

PCBN/PCD TURNING TOOLS

PCBN/PCD

PCBN/PCD Turning Insert Grades

PCBN Grades for K Applications

| Grade | Cutting Range | Advantages | Applications |
|-------------------------|------------------------------|--|---|
| B9121 (YP) | Finishing | <ul style="list-style-type: none"> Fine grain size, high CBN content and cermet binder system of PCBN inserts, which can realize continuous to heavy interrupted cutting. Superior impact resistance and chemical stability. | <ul style="list-style-type: none"> Suitable for finish cutting of Cast iron and Sintered Powder Metal. Suitable for milling of tool steels and hardened steels. |
| NEW B9123 (YP) | Semi-finishing | <ul style="list-style-type: none"> Fine grain size, high CBN content and metal binder system. High abrasion resistance, Outstanding impact strength, excellent edge quality and fine surface finishes. | <ul style="list-style-type: none"> Suitable for light interrupted or Rough cutting of pearlitic cast iron. Suitable for milling of tool steels or die steels. Suitable for finish cutting of Ni and Co-based super alloys. |
| NEW B9131 (YS/YZ) | Finishing and Semi-finishing | <ul style="list-style-type: none"> Solid CBN with mixed grain size distribution and high CBN content. High impact resistance and chemical wear resistance which has universal use. | <ul style="list-style-type: none"> Suitable for semi-finishing and finishing of high hard alloy cast iron and gray cast iron. Suitable for semi-finishing and finishing of hardened steels. |
| NEW B9132 (YS/YZ) | Finishing | <ul style="list-style-type: none"> Solid CBN with fine grain size and high CBN content. Excellent abrasion resistance and chip resistance. | <ul style="list-style-type: none"> Suitable for roughing and finishing of gray cast iron. Suitable for roughing and finishing of high hard alloy cast iron. |
| NEW B9141 (YS) | Heavy Roughing | <ul style="list-style-type: none"> Irregularly CBN grain appearance. Excellent impact and chip resistance. | <ul style="list-style-type: none"> Suitable for heavy roughing or finishing of high hard alloy cast iron, gray cast iron. Suitable for roughing and finishing of high manganese steels. |

PCBN Grades for H Applications

| Grade | Cutting Range | Advantages | Applications |
|--|-----------------------------|--|--|
| B9420 (YP) | Finishing | <ul style="list-style-type: none"> • Fine grain size, lower CBN content, ceramic binder system. • Excellent abrasion resistance and chemical stability, high fracture toughness. | <ul style="list-style-type: none"> • It was designed for continuous and light interrupted finish machining of hardened steels (>50 HRC), and can successfully replace conventional Aluminum oxide grinding in hard turning operations. |
| B9523 (YP) | Finishing | <ul style="list-style-type: none"> • Fine grain size, lower CBN content, ceramic binder system. • Excellent abrasion resistance and chip resistance. | <ul style="list-style-type: none"> • Suitable for finish cutting of automotive steels in high speed, continuous conditions. • Suitable for cool-work steels and Valve seat alloy steels. |
| B9241 (YS) <small>NEW</small> | Semi-finishing and Roughing | <ul style="list-style-type: none"> • Solid CBN is sintered by high percentage coarse grains. • Excellent impact resistance. | <ul style="list-style-type: none"> • Suitable for roughing of hardened steels under interrupted conditions. • Suitable for cutting of cast high speed steels. |
| B9310 (YS/YZ) <small>NEW</small> | Finishing | <ul style="list-style-type: none"> • Solid CBN is sintered by low content micro grains. • Excellent wear resistance, flank wear resistance and good surface quality. | <ul style="list-style-type: none"> • Suitable for semi-finishing and finishing of quenched alloy steels. |

PCD Grades for N Applications

| Grade | Cutting Range | Advantages | Applications |
|---------------|---|--|---|
| D9700 (YP) | Finishing and Roughing | <ul style="list-style-type: none"> High density sintered by super fine diamond grains, have highest wear resistance and fracture resistance, excellent shape edge also. | <ul style="list-style-type: none"> Suitable for milling and rough cutting of aluminum alloy. Compare to other fine grain PCD material, it is suitable for machining medium and high silicon aluminum alloy, titanium and composites. It is also suitable for machining where mirror surface finishes are required. |
| D9852 (YP) | Finishing and Roughing | <ul style="list-style-type: none"> Medium grain PCD inserts, have good wear resistance and discharge ability, high fracture resistance, and good for general use. | <ul style="list-style-type: none"> Mainly use for middle or low silicon aluminum alloy, copper or copper alloy, cemented carbide and ceramic presintered compact, etc. |
| D9900 (YP) | Finishing and Semi-finishing and Roughing | <ul style="list-style-type: none"> Mixed grain size distribution, combination of excellent wear resistance, high edge quality and high thermal stability. | <ul style="list-style-type: none"> Application areas: Machining of high silicon aluminum, CFRP, GFRP, MMC and bi-metal alloy. |
| D9950 (YP) | Semi-finishing and Roughing | <ul style="list-style-type: none"> Coarse grain size, high wear resistance and excellent impact strength, have longer tool life but moderate surface quality. | <ul style="list-style-type: none"> Suitable for interrupted cutting of high silicon Al alloy (Si > 14%)(ex. Milling), Tungsten carbide, sintered ceramic and other abrasive materials. |

PCBN/PCD车削刀片型号的表示规则

PCBN/PCD Turning Indexable Inserts Identification System

| Symbol | Shape | Corner Angle | Figure |
|----------------|---------------|--------------|--------|
| S | Square | 90° | □ |
| T | Triangle | 60° | △ |
| C | | 80° | △ |
| D | Rhombic | 55° | □ |
| V | | 35° | □ |
| W | Trigon | 80° | |
| L | Rectangle | 90° | △ |
| A | Parallelogram | 85° | □ |
| R | Round | -- | |
| ③ Shape Symbol | | | ○ |

| Symbol | Clearance Angle |
|--------|-----------------|
| A | 3° |
| B | 5° |
| C | 7° |
| D | 15° |
| E | 20° |
| F | 25° |
| G | 30° |
| N | 0° |
| P | 11° |
| O | Others |

④ Clearance Angle Symbol

| Symbol | Tolerance (mm) | | |
|--------|------------------|------------------|------------------|
| | Corner Height(m) | Thickness(s) | I.C.Size(Ød) |
| A | ±0.005 ±0.005 | ±0.025 ±0.025 | ±0.025 ±0.013 |
| C | ±0.013 | ±0.025 | ±0.025 |
| H | ±0.013 | ±0.025 | ±0.013 |
| E | ±0.025 | ±0.025 | ±0.025 |
| G | ±0.025 | ±0.13 | ±0.025 |
| K | ±0.013 | ±0.025 | ±0.05~ ±0.13 |
| L | ±0.025 | ±0.025 | ±0.05~ ±0.13 |
| M | ±0.08~ ±0.18 | ±0.13 | ±0.05~ ±0.13 |

⑤ Tolerance Symbol

YP 1 C N G A

| | | | | | |
|-----------------|----------------|-------|---|---------------------------|-------------|
| ① | ② | ③ | ④ | ⑤ | ⑥ |
| ① Insert Series | ② Cutting Edge | | | ⑥ Hole/Chipbreaker Symbol | |
| Symbol | Symbol | | | Symbol | hole |
| Sample | Edge | | | Hole Shape | Chipbreaker |
| YP | 1 | | | Shape | |
| YZ | 2 | | | | |
| YS | 3 | | | | |
| | 4 | | | | |
| | 0 | Other | | | |

| | | | | | | | | IC Size(mm) |
|--------|--------|--------|--------|--------|--------|--------|--------|-------------|
| Symbol | |
| 03 | 03 | | | 06 | 04 | | | 3.97 |
| 04 | 04 | | | 08 | 05 | | | 4.76 |
| 05 | | | | | | | | 5 |
| | 05 | 05 | 03 | 09 | 06 | | | 5.56 |
| 06 | | | | | | | | 6 |
| | 06 | 06 | 04 | 11 | 07 | 11 | | 6.35 |
| | 07 | 08 | 05 | 13 | 09 | | | 7.94 |
| 08 | | | | | | | | 8 |
| 09 | 09 | 09 | 06 | 16 | 11 | 16 | 16 | 9.525 |
| 10 | | | | | | | | 10 |
| 12 | | | | | | | | 12 |
| 12 | 12 | 12 | 08 | 22 | 15 | 22 | | 12.7 |
| 15 | 15 | 16 | 10 | 27 | 19 | | | 15.875 |
| 16 | | | | | | | | 16 |
| 19 | 19 | 19 | 13 | 33 | 23 | | | 19.05 |
| 20 | | | | | | | | 20 |
| | 22 | 22 | | 38 | 27 | | | 22.225 |
| 25 | | | | | | | | 25 |
| 25 | 25 | 25 | | 44 | 31 | | | 25.4 |
| 31 | 31 | 32 | | 55 | 38 | | | 31.75 |
| 31 | | | | | | | — | 32 |

(7)Inscribed Circle Size Symbol (mm)



09 T3 04 Q3

| (7) | (8) |
|--------|---------------|
| | |
| | |
| Symbol | Thickness(mm) |
| 01 | 1.59 |
| 02 | 2.38 |
| T2 | 2.78 |
| 03 | 3.18 |
| T3 | 3.97 |
| 04 | 4.76 |
| 05 | 5.56 |
| 06 | 6.35 |
| 07 | 7.94 |
| 09 | 9.52 |

| (9) | |
|--------|---------------|
| | |
| Symbol | Corner-Rc(mm) |
| 00 | 0.03 |
| 02 | 0.2 |
| 04 | 0.4 |
| 08 | 0.8 |
| 12 | 1.2 |
| 16 | 1.6 |
| 20 | 2.0 |
| 24 | 2.4 |
| 28 | 2.8 |
| 32 | 3.2 |

| (10) | |
|---------|-------------------|
| | |
| Symbol | Rake Angle Symbol |
| Q5 | 5° |
| Q7 | 7° |
| Without | 0° |

Commonly used cutting Edge Conditions of PCBN Tools



S

The Negative Land and Honing Cutting Edge Condition

Both the strength and the comprehensive performance of this cutting edge are the best, and this edge is most widely used for CBN cutting tools. The cutting edge S10020 is used to turn hard alloy cast iron, and turning gray cast iron is S02020, turning hardened steel is S01020.



T

The Negative Land Cutting Edge Condition

The negative land helps to improve the impact resistance of the cutting edges. Compared with S type cutting edge, the quality of the machined surface could be improved and the dimensional stability could be ensured.



E

Honing by Er Cutting Edge Condition

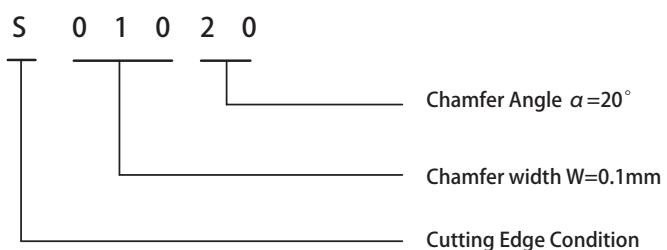
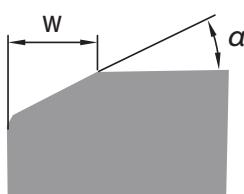
Honing can help to reduce micro-chipping and to protect the cutting edges. both the heavier honing and the more perfect cutting edges, the better strength will be improved. however, the cutting force and the cutting temperature will be also improved. Finally, the heavy honing would be selected under the condition that both the system rigidity and the machine power are enough, even if interrupted cutting.



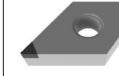
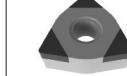
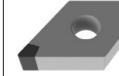
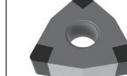
F

Sharp Cutting Edge Condition

It is difficult to generate the chatter marks and easy to reduce the roughness of the machined surface if the sharp cutting edge would be used. But on the other hand the tool life would be reduced if the edges are over-sharpened. consequently, this kind of edge is only adopted under the condition of cutting common cast iron and high precision surface requirement, such as finish turning gray cast iron brake discs.

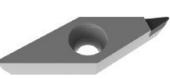


PCBN features of PCBN Turning Inserts

| Insert Series | Rhombic 80° | Rhombic 55° | Square 90° | Triangle 60° | Trigon 80° | Rhombic 35° | Round360° |
|---------------|--|--|---|--|---|---|---|
| YP |  |  |  |  |  |  | |
| | CNGA | DNGA | SNGA | TNGA | WNGA | VNGA | |
| | Page63 | Page64 | Page65 | Page66 | Page67 | Page68 | |
| YS |  |  |  |  |  | |  |
| | CNGN | DNGN | SNGN | TNGN | WNGN | | RNGN |
| | Page69 | Page70 | Page71 | Page72 | Page73 | | Page74 |
| YZ |  |  | |  |  | | |
| | CNGA | DNGA | | TNGA | WNGA | | |
| | Page75 | Page76 | | Page77 | Page78 | | |

| Insert Series | Rhombic 80° | Rhombic 55° | Square 90° | Triangle 60° | Trigon 80° | Rhombic 35° | Round360° |
|---------------|---|---|---|---|------------|---|---|
| YP |  |  | |  | |  | |
| | CCGW | DCGW | | TCGW | | VBGW | |
| | Page79 | Page81 | | Page82 | | Page84 | |
| | CPGW | | | TPGW | | VCGW | |
| | Page80 | | | Page83 | | Page85 | |
| YS | | |  | | | |  |
| | | | SCGN | | | | RCGN |
| | | | Page86 | | | | Page41 |

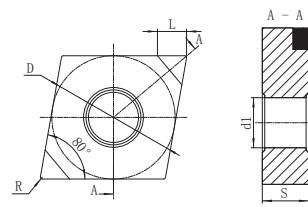
Features of PCD Turning Inserts

| Insert Series | Rhombic 80° | Rhombic 55° | Triangle 60° | Rhombic 35° |
|---------------|---|---|--|---|
| YP |  |  |  |  |
| | CCGW | DCGW | TCGW | VCGW |
| | Page88 | Page90 | Page91 | Page93 |
| | CPGW | | TPGW | |
| | Page89 | | Page92 | |

PCBN Turning Inserts (Negative)

