Introduction

簡介

東莞哆樂數控工具有限公司，是一家專業從事鎢鋼銑刀，鎢鋼鑽頭，數控刀柄，以及精密鏜刀等高精度數控工具的研發，生產，經營爲一體的高新科技企業。

本公司產品廣泛應用于汽車制造，航空航天，塑料制品，電子制造等領域，公司一直注重并了解用户的真正需求，爲用户提供超值服務，爲每個用户提供最經濟最有效的加工解決方案。

爲更好的服務于客户，現已在廣東，浙江，重慶，湖南成立分公司，并在多個城市設有區域代理商。主銷海外的市場，如美國，英國，德國，瑞士，迪拜，土耳其，等歐美及東南亞，中東市場，并在國外設有區域總代理。

公司憑借超群品質，精益求精，設備先進，良好信譽深受客户信賴。

公司始終恪守“質量第一，信譽第一，客户至上，誠信爲本，優質服務”的經營理念，竭力滿足客户的需求和期望。

DONGGUAN DOHRE TOOL CO.,LTD. is high–tech company that specialized in researching & manufacturing & operating high precision cnc tools, like tungsten carbide end mills, drill bits, cnc tool holders, boring bars.

Products are widely used in motor industry, aerospace industry, plastic products, electronic manufacturing, etc.We always pay attention to and learned customers'real demands,offering great–valued services and the most economical & effective manufacture solutions.

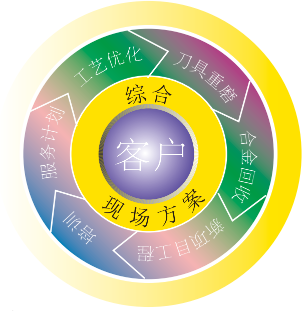
In order to providing better serives, we have found branch offices in Guangdong, Zhejiang,Chongqing,Hunan province, regional agents around many cities. Overseas market spread to America,Europe,South East Asia,Middle East, such as the United States, the United Kingdom,Germany,Switzerland,Dubai,Turkey,etc. And have had regional agents in some countries.

Excellent quality,advanced equipments and good credit are our strengths.

Our company is pursuing the objective all the time "quality first,prestige first, integrity–based, user paramount, excellent services", try our best to satisfy customers' needs and expectation.

哆樂公司全面的服務計劃將我們定位于您的合作伙伴，在整個生産過程中爲您提供先進的服務，幫助您顯著的提高生産效率和利潤率！

DOHRE TOOL CO.,LTD services plan is on our cooperation partner ,provide the Advanced service ,Help you Improve the production efficiency and profitability on whole proceducing processing!



◆工藝優化

哆樂工藝優化服務包括：

= 刀具的選擇、應用、標準化和設計
= 應用精藝的生産原則以盡量的避免浪費
= 采用工作整體化、標準化以減少庫存
= 安排工藝順序以創建工作流程
= 整合運營以發揮價值的最大效益

Ttechnology optimization

DOHRE technology optimization services:

=The tools of choose application ,standard ,design .
=Application of pure art production principles to try to avoid waste
=working completely,standardize to reduce the stock .
=Keep the order of processing to make working process .
=Integrated operation to play to the value of maximum benefit

◆新項目工程

利用創新來創造競争的優勢

哆樂的創新工程服務已經成爲汽車、航空航天、重型設備、通用加工、制冷設備、鐵路設備等衆多領域提供了優秀的加工方案！

我們提供的增值服務包括：

= 精益生産流程開發
= 制定非標刀具
= 成本評估
= 計劃、監控和采購

The new project

Create a competitive advantage by the Using the innovation

The Innovative engineering services OF DOHRE has prodiced the Excellent processing scheme on many area ,such as utomobile, aerospace,heavy equipment,General processing,refrigeration equipment,railway equipment .

The value–added services :

=Lean production process development
=Non–standard cutting tools
=Cost evaluation
=Plan, monitor, and procurement.

◆刀具重磨

哆樂重磨服務幫助您優化金屬切削刀具在整個生命周期内的價值，其途徑是在快速周轉時間内賦予其接近全新的性能，使您的理想刀具招之即來！

Tool regrinding

Dohre Tool Regrinding services to help you optimize the value of the metal cutting tool in the entire life cycle, the way is giving it close to the new performance in a rapid turnaround time. Ideal tool will coming for you !

◆培訓

哆樂知識中心爲您提供如下培訓科目，支持您不斷的提高生産率和降低成本：

= 全面的刀具應用
= 行業特定及應用
= 制定現場的加工方案

Training

Dohre knowledge center provides you with the following training course to support you continuously improve productivity and reduce cost:

=the comprehensive tool application
= industry specific and application
= Scheme for scene processing

◆全面的服務計劃

我們通過全面的服務計劃與您建立合作伙伴關系，專注于通過以下的方法與您的生産流程整合，逐年提高生産效率：

= 持續的現場優化
= 同步的新産品和技術優化
= 全方位物流

Comprehensive service plan

Through our comprehensive service plan to establish partnership with you and focus on Integrating production process through following ways. Then increasing production efficiency:

= continuous site optimization
=synchronization of new products and technology optimization
=The omni-directional logistics

Drills 钻头

源于德国30年的制造技术

瑞士最先进的涂层技术

10年的钻头成功方案

采用独特的圆弧刃设计，实现了优异的排屑性能与高精度加工。

采用先进的PVD涂层和专用配方母材；德国和美国技术的结合；德国的先进设备使钻头可以进行高速，高效率的钻孔加工。

根据您加工的产品设计更适合的方案，让你的加工效率加倍，精度更稳定。

全方位的修磨服务，让你的投资回报更高。

Germany 30 years manufacturing technology

Switzerland's most advanced coating technology

10 years of drills successful program

A unique circular blade design, achieve chip superior performance and high precision machining.

Advanced PVD coatings and special formula base materials, the combination of German and American technology, German's advanced equipment make drills high-speed, efficient drilling.

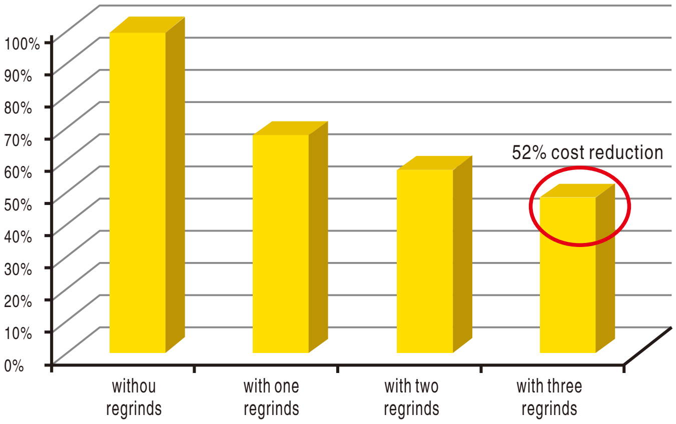
Depending on your processing product designs more appropriate solution. You will have double the processing efficiency, precision and more stable.

Full range of grinding service, get a higher return on your investment.

刀具修磨服务
Tool grinding services

利用全球资源，将世界先进的制造工艺与世界一流的项目实施能力结合在一起。
Use of global resources, combines the advanced manufacturing technology and world-class project implementation capacity.

在刀具的整个使用寿命的周期内，我们提供的刀具修磨服务，使刀具价值发挥最大，使您的成本降到最低，刀具成本降低50%以上
In the entire tool life cycle, we offer a tool grinding service, make the tool value maximum, make your costs to a minimum, tooling cost down more than 50% !

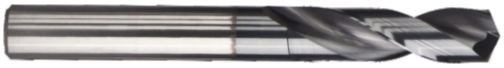


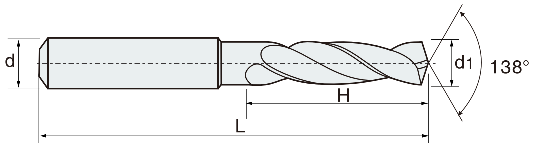
硬质合金回收活动
Carbide recycling activity

加入哆乐公司硬质合金回收活动，可以提高公司员工的环保意识，爱护环境，并且以负责任的态度处理废旧产品！
哆乐公司回收各种硬质合金产品，包括各种硬质合金刀片、钻头、铰刀和丝攻等.
Join DOHRE company carbide recycling activities, can improve the environmental awareness of employees, care for the environment, and in a responsible attitude to deal with waste products.
Dohre recycle all kinds of carbide products, include all kinds of carbide inserts, drills, reamer and tap,etc.

E•X–TY high performance general standard 2 blade high–speed drill

E•X–TY 通用高性能標準型 2刃高速鑽頭





材質 Grade

該材質爲TiAIN基復合塗層，有高紅硬性。微量潤滑加工高度抛光表面保證即使在應用低壓冷却液時也能實現卓越的排屑性能明顯提高了平均金屬切除率，延長了刀具使用壽命（最少改善了10～30%）

It is TiAIN mixed coating with high red hardness. Minimal quantities of lubricant processing, highly polished surface to ensure excellent chipping discharge even in application of low pressure cooling fluid,Significantly improve the average metal cutting rate, extend working life (at least improved 10–30%).

MG **0.6µm** **CO10%** **HRC‹50** **AITINL**

制造特点：

★尺寸形式 参考ISO标准制造
★横刃修正 F形，DOHRE标准
★主刃顶角 138°
★排屑槽形 特殊设计，便于排屑
★刃径公差 m7
★表面处理 纳米涂层–L

Manufacturing characteristics:

★Specification type produced as ISO standard
★Chisel edge modification F type, DOHRE standard
★Main flute top angle 138°
★Chip breaker special design, good for chip
★Diameter tolerance M7
★Surface treatment Nano coating–L

550		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	
S	🟧	●
H	⬜	○

600		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	○
S	🟧	●
H	⬜	●

Product Code 產品編號	Blade diameter 刃徑 d1	Blade length 刃長 H	Full 全長 L	Shank 柄徑 d	Inventory 庫存	
					550	600
EXTY00050	0.5	3	50	3	●	◎
EXTY00060	0.6	3	50	3	●	◎
EXTY00070	0.7	4	50	3	●	◎
EXTY00080	0.8	4	50	3	●	◎
EXTY00090	0.9	5	50	3	●	◎
EXTY00100	1.0	6	50	3	●	◎
EXTY00110	1.1	7	50	3	●	◎
EXTY00120	1.2	8	50	3	●	◎
EXTY00130	1.3	8	50	3	●	◎
EXTY00140	1.4	9	50	3	●	◎
EXTY00150	1.5	9	50	3	●	◎
EXTY00160	1.6	10	50	3	●	◎
EXTY00170	1.7	10	50	3	●	◎
EXTY00180	1.8	11	50	3	●	◎
EXTY00190	1.9	11	50	3	●	◎
EXTY00200	2.0	12	50	3	●	◎
EXTY00210	2.1	12	50	3	●	◎
EXTY00220	2.2	13	50	3	●	◎
EXTY00230	2.3	13	50	3	●	◎
EXTY00240	2.4	14	50	3	●	◎
EXTY00250	2.5	14	50	3	●	◎
EXTY00260	2.6	14	50	3	●	◎
EXTY00270	2.7	16	50	3	●	◎
EXTY00280	2.8	16	50	3	●	◎
EXTY00290	2.9	16	50	3	●	◎
EXTY00300	3.0	16	50	3	●	◎
EXTY00310	3.1	18	50	4	●	◎
EXTY00320	3.2	18	50	4	●	◎
EXTY00330	3.3	18	50	4 M4X0.7Q	●	◎
EXTY00340	3.4	20	50	4 N0.8–32UNC	●	◎
EXTY00350	3.5	20	50	4 M4X0.5Q	●	◎
EXTY00360	3.6	20	50	4	●	◎
EXTY00370	3.7	20	50	4 M4X0.7G	●	◎
EXTY00380	3.8	22	50	4 M4X0.5G	●	◎
EXTY00390	3.9	22	50	4	●	◎
EXTY00400	4.0	22	50	4	●	◎
EXTY00410	4.1	22	60	6	●	◎
EXTY00420	4.2	22	60	6 M5X0.8G	●	◎
EXTY00430	4.3	24	60	6	●	◎
EXTY00440	4.4	24	60	6	●	◎
EXTY00450	4.5	24	60	6 M5X0.5Q	●	◎
EXTY00460	4.6	24	60	6 M5X0.8G	●	◎
EXTY00470	4.7	24	60	6	●	◎
EXTY00480	4.8	26	60	6	●	◎
EXTY00490	4.9	26	60	6	●	◎
EXTY00500	5.0	26	60	6 M6X1Q	●	◎
EXTY00510	5.1	26	60	6	●	◎
EXTY00520	5.2	26	60	6	●	◎
EXTY00530	5.3	26	60	6 M6X0.75Q	●	◎

使用特點：

用于結構鋼、合金鋼、不銹鋼、灰鑄鐵、球墨鑄鐵、有色金屬等常見材料的加工；定心能力强，能獲得穩定的尺寸精度和良好的表面質量；適應于加工系統剛性優异的場合。

Usage features

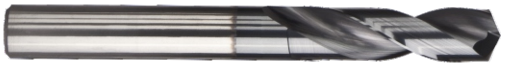
Used for process common material,like structural steel,alloy steel, stainless steel,gray cast iron,nodular cast iron, non-ferrous metal. Strong centering ability can achieve stable size precision and good surface quality.Suitable for the occasion of outstanding processing system rigidity.

