为 $140^\circ -4^\circ$ Tolerance of the point angle is $140^\circ -4^\circ$

FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8710920	9.2	10D	92	125	190	10	60	1.7	●
8712920		15D	138	170	240		68	1.7	●
8714920		20D	184	220	290		68	1.7	B ●
8724920		25D	230	270	340		68	1.7	●
8716920		30D	276	315	390		73	1.7	●
8710930	9.3	10D	93	125	190	10	60	1.7	●
8712930		15D	140	170	240		68	1.7	●
8714930		20D	186	220	290		68	1.7	B ●
8724930		25D	233	270	340		68	1.7	●
8716930		30D	279	315	390		73	1.7	●
8710940	9.4	10D	94	125	190	10	60	1.7	●
8712940		15D	141	170	240		68	1.7	●
8714940		20D	188	220	290		68	1.7	B ●
8724940		25D	235	270	340		68	1.7	●
8716940		30D	282	315	390		73	1.7	●
8696950	9.5	10D	95	125	190	10	63	1.7	●
8698950		15D	143	170	240		68	1.7	●
8706950		20D	190	220	290		68	1.7	B ●
8724950		25D	238	270	340		68	1.7	●
8708950		30D	285	315	390		73	1.7	●
8710960	9.6	10D	96	130	190	10	58	1.7	●
8712960		15D	144	180	240		58	1.7	●
8714960		20D	192	230	290		58	1.7	B ●
8724960		25D	240	280	340		58	1.7	●
8716960		30D	288	330	390		58	1.7	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8710970	9.7	10D	97	130	190	10	58	1.8	●
8712970		15D	146	180	240		58	1.8	●
8714970		20D	194	230	290		58	1.8	B ●
8724970		25D	243	280	340		58	1.8	●
8716970		30D	291	330	390		58	1.8	●
8710980	9.8	10D	98	130	190	10	58	1.8	●
8712980		15D	147	180	240		58	1.8	●
8714980		20D	196	230	290		58	1.8	B ●
8724980		25D	245	280	340		58	1.8	●
8716980		30D	294	330	390		58	1.8	●
8710990	9.9	10D	99	130	190	10	58	1.8	●
8712990		15D	149	180	240		58	1.8	●
8714990		20D	198	230	290		58	1.8	B ●
8724990		25D	248	280	340		58	1.8	●
8716990		30D	297	330	390		58	1.8	●
8697000	10	10D	100	130	190	10	60	1.8	●
8699000		15D	150	180	240		60	1.8	●
8707000		20D	200	230	290		58	1.8	B ●
8725000		25D	250	280	340		58	1.8	●
8709000		30D	300	330	390		58	1.8	●
8697010	10.1 - 11	10D	101	140	205	11	63	1.8	●
8699010		15D	152	190	260		68	1.8	●
8707010		20D	202	250	310		58	1.8	B ●
8727010		25D	253	310	370		58	1.8	●
8711010		10D	101	140	205	12	58.2	1.8	●
8713010	10.1	15D	152	190	260		45	1.8	●
8715010		20D	202	250	310		45	1.8	B ●
8725010		25D	253	310	370		45	1.8	●

● = 标准库存品 ● = Standard stock item

- 标识说明请参考 p.2.
- 涂层可能会有颜色不均的情况, 但这并不影响刀具的性能。
- 导向钻的推荐加工方法请参考 p.38.
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.
- About the recommended speed and feed rate for pilot drill, please refer p.38.

NEXT



全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

推荐使用ADO-3D/5D作为长刃型ADO-10D~50D的导向钻(p.11~)

The ADO-3D and 5D can also be used as a pilot drill for the ADO-10D to 50D long drills (from p.11).

· ADO-3D $\phi 2 \sim \phi 20$



· ADO-5D $\phi 2 \sim \phi 20$



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	钻头长度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8697020	10.2 - 11	10D	102	140	205	11	63	1.9	●
8699020		15D	153	190	260		68	1.9	●
8707020		20D	204	250	310		58	1.9	●
8727020		25D	255	310	370		58	1.9	●
8711020	10.2	10D	102	140	205	12	58.3	1.9	●
8713020		15D	153	190	260		45	1.9	●
8715020		20D	204	250	310		45	1.9	●
8725020		25D	255	310	370		45	1.9	●
8697030	10.3 - 11	10D	103	140	205	11	63	1.9	●
8699030		15D	155	190	260		68	1.9	●
8707030		20D	206	250	310		58	1.9	●
8727030		25D	258	310	370		58	1.9	●
8711030	10.3	10D	103	140	205	12	58.4	1.9	●
8713030		15D	155	190	260		45	1.9	●
8715030		20D	206	250	310		45	1.9	●
8725030		25D	258	310	370		45	1.9	●
8697040	10.4 - 11	10D	104	140	205	11	63	1.9	●
8699040		15D	156	190	260		68	1.9	●
8707040		20D	208	250	310		58	1.9	●
8727040		25D	260	310	370		58	1.9	●
8711040	10.4	10D	104	140	205	12	58.4	1.9	●
8713040		15D	156	190	260		45	1.9	●
8715040		20D	208	250	310		45	1.9	●
8725040		25D	260	310	370		45	1.9	●
8697050	10.5 - 11	10D	105	140	205	11	63	1.9	●
8699050		15D	158	190	260		68	1.9	●
8707050		20D	210	250	310		58	1.9	●
8727050		25D	263	310	370		58	1.9	●
8711050	10.5	10D	105	140	205	12	58.5	1.9	●
8713050		15D	158	190	260		45	1.9	●
8715050		20D	210	250	310		45	1.9	●
8725050		25D	263	310	370		45	1.9	●

· 导向钻的推荐加工方法请参考 p.38。

· About the recommended speed and feed rate for pilot drill, please refer p.38.

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	钻头长度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8697060	10.6 - 11	10D	106	140	205	11	63	1.9	●
8699060		15D	159	190	260		68	1.9	●
8707060		20D	212	250	310		58	1.9	●
8727060		25D	265	310	370		58	1.9	●
8711060	10.6	10D	106	140	205	12	58.6	1.9	●
8713060		15D	159	190	260		45	1.9	●
8715060		20D	212	250	310		45	1.9	●
8725060		25D	265	310	370		45	1.9	●
8697070	10.7 - 11	10D	107	140	205	11	63	1.9	●
8699070		15D	161	200	260		58	1.9	●
8707070		20D	214	250	310		58	1.9	●
8727070		25D	268	310	370		58	1.9	●
8711070	10.7	10D	107	140	205	12	58.7	1.9	●
8713070		15D	161	200	260		45	1.9	●
8715070		20D	214	250	310		45	1.9	●
8725070		25D	268	310	370		45	1.9	●
8697080	10.8 - 11	10D	108	145	205	11	58	2	●
8699080		15D	162	200	260		58	2	●
8707080		20D	216	250	310		58	2	●
8727080		25D	270	310	370		58	2	●
8711080	10.8	10D	108	145	205	12	56.8	2	●
8713080		15D	162	200	260		45	2	●
8715080		20D	216	250	310		45	2	●
8725080		25D	270	310	370		45	2	●
8697090	10.9 - 11	10D	109	145	205	11	58	2	●
8699090		15D	164	200	260		58	2	●
8707090		20D	218	250	310		58	2	●
8727090		25D	273	310	370		58	2	●
8711090	10.9	10D	109	145	205	12	56.9	2	●
8713090		15D	164	200	260		45	2	●
8715090		20D	218	250	310		45	2	●
8725090		25D	273	310	370		45	2	●

● = 标准库存品 ● = Standard stock item

NEXT



特点
Feature

加工数据
Cutting Data

带油孔 with Oil Hole

3D/5D/8D

10D/15D/20D/25D/30D

40D/50D

导向钻
Pilot Drill

无油孔 Non Oil Hole

2D/4D

中心钻 Starter Drill

AD-LDS

切削条件表
Cutting Conditions

非标品对应表
Production Table
by Drill Diameter

34

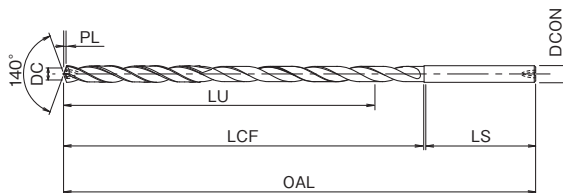
ADO-10D/15D/20D/25D/30D

全尺寸2021年10月以后的生产依次改为 **R Gash**。
All sizes after October 2021 production will be sequentially changed to **R Gash**.

R Gash



R形薄刃
R thinning



先端角的容许差为 $140^\circ \begin{smallmatrix} 0^\circ \\ -4^\circ \end{smallmatrix}$ Tolerance of the point angle is $140^\circ \begin{smallmatrix} 0^\circ \\ -4^\circ \end{smallmatrix}$

FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8697100	11 - 11	10D	110	145	205	11	58	2	●
8699100		15D	165	200	260		58	2	●
8707100		20D	220	250	310		58	2	●
8727100		25D	275	310	370		58	2	●
8711100	11	10D	110	145	205	12	57	2	●
8713100		15D	165	200	260		45	2	●
8715100		20D	220	250	310		45	2	●
8725100		25D	275	310	370		45	2	●
8711110	11.1	10D	111	155	215	12	58	2	●
8713110		15D	167	210	280		68	2	●
8715110		20D	222	270	330		58	2	●
8725110		25D	278	340	400		58	2	●
8711120	11.2	10D	112	155	215	12	58	2	●
8713120		15D	168	210	280		68	2	●
8715120		20D	224	270	330		58	2	●
8725120		25D	280	340	400		58	2	●
8711130	11.3	10D	113	155	215	12	58	2.1	●
8713130		15D	170	210	280		68	2.1	●
8715130		20D	226	270	330		58	2.1	●
8725130		25D	283	340	400		58	2.1	●
8711140	11.4	10D	114	155	215	12	58	2.1	●
8713140		15D	171	210	280		68	2.1	●
8715140		20D	228	270	330		58	2.1	●
8725140		25D	285	340	400		58	2.1	●

单位:mm Unit:mm

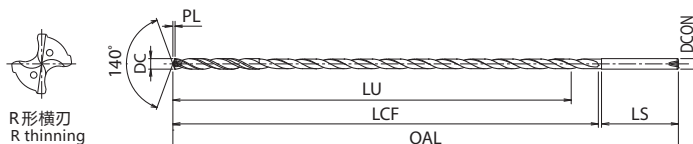
商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8711150	11.5	10D	115	155	215	12	58	2.1	●
8713150		15D	173	210	280		68	2.1	●
8715150		20D	230	270	330		58	2.1	●
8725150		25D	288	340	400		58	2.1	●
8711160	11.6	10D	116	155	215	12	58	2.1	●
8713160		15D	174	210	280		68	2.1	●
8715160		20D	232	270	330		58	2.1	●
8725160		25D	290	340	400		58	2.1	●
8711170	11.7	10D	117	155	215	12	58	2.1	●
8713170		15D	176	210	280		68	2.1	●
8715170		20D	234	270	330		58	2.1	●
8725170		25D	293	340	400		58	2.1	●
8711180	11.8	10D	118	155	215	12	58	2.1	●
8713180		15D	177	210	280		68	2.1	●
8715180		20D	236	270	330		58	2.1	●
8725180		25D	295	340	400		58	2.1	●
8711190	11.9	10D	119	155	215	12	58	2.2	●
8713190		15D	179	215	280		63	2.2	●
8715190		20D	238	270	330		58	2.2	●
8725190		25D	298	340	400		58	2.2	●
8697200	12	10D	120	155	215	12	58	2.2	●
8699200		15D	180	215	280		63	2.2	●
8707200		20D	240	270	330		58	2.2	●
8725200		25D	300	340	400		58	2.2	●
8711250	12.5	10D	125	155	215	14	56.3	2.3	●
8713250		15D	188	225	290		61.3	2.3	●
8715250		20D	250	280	330		46.3	2.3	●

● = 标准库存品 ● = Standard stock item

- 标识说明请参考 p.2.
- 涂层可能会有颜色不均的情况, 但这并不影响刀具的性能.
- 导向钻的推荐加工方法请参考 p.38.
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.
- About the recommended speed and feed rate for pilot drill, please refer p.38.



ADO-40D

R形横刃
R thinning先端角的容许差为 $140^{\circ} \begin{smallmatrix} 0^{\circ} \\ -4^{\circ} \end{smallmatrix}$ Tolerance of the point angle is $140^{\circ} \begin{smallmatrix} 0^{\circ} \\ -4^{\circ} \end{smallmatrix}$ 

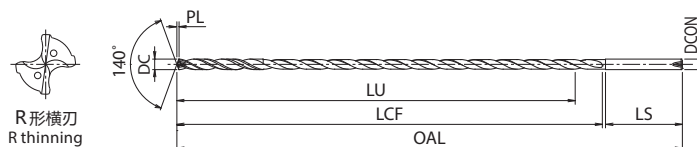
单位:mm Unit:mm

商品号 EDP No.	直径 DC	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8717300	3	120	129	179	3	49	0.5	B ●
8717400	4	160	172	222	4	49	0.7	B ●
8717500	5	200	215	265	5	49	0.9	B ●
8717600	6	240	258	308	6	49	1.1	B ●
8717800	8	320	344	394	8	49	1.5	B ●
8718000	10	400	430	490	10	59	1.8	B ●

- 标识说明请参考 p.2.
- 涂层可能会有颜色不均的情况, 但这并不影响刀具的性能。
- 导向钻的推荐加工方法请参考 p.38.
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.
- About the recommended speed and feed rate for pilot drill, please refer p.38.

