Power Clamp Cylinder

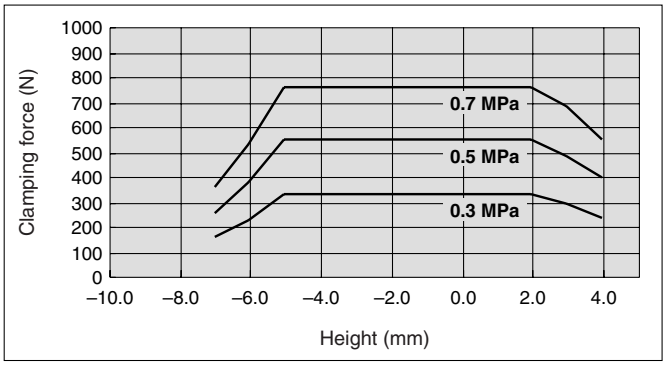
Conforming to the CNOMO Standard

Series CLKZ1R

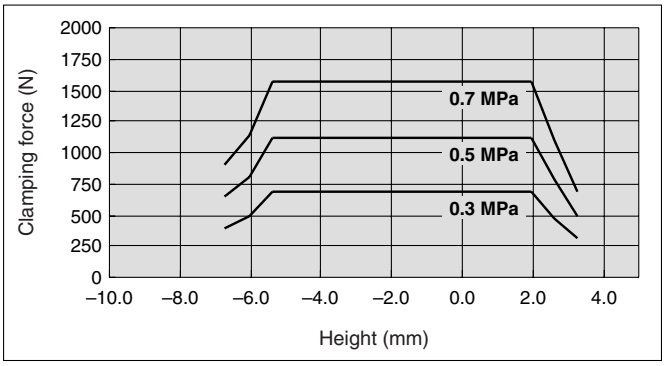
Clamping Force (measured at a position 100 mm from the fulcrum)

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

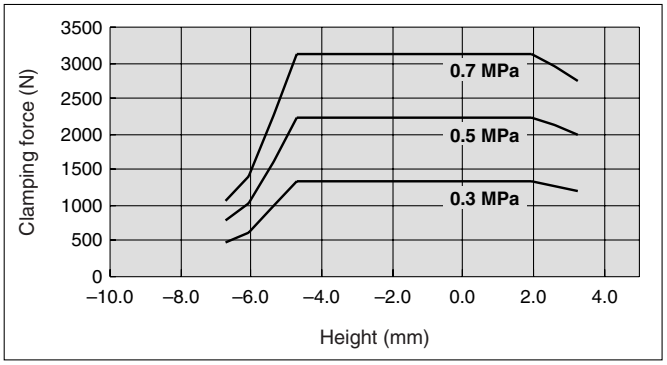
CLKZ1R040

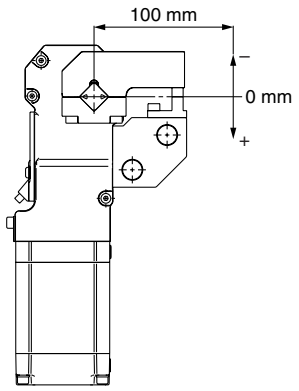


CLKZ1R110



CLKZ1R200



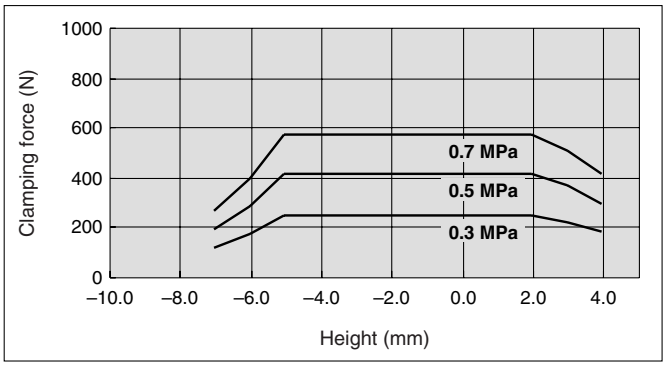


Holding Force

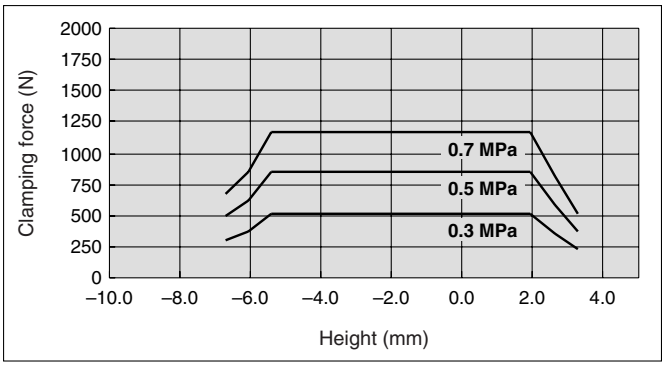
The clamping force that remains when the air supply is cut off after clamping at a given pressure. (measured at a position 100 mm from the fulcrum)

