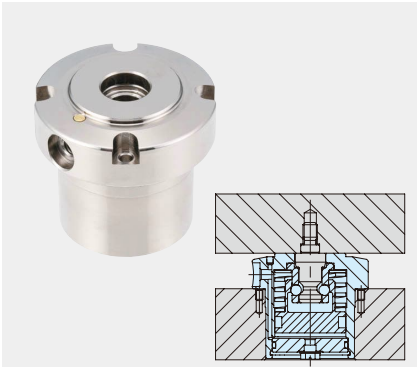


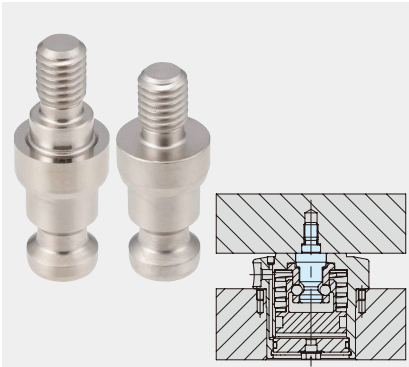
Pneumatic Flex Locators





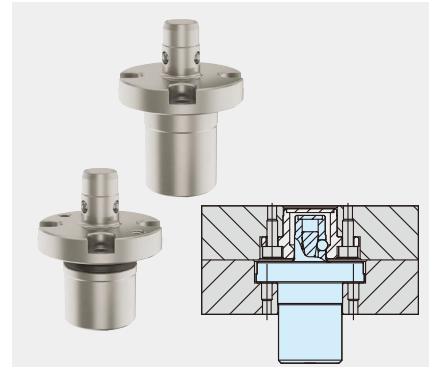
**PNEUMATIC CLAMPING
MODULES**

Part No. AMWFH-S



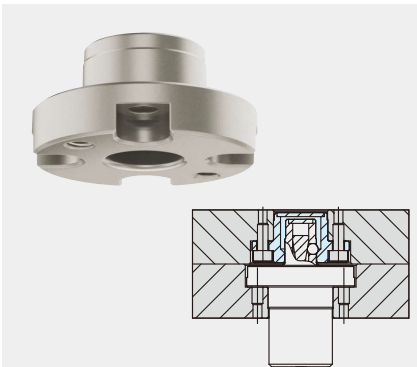
CLAMPING PINS

Part No. AMWFH-M



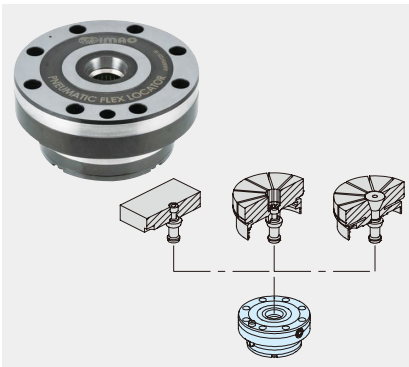
**PNEUMATIC CLAMPING
LOCATORS**

Part No. AMWF-L-S



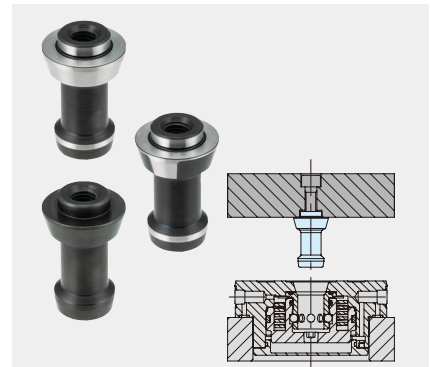
LOCATING RECEIVERS

Part No. AMWF-BU



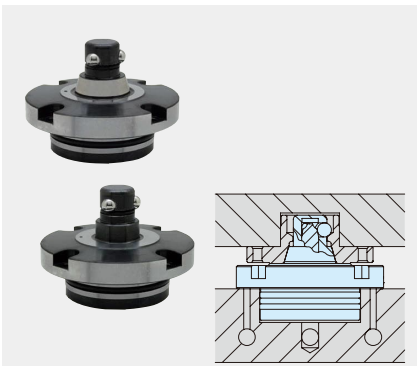
**PNEUMATIC CLAMPING
MODULES**

Part No. AMWFH-WP



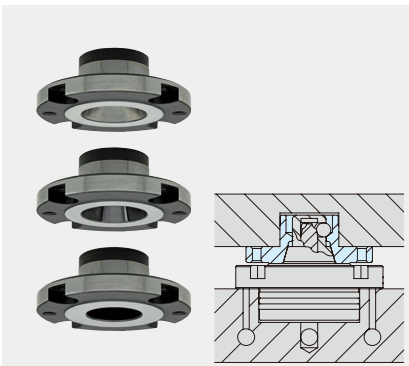
CLAMPING PINS

Part No. AMWFH-M



**PNEUMATIC CLAMPING
LOCATORS**

Part No. AMWF-W



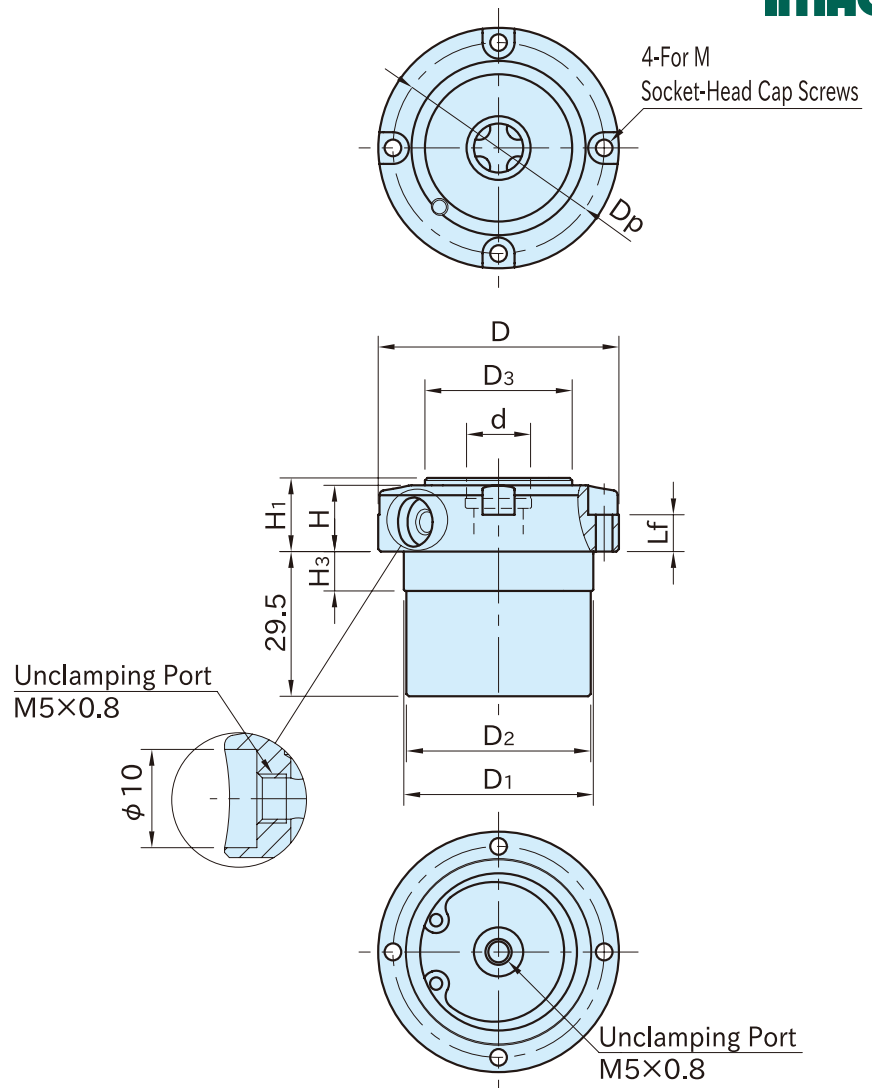
LOCATING RECEIVERS

Part No. AMWF-BU



AMWFH-S

PNEUMATIC CLAMPING MODULES



★Key Point

High clamping force by spring-loaded mechanical lock.

| Body | Ball | Spring |
|---|----------------------------|--------------------------------|
| SCM440 steel Electroless nickel plated | SUS440C stainless steel | Equivalent to SWOSC-V steel |

| Part Number | D ₁ (^{-0.01} / _{-0.04}) | H ₃ | D ₂ | D | H | D ₃ | H ₁ (±0.02) | d (^{+0.04} / _{+0.01}) | M | Lf | Dp |
|------------------|---|----------------|----------------|----|------|----------------|---------------------------|--|----|------|----|
| AMWFH49-S | 38 | 8 | 37.5 | 49 | 13.5 | 30 | 15 | 13 | M3 | 7.5 | 43 |
| AMWFH64-S | 48 | 10 | 47.5 | 64 | 18 | 40 | 20 | 15 | M4 | 10.5 | 56 |

| Part Number | Air Pressure (MPa) *) | Clamping Force (kN) | Holding Force (kN) **) | Weight (g) | Clamping Pins |
|------------------|--------------------------|------------------------|---------------------------|---------------|--------------------------|
| AMWFH49-S | 0.3 | 0.6 | 3 | 370 | AMWFH49-M6L, AMWFH49-M6S |
| AMWFH64-S | | 1 | 4 | 760 | AMWFH64-M8L, AMWFH64-M8S |

*) For unclamping

**) Exceeding the holding force will result in product failure. This value does not include a safety factor.

Reference

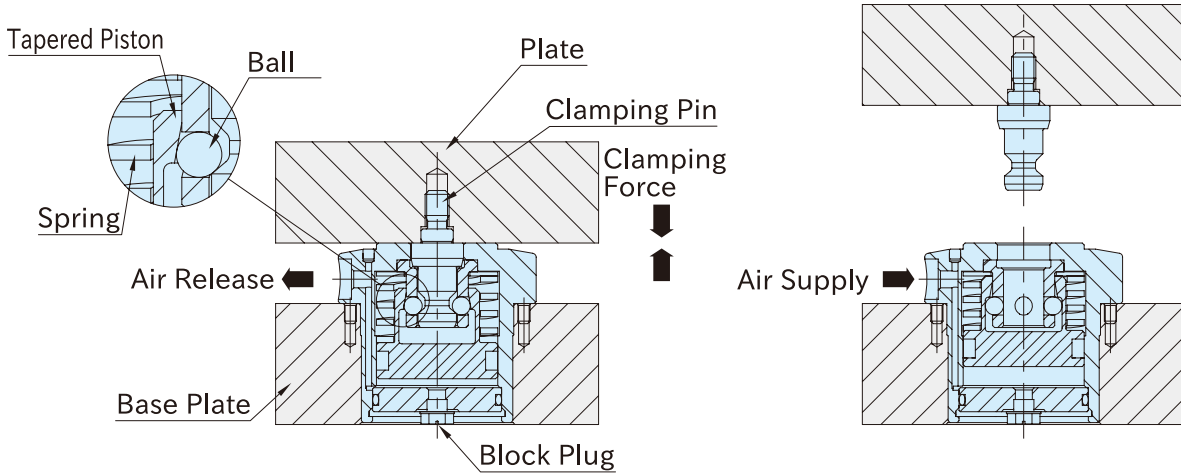
How To Install PNEUMATIC CLAMPING MODULES

Related Product

[AMWFH-M](#) CLAMPING PINS

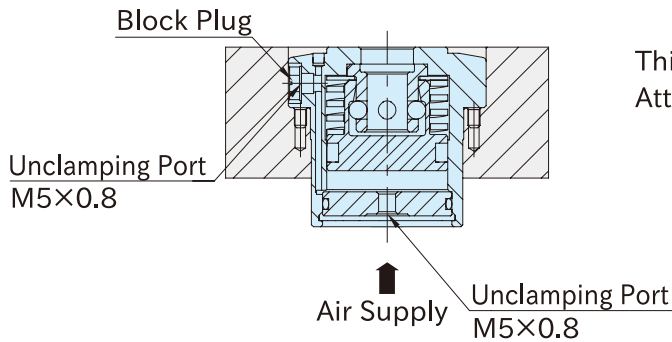
Feature

Single acting and spring clamping module. Supply air for unclamping, release for clamping.



