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2019
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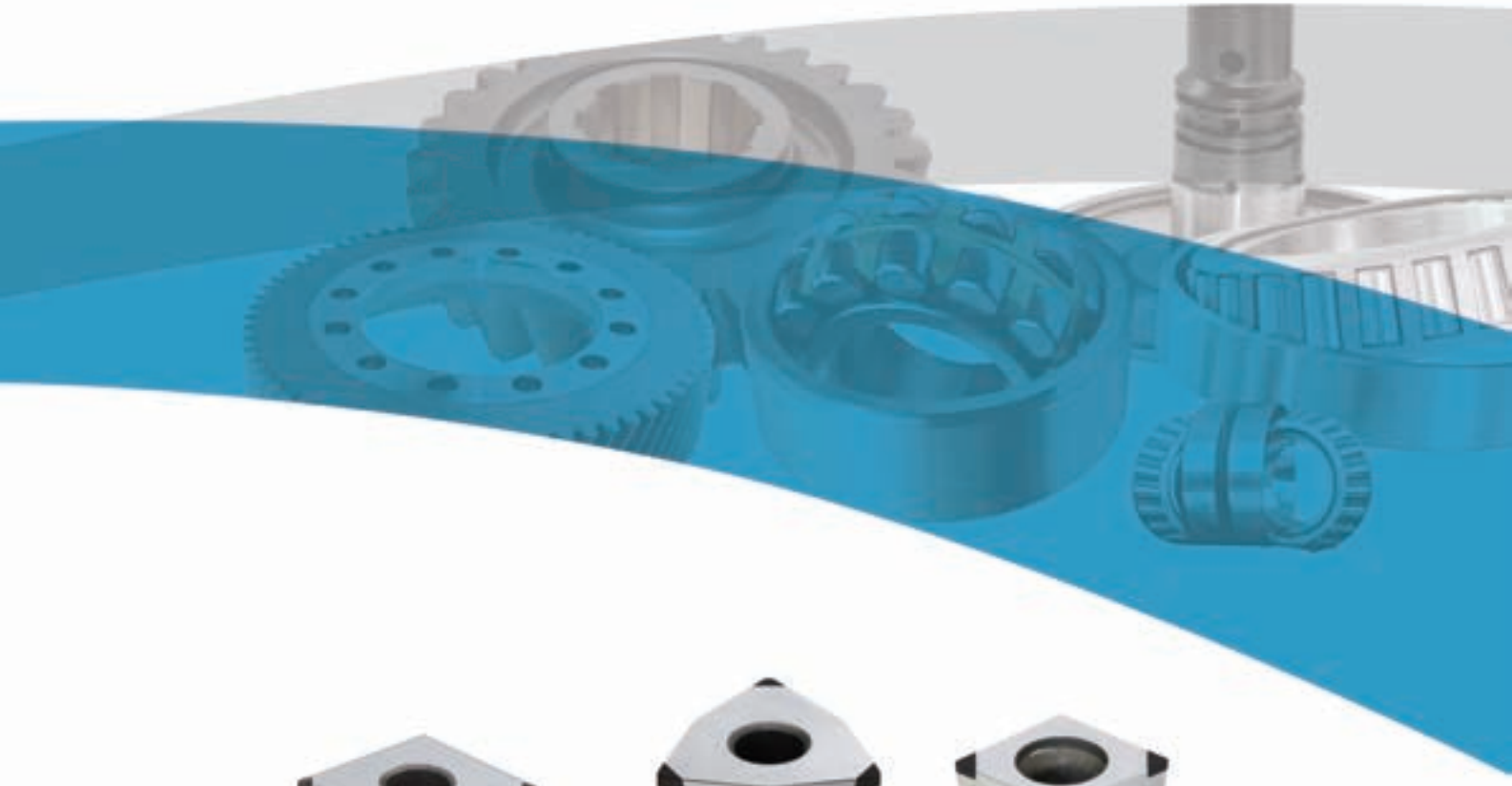

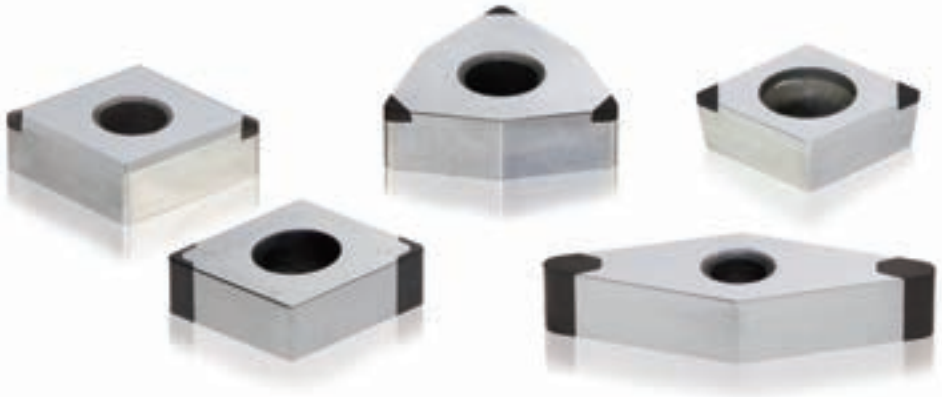

# PCBN数控刀片
# 【淬火钢加工】

北京沃尔德金刚石工具股份有限公司
BEIJING WORLDIA DIAMOND TOOLS CO.,LTD.

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# 沃尔德切削材料介绍

PCBN Material Introduction

## ■工件材料分类　ISO513标准

Material Group （ISO513 Standard）

| | |
|---|---|
| P | 非合金钢（如AIS1040），低合金钢（ISI4340），高合金钢（如AISID3），铸钢和长屑可锻铸铁<br>P: Steel |
| M | 铁素体和马氏体不锈钢和奥氏体不锈钢和锰钢，合金铸铁<br>M: Stainless Steel |
| K | 可锻铸铁，冷硬铸铁，灰口铸铁和球墨铸铁<br>K: Cast Iron |
| N | 非铁金属，铝合金<br>N: Non-Ferrous Materials |
| S | 高温合金，钛合金<br>S: High-Temp Alloys |
| H | 淬硬材料，淬硬钢和铸铁<br>H: Hardend Materials |

## ■刀片材料编码说明

Material Code Key

| PN | H10 | 20 |
|---|---|---|
| PCBN | 使用分类代号<br>Application | 材料代号<br>Material code |

| 材料种类<br>Material | 使用分类代号<br>Application | 材料代号<br>Material code | 特性<br>Characteristics |
|---|---|---|---|
| PN | H01<br>H10<br>H20<br>H30 | 20 | 速度 Speed ↕ 断续 Interruption<br>耐磨性 Abrasive resistance ↕ 韧性 Tenacity |

## ■PCBN种类（专为加工H系列淬硬钢所开发）

Hard Steel Machining - Special PCBN Introduction.

| 工件材质<br>Workpiece Material | PCBN牌号<br>WORLDIA PCBN Grades | CBN含量.%<br>Content | 粒度.μm<br>PCBN Grade | 结合剂<br>Bond | 硬度（Hv）<br>Hardness | 特性<br>Characteristics | 应用<br>Applications |
|---|---|---|---|---|---|---|---|
| H | PNH0120 | 45~50 | 1 | TiC | 2600~2800 | 优秀的耐热性和耐黏结磨性<br>Good thermal stability and crater wear resistance | 高度连续加工淬硬钢<br>Used for high-speed continuous turning of hardened steel |
| | PNH1020 | 60~65 | 1~2 | TiCN | 2600~2800 | 耐磨性与抗冲击性的组合<br>Combination of wear resistance and thermal stability | 轻断续、重载加工淬硬钢<br>Used for moderately interrupted and continuous turning of hardened steel |
| | PNH2020 | 65~70 | 1< | TiN | 2700~2900 | 优秀的韧性<br>High degree of toughness due to fine CBN and cermic binder matrix | 重断续、重载加工淬硬钢<br>Used for heavy interrupted turning of hardened stee |

## ■推荐切削条件

Cutting Data Recommendations.

| 切削条件<br>Cutting condition recommendations | 牌号 PCBN Grade<br>PNH0120 | PNH1020 | PNH2020 |
|---|---|---|---|
| 切削速度,vc（m/min）<br>Cutting Speed | 140 160 220 300 | 100 120 180 250 | 80 120 160 220 |
| 进给,fn (mm/r)<br>Feed Rate | 0.03 0.2 | 0.05 0.25 | 0.05 0.3 |
| 切削深度,AP (mm)<br>Cutting Depth | 常规MINI型 Mini Tipped PCBN Inserts<br>0.05 0.2 | 常规MINI型 Mini Tipped PCBN Inserts<br>0.05 0.5 | 常规MINI型 Mini Tipped PCBN Inserts<br>0.05 0.5 |
| | 贯穿MINI型 Mini Solid Tipped PCBN Inserts<br>0.05 0.3 | 贯穿MINI型 Mini Solid Tipped PCBN Inserts<br>0.05 0.8 | 贯穿MINI型 Mini Solid Tipped PCBN Inserts<br>0.05 1.0 |
| | | 贯穿重切型 Heavy Cutting PCBN Inserts<br>0.1 1.2 | 贯穿重切型 Heavy Cutting PCBN Inserts<br>0.1 2.0 |



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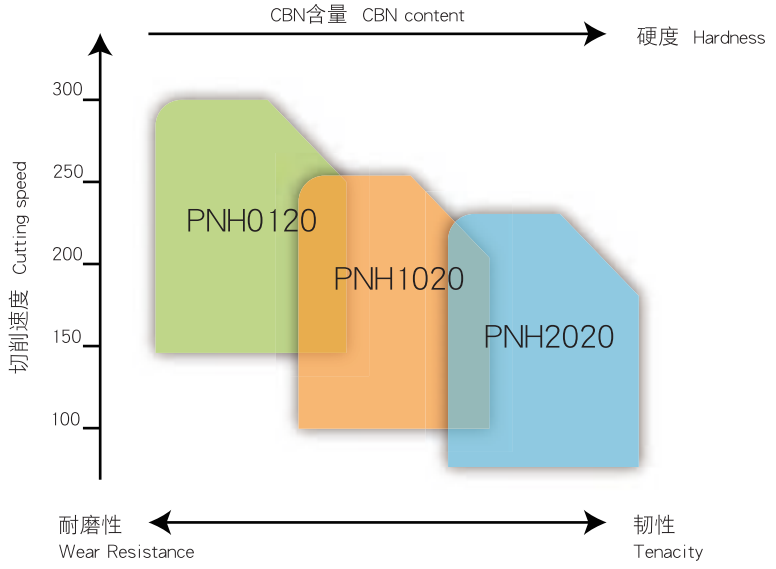
# 沃尔德切削材料介绍

PCBN Material Introduction

## ■推荐使用范围

Application




## ■PCBN贯穿式比PCBN复合片式寿命提高30%

Tool life competition between solid and standard tipped corners

测试工况：ISO 513 H05

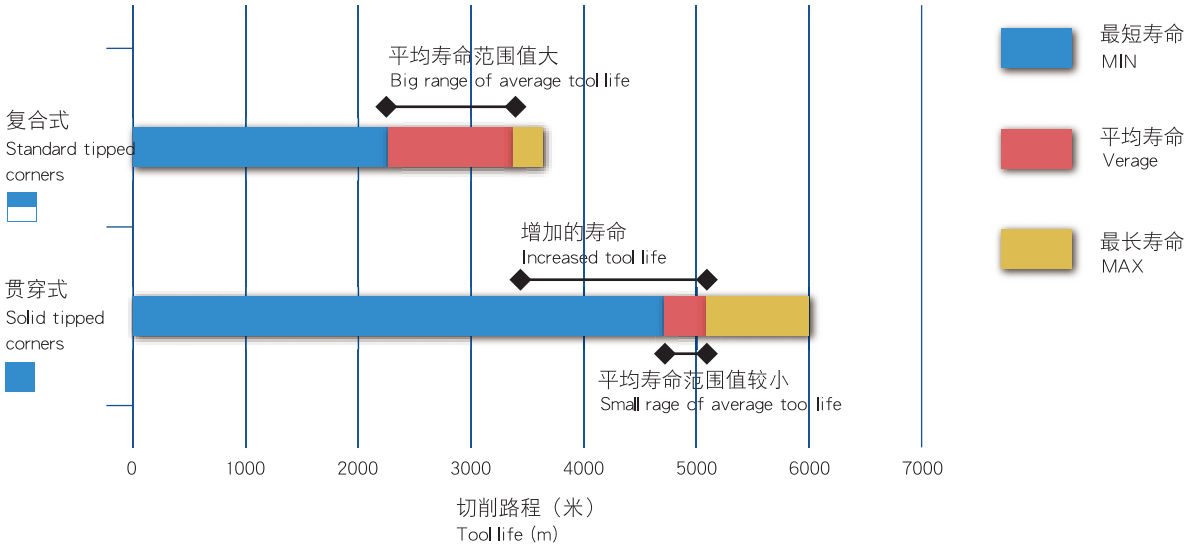
测试结果：1.整体式比复合式寿命大幅增长。

2.整体式比复合式平均寿命范围值更小，稳定性更高！

Testing results:

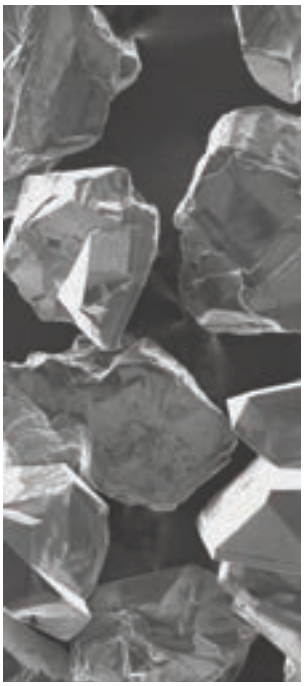
1.Solid tipped corners insert increase the tool life compared to the standard tipped corners insert.

2. The stability of solid tipped corners inserts is higher then standard tipped corners



# 为什么选用CBN刀具

PCBN Material Introduction



立方氮化硼（CBN）在1957年制造成功，成为一种新型人造超硬材料， CBN 的硬度仅次于金刚石，CBN单晶的显微硬度为HV8000～9000，是目前已知的第二高硬度的物质，PCBN的硬度一般为HV2500～5000。因此用于加工高硬度材料时具有比硬质合金及陶瓷更高的耐磨性，CBN具有很高的抗氧化能力，在1000℃时也不产生氧化现象，与铁系材料在1200～1300℃时也不发生化学反应，所以使用CBN刀具时往往采用干切方式因此CBN 材料在加工黑色金属材料方面具有独到之处。现在已经成为难加工材料的首选材料，其应用加工领域为：淬火钢，铸铁，高温合金和粉末冶金。

Cubic boron nitride is the second hardest material in the world invented successfully in 1957; the microhardness of CBN’s single crystal is HV8000-9000 while the hardness of PCBN is HV2500-5000, so it is considerably better abrasive resistance than tungsten carbide and ceramics. With a higher ability of oxidation resistance within 1000℃, CBN will do not have any chemical reaction together with ferrous material in 1200-1300℃. So it is unique for CBN material dry cutting ferrous materials. The principal application areas for CBN cutting tools are hardened steels, cast irons and sintered irons as well as powder metallurgy components.

## Characteristic

PCBN刀具的优点及特征

1、能够加工高质量的工件
2、提高工件加工效率
3、加工灵活性更强
4、设备投资减少
5、无需使用冷却液
6、切屑容易回收处理
7、使切屑更容易断屑排出

使用PCBN刀具的注意事项;

1、选择更大的刀柄尺寸
2、选择最短的刀具悬伸量
3、选择高强度的夹具
4、选择更大的工件装夹面积（薄壁零件）
5、选择PCBN刀具断续切削是无需使用切削液
6、硬车削合理选用切削液
A、切削过程保持切削液流量一致
B、控制被切削零件的热稳定性

Benefits and Features;

1. Excellent surface finish
2. High speed turning, high performance
3. More flexibility in machining
4. Less investment in machines
5. Not required coolant
6. Easier in recycling and treatment of chips
7. Easier in removal of outlet of chips

PCBN tools instruction;

1. Required larger dimension of holders
2. Required shorter extended length of cutting tools
3. Required high-duty of fixtures
4. Required larger clamping area of workpiece
5 No need use coolant in interrupted cutting
6. Properly applied coolant in turning hard steel
7. Keept the consistency of cutting fluid flow in machining
8. Controlled the thermal stability of work piece

□□ **ISO**

| C | C | M | W | 09 | T3 | 04 | 1 | N | S | 010 | 20 | 05 | CB | ST | 30 | S | PNH1020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |

□□ **ANSI**

| C | C | M | W | 3 | (2.5) | 1 | 1 | N | S | 010 | 20 | 05 | CB | ST | 30 | S | PNH1020 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |

## 1 刀片形状 Shape

| | | | | | |
|---|---|---|---|---|---|
| H | 正六边形 120° | | | | 菱形 |
| O | 正八边形 135° | | C | 80° | |
| P | 正五边形 108° | | D | 55° | |
| R | 圆形 | | E | 75° | |
| S | 正方形 90° | | M | 86° | |
| T | 正三角形 60° | | V | 35° | |
| | | | W | 六边形 80° | |
| | | | L | 长方形 90° | |
| | | | | 平行四边形 | |
| | | | A | 85° | |
| | | | B | 82° | |
| | | | K | 55° | |

## 2 刀片后角 Clearance Angle

| | | |
|---|---|---|
| A | E | P |
| B | F | O |
| C | G | |
| D | N | |

## 4 固定、断削槽 Standard、Chipbreaker

| | | |
|---|---|---|
| N | G | B |
| R | W | H |
| F | T | C |
| A | Q | J |
| M | U | 其它异形 X |

## 3 公差 ISO / Tolerance-ANSI

| 代号 | 允差mm | | | Code | inch | | |
|---|---|---|---|---|---|---|---|
| 级 | 刀尖高m | 厚度s | 内切圆IC | | m | ic | s |
| C | ±0.013 | ±0.025 | ±0.025 | C | ±.0005 | ±.001 | ±.001 |
| H | ±0.013 | ±0.025 | ±0.013 | H | ±.0005 | ±.0005 | ±.001 |
| E | ±0.025 | ±0.025 | ±0.025 | E | ±.001 | ±.001 | ±.001 |
| G | ±0.025 | ±0.13 | ±0.025 | G | ±.001 | ±.001 | ±.005 |
| K | ±0.013 | ±0.025 | ±0.05~±0.13 | K | ±.0005 | ±.002-.005 | ±.001 |
| M | ±0.08~±0.18 | ±0.13 | ±0.05~±0.13 | M | ±.002-.005 | ±.002-.005 | ±.005 |
| U | ±0.13~±0.38 | ±0.13 | ±0.08~±0.25 | U | ±.005-.012 | ±.005-.010 | ±.005 |

## 5 内切圆直径 Inscribed Circle Dia.

| ISO | | | | | | | | ANSI | |
|---|---|---|---|---|---|---|---|---|---|
| 切刃长度（按刀片形状） | | | | | | | 内切圆径 | Code | IC Size |
| C | D | R | S | T | V | W | mm | | inch |
| S4 | 04 | 03 | 03 | 06 | - | - | 3.97 | (1.2) | 5/32 |
| 04 | 05 | 04 | 04 | 08 | 08 | S3 | 4.76 | (1.5) | 3/16 |
| 05 | 06 | 05 | 05 | 09 | 09 | 03 | 5.56 | (1.8) | 7/32 |
| - | - | 06 | - | - | - | - | 6 | - | - |
| 06 | 07 | 06 | 06 | 11 | 11 | 04 | 6.35 | 2 | 1/4 |
| 08 | 09 | 07 | 07 | 13 | 13 | 05 | 7.94 | (2.5) | 5/16 |
| - | - | 08 | - | - | - | - | 8 | - | - |
| 09 | 11 | 09 | 09 | 16 | 16 | 06 | 9.525 | 3 | 3/8 |
| - | - | 10 | - | - | - | - | 10 | - | - |
| - | - | 12 | - | - | - | - | 12 | - | - |
| 12 | 15 | 12 | 12 | 22 | 22 | 08 | 12.7 | 4 | 1/2 |
| 16 | 19 | 15 | 15 | 27 | 27 | 10 | 15.875 | 5 | 5/8 |
| - | - | 16 | - | - | - | - | 16 | - | - |
| 19 | 23 | 19 | 19 | 33 | 33 | 13 | 19.05 | 6 | 3/4 |
| - | - | 20 | - | - | - | - | 20 | - | - |
| 22 | 27 | 22 | 22 | 38 | 38 | 15 | 22.225 | 7 | 7/8 |
| - | - | 25 | - | - | - | - | 25 | - | - |
| 25 | 31 | 25 | 25 | 44 | 44 | 17 | 25.4 | 8 | 1 |
| 32 | 38 | 31 | 31 | 54 | 54 | 21 | 31.75 | 10 | 1-1/4 |
| - | - | 32 | - | - | - | - | 32 | - | - |

## 6 刀片厚度 Thickness

| ISO | | ANSI | |
|---|---|---|---|
| 代号 | 尺寸 | Code | Size |
| S | mm | S | inch |
| 01 | 1.59 | 1 | 1/16 |
| 02 | 2.38 | (1.5) | 3/32 |
| T2 | 2.78 | - | - |
| 03 | 3.18 | 2 | 1/8 |
| T3 | 3.97 | (2.5) | 5/32 |
| 04 | 4.76 | 3 | 3/16 |
| 05 | 5.56 | (3.5) | 7/32 |
| 06 | 6.35 | 4 | 1/4 |
| 07 | 7.94 | 5 | 5/16 |
| 09 | 9.525 | 6 | 3/8 |

