AVMPV

マルチポート弁 Multi port valve

Specialty Valves and Control Products Dymatrix™

DIWater Chemical Slurry Air Manual Shut

Abundant applications

AVMPV is the optimal valve for flushing, sampling, and branching from the distribution line. This valve has the results to a slurry, DI water and chemical applications because of its compact design and minimized dead volume.

Made-to-order

We designed the MPV with the flexibility to meet the various user's specific needs. Made-to-order designs are available for the manifold layout, branching port quantities, fitting size, etc. AVMPV turns complicated equipment piping into a simple and compact product.

Specifications

Pneumatic Type

項目	Items		Unit	Pneumatic Type		
本体サイズ	body size		—	□30	□40	□50
作動	Actuation		—	Air to close・Air to open		
流体温度	Medium Temperature		℃	5～80		
構造耐圧	Proof Pressure		MPa	1.0 145psi		
使用圧力範囲	Working Pressure range		MPa	0～0.5 0～72.5psi		
弁座漏れ量	Leakage Rate		cm^3/min	0 (at hydraulic pressure 23℃)		
背圧	Back Pressure		MPa	0～0.5 0～72.5psi		
周囲温度	Ambient Temperature		℃	5～50		
開閉頻度	Frequency of opening and closing		times/min	＜20		
取付姿勢	Installation direction		—	Any direction		
接続	Connection		—	Flowell 20 series Flowell 60 series Super Type Pillar Fitting Super 300 Type Pillar Fitting Flare Type		
Pilot	Pilot pressure	Air to open	MPa	0.4～0.5 58～72.5psi		
		Air to close		0.3～0.4 43.5～58psi		
	Pilot air consumption	Air to open	L/times(ANR)※	0.003	0.01	0.02
		Air to close		0.03	0.06	0.11
	Pilot port		—	Rc1/8", FNPT1/8"		

※The pilot air consumption is the value at 0.4MPa.

Manual Type

項目	Items	Unit	Manual Type		
本体サイズ	body size	—	□30	□40	□50
作動	Actuation	—	Manual Multi-turn Type		
流体温度	Medium Temperature	℃	5～80		
構造耐圧	Proof Pressure	MPa	1.0 145psi		
使用圧力範囲	Working Pressure range	MPa	0～0.5 0～72.5psi		
弁座漏れ量	Leakage Rate	cm^3/min	0 (at hydraulic pressure 23℃)		
背圧	Back Pressure	MPa	0～0.5 0～72.5psi		
周囲温度	Ambient Temperature	℃	5～50		
取付姿勢	Installation Direction	—	Any direction		
接続	Connection	—	Flowell 20 series Flowell 60 series Super Type Pillar Fitting Super 300 Type Pillar Fitting Flare Type		

Ordering Code

AVMPV ① — ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ — ⑩ ※6

① Actuator size	
30	□30
40	□40
50	□50

② Number of actuators	
1	1
2	2
3	3
4	4
5	5

③ Number of port	
2	2
3	3
4	4
5	5
・	:
・	:
9	9

④ Actuation ※1	
G	(NC) Air to Open
S	(NO) Air to close
P	Manual Multi-turn Type
X	Mix

⑤ Body materials	
T	PTFE

⑥ Connection	
2	Flowell 20 series
6	Flowell 60 series
S	Super Type Pillar Fitting
3	Super 300 Type Pillar Fitting
F ※2	Flare Type
X	Mix

⑦ Tubing standard	
M	Millimeter
I	Inch
X	Mix

⑧ Chemical-resistant ※3			
	O-ring ※4	Metal Coating	Material of Exposure parts
V 0	FKM	×	PPS/PP
V 1		○	
V 2		○	PVDF
V 3		×	
E 0	EPDM	×	PPS/PP
E 1		○	
E 2		○	PVDF
E 3		×	
F 0	バイフロン®F ※5 Viflon®F	×	PPS/PP
F 1		○	
F 2		○	PVDF
F 3		×	
K 0	Kalrez®6190	×	PPS/PP
K 1		○	
K 2		○	PVDF
K 3		×	