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

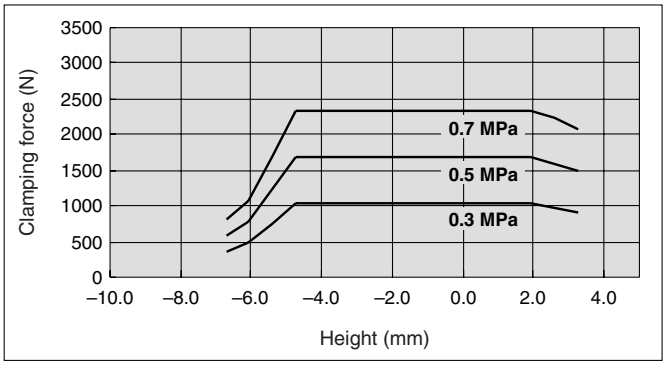
040



CLKZ1R110

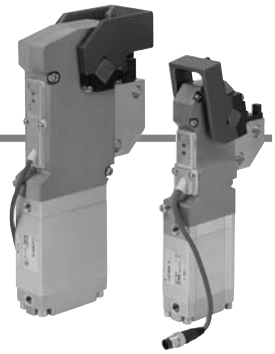


CLKZ1R200



Power Clamp Cylinder Conforming to the CNOMO Standard

Series CLKZ1R



How to Order

Cylinder Part No. **CLKZ1R 040 – N – X1121A – R1**

- **CLKZ1R**: Power clamp cylinder conforming to the CNOMO standard
- **040**: Category

040	40daN type
110	110daN type
200	200daN type

- **N**: Without arm
- **X1121A**: Option

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

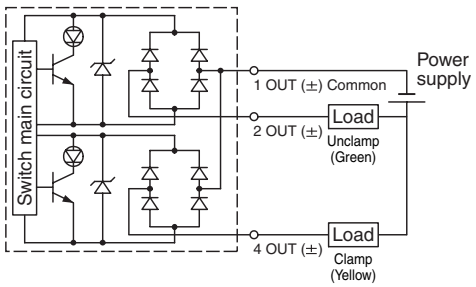
Cylinder Specifications

Category	040	110	200
Fluid	Air (Non-lube)		
Operating pressure range	0.3 to 0.7 MPa		
Proof pressure	1.05 MPa		
Operating temperature range	–10°C to +70°C		
Port size	G1/8		
Cushion	Unclamp side rubber bumper		
Arm angle	105 $^{0}_{-5}$° (Standard) / 15°, 30°, 45°, 60°, 75°, 90° (Option)		
Operating time (at supply pressure of 0.5 MPa)	Clamp: 0.5 s Unclamp: 0.5 s		
Clamping force (at supply pressure of 0.5 MPa)	40 N·m or more	110 N·m or more	200 N·m or more
Holding force (at supply pressure of 0.5 MPa)	30 N·m or more	82.5 N·m or more	150 N·m or more
Max. allowable load (at supply pressure of 0.5 MPa)	0.9 N·m	1.3 N·m	1.9 N·m
Max. allowable moment of inertia (at supply pressure of 0.5 MPa)	0.01 kg·m^2	0.02 kg·m^2	0.03 kg·m^2
Unclamp side locking force	2 N·m or more	5.5 N·m or more	10 N·m or more
Weight (including short arm)	1.7 kg	3.6 kg	5.9 kg