## 7 刀片R角 Nose radius

| ISO | | ANSI | |
|---|---|---|---|
| 代号 | 尺寸 | Code | Size |
| Rε | mm | Rε | inch |
| 00 | 锋利 | 00 | .000 |
| 003 | 0.03 | (0.1) | .001 |
| 01 | 0.1 | (0.2) | .004 |
| 02 | 0.2 | (0.5) | .008 |
| 04 | 0.4 | 1 | 1/64 |
| 08 | 0.8 | 2 | 1/32 |
| 12 | 1.2 | 3 | 3/64 |
| 16 | 1.6 | 4 | 1/16 |
| 20 | 2.0 | 5 | 5/64 |
| 24 | 2.4 | 6 | 3/32 |
| 28 | 2.8 | 7 | 7/64 |
| 32 | 3.2 | 8 | 1/8 |
| M0 | 圆形刀片 | 0 | circular |



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# 编码规则
Code Key

## 8 刃数 Edges

| 代号 Code | 1 | 2 | 3 | 4 | 6 | 8 |
|---|---|---|---|---|---|---|
| 含义 | 一刃 | 二刃 | 三刃 | 四刃 | 六刃 | 八刃 |
| notes | 1 edge | 2 edges | 3 edges | 4 edges | 6 edges | 8 edges |

## 9 切削方向 Cutting direction

| 代号 Code | R | L | N |
|---|---|---|---|
| 含义 | 正手 | 反手 | 无方向 |
| notes | R | L | N |


## 10 主切刃形状 Cutting Edge Design

| E | T | S | F |
|---|---|---|---|
| 钝化 | 倒棱 | 倒棱+钝化 | 锋利刃口 |
| Honed | Chamfered | Chamfered+Honed | Sharp Edge |

## 11 倒棱宽度 Chamfered Width

| 代号 | Code | 000 | 005 | 010 | 015 | 020 | 030 |
|---|---|---|---|---|---|---|---|
| 尺寸 | Size | - | 0.05 | 0.1 | 0.15 | 0.2 | 0.3 |

## 12 倒棱角度 Chamfered Angle

| 代号 | Code | α | 00 | 10 | 15 | 20 | 25 | 30 | 35 | 45 |
|---|---|---|---|---|---|---|---|---|---|---|
| 尺寸 | Size | ° | - | 10 | 15 | 20 | 25 | 30 | 35 | 45 |

## 13 倒圆大小 Honed Size

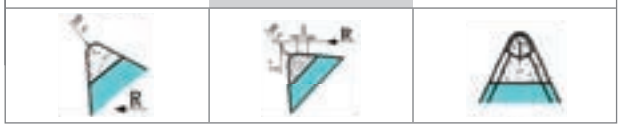
| 代号 | Code | 00 | 02 | 05 | 10 | 20 | 30 |
|---|---|---|---|---|---|---|---|
| 尺寸 | Size | - | 0.002 | 0.005 | 0.01 | 0.02 | 0.03 |

## 14 刀片结构 Insert type

| SF | SL | SS | CB | CS | SWW | SWU |
|---|---|---|---|---|---|---|
| 整面复合片 | 整体CBN局部 | 整体CBN | CBN复合片标准 | CBN复合片整条边 | 整体CBN(W形)贯穿 | 整体CBN(U形)贯穿 |
| Full Face | Solid Tipped Corner | Solid CBN | Standard Tipped Corners | Standard Full Edge | Solid Tipped Corners Type 'W' | Solid Tipped Corners Type 'U' |

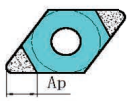
## 15 刃口形式 Cutting Edge Design

| ST | WG | CB |
|---|---|---|
| 圆角R刀片 | 修光刃 | 断屑槽刀片 |
| Nose Radius | Wiper | Chip Breaker |




## 16 主切刃长度 Cutting Edge Length

| 代号 | Code | Ap | 22 | 25 | 28 | 30 | 40 |
|---|---|---|---|---|---|---|---|
| 尺寸 | Size | | 2.2 | 2.5 | 2.8 | 3.0 | 4.0 |

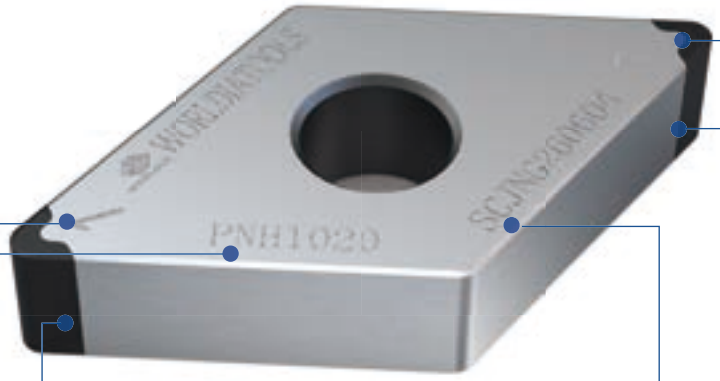



## 17 表面处理形式 Surface Treatment

| | | | |
|---|---|---|---|
| S | 标准未涂层 Uncoated | C1 | 涂层 Coated |
| | | 研发中 R & D | |

# 贯穿迷你型刀片

## Mini Solid Tipped PCBN Inserts




贯穿式焊接，双面使用的同时又实现了更大的切削深度（AP=0.8mm），从而提高了加工效率！
The mini solid tipped corners inserts can use double sides whichis not only achieved the larger cutting depth, but also to improve the machining efficiency. Max AP=0.8mm,

订单批号的标识更方便质量跟踪和信息的反馈。
Clear Serial Number on carbide body makes it easily to track the inserts quality and the feedback information.

刀片PCBN材质的标识方便识别。
Clear mark of PCBN material makes it easily to recognize.

采用特种焊接工艺，波浪形焊接面能有效增加焊接面积，焊接更牢固.
Special brazing technology, the W shape braze joint increased the brazed area which makes it more firmly.

所有刀尖序号的标识，更方便管理。
Clear numbers of tips make the inserts easily to management.

采用波浪型的小刀头设计，经济实用，性价比更高。
Mini tip,less cost and better performance.



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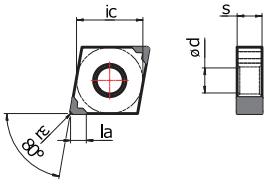
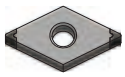
## CN 80° 菱形 • 负型 • 有孔
PCBN Negative Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

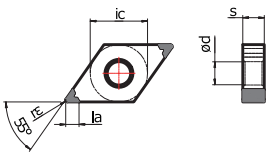



| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CNGA120402-4NS0102510 | SWWST22S | ● | ● | ● | CNGA43(0.5)-4NS0102510 | SWWST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120404-4NS0102510 | | ● | ● | ● | CNGA431-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120408-4NS0102510 | | ● | ● | ● | CNGA432-4NS0102510 | | | | | 0.8 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120412-4NS0102510 | | ● | ● | ● | CNGA433-4NS0102510 | | | | | 1.2 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

## DN 55° 菱形 • 负型 • 有孔
PCBN Negative Inserts

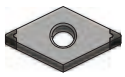


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

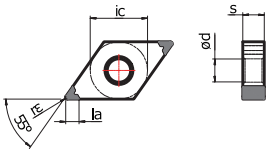



| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DNGA150402-4NS0102510 | SWWST22S | ● | ● | ● | DNGA43(0.5)-4NS0102510 | SWWST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150404-4NS0102510 | | ● | ● | ● | DNGA431-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150408-4NS0102510 | | ● | ● | ● | DNGA432-4NS0102510 | | | | | 0.8 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150412-4NS0102510 | | ● | ● | ● | DNGA433-4NS0102510 | | | | | 1.2 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

## DN 55° 菱形 • 负型 • 有孔
PCBN Negative Inserts



| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |




| 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DNGA150602-4NS0102510 | SWWSL22S | ● | ● | ● | DNGA43(0.5)-4NS0102510 | SWWSL22S | 12.7 | 5.16 | 6.35 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150604-4NS0102510 | | ● | ● | ● | DNGA441-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150608-4NS0102510 | | ● | ● | ● | DNGA442-4NS0102510 | | | | | 0.8 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150612-4NS0102510 | | ● | ● | ● | DNGA443-4NS0102510 | | | | | 1.2 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

示例（Example）： 公制 ISO：DNGA150602-4NS0102510SWWST22S PNH1020

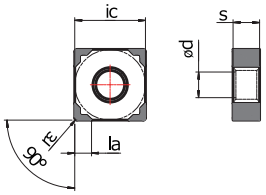
英制 ANSI：DNGA43(0.5)-4NS0102510SWWST22S PNH1020

# 贯穿迷你型刀片
## Mini Solid Tipped PCBN Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

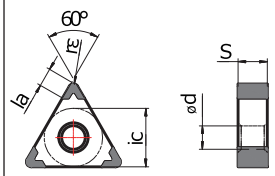
## SN 90° 正方形 • 负型 • 有孔
PCBN Negative Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

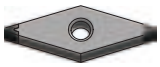
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | SNGA120402-8NS0102510 | SWWST22S | ● | ● | ● | SNGA43(0.5)-8NS0102510 | SWWST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -8NS0101505 | | ● | ● | | -8NS0101505 | | | | | | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |
| | SNGA120404-8NS0102510 | | ● | ● | ● | SNGA431-8NS0102510 | | | | | 0.4 | |
| | -8NS0101505 | | ● | ● | | -8NS0101505 | | | | | | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |
| | SNGA120408-8NS0102510 | | ● | ● | ● | SNGA432-8NS0102510 | | | | | | |
| | -8NS0101505 | | ● | ● | | -8NS0101505 | | | | | 0.8 | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |
| | SNGA120412-8NS0102510 | | ● | ● | ● | SNGA433-8NS0102510 | | | | | | |
| | -8NS0101505 | | ● | ● | | -8NS0101505 | | | | | 1.2 | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |

## TN 60° 三角形 • 负型 • 有孔
PCBN Negative Inserts

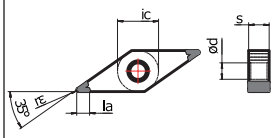
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TNGA160402-6NS0102510 | SWWST22S | ● | ● | ● | TNGA33(0.5)-6NS0102510 | SWWST22S | 9.525 | 3.81 | 4.76 | 0.2 | 2.2 |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | TNGA160404-6NS0102510 | | ● | ● | ● | TNGA331-6NS0102510 | | | | | 0.4 | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | TNGA160408-6NS0102510 | | ● | ● | ● | TNGA332-6NS0102510 | | | | | | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | 0.8 | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | TNGA160412-6NS0102510 | | ● | ● | ● | TNGA333-6NS0102510 | | | | | | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | 1.2 | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |

## VN 35° 菱形 • 负型 • 有孔
PCBN Negative Inserts



| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

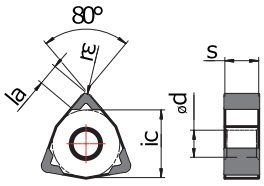
| 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | VNGA160402-4NS0102510 | SWWST22S | ● | ● | ● | VNGA33(0.5)-4NS0102510 | SWWST22S | 9.525 | 3.81 | 4.76 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | VNGA160404-4NS0102510 | | ● | ● | ● | VNGA341-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | VNGA160408-4NS0102510 | | ● | ● | ● | VNGA342-4NS0102510 | | | | | | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | 0.8 | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | VNGA160412-4NS0102510 | | ● | ● | ● | VNGA343-4NS0102510 | | | | | | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | 1.2 | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

示例（Example）： 公制 ISO：VNGA160412-4NS0102510SWWST22S PNH1020
英制 ANSI：VNGA343-4NS0102510SWWST22S PNH1020

# 贯穿迷你型刀片
Mini Solid Tipped PCBN Inserts

**WN** 80° 六边形 • 负型 • 有孔
PCBN Negative Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | WNGA080402-6NS0102510 | SWWST22S | ● | ● | ● | WNGA43(0.5)-6NS0102510 | SWWST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080404-6NS0102510 | | ● | ● | ● | WNGA431-6NS0102510 | | | | | 0.4 | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080408-6NS0102510 | | ● | ● | ● | WNGA432-6NS0102510 | | | | | 0.8 | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080412-6NS0102510 | | ● | ● | ● | WNGA433-6NS0102510 | | | | | 1.2 | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |

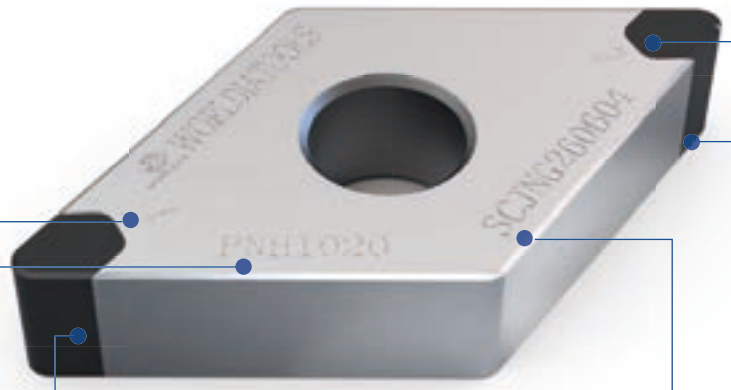


示例（Example）： 公制 ISO：WNGA080402-6NS0102505SLSWW22S PNH1020
英制 ANSI：WNGA43(0.5)-6NS0102505SLSWW22S PNH1020

WORLDIA

# 重切削型刀片

## Heavy Cutting PCBN Inserts




优质CBN材质与特殊的U形刀头设计增大了切削量，加工效率更高，经济实用，性价比高！
Premium CBN materials,u shape design increases the cuting depth and improves the machining efficiency ,it is also less cost and better performance.

订单批号的标识更方便质量跟踪和信息的反馈。
Clear Serial Number on carbide body makes it easily to track the inserts quality and the feedback information.

刀片PCBN材质的标识方便识别。
Clear mark of PCBN material makes it easily to recognize.

采用特种焊接工艺，深U形焊接面有效增加焊接面积，焊接牢固！
Mini tip,less cost and better performance.

所有刀尖序号的标识，更方便管理。
Clear numbers of tips make the inserts easily to management.

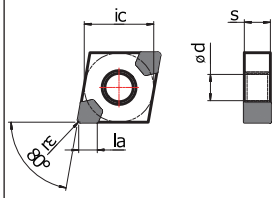
贯穿式焊接，双面使用的同时有实现了更大的切削深度（AP=1.5mm）
The solid tipped corners inserts can use double sides which is not only achieved the larger cutting depth, but also to improve the machining efficiency.（AP=1.5mm）



WORLDIA

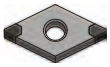
## CN 80° 菱形 • 负型 • 有孔
PCBN Negative Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0151505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

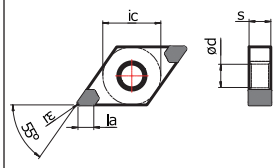



| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CNGA120402-4NS0102510 | SWUST25S | ● | ● | ● | CNGA43(0.5)-4NS0102510 | SWUST25S | 12.7 | 5.16 | 4.76 | 0.2 | 2.5 |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120404-4NS0102510 | | ● | ● | ● | CNGA431-4NS0102510 | | | | | 0.4 | |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120408-4NS0102510 | | ● | ● | ● | CNGA432-4NS0102510 | | | | | 0.8 | |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120412-4NS0102510 | | ● | ● | ● | CNGA433-4NS0102510 | | | | | 1.2 | |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

## DN 55° 菱形 • 负型 • 有孔
PCBN Negative Inserts

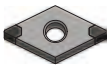


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0151505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

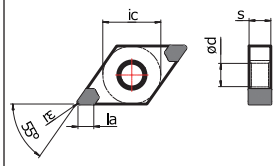



| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DNGA150402-4NS0102510 | SWUST25S | ● | ● | ● | DNGA43(0.5)-4NS0102510 | SWUST25S | 12.7 | 5.16 | 4.76 | 0.2 | 2.5 |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150404-4NS0102510 | | ● | ● | ● | DNGA431-4NS0102510 | | | | | 0.4 | |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150408-4NS0102510 | | ● | ● | ● | DNGA432-4NS0102510 | | | | | 0.8 | |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150412-4NS0102510 | | ● | ● | ● | DNGA433-4NS0102510 | | | | | 1.2 | |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

## DN 55° 菱形 • 负型 • 有孔
PCBN Negative Inserts



| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0151505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |




| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DNGA150602-4NS0102510 | SWUST25S | ● | ● | ● | DNGA43(0.5)-4NS0102510 | SWUST25S | 12.7 | 5.16 | 6.35 | 0.2 | 2.5 |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150604-4NS0102510 | | ● | ● | ● | DNGA431-4NS0102510 | | | | | 0.4 | |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150608-4NS0102510 | | ● | ● | ● | DNGA432-4NS0102510 | | | | | 0.8 | |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150612-4NS0102510 | | ● | ● | ● | DNGA433-4NS0102510 | | | | | 1.2 | |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

示例（Example）： 公制 ISO：DNGA150612-4NS0102510SWUST25S PNH1020

英制 ANSI：DNGA433-4NS0102510SWUST25S PNH1020

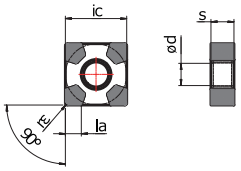
# 重切削型刀片
## Heavy Cutting PCBN Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

## SN 90° 正方形 • 负型 • 有孔
PCBN Negative Inserts

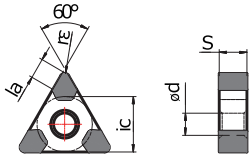
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0151505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

SWUST25S

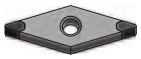
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | SNGA120402-8NS0152510 | SWUST25S | ● | ● | ● | SNGA43(0.5)-8NS0152510 | SWUST25S | 12.7 | 5.16 | 4.76 | 0.2 | 2.5 |
| | -8NS0151505 | | ● | ● | | -8NS0151505 | | | | | | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |
| | SNGA120404-8NS0152510 | | ● | ● | ● | SNGA431-8NS0152510 | | | | | 0.4 | |
| | -8NS0151505 | | ● | ● | | -8NS0151505 | | | | | | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |
| | SNGA120408-8NS0152510 | | ● | ● | ● | SNGA432-8NS0152510 | | | | | 0.8 | |
| | -8NS0151505 | | ● | ● | | -8NS0151505 | | | | | | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |
| | SNGA120412-8NS0152510 | | ● | ● | ● | SNGA433-8NS0152510 | | | | | 1.2 | |
| | -8NS0151505 | | ● | ● | | -8NS0151505 | | | | | | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |

## TN 60° 三角形 • 负型 • 有孔
PCBN Negative Inserts

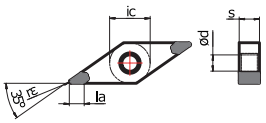
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0151505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TNGA160402-6NS0152510 | SWUST25S | ● | ● | ● | TNGA33(0.5)-6NS0152510 | SWUST25S | 9.525 | 3.81 | 4.76 | 0.2 | 2.5 |
| | -6NS0151505 | | ● | ● | | -6NS0151505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | TNGA160404-6NS0152510 | | ● | ● | ● | TNGA331-6NS0152510 | | | | | 0.4 | |
| | -6NS0151505 | | ● | ● | | -6NS0151505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | TNGA160408-6NS0152510 | | ● | ● | ● | TNGA332-6NS0152510 | | | | | 0.8 | |
| | -6NS0151505 | | ● | ● | | -6NS0151505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | TNGA160412-6NS0152510 | | ● | ● | ● | TNGA333-6NS0152510 | | | | | 1.2 | |
| | -6NS0151505 | | ● | ● | | -6NS0151505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |

## VN 35° 菱形 • 负型 • 有孔
PCBN Negative Inserts



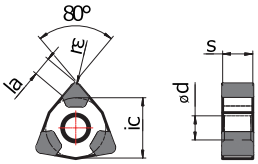
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0151505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | VNGA160402-4NS0152510 | SWUST25S | ● | ● | ● | VNGA33(0.5)-4NS0152510 | SWUST25S | 9.525 | 3.81 | 4.76 | 0.2 | 2.5 |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | VNGA160404-4NS0152510 | | ● | ● | ● | VNGA331-4NS0152510 | | | | | 0.4 | |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | VNGA160408-4NS0152510 | | ● | ● | ● | VNGA332-4NS0152510 | | | | | 0.8 | |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | VNGA160412-4NS0152510 | | ● | ● | ● | VNGA333-4NS0152510 | | | | | 1.2 | |
| | -4NS0151505 | | ● | ● | | -4NS0151505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

示例（Example）： 公制 ISO：VNGA160412-4NS0102510SWUST25S PNH1020
英制 ANSI：VNGA333-4NS0102510SWUST25S PNH1020

## WN 80° 六边形 • 负型 • 有孔
PCBN Negative Inserts

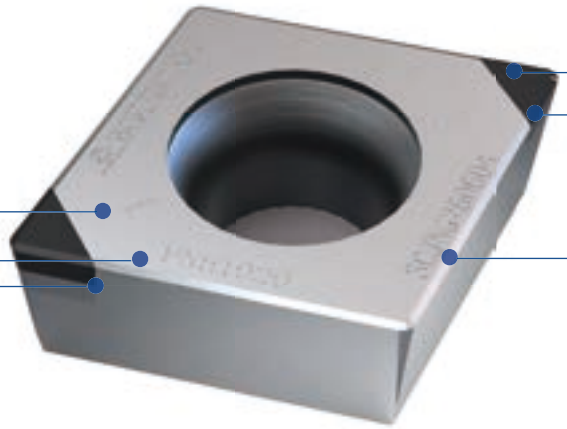
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0151505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | WNGA080402-6NS0152510 | SWUST25S | ● | ● | ● | WNGA43(0.5)-6NS0152510 | SWUST25S | 12.7 | 5.16 | 4.76 | 0.2 | 2.5 |
| | -6NS0151505 | | ● | ● | | -6NS0151505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080404-6NS0152510 | | ● | ● | ● | WNGA431-6NS0152510 | | | | | 0.4 | |
| | -6NS0151505 | | ● | ● | | -6NS0151505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080408-6NS0152510 | | ● | ● | ● | WNGA432-6NS0152510 | | | | | 0.8 | |
| | -6NS0151505 | | ● | ● | | -6NS0151505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080412-6NS0152510 | | ● | ● | ● | WNGA433-6NS0152510 | | | | | 1.2 | |
| | -6NS0151505 | | ● | ● | | -6NS0151505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |

示例（Example）： 公制 ISO：VNGA160412-4NS0102510SWUST25S PNH1020
英制 ANSI：VNGA333-4NS0102510SWUST25S PNH1020

# 常规迷你型刀片

## Mini Tipped PCBN Inserts



采用特种焊接工艺，焊接牢固！
Special brazing technology, firmly brazed.