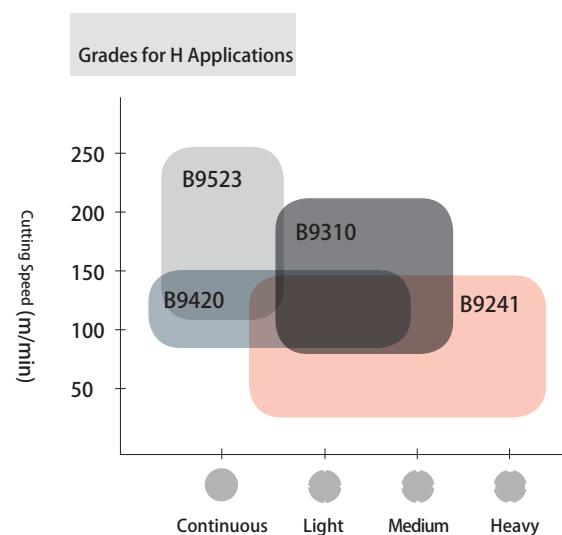
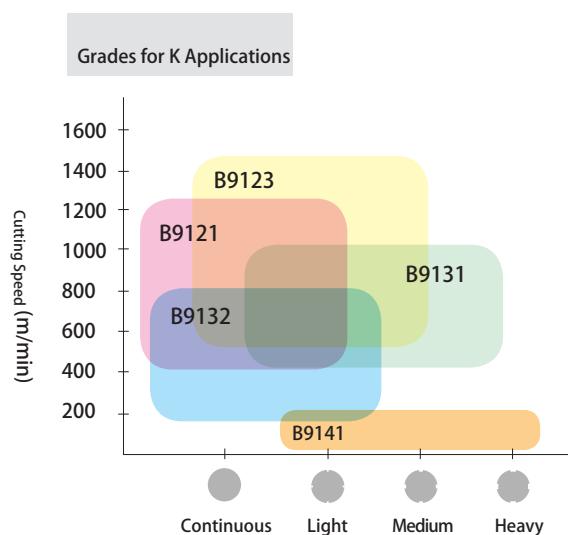
CNGA

Rhombic 80° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | | |
|---------------|---------------|----------------|-----|------|------|------|---------------------|------------|-------|-------|-------|
| | | L | D | S | d1 | R | B9121 | NEW | B9123 | B9420 | B9523 |
| | YP2CNGA120402 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 0.2 | ○ | ○ | ○ | ○ |
| | YP2CNGA120404 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 0.4 | ● | ○ | ● | ○ |
| | YP2CNGA120408 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ○ | ● | ○ |
| | YP2CNGA120412 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 1.2 | ● | ○ | ● | ○ |
| | YP2CNGA120416 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 1.6 | ○ | ○ | ○ | ○ |

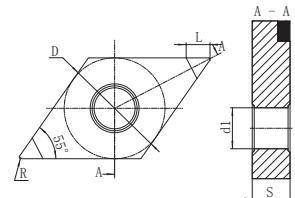
● Stock ○ Available upon Order



PCBN Turning Inserts (Negative)

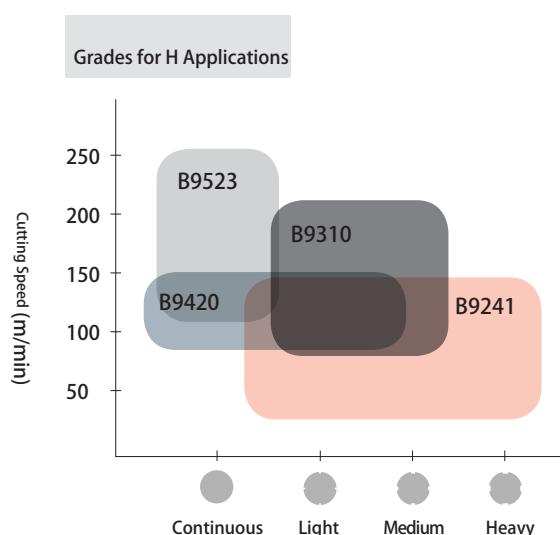
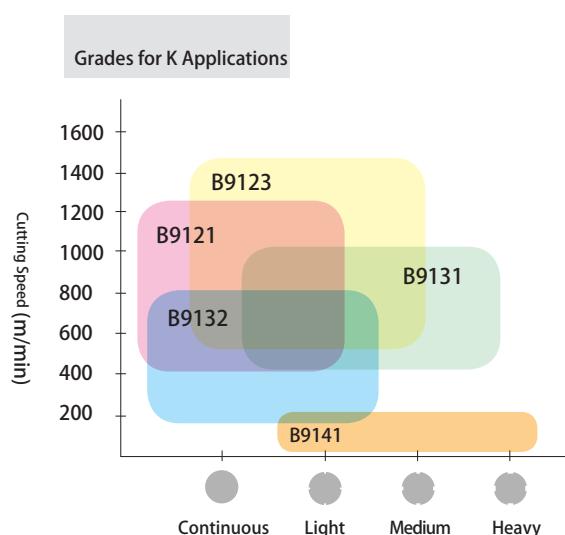
DNGA

Rhombic 55° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | |
|---------------|------|----------------|------|------|------|-----|---------------------|-----------|-------|-------|
| | | L | D | S | d1 | R | B9121 | NEW B9123 | B9420 | B9523 |
| YP2DNGA150402 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 0.2 | ○ | ○ | ○ | ○ |
| YP2DNGA150404 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 0.4 | ● | ○ | ● | ○ |
| YP2DNGA150408 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ○ | ● | ○ |
| YP2DNGA150412 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 1.2 | ● | ○ | ● | ○ |
| YP2DNGA150416 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 1.6 | ○ | ○ | ● | ○ |
| YP2DNGA150604 | 2 | 3.0 | 12.7 | 6.35 | 5.16 | 0.4 | ○ | ○ | ○ | ○ |
| YP2DNGA150608 | 2 | 3.0 | 12.7 | 6.35 | 5.16 | 0.8 | ○ | ● | ○ | ● |
| YP2DNGA150612 | 2 | 3.0 | 12.7 | 6.35 | 5.16 | 1.2 | ○ | ● | ○ | ● |
| YP2DNGA150616 | 2 | 3.0 | 12.7 | 6.35 | 5.16 | 1.6 | ○ | ○ | ○ | ○ |

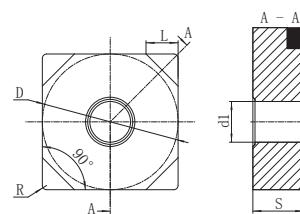
● Stock ○ Available upon Order



PCBN Turning Inserts (Negative)

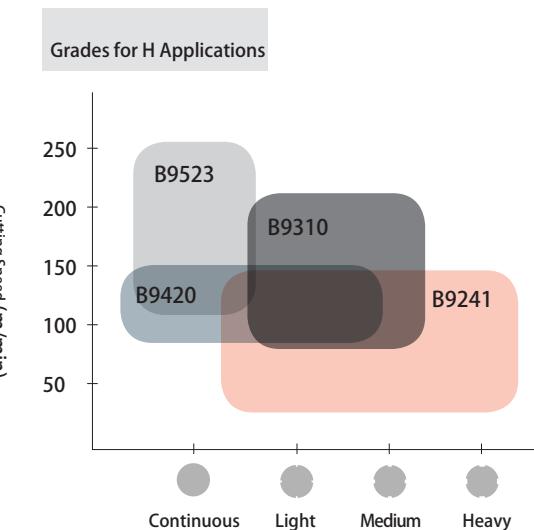
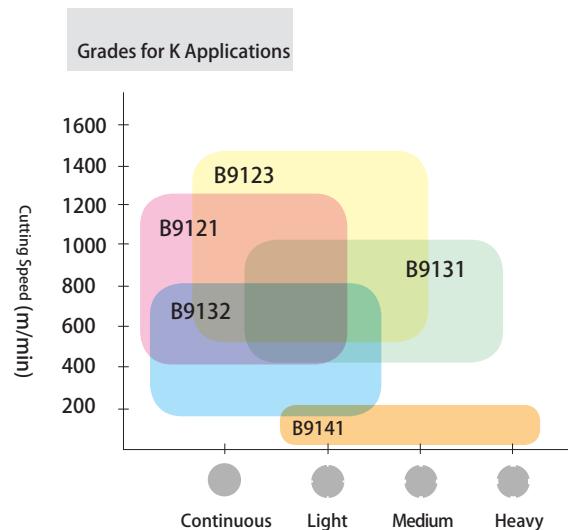
SNGA

V Square 90° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | |
|---------------|---------------|----------------|-----|------|------|------|---------------------|-----------|-------|-------|
| | | L | D | S | d1 | R | B9121 | NEW B9123 | B9420 | B9523 |
| | YP4SNGA120404 | 4 | 3.0 | 12.7 | 4.76 | 5.16 | 0.4 | ○ | ● | ○ |
| | YP4SNGA120408 | 4 | 3.0 | 12.7 | 4.76 | 5.16 | 0.8 | ○ | ● | ○ |
| | YP4SNGA120412 | 4 | 3.0 | 12.7 | 4.76 | 5.16 | 1.2 | ○ | ○ | ○ |
| | YP4SNGA120416 | 4 | 3.0 | 12.7 | 4.76 | 5.16 | 1.6 | ○ | ○ | ○ |

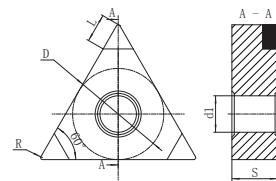
● Stock ○ Available upon Order



PCBN Turning Inserts (Negative)

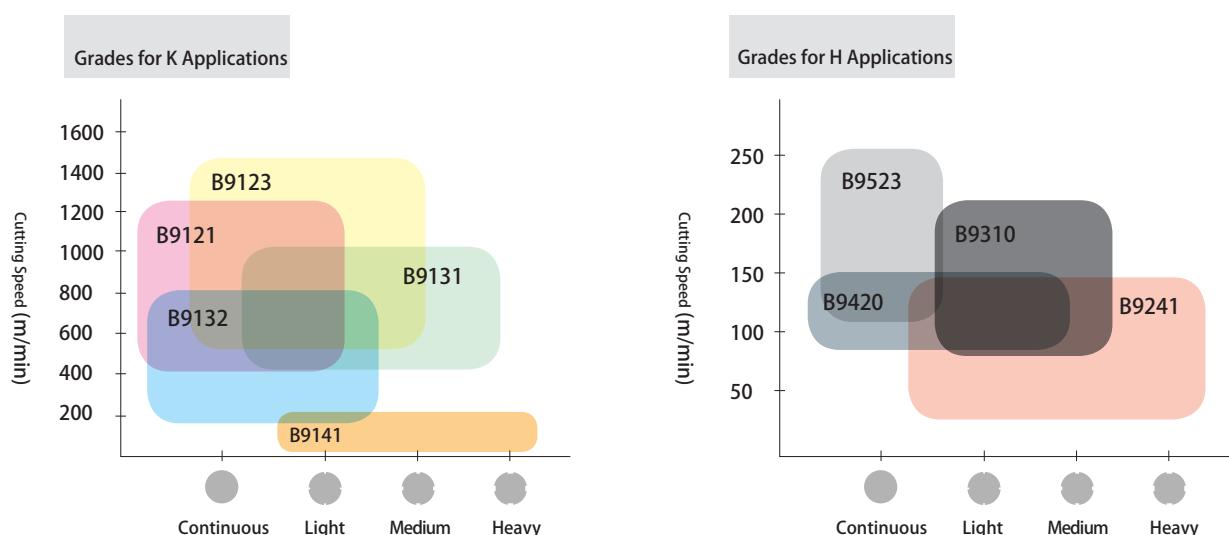
TNGA

Triangle 60° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | |
|---------------|------|----------------|-------|------|------|-----|---------------------|------------------|-------|-------|
| | | L | D | S | d1 | R | B9121 | NEW B9123 | B9420 | B9523 |
| YP3TNGA160402 | 3 | 3.0 | 9.525 | 4.76 | 3.81 | 0.2 | ○ | ● | ○ | ● |
| YP3TNGA160404 | 3 | 3.0 | 9.525 | 4.76 | 3.81 | 0.4 | ○ | ● | ○ | ● |
| YP3TNGA160408 | 3 | 3.0 | 9.525 | 4.76 | 3.81 | 0.8 | ○ | ● | ○ | ● |
| YP3TNGA160412 | 3 | 3.0 | 9.525 | 4.76 | 3.81 | 1.2 | ○ | ● | ○ | ● |
| YP3TNGA160416 | 3 | 3.0 | 9.525 | 4.76 | 3.81 | 1.6 | ○ | ○ | ○ | ● |

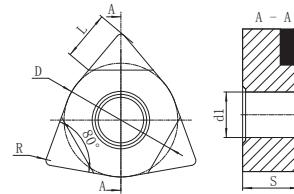
● Stock ○ Available upon Order



PCBN Turning Inserts (Negative)

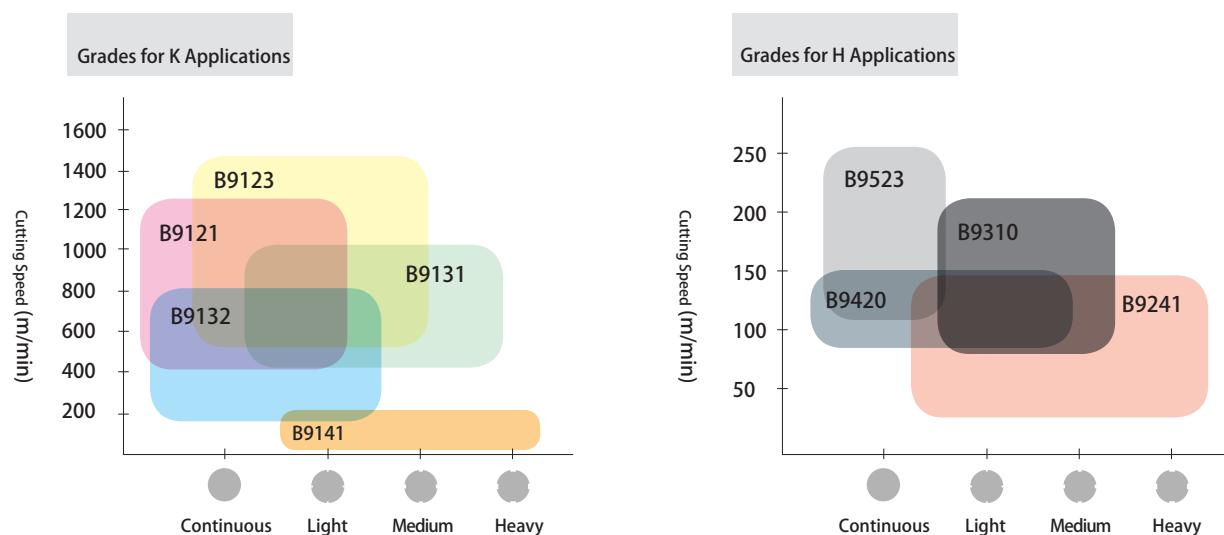
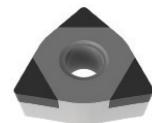
WNGA