Proximity Switch

Category	Proximity switch part no.
040	D-NF001
110/200	D-NF002

∗ With 2 mounting screws



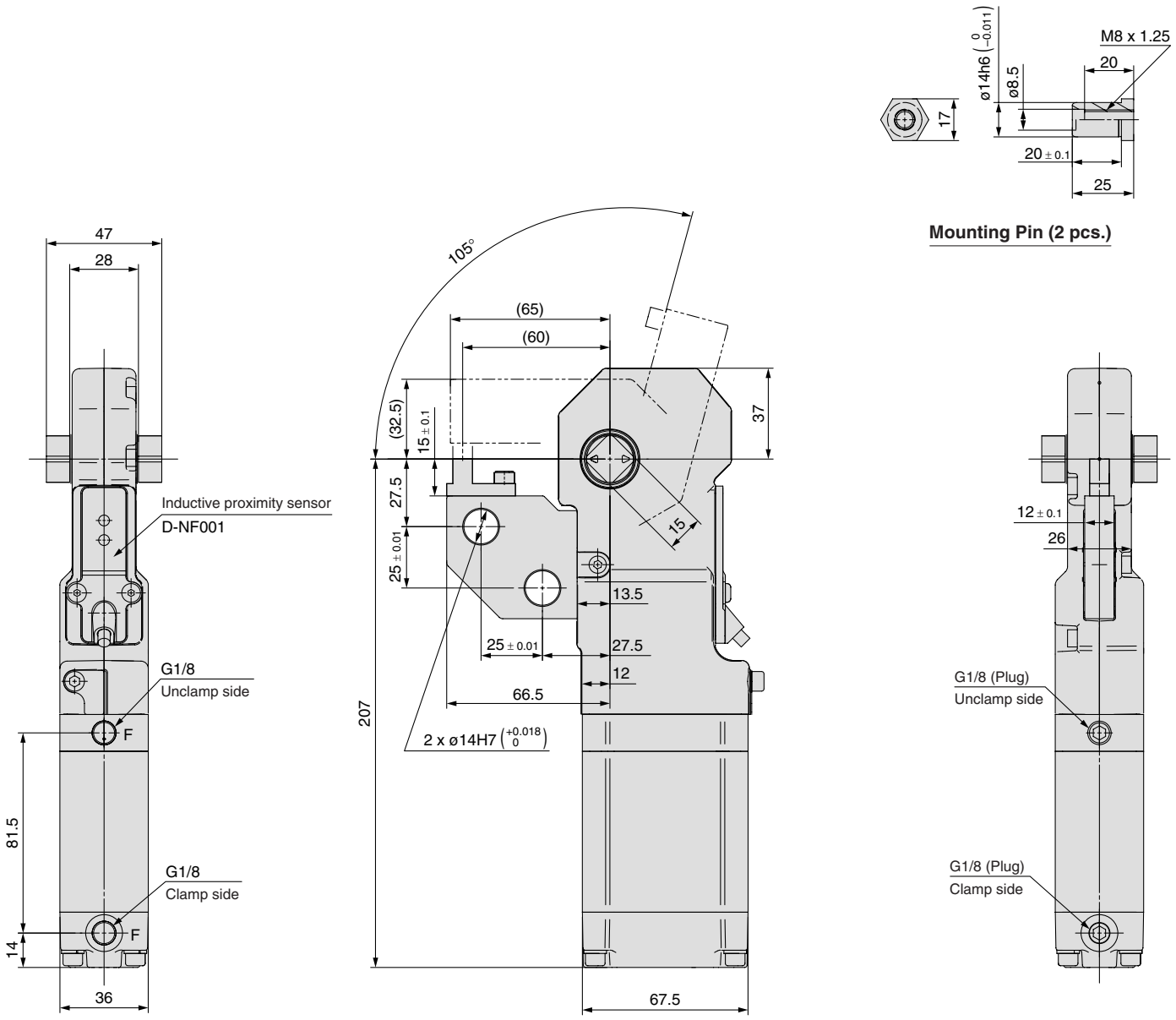
Switch Specifications

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

Dimensions