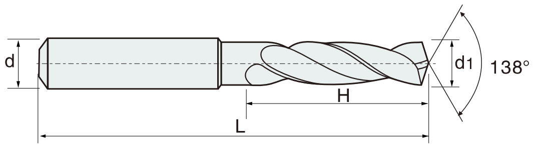
订货列：EXTY00350–550 或 EXTY00350–600
编号 材质 编号 材质

注：M4X0.7 Q M4X0.7 G
丝锥 切削 丝锥 挤压

E•X–TY high performance general standard 2 blade high–speed drill

E•X–TY 通用高性能標準型 2刃高速鑽頭





材質 Grade

該材質爲TiAIN基復合塗層，有高紅硬性。微量潤滑加工高度拋光表面保證即使在應用低壓冷却液時也能實現卓越的排屑性能明顯提高了平均金屬切除率，延長了刀具使用壽命（最少改善了10～30%）

It is TiAIN mixed coating with high red hardness. Minimal quantities of lubricant processing, highly polished surface to ensure excellent chipping discharge even in application of low pressure cooling fluid,Significantly improve the average metal cutting rate, extend working life (at least improved 10–30%).

MG **0.6μm** **CO10%** **HRC‹50** **AITINL**

制造特点：

- ★尺寸形式 参考ISO标准制造
- ★横刃修正 F形，DOHRE标准
- ★主刃顶角 138°
- ★排屑槽形 特殊设计，便于排屑
- ★刃径公差 m7
- ★表面处理 纳米涂层–L

Manufacturing characteristics:

- ★Specification type produced as ISO standard
- ★Chisel edge modification F type, DOHRE standard
- ★Main flute top angle 138°
- ★Chip breaker special design, good for chip
- ★Diameter tolerance M7
- ★Surface treatment Nano coating–L

550		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	
S	🟧	●
H	▨	○

600		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	○
S	🟧	●
H	▨	●

Product Code 產品編號	Blade diameter 刃徑 d1	Blade length 刃長 H	Full 全長 L	Shank 柄徑 d	Inventory 庫存	
					550	600
EXTY00540	5.4	28	60	6	●	◎
EXTY00550	5.5	28	60	M6X1G	●	◎
EXTY00560	5.6	28	60	6	●	◎
EXTY00570	5.7	28	60	6	●	◎
EXTY00580	5.8	28	60	6	●	◎
EXTY00590	5.9	28	60	6	●	◎
EXTY00600	6.0	28	60	6	●	◎
EXTY00610	6.1	31	80	8	◎	◎
EXTY00620	6.2	31	80	8	◎	◎
EXTY00630	6.3	31	80	8	◎	◎
EXTY00640	6.4	31	80	8	◎	◎
EXTY00650	6.5	31	80	8	●	◎
EXTY00660	6.6	31	80	8	◎	◎
EXTY00670	6.7	31	80	8	◎	◎
EXTY00680	6.8	34	80	8 M8X1.25Q	◎	◎
EXTY00690	6.9	34	80	8 M8X1Q	◎	◎
EXTY00700	7.0	34	80	8	●	◎
EXTY00710	7.1	34	80	8	◎	◎
EXTY00720	7.2	34	80	8	◎	◎
EXTY00730	7.3	34	80	8 M8X0.75Q	◎	◎
EXTY00740	7.4	34	80	8 M8X1.25G	◎	◎
EXTY00750	7.5	34	80	8	●	◎
EXTY00760	7.6	37	80	8	◎	◎
EXTY00770	7.7	37	80	8	◎	◎
EXTY00780	7.8	37	80	8	◎	◎
EXTY00790	7.9	37	80	8	◎	◎
EXTY00800	8.0	37	80	8	●	◎
EXTY00810	8.1	37	90	10	◎	◎
EXTY00820	8.2	37	90	10	◎	◎
EXTY00830	8.3	37	90	10	◎	◎
EXTY00840	8.4	37	90	10	◎	◎
EXTY00850	8.5	37	90	10 M10X1.5Q	●	◎
EXTY00860	8.6	40	90	10	◎	◎
EXTY00870	8.7	40	90	10	◎	◎
EXTY00880	8.8	40	90	10 M10X1.25Q	◎	◎
EXTY00890	8.9	40	90	10 M10X1Q	◎	◎
EXTY00900	9.0	40	90	10	●	◎
EXTY00910	9.1	40	90	10	◎	◎
EXTY00920	9.2	40	90	10	◎	◎
EXTY00930	9.3	40	90	10 M10X0.75Q /1.5G	◎	◎
EXTY00940	9.4	40	90	10	◎	◎
EXTY00950	9.5	40	90	10	●	◎

使用特點：

用于結構鋼、合金鋼、不銹鋼、灰鑄鐵、球墨鑄鐵、有色金屬等常見材料的加工；定心能力强，能獲得穩定的尺寸精度和良好的表面質量；適應于加工系統剛性優异的場合。

Usage features

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订货列：EXTY00350–550 或 EXTY00350–550

编号	材质	编号	材质
EXTY00350	550	EXTY00350	550

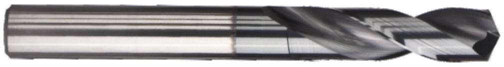
注：

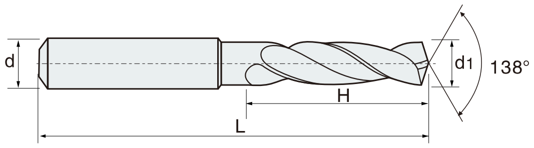
丝锥	切削	丝锥	挤压
M4X0.7	Q	M4X0.7	G

DOHRE

E•X–TY high performance general standard 2 blade high–speed drill

E•X–TY 通用高性能標準型 2刃高速鑽頭





制造特点：

- ★尺寸形式 参考ISO标准制造
- ★横刃修正 F形，DOHRE标准
- ★主刃顶角 138°
- ★排屑槽形 特殊设计，便于排屑
- ★刃径公差 m7
- ★表面处理 纳米涂层–L

Manufacturing characteristics:

- ★Specification type produced as ISO standard
- ★Chisel edge modification F type, DOHRE standard
- ★Main flute top angle 138°
- ★Chip breaker special design, good for chip
- ★Diameter tolerance M7
- ★Surface treatment Nano coating–L

550		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	
S	🟧	●
H	⬜	○

600		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	○
S	🟧	●
H	⬜	●

材質 Grade

該材質爲TiAIN基復合塗層，有高紅硬性。微量潤滑加工高度抛光表面保證即使在應用低壓冷却液時也能實現卓越的排屑性能明顯提高了平均金屬切除率，延長了刀具使用壽命（最少改善了10～30%）

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MG **0.6μm** **CO10%** **HRC‹50** **AITINL**

Product Code 產品編號	Blade diameter 刃徑 d1	Blade length 刃長 H	Full 全長 L	Shank 柄徑 d	Inventory 庫存 550	 600
EXTY00960	9.6	43	90	10	◎	◎
EXTY00970	9.7	43	90	10	◎	◎
EXTY00980	9.8	43	90	10	◎	◎
EXTY00990	9.9	43	90	10	◎	◎
EXTY01000	10.0	43	90	10	●	◎
EXTY01010	10.1	43	100	12	◎	◎
EXTY01020	10.2	43	100	12	◎	◎
EXTY01030	10.3	43	100	12 M12X1.75Q	◎	◎
EXTY01040	10.4	43	100	12	●	◎
EXTY01050	10.5	43	100	12	◎	◎
EXTY01060	10.6	47	100	12	◎	◎
EXTY01070	10.7	47	100	12	◎	◎
EXTY01080	10.8	47	100	12	◎	◎
EXTY01090	10.9	47	100	12	◎	◎
EXTY01100	11.0	47	100	12 M12X1Q	●	◎
EXTY01110	11.1	47	100	12 M12X1.75G	◎	◎
EXTY01120	11.2	47	100	12	◎	◎
EXTY01130	11.3	47	100	12	◎	◎
EXTY01140	11.4	47	100	12	◎	◎
EXTY01150	11.5	47	100	12	●	◎
EXTY01160	11.6	51	100	12	◎	◎
EXTY01170	11.7	51	100	12	◎	◎
EXTY01180	11.8	51	100	12	◎	◎
EXTY01190	11.9	51	100	12	◎	◎
EXTY01200	12.0	51	100	14 M14X2Q	●	◎
EXTY01300	13.0	55	115	14 M14X2G(1Q)	●	◎
EXTY01400	14.0	55	115	14 M16X2Q	●	◎
EXTY01500	15.0	55	115	16 M16X1Q	●	◎
EXTY01600	16.0	55	115	18 M18X2.5Q	●	◎
EXTY01700	17.0	55	115	18 M18X1Q	●	◎
EXTY01800	18.0	55	115	20 M20X2Q	●	◎
EXTY01900	19.0	55	115	20 M20X1Q	●	◎
EXTY02000	20.0	55	115	22 M22X2Q	●	◎
EXTY02100	21.0	75	150	25	◎	◎
EXTY02200	22.0	75	150	25	◎	◎
EXTY02310	23.0	75	150	25	◎	◎
EXTY02400	24.0	75	150	25	◎	◎
EXTY02500	25.0	75	150	25	◎	◎
EXTY02600	26.0	75	150	30	◎	◎
EXTY02700	27.0	75	150	30	◎	◎
EXTY02800	28.0	75	150	30	◎	◎
EXTY02900	29.0	75	150	30	◎	◎
EXTY03000	30.0	75	150	30	◎	◎

使用特點：

用于結構鋼、合金鋼、不銹鋼、灰鑄鐵、球墨鑄鐵、有色金屬等常見材料的加工；定心能力强，能獲得穩定的尺寸精度和良好的表面質量；適應于加工系統剛性優异的場合。

Usage features

Used for process common material,like structural steel,alloy steel, stainless steel,gray cast iron,nodular cast iron, non-ferrous metal. Strong centering ability can achieve stable size precision and good surface quality.Suitable for the occasion of outstanding processing system rigidity.

