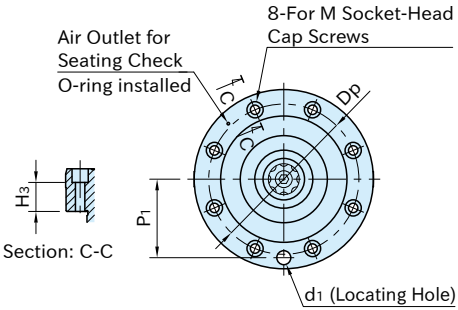
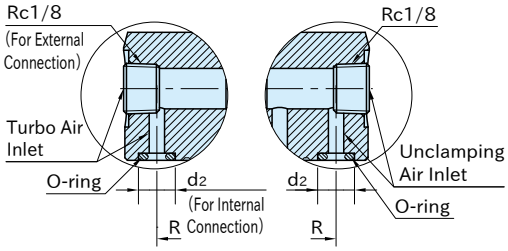
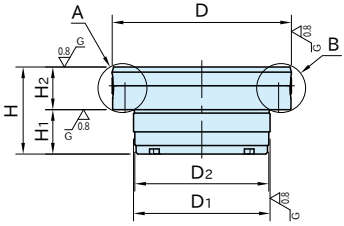
AMWFH-WP PNEUMATIC CLAMPING MODULES

RoHS

Wedge







★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)	D1 (h6)	D2	H	H1	H2 (±0.005)	M	H3	Dp	P1 (±0.02)	R	d1 (G6)	d2	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

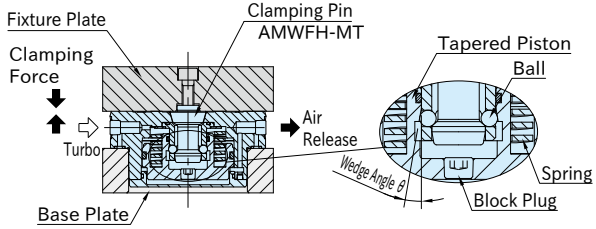
- AMWFH105-WP : 1 of diamond pin BJ722-08001
- AMWFH140-WP : 1 of diamond pin BJ722-10001
- 1 of locating pin
- 1 of orifice plug
- 8 of plastic mounting hole caps
- 1 of plastic locating hole cap

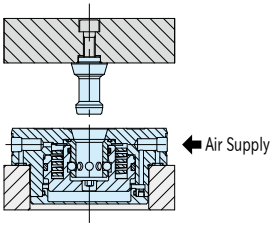
Feature

■ 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.

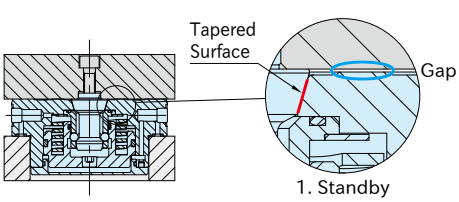


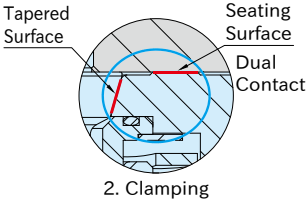


Releasing air allows the spring to push the tapered piston downward, which presses the balls and retracts the clamping pin.
The clamping force can be boosted by supplying air to the turbo port.

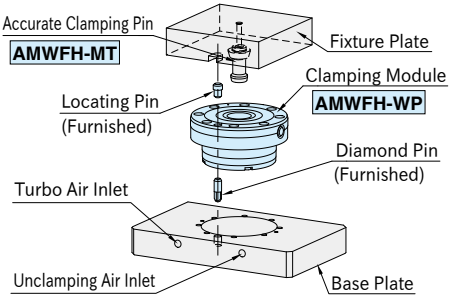
Supplying air raises the tapered piston, releasing the pressure on the balls and unclamping the clamping pin.

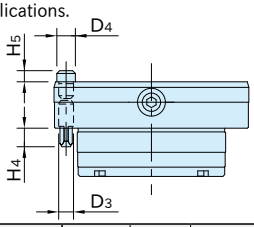
・Precise dual contact provides excellent locating repeatability at 5μm.





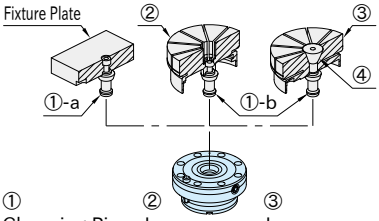
・Use the furnished diamond pin and the locating pin for single module applications.



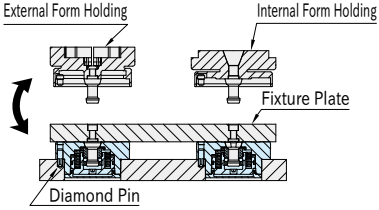


Part Number	D(h6)	H_4	D_4(h6)	H_5
AMWFH105-WP	8	10	10	6
AMWFH140-WP	10	12	12	7

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



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

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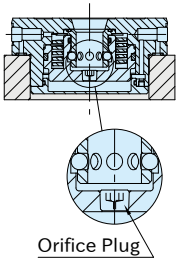
■ Blow-out Function



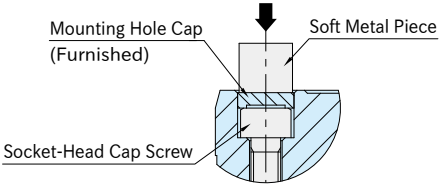
Replace the installed plug with the supplied orifice plug to enable air blow at the clamp pin insertion hole.