Releasing air allows the spring to push down the tapered piston. The balls pushed by the piston pull down the clamping pin. Keeps clamping without air supply.

Supplying air allows the tapered piston to rise. The balls become loose and the clamping pin is released.

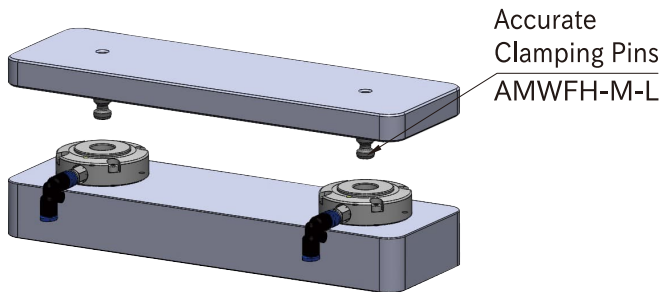


This module has 2 pneumatic ports for unclamping. Attach the furnished block plug to the unused port.

How To Use

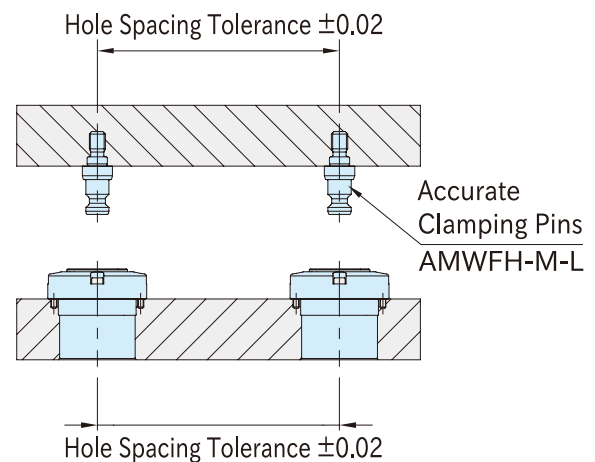
■ Clamping Pin

Use accurate clamping pins for locating.
Note: Use accurate clamping pins for 2 places and standard ones for other places when using 3 clamping pins or more.



■ Repeatability

Repeatability $\pm 30 \mu\text{m}$



🔧 Note

- Use clean air by removing moisture and debris with an air dryer and air filter.
- Impurities in the compressed air can cause malfunction.

AMWFH-M

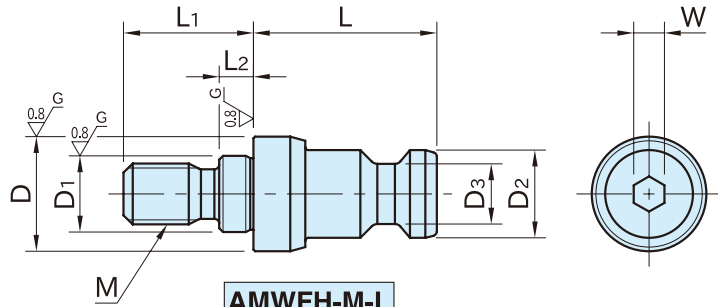
CLAMPING PINS



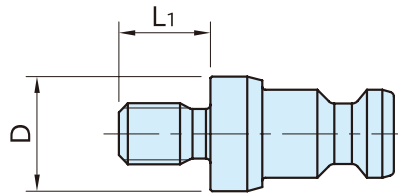
AMWFH-M-L
(Accurate)



AMWFH-M-S
(Standard)



AMWFH-M-L
(Accurate)



AMWFH-M-S
(Standard)

| Body |
|---------------------------|
| SCM435 steel |
| Quenched and tempered |
| Electroless nickel plated |

■ Accurate

| Part Number | M | D ₁ (g6) | L ₂ | L ₁ | D (f7) | L | D ₂ | D ₃ | W | Weight (g) | Pneumatic Clamping Modules |
|--------------------|---------|------------------------|----------------|----------------|-----------|----|----------------|----------------|---|---------------|-------------------------------|
| AMWFH49-M6L | M6×1 | 8 | 3.5 | 13 | 13 | 21 | 9.5 | 5.9 | 3 | 15 | AMWFH49-S |
| AMWFH64-M8L | M8×1.25 | 10 | 4.5 | 17 | 15 | 24 | 11.5 | 7.9 | 4 | 28 | AMWFH64-S |

■ Standard

| Part Number | M | L ₁ | D (^{-0.2} _{-0.4}) | L | D ₂ | D ₃ | W | Weight (g) | Pneumatic Clamping Modules |
|--------------------|---------|----------------|--|----|----------------|----------------|---|---------------|-------------------------------|
| AMWFH49-M6S | M6×1 | 9 | 13 | 21 | 9.5 | 5.9 | 3 | 14 | AMWFH49-S |
| AMWFH64-M8S | M8×1.25 | 12 | 15 | 24 | 11.5 | 7.9 | 4 | 25 | AMWFH64-S |

Reference

How To Install PNEUMATIC CLAMPING MODULES

Related Product

[AMWFH-S](#) PNEUMATIC CLAMPING MODULES

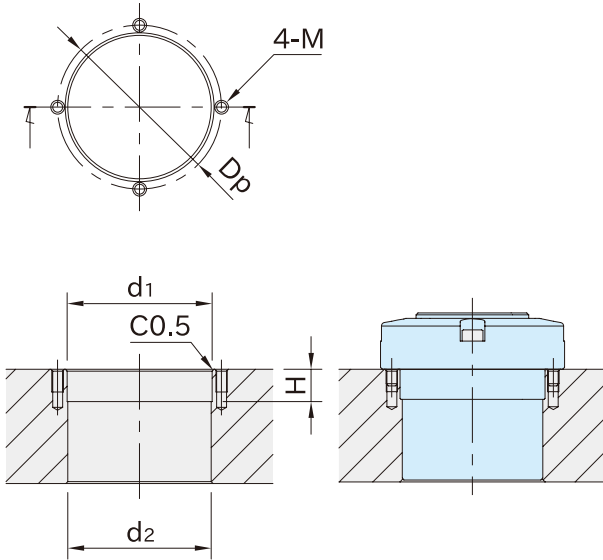
How To Install PNEUMATIC CLAMPING MODULES

How To Use

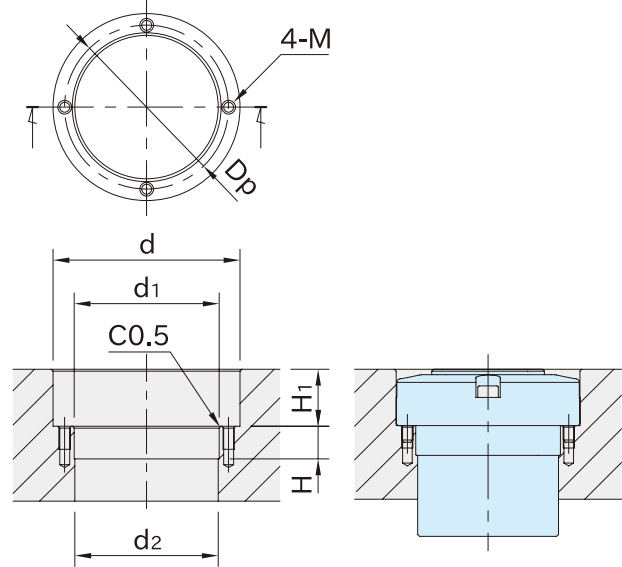
■ Mounting Hole Dimension

• Pneumatic Clamping Modules

Flange Mounting



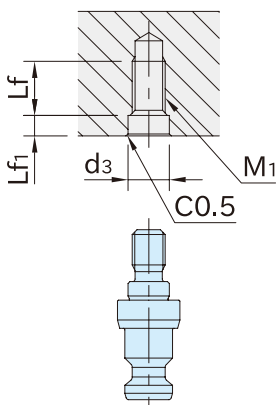
Flush Mounting



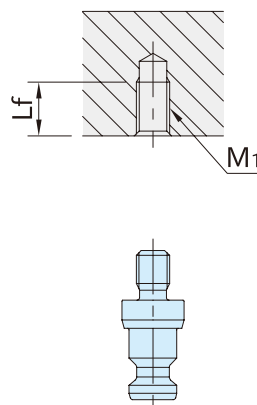
| Part Number | d ₁ (H7) | H | d ₂ | d | H ₁ (±0.05) | M | D _p |
|------------------|------------------------|------|----------------|----|---------------------------|----------------|----------------|
| AMWFH49-S | 38 | 8.5 | 37.8 | 50 | 15.1 | M3×0.5 Depth 6 | 43 |
| AMWFH64-S | 48 | 10.5 | 47.8 | 65 | 20.1 | M4×0.7 Depth 8 | 56 |

• Clamping Pins

AMWFH-M-L (Accurate)

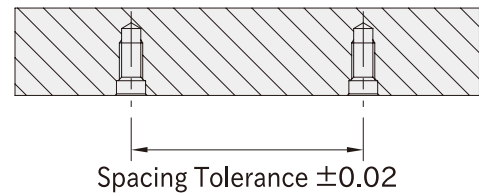


AMWFH-M-S (Standard)

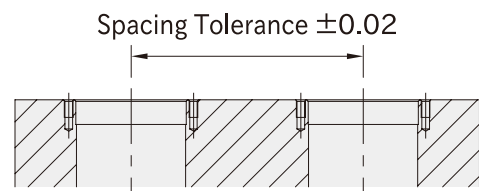


■ Machining Accuracy

AMWFH-M-L Accurate Clamping Pins



AMWFH-S Pneumatic Clamping Modules



| Part Number | M ₁ | L _f | d ₃ (H7) | L _{f1} |
|--------------------|----------------|----------------|------------------------|-----------------|
| AMWFH49-M6L | M6×1 | 10 | 8 | 4 |
| AMWFH64-M8L | M8×1.25 | 13 | 10 | 5 |
| AMWFH49-M6S | M6×1 | 10 | — | — |
| AMWFH64-M8S | M8×1.25 | 13 | — | — |

AMWF-L-S

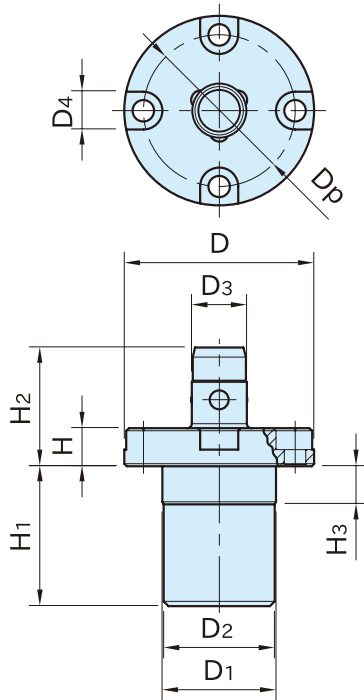
PNEUMATIC CLAMPING LOCATORS



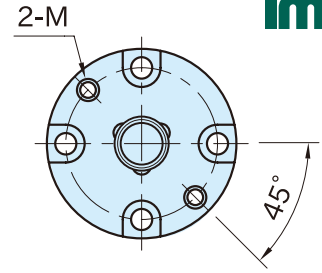
AMWF-L-S



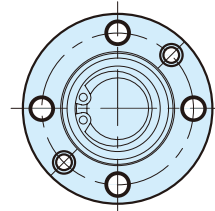
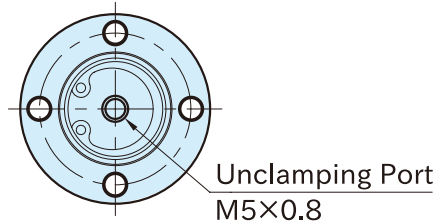
AMWF-L-S-G



