High functioning, High operating system

DIRECT TUNG system

Now offers 10x10 and 16x16 square shank toolholders
High pressure coolant is supplied through the holder to facilitate smooth chip evacuation, improved chip breaking and reduced machine down-time.

Coolant jets from two outlets ensure high cutting efficiency and extended tool life.

- **Directly to the cutting edge from side face**
  - Reduces frank wears

- **Directly to the cutting edge from rake face**
  - Reliable chip control
  - Reduces crater and notch wears

**Frank wears**

<table>
<thead>
<tr>
<th>External coolant supply</th>
<th>Through coolant supply (&gt;7MPa)</th>
</tr>
</thead>
</table>

**Crater wears**

<table>
<thead>
<tr>
<th>External coolant supply</th>
<th>Through coolant supply (&gt;7MPa)</th>
</tr>
</thead>
</table>
Tube-free design streamlines tool setup
Through-coolant supply enables high productivity

Coolant is supplied from the tool post directly to the tools.

Optional connection with external coolant tube
Detailed view of the coolant flow after connection

No need for coolant tube setup.
Eliminates chip entanglement on tubes and streamlines tool replacement.

Machines for DirectTungJet system
Improvement of chip evacuation with DirectTungJet

### Stainless steel: External turning (SUS304)

- **Material**: SUS304 / X5CrNi18-9
- **Holder**: JSDJ2CR1212X11-CHP
- **Insert**: DCGT11T302FN-JS SH725
- **Cutting speed**: \( V_c = 80 \text{ m/min} \)
- **Feed rate**: \( f = 0.03 \text{ mm/rev} \)
- **Depth of cut**: \( a_p = 1.5 \text{ mm} \)
- **Coolant type**: Oil

### Titanium alloy: Grooving (Ti-6Al-4V)

- **Material**: Ti-6Al-4V
- **Holder**: STCR1212X18-CHP
- **Insert**: TCP18R200F-010 SH725
- **Cutting speed**: \( V_c = 100 \text{ m/min} \)
- **Feed rate**: \( f = 0.05 \text{ mm/rev} \)
- **Groove width**: 2 mm
- **Groove depth**: 2.5 mm
- **Coolant type**: Oil

### Stainless steel: Parting -off (SUS304)

- **Material**: SUS304 / X5CrNi18-9
- **Holder**: JSXXL1212X09-CHP
- **Insert**: JXPG16L20F SH725
- **Cutting speed**: \( V_c = 100 \text{ m/min} \)
- **Feed rate**: \( f = 0.03 \text{ mm/rev} \)
- **Coolant type**: Oil
**Tool wear reduction with DirectTungJet**

### Stainless steel: External turning (SUS304)

After machining for 40 min.

- **Material**: SUS304 / X5CrNi18-9
- **Holder**: JSDJ2CR1212X11-CHP
- **Insert**: DCGT11T302FN-JS SH725
- **Cutting speed**: \( V_c = 200 \text{ m/min} \)
- **Feed rate**: \( f = 0.1 \text{ mm/rev} \)
- **Depth of cut**: \( a_p = 0.5 \text{ mm} \)
- **Coolant type**: Oil

### Titanium alloy: External turning (Ti-6Al-4V)

After machining for 10 min.

- **Material**: Ti-6Al-4V
- **Holder**: JSDJ2CR1212X11-CHP
- **Insert**: DCGT11T302FN-JS SH725
- **Cutting speed**: \( V_c = 70 \text{ m/min} \)
- **Feed rate**: \( f = 0.1 \text{ mm/rev} \)
- **Depth of cut**: \( a_p = 0.5 \text{ mm} \)
- **Coolant type**: Oil

### Stainless steel: Parting -off (SUS304)

After 1,500 parts machined

- **Material**: SUS304 / X5CrNi18-9
- **Holder**: JSXXL1212X09-CHP
- **Insert**: JXPG16L20F SH725
- **Cutting speed**: \( V_c = 100 \text{ m/min} \)
- **Feed rate**: \( f = 0.03 \text{ mm/rev} \)
- **Coolant type**: Oil

---

**Machining duration**

- **Flank wear on corners**: \( V_c (\text{mm}) \)
- **Material**: SUS304 / X5CrNi18-9
- **Holder**: JSDJ2CR1212X11-CHP
- **Insert**: DCGT11T302FN-JS SH725
- **Cutting speed**: \( V_c = 200 \text{ m/min} \)
- **Feed rate**: \( f = 0.1 \text{ mm/rev} \)
- **Depth of cut**: \( a_p = 0.5 \text{ mm} \)
- **Coolant type**: Oil

---

**Number of parts machined**

- **Flank wear on corners**: \( V_c (\text{mm}) \)
- **Material**: SUS304 / X5CrNi18-9
- **Holder**: JSDJ2CR1212X11-CHP
- **Insert**: DCGT11T302FN-JS SH725
- **Cutting speed**: \( V_c = 200 \text{ m/min} \)
- **Feed rate**: \( f = 0.1 \text{ mm/rev} \)
- **Depth of cut**: \( a_p = 0.5 \text{ mm} \)
- **Coolant type**: Oil
Modular Tooling System Adopted
Y2 Axis Added for Greater Functionality

