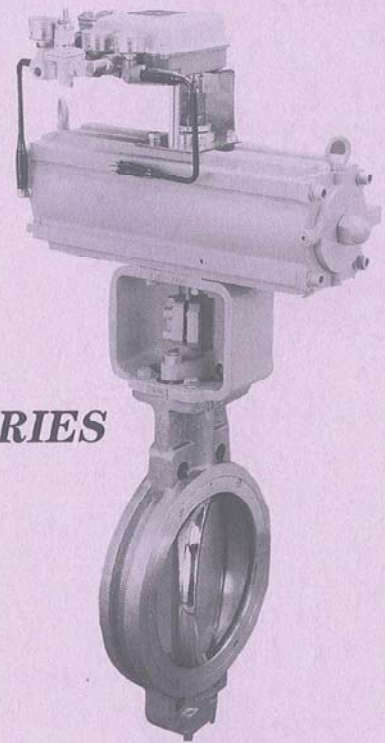


*STANDARD SPECIFICATION*

*HIGH PERFORMANCE BUTTERFLY VALVE  
PARA-SEAL*

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*710C SERIES*

**KOSO**

**KOSO**

## STANDARD SPECIFICATION

# PARA-SEAL HIGH PERFORMANCE BUTTERFLY VALVE 710C SERIES

### GENERAL

710 series is our latest high performance butterfly valves which disc itself is concentric type but disc seating surface is machined as eccentric. It has a special seating mechanism, accordingly having high sealing performance and controllability for a variety of liquid and gas services. On the other hand it has such features as compactness, light weight, free maintainance and wide manufacturing range including large size. It is one of the most economical valves.

### STANDARD SPECIFICATION

#### Body

Type : Concentric type

Size : 3"~60" (80~1500mm)

#### Rating

L Class : 3"~24"/JIS10K, ANSI & JPI Class 150  
28"~32"/JIS10K, JPI Class 150  
36"~60"/JIS5K

M Class : 3"~24"/JIS20K, ANSI & JPI Class 300  
28"~60"/JIS10K, JPI Class 150

Connection : Wafer

Face to Face dimension: See pages 18~30

Materials : SCPH2, SCS13A, SCS14A, FC25 and other Alloy Steels. (FC25 : L Class Body, 12" or under only)

As to the operating temp./press. for each material, see pages 2~4, Tables 1 & 3.

Bonnet : Standard bonnet (Casted with Body)  
3"~6" (80~150mm).....45~500°C  
8"~28" (200~700mm)....45~450°C  
32"~36" (800~900mm)....45~400°C  
40"~60" (1000~1500mm)....45~350°C

Long extension bonnet  
3 ~ 24" (80 ~ 600mm)··· — 45° C and under (M Class body for SCS14A only)

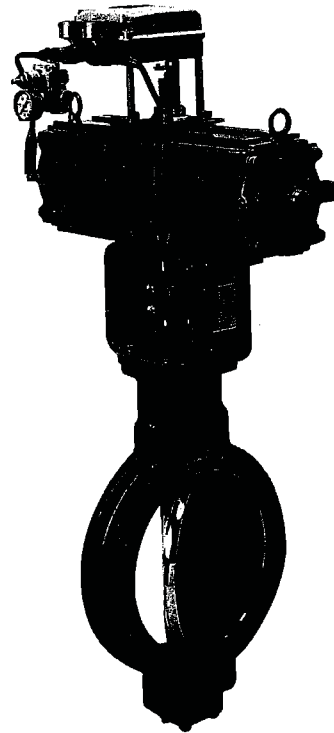
#### Outer bearing type

This type is available for high temperature service.

Gland packing : Teflon Asbestos, Pillarfoil

Gasket: Teflon, Asbestos, Pillarfoil

Painting color: Munsell N-6 (Epoxy resin group) is Standard. As for stainless steel body, no painting is standard.



#### Trim

Disc type : Tight close type

Characteristics : Modified EQ%

Material & Treatment: See pages 2~4, Table 1.

As to the temp./press. range vs disc/seal ring material/treatment, see page 5, Fig. 1.

#### Actuator

Standard specification: See page 2.

#### Performance

Rated Cv value: See page 7, Table 4.

Flow characteristics: See page 7, Fig. 5.

Rangeability : 90° opening (50 : 1)

60° opening (25 : 1)

Leakage: See pages 2~4, Table 1.

Allowable press. dorp: See pages 8~16, Table 5.

Dimensions: See pages 18~30.

Mounting form: See page 17, Fig. 6.

Weight: See page 17, Table 6.

Optional Special Specifications: See page 2.

## Actuator Specifications

Model	Pneumatic Cylinder		Diaphragm	Solid State Electronic Actuator		Electric Motor
	6500RA, 6600RA		5200RA	3500RB	3600RA	3400RA
specifications	Double Acting	Spring Return	Multi-Spring	DC Motor/Resolution 0.3%	AC Motor/Resolution 0.4%	AC Motor
Purpose	Modulation/On-Off		Modulation	Modulation		On-Off
Air Supply (Spring range) or Power Supply (Input signal)	4.0, 5.0kgf/cm <sup>2</sup> G	4.0(1.35~2.65)kgf/cm <sup>2</sup> G 5.0(1.70~3.30)kgf/cm <sup>2</sup> G	3.0(0.8~2.0)kgf/cm <sup>2</sup> G 3.4(0.8~2.0)kgf/cm <sup>2</sup> G 3.4(1.2~3.0)kgf/cm <sup>2</sup> G	AC100V 50/60Hz(DC4~20mA)		AC100V 50/60Hz Change-over contact
Piping/wiring Conn.	Rc <sup>1</sup> / <sub>8</sub> (for Cylinder size 60, 90), Rc <sup>1</sup> / <sub>4</sub> , Rc <sup>3</sup> / <sub>8</sub> , Rc <sup>1</sup> / <sub>2</sub>		Rc <sup>1</sup> / <sub>4</sub>	2-G <sup>1</sup> / <sub>2</sub>		2-G <sup>1</sup> / <sub>2</sub>
Opening angle	60 deg. or 90 deg.		60 deg.	60 deg. or 90 deg.		90 deg.
Action	Po. Signal increase: Valve Open or Shut.	DA : Air to Valve Shut. RA : Air to Valve Open.		DA: Signal increase-Valve Shut RA: Signal increase-Valve Open		Manual selection Valve Open, Shut or Opening Stop
Hysteresis	Less than 1.5 % of FS with positioner		Less than 1% of FS with positioner	Less than 0.5 % of FS	Less than 0.8% of FS	—
Linearity	Less than ±2 % of FS with positioner		Less than ±2% of FS with positioner	Less than ±1% of FS	Less than ±1% of FS	—
Ambient Temperature	-20~+60°C		-10~+70°C	-10~+55°C		-10~+55°C
Painting	Munsell N-6 (Epoxy Resin Group)			S type P4417 (Blue)		
Options	E/P-P/P positioner, Air set, Limit switch, Solenoid valve, Speed controller, Lock-up valve, Open or Shut stopper. Positon transmitter. Manual handle. Volume tank etc.			Resolution 0.1%, Split range, Space heater, Junction Box, Position transmitter, Manual handle, etc.	Overload unit, Space heater, Torque switch Junction Box, Manual handle, etc.	Potentiometer, Micro switch, Space heater, 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 Material: FC25, SCPH2 (12" and under)**

Valve size		3"~12"(80mm~300mm)			3"~12"(80mm~300mm)					
Body Material JIS/ASTM		FC25			SCPH2/A216-WCB					
Disc	Material	SCS14A	SCS14A	SCS14A	SCS14A	SCS14A	SCS14A	SCS14A	SCS14A	SCS14A
	Treatment	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Stellite Seat surface
Stem	Material	SUS630	SUS630	SUS630	SUS630	SUS630	SUS630	SUS630	SUS630	SUS630
	Treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment
Bearing	Material	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316
	Treatment	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated
Seal ring	Type	FN	FV	CS	FN	FV	CS	M	M	
	Material	Reinforced Teflon MoS <sub>2</sub> filled	Reinforced Teflon MoS <sub>2</sub> filled	Reinforced Teflon Carbonfiber filled	Reinforced Teflon MoS <sub>2</sub> filled	Reinforced Teflon MoS <sub>2</sub> filled	Reinforced Teflon Carbonfiber filled	SUS316	SUS316	SUS316
	Back ring	NBR O-ring	VITON O-ring	SUS316	NBR O-ring	VITON O-ring	SUS316	—	—	—
Retainer	Material	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316
Operating Temp.(°C)		0~+60	0~+180	0~+200	-5~+60	-5~+180	-5~+250	-5~+400	-5~+400	-5~+400
Seat Leakage	ANSI	Class VI	Class VI	—	Class VI	Class VI	—	—	—	—
	Rated Cv ×	Bubble-tight	Bubble-tight	1×10 <sup>-6</sup> %	Bubble-tight	Bubble-tight	1×10 <sup>-6</sup> %	See Table 2	See Table 2	See Table 2

Note 1) Disc material for size 3", 4" is SUS316.

2) The above Cv% is percentage against rated Cv Value for 90° disc opening.

3) Seat material/treatment vs operating temp./press. range; See page 5, Fig. 1.

**Table 1-2 Body Material: SCPH2 (14" and over)**

Valve size		14" ~ 60" (350mm ~ 1500mm)							
Body Material JIS/ASTM		SCPH 2/A216-WCB							
Disc	Material	SCPH2	SCPH2	SCPH2	SCS13A	SCS13A	SCS13A	SCS13A	SCS13A
	Treatment	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Stellite Seat surface
Stem	Material	SUS630	SUS630	SUS630	SUS630	SUS630	SUS630	SUS630	SUS630
	Treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment
Bearing	Material	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316
	Treatment	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated
Seal ring	Type	FN	FV	CS	FN	FV	CS	M	M
	Material	Reinforced Teflon MoS2 filled	Reinforced Teflon MoS2 filled	Reinforced Teflon Carbonfiber-filled	Reinforced Teflon MoS2 filled	Reinforced Teflon MoS2 filled	Reinforced Teflon Carbonfiber-filled	SUS316	SUS316
	Back ring	NBR O-ring	VITON O-ring	SUS316	NBR O-ring	VITON O-ring	SUS316	-	-
Retainer	Material	SS41	SS41	SS41	SUS316	SUS316	SUS316	SUS316	SUS316
Operating Temp. (°C)		-5 ~ +60	-5 ~ +180	-5 ~ +250	-5 ~ +60	-5 ~ +180	-5 ~ +250	-5 ~ +400	-5 ~ +400
Seat	ANSI	Class VI	Class VI	-	Class VI	Class VI	-	-	-
Leakage	Rated Cv x	Bubble-tight	Bubble-tight	1 × 10 <sup>-6</sup> %	Bubble-tight	Bubble-tight	1 × 10 <sup>-6</sup> %	See Table 2	See Table 2

Note 1) Leakage class Cv% percentage against rated Cv value for 90° disc opening.  
 2) Seat material/treatment vs operating temp./press. range; See page 5, Fig. 1.

**Table 1-3 Body Material: SCS13A, SCS14A**

Valve size		3" ~ 12" (80mm ~ 300mm)				3" ~ 60" (80mm ~ 1500mm)				
Body Material JIS/ASTM		SCS13A				SCS14A/A351-CF8M				
Disc	Material	SCS14A	SCS14A	SCS14A	SCS14A	SCS14A	SCS14A	SCS14A	SCS14A	SCS14A
	Treatment	Chrome plated	Chrome plated	Chrome plated	Stellite Seat surface	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Stellite Seat surface
Stem	Material	SUS630	SUS630	SUS630	SUS630	SUS316	SUS316	SUS316	SUS316	SUS316
	Treatment	Heat T.	Heat T.	Heat T.	Heat T.	-	-	-	-	-
Bearing	Material	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316
	Treatment	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Fion metal	Chrome plated	Chrome plated	Chrome plated	Chrome plated
Seal ring	Material	FV	CS	M	M	KS	FV	CS	M	M
	Type	Reinforced Teflon MoS2 filled	Reinforced Teflon Carbonfiber filled	SUS316	SUS316	Kel-F	Reinforced Teflon MoS2 filled	Reinforced Teflon Carbonfiber filled	SUS316	SUS316
	Back ring	VITON O-ring	SUS316	-	-	SUS316	VITON O-ring	SUS316	-	-
Retainer	Material	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	
Operating Temp. (°C)		-10 ~ +180	-45 ~ +250	-45 ~ +400	-45 ~ +400	-196 ~ +100	-10 ~ +180	-45 ~ +250	-45 ~ +600	-45 ~ +600
Seat	ANSI	Class VI	-	-	-	-	Class VI	-	-	-
Leakage	Rated Cv x	Bubble-tight	1 × 10 <sup>-6</sup> %	See Table 2	See Table 2	1 × 10 <sup>-6</sup> %	Bubble-tight	1 × 10 <sup>-6</sup> %	See Table 2	See Table 2

Note 1) Disc material for 3" & 4" IS SUS316.  
 2) Leakage class Cv% is percentage against rated Cv value for 90° disc opening.  
 3) Seat material/treatment vs operating temp./press. range; See page 5, Fig. 1.  
 4) When oxygen clean service is required, bearing material/treatment is SUS316/Fion Metal.

**Table 1-4 Body Material: SCS13A (14" and over)**

Valve size		14" ~ 60" (350mm ~ 1500mm)							
Body Material JIS		SCS13A							
Disc	Material	SCS13A	SCS13A	SCS13A	SCS13A	SCS14A	SCS14A	SCS14A	SCS14A
	Treatment	Chrome plated	Chrome plated	Chrome plated	Stellite Seat Surface	Chrome plated	Chrome plated	Chrome plated	Stellite Seat surface
Stem	Material	SUS630	SUS630	SUS630	SUS630	SUS316	SUS316	SUS316	SUS316
	Treatment	Heat treatment	Heat treatment	Heat treatment	Heat treatment	-	-	-	-
Bearing	Material	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316
	Treatment	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated	Chrome plated
Seal ring	Type	FV	CS	M	M	FV	CS	M	M
	Material	Reinforced Teflon MoS2 filled	Reinforced Teflon Carbonfiber filled	SUS316	SUS316	Reinforced Teflon MoS2 filled	Reinforced Teflon Carbonfiber filled	SUS316	SUS316
	Back ring		SUS316	-	-		SUS316	-	-
Retainer	Material	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316	SUS316
Operating Temp. (°C)		-10 ~ +180	-45 ~ +250	-45 ~ +400	-45 ~ +400	-10 ~ +180	-45 ~ +250	-45 ~ +450	-45 ~ +450
Seat Leakage	ANSI	Class VI	-	-	-	Class VI	-	-	-
	Rated Cv ×	Bubble-tight	1 × 10 <sup>-6</sup> %	See Table 2	See Table 2	Bubble-tight	1 × 10 <sup>-6</sup> %	See Table 2	See Table 2

- Note 1) Leakage class Cv% percentage against rated Cv value for 90° disc opening.  
 2) Seat material/treatment vs operating temp./press. range, See page 5, Fig. 1.  
 3) As to oxygen clean service, bearing material is SUS316+Flon-metal.

**Table 2 Metal Seal Ring Seat Leakage (Cv % against Rated Cv value for 90° disc opening)**

Valve size \ Fluid temperature	Under 300°C	300~400°C	400~500°C	500~600°C
3" ~ 6" ( 80 mm ~ 150 mm)	0.0001% under	0.01% under	0.018% under	0.05% under
8" ~ 10" (200 mm ~ 250 mm)	0.00001% under	0.007% under	0.015% under	0.03% under
12" ~ 18" (300 mm ~ 450 mm)	0.00001% under	0.005% under	0.01% under	0.02% under
20" (500 mm) over	0.00001% under	0.001% under	0.005% under	0.01% under

**Table 3 Body Materials Operating Pressure-Temperature Ratings.**

**Table 3-1 ANSI**

Unit: kgf/cm<sup>2</sup>G

Temp. (°C)	Class 125	Temp. (°C)	Class 150			Class 300		
	F C 25		SCPH2 WCB	SCS13A	SCS14A CF-8M	SCPH2 WCB	SCS13A	SCS14A CF-8M
-5 ~ 65	14.0	-196 ~ 38	—	19.4	19.4	—	50.6	50.8
80	13.5	-5 ~ 38	20.0	19.4	19.4	52.1	50.6	50.6
100	12.9	50	19.6	18.8	18.8	51.1	48.7	49.0
120	12.3	100	18.0	16.0	16.5	47.3	41.7	43.0
140	11.7	150	16.1	14.2	15.1	46.1	37.0	39.3
160	11.0	200	14.3	12.8	14.0	44.7	33.4	36.4
180	10.4	250	12.3	11.9	12.3	42.5	31.1	34.1
200	9.7	300	10.4	10.4	10.4	39.5	29.7	32.2
		350	8.6	8.6	8.6	37.7	28.7	31.0
		375	7.5	7.5	7.5	37.2	28.3	30.3
		400	6.6	6.6	6.6	35.2	28.0	29.7
		425	—	5.7	5.7	—	27.7	29.3
		450	—	4.8	4.8	—	27.4	28.7
		475	—	3.8	3.8	—	27.1	27.9
		500	—	2.9	2.9	—	26.6	27.3
		525	—	1.9	1.9	—	22.4	26.3
		550	—	1.3	1.3	—	22.2	25.5
		575	—	1.3	1.3	—	20.5	24.6
		600	—	1.3	1.3	—	17.0	21.8

**Table 3-2 JIS**

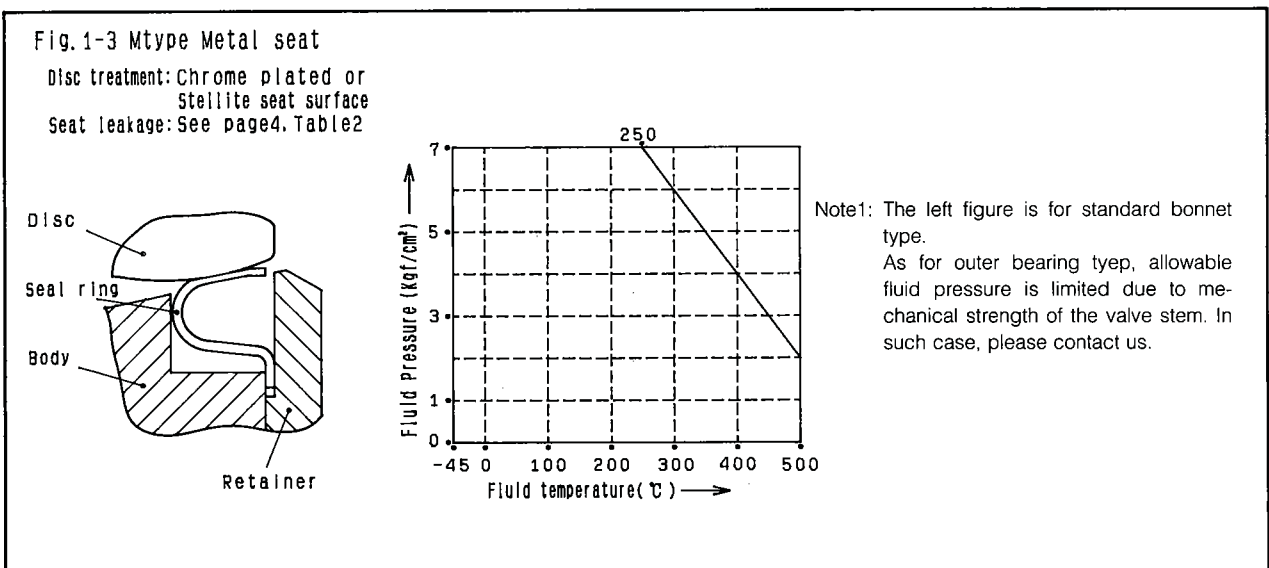
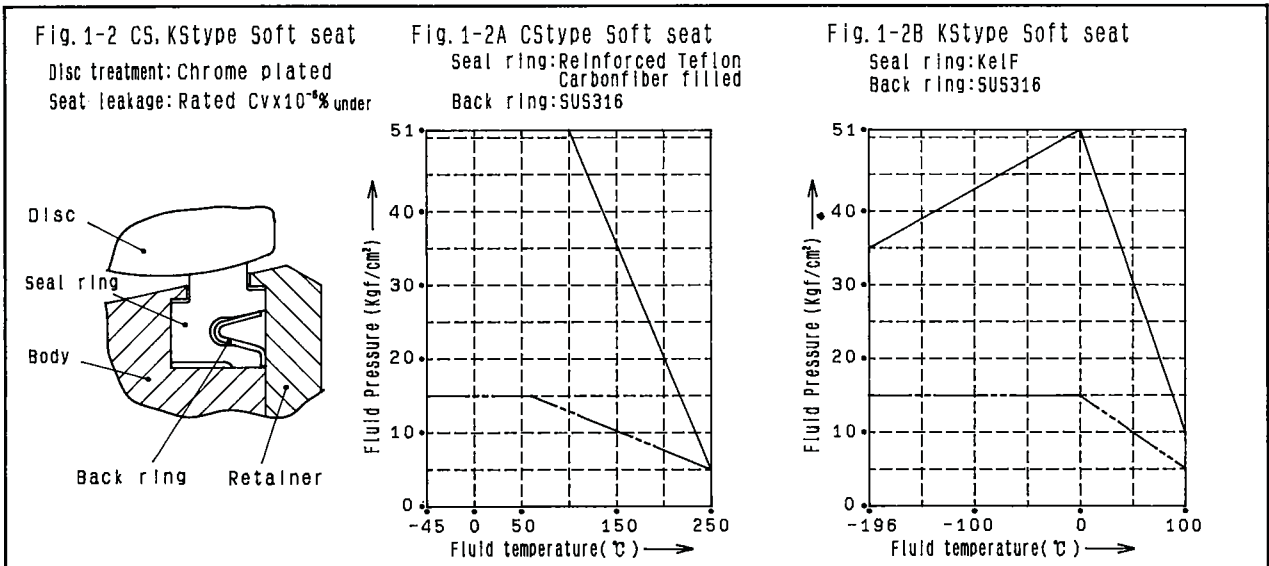
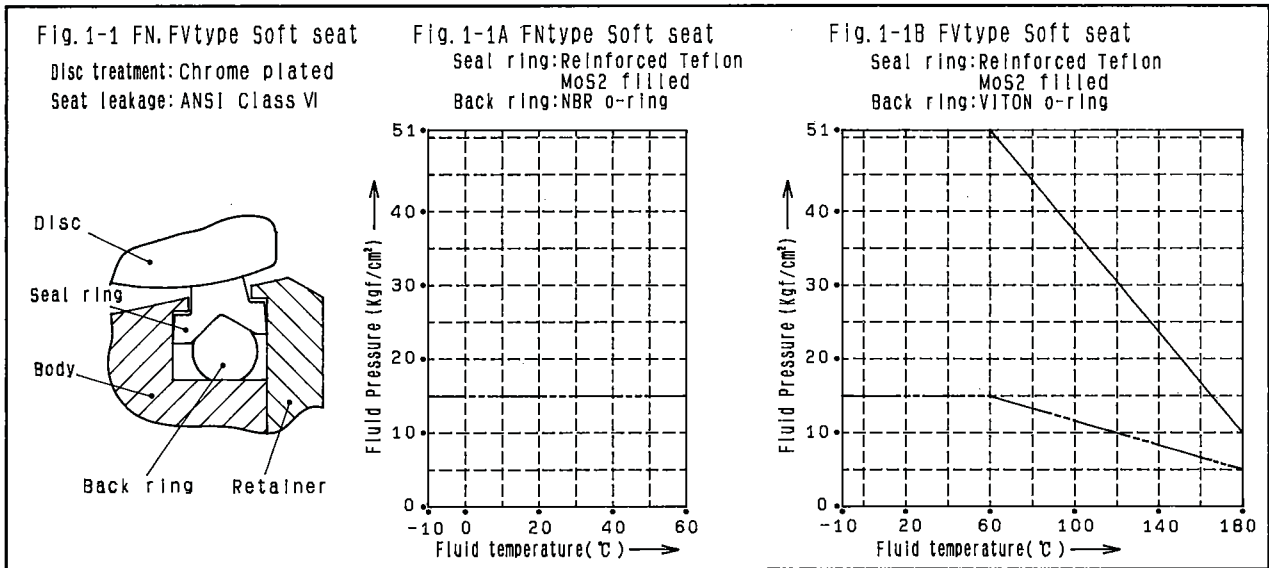
Unit: kgf/cm<sup>2</sup>G

Temp. (°C)	10K		20K
	FC25	SCPH2	SCPH2
~120	14.0	14.0	34.0
~220	10.0	12.0	31.0
~300	—	10.0	29.0
~350	—	—	26.0
~400	—	—	23.0

Note: For FC25, maximum allowable temperature is 200°C

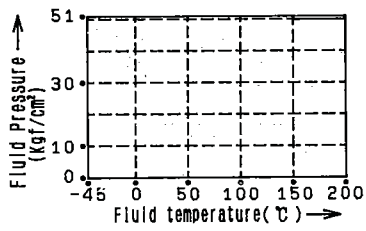
### Fig. 1 Seal Ring Operating Temperature-Pressure Limitation

