TOOL HOLDERS
TSUGAMI.
PCM WILLEN SA

For over 40 years, PCM Willen SA is one of the world’s leading manufacturers of special tool holders for automatic lathes. All our products are developed and manufactured in Switzerland and bear the label «Swiss Made», which is synonymous with precision, quality and reliability.

Our company is located in the middle of French-speaking part of Switzerland at the edge of Lake Geneva near Montreux. Our international dealer network ensures continued after sales support. We offer training courses, which we tailor to individual customer requirements.

PCM stays for innovation and progress. Our superbly qualified engineering staff ensures finest quality of manufacturing solutions and keeps our customers ahead of the competition.
In close cooperation with machine builders and end users, we stay on the way to satisfied customers. We will keep this track in the future.

The best quality toolholders can only provide optimum performance if they are maintained or repaired with first class replacement parts. PCM experts emphasize professional after sale support for all PCM equipment.
YOUR CHOICE N°1 IN TOOLING SYSTEMS

- Long service life
- Very gentle transmission even at high speed operation
- 100% tested
- Customised tool available

High performance seal for an hermetic tool holder

High precision preloaded spindle ball bearings class P4S

Low backlash and high transmission accuracy

Case-hardened and grinded spindle

Different clamping systems in high precise concentricity

Case-hardened and paired bevel gears system

Available with coolant through the spindle

Different ratios available

High flexible coolant system (Hirt Line)

Advantages
## TSUGAMI

### P03

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<td>Polygon tools</td>
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<td>Whirling tools</td>
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### Other machines

<table>
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<th>Tools</th>
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<td>34</td>
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<tr>
<td>Thread whirling tools</td>
<td>35</td>
</tr>
</tbody>
</table>

Rotation:  
- **CW** Clockwise  
- **CCW** Counterclockwise  

Cooling:  
- **INT** Interior  
- **EXT** Exterior  
- **W** Without
P03-GSC-117-S

- ER11
- 1:2
- RPM max.: 16'000

Machines Types: P034H

Note:
Original main block is to replace by this tool. To adjust the offset please contact your local TSUGAMI dealer.
Tool N°01 cutter carrier 8mm x 8mm
Tool N°02 cutter carrier 8mm x 8mm
Tool N°03 hight frequency Ø25
Tool N°04 in ER11 with RPM 16'000.
Tool N°05 is a modular quick change for different operation.
P03-GDF-416

Ø 3x16

Machines Types
P034H

Note:
### P03-GDF-516

<table>
<thead>
<tr>
<th>Ø</th>
<th>3x16</th>
</tr>
</thead>
</table>

**Machines Types**

P034H

**Note:**

---

![Diagram of P03-GDF-516 with dimensions and symbols](image-url)
**PO3-GTF-018**

<table>
<thead>
<tr>
<th>Machines Types</th>
<th>P034H</th>
</tr>
</thead>
</table>

Note:
## P03-GSE-207-II

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection</td>
<td>2xER11</td>
</tr>
<tr>
<td>Reduction</td>
<td>1:1</td>
</tr>
<tr>
<td>RPM max.</td>
<td>8,000 rpm</td>
</tr>
<tr>
<td>Machines Types</td>
<td>P034H</td>
</tr>
</tbody>
</table>

**Note:**
- CW
- CCW

---

---

---
**P03-GSC-015**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER08</td>
<td></td>
</tr>
<tr>
<td>1:1</td>
<td></td>
</tr>
<tr>
<td>RPM max.</td>
<td>8'000</td>
</tr>
<tr>
<td>Machines Types</td>
<td>P034H</td>
</tr>
</tbody>
</table>

**Note:**

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P03-GSH-135-L

- Bore: 3.5
- Module: 1:1
- RPM max: 8'000

Machines Types: P034H

Note:
Adjustable ±2.5°
**PO3-GSP-118**

- **Number of sides**: 8
- **Ratio**: 1:1
- **RPM max.**: 8'000

**Machines Types**

- **P034H**

**Note**:

- Adjustable ±2.5°
- Max. tool Ø45 mm
P03-GSP-218

- 8
- 1:1

RPM max. 8’000

Machines Types P03H4

Note:

Adjustable ±2.5°
Max. tool Ø45 mm
Cutter-saw has the same offset as the cutter carrier
**TSUGAMI**

**Polygon tools**

---

**P03-GSP-318**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of edges</td>
<td>8</td>
</tr>
<tr>
<td>Pitch</td>
<td>1:1</td>
</tr>
<tr>
<td>RPM max.</td>
<td>8’000</td>
</tr>
<tr>
<td>Machines Types</td>
<td>P034H</td>
</tr>
</tbody>
</table>

**Note:**
- Adjustable in X ±2.5°
- Adjustable in Y ±1.5°
- Max. tool Ø45 mm

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P03-GSW-220

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPM max.</td>
<td>8000</td>
</tr>
<tr>
<td>Machines Types</td>
<td>P034H</td>
</tr>
</tbody>
</table>

Note:
Adjustable 0°-20°
**BW20-GSC-105-4X**

- **ER08**
- **1:3.8**
- **RPM max.** 30'400

**Machines Types**
- BW207
- BW208
- BW208Z
- BW209Z

**Note:**
- Cross drilling/milling
- Gang tool T01, T02, T11, T12
- Main Spindle
- Speeder

**BW20-GSC-107-4X**

- **ER11**
- **1:3.8**
- **RPM max.** 22'800

**Machines Types**
- BW207
- BW208
- BW208Z
- BW209Z

**Note:**
- Cross drilling/milling
- Gang tool T01, T02, T11, T12
- Main Spindle
- Speeder
## B07-GSC-105-4X

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER8</td>
<td></td>
</tr>
<tr>
<td>1:3.8</td>
<td></td>
</tr>
<tr>
<td>RPM max.</td>
<td>22'800</td>
</tr>
</tbody>
</table>

**Machines Types**
- B073 – III, B074 – III,
- B0123 – III, B0124 – III,
- B0203 – III, B0204 – III,
- B075 – III, B0125 – III,
- B0126 – III, B0205 – III,
- B0206 – III

**Note:**
- Cross drilling/milling
- Gangtool, T01
- Main Spindle
- Speeder

## B07-GSC-110

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
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<tbody>
<tr>
<td>ER16</td>
<td></td>
</tr>
<tr>
<td>1:1</td>
<td></td>
</tr>
<tr>
<td>RPM max.</td>
<td>8'000</td>
</tr>
</tbody>
</table>

**Machines Types**
- B073 – III, B074 – III,
- B0123 – III, B0124 – III,
- B0203 – III, B0204 – III,
- B075 – III, B0125 – III,
- B0126 – III, B0205 – III,
- B0206 – III

**Note:**
- Cross drilling/milling
- Gangtool, T01
- Main Spindle
## TSUGAMI Cross drill/mill tools

### BO26-GSC-105-4X

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection</td>
<td>ER8</td>
</tr>
<tr>
<td>Ratio</td>
<td>1:3.8</td>
</tr>
<tr>
<td>RPM max.</td>
<td>22'800</td>
</tr>
</tbody>
</table>

**Machines Types**
- B0265 II, B0265B II,
- B0325 II, B0325B II,
- B0266 II, 0326 II

**Note**:
- Cross drilling/milling
- Gangtool, T11 - T15
- Main Spindle Speeder

### BO26-GSC-107-4X

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection</td>
<td>ER11</td>
</tr>
<tr>
<td>Ratio</td>
<td>1:3.8</td>
</tr>
<tr>
<td>RPM max.</td>
<td>22'800</td>
</tr>
</tbody>
</table>

**Machines Types**
- B0265 II, B0265B II,
- B0325 II, B0325B II,
- B0266 II, 0326 II

**Note**:
- Cross drilling/milling
- Gangtool, T11 - T15
- Main Spindle Speeder
### B026-GSC-107-3X

<table>
<thead>
<tr>
<th>ER11</th>
</tr>
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<tbody>
<tr>
<td>1:3</td>
</tr>
<tr>
<td>RPM max.</td>
</tr>
<tr>
<td>15’000</td>
</tr>
</tbody>
</table>

