

External

D1~D40

Turning Toolholders Identification System **D3**

Product Lineup **D4~D5**

Clamping system **D6~D7**

Toolholders for General Purpose **D8~D21**

| | | |
|--------------|--------------------------|------------|
| CN □□ Insert | DCLN / PCLN | D8 |
| DN □□ Insert | DDJN / DDHN | D10 |
| | PDJN / PDHN | D11 |
| SN □□ Insert | DSBN / PSBN / PSKN | D12 |
| | PSSN / PSDN | D13 |
| TN □□ Insert | DTGN / PTGN / PTFN | D14 |
| | WTJN-N / WTKN-N / WTEN-N | D15 |
| VN □□ Insert | DVLN / DVPN / DVVN | D16 |
| | MVLN / MVVN | D17 |
| | PVLN / PVPN / PVVN | D18 |
| RC □□ Insert | PRGC / PRXC | D19 |
| RN □□ Insert | PRGN | D19 |
| WN □□ Insert | DWLN / PWLN / WWLN | |

Toolholders for Ceramic Tools **D22~D31**

| | | |
|-----------------|-----------------------------|------------|
| CN □□ Insert | CCLN | |
| DN □□ Insert | CDJN | D23 |
| EN □□ Insert | CELN | D23 |
| SN □□ Insert | CSRN / CS-N / CSKN / CSYN | |
| | CSSN / CSDN | D25 |
| TN □□ Insert | CTJN / CTUN | D26 |
| RN □□ Insert | CRSN / CRDN | D27 |
| CN □□ GX Insert | CCLN-GX | |
| DN □□ GX Insert | CDHN-GX / CDJN-GX | |
| SN □□ CX Insert | CSRN-GX / CSDN-GX / CSSN-GX | |
| | CS-N-GX / CSKN-GX / CSYN-GX | D31 |

Toolholders for Solid CBN Tools **D32~D36**

| | | |
|-------------|--------------------------|------------|
| CNMN Insert | CCRN-A / CCLN-A | D32 |
| RNMN Insert | CRSN-A / CRDN-A | |
| SNMN Insert | CSRN-A / CSKN-A / CSYN-A | |
| | CSSN-A / CSDN-A | D35 |
| TNMN Insert | CTJN-A / CTUN-A | |

Toolholders for Bearing Machining **D37~D38**

| | | |
|-------------|-------------------|------------|
| RCMT Insert | PRGC-BE / PRGC-BF | D37 |
| SNMF Insert | CBSN | |

Technical Information **D39~D40**

Recommended Cutting Conditions

Parts Compatibility of Lever Lock Toolholders **R42**



High rigidity holder

Double Clamp Series

Securely clamps the insert with a single action

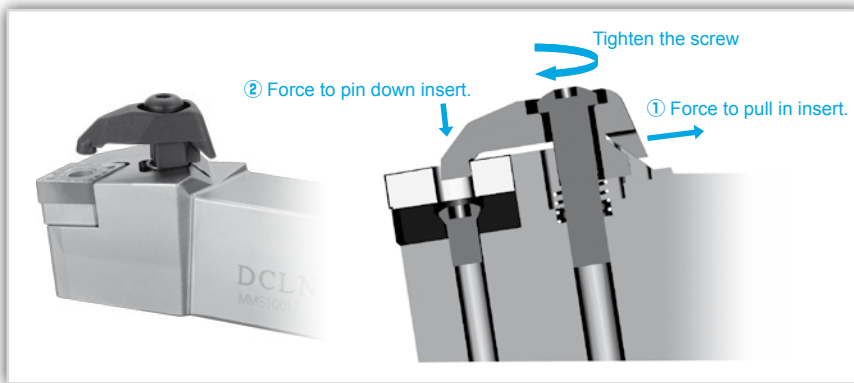
D



External

Improved Clamping Rigidity

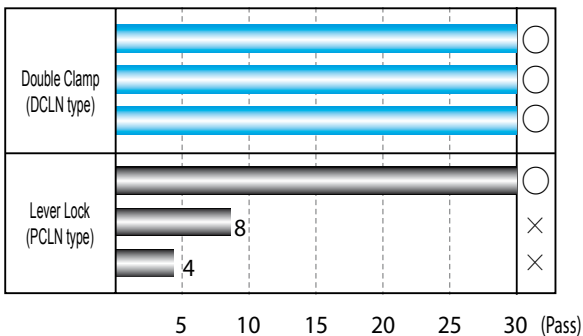
Firmly clamp the insert in two directions with one action.



Achieving long Insert Life

By strongly clamping the insert in two directions, good contact between the shim and insert can be maintained, even with high feed rates.

Along with improving the accuracy of the insert position, long insert life can be achieved.



<Cutting Conditions>
34CrMo4(SCM435), Vc=150m/min, ap=1mm, f=0.4mm/rev
CNMG120408PS, 30 Pass Interrupted Cutting

Comparison of shim and insert contact

Coating material is applied to the shim side of the insert, which is installed on the tool holder. Compare the shim contact surface after tightening.

| PS Chipbreaker | Shim contact surface of double clamp | Shim contact surface of lever lock |
|----------------|---|---|
| | | |
| | Cutting edge side | Cutting edge side |
| | The shape of insert chipbreaker is transferred. There is a high level of contact. | Only a part of the shape of insert chipbreaker is transferred. There is a low level of contact. |

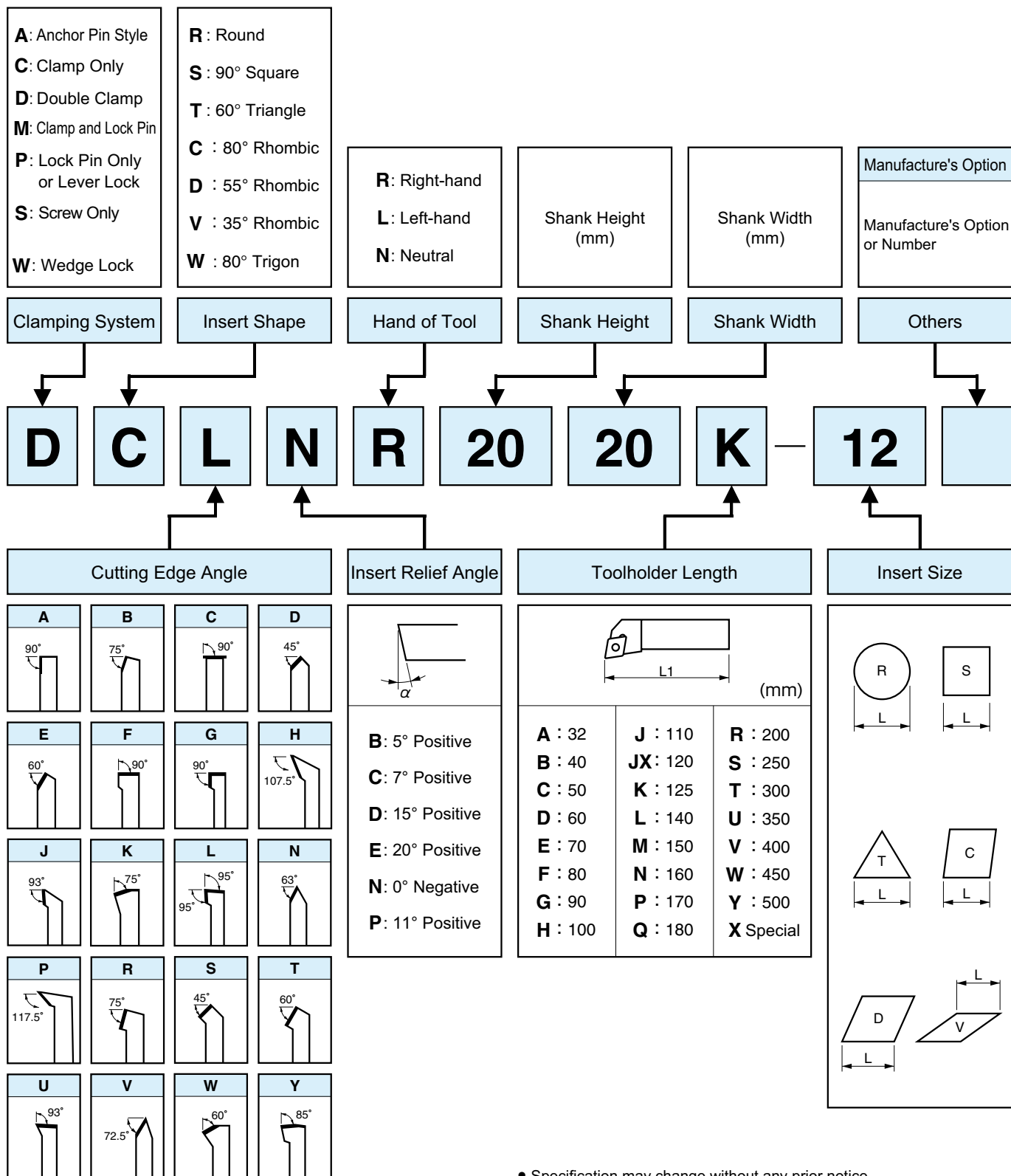
Convenient marking design



| Screw | Tightening Torque (N·m) |
|-------|-------------------------|
| CS-2D | 1.7 |
| CS-3D | 3.9 |
| CS-5D | 3.0 |

The part description can be confirmed for convenient ordering. The screw tightening torque is also indicated.

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.

Product Lineup

Toolholders for General Purpose

| Applicable Insert Shape | CN.. | WN.. | TN.. | DN.. | RC.. | | RN.. | VN.. | |
|-------------------------|-------------------|------|--------|-----------------------------|--------|---------|------|--|--|
| | | | | | | | | | |
| Application | External / Facing | | | External / Facing / Copying | | | | External / Facing / Copying / Undercutting | |
| Cutting Edge Angle | 95° | | | 105° | 107.5° | Special | | 117.5° | |
| Lever Lock (Pin Lock) | | | | | | | | | |
| | PCLN | PWLN | | PDHN | PRGC | PRXC | PRGN | PVPN (Pin Lock) | |
| Ref. Page | D8 | D20 | | D11 | D19 | D19 | D19 | D18 | |
| Wedge Lock Multi Lock | | | | | | | | | |
| | | WWLN | WTKN-N | | | | | | |
| Ref. Page | | D20 | D15 | | | | | | |
| Double Clamp | | | | | | | | | |
| | DCLN | DWLN | | DDHN | | | | DVPN | |
| Ref. Page | D8 | D20 | | D10 | | | | D16 | |

Toolholders for Ceramic Tools

| Application | External / Facing | | | External / Copying | | | External / Chamfering | External / Facing / Chamfering | |
|-----------------------|-------------------|-------|---------|--------------------|---------|---------|-----------------------|--------------------------------|--|
| Cutting Edge Angle | 95° | 97.5° | Special | 93° | 107.5° | Special | 45° | 45° | |
| Top Clamp | | | | | | | | | |
| | CCLN | CELN | CRSN | CDJN | | CRDN | CSDN | CSSN | |
| Ref. Page | D22 | D23 | D27 | D23 | | D27 | D25 | D24 | |
| With dimple Top Clamp | | | | | | | | | |
| | CCLN-GX | | | CDJN-GX | CDHN-GX | | CSDN-GX | CSSN-GX | |
| Ref. Page | D28 | | | D29 | D29 | | D30 | D30 | |

Toolholders for Solid CBN Tools

| Application | External / Facing | | External / Copying | External / Chamfering | External / Facing / Chamfering | External | | | |
|--------------------|-------------------|---------|--------------------|-----------------------|--------------------------------|----------|--------|--------|--|
| Cutting Edge Angle | 95° | Special | Special | 45° | 45° | 75° | | 93° | |
| Top Clamp | | | | | | | | | |
| | CCLN-A | CRSN-A | CRDN-A | CSDN-A | CSSN-A | CCRN-A | CSRN-A | CTJN-A | |
| Ref. Page | D32 | D33 | D33 | D35 | D35 | D32 | D34 | D36 | |

| | | | | | | | | | | |
|--|--------------------|--------|--------------------|-----------------------|--------|--------------------------------|----------|------|--------|------|
| | VN.. | DN.. | VN.. | SN.. | TN.. | SN.. | SN.. | TN.. | SN.. | TN.. |
| | | | | | | | | | | |
| | External / Copying | | | External / Chamfering | | External / Facing / Chamfering | External | | Facing | |
| | 72.5° | 93° | 95° | 45° | 60° | 45° | 75° | 91° | 15° | -1° |
| | | | | | | | | | | |
| | PVVN (Pin Lock) | PDJN | PVLN (Pin Lock) | PSDN | | PSSN | PSBN | PTGN | PSKN | PTFN |
| | D18 | D11 | D18 | D13 | | D13 | D12 | D14 | D12 | D14 |
| | | | | | | | | | | |
| | MVVN | WTJN-N | MVLN | | WTEN-N | | | | | |
| | D17 | D15 | D17 | | D15 | | | | | |
| | | | | | | | | | | |
| | DVVN | DDJN | DVLN | | | | DSBN | DTGN | | |
| | D16 | D10 | D16 | | | | D12 | D14 | | |



| External | | | Facing | | |
|----------|---------|------|---------|---------|------|
| 75° | 85° | 93° | 5° | 15° | -3° |
| | | | | | |
| CSRN | CS-N | CTJN | CSYN | CSKN | CTUN |
| D24 | D24 | D26 | D24 | D24 | D26 |
| | | | | | |
| CSRN-GX | CS-N-GX | | CSYN-GX | CSKN-GX | |
| D30 | D31 | | D31 | D31 | |

Toolholders for Bearing Machining

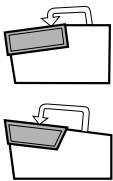
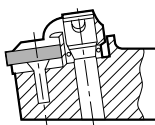
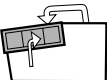
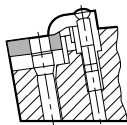
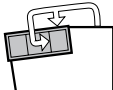
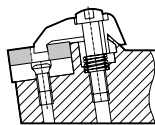
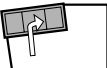
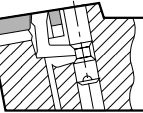
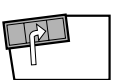
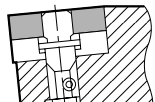
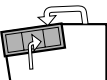
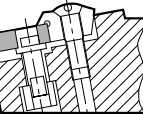
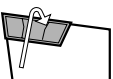
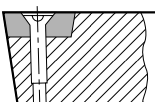
| Facing | | |
|--------|--------|--------|
| 5° | 15° | -3° |
| | | |
| CSYN-A | CSKN-A | CTUN-A |
| D34 | D34 | D36 |

| Application | External | Facing |
|--------------------|----------|---------|
| Cutting Edge Angle | Special | Special |
| Lever Lock | | |
| Ref. Page | D37 | D37 |

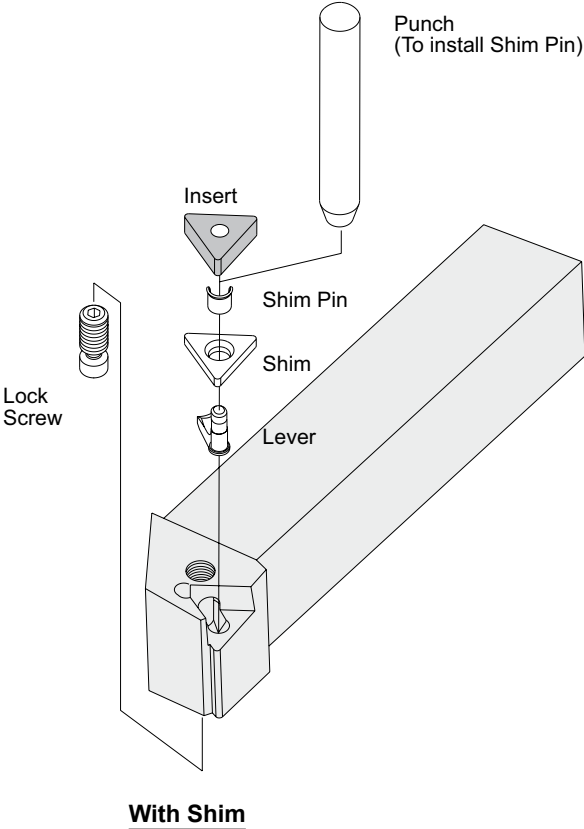
| Application | R Chamfering |
|--------------------|--------------|
| Cutting Edge Angle | Special |
| Top Clamp | |
| Ref. Page | D38 |

Clamping system

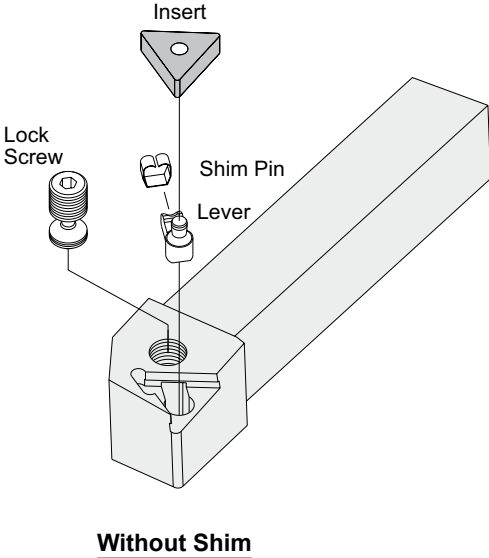
Clamping system

| Series | Design | | Features | Series | Design | | Features |
|------------------|--|--|---|------------------------|--|---|--|
| Clamp On (C) |  |  | <ul style="list-style-type: none">• Rigid Clamping• Negative Insert ... Medium to Heavy Cutting• (Mainly for Ceramic Insert)• Positive Insert : Low Cutting Resistance | Clamp and Lock Pin (M) |  |  | <ul style="list-style-type: none">• Combination of Top Clamp and Pin Lock• Rigid Clamping• Heavy Cutting |
| 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">• Firm Clamping• High precision• Easy Insert Replacement• General Use |
| Pin Lock (P) |  |  | <ul style="list-style-type: none">• Firm Clamping• High precision• Easy Insert Replacement | Wedge Lock (W) |  |  | <ul style="list-style-type: none">• Rigid Clamping• Heavy Cutting |
| Screw Clamp (S) |  |  | <ul style="list-style-type: none">• Simple Mechanism• Fewer Parts• Finishing to Medium Cutting | | | | |

● Lever Lock

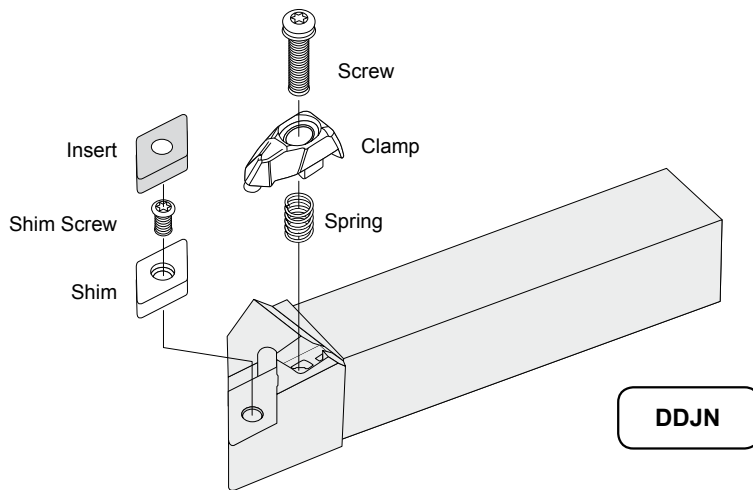


PCLN
PWLN
PTGN / PTFN / PTLN
PDJN / PDHN
PSBN / PSKN / PSSN / PSDN
PRGN
PRGC / PRXC



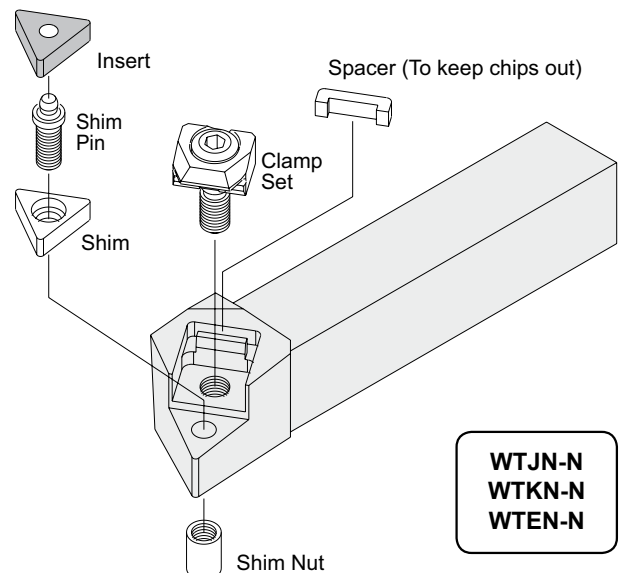
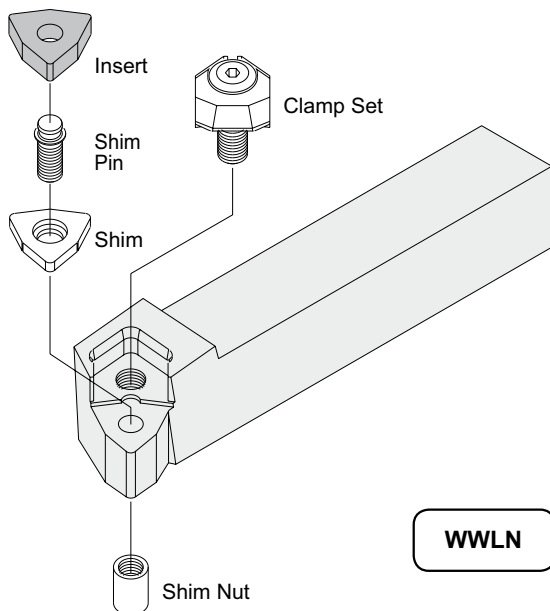
PTGN-11 / PTFN-11

● Double Clamp

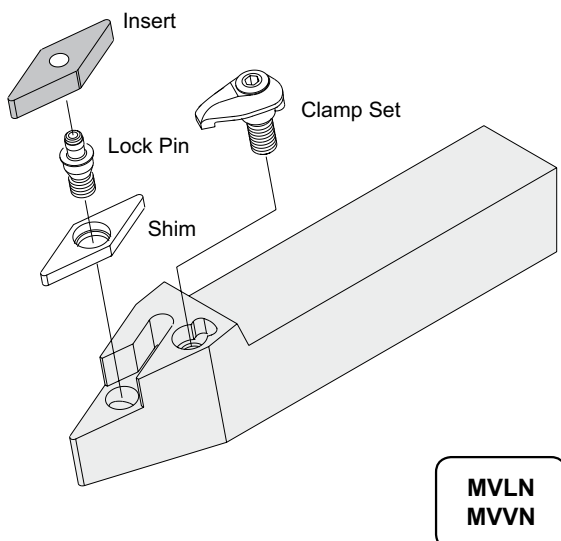


DCLN
DDJN / DDHN
DSBN
DTGN
DVLN / DVPN / DVVN
DWLN

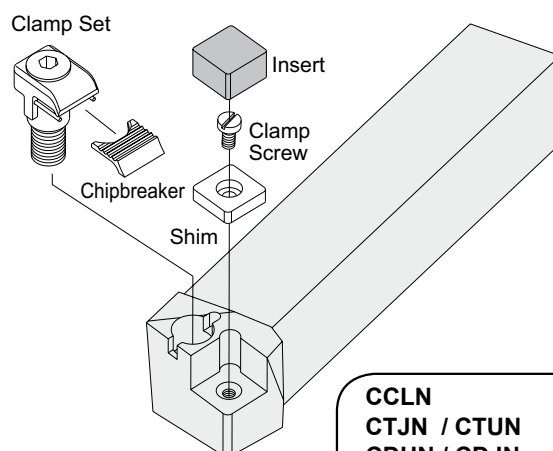
● Wedge Lock



● Multi Lock



● 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.

