New

For Diecast Systems

Ejector Coupler

Automatic Ejector Rod Coupler

Simple Setup / Setup Time Reduction / Improve Productivity

Option : with Action Confirmation

Model PMF  Pneumatic Auto Coupling

Manual Model Newly Added

Model PMG  Manual Coupling
One Touch to Connect EJ Rods

Ejector Coupler  Model PMF

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Minimizes Mold Change Time

Manual Ejector Coupler  
Model PMG

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<td>P.21</td>
</tr>
</tbody>
</table>
For Diecast Systems

**Ejector Coupler**

Model PMF

Quick Change Automatic Ejector Coupler

Drastically reduce setup time. Ball Lock Joint Provides Powerful Connection

**No Connecting Work Required!**

One touch to connect ejector rods with button operation from outside the machine.

Installation Example of 125 ton Diecast Machine

Installation Example of 350 ton Diecast Machine
Mold Change Time Reduction

※ Actual mold change time of a 350 ton diecast machine.

Unloading a Mold

Machine Side : Untighten 4 Nuts
Mold Side : Untighten 4 Rods

362 sec

Button Operation

1 sec

Loading a Mold

Machine Side : Tighten 4 Nuts
Mold Side : Tighten 4 Rods

387 sec

Button Operation

1 sec

Simplified Ejector Rod Connection

Manual Operation

MOLD
Tighten 2 Ejector Rods (Operation Side)
Move to Non-Operation Side
MOLD
Tighten 2 Ejector Rods (Non-Operation Side)
Move to Operation Side
Pump Start → Mold Close → Ejector Plate Move Forward

MACHINE
Tighten 2 Nuts (Operation Side)
Move to Non-Operation Side
MACHINE
Tighten 2 Nuts (Non-Operation Side)
Move to Operation Side
Pump Start → Ejector Plate Move Backward → Mold Open

Ejector Coupler

Mold Close → Ejector Plate Move Forward

Ejector Coupler LOCK (Button Operation)

Ejector Plate Move Backward → Mold Open

No need to move around the machine or operate inside the machine.

PMF Ejector Coupler

Improve Work Efficiency
The work without tools enhances productivity by saving time for searching tools.

Reduce Operation Time
No need to move to the non-operation side.

Secure Operation
Prevent accidents caused by tightening work inside the machine.

Standardize Operation
It allows everyone to tighten them with the same force.
Powerfully Connected by Air - Mechanical Locking

**PMF-P : Plug**
(Machine Side)

**PMF-H/S : Socket**
(Mold Side)

**Released State**

Release Air Pressure **ON**
By supplying air pressure, steel balls are free to move so the plug can be pulled out.

**Locked State**

Release Air Pressure **OFF**
By releasing air pressure, steel balls are pushed out with spring force, and the plug/socket is connected.

*Using straight surface to fix the steel balls allows for powerful connection.*
Action Confirmation Option
Ensures Lock and Release Action Confirmation

The air cylinder with auto switch moves the piston inside the plug directly. Ejector coupler action is confirmed by detecting air cylinder position with auto switch.

**Released State**
- **Lock Air Pressure**: OFF
- **Release Air Pressure**: ON

By supplying release air pressure, the air cylinder moves forward and the release action signal is ON.

**Locked State**
- **Lock Air Pressure**: ON
- **Release Air Pressure**: OFF

By supplying lock air pressure, the air cylinder moves backward and the lock action signal is ON.

**Reduce Setup Time Safely**
Setup time can be reduced safely since the connection of ejector rod is completed only by ON/OFF of air pressure.

**Able to Install a Pillar**
Since the rod part is connected, the pillar can be placed on the back side of the cavity which receives casting pressure. This makes product quality stable.
How to Absorb the Center Offset of Ejector Rod

The Ejector Coupler has no floating function, so it is required to provide the floating function in order to absorb the center offset of the ejector rods.

Floating on the Mold Side

The method to provide floating margin on the mold side that absorbs the center offset. When installing the Ejector Couplers on existing molds, the molds need to be modified.