**Machines Types**

B026 II, B0265 II, B0325 II, B0325B II, B0266 II, 0326 II

**Note:**

Cross drilling/milling
Gangtool, T11-T15
Main Spindle
Speeder

---

### B026-BSC-110-HP

<table>
<thead>
<tr>
<th>ER11</th>
</tr>
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<tbody>
<tr>
<td>1:1</td>
</tr>
<tr>
<td>RPM max.</td>
</tr>
<tr>
<td>8’000</td>
</tr>
</tbody>
</table>

**Machines Types**

B026 II, B0265 II, B0325 II, B0325B II, B0266 II, 0326 II

**Note:**

Cross drilling/milling
Gangtool, T11 - T15
Main Spindle
Coolant through spindle

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**TSUGAMI Cross drill/mill tools**
**S20-RSC-107-3X**

- ER11
- 1:3
- RPM max. 24'000
- Machines Types S205, S206

**Note:**
Cross drilling/milling
Gangtool T31 - T34
Need 2 tool position (T35 - T38)
Main Spindle
Speeder

---

**HS20-GSC-107-3X-II**

- ER11
- 1:3
- RPM max. 15'000
- Machines Types SS20, SS32, HS20, HS32

**Note:**
Cross drilling/milling
Gangtool, T01, T02, T11-T15
Main Spindle
Speeder
**S20-RSE-107-3X**

- Tool: ER11
- Taper: 1:3
- RPM max.: 24’000

**Machines Types**

SS20, SS32, HS20, HS32

**Note:**

Face drilling/milling  
Back tool post T31 - T34  
Need 2 tool position (T35 - T38)  
Back Spindle  
Speeder

---

**HS20-GSE-107-3X-II**

- Tool: ER11
- Taper: 1:3
- RPM max.: 24’000

**Machines Types**

SS20, SS32, HS20, HS32

**Note:**

Face drilling/milling  
Back tool post T31 - T34  
Need 2 tool position (T35 - T38)  
Back Spindle  
Speeder
### B07-RSE-207

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
<th>Machines Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio</td>
<td>1:1</td>
<td></td>
</tr>
<tr>
<td>RPM max.</td>
<td>8’000</td>
<td></td>
</tr>
<tr>
<td>Note</td>
<td>Face drilling/milling, Gangtool, T01, Main spindle</td>
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### B07-RSE-207-IK

<table>
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<th>Specification</th>
<th>Machines Types</th>
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</thead>
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<tr>
<td>Ratio</td>
<td>1:1</td>
<td></td>
</tr>
<tr>
<td>RPM max.</td>
<td>8’000</td>
<td></td>
</tr>
<tr>
<td>Note</td>
<td>Face drilling/milling, Gangtool, T01, Main spindle, Coolant through spindle</td>
<td></td>
</tr>
</tbody>
</table>
**B07-RSE-207-2X**

- **2x ER11**
- **1:2**
- **RPM max.** 16'000

**Machines Types**
- B073 - III, B074 – III,
- B0123 - III, B0124 – III,
- B0203 – III, B0204 – III,
- B075 – III, B0125 – III,
- B0126 – III, B0205 – III,
- B0206 – III

**Note:**
- Face drilling/milling
- Gangtool, T01
- Main spindle
- Speeder

---

**B07-RSE-207-IK-2X**

- **2x ER11**
- **1:2**
- **RPM max.** 16'000

**Machines Types**
- B073 - III, B074 – III,
- B0123 - III, B0124 – III,
- B0203 – III, B0204 – III,
- B075 – III, B0125 – III,
- B0126 – III, B0205 – III,
- B0206 – III

