



可来图来样任意订做陶瓷、钨钢、钻石、
超高防锈高硬度高韧性不锈钢、钛合金、钛等
系列CNC精密刀模具、成型治具、钎焊工夹具、
耐磨零配件、高精密配件（3DX技术）成型超硬、
超精密研磨。

According to drawings or samples, we can customize CNC precision
knife moulds, forming fixtures, brazing fixtures, wear-resistant parts,
high-precision accessories by (3DX technology) profile, super-hard,
super-fine grinding with ceramics, tungsten steel, diamond,
ultra-high anti-rust high-hardness high-toughness stainless steel,
titanium alloy, titanium and other series.

図面またはサンプルにてあらゆるセラミック、タングステン鋼、
ダイヤモンド、超高防锈高硬度高韧性ステンレス、チタン合金、
チタン等シリーズのCNC精密刃物金型、成型治具、はんだ付け用
固定具、耐磨耗付属品の製造、高精密部品（3DX技術）の成型、
超硬、超精密研磨ができる。

可在微细、超长、超薄、超耐磨、耐冲击、高精密度、组合成型的加工，具有完美的
刃口品质和可高达 $\pm 0.0005\text{mm}$ ($\pm 0.5\mu\text{m}$) 的尺寸公差，实现高效率、低成本的应用

Our products are able to process various materials whatever are micro-thin, super-long,
super-thin, super-wear-resistant, impact-resistant, top complex, and combined profile,
will all provided with perfect cutting quality and tolerance of dimension fine to $\pm$
 0.0005mm ($\pm 0.5\mu\text{m}$), and a high-efficiency & low-cost application we deliver to you!

を行い、微細、超长、超薄、超耐磨耗、耐衝擊、高度に複雑な組合せ成型の加工に得意
で、完璧な刃先品質及び $\pm 0.0005\text{mm}$ ($\pm 0.5\mu\text{m}$) まで高い寸法公差まで達することが
でき、効率の高い応用を実現する。



微信公众号



岭之峰属高科技合资企业，本着速力中華、平和大同、傳遞健康、快樂與陽光……在外銷型中、高端CNC精密刀模具、成型治具、鉗焊工夾具、耐磨零附件、高精度配件、超高等級品、超高等級品、超高等級品……擁有二十多年的研究、生產經驗。秉承先進綜合的生產體系，擁有各種精密技術生產加工能力，引進國際一流的CNC設備、強力高速複合磨削加工中心及超強超微細加工品質要素，高精度（3DX技術）成型超硬、超精研磨，可在微細、超長、超薄、超耐磨、高耐衝擊、高度複雜、組合成型的加工，具有完美的刀口品質和高可至 $\pm 0.0005\text{mm}$ ($\pm 0.5\mu\text{m}$) 的尺寸公差，實現高效率、低成本應用！常年庫存原材料、半成品、成品2000萬~3000萬RMB周轉的在庫品，依圖依樣現生產，快捷供貨，具有極強的性價比……

聯合配套中大型企業的供應銷售、中大盤批銷的協力代工服務，以六軸、七軸聯動CNC加工（AAA級）的高端產品到三軸、四軸生產的（D級）中端製品、不同等級的品質與價位……專業替代一流工業品，特殊、非標、異型、新產品中大批量的、超高等級性的研發、生產加工，依圖依樣改進設計，可大大降低綜合成本！

詢盤請能提供使用效果最好的樣品及參考頁註明每種產品的詳細要求、材料種類、尺寸公差、工件成品和半成品圖紙、所用的設備、設備價值RMB（以判斷其剛性及跳動等）、每月消耗的數量、原用產品類型及其不足之處？被加工材料及其硬度HRC？……

如有不足之處，請一定不吝指教：是易鈍化？易崩刃？還是……？並能提供使用效果最佳——新的和舊的實樣。

LZQ is a high-tech joint venture in the light of China's Rejuvenation, Great Harmony, Propagating health, Joyance & Sunshine... LZQ has been accumulating over 20 years of R&D experience in export-oriented medium and high-end CNC precision cutting tool, profile fixture, brazing fixtures, wear-resistant parts, high-precision accessories, super-high rust-proof & high hardness stainless steel high precision parts. Adhering to the advanced comprehensive production system, LZQ possesses various precision technology production and processing capabilities. We have introduced world first-class CNC equipment, powerful high-speed compound grinding machining center and best ultra-super-fine particle high quality raw materials, high-precision (3DX technology) molding superhard & Superfine grinding. We can achieve perfect edge quality and size tolerance up to $\pm 0.0005\text{mm}$ ($\pm 0.5\mu\text{m}$) in fine, ultra-long, ultra-thin, ultra-abrasive, high-impact, highly complex and combined molding processing, which can realize high-efficiency and low-cost applications! We keep annual inventory of raw materials, semi-finished products and finished products amount to 20 million~30 million RMB turnover. We can produce according to drawings or samples with a fast delivery, also a very good cost performance...

Joint supply and sales for medium and large enterprises, OEM assistance service for medium and large capitalization wholesaling. From high-end products processed by 6-axis / 7-axis linkage CNC (AAA grade), to middle-end products processed by 3-axis / 4-axis CNC (D grade), different levels of quality and different price ... Our reliable products can replace the first-class products, and we are professional in mass production, high cost-effective R&D, production & processing, as well as design revision according to drawings or samples of special, non-standard, special-shaped & new products. We can reduce the comprehensive cost greatly!

When you make inquiry, referencing to the page footer, please provide samples with best work performance, and specify the detailed requirements, material types, dimensional tolerances, drawings of finished and semi-finished products, equipment used or equipment value (to judge its rigidity and runout, etc), monthly consumed qty, type of original samples and its inadequacies, the workpiece material to be processed by sample and its hardness HRC? ...

Any deficiencies, please do not hesitate to let us know: Is it easy to get passivated? Or tipping? Or something else? Please provide new and old samples—with the best working performance—for us to check and test.

嶺之峰はハイテク企業であり、中華復興、平和大同、健康・楽しさ・陽光をお届けする理念をもとに……輸出の中、高レベルCNC精密刀物金型、成型治具、はんだ付け用固定具、耐磨耗付属品、高精度部品、超高等級品、超高等級品……擁有二十多年的研究、生產經驗。秉承先進綜合的生產體系，擁有各種精密技術生產加工能力，引進國際一流的CNC設備、強力高速複合磨削加工中心及超強超微細加工品質要素，高精度（3DX技術）成型超硬、超精研磨，可在微細、超長、超薄、超耐磨、高耐衝擊、高度複雜、組合成型的加工，具有完美的刀口品質和高可至 $\pm 0.0005\text{mm}$ ($\pm 0.5\mu\text{m}$) 的尺寸公差，實現高效率、低成本應用！常年庫存原材料、半成品、成品2000萬~3000萬元人民幣的周轉在庫品，依圖依樣現生產，快捷供貨，具有極強的性價比……

大・中規模企業の供給・販売に協力し、大・中規模卸売業者の代理加工サービスにも携わり、六軸・七軸の連動CNC加工（AAA級）による高級製品から三軸・四軸生産による（D級）中製品、各レベルの品質と値段……一流工業品の専門代標品、特殊、非標準、異型、新製品の中・大ロット、スーパーコストパフォーマンスの研究開発、生産加工、図面に基づき、設計を改善し、大幅に総合的なコストダウンが実現できる。見積り引き合いの際、最も効果の良いサンプルをご提供の上、フッターの内容に従って、各商品に関する詳しい要求、材料種類、寸法公差、ワークピース完成品と半製品図面、所用設備、設備金額（人民币で、その鋼種及び振れを確定するため）、月度の消耗量、以前の製品タイプ及び欠点、加工された材料及びその硬度HRCなどを記入ください。

不足の点があれば、ぜひご連絡ください。鈍化？刃崩れ？それとも……？また、最も使用効果の良い新・旧サンプルをご提供ください。



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擁有先進綜合的生產體系，具備各種精密技術生產加工能力，實現高效率、低成本的應用。
LZQ is possessed of advanced and comprehensive production systems and all kinds of precision technology and what a high-efficiency and low-cost application we deliver you!
先進的綜合生產系統有，各種的精密技術生產加工能力以高效率且低成本的應用為實現。

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★、依圖依樣尺寸公差要求可生產特殊、複合、異型、超大超微細超長組合成型制品。

We can produce special, compound, special-shaped, Super large, Super thin, Super long combined forming products according to the requirements of drawings, samples and size tolerance.

★.切割銼/骨銼/磨鑽/磨銼

Cutting bur / Bone bur /
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★.單晶鑽石/鑽石/CVD/PCD/CBN系列

Monocrystal diamond / Diamond / CVD / PCD/CBN Series



P305-306

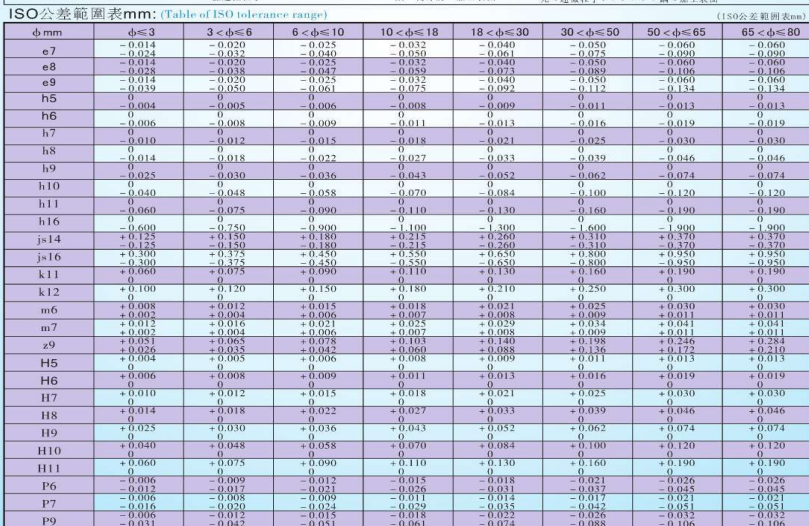
★、依图依样尺寸公差要求可生产特殊、复合、异型、超大超微细超长组合成型制品。

We can produce special, compound, special-shaped, Super large, Super thin, Super long combined forming products according to the requirements of drawings, samples and size tolerance.



各種のブレードカッタ用材料の特性及びISO公差範囲の表

各種のブレードカフタ用材料の硬さとじん性との対照



各類硬度換算表:
Conversion table of different kind of hardness
各種の硬さの換算表

◆材料硬度的近似換算値
Approximate conversion table of material hardness 料高きの近似換算表

Approximate conversion table of material hardness 料高きの近似換算表

[illegible]備注/Remark 1N/mm² = 1Mpa

幾何公差的圖示方法 Illustration method of geometric tolerance

◆幾何學公差的種類和記號 Type and mark(s) of geometric tolerance

公差的種類 Type of tolerance	記號 Mark	公差的域的定義 Definition of tolerance zone	圖示例的解釋 Note to illustration
真直度公差 Straightness		表示公差域的數值前方附有代號 ϕ 時,是指此一公差域,直徑的圓筒中的領域。 When there is symbol ϕ in front of the numerical value that expresses tolerance zone, it means this tolerance zone, the area in the cylinder with diameter of ϕ .	表示圓筒直徑的尺寸加有公差數時,其圓筒軸線是在直徑 $\phi 0.08\text{mm}$ 的圓筒內。 If the tolerance frame is after the diameter of the cylinder, it means the axial line of the cylinder could have 0.08mm tolerance.
平面度公差 Flatness		公差域是夾持的相距 t 的兩面平行的平面間的領域。 Tolerance zone is area enclosed by two parallel planes with a distance of t .	此一表面須在相距 t 的二面平行的平面之間。 This surface must be between two parallel planes with a distance of t .
真圓度公差 Roundness		對象的平面的公差域是相距 t 距離的2個同心圓之間的領域。 Object plane's tolerance zone is area which two concentric circles with a distance of t .	任意軸直角斷面的外周必須是在同一平面上相距的兩個同心圓之間。 The circumference of right-angle section of any axis must be between two concentric circles with a distance of t in the same plane.
圓筒度公差 Cylindricity		公差域是相距 t 的二個同軸圓筒間的領域。 Tolerance zone is area in which two coaxial cylinder plane with a distance of t .	對象面必須在相距 t 的二個同軸圓筒面之間。 Object plane must be between two coaxial cylinder surfaces with a distance of t .
線的輪廓度公差 Line profile		公差域是中心位於理論上正確輪廓線上,直徑 ϕ 的兩個包圍線之間,所夾持的領域。 Tolerance zone is area enclosed by two profile lines of a circle with a diameter of ϕ when the center is in the theoretically correct contour line.	與該剖面平行的任意截面上所畫的輪廓必須是中心位於具有 ϕ 直徑的 $\phi 0.08\text{mm}$ 的圓筒內。 The contour of the object in any section that is parallel with projective surface must be between two profile lines of a circle with a diameter of $\phi 0.08\text{mm}$ when the center is in the theoretically correct contour plane.
面的輪廓度公差 Surface profile		公差域是中心位於理論上正確輪廓面上,直徑 ϕ 的兩個包圍面之間,所夾持的領域。 Tolerance zone is area enclosed by two profile planes of a sphere with a diameter of ϕ when the center is in the theoretically correct contour plane.	對象的面必須是在中心位於理論上具有正確輪廓面上,直徑 $\phi 0.02\text{mm}$ 的球體之二個包圍面之間。 Object plane must be between two profile planes of a sphere with a diameter of $\phi 0.02\text{mm}$ when the center is in the theoretically correct contour plane.
平行度公差 Parallelism		公差域是與已知 datum 平面平行,相距 t 的二個平行平面間所夾持的領域。 Tolerance zone is area enclosed by two parallel planes with a distance of t and parallel with datum plane.	表示指示輪廓的平面,必須與已知平面的平行,而在指示輪廓的平面間相距 t 的兩面平行的平面。 Indicating surface of indicating line must be parallel with datum surface, and be between two parallel planes with a distance of t and parallel with datum plane.
垂直度公差 Perpendicularity		表示公差數值前附有代號 ϕ 時,此一公差域是與已知平面垂直,直徑 ϕ 的圓筒內的領域。 When there is symbol ϕ in front of the numerical value that expresses tolerance zone, this tolerance zone is area in the cylinder with a diameter of ϕ that is perpendicular to datum plane.	指示垂直度的平面,必須與已知平面垂直。 The cylinder axis indicated by indicating line must be perpendicular with datum surface and in the cylinder with a diameter of $\phi 0.1\text{mm}$.
傾斜度公差 Angularity		公差域是規定角度,與已知平面呈傾斜,相互間相距 t 的兩個平行平面間所夾持的領域。 Tolerance zone is area enclosed by two parallel planes with a distance of t , and inclined with datum plane by a specified angle.	指示傾斜度的平面,必須與已知平面呈正 40° 傾斜,而且是指示傾斜的方向與相距 0.08mm 的兩面平行平面。 The surface indicated by indicating line must be theoretically 40° inclined from datum plane A, and be between two parallel planes with a distance of 0.08mm in the direction of indicating line.
位置度公差 Position		公差域是對對象位置上正誤差(以下稱「正位置」)的中之之位置,與已知中心相距 t 的領域。 Tolerance zone is area in the circle with a diameter of ϕ with theoretically axial position theoretically referred to as "positive position" as the center.	指示位置度的平面,必須與已知直徑 $\phi 0.08\text{mm}$ 的圓筒內,已正位置指示的平面間相距 t 的兩面平行的平面。 The point indicated by indicating line must be in the circle with a diameter of $\phi 0.08\text{mm}$ with the positive position that is offset from datum straight line A, and be between two parallel planes with a distance of 0.08mm in the direction of indicating line.
同軸度公差及同心度公差 Concentricity		表示公差數值前附有代號 ϕ 時,此一公差域是與已知軸線垂直,相距 t 的兩面平行的平面間的領域。 When there is symbol ϕ in front of the numerical value that expresses tolerance zone, this tolerance zone is area in the cylinder with a diameter of ϕ that is parallel with the datum axial straight line.	指示同軸度的平面,必須是在已知軸,直徑 $\phi 0.08\text{mm}$ 的圓筒內。 The axis indicated by indicating line must be in the cylinder with a diameter of $\phi 0.08\text{mm}$ with datum axial straight line A as axis.
對稱度 Symmetry		公差域是與已知中心平面對稱配置,彼此相距 t 的二個平行平面間所夾持的領域。 Tolerance zone is the area symmetric with the datum plane, and enclosed by two parallel planes with a distance of t .	指示對稱度的平面,必須是以已知中心平面A對稱 $\phi 0.08\text{mm}$ 的圓筒,而且呈平行的二個平面之間。 The center plane indicated by indicating line must be between two parallel planes with a distance of 0.08mm and symmetric with datum center plane A.
圓周振動公差 Circular runout		測定表面與已知軸線垂直的任意兩平行平面,其與已知軸線垂直,相距 t 的兩面平行的平面間的領域。 Tolerance zone is area between two concentric circles with a distance of t in the direction of radius and has the same center with datum axial straight line in any measured plane perpendicular with datum axial straight line.	指示圓周振動的平面與已知平面的運動,是與已知軸A的同一圓周,其測點與已知軸垂直的任意兩平行平面,不會超過 0.1mm 。 The indicating line in the direction of cylinder plane radius indicated by indicating line axis is in any measured plane perpendicular with datum axial straight line when datum straight line A rotates a round and will not exceed 0.1mm .
全振動公差 Total runout		公差域是與已知軸線垂直的任意兩平行平面,其與已知軸線垂直,相距 t 的兩面平行的平面間的領域。 Tolerance zone is area between two coaxial cylinders with a distance of t in the direction of radius and has the same axis with datum axial straight line.	指示全振動的平面與已知平面的運動,是與已知軸A的同一圓周,其測點與已知軸垂直的任意兩平行平面,不會超過 0.1mm 。 The complete vibration in the direction of cylinder plane radius indicated by indicating line axis when datum straight line A rotates a round and will not exceed 0.1mm .

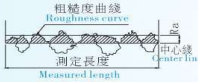
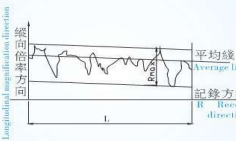
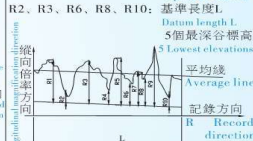
公差域定義欄中使用的線條具有以下的意義: The lines used in definition column of tolerance zone have the following meanings

粗實線或虛線:形體
Thick real line or dashed: form
粗一點虛線:既有資料
Thick one-dot dashed: data available
細實線或虛線:公差域
Thin real line or dashed: tolerance zone

粗一點虛線:中心線
Thin one-dot dashed: center line
粗二點虛線:補足的投影面或切斷面
Thick two-dot dashed: complementary projective surface or section
粗二點虛線:形狀對於補足的投影面或切斷面的投影
Thick two-dot dashed: projection of profile to complementary projective surface or fracture surface

表面粗糙度的定義及表示參考 Definition of surface roughness and expression reference

◆.表面粗糙度種類:Type of surface roughness

種類 Type	中心綫平均高度 Average height of center line	最大高度 Max. Height	T點平均高度 Average height at T point				
代號 Symbol	Ra	Rmax	Rz				
最大高度的最大表示代號 Expression symbol of maximum value of maximum height	a	s	z				
定義 Definition	取粗糙度曲綫對中心綫的絕對值面積除以基準長度比以微米（ μm ）為單位。通常通過中心綫粗糙度測定器可直接讀出。 Absolute value area of roughness curve to center line is divided by datum length in μm . Usually it can be directly read out via center line roughness measurer.	將基準長從斷面曲綫上抽取一部分，當平行于此部分平均綫的兩條直綫將此抽取部分變狹時，從曲綫縱向倍率方面測量兩直綫之間的距離并用微米表示此值。 Take a part of datum length from section curve, when the two straight lines parallel with this part of average line make this taken part narrow, measure the distance between two straight lines from curve's longitudinal magnification direction and express this value in μm .	將位於基準長從斷面曲綫上抽取的部分平行于平均綫且不橫切斷面直綫到從縱倍率方向測量的最高至五個谷底標高平均值之間的差用微米表示。 Take a part of datum length from section curve, parallel with mean line but not to crosscut the section, so the difference from the line to the mean value between 5 peak elevations & 5 lowest elevations measured at curve's longitudinal magnification direction and express this value in μm .				
							
				R1、R3、R5、R7、R9: 基準長度L Datum length L 5個最高頂標高 5 peak elevations R2、R3、R6、R8、R10: 基準長度L Datum length L 5個最深谷標高 5 lowest elevations			
粗糙度代號 Symbol of roughness	標準系列 Standard series	切斷值 Cutting value (mm)	測定長度 Measured length (mm)	標準系列 Standard series	基準長度 Datum length (mm)	標準系列 Standard series	基準長度 Datum length (mm)
標準代號和基準長度及粗糙度區分 Differentiation of standard symbol and datum length & roughness	▽▽▽▽	0.013a	0.8	0.05s	0.25	0.05z	0.25
	▽▽▽	0.025a	0.8	0.1s	0.8	0.02z	0.8
		0.05a		0.2s		0.04z	
		0.1a		0.4s		0.08z	
	▽▽	0.2a	0.8	0.8s	2.5	0.16z	2.5
		0.4a		1.6s		0.32z	
		0.8a		3.2s		0.63z	
	▽▽	1.6a	0.8	6.3s	8	1.25z	8
		3.2a		12.5s		2.5z	
		6.3a		25s		50z	
	▽	12.5a	2.5	50s	25	100z	25
		25a		100s		200z	
		50a		200s		400z	
	-	100a		400s			

各種加工法粗糙度的範圍

Roughness range of various machining method

◆各種加工法粗糙度範圍 : Roughness range of various machining method

粗糙度表示 Expression of roughness	0.1-S	0.2-S	0.4-S	0.8-S	1.6-S	3.2-S	6.3-S	12.5-S	25-S	50-S	100-S	200-S	400-S
粗糙度範圍 μm Roughness range	0.1以下 under 0.1	0.2以下 under 0.2	0.4以下 under 0.4	0.8以下 under 0.8	1.6以下 under 1.6	3.2以下 under 3.2	6.3以下 under 6.3	12.5以下 under 12.5	25以下 under 25	50以下 under 50	100以下 under 100	200以下 under 200	400以下 under 400
加工法 Machining method													
基準長度・標準值(mm) Standard value of datum length	0.25				0.8				2.5		8		25
代號 Symbol	無記號或No mark or.....												
鍛造 Forging								精密精加工	Precision finish machining				
鑄造 Foundry								精密精加工	Precision finish machining				
衝切件 Die cutting													
熱作軋延 Hot calendaring													
冷作軋延 Cold calendaring													
拉伸 Drawing													
押出 Extrusion													
轉筒式 Rotating drum													
噴砂 Sand blasting													
擠壓 Pressing													
粗糙度代號 Symbol of roughness	▽▽▽▽				▽▽▽				▽▽		▽		—
正面切削 Face cutting								精密精加工	Precision finish machining				
端面切削 End plane cutting													
仿形車 Contour lathe													
銑床 Milling machine								精密精加工	Precision finish machining				
精加工 Finish machining													
銑刀精加工 Finish machining by file								精密精加工	Precision finish machining				
圓車削 Circular cutting								上精加工 (high)	中精加工 (mid)	粗精 (roughness)			
精加工 Finish machining								上精加工 (high)	中精加工 (mid)				
銼削 Filing													
銼刀加工 Reamer machining								精密精加工	Precision finish machining				
拉刀 Broaching								精密精加工	Precision finish machining				
剃齒 Gear shaving													
研削 Grinding								上精加工 (high)	中精加工 (mid)	粗精 (roughness)			
研削 Finish machining by honing head								精密精加工	Precision finish machining				
超精加工 Super finish machining													
拋光 Polishing								精密精加工	Precision finish machining				
砂礫 Emery blue								精密精加工	Precision finish machining				
研磨 Grinding								精密精加工	Precision finish machining				
液體研磨 Liquid honing								精密精加工	Precision finish machining				
拋光 Polishing													
滾壓 Rolling													
放電仿 Spark discharge 電線加工 contour machining													
線切割 Wire cutting													
化學研削 Chemical grinding								精密精加工	Precision finish machining				
電解研削 Electrolytic grinding								精密精加工	Precision finish machining				

LZQ是一個優秀的高精密全精研磨醫療工具、刀具、治具、零配件、特殊新產品的代工企業，目前主要為國際一流品牌的供應商做代工，代工主要用戶也均為醫療工具、治具的製造企業。因為長期從事於飛機、艦艇、汽車等精密配件生產用的非標準工模具、成型治具，超高防銹高硬度不銹鋼、鎢鋼鉚焊工具夾具的生產加工，從而逐漸建立並不斷完善先進綜合的生產體系及各種精密技術生產加工能力，實現各類醫療工具、治具、配件產品的高精密、高度複雜、綜合成型的幾何加工，依圖依樣尺寸/公差/要求復合成型加工。可生產極為複雜、精密的形狀。工具、刀具可以激光分度、不同顏色的色圈、不同顏色的塗層、帶內孔……要求，祇要有要求及使用效果最好的樣品、CAD圖，即可實現成型加工。

與LZQ配合可以依貴司的設計能力和想法，實現對醫療工具用途的推廣，從而建立起屬於貴司自己的工具、治具、零配件產品體系。祇要有CAD或3D圖或使用效果最好的實樣或依自己想法用3D打印機打印樣件，或者用水頭刻制屬於自己想法的產品并標注尺寸公差，LZQ即可採用指定的國際一流高品質素材和先進綜合的生產體系，強力高速CNC磨削加工中心（3DX技術）成型超硬，超精研磨，具有完美的刃口品質和高可至 $\pm 0.0005\text{mm}$ ($\pm 0.5\mu\text{m}$)的尺寸公差，依圖依樣現生產，具有極強的性價比。

LZQ從二〇〇二年就開始主力高端高性能醫療器械、醫療刀具、配件的複雜成型之精密代工，一般沒有參與醫療制品的設計應用及配套認證服務，以熱處理後之高硬度材料磨削為主，電火花EDM、sodick/GF+慢走絲為輔，非傳統工藝生產的非標準工模具、成型治具，超高防銹高硬度不銹鋼、鎢鋼鉚焊工具夾具及全震動公差 $\nabla 7$ ，可以採用任意種類的進口高品質材料、熱處理後硬研磨成型，也可由用戶提供熱處理後的材料硬磨削成型，祇要有使用效果好的實樣，并拍照表達好重點注意的要求，LZQ就可以檢測出任何貴司所願慮的所有參數，採用完全相同或更為優質的材料及不同等級或更高精密精度等級的幾何形成型、CBNC超硬超精研磨加工，祇要設計理念得當，完全可以大大超越現有國際一流品牌的品質制品。

LZQ is an excellent OEM factory for high-precision manufacturing full-finish-grinding medical tools, cutters, fixtures, spare parts, and special new products. Currently we mainly make products for the best world-class brands' suppliers. The main users of our OEM products are also manufacturing enterprises of medical tools and fixtures. Because we have been engaged in the production of non-standard tools and moulds, forming fixtures, stainless steel and carbide brazing tools and fixtures for making precision components of aircrafts, warships, and automobiles, etc., we gradually establish and continuously improve our advanced integrated production systems and various precision technical production and processing capabilities, to achieve high-precision, highly complex and comprehensive-molding geometric processing of various types of medical tools, fixtures and accessories products, according to size / tolerance / requirements of drawings, samples to do the composite molding processing. We can produce extremely complex and precision shapes. Tools and cutters can be with laser segmentation, different colors of color ring, different colors of coating, inner hole ... different requirements, as long as there are samples or CAD drawings, we can achieve molding processing.

Cooperating with LZQ can help realize the promotion of the medical tools usages according to the design capabilities and ideas of your esteemed company, thus establishing your own tool kit, fixtures and spare parts product system. As long as you have CAD or 3D drawings, or samples with best using performance, or print the samples with a 3D printer, or use wood to engrave products with dimensional tolerances of your own ideas, LZQ can adopt a designated international first-class high-quality raw materials and advanced integrated production system, to do molding, superhard and ultra-fine grinding with the powerful high-speed CNC grinding machining center (3DX technology) according to drawings or samples, with perfect edge quality and dimensional tolerance up to $\pm 0.0005\text{mm}$ ($\pm 0.5\mu\text{m}$), which is at a very good cost performance

* 可來圖、來樣任意定製陶瓷、鎢鋼、超高防銹高耐磨不銹鋼 (AA)、不銹鋼、鈦合金、鈺、鑽石等系列，高精度組合成型治具、鉚焊工具、耐磨零件、高精密磨具 (3DX技術) 成型超硬、超精研磨

We can customize for you according to your samples or drawings for any manufacturing of ceramic, carbide, stainless high-speed steel, stainless steel, titanium alloy, titanium diamond etc series, high precision combination profile fixtures, brazed jigs and fixtures, wear-resistant parts, high-precision parts (3DX technology) profile super-hard and super-fine grinding.

Since 2002, LZQ has been focusing on precision manufacturing for sophisticated molding of high-end high-performance medical instruments, medical cutters, and accessories. We generally don't participate in any design, application and supporting certification services of medical tools. We mainly grind high-hardness materials after heat treatment, supplemented by EDM, sodick/+GF+WEDM, grind or polish after non-traditional turning processes, so with excellent concentricity $\odot$, cylindricity ∇ , circumferential vibration tolerance $\nearrow$ and full vibration tolerance $\nearrow$. We can use any kind of imported high-quality materials and hard-grind to mold after heat treatment, or customers could provide us raw material after heat treatment to do hard-grinding. As long as you have samples with best work performance and express clear about the requirements of key attention, LZQ can test all parameters concerned by your esteemed company, and use the same or higher-quality materials to mold the geometric of different grades or higher precision grades and process by CBNC superhard superfinishing, which can make products that completely exceed quality of the existing international first-class-brand ones if only the design concept is appropriate.

LZQは高精密全体細密研削医療器具、刃物、治具、部品、特殊新製品を加工する優良企業であり、現在、主に国際一流ブランド品メーカより受注生産をし、ご依頼主は主に医療器具、治具の製造企業である。長期にわたる経験、飛行機、艦艇、自動車などの精密部品生産用の非標準工具、成型治具、超防錆・高硬度且つ総合的な生産体制並びに努めている。各種の医療器具の製造に携わっているため、先進的な技術の完全化に向けて努めている。各種の医療器具、治具、部品の高精密、高精度に複雑な立体的加工を実現し、図面・サンプルの寸法/公差/要求に基づいて複合成型加工を行う。極度複雑且つ精密な形状も製造できる。工具、刃物については、レーザー切断、多色のカラーリング、多色のコーティング、穴付き・・・などのリクエスト、要求、または、サンプル、CAD図さえあれば、成型加工が実現できる。

LZQと提携することによって、御社の設計能力及びアイデアをもとに、医療器具用途の拡大で、御社独自の工具、治具、部品の製品シリーズが構築することができる。CADまたは3D図面があれば、もしくは、最も状態の良いサンプルで、ご自分の構想に基づき、3Dプリンターでサンプルを作成し、または、木でご自分の構想に基づき製品を彫刻した上で、寸法と公差を標記して頂いた場合、LZQが指定された国際一流品質の素材と先進的な総合生産システムで、強力高速CNC研削加工センター (3DX技術) を用いて、高硬度、超精密研削、完璧な刃先品質を有する、且つ $\pm 0.0005\text{mm}$ ($\pm 0.5\mu\text{m}$) 寸法公差の成型ができる。図面またはサンプルに基づいて生産し、極上のコストパフォーマンスがある。

LZQは2002年からハイレベル、ハイパフォーマンスの医療機器、医療用刃物、部品の複雑成型に関する精密受注生産に力を注ぎ、通常の場合、医療製品の設計・応用及び関連の認証サービスに携わらず、熱処理後の高硬度材料の研削を主業務とし、放電加工EDM、sodick/+GF+Wエアー放電加工を付随業務とし、従来の旋削後の研削或いは研磨と異なり、優良の同心度 $\odot$ 円筒度 ∇ 振動公差 $\nearrow$ 及び全振動公差 $\nearrow$ を確保でき、そして、あらゆるタイプの輸入高品質材料を採用し、熱処理の後に、研削で成型することができる。また、熱処理後の材料研削成型がお客様によっても提供されることができ、この場合、状態の良いサンプルがあるとともに、重客様に注意事項を説明していただいた上で、LZQが御社が悩まれているすべてのパラメーターを検出でき、全く同じまたは更に良質の材料及び異なるレベルまたは更に高い精密度レベルの立体的形状で成型し、CBNCスーパー硬度、スーパー精度での研削加工を用い、設計理念が妥当であれば、現にある国際一流ブランド品の品質を大幅に上回ることが確実にできる。

常用材料(UNS S44003D)

Conventional materials(UNS S44003D)

常用材質(UNS S44003D)

超高防銹型(AA)&超高耐磨型(A/AA)&可超精密加工
(Super-high anti-rust(AA)&Super wear-resistant
type(A/AA)&Super-high precision process)
(超防銹型(AA)&超耐磨耗型(A/AA)&超精密加工可)

★(超高耐磨不銹鋼 A) (淬硬處理HRC64° ± 2° 斷面)

常規標準防銹、超高耐磨不銹鋼，具有超高的耐磨耗（超高硬度）性能及常規標準的防銹、耐腐蝕性能，相應一般不銹鋼具有2~3倍的使用壽命，切削刃切割鋒利性保持時間超長。無標示下5%中性鹽霧實驗（ASTM B117）符合CFDA常規標準時間後無生銹現象，如重複使用、手術後建議能及時清潔烘幹處理，應用範圍廣，可生產極為複雜、高精密的柄部形狀及成型的超鋒利刃部結構。

★ (Ultra-high wear-resistant stainless steel A) (hardened HRC64° ± 2° Section)

Rust-proof, ultra-high wear-resistant stainless steel of conventional standard, with ultra-high wear resistance (ultra-high hardness) performance and conventional standard rust prevention, corrosion resistance, with 2~3 times longer lifetime comparing with that of the general stainless steel, and could make the cutting edge cutting sharpness last for a super-long time. Unmarked, with 5% Neutral salt spray test (ASTM B117), it doesn't rust after CFDA standard time. For repeated use, it is recommended to clean and dry in time after surgery. Wide range of applications and can be used to produce extremely complex, high-precision shank shapes and profile ultra-sharp edge structures.

★(超耐磨耗ステンレスA) (急冷處理 HRC64°±2°断面)

通常標準防銹、超耐磨耗ステンレスで、超耐磨耗（超高硬度）性能及び通常の標準防銹、耐蝕性能を有し、普通のステンレスと比べて、2～3倍の使用壽命があり、研削カッターの鋭利状態が非常に長く維持できる。マーク無しで、5%塩水噴霧試験（ASTM B117）がCFDAの通常標準時間後、さびが発生しないことに合格した。また、繰り返し使用の場合、手術後、直ちに洗浄及び乾燥を行うことが推奨される。応用範囲の広い、極に複雑、高精密の柄部形状及び超鋭利の刃部構造の成型ができる。



* 可來圖、來樣任意定製陶瓷、鋁鋼、超高防銹高耐磨不銹鋼(AA)、不銹鋼、鈦合金、鈦、鑽石等系列，高精度組合成型治具、鉗焊工具具、耐磨等附件。
We can customize for you according to your samples or drawings for any manufacturing of ceramic, carbide, stainless high-speed steel, stainless steel, titanium alloy, titanium diamond etc series, high precision combination profile fixtures, brazed jigs and fixtures, wear-resistant parts, high-precision parts(CDX technology) profile super-hard and super-fine grinding.

高精度不锈钢&钨钢成型刀模具、治具系列、加工等级

Profile cutter mold and jig series of high precision stainless high speed steel & tungsten steel, processing grade

高精度刃用ステンレススチール&マセット鋼成型カッタの金型、治具シリーズ

超高防锈型(AA)&超高耐磨型(A/AA)&可超高精密加工
(Super-high anti-rust(AA)&Super wear-resistant type(A/AA)&Super-high precision process)
(超防锈型(AA)&超耐磨耗型(A/AA)&超精密加工可)

LZQ常用材料等级

材料

AAA——德国、瑞士、瑞典、美国

A A——美国、卢森堡、瑞典等

A ——日本、法国

B ——台湾

C ——中国大陆上等材料

D ——中国大陆一般材料

LZQ加工等级区分

加工

AAA——300多万RMB CNC 六、七轴设备

A A——200多万RMB CNC 五轴六轴联动

A ——100多万日本富士CNC四轴设备

B ——70-90万 三轴设备

C ——40-60万 设备加工

D ——15-30万 设备加工

General material grade of LZQ

Material

AAA——German, Swiss, Sweden, American

A A——American, Luxembourg, Swiss Material

A ——Japanese, France Material

B ——Taiwan

C ——Chinese Mainland High-grade Material

D ——Chinese Mainland Ordinary Material

Different processing grade of LZQ

Processing

AAA——6.7 axis CNC equipment with value of 3 million RMB

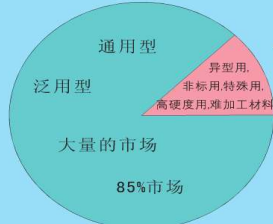
A A——5.6 axis CNC equipment with value of 2 million RMB

A ——4 axis CNC equipment with value of 1 million RMB

B ——3 axis CNC equipment with value of 0.7-0.9 million RMB

C ——processing equipment with value of 0.4-0.6 million RMB

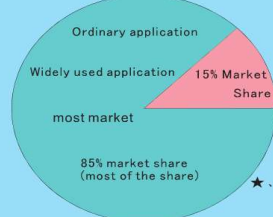
D ——processing equipment with value of 0.15-0.3 million RMB



15%市场

是LZQ的优势在AAA级加工

参考原效果最好的产品及有一定的数量，消化模拟后，常可以大大超越国际一流品牌，并获得较低的价格，或提升较高的品质，好不好，来图、来样试一试就知道了！



We have great advantage in the 15% market share. With the AAA grade processing after studying the original item with best application effect, we can make excellent products which will probably be better than the world-class brand with very low price. Just have a try to know our quality if you provide us the drawing or sample!

- ★、任何产品的成本：主要由材料及加工研磨成本组成，而不同的材料等级+不同的加工等级=组成不同的使用用途、效果、性价比的产品。
The production cost for any product: mainly includes the cost of raw material and grinding.
different grades of material+different grades of processing = different products with different application, effect and cost-performance.

* 可来图、来样任意定做陶瓷、钨钢、超高防锈高耐磨不锈钢(AA)、不锈钢、钛合金、钛、镁合金等，高精度组合成型治具、纤维工夹具、耐磨零件、高精度配件(3DX技术)成型钨钢、超精密磨。

We can customize for you according to your samples or drawings for any manufacturing of ceramic, carbide, stainless high-speed steel, stainless steel, titanium alloy, titanium diamond etc series, high precision combination profile fixtures, brazed jigs and fixtures, wear-resistant parts, high-precision parts(3DX technology) profile super-hard and super-fine grinding.

工業產品定位B

LZQ屬高科技合資企業，為在中國的世界500強企業以及外商投資企業生產加工專業替代進口的高精密刀模具、成型治具、鈎焊工夾具，耐磨零附件，高精密配件、超高防銹高硬度不銹鋼高精密零件，如替代Sandvik、Kennametal、Widia、Iscar……等的中、高端制品。採用進口超強極超微粒高品級素材，引進國際一流的CNC設備、強力高速復合磨削加工中心，從六軸、七軸聯動CNC加工的（AAA級）高端產品到三軸、四軸生產的（D級）中端制品、不同等級的品質與價位……專業替代一流工業品、特殊、非標、異型、新產品中大批量（注意盡量不做單規格小批量及標準品）、超高性價比的研發、生產加工，依圖依樣改進設計，高精密（3DX技術）成型超硬、超精密研磨的生產加工，可大大降低綜合成本！

LZQ公司擁有不斷更新、先進綜合的生產體系，具備各種精密技術生產加工能力，可在微細、超長、超薄、超耐磨、耐衝擊、高度復雜、組合成型的加工，具有完美的刃口品質和高可至 $\pm 0.0005\text{mm}$ （ ± 0.5 微米）的尺寸公差，實現高效率、低成本的應用！常年備存原材料、半成品、成品2000萬—3000萬RMB周轉的在庫品，依圖依樣現生產，快捷供貨，具有極強的性價比……

LZQ為特殊、非標、異型難加工類產品進行中、大批量的生產，盡量不做單規格、小批量和標準的產品，因為單規格小批量生產無法攤銷生產相應的高品質要求的工夾具、治具、模具、超硬砂輪的成本。而且如果沒有準備好，制作出相應的工裝夾具，生產出來的產品也不會很理想。當然，也要看產品的類別和規格來判定。而標準品的生產和一般的非標準品生產對我廠的生產成本是差不多的，如 $\phi 12.0$ 與 $\phi 12.218$ 對我廠的生產成本是接近的，而對Sandvik、Widia……是有較大的差距。所以對於特殊、非標、異型、新產品中、大批量生產，LZQ具有極大的競爭力，如果標準品是大批量訂購的，我們也可以組織生產，但性價比和競爭力相對會較弱些，貴公司銷售的利潤空間也會較小些。

一般而言，Sandvik、Kennametal、Widia、SecoTools……為取得市場及營銷的便捷，大部分產品為標準型、泛用型、通用型、常規型的產品，在這方面，LZQ競爭力較低也沒有很大的優勢，但在市場的特殊化、專業化、新產品、有針對性的某種材料的加工上或高精密超高防銹高硬度零附件、配件、治具、刀模具上，依圖依樣加工改進設計及1—2次的磨合，LZQ可以完全地替代、甚至大大超越原用國際一流產品。但這需要我們之間的理解和努力，和若幹次的磨合、配合，如取得原用使用效果最好的樣品（新的加上舊的若幹）、詳細的尺寸公差原廠圖紙，也可以參考我公司的網站www.50323322.com（www.lzqtool.com）中的電子樣本（……）的相應產品、頁數、頁腳注明每種產品的詳細要求、材料種類、尺寸公差、工件成品和半成品圖紙、所用設備、設備的價值USD（以判斷其剛性及跳動等）、每月消耗的數量等，並了解原用產品類型及其不足之處，是易鈍化？易崩口？或者其它，還有被加工材料種類和硬度HRC（HRA）？……

目前LZQ在高硬度用、高耐磨用、高耐衝擊用、高溫合金、耐熱合金、鎳鈦鈦合金鑄鐵、不銹鋼、鈷基鎳合金、鈦合金……等難加工材料類的各類產品的生產加工上表現突出，並取得較大的成績，常用進口材料有HRF10/K15A（超精加工→半精加工、高硬度用）、MR11（精加工→半粗加工、難加工材料用）、H10F/PR40（泛用型、通用型加工用）、VAR201（要求高耐衝擊、高抗崩性加工用）、ASP60A（HSS—Co10）、SKH57C（HSS—Co）、ASTM440PH……近300種材料種類。

Industrial product positioning B

LZQ is a high-tech joint venture, producing and processing high-precision imported products, like cutting tool, profile fixture, brazing jig, wear resistant parts, high-precision parts, and ultra-hard grinding tools for the world's top 500 companies and foreign-invested enterprises in China, and replacing mid-graded and high-graded products of Sandvik, Kennametal, Widia, Iscar..... Our material is super-strong ultra micro-grain high-level stuff. We have introduced world first-class CNC Processing Center, Super High-Speed Compound Grinding-Turning Center. From high-class products (via 6-axis/ 7-axis Blocking CNC-machine Tool (Class-AAA)) to medium-class products (via 3-axis/ 4-axis Blocking CNC-machine Tool (Class-D)), different quality and price. And we are professional in large quantity production of special, non-standard and special-shaped new products which can replace the first-class industrial products (please note that we try to avoid producing small quantity for every size). Our research, study and production are all for high-cost performance and we can modify the design according to your drawings and samples by the way of manufacturing and processing with high precision (3DX Technology) profile super-hard and super-finish grinding. It can reduce the total production cost!

With advanced and continually updated equipment, LZQ owns the capability of producing & processing various kinds of precise tools. We can produce super-precise/super-long/super-wear-resistant/impact-resistant/high-complex combined profiling products, with perfect cutting quality and tolerance fine to $\pm 0.0005\text{mm}(\pm 0.5\mu\text{m})$, and what a high-efficiency & low-cost application we deliver you! We keep around RMB 20-30 Million turnover stock articles such as raw material, semi-finished products, finished products in ordinary year, we are capable to produce according to drawing or sample provided by customer and make a quick delivery, so as to present you a favorable cost-performance ratio...

LZQ often produces non-standard, special-shaped, high precision products which are difficult to machine in medium and big batch, but rarely in a small number for single dimension standard ones, because the cost of jig, fixture, mould and Super-hard grinding wheel is quite high, and if without the mould, it is difficult to make an excellent item. However, it depends on the type and the dimension of the required products. Besides, in our company, the cost of standard products and that of the non-standard is similar, such as $\varnothing 12.0$ and $\varnothing 12.218$, but it is not for other companies, like Sandvik, Widia. This is why we are competitive in producing special, non-standard, special-shape goods. However, regarding to a big order, we also produce the standard products. But the cost-performance ratio and the competition are quite low, and also profit of the sale is lower for your company.

Generally speaking, for a big market share, other companies, like Sandvik, Kennametal, Widia, SecoTools... mostly make standard, general-use, ordinary products, from which we are not so competitive. But LZQ can replace or simulate the specialized, high-precision part, fixture, cutting tool, with special material, according to the requirements of drawings, samples. After once to twice test and improvement, we can make the same item as the first-class original one, even better. And this requires great understanding and support for us. It would be greatly helpful if real samples (several of the new and old with best application result) or drawings with detailed information about size and the specification of the products are provided. You can also visit our website <http://www.lzqtool.com.cn/dzyb/cn.html> from www.503233222.com (www.lzqtool.com) for electronic catalogue reference, from which detailed information for every product is available, including the material, size, drawings of semi-finished and final products, producing equipment and their value(USD)(for the judge of their working performance). You can also provide the deficiency of the original products, like easy-to-passivate, or tipping, or something else, and the material and hardness HRC will also be appreciated too.

