Multi coupler

check valve model

Pilot air type

model **MCB**

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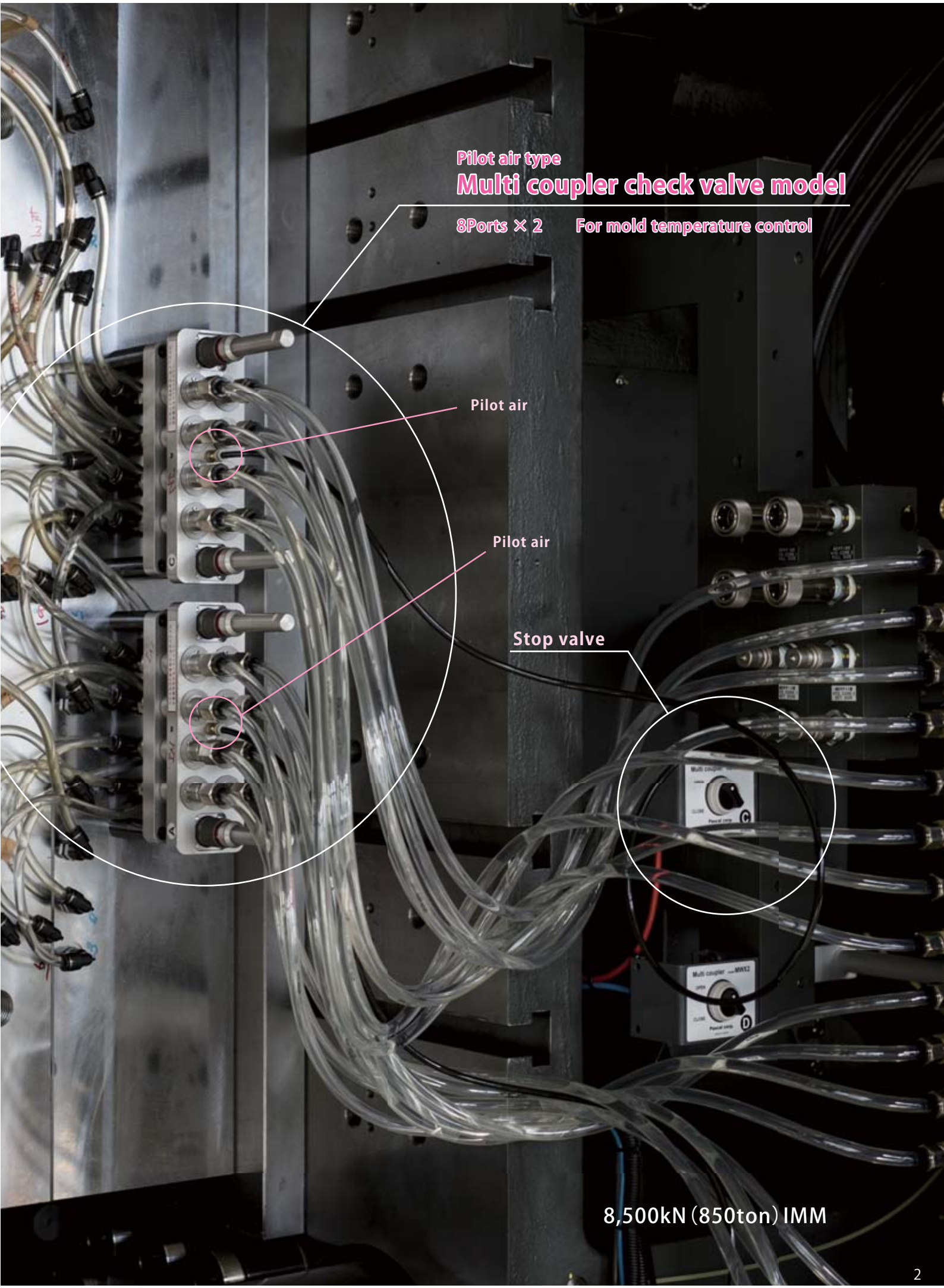
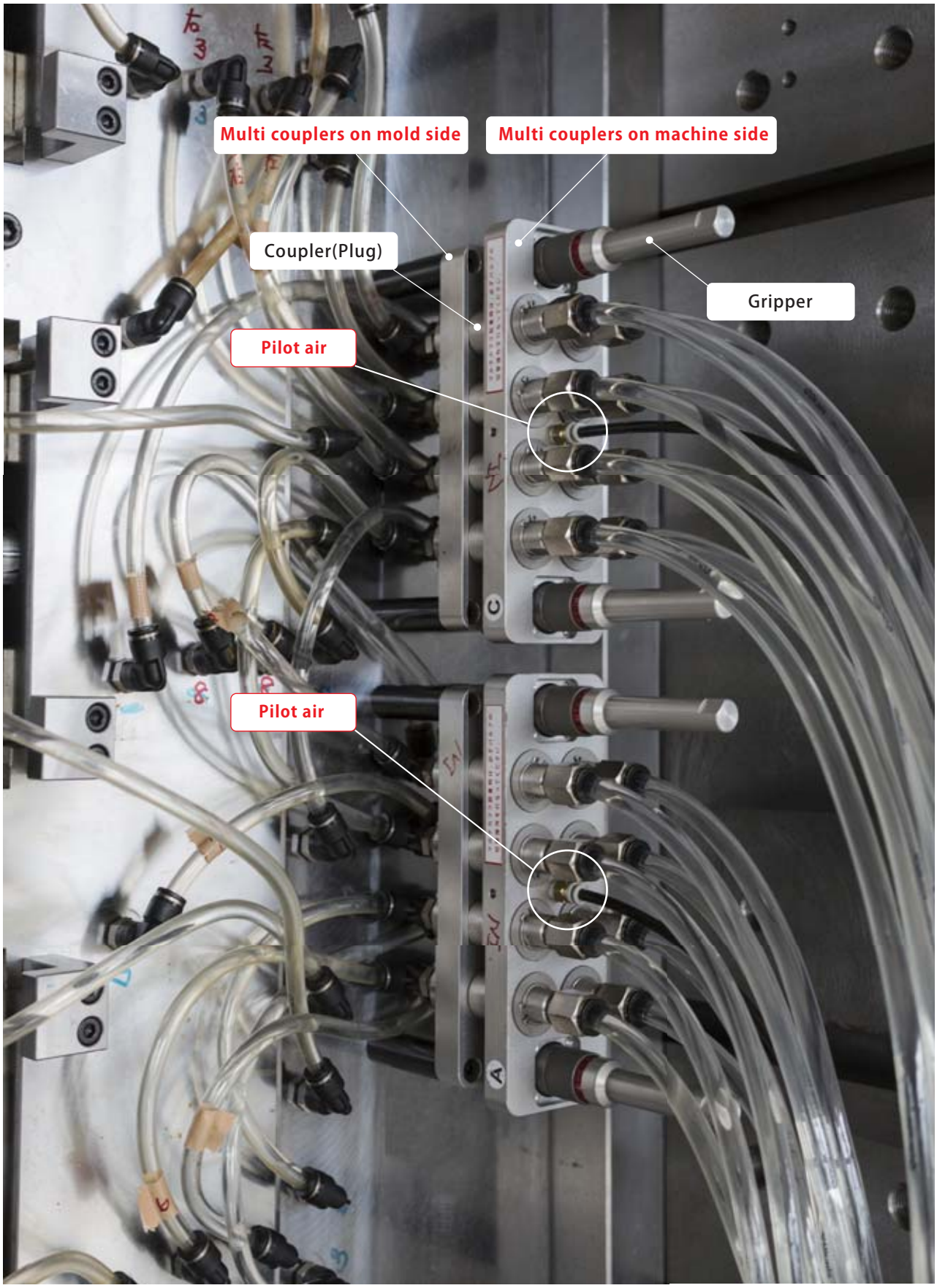
Pilot air type
Multi coupler check valve model
6Ports × 2
For mold temperature control
Pilot air
Pilot air


Pilot air type
Multi coupler check valve model
8Ports × 2
For mold temperature control
Pilot air
Pilot air
Stop valve
8,500kN（850ton）IMM