● = 标准库存品 ● = Standard stock item

ADO-50D

R形横刃
R thinning先端角的容许差为 $140^{\circ} \begin{smallmatrix} 0^{\circ} \\ -4^{\circ} \end{smallmatrix}$ Tolerance of the point angle is $140^{\circ} \begin{smallmatrix} 0^{\circ} \\ -4^{\circ} \end{smallmatrix}$ 

单位:mm Unit:mm

商品号 EDP No.	直径 DC	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8718300	3	150	159	209	3	49	0.5	B ●
8718400	4	200	212	262	4	49	0.7	B ●
8718500	5	250	265	315	5	49	0.9	B ●
8718600	6	300	318	368	6	49	1.1	B ●
8718800	8	400	424	474	8	49	1.5	B ●

- 标识说明请参考 p.2.
- 涂层可能会有颜色不均的情况, 但这并不影响刀具的性能。
- 导向钻的推荐加工方法请参考 p.38.
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.
- About the recommended speed and feed rate for pilot drill, please refer p.38.

● = 标准库存品 ● = Standard stock item

提高孔垂直度时的关键

Keys for improving the straightness of hole

请加工完导向孔后使用 ADO-20D/30D 加工, 之后再使用 ADO-40D/50D 加工。

First make a pilot hole, followed by the use of the ADO-20D/30D drill, and completing the hole with the ADO-40D/50D drill.

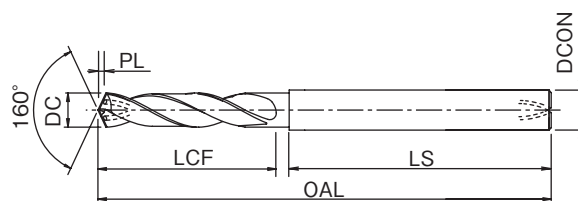
ADO-PLT



X形横刃
X thinning
(DC < 4)



R形横刃
R thinning
(4 ≤ DC)



商品号 EDP No.	直径 - 柄径 DC - DCON	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8688903	3.03 - 3	15	65	3	50	0.3	C ●
8688923	3.53	18	70	4	50.1	0.3	C ●
8688904	4.03	20	70	4	50	0.4	C ●
8688924	4.53 - 5	23	75	5	50.1	0.4	C ●
8688905	5.03 - 5	25	75	5	50	0.4	C ●
8688925	5.53	28	80	6	50.1	0.5	C ●
8688906	6.03	30	80	6	50	0.5	C ●
8688926	6.53 - 7	33	85	7	50.1	0.6	C ●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8688907	7.03 - 7	35	85	7	50	0.6	C ●
8688908	8.03	40	90	8	50	0.7	C ●
8688928	8.53 - 9	43	95	9	51	0.8	C ●
8688909	9.03 - 9	45	95	9	50	0.8	C ●
8688910	10.03	50	100	10	50	0.9	C ●
8688911	11.03 - 11	55	115	11	60	1	C ●
8688912	12.03	60	120	12	60	1.1	C ●

● = 标准库存品 ● = Standard stock item

- 标识说明请参考 p.2.
- 涂层可能会有颜色不均的情况，但这并不影响刀具的性能。
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.



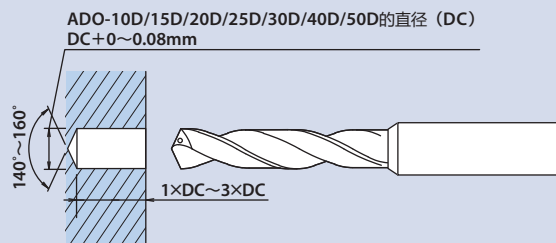
ADO-10D/15D/20D/25D/30D/40D/50D

①使用ADO-3D/5D, ADO-PLT进行导向孔加工

Make a pilot hole with the ADO-3D/5D or ADO-PLT.

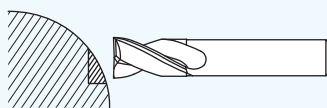
导向孔加工用工具请选择比 ADO-10D/15D/20D/25D/30D/40D/50D 的直径(DC) +0 ~ 0.08mm 的钻头, 推荐在加工时将导向孔尽量加深。

For the pilot hole, select 0 - 0.08mm larger size drill than ADO-10D/15D/20D/25D/30D/40D/50D.



★弯曲部加工时, 在导向孔加工前请先用 FX-ZDS 沉孔加工铣刀或 ADF 硬质合金平头钻进行如图所示的沉孔加工。

When working on a curved surface, use the FX-ZDS (end mill for counterboring) or the ADF (carbide flat drill) to counterbore a flat surface before drilling a pilot hole.

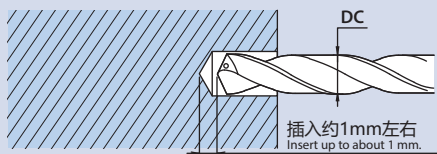


②深孔钻以转速(n) = 300~500min⁻¹

左右, 进给速度(Vf) = 300~500mm/min 插入

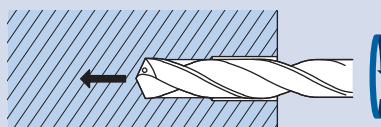
※ADO-40D/50D为逆转插入

Insert the long drill at a speed of (n) = 300 to 500 min⁻¹ and a feed rate of (Vf) = 300 to 500 mm/min. *Insert the ADO-40D/50D in reverse.



③加速至规定转速后开始加工

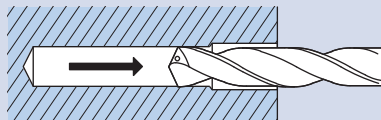
Increase the revolution to the designated speed and start drilling.



加工通孔时, 请在拔出时降低进给量至 (f) = 0.05 ~ 0.1mm/rev. When drilling through holes, reduce the feed rate to (f) 0.05 to 0.1 mm/rev.

④加工后, 拔出钻头时, 请降低转速至(n)=300 ~ 500min⁻¹·进给速度(Vf) = 1,000 ~ 3,000mm/min 左右拔出

After drilling, reduce the speed to (n) = 300 to 500 min⁻¹ and a feed rate of (Vf) = 1,000 to 3,000 mm/min and pull the drill out of the hole.



※加工时请务必使用内冷方式

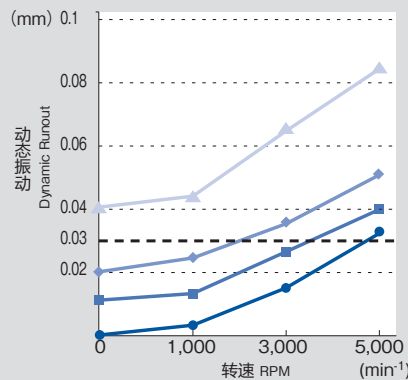
Make sure to use internal coolant supply when drilling.

深孔钻实现稳定加工的关键

Key point for stable drilling with long drills

工具装夹时的振动会随转速的提高而上升。右为上升量的示意图。OSG为了实现更加稳定的加工, 推荐使用「+0~0.08mm的导向孔钻头」及「深孔钻以静止或低速状态插入」两种方法。其理由正如右图所示, 转速提高后, 加工时振动随之增大, 有超出导向孔孔径范围的危险性。因此不仅要抑制其静态振动, 还要根据上述加工方法进行加工才能有效控制振动。

The runout of a gripped cutting tool increases with the speed. The graph on the right indicates this increase. To ensure a higher level of work stability, OSG recommends "making +0 - 0.08mm pilot holes" and "inserting long drills stopped or at low speed." The reason for this is made evident in the graph on the right: increasing the speed increases the dynamic runout, posing a higher risk of the drill not fitting properly in the pilot hole. Therefore, this is effective not only for inhibiting static runout, but is also the recommended drilling method for long drills.



静态振动 Static Runout 转速 RPM (min ⁻¹)	0mm	0.01mm	0.02mm	0.04mm
1,000	0.003	0.013	0.024	0.046
3,000	0.014	0.026	0.036	0.066
5,000	0.033	0.04	0.049	0.087

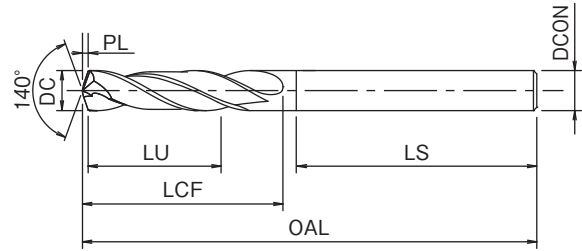
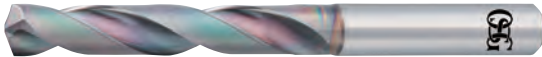
使用工具 Tool: $\phi 6 \times 30D$

AD-2D/4D

AD-2D



AD-4D



单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8675200	2 - 3	2D	10	14	62	3	37.9	0.4	●
8677200		4D	16	20	66		37.9	0.4	●
8670200	2	2D	10	14	62	4	36	0.4	●
8672200		4D	16	20	66		36	0.4	●
8675210	2.1 - 3	2D	10	14	62	3	37.9	0.4	●
8677210		4D	16	20	66		37.9	0.4	●
8670210	2.1	2D	10	14	62	4	36	0.4	●
8672210		4D	16	20	66		36	0.4	●
8675220	2.2 - 3	2D	10	14	62	3	37.9	0.4	●
8677220		4D	16	20	66		37.9	0.4	●
8670220	2.2	2D	10	14	62	4	36	0.4	●
8672220		4D	16	20	66		36	0.4	●
8675230	2.3 - 3	2D	9	14	62	3	37.9	0.4	●
8677230		4D	15	20	66		37.9	0.4	●
8670230	2.3	2D	9	14	62	4	36	0.4	●
8672230		4D	15	20	66		36	0.4	●
8675240	2.4 - 3	2D	9	14	62	3	37.9	0.4	●
8677240		4D	15	20	66		37.9	0.4	●

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8670240	2.4	2D	9	14	62	4	36	0.4	●
8672240		4D	15	20	66		36	0.4	●
8675250	2.5 - 3	2D	9	14	62	3	37.9	0.5	●
8677250		4D	15	20	66		37.9	0.5	●
8670250	2.5	2D	9	14	62	4	36	0.5	●
8672250		4D	15	20	66		36	0.5	●
8675260	2.6 - 3	2D	9	14	62	3	37.9	0.5	●
8677260		4D	15	20	66		37.9	0.5	●
8670260	2.6	2D	9	14	62	4	36	0.5	●
8672260		4D	15	20	66		36	0.5	●
8675270	2.7 - 3	2D	9	14	62	3	37.9	0.5	●
8677270		4D	15	20	66		37.9	0.5	●
8670270	2.7	2D	9	14	62	4	36	0.5	●
8672270		4D	15	20	66		36	0.5	●
8670276	2.76	2D	9	14	62	4	36	0.5	●
8670278	2.78	2D	8	14	62	4	36	0.5	●
8675280	2.8 - 3	2D	8	14	62	3	37.9	0.5	●
8677280		4D	14	20	66		37.9	0.5	●

● = 标准库存品 ● = Standard stock item

- 标识说明请参考 p.2.
- 涂层可能会有颜色不均的情况, 但这并不影响刀具的性能.
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8670280	2.8	2D	8	14	62	4	36	0.5	●
8672280		4D	14	20	66		36	0.5	●
8675290	2.9 - 3	2D	8	14	62	3	37.9	0.5	●
8677290		4D	14	20	66		37.9	0.5	●
8670290	2.9	2D	8	14	62	4	36	0.5	●
8672290		4D	14	20	66		36	0.5	●
8675300	3 - 3	2D	14	20	66	3	37.9	0.5	●
8677300		4D	22	28	74		37.9	0.5	●
8670300	3	2D	14	20	66	4	36	0.5	●
8672300		4D	22	28	74		36	0.5	●
8670310	3.1	2D	14	20	66	4	36	0.6	●
8672310		4D	22	28	74		36	0.6	●
8670320	3.2	2D	14	20	66	4	36	0.6	●
8672320		4D	22	28	74		36	0.6	●
8670330	3.3	2D	13	20	66	4	36	0.6	●
8672330		4D	21	28	74		36	0.6	●
8670340	3.4	2D	13	20	66	4	36	0.6	●
8672340		4D	21	28	74		36	0.6	●
8670350	3.5	2D	13	20	66	4	36	0.6	●
8672350		4D	21	28	74		36	0.6	●
8670360	3.6	2D	13	20	66	4	36	0.7	●
8672360		4D	21	28	74		36	0.7	●
8670366	3.66	2D	13	20	66	4	36	0.7	●
8670368	3.68	2D	13	20	66	4	36	0.7	●
8670370	3.7	2D	13	20	66	4	36	0.7	●
8672370		4D	21	28	74		36	0.7	●