At present, LZQ is good at producing tools for high-hardness, high wear-resistant and high impact-resistant products, like High-temperature alloy, Heat-resisting alloy, Vanadium-titanium alloy of nickel iron, Stainless steel, Cobalt-based nickel alloy, Titanium alloy or other items, made of difficult-processing material, and have done a good job. There are about 300 kinds of material we often use, like the imported ones, HRF10/K15A (for application from super-finish machining to semi-finish machining and for high-hardness processing), MR11 (for application from finish machining to semi-rough machining, and the use of hard-processing material), H10F/PR40 (for widely-used and ordinary processing application), VRA201 (for high wear-resistant and chipping-resistant application), ASP60A(HSS-Co10), SKH57C(HSS-Co), ASTM440PH...totally about 300 kinds of material.

常用HSS 及HSS-Co材料的毛坯成本(注意: 非医疗所用, 仅供参考)

(在中国大陆采购的品质有绝对保障的原材料毛坯供参考) 原材料毛坯单价为RMB元/kg, (部分材料材料说明见附件)。如原材料需经过锻造以达到更理想的晶粒致密性及刃口长时间的耐磨锋利性, 原材料毛坯锻打体积累量至少为实际的2倍, 即: 原材料 $\pi R^2 \times \text{厚度} \times \text{密度} \times 2$ 倍*单价, 为原材料毛坯经锻打后的实际用料成本。(供参考不同等级材料的成本)

- ①. ASP60A (AZQ常备 A级材料)
(相应HSS-Co10.5, 处理硬度HRC70° $\pm 2^\circ$) 特高硬度, 高红硬性, 密度约8.30g/ Cm3,
原材料毛坯 单价: 432-480元/kg, 真空热处理单价: 75-90元/kg。
- ②. SKH59C (A级材料)
(相应HSS-Co8.0, 处理硬度HRC68.5° $\pm 2^\circ$) 高硬度, 高红硬性, 密度约8.20g/ Cm3,
原材料毛坯单价: 320-350元/kg, 真空热处理单价: 60-75元/kg。
- ③. SKH57C (AZQ常备 A级材料)
(处理硬度HRC67° $\pm 2^\circ$ 优良的硬度和红硬性), 密度约8.20g/ Cm3,
原材料毛坯单价: 200-250元/kg, 真空热处理单价: 30-45元/kg。
- ④. SKH55C (AZQ常备 A级材料)
(处理硬度HRC65° $\pm 2^\circ$ 优良的硬度和红硬性), 密度约8.10g/ Cm3,
原材料毛坯单价: 180-220元/kg, 真空热处理单价: 20-30元/kg。
- ⑤. SKH51C (B级材料)
(处理硬度HRC61° $\pm 2^\circ$ 一般的硬度和红硬性, 但抗冲击、崩刃、折断性能较好),
密度约7.95g/ Cm3, 原材料毛坯单价: 100-120元/kg, 真空热处理单价: 10-15元/kg。
- ⑥. HSS-6542 (C级材料)
(处理硬度HRC61° $\pm 2^\circ$ 一般的硬度和红硬性, 但抗冲击、崩刃、折断性能较好),
密度7.95g/ Cm3, 原材料毛坯单价: 70-80元/kg, 真空热处理单价: 6-10元/kg。
- ⑦. HSS-9341 (C级材料)
(处理硬度HRC61° $\pm 2^\circ$ 一般的硬度和红硬性但抗冲击、崩刃、折断性能较好),
密度8.0g/ Cm3, 原材料毛坯单价: 65-75元/kg, 真空热处理单价: 5-8元/kg。
- ⑧. HSS-4341 (D级材料)
(处理硬度HRC60° $\pm 2^\circ$ 普通的硬度和耐磨性但抗冲击、崩刃、折断性能优良),
密度7.90g/ Cm3, 原材料毛坯单价: 55-65元/kg, 真空热处理单价: 3-6元/kg。
- ⑨. HSS-4241 (D级材料)
(处理硬度HRC59° $\pm 2^\circ$ 普通的硬度和耐磨性, 但抗冲击、崩刃、折断性能优秀),
密度7.90g/ Cm3, 原材料毛坯单价: 45-55元/kg, 真空热处理单价: 3-5元/kg。
- ⑩. HSS-607 (D级材料)
(处理硬度HRC58° $\pm 2^\circ$ 较差的硬度和耐磨性, 但抗冲击、崩刃、折断性能特别优秀),
密度7.85g/ Cm3, 原材料毛坯单价: 35-45元/kg, 真空热处理单价: 2-4元/kg。
- ASP60A :
(超耐磨型)
进口超耐磨型高级高钴粉末钢,
淬硬处理: HRC70° $\pm 2^\circ$, 具有极为优秀的耐磨耗性能及抗冲击性能, 相应HSS-Co、HSS-Al及HSSCo,
具有4~8倍的使用寿命, 并可保证被加工产品的统一性及合格率。
常用于普通设备加工各类高温合金、耐热合金、镍钎钛合金铸锭、不锈钢等难加工材料
(含镍、Cr、Mo、钨、钛等) 热处理前的特优秀加工工具。高温加工及综合性能极好,
允许切削速度较高, 加工材料的硬度越高, 效果越显著。
由于韧性略差, 不适合于断续切削或在工艺系统刚性不足的条件上使用, 否则易打刀或崩刃。
- ASP60A :
(超耐磨磨型)
Co粉末钢、热处理后硬化加工してある。HRC70° $\pm 2^\circ$ 耐摩擦、耐衝擊、耐熱、耐酸化、NIVT(アロイのHSS、HSS-Al、HSSCo)の4~8倍の使用壽命がある。高温加工、耐熱、酸化、NIVT(アロイのHSS、HSS-Al、HSSCo)の成分を含む場合)などの加工によく採用される。高温加工、総合性能は優れる。ハイスピード切削OK。ワークの硬度が高いほど、効果は顕著。韧性が足りないため、断続切削と加工設備の精度が低い場合、刃こぼれすることがある。
- SKH59C :
(超耐磨型)
进口超耐磨型高级高钴粉末钢:
淬硬处理: HRC68.5° $\pm 2^\circ$, 具有极为优秀的耐磨耗性能及抗冲击性能,
相应HSS-Co、HSS-Al及HSSCo, 具有4~6倍的使用寿命, 并可保证被加工产品的统一性及合格率。
常用于普通设备加工各类高温合金、耐热合金、镍钎钛合金铸锭、不锈钢等难加工材料
(含镍、Cr、Mo、钨、钛等) 热处理前的特优秀加工工具。高温加工及综合性能极好,
允许切削速度较高, 加工材料的硬度越高, 效果越显著。
由于韧性略差, 不适合于断续切削或在工艺系统刚性不足的条件上使用, 否则易打刀或崩刃。
- SKH57C :
(超硬型)
超硬高级高钴粉末钢:
淬硬处理HRC67° $\pm 2^\circ$ (HRA83.3° $\sim$ 85.6°) 相应HSS具有2~4倍以上的使用寿命。
- SKH55C :
(特硬型)
特硬高级高钴粉末钢:
淬硬处理HRC65° $\pm 2^\circ$ (HRA82° $\sim$ 84°) 相应HSS 具有2~3倍以上的使用寿命。
相应ISO M35。
- SKH51C :
(泛用超硬型)
超硬高级高速工具钢:
淬硬处理HRC61° $\pm 2^\circ$ 。具有理想的耐磨性/切削锋利性和使用寿命。
- HSSE :
(泛用超硬型)
超硬高级粉末高速工具钢:
淬硬处理HRC63° $\pm 2^\circ$ 。相应HSS具有更为理想的耐磨性和使用寿命。

The cost of general material HSS and HSS-Co (Note: Not for medical use and only for reference)

The margin of the material must be as twice as the practical material to use, if you need the material forged to be ideal crystal compactness, and long time wear-resistance of the edge and the sharpness. That is to say, the raw material $\approx 2 \times \text{thickness} \times \text{density} \times 2 \times \text{unit price}$, that equal to the actual cost of material to use after forging.

◆ The cost of general HSS and HSS-Co material work piece

The raw material blank purchased from Chinese Mainland which has absolute quality assurance for your reference. Please refer the attachment for the instructions of some materials and material types) please refer the attachment for some other instruction of the materials.

And the unit price of the raw material is RMB /kg. (For reference about the cost of different grades of material)

- ①. ASP60A : (Grade A)
(corresponding to the HSS-Co 10.5, the hardness can be up to HRC of $70^{\circ} \pm 2^{\circ}$ after treatment). Ultra high hardness, and high red hardness, the density is approximately 8.30g/Cm3. The unit price of the raw material 430-480 RMB/kg, and the unit price of vacuum heat treatment is 75-90 RMB/kg.
- ②. SKH59C : (Grade A)
(corresponding with HSS-Co8.0, deal the hardness can be up to HRC $68.5^{\circ} \pm 2^{\circ}$ after treatment. Ultra high hardness, and high red hardness, the density is approximately 8.20g/ Cm3. The unit price of the raw material is 320-350RMB/kg, and the unit price of vacuum heat treatment is 60-75 RMB/kg.
- ③. SKH57C : (which L24 has in stock for year round)
(deal the hardness can be up to HRC $67^{\circ} \pm 2^{\circ}$ after treatment), with excellent hardness and high red hardness. the density is approximately 8.20 g/ Cm3. The unit price of raw material is 200-250RMB/kg, and the unit price of vacuum heat treatment is 30-45 RMB/kg.
- ④. SKH55C : (which L24 has in stock for year round)
its material with A grade, with excellent hardness and high red hardness, the density is approximately 8.10g/ Cm3. The unit price of raw material is 180-220RMB/kg, and the unit price of vacuum heat treatment is 20-30 RMB/kg.
- ⑤. SKH51C : (Grade B)
(the hardness can be up to HRC $61^{\circ} \pm 2^{\circ}$ after treatment) with general hardness and high red hardness, but with comparably high impact-resistance, tipping-resistance, and fracture-resistance. The density is approximately 7.95g/ Cm3, the unit price of raw material is 100-120RMB/kg, and the unit price of vacuum heat treatment is 10-15RMB/kg.
- ⑥. HSS-6542 : (Grade C)
(the hardness can be up to HRC $61^{\circ} \pm 2^{\circ}$ after treatment) with general hardness and high red hardness, but with high impact-resistance, tipping-resistance, and fracture-resistance. The density is approximately 7.95g/ Cm3, the unit price of raw material is 70-80RMB/kg, and the unit price of vacuum heat treatment is 6-10RMB/kg.
- ⑦. HSS-9341 : (Grade C)
(the hardness can be up to HRC $61^{\circ} \pm 2^{\circ}$ after treatment) with general hardness and high red hardness, but with comparable high impact-resistance, tipping-resistance, and fracture-resistance. The density is approximately 8.0g/ Cm3, the unit price of raw material is 65-75RMB/kg, and the unit price of vacuum heat treatment is 5-8RMB/kg.
- ⑧. HSS-4341 : (Grade D)
(the hardness can be up to HRC $60^{\circ} \pm 2^{\circ}$ after treatment) with general hardness and wear-resistance, but with high impact-resistance, tipping-resistance, and fracture-resistance. The density is approximately 7.90g/ Cm3, the unit price of raw material is 55-65RMB/kg, and the unit price of vacuum heat treatment is 3-6RMB/kg.
- ⑨. HSS-4241 : (Grade D)
(the hardness can be up to HRC $59^{\circ} \pm 2^{\circ}$ after treatment) with general hardness and wear-resistance, but with excellent impact-resistance, tipping-resistance, and fracture-resistance. The density is approximately 7.90g/ Cm3, the unit price of raw material is 45-55RMB/kg, and the unit price of vacuum heat treatment is 3-5RMB/kg.
- ⑩. HSS-607 : (Grade D)
(the hardness can be up to HRC $58^{\circ} \pm 2^{\circ}$ after treatment) with comparably weak hardness and wear-resistance, but with especially excellent impact-resistance, tipping-resistance, and fracture-resistance. The density is approximately 7.85g/ Cm3, the unit price of raw material is 35-45RMB/kg, and the unit price of vacuum heat treatment is 2-4RMB/kg.

ASP60A:

Imported ultra high wear-resistant high-grade high cobalt powder steel: quenched; HRC70 2 , with excellent wear resistance and impact resistance. Comparing with HSSE/HSS-AL and HSSCo, it has 4 8 times lifetime, and can guarantee uniformity and conformity rate of machined products. It is often applied in general equipment for machining various materials including Ni-Cr-Mo-Si-V-Ti that are hard to machine like high alloy/heat-resistant alloy/cast iron of nickel-vanadium-titanium alloy/stainless steel. It is excellent machining tool before heat treatment. It has excellent high temperature machining and comprehensive performance, and allows higher cutting speed. The higher the hardness of machined materials are, the more remarkable the effect would be. Because its roughness is not so good, it is not suitable for discontinuous cutting or for using under processing system of insufficient rigidity, otherwise, Cutter's hit or chip will happen.

SKH59C :

(Ultra high wear-resistance)
Imported super wear-resistance high grade high cobalt powder steel: hardening at HRC68.5° $\pm 2^{\circ}$, with excellent wear-resistance and impact-resistance compare with the material of HSSE, HSS-AL or HSSCo, with more than 4-6 times serving lives, and we are sure of the uniformity and conformity rate of machined products. It is often applied on ordinary equipment to machine various different machining materials (containing Ni, Cr, Mo, Si, Ti etc) like high temperature alloys, heat-resistant alloys, Ni-V-Ti alloys, cast iron, stainless steel etc. before heat treatment. It is machined with high temperature and comprehensive ability, and high cutting speed allowed, the performance would be better if the hardness of the material to use is higher. Owing to the bad tenacity, and it's not suitable for using under non-continuous cutting and the condition of worse steel feature, it would be easy to tipping,!

SKH57C:

(Ultra hard)
Specifically hard & advanced high cobalt powder steel: quench hardening at HRC67° $\pm 2^{\circ}$ (HRA83.3° ~85.6°) , comparing to HSS, it has 2~4 times or more longer service life .

SKH55C:

(Special Hardness)
Special hardness high Cobalt powder steel, Quench treatment HRC65° $\pm 2^{\circ}$ (HRA82° ~84°) , Moreover HSS have a above 2-3 time use life. Correspond to ISO M35A.

HSSE:

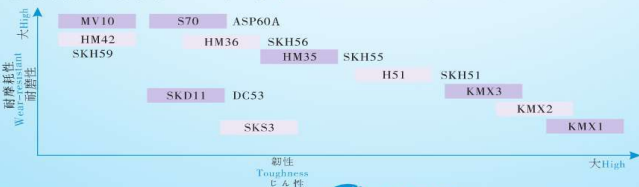
(The widely using ultra hard type)
Super high quality powder steel tool steel, hardening at HRC63° $\pm 2^{\circ}$ degrees, corresponding to HSS, it has even more ideal wear-resistant and service life

材料規格の比々[II] (工具鋼、金型鋼)

◆ 工具鋼關聯 Concerning of tool steel 工具鋼關係

規格號碼・名稱 Spec. Name	JIS	AISI	ASTM	BS	BSN	VDEH	NF	ГОСТ
炭素工具鋼 炭素工具鋼	SK1	W1-13	—	—	—	—	Y140	Y13
鋼材	SK2	W1-11/2	BW1C	—	—	—	Y120	Y12
	SK3	W1-10	BW1B	C105W1	—	—	Y105	Y11
	SK4	W1-9	BW1A	—	—	—	Y190	Y10
	SK5	W1-8	BW1A	C80W1	—	—	Y190・Y180	Y8Г・Y9
炭素工具鋼	SK6	W1-7	—	C80W1	—	—	Y180・Y170	Y8
	SK7	—	—	C70W2	—	—	Y170	Y7
	SKH2	T1	BT1	—	—	—	Z80WCV・18-04-01	P18
鋼材	SKH3	T4	BT4	—	—	—	Z80WKCVC・18-05-04-01	—
	SKH4	T5	BT5	S18-1-2-5	—	—	Z80WKCVC・18-10-04-02	—
	SKH10	T15	BT15	—	—	—	Z160WKCVC・12-05-05-04	—
	SKH51	M2	BM2	S6-5-2	—	—	Z85WDCVC・06-05-04-02	—
鋼材	SKH62	M3-1	—	—	—	—	—	—
	SKH53	M3-2	—	S6-5-3	—	—	Z120WDCVC・06-05-04-03	—
	SKH54	M4	BM4	—	—	—	Z130WDCVC・06-05-04-04	—
	SKH55	—	—	S6-5-2-5	—	—	Z90WDKVC・06-05-05-04-02	P6M5K5
鋼材	SKH56	M36	—	—	—	—	—	—
	SKH57	—	—	S10-4-3-10	—	—	Z130WKCDCV・10-10-04-04-03	—
	SKH58	M7	—	—	—	—	Z100DCVC・09-04-02-02	—
	SKH59	M42	BM42	—	—	—	Z11DKCVCV・09-08-04-02-01	—
	MPM	—	—	—	—	—	—	—
鋼材	SKS11	F2	—	—	—	—	—	XB4
	SKS12	—	—	105WCr6	—	—	105WC13	—
	SKS21	—	—	—	—	—	—	—
	SKS5	—	—	—	—	—	—	—
	SKS51	L6	—	—	—	—	—	—
	SKS7	—	—	—	—	—	—	—
	SKS8	—	—	—	—	—	Y2140C	13X
	SKS4	—	—	—	—	—	—	—
	SKS41	—	—	—	—	—	—	—
	SKS43	W2-91/2	BW2	—	—	—	Y1105V	—
鋼材	SKS44	W2-81/2	—	—	—	—	—	—
	SKS3	—	—	—	—	—	—	9XBГ
	SKS31	—	—	105WCr6	—	—	105WC13	XBГ
	SKS93	—	—	—	—	—	—	—
鋼材	SKS94	—	—	—	—	—	—	—
	SKS95	—	—	—	—	—	—	—
	SKD1	D3	BD3	X210Cr12	—	—	Z200C12	X12
	SKD11	D2	BD2	—	—	—	Z160CDV12	—
	SKD12	A2	BA2	—	—	—	Z100CDV5	—
	SKD4	—	—	—	—	—	Z32WCV5	—
	SKD5	H21	BH21	—	—	—	Z30WCV9	—
	SKD6	H11	BH11	X38CrMoV51	—	—	Z38CDV5	4X5MφC
	SKD61	H13	BH13	X40CrMoV51	—	—	Z40CDV5	4X5Mφ1C
	SKD7	H12	BH12	—	—	—	Z35WCDV5	3X3M3φ
鋼材	SKD8	H10	BH10	X32CrMoV33	—	—	Z32CDV28	—
	SKD8	H19	BH19	—	—	—	—	—
	SKT3	—	—	—	—	—	55CNDV4	—
	SKT4	—	—	—	—	—	55NCDV7	—
	SKT4	—	—	55NiCrMoV6	—	—	55NCDV7	5XHM
	SKT4	—	—	—	—	—	—	—
	SKT4	—	—	—	—	—	—	—

高速度鋼的特性位置安裝圖 Sketch map of high speed steel characteristic 高速度鋼の特性位置付け図



材料標準規格の比較【Ⅲ】(特殊鋼、不銹鋼)
Comparison of standard specification of materials【III】(special steel, stainless steel)
材料規格の比べ【III】(特殊鋼、ステンレススチール)

◆特殊用鋼関係 Concerning special purposes steel (特殊用途関連)

規格號碼・名称 Spec. Name 規格番号・名称	JIS	AISI SAE	BS	DIN	NF	OCT
High carbon chrome bearing steel	SUJ1	51100	—	—	—	—
JIS G-4805 高炭素 路軸承 鋼鋼材 高炭素のロム 軸受鋼の鋼材	SUJ2	52100	535A99	100Cr6	100Cr6	ω X 15
	SUJ3	ASTMA485 Grade-1	—	—	—	—
	SUJ4	—	—	—	—	—
	SUJ5	—	—	—	—	—

◆不銹鋼関係 Concerning stainless steel (ステンレススチール関連)

規格號碼・名称 Spec. name	JIS	ISO	AISI ASTM	BS	DIN	NF	Γ OHT
JIS G-4304 熱作拉伸 不銹鋼板	SUS201	A-2	AISI201	—	—	—	—
	SUS202	A-3	AISI202	BS284S16	—	—	Γ OCT12X17 Γ 9AH4
	SUS301	14	AISI301	BS301S21	DINX12CrNi177	NFZ12CrNi17.07	—
	SUS301J1	—	—	—	—	—	—
	SUS302	12	AISI302	BS302S25	—	NFZ10CrNi18.09	—
	SUS302B	—	AISI302B	—	DINX5CrNi1810	NFZ6CrNi18.09	—
	SUS304	11	AISI304	BS304S31	DINX2CrNi1911	NFZ2CrNi18.10	Γ OCT08X18H10
	SUS304L	10	AISI304L	BS304S11	—	NFZ5CrNi18.09Aa	Γ OCT03X03H11
	SUS304N1	—	AISI304N	—	DINX2CrNi1810	NFZ2CrNi18.10Aa	—
	SUS304N2	—	ASTMXM21	—	—	—	—
熱間圧延 ステンレススチール リット	SUS304LN	10N	ASTM304LN	—	DINX5CrNi1812	NFZ8CrNi18.12	—
	SUS305	13	AISI305	BS305S18	—	NFZ10CrNi24.13	—
	SUS309S	—	AISI309S	—	—	NFZ12CrNi25.20	—
	SUS310S	—	AISI310S	BS310S31	DINX5CrNiMo17122	NFZ6CrNi17.11	—
	SUS316	20,20a	AISI316	BS316S31	DINX2CrNiMo17132	NFZ2CrNi17.12	—
	SUS316L	19,19a	AISI316L	BS316S11	—	—	Γ OCT03X17H14M2
	SUS316N	—	AISI316N	—	DINX2CrNiMo17122	—	—
	SUS316LN	19N,19aN	ASTM316LN	—	—	NFZ2CrNi17.12Aa	—
	SUS316H	—	—	—	—	—	—
	SUS316H1	—	—	—	—	—	—
熱間圧延 ステンレススチール リット	SUS317	—	AISI317	BS317S16	DINX2CrNiMo18164	—	—
	SUS317L	24	AISI317L	BS317S12	—	NFZ2CrNi19.15	—
	SUS317H	—	—	—	DINX6CrNiTi1810	—	—
	SUS321	15	AISI321	BS321S31	DINX6CrNiNb1810	NFZ6CrNi18.10	—
	SUS347	16	AISI347	BS347S31	—	NFZ6CrNiNb18.10	Γ OCT08X18H10T
	SUS347H	—	ASTMXM15	—	—	NFZ15CrNi20.12	Γ OCT08X18H12B
	SUS329J1	—	AISI329	—	—	—	—
	SUS329J2L	—	ASTM	—	—	—	—
	SUS405	2	AISI405	BS405S17	DINX6CrAl13	NFZ6CrAl13	—
	SUS410L	—	—	—	—	NFZ3Cr14	—
熱間圧延 ステンレススチール リット	SUS429	—	AISI429	—	—	—	—
	SUS430	8	AISI430	BS430S17	DINX6Cr17	NFZ8Cr17	—
	SUS430X	—	ASTMXM8	—	DINX6Cr17	—	Γ OCT12X17
	SUS434	9c	AISI434	BS434S17	DINX6CrNb17	NFZ8CrNb17	—
	SUS436L	—	—	—	—	NFZ8Cr17.01	—
	SUS444	F1	ASTM	—	—	—	—
	SUS447J1	—	—	—	—	—	—
	SUSXM27	—	ASTMXM27	—	—	NFZ01Cr26.1	—
	SUS403	—	AISI403	—	—	—	—
	SUS410	3	AISI410	BS410S21	—	—	—
熱間圧延 ステンレススチール リット	SUS410S	1	ASTM410S	BS403S17	DINX10Cr13	NFZ13Cr13	Γ OCT12X13
	SUS420J1	4	AISI420	BS420S29	DINX6Cr13	NFZ6Cr13	Γ OCT08X13
	SUS420J2	—	—	BS420S37	DINX20Cr13	NFZ20Cr13	Γ OCT20X13
	SUS429J1	—	—	—	DINX30Cr13	NFZ30Cr13	Γ OCT30X13
	SUS440A	5	AISI440A	—	—	—	—
	SUS631	2	ASTM631	—	DINX7CrNiAl177	NFZ8CrNiAl17.7	Γ OCT09X17H17-0

参考: 国際標準化機構ISO=International Organization for Standardization(国際規格化機構)
Reference: 国際鋼鐵協會AISI=American Iron and steel Institute (アメリカ鋼鉄協会)

参考: 汽車技術協會SAE=Society of Automotive Engineers (自動車技術協会)

参考: 英國規格協會BS=British Standards Institution (イギリス規格協会)

参考: 美國材料規格協會ASTM=American Society for Testing and Materials (アメリカ材料規格協会)

参考: 德國規格委員會DIN=Deutsches Institut für Normung (ドイツ規格委員会)

参考: 法國國家標準NF=Nomes Francaises (フランス国家規格NF)

参考: 蘇聯國家規格TOCT= Russia National Standards (フランス国家規格NF)

参考: 德國鋼鐵協會VDEH=Vereim Deutscher Eisenhüttenleute (ドイツ鋼鉄協会)

刀具模具材料種對照表

Comparison table for material of cutting tool and mould

カッタ、金型材料種對照表

◆ 鑽石鋸鋼常用牌號(材種)對照表

Comparison table for general brand (material) of diamond tungsten steel (ダイヤモンド、タングステン鋼常用ブランド(材種)對照表)

ISO Code	LZQ	VR WESSON	CERATIZIT	GREENLEAF	CARBEX EVAMET	YB	Wimet	Unit	Tykrum	Carbex	ROCT (俄罗斯)	BHMA
P	P40	PRA121 PRA1220 PRA1200T	VR79	S40T GM246 S40T Gm740	GA-5040 G-50 G-915 G-910	CNX430 CS6	YT5	GW540 XL45	US40 US54B US50	TS4 CS6 P50	TFK12R T5K12B	263 182
	M10	HRF10 HRD10 NBR108	VR75	H210T CTC1110 CTC1115 GM213 U17T	G-23 GA-5022 GA-5026 G-925 G-920 G-20M	CYB300 CX1515 CX2515 TX10M CFX15	YW1	UA10 UH51B	TU1 RW2110	CU10		453
M	M20	MR11 MR12 SRA81 SRA82 MR12T HUF10	VR52	CTW7120 CTP2120 SR226+ GM127 Gm240	GA-5035 G-60 G-10 G-20M	CX3615 TX20M MX250M CNX825 CNX725 CYC400	YW2	UA20 UH51B	TU2 RW2110	CU20		363
	M30	PR14 PR15 SRA63 PRA8 PRA11 MU11 PR40	RAMET1	GM40 GM43+ GM740 CTC1435	GA-5030 G-910 G-915 GA-5040 G-01M G-50	CYC3300 TX25M CNX350 CNX430		UA30	THX	CU30		263
M	M40	PU40 PUA5		S40T GM246 S40T		CS6		UA40		CH10		273
K	K01	HRF10 HRD10 NRB10Z	VR52 VR82		G-40 G-20M	CYP320 CYB300 CYD500	YG3X	UH03	TH2 TH3	CS310 CH01	BK3M	930
	K10	SR10 SR10T MR11 MR12 KR121 HUF10	2A5	H210T AMZ SR215 H216T H10T CTC1115 CTC1115 SR17 H216T TSM20 GM213 U17T	G-23 GA-5026 G-920 G-925 GA-5012 GA-5022 G-02 G-20M	CX1515 CY320 CX2515 CH01 CH01D CFX15 CYW15	YG6A YD10	GW620H	UH10 UH51B	CH15 CS310 CS320	BK6M	741
K	K20	MR12T PR14 KR141 PR15 KR301 PR40 MU11 PRA5 NRA6		CTW7120 CTP2120 SR226+ CTC1435	G-10 G-910 GA-5040	CYC600 CYC100 MX250M CH1	YG6	GW620H	UH20	TG1 G1 CS320	BK6	560
	K30	NRA62 SRA63 NRA71 KRA720 PRA8 PU40 PUA5	RAMET1	TSC30 TSM30		CYD300 CYC700	YG8 YG15	CM G	UH30 UH40	TG1 TG3	BK8 BK10 BK15	280 290

◆ 超硬CBN/PCBN (Super hardness CBN/PCBN) (超硬CBN/PCBN)

分類 Classification 区分	代號 Symbol	LZQ	Mitsubishi Material	Sumitomo Electric	Toshiba Tungaloy	Kyocera	DIJET	Sandvik	GE	DeBeers
H	H01	CBN10	MB8010 MB810	BNX10 BNC150	BX310					
H	H10	GE2000	MB8025 MB820	BN250 BNX20	BX330 BX350	KBN10B	JBN330 JBN300	CB7020	HTC2000	DBC50
H	H20	GE8200 CBN20	MB8025 MB825	BN25 BNC200	BX360	KBN25B	JBN245	CB7050	BZN8200	DBN45
H	H30	CBN30	MB8025 MB835	BN300	BX380					
S	S01		MB730	BN600 BN700	BX950					
S	S10									
S	S20									
S	S30	HUF10								
K	K01	GE6000	MB710	BN500	BX930	KBN65B	JBN795	CB7050	BZN6000	DBC80
K	K10	CBN20	MB710 MB730	BN600 BN700	BX950	KBN900	JBN330			
K	K20	CBN30	MB730	BN600 BN700						
K	K30	HUF10		BNS800						

刀具模具材料種別対照表

Comparison table for material of cutting tool and mould

カッタ、金型材料種別対照表

◆ 金属陶瓷、陶瓷常用牌號（材料種）対照表

Comparison table for general brand (material) of cermet and ceramics 金属陶瓷、陶瓷常用ブランド（材料種）対照表

ISO Code	LZQ	Mitsubishi Material	Toshiba Tungaloy	Sumitomo Electric	Kyocera	DIJET	Hitachi Tool	Sandvik	Kennametal	Widia	Iscar	Seco Tools	
P	P01	HK4	NX22 XD805 AP25N	NS520 LX11 AT520 GT520	T05A T12Z NB90S T110A T2000Z	AZ5000 TN30 TC30 CA010 CA100	LN10 CX50 CA010 CA100	CH350	CT5015 CC620 CC650 CT5005	KT125 KW80 KB90 MC2 HTX	TTI-05 TTI-15 R.G.H	IC20N IC520M	
	P10	HK4	NX33 AP25N NX2525	N308 NS520 GT530 NS530 WG300 AT520 AT530	T12A T130Z T1200A WX120 T2000Z	TC30 TC40 TN60 TN6020 PV60 PV7020	LN10 CX50 NIT CX75	CH350 CZ25 CZ1025	CT525 CC670 CT5015 GC1525	KT125 KZ205 KT175 HT2 KB90X KT195M KT530M	TTI-05 TTI-15 TTI-25 R.G. M.U.	IC20N IC520N IC30N	CM C15M
	P20		UP35N NX55 AP25N NX2525 NX335	N308 GT530 NS530 AT530	T1200A T130A T2000Z T3000Z	TN90 TN60 TC60 TN6020 PV90 PV7020 TN100M	CX50 NAT CX75 CX90	CH550 CH570 CZ25 CZ1025 CH7030	GC1525 CT530 CC670	KZ205 KT175 HT5 KT195M KT530M PS5 HT7 KT605M	TTI-15 TTI-25	IC20N IC75T IC30N IC520N	C15M CR CM
	P30	HUF10	NX99 NX4545 NX335 NX530 VP45N	NS530 NS540	T1200A CN8000 T250A T3000Z		CX90 SUZ CX99	CH570		KT195M HT7		IC75T IC30N	OR
M	M10	HK4	NX22 NX2525 AP25N	NS520 WG300 AT530 GT530	T05A T110A T12Z WX120 NX260C Y2000Z	TN60 TN6020 PV60 PV7020	LN10 CA200 CS100 CX50	CH350	CT525 CC670 CT5015 GC1525	KT125 KT175 KY4300 Y4000 KY2000	TTI-15 TTI-25 R.G. M.U.	IC30N	CM C15M
	M20	HK4	NX33 NX2525 AP2525	NS520 GT530 NS530	T12A T1200A NS260C NS260 T2000Z	TN90 TN6020 PV90 PV7020 TN60 TN100M	CX50 NIT CX75 NAT CX90	CH550 CH570 CZ25 CZ1025 CH7030	CT530 CC670 GC1525	KT175 KT195M HT5 HT2 KY2100 KY2000 PS5	TTI-25 R.U N2000	IC30N	C15M CR
	M30	HUF10	NX4545		T130Z T250A T1200A CN8000 T3000Z		CX75 CX90 SUZ CX99	CH570	CT530 CC670	HT7 KZ205			C15M CR
	K	K01	HK4	NX22 DX202 NX2525 AP25N	NS520 LX11 LX21 AT520 GT520	T05A T12Z T110A NB90S NB90M WX120 T2000A	SN60 A65 A66N TN30 PV30	LN10 CA100 CA200	CH350	CT515 GC1690 CC620 CC650 CT5015	KW80 KB90 MC2 HTX	R G H N1000	
K	K10	HK4	NX33 XE15 XE9 AP25N NX2525	N302 GT530 WG300 FX105 NS520 AT530	T12A T1200A WX120 NS260C NS260 T2000Z	KS6000 TC30 TC40 PV30 PV60 PV6020 TN60 TN6020	LN10 CA200 CS100 CX75	CH350	GC650 CT5015 CT525	HT5 MC3 KB90 KY3000 KT315	R.G.H.U N1000 N2000		
	K20	HUF10	NX2525 AP25N		T3000Z		CX75						

◆ PCD鑽石材料(PCDDiamond material) (PCDダイヤモンド材料)

区分	代號 Symbol コード	LZQ	Mitsubishi Material	Sumitomo Electric	Toshiba Tungaloy	Kyocera	DIJET	Sandvik	GE	DeBeers
N	N01	GE1700	MD250	DA90	DX180	KPD025	JDA735		GE1700	CTH025
	N10	GE1500	MD205 MD220	DA150	DX160	KPD010	JDA745	CD10	GE1500	CTB010
	N20	GE1300	MD220 MD230	DA200	DX140 DX120	KPD002	JDA715 JDA710		GE1300	CTB002
	N30	GE1600	MD230	DA2200		KPD001			GE1600	

刀具模具材料對照表

Comparison table for material of tooling and mould

カッタ、金型材種對照表

◆ 刀具模具常用材料參考

Reference for general material of tooling and mould.

LZQ常用材料參考 Reference of general material from LZQ	硬度Hardness		抗彎強度Bending strength		抗壓強度Compression strength		密度Density
	HV30	HRA	N/mm ²	psi	N/mm ²	psi	g/cm ³
H10F	1600	92.1	3750	—	6300	—	14.50
H10F-1	1600	92.1	4300	623000	6250	906250	14.45
DK20	1500	91.4	2300	—	5300	—	14.70
DZ05	1900	93.8	2300	—	7700	—	15.00
DZ05	1900	93.8	2300	333000	6900	1000000	15.00
H3M	1750	93.0	1900	—	6900	—	15.20
H4M	1750	93.0	2000	290000	6900	1000000	1500
H5M	1700	92.7	2100	—	6700	—	15.00
H5M	1700	92.8	2100	305000	6700	971000	14.95
H6N	1575	91.9	2200	319000	6200	899000	14.95
H10N	1400	90.4	2600	—	5200	—	14.60
H12N	1300	89.3	2800	—	4600	—	14.30
DA25	1450	90.9	2400	348000	5200	754000	14.65
DC03	1900	93.8	2100	305000	7500	1088000	15.25
DZ05	1900	93.8	2300	333000	6900	1000000	15.00
H3F	1925	93.9	2200	319000	7800	1131000	15.25
H15F	1400	90.4	4000	580000	—	—	13.95
DH10	1720	92.9	2300	333000	—	—	15.00

◆ G类钻石钨钢材种近似对照表

Approximate comparison table for material of diamond tungsten steel kind G.

國際 標準 化組 織ISO	LZQ		德國 Germany		法國 France		日本 Japan		俄羅斯 Russia		瑞典 Sweden		英國 England		美國 America			
	LZQ	Diamond	DIN	Widia	Unit	Tykan	Carbes	Is	Lgetalloy	T OCT	Sandvik Coromant	Seco	BHMA	Wimet	Anmolloy	JIC	Wendt-Sonit	Kennametal
G05	NUA61 KU30IZ	G6	—	GT05	G05 B10	—	G10	—	G10E	BK6	CS10 CS20	—	—	NH N	F1/F	—	—	—
G10	KUA720 KU30IZ	G6	G1	GT10	G10	—	G12	E1	G2	BK6B	CS20	—	—	XI2	F1/C	—	—	—
G15	PUA71	G8	—	GT15	G15 B30	—	G3	—	G3	BK8B	CG35 CS40	—	—	CT 90B	F2/8C	—	—	—
G20	PUA181	G11	G2	GT20 TH40	G20 G40	—	G5	E2	G5	BK10	CG40	—	—	G R11 110B	F2/10C	—	—	—
G30	VUA22Z	G15	G3	GT30	G30 B50	—	G6	E3	G6	BK15	CG60 CT50	—	—	BP1	F2/15C	—	—	—
G40	VUA324 VUA351	—	G4	GT40	G40	—	G7	E4	G7	BK20	—	—	—	—	F2/20C	—	—	—
G50	VUA421	—	G5	GT55	G50	—	G8	E5	G8	BK25	CT70 CT80	—	—	TT	F2/25C	—	—	—
G60	VUA521	—	G6	—	G60	—	—	—	—	BK30	—	—	—	—	F2/30C	—	—	—

超精細研磨丸棒

高耐摩耗/高耐衝擊用/高精密度



外徑公差

AAA級:	$\pm 0.001\text{ mm}$
AA級:	$\pm 0.002\text{ mm}$
	+0
A級:	-0.004mm
	+0
B級:	-0.008mm
	+0
C級:	$\pm 0.008\text{ mm}$

真圓度 $\bigcirc \leq 0.004\text{mm}$
Roundness 真九度
同心度 $\odot \leq 0.004\text{mm}$
Concentricity 同心性
光潔度 $0.4 \sim 0.1$
Surface finish 纖細度

10

“★”常備在庫品

★ 依圖依樣尺寸公差要求可生產特殊、複合、異型、超大超微細超長組合成型制品。We can produce special、compound、special-shaped、super-large/super-thin/super-long combined profiling products according to requirements of drawings, samples and dimension tolerance. 図面、サンプル及び寸法の公差要求により可生産特殊、複合、異型、超大、超微細、超長の組合成型製品を生産できる

超精研磨帶孔圓棒（圓管、治具）

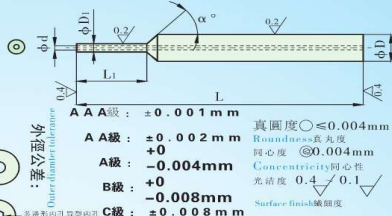
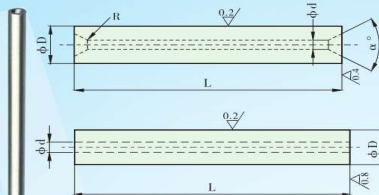
Super finish grinding round bar with hole(round pipe, fixture)

超精細研磨中空丸棒（丸管、治具）

（高耐磨/高耐衝擊/高精度）

High wear-resistant/high impact-resistant/high precision

高耐摩耗/高耐衝擊用/高精度



表面公差
Surface tolerance

AA級: ±0.001mm
A級: ±0.002mm
A級: +0
B級: +0
C級: -0.008mm

真圓度 ≤ 0.004mm
Roundness 真九度
同心度 ≤ 0.004mm
Concentricity 同心度
光洁度 0.4 ~ 0.1
Surface finish 鏡面度

規格 Specification 外径 ΦD 内径 Φd 長さ L O.D.I.D. Length	材質 Grades	規格 Specification 外径 ΦD 内径 Φd 長さ L O.D.I.D. Length	材質 Grades	規格 Specification 外径 ΦD 内径 Φd 長さ L O.D.I.D. Length	材質 Grades
1.000 * Φd * L	Quality Carbide	19.500 * Φd * L	Quality Carbide	38.000 * Φd * L	Quality Carbide
1.500 * Φd * L	HXF10	20.000 * Φd * L	HXF10	38.500 * Φd * L	HXF10
2.000 * Φd * L	HXD10(HRA94°)	20.500 * Φd * L	HXD10(HRA94°)	39.000 * Φd * L	HXD10(HRA94°)
2.500 * Φd * L	NXB10Z	21.000 * Φd * L	NXB10Z	39.500 * Φd * L	NXB10Z
3.000 * Φd * L	NXB10	21.500 * Φd * L	NXB10	40.000 * Φd * L	NXB10
3.500 * Φd * L	SX10	22.000 * Φd * L	SX10	40.500 * Φd * L	SX10
4.000 * Φd * L	SX10T	22.500 * Φd * L	SX10T	41.000 * Φd * L	SX10T
4.500 * Φd * L	MX11(HRA93°)	23.000 * Φd * L	MX11(HRA93°)	41.500 * Φd * L	MX11(HRA93°)
5.000 * Φd * L	MX12	23.500 * Φd * L	MX12	42.000 * Φd * L	MX12
5.500 * Φd * L	KX301	24.000 * Φd * L	KX301	42.500 * Φd * L	KX301
6.000 * Φd * L	MX12	24.500 * Φd * L	MX12	43.000 * Φd * L	MX12
6.500 * Φd * L	MX12	25.000 * Φd * L	MX12	43.500 * Φd * L	MX12
7.000 * Φd * L	MX12	25.500 * Φd * L	MX12	44.000 * Φd * L	MX12
7.500 * Φd * L	MX12	26.000 * Φd * L	MX12	44.500 * Φd * L	MX12
8.000 * Φd * L	MX12	26.500 * Φd * L	MX12	45.000 * Φd * L	MX12
8.500 * Φd * L	MX12	27.000 * Φd * L	MX12	45.500 * Φd * L	MX12
9.000 * Φd * L	MX12	27.500 * Φd * L	MX12	46.000 * Φd * L	MX12
9.500 * Φd * L	MX12	28.000 * Φd * L	MX12	46.500 * Φd * L	MX12
10.000 * Φd * L	MX12	28.500 * Φd * L	MX12	47.000 * Φd * L	MX12
10.500 * Φd * L	MX12	29.000 * Φd * L	MX12	47.500 * Φd * L	MX12
11.000 * Φd * L	MX12	29.500 * Φd * L	MX12	48.000 * Φd * L	MX12
11.500 * Φd * L	MX12	30.000 * Φd * L	MX12	48.500 * Φd * L	MX12
12.000 * Φd * L	MX12	30.500 * Φd * L	MX12	49.000 * Φd * L	MX12
12.500 * Φd * L	MX12	31.000 * Φd * L	MX12	49.500 * Φd * L	MX12
13.000 * Φd * L	MX12	31.500 * Φd * L	MX12	50.000 * Φd * L	MX12
13.500 * Φd * L	MX12	32.000 * Φd * L	MX12	50.500 * Φd * L	MX12
14.000 * Φd * L	MX12	32.500 * Φd * L	MX12	51.000 * Φd * L	MX12
14.500 * Φd * L	MX12	33.000 * Φd * L	MX12	51.500 * Φd * L	MX12
15.000 * Φd * L	MX12	33.500 * Φd * L	MX12	52.000 * Φd * L	MX12
15.500 * Φd * L	MX12	34.000 * Φd * L	MX12	53.000 * Φd * L	MX12
16.000 * Φd * L	MX12	34.500 * Φd * L	MX12	54.000 * Φd * L	MX12
16.500 * Φd * L	MX12	35.000 * Φd * L	MX12	55.000 * Φd * L	MX12
17.000 * Φd * L	MX12	35.500 * Φd * L	MX12	56.000 * Φd * L	MX12
17.500 * Φd * L	MX12	36.000 * Φd * L	MX12	57.000 * Φd * L	MX12
18.000 * Φd * L	MX12	36.500 * Φd * L	MX12	58.000 * Φd * L	MX12
18.500 * Φd * L	MX12	37.000 * Φd * L	MX12	59.000 * Φd * L	MX12
19.000 * Φd * L	MX12	37.500 * Φd * L	MX12	60.000 * Φd * L	MX12

★超精研磨圓棒的加工精度可達到小數點第3-4位（0.001），外徑公差可至±0.001mm。Super finish grinding round bar can achieve the machining precision up to 3-4 decimal digits (0.001), and outer diameter tolerance can achieve up to ±0.001mm.

★依圖面樣式尺寸公差要求可生產特殊、複合、異型、超大型超微細超長組合型製品。We can produce special, compound, special-shaped, super-large/super-thin/super-long combined products according to requirements of drawings, samples and dimension tolerance.

