

# AVSDV

## 薬液用2方弁 2way valve for chemical

Specialty Valves and Control Products **Dymatrix™**



### Excellent durability

AVSDV has excellent durability and reliability.

### Abundant line-up

We designed the AVSDV with wide Variation sizes, and it is compact. Abundant options (with Travel stop, with Indicator with Bypass) can be selected to meet various customer's needs.

## Specifications

項目	Items	Unit	Size					
			□30		□40		□50	□60
			6×4	10×8※1	10×8	12×10	19×16	25×22
			6.35×4.35	9.53×6.35	9.53×6.35	12.70×9.53	19.05×15.88	25.40×22.20
作動	Actuation	—	Air to open · Air to close · Double acting				Air to open · Double acting	
流体温度	Medium Temperature	℃	5 ~ 90 <small>Please consult us in case you need the valve for Middle Temp(5 ~ 140℃) or High Temp (10 ~ 200℃).</small>					
構造耐圧	Proof Pressure	MPa	1.0 145psi					
使用圧力範囲※2	Working Pressure range	MPa	0 ~ 0.5 0 ~ 72.5psi					
弁座漏れ量	Leakage Rate	cm <sup>3</sup> /min	0 (at hydraulic pressure 23℃)					
背圧※2	Back Pressure	MPa	0 ~ 0.25	0 ~ 36.25psi	0 ~ 0.3	0 ~ 43.5psi	0 ~ 0.5 0 ~ 72.5psi	
周囲温度	Ambient Temperature	℃	5 ~ 60					
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 Tube Rc、FNPT					
オリフィス※5	Orifice diameter	mm	φ 4	φ 6	φ 8	φ 10	φ 16	φ 22
Cv 値 Cv value※3※5	A Type	—	0.26	—	1.16	1.8	4.4	7.4
	B Type	—	0.3	0.8	1.2	2.1	5.3	8.1
Pilot	Pilot pressure	Air to open	0.4 ~ 0.5 58 ~ 72.5psi					
		Air to close	0.4 ~ 0.5 58 ~ 72.5psi		0.3 ~ 0.5 43.5 ~ 72.5psi		—	
		Double acting	0.3 ~ 0.4 43.5 ~ 58psi					
	エPilot air ※4 consumption	Air to open	0.003		0.01		0.02	0.05
		Air to close	0.03		0.06		—	
		Double acting	0.04		0.07		0.13	0.30
Pilot port	—	Rc1/8", FNPT1/8"						

Type	Connection
A type	Flowell 60 series
	Flare Type
B type	Flowell 20 series
	Super Type Pillar Fitting
	Super 300 Type Pillar Fitting
	Tube
	Rc, FNPT

- ※ 1. Specifications only for the PFA body (Super 300 Type Pillar Fitting, Flare Type)
- ※ 2. For the details, please refer to the characteristic graph of "Working pressure-Back pressure".
- ※ 3. "Cv value" is different by "Connection". Please refer to a list shown on the left.
- ※ 4. The value on the table shows the air consumption volume when the pilot pressure is 0.4MPa.
- ※ 5. Typical value.

Ordering Code

● PFA (PFA Body)

**AVSDV -** ① **A** ② ③ ④ ⑤ ⑥ ⑦ ⑧ - ⑨ ⑩

**① Actuation**

<b>G</b>	(NC) Air to open
<b>S</b> ※1	(NO) Air to close
<b>F</b>	(DA) Double acting

**Body material**

<b>A</b>	PFA
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**② Connection**

<b>3</b>	Super 300 Type Pillar Fitting
<b>F</b> ※2	Flare Type

**③ Tubing standard**

<b>M</b>	Millimeter
<b>I</b>	Inch

**Mounting**

<b>1</b>	Baseplate	
<b>2</b> ※3	Baseplate	

**⑤ Option**

<b>0</b> (Standard)※4	ON-OFF only
<b>1</b> ※4	Travel stop
<b>2</b>	Bypass
<b>3</b>	Travel stop • Bypass
<b>4</b> ※4	Indicator
<b>5</b>	Bypass • Indicator