Trigon 80° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | |
|---------------|------|----------------|-------|------|------|-----|---------------------|---------------------|-------|-------|
| | | L | D | S | d1 | R | B9121 | NEW B9123 | B9420 | B9523 |
| YP3WNGA060404 | 3 | 3.0 | 9.525 | 4.76 | 3.81 | 0.4 | ○ | ○ | ○ | ○ |
| YP3WNGA060408 | 3 | 3.0 | 9.525 | 4.76 | 3.81 | 0.8 | ○ | ● | ○ | ● |
| YP3WNGA060412 | 3 | 3.0 | 9.525 | 4.76 | 3.81 | 1.2 | ○ | ● | ○ | ● |
| YP3WNGA060416 | 3 | 3.0 | 9.525 | 4.76 | 3.81 | 1.6 | ○ | ○ | ○ | ○ |
| YP3WNGA080404 | 3 | 3.0 | 12.7 | 4.76 | 5.16 | 0.4 | ○ | ○ | ○ | ○ |
| YP3WNGA080408 | 3 | 3.0 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ○ | ● | ○ |
| YP3WNGA080412 | 3 | 3.0 | 12.7 | 4.76 | 5.16 | 1.2 | ● | ○ | ● | ○ |
| YP3WNGA080416 | 3 | 3.0 | 12.7 | 4.76 | 5.16 | 1.6 | ○ | ○ | ● | ○ |

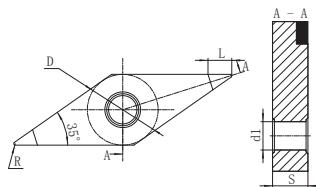
● Stock ○ Available upon Order



PCBN Turning Inserts (Negative)

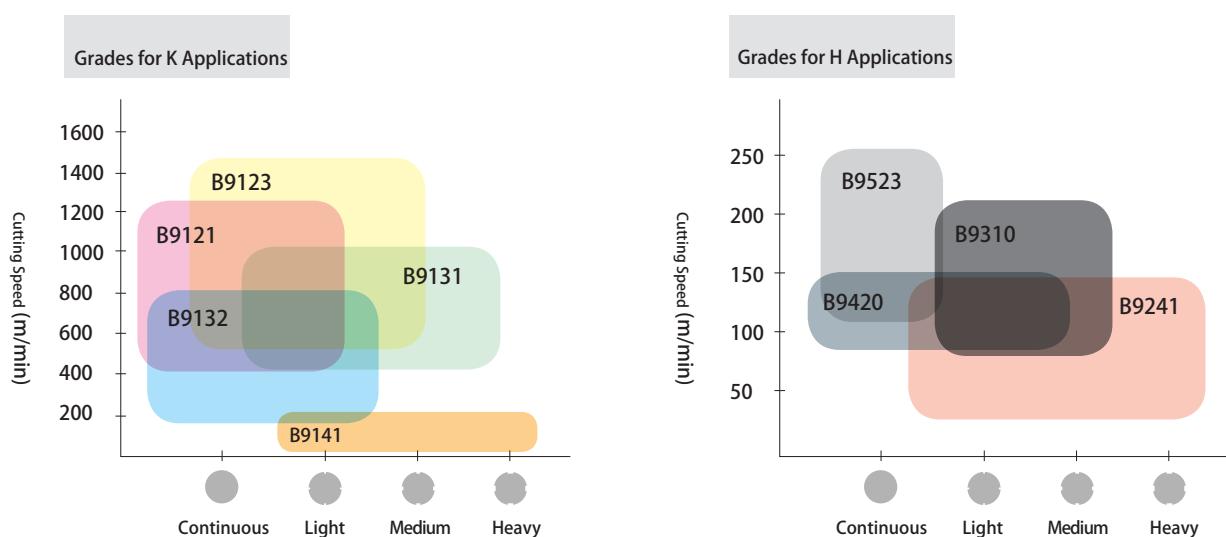
VNGA

Rhombic 35° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | |
|---------------|------|----------------|-------|------|------|-----|---------------------|-----------|-------|-------|
| | | L | D | S | d1 | R | B9121 | NEW B9123 | B9420 | B9523 |
| YP2VNGA160402 | 2 | 3.0 | 9.525 | 4.76 | 3.81 | 0.2 | ● | ○ | ● | ○ |
| YP2VNGA160404 | 2 | 3.0 | 9.525 | 4.76 | 3.81 | 0.4 | ● | ○ | ● | ○ |
| YP2VNGA160408 | 2 | 3.0 | 9.525 | 4.76 | 3.81 | 0.8 | ● | ○ | ● | ○ |
| YP2VNGA160412 | 2 | 3.0 | 9.525 | 4.76 | 3.81 | 1.2 | ○ | ○ | ○ | ○ |
| YP2VNGA160416 | 2 | 3.0 | 9.525 | 4.76 | 3.81 | 1.6 | ○ | ○ | ○ | ○ |
| YP2VNGA220402 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 0.2 | ○ | ○ | ○ | ○ |
| YP2VNGA220404 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 0.4 | ○ | ● | ○ | ● |
| YP2VNGA220408 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 0.8 | ○ | ● | ○ | ● |
| YP2VNGA220412 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 1.2 | ○ | ● | ○ | ● |
| YP2VNGA220416 | 2 | 3.0 | 12.7 | 4.76 | 5.16 | 1.6 | ○ | ○ | ○ | ○ |

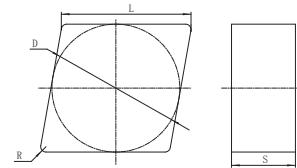
● Stock ○ Available upon Order



PCBN Turning Inserts (Negative)

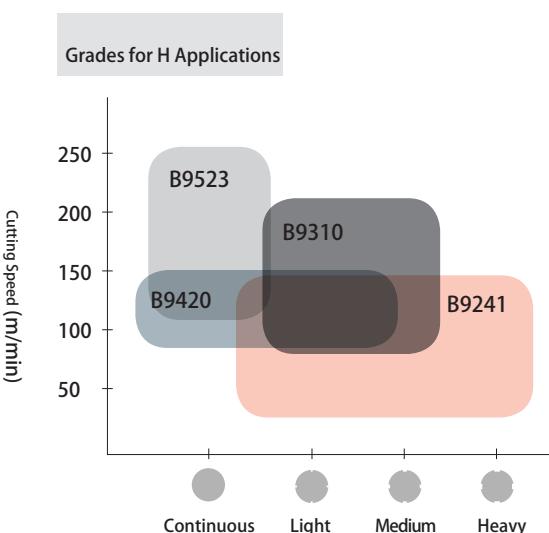
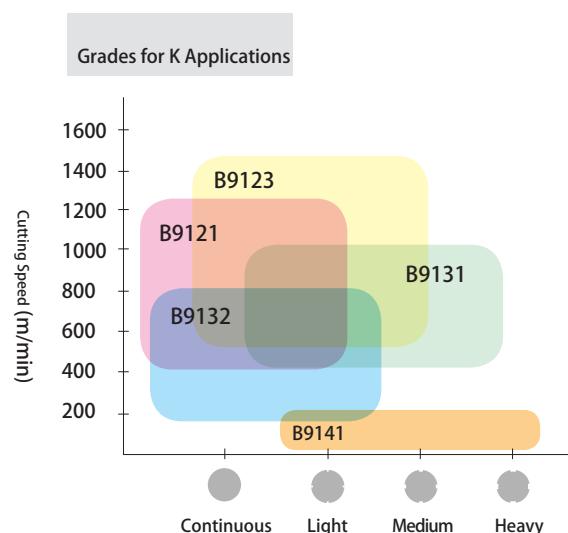
CNGN 

Rhombic 80° , without Hole



| Ordering Code | Edge | Dimensions(mm) | | | | PCBN Grades of PCBN | | | | |
|---|------|----------------|-------|------|-----|---------------------|-------|-------|-------|-------|
| | | L | D | S | R | B9131 | B9132 | B9141 | B9241 | B9310 |
|  YS4CNGN090404 | 4 | 9.525 | 9.525 | 4.76 | 0.4 | ○ | ○ | | | |
| | 4 | 9.525 | 9.525 | 4.76 | 0.8 | ○ | ○ | | | |
| | 4 | 9.525 | 9.525 | 4.76 | 1.2 | ○ | ○ | | | |
| | 4 | 12.7 | 12.7 | 4.76 | 0.4 | ● | ● | ● | | ○ |
| | 4 | 12.7 | 12.7 | 4.76 | 0.8 | ● | ● | ● | ● | ○ |
| | 4 | 12.7 | 12.7 | 4.76 | 1.2 | ● | ● | ● | ● | ○ |
| | 4 | 12.7 | 12.7 | 7.94 | 0.4 | ● | ● | ● | ○ | ○ |
| | 4 | 12.7 | 12.7 | 7.94 | 0.8 | ● | ● | ● | ○ | ○ |
| | 4 | 12.7 | 12.7 | 7.94 | 1.2 | ● | ● | | ○ | ○ |

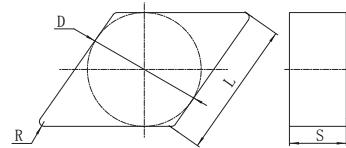
● Stock ○ Available upon Order



PCBN Turning Inserts (Negative)

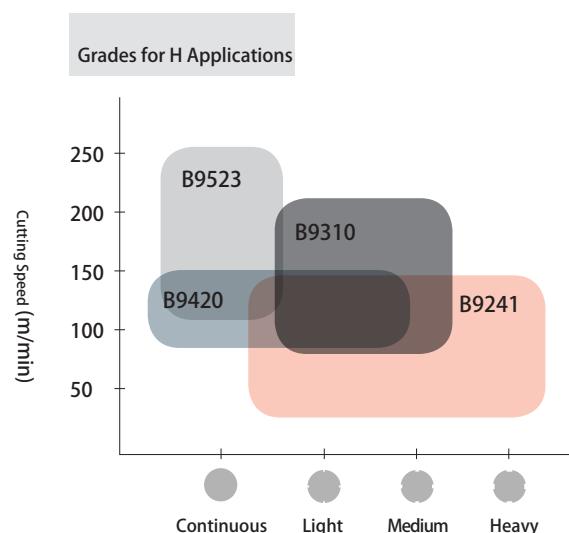
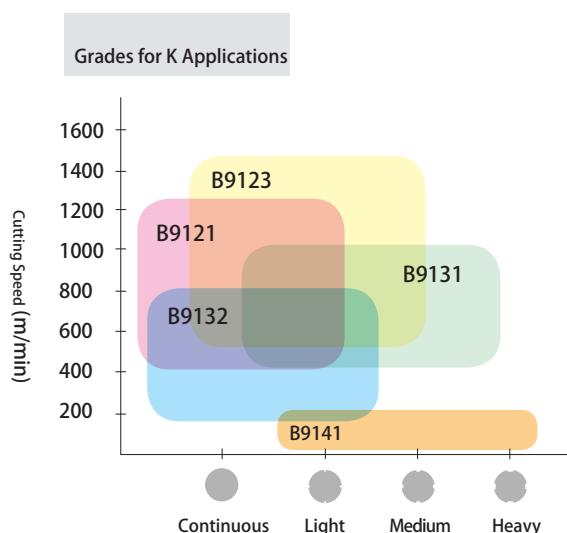
DNGN 

Rhombic 55° , without Hole



| Ordering Code | Edge | Dimensions(mm) | | | | PCBN Grades of PCBN | | | | |
|---------------|------|----------------|------|------|-----|---------------------|-------|-------|-------|-------|
| | | L | D | S | R | B9131 | B9132 | B9141 | B9241 | B9310 |
| YS4DNGN150604 | 4 | 15.5 | 12.7 | 6.35 | 0.4 | ○ | ○ | | | |
| YS4DNGN150608 | 4 | 15.5 | 12.7 | 6.35 | 0.8 | ○ | ○ | | | |
| YS4DNGN150612 | 4 | 15.5 | 12.7 | 6.35 | 1.2 | ○ | ○ | | | |
| | | | | | | | | | | |

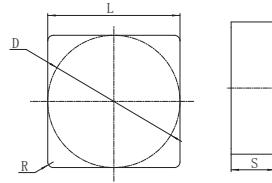
● Stock ○ Available upon Order



PCBN Turning Inserts (Negative)

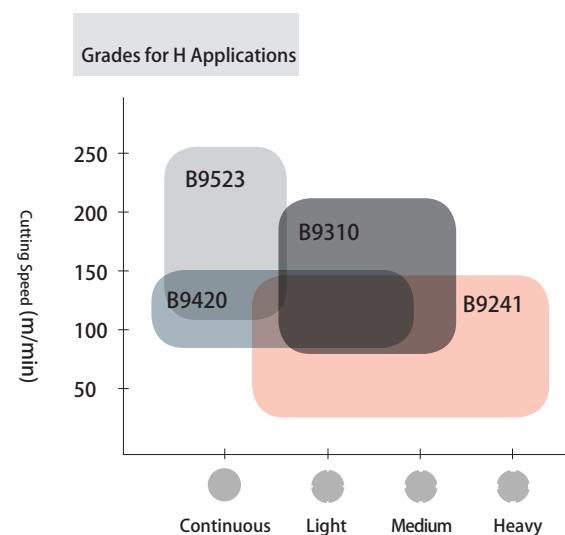
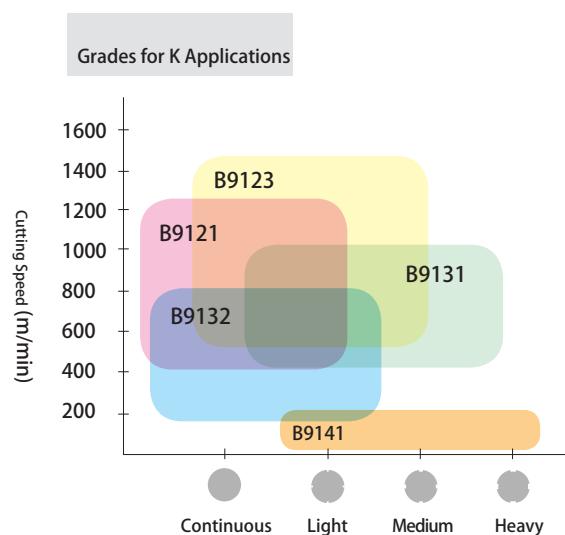
SNGN 