订单批号的标识更方便质量跟踪和信息的反馈。
Clear Serial Number on carbide body makes it easily to track the inserts quality and the feedback information.

刀片PCBN材质的标识方便识别。
Clear mark of PCBN material makes it easily to recognize.

优质CBN材质、小刀尖，经济实用，性价比高。
Premium CBN materials,mini tip,less cost and better performance.

所有刀尖序号的标识，更方便管理。
Clear numbers of tips make the inserts easily to management.

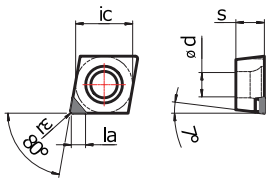
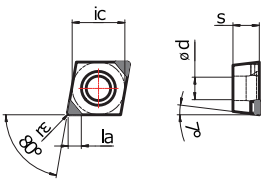
mini刀头的设计实现了成本的降低，切深亦可达（ap=0.5mm）！
Mini tip inserts can reduce the cost of cutting tools. The max ap=0.5mm.



WORLDIA

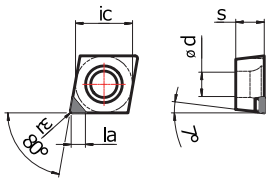
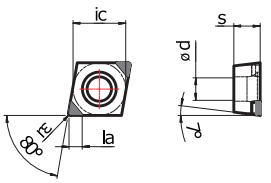
## CC 80° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | CCGW060202-1NS0102510 | SLST22S | ● | ● | ● | CCGW2(1.5)(0.5)-1NS0102510 | SLST22S | 6.35 | 2.8 | 2.38 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW060204-1NS0102510 | | ● | ● | ● | CCGW2(1.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW060208-1NS0102510 | | ● | ● | ● | CCGW2(1.5)2-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | CCGW060202-2NS0102510 | SLST22S | ● | ● | ● | CCGW2(1.5)(0.5)-2NS0102510 | SLST22S | 6.35 | 2.8 | 2.38 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW060204-2NS0102510 | | ● | ● | ● | CCGW2(1.5)1-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW060208-2NS0102510 | | ● | ● | ● | CCGW2(1.5)2-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

## CC 80° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | CCGW09T302-1NS0102510 | SLST22S | ● | ● | ● | CCGW3(2.5)(0.5)-1NS0102510 | SLST22S | 9.525 | 4.4 | 3.97 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW09T304-1NS0102510 | | ● | ● | ● | CCGW3(2.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW09T308-1NS0102510 | | ● | ● | ● | CCGW3(2.5)2-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | CCGW09T302-2NS0102510 | SLST22S | ● | ● | ● | CCGW3(2.5)(0.5)-2NS0102510 | SLST22S | 9.525 | 4.4 | 3.97 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW09T304-2NS0102510 | | ● | ● | ● | CCGW3(2.5)1-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW09T308-2NS0102510 | | ● | ● | ● | CCGW3(2.5)2-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

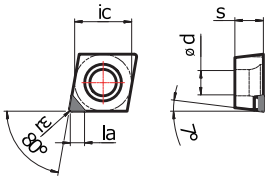
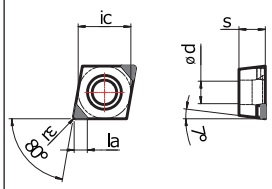
示例（Example）： 公制 ISO：CCGW09T308-2NS0102510SLST22S PNH1020
英制 ANSI：CCGW3(2.5)2-2NS0102510SLST22S PNH1020

# 常规迷你型刀片
## Mini Tipped PCBN Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

**CC** 80° 菱形 • 正型 • 有孔
PCBN Positive Inserts


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | CCGW120402-1NS0102510 | SLST22S | ● | ● | ● | CCGW43(0.5)-1NS0102510 | SLST22S | 12.7 | 5.5 | 4.46 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW120404-1NS0102510 | | ● | ● | ● | CCGW431-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW120408-1NS0102510 | | ● | ● | ● | CCGW432-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW120412-1NS0102510 | | ● | ● | ● | CCGW433-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 1.2 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | CCGW120402-2NS0102510 | SLST22S | ● | ● | ● | CCGW43(0.5)-2NS0102510 | SLST22S | 12.7 | 5.5 | 4.46 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW120404-2NS0102510 | | ● | ● | ● | CCGW431-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW120408-2NS0102510 | | ● | ● | ● | CCGW432-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 0.8 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW120412-2NS0102510 | | ● | ● | ● | CCGW433-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 1.2 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

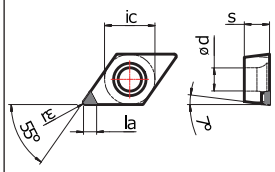
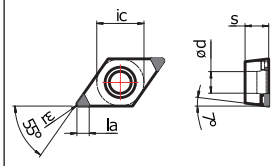
示例（Example）： 公制 ISO：CCGW120408-2NS0102505SLST22S PNH1020
英制 ANSI：CCGW432-2NS0102505SLST22S PNH1020



WORLDIA

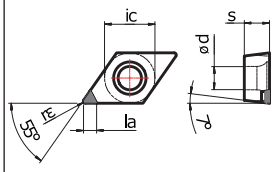
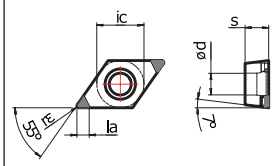
## DC 55° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | DCGW070202-1NS0102510 | SLST22S | ● | ● | ● | DCGW2(1.5)(0.5)-1NS0102510 | SLST22S | 6.35 | 2.8 | 2.38 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DCGW070204-1NS0102510 | | ● | ● | ● | DCGW2(1.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DCGW070208-1NS0102510 | | ● | ● | ● | DCGW2(1.5)2-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | DCGW070202-2NS0102510 | SLST22S | ● | ● | ● | DCGW2(1.5)(0.5)-2NS0102510 | SLST22S | 6.35 | 2.8 | 2.38 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0103505 | | | | | | |
| | DCGW070204-2NS0102510 | | ● | ● | ● | DCGW2(1.5)1-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DCGW070208-2NS0102510 | | ● | ● | ● | DCGW2(1.5)2-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

## DC 55° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | DCGW11T302-1NS0102510 | SLST22S | ● | ● | ● | DCGW3(2.5)(0.5)-1NS0102510 | SLST22S | 9.525 | 4.4 | 3.97 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DCGW11T304-1NS0102510 | | ● | ● | ● | DCGW3(2.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DCGW11T308-1NS0102510 | | ● | ● | ● | DCGW3(2.5)2-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DCGW11T312-1NS0102510 | | ● | ● | ● | DCGW3(2.5)3-1NS0102510 | | | | | 1.2 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | DCGW11T302-2NS0102510 | SLST22S | ● | ● | ● | DCGW3(2.5)(0.5)-2NS0102510 | SLST22S | 9.525 | 4.4 | 3.97 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DCGW11T304-2NS0102510 | | ● | ● | ● | DCGW3(2.5)1-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DCGW11T308-2NS0102510 | | ● | ● | ● | DCGW3(2.5)2-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DCGW11T312-2NS0102510 | | ● | ● | ● | DCGW3(2.5)3-2NS0102510 | | | | | 1.2 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

示例（Example）： 公制 ISO：DCGW11T308-2NS0102510SLST22S PNH1020

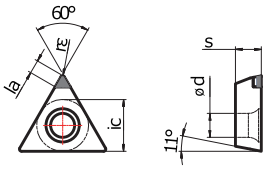
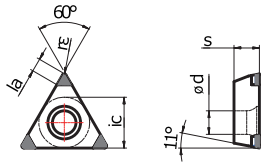
英制 ANSI：DCGW3(2.5)2-2NS0102510SLST22S PNH1020

# 常规迷你型刀片
## Mini Tipped PCBN Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

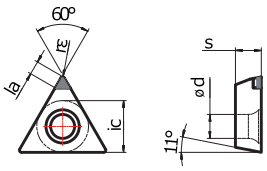
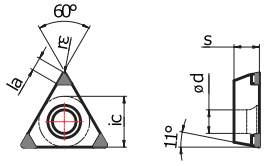
**TP** 60° 三角形 • 正型 • 有孔
PCBN Positive Inserts


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TPGW080202-1NS0102510 | SLST22S | ● | ● | ● | TPGW(1.5)(1.5)(0.5)-1NS0102510 | SLST22S | 4.76 | 2.4 | 2.38 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW080204-1NS0102510 | | ● | ● | ● | TPGW(1.5)(1.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | TPGW080202-3NS0102510 | SLST22S | ● | ● | ● | TPGW(1.5)(1.5)(0.5)-3NS0102510 | SLST22S | 4.76 | 2.4 | 2.38 | 0.2 | 2.2 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW080204-3NS0102510 | | ● | ● | ● | TPGW(1.5)(1.5)1-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |

**TP** 60° 三角形 • 正型 • 有孔
PCBN Positive Inserts


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TPGW090202-1NS0102510 | SLST22S | ● | ● | ● | TPGW(1.8)(1.5)(0.5)-1NS0102510 | SLST22S | 5.56 | 2.5 | 2.38 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW090204-1NS0102510 | | ● | ● | ● | TPGW(1.8)(1.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW090208-1NS0102510 | | ● | ● | ● | TPGW(1.8)(1.5)2-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | TPGW090202-3NS0102510 | SLST22S | ● | ● | ● | TPGW(1.8)(1.5)(0.5)-3NS0102510 | SLST22S | 5.56 | 2.5<br>2.8 | 2.38 | 0.2 | 2.2 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW090204-3NS0102510 | | ● | ● | ● | TPGW(1.8)(1.5)1-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW090208-3NS0102510 | | ● | ● | ● | TPGW(1.8)(1.5)2-3NS0102510 | | | | | 0.8 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |

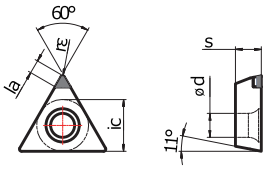
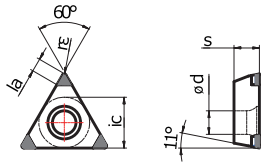
示例（Example）：
公制 ISO：TPGW090208-3NS0102510SLST22S PNH1020
英制 ANSI：TPGW(1.8)(1.5)2-3NS0102510SLST22S PNH1020

# 常规迷你型刀片
## Mini Tipped PCBN Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

**TP** 60° 三角形 • 正型 • 有孔
PCBN Positive Inserts

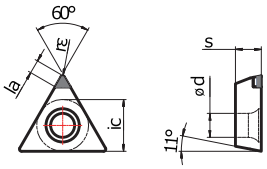
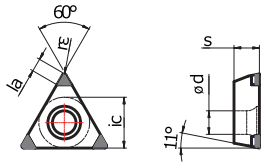

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TPGW160402-1NS0102510 | SLST22S | ● | ● | ● | TPGW33(0.5)-1NS0102510 | SLST22S | 9.525 | 4.4 | 4.76 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW160404-1NS0102510 | | ● | ● | ● | TPGW331-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW160408-1NS0102510 | | ● | ● | ● | TPGW332-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | TPGW160402-3NS0102510 | SLST22S | ● | ● | ● | TPGW33(0.5)-3NS0102510 | SLST22S | 9.525 | 4.4 | 4.76 | 0.2 | 2.2 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW160404-3NS0102510 | | ● | ● | ● | TPGW331-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW160408-3NS0102510 | | ● | ● | ● | TPGW332-3NS0102510 | | | | | 0.8 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |

示例（Example）： 公制 ISO：TPGW160408-3NS0102510SLST22S PNH1020
英制 ANSI：TPGW332-3NS0102510SLST22S PNH1020

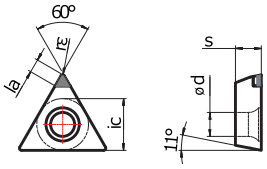
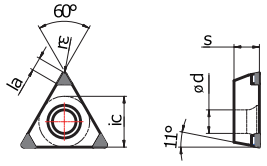
## TP 60° 三角形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TPGW110302-1NS0102510 | SLST22S | ● | ● | ● | TPGW22(0.5)-1NS0102510 | SLST22S | 6.35 | 2.8 | 3.18 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW110304-1NS0102510 | | ● | ● | ● | TPGW221-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | TPGW110302-3NS0102510 | SLST22S | ● | ● | ● | TPGW22(0.5)-3NS0102510 | SLST22S | 6.35 | 2.8 | 3.18 | 0.2 | 2.2 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW110304-3NS0102510 | | ● | ● | ● | TPGW221-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |

## TP 60° 三角形 • 正型 • 有孔
PCBN Positive Inserts

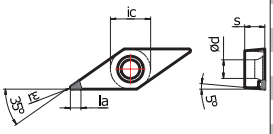
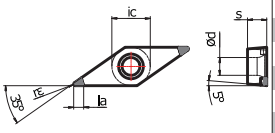
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TPGW160302-1NS0102510 | SLST22S | ● | ● | ● | TPGW32(0.5)-1NS0102510 | SLST22S | 9.525 | 4.4 | 3.18 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW160304-1NS0102510 | | ● | ● | ● | TPGW321-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW160308-1NS0102510 | | ● | ● | ● | TPGW322-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | TPGW160302-3NS0102510 | SLST22S | ● | ● | ● | TPGW32(0.5)-3NS0102510 | SLST22S | 9.525 | 4.4 | 3.18 | 0.2 | 2.2 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW160304-3NS0102510 | | ● | ● | ● | TPGW321-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW160308-3NS0102510 | | ● | ● | ● | TPGW322-3NS0102510 | | | | | 0.8 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |

示例（Example）：
公制 ISO：TPGW160308-3NS0102510SLST22S PNH1020
英制 ANSI：TPGW322-3NS0102510SLST22S PNH1020

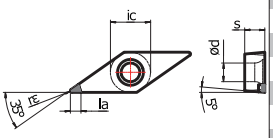
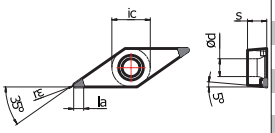
## VB 35° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | VBGW110302-1NS0102510 | SLST22S | ● | ● | ● | VBGW22(0.5)-1NS0102510 | SLST22S | 6.35 | 2.8 | 3.18 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VBGW110304-1NS0102510 | | ● | ● | ● | VBGW221-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VBGW110308-1NS0102510 | | ● | ● | ● | VBGW222-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | VBGW110302-2NS0102510 | SLST22S | ● | ● | ● | VBGW22(0.5)-2NS0102510 | SLST22S | 6.35 | 2.8 | 3.18 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VBGW110304-2NS0102510 | | ● | ● | ● | VBGW221-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VBGW110308-2NS0102510 | | ● | ● | ● | VBGW222-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

## VB 35° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | VBGW160402-1NS0102510 | SLST22S | ● | ● | ● | VBGW33(0.5)-1NS0102510 | SLST22S | 9.525 | 4.4 | 4.76 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VBGW160404-1NS0102510 | | ● | ● | ● | VBGW331-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VBGW160408-1NS0102510 | | ● | ● | ● | VBGW332-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VBGW160412-1NS0102510 | | ● | ● | ● | VBGW333-4NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
|  | VBGW160402-2NS0102510 | SLST22S | ● | ● | ● | VBGW33(0.5)-2NS0102510 | SLST22S | 9.525 | 4.4 | 4.76 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VBGW160404-2NS0102510 | | ● | ● | ● | VBGW331-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VBGW160408-2NS0102510 | | ● | ● | ● | VBGW332-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VBGW160412-1NS0102510 | | ● | ● | ● | VBGW333-4NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

示例（Example）： 公制 ISO：VBGW160408-2NS0102510SLST22S PNH1020

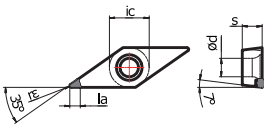
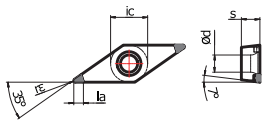
英制 ANSI：VBGW332-2NS0102510SLST22S PNH1020

# 常规迷你型刀片
Mini Tipped PCBN Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

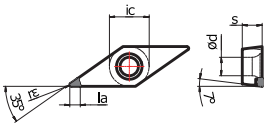
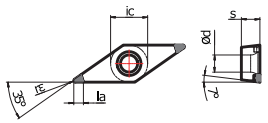
## VC 35° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | VCGW080202-1NS0102510 | SLST22S | ● | ● | ● | VCGW(1.5)(1.5)(0.5)-1NS0102510 | SLST22S | 6.35 | 2.3 | 2.38 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VCGW080204-1NS0102510 | | ● | ● | ● | VCGW(1.5)(1.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VCGW080208-1NS0102510 | | ● | ● | ● | VCGW(1.5)(1.5)2-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | VCGW080202-2NS0102510 | SLST22S | ● | ● | ● | VCGW(1.5)(1.5)(0.5)-2NS0102510 | SLST22S | 6.35 | 2.3 | 2.38 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VCGW080204-2NS0102510 | | ● | ● | ● | VCGW(1.5)(1.5)1-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VCGW080208-2NS0102510 | | ● | ● | ● | VCGW(1.5)(1.5)2-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

## VC 35° 菱形 • 正型 • 有孔
PCBN Positive Inserts

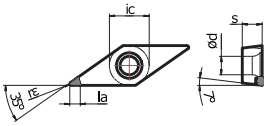
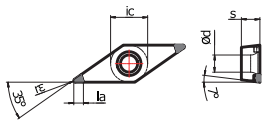
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | VCGW110302-1NS0102510 | SLST22S | ● | ● | ● | VCGW22(0.5)-1NS0102510 | SLST22S | 6.35 | 2.8 | 3.18 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VCGW110304-1NS0102510 | | ● | ● | ● | VCGW221-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VCGW110308-1NS0102510 | | ● | ● | ● | VCGW222-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | VCGW110302-2NS0102510 | SLST22S | ● | ● | ● | VCGW22(0.5)-2NS0102510 | SLST22S | 6.35 | 2.8 | 3.18 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VCGW110304-2NS0102510 | | ● | ● | ● | VCGW221-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VCGW110308-2NS0102510 | | ● | ● | ● | VCGW222-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

示例（Example）： 公制 ISO：VCGW110308-2NS0102510SLST22S PNH1020
英制 ANSI：VCGW222-2NS0102510SLST22S PNH1020

## VC 35° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

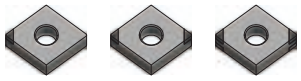
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | VCGW160402-1NS0102510 | SLST22S | ● | ● | ● | VCGW33(0.5)-1NS0102510 | SLST22S | 9.525 | 4.4 | 4.76 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VCGW160404-1NS0102510 | | ● | ● | ● | VCGW331-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VCGW160408-1NS0102510 | | ● | ● | ● | VCGW332-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | VCGW160402-2NS0102510 | SLST22S | ● | ● | ● | VCGW33(0.5)-2NS0102510 | SLST22S | 9.525 | 4.4 | 4.76 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VCGW160404-2NS0102510 | | ● | ● | ● | VCGW331-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VCGW160408-2NS0102510 | | ● | ● | ● | VCGW332-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 0.8 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

示例（Example）： 公制 ISO：VCGW160408-2NS0102510SLST22S PNH1020
英制 ANSI：VCGW332-2NS0102510SLST22S PNH1020

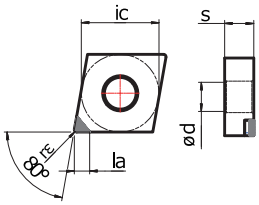
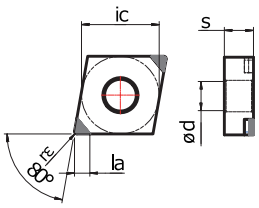
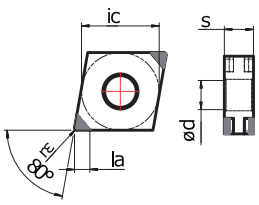
# 常规迷你型刀片
## Mini Tipped PCBN Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