D



External

DCLN (External / Facing)

| | |
|--|--|
| | |
|--|--|

PCLN (External / Facing)

• Right-hand shown

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

● Applicable Inserts

| Toolholder | 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.. |

Toolholder Dimensions

| | | | | | | | | | | | | | | | | |
|-------------------------------|--|------|---|----------------|----|-----|----|----|----|----------------------|-------------|------------|--------|----------|-------|--------|
| Description | | Std. | | Dimension (mm) | | | | | | Standard Corner-R(R) | Spare Parts | | | | | |
| | | R | L | H1=h | B | L1 | L2 | F1 | F2 | | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench |
| PCLN ^{R/L} 1616H -09 | | ● | ● | 16 | 16 | 100 | | 20 | 14 | 0.8 | LL-1N | LS-1N | LC-32N | LSP-1 | PC-1 | FH-2.5 |
| 2020K -09 | | ● | ● | 20 | 20 | 125 | 22 | 25 | 15 | | | | | | | |
| 2525M -09 | | ● | ● | 25 | 25 | 150 | | 32 | 18 | | | | | | | |
| 1616H -12 | | ● | ● | 16 | 16 | 100 | | 20 | 17 | | | | | | | |
| 2020H -12* | | ● | ● | 20 | 20 | 100 | | 25 | | | | | | | | |
| 2020K -12 | | ● | ● | 20 | 20 | 125 | 27 | 25 | 20 | 0.8 | LL-2N | LS-2N | LC-42N | LSP-2 | PC-2 | LW-3 |
| 2525M -12 | | ● | ● | 25 | 25 | 150 | | 32 | | | | | | | | |
| 3225P -12 | | ● | ● | 32 | 25 | 170 | | 32 | | | | | | | | |
| 2525M -16 | | ● | ● | 25 | 25 | 150 | 32 | 32 | 25 | 0.8 | LL-5N | LS-4N | LC-53N | LSP-3 | - | LW-3 |
| 3232P -16 | | ● | ● | 32 | 32 | 170 | | 40 | 27 | | | | | | | |
| 3232P -19 | | ● | ● | 32 | 32 | 170 | 40 | 40 | 27 | 1.6 | LL-6 | LS-5 | LC-63 | LSP-4 | - | LW-4 |
| 4040R -19 | | ● | ● | 40 | 40 | 200 | | 50 | | | | | | | | |

* mark indicates short shank type.

● Applicable Inserts

| Application | Finishing | Finishing-Medium | Finishing | Finishing-Medium | Finishing-Medium | Finishing-Medium | Finishing-Medium | Medium-Roughing | Medium-Roughing |
|-------------|--|-------------------------|--------------------------------|----------------------------------|----------------------|-----------------------|--|-------------------------------|-------------------------------|
| Insert | WP (Wiper) | WQ (Wiper) | GP | HQ | CQ | CJ | TK | GS | PS |
| Size | 12 | 12 | 09,12 | 09,12 | 12,16 | 12,16 | 12 | 09,12 | 12,16 |
| Page | B14 | B14 | B14 | B14 | B14 | B14 | B14 | B15 | B15 |
| Application | Medium-Roughing | Medium-Roughing | Medium-Roughing | Medium-Roughing | Roughing | Roughing | One side / Roughing-High Feed Rate | Finishing | Medium |
| Insert | HS | CS | PT | GT | Standard | PH | PX | R/S | R/L |
| Size | 12,16,19 | 12 | 12,16 | 12,19 | 12,16,19 | 12,16,19 | 12,16,19 | 09 | 09,12 |
| Page | B15 | B15 | B15 | B15 | B16 | B16 | B16 | B18 | B18 |
| Application | Medium-Roughing / Low Cutting Resistance type | Soft Steel Finishing | Soft Steel / Medium cutting | Soft Steel / Roughing | Stainless Steel | Stainless Finishing | Stainless Medium- Roughing | Stainless Medium- Roughing | Stainless Medium- Roughing |
| Insert | L-25R | XP | XC | XS | GU | MQ | MS | MR | TK |
| Size | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12,16,19 | 12 |
| Page | B18 | B16 | B16 | B16 | B17 | B17 | B17 | B17 | B17 |
| Application | Cast Iron | Cast Iron | Cast Iron | Cast Iron Without Chipbreaker | Cast Iron Ceramic | Non-ferrous Metals | Non-ferrous Metals | Non-ferrous Metals | Hard Materials |
| Insert | C | ZS | GC | | | AH | A3 | PCD | CBN |
| Size | 12,16 | 12 | 12 | 12 | 12,16 | 12 | 12 | 12 | 12 |

For recommended cutting conditions, see page ● D39~D40

■ Short shank toolholder for **small lathe and turning mill**

Length of 100mm for 20mm square shank

- Optimal toolholder length for small lathe, conventionally for which shank was cut off
- Available also as toolholder for quick change system of turning mill

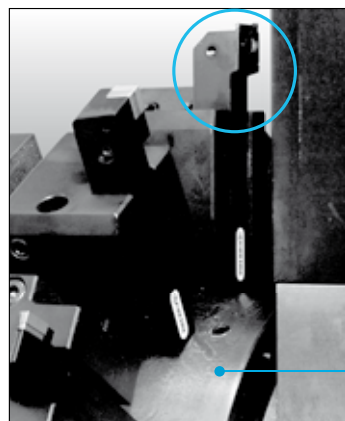


Short shank **PCLNR2020H-12**



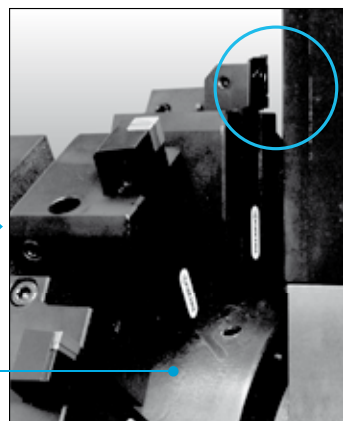
Conventional toolholder **PCLNR2020K-12**

Conventional Toolholder



Large overhang length due to contact of shank with toolpost drum.

Short Shank



May be set to optional overhang length since there is no interference with toolpost drum.

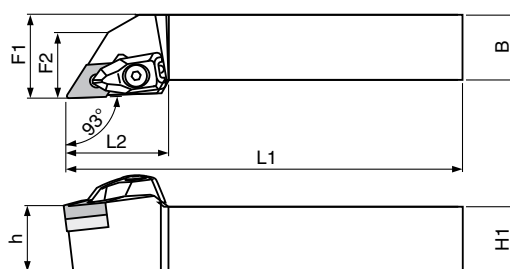
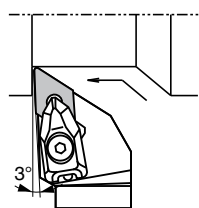
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External

Toolholders for General Purpose [DN ☐ ☐ Insert]

DDJN (External / Copying)



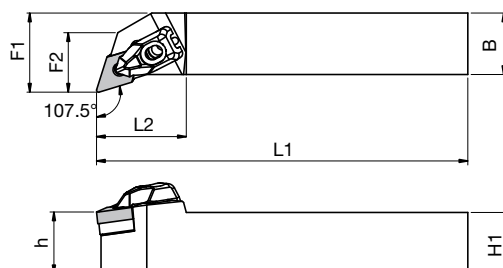
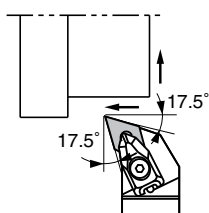
• Right-hand shown

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

● Applicable Inserts

| Toolholder | Description | |
|-------------------------------|-------------|-----------------|
| DDJN ^{R/L}-1504 | DN ○ A | 1504.. (1506..) |
| | DN ○ G | |
| DDJN ^{R/L}-1506 | DN ○ M | 1506.. (1504..) |

DDHN (External / Face Grooving / Copying)










• Right-hand shown

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

● Applicable Inserts

| Toolholder | Description | |
|-------------------------------|-------------|-----------------|
| DDHN ^{R/L}-1504 | DN ○ A | 1504.. (1506..) |
| | DN ○ G | |
| DDHN ^{R/L}-1506 | DN ○ M | 1506.. (1504..) |

| Description | | Std. | | Dimension (mm) | | | | | | Standard Corner-R(°) | Spare Parts | | | | | | | | | | | | | | |
|---------------------|-------------|------|---|----------------|----|-----|----|----|----|----------------------|---|---|---|---|---|--|---|--|--|------------------|--|------------------|--|--|--|
| | | R | L | H1=h | B | L1 | L2 | F1 | F2 | | Clamp | Screw | Spring | Shim | Shim Screw | Wrench | Wrench (sold separately) | | | | | | | | |
| | | | | | | | | | | |  |  |  |  |  |  For Clamp |  For Shim | | | | | | | | |
| DDJN ^{R/L} | 2020K -1504 | ● | ● | 20 | 20 | 125 | 39 | 25 | - | 0.8 | CP-3D | CS-3D | SP-3D | DD-44 (DD-43) | SB-4085TR | LW-3 | FT-15 | | | | | | | | |
| | 2525M -1504 | ● | ● | 25 | 25 | 150 | | 32 | 25 | | | | | | | | | | | | | | | | |
| DDJN ^{R/L} | 2020K -1506 | ● | ● | 20 | 20 | 125 | 39 | 25 | - | | | | | | | | | | | DD-43 (DD-44) | | | | | |
| | 2525M -1506 | ● | ● | 25 | 25 | 150 | | 32 | 25 | | | | | | | | | | | | | | | | |
| DDHN ^{R/L} | 2020K -1504 | ● | ● | 20 | 20 | 125 | 37 | 25 | 22 | | | | | | | | | | | DD-44 (DD-43) | | | | | |
| | 2525M -1504 | ● | ● | 25 | 25 | 150 | | 32 | | | | | | | | | | | | | | | | | |
| DDHN ^{R/L} | 2020K -1506 | ● | ● | 20 | 20 | 125 | | 37 | | | | | | 25 | | | | | | | | DD-43 (DD-44) | | | |
| | 2525M -1506 | ● | ● | 25 | 25 | 150 | | | | | | | | 32 | | | | | | | | | | | |

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

PDJN (External / Copying)

● Right-hand shown

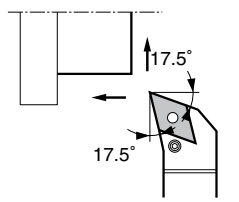
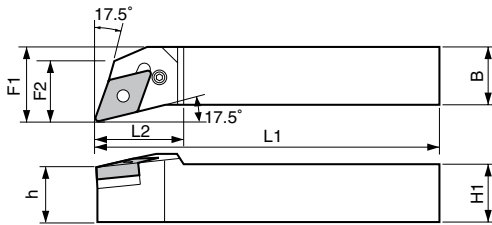
Side Rake Angle: -6°
Angle of Inclination: -7°

● Applicable Inserts







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

● Right-hand shown

PDHN (External / Face Grooving / Copying)

| | | |
|---|--|---|
|  |  | Side Rake Angle: -6° Angle of Inclination: -6° |
| ● Right-hand shown | ● Applicable Inserts | |
| | Toolholder | Description |
| | PDHN ^{R/L} ...15 | DN ○ A 1504.. DN ○ G 1506.. DN ○ M (1506..) |

● Right-hand shown

| Description | | Std. | | Dimension (mm) | | | | | Standard Corner-R(r_c) | Spare Parts | | | | | | |
|---------------------|------------|------|---|----------------|----|-----|----|----|----------------------------|-------------|---|---|---|---|---|---|
| | | | | | | | | | | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench | |
| | | R | L | H1=h | B | L1 | L2 | F1 | | F2 |  |  |  |  |  |  |
| PDJN ^{R/L} | 1616H -11 | ● | ● | 16 | 16 | 100 | | 20 | - | 0.4 | LL-1DN | LS-1N | LD-32N | LSP-1 | PC-1 | FH-2.5 |
| | 2020K -11 | ● | ● | 20 | 20 | 125 | 28 | 25 | - | | | | | | | |
| | 2525M -11 | ● | ● | 25 | 25 | 150 | | 32 | 27 | | | | | | | |
| | 2020H -15* | ● | | 20 | 20 | 100 | | 25 | - | | | | | | | |
| | 2020K -15 | ● | ● | 20 | 20 | 125 | 36 | 25 | - | 0.8 | LL-3N | LS-2N | LD-42 | LSP-2 | PC-2 | LW-3 |
| | 2525M -15 | ● | ● | 25 | 25 | 150 | | 32 | 25 | | | | *LD-42-20 | | | |
| | 3225P -15 | ● | ● | 32 | 25 | 170 | | 32 | 25 | | | | | | | |
| | 2525M -15U | ● | ● | 25 | 25 | 150 | 36 | 32 | 25 | 0.8 | LL-4 | LS-3 | LD-42 | LSP-2 | PC-2 | LW-3 |
| | 3232P -15U | ● | ● | 32 | 32 | 170 | | 40 | 28 | | | | *LD-42-20 (LD-43) (*LD-43-20) | | | |
| PDHN ^{R/L} | 2020K -15 | ● | ● | 20 | 20 | 125 | 36 | 25 | 22 | 0.8 | LL-4 | LS-3 | LD-43 | LSP-2 | PC-2 | LW-3 |
| | 2525M -15 | ● | ● | 25 | 25 | 150 | | 32 | 24 | | | | *LD-43-20 (LD-42) (*LD-42-20) | | | |

* mark indicates short shank type.

• Shim: PDJN^{R/L}-15U...LD-42 is attached to PDJNR / L-15U. When using DN □□ 1504 type insert, prepare LD-43 separately.

PDHN...LD-43 is attached to PDHN. When using DN □□ 1506 type Insert, prepare LD-42 separately.

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

● Applicable Inserts

| Application | Finishing | Finishing-Medium | Finishing-Medium | Finishing-Medium | Finishing-Medium | Medium-Roughing | Medium-Roughing | Medium-Roughing | Roughing | Roughing | Roughing |
|-------------|------------------------------------|------------------------------|------------------|----------------------|-----------------------------|-----------------------|--------------------|---------------------|------------------------------|------------------------------|-----------|
| Insert | GP | HQ | CQ | CJ | TK | GS | PS | PT | GT | Standard | PH |
| Size | 1104,1504,1506 | 1104,1504,1506 | 1504,1506 | 1504,1506 | 1506 | 1104,1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 |
| Page | B20 | B20 | B20 | B20 | B20 | B21 | B21 | B21 | B21 | B21 | B21 |
| Application | One side / Roughing-High Feed Rate | Finishing | Medium | Soft Steel Finishing | Soft Steel / Medium cutting | Soft Steel / Roughing | Stainless Steel | Stainless Finishing | Stainless Medium to Roughing | Stainless Medium to Roughing | |
| Insert | PX | ^{R/L} -S | ^{R/L} | XP (-T) | XQ | XS | GU | MQ | MS | MU | |
| Size | 1504,1506 | 1104 | 1104,1504 | 1504 | 1504 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | |
| Page | B21 | B23 | B23 | B22 | B22 | B22 | B22 | B22 | B22 | B22 | |
| Application | Stainless Steel | Stainless Medium to Roughing | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Non-ferrous Metals | Non-ferrous Metals | Non-ferrous Metals | Hard Materials | |
| Insert | ^{R/L} -ST | TK | C | ZS | GC | Ceramic | AH | ^{R/L} -A3 | PCD | CBN | |
| Size | 1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504,1506 | 1504 | 1504 | 1504,1506 | |
| Page | B22 | B22 | B23 | B23 | B23 | B86 | B23 | B23 | C17 | C6 | |

For recommended cutting conditions, see page ● D39~D40

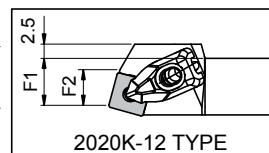
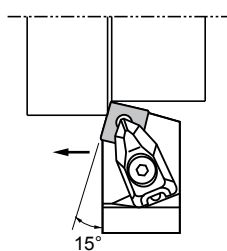
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

D



External

DSBN (External)

















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

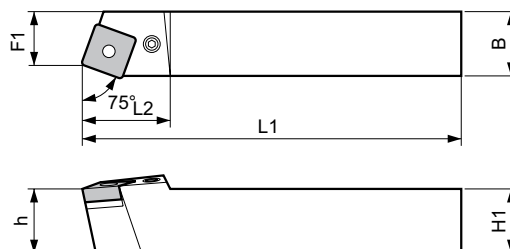
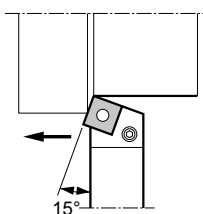
● Applicable Inserts

| Toolholder | Description |
|----------------------------|----------------------|
| DSBN ^{R/L} ...-12 | SN○A SN○G SN○M |
| | 1204.. |

● Right-hand shown

| Description | | Std. | | Dimension (mm) | | | | | | Standard Corner-R(R°) | Series | | | | | | |
|---------------------|-----------|------|---|----------------|----|-----|----|----|----|-----------------------|---|---|--|---|---|---|---|
| | | | | | | | | | | | Clamp | Screw | Spring | Shim | Shim Screw | Wrench | Wrench (sold separately) |
| | | R | L | H1=h | B | L1 | L2 | F1 | F2 | |  |  |  |  |  |  |  |
| DSBN ^{R/L} | 2020K -12 | ● | ● | 20 | 20 | 125 | 34 | 17 | 13 | 0.8 |  |  |  |  |  |  |  |
| | 2525M -12 | ● | ● | 25 | 25 | 150 | | 22 | | | | | | | | | |

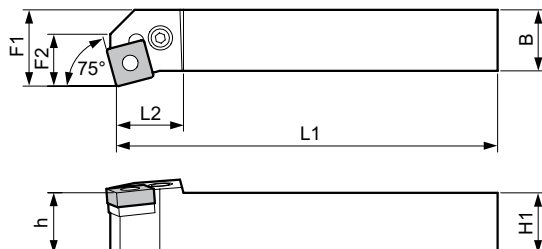
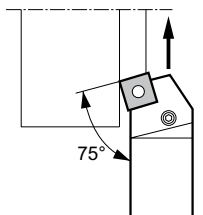
PSBN (External)



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

● Right-hand shown







PSKN (Facing)



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

● Right-hand shown

Toolholder Dimensions

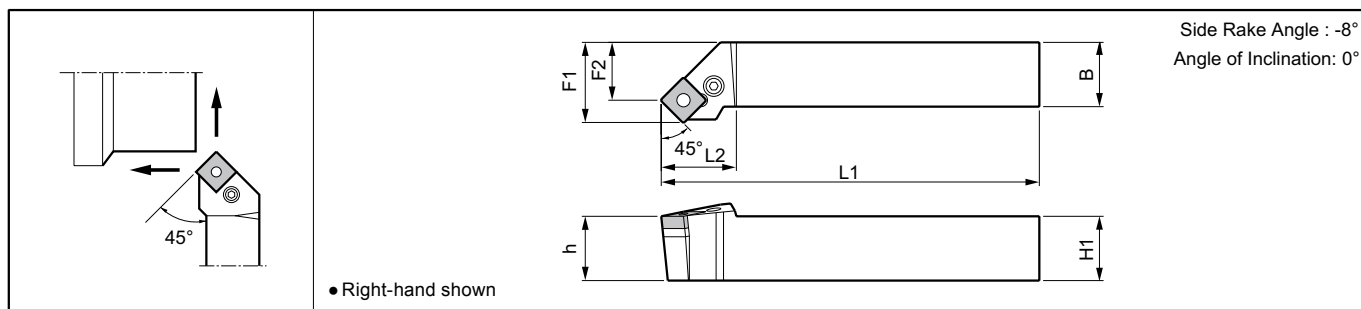
| Description | | Std. | | Dimension (mm) | | | | | Standard Corner-R(°) | Spare Parts | | | | | | |
|---------------------|-----------|------|---|----------------|----|-----|------|----|----------------------|-------------|---|---|---|---|--|---|
| | | | | | | | | | | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench | |
| | | R | L | H1=h | B | L1 | L2 | F1 | | F2 |  |  |  |  |  |  |
| PSBN ^{R/L} | 1616H -09 | ● | ● | 16 | 16 | 100 | 21 | 13 | - | 0.8 | LL-1N | LS-1N | LS-32 | LSP-1 | PC-1 | FH-2.5 |
| | 2020K -12 | ● | ● | 20 | 20 | 125 | 27 | 17 | - | 0.8 | LL-2N | LS-2N | LS-42 | LSP-2 | PC-2 | LW-3 |
| | 2525M -12 | ● | ● | 25 | 25 | 150 | 24 | 22 | - | 0.8 | LL-2N | LS-2N | LS-42 | LSP-2 | PC-2 | LW-3 |
| PSKN ^{R/L} | 1616H -09 | ● | ● | 16 | 16 | 100 | 19 | 20 | 12.7 | 0.8 | LL-1N | LS-1N | LS-32 | LSP-1 | PC-1 | FH-2.5 |
| | 2020K -12 | ● | ● | 20 | 20 | 125 | 22.5 | 25 | 17 | 0.8 | LL-2N | LS-2N | LS-42 | LSP-2 | PC-2 | LW-3 |
| | 2525M -12 | ● | ● | 25 | 25 | 150 | 22.5 | 32 | 19 | 0.8 | LL-2N | LS-2N | LS-42 | LSP-2 | PC-2 | LW-3 |

● PSKN^{R/L}: L-hand Insert for R-hand Toolholder, R-hand Insert for L-hand Toolholder.