CLKZ1R040-N

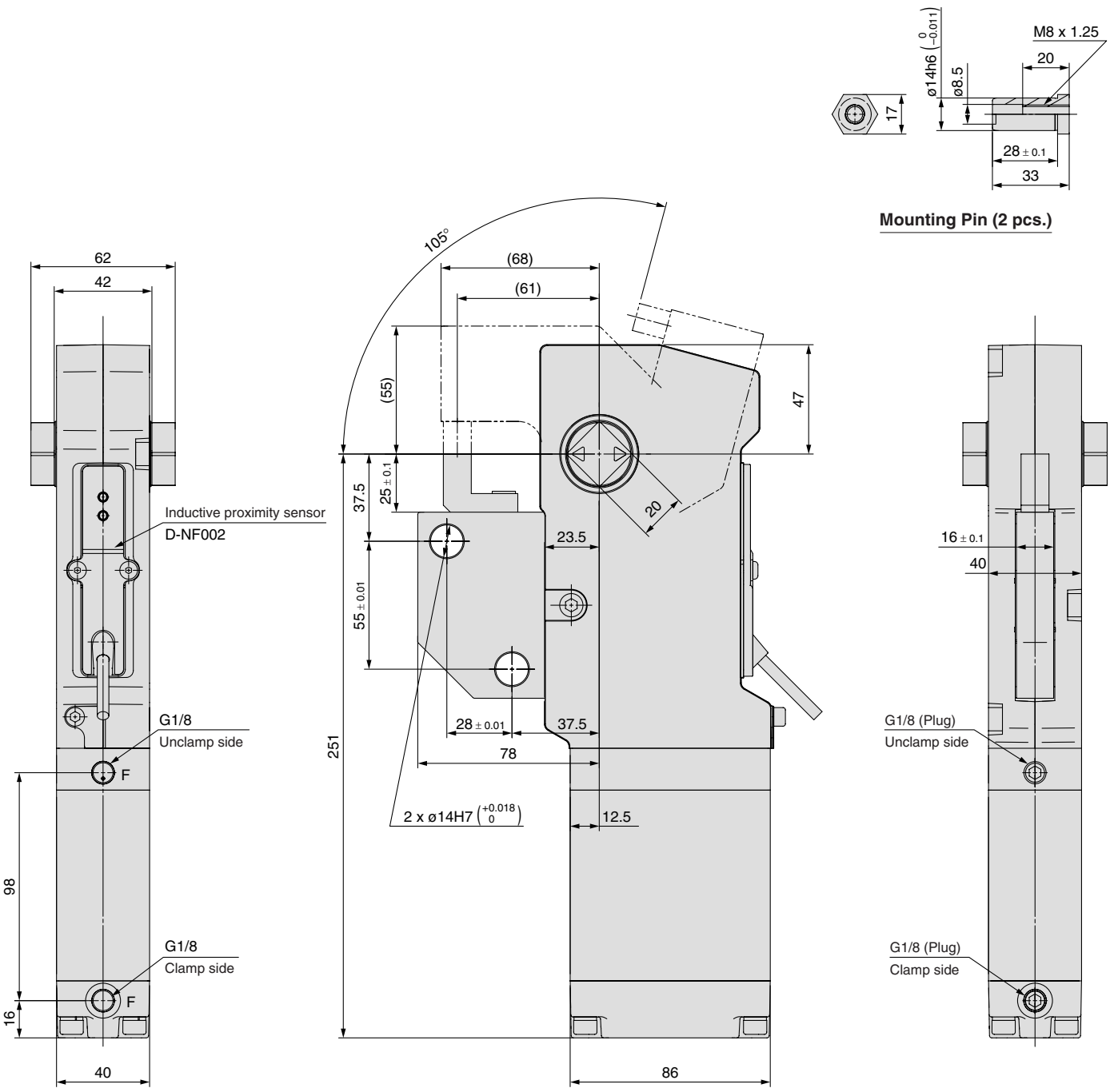
1 dimension projection



Dimensions

CLKZ1R110-N

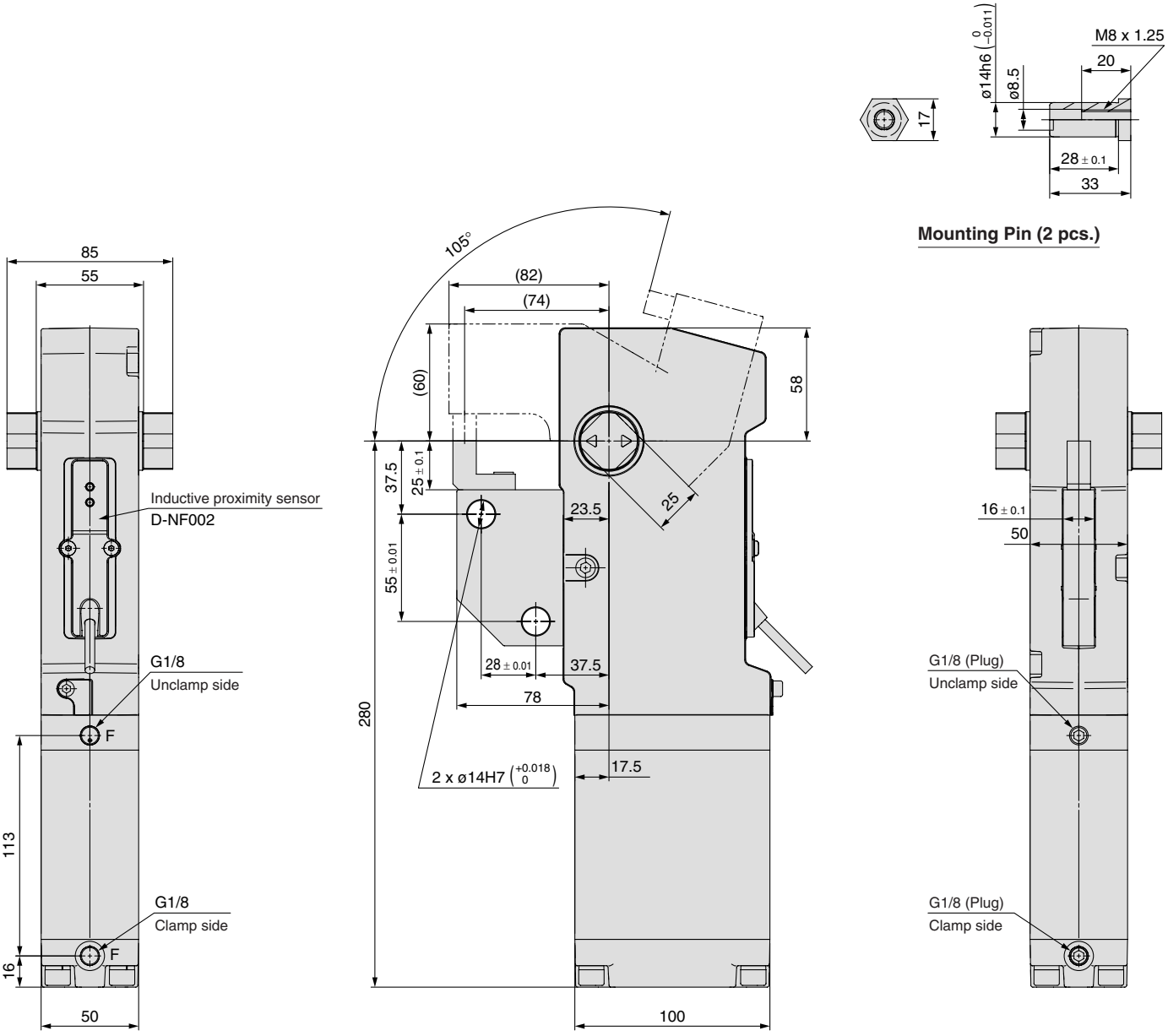
1 dimension projection



Dimensions

CLKZ1R200-N

1 dimension projection



Adapter