**CN** 80° 菱形 • 负型 • 有孔
PCBN Negative Inserts

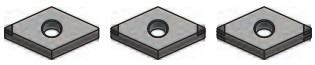


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

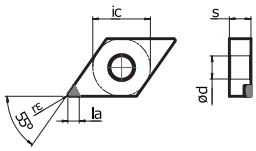
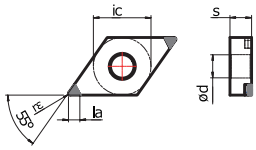
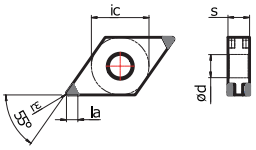
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | d | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | CNGA120402-1NS0102510 | SLST22S | ● | ● | ● | CNGA43(0.5)-1NS0102510 | SLST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CNGA120404-1NS0102510 | | ● | ● | ● | CNGA431-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CNGA120408-1NS0102510 | | ● | ● | ● | CNGA432-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CNGA120412-1NS0102510 | | ● | ● | ● | CNGA433-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 1.2 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | CNGA120402-2NS0102510 | SLST22S | ● | ● | ● | CNGA43(0.5)-2NS0102510 | SLST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CNGA120404-2NS0102510 | | ● | ● | ● | CNGA431-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CNGA120408-2NS0102510 | | ● | ● | ● | CNGA432-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 0.8 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CNGA120412-2NS0102510 | | ● | ● | ● | CNGA433-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 1.2 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
|  | CNGA120402-4NS0102510 | SLST22S | ● | ● | ● | CNGA43(0.5)-4NS0102510 | SLST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120404-4NS0102510 | | ● | ● | ● | CNGA431-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120408-4NS0102510 | | ● | ● | ● | CNGA432-4NS0102510 | | | | | | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | 0.8 | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120412-4NS0102510 | | ● | ● | ● | CNGA433-4NS0102510 | | | | | | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | 1.2 | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

示例（Example）： 公制 ISO：CNGA120408-4NS0102510SLST22S PNH1020
英制 ANSI：CNGA432-4NS0102510SLST22S PNH1020

## DN 55° 菱形 • 负型 • 有孔
PCBN Negative Inserts



| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

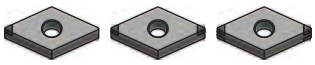
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | DNGA150402-1NS0102510 | SLST22S | ● | ● | ● | DNGA43(0.5)-1NS0102510 | SLST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DNGA150404-1NS0102510 | | ● | ● | ● | DNGA431-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DNGA150408-1NS0102510 | | ● | ● | ● | DNGA432-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DNGA150412-1NS0102510 | | ● | ● | ● | DNGA433-1NS0102510 | | | | | 1.2 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | DNGA150402-2NS0102510 | SLST22S | ● | ● | ● | DNGA43(0.5)-2NS0102510 | SLST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150404-2NS0102510 | | ● | ● | ● | DNGA431-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150408-2NS0102510 | | ● | ● | ● | DNGA432-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150412-2NS0102510 | | ● | ● | ● | DNGA433-2NS0102510 | | | | | 1.2 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
|  | DNGA150402-4NS0102510 | SLST22S | ● | ● | ● | DNGA43(0.5)-4NS0102510 | SLST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150404-4NS0102510 | | ● | ● | ● | DNGA431-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150408-4NS0102510 | | ● | ● | ● | DNGA432-4NS0102510 | | | | | 0.8 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150412-4NS0102510 | | ● | ● | ● | DNGA433-4NS0102510 | | | | | 1.2 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

示例（Example）： 公制 ISO：DNGA150408-4NS0102510SLST22S PNH1020
英制 ANSI：DNGA432-4NS0102510SLST22S PNH1020

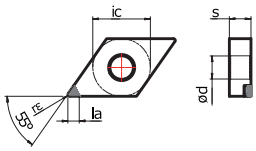
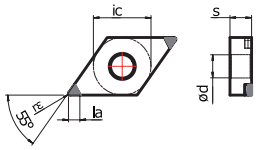
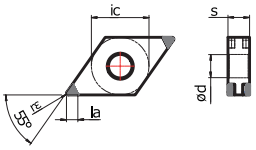
# 常规迷你型刀片
## Mini Tipped PCBN Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

**DN** 55° 菱形 • 负型 • 有孔
PCBN Negative Inserts



| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102501 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | DNGA150602-1NS0102510 | SLST22S | ● | ● | ● | DNGA44(0.5)-1NS0102510 | SLST22S | 12.7 | 5.16 | 6.35 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DNGA150604-1NS0102510 | | ● | ● | ● | DNGA441-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DNGA150608-1NS0102510 | | ● | ● | ● | DNGA442-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DNGA150612-1NS0102510 | | ● | ● | ● | DNGA443-1NS0102510 | | | | | 1.2 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | DNGA150602-2NS0102510 | SLST22S | ● | ● | ● | DNGA44(0.5)-2NS0102510 | SLST22S | 12.7 | 5.16 | 6.35 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150604-2NS0102510 | | ● | ● | ● | DNGA441-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150608-2NS0102510 | | ● | ● | ● | DNGA442-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150612-2NS0102510 | | ● | ● | ● | DNGA443-2NS0102510 | | | | | 1.2 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
|  | DNGA150602-4NS0102510 | SLST22S | ● | ● | ● | DNGA44(0.5)-4NS0102510 | SLST22S | 12.7 | 5.16 | 6.35 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150604-4NS0102510 | | ● | ● | ● | DNGA441-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150608-4NS0102510 | | ● | ● | ● | DNGA442-4NS0102510 | | | | | 0.8 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150612-4NS0102510 | | ● | ● | ● | DNGA443-4NS0102510 | | | | | 1.2 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

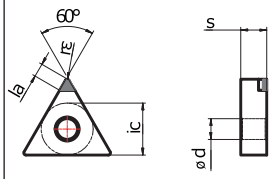
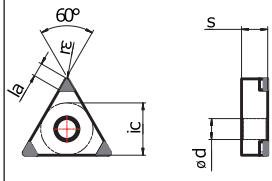
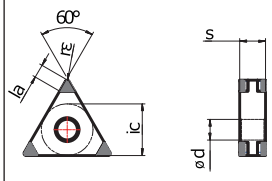
示例（Example）： 公制 ISO：DNGA150608-4NS0102510SLST22S PNH1020
英制 ANSI：DNGA442-4NS0102510SLST22S PNH1020

# 常规迷你型刀片
## Mini Tipped PCBN Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

**TN** 60° 三角形 • 负型 • 有孔
PCBN Negative Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

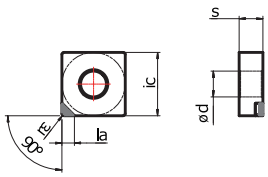
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TNGA160402-1NS0102510 | SLST22S | ● | ● | ● | TNGA33(0.5)-1NS0102510 | SLST22S | 9.525 | 3.81 | 4.76 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TNGA160404-1NS0102510 | | ● | ● | ● | TNGA331-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TNGA160408-1NS0102510 | | ● | ● | ● | TNGA332-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TNGA160412-1NS0102510 | | ● | ● | ● | TNGA333-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 1.2 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | TNGA160402-3NS0102510 | SLST22S | ● | ● | ● | TNGA33(0.5)-3NS0102510 | SLST22S | 9.525 | 3.81 | 4.76 | 0.2 | 2.2 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TNGA160404-3NS0102510 | | ● | ● | ● | TNGA331-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TNGA160408-3NS0102510 | | ● | ● | ● | TNGA332-3NS0102510 | | | | | | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | 0.8 | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TNGA160412-3NS0102510 | | ● | ● | ● | TNGA333-3NS0102510 | | | | | | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | 1.2 | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
|  | TNGA160402-6NS0102510 | SLST22S | ● | ● | ● | TNGA33(0.5)-6NS0102510 | SLST22S | 9.525 | 3.81 | 4.76 | 0.2 | 2.2 |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | TNGA160404-6NS0102510 | | ● | ● | ● | TNGA331-6NS0102510 | | | | | 0.4 | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | TNGA160408-6NS0102510 | | ● | ● | ● | TNGA332-6NS0102510 | | | | | | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | 0.8 | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | TNGA160412-6NS0102510 | | ● | ● | ● | TNGA333-6NS0102510 | | | | | | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | 1.2 | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |

示例（Example）： 公制 ISO：TNGA160408-6NS0102510SLST22S PNH1020
ANSI ANSI：TNGA332-6NS0102510SLST22S PNH1020

# 常规迷你型刀片
Mini Tipped PCBN Inserts

**SN** 90° 正方形 • 负型 • 有孔
PCBN Negative Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |



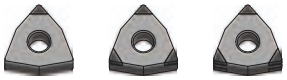

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | SNGA120402-1NS0102510 | SLST22S | ● | ● | ● | SNGA43(0.5)-1NS0102510 | SLST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | SNGA120404-1NS0102510 | | ● | ● | ● | SNGA431-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | SNGA120408-1NS0102510 | | ● | ● | ● | SNGA432-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | SNGA120412-1NS0102510 | | ● | ● | ● | SNGA433-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 1.2 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | SNGA120402-4NS0102510 | SLST22S | ● | ● | ● | SNGA43(0.5)-4NS0102510 | SLST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | SNGA120404-4NS0102510 | | ● | ● | ● | SNGA431-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | SNGA120408-4NS0102510 | | ● | ● | ● | SNGA432-4NS0102510 | | | | | | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | 0.8 | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | SNGA120412-4NS0102510 | | ● | ● | ● | SNGA433-4NS0102510 | | | | | | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | 1.2 | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | SNGA120402-8NS0102510 | SLST22S | ● | ● | ● | SNGA43(0.5)-8NS0102510 | SLST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -8NS0101505 | | ● | ● | | -8NS0101505 | | | | | | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |
| | SNGA120404-8NS0102510 | | ● | ● | ● | SNGA431-8NS0102510 | | | | | 0.4 | |
| | -8NS0101505 | | ● | ● | | -8NS0101505 | | | | | | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |
| | SNGA120408-8NS0102510 | | ● | ● | ● | SNGA432-8NS0102510 | | | | | | |
| | -8NS0101505 | | ● | ● | | -8NS0101505 | | | | | 0.8 | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |
| | SNGA120412-8NS0102510 | | ● | ● | ● | SNGA433-8NS0102510 | | | | | | |
| | -8NS0101505 | | ● | ● | | -8NS0101505 | | | | | 1.2 | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |

示例（Example）： 公制 ISO：SNGA120408-8NS0102510SLST22S PNH1020
英制 ANSI：SNGA432-8NS0102510SLST22S PNH1020

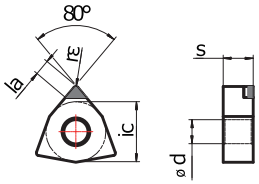
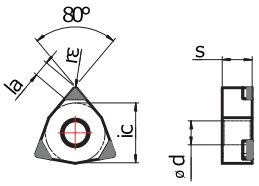
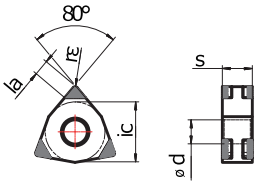
# 常规迷你型刀片
## Mini Tipped PCBN Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

**WN** 80° 六边形 • 负型 • 有孔
PCBN Negative Inserts

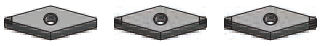


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

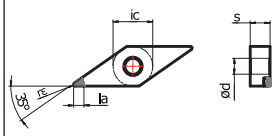
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | WNGA080402-1NS0102510 | SLST22S | ● | ● | ● | WNGA43(0.5)-1NS0102510 | SLST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | WNGA080404-1NS0102510 | | ● | ● | ● | WNGA431-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | WNGA080408-1NS0102510 | | ● | ● | ● | WNGA432-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | WNGA080412-1NS0102510 | | ● | ● | ● | WNGA433-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 1.2 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | WNGA080402-3NS0102510 | SLST22S | ● | ● | ● | WNGA43(0.5)-3NS0102510 | SLST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | WNGA080404-3NS0102510 | | ● | ● | ● | WNGA431-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | WNGA080408-3NS0102510 | | ● | ● | ● | WNGA432-3NS0102510 | | | | | | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | 0.8 | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | WNGA080412-3NS0102510 | | ● | ● | ● | WNGA433-3NS0102510 | | | | | | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | 1.2 | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
|  | WNGA080402-6NS0102510 | SLST22S | ● | ● | ● | WNGA43(0.5)-6NS0102505 | SLST22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080404-6NS0102510 | | ● | ● | ● | WNGA431-6NS0102510 | | | | | 0.4 | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080408-6NS0102510 | | ● | ● | ● | WNGA432-6NS0102510 | | | | | | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | 0.8 | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080412-6NS0102510 | | ● | ● | ● | WNGA433-6NS0102510 | | | | | | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | 1.2 | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |

示例（Example）： 公制 ISO：WNGA080408-6NS0102510SLST22S PNH1020
英制 ANSI：WNGA432-6NS0102510SLST22S PNH1020

## VN 35° 菱形 • 负型 • 有孔
PCBN Negative Inserts



| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

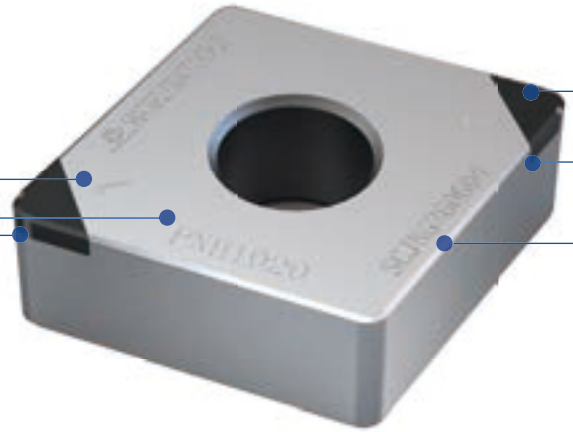



| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | VNGA160402-1NS0102510 | SLST22S | ● | ● | ● | VNGA33(0.5)-1NS0102510 | SLST22S | 9.525 | 3.81 | 4.76 | 0.2 | 2.2 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VNGA160404-1NS0102510 | | ● | ● | ● | VNGA331-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VNGA160408-1NS0102510 | | ● | ● | ● | VNGA332-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VNGA160412-1NS0102510 | | ● | ● | ● | VNGA333-1NS0102510 | | | | | 1.2 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VNGA160402-2NS0102510 | SLST22S | ● | ● | ● | VNGA33(0.5)-2NS0102510 | SLST22S | 9.525 | 3.81 | 4.76 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VNGA160404-2NS0102510 | | ● | ● | ● | VNGA331-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VNGA160408-2NS0102510 | | ● | ● | ● | VNGA332-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VNGA160412-2NS0102510 | | ● | ● | ● | VNGA333-2NS0102510 | | | | | 1.2 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VNGA160402-4NS0102510 | SLST22S | ● | ● | ● | VNGA33(0.5)-4NS0102510 | SLST22S | 9.525 | 3.81 | 4.76 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | VNGA160404-4NS0102510 | | ● | ● | ● | VNGA331-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | VNGA160408-4NS0102510 | | ● | ● | ● | VNGA332-4NS0102510 | | | | | 0.8 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | VNGA160412-4NS0102510 | | ● | ● | ● | VNGA333-4NS0102510 | | | | | 1.2 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

示例（Example）： 公制 ISO：VNGA160408-4NS0102510SLST22S PNH1020
英制 ANSI：VNGA332-4NS0102510SLST22S PNH1020

# 修光刃型刀片

## Wiper PCBN Inserts



增加的修光刃能有效提高工件表面质量或提高加工效率；mini刀头的设计实现了成本的降低，切深亦可达（ap=0.5mm）
Wiper tip inserts can improve the surface finishing of workpiece, increase machining efficiency, mini tip inserts can reduce the cost of cutting tools.The max ap=0.5mm.

订单批号的标识更方便质量跟踪和信息的反馈。
Clear Serial Number on carbide body makes it easily to track the inserts quality and the feedback information.

刀片PCBN材质的标识方便识别。
Clear mark of PCBN material makes it easily to recognize.

采用特种焊接工艺，焊接牢固！
Special brazing technology, firmly brazed.

所有刀尖序号的标识，更方便管理。
Clear numbers of tips make the inserts easily to management.

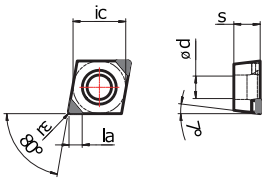
优质CBN材质、小刀尖，经济实用，性价比高。
Premium CBN materials,mini tip,less cost and better performance.

# 修光刃型刀片
Wiper PCBN Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

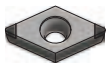
## CC 80° 菱形 • 正型 • 有孔
PCBN Positive Inserts


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

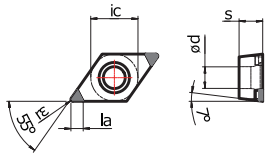



| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CCGW09T304-2NS0102510 | SLWGR22S | ● | ● | ● | CCGW3(2.5)1-2NS0102510 | SLWGR22S | 9.525 | 4.4 | 3.97 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW09T308-2NS0102510 | | ● | ● | ● | CCGW3(2.5)2-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |

## DC 55° 菱形 • 正型 • 有孔
PCBN Positive Inserts

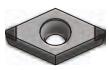



| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

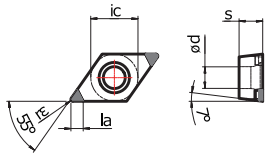



| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DCGW070204-2NS0102510 | SLWGR22S | ● | ● | ● | DCGW2(1.5)1-2NS0102510 | SLWGR22S | 6.35 | 2.8 | 2.38 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DCGW070208-2NS0102510 | | ● | ● | ● | DCGW2(1.5)2-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |

## DC 55° 菱形 • 正型 • 有孔
PCBN Positive Inserts




| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |



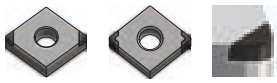

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | DCGW11T304-2NS0102510 | SLWGR22S | ● | ● | ● | DCGW3(2.5)1-2NS0102510 | SLWGR22S | 9.525 | 4.4 | 3.97 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DCGW11T308-2NS0102510 | | ● | ● | ● | DCGW3(2.5)2-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |

示例（Example）： 公制 ISO：DCGW11T304-2NS0102510SLWG22S PNH1020
英制 ANSI：DCGW3(2.5)1-2NS0102510SLWG22S PNH1020

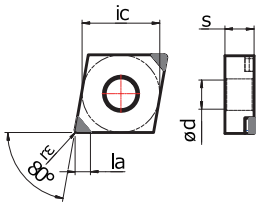
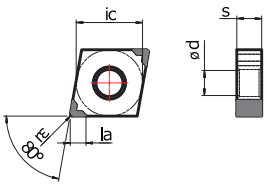


WORLDIA

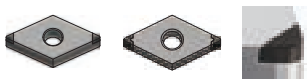
## CN 80° 菱形 • 负型 • 有孔
PCBN Negative Inserts



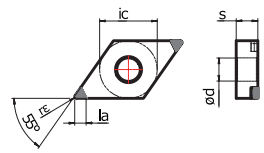
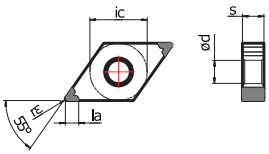
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | CNGA120404-2NS0102510 | SLWGR22S | ● | ● | ● | CNGA431-2NS0102510 | SLWGR22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CNGA120408-2NS0102505 | | ● | ● | ● | CNGA432-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0103505 | | | ● | ● | -2NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |
|  | CNGA120404-4NS0102510 | SWWWGR22S | ● | ● | ● | CNGA431-4NS0102510 | SWWWGR22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120408-4NS0102510 | | ● | ● | ● | CNGA432-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |

## DN 55° 菱形 • 负型 • 有孔
PCBN Negative Inserts



| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

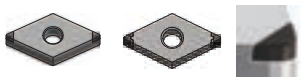
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | DNGA150404-2NS0102510 | SLWGR22S | ● | ● | ● | DNGA431-2NS0102510 | SLWGR22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150408-2NS0102510 | | ● | ● | ● | DNGA432-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |
|  | DNGA150404-4NS0102510 | SWWWGR22S | ● | ● | ● | DNGA431-4NS0102510 | SWWWGR22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150408-4NS0102510 | | ● | ● | ● | DNGA432-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |

示例（Example）： 公制 ISO：DNGA150408-2NS0102510SLWG22S PNH1020
英制 ANSI：DNGA432-2NS0102510SLWG22S PNH1020

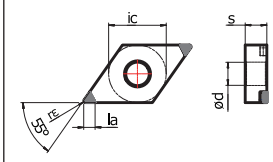
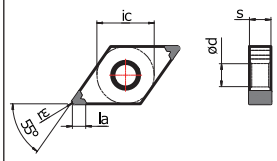
# 修光刃型刀片
Wiper PCBN Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

## DN 55° 菱形 • 负型 • 有孔
PCBN Negative Inserts

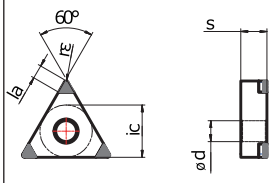
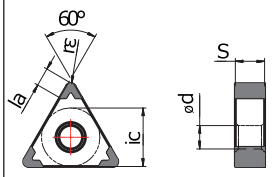


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | DNGA150604-2NS0102510 | SLWGR22S | ● | ● | ● | DNGA441-2NS0102510 | SLWGR22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150608-2NS0102510 | | ● | ● | ● | DNGA442-2NS0102510 | | | | | 0.4 | |
| | -2NS0051502 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |
|  | DNGA150604-4NS0102510 | SWWWGR22S | ● | ● | ● | DNGA441-4NS0102510 | SWWWGR22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150608-4NS0102510 | | ● | ● | ● | DNGA442-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |

## TN 60° 三角形 • 负型 • 有孔
PCBN Negative Inserts

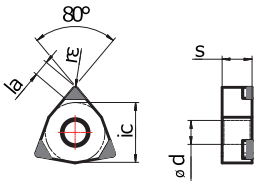
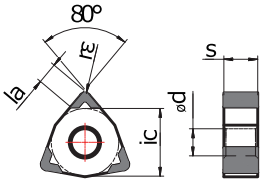
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TNGA160404-3NS0102510 | SLWGR22S | ● | ● | ● | TNGA331-3NS0102510 | SLWGR22S | 9.525 | 3.81 | 4.76 | 0.2 | 2.2 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TNGA160408-3NS0102510 | | ● | ● | ● | TNGA332-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |
|  | TNGA160404-6NS0102510 | SWWWGR22S | ● | ● | ● | TNGA431-6NS0102510 | SWWWGR22S | 9.525 | 3.81 | 4.76 | 0.2 | 2.2 |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | TNGA160408-6NS0102510 | | ● | ● | ● | TNGA432-6NS0102510 | | | | | 0.4 | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |

示例（Example）： 公制 ISO：TNGA160408-6NS0102510SWWWG22S PNH1020
英制 ANSI：TNGA432-6NS0102510SWWWG22S PNH1020

## WN 80° 六边形 • 负型 • 有孔
PCBN Negative Inserts

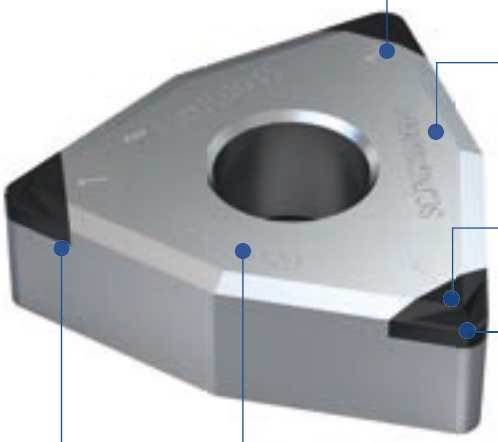
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | WNGA080404-3NS0102510 | SLWGR22S | ● | ● | ● | WNGA431-3NS0102510 | SLWGR22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | WNGA080408-3NS0102510 | | ● | ● | ● | WNGA432-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |
|  | WNGA080404-6NS0102510 | SWWWGR22S | ● | ● | ● | WNGA431-6NS0102510 | SWWWGR22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080408-6NS0102510 | | ● | ● | ● | WNGA432-6NS0102510 | | | | | 0.4 | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |

示例（Example）： 公制 ISO：WNGA080404-6NS0102510SWWWG22S PNH1020
英制 ANSI：WNGA431-6NS0102510SWWWG22S PNH1020

# 断屑型刀片

## Chip Breaker PCBN Inserts



所有刀尖序号的标识，更方便管理。
Clear numbers of tips make the inserts easily to management.

