

超锋利刃, 超高防锈性,
高可至0.30N的
超锋利切割刃

Super sharp cutting blade;
Ultra-high rust resistance;
Super sharp cutting edge
with sharpness up to 0.30N

CMEF

展位号: **5.1 M53**

Booth No.: **5.1 M53**



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、
耐磨零附件、高精度配件(3DX技术)成型超硬、
超精研磨。

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、超高防錆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、高精度部品(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、组成型**的加工, 具有完美的刃口品质和高可至 $\pm 0.0005\text{mm}$ ($\pm 0.5\mu\text{m}$) 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 $\pm 0.0005\text{mm}$ ($\pm 0.5\mu\text{m}$), and a high-efficiency & low-cost application we deliver to you!

を行い、微細、超長、超薄、超耐磨耗、耐衝撃、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
WeChat Official Account

医用工具及配件系列（极超锋利切刀/牙龈切刀）
 Medical tools and parts series(Super sharp knife/ Gingival cutter)
 医療器具及び部品シリーズ(カッター、メス)

(超高防锈型(AA)&超高耐磨型(A)&超锋利刃口)
 (Ultra-high rust (AA) & Ultra-high wear
 -resistant(A) & Ultra-sharp edge)
 (超防锈型(AA)&超耐磨型(A)&超锐利刃先)

超锋利刃,超高防锈性
 高可至0.30N的超锋利切割刃

Super sharp cutting blade;Ultra-high rust resistance;
 Super sharp cutting edge with sharpness up to 0.30N

必要时,
 也可来样或
 图纸加工装柄
 装夹杆

If necessary,
 we can also
 process the
 handle and
 clamp rod
 with your
 samples or
 drawings

常用颜色:黄色、
 蓝色、紫色、
 绿色、亮光、
 亚光等(供参考),
 (可处理近
 30种颜色)
 Commonly used
 colors for
 reference:
 yellow,
 blue, purple,
 green,
 shiny, matt, etc.
 (It can be
 processed with
 nearly 30 kinds
 of colors)

高可至0.30N的
 超锋利切割刃
 Super sharp
 cutting edge
 with sharpness
 up to 0.30N

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&超高耐磨&超高防銹&高精密度)

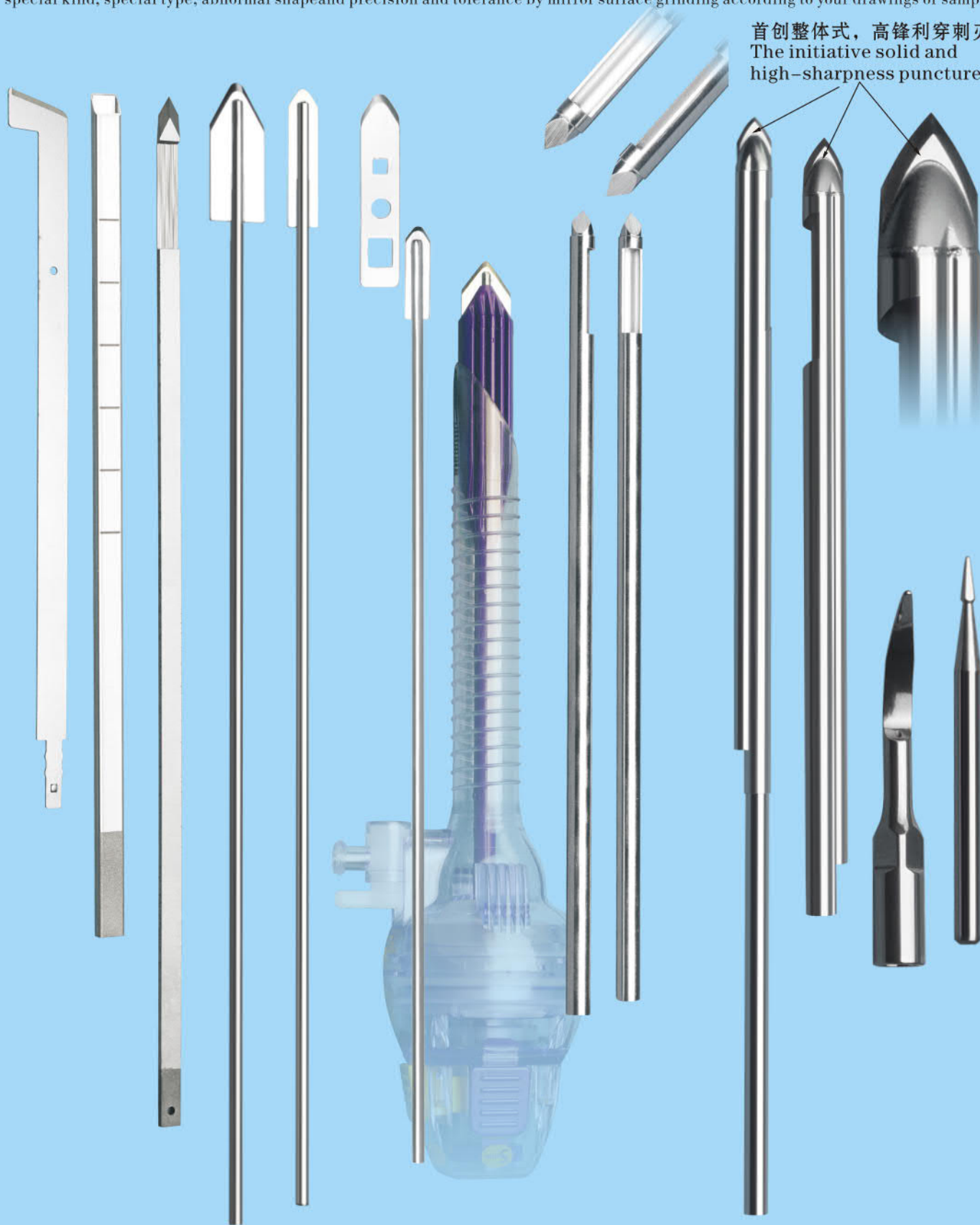
(Ultra-sharp edge & ultra-high wear-resistant

& ultra-high rust & high precision)

(超銳利刃先&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種，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

首創整體式，高鋒利穿刺刃
The initiative solid and
high-sharpness puncture blade



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&超高耐磨&超高防銹&高精密度)
(Ultra-sharp edge & ultra-high wear-resistant
& ultra-high rust & high precision)

(超銳利刃先&超耐磨耗&超防銹&高精度)

超鏡面研磨
Super mirror
surface grinding

捨棄式，
可更換。
Disposable,
replaceable.

柄部可為以下材料，
並可處理多種顏色，
以區分：

- 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



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&超高耐磨&超高防銹&高精密度)

(Ultra-sharp edge & ultra-high wear-resistant

& ultra-high rust & high precision)

(超銳利刃先&超耐磨耗&超防銹&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)

(超鋒利刃口&超高耐磨&超高防銹&高精密度)

(Ultra-sharp edge & ultra-high wear-resistant

& ultra-high rust & high precision)

(超銳利刃先&超耐磨耗&超防鏽&高精度)



★、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 can produce cutting edges from various types of material as per the requirement, like ceramic, carbide, stainless HSS, titanium and titanium alloy, stainless steel, etc.



超高防銹&超高耐磨不銹鋼&超鋒利刃口&超
 高精密度內外配合 (ASTM440PH/ASTMF899)
 Ultra-high anti-rust & ultra-high wear-resistant
 stainless steel & ultra-sharp edge & ultra-high
 precision internal and external matching
 (ASTM440PH/ASTMF899)



陶瓷
 Ceramic



鎢鋼
 carbide

※ 刃部加工等級: (內外配合間隙0.010~0.015mm)

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 ϕ ≤0.008mm(8 μ 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 ϕ ≤0.012mm(12 μ m),可任意的刃口鋒利程度。(常規常備)

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 ϕ ≤0.018mm(18 μ m),可任意的刃口鋒利程度。(常規常備)

B級: Sodick + GF+慢走絲及電火花EDM加工任意形狀之刃口,同心度◎,跳動↗,圓柱度 ϕ ≤0.05~0.100mm(50 μ m~100 μ m),可任意的刃口鋒利程度。

C級: 慢走絲一般加工之平刃齒一般刃口 (傳統型),同心度◎,跳動↗,圓柱度 ϕ ≤0.05~0.100mm(50 μ m~100 μ m)可任意的刃口鋒利程度。

※ Cutting edge machining grades: (Internal and external fit clearance 0.010~0.015mm)

class AAA: CNC super hard grinding wheel, mirror surface grinding for any shape of cutting edge. Concentricity◎, run out↗, cylindricity ϕ ≤0.003mm(3 μ m), any sharpness of cutting edge.

Class A A: CNC super hard grinding wheel, finish grinding for any shape of cutting edge. Concentricity◎, run out↗, cylindricity ϕ ≤0.008mm(8 μ m), any sharpness of cutting edge. (regular stock)

Class A: CNC super hard grinding wheel, general grinding for any shape of cutting edge. Concentricity◎, run out↗, cylindricity ϕ ≤0.012mm(12 μ m), any sharpness of cutting edge. (regular stock)

Class B: Take the Sodick + GF+ WEDM-LS and EDM technique to process cutting edge of any shapes, Concentricity◎, runout↗, cylindricity ϕ ≤0.05~0.100mm (50 μ m~100 μ m), any sharpness of cutting edges.

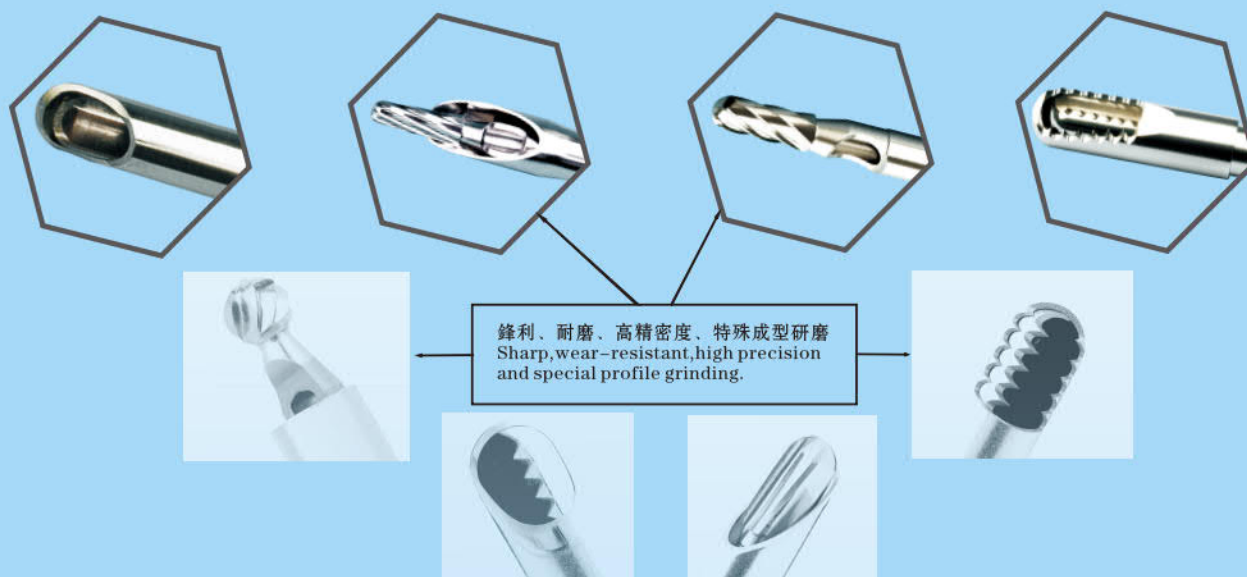
Class C: Take the WEDM-LS technique to generally process common cutting edges with flat flute(traditional type) Concentricity◎, runout↗, cylindricity ϕ ≤0.05~0.100mm (50 μ m~100 μ m) any sharpness of cutting edges.

※ 刃部材料類型：

1. 超防銹高耐磨高抗衝擊高韌性不銹鋼（AA）（HRC54° ± 2° 斷面）（常規常備）
2. 常規標準防銹超耐磨不銹鋼（A）（HRC64 ± ° 2° 斷面）
3. 對焊硬質合金（鎢鋼）類（HRA87° ~ 94°）系列（可定制）

Cutting edge Material Types:

1. ultra-high anti-rust high wear-resistant stainless steel (AA) (HRC54° ± 2° Section) (regular stock)
2. general anti-rust ultra-high wear-resistant stainless steel (A) (HRC64 ± ° 2° Section)
3. butt welding hard alloy (carbide) (HRA87° ~ 94°) series (customizable)



※ 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、性價比之製成品

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.

※ 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 harden 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 cutting edge sharpness

※ 刃部加工等級：

- AAA級：CNC超硬砂輪，鏡面研磨任意形狀之刃口
A A級：CNC超硬砂輪，精研磨任意形狀之刃口（常規常備）
A級：CNC超硬砂輪，一般研磨任意形狀之刃口（常規常備）
B級：Sodick + GF+慢走絲及電火花EDM加工任意形狀之刃口。

※ Cutting edge machining grades:

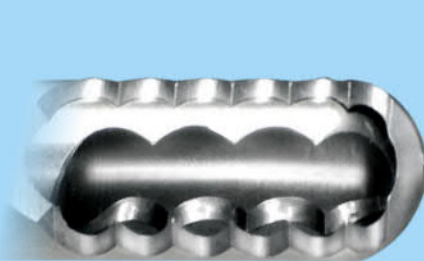
- AAA class: CNC super hard grinding wheel, mirror surface grinding for any shape of cutting edge.
A A class: CNC super hard grinding wheel, finish grinding for any shape of cutting edge. (regular stock)
A class: CNC super hard grinding wheel, general grinding for any shape of cutting edge. (regular stock)
B class: Sodick+ GF+ WEDM-LS and electric spark EDM, machine any shape of cutting edge.



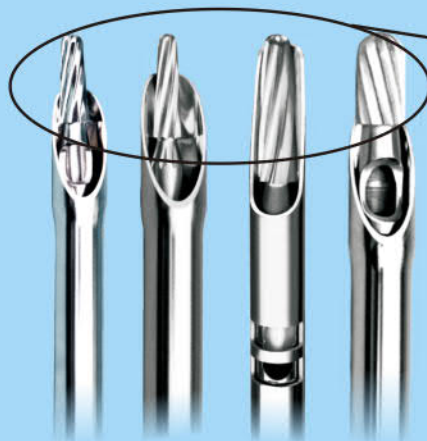
★、可來圖來樣任意訂做陶瓷、鎢鋼、不銹鋼、鈦合金、鈦等系列，高精度組合家具、鉗焊工夾具、耐磨零附件、高精度配件(3DX技術)成型超硬、超精研磨。We can customize for you according to your samples or drawings for any manufacturing of ceramic, carbide, stainless high-speed steel, stainless steel, titanium alloy, titanium diamond etc series, high precision combination profile fixtures, brazed jigs and fixtures, wear-resistant parts, high-precision parts (3DX technology) profile super-hard and super-fine grinding.

可研磨多種的刃口方式/方向角度

We can grind many types of cutting edge and angle direction.



內外刀配合
Cooperation of inner
blade and outer blade



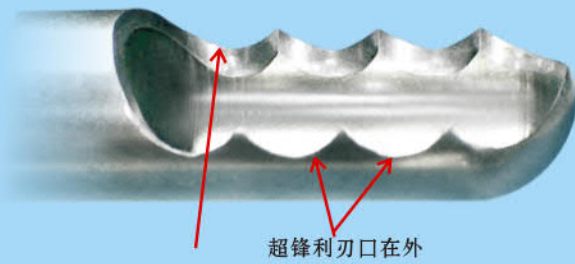
採用六軸聯動CNC磨削中心,可依
要求研磨任意形狀,鋒利要求,容屑
槽深淺要求,刃數,齒型,螺紋角度……

We use CNC with 6-axis and
grind any shape, sharpness,
the depth of chip pocket, flute
number, angle of thread
according to your
requirement.