Floating on the Ejector Plate Side

The method to provide floating margin on the ejector plate side that absorbs the center offset. When installing the Ejector Couplers on existing molds, the socket will be installed in place of existing rod, so the molds can be used without modification.
Flexible Design of C-Plate

Required to install a pillar to stabilize accuracy and quality of products, but C-plate occupies space behind the cavity so that a support pillar cannot be installed.

Even in such the case...

With KOSMEK Ejector Coupler, it is able to design a C-plate freely.
**Model No. Indication**

- **PMF 025 0 - P A - F - S**

  **1 Body Size**
  - 025: Outer Diameter φ 25 mm
  - 029: Outer Diameter φ 29 mm
  - 037: Outer Diameter φ 37 mm
  
  **P**: Plug

  ![Diagram of Plug](image)

  **2 Design No.**
  - 0: Revision Number

  **3 Classification**
  - **P**: Plug

  ![Diagram of Plug](image)

  **4 Ejector Coupler Installation Position**
  - **A**: Position A
  - **B**: Position B
  
  **A**: Ejector device with servo control, etc. Able to stop in the neutral position. (The plug top is inside the platen when a mold is loaded.)

  ![Diagram of Ejector Plate Backward Position](image)

  **B**: Ejector device with hydraulic control. Unable to stop in the neutral position. (The plug top is out of the platen when a mold is loaded.)

  ![Diagram of Ejector Rod](image)

  **5 Floating Method**
  - **Blank**: Floating on the Mold Side (Standard)
  - **F**: Floating on the Ejector Plate Side

  **Blank**: Floating on the Mold Side
  Provides floating margin on the mold side to absorb the center offset.

  ![Diagram of Mold Side Floating](image)

  **F**: Floating on the Ejector Plate Side
  Provides floating margin on the ejector plate side to absorb the center offset.

  ![Diagram of Ejector Plate Floating](image)

  **6 Action Confirmation Method**
  - **Blank**: None (Standard)
  - **M**: with Action Confirmation

  **Blank**: No Action Confirmation
  For confirming the action by checking the status of supply air with a pressure switch.

  ![Diagram of Ejector Plate with Air Switch](image)

  **M**: with Action Confirmation
  For confirming the action with the auto switch of the air cylinder that activates Ejector Coupler.

  ![Diagram of Ejector Plate with Auto Switch](image)

  **7 Production Number**
  This number represents the dimensions of Ejector Rod, such as shape and length. A number will be given after confirming specifications.
PMF 025 0 - H - K

1 Body Size
025: Hexagon 27 mm / Outer Diameter φ 25 mm
029: Hexagon 30 mm / Outer Diameter φ 29 mm
037: Hexagon 41 mm / Outer Diameter φ 37 mm

2 Design No.
0: Revision Number

3 Classification
H: Socket (Hex. Model)
S: Socket (Space-Saving Model)

4 Thread Part Shape
Blank: with Fitting
K: without Fitting

Specifications

<table>
<thead>
<tr>
<th>PMF Ejector Coupler</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model No.</td>
</tr>
<tr>
<td>Max. Allowable Stretching Force</td>
</tr>
<tr>
<td>Max. Allowable Compressive Force</td>
</tr>
<tr>
<td>Cylinder Capacity</td>
</tr>
<tr>
<td>mms</td>
</tr>
<tr>
<td>Air Pressure</td>
</tr>
<tr>
<td>MPa</td>
</tr>
<tr>
<td>Withstanding Pressure</td>
</tr>
<tr>
<td>MPa</td>
</tr>
<tr>
<td>Operating Temperature</td>
</tr>
<tr>
<td>°C</td>
</tr>
<tr>
<td>Ejector Coupler: 0 ~ 120 • Air Cylinder: 5 ~ 60</td>
</tr>
<tr>
<td>Usable Fluid</td>
</tr>
</tbody>
</table>

Auto Switch (SMC made)

