

D1~D42

External Turning Toolholders Identification System **D3**

Product Lineup **D4~D5**

Clamping System **D6~D7**

External Turning Toolholders **D8~D23**



| | | |
|--------------------|--------------------------|------------|
| CN□□ Insert | DCLN / DCLN-JCT | D8 |
| | PCLN | D9 |
| DN□□ Insert | DDJN / DDJN-JCT / DDHN | D12 |
| | PDJN / PDHN | D13 |
| SN□□ Insert | DSBN / PSBN / PSKN | D14 |
| | PSSN / PSDN | D15 |
| TN□□ Insert | DTGN / PTGN / PTFN | D16 |
| | WTJN-N / WTKN-N / WTEN-N | D17 |
| VN□□ Insert | DVLN / DVPN / DVVN | D18 |
| | MVLN / MVVN | D19 |
| | PVLN / PVPN / PVVN | D20 |
| RC□□ Insert | PRGC / PRXC | D21 |
| RN□□ Insert | PRGN | D21 |
| WN□□ Insert | DWLN / PWLN / WWLN | D22 |

Toolholders for Ceramic Tools **D24~D33**



| | | |
|--------------------|---|------------|
| CN□□ Insert | CCLN | D24 |
| DN□□ Insert | CDJN | D25 |
| EN□□ Insert | CELN | D25 |
| SN□□ Insert | CSRN / CS-N / CSKN / CSYN / CSSN / CSDN | D27 |
| TN□□ Insert | CTJN / CTUN | D28 |
| RN□□ Insert | CRSN / CRDN | D29 |
| CNGX Insert | CCLN-GX | D30 |
| DNGX Insert | CDHN-GX / CDJN-GX | D31 |
| SNGX Insert | CSRN-GX / CSDN-GX / CSSN-GX | D32 |
| | CS-N-GX / CSKN-GX / CSYN-GX | D33 |

Toolholders for Solid CBN Tools **D34~D38**



| | | |
|--------------------|--------------------------|------------|
| CNMN Insert | CCRN-A / CCLN-A | D34 |
| RNMN Insert | CRSN-A / CRDN-A | D35 |
| SNMN Insert | CSRN-A / CSKN-A / CSYN-A | D36 |
| | CSSN-A / CSDN-A | D37 |
| TNMN Insert | CTJN-A / CTUN-A | D38 |

Toolholders for Bearing Machining **D39~D40**



| | | |
|--------------------|-------------------|------------|
| RCMT Insert | PRGC-BE / PRGC-BF | D39 |
| SNMF Insert | CBSN | D40 |

Technical Information **D41~D42**

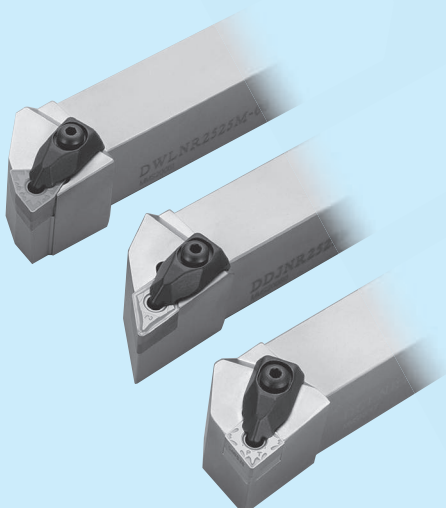


Recommended Cutting Conditions **D41**

Parts Compatibility of Lever Lock Toolholders **R52**



D



Great for High Pressure Coolant Turning Toolholders

Double-Clamp JCT

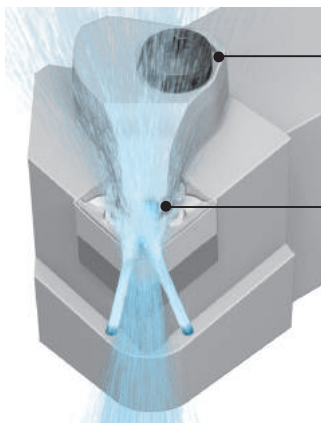
Discharges Coolant in Three Directions. Improved Chip Control and Longer Tool Life for a Wide Variety of Workpieces including Steel, Hardened Material and Difficult-to-Cut Material

D

External

Special Coolant Hole Design

Special coolant-through structure designed by careful simulation and analysis technology



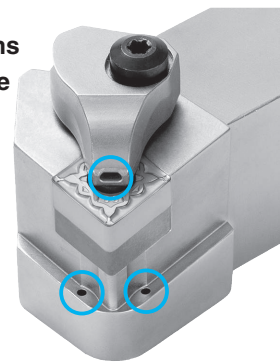
Double-Clamp

Firm insert clamp and easy to use in single operations
High-density coolant supply close to the cutting edge

Unique Nozzle Shape

Provides coolant to a wide area of the insert surface

○ : Coolant Hole



Discharges Coolant in Three Directions
The Cutting Edge Stays Cool

Internal Coolant Benefits

Discharges Coolant towards the Cutting Edge

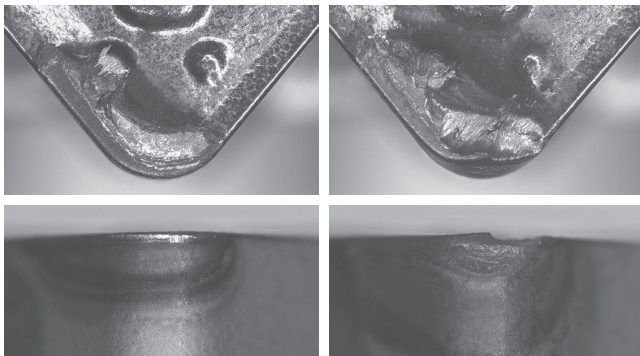
Internal Coolant Provides Longer Tool Life and Excellent Chip Control

Longer Tool Life

Wear Resistance Comparison (Internal evaluation)

Internal coolant (7MPa)

External coolant (0.4MPa)



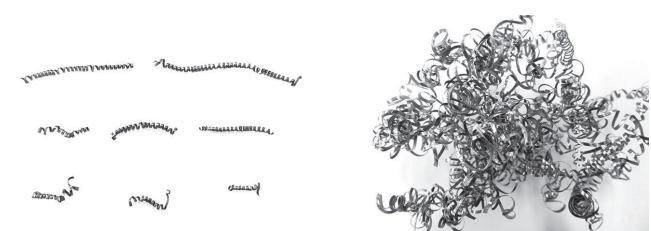
Cutting Conditions : $V_c = 250$ m/min, $f = 0.3$ mm/rev, $a_p = 2$ mm, Wet
CNMG120408type Workpiece Material : SCM435
External After Machining 42.2 min

Improved Chip Control

Chip Control Comparison (Internal evaluation)

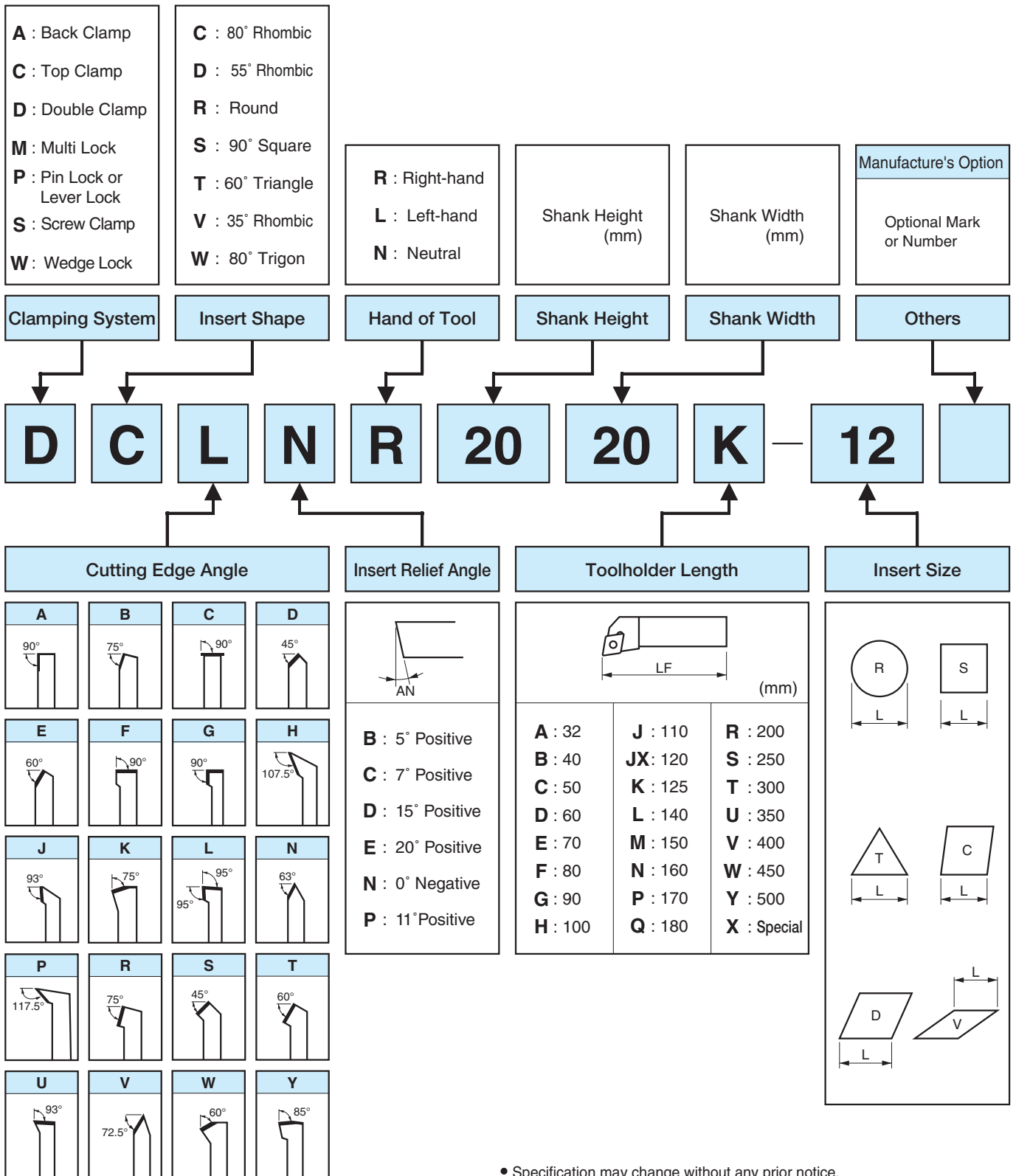
Internal coolant (7MPa)

External coolant (0.4MPa)



Cutting Conditions : $V_c = 200$ m/min, $f = 0.05$ mm/rev, $a_p = 0.5$ mm, Wet
DNMG150408type Workpiece Material : SCM415 External

External Turning Toolholders Identification System (Square Shank)



- Specification may change without any prior notice.
- Due to the installation size constraints on the machine, the toolholder length of some products may not match with the symbol.

Insert Grades
 Turning
 Indexable Inserts
 CN & PCD Tools
 External
 Small Parts
 Machining
 Boring
 Grooving
 Cut-off
 Threading
 Drilling
 Solid Tools
 Milling
 Tools for
 Turning Mill
 Spare Parts
 Technical
 Information
 Index

Product Lineup

External Turning Toolholders

| | CN.. | WN.. | TN.. | DN.. | RC.. | | RN.. | VN.. | |
|--|-------------------|------------|------------|-----------------------------|------------|------------|------------|--|--|
| Applicable Insert Shape | | | | | | | | | |
| Applications | External / Facing | | | External / Facing / Copying | | | | External / Facing / Copying / Undercutting | |
| Cutting Edge Angle | 95° | | | 105° | 107.5° | Special | | 117.5° | |
| Lever Lock (Pin Lock) | | | | | | | | | |
| See Page | D9 | D22 | | D13 | D21 | D21 | D21 | D20 | |
| Wedge Lock Multi Lock | | | | | | | | | |
| See Page | | D22 | D17 | | | | | | |
| Double Clamp (Coolant-through Holders) | | | | | | | | | |
| See Page | D8 | D22 | | D12 | | | | D18 | |

Toolholders for Ceramic Tools

| Applications | External / Facing | | | External / Copying | | | External / Chamfering | External / Facing / Chamfering | |
|--------------------|-------------------|------------|------------|--------------------|------------|------------|-----------------------|--------------------------------|--|
| Cutting Edge Angle | 95° | 97.5° | Special | 93° | 107.5° | Special | 45° | 45° | |
| Top Clamp | | | | | | | | | |
| See Page | D24 | D25 | D29 | D25 | | D29 | D27 | D27 | |
| Dimpled-clamp | | | | | | | | | |
| See Page | D30 | | | D31 | D31 | | D32 | D32 | |

Toolholders for Solid CBN Tools

| Applications | External / Facing | | External / Copying | External / Chamfering | External / Facing / Chamfering | External | | |
|--------------------|-------------------|------------|--------------------|-----------------------|--------------------------------|------------|------------|------------|
| Cutting Edge Angle | 95° | Special | Special | 45° | 45° | 75° | | 93° |
| Top Clamp | | | | | | | | |
| See Page | D34 | D35 | D35 | D37 | D37 | D34 | D36 | D38 |

D External

| | | | | | | | | | | |
|--|--------------------|--------------------|-------------|-----------------------|----------|--------------------------------|----------|----------|----------|------|
| | VN.. | DN.. | SN.. | TN.. | SN.. | SN.. | TN.. | SN.. | TN.. | |
| | External / Copying | | | External / Chamfering | | External / Facing / Chamfering | External | | Facing | |
| | 72.5° | 95° | 93° | 45° | 60° | 45° | 75° | 91° | 15° | -1° |
| | | | | | | | | | | |
| | PVVN (Pin Lock) | PVLN (Pin Lock) | PDJN | PSDN | | PSSN | PSBN | PTGN | PSKN | PTFN |
| | D20 | D20 | D13 | D15 | | D15 | D14 | D16 | D14 | D16 |
| | | | | | | | | | | |
| | MVVN | MVLN | WTJN-N | | WTEN-N | | | | | |
| | D19 | D19 | D17 | | D17 | | | | | |
| | | | | | | | | | | |
| | DVVN | DVLN | DDJN (-JCT) | | | | DSBN | DTGN | | |
| | D18 | D18 | D12 | | | | D14 | D16 | | |

| | | | | | |
|----------|---------|------|---------|---------|------|
| External | | | Facing | | |
| 75° | 85° | 93° | 5° | 15° | -3° |
| | | | | | |
| CSRN | CS-N | CTJN | CSYN | CSKN | CTUN |
| D27 | D27 | D28 | D27 | D27 | D28 |
| | | | | | |
| CSRN-GX | CS-N-GX | | CSYN-GX | CSKN-GX | |
| D32 | D33 | | D33 | D33 | |

| | | |
|--------|--------|--------|
| Facing | | |
| 5° | 15° | -3° |
| | | |
| CSYN-A | CSKN-A | CTUN-A |
| D36 | D36 | D38 |

Toolholders for Bearing Machining

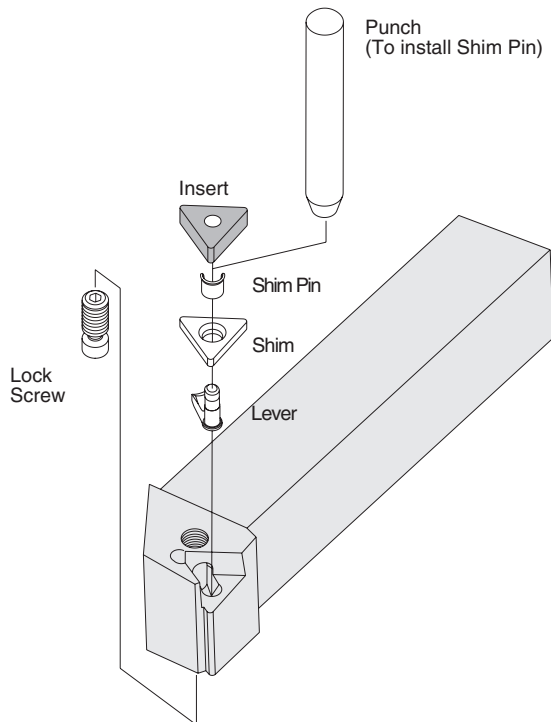
| | | | | |
|--------------------|----------|---------|--------------------|------------------|
| Applications | External | Facing | Applications | Round Chamfering |
| Cutting Edge Angle | Special | Special | Cutting Edge Angle | Special |
| Lever Lock | | | Top Clamp | |
| See Page | D39 | D39 | See Page | D40 |

Clamping System

Clamping System

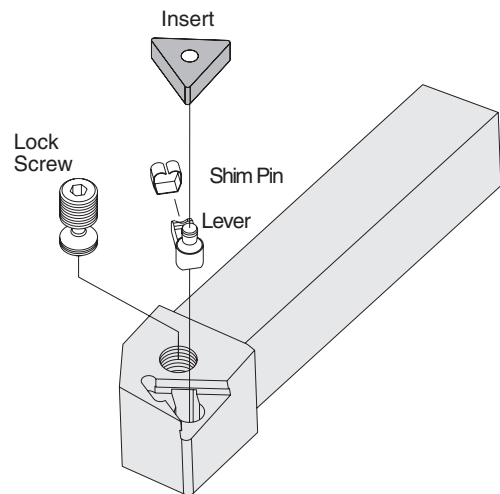
| Series | Design | Features | Series | Design | Features |
|------------------|--------|--|----------------|--------|--|
| Top Clamp (C) | | <ul style="list-style-type: none"> · Rigid Clamping · Negative Insert : Medium to Heavy Machining (Mainly for Ceramic Insert) · Positive Insert : Low Cutting Force | Multi Lock (M) | | <ul style="list-style-type: none"> · Combination of Top Clamp and Pin Lock · Rigid Clamping · Heavy Machining |
| Double Clamp (D) | | <ul style="list-style-type: none"> · Firmly clamp the insert in two directions with one action | Lever Lock (P) | | <ul style="list-style-type: none"> · Easy Insert Replacement · General Use |
| Pin Lock (P) | | <ul style="list-style-type: none"> · Easy Insert Replacement | Wedge Lock (W) | | <ul style="list-style-type: none"> · Rigid Clamping · Heavy Machining |
| Screw Clamp (S) | | <ul style="list-style-type: none"> · Simple Mechanism · Fewer Parts · Finishing to Medium Machining | | | |

● Lever Lock



With Shim

PCLN
 PWLN
 PTGN / PTFN / PTLN
 PDJN / PDHN
 PSBN / PSKN / PSSN / PSDN
 PRGN
 PRGC / PRXC

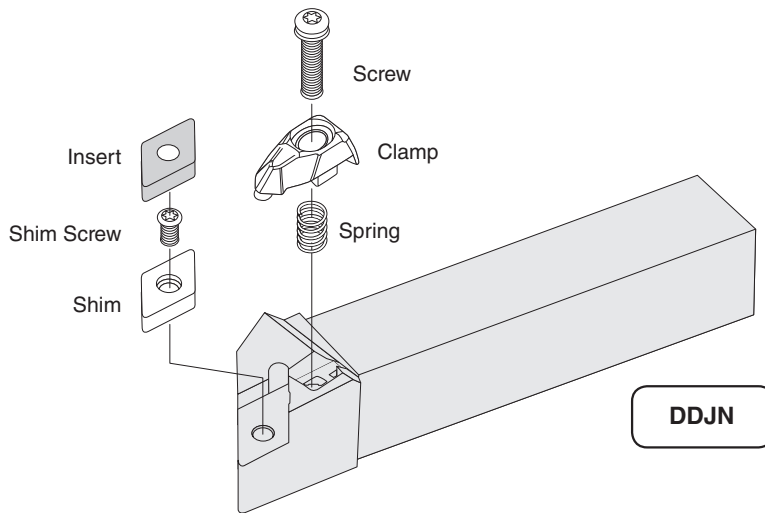


Without Shim

PTGN-11 / PTFN-11

D External

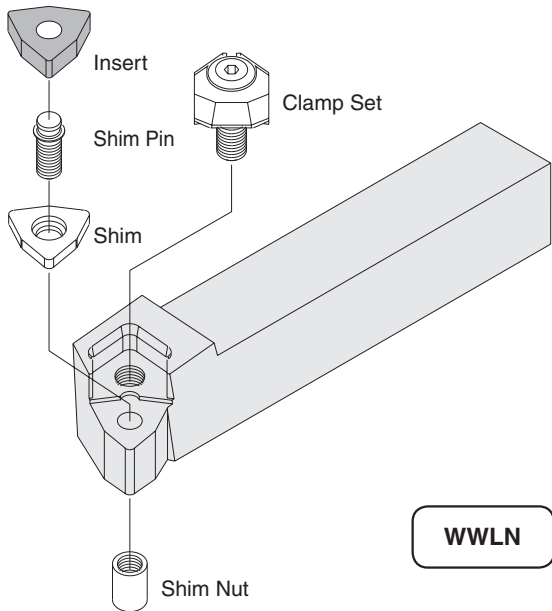
● Double Clamp



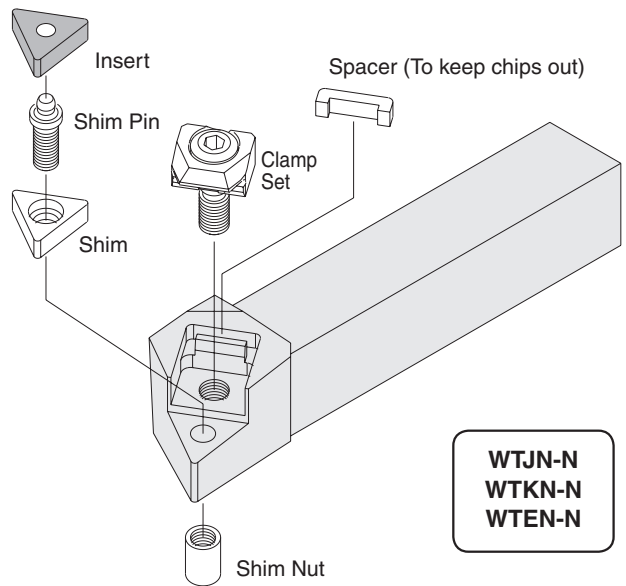
DCLN
DDJN / DDHN
DSBN
DTGN
DVLN / DVPN / DVVN
DWLN

DDJN

● Wedge Lock

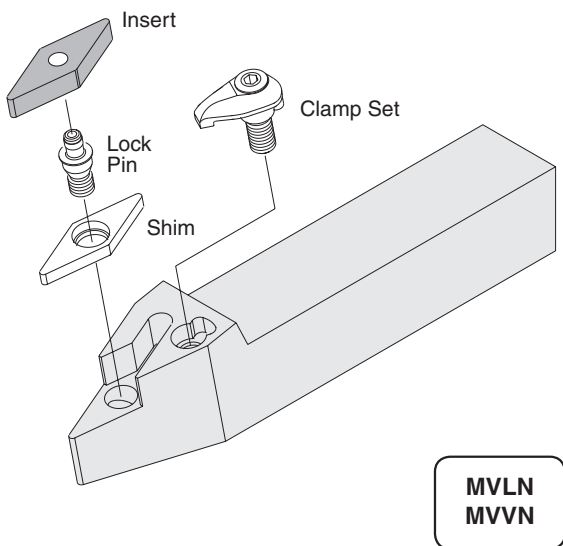


WWLN



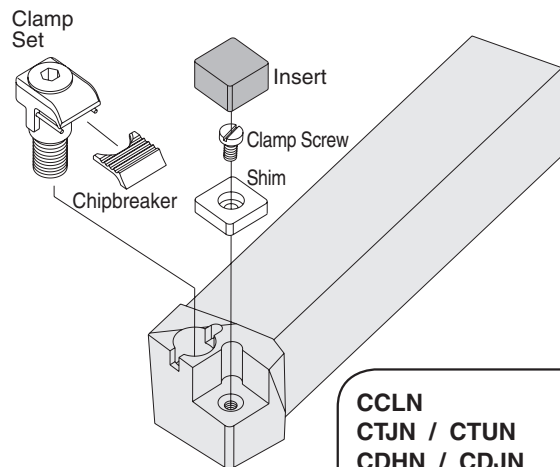
WTJN-N
WTKN-N
WTEN-N

● Multi Lock



MVLN
MVVN

● Top Clamp



CCLN
CTJN / CTUN
CDHN / CDJN
CELN
CSRN / CS-N / CSKN
CSYN / CSSN / CSDN
***CRSN / *CRDN**

*A chipbreaker is not included with CRSN / CRDN.

| | |
|---------------------------|----------|
| Insert Grades | A |
| Turning Indexable Inserts | B |
| CBN & PCBN Tools | C |
| External | D |
| Small Parts Machining | E |
| Boring | F |
| Grooving | G |
| Cut-off | H |
| Threading | J |
| Drilling | K |
| Solid Tools | L |
| Milling | M |
| Tools for Turning Mill | N |
| Spare Parts | P |
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DCLN (External / Facing)

Side Rake Angle : -6°
Angle of Inclination : -6°

● Applicable Inserts

| Toolholder Description | Insert Description |
|----------------------------|-----------------------------|
| DCLN ^{R/L} ...-12 | CN□A CN□G CN□M 1204.. |

● Right-hand shown

Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | | |
|-------------------------------|-------------------------------|---|----------------|----|----|-----|-----|----|-------|-------------------|-------------|--------|-------|------------|----------------------|--------------------------|------|
| | R | L | H | HF | B | LF | LH | WF | Clamp | | Screw | Spring | Shim | Shim Screw | Wrench | Wrench (sold separately) | |
| | DCLN ^{R/L} 2020K -12 | ● | ● | 20 | 20 | 20 | 125 | 33 | 25 | | 0.8 | CP-3D | CS-3D | SP-3D | *1DC-44 *2DC-44-C | SB-4085TR | LW-3 |
| DCLN ^{R/L} 2525M -12 | ● | ● | 25 | 25 | 25 | 150 | 32 | 32 | | | | | | | | | |

*1. When using inserts whose corner-R(RE) is greater than 1.6mm, it will be necessary additional modifications of the shim in order to prevent workpiece and shim from interfering each other.
*2. When using the inserts with SX chipbreaker, prepare a shim separately.