Sliding Headstock Type
CNC Automatic Lathe

L12

- Versatile tooling layout achieved, including slanted hole machining with the angle adjustable end face spindle.
- Back machining capability enhanced by equipping the back spindle with a Y2 axis (Type X).
- Built-in motor adopted as the drive system for the back spindle: realizes a maximum spindle speed of 12,000 min⁻¹ (Type X)

<table>
<thead>
<tr>
<th>Machine model</th>
<th>L12 X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Num. of axes/paths</td>
<td>6 axes, 2 path control systems</td>
</tr>
<tr>
<td>Maximum diameter machineable (mm)</td>
<td>ø12</td>
</tr>
<tr>
<td>Maximum length machineable (mm)</td>
<td>135 (GB), 30 (GBL)</td>
</tr>
<tr>
<td>Spindle speed (min⁻¹)</td>
<td>38</td>
</tr>
<tr>
<td>Tool positions</td>
<td>38</td>
</tr>
<tr>
<td>Motor, spindle drive (kW)</td>
<td>2.2 / 3.7</td>
</tr>
<tr>
<td>Mountable tool sizes (mm)</td>
<td>□10 (Parting □12)</td>
</tr>
<tr>
<td>Sleeve diameter (mm)</td>
<td>ø19.05</td>
</tr>
</tbody>
</table>
Enhanced Tool Modularity

L20

Sliding Headstock
Automatic CNC Lathe with convertible guide bushing

- 4 types of the L20 model are available, ranging from the cost-efficient 5-axis machine to the high-end type incorporating B-axis and Y-axis opposing tool post
- A convertible model: May be run with or without the guide bushing.
Double gang tool posts and B-axis
Optimized tool setup for maximum productivity

Sliding Headstock Automatic CNC Lathe with convertible guide bushing

D25

- Incorporates double gang tool posts to minimize non-machining intervals.
- A maximum of 59 tools can be mounted on the multiple tool posts, enabling seamless machining.
- Three live tool posts minimizes total machining time.
- B-axis can be utilized to machine either front or back of the workpiece.
- Simultaneous 5-axis control abilities allow for contour-profiling, enhancing the flexibility of the automatic CNC lathe capability.

<table>
<thead>
<tr>
<th>Machine model</th>
<th>D25 VII</th>
<th>D25 VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Num. of axes/paths</td>
<td>9 axes, 3 path control systems</td>
<td>10 axes, 3 path control systems</td>
</tr>
<tr>
<td>Maximum diameter machineable (mm)</td>
<td>ø25</td>
<td>ø25</td>
</tr>
<tr>
<td>Maximum length machineable (mm)</td>
<td>250 (GB)</td>
<td>250 (GB)</td>
</tr>
<tr>
<td>Spindle speed (min⁻¹)</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Tool positions</td>
<td>59</td>
<td>43</td>
</tr>
<tr>
<td>Motor, spindle drive (kW)</td>
<td>3.7 / 5.5</td>
<td>3.7 / 5.5</td>
</tr>
<tr>
<td>Mountable tool sizes (mm)</td>
<td>□ 16 (Parting □ 20)</td>
<td>□ 16 (Parting □ 20)</td>
</tr>
<tr>
<td>Sleeve diameter (mm)</td>
<td>ø25.4</td>
<td>ø25.4</td>
</tr>
</tbody>
</table>
The new L32 - an ‘icon’ reinvented

Sliding Headstock Type
CNC Automatic Lathe

M32

- Ranging from a 5-axis machine with excellent cost performance to a high-end machine equipped with B axis and back tool post Y axis.
- Workpiece conveyor equipped as standard.

<table>
<thead>
<tr>
<th>Machine model</th>
<th>M32 V</th>
<th>M32 VII</th>
<th>M32 VIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Num. of axes / paths</td>
<td>8 axes, 3 path control systems</td>
<td>9 axes, 3 path control systems</td>
<td>10 axes, 3 path control systems</td>
</tr>
<tr>
<td>Maximum diameter machineable (mm)</td>
<td>ø32 (ø38 optional)</td>
<td>ø32 (ø38 optional)</td>
<td>ø32 (ø38 optional)</td>
</tr>
<tr>
<td>Maximum length machineable (mm)</td>
<td>320 (GB)</td>
<td>320 (GB)</td>
<td>320 (GB)</td>
</tr>
<tr>
<td>Spindle speed (min⁻¹)</td>
<td>8,000</td>
<td>8,000</td>
<td>8,000</td>
</tr>
<tr>
<td>Tool positions</td>
<td>31 + α</td>
<td>35 + α</td>
<td>36 + α</td>
</tr>
<tr>
<td>Motor, spindle drive (kW)</td>
<td>5.5 / 7.5</td>
<td>5.5 / 7.5</td>
<td>5.5 / 7.5</td>
</tr>
<tr>
<td>Mountable tool sizes (mm)</td>
<td>□ 16 (Parting □ 20)</td>
<td>□ 16 (Parting □ 20)</td>
<td>□ 16 (Parting □ 20)</td>
</tr>
<tr>
<td>Sleeve diameter (mm)</td>
<td>ø25.4</td>
<td>ø25.4</td>
<td>ø25.4</td>
</tr>
</tbody>
</table>
For Turning / Facing

