Pascal auto coupler
**Coupler module**

### Screw mounting (new product)

<table>
<thead>
<tr>
<th>Water, air</th>
<th>Mold side</th>
<th>Machine side</th>
<th>Body material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WVE-W M</td>
<td>WVE-W F</td>
<td>Stainless steel</td>
</tr>
<tr>
<td>Hydraulic</td>
<td>WVE-H M</td>
<td>WVE-H F</td>
<td>Chromium molybdenum steel</td>
</tr>
<tr>
<td>Diameter</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td></td>
<td>3/4”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Flange mounting

<table>
<thead>
<tr>
<th>Water, air</th>
<th>Mold side</th>
<th>Machine side</th>
<th>Body material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WVE-W P</td>
<td>WVE-W S</td>
<td>Stainless steel</td>
</tr>
<tr>
<td>Hydraulic</td>
<td>WVE-H P</td>
<td>WVE-H S</td>
<td>Chromium molybdenum steel</td>
</tr>
<tr>
<td>Diameter</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td></td>
<td>3/4”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Flange mounting (Large flow type)

<table>
<thead>
<tr>
<th>Water, air</th>
<th>Mold side</th>
<th>Machine side</th>
<th>Body material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WVD-W P</td>
<td>WVD-W S</td>
<td>Stainless steel</td>
</tr>
<tr>
<td>Diameter</td>
<td>1”</td>
<td>1 1/4”</td>
<td>1 1/2”</td>
</tr>
<tr>
<td></td>
<td>2”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Embedded type

<table>
<thead>
<tr>
<th>Water, air</th>
<th>Machine side</th>
<th>Body material</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>WVF-03S</td>
<td>Copper alloy</td>
</tr>
<tr>
<td>Diameter</td>
<td>1/4”</td>
<td></td>
</tr>
</tbody>
</table>

Refer to "Auto coupler data sheet(PA-184)" for the specifications details.
Coupler module

Screw mounting  new product

Flange mounting

Flange mounting  Large flow type

Embedded type

Refer to "Auto coupler date sheet(PA-184)" for the specifications details.
Pascal coupling system

35,000kN (3,500ton) IMM horizontal loading
Coupling system & hydraulic clamp TKC
Pascal coupling system

4,500kN (450ton) IMM horizontal loading
Coupling system & mag clamp
Machine side
width: 720 \times \text{height: 280 (mm)}

The size width \times height is value excluding the bracket.
Machine side
width : 450 × height : 180 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”  3/8”  1/2”  3/4”  1”  1/8”  1/4”  3/8”  1/2”  3/4”  1”  1  1/4”  1  1/2”  2”</td>
<td>2  2  2  2  2  2  2  2  2  2  2  2  2  2</td>
<td>-</td>
</tr>
<tr>
<td>Pieces</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
Fixed machine side
width: 320 × height: 850 (mm)

Electric connector
Hydraulic 3/8” × 36 Ports
Water, Air
1 1/2” × 2 Ports
Lock guide socket
Self-alignment mechanism

Fixed mold side
width: 320 × height: 730 (mm)

Electric connector
Guide hole for auxiliary temperature control on the mold changer
Water 1 1/2” × 2 Ports
Hydraulic 3/8” × 36 Ports
Lock guide pin
Air 1/4” × 1 Port

Movable mold side
width: 210 × height: 480 (mm)

Electric connector
Hydraulic 3/8” × 6 Ports
Air 1/4” × 2 Ports
Water 1 1/2” × 2 Ports
Lock guide pin

* The size width × height is value excluding the bracket.

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td>Fixed platen</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Movable platen</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>
Mold side
width : 1,660 × height : 150 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td>12</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
Fixed machine side
width : 210 × height : 710 (mm)

Fixed Mold side
width : 210 × height : 600 (mm)

* The size width × height is value excluding the bracket.

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td>Fixed platen</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Movable platen</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>
Fixed machine side  Electric connector
width: 400 × height: 155 (mm)

Movable machine side  auto coupler
width: 320 × height: 810 (mm)

Fixed machine side  auto coupler
width: 350 × height: 925 (mm)

* The size width × height is value excluding the bracket.