<table>
<thead>
<tr>
<th>D-M9BVL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wiring Type</td>
</tr>
<tr>
<td>Entry Direction</td>
</tr>
<tr>
<td>Applicable Load</td>
</tr>
<tr>
<td>Load Voltage</td>
</tr>
<tr>
<td>Load Current</td>
</tr>
<tr>
<td>Internal Voltage Drop</td>
</tr>
<tr>
<td>Leakage Current</td>
</tr>
<tr>
<td>Operating Time</td>
</tr>
<tr>
<td>Indicator Light</td>
</tr>
<tr>
<td>Shock Resistance</td>
</tr>
<tr>
<td>Insulation Resistance</td>
</tr>
<tr>
<td>Withstand Voltage</td>
</tr>
<tr>
<td>Ambient Temperature</td>
</tr>
<tr>
<td>Enclosure Rating</td>
</tr>
<tr>
<td>Cable Length</td>
</tr>
</tbody>
</table>

Auto Switch Circuit Diagram

Sink Input Specifications

Source Input Specifications
### Ejector Coupler

**External Dimensions** : Floating on the Mold Side

**A : Position A**

**Corresponding Model No.**

- **Plug (Machine Side)**
- **Socket (Mold Side)**
- **PMF 0 - P A - S**
- **Position A**

**Disconnected State**

- Ejector Plate Backward Position
- (Shim Adjustment : Included)
- Movable Platen
- Ejector Rod

- **PMF**
- **H**
- **S**
- **H**
- **S**
- **Socket**
- **Socket Space-Saving Model**
- **H**
- **Thread**
- **Position A**

**Connected State**

- Ejector Plate Neutral Position
- Movable Platen
- B-Plate
- A-Plate

- **Distance from Ejector Plate to Platen**
- **B-Plate Thickness**
- **Mounting Block Thickness**

**B : Position B**

**Corresponding Model No.**

- **Plug (Machine Side)**
- **Socket (Mold Side)**
- **PMF 0 - P B - S**
- **Position B**

**Disconnected State**

- Ejector Plate Backward Position
- (Shim Adjustment : Included)
- Movable Platen
- Ejector Rod

- **PMF**
- **H**
- **S**
- **H**
- **S**
- **Socket**
- **Socket Space-Saving Model**
- **H**
- **Thread**
- **Position B**

**Connected State**

- Ejector Plate Neutral Position
- Movable Platen
- B-Plate
- A-Plate

- **Distance from Ejector Plate to Platen**
- **B-Plate Thickness**
- **Mounting Block Thickness**

**Notes :**

- 1. Secure the floating margin so that the mold side absorbs center offset.
- 2. Mold positioning accuracy must be within the floating margin.
- 3. There is a gap between the plug and the socket.

Make sure to install return pins since the ejector pin cannot be fully moved backward due to the gap.
### Machining Dimensions of Socket Mounting Part

**Corresponding Model No.**

- **Socket (Mold Side)**
  - PMF: 0 - 0
  - 0 with Fitting

### External Dimension and Machining Dimension Lists

#### Plug

<table>
<thead>
<tr>
<th>Model No.</th>
<th>PMF0250-PA</th>
<th>PMF0250-PB</th>
<th>PMF0290-PA</th>
<th>PMF0290-PB</th>
<th>PMF0370-PA</th>
<th>PMF0370-PB</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>25</td>
<td>44.5</td>
<td>51</td>
<td>51</td>
<td>53</td>
<td>52.5</td>
</tr>
<tr>
<td>B</td>
<td>45</td>
<td>44.5</td>
<td>51</td>
<td>51</td>
<td>53</td>
<td>52.5</td>
</tr>
<tr>
<td>C</td>
<td>17</td>
<td>17.5</td>
<td>18.5</td>
<td>19</td>
<td>24.5</td>
<td>25</td>
</tr>
<tr>
<td>D</td>
<td>17.5</td>
<td>19.5</td>
<td></td>
<td></td>
<td>25.5</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>22</td>
<td>26</td>
<td></td>
<td></td>
<td>33</td>
<td></td>
</tr>
</tbody>
</table>

