



Manual valve for chemical liquids

MMD*03RN Series



Export controlled items

*Eligibility: MMD403RN, MMD503RN

Specifications

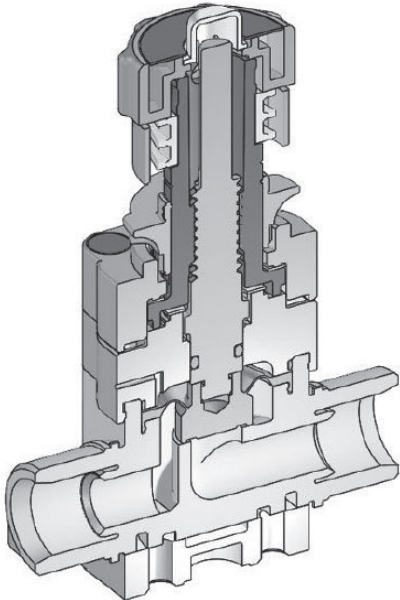
Item \ Size		MMD003RN	MMD303RN	MMD403RN	MMD503RN
		□ 25	□ 36	□ 46	□ 60
Working fluid		Chemical liquids, pure water, N ₂ gas, air			
Fluid temperature °C		5 to 120 (*1, *2)			
Proof pressure MPa		1.0			
Working pressure range	(A→B) MPa	0 to 0.5			
	(B→A) MPa	0 to 0.5			
Valve seat leakage cm ³ /min		0 (water pressure)			
Back pressure MPa		0 to 0.5			
Ambient temperature °C		0 to 60			
Mounting orientation		Unrestricted			
Connection		Super 300 Pillar fitting P Series F-LOCK 60 Series			
Weight	kg	0.09	0.22	0.44	0.87

*1: For hydrofluoric acid or chemical liquids containing hydrofluoric acid, use within the range of 5 to 80°C.

*2: 5 to 100°C if the connection is F-LOCK 60 Series.

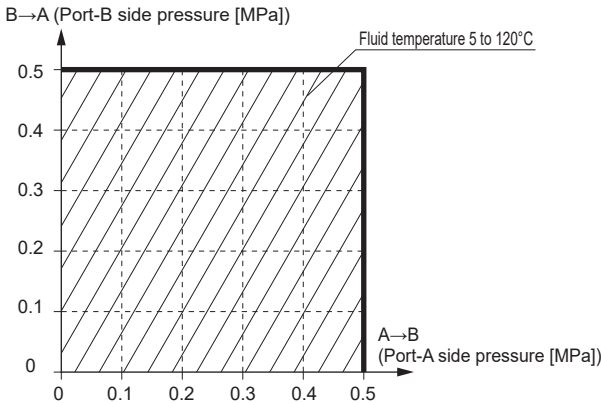
*3: Refer to pages 110 to 111 for Cv and flow characteristics.

Structure diagram and parts list



Part name	Material
Body (wetted parts)	PFA or PTFE
Diaphragm (wetted parts)	PTFE
Actuator	PVDF
O-ring	FEPM
Metal parts	Stainless steel (fluoro resin coating)
Mounting plate	PVDF
Misoperation prevention cover	PP

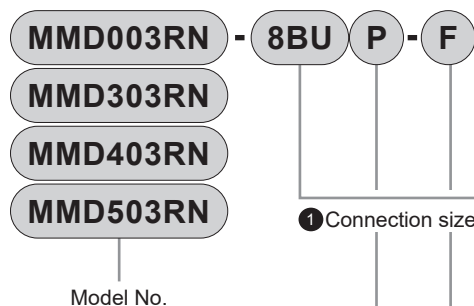
Working pressure



! Always read the precautions on Intro Pages 7 to 14 before use.