Pilot air type

Multi coupler　check valve model

Coupling

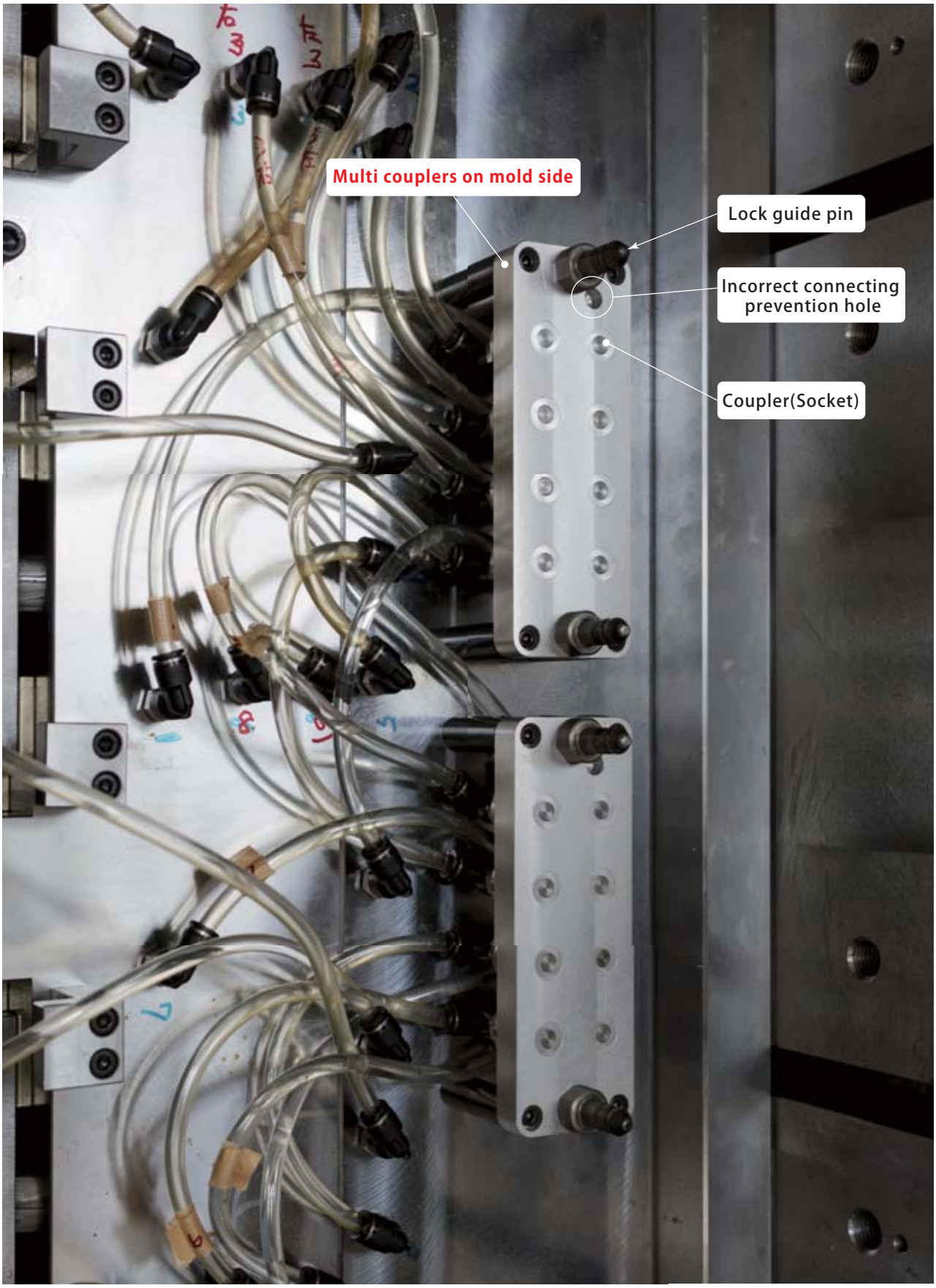


8,500kN (850ton) IMM　8ports×2　For mold temperature control

Pilot air type

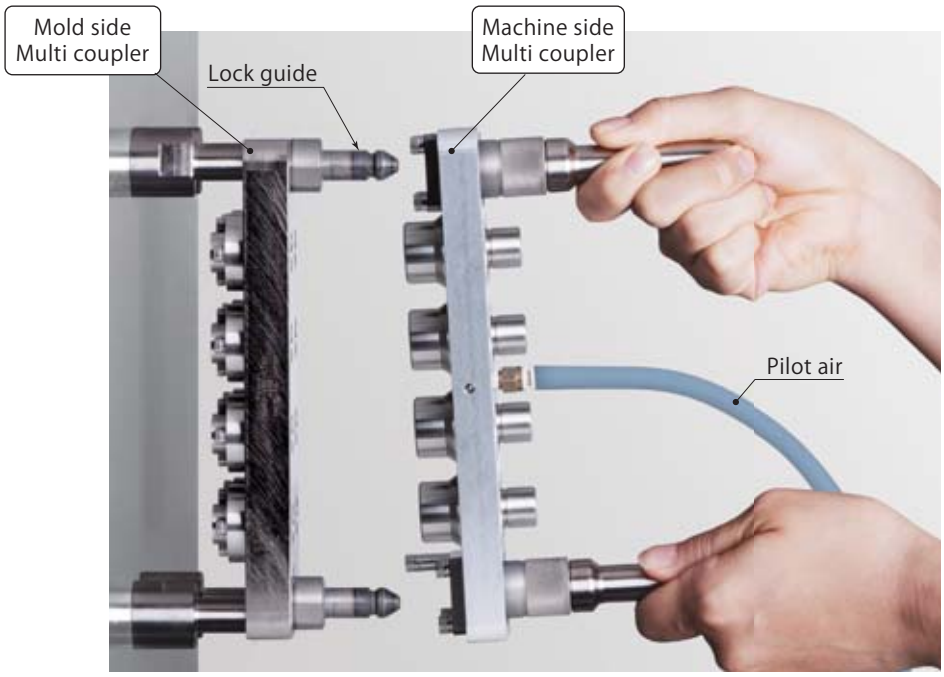
Multi coupler　check valve model

Release

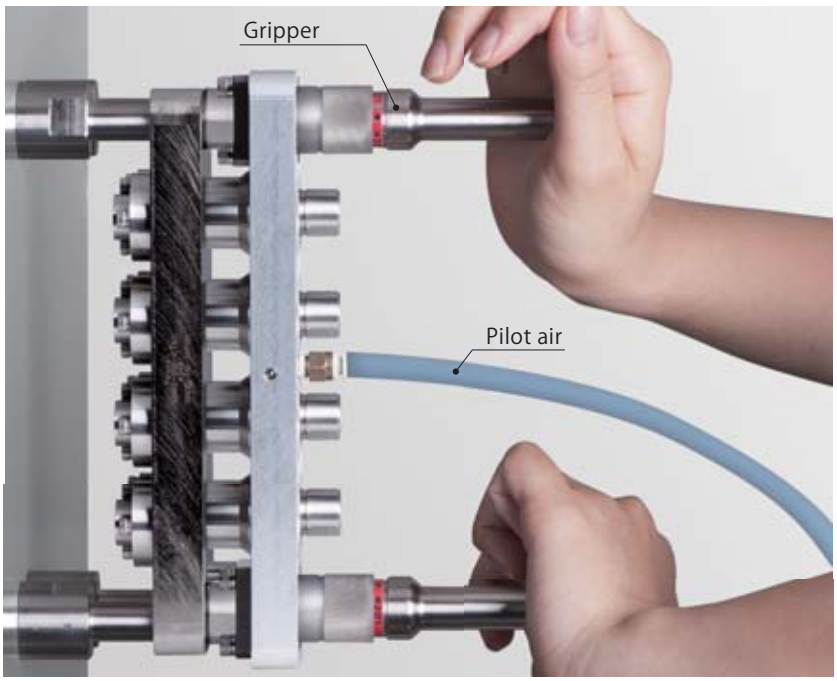


8,500kN（850ton）IMM　8ports×2　For mold temperature control

Coupling



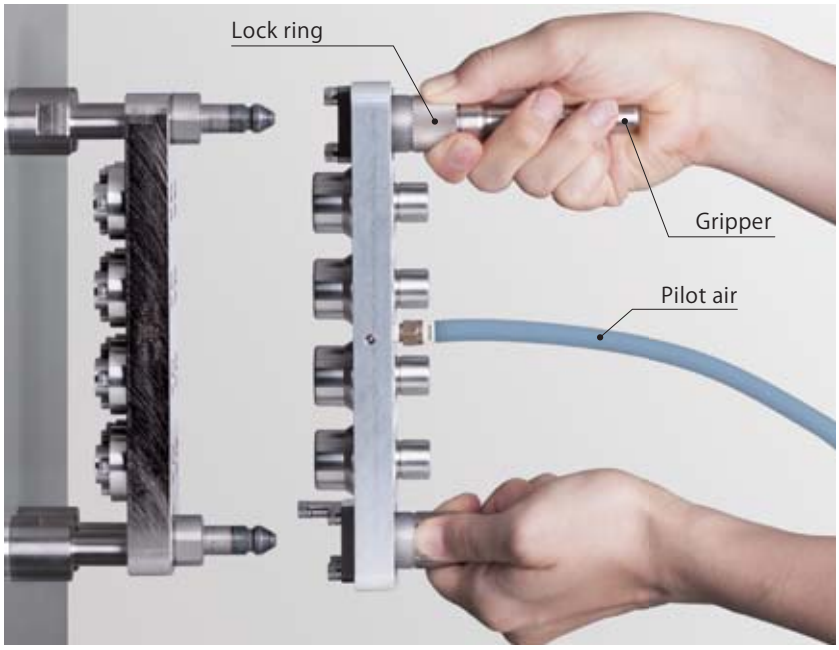
● Insert the couplers(Plug) along the guide.