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4&quot;</td>
<td>3/8&quot;</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>Pieces</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed platen</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Movable platen</td>
<td></td>
<td>1</td>
<td>8</td>
</tr>
</tbody>
</table>
Movable machine side

width : 420 × height : 130 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Machine side
width : 455 × height : 300 (mm)

Electric connector
Hydraulic 1/2”×2 Ports
Lock guide socket
Water,Air 3/8”×20 Ports

Mold side
width : 300 × height : 350 (mm)

Hydraulic 1/2”×2 Ports
Lock guide pin
Electric connector
Water,Air 1 1/2”×2 Ports

The non operation side
Operation side

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4” 3/8” 1/2” 3/4” 1” 1/8” 1/4” 3/8” 1/2” 3/4” 1” 1 1/4” 1 1/2” 2”</td>
<td>20 2 2</td>
<td></td>
</tr>
<tr>
<td>Pieces</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
Machine side
width: 510 × height: 160 (mm)

Water, Air 1” × 5 Ports
Self-alignment mechanism

Water, Air 3/8” × 2 Ports
Lock guide socket

Coupler (Water, Air)

Mold
Movable platen

Operation side
The non operation side

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Connection port</td>
<td>2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Pieces</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The size width × height is value excluding the bracket.
Machine side
width: 360 × height: 170 (mm)

- Electric connector
  - For heater 23A × 96pins
- Self-alignment mechanism
- Guide pin
- Electric connector
  - For signal × 120pins

Mold side
width: 300 × height: 180 (mm)

- Electric connector
  - For signal 23A × 96pins
- Electric connector
  - For signal × 120pins

The size width × height is value excluding the bracket.

Electric connector
For heater 23A × 96pins  For signal × 120pins
Fixed machine side
width: 775 × height: 220 (mm)

Movable machine side
width: 900 × height: 220 (mm)

### Fluid Connections:

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4&quot;  3/8&quot;  1/2&quot;  3/4&quot;  1&quot;  1/8&quot;  1/4&quot;  3/8&quot;  1/2&quot;  3/4&quot;  1&quot;  1/4&quot;  1/2&quot;  2&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pieces</td>
<td>Fixed platen       4                  20              4          Mountable</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Movable platen     8                  10              6          Mountable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Machine side
width : 440 × height : 170 (mm)

* The size width × height is value excluding the bracket.

Electric connector × 37 pins
Guide pin
Self-alignment mechanism

Electric connector
(Mounting position: Upper part of mold changer)

Mold
Mold changer

Electric connector
37 pins × 3
width : 198 × height : 45 (mm)

Magnetic clamp

Lock guide pin

Electric connector
For power of mag clamp 60A × 8pins

Movable platen

Electric connector

Mold

Electric connector
For power of mag clamp 60A × 8pins
Fixed platen side
width : 210 × height : 550 (mm)

Movable platen side
width : 175 × height : 550 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td>Fixed platen</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Movable platen</td>
<td>2</td>
<td>12</td>
</tr>
</tbody>
</table>

Coupler (Hydraulic, Water, Air) & Electric connector

The non operation side

Operation side
**Fixed machine side**

- **Width**: 430 × height: 175 (mm)

**Fixed Mold side**

- **Width**: 350 × height: 175 (mm)

---

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Connection port</strong></td>
<td>1/4&quot; 3/8&quot; 1/2&quot; 3/4&quot; 1&quot; 1/8&quot; 1/4&quot; 3/8&quot; 1/2&quot; 3/4&quot; 1&quot; 1 1/4&quot; 1 1/2&quot; 2&quot;</td>
<td>4 2 2</td>
<td></td>
</tr>
</tbody>
</table>
Movable Mold side
width: 350 × height: 175 (mm)

Movable machine side
width: 430 × height: 175 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”  3/8”  1/2”  3/4”  1”  1/8”  1/4”  3/8”  1/2”  3/4”  1”</td>
<td>1 1/4”  1/2”</td>
<td>-</td>
</tr>
<tr>
<td>Pieces</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

- Electric connector
- Hydraulic 3/8” × 4 Ports
- Water, Air Rc 1/2” × 2 Ports
- Water, Air 3/8” × 2 Ports
- Lock guide socket
- Self-alignment mechanism

- Movable machine side
- Fixed platen
- Movable platen
- The non operation side
- Coupler (Hydraulic, Water, Air) & Electric connector

5,000kN Die casting machines

[Diagram of Movable Mold side and Movable machine side with various components and dimensions]
Mold side
width : 580 × height : 200 (mm)

Machine side
width : 510 × height : 180 (mm)

* The size width × height is value excluding the bracket.