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

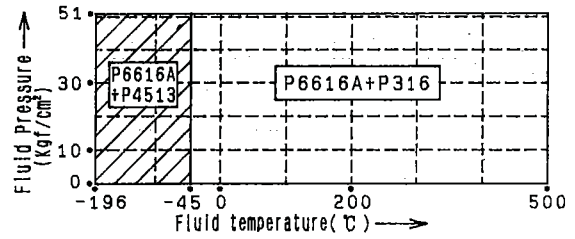


**Fig. 2 Gland Packing Operating Temperature-Pressure Limitation**

**Fig. 2-1 Teflon Asbestos (P4513+P4513L)  
Oxydizing Fluid (P4513+P# 2S)**

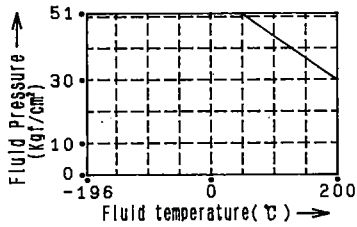


**Fig. 2-2 Pillarfoil**

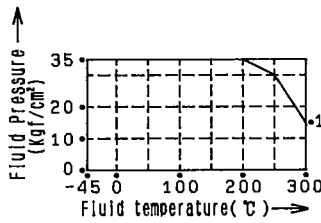


**Fig. 3 Gasket Operating Temperature-Pressure Limitation**

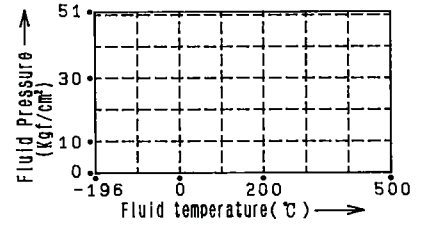
**Fig. 3-1 Reinforced Teflon  
(VAL. 7020)**



**Fig. 3-2 Asbestos  
(VAL. 1500AC)**

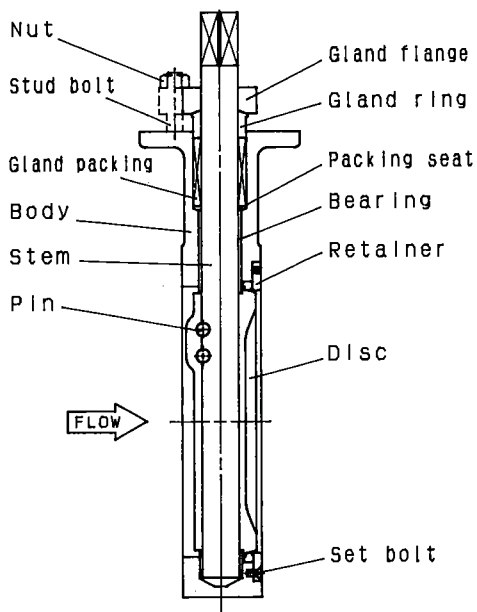


**Fig. 3-3 Pillarfoil  
(P6631)**

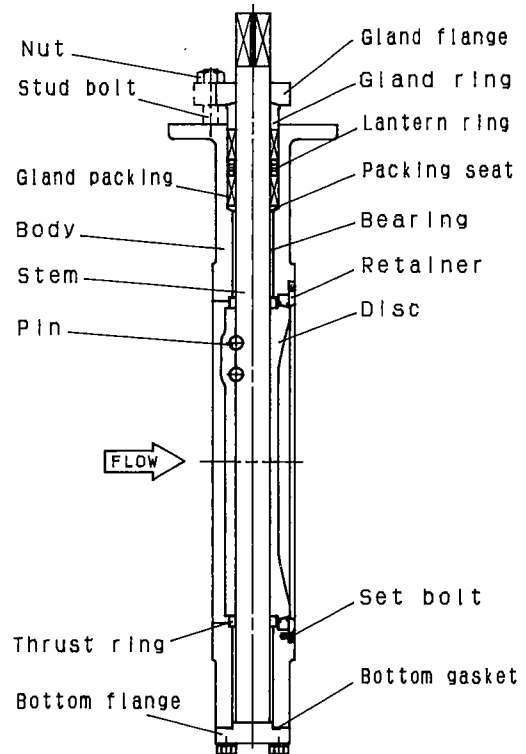


**Fig. 4 Body Assembly Section View**

**Fig. 4-1 Valve Size 8" (200 mm) and Under**



**Fig. 4-2 Valve Size 10" (250 mm) and Over**

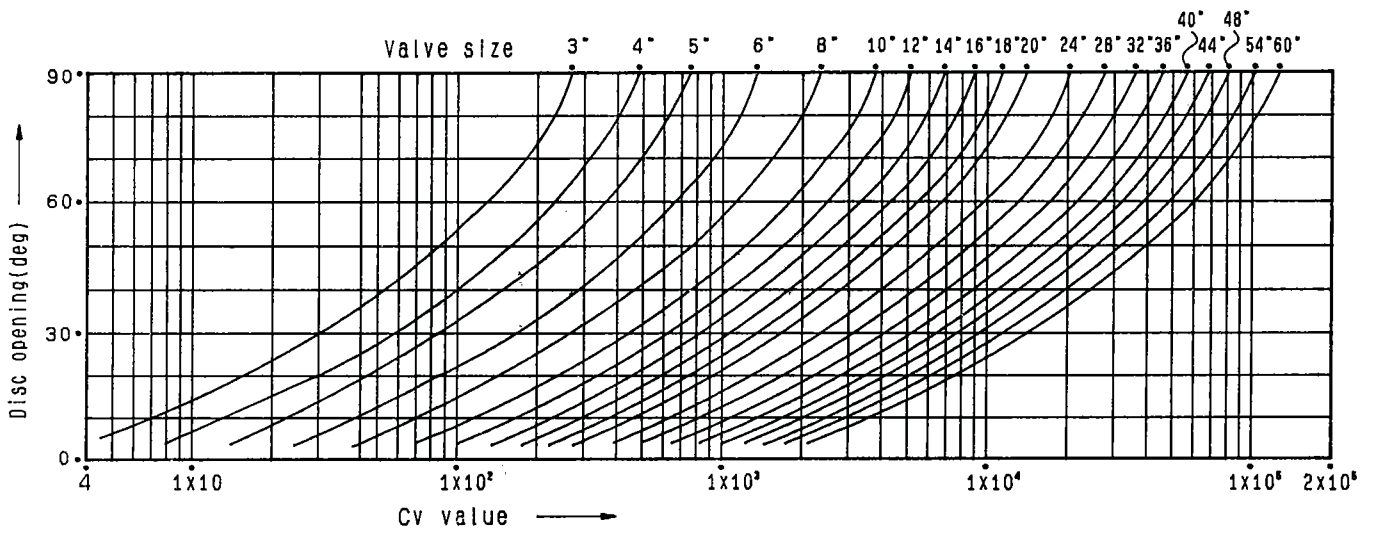


**Table 4 Cv Value**

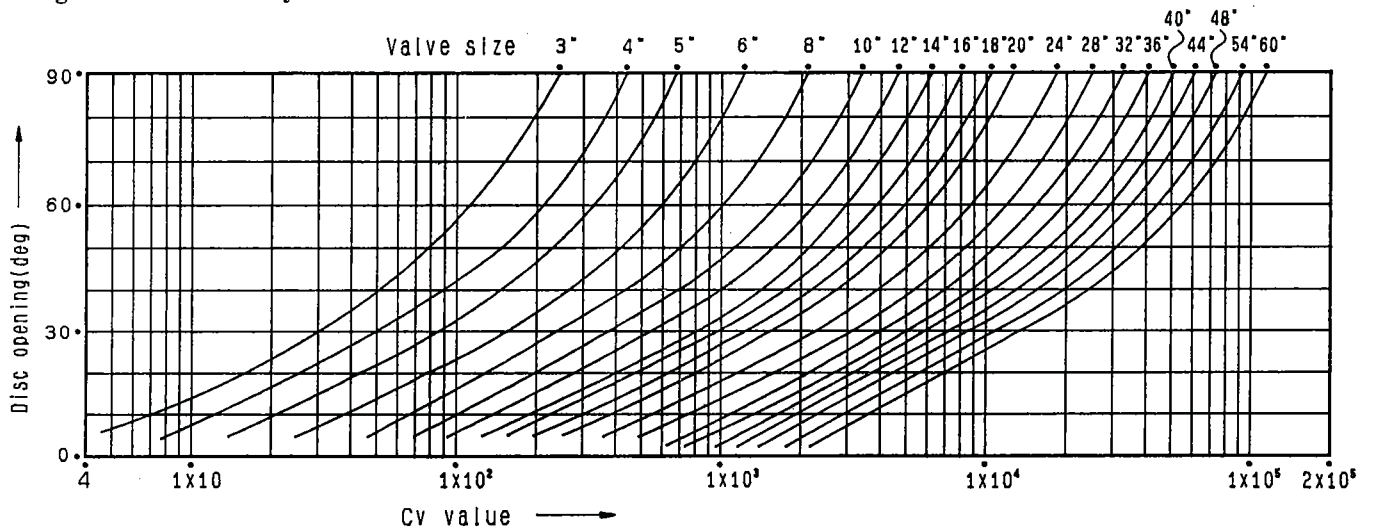
Valve size Inch (mm)	L Class Body		M Class Body		Valve size Inch (mm)	L Class Body		M Class Body	
	60° Open	90° Open	60° Open	90° Open		60° Open	90° Open	60° Open	90° Open
3 ( 80)	125	265	110	240	20 ( 500)	6,720	14,000	6,050	12,600
4 ( 100)	230	480	210	430	24 ( 600)	9,670	20,160	8,700	18,200
5 ( 125)	360	750	325	670	28 ( 700)	13,170	27,440	11,850	24,700
6 ( 150)	650	1,350	585	1,210	32 ( 800)	17,200	35,840	15,500	32,300
8 ( 200)	1,120	2,310	1,000	2,100	36 ( 900)	21,770	45,360	19,600	40,800
10 ( 250)	1,810	3,740	1,630	3,350	40 (1000)	26,800	56,000	24,100	50,400
12 ( 300)	2,470	5,100	2,220	4,600	44 (1100)	32,500	67,700	29,300	61,000
14 ( 350)	3,290	6,860	2,960	6,170	48 (1200)	38,700	80,600	34,800	72,600
16 ( 400)	4,300	8,960	3,870	8,060	54 (1350)	48,900	102,000	44,000	92,000
18 ( 450)	5,440	11,340	4,900	10,400	60 (1500)	60,400	126,000	54,300	113,000

**Fig. 5 Flow Characteristics**

**Fig. 5-1 L Class Body Flow Characteristics**



**Fig. 5-2 M Class Body Flow Characteristics**









**Table 5-1C M Class Body/Packing: Teflon-asbestos (P4513+P4513L)**

		Body Class - Valve Size		M Class Body																							
Actuator Series Size	Seal ring	Purpose	Stem Material	JIS20K, ANSI Class 300														JIS10K, ANSI Class 150									
				3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	40"	44"	48"	54"	60"				
6600RA	Double Acting (2 piston type)		SUS	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200	1350	1500				
6600RA	60	Soft seat	Shut-off	630	4.1	0.9																					
				316	4.1	0.9																					
			Δ P	630	3.0	0.9																					
		90	Soft seat	Shut-off	630	46.6	26.6	13.7																			
					316	21.2	11.2	13.7																			
				Δ P	630	11.4	6.0	3.2																			
	Metal seat		Shut-off	630	7.0	7.0	2.9																				
				316	6.4	0.2	2.9																				
			Δ P	630	7.0	7.0	2.9																				
	130	Soft seat	Shut-off	630		33.8	51.0	33.4	14.6	6.2																	
				316		21.2	20.4	12.0	14.6	6.2																	
			Δ P	630		9.1	10.4	6.5	2.5	1.2																	
Metal seat		Shut-off	630		7.0	7.0	7.0	7.0	1.3																		
			316		0.2	7.0	3.6	7.0	1.3																		
		Δ P	630		7.0	7.0	6.5	2.5	1.2																		
6500RA	170	Soft seat	Shut-off	630				51.0	25.3	14.5	8.0																
				316				26.7	12.4	14.5	8.0																
			Δ P	630				7.3	3.7	2.1	1.2																
		Metal seat	Shut-off	630				5.1	2.6	2.1	1.2																
				316				7.0	7.0	7.0	4.8																
			Δ P	630				7.0	6.4	7.0	4.8																
	200	Soft seat	Shut-off	630					30.0	27.0	15.7	11.8	8.6	6.1													
				316					12.4	17.6	15.7	11.8	8.6	6.1													
			Δ P	630					5.6	3.7	2.3	1.6	1.2	0.9													
		Metal seat	Shut-off	630						7.0	7.0	7.0	7.0	6.1	3.2												
				316						6.7	7.0	7.0	7.0	6.1	3.2												
			Δ P	630						5.6	3.7	2.3	1.6	1.2	0.9												
280	Soft seat	Shut-off	630						40.1	42.0	32.4	24.9	18.6	11.3	5.7												
			316						17.6	20.4	15.5	11.5	8.3	7.0	3.2												
		Δ P	630							7.1	5.8	4.2	3.0	2.2	1.3	0.7											
	Metal seat	Shut-off	630							7.0	7.0	7.0	7.0	7.0	7.0	4.2											
			316								7.0	7.0	7.0	7.0	1.4	4.7	2.1										
		Δ P	630							7.0	5.8	4.2	3.0	2.2	1.3	0.7											
6400RA	200	Soft seat	Shut-off	630										42.3	33.0	22.7	12.2	7.6	6.0	4.1	3.0	2.0	1.1	0.6			
				316												19.3	14.8	12.3	10.4	7.6	6.0	4.1	3.0	2.0	1.1	0.6	
			Δ P	630												5.6	4.2	2.5	1.3	0.9	0.6	0.4	0.3	0.2	0.2	0.1	
		Metal seat	Shut-off	630												7.0	7.0	7.0	7.0	5.4	4.3	3.0	2.3	1.6	1.0	0.6	
				316												7.0	7.0	7.0	7.0	5.4	4.3	3.0	2.3	1.6	1.0	0.6	
			Δ P	630												5.6	4.2	2.5	1.3	0.9	0.6	0.4	0.3	0.2	0.2	0.1	
	280	Soft seat	Shut-off	630															23.5	19.3	15.5	11.0	8.7	6.5	4.4	3.0	
				316																10.4	10.1	8.0	8.2	6.5	6.5	4.4	3.0
			Δ P	630																2.9	2.0	1.4	1.0	0.7	0.6	0.4	0.3
		Metal seat	Shut-off	630																7.0	7.0	7.0	7.0	7.0	5.4	3.8	2.8
				316																7.0	7.0	6.4	7.0	5.5	5.4	3.8	2.8
			Δ P	630																2.9	2.0	1.4	1.0	0.7	0.6	0.4	0.3

**Table 5-1D M Class Body/Packing: Pillarfoil (P6616A+P316)**

Actuator Series Size	Seal ring		Stem Material	Body Class · Valve Size	M Class Body																				
	Seal ring	Purpose			SUS	JIS20K, ANSI Class 300										JIS10K, ANSI Class 150									
						3" 80	4" 100	5" 125	6" 150	8" 200	10" 250	12" 300	14" 350	16" 400	18" 450	20" 500	24" 600	28" 700	32" 800	36" 900	40" 1000	44" 1100	48" 1200	54" 1350	60" 1500
6600RA Double Acting (2 piston type)	60	Soft seat	Shut-off	630																					
			316																						
		Δ P	630																						
		316																							
	90	Soft seat	Shut-off	630	44.0	25.0	11.2																		
			316	18.6	9.7	11.2																			
			Δ P	630	10.7	5.7	2.7																		
			316	7.3	3.8	2.7																			
		Metal seat	Shut-off	630	7.0	6.5	0.9																		
			316	4.3	0.1	0.9																			
			Δ P	630	7.0	5.7	0.9																		
			316	4.3	0.1	0.9																			
130	Soft seat	Shut-off	630	32.2	48.8	31.7	12.8	5.1																	
		316	9.7	17.9	10.3	12.8	5.1																		
		Δ P	630	8.8	9.9	6.2	2.2	1.1																	
		316	3.8	4.9	3.1	2.2	1.1																		
	Metal seat	Shut-off	630	7.0	7.0	7.0	7.0	0.3																	
		316	0.1	6.3	2.2	7.0	0.3																		
		Δ P	630	7.0	7.0	7.0	2.2	0.3																	
		316	0.1	4.9	2.2	2.2	0.3																		
6500RA Double Acting (2 piston type)	170	Soft seat	Shut-off	630				50.0	24.2	13.5	6.8														
			316				25.0	11.3	13.5	6.8															
		Δ P	630				7.0	3.5	2.0	1.0															
		316				4.8	2.4	2.0	1.0																
	Metal seat	Shut-off	630				7.0	7.0	7.0	3.7															
		316				7.0	5.5	7.0	3.7																
		Δ P	630				7.0	3.5	2.0	1.0															
		316				4.8	2.4	2.0	1.0																
	200	Soft seat	Shut-off	630					28.8	26.0	14.5	10.9	8.0	5.6											
			316					11.3	16.6	14.5	10.9	8.0	5.6												
			Δ P	630					5.4	3.6	2.1	1.5	1.1	0.8											
			316					2.4	3.1	2.1	1.5	1.1	0.8												
Metal seat		Shut-off	630					7.0	7.0	7.0	7.0	5.5	2.8												
		316					5.5	7.0	7.0	7.0	5.5	2.8													
		Δ P	630					5.4	3.6	2.1	1.5	1.1	0.8												
		316					2.4	3.1	2.1	1.5	1.1	0.8													
280	Soft seat	Shut-off	630					39.2	40.8	31.5	23.9	18.1	10.8	5.3											
		316					16.6	19.2	14.6	10.8	7.8	6.6	2.9												
		Δ P	630					7.0	5.6	4.0	2.9	2.2	1.3	0.6											
		316					3.1	3.6	2.6	1.9	1.4	1.1	0.5												
	Metal seat	Shut-off	630					7.0	7.0	7.0	7.0	7.0	7.0	3.9											
		316					7.0	7.0	7.0	7.0	4.6	4.3	1.9												
		Δ P	630					7.0	5.6	4.0	2.9	2.2	1.3	0.6											
		316					3.1	3.6	2.6	1.9	1.4	1.1	0.5												
6400RA Double Acting (4 piston type)	200	Soft seat	Shut-off	630							41.8	32.6	22.3	11.9	7.4	5.8	3.9	2.8	1.9	1.0	0.4				
			316										18.8	14.3	12.0	10.2	7.4	5.8	3.9	2.8	1.9	1.0	0.4		
			Δ P	630									5.5	4.1	2.4	1.2	0.8	0.6	0.4	0.3	0.2	0.1	0.1		
			316										3.2	2.4	1.9	1.2	0.8	0.6	0.4	0.3	0.2	0.1	0.1		
		Metal seat	Shut-off	630									7.0	7.0	7.0	7.0	5.2	4.1	2.8	2.1	1.5	0.9	0.4		
			316										7.0	7.0	7.0	7.0	5.2	4.1	2.8	2.1	1.5	0.9	0.4		
			Δ P	630									5.5	4.1	2.4	1.2	0.8	0.6	0.4	0.3	0.2	0.1	0.1		
			316										3.2	2.4	1.9	1.2	0.8	0.6	0.4	0.3	0.2	0.1	0.1		
	280	Soft seat	Shut-off	630													23.3	19.5	15.3	10.8	8.5	6.3	4.2	3.0	
			316														10.2	10.0	7.9	8.0	6.4	6.3	4.2	3.0	
		Δ P	630													2.9	2.0	1.4	1.0	0.7	0.5	0.4	0.3		
		316														1.5	1.5	1.0	1.0	0.7	0.5	0.4	0.3		
Metal seat	Shut-off	630														7.0	7.0	7.0	7.0	6.9	5.2	3.7	2.8		
	316															7.0	7.0	6.3	6.7	5.3	5.2	3.7	2.8		
Δ P	630														2.9	2.0	1.4	1.0	0.7	0.5	0.4	0.3			
316															1.5	1.5	1.0	1.0	0.7	0.5	0.4	0.3			

Table 5-2 Spring Return Pneumatic Cylinder Actuator/Air Supply 4.0 kgf/cm<sup>2</sup>G

Table 5-2A L Class Body

Packing	Body Class - Valve Size				L Class Body / JIS10K, ANSI Class 150																		
	Actuator Series	Size	Seal ring	Purpose	Stem Material SUS	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"				
						80	100	125	150	200	250	300	350	400	450	500	600	700	800				
Teflon-asbestos (P 4513 + P 4513L)	6600RA (2 piston type) Spring return	90	Soft seat	Shut-off	630	14.8	3.0	1.0															
				316	7.1	3.0	1.0																
		130	Soft seat	△ P	630	4.9	2.2	1.0															
				316	3.5	2.2	1.0																
		200	Soft seat	Shut-off	630	19.0	19.0	19.0	10.8	2.8													
				316	7.1	11.2	7.1	3.3	2.8														
	Metal seat		△ P	630	7.7	7.2	4.4	2.3	0.9														
			316	3.5	4.2	2.6	1.3	0.9															
	6500RA Spring return (2 piston type)	280	Soft seat	Shut-off	630				13.7	15.7	10.0	5.5	3.3										
				316						5.0	4.7	2.1	3.3										
			Metal seat	△ P	630				3.0	2.8	1.9	1.1	0.8										
				316						1.3	1.3	0.7	0.8										
		360	Soft seat	Shut-off	630				2.8	7.0	4.6	1.9	0.5										
				316						0.1	0.4	-	0.5										
			Metal seat	△ P	630				2.8	2.8	1.9	1.1	0.5										
				316						0.1	0.4	-	0.5										
		6600RA (2 piston type) Spring return	90	Soft seat	Shut-off	630	13.0	1.4															
					316	5.3	1.4																
			130	Soft seat	△ P	630	4.5	1.9															
					316	3.1	1.9																
	200		Soft seat	Shut-off	630	19.0	19.0	18.2	10.1	2.1													
				316	5.3	9.6	5.9	2.6	2.1														
			Metal seat	△ P	630	7.3	6.9	4.2	2.2	0.8													
				316	3.1	3.8	2.4	1.2	0.8														
6500RA Spring return (2 piston type)	280	Soft seat	Shut-off	630	3.4	7.0	4.6	0.1	-														
			316	-	-	-	-	-															
		Metal seat	△ P	630	3.4	6.9	4.2	0.1	-														
			316	-	-	-	-	-															
	360	Soft seat	Shut-off	630				13.0	14.9	9.4	5.1	2.8											
			316					2.6	4.2	4.1	1.6	2.8											
		Metal seat	△ P	630				2.8	2.7	1.8	1.1	0.7											
			316					1.2	1.1	1.2	0.8	0.7											
Pillarfoil (F6616A + P316)	200	Soft seat	Shut-off	630				2.2	7.0	4.2	1.5	0.2											
			316					-	-	0.1	-	0.2											
		Metal seat	△ P	630				2.2	2.7	1.8	1.1	0.2											
			316					-	-	0.1	-	0.2											
	280	Soft seat	Shut-off	630				14.6	8.5	13.0	7.5	4.6	3.1										
			316					4.1	1.6	4.3	4.1	4.6	3.1										
		Metal seat	△ P	630				2.7	1.6	1.9	1.2	0.8	0.6										
			316					1.2	0.8	0.9	0.9	0.8	0.6										
360	Soft seat	Shut-off	630				7.0	4.2	7.0	4.7	2.9	0.6											
		316					0.1	-	1.3	1.9	2.9	0.6											
	Metal seat	△ P	630				2.7	1.6	1.9	1.2	0.8	0.6											
		316					0.1	-	0.9	0.9	0.8	0.6											
6600RA (2 piston type) Spring return	90	Soft seat	Shut-off	630									12.6	12.5	9.0	4.3	2.3	0.8					
			316											4.1	5.0	3.3	3.9	2.1	0.8				
	130	Soft seat	△ P	630									2.0	1.8	1.3	0.7	0.4	0.3					
			316											0.9	0.9	0.7	0.7	0.4	0.3				
280	Soft seat	Shut-off	630										7.0	7.0	5.3	2.4	1.3	-					
		316											1.9	2.9	0.8	2.1	1.1	-					
	Metal seat	△ P	630										2.0	1.8	1.3	0.7	0.4	-					
		316											0.9	0.9	0.7	0.7	0.4	-					