**Note:**
- Face drilling/milling
- Gangtool, T01
- Main spindle
- Speeder
- Coolant through spindle
**BO26-RSE-110**

- 2x ER16
- 1:1
- RPM max. 8'000
- Machines Types: BO26, BO32, BO38

**Note:**
- Face drilling/milling
- Gangtool, T11
- Main and back spindle

**BO26-RSE-110-IK**

- 2x ER16
- 1:1
- RPM max. 8'000
- Machines Types: BO26, BO32, BO38

**Note:**
- Face drilling/milling
- Gangtool, T11
- Main and back spindle
- Coolant through spindle
**BO26-RSE-110M**

<table>
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<th>Item</th>
<th>Specification</th>
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<tr>
<td>Tool Holder</td>
<td>ER16</td>
</tr>
<tr>
<td>Reduction</td>
<td>1:1</td>
</tr>
<tr>
<td>RPM max.</td>
<td>8'000</td>
</tr>
<tr>
<td>Machines Types</td>
<td>BO26, BO32, BO38</td>
</tr>
</tbody>
</table>

**Note:**
- Face drilling/milling
- Gangtool, T11
- Main spindle

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**BO26-RSE-110M-IK**

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Tool Holder</td>
<td>ER16</td>
</tr>
<tr>
<td>Reduction</td>
<td>1:1</td>
</tr>
<tr>
<td>RPM max.</td>
<td>8'000</td>
</tr>
<tr>
<td>Machines Types</td>
<td>BO26, BO32, BO38</td>
</tr>
</tbody>
</table>

**Note:**
- Face drilling/milling
- Gangtool, T11
- Main spindle
- Coolant through spindle
**BO26-RSE-210**

- **Machines Types**: BO26, BO32, BO38
- **Note**: Face drilling/milling
  - Gangtool, T11
  - Main and back spindle

**BO26-RSE-210-IK**

- **Machines Types**: BO26, BO32, BO38
- **Note**: Face drilling/milling
  - Gangtool, T11
  - Main and back spindle
  - Coolant through spindle
BO26-RSE-210M

- 2x ER16
- 1:1
- RPM max.: 8'000
- Machines Types: BO26, BO32, BO38

Note:
- Face drilling/milling
- Gangtool, T11
- Main spindle

BO26-RSE-210M-IK

- 2x ER16
- 1:1
- RPM max.: 8'000
- Machines Types: BO26, BO32, BO38

Note:
- Face drilling/milling
- Gangtool, T11
- Main spindle
- Coolant through spindle
BO26-RSE-310

- 3x 2x ER16
- 1:1
- RPM max.: 8'000
- Machines Types: BO26, BO32, BO38
- Note:
  - Face drilling/milling
  - Gangtool, T11
  - Main and back spindle

BO26-RSE-310-IK

- 3x 2x ER16
- 1:1
- RPM max.: 8'000
- Machines Types: BO26, BO32, BO38
- Note:
  - Face drilling/milling
  - Gangtool, T11
  - Main and back spindle
  - Coolant through spindle
**BO26-RSE-310M**

- 3x ER16
- 1:1
- RPM max. 8'000
- Machines Types: BO26, BO32, BO38
- Note:
  - Face drilling/milling
  - Gangtool, T11
  - Main spindle

**BO26-RSE-310M-IK**

- 3x ER16
- 1:1
- RPM max. 8'000
- Machines Types: BO26, BO32, BO38
- Note:
  - Face drilling/milling
  - Gangtool, T11
  - Main spindle
  - Coolant through spindle
**HS20-GSP-613**

- 13
- 1:1
- RPM max. 5'000
- Machines Types SS20, SS32, HS20, HS32

**Note:**

Polygon cutting  
Gangtool, T01, T02, T11-T15  
Main Spindle  
Max. tool Ø72 mm  
Max. thickness 8.3 mm

---

**S20-GSP-613**

- 13
- 1:1
- RPM max. 8'000
- Machines Types S205, S206

**Note:**

Polygon cutting  
Gangtool, T11, T13  
Main Spindle  
Max. tool Ø72 mm  
Max. thickness 8.3 mm
### BO7-GSA-207

