



Manual valve for chemical liquid feed

MMD*0H Series

A valve designed to support high pressure and high back pressure in chemical liquid lines in semiconductor manufacturing lines.

● Orifice size: ø10, ø16, ø22, ø25



Export controlled items

* Target: MMD40H (*4), MMD50H, 60H

Specifications


Descriptions	MMD40H		MMD50H	MMD60H
Working fluid	Chemical liquid, pure water (*1)			
Fluid temperature °C	5 to 40			
Proof pressure MPa	1.4			
Working pressure (A→B) MPa	0 to 0.7			
Valve seat leakage cm ³ /min	0 (water pressure)			
Back pressure MPa	0 to 0.7			
Ambient temperature °C	0 to 40			
Mounting orientation	Unrestricted			
Connection	O.D. 1/2" tube connection Nominal 1/4" PFA pipe	O.D. 3/4" tube connection Nominal 1/2" PFA pipe	O.D. 1" tube connection Nominal 3/4" PFA pipe	O.D. 1.25" tube connection Nominal 1" PFA pipe
Orifice size	ø10	ø16	ø22	ø25
Cv	2	5 (*2)	9.5	14

*1: Check the compatibility of product structural materials, working fluids and atmosphere. (Refer to the compatibility check list on Intro Page 15.)

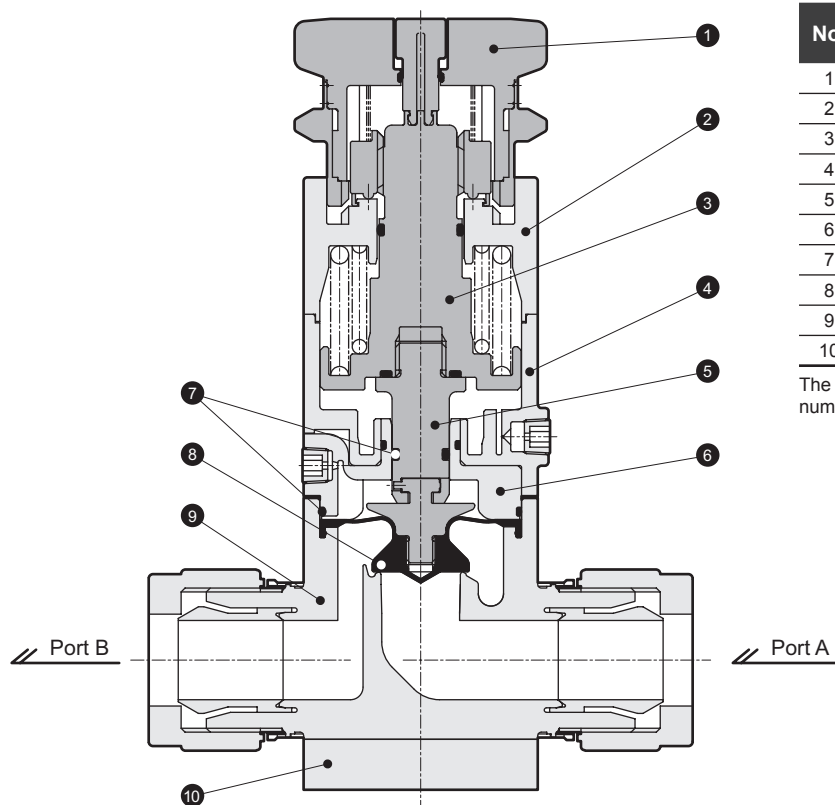
*2: The Flaretek fitting has Cv of 4.5.

*3: MMD*0H Series cannot be used for flow rate adjustment. Use it either fully closed or fully opened.

*4: Excludes O.D. 1/2" tube connection and nominal 1/4" PFA pipe.

 Always read the precautions on Intro Pages 7 to 16 before use.

Internal structure and parts list



No.	Part name	Material (by fluid code)	
		Standard	M
1	Knob	PP	
2	Cover	PP	
3	Shaft	PP	
4	Cylinder	PP	
5	Rod	PP	
6	Diaphragm holder	PP	
7	O-ring	FKM	EPDM
8	Diaphragm	PTFE	
9	Body	PFA	
10	Mounting plate	PP	

The material and structure may vary depending on the model number. Contact CKD for details.

Manual valve operation method

● OPEN

Confirm that the lock ring is slid to the upper limit. (↑ (1))
 When turning the knob in the OPEN direction, the first few turns will be idle.
 When idling, the slide nut moves downward while rotating, comes to the position shown in the figure and stops moving downward. (↓ (2))
 If turned further, the motion will be rotation alone, raising the shaft with the screw thrust, and the valve will open. (↑ (3) Indicator rises.)