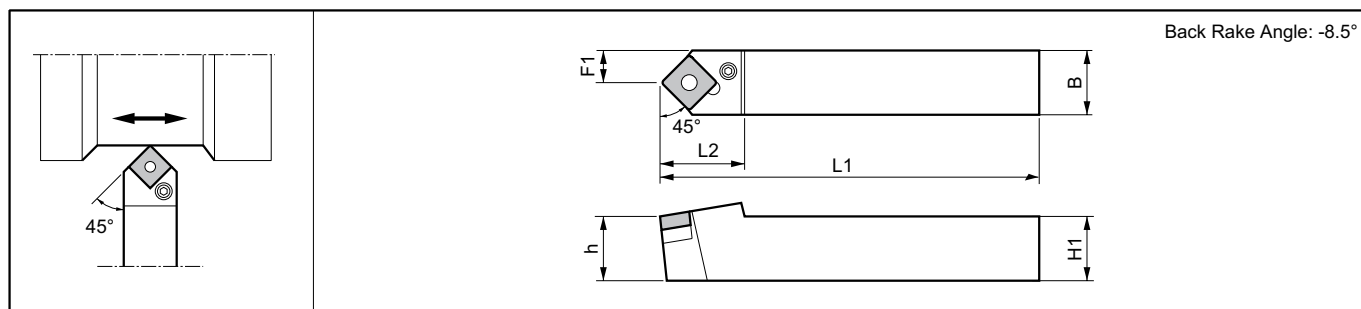
● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)









PSSN (External / Facing / Chamfering)



PSDN (External / Chamfering)



Toolholder Dimensions

| Description | | Std. | | | Dimension (mm) | | | | | Standard Corner-R(᳚) | Spare Parts | | | | | | |
|-------------|----------|------|---|---|----------------|----|-----|----|------|----------------------|-------------|--|--|--|--|--|--|
| | | R | N | L | H1=h | B | L1 | L2 | F1 | | F2 | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench |
| | | | | | | | | | | | |  |  |  |  |  |  |
| PSSN᳚ | 1616H-09 | ● | | ● | 16 | 16 | 100 | 22 | 20 | 13.6 | 0.8 | LL-1N | LS-1N | LS-32 | LSP-1 | PC-1 | FH-2.5 |
| | 2020K-12 | ● | | ● | 20 | 20 | 125 | 29 | 25 | 16.4 | 0.8 | LL-2N | LS-2N | LS-42 | LSP-2 | PC-2 | LW-3 |
| | 2525M-12 | ● | | ● | 25 | 25 | 150 | 32 | 23.4 | | | | | | | | |
| PSDNN | 1616H-09 | | | ● | 16 | 16 | 100 | 21 | 8 | - | 0.8 | LL-1N | LS-1N | LS-32 | LSP-1 | PC-1 | FH-2.5 |
| | 2020K-12 | | | ● | 20 | 20 | 125 | 30 | 10 | - | 0.8 | LL-2N | LS-2N | LS-42 | LSP-2 | PC-2 | LW-3 |
| | 2525M-12 | | | ● | 25 | 25 | 150 | 30 | 12.5 | | | | | | | | |

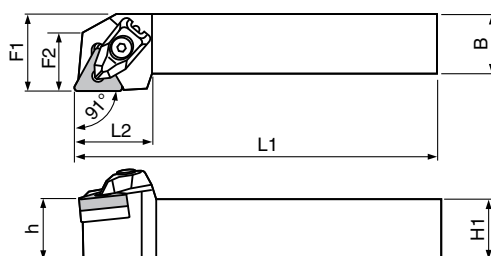
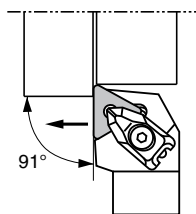
Applicable Inserts

| Toolholder | Description | | Application | Finishing-Medium | Medium-Roughing | Medium-Roughing | Medium-Roughing | Medium-Roughing | Medium-Roughing | Roughing | Roughing | One side / Roughing * High Feed Rate |
|----------------------------------|----------------------|--------|-------------|--------------------|---|----------------------|-----------------------|-----------------------|---------------------|---------------------------|-----------|--------------------------------------|
| PSBN^{R/L}....-09 | SN○G | 0903.. | Insert | HQ | PS | HS | PT | HT | Standard | PH | PX | |
| PSKN^{R/L}....-09 | | | Size | 12 | 12 | 12 | 12 | 12 | 09, 12 | 12 | 12 | |
| PSSN^{R/L}....-09 | | | Page | B26 | B26 | B26 | B26 | B26 | B26 | B26 | B27 | |
| PSDNN....-09 | | | Application | Finishing-Roughing | Medium-Roughing / Low Cutting Resistance type | Soft Steel Finishing | Soft Steel / Roughing | Soft Steel / Roughing | Stainless Finishing | Stainless Medium-Roughing | Cast Iron | |
| PSBN^{R/L}....-12 | SN○A SN○G SN○M | 1204.. | Insert | ^{R/L} □ | ^{R/L} -25R | XP | XQ | XS | MQ | MS | C | |
| PSKN^{R/L}....-12 | | | Size | 09, 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | |
| PSSN^{R/L}....-12 | | | Page | B27 | B27 | B26 | B26 | B26 | B26 | B26 | B27 | |
| PSDNN....-12 | | | Application | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Hard Materials | | | | |
| | | | Insert | ZS | GC | Without Chipbreaker | Ceramic | CBN | | | | |
| | | | Size | 12 | 12 | 12 | 12 | 12 | | | | |
| | | | Page | B28 | B28 | B28 | B88 | C7 | | | | |
| | | | Application | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Hard Materials | | | | |

• PSSN^{R/L}: At External Turning, R-hand Insert for R-hand Toolholder, L-hand Insert for L-hand Toolholder
At Facing, L-hand Insert for R-hand Toolholder, R-hand Insert for L-hand Toolholder

For recommended cutting conditions, see page [D39~D40](#)

DTGN (External)

















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

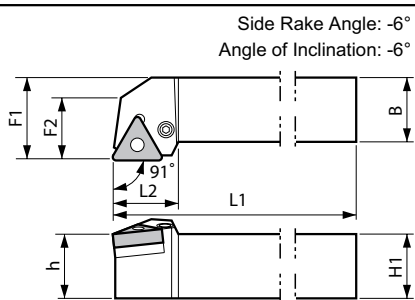
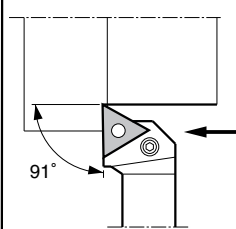
Applicable Inserts

| Toolholder | Description |
|----------------------------|-----------------------------|
| DTGN [®] /L...-16 | TN○A TN○G TN○M 1604.. |

• Right-hand shown

| Description | | Std. | | Dimension (mm) | | | | | | Standard Corner-R(ε) | Spare Parts | | | | | | |
|---------------------|-----------|------|---|----------------|----|-----|----|----|----|----------------------|---|---|---|---|---|---|---|
| | | | | | | | | | | | Clamp | Screw | Spring | Shim | Shim Screw | Wrench | Wrench (sold separately) |
| | | R | L | H1=h | B | L1 | L2 | F1 | F2 | |  |  |  |  |  |  |  |
| DTGN ^{R/L} | 2020K -16 | ● | ● | 20 | 20 | 125 | 25 | 25 | 20 | 0.8 |  |  |  |  |  |  |  |
| | 2525M -16 | ● | ● | 25 | 25 | 150 | | 32 | | | CP-2D | CS-2D | SP-2D | DT-32 | SB-3080TR | LW-2.5 | FT-10 |

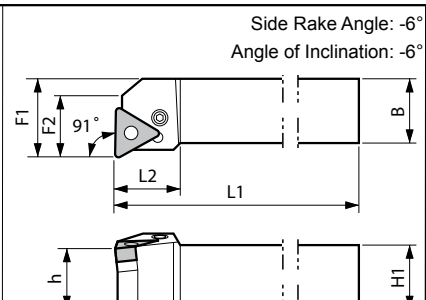
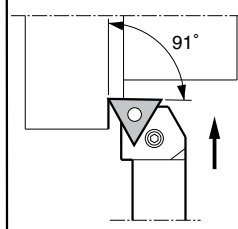
PTGN (External)



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 | | Std. | | Dimension (mm) | | | | | Standard Corner-R(ℓε) | Spare Parts | | | | | | |
|----------------------|------------|------|----|----------------|----|-----|------|----|-----------------------|-------------|---|--|---|---|---|---|
| | | R | L | H1=h | B | L1 | L2 | F1 | | F2 | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench |
| | | | | | | | | | | |  |  |  |  P LSP |  |  FH LW |
| PTGN [®] /L | 1212F -11 | ● | ● | 12 | 12 | 80 | 18 | 16 | 12 | 0.8 | LL-03N | LS-03N | - | P-03 | - | FH-2 |
| | 1616H -11 | ● | ● | 16 | 16 | 100 | | 20 | 14 | 0.8 | LL-03TN | LS-03SN | - | P-03S | - | FH-2.5 |
| | 2020K -11 | ● | ● | 20 | 20 | 125 | 22 | 25 | 20 | | | | | | | |
| | 2525M -11 | ● | ● | 25 | 25 | 150 | | 32 | 22 | | | | | | | |
| | 1616H -16 | ● | ● | 16 | 16 | 100 | | 20 | 17 | | | | | | | |
| | 2020H -16* | ● | ● | 20 | 20 | 100 | 24 | 25 | 20 | 0.8 | LL-1N | LS-1N | LT-32N *LT-32N-20 | LSP-1 | PC-1 | FH-2.5 |
| | 2020K -16 | ● | ● | 20 | 20 | 125 | | 25 | 20 | | | | | | | |
| | 2525M -16 | ● | ● | 25 | 25 | 150 | | 32 | 20 | | | | | | | |
| | 2525M -22 | ● | ● | 25 | 25 | 150 | 29 | 32 | 24 | | | | | | | |
| 3225P -22 | | ● | 32 | 170 | | | | | | | | | | | | |
| PTFN [®] /L | 1212F -11 | ● | ● | 12 | 12 | 80 | 15 | 16 | 12 | 0.8 | LL-03N | LS-03N | - | P-03 | - | FH-2 |
| | 1616H -11 | ● | ● | 16 | 16 | 100 | | 20 | 15 | 0.8 | LL-03TN | LS-03SN | - | P-03S | - | FH-2.5 |
| | 2020K -11 | ● | ● | 20 | 20 | 125 | 22.5 | 25 | 19 | | | | | | | |
| | 2525M -11 | ● | ● | 25 | 25 | 150 | | 32 | 25 | | | | | | | |
| | 2020K -16 | ● | ● | 20 | 20 | 125 | 24 | 25 | 21 | 0.8 | LL-1N | LS-1N | LT-32N *LT-32N-20 | LSP-1 | PC-1 | FH-2.5 |
| | 2525M -16 | ● | ● | 25 | 25 | 150 | | 32 | 22 | | | | | | | |
| | 2525M -22 | ● | ● | 25 | 25 | 150 | 29 | 32 | 25 | 0.8 | LL-2N | LS-2N | LT-42N *LT-42N-20 | LSP-2 | PC-2 | LW-3 |

* mark indicates short shank type.

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

Applicable Inserts

| Toolholder | Description |
|-------------------------------|-------------|
| PT○N [®] /L 12...-11 | TN○G 1103.. |
| PT○N [®] /L...-11 | TN○G 1104.. |
| PT○N [®] /L...-16 | TN○A 1604.. |
| PT○N [®] /L...-22 | TN○G 2204.. |

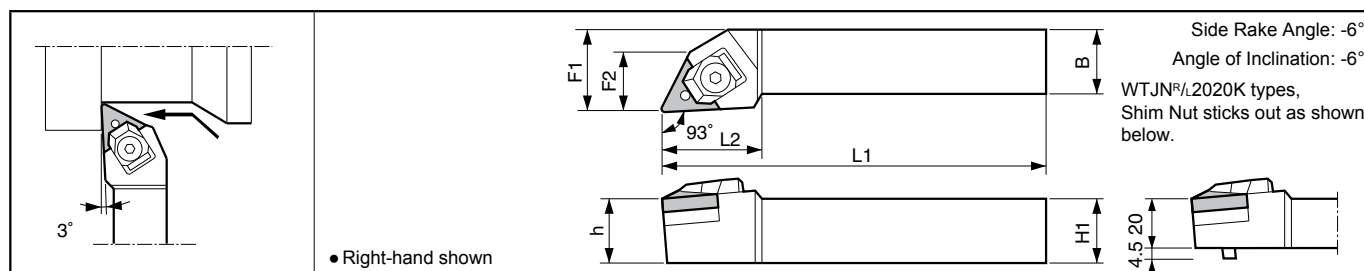
PTGN[®]/L 1212F-11 } Insert applicable for above
PTFN[®]/L 1212F-11 }

TN □ □ 1103-type Insert is applicable.

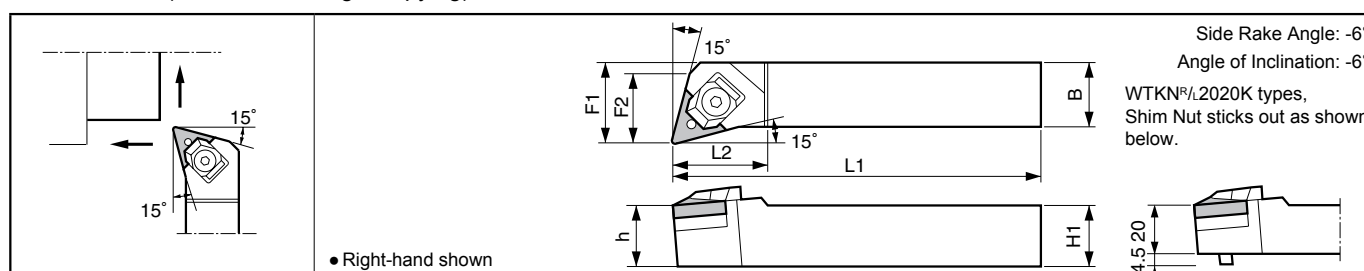
• PTFN[®]/L: L-hand Insert for R-hand Toolholder, R-hand Insert for L-hand Toolholder.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

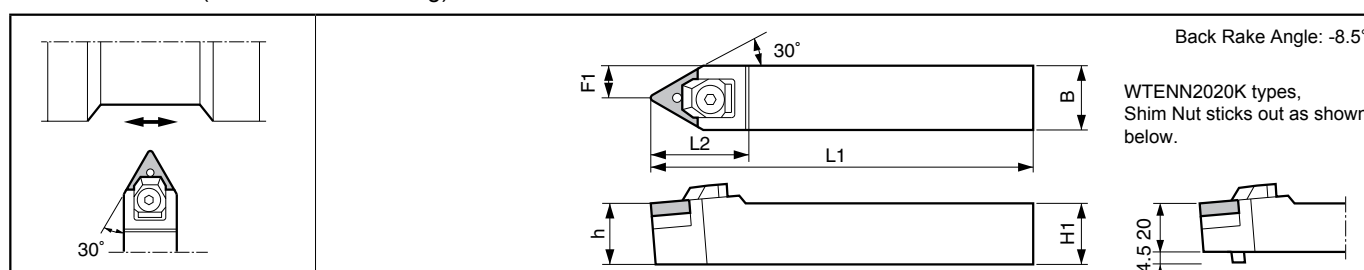
WTJN (External / Copying)



WTKN (External / Facing / Copying)



WTEN-N (External / Chamfering)



Toolholder Dimensions

| Description | Std. | | | Dimension (mm) | | | | | | Standard Corner R(re) | Spare Parts | | | | | |
|--------------------------------|------|---|---|----------------|----|-----|----|------|----|-----------------------|-------------|--------------------------|----------|----------|--------|--------|
| | R | N | L | H1=h | B | L1 | L2 | F1 | F2 | | Clamp Set | Shim | Shim Pin | Shim Nut | Wrench | Spacer |
| WTJN ^{R/L} 2020K -16N | ● | ● | ● | 20 | 20 | 125 | 32 | 25 | 24 | 0.8 | | | | | | |
| 2525M -16N | ● | ● | ● | 25 | 25 | 150 | 32 | 32 | 24 | | | | | | | |
| WTKN ^{R/L} 2020K -16N | ● | ● | ● | 20 | 20 | 125 | 32 | 25 | 30 | | | | | | | |
| 2525M -16N | ● | ● | ● | 25 | 25 | 150 | 32 | 32 | - | | | | | | | |
| WTENN 2020K -16N | ● | ● | ● | 20 | 20 | 125 | 32 | 10 | - | 0.8 | WCS-1N | WTN-33 *WTN -33-20 | WP-1S | WN-1 | LW-3 | WSP-1 |
| 2525M -16N | ● | ● | ● | 25 | 25 | 150 | 32 | 12.5 | - | | | | | | | |

* When using inserts whose corner R(re) is larger than 1.6mm, please purchase a shim with * mark and use it in order to prevent workpiece and shim from interfering each other.

Applicable Inserts

| Toolholder | Description | |
|-----------------------------|-------------|--------|
| WTJN ^{R/L} ...-16N | TN○A | 1604.. |
| WTKN ^{R/L} ...-16N | TN○G | |
| WTENN...-16N | TN○M | |

| Application | Finishing | Finishing-Medium | Finishing-Medium | Finishing-Medium | Medium-Roughing | Medium-Roughing | Medium-Roughing | Medium-Roughing* High Feed Rate | Medium-Roughing* High Feed Rate |
|-------------|-----------|--|------------------|--------------------|--------------------|--|----------------------|------------------------------------|------------------------------------|
| Insert | GP | HQ | CQ | TK | GS | PS | HS | PT | GT |
| Size | 1104,16 | 1104,16 | 16,22 | 16 | 1104,16 | 16,22 | 16,22 | 16 | 16 |
| Page | B30 | B30 | B30 | B30 | B30 | B30 | B30 | B31 | B31 |
| Application | Roughing | One side / Roughing* High Feed Rate | Roughing | Finishing-Roughing | Finishing-Roughing | Medium-Roughing / Low Cutting Resistance type | Soft Steel Finishing | Soft Steel / Medium cutting | Soft Steel / Roughing |
| Insert | PH | PX | Standard | ^{R/L} -S | ^{R/L} -□ | ^{R/L} -25R | XP(-T) | XQ | XS |
| Size | 16,22 | 16,22 | 16,22 | 1104,16 | 1103,1104,16,22 | 16 | 16 | 16 | 16 |
| Page | B31 | B31 | B31 | B34 | B34 | B34 | B31 | B31 | B31 |

| Application | Stainless Finishing | Stainless Medium to Roughing | Stainless Medium to Roughing | Stainless Medium to 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 | TK | C | ZS | GC | Without Chipbreaker | Ceramic | AH | ^{R/L} -A3 | PCD | CBN |
| Size | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 1103,16,22 | 16 | 16 | 16 | 16 | 16 |
| Page | B32 | B32 | B32 | B32 | B33 | B33 | B33 | B33 | B89 | B33 | B33 | C17 | C7 |

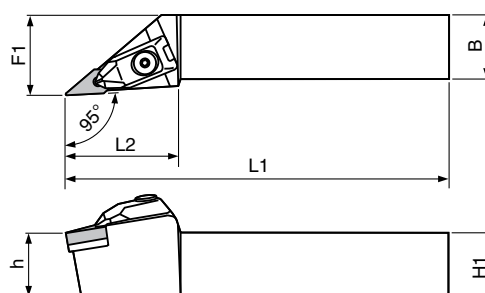
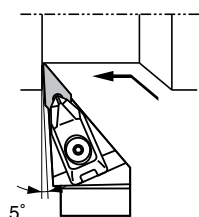
* In wedge lock, use of TN30 / PV30 and ceramic insert other than silicon nitride insert is not recommended due to strong restraint force.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

For recommended cutting conditions, see page [D39~D40](#)

Toolholders for General Purpose [TN ☐ ☐ Insert]

DVLN (External / Copying)



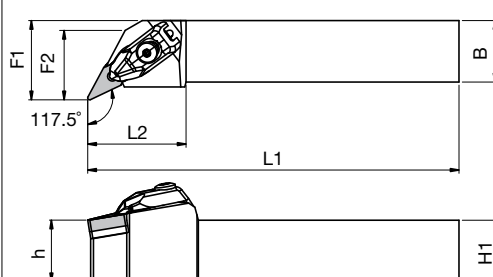
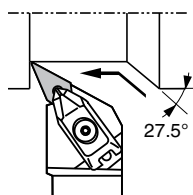
• Right-hand shown

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

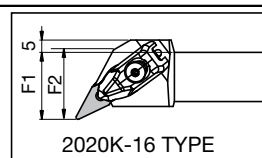
● Applicable Inserts

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

DVPN (External / Facing / Copying / Undercutting)



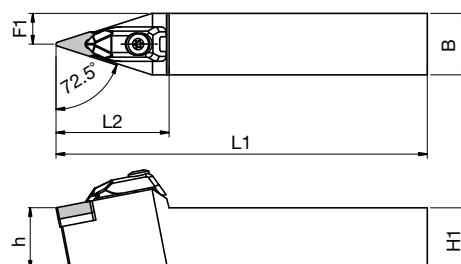
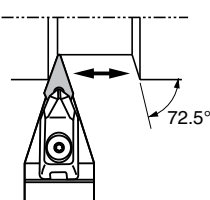
• Right-hand shown

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

● Applicable Inserts

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

DVVN (External / Copying)



Back Rake Angle: -11°

● Applicable Inserts

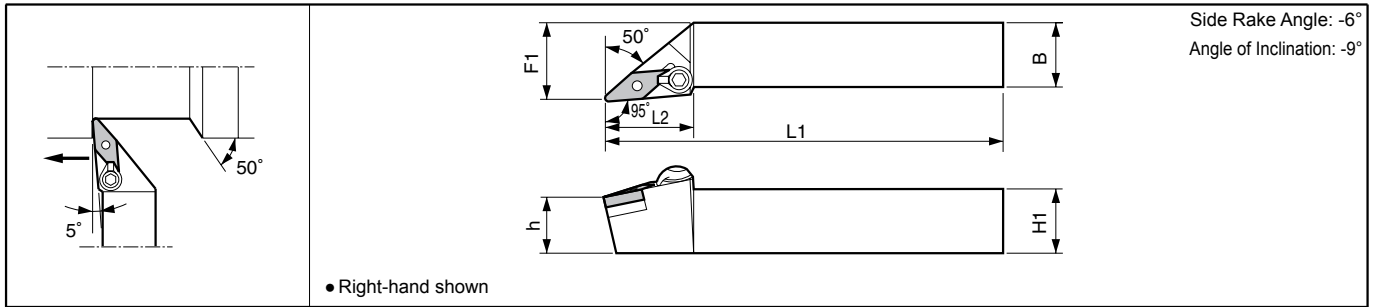
| Toolholder | Description |
|-------------|-------------------------|
| DVVNN...-16 | VN ○ A VN ○ G 1604.. |

| Description | Std. | | | Dimension (mm) | | | | | | Standard Corner-R(R) | Spare Parts | | | | | | |
|------------------------------|------|---|---|----------------|----|-----|------|----|----|----------------------|-------------|-------|--------|------|------------|--------|--------------------------|
| | R | N | L | H1=h | B | L1 | L2 | F1 | F2 | | Clamp | Screw | Spring | Shim | Shim Screw | Wrench | Wrench (sold separately) |
| DVLN ^{R/L} 2020K-16 | ● | | ● | 20 | 20 | 125 | 45 | 25 | - | 0.8 | | | | | | | |
| | ● | | ● | 25 | 25 | 150 | 32 | - | - | | | | | | | | |
| DVPN ^{R/L} 2020K-16 | ● | | ● | 20 | 20 | 125 | 40 | 27 | 28 | | | | | | | | |
| | ● | | ● | 25 | 25 | 150 | 32 | - | - | | | | | | | | |
| DVVN 2020K-16 | | ● | | 20 | 20 | 125 | 46 | 10 | - | | | | | | | | |
| | | ● | | 25 | 25 | 150 | 12.5 | - | - | | | | | | | | |

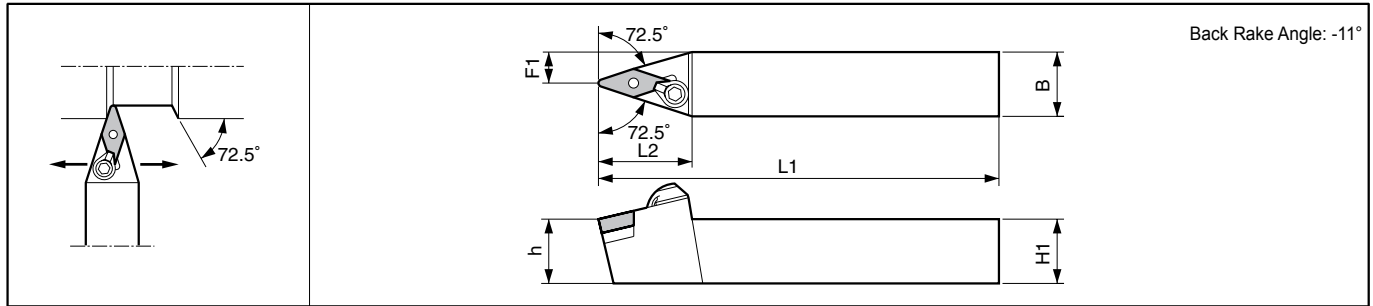
• Modification on toolholder and shim is required when using R1.6mm insert.