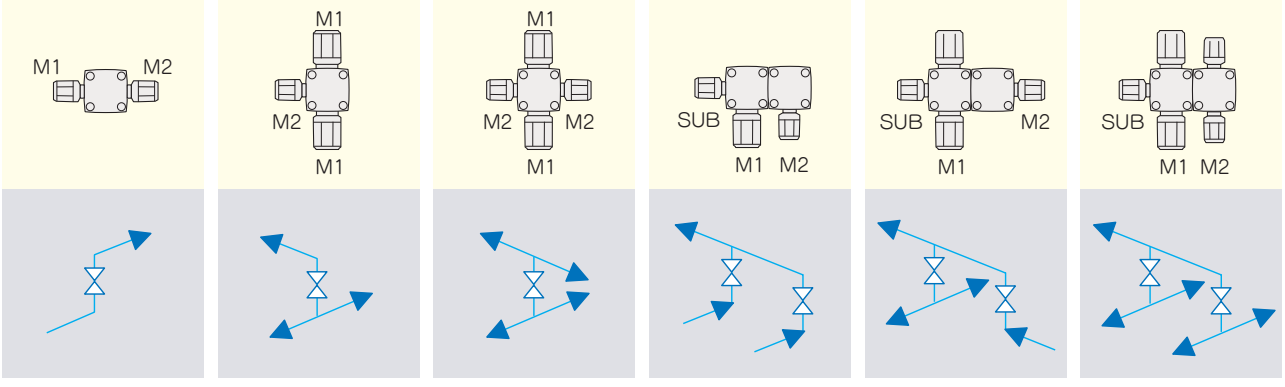
Ordering code example
AVMPV30-34GT2MV032-*****
AVMPV50-23PT6IF263-*****
AVMPV40-45XTXXK044-*****

⑨ Connection tubing size combination

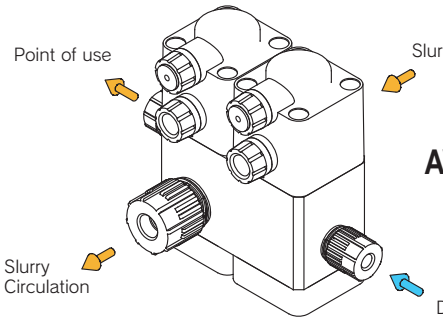
No.	Main Port		Sub Port		Body size		
					□30	□40	□50
	mm	inch	mm	inch	Orifice φ 4	Orifice φ 9	Orifice φ16
11	3 x 2	3.18 x 1.6	3 x 2	3.18 x 1.6	○	※7	※7
21	6 x 4	6.35 x 4.35	3 x 2	3.18 x 1.6	○	○	※7
22			6 x 4	6.35 x 4.35	○	○	※7
31	10 x 8	9.53 x 6.35	3 x 2	3.18 x 1.6	○	○	※7
32			6 x 4	6.35 x 4.35	○	○	※7
33			10 x 8	9.53 x 6.35	×	○	※7
41	12 x 10	12.70 x 9.53	3 x 2	3.18 x 1.6	×	○	※7
42			6 x 4	6.35 x 4.35	×	○	※7
43			10 x 8	9.53 x 4.35	×	○	※7
44			12 x10	12.70 x 9.53	×	○	※7
61	19 x 16	19.05 x 15.88	3 x 2	3.18 x 1.6	×	○	※7
62			6 x 4	6.35 x 4.35	×	○	※7
63			10 x 8	9.53 x 6.35	×	○	○
64			12 x10	12.70 x 9.53	×	○	○
66			19 x16	19.05 x15.88	×	×	○
81	25 x 22	25.40 x 22.20	3 x 2	3.18 x 1.6	×	×	○
82			6 x 4	6.35 x 4.35	×	×	○
83			10 x 8	9.53 x 6.35	×	×	○
84			12 x10	12.70 x 9.53	×	×	○
86			19 x16	19.05 x15.88	×	×	○