超鋒利刃口在內
Ultra-sharp cutting edge inward

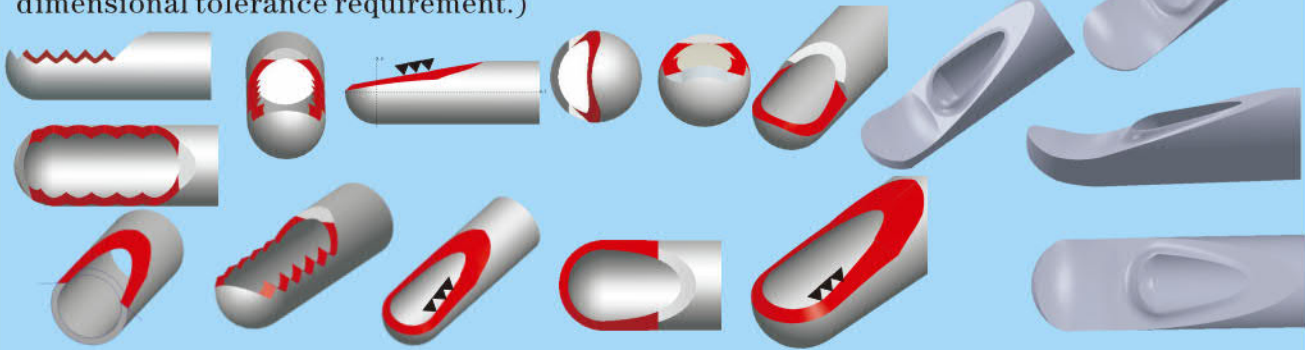
外刀：環周外徑外側採用CNC超硬砂輪
20° - 70° 角度（依鋒利要求）之超硬精
研磨（刃口處于內徑內側處）。
Outer blade: Super hard and finish
grinding for the circumferential
outside of outer diameter for 20° -
70° angle (according to the
requirement of sharpness) with
CNC super hard grinding wheel. (the
cutting edge is on the inner side of
inner diameter)。

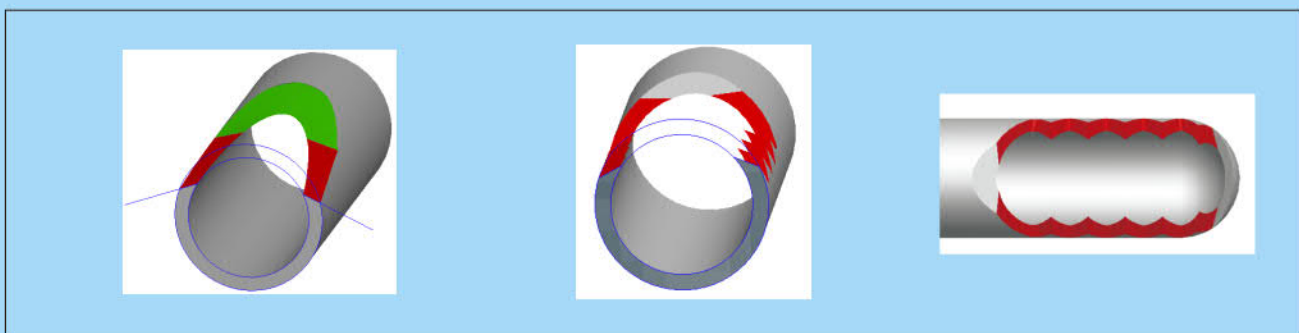


超鋒利刃口在外
Ultra-sharp cutting edge outward

內刀：環周內徑內側採用CNC超硬砂輪
10° - 60° （依鋒利要求）之超硬精研磨
（刃口處于外徑外側處）
Inner blade: Super hard and finish
grinding for the
circumferential inner side of inner
diameter for 10° - 60° angle
(according to the requirement of
sharpness) with CNC super hard
grinding wheel (the cutting edge is on
the outside of outer diameter)。

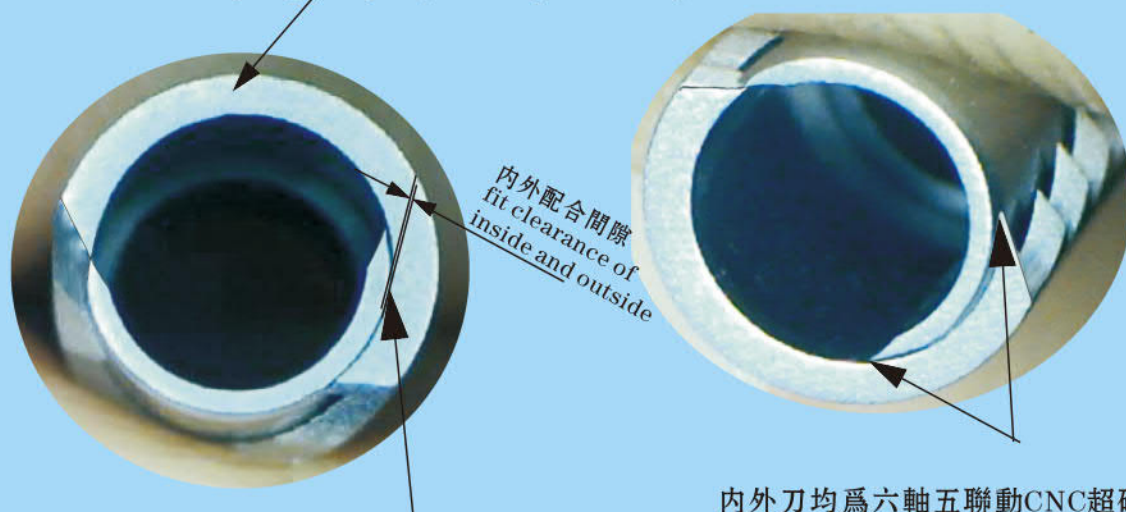
外刀頭部放大示意圖解（可以研磨任意刃型、鋒利刃之角度、牙型、中心高等尺寸公差要求）。
The schematic diagram of enlarged view for the head of outer blade (We can grind
any type of cutting edge, angle of sharp cutting edge, tooth type, center height etc.
dimensional tolerance requirement.)





超高防銹高耐磨高抗衝擊高韌性不銹鋼（AA）（HRC54° ± 2° 斷面），內外刃口鋒利性保持時間超長，（耐磨耗性能）使用壽命是傳統的AISI304L不銹鋼產品的60 ~ 100倍以上，並可使刃口長時間保持超鋒利狀態。

Ultra-high rust-proof, high wear-resistant, high-impact & high-toughness stainless steel (AA) (HRC54° ± 2° section), The inner blade and outer blade sharpness retention time is super-long. And lifetime (wear resistance) is 60 ~ 100 times higher than that of the traditional AISI304L product, which can make the cutting edge stay super sharp for a long time.



內外刀均為CNC高精密磨床反復精研磨加工，所以頭部的內外配合間隙為0.010~0.015mm之間的精密型，手術中切割無毛刺、毛邊、毛點殘留，屬高端精密型。

The inner blade and outer blade are finish-grinded repeatedly by CNC high precision grinding machine, so the head internal and external cooperation clearance is between 0.010~0.015mm, which is the precision type. The cutting is free of burrs and wool residue. It is a high-end precision type.

內外刀均為六軸五聯動CNC超硬砂輪（CBNC）高速研磨，刃口可近于鏡面光潔度，刃口超鋒利（後角可在20° ~ 70° 系列），手術中切割超幹淨，優良。

The inner blade and outer blade are grinded with high speed by 6-axis 5-linkage CNC superhard grinding wheel (CBNC). The edge can be close to the mirror finish, super-sharp (relief angle can be 20° ~ 70° series), super clean and excellent cutting during surgery.

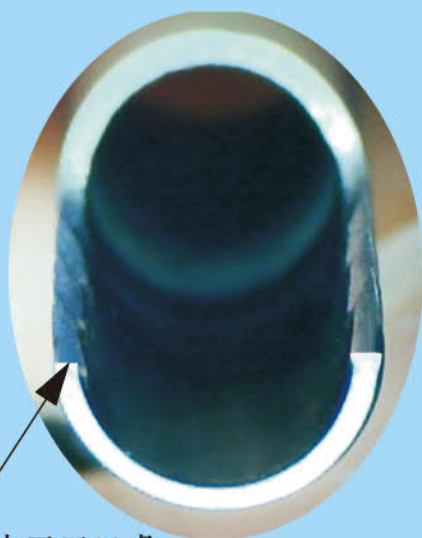
以上為超鋒利刃&超高防銹（AA）&超高耐磨高抗衝擊高韌性&超高精密度內外配合之刨削工具的（實物實剖範例）

Above are shaver blades with super-sharp edge & ultra-high anti-rust (AA) & ultra-high wear resistance & high impact & high toughness & ultra-high precision internal and external matching. (physical prototype example)

以下為市場上傳統結構的刨刀的(實物實剖範例)
(傳統常規的AISI304L不銹鋼,無硬度)

The following is traditional-structure shaver blades in current
market (physical prototype example)

(Traditional & conventional AISI 304L stainless steel, no hardness)

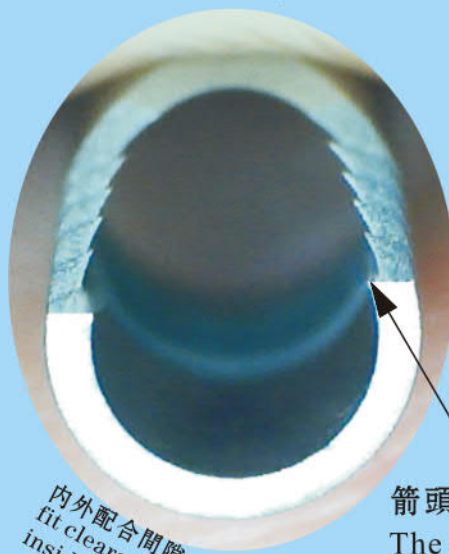


箭頭為內刀刃口處

(內刀刃在外,且為負刃口後角,
超鈍,切割易發熱及卷邊現象)

(Inner blade edge on the
outside is negative edge
relief angle, super blunt,
easy to heat while cutting,
and edge curl appears.)

The arrow indicate
inner blade edge



0° 無刃口後角
0° without cutting
edge relief angle

箭頭為外刀刃口處
The arrow indicate
outer blade edge

內外配合間隙
fit clearance of
inside and outside



傳統結構由模具直接完成,
內外刀間隙祇能
在0.075~0.110mm之間,
因為模具加工,無法達
到更高的精度,造成的
內外刀間隙大,切割易
卷入組織,及手術中毛
點殘留的現象。

The traditional structure is
directly completed by the
mold. The clearance of the
inner and outer blade can
only be between 0.075 ~ 0.110.
Because the mold processing
can't achieve higher accuracy,
resulting in large gap
between the inner and outer
blade, with possibility of
drawing tissue while cutting,
with residue in surgery.

傳統結構的為綫割加工, (綫割屬高溫碳化的原理作業)
表面粗糙, 放大50倍微鋸齒嚴重, 刃口鋒利性很差, 切割
易發熱, 易拉拔組織及拉絲現象。(但成本低很多)

The traditional structure is processed by wire-cut, (wire
cutting is the principle operation of high-temperature
carbonation), with rough surface. If magnified 50x, there
will be serious micro serrations. It's with poor edge
sharpness, easy to heat while cutting, tend to draw
tissue with fracture. (but very lower cost)

醫用工具及配件系列（耳鼻、內窺鏡、關節鏡刨刀）
Medical tools and parts series (Otorhinolaryngologic,
endoscopic, arthroscopic shaver blades)
医療器具及び部品シリーズ（耳鼻、内視鏡、関節鏡鉋刀）

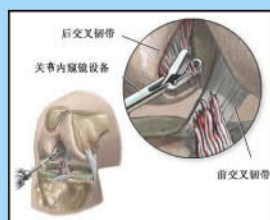
（超鋒利刃口&超高防銹（AA）&超高耐磨&超高精密度內外配合）
（Ultra-sharp cutting edge & ultra-high anti-rust (AA) & ultra-high wear
-resistant & ultra-high precision cooperation of inner tubes and outer tubes）
（超銳利刃先&超防銹（AA）&超耐磨耗&超精度內外接合）

產品：

各種齒形的關節鏡刨刀，如：削減切骨插刀，延長削減切骨插刀，原始骨插刀，帶寬窗口切骨插刀，直角外層套管電解法拋光切削刀，骨切刀，切削毛刺刀片，門齒狀精銳刀片，合力切削利口，小窗口滿圓弧切除器，彎月面刨刀，進取型彎月面刨刀，進取型彎月面加齒刨刀，雙彎月面刨刀，進取型彎月邊刨刀，修整器，鋒利進取型一端開口刨刀，刮刀，刨刀，多用型手用外科顯微器械刨刀，多用型刨刀，髓關節鏡刨刀，電鍍切除刀片……刃口精研磨，超鋒利，能輕快、有效、精確去除毛刺骨、切割軟組織，排屑順暢，減少堵塞，節約手術時間

Products:

Various tooth-shaped arthroscopic shaver blades, such as: Bone Plug Cutter With Cutback, Bone Plug Cutter With Extended Cutback, Original Bone Plug Cutter, Bone Plug Cutter With Wide Window, Angled Outer Sleeve, Electropolished cutting edge., Bone Cutter Blade, shaver blades and burrs, Incisor Plus Elite Blades, HELICUT Burr, Full Radius Resector Small Window, Meniscus Cutter, Aggressive Meniscus Cutter, Aggressive Meniscus Cutter Plus, Double Meniscus Cutter, Aggressive Meniscus Side Cutter, Trimmer, Aggressive Open End Cutter, Shaverblade, Shaver blade for multiple use, Shaverblades for multiple use, Hip Arthroscopic Shaver blade, Electroblade Resector...The fine grinding super-sharp cutting edge can remove burrs and cut soft tissue lightly, effectively and accurately, also evacuate the delivery site smoothly to reduce clogging, as a result, save valuable OR time.



批量時，有必要可協助開
模具及批量完成注塑部分，
或批量完成機加工
柄部的部分。

In batch order, if necessary,
we can help customers open
mould and finish the injection
molding part or finish the
machining shank part
in batches



醫用工具及配件系列（耳鼻、內窺鏡、關節鏡刨刀）

Medical tools and parts series (Otorhinolaryngologic, endoscopic, arthroscopic shaver blades)
医療器具及び部品シリーズ（耳鼻、内視鏡、関節鏡刨刀）

（超鋒利刃口&超高防銹（AA）&超高耐磨&超高精密度內外配合）

（Ultra-sharp cutting edge & ultra-high anti-rust (AA) & ultra-high wear-resistant & ultra-high precision cooperation of inner tubes and outer tubes）

（超銳利刃先&超防鏽（AA）&超耐磨耗&超精度內外接合）

可研磨多種的刃口方式/方向角度

We can grind many types of cutting edge and angle direction.



批量時，有必要
可協助開模具及
批量完成注塑部分，
或批量完成機加工
柄部的部分。

In batch order,
it's necessary to
open mould, and
needs to finish
injection part or
machining
shank part
in batches.



醫用工具及配件系列（耳鼻、內窺鏡、關節鏡刨刀）

Medical tools and parts series (Otorhinolaryngologic, endoscopic, arthroscopic shaver blades)

医療器具及び部品シリーズ（耳鼻、内視鏡、関節鏡鉋刀）

（超鋒利刃口&超高防銹（AA）&超耐磨&超高精密度內外配合）

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可研磨多種的刃口方式/方向角度

We can grind many types of cutting edge and angle direction.



常规交货状态，供注塑用

Regular delivery status, for injection molding

醫用工具及配件系列（耳鼻、內窺鏡、關節鏡刨刀）

Medical tools and parts series (Otorhinolaryngologic, endoscopic, arthroscopic shaver blades)

医療器具及び部品シリーズ（耳鼻、内視鏡、関節鏡鉋刀）

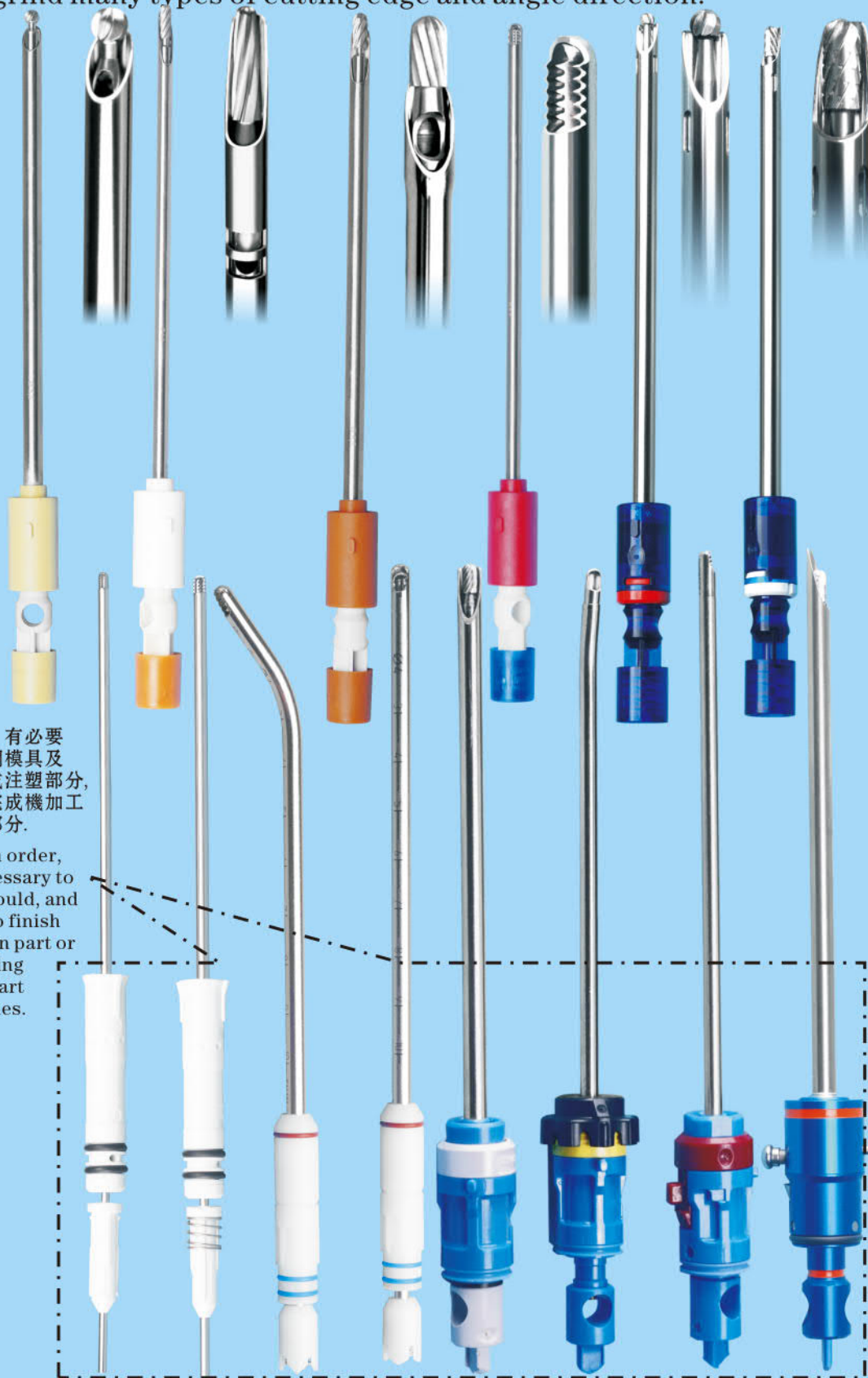
（超鋒利刃口&超高防銹（AA）&超高耐磨&超高精密度內外配合）

（Ultra-sharp cutting edge & ultra-high anti-rust (AA) & ultra-high wear-resistant & ultra-high precision cooperation of inner tubes and outer tubes）

（超銳利刃先&超防銹（AA）&超耐磨耗&超精度內外接合）

可研磨多種的刃口方式/方向角度

We can grind many types of cutting edge and angle direction.



批量時，有必要
可協助開模具及
批量完成注塑部分，
或批量完成機加工
柄部的部分。

In batch order,
it's necessary to
open mould, and
needs to finish
injection part or
machining
shank part
in batches.



(刃口钨钢对焊式加工AA)

Carbide butt welded
process, edge AA

頭部刃口材料:

- ① 超高硬度超耐磨鎢鋼(硬質合金)對焊式(AA)(常規常備)(整體式可定制)(HRA90° ~94° 系列)鎢鋼刃
- ② 高抗衝擊超耐磨鎢鋼(硬質合金)對焊式(AA)(HRA82° ~87° 系列)鎢鋼刃(批量才可定制)
- ③ 超高防銹高耐磨不銹鋼系列(AA)(HRC54° ± 2° 斷面)
- ④ 常規標準防銹高耐磨不銹鋼系列(A)(HRC56° ~64° 斷面系列)

Head cutting edge material:

- ① High hardness & high wear-resisting carbide (hard alloy) (The general is welded AA)(regular stock) (Solid type can be customized) (HRA90° ~94° series).
- ② High impact resistant & ultra-high wear resistant tungsten steel (carbide) butt welding (AA) (HRA82° ~87° series) tungsten steel edge (It can only be customized with big quantity)
- ③ Super-high anti-rust high wear resistance stainless steel series(AA)(HRC54° ± 2° Section)
- ④ General anti-rust high wear resistance stainless steel series(A)(HRC56° ~64° Section series)

可黃色/黑色/亞光/亮光的表面處理
Yellow/Black/Matt/Shiny
surface treatment

超長型可至任意之長度
Super-long type, can be up to any length

可加工任意形狀的切削刃頭部
及不同材料的頭部刃口硬度

We can produce the cutting edge head with
any shapes & hardness of different materials.