① Push the gripper slightly and the locking has been completed.
② Turn ON the pilot air. The check valve is released and the temperature controlling fluid can be flowed.

It prevents misplace of couplers and can shorten the coupling time.

Release



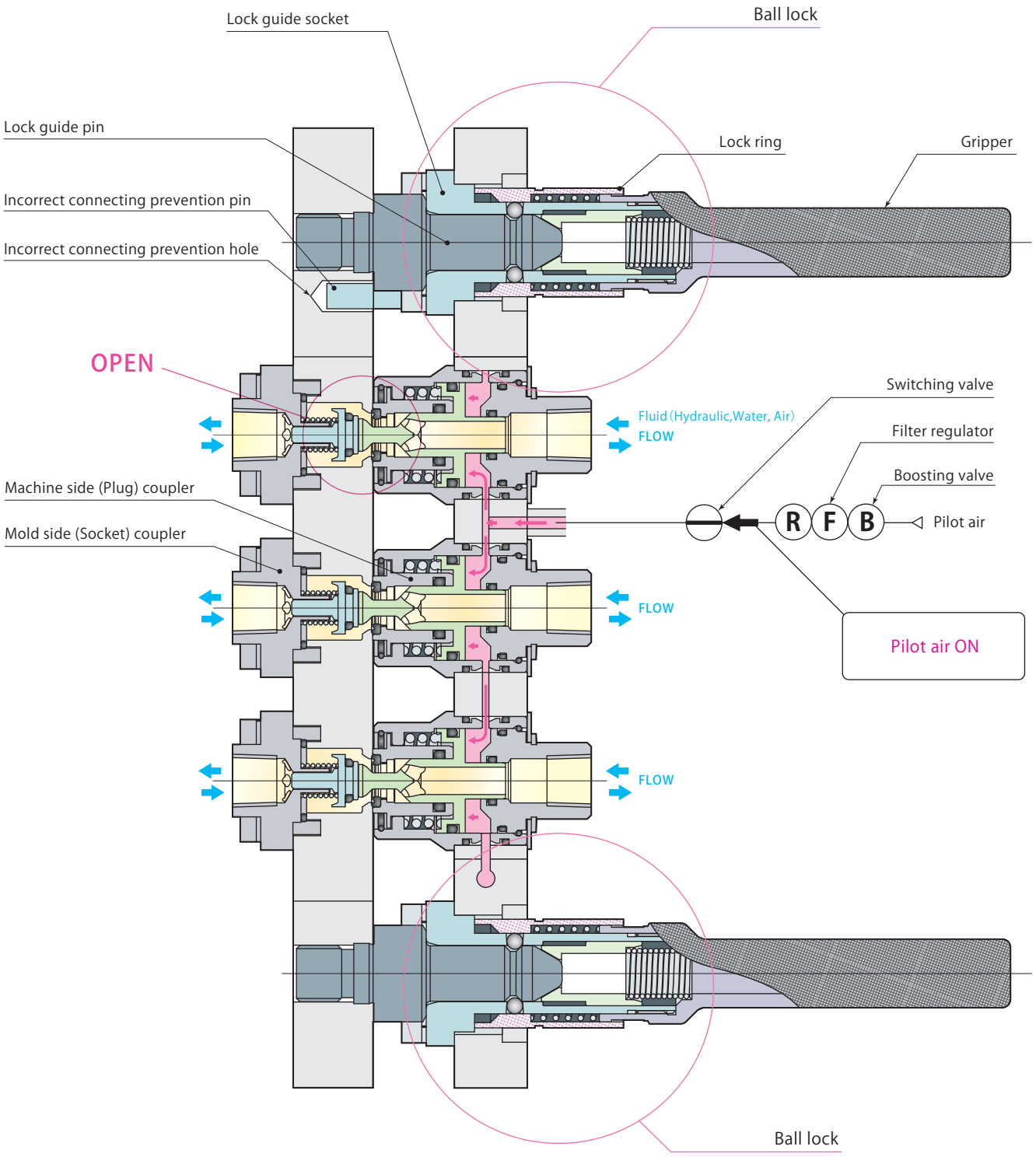
① Stop the temperature controlling fluid and set the residual pressure as zero.
② Turns OFF the pilot air and the check valve is closed.
③ Hold the gripper and pull the lock ring slightly and the couplers disconnect.

