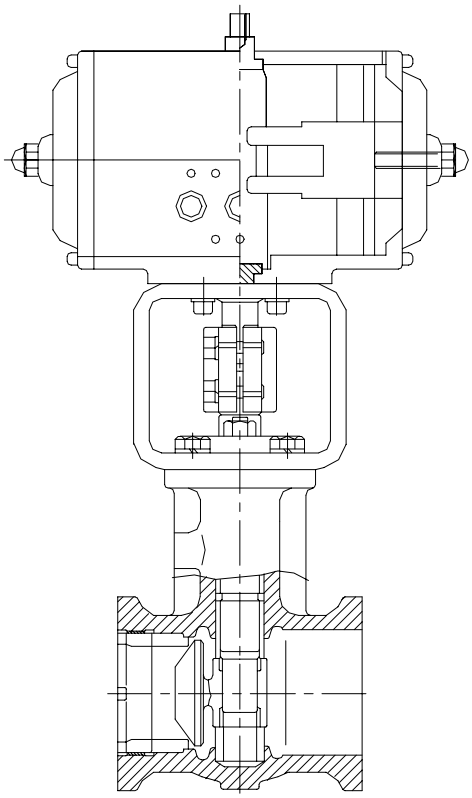
STANDARD SPECIFICATION

SEGMENTAL BALL VALVE ECCENTRIC ROTARY TYPE 4300E SERIES

GENERAL



4300E series, the latest eccentric type partial ball valves, has an automatically centering disc. They are characterized by compact size, light weight, large Cv valve, high range ability. And easy maintenance.
In addition, they can be changed in to reduced bore Type only by changing the seat ring from full bore Type to reduced bore type.

STANDARD SPECIFICATIONS

Body

Type : Eccentric rotary type.
Size : 1" ~ 12" (25~300mm)
Rating : JIS 10K, 20K, 30K, 40K
ANSI Class 150, 300, 600
Manufacturing range for JIS 30K, 40K & ANSI Class 600 is 1" to 3" (25~80mm)
Connection : Wafer type
Face to Face dimensions : See pages 10~20.
Materials : SCPH2, SCS13A, SCS14A
As to the operating temperature – Pressure limitation for each material, See pages 2~4 Tables 1~2
Bonnet : Standard (Castled together with body)
-45~ + 400° C
Note: Please be careful not to exceed Allowable temperature-pressure limitation for each material.
Packing : Teflon asbestos, Pillar foil
See page, 4, Fig.2 for selection.
Painting Color : Epoxy Resin Group/Munsell N-6 is Standard, When body material is stain-Less steel, no painting is standard.

TRIM

Disc type : Partial ball type disc.
Characteristic : Approximately Linear.
Materials/Treatment : Body & trim's standard material combination and treatment are stated on pages 2~3 Table 1.

Actuator

Standard Specification : See page 2.

Performance

Cv value : See page 5, Table 3.
Flow characteristics : See page 6, Fig 5.
Range ability : Full bore.....100 : 1
60% Reduced bore.....60 : 1
40% Reduced bore.....40 : 1
Seat leakage : See pages 2~3, Table 1.
Allowable pressure drop : See pages 7~9,Table 4.

Mounting Forms : See page 9, Fig. 6.
Dimensions : See pages 10~20.
Weight : See page 23, Table 5.
Optional Special Specifications : See page 2.

Actuator Specifications

Model / Specification	Diaphragm	Pneumatic cylinder		Solid State Electronic
	SA Series	SD Series		HQ Series with torque switch
	Multi-Spring Diaphragm	Double Acting	Spring Return	AC Motor/Resolution 0.4%
Purpose	Modulation/On-Off	Modulation/On-Off		Modulation
Air Supply (Spring range) Power Supply (Input signal)	1.4(0.2~1.0)kgf/㎠G 3.0(0.8~2.0)kgf/㎠G 3.4(0.8~2.0)kgf/㎠G 3.4(1.2~3.0)kgf/㎠G	Air Supply 4kg/㎠G		AC 220V , 50/60HZ AC100V-50/60HZ (DC4 ~ 20mA)
Piping/Wiring Connection	Rc1/4	Rc⅛(Cylinder size 40),Rc¼,Rc⅜,Rc½		2-G½
Opening angle	60 deg.	60 deg. 90 deg		60deg , 90deg
Action	DA : Air to Valve Shut. RA : Air to Valve Open	Positioner Signal increase Valve Open or Shut	DA : Air to Valve Shut RA : Air to Valve Open	DA : Signal increase-V-Shut RA : Signal increase-V-Open
Hysteresis	Less than 1% of SS With Positioner	Less than 1.5% of SS with Positioner		Less than 0.8% of SS
Linearity	Less than ±2% of SS With Positioner	Less than ±2% of SS with Positioner		Less than ±1% of SS
Ambient Temperature	-30~ + 70°C	-20~ + 60°C		-10 ~ + 55°C
Painting	Munsell N-6	Munsell N-6		Munsell N-6
Option	E/P.P/P Positioner, Air Set, Solenoid Valve Speed controller, Lock-up Valve, Limit switch. Manual handle. etc	E/P.P/P Positioner, Air set Limit switch. Solenoid valve, Speed controller, Lock-up valve Open or Shut stopper. Position transmitter. Manual handle. Volume tank etc.		Torque switch, Space heater, Junction Box, Overload unit, Manual handle etc.

Optional Special Specifications (additional cost is required) :

- ⬣Special testing
  Flow characteristics testing, Material certificate.
  Low temperature testing, Steam testing.
  Non-destructive testing, Radiographic testing
- ⬣Oxygen clean.
- ⬣ Sand/Dust proof.
- ⬣ Cold area proof.
- ⬣Tropical area proof
- ⬣ No copper alloy.
- ⬣ Salty environment proof.
- ⬣Special piping & fitting.
- ⬣Vacuum service proof.
- ⬣SUS bolts/nuts for exposed Parts.
- ⬣Non-standard Painting.

Table 1 Body/Trim Material Combinations, Operating Temperature & Seat Leakage.