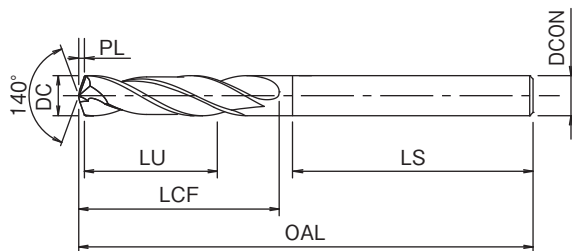
单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8670380	3.8	2D	16	24	66	4	36	0.7	●
8672380		4D	28	36	74		36	0.7	●
8670390	3.9	2D	16	24	66	4	36	0.7	●
8672390		4D	28	36	74		36	0.7	●
8670400	4	2D	16	24	66	4	36	0.7	●
8672400		4D	28	36	74		36	0.7	●
8675410	4.1 - 5	2D	16	24	66	5	37.9	0.7	●
8677410		4D	28	36	74		37.9	0.7	●
8670410	4.1	2D	16	24	66	6	36	0.7	●
8672410		4D	28	36	74		36	0.7	●
8675420	4.2 - 5	2D	16	24	66	5	37.9	0.8	●
8677420		4D	28	36	74		37.9	0.8	●
8670420	4.2	2D	16	24	66	6	36	0.8	●
8672420		4D	28	36	74		36	0.8	●
8675430	4.3 - 5	2D	15	24	66	5	37.9	0.8	●
8677430		4D	27	36	74		37.9	0.8	●
8670430	4.3	2D	15	24	66	6	36	0.8	●
8672430		4D	27	36	74		36	0.8	●
8675440	4.4 - 5	2D	15	24	66	5	37.9	0.8	●
8677440		4D	27	36	74		37.9	0.8	●
8670440	4.4	2D	15	24	66	6	36	0.8	●
8672440		4D	27	36	74		36	0.8	●
8675450	4.5 - 5	2D	15	24	66	5	37.9	0.8	●
8677450		4D	27	36	74		37.9	0.8	●
8670450	4.5	2D	15	24	66	6	36	0.8	●
8672450		4D	27	36	74		36	0.8	●

● = 标准库存品 ● = Standard stock item

AD-2D/4D

DC ≤ 4 X形横刃 X thinning
4 < DC R形横刃 R thinning



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8675460	4.6 - 5	2D	15	24	66	5	37.9	0.8	●
8677460		4D	27	36	74		37.9	0.8	●
8670460	4.6	2D	15	24	66	6	36	0.8	●
8672460		4D	27	36	74		36	0.8	●
8670462	4.62	2D	15	24	66	6	36	0.8	●
8670464	4.64	2D	15	24	66	6	36	0.8	●
8675470	4.7 - 5	2D	15	24	66	5	37.9	0.9	●
8677470		4D	27	36	74		37.9	0.9	●
8670470	4.7	2D	15	24	66	6	36	0.9	●
8672470		4D	27	36	74		36	0.9	●
8675480	4.8 - 5	2D	18	28	66	5	37.9	0.9	●
8677480		4D	34	44	82		37.9	0.9	●
8670480	4.8	2D	18	28	66	6	36	0.9	●
8672480		4D	34	44	82		36	0.9	●
8675490	4.9 - 5	2D	18	28	66	5	37.9	0.9	●
8677490		4D	34	44	82		37.9	0.9	●
8670490	4.9	2D	18	28	66	6	36	0.9	●
8672490		4D	34	44	82		36	0.9	●
8675500	5 - 5	2D	18	28	66	5	37.9	0.9	●
8677500		4D	34	44	82		37.9	0.9	●
8670500	5	2D	18	28	66	6	36	0.9	●
8672500		4D	34	44	82		36	0.9	●
8670510	5.1	2D	18	28	66	6	36	0.9	●
8672510		4D	34	44	82		36	0.9	●
8670520	5.2	2D	18	28	66	6	36	0.9	●
8672520		4D	34	44	82		36	0.9	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8670530	5.3	2D	17	28	66	6	36	1	●
8672530		4D	33	44	82		36	1	●
8670540	5.4	2D	17	28	66	6	36	1	●
8672540		4D	33	44	82		36	1	●
8670550	5.5	2D	17	28	66	6	36	1	●
8672550		4D	33	44	82		36	1	●
8670552	5.52	2D	17	28	66	6	36	1	●
8670554	5.54	2D	17	28	66	6	36	1	●
8670560	5.6	2D	17	28	66	6	36	1	●
8672560		4D	33	44	82		36	1	●
8670570	5.7	2D	17	28	66	6	36	1	●
8672570		4D	33	44	82		36	1	●
8670580	5.8	2D	17	28	66	6	36	1.1	●
8672580		4D	33	44	82		36	1.1	●
8670590	5.9	2D	16	28	66	6	36	1.1	●
8672590		4D	32	44	82		36	1.1	●
8670600	6	2D	16	28	66	6	36	1.1	●
8672600		4D	32	44	82		36	1.1	●
8675610	6.1 - 7	2D	22	34	79	7	37.9	1.1	●
8677610		4D	41	53	91		37.9	1.1	●
8670610	6.1	2D	22	34	79	8	36	1.1	●
8672610		4D	41	53	91		36	1.1	●
8675620	6.2 - 7	2D	22	34	79	7	37.9	1.1	●
8677620		4D	41	53	91		37.9	1.1	●
8670620	6.2	2D	22	34	79	8	36	1.1	●
8672620		4D	41	53	91		36	1.1	●

● = 标准库存品 ● = Standard stock item

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- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8675630	6.3 - 7	2D	22	34	79	7	37.9	1.1	●
8677630		4D	41	53	91		37.9	1.1	●
8670630	6.3	2D	22	34	79	8	36	1.1	●
8672630		4D	41	53	91		36	1.1	●
8675640	6.4 - 7	2D	21	34	79	7	37.9	1.2	●
8677640		4D	40	53	91		37.9	1.2	●
8670640	6.4	2D	21	34	79	8	36	1.2	●
8672640		4D	40	53	91		36	1.2	●
8675650	6.5 - 7	2D	21	34	79	7	37.9	1.2	●
8677650		4D	40	53	91		37.9	1.2	●
8670650	6.5	2D	21	34	79	8	36	1.2	●
8672650		4D	40	53	91		36	1.2	●
8675660	6.6 - 7	2D	21	34	79	7	37.9	1.2	●
8677660		4D	40	53	91		37.9	1.2	●
8670660	6.6	2D	21	34	79	8	36	1.2	●
8672660		4D	40	53	91		36	1.2	●
8675670	6.7 - 7	2D	21	34	79	7	37.9	1.2	●
8677670		4D	40	53	91		37.9	1.2	●
8670670	6.7	2D	21	34	79	8	36	1.2	●
8672670		4D	40	53	91		36	1.2	●
8675680	6.8 - 7	2D	21	34	79	7	37.9	1.2	●
8677680		4D	40	53	91		37.9	1.2	●
8670680	6.8	2D	21	34	79	8	36	1.2	●
8672680		4D	40	53	91		36	1.2	●
8675690	6.9 - 7	2D	20	34	79	7	37.9	1.3	●
8677690		4D	39	53	91		37.9	1.3	●

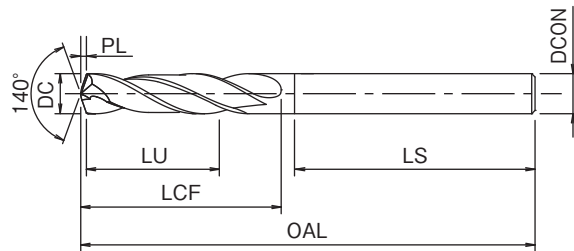
单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8670690	6.9	2D	20	34	79	8	36	1.3	●
8672690		4D	39	53	91		36	1.3	●
8675700	7 - 7	2D	20	34	79	7	37.9	1.3	●
8677700		4D	39	53	91		37.9	1.3	●
8670700	7	2D	20	34	79	8	36	1.3	●
8672700		4D	39	53	91		36	1.3	●
8670710	7.1	2D	27	41	79	8	36	1.3	●
8672710		4D	39	53	91		36	1.3	●
8670720	7.2	2D	27	41	79	8	36	1.3	●
8672720		4D	39	53	91		36	1.3	●
8670730	7.3	2D	27	41	79	8	36	1.3	●
8672730		4D	39	53	91		36	1.3	●
8670736	7.36	2D	26	41	79	8	36	1.3	●
8670738	7.38	2D	26	41	79	8	36	1.3	●
8670740	7.4	2D	26	41	79	8	36	1.3	●
8672740		4D	38	53	91		36	1.3	●
8670750	7.5	2D	26	41	79	8	36	1.4	●
8672750		4D	38	53	91		36	1.4	●
8670752	7.52	2D	26	41	79	8	36	1.4	●
8670754	7.54	2D	26	41	79	8	36	1.4	●
8670760	7.6	2D	26	41	79	8	36	1.4	●
8672760		4D	38	53	91		36	1.4	●
8670770	7.7	2D	26	41	79	8	36	1.4	●
8672770		4D	38	53	91		36	1.4	●
8670780	7.8	2D	26	41	79	8	36	1.4	●
8672780		4D	38	53	91		36	1.4	●

● = 标准库存品 ● = Standard stock item

AD-2D/4D

DC ≤ 4 X形横刃 X thinning
4 < DC R形横刃 R thinning



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8670790	7.9	2D	25	41	79	8	36	1.4	●
8672790		4D	37	53	91		36	1.4	●
8670800	8	2D	25	41	79	8	36	1.5	●
8672800		4D	37	53	91		36	1.5	●
8675810	8.1 - 9	2D	31	47	89	9	41.9	1.5	●
8677810		4D	45	61	103		41.9	1.5	●
8670810	8.1	2D	31	47	89	10	40	1.5	●
8672810		4D	45	61	103		40	1.5	●
8675820	8.2 - 9	2D	31	47	89	9	41.9	1.5	●
8677820		4D	45	61	103		41.9	1.5	●
8670820	8.2	2D	31	47	89	10	40	1.5	●
8672820		4D	45	61	103		40	1.5	●
8675830	8.3 - 9	2D	31	47	89	9	41.9	1.5	●
8677830		4D	45	61	103		41.9	1.5	●
8670830	8.3	2D	31	47	89	10	40	1.5	●
8672830		4D	45	61	103		40	1.5	●
8675840	8.4 - 9	2D	30	47	89	9	41.9	1.5	●
8677840		4D	44	61	103		41.9	1.5	●
8670840	8.4	2D	30	47	89	10	40	1.5	●
8672840		4D	44	61	103		40	1.5	●
8675850	8.5 - 9	2D	30	47	89	9	41.9	1.5	●
8677850		4D	44	61	103		41.9	1.5	●
8670850	8.5	2D	30	47	89	10	40	1.5	●
8672850		4D	44	61	103		40	1.5	●
8675860	8.6 - 9	2D	30	47	89	9	41.9	1.6	●
8677860		4D	44	61	103		41.9	1.6	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8670860	8.6	2D	30	47	89	10	40	1.6	●
8672860		4D	44	61	103		40	1.6	●
8675870	8.7 - 9	2D	30	47	89	9	41.9	1.6	●
8677870		4D	44	61	103		41.9	1.6	●
8670870	8.7	2D	30	47	89	10	40	1.6	●
8672870		4D	44	61	103		40	1.6	●
8675880	8.8 - 9	2D	30	47	89	9	41.9	1.6	●
8677880		4D	44	61	103		41.9	1.6	●
8670880	8.8	2D	30	47	89	10	40	1.6	●
8672880		4D	44	61	103		40	1.6	●
8675890	8.9 - 9	2D	29	47	89	9	41.9	1.6	●
8677890		4D	43	61	103		41.9	1.6	●
8670890	8.9	2D	29	47	89	10	40	1.6	●
8672890		4D	43	61	103		40	1.6	●
8675900	9 - 9	2D	29	47	89	9	41.9	1.6	●
8677900		4D	43	61	103		41.9	1.6	●
8670900	9	2D	29	47	89	10	40	1.6	●
8672900		4D	43	61	103		40	1.6	●
8670910	9.1	2D	29	47	89	10	40	1.7	●
8672910		4D	43	61	103		40	1.7	●
8670920	9.2	2D	29	47	89	10	40	1.7	●
8672920		4D	43	61	103		40	1.7	●
8670924	9.24	2D	29	47	89	10	40	1.7	●
8670926	9.26	2D	29	47	89	10	40	1.7	●
8670930	9.3	2D	29	47	89	10	40	1.7	●
8672930		4D	43	61	103		40	1.7	●

● = 标准库存品 ● = Standard stock item

- 标识说明请参考 p.2.
- 涂层可能会有颜色不均的情况, 但这并不影响刀具的性能.
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.