Square 90° , without Hole



| Ordering Code | Edge | Dimensions(mm) | | | | PCBN Grades of PCBN | | | | |
|---------------|------|----------------|--------|------|-----|---------------------|-------|-------|-------|-------|
| | | L | D | S | R | B9131 | B9132 | B9141 | B9241 | B9310 |
| YS0SNGN090304 | 8 | 9.525 | 9.525 | 3.18 | 0.4 | ○ | ○ | | | |
| YS0SNGN090308 | 8 | 9.525 | 9.525 | 3.18 | 0.8 | ○ | ○ | | | |
| YS0SNGN090312 | 8 | 9.525 | 9.525 | 3.18 | 1.2 | ○ | ○ | | | |
| YS0SNGN090404 | 8 | 9.525 | 9.525 | 4.76 | 0.4 | ○ | ○ | | | |
| YS0SNGN090408 | 8 | 9.525 | 9.525 | 4.76 | 0.8 | ○ | ○ | | | |
| YS0SNGN090412 | 8 | 9.525 | 9.525 | 4.76 | 1.2 | ○ | ○ | | | |
| YS0SNGN120404 | 8 | 12.7 | 12.7 | 4.76 | 0.4 | ● | ● | ○ | ○ | ○ |
| YS0SNGN120408 | 8 | 12.7 | 12.7 | 4.76 | 0.8 | ● | ● | ○ | ○ | ○ |
| YS0SNGN120412 | 8 | 12.7 | 12.7 | 4.76 | 1.2 | ● | ● | ○ | ○ | ○ |
| YS0SNGN120708 | 8 | 12.7 | 12.7 | 7.94 | 0.8 | ● | ● | ○ | ○ | ○ |
| YS0SNGN120712 | 8 | 12.7 | 12.7 | 7.94 | 1.2 | ● | ● | ○ | ○ | ○ |
| YS0SNGN150708 | 8 | 15.875 | 15.875 | 7.94 | 0.8 | ○ | ○ | ● | ● | |
| YS0SNGN150712 | 8 | 15.875 | 15.875 | 7.94 | 1.2 | ○ | ○ | ● | ● | |
| YS0SNGN201008 | 8 | 20 | 20 | 10 | 0.8 | | | ● | ● | |
| YS0SNGN201012 | 8 | 20 | 20 | 10 | 1.2 | | | ● | ● | |

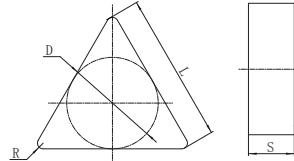
● Stock ○ Available upon Order



PCBN Turning Inserts (Negative)

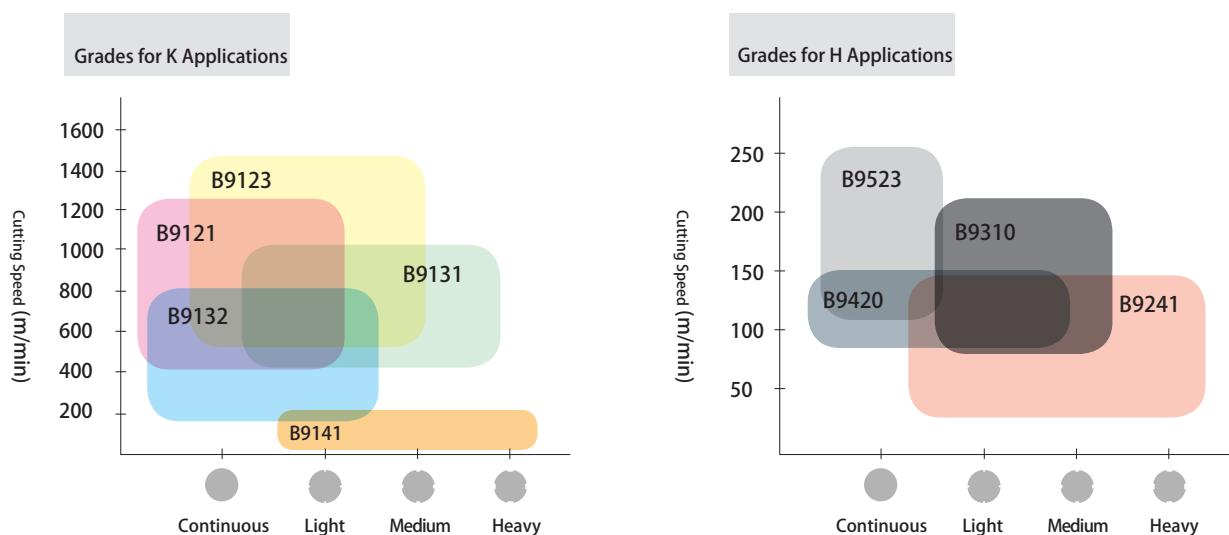
TNGN 

Triangle 60° , without Hole



| Ordering Code | Edge | Dimensions(mm) | | | | PCBN Grades of PCBN | | | | |
|---------------|------|----------------|------|------|-----|---------------------|-------|-------|-------|-------|
| | | L | D | S | R | B9131 | B9132 | B9141 | B9241 | B9310 |
| YSOTNGN110304 | 6 | 11.0 | 6.35 | 3.18 | 0.4 | ○ | ○ | | | |
| YSOTNGN110308 | 6 | 11.0 | 6.35 | 3.18 | 0.8 | ○ | ○ | | | |
| YSOTNGN110312 | 6 | 11.0 | 6.35 | 3.18 | 1.2 | ○ | ○ | | | |
| YSOTNGN160404 | 6 | 16.5 | 9.25 | 4.76 | 0.4 | ○ | ○ | | ○ | ○ |
| YSOTNGN160408 | 6 | 16.5 | 9.25 | 4.76 | 0.8 | ○ | ○ | | ○ | ○ |
| YSOTNGN160412 | 6 | 16.5 | 9.25 | 4.76 | 1.2 | ○ | ○ | | ○ | ○ |

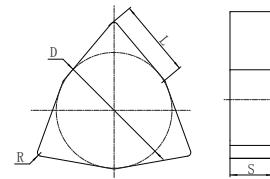
● Stock ○ Available upon Order



PCBN Turning Inserts (Negative)

WNGN 

Trigon 80° , without Hole

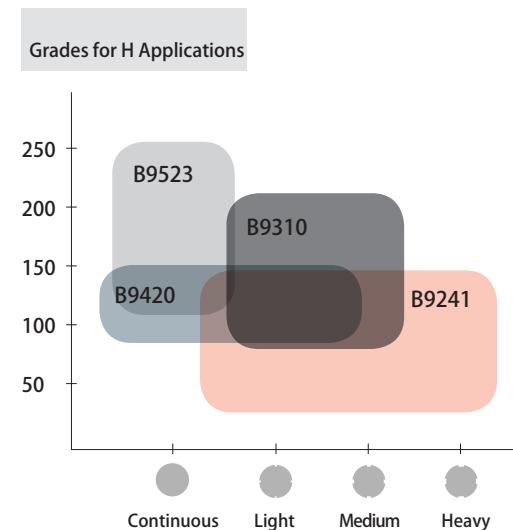
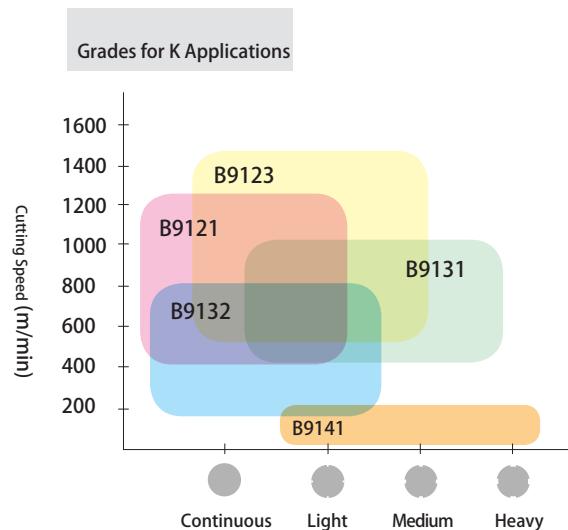


| Ordering Code | Edge | Dimensions(mm) | | | | PCBN Grades of PCBN | | | | |
|---|---------------|----------------|------|------|------|---------------------|-------|-------|-------|-------|
| | | L | D | S | R | B9131 | B9132 | B9141 | B9241 | B9310 |
|  | YS0WNGN080404 | 6 | 8.72 | 12.7 | 4.76 | 0.4 | ● | ● | | ○ ○ |
| | YS0WNGN080408 | 6 | 8.72 | 12.7 | 4.76 | 0.8 | ● | ● | | ○ ○ |
| | YS0WNGN080412 | 6 | 8.72 | 12.7 | 4.76 | 1.2 | ● | ● | | ○ ○ |
| | YS0WNGN080416 | 6 | 8.72 | 12.7 | 4.76 | 1.6 | ● | ● | | ○ ○ |

● Stock ○ Available upon Order

073

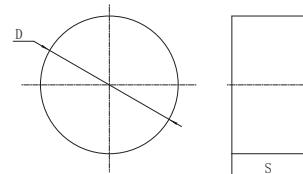
Turning



PCBN Turning Inserts (Negative)

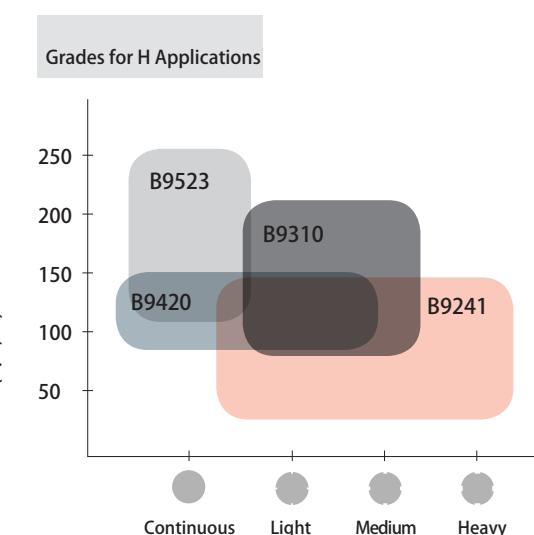
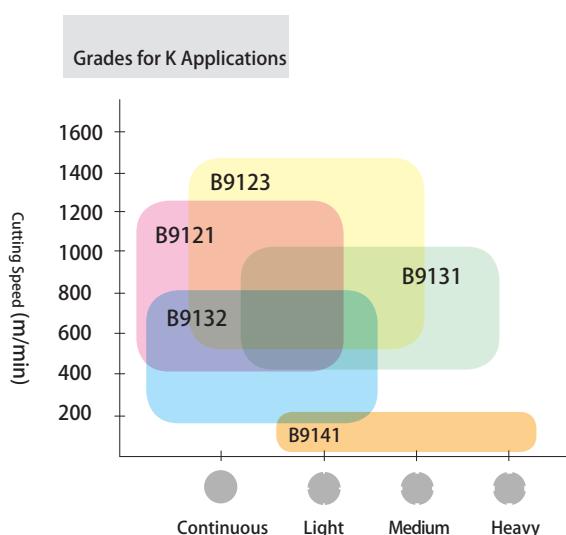
RNGN 

Round 360° , without Hole



| Ordering Code | Edge | Dimensions(mm) | | PCBN Grades of PCBN | | | | |
|---------------|-------|----------------|------|---------------------|-------|-------|-------|-------|
| | | D | S | B9131 | B9132 | B9141 | B9241 | B9310 |
| YSORNGN090300 | Round | 9.525 | 3.18 | ○ | ○ | | ○ | ○ |
| YSORNGN090400 | Round | 9.525 | 4.76 | ○ | ○ | | ○ | ○ |
| YSORNGN120400 | Round | 12.7 | 4.76 | ○ | ○ | | ○ | ○ |
| YSORNGN120600 | Round | 12.7 | 6.35 | ○ | ○ | | ○ | ○ |
| YSORNGN120700 | Round | 12.7 | 7.94 | ○ | ○ | | ● | ○ |
| YSORNGN150700 | Round | 15.875 | 7.94 | ○ | ○ | ○ | ● | ○ |
| YSORNGN201000 | Round | 20 | 10 | ○ | ○ | ● | ○ | ○ |

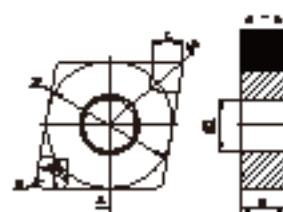
● Stock ○ Available upon Order



PCBN Turning Inserts (Negative)

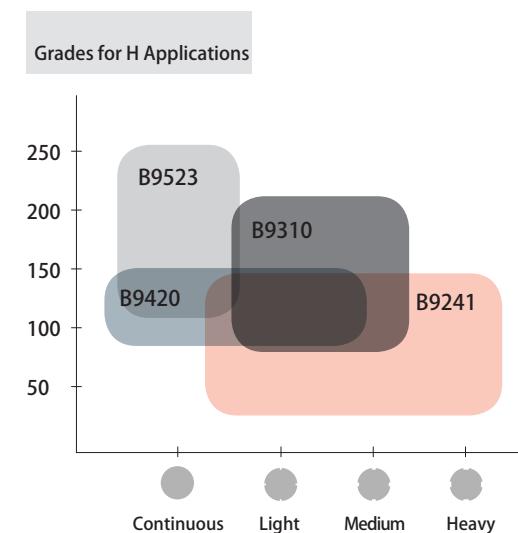
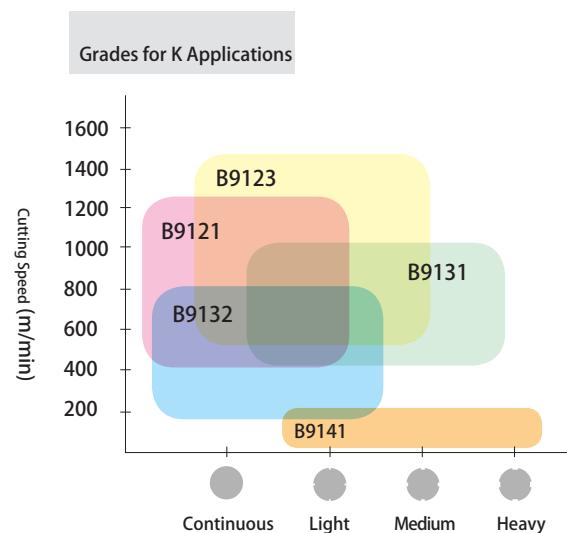
CNGA 

Rhombic 80°, with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | | |
|---|------|----------------|------|------|------|-----|---------------------|-------|-------|-------|-------|
| | | L | D | S | d1 | R | B9131 | B9132 | B9141 | B9241 | B9310 |
|  YZ4CNGA120404 | 4 | 3.0 | 12.7 | 4.76 | 5.16 | 0.4 | ● | ● | | | ● |
| YZ4CNGA120408 | 4 | 3.0 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | | | ● |
| YZ4CNGA120412 | 4 | 3.0 | 12.7 | 4.76 | 5.16 | 1.2 | ● | ● | | | ● |
| YZ4CNGA120416 | 4 | 3.0 | 12.7 | 4.76 | 5.16 | 1.6 | ● | ● | | | ● |

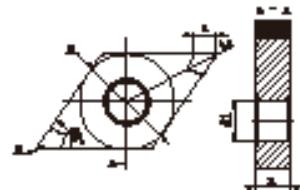
● Stock ○ Available upon Order



PCBN Turning Inserts (Negative)