Table 1-1 Body Materials : SCPH2, SCS13A

Body Material	JIS/ASTM	SCPH2/A216-WCB.SCS13A				
Disc	Materials	SCS14A	SCS14A	SCS14A	SCS14A	SCS14A
	Treatment	Chrome plated	Chrome plated	Chrome plated	Satellite Seat Surface	Satellite Seat Surface
Stem	Materials	SUS630	SUS630	SUS630	SUS630	SUS630
	Treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment
Bearing	Materials	SUS316	SUS316	SUS316	SUS316	SUS316
	Treatment	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated
Retainer	Material	SUS316	SUS316	SUS316	SUS316	SUS316
Seal ring	Type	SN type	SV type	SS type	M type	MS type
	Materials	Reinforced Teflon	Reinforced Teflon	Reinforced Teflon	SUS630	SUS316
	Treatment	MoS_2 filled	MoS_2 filled	Carbon fiber filled	Heat treatment	Heat treatment
	Back ring	NBR O-ring	VITON O-ring	SUS316	-	-
Seat leakage	ANSI	Class VI	Class VI	-	Class VI	Class VI
	Rated Cv X	Bubble-tight	Bubble-tight	0.000001%	0.01%	0.01%
Operating Temperature °C	SCPH2 Body	-5~+60	-5~+180	-5~+250	-5~+400	-5~+400
	Dcd13A Body	-45~+60	-10~+180	-45~+250	-45~+400	-45~+400

Table 1-2 Body Materials : SCS14A

Body Material	JIS/ASTM	SCS14A/A351-CF8M			
Disc	Materials	SCS14A	SCS14A	SCS14A	SCS14A
	Treatment	Chrome plated	Chrome plated	Chrome plated	Stellite Seat Surface
Stem	Materials	SUS316	SUS316	SUS316	SUS316
	Treatment	-	-	-	-
Bearing	Materials	SUS316	SUS316	SUS316	SUS316
	Treatment	Chrome plated	Chrome plated	Chrome plated	Chrome plated
Retainer	Material	SUS316	SUS316	SUS316	SUS316
Seal ring	Type	SN type	SV type	SS type	MS type
	Materials	Reinforced Teflon	Reinforced Teflon	Reinforced Teflon	SUS316
	Treatment	MoS_2 filled	MoS_2 filled	Carbon fiber filled	Heat treatment
	Back ring	NBR O-ring	VITON O-ring	SUS316	-
Seat leakage	ANSI	Class VI	Class VI	-	Class VI
	Rated Cv X	Bubble-tight	Bubble-tight	0.000001%	0.01%
Operating Temperature ℃		-45~+60	-10~+180	-45~+250	-45~+400

Note 1) Seal ring material/treatment vs operating temperature-pressure limitation See page 3. Fig. 1.

Table 2 Body Materials Operating Pressure-Temperature Ratings.

Table 2-1 ANSI

UNIT : kgf/㎠G

Temp. ℃	Class 150			Class 300			Class 600		
	SCPH2 WCB	SCS13A	SCS14A CF-8M	SCPH2 WCB	SCS13A	SCS14A CF-8M	SCPH2 WCB	SCS13A	SCS14A CF-8M
-45~-5		19.4	19.4		50.6	50.6		101.2	101.3
38	20.0	19.4	19.4	52.1	50.6	50.6	104.1	101.2	101.3
50	19.6	18.8	18.8	51.1	48.7	49.0	102.2	97.6	98.2
100	18.0	16.0	16.5	47.3	41.7	43.0	94.6	83.4	86.1
150	16.1	14.2	15.1	46.1	37.0	39.3	92.3	74.1	78.5
200	14.3	12.8	14.0	44.7	33.4	36.4	89.3	66.8	72.7
250	12.3	11.9	12.3	42.5	31.1	34.1	85.0	62.3	68.1
300	10.4	10.4	10.4	39.5	29.7	32.2	79.0	59.2	64.5
350	8.6	8.6	8.6	37.7	28.7	31.0	75.4	57.2	62.0
375	7.5	7.5	7.5	37.2	28.3	30.3	74.3	56.6	60.6
400	6.6	6.6	6.6	35.2	28.0	29.7	70.4	56.0	59.3

Table 2-2 JIS

UNIT : kgf/㎠G

Temp. ℃	JIS10K	JIS20K	JIS30K	JIS40K
	SCPH2	SCPH2	SCPH2	SCPH2
~120	14.0	34.0	51.0	68.0
~220	12.0	31.0	46.0	62.0
~300	10.0	29.0	43.0	57.0
~350		26.0	39.0	52.0
~400		23.0	38.0	46.0

Fig. 1 Seal Ring Operating Temperature-Pressure Limitation

(—— - —— allowable fluid pressure at Valve Shut
——— allowable differential pressure at Modulation)

Fig.1-1 Soft seat (Sn,Sv type)

