

Great for High Pressure Coolant, Toolholder for Turning

# Double Clamp-JCT



Excellent Chip Control and Long Tool Life with High Pressure Coolant

Easy Connection with High Pressure Hose and Joint

Long Tool Life and Excellent Chip Control with Unique Coolant System

Internal Coolant Provides Longer Tool Life

Full Product Lineup with T and V Types



C Type

D Type

W Type



NEW

T Type

NEW

V Type

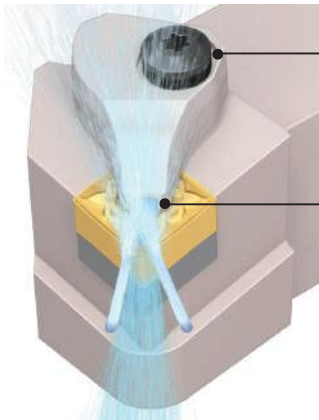
Great for High Pressure Coolant, Toolholder for Turning

# Double Clamp-JCT

Improved Chip Control and Longer Tool Life for a Wide Variety of Workpieces including Steel, Hardened Material and Difficult-to-Cut Material

## 1 Superior Chip Control Performance

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



### Double-Clamp

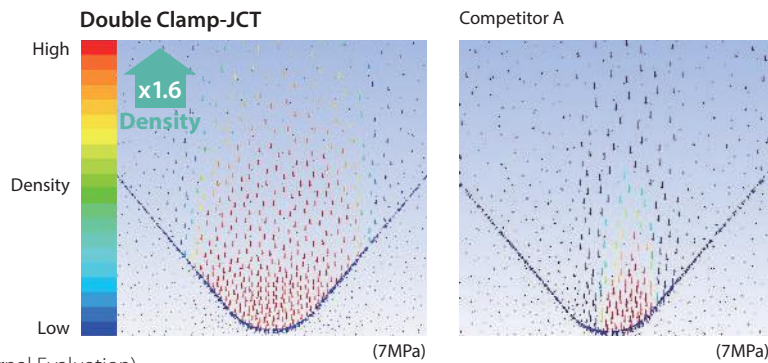
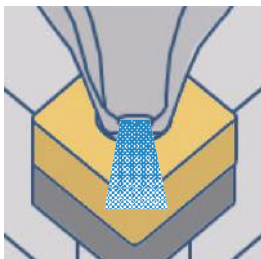
Firm insert clamp and easy to use in single operations  
High-density coolant supply close to the cutting edge

### Unique Nozzle Shape

Provides coolant to a wide area of the insert surface

### Coolant Supply Simulation Comparison (Internal Evaluation)

Discharges a wide stream of high-density coolant towards the rake surface of the insert



### Chip Control Comparison (Internal Evaluation)

#### Double Clamp-JCT



#### Competitor A



Cutting Conditions: Vc = 150 m/min, ap = 0.5 mm, Wet, CNMG120408 Type Workpiece: SCM415 External Turning

## 2

## Longer Tool Life and High Speed Machining

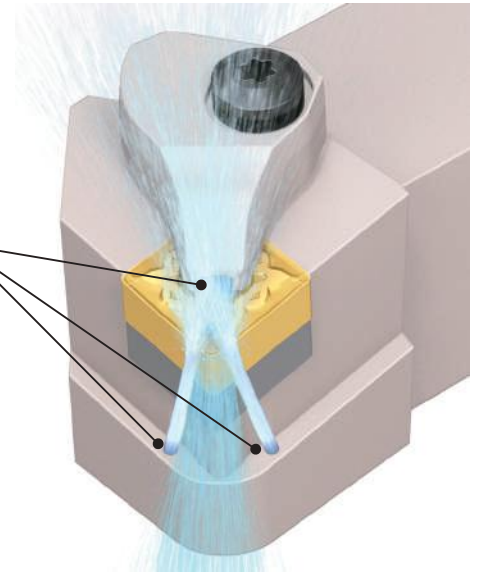
Coolant is also directed from two directions towards the flank face of the insert to ensure even cooling action\*