#### Socket

<table>
<thead>
<tr>
<th>Model No.</th>
<th>PMF0250-H</th>
<th>PMF0250-S</th>
<th>PMF0290-H</th>
<th>PMF0290-S</th>
<th>PMF0370-H</th>
<th>PMF0370-S</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>25</td>
<td>30</td>
<td>36.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>19</td>
<td>22</td>
<td></td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>M16 × 2</td>
<td>M18 × 2.5</td>
<td>M24 × 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J FB</td>
<td>16.5 ± 0.0</td>
<td>18.5 ± 0.0</td>
<td>24.5 ± 0.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J HB</td>
<td>16.5 ± 0.0</td>
<td>18.5 ± 0.0</td>
<td>24.5 ± 0.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>27 (Outer Diam. 30)</td>
<td>30 (Outer Diam. 33)</td>
<td>41 (Outer Diam. 45)</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>7</td>
<td>8</td>
<td></td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>20</td>
<td>23</td>
<td></td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Movable Center Off before Connection</td>
<td>0.5 – 1</td>
<td>0.5 – 1</td>
<td>0.5 – 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tightening Torque (N・m)</td>
<td>80</td>
<td>130</td>
<td>240</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ※4. Insufficient tightening torque causes looseness and breakage.

### Specification List

After confirming specifications, we will determine the shape of Ejector Rod and submit the dimensional drawing.

#### Diecast Machine Maker

#### Diecast Machine Model No.

#### Extrusion Capability kN

#### Ejector Stroke mm

#### Distance from Ejector Plate to Platen ※5 mm

#### Plate Thickness mm

#### Platen Hole Diam. ※5 mm

#### Plate Hole Diam. mm

### Notes:

※5. Specify them precisely including tolerance.
※6. Platen Thickness shall indicate the part where the ejector rod is actually mounted.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Platen Thickness ※6 mm</td>
</tr>
<tr>
<td></td>
<td>Retraction (Only when selecting A: Position A) mm</td>
</tr>
<tr>
<td></td>
<td>Mounting Block Thickness ※5 mm</td>
</tr>
<tr>
<td></td>
<td>Distance from Platen to B-Plate ※5 mm</td>
</tr>
<tr>
<td></td>
<td>B-Plate Thickness ※5 mm</td>
</tr>
<tr>
<td></td>
<td>Ejector Coupler Body Size</td>
</tr>
<tr>
<td></td>
<td>Ejector Coupler Qty.</td>
</tr>
</tbody>
</table>
Ejector Coupler

C. External Dimensions: Floating on the Ejector Plate Side

A: Position A

Corresponding Model No.

[Socket (Mold Side)] PMF 0 - P A - F - S

Disconnected State

[Plug (Machine Side)] PMF 0 - P

Ejector Plate Backward Position

(M Shim Adjustment: Included)

Plate Thickness

Distance from Ejector Plate to Platen

[Socket (Mold Side)] PMF 0 - H S - K

Without Fitting

Hex. K

H Socket (Hex Model)

H Thread

S Socket (Space-Saving Model)

H Thread

B: Position B

Corresponding Model No.

[Socket (Mold Side)] PMF 0 - H S - K

Disconnected State

[Plug (Machine Side)] PMF 0 - P

Ejector Plate Backward Position

(M Shim Adjustment: Included)

Plate Thickness

Distance from Ejector Plate to Platen

[Socket (Mold Side)] PMF 0 - H S - K

Without Fitting

Hex. K

H Socket (Hex Model)

H Thread

S Socket (Space-Saving Model)

H Thread

Notes:

1. There should be a moderate gap that the plug can be inserted into the socket within the allowable center offset.
2. The gap should be adjusted so that all the ejector couplers in use receive the load equally.
3. There is a gap between the plug and the socket.