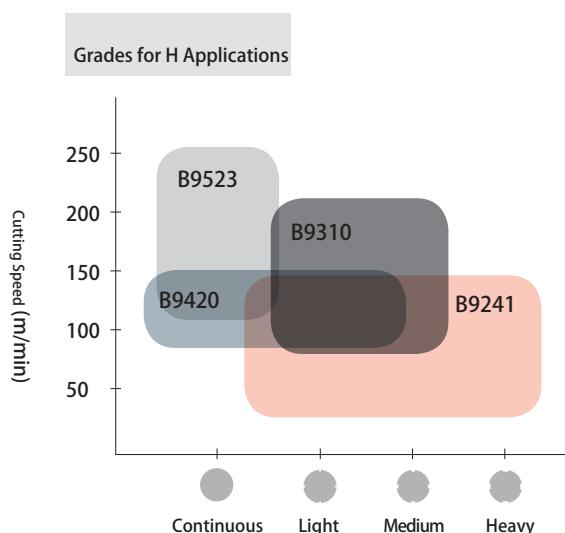
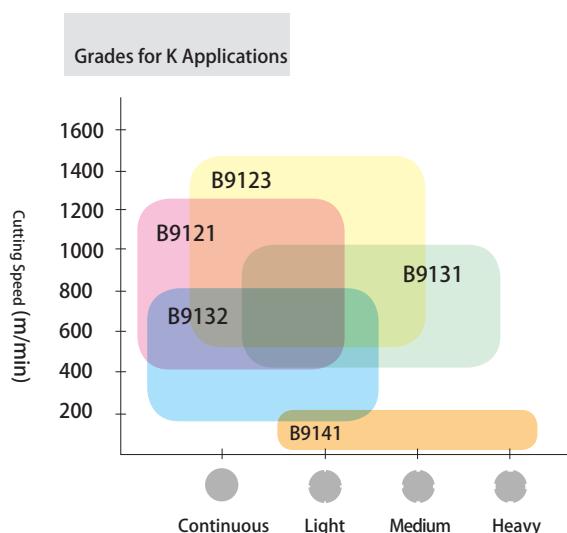
DNGA 

Rhombic 55°, with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | | |
|---------------|------|----------------|------|------|------|-----|---------------------|-------|-------|-------|-------|
| | | L | D | S | d1 | R | B9131 | B9132 | B9141 | B9241 | B9310 |
| YZ4DNGA150404 | 4 | 3.0 | 12.7 | 4.76 | 5.16 | 0.4 | ○ | ○ | | | ○ |
| YZ4DNGA150408 | 4 | 3.0 | 12.7 | 4.76 | 5.16 | 0.8 | ○ | ○ | | | ○ |
| YZ4DNGA150412 | 4 | 3.0 | 12.7 | 4.76 | 5.16 | 1.2 | ○ | ○ | | | ○ |
| YZ4DNGA150604 | 4 | 3.0 | 12.7 | 6.35 | 5.16 | 0.4 | ○ | ○ | | | ○ |
| YZ4DNGA150608 | 4 | 3.0 | 12.7 | 6.35 | 5.16 | 0.8 | ○ | ○ | | | ○ |
| YZ4DNGA150612 | 4 | 3.0 | 12.7 | 6.35 | 5.16 | 1.2 | ○ | ○ | | | ○ |

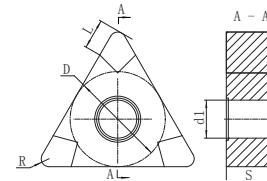
● Stock ○ Available upon Order



PCBN Turning Inserts (Negative)

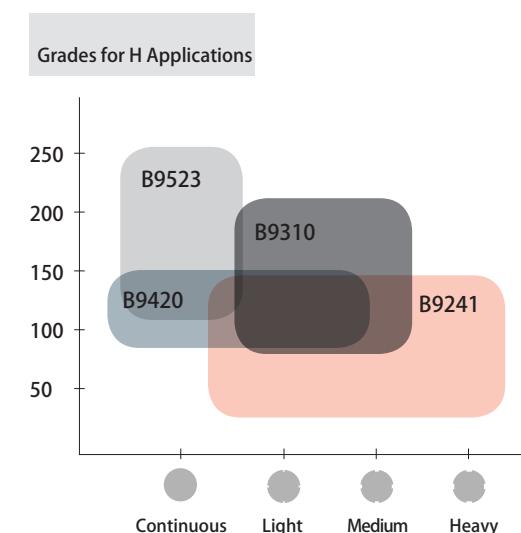
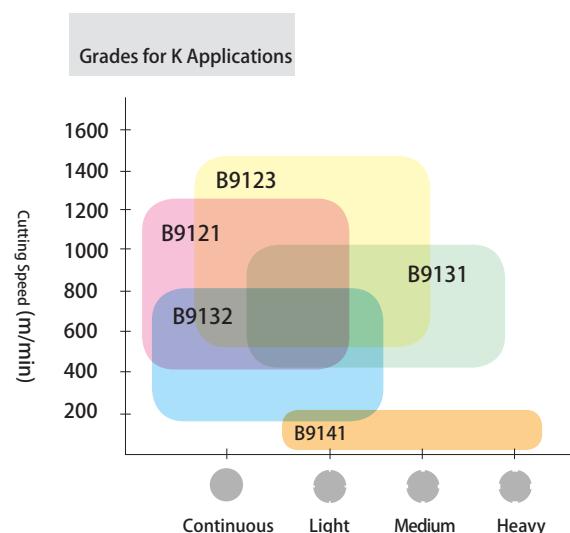
TNGA 

Triangle 60° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | | |
|---|---------------|----------------|-----|-------|------|------|---------------------|-------|-------|-------|-------|
| | | L | D | S | d1 | R | B9131 | B9132 | B9141 | B9241 | B9310 |
|  | YZ0TNGA160404 | 6 | 3.0 | 9.525 | 4.76 | 3.81 | 0.4 | ○ | ○ | | ○ |
| | YZ0TNGA160408 | 6 | 3.0 | 9.525 | 4.76 | 3.81 | 0.8 | ○ | ○ | | ○ |
| | YZ0TNGA160412 | 6 | 3.0 | 9.525 | 4.76 | 3.81 | 1.2 | ○ | ○ | | ○ |
| | YZ0TNGA160416 | 6 | 3.0 | 9.525 | 4.76 | 3.81 | 1.6 | ○ | ○ | | ○ |

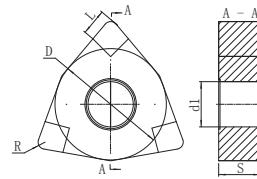
● Stock ○ Available upon Order

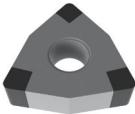


PCBN Turning Inserts (Negative)

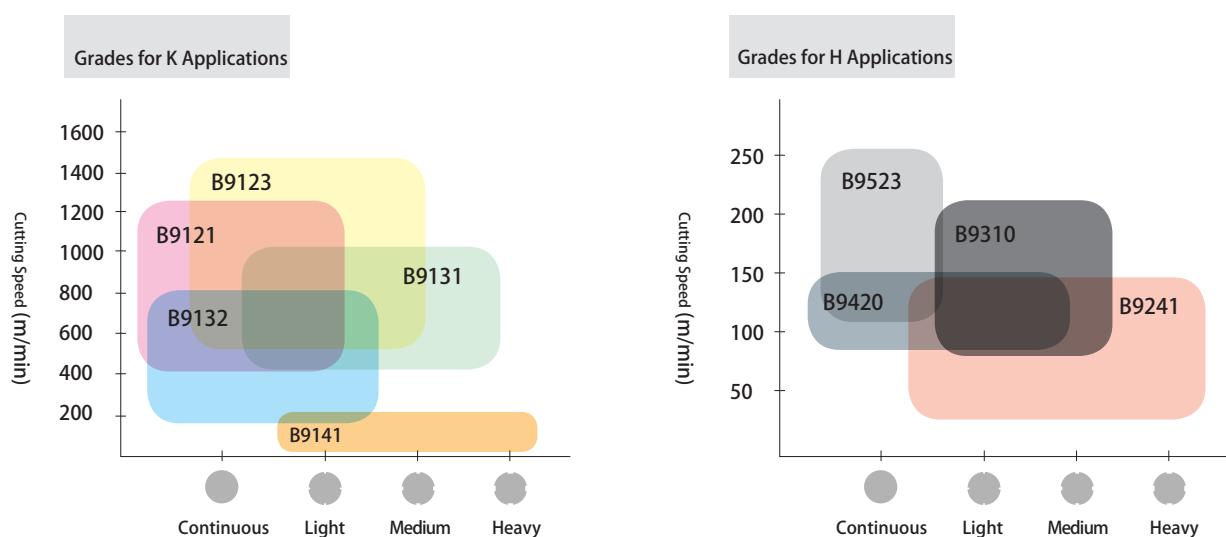
WNGA 

Trigon 80°, with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of P CBN | | | | |
|---|------|----------------|------|------|------|-----|----------------------|-------|-------|-------|-------|
| | | L | D | S | d1 | R | B9131 | B9132 | B9141 | B9241 | B9230 |
|  YZ0WNGA080404 | 6 | 3.0 | 12.7 | 4.76 | 5.16 | 0.4 | ● | ● | | | ● |
| YZ0WNGA080408 | 6 | 3.0 | 12.7 | 4.76 | 5.16 | 0.8 | ● | ● | | | ● |
| YZ0WNGA080412 | 6 | 3.0 | 12.7 | 4.76 | 5.16 | 1.2 | ● | ● | | | ● |
| YZ0WNGA080416 | 6 | 3.0 | 12.7 | 4.76 | 5.16 | 1.6 | ● | ● | | | ● |

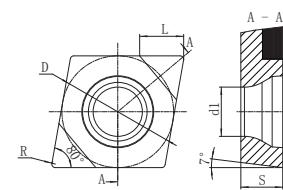
● Stock ○ Available upon Order



PCBN Turning Inserts (Positive)

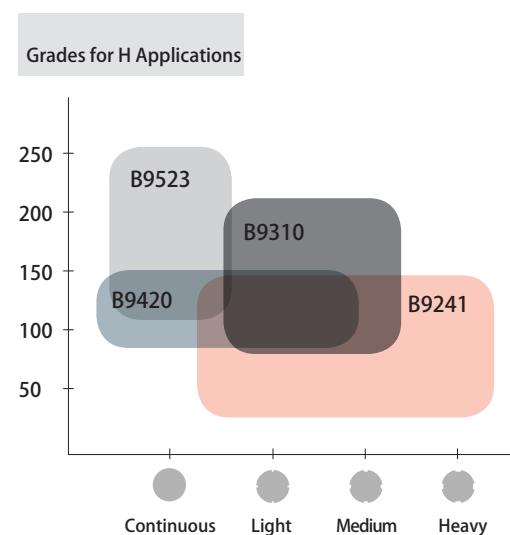
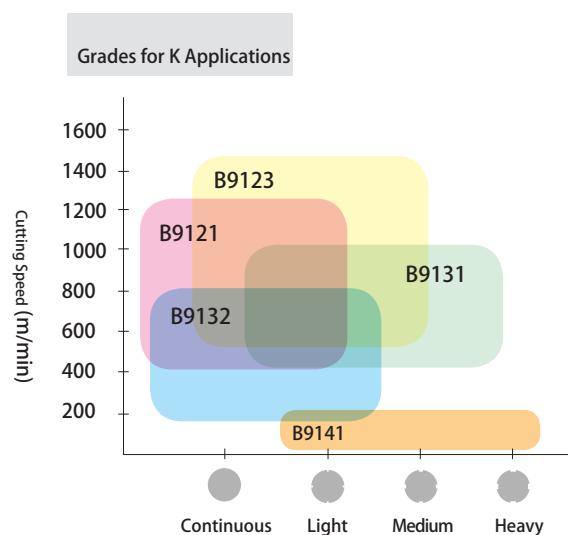
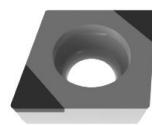
CCGW

Rhombic 80° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | |
|---------------|------|----------------|-------|------|-----|-----|---------------------|-----------|-------|-------|
| | | L | D | S | d1 | R | B9121 | NEW B9123 | B9420 | B9523 |
| YP2CCGW060202 | 2 | 2.5 | 6.35 | 2.38 | 2.8 | 0.2 | ● | ○ | ● | ○ |
| YP2CCGW060204 | 2 | 2.5 | 6.35 | 2.38 | 2.8 | 0.4 | ● | ○ | ● | ○ |
| YP2CCGW060208 | 2 | 2.5 | 6.35 | 2.38 | 2.8 | 0.8 | ● | ○ | ● | ○ |
| YP2CCGW09T302 | 2 | 3.0 | 9.525 | 3.97 | 4.4 | 0.2 | ● | ○ | ● | ○ |
| YP2CCGW09T304 | 2 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | ○ | ● | ○ | ● |
| YP2CCGW09T308 | 2 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | ○ | ● | ○ | ● |
| YP2CCGW120402 | 2 | 3.0 | 12.7 | 4.76 | 5.5 | 0.2 | ○ | ○ | ○ | ○ |
| YP2CCGW120404 | 2 | 3.0 | 12.7 | 4.76 | 5.5 | 0.4 | ○ | ● | ○ | ● |
| YP2CCGW120408 | 2 | 3.0 | 12.7 | 4.76 | 5.5 | 0.8 | ○ | ● | ○ | ● |

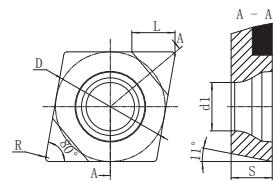
● Stock ○ Available upon Order



PCBN Turning Inserts (Positive)