★圖面、サンプル及び寸法の公差要求により可生産特殊、複合、異型、超大型、超微細、超長の組合成型製品を生產できる

刀具, 配件 (钻头/起子) 部分柄部类型

Patial shank types for cutters, accessories(drills/drivers)

刃物、部品(ドリル/ドライバー)の一部柄部タイプ

超高防锈高硬度型(AA)&超高耐磨型(A/AA)&超高精密加工

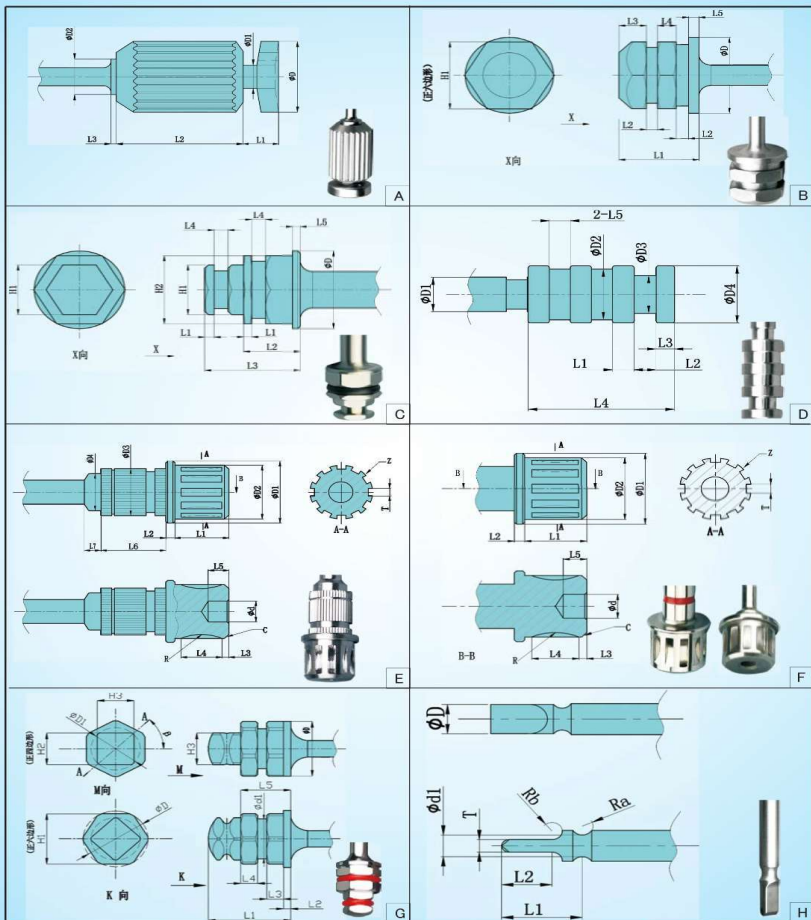
(Super-high anti-rust and high hardness type(AA)&Super

wear-resistant type(A/AA)&Super-high precision process)

(超高防锈高硬度型(AA)&超耐磨耗型(A/AA)&超精密加工可)

★、各種鑽頭、鑽套可以採用任何材料及任何形狀、成型超硬、超硬研磨成型

★、All drills and tappers are made from any material with any geometrical shape by profile superfinishing and superhard grinding



★、可以研磨任何的柄部形式、形狀、尺寸、公差、要求等, 只要有CAD圖示樣品, 就可以生產研磨, 有個柄部對應的刀柄選配最好。

★、We can grind any shank types, shapes, sizes, tolerances, requirement, etc, only if customers have CAD drawings for sample. Better if with a corresponding cutter holder to match the shank

刀具, 配件 (钻头/起子) 部分柄部类型

Patial shank types for cutters, accessories(drills/drivers)

刃物、部品(ドリル/ドライバー)の一部柄部タイプ

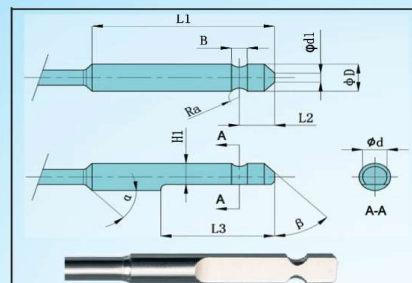
★、各種鑽頭、鑽套可以採用任意材料及其何種形狀、長度型號、超硬研磨成型

★、All drills and tappers are able to be material and any geometrical shape, length, type and superhard grinding

超高防銹高硬度型 (AA) & 超耐磨型 (A/AA) & 可超精密加工

(Super-high anti-rust and high hardness type(AA)&Super wear-resistant type(A/AA)&Super-high precision process)

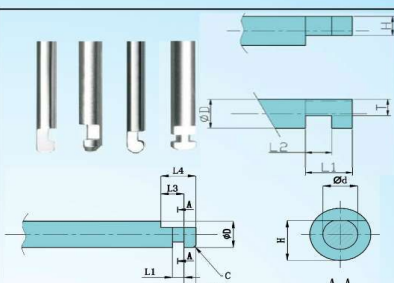
(超高防銹高硬度型 (AA) & 超耐磨型 (A/AA) & 超精密加工)



注意: L3、L2的尺寸公差要求?

Note: The requirement of dimension tolerance for L3,L2?

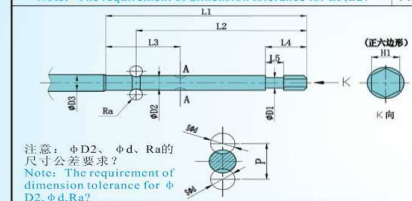
A



注意: L2、L4的尺寸公差要求?

Note: The requirement of dimension tolerance for L2,L4?

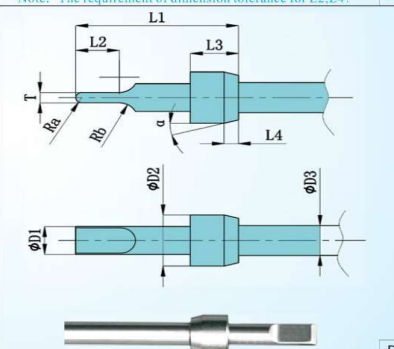
B



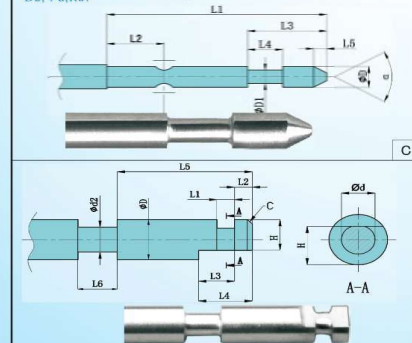
注意: φD2、φd、Ra的尺寸公差要求?

Note: The requirement of dimension tolerance for φD2, φd, Ra?

C



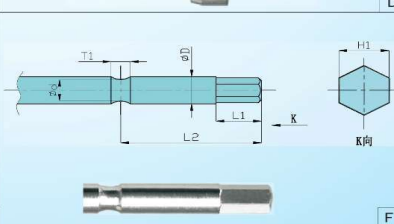
D



注意: L2、L4的尺寸公差要求?

Note: The requirement of dimension tolerance for L2,L4?

E



F

★、依照依樣尺寸公差要求可生產特殊、複合、異型、超大超細超長組合成型的系列刀具。We can produce special, compound, special-shaped, super-large/super-thin/super-long combined profile series tooling according to requirements of drawings, samples, and dimension tolerance. 圖面、サンプル、または寸法の公差要求により特殊、複合、異型または超大、超細、超長の組合せ成型のシリーズカッターを生産できる。

刀具、配件 (钻头/起子) 部分柄部类型

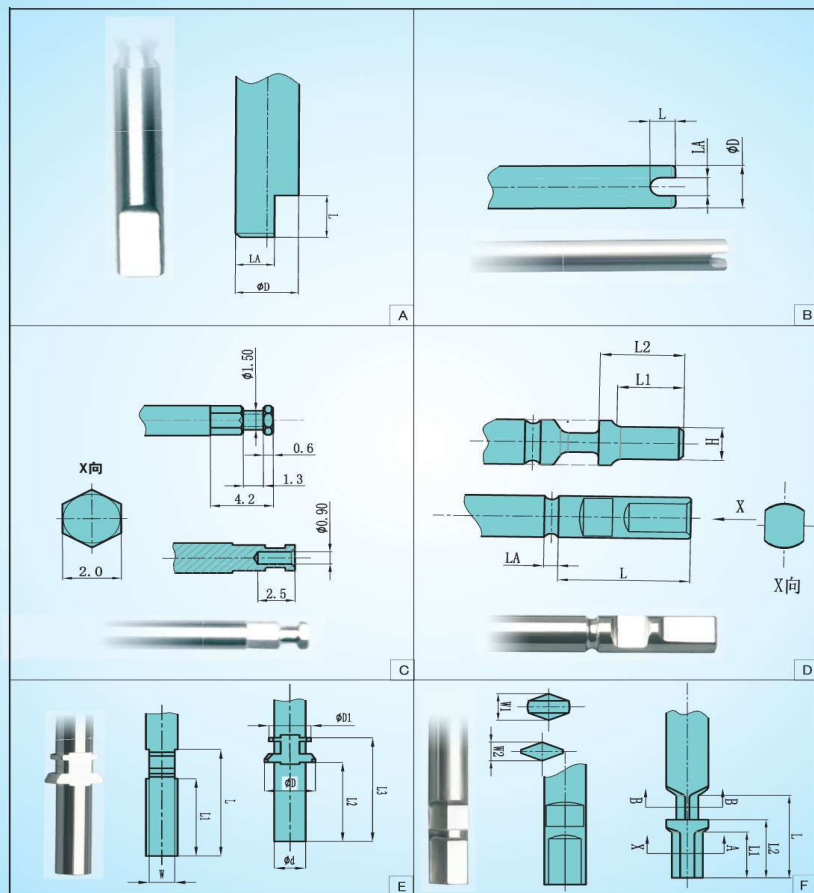
Partial shank types for cutters, accessories (drills/drivers)

超防锈钢高硬度型 (AA) & 超耐磨型 (A/AA) & 可超精密加工 (Super-high anti-rust and high hardness type (AA) & Super wear-resistant type (A/AA) & Super-high precision process)

刃物、部品 (ドリル/ドライバー) の一部柄部タイプ

(超防锈钢高硬度型 (AA) & 超耐磨型 (A/AA) & 超精密加工可)

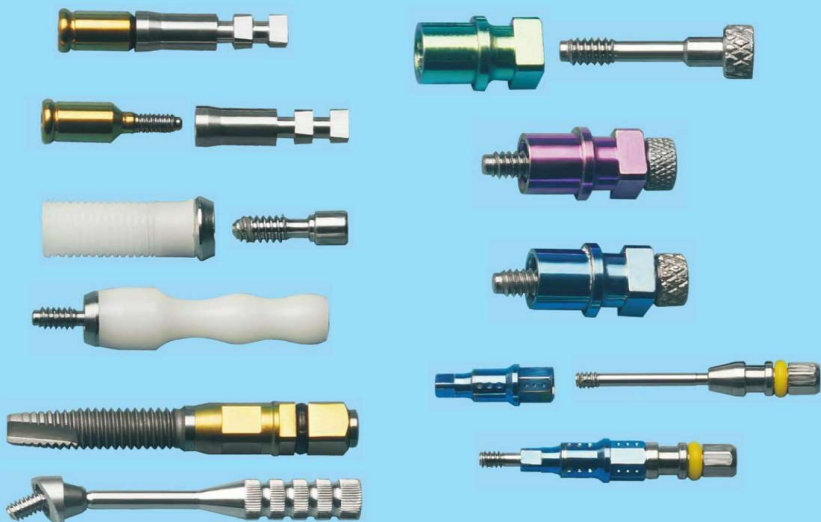
★、各種鑽頭、鑽套可以採用任意材料及任何形狀、或型超精、超硬研磨成型
★、All drills and tappers are able to use any material and any geometrical shape by profile superfinishing and superhard grinding



★、依照依樣尺寸公差要求可生產特殊、複合、異型、超大超細超長組合成型的系列刀具。We can produce special, compound, special-shaped, super-large/super-thin/super-long combined profile series tooling according to requirements of drawings, samples, and dimension tolerance. 圖面、サンプル、または寸法の公差要求により特殊、複合、異型または超大、超細、超長の組合せ成型のシリーズカプタを生産できる。

醫用工具及配件系列(基臺/轉移杆/替代體/愈合帽/螺絲)
Medical tools and parts series (Abutment/Transfer/Analog
/Healing cap/screw)
医療器具及び部品シリーズ(アバットメント/トランスファー/アナログ
/ヒーリングキャップ/スクリュー)

(超高防銹高硬度型&超高精密度&不同材質不同顏色系列)
(ultra-high anti-rust & high-hardness type ultra-high
precision type & different material and color series)
(超高防銹高硬度型&多材質多色シリーズ)



A:加工精度等級:

1. 超高精密度(AAA)(精度高可至 $\pm 0.0015\text{mm}$ (1.5 μm) 的公差) (需批量)
2. 高精密度(AA) (精度高可至 ± 0.005 (5 μm) 的公差) (常規加工)
3. 一般精密型加工(A) (精度高可至 $\pm 0.010\text{mm}$ (10 μm) 的公差) (常規加工)

A:Process finish grade:

1. Ultra High Precision type (AAA) (Tolerance accuracy up to $\pm 0.0015\text{mm}$ (1.5 μm) need to be mass customized)
2. High Precision (AA) (Tolerance accuracy up to ± 0.005 (5 μm)) (Conventional Machining)
3. General precision machining (A) (Tolerance accuracy up to $\pm 0.010\text{mm}$ (10 μm)) (Conventional Machining)

B:材料分類:

1. 鈦及鈦合金系列(可處理成近20種不同的顏色)(常規常備為AA級料,AA級料的需批量定制)
2. 超高防銹高耐磨、高硬度、高剛性不銹鋼系列(AA)(HRC54° $\pm 2^\circ$ 斷面)(常規常備)
3. 超高防銹奧氏體不銹鋼系列(常規常備)
4. 可定制不同顏色的高耐磨PEEK,PPSU等等系列(常規常備)

B: Material Classification:

1. Titanium and Titanium alloy series (can be processed with nearly 20 different colors) (A grade material generally stock, AA grade material need to be mass customized)
2. Ultra-high rust-proof, wear-resistant, high-hardness, high-rigidity stainless steel series (AA) (HRC54° $\pm 2^\circ$ Section)(generally stock)
3. Ultra-high rust-resistant austenitic stainless steel (generally stock)
4. High wear-resistant PEEK, PPSU and other series of different colors can be customized (generally stock)

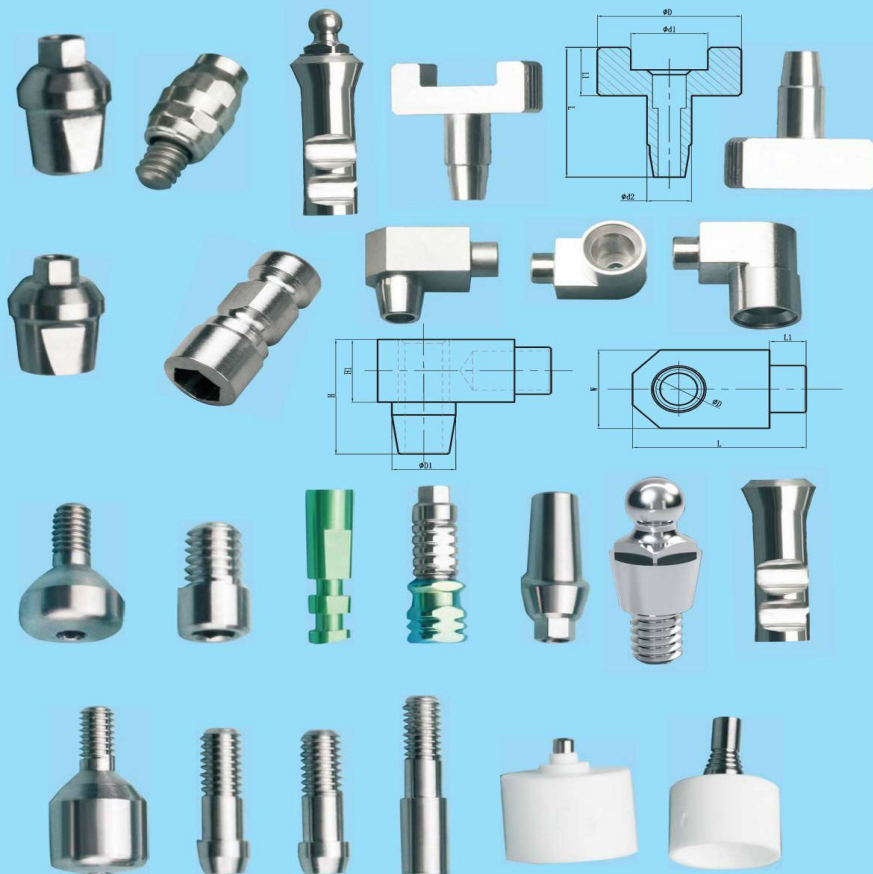
★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高剛性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。

Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列(基臺/轉移杆/替代體/愈合帽)
Medical tools and parts series(Abutment/Transfer/Analog
/Healing cap)

医療器具及び部品シリーズ(アバットメント/トランスファー/アナログ/ヒーリングキャップ)

(超高防銹高硬度型&超高精度型&不同材質不同顏色系列)
(ultra-high anti-rust & high-hardness type ultra-high
precision type & different material and color series)
(超高防銹高硬度型&多材質多色シリーズ)



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。

Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列(基臺/轉移杆/替代體/愈合帽)
Medical tools and parts series(Abutment/Transfer/Analog
/Healing cap)

(超高防銹高硬度型&超高精密型&不同材質不同顏色系列)
(ultra-high anti-rust & high-hardness type ultra-high
precision type & different material and color series)
(超高防銹高硬度型&多材質多色系列)

医療器具及び部品シリーズ(アバットメント/トランスファー/アナログ/ヒーリングキャップ)



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。

Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列(基臺/轉移杆/替代體/愈合帽/螺絲)
Medical tools and parts series (Abutment/Transfer/Analog/
/Healing cap/screw)

(超高防銹高硬度型&超高精密度&不同材質不同顏色系列)
(ultra-high anti-rust & high-hardness type ultra-high
precision type & different material and color series)
(超高防銹高硬度型&多材質多色シリーズ)

医療器具及び部品シリーズ(アバットメント/トランスファー/アナログ/ヒーリングキャップ/スクリュー)



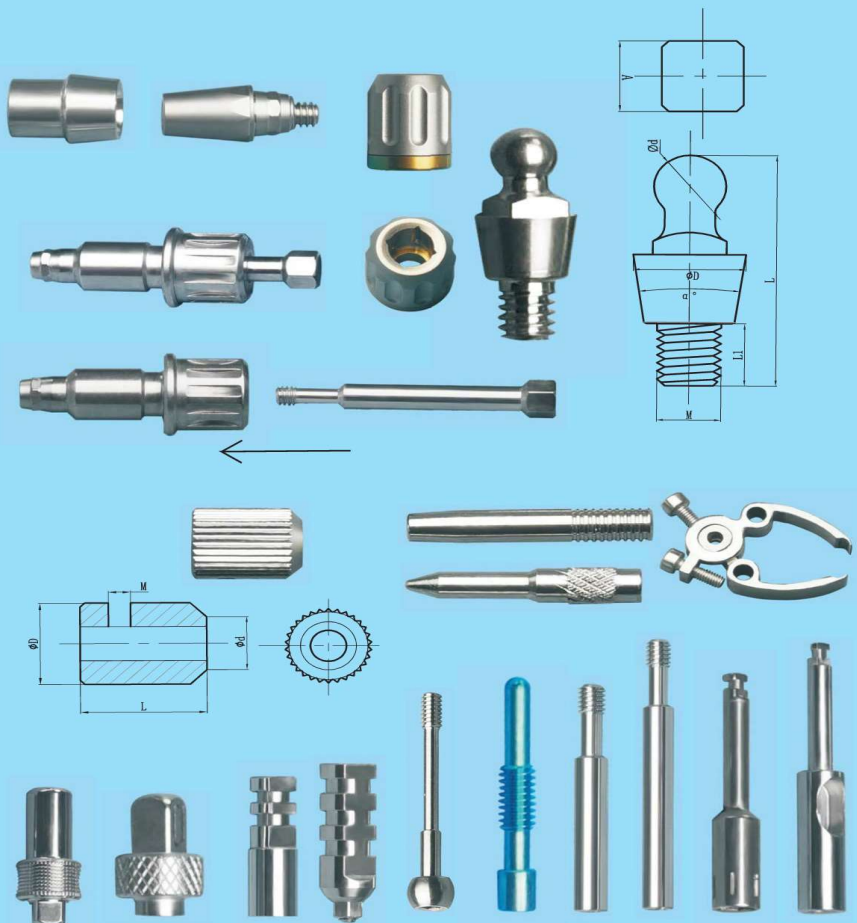
★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。

Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列(基臺/轉移杆/替代體/愈合帽/螺絲)

Medical tools and parts series (Abutment/Transfer/Analog/Healing cap/screw)

医療器具及び部品シリーズ(アバットメント/トランスファー/アナログ/ヒーリングキャップ/スクリュー)



醫用工具及配件系列(平行杆/基台/ 棒)
Medical tools and parts series (Parallel ip/Abutment/sleeve)
醫療器具及部件系列(平行桿/基台/ 棒)

(超高防銹高硬度型&超高精密型&不同材質不同顏色系列)
(ultra-high anti-rust & high-hardness type ultra-high
precision type & different material and color series)
(超高防銹高硬度型&多材質多色系列)



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel,
titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列 (鑽套、襯套)
 Medical tools and parts series(Drill stopper, sleeve)
 医療器具及び部品シリーズ(ドリルヘッドストッパー、スリーブ)

(可不同顏色處理&高精密成型)
 (We can make different colors & high precision shaping)
 (多色處理&高精密成型可)



可不同顏色的表面處理、不同形狀結構方式的加工、不同尺寸公差の定制

We can customize with different colors (surface treatment), shapes, structures and size tolerances

(輕受力的下,可調節)
 輕受力的下,可一鑽分
 多級限位的機能結構

Under light load, one drill can be divided into multistage limited functional structures



常用顏色:黃色、藍色、紫色、綠色、亮光、亞光等(供參考), (可處理近30種顏色)

Commonly used colors for reference: yellow, blue, purple, green, shiny, matt, etc.
 (It can be processed with nearly 30 kinds of colors)

★ 超防腐蝕高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。
 Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列 (鑽套、襯套)
 Medical tools and parts series (Drill stopper, sleeve)
 医療器具及び部品シリーズ (ドリルヘッドストッパー、スリーブ)

(可不同顏色處理&高精密成型)
 (We can make different colors & high precision shaping)
 (多色處理&高精密成型可)



定位夾具 (可以加工任意規格尺寸及鬆緊度
 (不銹鋼/鈦/鈦合金)
 Positioning fixture (We can process any
 size and tightness (stainless steel
 /titanium/titanium alloy)

定位夾具方式:

- ①、卡口型 (方便、傳統型一般的卡緊程度)
- ②、螺紋型 (新型、高轉速不易脫落, 但鑽頭也要配合螺紋)

Positioning fixture type:

1. Bayonet type (convenient and traditional type, general chucking level)
2. Thread type (new type, not easy to fall off at high rotary speed, but drills need to match with thread)



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。
 Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列 (鑽套)
Medical tools and parts series(Drill stopper)
医療器具及び部品シリーズ(ドリルヘッドストッパー)

(可不同顏色處理&高精密成型)
(We can make different colors & high precision shaping)
(多色處理&高精密成型可)

深槽至頂、可堆屑至槽頂。
(可黑色、黃色、全亞光、
全亮光、部分亞光、部分
亮光等表面處理)

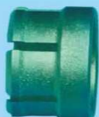
Deep groove to top,
chip accumulation to
the crest. (It can be
with black, yellow,
full matt, full shiny,
partial matt + partial
shiny and other
surface treatment)



★ 超高防鏽高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel,
titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列 (鑽套)
 Medical tools and parts series(Drill stopper)
 医療器具及び部品シリーズ(ドリルヘッドストッパー)

(可不同顏色處理&高精密成型)
 (We can make different colors &
 high precision shaping)
 (多色處理&高精密成型可)



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
 Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel,
 titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列（鑽套）
Medical tools and parts series(Drill stopper)
医療器具及び部品シリーズ(ドリルヘッドストップパー)

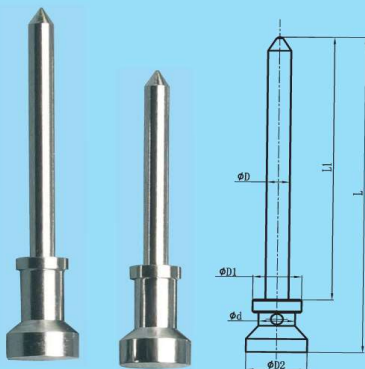
（可不同顏色處理&高精密成型）
（We can make different colors &
high precision shaping）
（多色處理&高精密成型可）



★ 超高防鏽高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列 (固位針)
Medical tools and parts series()
医療器具及び部品シリーズ(固定ピン)

(超高防銹高硬度高剛性型&可不同顏色處理&復雜成型加工)
(ultra-high anti-rust, high-hardness, high-rigidity type&
different colors treatment & complex forming processing available)
(超高防銹高硬度高鋼性型多色處理&複雜成型加工可)



部分尺寸: some size

	直徑ΦD Diameter	1.5	1.5	2.0
	直徑ΦD2 Diameter	4.0	4.0	4.0
	長度L1 Length	20	20	20
	總度L Overall Length	24	28	28

材料:

1. 超高防銹不銹鋼&鈦合金, 常規型, 一般剛性(A)
2. 超高防銹高耐磨、高硬度、高剛性不銹鋼系列(HRC54 ± 2° 斷面) 超高剛性(AA)

Material:

1. Ultra-high rust-resistant stainless steel & titanium alloy, conventional type with general rigidity (A)
2. Ultra-high rust-proof, wear-resistant, high-hardness, high-rigidity stainless steel series (HRC54 ± 2° Section), ultra-high rigidity(AA)



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列 (平行杆/測量杆/平行針)

Medical tools and parts series (Parallel pin/Paralleling pin)

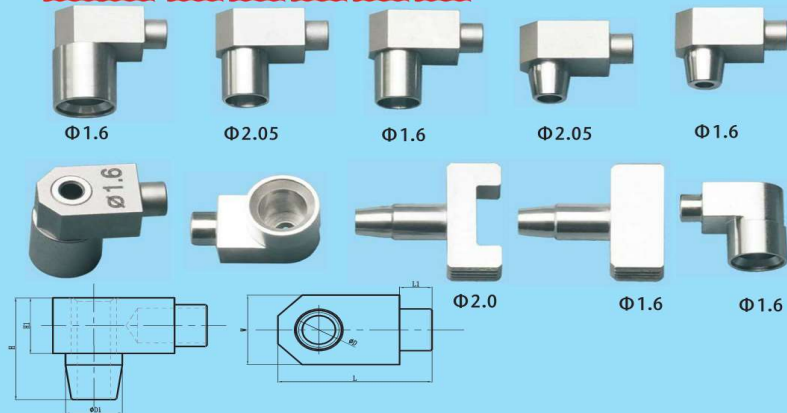
医療器具及び部品シリーズ (パラレルポール/測定ポール/パラレルピン)

(超高防銹高硬度高剛性型&可不同顏色處理&複雜成型加工)
(ultra-high anti-rust, high-hardness, high-rigidity type & different colors treatment & complex forming processing available)
(超高防銹高硬度高剛性型多色處理&複雜成型加工可)



高防銹不銹鋼&超高防銹高硬度高剛性不銹鋼&可處理不同顏色之鈦金屬材料，及不同程度的亞光/亮光處理

High anti-rust stainless steel & Ultra-high rust resistant, high-hardness, high-rigidity stainless steel & Titanium metal material which can be with different colors, and different degrees of Matte/Shinny treatment



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列（平行杆/測量杆/平行針）

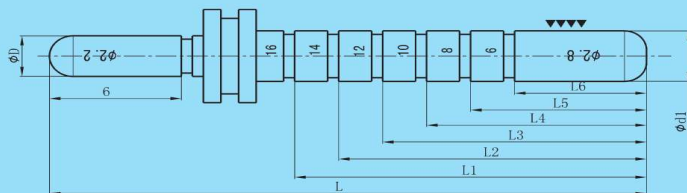
Medical tools and parts series (Parallel pin/Paralleling pin)

医療器具及び部品シリーズ（パラレルポール/測定ポール/パラレルピン）

（超高防銹高硬度高剛性型&可不同顏色處理&復雜成型加工）

(ultra-high anti-rust, high-hardness, high-rigidity type & different colors treatment & complex forming processing available)

（超高防銹高硬度高鋼性型多色處理&複雜成型加工可）



可研磨高精度的分段槽
high-precision segmented slots can be ground

高防銹不銹鋼&超高防銹高硬度高剛性不銹鋼&可處理不同顏色之鈦金屬材料，及不同程度的亞光/亮光處理

High anti-rust stainless steel & Ultra-high rust resistant, high-hardness, high-rigidity stainless steel & Titanium metal material which can be with different colors, and different degrees of Matte/Shinny treatment



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。

Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列（平行杆/測量杆/平行針）

Medical tools and parts series (Parallel pin/Paralleling pin)

医療器具及び部品シリーズ（パラレルポール/測定ポール/パラレルピン）

（超高防銹高硬度高剛性型&可不同顏色處理&複雜成型加工）
 (ultra-high anti-rust, high-hardness, high-rigidity type&
 different colors treatment & complex forming processing available)
 （超高防銹高硬度高剛性型多色處理&複雜成型加工可）



高防銹不銹鋼&超高防銹高硬度高剛性不銹鋼&可處理不同顏色之鈦金屬材料，
及不同程度的亞光/亮光處理

High anti-rust stainless steel & Ultra-high rust resistant, high-hardness,
high-rigidity stainless steel & Titanium metal material which can be with
different colors, and different degrees of Matte/Shinny treatment



★ 超高防銹高硬度高剛性、高抗衝擊、高剛性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。

Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列（平行杆/測量杆/平行針）

Medical tools and parts series (Parallel pin/Paralleling pin) different colors treatment & complex forming processing available

医療器具及び部品シリーズ（パラレルボール/測定ボール/パラレルピン）（超高防錆高硬度高剛性型多色処理&複雑成型加工可）



高防銹不銹鋼&超高防銹高硬度高剛性不銹鋼&可處理不同顏色之鈦金屬材料，及不同程度的亞光/亮光處理
High anti-rust stainless steel & Ultra-high rust resistant, high-hardness, high-rigidity stainless steel & Titanium metal material which can be with different colors, and different degrees of Matte/Shiny treatment



★ 超高防銹高硬度高耐磨，高剛性，高抗衝擊，高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列 (平行杆/測量杆/平行針)

Medical tools and parts series (Parallel pin/Paralleling pin)

医療器具及び部品シリーズ (パラレルポール/測定ポール/パラレルピン)

(超高防銹高硬度高剛性型&可不同顏色處理&複雜成型加工)

(ultra-high anti-rust, high-hardness, high-rigidity type & different colors treatment & complex forming processing available)

(超高防銹高硬度高鋼性型多色處理&複雜成型加工)



高防銹不銹鋼&超高防銹高硬度高剛性不銹鋼&可處理不同顏色之鈦金屬材料, 及不同程度的亞光/亮光處理

High anti-rust stainless steel & Ultra-high rust resistant, high-hardness, high-rigidity stainless steel & Titanium metal material which can be with different colors, and different degrees of Matte/Shinny treatment

常規常備0.200mm/0.250mm/0.350mm厚
超高防銹高硬度不銹鋼(AA) (HRC52° ± 2°)

Regular stock: 0.200mm/0.250mm/0.350mm thickness
Ultra high anti-rust and high hardness stainless steel (AA) (HRC52° ± 2°)



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。

Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列 (固位針、起子)
Medical tools and parts series(Driver)
醫療器具及び部品シリーズ(固定ピン、ドライバー)

(超高防銹高硬度高剛性型&可不同顏色處理&複雜成型加工)
(ultra-high anti-rust, high-hardness, high-rigidity type &
different colors treatment & complex forming processing available)
(超高防銹高硬度高剛性型多色處理&複雜成型加工可)

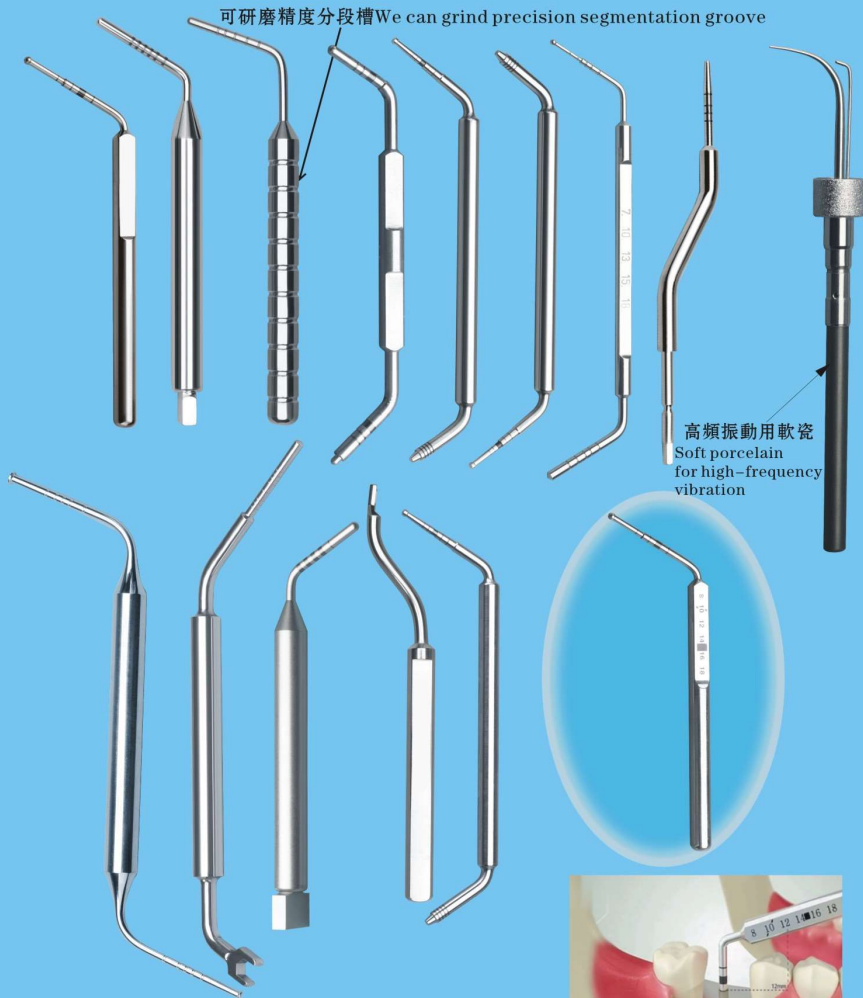


★ 超高防銹高硬度高剛性、高剛性、高抗衝擊、高剛性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel,
titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

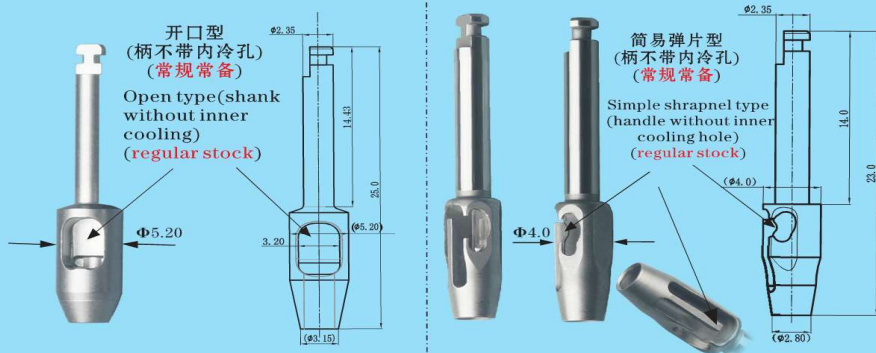
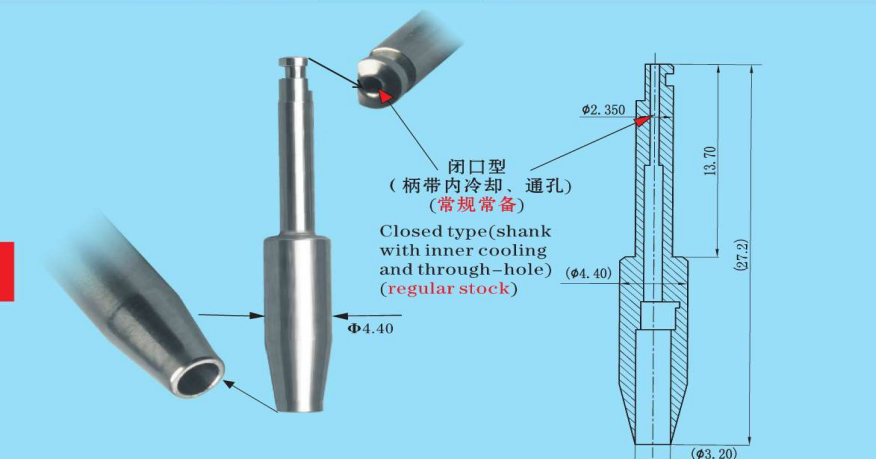
醫用工具及配件系列 (深度探針)
 Medical tools and parts series (Probes for depth)
 医療器具及び部品シリーズ (深さプローブ)

(超高防銹高硬度高剛性型&可不同顏色處理&複雜成型加工)
 (ultra-high anti-rust, high-hardness, high-rigidity type & different colors treatment & complex forming processing available)
 (超高防銹高硬度高剛性型多色處理&複雜成型加工可)

可研磨精度分段槽 We can grind precision segmentation groove



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
 Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.



醫用工具及配件系列 (延長杆、延長器)
 Medical tools and parts series (Drill Extension)
 医療器具及び部品シリーズ (延長ロッド、エクステンダー)

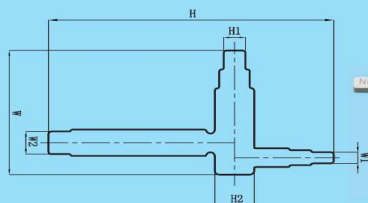
(超高防銹高耐磨 (AA) & 高精度)
 (Super-high anti-rust high wear-resisting (AA)
 & high precision)
 (超防銹高耐磨 (AA) & 高精度)



帶彈性的, 可批量定制 (彈性可大可小)
 With elasticity, mass customized (big or small elasticity)



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。
 Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.



陶瓷、鎢鋼、醫用、鈦合金、不銹鋼系列
Ceramic, carbide, medical, Titanium and stainless steel series



常規常備
Regular stock



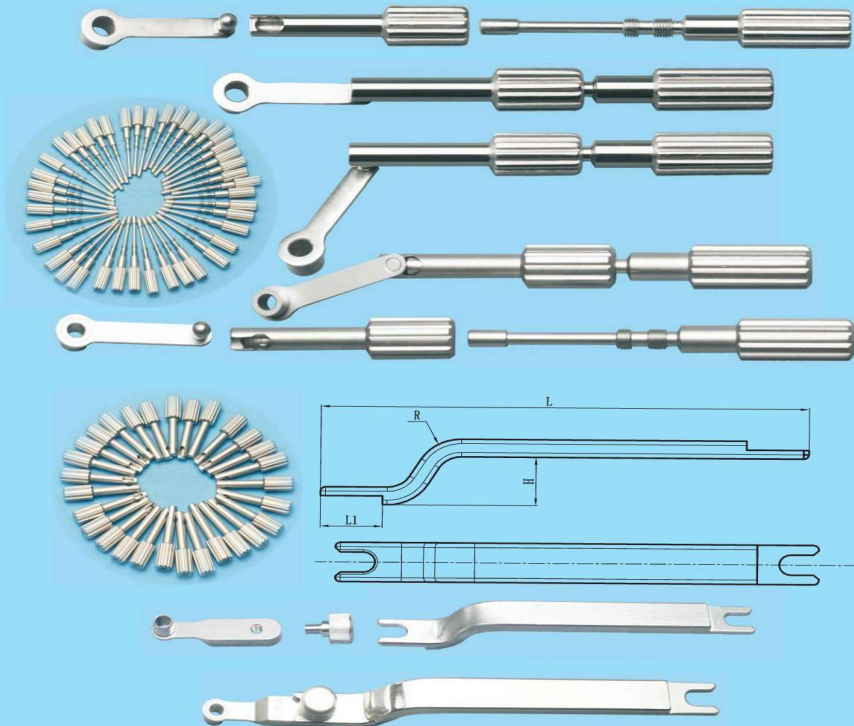
- ★ 依圖依樣尺寸公差要求可生產特殊、複合、異型、超大超微細超長組合成型制品。
We can produce special, compound, special-shaped, Super large, Super thin, Super long combined forming products according to the requirements of drawings, samples, and size tolerance.

圖面、サンプルまたは寸法公差の要求により特殊、複合、異型、超大超小超長の組合せ型シリーズのフライスディスクを生産できる

可依图依样加工任意尺寸、公差、形状的压板及连接器、结构方式等等
We can produce drill guide, adapter and structure of any size, tolerance and shape according to your drawings or samples.



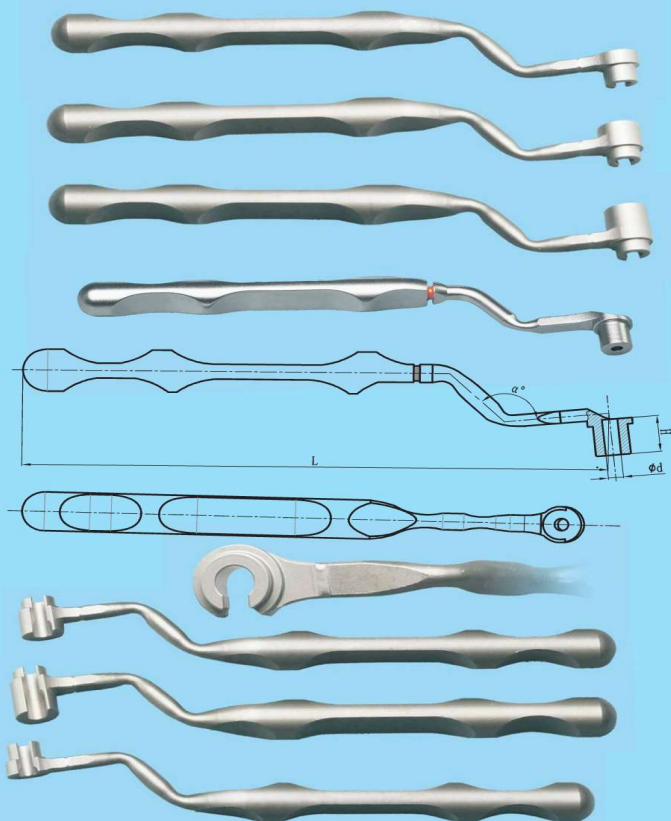
図面またはサンプルに従って、あらゆる寸法、公差、形状のガイド及びコネクター、構造の加工ができる。



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

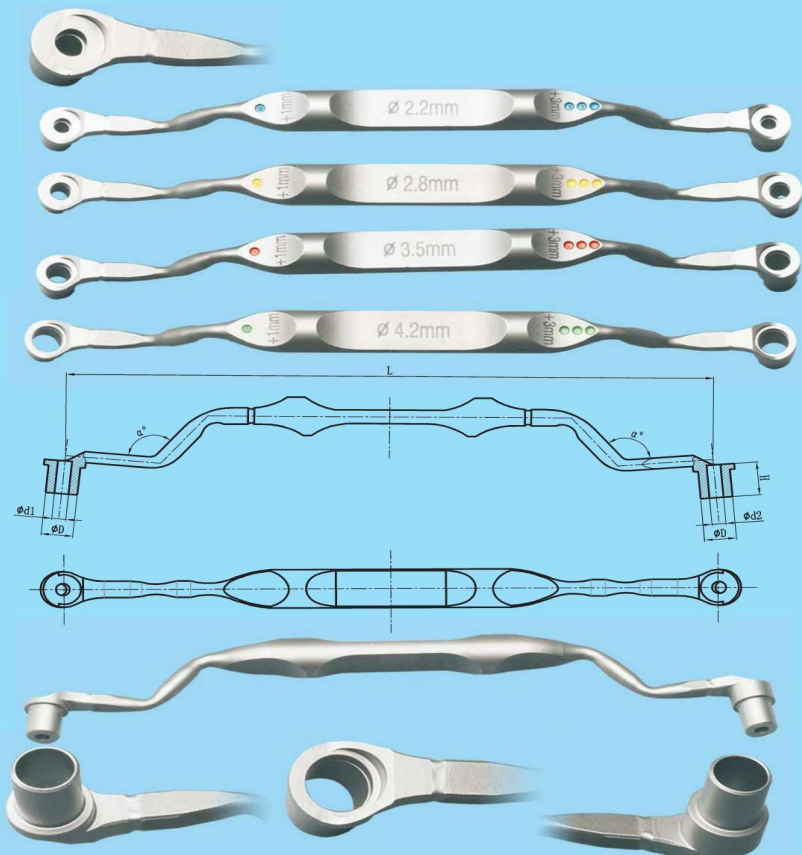
可依图依样加工任意尺寸、公差、形状的压板及连接器、结构方式等等

We can produce drill guide, adapter and structure of any size, tolerance and shape according to your drawings or samples.