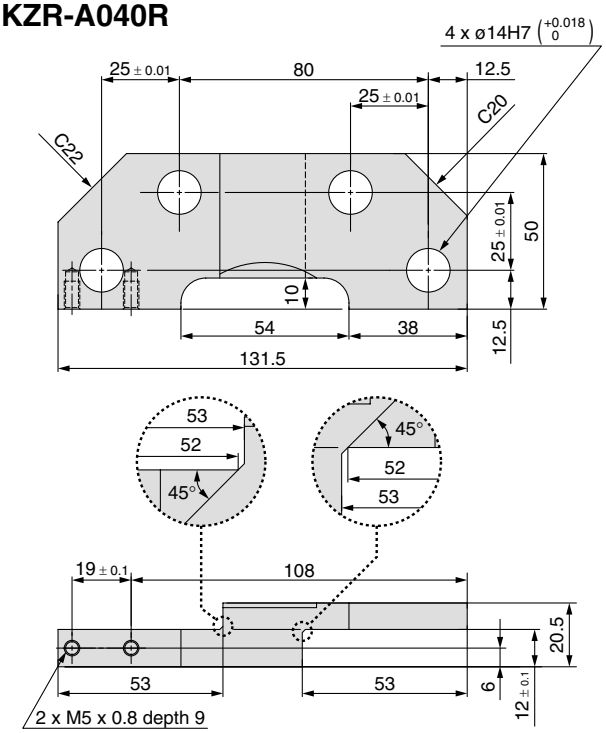
For mounting example, refer to page 217.

1 dimension projection

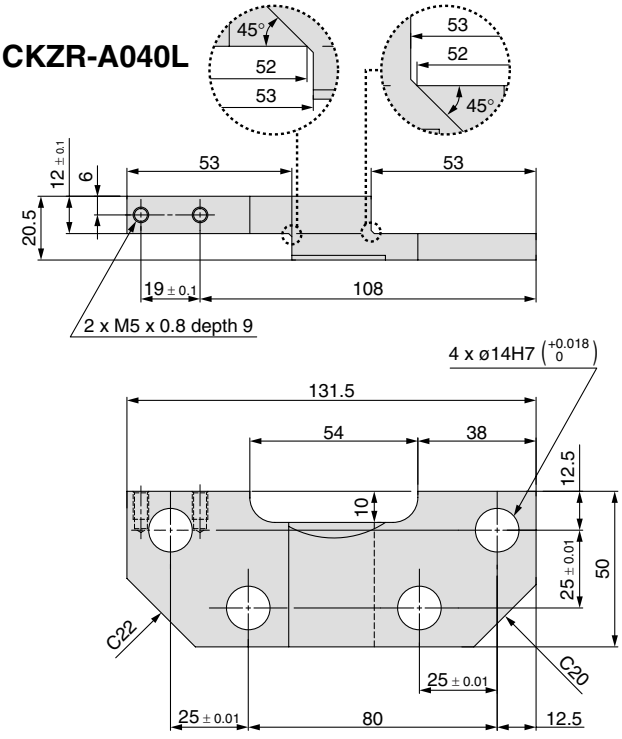
Category	Right-handed type	Left-handed type
040	CKZR-A040R	CKZR-A040L
110/200	CKZR-A110R	CKZR-A110L

