

CONTROL VALVE

- OUR ORIGINAL SPECIAL PLUG SHAPE REDUCES EFFECTS OF FLUID VISCOSITY AND ALLOWS FOR HIGHLY ACCURATE FLOW CONTROL (IDEAL FOR CORROSIVE FLUID).
- USE OF HIGH-PERFORMANCE ALL ELECTRONIC SERVO ACTUATOR (ELECTRICALLY DRIVEN)
- EMBEDDED WITH ELECTRONIC LIMITER AND OVERLOAD PROTECTION CIRCUIT FOR ALL CYCLE TIME.

BASIC SPECIFICATIONS

VALVE TYPE ——— CONTROL VALVE

SIZE ——— 15 mm—100 mm (1/2 inch—4 inch)

BODY MATERIAL ——— U-PVC PVDF

SEAL MATERIAL / SEAT ——— EPDM Viflon®F FKM-F Viflon®C FKM-C etc.

CONNECTION / FLANGED ——— JIS10K, DIN, ANSI

HIGH PURITY SERIES ——— LUBRICANT FREE

	FLUID TEMPERATURE	MAXIMUM WORKING PRESSURE (NORMAL TEMPERATURE) MPa(kgf/cm ²)					CONNECTION METHOD
		15mm	25mm	50mm	80mm	100mm	
U-PVC	0°C ~ 50°C	1.0 {10.2}			0.75 {7.7}		○
PVDF	0°C ~ 90°C	1.0 {10.2}			—		○

NOTE The maximum working pressure is the value including the water hammer pressure. Be careful that the maximum working pressure is not exceeded during use.

* Concerning the allowable pressure for each temperature and material, see the technical documents at the end of this catalog.

AUTOMATIC



COMPATIBLE ACTUATOR AUTOMATIC

PNEUMATIC

TYPE AV

For detailed specifications, see P.120

ELECTRIC

TYPE M

For detailed specifications, see P.129

PRODUCT MODEL CODE LIST

AUTOMATIC

ACTUATION	TYPE	ACTUATOR TYPE	ACTION / POWER SOURCE	BODY MATERIAL	SEAL MATERIAL	CONNECTION	STANDARD	SIZE	HIGH PURITY SERIES	POSITIONER
A	CV	*	*	*	*	F	*	***	1	**
A AUTOMATIC VALVE	CV CV	PNEUMATIC V TYPE AV ELECTRIC M TYPE M	PNEUMATIC F DOUBLE ACTING G AIR TO OPEN ELECTRIC 1 Single-Phase 100V 2 Single-Phase 200V D DC24V	U U-PVC F PVDF	E EPDM F Viflon®F FKM-F C Viflon®C FKM-C	F FLANGED	1 JIS10K D DIN A ANSI	015 15mm ? 100 100mm	1 LUBRICANT FREE	PNEUMATIC 01 EP POSITIONER 02 PIP POSITIONER 03 E/P FR SET 04 P/P FR SET

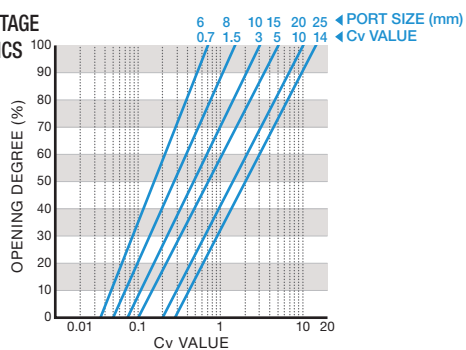
NOTE DIN standard type is U-PVC 15 and 25 mm only. ANSI standard type is U-PVC 15, 25 and 50 mm only.

* Specify only in the case of pneumatic type.