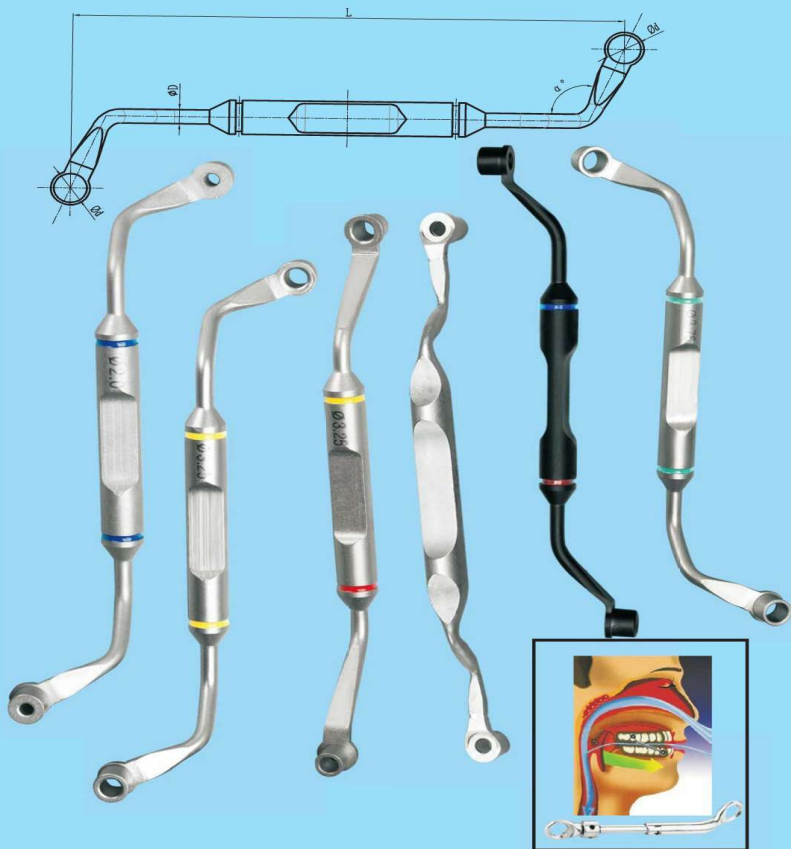
★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。
 Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

可依图依样加工任意尺寸、公差、形状的压板及连接器、结构方式等等
We can produce drill guide, adapter and structure of any size,
tolerance and shape according to your drawings or samples.



★ 超高防锈高硬度高耐磨、高刚性、高抗衝擊、高韧性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel,
titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

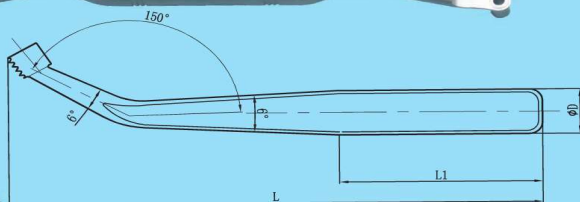
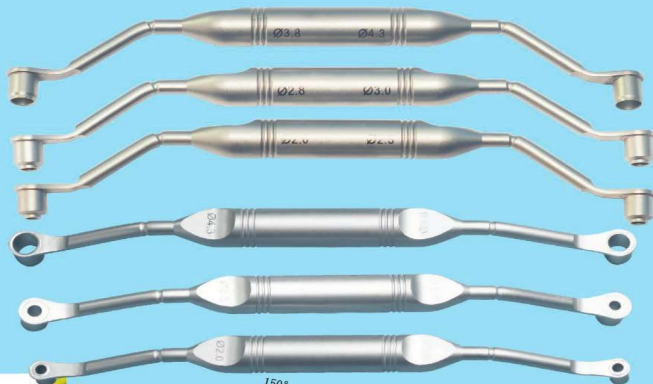
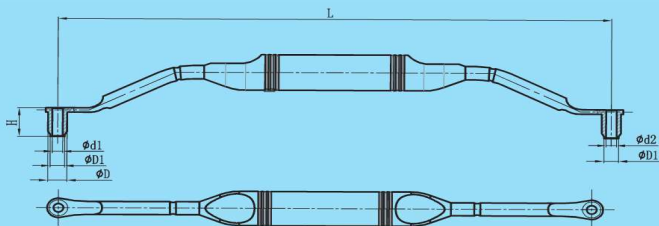
可依图依样加工任意尺寸、公差、形状的压板及连接器、结构方式等等
We can produce drill guide, adapter and structure of any size,
tolerance and shape according to your drawings or samples.



★ 超高防鏽高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel,
titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列（压板）
Medical tools and parts series (Drill guide)
医療器具及び部品シリーズ（ガイド）

（耐磨&高精密配合）
（wear resistance & high precision match）
（耐磨耗&高精密接合）



★ 超高防銹高硬度高耐磨，高剛性，高抗衝擊，高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列（板手）
Medical tools and parts series(Wrenches)
医療器具及び部品シリーズ(レンチ)

（可不同顏色處理&複雜成型加工）
（different colors treatment &
complex forming processing available）
（多色處理&複雜成型加工可）



可任意調整角度
It can be adjusted
to any angle



卡位小柱
detent post



可依要求
做刻度
Scale can be
customized

★ 超高防鏽高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

可以依要求生產任意反轉扭力受力大小，也可以很輕很輕的扭力受力大小。
We can produce any stress of reversal torque according to requirement, the stress of torque can be also very slight.

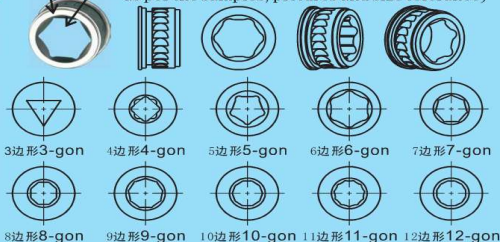
可自己調換不同大小的卡口 (可調換式)。You can exchange the bayonets of different sizes.
(Convertible type)

可生產任意形狀的卡口方式，及任意設計卡口方式的規格尺寸大小。We can produce bayonets of any shapes and design various specifications or sizes for bayonets.

可依要求做標示、刻度、類別等。We can make mark, scale and type, etc according to your requirement.

(可單獨定制)
(It can be individually customized)

不同形狀之卡口 (部分祇供參考用，實際可依樣
依圖形狀，尺寸公差生產) Bayonets of various
shapes (Just for reference, actual production
as per the samples, pictures and size tolerance)



.....等其它各種不同形狀之卡口，均可生產。

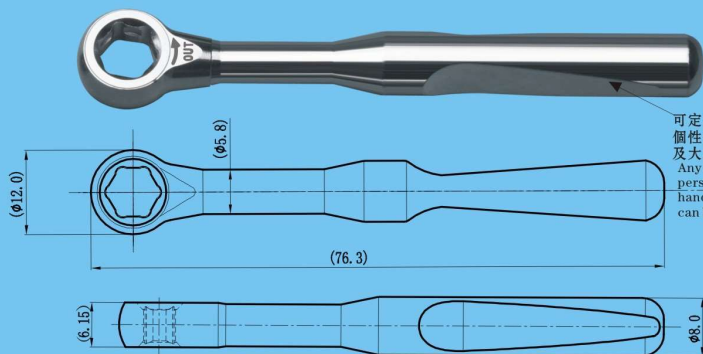
.....and other bayonets with different shapes, we can produce all.

可以定做任意壓力大小 (牛頓N) 的範圍。We can customize the wrenches with requirement of any pressure range (Newton N).

※可批量依圖依樣依要求生產不同結構方式之醫療醫用卡口扳手系列。

Medical and clinical bayonets and spanners series of different structures can be produced in batches as per the samples and pictures.

★ 超高防鏽高硬度高耐磨、高剛性、高抗衝擊、高韌性不鏽鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.



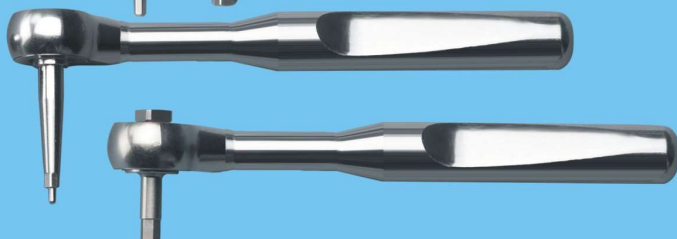
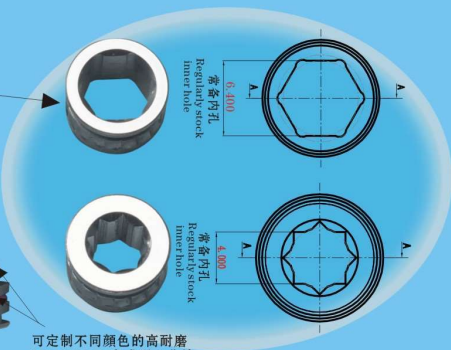
可定制任意形狀
個性化的手柄
及大小
Any shape of
personalized
handle and size
can be customized

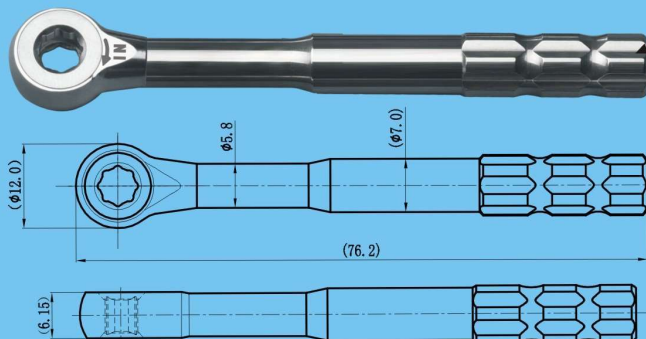
(可依圖依樣加工任意尺寸
公差及形狀的內孔方式,
也可單獨定制)

(We could produce inner hole
of any sizes, tolerances or
geometrical shapes according
to customers' drawings
or samples)



可定制不同顏色的高耐磨
PEEK/PPSU扁成型 (非純
圓圈類) 的高端卡圈。
(需在起子定制前明確)
we can customize high wear
-resistant PEEK/PPSU flat
forming (not pure circle type)
high-end rand of different colors

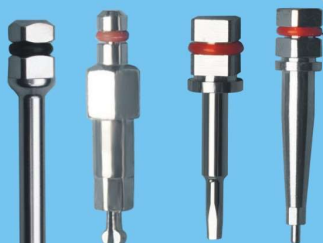
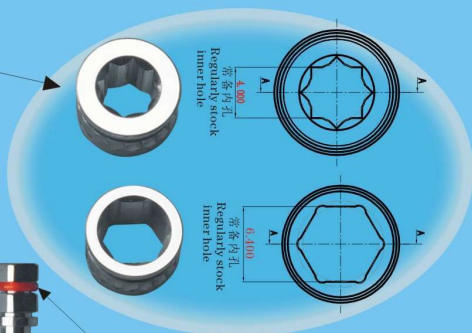




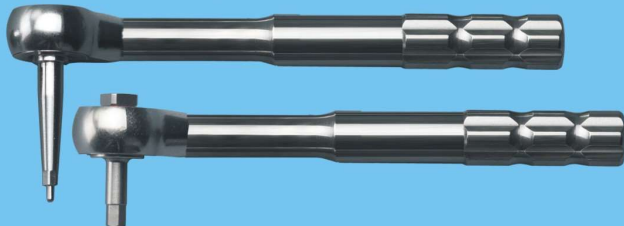
可定制任意
形狀的手柄
及長度

Any shape of
handle and
length can be
customized

(可依圖依樣加工任意尺寸
公差及形狀的內孔方式,
也可單獨定制)
(We could produce inner hole
of any sizes, tolerances or
geometrical shapes according
to customers' drawings
or samples)

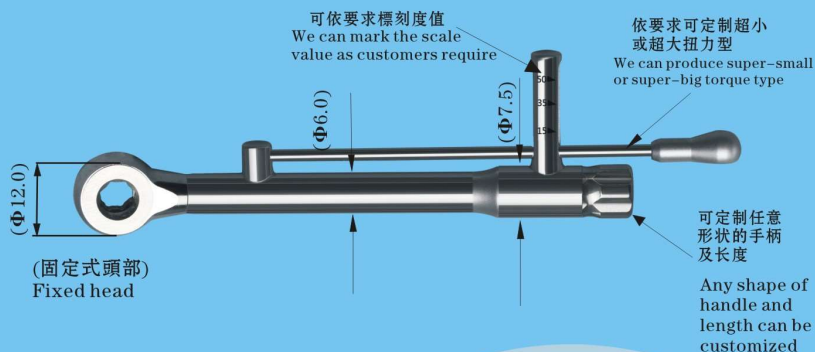


可定制不同顏色的高耐磨
PEEK/PPSU扁成型 (非純
圓圈類) 的高端卡圈。
(需在起子定制前明確尺寸)
we can customize high wear
-resistant PEEK/PPSU flat
forming(not pure circle type)
high-end rand of different colors

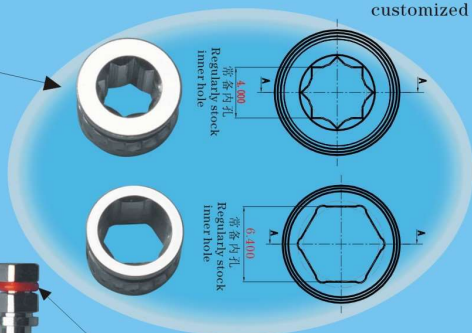


★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。

Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.



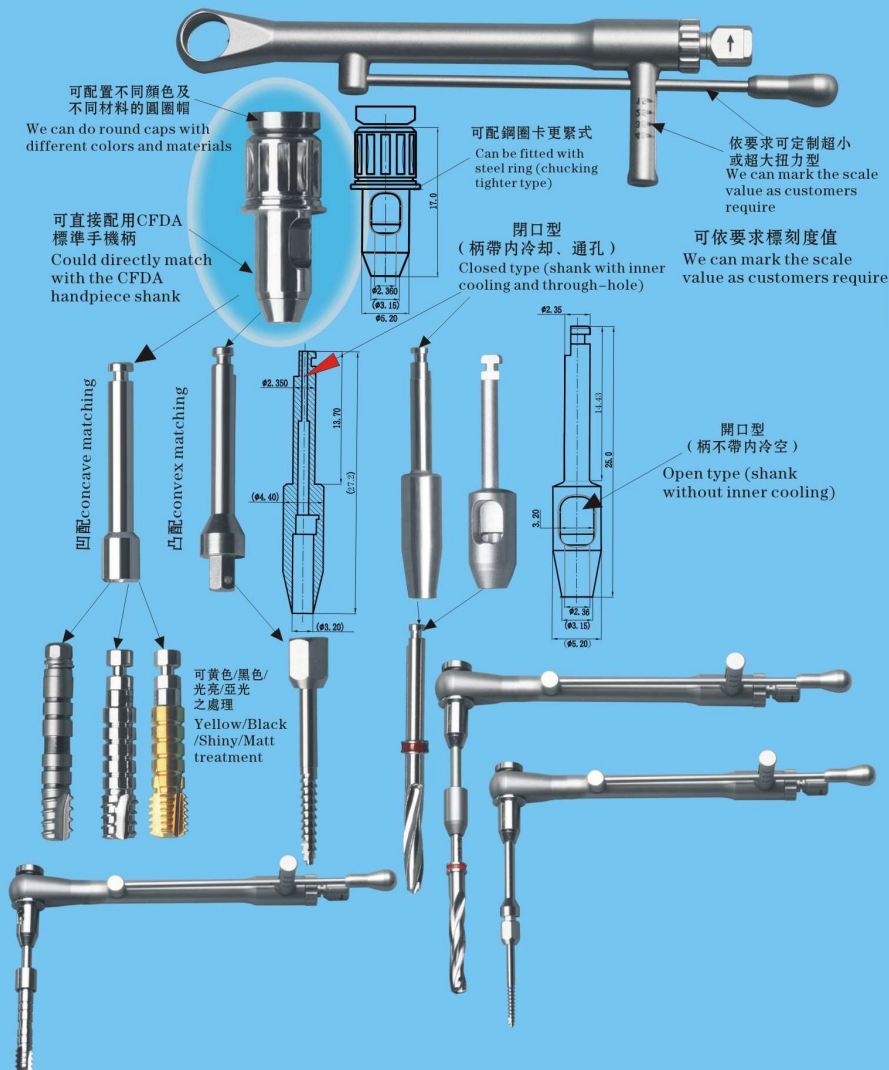
(可依圖依樣加工任意尺寸公差及形狀的內孔方式, 也可單獨定制)
(We could produce inner hole of any sizes, tolerances or geometrical shapes according to customers' drawings or samples)



可定制不同顏色的高耐磨 PEEK/PPSU 扁成型 (非純圓圈類) 的高端卡圈。
(需在起子定制前明確尺寸)
we can customize high wear-resistant PEEK/PPSU flat forming (not pure circle type) high-end rand of different colors

醫用工具及配件系列 (扭力扳手/轉接頭)
Medical tools and parts series (Torque Wrench/Adapter)
醫療器具及部件系列 (トルクレンチ/アダプター)

(可不同顏色處理及複雜成型加工)
(different colors treatment & complex forming processing available)
(多色處理及複雜成型加工可)

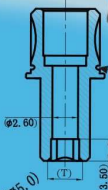
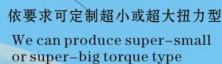


★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

(可不同顏色處理&復雜成型加工)
(different colors treatment &
complex forming processing available)
(多色處理&複雜成型加工可)



可配鋼圈卡更緊式
Can be fitted with
steel ring (chucking
tighter type)

3-(T=4.0)
(常備內孔)
(Regularly stock inner hole)

T=2.80) (常備内孔)
(Regularly stock inner hole)



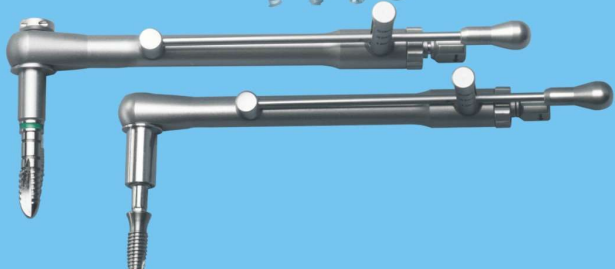
可定制不同顏色的高耐磨
PEEK/PPSU扁成型（非純
圓圈類）的高端卡圈。
（需在起子定制前明確尺寸）

we can customize high wear
-resistant PEEK/PPSU flat
forming(not pure circle type)
high-end rand of different colors



配用卡入的多邊形，
可依要求定制

To match the polygons,
we could customize the
production according
to your requirement



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列(扭力扳手/轉接頭)
Medical tools and parts series(Torque Wrench/Adapter)
医療器具及び部品シリーズ(トルクレンチ/アダプター)

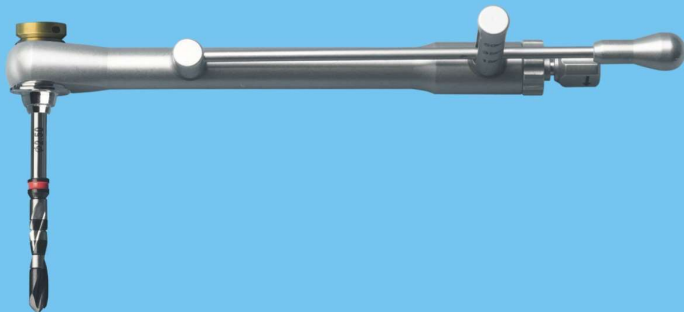
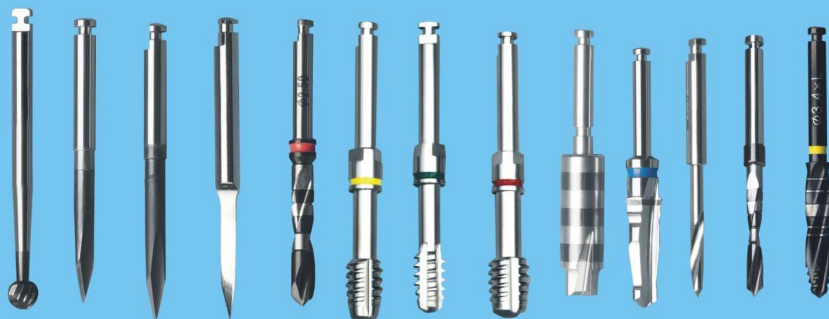
(可不同顏色處理&複雜成型加工)
(different colors treatment & complex forming processing available)
(多色處理&複雜成型加工可)



可配置不同顏色及
不同材料的圓圈帽
We can do round caps with
different colors and materials



可直接配用
CFDA手機柄
Could directly match
with the CFDA
handpiece shank



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.



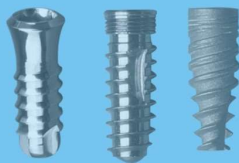
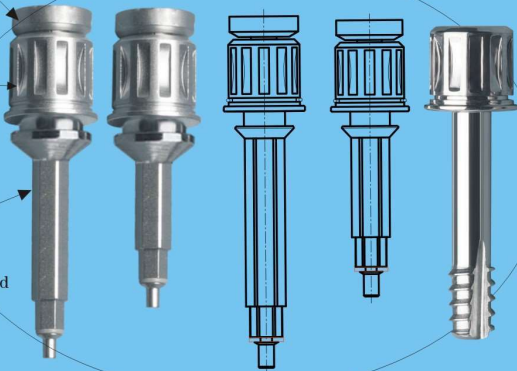
可配制不同顏色及不同材料的圓圈帽
We can do round caps with different colors and materials

依要求可定制超大扭力型
We can do super-big torque as customers require

超高防銹高硬度型(AA)
Super-high anti-rust and high hardness type(AA)

可依圖依樣加工任意尺寸公差及形狀的起子
方式和結構

We can customize drivers with any sizes, tolerances and shapes.



Medical tools and parts series(Ratchet torque wrench)
 Serie Medizinischer Werkzeuge und Zubehörteile
 (Ratschen-Drehmomentschlüssel)
 医療器具及び部品シリーズ(ラチェットレンチ)

(different colors treatment &
 complex forming processing available)
 Unterschiedliche Farbverarbeitungen &
 komplexe Spritzgussverarbeitung
 (多色処理&複雑成型加工可)



★ Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

Schlagfeste und hochfeste Edelstähle, Titan, Titanlegierung usw.vom superhohen Rostschutz, hoher Härte, hohem Verschleiß, hoher Steifigkeit. Hochpräzise, ultrafeine, ultraharte superharte Verarbeitung und Formen

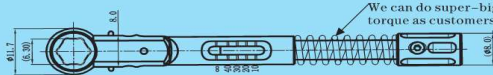


可定制任意形狀
個性化的手柄
及大小

Any shape of
personalized
handle and size
can be customized

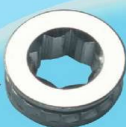
依要求可定制超大扭力型

We can do super-big
torque as customer require



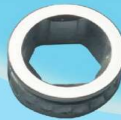
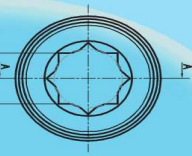
(可依圖依樣加工任意尺寸
公差及形狀的內孔方式,
也可單獨定制)

(We could produce inner hole
of any sizes, tolerances or
geometrical shapes according
to customers' drawings
or samples)



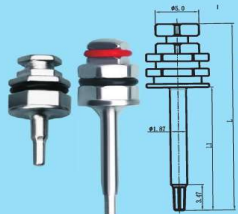
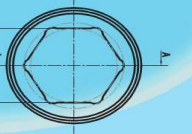
Regularly stock inner hole

4.000



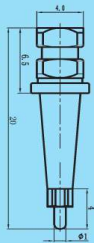
Regularly stock inner hole

6.400



可定制不同顏色的高耐磨
PEEK/PPSU扁成型(非純
圓圈類)的高端卡圈。
(需在起子定制前明確尺寸)

we can customize high wear
-resistant PEEK/PPSU flat
forming(not pure circle type)
high-end rand of different colors

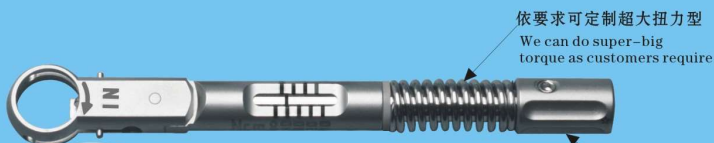


醫用工具及配件系列 (棘輪扭力扳手/轉接頭)

Medical tools and parts series(Ratchet torque wrench/Adapter)

医療器具及び部品シリーズ(ラチェットレンチ/アダプター)

(可不同顏色處理&複雜成型加工)
(different colors treatment &
complex forming processing available)
(多色處理&複雜成型加工可)



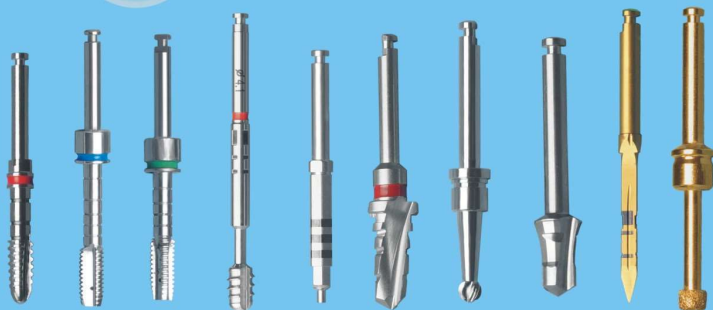
依要求可定制超大扭力型
We can do super-big
torque as customers require



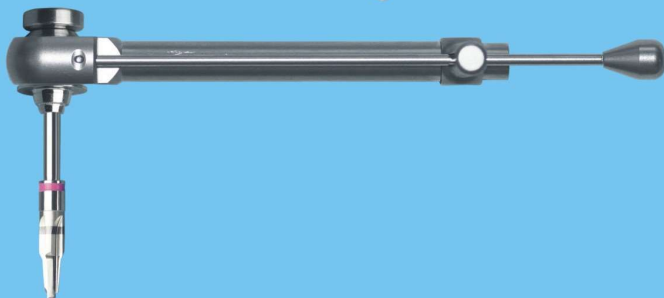
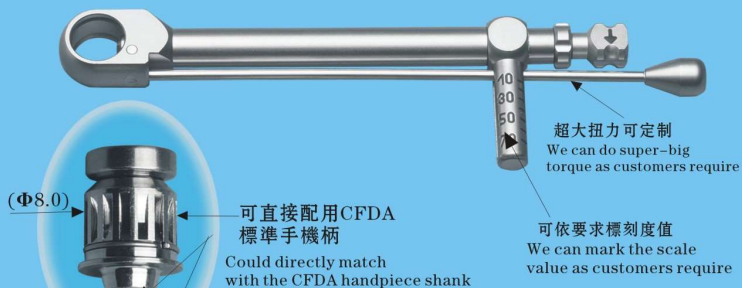
可配制不同顏色及不同材料的圓圈帽
We can do round caps with
different colors and materials

可直接配入扳手中及
CFDA標準手機柄中
They could be directly matched
with wrenches and CFDA standard
handpiece

可定制任意形狀
個性化的手柄
及大小
Any shape of
personalized
handle and size
can be customized



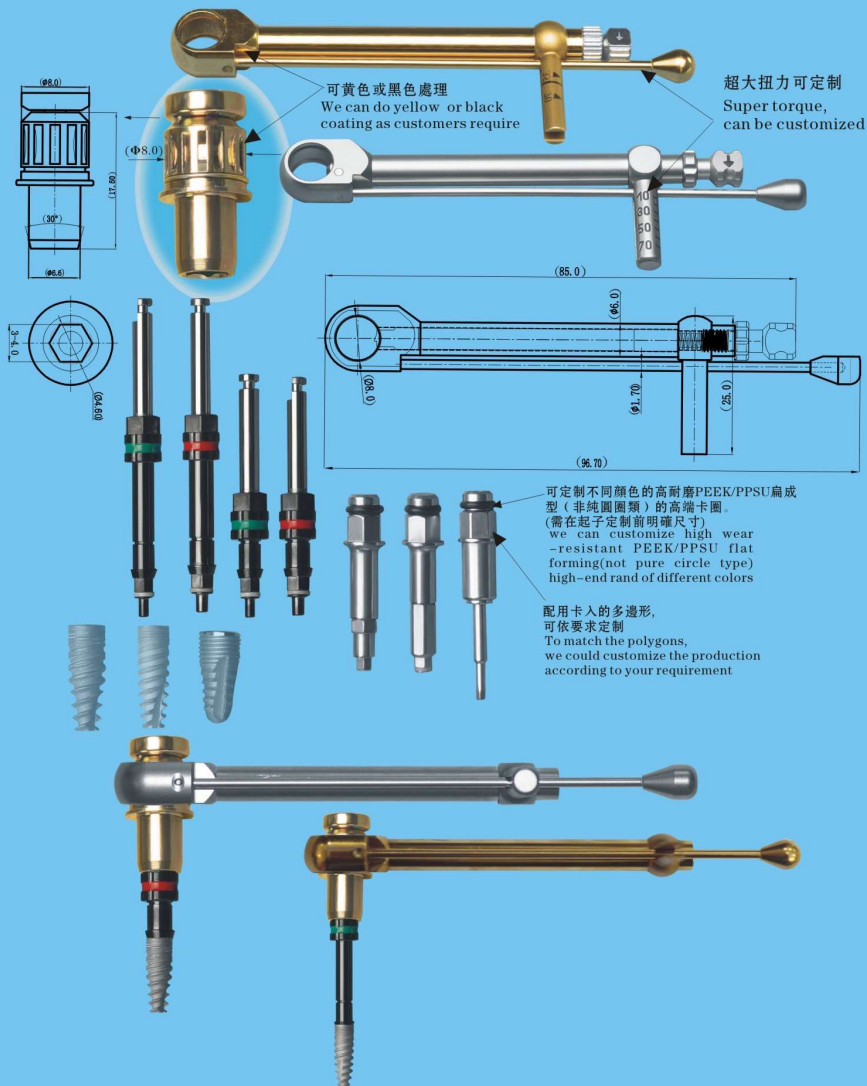
★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel,
titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列（扭力扳手/轉接頭）
Medical tools and parts series (Torque Wrench/Adapter)
醫療器具及び部品シリーズ（トルクレンチ/アダプター）

（可不同顏色處理&複雜成型加工）
（different colors treatment & complex forming processing available）
（多色處理&複雜成型加工可）



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列 (扭力扳手/固定扳手)
 Medical tools and parts series(Wrenches/fixed wrench)
 医療器具及び部品シリーズ(トルクレンチ/固定レンチ)

(可不同顏色處理&複雜成型加工)
 (different colors treatment &
 complex forming processing available)
 (多色處理&複雜成型加工可)



依要求可批量定制大扭力型
 We can produce big torque
 type as customers require

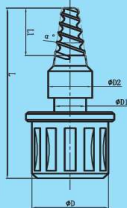


可單獨當固定扳手單用
 It can be used as a fixed wrench alone.

可直接配用CFDA
 標準手機柄
 Could directly match
 with the CFDA
 handpiece shank



($\Phi 7.0$)

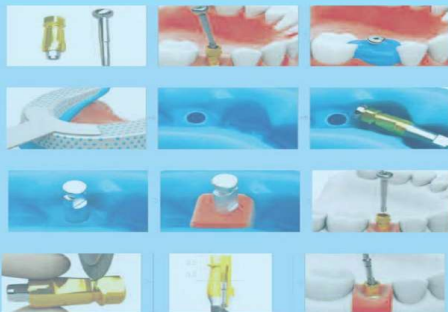


★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。
 Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel,
 titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.



美齒自然是美女!

*Beautiful teeth
beautiful woman*



★ 超高防鏽高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel,
titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列（扭力扳手）
Medical tools and parts series(Wrenches)
医療器具及び部品シリーズ（トルクレンチ）

（可不同顏色處理&複雜成型加工）
（different colors treatment &
complex forming processing available）
（多色處理&複雜成型加工可）



可直接配用CFDA
標準手機柄
Could directly match
with the CFDA
handpiece shank



(Φ7.0)



依要求可批量定制大扭力型
We can produce big torque
type as customers require

特殊設計及專用產品，可在允許下協助批量、高要求、高精度、高品級的代工生產。

We can assist in batch, high-demand, high-precision and high-grade OEM
production for products with special design and special usage with permission

★ 超高防鏽高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel,
titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

醫用工具及配件系列（板手扭力檢測）
 Medical tools and parts series (Torque detection of wrench)
 医療器具及び部品シリーズ（トルクレンチ）

（可不同顏色處理&複雜成型加工）
 (different colors treatment &
 complex forming processing available)
 （多色處理&複雜成型加工可）



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。

Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

依圖依樣尺寸公差要求可生產特殊、復合、異型、超大超細超長
組合成型的系列刀具。(可分不同等級的材料與研磨進行加工)

We can produce special, compound, special-shaped, super-large,
super-thin/super-long combined profile series tooling according
to requirements of drawings, samples and dimension tolerance.

A: (We can do process with different grades of material and grinding)

材料等級:

- ① 超高防銹高耐磨不銹鋼系列(AA)(HRC54° ± 2° 斷面)(常規常備)
- ② 常規標準防銹高耐磨及超高耐磨不銹鋼系列(A)(HRC45° ~ 64° 斷面系列)

A:

material:

- ① Super-high anti-rust high wear resistance stainless steel series(AA)
(HRC54° ± 2° Section)(regularly stock)
- ② General anti-rust high wear resistance stainless steel series(A)
(HRC45° ~ 64° Section series)

B:

空芯內孔加工等級(與材料等級和刃口加工等級無關):

- ① AAA級: 帶孔原生料+純鏡面空芯內孔研磨
(空芯內孔▽▽▽▽ & R0.01)(AAA)
(成本很高, 不常用)
- ② AA級: 帶孔原生料, CFDA標準常規
空芯內孔(AA)(成本較高, 不常用)
- ③ 電火花EDM加工AA&A級料+空芯內孔研磨
(空芯內孔研磨等級▽▽▽ & ▽▽▽等級不同,
成本也不同) (A&AA)(成本高, 不常用)
- ④ 深孔鑽打孔AA&A級料空芯內孔(受限於內孔
徑與孔深度的比例, 常規內孔徑x(40~60)倍左右
的孔深度) (B) (成本低, 但需批量加工)(常規常備)
- ⑤ 電火花EDM加工AA&A級料空芯內孔, 內孔
相對粗糙些 (C) (成本低, 常規常備)

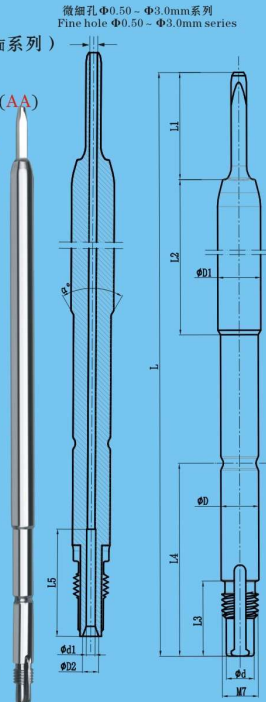
B:

Hollow core inner hole process grade (independent
of material grade & edge process grade):

- ① AAA grade: raw material with hole + pure mirror
grinding of hollow core inner hole (hollow core inner
hole ▽▽▽▽ & R0.01) (AAA) (high cost, not commonly used)
- ② AA grade: raw material with holes, CFDA
standard hollow core inner hole (AA) (relatively high cost, not commonly used)
- ③ Electrical discharge machining (EDM) process AA & A
grade material + hollow core inner hole grinding (hollow core inner hole grinding
grade ▽▽▽ & ▽▽▽▽ Different cost for different grade) (A&AA) (high cost,
not commonly used)
- ④ Deep hole drilling AA&A grade material hollow core inner hole (limited by the
ratio of the inner hole diameter & hole depth, conventional inner hole diameter x hole depth
(40~60) times approximately) (B) (low cost, but requires batch processing)(regular stock)
- ⑤ Electrical discharge machining (EDM) processing AA & A grade raw material hollow core
inner hole, the inner hole is relatively rough (C) (low cost, regular stock)

微細孔 Φ0.50 - Φ3.0mm 系列
Fine hole Φ0.50 - Φ3.0mm series

常用鉛筆
common pencil



依圖依樣尺寸公差要求可生產特殊、複合、異型、超大超細超長組合成型的系列刀具。
 We can produce special, compound, special-shaped, super-large, super-thin/super-long combined profile series tooling according to requirements of drawings, samples and dimension tolerance.
 圖面、サンプル、または寸法の公差要求により特殊、複合、異型または超大、超細、超長の組合せ成型的シリーズカッタを生産できる。

全精研磨 ▼▼▼ ~ ▼▼▼▼

材質：不銹鋼(HRC35° ~ 64° 系列) 純鈦、鈦合金; 高速鋼;
 鉬高速鋼; 合金鋼; 鎢鋼; 硬質合金; 陶瓷。

Fine finish grinding, ▼▼▼ ~ ▼▼▼▼

Material: stainless steel(HRC35° ~ 64° series), pure titanium, titanium alloy; HSS; Cobalt HSS; alloy steel; carbide; hard alloy; ceramic.

可依3D樣板及
 CAD圖制作
 的成品制品

Finished products
 made from 3D
 templates & CAD
 drawings



※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades
 必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。

Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

依圖依樣尺寸公差要求可生產特殊、複合、異型、超大超細超長組合成型的系列刀具。

We can produce special, compound, special-shaped, super-large, super-thin/super-long combined profile series tooling according to requirements of drawings, samples and dimension tolerance.

圖面、サンプル、または寸法の公差要求により特殊、複合、異型または超大、超細、超長の組合せ成型のシリーズカッタを生産できる。

全精研磨 ▼▼▼~▼▼▼▼

材質：不銹鋼(HRC35°~64°系列) 純鈦、鈦合金； 鍍鋼；
鈷高速鋼； 鎢鋼； 鋼； 硬合金； 陶瓷。

Fine finish grinding, ▼▼▼~▼▼▼▼

Material: stainless steel(HRC35°~64° series), pure titanium,
titanium alloy; HSS; Cobalt HSS; alloy steel; carbide; hard alloy;
ceramic.



※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。
With or without penetration, hollow & hollow core inner hole process with different grades
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

依圖依樣尺寸公差要求可生產特殊、復合、異型、超大超細超長組合成型的系列刀具。

We can produce special, compound, special-shaped, super-large, super-thin/super-long combined profile series tooling according to requirements of drawings, samples and dimension tolerance.

図面、サンプル、または寸法の公差要求により特殊、複合、異型または超大、超細、超長の組合せ成型のシリーズカッタを生産できる。



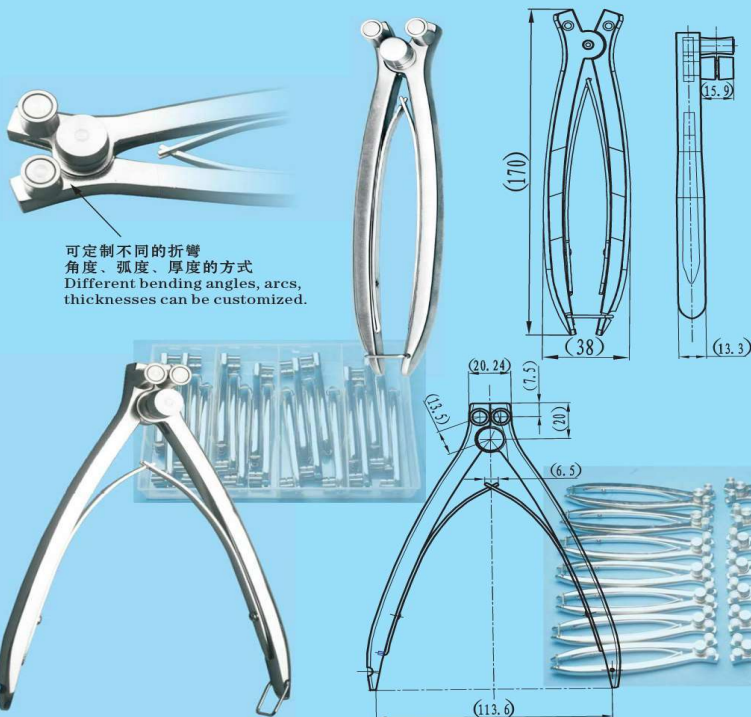
※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。
With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。
Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

依圖依樣尺寸公差要求可生產特殊、復合、異型、超大超細超長組合成型的系列產品。

We can produce products of special, compound, special-shaped, super-large, super-thin/ super-long combined profile series according to requirements of drawings, samples and dimension tolerance.

図面、サンプル、または寸法の公差要求により特殊、複合、異型または超大、超細、超長の組合せ成型のシリーズ製品を生産できる。



※以上可定制做精密高端高要求成品，但需批量才能定制。

Precision high-end high-demand finished products as above can be customized, but require batch qty.

★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。

Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.



★、各種精密配件，零附件批量時，可以采用任意材料及幾何形狀、成型超精、超硬研磨

★、材質：高硬度超級鏡面不銹鋼(AA) (HRC54° ± 2° 斷面) & 高耐衝擊/超耐磨極超微粒鑽石鈎鋼VWA201(HRC71° ± 1°)

★、Every kind of precision accessories and parts, if in bulk, we can produce with any material, geometrical shape, profile superfinishing or superhard processing

★、Material: high hardness super mirror stainless (AA) (HRC54° ± 2° Section) & high impact-resistant/super wear-resistant ultra micro-grain quality carbide VWA201 (HRC71° ± 1°)



★ 超防腐高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。

Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

★、可以采用任意材料及幾何形狀、成型超精、超硬研磨

We can produce with any material and geometrical shape by profile superfinishing or superhard processing

★、依圖依樣尺寸公差要求可生產特殊、複合、異型、超大超細超長組合成型的系列產品。

We can produce products of special, compound, special-shaped, super-large, super-thin/super-long combined profile series according to requirements of drawings, samples and dimension tolerance.

図面、サンプル、または寸法の公差要求により特殊、複合、異型または超大、超細、超長の組合せ成型のシリーズ製品を生産できる。



★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精度、超細、超長、超硬加工成型。

Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

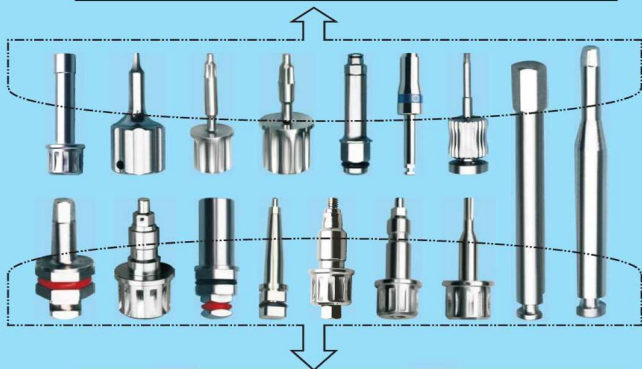
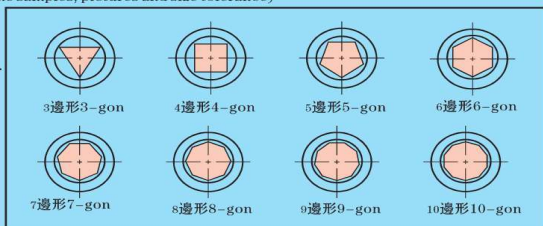
依圖依樣尺寸公差要求可生產特殊、復合、異型、超大超細超長組合成型的系列刀具。
 We can produce special, compound, special-shaped, super-large, super-thin/super-long combined profile series tooling according to requirements of drawings, samples and dimension tolerance.
 圖面、サンプル、または寸法の公差要求により特殊、複合、異型または超大、超細、超長の組合せ成型のシリーズカッタを生産できる。。



可依要求加工,彎曲不同弧度、角度的軟杆、軟鑽
 We can process soft rods and soft drills with different curved radian and angles on request

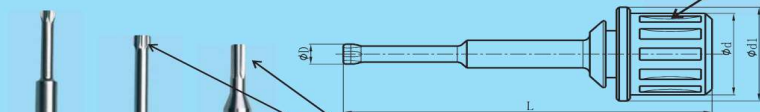
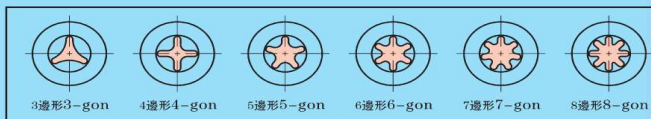
★ 超高防銹高硬度高耐磨、高剛性、高抗衝擊、高韌性不銹鋼、鈦、鈦合金等高精密、超細、超長、超硬加工成型。
 Ultra-high rust-resistant, high-hardness, high-wear-resistant, high-rigidity, high-impact-resistant & high-toughness stainless steel, titanium, titanium alloy, etc., with high-precision, ultra-fine, ultra-long, super-hard machine shaping.

- ★、可以生產不同的頭部形式、形狀、精研磨成型。
- ★、We can produce various head types, shapes and fine grind to mold.
- ★、不同形狀之卡口 (部分祇供參考，實際可依樣依圖形狀，尺寸公差生產)
- ★、Bayonets of various shapes (just for reference, actual production as per the samples, pictures and size tolerance)



- ★、可以生產不同的柄部形式、形狀、精研磨成型。
- ★、We can produce various shank types, shapes and fine grind to mold.

- ★、可以生產不同的頭部形式、形狀、精研磨成型。
- ★、We can produce various head types, shapes and fine grind to mold.



起子的生產，請能提供對應使用效果良好的
螺釘若幹，供檢配用。

For the production of driver, please provide
some good performed screws to match and
test.

ドライバーの生産に際して、調整及び効果
確認用のため、該当ボルトを数個ご提供
いただく。



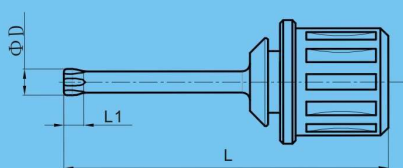
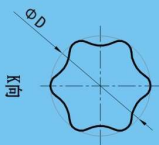
可依要求加工任意結構方式類型的接長柄。
We can produce any type and structure
of lengthened shanks according to your
requirement

材料:

- ①超高防銹高耐磨高硬度不銹鋼系列(AA)(HRC54° ±2° 斷面)(常規常備)
- ②常規標準防銹高耐磨不銹鋼系列(A)(HRC45° ~64° 斷面)
- ③有必要在超高精研磨下,起子處精度可至 ± 0.002mm (± 2um)

Material:

- ①Ultra high rust-proof, high wear-resistant & high-hardness stainless steel series (AA) (HRC54° ±2° Section)(regular stock)
- ②General anti-rust high wear resistance stainless steel series(A)(HRC45° ~64° Section)
- ③If necessary, with super-high finish grinding, the driver finish could reach ± 0.002mm.