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)






MVLN (External / Copying)



MVVN (External / Copying)



Toolholder Dimensions

| Description | | Std. | | | Dimension (mm) | | | | | Standard Corner-R(ℓ) | Spare Parts | | | | | | |
|---------------------|-----------|------|---|---|----------------|----|-----|----|------|----------------------|---|--|---|---|---|------|--|
| | | R | N | L | H1=h | B | L1 | L2 | F1 | | Clamp Set | Wrench | Shim | Lock Pin | Wrench | | |
| | | | | | | | | | | |  |  |  |  |  | | |
| MVLN ^{R/L} | 2020K -16 | ● | | ● | 20 | 20 | 125 | 37 | 25 | | 0.8 | CPS-5 ^{R/L} | FH-2.5 | MVN-32 | TS-3S | FH-2 | |
| | 2525M-16 | ● | | ● | 25 | 25 | 150 | | 32 | | | | | | | | |
| MVVNN | 2020K -16 | | ● | | 20 | 20 | 125 | | 10 | | | CPS-5R | FH-2.5 | MVN-32 | TS-3S | FH-2 | |
| | 2525M-16 | | ● | | 25 | 25 | 150 | 39 | 12.5 | | 0.8 | | | | | | |

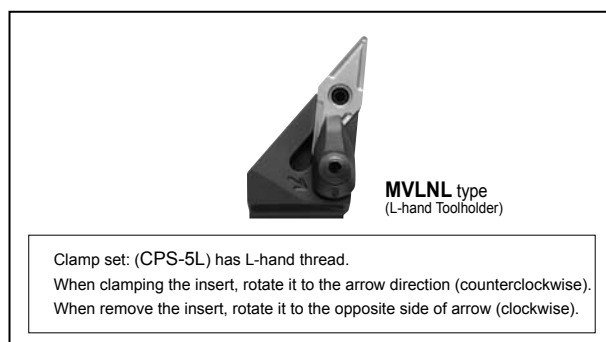
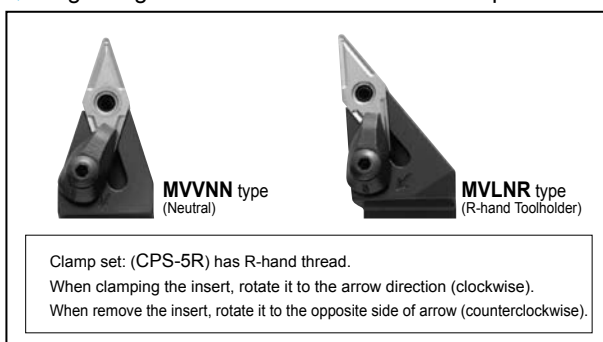
- Clamp Set : CPS-5R for Right-hand Toolholder, CPS-5L for Left-hand Toolholder.
- Modification on toolholder and shim is required when using R1.6mm insert.

Applicable Inserts

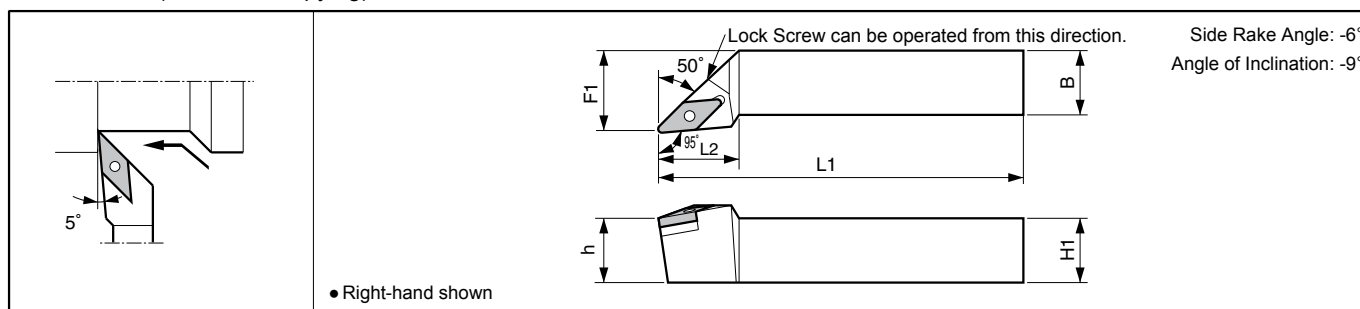
| Toolholder | Description | Application | Finishing | Finishing-Medium | Finishing-Medium | Medium | Roughing | Finishing-Medium | Low Carbon Steel | Stainless Steel |
|---------------------------------|-------------|-------------|---------------------|------------------------------|------------------------------|---------------------|-----------|--------------------|------------------|-----------------|
| MVLN^{R/L}...-16 | VN ○ A | Insert | GP | VF | HQ | TN-V | Standard | ^{R/L} | XP | GU |
| MVVNN...-16 | VN ○ G | | | | | | | | | |
| | VN ○ M | | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| | | Page | B36 | B36 | B36 | B36 | B36 | B36 | B36 | B36 |
| | | Application | Stainless Finishing | Stainless Medium to Roughing | Stainless Medium to Roughing | Cast Iron | Cast Iron | Non-ferrous Metals | Hard Materials | |
| | | Insert | MQ | MS | MU | Without Chipbreaker | Ceramic | PCD | CBN | |
| | | | | | | | | | | |
| | | | 16 | 16 | 16 | 16 | 16 | 16 | 16 | |
| | | Page | B36 | B36 | B36 | B36 | B91 | C17 | C8 | |

Regarding revolution directions of the clamp set

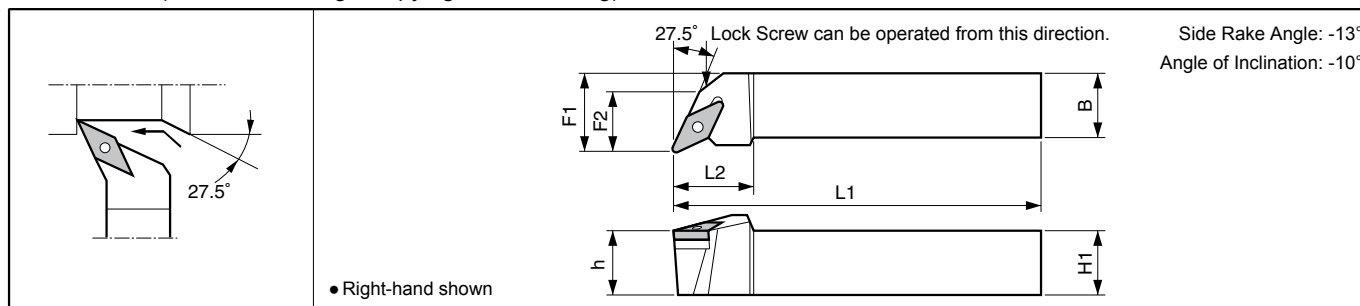
For recommended cutting conditions, see page [D39~D40](#)



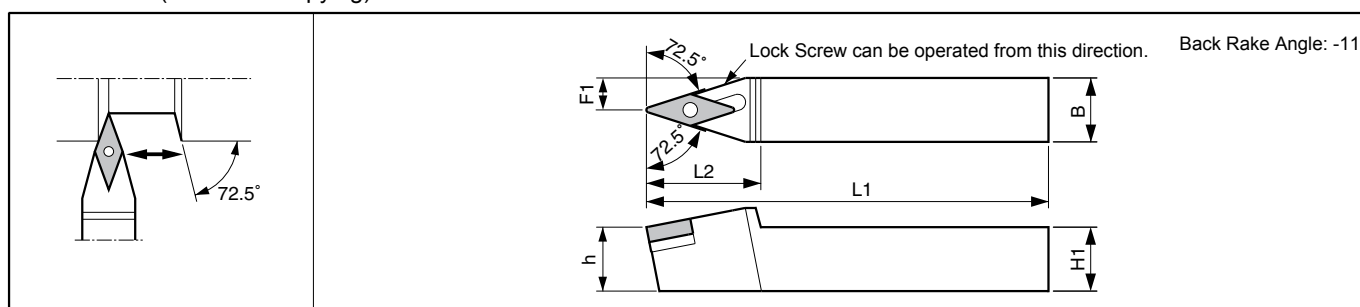
PVLN (External / Copying)







PVPN (External / Facing / Copying / Undercutting)



PVVN (External / Copying)



Toolholder Dimensions

| Description | | Std. | | | Dimension (mm) | | | | | Standard Corner-R(°) | Spare Parts | | | | | | |
|---------------------|-----------|------|---|---|----------------|----|-----|----|------|----------------------|-------------|---|--|---|---|--|--|
| | | R | N | L | H1=h | B | L1 | L2 | F1 | | F2 | Lock Pin | Lock Screw | Shim | Wrench | | |
| | | | | | | | | | | | |  |  |  |  | | |
| PVLN ^{R/L} | 2525M-16Q | ● | | ● | 25 | 25 | 150 | 37 | 32 | - | 0.8 | LP-6S | LS-15 | KVN-32 | LW-3 | | |
| PVPN ^{R/L} | 2020K-16Q | ● | | ● | 20 | 20 | 125 | | 25 | 22 | 0.8 | LP-2S | LS-11 | KVN-32 | LW-3 | | |
| | 2525M-16Q | ● | | ● | 25 | 25 | 150 | | 30 | 32 | | 28 | | | | | |
| PVVNN | 2020K-16Q | | ● | | 20 | 20 | 125 | 35 | 10 | | 0.8 | LP-2S | LS-15 | KVN-32 | LW-3 | | |
| | 2525M-16Q | | ● | | 25 | 25 | 150 | 40 | 12.5 | - | | LP-6S | | | | | |

• Modification on toolholder and shim is required when using R1.6mm insert.

Applicable Inserts

| Toolholder | Description | Application | Finishing | Finishing-Medium | Finishing-Medium | Medium | Roughing | Finishing-Medium | Low Carbon Steel | Stainless Steel |
|-----------------------------|-------------|-------------|---------------------|---------------------------|------------------------------|---------------------|-----------|--------------------|------------------|-----------------|
| PVLN ^{R/L} ...-16Q | VN○A | Insert | GP | VF | HQ | TN-V | Standard | ^{R/L} | XP | GU |
| PVPN ^{R/L} ...-16Q | VN○G | | | | | | | | | |
| PVVNN...-16Q | VN○M | | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |
| | | Page | B36 | B36 | B36 | B36 | B36 | B36 | B36 | B36 |
| | | Application | Stainless Finishing | Stainless Medium-Roughing | Stainless Medium to Roughing | Cast Iron | Cast Iron | Non-ferrous Metals | Hard Materials | |
| | | Insert | MQ | MS | MU | Without Chipbreaker | Ceramic | PCD | CBN | |
| | | | | | | | | | | |
| | | | 16 | 16 | 16 | 16 | 16 | 16 | 16 | |
| | | Page | B36 | B36 | B36 | B36 | B91 | C17 | C8 | |

For recommended cutting conditions, see page [D39~D40](#)

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)



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

| | |
|--------------------|---|
| <p>PRGC</p> | <p>Side Rake Angle: 0° Angle of Inclination: 0°</p> <p>• Right-hand shown</p> |
| <p>PRXC</p> | <p>Side Rake Angle: 0° Angle of Inclination: 0°</p> <p>• Right-hand shown</p> |
| <p>PRGN</p> | <p>Side Rake Angle: -6° Angle of Inclination: -6°</p> <p>• Right-hand shown</p> |

Toolholder Dimensions

| Description | Std. | | Dimension (mm) | | | | | Standard Corner-R (°) | Spare Parts | | | | | |
|---------------------|------|---|----------------|----|-----|----|------|-----------------------|-------------|------------|------|----------|-------|--------|
| | R | L | H1=h | B | L1 | L2 | F1 | | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench |
| PRGC ^{R/L} | ● | ● | 20 | 20 | 125 | 15 | 25 | - | | | | | | |
| | | | 25 | 25 | 150 | 15 | 32 | | | | | | | |
| | | | 20 | 20 | 125 | 14 | 25 | | | | | | | |
| | | | 25 | 25 | 150 | 17 | 32 | | | | | | | |
| PRXC ^{R/L} | ● | ● | 20 | 20 | 125 | 25 | 20.5 | - | | | | | | |
| | | | 25 | 25 | 150 | 30 | 25.5 | | | | | | | |
| | | | 25 | 25 | 180 | 30 | 25.5 | | | | | | | |
| | | | 25 | 25 | 150 | 30 | 25.7 | | | | | | | |
| PRGN ^{R/L} | ● | ● | 20 | 20 | 125 | 19 | 25 | - | | | | | | |
| | | | 25 | 25 | 150 | 26 | 32 | | | | | | | |

Applicable Inserts

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

For recommended cutting conditions, see page [D39~D40](#)

Toolholders for General Purpose [WN □□ Insert]

DWLN (External / Facing)

| | | | | | | | | | | Side Rake Angle: -6° Angle of Inclination: -6° | | | | | | |
|-------------------------------|--|--------------------|----|------|-----|-----|----|----|----------------------|--|-------|------------|-------------|----------------------------|--|--------|
| | | ● Right-hand shown | | | | | | | | ● Applicable Inserts | | | | | | |
| | | | | | | | | | | <table><tr><th>Toolholder</th><th>Description</th></tr><tr><td>DWLN^{R/L}...-08</td><td>WN ○ A 0804... WN ○ G 0804... WN ○ M 0804...</td></tr></table> | | Toolholder | Description | DWLN ^{R/L} ...-08 | WN ○ A 0804... WN ○ G 0804... WN ○ M 0804... | |
| Toolholder | Description | | | | | | | | | | | | | | | |
| DWLN ^{R/L} ...-08 | WN ○ A 0804... WN ○ G 0804... WN ○ M 0804... | | | | | | | | | | | | | | | |
| Description | Std. | Dimension (mm) | | | | | | | Standard Corner-R(°) | Spare Parts | | | | | | |
| | | R | L | H1=h | B | L1 | L2 | F1 | | F2 | Clamp | Screw | Spring | Shim | Shim Screw | Wrench |
| | DWLN ^{R/L} 2020K -08 | ● | ● | 20 | 20 | 125 | 34 | 25 | 20 | 0.8 | | | | | | |
| DWLN ^{R/L} 2525M -08 | ● | ● | 25 | 25 | 150 | 32 | 32 | 20 | 0.8 | CP-3D | CS-3D | SP-3D | DW-44 | SB-4085TR | LW-3 | FT-15 |

PWLN (External / Facing)

| | | | Side Rake Angle: -6° Angle of Inclination: -6° | | | | | | | | | | | | |
|-------------------------------|--------------------|--|---|------------|-------------|----------------------------|---------------|----------------------------|---------------|-------|------------|--------|----------|-------|--------|
| | • Right-hand shown | | ● Applicable Inserts | | | | | | | | | | | | |
| | | <table><tr><th>Toolholder</th><th>Description</th></tr><tr><td>PWLN^{R/L}...-06</td><td>WN ○ A 0604..</td></tr><tr><td>PWLN^{R/L}...-08</td><td>WN ○ G 0804..</td></tr><tr><td></td><td>WN ○ M</td></tr></table> | | Toolholder | Description | PWLN ^{R/L} ...-06 | WN ○ A 0604.. | PWLN ^{R/L} ...-08 | WN ○ G 0804.. | | WN ○ M | | | | |
| Toolholder | Description | | | | | | | | | | | | | | |
| PWLN ^{R/L} ...-06 | WN ○ A 0604.. | | | | | | | | | | | | | | |
| PWLN ^{R/L} ...-08 | WN ○ G 0804.. | | | | | | | | | | | | | | |
| | WN ○ M | | | | | | | | | | | | | | |
| Description | Std. | | Dimension (mm) | | | | | Standard Corner-R(ε) | Spare Parts | | | | | | |
| | R | L | H1=h | B | L1 | L2 | F1 | | F2 | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench |
| PWLN ^{R/L} 1616H -06 | ● | ● | 16 | 16 | 100 | | 20 | | 0.8 | | | | | | |
| 2020K -06 | ● | ● | 20 | 20 | 125 | 23 | 25 | - | | | | | | | |
| 2525M -06 | ● | ● | 25 | 25 | 150 | | 32 | | | | | | | | |
| 2020K -08 | ● | ● | 20 | 20 | 125 | 27 | 25 | - | 0.8 | LL-2N | LS-2N | LW-42N | LSP-2 | PC-2 | LW-3 |
| 2525M -08 | ● | ● | 25 | 25 | 150 | | 32 | 23 | | | | | | | |

WWLN (External / Facing)

| | | | | <p>Side Rake Angle: -6° Angle of Inclination: -6°</p> <p>WWLN^{R/L}/2020K types, Shim Nut sticks out as below.</p> | | <p>● Applicable Inserts</p> | | | | | | | | | | |
|-------------------------------|----------------------------|--------------------|---|--|----|-----------------------------|-------------|-----------------------------|----------------------------|-------------|-----------|------|----------|----------|--------|--|
| | | ● Right-hand shown | | <table><tr><th>Toolholder</th><th>Description</th></tr><tr><td>WWLN^{R/L}/...-08</td><td>WN ○ A WN ○ G WN ○ M</td><td>0804..</td></tr></table> | | Toolholder | Description | WWLN ^{R/L} /...-08 | WN ○ A WN ○ G WN ○ M | 0804.. | | | | | | |
| Toolholder | Description | | | | | | | | | | | | | | | |
| WWLN ^{R/L} /...-08 | WN ○ A WN ○ G WN ○ M | 0804.. | | | | | | | | | | | | | | |
| Description | | Std. | | Dimension (mm) | | | | | Standard Corner-R(ε) | Spare Parts | | | | | | |
| | | R | L | H1=h | B | L1 | L2 | F1 | | F2 | Clamp Set | Shim | Shim Pin | Shim Nut | Wrench | |
| WWLN ^{R/L} 2020K -08 | | ● | ● | 20 | 20 | 125 | 30 | 25 | - | 1.2 | | | | | | |
| 2525M -08 | | ● | ● | 25 | 25 | 150 | 30 | 32 | 2.5 | | | | | | | |

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

Applicable Inserts

| Application | Finishing | Finishing-Medium | Finishing | Finishing-Medium | Finishing-Medium | Finishing-Medium | Finishing-Medium | Medium-Roughing | Medium-Roughing | Medium-Roughing |
|-------------|------------------------------|------------------------------|--------------|------------------|----------------------|-----------------------------|-----------------------|--------------------|---------------------|------------------------------|
| Insert | WP (Wiper) | WQ (Wiper) | GP | HQ | CQ | CJ | TK | GS | PS | PT |
| Size | 08 | 08 | 06,08 | 06,08 | 08 | 08 | 08 | 06,08 | 08 | 08 |
| Page | B38 | B38 | B38 | B38 | B38 | B38 | B38 | B38 | B38 | B39 |
| Application | Medium-Roughing | Roughing | Finishing | Medium | Soft Steel Finishing | Soft Steel / Medium cutting | Soft Steel / Roughing | Stainless Steel | Stainless Finishing | Stainless Medium to Roughing |
| Insert | GT | Standard | P/L-S | P/L | XP | XQ | XS | GU | MQ | MS |
| Size | 08 | 08 | 06 | 06 | 08 | 08 | 08 | 08 | 08 | 08 |
| Page | B39 | B39 | B40 | B40 | B39 | B39 | B39 | B39 | B39 | B39 |
| Application | Stainless Medium to Roughing | Stainless Medium to Roughing | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Cast Iron | Non-ferrous Metals | Non-ferrous Metals | Hard Materials |
| Insert | MU | TK | C | ZS | GC | Without Chipbreaker | Ceramic | AH | PCD | CBN |
| Size | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 |
| Page | B39 | B39 | B39 | B39 | B39 | B39 | B91 | B40 | C17 | C8 |

* In wedge lock, use of TN30 / PV30 and ceramic insert other than silicon nitride insert is not recommended due to strong restraint force.

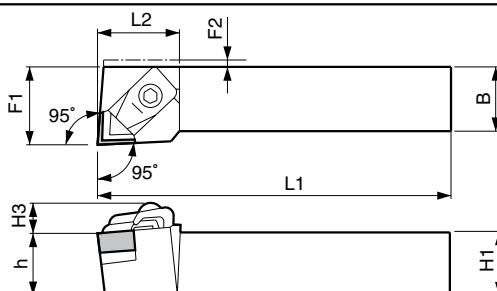
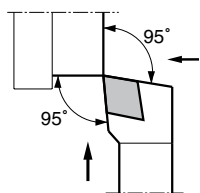
For recommended cutting conditions, see page [D39~D40](#)

D



External






CCLN (External / Facing)




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



• Right-hand shown

Toolholder Dimensions

| Description | | Std. | | Dimension (mm) | | | | | | Standard Corner-R(ℓ) | Spare Parts | | | | | |
|---------------------------|------------------|------|---|----------------|----|----|-----|----|----|----------------------|-------------|---|---|---|---|---|
| | | | | | | | | | | | Chipbreaker | Clamp Set | Wrench | Shim | Shim Screw | |
| | | R | L | H1=H2 | H3 | B | L1 | L2 | F1 | | F2 |  |  |  |  |  |
| CCLN^{R/L} | 2020K -12 | ● | ● | 20 | 14 | 20 | 125 | 32 | 27 | 5 | 0.8 | CB-16 | CE-010 | LW-4 | SP-441 (SP-443) | M3X8 (M3X12) |
| | 2525M -12 | ● | ● | 25 | | 25 | 150 | | 32 | - | | | | | | |
| | 2525M -16 | ● | | 25 | | 25 | 150 | | 32 | - | 0.8 | CB-17 | CE-220 | LW-4 | SP-454 | M4X10 |
| | 3225P -16 | ● | | 32 | | 25 | 170 | | 32 | - | | | | | | |

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

Applicable Inserts













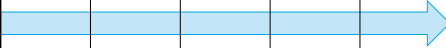


| Applications | Cast Iron / Hard Materials | Cast Iron / Hard Materials |
|---------------------------------|---|---|
| Reference Pace | B85 | C9 |
| Insert | Ceramic  | CBN(KBN900)  |
| Toolholder | | |
| CCLN^{R/L}...-12 | CNGN1207..(CNGN1204..) CNMN1207 | (CNMN1204) |
| CCLN^{R/L}...-16 | CNGN1607.. | - |

For recommended cutting conditions, see page [D39~D40](#)

Selection of Ceramic Insert

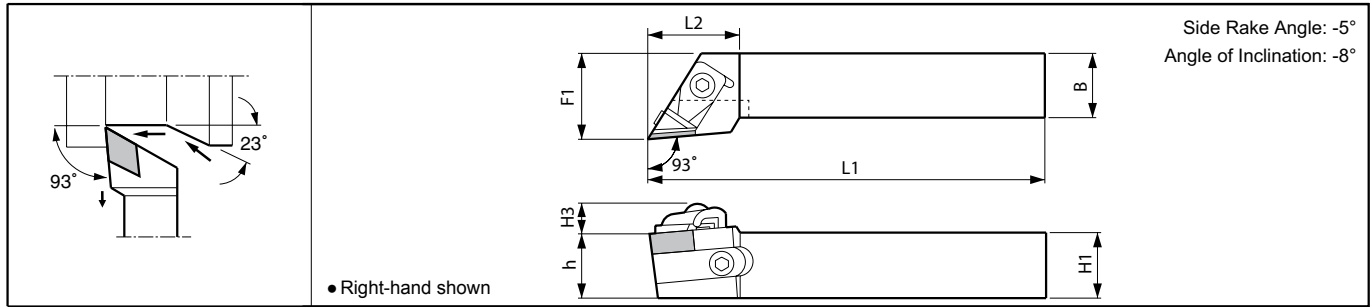
Select the suitable Ceramic Insert and specifications (Corner-R(ℓ), Feed Rate, Chamfer, etc.) from the table below.