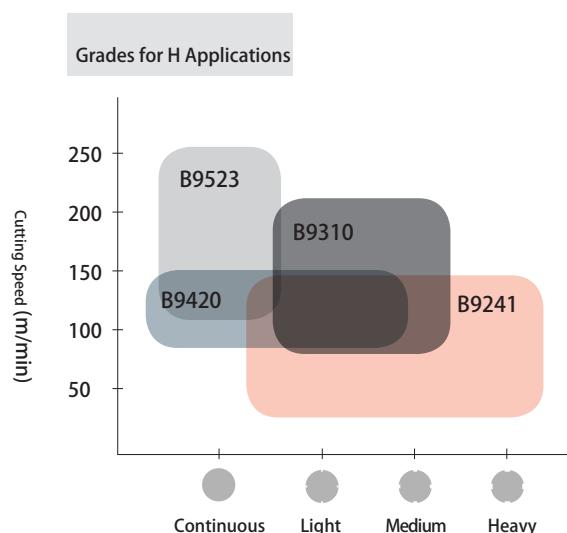
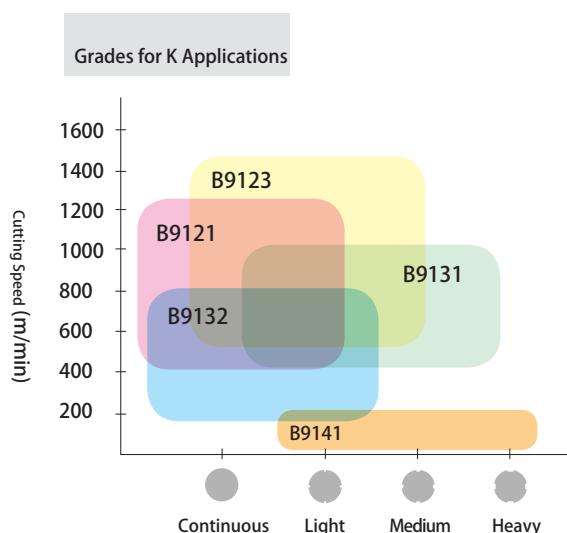
CPGW

Rhombic 80° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | |
|---------------|------|----------------|-------|------|-----|-----|---------------------|---------------------|-------|-------|
| | | L | D | S | d1 | R | B9121 | B9123 NEW | B9420 | B9523 |
| YP2CPGW090302 | 2 | 3.0 | 9.525 | 3.18 | 4.4 | 0.2 | ○ | ○ | ○ | ○ |
| YP2CPGW090304 | 2 | 3.0 | 9.525 | 3.18 | 4.4 | 0.4 | ○ | ○ | ○ | ○ |
| YP2CPGW090308 | 2 | 3.0 | 9.525 | 3.18 | 4.4 | 0.8 | ○ | ○ | ○ | ○ |

● Stock ○ Available upon Order

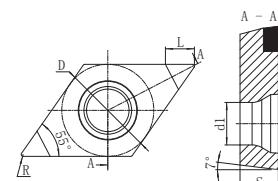


PCBN Turning Inserts (Positive)

DCGW

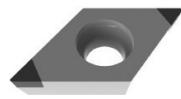
有孔

Rhombic 55° , with Hole



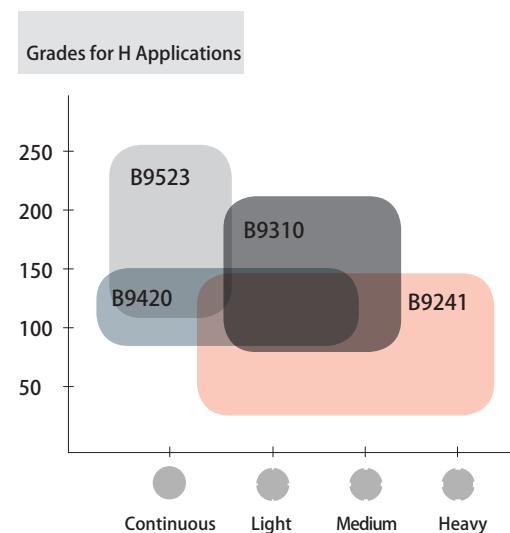
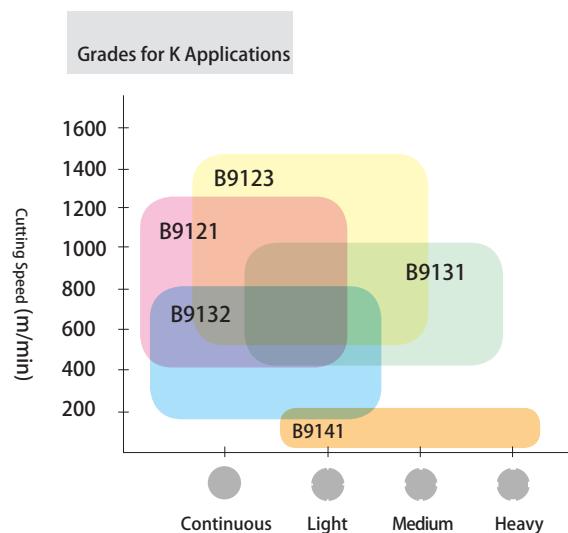
| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | |
|---------------|------|----------------|-------|------|-----|-----|---------------------|-----------|-------|-------|
| | | L | D | S | d1 | R | B9121 | NEW B9123 | B9420 | B9523 |
| YP2DCGW070202 | 2 | 2.5 | 6.35 | 2.38 | 2.8 | 0.2 | ○ | ● | ○ | ● |
| YP2DCGW070204 | 2 | 2.5 | 6.35 | 2.38 | 2.8 | 0.4 | ○ | ● | ○ | ● |
| YP2DCGW070208 | 2 | 2.5 | 6.35 | 2.38 | 2.8 | 0.8 | ○ | ● | ○ | ● |
| YP2DCGW11T302 | 2 | 3.0 | 9.525 | 3.97 | 4.4 | 0.2 | ● | ○ | ● | ○ |
| YP2DCGW11T304 | 2 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | ● | ○ | ● | ○ |
| YP2DCGW11T308 | 2 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | ● | ○ | ● | ○ |

● Stock ○ Available upon Order



081

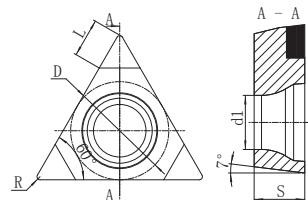
Turning



PCBN Turning Inserts (Positive)

TCGW

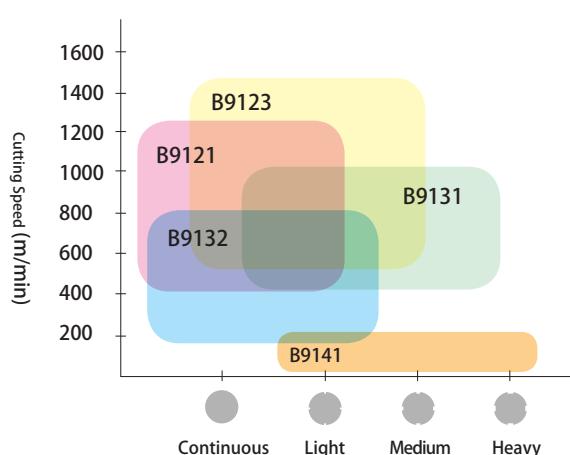
Triangle 60° , with Hole



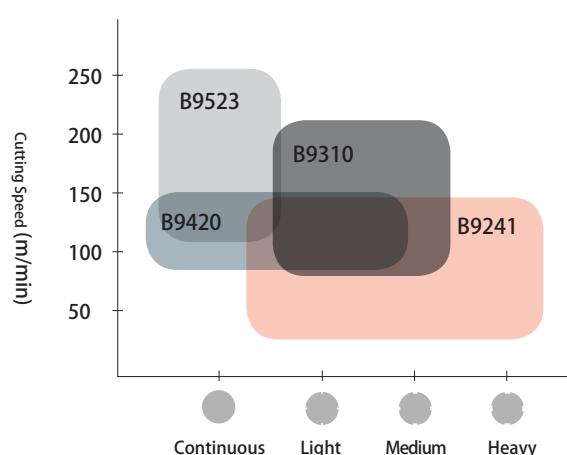
| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | |
|---------------|------|----------------|-------|------|-----|-----|---------------------|-----------|-------|-------|
| | | L | D | S | d1 | R | B9121 | NEW B9123 | B9420 | B9523 |
| YP3TCGW110302 | 3 | 2.5 | 6.35 | 3.18 | 2.8 | 0.2 | ○ | ● | ○ | ● |
| YP3TCGW110304 | 3 | 2.5 | 6.35 | 3.18 | 2.8 | 0.4 | ○ | ● | ○ | ● |
| YP3TCGW110308 | 3 | 2.5 | 6.35 | 3.18 | 2.8 | 0.8 | ○ | ● | ○ | ● |
| YP3TCGW160404 | 3 | 3.0 | 9.525 | 4.76 | 4.4 | 0.4 | ● | ○ | ● | ○ |
| YP3TCGW160408 | 3 | 3.0 | 9.525 | 4.76 | 4.4 | 0.8 | ● | ○ | ● | ○ |
| YP3TCGW160412 | 3 | 3.0 | 9.525 | 4.76 | 4.4 | 1.2 | ● | ○ | ● | ○ |

● Stock ○ Available upon Order

Grades for K Applications



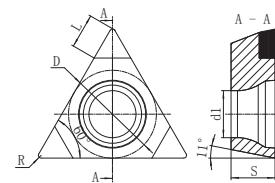
Grades for H Applications



PCBN Turning Inserts (Positive)

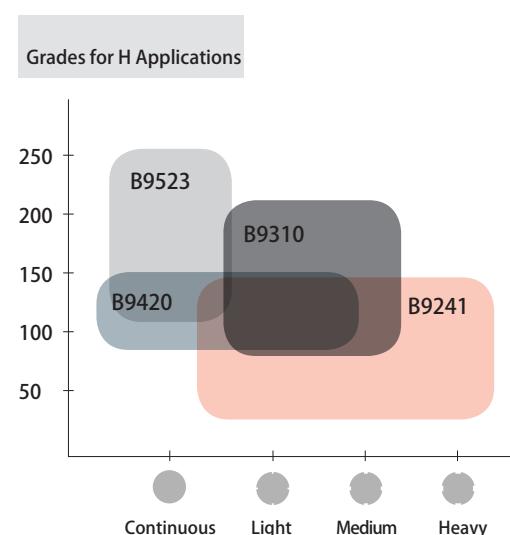
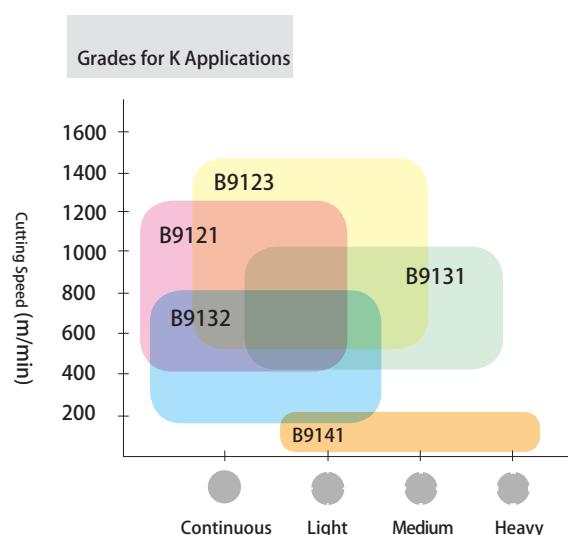
TPGW

Triangle 60° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | |
|---------------|------|----------------|-------|------|-----|-----|---------------------|-----------|-------|-------|
| | | L | D | S | d1 | R | B9121 | NEW B9123 | B9420 | B9523 |
| YP3TPGW110202 | 3 | 2.5 | 6.35 | 2.38 | 2.8 | 0.2 | ○ | ○ | ○ | ○ |
| YP3TPGW110204 | 3 | 2.5 | 6.35 | 2.38 | 2.8 | 0.4 | ○ | ○ | ○ | ○ |
| YP3TPGW110208 | 3 | 2.5 | 6.35 | 2.38 | 2.8 | 0.8 | ○ | ○ | ○ | ○ |
| YP3TPGW110302 | 3 | 2.5 | 6.35 | 3.18 | 2.8 | 0.2 | ○ | ○ | ○ | ○ |
| YP3TPGW110304 | 3 | 2.5 | 6.35 | 3.18 | 2.8 | 0.4 | ○ | ○ | ○ | ○ |
| YP3TPGW110308 | 3 | 2.5 | 6.35 | 3.18 | 2.8 | 0.8 | ○ | ○ | ○ | ○ |
| YP3TPGW160402 | 3 | 3.0 | 9.525 | 4.76 | 4.4 | 0.2 | ○ | ○ | ○ | ○ |
| YP3TPGW160404 | 3 | 3.0 | 9.525 | 4.76 | 4.4 | 0.4 | ○ | ○ | ○ | ○ |
| YP3TPGW160408 | 3 | 3.0 | 9.525 | 4.76 | 4.4 | 0.8 | ○ | ○ | ○ | ○ |

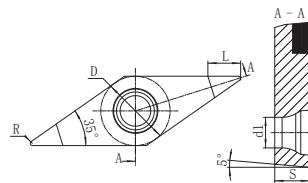
● Stock ○ Available upon Order



PCBN Turning Inserts (Positive)

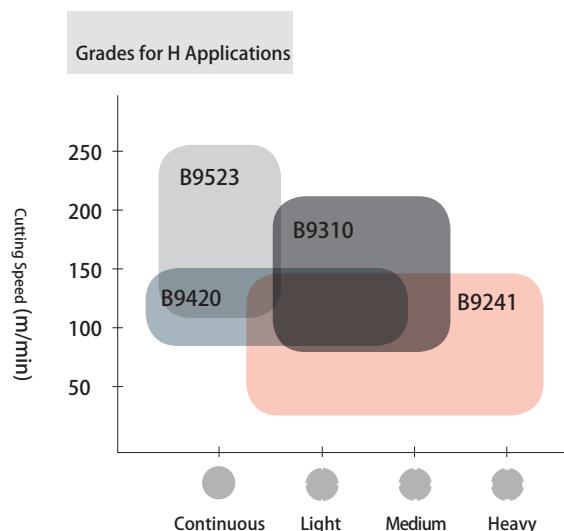
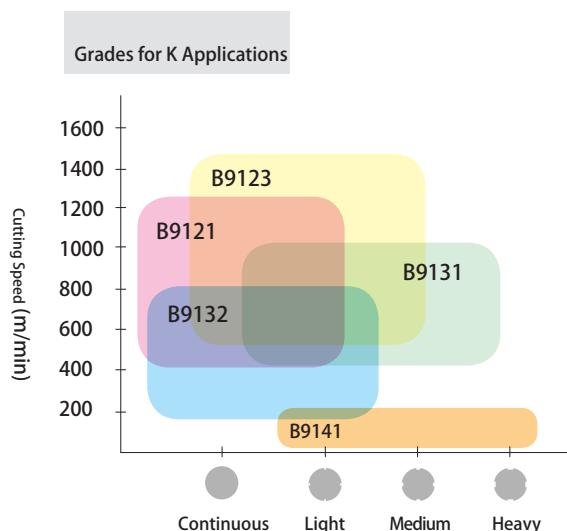
VBGW