可定制任意形狀的梅花起子,
公差高可至 ± 0.002mm
(依螺釘實樣配)

we can customize any shape of
Torx driver, the tolerance can
be up to ± 0.002mm (to match
the screw samples accordingly)

あらゆる形状のプラスドライバーが製
作でき、公差が±0.002mmまでできる
(ボルトに基づく製作)

部分尺寸 some size

	ΦD Diameter	1.750	1.750
	總長L Overall length	21	27



超高防銹型(AA)(常規常備)
Super-high anti-rust (AA)(regular stock)

可配製不同顏色及不同材料的圓圈帽

Circle cap can be prepared with different colors and different materials
多色多種材質的丸いキャップが製作できる

材料:

- ① 超高防銹高耐磨高硬度不銹鋼系列(AA)(HRC54° ± 2° 斷面)(常規常備)
- ② 常規標準防銹高耐磨不銹鋼系列(A)(HRC45° ~ 64° 斷面)
- ③ 有必要在超高精研磨下,起子處精度可至 ± 0.002mm (± 2um)

Material:

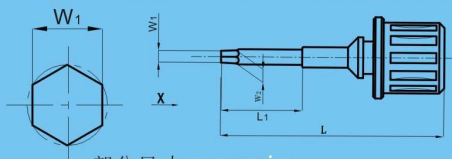
- ① Ultra high rust-proof, high wear-resistant & high-hardness stainless steel series (AA) (HRC54° ± 2° Section) (regularly stock)
- ② General anti-rust high wear resistance stainless steel series (A) (HRC45° ~ 64° Section)
- ③ If necessary, with super-high finish grinding, the driver finish could reach ± 0.002mm.

可不同材料等級
及加工等級的生產

We can produce with
different material grades
and processing grades

可配制不同顏色及
不同材料的圓圈帽
we can customize any
circle cap of any color
and material

本體超高防銹(AA)(常規常備)
Super-high anti-rust (AA)(regular stock)



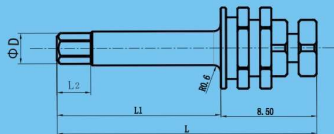
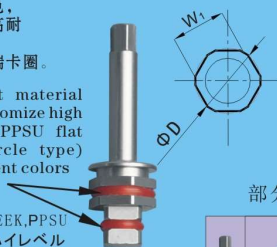
部分尺寸 some size

	W1 Width	1.16	1.16	1.25	1.28
	總長L Overall length	16	22	21	21

可不同材料及不同顏色,
也可定制不同顏色的高耐
磨PEEK,PPSU扁成型
(非純圓圈類)的高端卡圈。

we can use different material
and color, can also customize high
wear-resistant PEEK/PPSU flat
forming (not pure circle type)
high-end ring of different colors

多材質多色的高耐磨PEEK,PPSU
扁平成型(非丸型)のハイレベル
リングが特製できる。



部分尺寸 some size

	W1 Width	1.23	1.23	2.41	2.41
	ΦD Diameter	1.32	1.32	2.72	2.72
	L1 length of cut	11.5	16.5	9.0	15.0
	總長L Overall length	20.0	25.0	17.5	23.5

醫用工具及配件系列（螺絲起子）
Medical tools and parts series(Screwdriver)
医療器具及び部品シリーズ(スクルードライバー)

(超高防銹型(AA)&常規標準防銹型(A)&可超精密加工)
(Super-high anti-rust (AA)& General
anti-rust (A)&with super-high precision process)
(超防銹型(AA)&通常標準防銹型(A)&超精密加工可)



醫用工具及配件系列(螺絲起子/扳手/平行杆/鑽頭)

Medical tools and parts series (Screwdriver/Wrench/Parallel pin/Drill)

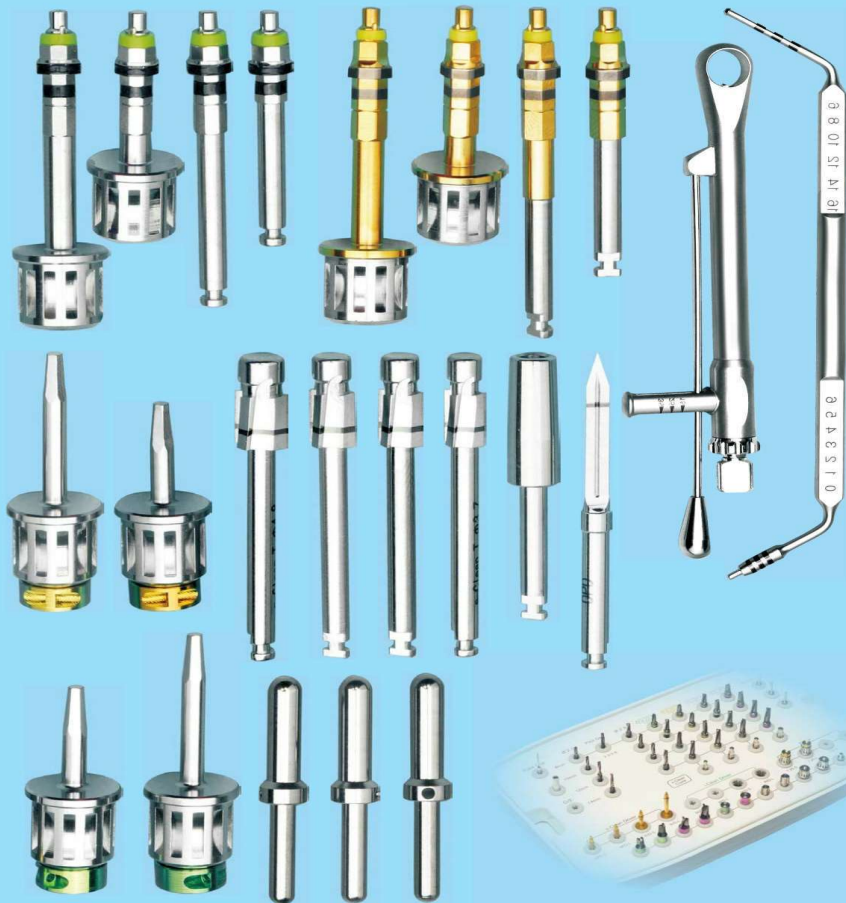
医療器具及び部品シリーズ(スクリュードライバー/レンチ/パラレルポール/ドリルヘッド)

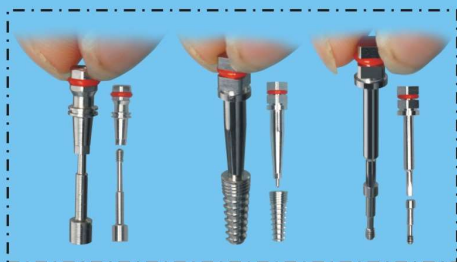
(超高防銹型(AA)&常規標準防銹型(A)&可超精密加工)

(Super-high anti-rust (AA) & General

anti-rust (A) & with super-high precision process)

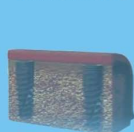
(超防銹型(AA)&通常標準防銹型(A)&超精密加工可)



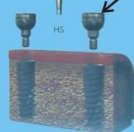


高精度，任意形狀方式，可垂直向下，輕甩不掉
(訂做時需提供配對合格的螺釘樣品，供檢配用)
With high precision and any shape, it can be used
with the screw vertically downward without falling
off if gently removing it. (When customizing,
corresponding qualified matching screw samples
are needed for match and test)

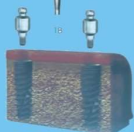
可以任意柄部連接
的結構方式。
It can be any structure of
shank connecting.



1 植體
Implants



2 治療基臺
Healing Abutment



3 球形接頭附着器
Ball Attachment
Insertion



4 尼龍不銹鋼帽
Nylon and Stainless
Steel Cap



5 固定在口腔內的有機帽
Cap Fixation with Acrylic
in Oral Cavity

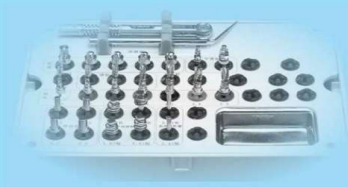
醫用工具及配件系列 (螺絲起子)
 Medical tools and parts series(Screwdriver)
 医療器具及び部品シリーズ(スクリュードライバー)

(超高防銹型(AA)&常規標準防銹型(A)&可超高精密加工)
 (Super-high anti-rust (AA)&General
 anti-rust(A)&with super-high precision process)
 (超防銹型(AA)&通常標準防銹型(A)&超精密加工可)



醫用工具及配件系列（螺絲起子）
 Medical tools and parts series(Screwdriver)
 医療器具及び部品シリーズ(スクルードライバー)

(超高防銹型(AA)&常規標準防銹型(A)&可超高精密加工)
 (Super-high anti-rust (AA)& General
 anti-rust(A)&with super-high precision process)
 (超防銹型(AA)&通常標準防銹型(A)&超精密加工可)



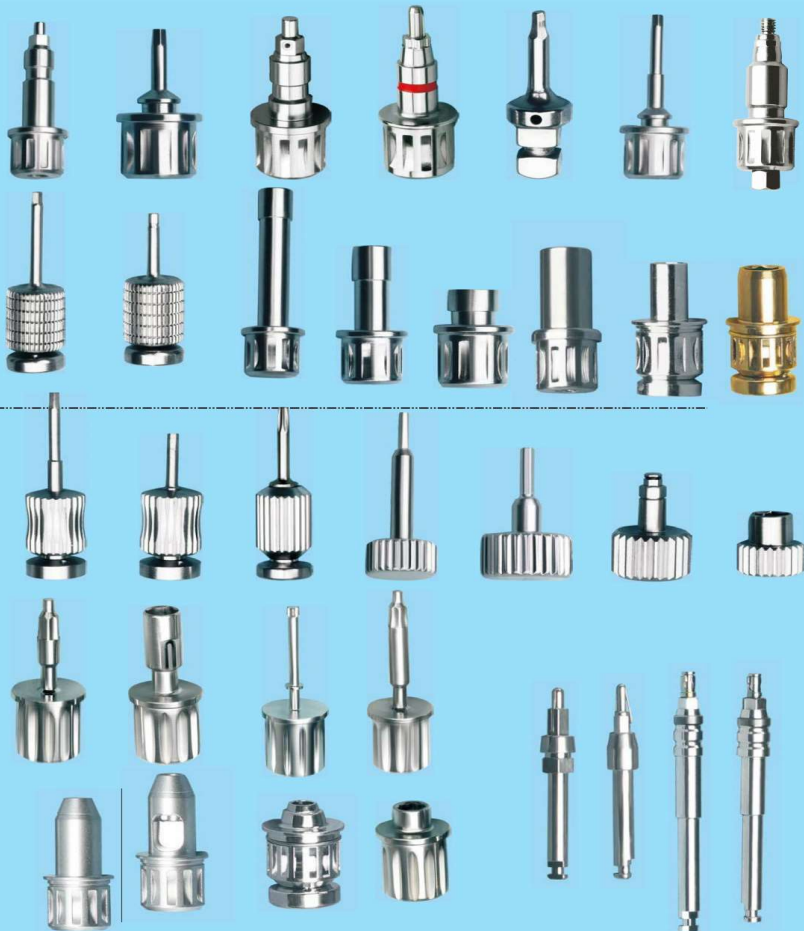
醫用工具及配件系列（螺絲起子/鑽頭）
 Medical tools and parts series (Screwdriver/drill)
 醫療器具及部件系列（螺絲起子/鑽頭）

(超高防腐型(AA)&常規標準防腐型(A)&可超高精密加工)
 (Super-high anti-rust (AA) & General
 anti-rust (A) & with super-high precision process)
 (超防腐型(AA)&通常標準防腐型(A)&超精密加工可)



醫用工具及配件系列（螺絲起子）
Medical tools and parts series(Screwdriver)
医療器具及び部品シリーズ(スクリュードライバー)

(超高防銹型(AA)&常規標準防銹型(A)&可超高精密加工)
(Super-high anti-rust (AA)& General
anti-rust(A)&with super-high precision process)
(超防銹型(AA)&通常標準防銹型(A)&超精密加工可)





帶彈性的，可量定制(彈性可大可小)
With elasticity, mass customized (big or small elasticity)

★、要求帶橡膠圈的請能提供對應的螺釘及配件，以便
依實際檢測匹配的功能來確定，生產研磨尺寸公差，當然橡
膠圈用戶自己提供更好。

★、If you want rubber rings, please provide corresponding
screws and accessories to confirm the dimensional
tolerance of grinding by testing their actual matching
function. Of course, it will be better if the users can provide
the rubber rings themselves.

也可定制不同顏色的
高耐磨PEEK,PPSU
扁成型（非純圓圈類）
的高端卡圈。

we can use different material
and color, can also customize
high wear-resistant
PEEK/PPSU flat forming
(not pure circle type)
high-end ring of
different colors

可帶不同的橡膠圈
It can be with different
rubber rings



材料:

- ① 超高防銹高耐磨高硬度不銹鋼系列(AA)(HRC54° ± 2° 斷面)(常規常備)
② 常規標準防銹高耐磨不銹鋼系列(A)(HRC45° ~ 64° 斷面)
③ 有必要在超高精研磨下,起子處精度可至 ± 0.002mm (± 2um)

Material:

- ① Ultra high rust-proof, high wear-resistant & high-hardness stainless steel series (AA)
(HRC54° ±2° Section)(regularly stock)
② General anti-rust high wear resistance stainless steel series(A)(HRC45° ~64° Section)
③ If necessary, with super-high finish grinding, the driver finish could reach ±0.002mm.



we can customize any shape of Torx driver,
the tolerance can be up to $\pm 0.002\text{mm}$
(to match the screw samples accordingly)

不同形狀之頭部 (部分祇供參考用, 實際可依樣圖形狀, 尺寸公差生產)

Heads of various shapes (Just for reference, actual production as per the samples, pictures and size tolerance)



可以生產不同的頭部形式、形狀、精研磨成型。
We can produce various head types, shapes and fine grind to mold.

可依要求生產不同頭部材料類型 (陶瓷類、鎢鋼類、不銹鋼類、鈦及鈦合金類……等系列)

We can produce heads from various types of material as per the requirement, like ceramic, carbide, stainless, titanium and titanium alloy, etc.



刃部材料類型:

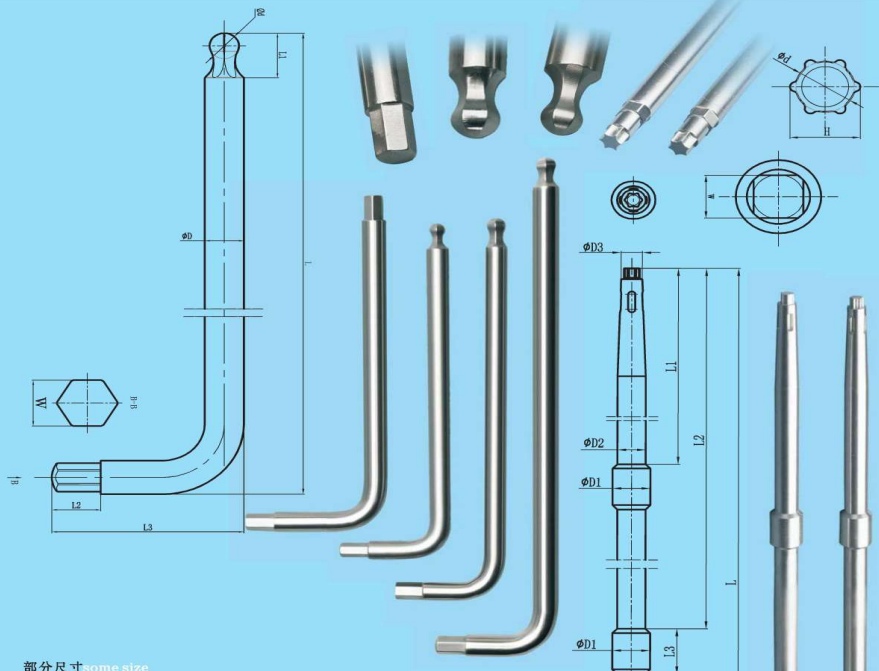
1. 超高防銹高耐磨高硬度不銹鋼類(AA) (HRC54° ± 2° 斷面). (常規常備)
2. 常規標準防銹高耐磨不銹鋼類(A) (HRC45° ~ 64° 斷面) 系列.
3. 鈦及鈦合金類 (HRC35° ~ 42°) 系列.
4. 陶瓷類 (HRA85° ~ 94°) 系列, (HRC67° ~ 84°) 系列.
5. 鎢鋼類 (HRA81° ~ 94°) 系列, (HRC60° ~ 84°) 系列.

Cutting edge material:

1. Ultra high rust-proof, high wear-resistant & high-hardness stainless steel series (AA) (HRC54° ± 2° Section). (regularly stock)
2. General anti-rust & high wear-resisting type (A) (HRC45° ~ 64° Section) series.
3. Ti and Ti alloy (HRC35° ~ 42°) series.
4. Ceramic (HRA85° ~ 94°) series, (HRC67° ~ 84°) series.
5. Carbide (HRA81° ~ 94°) series, (HRC60° ~ 84°) series.

醫用工具及配件系列 (螺絲起子)
Medical tools and parts series (Screwdriver)
医療器具及び部品シリーズ (スクルードライバー)

(超高防銹型(AA)&常規標準防銹型(A)&可超高精密加工)
(Super-high anti-rust (AA)& General
anti-rust (A)&with super-high precision process)
(超防銹型(AA)&通常標準防銹型(A)&超精密加工可)

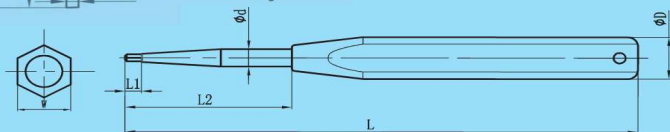
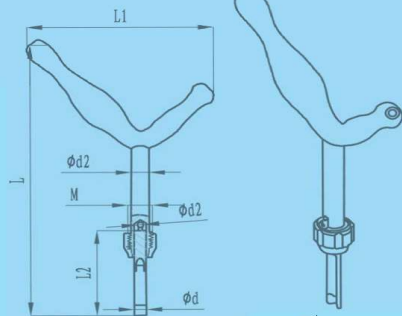
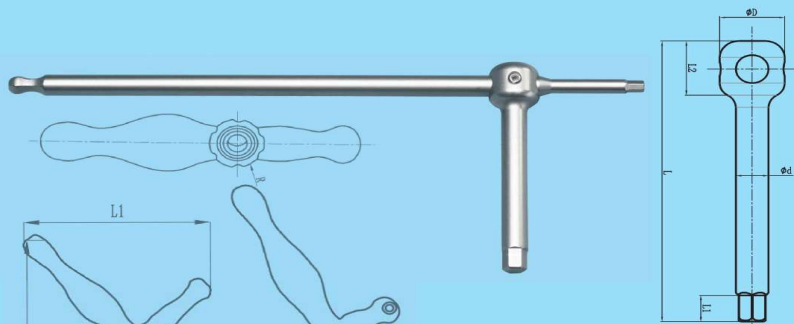
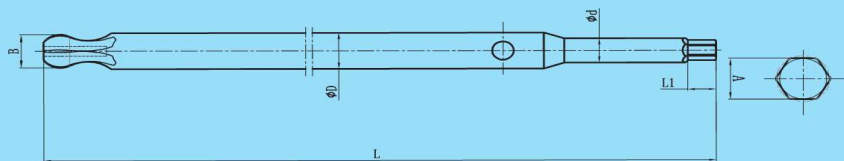


部分尺寸 some size

長度L1 Length L1	長度L2 Length L2	長度L3 Length L3	總長L Overall Length	外徑ΦD Diameter	球徑Φd Diameter d	寬度W Wide
9.35	8	30.4	121.4	5.97	5.0	5.0
10.5	9.0	39.0	180.8	7.95	6.0	6.0

醫用工具及配件系列 (螺絲起子)
 Medical tools and parts series (Screwdriver)
 医療器具及び部品シリーズ(スクルードライバー)

(超高防銹型(AA)&常規標準防銹型(A)&可超精密加工)
 (Super-high anti-rust (AA)& General
 anti-rust (A)&with super-high precision process)
 (超防銹型(AA)&通常標準防銹型(A)&超精密加工可)





- ★、可依不同品牌、不同類型的植體形式、形狀、結構等，高精密研磨成型對應的、匹配相關的相同類型、形式、形狀、結構的鑽頭、工具等等。

Corresponding and matching drills and tools of different types, forms, shapes, structures can be high precisely ground to mold according to different brands and different types of implants forms, shapes, structures, etc.

各ブランド及び各タイプのインプラントの形式、形状、構造などに従って、高精密研磨成型で各タイプ、形式、形状、構造のドリルヘッド、工具等に対応できる。

- ★、可用陶瓷、鎢鋼、超高防銹高耐磨高硬度不銹鋼(AA)、鈦、鈦合金等材料超精超硬研磨成型。It can be produced by ultra-precision superhard grinding to mold of ceramic, tungsten steel, superhigh rust-proof high wear-resistant high-hardness stainless steel (AA), titanium, titanium alloys and other materials.

セラミック、タングステン鋼、超防銹高耐磨高硬度ステンレス(AA)、チタン、チタン合金などの材質で超精密超硬研磨成型ができる。

※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

ith r w ithout eetration, o llow & o llow ore nner ole r ocess ith ifferent r gles.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型、芯厚、容屑槽寬度、刃背方式、鑽尖方式、內冷孔方式、刃部結構、刃口角度、刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

- ★、可依要求生產不同刃部材料類型(陶瓷類、鎢鋼類、超防銹高高級品不銹鋼類(AA)、鈦及鈦合金類、常規標準防銹高耐磨不銹鋼(A).....等系列)

The cutting edge can be produced with different materials (ceramic, carbide, superhigh anti-rust and high wear resistant stainless steel (AA), Ti, Ti alloy, generally anti-rust and high wear resistant stainless steel (A) ... series)



超防銹高耐磨
不銹鋼(AA)
superhigh anti-rust and
high wear resistant
stainless steel(AA)



陶瓷
Ceramic



鎢鋼
carbide



※ 刃部加工等級:

- AAA級: CNC超硬砂輪,鏡面研磨任意形狀之刃口,同心度◎,跳動↗,圓柱度 $\phi \leq 0.003\text{mm}$ ($3\mu\text{m}$),可任意的刃口鋒利程度。
A A級: CNC超硬砂輪,精研磨任意形狀之刃口,同心度◎,跳動↗,圓柱度 $\phi \leq 0.008\text{mm}$ ($8\mu\text{m}$),可任意的刃口鋒利程度。
A級: CNC超硬砂輪,一般研磨任意形狀之刃口同心度◎,跳動↗,圓柱度 $\phi \leq 0.012\text{mm}$ ($12\mu\text{m}$),可任意的刃口鋒利程度。
B級: CNC車削加工+熱處理+拋光處理,較差的刃口鋒利性,同心度◎,跳動↗,圓柱度 ϕ (0.10~0.20mm) (100/ μm ~200/ μm)

※ Cutting edge machining grades:

- Class AAA: CNC super hard grinding wheel, mirror surface grinding for any shape of cutting edge. Concentricity ◎, runout ↗, cylindricity $\phi \leq 0.003\text{mm}$ ($3\mu\text{m}$), any sharpness of cutting edge.
Class A A: CNC super hard grinding wheel, finish grinding for any shape of cutting edge. Concentricity ◎, runout ↗, cylindricity $\phi \leq 0.008\text{mm}$ ($8\mu\text{m}$), any sharpness of cutting edge.
Class A A: CNC super hard grinding wheel, general grinding for any shape of cutting edge. Concentricity ◎, runout ↗, cylindricity $\phi \leq 0.012\text{mm}$ ($12\mu\text{m}$), any sharpness of cutting edge.
Class B: CNC lathe work + heat treatment + polishing treatment, worse sharpness of cutting edge. Concentricity ◎, runout ↗, cylindricity ϕ (0.10~0.20mm) (100/ μm ~200/ μm).

*刃部材料類型:

- 1.超防銹不銹鋼類(AA)(HRC54° $\pm 2^\circ$ 斷面)
(常規常備)
- 2.常規標準防銹高耐磨不銹鋼類(A)
(HRC45° ~64° 斷面)
- 3.鈦及鈦合金類(HRC35° ~42°)系列,
- 4.陶瓷類(HRA85° ~94°)系列,
(HRC67° ~84°)系列,
- 5.鎢鋼類(HRA81° ~94°)系列,
(HRC60° ~84°)系列,

Material of cutting edge:

1. ultra-high anti-rust high wear-resistant stainless steel(AA)(HRC54° $\pm 2^\circ$ Section)(regular stock)
2. general anti-rust high wear-resistant stainless steel(A)(HRC45° ~64° Section) series
3. Titanium and Titanium alloy (HRC35° ~42°) series
4. Ceramic (HRA85° ~94°)series, (HRC67° ~84°) series
5. Carbide (HRA81° ~94°)series, (HRC60° ~84°) series

※必要可帶穿透&不穿透,不同等級加工的中空、空腔內孔加工。

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

*可超硬、超精研磨,任意的精研類型,芯厚,容屑槽寬度,刃背方式,鑽尖方式,內冷卻孔方式,刃部結構,刃口角度,刃口鋒利程度之要求,及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(集屑鑽、積屑鑽系列)

Medical tools and parts series(Chip collector, Bone deposition drill series)

醫療器具及び部品シリーズ(洞ドリルヘッド)

(超高防銹高耐磨(AA)&高精密特殊非標成型)

(ultra-high anti-rust(AA)&high

precision special nonstandard forming)

超防銹高耐磨(AA)&高精密特殊非標成型

常用骨屑收集、骨粉堆積至槽頂的集屑鑽、積屑鑽、擴孔系列參考：
常規常備材料：超高防銹高耐磨不銹鋼(AA)(HRC54° ± 2° 斷面)

Chip collector, Bone deposition drill and reamer series commonly used for skeletal fragment collection and bone powder accumulation to the crest as reference:

Regular stock material: Ultra-high anti-rust & high wear-resistant stainless steel(AA)(HRC54° ± 2° Section)



深槽至頂、可堆屑至槽頂。(可黑色、黃色、全亞光、全亮光、部分亞光+部分亮光等表面處理)

Deep groove to top, chip accumulation to the crest. (It can be with black, yellow, full matt, full shiny, partial matt + partial shiny and other surface treatment)

麻花式、深槽至頂、螺旋刃 Twist, deep groove to top, spiral edge			(所有刃處均全精研磨) (All edges are fully finish grinding)
2刃(階梯、錐度均可) 2-flute (It can be step or taper.)	3刃(階梯、錐度均可) 3-flute (It can be step or taper.)	4刃(階梯、錐度均可) 4-flute (It can be step or taper.)	

① 2刃常用規格系列：刃徑Φ0.80mm~Φ5.50mm之間系列任意尺寸之規格

3刃常用規格系列：刃徑Φ0.80mm~Φ6.40mm之間系列任意尺寸之規格

4刃常用規格系列：刃徑Φ2.0mm~Φ7.95mm之間系列任意尺寸之規格(需批量訂做)

② 所有刃數常規刃長長可至55mm系列，總長可至65mm系列的
任意階梯、錐度角度、形狀、鋒利性要求加工的。

③ 常規為10°~12°螺旋刃，可為鋒利螺旋刃、擠光螺旋刃、鈍化螺旋刃或前鋒利後鈍化螺旋刃等結構方式。

① 2-flute commonly-used specification: Any size series of edge diameter between Φ0.80mm ~ Φ5.50mm

3-flute commonly-used specification: Any size series of edge diameter between Φ0.80mm ~ Φ6.40mm

4-flute commonly-used specification: Any size series of edge diameter between Φ2.0mm ~ Φ7.95mm (Mass customized)

② The series with regular number of flutes, but cutting length up to 55mm and total length up to 65mm, processed with any step, taper angle, shape, sharpness requirements.

③ The conventional 10° ~ 12° helical edge can be sharp, burnishing, passivated, or front-sharp but rear-blunt.

*可超硬、超精研磨，任意的新穎類型，芯厚、容屑槽寬度、刃帶方式、鑽尖方式、內冷卻孔方式、刃部結構、刃口角度、刃口鋒利程度之要求，及高可至±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, wall thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)

醫用工具及配件系列(集屑鑽、積骨鑽系列)

Medical tools and parts series(Chip collector, Bone deposition drill series)

医療器具及び部品シリーズ(洞ドリルヘッド)

(超高防銹高耐磨(AA)&高精密特殊非標成型)

(ultra-high anti-rust(AA)&high precision special nonstandard forming)

超防銹高耐磨(AA)&高精密特殊非標準成型

常用骨屑收集、骨粉堆積至槽頂的集屑鑽、積骨鑽、擴孔系列參考:

常規常備材料: 超高防銹高耐磨不銹鋼(AA) (HRC54° ± 2° 斷面)

Chip collector, Bone deposition drill and reamer series commonly used for skeletal fragment collection and bone powder accumulation to the crest as reference:

Regular stock material: Ultra-high anti-rust & high wear-resistant stainless steel(AA) (HRC54° ± 2° Section)



深槽至頂, 可堆屑至槽頂。
(可黑色、黃色、全亞光、
全亮光、部分亞光、部分亮
光等表面處理)

Deep groove to top, chip accumulation to the crest. (It can be with black, yellow, full matt, full shiny, partial matt + partial shiny and other surface treatment)

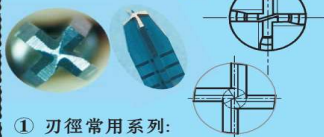
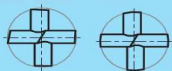
寬槽至頂、直槽直刃系列
Wide groove to top, straight groove straight-flute series

(所有刃處均全精研磨)
(All edges are fully finish ground)

4刃、帶頂角刃型
4-flute, edge with vertex angle

3刃、大開口型
3-flute, large opening type

4刃、擴孔式型
4-flute, reaming type



- ① 刃徑常用系列:
Φ0.80mm ~ Φ6.40mm
之間系列任意尺寸之規格
- ② 常規刃長長可至
55mm系列, 總長
可至65mm的任意
階梯、錐度角度、
形狀、鋒利性要
求加工的。

- ① 刃徑常用系列:
Φ0.80mm ~ Φ5.50mm
之間系列任意尺寸之規格。
- ② 常規刃長長可至55mm
系列, 總長可至65mm
系列的任意階梯、錐度
角度、形狀、鋒利性要
求加工的。

- ① 刃徑常用系列:
Φ0.80mm ~ Φ6.40mm
之間系列任意尺寸之規格。
- ② 常規刃長長可至55mm系列,
總長可至65mm的任意階梯、
錐度角度、形狀、鋒利性要
求加工的。

- ① Commonly-used edge
diameter: any size series
between Φ0.80mm ~ Φ6.40mm
- ② Conventional cutting
length up to 55mm series,
and total length up to
65mm, processed with
any step, taper angle,
shape, sharpness
requirements

- ① Commonly-used edge
diameter: any size series
between Φ0.80mm ~ Φ5.50mm
- ② Conventional cutting
length up to 55mm series,
and total length up to
65mm, processed with
any step, taper angle,
shape, sharpness
requirements

- ① Commonly-used edge
diameter: any size series
between Φ0.80mm ~ Φ6.40mm
- ② Conventional cutting
length up to 55mm series,
and total length up to
65mm, processed with
any step, taper angle,
shape, sharpness
requirements

★可鉗徑、鉗槽研磨、任意的新穎型、花厚、花厚槽寬度、刃帶方式、鑽尖方式、內冷沖孔方式、刃部結構、刃口角度、刃口鋒利程度之要求、及高可至 ± 0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, wall thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ± 0.003mm (3μm)

★ 陶瓷類 (HRA85° ~94°)系列, (HRC67° ~84°)系列。

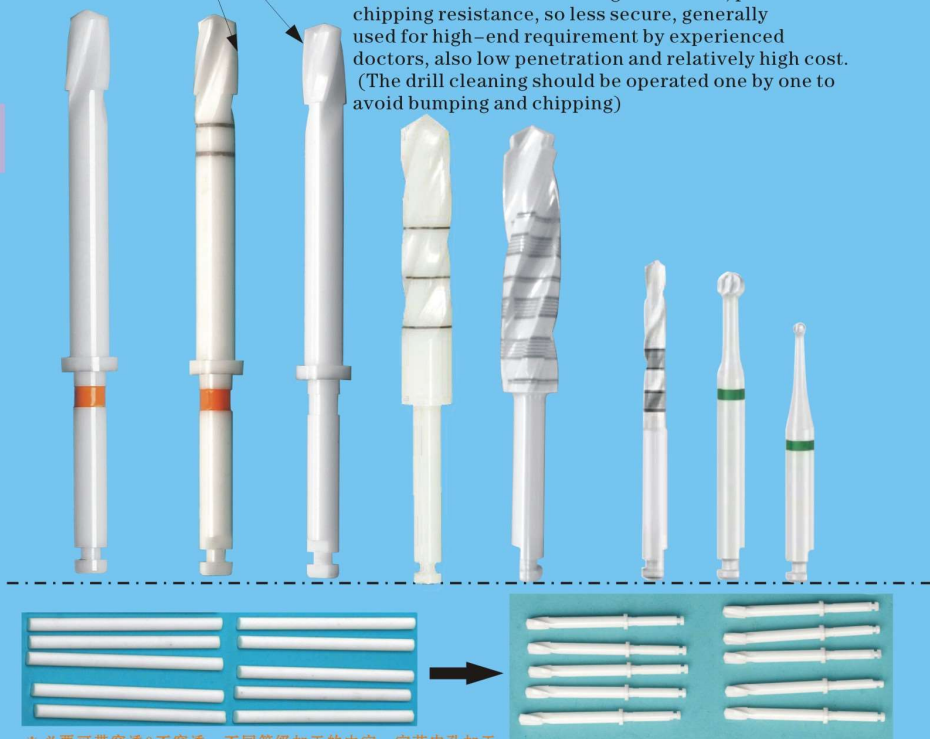
Ceramic (HRA85° ~94°) series, (HRC67° ~84°) series.

★ 陶瓷類, 手術中晶瑩剔透, 超級美觀, 不崩刃下, 刃口鋒利性保持時間超長; 在不崩刃下, 鋒利性耐磨度是高耐磨不銹鋼類的10~30倍, 但由於脆性大, 抗崩刃性低, 安全性較差, 一般用於要求高端的、經驗豐富者使用, 且普及性低, 成本也會較高。

(清潔清洗需單支作業, 以免碰碰而崩刃)

Ceramics, crystal clear in surgery, super-beautiful. If not tipping, cutting edge sharpness hold time is super long, and its sharpness & abrasability are 10~30 times higher than that of high wear resistant stainless steel. But due to big brittleness, poor chipping resistance, so less secure, generally used for high-end requirement by experienced doctors, also low penetration and relatively high cost. (The drill cleaning should be operated one by one to avoid bumping and chipping)

依材料類別, 可以不同的差異的顏色
Different colors for different materials



※ 必要可帶穿透&不穿透, 不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole processing with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★ 可超硬、超精研磨, 任意的柄部類型, 芯厚, 容屑槽寬度, 刃背方式, 鑽尖方式, 內冷孔孔方式, 刃部結構, 刃口角度, 刃口鋒利程度之要求, 及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求 We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

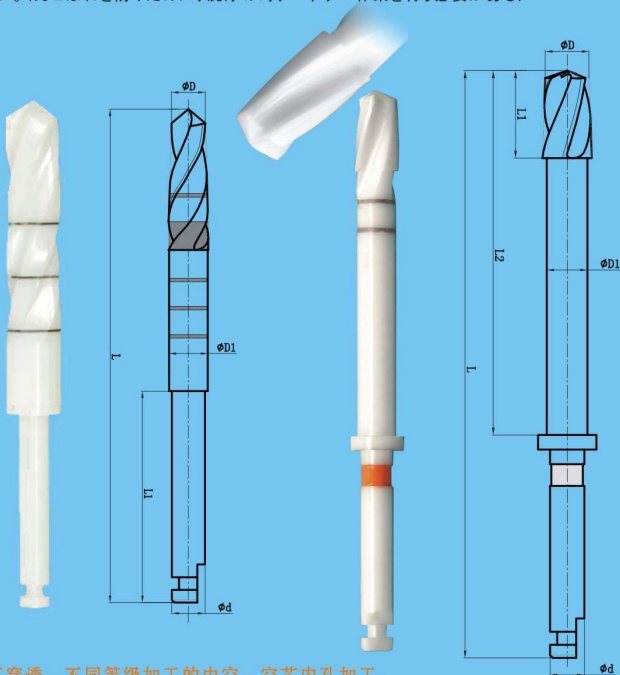
★ 陶瓷類 (HRA85° ~94°)系列, (HRC67° ~84°)系列。
Ceramic (HRA85° ~94°) series, (HRC67° ~84°) series.

- ★ 陶瓷類, 手術中晶瑩剔透, 超級美觀, 不崩刃下, 刃口鋒利性保持時間超長; 在不崩刃下, 鋒利性耐磨度是高耐磨不銹鋼類的10~30倍, 但由於脆性大, 抗崩刃性低, 安全性較差, 一般用於要求高端的、經驗豐富者使用, 且普及性低, 成本也會較高。
(清潔清洗需單支作業, 以免磕碰而崩刃)

Ceramics, crystal clear in surgery, super-beautiful. If not tipping, cutting edge sharpness hold time is super long, and its sharpness & abrasability are 10~30 times higher than that of high wear resistant stainless steel. But due to big brittleness, poor chipping resistance, so less secure, generally used for high-end requirement by experienced doctors, also low penetration and relatively high cost.

(The drill cleaning should be operated one by one to avoid bumping and chipping)

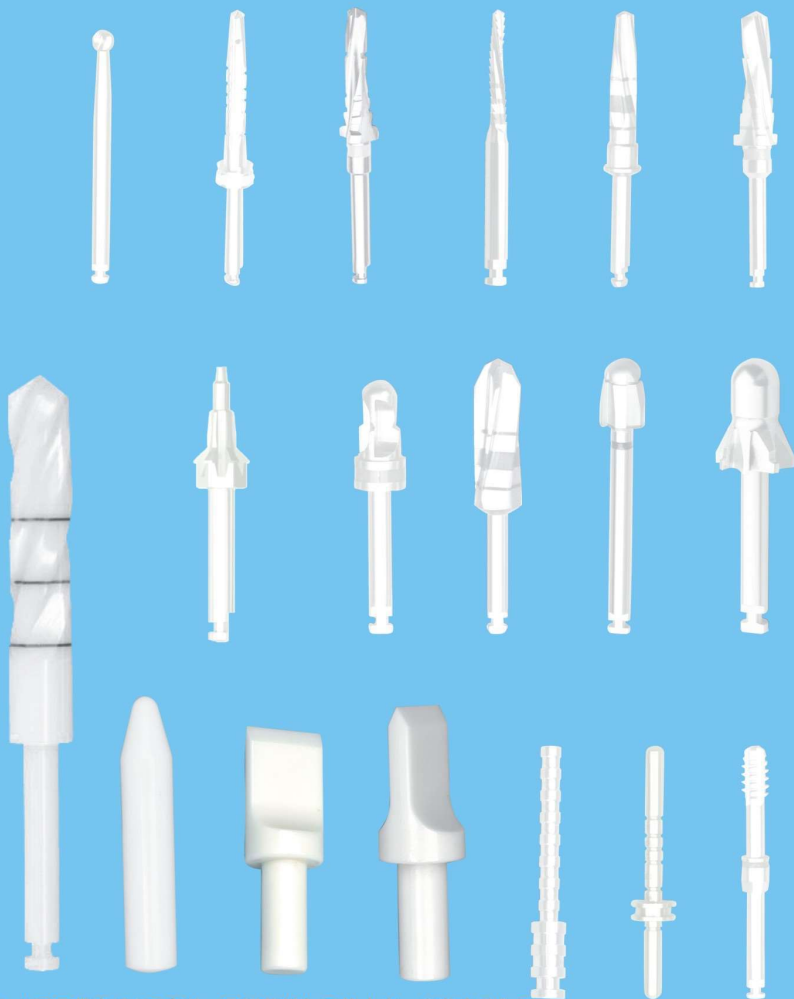
セラミック類は手術の際、澄みきって、見栄えがよい。刃こぼれが無ければ、刃の鋭利さが長時間で維持できる; 刃こぼれが無ければ、鋭利さと耐磨耗度が高耐磨耗ステンレス類の10~30倍である。但し、脆性が大きいため、刃こぼれが発生しやすく、安全性が低い。一般的には、ハイレベル且つ経験豊富な医師に利用され、普及度が低いほか、コストも高い。(刃こぼれを防ぐために、洗浄の時、一本ずつ作業を行う必要がある)



※ 必要可帶穿透&不穿透, 不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★ 可超硬、超精研磨, 任意的柄部類型, 芯厚, 容屑槽寬度, 刃背方式, 鑽尖方式, 內冷卻孔方式, 刃部結構, 刃口角度, 刃口鋒利程度之要求, 及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)



※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に依じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

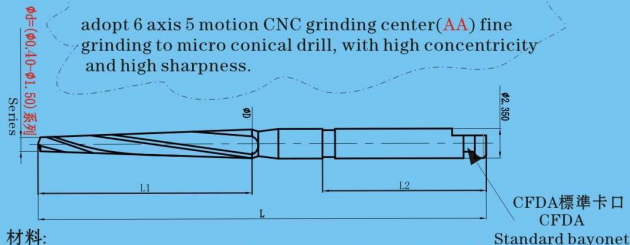
★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列 (微細錐度鑽頭、牙髓鑽、預備鑽)
Medical tools and parts series (Micro conical drill, Endodontics drills, Preparation drill)
医療器具及び部品シリーズ (極細テーパ・ビット、歯髓ドリル、予備ドリル)

(超高防銹高耐磨 (AA) & 高精密特殊非標成型)
(ultra-high anti-rust (AA) & high precision special nonstandard forming)
超防銹高耐磨 (AA) & 高精密特殊非標準成型

採用六軸五聯動CNC磨削中心(AA)精研磨之微細錐度鑽頭，高同心度、高鋒利性、高銳利性

adopt 6 axis 5 motion CNC grinding center (AA) fine grinding to micro conical drill, with high concentricity and high sharpness.



材料:

- ① 超高防銹高耐磨不銹鋼(AA) (HRC54° ± 2° 斷面) (常規常備)
- ② 超高回彈性，低耐磨不銹鋼 (AA)

Material

- ① ultra-high anti-rust high wear-resistant stainless steel (AA) (HRC54° ± 2° Section) (regular stock)
- ② ultra-high elasticity, low wear-resistant stainless steel (AA)

部分尺寸(AA) (常規常備) some sizes (AA) (regular stock)

刃徑Φd Diameter	0.50	0.70	0.90	1.10
刃徑ΦD Diameter	1.69	1.89	2.09	2.29
刃長L1 Length of cut	17.05	17.05	17.05	17.05
柄徑 Shank Dia.	2.35	2.35	2.35	2.35
總長L Overall length	35.65	35.65	35.65	35.65
刃數Z No. of flute	3	3	3	3

六軸五聯動CNC磨削中心，超鋒利之刃口超硬精研磨成型。
超高鋒利刃、不堵屑、不粘屑、不發熱。

6-axis 5-linkage CNC grinding center, super-sharp cutting edge super-hard finish grinding profiling.
ultra-high sharp edge, no blocking chips, no heating

纖維柱預備鑽、根管預備鑽、根管鑽、根管擴充鑽、直線通路車針、修復治療鑽。

Fiber Post Drill, Root Canal Preparation Drill, Root Canal Drill, Root Canal Expanding Drill, Straight wire access pin, Restoration drill

* 必要可帶不穿透，不同等級加工的中空、空芯內孔加工。

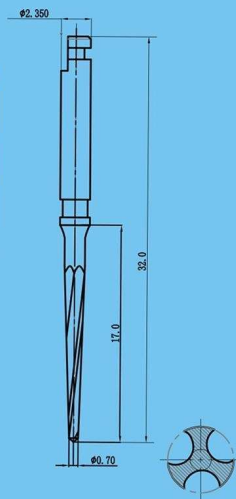
Without penetration, hollow & hollow core inner hole process with different grades.