超長型
super long type

We can also process super-complicated shank shapes,
structures, with inner cooling hole, finish, tolerance
and super-long total length as customers' requirement

也可依要求加工超複雜的柄部形狀、結構、
帶內冷卻孔方式、精度、公差、超總長度等

醫用工具及配件系列（切割銼）
Medical tools and parts series (Legend Ball-Fluted Bur)
医療器具及び部品シリーズ（切断やすり）

（超高耐磨型(A) & 超高防銹型(AA)）
(Super high wear resistance(A)
& Super high antirust(AA))
（超耐磨耗型(A) & 超防銹型(AA)）



★、可依要求生產不同刃部材料類型(陶瓷類、鎢鋼類、不銹鋼類、鈦及鈦合金類.....等系列)

★、We can produce cutting edges from various types of material as per the requirement, like ceramic, carbide, stainless steel, titanium and titanium alloy, etc.



※ 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 $\phi (0.10 \sim 0.20\text{mm})$
($100/\mu\text{m} \sim 200/\mu\text{m}$)

※ Cutting edge machining grades:

Class AAA: CNC super hard grinding wheel, mirror surface grinding for any shape of cutting edge. Concentricity ◎, runout ↗, cylindricity $\phi \leq 0.003\text{mm}(3\mu\text{m})$, 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 : 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 $\phi (0.10 \sim 0.20\text{mm})$ ($100/\mu\text{m} \sim 200/\mu\text{m}$).

*刃部材料類型:

1. 超高防銹不銹鋼類(AA)(HRC54° ± 2° 斷面)
(常規常備)

2. 常規標準防銹高耐磨不銹鋼(A)(HRC45° ~ 64° 斷面)
(常規常備)

3. 陶瓷類(HRA85° ~ 94°)系列, (HRC67° ~ 84°)系列.

4. 鎢鋼類(HRA81° ~ 94°)系列,
(HRC60° ~ 84°)系列.(常規常備)

Material of 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) series.(regular stock)

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

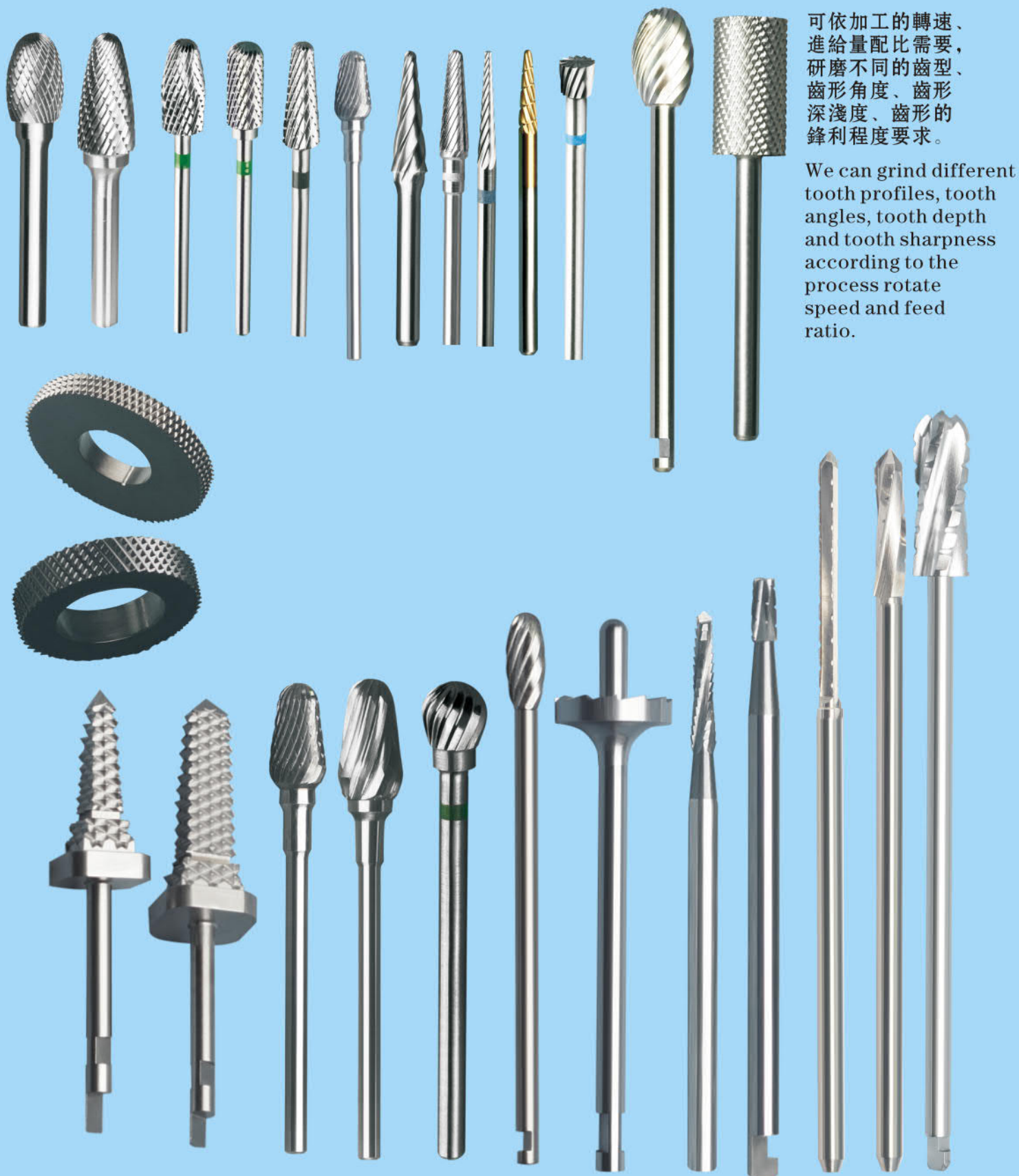
4. Carbide (HRA81° ~ 94°) series,
(HRC60° ~ 84°) series.(regular stock)

醫用工具及配件系列(骨銼/切割銼)

Medical tools and parts series(Bone bur/Rotary bur)

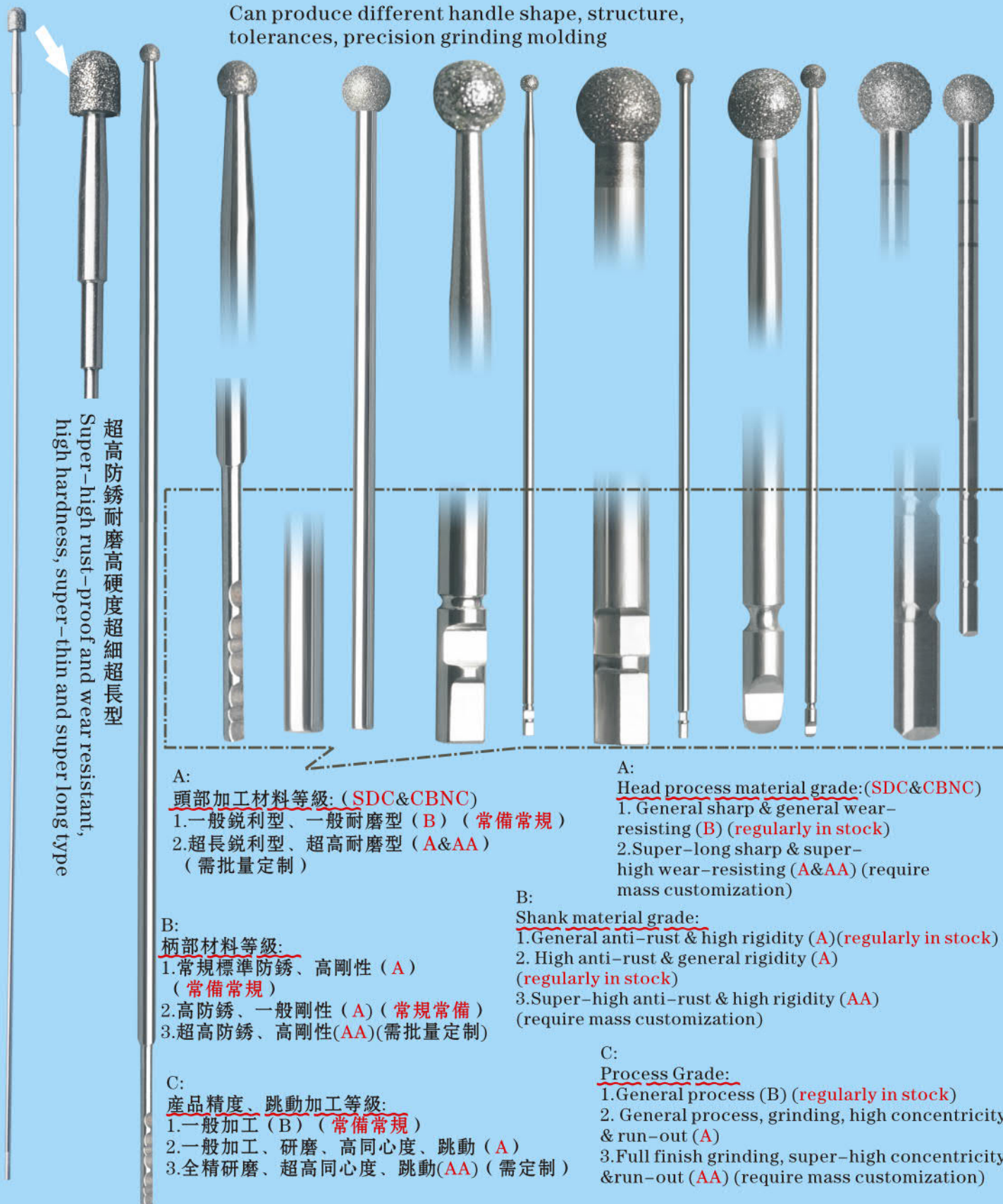
医療器具及び部品シリーズ(骨やすり/切断やすり)

(超高銳利型&一般銳利型)
(Super sharp type®ular sharp type)
(超銳利型&一般銳利型)



可以生產不同超複雜的柄部形狀、結構方式、公差及精研磨成型。

Can produce different handle shape, structure, tolerances, precision grinding molding



超高防銹耐磨高硬度超細超長型
Super-high rust-proof and wear resistant,
high hardness, super-thin and super long type

- A:
頭部加工材料等級: (SDC&CBNC)
1.一般銳利型、一般耐磨型 (B) (常備常規)
2.超長銳利型、超高耐磨型 (A&AA)
(需批量定制)

- B:
柄部材料等級:
1.常規標準防銹、高剛性 (A)
(常備常規)
2.高防銹、一般剛性 (A) (常規常備)
3.超高防銹、高剛性(AA)(需批量定制)

- C:
產品精度、跳動加工等級:
1.一般加工 (B) (常備常規)
2.一般加工、研磨、高同心度、跳動 (A)
3.全精研磨、超高同心度、跳動(AA) (需定制)

- A:
Head process material grade:(SDC&CBNC)
1. General sharp & general wear-resisting (B) (regularly in stock)
2.Super-long sharp & super-high wear-resisting (A&AA) (require mass customization)

- B:
Shank material grade:
1.General anti-rust & high rigidity (A)(regularly in stock)
2. High anti-rust & general rigidity (A) (regularly in stock)
3.Super-high anti-rust & high rigidity (AA) (require mass customization)

- C:
Process Grade:
1.General process (B) (regularly in stock)
2. General process, grinding, high concentricity & run-out (A)
3.Full finish grinding, super-high concentricity &run-out (AA) (require mass customization)

醫用工具及配件系列(鑽石銼/打磨銼/磨鑽)

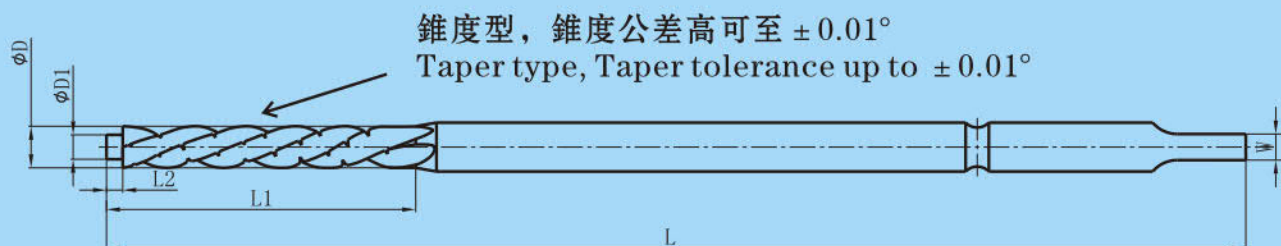
Medical tools and parts series(Legend Ball-Diamond Bur/Neurosurgical Bur)

医療器具及び部品シリーズ(ダイヤモンドやすり/研磨やすり/研磨回転ドリル)

(超高銳利型 & 耐磨型)
(Super sharp type & Wear-resistant type)
(超銳利型 & 耐磨耗型)

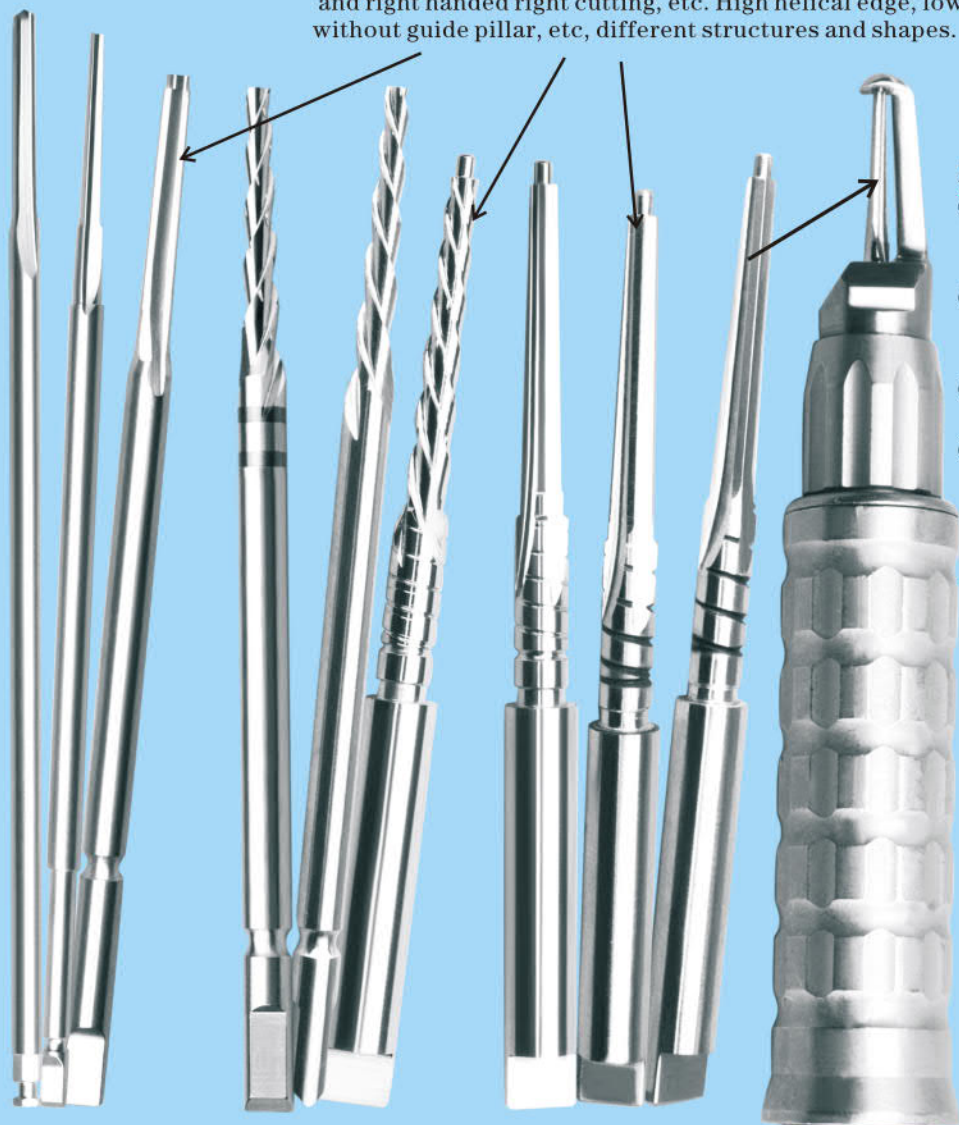


★可超硬、超精研磨、任何的柄部類型、芯厚、容屑槽寬度、刃背方式、鑽尖方式、內冷卻孔方式、刃部結構、刃口角度、刃口鋒利程度之要求、及高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 的尺寸公差要求 We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute, land, drill tip, inner cooling hole, structure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



★刃口結構可以任意的排屑方式(如,上排屑、下排屑、左旋右切、右旋左切、左旋左切、右旋右切等等。高螺旋刃,低螺旋刃,帶導柱不帶導柱等等,結構形狀之方式。

edge structure can be applicable to any chip removing methods(such as, upper chip removal, lower chip removal, left handed right cutting, right handed left cutting, left handed left cutting, and right handed right cutting, etc. High helical edge, low helical edge, with guide pillar or without guide pillar, etc, different structures and shapes.



材料等級:

- ① 超高防銹高耐磨不銹鋼系列(AA)(HRC54° $\pm 2^\circ$ 斷面)(常規常備)
- ② 常規標準防銹高耐磨及超高耐磨系列(A)(常規常備)(HRC45° ~64° 斷面系列)
- ③ 超高耐磨高級高鈷粉末鋼 ASP60A (HRC70° $\pm 2^\circ$ 斷面系列)
- ④ 超高耐磨硬質合金系列(AA)(HRA87° ~94° 系列)

Material grade:

- ① ultra-high anti-rust high wear-resistant stainless steel series (AA)(HRC54° $\pm 2^\circ$ Section)(regular stock)
- ② general standard anti-rust, high wear-resistant and ultra-high wear-resistant series (A)(HRC45° ~64° Section series)(regular stock)
- ③ Super high wear resistant high-grade high cobalt powder steel ASP60A(HRC70° $\pm 2^\circ$ section series)
- ④ ultra-high wear-resistant hard alloy series(AA)(HRA87° ~94° series)

★.依圖依樣尺寸/公差/要求復合成型加工可生產極為複雜\精密的柄部結構形狀。

Compound contour machining according to the sizes/ tolerances/ requirements of drawings and samples; we can produce extremely complex and accurate holder structure profile.