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td>Fixed platen</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Movable platen</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
Machine side (Movable platen)
width: 180 × height: 465 (mm)

* The size width × height is value excluding the bracket.

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4&quot;  3/8&quot;  1/2&quot;  3/4&quot;  1&quot;  1/8&quot;  1/4&quot;  3/8&quot;  1/2&quot;  3/4&quot;  1&quot;  1 1/4&quot;  1 1/2&quot;  2&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pieces</td>
<td>Fixed platen 4 4 4 4 4 4</td>
<td>Movable platen 4 4</td>
<td>4 4</td>
</tr>
</tbody>
</table>
Machine side
width : 125 $\times$ height : 325 (mm)

Mold side
width : 150 $\times$ height : 200 (mm)

* The size width $\times$ height is value excluding the bracket.

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4” 3/8” 1/2” 3/4” 1” 1/8” 1/4” 3/8” 1/2” 3/4” 1” 1 1/4” 1 1/2” 2”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pieces</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>
Mold side
width: 330 × height: 100 (mm)

Hydraulic
3/8" × 10 Ports

Guide pin

Fixed platen

The non-operation side

Operation side

Coupler (Water, Air)

Machine side
width: 450 × height: 95 (mm)

Hydraulic
3/8" × 10 Ports

Self-alignment mechanism

The size width × height is value excluding the bracket.

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”  3/8”  1/2”  3/4”  1”  1/8”  1/4”  3/8”  1/2”  3/4”  1”  1 1/4”  1 1/2”  2”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pieces</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1,800kN IMM

Machine side
width: 115 × height: 100 (mm)

Mold side
width: 105 × height: 100 (mm)

Self-alignment mechanism
Guide pin

Electric connector
For heater 40A × 6pins 23A × 8pins
For signal × 15pins

Fixed platen
The non operation side
Electric connector

Operation side

Electric connector
For heater 40A × 6pins, 23A × 8pins
For signal × 15pins

* The size width × height is value excluding the bracket.
Machine side
width : 140 × height : 85 (mm)

Electric connector
24pins + 30pins

Self-alignment mechanism

Guide pin

The non operation side
Operation side

Electric connector

24pins + 30pins

* The size width × height is value excluding the bracket.
Machine side
width: 480 × height: 200 (mm)

Mold side
width: 350 × height: 250 (mm)

* The size width × height is value excluding the bracket.

### Fluid

<table>
<thead>
<tr>
<th>Connection port</th>
<th>Hydraulic</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pieces</td>
<td>2</td>
<td>20</td>
<td>140 pins</td>
</tr>
</tbody>
</table>
Machine side
width: 450 × height: 200 (mm)

Mold side
width: 310 × height: 250 (mm)

* The size width × height is value excluding the bracket.

---

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4&quot;  3/8&quot;  1/2&quot;  3/4&quot;  1&quot;  1/8&quot;  1/4&quot;  3/8&quot;  1/2&quot;  3/4&quot;  1&quot;  1/14&quot;  1/2&quot;  2&quot;</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Pieces</td>
<td>2</td>
<td>8</td>
<td>6</td>
</tr>
</tbody>
</table>

---

Fixed platen
The non operation side
Mold
Operation side
Movable platen

Lock guide socket
Hydraulic
1/2" × 2 Ports
Water, Air
3/8" × 8 Ports

Lock guide pin
Water, Air
1/2" × 6 Ports
Hydraulic
1/2" × 2 Ports

Electric connector
× 130 pins

Self-alignment mechanism

---

Width: 450 mm
Height: 200 mm

Width: 310 mm
Height: 250 mm

---

Machine side
Mold side

---

Coupler (Hydraulic, Water, Air)
& Electric connector

---

1/2" × 2 Ports
3/8" × 8 Ports
1/2" × 6 Ports

---

1,000kN IMM
H W A ELC. CN.
Machine side for Upper
width: 830 × height: 310 (mm)