■ Mounting Hole Cap

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

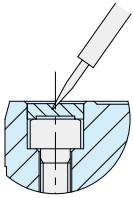
Installation

Tap in with plastic hammer



・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.

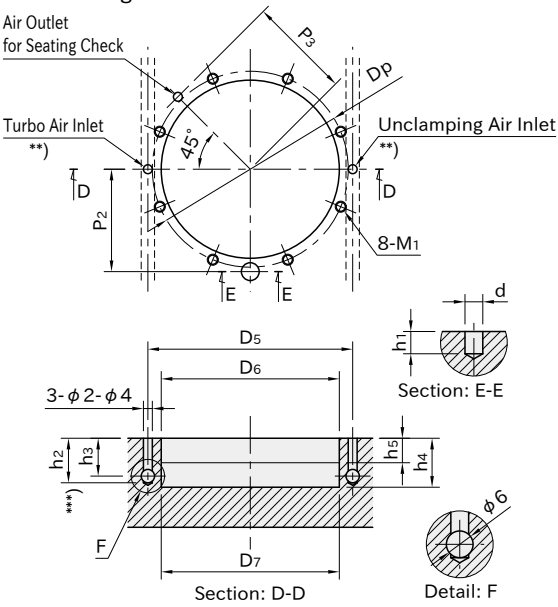
Removal



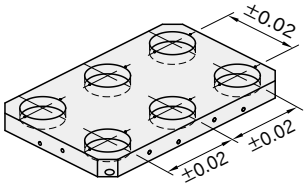
・Insert a pointed tool into the cap to remove it.

How To Use

■Mounting Hole Dimensions



■ Machining Accuracy



Spacing tolerance between mounting holes should be ±0.02.

**) Not required for external connection with Rc1/8 ports.
***) Refer to Internal Pneumatic Connection for the details of h_2 and h_3.

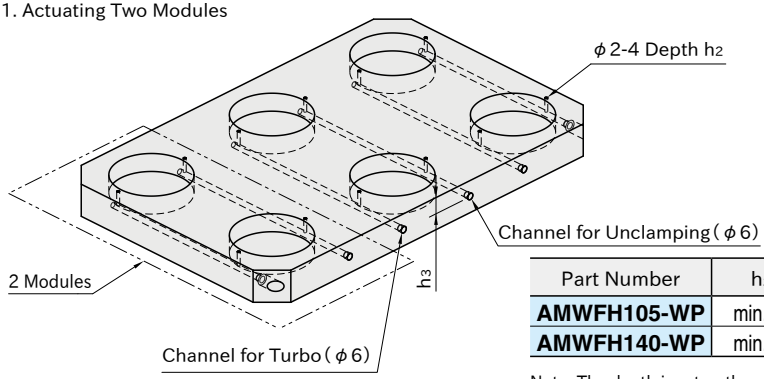
Part Number	P_2 (±0.02)	P_3	Dp	M_1	d (G7)	h_1	D_5	D_6 (H7)	D_7	h_4	h_5
AMWFH105-WP	46	46	88	M5×0.8 Depth 10 (Hole Depth 14)	8	10	92	80	79.8	27	14
AMWFH140-WP	62	62	120	M6×1.0 Depth 13 (Hole Depth 18)	10	12	124	110	109.8	34	19

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 ϕ2-4.

1. Actuating Two Modules

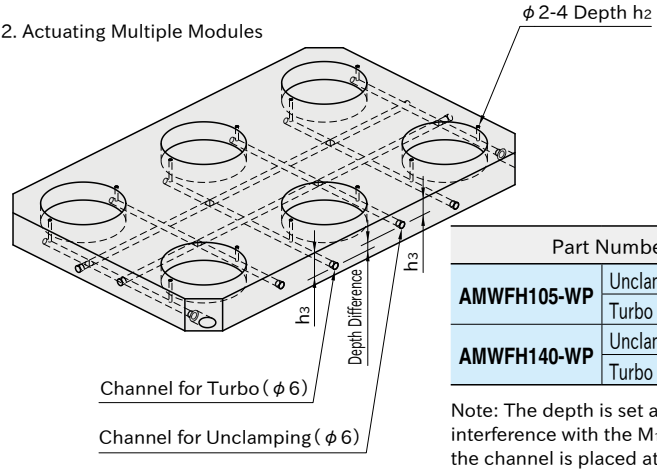


Part Number	h_2	h_3
AMWFH105-WP	min.21	min.18
AMWFH140-WP	min.23	min.20

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 (ϕ2-4) 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 (ϕ2-4) 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