NEXT



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8670936	9.36	2D	28	47	89	10	40	1.7	B ●
8670938	9.38	2D	28	47	89	10	40	1.7	B ●
8670940	9.4	2D	28	47	89	10	40	1.7	B ●
8672940		4D	42	61	103		40	1.7	B ●
8670950	9.5	2D	28	47	89	10	40	1.7	B ●
8672950		4D	42	61	103		40	1.7	B ●
8670952	9.52	2D	28	47	89	10	40	1.7	B ●
8670954	9.54	2D	28	47	89	10	40	1.7	B ●
8670960	9.6	2D	28	47	89	10	40	1.7	B ●
8672960		4D	42	61	103		40	1.7	B ●
8670970	9.7	2D	28	47	89	10	40	1.8	B ●
8672970		4D	42	61	103		40	1.8	B ●
8670980	9.8	2D	28	47	89	10	40	1.8	B ●
8672980		4D	42	61	103		40	1.8	B ●
8670990	9.9	2D	27	47	89	10	40	1.8	B ●
8672990		4D	41	61	103		40	1.8	B ●
8671000	10	2D	27	47	89	10	40	1.8	B ●
8673000		4D	41	61	103		40	1.8	B ●
8676010	10.1 - 11	2D	35	55	102	11	46.9	1.8	B ●
8678010		4D	51	71	118		46.9	1.8	B ●
8671010	10.1	2D	35	55	102	12	45	1.8	B ●
8673010		4D	51	71	118		45	1.8	B ●
8676020	10.2 - 11	2D	35	55	102	11	46.9	1.9	B ●
8678020		4D	51	71	118		46.9	1.9	B ●
8671020	10.2	2D	35	55	102	12	45	1.9	B ●
8673020		4D	51	71	118		45	1.9	B ●

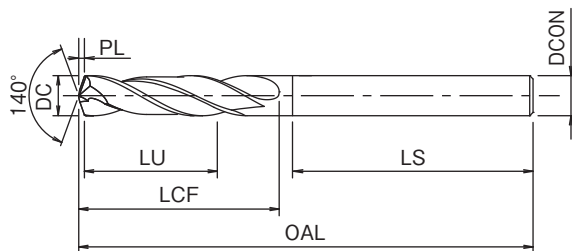
单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8676030	10.3 - 11	2D	35	55	102	11	46.9	1.9	B ●
8678030		4D	51	71	118		46.9	1.9	B ●
8671030	10.3	2D	35	55	102	12	45	1.9	B ●
8673030		4D	51	71	118		45	1.9	B ●
8676040	10.4 - 11	2D	34	55	102	11	46.9	1.9	B ●
8678040		4D	50	71	118		46.9	1.9	B ●
8671040	10.4	2D	34	55	102	12	45	1.9	B ●
8673040		4D	50	71	118		45	1.9	B ●
8676050	10.5 - 11	2D	34	55	102	11	46.9	1.9	B ●
8678050		4D	50	71	118		46.9	1.9	B ●
8671050	10.5	2D	34	55	102	12	45	1.9	B ●
8673050		4D	50	71	118		45	1.9	B ●
8676060	10.6 - 11	2D	34	55	102	11	46.9	1.9	B ●
8678060		4D	50	71	118		46.9	1.9	B ●
8671060	10.6	2D	34	55	102	12	45	1.9	B ●
8673060		4D	50	71	118		45	1.9	B ●
8676070	10.7 - 11	2D	34	55	102	11	46.9	1.9	B ●
8678070		4D	50	71	118		46.9	1.9	B ●
8671070	10.7	2D	34	55	102	12	45	1.9	B ●
8673070		4D	50	71	118		45	1.9	B ●
8676080	10.8 - 11	2D	34	55	102	11	46.9	2	B ●
8678080		4D	50	71	118		46.9	2	B ●
8671080	10.8	2D	34	55	102	12	45	2	B ●
8673080		4D	50	71	118		45	2	B ●
8676090	10.9 - 11	2D	33	55	102	11	46.9	2	B ●
8678090		4D	49	71	118		46.9	2	B ●

● = 标准库存品 ● = Standard stock item

AD-2D/4D

DC ≤ 4 X形横刃 X thinning
4 < DC R形横刃 R thinning



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8671090	10.9	2D	33	55	102	12	45	2	●
8673090		4D	49	71	118		45	2	●
8676100	11 - 11	2D	33	55	102	11	46.9	2	●
8678100		4D	49	71	118		46.9	2	●
8671100	11	2D	33	55	102	12	45	2	●
8673100		4D	49	71	118		45	2	●
8671110	11.1	2D	33	55	102	12	45	2	●
8673110		4D	49	71	118		45	2	●
8671120	11.2	2D	33	55	102	12	45	2	●
8673120		4D	49	71	118		45	2	●
8671122	11.22	2D	33	55	102	12	45	2	●
8671124	11.24	2D	33	55	102	12	45	2	●
8671130	11.3	2D	33	55	102	12	45	2.1	●
8673130		4D	49	71	118		45	2.1	●
8671136	11.36	2D	32	55	102	12	45	2.1	●
8671138	11.38	2D	32	55	102	12	45	2.1	●
8671140	11.4	2D	32	55	102	12	45	2.1	●
8673140		4D	48	71	118		45	2.1	●
8671150	11.5	2D	32	55	102	12	45	2.1	●
8673150		4D	48	71	118		45	2.1	●
8671160	11.6	2D	32	55	102	12	45	2.1	●
8673160		4D	48	71	118		45	2.1	●
8671170	11.7	2D	32	55	102	12	45	2.1	●
8673170		4D	48	71	118		45	2.1	●
8671180	11.8	2D	32	55	102	12	45	2.1	●
8673180		4D	48	71	118		45	2.1	●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8671190	11.9	2D	31	55	102	12	45	2.2	●
8673190		4D	47	71	118		45	2.2	●
8671200	12	2D	31	55	102	12	45	2.2	●
8673200		4D	47	71	118		45	2.2	●
8678210	12.1 - 13	4D	53	77	124	13	45	2.2	●
8671210	12.1	2D	36	60	107	14	45	2.2	●
8673210		4D	53	77	124		45	2.2	●
8678220	12.2 - 13	4D	53	77	124	13	45	2.2	●
8671220	12.2	2D	36	60	107	14	45	2.2	●
8673220		4D	53	77	124		45	2.2	●
8678230	12.3 - 13	4D	53	77	124	13	45	2.2	●
8671230	12.3	2D	36	60	107	14	45	2.2	●
8673230		4D	53	77	124		45	2.2	●
8678240	12.4 - 13	4D	52	77	124	13	45	2.3	●
8671240	12.4	2D	35	60	107	14	45	2.3	●
8673240		4D	52	77	124		45	2.3	●
8678250	12.5 - 13	4D	52	77	124	13	45	2.3	●
8671250	12.5	2D	35	60	107	14	45	2.3	●
8673250		4D	52	77	124		45	2.3	●
8678260	12.6 - 13	4D	52	77	124	13	45	2.3	●
8671260	12.6	2D	35	60	107	14	45	2.3	●
8673260		4D	52	77	124		45	2.3	●
8678270	12.7 - 13	4D	52	77	124	13	45	2.3	●
8671270	12.7	2D	35	60	107	14	45	2.3	●
8673270		4D	52	77	124		45	2.3	●
8678280	12.8 - 13	4D	52	77	124	13	45	2.3	●

● = 标准库存品 ● = Standard stock item

- 标识说明请参考 p.2.
- 涂层可能会有颜色不均的情况, 但这并不影响刀具的性能.
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.

NEXT



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8671280	12.8	2D	35	60	107	14	45	2.3	●
8673280		4D	52	77	124		45	2.3	●
8678290	12.9 - 13	4D	51	77	124	13	45	2.3	●
8671290	12.9	2D	34	60	107	14	45	2.3	●
8673290		4D	51	77	124		45	2.3	●
8678300	13 - 13	4D	51	77	124	13	45	2.4	●
8671300	13	2D	34	60	107	14	45	2.4	●
8673300		4D	51	77	124		45	2.4	●
8671310	13.1	2D	34	60	107	14	45	2.4	●
8673310		4D	51	77	124		45	2.4	●
8671320	13.2	2D	34	60	107	14	45	2.4	●
8673320		4D	51	77	124		45	2.4	●
8671330	13.3	2D	34	60	107	14	45	2.4	●
8673330		4D	51	77	124		45	2.4	●
8671340	13.4	2D	33	60	107	14	45	2.4	●
8673340		4D	50	77	124		45	2.4	●
8671350	13.5	2D	33	60	107	14	45	2.5	●
8673350		4D	50	77	124		45	2.5	●
8671360	13.6	2D	33	60	107	14	45	2.5	●
8673360		4D	50	77	124		45	2.5	●
8671370	13.7	2D	33	60	107	14	45	2.5	●
8673370		4D	50	77	124		45	2.5	●
8671380	13.8	2D	33	60	107	14	45	2.5	●
8673380		4D	50	77	124		45	2.5	●
8671390	13.9	2D	32	60	107	14	45	2.5	●
8673390		4D	49	77	124		45	2.5	●

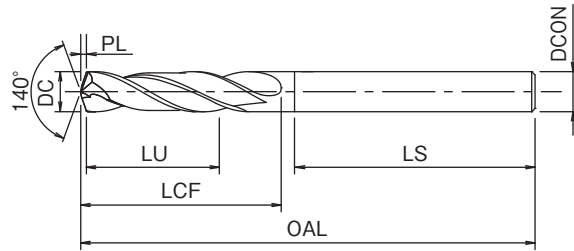
单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8671400	14	2D	32	60	107	14	45	2.5	●
8673400		4D	49	77	124		45	2.5	●
8678410	14.1 - 15	4D	55	83	133	15	48	2.6	●
8671410	14.1	2D	37	65	115	16	48	2.6	●
8673410		4D	55	83	133		48	2.6	●
8678420	14.2 - 15	4D	55	83	133	15	48	2.6	●
8671420	14.2	2D	37	65	115	16	48	2.6	●
8673420		4D	55	83	133		48	2.6	●
8678430	14.3 - 15	4D	55	83	133	15	48	2.6	●
8671430	14.3	2D	37	65	115	16	48	2.6	●
8673430		4D	55	83	133		48	2.6	●
8678440	14.4 - 15	4D	54	83	133	15	48	2.6	●
8671440	14.4	2D	36	65	115	16	48	2.6	●
8673440		4D	54	83	133		48	2.6	●
8678450	14.5 - 15	4D	54	83	133	15	48	2.6	●
8671450	14.5	2D	36	65	115	16	48	2.6	●
8673450		4D	54	83	133		48	2.6	●
8678460	14.6 - 15	4D	54	83	133	15	48	2.7	●
8671460	14.6	2D	36	65	115	16	48	2.7	●
8673460		4D	54	83	133		48	2.7	●
8678470	14.7 - 15	4D	54	83	133	15	48	2.7	●
8671470	14.7	2D	36	65	115	16	48	2.7	●
8673470		4D	54	83	133		48	2.7	●
8678480	14.8 - 15	4D	54	83	133	15	48	2.7	●
8671480	14.8	2D	36	65	115	16	48	2.7	●
8673480		4D	54	83	133		48	2.7	●

● = 标准库存品 ● = Standard stock item

AD-2D/4D

DC ≤ 4 X形横刃 X thinning
4 < DC R形横刃 R thinning



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8678490	14.9 - 15	4D	53	83	133	15	48	2.7	B ●
8671490	14.9	2D	35	65	115	16	48	2.7	B ●
8673490		4D	53	83	133		48	2.7	B ●
8678500	15 - 15	4D	53	83	133	15	48	2.7	B ●
8671500	15	2D	35	65	115	16	48	2.7	B ●
8673500		4D	53	83	133		48	2.7	B ●
8671510	15.1	2D	35	65	115	16	48	2.7	B ●
8673510		4D	53	83	133		48	2.7	B ●
8671520	15.2	2D	35	65	115	16	48	2.8	B ●
8673520		4D	53	83	133		48	2.8	B ●
8671530	15.3	2D	35	65	115	16	48	2.8	B ●
8673530		4D	53	83	133		48	2.8	B ●
8671540	15.4	2D	34	65	115	16	48	2.8	B ●
8673540		4D	52	83	133		48	2.8	B ●
8671550	15.5	2D	34	65	115	16	48	2.8	B ●
8673550		4D	52	83	133		48	2.8	B ●
8671560	15.6	2D	34	65	115	16	48	2.8	B ●
8673560		4D	52	83	133		48	2.8	B ●
8671570	15.7	2D	34	65	115	16	48	2.9	B ●
8673570		4D	52	83	133		48	2.9	B ●
8671580	15.8	2D	34	65	115	16	48	2.9	B ●
8673580		4D	52	83	133		48	2.9	B ●
8671590	15.9	2D	33	65	115	16	48	2.9	B ●
8673590		4D	51	83	133		48	2.9	B ●

单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
8671600	16	2D	33	65	115	16	48	2.9	B ●
8673600		4D	51	83	133		48	2.9	B ●
	16.1	2D	41	73	123	18	48	2.9	□
		4D	61	93	143		48	2.9	□
	16.2	2D	41	73	123	18	48	2.9	□
		4D	61	93	143		48	2.9	□
	16.3	2D	41	73	123	18	48	3	□
		4D	61	93	143		48	3	□
	16.4	2D	40	73	123	18	48	3	□
		4D	60	93	143		48	3	□
8678650	16.5 - 17	4D	60	93	143	17	48	3	B ●
8671650	16.5	2D	40	73	123	18	48	3	B ●
8673650		4D	60	93	143		48	3	B ●
	16.6	2D	40	73	123	18	48	3	□
		4D	60	93	143		48	3	□
	16.7	2D	40	73	123	18	48	3	□
		4D	60	93	143		48	3	□
	16.8	2D	40	73	123	18	48	3.1	□
		4D	60	93	143		48	3.1	□
	16.9	2D	40	73	123	18	48	3.1	□
		4D	60	93	143		48	3.1	□
8678700	17 - 17	4D	59	93	143	17	48	3.1	B ●
8671700	17	2D	39	73	123	18	48	3.1	B ●
8673700		4D	59	93	143		48	3.1	B ●

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- See p.2 for explanation of icons.
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FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
	17.1	2D	39	73	123	18	48	3.1	☐
		4D	59	93	143		48	3.1	☐
	17.2	2D	39	73	123	18	48	3.1	☐
		4D	59	93	143		48	3.1	☐
	17.3	2D	39	73	123	18	48	3.1	☐
		4D	59	93	143		48	3.1	☐
	17.4	2D	39	73	123	18	48	3.2	☐
		4D	59	93	143		48	3.2	☐
8671750	17.5	2D	38	73	123	18	48	3.2	●
8673750		4D	58	93	143		48	3.2	●
	17.6	2D	38	73	123	18	48	3.2	☐
		4D	58	93	143		48	3.2	☐
	17.7	2D	38	73	123	18	48	3.2	☐
		4D	58	93	143		48	3.2	☐
	17.8	2D	38	73	123	18	48	3.2	☐
		4D	58	93	143		48	3.2	☐
	17.9	2D	38	73	123	18	48	3.3	☐
		4D	58	93	143		48	3.3	☐
8671800	18	2D	37	73	123	18	48	3.3	●
8673800		4D	57	93	143		48	3.3	●
	18.1	2D	43	79	131	20	50	3.3	☐
		4D	65	101	153		50	3.3	☐
	18.2	2D	43	79	131	20	50	3.3	☐
		4D	65	101	153		50	3.3	☐