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

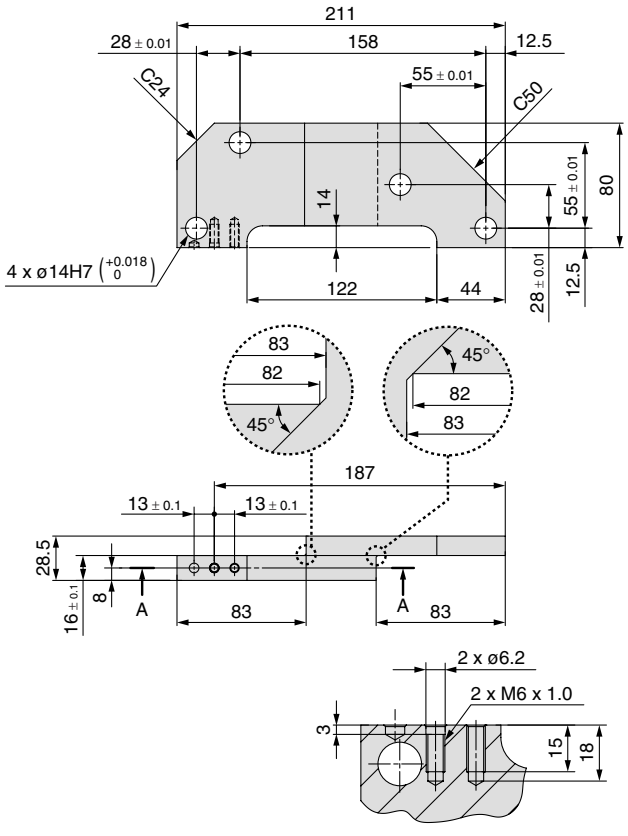
CKZR-A040R



CKZR-A040L

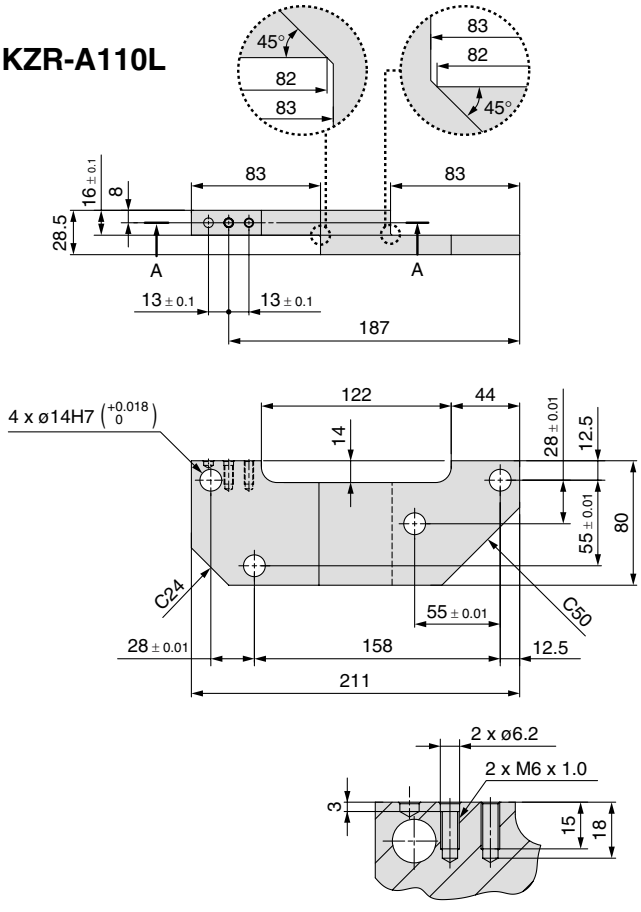


CKZR-A110R



Section A-A

CKZR-A110L



Section A-A

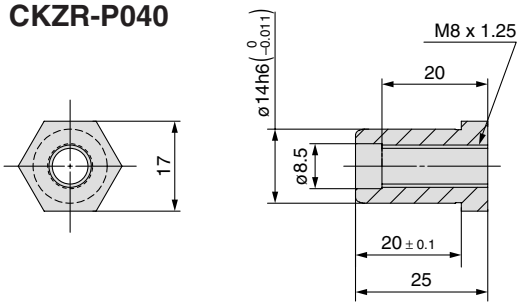
Mounting Pin

1 dimension projection

Category	Mounting pin part no.
040	CKZR-P040
110/200	CKZR-P110

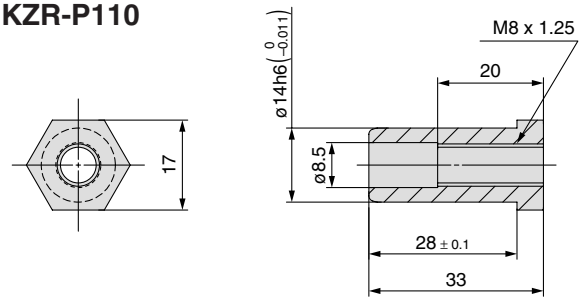
∗ Quantity: 2 pcs. for each

CKZR-P040



Mounting Pin (2 pcs.)

CKZR-P110



Mounting Pin (2 pcs.)

Arm

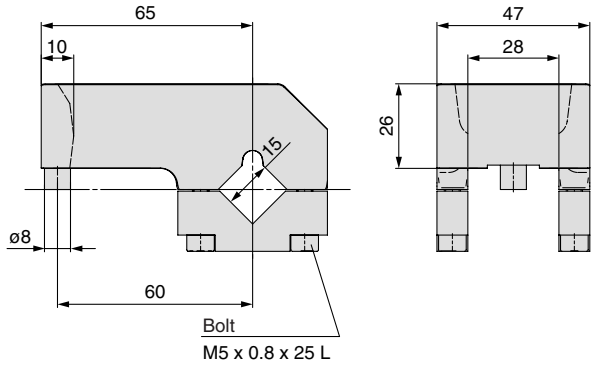
For mounting example, refer to page 217.

1 dimension projection

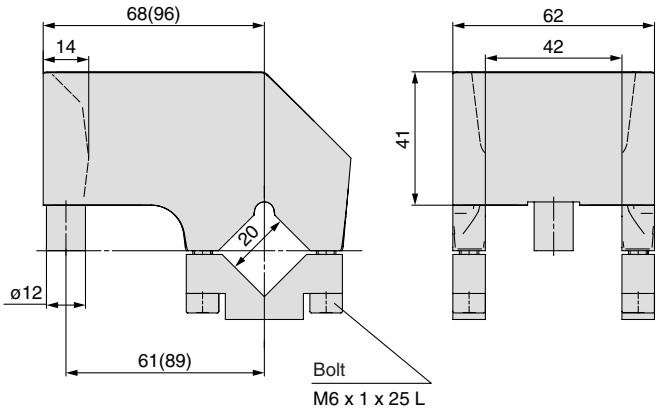
Category	Short arm	Long arm
040	CKZR-Y040	
110	CKZR-Y110S	CKZR-Y110N
200	CKZR-Y200S-A	CKZR-Y200N-A

∗ Select long arm when using an adapter.