AMWF-L-S (Port Style)



AMWF-L-S-G (Direct Style)



| Body | Ball | Coiled Spring |
|---|----------------------------|------------------------------|
| S45C steel Electroless nickel plated | SUS440C stainless steel | SUS304WPB stainless steel |

| Part Number | D ₁ (g6) | H ₃ | D ₂ | H ₁ | D | H | D ₃ (h8) | H ₂ | d | L _f | D ₄ | D _p |
|---------------------|------------------------|----------------|----------------|----------------|----|-----|------------------------|----------------|-----|----------------|----------------|----------------|
| AMWF18L-4S | 24 | 8.0 | 23.4 | 29.5 | 40 | 8 | 12 | 25 | 4.5 | 3.5 | 8 | 32 |
| AMWF26L-4S | 32 | 8.5 | 31.4 | 31.7 | 51 | 9.5 | 16 | 28.5 | 5.5 | 4 | 9.5 | 41 |
| AMWF18L-4S-G | 24 | 8 | 23.4 | 24.5 | 40 | 8 | 12 | 25 | 4.5 | 3.5 | 8 | 32 |
| AMWF26L-4S-G | 32 | 8.5 | 31.4 | 25.5 | 51 | 9.5 | 16 | 28.5 | 5.5 | 4 | 9.5 | 41 |

| Part Number | M | Air Pressure (MPa) | Clamping Force (N) | Holding Force (N) * | Weight (g) |
|---------------------|--------|-----------------------|-----------------------|------------------------|---------------|
| AMWF18L-4S | — | 0.5 | 250 | 5000 | 154 |
| AMWF26L-4S | — | | 350 | 10000 | 289 |
| AMWF18L-4S-G | M4x0.7 | | 250 | 5000 | 136 |
| AMWF26L-4S-G | M5x0.8 | | 350 | 10000 | 252 |

*) Exceeding the holding force will result in product failure.
This value does not include a safety factor.

Reference

- How To Install PNEUMATIC FLEX LOCATORS
- How To Use PNEUMATIC FLEX LOCATORS

Note

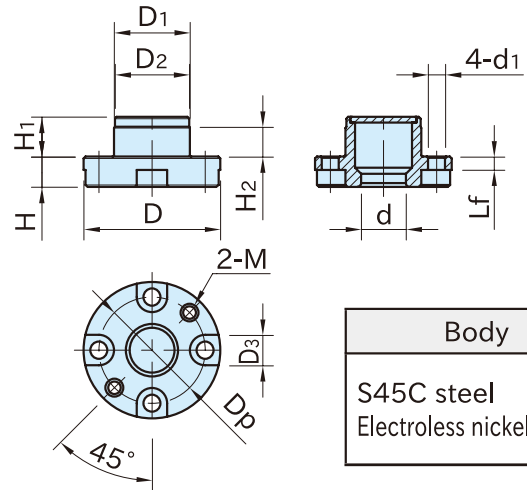
- Use clean air by removing moisture and debris with an air dryer and air filter.
- Impurities in the compressed air can cause malfunction.

Related Product

AMWF-BU LOCATING RECEIVERS

AMWF-BU

LOCATING RECEIVERS



| |
|---|
| Body |
| S45C steel Electroless nickel plated |

| Part Number | D ₁ (g6) | H ₂ | D ₂ | H ₁ | D | H | d (E7) | d ₁ | Lf | D ₃ | M | D _p | Weight (g) |
|------------------|------------------------|----------------|----------------|----------------|----|-----|-----------|----------------|-----|----------------|--------|----------------|---------------|
| AMWF18-BU | 20 | 7.5 | 19.6 | 10.5 | 36 | 8 | 12.1 | 4.5 | 3.5 | 8 | M4×0.7 | 28 | 57 |
| AMWF26-BU | 25 | 7 | 24.6 | 11 | 44 | 9.5 | 16.1 | 5.5 | 4 | 9.5 | M5×0.8 | 34 | 97 |

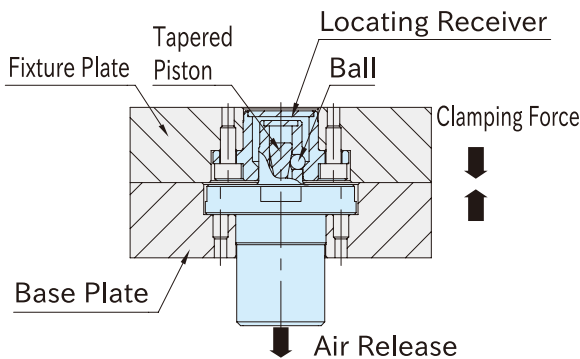
Reference

- How To Install PNEUMATIC FLEX LOCATORS
- How To Use PNEUMATIC FLEX LOCATORS

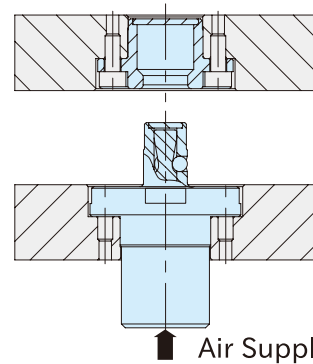
Related Product

[AMWF-L-S](#) PNEUMATIC CLAMPING LOCATORS

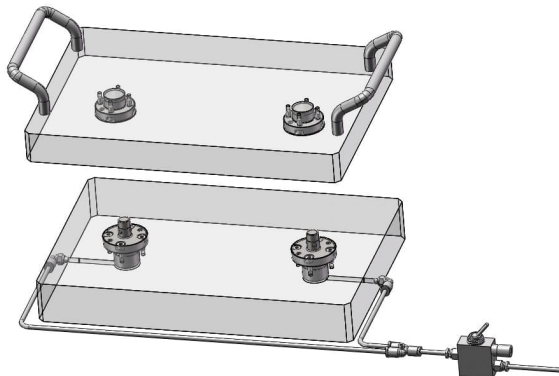
Feature



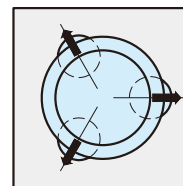
Release air for clamping. The tapered piston goes down and pushes the balls to pull down the receiver. Can keep clamped without air supply.



Supply air for unclamping. The wedge goes up and releases the balls.



Quick clamping and unclamping reduce set-up time in production equipment.



Locating Repeatability : $\pm 10 \mu\text{m}$
The receiver is centered and clamped when the 3 balls are pushed out to gain high locating repeatability.

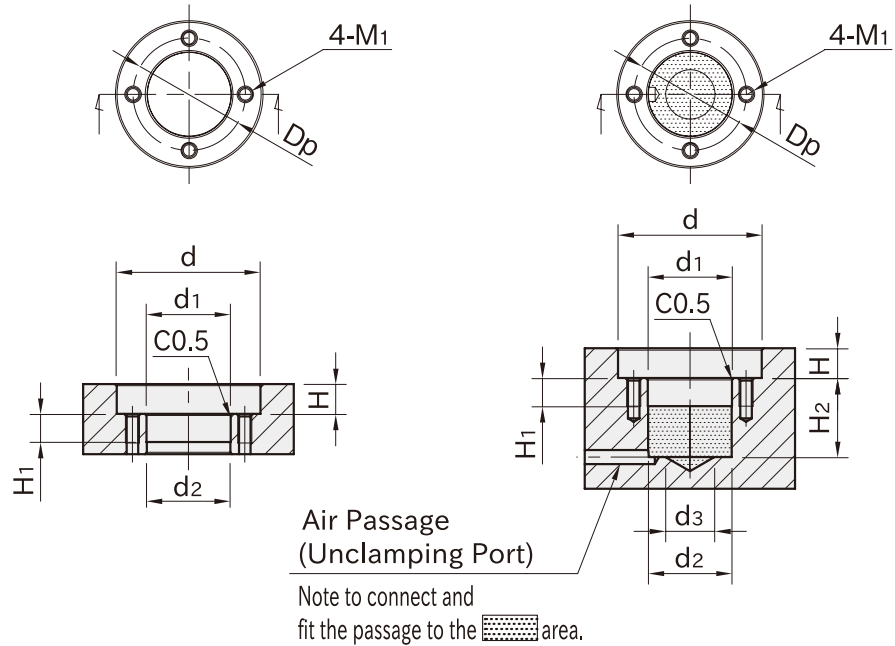
How To Install PNEUMATIC FLEX LOCATORS

■ Mounting Hole Dimensions

· Pneumatic Clamping Locators

AMWF-L-S (Port Style)

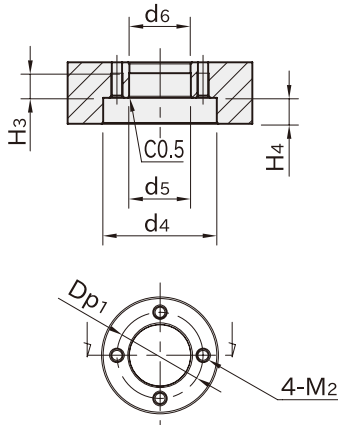
AMWF-L-S-G (Direct Style)



| Part Number | d ₁ (H7) | H ₁ | d ₂ | H ₂ | d ₃ | d | H (±0.05) | M ₁ | D _p |
|---------------------|------------------------|----------------|----------------|----------------|----------------|----|--------------|----------------|----------------|
| AMWF18L-4S | 24 | 8.5 | 23.8 | — | — | 41 | 8.5 | M4×0.7 Depth 8 | 32 |
| AMWF26L-4S | 32 | 9 | 31.8 | — | — | 52 | 10 | M5×0.8 Depth10 | 41 |
| AMWF18L-4S-G | 24 | 8.5 | 23.8 | 25.5 | 14 | 41 | 8.5 | M4×0.7 Depth 8 | 32 |
| AMWF26L-4S-G | 32 | 9 | 31.8 | 26.5 | 20 | 52 | 10 | M5×0.8 Depth10 | 41 |

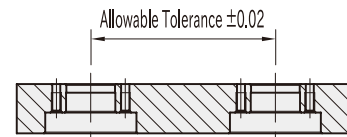
· Locating Receivers

AMWF-BU (Locating Receiver)



■ Spacing Tolerance

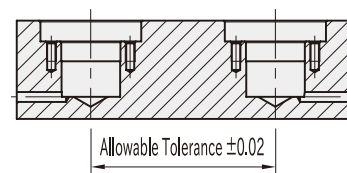
AMWF-BU (Locating Receiver)



AMWF-L-S (Port Style)



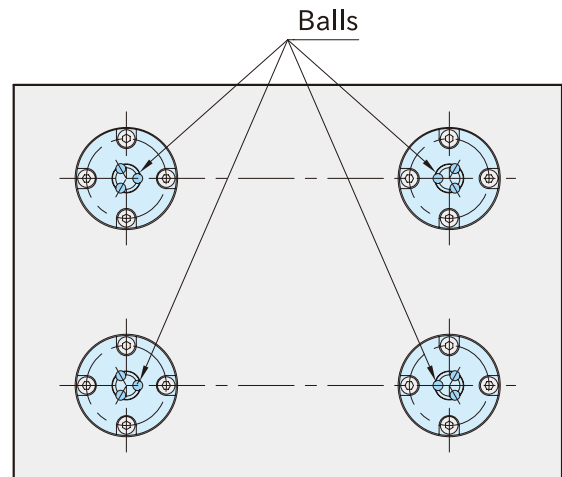
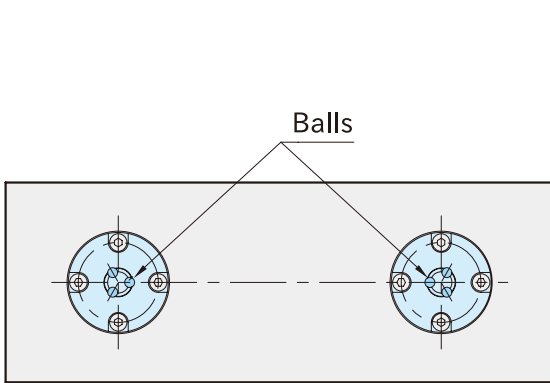
AMWF-L-S-G (Direct Style)



| Part Number | d ₅ (H7) | H ₃ | d ₆ | d ₄ | H ₄ (±0.05) | M ₂ | D _{p1} |
|------------------|------------------------|----------------|----------------|----------------|---------------------------|----------------|-----------------|
| AMWF18-BU | 20 | 8 | 19.8 | 37 | 8.5 | M4×0.7 Depth 8 | 28 |
| AMWF26-BU | 25 | 7.5 | 24.8 | 45 | 10 | M5×0.8 Depth10 | 34 |

How To Use PNEUMATIC FLEX LOCATORS

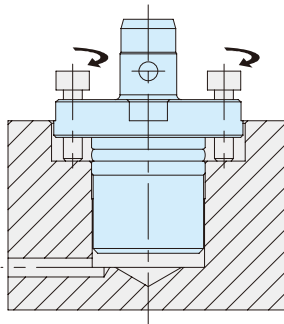
How to Use



The locators should be mounted in the direction shown in the above figures.