DCLN-JCT (External / Facing and Coolant-through Holders)

Pressure Resistance : ~30MPa

Side Rake Angle : -6°
Angle of Inclination : -6°

● Applicable Inserts

| Toolholder Description | Insert Description |
|----------------------------|-----------------------------|
| DCLN ^{R/L} ...-12 | CN□A CN□G CN□M 1204.. |

● Right-hand shown

Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | | |
|-------------|----------------------------------|---|----------------|----|----|----|-----|----|-----|-------------------|-------------|----------------------------------|----------------------------|--------|----------|------------|----------------------|
| | R | L | H | HF | B | LF | LH | WF | MHD | | Clamp | Pipe Connection (*1 with O-ring) | Screw | Spring | Shim | Shim Screw | Wrench |
| | DCLN ^{R/L} 2525M -12JCT | ● | ● | 25 | 25 | 25 | 150 | 27 | 32 | | 135.2 | 0.8 | CP-3D- ^{R/L} -JCT | FP-12 | CS-3D-TR | SP-3D | *2DC-44 *3DC-44-C |

Please see D11 for piping parts of coolant-through holders.

*1 It is possible to order just an O-ring (SS-035).

*2 When using inserts whose corner-R(RE) is greater than 1.6mm, additional modifications to the shim are necessary in order to prevent workpiece and shim from interfering each other.

*3 When using the inserts with SX chipbreaker, prepare a shim separately.

PCLN (External / Facing)

Side Rake Angle : -6°
Angle of Inclination : -6°

● Applicable Inserts

| Toolholder Description | Insert Description |
|----------------------------|--------------------|
| PCLN ^{R/L} ...-09 | CN□G 0904.. |
| PCLN ^{R/L} ...-12 | CN□A 1204.. |
| PCLN ^{R/L} ...-16 | CN□G 1606.. |
| PCLN ^{R/L} ...-19 | CN□M 1906.. |

● Right-hand shown

● Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | | | |
|---------------------|------------|---|----------------|----|----|-----|-----|----|-------------------|-------------|------------|--------------------|----------|-------------------------------------|--------|--------|------|
| | R | L | H | HF | B | LF | LH | WF | | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench | | |
| PCLN ^{R/L} | 1616H-09 | ● | ● | 16 | 16 | 16 | 100 | 22 | 20 | 0.8 | LL-1N | LS-1N | LC-32N | LSP-1 | PC-1 | FH-2.5 | |
| | 2020K-09 | ● | ● | 20 | 20 | 20 | 125 | | 25 | | | | | | | | |
| | 2525M-09 | ● | ● | 25 | 25 | 25 | 150 | | 32 | | | | | | | | |
| | 2020H-12*1 | ● | ● | 20 | 20 | 20 | 100 | 27 | 25 | | 0.8 | LL-2N | LS-2N | LC-42N *2LC-42N-20 *3LC-42N-C | LSP-2 | PC-2 | LW-3 |
| | 2020K-12 | ● | ● | | | | 125 | | | | | | | | | | |
| | 2525M-12 | ● | ● | 25 | 25 | 25 | 150 | 32 | 32 | | 0.8 | LL-5N | LS-4N | LC-53N *3LC-53N-C | LSP-3 | - | LW-3 |
| | 3225P-12 | ● | ● | 32 | 32 | 32 | 170 | 40 | | | | | | | | | |
| | 2525M-16 | ● | ● | 25 | 25 | 25 | 150 | 32 | 32 | | 0.8 | LL-5N | LS-4N | LC-53N *3LC-53N-C | LSP-3 | - | LW-3 |
| | 3232P-16 | ● | ● | 32 | 32 | 32 | 170 | | 40 | | | | | | | | |
| 3232P-19 | ● | ● | 32 | 32 | 32 | 170 | 38 | 40 | 1.2 | LL-6 | LS-5 | LC-63 *3LC-63-C | LSP-4 | - | LW-4 | | |

*1. Indicates short shank type

*2. When using inserts whose corner-R(RE) is greater than 1.6mm, please purchase a shim and use it in order to prevent workpiece and shim from interfering each other.

*3. When using the inserts with SX chipbreaker, prepare a shim separately.

● Applicable Inserts

| | | | | | | | | | |
|--------------|------------------------------------|-----------------------------|-----------------------------------|--|--------------------|--------------------|-----------------------|------------------------|---------------------|
| Applications | Finishing | Finishing - Medium | Finishing | Finishing - Medium | Finishing - Medium | Finishing - Medium | Medium - Roughing | Medium - Roughing | Medium - Roughing |
| Insert | WF(Wiper) | WE(Wiper) | PP | PQ | CQ | CJ | GS | PG | PS |
| Size | 12 | 12 | 12 | 12 | 12,16 | 12,16 | 09,12 | 12 | 12,16 |
| Page | B16 | B16 | B16 | B16 | B17 | B17 | B17 | B17 | B17 |
| Applications | Medium - Roughing / High Feed Rate | Roughing | Roughing | Single Sided / Roughing / High Feed Rate | Finishing | Medium | Soft Steel / Small ap | Soft Steel / Finishing | Soft Steel / Medium |
| Insert | PT | Standard | PH | PX | ^{R/L} -S | ^{R/L} | XF | XP | XQ |
| Size | 12,16 | 12,16,19 | 12,16,19 | 12,16,19 | 09 | 09,12 | 12 | 12 | 12 |
| Page | B18 | B18 | B18 | B19 | B22 | B22 | B19 | B19 | B19 |
| Applications | Soft Steel / Roughing | Stainless Steel / Finishing | Stainless Steel / Medium-Roughing | Stainless Steel / Medium-Roughing | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Cast Iron |
| Insert | XS | MQ | MS | MU | KQ | KG | KH | C | ZS |
| Size | 12 | 12 | 12 | 12,16,19 | 12 | 12 | 12 | 12,16 | 12 |
| Page | B19 | B20 | B20 | B20 | B21 | B21 | B21 | B21 | B21 |
| Applications | Cast Iron | Cast Iron | Cast Iron | Non-ferrous Metals | Non-ferrous Metals | Non-ferrous Metals | Heat-resistant Alloys | Heat-resistant Alloys | Hard Materials |
| Insert | GC | Without Chipbreaker | Ceramic | A3 | AH | PCD | SQ | ^{R/L} -SX | CBN |
| Size | 12 | 12 | 12 | 12 | 12 | 12 | 12,16,19 | 12,16,19 | 12 |
| Page | B21 | B21 | B106 | B22 | B22 | C23 | B20 | B21 | C6, C7 |

Recommended Cutting Conditions ● D41~D42

● : Std. Item

Insert Grades
 Turnings
 CBN & PCD Tools
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 Machining
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 Tools for Turning Mill
 Spare Parts
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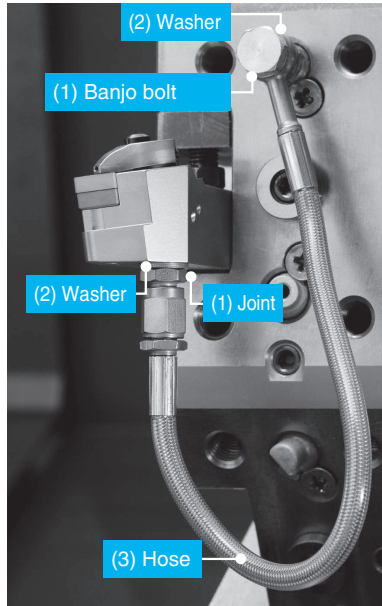
R

T

Piping Parts for Coolant-through Holders

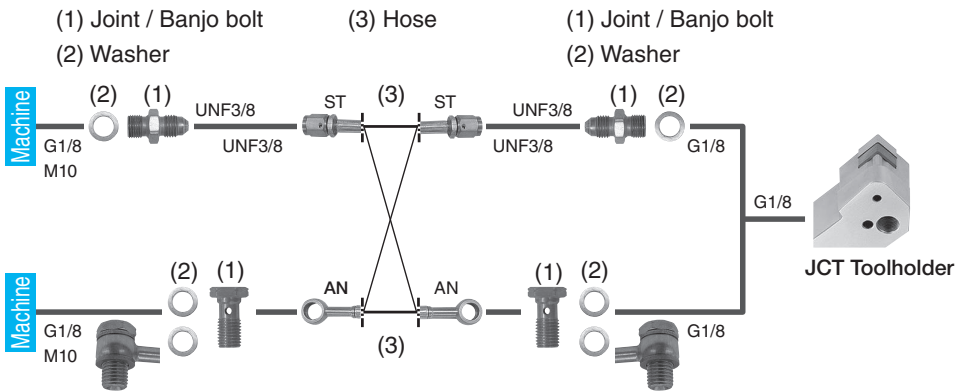
Easy Coolant Connections

Easy Connection with High Pressure Hose and Joint



- Even without a high pressure pump, internal coolant can be used at a normal pressure.
- Banjo bolt available for angled hose connection. Can be used in a variety of machines.

<Piping Installation Guide>



● Internal Coolant Benefits (Reference)

| Coolant Pressure (MPa) | Tool Life | Chip Control | Remarks |
|-------------------------------|-----------|--------------|--|
| ~ 2 (Low Pressure) | ○ | - | Longer tool life under 1MPa |
| 2 ~ 7 (Medium Pressure) | ◎ | ○ | Longer tool life and Improved chip control |
| 7 ~ 15 (High Pressure) | ◎ | ◎ | Fine chip breaking |
| 15 ~ 30 (Extra-high Pressure) | ◎ | ◎ | Fine chip breaking. High speed machining for heat-resistant alloys |

Internal coolant under low pressure provides improved performance and stable machining

D External

● Piping Parts


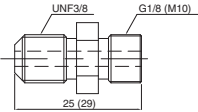

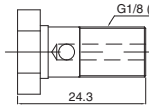
Optional Piping Parts Available (sold separately)

Choose among (1)(2)(3) based on the machine spec and piping configuration.

(1) Joint / Banjo bolt x 2 (2) Washer x 2-4 (3) Hose x 1


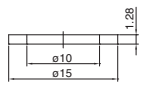
(1) Joint / Banjo bolt

Pressure Resistance : ~30MPa

| Shape | Description | Stock | Thread Standard | |
|--|---|-------|----------------------------------|--|
| | | | Thread connection to the machine | |
|  |  | ● | G1/8 | |
| | J-M10X1.5-UNF3/8 | ● | M10X1.5 | |
| Banjo bolt (for angled hose)  |  | ● | G1/8 | |
| | BB-M10X1.5 | ● | M10X1.5 | |

(2) Washer




Pressure Resistance : ~30MPa

| Shape | Description | Stock |
|--|-------------|-------|
|   | WS-10 | ● |

*Use 2 washers for a banjo bolt

(3) Hose

Pressure Resistance : ~30MPa

| Shape | Description | Stock | Thread Standard | | Dimension (mm) |
|---|--------------|-------|-----------------|--------|----------------|
| | | | | | L |
|  | HS-ST-ST-200 | ● | UNF3/8 | UNF3/8 | 200 |
| | HS-ST-ST-250 | ● | | | 250 |
|  | HS-ST-AN-200 | ● | UNF3/8 | - | 200 |
| | HS-ST-AN-250 | ● | | | (Banjo bolt) |
|  | HS-AN-AN-200 | ● | - | - | 200 |
| | HS-AN-AN-250 | ● | | | (Banjo bolt) |

Cautions

1. Make sure machine door is completely closed before use of these parts.
2. Use appropriate seal for the male thread of the piping parts and make sure the connection is secure.
Use plugs to seal off unused coolant holes.
3. Connect and fasten the coolant hose firmly.
4. The use of copper washers may cause leakage but will have no effect on the performance.
5. Commercial piping parts can be used if the thread standards are same. Check the pressure resistance before use.
6. Regularly changing the coolant filter is recommended.

● : Std. Item

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External Turning Toolholders [DN□□ Insert]

DDJN (External / Copying)

Side Rake Angle : -6°
Angle of Inclination : -7°

● Right-hand shown

● Applicable Inserts

| Toolholder Description | Insert Description |
|------------------------------|---------------------------------|
| DDJN [®] /L...-1504 | DN□A DN□G 1504.. (1506..) |
| DDJN [®] /L...-1506 | DN□M DNMX 1506.. (1504..) |

DDJN-JCT (External / Copying / Coolant-through Holders)

Side Rake Angle : -6°
Angle of Inclination : -7°

● Right-hand shown

● Applicable Inserts

| Toolholder Description | Insert Description |
|-------------------------------|--|
| DDJN [®] /L...-15JCT | DN□A DN□G 1504.. DN□M (1506..) DNMX |

DDHN (External / Facing / Copying)

Side Rake Angle : -6°
Angle of Inclination : -6°

● Right-hand shown

● Applicable Inserts

| Toolholder Description | Insert Description |
|------------------------------|---------------------------------|
| DDHN [®] /L...-1504 | DN□A DN□G 1504.. (1506..) |
| DDHN [®] /L...-1506 | DN□M 1506.. (1504..) |

Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | | | |
|----------------------------------|-------|---|----------------|----|----|-----|----|----|-----|-------------------------------|-------------|-------------------------------------|-------|--------------------|--------------------|------------|---------------------|--|
| | R | L | H | HF | B | LF | LH | WF | MHD | | Clamp | Pipe Connection (*1 with O-ring) | Screw | Spring | Shim | Shim Screw | Wrench | Wrench |
| DDJN [®] /L 2020K -1504 | ● | ● | 20 | 20 | 20 | 125 | 25 | 39 | - | 0.8 | CP-3D | - | CS-3D | SP-3D | *2DD-44 (DD-43) | SB-4085TR | LW-3 (For Clamp) | FT-15 (For Shim sold separately) |
| 2525M-1504 | ● | ● | 25 | 25 | 25 | 150 | | | | | | | | | | | | |
| DDJN [®] /L 2020K -1506 | ● | ● | 20 | 20 | 20 | 125 | 25 | | | | | | | | | | | |
| 2525M-1506 | ● | ● | 25 | 25 | 25 | 150 | 32 | | | | | | | | | | | |
| DDJN [®] /L 2525M-15JCT | ● | ● | 25 | 25 | 25 | 150 | 37 | 32 | 126 | CP-4D- [®] /L-JCT | FP-12 | CS-3D- -TR | SP-3D | *2DD-44 (DD-43) | SB-4085TR | - | FT-15 | |
| DDHN [®] /L 2020K -1504 | ● | ● | 20 | 20 | 20 | 125 | 25 | 37 | - | 0.8 | CP-3D | - | CS-3D | SP-3D | *2DD-44 (DD-43) | SB-4085TR | LW-3 (For Clamp) | FT-15 (For Shim sold separately) |
| 2525M-1504 | ● | ● | 25 | 25 | 25 | 150 | 32 | | | | | | | | | | | |
| DDHN [®] /L 2020K -1506 | ● | ● | 20 | 20 | 20 | 125 | 25 | | | | | | | | | | | |
| 2525M-1506 | ● | ● | 25 | 25 | 25 | 150 | 32 | | | | | | | | | | | |

Please see D11 for piping parts of coolant-through holders.

Shims indicated within brackets () are not included with the toolholder. To change insert thickness, please purchase it separately.

*1 It is possible to order just an O-ring (SS-035).

*2. When using inserts whose corner-R(RE) is greater than 1.6mm, additional modifications to the shim are necessary in order to prevent workpiece and shim from interfering each other.

● : Std. Item

PDJN (External / Copying)

Side Rake Angle : -6°
Angle of Inclination : -7°

● Applicable Inserts

| Toolholder Description | Insert Description | |
|-----------------------------|--------------------|--------------------|
| PDJN ^{R/L} ...-11 | DN□A DN□G | 1104.. |
| PDJN ^{R/L} ...-15 | DN□A DN□G | 1504.. |
| PDJN ^{R/L} ...-15U | DN□M DNMX | 1506.. (1504..) |

● Right-hand shown

PDHN (External / Facing / Copying)

Side Rake Angle : -6°
Angle of Inclination : -6°

● Applicable Inserts

| Toolholder Description | Insert Description | |
|----------------------------|----------------------|--------------------|
| PDHN ^{R/L} ...-15 | DN□A DN□G DN□M | 1504.. (1506..) |

● Right-hand shown

● Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | | |
|---------------------|-------------|---|----------------|----|----|-----|-----|----|-------------------|-------------|------------|--|--|-------|--------|------|
| | R | L | H | HF | B | LF | LH | WF | | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench | |
| PDJN ^{R/L} | 1616H -11 | ● | ● | 16 | 16 | 16 | 100 | 28 | 0.4 | LL-1DN | LS-1N | LD-32N | LSP-1 | PC-1 | FH-2.5 | |
| | 2020K -11 | ● | ● | 20 | 20 | 20 | 125 | | | | | | | | | 25 |
| | 2525M -11 | ● | ● | 25 | 25 | 25 | 150 | 36 | 0.8 | LL-3N | LS-2N | LD-42 *2LD-42-20 | LSP-2 | PC-2 | LW-3 | |
| | 2020H -15*1 | ● | ● | 20 | 20 | 20 | 100 | | | | | | | | | 25 |
| | 2020K -15 | ● | ● | 20 | 20 | 20 | 125 | 36 | 0.8 | LL-4 | LS-3 | LD-42 *2LD-42-20 (LD-43) (*2LD-43-20) | LSP-2 | PC-2 | LW-3 | |
| | 2525M -15 | ● | ● | 25 | 25 | 25 | 150 | | | | | | | | | 32 |
| | 3225P -15 | ● | ● | 32 | 32 | 32 | 170 | 36 | 0.8 | LL-4 | LS-3 | LD-43 *2LD-43-20 (LD-42) (*2LD-42-20) | LSP-2 | PC-2 | LW-3 | |
| | 2525M -15U | ● | ● | 25 | 25 | 25 | 150 | | | | | | | | | 34 |
| 3232P -15U | ● | ● | 32 | 32 | 32 | 170 | 36 | 40 | | | | | | | | |
| PDHN ^{R/L} | 2020K -15 | ● | ● | 20 | 20 | 20 | 125 | 35 | 25 | 0.8 | LL-4 | LS-3 | LD-43 *2LD-43-20 (LD-42) (*2LD-42-20) | LSP-2 | PC-2 | LW-3 |
| | 2525M -15 | ● | ● | 25 | 25 | 25 | 150 | 34 | 32 | | | | | | | |

*1. Indicates short shank type
 * Shim : PDJN^{R/L}-15U ...LD-42 is attached to PDJN^{R/L}-15U. When using DN□□1504 type insert, please purchase LD-43 separately.
 PDHN ...LD-43 is attached to PDHN. When using DN□□1506 type Insert, please purchase LD-42 separately.
 * When using inserts whose corner-R(RE) is greater than 1.6mm, please purchase a shim*2 and use it in order to prevent workpiece and shim from interfering each other.

● Applicable Inserts

| Applications | * Finishing | Finishing | Finishing - Medium | Finishing - Medium | Finishing - Medium | Medium - Roughing | Medium - Roughing | Medium - Roughing | Medium - Roughing / High Feed Rate | Roughing | Roughing |
|--------------|---|-------------------|--------------------|------------------------|---------------------|-----------------------|-----------------------------|-----------------------------------|------------------------------------|-----------------------------------|----------------|
| Insert | WF(Wiper) | PP | PQ | CQ | CJ | GS | PG | PS | PT | Standard | PH |
| Size | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1104,1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 |
| Page | B23 | B23 | B23 | B24 | B24 | B24 | B25 | B25 | B25 | B26 | B26 |
| Applications | Single Side / Roughing / High Feed Rate | Finishing | Medium | Soft Steel / Finishing | Soft Steel / Medium | Soft Steel / Roughing | Stainless Steel / Finishing | Stainless Steel / Medium-Roughing | Stainless Steel / Medium-Roughing | Stainless Steel / Medium-Roughing | Cast Iron |
| Insert | PX | ^{R/L} -S | ^{R/L} | XP | XQ | XS | MQ | MS | MU | TK | C |
| Size | 1504,1506 | 1104 | 1104,1504 | 1504,1506 | 1504,1506 | 1504 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 |
| Page | B26 | B30 | B30 | B26 | B26 | B26 | B27 | B28 | B28 | B27 | B29 |
| Applications | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Non-ferrous Metals | Non-ferrous Metals | Non-ferrous Metals | Heat-resistant Alloys | Hard Materials |
| Insert | KQ | KG | KH | ZS | GC | Ceramic | ^{R/L} -A3 | AH | PCD | SQ | CBN |
| Size | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504 | 1504,1506 | 1504 | 1504,1506 | 1504,1506 |
| Page | B29 | B29 | B29 | B29 | B29 | B107 | B30 | B30 | C23 | B28 | C8, C9 |

* When using the insert with WF chipbreaker, tool edge offset or program corrections are required. ● R34
 The insert with WF chipbreaker is not applicable for DDHN type and PDHN type toolholder.

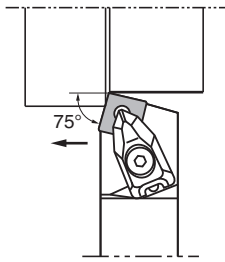
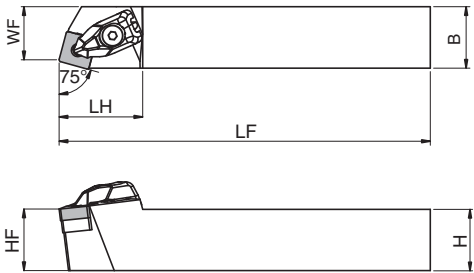
● : Std. Item

Recommended Cutting Conditions ● D41~D42

Insert Grades
 Turnable Inserts
 CBN & PCD Tools
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DSBN (External)

Side Rake Angle : -4°
Angle of Inclination : -7°















2020K-12 type

● Applicable Inserts

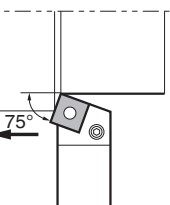
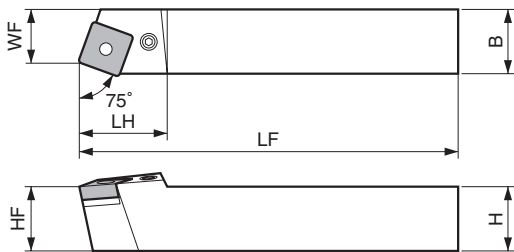
| Toolholder Description | Insert Description |
|----------------------------|--------------------|
| DSBN [®] /L...-12 | SN□A |
| | SN□G |
| | SN□M |

● Right-hand shown

Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | | |
|----------------------|-------|---|----------------|----|----|-----|----|----|---|---|---|---|---|---|---|---|--|
| | R | L | H | HF | B | LF | LH | WF | Clamp | | Screw | Spring | Shim | Shim Screw | Wrench | Wrench (sold separately) | |
| | | | | | | | | |  | |  |  |  |  |  |  | |
| DSBN [®] /L | ● | ● | 20 | 20 | 20 | 125 | 34 | 17 | 0.8 |  |  |  |  |  |  |  | |
| | ● | ● | 25 | 25 | 25 | 150 | | 22 | | CP-3D | CS-3D | SP-3D | DS-44 | SB-4085TR | LW-3 | FT-15 | |

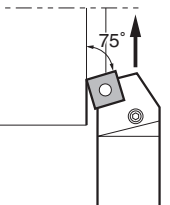
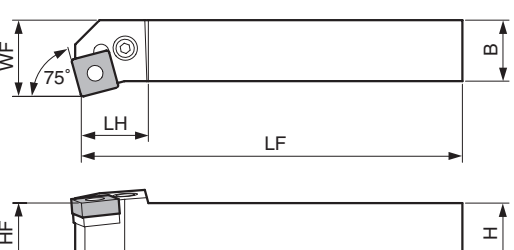
PSBN (External)

Side Rake Angle : -4°
Angle of Inclination : -7°

● Right-hand shown

























PSKN (Facing)

Side Rake Angle : -4°
Angle of Inclination : -7°

● Right-hand shown

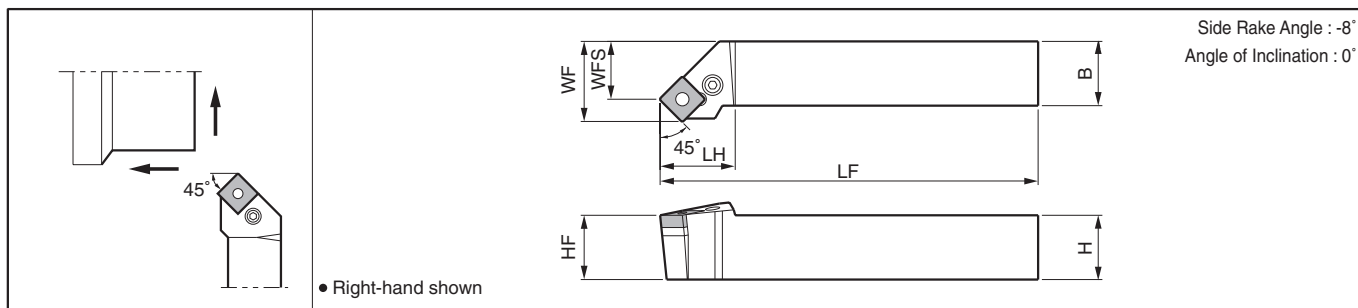
Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | |
|----------------------|-------|---|----------------|----|----|-----|------|----|---|---|--|---|---|---|---|---|
| | R | L | H | HF | B | LF | LH | WF | Lever | | Lock Screw | Shim | Shim Pin | Punch | Wrench | |
| | | | | | | | | |  | |  |  |  |  |  | |
| PSBN [®] /L | ● | ● | 16 | 16 | 16 | 100 | 21 | 13 | 0.8 |  |  |  |  |  |  | |
| | ● | ● | 20 | 20 | 20 | 125 | 27 | 17 | | LL-2N | LS-2N | LS-42 | LSP-2 | PC-2 | LW-3 | |
| | ● | ● | 25 | 25 | 25 | 150 | 24 | 22 | 0.8 | LL-2N | LS-2N | LS-42 | LSP-2 | PC-2 | LW-3 | |
| PSKN [®] /L | ● | ● | 16 | 16 | 16 | 100 | 19 | 20 | 0.8 |  |  |  |  |  |  | |
| | ● | ● | 20 | 20 | 20 | 125 | 22.5 | 25 | | 0.8 |  |  |  |  |  |  |
| | ● | ● | 25 | 25 | 25 | 150 | | 32 | 0.8 | | LL-2N | LS-2N | LS-42 | LSP-2 | PC-2 | LW-3 |

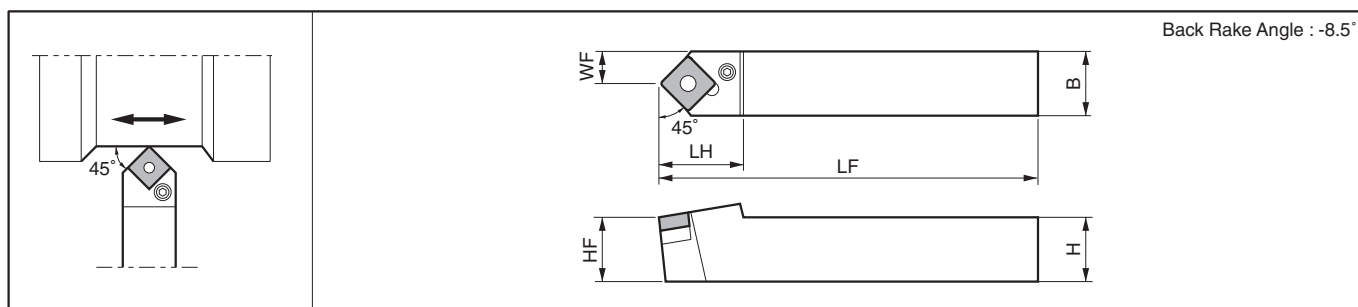
· PSKN[®]/L : Left-hand Insert for Right-hand Toolholder,
Right-hand Insert for Left-hand Toolholder.