Cv VALUE PER OPENING DEGREE GRAPH

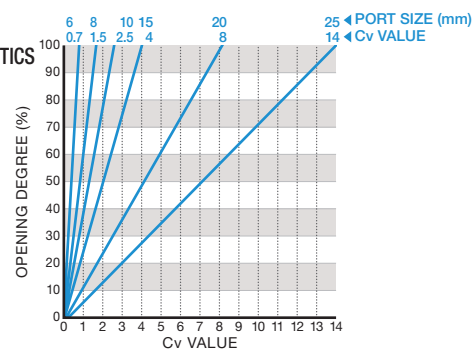
15 mm, 25 mm STANDARD Cv VALUE TYPE

EQUAL-PERCENTAGE CHARACTERISTICS



SIZE (mm)		25					
		15					
PORT SIZE [mm]		6	8	10	15	20	25
Cv VALUE		0.7	1.5	3	5	10	14
RANGEABILITY		20:1	30:1	40:1	50:1	50:1	50:1
STROKE	SIZE 15 mm	17	16	17	18	—	—
	(mm)	17	16	16	16	22	24

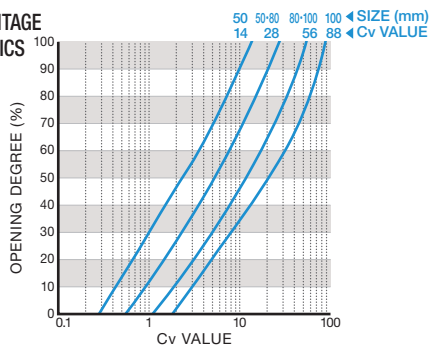
LINEAR CHARACTERISTICS



SIZE (mm)		25					
		15					
PORT SIZE [mm]		6	8	10	15	20	25
Cv VALUE		0.7	1.5	2.5	4	8	14
RANGEABILITY		20:1	25:1	30:1	40:1	40:1	50:1
STROKE	SIZE 15 mm	16	16	15	16	—	—
	(mm)	16	16	14	15	20	25

50 mm - 100 mm STANDARD Cv VALUE TYPE

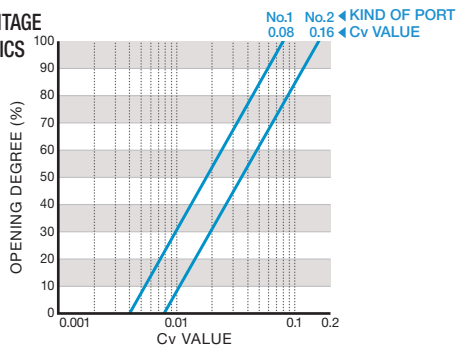
EQUAL-PERCENTAGE CHARACTERISTICS



SIZE (mm)		50		80		100	
		S	L	S	L	S	L
Cv VALUE		14	28	28	56	56	88
RANGEABILITY		50:1	50:1	50:1	50:1	50:1	50:1
STROKE	(mm)	26	28	30	28	32	28

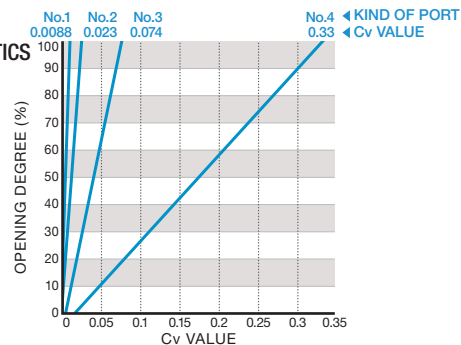
15 mm SMALL Cv VALUE TYPE

EQUAL-PERCENTAGE CHARACTERISTICS



SIZE (mm)		15	
		No.1	No.2
Cv VALUE		0.08	0.16
RANGEABILITY		20:1	20:1
STROKE	(mm)	16	16

LINEAR CHARACTERISTICS



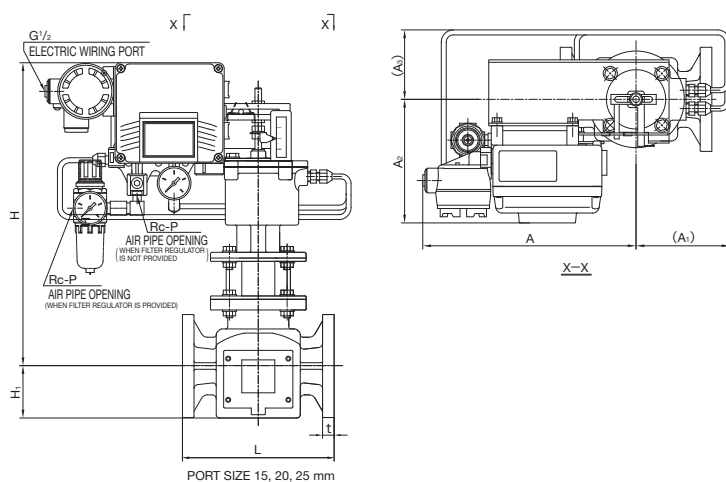
SIZE (mm)		15			
		No.1	No.2	No.3	No.4
Cv VALUE		0.0088	0.023	0.074	0.33
RANGEABILITY		15:1	15:1	15:1	15:1
STROKE	(mm)	16	16	16	16