**⑥ Pilot port connection**

<b>2</b> (Standard)	
<b>0</b>	
<b>1</b>	
<b>3</b>	

**⑦ Chemical-resistant**※5

	※6 O-ring	Metal Coating	Material of Exposure parts
<b>V</b>	FKM	○	PPS/PP
		○	PVDF
		○	PVDF
<b>E</b>	EPDM	○	PPS/PP
		○	PVDF
		○	PVDF
<b>F</b>	Viton F	○	PPS/PP
		○	PVDF
		○	PVDF
<b>K</b>	Kalrez® 6190	○	PPS/PP
		○	PVDF
		○	PVDF

**⑧ Connection tubing size**

<b>06</b>	6×4	6.35×4.35	<input type="checkbox"/> 30
<b>10A</b>	10×8	9.53×6.35	<input type="checkbox"/> 40
<b>10</b>	10×8	9.53×6.35	<input type="checkbox"/> 40
<b>12</b>	12×10	12.70×9.53	<input type="checkbox"/> 50
<b>19</b>	19×16	19.05×15.88	<input type="checkbox"/> 50
<b>25</b>	25×22	25.40×22.20	<input type="checkbox"/> 60

**⑨ Revision**

<b>1</b>	Except the following
Chemical-resistant	Connection tubing size
※2	06 ~ 12
Chemical-resistant	Connection tubing size
※3	06 ~ 12

**⑩ Pilot port**

<b>n/a</b>	Rc 1/8"
<b>N</b>	FNPT 1/8"

※1 : In the case of tubing size "19", "25", please consult us for the specification Air to close.  
 ※2 : In the case of the connection is "F", only "I (Inch)" can be selected for the "Tubing Standard".  
 ※3 : In the case of Mounting "2" there is some possibility of the mounting holes are hidden by some connection from top side, and hard to be mounted.  
 ※4 : In the case of tubing size "06" "10A", please select the option from "0" "1" and "4".  
 ※5 : Please consult us for the specification if the medium is a strong chemical, strong acid etc.  
 ※6 : O-ring are not wetted.  
 ※7 : "Viton" is the Terpolymerization Fluorocarbon Elastomers.

Ordering code example  
 AVSDV-GA31100V006  
 AVSDV-GA31100V006-N

● PTFE (PTFE Body)

**AVSDV -** ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ - ⑨ ⑩

**① Actuation**

<b>G</b>	(NC) Air to Open
<b>S</b> ※1	(NO) Air to close
<b>F</b>	(DA) Double acting

**② Connection**※2

<b>2</b>	Flowell 20 series
<b>6</b>	Flowell 60 series
<b>S</b>	Super Type Pillar Fitting
<b>T</b> ※3	Tube
<b>R</b> ※4	Rc
<b>N</b> ※4	FNPT

**③ Tubing standard**

<b>M</b>	Millimeter
<b>I</b>	Inch

**④ Mounting**

<b>1</b>	Baseplate	
<b>2</b> ※5	Baseplate	

**⑤ Option**※6

<b>0</b> (Standard)	ON-OFF only
<b>1</b>	Travel stop
<b>2</b>	Bypass
<b>3</b>	Travel stop • Bypass
<b>4</b>	Indicator
<b>5</b>	Bypass • Indicator

**⑥ Pilot port connection**

<b>2</b> (Standard)	
<b>0</b>	
<b>1</b>	
<b>3</b>	

**⑦ Chemical-resistant**※7

	※8 O-ring	Metal Coating	Material of Exposure parts
<b>V</b>	FKM	○	PPS/PP
		○	PVDF
		○	PVDF
<b>E</b>	EPDM	○	PPS/PP
		○	PVDF
		○	PVDF
<b>F</b>	Viton F	○	PPS/PP
		○	PVDF
		○	PVDF
<b>K</b>	Kalrez® 6190	○	PPS/PP
		○	PVDF
		○	PVDF

**⑧ Connection tubing size**

<b>06</b>	6×4	6.35×4.35	<input type="checkbox"/> 30
<b>10</b>	10×8	9.53×6.35	<input type="checkbox"/> 40
<b>12</b>	12×10	12.70×9.53	<input type="checkbox"/> 50
<b>19</b>	19×16	19.05×15.88	<input type="checkbox"/> 50
<b>25</b>	25×22	25.40×22.20	<input type="checkbox"/> 60

**⑨ Revision**

<b>1</b>	Except the following
Chemical-resistant	Connection tubing size
※2	06 ~ 12
Chemical-resistant	Connection tubing size
※3	06 ~ 12

**⑩ Pilot port**

<b>n/a</b>	Rc 1/8"
<b>N</b>	FNPT 1/8"