**J- SERIES**

**JSCL2CR-CHP**

Screw-on toolholder without offset, 95° approach angle for positive 80° rhombic inserts, high pressure coolant compatible

![Diagram](image)

<table>
<thead>
<tr>
<th>Designation</th>
<th>H</th>
<th>B</th>
<th>LF</th>
<th>LH</th>
<th>HF</th>
<th>HBH</th>
<th>WF</th>
<th>OAW</th>
<th>RE** Insert</th>
<th>Torque*</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSCL2CR1212X09-CHP***</td>
<td>12</td>
<td>12</td>
<td>120</td>
<td>18</td>
<td>12</td>
<td>4</td>
<td>0</td>
<td>20</td>
<td>0.2 CC**09T3</td>
<td>1.2</td>
</tr>
<tr>
<td>JSCL2CR1212X09B-CHP</td>
<td>12</td>
<td>12</td>
<td>120</td>
<td>18</td>
<td>12</td>
<td>1.5</td>
<td>0</td>
<td>20</td>
<td>0.2 CC**09T3</td>
<td>1.2</td>
</tr>
<tr>
<td>JSCL2CR1616X09-CHP</td>
<td>16</td>
<td>16</td>
<td>120</td>
<td>18</td>
<td>16</td>
<td>0</td>
<td>0</td>
<td>20</td>
<td>0.2 CC**09T3</td>
<td>1.2</td>
</tr>
</tbody>
</table>

*Torque: Recommended torque (N∙m) for clamping  **RE: Standard corner radius
Note: Right-hand toolholders (R) are used with right-hand inserts (R). Left-hand toolholders (L) are used with left-hand inserts (L).
***: To be replaced with the new design

**SPARE PARTS**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Clamping screw</th>
<th>Coolant nozzle</th>
<th>Wrench</th>
<th>Coolant plug</th>
<th>Wrench</th>
<th>DirectJet plug</th>
<th>Wrench</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSCL2CR***-CHP</td>
<td>CSTB-4SD</td>
<td>S-CU-CHP</td>
<td>T-8F</td>
<td>SR5/16UNFTL360</td>
<td>P-4</td>
<td>SSSM4-6-TB</td>
<td>P-2</td>
</tr>
</tbody>
</table>

See page 16 for the proper tool overhang and plug settings.

For External Turning

**J- SERIES**

**JSDJ2CR-CHP**

Screw-on toolholder without offset, 93° approach angle for positive 55° rhombic inserts, high pressure coolant compatible

![Diagram](image)

<table>
<thead>
<tr>
<th>Designation</th>
<th>H</th>
<th>B</th>
<th>LF</th>
<th>LH</th>
<th>HF</th>
<th>WF</th>
<th>OAW</th>
<th>RE** Insert</th>
<th>Torque*</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSDJ2CR1012H07-CHP</td>
<td>10</td>
<td>12</td>
<td>100</td>
<td>17</td>
<td>10</td>
<td>0</td>
<td>16.4</td>
<td>0.2 DC**07T2</td>
<td>1.2</td>
</tr>
<tr>
<td>JSDJ2CR1012X11-CHP</td>
<td>12</td>
<td>12</td>
<td>120</td>
<td>19</td>
<td>12</td>
<td>0</td>
<td>20.5</td>
<td>0.2 DC**11T3</td>
<td>1.2</td>
</tr>
<tr>
<td>JSDJ2CR1616X11-CHP</td>
<td>16</td>
<td>16</td>
<td>120</td>
<td>19</td>
<td>16</td>
<td>0</td>
<td>20.5</td>
<td>0.2 DC**11T3</td>
<td>1.2</td>
</tr>
</tbody>
</table>

*Torque: Recommended torque (N∙m) for clamping  **RE: Standard corner radius

**SPARE PARTS**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Clamping screw</th>
<th>Coolant nozzle</th>
<th>Wrench</th>
<th>Coolant plug</th>
<th>Wrench</th>
<th>DirectJet plug</th>
<th>Wrench</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSDJ2CR1012H07-CHP</td>
<td>CSTB-2.5</td>
<td>NZ-110-7-CHP</td>
<td>T-8F</td>
<td>SR5/16UNFTL360</td>
<td>P-4</td>
<td>SSSM4-6-TB</td>
<td>P-2</td>
</tr>
</tbody>
</table>

**SPARE PARTS**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Clamping screw</th>
<th>Coolant unit</th>
<th>Wrench</th>
<th>Coolant plug</th>
<th>Wrench</th>
<th>DirectJet plug</th>
<th>Wrench</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSDJ2CR***-11-CHP</td>
<td>CSTB-4SD</td>
<td>S-CU-CHP*</td>
<td>T-8F</td>
<td>SR5/16UNFTL360</td>
<td>P-4</td>
<td>SSSM4-6-TB</td>
<td>P-2</td>
</tr>
</tbody>
</table>

See page 16 for the proper tool overhang and plug settings.
**J-SERIES**

**JSVJ2BR-CHP**

Screw-on toolholder without offset, 93° approach angle for positive 35° rhombic inserts, high pressure coolant compatible

![Cutting edge style J2](image)