How to order

● Body



Code	Description				
① Connection size		Selectable models			
Metric	Tube size	MMD0	MMD3	MMD4	MMD5
6U	ø6 x ø4	●			
8U	ø8 x ø6	●			
10U	ø10 x ø8	●	●		
12U	ø12 x ø10		●		
25U	ø25 x ø22				●
Inching	Tube size	MMD0	MMD3	MMD4	MMD5
8BU	1/4"×5/32"	●			
10BU	3/8"×1/4"	●	●		
15BU	1/2"×3/8"		●		
20BU	3/4"×5/8"			●	
25BU	1"×7/8"				●
② Connection					
P	Super 300 Pillar fitting P Series				
R	F-LOCK 60 Series				
③ Mounting method					
F	Flange mounting				
H	4-point flange mounting				
X	Bottom mounting				

! Precautions for model No. selection

* Body material

Connection F-LOCK 60 Series is PTFE body.

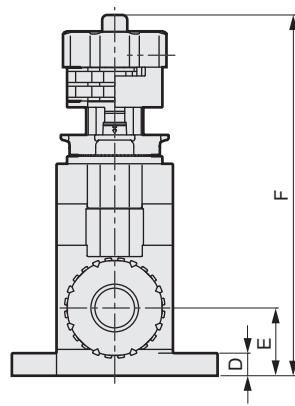
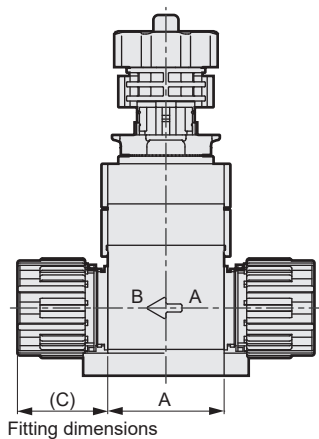
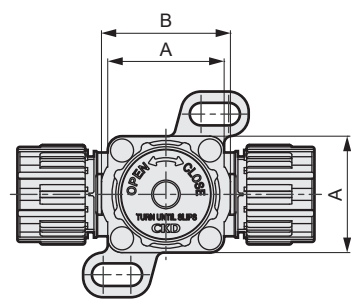
● Misoperation prevention cover

- MMD003RN-C
- MMD303RN-C
- MMD403RN-C
- MMD503RN-C

Part3R	Part2	Part1	High pressure	Metall-free size	Large bore size	Polyvinyl chloride	Drainage	Part3RN	Part2	High pressure	Metall-free size	Large bore size	Single unit	Air operated integrated valve	Pilot	Manual	Electric	Manual	Manual Fine flow rate	Fine level Switch	Related products
			Air operated valve							Manual valve					Regulator						

Dimensions

Part 3R	Part 2	Part 1	High pressure	Metal-free	Air operated valve
Large bore size	PVC	Drainage	Part 3RN	Part 2	Manual valve
High pressure	Metal-free	Single unit	Air operated	Integrated	Drip prevention valve
Pilot	Manual	Regulator	Manual	Electric	Flow rate adjusting valve
Manual	Fine level	Switch	Related products		



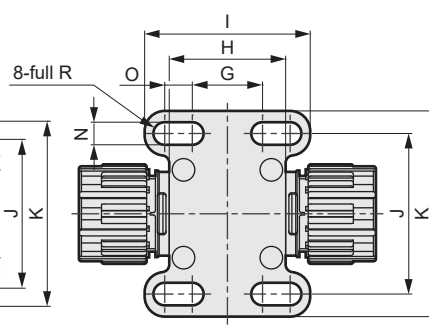
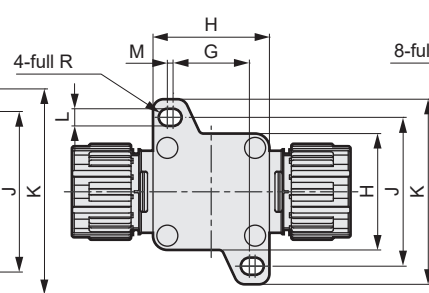
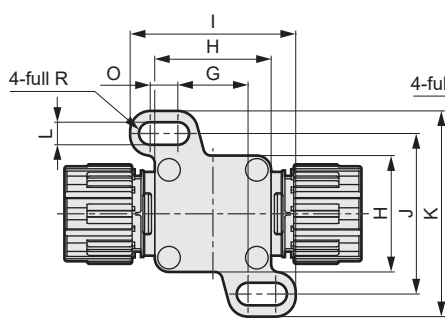
Super 300P Series