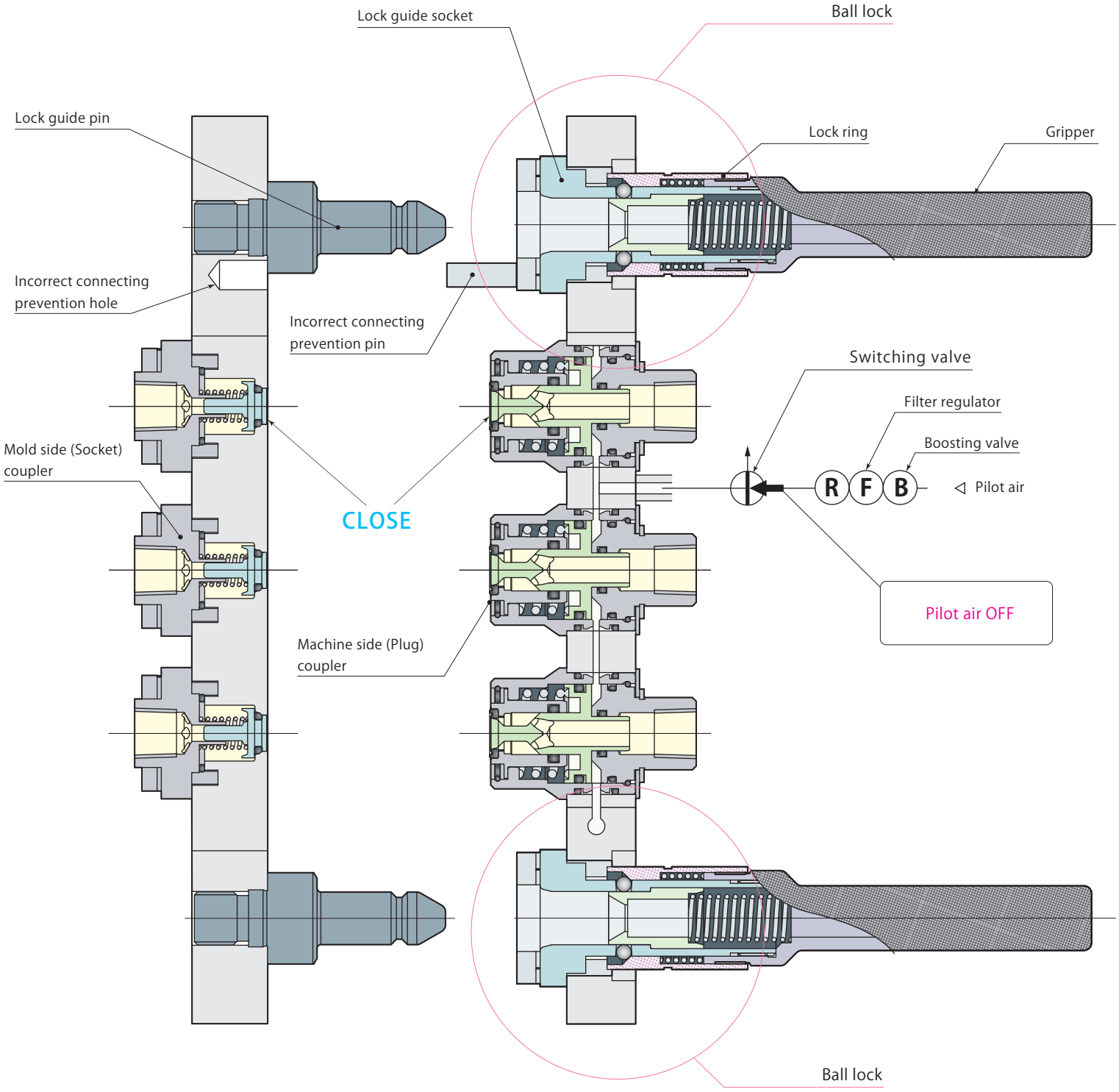
Coupling

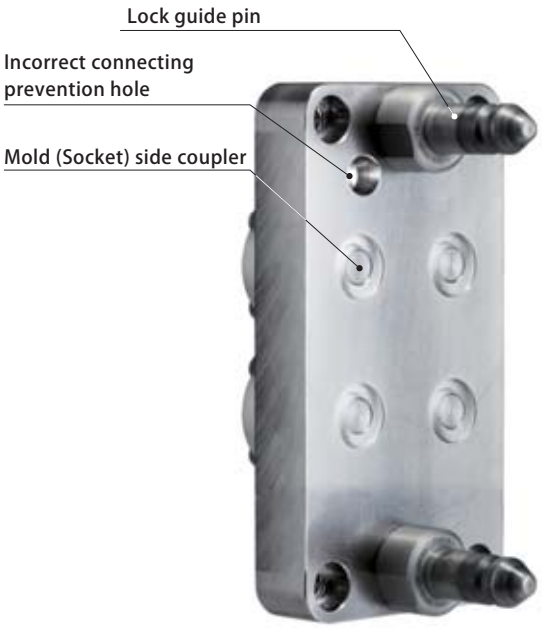
The locking completion can be recognized at a glance with this indicator.

Release

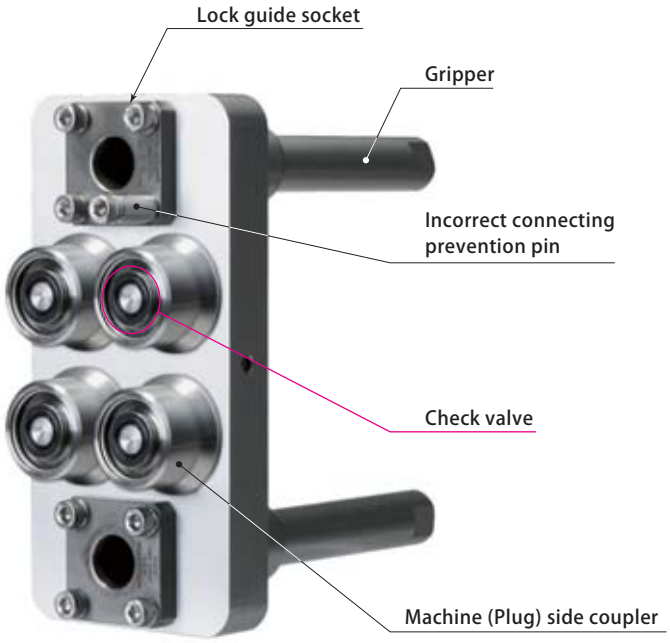
Lock ring


Lock guide socket
Ball lock
Lock guide pin
Lock ring
Gripper
Incorrect connecting prevention pin
Incorrect connecting prevention hole
OPEN
Switching valve
Fluid (Hydraulic,Water, Air)
FLOW
Filter regulator
Boosting valve
Machine side (Plug) coupler
R
F
B
Pilot air
Mold side (Socket) coupler
FLOW
Pilot air ON
FLOW
Ball lock


Lock guide socket
Ball lock
Lock guide pin
Lock ring
Gripper
Incorrect connecting prevention hole
Incorrect connecting prevention pin
Switching valve
Filter regulator
Boosting valve
Mold side (Socket) coupler
R
F
B
Pilot air
CLOSE
Pilot air OFF
Machine side (Plug) coupler
Ball lock