CKZR-Y040

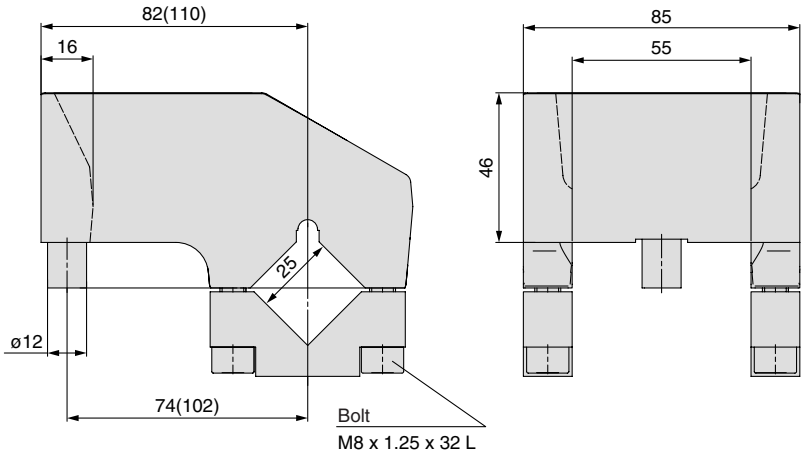


CKZR-Y110$^{S}_{N}$



( ): In case of CKZR-Y110N

CKZR-Y200$^{S}_{N}$-A

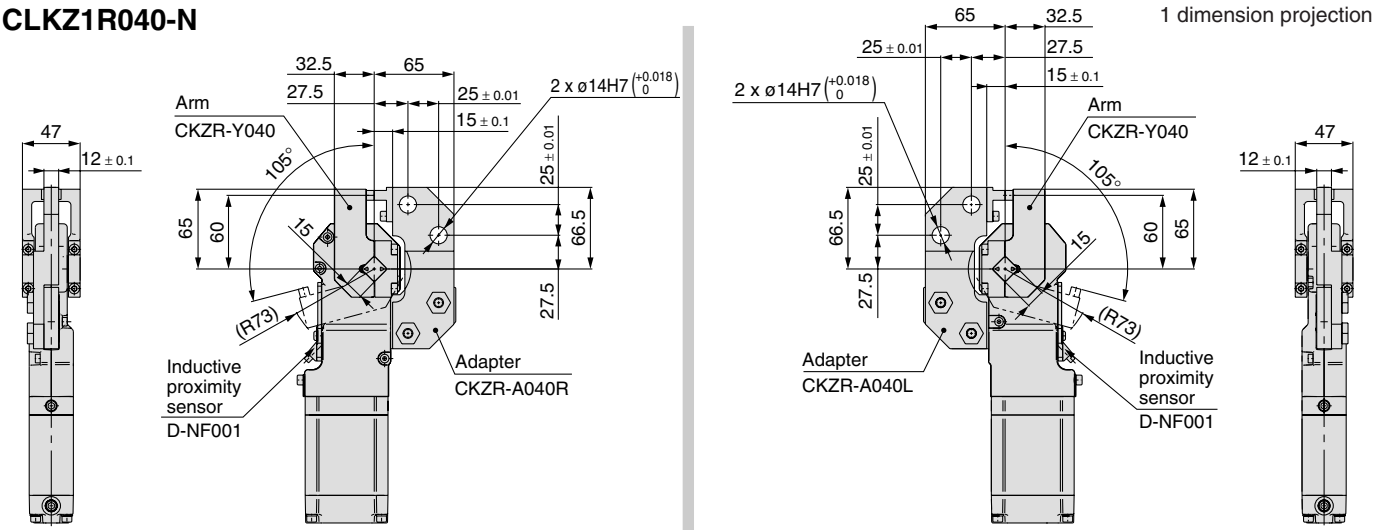


( ): In case of CKZR-Y200N-A

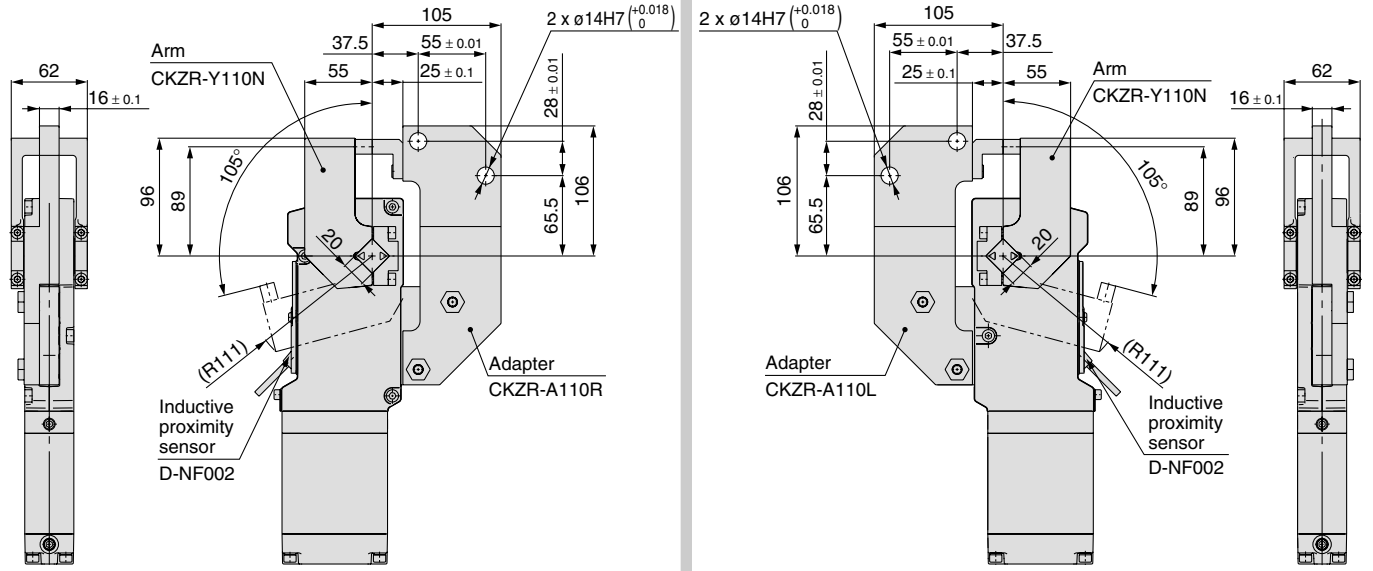
Adapter/Arm Mounting Example

CLKZ1R040-N

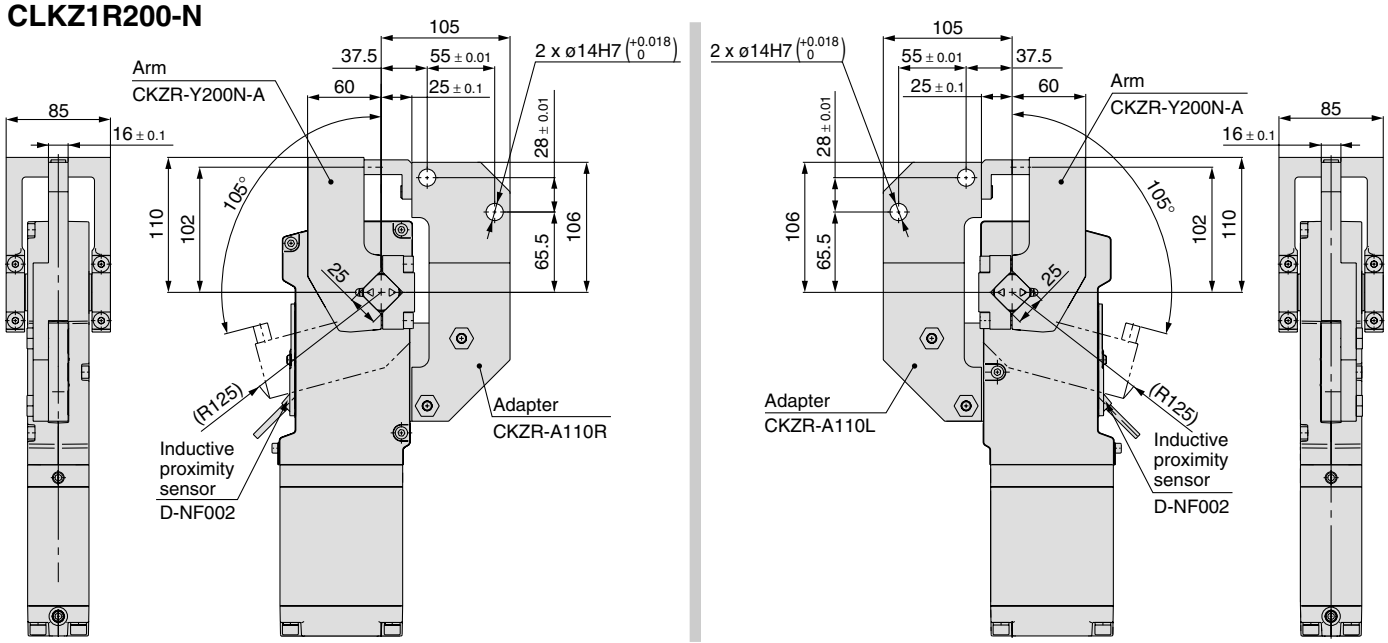
1 dimension projection



CLKZ1R110-N



CLKZ1R200-N



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.

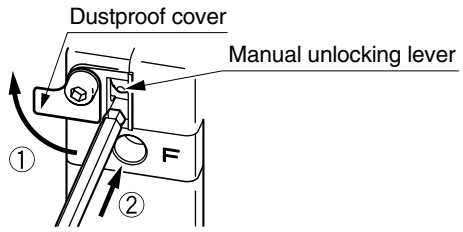
How to Release the Lock Manually