Make sure to install return pins since the ejector pin cannot be fully moved backward due to the gap.
Machining Dimensions of Socket Mounting Part

**Corresponding Model No.**

| PMF | 0 - | H - | K |

without Fitting

H Thread

M or more

External Dimension and Machining Dimension Lists

**Plug** (mm)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>PMF0250-PA-F</th>
<th>PMF0250-PB-F</th>
<th>PMF0290-PA-F</th>
<th>PMF0290-PB-F</th>
<th>PMF0370-PA-F</th>
<th>PMF0370-PB-F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>25</td>
<td>29</td>
<td>37</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>45</td>
<td>44.5</td>
<td>51.5</td>
<td>51</td>
<td>53</td>
<td>52.5</td>
</tr>
<tr>
<td>C</td>
<td>17</td>
<td>17.5</td>
<td>18.5</td>
<td>19</td>
<td>24.5</td>
<td>25</td>
</tr>
<tr>
<td>D</td>
<td>17.5</td>
<td>19.5</td>
<td>25.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>22</td>
<td>26</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Socket** (mm)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>25</td>
<td>30</td>
<td>36.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>19</td>
<td>22</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>M16 × 2</td>
<td>M18 × 2.5</td>
<td>M24 × 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>27 (Outer Diam. φ 30)</td>
<td>8 (Outer Diam. φ 33)</td>
<td>10 (Outer Diam. φ 45)</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>20</td>
<td>23</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Moveable Center (After connection) 0.5 ~ 1

Tightening Torque (N · m) 0.5 ~ 1

Note:

※4. Insufficient tightening torque causes looseness and breakage.

**Specification List**

After confirming specifications, we will determine the shape of Ejector Rod and submit the dimensional drawing.

| Diecast Machine Maker | | | | | Diecast Machine Model No. |
|-----------------------| | | | | Extrusion Capability | kN |
| Ejector Stroke | mm |
| Distance from Ejector Plate to Platen | mm |
| Plate Thickness | mm |
| Plate Hole Thickness | mm |
| Plate Hole Diam. | mm |
| Plate Dia. | mm |

Notes:

※5. Specify them precisely including tolerance.

※6. Platen Thickness shall indicate the part where the ejector rod is actually mounted.
**External Dimensions**

- **M**: with Action Confirmation

**Corresponding Model No.**

<table>
<thead>
<tr>
<th>Plug (Machine Side)</th>
<th>PMF</th>
<th>A</th>
<th>B</th>
<th>M</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Floating on the Mold Side**

**2-Auto Switch**

- Release Air Port J Thread
- Lock Air Port J Thread
- Air Cylinder
- Plate Hole Dam

**External Dimension List**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>PMF0250-P-M</th>
<th>PMF0290-P-M</th>
<th>PMF0370-P-M</th>
<th>(mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Ø 16.5 ~ 18</td>
<td>Ø 18.5 ~ 24</td>
<td>Ø 24.5 ~ 29</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>60</td>
<td>72</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>29.5</td>
<td>33</td>
<td>39.5</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>30.5</td>
<td>39</td>
<td>40.5</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>27</td>
<td>30</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>17</td>
<td>21</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>31</td>
<td>36</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>M3 × 0.5 Thread</td>
<td>M5 × 0.8 Thread</td>
<td>M5 × 0.8 Thread</td>
<td></td>
</tr>
<tr>
<td>Air Cylinder (SMC)</td>
<td>JCDQ16-10</td>
<td>JCDQ20-15</td>
<td>JCDQ25-15</td>
<td></td>
</tr>
<tr>
<td>Auto Switch (SMC)</td>
<td>D-M9BVL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**

- 1. Contact us for plate hole diameter not listed above.
Air Circuit Reference

- Ejector Coupler: without Action Confirmation

- Ejector Coupler: with Action Confirmation

Air valve should be selected according to usage.

Related Products

- System Structure Example (Ejector Coupler: with Action Confirmation)

Air Valve Unit

Air directional control valve, which is actuated by electrical signal, controls air supplied to the ejector coupler.