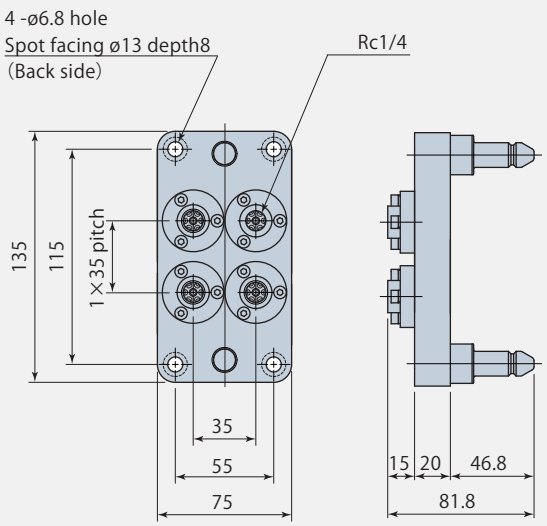


Mold (Socket) side

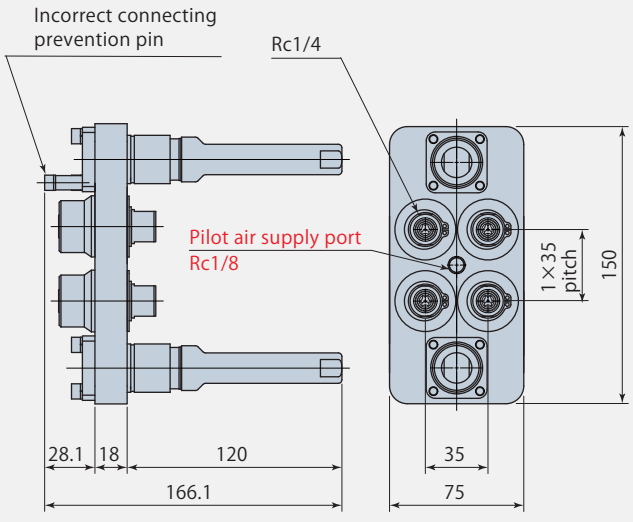


Machine (Plug) side

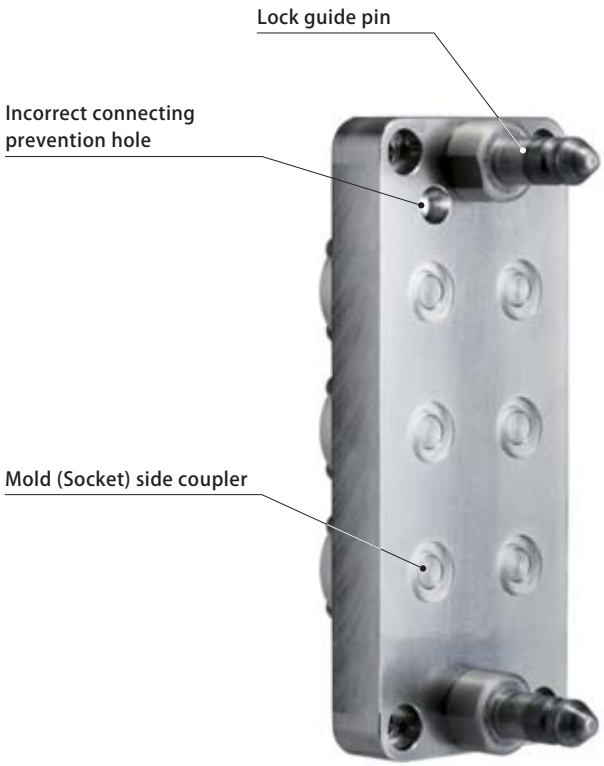
Mold (Socket) side **MCB – 04 P**



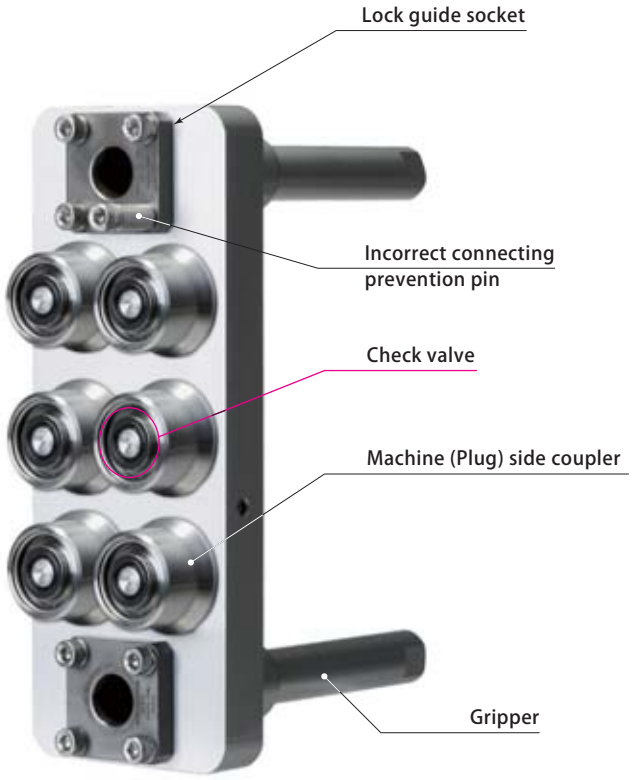
Machine (Plug) side **MCB – 04 S**



∗ The breadth is 193mm when mold(Plug)side and machine(Femable)side are coupled together.

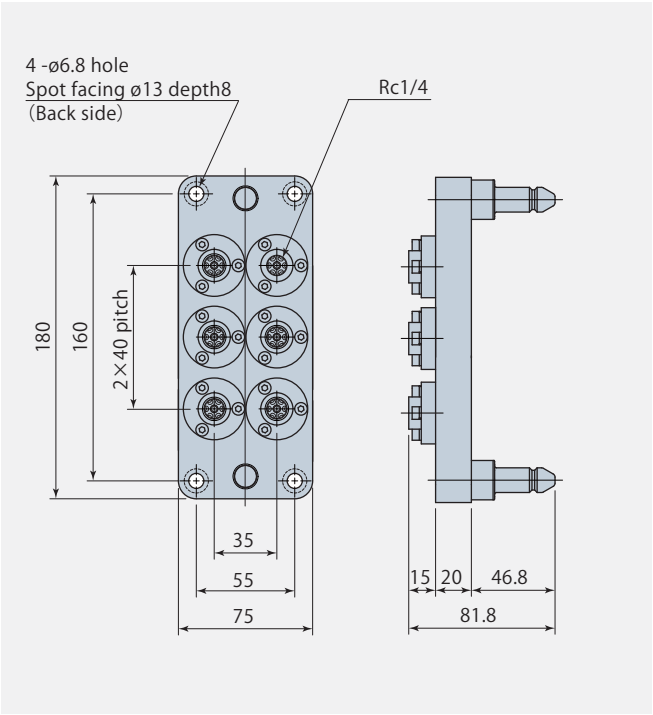


Mold (Socket) side

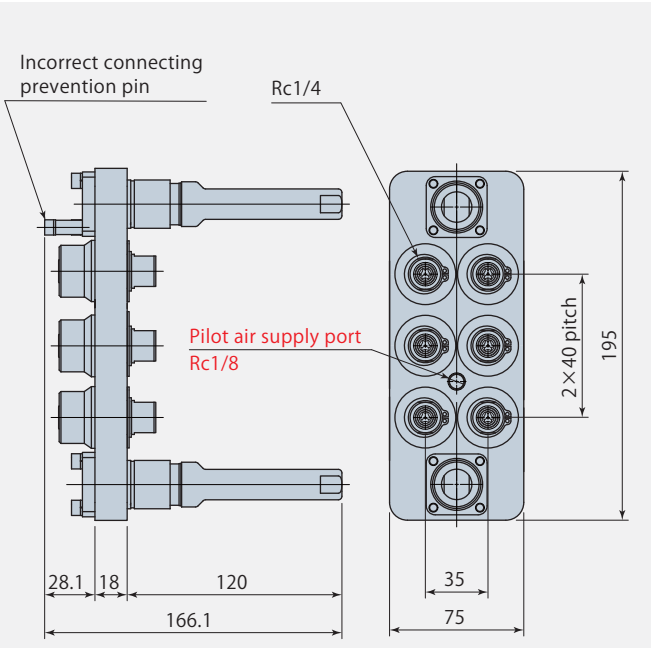


Machine (Plug) side

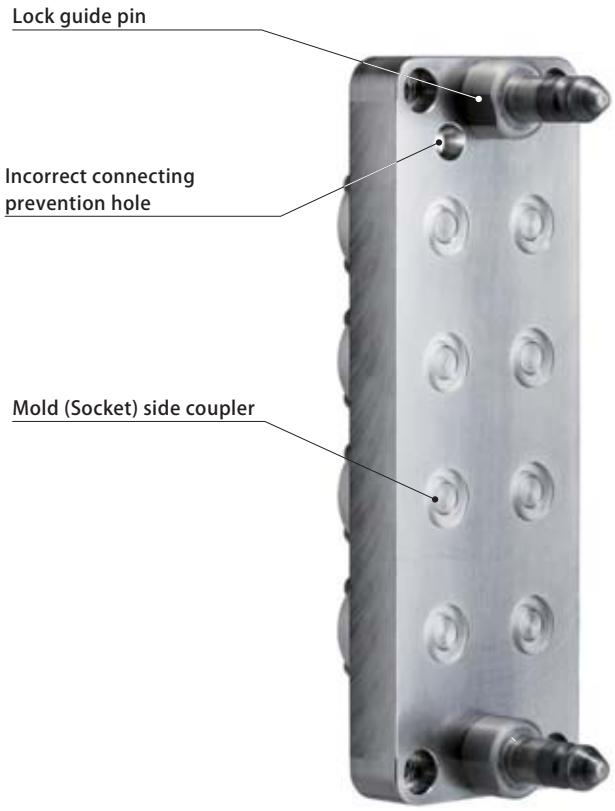
Mold (Socket) side **MCB – 06 P**



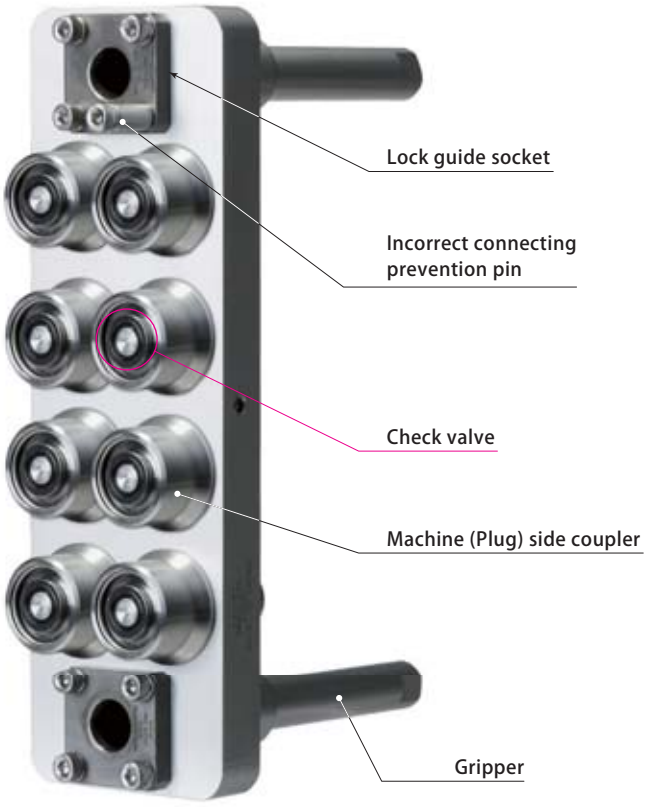
Machine (Plug) side **MCB – 06 S**



∗ The breadth is 193mm when mold(Plug)side and machine(Femable)side are coupled together.