⚠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.

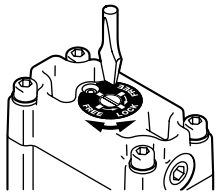
How to release the lock on the clamp side

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 flat-head screwdriver.

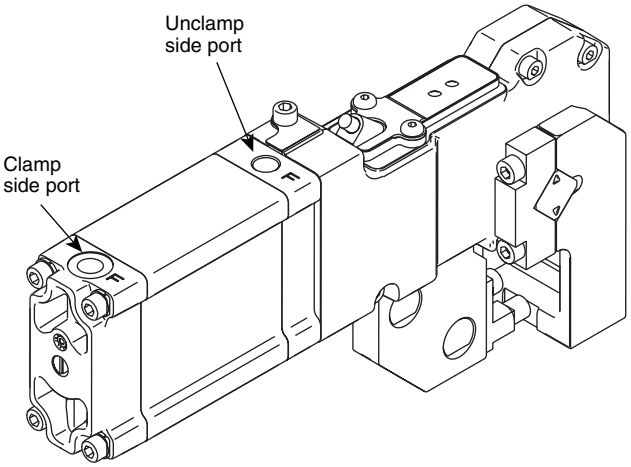


Note) At the time of shipment from the factory, the locking mechanism on the unclamp side is not engaged. When that mechanism is used, change the dial to the LOCK position.

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.



Pneumatic Circuit

⚠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.