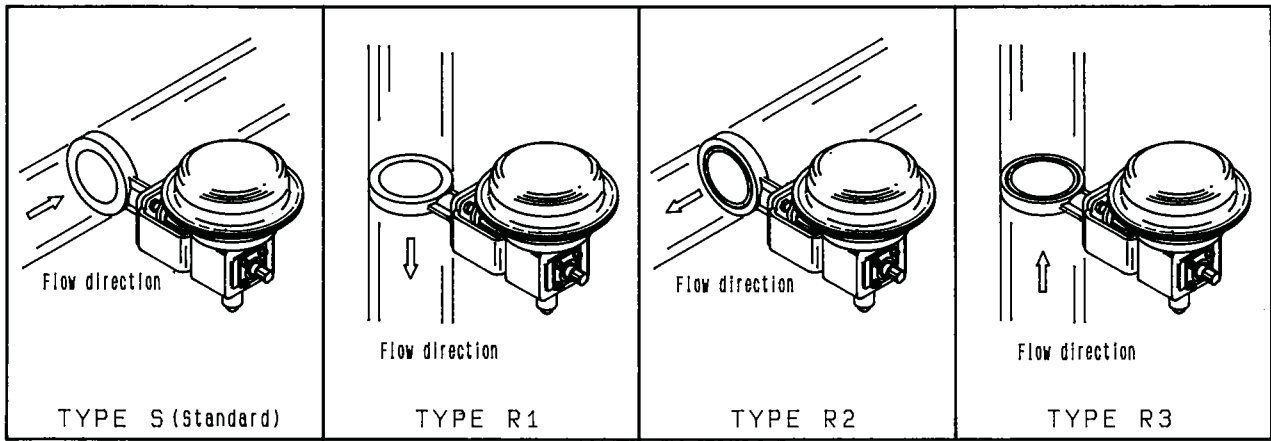
Table 5-3B M Class Body

Body Class · Packing · Valve Size				M Class Body / JIS 20K, ANSI Class 300																					
Actuator Size	Seal ring	Stem Material Purpose	SUS	Teflon-asbestos (P4513+P4513L)										Pillarfoil (P6616A+P316)											
				3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"		
				80	100	125	150	200	250	300	350	400	450	80	100	125	150	200	250	300	350	400	450		
35A2RB 36A2RA 34A2RA (5kgf-m)	Soft seat	Shut-off	630																						
			316																						
		Δ P	630																						
			316																						
35B1RB 36B1RA 34B1RA (10 kgf-m)	Soft seat	Shut-off	630	25.3	13.7										22.7	12.1									
			316	21.3	11.2										18.6	9.7									
		Δ P	630	8.9	4.7										8.3	4.4									
			316	7.9	4.2										7.3	4.4									
	Metal seat	Shut-off	630	7.0	1.0										7.0	0.3									
			316	6.4	0.2										4.3	0.1									
		Δ P	630	7.0	1.0										7.0	0.3									
			316	6.4	0.2										4.3	0.1									
35B2RB 36B2RA 34B2RA (20 kgf-m)	Soft seat	Shut-off	630	51.0	33.8	20.1	11.8								51.0	32.2	17.6	10.1							
			316	21.2	11.2	20.1	11.8								18.6	9.7	17.6	10.1							
		Δ P	630	15.0	9.1	5.3	3.3								15.0	8.7	4.8	3.0							
			316	7.9	4.2	5.3	3.3								7.3	3.8	4.8	3.0							
	Metal seat	Shut-off	630	7.0	7.0	7.0	3.5								7.0	7.0	6.1	2.1							
			316	6.4	0.2	7.0	3.5								4.3	0.1	6.1	2.1							
		Δ P	630	7.0	7.0	5.3	3.3								7.0	7.0	4.8	2.1							
			316	6.4	0.2	5.3	3.3								4.3	0.1	4.8	2.1							
35C1RB 36C1RA 34C1RA (30 kgf-m)	Soft seat	Shut-off	630			34.2	21.6	8.3									31.8	19.9	6.6						
			316			20.4	12.1	8.3									17.9	10.3	6.6						
		Δ P	630			8.3	5.2	2.0									7.8	4.9	1.7						
			316			5.4	3.4	2.0									4.9	3.0	1.7						
	Metal seat	Shut-off	630			7.0	7.0	3.2									7.0	7.0	1.7						
			316			7.0	3.6	3.2									4.8	2.1	1.7						
		Δ P	630			7.0	5.2	2.0									7.0	4.9	1.7						
			316			5.4	3.4	2.0									4.8	2.1	1.7						
35C2RB 36C2RA 34C2RA (50 kgf-m)	Soft seat	Shut-off	630			51.0	33.4	17.2	7.5								48.8	31.7	15.5	6.4					
			316			20.4	12.7	17.2	7.5								17.9	10.3	15.5	6.4					
		Δ P	630			11.8	7.4	3.5	1.7								11.3	7.0	3.2	1.5					
			316			5.4	3.4	3.5	1.7								4.9	3.0	3.2	1.5					
	Metal seat	Shut-off	630			7.0	7.0	7.0	2.4								7.0	7.0	7.0	1.5					
			316			7.0	3.6	7.0	2.4								4.8	2.1	7.0	1.5					
		Δ P	630			7.0	7.0	3.5	1.7								7.0	7.0	3.2	1.5					
			316			5.4	3.4	3.5	1.7								4.8	2.1	3.2	1.5					
35C3RB 36C3RA 34C3RA (60 kgf-m)	Soft seat	Shut-off	630					21.6	9.8										19.9	8.7					
			316					21.6	9.8										19.9	8.7					
		Δ P	630					4.3	2.1											4.0	1.9				
			316					4.3	2.1											4.0	1.9				
	Metal seat	Shut-off	630					7.0	4.3											7.0	3.3				
			316					7.0	4.3											7.0	3.3				
		Δ P	630					4.3	2.1											4.0	1.9				
			316					4.3	2.1											4.0	1.9				
36D1RA 34D1RA (100 kgf-m)	Soft seat	Shut-off	630					39.3	18.9	10.7	5.6	4.0	2.6						37.6	17.8	9.7	4.4	3.0	1.8	
			316					26.7	12.4	10.7	5.6	4.0	2.6						25.0	11.4	9.7	4.4	3.0	1.8	
		Δ P	630					7.3	3.7	2.1	1.2	0.9	0.6							7.0	3.5	2.0	1.0	0.7	0.5
			316					5.1	2.6	2.1	1.2	0.9	0.6							4.8	2.4	2.0	1.0	0.7	0.5
	Metal seat	Shut-off	630					7.0	7.0	6.2	2.8	1.7	0.9							7.0	7.0	5.4	1.7	0.9	0.3
			316					7.0	6.4	6.2	2.8	1.7	0.9							7.0	5.5	5.4	1.7	0.9	0.3
		Δ P	630					7.0	3.7	2.1	1.2	0.9	0.6							7.0	3.5	2.0	1.0	0.7	0.3
			316					5.1	2.6	2.1	1.2	0.9	0.6							4.8	2.4	2.0	1.0	0.7	0.3
36D2RA 34D2RA (150 kgf-m)	Soft seat	Shut-off	630					30.0	17.5	9.9	7.3	5.2							51.0	28.9	16.6	8.7	6.4	4.4	
			316					12.4	17.5	9.9	7.3	5.2								25.0	11.4	16.6	8.7	6.4	4.4
		Δ P	630					5.6	3.3	2.0	1.4	1.0								10.7	5.4	3.1	1.8	1.3	0.9
			316					2.6	3.3	2.0	1.4	1.0								4.8	2.4	3.1	1.8	1.3	0.9
	Metal seat	Shut-off	630					7.0	7.0	6.4	4.6	3.2								7.0	7.0	7.0	5.4	3.7	2.5
			316					6.4	7.0	6.4	4.6	3.2								7.0	5.5	7.0	5.4	3.7	2.5
		Δ P	630					5.6	3.3	2.0	1.4	1.0								7.0	5.4	3.1	1.8	1.3	0.9
			316					2.6	3.3	2.0	1.4	1.0								4.8	2.4	3.1	1.8	1.3	0.9





**Fig. 6 Actuator Mounting Forms (For Model 5200RA)**



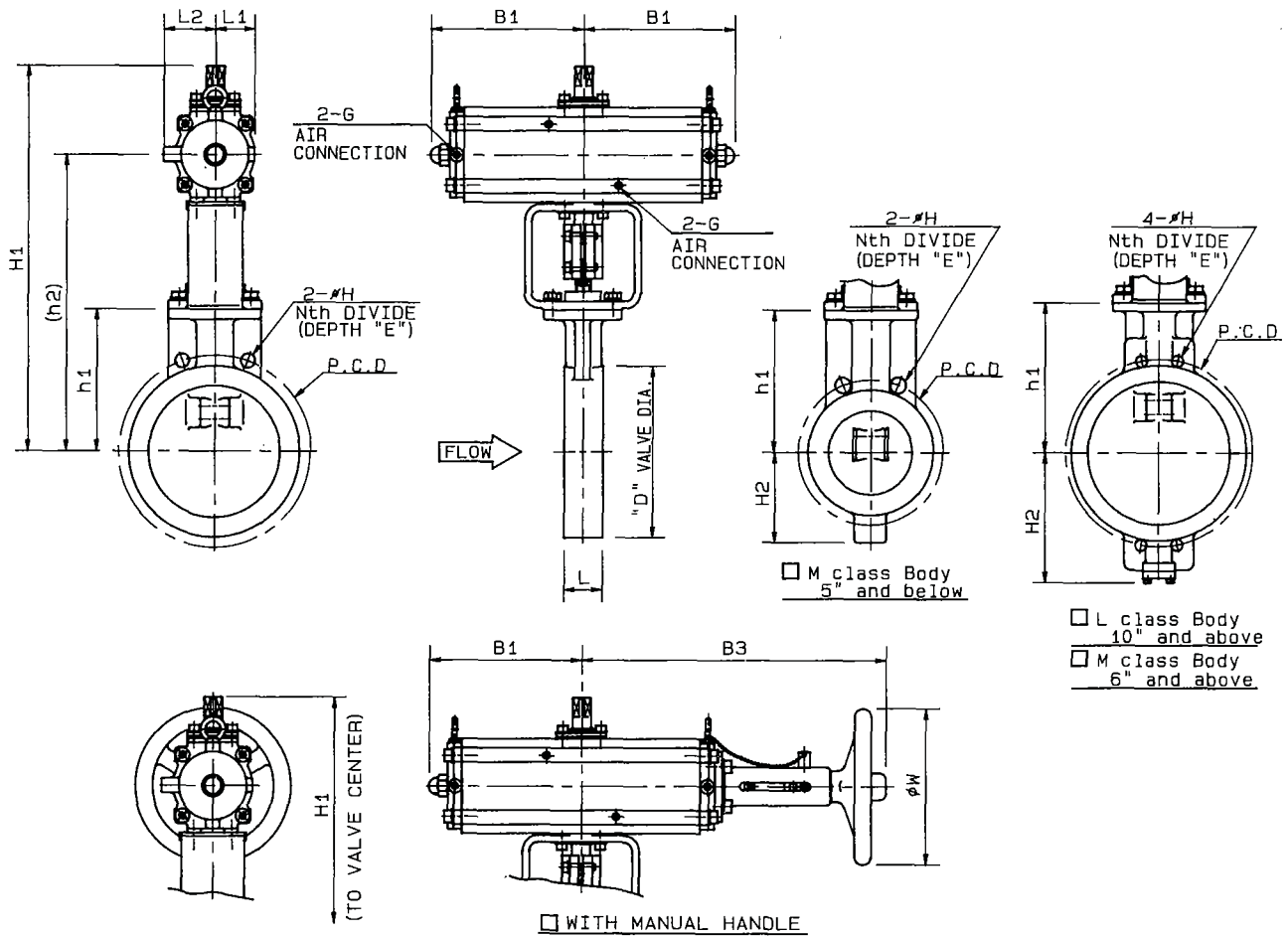
Note: Specify mounting form if not TYPE S. Otherwise, TYPE S is automatically applied.

**Table 6 Net Weight of Standard Valve and Actuator Combined. (Unit: kg)**

Only standard types are represented. Weights of accessories, a handwheel and the like are not included.

Body Class	Actuator Size		Valve size																						
			3" 80	4" 100	5" 120	6" 150	8" 200	10" 250	12" 300	14" 350	16" 400	18" 450	20" 500	24" 600	28" 700	32" 800	36" 900	40" 1000	44" 1100	48" 1200	54" 1350	60" 1500			
L Class Body	Double Acting	6600RA	60	12	14																				
			90	16	18	24	27	32																	
			130			29	32	37	52	72															
		6500RA	170						110	130	140	180	210	240											
			200								190	230	260	290	465	510									
			280										400	430											
	6400RA	200												710	755	990	1040	1140	1390	1540	1900	2300			
		280															1250	1350	1550	1700	2150	2550			
	Spring return	6600RA	90	21	23	29																			
			130	39	41	47	50	55																	
			200					170	187	210	225	275													
		6500RA	280								350	400	425	445	590										
			360											690	835	880									
	Diaphragm Actuator 5200RA	218	29	31																					
		270	39	41	47																				
350				82	85	90																			
450						135	150	170																	
35A2RB, 36A2RA, 34A2RA		16	18																						
35B1RB, 36B1RA, 34B1RA		21	23	29	32	37																			
35B2RB, 36B2RA, 34B2RA																									
35C1RB, 36C1RA, 34C1RA																									
35C2RB, 36C2RA, 34C2RA						65	80	100	110	150															
35C3RB, 36C3RA, 34C3RA																									
36D1RA, 34D1RA											200	240	270												
M Class Body	Double Acting	6600RA	60	20	23																				
			90	24	27	34																			
			130		32	39	52	67	107																
		6500RA	170					125	165	190	240														
			200						215	240	290	370	420	490											
			280							380	430	510	560	630	810	1000									
	6400RA	200										700	770	950	1150	1450	1650	1800	2190	2640	3200	3900			
		280													1350	1650	1850	2000	2350	2800	3450	4150			
	Spring return	6600RA	90	29	32																				
			130	47	50	57	70																		
			200					200	237	270	325	410													
		6500RA	280								450	540	585	645	840										
			360											890	1085	1280									
	Diaphragm Actuator 5200RA	218																							
		270	47	50																					
350		82	85	92	105	120																			
450				137	150	165	205																		
35A2RB, 36A2RA, 34A2RA																									
35B1RB, 36B1RA, 34B1RA		29	32	39	52																				
35B2RB, 36B2RA, 34B2RA																									
35C1RB, 36C1RA, 34C1RA																									
35C2RB, 36C2RA, 34C2RA				67	80	95	135																		
35C3RB, 36C3RA, 34C3RA																									
36D1RA, 34D1RA						185	225	250	300	380	430														

# PARA-SEAL Double acting cylinder



## DIMENSIONS

UNIT: mm

VALVE SIZE CODE No.	L Class Body						M Class Body						ACTUATOR															
	□ JIS10k			□ ANSI Class 150			□ JIS20k			□ ANSI Class 300			Cylinder size	B1	L1	L2	G	□ WITH MANUAL HANDLE		CODE No.								
	L	h1	H2	D	h2	H1	L	h1	H2	D	h2	H1						B3	W									
03 □ 3" (80A)	46	137	—	133	295	385	64	162	120	135	325	415	□ 60	155	38	55	RC1/8	305	140	6606RA								
04 □ 4" (100A)	52	160	—	155	315	425	64	172	130	160	345	455	□ 90	200	55	70	RC1/8	395	140	6609RA								
					320	410					335	425									□ 60	155	38	55	RC1/8	305	140	6606RA
					—	—					355	465									□ 90	200	55	70	RC1/8	395	140	6609RA
05 □ 5" (125A)	56	170	—	187	350	465	70	220	140	195	430	545	□ 90	200	55	70	RC1/8	395	140	6609RA								
					395	545					470	620									□ 130	270	75	100	RC1/4	530	300	6613RA
					—	—					—	—									□ 90	200	55	70	RC1/8	395	140	6609RA
06 □ 6" (150A)	56	185	—	216	365	480	76	230	205	230	480	630	□ 130	270	75	100	RC1/4	530	300	6613RA								
					410	560					—	—									□ 90	200	55	70	RC1/8	395	140	6609RA
					—	—					—	—									□ 130	270	75	100	RC1/4	530	300	6613RA
08 □ 8" (200A)	60	220	—	266	430	545	89	290	255	275	555	705	□ 130	270	75	100	RC1/4	530	300	6613RA								
					470	620					—	—									□ 90	200	55	70	RC1/8	395	140	6609RA
					—	—					—	—									□ 130	270	75	100	RC1/4	530	300	6613RA
10 □ 10" (250A)	68	280	235	330	530	680	114	306	270	350	570	720	□ 130	270	75	100	RC1/4	530	300	6613RA								
12 □ 12" (300A)	78	320	320	375	585	735	—	—	—	—	—	—	□ 130	270	75	100	RC1/4	530	300	6613RA								

VALVE SIZE	JIS 10k					JIS 20k					ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E		
3" (80A)	□ 150	8	19		□ 160	8	23		□ 190.5	8	19		□ 168.1	8	22			
4" (100A)	□ 175	8	19		□ 185	8	23		□ 190.5	8	19		□ 200.2	8	22			
5" (125A)	□ 210	8	23		□ 225	8	25		□ 215.9	8	22		□ 235	8	22			
6" (150A)	□ 240	8	23		□ 260	12	M22	20	□ 241.3	8	22		□ 269.7	12	22			
8" (200A)	□ 290	12	23		□ 305	12	M22	28	□ 298.4	8	22		□ 330.2	12	25			
10" (250A)	□ 355	12	25		□ 380	12	27		□ 362	12	25		□ 387.4	16	UNC 1	24		
12" (300A)	□ 400	16	25		□ —	—	—		□ 431.8	12	25		□ —	—	—			

NOTE :

DRAWING No.

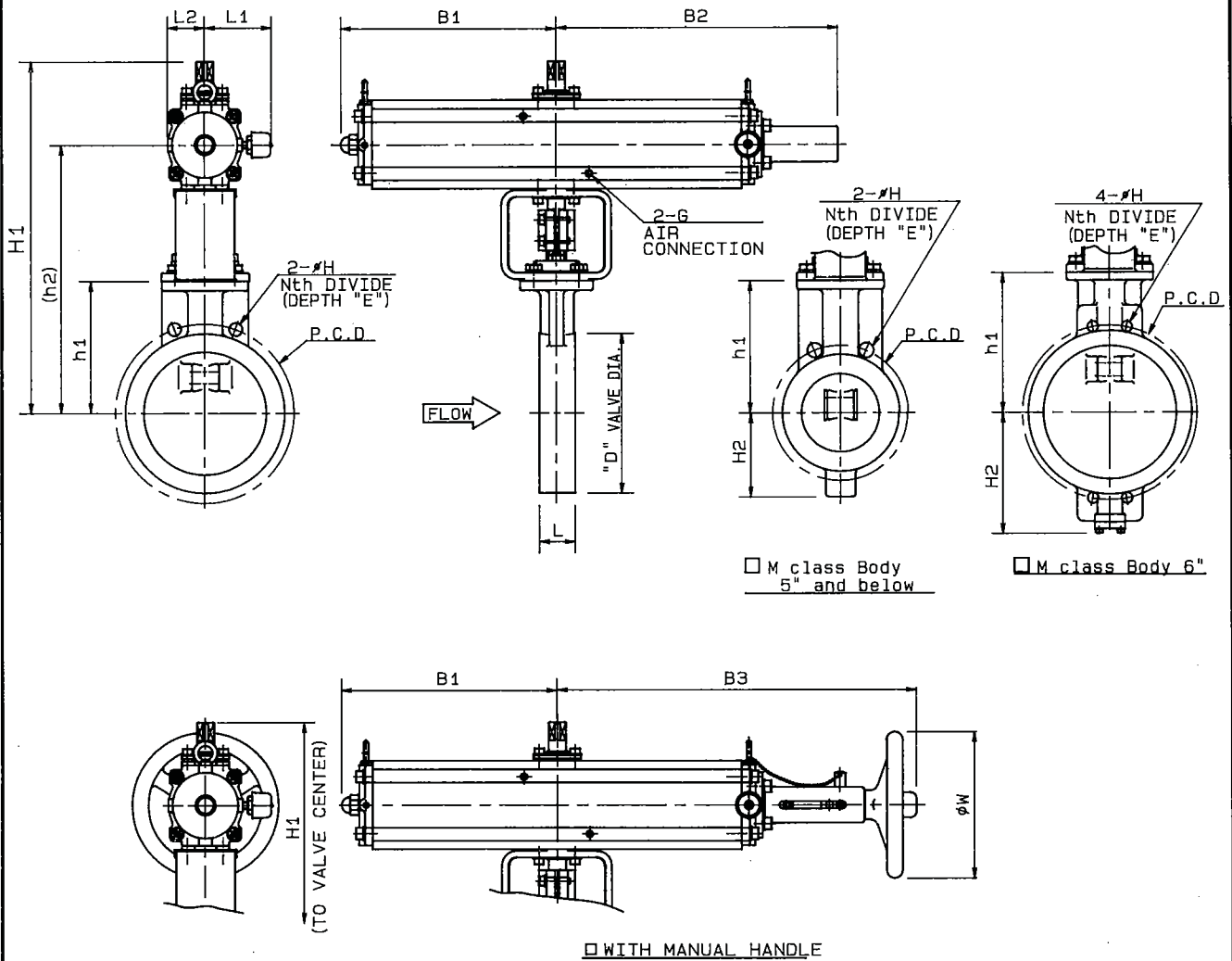
E-710C-6600RA-W-N  
S

REV

B

**KOSO**

# PARA-SEAL Spring return cylinder



## DIMENSIONS

UNIT: mm

VALVE SIZE CODE No.	L Class Body		M Class Body				ACTUATOR														
	□ JIS10k □ ANSI Class 150		□ JIS20k □ ANSI Class 300				Cylinder size	B1	B2	L1	L2	G	□ WITH MANUAL HANDLE		CODE No.						
	L	h1	H2	D	h2	H1							L	h1		H2	D	h2	H1	B3	W
03 □ 3" (80A)	46	137	—	133	315	445	64	162	120	135	345	475	□ 90	290	375	95	55	RC1/8	480	140	6609RA
					355	505					385	535									
04 □ 4" (100A)	52	160	—	155	335	470	64	172	130	160	355	485	□ 90	290	375	95	55	RC1/8	480	140	6609RA
					380	530					395	545									
05 □ 5" (125A)	56	170	—	187	350	485	70	220	140	195	—	—	□ 90	290	375	95	55	RC1/8	480	140	6609RA
					395	545					470	620									
06 □ 6" (150A)	56	185	—	216	410	560	76	230	205	230	480	630	□ 130	395	500	115	75	RC1/4	655	300	6613RA
08 □ 8" (200A)	60	220	—	266	470	620	—	—	—	—	—	—	□ 130	395	500	115	75	RC1/4	655	300	6613RA

VALVE SIZE.	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
3" (80A)	□ 150	8	19		□ 160	8	23		□				□ 168.1	8	22	
4" (100A)	□ 175	8	19		□ 185	8	23		□	190.5	8	19	□	200.2	8	22
5" (125A)	□ 210	8	23		□ 225	8	25		□	215.9	8	22	□	235	8	22
6" (150A)	□ 240	8	23		□ 260	12	M22	20	□	241.3	8	22	□	269.7	12	22
8" (200A)	□ 290	12	23		□				□	298.4	8	22	□			

NOTE:

DRAWING No.

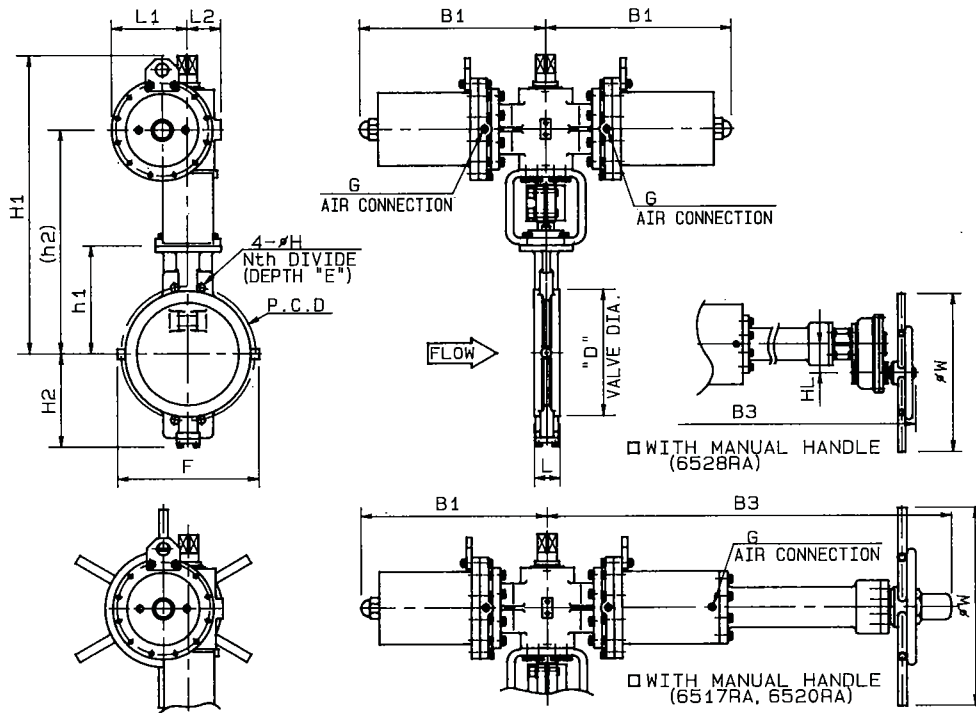
E-710C-6600RA-D-N  
R-S

REV

C

**KOSO**

# PARA-SEAL Double acting cylinder



## DIMENSIONS

UNIT: mm

VALVE SIZE	L Class Body							M Class Body							ACTUATOR								
	□ JIS 5k			□ JIS10k				□ JIS20k			□ ANSI Class 300				Cylinder size	B1	L1	L2	G	□ WITH MANUAL HANDLE			CODE No.
CODE No.	L	h1	H2	D	F	h2	H1	L	h1	H2	D	F	h2	H1						B3	HL	W	
08 □ 8" (200A)	—	—	—	—	—	—	—	89	290	255	275	—	595	830	□ 170	440	205	90	RC3/8	1015	—	400	6517RA
10 □ 10" (250A)	68	280	235	330	—	575	810	114	306	270	350	—	610	845	□ 170	440	205	90	RC3/8	1015	—	400	6517RA
						605	880						640	915									
12 □ 12" (300A)	78	320	280	375	—	625	860	114	410	370	400	—	725	960	□ 170	440	205	90	RC3/8	1015	—	400	6517RA
						650	925						755	1030									
14 □ 14" (350A)	78	365	325	416	500	670	905	127	435	395	445	560	785	1020	□ 170	440	205	90	RC3/8	1015	—	400	6517RA
						695	970						830	1105									
16 □ 16" (400A)	102	395	355	480	540	710	945	140	455	415	505	600	805	1040	□ 170	440	205	90	RC3/8	1015	—	400	6517RA
						770	1100						850	1125									
18 □ 18" (450A)	114	425	370	528	610	740	975	152	480	440	560	660	830	1065	□ 170	440	205	90	RC3/8	1015	—	400	6517RA
						770	1045						875	1150									
20 □ 20" (500A)	127	460	405	580	650	775	1010	152	500	460	615	720	895	1170	□ 200	555	230	100	RC1/2	1210	—	590	6520RA
						805	1080						930	1260									
24 □ 24" (600A)	130	560	490	685	740	815	1145	154	617	565	720	820	905	1235	□ 280	675	290	130	RC1/2	1620	196	590	6528RA
						955	1230						850	1085									
28 □ 28" (700A)	140	610	540	782	850	1010	1340	—	—	—	—	—	1015	1290	□ 200	555	230	100	RC1/2	1210	—	590	6520RA
						1005	1280						880	1210									
32 □ 32" (800A)	160	725	665	890	980	1060	1390	—	—	—	—	—	1070	1400	□ 280	675	290	130	RC1/2	1620	196	590	6528RA
						1005	1280						880	1210									
36 □ 36" (900A)	160	695	650	990	1100	1060	1390	—	—	—	—	—	1070	1400	□ 280	675	290	130	RC1/2	1620	196	590	6528RA
						1005	1280						880	1210									
40 □ 40" (1000A)	160	755	710	1090	1200	1060	1390	—	—	—	—	—	1070	1400	□ 280	675	290	130	RC1/2	1620	196	590	6528RA
						1005	1280						880	1210									
44 □ 44" (1100A)	170	820	765	1200	1300	1270	1600	—	—	—	—	—	—	—	□ 280	675	290	130	RC1/2	1620	196	590	6528RA

VALVE SIZE	JIS 5k				JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300							
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E				
8" (200A)	□			□					□	305	12	M22	28	□				□	330.2	12	25			
10" (250A)	□			□	□	355	12	25		□	380	12	27		□	362	12	25		□	387.4	16	UNC 1/24	
12" (300A)	□			□	□	400	16	25		□	430	16	M24	30	□	431.8	12	25		□	450.8	16	1-1/8-UNC	28
14" (350A)	□			□	□	445	16	25		□	480	16	M30x3	30	□	476.2	12	29		□	541.4	20	1-1/8-UNC	25
16" (400A)	□			□	□	510	16	27		□	540	16	M30x3	35	□	539.8	16	29		□	571.5	20	1-1/4-UNC	30
18" (450A)	□			□	□	565	20	M24	28	□	605	20	M30x3	32	□	577.8	16	32		□	628.6	24	1-1/4-UNC	28
20" (500A)	□			□	□	620	20	M24		□	660	20	M30x3	36	□	635	20	1-1/8-UNC	30	□	685.8	24	1-1/4-UNC	32
24" (600A)	□			□	□	730	24	M30x3	26	□	540	24	M36x3	34	□	749.3	20	1-1/4-UNC	32	□	812.8	24	1-1/2-UNC	34
28" (700A)	□			□	□	840	24	M30x3	35	□				□						□				
32" (800A)	□			□	□	950	28	M30x3	36	□				□						□				
36" (900A)	□	1030	24	33		□	1050	28	M30x3	36	□			□						□				
40" (1000A)	□	1130	28	M30x3	40	□	1160	28	M36x3	36	□			□						□				
44" (1100A)	□	1240	28	M30x3	38	□	1270	28	M36x3	45	□			□						□				

## NOTE:

DRAWING No.