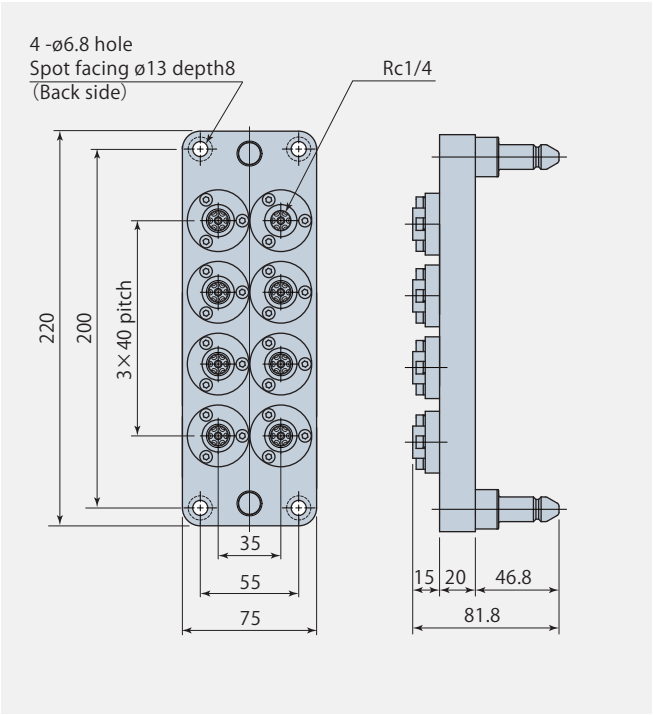


Mold (Socket) side

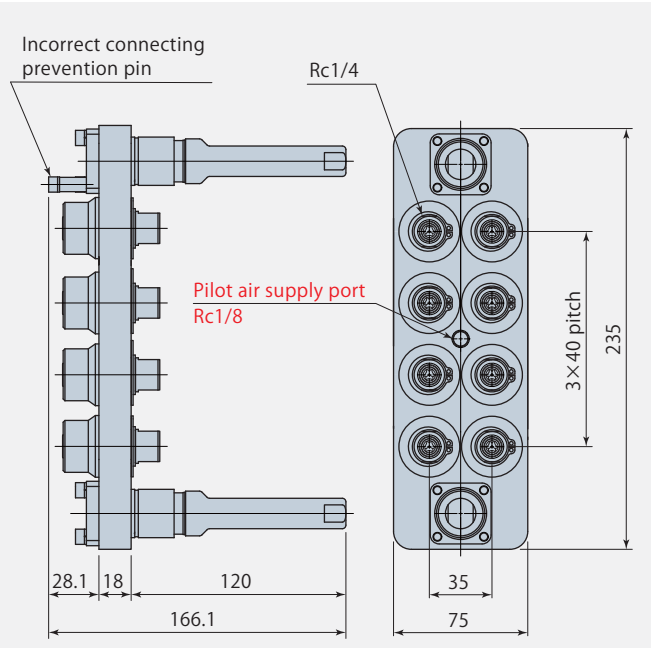


Machine (Plug) side

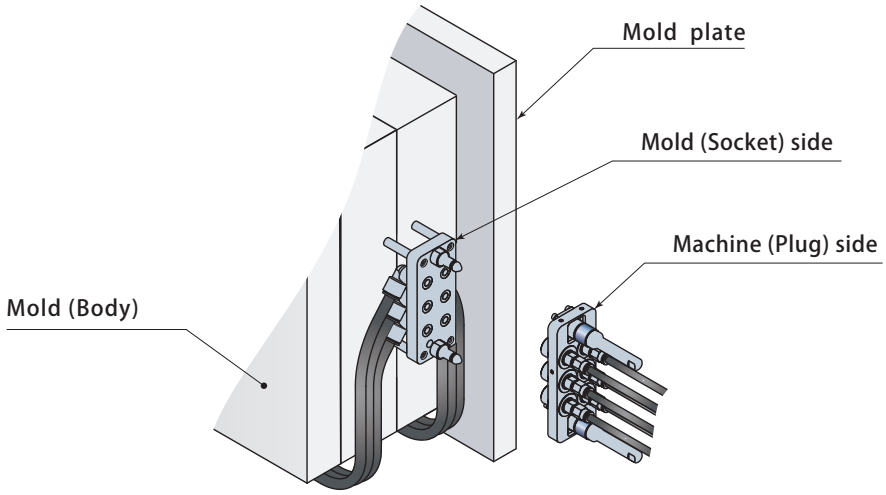
Mold (Socket) side **MCB – 08 P**



Machine (Plug) side **MCB – 08 S**



∗ The breadth is 193mm when mold(Plug)side and machine(Femable)side are coupled together.



Model designation

	4 Ports	6 Ports	8 Ports
Machine (Plug) side	MCB – 04 S	MCB – 06 S	MCB – 08 S
Mass (kg)	1.6	2.1	2.5
Mold (Socket) side	MCB – 04 P	MCB – 06 P	MCB – 08 P
Mass (kg)	1.9	2.5	3.0

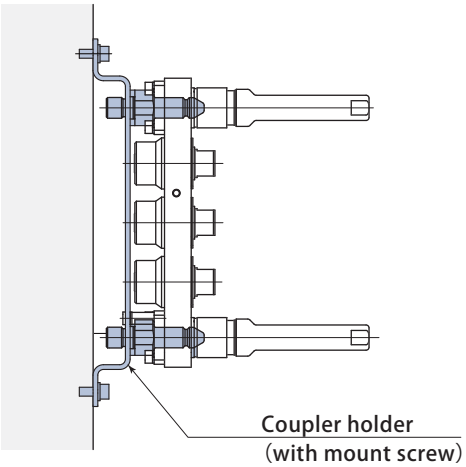
Pipe size			Rc1/4		
Number of ports			4	6	8
Min. Passage area (per 1 port)		mm^2	35		
Max. working pressure	**At connection**	MPa	1		
	At disconnection		No pressure maintaining at machine side / 1MPa pressure maintaining at mold side		
Required pilot air pressure		MPa	(Fluid pressure × 0.3) + 0.5		
Body material	**Coupler**		Stainless steel		
	Plate	**Machine side**	Aluminium alloy (Surface treatment : Alumite)		
		Mold side	Steel (Surface treatment : Electrolytic nickel plating)		
	Lock guide		Aluminium alloy (Surface treatment : Alumite) Steel (Surface treatment : Ion nitridation)		
Material of seal			Fluoro-rubber		
Fluid			General mineral based hydraulic oil,Water,Air		
Operating temperature		℃	0 ~ 180 (No boiling, No freezing) *		

● The mounting bolt and pipe are not included on mold side.

* In case that high temperature fluid is used, the temperature around the multi couplers is also increased. Pay attention for burn injury.

