

AVHPRS

定圧弁スラリー用 Regulator for slurry

Specialty Valves and Control Products **Dymatrix™**



Simple Structure

The valve has a proprietary simple structure. There is almost no influence to the particle size even with the highly coherent fluid such as slurry solution. It also can be used for DI water or chemicals.

Specifications

項目	Items	Unit	Type	
			50	60
流体温度	Medium Temperature	°C	10 ~ 50	
構造耐圧	Proof Pressure	MPa	0.5 72.5psi	
使用圧力範囲	Working Pressure range	MPa	Pilot Pressure +0.03 ~ 0.3 (+4.35 ~ 43.5psi)	
最高設定圧力	Max. setting pressure	MPa	0.1 1.45psi	
周囲温度	Ambient Temperature	°C	10 ~ 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 Tube	
接続口径	Connection tubing size	mm	6×4(6.35×3.95)	10×8(9.53×6.35), 12×10(12.70×9.53)
参考流量範囲	Reference Flow Range	L/min	0.05 ~ 0.50	0.05 ~ 3.0
精度	Accuracy	—	±5%F.S. Accuracy of flow rate when the range of inlet pressure is from minimum working pressure to 0.3MPa, and there is no back pressure change.	
重量	Weight	kg	0.3	0.5
Pilot	Pilot pressure	MPa	0.03 ~ 0.1 Open control · Feed back control	
	Pilot port	—	Rc1/8" , FNPT1/8"	
	Tighten the torque	N · m	0.2 ~ 0.4	

Cautions for Use

1. Please install the shut-off valve at upstream side of AVHPRS. (Otherwise it would cause breakage of the valve)
2. Please use the AVHPRS with the downstream side opened to atmosphere.
3. Please install a constriction such as the orifice at downstream side for proper flow control.
4. Please do not use the AVHPRS in negative pressure. (It would cause the breakage of the valve)
5. Please use CDA for pilot air. In case the pilot air contains foreign substance, such as chemicals, synthetic oil contains organic solvent, salt, corrosive gas and so on, it would cause the breakage and operation defectiveness.
6. We recommend to use the high quality regulator for pilot air control such as the precise regulator and Electronic-Pneumatic regulator.
7. Please do not use the regulator without the exhaust function. (The valve may not operate precisely)
8. Please leave the pilot air pressure off in case the valve is not used for long time.
9. The range of the flow rate differs with high viscosity fluid from the one for water. Please consult us in case of use of high viscosity fluid.
10. The valve is not suited to the use to the crystallizing nature fluid.
11. Please use AVHPRS for the fluid that has passed filter.

Ordering Code

AVHPR ① - **T** ② ③ ④ ⑤ ⑥ - ⑦

①	Type
50	50
60	60

Body materials	
T	PTFE

②	Connection tubing size			
06	6×4	6.35×4.35	□50	
10	10×8	9.53×6.35	□60	
12	12×10	12.70×9.53		

③	Tubing standard
M	Millimeter
I	Inch

④	Connection
2	Flowell 20 series
6	Flowell 60 series
S	Super Type Pillar Fitting
3	Super 300 Type Pillar Fitting
F ^{※3}	Flare Type
T ^{※4}	Tube

⑤	O-ring ^{※1}
V	FKM
E	EPDM
F	キヤノン [®] F <i>Viflon[®]F</i> ^{※2}
K	Kalrez [®] 6190

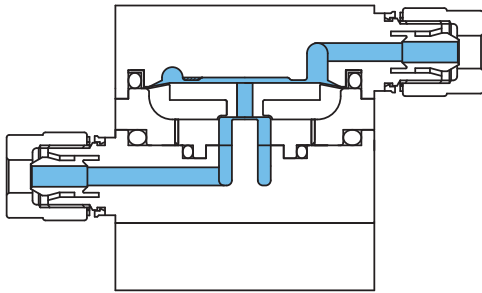
⑥	Mounting
0	Thread at bottom
1	Base plate

⑦	Pilot port
n/a	Rc 1/8"
N	FNPT 1/8"

※1: O-rings are not wetted.
 ※2: "Viflon" is the Terpolymerization FluorocarbonElastomers.
 ※3: In the case of the connection is "F", only "1 (inch)" can be selected for the "Tubing Standard".
 ※4: Please refer to page 105 for diameter of "Tube"