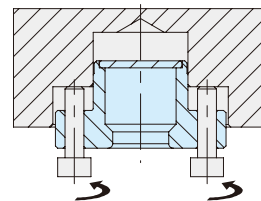
How to Remove (Direct Style Locators)

For easier removal, insert screws into the tapped holes and screw them.



How to Remove (Locating Receivers)

For easier removal, insert screws into the tapped holes and screw them.



Note

| Size | Max. Loading Weight (kg) |
|---------------|--------------------------|
| AMWF18 | 40 |
| AMWF26 | 56 |

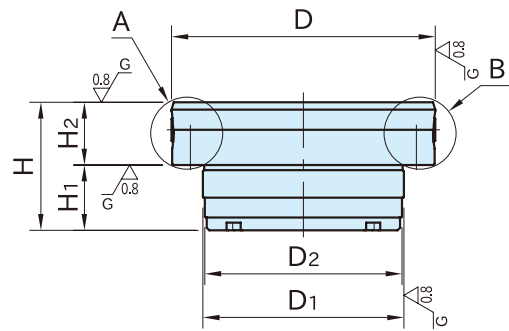
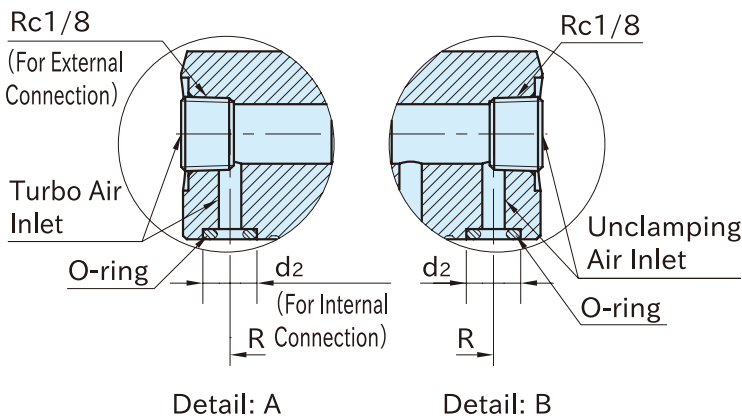
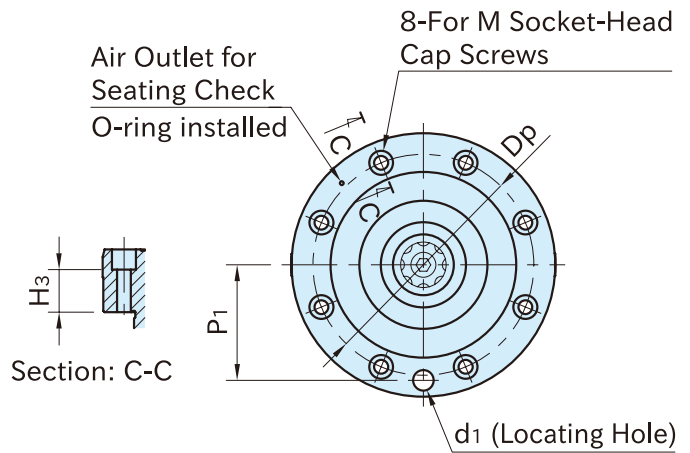
- If the total weight exceeds the maximum loading weight, the locating repeatability may exceed $\pm 10 \mu\text{m}$.
- In vertical use, the locating repeatability may exceed $\pm 10 \mu\text{m}$.
- Pneumatic Clamping Locators and Locating Receivers should be positioned equally against the center of the fixture plate.
- For Port Style Locators, use with air joint that is available commercially.

Note: The maximum loading weight is the entire sum of the weight of fixture plates, fixtures and workpieces.

Note: The maximum loading weight shown is the value when two sets each of **AMWF-L-S** Pneumatic Clamping Locators and **AMWF-BU** Locating Receivers are used.

AMWFH-WP

PNEUMATIC CLAMPING MODULES



★ Key Point

Work as quick change & form holding system.

| Body | Ball | Spring |
|--|----------------------------|--------------------------------|
| S55C steel Black oxide finish HRC50-60 | SUS440C stainless steel | Equivalent to SWOSC-V steel |

| Part Number | D (h7) | D ₁ (h6) | D ₂ | H | H ₁ | H ₂ (±0.005) | M | H ₃ | D _p | P ₁ (±0.02) | R | d ₁ (G6) | d ₂ | O-ring |
|--------------------|--------|---------------------|----------------|----|----------------|-------------------------|----|----------------|----------------|------------------------|----|---------------------|----------------|--------|
| AMWFH105-WP | 105 | 80 | 79.5 | 51 | 26 | 25 | M5 | 17 | 88 | 46 | 46 | 8 | 7.2 | P4 |
| AMWFH140-WP | 140 | 110 | 109.5 | 65 | 33 | 32 | M6 | 23 | 120 | 62 | 62 | 10 | 8.2 | P5 |

| Part Number | Clamping Force (kN) | | Operating Air Pressure (MPa) | Weight (kg) |
|--------------------|---------------------|----------|------------------------------|-------------|
| | w/o Turbo | w/ Turbo | | |
| AMWFH105-WP | 4 | 9-12 | 0.6-1.0 | 2.2 |
| AMWFH140-WP | 8.5 | 19-26 | | 4.8 |

Note

- Do not plug the turbo port as it functions as an air vent even when not using turbo function. Mounting a filter prevents contamination.
- If seating confirmation by monitoring air flow is required, internal air supply must be provided. The detection switch and related components should be prepared by the customer.
- Use clean air by removing moisture and debris with an air dryer and air filter.
- Impurities in the compressed air can cause malfunction.

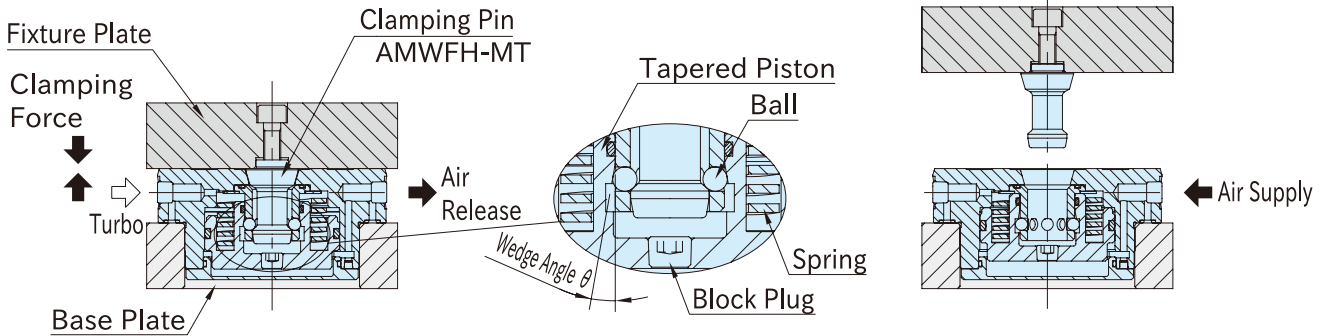
Supplied With

- **AMWFH105-WP**: 1 of diamond pin BJ722-08001
- **AMWFH140-WP**: 1 of diamond pin BJ722-10001
- 1 of locating pin
- 1 of orifice plug
- 8 of plastic mounting hole caps
- 1 of plastic locating hole cap

Feature

■ Clamping Mechanism

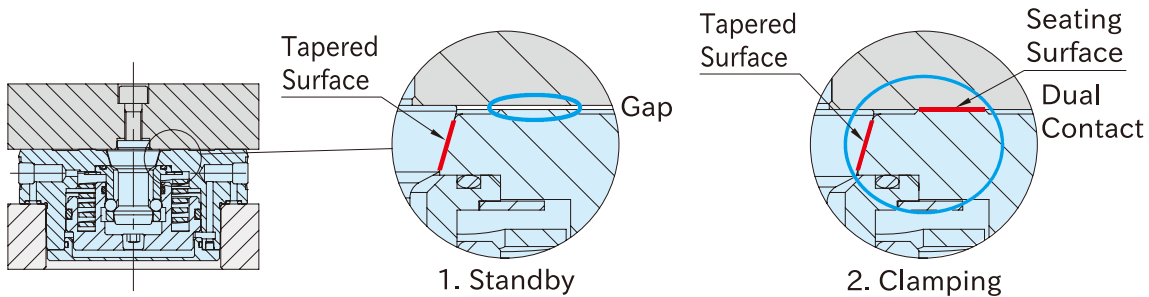
- This module clamps the plate with spring force, and can be boosted by supplying air to the turbo port. Supplying air to the unclamping port opens the module, and releasing air allows the spring to hold the clamping pin for clamping.
- Available with either external threaded connection or internal connection.



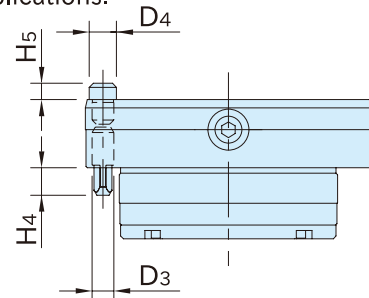
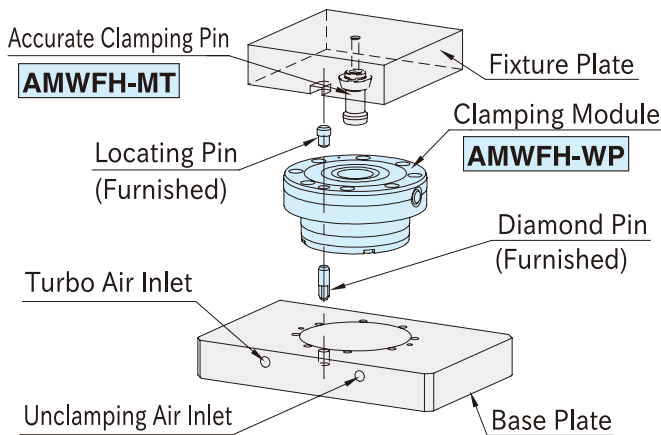
Releasing air allows the spring to push the tapered piston downward, which presses the balls and retracts the clamping pin. The clamping force can be boosted by supplying air to the turbo port.