E-710C-6500RA-W-N-S

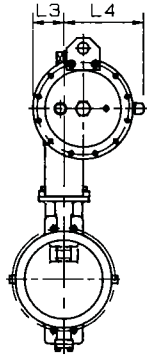
REV

C

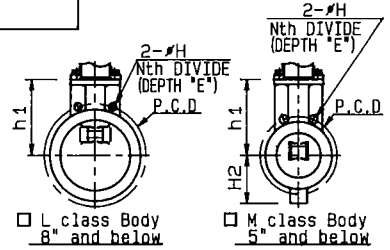
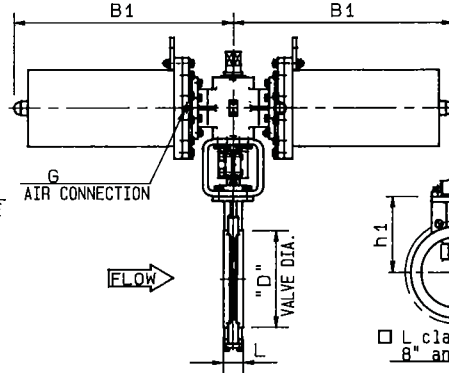
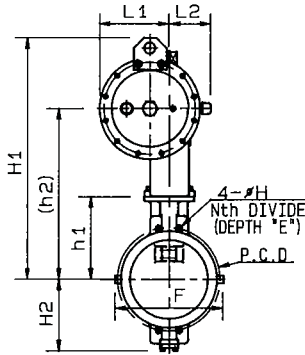


# PARA-SEAL Spring return cylinder

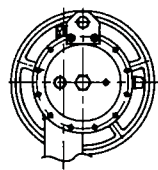
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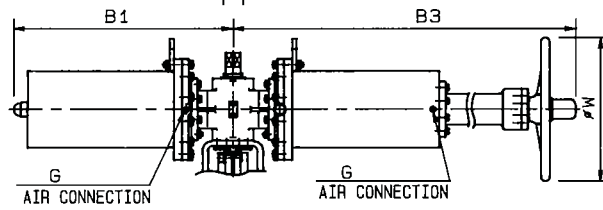
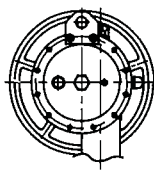
□ REVERSE ACTION



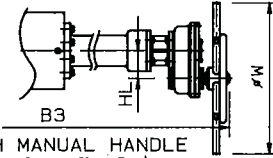
□ DIRECT ACTION



□ REVERSE ACTION



□ WITH MANUAL HANDLE (6520RA)



□ WITH MANUAL HANDLE (6528RA, 6536RA)

DIMENSIONS

UNIT: mm

VALVE SIZE CODE No.	L Class Body														M Class Body														ACTUATOR										
	□ JIS10k							□ ANSI Class 150							□ JIS20k							□ ANSI Class 300							Cylinder size	B1	L1	L2	L3	L4	G	□ WITH MANUAL HANDLE			
	L	h1	H2	D	F	h2	H1	L	h1	H2	D	F	h2	H1	L	h1	H2	D	F	h2	H1	B3	HL	W	CODE No.														
05 □ 5" (125A)	—	—	—	—	—	—	70	220	140	195	—	515	750	□ 200	770	211	135	91	255	RC3/8	1330	—	400	6520RA															
06 □ 6" (150A)	56	185	—	216	—	460	695	76	230	205	230	—	525	760	□ 200	770	211	135	91	255	RC3/8	1330	—	400	6520RA														
08 □ 8" (200A)	60	220	—	266	—	515	750	89	290	255	275	—	595	830	□ 200	770	211	135	91	255	RC3/8	1330	—	400	6520RA														
10 □ 10" (250A)	68	280	235	330	—	575	810	114	306	270	350	—	605	840	□ 280	865	275	165	122	315	RC1/2	1615	108	590	6528RA														
						605	880						□ 200	770	211	135	91	255	RC3/8	1330	—	400	6520RA																
12 □ 12" (300A)	78	320	280	375	—	625	860	114	410	370	400	—	755	1030	□ 280	865	275	165	122	315	RC1/2	1615	108	590	6528RA														
						650	925						□ 200	770	211	135	91	255	RC3/8	1330	—	400	6520RA																
14 □ 14" (350A)	78	365	325	416	500	670	905	127	435	395	445	560	830	1105	□ 280	865	275	165	122	315	RC1/2	1615	108	590	6528RA														
						695	970						□ 360	1070	315	265	135	355	RC1/2	1990	196	590	6536RA																
16 □ 16" (400A)	102	395	355	480	540	740	1015	140	455	415	505	600	850	1125	□ 280	865	275	165	122	315	RC1/2	1615	108	590	6528RA														
						815	1145						□ 360	1070	315	265	135	355	RC1/2	1990	196	590	6536RA																
18 □ 18" (450A)	114	425	370	528	610	770	1045	152	480	440	560	660	905	1235	□ 280	865	275	165	122	315	RC1/2	1615	108	590	6528RA														
						845	1175						□ 360	1070	315	265	135	355	RC1/2	1990	196	590	6536RA																
20 □ 20" (500A)	127	460	405	580	650	805	1080	152	500	460	615	720	950	1280	□ 280	865	275	165	122	315	RC1/2	1615	108	590	6528RA														
						880	1210						□ 360	1070	315	265	135	355	RC1/2	1990	196	590	6536RA																
24 □ 24" (600A)	130	560	490	685	740	955	1230	154	617	565	720	820	1070	1400	□ 280	865	275	165	122	315	RC1/2	1615	108	590	6528RA														
						1010	1340						□ 360	1070	315	265	135	355	RC1/2	1990	196	590	6536RA																
28 □ 28" (700A)	140	610	540	782	850	1060	1390	—	—	—	—	—	—	—	□ 360	1070	315	265	135	355	RC1/2	1990	196	590	6536RA														
32 □ 32" (800A)	160	725	665	890	980	1175	1505	—	—	—	—	—	—	—	—	□ 360	1070	315	265	135	355	RC1/2	1990	196	590	6536RA													

VALVE SIZE	JIS 10k					JIS 20k					ANSI Class 150					ANSI Class 300				
	P.C.D	N	H	E		P.C.D	N	H	E		P.C.D	N	H	E		P.C.D	N	H	E	
5" (125A)	□					□	225	8	25		□					□	235	8	22	
6" (150A)	□	240	8	23		□	260	12	M22	20	□	241.3	8	22		□	269.7	12	22	
8" (200A)	□	290	12	23		□	305	12	M22	28	□	298.4	8	22		□	330.2	12	25	
10" (250A)	□	355	12	25		□	380	12	27		□	362	12	25		□	387.4	16	UNC 1	24
12" (300A)	□	400	16	25		□	430	16	M24	30	□	431.8	12	25		□	450.8	16	1-1/8-BUN	28
14" (350A)	□	445	16	25		□	480	16	M30x3	30	□	476.2	12	29		□	541.4	20	1-1/8-BUN	25
16" (400A)	□	510	16	27		□	540	16	M30x3	35	□	539.8	16	29		□	571.5	20	1-1/4-BUN	30
18" (450A)	□	565	20	M24	28	□	605	20	M30x3	32	□	577.8	16	32		□	628.6	24	1-1/4-BUN	28
20" (500A)	□	620	20	M24		□	660	20	M30x3	36	□	635	20	1-1/8-BUN	30	□	685.8	24	1-1/4-BUN	32
24" (600A)	□	730	24	M30x3	26	□	770	24	M36x3	34	□	749.3	20	1-1/4-BUN	32	□	812.8	24	1-1/2-BUN	34
28" (700A)	□	840	24	M30x3	35	□					□					□				
32" (800A)	□	950	28	M30x3	36	□					□					□				

NOTE:

DRAWING No.

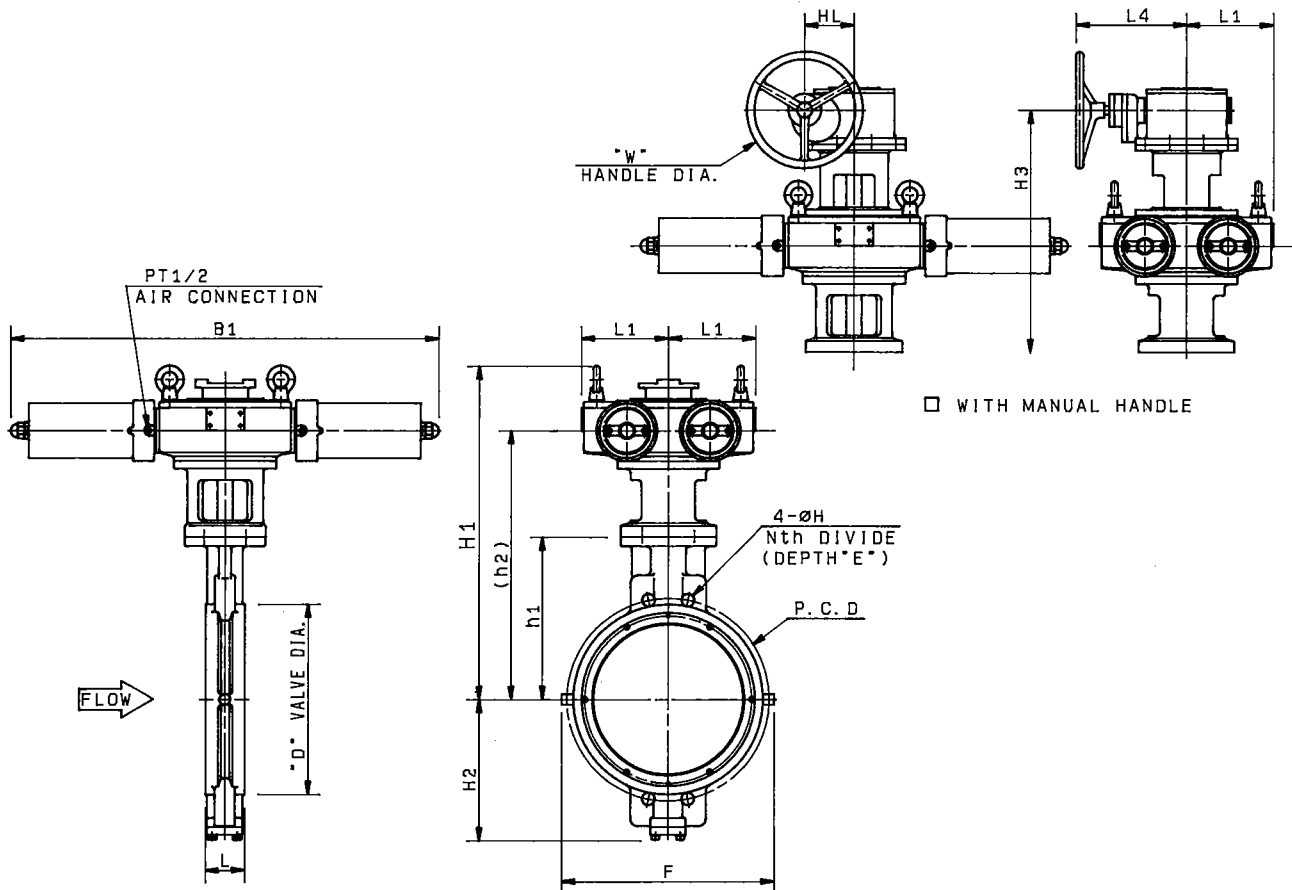
E-710C-6500RA-D-N  
R-S

REV

B

**KOSO**

# PARA-SEAL Double acting cylinder



## DIMENSIONS

UNIT: mm

VALVE SIZE CODE No.	L Class BODY								ACTUATOR							
	□ JIS 5k				□ ANSI Class 150				Cylinder size	□ WITH MANUAL HANDLE						
	L	h1	H2	D	F	h2	H1	B1		L1	H3	L4	HL	W	CODE No.	
24 □ 24" (600A)	130	560	490	685	740	980	1250	□ 200	1690	345	1485	455	104	460	6420RA	
28 □ 28" (700A)	140	610	540	782	850	1030	1300	□ 200	1690	345	1535	455	104	460	6420RA	
32 □ 32" (800A)	160	725	665	890	980	1145	1415	□ 200	1690	345	1650	455	104	460	6420RA	
36 □ 36" (900A)	160	695	650	990	1100	1115	1385	□ 200	1690	345	1620	455	104	460	6420RA	
						1140	1450	□ 280	1980	395	1715	550	118	460	6428RA	
40 □ 40" (1000A)	160	755	710	1090	1200	1175	1445	□ 200	1690	345	1680	455	104	460	6420RA	
						1200	1510	□ 280	1980	395	1775	550	118	460	6428RA	
44 □ 44" (1100A)	160	820	765	1200	1300	1240	1510	□ 200	1690	345	1745	455	104	460	6420RA	
						1265	1575	□ 280	1980	395	1840	550	118	460	6428RA	
48 □ 48" (1200A)	180	890	850	1305	1440	1310	1580	□ 200	1690	345	1815	455	104	460	6420RA	
						1335	1645	□ 280	1980	395	1910	550	118	460	6428RA	
54 □ 54" (1350A)	210	960	920	1460	1610	1380	1650	□ 200	1690	345	1885	455	104	460	6420RA	
						1405	1715	□ 280	1980	395	1980	550	118	460	6428RA	
60 □ 60" (1500A)	210	1035	995	1615	1760	1455	1725	□ 200	1690	345	1960	455	104	460	6420RA	
						1480	1790	□ 280	1980	395	2055	550	118	460	6428RA	

VALVE SIZE	JIS 5k				JIS 10k				ANSI Class 150				JPI Class 150						
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E			
24" (600A)	□				□	730	24	M30x3	26	□	749.3	20	1-1/4-BUN	32	□				
28" (700A)	□				□	840	24	M30x3	35	□					□	795.3	40	3/4-UNC	25
32" (800A)	□				□	950	28	M30x3	36	□					□	900.1	48	3/4-UNC	25
36" (900A)	□	1030	24	33	□					□					□				
40" (1000A)	□	1130	28	M30x3	40	□				□					□				
44" (1100A)	□	1240	28	M30x3	38	□				□					□				
48" (1200A)	□	1350	32	M30x3	38	□				□					□				
54" (1350A)	□	1505	32	M30x3	40	□				□					□				
60" (1500A)	□	1660	36	M30x3	45	□				□					□				

NOTE:

DRAWING No.

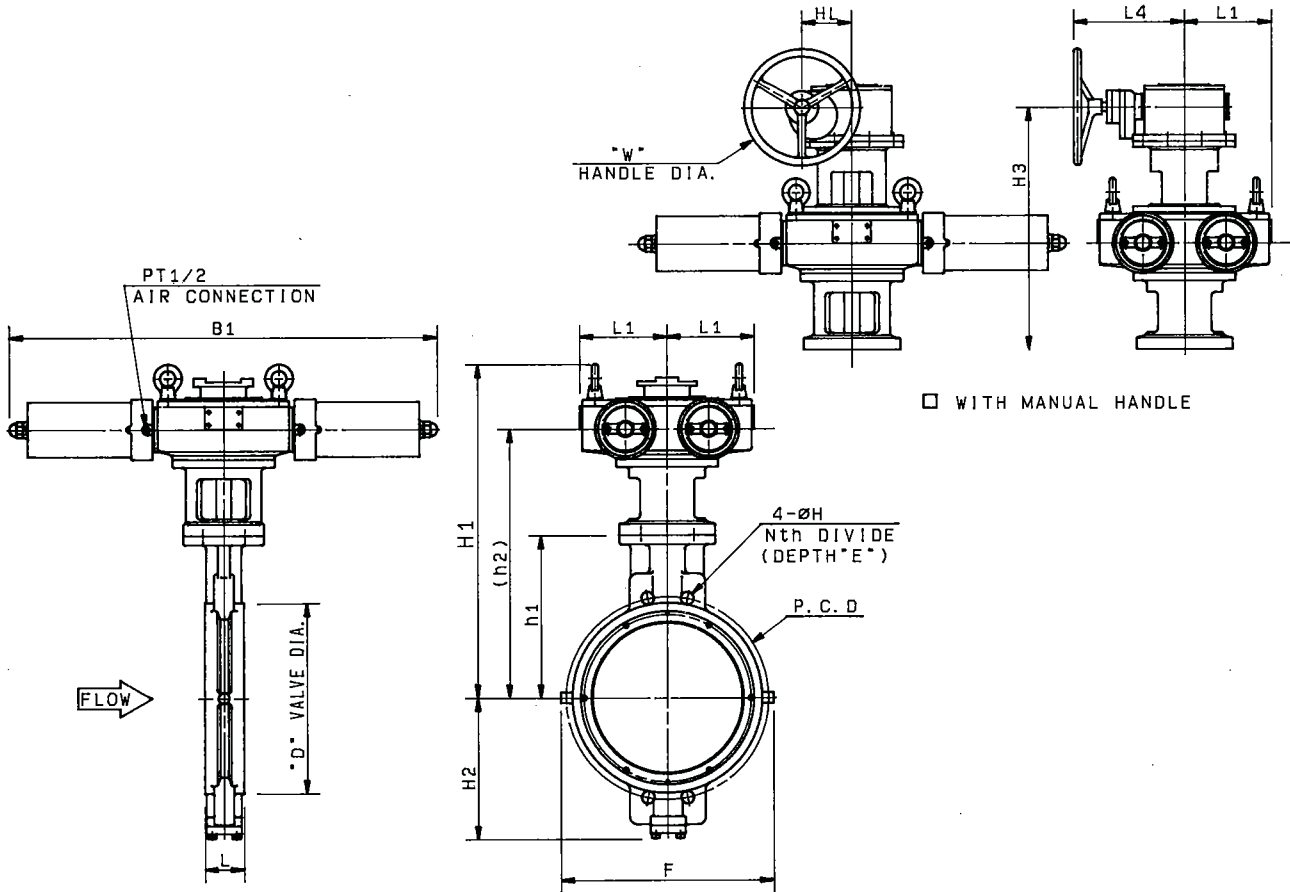
E-710C-L-6400RA-W-N-S

REV

A

**KOSO**

# PARA-SEAL Double acting cylinder



## DIMENSIONS

UNIT: mm

CODE No.	VALVE SIZE	M Class BODY								ACTUATOR							CODE No.
		□ JIS 10k				□ ANSI Class 300				Cylinder size	□ WITH MANUAL HANDLE						
		L	h1	H2	D	F	n2	H1	B1		L1	H3	L4	HL		W	
18	□ 18" (450A)	152	480	440	560	660	900	1170	□ 200	1690	345	1405	460	104	460	6420RA	
20	□ 20" (500A)	152	500	460	615	720	920	1190	□ 200	1690	345	1425	460	104	460	6420RA	
24	□ 24" (600A)	154	617	565	720	820	1040	1310	□ 200	1690	345	1545	460	104	460	6420RA	
28	□ 28" (700A)	165	720	655	800	890	1140	1410	□ 200	1690	345	1645	460	104	460	6420RA	
							1165	1475	□ 280	1980	395	1740	550	118	460	6428RA	
32	□ 32" (800A)	190	730	665	905	1000	1150	1420	□ 200	1690	345	1655	460	104	460	6420RA	
							1175	1485	□ 280	1980	395	1750	550	118	460	6428RA	
36	□ 36" (900A)	203	780	730	980	1080	1200	1470	□ 200	1690	345	1705	460	104	460	6420RA	
							1225	1535	□ 280	1980	395	1800	550	118	460	6428RA	
40	□ 40" (1000A)	216	865	800	1110	1220	1285	1555	□ 200	1690	345	1790	460	104	460	6420RA	
							1310	1620	□ 280	1980	395	1885	550	118	460	6428RA	
44	□ 44" (1100A)	216	915	850	1220	1330	1335	1605	□ 200	1690	345	1840	460	104	460	6420RA	
							1360	1670	□ 280	1980	395	1935	550	118	460	6428RA	
48	□ 48" (1200A)	254	1025	960	1325	1460	1445	1715	□ 200	1690	345	1950	460	104	460	6420RA	
							1470	1780	□ 280	1980	395	2045	550	118	460	6428RA	
54	□ 54" (1350A)	318	1100	1035	1480	1630	1620	1890	□ 200	1690	345	2125	460	104	460	6420RA	
							1645	1955	□ 280	1980	395	2220	550	118	460	6428RA	
60	□ 60" (1500A)	330	1200	1150	1635	1780	1770	2040	□ 200	1690	345	2275	460	104	460	6420RA	
							1795	2105	□ 280	1980	395	2370	550	118	460	6428RA	

VALVE SIZE	JIS 10k				JIS 20k				JPI Class 150				ANSI Class 300					
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E		
18" (450A)	□				□	605	20	M30x3	32	□				□	628.6	24	1-1/4-BUN	28
20" (500A)	□				□	660	20	M30x3	36	□				□	685.8	24	1-1/4-BUN	32
24" (600A)	□				□	770	24	M36x3	34	□				□	812.8	24	1-1/2-BUN	34
28" (700A)	□	840	24	M30x3	29	□				□	795.3	40	3/4UNC	19	□			
32" (800A)	□	950	28	M30x3	34	□				□	900.1	48	3/4UNC	25	□			
36" (900A)	□	1050	28	M30x3	40	□				□	1009.6	44	7/8UNC	30	□			
40" (1000A)	□	1160	28	M36x3	40	□				□	1120.8	44	1UNC	35	□			
44" (1100A)	□	1270	28	M36x3	40	□				□	1222.4	52	1UNC	30	□			
48" (1200A)	□	1380	32	M36x3	45	□				□	1335.1	44	1-1/8-BUN	45	□			
54" (1350A)	□	1540	36	M42x3	50	□				□	1492.2	56	1-1/8-BUN	40	□			
60" (1500A)	□	1700	40	M42x3	50	□				□	1662.1	52	1-1/4-BUN	45	□			

## NOTE:

DRAWING No.