Connection (connection size + type)	C
6UP, 8BUP	19
8UP	22
10UP, 10BUP	25
12UP, 15BUP	29
20BUP	36
25UP, 25BUP	43

F-LOCK 60 Series

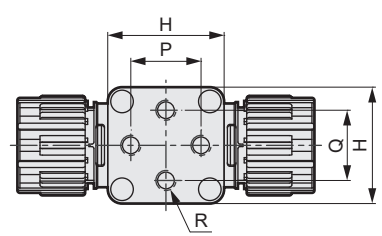
Connection (connection size + type)	C
6UR	30
8BUR	31
8UR	31
10UR	37
10BUR	39
12UR	37
15BUR	39
20BUR	44
25UR	49.5
25BUR	51

- ☐ F Flange mounting (MMD 0/3/4)
- ☐ F Flange mounting (MMD5)
- ☐ H 4-point flange mounting



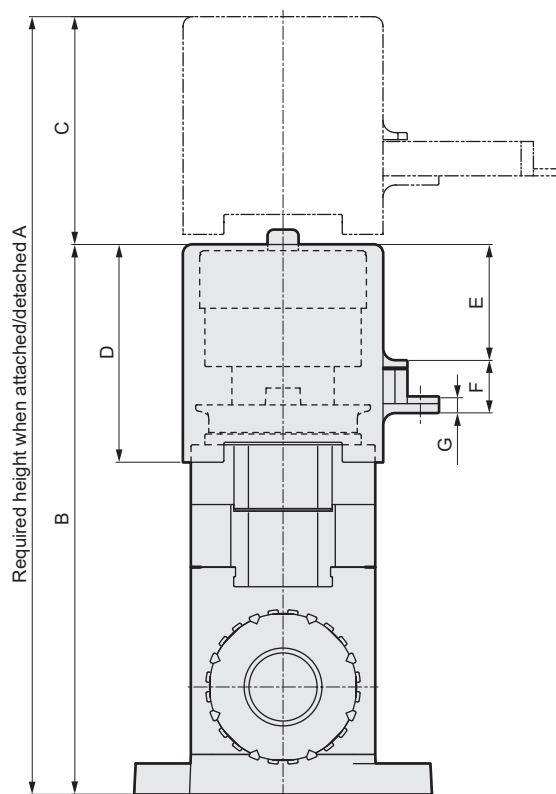
Model	A	B	D	E	F	G	H	I	J	K	L	M	N	O
MMD003RN	25	-	6	19	83	15	25	30	33	39	2-3.5	2-4.5	4-3.5	4-4.5
MMD303RN	36	39	8.5	21	116	22	36	50	50	62	2-7	2-8	4-7	4-8
MMD403RN	46	51	9	27	144	28	46	66	64	82	2-9	2-11	4-9	4-11
MMD503RN	60	65	10	35	184	40	61	78	78	97	2-9	2-3	4-9	4-11

- ☐ X Bottom mounting



Model	P	Q	R
MMD003RN	-	14±0.3	2-M6 depth 8
MMD303RN	22±0.3	22±0.3	4-M6 depth 9
MMD403RN	28±0.3	28±0.3	4-M8 depth 10
MMD503RN	40±0.3	40±0.3	4-M8 depth 13

- MMD*03RN-C



* Mounting the misoperation prevention cover Mountable in any direction (4 directions).

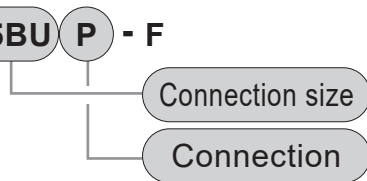
Model No.	A	B	C	D	E	F	G	H	I	J	K	L	M
MMD003RN-C	105	79	26	22	6.5	8	5	60	44	16	29	10	25
MMD303RN-C	166	112	54	51	25	13	5	78	55	23	40	10	40
MMD403RN-C	203	139	64	60	31	15	5	99	68	31	51	11	51
MMD503RN-C	254	179	75	71	38	17	5.5	125	83	71	65	12	65