Supplying air raises the tapered piston, releasing the pressure on the balls and unclamping the clamping pin.

- Precise dual contact provides excellent locating repeatability at 5 μ m.

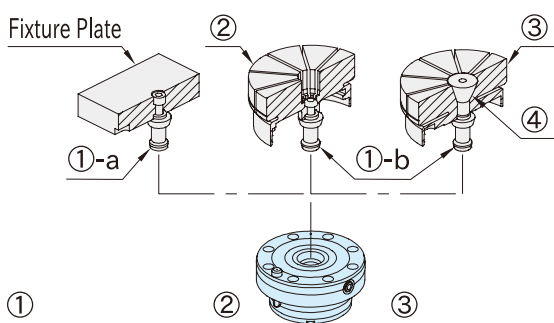


- Use the furnished diamond pin and the locating pin for single module applications.

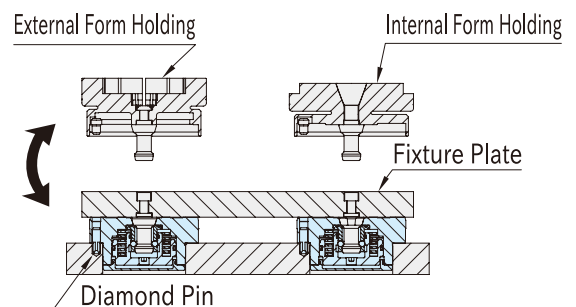


| Part Number | D ₃ (h6) | H ₄ | D ₄ (h6) | H ₅ |
|-------------|---------------------|----------------|---------------------|----------------|
| AMWFH105-WP | 8 | 10 | 10 | 6 |
| AMWFH140-WP | 10 | 12 | 12 | 7 |

- This module works as a form holding clamp for O.D. clamping or I.D. clamping by mounting optional jaws.



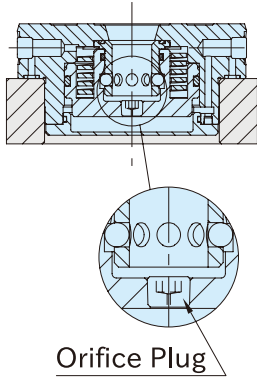
- ① Clamping Pin
 ①-a : AMWFH-MT
 ①-b : AMWFH-MS
- ② Jaw (External Holding)
 AMWFH-O
- ③ Jaw (Internal Holding)
 AMWFH-I
- ④ Tapered Screw (Internal Holding)
 AMWFH-IB



Diamond pins are not required for rotational positioning when using multiple modules. If the modules are also used for O.D. clamping or I.D. clamping, install diamond pins beforehand.

➡ Continuing on Next Page

Blow-out Function



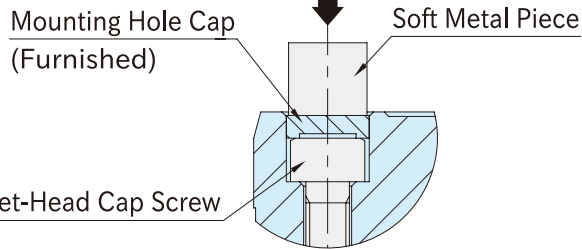
Replace the installed plug with the supplied orifice plug to enable air blow at the clamp pin insertion hole.

Mounting Hole Cap

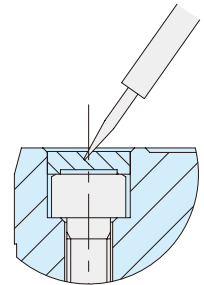
Keep the top surface of the module clean by inserting the plastic cap into the mounting hole.

Installation

Tap in with plastic hammer



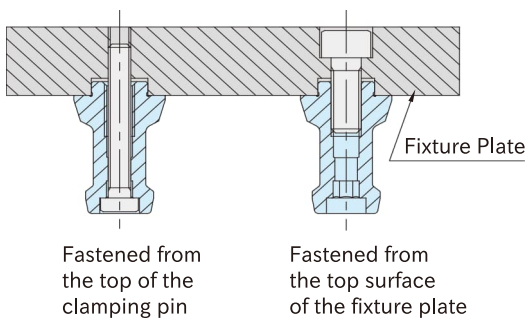
Removal



- Place the mounting hole cap over the socket-head cap screw hole and tap it in using a plastic hammer.
- When tapping, always place a piece of soft metal between the hammer and the plastic cap.

Insert a pointed tool into the cap to remove it.

Technical Information

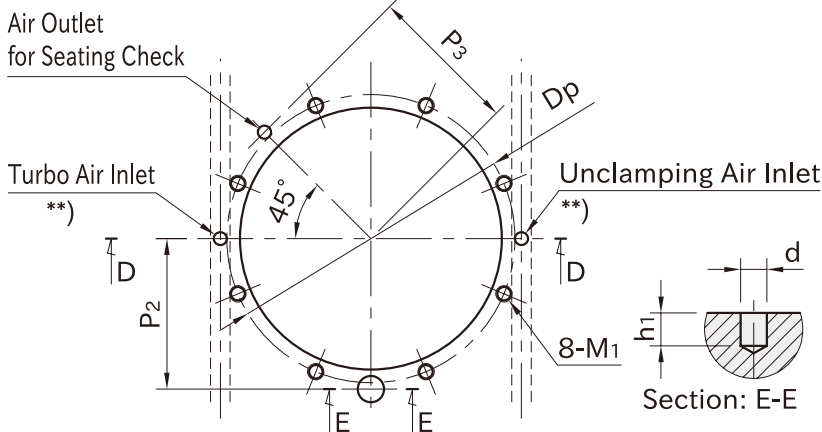


| Clamping Modules | Clamping Pin Size | Holding Force (kN)* | |
|------------------|-------------------|--|--|
| | | Fastened From the Clamping Pin Top (Class 8.8 Screw) | Fastened From the Fixture Plate Top (Class 12.9 Screw) |
| AMWFH105-WP | AMWFH105-M8 | 17 | 21 |
| AMWFH140-WP | AMWFH140-M12 | 47 | 100 |
| | AMWFH140-M16 | 74 | 140 |

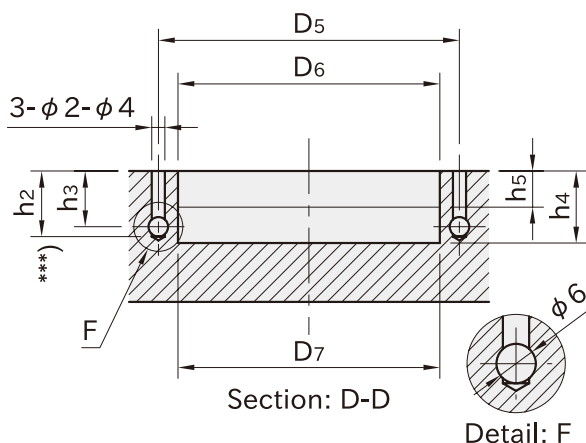
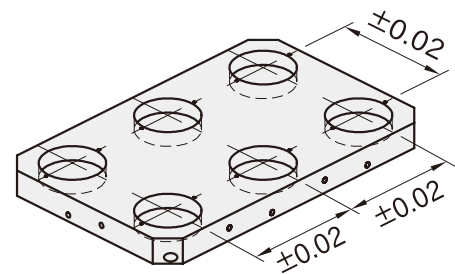
*) Exceeding the holding force will result in product or screw failure. This value does not include a safety factor. Measured at 0.6 MPa.

How To Use

Mounting Hole Dimensions



Machining Accuracy



| Part Number | P ₂ (±0.02) | P ₃ | D _p | M ₁ |
|-------------|------------------------|----------------|----------------|---------------------------------|
| AMWFH105-WP | 46 | 46 | 88 | M5×0.8 Depth 10 (Hole Depth 14) |
| AMWFH140-WP | 62 | 62 | 120 | M6×1.0 Depth 13 (Hole Depth 18) |

| Part Number | d (G7) | h ₁ | D ₅ | D ₆ (H7) | D ₇ | h ₄ | h ₅ |
|-------------|--------|----------------|----------------|---------------------|----------------|----------------|----------------|
| AMWFH105-WP | 8 | 10 | 92 | 80 | 79.8 | 27 | 14 |
| AMWFH140-WP | 10 | 12 | 124 | 110 | 109.8 | 34 | 19 |

**) Not required for external connection with Rc1/8 ports.

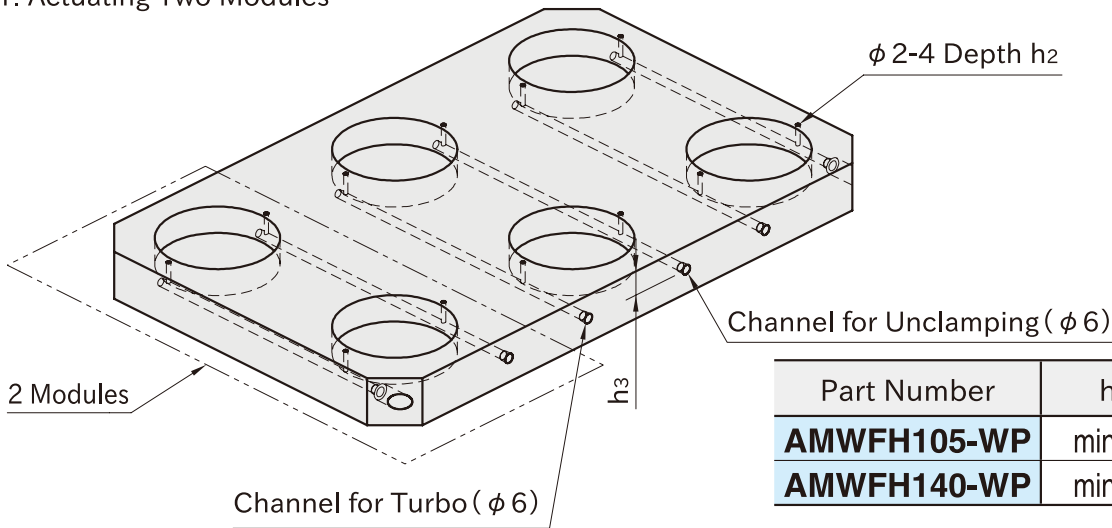
***) Refer to Internal Pneumatic Connection for the details of h₂ and h₃.

How To Use

Internal Pneumatic Connection

Prepare channel holes for turbo, unclamping, and (if needed) seating check in the base plate. Each channel should connect to a vertical hole with a diameter of $\phi 2-4$.