Disc: SCS14A chrome plated
Seat leakage: ANSI Class VI

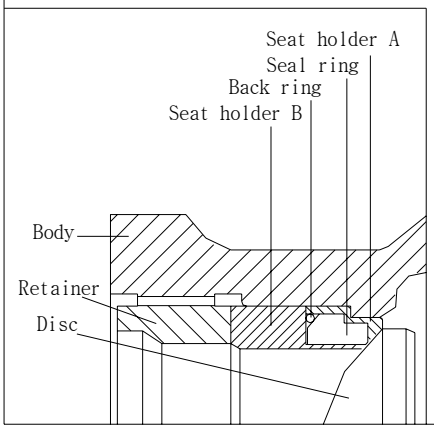


Fig.1-1A Sv type

Seal ring: Reinforced Teflon
Mos2filled
Back ring: Viton O-ring

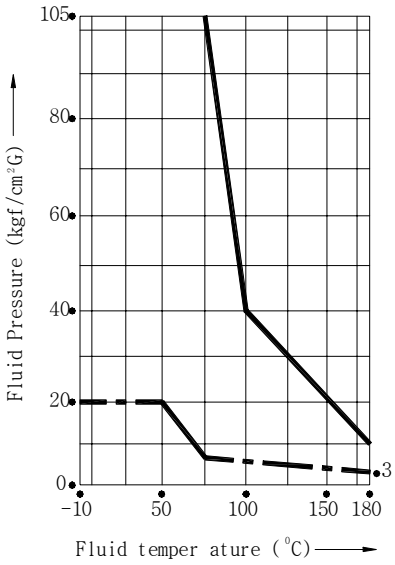


Fig.1-1B Sn type

Seal ring: Reinforced Teflon
Mos2filled
Back ring: NBR O-ring

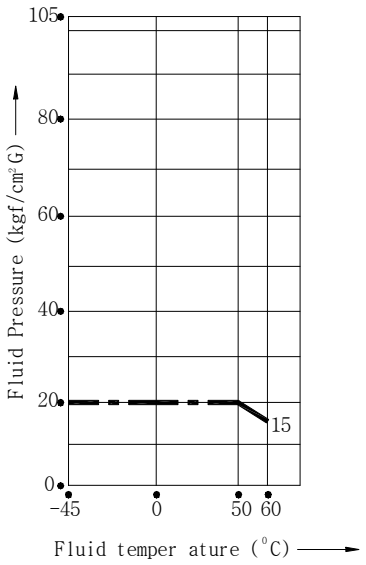
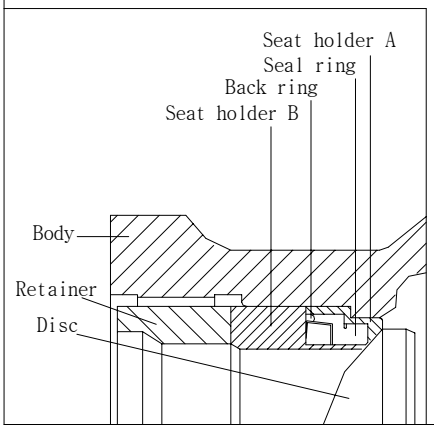


Fig.1-2 Soft seat (SS type)

Disc: SCS14A chrome plated
Seat leakage: Rated Cv x 0.000001%

Seal ring: Reinforced Teflon
carbon Fiber filled
Back ring: SUS316



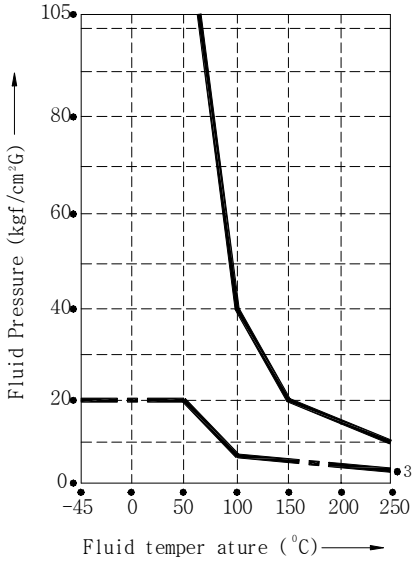
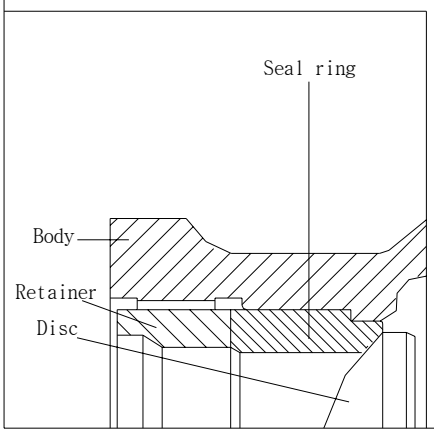
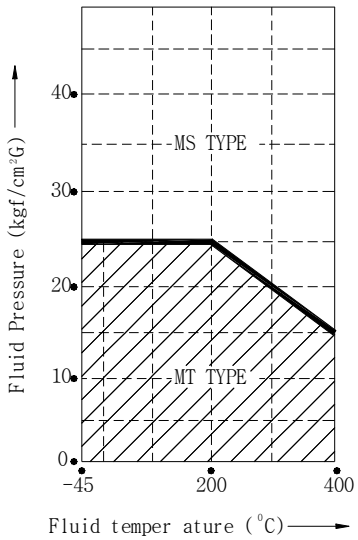


Fig.1-3 Metal seat (M, MS type)

Seat leakage: Rated Cv x 0.01%





	Disc	Seal ring
MT TYPE	SCS14A Stellite seat surface	SUS630 Heat treatment
MS TYPE	SCS14A Stellite seat surface	Sus316 Stellite seat surface

Fig. 2 Gland Packing Temperature-Pressure Limitation

Fig. 2-1 Teflon asbestos (P4513 + P4513L)
Oxidizing fluid (P4513 + P#2S)

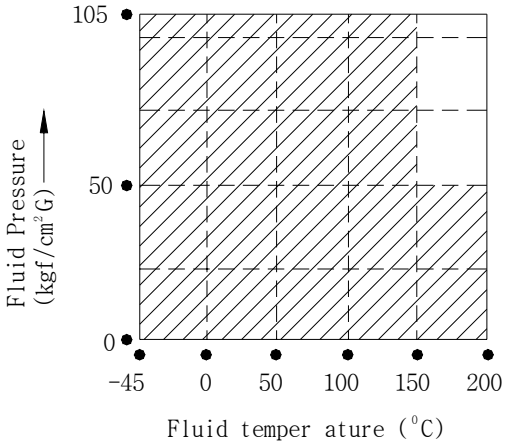


Fig. 2-2 Pillar foil (P6616A + P316)