E-710C-M-6400RA-W-N-S

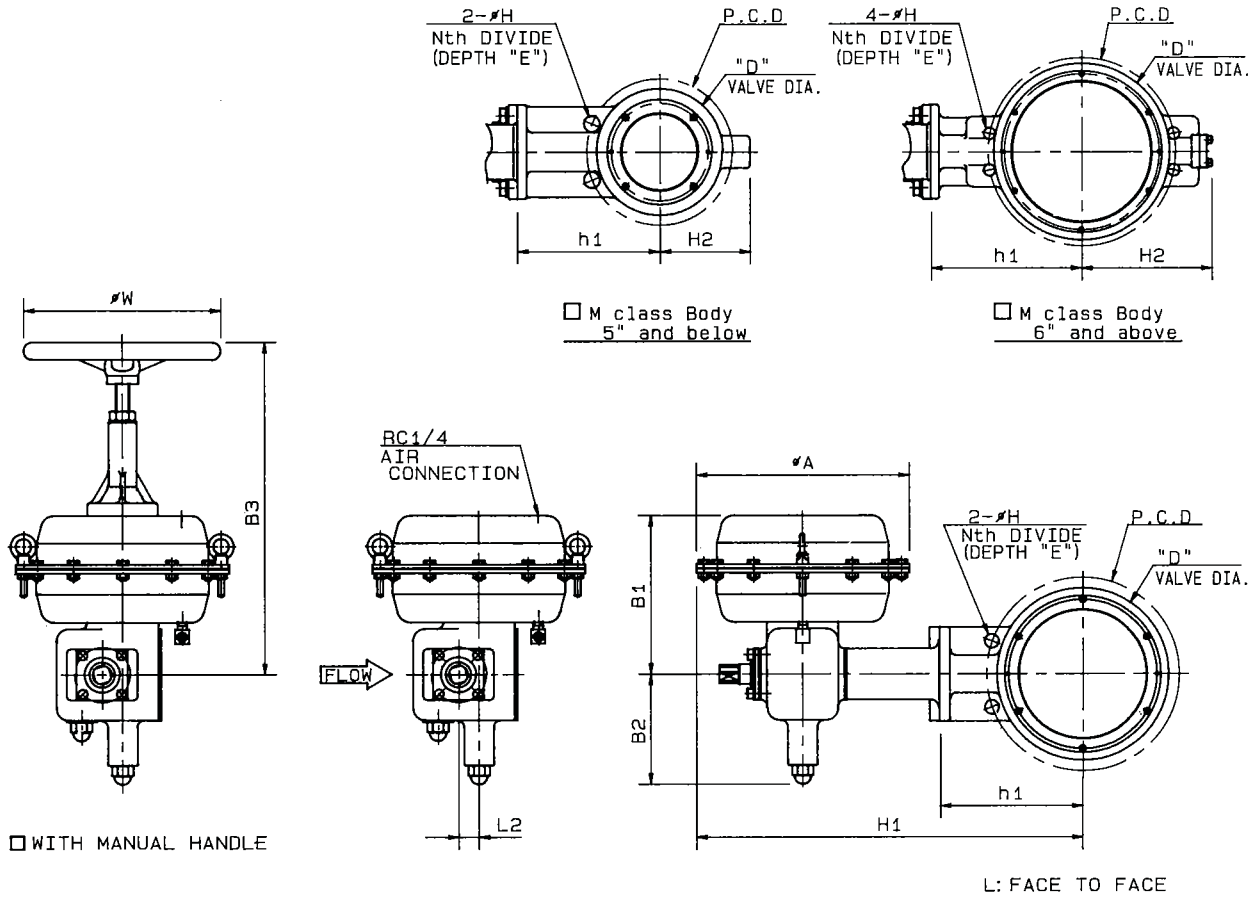
REV

A

**KOSO**



# PARA-SEAL DIRECT ACTION



## DIMENSIONS

UNIT: mm

VALVE SIZE CODE No.	L Class Body		M Class Body					ACTUATOR										
	□ JIS10k	□ ANSI Class 150	□ JIS20k		□ ANSI Class 300			size	A	B1	B2	L2	□ WITH MANUAL HANDLE		CODE No.			
	L	h1	H2	D	H1	L	h1						H2	D		H1	B3	W
03 □ 3" (80A)	46	137	—	133	405	64	162	120	135	—	□ 218	218	140	110	18	325	200	5218RA
					445					□ 270	270	205	140	26	420	250	5227RA	
					—					□ 350	350	235	155	35	495	320	5235RA	
04 □ 4" (100A)	52	160	—	155	425	64	172	130	160	—	□ 218	218	140	110	18	325	200	5218RA
					465					□ 270	270	205	140	26	420	250	5227RA	
					—					□ 350	350	235	155	35	495	320	5235RA	
05 □ 5" (125A)	56	170	—	187	480	70	220	140	195	—	□ 270	270	205	140	26	420	250	5227RA
					530					□ 350	350	235	155	35	495	320	5235RA	
					—					□ 270	270	205	140	26	420	250	5227RA	
06 □ 6" (150A)	56	185	—	216	495	76	230	205	230	—	□ 270	270	205	140	26	420	250	5227RA
					545					□ 350	350	235	155	35	495	320	5235RA	
					—					□ 270	270	205	140	26	420	250	5227RA	
08 □ 8" (200A)	60	220	—	266	610	89	290	255	275	695	□ 350	350	235	155	35	495	320	5235RA

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300				
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	
3" (80A)	□ 150	8	19		□ 160	8	23		□				□ 168.1	8	22		
4" (100A)	□ 175	8	19		□ 185	8	23		□	190.5	8	19		□ 200.2	8	22	
5" (125A)	□ 210	8	23		□ 225	8	25		□	215.9	8	22		□ 235	8	22	
6" (150A)	□ 240	8	23		□ 260	12	M22	20	□	241.3	8	22		□ 269.7	12	22	
8" (200A)	□ 290	12	23		□ 305	12	M22	28	□	298.4	8	22		□ 330.2	12	25	

NOTE:

DRAWING No.

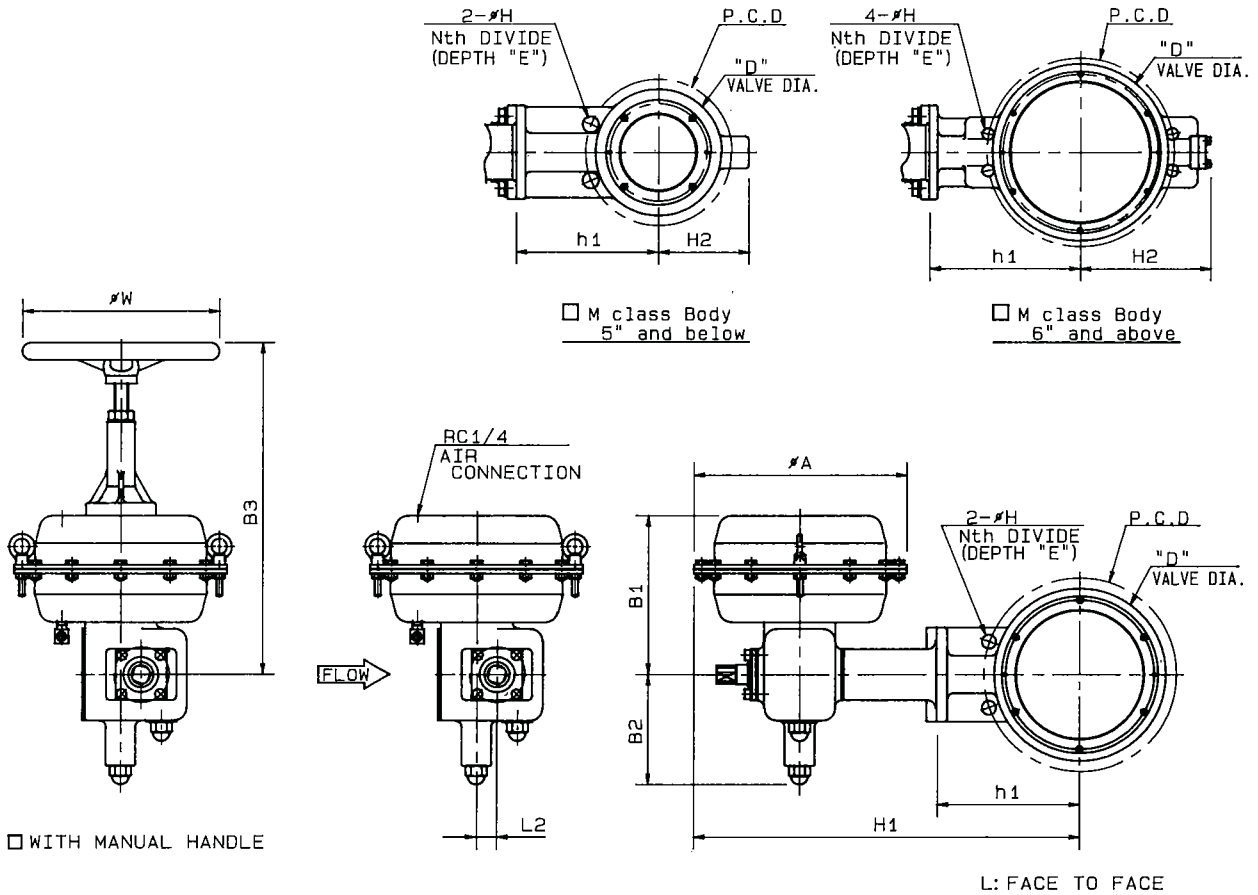
E-710C-5200RA-D-<sup>N</sup>/<sub>T</sub>

REV

B

**KOSO**

# PARA-SEAL REVERSE ACTION



**DIMENSIONS**

UNIT: mm

VALVE SIZE CODE No.	L Class Body					M Class Body					ACTUATOR							
	□ JIS10k		□ ANSI Class 150			□ JIS20k		□ ANSI Class 300			size	A	B1	B2	L2	□ WITH MANUAL HANDLE		CODE No.
	L	h1	H2	D	H1	L	h1	H2	D	H1						B3	W	
03 □ 3" (80A)	46	137	—	133	405	64	162	120	135	—	□ 218	218	140	110	18	325	200	5218RA
					445					475	□ 270	270	205	140	26	420	250	5227RA
					—					525	□ 350	350	235	155	35	495	320	5235RA
04 □ 4" (100A)	52	160	—	155	425	64	172	130	160	—	□ 218	218	140	110	18	325	200	5218RA
					465					485	□ 270	270	205	140	26	420	250	5227RA
					—					535	□ 350	350	235	155	35	495	320	5235RA
05 □ 5" (125A)	56	170	—	187	480	70	220	140	195	—	□ 270	270	205	140	26	420	250	5227RA
					530					610	□ 350	350	235	155	35	495	320	5235RA
					495					—	□ 270	270	205	140	26	420	250	5227RA
06 □ 6" (150A)	56	185	—	216	545	76	230	205	230	—	□ 350	350	235	155	35	495	320	5235RA
					—					620	□ 270	270	205	140	26	420	250	5227RA
08 □ 8" (200A)	60	220	—	266	610	89	290	255	275	695	□ 350	350	235	155	35	495	320	5235RA

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
3" (80A)	□ 150	8	19		□ 160	8	23		□				□ 168.1	8	22	
4" (100A)	□ 175	8	19		□ 185	8	23		□ 190.5	8	19		□ 200.2	8	22	
5" (125A)	□ 210	8	23		□ 225	8	25		□ 215.9	8	22		□ 235	8	22	
6" (150A)	□ 240	8	23		□ 260	12	M22	20	□ 241.3	8	22		□ 269.7	12	22	
8" (200A)	□ 290	12	23		□ 305	12	M22	28	□ 298.4	8	22		□ 330.2	12	25	

NOTE :

DRAWING No.

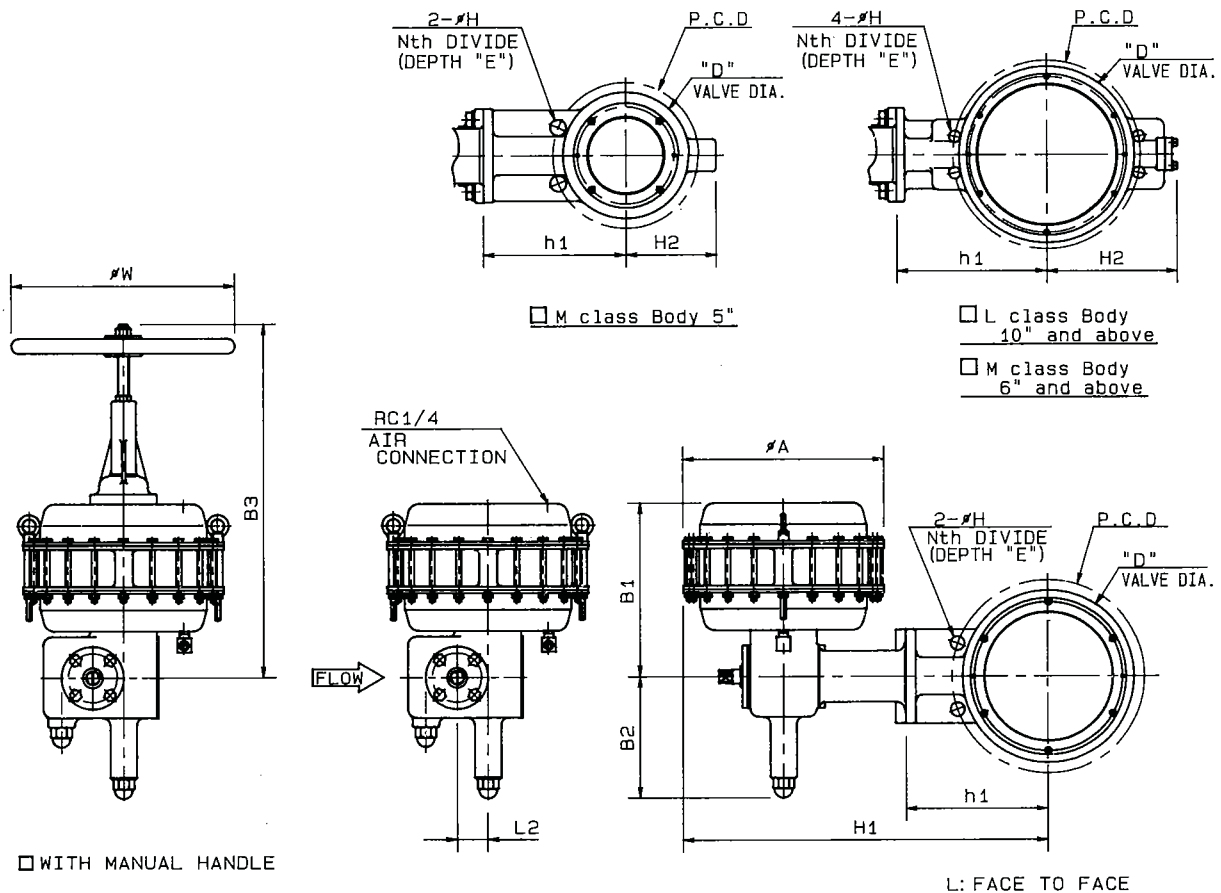
E-710C-5200RA-R-<sup>N</sup>/<sub>T</sub>

REV

B

**KOSO**

# PARA-SEAL DIRECT ACTION



## DIMENSIONS

UNIT: mm

VALVE SIZE CODE No.	L Class Body		M Class Body					ACTUATOR										
	□ JIS10k □ ANSI Class 150		□ JIS20k □ ANSI Class 300					size	A	B1	B2	L2	B3	W	CODE No.			
	L	h1	H2	D	H1	L	h1									H2	D	H1
05 □ 5" (125A)	—	—	—	—	—	70	220	140	195	710	□ 450	450	390	270	70	790	500	524LRA
06 □ 6" (150A)	—	—	—	—	—	76	230	205	230	720	□ 450	450	390	270	70	790	500	524LRA
08 □ 8" (200A)	60	220	—	226	710	89	290	255	275	790	□ 450	450	390	270	70	790	500	524LRA
10 □ 10" (250A)	68	280	—	330	770	114	306	270	350	810	□ 450	450	390	270	70	790	500	524LRA
12 □ 12" (300A)	78	320	—	375	820	114	410	370	400	925	□ 450	450	390	270	70	790	500	524LRA

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300							
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E				
5" (125A)	□				□	225	8	25		□				□	235	8	22			
6" (150A)	□				□	260	12	M22	20	□				□	269.7	12	22			
8" (200A)	□	290	12	23		□	305	12	M22	28	□	298.4	8	22		□	330.2	12	25	
10" (250A)	□	355	12	25		□	380	12	27		□	362	12	25		□	387.4	16	UNC 1	24
12" (300A)	□	400	16	25		□	430	16	M24	30	□	431.8	12	25		□	450.8	16	1-1/8 UN	28

NOTE :

DRAWING No.

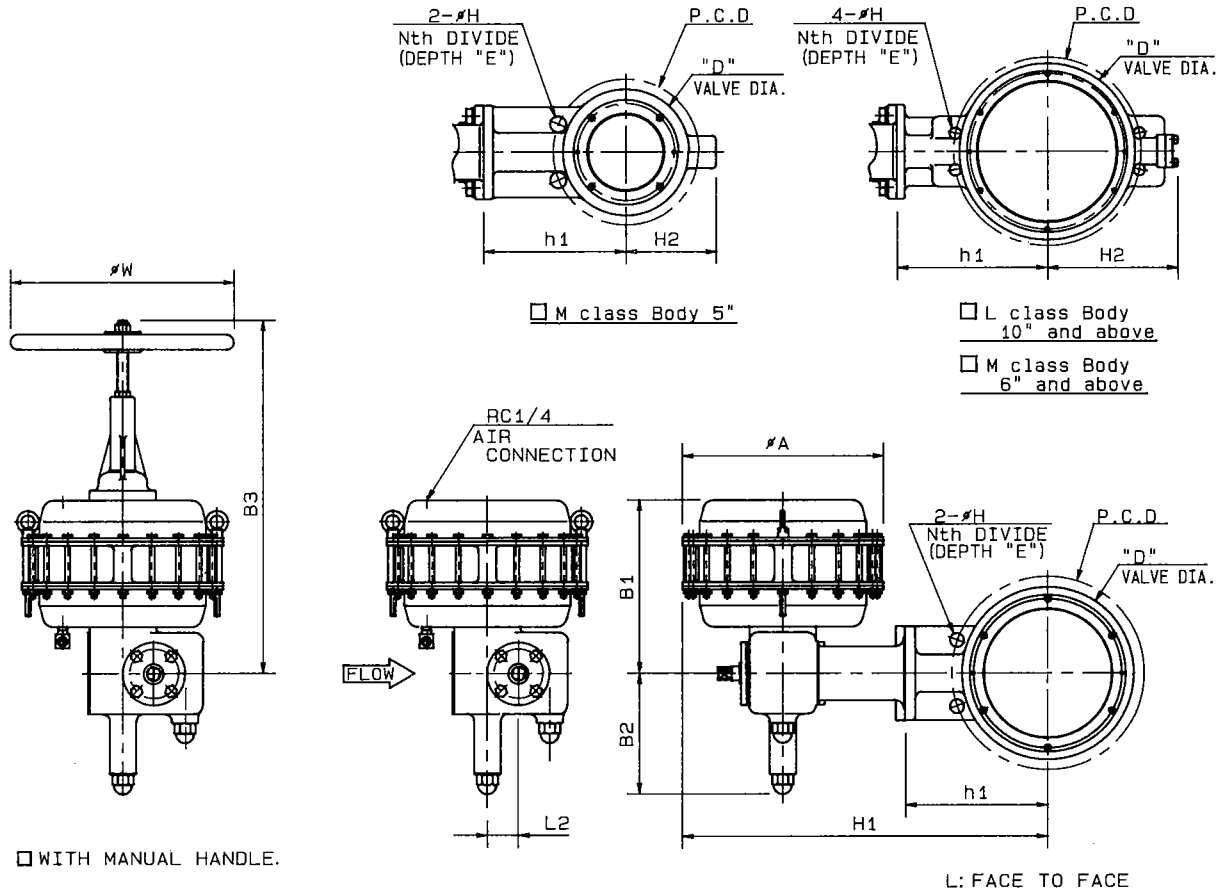
E-710C-524LRA-D-N  
T

REV

C

**KOSO**

# PARA-SEAL REVERSE ACTION



## DIMENSIONS

UNIT: mm

CODE No.	VALVE SIZE	L Class Body					M Class Body					ACTUATOR							
		□ JIS10k		□ ANSI Class 150			□ JIS20k		□ ANSI Class 300			size	A	B1	B2	L2	□ WITH MANUAL HANDLE		CODE No.
		L	h1	H2	D	H1	L	h1	H2	D	H1						B3	W	
05	□ 5" (125A)	—	—	—	—	—	70	220	140	195	710	□ 450	450	390	270	70	790	500	524LRA
06	□ 6" (150A)	—	—	—	—	—	76	230	205	230	720	□ 450	450	390	270	70	790	500	524LRA
08	□ 8" (200A)	60	220	—	226	710	89	290	255	275	790	□ 450	450	390	270	70	790	500	524LRA
10	□ 10" (250A)	68	280	—	330	770	114	306	270	350	810	□ 450	450	390	270	70	790	500	524LRA
12	□ 12" (300A)	78	320	—	375	820	114	410	370	400	925	□ 450	450	390	270	70	790	500	524LRA

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
5" (125A)	□				□ 225	8	25		□				□ 235	8	22	
6" (150A)	□				□ 260	12	M22	20	□				□ 269.7	12	22	
8" (200A)	□ 290	12	23		□ 305	12	M22	28	□ 298.4	8	22		□ 330.2	12	25	
10" (250A)	□ 355	12	25		□ 380	12	27		□ 362	12	25		□ 387.4	16	UNC 1	24
12" (300A)	□ 400	16	25		□ 430	16	M24	30	□ 431.8	12	25		□ 450.8	16	1-1/8 UN	28

NOTE :

DRAWING No.

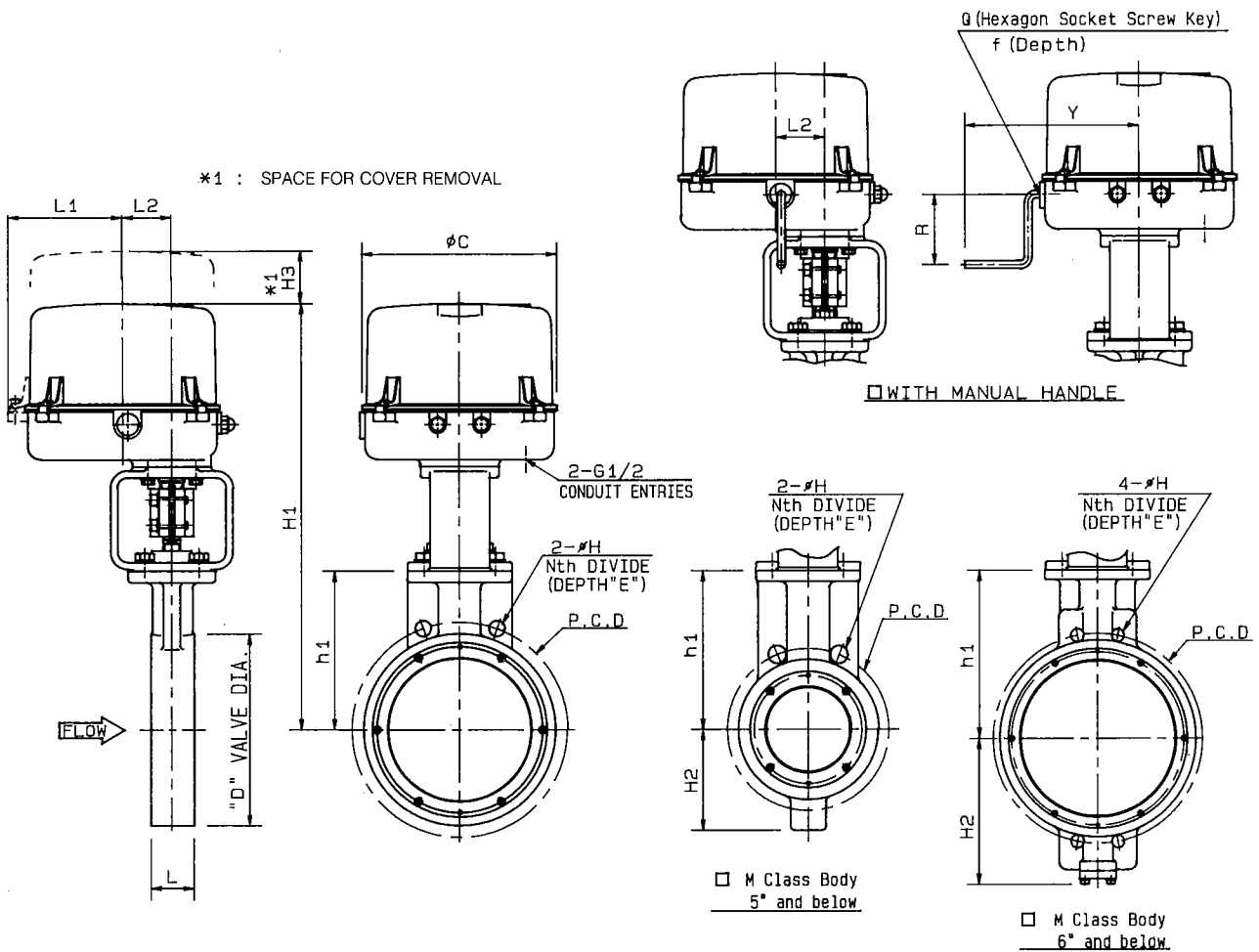
E-710C-524LRA-R-N<sub>T</sub>.