订单批号的标识更方便质量跟踪和信息的反馈。
Clear Serial Number on carbide body makes it easily to track the inserts quality and the feedback information.

增特意增加的断屑结构能有效应对淬硬钢加工时所出现的缠屑现象。
Chipbreaker inserts can slove the problem of long chips while the process.

优质CBN材质、小刀尖，经济实用，性价比高。
Premium CBN materials,mini tip,less cost and better performance.

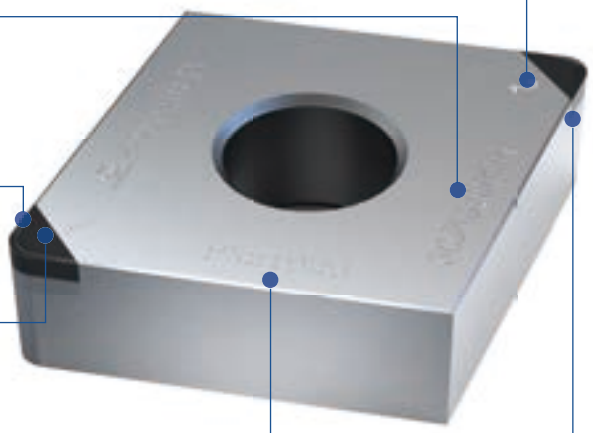
刀片PCBN材质的标识方便识别。
Clear mark of PCBN material makes it easily to recognize.

采用特种焊接工艺，焊接牢固！
Special brazing technology, firmly brazed.

所有刀尖序号的标识，更方便管理。
Clear numbers of tips make the inserts easily to management.

订单批号的标识更方便质量跟踪和信息的反馈。
Clear Serial Number on carbide body makes it easily to track the inserts quality and the feedback information.

增特意增加的断屑结构能有效应对淬硬钢加工时所出现的缠屑现象。
Chipbreaker inserts can slove the problem of long chips while the process.



优质CBN材质、小刀尖，经济实用，性价比高。
Premium CBN materials,mini tip,less cost and better performance.

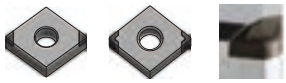
刀片PCBN材质的标识方便识别。
Clear mark of PCBN material makes it easily to recognize.

采用特种焊接工艺，焊接牢固！
Special brazing technology, firmly brazed.

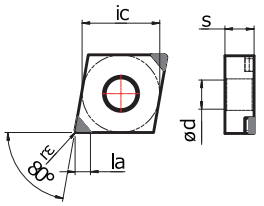
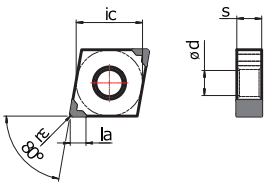


WORLDIA

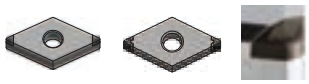
## CN 80° 菱形 • 负型 • 有孔
PCBN Negative Inserts



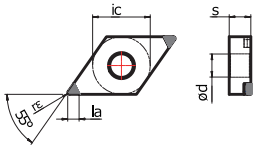
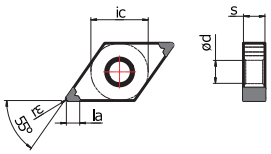
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | CNGA120404-2NS0102510 | SLCBR422S<br>SLCB22S | ● | ● | ● | CNGA431-2NS0102510 | SLCBR422S<br>SLCB22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CNGA120408-2NS0102510 | | ● | ● | ● | CNGA432-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |
|  | CNGA120404-4NS0102510 | SWWCBR422S<br>SWWCB22S | ● | ● | ● | CNGA431-4NS0102510 | SWWCBR422S<br>SWWCB22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120408-4NS0102510 | | ● | ● | ● | CNGA432-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |

## DN 55° 菱形 • 负型 • 有孔
PCBN Negative Inserts



| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

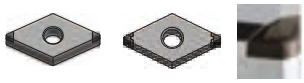
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | DNGA150404-2NS0102510 | SLCBR422S<br>SLCB22S | ● | ● | ● | DNGA431-2NS0102510 | SLCBR422S<br>SLCB22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150408-2NS0102510 | | ● | ● | ● | DNGA432-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0103505 | | | ● | ● | -2NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |
|  | DNGA150404-4NS0102510 | SWWCBR422S<br>SWWCB22S | ● | ● | ● | DNGA431-4NS0102510 | SWWCBR422S<br>SWWCB22S | 12.7 | 5.16 | 4.76 | 0.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150408-4NS0102510 | | ● | ● | ● | DNGA432-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | | | | | | | | | | | 0.8 | |
| | | | | | | | | | | | 1.2 | |

示例（Example）： 公制 ISO：DNGA150408-2NS0102510SLCB22S PNH1020
英制 ANSI：DNGA432-2NS0102510SLCB22S PNH1020

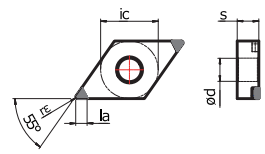
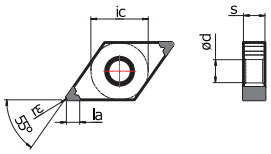
# 断屑型刀片
## Chip Breaker PCBN Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

## DN 55° 菱形 • 负型 • 有孔
PCBN Negative Inserts

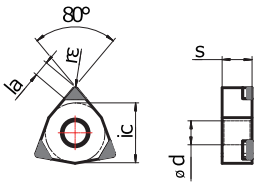
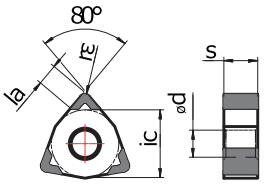


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | DNGA150604-2NS0102510 | SLCBR422S<br>SLCB22S | ● | ● | ● | DNGA441-2NS0102510 | SLCBR422S<br>SLCB22S | 12.7 | 5.16 | 4.76 | 0.2<br>0.4<br>0.8<br>1.2 | 2.2 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150608-2NS0102510 | | ● | ● | ● | DNGA442-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
|  | DNGA150604-4NS0102510 | SWWCBR422S<br>SWWCB22S | ● | ● | ● | DNGA441-4NS0102510 | SWWCBR422S<br>SWWCB22S | 12.7 | 5.16 | 4.76 | 0.2<br>0.4<br>0.8<br>1.2 | 2.2 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150608-4NS0102510 | | ● | ● | ● | DNGA442-4NS0102510 | | | | | | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

## WN 80° 六边形 • 负型 • 有孔
PCBN Negative Inserts

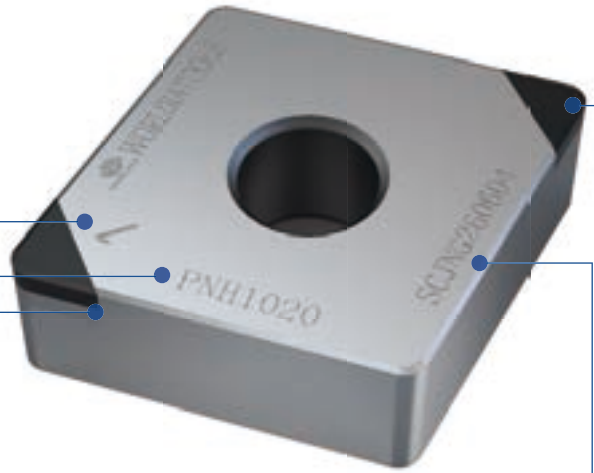
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | WNGA080404-3NS0102510 | SLCBR422S<br>SLCB22S | ● | ● | ● | WNGA431-3NS0102510 | SLCBR422S<br>SLCB22S | 12.7 | 5.16 | 4.76 | 0.2<br>0.4<br>0.8<br>1.2 | 2.2 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NSS0152520 | | | | | | |
| | WNGA080408-3NS0102510 | | ● | ● | ● | WNGA432-3NS0102510 | | | | | | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
|  | WNGA080404-6NS0102510 | SWWCBR422S<br>SWWCB22S | ● | ● | ● | WNGA431-6NS0102510 | SWWCBR422S<br>SWWCB22S | 12.7 | 5.16 | 4.76 | 0.2<br>0.4<br>0.8<br>1.2 | 2.2 |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080408-6NS0102510 | | ● | ● | ● | WNGA432-6NS0102510 | | | | | | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |

示例（Example）： 公制 ISO：WNGA080408-3NS0102510SLCB22S PNH1020
英制 ANSI：WNGA432-3NS0102510SLCB22S PNH1020

# 可修磨型刀片

## PCBN Standard Inserts




采用特种焊接工艺，焊接牢固！
Special brazing technology, firmly brazed.

订单批号的标识更方便质量跟踪和信息的反馈。
Clear Serial Number on carbide body makes it easily to track the inserts quality and the feedback information.

刀片PCBN材质的标识方便识别。
Clear mark of PCBN material makes it easily to recognize.

优质CBN材质。
Premium CBN materials.

所有刀尖序号的标识，更方便管理。
Clear numbers of tips make the inserts easily to management.

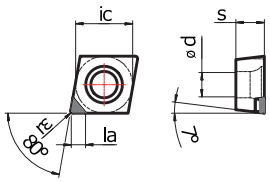
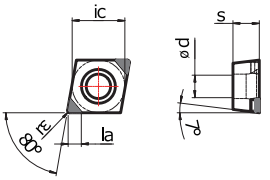
# 可修磨型刀片
PCBN Standard Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

## CC 80° 菱形 • 正型 • 有孔
PCBN Positive Inserts

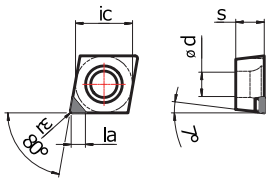
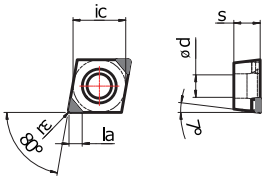

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

SLST30S

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | CCGW060202-1NS0102510 | SLST30S | ● | ● | ● | CCGW2(1.5)(0.5)-1NS0102510 | SLST30S | 6.35 | 2.8 | 2.38 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW060204-1NS0102510 | | ● | ● | ● | CCGW2(1.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW060208-1NS0102510 | | ● | ● | ● | CCGW2(1.5)2-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | CCGW060202-2NS0102510 | SLST30S | ● | ● | ● | CCGW2(1.5)(0.5)-2NS0102510 | SLST30S | 6.35 | 2.8 | 2.38 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW060204-2NS0102510 | | ● | ● | ● | CCGW2(1.5)1-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW060208-2NS0102510 | | ● | ● | ● | CCGW2(1.5)2-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 0.8 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

## CC 80° 菱形 • 正型 • 有孔
PCBN Positive Inserts

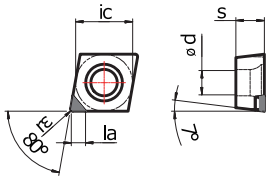
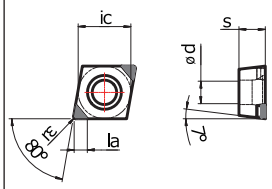

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | CCGW09T302-1NS0102510 | SLST30S | ● | ● | ● | CCGW3(2.5)(0.5)-1NS0102510 | SLST30S | 9.525 | 4.4 | 3.97 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW09T304-1NS0102510 | | ● | ● | ● | CCGW3(2.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW09T308-1NS0102510 | | ● | ● | ● | CCGW3(2.5)2-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | CCGW09T302-2NS0102510 | SLST30S | ● | ● | ● | CCGW3(2.5)(0.5)-2NS0102510 | SLST30S | 9.525 | 4.4 | 3.97 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW09T304-2NS0102510 | | ● | ● | ● | CCGW3(2.5)1-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW09T308-2NS0102510 | | ● | ● | ● | CCGW3(2.5)2-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 0.8 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

示例（Example）： 公制 ISO：CCGW09T308-2NS0102510SLST30S PNH1020
英制 ANSI：CCGW3(2.5)2-2NS0102510SLST30S PNH1020

**CC** 80° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | CCGW120402-1NS0102510 | SLST30S | ● | ● | ● | CCGW43(0.5)-1NS0102510 | SLST30S | 12.7 | 5.5 | 4.46 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW120404-1NS0102510 | | ● | ● | ● | CCGW431-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW120408-1NS0102510 | | ● | ● | ● | CCGW432-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CCGW120412-1NS0102510 | | ● | ● | ● | CCGW433-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 1.2 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | CCGW120402-2NS0102510 | SLST30S | ● | ● | ● | CCGW43(0.5)-2NS0102510 | SLST30S | 12.7 | 5.5 | 4.46 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW120404-2NS0102510 | | ● | ● | ● | CCGW431-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW120408-2NS0102510 | | ● | ● | ● | CCGW432-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 0.8 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CCGW120412-2NS0102510 | | ● | ● | ● | CCGW433-2NS0102510 | | | | | | |
| | -2NS0051502 | | ● | ● | | -2NS0101505 | | | | | 1.2 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

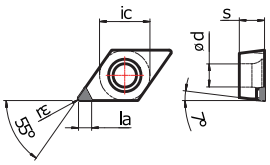
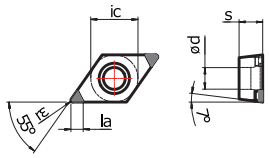
示例（Example）： 公制 ISO：CCGW120408-2NS0102510SLST30S PNH1020
英制 ANSI：CCGW432-2NS0102510SLST30S PNH1020

# 可修磨型刀片
PCBN Standard Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

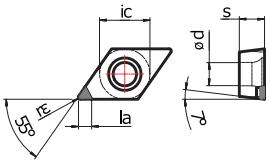
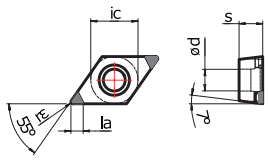
## DC 55° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | DCGW070202-1NS0102510 | SLST30S | ● | ● | ● | DCGW2(1.5)(0.5)-1NS0102510 | SLST30S | 6.35 | 2.8 | 2.38 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DCGW070204-1NS0102510 | | ● | ● | ● | DCGW2(1.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DCGW070208-1NS0102510 | | ● | ● | ● | DCGW2(1.5)2-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | DCGW070202-2NS0102510 | SLST30S | ● | ● | ● | DCGW2(1.5)(0.5)-2NS0102510 | SLST30S | 6.35 | 2.8 | 2.38 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DCGW070204-2NS0102510 | | ● | ● | ● | DCGW2(1.5)1-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DCGW070208-2NS0102510 | | ● | ● | ● | DCGW2(1.5)2-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 0.8 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

## DC 55° 菱形 • 正型 • 有孔
PCBN Positive Inserts

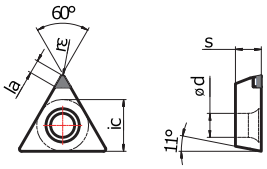
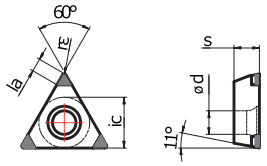
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | DCGW11T302-1NS0102510 | SLST30S | ● | ● | ● | DCGW3(2.5)(0.5)-1NS0102510 | SLST30S | 9.525 | 4.4 | 3.97 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DCGW11T304-1NS0102510 | | ● | ● | ● | DCGW3(2.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DCGW11T308-1NS0102510 | | ● | ● | ● | DCGW3(2.5)2-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DCGW11T312-1NS0102510 | | ● | ● | ● | DCGW3(2.5)3-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 1.2 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | DCGW11T302-2NS0102510 | SLST30S | ● | ● | ● | DCGW3(2.5)(0.5)-2NS0102510 | SLST30S | 9.525 | 4.4 | 3.97 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DCGW11T304-2NS0102510 | | ● | ● | ● | DCGW3(2.5)1-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DCGW11T308-2NS0102510 | | ● | ● | ● | DCGW3(2.5)2-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 0.8 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DCGW11T312-2NS0102510 | | ● | ● | ● | DCGW3(2.5)3-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 1.2 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

示例（Example）： 公制 ISO：DCGW11T308-2NS0102510SLST30S PNH1020
英制 ANSI：DCGW3(2.5)2-2NS0102510SLST30S PNH1020

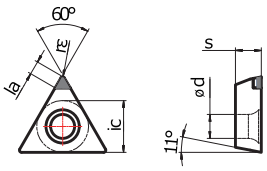
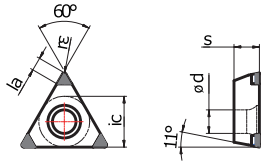
## TP 60° 三角形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TPGW080202-1NS0102510 | SLST30S | ● | ● | ● | TPGW(1.5)(1.5)(0.5)-1NS0102510 | SLST30S | 4.76 | 2.4 | 2.38 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW080204-1NS0102510 | | ● | ● | ● | TPGW(1.5)(1.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | TPGW080202-3NS0102510 | SLST30S | ● | ● | ● | TPGW(1.5)(1.5)(0.5)-3NS0102510 | SLST30S | 4.76 | 2.4 | 2.38 | 0.2 | 3.0 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW080204-3NS0102510 | | ● | ● | ● | TPGW(1.5)(1.5)1-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |

## TP 60° 三角形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TPGW090202-1NS0102510 | SLST30S | ● | ● | ● | TPGW(1.8)(1.5)(0.5)-1NS0102510 | SLST30S | 5.56 | 2.5 | 2.38 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW090204-1NS0102510 | | ● | ● | ● | TPGW(1.8)(1.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW090208-1NS0102510 | | ● | ● | ● | TPGW(1.8)(1.5)2-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | TPGW090202-3NS0102510 | SLST30S | ● | ● | ● | TPGW(1.8)(1.5)(0.5)-3NS0102510 | SLST30S | 5.56 | 2.5<br>2.8 | 2.38 | 0.2 | 3.0 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW090204-3NS0102510 | | ● | ● | ● | TPGW(1.8)(1.5)1-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW090208-3NS0102510 | | ● | ● | ● | TPGW(1.8)(1.5)2-3NS0102510 | | | | | 0.8 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |

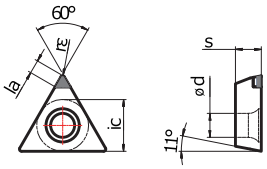
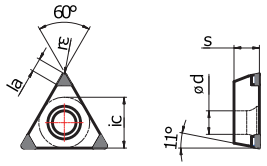
示例（Example）：
公制 ISO：TPGW090208-3NS0102510SLST30S PNH1020
英制 ANSI：TPGW(1.8)(1.5)2-3NS0102510SLST30S PNH1020