※1 : In the case of tubing size "19", "25", please consult us for the specification Air to close.  
 ※2 : Please consult us for the specification "Super 300 Type Pillar Fitting", "Flare Type" in the case of the hope.  
 ※3 : Please refer to page 106 for diameter of "Tube".  
 ※4 : In the case of the connection is "R", "N", only "I (Inch)" can be selected for the "Tubing Standard".  
 ※5 : In the case of Mounting "2" there is some possibility of the mounting holes are hidden by some connection from top side, and hard to be mounted.  
 ※6 : In the case of tubing size "06", please select the option from "0" "1" and "4".  
 ※7 : Please consult us for the specification if the medium is a strong chemical, strong acid.  
 ※8 : O-ring are not wetted.  
 ※9 : "Viton" is the Terpolymerization Fluorocarbon Elastomers.

Ordering code example  
 AVSDV-G21100V006  
 AVSDV-G21100V006-N

- AVPV3
- AVPM
- AVPSL
- AVSDV
- AVSDVM
- AVSDVT
- AVSAS
- AVMPV
- AVDIV
- AVWM
- AVHRL
- AVHRL-M
- AVHPRS
- AVBPR
- AVCFV
- HDV12R
- HDVM
- AVQDV
- AVBVX
- AVPJX
- AVSIV
- AVFCS2
- AVFCN
- OTHER

## Ordering Code

### Body Materials · Connection combination

Connection	□30		□40		□50	□60
	06	10A	10	12	19	25
2 Flowell 20 series	PTFE	—	PTFE	PTFE	PTFE	PTFE
6 Flowell 60 series	PTFE	—	PTFE	PTFE	PTFE	PTFE
S Super Type Pillar Fitting	PTFE	—	PTFE	PTFE	PTFE	PTFE
3 Super 300 Type Pillar Fitting	PFA	PFA	PFA	PFA	PFA	PFA
F Flare Type	PFA	PFA	PFA	PFA	PFA	PFA
T Tube	PTFE	—	PTFE	PTFE	PTFE	PTFE
R Rc	PTFE	—	PTFE	PTFE	PTFE	PTFE
N FNPT	PTFE	—	PTFE	PTFE	PTFE	PTFE

## Option

### Body size 30 mm × 30 mm (□ 30)

Option No.	0	1	4
Travel stop	—	○	—
Indicator	—	—	○

### Body size 40 mm × 40 mm (□ 40) ~ 60 mm × 60 mm (□ 60)

Option No.	0	1	2	3	4	5
Travel stop	—	○	—	○	—	—
Bypass	—	—	○	○	—	○
Indicator	—	—	—	—	○	○

## Weight List (Reference)

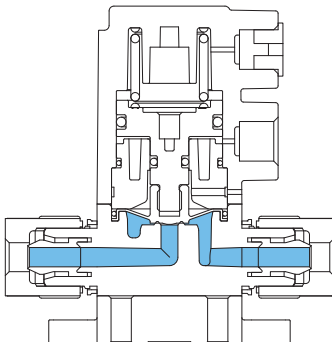
(Unit) : kg

PFA Body	Size					
	□ 30		□ 40		□ 50	□ 60
	6 × 4 6.35 × 4.35	10 × 8 9.53 × 6.35	10 × 8 9.53 × 6.35	12 × 10 12.70 × 9.53	19 × 16 19.05 × 15.88	25 × 22 25.40 × 22.20
Air to open	0.1		0.2		0.4	0.7
Air to close	0.1		0.2		—	—
Double acting	0.1		0.2		0.3	0.5

(Unit) : kg

PTFE Body	Size				
	□ 30	□ 40		□ 50	□ 60
	6 × 4 6.35 × 4.35	10 × 8 9.53 × 6.35	12 × 10 12.70 × 9.53	19 × 16 19.05 × 15.88	25 × 22 25.40 × 22.20
Air to open	0.1	0.2		0.5	0.8
Air to close	0.1	0.2		—	—
Double acting	0.1	0.2		0.4	0.5