CONTROL VALVE

TYPE—ACVV

CONNECTION / FLANGED—JIS, DIN, ANSI



ACTUATOR SELECTION CHART

SIZE	ACTUATOR TYPE	
	U-PVC BODY	PVDF BODY
15mm (1/2inch)	AVU-1DA	AVF-1DA
25mm (1inch)	AVU-2DA	AVF-2DA

For detailed specifications, see **P.119**

■ JIS, DIN (Unit: mm)

mm	H		H ₁		A	A ₁		A ₂	A ₃	P	JIS10K, DIN PN10	
	U-PVC	PVDF	U-PVC	PVDF		U-PVC	PVDF				L	t
15	337	325	51	49.5	259	130	110	150	70	1/4	160	12
25	368	354	63	66.5	259	130	110	150	70	1/4	164	14

■ ANSI (UNIT: inch)

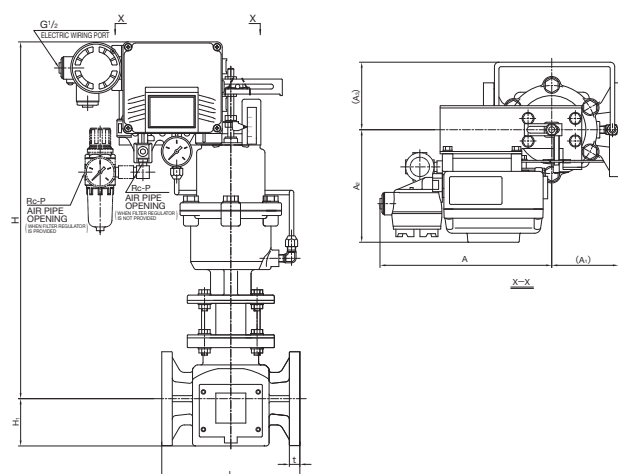
inch	mm	H		H ₁		A	A ₁		A ₂	A ₃	P	ANSI CLASS150	
		U-PVC	PVDF	U-PVC	PVDF		U-PVC	PVDF				L	t
1/2	15	13.27	12.79	2.01	1.95	10.20	5.12	4.33	5.91	2.76	1/4	6.30	0.47
1	25	14.49	13.92	2.48	2.62	10.20	5.12	4.33	5.91	2.76	1/4	6.46	0.55



CONTROL VALVE

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ACTUATOR SELECTION CHART

SIZE	ACTUATOR TYPE	
	U-PVC BODY	PVDF BODY
15mm (1/2inch)	AVU-1AO	AVF-1AO
25mm (1inch)	AVU-2AO	AVF-2AO

For detailed specifications, see **P.119**

■ JIS, DIN (Unit: mm)

mm	H		H ₁		A	A ₁		A ₂	A ₃	P	JIS10K, DIN	
	U-PVC	PVDF	U-PVC	PVDF		U-PVC	PVDF				L	t
15	438	423	51	49.5	229	89	86	150	90	1/4	160	12
25	475	458	63	66.5	229	89	86	150	90	1/4	184	14

■ ANSI (UNIT: inch)

inch	mm	H		H ₁		A	A ₁		A ₂	A ₃	P	ANSI CLASS150	
		U-PVC	PVDF	U-PVC	PVDF		U-PVC	PVDF				L	t
1/2	15	17.24	16.67	2.01	1.95	9.02	3.50	3.37	5.91	3.54	1/4	6.30	0.47
1	25	18.70	18.03	2.48	2.62	9.02	3.50	3.37	5.91	3.54	1/4	7.24	0.55