单位:mm Unit:mm

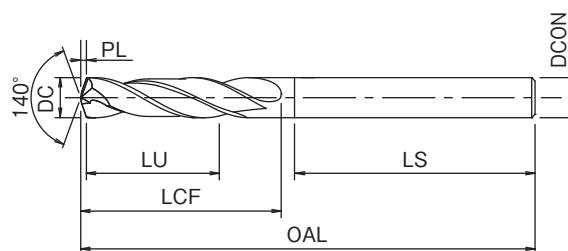
商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
	18.3	2D	43	79	131	20	50	3.3	☐
		4D	65	101	153		50	3.3	☐
	18.4	2D	43	79	131	20	50	3.3	☐
		4D	65	101	153		50	3.3	☐
8678850	18.5 - 19	4D	64	101	153	19	50	3.4	B ●
8671850	18.5	2D	42	79	131	20	50	3.4	●
8673850		4D	64	101	153		50	3.4	●
	18.6	2D	42	79	131	20	50	3.4	☐
		4D	64	101	153		50	3.4	☐
	18.7	2D	42	79	131	20	50	3.4	☐
		4D	64	101	153		50	3.4	☐
	18.8	2D	42	79	131	20	50	3.4	☐
		4D	64	101	153		50	3.4	☐
	18.9	2D	42	79	131	20	50	3.4	☐
		4D	64	101	153		50	3.4	☐
8678900	19 - 19	4D	63	101	153	19	50	3.5	B ●
8671900	19	2D	41	79	131	20	50	3.5	●
8673900		4D	63	101	153		50	3.5	●
	19.1	2D	41	79	131	20	50	3.5	☐
		4D	63	101	153		50	3.5	☐
	19.2	2D	41	79	131	20	50	3.5	☐
		4D	63	101	153		50	3.5	☐
	19.3	2D	41	79	131	20	50	3.5	☐
		4D	63	101	153		50	3.5	☐

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NEXT

AD-2D/4D

DC ≤ 4	X形横刃 X thinning
4 < DC	R形横刃 R thinning



FROM

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
	19.4	2D	41	79	131	20	50	3.5	☐
		4D	63	101	153	20	50	3.5	☐
8671950	19.5	2D	40	79	131	20	50	3.5	●
8673950		4D	62	101	153	20	50	3.5	●
	19.6	2D	40	79	131	20	50	3.6	☐
		4D	62	101	153	20	50	3.6	☐
	19.7	2D	40	79	131	20	50	3.6	☐
		4D	62	101	153	20	50	3.6	☐

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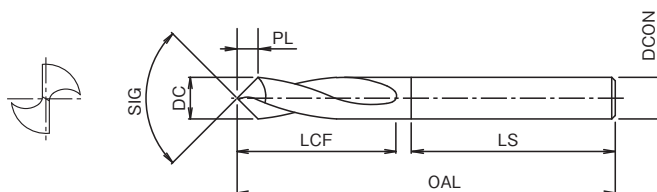
单位:mm Unit:mm

商品号 EDP No.	直径 - 柄径 DC - DCON	类型 Type	有效加工深度 LU	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	库存 Stock
	19.8	2D	40	79	131	20	50	3.6	☐
		4D	62	101	153	20	50	3.6	☐
	19.9	2D	40	79	131	20	50	3.6	☐
		4D	62	101	153	20	50	3.6	☐
8672000	20	2D	39	79	131	20	50	3.6	●
8674000		4D	61	101	153	20	50	3.6	●

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AD-LDS



先端角的容许差为 $60^\circ \pm 3^\circ$ 、 $90^\circ \pm 1^\circ$ 、 $120^\circ \pm 2^\circ$ 、 $140^\circ \pm 4^\circ$
Tolerance of the point angle is $60^\circ \pm 3^\circ$, $90^\circ \pm 1^\circ$, $120^\circ \pm 2^\circ$, $140^\circ \pm 4^\circ$

CARBIDE	EgiAs	WXL	SHANK h6	12°	约25°	SPEED FEED P57
2≤DC	DC<2		3≤DC	DC<3		

商品号 EDP No.	直径×先端角 DC×SIG	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	最小底孔径 Min.Pre-Drilled Dia. 注1)	库存 Stock
	0.5 × 60°	1	38	3	32.2	0.4	0.25	— □
	1 × 60°	2	38	3	32.2	0.9	0.4	— □
	2 × 60°	4	38	3	32	1.7	1	— □
8688951	3 × 60°	9	48	3	39	1.8	1.5	B ●
8688952	4 × 60°	12	54	4	42	2.7	1.7	B ●
8688953	6 × 60°	15	72	6	57	4.2	2	B ●
8688954	8 × 60°	20	81	8	61	5.9	2.1	B ●
8688955	10 × 60°	24	93	10	69	7.4	2.5	B ●
8688956	12 × 60°	28	108	12	80	9.1	2.5	B ●
8688930	0.5 × 90°	1	38	3	32.2	0.3	0.25	B ●
8688931	1 × 90°	1.8	38	3	32	0.5	0.4	B ●
8688932	2 × 90°	2.5	38	3	33	1	1	B ●
8688933	3 × 90°	9	48	3	39	1.5	1.2	B ●
8688934	4 × 90°	12	54	4	42	2	1.5	B ●
8688935	6 × 90°	15	72	6	57	3	1.9	B ●
8688936	8 × 90°	20	81	8	61	4	2.1	B ●
8688937	10 × 90°	24	93	10	69	5	2.5	B ●
8688938	12 × 90°	28	108	12	80	6	2.5	B ●
	0.5 × 120°	1	38	3	32.2	0.1	—	— □
	1 × 120°	1.8	38	3	32	0.3	—	— □
	2 × 120°	2.5	38	3	33.1	0.6	—	— □
8688957	3 × 120°	9	48	3	39	0.9	—	B ●
8688958	4 × 120°	12	54	4	42	1.2	—	B ●

注1)) 表示进行倒角情况下的底孔最小值。

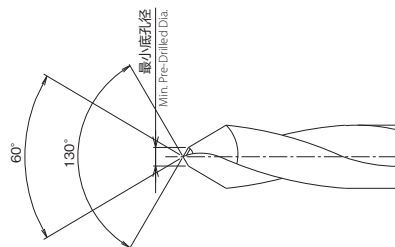
These minimum pre-drilled hole sizes are required before chamfering operations.

- 标识说明请参考 p.2.
- 涂层可能会有颜色不均的情况，但这并不影响刀具的性能。
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.

单位:mm Unit:mm

商品号 EDP No.	直径×先端角 DC×SIG	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	最小底孔径 Min.Pre-Drilled Dia. 注1)	库存 Stock
8688959	6 × 120°	15	72	6	57	1.7	—	B ●
8688960	8 × 120°	20	81	8	61	2.3	—	B ●
8688961	10 × 120°	24	93	10	69	2.9	—	B ●
8688962	12 × 120°	28	108	12	80	3.5	—	B ●
	0.5 × 130°	1	38	3	32.2	0.1	—	— □
	1 × 130°	1.8	38	3	32	0.2	—	— □
	2 × 130°	2.5	38	3	33.1	0.5	—	— □
	3 × 130°	9	48	3	39	0.7	—	— □
	4 × 130°	12	54	4	42	0.9	—	— □
	6 × 130°	15	72	6	57	1.4	—	— □
	8 × 130°	20	81	8	61	1.9	—	— □
	10 × 130°	24	93	10	69	2.3	—	— □
	12 × 130°	28	108	12	80	2.8	—	— □
8688963	0.5 × 140°	1	38	3	32.2	0.1	—	B ●
8688964	1 × 140°	1.8	38	3	32	0.2	—	B ●
8688965	2 × 140°	2.5	38	3	33.1	0.4	—	B ●
8688966	3 × 140°	9	48	3	39	0.5	—	B ●
8688967	4 × 140°	12	54	4	42	0.7	—	B ●
8688968	6 × 140°	15	72	6	57	1.1	—	B ●
8688969	8 × 140°	20	81	8	61	1.5	—	B ●
8688970	10 × 140°	24	93	10	69	1.8	—	B ●
8688971	12 × 140°	28	108	12	80	2.2	—	B ●

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先端角60°，直径 $\phi 3 \sim \phi 12$ 的产品用于中心定位加工时易产生钻尖崩损，为解决此问题，钻尖中心小于最小底孔径的部分为130°。
Items with a point angle of 60° in outer diameter sizes of $\phi 3$ to $\phi 12$ have a 130° point angle within the minimum drill diameter to prevent the chisel edge from crushing during centering.



特点
Feature

加工数据
Cutting Data

3D/5D/8D

10D/15D/20D/25D/30D

带油孔 with Oil Hole

40D/50D

导向钻
Pilot Drill

无油孔 Non Oil Hole

2D/4D

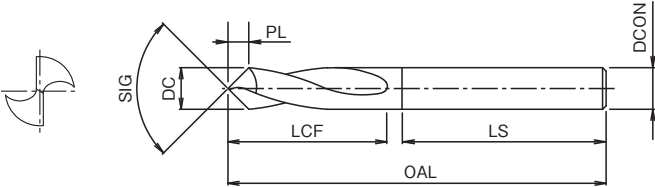
中心钻 Starter Drill

AD-LDS

切削条件表
Cutting Conditions

非标准品对应表
Production Table
by Drill Diameter

AD-LS-LDS



先端角的容许差为 $90^{\circ} \pm 1^{\circ}$ 。
Tolerance of the point angle is $90^{\circ} \pm 1^{\circ}$



商品号 EDP No.	直径×先端角 DC×SIG	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	最小底孔径 Min.Pre-Drilled Dia. 注1)	库存 Stock
8688942	3×90°	9	75	3	66	1.5	1.2	B ●
8688943	4×90°	12	100	4	88	2	1.5	B ●
8688944	6×90°	15	150	6	135	3	1.9	B ●

注1) 表示进行倒角情况下的底孔最小值。
These minimum pre-drilled hole sizes are required before chamfering operations.

- 标识说明请参考 p.2。
- 涂层可能会有颜色不均的情况，但这并不影响刀具的性能。
- See p.2 for explanation of icons.
- Drills may have some discoloration, but it does not cause any performance problems.

单位:mm Unit:mm

商品号 EDP No.	直径×先端角 DC×SIG	槽长 LCF	全长 OAL	柄径 DCON	柄长 LS	先端 PL	最小底孔径 Min.Pre-Drilled Dia. 注1)	库存 Stock
8688945	8×90°	20	150	8	130	4	2.1	B ●
8688946	10×90°	24	200	10	176	5	2.5	B ●
8688947	12×90°	28	200	12	172	6	2.5	B ●

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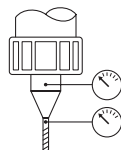


ADO-3D/5D/8D

加工材料 Work Material	软钢·低碳素钢 Mild Steel · Low Carbon Steel SS400 · S10C ~150HB ~500N/mm ²		碳素钢 Carbon Steel S35C · S50C ~210HB ~710N/mm ²		合金钢 Alloy Steel SCM · SCr · SNCM 16 ~ 28HRC 710 ~ 900N/mm ²		合金钢 Alloy Steel SCM · SCr · SNCM 28 ~ 35HRC 900 ~ 1,100N/mm ²	
切削速度 Cutting Speed	80~120m/min		80~160m/min		80~120m/min		60~90m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
2	12,700	0.04 ~ 0.08	12,700	0.04 ~ 0.08	12,700	0.04 ~ 0.08	11,100	0.04 ~ 0.08
3	10,600	0.06 ~ 0.12	10,600	0.06 ~ 0.12	10,600	0.06 ~ 0.12	7,400	0.06 ~ 0.12
4	8,000	0.08 ~ 0.16	8,000	0.08 ~ 0.16	8,000	0.08 ~ 0.16	5,600	0.08 ~ 0.16
5	6,400	0.1 ~ 0.2	6,400	0.1 ~ 0.2	6,400	0.1 ~ 0.2	4,500	0.1 ~ 0.2
6	5,300	0.12 ~ 0.24	5,300	0.12 ~ 0.24	5,300	0.12 ~ 0.24	3,700	0.12 ~ 0.24
7	4,500	0.14 ~ 0.26	4,500	0.14 ~ 0.26	4,500	0.14 ~ 0.26	3,200	0.14 ~ 0.26
8	4,000	0.16 ~ 0.28	4,000	0.16 ~ 0.28	4,000	0.16 ~ 0.28	2,800	0.16 ~ 0.28
9	3,500	0.18 ~ 0.3	3,500	0.18 ~ 0.3	3,500	0.18 ~ 0.3	2,500	0.18 ~ 0.3
10	3,200	0.2 ~ 0.3	3,200	0.2 ~ 0.3	3,200	0.2 ~ 0.3	2,200	0.2 ~ 0.3
11	2,900	0.2 ~ 0.3	2,900	0.2 ~ 0.3	2,900	0.2 ~ 0.3	2,000	0.2 ~ 0.3
12	2,700	0.21 ~ 0.3	2,700	0.21 ~ 0.3	2,700	0.21 ~ 0.3	1,900	0.21 ~ 0.3
14	2,300	0.22 ~ 0.35	2,300	0.22 ~ 0.35	2,300	0.22 ~ 0.35	1,600	0.22 ~ 0.35
16	2,000	0.25 ~ 0.36	2,000	0.25 ~ 0.36	2,000	0.25 ~ 0.36	1,400	0.25 ~ 0.36
18	1,800	0.28 ~ 0.38	1,800	0.28 ~ 0.38	1,800	0.28 ~ 0.38	1,200	0.28 ~ 0.38
20	1,600	0.3 ~ 0.4	1,600	0.3 ~ 0.4	1,600	0.3 ~ 0.4	1,100	0.3 ~ 0.4