図面、サンプル、寸法または公差の要求により複合成型加工を行い、極めて複雑、精密な柄部の形状を生産できる。

※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。

★.依圖依樣尺寸/公差/要求復合成型加工可生產極為複雜\精密的柄部結構形狀。

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★、刃口結構可以任意的排屑方式(如,上排屑、下排屑、左旋右切、右旋左切、左旋左切, 右旋右切等等。高螺旋刃, 低螺旋刃, 帶導柱不帶導柱等等,結構形狀之方式。

edge structure can be applicable to any chip removing methods(such as, upper chip removal, lower chip removal, left handed right cutting, right handed left cutting, left handed left cutting, and right handed right cutting, etc. High helical edge, low helical edge, with guide pillar or without guide pillar, etc, different structures and shapes.



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系列(A)(HRC45° ~64° 斷面 系列)(常規常備)
- ③ 超高耐磨高級高鈷粉末鋼ASP60A HRC70° ± 2° 斷面系列)
- ④ 超高耐磨硬質合金系列(AA)(HRA87° ~94° 系列)

Material grade:

- ① ultra-high anti-rust high wear-resistant stainless steel series (AA)(HRC54° ± 2° Section)(regular stock)
- ② general standard anti-rust, high wear-resistant and ultra-high wear-resistant series (A)
(HRC45° ~64° Section series)(regular stock)
- ③ Super high wear resistant high-grade high cobalt powder steel ASP60A(HRC70° ± 2° section series)
- ④ ultra-high wear-resistant hard alloy series(AA)(HRA87° ~94° series)

★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(自停頭顱鑽)

Medical tools and parts series(Auto stop cranial perforators)

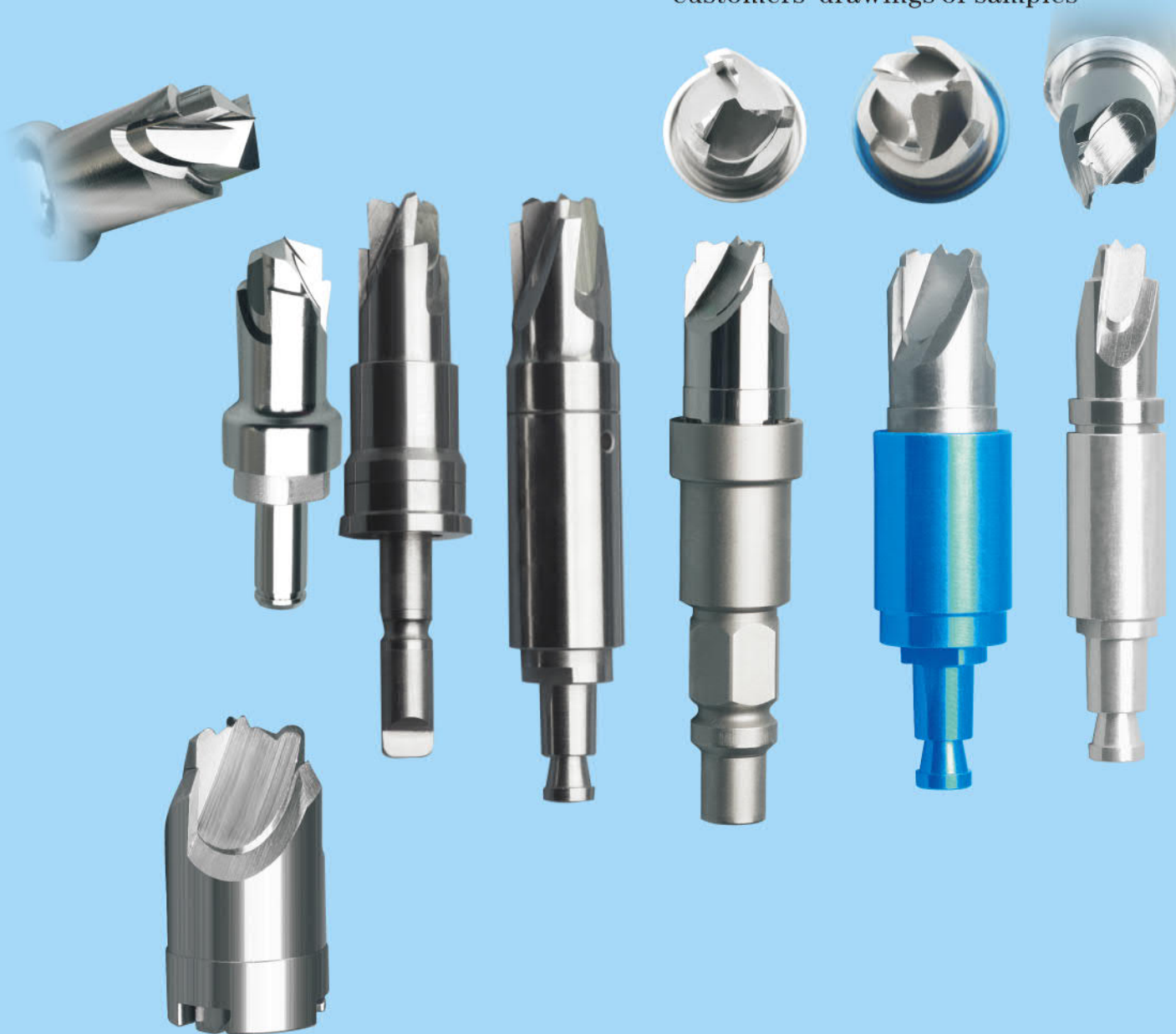
医療器具及び部品シリーズ(自動停止頭蓋骨ドリル)

(高耐磨型&CNC鋒利刃口&高精密度配合)
(High wear-resistant & CNC sharp edge & high precision with)

(高耐磨耗型&CNC銳利刃先&高精度接合)

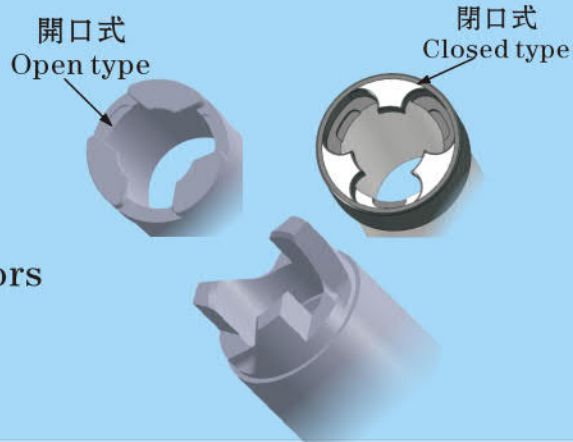
可依圖依樣研磨不同要求, 不同形狀, 不同角度,
不同定位方式, 不同鋒利性的刃部方式

We could grind cutting edge according
to different requirements and shapes as
customers' drawings or samples



刃部及柄部結構均可依要求, 制作不同材料, 不同顏色
的結構、形狀方式

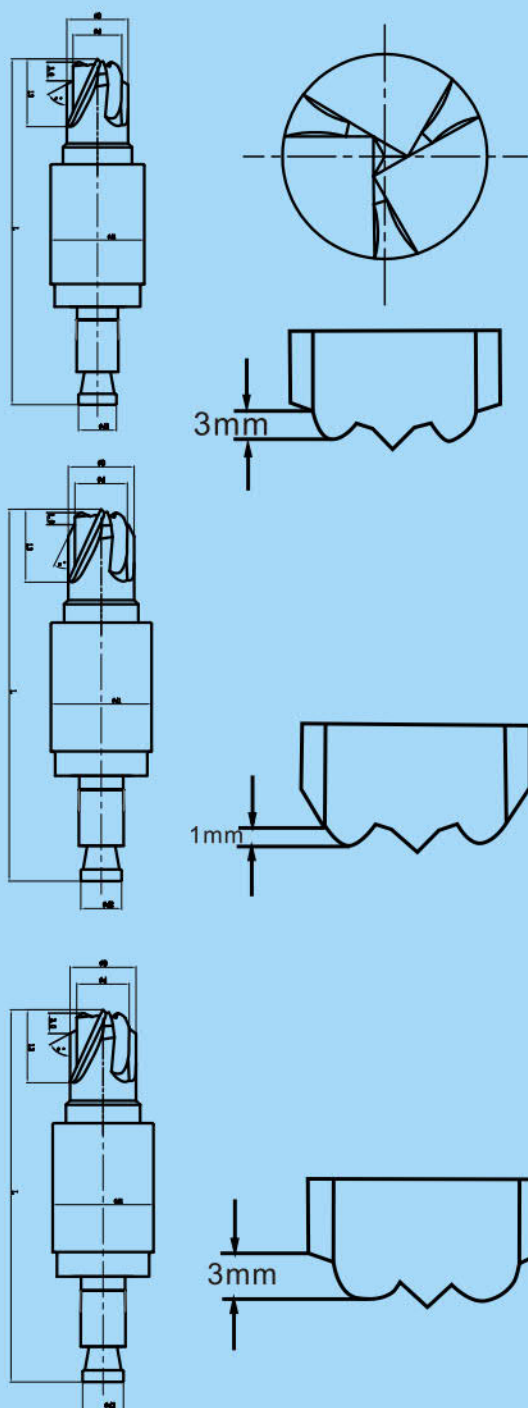
Production of cutting edge and
shank could be as customers' requirement
We produce with different materials and colors
Different structures and shapes



★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(自停頭顱鑽)
Medical tools and parts series(Auto stop cranial perforators)
医療器具及び部品シリーズ(自動停止頭蓋骨ドリル)

(高耐磨型&CNC鋒利刃口&高精密度配合)
(High wear-resistant & CNC sharp edge & high precision with)
(高耐磨耗型&CNC銳利刃先&高精度接合)



柄部接口方式:

- ① 可做不同颜色的铝合金柄部结构
- ② 可做不同颜色的钛合金柄部结构
- ③ 可做不同颜色的医用塑料/树脂PPSU/PEEK等柄部结构
- ④ 可定做不锈钢类系列柄

Handle interface method:

- ① can do different colors aluminum handle
- ② can do different colors titanium handle
- ③ can do different colors of medical plastic / Resin PPSU / PEEK handle
- ④ can do stainless steel series handle

(可黄色及黑色塗層處理和光亮型、亞光型處理)

It can be with yellow or black coating, shiny or matt treatment

some size

ϕD Diameter	7.80	12.20	13.70	11.00	12.20	13.70	11.00	12.20	13.70
ϕd Shank Dia.	5.00	9.30	11.20	7.50	9.30	11.20	7.50	9.30	11.20
L Length 總長さ	3.0	3.0	3.0	1.0	1.0	1.0	3.0	3.0	3.0

★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，及最高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$)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 $\pm 0.003\text{mm}$ ($3\mu\text{m}$)

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.

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

A:

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)
- ③ 超高耐磨高級高鈷粉末鋼ASP60A
(HRC70° ± 2° 斷面系列)

A:

Material:

- ① Super-high anti-rust high wear
resistance stainless steel series(AA)
(HRC54° ± 2° Section)(**regular stock**)
- ② General anti-rust high wear
resistance stainless steel series(A)
(HRC45° ~64° Section series)
- ③ Super high wear resistant high-grade high cobalt
powder steel ASP60A(HRC70° ± 2° 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**)

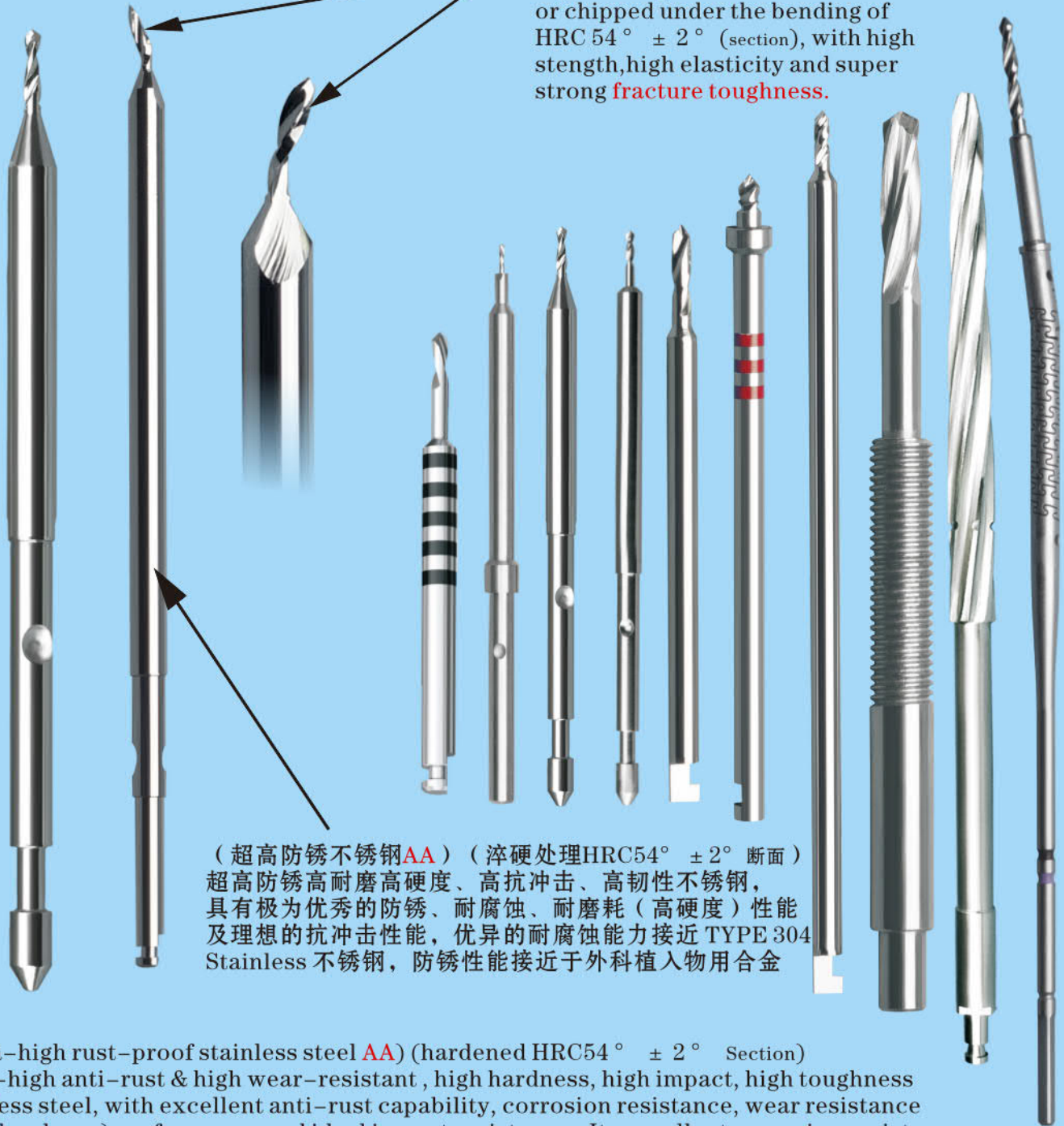
★可超硬、超精研磨。任意的柄部類型。芯厚。容屑槽寬度。刃背方式。鑽尖方式。內冷卻孔方式。刃部結構。刃口角度。刃口鋒利程度之要求。及高可至±0.003mm (3μm)
的尺寸公差要求 We can produce with super hard and super finish grinding and satisfy your requirement of any type of shank, web thickness, width of chip flute,
land, drill tip, inner cooling hole, structure of cutting edge, angle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

微小徑鑽針的高安全性、
高防銹性、高鋒利性。

The high safety, high rust resistance
and high sharpness of micro-diameter drills

在HRC54° ± 2° (斷面)折彎下，
不折斷、不崩刃的高安全性鑽針，
高強度，高彈性。具有超强的**斷裂韌性**。

High-safety drill burs which won't be broken
or chipped under the bending of
HRC 54° ± 2° (section), with high
strength, high elasticity and super
strong **fracture toughness**.



(超高防銹不銹鋼AA) (淬硬處理HRC54° ± 2° 斷面)
超高防銹高耐磨高硬度、高抗衝擊、高韌性不銹鋼，
具有極為優秀的防銹、耐腐蝕、耐磨耗（高硬度）性能
及理想的抗衝擊性能，優秀的耐腐蝕能力接近 TYPE 304
Stainless 不銹鋼，防銹性能接近於外科植入物用合金

(Ultra-high rust-proof stainless steel AA) (hardened HRC54° ± 2° Section)
Ultra-high anti-rust & high wear-resistant, high hardness, high impact, high toughness
stainless steel, with excellent anti-rust capability, corrosion resistance, wear resistance
(high hardness) performance and ideal impact resistance.. Its excellent corrosion resistance
is comparable to TYPE 304 Stainless steel; and its rust resistance is
closer to alloy for surgical implant.