**Designation** | **H** | **B** | **LF** | **LH** | **HF** | **WF** | **OAW** | **RE** | **Insert** | **Torque** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>JSVJ2BR1212X11-CHP</td>
<td>12</td>
<td>12</td>
<td>120</td>
<td>23.6</td>
<td>12</td>
<td>0</td>
<td>14.7</td>
<td>0.2</td>
<td>VB**1103</td>
<td>1.2</td>
</tr>
<tr>
<td>JSVJ2BR1616X11-CHP</td>
<td>16</td>
<td>16</td>
<td>120</td>
<td>23.6</td>
<td>16</td>
<td>0</td>
<td>16</td>
<td>0.2</td>
<td>VB**1103</td>
<td>1.2</td>
</tr>
</tbody>
</table>

*Torque: Recommended torque (N·m) for clamping  **RE: Standard corner radius

**SPARE PARTS**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Clamping screw</th>
<th>Coolant unit</th>
<th>Wrench</th>
<th>Coolant plug</th>
<th>Wrench</th>
<th>Direct Jet plug</th>
<th>Wrench</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSVJ2BR**11-CHP</td>
<td>CSTB-2.5</td>
<td>S-CU-CHP</td>
<td>T-6F</td>
<td>SRS/16UNFTL360</td>
<td>P-4</td>
<td>SSM-4-6-TB</td>
<td>P-2</td>
</tr>
</tbody>
</table>

See page 16 for the proper tool overhang and plug settings.

**For Turning / Facing**

**MINIFTURN**

**JSWL2XR-CHP**

Screw-on toolholder without offset, 95° approach angle, for WXGU inserts, high pressure coolant compatible

![Cutting edge style L2](image)

**Designation** | **H** | **B** | **LF** | **LH** | **HF** | **WF** | **OAW** | **RE** | **Insert** | **Torque** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>JSWL2XR1212X04-CHP</td>
<td>12</td>
<td>12</td>
<td>120</td>
<td>18.5</td>
<td>12</td>
<td>0</td>
<td>16.5</td>
<td>0.2</td>
<td>WXGU0403**L</td>
<td>0.9</td>
</tr>
<tr>
<td>JSWL2XR1616X04-CHP</td>
<td>16</td>
<td>16</td>
<td>120</td>
<td>18.5</td>
<td>16</td>
<td>0</td>
<td>16.5</td>
<td>0.2</td>
<td>WXGU0403**L</td>
<td>0.9</td>
</tr>
</tbody>
</table>

*Torque: Recommended torque (N·m) for clamping  **RE: Standard corner radius

Note: Right-hand toolholders (R) are used with left-hand inserts (L), Left-hand toolholders (L) are used with right-hand inserts (R).

**SPARE PARTS**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Clamping screw</th>
<th>Coolant unit</th>
<th>Wrench</th>
<th>Coolant plug</th>
<th>Wrench</th>
<th>Direct Jet plug</th>
<th>Wrench</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSWL2XR**04-CHP</td>
<td>5R3H-514</td>
<td>S-CU-CHP</td>
<td>T-7F</td>
<td>SRS/16UNFTL360</td>
<td>P-4</td>
<td>SSM-4-6-TB</td>
<td>P-2</td>
</tr>
</tbody>
</table>

See page 16 for the proper tool overhang and plug settings.
**For External Turning**

**MINI-FORCE**

**JSDJ2XR-CHP**

Screw-on toolholder without offset, 93° approach angle, for DXGU inserts, high pressure coolant compatible

![Cutting edge style J2](image)

**Table 1**

<table>
<thead>
<tr>
<th>Designation</th>
<th>H</th>
<th>B</th>
<th>LF</th>
<th>LH</th>
<th>HF</th>
<th>WF</th>
<th>OAW</th>
<th>RE**</th>
<th>Insert</th>
<th>Torque*</th>
<th>Fig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSDJ2XR1012H07-CHP</td>
<td>10</td>
<td>12</td>
<td>100</td>
<td>17</td>
<td>10</td>
<td>0</td>
<td>16.4</td>
<td>0.2</td>
<td>DXGU0703**L</td>
<td>0.9</td>
<td>1</td>
</tr>
<tr>
<td>JSDJ2XR1212X07-CHP</td>
<td>12</td>
<td>12</td>
<td>120</td>
<td>19</td>
<td>12</td>
<td>0</td>
<td>18.5</td>
<td>0.2</td>
<td>DXGU0703**L</td>
<td>0.9</td>
<td>2</td>
</tr>
<tr>
<td>JSDJ2XR1616X07-CHP</td>
<td>16</td>
<td>16</td>
<td>120</td>
<td>16</td>
<td>16</td>
<td>0</td>
<td>18.5</td>
<td>0.2</td>
<td>DXGU0703**L</td>
<td>0.9</td>
<td>2</td>
</tr>
</tbody>
</table>