● : Std. Item

PSSN (External / Facing / Chamfering)



PSDN (External / Chamfering)



● Toolholder Dimensions

| Description | Stock | | | Dimension (mm) | | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | |
|--------------------------------|-------|---|----|----------------|----|-----|----|------|------|-----|-------|-------------------|-------------|-------|----------|--------|--------|--|
| | R | N | L | H | HF | B | LF | LH | WF | WFS | Lever | | Lock Screw | Shim | Shim Pin | Punch | Wrench | |
| PSSN ^{3/4} L 1616H-09 | ● | ● | 16 | 16 | 16 | 100 | 22 | 20 | 13.6 | 0.8 | LL-1N | LS-1N | LS-32 | LSP-1 | PC-1 | FH-2.5 | | |
| | ● | ● | 20 | 20 | 20 | 125 | 29 | 25 | 16.4 | 0.8 | LL-2N | LS-2N | LS-42 | LSP-2 | PC-2 | LW-3 | | |
| | ● | ● | 25 | 25 | 25 | 150 | | 32 | 23.4 | | LL-2N | LS-2N | LS-42 | LSP-2 | PC-2 | LW-3 | | |
| PSDNN 1616H-09 | ● | | 16 | 16 | 16 | 100 | 21 | 8 | - | 0.8 | LL-1N | LS-1N | LS-32 | LSP-1 | PC-1 | FH-2.5 | | |
| | ● | | 20 | 20 | 20 | 125 | 30 | 10 | - | 0.8 | LL-2N | LS-2N | LS-42 | LSP-2 | PC-2 | LW-3 | | |
| | ● | | 25 | 25 | 25 | 150 | | 12.5 | - | | LL-2N | LS-2N | LS-42 | LSP-2 | PC-2 | LW-3 | | |

● Applicable Inserts

| Toolholder Description | Insert Description | Applications | Finishing - Medium | Medium - Roughing | Medium - Roughing | Medium - Roughing | Medium - Roughing / High Feed Rate | Roughing | Roughing | Single Sided / Roughing / High Feed Rate | |
|-----------------------------|-----------------------------|--------------|----------------------|-------------------------------------|------------------------|---------------------|------------------------------------|-----------------------------|-----------------------------------|--|-----|
| PSBN ^{3/4} L...-09 | SN□G 0903.. | Insert | PQ | PG | PS | HS | PT | Standard | PH | PX | |
| PSKN ^{3/4} L...-09 | | Size | 12 | 12 | 12 | 12 | 12 | 09, 12 | 12 | 12 | |
| PSSN ^{3/4} L...-09 | | Page | B32 | B32 | B32 | B32 | B32 | B32 | B32 | B33 | |
| PSDNN...-09 | | | | | | | | | | | |
| PSBN ^{3/4} L...-12 | SN□A SN□G SN□M 1204.. | Applications | Finishing - Roughing | Medium-Roughing / Low Cutting Force | Soft Steel / Finishing | Soft Steel / Medium | Soft Steel / Roughing | Stainless Steel / Finishing | Stainless Steel / Medium-Roughing | Cast Iron | |
| PSKN ^{3/4} L...-12 | | Insert | ^{3/4} L-□ | ^{3/4} L-25R | XP | XQ | XS | MQ | MS | C | |
| PSSN ^{3/4} L...-12 | | Size | 09, 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| PSDNN...-12 | | Page | B35 | B35 | B33 | B33 | B33 | B34 | B34 | B34 | B34 |
| | | Applications | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Hard Materials | | |
| | Insert | KG | KH | ZS | GC | Without Chipbreaker | Ceramic | CBN | | | |
| | Size | 12 | 12 | 12 | 12 | 12 | 12 | 12 | | | |
| | Page | B34 | B34 | B34 | B34 | B35 | B109 | C10 | | | |

● PSSN^{3/4}L : When using handed inserts,
For External Turning, Right-hand Insert for Right-hand Toolholder,
Left-hand Insert for Left-hand Toolholder
For Facing, Left-hand Insert for Right-hand Toolholder,
Right-hand Insert for Left-hand Toolholder.

Recommended Cutting Conditions ● D41~D42

● : Std. Item

Insert Grades
Turning
Indexable Inserts
CBN & PCD Tools
External
Small Parts
Machining
Boring
Grooving
Cut-off
Threading
Drilling
Solid Tools
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DTGN (External)

| | Side Rake Angle : -6° Angle of Inclination : -6° | | | | | | | | | | | | | | | |
|----------------------------|--|----------------|------------------------|--------------------|----------------------------|------|------|------|-------------------|-------------|-------|--------|--------|------------|--------|--------------------------|
| | Applicable Inserts <table border="1"> <thead> <tr> <th>Toolholder Description</th> <th>Insert Description</th> </tr> </thead> <tbody> <tr> <td rowspan="4">DTGN[®]/L...-16</td> <td>TN□A</td> </tr> <tr> <td>TN□G</td> </tr> <tr> <td>TN□M</td> </tr> <tr> <td>TNMX</td> </tr> </tbody> </table> | | Toolholder Description | Insert Description | DTGN [®] /L...-16 | TN□A | TN□G | TN□M | TNMX | | | | | | | |
| Toolholder Description | Insert Description | | | | | | | | | | | | | | | |
| DTGN [®] /L...-16 | TN□A | | | | | | | | | | | | | | | |
| | TN□G | | | | | | | | | | | | | | | |
| | TN□M | | | | | | | | | | | | | | | |
| | TNMX | | | | | | | | | | | | | | | |
| Description | Stock | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | | |
| | R | L | H | HF | B | LF | LH | WF | | Clamp | Screw | Spring | Shim | Shim Screw | Wrench | Wrench (sold separately) |
| DTGN [®] /L | 2020K -16 | ● | ● | 20 | 20 | 20 | 125 | 25 | 0.8 | CP-2D | CS-2D | SP-2D | *DT-32 | SB-3080TR | LW-2.5 | FT-10 |
| | 2525M -16 | ● | ● | 25 | 25 | 25 | 150 | 32 | | | | | | | | |

* When using inserts whose corner-R(RE) is greater than 1.6mm, additional modifications to the shim are necessary in order to prevent workpiece and shim from interfering each other.

• When using the insert with WF chipbreaker (wiper insert), tool edge offset or program corrections are required. R34

PTGN (External)

| | | |
|--|---|--|
| | Side Rake Angle : -6° Angle of Inclination : -6° | |
| | • Right-hand shown | |

PTFN (Facing)

| | | |
|--|---|--|
| | Side Rake Angle : -6° Angle of Inclination : -6° | |
| | • Right-hand shown | |

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | |
|----------------------|-------------|---|----------------|----|----|-----|-----|------|-------|-------------------|-------------|-----------------------|-----------------------|-------|--------|--------|
| | R | L | H | HF | B | LF | LH | WF | Lever | | Lock Screw | Shim | Shim Pin | Punch | Wrench | |
| PTGN [®] /L | 1212F -11 | ● | ● | 12 | 12 | 12 | 80 | 18 | 16 | 0.8 | LL-03N | LS-03N | - | P-03 | - | FH-2 |
| | 1616H -11 | ● | ● | 16 | 16 | 16 | 100 | 20 | 20 | 0.8 | LL-03TN | LS-03SN | - | P-03S | - | FH-2.5 |
| | 2020K -11 | ● | ● | 20 | 20 | 20 | 125 | 22 | 25 | | | | | | | |
| | 2525M -11 | ● | ● | 25 | 25 | 25 | 150 | 32 | 32 | 0.8 | LL-1N | LS-1N | LT-32N *2LT-32N-20 | LSP-1 | PC-1 | FH-2.5 |
| | 1616H -16 | ● | ● | 16 | 16 | 16 | 100 | 20 | 20 | | | | | | | |
| | 2020H -16*1 | ● | | 20 | 20 | 20 | 125 | 24 | 25 | | | | | | | |
| | 2020K -16 | ● | ● | 20 | 20 | 20 | 125 | 22 | 25 | | | | | | | |
| 2525M -16 | ● | ● | 25 | 25 | 25 | 150 | 32 | 32 | 0.8 | LL-2N | LS-2N | LT-42N *2LT-42N-20 | LSP-2 | PC-2 | LW-3 | |
| 2525M -22 | ● | ● | 25 | 25 | 25 | 150 | 29 | 32 | | | | | | | | |
| PTFN [®] /L | 1212F -11 | ● | ● | 12 | 12 | 12 | 80 | 15 | 16 | 0.8 | LL-03N | LS-03N | - | P-03 | - | FH-2 |
| | 1616H -11 | ● | ● | 16 | 16 | 16 | 100 | 20 | 20 | 0.8 | LL-03TN | LS-03SN | - | P-03S | - | FH-2.5 |
| | 2020K -11 | ● | ● | 20 | 20 | 20 | 125 | 22.5 | 25 | | | | | | | |
| | 2525M -11 | ● | ● | 25 | 25 | 25 | 150 | 32 | 32 | 0.8 | LL-1N | LS-1N | LT-32N *2LT-32N-20 | LSP-1 | PC-1 | FH-2.5 |
| | 2020K -16 | ● | ● | 20 | 20 | 20 | 125 | 22 | 25 | | | | | | | |
| | 2525M -16 | ● | ● | 25 | 25 | 25 | 150 | 23 | 32 | | | | | | | |
| | 2525M -22 | ● | ● | 25 | 25 | 25 | 150 | 28 | 32 | | | | | | | |

*1. Indicates short shank type

• When using inserts whose corner-R(RE) is greater than 1.6mm, please purchase a shim*2 and use it in order to prevent workpiece and shim from interfering each other.

• When using the insert with WF chipbreaker (wiper insert), tool edge offset or program corrections are required. R34

Applicable Inserts

| Toolholder Description | Insert Description | Toolholder Description | Insert Description |
|------------------------------|--------------------|----------------------------|------------------------------|
| PT□N [®] /L12...-11 | TN□□ | PT□N [®] /L...-16 | TN□A TN□G TN□M TNMX |
| PT□N [®] /L...-11 | 1103.. | PT□N [®] /L...-22 | 1604.. |
| | 1104.. | | 2204.. |

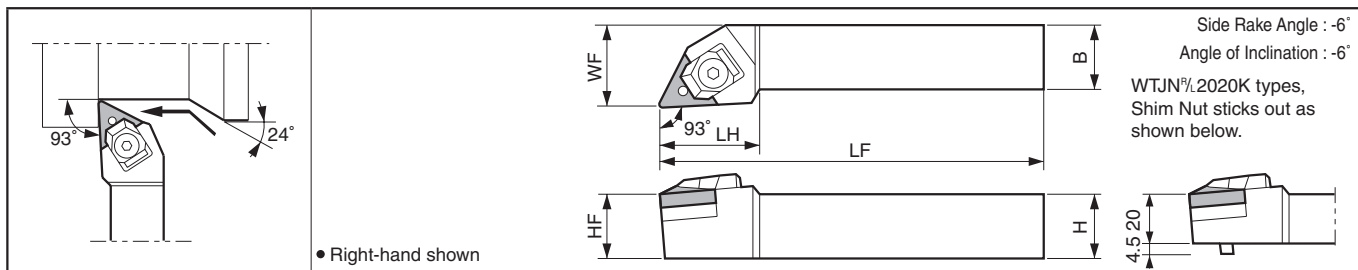
PTGN[®]/L1212F-11 } Insert applicable for above TN □□ 1103 type Insert is applicable.
 PTFN[®]/L1212F-11 }

*3. TNMX type insert is not applicable for PT □N[®]/L...-22 toolholder.

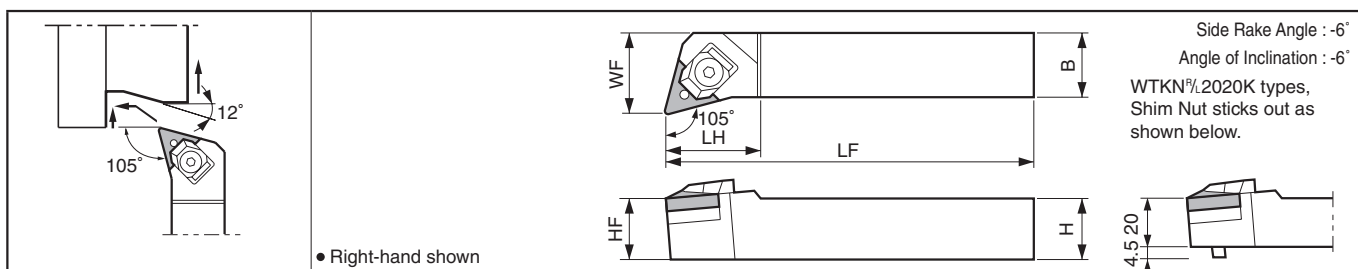
• PTFN[®]/L : Left-hand Insert for Right-hand Toolholder,
 Right-hand Insert for Left-hand Toolholder.

● : Std. Item

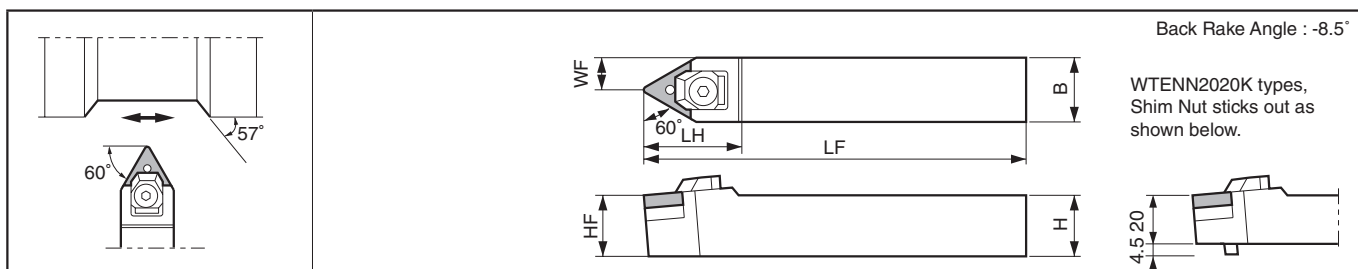
WTJN-N (External / Copying)



WTKN-N (External / Facing / Copying)



WTEN-N (External / Chamfering)



Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | |
|-----------------------|-----------|---|----------------|----|----|----|-----|----|------|-------------------|-------------|-----------------------|----------|----------|--------|--------|
| | R | N | L | H | HF | B | LF | LH | WF | | Clamp Set | Shim | Shim Pin | Shim Nut | Wrench | Spacer |
| WTJN ^{3/4} L | 2020K-16N | ● | ● | 20 | 20 | 20 | 125 | 32 | 25 | 0.8 | WCS-1N | WTKN-33 *WTN-33-20 | WP-1S | WN-1 | LW-3 | WSP-1 |
| | 2525M-16N | ● | ● | 25 | 25 | 25 | 150 | 32 | 32 | | | | | | | |
| WTKN ^{3/4} L | 2020K-16N | ● | ● | 20 | 20 | 20 | 125 | 32 | 25 | 0.8 | WCS-1N | WTKN-33 *WTN-33-20 | WP-1S | WN-1 | LW-3 | WSP-1 |
| | 2525M-16N | ● | ● | 25 | 25 | 25 | 150 | 32 | 32 | | | | | | | |
| WTENN | 2020K-16N | | ● | 20 | 20 | 20 | 125 | 32 | 10 | 0.8 | WCS-1N | WTKN-33 *WTN-33-20 | WP-1S | WN-1 | LW-3 | WSP-1 |
| | 2525M-16N | | ● | 25 | 25 | 25 | 150 | 32 | 12.5 | | | | | | | |

• When using inserts whose corner-R(RE) is greater than 1.6mm, please purchase a shim (WTN-33-20) with * mark and use it in order to prevent workpiece and shim from interfering with each other.

Applicable Inserts

| Toolholder Description | Insert Description | Applications | Finishing | Finishing - Medium | Finishing - Medium | Medium - Roughing | Medium - Roughing | Medium - Roughing | Medium - Roughing / High Feed Rate | Medium - Roughing / High Feed Rate | Roughing | |
|------------------------------|--------------------------------|-----------------------------------|--|--------------------|--------------------|----------------------|-------------------------------------|-----------------------|------------------------------------|------------------------------------|-----------------------|----------------|
| WTJN ^{3/4} L...-16N | TN□A TN□G TN□M 1604.. | Insert | PP | PQ | CQ | GS | PG | PS | PT | GT | PH | |
| WTKN ^{3/4} L...-16N | | Size | 16 | 16 | 16,22 | 1104,16 | 16 | 16,22 | 16 | 16 | 16,22 | |
| WTENN...-16N | | Page | B36 | B36 | B36 | B36 | B36 | B37 | B37 | B37 | B37 | B37 |
| | | Applications | Single Steel / Roughing / High Feed Rate | Roughing | Finishing | Finishing - Roughing | Medium-Roughing / Low Cutting Force | Soft Steel / Small ap | Soft Steel / Finishing | Soft Steel / Medium | Soft Steel / Roughing | |
| | | Insert | PX | Standard | ^{3/4} L-S | ^{3/4} L-□ | ^{3/4} L-25R | XF | XP | XQ | XS | |
| | | Size | 16,22 | 16,22 | 1104,16 | 1103,1104,16,22 | 16 | 16 | 16 | 16 | 16 | |
| | | Page | B38 | B37 | B42 | B42,B43 | B43 | B38 | B38 | B38 | B38 | |
| Applications | Stainless Steel / Finishing | Stainless Steel / Medium-Roughing | Stainless Steel / Medium-Roughing | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Non-ferrous Metals | Non-ferrous Metals | Non-ferrous Metals | Hard Materials |
| Insert | MQ | MS | MU | KQ | KG | KH | ZS | Ceramic | ^{3/4} L-A3 | AH | PCD | CBN |
| Size | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| Page | B39 | B39 | B39 | B40 | B40 | B40 | B40 | B111 | B41 | B41 | C23 | C10,C11 |

• In wedge lock, use of ceramic insert other than silicon nitride insert is not recommended due to strong restrain force.

Recommended Cutting Conditions **D41~D42**

● : Std. Item

Insert Grades
Turning
Indexable Inserts
CBN & PCD Tools

External
Small Parts
Machining

Boring

Grooving
Cut-off
Threading

Drilling
Solid Tools

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External Turning Toolholders [VN□□ Insert]

DVLN (External / Copying)

Side Rake Angle : -6°
Angle of Inclination : -9°

● Right-hand shown

● Applicable Inserts

| Toolholder Description | Insert Description |
|----------------------------|-----------------------------|
| DVLN ^{R/L} ...-16 | VN□A VN□G VN□M 1604.. |

DVPN (External / Facing / Copying / Undercutting)

Side Rake Angle : -13°
Angle of Inclination : -10°

● Right-hand shown

● Applicable Inserts

| Toolholder Description | Insert Description |
|----------------------------|-----------------------------|
| DVPN ^{R/L} ...-16 | VN□A VN□G VN□M 1604.. |

DVVN (External / Copying)

Back Rake Angle : -11°

● Right-hand shown

● Applicable Inserts

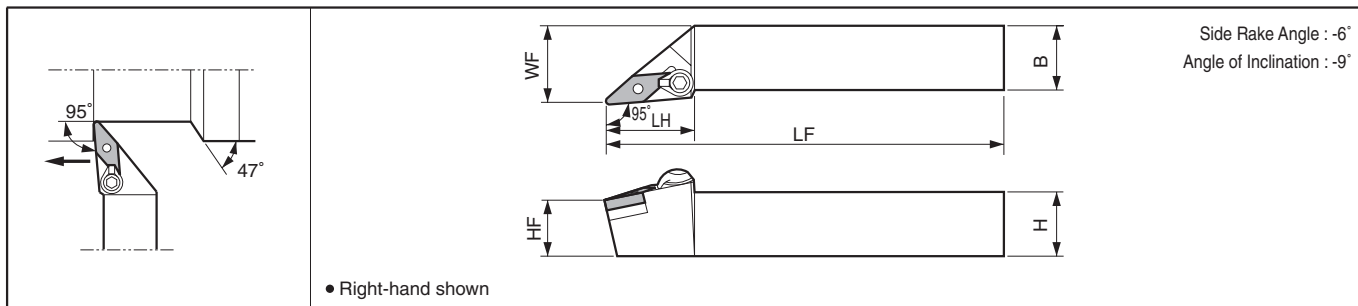
| Toolholder Description | Insert Description |
|------------------------|-----------------------------|
| DVVNN...-16 | VN□A VN□G VN□M 1604.. |

● Toolholder Dimensions

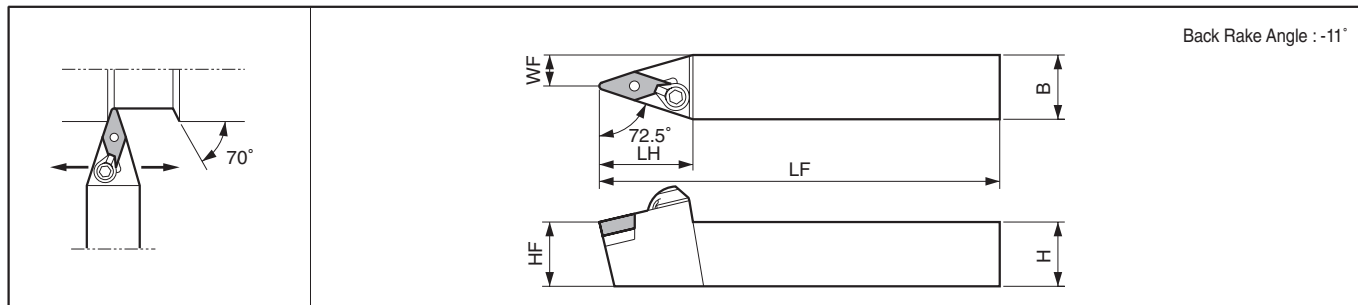
| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | | |
|---------------------|----------|---|----------------|----|----|----|-----|------|----|-------------------|-------------|-------|--------|-------|------------|--------|--------------------------|
| | R | N | L | H | HF | B | LF | LH | WF | | Clamp | Screw | Spring | Shim | Shim Screw | Wrench | Wrench (sold separately) |
| DVLN ^{R/L} | 2020K-16 | ● | ● | 20 | 20 | 20 | 125 | 45 | 25 | 0.8 | CP-5D | CS-5D | SP-5D | DV-33 | SB-4085TR | LW-3 | FT-15 |
| | 2525M-16 | ● | ● | 25 | 25 | 25 | 150 | 32 | | | | | | | | | |
| DVPN ^{R/L} | 2020K-16 | ● | ● | 20 | 20 | 20 | 125 | 40 | 27 | | | | | | | | |
| | 2525M-16 | ● | ● | 25 | 25 | 25 | 150 | 32 | | | | | | | | | |
| DVVNN | 2020K-16 | | ● | 20 | 20 | 20 | 125 | 46 | 10 | | | | | | | | |
| | 2525M-16 | | ● | 25 | 25 | 25 | 150 | 12.5 | | | | | | | | | |

● : Std. Item

MVLN (External / Copying)



MVVN (External / Copying)



Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | |
|---------------------|----------|---|----------------|----|----|----|-----|------|----|-------------------|----------------------|--------|--------|----------|--------|
| | R | N | L | H | HF | B | LF | LH | WF | | Clamp Set | Wrench | Shim | Lock Pin | Wrench |
| MVLN ^{R/L} | 2020K-16 | ● | ● | 20 | 20 | 20 | 125 | 38 | 25 | 0.8 | CPS-5 ^{R/L} | FH-2.5 | MVN-32 | TS-3S | FH-2 |
| | 2525M-16 | ● | ● | 25 | 25 | 25 | 150 | 32 | | | | | | | |
| MVVNN | 2020K-16 | | ● | 20 | 20 | 20 | 125 | 39 | 10 | 0.8 | CPS-5R | FH-2.5 | MVN-32 | TS-3S | FH-2 |
| | 2525M-16 | | ● | 25 | 25 | 25 | 150 | 12.5 | | | | | | | |

· Clamp Set : CPS-5R for Right-hand Toolholder, CPS-5L for Left-hand Toolholder.