Operation Panel / Control Unit

One control unit is able to control both ejector rod and hydraulic auto clamp. Allows for much safer mold change with interlock which is available for a diecast machine, ejector couplers and hydraulic auto clamps.

Please contact us for further information.
For Diecast Systems

Manual Ejector Coupler

Quick Change Manual Ejector Coupler
One-Touch Ball Lock Joint Reduces Setup Time in Half

One Touch to Connect
Ejector Rod and Ejector Plate!

Reduces Setup Time in Half!
In general, an ejector rod and an ejector plate are connected by a double nut, but this takes a lot of time to tighten and untighten.

**Current Method**

![Diagram of Current Method]

Manual Ejector Coupler enables one-touch connection of the ejector rod and ejector plate.

**Manual Ejector Coupler**

![Diagram of Manual Ejector Coupler]

**Locked State : Mechanical Lock**

By releasing the manual switch, the steel balls come out with internal spring and lock the plug and socket.

**Released State : Manual Switch**

By pushing the manual switch, the steel balls become free to move so it is able to pull out the plug.

It is connected to the mold side via the ejector rod, so the mold side needs no modification.
Model No. Indication

Plug PMG 018 0 - 500
Socket PMF 025 0 - S

1 Ejector Plate Hole Diameter
018: Ejector Plate Hole Diameter φ 18 ~ 19 mm
020: Ejector Plate Hole Diameter φ 20 ~ 21 mm

2 Design No.
0: Revision Number

3 Ejector Plate Thickness
250: Ejector Plate Thickness 25 mm
700: Ejector Plate Thickness 70 mm

* Specify 3 Ejector Plate Thickness in 1mm increments with the first decimal place rounded up.
(Ex.) When the actual thickness is 50.3mm, select '510': 51mm.
* The maximum ejector plate thickness is 700: 70mm.

1 Body Size
025: Outer Diameter φ 25 mm (Applicable Plug PMG0180)
029: Outer Diameter φ 29 mm (Applicable Plug PMG0200)

2 Design No.
0: Revision Number

3 Classification
S: Socket (Space-Saving Model)

Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Plug</th>
<th>PMG0180</th>
<th>PMG0200</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Socket</td>
<td>PMF0250-S</td>
<td>PMF0290-S</td>
</tr>
<tr>
<td>Max. Allowable Stretching Force</td>
<td>kN</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>Max. Allowable Compressive Force</td>
<td>kN</td>
<td>25</td>
<td>40</td>
</tr>
<tr>
<td>Spring Force</td>
<td>N</td>
<td>11 ~ 16</td>
<td>11 ~ 19</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>°C</td>
<td>0 ~ 120</td>
<td></td>
</tr>
<tr>
<td>Ejector Plate Hole Diameter</td>
<td>mm</td>
<td>φ 18 ~ 19</td>
<td>φ 20 ~ 21</td>
</tr>
<tr>
<td>Max. Ejector Plate Thickness</td>
<td>mm</td>
<td>70</td>
<td></td>
</tr>
</tbody>
</table>

Note:
1. Make sure that the ejector plate hole is cleaned before use.
   Contaminants entering from steel ball holes lead to malfunction.
### External Dimensions

#### Plug

![Diagram of Plug with dimensions]

- **M:** Attaching/Detaching Stroke
- **D:** Ejector Plate Backward Position
- **F:** Ejector Plate Hole Diameter
- **G:** Identification Mark (V slot) for Lock Confirmation
- **H:** Width H
- **K:** (Ejector Plate Thickness) + B
- **L:** (Max. Thickness 70mm)

#### Socket

![Diagram of Socket with dimensions]

- **Hex T:** Socket
- **R:** Thread
- **V or more:** R Thread
- **30° or more:** U
- **45°:** R Thread

### Machining Dimensions of Socket Mounting Part

![Diagram of Socket Mounting Part with dimensions]