订货 列：	EXTY00350	–	550	或	EXTY00350	–	600
	编号		材质		编号		材质

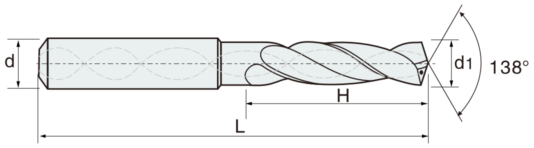
注：	M4X0.7	Q	M4X0.7	G
	丝锥	切削	丝锥	挤压

DOHRE

E•X–NY high speed (Internal cooling) two drill

E•X–NY 高速（内冷）二刃鑽頭

3XD/5XD/8XD



制造特点：

★尺寸形式 参考ISO标准制造
★横刃修正 F形，DOHRE标准
★主刃顶角 138°
★排屑槽形 特殊设计，便于排屑
★刃径公差 m7
★表面处理 纳米涂层–S

Manufacturing characteristics:

★Specification type produced as ISO standard
★Chisel edge modification F type, DOHRE standard
★Main flute top angle 138°
★Chip breaker special design, good for chip
★Diameter tolerance M7
★Surface treatment Nano coating–L

3XD 600		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	
S	🟧	●
H	⬛	●

5XD 600		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	
S	🟧	●
H	⬛	●

8XD 600		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	
S	🟧	●
H	⬛	●

鑽頭及孔公差

公差爲m7的整體硬質合金鑽頭（E•X－NL）加工出的孔公差爲H9。在非常好的條件下公差可以達到H8。
其他鑽削公差需要專用的整體硬質合金鑽。

Drills and hole tolerance

Solid carbide drills(E X–NL) with tolerance M7, hole tolerance is H9, even up to H8.
Other drilling tolerance need special solid carbide drills.

MG **0.6µm** **CO10%** **HRC‹50** **AITINS**

Product Code 產品編號	Blade diameter 刃徑 d1	Blade length 刃長 H			Full 全長 L			Shank 柄徑 d			Inventory 庫存		
		3XD	5XD	8XD	3XD	5XD	8XD	3XD	5XD	8XD	3XD	5XD	8XD
EXNL00400	4.0	24	36	43	66	74	81	6	6	6	◎	◎	◎
EXNL00450	4.5	24	36	43	66	74	81	6	6	6	◎	◎	◎
EXNL00500	5.0	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXNL00550	5.5	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXNL00600	6.0	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXNL00650	6.5	34	53	76	79	91	114	8	8	8	◎	◎	◎
EXNL00700	7.0	34	53	76	79	91	114	8	8	8	◎	◎	◎
EXNL00750	7.5	41	53	76	79	91	116	8	8	8	◎	◎	◎
EXNL00800	8.0	41	53	76	79	91	116	8	8	8	◎	◎	◎
EXNL00850	8.5	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXNL00900	9.0	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXNL00950	9.5	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXNL01000	10.0	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXNL01050	10.5	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXNL01100	11.0	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXNL01150	11.5	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXNL01200	12.0	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXNL01250	12.5	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXNL01300	13.0	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXNL01350	13.5	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXNL01400	14.0	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXNL01450	14.5	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXNL01500	15.0	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXNL01550	15.5	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXNL01600	16.0	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXNL01650	16.5	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXNL01700	17.0	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXNL01750	17.5	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXNL01800	18.0	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXNL01850	18.5	79	101	--	131	153	--	20	20	20	◎	◎	◎
EXNL01900	19.0	79	101	--	131	153	--	20	20	20	◎	◎	◎
EXNL01950	19.5	79	101	--	131	153	--	20	20	20	◎	◎	◎
EXNL02000	20.0	79	101	--	131	153	--	20	20	20	◎	◎	◎

订货 列：	EXNL	00400	3XD	600
	种类	直径	刃长	材质

接受非標定制
刀具直徑、槽長、總長可非標定制
柄部形式可按DIN6535訂制

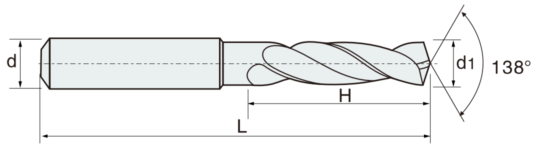
Accept custom-made
Diameter, cutting length, overall length can be customized.
Shank type can be made as ISO standard.

EX--AITINS 適合普通材料的高速、高進給的高效加工。
EX–ALTINS suitable for high speed and high feed machining of commom materia

E•X–WL high speed (External cooling) two drill

E•X–WL 高速（外冷）二刃鑽頭

3XD/5XD/8XD



制造特点：
- ★尺寸形式 参考ISO标准制造
- ★横刃修正 F形，DOHRE标准
- ★主刃顶角 138°
- ★排屑槽形 特殊设计，便于排屑
- ★刃径公差 m7
- ★表面处理 纳米涂层–S

Manufacturing characteristics:
- ★Specification type produced as ISO standard
- ★Chisel edge modification F type, DOHRE standard
- ★Main flute top angle 138°
- ★Chip breaker special design, good for chip
- ★Diameter tolerance M7
- ★Surface treatment Nano coating–S

鑽頭及孔公差

公差爲m7的整體硬質合金鑽頭（E•X－NL）加工出的孔公差爲H9。在非常好的條件下公差可以達到H8。
其他鑽削公差需要專用的整體硬質合金鑽。

Drills and hole tolerance

Solid carbide drills(E X–NL) with tolerance M7, hole tolerance is H9, even up to H8.
Other drilling tolerance need special solid carbide drills.

3XD 600		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	
S	🟧	●
H	⬜	●

5XD 600		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	
S	🟧	●
H	⬜	●

8XD 600		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	
S	🟧	●
H	⬜	●

MG **0.6µm** **CO10%** **HRC<50** **AITINS**

Product Code 產品編號	Blade diameter 刃徑 d1	Blade length 刃長 H			Full 全長 L			Shank 柄徑 d			Inventory 庫存		
		3XD	5XD	8XD	3XD	5XD	8XD	3XD	5XD	8XD	3XD	5XD	8XD
EXWL00400	4.0	24	36	43	66	74	81	6	6	6	◎	◎	◎
EXWL00450	4.5	24	36	43	66	74	81	6	6	6	◎	◎	◎
EXWL00500	5.0	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXWL00550	5.5	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXWL00600	6.0	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXWL00650	6.5	34	53	76	79	91	114	8	8	8	◎	◎	◎
EXWL00700	7.0	34	53	76	79	91	114	8	8	8	◎	◎	◎
EXWL00750	7.5	41	53	76	79	91	116	8	8	8	◎	◎	◎
EXWL00800	8.0	41	53	76	79	91	116	8	8	8	◎	◎	◎
EXWL00850	8.5	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXWL00900	9.0	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXWL00950	9.5	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXWL01000	10.0	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXWL01050	10.5	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXWL01100	11.0	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXWL01150	11.5	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXWL01200	12.0	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXWL01250	12.5	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXWL01300	13.0	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXWL01350	13.5	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXWL01400	14.0	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXWL01450	14.5	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXWL01500	15.0	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXWL01550	15.5	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXWL01600	16.0	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXWL01650	16.5	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXWL01700	17.0	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXWL01750	17.5	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXWL01800	18.0	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXWL01850	18.5	79	101	--	131	153	--	20	20	20	◎	◎	◎
EXWL01900	19.0	79	101	--	131	153	--	20	20	20	◎	◎	◎
EXWL01950	19.5	79	101	--	131	153	--	20	20	20	◎	◎	◎
EXWL02000	20.0	79	101	--	131	153	--	20	20	20	◎	◎	◎

订货 列：	EXNL	00400	3XD	600
	种类	直径	刃长	材质

接受非標定制
刀具直徑、槽長、總長可非標定制
柄部形式可按DIN6535訂制

Accept custom-made
Diameter, cutting length, overall length can be customized.
Shank type can be made as ISO standard.

EX--AITINS 適合普通材料的高速、高進給的高效加工。

EX–ALTINS suitable for high speed and high feed machining of commom materia

DOHRE

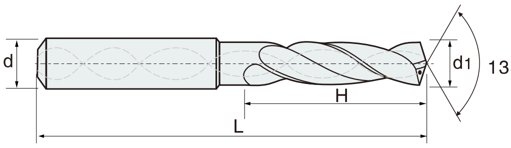
E•X–BX high speed (External cooling) two drill

E•X–BX 高速不銹鋼專用

3XD/5XD/8XD

鑽頭帶内冷用于不銹鋼材料加工

Drills with coolant hole, for process stainless steel



480材質

- TiAIN基納米塗層、耐磨性高，與不銹鋼材料的粘着性低。
- 高度拋光表面保證即使再應用低壓冷却液時也能實現卓越的排屑性能。
- 明顯提高了平均金屬切除率，延長了刀具使用壽命（最少改善了10–30%）。

480 Material

- TiAIN nano–composite coating, high wear resistance, low viscosity and stainless steel materials.
- Highly polished surface to ensure achieving excellent chip removal performance even on low pressure cooling fluid processing .
- Improving the average rate of metal cutting removal rate.extend the life of tools .

制造特点：

★尺寸形式 参考ISO标准制造
★横刃修正 S形，DOHRE标准
★主刃顶角 138°
★排屑槽形 特殊设计，便于排屑
★刃径公差 m7
★表面处理 纳米涂层

Manufacturing characteristics:

★Specification type produced as ISO standard
★Chisel edge modification S type, DOHRE standard
★Main flute top angle 138°
★Chip breaker special design, good for chip
★Diameter tolerance M7
★Surface treatment Nano coating

特点与优势：

EX钻尖设计

- 低钻入力防止工件弯曲。
- 卓越的定中心性能。

独特的排屑槽设计

- 提高了排屑性能。
- 在难加工材料上，能加工更深的孔。

Characteristics & advantage:

The EX drill point design
low drilling power to prevent bending of workpiece
excellen Centering performance

The Special chip groove design
Improve the performance of chip removal
Drilling the deep hole On the hard material.

主要應用

系列整體硬質合金鑽頭專門用于不銹鋼材料的加工，在對鋼材料和鈦材料進行常規加工時，具有卓越的切削性能和超長的使用壽命。系列在單個刀具產品中結合了多項技術，如HP鑽尖、排屑槽槽型，以及最新的後塗層處理工藝；該系列產品是高效率的刀具產品。

Mainly Application

The Solid Carbide Drill suit for processing the stainless steel .There will be Excellent cutting performance and long tool life when process the common steel and titanium materials.the carbide series is combined with many technologies such as HP drill tip, clearance groove type,and the most adcanced treatment process of coating .

MG **0.6μm** **CO10%** **HRC-50** **AITINS**

3XD 580		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	⬜	●

5XD 580		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	⬜	●

8XD 580		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	⬜	●

Product Code 產品編號	Blade diameter 刃徑 d1	Blade length 刃長 H			Full 全長 L			Shank 柄徑 d			Inventory 庫存		
		3XD	5XD	8XD	3XD	5XD	8XD	3XD	5XD	8XD	3XD	5XD	8XD
EXBX00400	4.0	24	36	43	66	74	81	6	6	6	◎	◎	◎
EXBX00450	4.5	24	36	43	66	74	81	6	6	6	◎	◎	◎
EXBX00500	5.0	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXBX00550	5.5	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXBX00600	6.0	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXBX00650	6.5	34	53	76	79	91	114	8	8	8	◎	◎	◎
EXBX00700	7.0	34	53	76	79	91	114	8	8	8	◎	◎	◎
EXBX00750	7.5	41	53	76	79	91	116	8	8	8	◎	◎	◎
EXBX00800	8.0	41	53	76	79	91	116	8	8	8	◎	◎	◎
EXBX00850	8.5	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXBX00900	9.0	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXBX00950	9.5	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXBX01000	10.0	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXBX01050	10.5	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXBX01100	11.0	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXBX01150	11.5	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXBX01200	12.0	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXBX01250	12.5	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXBX01300	13.0	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXBX01350	13.5	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXBX01400	14.0	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXBX01450	14.5	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXBX01500	15.0	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXBX01550	15.5	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXBX01600	16.0	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXBX01650	16.5	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXBX01700	17.0	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXBX01750	17.5	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXBX01800	18.0	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXBX01850	18.5	79	101	--	131	153	--	20	20	20	◎	◎	◎
EXBX01900	19.0	79	101	--	131	153	--	20	20	20	◎	◎	◎
EXBX01950	19.5	79	101	--	131	153	--	20	20	20	◎	◎	◎
EXBX02000	20.0	79	101	--	131	153	--	20	20	20	◎	◎	◎

使用特點：

用于結構鋼、合金鋼、不銹鋼等常見材料的加工；定心能力强，能獲得穩定的尺寸精度和良好的表面質量；適應于加工系統剛性優异的場合。

Usage features

Used for process common material,like structural steel,alloy steel, stainless steel,gray cast iron,nodular cast iron, non-ferrous metal. Strong centering ability can achieve stable size precision and good surface quality.Suitable for the occasion of outstanding processing system rigidity.