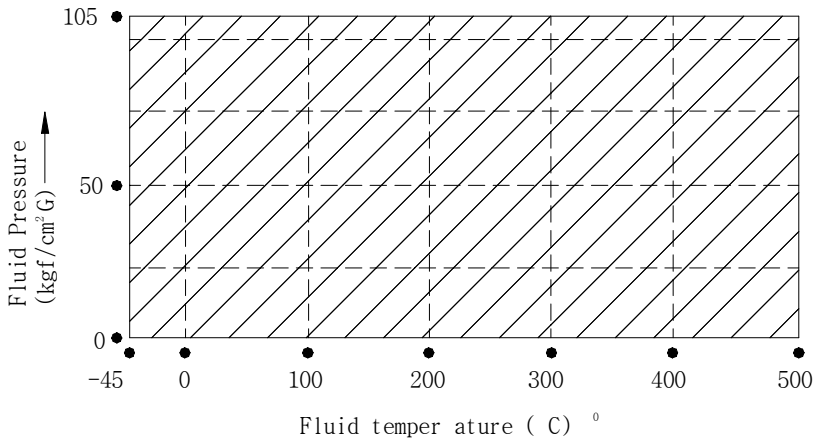


Fig. 3 Body Section View

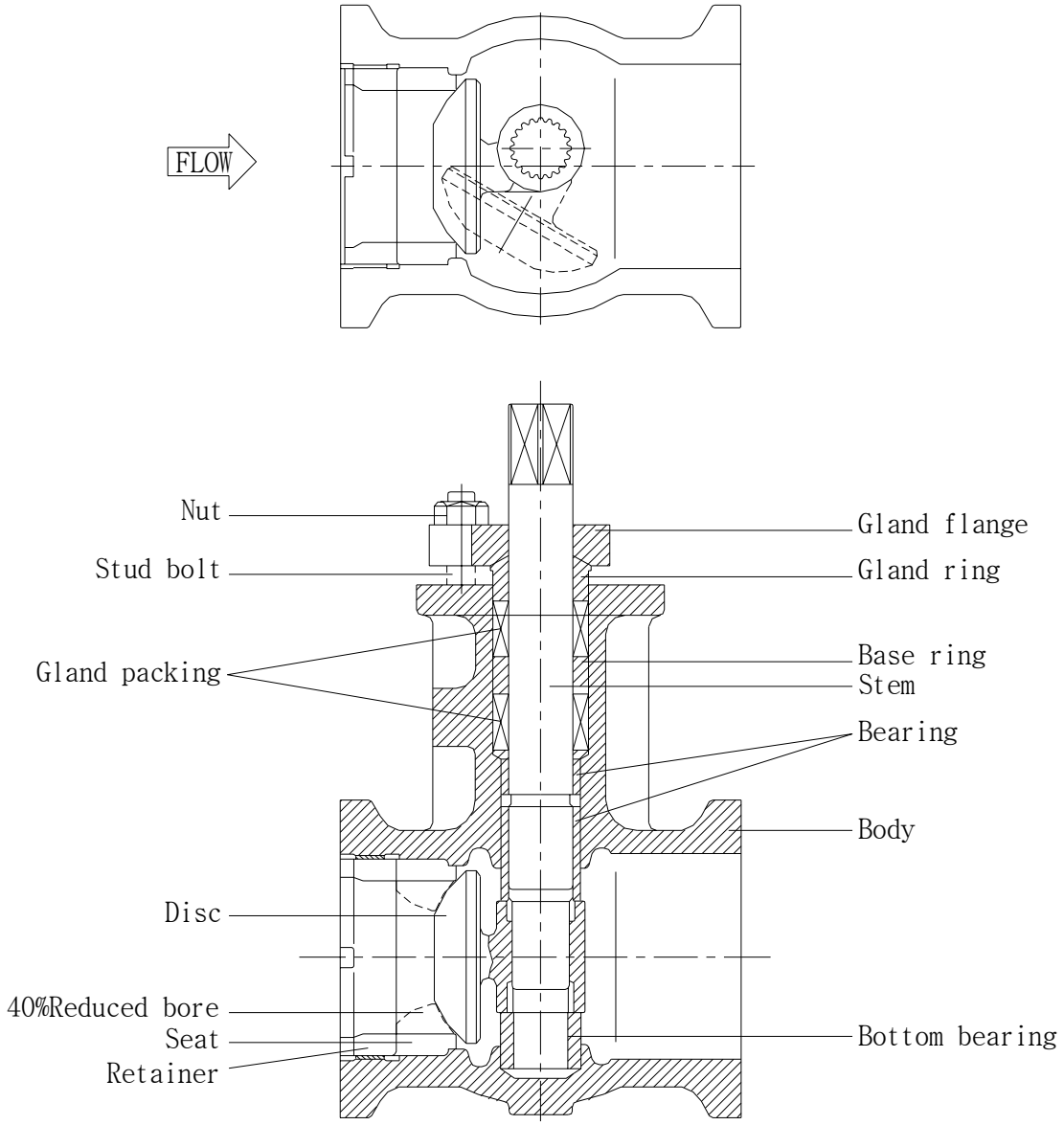


Table 3 Rated Cv valve

Valve size Inch (mm)	Full bore	60% Reduced bore	40% Reduced bore
1 (25)	14	-	6
1½ (40)	30	-	12
2 (50)	55	-	22
2½ (65)	100	-	40
3 (80)	150	-	60
4 (100)	250	-	100
5 (125)	350	-	140
6 (150)	600	360	240
8 (200)	1000	600	400
10 (250)	1400	840	560
12 (300)	1950	1200	780