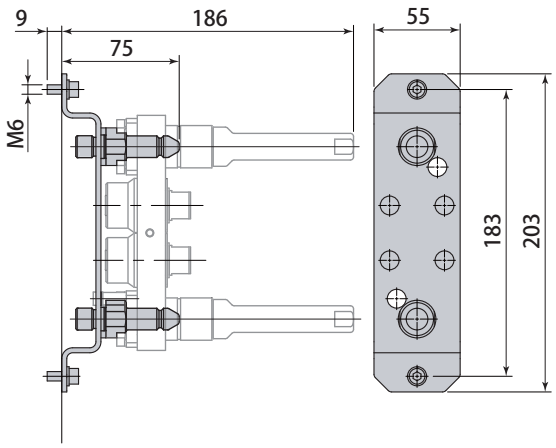
Model designation

4 Ports	MCB – 04	H
6 Ports	MCB – 06	H
8 Ports	MCB – 08	H

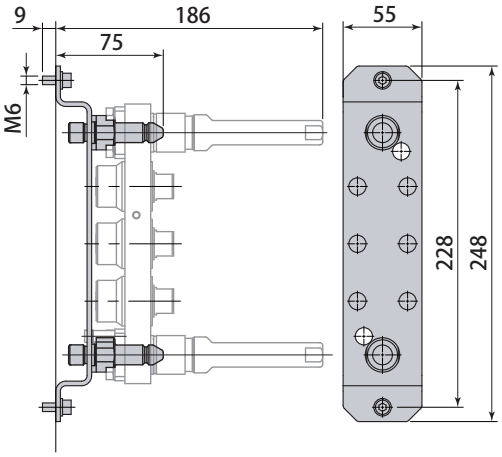


Dimensions

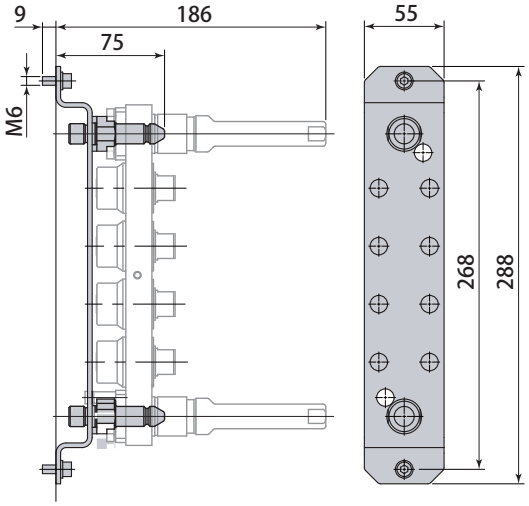
MCB – 04 H



MCB – 06 H



MCB – 08 H

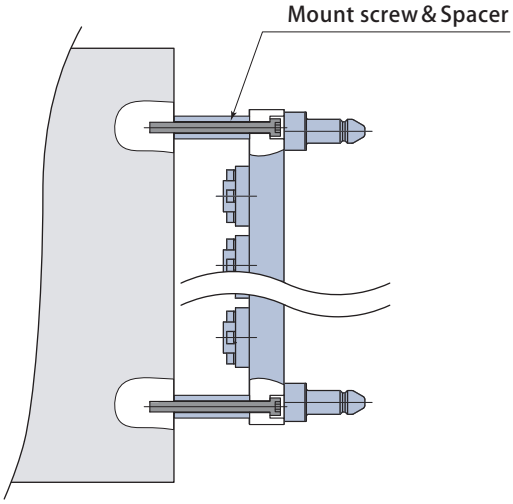


● Include Mount screw.

● The above item is not included. Purcahse it seperately.

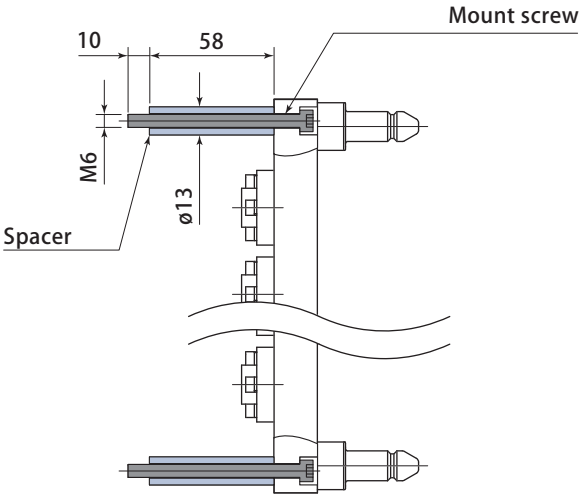
Model designation

MCB – SP



Dimensions

MCB – SP



● The above item is not included. Purcahse it seperately.

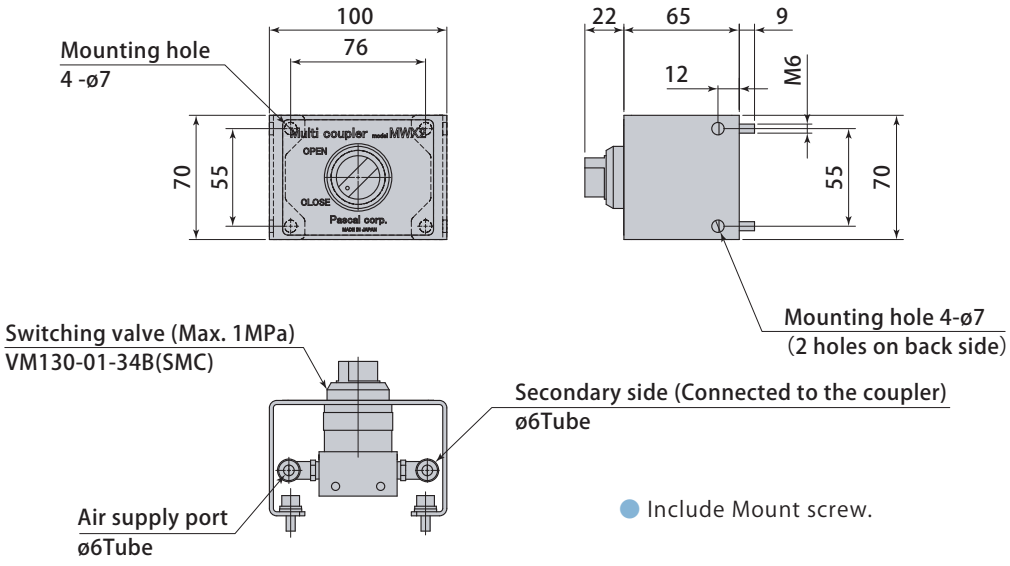
Switching valve of couplers

Model designation

MCB – V

Dimensions

MCB – V



● Include Mount screw.

● The above item is not included. Purcahse it seperately.

- Connection and disconnection of couplers
  Make sure to set the fluid pressure as zero and turn off the pilot air before connecting and disconnecting couplers. The lock guide pin can not be locked or unlocked as long as pilot air is on ,which makes connection and disconnection disabled.

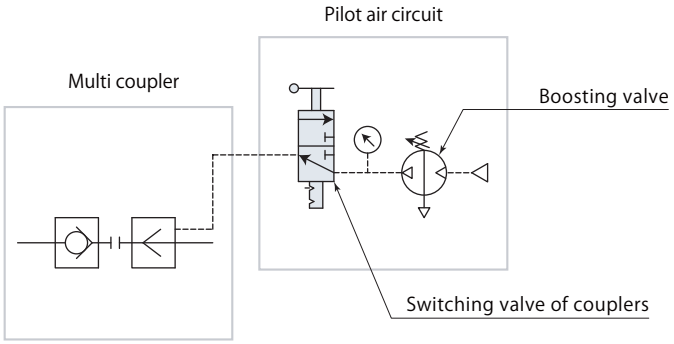
- When the coupler on machine (Plug) side is pressurized in a disconnected state, the fluid leakes outside. The pressure can not be maintained on the machine (Plug) side in a disconnected state.

- When the coupler is pressurized under the pilot air OFF in a connected state, the fluid does not leak from the contact surface of couplers and does not flow.

- Required pilot air pressure when fluid pressure at 0.4MPa : $(0.4 \times 0.3) + 0.5 = 0.12 + 0.5 = 0.62$MPa

- Switching of pilot air
  Make sure to set the fluid pressure as zero and turn off the pilot air. When turning off the pilot air under pressure, the fluid scatteres outside the couplers and it causes danger.