Longer tool life and high-speed machining with improved wear resistance

Discharges Coolant in Three Directions  
The Cutting Edge Stays Cool

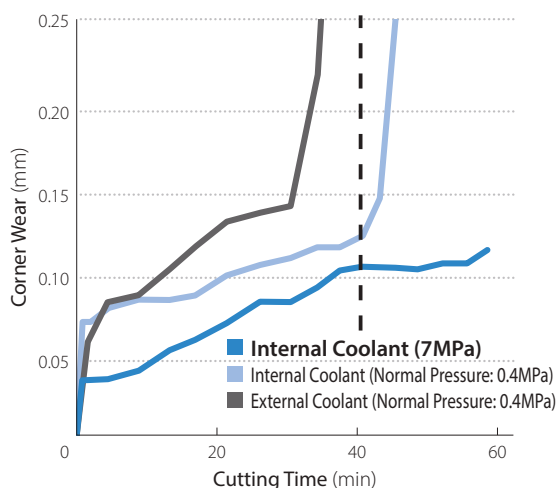
\*The coolant supply system depends on the type.

DTGN-JCT, DVLN/DVPN-JCT : Two directions, DVVN-JCT : One direction

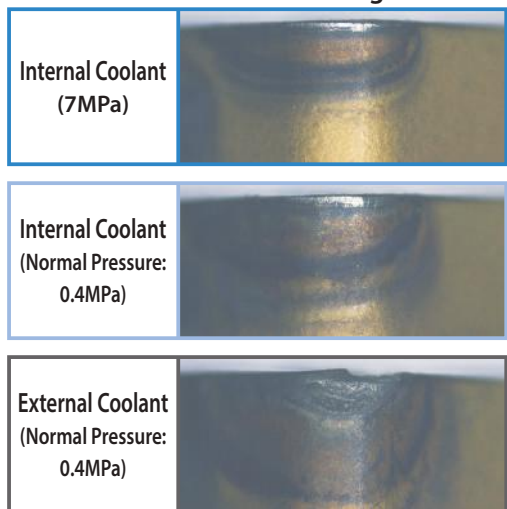


### Wear Resistance Comparison (Internal Evaluation)

#### Alloy Steel (SCM435)



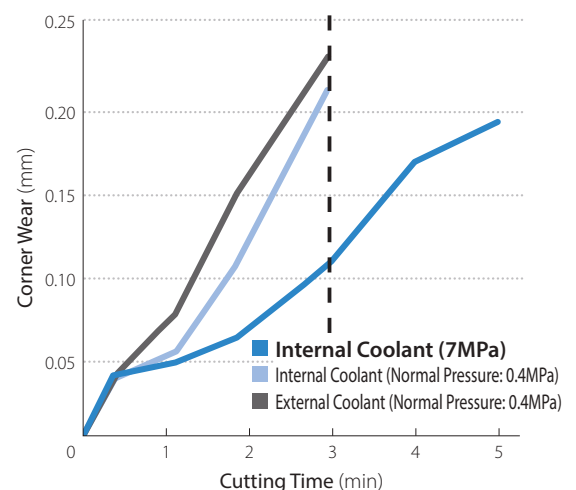
After Machining 42.2 min



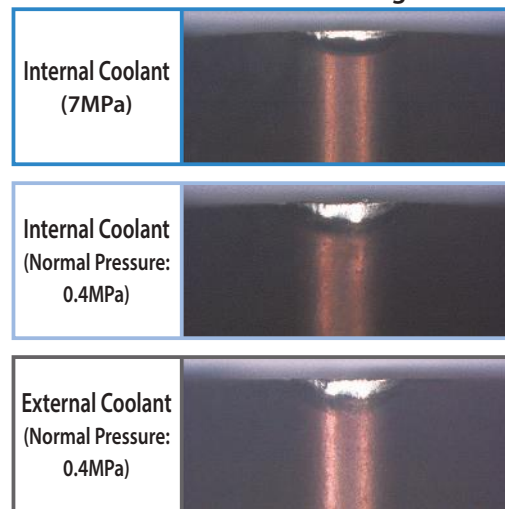
UP  
Abrasion  
Resistance

Cutting Conditions:  $V_c = 250$  m/min,  $a_p = 2$  mm,  $f = 0.3$  mm/rev, Wet  
CNMG120408 Type External Turning