REV

C

**KOSO**

# PARA-SEAL



**DIMENSIONS**

UNIT: mm

VALVE SIZE CODE No.	L Class Body				M Class Body					ACTUATOR							SIZE CODE No.				
	JIS10k		ANSI Class 150		JIS20k		ANSI Class 300			WITH MANUAL HANDLE			Q-f								
	L	h1	H2	D	H1	L	h1	H2	D	H1	H3	L1	L2	∅C	R	Y	Q-f				
03 □ 3" (80A)	46	137	—	133	440	64	162	120	135	510	120	130	56	225	80	200	6-12	□35A2RB	□36A2RA	□34A2RA	
					480						155	145	68	255	160	225	8-15	□35B1RB	□36B1RA	□34B1RA	
					—						155	145	68	255	160	225	8-15	□35B2RB	□36B2RA	□34B2RA	
04 □ 4" (100A)	52	160	—	155	460	64	172	130	160	520	120	130	56	225	80	200	6-12	□35A2RB	□36A2RA	□34A2RA	
					500						155	145	68	255	160	225	8-15	□35B1RB	□36B1RA	□34B1RA	
					—						155	145	68	255	160	225	8-15	□35B2RB	□36B2RA	□34B2RA	
05 □ 5" (125A)	56	170	—	187	515	70	220	140	195	—	155	145	68	255	160	225	8-15	□35B1RB	□36B1RA	□34B1RA	
					595					155	145	68	255	160	225	8-15	□35B2RB	□36B2RA	□34B2RA		
06 □ 6" (150A)	56	185	—	216	530	76	230	205	230	—	155	145	68	255	160	225	8-15	□35B1RB	□36B1RA	□34B1RA	
					605					155	145	68	255	160	225	8-15	□35B2RB	□36B2RA	□34B2RA		
08 □ 8" (200A)	60	220	—	266	595	—	—	—	—	—	155	145	68	255	160	225	8-15	□35B2RB	□36B2RA	□34B2RA	

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
3" (80A)	□ 150	8	19		□ 160	8	23		□				□ 168.1	8	22	
4" (100A)	□ 175	8	19		□ 185	8	23		□	190.5	8	19	□ 200.2	8	22	
5" (125A)	□ 210	8	23		□ 225	8	25		□	215.9	8	22	□ 235	8	22	
6" (150A)	□ 240	8	23		□ 260	12	M22	20	□	241.3	8	22	□ 269.7	12	22	
8" (200A)	□ 290	12	23		□	—	—	—	□	296.4	8	22	□	—	—	

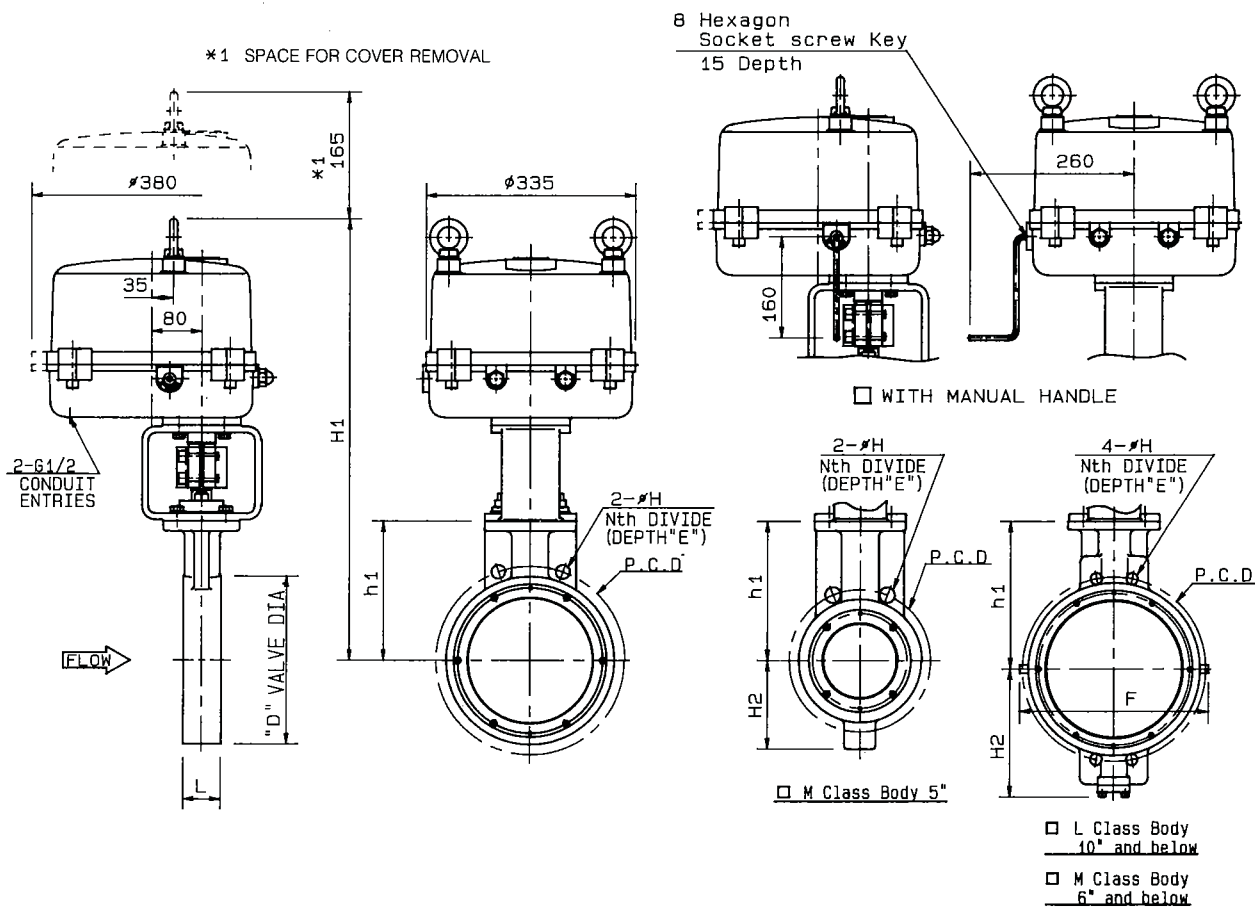
NOTE :

DRAWING No.  
E-710C- 3500RB  
3600RA -B-N  
3400RA -B-S

REV  
B

**KOSO**

# PARA-SEAL



## DIMENSIONS

UNIT: mm

VALVE SIZE CODE No.	L Class Body							M Class Body							ACTUATOR SIZE CODE No.
	JIS10k		ANSI Class 150					JIS20k		ANSI Class 300					
	L	h1	H2	D	F	H1	L	h1	H2	D	F	H1			
05 □ 5" (125A)	—	—	—	—	—	—	70	220	140	195	—	715	□35C1RB □36C1RA □34C1RA □35C2RB □36C2RA □34C2RA		
06 □ 6" (150A)	—	—	—	—	—	—	76	230	205	230	—	725	□35C1RB □36C1RA □34C1RA □35C2RB □36C2RA □34C2RA		
08 □ 8" (200A)	60	220	—	266	—	715	89	290	255	275	—	800	□35C1RB □36C1RA □34C1RA □35C2RB □36C2RA □34C2RA □35C3RB □36C3RA □34C3RA		
10 □ 10" (250A)	68	280	235	330	—	775	114	306	270	350	—	820	□35C2RB □36C2RA □34C2RA □35C3RB □36C3RA □34C3RA		
12 □ 12" (300A)	78	320	280	375	—	830	—	—	—	—	—	—	□35C2RB □36C2RA □34C2RA □35C3RB □36C3RA □34C3RA		
14 □ 14" (350A)	78	365	325	416	500	875	—	—	—	—	—	—	□35C2RB □36C2RA □34C2RA □35C3RB □36C3RA □34C3RA		
16 □ 16" (400A)	102	395	355	480	540	920	—	—	—	—	—	—	□35C3RB □36C3RA □34C3RA		

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300					
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E		
5" (125A)	□				□	225	8	25	□				□	235	8	22		
6" (150A)	□				□	260	12	M22	20	□				□	269.7	12	22	
8" (200A)	□	290	12	23	□	305	12	M22	28	□	298.4	8	22	□	330.2	12	25	
10" (250A)	□	355	12	25	□	380	12	27		□	362	12	25	□	387.4	16	UNC 1	24
12" (300A)	□	400	16	25	□					□	431.8	12	25	□				
14" (350A)	□	445	16	25	□					□	476.2	12	29	□				
16" (400A)	□	510	16	27	□					□	539.8	16	29	□				

NOTE:

DRAWING No.

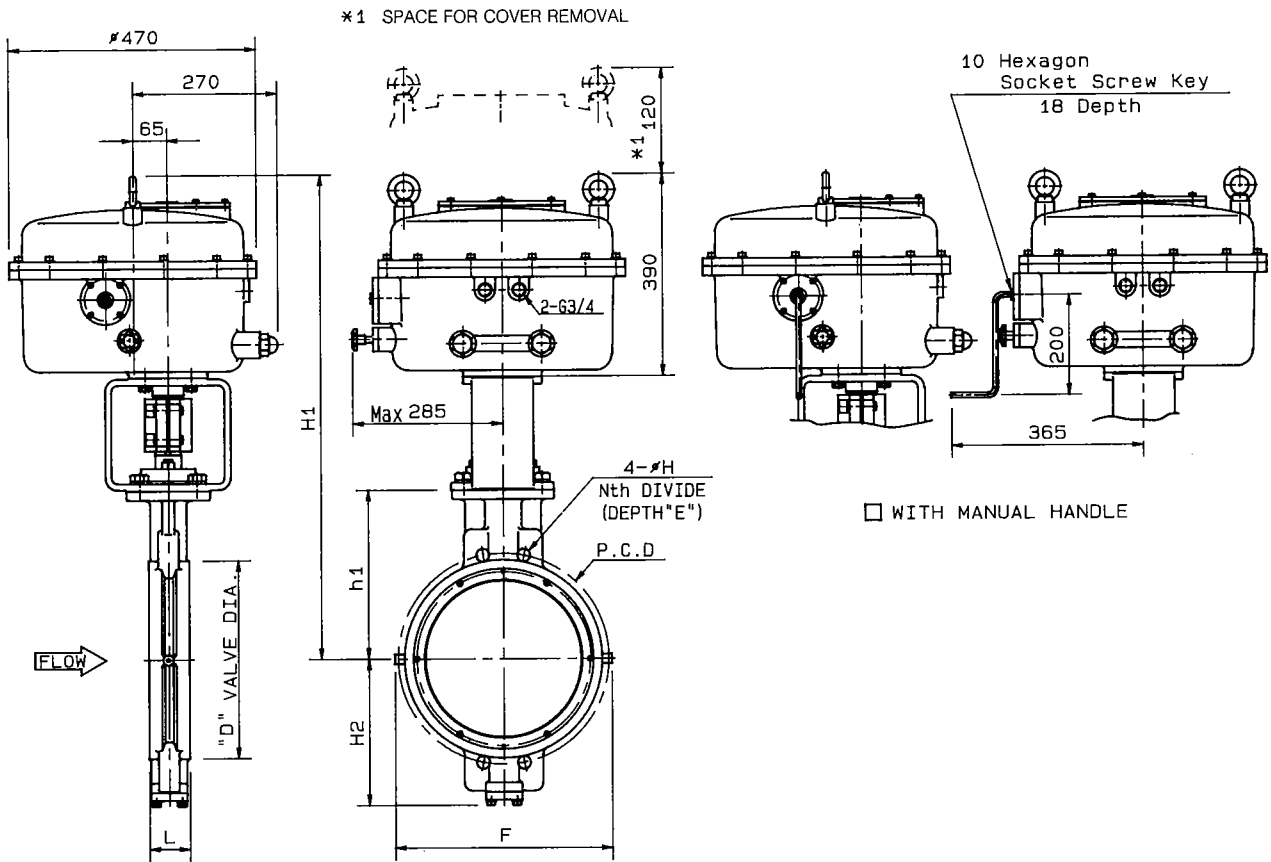
E-710C- 35C:RB  
36C:RA -B-N  
34C:RA S

REV

B

**KOSO**

# PARA-SEAL



## DIMENSIONS

UNIT: mm

VALVE SIZE CODE No.	L Class Body						M Class Body						ACTUATOR SIZE CODE No.
	□ JIS10k			□ ANSI Class 150			□ JIS20k			□ ANSI Class 300			
	L	h1	H2	D	F	H1	L	h1	H2	D	F	H1	
08 □ 8" (200A)	—	—	—	—	—	—	89	290	255	275	—	880	□36D1RA □34D1RA
10 □ 10" (250A)	68	280	235	330	—	865	114	306	270	350	—	900	□36D1RA □34D1RA □36D2RA □34D2RA
12 □ 12" (300A)	78	320	280	375	—	910	114	410	370	400	—	1015	□36D1RA □34D1RA □36D2RA □34D2RA
14 □ 14" (350A)	78	365	325	416	500	955	127	435	395	445	560	1065	□36D1RA □36D2RA □34D1RA □34D2RA
16 □ 16" (400A)	102	395	355	480	540	1000	140	455	415	505	600	1085	□36D1RA □36D2RA □34D1RA □34D2RA
18 □ 18" (450A)	114	425	370	528	610	1030	152	480	440	560	660	1110	□36D1RA □36D2RA □34D1RA □34D2RA

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
8" (200A)	□				□ 305	12	M22	28	□				□ 330.2	12		25
10" (250A)	□ 355	12	25		□ 380	12	27		□ 362	12	25		□ 387.4	16	UNC 1	24
12" (300A)	□ 400	16	25		□ 430	16	M24	30	□ 431.8	12	25		□ 450.8	16	1-1/8-BUN	28
14" (350A)	□ 445	16	25		□ 480	16	M30x3	30	□ 476.2	12	29		□ 541.4	20	1-1/8-BUN	25
16" (400A)	□ 510	16	27		□ 540	16	M30x3	38	□ 539.8	16	29		□ 571.5	20	1-1/4-BUN	30
18" (450A)	□ 565	20	M24	28	□ 605	20	M30x3	32	□ 577.8	16	32		□ 628.6	24	1-1/4-BUN	28

NOTE :

DRAWING No.

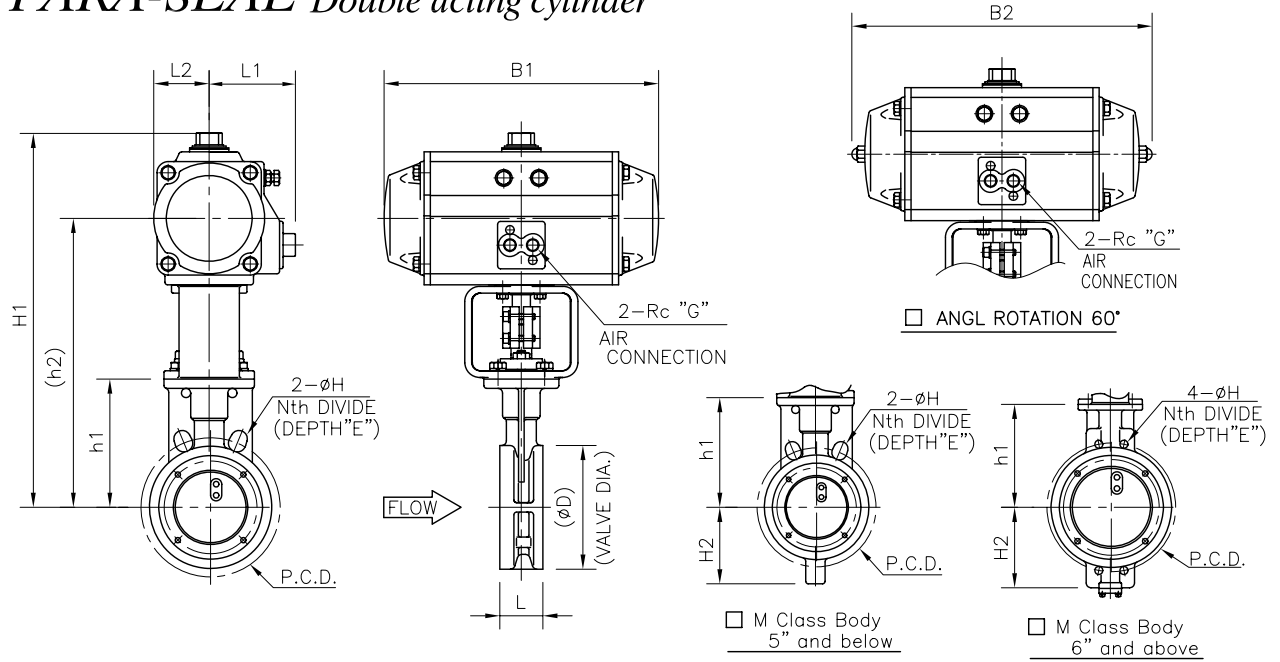
E-710C-36D●RA-B-N  
34D●RA-B-S

REV

B

**KOSO**

# PARA-SEAL Double acting cylinder



## DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	VALVE SIZE	L Class Body					M Class Body					ACTUATOR								
		□ JIS 10k		□ ANSI Class 150			□ JIS 20k		□ ANSI Class 300			Cylinder Size	B1	B2	L1	L2	G	CODE No.		
L	h1	H2	D	h2	H1	L	h1	H2	D	h2	H1									
03	□ 3" (80A)	46	137	—	132	305	375	64	162	85	135	—	—	□ AT200	215	240	70	43	1/4	63B2RB
						310	390					340	420	□ AT250	250	275	75	50	1/4	63BARB
						320	400					350	430	□ AT300	270	305	85	56	1/4	63B3RB
						—	—					355	460	□ AT350	315	355	95	64	1/4	63BBRB
						—	—					380	490	□ AT400	345	385	100	70	1/4	63B4RB
						—	—					425	540	□ AT450	410	455	110	80	1/4	63BCRB
04	□ 4" (100A)	52	160	—	156	335	410	64	172	95	160	340	425	□ AT250	250	275	75	50	1/4	63BARB
						350	450					360	440	□ AT300	270	305	85	56	1/4	63B3RB
						375	485					365	470	□ AT350	315	355	95	64	1/4	63BBRB
						—	—					395	500	□ AT400	345	385	100	70	1/4	63B4RB
						—	—					435	550	□ AT450	410	455	110	80	1/4	63BCRB
						—	—					—	—	□ AT250	250	275	75	50	1/4	63BARB
05	□ 5" (125A)	56	170	—	187	350	425	70	205	120	195	420	505	□ AT300	270	305	85	56	1/4	63B3RB
						355	440					430	530	□ AT350	315	355	95	64	1/4	63BBRB
						365	465					450	560	□ AT400	345	385	100	70	1/4	63B4RB
						390	500					490	605	□ AT450	410	455	110	80	1/4	63BCRB
						—	—					495	625	□ AT500	440	485	120	88	1/4	63B5RB
						—	—					—	—	□ AT300	270	305	85	56	1/4	63B3RB
06	□ 6" (150A)	56	185	—	217	370	455	76	230	205	230	455	555	□ AT350	315	355	95	64	1/4	63BBRB
						380	480					475	585	□ AT400	345	385	100	70	1/4	63B4RB
						405	515					515	630	□ AT450	410	455	110	80	1/4	63BCRB
						445	565					520	650	□ AT500	440	485	120	88	1/4	63B5RB
						—	—					550	710	□ AT550	490	540	125	99	1/4	63BDRB
						—	—					—	—	□ AT350	315	355	95	64	1/4	63BBRB
08	□ 8" (200A)	60	220	—	266	445	545	89	275	260	275	535	645	□ AT400	345	385	100	70	1/4	63B4RB
						465	575					565	685	□ AT450	410	455	110	80	1/4	63BCRB
						505	620					575	705	□ AT500	440	485	120	88	1/4	63B5RB
						510	640					600	760	□ AT550	490	540	125	99	1/4	63BDRB
						—	—					610	780	□ AT600	545	600	130	110	1/4	63B6RB
						—	—					635	835	□ AT650	625	685	150	131	3/8	63BERB

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
3" (80A)	□ (150)	8	(19)	—	□ (160)	8	(23)	—	□ —	—	—	—	□ (168.1)	8	(22)	—
4" (100A)	□ (175)	8	(19)	—	□ (185)	8	(23)	—	□ (190.5)	8	(19)	—	□ (200.2)	8	(22)	—
5" (125A)	□ (210)	8	(23)	—	□ (225)	8	(25)	—	□ (215.9)	8	(22)	—	□ (235.0)	8	(22)	—
6" (150A)	□ (240)	8	(23)	—	□ 260	12	M22	23	□ (241.3)	8	(22)	—	□ 269.7	12	22	—
8" (200A)	□ (290)	12	(23)	—	□ 305	12	M22	28	□ (298.4)	8	(22)	—	□ 330.2	12	25	—

NOTE:

DRAWING No.

E-710C-6300RB-W-N-1

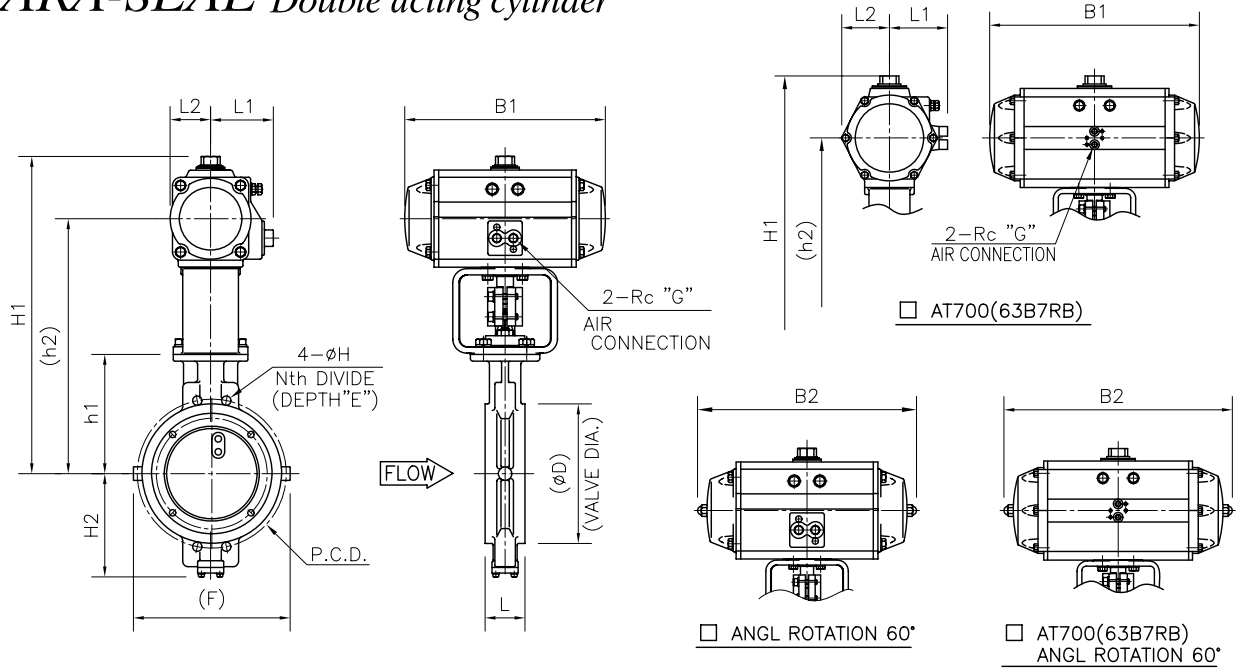
REV.

B

**KOSO**



# PARA-SEAL Double acting cylinder



## DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	L Class Body						M Class Body						ACTUATOR								
	□ JIS 10k			□ ANSI Class 150			□ JIS 20k			□ ANSI Class 300			Cylinder Size	B1	B2	L1	L2	G	CODE No.		
L	h1	H2	D	F	h2	H1	L	h1	H2	D	F	h2								H1	
10 □ 10" (250A)	68	280	235	330	—	565	680	114	306	275	350	—	595	715	□ AT450	410	455	110	80	1/4	63BCRB
						570	700						□ AT500	440	485	120	88	1/4	63B5RB		
						600	760						□ AT550	490	540	125	99	1/4	63BDRB		
						610	780						□ AT600	545	600	130	110	1/4	63B6RB		
						640	835						□ AT650	625	685	150	131	3/8	63BERB		
						—	—						□ AT700	730	805	185	165	1/2	63B7RB		
						—	—						□ AT500	440	485	120	88	1/4	63B5RB		
12 □ 12" (300A)	78	320	280	372	—	620	750	114	380	375	400	—	720	880	□ AT550	490	540	125	99	1/4	63BDRB
						645	805						□ AT600	545	600	130	110	1/4	63B6RB		
						655	825						□ AT650	625	685	150	131	3/8	63BERB		
						680	880						□ AT700	730	805	185	165	1/2	63B7RB		
						—	—						□ AT500	440	485	120	88	1/4	63B5RB		
						—	—						□ AT550	490	540	125	99	1/4	63BDRB		
						—	—						□ AT600	545	600	130	110	1/4	63B6RB		
14 □ 14" (350A)	78	365	325	416	500	665	795	127	420	405	445	560	815	990	□ AT600	545	600	130	110	1/4	63B6RB
						690	850						□ AT650	625	685	150	131	3/8	63BERB		
						700	870						□ AT700	730	805	185	165	1/2	63B7RB		
						725	925						□ AT500	440	485	120	88	1/4	63B5RB		
						740	955						□ AT550	490	540	125	99	1/4	63BDRB		
						745	915						□ AT600	545	600	130	110	1/4	63B6RB		
						770	970						□ AT650	625	685	150	131	3/8	63BERB		
16 □ 16" (400A)	102	395	355	480	540	770	970	140	455	425	505	600	850	1025	□ AT600	545	600	130	110	1/4	63B6RB
						785	1000						□ AT650	625	685	150	131	3/8	63BERB		
						800	1000						□ AT700	730	805	185	165	1/2	63B7RB		
						815	1030						□ AT500	440	485	120	88	1/4	63B5RB		
						895	1110						□ AT550	490	540	125	99	1/4	63BDRB		
						905	1105						□ AT600	545	600	130	110	1/4	63B6RB		
						920	1135						□ AT650	625	685	150	131	3/8	63BERB		
18 □ 18" (450A)	114	425	370	528	610	835	1035	152	480	450	560	660	—	—	□ AT650	625	685	150	131	3/8	63BERB
						850	1065						□ AT700	730	805	185	165	1/2	63B7RB		
						940	1155						□ AT500	440	485	120	88	1/4	63B5RB		
20 □ 20" (500A)	127	460	405	580	650	850	1065	152	500	470	615	720	—	—	□ AT650	625	685	150	131	3/8	63BERB
						850	1065						□ AT700	730	805	185	165	1/2	63B7RB		
						940	1155						□ AT500	440	485	120	88	1/4	63B5RB		
24 □ 24" (600A)	130	560	490	685	740	1000	1215	154	617	575	720	820	1055	1270	□ AT700	730	805	185	165	1/2	63B7RB

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
10" (250A)	□ 355	12	25	—	□ 380	12	27	—	□ 362.0	12	25	—	□ 387.4	16	UNC 1	24
12" (300A)	□ 400	16	25	—	□ 430	16	M24	30	□ 431.8	12	25	—	□ 450.8	16	1 1/8-8UN	28
14" (350A)	□ 445	16	M22	—	□ 480	16	M30X3	26	□ 476.2	12	29	—	□ 514.4	20	1 1/8-8UN	23
16" (400A)	□ 510	16	27	—	□ 540	16	M30X3	35	□ 539.8	16	29	—	□ 571.5	20	1 1/4-8UN	30
18" (450A)	□ 565	20	M24	30	□ 605	20	M30X3	32	□ 577.8	16	32	—	□ 628.6	24	1 1/4-8UN	28
20" (500A)	□ 620	20	M24	30	□ 660	20	M30X3	36	□ 635.0	20	1 1/8-8UN	30	□ 685.8	24	1 1/4-8UN	32
24" (600A)	□ 730	24	M30X3	26	□ 770	24	M36X3	34	□ 749.3	20	1 1/4-8UN	32	□ 812.8	24	1 1/2-8UN	34

NOTE:

DRAWING No.