(FC250, Cutting Edge Angle: 0°~15°)

| Insert Shape | Corner-R (ℓ) | f (mm/rev) | | | | | | | | | | ap 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  EN  CN | 2.0 |  | | | | | | | | | | 0.3~4 |
| | 1.6 |  | | | | | | | | | | |
| | 1.2 |  | | | | | | | | | | |
| | 0.8 |  | | | | | | | | | | |
| | 0.4 |  | | | | | | | | | | |
|  TN  DN | 1.6 |  | | | | | | | | | | 0.3~2 |
| | 1.2 |  | | | | | | | | | | |
| | 0.8 |  | | | | | | | | | | |
| Chamfer | | 0.05mm×20° | | (0.1~0.2)mm×(20°~25°) | | | | 0.3mm×30° | | | | — |
| Insert Thickness | | 7.94mm | | | | | | | | | | |

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

CDJN (External / Copying / Back Turning)



Toolholder Dimensions

| Description | Std. | | Dimension (mm) | | | | | | | Standard Corner-R(r_c) | Spare Parts | | | | |
|---|------|---|----------------|----|----|-----|----|----|--|----------------------------|-------------|-----------|--------|------|------------|
| | R | L | H1=h | H3 | B | L1 | L2 | F1 | | | Chipbreaker | Clamp Set | Wrench | Shim | Shim Screw |
| CDJN^{R/L} 2525M-15 3225P-15 | ● | ● | 25 | 16 | 25 | 150 | 32 | 32 | | 0.8 | | | | | |

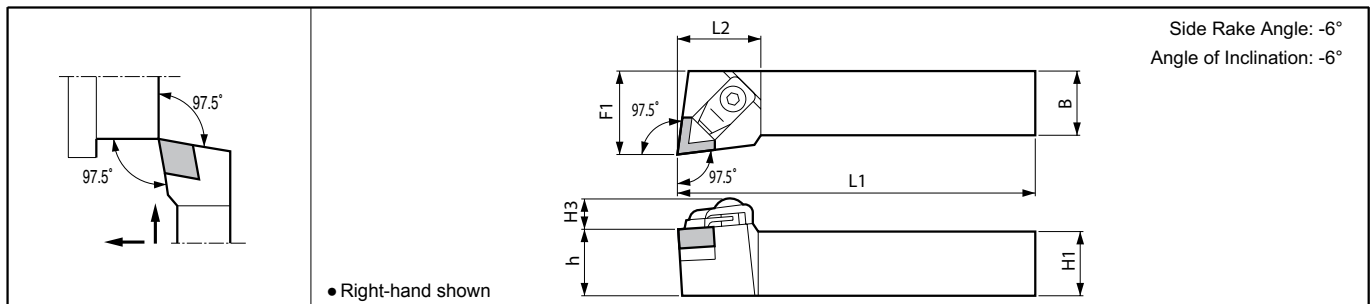
• Chipbreaker : CB-14 for Right-hand Toolholder, and CB-15 for Left-hand Toolholder.
• Shim : 556CR for Right-hand Toolholder, and 556CL for Left-hand Toolholder.

Applicable Inserts

| Applications | Cast Iron / Hard Materials |
|---------------------------------|----------------------------|
| Ref. Page | B86 |
| Toolholder | Ceramic |
| CDJN^{R/L}...-15 | DNGN1507.. |

For recommended cutting conditions, see page [D39~D40](#)

CELN (External / Facing)



Toolholder Dimensions

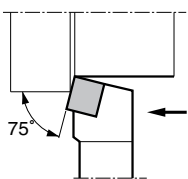
| Description | Std. | | Dimension (mm) | | | | | | | Standard Corner-R(r_c) | Spare Parts | | | | |
|------------------------------------|------|---|----------------|----|----|-----|----|----|--|----------------------------|-------------|-----------|--------|------|------------|
| | R | L | H1=h | H3 | B | L1 | L2 | F1 | | | Chipbreaker | Clamp Set | Wrench | Shim | Shim Screw |
| CELN^{R/L} 2525M-13 | ● | ● | 25 | 15 | 25 | 150 | 32 | 32 | | 0.8 | | | | | |

Applicable Inserts

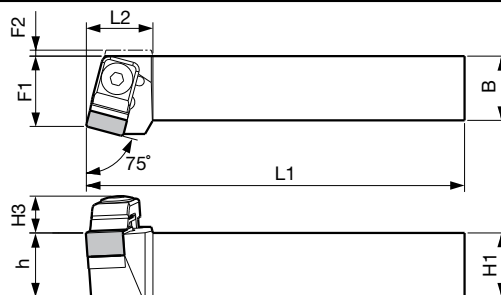
| Applications | Cast Iron / Hard Materials |
|---------------------------------|----------------------------|
| Ref. Page | B87 |
| Toolholder | Ceramic |
| CELN^{R/L}...-13 | ENGN1307.. |

For recommended cutting conditions, see page [D39~D40](#)

CSRN (External)



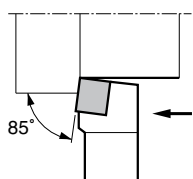
• Right-hand shown



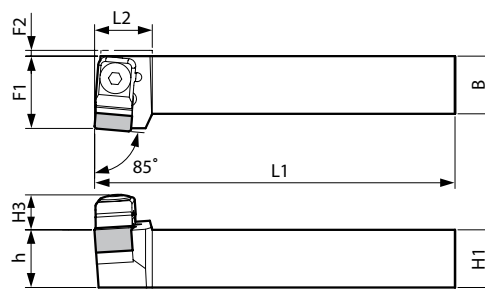
Side Rake Angle: -6°
Angle of Inclination: -4°

D

CS-N (External)



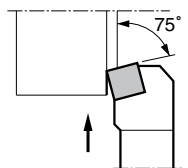
• Right-hand shown



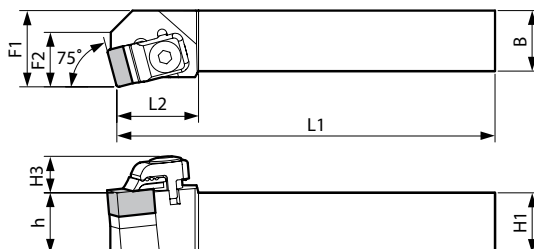
Side Rake Angle: -6°
Angle of Inclination: -4°

External

CSKN (Facing)

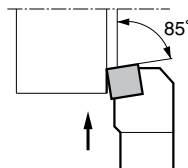


• Right-hand shown

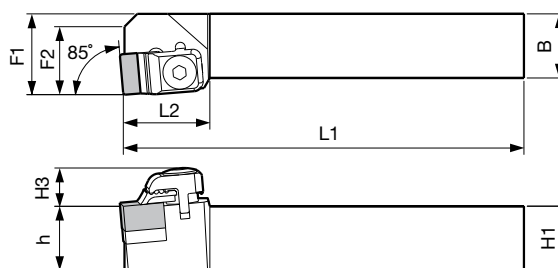


Side Rake Angle: -6°
Angle of Inclination: -4°

CSYN (Facing)

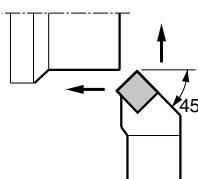


• Right-hand shown

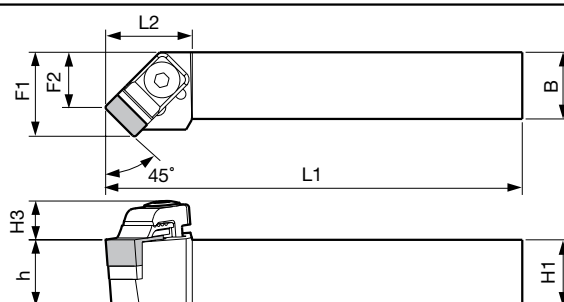


Side Rake Angle: -6°
Angle of Inclination: -4°

CSSN (External / Facing / Chamfering)

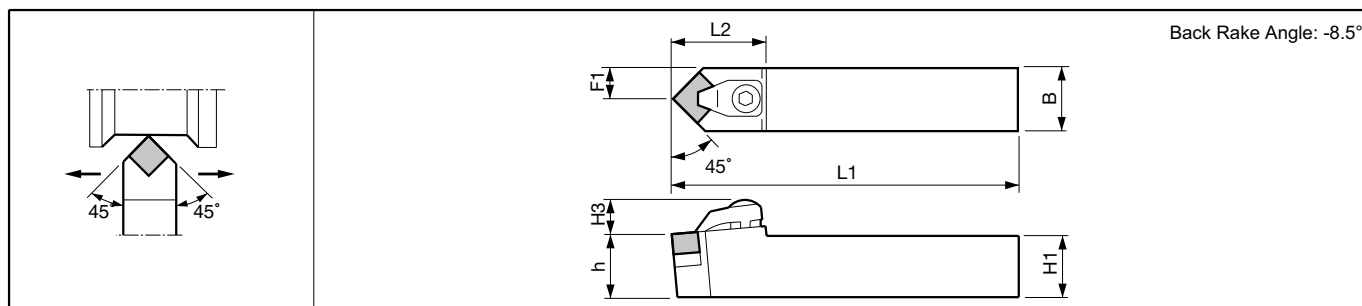


• Right-hand shown










Side Rake Angle: -6°
Angle of Inclination: 0°

CSDN (External / Chamfering)



Toolholder Dimensions

| Description | | Std. | | | Dimension (mm) | | | | | | | Standard Corner-R(1/8") | Spare Parts | | | | | | |
|---------------------|-----------|------|---|----|----------------|----|-----|-----|----|------|-----|-------------------------|---|---|---|---|---|---|---|
| | | R | N | L | H1=h | H3 | B | L1 | L2 | F1 | F2 | | Chipbreaker | Clamp Set | | | Wrench | Shim | Shim Screw |
| | | | | | | | | | | | | |  |  020 |  220 |  040 |  |  |  |
| CSRN ^{R/L} | 2020K -12 | ● | | ● | 20 | | 20 | 125 | | 22 | 2 | 0.8 | CB-11 | CE-020 | LW-4 | SP-141 (SP-143) | M3X8 (M3X12) | | |
| | 2525M -12 | ● | | ● | 25 | 12 | 25 | 150 | 22 | 27 | - | | | | | | | | |
| | 3225P -12 | ● | | ● | 32 | | 25 | 170 | | 27 | - | | | | | | | | |
| | 3225P -15 | ● | | | 32 | 15 | 25 | 170 | 30 | 32 | - | | | | | | | | |
| 4040R -15 | ● | | ● | 40 | | 40 | 200 | | 43 | | 0.8 | CB-51 | CE-220 | LW-4 | SP-162 | M4X10 | | | |
| | | | | | | | | | | | | | | | | | | | |
| CS-N ^{R/L} | 2020K -12 | ● | | ● | 20 | 12 | 20 | 125 | 20 | 25 | 2 | 0.8 | CB-11 | CE-020 | LW-4 | SP-141 (SP-143) | M3X8 (M3X12) | | |
| | 2525M -12 | ● | | ● | 25 | | 25 | 150 | | 32 | - | | | | | | | | |
| CSKN ^{R/L} | 2020K -12 | ● | | ● | 20 | 12 | 20 | 125 | | 25 | 18 | 0.8 | CB-11 | CE-020 | LW-4 | SP-141 (SP-143) | M3X8 (M3X12) | | |
| | 2525M -12 | ● | | ● | 25 | | 25 | 150 | 27 | 32 | | | | | | | | | |
| | 3225P -15 | ● | | | 32 | 15 | 25 | 170 | 37 | 32 | 20 | | | | | | | | |
| CSYN ^{R/L} | 2020K -12 | ● | | ● | 20 | | 20 | 125 | 27 | 25 | 21 | 0.8 | CB-11 | CE-020 | LW-4 | SP-141 (SP-143) | M3X8 (M3X12) | | |
| | 2525M -12 | ● | | ● | 25 | 12 | 25 | 150 | | 32 | | | | | | | | | |
| CSSN ^{R/L} | 2020K -12 | ● | | ● | 20 | | 20 | 125 | | 25 | 17 | 0.8 | CB-11 | CE-020 | LW-4 | SP-141 (SP-143) | M3X8 (M3X12) | | |
| | 2525M -12 | ● | | ● | 25 | 12 | 25 | 150 | 26 | 32 | 23 | | | | | | | | |
| CSDNN | 2020K -12 | | ● | | 20 | | 20 | 125 | | 10 | | 0.8 | - | CE-040 | LW-4 | SP-141 (SP-143) | M3X8 (M3X12) | | |
| | 2525M -12 | | ● | | 25 | 13 | 25 | 150 | 32 | 12.5 | - | | | | | | | | |
| | 3225P -12 | | ● | | 32 | | 25 | 170 | | 12.5 | | | | | | | | | |

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

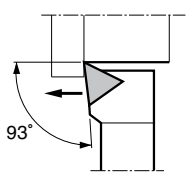
Applicable Inserts

| Applications | Cast Iron / Hard Materials | Cast Iron | Cast Iron / Hard Materials | When using as toolholder for CBN tools (KBN900), prepare spare parts below separately. | | |
|----------------------------------|--------------------------------------|--------------|----------------------------|--|--------|------------|
| Ref. Page | B88, B89 | B28 | C9 | Clamp Set | Shim | Shim Screw |
| Toolholder | Insert | Coating | CBN(KBN900) | | | |
| | Ceramic | | | | | |
| CSRN^{R/L} ...-12 | SNGN1207..(SNGN1204..) SNMN1207.. | (SNMN1204..) | (SNMN1204..) | CE-030A | SP-143 | M3X12 |
| 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 |

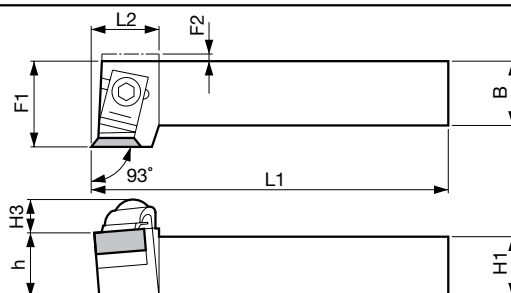
• CSDNN...-12 : Clamp Set CE-040 is used continuously.

For recommended cutting conditions, see page [D39~D40](#)

CTJN (External)

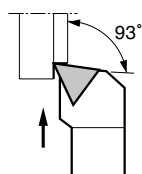


• Right-hand shown

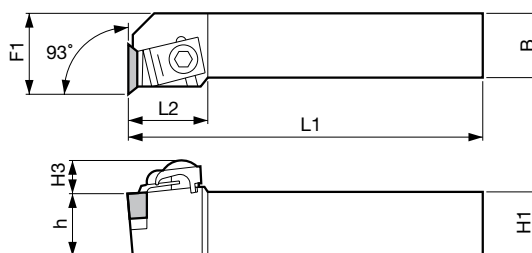


Side Rake Angle: -6°
Angle of Inclination: -4°

CTUN (Facing)








• Right-hand shown



Side Rake Angle: -6°
Angle of Inclination: -4°

Toolholder Dimensions

| Description | | Std. | | Dimension (mm) | | | | | | Standard Corner-R(℞) | Spare Parts | | | | | |
|---------------------|-----------|------|---|----------------|----|----|-----|----|----|----------------------|-------------|---|--|---|---|---|
| | | R | L | H1=ℎ | H3 | B | L1 | L2 | F1 | | F2 | Chipbreaker | Clamp Set | Wrench | Shim | Shim Screw |
| | | | | | | | | | | | |  |  |  |  |  |
| CTJN ^{R/L} | 2020K -16 | ● | ● | 20 | 11 | 20 | 125 | 21 | 25 | 2 | 0.8 | CB-12 / 13 | CE-020 | LW-4 | SP-221 (SP-223) | M3X8 (M3X12) |
| | 2525M-16 | ● | ● | 25 | | 25 | 150 | | 32 | - | | | | | | |
| CTUN ^{R/L} | 2020K -16 | ● | ● | 20 | 11 | 20 | 125 | 27 | 25 | - | 0.8 | CB-13 / 12 | CE-020 | LW-4 | SP-221 (SP-223) | M3X8 (M3X12) |
| | 2525M-16 | ● | ● | 25 | | 25 | 150 | | 32 | - | | | | | | |

* CTJN (Chipbreaker): CB-12 for R-hand Toolholder, CB-13 for L-hand Toolholder.

CTJN (Chipbreaker): CB-13 for R-hand Toolholder, CB-12 for L-hand Toolholder.

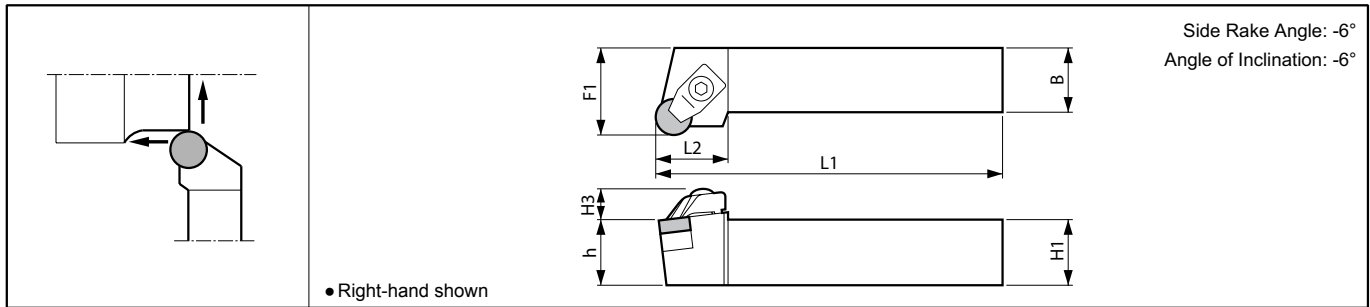
* Shim & Shim Screw : When using TN □□ 1604 Insert, purchase spare parts in () separately.

Applicable Inserts

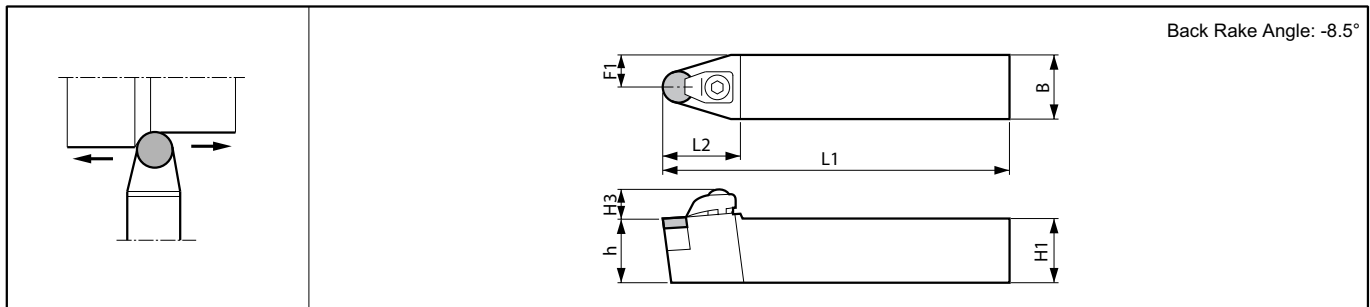
| Applications | Cast Iron / Hard Materials | Cast Iron / Hard Materials | Cast Iron |
|----------------------------|---|----------------------------|--------------|
| Ref. Page | B89, B90 | C9 | B34 |
| Insert | Ceramic | CBN(KBN900) | Coated |
| Toolholder | | | |
| CTJN ^{R/L} ...-16 | TNGN1607.. (TNGN1604..) (TNMN1604..) | (TNMN1604..) | (TNGN1604..) |
| CTUN ^{R/L} ...-16 | | | |

For recommended cutting conditions, see page [D39~D40](#)













CRSN (External / Facing)





CRDN (External / Copying)








Toolholder Dimensions

| Description | Std. | | Dimension (mm) | | | | | | | | Standard Corner-R(re) | Spare Parts | | | | |
|---------------------------|------|---|----------------|------|----|-----|----|------|----|--|-----------------------|--|--|--|--|--|
| | R | N | L | H1=h | H3 | B | L1 | L2 | F1 | | | Clamp Set | Wrench | Shim | Shim Screw | |
| CRSN^{R/L} | ● | ● | 20 | | 20 | 125 | | 25 | | | - |  |  |  |  | |
| | | | 25 | 11 | 25 | 150 | 26 | 32 | | | | | | | | |
| | | | 32 | | 25 | 170 | | 32 | | | | | | | | |
| CRDNN | ● | ● | 20 | | 20 | 125 | | 10 | | | - |  |  |  |  | |
| | | | 25 | 11 | 25 | 150 | 28 | 12.5 | | | | | | | | |
| | | | 32 | | 25 | 170 | | 12.5 | | | | | | | | |
| | | | 32 | | 32 | 170 | | 16 | | | |  |  |  |  | |
| | | | 40 | 13 | 40 | 200 | 35 | 20 | | | | | | | | |

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

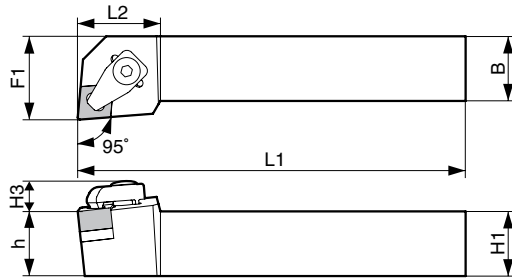
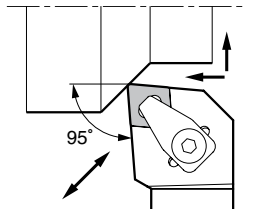
Applicable Inserts

| Applications | | Cast Iron / Hard Materials | | Cast Iron / Hard Materials | | When using as toolholder for CBN tools (KBN900), prepare spare parts below separately. | | |
|----------------------------------|--------|---|--|---|--|--|---|---|
| Ref. Page | | B87 | | C9 | | Clamp Set | Shim | Shim Screw |
| Toolholder | Insert | Ceramic | |  | |  |  |  |
| | |  | | (RNMN120400) | | CE-030A | SP-843 | M3X12 |
| CRSN^{R/L} ...-12 | | RNGN120700(RNGN120400) | | (RNMN120400) | | CE-030A | SP-843 | M3X12 |
| CRDNN ...-12 | | RNGN120700(RNGN120400) | | (RNMN120400) | | CE-030A | SP-843 | M3X12 |
| CRDNN ...-15 | | RNGN150700 | | - | | - | | |

For recommended cutting conditions, see page [D39~D40](#)

CCLN-GX (External / Facing / Back Turning)

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



• Right-hand shown

Toolholder Dimensions

| Description | Std. | | Dimension (mm) | | | | | | | Standard Corner-R (r) | Spare Parts | | | | |
|--------------------------------------|------|---|----------------|----|----|-----|----|----|--|-----------------------|---------------|-------------|---------------|-------------|--|
| | R | L | H1-h | H3 | B | L1 | L2 | F1 | | | Clamp Set | Wrench | Shim | Shim Screw | |
| CCLN^R/L 2525M-12GX | ● | ● | 25 | 13 | 25 | 150 | 30 | 32 | | 1.2 | CE-410 | LW-4 | SP-441 | M3X8 | |

Applicable Inserts

| Applications | Cast Iron |
|----------------------------------|-------------------|
| Ref. Page | B85 |
| Toolholder | Ceramic |
| CCLN^R/L...12GX | CNGX1207.. |

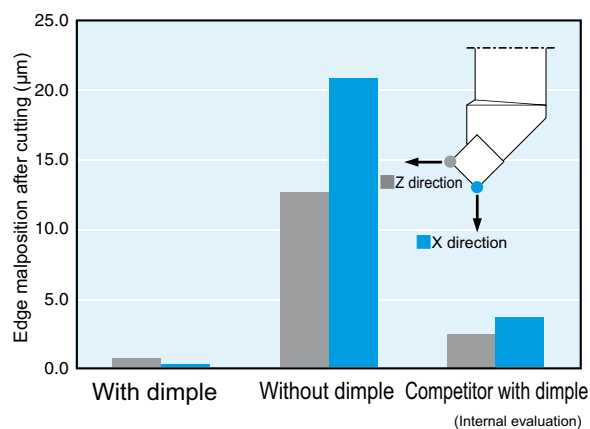
For recommended cutting conditions, see page [D39~D40](#)

Features

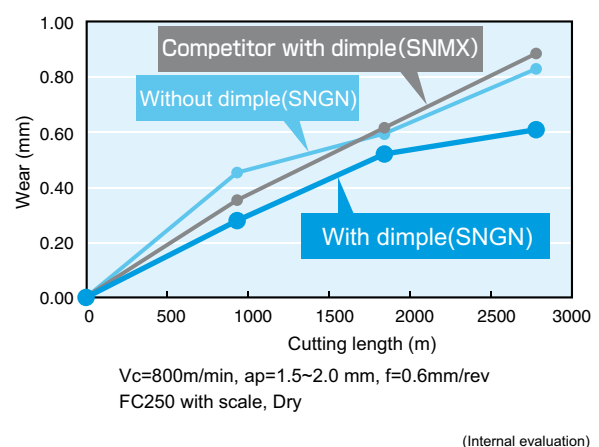
1. Improved clamping stability due to the dimple design.
2. Improve machining stability and machinability