加工材料 Work Material	铸铁 Cast Iron FC250 ~350N/mm ²		球墨铸铁 Ductile Cast Iron FCD450 FCD600 400~600N/mm ²		不锈钢 Stainless Steel SUS300系 SUS400系 480~800N/mm ²		特殊钢·调质钢·预硬钢 Special Alloy Steel · Hardened Steel · Prehardened Steel SKD61(非调质) (unquenched) 34 ~ 40HRC 1,060~1,250N/mm ²	
切削速度 Cutting Speed	80~120m/min		60~100m/min		40~80m/min		30~60m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
2	12,700	0.04 ~ 0.08	12,700	0.04 ~ 0.08	9,500	0.04 ~ 0.08	7,200	0.04 ~ 0.06
3	10,600	0.06 ~ 0.12	8,500	0.06 ~ 0.12	6,400	0.06 ~ 0.12	4,800	0.06 ~ 0.09
4	8,000	0.08 ~ 0.16	6,400	0.08 ~ 0.16	4,800	0.08 ~ 0.16	3,600	0.08 ~ 0.12
5	6,400	0.1 ~ 0.2	5,100	0.1 ~ 0.2	3,800	0.1 ~ 0.2	2,900	0.1 ~ 0.15
6	5,300	0.12 ~ 0.24	4,200	0.12 ~ 0.24	3,200	0.12 ~ 0.24	2,400	0.12 ~ 0.18
7	4,500	0.14 ~ 0.26	3,600	0.14 ~ 0.26	2,700	0.14 ~ 0.26	2,000	0.14 ~ 0.21
8	4,000	0.16 ~ 0.28	3,200	0.16 ~ 0.28	2,400	0.16 ~ 0.28	1,800	0.16 ~ 0.24
9	3,500	0.18 ~ 0.3	2,800	0.18 ~ 0.3	2,100	0.18 ~ 0.3	1,600	0.18 ~ 0.27
10	3,200	0.2 ~ 0.3	2,500	0.2 ~ 0.3	1,900	0.2 ~ 0.3	1,400	0.2 ~ 0.3
11	2,900	0.2 ~ 0.3	2,300	0.2 ~ 0.3	1,700	0.2 ~ 0.3	1,300	0.2 ~ 0.3
12	2,700	0.21 ~ 0.3	2,100	0.21 ~ 0.3	1,600	0.21 ~ 0.3	1,200	0.21 ~ 0.3
14	2,300	0.22 ~ 0.35	1,800	0.22 ~ 0.35	1,400	0.22 ~ 0.35	1,000	0.22 ~ 0.35
16	2,000	0.25 ~ 0.36	1,600	0.25 ~ 0.36	1,200	0.25 ~ 0.36	900	0.25 ~ 0.36
18	1,800	0.28 ~ 0.38	1,400	0.28 ~ 0.38	1,100	0.28 ~ 0.38	800	0.28 ~ 0.38
20	1,600	0.3 ~ 0.4	1,300	0.3 ~ 0.4	1,000	0.3 ~ 0.4	700	0.3 ~ 0.4

1. 此切削条件基准表适用于水溶性切削油剂或油雾式冷却加工。
2. 请使用稀释20倍以下的优质水溶性切削油剂。
3. 使用油性切削油剂或水溶性切削油剂稀释率超过20倍时，切削速度请下调30%。
4. 此切削条件基准表适用于孔深在8D 以下的情况。
5. 安装钻头时，请使用无损伤、无油污的夹具，钻头振动控制在0.02mm 以下。
6. 请保持加工材料在不变形、不弯曲、不振动的状态下。
7. 油孔堵塞是造成折损问题的原因，请务必安装供油装置的过滤器。
8. 加工高硬度材料或 8D 用时，请根据情况进行1D~2D 的阶梯式加工。
9. 根据使用环境，也有可能无法达到高速条件。
10. 加工镁合金时，请务必使用切削油剂厂家推荐的切削油剂。还有，处理切屑时请注意，以免造成火灾。



1. The indicated speeds and feeds are for drilling with water-soluble coolant or MQL.
2. Water-soluble high density coolant (less than 20 times dilution) is recommended.
3. When using non-water-soluble or water-soluble coolant (over 20 times dilution), reduce cutting speed by 30%.
4. These conditions are for drilling depth less than 8 times the drill diameter.
5. Equip the drill with a scratch- and dust-free collet and minimize drill deflection to less than 0.02mm.
6. Fasten the work material to reduce the possibility of work deformation, deflection of machined surface, or vibration.
7. A clogged oil hole can lead to a breakage. Make sure that a filter is attached to the oil feeder.
8. 1D - 2D step feeding may be required for drilling high hardened steels and mid-range (8D) work.
9. Depending on actual operation environment, high speed cutting parameters listed above may not be applicable.
10. Please always use the appropriate cutting fluid recommended by the cutting fluid manufacturer in the machining of magnesium alloys. Be cautious with the cutting chips as they are highly flammable and may pose a serious fire risk if not properly handled.

ADO-10D/15D/20D/25D/30D

加工材料 Work Material	软钢·低碳钢 Mild Steel · Low Carbon Steel SS400 · S10C ~150HB ~500N/mm ²		碳素钢 Carbon Steel S35C · S50C ~210HB ~710N/mm ²		合金钢 Alloy Steel SCM · SCR · SNCM 16 ~ 28HRC 710 ~ 900N/mm ²		合金钢·预硬钢 Alloy Steel · Prehardened Steel (C ≥ 0.3%) SCM440 28 ~ 34HRC 900 ~ 1,060N/mm ²	
切削速度 Cutting Speed	60~125m/min		60~125m/min		60~125m/min		50~70m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
3	7,500	0.06 ~ 0.12	7,500	0.06 ~ 0.12	7,500	0.06 ~ 0.12	6,300	0.08 ~ 0.11
4	6,400	0.08 ~ 0.16	6,400	0.08 ~ 0.16	6,400	0.08 ~ 0.16	4,700	0.1 ~ 0.15
5	5,800	0.1 ~ 0.2	5,800	0.1 ~ 0.2	5,800	0.1 ~ 0.2	3,800	0.12 ~ 0.18
6	4,800	0.12 ~ 0.24	4,800	0.12 ~ 0.24	4,800	0.12 ~ 0.24	3,100	0.14 ~ 0.2
8	3,600	0.16 ~ 0.28	3,600	0.16 ~ 0.28	3,600	0.16 ~ 0.28	2,300	0.16 ~ 0.24
10	2,900	0.2 ~ 0.35	2,900	0.2 ~ 0.35	2,900	0.2 ~ 0.35	1,900	0.18 ~ 0.27
12	2,400	0.24 ~ 0.42	2,400	0.24 ~ 0.42	2,400	0.24 ~ 0.42	1,500	0.24 ~ 0.3

加工材料 Work Material	铸铁 Cast Iron FC250 ~350N/mm ²		球墨铸铁 Ductile Cast Iron FCD450 FCD600 400~600N/mm ²		不锈钢 Stainless Steel SUS400系 480~800N/mm ²		特殊钢·调质钢·预硬钢 Special Alloy Steel · Hardened Steel · Prehardened Steel SKD61(非调质) (unquenched) 34 ~ 40HRC 1,060~1,250N/mm ²	
切削速度 Cutting Speed	60 ~ 125m/min		50 ~ 80m/min		40 ~ 80m/min		30 ~ 50m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
3	7,500	0.06 ~ 0.12	7,500	0.06 ~ 0.12	5,300	0.06 ~ 0.12	4,200	0.08 ~ 0.11
4	6,400	0.08 ~ 0.16	5,600	0.08 ~ 0.16	4,400	0.08 ~ 0.16	3,100	0.1 ~ 0.15
5	5,800	0.1 ~ 0.2	4,500	0.1 ~ 0.2	3,800	0.1 ~ 0.2	2,500	0.12 ~ 0.18
6	4,800	0.12 ~ 0.24	3,800	0.12 ~ 0.24	3,200	0.12 ~ 0.24	2,100	0.14 ~ 0.2
8	3,600	0.16 ~ 0.28	2,800	0.16 ~ 0.28	2,400	0.16 ~ 0.28	1,500	0.16 ~ 0.24
10	2,900	0.2 ~ 0.35	2,300	0.2 ~ 0.35	1,900	0.2 ~ 0.35	1,200	0.18 ~ 0.27
12	2,400	0.24 ~ 0.42	1,900	0.24 ~ 0.42	1,600	0.24 ~ 0.42	1,000	0.24 ~ 0.3

1. 此切削条件基准表适用于水溶性切削油剂或油雾式冷却加工。
(不锈钢加工不推荐MQL)
2. 请使用稀释20倍~30倍的优质水溶性切削油剂。
3. 使用油性切削油剂时, 将切削速度设定在最低值的70%左右。
4. 请参考p.38的「推荐加工方法」进行导向孔的加工。
5. 油孔堵塞是造成折损问题的原因, 请务必安装供油装置的过滤器。
6. 加工高硬度材料时, 请进行1D~2D的阶梯式加工。

1. The indicated speeds and feeds are for drilling with **water-soluble coolant or MQL** (mist drilling in stainless steels is not recommended).
2. Water-soluble high density coolant (20-30 times dilution) is recommended.
3. When using non-water-soluble coolant, set the cutting speed between 70-100% of the lowest limit.
4. Make a **pilot hole** before using in accordance with recommended operation.
5. A clogged oil hole can lead to a breakage. Make sure that a filter is attached to the oil feeder.
6. Peck drilling of 1D - 2D is strongly recommended.



ADO-40D/50D

加工材料 Work Material	软钢·低碳素钢 Mild Steel · Low Carbon Steel SS400 · S10C ~150HB ~500N/mm ²		碳素钢 Carbon Steel S35C · S50C ~210HB ~710N/mm ²		合金钢 Alloy Steel SCM · SCr · SNCM 16 ~ 28HRC 710 ~ 900N/mm ²		合金钢 Alloy Steel (C ≥ 0.3%) SCM440 28 ~ 35HRC 900 ~ 1,060N/mm ²	
切削速度 Cutting Speed	60~90m/min		60~90m/min		50~80m/min		40~70m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
3	7,500	0.06 ~ 0.12	7,500	0.06 ~ 0.12	6,400	0.06 ~ 0.12	5,300	0.06 ~ 0.11
4	5,600	0.08 ~ 0.16	5,600	0.08 ~ 0.16	4,800	0.08 ~ 0.16	4,000	0.08 ~ 0.14
5	4,500	0.1 ~ 0.2	4,500	0.1 ~ 0.2	3,800	0.1 ~ 0.2	3,200	0.1 ~ 0.17
6	3,700	0.12 ~ 0.24	3,700	0.12 ~ 0.24	3,200	0.12 ~ 0.24	2,700	0.12 ~ 0.21
8	2,800	0.16 ~ 0.28	2,800	0.16 ~ 0.28	2,400	0.16 ~ 0.28	2,000	0.16 ~ 0.24
10	2,300	0.2 ~ 0.35	2,300	0.2 ~ 0.35	1,900	0.2 ~ 0.35	1,600	0.2 ~ 0.3

加工材料 Work Material	铸铁 Cast Iron FC250 ~350N/mm ²		球墨铸铁 Ductile Cast Iron FCD450 · FCD600 400 ~ 600N/mm ²		不锈钢 Stainless Steel SUS300/400 系 480 ~ 800N/mm ²	
切削速度 Cutting Speed	60 ~ 90m/min		50 ~ 80m/min		40 ~ 60m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
3	7,500	0.06 ~ 0.12	6,400	0.06 ~ 0.12	5,300	0.06 ~ 0.12
4	5,600	0.08 ~ 0.16	4,800	0.08 ~ 0.16	4,000	0.08 ~ 0.16
5	4,500	0.1 ~ 0.2	3,800	0.1 ~ 0.2	3,200	0.1 ~ 0.2
6	3,700	0.12 ~ 0.24	3,200	0.12 ~ 0.24	2,700	0.12 ~ 0.24
8	2,800	0.16 ~ 0.28	2,400	0.16 ~ 0.28	2,000	0.16 ~ 0.28
10	2,300	0.2 ~ 0.35	1,900	0.2 ~ 0.35	1,600	0.2 ~ 0.35

1. 此切削条件基准表适用于水溶性切削油剂或油雾式冷却加工。
(不锈钢加工不推荐 MQL)
2. 请使用稀释20倍~30倍的优质水溶性切削油剂。
3. 使用油性切削油剂时，将切削速度设定在最低值的70%左右。
4. 请参考[推荐加工方法(p.38)]进行导向孔的加工。
5. 油孔堵塞是造成折损问题的原因，请务必安装供油装置的过滤器。
6. 加工高硬度材料时，请进行1D~2D的阶梯式加工。

★加工困难或需改善孔的垂直度的情况下，请在导向孔加工后，使用内冷油孔硬质合金钻头 ADO-20D/30D 进行加工，之后再使用 ADO-40D/50D 进行加工。使用三种工具加工的情况下，ADO-40D/50D 可使用比上述切削条件表更高的切削条件进行加工。

1. The indicated speeds and feeds are for drilling with water-soluble coolant or MQL (mist drilling in stainless steels is not recommended).
2. Water-soluble high density coolant (20-30 times dilution) is recommended.
3. When using non-water-soluble coolant, set the cutting speed between 70-100% of the lowest limit.
4. Make a pilot hole before using in accordance with the recommended operation.
5. A clogged oil hole can lead to breakage. Make sure that a filter is attached to the oil feeder.
6. Peck drilling of 1D - 2D is strongly recommended.