订货 列：	EXBX	00400	3XD	580
	种类	直径	刃长	材质

非標定制

- 可以定制非標直徑產品。
- 可以定制不同長度的鑽頭產品和階梯直徑比和非常復雜的階梯鑽槽型。
- 在加工中如果不需要考慮工件的輪廓，可以使用肯納液壓夾頭，以及其它通用刀柄。

Non-standard Tools

- Customized non-standard diameter tools
- Different length drills, Step drill , complicated step slot drill .
- Kennametal hydraulic chuck and other common chucks can be used if the customer needn't take the contour of workpiece into consideration

DOHRE

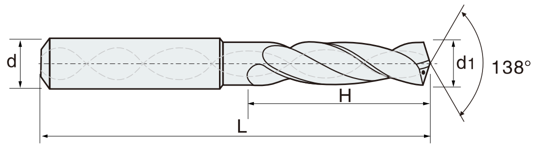
E•X–NJ high speed (Internal cooling) two drill

E•X–NJ 高速（内冷）二刃鑽頭

3XD/5XD/8XD

鑽頭帶内冷，用于難加工材料

Bit with internal cooling, for difficult to machine materials



580材質

- ●TiAIN基復合塗層，有熱紅硬性，切屑速度更快，有卓越的耐磨性。
- ●優化的刀具表面粗糙度保證了在快遞鑽削和MQL應用中的排屑性能。

580 Material

- ●TiAIN––complicated coating. Hot red hardness, high speed of cutting and excellent wear resistance.
- ●Optimize surface roughness , ensure high speed milling and chip performance in the MQL applications.

特點與優勢：

YPL鑽尖設計

- ●保證良好的定中心性能和切屑成形。
- ●没有切屑堵塞，易于修磨。

獨特的排屑槽設計

- ●改善了幹式加工和中等L/D比鑽削加工的排屑性能。
- ●改善了孔加工的表面質量。

Features and Advantages

YPL drill tip design

- ●Ensure good performance and chip forming .
- ●No chip blocking, easy grinding.

Unique design of flutes

- ●Improve dry machining and L / D ratio of drilling chip performance.
- ●Improve surface quality of hole machining .

主要應用

EX–NJ系列整體硬質合金鑽頭專門用于鑽制不銹鋼，高温合金，和難加工材料。

EX–NJ鑽在難加工材料的加工中，在同類產品中具有最佳的孔加工質量。

鑽頭采用標準内冷或微量潤滑（MOL）冷却方式。

Mainly Application

EX-NJ Series Solid carbide drills specifically for drilling stainless steel, high temperature alloys and Complicated material.

EX-NJ drilling has best quality of hole machining in similar products when processing complicated material.

Drill use standard internal cold and MOL cooling.

3XD 580		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	⬛	●

5XD 580		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	⬛	●

8XD 580		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	⬛	●

MG **0.6μm** **CO10%** **HRC-55** **AITINS**

Product Code 產品編號	Blade diameter 刃徑 d1	Blade length 刃長 H			Full 全長 L			Shank 柄徑 d			Inventory 庫存		
		3XD	5XD	8XD	3XD	5XD	8XD	3XD	5XD	8XD	3XD	5XD	8XD
EXNJ00400	4.0	24	36	43	66	74	81	6	6	6	◎	◎	◎
EXNJ00450	4.5	24	36	43	66	74	81	6	6	6	◎	◎	◎
EXNJ00500	5.0	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXNJ00550	5.5	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXNJ00600	6.0	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXNJ00650	6.5	34	53	76	79	91	114	8	8	8	◎	◎	◎
EXNJ00700	7.0	34	53	76	79	91	114	8	8	8	◎	◎	◎
EXNJ00750	7.5	41	53	76	79	91	116	8	8	8	◎	◎	◎
EXNJ00800	8.0	41	53	76	79	91	116	8	8	8	◎	◎	◎
EXNJ00850	8.5	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXNJ00900	9.0	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXNJ00950	9.5	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXNJ01000	10.0	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXNJ01050	10.5	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXNJ01100	11.0	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXNJ01150	11.5	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXNJ01200	12.0	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXNJ01250	12.5	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXNJ01300	13.0	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXNJ01350	13.5	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXNJ01400	14.0	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXNJ01450	14.5	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXNJ01500	15.0	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXNJ01550	15.5	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXNJ01600	16.0	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXNJ01650	16.5	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXNJ01700	17.0	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXNJ01750	17.5	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXNJ01800	18.0	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXNJ01850	18.5	79	101	––	131	153	––	20	20	20	◎	◎	◎
EXNJ01900	19.0	79	101	––	131	153	––	20	20	20	◎	◎	◎
EXNJ01950	19.5	79	101	––	131	153	––	20	20	20	◎	◎	◎
EXNJ02000	20.0	79	101	––	131	153	––	20	20	20	◎	◎	◎

3刃帶

- ●將力指向第三個刃帶减少了擺動，可以實現卓越的孔精度（圓柱度，一致的直徑，孔直度）。

3 flutes

- ●The force point to the third reduces swing blade, can achieve excellent precision holes

订货列：	EXNJ	00400	3XD	580
	种类	直径	刃长	材质

非標定制

- ●提供DW標準的各種中間直徑產品。
- ●可以定制不同長度的鑽頭產品和階梯鑽產品。
- ●在加工中如果不需要考慮工件的輪廓，可以使用液壓夾頭。

Non-standard Tools

- ●Provide all kinds of middle diameter DW standards products .
- ●Provide different length drill products and step drill products.
- ●Can use Hydraulic chuck in the machining If not need to consider the contours of the workpiece.

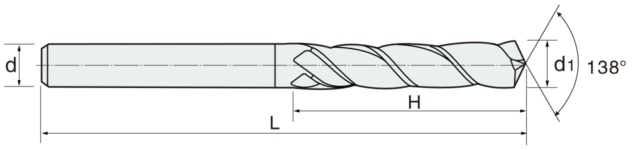
E·X–SR For Jack . centering . high speed three drill

E·X–SR 用于擴孔.定心.高速三刃鑽頭

3XD/5XD/8XD

用于高金屬切除率加工的鑽頭

Drill– Processing for high metal removal rates



特點與優勢：

3個切削刃

- 比2刃鑽頭進給率快。

3個寬敞的排屑槽

- 快速排屑。
- 3刃帶鑽頭比2排屑槽鑽頭有更好的孔質量和直度。

耐磨損硬質合金材質

- 加工像鑄鐵和鋁壓鑄合金這樣的硬材料，使用壽命長。

Features and Advantages

3 cutting flutes

- Faster feed rate than 2 flutes drill bits

3 spacious flutes

- fast chip removal.
- 3 flutes drill bits have better hole quality and straightness than 2 flutes drill bits

Wear–resistant carbide grade

- machining hard material like cast iron and aluminum die–casting alloys, working life more longer.

580材質

- TiAIN基復合塗層，有熱紅硬性，切屑速度更快，有卓越的耐磨性。
- 優化的刀具表面粗糙度保證了在快遞鑽削和擴孔應用中的排屑性能。

580 Material

- TiAIN––complicated coating. Hot red hardness, high speed of cutting and excellent wear resistance.
- Optimize surface roughness , ensure high speed milling and chip performance in the MQL applications.

主要應用

B105整體硬質合金非常適合高金屬切除率加工，在短切屑材料的加工中具有卓越的孔加工質量。如灰鑄鐵、球墨鑄鐵，和鋁材料的加工；以及鈦材質的淺孔加工。

Mainly Application

B105 Solid Carbide ideally suited for high metal removal rate machining, short-chipping materials processing with excellent hole machining quality.

Such as gray iron, ductile iron, and aluminum materials processing; and shallow hole of titanium material.

3XD 580		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	▨	●

5XD 580		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	▨	●

8XD 580		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	▨	●

MG | 0.6μm | CO10% | HRC-50 | AITINS

Product Code 產品編號	Blade diameter 刃徑 d1	Blade length 刃長 H			Full 全長 L			Shank 柄徑 d			Inventory 庫存		
		3XD	5XD	8XD	3XD	5XD	8XD	3XD	5XD	8XD	3XD	5XD	8XD
EXSR00400	4.0	24	36	43	66	74	81	6	6	6	◎	◎	◎
EXSR00450	4.5	24	36	43	66	74	81	6	6	6	◎	◎	◎
EXSR00500	5.0	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXSR00550	5.5	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXSR00600	6.0	28	44	57	66	82	95	6	6	6	◎	◎	◎
EXSR00650	6.5	34	53	76	79	91	114	8	8	8	◎	◎	◎
EXSR00700	7.0	34	53	76	79	91	114	8	8	8	◎	◎	◎
EXSR00750	7.5	41	53	76	79	91	116	8	8	8	◎	◎	◎
EXSR00800	8.0	41	53	76	79	91	116	8	8	8	◎	◎	◎
EXSR00850	8.5	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXSR00900	9.0	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXSR00950	9.5	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXSR01000	10.0	47	61	95	89	103	142	10	10	10	◎	◎	◎
EXSR01050	10.5	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXSR01100	11.0	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXSR01150	11.5	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXSR01200	12.0	55	71	114	102	118	162	12	12	12	◎	◎	◎
EXSR01250	12.5	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXSR01300	13.0	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXSR01350	13.5	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXSR01400	14.0	60	77	133	107	124	178	14	14	14	◎	◎	◎
EXSR01450	14.5	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXSR01500	15.0	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXSR01550	15.5	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXSR01600	16.0	65	83	152	115	133	204	16	16	16	◎	◎	◎
EXSR01650	16.5	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXSR01700	17.0	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXSR01750	17.5	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXSR01800	18.0	73	93	171	123	143	223	18	18	18	◎	◎	◎
EXSR01850	18.5	79	101	––	131	153	––	20	20	20	◎	◎	◎
EXSR01900	19.0	79	101	––	131	153	––	20	20	20	◎	◎	◎
EXSR01950	19.5	79	101	––	131	153	––	20	20	20	◎	◎	◎
EXSR02000	20.0	79	101	––	131	153	––	20	20	20	◎	◎	◎

TiAIN–塗層

- 高速加工時耐磨性更强。

TiAIN coating

- High–speed machining abrasion resistance.

無塗層材質

- 無塗層材質有助于防止鑽削鋁和高温合金時産生積屑瘤。

Uncoate grade

- Uncoated grade helps prevent BUE when drilling aluminum and high–temperature alloys.

订货 列：	EXSR	00400	3XD	580
	种类	直径	刃长	材质

非標定制

- 可以定制非標直徑産品。
- 可以定制不同長度的鑽頭産品和階梯鑽産品。

Non-standard Tools

- Can customized non-standard diameter products.
- Can customized different lengths of drills and step drills.