超高防銹不銹鋼AA (急冷處理 HRC54° ± 2° 斷面)
超高防銹高耐磨耗高硬度、高耐衝擊、高韌性不銹鋼、非常に優れた防銹、耐蝕、
耐磨耗（高硬度）性能及び理想の耐衝擊性能を有し、優れた耐蝕性能がTYPE 304
Stainless不銹鋼に近い。防銹性能が外科インプラント用合金に近くて、マーク無しで、

★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 (鑽針、骨鑽、空芯鑽系列)
Medical tools and parts series (Maxillofacial drilling pin)
医療器具及び部品シリーズ (ドリルピン、骨ドリル、中空ドリルシリーズ)

(超高防銹型(AA)&超高耐磨型(A))
(High anti-rust type (AA)
& super wear-resistant type (A))
(超防銹型(AA)&超耐磨耗型(A))

材料:

- 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)

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)



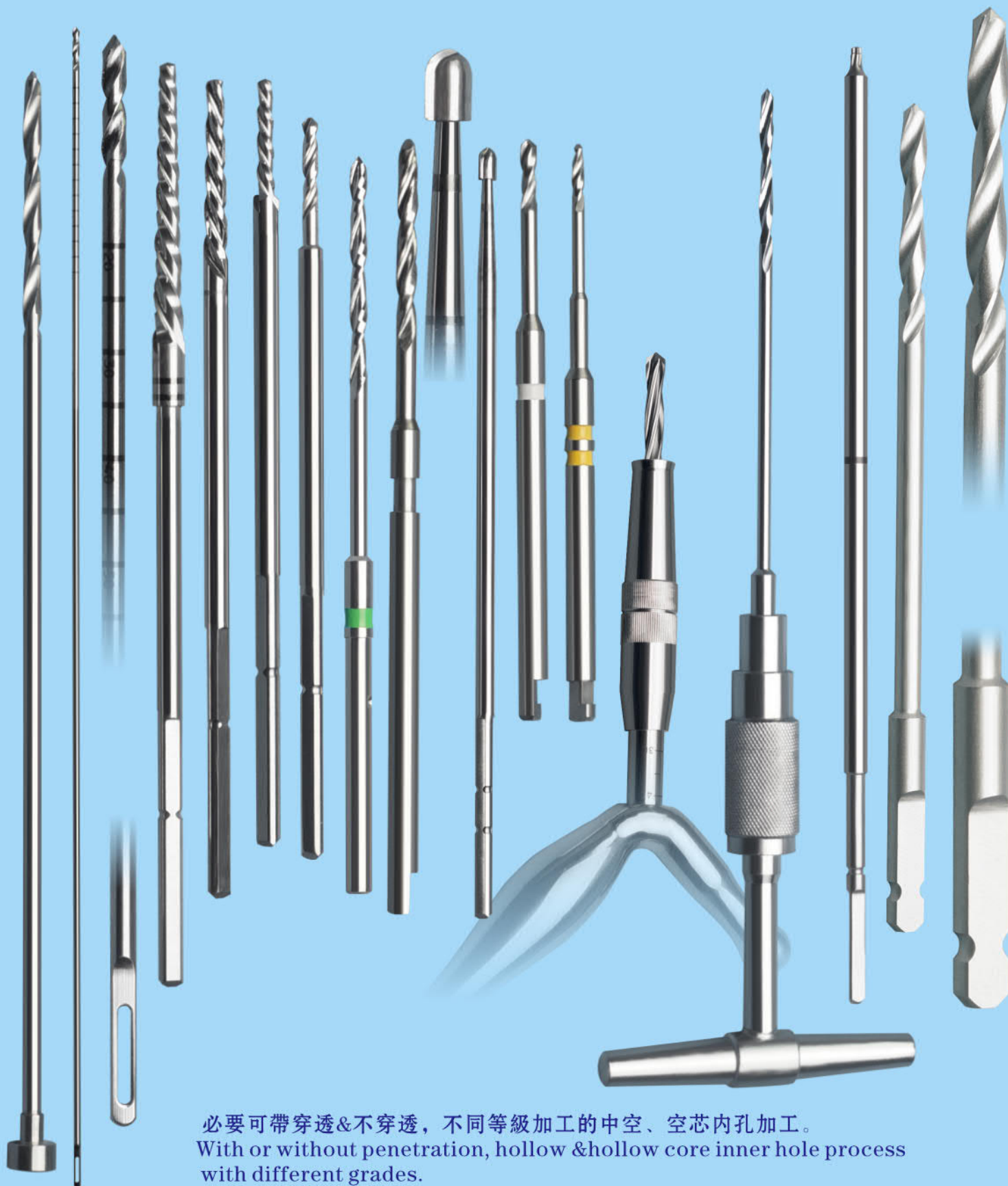
必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。
With or without penetration, hollow & hollow core inner hole process
with different grades.

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（鑽針、骨鑽、空芯鑽系列）
 Medical tools and parts series(Maxillofacial drilling pin)
 医療器具及び部品シリーズ(ドリルピン、骨ドリル、中空ドリルシリーズ)

(超高防銹型(AA)&超高耐磨型(A))
 (High anti-rust type (AA)
 & super wear-resistant type (A))
 (超防銹型(AA)&超耐磨耗型(A))

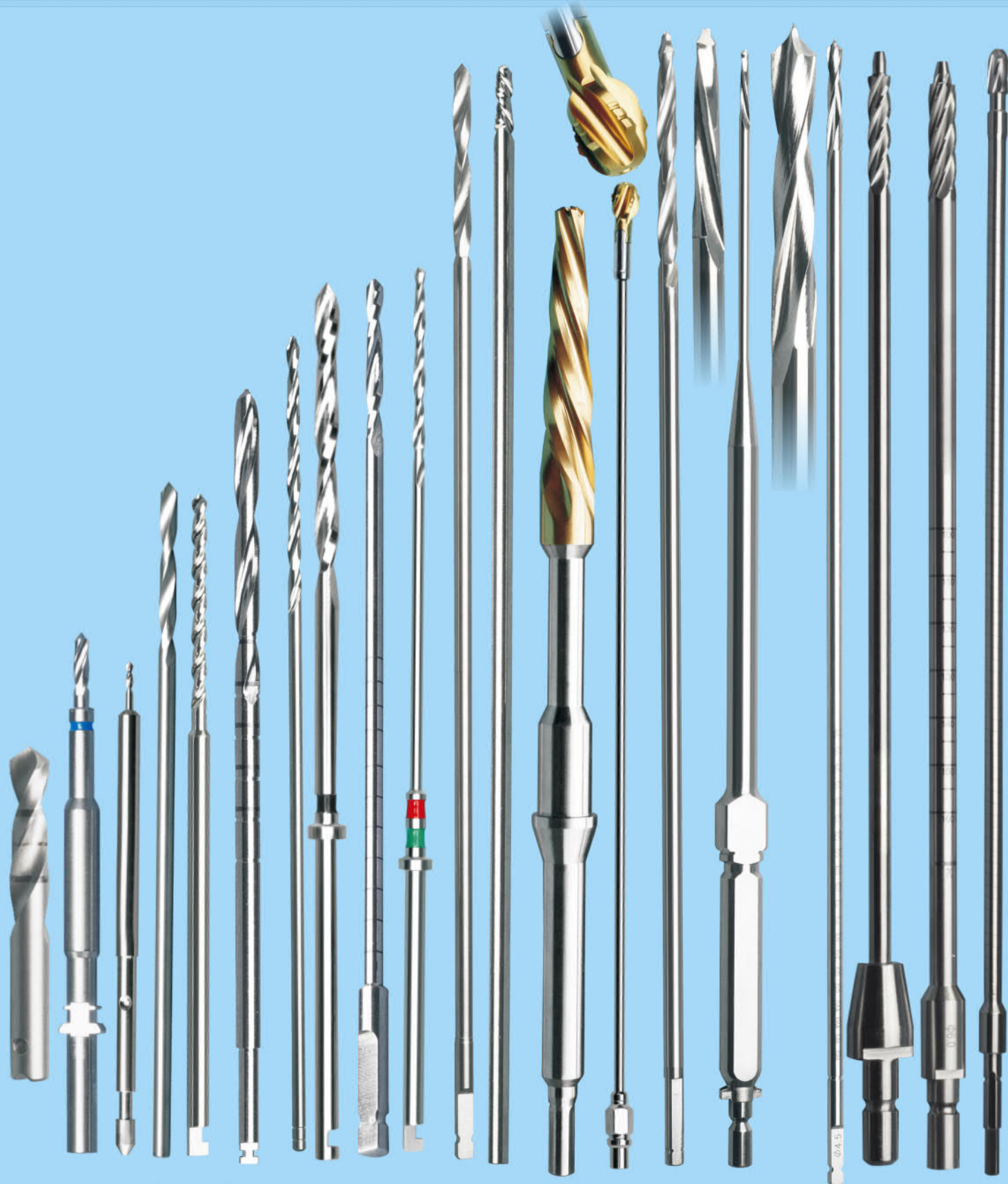


必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。
 With or without penetration, hollow & hollow core inner hole process
 with different grades.
 必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★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，及最高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 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（鑽針、骨鑽、空芯鑽系列）
 Medical tools and parts series(Maxillofacial drilling pin)
 医療器具及び部品シリーズ(ドリルピン、骨ドリル、中空ドリルシリーズ)

(超高防銹型(AA)&超高耐磨型(A))
 (High anti-rust type (AA)
 & super wear-resistant type (A))
 (超防銹型(AA)&超耐磨型(A))

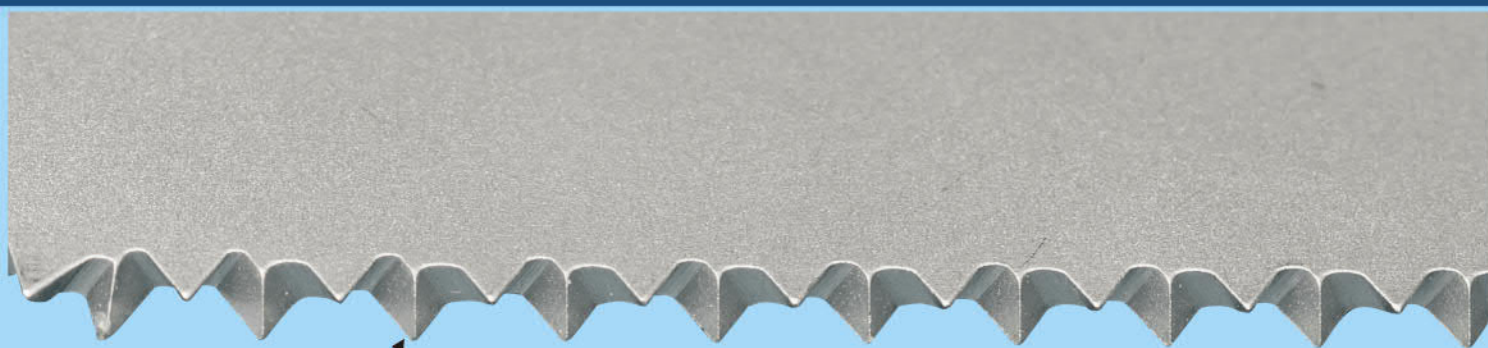


必要可帶穿透&不穿透，不同等級加工的中空、空芯內孔加工。
 With or without penetration, hollow & hollow core inner hole process with different grades.
 必要に応じて、貫通付き&貫通なし、各レベル加工での中空、中空内穴加工。

★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（骨鋸）
Medical tools and parts series(Bone saw blades)
医療器具及び部品シリーズ（骨鋸）

(超鋒利刃口&超高耐磨&超高防銹&高精密度)
(Ultra-sharp edge & ultra-high wear-resistant
& ultra-high rust & high precision)
(超銳利刃先&超耐磨耗&超防銹&高精度)



可生产不同齿型、齿数、角度、精度外径与厚度公差
We can produce different shapes of tooth, number of tooth,
precision diameter and thickness tolerance.

材料分类:

1. 超高防锈高耐磨不锈钢类(AA)(HRC54° ± 2° 断面)(**常规常备**)
2. 常规标准防锈耐磨不锈钢类(A)(HRC52° ± 2°)系列
3. 普通防锈超高耐磨不锈钢(A)(HRC62° ± 2°)

Material classification:

1. Ultra-high rust-proof & wear-resistant stainless steel (AA)
(HRC54° ± 2° Section) (**regular stock**)
2. Conventional standard rust-proof and wear-resistant stainless
steel (A)(HRC52° ± 2°) series
3. Ordinary antirust stainless steel (A) (HRC62° ± 2°)

往復鋸

Reciprocating
Saw Blades



柄可磨薄
Handle can
be grinded
thin

★. 可來圖、來樣任意訂做陶瓷、鎢鋼、不銹鋼、鈦合金、鈦鑽石等系列，高精密組合成型治具、釐焊工夾具、耐磨零附件、
高精密配件（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 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

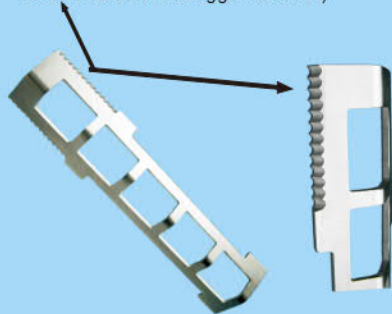
醫用工具及配件系列（骨鋸）

Medical tools and parts series (Bone saw blades)

医療器具及び部品シリーズ（骨鋸）

(超鋒利刃口&超高耐磨&超高防銹&高精密度)
(Ultra-sharp edge & ultra-high wear-resistant
& ultra-high rust & high precision)
(超銳利刃先&超耐磨耗&超防銹&高精度)

波紋刃（可正、反面及錯齒研磨）
wavy-edge (we can grind front,
reverse side and staggered teeth)



可生产不同齿型、齿数、角度、精度、外径与厚度公差
We can produce different shapes of tooth, number of tooth,
precision outer diameter and thickness tolerance.

★、刃部研磨等级

AAA级：CNC镜面研磨任意形状之刃口。

A A级：CNC精研磨任意形状之刃口。

A级：CNC一般研磨任意形状之刃口。

★、Grinding grade for flute section

AAA: CNC mirror grinding for flute with any shape

A A: CNC finish grinding for flute with any shape

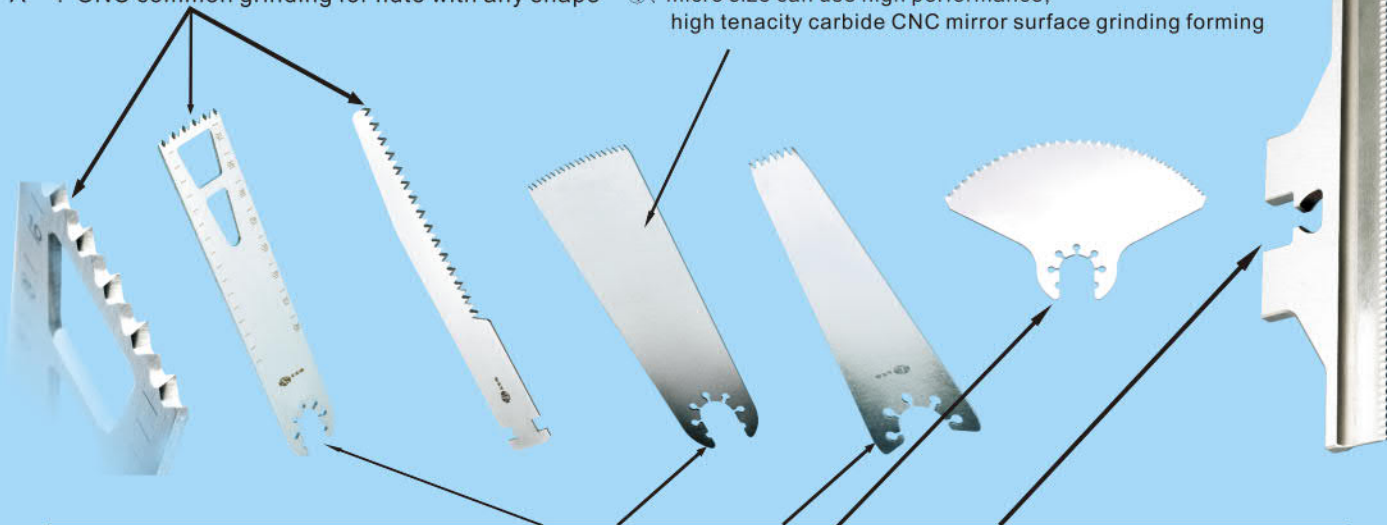
A : CNC common grinding for flute with any shape

★、两平面加工方式：

- ①、热处理后HRC62°±2°硬厚材料平面精研磨及电火花EDM至复杂、阶梯成型形状尺寸公差，但成本高。
- ②、热处理后HRC62°±2°硬厚材料平面精研磨至双面平面，可以任意公差厚度，但成本较高。
- ③、标准厚度之光面板材，成本低，无法热处理，太薄，材料硬度由板材出厂决定。
- ④、微小规格可采用高性能、高韧性钨钢CNC镜面研磨成型。

★、Processing way of two flat sides:

- ①、After heat treatment to hardness HRC62° ± 2° , hard and thick materials can be processed to complicated and step profile shape and size by finish grinding and electric spark EDM, but the cost is high.
- ②、After heat treatment to hardness HRC62° ± 2° , hard material can be processed to double flat sides with any thickness tolerance by finish grinding, but the cost is a little high.
- ③、Standard thickness material can't be through the treatment and it is too thin. The cost is low. The hardness of material is decided by material factories.
- ④、micro size can use high performance, high tenacity carbide CNC mirror surface grinding forming



★、柄部加工等级

AAA级：Sodick/+GF+慢走丝3-5次。

A A级：Sodick/+GF+慢走丝1-2次。

A级：钨钢模具高精度冲剪加工成型。

B级：一般模具精密冲剪加工成型

★、Processing grade for shank

AAA: Sodick/+GF+WEDM-LS by 3-5 times

A A: Sodick/+GF+WEDM-LS 1-2 times

A : process with carbide mould by high precision punching shear

B : process with common mould by precision punching shear

★、产品成本由：刃部研磨等级+柄部加工等级+两平面加工方式=组合不同使用用途、效果、档次、性价比之制成品。

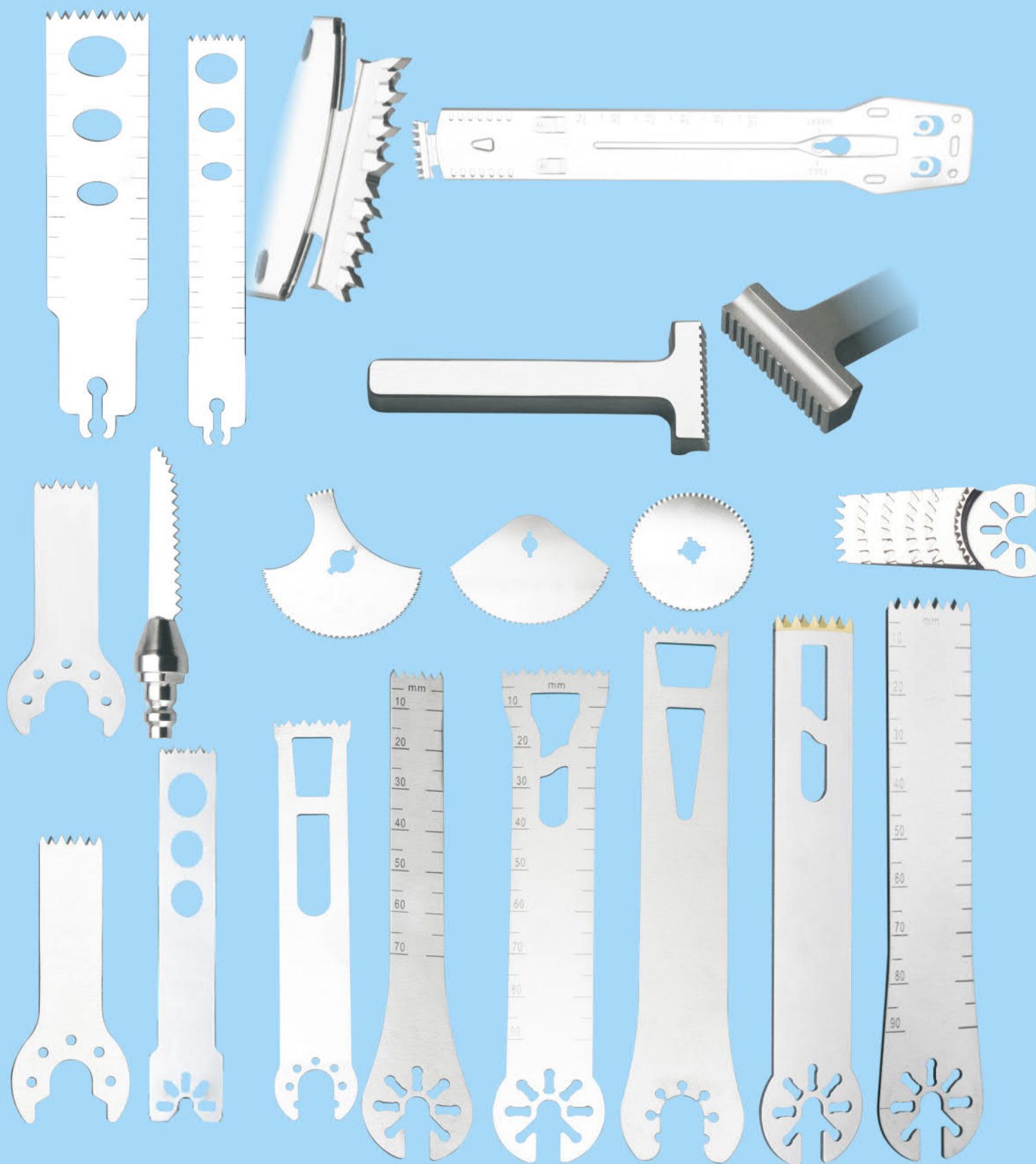
The cost of products includes: grinding grades of cutting edge+ processing grades of shank+ processing way of two flats
= combine final products with different application, effect, grade and cost-performance.