Fig. 4 Flow characteristics

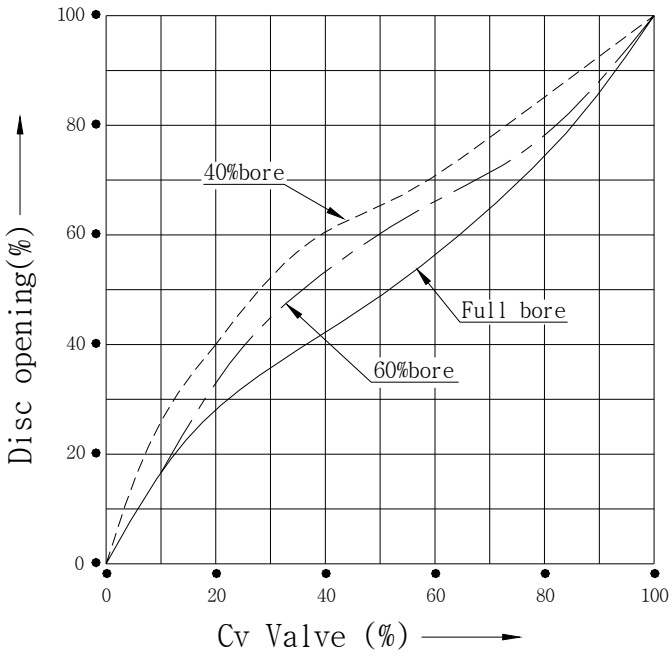


Fig. 5-1 Flow Characteristics

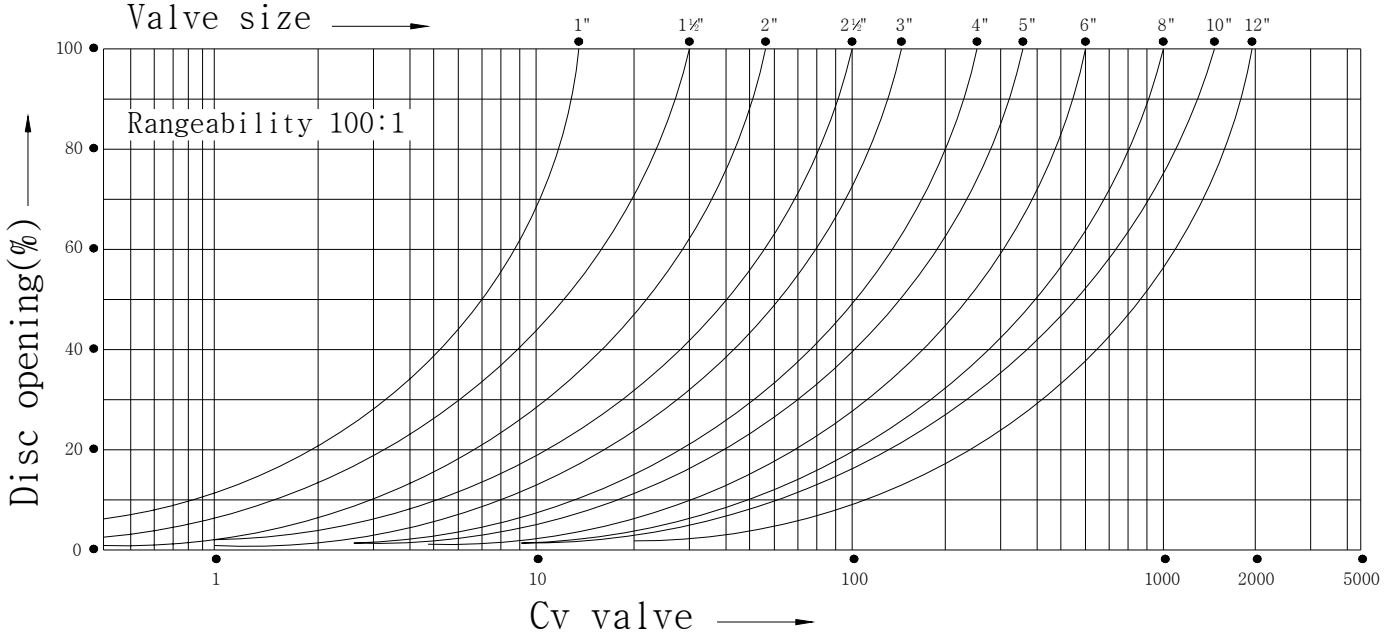


Fig. 5-2 60% Reduced Bore Flow Characteristics

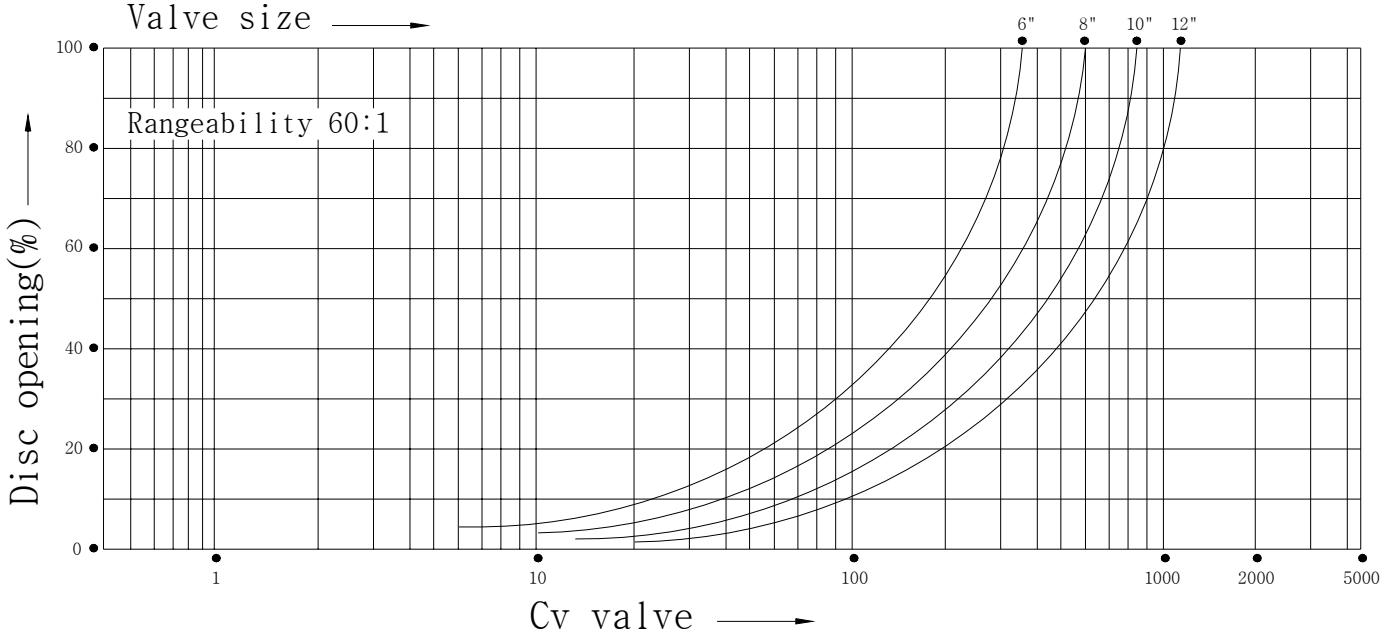


Fig. 5-3 40% Reduced Bore Flow Characteristics

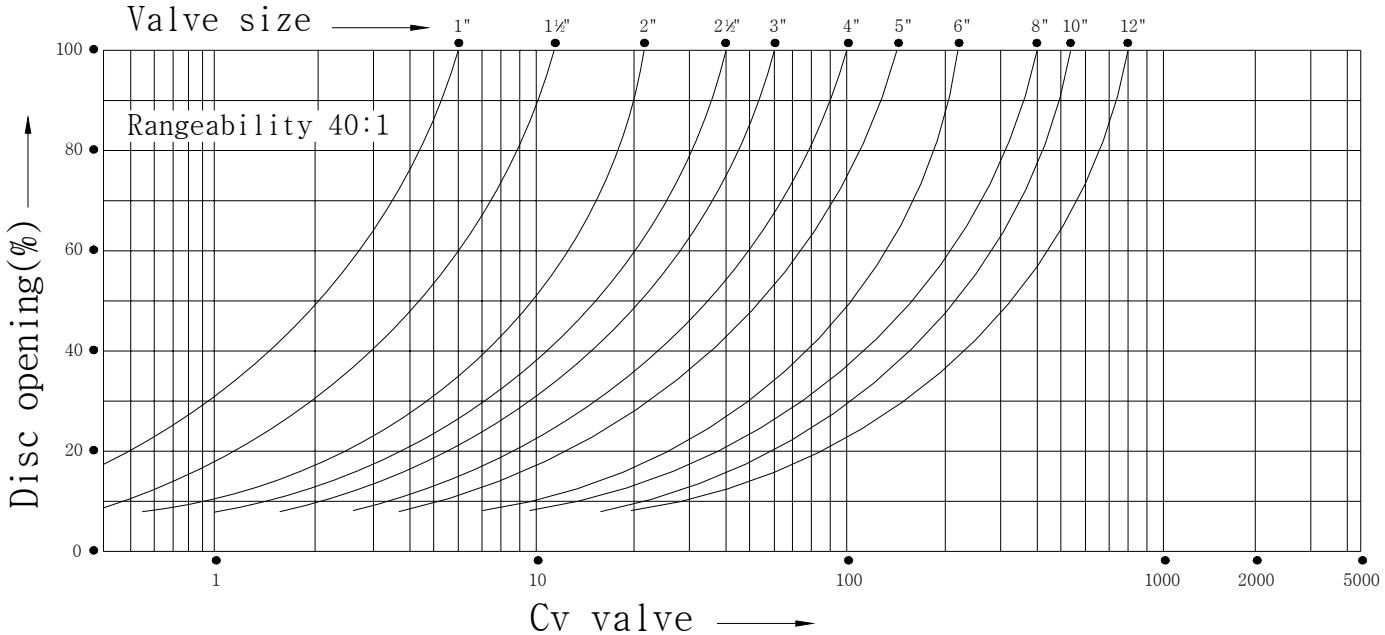


Table 4 Max. Allowable Differential Pressure (Unit:kgf/㎠)
△ Modulating Differential Pressure.

Table 4-1 Diaphragm Actuator (SA Series)

Table 4-1A Packing: Teflon Asbestos (P4513+P4513L,P4513+P#2S)

Actuator Size	Air Supply (off Balance) kgf/㎠G	Spring Range kgf/㎠G	Purpose	Stem Materials	Valve size										
					1" 25A	1½" 40A	2" 50A	2½" 65A	3" 80	4" 100A	5" 125A	6" 150A	8" 200A	10" 250A	12" 300A
220	3.0 (0.8)	0.8 ~ 2.0	Shut-off	SUS630	51.0	28.0	12.5								
				SUS316	51.0	28.0	12.5								
			△ P	SUS630	16.0	6.5	3.0								
				SUS316	16.0	6.5	3.0								