Applicable Inserts

| Toolholder Description | Insert Description | Applications | Finishing | Finishing - Medium | Finishing - Medium | Finishing - Medium | Medium | Roughing | Finishing - Medium | Stainless Steel / Finishing |
|----------------------------|--------------------|--------------|-----------------------------------|-----------------------------------|--------------------|--------------------|---------------------|-----------|--------------------|-----------------------------|
| MVLN ^{R/L} ...-16 | VN□A | Insert | PP | ^{R/L} -VC | VF | PQ | TN-V | Standard | ^{R/L} | MQ |
| MVVNN...-16 | VN□G VN□M | | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| | 1604.. | Page | B44 | B44 | B44 | B44 | B44 | B44 | B45 | B45 |
| | | Applications | Stainless Steel / Medium-Roughing | Stainless Steel / Medium-Roughing | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Non-ferrous Metals | Hard Materials |
| | | Insert | MS | MU | KG | KH | Without Chipbreaker | Ceramic | PCD | CBN |
| | | Size | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| | | Page | B45 | B45 | B45 | B45 | B45 | B112 | C23 | C12 |

Regarding rotation directions of the clamp set

MVVNN type (Neutral)

Clamp set : (CPS-5R) has Right-hand thread.
When clamping the insert, turn the screw in the arrow direction (clockwise).
When removing the insert, turn the screw away from the arrow (counterclockwise).

MVLNR type (Right-hand Toolholder)

Recommended Cutting Conditions ➔ D41~D42

MVLNL type (Left-hand Toolholder)

Clamp set : (CPS-5L) has Left-hand thread.
When clamping the insert, turn the screw in the arrow direction (counterclockwise).
When removing the insert, turn the screw away from the arrow (clockwise).

● : Std. Item

Insert Grades
Turning
Indexable Inserts
CBN & PCD Tools
External
Small Parts
Machining
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PVLN (External / Copying)

Side Rake Angle : -6°
Angle of Inclination : -9°

• Right-hand shown

PVPN (External / Facing / Copying / Undercutting)

Side Rake Angle : -13°
Angle of Inclination : -10°

• Right-hand shown

PVVN (External / Copying)

Back Rake Angle : -11°

Toolholder Dimensions

| Description | Stock | | | Dimension (mm) | | | | | | Std. Corner-R(RE) | Spare Parts | | | |
|-------------------------------|-------|---|---|----------------|----|----|-----|----|------|-------------------|-------------|------------|--------|--------|
| | R | N | L | H | HF | B | LF | LH | WF | | Lock Pin | Lock Screw | Shim | Wrench |
| PVLN ^{R/L} 2525M-16Q | ● | ● | | 25 | 25 | 25 | 150 | 37 | 32 | 0.8 | LP-6S | LS-15 | KVN-32 | LW-3 |
| PVPN ^{R/L} 2020K-16Q | ● | ● | | 20 | 20 | 20 | 125 | 30 | 25 | 0.8 | LP-2S | LS-11 | KVN-32 | LW-3 |
| PVPN ^{R/L} 2525M-16Q | ● | ● | | 25 | 25 | 25 | 150 | | 32 | | LP-6S | | | |
| PVVNN 2020K-16Q | | ● | | 20 | 20 | 20 | 125 | 35 | 10 | 0.8 | LP-2S | LS-15 | KVN-32 | LW-3 |
| PVVNN 2525M-16Q | | ● | | 25 | 25 | 25 | 150 | 40 | 12.5 | | LP-6S | | | |

Applicable Inserts

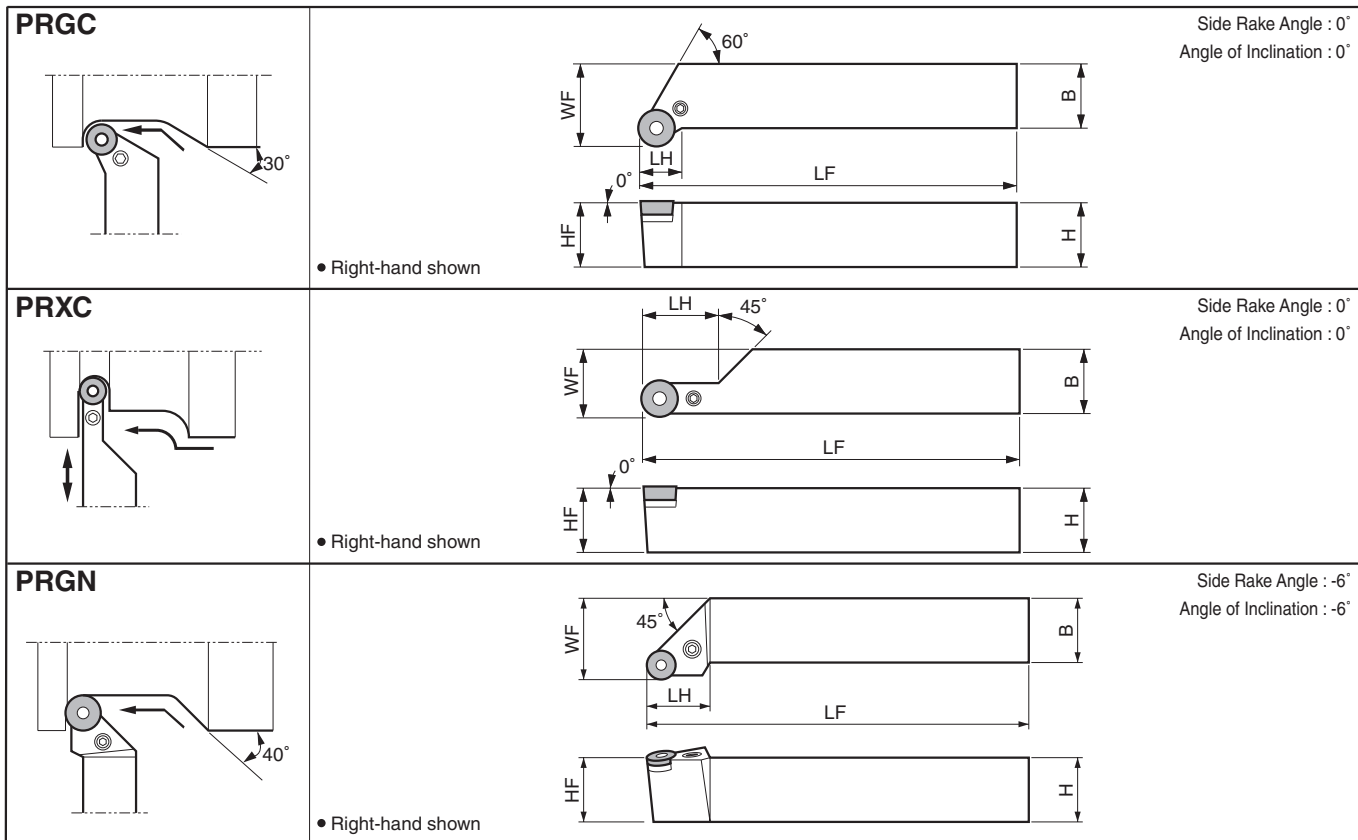
| Toolholder Description | Insert Description | Applications | Finishing | Finishing - Medium | Finishing - Medium | Finishing - Medium | Medium | Roughing | Finishing - Medium | Stainless Steel / Finishing |
|-----------------------------|--------------------|--------------|-----------------------------------|-----------------------------------|--------------------|--------------------|---------------------|-----------|--------------------|-----------------------------|
| PVLN ^{R/L} ...-16Q | VN□A | 1604.. | PP | ^{R/L} -VC | VF | PQ | TN-V | Standard | ^{R/L} | MQ |
| PVPN ^{R/L} ...-16Q | VN□G | | | | | | | | | |
| PVVNN...-16Q | VN□M | | | | | | | | | |
| | | Applications | Stainless Steel / Medium-Roughing | Stainless Steel / Medium-Roughing | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Non-ferrous Metals | Hard Materials |
| | | Insert | MS | MU | KG | KH | Without Chipbreaker | Ceramic | PCD | CBN |
| | | Size | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| | | Page | B44 | B44 | B44 | B44 | B44 | B44 | B45 | B45 |
| | | Insert | | | | | | | | |
| | | Size | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| | | Page | B45 | B45 | B45 | B45 | B45 | B112 | C23 | C12 |

Recommended Cutting Conditions ● D41~D42

● : Std. Item

External Turning Toolholders [RC□□ / RN□□ Insert]

PRGC / PRXC / PRGN (External / Facing / Copying)



● Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | | |
|---------------------|----------|---|----------------|----|----|----|-----|----|-------------------|-------------|------------|-------|----------|-------|--------|--------|
| | R | L | H | HF | B | LF | LH | WF | | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench | |
| PRGC ^{β/L} | 2020K-10 | ● | ● | 20 | 20 | 20 | 125 | 15 | 25 | - | LL-05C | LS-05 | LR-10C | LSP-1 | PC-1 | FH-2 |
| | 2525M-10 | ● | ● | 25 | 25 | 25 | 150 | 15 | 32 | - | LL-05C | LS-05 | LR-10C | LSP-1 | PC-1 | FH-2 |
| | 2020K-12 | ● | ● | 20 | 20 | 20 | 125 | 14 | 25 | - | LL-1CN | LS-1N | LR-12C | LSP-1 | PC-1 | FH-2.5 |
| | 2525M-12 | ● | ● | 25 | 25 | 25 | 150 | 17 | 32 | - | LL-1CN | LS-1N | LR-12C | LSP-1 | PC-1 | FH-2.5 |
| PRXC ^{β/L} | 2020K-10 | ● | ● | 20 | 20 | 20 | 125 | 25 | 20.5 | - | LL-05C | LS-05 | LR-10C | LSP-1 | PC-1 | FH-2 |
| | 2525M-10 | ● | ● | 25 | 25 | 25 | 150 | 30 | 25.5 | - | LL-05C | LS-05 | LR-10C | LSP-1 | PC-1 | FH-2 |
| | 2525Q-10 | ● | ● | 25 | 25 | 25 | 180 | 30 | 25.5 | - | LL-05C | LS-05 | LR-10C | LSP-1 | PC-1 | FH-2 |
| | 2525M-12 | ● | ● | 25 | 25 | 25 | 150 | 30 | 25.7 | - | LL-1CN | LS-1N | LR-12C | LSP-1 | PC-1 | FH-2.5 |
| PRGN ^{β/L} | 2020K-09 | ● | ● | 20 | 20 | 20 | 125 | 19 | 25 | - | LL-1N | LS-1N | LR-80 | LSP-1 | PC-1 | FH-2.5 |
| | 2525M-12 | ● | ● | 25 | 25 | 25 | 150 | 26 | 32 | - | LL-2N | LS-2N | LR-81 | LSP-2 | PC-2 | LW-3 |

● Applicable Inserts

| Toolholder Description | Insert Description | Applications | Medium | Non-ferrous Metals | | | | | | |
|----------------------------|--------------------|--------------|----------|--------------------|--|--|--|--|--|--|
| PRGC ^{β/L} ...-10 | RCGX | Insert | Standard | AQ | | | | | | |
| | | | 1003M0 | 1204M0 | | | | | | |
| | RCMX | 1003M0 | 1204M0 | | | | | | | |
| | | 1003M0 | 1204M0 | | | | | | | |
| PRXC ^{β/L} ...-10 | RCMX | Insert | Standard | AQ | | | | | | |
| PRXC ^{β/L} ...-12 | RCMX | Insert | Standard | AQ | | | | | | |
| PRGN ^{β/L} ...-09 | RNMG | Insert | Standard | | | | | | | |
| PRGN ^{β/L} ...-12 | | | 090300 | 120400 | | | | | | |

Recommended Cutting Conditions ● D41~D42

● : Std. Item

Insert Grades
Turning
Indexable Inserts
CBN & PCD Tools
External
Small Parts
Machining
Boring
Grooving
Cut-off
Threading
Drilling
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Milling
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External Turning Toolholders [WN□□ Insert]

DWLN (External / Facing)

| | Side Rake Angle : -6° Angle of Inclination : -6° | | | | | | | | | | | | | | | |
|---|---|---|----------------|----|----|-----|----|-----|-------------------|------------------------|--------------------|----------------------------|----------------------|------------|-----------|--------------------------|
| | • Right-hand shown | | | | | | | | | | | | | | | |
| Applicable Inserts | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Toolholder Description</th> <th>Insert Description</th> </tr> </thead> <tbody> <tr> <td>DWLN^{R/L}...-08</td> <td>WN□A WN□G WN□M</td> </tr> <tr> <td></td> <td>0804...</td> </tr> </tbody> </table> | | | | | | | | | | Toolholder Description | Insert Description | DWLN ^{R/L} ...-08 | WN□A WN□G WN□M | | 0804... | |
| Toolholder Description | Insert Description | | | | | | | | | | | | | | | |
| DWLN ^{R/L} ...-08 | WN□A WN□G WN□M | | | | | | | | | | | | | | | |
| | 0804... | | | | | | | | | | | | | | | |
| Description | Stock | | Dimension (mm) | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | | |
| | R | L | H | HF | B | LF | LH | WF | | Clamp | Screw | Spring | Shim | Shim Screw | Wrench | Wrench (sold separately) |
| DWLN ^{R/L} | ● | ● | 20 | 20 | 20 | 125 | 34 | 25 | 0.8 | | | | | | | |
| | 2020K -08 | ● | ● | 25 | 25 | 25 | | 150 | | 32 | CP-3D | CS-3D | SP-3D | DW-44 | SB-4085TR | LW-3 |
| | ● | ● | 25 | 25 | 25 | 150 | | | | | | | | | | |

PWLN (External / Facing)

| | Side Rake Angle : -6° Angle of Inclination : -6° | | | | | | | | | | | | | | | | |
|---|---|---|----------------|----|----|-----|-----|-----|-------------------|------------------------|--------------------|----------------------------|----------------------|-------|--------|----------------------------|--------|
| | • Right-hand shown | | | | | | | | | | | | | | | | |
| Applicable Inserts | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Toolholder Description</th> <th>Insert Description</th> </tr> </thead> <tbody> <tr> <td>PWLN^{R/L}...-06</td> <td>WN□A WN□G WN□M</td> </tr> <tr> <td></td> <td>0604..</td> </tr> <tr> <td>PWLN^{R/L}...-08</td> <td>0804..</td> </tr> </tbody> </table> | | | | | | | | | | Toolholder Description | Insert Description | PWLN ^{R/L} ...-06 | WN□A WN□G WN□M | | 0604.. | PWLN ^{R/L} ...-08 | 0804.. |
| Toolholder Description | Insert Description | | | | | | | | | | | | | | | | |
| PWLN ^{R/L} ...-06 | WN□A WN□G WN□M | | | | | | | | | | | | | | | | |
| | 0604.. | | | | | | | | | | | | | | | | |
| PWLN ^{R/L} ...-08 | 0804.. | | | | | | | | | | | | | | | | |
| Description | Stock | | Dimension (mm) | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | | | |
| | R | L | H | HF | B | LF | LH | WF | | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench | | |
| PWLN ^{R/L} | ● | ● | 16 | 16 | 16 | 100 | 22 | 20 | 0.8 | | | | | | | | |
| | 1616H -06 | ● | ● | 20 | 20 | 20 | | 125 | | 25 | LL-1N | LS-1N | LW-32N | LSP-1 | PC-1 | FH-2.5 | |
| | 2020K -06 | ● | ● | 25 | 25 | 25 | 150 | 32 | | | | | | | | | |
| | 2525M -06 | ● | ● | 20 | 20 | 20 | 125 | 26 | | 25 | LL-2N | LS-2N | LW-42N | LSP-2 | PC-2 | LW-3 | |
| | 2020K -08 | ● | ● | 25 | 25 | 25 | 150 | 32 | | | | | | | | | |
| | ● | ● | 25 | 25 | 25 | 150 | | | | | | | | | | | |




























WWLN (External / Facing)

| | Side Rake Angle : -6° Angle of Inclination : -6° | | | | | | | | | | | | | | |
|--|---|---|----------------|----|----|-----|----|-----|-------------------|------------------------|--------------------|----------------------------|----------------------|--------|--------|
| | • Right-hand shown | | | | | | | | | | | | | | |
| Applicable Inserts | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Toolholder Description</th> <th>Insert Description</th> </tr> </thead> <tbody> <tr> <td>WWLN^{R/L}...-08</td> <td>WN□A WN□G WN□M</td> </tr> <tr> <td></td> <td>0804..</td> </tr> </tbody> </table> | | | | | | | | | | Toolholder Description | Insert Description | WWLN ^{R/L} ...-08 | WN□A WN□G WN□M | | 0804.. |
| Toolholder Description | Insert Description | | | | | | | | | | | | | | |
| WWLN ^{R/L} ...-08 | WN□A WN□G WN□M | | | | | | | | | | | | | | |
| | 0804.. | | | | | | | | | | | | | | |
| Description | Stock | | Dimension (mm) | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | |
| | R | L | H | HF | B | LF | LH | WF | | Clamp Set | Shim | Shim Pin | Shim Nut | Wrench | |
| WWLN ^{R/L} | ● | ● | 20 | 20 | 20 | 125 | 30 | 25 | 1.2 | | | | | | |
| | 2020K -08 | ● | ● | 25 | 25 | 25 | | 150 | | 32 | WCS-8 | WWN-42 | WP5X15 | WN-1 | LW-3 |
| | ● | ● | 25 | 25 | 25 | 150 | | | | | | | | | |

● : Std. Item

D External

Applicable Inserts

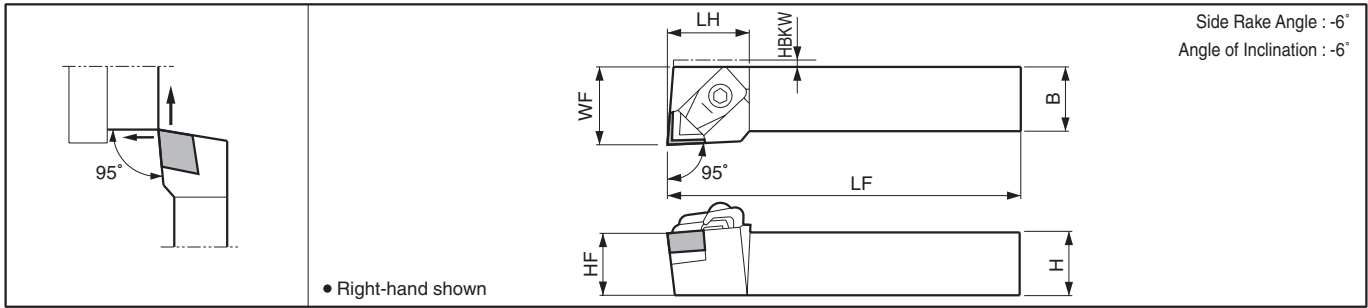
| | | | | | | | | | |
|--------------|---|---|---|---|--|--|--|--|---|
| Applications | Finishing | Finishing - Medium | Finishing | Finishing - Medium | Finishing - Medium | Finishing - Medium | Medium - Roughing | Medium - Roughing | Medium - Roughing |
| Insert | WF(Wiper)  | WE(Wiper)  | PP  | PQ  | CQ  | CJ  | GS  | PG  | PS  |
| Size | 08 | 08 | 08 | 08 | 08 | 08 | 06,08 | 08 | 08 |
| Page | B46 | B46 | B46 | B46 | B47 | B47 | B47 | B47 | B47 |
| Applications | Medium - Roughing / High Feed Rate | Roughing | Finishing | Medium | Soft Steel / Finishing | Soft Steel / Medium | Soft Steel / Roughing | Stainless Steel / Finishing | Stainless Steel / Medium-Roughing |
| Insert | PT  | Standard  | P/L-S  | P/L  | XP  | XQ  | XS  | MQ  | MS  |
| Size | 08 | 08 | 06 | 06 | 08 | 08 | 08 | 08 | 08 |
| Page | B47 | B47 | B49 | B49 | B48 | B48 | B48 | B48 | B48 |
| Applications | Stainless Steel / Medium-Roughing | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Non-ferrous Metals | Non-ferrous Metals | Hard Materials |
| Insert | MU  | KQ  | KG  | KH  | ZS  | GC  | AH  | PCD  | CBN  |
| Size | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 |
| Page | B48 | B49 | B49 | B49 | B49 | B49 | B49 | C23 | C13 |

In wedge lock, use of ceramic insert other than silicon nitride insert is not recommended due to strong restraint force.

Recommended Cutting Conditions **D41 ~ D42**

| | |
|------------------------|----------|
| Insert Grades | A |
| Turning | B |
| Indexable Inserts | C |
| CBN & PCD Tools | D |
| External | E |
| Small Parts Machining | F |
| Boring | G |
| Grooving | H |
| Cut-off | J |
| Threading | K |
| Drilling | L |
| Solid Tools | M |
| Milling | N |
| Tools for Turning Mill | P |
| Spare Parts | R |
| Technical Information | T |

CCLN (External / Facing)



Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | | | | |
|---------------------------|-------|---|----------------|----|----|-----|----|----|------|-------------|-------------------|-------------|--------|-----------------|--------------|--|--|--|--|
| | R | L | H | HF | B | LF | LH | WF | HBKW | Chipbreaker | | Clamp Set | Wrench | Shim | Shim Screw | | | | |
| CCLN³/L | | | | | | | | | | | | | | | | | | | |
| 2020K -12 | ● | ● | 20 | 20 | 20 | 125 | 32 | 27 | 5 | 0.8 | CB-16 | CE-010 | LW-4 | SP-441 (SP-443) | M3X8 (M3X12) | | | | |
| 2525M -12 | ● | ● | 25 | 25 | 25 | 150 | 32 | 32 | - | 0.8 | CB-16 | CE-010 | LW-4 | SP-441 (SP-443) | M3X8 (M3X12) | | | | |
| 3225P -16 | ● | ● | 32 | 32 | 25 | 170 | 35 | 32 | - | 0.8 | CB-17 | CE-220 | LW-4 | SP-454 | M4X10 | | | | |

• Shim & Shim Screw : When using CN□□1204 Insert, please purchase spare parts in () separately.

Applicable Inserts

| Applications | Cast Iron / Hard Materials | Hard Materials / Cast Iron |
|---------------------------------|----------------------------------|----------------------------|
| See Page | B106 | C19 |
| Insert | Ceramic | CBN (KBN900) |
| Toolholder Description | | |
| CCLN³/L...-12 | CNGN1207.(CNGN1204.) CNMN1207 | (CNMN1204) |
| CCLN³/L...-16 | CNGN1607.. | - |

Recommended Cutting Conditions **D41~D42**

Selection of Ceramic Insert

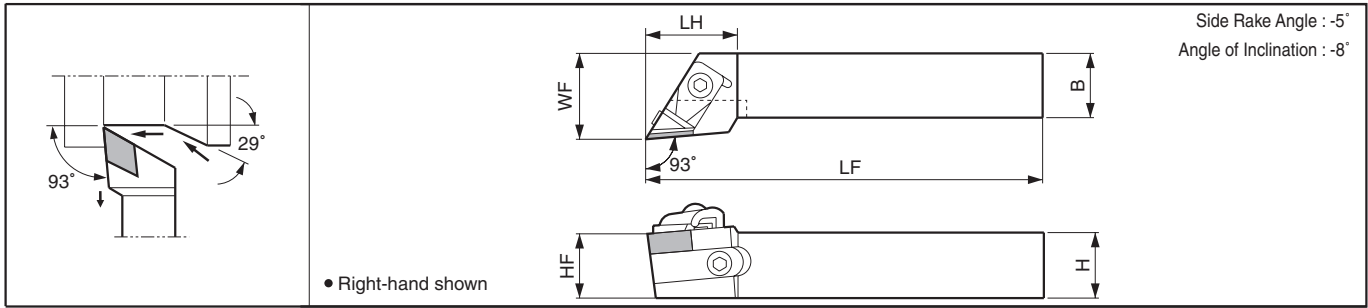
Select the suitable Ceramic Insert and Specifications (Corner-R(RE), Feed Rate, Chamfer, etc.) from the table below.