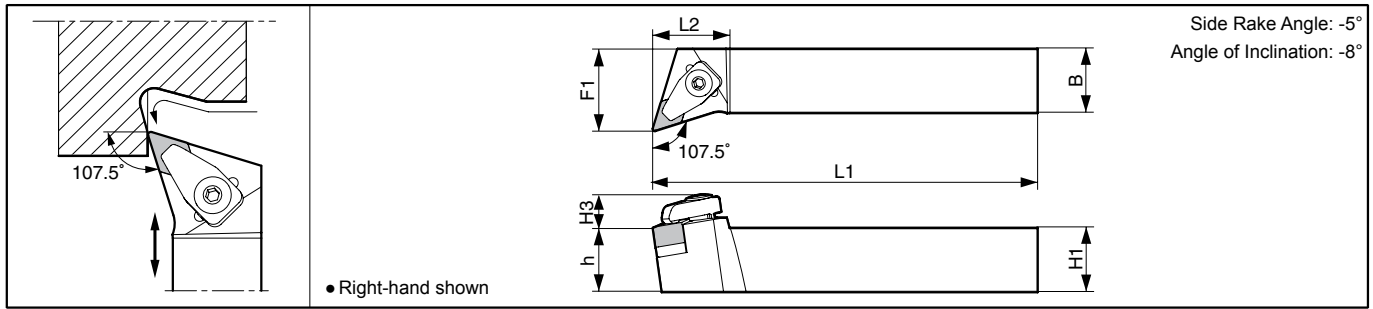
Edge displacement



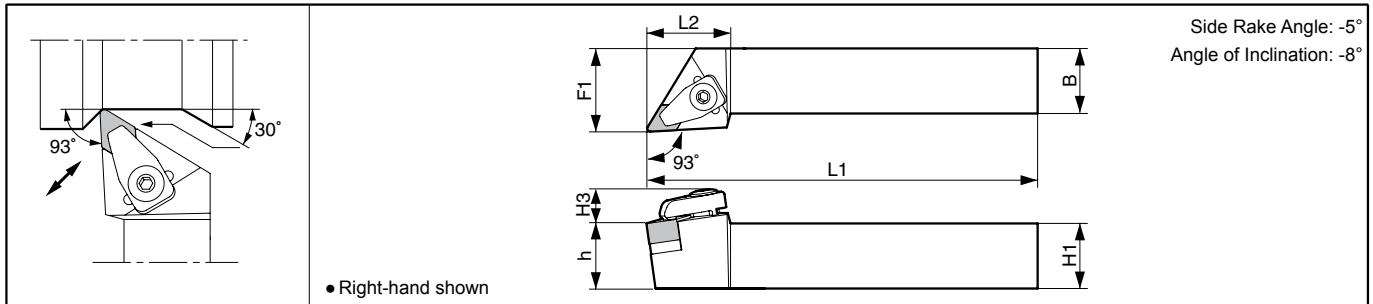
Cutting Capability







CDHN-GX (External / Copying / Back Turning)



CDJN-GX (External / Copying / Back Turning)



Toolholder Dimensions

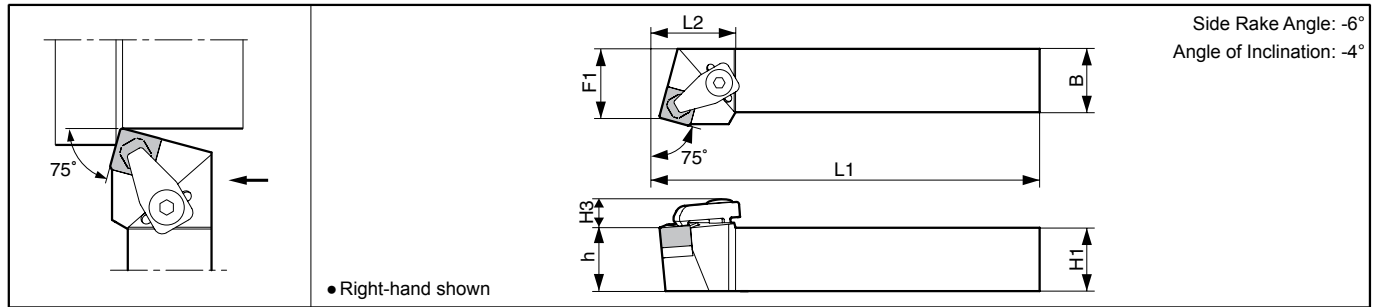
| Description | | Std. | | Dimension (mm) | | | | | | | Standard Corner-R(°) | Spare Parts | | | | |
|---------------------|------------|------|---|----------------|----|----|-----|----|----|---|----------------------|---|---|---|------|--|
| | | R | L | H1=H | H3 | B | L1 | L2 | F1 | Clamp Set | | Wrench | Shim | Shim Screw | | |
| | | | | | | | | | |  | |  |  |  | | |
| CDHN ^{R/L} | 2525M-12GX | ● | ● | 25 | 14 | 25 | 150 | 30 | 32 | | 1.2 | CE-410 | LW-4 | SP-521 | M3X8 | |
| | 2525M-15GX | ● | ● | 25 | 15 | 25 | 150 | 33 | 32 | | 1.2 | CE-430 | | SP-541 | M3X8 | |
| CDJN ^{R/L} | 2525M-12GX | ● | ● | 25 | 14 | 25 | 150 | 32 | 32 | | 1.2 | CE-410 | LW-4 | SP-521 | M3X8 | |
| | 2525M-15GX | ● | ● | 25 | 15 | 25 | 150 | 38 | 32 | | 1.2 | CE-430 | | SP-541 | M3X8 | |

Applicable Inserts

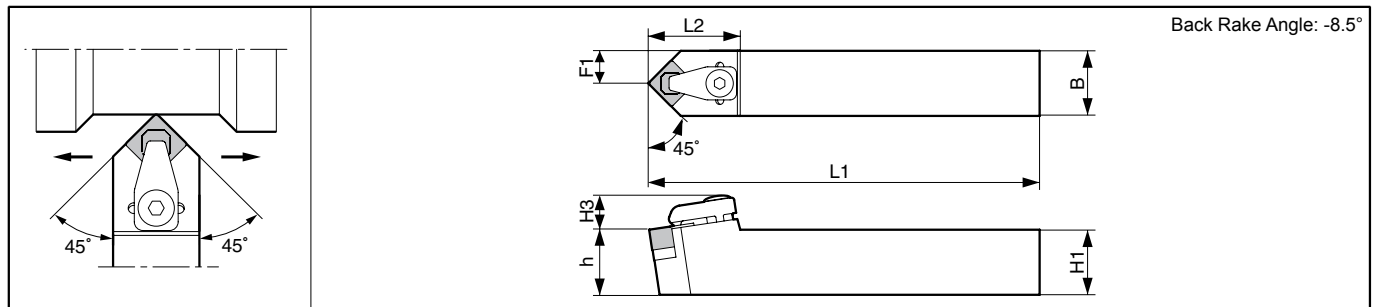
| Applications | | Cast Iron | |
|---------------------|------------|--------------|--|
| Ref. Page | | B86 | |
| Toolholder | Insert | Ceramic | |
| | | | |
| CDHN ^{R/L} | 2525M-12GX | DNGX1207 ... | |
| | 2525M-15GX | DNGX1507 ... | |
| CDJN ^{R/L} | 2525M-12GX | DNGX1207 ... | |
| | 2525M-15GX | DNGX1507 ... | |

For recommended cutting conditions, see page [D39~D40](#)

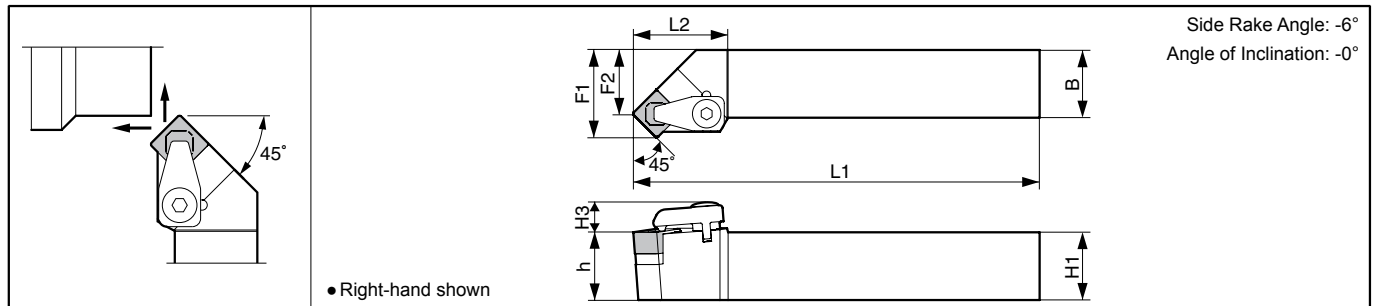
CSRN-GX (External)



CSDN-GX (External / Chamfering)



CSSN-GX (External / Facing / Chamfering)



Toolholder Dimensions

| Description | Std. | Dimension (mm) | | | | | | | | | | Standard Corner-R (r) | Spare Parts | | | | |
|---------------------|------------|----------------|---|----|------|----|-----|----|------|----|-----|-----------------------|-------------|--------|-------|------------|--|
| | | R | N | L | H1=h | H3 | B | L1 | L2 | F1 | F2 | | Clamp Set | Wrench | Shim | Shim Screw | |
| CSRN ^{R/L} | 2525M-12GX | ● | ● | 25 | 12 | 25 | 150 | 30 | 27 | - | 1.2 | CE-410 | LW-4 | SP-141 | M3X8 | | |
| | 2525M-15GX | ● | ● | 25 | 13 | 25 | 150 | 35 | 27 | - | 1.2 | CE-410 | LW-4 | SP-162 | M4X10 | | |
| CSDNN | 2525M-12GX | ● | ● | 25 | 13 | 25 | 150 | 35 | 12.5 | - | 1.2 | CE-410 | LW-4 | SP-141 | M3X8 | | |
| | 2525M-15GX | ● | ● | 25 | 14 | 25 | 150 | 40 | 12.5 | - | 1.2 | CE-410 | LW-4 | SP-162 | M4X10 | | |
| CSSN ^{R/L} | 2525M-12GX | ● | ● | 25 | 12 | 25 | 150 | 35 | 32 | 23 | 1.2 | CE-410 | LW-4 | SP-141 | M3X8 | | |
| | 2525M-15GX | ● | ● | 25 | 13 | 25 | 150 | 40 | 32 | 21 | 1.2 | CE-410 | LW-4 | SP-162 | M4X10 | | |

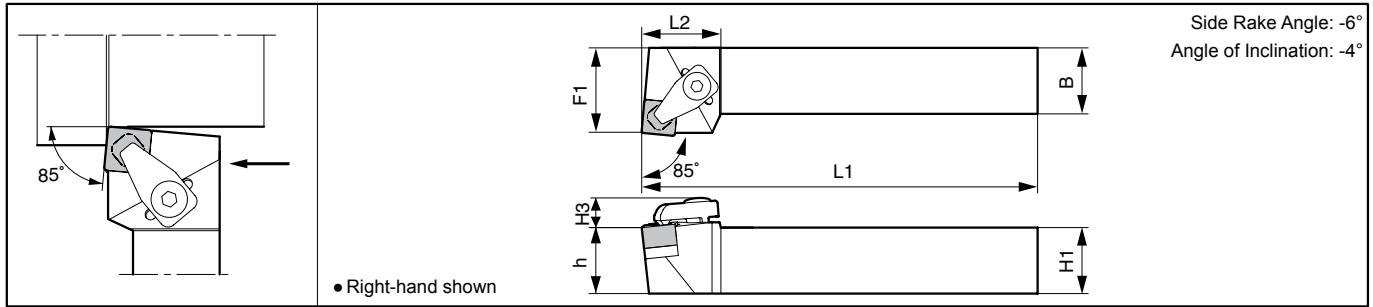
Applicable Inserts

| Applications | | Cast Iron | |
|---------------------|------------|--------------|--|
| Ref. Page | | B89 | |
| Toolholder | Insert | Ceramic | |
| | | | |
| CSRN ^{R/L} | 2525M-12GX | SNGX1207 ... | |
| | 2525M-15GX | SNGX1507 ... | |
| CSDNN | 2525M-12GX | SNGX1207 ... | |
| | 2525M-15GX | SNGX1507 ... | |
| CSSN ^{R/L} | 2525M-12GX | SNGX1207 ... | |
| | 2525M-15GX | SNGX1507 ... | |

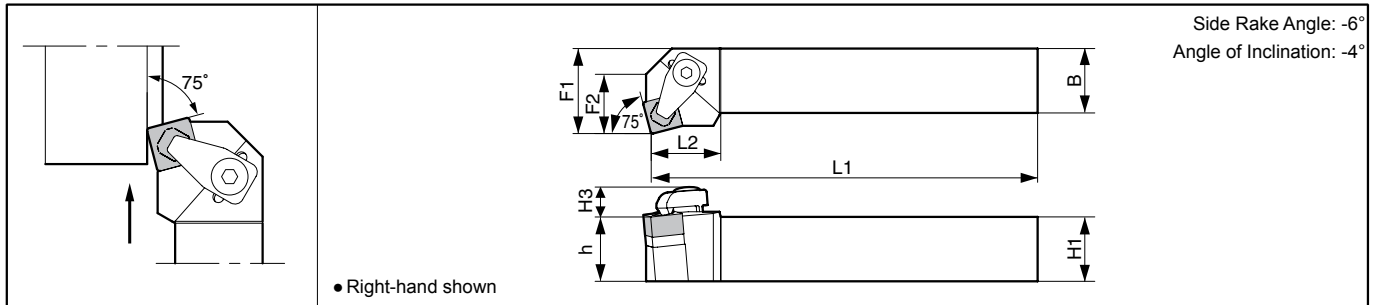
For recommended cutting conditions, see page [D39~D40](#)

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

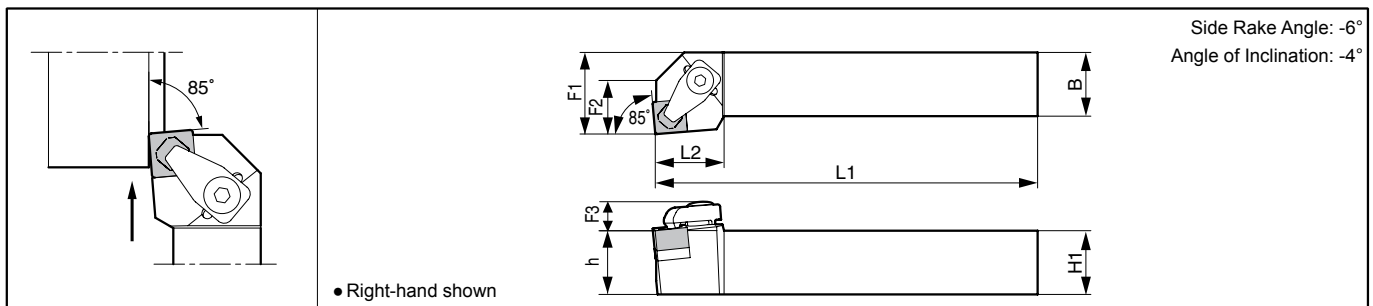
CS-N-GX (External)







CSKN-GX (Facing)




CSYN-GX (Facing)



Toolholder Dimensions

| Description | | Std. | | Dimension (mm) | | | | | | | Standard Corner-R(°) | Spare Parts | | | | |
|---------------------|-------------|------|---|----------------|----|----|-----|----|----|----|----------------------|---|---|---|---|--|
| | | R | L | H1=h | H3 | B | L1 | L2 | F1 | F2 | | Clamp Set | Wrench | Shim | Shim Screw | |
| | | | | | | | | | | | |  |  |  |  | |
| CS-N ^{R/L} | 2525M -12GX | ● | ● | 25 | 12 | 25 | 150 | 30 | 32 | - | 1.2 | CE-410 | LW-4 | SP-141 | M3X8 | |
| | 2525M -15GX | ● | ● | 25 | 13 | 25 | 150 | 30 | 32 | - | 1.2 | CE-410 | LW-4 | SP-162 | M4X10 | |
| CSKN ^{R/L} | 2525M -12GX | ● | ● | 25 | 12 | 25 | 150 | 27 | 32 | 23 | 1.2 | CE-410 | LW-4 | SP-141 | M3X8 | |
| | 2525M -15GX | ● | ● | 25 | 13 | 25 | 150 | 28 | 32 | 23 | 1.2 | CE-410 | LW-4 | SP-162 | M4X10 | |
| CSYN ^{R/L} | 2525M -12GX | ● | ● | 25 | 12 | 25 | 150 | 27 | 32 | 21 | 1.2 | CE-410 | LW-4 | SP-141 | M3X8 | |
| | 2525M -15GX | ● | ● | 25 | 13 | 25 | 150 | 29 | 32 | 23 | 1.2 | CE-410 | LW-4 | SP-162 | M4X10 | |

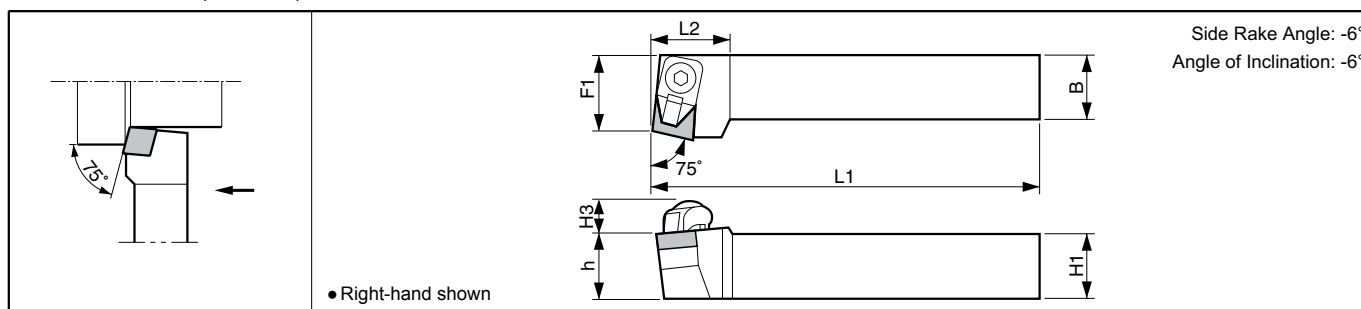
Applicable Inserts

| Applications | | Cast Iron | |
|---------------------|------------|--------------|---|
| Ref. Page | | B89 | |
| Toolholder | Insert | Ceramic |  |
| | | | |
| CS-N ^{R/L} | 2525M-12GX | SNGX1207 ... | |
| | 2525M-15GX | SNGX1507 ... | |
| CSKN ^{R/L} | 2525M-12GX | SNGX1207 ... | |
| | 2525M-15GX | SNGX1507 ... | |
| CSYN ^{R/L} | 2525M-12GX | SNGX1207 ... | |
| | 2525M-15GX | SNGX1507 ... | |

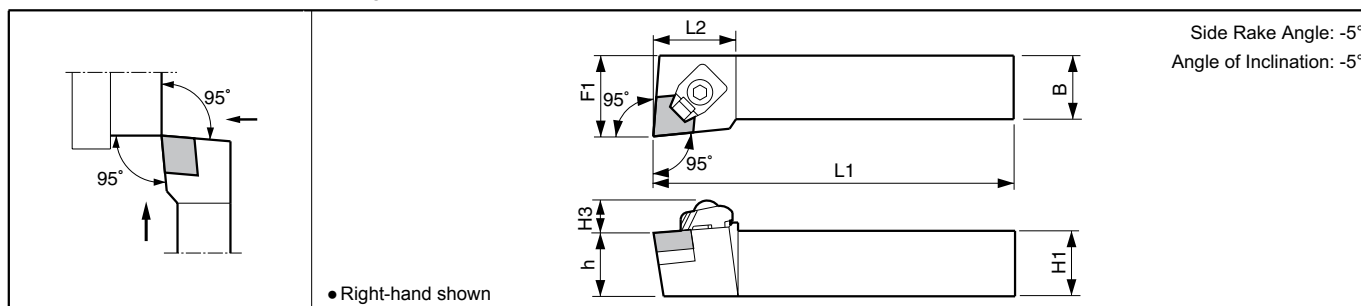
For recommended cutting conditions, see page [D39~D40](#)

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

CCRN-A (External)



CCLN-A (External / Facing)



Toolholder Dimensions

| Description | Std. | | Dimension (mm) | | | | | | | | Standard Corner-R(r_e) | Spare Parts | | | | |
|-------------------------------|------|---|----------------|----|----|-----|----|----|--|-----|----------------------------|-------------|--------|--------|------------|--|
| | R | L | H1=h | H3 | B | L1 | L2 | F1 | | | | Clamp Set | Wrench | Shim | Shim Screw | |
| CCRN ^{R/L} 2525M-09A | ● | ● | 25 | 11 | 25 | 150 | 27 | 27 | | 0.8 | CE-030A | LW-4 | SP-429 | HH3X12 | | |
| CCLN ^{R/L} 2525M-09A | ● | ● | 25 | 11 | 25 | 150 | 35 | 32 | | 0.8 | CE-030A | LW-4 | SP-429 | HH3X12 | | |
| 3225P-09A | ● | ● | 32 | | 25 | 170 | | | | | | | | | | |

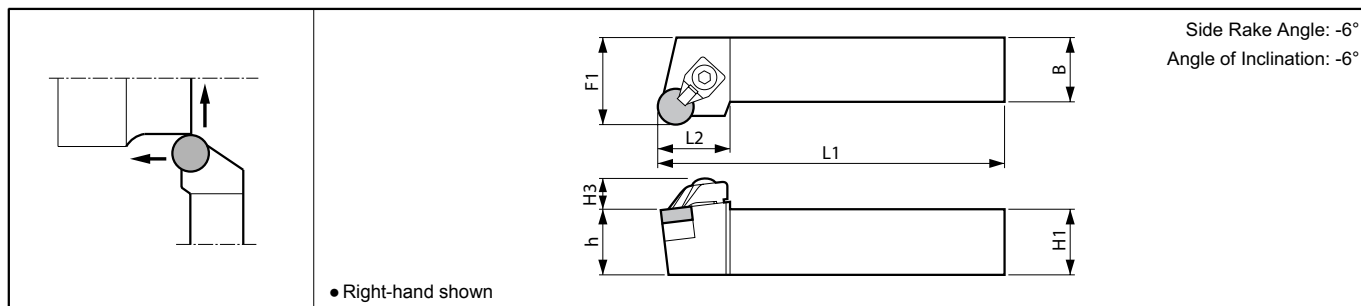
Applicable Inserts

| | |
|-----------------------------|----------------------------|
| Applications | Cast Iron / Hard Materials |
| Ref. Page | C9 |
| Insert | CBN(KBN900) |
| Toolholder | |
| CCRN ^{R/L} ...-09A | CNMN0903.. |
| CCLN ^{R/L} ...-09A | |

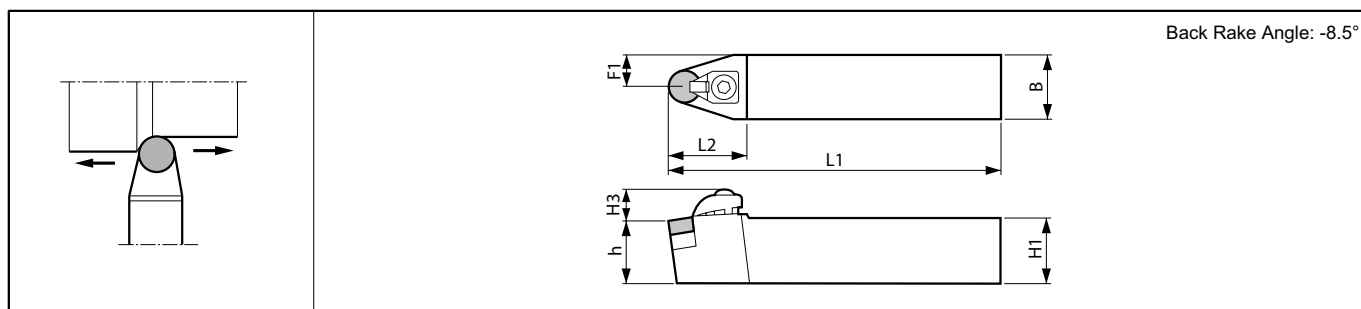
* For CNMN1204 Insert holder, see page D22.