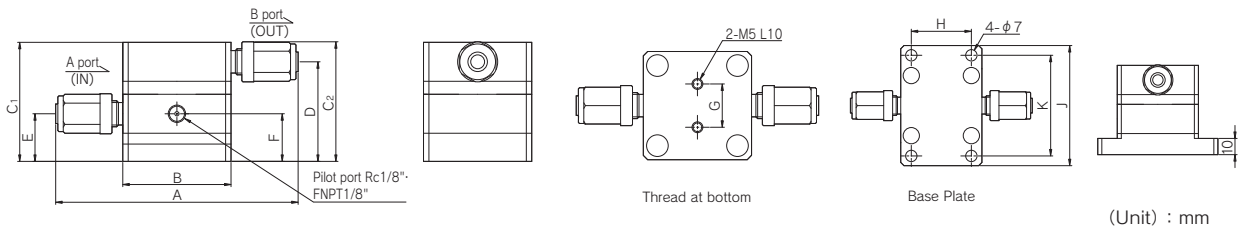
Ordering code example
 AVHPR50-T06I3V0
 AVHPR50-T06I3V0-N

Parts & Materials



Parts	Material	Wetted parts
Body	PTFE	○
Diaphragm	PTFE	○
Actuator	PP	
O-ring	FKM / EPDM / キヤノン [®] F <i>Viflon[®]F</i> / Kalrez [®] 6190	
Metal parts	SUS304	

Dimensions



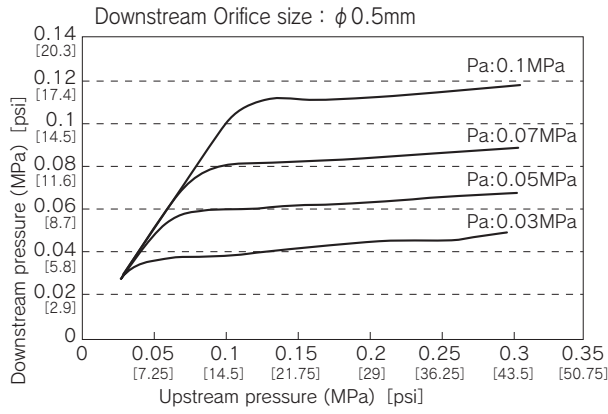
Type	Tube size	Standard	Connection [※]	Dimension										
				A	B	C ₁	C ₂	D	E	F	G	H	J	K
50	6×4 6.35×4.35	inch	2	86	50	55	56	46	22	21	20	37	74	62
		mm	2	84										
		inch	6	112										
		mm	6	110										
	10×8 9.53×6.35	inch/mm	S	89										
		inch/mm	3	88										
		inch	F	106										
60	10×8 9.53×6.35	inch	T	110	60	70	71	57.5	25.5	25.5	25	42	84	72
		mm	2	105										
		inch	6	138										
		mm	6	134										
		inch/mm	S	113										
		inch/mm	3	110										
		inch	F	122										
	12×10 12.70×9.53	inch/mm	T	102										
		inch	2	113										
		mm	2	110										
		inch	6	138										
		mm	6	134										
		inch/mm	S	120										
		inch/mm	3	118										
inch	F	126												
inch/mm	T	120												

※ Please refer to Ordering Code the symbols of the connection methods.
 ※ Reference values

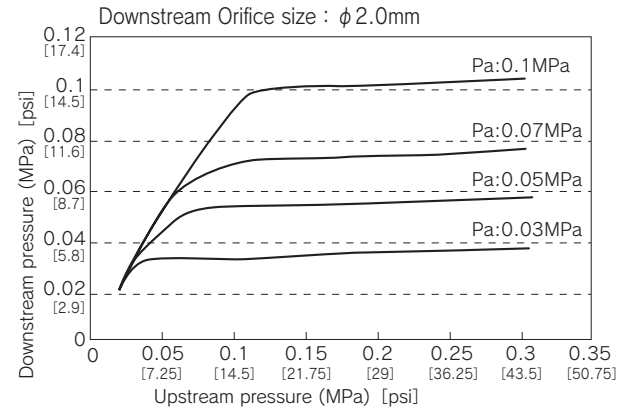
- AVPV3
- AVPVM
- AVPVS
- AVSDV
- AVSDVM
- AVSDVT
- AVSAS
- AVMPV
- AVDIV
- AVWM
- AVHPR
- AVHRL
- AVHRS
- AVBPR
- AVCFV
- HDV12R
- HDVM
- AVQDV
- AVBVX
- AVPJX
- AVSIV
- AVFCS2
- AVFCN
- OTHER