(FC250, Cutting Edge Angle: 0°~15°)

| Insert Shape | Corner-R (RE) | f (mm/rev) | | | | | | | | | | ap(mm) |
|------------------|---------------|--------------|------|------|--------------------------|------|------|------|-------------|------|------|--------|
| | | 0.10 | 0.15 | 0.20 | 0.25 | 0.30 | 0.35 | 0.40 | 0.45 | 0.50 | 0.60 | |
| RN | - | → | | | | | | | | | | 0.3~4 |
| SN | 2.0 | → | | | | | | | | | | 0.3~4 |
| | 1.6 | → | | | | | | | | | | |
| | 1.2 | → | | | | | | | | | | |
| EN | 0.8 | → | | | | | | | | | | 0.3~4 |
| | 0.4 | → | | | | | | | | | | |
| | 0.4 | → | | | | | | | | | | |
| TN | 1.6 | → | | | | | | | | | | 0.3~2 |
| | 1.2 | → | | | | | | | | | | |
| | 0.8 | → | | | | | | | | | | |
| Chamfer | | 0.05mm x 20° | | | (0.1~0.2)mm x (20°~ 25°) | | | | 0.3mm x 30° | | | - |
| Insert Thickness | | 7.94mm | | | | | | | | | | |

● : Std. Item

CDJN (External / Copying / Back Turning)



Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | |
|--|-------|---|----------------|----|----|-----|----|----|-------------|-------------------|-------------|--------|------|------------|--|
| | R | L | H | HF | B | LF | LH | WF | Chipbreaker | | Clamp Set | Wrench | Shim | Shim Screw | |
| CDJN ^{R/L} 2525M-15 3225P-15 | ● | ● | 25 | 25 | 25 | 150 | 32 | 32 | 0.8 | | | | | | |
| | ● | ● | 32 | 32 | | 170 | | | | | | | | | |

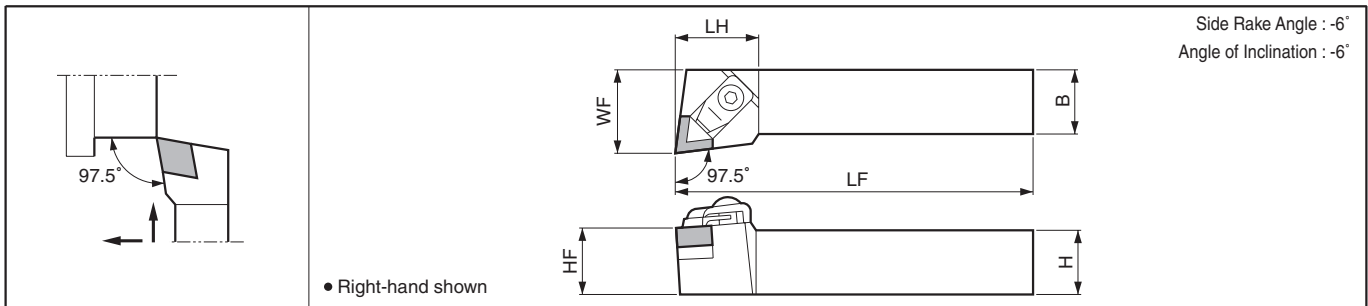
• Chipbreaker : CB-14 for Right-hand Toolholder, CB-15 for Left-hand Toolholder.
 • Shim : 556CR for Right-hand Toolholder, 556CL for Left-hand Toolholder.

Applicable Inserts

| | |
|----------------------------|---|
| Applications See Page | Cast Iron / Hard Materials B107 |
| Insert | Ceramic |
| Toolholder Description | |
| CDJN ^{R/L} ...-15 | DNGN1507.. |

Recommended Cutting Conditions **D41~D42**

CELN (External / Facing)



Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | |
|------------------------------|-------|---|----------------|----|----|-----|----|----|-------------|-------------------|-------------|--------|------|------------|--|
| | R | L | H | HF | B | LF | LH | WF | Chipbreaker | | Clamp Set | Wrench | Shim | Shim Screw | |
| CELN ^{R/L} 2525M-13 | ● | ● | 25 | 25 | 25 | 150 | 32 | 32 | 0.8 | | | | | | |

Applicable Inserts

| | |
|----------------------------|---|
| Applications See Page | Cast Iron / Hard Materials B107 |
| Insert | Ceramic |
| Toolholder Description | |
| CELN ^{R/L} ...-13 | ENGN1307.. |

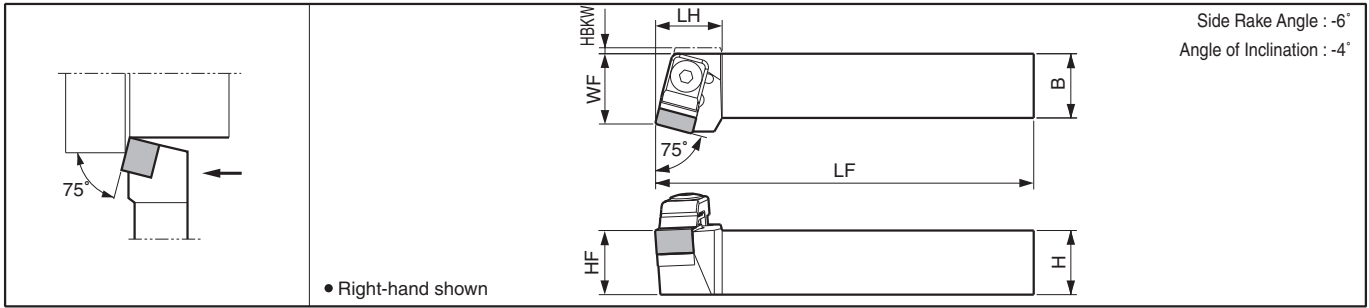
Recommended Cutting Conditions **D41~D42**

● : Std. Item

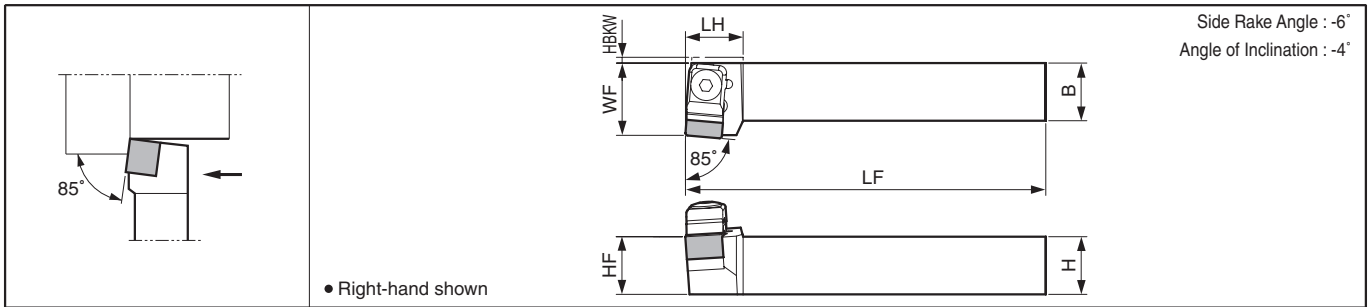
Insert Grades
 Turning
 Indexable Inserts
 CN & PCD Tools
 External
 Small Parts
 Machining
 Boring
 Grooving
 Cut-off
 Threading
 Drilling
 Solid Tools
 Milling
 Tools for
 Turning Mill
 Spare Parts
 Technical
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A
 B
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 R
 T

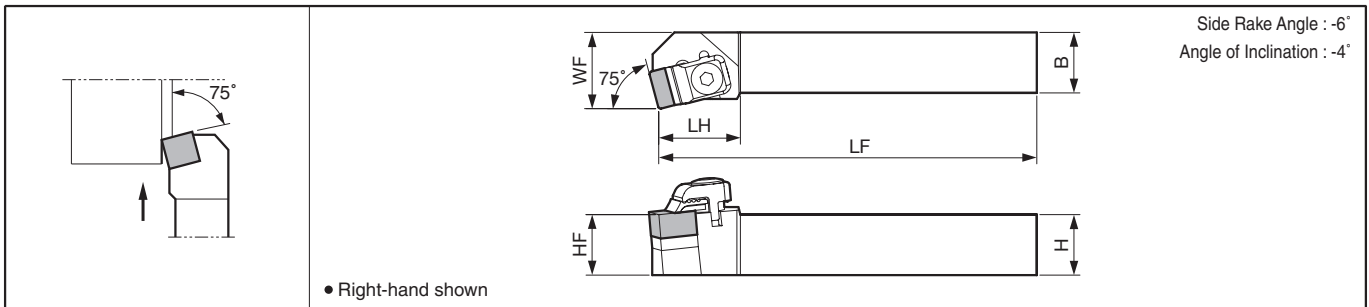
CSRN (External)



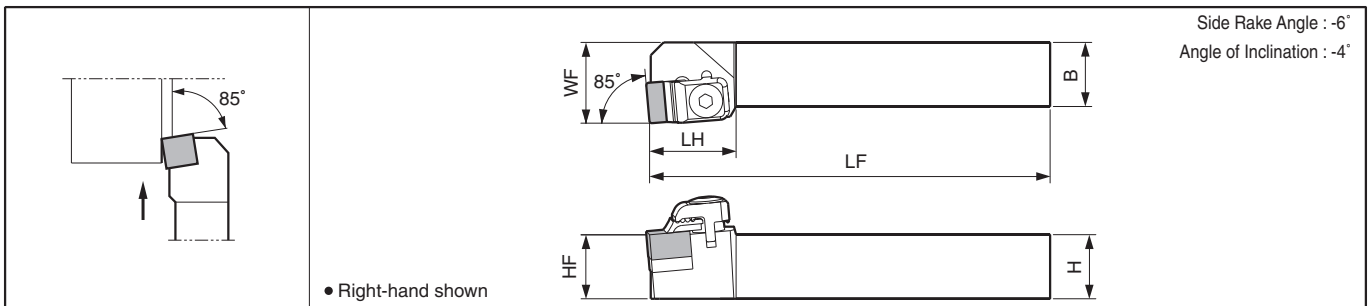
CS-N (External)



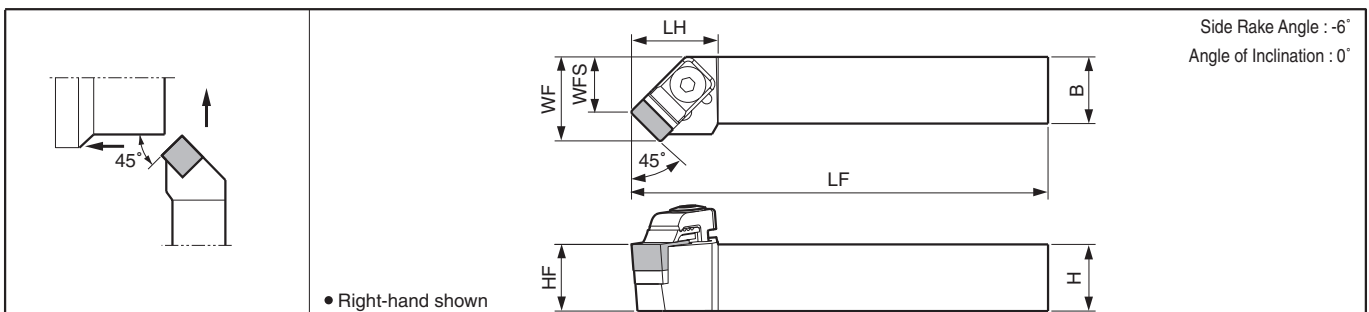
CSKN (Facing)



CSYN (Facing)



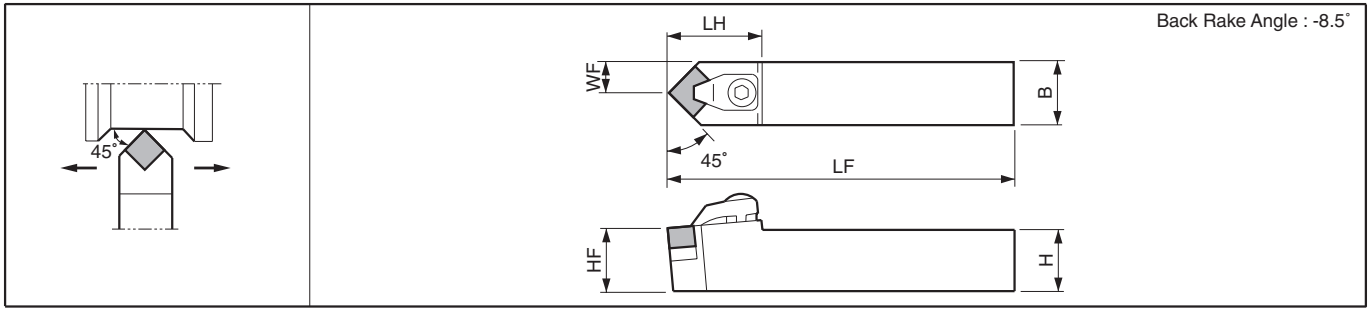
CSSN (External / Facing / Chamfering)



D

External

CSDN (External / Chamfering)



● Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | | | | Std. Corner(R)(RE) | Spare Parts | | | | |
|---------------------|-----------|---|----------------|----|----|----|-----|----|------|------|----------|-------------|--------------------|-------------|--------|-----------------|--------------|--|
| | R | N | L | H | HF | B | LF | LH | WF | HBKW | WFS | Chipbreaker | | Clamp Set | Wrench | Shim | Shim Screw | |
| | | | | | | | | | | | | | | | | | | |
| CSRN ^{R/L} | 2020K -12 | ● | ● | 20 | 20 | 20 | 125 | | 22 | 2 | - | 0.8 | CB-11 | CE-020 | LW-4 | SP-141 (SP-143) | M3X8 (M3X12) | |
| | 2525M -12 | ● | ● | 25 | 25 | 25 | 150 | 22 | 27 | - | - | | | | | | | |
| | 3225P -12 | ● | ● | 32 | 32 | 25 | 170 | | | | | | | | | | | |
| | 3225P -15 | ● | | 32 | 32 | 25 | 170 | 30 | 32.4 | - | - | | | | | | | |
| | 4040R -15 | ● | ● | 40 | 40 | 40 | 200 | | 43 | - | - | | | | | | | |
| CS-N ^{R/L} | 2525M -12 | ● | ● | 25 | 25 | 25 | 150 | 20 | 32 | - | - | 0.8 | CB-11 | CE-020 | LW-4 | SP-141 (SP-143) | M3X8 (M3X12) | |
| CSKN ^{R/L} | 2020K -12 | ● | | 20 | 20 | 20 | 125 | | 27 | 25 | - | 0.8 | CB-11 | CE-020 | LW-4 | SP-141 (SP-143) | M3X8 (M3X12) | |
| | 2525M -12 | ● | ● | 25 | 25 | 25 | 150 | | 32 | - | - | | | | | | | |
| | 3225P -15 | ● | | 32 | 32 | 25 | 170 | 37 | 32 | - | - | | | | | | | |
| CSYN ^{R/L} | 2525M -12 | ● | ● | 25 | 25 | 25 | 150 | 27 | 32 | - | - | 0.8 | CB-11 | CE-020 | LW-4 | SP-141 (SP-143) | M3X8 (M3X12) | |
| CSSN ^{R/L} | 2020K -12 | ● | | 20 | 20 | 20 | 125 | | 26 | 25 | - | 0.8 | CB-11 | CE-020 | LW-4 | SP-141 (SP-143) | M3X8 (M3X12) | |
| | 2525M -12 | ● | ● | 25 | 25 | 25 | 150 | | 32 | - | 16 23 | | | | | | | |
| CSDNN | 2020K -12 | | ● | 20 | 20 | 20 | 125 | | | 10 | - | 0.8 | - | CE-040 | LW-4 | SP-141 (SP-143) | M3X8 (M3X12) | |
| | 2525M -12 | | ● | 25 | 25 | 25 | 150 | 32 | 12.5 | - | - | | | | | | | |
| | 3225P -12 | | ● | 32 | 32 | 25 | 170 | | | - | - | | | | | | | |

• Shim & Shim Screw : When using SN□□1204 Insert, please purchase spare parts in () separately.

● Applicable Inserts

| Applications See Page | Cast Iron / Hard Materials | | Cast Iron | | Hard Materials / Cast Iron | | When using as toolholder for CBN tools (KBN900), please purchase spare parts below separately. | | |
|----------------------------|-------------------------------------|-------------------------------------|----------------|--------------|----------------------------|--------------|--|---------|------------|
| | B109,B110 | | B35 | | C19 | | Clamp Set | Shim | Shim Screw |
| Toolholder Description | Ceramic | | Coated Carbide | | CBN (KBN900) | | | | |
| | CSRN ^{R/L} ...-12 | SNGN1207.(SNGN1204..) SNMN1207.. | | (SNMN1204..) | | (SNMN1204..) | | CE-030A | SP-143 |
| CSRN ^{R/L} ...-15 | SNGN1507.. | | - | | - | | - | | |
| CS-N ^{R/L} ...-12 | SNGN1207.(SNGN1204..) SNMN1207.. | | (SNMN1204..) | | (SNMN1204..) | | CE-030A | SP-143 | M3X12 |
| CSKN ^{R/L} ...-12 | SNGN1207.(SNGN1204..) SNMN1207.. | | (SNMN1204..) | | (SNMN1204..) | | CE-030A | SP-143 | M3X12 |
| CSKN ^{R/L} ...-15 | SNGN1507.. | | - | | - | | - | | |
| CSYN ^{R/L} ...-12 | SNGN1207.(SNGN1204..) SNMN1207.. | | (SNMN1204..) | | (SNMN1204..) | | CE-030A | SP-143 | M3X12 |
| CSSN ^{R/L} ...-12 | SNGN1207.(SNGN1204..) SNMN1207.. | | (SNMN1204..) | | (SNMN1204..) | | CE-030A | SP-143 | M3X12 |
| CSDNN ...-12 | SNGN1207.(SNGN1204..) SNMN1207.. | | (SNMN1204..) | | (SNMN1204..) | | * - | SP-143 | M3X12 |

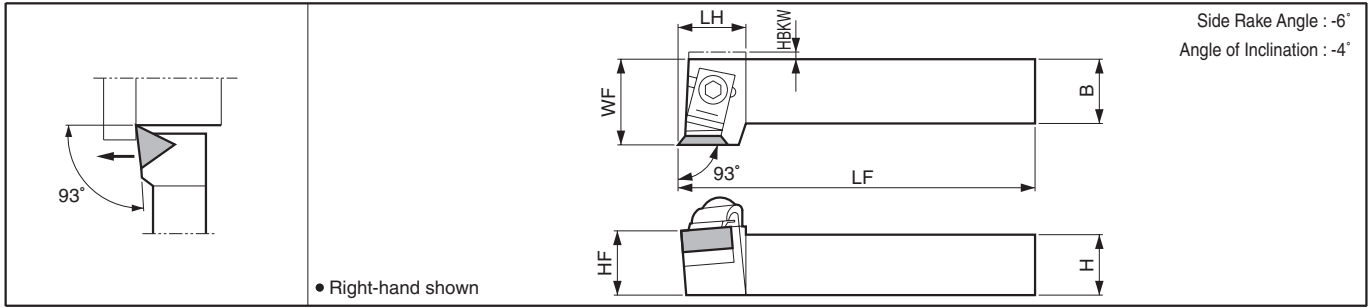
* CSDNN...-12 : Clamp Set CE-040 is used continuously.

Recommended Cutting Conditions ● D41~D42

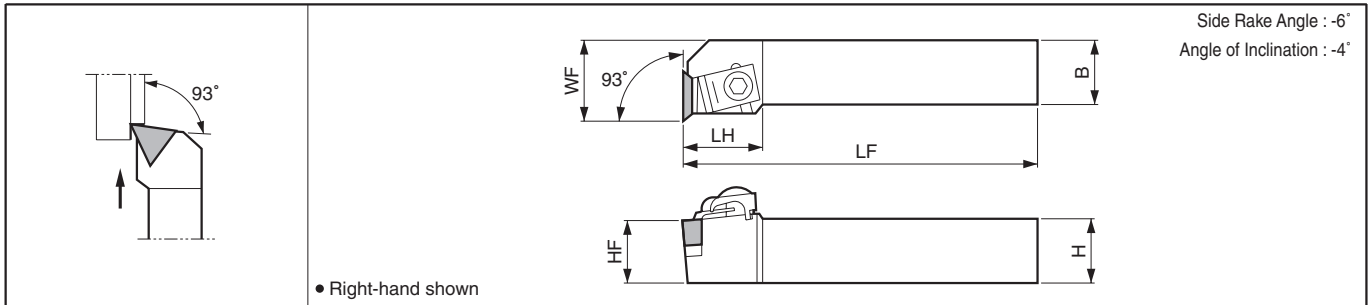
● : Std. Item

Insert Grades
 Turning
 Indexable Inserts
 CBN & PCD Tools
 External
 Small Parts
 Machining
 Boring
 Grooving
 Cut-off
 Threading
 Drilling
 Solid Tools
 Milling
 Tools for
 Turning Mill
 Spare Parts
 Technical
 Information
 Index

CTJN (External)



CTUN (Facing)



Toolholder Dimensions

| Description | Stock | Dimension (mm) | | | | | | | | | Std. Corner-R ₁ (RE) | Spare Parts | | | | |
|-------------------------------|-------|----------------|----|----|-----|----|----|----|-----|----------|---------------------------------|-------------|-----------------|--------------|------|------------|
| | | R | L | H | HF | B | LF | LH | WF | HBKW | | Chipbreaker | Clamp Set | Wrench | Shim | Shim Screw |
| | | | | | | | | | | | | | | | | |
| CTJN ^{R/L} 2020K -16 | ●● | 20 | 20 | 20 | 125 | 21 | 25 | 2 | 0.8 | CB-12/13 | CE-020 | LW-4 | SP-221 (SP-223) | M3X8 (M3X12) | | |
| | ●● | 25 | 25 | 25 | 150 | | | | | | | | | | 32 | - |
| CTUN ^{R/L} 2020K -16 | ●● | 20 | 20 | 20 | 125 | 27 | 25 | - | 0.8 | CB-13/12 | CE-020 | LW-4 | SP-221 (SP-223) | M3X8 (M3X12) | | |
| | ●● | 25 | 25 | 25 | 150 | | | | | | | | | | 32 | - |

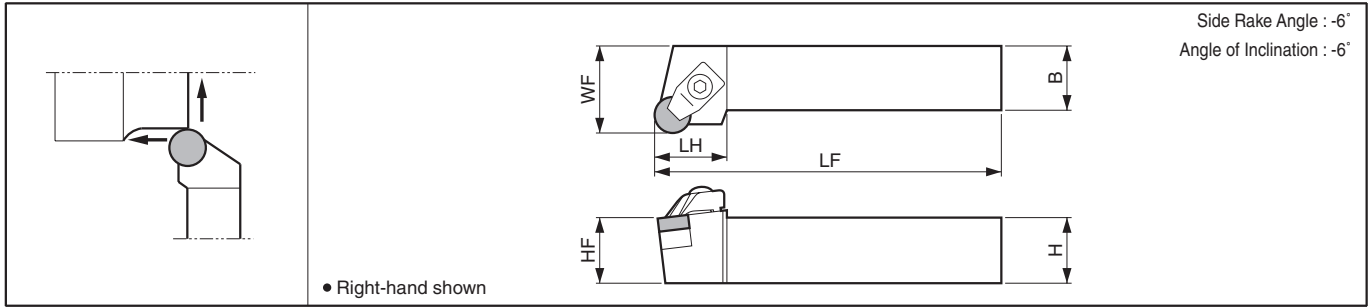
- CTJN (Chipbreaker) : CB-12 for Right-hand Toolholder, CB-13 for Left-hand Toolholder.
- CTUN (Chipbreaker) : CB-13 for Right-hand Toolholder, CB-12 for Left-hand Toolholder.
- Shim & Shim Screw : When using TN□□1604 Insert, please purchase spare parts in () separately.