#### Heat-resistant Alloys (Inconel®718)



After Machining 3 min



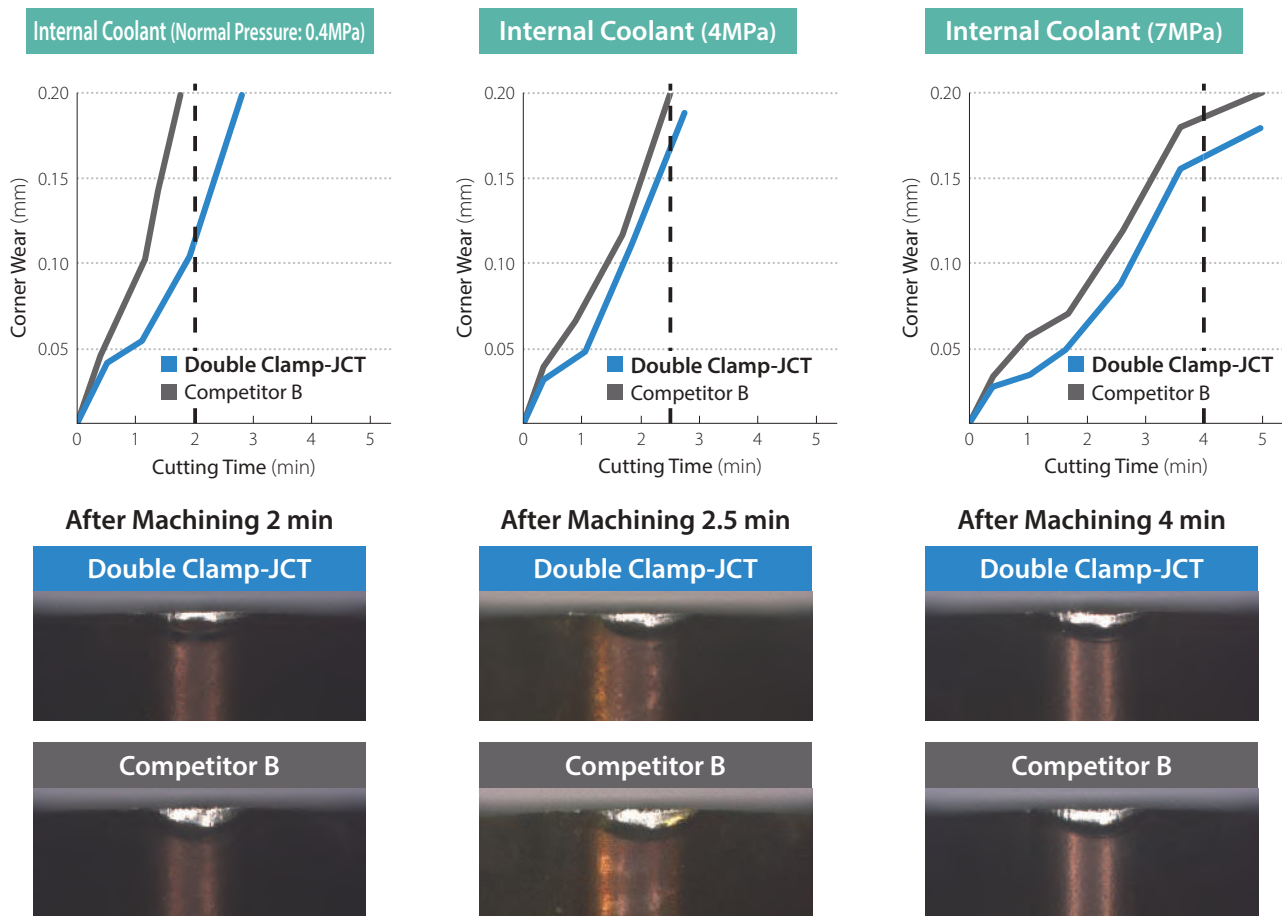
UP  
Abrasion  
Resistance

Cutting Conditions:  $V_c = 80$  m/min,  $a_p = 0.5$  mm,  $f = 0.15$  mm/rev, Wet  
CNMG120408 Type External Turning

Using internal coolant improves wear-resistance in alloy steel and heat-treated steel  
High-pressure coolant is more effective

## Wear Resistance Comparison (Internal Evaluation)

### Double Clamp-JCT maintains better wear resistance than competitors

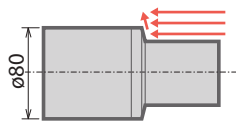


Cutting Conditions:  $V_c = 80$  m/min,  $a_p = 0.5$  mm,  $f = 0.15$  mm/rev, Wet, CNMG120408 Type Workpiece: Inconel\*718-equivalent External Turning