Machine side for Lower
width: 720 × height: 230 (mm)

Mold side
width: 660 × height: 310 (mm)

Mold side
width: 570 × height: 230 (mm)
Machine side for hydraulic cylinder
width: 660 × height: 230 (mm)

Mold side
width: 520 × height: 230 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4&quot;  3/8&quot;  1/2&quot;  3/4&quot;  1&quot;  1/8&quot;  3/8&quot;  1/2&quot;  3/4&quot;  1&quot;  1/4&quot;  1  1/4&quot;  1/2&quot;  2&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pieces</td>
<td>Upper  10</td>
<td>12  4  4  2</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>Lower   2</td>
<td>4  4  3</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>Hydraulic 12</td>
<td>8  2</td>
<td>○</td>
</tr>
</tbody>
</table>
Machine side C&C coupler
width: 100 × height: 410 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Machine side C&C coupler
width: 100 × height: 410 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”  3/8”  1/2”  3/4”  1”  1/8”  1/4”  3/8”  1/2”  3/4”  1”  1 1/4”  1 1/2”  2”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pieces</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
width : 260 × height : 70 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic</th>
<th>Water &amp; Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4&quot; 3/8&quot; 1/2&quot; 3/4&quot; 1&quot; 1/8&quot; 1/4&quot; 3/8&quot; 1/2&quot; 3/4&quot; 1&quot; 1 1/4&quot; 1 1/2&quot; 2&quot;</td>
<td></td>
</tr>
<tr>
<td>Pieces</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Electric connector

Water, Air 1/4" × 3 Ports

Operation side

Mold

Movable platen

The non operation side

C&C coupler
C&C coupler

width: 75 × height: 110 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (general mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td>Fixed platen</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Movable platen</td>
<td>2</td>
<td>-</td>
</tr>
</tbody>
</table>
Multi coupler check valve model
6 Ports  width: 75 × height: 180 (mm)
8 Ports  width: 75 × height: 220 (mm)

Multi coupler open model
12 Ports width: 60 × height: 203 (mm)

For temperature control & air valve gate

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Connection port</th>
<th>Rc 1/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>Port</td>
<td>Pieces</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

* Until 1MPa

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Connection port</th>
<th>Water &amp; Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>Port</td>
<td>Pieces</td>
</tr>
<tr>
<td>8</td>
<td>12</td>
<td>2</td>
</tr>
</tbody>
</table>
Multi coupler open model
8 Ports  width : 60 × height : 155 (mm)

For temperature control & air valve gate

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Water &amp; Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>Rc 1/4</td>
</tr>
<tr>
<td>Port</td>
<td>8</td>
</tr>
<tr>
<td>Pieces</td>
<td>4</td>
</tr>
</tbody>
</table>
Multi coupler open model
8 Ports width: 60 x height: 155 (mm)

For temperature control

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Water &amp; Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>Rc 1/4</td>
</tr>
<tr>
<td>Port</td>
<td>8</td>
</tr>
<tr>
<td>Pieces</td>
<td>2</td>
</tr>
</tbody>
</table>
### Die side

width: 430 × height: 280 (mm)

- Lock guide pin
- Hydraulic 1" × 5 Ports
- Water 3/4" × 1 Port
- Bolster
- Coupler (Hydraulic, Water, Air)
- Moving bolster
- Lower die
- Self-alignment mechanism

### Machine side

width: 630 × height: 280 (mm)

- Lock guide socket
- Hydraulic 1" × 5 Ports
- Hydraulic 3/8" × 2 Ports
- Water 3/4" × 1 Port

### Fluid Connection Table

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4&quot;</td>
<td>3/8&quot;</td>
<td>1/2&quot;</td>
</tr>
<tr>
<td>Pieces</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bolster Operation side</td>
<td>2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bolster The non operation side</td>
<td>2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The size width × height is value excluding the bracket.
35,000kN Hydroforming press

Die side
width : 350 × height : 180 (mm)

Machine side
width : 500 × height : 175 (mm)

* The size width × height is value excluding the bracket.