For recommended cutting conditions, see page D39~D40







CRSN-A (External / Facing)



CRDN-A (External / Copying)



Toolholder Dimensions

| Description | | Std. | | | Dimension (mm) | | | | | | Standard Corner-R(°) | Spare Parts | | | | | |
|---------------------|------------|------|---|---|----------------|----|----|-----|----|------|----------------------|--|---|---|---|---|---|
| | | R | N | L | H1=h | H3 | B | L1 | L2 | F1 | | Clamp Set | Wrench | Shim | | Shim Screw | |
| | | | | | | | | | | | |  |  |  |  |  HH |  BH |
| CRSN ^{R/L} | 2525M -09A | ● | | ● | 25 | 11 | 25 | 150 | 26 | 32 | | - | CE-030A | LW-4 | SP-829 | - | HH3X12 |
| | 3225P -09A | ● | | ● | 32 | | | 170 | | | | | | | | | |
| | 2525M -12A | ● | | ● | 25 | 11 | 25 | 150 | 26 | 32 | | | | | - | SP-849 (SP-843) | BH3X12 |
| | 3225P -12A | ● | | ● | 32 | | | 170 | | | | | | | | | |
| CRDNN | 2525M -09A | | ● | | 25 | 11 | 25 | 150 | 29 | 12.5 | | - | CE-030A | LW-4 | SP-829 | - | HH3X12 |
| | 3225P -09A | | ● | | 32 | | | 170 | | | | | | | | | |
| | 2525M -12A | | ● | | 25 | 11 | 25 | 150 | 29 | 12.5 | | | | | - | SP-849 (SP-843) | BH3X12 |
| | 3225P -12A | | ● | | 32 | | | 170 | | | | | | | | | |

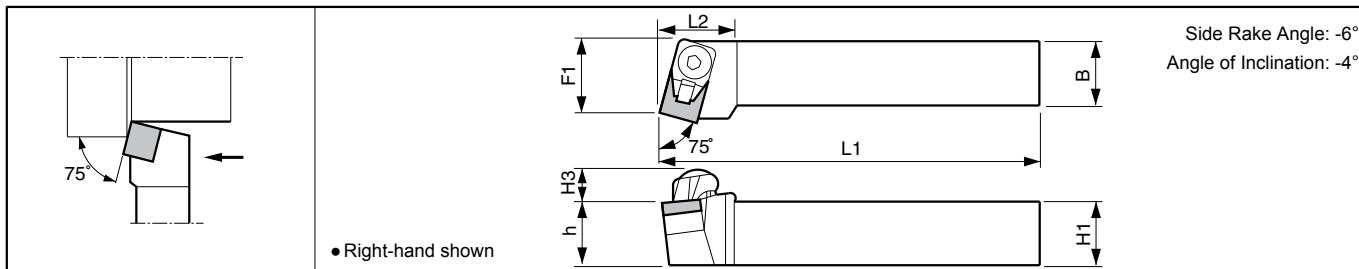
• 12A Holder Shim: When using RN □ □ 1204 Insert, purchase spare parts: SP-843 in () separately.

Applicable Inserts

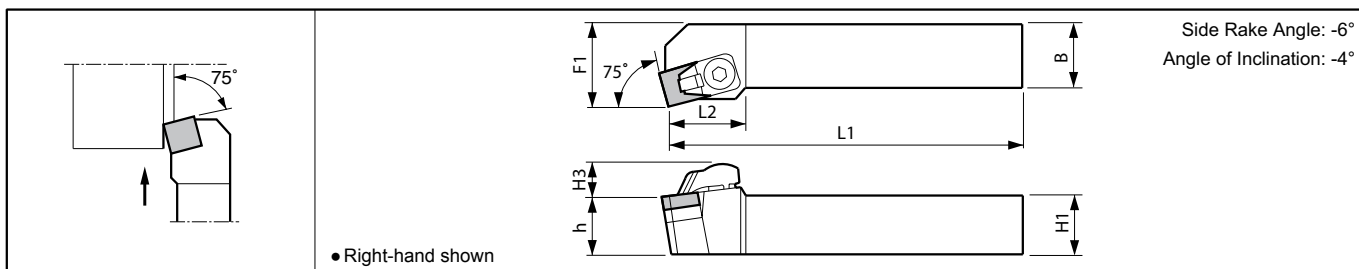
| Applications | Cast Iron / Hard Materials | | Cast Iron / Hard Materials | Cast Iron / Hard Materials | When using as toolholder for ceramic tools, prepare spare parts below separately. | |
|----------------------------------|----------------------------|--|----------------------------|----------------------------|---|--------------|
| Ref. Page | C9 | | B87 | B87 | | |
| Insert | CBN(KBN900) | | Ceramic | Ceramic | Shim | Shim Screw |
| | | | | | | |
| CRSN^{R/L}...-09A | RNMN090300 | | RNGN090300 | (RNGN090400) | SP-826 | - |
| CRSN^{R/L}...-12A | RNMN120300 (RNMN120400) | | - | (RNGN120400) | SP-843 | M3X12 |
| CRDNN...-09A | RNMN090300 | | RNGN090300 | (RNGN120700) | SP-841 | M3X8 |
| CRDNN...-12A | RNMN120300 (RNMN120400) | | - | (RNGN090400) | SP-826 | - |
| | | | | (RNGN120400) | SP-843 | M3X12 |
| | | | | (RNGN120700) | SP-841 | M3X8 |

For recommended cutting conditions, see page [D39~D40](#)

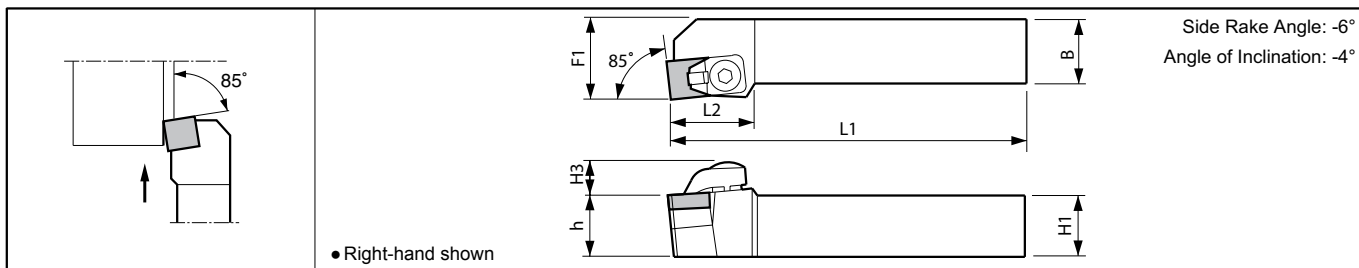
CSRN-A (External)



CSKN-A (Facing)



CSYN-A (Facing)



Toolholder Dimensions

| Description | Std. | Dimension (mm) | | | | | | | | Standard Corner-R (R) | Spare Parts | | | | |
|-------------------------------|------|----------------|----|------|----|-----|----|----|----|-----------------------|-------------|--------|--------|-----------------|------------|
| | | R | L | H1=h | H3 | B | L1 | L2 | F1 | | Clamp Set | Wrench | Shim | | Shim Screw |
| CSRN ^{R/L} 2525M-09A | ● | ● | 25 | 11 | 25 | 150 | 22 | 27 | | 0.8 | CE-030A | LW-4 | SP-129 | - | HH3X12 |
| | ● | ● | 25 | 11 | 25 | 150 | 22 | 27 | | | | | - | SP-148 (SP-143) | BH3X12 |
| CSKN ^{R/L} 2525M-09A | ● | | 25 | 11 | 25 | 150 | 27 | 32 | | 0.8 | CE-030A | LW-4 | SP-129 | - | HH3X12 |
| | ● | | 25 | 11 | 25 | 150 | 27 | 32 | | | | | - | SP-148 (SP-143) | BH3X12 |
| CSYN ^{R/L} 2525M-09A | ● | ● | 25 | 11 | 25 | 150 | 26 | 32 | | 0.8 | CE-030A | LW-4 | SP-129 | - | HH3X12 |
| | ● | ● | 25 | 11 | 25 | 150 | 26 | 32 | | | | | - | SP-148 (SP-143) | BH3X12 |

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

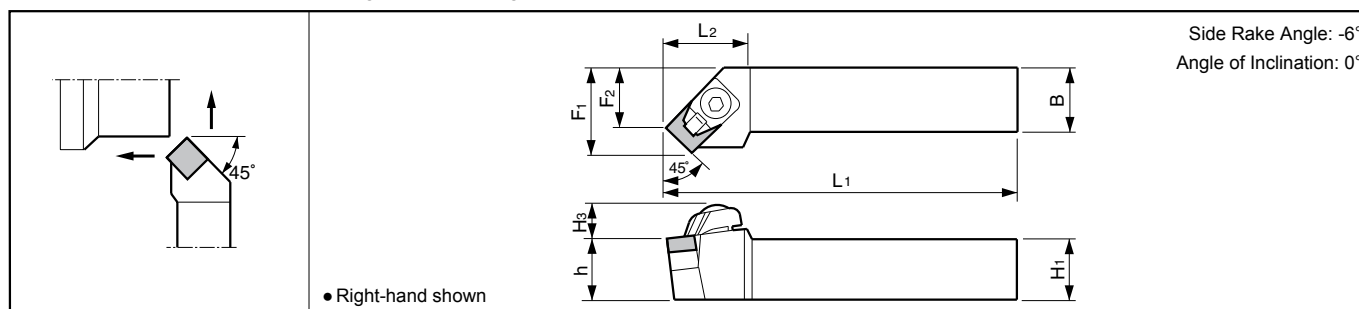
Applicable Inserts

| Applications | Cast Iron / Hard Materials | Cast Iron | Cast Iron / Hard Materials | When using as toolholder for ceramic tools, prepare spare parts below separately. | | | |
|-----------------------------|----------------------------|----------------|---|---|-----------|---------------|------------|
| Ref. Page | C9 | B28 | B88, B89 | Chipbreaker | Clamp Set | Shim | Shim Screw |
| Insert | CBN(KBN900) | coated Carbide | Ceramic | | | | |
| Toolholder | | | | | | | |
| CSRN ^{R/L} ...-09A | SNMN0903.. | - | - | - | - | - | - |
| CSRN ^{R/L} ...-12A | SNMN1203.. (SNMN1204..) | (SNMN1204..) | (SNGN1204..) (SNMN1204..) (SNGN1207..) (SNMN1207..) | CB-11 | CE-020 | SP-143 SP-141 | M3X12 M3X8 |
| CSKN ^{R/L} ...-09A | SNMN0903.. | - | - | - | - | - | - |
| CSKN ^{R/L} ...-12A | SNMN1203.. (SNMN1204..) | (SNMN1204..) | (SNGN1204..) (SNMN1204..) (SNGN1207..) (SNMN1207..) | CB-11 | CE-020 | SP-143 SP-141 | M3X12 M3X8 |
| CSYN ^{R/L} ...-09A | SNMN0903.. | - | - | - | - | - | - |
| CSYN ^{R/L} ...-12A | SNMN1203.. (SNMN1204..) | (SNMN1204..) | (SNGN1204..) (SNMN1204..) (SNGN1207..) (SNMN1207..) | CB-11 | CE-020 | SP-143 SP-141 | M3X12 M3X8 |

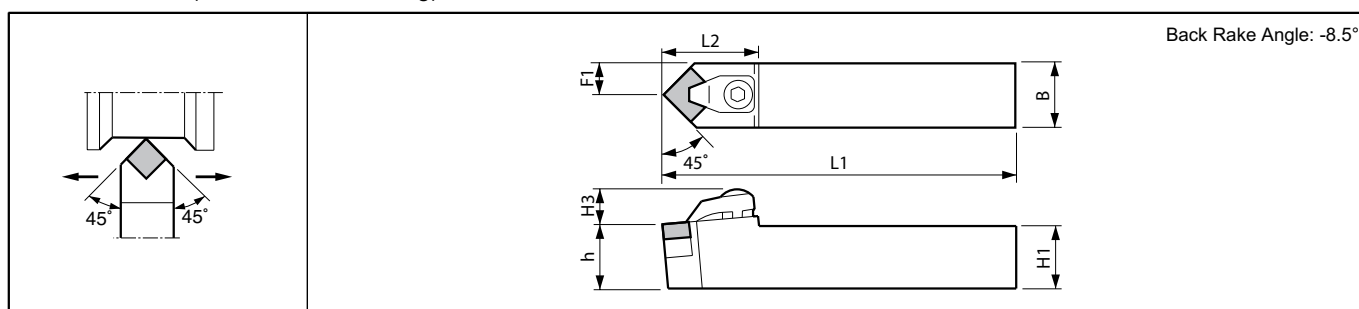
For recommended cutting conditions, see page [D39~D40](#)

● : Std. Item ○ : Check Availability R : Std. Item (R-hand Only) L : Std. Item (L-hand Only)

CSSN-A (External / Facing / Chamfering)



CSDN-A (External / Chamfering)



Toolholder Dimensions

| Description | Std. | | Dimension (mm) | | | | | | | | Standard Corner-R(R_2) | Spare Parts | | | | | |
|---------------------------|------|---|----------------|------|----|-----|----|------|----|-----|----------------------------|-------------|---------------|------|---------------|------------|--|
| | | | | | | | | | | | | Clamp Set | Wrench | Shim | | Shim Screw | |
| | R | N | L | H1=h | H3 | B | L1 | L2 | F1 | F2 | | | | | | | |
| CSSN^R/L | ● | ● | 25 | 11 | 25 | 150 | 27 | 32 | 25 | 0.8 | CE-030A | LW-4 | SP-129 | - | HH3X12 | | |
| | | | | | | | | | | | | | | | | | |
| 2525M-09A | | | | | | | | | | | | | | | | | |
| 2525M-12A | | | | | | | | | | | | | | | | | |
| CSDNN | ● | ● | 25 | 13 | 25 | 150 | 33 | 12.5 | - | 0.8 | CE-040 | LW-4 | SP-129 | - | HH3X12 | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| 2525M-09A | | | | | | | | | | | | | | | | | |
| 3225P-09A | | | | | | | | | | | | | | | | | |
| 2525M-12A | | | | | | | | | | | | | | | | | |

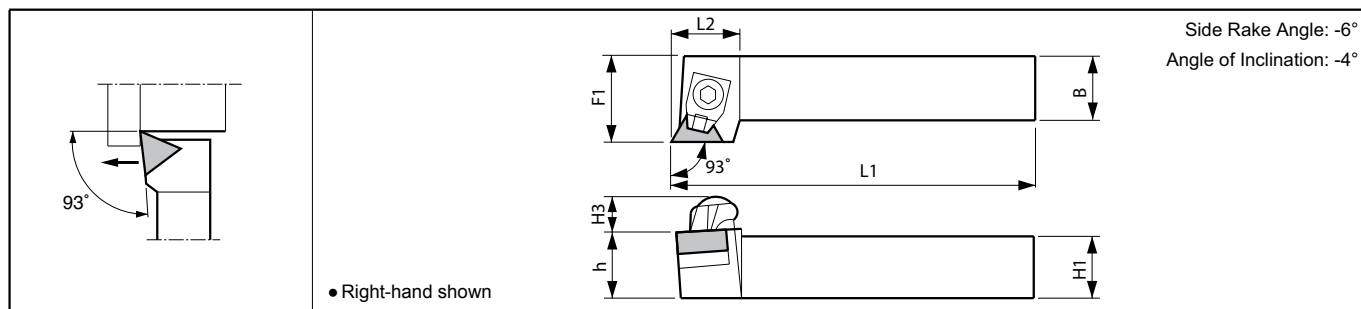
• 12A Holder Shim: When using SN □□ 1204 Insert, purchase spare parts: SP-143 in () separately.

Applicable Inserts

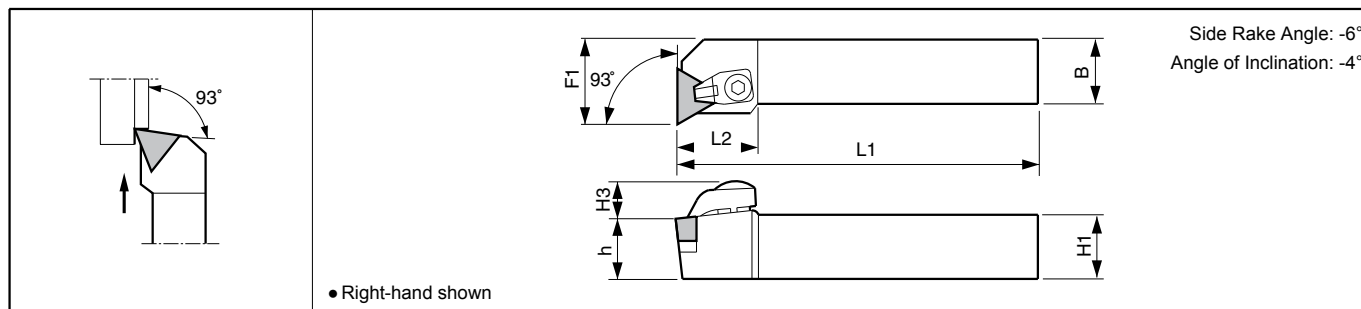
| Applications | Cast Iron / Hard Materials | Cast Iron | Cast Iron / Hard Materials | When using as toolholder for ceramic tools, prepare spare parts below separately. | | | |
|----------------------------------|----------------------------|--------------|--|---|---------------|--------------------------------|-----------------------------|
| Ref. Page | C9 | B28 | B88, B89 | Chipbreaker | Clamp Set | Shim | Shim Screw |
| Insert | | | | | | | |
| Toolholder | | | | | | | |
| CSSN^R/L...-09A | SNMN0903.. | - | - | - | - | - | - |
| CSSN^R/L...-12A | SNMN1203.. (SNMN1204..) | (SNMN1204..) | (SNGN1204..) (SNMN1204..) (SNGN1207..) (SNMN1207..) | CB-11 | CE-020 | SP-143 SP-141 | M3X12 M3X8 |
| CSDNN...-09A | SNMN0903.. | - | - | - | - | - | - |
| CSDNN...-12A | SNMN1203.. (SNMN1204..) | (SNMN1204..) | (SNGN1204..) (SNMN1204..) (SNGN1207..) (SNMN1207..) | - | - | SP-143 SP-141 | M3X12 M3X8 |

For recommended cutting conditions, see page ➡ **D39~D40**

CTJN-A (External)





CTUN-A (Facing)



Toolholder Dimensions

| Description | Std. | | Dimension (mm) | | | | | | | Standard Corner-R(°) | Spare Parts | | | |
|-------------------------------|------|---|----------------|----|----|-----|----|----|-----|----------------------|-------------|--------|--------|------------|
| | R | L | H1=h | H3 | B | L1 | L2 | F1 | | | Clamp Set | Wrench | Shim | Shim Screw |
| CTJN ^{R/L} 2525M-11A | ● | ● | 25 | 11 | 25 | 150 | 22 | 32 | 0.8 | CE-030A | LW-4 | SP-219 | HH3X12 | |
| CTUN ^{R/L} 2525M-11A | ● | ● | 25 | 11 | 25 | 150 | 28 | 32 | 0.8 | CE-030A | LW-4 | SP-219 | HH3X12 | |
| 3225P-11A | ● | | 32 | | | 170 | | | | | | | | |

Applicable Inserts

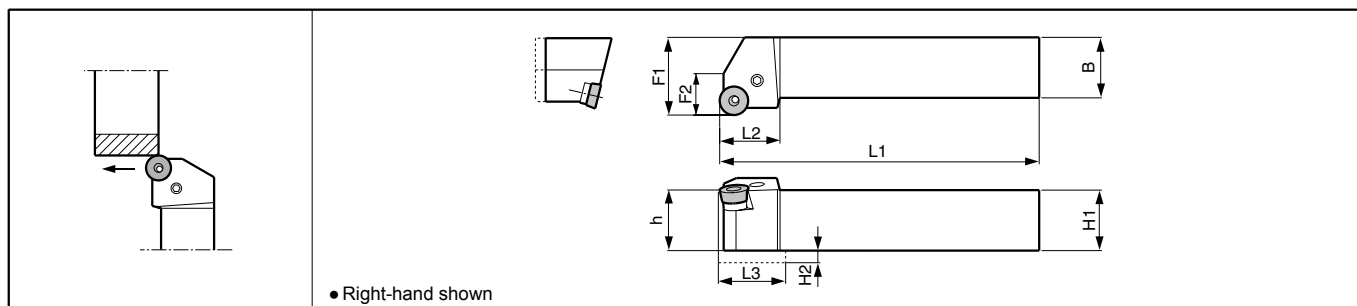
| Applications | Cast Iron / Hard Materials | Cast Iron / Hard Materials |
|-----------------------------|---|---|
| Ref. Page | C9 | B90 |
| Insert | CBN(KBN900) | Ceramic |
| Toolholder |  |  |
| CTJN ^{R/L} ...-11A | TNMN1103.. | TNGN1103.. |
| CTUN ^{R/L} ...-11A | | |

* TNMN1604 Insert holder is described in D26.