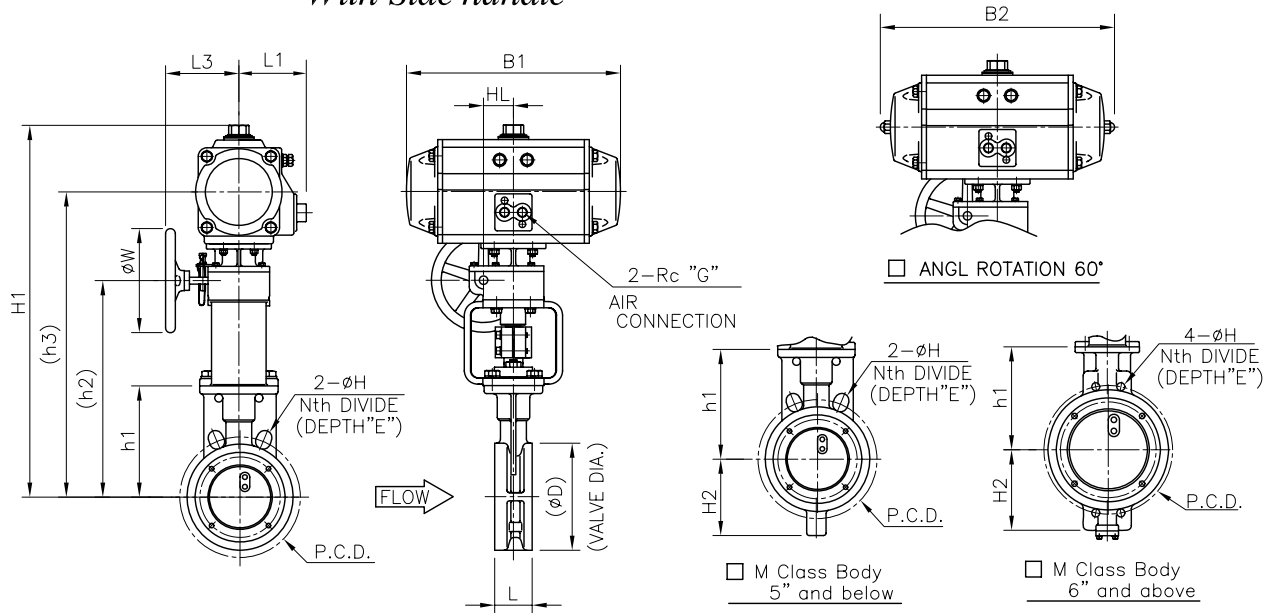
E-710C-6300RB-W-N-2

REV.

B

**KOSO**

# PARA-SEAL Double acting cylinder With Side handle



## DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	L Class Body							M Class Body							ACTUATOR								
	□ JIS 10k			□ ANSI Class 150				□ JIS 20k			□ ANSI Class 300				Cylinder Size	B1	B2	L1	L3	HL	W	G	CODE No.
L	h1	H2	D	h2	h3	H1	L	h1	H2	D	h2	h3	H1	AT									
03 □ 3" (80A)	46	137	—	132	315	455	525	64	162	85	135	—	—	—	□ AT200	215	240	70	130	56	160	1/4	63B2RB
					315	460	540					□ AT250	250	275	75	130	56	160	1/4	63BARB			
					315	455	535					□ AT300	270	305	85	130	56	160	1/4	63B3RB			
					—	—	—					□ AT350	315	355	95	130	56	160	1/4	63BBRB			
					—	—	—					□ AT400	345	385	100	130	56	160	1/4	63B4RB			
					—	—	—					□ AT450	410	455	110	150	69	200	1/4	63BCRB			
04 □ 4" (100A)	52	160	—	156	340	485	560	64	172	95	160	355	500	580	□ AT250	250	275	75	130	56	160	1/4	63BARB
					340	475	560					□ AT300	270	305	85	130	56	160	1/4	63B3RB			
					340	485	585					□ AT350	315	355	95	130	56	160	1/4	63BBRB			
					340	490	600					□ AT400	345	385	100	130	56	160	1/4	63B4RB			
					—	—	—					□ AT450	410	455	110	150	69	200	1/4	63BCRB			
					—	—	—					□ AT500	440	485	120	150	69	200	1/4	63B5RB			
05 □ 5" (125A)	56	170	—	187	355	500	575	70	205	120	195	—	—	—	□ AT250	250	275	75	130	56	160	1/4	63BARB
					355	490	575					□ AT300	270	305	85	130	56	160	1/4	63B3RB			
					355	500	600					□ AT350	315	355	95	130	56	160	1/4	63BBRB			
					355	505	615					□ AT400	345	385	100	130	56	160	1/4	63B4RB			
					370	545	660					□ AT450	410	455	110	150	69	200	1/4	63BCRB			
					—	—	—					□ AT500	440	485	120	150	69	200	1/4	63B5RB			
06 □ 6" (150A)	56	185	—	217	370	505	590	76	230	205	230	—	—	—	□ AT300	270	305	85	130	56	160	1/4	63B3RB
					370	515	615					□ AT350	315	355	95	130	56	160	1/4	63BBRB			
					370	520	630					□ AT400	345	385	100	130	56	160	1/4	63B4RB			
					385	560	675					□ AT450	410	455	110	150	69	200	1/4	63BCRB			
					—	—	—					□ AT500	440	485	120	150	69	200	1/4	63B5RB			
					—	—	—					□ AT550	490	540	125	220	90	300	1/4	63BDRB			
08 □ 8" (200A)	60	220	—	266	430	575	675	89	275	260	275	—	—	—	□ AT350	315	355	95	130	56	160	1/4	63BBRB
					430	580	690					□ AT400	345	385	100	130	56	160	1/4	63B4RB			
					450	625	740					□ AT450	410	455	110	150	69	200	1/4	63BCRB			
					450	635	760					□ AT500	440	485	120	150	69	200	1/4	63B5RB			
					—	—	—					□ AT550	490	540	125	220	90	300	1/4	63BDRB			
					—	—	—					□ AT600	545	600	130	220	90	300	1/4	63B6RB			
—	—	—	□ AT650	625	685	150	355	106	400	3/8	63BERB												

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
3" (80A)	□ (150)	8	(19)	—	□ (160)	8	(23)	—	□ (168.1)	8	(22)	—	□ (168.1)	8	(22)	—
4" (100A)	□ (175)	8	(19)	—	□ (185)	8	(23)	—	□ (190.5)	8	(19)	—	□ (200.2)	8	(22)	—
5" (125A)	□ (210)	8	(23)	—	□ (225)	8	(25)	—	□ (215.9)	8	(22)	—	□ (235.0)	8	(22)	—
6" (150A)	□ (240)	8	(23)	—	□ 260	12	M22	23	□ (241.3)	8	(22)	—	□ 269.7	12	22	—
8" (200A)	□ (290)	12	(23)	—	□ 305	12	M22	28	□ (298.4)	8	(22)	—	□ 330.2	12	25	—

NOTE:

DRAWING No.

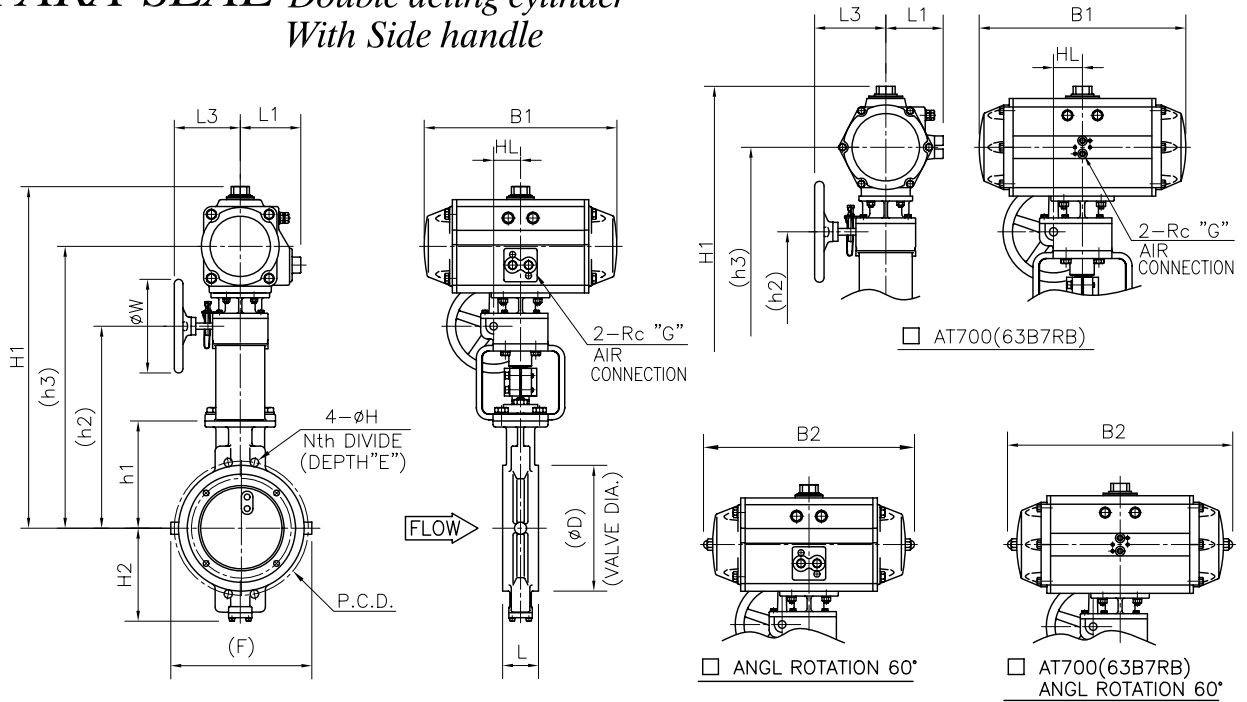
E-710C-6300RB-W-S-1

REV.

B

**KOSO**

# PARA-SEAL Double acting cylinder With Side handle



## DIMENSIONS

UNIT : mm

VALVE SIZE CODE No,	L Class Body										M Class Body						ACTUATOR									
	□ JIS 10k					□ ANSI Class 150					□ JIS 20k			□ ANSI Class 300			Cylinder Size	B1	B2	L1	L3	HL	W	G	CODE No.	
	L	h1	H2	D	F	h2	h3	H1	L	h1	H2	D	F	h2	h3	H1										
10 □ 10" (250A)	68	280	235	330	—	510	685	800	114	306	275	350	—	545	720	840	□AT450	410	455	110	150	69	200	1/4	63BCRB	
					—	510	695	820					—	545	730	855	□AT500	440	485	120	150	69	200	1/4	63B5RB	
					—	540	745	905					—	570	775	935	□AT550	490	540	125	220	90	300	1/4	63BDRB	
					—	540	755	930					—	570	785	960	□AT600	545	600	130	220	90	300	1/4	63B6RB	
					—	570	825	1025					—	610	865	1065	□AT650	625	685	150	355	106	400	3/8	63BERB	
12 □ 12" (300A)	78	320	280	372	—	560	745	870	114	380	375	400	—	—	—	—	□AT500	440	485	120	150	69	200	1/4	63B5RB	
					—	585	790	950					—	560	865	1025	□AT550	490	540	125	220	90	300	1/4	63BDRB	
					—	585	800	975					—	560	875	1050	□AT600	545	600	130	220	90	300	1/4	63B6RB	
					—	625	880	1080					—	700	955	1155	□AT650	625	685	150	355	106	400	3/8	63BERB	
					—	—	—	—					—	700	970	1185	□AT700	730	805	185	355	106	400	1/2	63B7RB	
14 □ 14" (350A)	78	365	325	416	500	605	790	915	127	420	405	445	560	—	—	—	□AT500	440	485	120	150	69	200	1/4	63B5RB	
						630	835	995						—	—	—	□AT550	490	540	125	220	90	300	1/4	63BDRB	
						630	845	1020						—	750	965	1140	□AT600	545	600	130	220	90	300	1/4	63B6RB
						670	925	1125						—	770	1025	1125	□AT650	625	685	150	355	106	400	3/8	63BERB
						670	940	1155						—	770	1040	1255	□AT700	730	805	185	355	106	400	1/2	63B7RB
16 □ 16" (400A)	102	395	355	480	540	675	890	1065	140	455	425	505	600	785	990	1150	□AT600	545	600	130	220	90	300	1/4	63B6RB	
						715	970	1170						—	805	1060	1260	□AT650	625	685	150	355	106	400	3/8	63BERB
						715	985	1200						—	805	1075	1290	□AT700	730	805	185	355	106	400	1/2	63B7RB
						745	1000	1200						—	830	1085	1285	□AT650	625	685	150	355	106	400	3/8	63BERB
						745	1015	1230						—	830	1100	1315	□AT700	730	805	185	355	106	400	1/2	63B7RB
18 □ 18" (450A)	114	425	370	528	610	780	1035	1235	152	500	470	615	720	—	—	—	□AT650	625	685	150	355	106	400	3/8	63BERB	
						780	1050	1265						—	850	1120	1335	□AT700	730	805	185	355	106	400	1/2	63B7RB
						—	—	—						—	—	—	—	—	—	—	—	—	—	—	—	—
20 □ 20" (500A)	127	460	405	580	650	780	1035	1235	152	500	470	615	720	—	—	—	□AT650	625	685	150	355	106	400	3/8	63BERB	
						780	1050	1265						—	850	1120	1335	□AT700	730	805	185	355	106	400	1/2	63B7RB
24 □ 24" (600A)	130	560	490	685	740	910	1180	1395	154	617	575	720	820	970	1235	1450	□AT700	730	805	185	355	106	400	1/2	63B7RB	

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
10" (250A)	□ 355	12	25	—	□ 380	12	27	—	□ 362.0	12	25	—	□ 387.4	16	UNC 1	24
12" (300A)	□ 400	16	25	—	□ 430	16	M24	30	□ 431.8	12	25	—	□ 450.8	16	1 1/8-8UN	28
14" (350A)	□ 445	16	M22	—	□ 480	16	M30X3	26	□ 476.2	12	29	—	□ 514.4	20	1 1/8-8UN	23
16" (400A)	□ 510	16	27	—	□ 540	16	M30X3	35	□ 539.8	16	29	—	□ 571.5	20	1 1/4-8UN	30
18" (450A)	□ 565	20	M24	30	□ 605	20	M30X3	32	□ 577.8	16	32	—	□ 628.6	24	1 1/4-8UN	28
20" (500A)	□ 620	20	M24	30	□ 660	20	M30X3	36	□ 635.0	20	1 1/8-8UN	30	□ 685.8	24	1 1/4-8UN	32
24" (600A)	□ 730	24	M30X3	26	□ 770	24	M36X3	34	□ 749.3	20	1 1/4-8UN	32	□ 812.8	24	1 1/2-8UN	34

NOTE:

DRAWING No.

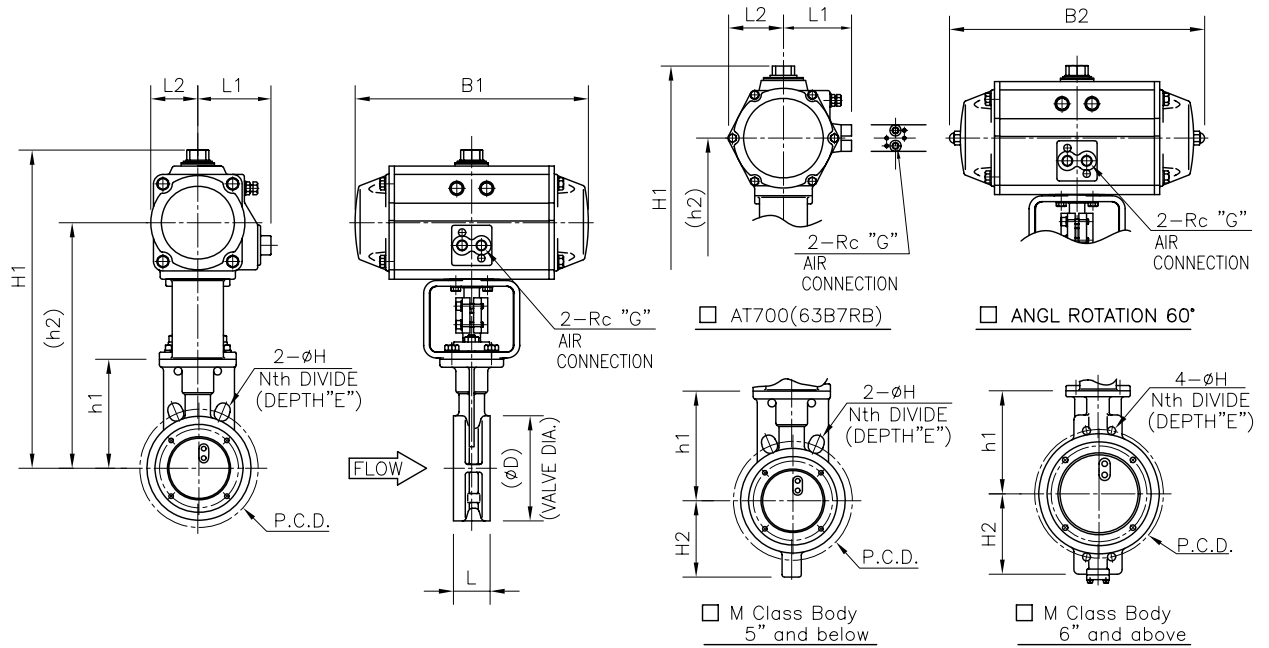
E-710C-6300RB-W-S-2

REV.

B

**KOSO**

# PARA-SEAL Spring return cylinder



## DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	VALVE SIZE	L Class Body					M Class Body					ACTUATOR															
		□ JIS 10k		□ ANSI Class 150			□ JIS 20k		□ ANSI Class 300			Cylinder Size	B1	B2	L1	L2	G	CODE No.									
L	h1	H2	D	h2	H1	L	h1	H2	D	h2	H1																
03	□ 3" (80A)	46	137	—	132	320	400	64	162	85	135	—	—	□ AT300	270	305	85	56	1/4	63B3RB							
						325	430					355	460	□ AT350	315	355	95	64	1/4	63B4RB							
						355	460					380	495	□ AT400	345	385	100	70	1/4	63B4RB							
						—	—					425	540	□ AT450	410	455	110	80	1/4	63BCRB							
						—	—					430	560	□ AT500	440	485	120	88	1/4	63B5RB							
						—	—					425	585	□ AT550	490	540	125	99	1/4	63BDRB							
04	□ 4" (100A)	52	160	—	156	350	450	64	172	95	160	365	470	□ AT350	315	355	95	64	1/4	63B4RB							
						375	485					395	500	□ AT400	345	385	100	70	1/4	63B4RB							
						400	520					435	550	□ AT450	410	455	110	80	1/4	63BCRB							
						410	540					440	570	□ AT500	440	485	120	88	1/4	63B5RB							
						425	585					435	595	□ AT550	490	540	125	99	1/4	63BDRB							
						—	—					450	560	□ AT400	345	385	100	70	1/4	63B4RB							
05	□ 5" (125A)	56	170	—	187	390	500	70	205	120	195	450	560	□ AT400	345	385	100	70	1/4	63B4RB							
						430	550					490	605	□ AT450	410	455	110	80	1/4	63BCRB							
						440	570					495	625	□ AT500	440	485	120	88	1/4	63B5RB							
						435	595					525	685	□ AT550	490	540	125	99	1/4	63BDRB							
						—	—					535	705	□ AT600	545	600	130	110	1/4	63B6RB							
						—	—					565	760	□ AT650	625	685	150	131	3/8	63BERB							
06	□ 6" (150A)	56	185	—	217	445	565	76	230	205	230	515	630	□ AT450	410	455	110	80	1/4	63BCRB							
						455	585					520	650	□ AT500	440	485	120	88	1/4	63B5RB							
						450	610					550	710	□ AT550	490	540	125	99	1/4	63BDRB							
						—	—					560	730	□ AT600	545	600	130	110	1/4	63B6RB							
						—	—					590	785	□ AT650	625	685	150	131	3/8	63BERB							
						—	—					—	—	□ AT500	440	485	120	88	1/4	63B5RB							
08	□ 8" (200A)	60	220	—	266	510	640	89	275	260	275	600	760	□ AT550	490	540	125	99	1/4	63BDRB							
						540	700					610	780	□ AT600	545	600	130	110	1/4	63B6RB							
						550	720					635	835	□ AT650	625	685	150	131	3/8	63BERB							
						580	775					—	—	□ AT700	730	805	185	165	1/2	63B7RB							
						—	—					—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
3" (80A)	□ (150)	8	(19)	—	□ (160)	8	(23)	—	□ (190.5)	8	(19)	—	□ (168.1)	8	(22)	—
4" (100A)	□ (175)	8	(19)	—	□ (185)	8	(23)	—	□ (215.9)	8	(22)	—	□ (200.2)	8	(22)	—
5" (125A)	□ (210)	8	(23)	—	□ (225)	8	(25)	—	□ (241.3)	8	(22)	—	□ (235.0)	8	(22)	—
6" (150A)	□ (240)	8	(23)	—	□ 260	12	M22	23	□ (298.4)	8	(22)	—	□ 269.7	12	22	—
8" (200A)	□ (290)	12	(23)	—	□ 305	12	M22	28	□ (298.4)	8	(22)	—	□ 330.2	12	25	—

NOTE:

DRAWING No.

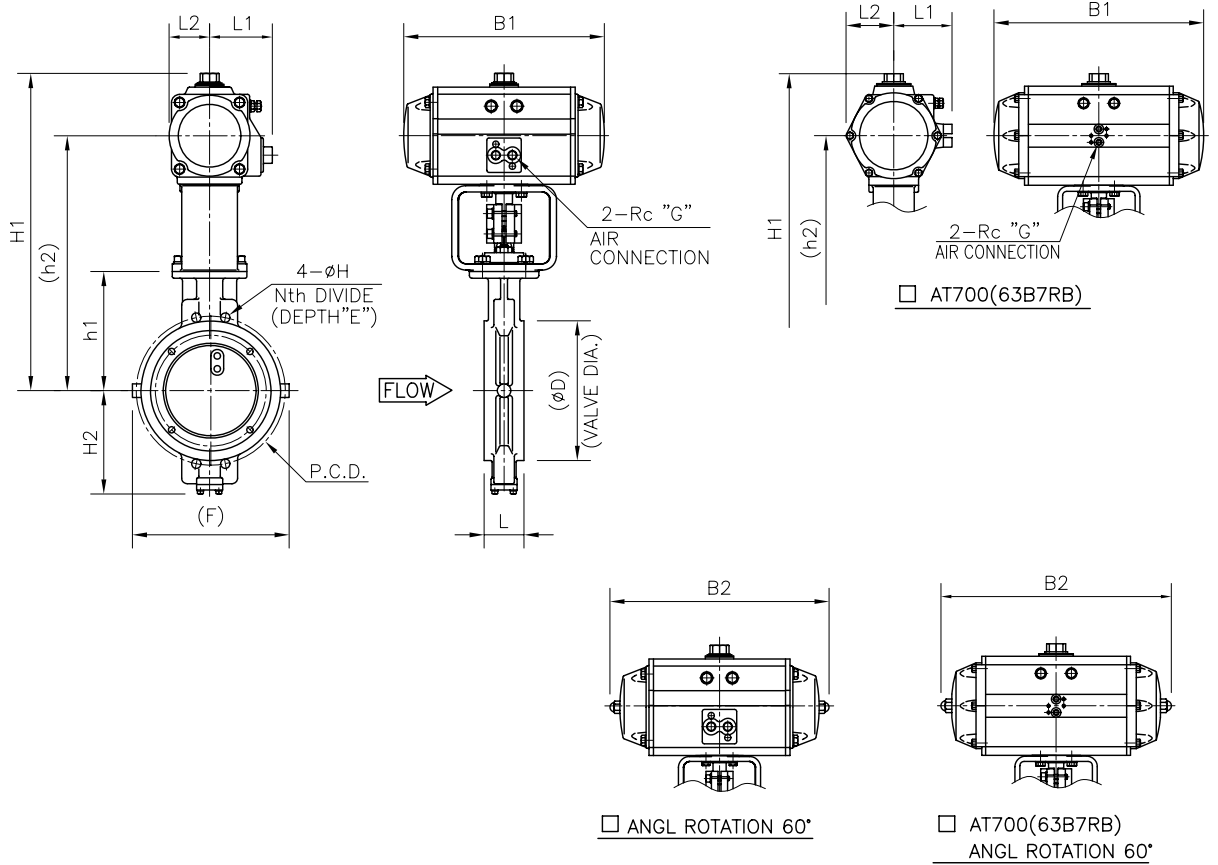
E-710C-6300RB-S-N-1

REV.