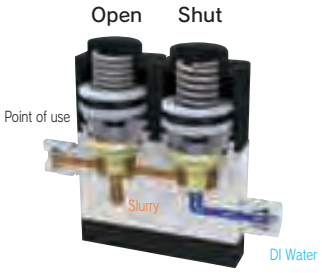
※1 : Please consult us for the specification "Double acting" in the case of the hope.
※2 : In the case of the connection is "F", only "I (Inch)" can be selected for the "Tubing Standard".
※3 : Please consult us for the specification if the medium isa strong chemical, strong acid etc.
※4 : O-rings are not wetted.
※5 : "Viflon" is the Terpolymerization Fluorocarbon Elastomers.
※6 : The product has a five -digit code depending on customizations, such as the direction of the port. Please contact us for the formal ordering code.
※7 : Please consult us.

Port combinations



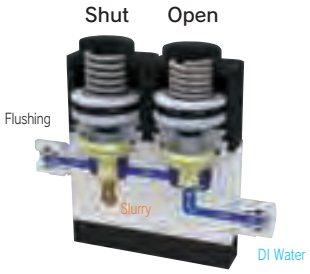
Example





DI Water
Slurry

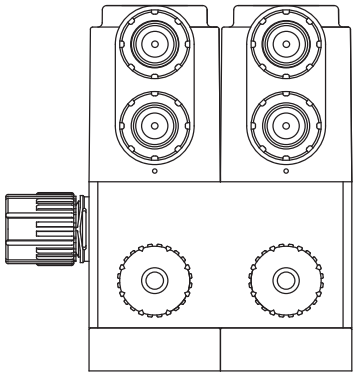
Supply of slurry



Flushing

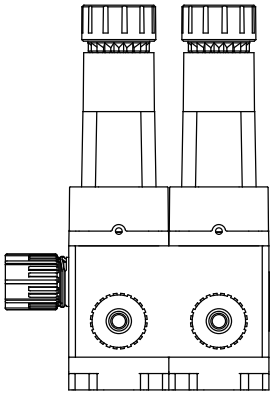
Parts & Materials

Pneumatic Type



Parts	Chemical-resistant				Wetted parts
	0	1	2	3	
Body	PTFE				○
Diaphragm	PTFE				○
Actuator	PPS / PP		PVDF		
O-ring	FKM / EPDM / バイフロン®F Viflon®F / Kalrez®6190				
Metal parts	SUS304	SUS304 PTFE Coating		SUS304	

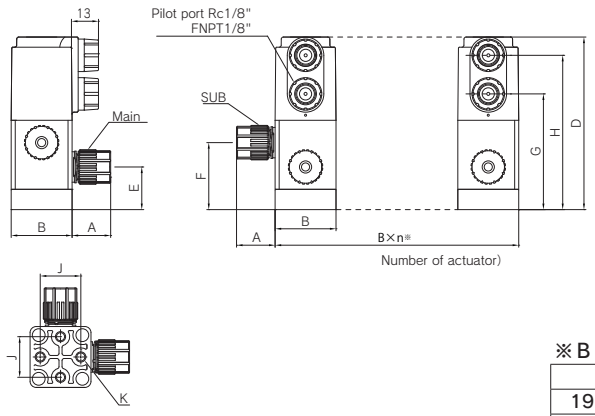
Manual Type



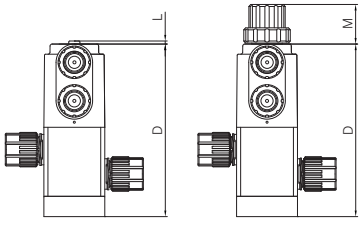
Parts	Chemical-resistant		Wetted parts
	2	3	
Body	PTFE		○
Diaphragm	PTFE		○
Actuator	PVDF		
O-ring	FKM / EPDM / バイフロン®F Viflon®F / Kalrez®6190		
Metal parts	SUS304 PTFE Coating	SUS304	