必要に依じて、貫通なし、各レベル加工で中空、中空内孔加工。

* 可超硬、超精研磨，任意的術部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 ± 0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ± 0.003mm (3μm)

醫用工具及配件系列(寶鑽頭)
Medical tools and parts series(Drill)
医療器具及び部品シリーズ(洞ドリルヘッド)

(超高防銹高耐磨(AA)&高精度特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨耗(AA)&高精度特殊非標準成型



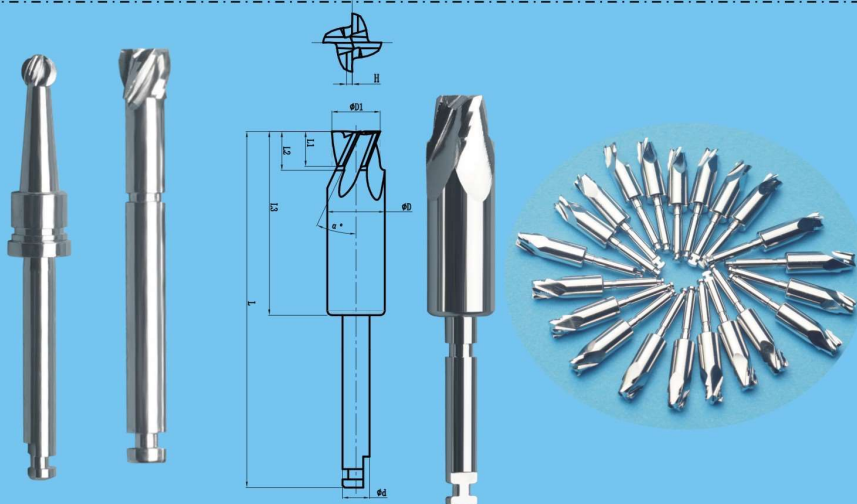
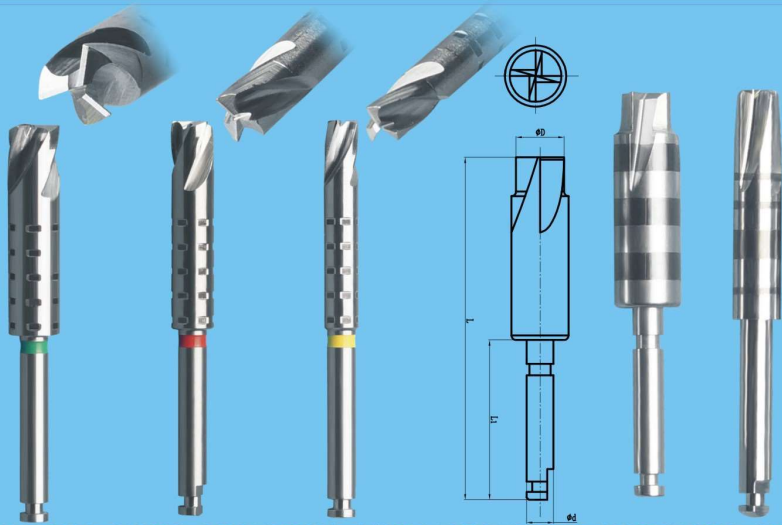
※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求 We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列（平骨鑽）
Medical tools and parts series (Flat bone drill)
医療器具及び部品シリーズ（平骨ドリル）

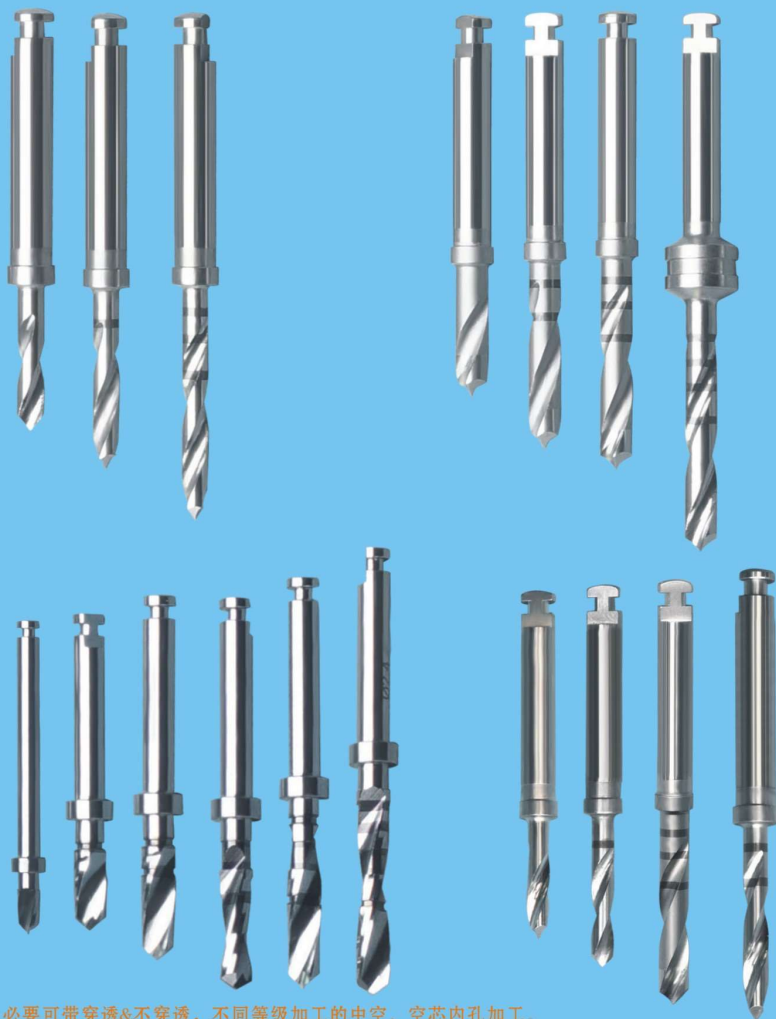
（超高防銹高耐磨（AA）&高精密特殊非標成型）
（ultra-high anti-rust (AA) & high
precision special nonstandard forming）
超防銹高耐磨（AA）&高精密特殊非標準成型



★必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)



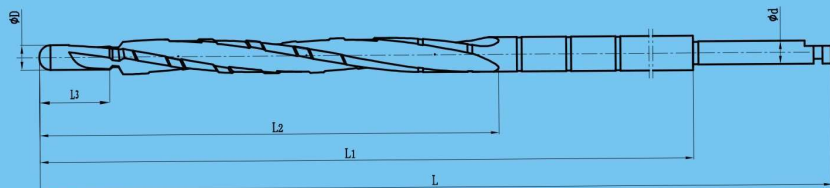
※ 必要可帶穿透&不穿透。不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★ 可超硬、超精研磨。任意的斷部類型。芯厚。容屑槽寬度。刃背方式。鑽尖方式。內冷卻孔方式。刃部結構。刃口角度。刃口鋒利程度之要求。及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(顱骨鑽頭)
Medical tools and parts series(Zygomatic drill)
医療器具及び部品シリーズ(ほお骨ドリルヘッド)

(超高防銹高耐磨(AA) & 高精度特殊非標成型)
(ultra-high anti-rust(AA) & high
precision special nonstandard forming)
超防銹高耐磨(AA) & 高精度特殊非標準成型



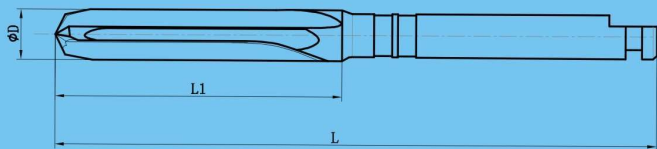
※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★ 可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

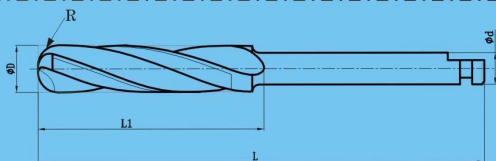
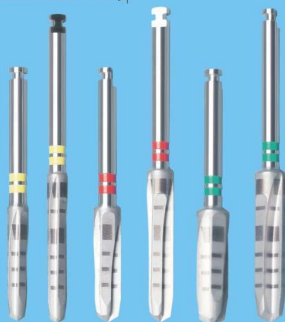
醫用工具及配件系列(引導鑽頭)
Medical tools and parts series(Guide drill)
医療器具及び部品シリーズ(ガイドドリルヘッド)

(超高防銹高耐磨(AA)&高精密特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨耗(AA)&高精密特殊非標準成型



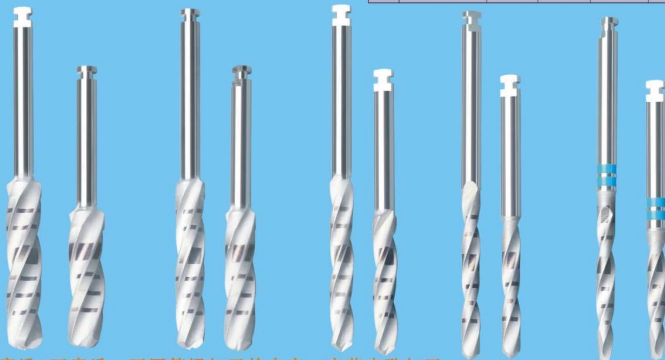
部分尺寸 some size

刃徑 ΦD Diameter	2.8	2.8	3.5	3.5	4.2	4.2
刃長 $L1$ Length of cut	15	20	15	20	15	20
柄徑 Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35
總長 L Overall length	33	41	33	41	33	41
刃數 Z No. of flute	3	3	3	3	3	3



部分尺寸 some size

刃徑 ΦD Diameter	3.5	3.5	4.2	4.2
刃長 $L1$ Length of cut	17	21	17	21
柄徑 Φd Shank Dia.	2.35	2.35	2.35	2.35
總長 L Overall length	33	41	33	41
刃數 Z No. of flute	3	3	3	3



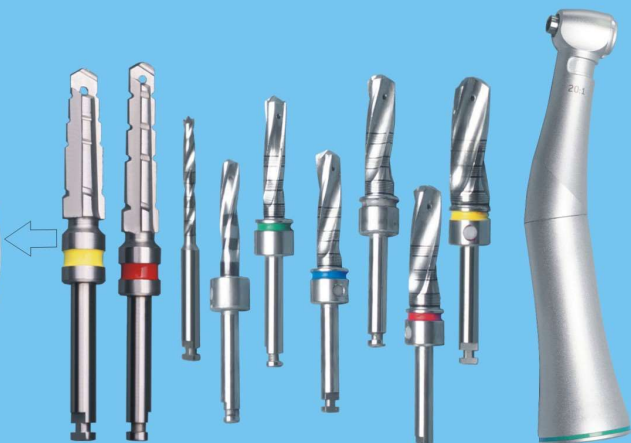
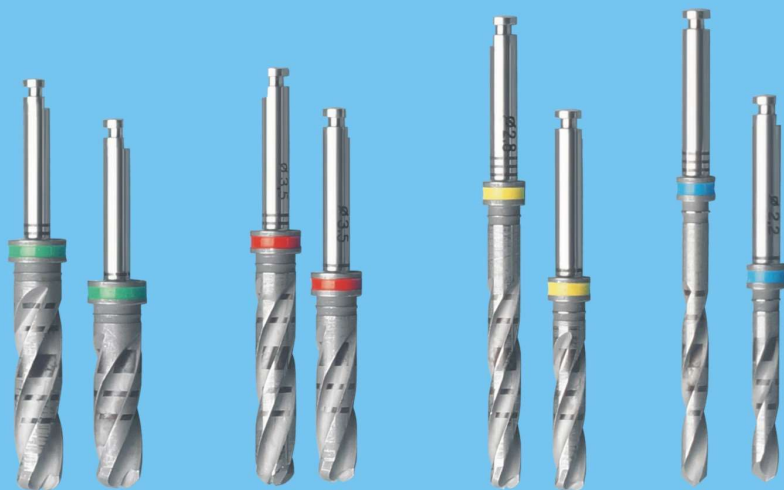
※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、空芯内穴加工。

★ 可超硬、超精研，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列 (引導鑽頭)
Medical tools and parts series (Guide drill bits)
医療器具及び部品シリーズ (ガイドドリルヘッド)

(超高防銹高耐磨 (AA) & 高精密特殊非標成型)
(ultra-high anti-rust (AA) & high
precision special nonstandard forming)
超防銹高耐磨 (AA) & 高精密特殊非標準成型



※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

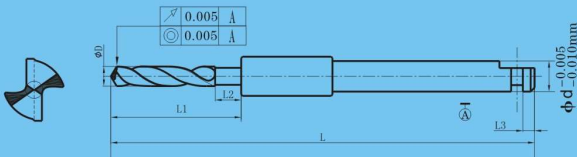
With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★ 可超硬、超精研磨、任意的柄部類型、芯厚、容屑槽寬度、刃背方式、鑽尖方式、內冷卻孔方式、刃部結構、刃口角度、刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(支抗鑽頭)
Medical tools and parts series(Anchorage Drills)
醫療器具及び部品シリーズ(アンカレッジドリルヘッド)

(超高防銹高耐磨(AA)&高精密特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨(AA)&高精密特殊非標準成型

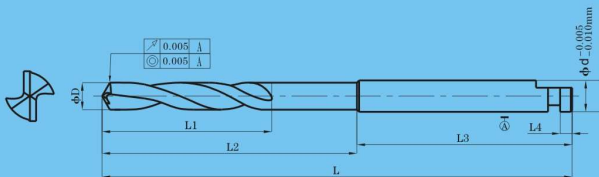


可以至φ0.30mm的微型鑽針型。
Micro drill point to φ0.30mm

部分尺寸some sizes

刃徑φD Diameter	1.2	1.2	1.2	1.2	1.2	1.5	1.5	1.5	1.5	1.5
刃長L1 Length of cut 刃の長さ	8.0	10	12	14	16	8.0	10	12	14	16
柄徑φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長L Overall length 總長さ	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5	32.5
刃數Z No. of flute	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

其它规格刃徑、刃長、總長等，可以按要要求生產，比如刃徑、1.0;1.1;1.6;1.8;2.0等……
Other specifications such as flute diameter, flute length, total length, etc, can be produced as per requirement, for example, the flute diameter could be 1.0, 1.1, 1.6, 1.8, 2.0, ...



部分尺寸some sizes

刃徑φD Diameter	1.2	1.4	1.6	2.0	2.2
刃長L1 Length of cut 刃の長さ	8	8	8	10	10
柄徑φd Shank Dia.	2.35	2.35	2.35	2.35	2.35
總長L Overall length 總長さ	36	36	36	36	36
刃數Z No. of flute	2	2	2	2	2

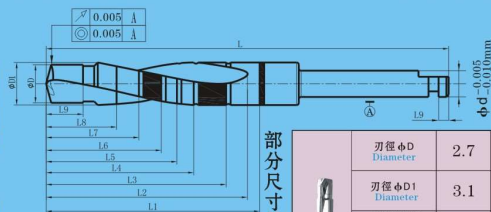
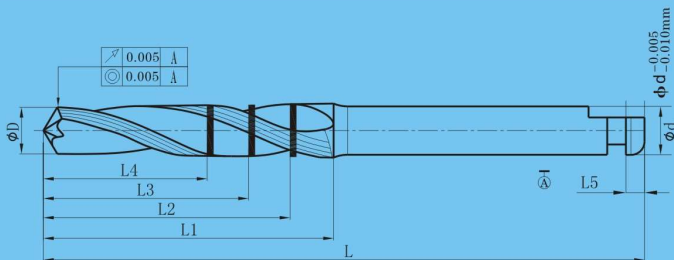
※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、空芯内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷却孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)

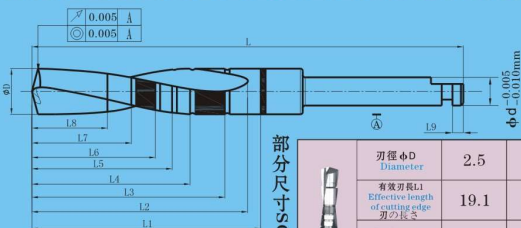
醫用工具及配件系列(鑽頭)
Medical tools and parts series(Drill)
医療器具及び部品シリーズ(ドリルヘッド)

(超高防銹高耐磨 (AA) & 高精密特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨耗(AA)&高精密特殊非標準成型



部分尺寸 some sizes

刃徑 φD Diameter	2.7	3.1	3.3	4.3
刃徑 φD1 Diameter	3.1	3.5	3.7	4.7
有效刃長 L1 Effective length of cutting edge 刃の長さ	19.1	19.1	19.1	19.1
柄徑 φd Shank Dia.	2.35	2.35	2.35	2.35
總長 L Overall length 總長	36	36	36	36
刃數 Z No. of Flute	2	2	2	2



部分尺寸 some sizes

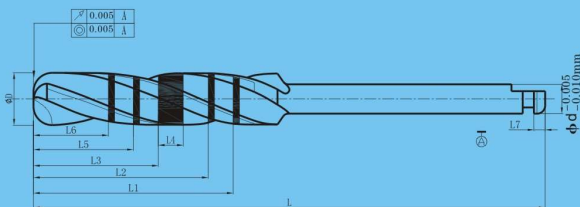
刃徑 φD Diameter	2.5	2.7	4.0
有效刃長 L1 Effective length of cutting edge 刃の長さ	19.1	19.1	19.1
柄徑 φd Shank Dia.	2.35	2.35	2.35
總長 L Overall length 總長	36	36	36
刃數 Z No. of Flute	2	2	2

※ 必要可帶穿透 & 不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

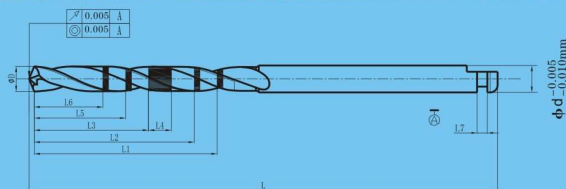
必要に応じて、貫通付き & 貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 ±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)



部分尺寸
some sizes

	刃徑 ϕD Diameter	3.5	3.5	4.2	4.2
	有效刃長L1 Effective length of cutting edge 刃の長さ	12	16	12	16
	柄徑 ϕd Shank Dia.	2.35	2.35	2.35	2.35
	總長L Overall length 總長	33	41	33	41
	刃數Z No. of flute	3	3	3	3



部分尺寸 some sizes

	刃徑 ϕD Diameter	2.2	2.2	2.8	2.8
	有效刃長L1 Effective length of cutting edge 刃の長さ	12	16	12	16
	柄徑 ϕd Shank Dia.	2.35	2.35	2.35	2.35
	總長L Overall length 總長	33	41	33	41
	刃數Z No. of flute	2	2	3	3

✦ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、空芯内孔加工。

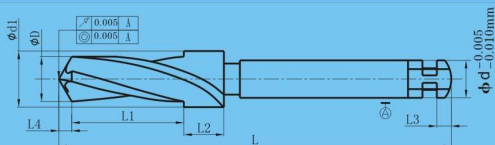
✦ 可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill up, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(鑽頭)
Medical tools and parts series(Drill)
醫療器具及び部品シリーズ(ドリルヘッド)

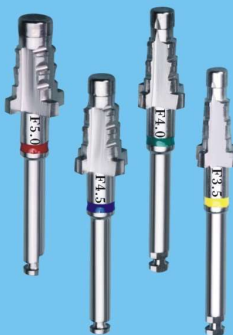
(超高防銹高耐磨 (AA) & 高精密特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨 (AA) & 高精密特殊非標準成型



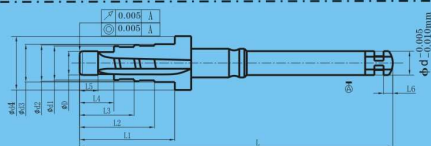
部分尺寸
some sizes



刃徑 ϕD Diameter	2.8	2.8	2.8	2.8	2.8	2.8
刃長 L_1 Length of cut 刃の長さ	7.0	8.5	10	11.5	13	15
柄徑 ϕd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35
總長 L Overall length 總長さ	24.5	26	27.5	29	30.5	32.5
刃數 Z No. of Flute	3	3	3	3	3	3



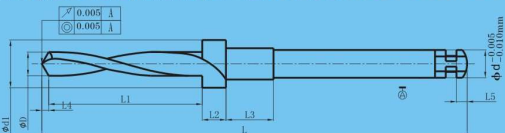
部分尺寸
some sizes



刃徑 $\phi d3$ Diameter	3.5	4.0	4.5	5.0
刃長 L_1 Length of cut 刃の長さ	8.8	8.8	8.8	8.8
柄徑 ϕd Shank Dia.	2.35	2.35	2.35	2.35
總長 L Overall length 總長さ	30.6	30.2	30.1	30.1
刃數 Z No. of Flute	1	1	1	1



部分尺寸
some sizes



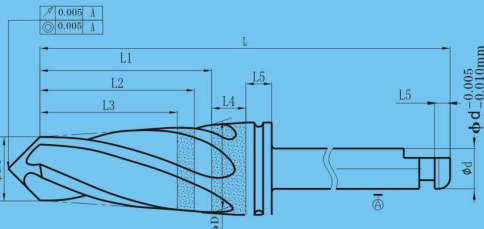
刃徑 ϕD Diameter	2.0	2.0	2.0	2.0
刃長 L_1 Length of cut 刃の長さ	8.5	10	11.5	13
柄徑 ϕd Shank Dia.	2.35	2.35	2.35	2.35
總長 L Overall length 總長さ	31.8	34.8	30.3	34.2
刃數 Z No. of Flute	3	3	3	3

✱ 必要可帶穿透&不穿透, 不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades. 必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

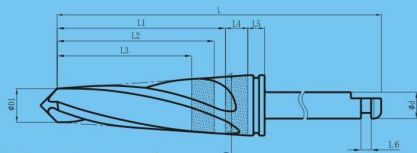
✱ 可超硬、超精研磨、任意的柄部類型、芯厚、容屑槽寬度、刃背方式、鑽尖方式、內冷卻孔方式、刃部結構、刃口角度、刃口鋒利程度之要求、及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

锥度型高可至 $\pm 0.01^\circ$ 的公差。
The tolerance of the taper can be up to $\pm 0.01^\circ$



部分尺寸some sizes

小徑 $\phi D1$ Diameter	2.6	3.0	3.2	3.4	3.7	3.9	4.2
大徑 ϕD Diameter	2.6	3.3	3.5	3.7	4.0	4.2	4.5
刃長 $L3$ Length of cut 刃の長さ	8.0	8.0	8.0	8.0	8.0	8.0	8.0
柄徑 ϕd Shank Dia	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長 Overall length 總長さ	27.5	27.5	27.5	27.5	27.5	27.5	27.5
刃數 Z No. of flute	3	3	3	3	3	3	3



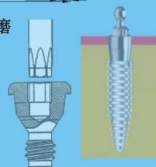
部分尺寸some sizes

小徑 $\phi D1$ Diameter	2.6	3.0	3.2	3.4	3.7	3.9	4.2
大徑 ϕD Diameter	2.6	3.3	3.5	3.7	4.0	4.2	4.5
刃長 $L3$ Length of cut 刃の長さ	12.0	12.0	12.0	12.0	12.0	12.0	12.0
柄徑 ϕd Shank Dia	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長 Overall length 總長さ	32.5	32.5	32.5	32.5	32.5	32.5	32.5
刃數 Z No. of flute	3	3	3	3	3	3	3

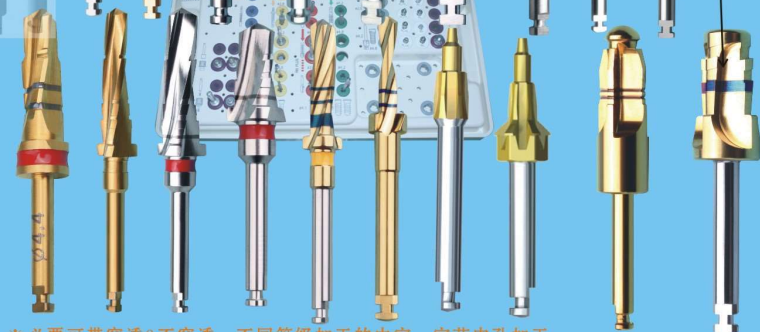
※ 必要可帶穿透或不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付きと貫通なし、各レベル加工での中空、中空内穴加工。

★ 可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷却孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)



可依據要求研磨出不同要求的刃口鋒利程度及容屑槽。Different edge sharpness and chip flutes can be ground according to the samples and the requirements.



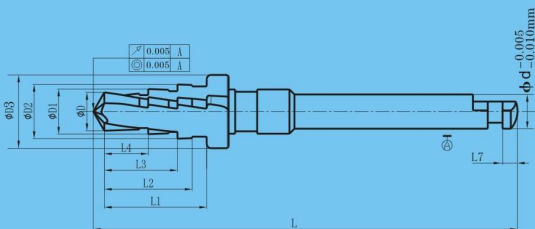
★必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(錐度鑽頭)
Medical tools and parts series(Taper Drill)
醫療器具及部品シリーズ(テーパードリル)

(超高防銹高耐磨(AA)&高精度特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨(AA)&高精度特殊非標準成型



部分尺寸some sizes

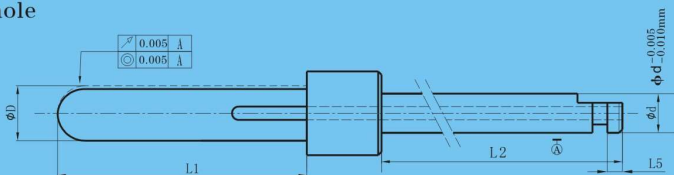
刃徑 φD2 Diameter	刃長L2 Length of cut 刃の長さ	柄徑 φd Shank Dia.	總長L Overall length 総長さ	刃數Z No. of Flute	刃徑 φD2 Diameter	刃長L2 Length of cut 刃の長さ	柄徑 φd Shank Dia.	總長L Overall length 総長さ	刃數Z No. of Flute
3.5	7.0	2.35	29	3	4.5	7.0	2.35	29.2	3
3.5	8.5	2.35	30.5	3	4.5	8.5	2.35	30.6	3
3.5	10	2.35	32	3	4.5	10	2.35	32.2	3
3.5	11.5	2.35	33.5	3	4.5	11.5	2.35	33.7	3
3.5	13	2.35	35	3	4.5	13	2.35	35.3	3
3.5	15	2.35	37.1	3	4.5	15	2.35	37.2	3
4.0	7.0	2.35	29.2	3	5.0	7.0	2.35	29.3	3
4.0	8.5	2.35	30.6	3	5.0	8.5	2.35	30.8	3
4.0	10	2.35	32.1	3	5.0	10	2.35	32.3	3
4.0	11.5	2.35	33.6	3	5.0	11.5	2.35	33.9	3
4.0	13	2.35	35.1	3	5.0	13	2.35	35.2	3
4.0	15	2.35	37.2	3	5.0	15	2.35	37.3	3

※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷却孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 ±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)

冷却孔 Cooling hole

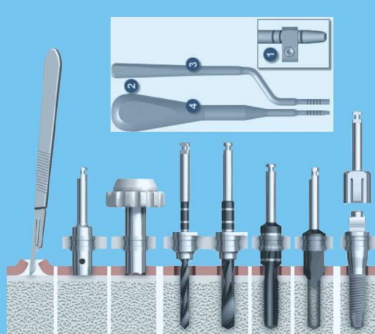


部分尺寸 some sizes

刃徑 φD Diameter	3.3	3.3	3.3	3.3	4.0	4.0	4.0	4.0
刃長 L1 Length of cut 刃の長さ	8	11	13	15	8	11	13	15
柄徑 φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長 L Overall length 總長さ	27	30	32	34	27	30	32	34

★、各種鑽頭鑽套可以採用任意材料及幾何形狀、成型超精、超硬研磨

All drills and stoppers can be made with any material or into any geometrical shape by profile superfinishing and superhard grinding



※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

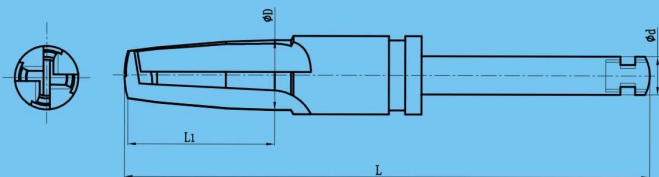
With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯桿，容屑槽寬度，刃背方式，鑽尖方式，內冷却孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 ±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)

醫用工具及配件系列 (種植牙鑽頭、鑽針、工具)
Medical tools and parts series (dental implant drill bit, drill needle, tools)
医療器具及び部品シリーズ (インプラントドリルヘッド、ドリルピン、工具)

(超高防銹高耐磨 (AA) & 高精密特殊非標成型)
(ultra-high anti-rust (AA) & high precision special nonstandard forming)
超防銹高耐磨耗 (AA) & 高精密特殊非標準成型



部分尺寸 some size

刃徑 ΦD Diameter	3.4	3.8	4.3	5.0
刃長 $L1$ Length of cut	15	15	15	15
柄徑 Φd Shank Dia.	2.35	2.35	2.35	2.35
總長 L Overall length	38	38	38	38
刃數 Z No. of flute	4	4	4	4



深槽至頂、可堆屑至槽頂。(可黑色、黃色、全亞光、全亮光、部分亞光+部分亮光等表面處理)

Deep groove to top, chip accumulation to the crest.
(It can be with black, yellow, full matt, full shiny, partial matt + partial shiny and other surface treatment)

2刃/3刃/4刃
(可直刃/螺旋刃)

2-flute / 3-flute / 4-flute
(it can be straight edge / helical edge)



※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に依じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★ 可超硬、超精研磨 任意的柄部類型 芯厚 容屑槽寬度 刃背方式 鑽尖方式 內冷却孔方式 刃部結構 刃口角度 刃口鋒利程度之要求 及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求 We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)



✦ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。
With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

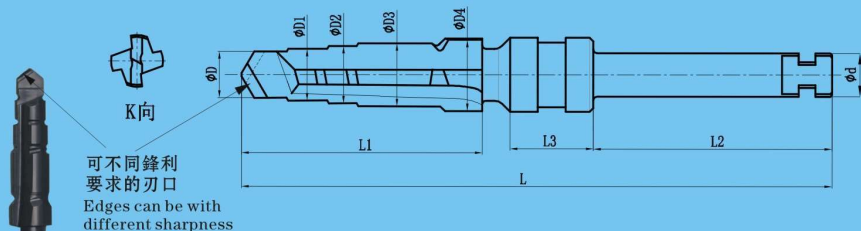
★可超硬、超精研磨 任意的柄部類型 芯厚 容屑槽寬度 刃背方式 鑽尖方式 內冷卻孔方式、刃口結構 刃口角度 刃口鋒利程度之要求 及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求 We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(內冷卻孔鑽頭)

Medical tools and parts series(Drill with internal cooling hole)

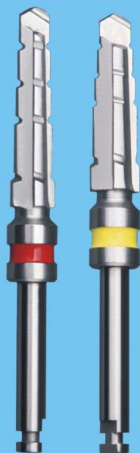
医療器具及び部品シリーズ(内冷却穴ドリルヘッド)

(超高防銹高耐磨(AA)&高精密特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨(AA)&高精密特殊非標準成型



部分尺寸 some size

刃徑 ΦD Diameter	2.40	2.40	2.50	2.50	2.50	2.80	2.80	2.80	2.90	2.90
刃徑 $\Phi D4$ Diameter	3.40	3.40	3.40	3.40	3.40	4.25	4.25	4.25	4.25	4.25
刃長 $L1$ Length of cut	9.0	11.0	12.5	14.0	17.0	9.0	11.0	12.5	14.0	17.0
柄徑 Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長 L Overall length	28.25	30.85	32.35	33.85	36.85	28.25	30.85	32.35	33.85	36.85
刃數 Z No. of flute	4	4	4	4	4	4	4	4	4	4



刃徑 ΦD Diameter	3.50	3.50	3.50	3.50	3.50
刃徑 $\Phi D4$ Diameter	4.90	4.90	4.90	4.90	4.90
刃長 $L1$ Length of cut	9.0	11.0	12.5	14.0	17.0
柄徑 Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35
總長 L Overall length	28.25	30.85	32.35	33.85	36.85
刃數 Z No. of flute	4	4	4	4	4

※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

必要に於て、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★ 可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(內冷卻孔鑽頭)

Medical tools and parts series(Drill with internal cooling hole)

医療器具及び部品シリーズ(内冷却穴ドリルヘッド)

(超高防銹高耐磨(AA)&高精特殊非標成型)

(Ultra-high anti-rust(AA)&high precision special nonstandard forming)

(超高耐磨耗型/高耐衝擊用/高精度)

★、各種鑽頭鑽套可以採用任意材料及幾何形狀、成型超精、超硬研磨

Every drill and stopper can be made with any material and to be ground to any geometrical shape by super finish and super hard grinding

※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

种植牙顺序图
Implant sequence diagram



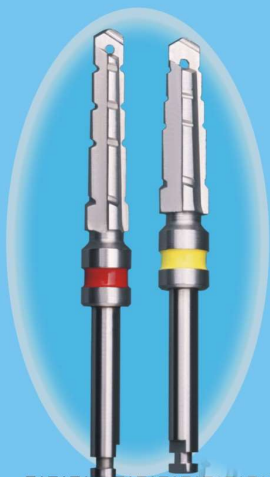
★可超硬、超精研磨，任意的柄部類型、芯厚、容屑槽寬度、刃背方式、鑽尖方式、內冷卻孔方式、刃部結構、刃口角度、刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of grinding, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(內冷却孔鑽頭)

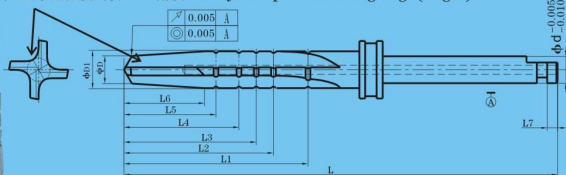
Medical tools and parts series(Drill with internal cooling hole)

医療器具及び部品シリーズ (内冷却穴ドリルヘッド)

(超高防銹高耐磨 (AA) & 高精度特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨 (AA) & 高精度特殊非標準成型



可任意鋒利程度的刃口(角度) Any sharpness cutting edge(angle)



部分尺寸 some sizes

刃徑φD Diameter	2.0	2.0	2.4	2.6	3.2	3.8	4.6
刃徑φD1 Diameter	2.0	2.9	3.2	3.65	4.1	4.6	5.3
有效刃長L1 Effective length of cutting edge 刃の長さ	16	16	16	16	16	16	16
柄徑φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長L Overall length 總長さ	37.7	37.7	37.7	37.7	37.7	37.7	37.7
刃數Z No. of flute	4	4	4	4	4	4	4

★、可以生产内冲水孔(内冷却孔),也可以生产不要内冲水孔的。Either with inner punching hole (inner cooling hole) or without inner punching hole.

※ 必要可带穿透&不穿透, 不同等级加工的中空、空芯内孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨, 任意的柄部類型, 芯厚, 容屑槽寬度, 刃背方式, 鑽尖方式, 內冷却孔方式, 刃部結構, 刃口角度, 刃口鋒利程度之要求, 及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(內冷卻孔鑽頭)

Medical tools and parts series(Drill with internal cooling hole)

医療器具及び部品シリーズ(内冷却穴ドリルヘッド)

(超高防銹高耐腐(AA)&高精密特殊非標成型)

(ultra-high anti-rust(AA)&high

precision special nonstandard forming)

超防銹高耐腐(AA)&高精密特殊非標準成型



※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

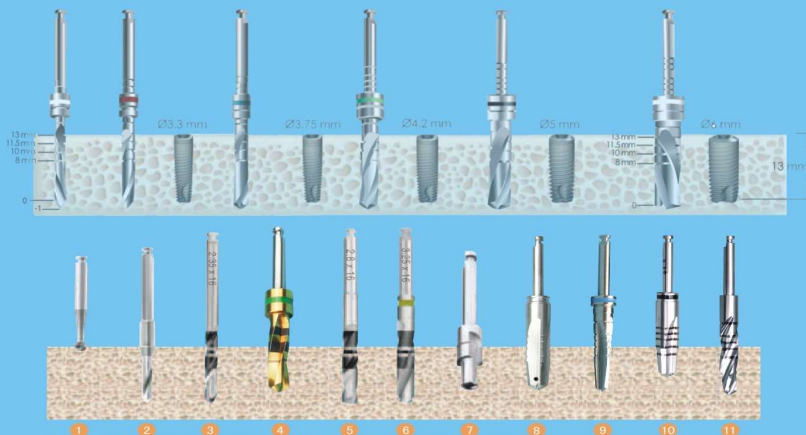
★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

可依要求研磨鋒利程度 We can grind the sharpness according to your requirement.



★、各種鑽頭鑽套可以採用任意材料及幾何形狀、成型超精、超硬研磨

All drills and stoppers can be made with any material or into any geometrical shape by profile superfinishing and superhard grinding



※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

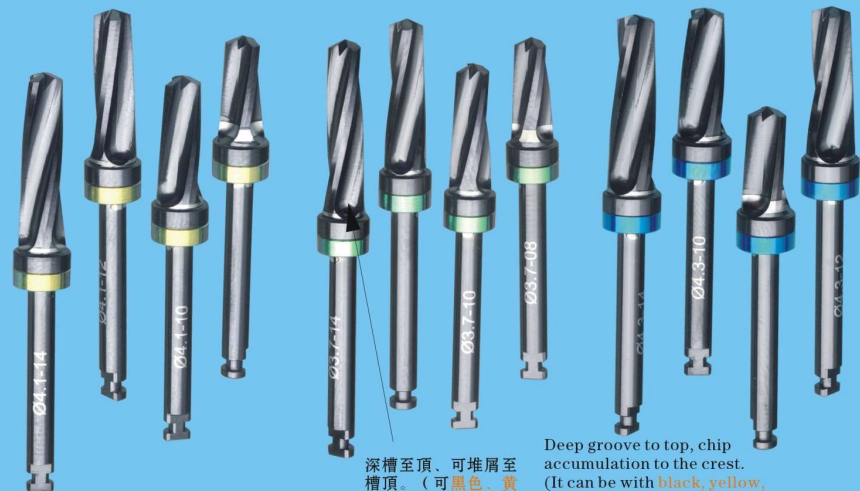
With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)

醫用工具及配件系列(鑽頭)
Medical tools and parts series(Drill)
医療器具及び部品シリーズ(ドリルヘッド)

(超高防銹高耐磨 (AA) & 高精度特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨(AA)&高精度特殊非標準成型



深槽至頂、可堆屑至槽頂。(可黑色、黃色、全亞光、全亮光、部分亞光、部分亮光等表面處理)

Deep groove to top, chip accumulation to the crest.
(It can be with black, yellow, full matt, full shiny, partial matt + partial shiny and other surface treatment)

可為2刃/3刃/4刃的螺旋刃
It can be 2-flute/3-flute / 4-flute helical edge



中必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

必要に於て、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求 We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(引導鑽頭)
Medical tools and parts series(Guided drill)
醫療器具及部件系列(ガイドドリルヘッド)

(超高防銹高耐磨(AA)&高精密特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨(AA)&高精密特殊非標準成型



深槽至頂、可堆屑至槽頂。(可黑色、黃色、全亞光、全亮光、部分亞光+部分亮光等表面處理)

Deep groove to top, chip accumulation to the crest.
(It can be with black, yellow, full matt, full shiny, partial matt + partial shiny and other surface treatment)

可為2刃/3刃/4刃的螺旋刃
It can be 2-flute/3-flute/4-flute helical edge

★必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨 任意的柄部類型 芯厚 容屑槽寬度 刃背方式 鑽尖方式 內冷卻孔方式 刃部結構 刃口角度 刃口鋒利程度之要求 及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求 We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(鑽頭)
Medical tools and parts series(Drill)
醫療器具及び部品シリーズ(ドリルヘッド)

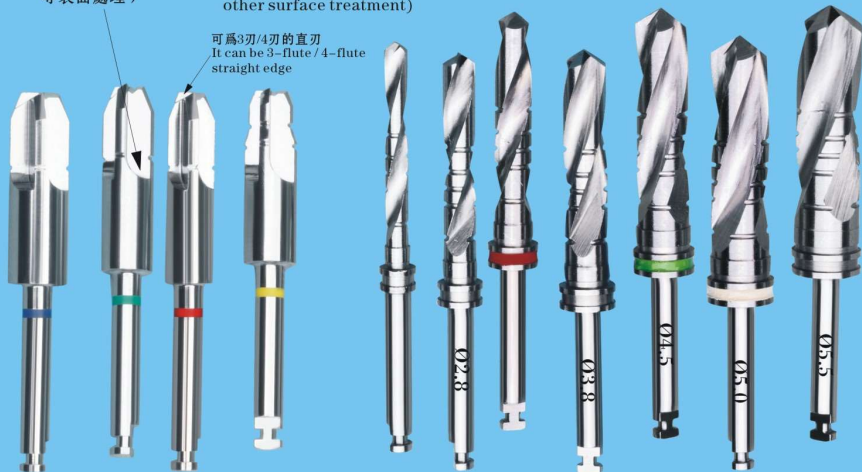
(超高防銹高耐磨 (AA) & 高精密特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨 (AA) & 高精密特殊非標準成型



深槽至頂、可堆屑至槽頂。(可黑色、黃色、全亞光、全亮光、部分亞光+部分亮光等表面處理)

Deep groove to top, chip accumulation to the crest.
(It can be with black, yellow, full matt, full shiny, partial matt + partial shiny and other surface treatment)

可為3刃/4刃的直刃
It can be 3-flute / 4-flute straight edge



✦ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(鑽頭)
Medical tools and parts series(Drill)
醫療器具及び部品シリーズ(ドリルヘッド)

(超高防銹高耐磨(AA) & 高精密特殊非標成型)
(ultra-high anti-rust(AA) & high
precision special nonstandard forming)
超防銹高耐磨耗(AA) & 高精密特殊非標準成型

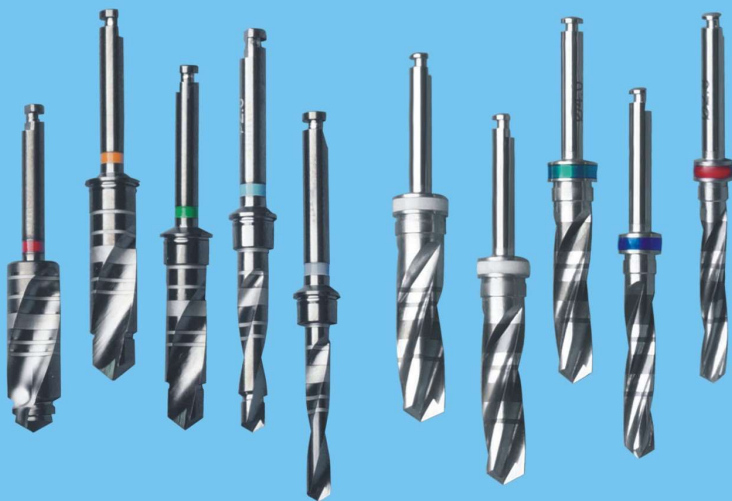


※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷却孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)



★、各種鑽頭鑽套可以採用任意材料及幾何形狀、成型超精、超硬研磨

All drills and stoppers can be made with any material or into any geometrical shape by profile superfinishing and superhard grinding



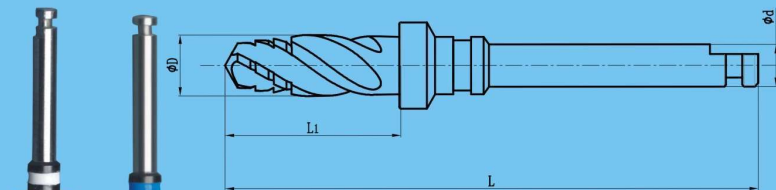
✱ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

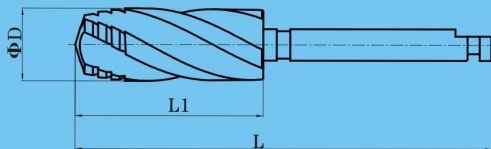
醫用工具及配件系列(鑽頭)
Medical tools and parts series(Drill)
醫療器具及部品シリーズ(ドリルヘッド)

(超高防銹高耐磨(AA)&高精密特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨耗(AA)&高精密特殊非標準成型



部分尺寸 some size

刃徑ΦD Diameter	2.3	3.1	3.4	3.9	5.4
刃長L1 Length of cut	12.7	12.7	12.7	12.7	12.7
柄徑Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35
總長L Overall length	32.70	32.70	32.70	32.70	32.70
刃數Z No. of flute	3	3	3	3	3

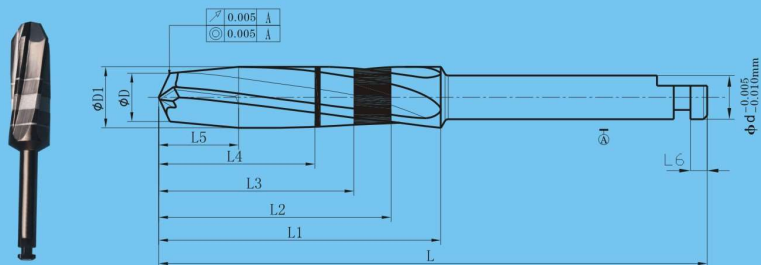


多階梯鑽入，
入鑽不易跳動
Multi-step drilling, which
is not easy to cause runout.