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4” 3/8” 1/2” 3/4” 1” 1/8” 1/4” 3/8” 1/2” 3/4” 1” 1 1/4” 1 1/2” 2”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pieces</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Die side (Lower die Water pressure)
width: 550 × height: 259 (mm)

Die side (Lower die Hydraulic pressure)
width: 800 × height: 300 (mm)

**Press slide**
- **Upper die**
- **Operation side**
- **Non operation side**
- **Lower die**
- **Moving bolster**
- **Coupler (Hydraulic)**
- **Coupler (Water)**

### Fluid

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td>Lower die Water pressure</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Lower die Water pressure</td>
<td>6</td>
<td>10</td>
</tr>
</tbody>
</table>

**Press**

**Hydroforming press**

**H W ELC. CN.**
Die side (Upper die)
width: 450 × height: 200 (mm)

Hydraulic 3/8” × 2 Ports

Hydraulic 1” × 4 Ports

Lock guide pin

Press slide
Coupler (Hydraulic)

Upper die
The non operation side

Lower die

Moving bolster

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4” 3/8” 1/2” 3/4” 1” 1/8” 1/4” 3/8” 1/2” 3/4” 1” 1 1/4” 1 1/2” 2”</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Pieces</td>
<td>2 4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Press slide
width: 330 × height: 180 (mm)

Bolster Operation side
width: 290 × height: 145 (mm)

Air cylinder
Non-contact connector thermocouple
Self-alignment mechanism
Lock guide socket
Mold detection proximity switch
Lock guide pin
Non-contact connector thermocouple

Water 1 1/2 × 2 Ports

Die side
width: 280 × height: 180 (mm)

Die side
width: 295 × height: 135 (mm)

Press

Lock guide socket
Mold detection proximity switch
Lock guide pin
Non-contact connector thermocouple

Air cylinder
Mold detection proximity switch
Self-alignment mechanism
Lock guide socket

Water 1 1/2 × 2 Ports

12,000kN

Press slide

Upper die

The non operation side

Lower die

Moving bolster

Coupler
Bolster The non operation side
width : 330 × height : 180 (mm)

Die side
width : 295 × height : 135 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td>Press slide</td>
<td>The non operation side</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bolster Operation side</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bolster The non operation side</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The size width × height is value excluding the bracket.
Die side
width: 130 × height: 730 (mm)

Machine side
width: 160 × height: 950 (mm)

* The size width × height is value excluding the bracket.

### Fluid

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td>1</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

* Special type
6,000kN Press

**Die side**

- Width: 220 x Height: 95 (mm)

*The size width x height is value excluding the bracket.*

**Machine side**

- Width: 345 x Height: 75 (mm)

### Fluid

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Lock guide pin

Electric connector

Water, Air 1/4” x 1 Port

Hydraulic 1/4” x 1 Port

Self-alignment mechanism

Lock guide socket

Water, Air 1/4” x 1 Port

Hydraulic 1/4” x 1 Port

Press slide

Upper die

Lower die

Moving bolster

Coupler (Hydraulic, Water, Air) & Electric connector

The non operation side

Operation side
6,000kN Press

**Die side**
width: 220 × height: 95 (mm)

- Lock guide pin
- Hydraulic 1/4” × 1 Port
- Air 1/4” × 1 Port

**Machine side**
width: 345 × height: 75 (mm)

- Self-alignment mechanism
- Lock guide socket
- Hydraulic 1/4” × 1 Port
- Air 1/4” × 1 Port

*The size width × height is value excluding the bracket.*

---

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
### 4,000kN Press

#### Die side
- **width**: 970 × **height**: 200 (mm)

#### Machine side
- **width**: 840 × **height**: 200 (mm)

### Fluid Connections

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td>28</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

### Components
- **Press slide**
- **Upper die**
- **Lower die**
- **Moving bolster**
- **Self-alignment mechanism**
- **Lock guide socket**
- **Electric connector**: 18A × 15pin
- **Hydraulic**: 1/4” × 28 Ports
- **Air**: 3/8” × 2 Ports
- **Water**: 1” × 2 Ports
- **Coupler (Hydraulic, Water, Air)**
- **& Electric connector**