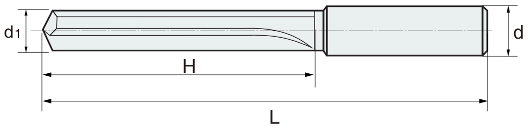
E•X–LY High price of two drill (straight slot)

E•X–LY 高性能二刃鑽頭（直槽）

5XD

用于緊密公差孔（鑽鉸）

For close tolerance holes



特點與優勢：

2個切削刃，帶直排屑槽

- 即使用作復雜階梯鑽頭平臺也能加工出精確的孔形。
- 可以加工型芯孔。

X–形鑽尖

- 卓越的定中心性能。

4–刃帶設計

- 第二套切削刃帶提高了表面質量。
- 實現嚴格的直徑公差。
- 可以運行于公叉孔，可以在斜面退刃。

550 非涂层		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	○
H	▨	○

600 涂层		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	▨	

Features and Advantages

2 cutting flutes with straight chip groove

- Even used as a complex platform ladder drills can also be machined precisely shaped hole.
- Can be processed core hole

X–shapd drill tip

- Excellent centering performance

4 cutting flutes design

- Second cutting edge improved surface quality.
- Implement stringent diameter tolerances.
- Can run on tolerance hole, also can retract the ramp.

主要應用

整體硬質合金鑽頭有X－形，易切削130°鑽尖設計，適用于灰鑄鐵、球墨鑄鐵。非鐵材料以及鋁合金材料，最適用于鑽削需要非常好的表面粗糙度的高質量嚴格的公差孔。

Mainly Application

Solid carbide drills with X-shaped, 130 ° drill point design, suitable for gray iron, ductile iron. Non-ferrous materials and aluminum alloy materials, most suitable for drilling tolerancew hole with good surface roughness and strict quality.

MG **0.6μm** **CO10%** **HRC·45**

Product Code 產品編號	Blade diameter 刃徑 d1	Blade length 刃長 H	Full 全長 L	Shank 柄徑 d	Inventory 庫存	
					550	600
EXLY00400	4.0	36	74	6	◎	◎
EXLY00450	4.5	36	74	6	◎	◎
EXLY00500	5.0	44	82	6	◎	◎
EXLY00550	5.5	44	82	6	◎	◎
EXLY00600	6.0	44	82	6	◎	◎
EXLY00650	6.5	53	91	8	◎	◎
EXLY00700	7.0	53	91	8	◎	◎
EXLY00750	7.5	53	91	8	◎	◎
EXLY00800	8.0	53	91	8	◎	◎
EXLY00850	8.5	61	103	10	◎	◎
EXLY00900	9.0	61	103	10	◎	◎
EXLY00950	9.5	61	103	10	◎	◎
EXLY01000	10.0	61	103	10	◎	◎
EXLY01050	10.5	71	118	12	◎	◎
EXLY01100	11.0	71	118	12	◎	◎
EXLY01150	11.5	71	118	12	◎	◎
EXLY01200	12.0	71	118	12	◎	◎
EXLY01250	12.5	77	127	14	◎	◎
EXLY01300	13.0	77	127	14	◎	◎
EXLY01350	13.5	77	127	14	◎	◎
EXLY01400	14.0	77	127	14	◎	◎
EXLY01450	14.5	83	133	16	◎	◎
EXLY01500	15.0	83	133	16	◎	◎
EXLY01550	15.5	83	133	16	◎	◎
EXLY01600	16.0	83	133	16	◎	◎
EXLY01650	16.5	93	143	18	◎	◎
EXLY01700	17.0	93	143	18	◎	◎
EXLY01750	17.5	93	143	18	◎	◎
EXLY01800	18.0	93	143	18	◎	◎
EXLY01850	18.5	101	53	20	◎	◎
EXLY01900	19.0	101	53	20	◎	◎
EXLY01950	19.5	101	53	20	◎	◎
EXLY02000	20.0	101	53	20	◎	◎

耐磨損的550硬質合金材質

- 刀具使用壽命長，用于加工硬材料，如鑄鐵和壓鑄鋁合金
- 無塗層的材質有助于防止鑽削鋁材料時形成積屑瘤。

Wear–resistant 500 carbide material

- Long tool life, for machining of hard materials such as cast iron and aluminum die–casting.
- Uncoated material helps prevent BUE in drilling aluminum material..

订货 列：	EXLY	00400	5XD	550
	种类	直径	刃长	材质

非標定制

- 提供標準的各種中間直徑產品。
- 可以定制不同長度的鑽頭產品和階梯鑽產品。
- 帶塗層的600材質耐磨性强，直徑精度高。

Non-standard Tools

- Provides a standard diameter of various intermediate products.
- Different length drills and step drill bits can be customized
- Coated material 600 with good wear resistance, high precision.

DOHRE

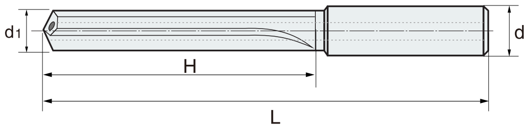
E•X–LYL High price of two drill (straight slot)

E•X–LYL 内冷高性能二刃鑽頭（直槽）

5XD

用于緊密公差孔

For close tolerance holes



特點與優勢：

2個切削刃，帶直排屑槽

- ●即使用作復雜階梯鑽頭平臺也能加工出精確的孔形。
- ●可以加工型芯孔。

X–形鑽尖

- ●卓越的定中心性能。

4–刃帶設計

- ●第二套切削刃帶提高了表面質量。
- ●實現嚴格的直徑公差。
- ●可以運行于公叉孔，可以在斜面退刀。

600		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	▨	

Features and Advantages

2 cutting flutes with straight chip groove

- ●Even used as a complex platform ladder drills can also be machined precisely shaped hole.
- ●Can be processed core hole

X–shapd drill tip

- ●Excellent centering performance

4 cutting flutes design

- ●Second cutting edge improved surface quality.
- ●Implement stringent diameter tolerances.
- ●Can run on tolerance hole, also can retract the ramp.

主要應用

整體硬質合金鑽頭有X–形，易切削130°鑽尖設計，適用于灰鑄鐵、球墨鑄鐵。非鐵材料以及鋁合金材料，最適用于鑽削需要非常好的表面粗糙度的高質量嚴格的公差孔。

Mainly Application

Solid carbide drills with X-shaped, 130 ° drill point design, suitable for gray iron, ductile iron. Non-ferrous materials and aluminum alloy materials, most suitable for drilling tolerancew hole with good surface roughness and strict quality.

MG **0.6µm** **CO10%** **HRC‹45**

Product Code 產品編號	Blade diameter 刃徑 d1	Blade length 刃長 H	Full 全長 L	Shank 柄徑 d	庫存 Inventory
EXLYL00400	4.0	36	74	6	◎
EXLYL00450	4.5	36	74	6	◎
EXLYL00500	5.0	44	82	6	◎
EXLYL00550	5.5	44	82	6	◎
EXLYL00600	6.0	44	82	6	◎
EXLYL00650	6.5	53	91	8	◎
EXLYL00700	7.0	53	91	8	◎
EXLYL00750	7.5	53	91	8	◎
EXLYL00800	8.0	53	91	8	◎
EXLYL00850	8.5	61	103	10	◎
EXLYL00900	9.0	61	103	10	◎
EXLYL00950	9.5	61	103	10	◎
EXLYL01000	10.0	61	103	10	◎
EXLYL01050	10.5	71	118	12	◎
EXLYL01100	11.0	71	118	12	◎
EXLYL01150	11.5	71	118	12	◎
EXLYL01200	12.0	71	118	12	◎
EXLYL01250	12.5	77	127	14	◎
EXLYL01300	13.0	77	127	14	◎
EXLYL01350	13.5	77	127	14	◎
EXLYL01400	14.0	77	127	14	◎
EXLYL01450	14.5	83	133	16	◎
EXLYL01500	15.0	83	133	16	◎
EXLYL01550	15.5	83	133	16	◎
EXLYL01600	16.0	83	133	16	◎
EXLYL01650	16.5	93	143	18	◎
EXLYL01700	17.0	93	143	18	◎
EXLYL01750	17.5	93	143	18	◎
EXLYL01800	18.0	93	143	18	◎
EXLYL01850	18.5	101	53	20	◎
EXLYL01900	19.0	101	53	20	◎
EXLYL01950	19.5	101	53	20	◎
EXLYL02000	20.0	101	53	20	◎

耐磨損的600硬質合金材質

- ●刀具使用壽命長，用于加工硬材料，如鑄鐵和壓鑄鋁合金
- ●無塗層的材質有助于防止鑽削鋁材料時形成積屑瘤。

Wear–resistant 600 carbide material

- ●Long tool life, for machining of hard materials such as cast iron and aluminum die–casting.
- ●Uncoated material helps prevent BUE in drilling aluminum material..

订货 列：	EXLYL	00400	3XD	600
	种类	直径	刃长	材质

非標定制

- ●提供標準的各種中間直徑產品。
- ●可以定制不同長度的鑽頭產品和階梯鑽產品。
- ●帶塗層的600材質耐磨性强，直徑精度高。

Non-standard Tools

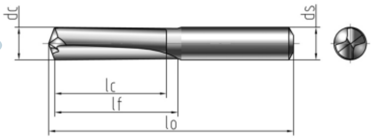
- ●Provides a standard diameter of various intermediate products.
- ●Different length drills and step drill bits can be customized
- ●Coated material 600 with good wear resistance, high precision.

E·X–QL Two bit edge strength

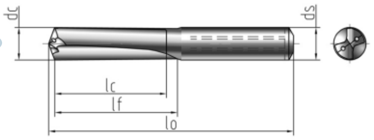
E·X–QL 二刃强力鑽頭

3XD

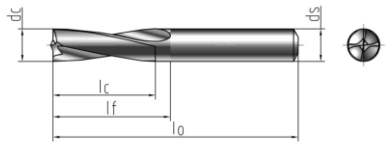
EXQL–A



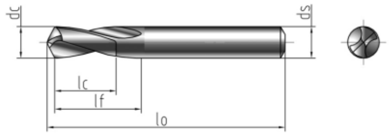
EXQL–A/L



EXQL–B



EXQL–C



材質

- 該材質是TIAIN基復合塗層，有高紅熱性。切削速度快，可用于微量潤滑加工
- 高度抛光表面保證即使在應用低壓冷却液時也能實現卓越的排屑性能。
- 提高了平均金屬切除率，刀具使用壽命延長10%～20%。
- It is TiAIN mixed coating with high red hardness. Minimal quantities of lubricant processing ,
- highly polished surface to ensure excellent chipping discharge even in application of low pressure cooling fluid,
- Significantly improve the average metal cutting rate, extend working life (at least improved 10–20%).

MG **0.6µm** **CO10%** **HRC·45** **AITINS**

600		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	▨	

Product Code 產品編號	Blade diameter 刃徑 d1	Blade length 刃長 H	Full 全長 L	Shank 柄徑 d	Inventory 庫存			
					A	B	C	AL
EXQL00400	4.0	24	66	6	◎	◎	◎	◎
EXQL00450	4.5	24	66	6	◎	◎	◎	◎
EXQL00500	5.0	28	66	6	◎	◎	◎	◎
EXQL00550	5.5	28	66	6	◎	◎	◎	◎
EXQL00600	6.0	28	66	6	◎	◎	◎	◎
EXQL00650	6.5	34	79	8	◎	◎	◎	◎
EXQL00700	7.0	34	79	8	◎	◎	◎	◎
EXQL00750	7.5	41	79	8	◎	◎	◎	◎
EXQL00800	8.0	41	79	8	◎	◎	◎	◎
EXQL00850	8.5	47	89	10	◎	◎	◎	◎
EXQL00900	9.0	47	89	10	◎	◎	◎	◎
EXQL00950	9.5	47	89	10	◎	◎	◎	◎
EXQL01000	10.0	47	89	10	◎	◎	◎	◎
EXQL01050	10.5	55	102	12	◎	◎	◎	◎
EXQL01100	11.0	55	102	12	◎	◎	◎	◎
EXQL01150	11.5	55	102	12	◎	◎	◎	◎
EXQL01200	12.0	55	102	12	◎	◎	◎	◎
EXQL01250	12.5	60	107	14	◎	◎	◎	◎
EXQL01300	13.0	60	107	14	◎	◎	◎	◎
EXQL01350	13.5	60	107	14	◎	◎	◎	◎
EXQL01400	14.0	60	107	14	◎	◎	◎	◎
EXQL01450	14.5	65	115	16	◎	◎	◎	◎
EXQL01500	15.0	65	115	16	◎	◎	◎	◎
EXQL01550	15.5	65	115	16	◎	◎	◎	◎
EXQL01600	16.0	65	115	16	◎	◎	◎	◎
EXQL01650	16.5	73	123	18	◎	◎	◎	◎
EXQL01700	17.0	73	123	18	◎	◎	◎	◎
EXQL01750	17.5	73	123	18	◎	◎	◎	◎
EXQL01800	18.0	73	123	18	◎	◎	◎	◎
EXQL01850	18.5	79	131	20	◎	◎	◎	◎
EXQL01900	19.0	79	131	20	◎	◎	◎	◎
EXQL01950	19.5	79	131	20	◎	◎	◎	◎
EXQL02000	20.0	79	131	20	◎	◎	◎	◎

非標定制

- 提供標準的各種中間直徑產品。

Non-standard Tools

- Provides a standard diameter of various intermediate products.