※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)



部分尺寸some sizes

	刃徑 φD Diameter	2.0	2.0	2.0	2.0	2.0	2.3	2.3	2.3	2.3	2.3	2.75	2.75	2.75	2.75	2.75	3.0	3.0	3.0	3.0	3.0
	刃長 L ₁ Length of cut 刃の長さ	8.5	10	11.5	13	15	8.5	10	11.5	13	15	8.5	10	11.5	13	15	8.5	10	11.5	13	15
	柄徑 φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
	總長 L Overall length 總長さ	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/
	九數 Z No. of flute	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3

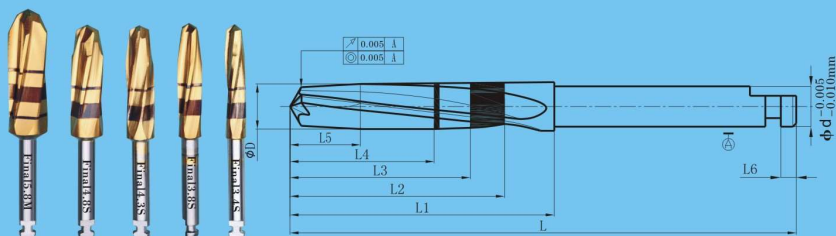
部分尺寸some sizes

	刃徑φD Diameter	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25	4.25	4.25	4.25	4.25	4.25	5.25	5.25	5.25	5.25	5.25
	刃長L ₁ Length of cut 刃の長さ	8.5	10	11.5	13	15	8.5	10	11.5	13	15	8.5	10	11.5	13	15	8.5	10	11.5	13	15
	柄徑φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
	總長L Overall length 總長さ	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/	37/
	九數Z No. of Flute	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3

※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に於て、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

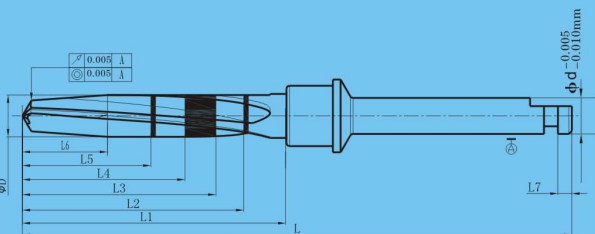
★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷却孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 ±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)



部分尺寸some sizes



刃徑 φD Diameter	2.75	3.3	3.8	4.33	5.35
有效刃長L1 Effective length of cutting edge 刃の長さ	15.4	15.2	15	14.9	16.5
柄徑 φd Shank Dia.	2.35	2.35	2.35	2.35	2.35
總長L Overall length 總長さ	29.5	29.5	29.5	29.5	31.5
刃數Z No. of flute	3	4	5	5	5



部分尺寸some sizes

刃徑 φD Diameter	2.72	3.3	4.35
有效刃長L1 Effective length of cutting edge 刃の長さ	16	16	16
柄徑 φd Shank Dia.	2.35	2.35	2.35
總長L Overall length 總長さ	35.5	35.5	35.5
刃數Z No. of flute	3	4	5

※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

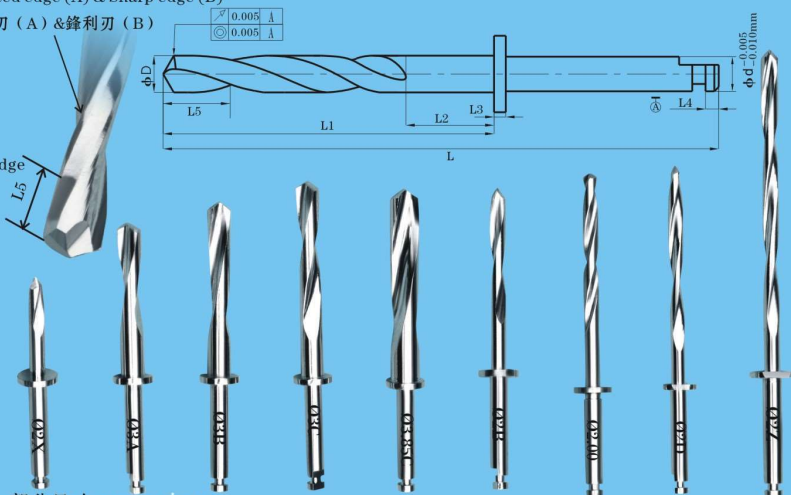
With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、空芯内穴加工。

★ 可組機、超精研磨、任意的柄部類型、花厚、容屑槽寬度、刃背方式、鑽尖方式、內冷卻孔方式、刃部結構、刃口鋒利程度之要求，及高可至 ±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)

Passivated edge (A) & Sharp edge (B)

鈍化刃 (A) & 鋒利刃 (B)

鋒利刃
Sharp edge



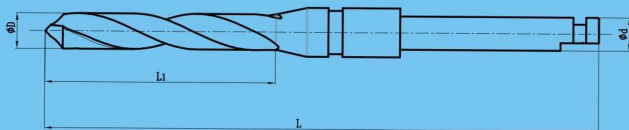
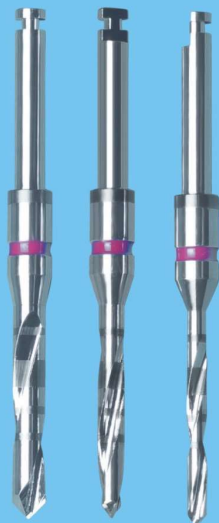
部分尺寸 some sizes

刀徑 ΦD Diameter	有效刃長 L1 Effective length of cutting edge 刃の長さ	柄徑 Φd Shank Dia.	總長 L Overall length 總長さ	刃數 Z No. of flutes	刀徑 ΦD Diameter	有效刃長 L1 Effective length of cutting edge 刃の長さ	柄徑 Φd Shank Dia.	總長 L Overall length 總長さ	刃數 Z No. of flutes
2.0	12	2.35	27.1	2	3.0	25	2.35	34.1	2
2.0	16	2.35	31.1	2	3.0	29	2.35	37.1	2
2.0	19	2.35	34.1	2	3.0	38	2.35	40.1	2
2.0	22	2.35	37.1	2	3.25	29	2.35	44.1	2
2.0	25	2.35	40.1	2	3.85	19	2.35	34.1	2
2.0	29	2.35	44.1	2	3.85	22	2.35	37.1	2
2.0	38	2.35	53.1	2	3.85	25	2.35	40.1	2
2.75	29	2.35	44.1	2	3.85	29	2.35	44.1	2
3.0	19	2.35	34.1	2	4.25	29	2.35	44.1	2
3.0	22	2.35	37.1	2	~	~	~	~	~

※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

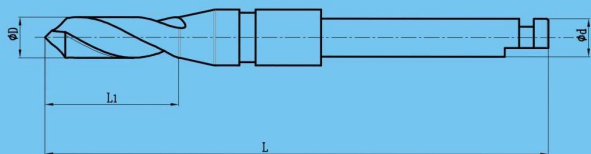
With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 ±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)



部分尺寸 some size

	刃徑 ΦD Diameter	1.5	2.0	2.5
	刃長 L1 Length of cut	16.2	16.2	16.2
	柄徑 Φd Shank Dia.	2.35	2.35	2.35
	總長 L Overall length	39	39	39
	刃數 Z No. of flute	2	2	2



部分尺寸 some size

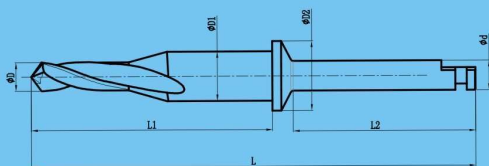
	刃徑 ΦD Diameter	1.5	2.0	2.5
	刃長 L1 Length of cut	8.2	8.2	8.2
	柄徑 Φd Shank Dia.	2.35	2.35	2.35
	總長 L Overall length	31	31	31
	刃數 Z No. of flute	2	2	2

※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

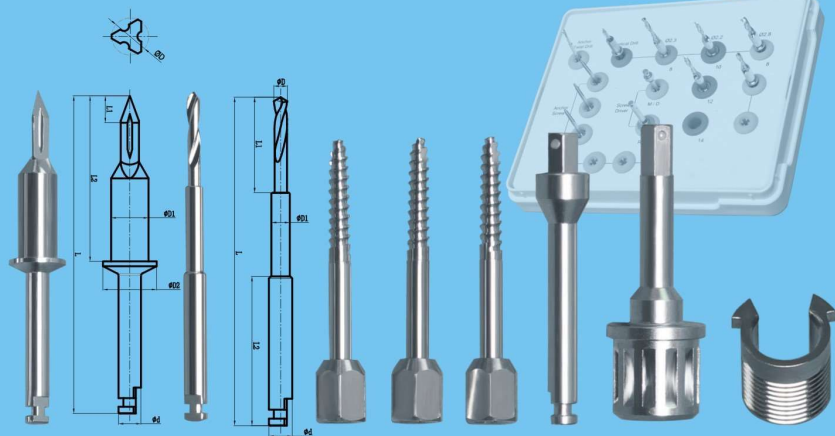
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨 任意的柄部類型 芯厚 容屑槽寬度 刃背方式 鑽尖方式 內冷却孔方式 刃部結構 刃口角度 刃口鋒利程度之要求 及高可至 ±0.003mm (3μm) 的尺寸公差要求 We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)



部分尺寸 some size

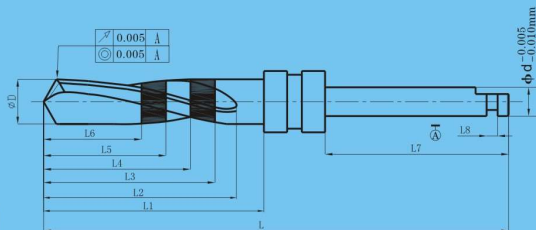
刃徑 ΦD Diameter	2.20	2.20	2.20	2.30	2.80	3.30
直徑 ΦD1 Diameter	3.90	3.90	3.90	3.90	3.90	3.90
刃長 L1 Length of cut	21.23	23.27	25.26	19.0	19.05	19.05
柄徑 Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35
總長 L Overall length	37.30	39.36	41.37	35.10	35.23	35.23
刃數 Z No. of flute	2	2	2	2	3	3



※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

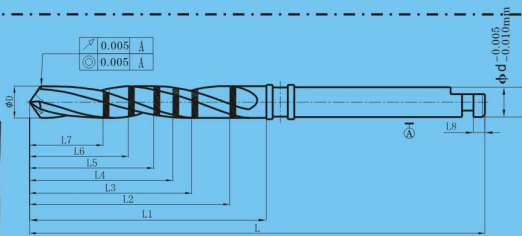
With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

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部分尺寸some sizes

刃徑φD Diameter	2.5	3.0	3.25	3.5	3.75
有效刃長L1 Effective length of cutting edge 刃の長さ	18	18	18	18	18
柄徑φd Shank Dia.	2.35	2.35	2.35	2.35	2.35
總長L Overall length 總長さ	38	38	38	38	38
刃數Z No. of flute	2	2	2	2	2



部分尺寸some sizes

刃徑φD Diameter	2.2	2.5	2.8	3.0	3.3	3.5	4.0
有效刃長L1 Effective length of cutting edge 刃の長さ	18.7	18.7	18.7	18.7	18.7	18.7	18.7
柄徑φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長L Overall length 總長さ	36	36	36	36	36	36	36
刃數Z No. of flute	3	3	3	3	3	3	3

※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

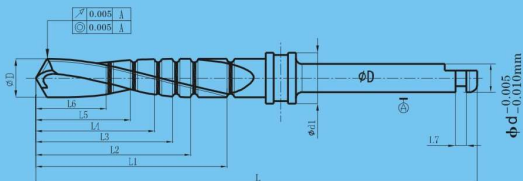
With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷却孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)

醫用工具及配件系列(鑽頭)
Medical tools and parts series(Drill)
医療器具及び部品シリーズ(ドリルヘッド)

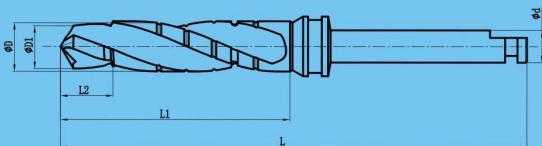
(超防腐銹高耐磨(AA)&高精度特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防腐高耐磨耗(AA)&高精度特殊非標準成型



部分尺寸 some sizes

刃徑 ΦD Diameter	2.0	2.5	2.8	3.2	3.65	4.0	4.5	4.8	5.2
刃長 L1 Length of cut 刃の長さ	18	18	18	18	18	18	18	18	18
柄徑 Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長 L Overall length 総長さ	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5
刃數 Z No. of flute	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3	2/3

钻头刃长、刃数、色圈及深度标记(刻度)，可以根据客户的需要订做。
The length and number of drills' flute, color code and depth mark (scale) can be customized according to customers' requirement.



部分尺寸 some size

刃徑 ΦD Diameter	2.80	3.20	3.85	4.65
刃徑 ΦD1 Diameter	2.40	2.80	3.43	4.0
刃長 L1 Length of cut	16.55	16.65	16.80	16.90
柄徑 Φd Shank Dia.	2.35	2.35	2.35	2.35
總長 L Overall length	33.85	33.95	33.95	34.05
刃數 Z No. of flute	2	2	3	3

※必要可帶穿透&不穿透、不同等級加工的中空、空芯內孔加工。

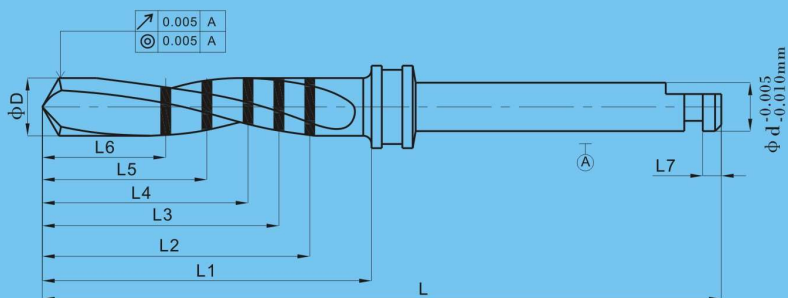
With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨、任意的柄部類型、芯厚、容屑槽寬度、刃背方式、鑽尖方式、內冷却孔方式、刃部結構、刃口角度、刃口鋒利程度之要求。及高可至 ±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)

醫用工具及配件系列(鑽頭)
Medical tools and parts series(Drill)
醫療器具及び部品シリーズ(ドリルヘッド)

(超高防銹高耐磨(AA)&高精密特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨(AA)&高精密特殊非標準成型



部分尺寸some sizes

刃徑φD Diameter	2.0	2.8	3.25	3.65	4.2	2.0	2.8	3.25	3.65	4.2
有效刃長L1 Effective length of cutting edge 刃の長さ	11.5	11.5	11.5	11.5	11.5	16	16	16	16	16
柄徑φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長L Overall length 總長さ	28.5	28.5	28.5	28.5	28.5	33	33	33	33	33
刃數Z No. of flute	2	2	2	2	2	2	2	2	2	2

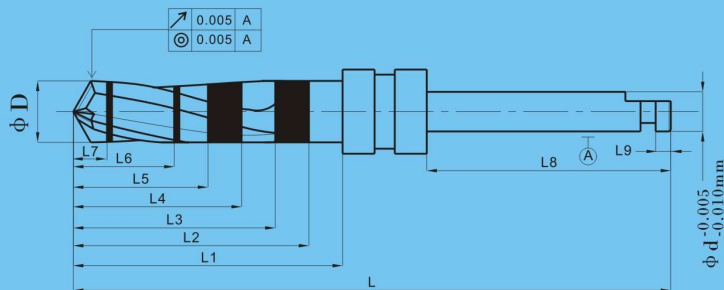
★ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)

醫用工具及配件系列(鑽頭)
Medical tools and parts series(Drill)
医療器具及び部品シリーズ(ドリルヘッド)

(超高防銹高耐磨 (AA) & 高精密特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨 (AA) & 高精密特殊非標準成型



部分尺寸 some sizes

	刃徑 ϕD Diameter	2.0	2.8	3.2	3.6	4.0	4.4	4.8
	有效刃長 L ₁ Effective length of cutting edge 刃の長さ	16	16	16	16	16	16	16
	柄徑 ϕd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35
	總長 L Overall length 總長さ	35.5	35.5	35.5	35.5	35.5	35.5	35.5
	刃數 Z No. of flute	3	3	3	3	3	3	3

※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

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必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★ 可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

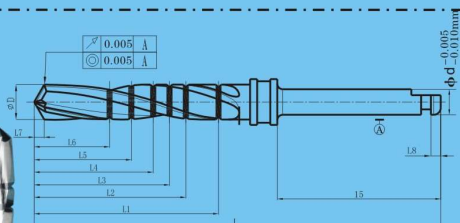
醫用工具及配件系列(鑽頭)
Medical tools and parts series(Drill)
医療器具及び部品シリーズ(ドリルヘッド)

(超高防銹高耐磨(AA) & 高精度特殊非標成型)
(ultra-high anti-rust(AA) & high
precision special nonstandard forming)
超防銹高耐磨(AA) & 高精度特殊非標準成型



鑽頭可以依要求生產2刃、3刃或貴司要求(刃數)色圈和深度標記刻度,也可根據具體需要生產。

Drills can be produced with 2 flutes, 3 flutes or any flutes as per your esteemed company's requirement, color code and depth mark scale can also be produced according to specific requirement.



部分尺寸some sizes

刃徑ΦD Diameter	2.0	2.8	3.2	3.65	4.2	4.8	5.2
有效刃長L1 Effective length of cutting edge 刃の長さ	16	16	16	16	16	16	16
柄徑Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長L Overall length 總長さ	36.5	36.5	36.5	36.5	36.5	36.5	36.5
刃數Z No. of Flute	2	2	2	2/3	2/3	2/3	2/3

※必要可帶穿透&不穿透, 不同等級加工的中空、空芯內孔加工。

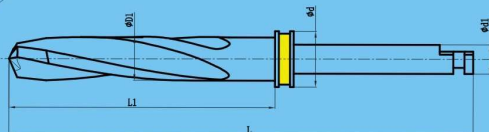
With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨, 任意的柄部類型, 芯厚, 容屑槽寬度, 刃背方式, 鑽尖方式, 內冷却孔方式, 刃部結構, 刃口角度, 刃口鋒利程度之要求, 及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求 We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)



深槽至頂、可堆屑至
槽頂。(可黑色、黃
色、全亞光、全亮光、
部分亞光+部分亮光
等表面處理)

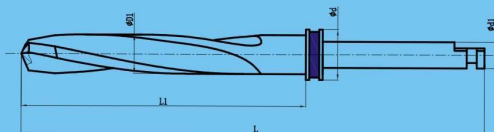
Deep groove to top, chip
accumulation to the crest.
(It can be with black, yellow,
full matt, full shiny, partial
matt + partial shiny and
other surface treatment)



可為2刃/3刃/4刃的螺旋刃
It can be 2-flute/3-flute/4-flute helical edge

部分尺寸 some size

刃徑ΦD Diameter	2.0	2.5	2.8	3.0	3.30	3.50	3.80	4.30
刃長L1 Length of cut	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
柄徑Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長L Overall length	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5
刃數Z No. of flute	2	3	3	3	3	3	3	3



部分尺寸 some size

刃徑ΦD Diameter	2.5	2.8	3.0	3.30	3.50	3.80	4.30
刃長L1 Length of cut	25.5	25.5	25.5	25.5	25.5	25.5	25.5
柄徑Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長L Overall length	41.5	41.5	41.5	41.5	41.5	41.5	41.5
刃數Z No. of flute	3	3	3	3	3	3	3

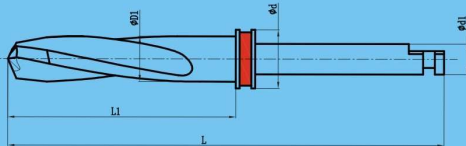
中必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に於て、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨 任意的柄部類型 芯厚 容屑槽寬度 刃背方式 鑽尖方式 內冷卻孔方式 刃部結構 刃口角度 刃口鋒利程度之要求 及高可至±0.003mm (3μm) 的尺寸公差要求 We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)

醫用工具及配件系列(引導鑽頭/引導成型鑽)
Medical tools and parts series(Guided drill/Guided profile drill)
醫療器具及び部品シリーズ (ガイドドリルヘッド/ガイド成型ドリル)

(超高防銹高耐磨 (AA) & 高精度特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防銹高耐磨 (AA) & 高精度特殊非標準成型



深槽至頂、可堆屑至槽頂。(可黑色、黃色、全亞光、全亮光、部分亞光、部分亮光等表面處理)

Deep groove to top, chip accumulation to the crest. (It can be with black, yellow, full matt, full shiny, partial matt + partial shiny and other surface treatment)

可為2刃/3刃/4刃的螺旋刃

It can be 2-flute/3-flute/4-flute helical edge

部分尺寸 some size

刃徑ΦD Diameter	2.0	2.5	2.8	3.0	3.30	3.50	3.80	4.30
刃長L1 Length of cut	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5
柄徑Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長L Overall length	33.5	33.5	33.5	33.5	33.5	33.5	33.5	33.5
刃數Z No. of flute	2	3	3	3	3	3	3	3



※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)

醫用工具及配件系列(引導鑽頭/引導成型鑽)

Medical tools and parts series(Guided drill/Guided profile drill)

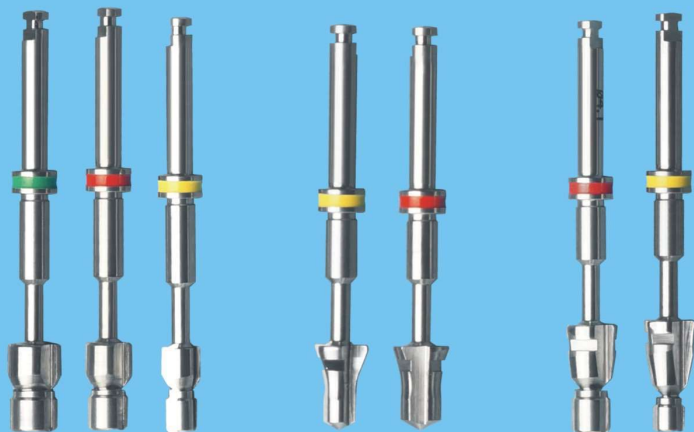
医療器具及び部品シリーズ (ガイドドリルヘッド/ガイド成型ドリル)

(超高防銹高耐磨 (AA) & 高精度特殊非標成型)

(ultra-high anti-rust(AA)&high

precision special nonstandard forming)

超防銹高耐磨耗 (AA) & 高精度特殊非標準成型



※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨、任意的柄部類型、芯厚、容屑槽寬度、刃背方式、鑽尖方式、內冷卻孔方式、刃部結構、刃口角度、刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(成型鑽/肩臺成型鑽)

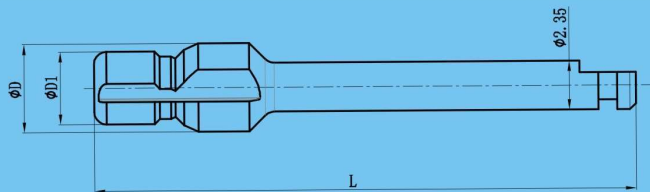
Medical tools and parts series(Profile drill/Shoulder countersink)

医療器具及び部品シリーズ (成型ドリル/ショルダー成型ドリル)

(超高防銹高耐磨 (AA) & 高精度特殊非標成型)

(ultra-high anti-rust(AA)&high precision special nonstandard forming)

超防銹高耐磨耗(AA)&高精度特殊非標準成型



部分尺寸 some size

刃徑 ΦD Diameter	3.5	3.5	4.2	4.2	4.8	4.8
刃長L1 Length of cut	2.8	2.8	3.5	3.5	4.2	4.2
柄徑 Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35
總長L Overall length	26	35	26	35	26	35
刃數Z No. of flute	3	3	3	3	3	3

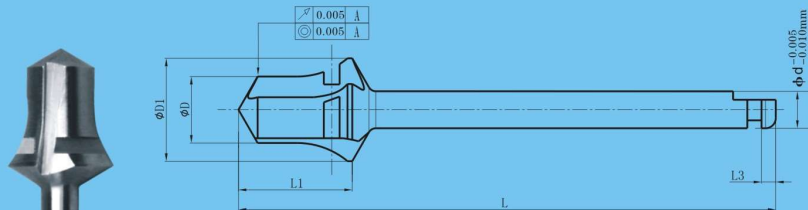


✦ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

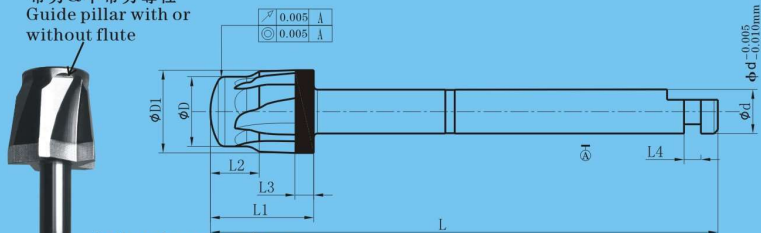
★可鉋硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至：±0.003mm（3μm）的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm（3μm）



部分尺寸some sizes

	刃徑ΦD Diameter	2.8	2.8	3.5	3.5	4.2	4.2
	刃徑ΦD1 Diameter	4.8	4.8	4.8	4.8	6.53	6.5
	刃長L1 Length of cut 刃の長さ	6.65	7.2	6.72	7.2	7.2	7.2
	柄徑Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35
	總長L Overall length 總長さ	33.85	34	34.3	34	25	34

帶刃&不帶刃導柱
Guide pillar with or
without flute



部分尺寸some sizes

	刃徑ΦD1 Diameter	3.6	4.0	4.5	5.0	6.0	7.0
	刃長L1 Length of cut 刃の長さ	5.5	5.5	5.5	5.5	7.5	7.2
	柄徑Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35
	總長L Overall length 總長さ	28	28	28	28	27	27

※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

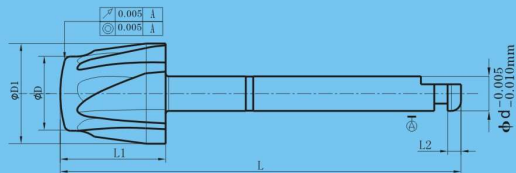
With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 ±0.003mm (3μm) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)

醫用工具及配件系列（皮質骨成型鉗）
Medical tools and parts series (Cortical countersink)
医療器具及び部品シリーズ（皮質骨成型ドリル）

（超高防銹高耐摩（AA）&高精密特殊非標成型）
（ultra-high anti-rust (AA) & high
precision special nonstandard forming）
超防銹高耐摩耗（AA）&高精密特殊非標準成型



★、可以任意CAD/3D/實物結構方式的倒角加工。
Chamfering process for any structural style
of CAD/3D/entity

部分尺寸 some sizes



刃徑 ϕD Diameter	2.7	3.1	3.7	3.9	4.2	5.0
刃徑 $\phi D1$ Diameter	3.6	4.0	4.5	5.0	6.0	7.0
刃長 $L1$ Length of cut 刃の長さ	5.5	5.5	5.5	5.5	7.5	7.2
柄徑 ϕd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35
總長 L Overall length 總長さ	28	28	28	28	27	27
刃數 Z No. of flute	5	5	5	5	5	5



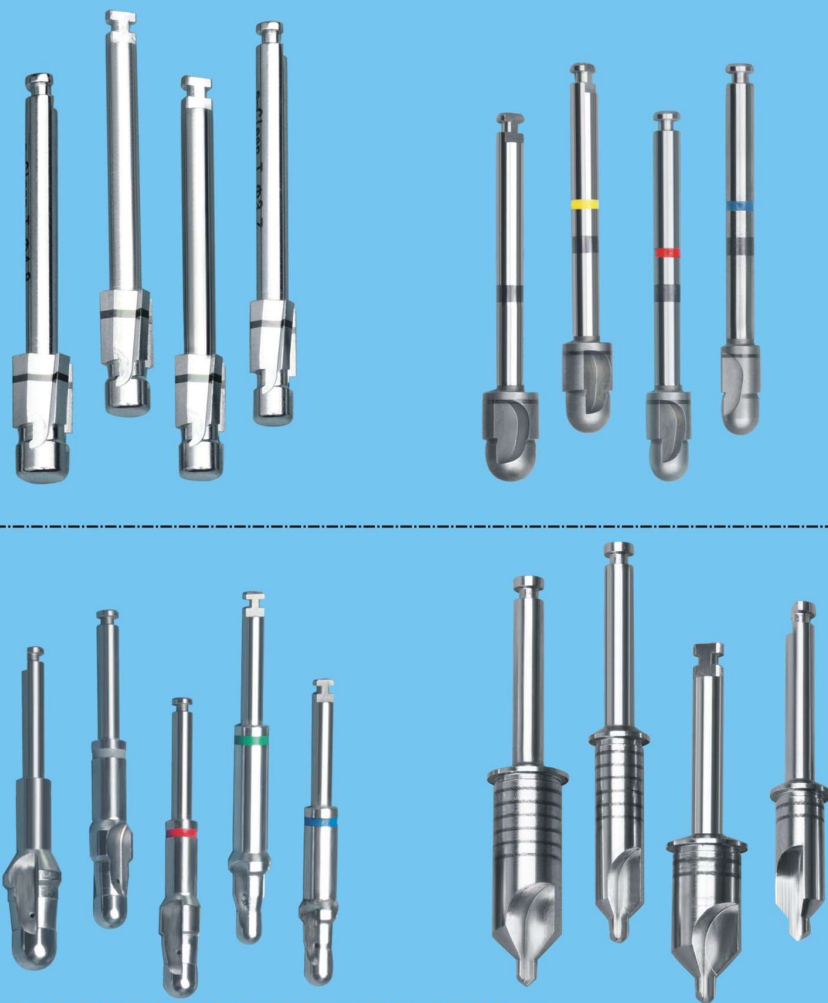
※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷却孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(成型鑽/肩臺成型鑽)
Medical tools and parts series(Profile drill/Shoulder countersink)
医療器具及び部品シリーズ (成型ドリル/ショルダー成型ドリル)

(超防腐蝕高耐磨(AA)&高精密特殊非標成型)
(ultra-high anti-rust(AA)&high
precision special nonstandard forming)
超防腐蝕高耐磨(AA)&高精密特殊非標準成型



※必要可帶穿透&不穿透、不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨、任意的柄部類型、芯厚、容屑槽寬度、刃背方式、鑽尖方式、內冷却孔方式、刃部結構、刃口角度、刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)



※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$)
的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute,
land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can
be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列(側切鑽)

Medical tools and parts series(Lindemann drill)

医療器具及び部品シリーズ(側方切開ドリル)

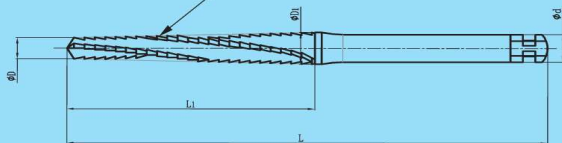
(超高防銹高耐磨(AA)&高精密特殊非標成型)

(ultra-high anti-rust(AA)&high precision special nonstandard forming)

(超防銹高耐磨耗(AA)&高精密特殊非標準成型)

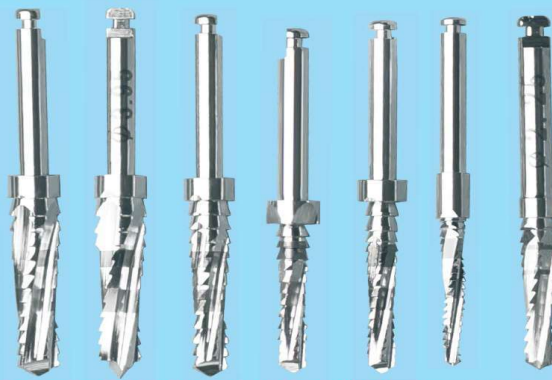


修正、校正
Amendment, correction



可加工任意齒間距、齒數、刃數、刃長、
錐度角度、鑽尖方式、鑽尖角度……
等側切鑽方式

We can process any pitch, number of
teeth, number of blades, length of cut,
angle of taper, mode of drill tip, angle
of drill tip, etc.

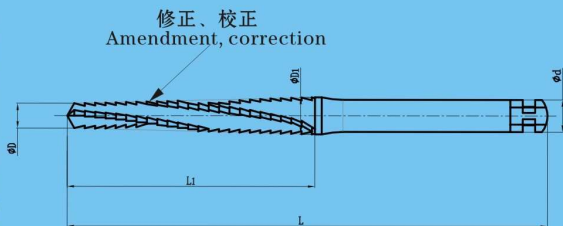


※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

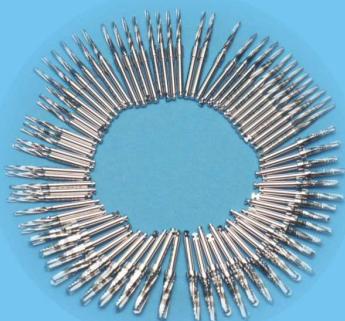
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨，任意的齒部類型，芯厚，容屑槽寬度，刃帶方式，鑽尖方式，內冷却孔方式，刃部結構，刃口角度，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)



部分尺寸 some size

刃徑 ΦD Diameter	1.7	1.8	1.8	1.8
刃長 L1 Length of cut	17	15.5	18	18
柄徑 Φd Shank Dia.	2.35	2.35	2.35	2.35
總長 L Overall length	32	31	33	34.9
刃數 Z No. of flute	3	3	3	3

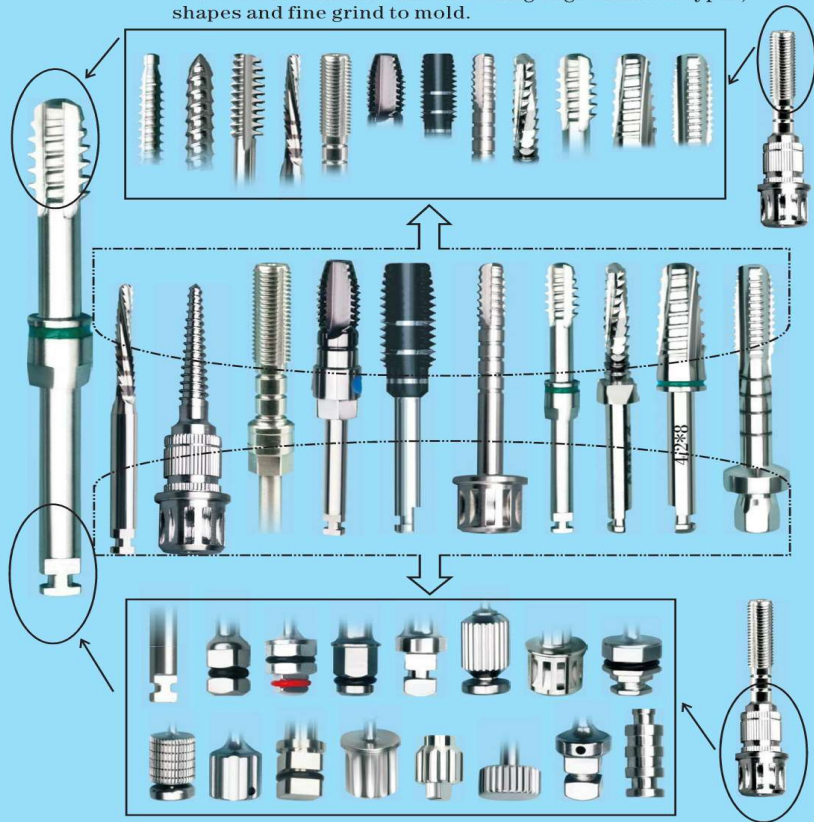


※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★可超硬、超精研磨 任意的柄部類型 芯厚 容屑槽寬度 刃背方式 鑽尖方式 內冷卻孔方式 刃部結構 刃口角度 刃口鋒利程度之要求 及高可至 ±0.003mm (3μm) 的尺寸公差要求 We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to ±0.003mm (3μm)

- ★、可以組合不同的刃徑形式、形狀、精研磨成型。
- ★、We can combine various cutting edge diameter types, shapes and fine grind to mold.



- ★、可以組合不同的柄部形式、形狀、精研磨成型。
- ★、可依用戶的需求，設計，樣品、CAD圖/3D圖加工研磨出任意形狀的產品。
- ★、We can combine various shank types, shapes and fine grind to mold.
- ★、We can produce and grind tools of any shapes according to customers' designs, samples and CAD drawings/3D drawings.

※必要可帶穿通&不穿通、不同等級加工的中空、空芯內孔加工。
With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★、機用絲錐結構方式:

可為2刀/3刀/4刀的螺旋刃,以漸進式、分散攻入的切削力方式
(常規螺旋角為 $10^{\circ} \sim 12^{\circ}$)

Machine Tap Structure:

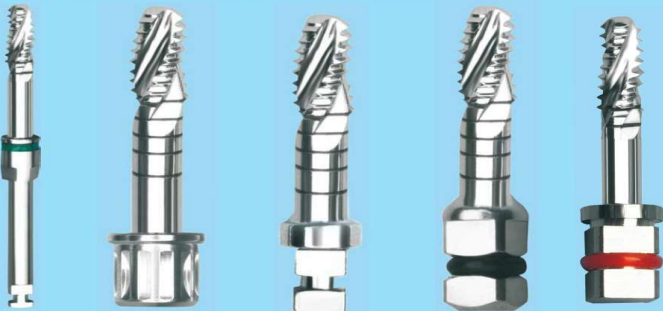
It can be a 2-flute/3-flut/4-flut spiral edge with progressive and dispersive cutting force(conventional helix angle is $10^{\circ} \sim 12^{\circ}$)



★、任意牙形(螺紋)的熱處理後的超硬、超精研磨(可帶內冷却孔)
★、Super-hard and super finish grinding for any thread form (thread) after heat treatment (it can have inner cooling hole)

★、可以任何柄部形狀與刃部形狀、尺寸、公差的組合成型加工。

★、We can do combination profile processing for products with any shape of shank, cutting edge, dimension and tolerance.

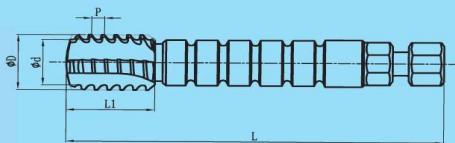


※必要可帶穿透&不穿透,不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

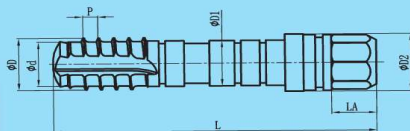


可帶橡膠圈或可定制不同顏色的高耐磨PEEK,PPSU扁成型(非純圓圈類)的高端卡圈。we can use different material and color, can also customize high wear-resistant PEEK/PPSU flat forming(not pure circle type) high-end ring of different colors



部分尺寸(AA)some size

	外徑ΦD Diameter	3.3	4.0	4.0	4.8	4.8
	刃長L1 Length of cut	5.5	5.5	5.5	5.5	5.5
	內徑Φd Shank Dia.	2.6	3.3	3.3	4.1	4.1
	總長L Overall length	23.0	23.0	23.0	23.0	23.0
	齒間距P space width	0.8	0.8	1.25	0.8	1.25



部分尺寸(AA)some size

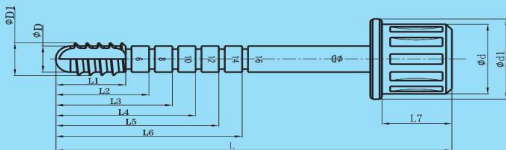
	外徑ΦD Diameter	3.3	4.1
	內徑Φd Shank Dia.	2.6	3.3
	總長L Overall length	1.0	1.25
	寬度W wide	3.0	3.0
	齒間距P space width	23.0	23.0



帶銅圈
with steel ring

※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。



部分尺寸(AA):some size (AA)

刃徑 $\phi D1$ Diameter	3.3	4.1	4.8	3.3	4.1	4.8
刃長 $L1$ Length of cut 刃の長さ	8	6	6	6	6	6
柄徑 ϕD Shank Dia.	2.6	3.4	4.1	2.8	3.5	4.2
總長 L Overall length 総長さ	26	26	26	34	34	34

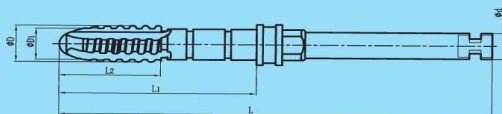
- ★、任意牙形（螺紋）的熱處理後的超硬、超精研磨（可帶內冷却孔）
- ★、Super-hard and super finish grinding for any thread form (thread after heat treatment (it can have inner cooling hole))
- ★、可以任何柄部形狀與刃部形狀、尺寸、公差の組合成型加工。
- ★、We can do combination profile processing for products with any shape of shank, cutting edge, dimension and tolerance.
- ★、機用絲錐結構方式:
可為2刃/3刃/4刃的螺旋刃,以漸進式、分散攻入的切削力方式
(常規螺旋角為 $10^\circ \sim 12^\circ$)

Machine Tap Structure:

It can be a 2-flute/3-flut/4-flut spiral edge with progressive and dispersive cutting force (conventional helix angle is $10^\circ \sim 12^\circ$)



- ※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。
With or without penetration, hollow & hollow core inner hole process with different grades.
- ※ 必要に依じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。



部分尺寸(AA)some size

刃徑ΦD Diameter	3.5	4.3	5.0
刃徑ΦD1 Diameter	2.75	3.5	4.2
刃長L1 Length of cut	15.5	15.5	15.5
柄徑Φd Shank Dia.	2.35	2.35	2.35
總長L Overall length	33.8	33.8	33.8
刃數Z No. of flute	3	3	3

材料:

①超高防銹高耐磨不銹鋼系列(AA)(HRC54° ±2° 斷面)(常備常規)

②一般防銹高耐磨不銹鋼系列(A)(HRC45° ~64° 斷面系列)

Material:

①Super-high anti-rust high wear resistance stainless steel series(AA)(HRC54° ±2° section)(regularly stock)

②General anti-rust high wear resistance stainless steel series(A)(HRC45° ~64° section series)

材質

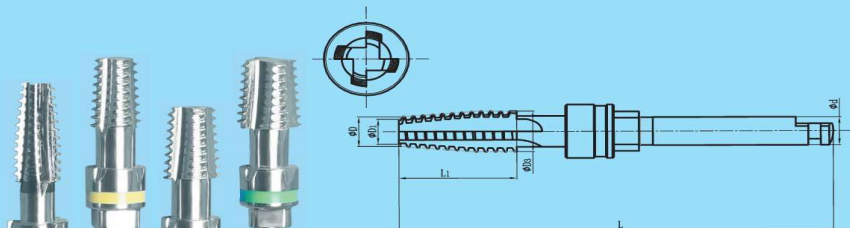
①超防銹高耐磨耗ステンレスシリーズ(AA)(HRC54° ±2°)(常備通常)

②一般防銹高耐磨耗ステンレスシリーズ(A)(HRC45° ~64° シリーズ)



※必要可帶穿透と不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。



部分尺寸(AA) some size

刃徑 ΦD Diameter	2.5	3.3	3.6	4.3
刃長 $L1$ Length of cut	8.5	6.1	6.1	6.1
柄徑 Φd Shank Dia.	2.35	2.35	2.35	2.35
總長 L Overall length	31.3	28.9	28.9	28.9
刃數 Z No. of flutes	4	4	4	4

材料:

- ①超高防銹高耐磨不銹鋼系列(AA)(HRC54° $\pm 2^\circ$ 断面)(常備常規)
- ②一般防銹高耐磨不銹鋼系列(A)(HRC45° ~64° 断面系列)

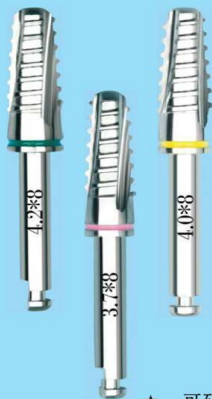
Material:

- ①Super-high anti-rust high wear resistance stainless steel series(AA)(HRC54° $\pm 2^\circ$ section)(regularly stock)
- ②General anti-rust high wear resistance stainless steel series(A)(HRC45° ~64° section series)



※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。



材料:

- ①超高防銹高耐磨不銹鋼系列(AA)(HRC54° ±2° 斷面)(常備常規)
②一般防銹高耐磨不銹鋼系列(A)(HRC45° ~64° 斷面系列)

Material:

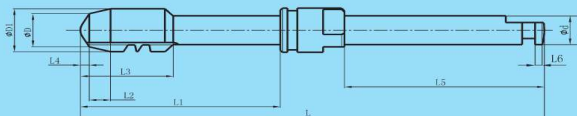
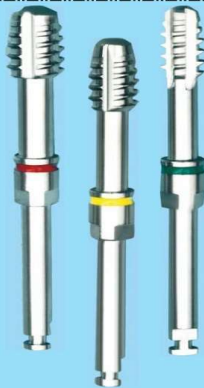
- ①Super-high anti-rust high wear resistance stainless steel series(AA)(HRC54° ±2° section)(**regularly stock**)
②General anti-rust high wear resistance stainless steel series(A)(HRC45° ~64° section series)

部分尺寸(AA):some size (AA)

	刃徑φd1 Diameter	M3.75	M4.05	M4.25	M4.55
	刃長L1 Length of cut 刃の長さ	8	8	8	8
	柄徑φd Shank Dia.	2.35	2.35	2.35	2.35
	總長L Overall length 総長さ	25.5	25.5	25.5	25.5

★、可研磨任意規格，錐度、刃徑；刃長；總長；定位；色圈……及尺寸公差要求。

★、We can grind any specification, taper; flute diameter; flute length; total length; location, color code and size tolerance as per the requirement.