# 可修磨型刀片
PCBN Standard Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

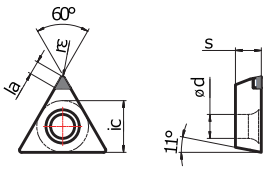
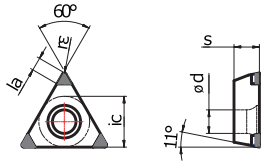
## TP 60° 三角形 • 正型 • 有孔
PCBN Positive Inserts


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TPGW110302-1NS0102510 | SLST30S | ● | ● | ● | TPGW22(0.5)-1NS0102510 | SLST30S | 6.35 | 2.8 | 3.18 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW110304-1NS0102510 | | ● | ● | ● | TPGW221-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | TPGW110302-3NS0102510 | SLST30S | ● | ● | ● | TPGW22(0.5)-3NS0102510 | SLST30S | 6.35 | 2.8 | 3.18 | 0.2 | 3.0 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW110304-3NS0102510 | | ● | ● | ● | TPGW221-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |

## TP 60° 三角形 • 正型 • 有孔
PCBN Positive Inserts


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

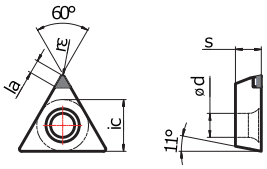
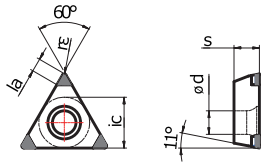
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TPGW160302-1NS0102510 | SLST30S | ● | ● | ● | TPGW32(0.5)-1NS0102510 | SLST30S | 9.525 | 4.4 | 3.18 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW160304-1NS0102510 | | ● | ● | ● | TPGW321-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW160308-1NS0102510 | | ● | ● | ● | TPGW322-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | TPGW160302-3NS0102510 | SLST30S | ● | ● | ● | TPGW32(0.5)-3NS0102510 | SLST30S | 9.525 | 4.4 | 3.18 | 0.2 | 3.0 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW160304-3NS0102510 | | ● | ● | ● | TPGW321-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW160308-3NS0102510 | | ● | ● | ● | TPGW322-3NS0102510 | | | | | 0.8 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |

示例（Example）：
公制 ISO：TPGW160308-3NS0102510SLST30S PNH1020
英制 ANSI：TPGW322-3NS0102510SLST30S PNH1020

# TP 60° 三角形 • 正型 • 有孔

PCBN Positive Inserts


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TPGW160402-1NS0102510 | SLST30S | ● | ● | ● | TPGW33(0.5)-1NS0102510 | SLST30S | 9.525 | 4.4 | 4.76 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW160404-1NS0102510 | | ● | ● | ● | TPGW331-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TPGW160408-1NS0102510 | | ● | ● | ● | TPGW332-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | TPGW160402-3NS0102510 | SLST30S | ● | ● | ● | TPGW33(0.5)-3NS0102510 | SLST30S | 9.525 | 4.4 | 4.76 | 0.2 | 3.0 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW160404-3NS0102510 | | ● | ● | ● | TPGW331-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TPGW160408-3NS0102510 | | ● | ● | ● | TPGW332-3NS0102510 | | | | | 0.8 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |

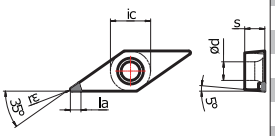
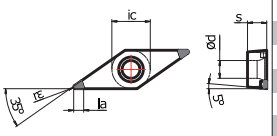
示例（Example）： 公制 ISO：TPGW160408-3NS0102510SLST30S PNH1020
英制 ANSI：TPGW332-3NS0102510SLST30S PNH1020

# 可修磨型刀片
PCBN Standard Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

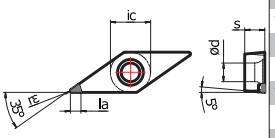
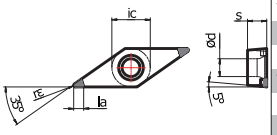
## VB 35° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | VBGW110302-1NS0102510 | SLST30S | ● | ● | ● | VBGW22(0.5)-1NS0102510 | SLST30S | 6.35 | 2.8 | 3.18 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VBGW110304-1NS0102510 | | ● | ● | ● | VBGW221-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VBGW110308-1NS0102510 | | ● | ● | ● | VBGW222-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | VBGW110302-2NS0102510 | SLST30S | ● | ● | ● | VBGW22(0.5)-2NS0102510 | SLST30S | 6.35 | 2.8 | 3.18 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VBGW110304-2NS0102510 | | ● | ● | ● | VBGW221-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VBGW110308-2NS0102510 | | ● | ● | ● | VBGW222-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

## VB 35° 菱形 • 正型 • 有孔
PCBN Positive Inserts

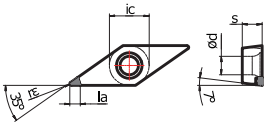
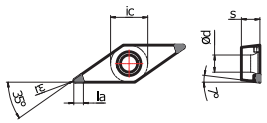
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | VBGW160402-1NS0102510 | SLST30S | ● | ● | ● | VBGW33(0.5)-1NS0102510 | SLST30S | 9.525 | 4.4 | 4.76 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VBGW160404-1NS0102510 | | ● | ● | ● | VBGW331-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VBGW160408-1NS0102510 | | ● | ● | ● | VBGW332-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VBGW160412-1NS0102510 | | ● | ● | ● | VBGW333-4NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
|  | VBGW160402-2NS0102510 | SLST30S | ● | ● | ● | VBGW33(0.5)-2NS0102510 | SLST30S | 9.525 | 4.4 | 4.76 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VBGW160404-2NS0102510 | | ● | ● | ● | VBGW331-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VBGW160408-2NS0102510 | | ● | ● | ● | VBGW332-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VBGW160412-1NS0102510 | | ● | ● | ● | VBGW333-4NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

示例（Example）： 公制 ISO：VBGW160408-2NS0102510SLST30S PNH1020
英制 ANSI：VBGW332-2NS0102510SLST30S PNH1020

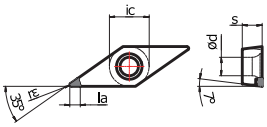
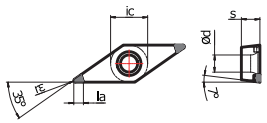
## VC 35° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | VCGW080202-1NS0102510 | SLST30S | ● | ● | ● | VCGW(1.5)(1.5)(0.5)-1NS0102510 | SLST30S | 4.76 | 2.3 | 2.38 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VCGW080204-1NS0102510 | | ● | ● | ● | VCGW(1.5)(1.5)1-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VCGW080208-1NS0102510 | | ● | ● | ● | VCGW(1.5)(1.5)2-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | VCGW080202-2NS0102510 | SLST30S | ● | ● | ● | VCGW(1.5)(1.5)(0.5)-2NS0102510 | SLST30S | 4.76 | 2.3 | 2.38 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VCGW080204-2NS0102510 | | ● | ● | ● | VCGW(1.5)(1.5)1-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VCGW080208-2NS0102510 | | ● | ● | ● | VCGW(1.5)(1.5)2-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

## VC 35° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | VCGW110302-1NS0102510 | SLST30S | ● | ● | ● | VCGW22(0.5)-1NS0102510 | SLST30S | 6.35 | 2.8 | 3.18 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VCGW110304-1NS0102510 | | ● | ● | ● | VCGW221-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VCGW110308-1NS0102510 | | ● | ● | ● | VCGW222-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | VCGW110302-2NS0102510 | SLST30S | ● | ● | ● | VCGW22(0.5)-2NS0102510 | SLST30S | 6.35 | 2.8 | 3.18 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VCGW110304-2NS0102510 | | ● | ● | ● | VCGW221-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VCGW110308-2NS0102510 | | ● | ● | ● | VCGW222-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

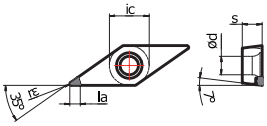
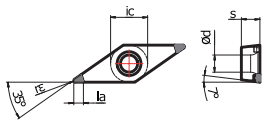
示例（Example）： 公制 ISO：VCGW110308-2NS0102510SLST30S PNH1020
英制 ANSI：VCGW222-2NS0102510SLST30S PNH1020

# 可修磨型刀片
PCBN Standard Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

**VC** 35° 菱形 • 正型 • 有孔
PCBN Positive Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

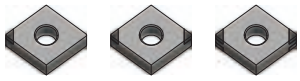
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | VCGW160402-1NS0102510 | SLST30S | ● | ● | ● | VCGW33(0.5)-1NS0102510 | SLST30S | 9.525 | 4.4 | 4.76 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VCGW160404-1NS0102510 | | ● | ● | ● | VCGW331-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VCGW160408-1NS0102510 | | ● | ● | ● | VCGW332-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | VCGW160402-2NS0102510 | SLST30S | ● | ● | ● | VCGW33(0.5)-2NS0102510 | SLST30S | 9.525 | 4.4 | 4.76 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VCGW160404-2NS0102510 | | ● | ● | ● | VCGW331-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VCGW160408-2NS0102510 | | ● | ● | ● | VCGW332-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 0.8 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |

示例（Example）： 公制 ISO：VCGW160408-2NS0102510SLST30S PNH1020
英制 ANSI：VCGW332-2NS0102510SLST30S PNH1020

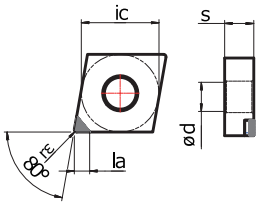
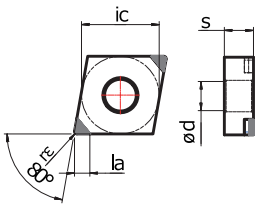
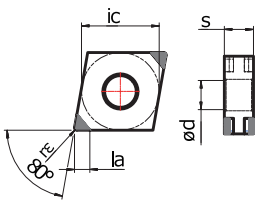


WORLDIA

**CN** 80° 菱形 • 负型 • 有孔
PCBN Negative Inserts



| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

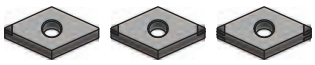
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | d | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | CNGA120402-1NS0102510 | SLST30S | ● | ● | ● | CNGA43(0.5)-1NS0102510 | SLST30S | 12.7 | 5.16 | 4.76 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CNGA120404-1NS0102510 | | ● | ● | ● | CNGA431-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CNGA120408-1NS0102510 | | ● | ● | ● | CNGA432-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | CNGA120412-1NS0102510 | | ● | ● | ● | CNGA433-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 1.2 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | CNGA120402-2NS0102510 | SLST30S | ● | ● | ● | CNGA43(0.5)-2NS0102510 | SLST30S | 12.7 | 5.16 | 4.76 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CNGA120404-2NS0102510 | | ● | ● | ● | CNGA431-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CNGA120408-2NS0102510 | | ● | ● | ● | CNGA432-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 0.8 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | CNGA120412-2NS0102510 | | ● | ● | ● | CNGA433-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 1.2 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
|  | CNGA120402-4NS0102510 | SLST30S | ● | ● | ● | CNGA43(0.5)-4NS0102510 | SLST30S | 12.7 | 5.16 | 4.76 | 0.2 | 3.0 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120404-4NS0102510 | | ● | ● | ● | CNGA431-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120408-4NS0102510 | | ● | ● | ● | CNGA432-4NS0102510 | | | | | | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | 0.8 | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | CNGA120412-4NS0102510 | | ● | ● | ● | CNGA433-4NS0102510 | | | | | | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | 1.2 | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

示例（Example）： 公制 ISO：CNGA120408-4NS0102510SLST30S PNH1020
英制 ANSI：CNGA432-4NS0102510SLST30S PNH1020

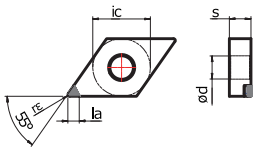
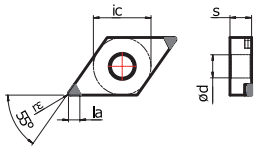
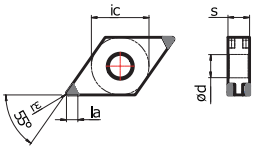
# 可修磨型刀片
PCBN Standard Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

## DN 55° 菱形 • 负型 • 有孔
PCBN Negative Inserts



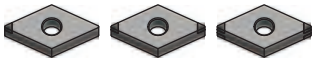
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | DNGA150402-1NS0102510 | SLST30S | ● | ● | ● | DNGA43(0.5)-1NS0102510 | SLST30S | 12.7 | 5.16 | 4.76 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DNGA150404-1NS0102510 | | ● | ● | ● | DNGA431-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DNGA150408-1NS0102510 | | ● | ● | ● | DNGA432-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DNGA150412-1NS0102510 | | ● | ● | ● | DNGA433-1NS0102510 | | | | | 1.2 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | DNGA150402-2NS0102510 | SLST30S | ● | ● | ● | DNGA43(0.5)-2NS0102510 | SLST30S | 12.7 | 5.16 | 4.76 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150404-2NS0102510 | | ● | ● | ● | DNGA431-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150408-2NS0102510 | | ● | ● | ● | DNGA432-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150412-2NS0102510 | | ● | ● | ● | DNGA433-2NS0102510 | | | | | 1.2 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
|  | DNGA150402-4NS0102510 | SLST30S | ● | ● | ● | DNGA43(0.5)-4NS0102510 | SLST30S | 12.7 | 5.16 | 4.76 | 0.2 | 3.0 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150404-4NS0102510 | | ● | ● | ● | DNGA431-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150408-4NS0102510 | | ● | ● | ● | DNGA432-4NS0102510 | | | | | 0.8 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150412-4NS0102510 | | ● | ● | ● | DNGA433-4NS0102510 | | | | | 1.2 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

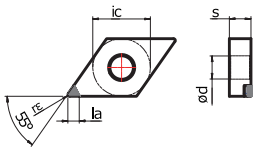
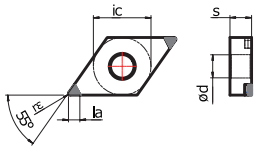
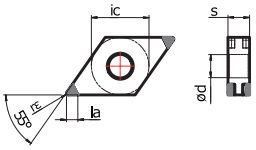
示例（Example）： 公制 ISO：DNGA150408-4NS0102510SLST30S PNH1020
英制 ANSI：DNGA432-4NS0102510SLST30S PNH1020

# DN 55° 菱形 • 负型 • 有孔

PCBN Negative Inserts



| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | DNGA150602-1NS0102510 | SLST30S | ● | ● | ● | DNGA43(0.5)-1NS0102510 | SLST30S | 12.7 | 5.16 | 6.35 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DNGA150604-1NS0102510 | | ● | ● | ● | DNGA431-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DNGA150608-1NS0102510 | | ● | ● | ● | DNGA432-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | DNGA150612-1NS0102510 | | ● | ● | ● | DNGA433-1NS0102510 | | | | | 1.2 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | DNGA150602-2NS0102510 | SLST30S | ● | ● | ● | DNGA43(0.5)-2NS0102510 | SLST30S | 12.7 | 5.16 | 6.35 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150604-2NS0102510 | | ● | ● | ● | DNGA431-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150608-2NS0102510 | | ● | ● | ● | DNGA432-2NS0102510 | | | | | 0.8 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | DNGA150612-2NS0102510 | | ● | ● | ● | DNGA433-2NS0102510 | | | | | 1.2 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
|  | DNGA150602-4NS0102510 | SLST30S | ● | ● | ● | DNGA43(0.5)-4NS0102510 | SLST30S | 12.7 | 5.16 | 6.35 | 0.2 | 3.0 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150604-4NS0102510 | | ● | ● | ● | DNGA431-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150608-4NS0102510 | | ● | ● | ● | DNGA432-4NS0102510 | | | | | 0.8 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | DNGA150612-4NS0102510 | | ● | ● | ● | DNGA433-4NS0102510 | | | | | 1.2 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

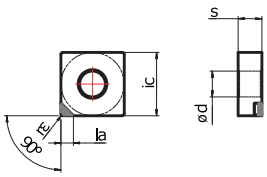
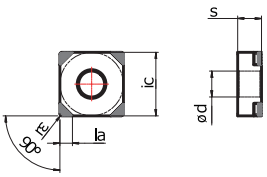
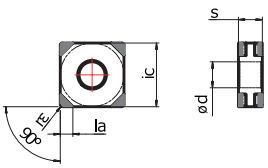
示例（Example）： 公制 ISO：DNGA150608-4NS0102510SLST30S PNH1020
英制 ANSI：DNGA432-4NS0102510SLST30S PNH1020

# 可修磨型刀片
## PCBN Standard Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

**SN** 90° 正方形 • 负型 • 有孔
PCBN Negative Inserts

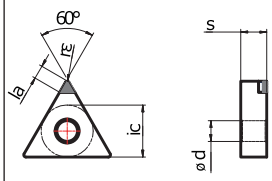
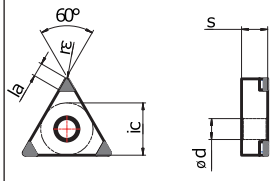
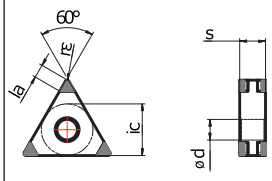
| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | SNGA120402-1NS0102510 | SLST30S | ● | ● | ● | SNGA43(0.5)-1NS0102510 | SLST30S | 12.7 | 5.16 | 4.76 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | SNGA120404-1NS0102510 | | ● | ● | ● | SNGA431-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | SNGA120408-1NS0102510 | | ● | ● | ● | SNGA432-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | SNGA120412-1NS0102510 | | ● | ● | ● | SNGA433-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 1.2 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | SNGA120402-4NS0102510 | SLST30S | ● | ● | ● | SNGA43(0.5)-4NS0102510 | SLST30S | 12.7 | 5.16 | 4.76 | 0.2 | 3.0 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | SNGA120404-4NS0102510 | | ● | ● | ● | SNGA431-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | SNGA120408-4NS0102510 | | ● | ● | ● | SNGA432-4NS0102510 | | | | | | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | 0.8 | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | SNGA120412-4NS0102510 | | ● | ● | ● | SNGA433-4NS0102510 | | | | | | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | 1.2 | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
|  | SNGA120402-8NS0102510 | SLST30S | ● | ● | ● | SNGA43(0.5)-8NS0102510 | SLST30S | 12.7 | 5.16 | 4.76 | 0.2 | 3.0 |
| | -8NS0101505 | | ● | ● | | -8NS0101505 | | | | | | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |
| | SNGA120404-8NS0102510 | | ● | ● | ● | SNGA431-8NS0102510 | | | | | 0.4 | |
| | -8NS0101505 | | ● | ● | | -8NS0101505 | | | | | | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |
| | SNGA120408-8NS0102510 | | ● | ● | ● | SNGA432-8NS0102510 | | | | | | |
| | -8NS0101505 | | ● | ● | | -8NS0101505 | | | | | 0.8 | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |
| | SNGA120412-8NS0102510 | | ● | ● | ● | SNGA433-8NS0102510 | | | | | | |
| | -8NS0101505 | | ● | ● | | -8NS0101505 | | | | | 1.2 | |
| | -8NS0152520 | | | ● | ● | -8NS0152520 | | | | | | |

示例（Example）： 公制 ISO：SNGA120408-8NS0102510SLST30S PNH1020
英制 ANSI：SNGA432-8NS0102510SLST30S PNH1020

**TN** 60° 三角形 • 负型 • 有孔
PCBN Negative Inserts

| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

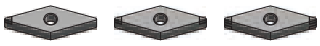
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | TNGA160402-1NS0102510 | SLST30S | ● | ● | ● | TNGA33(0.5)-1NS0102510 | SLST30S | 9.525 | 3.81 | 4.76 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TNGA160404-1NS0102510 | | ● | ● | ● | TNGA331-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TNGA160408-1NS0102510 | | ● | ● | ● | TNGA332-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | TNGA160412-1NS0102510 | | ● | ● | ● | TNGA333-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 1.2 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | TNGA160402-3NS0102510 | SLST30S | ● | ● | ● | TNGA33(0.5)-3NS0102510 | SLST30S | 9.525 | 3.81 | 4.76 | 0.2 | 3.0 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TNGA160404-3NS0102510 | | ● | ● | ● | TNGA331-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TNGA160408-3NS0102510 | | ● | ● | ● | TNGA332-3NS0102510 | | | | | | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | 0.8 | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | TNGA160412-3NS0102510 | | ● | ● | ● | TNGA333-3NS0102510 | | | | | | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | 1.2 | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
|  | TNGA160402-6NS0102510 | SLST30S | ● | ● | ● | TNGA33(0.5)-6NS0102510 | SLST30S | 9.525 | 3.81 | 4.76 | 0.2 | 3.0 |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | TNGA160404-6NS0102510 | | ● | ● | ● | TNGA331-6NS0102510 | | | | | 0.4 | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | TNGA160408-6NS0102510 | | ● | ● | ● | TNGA332-6NS0102510 | | | | | | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | 0.8 | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | TNGA160412-6NS0102510 | | ● | ● | ● | TNGA333-6NS0102510 | | | | | | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | 1.2 | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |

示例（Example）： 公制 ISO：TNGA160408-6NS0102510SLST30S PNH1020
ANSI ANSI：TNGA332-6NS0102510SLST30S PNH1020