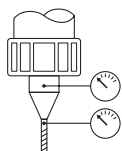
★If it is difficult to process or if the straightness of the hole needed to be improved, use the coolant-through carbide drill ADO-20/30D after drilling a pilot hole, then process with the ADO-40/50D. When processing with 3 tools, the ADO-40/50D may be used at a more aggressive cutting condition than those listed above.

ADO-PLT

加工材料 Work Material	软钢·低碳素钢 Mild Steel · Low Carbon Steel SS400 · S10C ~150HB ~500N/mm ²		碳素钢 Carbon Steel S35C · S50C ~210HB ~710N/mm ²		合金钢 Alloy Steel SCM · SCR · SNCM 16 ~ 28HRC 710 ~ 900N/mm ²		合金钢·预硬钢 Alloy Steel · Prehardened Steel (C ≥ 0.3%) SCM440 28 ~ 34HRC 900 ~ 1,060N/mm ²	
切削速度 Cutting Speed	60~125m/min		60~80m/min		60~80m/min		40~60m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
3.03	7,400	0.06 ~ 0.09	7,400	0.06 ~ 0.09	7,400	0.06 ~ 0.09	5,200	0.06 ~ 0.09
4.03	5,600	0.08 ~ 0.12	5,600	0.08 ~ 0.12	5,600	0.08 ~ 0.12	3,900	0.08 ~ 0.12
5.03	4,500	0.1 ~ 0.15	4,500	0.1 ~ 0.15	4,500	0.1 ~ 0.15	3,100	0.1 ~ 0.15
6.03	3,700	0.12 ~ 0.18	3,700	0.12 ~ 0.18	3,700	0.12 ~ 0.18	2,600	0.12 ~ 0.18
7.03	3,200	0.14 ~ 0.2	3,200	0.14 ~ 0.2	3,200	0.14 ~ 0.2	2,300	0.14 ~ 0.2
8.03	2,800	0.14 ~ 0.2	2,800	0.14 ~ 0.2	2,800	0.14 ~ 0.2	2,000	0.14 ~ 0.2
9.03	2,500	0.14 ~ 0.22	2,500	0.14 ~ 0.22	2,500	0.14 ~ 0.22	1,800	0.14 ~ 0.22
10.03	2,200	0.15 ~ 0.24	2,200	0.15 ~ 0.24	2,200	0.15 ~ 0.24	1,600	0.15 ~ 0.24
11.03	2,000	0.16 ~ 0.26	2,000	0.16 ~ 0.26	2,000	0.16 ~ 0.26	1,500	0.17 ~ 0.24
12.03	1,800	0.18 ~ 0.28	1,800	0.18 ~ 0.28	1,800	0.18 ~ 0.28	1,350	0.18 ~ 0.24

加工材料 Work Material	铸铁 Cast Iron FC250 ~350N/mm ²		球墨铸铁 Ductile Cast Iron FCD450 FCD600 400~600N/mm ²		不锈钢 Stainless Steel SUS400系 480~800N/mm ²		特殊钢·调质钢·预硬钢 Special Alloy Steel · Hardened Steel · Prehardened Steel SKD61(非调质) (unquenched) 34 ~ 40HRC 1,060 ~ 1,250N/mm ²	
切削速度 Cutting Speed	60~80m/min		60~80m/min		40~60m/min		30~50m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
3.03	7,400	0.06 ~ 0.09	7,400	0.06 ~ 0.09	5,200	0.06 ~ 0.09	4,200	0.06 ~ 0.09
4.03	5,600	0.08 ~ 0.12	5,600	0.08 ~ 0.12	3,900	0.08 ~ 0.12	3,100	0.08 ~ 0.12
5.03	4,500	0.1 ~ 0.15	4,500	0.1 ~ 0.15	3,100	0.1 ~ 0.15	2,500	0.1 ~ 0.15
6.03	3,700	0.12 ~ 0.18	3,700	0.12 ~ 0.18	2,600	0.12 ~ 0.18	2,100	0.12 ~ 0.18
7.03	3,200	0.14 ~ 0.2	3,200	0.14 ~ 0.2	2,300	0.14 ~ 0.2	1,800	0.14 ~ 0.2
8.03	2,800	0.14 ~ 0.2	2,800	0.14 ~ 0.2	2,000	0.14 ~ 0.2	1,600	0.14 ~ 0.2
9.03	2,500	0.14 ~ 0.22	2,500	0.14 ~ 0.22	1,800	0.14 ~ 0.22	1,400	0.14 ~ 0.22
10.03	2,200	0.15 ~ 0.24	2,200	0.15 ~ 0.24	1,600	0.15 ~ 0.24	1,300	0.15 ~ 0.24
11.03	2,000	0.16 ~ 0.26	2,000	0.16 ~ 0.26	1,400	0.16 ~ 0.26	1,150	0.17 ~ 0.24
12.03	1,800	0.18 ~ 0.28	1,800	0.18 ~ 0.28	1,300	0.18 ~ 0.28	1,100	0.18 ~ 0.24

1. 此切削条件基准表适用于**水溶性切削油剂或油雾式**冷却加工。
(不锈钢加工不推荐MQL)
2. 请使用稀释20倍以下的优质水溶性切削油剂。
3. 水溶性切削油剂稀释倍率超过20倍时, 标准条件下切削速度请下调30%, 不适用于高速加工。
4. 使用油性切削油剂时, 请选择标准条件的切削速度以下的数值, 不适用于高速加工。
5. 此切削条件基准表适用于**孔深在3D**以下的情况。
6. 安装钻头时, 请使用无损伤、无油污的夹具, 钻头振动控制在**0.02mm**以下。
7. 请保持加工材料在不变形、不弯曲、不振动的状态下。
8. 油孔堵塞是造成折损问题的原因, 请务必安装供油装置的过滤器。



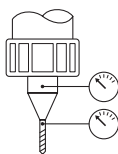
1. The indicated speeds and feeds are for drilling with **water-soluble coolant or MQL** (mist drilling in stainless steels is not recommended).
2. Water-soluble high density coolant (less than 20 times dilution) is recommended.
3. When using water-soluble coolant with over 20 times dilution, reduce cutting speed by 30% below the standard conditions. Do not use the high speed cutting conditions in this case.
4. When using non-water-soluble coolant, the lower cutting speed in the table should be selected. Do not use the high speed drilling conditions in this case.
5. These conditions are for **drilling depth less than 3 times** the drill diameter.
6. Equip the drill with a scratch- and dust-free collet and **minimize drill deflection to less than 0.02mm**.
7. Fasten the work material to reduce the possibility of work deformation, deflection of machined surface, or vibration.
8. A clogged oil hole can lead to a breakage. Make sure that a filter is attached to the oil feeder.

AD-2D/4D

加工材料 Work Material	软钢·低碳素钢·合金钢 Mild Steel · Low Carbon Steel · Alloy Steel (C<0.3%) SS400 · SCM ~710N/mm ²		碳素钢 Carbon Steel S35C · S50C ~210HB ~710N/mm ²		合金钢 Alloy Steel SCM · SCr · SNCM 16 ~ 28HRC 710 ~ 900N/mm ²	
切削速度 Cutting Speed	70~120m/min		60~120m/min		60~120m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
2	12,000	0.06 ~ 0.08	10,400	0.06 ~ 0.08	10,400	0.06 ~ 0.08
4	8,000	0.08 ~ 0.16	7,200	0.08 ~ 0.16	7,200	0.08 ~ 0.16
6	5,300	0.12 ~ 0.24	4,800	0.12 ~ 0.24	4,800	0.12 ~ 0.24
8	4,000	0.16 ~ 0.28	3,600	0.16 ~ 0.28	3,600	0.16 ~ 0.28
10	3,200	0.2 ~ 0.3	2,900	0.2 ~ 0.3	2,900	0.2 ~ 0.3
12	2,700	0.21 ~ 0.3	2,400	0.21 ~ 0.3	2,400	0.21 ~ 0.3
14	2,300	0.22 ~ 0.35	2,050	0.22 ~ 0.35	2,050	0.22 ~ 0.35
16	2,000	0.25 ~ 0.36	1,800	0.25 ~ 0.36	1,800	0.25 ~ 0.36
18	1,800	0.28 ~ 0.38	1,600	0.28 ~ 0.38	1,600	0.28 ~ 0.38
20	1,600	0.3 ~ 0.4	1,450	0.3 ~ 0.4	1,450	0.3 ~ 0.4

加工材料 Work Material	合金钢 Alloy Steel SCM · SCr · SNCM 28 ~ 35HRC 900 ~ 1,100N/mm ²		铸铁 Cast Iron FC250 ~350N/mm ²		球墨铸铁 Ductile Cast Iron FCD450 FCD600 400 ~ 600N/mm ²	
切削速度 Cutting Speed	50~90m/min		60~120m/min		50~100m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
2	8,800	0.06 ~ 0.08	10,400	0.06 ~ 0.08	9,600	0.06 ~ 0.08
4	5,600	0.08 ~ 0.16	7,200	0.08 ~ 0.16	6,000	0.08 ~ 0.16
6	3,700	0.12 ~ 0.24	4,800	0.12 ~ 0.24	4,000	0.12 ~ 0.24
8	2,800	0.16 ~ 0.28	3,600	0.16 ~ 0.28	3,000	0.16 ~ 0.28
10	2,200	0.2 ~ 0.3	2,900	0.2 ~ 0.3	2,400	0.2 ~ 0.3
12	1,900	0.21 ~ 0.3	2,400	0.21 ~ 0.3	2,000	0.21 ~ 0.3
14	1,400	0.22 ~ 0.35	2,050	0.22 ~ 0.35	1,700	0.22 ~ 0.35
16	1,200	0.25 ~ 0.36	1,800	0.25 ~ 0.36	1,500	0.25 ~ 0.36
18	1,050	0.28 ~ 0.38	1,600	0.28 ~ 0.38	1,350	0.28 ~ 0.38
20	950	0.3 ~ 0.4	1,450	0.3 ~ 0.4	1,200	0.3 ~ 0.4

1. 此切削条件基准表适用于水溶性切削油剂。
2. 请使用稀释20倍以下的优质水溶性切削油剂。
3. 使用油性切削油剂或水溶性切削油剂稀释倍率超过20倍时，切削速度请下调30%。
4. 此切削条件基准表适用于孔深在3D以下的情况。
5. 安装钻头时，请使用无损伤、无油污的夹具，钻头振动控制在0.02mm以下。
6. 请保持加工材料在不变形、不弯曲、不振动的状态下。
7. 机器转速无法达到上述切削速度时，请尽可能使用高转速。另外，此情况可能会导致寿命降低。



1. The indicated speeds and feeds are for drilling with water-soluble coolant.
2. Water-soluble high density coolant (less than 20 times dilution) is recommended.
3. When using non-water-soluble or water-soluble coolant (over 20 times dilution), reduce cutting speed by 30%.
4. These conditions are for drilling depth under 3 times the drill diameter.
5. Equip the drill with a scratch- and dust-free collet and minimize drill deflection to less than 0.02mm.
6. Fasten the work material to reduce the possibility of work deformation, deflection of machined surface, or vibration.
7. For machines that cannot achieve the speeds indicated in the table please set rotation as high as possible. Tool life may be decreased.