[illegible]

MMD*03RN Series

MMD*03RN Series Connection and Cv

MMD303RN - **15BU** **P** - F



Super 300 pillar fitting (connection code: P)

	Connection size	Connection	Applicable tube size	Selectable model sizes and Cv			
				MMD0	MMD3	MMD4	MMD5
Metric	6U	P	ø6 × ø4	0.34			
	8U	P	ø8 × ø6	0.64			
	10U	P	ø10 × ø8	0.8	1.25		
	12U	P	ø12 × ø10		1.8		
	25U	P	ø25 × ø22				8
Inch	8BU	P	1/4" × 5/32"	0.34			
	10BU	P	3/8" × 1/4"	0.8	1.25		
	15BU	P	1/2" × 3/8"		1.8		
	20BU	P	3/4" × 5/8"			5	
	25BU	P	1" × 7/8"				8

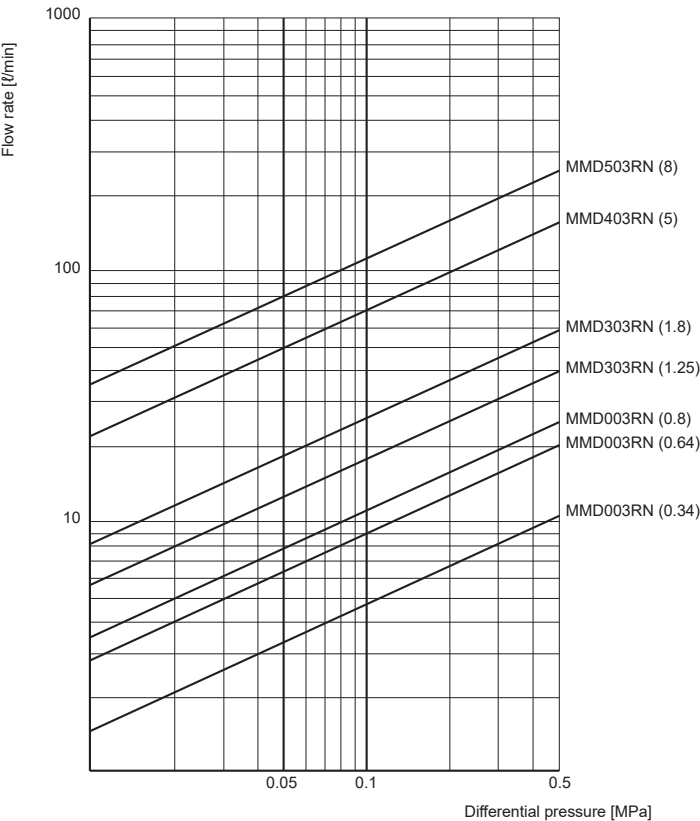
F-LOCK 60 Series (connection code: R)

	Connection size	Connection	Applicable tube size	Selectable model sizes and Cv			
				MMD0	MMD3	MMD4	MMD5
Metric	6U	R	ø6 × ø4	0.28			
	8U	R	ø8 × ø6	0.64			
	10U	R	ø10 × ø8	0.7	1		
	12U	R	ø12 × ø10		1.6		
	25U	R	ø25 × ø22				8
Inch	8BU	R	1/4" × 5/32"	0.28			
	10BU	R	3/8" × 1/4"	0.64	0.7		
	15BU	R	1/2" × 3/8"		1.6		
	20BU	R	3/4" × 5/8"			4.5	
	25BU	R	1" × 7/8"				8

MMD003RN to MMD503RN Flow characteristics

● Flow characteristics (water)

Differential pressure - internal flow rate (): Cv



Part3R	Part2	Part1	High pressure	Metal-free	Large bore size	Polyvinyl chloride	Drainage	Part3RN	Part2	High pressure	Metal-free	Large bore size	Single unit	Air operated integrated	Pilot	Manual	Electric	Manual Fine flow rate	Fine level Switch	Related products
																Regulator		Flow rate adjusting valve		
	Air operated valve								Manual valve					Drip prevention valve						