*Torque: Recommended torque (N·m) for clamping   **RE: Standard corner radius

Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

**SPARE PARTS**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Clamping screw</th>
<th>Wrench</th>
<th>Coolant plug</th>
<th>Wrench</th>
<th>DirectJet plug</th>
<th>Wrench</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSDJ2XR1012H07-CHP</td>
<td>SR34-514</td>
<td>T-7F</td>
<td>SR5/16UNFTL360</td>
<td>P-4</td>
<td>SSHM4-6-TB</td>
<td>P-2</td>
</tr>
<tr>
<td>JSDJ2XR1212X07-CHP</td>
<td>SR34-514</td>
<td>T-7F</td>
<td>SR5/16UNFTL360</td>
<td>P-4</td>
<td>SSHM4-6-TB</td>
<td>P-2</td>
</tr>
<tr>
<td>JSDJ2XR1616X07-CHP</td>
<td>SR34-514</td>
<td>T-7F</td>
<td>SR5/16UNFTL360</td>
<td>P-4</td>
<td>SSHM4-6-TB</td>
<td>P-2</td>
</tr>
</tbody>
</table>

See page 16 for the proper tool overhang and plug settings.

**For more information**

---

**MINI-FORCE**

**JSVJ2XR-CHP**

Screw-on toolholder without offset, 93° approach angle, for VXGU inserts, high pressure coolant compatible

![Cutting edge style J2](image)

**Table 2**

<table>
<thead>
<tr>
<th>Designation</th>
<th>H</th>
<th>B</th>
<th>LF</th>
<th>LH</th>
<th>HF</th>
<th>WF</th>
<th>OAW</th>
<th>RE**</th>
<th>Insert</th>
<th>Torque*</th>
<th>Fig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSVJ2XR1012H07-CHP</td>
<td>10</td>
<td>12</td>
<td>100</td>
<td>17</td>
<td>10</td>
<td>0</td>
<td>13.4</td>
<td>0.2</td>
<td>VXGU0972**L</td>
<td>0.9</td>
<td>1</td>
</tr>
<tr>
<td>JSVJ2XR1212X09-CHP</td>
<td>12</td>
<td>12</td>
<td>120</td>
<td>19.5</td>
<td>12</td>
<td>0</td>
<td>13.4</td>
<td>0.2</td>
<td>VXGU0972**L</td>
<td>0.9</td>
<td>2</td>
</tr>
<tr>
<td>JSVJ2XR1616X09-CHP</td>
<td>16</td>
<td>16</td>
<td>120</td>
<td>16</td>
<td>16</td>
<td>0</td>
<td>16</td>
<td>0.2</td>
<td>VXGU0972**L</td>
<td>0.9</td>
<td>2</td>
</tr>
</tbody>
</table>

*Torque: Recommended torque (N·m) for clamping   **RE: Standard corner radius

Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

**SPARE PARTS**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Clamping screw</th>
<th>Wrench</th>
<th>Coolant plug</th>
<th>Wrench</th>
<th>DirectJet plug</th>
<th>Wrench</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSVJ2XR1012H07-CHP</td>
<td>SR34-508</td>
<td>T-7F</td>
<td>SR5/16UNFTL360</td>
<td>P-4</td>
<td>SSHM4-6-TB</td>
<td>P-2</td>
</tr>
<tr>
<td>JSVJ2XR1212X09-CHP</td>
<td>SR34-508</td>
<td>T-7F</td>
<td>SR5/16UNFTL360</td>
<td>P-4</td>
<td>SSHM4-6-TB</td>
<td>P-2</td>
</tr>
<tr>
<td>JSVJ2XR1616X09-CHP</td>
<td>SR34-508</td>
<td>T-7F</td>
<td>SR5/16UNFTL360</td>
<td>P-4</td>
<td>SSHM4-6-TB</td>
<td>P-2</td>
</tr>
</tbody>
</table>

See page 16 for the proper tool overhang and plug settings.
For Grooving and Threading

**STCR/L-18-CHP**

External grooving and threading toolholder, high pressure coolant compatible

<table>
<thead>
<tr>
<th>Designation</th>
<th>H</th>
<th>B</th>
<th>LF</th>
<th>LH</th>
<th>HBL</th>
<th>HF</th>
<th>WF</th>
<th>HBH</th>
<th>Insert</th>
<th>Torque*</th>
</tr>
</thead>
<tbody>
<tr>
<td>STCR/L1012H18-CHP</td>
<td>10</td>
<td>12</td>
<td>100</td>
<td>17.1</td>
<td>17.1</td>
<td>10</td>
<td>0/12</td>
<td>4</td>
<td>TC**18</td>
<td>1.2</td>
</tr>
<tr>
<td>STCR/L1212X18-CHP***</td>
<td>12</td>
<td>12</td>
<td>120</td>
<td>18.5</td>
<td>17.5</td>
<td>12</td>
<td>0/12</td>
<td>4</td>
<td>TC**18</td>
<td>1.2</td>
</tr>
<tr>
<td>STCR/L1616X18-CHP</td>
<td>16</td>
<td>16</td>
<td>120</td>
<td>18.5</td>
<td>-</td>
<td>16</td>
<td>0/16</td>
<td>0</td>
<td>TC**18</td>
<td>1.2</td>
</tr>
</tbody>
</table>

* The right hand insert (TC**18R...) is used for the right hand toolholders (STCR...), and the left hand insert (TC**18L...) is used for the left hand toolholders (STCL...).

