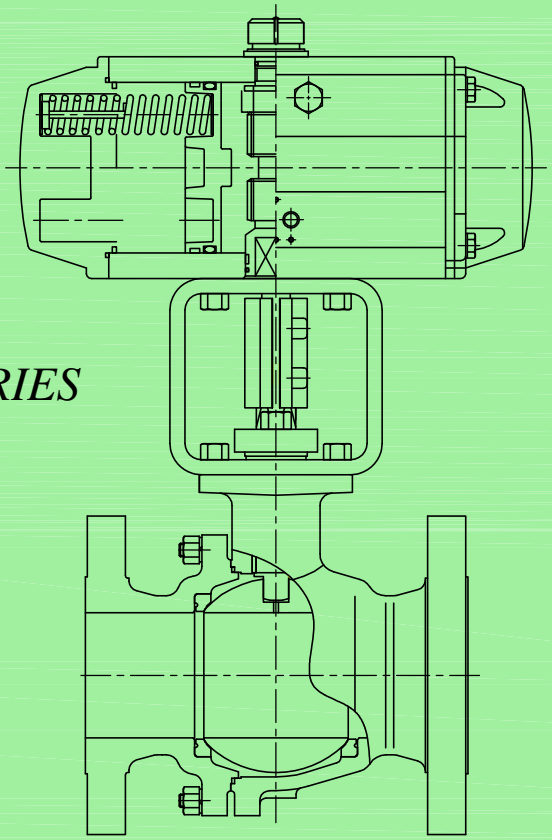
KOSO

STANDARD SPECIFICATION

STRAIGHT–THROUGH TYPE

BALL- VALVE

301K SERIES



KOSO

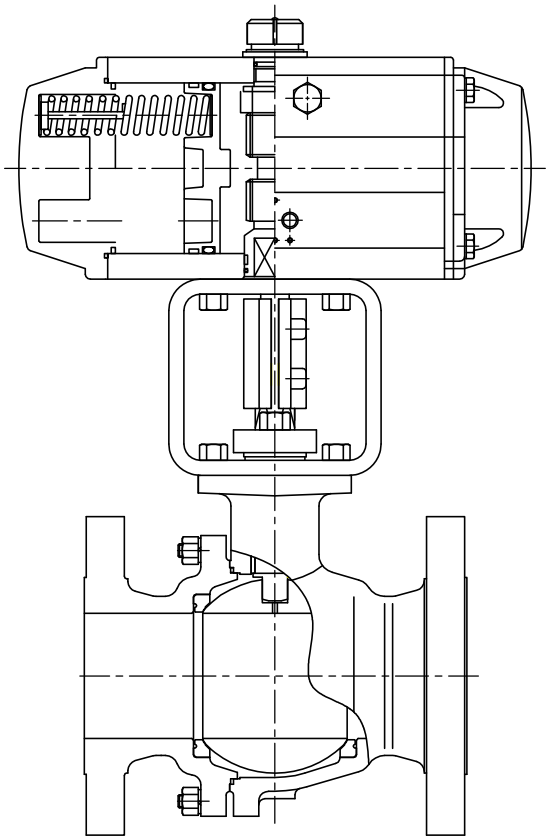
STANDARD SPECIFICATION

BALL –VALVE
STRAIGHT- THROUGH TYPE
301K SERIES

GENERAL

301K series provides ball valves which facilitates tight shut off. Valve is controlled (opening/closing) by stem for performing quarter turn operation.

When the valve completely opened, has the same bore as the pipeline and its fluid resistance is negligible. For this reason this automatic valve is best suited to ON-OFF service. Controlling various types of liquid, gas and slurry.



STANDARD SPECIFICATION.

Body

Type:

Size:
Full Bore Type 1/2" to 42" (15-1050mm)
Reduced Bore type: 2" x 1" to 42" x 40"
(50x80 To 1050x1000mm)
Steam jacket type (L,M,H,S Class Body)
Ball Size 1/2" to 42" (15 to 1050mm)

Rating:

L Class:
ANSI 150#, JIS 10K
Ball Size for Floating Type: 1/2" to 8"
Ball Size for Trunnion Type: 4" to 42"

M Class:
ANSI 300#, JIS 20K
Ball Size for Floating Type: 1/2" to 6"
Ball Size for Trunnion Type: 4" to 42"

H **Class:**
ANSI 600#, JIS 40K
Ball Size for Floating Type: 1/2" to 5"
Ball Size for Trunnion Type: 4" to 42"

S **Class:**
ANSI 900#,1500# JIS 63K
Ball Size for Trunnion Type: 4" to 42"

Connection: Flanged (RF,FF,RTJ & BW)

Face to Face Dimensions: As per API 6D

Material:
SCPH2 / A216 WCB
SCS13A / A351 CF8
SCS14A / A351 CF8M

Bonnet:
Standard type…….. - 20^0 To 250^{0}C
Steam jacket type: Maximum working pressure: 10Kgf/cm^{2}G