部分尺寸(AA):some size (AA)

	刃徑φd1 Diameter	M3.5	M4.1	M4.7
	刃長L Length of cut 刃の長さ	6.5	6.5	6.5
	柄徑φd Shank Dia.	2.35	2.35	2.35
	總長L Overall length 総長さ	32.5	32.5	32.5

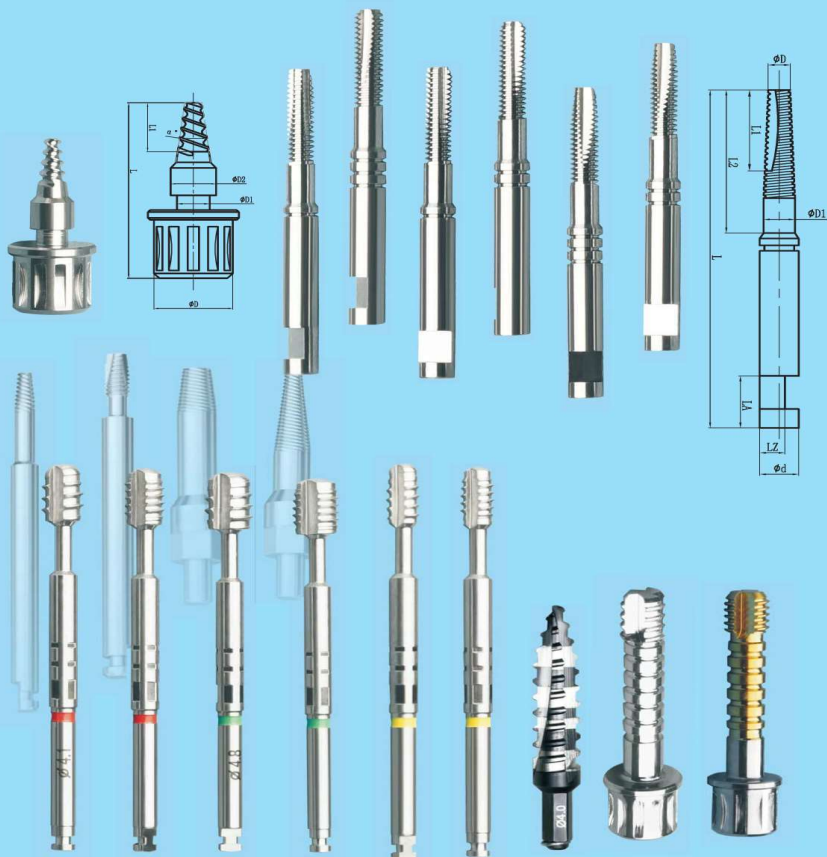
* 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

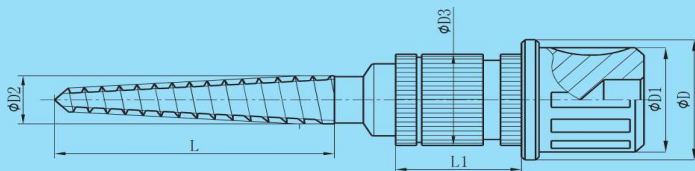
醫用工具及配件系列(絲錐、絲攻、攻絲鑽)
Medical tools and parts series(Taps,Screw taps)
医療器具及び部品シリーズ(ねじタップ、タップ)

(超高防銹型(AA)&超高耐磨型(A)&超鋒利刃口)
U ltra-high usst AA0 U ltra-high ear
-resistant(A) U ltra-sharp dge)
(超防銹型(AA)&超耐磨型(A)&超銳利刃先)



※必要可帶穿透&不穿透，不同等級加工的中空、中空內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。



- ★、任意牙形（螺紋）の熱處理後の超硬、超精研磨（可帶內冷卻孔）
- ★、Super-hard and super finish grinding for any thread form (thread) after heat treatment (it can have inner cooling hole)

材料:

- ① 超高防銹高耐磨不銹鋼系列(AA)(HRC54° ± 2° 斷面)(常備常規)
- ② 一般防銹高耐磨不銹鋼系列(A)(HRC45° ~ 64° 斷面系列)

Material:

- ① Super-high anti-rust high wear resistance stainless steel series(AA)(HRC54° ± 2° section)(regularly stock)
- ② General anti-rust high wear resistance stainless steel series(A)(HRC45° ~ 64° section series)

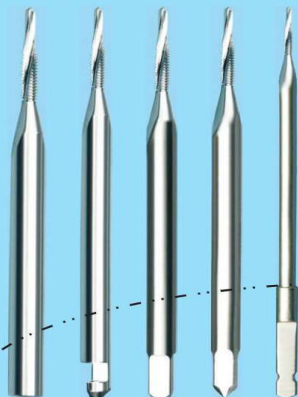
部分尺寸 some sizes

	螺紋徑 ϕD Diameter	3.2	3.4	3.5	4.0
	螺紋長 L_1 Thread Length	16	16	15.2	16
	冒徑 ϕd Cap Diameter	8.0	8.0	8.0	8.0
	總長 L Overall length	33.7	34	36.9	34.3

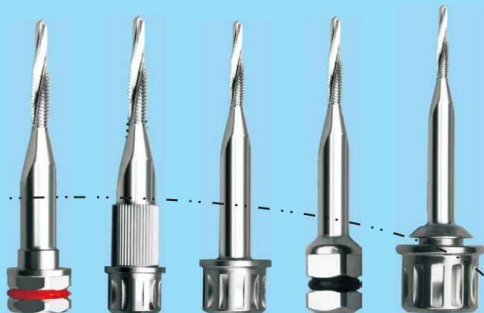


※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。



- ★、可以研磨出不同的刃徑形式、形狀、精研磨成型。
- ★、We can grind various shank types, shapes and fine grind to mold.



- ★、可以研磨出不同的柄部形式、形狀、精研磨成型。
- ★、We can grind various shank types, shapes and fine grind to mold.

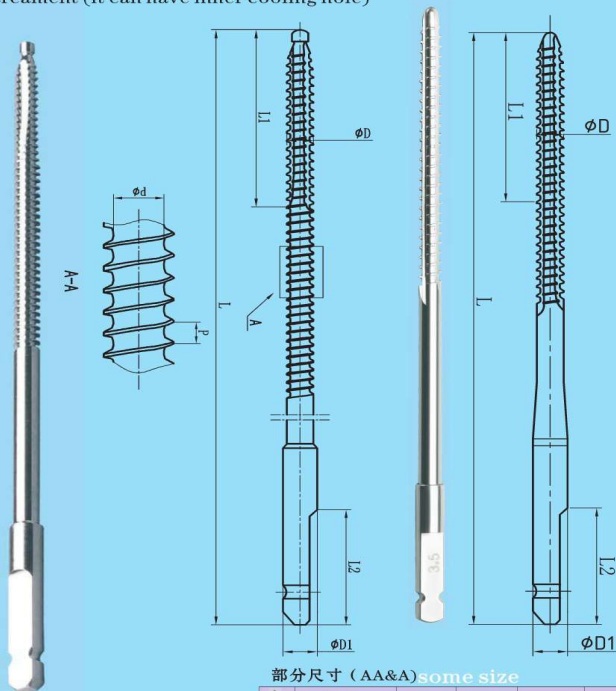


- ★、任意牙形(螺紋)的熱處理後的超硬、超精研磨(可帶內冷却孔)。
- ★、Super-hard and super finish grinding for any thread form(thread)after heat treatment (it can have inner cooling hole)
- ★、微細牙型M0.30~M1.40系列，鑽攻一體之微型絲錐(當然M1.40以上更易於生產)。
- ★、Micro thread form series M0.30~M1.40, tiny taps for drilling and tapping (Of course, series above M1.40 are easier to produce)

※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。
With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★、任意牙形（螺紋）的熱處理後的超硬、超精研磨（可帶內冷卻孔）

★、Super-hard and super finish grinding for any thread form (thread) after heat treatment (it can have inner cooling hole)



部分尺寸（AA&A）some size

※必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.

必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

外徑 ΦD Diameter	2.0	2.7	3.5	4.3
內徑 $\Phi D1$ Diameter	1.6	2.1	2.7	3.5
刃長 $L1$ Length of cut	50	60	70	80
柄徑 Φd Shank Dia.	4.5	4.5	4.5	4.5
總長 L Overall length	100	110	120	130
刃數 Z No. of Flute	2	2	3	3

- ★、任意牙形（螺紋）的熱處理後的超硬、超精研磨（可帶內冷却孔）
- ★、Super-hard and super finish grinding for any thread form (thread)
after heat treatment (it can have inner cooling hole)



※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。
With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

- ★、任意牙形（螺紋）の熱處理後の超硬、超精研磨（可帶內冷却孔）
- ★、Super-hard and super finish grinding for any thread form (thread) after heat treatment (it can have inner cooling hole)

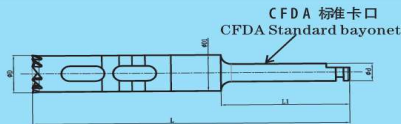
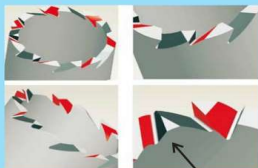


※ 必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。

With or without penetration, hollow & hollow core inner hole process with different grades.
必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

醫用工具及配件系列 (取骨鑽/穿孔器)
Medical tools and parts series (Trephine/Perforator)
醫療器具及部件系列(トレフィン)

(超防腐型(AA) & 超耐磨型(A) & 超銳利刃口)
(ultra-high anti-rust (AA) ultra-high wear-resistant (A) & ultra-sharp cutting edge)
超防腐型(AA) & 超耐磨型(A) & 超銳利刃口



可依CAD/3D圖及樣品研磨任意形狀，齒形、結構、深淺度，鋒利性程度的取骨工具。
We can grind the tool for removing the bone with any requirement of any shape, tooth form; structure; depth and sharpness according to the CAD/3D drawings.

- ★ 可依要求生產不同刃部材料類型 (陶瓷類、鎢鋼類、超防腐防銹高級品不銹鋼類(AA)、鈦及鈦合金類、常規標準防銹高耐磨不銹鋼(A).....等系類)
★ Different cutting edge materials (ceramic, carbide, high anti-rust high grade stainless steel (AA), titanium and titanium alloys, conventional standard anti-rust high wear-resistant stainless steel (A) ...series) can be produced according to customers' requirement



※ 刃部加工等級：

- AAA級：CNC超硬砂輪，鏡面研磨任意形狀之刃口，同心度◎，跳動↗，圓柱度 $\text{I} \leq 0.003\text{mm}$ ($3\mu\text{m}$)，可任意的刃口鋒利程度。
A級：CNC超硬砂輪，精研磨任意形狀之刃口，同心度◎，跳動↗，圓柱度 $\text{I} \leq 0.008\text{mm}$ ($8\mu\text{m}$)，可任意的刃口鋒利程度。
A級：CNC超硬砂輪，一般研磨任意形狀之刃口同心度◎，跳動↗，圓柱度 $\text{I} \leq 0.012\text{mm}$ ($12\mu\text{m}$)，可任意的刃口鋒利程度。
B級：CNC車削加工，熱處理+拋光處理，較差的刃口鋒利性，同心度◎，跳動↗，圓柱度 $\text{I} \leq (0.10-0.20\text{mm})$ ($100\mu\text{m} \sim 200\mu\text{m}$)

※ Cutting edge machining grades:

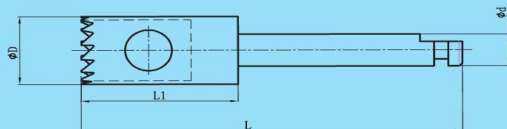
- Class AAA: CNC super hard grinding wheel, mirror surface grinding for any shape of cutting edge. Concentricity ◎, runout ↗, cylindricity $\text{I} \leq 0.003\text{mm}$ ($3\mu\text{m}$), any sharpness of cutting edge.
Class A: CNC super hard grinding wheel, finish grinding for any shape of cutting edge. Concentricity ◎, runout ↗, cylindricity $\text{I} \leq 0.008\text{mm}$ ($8\mu\text{m}$), any sharpness of cutting edge.
Class A: CNC super hard grinding wheel, general grinding for any shape of cutting edge. Concentricity ◎, runout ↗, cylindricity $\text{I} \leq 0.012\text{mm}$ ($12\mu\text{m}$), any sharpness of cutting edge.
Class B: CNC lathe work + heat treatment + polishing treatment, worse sharpness of cutting edge. Concentricity ◎, runout ↗, cylindricity $\text{I} \leq (0.10-0.20\text{mm})$ ($100\mu\text{m} \sim 200\mu\text{m}$).

※ 刃部材料類型：

1. 超防腐防銹不銹鋼(AA) (HRC54° ± 2° 斷面) (常備常規)
2. 常規標準防銹高耐磨不銹鋼類(A) (HRC45°~64° 斷面)
3. 鈦及鈦合金類 (HRC35°~42°) 系列。
4. 陶瓷類 (HRA85°~94°) 系列, (HRC67°~84°) 系列。
5. 鎢鋼類 (HRA81°~94°) 系列, (HRC60°~84°) 系列。

Material cutting edge:

1. ultra-high anti-rust high wear-resistant stainless steel (AA) (HRC54° ± 2° Section) (regular stock)
2. general anti-rust high wear-resistant stainless steel (A) (HRC45°~64° Section)
3. titanium and titanium alloy HRC35°~42° series
4. Ceramic (HRA85°~94°) series, (HRC67°~84°) series
5. carbide (HRA81°~94°) series, (HRC60°~84°) series



部分尺寸 some size

刃徑 ϕD Diameter	4.1	5.0	6.0	7.0	8.0	4.5	5.5	6.5	7.8
刃長 L_1 length of cut 刃の長さ	10	10	10	10	10	14.85	14.85	14.85	14.85
柄徑 ϕd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長 L Overall Length 總長さ	24.3	24.3	30.85	30.85	30.85	30.85	30.85	30.85	30.85

材料:

- ①超高防銹高耐磨不銹鋼系列(AA)(HRC54° ± 2° 斷面)(常備常規)
- ②常規標準防銹高耐磨不銹鋼系列(A)(HRC45° ~ 64° 斷面系列)

Material:

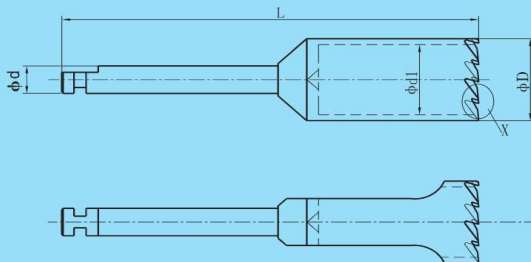
- ①Super-high anti-rust high wear resistance stainless steel series(AA)(HRC54° ± 2° Section)(regularly stock)
- ②General anti-rust high wear resistance stainless steel series(A)(HRC45° ~ 64° Section series)



可加工任意尺寸、不同角度、不同鋒利性、
不同定位方式、精度、公差公差、形狀結構、齒形及齒數
Can process any size, tolerance, shape, structure, teeth form and teeth number.

醫用工具及配件系列 (取骨鑽/穿孔器)
Medical tools and parts series (Trephine/Perforator)
医療器具及び部品シリーズ(トレフィン)

(超防腐型 (AA) & 超耐磨型 (A) & 超鋒利刃口)
(ultra-high anti-rust (AA) ultra-high wear
resistant (A) & Ultra-sharp cutting edge)
超防腐型 (AA) & 超耐磨型 (A) & 超鋒利刃先



部分尺寸 (AA) 系列 (AA)

刃徑 φD Diameter	4.1	5.0	6.0	7.0	8.0	4.5	5.5	6.5	7.8
刃長 L1 Length of cut 刃の長さ	10	10	10	10	10	14.85	14.85	14.85	14.85
柄徑 φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長 L Overall length 總長さ	24.3	24.3	30.85	30.85	30.85	30.85	30.85	30.85	30.85

部分尺寸 (A) 系列 (A)

刃徑 φD Diameter	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	9.0	10	11	12
刃長 L1 Length of cut 刃の長さ	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
柄徑 φd Shank Dia.	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
總長 L Overall length 總長さ	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6	31.6

φD 均為外徑尺寸，內孔比外徑小 1mm；總長可以按貴司要求生產，壁厚常規 0.5mm，也可以 0.25, 0.3mm，可以根據貴司需要生產。All the φD are out diameters. The inner holes are 1mm smaller than out diameters. The total length can be produced according to your esteemed company's requirement. The normal wall thickness is 0.5mm. 0.25mm, 0.3mm, or sizes as per your requirement are all OK.

醫用工具及配件系列 (舍弃式取骨器/骨收集鑽/穿孔器)
 Medical tools and parts series (Trephine/Bone
 collector drills/Perforator)
 医療器具及び部品シリーズ (使い捨て式トレフィン/トレフィンドリル)

(超防腐型 (AA) & 超耐磨型 (A) & 超銳利刃口)
 (ultra-high non-rust AA ultra-high wear
 resistant A) & Ultra-sharp cutting edge)
 超防腐型 (AA) & 超耐磨型 (A) & 超銳利刃口

可依CAD/3D圖及樣品研磨任意形狀、不同角度、不同定位方式、
 齒形、結構、深淺度，鋒利性程度的取骨工具。

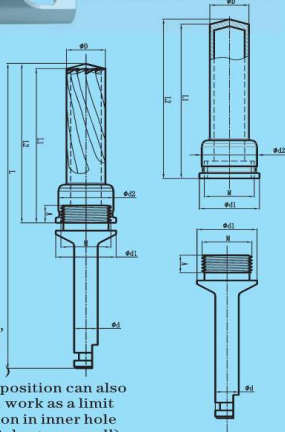
We can grind bone fetchers with any shape, different angles,
 different locate mode, tooth profile, structure, depth, and
 degree of sharpness according to CAD/3D drawings or samples

超高耐磨鎢鋼 (硬質合金) 刃及
 高抗衝擊鎢鋼 (硬質合金) 刃
 Ultra-high wear-resistant
 tungsten steel (carbide)
 edge & High impact tungsten
 steel (carbide) edge

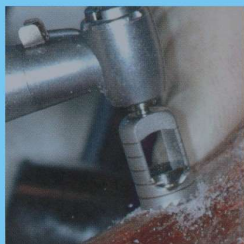
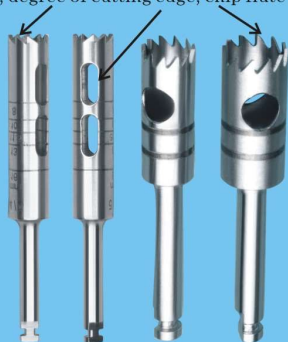


舍弃式
 Disposable

(螺紋旋入式)
 此處也可整體加帶鑽頭，
 在內孔中作為限位及鑽
 削來組合用
 (可長可短，可大可小)
 (Screw-on type) This position can also
 be solid with the drill, work as a limit
 and drilling combination in inner hole
 (It can be long or short, large or small)



可超硬研磨任意刃口角度、方式、結構及刃口鋒利程度、容屑槽大小等要求之制品
We can produce products with any requirement for angle of cutting edge, type, structure, degree of cutting edge, chip flute size.



可依CAD/3D圖及樣品研磨任意形狀、齒形;結構;深淺度;鋒利性程度的取骨工具。
We can grind the tool for removing the bone with any requirement of any shape, tooth form; structure; depth and sharpness according to the CAD/3D drawings.

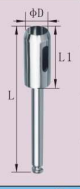
CAD/3D圖面またはサンプルに基づいて、あらゆる形状、各角度、各位置決め方法、齒型、構造、深さ、鋭利さのトレフィンが研磨ができる



偏心刃旋切
Eccentric rotary-cutting



部分尺寸(AA):some size(AA)

	刃徑 ΦD Diameter	3.0	4.0	5.0	6.0	7.0
	刃長 L1 Length of cut 刃の長さ	11.3	11.3	11.3	11.3	11.3
	柄徑 Φd Shank Dia.	2.35	2.35	2.35	2.35	2.35
	總長 L Overall length 總長さ	31	31	31	31	31

ΦD均為外徑尺寸，內孔比外徑小1mm；總長可以按貴司要求生產，壁厚常規0.5mm，也可以0.25/0.3mm，可以根據貴司需要生產。All the ΦD are out diameters. The inner holes are 1mm smaller than out diameters. The total length can be produced according to your esteemed's requirement. The normal wall thickness is 0.5mm. 0.25mm, 0.3mm, or sizes as per your requirement are all OK.

材料:

- ① 超高防銹高耐磨高硬度不銹鋼系列(AA)(HRC54° ± 2° 斷面)(常備常規)
- ② 常規標準防銹高耐磨不銹鋼系列(A)(HRC45° ~64° 斷面系列)

Material:

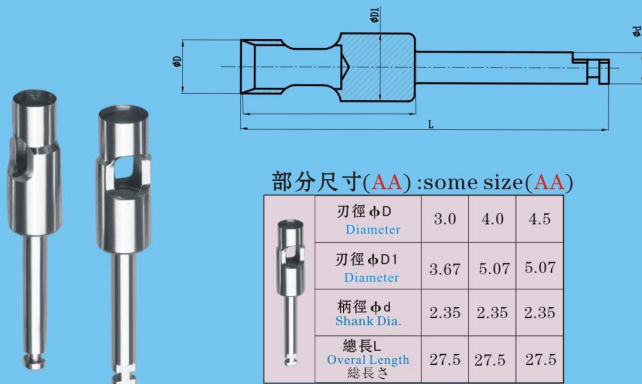
- ① Ultra high rust-proof, high wear-resistant & high-hardness stainless steel series (AA)(HRC54° ± 2° Section)(regular stock)
- ② General anti-rust high wear resistance stainless steel series(A)(HRC45° ~64° Section series)

外斜口 external oblique opening

可超高鋒利型 & 一般鋒利型
ultra-high sharp & general sharp

內斜口
internal oblique opening

可加工任意尺寸、公差、形狀、結構、刃口角度、鋒利性要求
Can process any size, tolerance, shape, structure, cutting edge angle and sharpness.



部分尺寸(AA) : some size(AA)

	刃徑 φD Diameter	3.0	4.0	4.5
	刃徑 φD1 Diameter	3.67	5.07	5.07
	柄徑 φd Shank Dia.	2.35	2.35	2.35
	總長 L Overall Length 總長	27.5	27.5	27.5

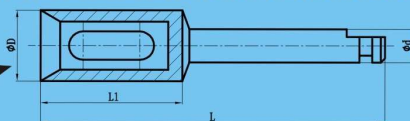
材料:

- ① 超高防銹高耐磨高硬度不銹鋼系列(AA)(HRC54° ± 2° 斷面)(常規常備)
- ② 常規標準防銹高耐磨不銹鋼系列(A)(HRC45° ~ 64° 斷面系列)

Material:

Ultra high rust-proof, high wear-resistant & high-hardness stainless steel series (AA)(HRC54° ± 2° Section)(regular stock)
② General anti-rust high wear resistance stainless steel series(A)(HRC45° ~ 64° Section series)

可超高鋒利型&一般鋒利型
ultra-high sharp & general sharp



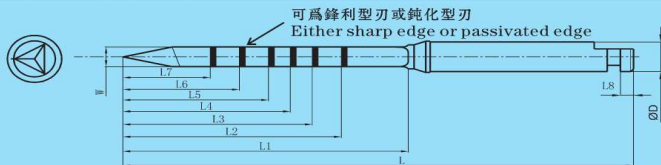
部分尺寸(AA) : some size(AA)

	刃徑 φD Diameter	3.0	4.0	5.0	6.0
	刃長 L1 length of cut 刃の長さ	11.3	11.3	11.3	11.3
	柄徑 φd Shank Dia.	2.35	2.35	2.35	2.35
	總長 L Overall Length 總長	31	31	31	31

φD均為外徑尺寸。內孔比外徑小1mm; 總長可以按貴司要求生產。壁厚常規見0.5mm, 也可以0.25/0.3mm, 可以根據貴司需要生產。All the φD are out diameters. The inner holes are 1mm smaller than out diameters. The total length can be produced according to your esteemed's requirement. The normal wall thickness is 0.5mm, 0.25mm, 0.3mm, or sizes as per your requirement are all OK.

醫用工具及配件系列（先鋒鑽）
Medical tools and parts series (Lance drill)
医療器具及び部品シリーズ（スポッティングドリル）

(超防腐型(AA)&一般防腐型(A))
High anti-rust type (AA) & general anti-rust type (A)
(超防腐型(AA)&一般防腐型(A))



可研磨3-12稜之成型錐度
We can grind profile taper
with 3-12 arsis.

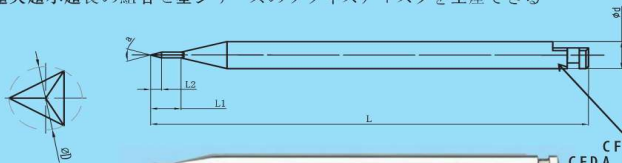
- ① 表面可黃色/黑色/亞光/亮光處理
Yellow/Black/Shiny/Matt treatment
- ② 可依要求做任意長度、寬度及深度大小的凹槽。
Grooves of any length, width and depth
can be made as required.



★ 依圖依樣尺寸公差要求可生產特殊、複合、異型、超大超微細超長組合成型制品。

We can produce special, compound, special-shaped, Super large, Super thin,
Super long combined forming products according to the requirements of
drawings, samples, and size tolerance.

圖面、サンプルまたは寸法公差の要求により特殊、複合、異型、
超大超小超長の組合せ型シリーズのプライスディスクを生産できる



(微型刃至 $\Phi 0.50\text{mm}$)
(Micro edge to $\Phi 0.50\text{mm}$)

CFDA 标准卡口
CFDA standard aporet

★ 可超硬、超精研磨、任意的柄部類型、芯厚、容屑槽寬度、刃背方式、鑽尖方式、內冷却孔方式、刃部結構、刃口角度、刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列（先鋒鑽）
Medical tools and parts series (Lance drill)
醫療器具及び部品シリーズ（スポッティングドリル）

(超高防銹型(AA)&一般防銹型(A))
(High anti-rust type (AA) & general anti-rust type (A))
(超防銹型(AA)&一般防銹型(A))

材料:

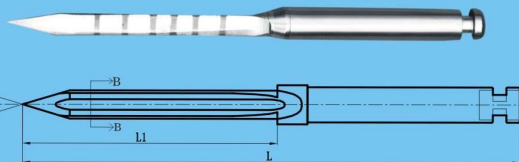
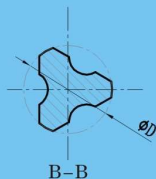
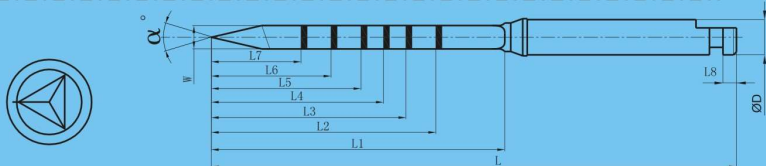
- ① 超高防銹高耐磨高抗冲击高韧性不锈钢系列 (AA)(常备常规)
- ② 高抗冲击钨钢。
- ③ 超高耐磨高硬度钨钢。(超高耐用度,但较脆)

Material:

1. Ultra-high rust-proof, high wear-resistant, high-impact and high-toughness stainless steel series (AA) (regular stock)
2. Carbide with high shock resistance
3. Carbide with super-high wear resistance and high hardness (super-high durable, but more brittle)

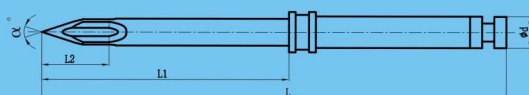
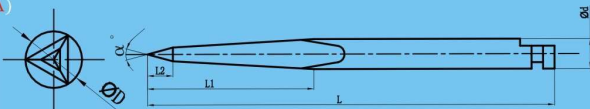
表面处理: 黄色/黑色/亚光处理/光亮处理

Surface treatment: yellow/black/matt treatment



部分尺寸(AA) some size (AA)

刃徑 ϕD Diameter	2.0	2.0
刃長 L_1 Length of cut 刃の長さ	13.08	13.08
柄徑 ϕd Shank Dia.	2.35	2.35
總長 L Overall Length 總長さ	32	36



★可超硬、超精研磨，任意的柄部類型，芯厚，容屑槽寬度，刃背方式，鑽尖方式，內冷卻孔方式，刃部結構，刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列 (先鋒鑽)

Medical tools and parts series (Lance drill)

医療器具及び部品シリーズ (スボッティングドリル)

(超防腐型(AA) & 一般防腐型(A))
(High anti-rust type AA) & general anti-rust type A)
(超防腐型(AA) & 一般防腐型(A))

可依要求做任意長度、寬度及深度大小的凹槽。
Grooves of any length, width and depth
can be made as required.



硬質合金對焊型，硬度、超耐磨，但抗崩刃性較差些。
Hard alloy butt welded, with high hardness
& superhigh wear resistance, but with
relatively poor chipping resistance



★可超硬、超精研磨，任意的柄部類型、芯厚、容屑槽寬度、刃背方式、鑽尖方式、內冷卻孔方式、刃部結構、刃口角度、刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

- ★ 可依要求生產不同刃部材料類型 (陶瓷類、鎢鋼類、高品級不銹鋼類、鈦及鈦合金類、一般不銹鋼.....等系列)
- ★ We will produce the cutting edge with different material types (ceramics, carbide, high-grade stainless steel, titanium and titanium alloys, general stainless steel ,...)



不銹鋼Stainless(AA)

陶瓷 Ceramic

鎢鋼 Carbide

※ 刃部加工等級:

AAA級: CNC超硬砂輪,鏡面研磨任意形狀之刃口,同心度 $\odot$,跳動 $\nearrow$,圓柱度 $\swarrow \leq 0.003\text{mm}(3\mu\text{m})$,可任意的刃口鋒利程度。

A A級: CNC超硬砂輪,精研磨任意形狀之刃口,同心度 $\odot$,跳動 $\nearrow$,圓柱度 $\swarrow \leq 0.008\text{mm}(8\mu\text{m})$,可任意的刃口鋒利程度。

A級: CNC超硬砂輪,一般研磨任意形狀之刃口同心度 $\odot$,跳動 $\nearrow$,圓柱度 $\swarrow \leq 0.012\text{mm}(12\mu\text{m})$,可任意的刃口鋒利程度。

B級: CNC車削加工+熱處理+拋光處理,較差的刃口鋒利性,同心度 $\odot$,跳動 $\nearrow$,圓柱度 $\swarrow (0.10-0.20\text{mm})$

!($100/\mu\text{m}-200/\mu\text{m}$)

※ Cutting edge machining grades:

Class AAA: CNC super hard grinding wheel, mirror surface grinding for any shape of cutting edge. Concentricity $\odot$, runout $\nearrow$, cylindricity $\swarrow \leq 0.003\text{mm}(3\mu\text{m})$, any sharpness of cutting edge.

Class A A: CNC super hard grinding wheel, finish grinding for any shape of cutting edge. Concentricity $\odot$, runout $\nearrow$, cylindricity $\swarrow \leq 0.008\text{mm}(8\mu\text{m})$, any sharpness of cutting edge.

Class A: CNC super hard grinding wheel, general grinding for any shape of cutting edge. Concentricity $\odot$, runout $\nearrow$, cylindricity $\swarrow \leq 0.012\text{mm}(12\mu\text{m})$, any sharpness of cutting edge.

Class B: CNC lathe work + heat treatment + polishing treatment, worse sharpness of cutting edge. Concentricity $\odot$, runout $\nearrow$, cylindricity $\swarrow (0.10-0.20\text{mm}) (100/\mu\text{m}-200/\mu\text{m})$.

※ 刃部材料類型:

1. 超高防銹不銹鋼類(AA)(HRC54° $\pm 2^\circ$ 斷面)
(常備常規)

2. 常規標準防銹高耐磨不銹鋼類(A)
(HRC45° ~64° 斷面)

3. 鈦及鈦合金類(HRC35° ~42°)系列。

4. 陶瓷類(HRA85° ~94°)系列,
(HRC67° ~84°)系列。

5. 鎢鋼類(HRA81° ~94°)系列,
(HRC60° ~84°)系列。

Material of cutting edge:

1. ultra-high anti-rust high wear-resistant stainless steel(AA)(HRC54° $\pm 2^\circ$ Section)(regular stock)

2. general anti-rust high wear-resistant stainless steel(A)
(HRC45° ~64° Section) series

3. Titanium and Titanium alloy (HRC35° ~42°) series

4. Ceramic (HRA85° ~94°) series, (HRC67° ~84°) series

5. Carbide (HRA81° ~94°) series, (HRC60° ~84°) series

※ 可熱處理後硬料、超硬、超精研磨任意的柄部類型,孔徑、壁厚、牙型、牙數、刃口形狀、刃口類別,刃口之結構、角度、螺旋角,刃口鋒利程度之要求.....

By way of super hard and super finish grinding for hardened material after heat treatment, we can produce any type of shank and satisfy your requirement of any hole diameter, wall thickness, thread form, number of teeth, cutting edge shape, cutting edge type, structure of cutting edge, angle, helix angle, and sharpness requirements...

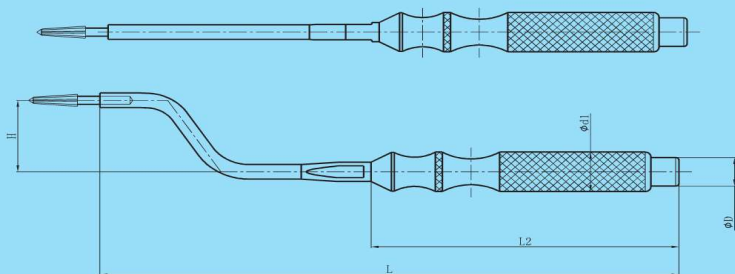
※ 產品成本由:

刃部材料類型+刃部加工等級+產品精度要求=組成不同使用用途、效果、檔次、性價比之制成品。

The cost of products includes: cutting edge material grade + cutting edge process grade + product precision requirements= combine final products with different application, effect, grade and cost-performance.

醫用工具及配件系列(骨齒)
Medical tools and parts series(Osteotome)
医療器具及び部品シリーズ(骨のみ)

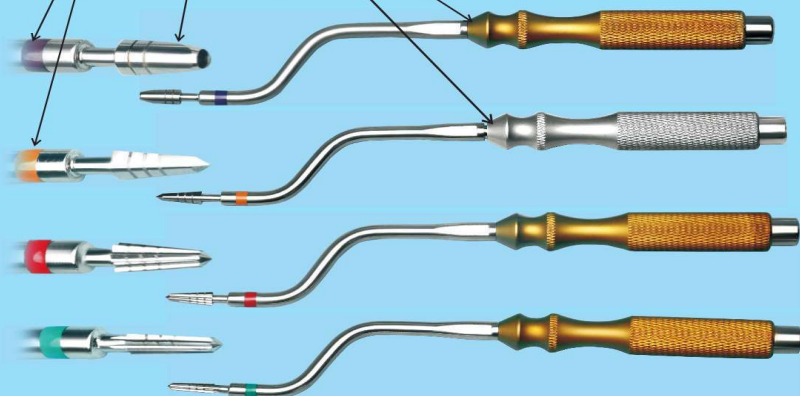
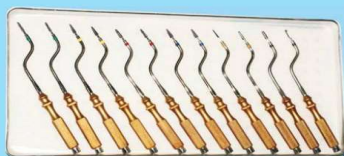
(超防腐型 (AA) & 超耐磨型 (A) & 超銳利刃口)
(ultra-high nbi-rust AAQ ultra-high ear
resistant A) & U ltra-sharp utting dge)
超防腐型 (AA)&超耐磨耗型 (A)&超銳利刃先



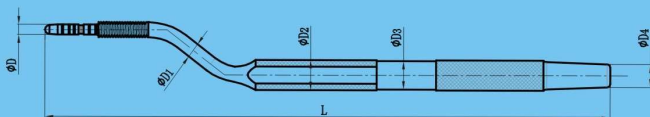
不同顏色之色圈
Different color
ring

不同顏色之塗層
Different color
coating

可以任意刃部結構，
形狀之生產。
It can be produced with any
flute structure and shape.



以下為常規在庫品,也可非標準,依圖依樣定制
Below are regular stock products,
we can also make non-standard products according
to customers' drawings or samples



部分尺寸 some size

直徑ΦD Diameter	2.0 (凹嘴)	2.5 (凹嘴)	3.0 (凹嘴)	3.5 (凹嘴)	4.0 (凹嘴)	2.0 (圓嘴)	2.5 (圓嘴)	3.0 (圓嘴)	3.5 (圓嘴)	4.0 (圓嘴)
柄徑ΦD3 Shank Dia.	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
總長L Overall length	168	168	168	168	168	168	168	168	168	168



限位套材料:
①可不同顏色
的高耐磨醫
用塑料類
②可不同顏色
的高品級
金屬類



Material of stop collars:

- ① Can be high wear-resistant medical plastic with different color.
- ② Can be high grade metal with different colors.



捨棄式，
可更換。
Disposable,
replaceable.

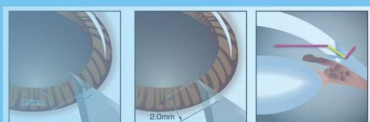
柄部可為以下材料，
並可處理多種顏色，
以区分：

- ① 鋁合金
- ② 鈦合金
- ③ PEEK/PPSU

Shank can be made
with materials as be
low and various colors
to distinguish:

- ① Aluminium alloy
- ② Titanium alloy
- ③ PEEK/PPSU

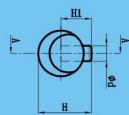
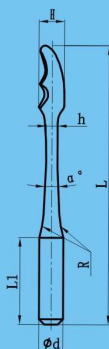
超鏡面研磨
Super mirror
surface grinding



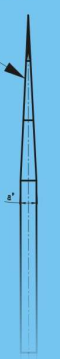
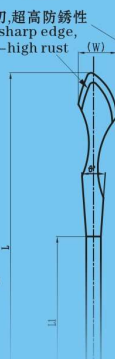
★ 依圖依樣尺寸公差要求可生產特殊、複合、異型、超大超微細超長組合成型制品。

We can produce special, compound, special-shaped, Super large, Super thin, Super long combined forming products according to the requirements of drawings, samples, and size tolerance.

図面、サンプルまたは寸法公差の要求により特殊、複合、異型、超大超小超長の組合せ型シリーズのフライスディスクを生産できる



超鋒利刃，超高防銹性
ultra-sharp edge,
ultra-high rust



Φd
(Φ1.0~Φ2.30mm)
系列series

醫用工具及配件系列（手術刀/克氏針/精微切刀）

Medical tools and parts series (Surgical knives /

Kirschner wires / Subtle cutter)

医療器具及び部品シリーズ(カッター、メス/キルシュナー鋼線/マイクロカッター)

(超鋒利刃口&超耐磨&超防腐&高精度)
(Ultra-sharp edge & ultra-high wear-resistant
& ultra-high rust & high precision)
(超銳利刃先&超耐磨耗&超防蝕&高精度)

CNC磨削中心, 可超精研磨任意形狀, 結構, 精度公差, 的超鋒利成型刃口, 超防腐不銹鋼 (AA) (HRC54° ± 2° 斷面)

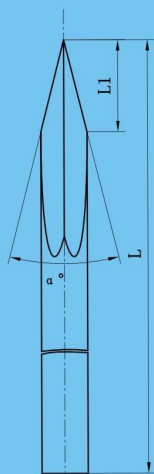
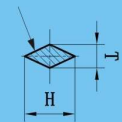
CNC Grinding Center, which can superfinish grind the ultra-sharp profile edge with any shape, structure and precision tolerance, also the ultra-high anti-rust stainless steel (AA) (HRC54° ± 2° Section)

全精研磨, 超鋒利刃(非機加工成型的); 可微凹斜面, 刃超鋒利
Full finishing, ultra-sharp edge (not machined);
The bevel can be slightly concave, the edge is super sharp

可微細、成型、特殊形狀、
超鋒利刃CBNC、
高光潔度硬研磨成型

It can be micro, forming, special-shaped, super sharp-edged CBNC and high finish hard ground to mold

超鋒利全精研磨刃口
Super sharp full-finish grinding edge



批量可協助開模注塑。
If in batch, we can assist in mold injection

Φd
(Φ0.620-Φ2.300mm)
系列series

醫用工具及配件系列（手術刀/克氏針/精微切刀）

Medical tools and parts series (Surgical knives /

Kirschner wires / Subtle cutter)

医療器具及び部品シリーズ(カッター、メス/キルシュナー鋼線/マイクロカッター)

(超鋒利刃口&超耐磨&超防腐&高精度)
(Ultra-sharp edge & ultra-high wear-resistant
& ultra-high rust & high precision)
(超銳利刃先&超耐磨耗&超防蝕&高精度)

CNC磨削中心, 可超精研磨任意形狀, 結構, 精度公差, 的超鋒利成型刃口, 超防腐不銹鋼 (AA) (HRC54° ± 2° 斷面)

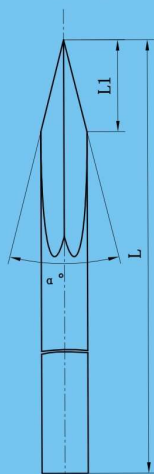
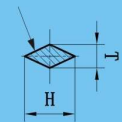
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Full finishing, ultra-sharp edge (not machined);
The bevel can be slightly concave, the edge is super sharp

可微細、成型、特殊形狀、
超鋒利刃CBNC、
高光潔度硬研磨成型

It can be micro, forming, special-shaped, super sharp-edged CBNC and high finish hard ground to mold

超鋒利全精研磨刃口
Super sharp full-finish grinding edge



批量可協助開模注塑。
If in batch, we can assist in mold injection

Φd
(Φ0.620-Φ2.300mm)
系列series

CNC磨削中心,可超精研磨任意形狀,結構,精度公差之超鋒利
成型刃口.超高防銹不銹鋼 (AA) (HRC54° ± 2° 斷面)

CNC Grinding Center, which can superfinish grind the ultra-sharp profile edge
with any shape, structure and precision tolerance, also the ultra-high anti-rust
stainless steel (AA) (HRC54° ± 2° Section)

精研磨超鋒利刃
(非機加工成型的)

Precision grinding super sharp
(non-machining molding)

精研磨,超鋒利刃(非機加工成型的)
Precision grinding super sharp
(non-machining molding)

全精研磨之平斜面
Flat bevel of full
finish grinding

全精研磨之微
凹斜面,刃超鋒利
Slightly concave bevel
of full finish grinding,
ultra-sharp edge

可微細、成型、特殊形狀、
超鋒利刃CBNC、
高光潔度硬研磨成型

It can be micro, forming,
special-shaped, super
sharp-edged CBNC
and high finish hard
ground to mold

醫用工具及配件系列（手術刀/克氏針/精微切刀）

Medical tools and parts series (Surgical knives /

Kirschner wires / Subtle cutter)

医療器具及び部品シリーズ(カッター、メス/キルシュナー鋼線/マイクロカッター)

(超銳利刃口 & 超耐磨耗 & 超防腐蝕 & 高精度)
(Ultra-sharp edge & Ultra-high wear-resistant & Ultra-high corrosion-resistant & High precision)
(超銳利刃口 & 超耐磨耗 & 超防腐蝕 & 高精度)

依圖依樣尺寸公差要求可生產特殊、復合、異型、超大超細超長組合成型的系列刀具。

We can produce special, compound, special-shaped, super-large, super-thin/super-long combined profile series tooling according to requirements of drawings, samples and dimension tolerance.

圖面、サンプル、または寸法の公差要求により特殊、復合、異型または超大、超細、超長の組合せ成型のシリーズカッターを生産できる。



★可超硬、超精研磨、任意的特部類型、芯厚、容屑槽寬度、刃背方式、鑽尖方式、內冷卻孔方式、刃部結構、刃口角度、刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, angle of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列（手術刀/克氏針/精微切刀）

Medical tools and parts series (Surgical knives/

Kirschner wires / Subtle cutter)

医療器具及び部品シリーズ(カッター、メス/キルシュナー鋼線/マイクロカッター)

(超銳利刃口 & 超高等磨 & 超高等防銹 & 高精密度)
(Ultra-sharp edge & ultra-high wear-resistant & ultra-high accuracy & high precision)
(超銳利刃口 & 超高等磨耗 & 超高等防銹 & 高精度)

依圖依樣尺寸公差要求可生產特殊、複合、異型、超大超細超長組合成型的系列刀具。

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可加工任意的槽型及
深度、精度要求

We can process with
any groove type and
any depth, accuracy
requirement

★可超硬、超精研磨、任意的柄部類型、芯厚、容屑槽寬度、刃背方式、鑽尖方式、內冷却孔方式、刃部結構、刃口角度、刃口鋒利程度之要求，及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求。We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure of cutting edge, degree of sharpness of cutting edge, and the dimension tolerance can be up to $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

醫用工具及配件系列（手術刀/克氏針/精微切刀）

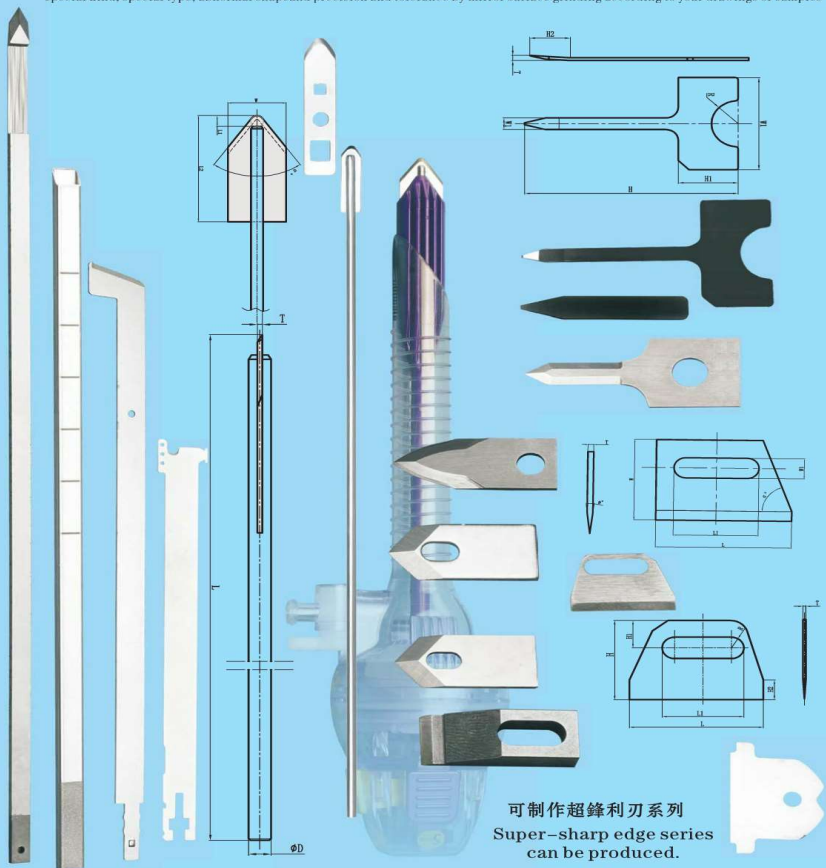
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& Ultra-high rust & high precision)
(超銳利刀先 & 超耐磨耗 & 超防銹 & 高精度)

可以依圖依樣鏡面研磨加工任意材質，形狀、特殊、異型、精度公差之產品。We can make tools with any material, any shape, special kind, special type, abnormal shape and precision and tolerance by mirror surface grinding according to your drawings or samples



可制作超鋒利刃系列
Super-sharp edge series
can be produced.