Power Clamp Cylinder
Conforming to the CNOMO Standard
Series CLKZ1R
Clamping Force (measured at a position 100 mm from the fulcrum)

The work piece can be held with a constant clamping force regardless of its height. (–4 to +2 mm)

CLKZ1R040

CLKZ1R110

CLKZ1R200

040

CLKZ1R110

CLKZ1R200

Clamping Force

Holding Force (measured at a position 100 mm from the fulcrum)

The work piece can be clamped at a constant holding force regardless of its height. (–4 to +2 mm)

The clamping force that remains when the air supply is cut off after clamping at a given pressure.

040

CLKZ1R110

CLKZ1R200

Holding Force

Clamping Force
Power Clamp Cylinder
Conforming to the CNOMO Standard

Series CLKZ1R

How to Order

Cylinder Part No. CLKZ1R 040-N-X1121A-R1

Power clamp cylinder conforming to the CNOMO standard

Without arm

Option

Symbol Arm angle
Nil 105°
X1121A 15°
X1121B 30°
X1121C 45°
X1121D 60°
X1121E 75°
X1121F 90°

Cylinder Specifications

<table>
<thead>
<tr>
<th>Category</th>
<th>040</th>
<th>110</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid</td>
<td>Air (Non-lube)</td>
<td>0.3 to 0.7 MPa</td>
<td>0.3 to 0.7 MPa</td>
</tr>
<tr>
<td>Operating pressure range</td>
<td>1.05 MPa</td>
<td>1.05 MPa</td>
<td>1.05 MPa</td>
</tr>
<tr>
<td>Proof pressure</td>
<td>–10°C to +70°C</td>
<td>–10°C to +70°C</td>
<td>–10°C to +70°C</td>
</tr>
<tr>
<td>Operating temperature range</td>
<td>G1/8</td>
<td>Unclamp side rubber bumper</td>
<td>Unclamp side rubber bumper</td>
</tr>
<tr>
<td>Port size</td>
<td>105° (Standard) / 15°, 30°, 45°, 60°, 75°, 90° (Option)</td>
<td>105° (Standard) / 15°, 30°, 45°, 60°, 75°, 90° (Option)</td>
<td>105° (Standard) / 15°, 30°, 45°, 60°, 75°, 90° (Option)</td>
</tr>
<tr>
<td>Arm angle</td>
<td>Clamp: 0.5 s Unclamp: 0.5 s</td>
<td>Clamp: 0.5 s Unclamp: 0.5 s</td>
<td>Clamp: 0.5 s Unclamp: 0.5 s</td>
</tr>
<tr>
<td>Operating time (at supply pressure of 0.5 MPa)</td>
<td>40 N·m or more 110 N·m or more 200 N·m or more</td>
<td>40 N·m or more 110 N·m or more 200 N·m or more</td>
<td>40 N·m or more 110 N·m or more 200 N·m or more</td>
</tr>
<tr>
<td>Clamping force (at supply pressure of 0.5 MPa)</td>
<td>0.9 N·m 1.3 N·m 1.9 N·m</td>
<td>0.9 N·m 1.3 N·m 1.9 N·m</td>
<td>0.9 N·m 1.3 N·m 1.9 N·m</td>
</tr>
<tr>
<td>Holding force (at supply pressure of 0.5 MPa)</td>
<td>0.01 kg·m² 0.02 kg·m² 0.03 kg·m²</td>
<td>0.01 kg·m² 0.02 kg·m² 0.03 kg·m²</td>
<td>0.01 kg·m² 0.02 kg·m² 0.03 kg·m²</td>
</tr>
<tr>
<td>Max. allowable moment of inertia (at supply pressure of 0.5 MPa)</td>
<td>2 N·m or more 5.5 N·m or more 10 N·m or more</td>
<td>2 N·m or more 5.5 N·m or more 10 N·m or more</td>
<td>2 N·m or more 5.5 N·m or more 10 N·m or more</td>
</tr>
<tr>
<td>Unclamp side locking force</td>
<td>Weight (including short arm)</td>
<td>1.7 kg 3.6 kg 5.9 kg</td>
<td>1.7 kg 3.6 kg 5.9 kg</td>
</tr>
</tbody>
</table>

Proximity Switch

<table>
<thead>
<tr>
<th>Category</th>
<th>Proximity switch part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>040</td>
<td>D-NF001</td>
</tr>
<tr>
<td>110/200</td>
<td>D-NF002</td>
</tr>
</tbody>
</table>

* With 2 mounting screws

Rated operating distance SN 1.5 (mm) ± 10%
Reproducibility ≤0.1 (mm)
Hysteresis 0.1 (mm) ≤ H ≤ 1 (mm)
Applicable applied voltage DC24 (V)
Supply voltage DC10 to 30 (V)
Voltage drop ≤ 5 (V)
Output function Normally Open
Minimum operating current 2.5 (mA)
Maximum operating current 100 (mA)
Residual current ≤0.6 (mA)
Nominal temperature of application 25 (°C)
Ambient temperature –10 (°C) ≤ Ta ≤ 70 (°C)
Degree of protection IP67
Protection against excess current (short circuit) or overloads The detector is equipped with a protection system guaranteeing its correct operation in spite of an excess current of 2xIe (200 mA) for 100 μs.
Protection against polarity inversions Non polarized
Series CLKZ1R

Dimensions

CLKZ1R040-N

1 dimension projection

Mounting Pin (2 pcs.)