订货 列:	EXQL	00400	A	600
	种类	直径	钻头	材质

DOHRE

Powerful Dril

强力鑽

當被加工材料硬度≥HRC42時,就很難用鑽頭直接加工了。必須采用機械加工和熱處理交替進行的方式。比如，先將工件調質到硬度25＜HRC＜35，鑽孔，擴孔，再對工件淬火至53＜HRC＜56，時效後回火至43＜HRC＜48，再采用精鉸或銑鉸加工。工藝編排復雜，時間延續很長，成本高昂。

這是因爲在鑽孔是在封閉的空間中進行，散熱非常困難。而硬度很高的高强鋼，在加工過程中發熱大，鑽頭極易磨損，個别還會因爲過度磨損而導致崩刃與斷刀，甚至發生設備事故。

哆樂提供了3種强力鑽頭，可以實現≥HRC42的材料加工，尤其是能實現淬火後的鑽削加工，實現加工工藝優化，并能提高工藝安全性和穩定性，具有很好的性價比。

When processed material hardness ≥ HRC42, it is difficult to directly processed with a drill. machining and heat treatment must be alternate used in a manner . For example, first to tempering hardness 25<HRC<35, drilling, reaming, then the workpiece quenching to 53<HRC<56, After aging, tempered to 43 <HRC <46, then use Pure hinge or milling hinge to process. All process is complex, long time and high cost.

This is because the drilling is in a closed space, heat dissipation is very difficult If process high hardness steel, it is easy to fever and wear, some of them will also lead to collapse and break for excessive wear, even the equipment accident.

DOHRE provides three types Powerful drills,can achieve ≥HRC42 materials processing, sspecially can realize drilling machining after quenching ,optimized processing technology and can improve the security and stability. The process has good cost performance。

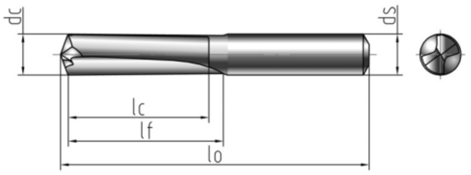
EXQL-A/AL 整体硬质合金强力钻 3XD　　EXQL-A/AL Solid Carbide Powerful Drill 3 X D

制造特点：

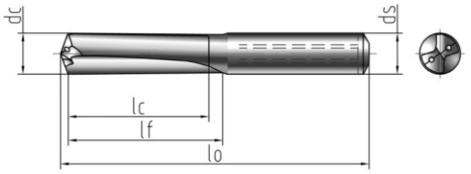
- ★尺寸形式 参考DIN6539标准制造
- ★横刃修正 S形，DOHRE标准
- ★主刃顶角 125°
- ★刀尖R值 0.8
- ★排屑槽形 优化槽形，便于排屑
- ★刃径公差 ±0.002
- ★表面处理 纳米涂层

Manufacturing characteristics:

1. Size form : Reference to standard DIN6539
2. Chisel edge correction : S type DOHRE standard
3. Main blade Apex Angle : 125°
4. R angle : 0.8
5. Chip groove : Optimization of slot type, easy to clearance
6. Blade diameter tolerance : ±0.002
7. Surface treatment : Nano coating



EXQL-A



EXQL-A/L

使用特点

适合≥HRC56高碳钢与合金钢；具有优异的钻孔精度，孔深≤1.5xd时，孔精度≤IT7，圆度≤0.005；可获得完美的表面质量，Ra≤1.2μ

Using features

Suitable≥HRC56 high carbon steel and alloy steel, excellent precision drilling. Deep hole ≤1.5xd, hole precision≤IT7, roundness＜0.005, the perfect surface quality can be obtained, Ra ≤1.2μ

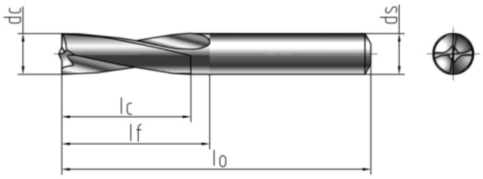
EXQL-B 整体硬质合金强力钻 3XD　　EXQL-B Solid Carbide Powerful Drill 3 X D

制造特点：

- ★尺寸形式 参考DIN6539标准制造
- ★横刃修正 S形，DOHRE标准
- ★主刃顶角 125°
- ★刀尖R值 0.8
- ★排屑槽形 优化槽形，便于排屑
- ★刃径公差 ±0.002
- ★表面处理 纳米涂层

Manufacturing characteristics:

1. Size form : Reference to standard DIN6539
2. Chisel edge correction : S type DOHRE standard
3. Main blade Apex Angle : 125°
4. R angle : 0.8
5. Chip groove : Optimization of slot type, easy to clearance
6. Blade diameter tolerance : ±0.002
7. Surface treatment : Nano coating



EXQL-B

使用特点

适合HRC42–48高碳钢与合金钢；具有优异的钻孔精度，孔深≤1.5xd时，孔精度≤IT7，圆度≤0.005；可获得完美的表面质量，Ra≤1.2μ

Using features

Suitable HRC42–48 high carbon steel and alloy steel, excellent precision drilling. Deep hole ≤1.5xd, hole precision≤IT7, roundness＜0.005, the perfect surface quality can be obtained, Ra ≤1.2μ

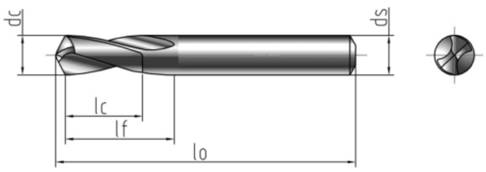
EXQL-C 整体硬质合金强力钻 3XD　　EXQL-C Solid Carbide Powerful Drill 3 X D

制造特点：

- ★尺寸形式 参考DIN6539标准制造
- ★横刃修正 S形，DOHRE标准
- ★主刃顶角 125°
- ★刀尖R值 0.8
- ★排屑槽形 优化槽形，便于排屑
- ★刃径公差 ±0.002
- ★表面处理 纳米涂层

Manufacturing characteristics:

1. Size form : Reference to standard DIN6539
2. Chisel edge correction : S type DOHRE standard
3. Main blade Apex Angle : 125°
4. R angle : 0.8
5. Chip groove : Optimization of slot type, easy to clearance
6. Blade diameter tolerance : ±0.002
7. Surface treatment : Nano coating



EXQL-C

使用特点

适合HRC42–48高碳钢与合金钢；具有优异的钻孔精度，孔深≤1.5xd时，孔精度≤IT7，圆度≤0.005；可获得完美的表面质量，Ra≤1.2μ

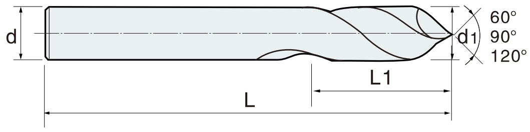
Using features

Suitable HRC42–48 high carbon steel and alloy steel, excellent precision drilling. Deep hole ≤1.5xd, hole precision≤IT7, roundness＜0.005, the perfect surface quality can be obtained, Ra ≤1.2μ

DOHRE

60° /90° /120° NC spotting drills

60/90/120度 2刃定位鑽



制造特点：
★尺寸形式 参考AHNO标准制造
★横刃修正 H形，AHNO标准
★主刃顶角 120°
★排屑槽形 特殊设计，便于排屑
★刃径公差 m7
★表面处理 超H涂层

非塗層		
550		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	
S	🟧	
H	⬛	

塗層		
600		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	⬛	

主要特點

- 用于灰鑄鐵,球墨鑄鐵，高硅鋁合金，銅合金等短切屑材料，對于變形鋁，純銅等長切屑材料必須采用內冷强制排屑；定心能力强，能獲得穩定的尺寸精度和良好的表面質量；適合高速大進給切削。
- For the gray cast iron, ductile iron, high silicon aluminum alloy, copper alloy and other short chip material, the deformation of aluminum, copper, chip materials must be used in the cold forced chip; centering ability strong, can obtain the size stability accuracy and good surface quality; is suitable for high speed and high feed cutting.

Manufacturing characteristics:
★Specification type produced as AHNO standard
★Chisel edge modification H type, AHNO standard
★Main flute top angle 120°
★Chip breaker special design, good for chip
★Diameter tolerance m7
★Surface treatment Super T coating

MG **0.6µm** **CO10%** **HRC<45**

Product Code 產品編號	Blade diameter 刃徑	Blade length 刃長 L1	Full 全長 L	Angle 角度	Shank 柄徑 d	Inventory 庫存	
						550	600
DZ00049	2	4	50	60° /90° /120°	2	◎	◎
DZ00050	3	6	50	60° /90° /120°	3	◎	◎
DZ00051	4	8	50	60° /90° /120°	4	◎	◎
DZ00052	5	10	50	60° /90° /120°	5	◎	◎
DZ00053	6	12	50	60° /90° /120°	6	◎	◎
DZ00054	8	16	60	60° /90° /120°	8	◎	◎
DZ00055	10	20	75	60° /90° /120°	10	◎	◎
DZ00056	12	20	75	60° /90° /120°	12	◎	◎
DZ00057	16	25	100	60° /90° /120°	16	◎	◎
DZ00058	20	25	100	60° /90° /120°	20	◎	◎
DZ00059	3	6	75	60° /90° /120°	3	◎	◎
DZ00060	4	8	75	60° /90° /120°	4	◎	◎
DZ00061	5	10	75	60° /90° /120°	5	◎	◎
DZ00062	6	12	75	60° /90° /120°	6	◎	◎
DZ00063	8	16	75	60° /90° /120°	8	◎	◎
DZ00064	4	8	100	60° /90° /120°	4	◎	◎
DZ00065	5	10	100	60° /90° /120°	5	◎	◎
DZ00066	6	12	100	60° /90° /120°	6	◎	◎
DZ00067	8	16	100	60° /90° /120°	8	◎	◎
DZ00068	10	20	100	60° /90° /120°	10	◎	◎
DZ00069	12	20	100	60° /90° /120°	12	◎	◎
DZ00070	6	12	150	60° /90° /120°	6	◎	◎
DZ00071	8	16	150	60° /90° /120°	8	◎	◎
DZ00072	10	20	150	60° /90° /120°	10	◎	◎
DZ00073	12	20	150	60° /90° /120°	12	◎	◎
DZ00074	16	25	150	60° /90° /120°	16	◎	◎
DZ00075	20	25	150	60° /90° /120°	20	◎	◎
DZ00076	6	12	200	60° /90° /120°	6	◎	◎
DZ00077	8	16	200	60° /90° /120°	8	◎	◎
DZ00078	10	20	200	60° /90° /120°	10	◎	◎
DZ00079	12	20	200	60° /90° /120°	12	◎	◎
DZ00080	16	25	200	60° /90° /120°	16	◎	◎
DZ00081	20	25	200	60° /90° /120°	20	◎	◎