Applicable Inserts

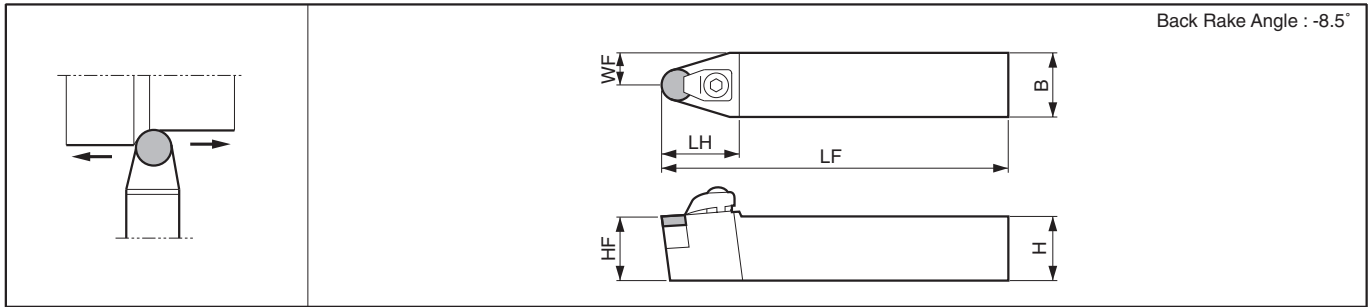
| Applications | Cast Iron / Hard Materials | Hard Materials / Cast Iron |
|----------------------------|----------------------------|-------------------------------------|
| See Page | B111 | C19 |
| Toolholder Description | Ceramic | CBN (KBN900) |
| | CTJN ^{R/L} ...-16 | TNGN1607. (TNGN1604..) (TNMN1604..) |
| CTUN ^{R/L} ...-16 | | |

Recommended Cutting Conditions D41~D42

CRSN (External / Facing)



CRDN (External / Copying)



Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | |
|--------------|---------------------------|---|----------------|----|----|----|-----|-----|------|-------------------|-------------|--------|------|-----------------|--------------|
| | R | N | L | H | HF | B | LF | LH | WF | | Clamp Set | Wrench | Shim | Shim Screw | |
| | CRSN^{3/4} | ● | ● | | 20 | 20 | 20 | 125 | | | 25 | | - | | |
| 2525M-12 | ● | ● | | 25 | 25 | 25 | 150 | 26 | 32 | | | CE-030 | LW-4 | SP-841 (SP-843) | M3X8 (M3X12) |
| 3225P-12 | ● | ● | | 32 | 32 | | 170 | | | | | | | | |
| CRDNN | | ● | | 20 | 20 | 20 | 125 | | 10 | | - | | | | |
| 2525M-12 | | ● | | 25 | 25 | 25 | 150 | 28 | 12.5 | | | CE-030 | LW-4 | SP-841 (SP-843) | M3X8 (M3X12) |
| 3225P-12 | | ● | | 32 | 32 | | 170 | | | | | | | | |
| 3232P-15 | | ● | | 32 | 32 | 32 | 170 | 35 | 16 | | - | CE-040 | LW-4 | SP-861 | M4X10 |
| 4040R-15 | | ● | | 40 | 40 | 40 | 200 | | 20 | | | | | | |

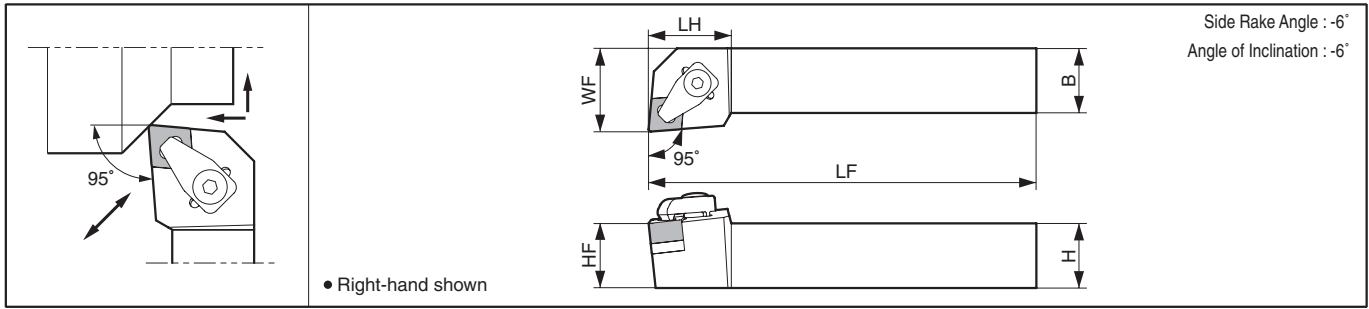
• Shim & Shim Screw : When using RN□□1204 Insert, please purchase spare parts in () separately.

Applicable Inserts

| Applications See Page | Cast Iron / Hard Materials | Hard Materials / Cast Iron | When using as toolholder for CBN tools (KBN900), please purchase spare parts below separately. | | | |
|----------------------------------|----------------------------|----------------------------|--|---------------|--------------|------------|
| Toolholder Description | Ceramic | B108 | | Clamp Set | Shim | Shim Screw |
| | | C19 CBN (KBN900) | | | | |
| CRSN^{3/4} ...-12 | RNGN120700(RNGN120400) | (RNMN120400) | CE-030A | SP-843 | M3X12 | |
| CRDNN ...-12 | RNGN120700(RNGN120400) | (RNMN120400) | CE-030A | SP-843 | M3X12 | |
| CRDNN ...-15 | RNGN150700 | - | - | | | |

Recommended Cutting Conditions ➡ D41~D42

CCLN-GX (External / Facing / Back Turning)



Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | |
|---------------------------------|--------------------------|--------------------------|----------------|----|----|-----|----|----|-----------|-------------------|-------------|--------|------------|--|--|
| | R | L | H | HF | B | LF | LH | WF | Clamp Set | | Wrench | Shim | Shim Screw | | |
| CCLN ³ /L 2525M-12GX | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 25 | 25 | 150 | 30 | 32 | 1.2 | | | | | | |
| | | | | | | | | | | CE-410 | LW-4 | SP-441 | M3X8 | | |

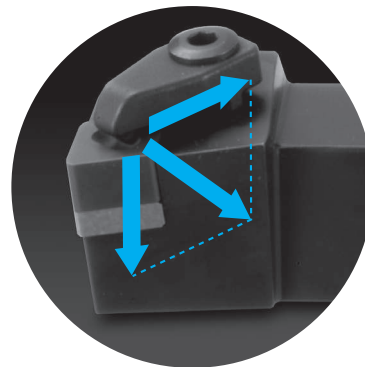
Applicable Inserts

| Applications See Page | Cast Iron B106 |
|-----------------------------|-------------------|
| Toolholder Description | Ceramic |
| CCLN ³ /L...12GX | CNGX1207. |

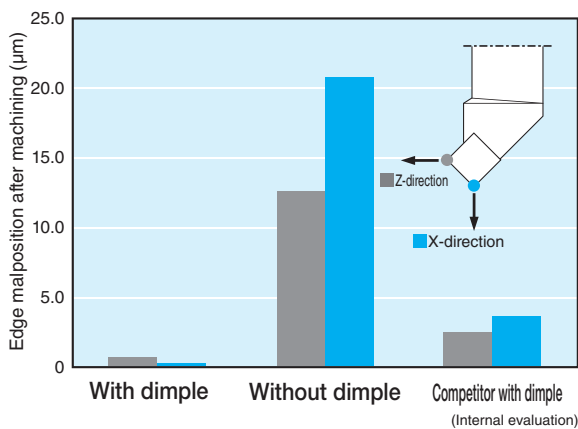
Recommended Cutting Conditions D41~D42

Features

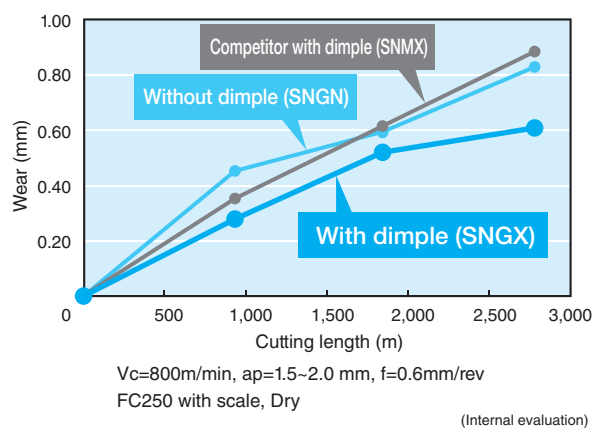
- Improved clamping stability due to the dimple design
- Improve machine stability and machinability



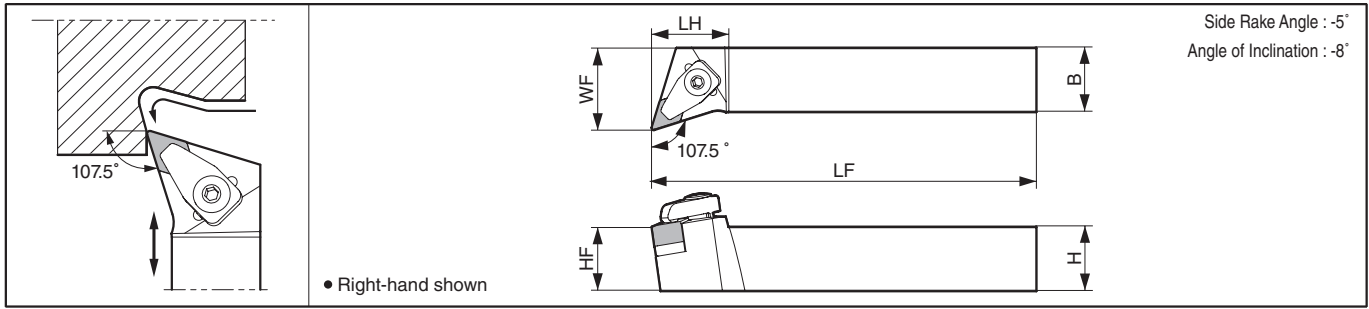
Edge malposition



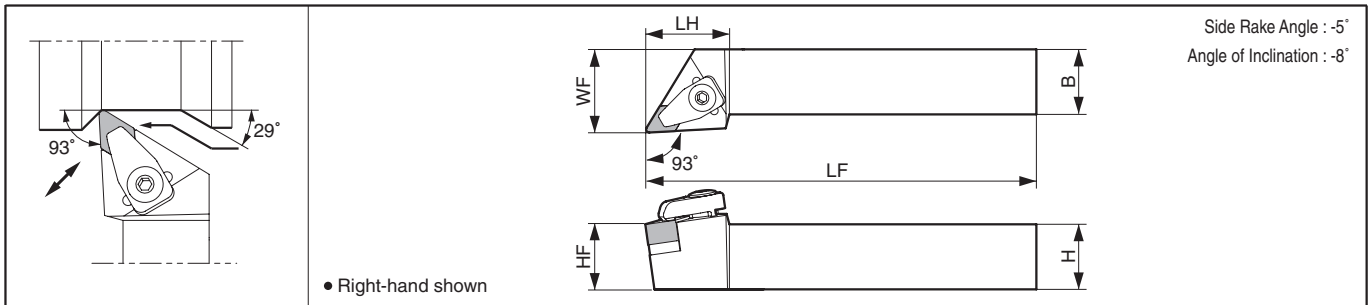
Cutting capability



CDHN-GX (External / Copying / Back Turning)



CDJN-GX (External / Copying / Back Turning)



Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R/(RE) | Spare Parts | | | |
|--------------------------------|--------------------------|--------------------------|----------------|----|----|-----|----|----|-----------|--------------------|-------------|--------|------------|--------|
| | R | L | H | HF | B | LF | LH | WF | Clamp Set | | Wrench | Shim | Shim Screw | |
| CDHN ^{R/L} 2525M-12GX | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 25 | 25 | 150 | 30 | 32 | 1.2 | CE-410 | LW-4 | SP-521 | M3X8 | |
| | <input type="checkbox"/> | <input type="checkbox"/> | | | | | 33 | | | | | | | CE-430 |
| CDJN ^{R/L} 2525M-12GX | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 25 | 25 | 150 | 32 | 32 | 1.2 | CE-410 | LW-4 | SP-521 | M3X8 | |
| | <input type="checkbox"/> | <input type="checkbox"/> | | | | | 38 | | | | | | | CE-430 |

Applicable Inserts

| Applications See Page | Cast Iron B107 |
|--------------------------------|-------------------|
| Insert | Ceramic |
| CDHN ^{R/L} 2525M-12GX | DNGX1207... |
| 2525M-15GX | DNGX1507... |
| CDJN ^{R/L} 2525M-12GX | DNGX1207... |
| 2525M-15GX | DNGX1507... |

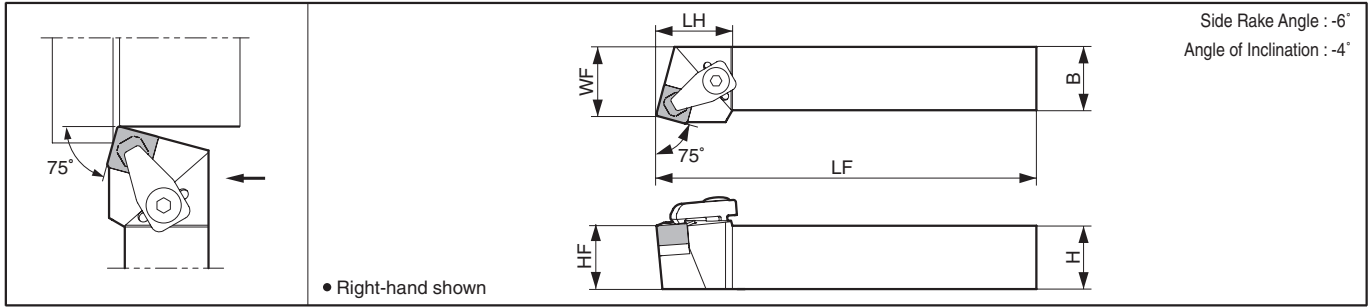
Recommended Cutting Conditions D41~D42

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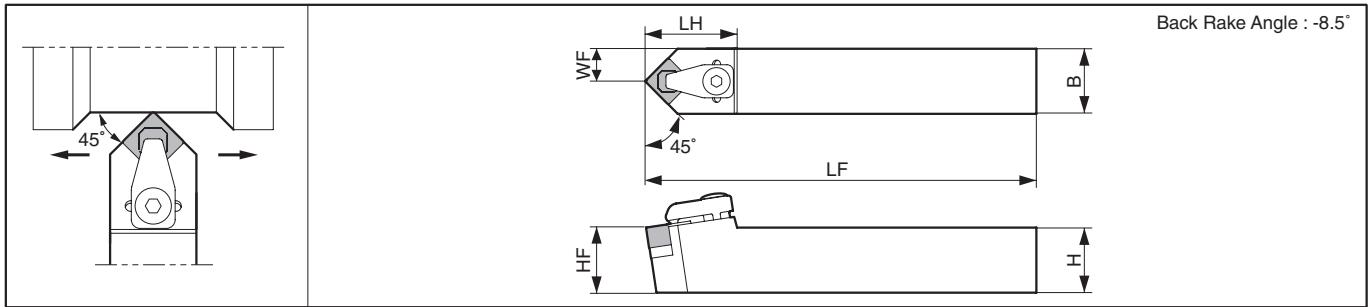
Insert Grades
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 Indexable Inserts
 CBN & PCBN Tools
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 Small Parts
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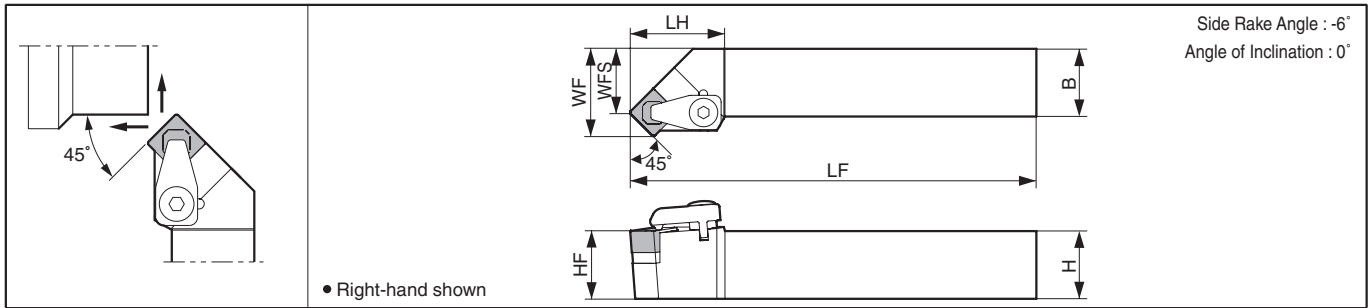
CSRN-GX (External)



CSDN-GX (External / Chamfering)



CSSN-GX (External / Facing / Chamfering)



Toolholder Dimensions

| Description | Stock | | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | |
|---------------------------------|--------------------------|--------------------------|---|----------------|----|----|-----|----|------|------|-------------------|-------------|--------|--------|------------|--|
| | R | N | L | H | HF | B | LF | LH | WF | WFS | | Clamp Set | Wrench | Shim | Shim Screw | |
| | | | | | | | | | | | | | | | | |
| CSRN ^β /L 2525M-12GX | <input type="checkbox"/> | <input type="checkbox"/> | | 25 | 25 | 25 | 150 | 30 | 27 | - | 1.2 | CE-410 | LW-4 | SP-141 | M3X8 | |
| | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | 35 | | | | | | SP-162 | M4X10 | |
| CSDNN 2525M-12GX | <input type="checkbox"/> | <input type="checkbox"/> | | 25 | 25 | 25 | 150 | 35 | 12.5 | - | 1.2 | CE-410 | LW-4 | SP-141 | M3X8 | |
| | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | 40 | | | | | | SP-162 | M4X10 | |
| CSSN ^β /L 2525M-12GX | <input type="checkbox"/> | <input type="checkbox"/> | | 25 | 25 | 25 | 150 | 35 | 32 | 23.6 | 1.2 | CE-410 | LW-4 | SP-141 | M3X8 | |
| | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | 40 | | 21.1 | | | | SP-162 | M4X10 | |

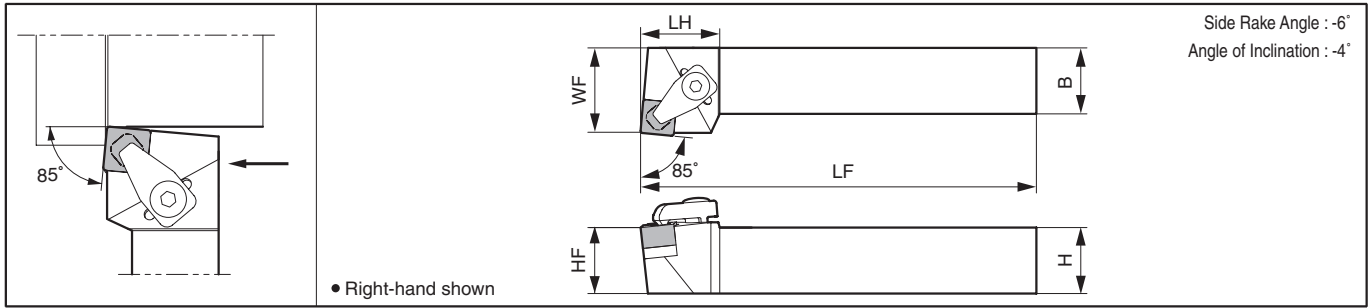
Applicable Inserts

| Applications See Page | Cast Iron B110 |
|---------------------------------|-------------------|
| Insert | Ceramic |
| Toolholder Description | |
| CSRN ^β /L 2525M-12GX | SNGX1207... |
| 2525M-15GX | SNGX1507... |
| CSDNN 2525M-12GX | SNGX1207... |
| 2525M-15GX | SNGX1507... |
| CSSN ^β /L 2525M-12GX | SNGX1207... |
| 2525M-15GX | SNGX1507... |

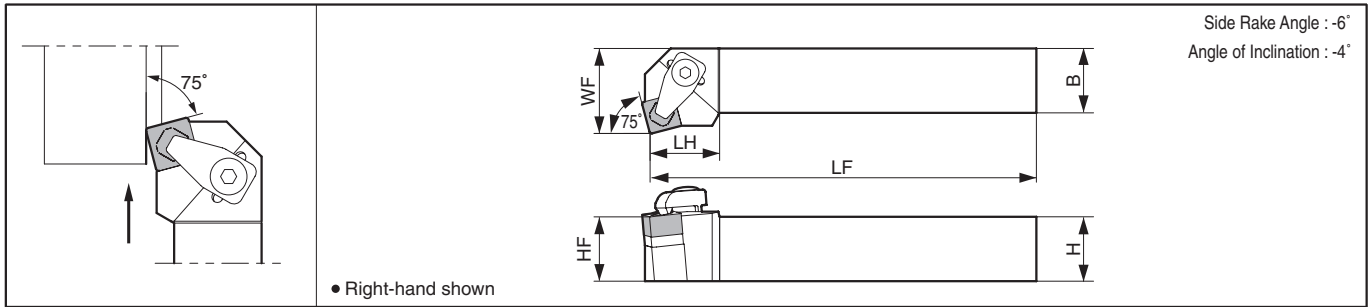
Recommended Cutting Conditions D41~D42

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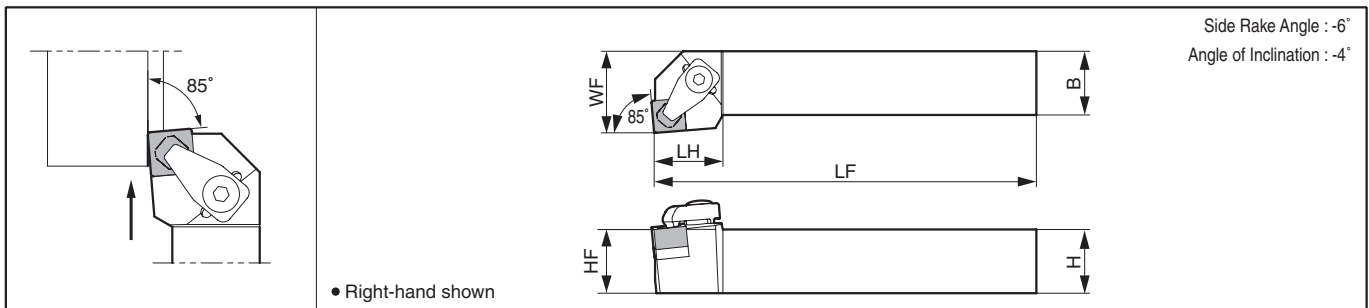
CS-N-GX (External)



CSKN-GX (Facing)



CSYN-GX (Facing)



Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | |
|----------------------------------|--------------------------|--------------------------|----------------|----|----|-----|----|----|-----------|-------------------|-------------|--------|------------|--|
| | R | L | H | HF | B | LF | LH | WF | Clamp Set | | Wrench | Shim | Shim Screw | |
| CS-N ^{3/4} L 2525M-12GX | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 25 | 25 | 150 | 30 | 32 | 1.2 | CE-410 | LW-4 | SP-141 | M3X8 | |
| | <input type="checkbox"/> | <input type="checkbox"/> | | | | | | | | | | SP-162 | M4X10 | |
| CSKN ^{3/4} L 2525M-12GX | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 25 | 25 | 150 | 27 | 32 | 1.2 | CE-410 | LW-4 | SP-141 | M3X8 | |
| | <input type="checkbox"/> | <input type="checkbox"/> | | | | | 26 | | | | | SP-162 | M4X10 | |
| CSYN ^{3/4} L 2525M-12GX | <input type="checkbox"/> | <input type="checkbox"/> | 25 | 25 | 25 | 150 | 27 | 32 | 1.2 | CE-410 | LW-4 | SP-141 | M3X8 | |
| | <input type="checkbox"/> | <input type="checkbox"/> | | | | | 29 | | | | | SP-162 | M4X10 | |

Applicable Inserts

| Applications See Page | Cast Iron B110 |
|----------------------------------|-------------------|
| Insert | Ceramic |
| Toolholder Description | |
| CS-N ^{3/4} L 2525M-12GX | SNGX1207... |
| 2525M-15GX | SNGX1507... |
| CSKN ^{3/4} L 2525M-12GX | SNGX1207... |
| 2525M-15GX | SNGX1507... |
| CSYN ^{3/4} L 2525M-12GX | SNGX1207... |
| 2525M-15GX | SNGX1507... |

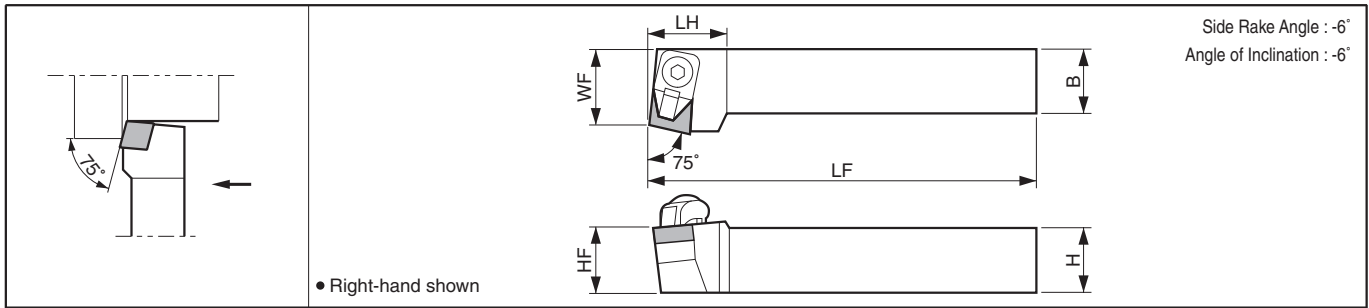
Recommended Cutting Conditions D41~D42

: Deleted from the next catalog

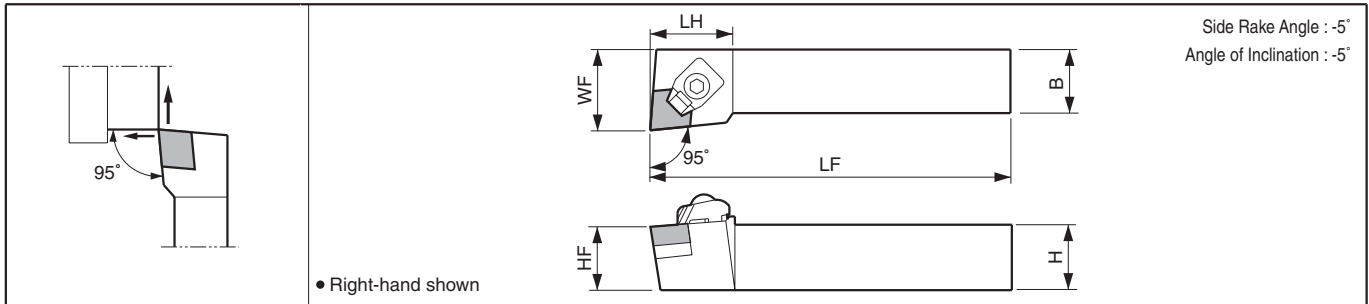
Insert Grades
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CCRN-A (External)



CCLN-A (External / Facing)



Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner R (RE) | Spare Parts | | | |
|-------------------------------|-------|---|----------------|----|----|-----|----|----|-----------|--------------------|-------------|--------|------------|--|
| | R | L | H | HF | B | LF | LH | WF | Clamp Set | | Wrench | Shim | Shim Screw | |
| | | | | | | | | | | | | | | |
| CCRN ^{R/L} 2525M-09A | ● | ● | 25 | 25 | 25 | 150 | 27 | 27 | 0.8 | CE-030A | LW-4 | SP-429 | HH3X12 | |
| CCLN ^{R/L} 2525M-09A | ● | ● | 25 | 25 | 25 | 150 | 28 | 32 | 0.8 | CE-030A | LW-4 | SP-429 | HH3X12 | |