- **2x ER11**
- **1:1**
- **RPM max.** 8'000

#### Machines Types

#### Note:
- Face, cross & angular drilling/milling
- Gangtool, T01
- Main spindle
- Inclination : 90°

### BO7-GSA-207-IK

- **2x ER11**
- **1:1**
- **RPM max.** 8'000

#### Machines Types

#### Note:
- Face, cross & angular drilling/milling
- Gangtool, T01
- Main spindle
- Coolant through spindle
- Inclination : 90°
**BO7-GSA-207-2X**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spindle Diameter</td>
<td>2x ER11</td>
</tr>
<tr>
<td>Reduction</td>
<td>1:2</td>
</tr>
<tr>
<td>RPM max.</td>
<td>16’000</td>
</tr>
</tbody>
</table>

**Note:**
Face, cross & angular drilling/milling
Gangtool, T01
Speeder
Main spindle
Coolant through spindle
Inclination : 90°

**BO7-GSA-207-IK-2X**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spindle Diameter</td>
<td>2x ER11</td>
</tr>
<tr>
<td>Reduction</td>
<td>1:2</td>
</tr>
<tr>
<td>RPM max.</td>
<td>16’000</td>
</tr>
</tbody>
</table>

**Note:**
Face, cross & angular drilling/milling
Gangtool, T01
Speeder
Main spindle
Coolant through spindle
Inclination : 90°
### B07-GSS-110

- **Toolholder**: ER16
- **Ratio**: 1:1
- **RPM max.**: 8'000

**Machines Types**

B073 – III, B074 – III, 
B0123 – III, B0124 – III, 
B0203 – III, B0204 – III, 
B075 – III, B0125 – III, 
B0126 – III, B0205 – III, 
B0206 – III 

**Note:**

Slitting 
Gangtool, T01 
Main Spindle 
Milling cutter Ømax=70mm 
Driven toolholder for slitting or face drilling / milling

### S20-RSS-110

- **Toolholder**: ER16
- **Ratio**: 1:1
- **RPM max.**: 8'000

**Machines Types**

S205, S206 

**Note:**

Slitting 
Gangtool, T11, T13 
Main Spindle 
Driven toolholder for slitting or face drilling / milling 
Milling cutter Ømax=70mm
### B07-GSF-418

- **Dia.**
  - 8 mm

- **D-Ø**
  - 1:1

- **RPM max.**
  - 8'000

**Machines Types**
- B073 - III, B074 – III,
- B0123 - III, B0124 – III,
- B0203 – III, B0204 – III,
- B075 – III, B0125 – III,
- B0126 – III, B0205 – III,
- B0206 – III

**Note:**
- Gangtool, T01
- Main Spindle
- Driven toolholder for thread milling
- Milling cutters, Ømax=72mm, Width= L = 3-5 mm
- Line of cutting in 1mm of the spindle

### B07-GSF-518

- **Dia.**
  - 8 mm

- **D-Ø**
  - 1:1

- **RPM max.**
  - 8'000

**Machines Types**
- B073 - III, B074 – III,
- B0123 - III, B0124 – III,
- B0203 – III, B0204 – III,
- B075 – III, B0125 – III,
- B0126 – III, B0205 – III,
- B0206 – III

**Note:**
- Gangtool, T01
- Main Spindle
- Driven toolholder for thread milling
- Milling cutters, Ømax=72mm, Width= L = 3-5 mm
- Line of cutting in 1mm of the spindle
- Slope 0…1.5°
TSUGAMI1-GSW-220

<table>
<thead>
<tr>
<th>Ø</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>ø-ø</td>
<td>1:1</td>
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<tr>
<td>RPM max.</td>
<td>8’000</td>
</tr>
<tr>
<td>Machines Types</td>
<td>S205, S206</td>
</tr>
</tbody>
</table>

Note:
Adjustable ±20°
Main Spindle
1 PCM cutterhead included:
- GSW-220-FPGLO Z=5, Ø6 mm
- GSW-220-FPSWG Z=5, Ø6 mm
- GSW-220-FPSWG-II Z=5, Ø6 mm
Basis TSUGAMI1-PCR
Head GSW-220

Inserts are not included
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