## Case Studies

### Mechanical Parts Carbon Steel

$V_c = 250$  m/min  
 $a_p = 3$  mm  
 $f = 0.36$  mm/rev  
 Wet  
 DCLNR2525M-12JCT  
 CNMG120408PT CA510



#### Tool Life

**DCLN-JCT Toolholder**  
 (Internal Coolant: 4MPa)

**100 pcs / edge**

**Tool Life**  
**x1.25**

Conventional Toolholder  
 (External Coolant)

**80 pcs / edge**

The DCLN-JCT internal coolant improved tool life by 1.25 times when compared to using external coolant

(User evaluation)

### Shaft SCr420 (Hardened Steel Over 55HRC)

$V_c = 180$  m/min  
 $a_p = 0.1$  mm  
 $f = 0.07$  mm/rev  
 Wet  
 DDJNR2525M-15JCT  
 DNGA150408 Type CBN



#### Tool Life

**DDJN-JCT Toolholder**  
 (Internal Coolant)

**100 pcs / edge**

**Tool Life**  
**x1.4**

Competitor C  
 (Internal Coolant)

**70 pcs / edge (Unstable)**

Competitor D  
 (External Coolant)

**60 pcs / edge (Unstable)**

#### Cutting Edge

DDJN-JCT Toolholder

Competitor C

Competitor D

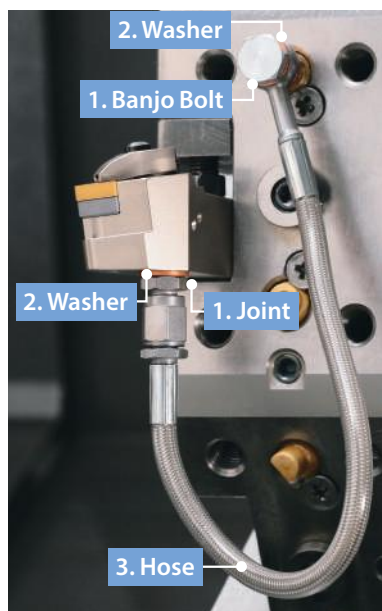


The DDJN-JCT toolholder reduced sudden fracturing and defects with stable machining and maintained 1.4 times longer tool life

(User evaluation)

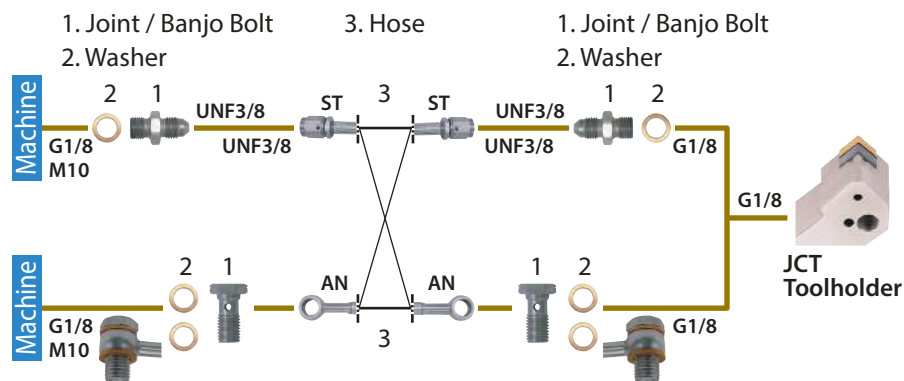
# Easy Coolant Connections

## Easy Connection with High Pressure Hose and Joint



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

### <Piping Installation Guide>



## Piping Parts

### Optional Piping Parts Available

Choose from parts below to match your machine specifications

1. Joint / Banjo bolt × 2 2. Washer × 2-4 3. Hose × 1

#### 1. Joint / Banjo Bolt

Pressure Resistance: ~ 30MPa

| Shape                              | Description      | Stock | Thread Standard                  |
|------------------------------------|------------------|-------|----------------------------------|
|                                    |                  |       | Thread connection to the machine |
|                                    | J-G1/8-UNF3/8    | ●     | G1/8                             |
|                                    | J-M10X1.5-UNF3/8 | ●     | M10X1.5                          |
| Banjo Bolt<br>(For the angle hose) | BB-G1/8          | ●     | G1/8                             |
|                                    | BB-M10X1.5       | ●     | M10X1.5                          |