★、可來圖、來樣任意訂做陶瓷、鈎鋼，不銹鋼、鈦合金、鈦鑽石等系列，高精組合成型治具、釐焊工夾具、耐磨零附件、精密配件（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 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

醫用工具及配件系列（骨鋸）
 Medical tools and parts series(Bone saw blades)
 医療器具及び部品シリーズ（骨鋸）

（超鋒利刃口&超高耐磨&超高防銹&高精密度）
 (Ultra-sharp edge & ultra-high wear-resistant
 & ultra-high rust & high precision)
 （超銳利刃先&超耐磨耗&超防鏽&高精度）



可以依圖依樣鏡面研磨加工任意材種，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

醫用工具及配件系列（骨鋸）

Medical tools and parts series (Bone saw blades)

医療器具及び部品シリーズ（骨鋸）

(超鋒利刃口&超高耐磨&超高防銹&高精密度)
(Ultra-sharp edge & ultra-high wear-resistant
& ultra-high rust & high precision)
(超銳利刃先&超耐磨耗&超防銹&高精度)



可生产不同齿型、齿数、角度、精度外径与厚度公差
We can produce different shapes of tooth, number of tooth,
precision outer diameter and thickness tolerance.

(可超薄)
It can be super-thin.



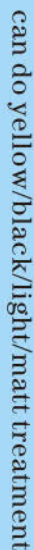
可以依圖依樣鏡面研磨加工任意材種，形狀、特殊、異型、精度公差之產品。We can make tools with any material, any shape,
special kind, special type, abnormal shape and precision and tolerance by mirror surface grinding according to your drawings or samples

Medical tools and parts series(Screwdriver)
医療器具及び部品シリーズ(スクリウドライバー)

(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)

③有必要的在超高精研磨下,起子處精度可至 $\pm 0.002\text{mm}$ ($\pm 2\mu\text{m}$)

③If necessary, with super-high finish grinding, the driver finish could reach $\pm 0.002\text{mm}$.



可黄色\黑色\光亮\亚光之处理

可垂直向下轻抖不掉落
won't drop when shake vertically
downward gently

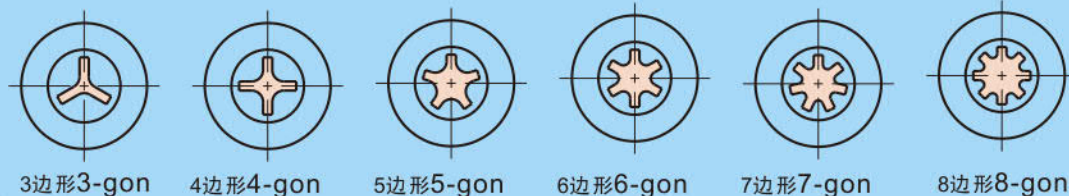
可定制任意形状的梅花起子，
公差高可至 $\pm 0.002\text{mm}$
(依螺钉实样实配)

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)

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

不同形狀之頭部（部分祇供參考用，實際可依樣依圖形狀，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.

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



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(スクロッドライバー)

(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（螺絲絲錐/絲攻）
Medical tools and parts series(Screw tap/Tap)
医療器具及び部品シリーズ（スクリータップ/タップ）

(超高防銹型(AA)&一般防銹型(A)&CNC全精研磨鋒利刃)
(ultra-high anti-rust type(AA)&general anti-rust
type(A)&CNC full fine grinding sharp cutting edge)
(超防銹型(AA)&一般防銹型(A)&CNC全精密研磨銳利刃)

- ★、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。

- ① 超高回彈性植入物型(AA)
- ② 超高防銹高耐磨型(AA)
 (HRC54° ± 2° 断面)

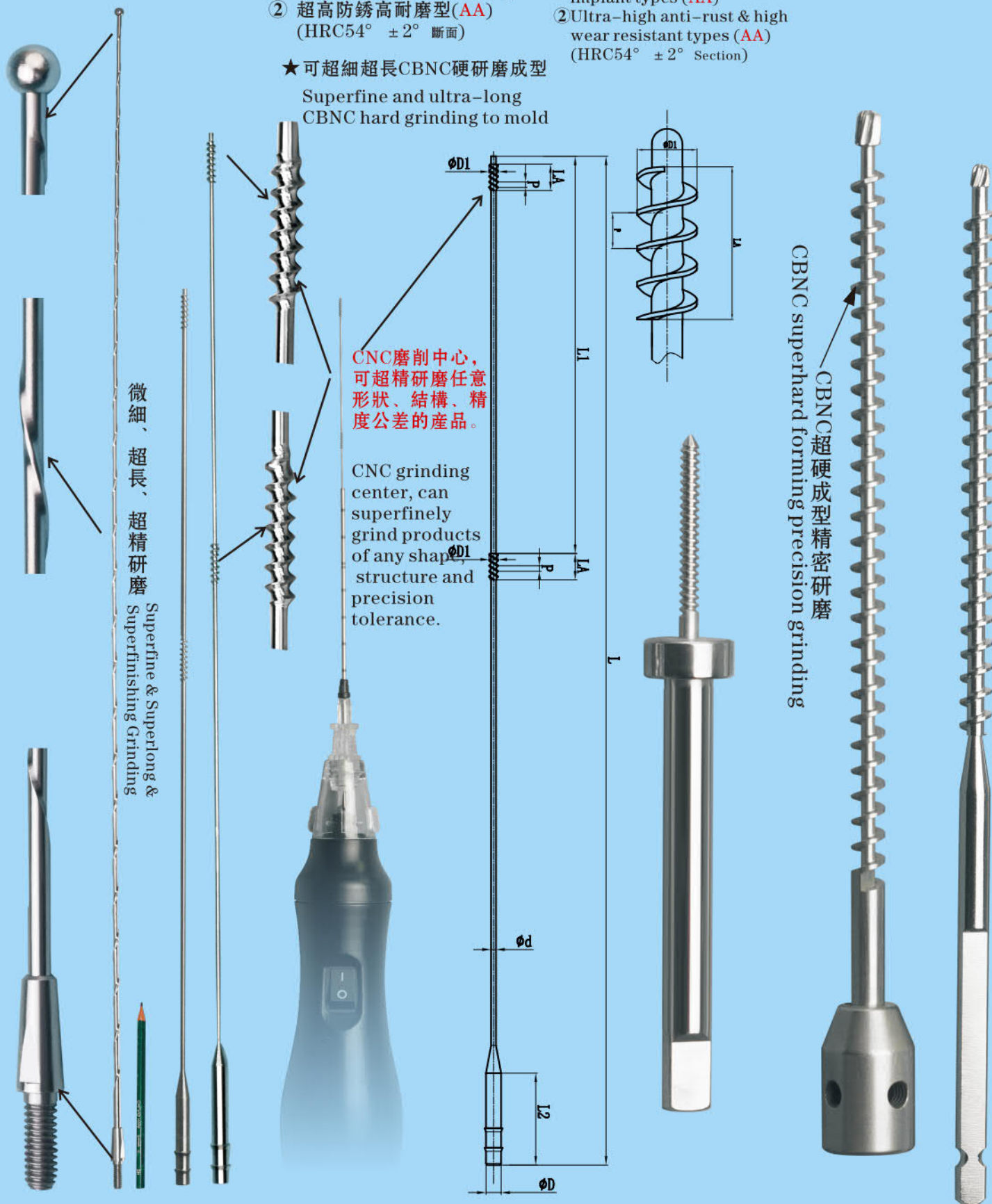
- ① Ultra-high resilient implant types (AA)
- ② Ultra-high anti-rust & high wear resistant types (AA)
 (HRC54° ± 2° Section)

★可超細超長CBNC硬研磨成型
 Superfine and ultra-long
 CBNC hard grinding to mold

CNC磨削中心，
 可超精研磨任意
 形狀、結構、精
 度公差的产品。

CNC grinding
 center, can
 superfinely
 grind products
 of any shape,
 structure and
 precision
 tolerance.

CBNC超硬成型精密研磨
 CBNC superhard forming precision grinding



醫用工具及配件系列（高精密部件、工具配件）

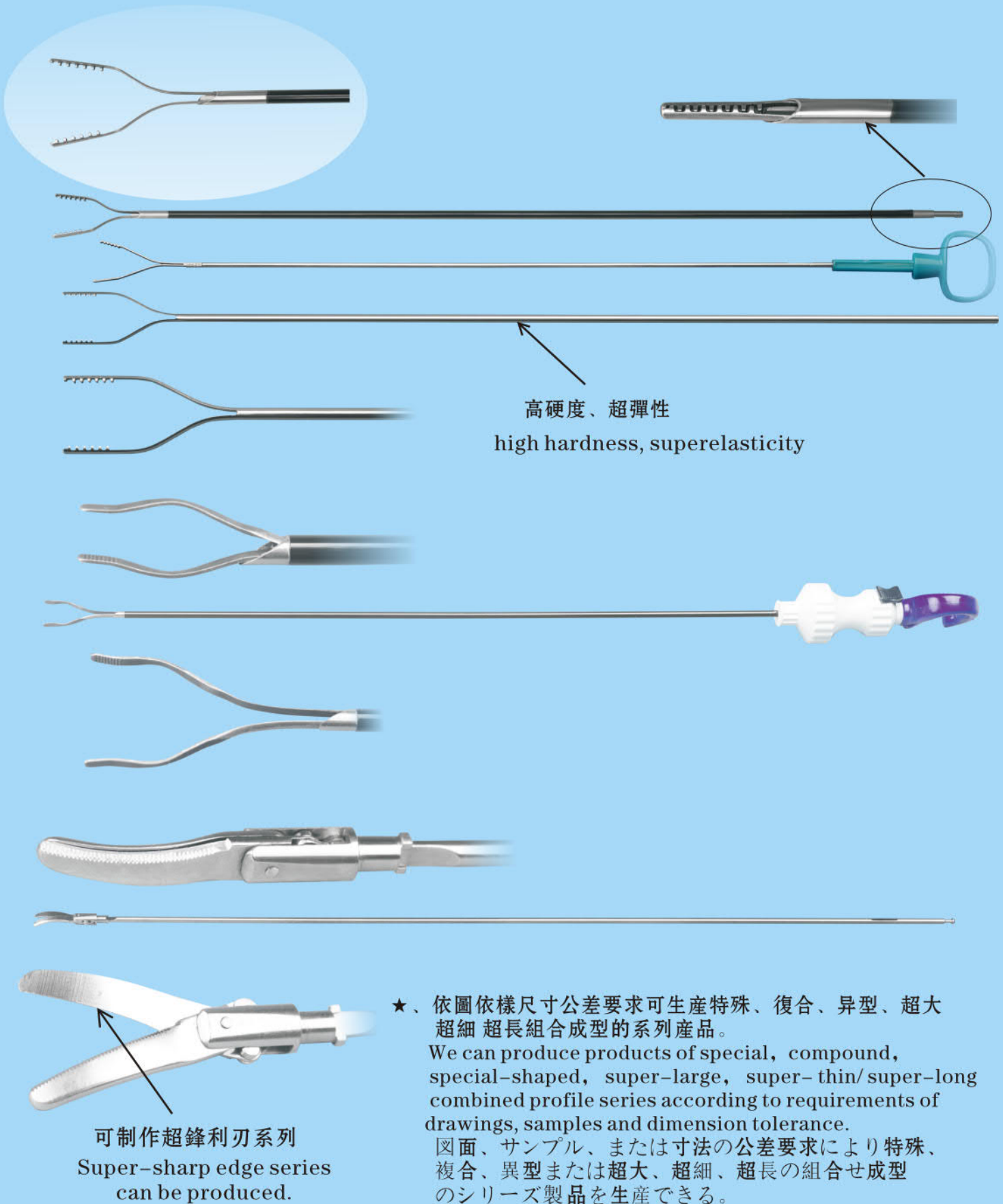
Medical tools and parts series (High precision parts/Tool accessories)

医療器具及び部品シリーズ（高精密部件、工具部品）

可復雜組合成型&超鋒利刃口研磨

(Complex combination shaping & ultra-sharp edge grinding)

複雜な組合せ成型&超鋭利刃先研磨可



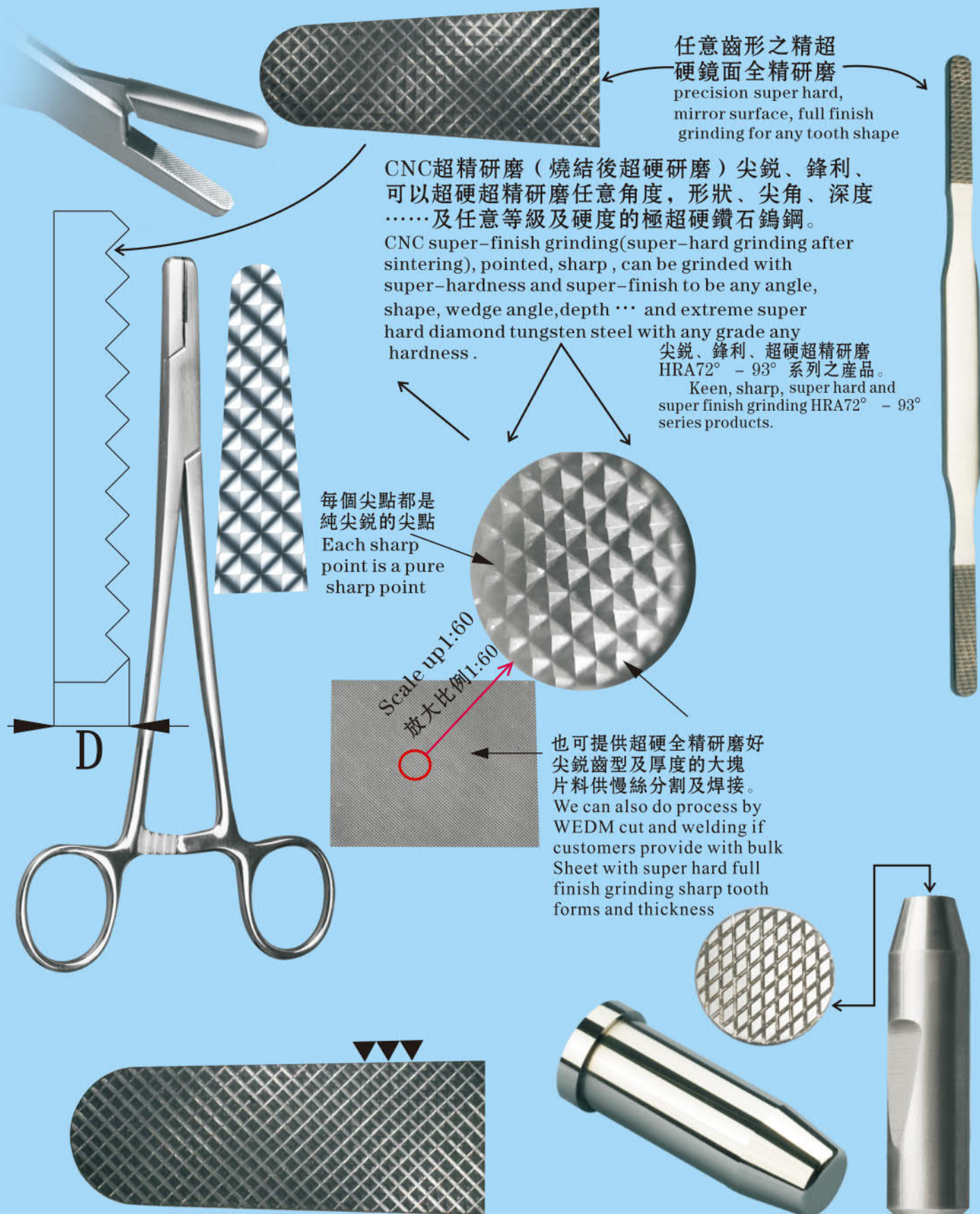
高硬度、超彈性
high hardness, superelasticity

可制作超鋒利刃系列
Super-sharp edge series
can be produced.

★、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。

醫用工具及配件系列(持針鉗/扁銼/紋衝)
 Medical tools and parts series(forceps/flat files/files)
 医療器具及び部品シリーズ(持針鉗子/平やすり/ファイル)

(精密&尖銳&超硬微研磨)
 (High precision & Sharp-pointed &
 Super-hard micro grinding)
 (精密&シャープ&超硬微研磨)



★ 可以依圖依樣鏡面研磨加工任意材種, 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

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.