---

4,000kN Press

- **MVJE )ZESBVMJDʢ(FOFSBMNJOFSBMCBTFEIZESBVMJD"JS &MFDUSJD

---

**Press**

---

50
Machine side
width: 385 × height: 100 (mm)

Die side
width: 250 × height: 140 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”  3/8”  1/2”  3/4”  1”  1/8”  1/4”  3/8”  1/2”  3/4”  1”  1/4”  1/2”  2”</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Pieces</td>
<td>2</td>
<td>2</td>
<td>-</td>
</tr>
</tbody>
</table>
Die side
width: 1,000 × height: 190 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4&quot;  3/8&quot;  1/2&quot;  3/4&quot;  1&quot;  1/8&quot;  1/4&quot;  3/8&quot;  1/2&quot;  3/4&quot;  1&quot;  1/4&quot;  1/2&quot;  2&quot;</td>
<td>4  2</td>
<td></td>
</tr>
<tr>
<td>Pieces</td>
<td>32</td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>
Supply side
width: 125 × height: 340 (mm)

Reception side
width: 125 × height: 420 (mm)

Water, Air 3/8” × 1 Port

Self-alignment mechanism

Lock guide pin

Lock guide socket

Electric connector
For power 40A × 9 pins 23A × 32 pins
For signal × 145 pins

Supply and reception side measurements:
- Supply side: Width 125mm, Height 340mm
- Reception side: Width 125mm, Height 420mm

Fluid
<table>
<thead>
<tr>
<th>Connection port</th>
<th>1/8”</th>
<th>1/4”</th>
<th>3/8”</th>
<th>1/2”</th>
<th>3/4”</th>
<th>1”</th>
<th>1 1/4”</th>
<th>1 1/2”</th>
<th>2”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pieces</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Electric connector
- For power 40A: 9 pins / 23A: 32 pins
- For signal: 145 pins

* The size width × height is value excluding the bracket.
Hydraulic equipment side
width : 200 × height : 160 (mm)

- Hydraulic 1/2” × 1 Port
- Hydraulic 3/8” × 4 Ports
- Lock guide pin

Hydraulic unit side
width : 240 × height : 160 (mm)

- Hydraulic 3/8” × 4 Ports
- Self-alignment mechanism
- Hydraulic 1/2” × 1 Port

Coupler (Hydraulic)
Mounted on the lateral surface of changer

Industrial machinery (Hydraulic piping connection)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4” 3/8” 1/2” 3/4” 1” 1/8” 1/4” 3/8” 1/2” 3/4” 1” 1 1/4” 1 1/2” 2”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pieces</td>
<td>4 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Trestle side**

width: 450 × height: 125 (mm)

*The size width × height is value excluding the bracket.*

**Changer side**

width: 410 × height: 120 (mm)

**Electric connector**

- For power 40A × 3pins
- For signal 23A × 16pins × 200pins

**Self-alignment mechanism**

**Lock guide socket**

**Lock guide pin**

**Traveling changer**

**Electric connector**

Mounted on the bottom surface of trestle

For power 40A: 3pins / 23A: 16pins For signal 200pins
### Machine side
width: 375 × height: 120 (mm)

- Self-alignment mechanism
- Lock guide socket
- Water 3/4” × 4 Ports

### Die side
width: 270 × height: 120 (mm)

- Lock guide pin
- Water 3/4” × 4 Ports

### Fluid Transfer Table

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/4”</td>
<td>3/8”</td>
<td>1/2”</td>
</tr>
<tr>
<td>Pieces</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

*Industrial machinery*
Industrial machinery (Urethane injection machine)

Upper die side
width: 230 × height: 190 (mm)

Lower die side
width: 375 × height: 130 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Hydraulic (General mineral based hydraulic oil)</th>
<th>Water &amp; Air</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pieces</td>
<td>Upper die</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Lower die</td>
<td>10</td>
<td>3</td>
</tr>
</tbody>
</table>
width : 920 × height : 174 (mm)
width : 920 × height : 204 (mm)

width : 750 × height : 400 (mm)

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Water &amp; Air</th>
<th>Vacuum</th>
<th>Electric connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection port</td>
<td>1/8”</td>
<td>1/4”</td>
<td>3/8”</td>
</tr>
<tr>
<td>Pieces</td>
<td>50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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