● CLOSE

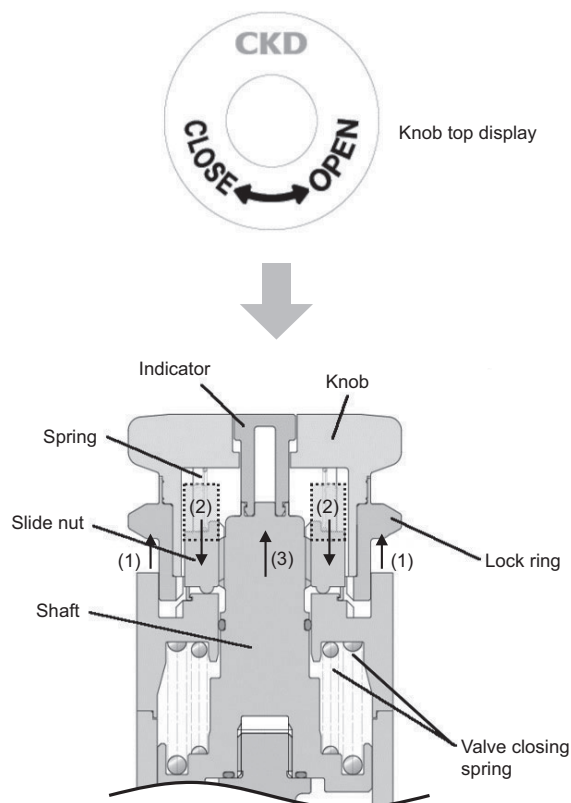
Confirm that the lock ring is slid to the upper limit. (↑ (1))
 Turning the knob clockwise will close the valve.
 (Indicator falls.)
 When turning the knob further in the CLOSE direction while the valve is closed (indicator lowered position), it will idle.
 → This prevents overtightening.
 Even when it is idling, the fluid can be stopped as the valve closing spring is activated.

In the idling state, the slide nut and shaft screw will rotate to the point where they are disengaged, but the slide nut is constantly pushed by the spring, so turning the screw in the OPEN direction again will cause the screws to engage again.

● Knob lock

After operating the knob, you can slide the lock ring to the lower limit and lock the lock ring so that the knob does not turn.
 → This can prevent misoperation.

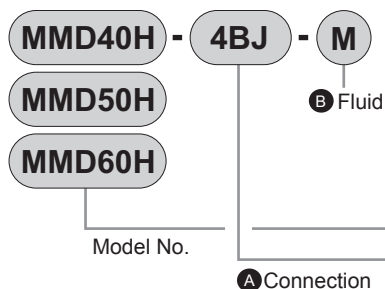
● Do not operate while applying lateral force to the knob. Also, do not forcibly turn the knob after the valve is opened and after the knob is locked.
 There is a risk of part damage.



MMD*0H Series

How to order

● MMD*0H Series



Model No.		MMD40H						MMD50H			MMD60H	
		A Connection										
		4BJ	6BJ	4BW	6BW	2W	4W	8BJ	8BW	6W	10BJ	8W
		Super 300 Pillar fitting P Series integrated		Flaretek integrated fitting		PFA pipe for welding		Super 300 Pillar fitting P Series integrated	Flaretek integrated fitting	PFA pipe for welding	Super 300 Pillar fitting P Series integrated	PFA pipe for welding
		1/2" x 3/8" tube connection	3/4" x 5/8" tube connection	1/2" x 3/8" tube connection	3/4" x 5/8" tube connection	Nominal 1/4" PFA pipe for welding	Nominal 1/2" PFA pipe for welding	1" x 7/8" tube connection	1" x 7/8" tube connection	Nominal 3/4" PFA pipe for welding	1 1/4" x 1 1/10" Tube connection	Nominal 1" PFA pipe for welding
Code	Content	Orifice size		ø10	ø16	ø10	ø16	ø10	ø16	ø22		ø25
Body material		PFA molded body										
B Fluid												
Blank	Standard	●	●	●	●	●	●	●	●	●	●	●
M	For ammonia (Note)	●	●	●	●	●	●	●	●	●	●	●