Rhombic 35° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | |
|---------------|------|----------------|-------|------|-----|-----|---------------------|---------------------|-------|-------|
| | | L | D | S | d1 | R | B9121 | B9123 NEW | B9420 | B9523 |
| YP2VBGW110302 | 2 | 3.0 | 6.35 | 3.18 | 2.8 | 0.2 | ○ | ○ | ○ | ○ |
| YP2VBGW110304 | 2 | 3.0 | 6.35 | 3.18 | 2.8 | 0.4 | ○ | ○ | ○ | ○ |
| YP2VBGW110308 | 2 | 3.0 | 6.35 | 3.18 | 2.8 | 0.8 | ○ | ○ | ○ | ○ |
| YP2VBGW160402 | 2 | 3.0 | 9.525 | 4.76 | 4.4 | 0.2 | ○ | ○ | ○ | ○ |
| YP2VBGW160404 | 2 | 3.0 | 9.525 | 4.76 | 4.4 | 0.4 | ○ | ○ | ○ | ○ |
| YP2VBGW160408 | 2 | 3.0 | 9.525 | 4.76 | 4.4 | 0.8 | ○ | ○ | ○ | ○ |

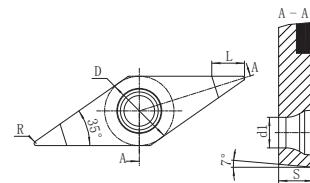
● Stock ○ Available upon Order



PCBN Turning Inserts (Positive)

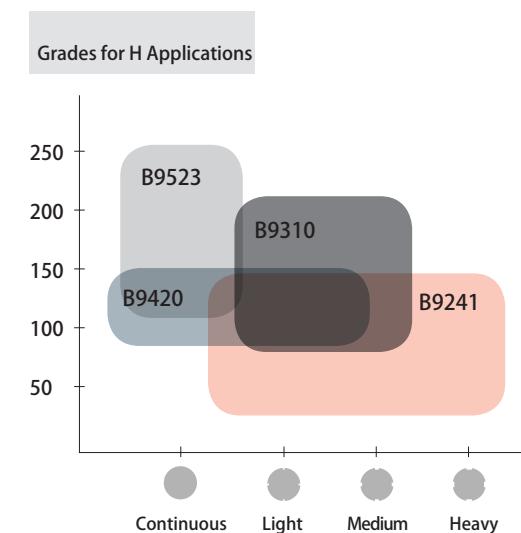
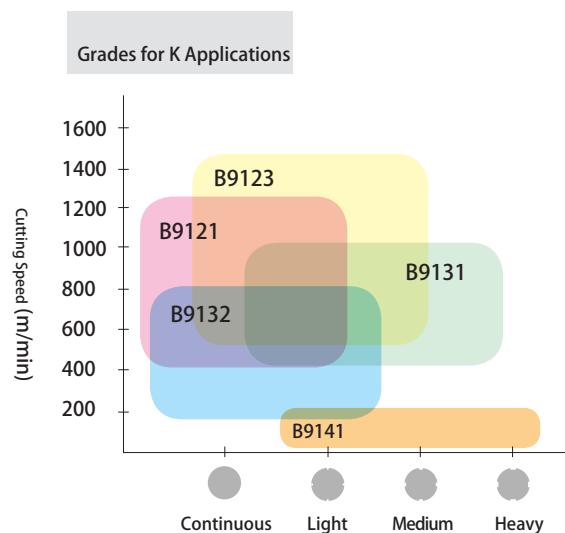
VCGW

Rhombic35° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | PCBN Grades of PCBN | | | |
|---------------|------|----------------|-------|------|-----|-----|---------------------|---------------------|-------|-------|
| | | L | D | S | d1 | R | B9121 | B9123 NEW | B9420 | B9523 |
| YP2VCGW110302 | 2 | 3.0 | 6.35 | 3.18 | 2.8 | 0.2 | ○ | ● | ○ | ● |
| YP2VCGW110304 | 2 | 3.0 | 6.35 | 3.18 | 2.8 | 0.4 | ○ | ● | ○ | ● |
| YP2VCGW110308 | 2 | 3.0 | 6.35 | 3.18 | 2.8 | 0.8 | ○ | ● | ○ | ● |
| YP2VCGW160402 | 2 | 3.0 | 9.525 | 4.76 | 4.4 | 0.2 | ○ | ● | ○ | ● |
| YP2VCGW160404 | 2 | 3.0 | 9.525 | 4.76 | 4.4 | 0.4 | ● | ○ | ● | ○ |
| YP2VCGW160408 | 2 | 3.0 | 9.525 | 4.76 | 4.4 | 0.8 | ● | ○ | ● | ○ |

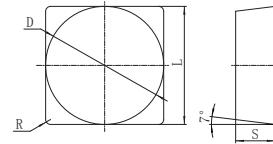
● Stock ○ Available upon Order



PCBN Turning Inserts (Positive)

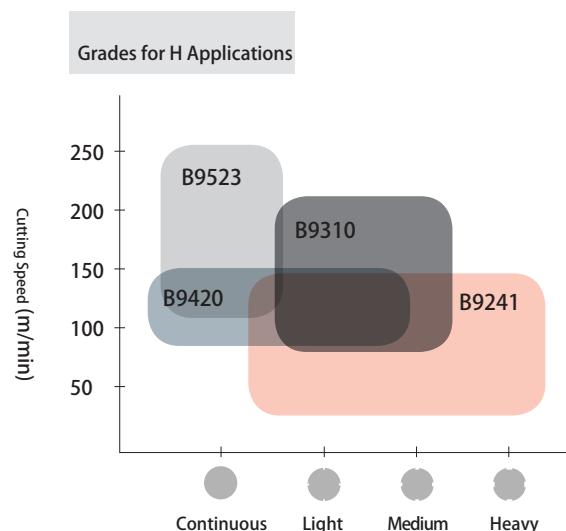
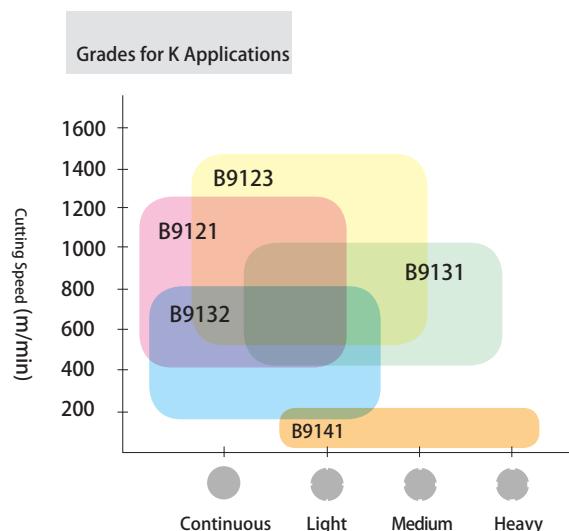
SCGN 

Square 90°, without Hole



| Ordering Code | Edge | Dimensions(mm) | | | | PCBN Grades of PCBN | | | | |
|---------------|------|----------------|-------|------|-----|---------------------|-------|-------|-------|-------|
| | | L | D | S | R | B9131 | B9132 | B9141 | B9241 | B9310 |
| YS4SCGN090304 | 4 | 9.525 | 9.525 | 3.18 | 0.4 | | ○ | | | |
| YS4SCGN090308 | 4 | 9.525 | 9.525 | 3.18 | 0.8 | | ○ | | | |
| YS4SCGN090312 | 4 | 9.525 | 9.525 | 3.18 | 1.2 | | ○ | | | |
| YS4SCGN090404 | 4 | 9.525 | 9.525 | 4.76 | 0.4 | ● | | | | |
| YS4SCGN090408 | 4 | 9.525 | 9.525 | 4.76 | 0.8 | ● | | | | |
| YS4SCGN090412 | 4 | 9.525 | 9.525 | 4.76 | 1.2 | ● | | | | |

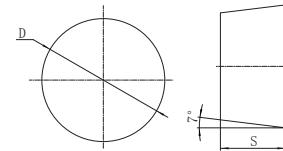
● Stock ○ Available upon Order



PCBN Turning Inserts (Positive)

RCGN 

Round 360° , without Hole



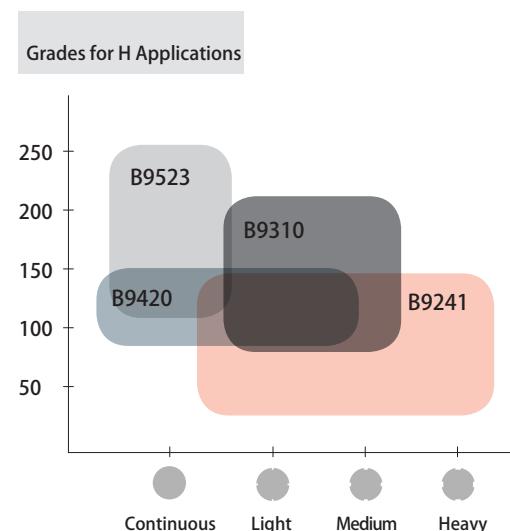
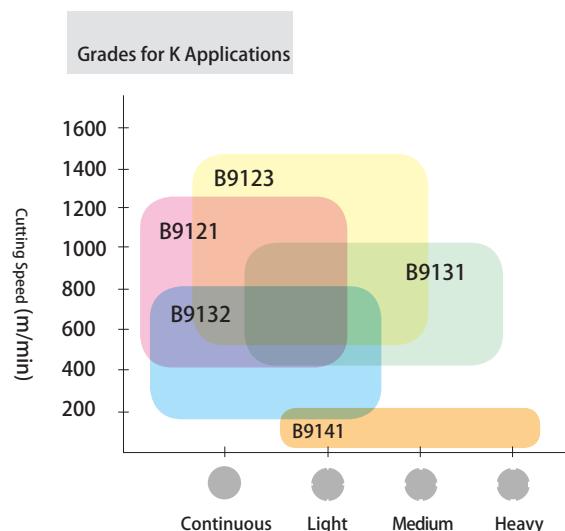
| Ordering Code | Edge | Dimensions(mm) | | PCBN Grades of PCBN | | | | |
|---------------|-------|----------------|------|---------------------|-------|-------|-------|-------|
| | | D | S | B9131 | B9132 | B9141 | B9241 | B9310 |
| YS0RCGN090400 | Round | 9.525 | 4.76 | | ○ | | | ○ |
| YS0RCGN090600 | Round | 9.525 | 6.35 | | ○ | | | ○ |
| YS0RCGN120600 | Round | 12.7 | 6.35 | | ○ | | | ○ |
| YS0RCGN120700 | Round | 12.7 | 7.94 | | ○ | | | ○ |

● Stock ○ Available upon Order



087

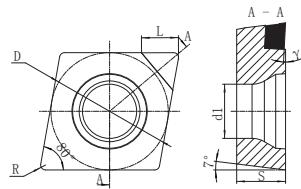
Turning



PCD Turning Inserts (Positive)

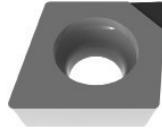
CCGW

Rhombic 80° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | | PCD Grades of PCD | | | |
|-----------------|------|----------------|-------|------|-----|-----|--------------|-------------------|-------|-------|-------|
| | | L | D | S | d1 | R | γ (°) | D9950 | D9852 | D9900 | D9700 |
| YP1CCGW09T304 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | 0 | ● | ● | ○ | ○ |
| YP1CCGW09T308 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | 0 | ● | ● | ○ | ○ |
| YP1CCGW09T304Q5 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | 5 | ● | ● | ○ | ○ |
| YP1CCGW09T308Q5 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | 5 | ● | ● | ○ | ○ |
| YP1CCGW09T304Q7 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | 7 | ● | ● | ○ | ○ |
| YP1CCGW09T308Q7 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | 7 | ● | ● | ○ | ○ |
| YP1CCGW120404 | 1 | 3.0 | 12.7 | 4.76 | 5.5 | 0.4 | 0 | ○ | ● | ○ | ● |
| YP1CCGW120408 | 1 | 3.0 | 12.7 | 4.76 | 5.5 | 0.8 | 0 | ○ | ● | ○ | ● |
| YP1CCGW120404Q5 | 1 | 3.0 | 12.7 | 4.76 | 5.5 | 0.4 | 5 | ○ | ● | ○ | ● |
| YP1CCGW120408Q5 | 1 | 3.0 | 12.7 | 4.76 | 5.5 | 0.8 | 5 | ○ | ● | ○ | ● |
| YP1CCGW120404Q7 | 1 | 3.0 | 12.7 | 4.76 | 5.5 | 0.4 | 7 | ○ | ● | ○ | ● |
| YP1CCGW120408Q7 | 1 | 3.0 | 12.7 | 4.76 | 5.5 | 0.8 | 7 | ○ | ● | ○ | ● |

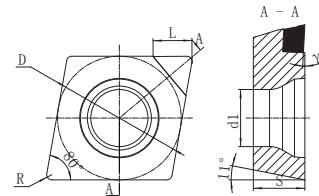
● Stock ○ Available upon Order



PCD Turning Inserts (Positive)

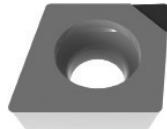
CPGW

Rhombic 80° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | | PCD Grades of PCD | | | |
|-----------------|------|----------------|-------|------|-----|-----|-------|-------------------|-------|-------|-------|
| | | L | D | S | d1 | R | γ (°) | D9950 | D9852 | D9900 | D9700 |
| YP1CPGW09T304 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | 0 | ○ | ● | ○ | ● |
| YP1CPGW09T308 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | 0 | ○ | ● | ○ | ● |
| YP1CPGW09T304Q5 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | 5 | ○ | ● | ○ | ● |
| YP1CPGW09T308Q5 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | 5 | ○ | ● | ○ | ● |
| YP1CPGW09T304Q7 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | 7 | ○ | ● | ○ | ● |
| YP1CPGW09T308Q7 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | 7 | ○ | ● | ○ | ● |
| YP1CPGW120404 | 1 | 3.0 | 12.7 | 4.76 | 5.5 | 0.4 | 0 | ○ | ● | ○ | ● |
| YP1CPGW120408 | 1 | 3.0 | 12.7 | 4.76 | 5.5 | 0.8 | 0 | ○ | ● | ○ | ● |
| YP1CPGW120404Q5 | 1 | 3.0 | 12.7 | 4.76 | 5.5 | 0.4 | 5 | ● | ● | ○ | ○ |
| YP1CPGW120408Q5 | 1 | 3.0 | 12.7 | 4.76 | 5.5 | 0.8 | 5 | ● | ● | ○ | ○ |
| YP1CPGW120404Q7 | 1 | 3.0 | 12.7 | 4.76 | 5.5 | 0.4 | 7 | ● | ● | ○ | ○ |
| YP1CPGW120408Q7 | 1 | 3.0 | 12.7 | 4.76 | 5.5 | 0.8 | 7 | ● | ● | ○ | ○ |

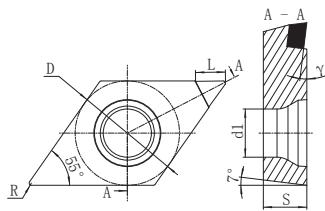
● Stock ○ Available upon Order



PCD Turning Inserts (Positive)