	3.4 (1.2)	RA 1.2~3.0 DA 0.8~2.0	Shut-off	SUS630	51.0	51.0	25.0	7.0	3.0						
				SUS316	51.0	51.0	25.0	7.0	3.0						
			△ P	SUS630	36.0	15.0	8.0	2.0	1.0						
				SUS316	36.0	15.0	8.0	2.0	1.0						
265	3.0 (0.8)	0.8 ~ 2.0	Shut-off	SUS630			51.0	20.0	11.0						
				SUS316			34.0	20.0	11.0						
			△ P	SUS630			16.0	6.0	4.0						
				SUS316			16.0	6.0	4.0						
	3.4 (1.2)	RA 1.2~3.0 DA 0.8~2.0	Shut-off	SUS630				34.0	21.0	7.0	3.0				
				SUS316				34.0	21.0	7.0	3.0				
			△ P	SUS630				11.0	6.5	1.5	1.0				
				SUS316				11.0	6.5	1.5	1.0				
365	3.0 (0.8)	0.8 ~ 2.0	Shut-off	SUS630				51.0	38.0	15.5	9.0				
				SUS316				42.0	36.0	15.5	9.0				
			△ P	SUS630				20.0	12.5	4.5	3.0				
				SUS316				20.0	12.5	4.5	3.0				
470	3.0 (0.8)	0.8 ~ 2.0	Shut-off	SUS630						51.0	50.0	24.0	13.0	6.5	3.5
				SUS316						44.0	28.0	24.0	13.0	6.5	3.5
			△ P	SUS630						24.0	15.0	7.0	4.0	2.0	1.3
				SUS316						24.0	15.0	7.0	4.0	2.0	1.3