Upstream pressure - Downstream pressure

AVHPR50

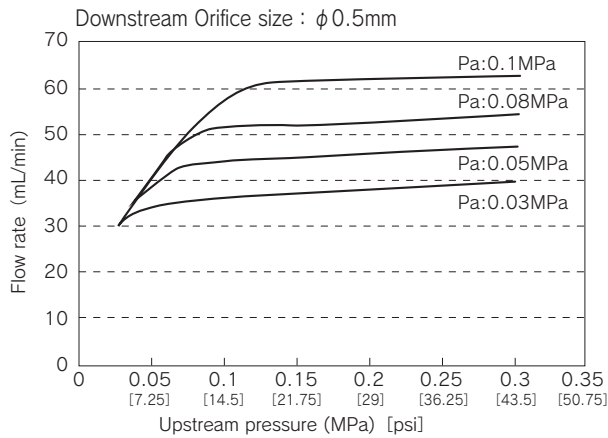


AVHPR60

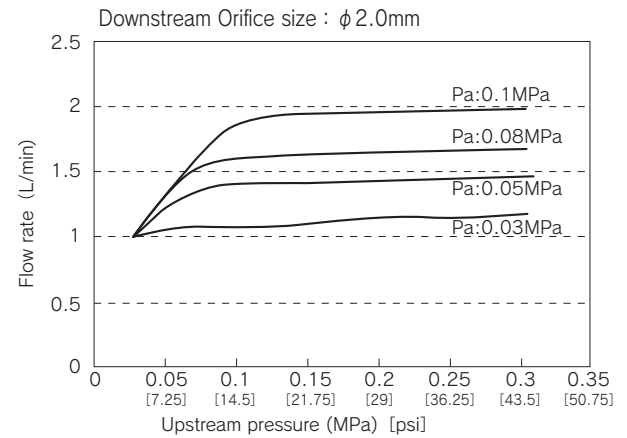


Upstream pressure - Flow rate

AVHPR50

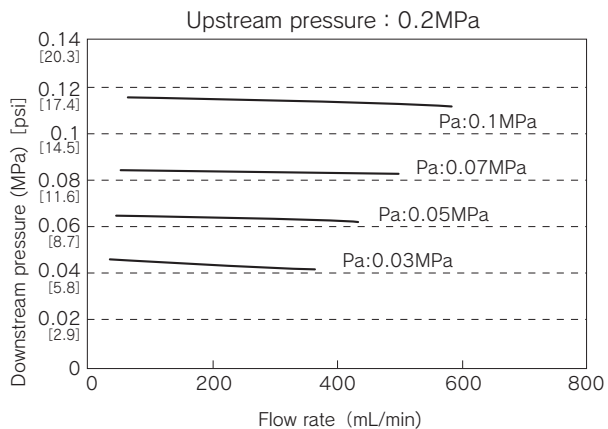


AVHPR60

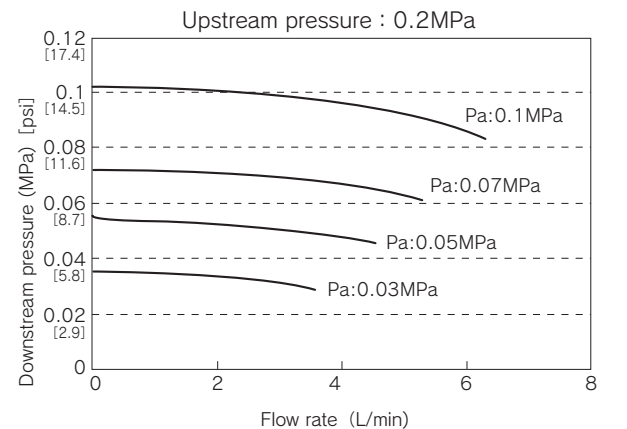


Flow rate - Downstream pressure

AVHPR50



AVHPR60



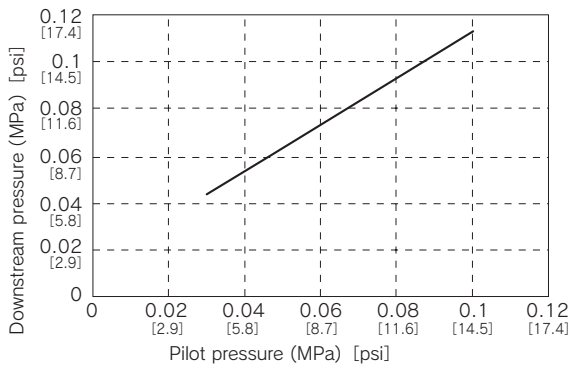
※ The data shown here is the experimental values and the reference values.