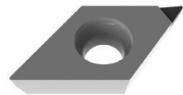
DCGW

Rhombic 55° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | | PCD Grades of PCD | | | |
|-----------------|------|----------------|-------|------|-----|-----|--------------|-------------------|-------|-------|-------|
| | | L | D | S | d1 | R | γ (°) | D9950 | D9852 | D9900 | D9700 |
| YP1DCGW110302 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.2 | 0 | ○ | ● | ○ | ● |
| YP1DCGW110304 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | 0 | ○ | ● | ○ | ● |
| YP1DCGW110308 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | 0 | ○ | ● | ○ | ● |
| YP1DCGW110302Q5 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.2 | 5 | ○ | ● | ○ | ● |
| YP1DCGW110304Q5 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | 5 | ○ | ● | ○ | ● |
| YP1DCGW110308Q5 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | 5 | ○ | ● | ○ | ● |
| YP1DCGW110302Q7 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.2 | 7 | ● | ● | ○ | ○ |
| YP1DCGW110304Q7 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | 7 | ● | ● | ○ | ○ |
| YP1DCGW110308Q7 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | 7 | ● | ● | ○ | ○ |
| YP1DCGW11T302 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.2 | 0 | ● | ● | ○ | ○ |
| YP1DCGW11T304 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | 0 | ● | ● | ○ | ○ |
| YP1DCGW11T308 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | 0 | ● | ● | ○ | ○ |
| YP1DCGW11T302Q5 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.2 | 5 | ● | ● | ○ | ○ |
| YP1DCGW11T304Q5 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | 5 | ● | ● | ○ | ○ |
| YP1DCGW11T308Q5 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | 5 | ● | ● | ○ | ○ |
| YP1DCGW11T302Q7 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.2 | 7 | ○ | ● | ○ | ● |
| YP1DCGW11T304Q7 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.4 | 7 | ○ | ● | ○ | ● |
| YP1DCGW11T308Q7 | 1 | 3.0 | 9.525 | 3.97 | 4.4 | 0.8 | 7 | ○ | ● | ○ | ● |

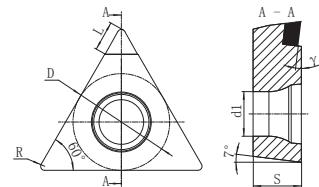
● Stock ○ Available upon Order



PCD Turning Inserts (Positive)

TCGW

Triangle 60° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | | PCD Grades of PCD | | | |
|-----------------|------|----------------|------|------|-----|-----|--------------|-------------------|-------|-------|-------|
| | | L | D | S | d1 | R | γ (°) | D9950 | D9852 | D9900 | D9700 |
| YP1TCGW110302 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.2 | 0 | ○ | ● | ○ | ● |
| YP1TCGW110304 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.4 | 0 | ○ | ● | ○ | ● |
| YP1TCGW110302Q5 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.2 | 5 | ○ | ● | ○ | ● |
| YP1TCGW110304Q5 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.4 | 5 | ○ | ● | ○ | ● |

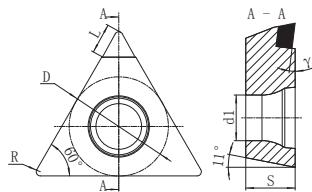
● Stock ○ Available upon Order



PCD Turning Inserts (Positive)

TPGW

Triangle 60° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | | PCD Grades of PCD | | | |
|-----------------|------|----------------|-------|------|-----|-----|--------------|-------------------|-------|-------|-------|
| | | L | D | S | d1 | R | γ (°) | D9950 | D9852 | D9900 | D9700 |
| YP1TPGW110302 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.2 | 0 | ○ | ● | ○ | ● |
| YP1TPGW110304 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.4 | 0 | ○ | ● | ○ | ● |
| YP1TPGW110302Q5 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.2 | 5 | ○ | ● | ○ | ● |
| YP1TPGW110304Q5 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.4 | 5 | ○ | ● | ○ | ● |
| YP1TPGW160404 | 1 | 3.0 | 9.525 | 4.76 | 4.4 | 0.4 | 0 | ● | ● | ○ | ○ |
| YP1TPGW160408 | 1 | 3.0 | 9.525 | 4.76 | 4.4 | 0.8 | 0 | ● | ● | ○ | ○ |
| YP1TPGW160404Q5 | 1 | 3.0 | 9.525 | 4.76 | 4.4 | 0.4 | 5 | ● | ● | ○ | ○ |
| YP1TPGW160408Q5 | 1 | 3.0 | 9.525 | 4.76 | 4.4 | 0.8 | 5 | ● | ● | ○ | ○ |
| YP1TPGW160404Q7 | 1 | 3.0 | 9.525 | 4.76 | 4.4 | 0.4 | 7 | ● | ● | ○ | ○ |
| YP1TPGW160408Q7 | 1 | 3.0 | 9.525 | 4.76 | 4.4 | 0.8 | 7 | ● | ● | ○ | ○ |

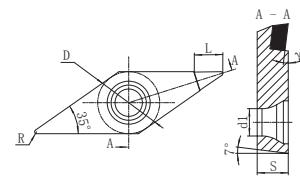
● Stock ○ Available upon Order



PCD Turning Inserts (Positive)

VCGW

Rhombic 35° , with Hole



| Ordering Code | Edge | Dimensions(mm) | | | | | | PCD Grades of PCD | | | |
|-----------------|------|----------------|-------|------|-----|-----|----------|-------------------|-------|-------|-------|
| | | L | D | S | d1 | R | γ (°) | D9950 | D9852 | D9900 | D9700 |
| YP1VCGW110302 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.2 | 0 | ○ | ● | ○ | ● |
| YP1VCGW110304 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.4 | 0 | ○ | ● | ○ | ● |
| YP1VCGW110302Q5 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.2 | 5 | ○ | ● | ○ | ● |
| YP1VCGW110304Q5 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.4 | 5 | ○ | ● | ○ | ● |
| YP1VCGW110302Q7 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.2 | 7 | ○ | ● | ○ | ● |
| YP1VCGW110304Q7 | 1 | 3.0 | 6.35 | 3.18 | 2.8 | 0.4 | 7 | ○ | ● | ○ | ● |
| YP1VCGW160404 | 1 | 3.0 | 9.525 | 4.76 | 4.4 | 0.4 | 0 | ● | ● | ○ | ○ |
| YP1VCGW160408 | 1 | 3.0 | 9.525 | 4.76 | 4.4 | 0.8 | 0 | ● | ● | ○ | ○ |
| YP1VCGW160404Q5 | 1 | 3.0 | 9.525 | 4.76 | 4.4 | 0.4 | 5 | ● | ● | ○ | ○ |
| YP1VCGW160408Q5 | 1 | 3.0 | 9.525 | 4.76 | 4.4 | 0.8 | 5 | ● | ● | ○ | ○ |
| YP1VCGW160404Q7 | 1 | 3.0 | 9.525 | 4.76 | 4.4 | 0.4 | 7 | ● | ● | ○ | ○ |
| YP1VCGW160408Q7 | 1 | 3.0 | 9.525 | 4.76 | 4.4 | 0.8 | 7 | ● | ● | ○ | ○ |

● Stock ○ Available upon Order



PCBN Turning Insert

PCBN Inserts for Cutting of Cast Iron

Case Studies

Case 1



| B9132 for Cutting of Cast Iron | | Workpiece | |
|--------------------------------|--|---------------|------------------------------|
| Workpiece | Air Conditioning Compressor Bearing Cover | | |
| Type | WNGA080408 | | |
| Workpiece Materials | HT250 (190-220HB) | Comparison | V _c Cutting Speed |
| Cutting Parameters | V _c =600m/min ap=1.5mm f=0.25mm/r | Coated Alloy | 300m/min |
| Cutting Method | Dry Interrupted Cutting | WINTECH B9132 | 600m/min |
| | | Efficiency | Life |
| | | 30Sec/pcs | 120pcs/edge |
| | | 15Sec/pcs | 500pcs/edge |

Case 2



| B9132 for Cutting of Cast Iron | | Workpiece | |
|--------------------------------|--|------------------------------|------------------------------|
| Workpiece | Pulley | | |
| Type | CNMN120412 | | |
| Workpiece Materials | HT200 (190-220HB) | Comparison | V _c Cutting Speed |
| Cutting Parameters | V _c =520m/min ap=0.5mm f=0.35mm/r | Japanese Series Coated Alloy | 280m/min |
| Cutting Method | High Speed Turning | WINTECH B9132 | 520m/min |
| | | Efficiency | Life |
| | | 19Sec/pcs | 30pcs/edge |
| | | 10Sec/pcs | 125pcs/edge |

PCBN Turning Insert

PCBN Inserts for Cutting of Cast Iron

Case Studies

Case 3



| B9132 for Cutting of Cast Iron | | Workpiece | | | |
|--------------------------------|---|------------|------------------------------|------------|-------------|
| Workpiece | Brake Disc | | | | |
| Type | CNGN120720 | | | | |
| Workpiece Materials | HT200 (170-210HB) | Comparison | V _c Cutting Speed | Efficiency | Life |
| Cutting Parameters | V _c =320m/min ap=3mm f=0.5mm/r | | Japanese Series Coated Alloy | 90Sec/pcs | 45pcs/edge |
| Cutting Method | Turning Wet,Ra3.2 | | WINTECH B9132 | 40Sec/pcs | 120pcs/edge |

Case 4



| B9123 for Cutting of Cast Iron | | Workpiece | | | |
|--------------------------------|---|-----------|-----------------------------|--------------------------|--|
| Workpiece | Auto Sleeve | | | | |
| Type | TPGW110304 | | | | |
| Workpiece Materials | Powder Metallurgy FNF4Q | JZ | 380 | +18% | |
| Cutting Parameters | V _c =290m/min ap=0.01mm f=0.05mm/r | | 450 | | |
| Cutting Method | Light Interrupted Finishing | | 340 360 380 400 420 440 460 | 加工数量 (件) Amount (pcs) | |

PCBN Turning Insert

PCBN Inserts for Cutting of Steel

Case Studies

Case 1



| B9241 for Cutting of Steel | | Workpiece | |
|----------------------------|--|-----------------------|------------------|
| Workpiece | Gear | | |
| Type | SNGN201020 | | |
| Workpiece Materials | 40CrMo (45~55HRC) | | |
| Cutting Parameters | Rough: ap=4mm, f=0.7mm/r Finishing: ap=0.5mm, f=0.6mm/r | Comparison | Vc Cutting Speed |
| Cutting Method | Gear Top Excircle Turning | European Series Alloy | 20m/min |
| | | WINTECH B9241 | 50m/min |
| | | | 2h/pcs |
| | | | 2pcs/edge |

Case 2



| B9241 for Cutting of Steel | | Workpiece | |
|----------------------------|------------------------------------|----------------|------|
| Workpiece | Bearing | | |
| Type | SNGN150720 | | |
| Workpiece Materials | Gr15 (55-62HRC) | | |
| Cutting Parameters | Vc=120m/min ap=4mm f=0.1mm/r | JM | 2 |
| Cutting Method | Excircle, face turning | WINTECH | 3 |
| | | Amount (pcs) | +50% |

PCBN Turning Insert

PCBN Inserts for Cutting of Steel

Case Studies

Case 3



| B9310 for Cutting of Steel | | Workpiece | |
|----------------------------|-------------------------------------|--------------|------------------|
| Workpiece | Rotary Support | | |
| Type | RCGN090700 | | |
| Workpiece Materials | 42CrMo (47-55HRC) | Comparison | Vc Cutting Speed |
| Cutting Parameters | Vc=90m/min ap=0.2mm f=0.3mm/r | Coated Alloy | 50m/min |
| Cutting Method | Inner Circle Turning | WINTECHB9310 | 90m/min |
| | | Efficiency | Life |
| | | 2h/pcs | 1pcs/edge |
| | | 30min/pcs | 4pcs/edge |

Case 4



| B9310 for Cutting of Steel | | Workpiece | |
|----------------------------|--------------------------------------|-----------|--|
| Workpiece | Crankshaft | | |
| Type | DNGA110408 | | |
| Workpiece Materials | 42CrMo (42-47HRC) | | |
| Cutting Parameters | Vc=170m/min ap=0.3mm f=0.1mm/r | | |
| Cutting Method | Excircle Interrupted Turning, Wet | | |

| Tool Type | Amount (pcs) |
|-----------|--------------|
| JM | 25 |
| WINTECH | 35 |

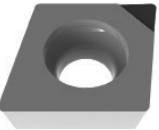
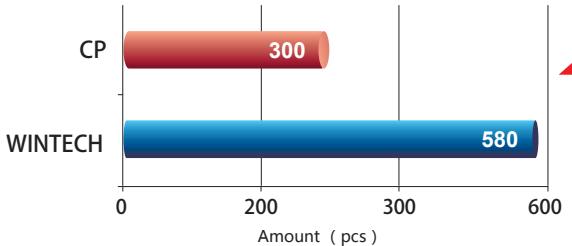
+40%

PCD Turning Insert

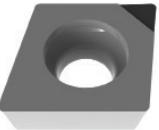
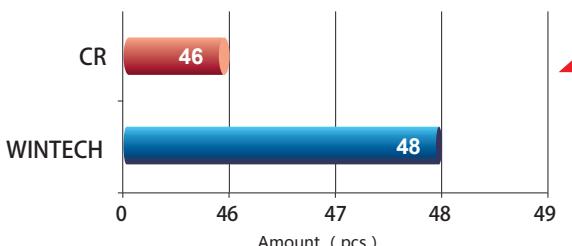
PCD Inserts for Cutting of Cast Aluminum Alloy

Case Studies

Case 1

| D9700 for Cutting of Cast Aluminum Alloy | | Workpiece | |
|--|--------------------------------------|--|---|
| Workpiece | Auto Valve Seat |  |  |
| Type | CCGW09T304Q5 | | |
| Workpiece Materials | Cast Aluminum Alloy | | |
| Cutting Parameters | Vc=500m/min ap=1.2mm f=0.2mm/r |  <p>CP 300</p> <p>WINTECH 580</p> <p>Amount (pcs)</p> |  |
| Cutting Method | Light Interrupted Semi-finishing | | |

Case 2

| D9700 for Cutting of Cast Aluminum Alloy | | Workpiece | |
|--|--|---|---|
| Workpiece | Auto Mould |  |  |
| Type | CCGW09T304Q5 | | |
| Workpiece Materials | 20HRC Cast Aluminum Alloy | | |
| Cutting Parameters | Vc=480m/min ap=0.15mm f=0.02mm/r |  <p>CR 46</p> <p>WINTECH 48</p> <p>Amount (pcs)</p> |  |
| Cutting Method | Continuous Finishing | | |