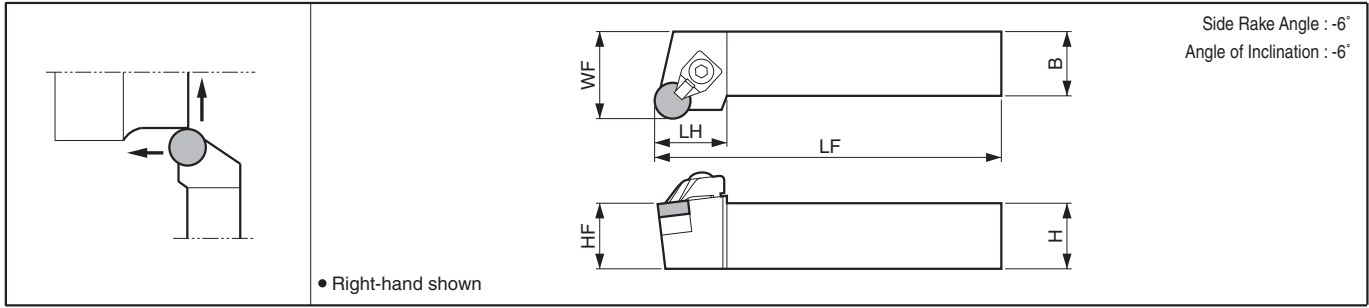
Applicable Inserts

| | |
|-----------------------------|----------------------------|
| Applications | Hard Materials / Cast Iron |
| See Page | C19 |
| Toolholder Description | Insert CBN (KBN900) |
| | CNMF0903.. |
| CCRN ^{R/L} ...-09A | CNMN0903.. |
| CCLN ^{R/L} ...-09A | |

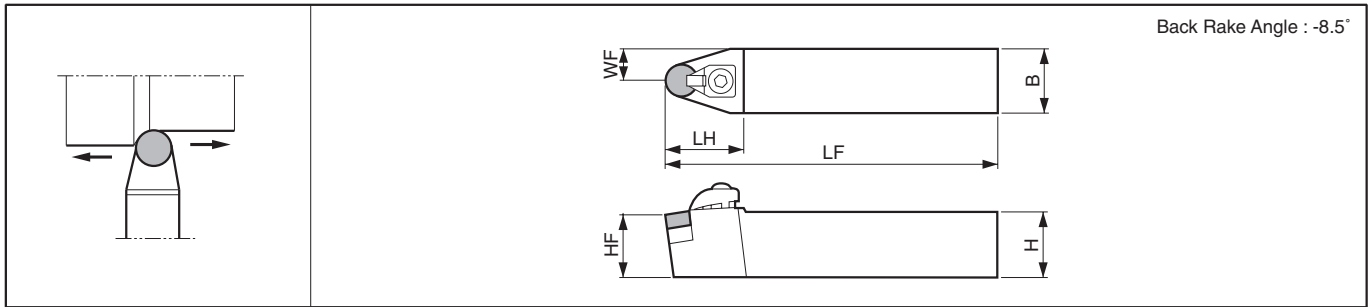
* For CNMN1204 Insert toolholder, see page D24

Recommended Cutting Conditions D41~D42

CRSN-A (External / Facing)



CRDN-A (External / Copying)



Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | |
|---------------------|-----------|---|----------------|----|----|-----|-----|----|------|-----------|-------------------|-------------|-----------------|--------|------------|--|
| | R | N | L | H | HF | B | LF | LH | WF | Clamp Set | | Wrench | Shim | | Shim Screw | |
| | | | | | | | | | | | | | HH | BH | | |
| CRSN ^{R/L} | 2525M-09A | ● | ● | 25 | 25 | 25 | 150 | 26 | 32 | - | CE-030A | LW-4 | SP-829 | - | HH3X12 | |
| | 3225P-09A | ● | ● | 32 | 32 | | 170 | | | | | | SP-849 (SP-843) | BH3X12 | | |
| | 2525M-12A | ● | ● | 25 | 25 | 150 | - | - | | | | | | | | |
| | 3225P-12A | ● | ● | 32 | 32 | 170 | - | - | | | | | | | | |
| CRDNN | 2525M-09A | | ● | 25 | 25 | 25 | 150 | 29 | 12.5 | - | CE-030A | LW-4 | SP-829 | - | HH3X12 | |
| | 3225P-09A | | ● | 32 | 32 | | 170 | | | | | | SP-849 (SP-843) | BH3X12 | | |
| | 2525M-12A | | ● | 25 | 25 | 150 | - | - | | | | | | | | |
| | 3225P-12A | | ● | 32 | 32 | 170 | - | - | | | | | | | | |

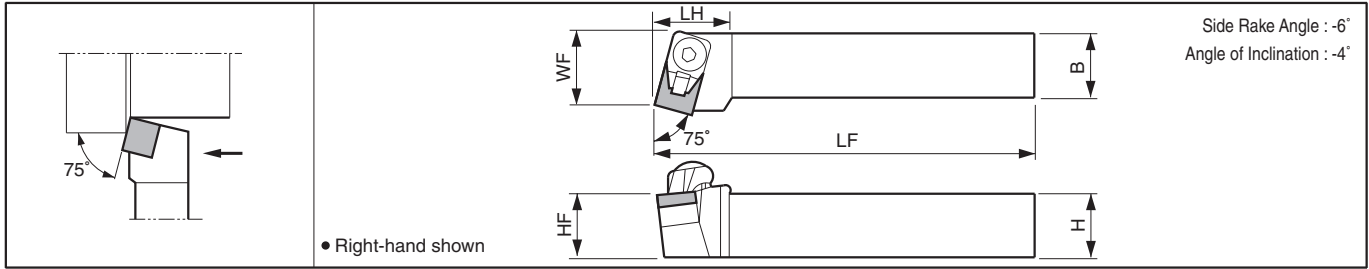
-12A toolholder Shim : When using RN□1204 Insert, please purchase spare parts : SP-843 in () separately.

Applicable Inserts

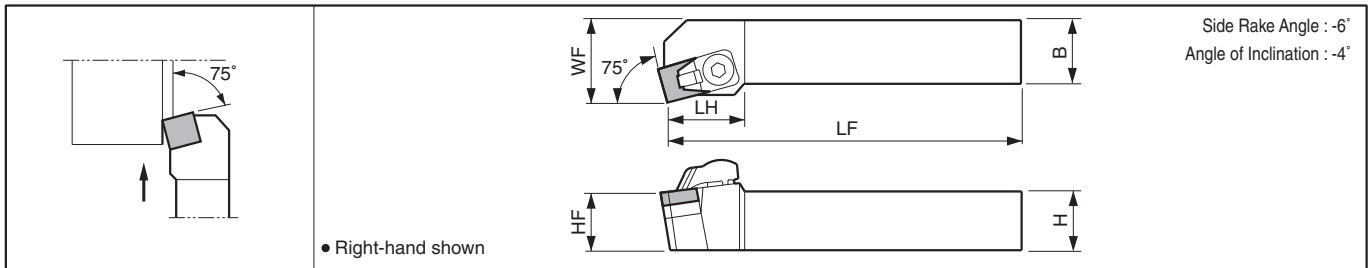
| Applications See Page | Hard Materials / Cast Iron | Cast Iron / Hard Materials | | When using as toolholder for ceramic tools, please purchase spare parts below separately. | |
|-----------------------------|----------------------------|----------------------------|--------|---|--|
| | C19 | B108 | Shim | Shim Screw | |
| Insert | CBN (KBN900) | Ceramic | | | |
| | Toolholder Description | | | | |
| CRSN ^{R/L} ...-09A | RNMN090300 | (RNGN090400) | SP-826 | - | |
| CRSN ^{R/L} ...-12A | RNMN120300 | (RNGN120400) | SP-843 | M3X12 | |
| | (RNMN120400) | (RNGN120700) | SP-841 | M3X8 | |
| CRDNN...-09A | RNMN090300 | (RNGN090400) | SP-826 | - | |
| CRDNN...-12A | RNMN120300 | (RNGN120400) | SP-843 | M3X12 | |
| | (RNMN120400) | (RNGN120700) | SP-841 | M3X8 | |

Recommended Cutting Conditions ● D41~D42

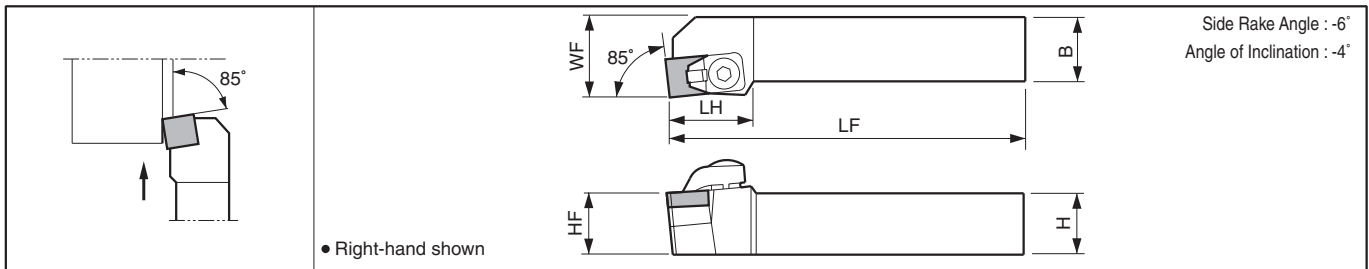
CSRN-A (External)



CSKN-A (Facing)



CSYN-A (Facing)



Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | |
|---------------------|-------|---|----------------|----|----|-----|----|----|-----------|-------------------|-------------|--------|-----------------|------------|----|
| | R | L | H | HF | B | LF | LH | WF | Clamp Set | | Wrench | Shim | | Shim Screw | |
| CSRN ^{R/L} | ● | ● | 25 | 25 | 25 | 150 | 22 | 27 | 0.8 | CE-030A | LW-4 | SP-129 | - | HH | BH |
| | ● | ● | | | | | | | | | | - | SP-148 (SP-143) | BH3X12 | |
| CSKNR | ● | | 25 | 25 | 25 | 150 | 27 | 32 | 0.8 | CE-030A | LW-4 | SP-129 | - | HH | BH |
| | ● | | | | | | 29 | | | | | - | SP-148 (SP-143) | BH3X12 | |
| CSYN ^{R/L} | ● | ● | 25 | 25 | 25 | 150 | 27 | 32 | 0.8 | CE-030A | LW-4 | SP-129 | - | HH | BH |
| | ● | ● | | | | | | | | | | - | SP-148 (SP-143) | BH3X12 | |

--12A toolholder Shim : When using SN□□1204 Insert, please purchase spare parts : SP-143 in () separately.

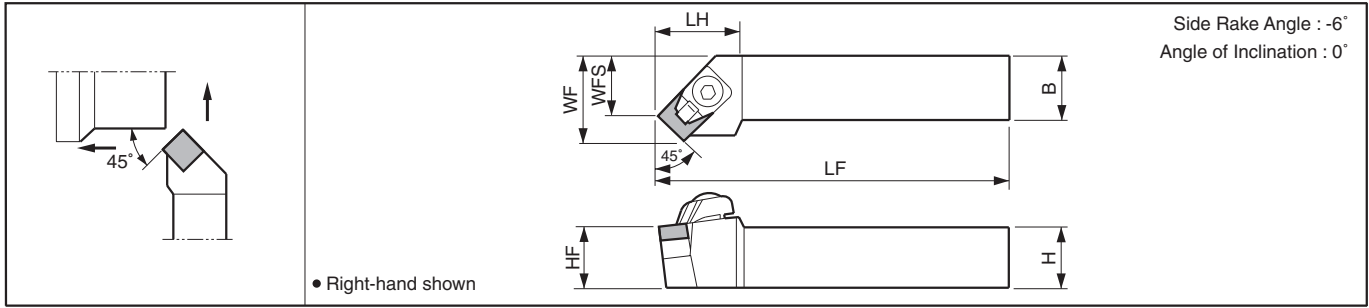
Applicable Inserts

| Applications See Page | Hard Materials / Cast Iron | | Cast Iron | | Cast Iron / Hard Materials | | When using as toolholder for ceramic tools, please purchase spare parts below separately. | | | |
|-----------------------------|----------------------------|----------------|---------------------------|-------|----------------------------|-----------|---|------------|------|--|
| | C19 | B35 | B109,B110 | | Chipbreaker | Clamp Set | Shim | Shim Screw | | |
| Insert | CBN (KBN900) | Coated Carbide | Ceramic | | | | | | | |
| Toolholder Description | | | | | | | | | | |
| CSRN ^{R/L} ...-09A | SNMN0903.. | - | - | - | - | - | - | - | | |
| CSRN ^{R/L} ...-12A | SNMN1203.. (SNMN1204..) | (SNMN1204..) | (SNGN1204..) (SNMN1204..) | CB-11 | CE-020 | SP-143 | M3X12 | | | |
| | | | (SNGN1207..) (SNMN1207..) | | | | | SP-141 | M3X8 | |
| CSKN ^{R/L} ...-09A | SNMN0903.. | - | - | - | - | - | - | | | |
| CSKN ^{R/L} ...-12A | SNMN1203.. (SNMN1204..) | (SNMN1204..) | (SNGN1204..) (SNMN1204..) | CB-11 | CE-020 | SP-143 | M3X12 | | | |
| | | | (SNGN1207..) (SNMN1207..) | | | | | SP-141 | M3X8 | |
| CSYN ^{R/L} ...-09A | SNMN0903.. | - | - | - | - | - | - | | | |
| CSYN ^{R/L} ...-12A | SNMN1203.. (SNMN1204..) | (SNMN1204..) | (SNGN1204..) (SNMN1204..) | CB-11 | CE-020 | SP-143 | M3X12 | | | |
| | | | (SNGN1207..) (SNMN1207..) | | | | | SP-141 | M3X8 | |

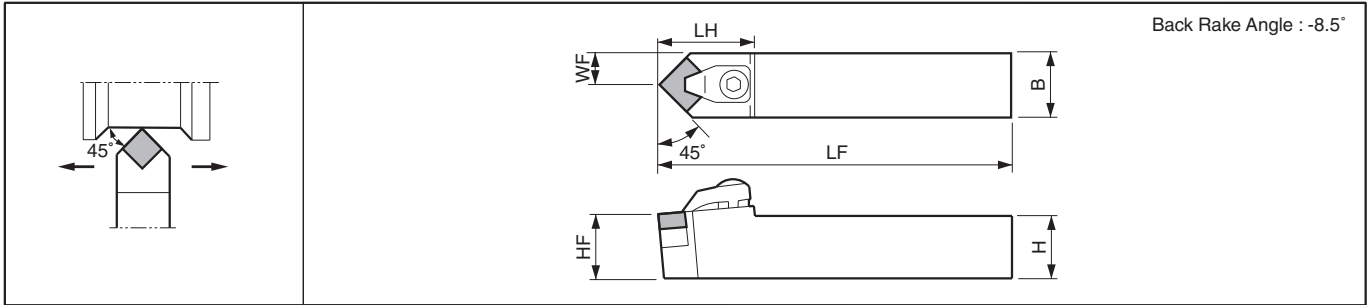
Recommended Cutting Conditions ● D41~D42

● : Std. Item

CSSN-A (External / Facing / Chamfering)



CSDN-A (External / Chamfering)



● Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | | | Std. Corner-R(RE) | Spare Parts | | | | |
|---------------------------|-----------|---|----------------|---|----|----|----|-----|----|------|-----------|-------------------|-------------|--------|------------|-----------------|--------|
| | R | N | L | H | HF | B | LF | LH | WF | WFS | Clamp Set | | Wrench | Shim | Shim Screw | | |
| | | | | | | | | | | | 030A 040 | | | | HH BH | | |
| CSSN³/L | 2525M-09A | ● | ● | | 25 | 25 | 25 | 150 | 26 | 32 | 25 | 0.8 | CE-030A | LW-4 | SP-129 | - | HH3X12 |
| | 2525M-12A | ● | ● | | | | | | | 23 | | | | | - | SP-148 (SP-143) | BH3X12 |
| CSDNN | 2525M-09A | | ● | | 25 | 25 | | 150 | | | 0.8 | CE-040 | LW-4 | SP-129 | - | HH3X12 | |
| | 3225P-09A | | ● | | 32 | 32 | | 170 | 32 | 12.5 | | | | - | | SP-148 (SP-143) | BH3X12 |
| | 2525M-12A | | ● | | 25 | 25 | | 150 | | | | | | | | | |

--12A toolholder Shim: When using SN□□1204 Insert, please purchase spare parts : SP-143 in () separately.

● Applicable Inserts

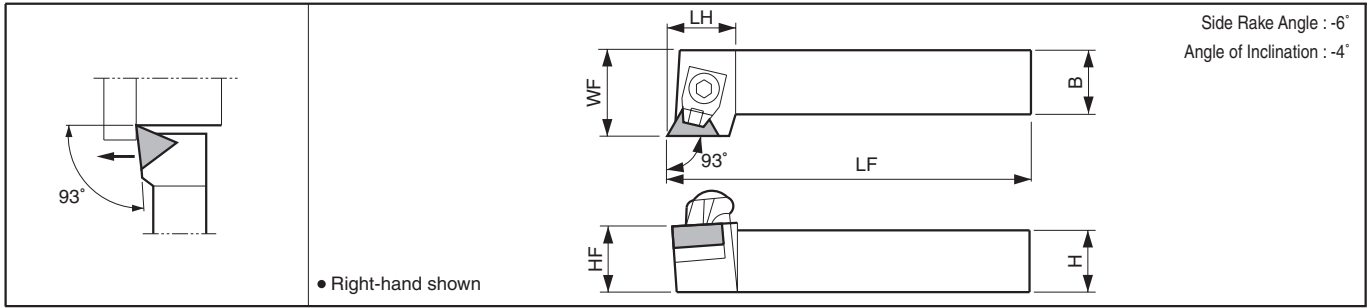
| Applications See Page | Hard Materials / Cast Iron | Cast Iron | Cast Iron / Hard Materials | | | | When using as toolholder for ceramic tools, please purchase spare parts below separately. | | | |
|----------------------------------|----------------------------|----------------|----------------------------|--|--|--|---|-----------|--------|------------|
| | C19 | B35 | B109,B110 | | | | Chipbreaker | Clamp Set | Shim | Shim Screw |
| Insert | CBN (KBN900) | Coated Carbide | Ceramic | | | | | | | |
| Toolholder Description | | | | | | | | | | |
| CSSN³/L...-09A | SNMN0903.. | - | - | | | | | | | |
| CSSN³/L...-12A | SNMN1203.. (SNMN1204..) | (SNMN1204..) | (SNGN1204..) (SNMN1204..) | | | | CB-11 | CE-020 | SP-143 | M3X12 |
| | | | (SNGN1207..) (SNMN1207..) | | | | | | | |
| CSDNN...-09A | SNMN0903.. | - | - | | | | | | | |
| CSDNN...-12A | SNMN1203.. (SNMN1204..) | (SNMN1204..) | (SNGN1204..) (SNMN1204..) | | | | - | - | SP-143 | M3X12 |
| | | | (SNGN1207..) (SNMN1207..) | | | | | | | |

Recommended Cutting Conditions ● D41~D42

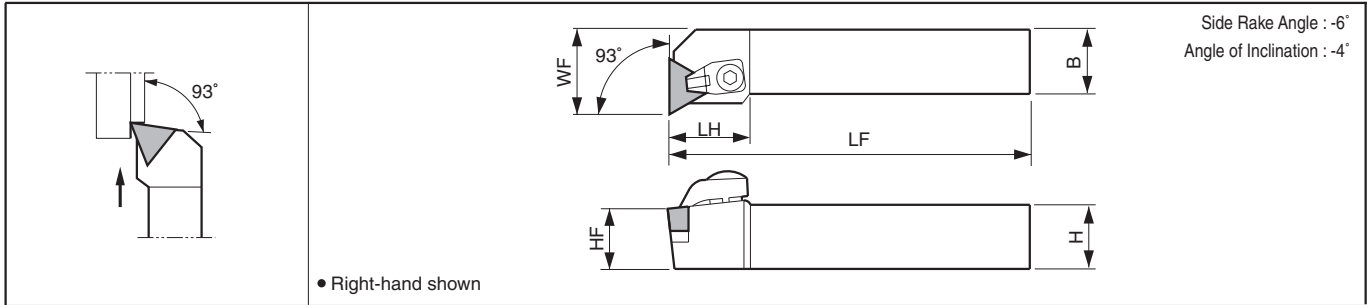
● : Std. Item

Insert Grades
Turning
Indexable Inserts
CBN & PCD Tools
External
D
Small Parts
Machining
E
Boring
F
Grooving
G
Cut-off
H
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CTJN-A (External)



CTUN-A (Facing)



Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | | Std. Corner-R(RE) | Spare Parts | | | |
|--|--|---|----------------|----|----|-----|-----|----|-----------|-------------------|-------------|------|------------|--|
| | R | L | H | HF | B | LF | LH | WF | Clamp Set | | Wrench | Shim | Shim Screw | |
| | CTJN ^R / _L 2525M-11A | ● | ● | 25 | 25 | 25 | 150 | 22 | 32 | | 0.8 | | | |
| CTUN ^R / _L 2525M-11A | ● | ● | 25 | 25 | 25 | 150 | 27 | 32 | 0.8 | | | | | |

Applicable Inserts

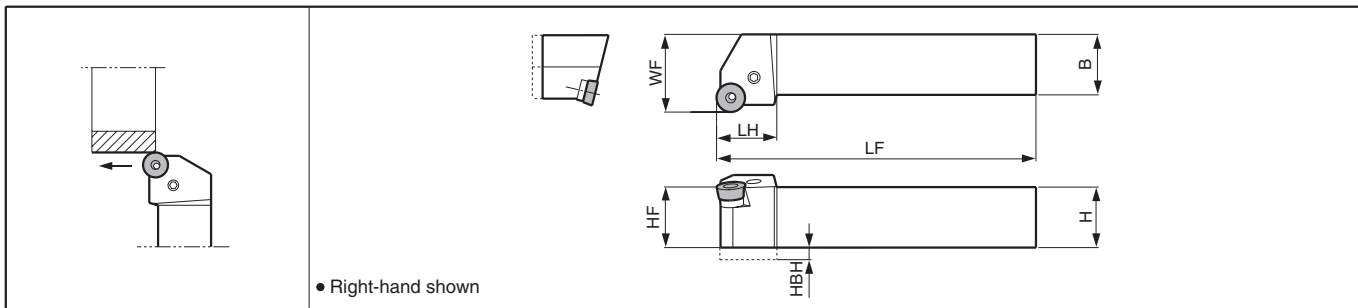
| Applications | Hard Materials / Cast Iron | Cast Iron / Hard Materials |
|--|----------------------------|----------------------------|
| See Page | C19 | B111 |
| Insert | CBN (KBN900) | Ceramic |
| Toolholder Description | | |
| CTJN ^R / _L ...-11A | TNMN1103.. | TNGN1103.. |
| CTUN ^R / _L ...-11A | | |

* TNMN1604 Insert toolholder is described in **D28**.