#### 2. Washer Pressure Resistance: ~ 30MPa

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

\* Use 2 washers for a banjo bolt

#### 3. Hose

Pressure Resistance: ~ 30MPa

| Shape               | Description  | Stock | Thread Standard |        | Dimensions (mm) |
|---------------------|--------------|-------|-----------------|--------|-----------------|
|                     |              |       |                 |        | L               |
| Straight / Straight | HS-ST-ST-200 | ●     | UNF3/8          | UNF3/8 | 200             |
|                     | HS-ST-ST-250 | ●     |                 |        | 250             |
| Straight / Angle    | HS-ST-AN-200 | ●     | UNF3/8          | -      | 200             |
|                     | HS-ST-AN-250 | ●     |                 |        | 250             |
| Angle / Angle       | HS-AN-AN-200 | ●     | -               | -      | 200             |
|                     | HS-AN-AN-250 | ●     |                 |        | 250             |

### Precautions

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



### DCLN-JCT

External turning/Facing

Side Rake Angle:  $-6^\circ$   
 Angle of Inclination:  $-6^\circ$   
 Coolant supply: 3 directions

Recommended tightening torque  
 $3.9\text{N} \cdot \text{m}$

## Toolholder Dimensions

Pressure Resistance:  $\sim 30\text{MPa}$

| Description            | Stock |   | Dimension (mm) |    |    |     |    |    |     | Std. Corner-R(RE) | Spare Parts   |                               |          |        |            |            |        | Applicable Inserts |
|------------------------|-------|---|----------------|----|----|-----|----|----|-----|-------------------|---------------|-------------------------------|----------|--------|------------|------------|--------|--------------------|
|                        |       |   |                |    |    |     |    |    |     |                   | Clamp         | Pipe Connection (with O-ring) | Screw    | Spring | Shim       | Shim Screw | Wrench |                    |
|                        | R     | L | H              | HF | B  | LF  | LH | WF | MHD |                   |               |                               |          |        |            |            |        |                    |
| DCLN $R/L$ 2020K-12JCT | ●     | ● | 20             | 20 | 20 | 125 | 27 | 25 | 109 | 0.8               | CP-3D-R/L-JCT | FP-12                         | CS-3D-TR | SP-3D  | *1 DC-44   | SB-4085TR  | FT-15  | CN**1204           |
| 2525M-12JCT            | ●     | ● | 25             | 25 | 25 | 150 |    | 32 | 134 |                   |               |                               |          |        | *2 DC-44-C |            |        |                    |

\* O-ring (SS-035) is available to order

● : Standard Stock

\*1. When using inserts whose corner-R(RE) is greater than 1.6 mm, additional modifications to the shim are necessary in order to prevent workpiece and shim from interfering each other

\*2. SX chipbreaker inserts require a different shim (optional)

### DDJN-JCT

External turning/Copying

Side Rake Angle:  $-6^\circ$   
 Angle of Inclination:  $-7^\circ$   
 Coolant supply: 3 directions

Recommended tightening torque  
 $3.9\text{N} \cdot \text{m}$

## Toolholder Dimensions

Pressure Resistance:  $\sim 30\text{MPa}$

| Description            | Stock |   | Dimension (mm) |    |    |     |    |    |     | Std. Corner-R(RE) | Spare Parts   |                               |          |        |          |            |        | Applicable Inserts |
|------------------------|-------|---|----------------|----|----|-----|----|----|-----|-------------------|---------------|-------------------------------|----------|--------|----------|------------|--------|--------------------|
|                        |       |   |                |    |    |     |    |    |     |                   | Clamp         | Pipe Connection (with O-ring) | Screw    | Spring | Shim     | Shim Screw | Wrench |                    |
|                        | R     | L | H              | HF | B  | LF  | LH | WF | MHD |                   |               |                               |          |        |          |            |        |                    |
| DDJN $R/L$ 2020K-15JCT | ●     | ● | 20             | 20 | 20 | 125 | 37 | 25 | 101 | 0.8               | CP-4D-R/L-JCT | FP-12                         | CS-3D-TR | SP-3D  | *1 DD-44 | SB-4085TR  | FT-15  | DN**1504 (06)      |
| 2525M-15JCT            | ●     | ● | 25             | 25 | 25 | 150 |    | 32 | 126 |                   |               |                               |          |        | (DD-43)  |            |        |                    |

DD-43 is not included with the holder. Please purchase separately when a change in insert thickness is needed