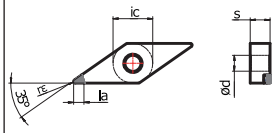
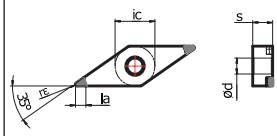
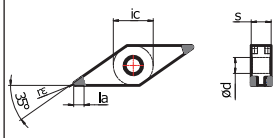
# 可修磨型刀片
## PCBN Standard Inserts

编码细则请参考B01-B02页
The rule of insert code please refer to page B01-B02

**VN** 35° 菱形 • 负型 • 有孔
PCBN Negative Inserts

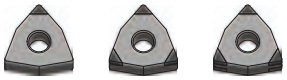


| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

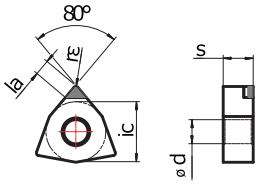
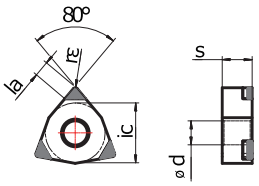
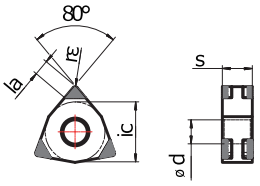
| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | VNGA160402-1NS0102510 | SLST30S | ● | ● | ● | VNGA33(0.5)-1NS0102510 | SLST30S | 9.525 | 3.81 | 4.76 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VNGA160404-1NS0102510 | | ● | ● | ● | VNGA331-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VNGA160408-1NS0102510 | | ● | ● | ● | VNGA332-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 0.8 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | VNGA160412-1NS0102510 | | ● | ● | ● | VNGA333-1NS0102510 | | | | | | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | 1.2 | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | VNGA160402-2NS0102510 | SLST30S | ● | ● | ● | VNGA33(0.5)-2NS0102510 | SLST30S | 9.525 | 3.81 | 4.76 | 0.2 | 3.0 |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VNGA160404-2NS0102510 | | ● | ● | ● | VNGA331-2NS0102510 | | | | | 0.4 | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VNGA160408-2NS0102510 | | ● | ● | ● | VNGA332-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 0.8 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
| | VNGA160412-2NS0102510 | | ● | ● | ● | VNGA333-2NS0102510 | | | | | | |
| | -2NS0101505 | | ● | ● | | -2NS0101505 | | | | | 1.2 | |
| | -2NS0152520 | | | ● | ● | -2NS0152520 | | | | | | |
|  | VNGA160402-4NS0102510 | SLST30S | ● | ● | ● | VNGA33(0.5)-4NS0102510 | SLST30S | 9.525 | 3.81 | 4.76 | 0.2 | 3.0 |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | VNGA160404-4NS0102510 | | ● | ● | ● | VNGA331-4NS0102510 | | | | | 0.4 | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | VNGA160408-4NS0102510 | | ● | ● | ● | VNGA332-4NS0102510 | | | | | | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | 0.8 | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |
| | VNGA160412-4NS0102510 | | ● | ● | ● | VNGA333-4NS0102510 | | | | | | |
| | -4NS0101505 | | ● | ● | | -4NS0101505 | | | | | 1.2 | |
| | -4NS0152520 | | | ● | ● | -4NS0152520 | | | | | | |

示例（Example）： 公制 ISO：VNGA160408-4NS0102510SLST30S PNH1020
英制 ANSI：VNGA332-4NS0102510SLST30S PNH1020

**WN** 80° 六边形 • 负型 • 有孔
PCBN Negative Inserts



| 标准型 | 锋利型 | 增强型 |
|---|---|---|
| S0102510 | S0101505 | S0152520 |
| Standard cutting edge | Sharp cutting edge | Strong cutting edge |

| Shape 图示 | 公制代码 ISO | Tip Shape 刀片结构 | H PNH0120 | H PNH1020 | H PNH2020 | 英制代码 ANSI | Tip Shape 刀片结构 | Dimensions in mm 刀片参数 ic | Ød | s | r | la |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | WNGA080402-1NS0102510 | SLST30S | ● | ● | ● | WNGA43(0.5)-1NS0102510 | SLST30S | 12.7 | 5.16 | 4.76 | 0.2 | 3.0 |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | WNGA080404-1NS0102510 | | ● | ● | ● | WNGA431-1NS0102510 | | | | | 0.4 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | WNGA080408-1NS0102510 | | ● | ● | ● | WNGA432-1NS0102510 | | | | | 0.8 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
| | WNGA080412-1NS0102510 | | ● | ● | ● | WNGA433-1NS0102510 | | | | | 1.2 | |
| | -1NS0101505 | | ● | ● | | -1NS0101505 | | | | | | |
| | -1NS0152520 | | | ● | ● | -1NS0152520 | | | | | | |
|  | WNGA080402-3NS0102510 | SLST30S | ● | ● | ● | WNGA43(0.5)-3NS0102510 | SLST30S | 12.7 | 5.16 | 4.76 | 0.2 | 3.0 |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | WNGA080404-3NS0102510 | | ● | ● | ● | WNGA431-3NS0102510 | | | | | 0.4 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | WNGA080408-3NS0102510 | | ● | ● | ● | WNGA432-3NS0102510 | | | | | 0.8 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
| | WNGA080412-3NS0102510 | | ● | ● | ● | WNGA433-3NS0102510 | | | | | 1.2 | |
| | -3NS0101505 | | ● | ● | | -3NS0101505 | | | | | | |
| | -3NS0152520 | | | ● | ● | -3NS0152520 | | | | | | |
|  | WNGA080402-6NS0102510 | SLST30S | ● | ● | ● | WNGA43(0.5)-6NS0102510 | SLST30S | 12.7 | 5.16 | 4.76 | 0.2 | 3.0 |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080404-6NS0102510 | | ● | ● | ● | WNGA431-6NS0102510 | | | | | 0.4 | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080408-6NS0102510 | | ● | ● | ● | WNGA432-6NS0102510 | | | | | 0.8 | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |
| | WNGA080412-6NS0102510 | | ● | ● | ● | WNGA433-6NS0102510 | | | | | 1.2 | |
| | -6NS0101505 | | ● | ● | | -6NS0101505 | | | | | | |
| | -6NS0152520 | | | ● | ● | -6NS0152520 | | | | | | |

示例（Example）： 公制 ISO：WNGA080402-6NS0102510SLST30S PNH1020
英制 ANSI：WNGA43(0.5)-6NS0102510SLST30S PNH1020

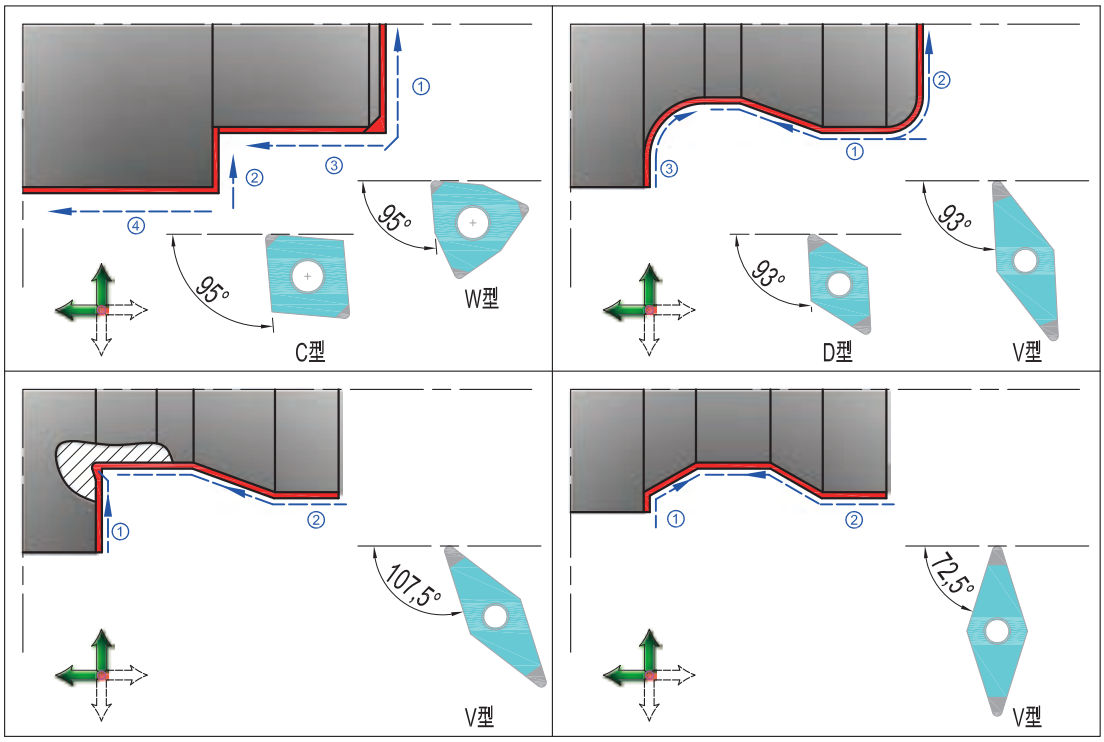
# 正确走刀路径推荐

Cutting direction recommendation

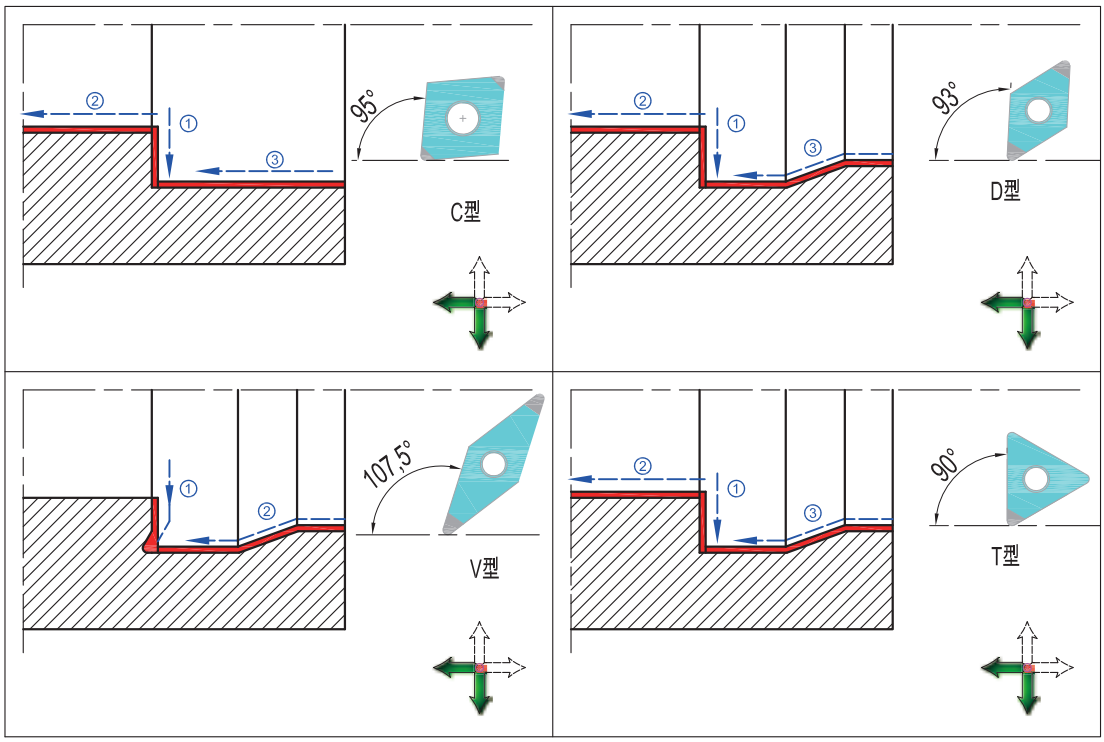
## ■使用PCBN刀具车削淬硬钢时推荐的走刀路径

Recommended PCBN insert cutting direction for turning hardened steel.

### ■外圆加工 External machining




### ■内圆加工 Internal machining






WORLDIA

# 选择正确的切削参数

Cutting parameter recommendation

## ■加工淬火钢时，工件硬度、刀尖圆弧、切深与进给之间的关系

The appropriate cutting speed,vc(mm/min), nose radius,cutting depth,ap(mm) in different workpiece hardness can be selected by means of tables below.

### 连续切削淬火钢（推荐值）

Continuous cutting hard steel data tables.

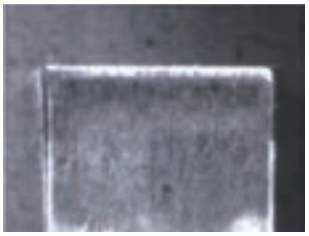
| 工件硬度 (HRC) | 推荐切削速度 Vc(m/min) | 刀尖圆弧 r（mm） | 切深ap(mm) | | | | |
|---|---|---|---|---|---|---|---|
| | | | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 |
| | | | 进给量f(mm/rev)≦ | | | | |
| 45～48 | 280 | 0.4 | 0.27 | 0.21 | 0.18 | 0.18 | ---- |
| | | 0.8 | 0.38 | 0.29 | 0.23 | 0.22 | 0.20 |
| | | 1.2 | 0.45 | 0.32 | 0.27 | 0.23 | 0.22 |
| | | 1.6 | 0.50 | 0.36 | 0.31 | 0.27 | 0.25 |
| 48～52 | 240 | 0.4 | 0.24 | 0.18 | 0.16 | 0.16 | ---- |
| | | 0.8 | 0.34 | 0.26 | 0.21 | 0.19 | 0.18 |
| | | 1.2 | 0.40 | 0.29 | 0.24 | 0.21 | 0.19 |
| | | 1.6 | 0.45 | 0.32 | 0.27 | 0.24 | 0.22 |
| 52～56 | 200 | 0.4 | 0.21 | 0.16 | 0.14 | 0.14 | ---- |
| | | 0.8 | 0.30 | 0.22 | 0.18 | 0.17 | 0.15 |
| | | 1.2 | 0.35 | 0.25 | 0.21 | 0.18 | 0.17 |
| | | 1.6 | 0.39 | 0.28 | 0.24 | 0.21 | 0.20 |
| 56～60 | 160 | 0.4 | 0.18 | 0.14 | 0.12 | 0.12 | ---- |
| | | 0.8 | 0.26 | 0.20 | 0.16 | 0.15 | 0.13 |
| | | 1.2 | 0.31 | 0.22 | 0.18 | 0.16 | 0.15 |
| | | 1.6 | 0.34 | 0.25 | 0.21 | 0.18 | 0.17 |
| 60～64 | 140 | 0.4 | 0.15 | 0.11 | 0.10 | 0.10 | ---- |
| | | 0.8 | 0.22 | 0.16 | 0.13 | 0.12 | 0.11 |
| | | 1.2 | 0.26 | 0.18 | 0.15 | 0.13 | 0.12 |
| | | 1.6 | 0.28 | 0.20 | 0.17 | 0.15 | 0.14 |

# 刀片磨损原因及解决方案

Troubleshooting recommendations

## ■后刀面磨损

Flank Ware

原因：切削速度太高
材质耐磨性不足
进给率太低

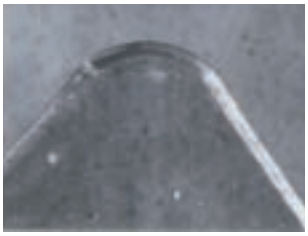
解决方法：降低切削速度
选择耐磨性更高的材质
调整进给量与切削速度和切削深度的匹配（增加进给量）

Reason: Cutting speed is too fast
Lower wear resistance of material
Feed rate is too low

Solution: Reduce cutting speed
Select a higher abrasion resistance material
Adjust the cutting speed and depth of cut (Increase feed)

## ■刃口破损

Crater Wear

原因：材质过硬
震动
进给率太高或切削深度太大
断续切削
碎屑破坏

解决方法：降低切削速度
选择耐磨性更高的材质
调整进给量与切削速度和切削深度的匹配（增加进给量）

Reason: The work piece is too hard
Vibration
High speed or great depth of cut
Interrupt cutting
Damaged by chips

Solution: Reduce cutting speed
Select a higher abrasion resistance material
Adjust the cutting speed and depth of cut (Increase feed)

## ■月牙洼磨损

Notch Ware


原因：过高的切削速度和/或进给量
材质的耐磨性不足
冷却液供给不足

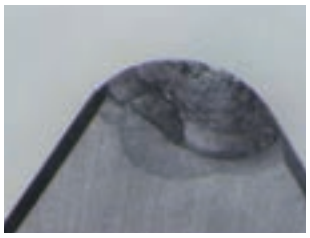
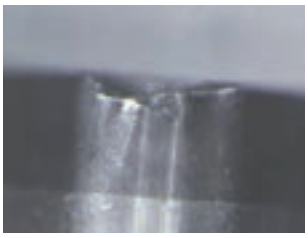
解决方法：降低切削速度和/或进给量
增加冷却液流量和压力，优化冷却液供给
使用抗月牙洼磨损性能更高的材质

Reason: High cutting speed or big feed
Low material of wear resistance
Shortage of coolant

Solution: Reduce cutting speed / feed
Increase coolant and pressure, optimized coolant supply
Select a higher abrasion resistance material

## ■崩刃

Chipping

原因：刀片承受更大的压力
稳定性不足
圆角太小
刃口切深处破损过大

解决方法：使用韧性更好的材质
使用带倒棱的刀片
增加刀刃的倒圆

Reason: Too high pressure on the inserts
Lack of stability
Nose radius too small
Cutting edge damaged

Solution: Select a higher abrasion resistance material
Use inserts with chamfer
Increase cutting edge honed

# 刀尖圆弧、进给与粗糙度关系

Nose radius, feed rate against surface finish

## ■刀尖圆弧、进给与粗糙度关系

Influnence of nose radius and feed rate on the surface finish.

车削时，刀尖半径与进给量、表面粗糙度的理论值存在一定关系，我们选择进给量时一般不应超过此值。
The table below gives recommended maximum feed rates to achieve a special Ra. Value.

$$h=r\varepsilon-(r\varepsilon^2-(0.5\times f)^2)0.5$$

h为残留高度，而Ra=(0.25~0.33)h，因此

$$f_{max}=(Ra\times r\varepsilon/50)^{\frac{1}{2}}$$

| 刀尖圆弧 rε(mm)<br>Nose radius(mm) | 粗糙度要求Ra(μm)<br>Surface finish Ra value(μm) | | | | | |
|---|---|---|---|---|---|---|
| | 0.2 | 0.4 | 0.8 | 1.6 | 3.2 | 6.4 |
| | 进给量f(mm/rev)≦<br>feed (mm/rev) rate≦ | | | | | |
| 0.2 | 0.028 | 0.040 | 0.057 | 0.080 | 0.113 | 0.160 |
| 0.4 | 0.040 | 0.057 | 0.080 | 0.113 | 0.160 | 0.226 |
| 0.8 | 0.057 | 0.080 | 0.113 | 0.160 | 0.226 | 0.320 |
| 1.2 | 0.069 | 0.098 | 0.139 | 0.196 | 0.277 | 0.392 |
| 1.6 | 0.080 | 0.113 | 0.160 | 0.226 | 0.320 | 0.453 |
| 2.4 | 0.098 | 0.139 | 0.196 | 0.277 | 0.392 | 0.554 |

# 机床转速转换表

Spindle speed recommendation

## ■机床转速转换表

The appropriate spindle speed can be selected by means of the tables below .

| 切削速度Vc(m/min) | 工件/刀盘直径（mm） Workpiece/Tool Holer Diameter（mm） | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 12 | 16 | 20 | 25 | 32 | 50 | 63 | 80 | 100 | 125 | 160 | 175 | 200 | 250 |
| 80 | 2123 | 1592 | 1274 | 1019 | 796 | 510 | 404 | 318 | 255 | 204 | 159 | 146 | 127 | 102 |
| 90 | 2389 | 1791 | 1433 | 1146 | 896 | 573 | 455 | 358 | 287 | 229 | 179 | 164 | 143 | 115 |
| 100 | 2654 | 1990 | 1592 | 1274 | 995 | 637 | 506 | 398 | 318 | 255 | 199 | 182 | 159 | 127 |
| 110 | 2919 | 2189 | 1752 | 1401 | 1095 | 701 | 556 | 438 | 350 | 280 | 219 | 200 | 175 | 140 |
| 120 | 3185 | 2389 | 1911 | 1529 | 1194 | 764 | 607 | 478 | 382 | 306 | 239 | 218 | 191 | 153 |
| 140 | 3715 | 2787 | 2229 | 1783 | 1393 | 892 | 708 | 557 | 446 | 357 | 279 | 255 | 223 | 178 |
| 160 | 4246 | 3185 | 2548 | 2038 | 1592 | 1019 | 809 | 637 | 510 | 408 | 318 | 291 | 255 | 204 |
| 180 | 4777 | 3583 | 2866 | 2293 | 1791 | 1146 | 910 | 717 | 573 | 459 | 358 | 328 | 287 | 229 |
| 200 | 5308 | 3981 | 3185 | 2548 | 1990 | 1274 | 1011 | 796 | 637 | 510 | 398 | 364 | 318 | 255 |
| 220 | 5839 | 4379 | 3503 | 2803 | 2189 | 1401 | 1112 | 876 | 701 | 561 | 438 | 400 | 350 | 280 |
| 240 | 6369 | 4777 | 3822 | 3057 | 2389 | 1529 | 1213 | 955 | 764 | 611 | 478 | 437 | 382 | 306 |
| 260 | 6900 | 5175 | 4140 | 3312 | 2588 | 1656 | 1314 | 1035 | 828 | 662 | 518 | 473 | 414 | 331 |
| 280 | 7431 | 5573 | 4459 | 3567 | 2787 | 1783 | 1415 | 1115 | 892 | 713 | 557 | 510 | 446 | 357 |
| 300 | | 5971 | 4777 | 3822 | 2986 | 1911 | 1517 | 1194 | 955 | 764 | 597 | 546 | 478 | 382 |
| 400 | | | | | | 2548 | 2022 | 1592 | 1274 | 1019 | 796 | 728 | 637 | 510 |
| 600 | | | | | | 3822 | 3033 | 2389 | 1911 | 1529 | 1194 | 1092 | 955 | 764 |
| 800 | | | | | | 5096 | 4044 | 3185 | 2548 | 2038 | 1592 | 1456 | 1274 | 1019 |
| 1000 | | | | | | 6369 | 5055 | 3981 | 3185 | 2548 | 1990 | 1820 | 1592 | 1274 |