AUTOMATIC

PNEUMATIC

TYPE AV

DOUBLE ACTING

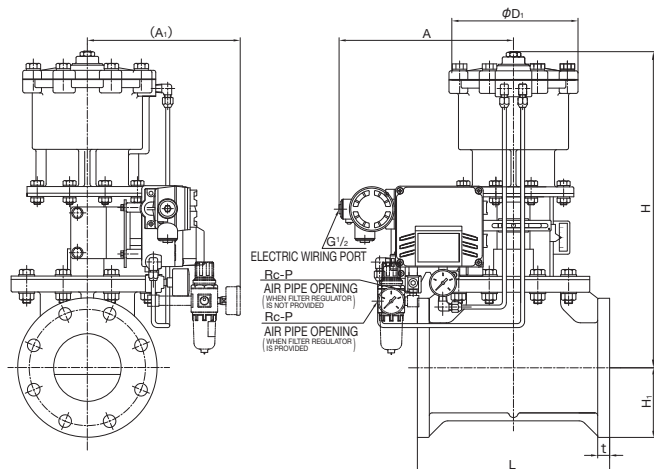
AIR TO OPEN

AIR TO CLOSE

CONTROL VALVE

TYPE—ACV

CONNECTION / FLANGED—JIS, ANSI



ACTUATOR SELECTION CHART

SIZE	ACTUATOR TYPE	
	U-PVC BODY	
50mm (2inch)	AVU-3DA	
80mm (3inch)	AVU-4DA	
100mm (4inch)	AVU-5DA	

For detailed specifications, see P.119

■ JIS (Unit: mm)

							JIS10K	
mm	D ₁	H	H ₁	A	A ₁	P	L	t
50	147	381	77.5	256	229	1/4	200	16
80	147	420	92	261	230	1/4	240	18
100	208	477	105	266	230	1/4	290	18

■ ANSI (UNIT: inch)

							ANSI CLASS150	
inch	mm	D ₁	H	H ₁	A	A ₁	L	t
2	50	5.79	15.00	3.05	10.08	9.02	7.87	0.63

AUTOMATIC

PNEUMATIC

TYPE AV

DOUBLE ACTING

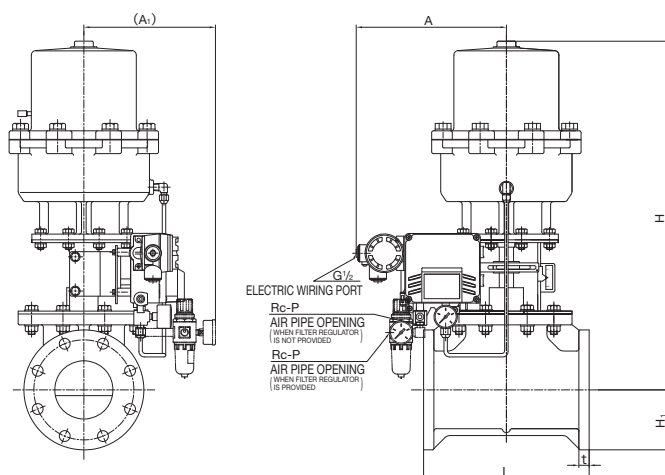
AIR TO OPEN

AIR TO CLOSE

CONTROL VALVE

TYPE—ACV

CONNECTION / FLANGED—JIS, ANSI



ACTUATOR SELECTION CHART

SIZE	ACTUATOR TYPE	
	U-PVC BODY	
50mm (2inch)	AVU-3AO	
80mm (3inch)	AVU-4AO	
100mm (4inch)	AVU-5AO	

For detailed specifications, see P.119

■ JIS (Unit: mm)

							JIS10K	
mm	H	H ₁	A	A ₁	P		L	t
50	469	77.5	256	229	1/4		200	16
80	562	92	261	230	1/4		240	18
100	611	105	266	230	1/4		290	18

■ ANSI (UNIT: inch)

							ANSI CLASS150	
inch	mm	H	H ₁	A	A ₁	P	L	t
2	50	18.46	3.05	10.08	9.02	1/4	7.87	0.63