### External Dimension and Machining Dimension Lists

#### Plug

<table>
<thead>
<tr>
<th>Model No.</th>
<th>PMG0180</th>
<th>PMG0200</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>17.5</td>
<td>19.5</td>
</tr>
<tr>
<td>B</td>
<td>17</td>
<td>18.5</td>
</tr>
<tr>
<td>C</td>
<td>45</td>
<td>50.5</td>
</tr>
<tr>
<td>D</td>
<td>14.5</td>
<td>17.5</td>
</tr>
<tr>
<td>E</td>
<td>40</td>
<td>44.5</td>
</tr>
<tr>
<td>F</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>G</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>H</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td>J</td>
<td>34</td>
<td>39</td>
</tr>
<tr>
<td>K</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>L</td>
<td>25</td>
<td>29</td>
</tr>
<tr>
<td>M</td>
<td>4.5</td>
<td>5.5</td>
</tr>
</tbody>
</table>

#### Socket

<table>
<thead>
<tr>
<th>Model No.</th>
<th>PMF0250-S</th>
<th>PMF0290-S</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>25</td>
<td>29</td>
</tr>
<tr>
<td>P</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>Q</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>R</td>
<td>M16×2</td>
<td>M18×2.5</td>
</tr>
<tr>
<td>S</td>
<td>16.5</td>
<td>18.5</td>
</tr>
<tr>
<td>T</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>U</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>V</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>Tightening Torque (N·m)</td>
<td>80</td>
<td>130</td>
</tr>
</tbody>
</table>

**Notes:**

1. Design the ejector rod with a gap (0 – 0.5mm) between the ejector plate and socket at the ejector plate backward position in order to prevent the load applied on the connecting part of the manual ejector coupler.
2. Make sure to install return pins since the ejector pin cannot be fully moved backward due to the gap.
3. Insufficient tightening torque causes looseness and breakage.
4. Contact us for unlisted sizes.

### Specification List

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ejector Plate Thickness</td>
<td><strong>※3</strong> mm</td>
</tr>
<tr>
<td>Ejector Plate Hole Diameter</td>
<td>mm</td>
</tr>
</tbody>
</table>

**Note:**

**※3.** Ejector Plate Thickness shall indicate the part where the ejector rod is actually mounted. (Be careful with the spot facing hole.)
Cautions

- Notes for Design
  1) Check Specifications
     ● The diecast machine/coupler device should be handled and maintained by qualified personnel.
  2) Do not connect couplers when contaminants are adhered.
     ● If there are contaminants adhered on edge of each coupler, make sure to remove them with air blow. Otherwise it cannot be connected properly.
  3) Secure the floating margin so that the mold side absorbs center offset.
     Applying only to : PMF Coupler with Floating on the Mold Side
     ● Ejector coupler itself has no floating function.
     Mold positioning accuracy must be within the floating margin.
     Recommended Floating Margin : 0.5~1 mm (One Side)

4) Install mold locating bars.

5) Install return pins.

6) Operation sequence of PMF Ejector Coupler differs depending on the ejector coupler installation position : Position A or B. Please contact us for further information.

Installation Notes

1) Please supply clean dry air. (Only for PMF Coupler)
   ● Install an air filter/air dryer in order to prevent rust and dirt. Otherwise it may lead to malfunction.

2) Procedure before Piping (Only for PMF Coupler)
   ● The pipeline and piping connector should be cleaned by thorough flushing. The dust and cutting chips in the circuit may lead to air leakage and malfunction.
   (The filter which removes contaminant in the air circuit is not provided.)

3) Applying Sealing Tape
   ● Wrap with tape 1 to 2 times following the screwing direction.
   When piping, be careful that contaminants such as sealing tape do not enter in products. Pieces of the sealing tape can lead to air leakage and malfunction.