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トを生産できる。

全精研磨 ▼▼▼ ~ ▼▼▼▼

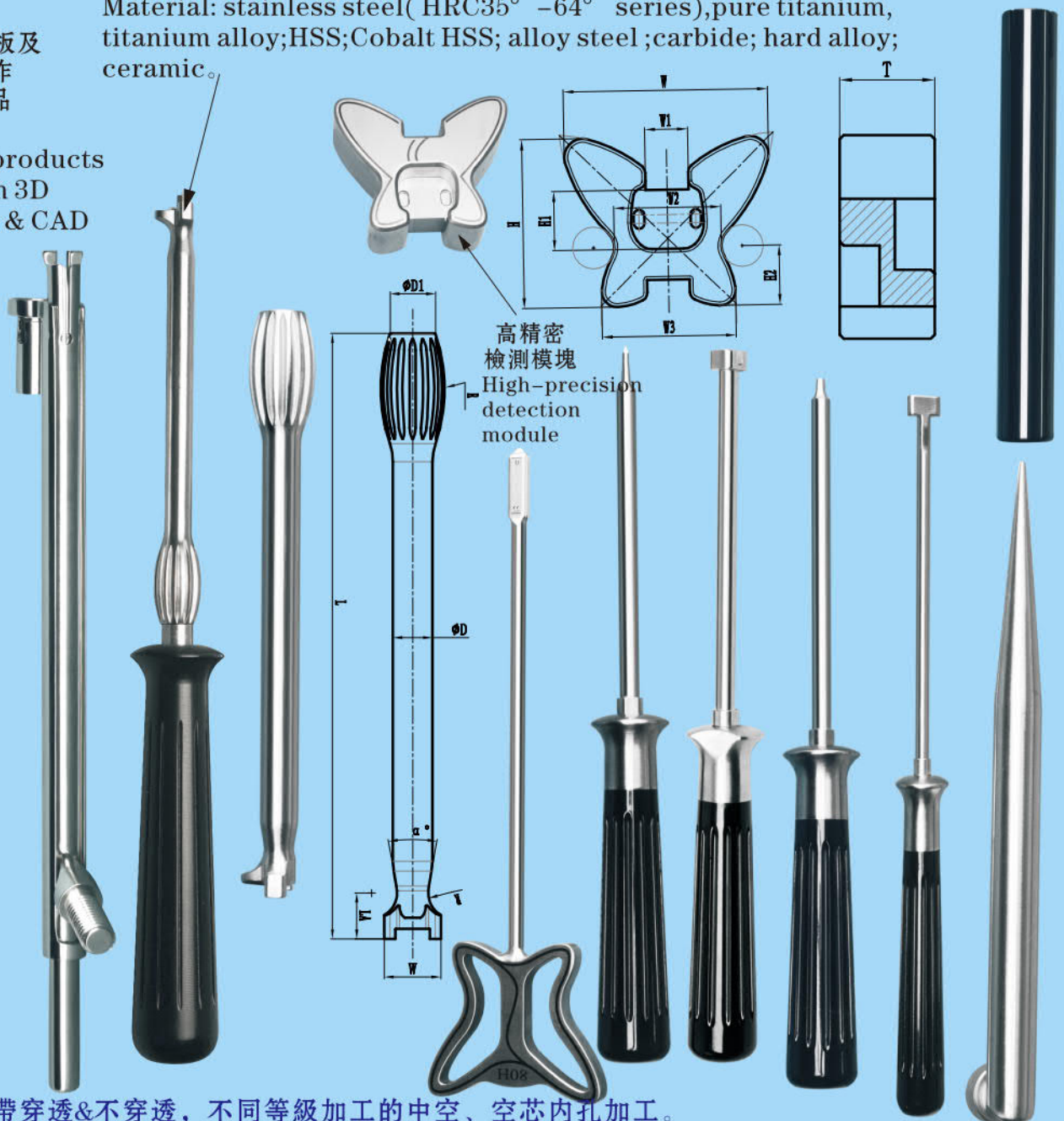
材質: 不銹鋼(HRC35° ~64° 系列) 純鈦、鈦合金; 高速鋼; 鈷高速鋼; 合金鋼; 鎢鋼; 硬質合金; 陶瓷。

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.

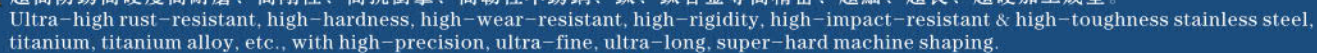
医療器具及び部品シリーズ(整形外科工具、中空工具)

超防銹高耐磨耗型(AA)&通常標準防銹高耐磨耗型(A)

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。

材质: 不锈钢 (HRC35° ~64° 系列) 纯钛、钛合金; 高速钢; 钴高速钢; 合金钢; 钨钢; 硬质合金; 陶瓷。

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



医療器具及び部品シリーズ (高安全性高防錆ドリルビット)

超防鏽高耐磨耗型(AA)&通常標準防鏽高耐磨耗型(A)

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トを生産できる。



- ★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, ...)



※ 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 $\phi (0.10\sim 0.20\text{mm})$

($100/\mu\text{m}\sim 200/\mu\text{m}$)

※ Cutting edge machining grades:

Class AAA: CNC super hard grinding wheel, mirror surface grinding for any shape of cutting edge. Concentricity ◎, runout ↗, cylindricity $\phi \leq 0.003\text{mm}(3\mu\text{m})$, 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: 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 $\phi (0.10\sim 0.20\text{mm})$ ($100/\mu\text{m}\sim 200/\mu\text{m}$).

※ 刃部材料類型:

1. 超高防銹不銹鋼類(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 of 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) 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(骨鑿)
Medical tools and parts series(Osteotome)
医療器具及び部品シリーズ(骨のみ)

(超高防銹型(AA)&超高耐磨型(A)&超鋒利刃口)
(ultra-high anti-rust(AA)&ultra-high wear
resistant(A)&Ultra-sharp cutting edge)
超防銹型(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.



★、請注意不同的設備轉速，進給量，走刀量的選擇及使用中的依實際現象問題微調整，以免失去最佳效果。
Please pay attention to different equipments' rotary speed, feed rate, the choice of feed, and micro-adjustment as per the actual problems during application, to avoid losing the best effect.



A型——一般速度用產品：10000r/min以內及左右，一般加工用。

A type -- products under ordinary speed: speed within or about 10000r/min, for ordinary processing

B型——CNC機用產品：20000r/min~40000r/min用。

B type -- CNC machine products: under speed 20000r/min~40000r/min

C型——加工中心CNC用產品：40000r/min~60000r/min用。

C type -- CNC processing zone products: under speed 40000r/min~60000r/min

D型——加工中心CNC特殊用產品：60000r/min~80000r/min用。

D type -- CNC processing zone special usage products: under speed 60000r/min~80000r/min

E型——加工中心CNC特殊用產品：80000r/min~120000r/min用。

E type -- CNC processing zone special usage products: under speed 80000r/min~120000r/min

※總長可統一控長，高可至±0.010mm以內。

We can hold the length and height within tolerance ±0.010mm

※可帶常磁性/定位柄部定位方式。

with positioning shank/constant magnetic positioning

※可帶橡膠圈或卡環定位方式。

with rubber ring or snap ring positioning

※可帶灰黑色塗層（陶瓷用）及紫色塗層（純鈦用）。

with gray-black coating (for ceramic) and purple coating (for pure titanium)

★、材種：HSS-Co, 極超微粒鑽石鎢鋼、陶瓷、鑽石、系列。

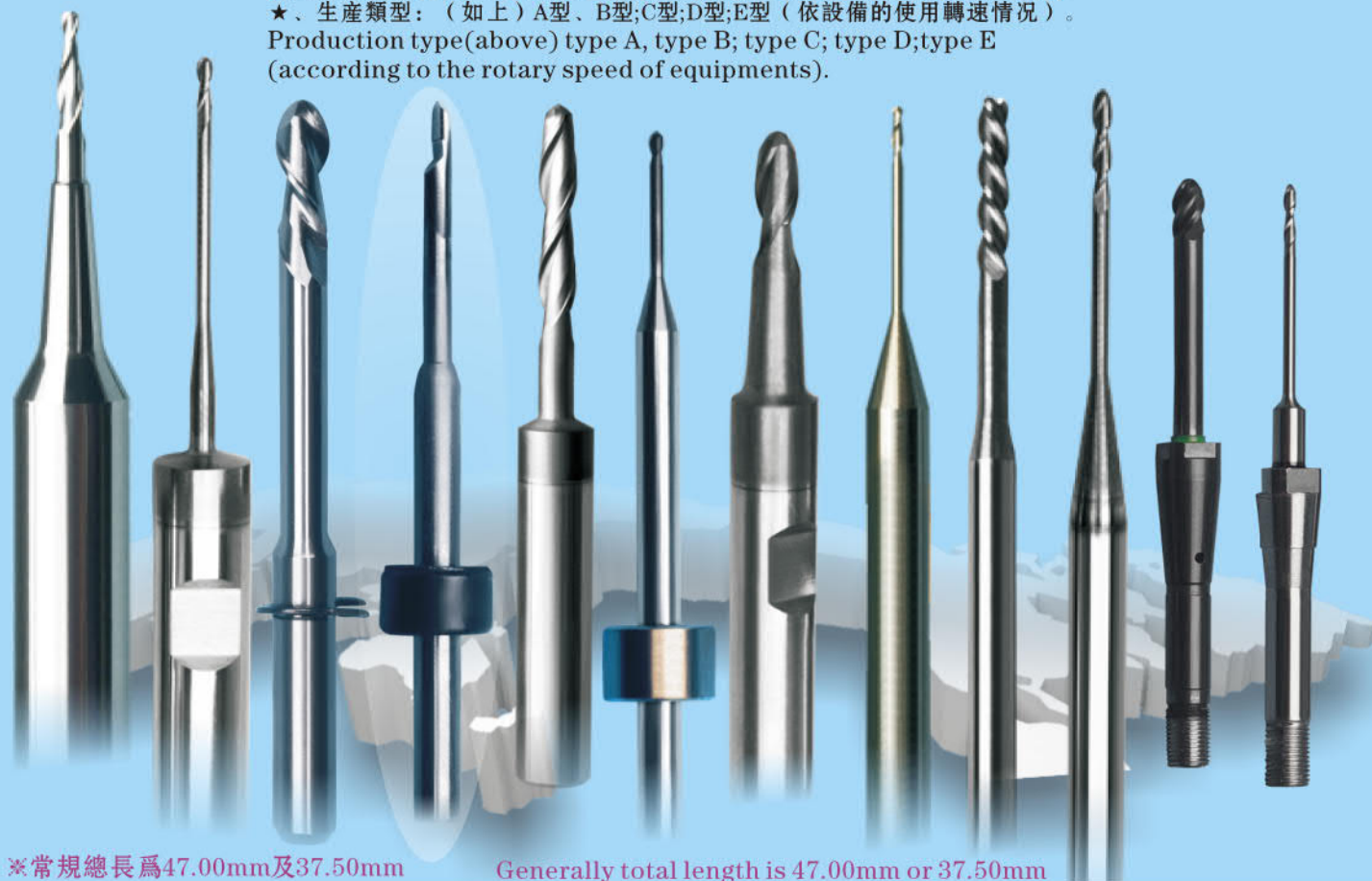
Grades: HSS-Co, Ultra micro-grain quality carbide, ceramic, diamond series

★、生產精度等級AA級（高端用）、A級（中高端用）、B級（一般標準用）。

Production precision g0072ade AA (high-ranking application), grade A (middle and high-end application), grade B (general application).

★、生產類型：（如上）A型、B型、C型、D型、E型（依設備的使用轉速情況）。

Production type (above) type A, type B; type C; type D; type E (according to the rotary speed of equipments).



※常規總長為47.00mm及37.50mm

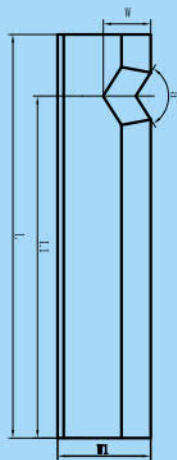
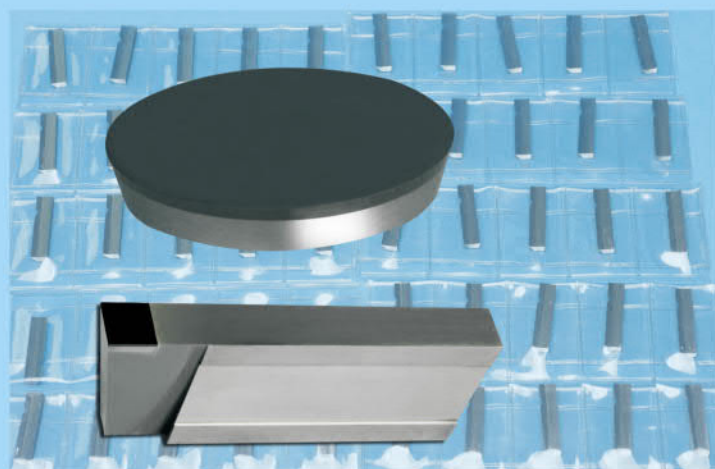
Generally total length is 47.00mm or 37.50mm

可以依圖依樣鏡面研磨加工任意材種，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

醫用工具及配件系列(單晶鑽石/鑽石/CVD/PCD/CBN系列)

Medical tools and parts series(Monocrystal diamond / Diamond / CVD / PCD/CBN Series)

医療器具及び部品シリーズ(単結晶ダイヤモンド/ダイヤモンド/CVD/PCD/CBNシリーズ)



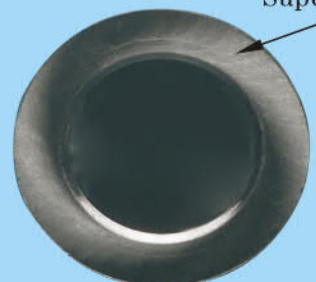
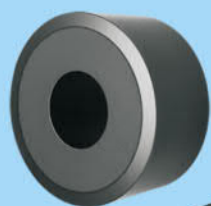
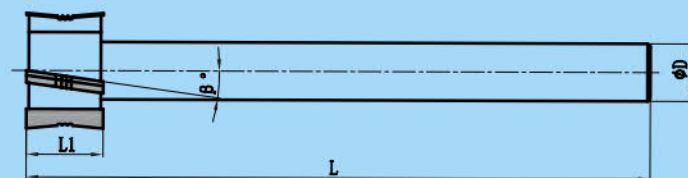
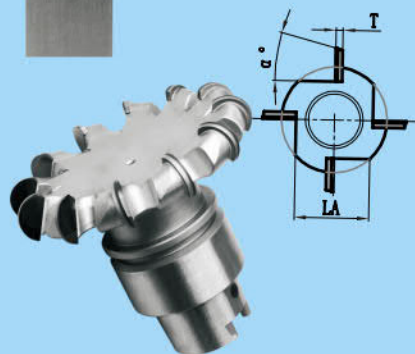
可鏡面研磨刃口
之後角面

The relief angle
surface of edge
can be with mirror
surface grinding.



不銹鋼
stainless steel

鎢鋼(硬質合金)
Tungsten steel (carbide)



超鋒利刃口
Super sharp edge



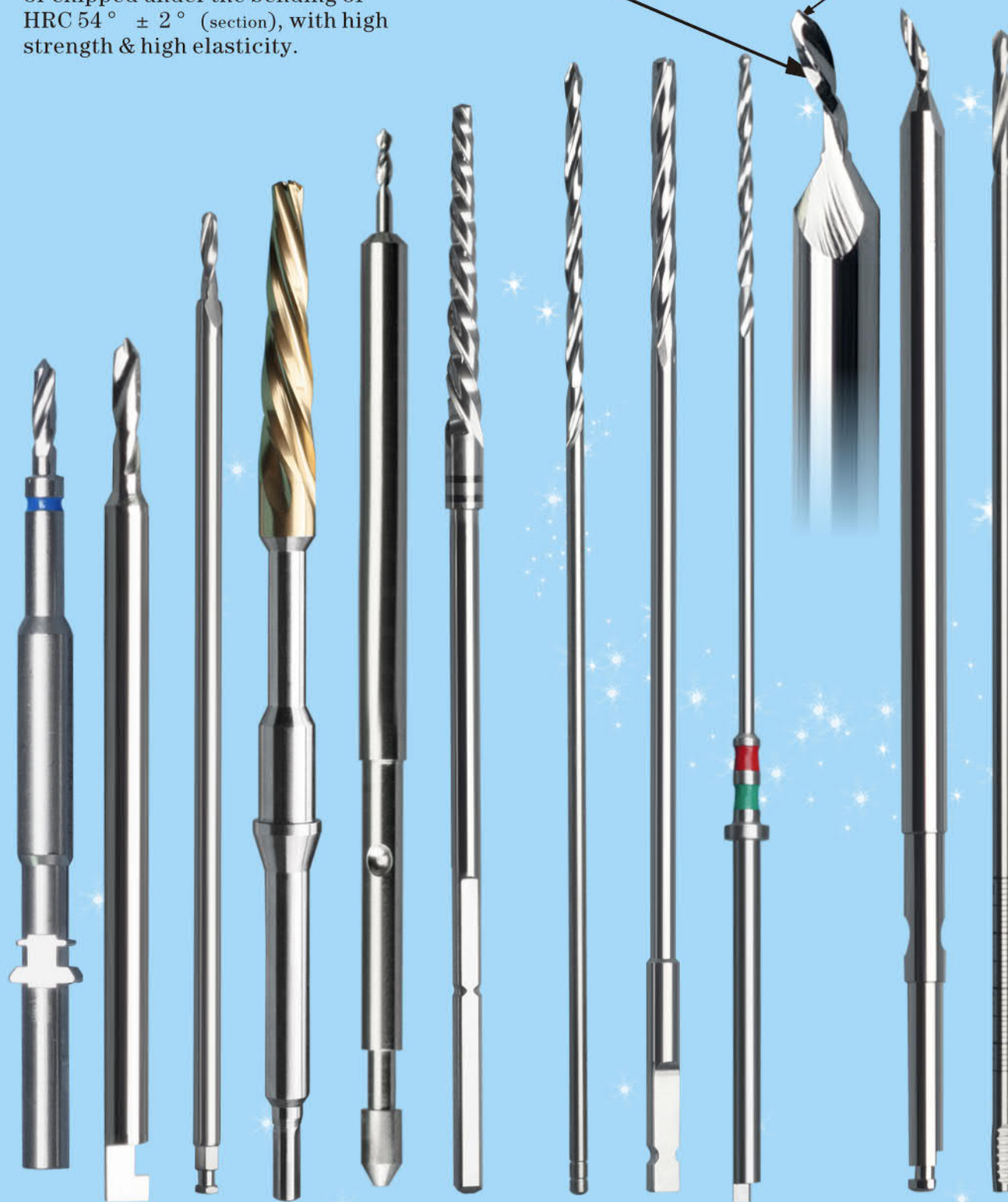
★可以依圖依樣鏡面研磨加工任意材種，形狀、特殊、異型、精度公差之產品。We can make tools with any material, any shape, special kind, special type, abnormal shape and precision and tolerance by mirror surface grinding according to your drawings or samples