Dimensions

Pneumatic Type



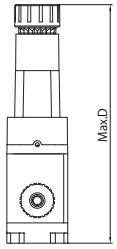
Option



indicator

Travel stop

Manual Multi-turn Type



※B = 50

Main Port size		
19 × 16	19.05 × 15.88	B × n + (n-1)
25 × 22	25.40 × 22.20	B × n + 10 × (n-1)

Dimensions

(Unit) : mm

		Main Port size	3 × 2	6 × 4	10 × 8	12 × 10	19 × 16	25 × 22
			3.18 × 1.6	6.35 × 4.35	9.53 × 6.35	12.70 × 9.53	19.05 × 15.88	25.40 × 22.20
A	Flowell 20 series	inch	-	18	22.5	26.5	31	42
		mm	9	17	21	25	31	42
	Flowell 60 series	inch	-	31	39	39	44	51
		mm	17.5	30	37	37	44	49.5
	Super Type Pillar fitting	inch/mm	15	19.5	26.5	30	39.5	45
	Super 300 Type Pillar fitting	inch/mm	15	19	25	29	36	43
	Flare Type	inch	-	28	31	33	38	47
B				30			—	
			—	40				—
				—			50	
L				1.5			—	
			—	3.0				—
				—			3.5	
M				Max. 21.5			—	
			—	Max. 22				—
				—			Max. 23	

B=30

	Main Port size	3 × 2	6 × 4	10 × 8	12 × 10	19 × 16	25 × 22
		3.18 × 1.6	6.35 × 4.35	9.53 × 6.35	12.70 × 9.53	19.05 × 15.88	25.40 × 22.20
D		85		90		—	
Max.D		117.5		122.5		—	
E		21		25.5		—	
F		33		38		—	
G		57		62		—	
H		76		81		—	
J		20				—	
K		M5 L10				—	
L		5.0				—	

B=40

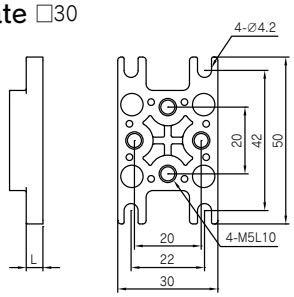
	Main Port size	3 × 2	6 × 4	10 × 8	12 × 10	19 × 16	25 × 22
		3.18 × 1.6	6.35 × 4.35	9.53 × 6.35	12.70 × 9.53	19.05 × 15.88	25.40 × 22.20
D		—	93	103		108	—
Max.D		—	116.5	126.5		131.5	—
E		—	22	27.5		30.5	—
F		—	33	43		48	—
G		—	61	71		76	—
H		—	84.5	94.5		99.5	—
J		—	20				—
K		—	M5 L13				—
L		—	7.0				—

B=50

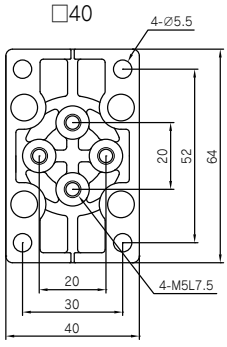
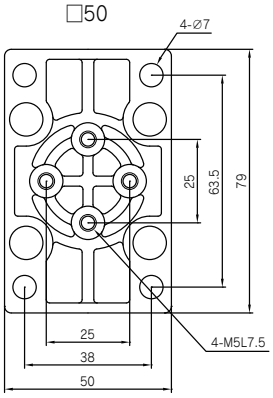
	Main Port size	3 × 2	6 × 4	10 × 8	12 × 10	19 × 16	25 × 22
		3.18 × 1.6	6.35 × 4.35	9.53 × 6.35	12.70 × 9.53	19.05 × 15.88	25.40 × 22.20
D		—				129	134
Max.D		—				158	163
E		—				34	35.5
F		—				59	64
G		—				93	98
H		—				120	125
J		—				—	
K		—				—	
L		—				7.0	

※ Reference values

Base Plate □30



□40



□50