Technical Data

Pilot pressure - Downstream pressure

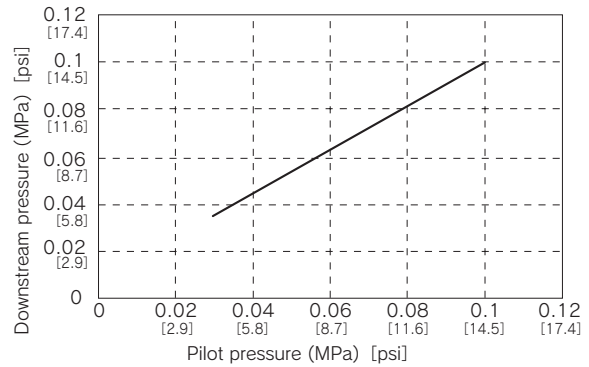
AVHPR50

Upstream pressure : 0.2MPa,
Downstream Orifice size : ϕ 0.5mm



AVHPR60

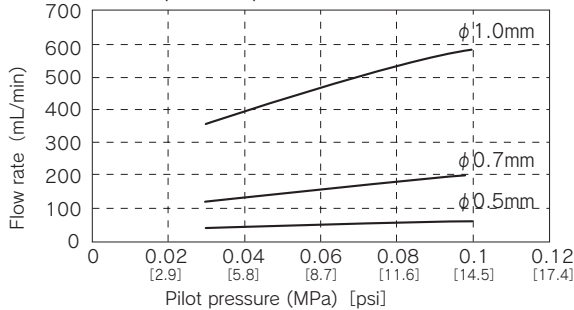
Upstream pressure : 0.2MPa,
Downstream Orifice size : ϕ 1.5mm



Pilot pressure - Flow rate

AVHPR50

Upstream pressure : 0.2MPa

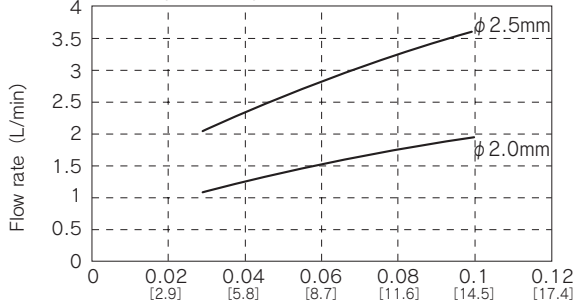


Orifice - Reference Flow Range

Orifice diameter (reference)	
Orifice (mm)	Flow rate (mL/min)
ϕ 0.5	35~ 60
ϕ 0.6	70~115
ϕ 0.7	120~200
ϕ 0.8	170~290
ϕ 0.9	250~420
ϕ 1.0	360~580

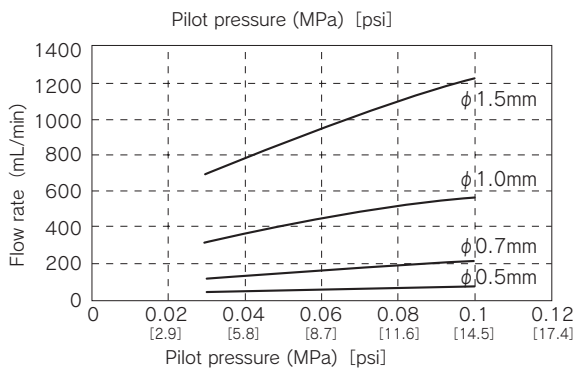
AVHPR60

Upstream pressure : 0.2MPa



Orifice - Reference Flow Range

Orifice diameter (reference)	
Orifice (mm)	Flow rate (L/min)
ϕ 1.0	0.3 ~0.55
ϕ 1.2	0.5 ~0.8
ϕ 1.4	0.6 ~1.0
ϕ 1.6	0.8 ~1.3
ϕ 1.8	0.95~1.6
ϕ 2.0	1.1 ~1.9
ϕ 2.5	2.0 ~3.0



Orifice - Reference Flow Range

Orifice diameter (reference)	
Orifice (mm)	Flow rate (mL/min)
ϕ 0.5	40~ 71
ϕ 0.6	72~130
ϕ 0.7	120~210
ϕ 0.8	175~310
ϕ 0.9	240~430

The data shown here is the experimental values and the reference values.

- AVPV3
- AVPVM
- AVPVS
- AVSDV
- AVSDVM
- AVSDVT
- AVSAS
- AVMPV
- AVDIV
- AVVM
- AVHRL
- AVHRL-M
- AVHPRS
- AVBPR
- AVCFV
- HDV12R
- HDVM
- AVQDV
- AVBVX
- AVPJX
- AVSIV
- AVFCS2
- AVFCN
- OTHER