# 配合公差等级表-IT等级表

IT standard tolerance

## ■配合公差等级表-IT等级表

The apropriate tolerance between spindle and hole can be selected by means of tables below

表示孔径和外径公差的偏差幅度，IT后面的数字越小说明精度越高，越大表示公差越低，该数值会随着刀具直径和孔径的变化而变化。IT8以下最好以铰削加工为主，IT5以下则必须分开粗、精加工。以上要求是基于钢材加工的一般数值，实际加工时由于被加工材料的成分和硬度不同，会有很大差异。

The ISO-basic tolerances (International Tolerance Grades, or, “IT”) which apply to all linear sizes (external and internal sizes, diameters, lengths, widths and thicknesses). An IT-grade number establishes the magnitude of the tolerance zone, while the tolerance position letter determines where the tolerance zone is in relation to the zero line.

| 基本尺寸 (mm)+A7:V34 | | IT01 | IT0 | IT1 | IT2 | IT3 | IT4 | IT5 | IT6 | IT7 | IT8 | IT9 | IT10 | IT11 | IT12 | IT13 | IT14 | IT15 | IT16 | IT17 | IT18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| > | ≦ | (μm) | | | | | | | | | | | | | (mm) | | | | | | |
| --- | 3 | 0.3 | 0.5 | 0.8 | 1.2 | 2 | 3 | 4 | 6 | 10 | 14 | 25 | 40 | 60 | 0.1 | 0.14 | 0.25 | 0.4 | 0.6 | 1 | 1.4 |
| 3 | 6 | 0.4 | 0.6 | 1 | 1.5 | 2.5 | 4 | 5 | 8 | 12 | 18 | 30 | 48 | 75 | 0.12 | 0.18 | 0.3 | 0.48 | 0.75 | 1.2 | 1.8 |
| 6 | 10 | 0.4 | 0.6 | 1 | 1.5 | 2.5 | 4 | 6 | 9 | 15 | 22 | 36 | 58 | 90 | 0.15 | 0.22 | 0.36 | 0.58 | 0.9 | 1.5 | 2.2 |
| 10 | 18 | 0.5 | 0.8 | 1.2 | 2 | 3 | 5 | 8 | 11 | 18 | 27 | 43 | 700 | 110 | 0.18 | 0.27 | 0.43 | 0.7 | 1.1 | 1.8 | 2.7 |
| 18 | 30 | 0.6 | 1 | 1.5 | 2.5 | 4 | 6 | 9 | 13 | 21 | 33 | 52 | 84 | 130 | 0.21 | 0.33 | 0.52 | 1.84 | 1.3 | 2.1 | 3.3 |
| 30 | 50 | 0.6 | 1 | 1.5 | 2.5 | 4 | 7 | 11 | 16 | 25 | 39 | 62 | 100 | 160 | 0.25 | 0.39 | 0.62 | 1 | 1.6 | 2.5 | 3.9 |
| 50 | 80 | 0.8 | 1.2 | 2 | 3 | 5 | 8 | 13 | 19 | 30 | 46 | 74 | 120 | 190 | 0.3 | 0.46 | 0.74 | 1.2 | 1.9 | 3 | 4.6 |
| 80 | 120 | 1.5 | 2.5 | 4 | 6 | 10 | 15 | 22 | 35 | 54 | 87 | 140 | 220 | 350 | 0.54 | 0.87 | 1.4 | 2.2 | 3.5 | 5.4 | |
| 120 | 180 | 1.2 | 2 | 3.5 | 5 | 8 | 12 | 18 | 25 | 40 | 63 | 100 | 160 | 250 | 0.4 | 0.63 | 1 | 1.6 | 2.5 | 4 | 6.3 |
| 180 | 250 | 2 | 3 | 4.5 | 7 | 10 | 14 | 20 | 29 | 46 | 72 | 115 | 185 | 290 | 0.46 | 0.72 | 1.15 | 1.85 | 2.9 | 4.6 | 7.2 |
| 250 | 315 | 2.5 | 4 | 6 | 8 | 12 | 16 | 23 | 32 | 52 | 81 | 130 | 210 | 320 | 0.52 | 0.81 | 1.3 | 2.1 | 3.2 | 5.2 | 8.1 |
| 315 | 400 | 3 | 5 | 7 | 9 | 13 | 18 | 25 | 36 | 57 | 89 | 140 | 230 | 360 | 0.57 | 0.89 | 1.4 | 2.3 | 3.6 | 5.7 | 8.9 |
| 400 | 500 | 4 | 6 | 8 | 10 | 15 | 20 | 27 | 40 | 63 | 97 | 155 | 250 | 400 | 0.63 | 0.97 | 1.55 | 2.5 | 4 | 6.3 | 9.7 |
| 500 | 630 | 4.5 | 6 | 9 | 11 | 16 | 22 | 30 | 44 | 70 | 110 | 175 | 280 | 440 | 0.7 | 1.75 | 2.8 | 4.4 | 7 | 11 | |
| 630 | 800 | 5 | 7 | 10 | 13 | 18 | 25 | 35 | 50 | 80 | 125 | 200 | 320 | 500 | 0.8 | 1.25 | 2 | 3.2 | 5 | 8 | 12.5 |
| 800 | 1000 | 5.5 | 8 | 11 | 15 | 21 | 29 | 40 | 56 | 90 | 140 | 230 | 360 | 560 | 0.9 | 1.4 | 2.3 | 3.6 | 5.6 | 9 | 14 |
| 1000 | 1250 | 6.5 | 9 | 13 | 18 | 24 | 34 | 46 | 66 | 105 | 165 | 260 | 420 | 660 | 1.05 | 1.65 | 2.6 | 4.2 | 6.6 | 10.5 | 16.5 |
| 1250 | 1600 | 8 | 11 | 15 | 21 | 29 | 40 | 54 | 78 | 125 | 195 | 310 | 500 | 780 | 1.25 | 1.95 | 3.1 | 5 | 7.8 | 12.5 | 19.5 |
| 1600 | 2000 | 9 | 13 | 18 | 25 | 35 | 48 | 65 | 92 | 150 | 230 | 370 | 600 | 920 | 1.5 | 2.3 | 3.7 | 6 | 9.2 | 15 | 23 |
| 2000 | 2500 | 11 | 15 | 22 | 30 | 41 | 57 | 77 | 110 | 175 | 280 | 440 | 700 | 1100 | 1.75 | 2.8 | 4.4 | 7 | 11 | 17.5 | 28 |
| 2500 | 3150 | 13 | 18 | 26 | 36 | 50 | 69 | 93 | 135 | 210 | 330 | 540 | 860 | 1350 | 2.1 | 3.3 | 5.4 | 8.6 | 13.5 | 21 | 33 |
| 3150 | 4000 | 16 | 23 | 33 | 45 | 60 | 84 | 115 | 165 | 260 | 410 | 660 | 1050 | 1650 | 2.6 | 4.1 | 6.6 | 10.5 | 16.5 | 26 | 41 |
| 4000 | 5000 | 20 | 28 | 40 | 55 | 74 | 100 | 140 | 200 | 320 | 500 | 800 | 1300 | 2000 | 3.2 | 5 | 8 | 13 | 20 | 32 | 50 |
| 5000 | 6300 | 25 | 35 | 49 | 67 | 92 | 125 | 170 | 250 | 400 | 620 | 980 | 1550 | 2500 | 4 | 6.2 | 9.8 | 15.5 | 25 | 40 | 62 |
| 6300 | 8000 | 31 | 43 | 62 | 84 | 115 | 155 | 215 | 310 | 490 | 760 | 1200 | 1950 | 3100 | 4.9 | 7.6 | 12 | 19.5 | 31 | 49 | 76 |
| 8000 | 10000 | 38 | 53 | 76 | 105 | 140 | 195 | 270 | 380 | 600 | 940 | 1500 | 2400 | 3800 | 6 | 9.4 | 15 | 24 | 38 | 60 | 94 |

# 轴、孔配合公差表

Spindle and hole standard tolerance

## ■轴、孔配合公差表

The appropriate spindle speed can be selected by means of the tables below .

| 基本尺寸(mm) Spindle diameter(mm) | | 轴的公差范围表 Spindle tolerance range | | | | | | | | | | | | | | | | | | | | | | | | 单位：μm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| > | ≦ | f5 | f6 | f7 | f8 | g6 | g7 | g8 | h6 | h7 | h8 | h9 | h10 | js6 | js7 | js8 | js9 | k6 | k7 | k8 | m6 | m7 | m8 | n6 | n7 | n8 |
| — | 3 | -6 | -6 | -6 | -6 | -2 | -2 | -2 | 0 | 0 | 0 | 0 | 0 | ±3 | ±5 | ±7 | ±12 | +6 | +10 | +14 | +8 | +12 | +16 | +10 | +14 | +18 |
| | | -10 | -12 | -16 | -20 | -8 | -12 | -16 | -6 | -10 | -14 | -25 | -40 | | | | | 0 | 0 | 0 | +2 | +2 | +2 | +4 | +4 | +4 |
| 3 | 6 | -10 | -10 | -10 | -10 | -4 | -4 | -4 | 0 | 0 | 0 | 0 | 0 | ±4 | ±6 | ±9 | ±15 | +9 | +13 | +18 | +12 | +16 | +22 | +16 | +20 | +26 |
| | | -15 | -18 | -22 | -28 | -12 | -16 | -22 | -8 | -12 | -18 | -30 | -48 | | | | | +1 | +1 | 0 | +4 | +4 | +4 | +8 | +8 | +8 |
| 6 | 10 | -13 | -13 | -13 | -13 | -5 | -5 | -5 | 0 | 0 | 0 | 0 | 0 | ±4.5 | ±7 | ±11 | ±18 | +10 | +16 | +22 | +15 | +21 | +28 | +19 | +25 | +32 |
| | | -19 | -22 | -28 | -35 | -14 | -20 | -27 | -9 | -15 | -22 | -36 | -58 | | | | | +1 | +1 | 0 | +6 | +6 | +6 | +10 | +10 | +10 |
| 10 | 14 | -16 | -16 | -16 | -16 | -6 | -6 | -6 | 0 | 0 | 0 | 0 | 0 | ±5.5 | ±9 | ±13 | ±21 | +12 | +19 | +27 | +18 | +25 | +34 | +23 | +30 | +39 |
| 14 | 18 | -24 | -27 | -34 | -43 | -17 | -24 | -33 | -11 | -18 | -27 | -43 | -70 | | | | | +1 | +1 | 0 | +7 | +7 | +7 | +12 | +12 | +12 |
| 18 | 24 | -20 | -20 | -20 | -20 | -7 | -7 | -7 | 0 | 0 | 0 | 0 | 0 | ±6.5 | ±10 | ±16 | ±26 | +15 | +23 | +33 | +21 | +29 | +41 | +28 | +36 | +48 |
| 24 | 30 | -29 | -33 | -41 | -53 | -20 | -28 | -40 | -13 | -21 | -33 | -52 | -84 | | | | | +2 | +2 | 0 | +8 | +8 | +8 | +15 | +15 | +15 |
| 30 | 40 | -25 | -25 | -25 | -25 | -9 | -9 | -9 | 0 | 0 | 0 | 0 | 0 | ±8 | ±12 | ±19 | ±31 | +18 | +27 | +39 | +25 | +34 | +48 | +33 | +42 | +56 |
| 40 | 50 | -36 | -41 | -50 | -64 | -25 | -34 | -48 | -16 | -25 | -39 | -62 | -100 | | | | | +2 | +2 | 0 | +9 | +9 | +9 | +17 | +17 | +17 |
| 50 | 65 | -30 | -30 | -30 | -30 | -10 | -10 | -10 | 0 | 0 | 0 | 0 | 0 | ±9.5 | ±15 | ±23 | ±37 | +21 | +32 | +46 | +30 | +41 | +57 | +39 | +50 | +66 |
| 65 | 80 | -43 | -49 | -60 | -76 | -29 | -40 | -56 | -19 | -30 | -46 | -74 | -120 | | | | | +2 | +2 | 0 | +11 | +11 | +11 | +20 | +20 | +20 |
| 80 | 100 | -36 | -36 | -36 | -36 | -12 | -12 | -12 | 0 | 0 | 0 | 0 | 0 | ±11 | ±17 | ±27 | ±43 | +25 | +38 | +54 | +35 | +48 | +67 | +45 | +58 | +77 |
| 100 | 120 | -51 | -58 | -71 | -90 | -34 | -47 | -66 | -22 | -35 | -54 | -87 | -140 | | | | | +3 | +3 | 0 | +13 | +13 | +13 | +23 | +23 | +23 |
| 120 | 140 | -43 | -43 | -43 | -43 | -14 | -14 | -14 | 0 | 0 | 0 | 0 | 0 | ±12.5 | ±20 | ±31 | ±50 | +28 | +43 | +63 | +40 | +55 | +78 | +52 | +67 | +90 |
| 140 | 160 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 180 | -61 | -68 | -83 | -106 | -39 | -54 | -77 | -25 | -40 | -63 | -100 | -160 | | | | | +3 | +3 | 0 | +15 | +15 | +15 | +27 | +27 | +27 |
| 180 | 200 | -50 | -50 | -50 | -50 | -15 | -15 | -15 | 0 | 0 | 0 | 0 | 0 | ±14.5 | ±23 | ±36 | ±57 | +33 | +50 | +72 | +46 | +63 | +89 | +60 | +77 | +103 |
| 200 | 225 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 225 | 250 | -70 | -79 | -96 | -122 | -44 | -61 | -87 | -29 | -46 | -72 | -115 | -185 | | | | | +4 | +4 | 0 | +17 | +17 | +17 | +31 | +31 | +31 |
| 250 | 280 | -56 | -56 | -56 | -56 | -17 | -17 | -17 | 0 | 0 | 0 | 0 | 0 | ±16 | ±26 | ±40 | ±65 | +36 | +56 | +81 | +52 | +72 | +101 | +66 | +86 | +115 |
| 280 | 315 | -79 | -88 | -108 | -137 | -49 | -69 | -98 | -32 | -52 | -81 | -130 | -210 | | | | | +4 | +4 | 0 | +20 | +20 | +20 | +34 | +34 | +34 |

| 基本尺寸(mm) Hole diameter(mm) | | 孔的公差范围表 Hole tolerance range | | | | | | | | | | | | | | | | | | | | | | | | 单位：μm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| > | ≦ | F6 | F7 | F8 | F9 | G6 | G7 | G8 | H6 | H7 | H8 | H9 | H10 | Js6 | Js7 | Js8 | Js9 | K6 | K7 | K8 | M6 | M7 | M8 | N6 | N7 | N8 |
| — | 3 | +12 | +16 | +20 | +31 | +8 | +12 | +16 | +6 | +10 | +14 | +25 | +40 | ±3 | ±5 | ±7 | ±12 | 0 | 0 | 0 | -2 | -2 | -2 | -4 | -4 | -4 |
| | | +6 | +6 | +6 | +6 | +2 | +2 | +2 | 0 | 0 | 0 | 0 | 0 | | | | | -6 | -10 | -14 | -8 | -12 | -16 | -10 | -14 | -18 |
| 3 | 6 | +18 | +22 | +28 | +40 | +12 | +16 | +22 | 0,+8 | 0,+12 | 0,+18 | 0,+30 | 0,+48 | ±4 | ±6 | ±9 | ±15 | +2 | +3 | +5 | -1 | 0 | +2 | -5 | -4 | -2 |
| | | +10 | +10 | +10 | +10 | +4 | +4 | +4 | 0 | 0 | 0 | 0 | 0 | | | | | -6 | -9 | -13 | -9 | -12 | -16 | -13 | -16 | -20 |
| 6 | 10 | +22 | +28 | +35 | +49 | +14 | +20 | +27 | +9 | +15 | +22 | +36 | +58 | ±4.5 | ±7 | ±11 | ±18 | +2 | +5 | +6 | -3 | 0 | +1 | -7 | -4 | -3 |
| | | +13 | +13 | +13 | +13 | +5 | +5 | +5 | 0 | 0 | 0 | 0 | 0 | | | | | -7 | -10 | -16 | -12 | -15 | -21 | -16 | -19 | -25 |
| 10 | 14 | +27 | +34 | +43 | +59 | +17 | +24 | +33 | +11 | +18 | +27 | +43 | +70 | ±5.5 | ±9 | ±13 | ±21 | +2 | +6 | +8 | -4 | 0 | +2 | -9 | -5 | -3 |
| 14 | 18 | +16 | +16 | +16 | +16 | +6 | +6 | +6 | 0 | 0 | 0 | 0 | 0 | | | | | -9 | -12 | -19 | -15 | -18 | -25 | -20 | -23 | -30 |
| 18 | 24 | +33 | +41 | +53 | +72 | +20 | +28 | +40 | +13 | +21 | +33 | +52 | +84 | ±6.5 | ±10 | ±16 | ±26 | +2 | +6 | +10 | -4 | 0 | +4 | -11 | -7 | -3 |
| 24 | 30 | +20 | +20 | +20 | +20 | +7 | +7 | +7 | 0 | 0 | 0 | 0 | 0 | | | | | -11 | -15 | -23 | -17 | -21 | -29 | -24 | -28 | -36 |
| 30 | 40 | +41 | +50 | +64 | +87 | +25 | +34 | +48 | +16 | +25 | +39 | +62 | +100 | ±8 | ±12 | ±19 | ±31 | +3 | +7 | +12 | -4 | 0 | +5 | -12 | -8 | -3 |
| 40 | 50 | +25 | +25 | +25 | +25 | +9 | +9 | +9 | 0 | 0 | 0 | 0 | 0 | | | | | -13 | -18 | -27 | -20 | -25 | -34 | -28 | -33 | -42 |
| 50 | 65 | +49 | +60 | +76 | +104 | +29 | +40 | +56 | +19 | +30 | +46 | +74 | +120 | ±9.5 | ±15 | ±23 | ±37 | +4 | +9 | +14 | -5 | 0 | +5 | -14 | -9 | -4 |
| 65 | 80 | +30 | +30 | +30 | +30 | +10 | +10 | +10 | 0 | 0 | 0 | 0 | 0 | | | | | -15 | -21 | -32 | -24 | -30 | -41 | -33 | -39 | -50 |
| 80 | 100 | +58 | +71 | +90 | +123 | +34 | +47 | +66 | +22 | +35 | +54 | +87 | +140 | ±11 | ±17 | ±27 | ±43 | +4 | +10 | +16 | -6 | 0 | +6 | -16 | -10 | -4 |
| 100 | 120 | +36 | +36 | +36 | +36 | +12 | +12 | +12 | 0 | 0 | 0 | 0 | 0 | | | | | -18 | -25 | -38 | -28 | -35 | -48 | -38 | -45 | -58 |
| 120 | 140 | +68 | +83 | +106 | +143 | +39 | +54 | +77 | +25 | +40 | +63 | +100 | +160 | ±12.5 | ±20 | ±31 | ±50 | +4 | +12 | +20 | -8 | 0 | +8 | -20 | -12 | -4 |
| 140 | 160 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 160 | 180 | +43 | +43 | +43 | +43 | +14 | +14 | +14 | 0 | 0 | 0 | 0 | 0 | | | | | -21 | -28 | -43 | -33 | -40 | -55 | -45 | -52 | -67 |
| 180 | 200 | +79 | +96 | +122 | +165 | +44 | +61 | +87 | +29 | +46 | +72 | +115 | +185 | ±14.5 | ±23 | ±36 | ±57 | +5 | +13 | +22 | -8 | 0 | +9 | -22 | -14 | -5 |
| 200 | 225 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 225 | 250 | +50 | +50 | +50 | +50 | +15 | +15 | +15 | 0 | 0 | 0 | 0 | 0 | | | | | -24 | -33 | -50 | -37 | -46 | -63 | -51 | -60 | -77 |
| 250 | 280 | +88 | +108 | +137 | +186 | +49 | +69 | +98 | +32 | +52 | +81 | +130 | +210 | ±16 | ±26 | ±40 | ±65 | +5 | +16 | +25 | -9 | 0 | +9 | -25 | -14 | -5 |
| 280 | 315 | +56 | +56 | +56 | +56 | +17 | +17 | +17 | 0 | 0 | 0 | 0 | 0 | | | | | -27 | -36 | -56 | -41 | -52 | -72 | -57 | -66 | -86 |

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PCBN Inserts For
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PCBN可转位面铣刀
PCBN Face Milling

PCD可转位面铣刀
PCD Face Milling

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PCD/CVDD Inserts

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Chip Breaker PCBN Inserts

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