4) Installation of the Product
   ● For installation of PMF-H/S : Socket, tighten it with the torque shown in the following list. Insufficient tightening torque causes looseness and breakage. Tightening torque of the ejector rod of PMF Coupler differs depending on the thread size.
   Contact us for further information.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Thread Size</th>
<th>Tightening Torque (Kgf·m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMF0250-H/S</td>
<td>M16 x 2</td>
<td>80</td>
</tr>
<tr>
<td>PMF0290-H/S</td>
<td>M18 x 2.5</td>
<td>130</td>
</tr>
<tr>
<td>PMF0370-H/S</td>
<td>M24 x 3</td>
<td>240</td>
</tr>
</tbody>
</table>

- When the socket cannot be installed with the specified torque due to interference of a mold with a mounting block installed, mount the socket to the mounting block first and install them to the mold. (Applying only to : PMF Coupler with Floating on the Mold Side)

5) Shim Adjustment (Only for PMF Coupler)
   ● Use the included shims and level four ejector rods in length direction.
Notes on Handling

1) It should be handled by qualified personnel.
2) Do not handle or remove the product unless the safety is ensured.
   ① The machine and equipment can only be inspected or prepared when it is confirmed that the preventive devices are in place.
   ② Before the product is removed, make sure that the above-mentioned safety measures are in place.
   ③ After stopping the machine, do not remove the product until the temperature cools down.
   ④ Make sure there is no abnormality in the respective parts before restarting the machine or equipment.
3) Do not disassemble or modify.
   ● If the product is taken apart or modified, the warranty will be voided even within the warranty period.
4) Do not touch the product while it is working.
   ● Otherwise, your hands may be injured due to clinching.
5) After connected, make sure you can see the identification mark for lock confirmation and the coupler cannot be detached.

![Identification Mark (V slot) for Lock Confirmation](image)

Warranty

1) Warranty Period
   ● The product warranty period is 18 months from shipment from our factory or 12 months from initial use, whichever is earlier.

2) Warranty Scope
   ● If the product is damaged or malfunctions during the warranty period due to faulty design, materials or workmanship, we will replace or repair the defective part at our expense. Defects or failures caused by the following are not covered.
   ① If the stipulated maintenance and inspection are not carried out.
   ② If the product is used while it is not suitable for use based on the operator’s judgment, resulting in defect.
   ③ If it is used or handled inappropriately by the operator.
   (Including damage caused by the misconduct of the third party.)
   ④ If the defect is caused by reasons other than our responsibility.
   ⑤ If repair or modifications are carried out by anyone other than Kosmek, or without our approval and confirmation, it will void warranty.
   ⑥ Other damages caused by natural disasters or calamities not attributable to our company.
   ⑦ Parts or replacement expenses due to parts consumption and deterioration. (Such as rubber, plastic, seal material and some electric components.)

Damages excluding from direct result of a product defect shall be excluded from the warranty.

Maintenance/Inspection

1) Removal of the Product and Shut-off of Air Source
   ● Before the product is removed, make sure that the preventive devices and the safety measures are in place.
   Shut off the pressure source and power source and make sure no pressure exists in the air circuit. Also, make sure there is no abnormality in the bolts and respective parts before restarting.

2) Periodically ensure that piping, plug body and socket are securely tightened.

3) Periodically ensure that supply air pressure is a specified value.

4) Make sure to supply filtered clean dry air.

5) Make sure there is smooth action and no abnormal noise.
   ● Especially when it is restarted after being left unused for a long period, make sure it can be operated properly.

6) The products should be stored in the cool and dark place without direct sunshine or moisture.

7) Please contact us for overhaul and repair.
Kosmek Products for Diecast Systems

KOSMEK Diecast Clamping Systems

For Diecast Systems

Secure and Safe Mold Clamping with Auto Clamps

Allows for secure and safe mold clamping with a button operation outside the machine.

Model GK

High-Power / High-Speed Core Pull Cylinder

For Diecast Systems

Productivity Improvement

Pulls out the core with 1.8 times thrust force in half the time compared to a cylinder with the same size.

Model PC

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For Further Information on Unlisted Specifications and Sizes, Please call us.
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