1. Actuating Two Modules

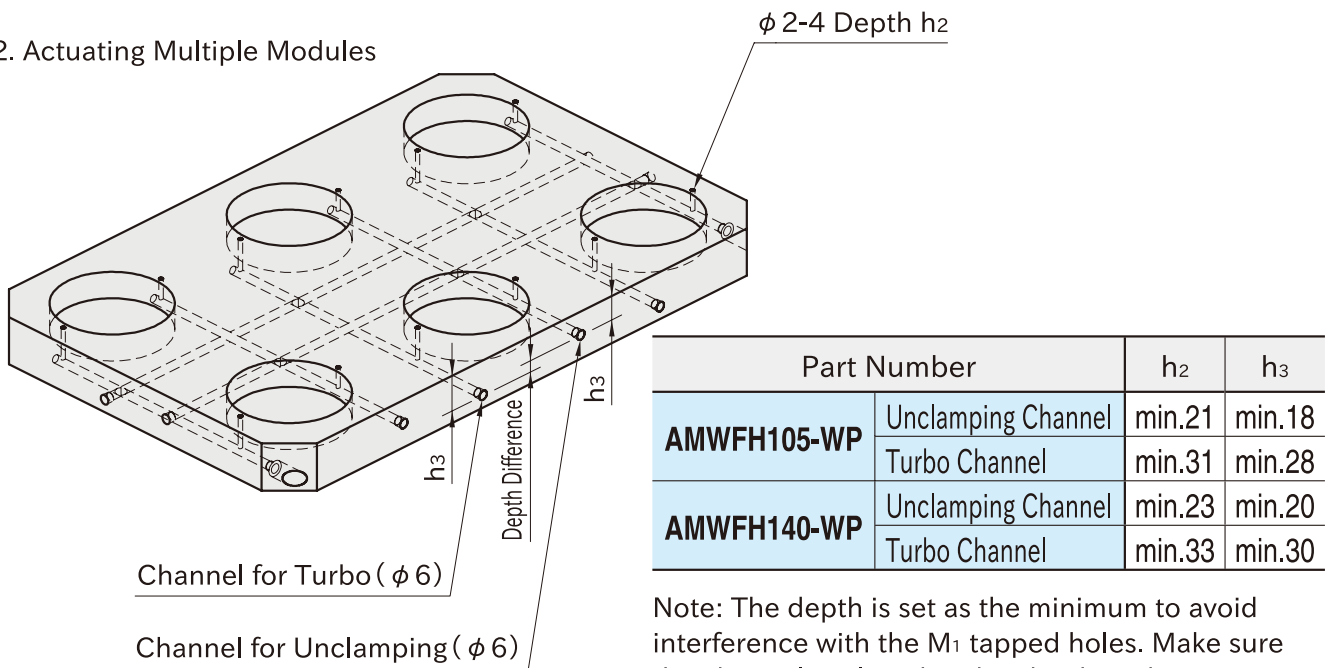


| Part Number | h_2 | h_3 |
|--------------------|--------|--------|
| AMWFH105-WP | min.21 | min.18 |
| AMWFH140-WP | min.23 | min.20 |

Note: The depth is set as the minimum to avoid interference with the M_1 tapped holes. Make sure the channel is placed at this depth or deeper.

The depth of vertical holes ($\phi 2-4$) should be h_2 .

2. Actuating Multiple Modules



| Part Number | | h_2 | h_3 |
|--------------------|--------------------|--------|--------|
| AMWFH105-WP | Unclamping Channel | min.21 | min.18 |
| | Turbo Channel | min.31 | min.28 |
| AMWFH140-WP | Unclamping Channel | min.23 | min.20 |
| | Turbo Channel | min.33 | min.30 |

Note: The depth is set as the minimum to avoid interference with the M_1 tapped holes. Make sure the channel is placed at this depth or deeper. The hole depths for the unclamping and turbo sides can be reversed if needed.

- The depth of vertical holes ($\phi 2-4$) should be h_2 .
- Make sure to set different depths for the turbo and unclamping channels to avoid interference.
- Use one air supply port each for turbo and unclamping, and plug the unused ports. Screw plugs should be prepared by the customer.

Related Products

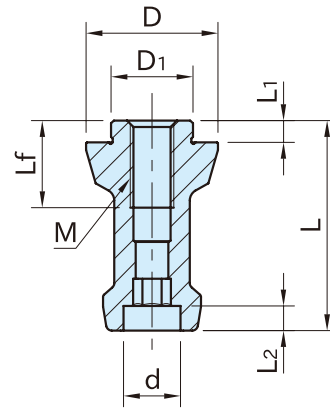
- [AMWFH-M](#) CLAMPING PINS
- [BJ722](#) DIAMOND LOCATING PINS
- [AMWFH-O](#) JAWS FOR EXTERNAL FORM HOLDING
- [AMWFH-I](#) JAWS FOR INTERNAL FORM HOLDING

AMWFH-M

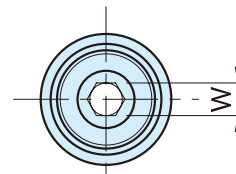
CLAMPING PINS



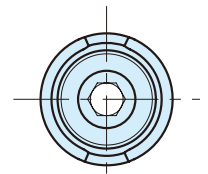
(Locating, Round) (Locating, Diamond) (Clamping)



| Body |
|---|
| SCM415 Steel Carburized-hardened Black oxide finished |



AMWFH-MT
(Round)



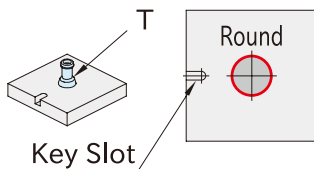
AMWFH-MD
(Diamond)

| Part Number | Type | M | D ₁ | L ₁ | D | L | d | L ₂ | W | L _f | Weight (g) | Pneumatic Clamping Modules |
|----------------------|----------|----------|--------------------|----------------|------|------|------|----------------|----|----------------|------------|----------------------------|
| AMWFH105-M 8T | Round | M 8×1.25 | 15g6 | 4 | 24.2 | 38.5 | 10.5 | 4.5 | 6 | 16 | 55 | AMWFH105-WP |
| AMWFH105-M 8D | Diamond | | | | 24 | | | | | | | |
| AMWFH105-M 8S | Clamping | | 15 ^{-0.1} | | | | | | | | | |
| AMWFH140-M12T | Round | M12×1.75 | 25g6 | 5 | 34.2 | 51.5 | 16.5 | 6.5 | 10 | 24 | 170 | AMWFH140-WP |
| AMWFH140-M12D | Diamond | | | | 34 | | | | | | | |
| AMWFH140-M12S | Clamping | | 25 ^{-0.1} | | | | | | | | | |
| AMWFH140-M16T | Round | M16×2 | 25g6 | 5 | 34.2 | 51.5 | 18.5 | 7.5 | 12 | 30 | 140 | AMWFH140-WP |
| AMWFH140-M16D | Diamond | | | | 34 | | | | | | | |
| AMWFH140-M16S | Clamping | | 25 ^{-0.1} | | | | | | | | | |

How To Use

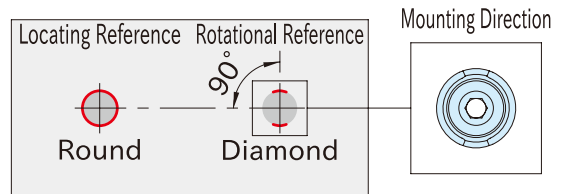
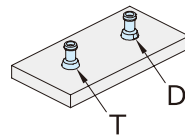
■ Use of Single Pin

Type T Round Pin: 1 pc



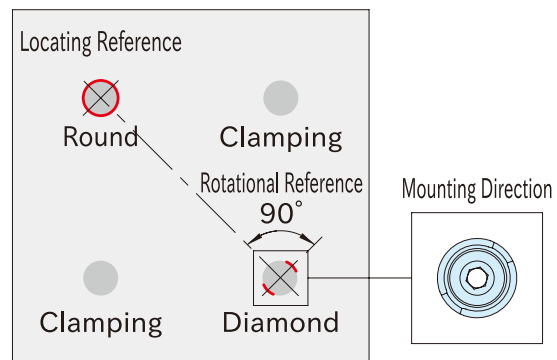
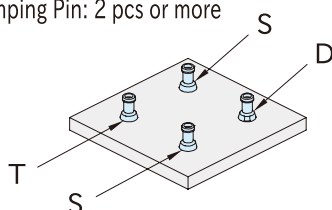
■ Use of 2 Pins

Type T Round Pin: 1 pc
Type D Diamond Pin: 1 pc



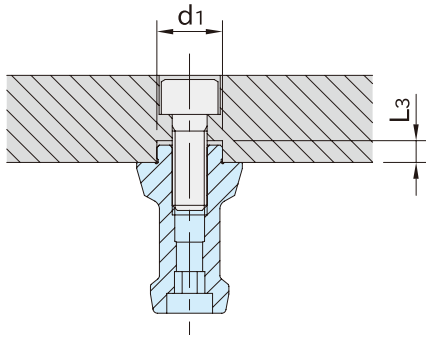
■ Use of 4 or More Pins

Type T Round Pin: 1 pc
Type D Diamond Pin: 1 pc
Type S Non-Locating Clamping Pin: 2 pcs or more



How To Use

■ Mounting Hole Dimension

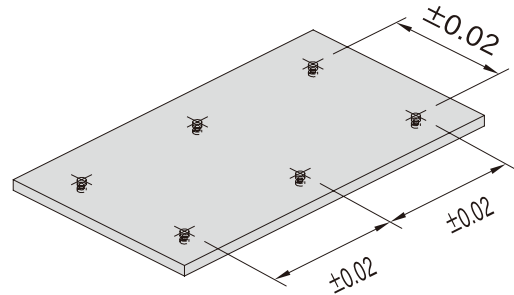


| Size | d ₁ (H7) | L ₃ |
|--------------|------------------------|----------------|
| AMWFH105-M8 | 15 | 4.5 |
| AMWFH140-M12 | 25 | 5.5 |
| AMWFH140-M16 | | |

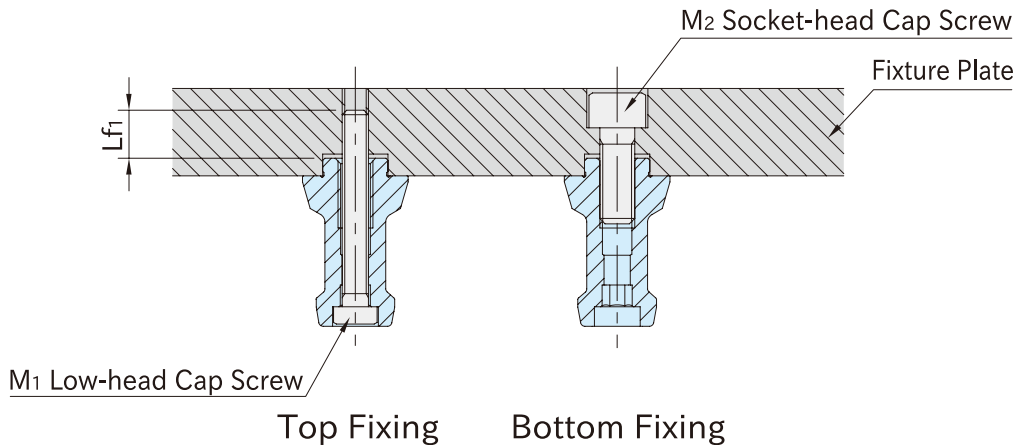
Note: The tolerance of d₁ for Type S non-locating Clamping Pin is $^{+0.1}_0$.

■ Spacing Tolerance

Should be ± 0.02 for Type T and D Locating Pins. The required tolerance for Type S non-locating Clamping Pin is ± 0.1 .



■ How To Install



| Size | M ₁ | L _{f1} | M ₂ |
|--------------|----------------|-----------------|----------------|
| AMWFH105-M8 | M 6×1 -45L | 11 | M 8 |
| AMWFH140-M12 | M10×1.5 -60L | 15 | M12 |
| AMWFH140-M16 | M12×1.75-60L | 16 | M16 |

The screws should be prepared by the customer.
The length of screw differs by the thickness of fixture plate.