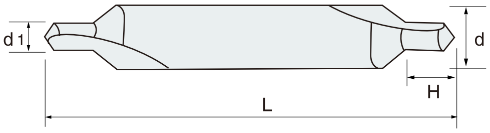
订货 列:	DZ00081	60°	600
	编号	角度	材质

DOHRE

60° center drills

60度中心鑽

标准型 15°



非塗層		
550		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	
S	🟧	
H	⬜	

塗層		
600		
P	🟦	●
M	🟨	●
K	🟥	●
N	🟩	●
S	🟧	●
H	⬜	

MG **0.6μm** **CO10%** **HRC◂45**

Product Code 產品編號	Blade diameter 刃徑 d1	Blade length 刃長 H	Full 全長 L	Shank 柄徑 d	Inventory 庫存
DZ00026	0.50	0.8	50	3	◎
DZ00027	0.80	1.3	50	3	◎
DZ00028	1.00	1.6	50	4	◎
DZ00029	1.25	2.0	50	4	◎
DZ00030	1.50	2.5	50	4	◎
DZ00031	2.00	3.0	50	6	◎
DZ00032	2.50	3.5	50	6	◎
DZ00033	3.00	4.0	60	8	◎
DZ00034	3.15	4.0	60	8	◎
DZ00035	4.00	5.0	75	10	◎
Dz00036	5.00	6.5	75	12	◎

★ WORK MATERAIL 被削材质

通用　GENERAL

P20 S45C 碳素钢	SCM SK 合金钢	FC FCD 铸铁	CU 铜合金	SKD 淬火钢
●	●	●	●	●

使用特點：

用于結構鋼、合金鋼、不銹鋼、灰鑄鐵、球墨鑄鐵、有色金屬等常見材料的加工；定心能力强，能獲得穩定的尺寸精度和良好的表面質量；適應于加工系統剛性優异的場合。

Usage features

Used for process common material,like structural steel,alloy steel, stainless steel,gray cast iron,nodular cast iron, non-ferrous metal. Strong centering ability can achieve stable size precision and good surface quality.Suitable for the occasion of outstanding processing system rigidity.

非標定制

- 提供標準的各種中間直徑產品。

Non-standard Tools

- Provides a standard diameter of various intermediate products.

Micro–diameter drill tungsten steel standard 2 flutes

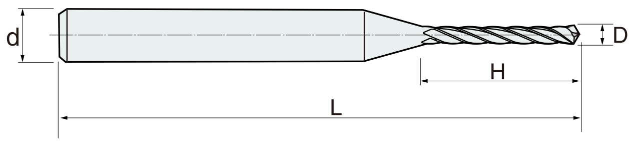
鎢鋼微徑鑽頭 標準型 2刃

高性能合金鑽頭，（微型鑽頭）

專門用于極小直徑主要加工綫路板、鋁合金、不銹鋼、亞克力板

High performance alloy drills (Micro drills)

Specialized in processing extremely small diameter pcb, aluminum alloy, stainless steel, acrylic.



主要應用

全新的微鑽解决了各種材料的應用中鑽削直徑的問題。
如在燃油系統或醫療器械部件加工中的應用。設計獨特。
拓展了模塊化鑽頭在小直徑範圍加工中的優勢：高端材質，磨損指示塗層。
以及最新推出的專利槽型，這些特點可以保證鑽頭在規定使用壽命内，具有良好的鑽削性能。
微鑽產品具有非常好的效能成本，在特定直徑規格内，刀具爲一次性產品。

Main application

New micro drills solved the drilling diameter problem of different material in application.
For example, applicated in machining fuel system or medical apparatus and instruments.Unique design.
Expand the range of modular drills in small diameter machining advantages: high–end materials, wear indicator coating.
And the latest patent groove, these features can ensure the required life of the drill bit, with good drilling performance.
Micro drill have very good performance cost, in particular diameter specifications, the tool is a disposable product.

特點與優勢：

A/設計

★無刃帶設計，减少摩擦生熱–使用壽命更長。
★多功能刀具，用于多種材料加工。
★良好的效能成本，避免了因刀具修磨而支出的物流成本。
★無需設置。
★一次性或可回收。

B/ 鑽尖

★優化切削設計用于微型鑽削，可以保證鑽頭中心切屑流順暢。。
★卓越的定中心性能。
★减少軸向力。
★卓越的孔加工質量，孔圓度和圓柱度，適用于各種材料工件加工。。

Features and advantages：

A/Design

★No flute design, reducing friction, longer life.
★Versatile tool for a variety of materials processing.
★Main flute top angle 120°
★Good performance cost, avoiding the expense of tool grinding and logistics costs.
★No setting.
★Disposable or recyclable.

B/ Drill tip

★Optimize cutting design for micro drilling, drill center can ensure smooth chip flow.
★Excellent centering performance.
★Reduce the axial force.
★Excellent hole machining quality, roundness and cylindrical, for a variety of workpiece materials.

MG | 0.6µm | CO10% | HRC‹45

Product Code 產品編號	Blade diameter 刃徑 D	Blade length 刃長 H	Full 全長 L	Shank 柄徑 d	Inventory 庫存
DZ00114	0.10	1	38	3.175 (1/8)	◎
DZ00115	0.15	1	38	3.175 (1/8)	◎
DZ00116	0.20	1.5	38	3.175 (1/8)	◎
DZ00117	0.25	2	38	3.175 (1/8)	◎
DZ00118	0.30	2	38	3.175 (1/8)	◎
DZ00119	0.35	2.5	38	3.175 (1/8)	◎
DZ00120	0.40	3.5	38	3.175 (1/8)	◎
DZ00121	0.45	3.5	38	3.175 (1/8)	◎
DZ00122	0.50	3.5	38	3.175 (1/8)	◎
DZ00123	0.60	4	38	3.175 (1/8)	◎
DZ00124	0.70	5	38	3.175 (1/8)	◎
DZ00125	0.80	6	38	3.175 (1/8)	◎
DZ00126	0.90	6	38	3.175 (1/8)	◎
DZ00127	1.00	7	38	3.175 (1/8)	◎
DZ00128	1.10	8	38	3.175 (1/8)	◎
DZ00129	1.20	8	38	3.175 (1/8)	◎
DZ00130	1.30	9	38	3.175 (1/8)	◎
DZ00131	1.40	10	38	3.175 (1/8)	◎
DZ00132	1.50	11	38	3.175 (1/8)	◎
DZ00133	1.60	11	38	3.175 (1/8)	◎
DZ00134	1.70	12	38	3.175 (1/8)	◎
DZ00135	1.80	13	38	3.175 (1/8)	◎
DZ00136	1.90	14	38	3.175 (1/8)	◎
DZ00137	2.00	14	38	3.175 (1/8)	◎
DZ00138	2.10	15	38	3.175 (1/8)	◎
DZ00139	2.20	15	38	3.175 (1/8)	◎
DZ00140	2.30	15	38	3.175 (1/8)	◎
DZ00141	2.40	15	38	3.175 (1/8)	◎
DZ00142	2.50	15	38	3.175 (1/8)	◎
DZ00143	2.60	15	38	3.175 (1/8)	◎
DZ00144	2.70	15	38	3.175 (1/8)	◎
DZ00145	2.80	15	38	3.175 (1/8)	◎
DZ00146	2.90	15	38	3.175 (1/8)	◎

非標定制

●提供標準的各種中間直徑產品。

Non-standard Tools

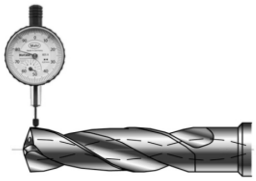
●Provides a standard diameter of various intermediate products.

鑽頭切削參數（推薦） Drill bits cutting parameters (recommend)

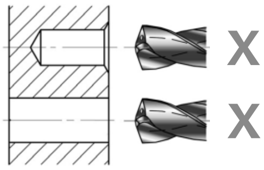
直徑 diameter mm	進給系列 mm/r Feed series							
	A	B	C	D	E	F	G	H
3.0	0.03	0.04	0.05	0.06	0.08	0.10	0.12	0.15
4.0	0.04	0.05	0.06	0.08	0.10	0.12	0.15	0.18
5.0	0.05	0.06	0.07	0.09	0.10	0.12	0.16	0.18
6.0	0.05	0.07	0.08	0.10	0.12	0.15	0.18	0.20
8.0	0.06	0.08	0.10	0.12	0.15	0.18	0.20	0.25
10.0	0.08	0.10	0.12	0.15	0.18	0.20	0.25	0.30
12.0	0.10	0.12	0.15	0.18	0.20	0.25	0.30	0.35
16.0	0.12	0.15	0.18	0.20	0.25	0.30	0.35	0.40
20.0	0.15	0.18	0.20	0.25	0.30	0.35	0.40	0.50

鑽孔注意事項 Drilling notes

穩定的夾持 TIR<0.02
Stable clamping



不得擴孔(3刃鑽除外)
Can't reaming (except 3 flutes drills)



加工材料組 Processing material ISO	被加工材料 Be processed material	硬度 Hardness		强度 Strength	材料舉例 Material series	
		HB	HRC	N/mm²	中國 China	國際 International
P 鋼 steel	易切鋼 Mild steel	< 150		< 700	Y12、Y15Pb	10S20、11SMnPb36
		> 150		> 700	Y35、Y40Mn	35S20、44SMn28
	碳素結構鋼 Carbon construction steel	< 200		< 700	Q235A、Q275	S235JR、S275J2G3
		< 250		< 850	35#、45#	C35E4、C45E4
		< 300	< 31	< 1000	55#、65#	C55E4、C60E4
	合金結構鋼 Alloy construction steel	< 300	< 31	< 1000	20Cr、20CrMo	20Cr4、18CrMo4
		< 350	< 37	< 120	40Cr、42CrMo	41Cr4、42CrMo
	模具鋼 Mould steel	< 300	< 31	< 1000	Cr12、Cr12MoV1	210Cr12、160CrMoV12
		< 350	< 37	< 1200	CrWMn、3CrW8V	105WCr1、30WCrV9
	工具鋼 Tool steel	< 300	< 31	< 1000	9SiCr、Cr2	-, 100Cr2
	鐵素體不銹鋼 Ferritic Stainless Steel	< 200		< 700	0Cr13Al、1Cr17	x6CrAl13、X6Cr17-1
	馬氏體不銹鋼 Martensitic stainless steel	< 240		< 820	2Cr、1Cr17Ni2	x20Cr13、X17CrNi16-2
M 不銹鋼 stainless steel	奥氏體不銹鋼 Austenitic stainless steel	< 850		< 850	0Cr19Ni9 0Cr17Ni17Mo2	X5CrNi18-10, X5CrNiCrMo17-12-2
	雙相不銹鋼 Duplex stainless steel	< 850		< 850	0Cr26Ni5Mo2	
K 鑄鐵 Cast iron	灰鑄鐵 Gray cast iron	< 240			HT250、HT350	250、350
	球墨鑄鐵 Ductile Cast iron	< 300			QT500、QT600	500-7、600-3
	可鍛鑄鐵 Malleable cast iron	< 300			KTH350-10、KTB400-05	B35-10、W40-05
N 鋁及鋁合金 Aluminum and aluminum alloy	純鋁 Pure aluminum	< 120		< 400	1A50/L3	Al99、5
	變形鋁合金≤0.5Si Wrought aluminium alloy	< 120		< 400	LF5-1、LD30	AlMg5、AlMg1SiCu
	鑄造鋁合金≤10Si Casting aluminium alloy	< 160		< 550	ZL101、ZL104	AlSi7Mg、AlSi9Cu3
	鑄造鋁合金 > 10Si Casting aluminium alloy	< 160		< 550	ZL102、ZL109	AlSi12、AlSi12Cu
N 銅及銅合金 Copper and copper alloy	紫銅，低合金銅 Red copper,Lower alloy copper	< 120		< 400	Tu2、H96	Cu-0F、CuSn5
	黄銅 Brass	< 160		< 550	HPb63、HPb59	CuZn35Pb1、CuZn39Pb3
	青銅 Bronze	< 160		< 550	QSn8、BSn18-26	CuSn8、CuNi18Zn27
S 難加工材料 優質耐熱合金 Complicated material High-quality heat-resistant alloys	純鈦，鈦合金 Pure titanium,Titanium alloy			< 400	TA2	Ti99.5
	Alpha+beta鈦合金 Titanium alloy			< 1050	TC4、-	TiAl6V4、TiAl6Zr5
	鐵基耐熱合金 Ferrous heat-resistant alloy	< 280		< 950		
	鎳鉻、鎳、鎳鈷合金、鈷鉻合金 Nickel-chromium.Nickel.Nickel-cobalt alloy.Cobalt-chromium alloy	< 350		< 120		Hastelloy、Monel、Inconel
H 高硬材料 High hardness material	淬硬鋼 Quenched Steel		< 48			
			< 62			
	冷硬鑄鐵 Chilled cast iron		< 55			
G 石墨 Graphite	石墨 Graphite					