**: To be replaced with the new design

### Grooving

**TCS type (3D chipbreaker)**

- The chipbreaker incorporates a dimple-like recess on the rake face to facilitate smooth chip flow with light cutting action
- The chipbreaker ensures low cutting force, providing reliable chip flow at low feed rates

**TCG type (Honed edge)**

- Optimized rake angle and edge preparation enhances fracture resistance, allowing for smooth cutting
- AH7025 grade features a superior combination of wear and fracture resistances

**TCP type (Lightly honed edge)**

- A large rake angle ensures smooth cutting for excellent surface finish
- The insert in grade AH725 features a tough edge preparation for high resistance to fracture

### Threading

**TCT type**

- Full profile inserts for burr-less threading are newly added.
- Pitch: 0.5 – 1.5 mm.
- Sharp cutting edge for reduced cutting load, improving thread surface quality
- Suitable for thread pitches ranging from 0.4 mm to 3 mm

---

For more information

[For Grooving and Threading webpage link]
For Parting-off and Threading

**DUOJ CUT**

JSXXR/L-CHP

Parting and threading toolholder, high pressure coolant compatible

![Diagram of toolholder]

<table>
<thead>
<tr>
<th>Designation</th>
<th>CW</th>
<th>H</th>
<th>B</th>
<th>WF</th>
<th>LF**</th>
<th>HF</th>
<th>HBH</th>
<th>LH**</th>
<th>HBL**</th>
<th>Insert</th>
<th>Torque*</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSXXR/L1012HX09-CHP</td>
<td>1-2</td>
<td>10</td>
<td>12</td>
<td>0.2/11.8</td>
<td>≤102</td>
<td>10</td>
<td>3</td>
<td>≤19.2</td>
<td>18.7</td>
<td>JX**06...12...16...20...</td>
<td>1.2</td>
</tr>
<tr>
<td>JSXXR/L1212HX09-CHP</td>
<td>1-2</td>
<td>12</td>
<td>12</td>
<td>0.2/11.8</td>
<td>≤120</td>
<td>12</td>
<td>2</td>
<td>≤19.4</td>
<td>18.8</td>
<td>JX**06...12...16...20...</td>
<td>1.2</td>
</tr>
<tr>
<td>JSXXR/L1616HX09-CHP**</td>
<td>1-2</td>
<td>16</td>
<td>16</td>
<td>0.2/15.8</td>
<td>≤120</td>
<td>16</td>
<td>2.5</td>
<td>≤19.4</td>
<td>18.7</td>
<td>JX**06...12...16...20...</td>
<td>1.2</td>
</tr>
<tr>
<td>JSXXR/L1616X09B-CHP</td>
<td>1-2</td>
<td>16</td>
<td>16</td>
<td>0.2/15.8</td>
<td>≤120</td>
<td>16</td>
<td>0</td>
<td>≤19.4</td>
<td>18.7</td>
<td>JX**06...12...16...20...</td>
<td>1.2</td>
</tr>
</tbody>
</table>

*Torque: Recommended torque (N·m) for clamping

**LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 2 mm shorter than the above values with JX**12... and JX**20... inserts, and 4 mm shorter for JX**06... insert.

***To be replaced with the new design

Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

---

**SPARE PARTS**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Clamping screw</th>
<th>Wrench</th>
<th>Coolant plug</th>
<th>Wrench</th>
<th>DirectTungJet plug</th>
<th>Wrench</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSXXR...</td>
<td>CSTC-4L1000DL</td>
<td>T-1008/5</td>
<td>SRS/16UNFTL360</td>
<td>P-4</td>
<td>SSHM4-6-TB</td>
<td>P-2</td>
</tr>
<tr>
<td>JSXXL...</td>
<td>CSTC-4L1000DR</td>
<td>T-1008/5</td>
<td>SRS/16UNFTL360</td>
<td>P-4</td>
<td>SSHM4-6-TB</td>
<td>P-2</td>
</tr>
</tbody>
</table>

---

**Note:**

- For Parting-off and Threading
- For Parting-off

---

Parting-off toolholder, capable with sub spindle, high pressure coolant compatible

![Diagram of toolholder]

<table>
<thead>
<tr>
<th>Designation</th>
<th>CW</th>
<th>H</th>
<th>B</th>
<th>WF</th>
<th>LF**</th>
<th>HF</th>
<th>HBH</th>
<th>LH**</th>
<th>Insert</th>
<th>Torque*</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSXXR/L1212HX9-S-CHP***</td>
<td>1-2</td>
<td>12</td>
<td>12</td>
<td>0.2/5.5</td>
<td>≤120</td>
<td>12</td>
<td>4</td>
<td>26</td>
<td>JX**06...12...16...20...</td>
<td>1.2</td>
</tr>
<tr>
<td>JSXXR/L1212HX8-S-CHP</td>
<td>1-2</td>
<td>12</td>
<td>12</td>
<td>0.2/5.5</td>
<td>≤120</td>
<td>12</td>
<td>2</td>
<td>26</td>
<td>JX**06...12...16...20...</td>
<td>1.2</td>
</tr>
<tr>
<td>JSXXR/L1616HX9-S-CHP***</td>
<td>1-2</td>
<td>16</td>
<td>16</td>
<td>0.2/5.5</td>
<td>≤120</td>
<td>16</td>
<td>1.5</td>
<td>30</td>
<td>JX**06...12...16...20...</td>
<td>1.2</td>
</tr>
<tr>
<td>JSXXR/L1616HX9B-CHP***</td>
<td>1-2</td>
<td>16</td>
<td>16</td>
<td>0.2/5.5</td>
<td>≤120</td>
<td>16</td>
<td>0</td>
<td>30</td>
<td>JX**06...12...16...20...</td>
<td>1.2</td>
</tr>
</tbody>
</table>