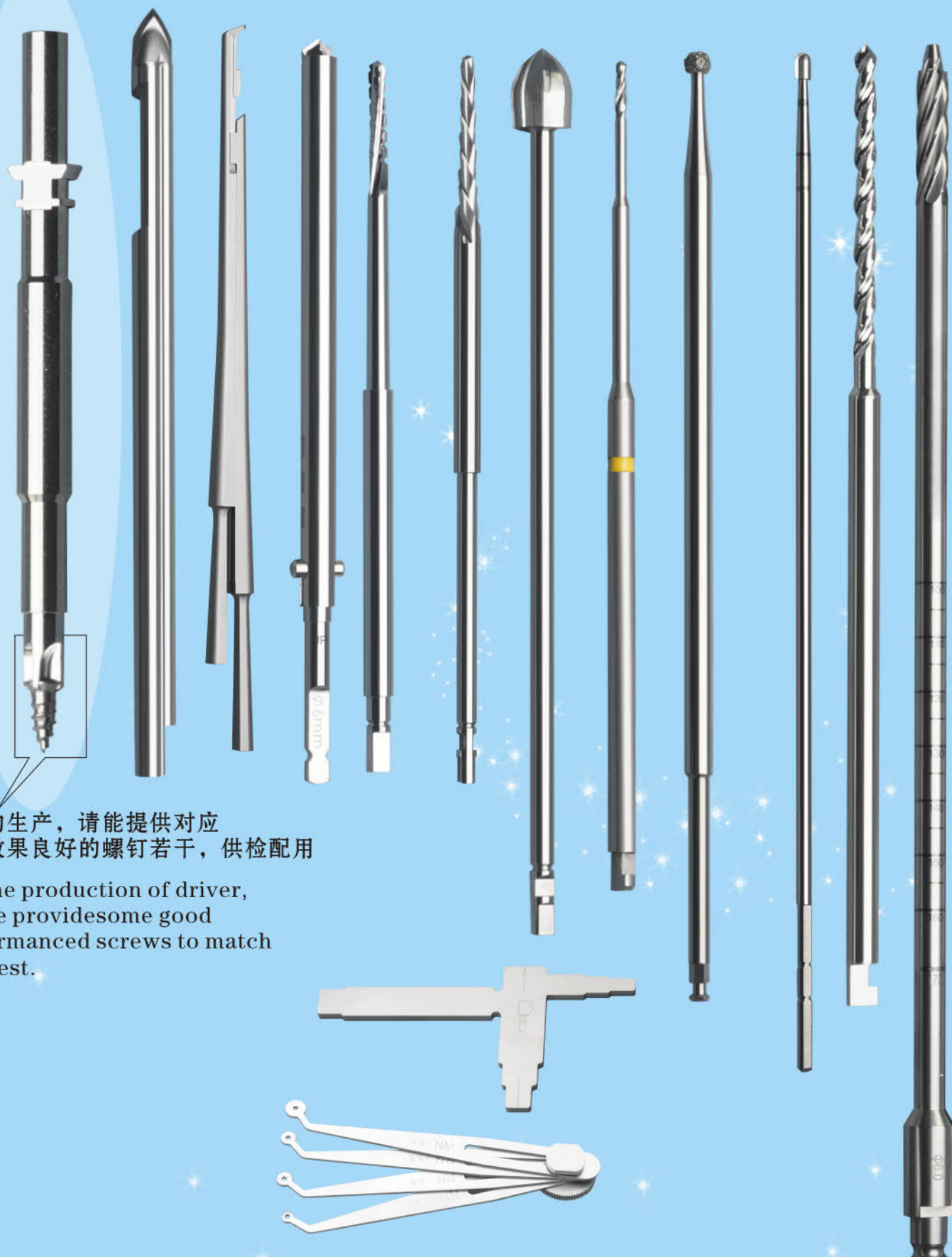
在HRC54° ± 2° (断面)折弯下，
不折断、不崩刃的高安全性钻针，
高强度，高弹性。具有超强的**断裂韧性**。

High-safety drill burs which won't be broken
or chipped under the bending of
HRC 54° ± 2° (section), with high
strength & high elasticity.

微小径钻针的高安全性、
高防锈性、高锋利性。

The high safety, high rust resistance
and high sharpness of micro-
diameter drills.





起子的生产，请能提供对应
使用效果良好的螺钉若干，供检配用

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

材料等级:

- ① 超高防锈高耐磨不锈钢系列(AA)
(HRC54° ± 2° 断面) (常规常备)
- ② 常规标准防锈高耐磨及超高耐磨系列(A)
(HRC45° ~64° 断面系列)
- ③ 高耐磨硬质合金系列(AA)(HRA87° ~94° 系列)

Material grade:

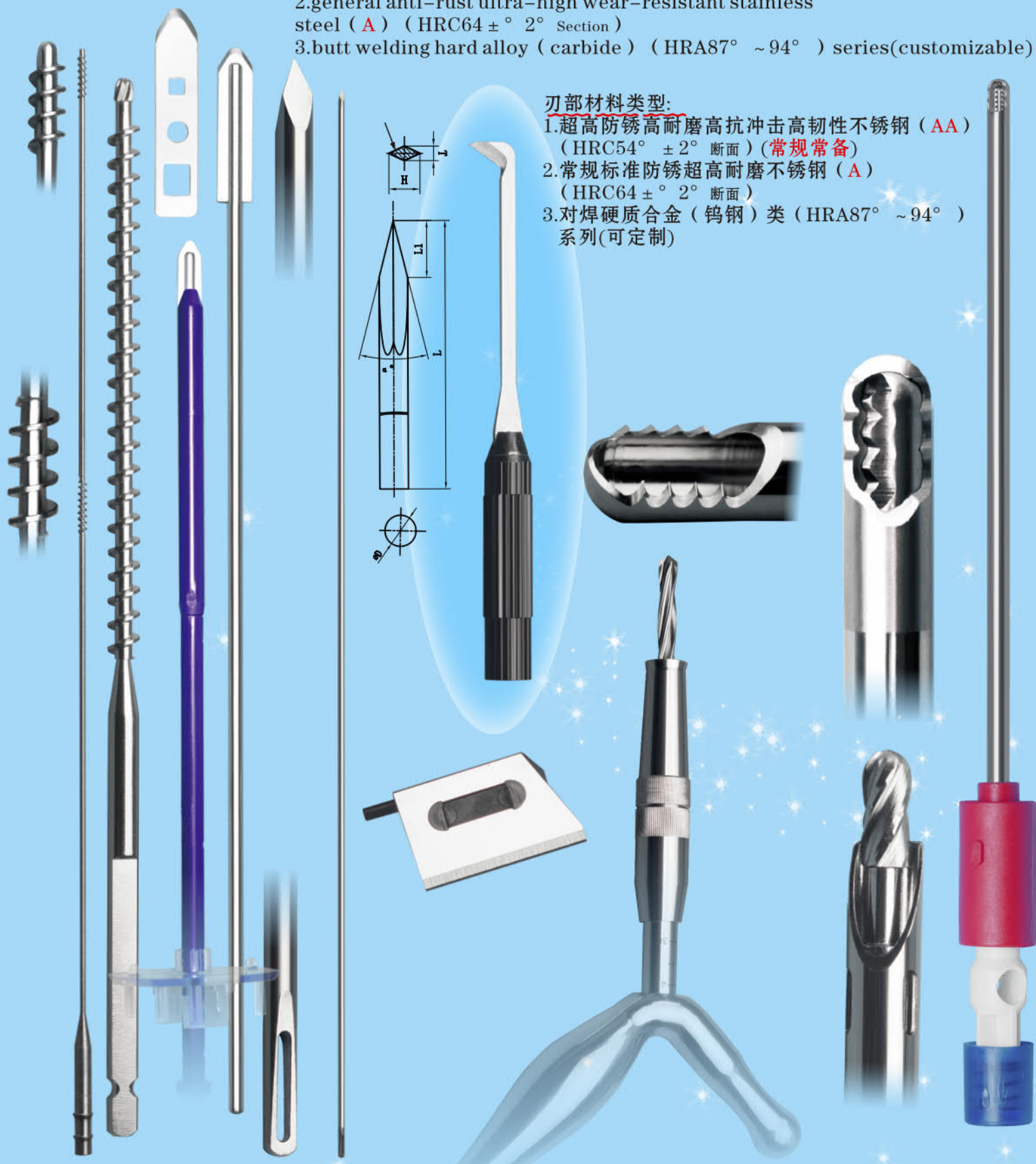
- ① ultra-high anti-rust high wear-resistant stainless steel series (AA)(HRC54° ± 2° Section)(regular stock)
- ② general standard anti-rust, high wear-resistant and ultra-high wear-resistant series (A)(HRC45° ~64° Section series)
- ③ ultra-high wear-resistant hard alloy series(AA)(HRA87° ~94° series)



1. ultra-high anti-rust high wear-resistant stainless steel (AA) (HRC54° ± 2° Section) (regular stock)
2. general anti-rust ultra-high wear-resistant stainless steel (A) (HRC64 ± 2° Section)
3. butt welding hard alloy (carbide) (HRA87° ~ 94°) series (customizable)

刃部材料类型:

1. 超高防锈高耐磨高抗冲击高韧性不锈钢 (AA)
(HRC54° ± 2° 断面) (常规常备)
2. 常规标准防锈超高耐磨不锈钢 (A)
(HRC64 ± 2° 断面)
3. 对焊硬质合金 (钨钢) 类 (HRA87° ~ 94°)
系列 (可定制)



edge structure can be applicable to any chip removing methods(such as, upper chip removal, lower chip removal, left handed right cutting, right handed left cutting, left handed left cutting, and right handed right cutting, etc. High helical edge, low helical edge, with guide pillar or without guide pillar, etc, different structures and shapes.

刃口结构可以任意的排屑方式(如,上排屑、下排屑、左旋右切、右旋左切、左旋左切、右旋右切等等。高螺旋刃,低螺旋刃,带导柱不带导柱等等,结构形状之方式



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

可任意刃口鑽尖鋒利度的定制

Any cutting edge sharpness can be customized



可任意刃口鑽尖鋒利度的定制

Any cutting edge sharpness can be customized

※ 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，及最高可至 $\pm 0.003\text{mm}$ ($3\mu\text{m}$) 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(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)

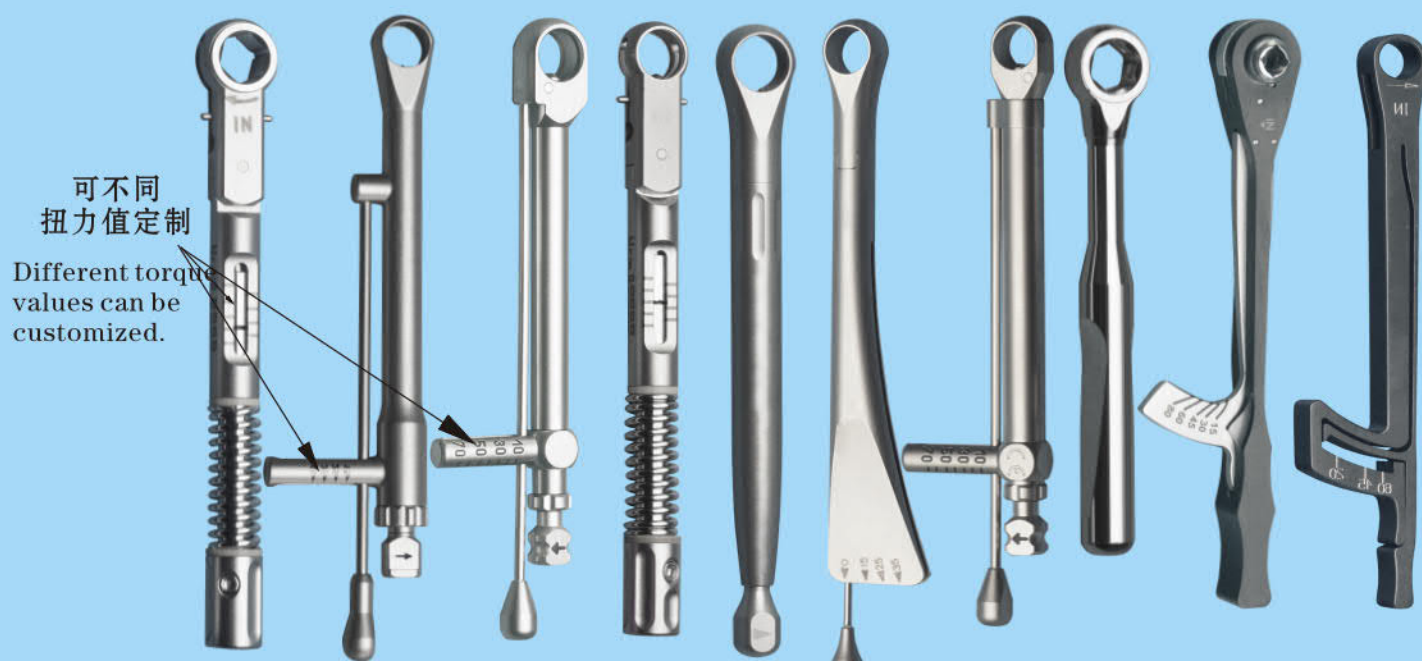
(超高防銹高硬度型&超高精密型&不同材質不同顏色系列)
 (ultra-high anti-rust & high-hardness type ultra-high
 precision type & different material and color series)
 (超高防銹高硬度型&多材質多色シリーズ)



★ 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.

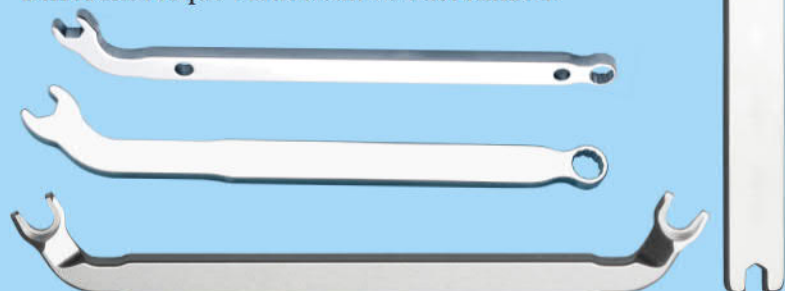
醫用工具及配件系列（板手/轉換器）
Medical tools and parts series(Wrench/Adaptor)
医療器具及び部品シリーズ（レンチ/変換機）

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



可不同
扭力值定制
Different torque
values can be
customized.

可不同扭力值定制
Different torque values can be customized.



★可來圖來樣任意定做產品。

We can customize products according to 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.

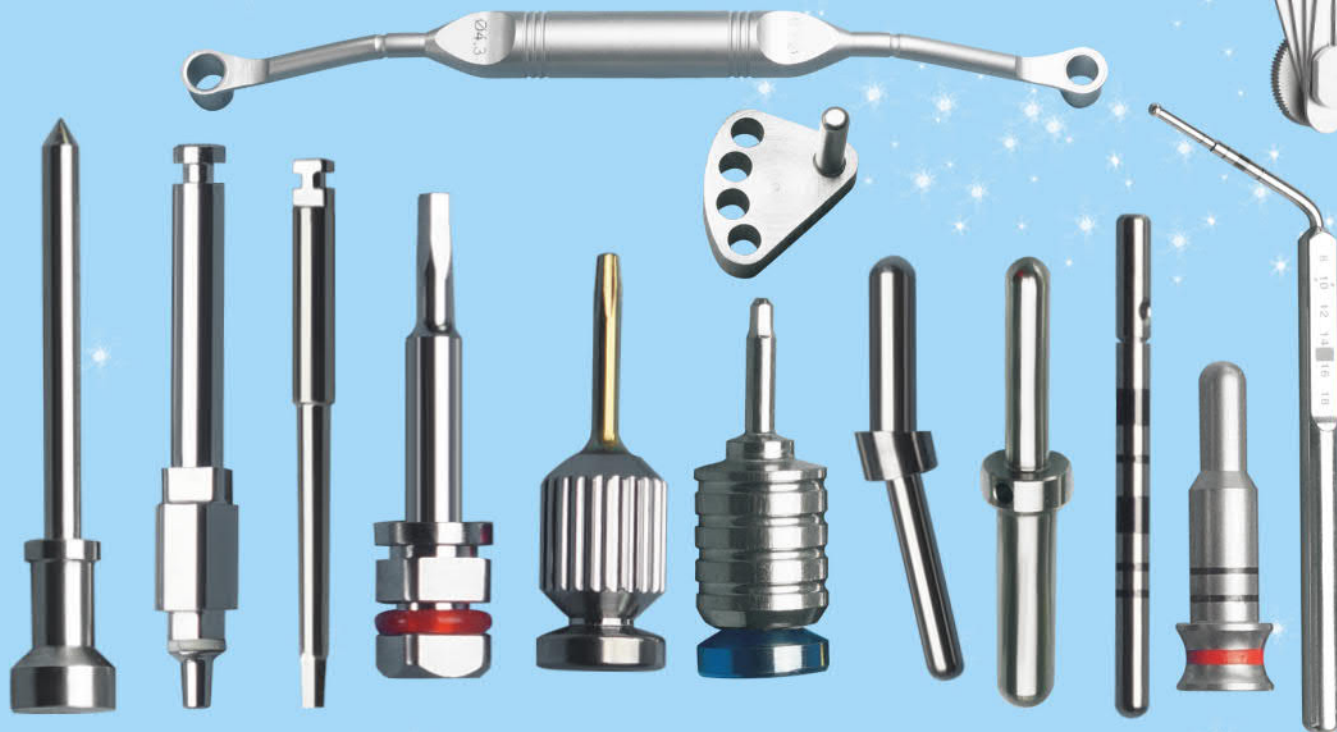


加工精度等级:

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

A:Process finish grade:

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



锋利、不锈、耐磨、耐高温、高精密度。

Sharp, antirust, wear-resistant, high-temperature resistant, high precision.

鋭い、錆びていない、摩擦に強い、容易に擦り切れない、高温に耐える、高い



专业特殊 非标 异型 新产品
任意种类 形状 公差 的超硬加工。
拥有先进综合的生产体系，具备各
种精密技术生产加工能力，实现高
效率、低成本的应用！

We specialize in super-hardness machining for special, non-standard new items with different size and tolerance. Possessed of cutting-edge & comprehensive production system, as well as rich producing & machining capability with different precision technology, so as to realize high efficiency application.

專業で一流の製品、特殊、非標準、異型、新製品の中大ロット、性能と価格との比率の高い開発及び生産加工を替えて、図面、サンプルにより設計を改善して、総合コストを大いに低くする。進んだ総合的な生産体系及び、各種の精密技術での生産・加工能力を有して、効率の高い、コストの低い応用を実現する。

极超微粒、超长切削寿命、无与伦比的耐用度，
可来图、来样定做试试比比.....

Ultra micro-grain, long cutting age, perfect durability,
Can be made to order according to graph
And sample.

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Skype: **shpdlzq** E-mail: **lzq@50323322.com**

上海岭之崎精密工具技术有限公司
地址: 上海浦东金桥出口加工区金沪路1269号厂房

LZQ TOOL CO., LTD.
Add.: NO.1269 Plant, Jinhu Road, Jinqiao Export Processing Zone, Pudong New District, Shanghai, China.



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