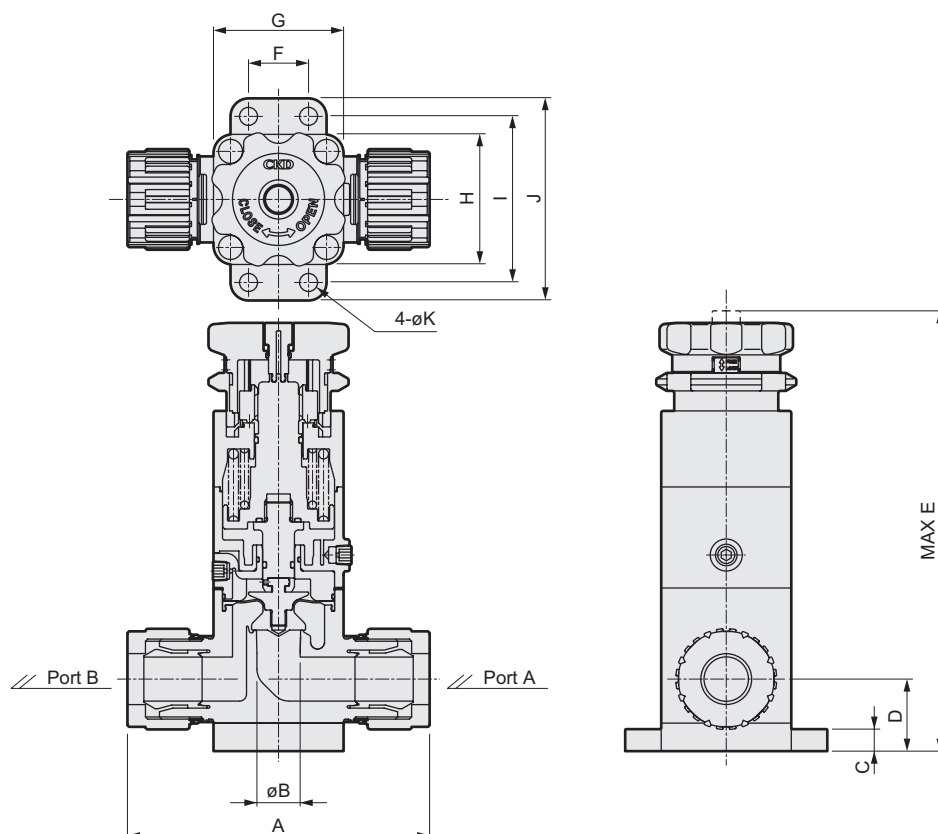
⚠ Precautions for model No. selection

* Available as custom order

Dimensions

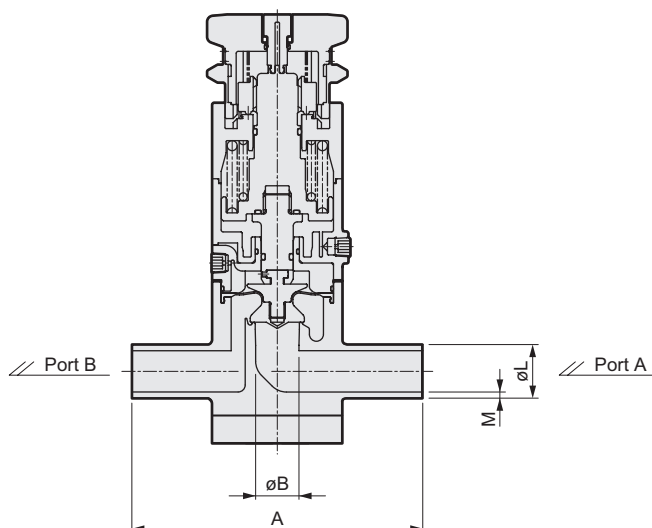
● Integrated fitting

·MMD⁴₆0H-*BJ
*BW



● Pipe for welding

·MMD⁴₆0H-*W



Model No.	Connection model No.	A	B	C	D	E	F	G	H	I	J	K	L	M
MMD40H	4BJ	108	10	10	31	183	20	50	50	68	86	9	-	-
	4BW	117	10	10	31	183	20	50	50	68	86	9	-	-
	2W	110	10	10	31	183	20	50	50	68	86	9	13.7	2.3
	6BJ	122	16	10	31	183	20	50	50	68	86	9	-	-
	6BW	126	16	10	31	183	20	50	50	68	86	9	-	-
	4W	130	16	10	31	183	20	50	50	68	86	9	21.3	2.8
MMD50H	8BJ	151	22	11	36	220	30	65	65	83	101	9	-	-
	8BW	161	22	11	36	220	30	65	65	83	101	9	-	-
	6W	145	22	11	36	220	30	65	65	83	101	9	26.7	2.9
MMD60H	10BJ	198	25	12	42	241	38	75	75	93	111	9	-	-
	8W	155	25	12	42	241	38	75	75	93	111	9	33.4	3.4