Table 4-1B Packing: Pillar foil (P6616A+P316)

Actuator Size	Air Supply (off Balance) kgf/㎠G	Spring Range kgf/㎠G	Purpose	Stem Materials	Valve size										
					1" 25A	1½" 40A	2" 50A	2½" 65A	3" 80	4" 100A	5" 125A	6" 150A	8" 200A	10" 250A	12" 300A
220	3.0 (0.8)	0.8 ~ 2.0	Shut-off	SUS630	51.0	20.0	8.0								
				SUS316	51.0	20.0	8.0								
			△ P	SUS630	3.0	1.0	0.5								
				SUS316	3.0	1.0	0.5								
	3.4 (1.2)	RA 1.2~3.0 DA 0.8~2.0	Shut-off	SUS630	51.0	42.0	20.0								
				SUS316	51.0	42.0	20.0								
			△ P	SUS630	20.0	8.0	4.0								
				SUS316	20.0	8.0	4.0								
265	3.0 (0.8)	0.8 ~ 2.0	Shut-off	SUS630			46.0	15.0	8.0						
				SUS316			29.0	15.0	8.0						
			△ P	SUS630			12.0	2.5	1.5						
				SUS316			12.0	2.5	1.5						
	3.4 (1.2)	RA 1.2~3.0 DA 0.8~2.0	Shut-off	SUS630				3.0	18.0						
				SUS316				3.0	18.0						
			△ P	SUS630				7.5	5.0						
				SUS316				7.5	5.0						
365	3.0 (0.8)	0.8 ~ 2.0	Shut-off	SUS630				51.0	33.0	11.0	6.0				
				SUS316				36.0	33.0	11.0	6.0				
			△ P	SUS630				16.0	10.0	1.5	1.0				
				SUS316				16.0	10.0	1.5	1.0				
470	3.0 (0.8)	0.8 ~ 2.0	Shut-off	SUS630						51.0	47.0	22.0	11.0	5.5	3.0
				SUS316						42.0	26.0	22.0	11.0	5.5	3.0
			△ P	SUS630						21.0	13.0	6.0	1.5	1.5	0.7
				SUS316						21.0	13.0	6.0	1.5	1.5	0.7

Table 4-2 Double Acting Pneumatic Cylinder Actuator/Air Supply 4.0 kgf/㎠G

Actuator series	size	Purpose	Packing / Valve size / Stem Materials	Teflon asbestos (P4513+P4513L,P4513+P#2S)											Pillarfoil(P6616A+P316)										
				1"	1½"	2	2½"	3"	4"	5"	6"	8"	10"	12"	1"	1½"	2	2½"	3"	4"	5"	6"	8"	10"	12"
SA Series Double Acting	65	Shut-off	SUS630	51.0	51.0	26.0									51.0	47.0	22.0								
			SUS316	51.0	51.0	26.0									51.0	47.0	22.0								
		⊿ P	SUS630	40.0	16.5	9.0									26.0	11.0	6.0								
			SUS316	40.0	16.5	9.0									26.0	11.0	6.0								
	80	Shut-off	SUS630			51.0	46.0	28.0	10.5	6.0							51.0	46.0	28.0	8.0	4.0				
			SUS316			34.0	42.0	28.0	10.5	6.0							29.0	36.0	28.0	8.0	4.0				
		⊿ P	SUS630			37.0	17.0	11.0	4.0	2.5							33.0	13.0	8.5	1.0	-				
			SUS316			25.5	17.0	11.0	4.0	2.5							22.5	13.0	8.5	1.0	-				
	100	Shut-off	SUS630				51.0	51.0	48.0	34.5	16.0	8.0						51.0	51.0	47.0	30.0	14.0	7.0		
			SUS316				42.0	36.0	44.0	28.0	16.0	8.0						36.0	33.0	42.0	26.5	14.0	7.0		
		⊿ P	SUS630				51.0	44.0	26.0	16.5	8.0	4.0						51.0	42.0	22.0	14.0	6.5	3.5		
			SUS316				31.0	26.5	26.0	16.5	8.0	4.0						27.0	24.0	22.0	14.0	6.5	3.5		
SD Series Double Acting	140	Shut-off	SUS630								51.0	29.0	16.5	10.0								51.0	28.0	15.0	9.0
			SUS316								25.5	14.0	15.5	10.0								23.0	12.5	14.0	9.0
		⊿ P	SUS630								17.0	9.0	5.0	3.0								15.5	8.0	4.5	2.5
			SUS316								17.0	9.0	5.0	3.0								15.5	8.0	4.5	2.5
	200	Shut-off	SUS630										29.0	18.0										26.5	16.5
			SUS316										15.5	12.0										14.5	11.0
		⊿ P	SUS630										9.5	6.0										9.0	5.5
			SUS316										9.5	6.0										9.0	5.5
	250D	Shut-off	SUS630										34.0	29.0										34.0	28.0
			SUS316										15.5	12.0										14.5	11.0
		⊿ P	SUS630										22.0	15.0										21.0	14.0
			SUS316										11.5	8.0										10.7	7.5