*Torque: Recommended torque (N·m) for clamping

**LF (Functional Length) LH (Head Length), and HBL (Head-bottom Offset Length) values shown above are true with JX**16... insert. LF, LH, and HBL will all be 2 mm shorter than the above values with JX**12... and JX**20... inserts, and 4 mm shorter for JX**06... insert.

***To be replaced with the new design

Note: Use the right-hand insert (JX****R...) for a right-hand holder (JSXXR...); the left-hand insert (JX****L...) for a left-hand holder (JSXXL...).

---

**SPARE PARTS**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Clamping screw</th>
<th>Wrench</th>
<th>Coolant plug</th>
<th>Wrench</th>
<th>DirectTungJet plug</th>
<th>Wrench</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSXXR...***-S-CHP</td>
<td>CSTC-4L0550DL</td>
<td>T-1008/5</td>
<td>SRS/16UNFTL360</td>
<td>P-4</td>
<td>SSHM4-6-TB</td>
<td>P-2</td>
</tr>
<tr>
<td>JSXXL...***-S-CHP</td>
<td>CSTC-4L0550DR</td>
<td>T-1008/5</td>
<td>SRS/16UNFTL360</td>
<td>P-4</td>
<td>SSHM4-6-TB</td>
<td>P-2</td>
</tr>
</tbody>
</table>

---

**Note:**

- Parting-off widths : 1.0 mm and 1.5 mm (for a max parting diameter of ø6 mm)
  - 1.5 mm and 2.0 mm (for max parting diameters of ø12 mm, ø16 mm, ø20 mm)
- Threading pitch range : 0.2 – 1.5 mm

See page 16 for the proper tool overhang and plug settings.

---

For more information
External grooving and parting-off toolholder, high pressure coolant compatible

**TUNGALOY ACCELERATED MACHINING**

### JCTER/L-CHP

![Diagram](image)

**Designation**
- **JCTER/L1212X2T12-CHP**
  - CW: 2
  - Seat size: 25
  - CUTDIA: 12
  - H: 12
  - B: 120
  - LF: 24.5
  - LH: 25.4
  - HBL: 12
  - HF: 12
  - WF: 0/12
  - HBH: 5
  - Torque*: 3.0

- **JCTER/L1616X2T12-CHP**
  - CW: 2
  - Seat size: 25
  - CUTDIA: 16
  - H: 16
  - B: 160
  - LF: 24.5
  - LH: 25.4
  - HBL: 16
  - HF: 16
  - WF: 0/16
  - HBH: 1
  - Torque*: 3.0

- **JCTER/L1616X2T16-CHP**
  - CW: 2
  - Seat size: 32
  - CUTDIA: 16
  - H: 16
  - B: 160
  - LF: 24.5
  - LH: 25.4
  - HBL: 16
  - HF: 16
  - WF: 0/16
  - HBH: 4
  - Torque*: 3.0

- **JCTER/L2020X2T16-CHP**
  - CW: 2
  - Seat size: 32
  - CUTDIA: 20
  - H: 20
  - B: 200
  - LF: 24.5
  - LH: 25.4
  - HBL: 20
  - HF: 20
  - WF: 0/20
  - HBH: 0
  - Torque*: 3.0

---

(1) "WF" value is calculated with groove width "WF" shown in the table. • CUTDIA: Max. parting off dia.

*Torque: Recommended torque (N·m) for clamping

---

**SPARE PARTS**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Clamping screw</th>
<th>Wrench</th>
<th>Coolant plug</th>
<th>Wrench</th>
<th>DirectJet plug</th>
<th>Wrench</th>
</tr>
</thead>
<tbody>
<tr>
<td>JCTER/L...</td>
<td>GSHB-4-A</td>
<td>T-SF</td>
<td>SRS/16UNFTL360</td>
<td>P-4</td>
<td>SSHM4-6-TB</td>
<td>P-2</td>
</tr>
</tbody>
</table>

Groove width: 2.0 mm

See page 16 for the proper tool overhang and plug settings.

---

**TETRACUT**

**STCR/L-27-CHP**

Grooving and parting-off toolholder. High pressure coolant capability.