中心定位 Centering

AD-LDS・AD-LS-LDS 注1) Note

加工材料 Work Material	低碳素钢・软钢 Low Carbon Steel Mild Steel SS400 ~ 500N/mm ²		碳素钢 Carbon Steel S50C 500 ~ 710N/mm ²		合金钢 Alloy Steel SCM 710 ~ 900N/mm ²		特殊钢・调质钢 Special Alloy Steel Hardened Steel SKD61 ~ 900N/mm ² 28HRC	
切削速度 Cutting Speed	63~80m/min		40 ~ 63m/min		32 ~ 50m/min		20 ~ 30m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
0.5	20,000	0.005 ~ 0.02	25,000	0.005 ~ 0.02	20,000	0.005 ~ 0.02	16,000	0.005 ~ 0.02
1	10,000	0.01 ~ 0.03	16,000	0.01 ~ 0.03	10,000	0.01 ~ 0.03	8,000	0.01 ~ 0.03
2	5,000	0.03 ~ 0.06	8,000	0.03 ~ 0.06	5,000	0.03 ~ 0.06	4,000	0.03 ~ 0.06
3	7,500	0.04 ~ 0.08	5,500	0.04 ~ 0.08	4,500	0.04 ~ 0.08	2,700	0.04 ~ 0.08
4	5,700	0.05 ~ 0.1	4,100	0.05 ~ 0.1	3,300	0.05 ~ 0.1	2,000	0.05 ~ 0.1
6	3,800	0.06 ~ 0.12	2,700	0.06 ~ 0.12	2,300	0.06 ~ 0.12	1,300	0.06 ~ 0.12
8	2,800	0.08 ~ 0.15	2,000	0.08 ~ 0.15	1,700	0.08 ~ 0.15	1,000	0.08 ~ 0.15
10	2,300	0.1 ~ 0.18	1,700	0.1 ~ 0.18	1,400	0.1 ~ 0.18	800	0.1 ~ 0.18
12	1,900	0.12 ~ 0.21	1,400	0.12 ~ 0.21	1,200	0.12 ~ 0.21	650	0.12 ~ 0.21

加工材料 Work Material	特殊钢・调质钢 Special Alloy Steel Hardened Steel SKD11 ~ 1060N/mm ² 34HRC		工具钢 Tool Steel		铸铁・球墨铸铁 Cast Iron・Ductile Cast Iron FC250・FCD400 ~ 500N/mm ²		铸造铝合金 Aluminum Alloy Casting ADC・AC4D	
切削速度 Cutting Speed	16 ~ 22m/min		16 ~ 22m/min		63~100m/min		80~160m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
0.5	12,000	0.005 ~ 0.02	12,000	0.005 ~ 0.02	注2) Note	0.005 ~ 0.015	注2) Note	0.02 ~ 0.04
1	6,000	0.01 ~ 0.03	6,000	0.01 ~ 0.03	20,000	0.01 ~ 0.03	注2) Note	0.04 ~ 0.07
2	3,000	0.03 ~ 0.06	3,000	0.03 ~ 0.06	12,000	0.03 ~ 0.06	15,000	0.06 ~ 0.14
3	2,000	0.04 ~ 0.08	2,000	0.04 ~ 0.08	8,000	0.05 ~ 0.09	12,000	0.1 ~ 0.22
4	1,500	0.05 ~ 0.1	1,500	0.05 ~ 0.1	6,500	0.07 ~ 0.12	9,500	0.12 ~ 0.25
6	1,000	0.06 ~ 0.12	1,000	0.06 ~ 0.12	4,300	0.12 ~ 0.18	6,400	0.14 ~ 0.28
8	750	0.08 ~ 0.15	750	0.08 ~ 0.15	3,200	0.13 ~ 0.2	4,800	0.18 ~ 0.32
10	600	0.1 ~ 0.18	600	0.1 ~ 0.18	2,600	0.17 ~ 0.25	3,800	0.22 ~ 0.36
12	500	0.12 ~ 0.21	500	0.12 ~ 0.21	2,200	0.21 ~ 0.3	3,200	0.25 ~ 0.4

1. 当使用AD-LS-LDS(长柄型)时, 请降低进给量。
2. 如果不能达到表中所示转速, 请尽量设置高转速。
3. 此切削条件基准表适用于使用水溶性切削油剂的情况。
4. 使用油性切削油剂时, 请将切削速度降低20%。
5. 当以曲面或倾斜面为中心定位时, 请降低进给量。
6. 不推荐以不锈钢为中心定位。请使用 TIN-NC-LDS 或 NC-LDS。

1. When using AD-LS-LDS, reduce the feed rate accordingly.
2. For machines that cannot achieve the speeds indicated in the table please set rotation as high as possible.
3. The indicated speeds and feeds are for drilling with water-soluble coolant.
4. When using non-water-soluble coolant, reduce the drilling speed by 20%.
5. When centering on a curved or inclined surface, reduce the feed rate accordingly.
6. Centering on Stainless Steels is not recommended. For these procedures, use the TIN-NC-LDS or the NC-LDS.



加工材料 Work Material	低碳素钢·软钢 Low Carbon Steel Mild Steel SS400 ~ 500N/mm ²		碳素钢 Carbon Steel S50C 500 ~ 710N/mm ²		合金钢 Alloy Steel SCM 710 ~ 900N/mm ²		特殊钢·调质钢 Special Alloy Steel Hardened Steel SKD61 ~ 900N/mm ² 28HRC	
切削速度 Cutting Speed	63~80m/min		40 ~ 63m/min		32 ~ 50m/min		20 ~ 30m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
0.5	20,000	0.005 ~ 0.05	25,000	0.005 ~ 0.05	20,000	0.005 ~ 0.05	16,000	0.005 ~ 0.05
1	10,000	0.01 ~ 0.1	16,000	0.01 ~ 0.1	10,000	0.01 ~ 0.1	8,000	0.01 ~ 0.1
2	5,000	0.02 ~ 0.18	8,000	0.02 ~ 0.18	5,000	0.02 ~ 0.18	4,000	0.02 ~ 0.18
3	7,500	0.04 ~ 0.24	5,500	0.04 ~ 0.24	4,500	0.04 ~ 0.24	2,700	0.04 ~ 0.24
4	5,700	0.04 ~ 0.24	4,100	0.04 ~ 0.24	3,300	0.04 ~ 0.24	2,000	0.04 ~ 0.24
6	3,800	0.06 ~ 0.36	2,700	0.06 ~ 0.36	2,300	0.06 ~ 0.36	1,300	0.06 ~ 0.36
8	2,800	0.08 ~ 0.38	2,000	0.08 ~ 0.38	1,700	0.08 ~ 0.38	1,000	0.08 ~ 0.38
10	2,300	0.1 ~ 0.4	1,700	0.1 ~ 0.4	1,400	0.1 ~ 0.4	800	0.1 ~ 0.4
12	1,900	0.12 ~ 0.42	1,400	0.12 ~ 0.42	1,200	0.12 ~ 0.42	650	0.12 ~ 0.42

加工材料 Work Material	特殊钢·调质钢 Special Alloy Steel Hardened Steel SKD11 ~ 1060N/mm ² 34HRC		淬火钢 Quenched and Tempered Steel 45~50HRC		铸铁·球墨铸铁 Cast Iron · Ductile Cast Iron FC250 · FCD400 ~ 500N/mm ²		铸造铝合金 Aluminum Alloy Casting ADC · AC4D	
切削速度 Cutting Speed	20 ~ 30m/min		20 ~ 30m/min		63~100m/min		80~160m/min	
直径 Drill Dia. (mm)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)	转速 Speed (min ⁻¹)	进给量 Feed Rate (mm/rev)
0.5	16,000	0.005 ~ 0.05	16,000	0.005 ~ 0.02	注2) Note	0.005 ~ 0.05	注2) Note	0.005 ~ 0.05
1	8,000	0.01 ~ 0.1	8,000	0.01 ~ 0.03	20,000	0.01 ~ 0.1	注2) Note	0.01 ~ 0.1
2	4,000	0.02 ~ 0.18	4,000	0.03 ~ 0.06	12,000	0.02 ~ 0.18	15,000	0.02 ~ 0.18
3	2,700	0.04 ~ 0.24	2,700	0.04 ~ 0.08	8,000	0.04 ~ 0.24	12,000	0.04 ~ 0.24
4	2,000	0.04 ~ 0.24	2,000	0.05 ~ 0.1	6,500	0.04 ~ 0.24	9,500	0.04 ~ 0.24
6	1,300	0.06 ~ 0.36	1,300	0.06 ~ 0.12	4,300	0.06 ~ 0.36	6,400	0.06 ~ 0.36
8	1,000	0.08 ~ 0.38	1,000	0.08 ~ 0.15	3,200	0.08 ~ 0.38	4,800	0.08 ~ 0.38
10	800	0.1 ~ 0.4	800	0.1 ~ 0.18	2,600	0.1 ~ 0.4	3,800	0.1 ~ 0.4
12	650	0.12 ~ 0.42	650	0.12 ~ 0.21	2,200	0.12 ~ 0.42	3,200	0.12 ~ 0.42

1. 当使用AD-LS-LDS(长柄型)时, 请降低进给量。
2. 如果不能达到表中所示转速, 请尽量设置高转速。
3. 此切削条件基准表适用于使用水溶性切削油剂的情况。
4. 使用油性切削油剂时, 请将切削速度降低20%。
5. 当对曲面或倾斜面进行倒角时, 请降低进给量。
6. 高速加工的情况下, 请将上表切削速度中央值的2倍作为上限。
7. 加工不锈钢倒角时, 请参考低碳素钢的数值。

1. When using AD-LS-LDS, reduce the feed rate accordingly.
2. For machines that cannot achieve the speeds indicated in the table please set rotation as high as possible.
3. The indicated speeds and feeds are for drilling with water-soluble coolant.
4. When using non-water-soluble coolant, reduce the drilling speed by 20%.
5. When counter sinking on a curved or inclined surface, reduce the feed rate accordingly.
6. For high-speed machining, double the median value of the above cutting condition to use as upper limit.
7. When countersinking on Stainless Steels, use a condition of Low Carbon Steel.

广泛的产品系列为每个应用提供了理想的加工条件。

The wide product lineup provides ideal machining conditions for every application.

单位:mm Unit:mm

直径 DC	L/D	10D	15D	20D	25D	30D	35D	40D	45D	50D	60D
1					34						
1.1					37						
1.2					40						
1.3					44						
1.4					47						
1.5					51						
1.6					54						
1.7					57						
1.8					61						
1.9					64						
2					68						
2.1					69						
2.2					73						
2.3					76						
2.4					79						
2.5					83						
2.6					86						
2.7					89						
2.8					93						
2.9					96						
3										159	
3.1										165	
3.2										170	
3.3										175	
3.4										181	
3.5										186	
3.6										191	
3.7										197	
3.8										202	
3.9										207	
4										212	
4.1										218	
4.2										223	
4.3										228	
4.4										234	
4.5										239	
4.6										244	
4.7										250	
4.8										255	
4.9										260	

直径 DC	L/D	10D	15D	20D	25D	30D	35D	40D	45D	50D	60D
5										265	
5.1										271	
5.2										276	
5.3										281	
5.4										287	
5.5										292	
5.6										297	
5.7										303	
5.8										308	
5.9										313	
6										378	
6.1										378	
6.2										378	
6.3										378	
6.4										378	
6.5										378	
6.6										383	
6.7										389	
6.8										395	
6.9										401	
7										406	
7.1										406	
7.2										406	
7.3										411	
7.4										417	
7.5										422	
7.6										428	
7.7										434	
7.8										439	
7.9										445	
8										450	
8.1									450		
8.2									450		
8.3									450		
8.4									450		
8.5									450		
8.6									450		
8.7									450		
8.8									450		
8.9									450		

表中的数值为可加工的最大槽长。 The values in the table indicate the maximum possible flute lengths.





加工对应范围 (视加工场合而定,可能有无法对应的情况)
Production table by drill dia. (Under certain circumstances, some drills cannot be produced.)



请咨询本公司销售人员 (视加工场合而定,可能有无法对应的情况)
Please contact our sales staff for more information.
(Under certain circumstances, some drills cannot be produced.)

单位:mm Unit:mm

L/D 直径 DC	10D	15D	20D	25D	30D	35D	40D	45D	50D	60D
9								450		
9.1							450			
9.2							450			
9.3							450			
9.4							450			
9.5							450			
9.6							450			
9.7							450			
9.8							450			
9.9							450			
10							450			
10.1							450			
10.2							450			
10.3							450			
10.4							450			
10.5							450			
10.6						450				
10.7						450				
10.8						450				
10.9						450				
11						450				
11.1						450				
11.2						450				
11.3						450				
11.4						450				
11.5						450				
11.6						450				
11.7						450				
11.8						450				
11.9						450				
12						450				
12.1					450					
12.2					450					
12.3					450					
12.4					450					
12.5					450					
12.6					450					
12.7					450					
12.8					450					
12.9					450					

L/D 直径 DC	10D	15D	20D	25D	30D	35D	40D	45D	50D	60D
13					450					
13.1					450					
13.2					450					
13.3					450					
13.4					450					
13.5					450					
13.6					450					
13.7					450					
13.8					450					
13.9					450					
14					450					
14.1				450						
14.2				450						
14.3				450						
14.4				450						
14.5				450						
14.6				450						
14.7				450						
14.8				450						
14.9				450						
15				450						
15.1				450						
15.2				450						
15.3				450						
15.4				450						
15.5				450						
15.6				450						
15.7				450						
15.8				450						
15.9				450						
16				450						
16.5			450							
17			450							
17.5			450							
18			450							
18.5										
19										
19.5										
20										
20~										

表中的数值为可加工的最大槽长。 The values in the table indicate the maximum possible flute lengths.



特点
Feature

加工数据
Cutting Data

3D/5D/8D

带油孔 with Oil Hole
10D/15D/20D/25D/30D

40D/50D
导向孔
Pilot Drill

无油孔 Non Oil Hole
2D/4D

中心钻 Starter Drill
AD-LDS

切削条件表
Cutting Conditions

非标品对应表
Production Table
by Drill Diameter

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φ2以下的小径请看这里

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小径内冷油孔硬质合金钻头

ADO-MICRO

Small Diameter Carbide Drills with Oil Holes

A

2D型 2D Type $\phi 0.7 \sim \phi 2$

5D型 5D Type $\phi 0.7 \sim \phi 2$

12D型 12D Type $\phi 1 \sim \phi 2$

20D型 20D Type $\phi 1 \sim \phi 2$

30D型 30D Type $\phi 1 \sim \phi 2$

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也可对应小径的孔加工

Also supports small diameter drilling

硬质合金平头钻

ADF

Carbide Flat Drill

ADF-2D $\phi 0.2 \sim \phi 20$

ADFO-3D $\phi 3 \sim \phi 20$

ADFLS-2D $\phi 3 \sim \phi 20$

ADF-NC $\phi 2 \sim \phi 12$

ADFO-NC $\phi 3 \sim \phi 10$

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