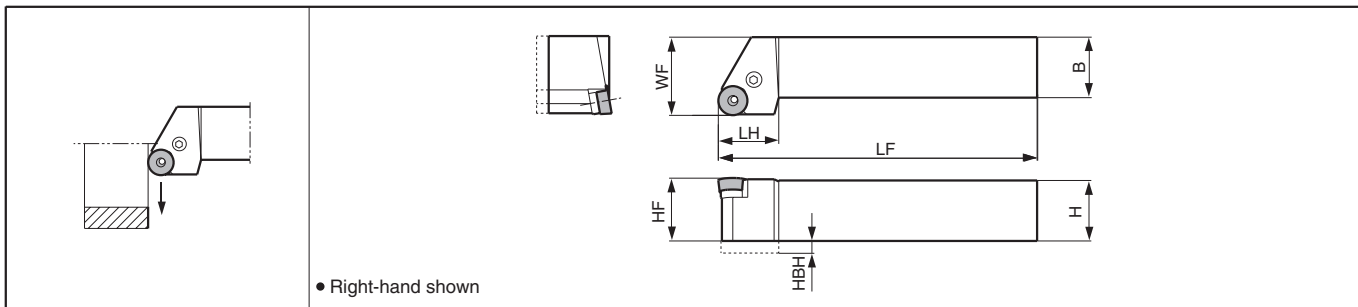
Recommended Cutting Conditions **D41-D42**

Toolholders for Bearing Machining [RCMT Insert]

PRGC-BE (External)



PRGC-BF (Facing)



Toolholder Dimensions

| Description | Stock | Dimension (mm) | | | | | | | | Spare Parts | | | | | | Applicable Inserts ● B103 |
|-------------|-------------|----------------|----|-----|---|----|-----|----|-------|-------------|-------|----------|-------|--------|--------|------------------------------|
| | | H | HF | HBH | B | LF | LH | WF | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench | | |
| PRGCR | 2020K -12BE | ● | 20 | 20 | - | 20 | 125 | 22 | 25 | LL-1CN | LS-1N | LR-12C | LSP-1 | PC-1 | FH-2.5 | RCMT 1204M0-BB |
| | 2525M -12BE | ● | 25 | 25 | - | 25 | 150 | 25 | 32 | | | | | | | |
| | 2020K -16BE | ● | 20 | 20 | 5 | 20 | 125 | 27 | 29 | LL-2C | LS-1T | LR-16C | LSP-2 | PC-2 | | |
| | 2525M -16BE | ● | 25 | 25 | - | 25 | 150 | 27 | 32 | | | | | | | |
| PRGCR | 2020K -12BF | ● | 20 | 20 | - | 20 | 125 | 22 | 25 | LL-1CN | LS-1N | LR-12C | LSP-1 | PC-1 | FH-2.5 | RCMT 1204M0-BB |
| | 2525M -12BF | ● | 25 | 25 | - | 25 | 150 | 25 | 32 | | | | | | | |
| | 2020K -16BF | ● | 20 | 20 | 5 | 20 | 125 | 27 | 25 | LL-2C | LS-1T | LR-16C | LSP-2 | PC-2 | | |
| | 2525M -16BF | ● | 25 | 25 | - | 25 | 150 | 27 | 32 | | | | | | | |

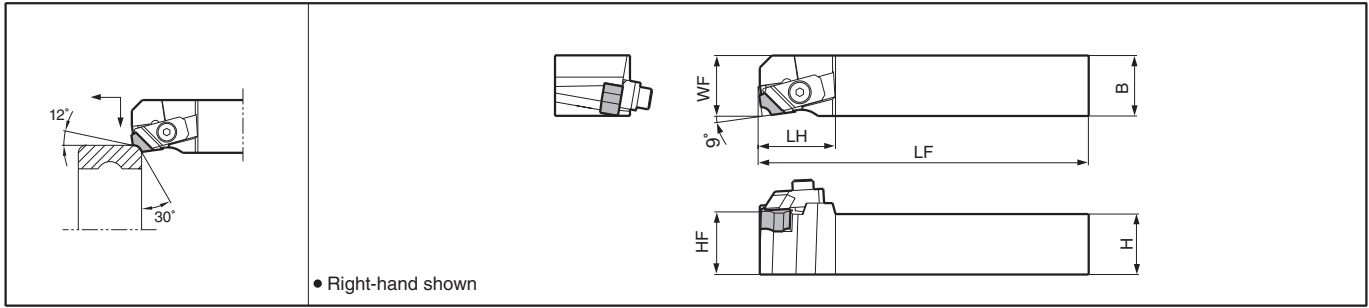
Recommended Cutting Conditions ● D41~D42

● : Std. Item

- Insert Grades
- Turning
- Indexable Inserts
- OBN & PCD Tools
- External
- Small Parts Machining
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CBSN (External Round-Chamfering)



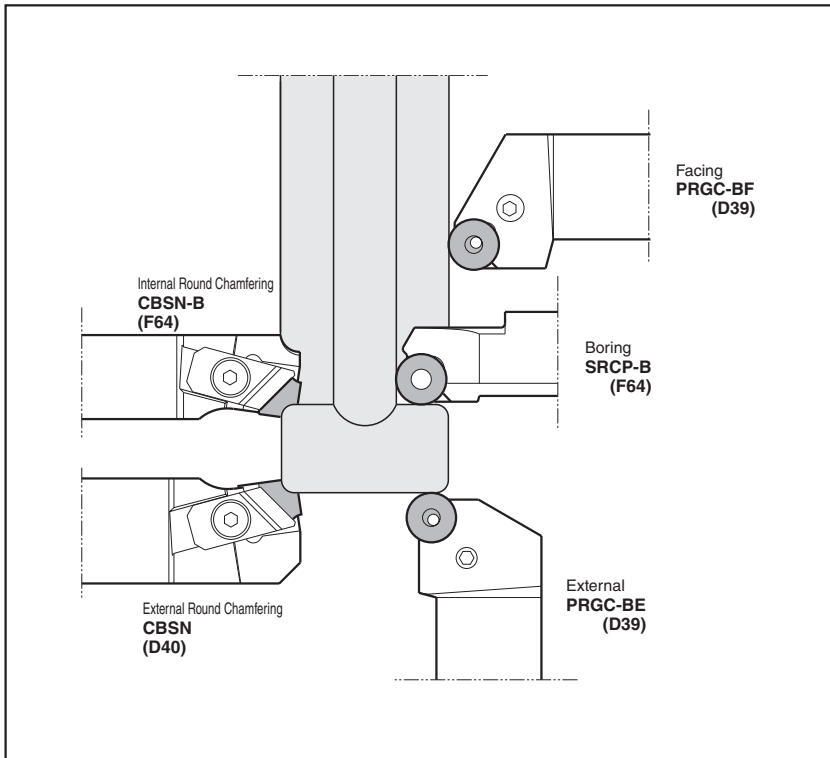
Toolholder Dimensions

| Description | Stock | | Dimension (mm) | | | | | | Spare Parts | | | | Applicable Inserts ● B103 |
|--|-------|---|----------------|----|----|-----|----|----|----------------------|--------|-------|------------|------------------------------|
| | R | L | H | HF | B | LF | LH | WF | Clamp Set | Wrench | Shim | Shim Screw | |
| | | | | | | | | | CP-RC ^{R/L} | LW-5 | SP-RC | SP3X8 | |
| CBSN^{R/L} 2020K -12 | ● | ● | 20 | 20 | 20 | 125 | 32 | 20 | CP-RC ^{R/L} | LW-5 | SP-RC | SP3X8 | SNMF1204○-21 |
| 2525M -12 | ● | ● | 25 | 25 | 25 | 150 | | 25 | | | | | |

Clamp Set : CP-RCR for Right-hand Toolholder, CP-RCL for Left-hand Toolholder.

Recommended Cutting Conditions ● D41~D42

Tooling for Bearing Machining



Recommended Cutting Conditions

Recommended Cutting Conditions - External Turning (Negative Insert)

[ap indicates radius]

| ISO Classification | Workpiece Material | Hardness | Cutting Range | Applications | Recommended Chipbreaker | Recommended Insert Grade | Corner-R (RE) | Lower Limit - Recommendation - Upper Limit | | | |
|--------------------|---|-------------------------|--|-------------------------|-----------------------------------|-----------------------------------|------------------------------------|--|--|--|---|
| | | | | | | | | Vc (m/min) | ap (mm) | f (mm/rev) | |
| | | | | | | | | | | | |
| P | Low Carbon Steel Low Carbon Alloy | HB ≤ 300 | Finishing (Small ap) | Continuous Interruption | XF | PV710 PV720 | 0.4 0.8 | 250 - 350 - 520 240 - 320 - 480 | 0.05 - 0.12 - 0.6 0.05 - 0.15 - 0.6 | 0.03 - 0.1 - 0.22 0.04 - 0.12 - 0.25 | |
| | | | Finishing (Gloss Oriented) | Continuous Interruption | XP | TN610 TN620 | 0.4 0.8 | 250 - 320 - 400 240 - 310 - 370 | 0.2 - 0.5 - 0.7 0.2 - 0.5 - 0.7 | 0.07 - 0.12 - 0.2 0.07 - 0.12 - 0.2 | |
| | | | Finishing (Tool Life Oriented) | Continuous Interruption | XP | PV710 PV720 | 0.4 0.8 | 250 - 300 - 370 240 - 290 - 340 | 0.2 - 0.5 - 0.7 0.2 - 0.5 - 0.7 | 0.07 - 0.12 - 0.2 0.07 - 0.12 - 0.2 | |
| | | | Finishing - Medium (Gloss Oriented) | Continuous Interruption | XQ | TN610 TN620 | 0.4 0.8 | 250 - 320 - 400 240 - 280 - 340 | 0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5 | 0.17 - 0.25 - 0.3 0.17 - 0.25 - 0.3 | |
| | | | Finishing - Medium (Tool Life Oriented) | Continuous Interruption | XQ | PV710 PV720 | 0.8 0.8 | 250 - 300 - 370 240 - 280 - 340 | 0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5 | 0.17 - 0.25 - 0.3 0.17 - 0.25 - 0.3 | |
| | | | Medium - Roughing | Continuous Interruption | XS | PV720 CA515 | 0.8 0.8 | 220 - 260 - 320 160 - 210 - 260 | 0.8 - 1.5 - 2.0 0.8 - 1.5 - 2.0 | 0.25 - 0.3 - 0.4 0.25 - 0.3 - 0.4 | |
| | | | Roughing | Continuous Interruption | PG | CA515 CA025P | 0.8 1.2 | 180 - 220 - 260 150 - 200 - 240 | 1.0 - 2.5 - 3.5 1.0 - 2.5 - 3.5 | 0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4 | |
| | | | Medium - Roughing High Feed Rate | Continuous Interruption | PT | CA515 CA025P | 0.8 1.2 | 150 - 200 - 240 120 - 180 - 220 | 1.5 - 3.0 - 4.5 1.5 - 3.0 - 4.5 | 0.25 - 0.35 - 0.45 0.25 - 0.35 - 0.45 | |
| | | | Roughing High Feed Rate | Continuous Interruption | PH | CA515 CA025P | 1.2 1.6 | 150 - 200 - 240 120 - 180 - 220 | 2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7 | |
| | | | Roughing (Low Cutting Force) | Continuous Interruption | PX | CA515 (Single-sided) CA025P | 1.2 1.6 | 150 - 200 - 240 120 - 180 - 220 | 2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7 | |
| | | | Medium - Roughing High Feed Rate | Continuous Interruption | PT | CA515 CA025P | 0.8 1.2 | 120 - 180 - 230 100 - 150 - 200 | 1.5 - 3.0 - 4.5 1.5 - 3.0 - 4.5 | 0.25 - 0.35 - 0.45 0.25 - 0.35 - 0.45 | |
| | | | Roughing High Feed Rate | Continuous Interruption | PH | CA515 CA025P | 1.2 1.6 | 120 - 180 - 230 100 - 150 - 200 | 2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7 | |
| | | | Roughing (Low Cutting Force) | Continuous Interruption | PX | CA515 (Single-sided) CA025P | 1.2 1.6 | 120 - 180 - 230 100 - 150 - 200 | 2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7 | |
| | | | Medium Carbon Steel Medium Carbon Alloy | HB ≤ 300 | Finishing (Time Oriented) | Continuous Interruption | WF (Wiper) | PV710 CA515 | 0.8 0.8 | 200 - 250 - 320 160 - 220 - 280 | 0.3 - 0.5 - 1.0 0.3 - 0.5 - 1.0 |
| | Finishing - Medium (Time Oriented) | Continuous Interruption | WE (Wiper) | | PV710 CA025P | 0.8 0.8 | 180 - 220 - 280 130 - 180 - 240 | 1.0 - 2.0 - 3.0 1.0 - 2.0 - 3.0 | 0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4 | | |
| | Finishing (Gloss Oriented) | Continuous Interruption | PP | | TN610 | 0.4 0.8 | 200 - 250 - 320 180 - 230 - 300 | 0.2 - 0.5 - 1.5 0.2 - 0.5 - 1.5 | 0.04 - 0.16 - 0.28 0.05 - 0.2 - 0.35 | | |
| | Finishing (Tool Life Oriented) | Continuous Interruption | PP | | PV710 PV720 | 0.4 0.8 | 200 - 250 - 320 200 - 240 - 290 | 0.2 - 0.5 - 1.5 0.2 - 0.5 - 1.5 | 0.04 - 0.16 - 0.28 0.05 - 0.2 - 0.35 | | |
| | Finishing - Medium (Gloss Oriented) | Continuous Interruption | PQ | | TN610 TN620 | 0.8 1.2 | 180 - 230 - 300 160 - 220 - 260 | 0.5 - 1.5 - 2.5 0.5 - 1.5 - 2.5 | 0.1 - 0.2 - 0.3 0.1 - 0.17 - 0.25 | | |
| | Finishing - Medium (Tool Life Oriented) | Continuous Interruption | PQ | | PV710 CA025P | 0.8 0.8 | 160 - 210 - 280 140 - 200 - 240 | 0.5 - 1.5 - 2.5 0.5 - 1.5 - 2.5 | 0.1 - 0.2 - 0.3 0.1 - 0.17 - 0.25 | | |
| | Medium - Roughing | Continuous Interruption | PG | | CA515 CA025P | 0.8 1.2 | 150 - 200 - 240 120 - 160 - 200 | 1.0 - 2.5 - 3.5 1.0 - 2.5 - 3.5 | 0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4 | | |
| | Medium - Roughing High Feed Rate | Continuous Interruption | PT | | CA515 CA025P | 0.8 1.2 | 120 - 180 - 230 100 - 150 - 200 | 1.5 - 3.0 - 4.5 1.5 - 3.0 - 4.5 | 0.25 - 0.35 - 0.45 0.25 - 0.35 - 0.45 | | |
| | Roughing High Feed Rate | Continuous Interruption | PH | | CA515 CA025P | 1.2 1.6 | 120 - 180 - 230 100 - 150 - 200 | 2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7 | | |
| | Roughing (Low Cutting Force) | Continuous Interruption | PX | | CA515 (Single-sided) CA025P | 1.2 1.6 | 120 - 180 - 230 100 - 150 - 200 | 2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7 | | |
| | High Carbon Alloy | HB ≤ 280 | Finishing (Gloss Oriented) | | Continuous Interruption | PP | TN610 TN620 | 0.4 0.8 | 150 - 200 - 280 140 - 180 - 240 | 0.2 - 0.5 - 1.5 0.2 - 0.5 - 1.5 | 0.04 - 0.16 - 0.28 0.05 - 0.2 - 0.35 |
| | Finishing (Tool Life Oriented) | | Continuous Interruption | | PP | PV710 CA515 | 0.4 0.8 | 120 - 180 - 260 100 - 150 - 200 | 0.2 - 0.5 - 1.5 0.2 - 0.5 - 1.5 | 0.04 - 0.16 - 0.28 0.05 - 0.2 - 0.35 | |
| | Finishing - Medium | | Continuous Interruption | | PQ | CA515 CA025P | 0.8 0.8 | 120 - 160 - 220 100 - 140 - 180 | 0.5 - 1.5 - 2.5 0.5 - 1.5 - 2.5 | 0.15 - 0.25 - 0.3 0.15 - 0.2 - 0.25 | |
| | Medium - Roughing | | Continuous Interruption | | PG | CA515 CA025P | 0.8 0.8 | 120 - 150 - 200 100 - 130 - 180 | 1.0 - 2.0 - 3.0 1.0 - 2.0 - 3.0 | 0.2 - 0.3 - 0.5 0.15 - 0.2 - 0.3 | |
| | Medium - Roughing High Feed Rate | | Continuous Interruption | PT | CA515 CA025P | 0.8 1.2 | 100 - 140 - 180 80 - 120 - 160 | 1.5 - 3.0 - 4.5 1.5 - 3.0 - 4.5 | 0.25 - 0.35 - 0.45 0.25 - 0.35 - 0.45 | | |
| | Roughing High Feed Rate | | Continuous Interruption | PH | CA515 CA025P | 1.2 1.6 | 100 - 140 - 180 80 - 120 - 160 | 2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7 | | |
| | Roughing (Low Cutting Force) | | Continuous Interruption | PX | CA515 (Single-sided) CA025P | 1.2 1.6 | 100 - 140 - 180 80 - 120 - 160 | 2.0 - 5.0 - 8.0 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 0.3 - 0.5 - 0.7 | | |

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Recommended Cutting Conditions

Recommended Cutting Conditions - External Turning (Negative Insert)

[ap indicates radius]

| ISO Classification | Workpiece Material | Hardness | Cutting Range | Applications | Recommended Chipbreaker | Recommended Insert Grade | Corner-R (RE) | Lower Limit - Recommendation - Upper Limit | | | | | |
|---------------------|---|---|---|---|----------------------------|--|-----------------------------------|--|--|---|--|---|--|
| | | | | | | | | Vc (m/min) | ap (mm) | f (mm/rev) | | | |
| | | | | | | | | | | | | | |
| M | Stainless Steel (Austenitic related) | HB ≤ 220 | Finishing (Gloss Oriented) | Continuous Interruption | PQ | TN620 | 0.8 | 120 - 160 - 200 | 0.5 - 1.0 - 1.5 | 0.08 - 0.15 - 0.2 | | | |
| | | | Finishing | Continuous Interruption | MQ | CA6515 CA6525 | 0.4 0.8 | 120 - 180 - 240 100 - 160 - 220 | 0.5 - 1.0 - 1.5 | 0.08 - 0.15 - 0.2 0.05 - 0.1 - 0.15 | | | |
| | | | Medium - Roughing (Chip Control Oriented) | Continuous Interruption | MS | CA6515 CA6525 | 0.4 0.8 | 120 - 160 - 200 80 - 140 - 180 | 1.0 - 2.0 - 3.0 | 0.1 - 0.2 - 0.3 0.2 - 0.3 - 0.4 | | | |
| | | | Medium - Roughing (Sharpness Oriented) | Continuous Interruption | MU | CA6515 CA6525 | 0.4 0.8 | 120 - 160 - 200 80 - 140 - 180 | 1.0 - 2.0 - 3.0 | 0.15 - 0.25 - 0.35 0.15 - 0.25 - 0.3 | | | |
| | | | Roughing | Continuous Interruption | Standard | CA6515 CA6525 | 0.8 1.2 | 100 - 140 - 180 80 - 120 - 150 | 1.0 - 2.0 - 4.0 | 0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4 | | | |
| | | | Stainless Steel (Precipitation Hardening) | HB ≤ 300 | Finishing (Gloss Oriented) | Continuous Interruption | PQ | TN620 | 0.8 | 100 - 120 - 150 | 0.5 - 1.0 - 1.5 | 0.05 - 0.1 - 0.15 | |
| | Finishing | Continuous Interruption | MQ | | CA6515 CA6525 | 0.4 0.8 | 100 - 120 - 150 80 - 100 - 120 | 0.5 - 1.0 - 1.5 | 0.08 - 0.15 - 0.2 0.05 - 0.1 - 0.15 | | | | |
| | Medium - Roughing (Chip Control Oriented) | Continuous Interruption | MS | | CA6515 CA6525 | 0.4 0.8 | 100 - 120 - 150 80 - 100 - 120 | 1.0 - 1.5 - 2.0 | 0.1 - 0.15 - 0.25 0.1 - 0.15 - 0.2 | | | | |
| | Medium - Roughing (Sharpness Oriented) | Continuous Interruption | MU | | CA6515 CA6525 | 0.4 0.8 | 100 - 120 - 150 80 - 100 - 120 | 1.0 - 1.5 - 2.0 | 0.1 - 0.15 - 0.25 0.1 - 0.15 - 0.2 | | | | |
| | Roughing | Continuous Interruption | Standard | | CA6515 CA6525 | 0.8 1.2 | 80 - 100 - 120 60 - 80 - 100 | 1.0 - 2.0 - 3.0 | 0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4 | | | | |
| | K | Gray Cast Iron | HB ≤ 250 | | High Speed Machining | Continuous Interruption | Without Chipbreaker | KBN475 KBN900 KBN900 | 0.8 1.2 1.2 | 400 - 800 - 1200 500 - 900 - 1200 500 - 700 - 900 | 0.05 - 0.2 - 0.5 | 0.1 - 0.2 - 0.3 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2 | |
| | | | | Finishing (Gloss Oriented) | Continuous Interruption | Standard | PV7005 PV720 | 0.8 0.8 | 300 - 350 - 400 150 - 200 - 300 | 0.5 - 1.0 - 1.5 | 0.1 - 0.2 - 0.3 0.08 - 0.15 - 0.2 | | |
| Finishing (Ceramic) | | | | Continuous Interruption | Without Chipbreaker | KA30 PT600M | 1.2 0.8 | 300 - 500 - 700 300 - 450 - 600 | 0.3 - 0.5 - 1.0 | 0.1 - 0.2 - 0.3 0.1 - 0.2 - 0.3 | | | |
| Medium (Ceramic) | | | | Continuous Interruption | Without Chipbreaker | CS7050 KS6050 | 1.2 1.2 | 300 - 450 - 550 250 - 400 - 500 | 1.0 - 2.0 - 3.0 | 0.15 - 0.25 - 0.35 0.15 - 0.2 - 0.3 | | | |
| Medium | | | | Continuous Interruption | KH | CA310 CA315 | 0.8 1.2 | 200 - 250 - 300 150 - 200 - 250 | 0.5 - 2.0 - 2.5 | 0.1 - 0.2 - 0.3 0.08 - 0.15 - 0.2 | | | |
| Roughing | | | | Continuous Interruption | KH | CA310 CA315 | 0.8 1.2 | 200 - 250 - 300 150 - 200 - 250 | 1.0 - 2.0 - 4.0 | 0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4 | | | |
| Nodular Cast Iron | | HB ≤ 270 | High Speed Machining | Continuous Interruption | Without Chipbreaker | KBN60M PT600M | 0.4 0.8 | 200 - 300 - 400 200 - 250 - 350 | 0.1 - 0.3 - 0.5 | 0.1 - 0.15 - 0.2 0.1 - 0.2 - 0.4 | | | |
| | | | Finishing (Gloss Oriented) | Continuous Interruption | Standard | PV7005 PV720 | 0.8 0.8 | 150 - 250 - 300 120 - 200 - 250 | 0.5 - 1.0 - 1.5 | 0.1 - 0.2 - 0.3 0.08 - 0.15 - 0.2 | | | |
| | | | Medium | Continuous Interruption | KG | CA310 CA315 | 0.8 1.2 | 150 - 200 - 250 120 - 180 - 220 | 0.5 - 2.0 - 2.5 | 0.1 - 0.2 - 0.3 0.08 - 0.15 - 0.2 | | | |
| | | | Roughing | Continuous Interruption | KG KH | CA310 CA315 CA320 | 0.8 1.2 1.2 | 150 - 200 - 250 120 - 180 - 220 | 1.0 - 2.0 - 4.0 | 0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4 | | | |
| | | | N | Non-ferrous Metals Copper Alloy Aluminum Aluminum Alloys | HB ≤ 100 | High Speed Machining (Rainbow Surface Gross) | Continuous Interruption | Without Chipbreaker | KPD001 | 0.4 | 300 - 800 - 2000 | 0.05 - 0.5 - 1.0 | 0.05 - 0.1 - 0.15 |
| | | | | | | Finishing (Long Tool Life) | Continuous Interruption | A3 | PDL025 | 0.4 0.8 | 400 - 500 - 700 400 - 500 - 700 | 0.5 - 1.0 - 2.0 | 0.1 - 0.2 - 0.25 0.1 - 0.2 - 0.25 |
| Finishing | Continuous Interruption | A3 | | | | KW10 | 0.8 0.8 | 400 - 500 - 700 400 - 500 - 700 | 0.5 - 1.0 - 2.0 | 0.1 - 0.2 - 0.25 0.1 - 0.2 - 0.25 | | | |
| Medium | Continuous Interruption | AH | | | | KW10 | 0.8 0.8 | 200 - 300 - 500 200 - 300 - 500 | 1.0 - 2.0 - 3.5 | 0.1 - 0.3 - 0.4 0.1 - 0.3 - 0.4 | | | |
| Titanium Alloys | HB ≤ 400 | Precision Finishing (Rainbow Surface Gross) | | Continuous Interruption | Without Chipbreaker | KPD001 | 0.4 0.4 | 100 - 150 - 180 70 - 120 - 150 | 0.05 - 0.3 - 0.5 | 0.03 - 0.1 - 0.15 0.03 - 0.07 - 0.1 | | | |
| | | Finishing | | Continuous Interruption | MQ | SW05 | 0.4 0.4 | 40 - 70 - 100 40 - 70 - 100 | 0.2 - 0.5 - 1.0 | 0.05 - 0.2 - 0.3 0.05 - 0.15 - 0.2 | | | |
| | | Medium | | Continuous Interruption | MU | SW05 | 0.8 0.8 | 40 - 60 - 80 40 - 60 - 80 | 0.5 - 1.0 - 3.0 | 0.1 - 0.25 - 0.35 0.1 - 0.2 - 0.3 | | | |
| | | Heat-resistant Alloys | | HB ≤ 350 | Finishing | Continuous Interruption | MQ | PR005S PR015S | 0.4 0.8 | 30 - 55 - 90 25 - 45 - 70 | 0.2 - 0.3 - 1.0 | 0.05 - 0.08 - 0.15 0.05 - 0.1 - 0.2 | |
| Medium | Continuous Interruption | | | | SQ | PR005S PR015S | 0.8 0.8 | 30 - 55 - 90 25 - 45 - 70 | 0.3 - 0.5 - 1.5 | 0.1 - 0.17 - 0.35 0.1 - 0.17 - 0.35 | | | |
| Roughing | Continuous Interruption | | | | SX | PR005S PR015S | - | 30 - 55 - 90 25 - 45 - 70 | 0.5 - 2.0 - 4.0 | 0.15 - 0.3 - 0.45 0.15 - 0.3 - 0.45 | | | |
| H | Hardened Steel Hard Materials | | | | 40-50 HRC | Finishing | Continuous Interruption | PQ Standard | CA515 | 0.8 0.8 | 60 - 100 - 120 30 - 50 - 70 | 0.1 - 0.3 - 0.5 | 0.05 - 0.08 - 0.1 0.05 - 0.08 - 0.1 |
| | | Finishing | | Continuous Interruption | | Without Chipbreaker | PT600M | 0.8 1.2 | 60 - 80 - 100 30 - 40 - 60 | 0.2 - 0.5 - 0.7 | 0.05 - 0.1 - 0.15 0.05 - 0.1 - 0.15 | | |
| | | 50-68 HRC | Finishing | Continuous Interruption | ME MET | KBN05M | 0.8 1.2 | 100 - 150 - 200 90 - 140 - 180 | 0.05 - 0.3 - 0.5 | 0.05 - 0.08 - 0.1 0.05 - 0.08 - 0.1 | | | |
| | | | Medium | Continuous Interruption | Without Chipbreaker | KBN900 | 1.2 | 80 - 100 - 120 | 0.5 - 1.0 - 2.0 | 0.05 - 0.1 - 0.2 | | | |
| | | Radius | | | | | | 70 - 90 - 110 | 0.3 - 0.7 - 1.0 | 0.05 - 0.1 - 0.15 | | | |

D External