B

**KOSO**

# PARA-SEAL Spring return cylinder



## DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	L Class Body							M Class Body							ACTUATOR						
	■ JIS 10k			□ ANSI Class 150				□ JIS 20k			□ ANSI Class 300				Cylinder Size	B1	B2	L1	L2	G	CODE No.
L	h1	H2	D	F	h2	H1	L	h1	H2	D	F	h2	H1	B1							
10 □ 10" (250A)	68	280	235	330	—	610	780	114	306	275	350	—	640	815	□ AT600	545	600	130	110	1/4	63B6RB
						640	835						□ AT650	625	685	150	131	3/8	63BERB		
						650	865						□ AT700	730	805	185	165	1/2	63B7RB		
12 □ 12" (300A)	78	320	280	372	—	680	880	114	380	375	400	—	—	—	□ AT650	625	685	150	131	3/8	63BERB
						695	910						□ AT700	730	805	185	165	1/2	63B7RB		
						725	925						□ AT650	625	685	150	131	3/8	63BERB		
14 □ 14" (350A)	78	365	325	416	500	740	955	127	420	405	445	560	—	—	□ AT650	625	685	150	131	3/8	63BERB
						860	1075						□ AT700	730	805	185	165	1/2	63B7RB		
16 □ 16" (400A)	102	395	355	480	540	785	1000	140	455	425	505	600	895	1110	□ AT700	730	805	185	165	1/2	63B7RB

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
10" (250A)	□ 355	12	25	—	□ 380	12	27	—	□ 362.0	12	25	—	□ 387.4	16	UNC 1	24
12" (300A)	□ 400	16	25	—	□ 430	16	M24	30	□ 431.8	12	25	—	□ 450.8	16	1 1/8-8UN	28
14" (350A)	□ 445	16	M22	—	□ 480	16	M30X3	26	□ 476.2	12	29	—	□ 514.4	20	1 1/8-8UN	23
16" (400A)	□ 510	16	27	—	□ 540	16	M30X3	35	□ 539.8	16	29	—	□ 571.5	20	1 1/4-8UN	30

NOTE:

DRAWING No.

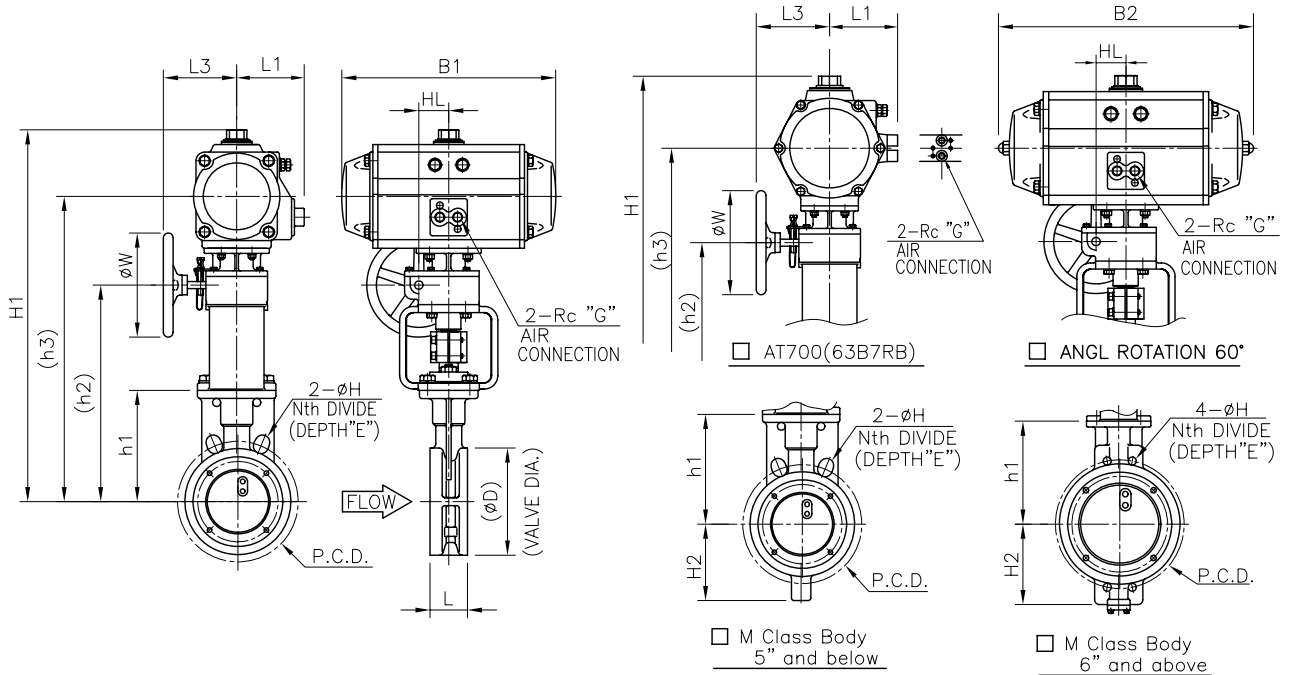
E-710C-6300RB-SN-2

REV.

B

**KOSO**

# PARA-SEAL Spring return cylinder With Side handle



## DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	L Class Body							M Class Body							ACTUATOR								
	JIS 10k			ANSI Class 150				JIS 20k			ANSI Class 300				Cylinder Size	B1	B2	L1	L3	HL	W	G	CODE No.
L	h1	H2	D	h2	h3	H1	L	h1	H2	D	h2	h3	H1	B1									
03 □ 3" (80A)	46	137	—	132	315	455	535	64	162	85	135	—	—	—	□AT300	270	305	85	130	56	160	1/4	63B3RB
					315	460	565					□AT350	315	355	95	130	56	160	1/4	63B4RB			
					315	470	575					□AT400	345	385	100	130	56	160	1/4	63B4RB			
					330	505	625					□AT450	410	455	110	150	69	300	1/4	63BCRB			
					—	—	—					□AT500	440	485	120	150	69	300	1/4	63B5RB			
04 □ 4" (100A)	52	160	—	156	340	485	585	64	172	95	160	345	500	605	□AT350	315	355	95	130	56	160	1/4	63B4RB
					315	470	575					□AT400	345	385	100	130	56	160	1/4	63B4RB			
					355	530	645					□AT450	410	455	110	150	69	300	1/4	63BCRB			
					355	540	665					□AT500	440	485	120	150	69	300	1/4	63B5RB			
					415	620	780					□AT550	490	540	125	235	90	400	1/4	63BDRB			
05 □ 5" (125A)	56	170	—	187	355	505	615	70	205	120	195	415	565	675	□AT400	345	385	100	130	56	160	1/4	63B4RB
					370	545	660					□AT450	410	455	110	150	69	300	1/4	63BCRB			
					370	555	680					□AT500	440	485	120	150	69	300	1/4	63B5RB			
					425	630	790					□AT550	490	540	125	235	90	400	1/4	63BDRB			
					—	—	—					□AT600	545	600	130	235	90	400	1/4	63B6RB			
06 □ 6" (150A)	56	185	—	217	385	560	675	76	230	205	230	460	635	750	□AT450	410	455	110	150	69	300	1/4	63BCRB
					385	570	695					□AT500	440	485	120	150	69	300	1/4	63B5RB			
					440	645	805					□AT550	490	540	125	235	90	400	1/4	63BDRB			
					—	—	—					□AT600	545	600	130	235	90	400	1/4	63B6RB			
					—	—	—					□AT650	625	685	150	355	106	630	3/8	63BERB			
08 □ 8" (200A)	60	220	—	266	450	635	760	89	275	260	275	—	—	—	□AT500	440	485	120	150	69	300	1/4	63B5RB
					480	685	845					□AT550	490	540	125	235	90	400	1/4	63BDRB			
					480	695	870					□AT600	545	600	130	235	90	400	1/4	63B6RB			
					510	765	965					□AT650	625	685	150	355	106	630	3/8	63BERB			
					—	—	—					□AT700	730	805	185	355	106	630	1/2	63B7RB			

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
3" (80A)	(150)	8	(19)	—	(160)	8	(23)	—	(190.5)	8	(19)	—	(200.2)	8	(22)	—
4" (100A)	(175)	8	(19)	—	(185)	8	(23)	—	(215.9)	8	(22)	—	(235.0)	8	(22)	—
5" (125A)	(210)	8	(23)	—	(225)	8	(25)	—	(241.3)	8	(22)	—	269.7	12	22	—
6" (150A)	(240)	8	(23)	—	260	12	M22	23	(298.4)	8	(22)	—	330.2	12	25	—
8" (200A)	(290)	12	(23)	—	305	12	M22	28								

NOTE:

DRAWING No.

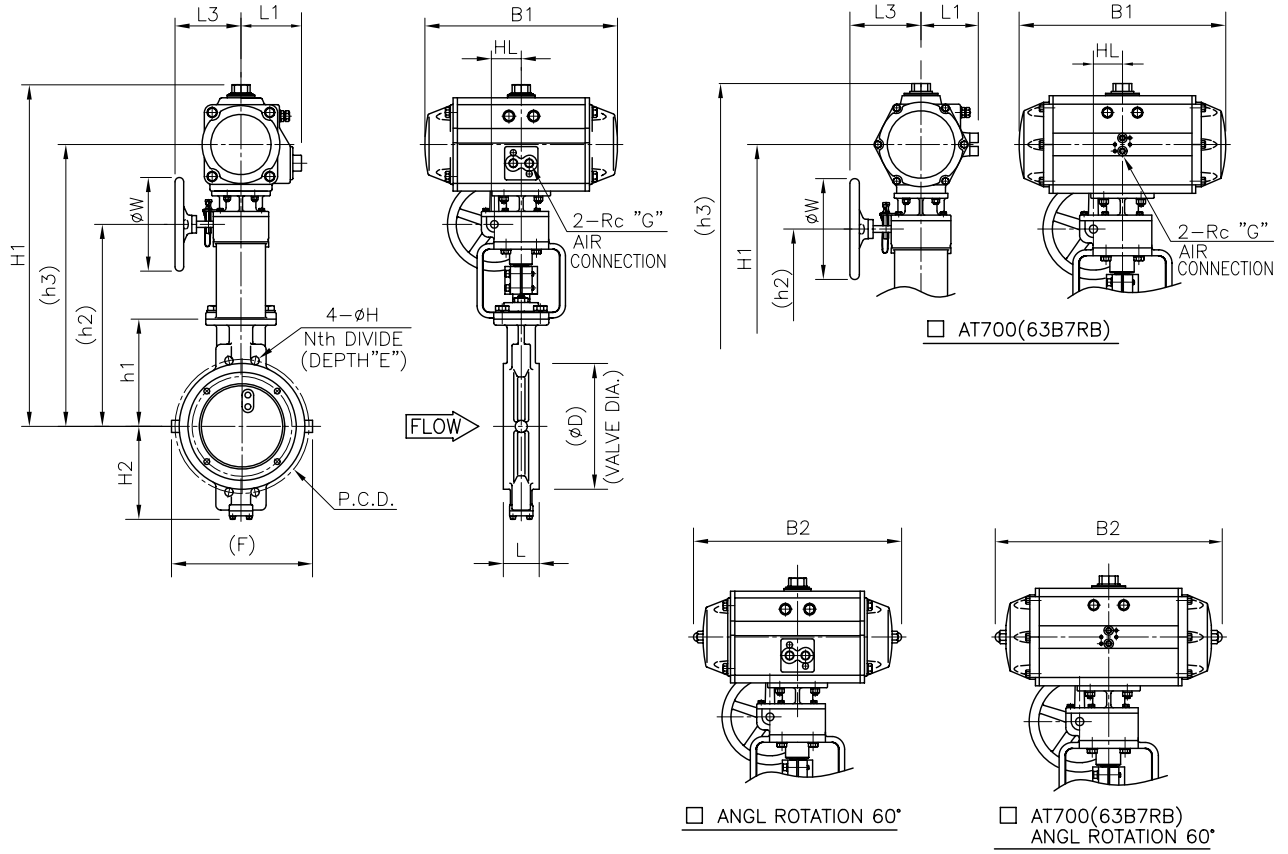
E-710C-6300RB-S-S-1

REV.

B

**KOSO**

# PARA-SEAL Spring return cylinder With Side handle



## DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	L Class Body									M Class Body									ACTUATOR								
	□ JIS 10k				□ ANSI Class 150					□ JIS 20k				□ ANSI Class 300					Cylinder Size	B1	B2	L1	L3	HL	W	G	CODE No.
	L	h1	H2	D	F	h2	h3	H1	L	h1	H2	D	F	h2	h3	H1											
10 □ 10" (250A)	68	280	235	330	—	540	755	930	114	306	275	350	—	570	785	960	□AT600	545	600	130	235	90	400	1/4	63B6RB		
						570	840	1055						610	865	1065	□AT650	625	685	150	355	106	630	3/8	63BERB		
						610	880	1095						□AT700	730	805	185	355	106	630	1/2	63B7RB					
12 □ 12" (300A)	78	320	280	372	—	625	880	1080	114	380	375	400	—	—	—	—	□AT650	625	685	150	355	106	630	3/8	63BERB		
						625	895	1110						700	970	1185	□AT700	730	805	185	355	106	630	1/2	63B7RB		
						670	925	1125						□AT650	625	685	150	355	106	630	3/8	63BERB					
14 □ 14" (350A)	78	365	325	416	500	670	925	1125	127	420	405	445	560	—	—	—	□AT650	625	685	150	355	106	630	3/8	63BERB		
						670	940	1155						□AT700	730	805	185	355	106	630	1/2	63B7RB					
16 □ 16" (400A)	102	395	355	480	540	715	985	1200	140	455	425	505	600	805	1075	1290	□AT700	730	805	185	355	106	630	1/2	63B7RB		

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
10" (250A)	□ 355	12	25	—	□ 380	12	27	—	□ 362.0	12	25	—	□ 387.4	16	UNC 1	24
12" (300A)	□ 400	16	25	—	□ 430	16	M24	30	□ 431.8	12	25	—	□ 450.8	16	1 1/8-8UN	28
14" (350A)	□ 445	16	M22	—	□ 480	16	M30X3	26	□ 476.2	12	29	—	□ 514.4	20	1 1/8-8UN	23
16" (400A)	□ 510	16	27	—	□ 540	16	M30X3	35	□ 539.8	16	29	—	□ 571.5	20	1 1/4-8UN	30

NOTE:

DRAWING No.

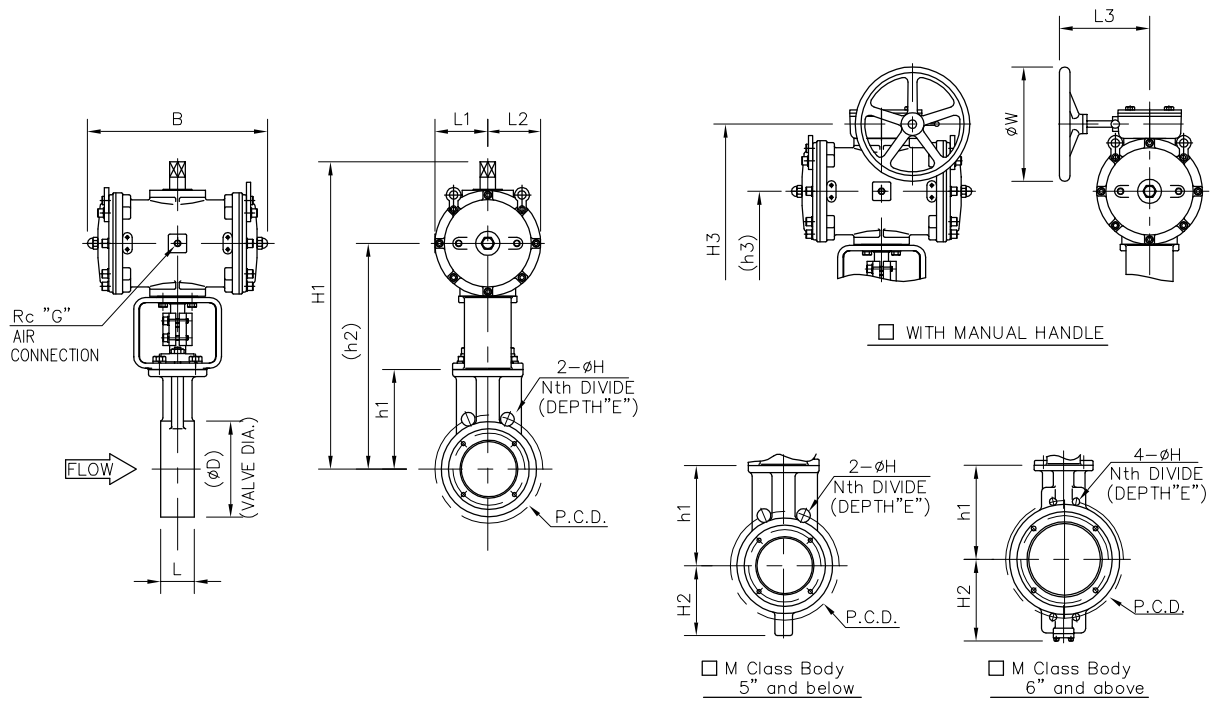
E-710C-6300RB-S-S-2

REV.

B

**KOSO**

# PARA-SEAL Double acting cylinder



## DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	L Class Body							M Class Body							ACTUATOR								
	□ JIS 10k			□ ANSI Class 150				□ JIS 20k			□ ANSI Class 300				Cylinder Size	B	L1	L2	L3	HL	G	W	CODE No.
	L	h1	H2	D	h2	H1	H3	L	h1	H2	D	h2	H1	H3									
08 □ 3" (80A)	46	137	-	133	380	560	525	64	162	120	135	410	590	555	□ 170	500	120	120	235	93	3/8	300	7317RB
04 □ 4" (100A)	52	160	-	155	405	585	550	64	172	130	160	420	600	565	□ 170	500	120	120	235	93	3/8	300	7317RB
05 □ 5" (125A)	56	170	-	187	420	600	565	70	220	140	195	495	675	640	□ 170	500	120	120	235	93	3/8	300	7317RB
06 □ 6" (150A)	56	185	-	216	435	615	580	76	230	205	230	505	685	650	□ 170	500	120	120	235	93	3/8	300	7317RB
					-	-	-					565	800	760									
08 □ 8" (150A)	60	220	-	266	495	675	640	89	290	255	275	580	760	725	□ 170	500	120	120	235	93	3/8	300	7317RB
					-	-	-					640	875	835									

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
3" (80A)	□ (150)	8	(19)	—	□ (160)	8	(23)	—	□ (168.1)	8	(19)	—	□ (168.1)	8	(22)	—
4" (100A)	□ (175)	8	(19)	—	□ (185)	8	(23)	—	□ (190.5)	8	(19)	—	□ (200.2)	8	(22)	—
5" (125A)	□ (210)	8	(23)	—	□ (225)	8	(25)	—	□ (215.9)	8	(22)	—	□ (235.0)	8	(22)	—
6" (150A)	□ (240)	8	(23)	—	□ 260	12	M22	23	□ (241.3)	8	(22)	—	□ 269.7	12	22	—
8" (200A)	□ (290)	12	(23)	—	□ 305	12	M22	28	□ (298.4)	8	(22)	—	□ 330.2	12	25	—

NOTE:

DRAWING No.

E-710C-7300RB-W-<sup>N</sup>/<sub>H</sub>

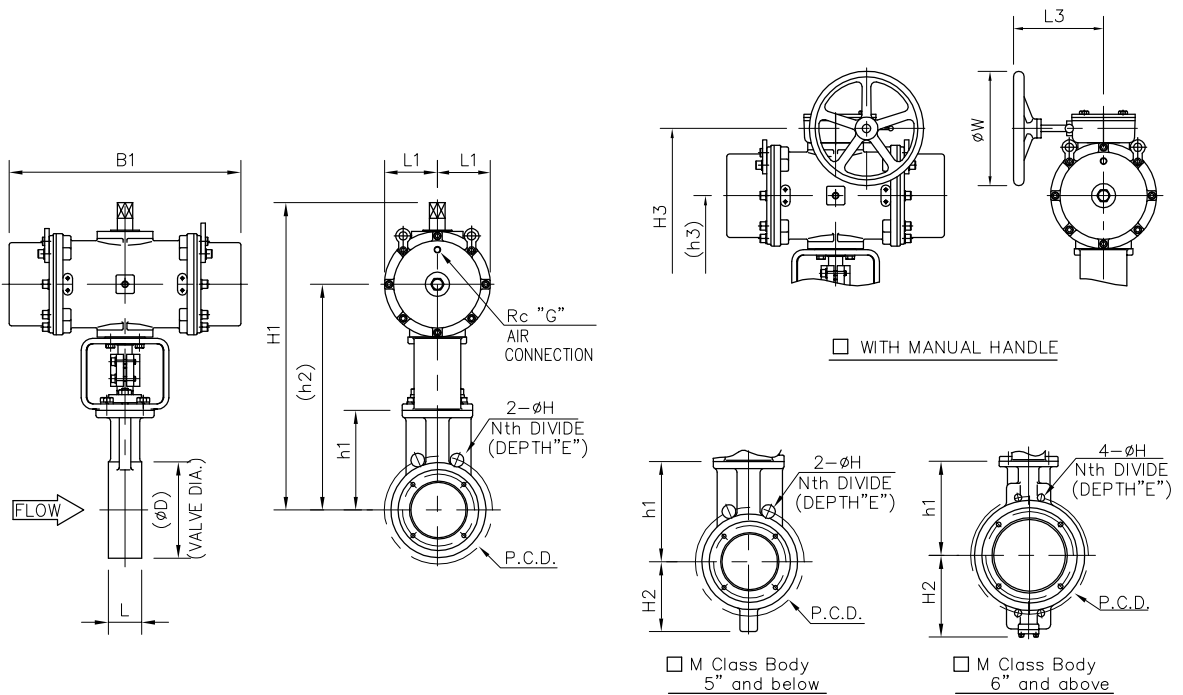
REV.

A

**KOSO**



# PARA-SEAL Spring return cylinder



## DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.	L Class Body		M Class Body				ACTUATOR																
	□ JIS 10k		□ ANSI Class 150		□ JIS 20k		□ ANSI Class 300		Cylinder														
	L	h1	H2	D	h2	H1	H3	L	h1	H2	D	h2	H1	H3	Size	B	L1	L2	L3	HL	G	W	CODE No.
08 □ 3" (80A)	46	137	-	133	380	560	535	64	162	120	135	410	590	565	□ 170	500	120	120	235	93	3/8	300	7317RB
					-	-	-					475	710	675	□ 235	635	160	160	315	108	1/2	400	7323RB
04 □ 4" (100A)	52	160	-	155	405	580	560	64	172	130	160	420	600	575	□ 170	500	120	120	235	93	3/8	300	7317RB
					465	700	665					485	720	685	□ 235	635	160	160	315	108	1/2	400	7323RB
05 □ 5" (125A)	56	170	-	187	420	600	575	70	220	140	195	495	675	650	□ 170	500	120	120	235	93	3/8	300	7317RB
					480	715	680					555	790	755	□ 235	635	160	160	315	108	1/2	400	7323RB
06 □ 6" (150A)	56	185	-	216	495	730	695	76	230	205	230	560	795	760	□ 235	635	160	160	315	108	1/2	400	7323RB
					545	830	790					615	900	860	□ 280	810	185	185	380	165	1/2	630	7328RB
08 □ 8" (150A)	60	220	-	266	555	790	755	89	290	255	275	640	875	840	□ 375	990	240	240	467	269	3/4	630	7337RB
					605	890	850					690	975	935	□ 280	810	185	185	380	165	1/2	630	7328RB
					-	-	-					780	1150	1070	□ 375	990	240	240	467	269	3/4	630	7337RB

VALVE SIZE	JIS 10k				JIS 20k				ANSI Class 150				ANSI Class 300			
	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E	P.C.D	N	H	E
3" (80A)	□ (150)	8	(19)	—	□ (160)	8	(23)	—	□ (190.5)	8	(19)	—	□ (200.2)	8	(22)	—
4" (100A)	□ (175)	8	(19)	—	□ (185)	8	(23)	—	□ (215.9)	8	(22)	—	□ (235.0)	8	(22)	—
5" (125A)	□ (210)	8	(23)	—	□ (225)	8	(25)	—	□ (241.3)	8	(22)	—	□ (269.7)	12	22	—
6" (150A)	□ (240)	8	(23)	—	□ 260	12	M22	23	□ (298.4)	8	(22)	—	□ 330.2	12	25	—
8" (200A)	□ (290)	12	(23)	—	□ 305	12	M22	28								

NOTE:

DRAWING No.

E-710C-7300RB-S-N-1

REV.

A

**KOSO**

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Service stations: Saitama, Osaka, Nagoya, Hiroshima, Chiba, Okayama, Kyushu  
and Niigata

\* Subject to change without notice.