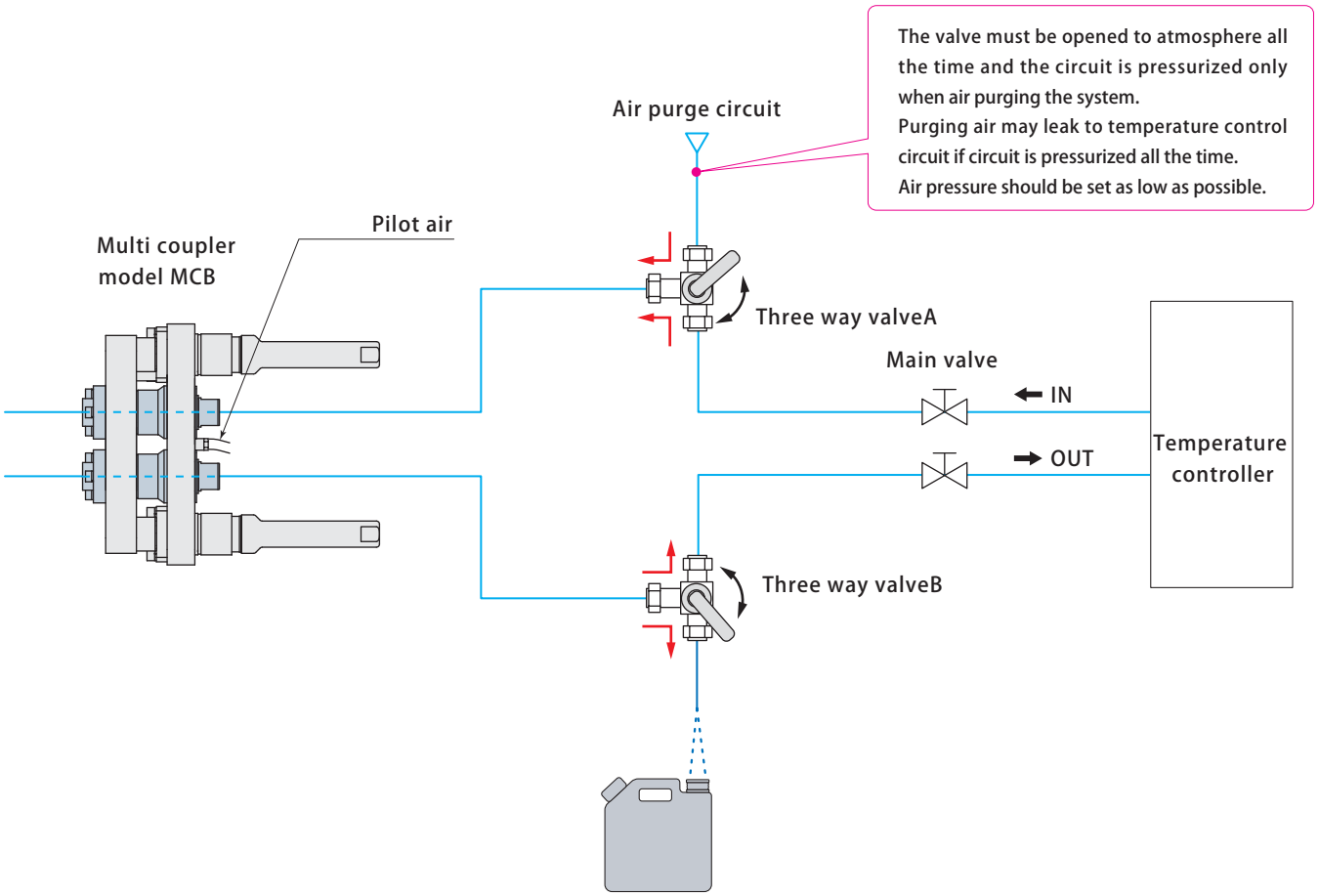
Pilot air circuit diagram



- When the pilot air pressure is not sufficient, install a boosting valve.

Recommendable boosting valve (with pressure gauge)	SMC VBA10A-02GLN

Drain circuit for temp. controlling water(with air purge)



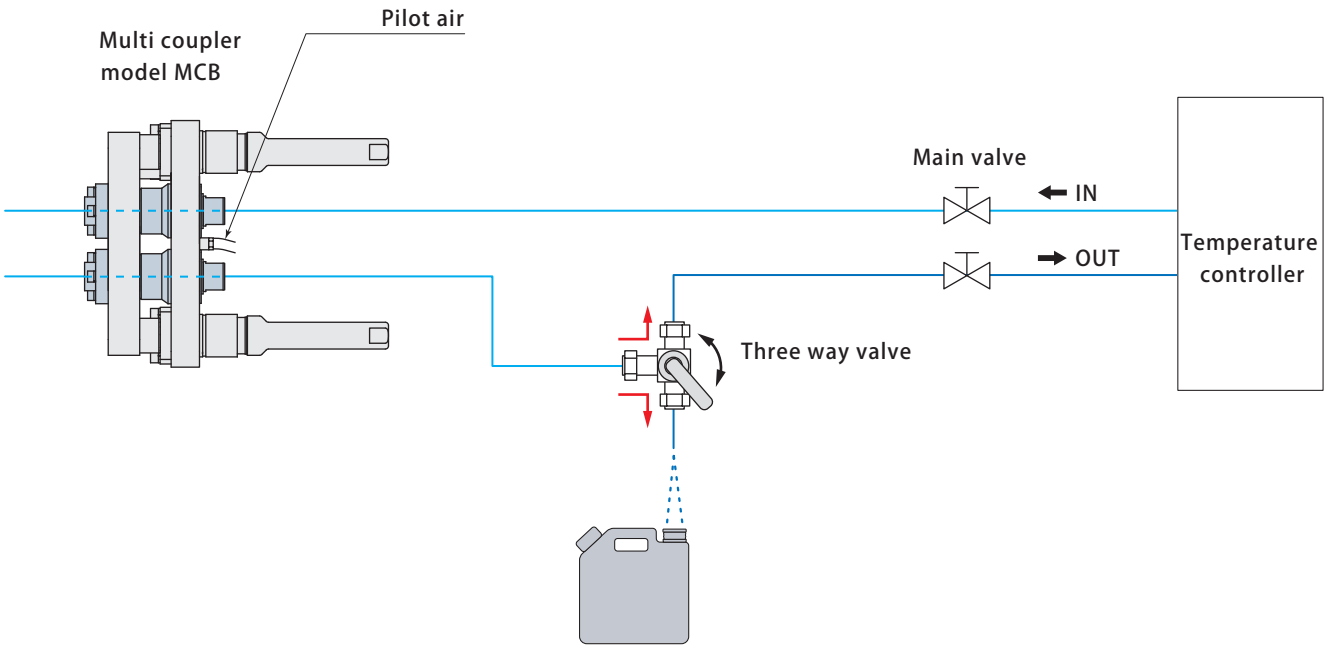
Connection

1. Connect the air coupler.
2. Turn ON the pilot air of coupler.
3. Open the main valve from OUT to IN in order.
4. Turn ON the temp. controlling water.

Disconnect

1. Turn OFF the temp. controlling water.
2. Close the main valve from IN to OUT in order.
3. Switch the three way valve B to air release side.
4. Switch the three way valve A to air purge side.
5. Supply air to drain controlling water in the circuit totally and then stop air.
6. Switch the three way valve to the side of temp. controlling water from A to B in order .
7. Turn OFF the pilot air of couppler.
8. Disconnect the coupler.

Drain circuit for temp. controlling water(without air purge)



Connection

1. Connect the air coupler.
2. Turn ON the pilot air of coupler.
3. Open the main valve from OUT to IN in order.
4. Turn ON the temp. controlling water.

Disconnect

1. Turn OFF the temp. controlling water.
2. Close the main valve from IN to OUT in order.
3. Switch the three way valve to air release side and drain the temp. controlling water.
4. Switch the three way valve to the side of temp. controlling water.
5. Turn OFF the pilot air of couppler.
6. Disconnect the coupler.

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CERTIFICATE OF APPROVAL ISO9001

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