Table 4-3 Spring Return Pneumatic Cylinder Actuator/Air Supply 4.0 kgf/㎠G

Actuator series	size	Purpose	Packing / Valve size / Stem Materials	Teflon asbestos (P4513+P4513L,P4513+P#2S)											Pillarfoil(P6616A+P316)										
				1"	1½"	2	2½"	3"	4"	5"	6"	8"	10"	12"	1"	1½"	2	2½"	3"	4"	5"	6"	8"	10"	12"
SA Series Double Acting	65	Shut-off	SUS630	29.0	8.0										6.0										
			SUS316	29.0	8.0										6.0										
		⊿ P	SUS630	12.0	5.0										-										
			SUS316	12.0	5.0										-										
	80	Shut-off	SUS630	51.0	51.0	36.0	13.0	7.0							51.0	51.0	31.0	8.0	3.5						
			SUS316	51.0	51.0	34.0	13.0	7.0							51.0	51.0	29.0	8.0	3.5						
		⊿ P	SUS630	51.0	31.0	16.0	6.5	4.0							51.0	25.0	13.0	3.0	2.0						
			SUS316	51.0	31.0	16.0	6.5	4.0							51.0	25.0	13.0	3.0	2.0						
	100	Shut-off	SUS630			51.0	51.0	36.0	14.5	9.0							51.0	51.0	34.0	11.0	6.0				
			SUS316			34.0	44.0	36.0	14.5	9.0							29.0	36.0	33.0	11.0	6.0				
		⊿ P	SUS630			51.0	26.0	16.5	7.0	4.5							51.0	23.0	14.5	4.0	2.5				
			SUS316			25.5	26.0	16.5	7.0	4.5							22.0	23.0	14.5	4.0	2.5				
SD Series Double Acting	140	Shut-off	SUS630						51.0	51.0	25.0	14.0								51.0	49.0	23.0	12.5		
			SUS316						44.0	28.0	25.0	14.0								42.0	26.0	23.0	12.5		
		⊿ P	SUS630						35.0	22.0	11.0	6.0								31.0	20.0	9.0	5.0		
			SUS316						32.0	20.0	11.0	6.0								29.0	18.5	9.0	5.0		
	250D	Shut-off	SUS630								51.0	31.0	19.0	12.0								51.0	29.0	18.0	11.0
			SUS316								25.0	14.0	15.0	12.0								23.0	12.5	14.5	11.0
		⊿ P	SUS630								28.5	15.0	9.0	5.5								27.0	14.0	8.0	7.0
			SUS316								18.0	9.5	9.0	5.5								16.5	9.0	8.0	7.0
	300D	Shut-off	SUS630										34.0	29.0										34.0	28.0
			SUS316										15.0	12.0										14.5	11.0
		⊿ P	SUS630										18.0	11.5										17.0	11.0
			SUS316										10.5	8.0										10.0	7.0

Table 4-4 Solid State Electric Actuator

Actuator series (kgf-m)	Purpose	Stem Materials / Packing / Valve size	Teflon asbestos (P4513+P4513L,P4513+P#2S)											Pillarfoil(P6616A+P316)										
			1"	1½"	2	2½"	3"	4"	5"	6"	8"	10"	12"	1"	1½"	2	2½"	3"	4"	5"	6"	8"	10"	12"
HQ008	Shut-off	SUS630	51.0	20.0	8.0									35.0	10.0	3.0								
		SUS316	51.0	20.0	8.0									35.0	10.0	3.0								
	⊿ P	SUS630	43.0	18.0	8.0									30.0	10.0	3.0								
		SUS316	43.0	18.0	8.0									30.0	10.0	3.0								
HQ015	Shut-off	SUS630		51.0	38.0	14.0	8.0	.							51.0	33.0	9.0	4.5	.					
		SUS316		51.0	34.0	14.0	8.0	.							51.0	29.0	9.0	4.5	.					
	⊿ P	SUS630		51.0	28.0	13.0	8.0	.							48.0	26.0	9.0	4.5	.					
		SUS316		48.0	25.5	13.0	8.0	.							43.0	22.5	9.0	4.5	.					
HQ015	Shut-off	SUS630			51.0	40.0	24.0	8.0	4.5							51.0	35.0	20.0	3.5	1.5				
		SUS316			34.0	40.0	24.0	8.0	4.5							29.0	35.0	20.0	3.5	1.5				
	⊿ P	SUS630			51.0	29.0	18.5	8.0	4.5							51.0	26.0	16.5	3.5	1.5				
		SUS316			25.5	29.0	18.5	8.0	4.5							22.5	26.0	16.5	3.5	1.5				
HQ020	Shut-off	SUS630				51.0	51.0	25.0	16.0	6.5							51.0	51.0	20.0	12.5	4.0			
		SUS316				42.0	36.0	25.0	16.0	6.5							36.0	33.0	20.0	12.5	4.0			
	⊿ P	SUS630				51.0	39.0	25.0	12.0	6.0							51.0	37.0	16.0	10.0	4.0			
		SUS316				31.0	26.5	25.0	12.0	6.0							27.0	24.0	16.0	10.0	4.0			
HQ030	Shut-off	SUS630						42.0	28.0	12.5	6.0								38.0	24.0	10.0	5.0		
		SUS316						42.0	28.0	12.5	6.0								38.0	24.0	10.0	5.0		
	⊿ P	SUS630						30.0	19.0	9.5	5.0								28.0	18.0	8.5	4.5		
		SUS316						30.0	19.0	9.5	5.0								28.0	18.0	8.5	4.5		
HQ060	Shut-off	SUS630						51.0	50.0	24.0	13.0								51.0	46.0	22.0	12.0		
		SUS316						44.0	28.5	24.0	13.0								42.0	26.0	22.0	12.0		
	⊿ P	SUS630						50.0	34.0	17.0	9.0								49.0	32.0	16.0	8.0		
		SUS316						31.5	20.5	17.0	9.0								29.0	18.5	16.0	8.0		
HQ080	Shut-off	SUS630								30.0	16.0	9.0	5.0								28.0	15.0	7.5	4.5
		SUS316								25.5	14.0	9.0	5.0								23.5	12.5	7.5	4.5
	⊿ P	SUS630								21.0	11.0	6.5	4.0								19.0	10.0	5.5	3.5
		SUS316								18.0	9.5	6.5	4.0								16.5	9.0	5.5	3.5
HQ080	Shut-off	SUS630								51.0	29.0	16.0	10.0								50.0	28.0	15.0	9.0
		SUS316								25.5	14.0	15.5	10.0								23.5	12.5	14.5	9.0
	⊿ P	SUS630								36.0	19.0	11.0	7.0								34.0	18.0	10.5	6.5
		SUS316								18.0	9.5	10.5	7.0								16.5	9.0	10.0	6.5

Fig. 6 Mounting Forms (For Diaphragm Actuator)