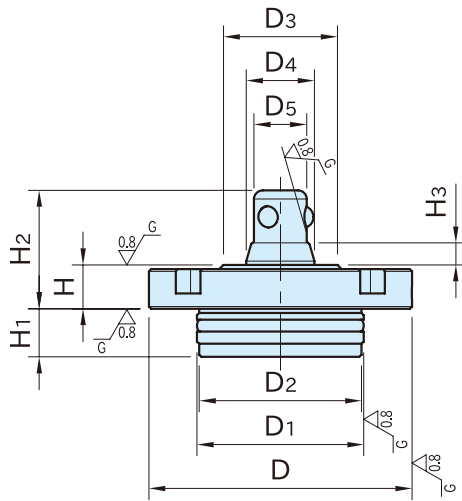
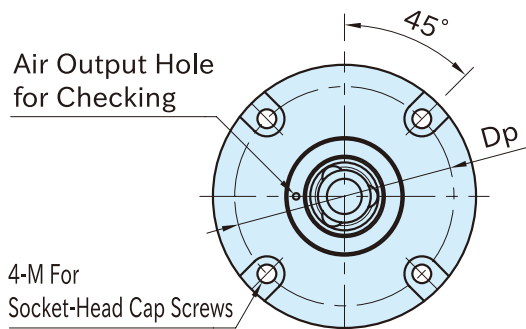


(Tapered Type)

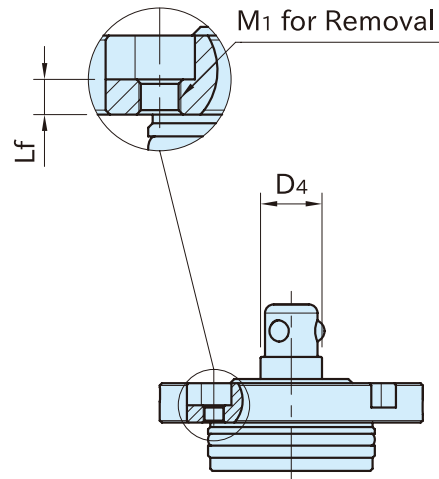


(Straight Type)

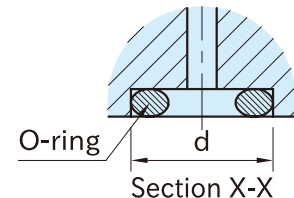
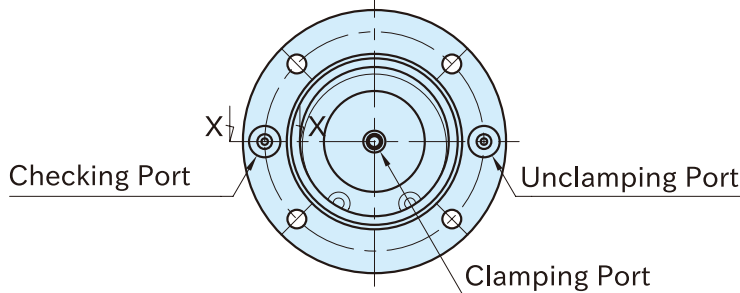
| Body | Cylinder | Ball |
|--|---|----------------------------|
| SCM440 steel Induction hardened Black oxide finished Precision ground | S45C steel Induction hardened Electroless nickel plated | SUS440C stainless steel |



AMWF-W-T (Tapered Type)



AMWF-W-S (Straight Type)



Reference

- How To Use PNEUMATIC FLEX LOCATORS
- How To Install PNEUMATIC FLEX LOCATORS

Note

- Use clean air by removing moisture and debris with an air dryer and air filter.
- Impurities in the compressed air can cause malfunction.

| Size | D ₁ (g6) | D ₂ | H ₁ | D | D ₃ | H (±0.003) | M | H ₃ | D ₅ (^{-0.05} / _{-0.15}) | H ₂ | Lf | M ₁ | Dp |
|-----------------|------------------------|----------------|----------------|----|----------------|---------------|----|----------------|---|----------------|----|----------------------------|----|
| AMWF-W-T | 40 | 48 | 47.5 | 15 | 70 | 38 | M5 | 8 | 16 | 35 | 5 | M6×1 (Drilled Hole φ5.2) | 60 |
| AMWF-W-S | 50 | 58 | 57.5 | 19 | 85 | 48 | M6 | 10 | 20 | 44 | 6 | M8×1.25(Drilled Hole φ6.8) | 72 |

| Size | d | Furnished O-ring | Operating Air Pressure(MPa)* | Clamping Force(kN) | Holding Force(kN)** |
|-----------------|-----------|---------------------|---------------------------------|-----------------------|------------------------|
| AMWF-W-T | 40 | P4 | 0.5 | 4 | 60 |
| AMWF-W-S | 50 | P5 | | 6.3 | 80 |

Related Product
AMWF-BU LOCATING RECEIVERS

*) At least 0.45 MPa is required for unclamping.

The maximum operating air pressure is 1 MPa.

**) Exceeding the holding force will result in product failure.

This value does not include a safety factor.

AMWF-W-T (Tapered Type)

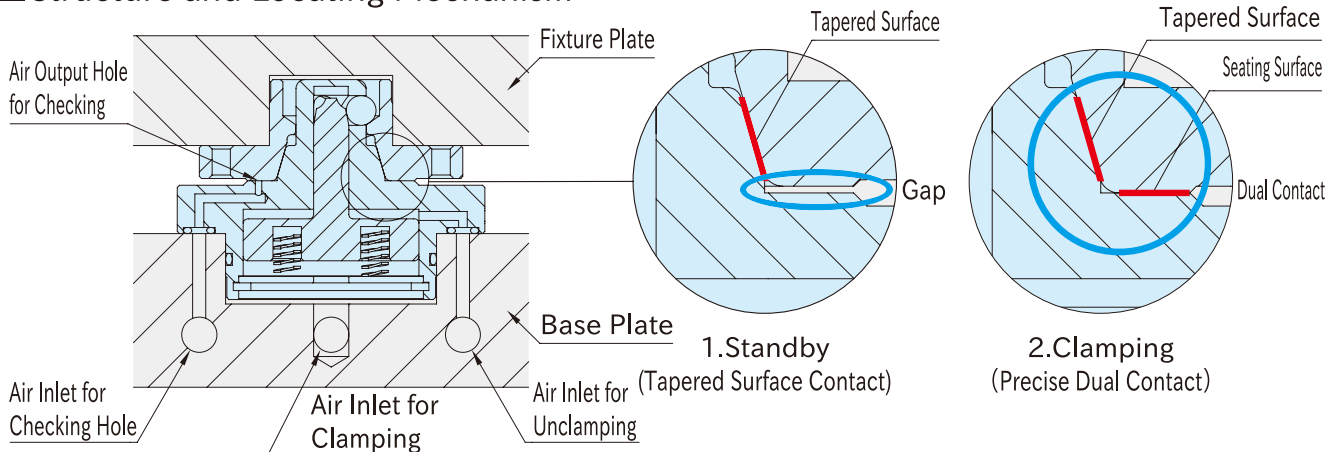
| Part Number | D ₄ | Weight (g) |
|-------------------|----------------|---------------|
| AMWF40-W-T | 24.5 | 450 |
| AMWF50-W-T | 31.5 | 820 |

AMWF-W-S (Straight Type)

| Part Number | D ₄ | Weight (g) |
|-------------------|----------------|---------------|
| AMWF40-W-S | 20 | 440 |
| AMWF50-W-S | 26 | 810 |

Feature

■ Structure and Locating Mechanism



•When the air pressure is lowered by an air leakage, the wedge mechanism and the spring prevent prompt lowering of the clamping force.

Clamping Force at 0 Mpa Air Pressure (Clamping Force of Spring)

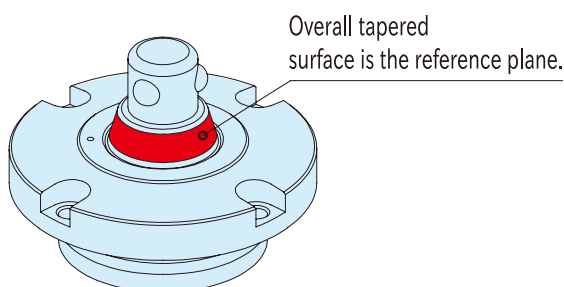
- AMWF40···1.2kN
- AMWF50···1.8kN

•Can check if the fixture plate is clamped properly by applying air through the checking hole.

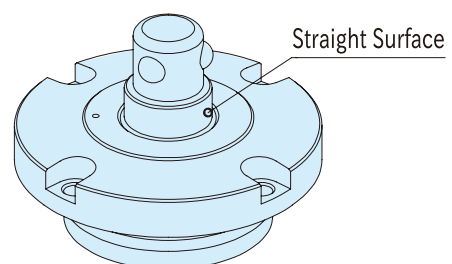
•Precise dual contact provides excellent locating repeatability at 3 μm.

■ Functions

Locating with Tapered Type



Clamping with Straight Type





(Tapered Type)

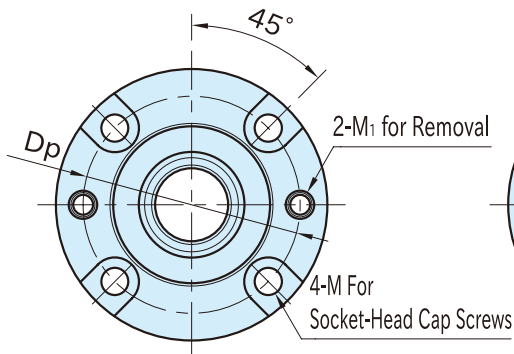
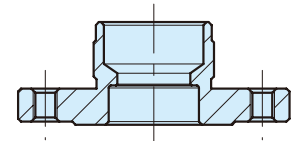
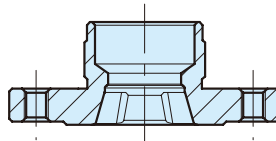
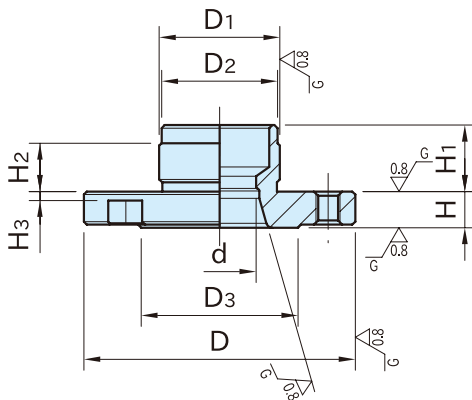


(Diamond Type)

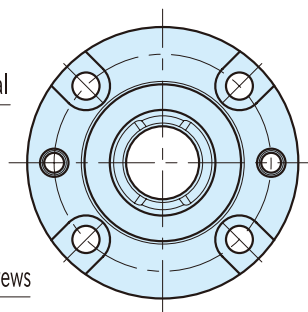


(Straight Type)

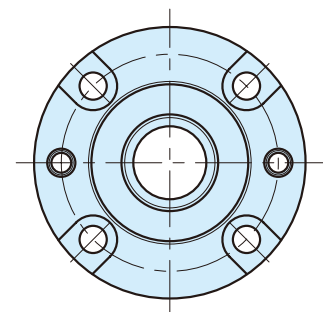
| Body |
|---------------------|
| SCM440 steel |
| Quenched & tempered |
| Black oxide finish |
| Precision ground |



AMWF-BU-T
(Tapered Type)



AMWF-BU-D
(Diamond Type)



AMWF-BU-S
(Straight Type)

| Size | | D ₁ (g6) | H ₂ | D ₂ | H ₁ | M | H ₃ | D | D ₃ | H (±0.003) | d (^{+0.15} / _{+0.05}) | M ₁ | D _p |
|------------------|-----------|------------------------|----------------|----------------|----------------|----|----------------|----|----------------|---------------|--|----------------|----------------|
| AMWF-BU-T | 40 | 28 | 10 | 27.5 | 15 | M5 | 2.5 | 60 | 38 | 8 | 16 | M5×0.8 | 50 |
| AMWF-BU-D | 50 | 36 | 14 | 35.5 | 19 | M6 | 3.5 | 75 | 48 | 10 | 20 | M6×1 | 62 |
| AMWF-BU-S | | | | | | | | | | | | | |

AMWF-BU-T (Tapered Type)

| Part Number | Weight (g) |
|--------------------|------------|
| AMWF40-BU-T | 160 |
| AMWF50-BU-T | 323 |

AMWF-BU-D (Diamond Type)