Inductive proximity sensor D-NF001

G1/8

Undeclamp side

G1/8

Clamp side

G1/8 (Plug)

Undeclamp side

G1/8 (Plug)

Clamp side
Power Clamp Cylinder
Conforming to the CNOMO Standard  
**Series CLKZ1R**

**Dimensions**

**CLKZ1R110-N**

1 dimension projection

![Diagram of CLKZ1R110-N]
Power Clamp Cylinder
Conforming to the CNOMO Standard

Series CLKZ1R

Adapter

<table>
<thead>
<tr>
<th>Category</th>
<th>Right-handed type</th>
<th>Left-handed type</th>
</tr>
</thead>
<tbody>
<tr>
<td>040</td>
<td>CKZR-A040R</td>
<td>CKZR-A040L</td>
</tr>
<tr>
<td>110/200</td>
<td>CKZR-A110R</td>
<td>CKZR-A110L</td>
</tr>
</tbody>
</table>

+ 2 mounting pins
++ Select long arm when using an adapter.

For mounting example, refer to page 217.

1 dimension projection
Series CLKZ1R

Mounting Pin

<table>
<thead>
<tr>
<th>Category</th>
<th>Mounting pin part no.</th>
<th>1 dimension projection</th>
</tr>
</thead>
<tbody>
<tr>
<td>040</td>
<td>CKZR-P040</td>
<td></td>
</tr>
<tr>
<td>110/200</td>
<td>CKZR-P110</td>
<td></td>
</tr>
</tbody>
</table>

* Quantity: 2 pcs. for each

**CKZR-P040**

![Mounting Pin (2 pcs.)](image)

**CKZR-P110**

![Mounting Pin (2 pcs.)](image)

Arm

For mounting example, refer to page 217.

<table>
<thead>
<tr>
<th>Category</th>
<th>Short arm</th>
<th>Long arm</th>
</tr>
</thead>
<tbody>
<tr>
<td>040</td>
<td>CKZR-Y040</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>CKZR-Y110S CKZR-Y110N</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>CKZR-Y200S-A CKZR-Y200N-A</td>
<td></td>
</tr>
</tbody>
</table>

* Select long arm when using an adapter.

**CKZR-Y040**

![CKZR-Y040](image)

**CKZR-Y110N**

![CKZR-Y110N](image)

**CKZR-Y200N-A**

![CKZR-Y200N-A](image)
Adapter/Arm Mounting Example

CLKZ1R040-N

CLKZ1R110-N

CLKZ1R200-N

1 dimension projection

Series CLKZ1R
Power Clamp Cylinder
Conforming to the CNOMO Standard
SERIES CLKZ1R
Specific Product Precautions

Be sure to read this before handling. Refer to pages 222 and 223 for Safety Instructions and “Precautions for Handling Pneumatic Devices” (M-03-E3A) for Actuator Precautions.

How to Release the Lock Manually

⚠️ Warning
When equipment is removed, confirm the safety process. Cut the supply pressure for this equipment and exhaust all residual compressed air in the system.
Do not release the lock manually by using an external force such as a load and spring force. The cylinder could move suddenly, which could be very dangerous.

How to release the lock on the clamp side
1. Open the dustproof cover at the upper part of the port on the clamping side.
2. Insert a hexagon wrench and flip up the manual unlocking lever.

How to release the lock on the unclamp side
Move the dial of the head cover to the FREE position with a flathead screwdriver.

Note) At the time of shipment from the factory, the locking mechanism on the unclamp side is not engaged. When that mechanism is used, change the dial to the LOCK position.

Preparation for Operation

⚠️ Warning
1) Be sure to supply air pressure to the clamp side port before restarting the cylinder from the clamping position. Pressurizing to the unclamp side port without applying air pressure to the clamp side port will release the lock and cause the cylinder to move suddenly, which could be very dangerous.

⚠️ Caution
1) Do not use a 3-position valve. This valve could unexpectedly supply air pressure, which would release the lock.
2) Mount the speed controller so as to provide meter-out control. Using the speed controller as a meter-in could cause operating failure.
3) Be careful not to allow a reverse flow of exhaust pressure from a common exhaust-type valve manifold. A reverse flow of exhaust pressure could release the lock. Use an independent exhaust-type valve manifold or independent valve.

Pneumatic Circuit

Unclamp side port
Clamp side port