注:1）硬質合金鑽頭應在高剛性大功率機床上使用。
2）保證主軸——刀柄——刀尖跳動誤差在0.02範圍内。
3）使用内冷麻花鑽頭時，應保證内冷壓力不小于：Φ5時20kgf/cm²，Φ10時15kgf/cm²，Φ15時10kgf/cm²，Φ20時7kgf/cm²，内冷直槽鑽由于排屑困難，内冷壓力還應相應提高。
4）本推薦參數需根據實際加工情況進行調整。

1) Carbide used on high rigidity and high-power machine
2) Ensure Spindle – tool holder – cutter tip precision in the range of 0.02
3) When we use twist drills with coolant hole, should ensure that coolant pressure not less than: 5 is 20kgf/cm², 10 is 15kgf/cm², 15 is 10kgf/cm², 20 is 7kgf/cm², Coolant straight flute drills as its difficult chip removal, coolant pressure should be increased accordingly
4) The recommended parameters need to be adjusted according to actual processing conditions

DOHRE

3XD 麻花鑽 Twist drills		5XD 麻花鑽 Twist drills		8XD 麻花鑽 Twist drills		8XD 麻花鑽 Twist drills	定心鑽 NC Spotting drills
			Vc m/min	f mm/r			
130 E	150 E	117 E	135 E	104 E	117 E	104 E	130 C
110 D	125 D	99 D	113 D	88 D	99 D	88 D	110 C
105 E	120 E	95 E	108 E	84 E	95 E	84 E	105 C
90 E	105 E	81 E	95 E	72 E	81 E	72 E	90 C
80 E	90 E	72 E	81 E	64 E	72 E	64 E	80 C
85 E	100 E	77 E	90 E	68 E	77 E	68 E	85 C
75 D	85 D	68 D	77 D	60 D	68 D	60 D	75 C
85 D	100 D	77 D	90 D	68 D	77 D	68 D	85 B
75 D	85 D	68 D	77 D	60 D	68 D	60 D	75 B
60 D	70 D	54 D	63 D	48 D	54 D	48 D	60 B
55 C	63 C	50 C	57 C	44 C	50 C	44 C	55 C
55 C	63 C	50 C	57 C	44 C	50 C	44 C	55 B
45 B	50 B		45 B		41 B	36 B	45 B
45 B	50 B		45 B		41 B	36 B	45 B
160 G	180 G	144 G	162 G	128 G	144 G	128 G	160 C
120 F	135 F	108 F	122 F	96 F	108 F	96 F	120 C
90 F	105 F	81 F	95 F	72 F	81 F	72 F	90 C
					207 F	184 F	230 C
					207 F	184 F	230 C
160 G	180 G	144 G	162 G	128 G	144 G	128 G	160 D
140 G	160 G	126 G	144 G	112 G	126 G	112 G	140 D
					81 F	184 F	90 C
160 G	180 G	144 G	162 G	128 G	144 G	128 G	160 D
90 G	105 G	81 G	95 G	72 G	81 G	72 G	90 C
							40 B
							35 B
							32 B
							30 B
							30 B
							30 B
							27 B

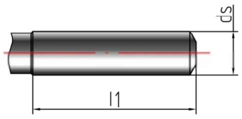
4XD 直槽鑽 Straight flute drills	4XD 直槽鑽 Straight flute drills	7XD 直槽鑽 Straight flute drills	7XD 直槽鑽 Straight flute drills	10XD 直槽鑽 Straight flute drills	15XD 直槽鑽 Straight flute drills	5XD 麻花鑽(3刃) Twist drills(3 flutes)	
			Vc m/min	f mm/r			
							104 E
							88 D
							84 E
							72 E
							64 E
							68 E
							60 D
							68 D
							60 D
							48 D
							44 C
							44 C
							36 B
							36 B
120 G	150 H	120 G	150 H	112 F	112 F	100 F	125 F
100 F	120 G	100 F	120 G	96 E	96 E	85 E	100 E
75 F	90 G	75 F	90 G	72 E	72 E	65 E	75 E
						160 F	185 F
						160 F	185 F
160 F	200 H	160 F	200 H	180 F	180 F	110 G	130 G
160 F	200 H	160 F	200 H	180 F	180 F	100 G	115 G
						160 F	185 F
136 F	160 G	136 F	160 G	128 E	128 E	110 G	130 G
	100 E		100 E	80 C	80 C	65 E	75 E

3XD 强力鑽 Powerful drills				5XD 鋁合金專用鑽頭 Drills for processing aluminum alloy		8XD 鋁合金專用鑽頭 Drills for processing aluminum alloy	
Vc m/min f mm/r							
160 G	180 G	160 G	144 G				
120 F	135 F	120 F	108 F				
90 F	105 F	90 F	81 F				
				170 F	265 G	170 F	265 G
				170 F	265 G	170 F	265 G
				120 G	180 H	120 G	180 H
				105 G	160 H	105 G	160 H
				80 E	105 F	80 E	105 F
				120 F	180 G	120 F	180 G
120 F	135 F	122 F	180 F	80 E	105 E	80 E	105 E
38 C	42 C	38 B	38 C				
30 A	35 A	28 A	28 C				
36 B	40 B	32 B	32 B				

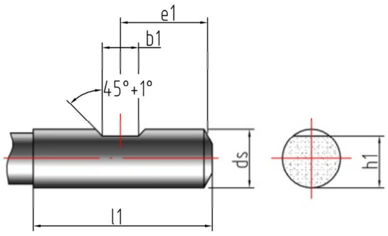
3XD 鑄鐵專用鑽頭 Twist drills(3 flutes)		5XD 鑄鐵專用鑽頭 Twist drills(3 flutes)		3XD 不銹鋼專用鑽頭 Drills for processing stainless steel		5XD 不銹鋼專用鑽頭 Drills for processing stainless steel	
Vc f m/min mm/r							
				55 C	63 C	50 C	57 C
				55 C	63 C	50 C	57 C
				45 B	50 B	41 B	45 B
				45 B	50 B	41 B	45 B
160 G	180 G	144 G	162 G				
120 F	135 F	108 F	122 F				
90 F	105 F	81 F	95 F				
					45 B		41 B
					40 B		36 B
					38 C		38 C
					35 C		32 C
38 C	42 C						
30 A	35 A						
36 B	40 B						

刀具柄部形式 Cutter shank types

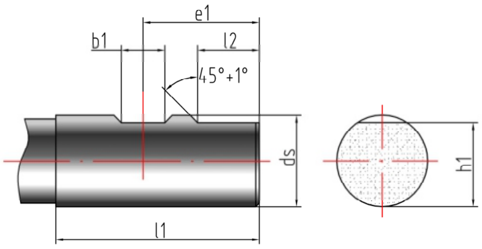
DIN6535HA5/DIN1835A



DIN6535HB5/DIN1835B ds≤20

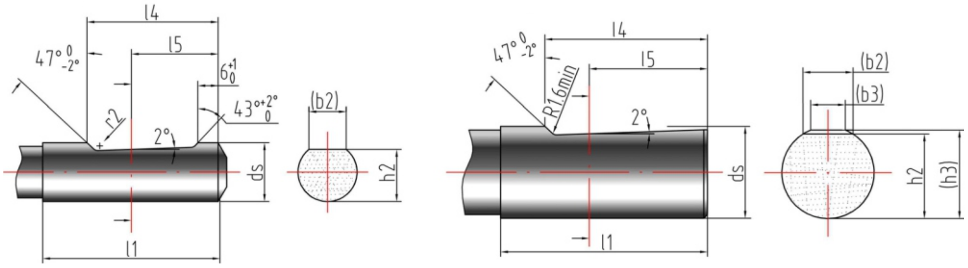


DIN6535HB5/DIN1835B ds = 25&32



DIN 1835A		DIN 1835B						DIN 1835A		DIN 1835B					
ds	l_1	ds	b_1	e_1	h_1	l_1	l_2	ds	l_1	ds	b_1	e_1	h_1	l_1	l_2
h6	+2 0	h6	+0.05 0	0 −0	h11	+2 0	+1 0	h6	+2 0	h6	+0.05 0	0 −0	h11	+2 0	+1 0
6	36	6	4.2	18	4.8	36		6	36	6	4.2	18	5.1	36	
8	36	8	5.5	18	6.6	36		8	36	8	5.5	18	6.9	36	
10	40	10	7	20	8.4	40		10	40	10	7	20	8.5	40	
12	45	12	8	22.5	10.4	45		12	45	12	8	22.5	10.4	45	
14	45	14						14	45	14	8	22.5	12.7	45	
16	48	16	10	24	14.2	48		16	48	16	10	24	14.2	48	
18		18						18	48	18	10	24	16.2	48	
20	50	20	11	25	18.2	50		20	50	20	11	25	18.2	50	
25	56	25	12	32	23	56	17	25	56	25	12	32	23	56	17
32	60	32	14	36	30	60	19	32	60	32	14	36	30	60	19
40	70	40	14	40	38	70	19								
50	80	50	18	45	47.8	80	23								
63	90	63	18	50	60.8	90	23								

DIN6535 HE/DIN1835 E ds = 25&32



DIN 1835E									DIN 6535HE								
ds	b_2	b_3	h_2	h_3	l_1	l_4	l_5	r_2	ds	b_2	b_3	h_2	h_3	l_1	l_4	l_5	r_2
h6	≈	≈	h11	≈	+2 0	0 −0		min	h6	≈	≈	h11	≈	+2 0	0 −0		min
6	4.3		5.1		36	25	18	1.2	6	4.8	3.5	4.8		36	25	18	1.2
8	5.5		6.9		36	25	18	1.2	8	6.1	4.7	6.6		36	25	18	1.2
10	7.1		8.5		40	28	20	1.2	10	7.3	5.7	8.4		40	28	20	1.2
12	8.2		10.4		45	33	22.5	1.2	12	8.2	6.0	10.4		45	33	22.5	1.2
14	8.1		12.7		45	33	22.5	1.2	14	8.1		12.7		45	33	22.5	1.2
16	10.1		14.2		48	36	24	1.6	16	10.1	7.6	14.2		48	36	24	1.6
18	10.8		16.2		48	36	24	1.6	18	10.8		16.2		48	36	24	1.6
20	11.4		18.2		50	38	25	1.6	20	11.5	10.4	18.2		50	38	25	1.6
25	13.6	9.3	23		56	44	32	1.6	25	13.6	9.3	23	24.1	56	44	32	1.6
32	15.5	9.9	30	31.2	60	48	36	1.6	32	13.5	9.9	30	31.2	60	48	36	1.6

注：DIN1835用于工具鋼柄部刀具，DIN6535用語整體硬質合金刀具
Remark: DIN1835 used for the shank of tool steel,DIN6535 used for the shank of solid carbide tools