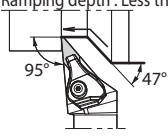
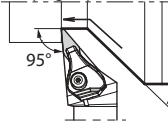
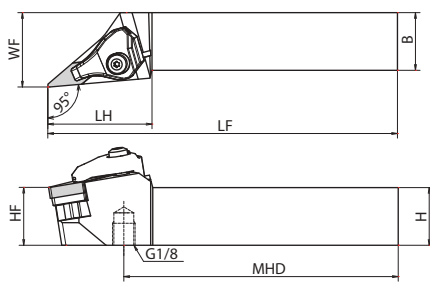
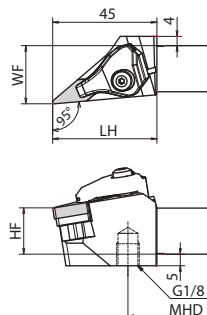
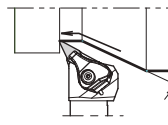
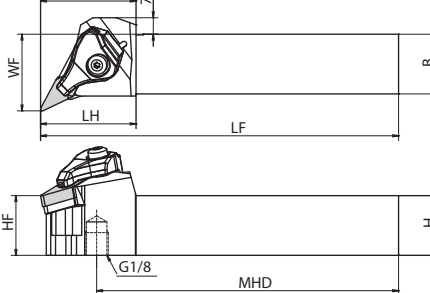
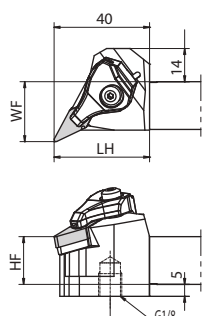
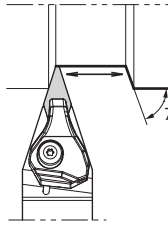
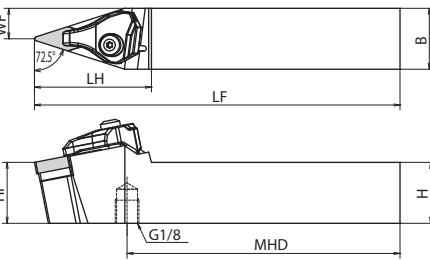
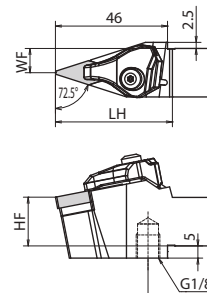
● : Standard Stock

\* O-ring (SS-035) is available to order

\*1. When using inserts whose corner-R(RE) is greater than 1.6 mm, additional modifications to the shim are necessary in order to prevent workpiece and shim from interfering each other

## Advantages (Reference) Internal coolant under low pressure provides improved performance and stable machining

| Coolant Pressure (MPa)                  | Tool Life | Chip Control | Notes                                                              |
|-----------------------------------------|-----------|--------------|--------------------------------------------------------------------|
| Normal Pressure $\sim 2$ (Low Pressure) | Good      | —            | Longer tool life under 1MPa                                        |
| 2-7 (Medium Pressure)                   | Excellent | Good         | Longer tool life and excellent chip control                        |
| 7-15 (High Pressure)                    | Excellent | Excellent    | Fine chip breaking                                                 |
| 15-30 (Extra-high Pressure)             | Excellent | Excellent    | Fine chip breaking. High speed machining for heat-resistant alloys |

|                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                      |                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>DVLN-JCT</b> <span style="color:red">NEW</span></p> <p>External turning/Copying</p> <p>Ramping depth : Less than 20mm</p>  <p>Ramping depth : 20mm or more</p>  | <div>   </div> <p>Right-hand (R) Shown</p> <p>2020K-16JCT</p>     | <p>Side Rake Angle: -6°<br/>Angle of Inclination: -9°<br/>Coolant supply: 2 directions</p> <p>Recommended tightening torque<br/>3.9N·m</p>   |
| <p><b>DVPN-JCT</b> <span style="color:red">NEW</span></p> <p>External/Facing/Copying/Undercutting</p>                                                                                                                                                  | <div>   </div> <p>Right-hand (R) Shown</p> <p>2020K-16JCT</p>     | <p>Side Rake Angle: -13°<br/>Angle of Inclination: -10°<br/>Coolant supply: 2 directions</p> <p>Recommended tightening torque<br/>3.9N·m</p> |
| <p><b>DVVN-JCT</b> <span style="color:red">NEW</span></p> <p>External turning/Copying</p>                                                                                                                                                            | <div>   </div> <p>Right-hand (R) Shown</p> <p>2020K-16JCT</p> | <p>Back Rake Angle: -11°<br/>Coolant supply: 1 direction</p> <p>Recommended tightening torque<br/>3.9N·m</p>                                 |