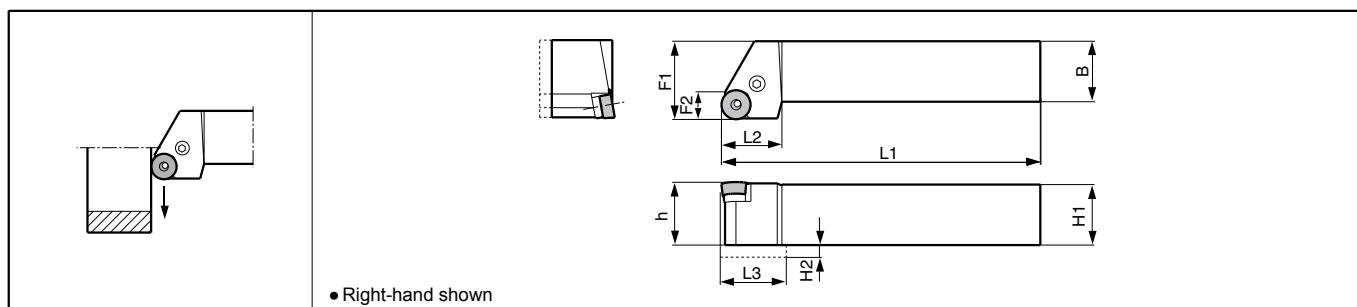
For recommended cutting conditions, see page D39~D40


























PRGC-BE (External)



PRGC-BF (Facing)



Toolholder Dimensions

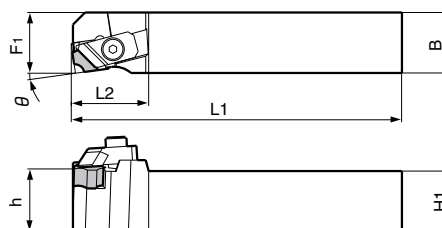
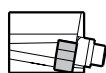
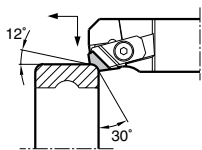
| Description | | Std. | | Dimension (mm) | | | | | | | | Spare Parts | | | | | | Applicable Inserts  |
|---|---|---|----|----------------|----|-----|----|----|----|----|---------------|--|---|--|--|--|--|---|
| | | | | | | | | | | | | Lever | Lock Screw | Shim | Shim Pin | Punch | Wrench | |
| | | R | L | H1=h | H2 | B | L1 | L2 | L3 | F1 | F2 |  |  |  |  |  |  | |
| PRGC^{R/L} 2020K -12BE 2525M -12BE 2020K -16BE 2525M -16BE |  |  | 20 | - | 20 | 125 | 22 | - | 25 | 15 | LL-1CN | LS-1N | LR-12C | LSP-1 | PC-1 | FH-2.5 | RCMT 1204M0-BB | |
| |  |  | 25 | - | 25 | 150 | 25 | - | 32 | 17 | | | | | | | | |
| |  |  | 20 | 5 | 20 | 125 | 27 | 27 | 29 | 22 | LL-2C | LS-1T | LR-16C | LSP-2 | PC-2 | FH-2.5 | RCMT 1606M0-BB | |
| |  |  | 25 | - | 25 | 150 | 27 | - | 32 | 22 | | | | | | | | |
| PRGC^{R/L} 2020K -12BF 2525M -12BF 2020K -16BF 2525M -16BF |  |  | 20 | - | 20 | 125 | 22 | - | 25 | 10 | LL-1CN | LS-1N | LR-12C | LSP-1 | PC-1 | FH-2.5 | RCMT 1204M0-BB | |
| |  |  | 25 | - | 25 | 150 | 25 | - | 32 | 11 | | | | | | | | |
| |  |  | 20 | 5 | 20 | 125 | 27 | 27 | 25 | 17 | LL-2C | LS-1T | LR-16C | LSP-2 | PC-2 | FH-2.5 | RCMT 1606M0-BB | |
| |  |  | 25 | - | 25 | 150 | 27 | - | 32 | 17 | | | | | | | | |

Applicable Inserts

| Insert | Description | Dimension (mm) | | | | Angle (°) |
|--------|-----------------------------|----------------|------|-----|----|-----------|
| | | A | T | ød | rε | |
| | RCMT 1204M0-BB 1606M0-BB | 12.0 | 4.76 | 4.2 | - | 7° |
| | | 16.0 | 6.35 | 5.5 | - | |

For recommended cutting conditions, see page ● D39~D40

CBSN (External Round Chamfering)



• Right-hand shown

Toolholder Dimensions

| Description | Std. | | Dimension (mm) | | | | | | θ | Spare Parts | | | | Applicable Inserts ➔ B80 |
|-------------------------------|------|---|----------------|----|-----|----|----|--|----------|----------------------|--------|-------|------------|-----------------------------|
| | R | L | H1=h | B | L1 | L2 | F1 | | | Clamp Set | Wrench | Shim | Shim Screw | |
| CBSN ^{R/L} 2020K -12 | ● | ● | 20 | 20 | 125 | 32 | 20 | | 9° | CP-RC ^{R/L} | LW-5 | SP-RC | SP3X8 | SNMF1204 ○○ -21 |
| 2525M-12 | ● | ● | 25 | 25 | 150 | 32 | 25 | | | | | | | |

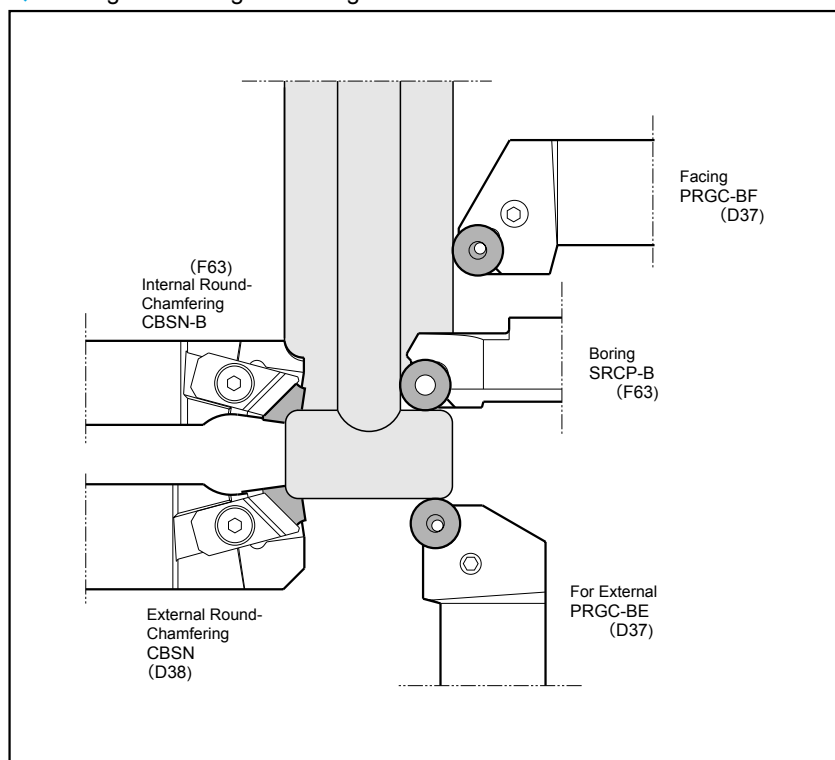
* Clamp Set : RP-RCR for Right-hand Toolholder, and CP-RCL for Left-hand Toolholder.

Applicable Inserts

| Insert | Description | Dimension (mm) | | | | Angle (°) |
|--------|----------------|----------------|------|-----|------------|--------------|
| | | A | T | B | ϵ | |
| | SNMF 120406-21 | | | 1.5 | 0.6 | 21° |
| | 120410-21 | | | 3.0 | 1.0 | |
| | 120416-21 | 12.70 | 4.76 | 3.1 | 1.6 | |
| | 120421-21 | | | 3.2 | 2.1 | |
| | 120426-21 | | | 3.3 | 2.6 | |

Tooling for Bearing Machining

For recommended cutting conditions, see page ➔ D39~D40



Recommended Cutting Conditions

Recommended Cutting Conditions - External Turning (Negative Insert)

(ap indicates radius)

| ISO Classification | Workpiece Material | Hardness | Cutting Range | Application | Recommended Chipbreaker | Recommended Grade | Corner-R (rε) | Lower Limit - Recommendation - Upper Limit | | |
|--------------------|--|-----------|------------------------------------|--------------|-------------------------|-------------------|---------------|--|-----------------|--------------------|
| | | | | | | | | Vc(m/min) | ap(mm) | f(mm/rev) |
| P | Low-carbon Steel Low-carbon Alloy | HB 300 | Finishing (Gloss Oriented) | Continuous | XP | TN6020 | 0.4 | 250 - 320 - 380 | 0.2 - 0.5 - 0.7 | 0.07 - 0.12 - 0.2 |
| | | | | Interruption | | TN6020 | 0.8 | 220 - 300 - 360 | 0.2 - 0.5 - 0.7 | 0.07 - 0.12 - 0.2 |
| | | | Finishing (Finish Oriented) | Continuous | XP | PV7010 | 0.4 | 250 - 300 - 350 | 0.2 - 0.5 - 0.7 | 0.07 - 0.12 - 0.2 |
| | | | | Interruption | | PV7025 | 0.8 | 220 - 280 - 340 | 0.2 - 0.5 - 0.7 | 0.07 - 0.12 - 0.2 |
| | | | Finishing-Medium (Gloss Oriented) | Continuous | XQ | TN6020 | 0.4 | 250 - 300 - 350 | 0.5 - 1.0 - 1.5 | 0.17 - 0.25 - 0.3 |
| | | | | Interruption | | TN6020 | 0.8 | 220 - 260 - 320 | 0.5 - 1.0 - 1.5 | 0.17 - 0.25 - 0.3 |
| | | | Finishing-Medium (Finish Oriented) | Continuous | XQ | PV7010 | 0.8 | 250 - 300 - 350 | 0.5 - 1.0 - 1.5 | 0.17 - 0.25 - 0.3 |
| | | | | Interruption | | PV7025 | 0.8 | 220 - 260 - 320 | 0.5 - 1.0 - 1.5 | 0.17 - 0.25 - 0.3 |
| | | | Medium-Roughing | Continuous | XS | PV7025 | 0.8 | 200 - 250 - 300 | 0.8 - 1.5 - 2.0 | 0.25 - 0.3 - 0.4 |
| | | | | Interruption | | CA5515 | 0.8 | 160 - 210 - 260 | 0.8 - 1.5 - 2.0 | 0.25 - 0.3 - 0.4 |
| | | | Roughing | Continuous | PS | CA5515 | 0.8 | 180 - 220 - 260 | 1.0 - 2.5 - 3.5 | 0.2 - 0.3 - 0.4 |
| | | | | Interruption | | CA5525 | 1.2 | 150 - 200 - 240 | 1.0 - 2.5 - 3.5 | 0.2 - 0.3 - 0.4 |
| | Medium-carbon Steel Medium-carbon Alloy | HB 300 | Medium-Roughing High Feed Rate | Continuous | PT | CA5515 | 0.8 | 150 - 200 - 240 | 1.5 - 3.0 - 4.5 | 0.25 - 0.35 - 0.45 |
| | | | | Interruption | | CA5525 | 1.2 | 120 - 180 - 220 | 1.5 - 3.0 - 4.5 | 0.25 - 0.35 - 0.45 |
| | | | Roughing High Feed Rate | Continuous | PH | CA5515 | 1.2 | 150 - 200 - 240 | 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 |
| | | | | Interruption | | CA5525 | 1.6 | 120 - 180 - 220 | 2.0 - 5.0 - 8.0 | 0.3 - 0.5 - 0.7 |
| | | | Roughing (Low Cutting Force) | Continuous | PX (Single Side) | CA5515 | 1.2 | 150 - 200 - 240 | 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 |
| | | | | Interruption | | CA5525 | 1.6 | 120 - 180 - 220 | 2.0 - 5.0 - 8.0 | 0.3 - 0.5 - 0.7 |
| | | | Finishing (Time Oriented) | Continuous | WP (Wiper) | PV7010 | 0.8 | 200 - 250 - 300 | 0.3 - 0.5 - 1.0 | 0.2 - 0.3 - 0.4 |
| | | | | Interruption | | CA5515 | 0.8 | 160 - 220 - 280 | 0.3 - 0.5 - 1.0 | 0.2 - 0.3 - 0.4 |
| | | | Finishing-Medium (Time Oriented) | Continuous | WQ (Wiper) | PV7010 | 0.8 | 180 - 220 - 260 | 1.0 - 2.0 - 3.0 | 0.2 - 0.3 - 0.4 |
| | | | | Interruption | | CA5525 | 0.8 | 130 - 180 - 240 | 1.0 - 2.0 - 3.0 | 0.2 - 0.3 - 0.4 |
| | | | Finishing (Gloss Oriented) | Continuous | GP | TN6010 | 0.4 | 200 - 250 - 300 | 0.3 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 |
| | | | | Interruption | | TN6010 | 0.8 | 180 - 230 - 280 | 0.3 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 |
| | | | Finishing (Finish Oriented) | Continuous | GP | PV7010 | 0.4 | 200 - 250 - 300 | 0.3 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 |
| | | | | Interruption | | PV7025 | 0.8 | 200 - 240 - 280 | 0.3 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 |
| | | | Finishing-Medium (Gloss Oriented) | Continuous | CQ | TN6010 | 0.8 | 180 - 230 - 270 | 0.5 - 1.5 - 2.5 | 0.1 - 0.2 - 0.25 |
| | | | | Interruption | | TN6020 | 1.2 | 150 - 210 - 250 | 0.5 - 1.5 - 2.5 | 0.1 - 0.15 - 0.2 |
| | | | Finishing-Medium (Finish Oriented) | Continuous | CQ | PV7010 | 0.8 | 160 - 210 - 260 | 0.5 - 1.5 - 2.5 | 0.1 - 0.2 - 0.25 |
| | | | | Interruption | | CA5525 | 0.8 | 140 - 200 - 240 | 0.5 - 1.5 - 2.5 | 0.1 - 0.15 - 0.2 |
| | | | Medium-Roughing | Continuous | GS | CA5515 | 0.8 | 150 - 200 - 240 | 1.0 - 2.0 - 3.0 | 0.2 - 0.3 - 0.5 |
| | | | | Interruption | | CA5525 | 1.2 | 120 - 180 - 220 | 1.0 - 2.0 - 3.0 | 0.15 - 0.2 - 0.3 |
| | | | Roughing | Continuous | PS | CA5515 | 0.8 | 150 - 200 - 240 | 1.0 - 2.5 - 3.5 | 0.2 - 0.3 - 0.4 |
| | | | | Interruption | | CA5525 | 1.2 | 120 - 160 - 200 | 1.0 - 2.5 - 3.5 | 0.2 - 0.3 - 0.4 |
| | | | Medium-Roughing High Feed Rate | Continuous | PT | CA5515 | 0.8 | 120 - 180 - 230 | 1.5 - 3.0 - 4.5 | 0.25 - 0.35 - 0.45 |
| | | | | Interruption | | CA5525 | 1.2 | 100 - 150 - 200 | 1.5 - 3.0 - 4.5 | 0.25 - 0.35 - 0.45 |
| | | | Roughing High Feed Rate | Continuous | PH | CA5515 | 1.2 | 120 - 180 - 230 | 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 |
| | | | | Interruption | | CA5525 | 1.6 | 100 - 150 - 200 | 2.0 - 5.0 - 8.0 | 0.3 - 0.5 - 0.7 |
| | | | Roughing (Low Cutting Force) | Continuous | PX (Single Side) | CA5515 | 1.2 | 120 - 180 - 230 | 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 |
| | | | | Interruption | | CA5525 | 1.6 | 100 - 150 - 200 | 2.0 - 5.0 - 8.0 | 0.3 - 0.5 - 0.7 |
| | High-carbon Alloy | HB 280 | Finishing (Gloss Oriented) | Continuous | GP | TN6010 | 0.4 | 150 - 200 - 250 | 0.3 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 |
| | | | | Interruption | | TN6020 | 0.8 | 120 - 180 - 220 | 0.3 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 |
| | | | Finishing (Finish Oriented) | Continuous | GP | PV7010 | 0.4 | 120 - 180 - 240 | 0.3 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 |
| | | | | Interruption | | CA5515 | 0.8 | 100 - 150 - 200 | 0.3 - 0.5 - 1.0 | 0.05 - 0.1 - 0.2 |
| | | | Finishing-Medium | Continuous | CQ | CA5515 | 0.8 | 120 - 160 - 220 | 0.5 - 1.5 - 2.5 | 0.15 - 0.25 - 0.3 |
| | | | | Interruption | | CA5525 | 0.8 | 100 - 140 - 180 | 0.5 - 1.5 - 2.5 | 0.15 - 0.2 - 0.25 |
| | | | Medium-Roughing | Continuous | PS | CA5515 | 0.8 | 120 - 150 - 200 | 1.0 - 2.0 - 3.0 | 0.2 - 0.3 - 0.5 |
| | | | | Interruption | | CA5525 | 0.8 | 100 - 130 - 180 | 1.0 - 2.0 - 3.0 | 0.15 - 0.2 - 0.3 |
| | | | Medium-Roughing High Feed Rate | Continuous | PT | CA5515 | 0.8 | 100 - 140 - 180 | 1.5 - 3.0 - 4.5 | 0.25 - 0.35 - 0.45 |
| | | | | Interruption | | CA5525 | 1.2 | 80 - 120 - 160 | 1.5 - 3.0 - 4.5 | 0.25 - 0.35 - 0.45 |
| | | | Roughing High Feed Rate | Continuous | PH | CA5515 | 1.2 | 100 - 140 - 180 | 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 |
| | | | | Interruption | | CA5525 | 1.6 | 80 - 120 - 160 | 2.0 - 5.0 - 8.0 | 0.3 - 0.5 - 0.7 |
| | | | Roughing (Low Cutting Force) | Continuous | PX (Single Side) | CA5515 | 1.2 | 100 - 140 - 180 | 2.0 - 5.0 - 8.0 | 0.4 - 0.6 - 0.8 |
| | | | | Interruption | | CA5525 | 1.6 | 80 - 120 - 160 | 2.0 - 5.0 - 8.0 | 0.3 - 0.5 - 0.7 |

D



External

Recommended Cutting Conditions

Recommended Cutting Conditions - External Turning (Negative Insert)

(ap indicates radius)

| ISO Classification | Workpiece Material | Hardness | Cutting Range | Application | Recommended Chipbreaker | Recommended Grade | Corner-R (r _e) | Lower Limit - Recommendation - Upper Limit | | |
|--------------------|-----------------------|-------------|--|-------------------------|-------------------------|-------------------|----------------------------|--|--|---|
| | | | | | | | | vc(m/min) | ap(mm) | f(mm/rev) |
| D External M | Stainless Steel | HB ≤ 220 | Finishing (Gloss Oriented) | Continuous Interruption | HQ | TN6020 TN6020 | 0.8 0.8 | 120 - 160 - 200 100 - 120 - 150 | 0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5 | 0.08 - 0.15 - 0.2 0.05 - 0.1 - 0.15 |
| | | | Finishing | Continuous Interruption | MQ | CA6515 CA6525 | 0.4 0.8 | 120 - 180 - 240 100 - 160 - 220 | 0.5 - 1.0 - 1.5 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 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 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 1.0 - 2.0 - 4.0 | 0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4 |
| | Stainless Steel | HB ≤ 300 | Finishing (Gloss Oriented) | Continuous Interruption | HQ | TN6020 TN6020 | 0.8 0.8 | 100 - 120 - 150 80 - 100 - 120 | 0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5 | 0.05 - 0.1 - 0.15 0.05 - 0.08 - 0.1 |
| | | | Finishing | Continuous Interruption | MQ | CA6515 CA6525 | 0.4 0.8 | 100 - 120 - 150 80 - 100 - 120 | 0.5 - 1.0 - 1.5 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 1.0 - 2.0 - 3.0 | 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 1.0 - 2.0 - 3.0 | 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 1.0 - 2.0 - 4.0 | 0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4 |
| K | Gray Cast Iron | HB ≤ 250 | High Speed Cutting | Continuous Interruption | Without Chipbreaker | KBN60M KBN900 | 0.8 1.2 1.2 | 400 - 700 - 900 500 - 900 - 1200 500 - 700 - 900 | 0.05 - 0.2 - 0.5 0.1 - 0.5 - 1.0 0.5 - 1.0 - 1.5 | 0.03 - 0.05 - 0.1 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.2 |
| | | | Finishing (Gloss Oriented) | Continuous Interruption | Standard | PV7005 TN6020 | 0.8 0.8 | 300 - 350 - 400 100 - 150 - 200 | 0.5 - 1.0 - 1.5 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 0.3 - 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 1.0 - 2.0 - 3.0 | 0.15 - 0.25 - 0.35 0.15 - 0.2 - 0.3 |
| | | | Medium | Continuous Interruption | Standard | CA4505 CA4515 | 0.8 1.2 | 200 - 250 - 300 150 - 200 - 250 | 0.5 - 2.0 - 2.5 0.5 - 2.0 - 2.5 | 0.1 - 0.2 - 0.3 0.08 - 0.15 - 0.2 |
| | | | Roughing | Continuous Interruption | ZS | CA4505 CA4515 | 0.8 1.2 | 200 - 250 - 300 150 - 200 - 250 | 1.0 - 2.0 - 4.0 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 Cutting | Continuous Interruption | Without Chipbreaker | KBN60M PT600M | 0.4 0.8 | 200 - 300 - 400 200 - 250 - 350 | 0.1 - 0.3 - 0.5 0.1 - 0.5 - 1.0 | 0.1 - 0.15 - 0.2 0.1 - 0.2 - 0.4 |
| | | | Finishing (Gloss Oriented) | Continuous Interruption | Standard | PV7005 TN6020 | 0.8 0.8 | 150 - 250 - 300 100 - 150 - 180 | 0.5 - 1.0 - 1.5 0.5 - 1.0 - 1.5 | 0.1 - 0.2 - 0.3 0.08 - 0.15 - 0.2 |
| | | | Medium | Continuous Interruption | Standard | CA4505 CA4515 | 0.8 1.2 | 150 - 200 - 250 120 - 180 - 220 | 0.5 - 2.0 - 2.5 0.5 - 2.0 - 2.5 | 0.1 - 0.2 - 0.3 0.08 - 0.15 - 0.2 |
| | | | Roughing | Continuous Interruption | ZS | CA4505 CA4515 | 0.8 1.2 | 150 - 200 - 250 120 - 180 - 220 | 1.0 - 2.0 - 4.0 1.0 - 2.0 - 4.0 | 0.2 - 0.3 - 0.4 0.2 - 0.3 - 0.4 |
| N | Non-ferrous Metals | HB ≤ 100 | High Speed Cutting (Rainbow Surface Gross) | Continuous | Without Chipbreaker | KPD001 | 0.4 | 300 - 800 - 2000 | 0.05 - 0.5 - 1.0 | 0.05 - 0.1 - 0.15 |
| | | | Finishing | Continuous Interruption | A3 | KW10 KW10 | 0.8 0.8 | 400 - 500 - 700 400 - 500 - 700 | 0.5 - 1.0 - 2.0 0.5 - 1.0 - 2.0 | 0.1 - 0.2 - 0.25 0.1 - 0.2 - 0.25 |
| | | | Medium | Continuous Interruption | AH | KW10 KW10 | 0.8 0.8 | 200 - 300 - 500 200 - 300 - 500 | 1.0 - 2.0 - 3.5 1.0 - 2.0 - 3.5 | 0.1 - 0.3 - 0.4 0.1 - 0.3 - 0.4 |
| S | Titanium Alloy | HB ≤ 400 | Precision Cutting (Rainbow Surface Gross) | Continuous Interruption | Without Chipbreaker | KPD001 KPD001 | 0.4 0.4 | 100 - 150 - 180 70 - 120 - 150 | 0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5 | 0.03 - 0.1 - 0.15 0.03 - 0.07 - 0.1 |
| | | | Finishing | Continuous Interruption | MQ | SW05 SW05 | 0.4 0.4 | 40 - 70 - 100 40 - 70 - 100 | 0.2 - 0.5 - 1.0 0.2 - 1.5 - 1.0 | 0.05 - 0.2 - 0.3 0.05 - 0.15 - 0.2 |
| | | | Medium | Continuous Interruption | MU | SW05 SW05 | 0.8 0.8 | 40 - 60 - 80 40 - 60 - 80 | 0.5 - 1.0 - 3.0 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 | PR1310 PR1310 | 0.4 0.8 | 40 - 60 - 80 40 - 60 - 80 | 0.2 - 0.5 - 1.5 0.2 - 0.5 - 1.5 | 0.03 - 0.08 - 0.12 0.05 - 0.1 - 0.15 |
| | | | Medium | Continuous Interruption | MS | PR1310 PR1310 | 0.8 1.2 | 40 - 60 - 80 40 - 60 - 80 | 0.5 - 1.0 - 2.0 0.5 - 1.0 - 2.0 | 0.05 - 0.1 - 0.15 0.1 - 0.15 - 0.2 |
| H | Hard Materials | 40 ~ 50 HRC | Finishing | Continuous Interruption | HQ Standard | CA5515 CA5515 | 0.8 0.8 | 60 - 100 - 120 30 - 50 - 70 | 0.1 - 0.3 - 0.5 0.1 - 0.3 - 0.5 | 0.05 - 0.08 - 0.1 0.05 - 0.08 - 0.1 |
| | | 40-50 HRC | Finishing | Continuous Interruption | Without Chipbreaker | PT600M PT600M | 0.8 1.2 | 60 - 80 - 100 30 - 40 - 60 | 0.2 - 0.5 - 0.7 0.2 - 0.5 - 0.7 | 0.05 - 0.1 - 0.15 0.05 - 0.1 - 0.15 |
| | | 50-65 HRC | Finishing | Continuous Interruption | Without Chipbreaker | KBN05M KBN25M | 0.8 1.2 | 100 - 150 - 200 80 - 120 - 160 | 0.05 - 0.3 - 0.5 0.05 - 0.3 - 0.5 | 0.05 - 0.08 - 0.1 0.05 - 0.08 - 0.1 |
| | | 50-65 HRC | Finishing | Continuous Interruption | Without Chipbreaker | KBN900 KBN900 | 1.2 1.2 | 80 - 100 - 120 70 - 90 - 110 | 0.5 - 1.0 - 2.0 0.3 - 0.7 - 1.0 | 0.05 - 0.1 - 0.2 0.05 - 0.1 - 0.15 |
| | | | Medium | Continuous Interruption | Without Chipbreaker | KBN900 | Radius Plus | | | |