For post-stoppage positioning and locking of carriers, line pallets, carts, etc.

Pallet Lock Cylinder

- Centering applied to correct positional deviation of up to ±50 mm
- Through the toggle mechanism, max. clamping force of 4430 N

Arm opening angle: Approx. 70°
A wide arm opening angle prevents contact with the workpiece.
(Cylinder sliding is not necessary.)
* Values for W-R1 Series

Integration of the clamping unit and cylinder unit reduces design and assembly labor

Selectable when the mass of the transferred object is either 1000 kg or 3000 kg, with consideration given to the impact during positioning

W-R1/W-R3 Series
Pallet Lock Cylinder

W-R1/W-R3 Series

How to Order

Type 1
W-R1-S2-B

Type 3
W-R3-S-B

Proximity Switch

<table>
<thead>
<tr>
<th>Type</th>
<th>B</th>
<th>SC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>With mounting bracket (Without proximity switch)</td>
<td>With proximity switch</td>
</tr>
</tbody>
</table>

* For details, refer to the table below.

Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>Type 1</th>
<th>Type 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass of transferred object</td>
<td>1000 kg or less</td>
<td>3000 kg or less</td>
</tr>
<tr>
<td>Possible amount of positional correction</td>
<td>±50 mm or less</td>
<td></td>
</tr>
<tr>
<td>Clamping force</td>
<td>4430 N</td>
<td>4070 N</td>
</tr>
<tr>
<td>Operating time</td>
<td>1.0 s or more</td>
<td>0.8 s or more</td>
</tr>
<tr>
<td>Cylinder operation stroke</td>
<td>83.5 mm</td>
<td>140 mm</td>
</tr>
<tr>
<td>Bore size</td>
<td>100 mm</td>
<td></td>
</tr>
<tr>
<td>Cylinder proof pressure</td>
<td>1 MPa</td>
<td></td>
</tr>
<tr>
<td>Max. operating pressure</td>
<td>0.49 MPa Non-lube</td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>5 to 60°C</td>
<td></td>
</tr>
<tr>
<td>Piston rod size</td>
<td>30 mm</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>28 kg</td>
<td>35 kg</td>
</tr>
</tbody>
</table>

Proximity Switch Specifications/Maker: OMRON Corporation

- Model: E2E-X7D1-M1J-T10.3M
- Voltage range: 10 to 30 VDC (Allowable ripple: 10% or less (P-P))
- Temperature range: -25 to 70°C (with no freezing or condensation)
- Humidity range: 35 to 95%RH
- Light: Lights up green when turned ON
- Connector size: M12 x 1

Clamping Force

W-R1-S2-

W-R3-S-

Connector pin arrangement

<table>
<thead>
<tr>
<th>Type</th>
<th>Connector pins and arrangement</th>
</tr>
</thead>
<tbody>
<tr>
<td>E2E-X7D1-M1J-T10.3M</td>
<td>1 2 3 4</td>
</tr>
</tbody>
</table>
Dimensions

**W-R1-S2-**

![Diagram of W-R1-S2 dimensions]

- **Position of fulcrum**: 10.5°
- **Proximity switch mounting bracket**: 2 x ø18.5
- **Proximity switch**: (Option)
- **4 x ø11**: (Clamp block mounting hole)
- **2 x ø8**: (Mounting hole)
- **2 x M8 x 1.25 thread depth 13**: (External cover mounting screw)
- **4 x ø20 counterbore depth 8**: (Mounting hole)

**W-R3-S-**

![Diagram of W-R3 dimensions]

- **Position of fulcrum**: 10.5°
- **Proximity switch mounting bracket**: 2 x ø18.5
- **Proximity switch**: (Option)
- **4 x ø11**: (Clamp block mounting hole)
- **2 x ø8**: (Mounting hole)
- **2 x M8 x 1.25 thread depth 13**: (External cover mounting screw)
- **4 x ø20 counterbore depth 8**: (Mounting hole)

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**Pallet Lock Cylinder W-R1/W-R3 Series**
Handling Precautions

⚠️ Warning
1. Affix a safety cover in places where there is a danger of personal injury.
   A large gripping force is generated during clamping. If there is a possible pinching hazard, design the structure to avoid contact with the human body.

⚠️ Caution
1. Avoid using material handling equipment in a way that applies torsion, inertial force, or impact.
2. Use the product under air pressure of up to 0.49 MPa.
3. Make sure that the clamp arm length is not longer than the lengths shown below.

<table>
<thead>
<tr>
<th></th>
<th>W-R1-S</th>
<th>W-R3-S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arm length A</td>
<td>109.5 mm</td>
<td>150.5 mm</td>
</tr>
</tbody>
</table>

4. Make sure that the offset of the clamping position is within ±15 mm as shown in the figure below.

Safety Instructions
Be sure to read the “Handling Precautions for SMC Products” (M-E03-3) and “Operation Manual” before use.