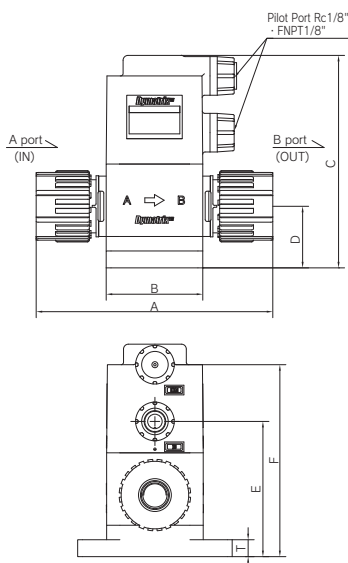
## Parts & Materials



Parts	Chemical-resistant				Wetted parts
	0	1	2	3	
Body	PFA or PTFE				○
Diaphragm	PTFE				○
Actuator	PPS		PVDF		
O-ring	FKM / EPDM / <b>RYDOL®</b> <i>Viflon® F</i> / <b>Kalrez®</b> 6190				
Metal parts	SUS304	SUS304 PTFE Coating	SUS304		

Dimensions

● Air to open · Air to close · Double acting

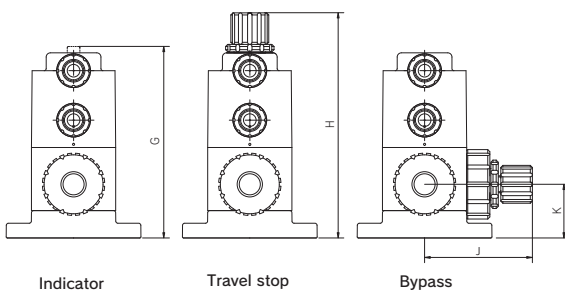


(Unit) : mm

		Size						
		□30		□40		□50	□60	
Standard	6×4	10×8	10×8	12×10	19×16	25×22		
	6.35×4.35	9.53×6.35	9.53×6.35	12.70×9.53	19.05×15.88	25.40×22.20		
Flowell 20 series	inch	66	—	85	93	112	144	
	mm	64	—	82	90	112	144	
Flowell 60 series	inch	92	—	118	118	138	162	
	mm	90	—	114	114	138	159	
A	Super Type Pillar Fitting	inch/mm	69	—	93	100	129	150
	Super 300 Type Pillar Fitting	inch/mm	68 (PFA)	80 (PFA)	90 (PFA)	98 (PFA)	122 (PFA)	146 (PFA)
	Flare Type	inch	86 (PFA)	92 (PFA)	102 (PFA)	106 (PFA)	126 (PFA)	154 (PFA)
	Tube	inch/mm	90	—	100	100	130	140
	Rc, FNPT	inch	50	—	72	72	90	110
B		□30		□40		□50	□60	
C		70	75	88		104	138.5	
D		18	22	25.5		34	39	
E		42	47	56		68	84.5	
F		61	66	79.5		95	116.5	
T		5			7			

Dimensions (Option)

● Option

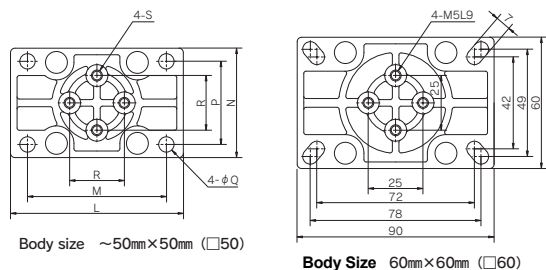


(Unit) : mm

	Size					
	□30		□40		□50	□60
6×4	10×8*	10×8	12×10	19×16	25×22	
	6.35×4.35	9.53×6.35	9.53×6.35	12.70×9.53	19.05×15.88	25.40×22.20
G	71.5	76.5	91		107.5	143
H	91.5	96.5	110		127	161.5
J	—	—	52		59	64
K	—	—	25.5		34	39

\* Specifications only for the PFA body (Super 300 Type Pillar Fitting, Flare Type)  
\* Reference value.

● Base Plate



(Unit) : mm

	Size					
	□30		□40		□50	□60
6×4	10×8*	10×8	12×10	19×16	25×22	
	6.35×4.35	9.53×6.33	9.53×6.33	12.70×9.53	19.05×15.88	25.40×22.20
L	50	64		79	—	
M	42	52		63.5	—	
N	30	40		50	—	
P	22	30		38	—	
Q	φ 4.2	φ 5.5		φ 7	—	
R	20			25	—	
S	M5L7.5					

\* Specifications only for the PFA body (Super 300 Type Pillar Fitting, Flare Type)  
\* Reference value.

Technical Data

Working pressure-Back pressure