![Diagram](image)

### SPARE PARTS

<table>
<thead>
<tr>
<th>Designation</th>
<th>Screw</th>
<th>Wrench</th>
<th>Coolant plug</th>
<th>Wrench</th>
<th>DirectJet plug</th>
<th>Wrench</th>
</tr>
</thead>
<tbody>
<tr>
<td>STCR-27-CHP</td>
<td>SR16-212-01397/L</td>
<td>T-2010/5</td>
<td>SRS/16UNFTL360</td>
<td>P-4</td>
<td>SSHM4-6-TB</td>
<td>P-2</td>
</tr>
<tr>
<td>STCL-27-CHP</td>
<td>SR16-212-01397</td>
<td>T-2010/5</td>
<td>SRS/16UNFTL360</td>
<td>P-4</td>
<td>SSHM4-6-TB</td>
<td>P-2</td>
</tr>
</tbody>
</table>

See page 16 for the proper tool overhang and plug settings.
Tool settings on the tool post

- When using through-coolant, always set the tool to a proper overhang as specified in the table below.
- Remove the plug as specified below for proper through-coolant usage.

<table>
<thead>
<tr>
<th>Machine model</th>
<th>Grooving tool</th>
<th>Other stationary tools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Overhang L1 (mm)</td>
<td>Coolant plug to remove</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L12</td>
<td>17.5 (for 10X12 mm shank)</td>
<td>1*</td>
</tr>
<tr>
<td>L20</td>
<td>30 (for 16X16 mm shank)</td>
<td>B1</td>
</tr>
<tr>
<td>D25, M32</td>
<td>25 (for 20X20 mm shank)</td>
<td>B1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Only one coolant inlet on the toolholder
** 12x12 holder can also be used by shimming with a 4 mm shim
Tooling Examples

For Model L20 (compatible with the DirectTung-Jet system)

Coolant is supplied to Post T1 through Post T5 in a single system. If more than two coolant supply systems are required, please consult your Cincom agent.

For Model D25 (compatible with the DirectTung-Jet system)

Coolant is supplied in a single system to Post T1 through Post T4 in a single system.
Shaft (stainless steel)

1 and 5: Facing and OD turning, ø16 mm
2: Drilling, ø7 mm
4 and 9: Groove-turning, w/4 mm thick insert
10: Cutting off, w/2 mm insert

3 and 12: Boring, ø8 mm

6: Threading, M18 x 1.0
7: Facing and grooving, 3 mm thick
8: Spotfacing flats

Plunger (stainless steel)

1 and 5: Facing and OD turning, ø10 mm
2: Drilling, ø7 mm
3: Drilling, ø2.9 mm
4: Boring, ø4.5 mm
5: Drilling, ø10 mm
6: Cutting off, ø10 mm
7: Facing, ø10 mm
8: Boring, ø3 mm

Shaft (stainless steel)

Tung C 10: Cutting off, w/2 mm insert

Tung M 3 and 12: Boring, ø8 mm

Tung M 11: Facing and OD turning, ø15 mm

Tung M 6: Threading, M18 x 1.0

Tung M 7: Facing and grooving, 3 mm thick

Tung M 8: Spotfacing flats

Plunger (stainless steel)

MINI T 1 and 5: Facing and OD turning, ø10 mm

MINI T 2: Drilling, ø7 mm

MINI T 6: Cutting off, ø10 mm

MINI T 7: Facing, ø10 mm

MINI T 4: Boring, ø4.5 mm

MINI T 8: Boring, ø3 mm
### Practical examples

#### Shaft Machining

<table>
<thead>
<tr>
<th>Workpiece type</th>
<th>Shaft</th>
<th>Valve part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toolholder</td>
<td>JSDJ2CR1212X11-CHP</td>
<td>JSDJ2CR1212X11-CHP</td>
</tr>
<tr>
<td>Insert</td>
<td>DCGT11T301FN-JS</td>
<td>DCMT11T304-PSS</td>
</tr>
<tr>
<td>Grade</td>
<td>SH730</td>
<td>AH905</td>
</tr>
</tbody>
</table>

**Workpiece material**

- **Cutting speed**: $V_c$ (m/min)
  - Shaft: 100
  - Valve part: 50
- **Feed**: $f$ (mm/rev)
  - Shaft: 0.02
  - Valve part: 0.05
- **Depth of cut**: $a_p$ (mm)
  - Shaft: 2
  - Valve part: 0.15

**Cutting conditions**

- **Machining**: External turning
- **Coolant**: Oil

**Results**

- **Parts machined per insert**
  - Shaft: 7 MPa
  - Valve part: 2 MPa

### Injection Part Machining

<table>
<thead>
<tr>
<th>Workpiece type</th>
<th>Shaft</th>
<th>Injection part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toolholder</td>
<td>STCR1212X18-CHP</td>
<td>JSXR1212X09-CHP</td>
</tr>
<tr>
<td>Insert</td>
<td>TCP18R200F-010</td>
<td>JXPG16R15F</td>
</tr>
<tr>
<td>Grade</td>
<td>SH725</td>
<td>SH725</td>
</tr>
</tbody>
</table>

**Workpiece material**

- **Insert width**: 2 mm
- **Part-off diameter**: ø8 mm

**Cutting conditions**

- **Machining**: External grooving
- **Coolant**: Oil

**Results**

- **Parts machined per insert**
  - Shaft: 7 MPa
  - Injection part: 7 MPa

---

DirectTungJet’s high pressure, through-coolant supply system has improved the tool life to 230% over external coolant supply method. DirectTungJet’s high pressure coolant jet system has improved the tool life over external coolant supply method. DirectTungJet’s high pressure, through-coolant supply system has improved the tool life to 230% over external coolant supply method.