## Toolholder Dimensions

Pressure Resistance: ~ 30MPa

| Description       | Stock |   |   | Dimension (mm) |    |    |     |    |      |       | Std. Corner-R(RE) | Spare Parts |                               |          |        |          |            |        | Applicable Inserts |
|-------------------|-------|---|---|----------------|----|----|-----|----|------|-------|-------------------|-------------|-------------------------------|----------|--------|----------|------------|--------|--------------------|
|                   | R     | N | L | H              | HF | B  | LF  | LH | WF   | MHD   |                   | Clamp       | Pipe Connection (with O-ring) | Screw    | Spring | Shim     | Shim Screw | Wrench |                    |
| DVLNR 2020K-16JCT | ●     |   |   | 20             | 20 | 20 | 125 | 45 | 25   | 92.5  | 0.8               | CP-5D-JCT   | FP-12                         | CS-3D-TR | SP-3D  | *1 DV-33 | SB-4085TR  | FT-15  | VN**1604           |
| 2525M-16JCT       | ●     |   |   | 25             | 25 | 25 | 150 |    | 32   | 117.5 |                   |             |                               |          |        |          |            |        |                    |
| DVLNL 2020K-16JCT |       | ● |   | 20             | 20 | 20 | 125 | 45 | 25   | 88.5  |                   |             |                               |          |        |          |            |        |                    |
| 2525M-16JCT       |       | ● |   | 25             | 25 | 25 | 150 |    | 32   | 113.5 |                   |             |                               |          |        |          |            |        |                    |
| DVPNR 2020K-16JCT | ●     |   |   | 20             | 20 | 20 | 125 | 40 | 25   | 101.5 | 0.8               | CP-5D-JCT   | FP-12                         | CS-3D-TR | SP-3D  | *1 DV-33 | SB-4085TR  | FT-15  | VN**1604           |
| 2525M-16JCT       | ●     |   |   | 25             | 25 | 25 | 150 |    | 32   | 126.5 |                   |             |                               |          |        |          |            |        |                    |
| DVPNL 2020K-16JCT |       | ● |   | 20             | 20 | 20 | 125 | 40 | 25   | 93.5  |                   |             |                               |          |        |          |            |        |                    |
| 2525M-16JCT       |       | ● |   | 25             | 25 | 25 | 150 |    | 32   | 118.5 |                   |             |                               |          |        |          |            |        |                    |
| DVVNN 2020K-16JCT | ●     |   |   | 20             | 20 | 20 | 125 | 48 | 10   | 87.0  | 0.8               | CP-5D-JCT   | FP-12                         | CS-3D-TR | SP-3D  | *1 DV-33 | SB-4085TR  | FT-15  | VN**1604           |
| 2525M-16JCT       | ●     |   |   | 25             | 25 | 25 | 150 |    | 12.5 | 112.0 |                   |             |                               |          |        |          |            |        |                    |

• O-ring (SS-035) is available to order

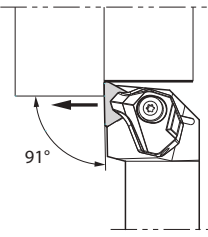
The washer may protrude from the holder. To prevent interference, additional modifications to the washer may be required.

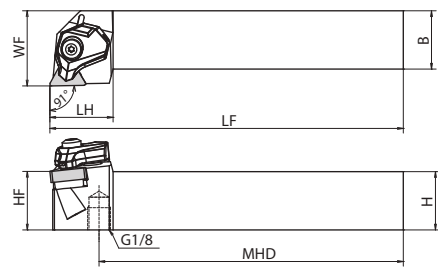
\*1. When using inserts whose corner-R(RE) is greater than 1.2 mm, additional modifications to the shim are necessary in order to prevent workpiece and shim from interfering each other