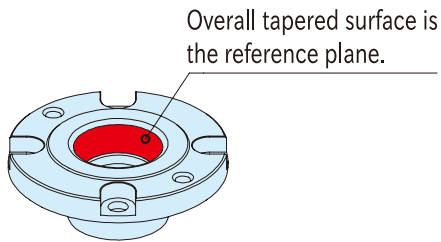
| Part Number | Weight (g) |
|--------------------|------------|
| AMWF40-BU-D | 159 |
| AMWF50-BU-D | 322 |

AMWF-BU-S (Straight Type)

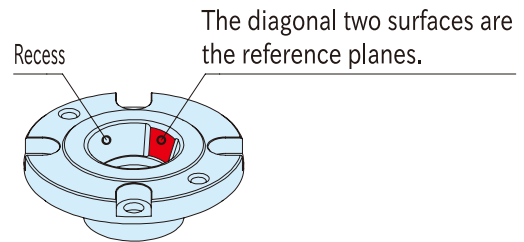
| Part Number | Weight (g) |
|--------------------|------------|
| AMWF40-BU-S | 163 |
| AMWF50-BU-S | 330 |

Feature■ **Function**

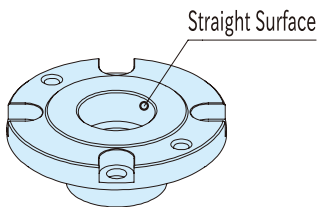
Locating with Tapered Type
For setting reference position



Locating with Diamond Type
For locating reference at rotational direction



Clamping with Straight Type

**Related Product**

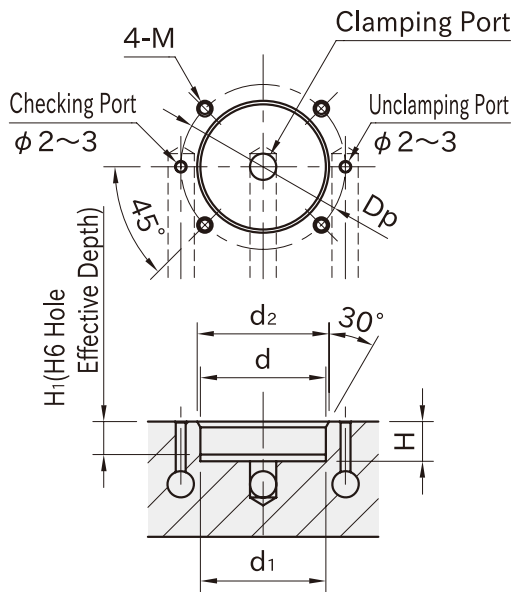
- **AMWF-W** PNEUMATIC CLAMPING LOCATORS
- **CP741** PRECISION ONE-TOUCH CLAMPING LOCATORS

Reference

- How To Use PNEUMATIC FLEX LOCATORS
- How To Install PNEUMATIC FLEX LOCATORS
- How To Use PRECISION ONE-TOUCH CLAMPING LOCATORS

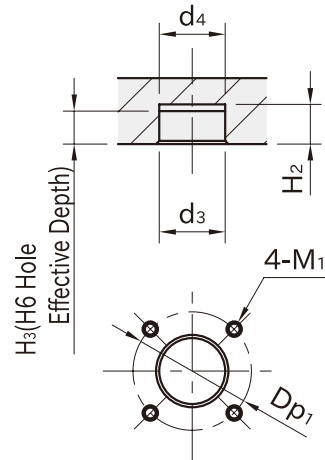
How To Install PNEUMATIC FLEX LOCATORS

■ Mounting Hole Dimensions for Locators



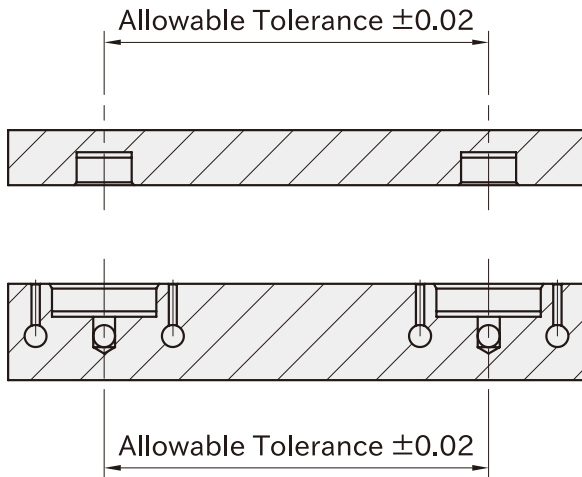
| Size | d (H6) | H ₁ | d ₁ (-0.1/-0.3) | H | d ₂ | M | D _p |
|----------|--------|----------------|----------------------------|----|----------------|--------|----------------|
| AMWF40-W | 48 | 12 | 48 | 16 | 50 | M5×0.8 | 60 |
| AMWF50-W | 58 | 16 | 58 | 20 | 60 | M6×1 | 72 |

■ Mounting Hole Dimensions for Locating Receivers



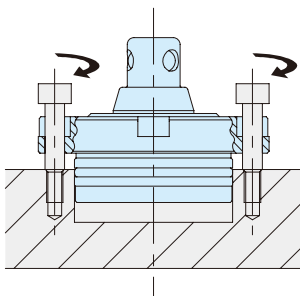
| Size | d ₃ (H6) | H ₃ | d ₄ (-0.1/-0.3) | H ₂ | M ₁ | D _{p1} |
|-----------|---------------------|----------------|----------------------------|----------------|----------------|-----------------|
| AMWF40-BU | 28 | 12 | 28 | 16 | M5×0.8 | 50 |
| AMWF50-BU | 36 | 16 | 36 | 20 | M6×1 | 62 |

■ Spacing Tolerance



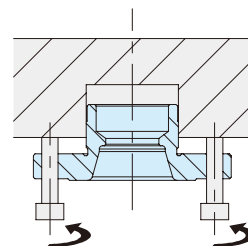
■ How to Remove Locators

For easier removal, insert screws into the tapped holes and screw them.



■ How to Remove Locating Receivers

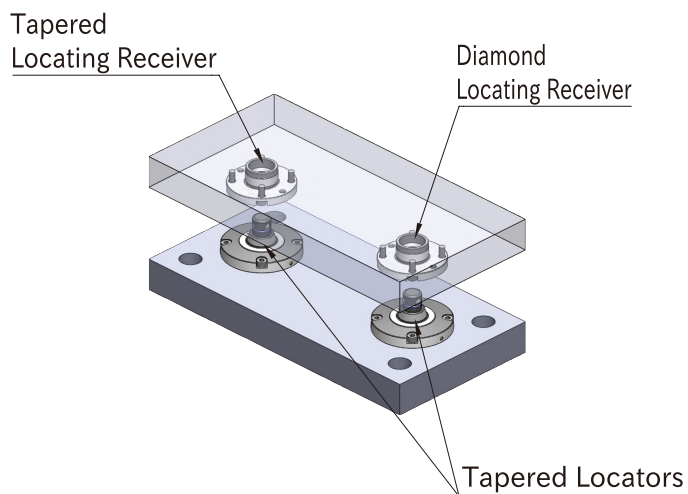
For easier removal, insert screws into the tapped holes and screw them.



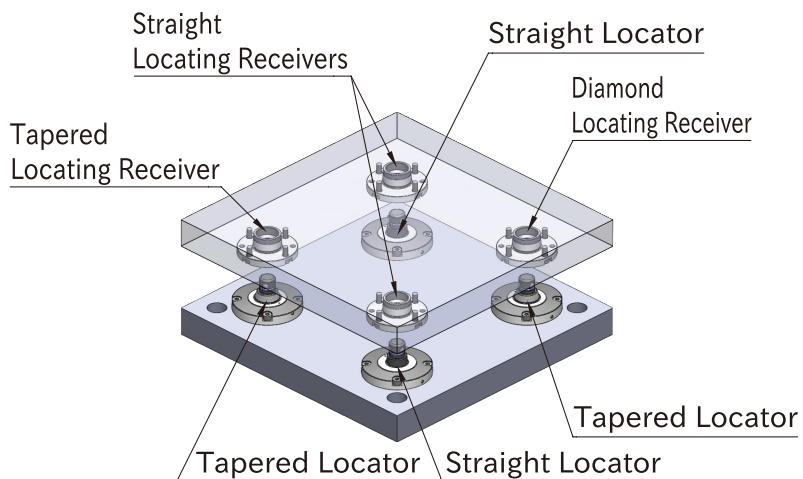
How To Use PNEUMATIC FLEX LOCATORS

Application Example

For clamping at 2 points



For clamping at 4 points

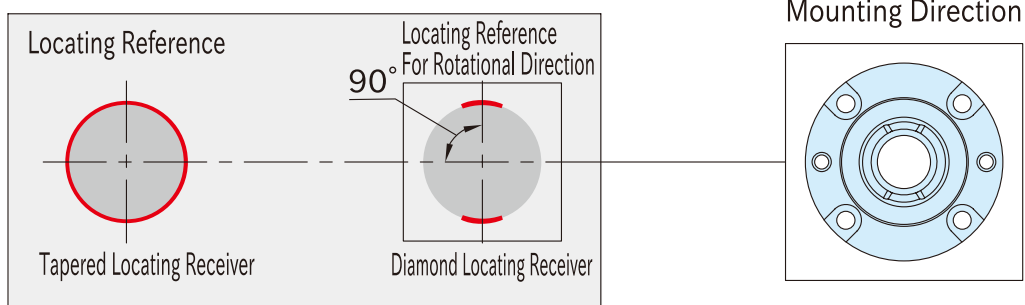


Layout of Locating Receivers

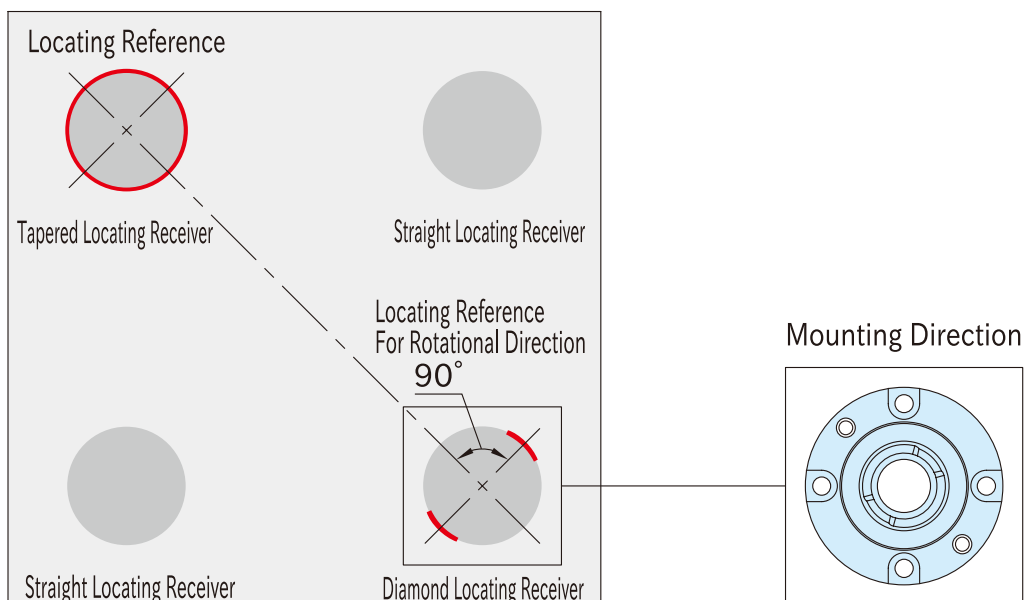
Mount the Tapered Locating Receivers and Diamond Locating Receivers as in the figure below for locating fixture plates.

Pay attention to the mounting direction of the Diamond Locating Receivers, since the direction for use at 2 points and the direction for use at 4 points differ.

For clamping at 2 points



For clamping at 4 points



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