● : Standard Stock

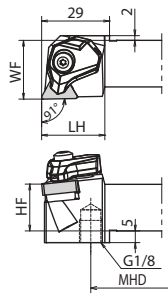
**DTGN-JCT** NEW

External turning





Right-hand (R) Shown



2020K-16JCT

Side Rake Angle: -6°  
Angle of Inclination: -6°  
Coolant supply: 2 directions

Recommended tightening torque  
3.9N·m

## Toolholder Dimensions

Pressure Resistance: ~ 30MPa

| Description          | Stock |   | Dimension (mm) |    |    |     |    |    |     | Std. Corner-R(RE) | Spare Parts                                                                       |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                                  | Applicable Inserts |                                                                                                 |
|----------------------|-------|---|----------------|----|----|-----|----|----|-----|-------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------|
|                      |       |   |                |    |    |     |    |    |     |                   | Clamp                                                                             | Pipe Connection (with O-ring)                                                     | Screw                                                                             | Spring                                                                             | Shim                                                                                | Shim Screw                                                                          | Wrench                                                                                           |                    | Wrench (Sold separately)                                                                        |
|                      | R     | L | H              | HF | B  | LF  | LH | WF | MHD |                   |  |  |  |  |  |  | <br>For clamp |                    | <br>For shim |
| DTGN R/L 2020K-16JCT | ●     | ● | 20             | 20 | 20 | 125 | 27 | 25 | 104 | 0.8               | CP-2D-R/L-JCT                                                                     | FP-12                                                                             | CS-3D-TR                                                                          | SP-3D                                                                              | *1 DT-32                                                                            | SB-3080TR                                                                           | FT-15                                                                                            | FT-10              | TN**1604                                                                                        |
| 2525M-16JCT          | ●     | ● | 25             | 25 | 25 | 150 |    | 32 | 129 |                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                                  |                    |                                                                                                 |

• O-ring (SS-035) is available to order

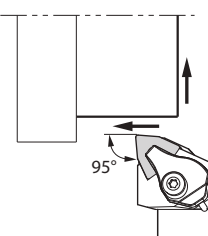
● : Standard Stock

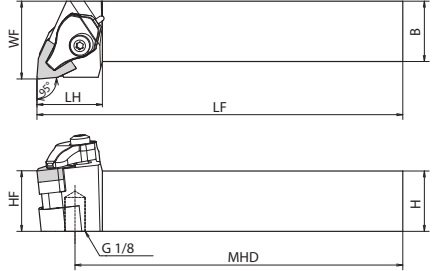
When using WF chipbreaker (Wiper insert), the cutting edge position or machining program needs to be corrected.

\*1. When using inserts whose corner-R(RE) is greater than 1.6 mm, additional modifications to the shim are necessary in order to prevent workpiece and shim from interfering each other

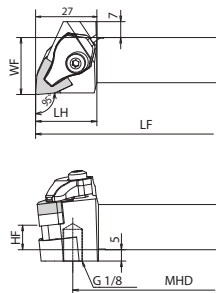
**DWLN-JCT**

External turning/Facing





Right-hand (R) Shown



2020K-08JCT

Side Rake Angle: -6°  
Angle of Inclination: -6°  
Coolant supply: 3 directions

Recommended tightening torque  
3.9N·m

## Toolholder Dimensions

Pressure Resistance: ~ 30MPa

| Description          | Stock |   | Dimension (mm) |    |    |     |    |    |     | Std. Corner-R(RE) | Spare Parts                                                                         |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       | Applicable Inserts |
|----------------------|-------|---|----------------|----|----|-----|----|----|-----|-------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------|
|                      |       |   |                |    |    |     |    |    |     |                   | Clamp                                                                               | Pipe Connection (with O-ring)                                                       | Screw                                                                                 | Spring                                                                                | Shim                                                                                  | Shim Screw                                                                            | Wrench                                                                                |                    |
|                      | R     | L | H              | HF | B  | LF  | LH | WF | MHD |                   |  |  |  |  |  |  |  |                    |
| DWLN R/L 2020K-08JCT | ●     | ● | 20             | 20 | 20 | 125 | 27 | 25 | 109 | 0.8               | CP-3D-R/L-JCT                                                                       | FP-12                                                                               | CS-3D-TR                                                                              | SP-3D                                                                                 | DW-44                                                                                 | SB-4085TR                                                                             | FT-15                                                                                 | WN**0804           |
| 2525M-08JCT          | ●     | ● | 25             | 25 | 25 | 150 | 32 | 32 | 134 |                   |                                                                                     |                                                                                     |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                    |

• O-ring (SS-035) is available to order

● : Standard Stock

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