Gland Packing:
Teflon V Ring, Teflon Asbestos

Gasket:
Teflon, Asbestos, Pillar foil

* Special materials like HastAlloy - C, Monel etc will be avaliable on request

ACTUATOR SPECIFICATION

Model / Specification	Pneumatic Cylinder	
	6300RB, 6400,6500	
	Double Acting	Spring Return
Purpose	On - Off	
Supply	Air Supply : 4 to 6 Kg/Cm2	
Piping / Tubing Connections	Rc 1/8 (For Cylinder Size 60 to 90),Rc 1/4, Rc 3/8, Rc 1/2, Rc 1, Rc 1 1/2	
Control Signal	On - Off Signal by Air	
Opened Or Closed	90 Deg	
Action	Fully opened or closed by On - Off Signal	Air to valve closed or Air to valve opened
Ambient Temperature	-20 to 60 Deg C	
Painting	Munsell N-6 (Epoxy resin group)	
Option	Solenoid Valve, Air set, Speed Controller, Lock - Up -Valve, Limit Switch, Manual handle	

Optional special specifications (Additional cost is required)

- Special testing (Material Certificate, Non-Destructive testing, Radiographic testing)
- Oxygen Clean
- Sand / Dust proof
- Cold area proof
- Tropical area proof
- No copper alloy exposed parts
- Special Piping & fitting
- Vacuum Service
- SUS bolts/nuts for
- Non standard painting

Table 1; Body / Trim material Combinations, Operating Temperature & Seat leakage

Table 1-1 FLOATING TYPE

Table 1-1A L Class Body / Valve Size 1/2" to 4" (15-100mm)

Body Rating		ANSI Class 150 / JIS10K		
Body Material JIS/ASTM		SCPH2/A216WCB, SCS13A,SCS14A/A351-CF8M		
Ball	Material	SS316	SS316	SS316
	Treatment	Buffing	Buffing	Buffing
Stem	Material	SS316	SS316	SS316
Bearing	Material	SS316	SS316	SS316
	Treatment	Chrome Plated	Chrome Plated	Chrome Plated
Seal Ring	Type	T Type	F Type	C Type
	Material	Pure Teflon	Reinforced TFE MoS2 Filled	Reinforced TFE Carbonfiber Filled
Seat leakage		Tight Shut off	Tight Shut off	Tight Shut off
Operating Temperature	A 216 WCB	-5 To +200	-5 To +200	-5 To +200
	A 351 CF8	-20 To +200	-20 To +200	-20 To +200
	A 351 CF8 M	-20 To +200	-20 To +200	-20 To +200

Table 1-1B L Class Body / Valve Size 5" to 8" (125-200mm)

Body Rating		ANSI Class 150 / JIS10K					
Body Material JIS/ASTM		SCPH2/A216WCB, SCS13A/A351-CF8			SCS14A/ A351-CF8M		
Ball	Material	A 351 CF8	A 351 CF8	A 351 CF8	SCS14A	SCS14A	SCS14A
	Treatment	Buffing	Buffing	Buffing	Buffing	Buffing	Buffing
Stem	Material	SS304	SS304	SS304	SS316	SS316	SS316
Bearing	Material	SS316	SS316	SS316	SS316	SS316	SS316
	Treatment	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated
Seal Ring	Type	T Type	F Type	C Type	T Type	F Type	C Type
	Material	Pure Teflon	Reinforced TFE MoS2 Filled	Reinforced TFE Carbonfiber Filled	Pure Teflon	Reinforced TFE MoS2 Filled	Reinforced TFE Carbonfiber Filled
Seat leakage		Tight Shut off	Tight Shut off	Tight Shut off	Tight Shut off	Tight Shut off	Tight Shut off
Operating Temperature	A 216 WCB	-5 To +200	-5 To +200	-5 To +200	-20 To +200	-20 To +230	-20 To +250
	A 351 CF8	-20 To +200	-20 To +200	-20 To +200			
	A 351 CF8 M	-20 To +200	-20 To +200	-20 To +200			

Table 1-1C.1 M Class Body / Valve Size 1/2” to 4” (15-100mm)

Valve Size		1/2" To 4" (15 TO 100mm)			
Body Rating		ANSI Class 300 / JIS20K			
Body Material JIS/ASTM		SCPH2/A216WCB, SCS13A		SCS14A/ A351-CF8M	
Ball	Material	SS316	SS316	SS316	SS316
	Treatment	Buffing	Buffing	Buffing	Buffing
Stem	Material	SS630	SS630	SS316	SS316
	Treatment	Heat Treatment	Heat Treatment	–	–
Bearing	Material	SS316	SS316	SS316	SS316
	Treatment	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated
Seal Ring	Type	F Type	C Type	F Type	C Type
	Material	Reinforced TFE MoS2 Filled	Reinforced TFE Carbonfiber Filled	Reinforced TFE MoS2 Filled	Reinforced TFE Carbonfiber Filled
Seat leakage		Tight Shut off	Tight Shut off	Tight Shut off	Tight Shut off
Operating Temperature	A 216 WCB	-5 To +230	-5 To +250	-20 To +250	-20 To +250
	A 351 CF8	-20 To +230	-20 To +250		

Table 1-1C.2 M Class Body / Valve Size 5” to 6” (125-150mm)

Valve Size		5" To 6" (125 TO 150mm)			
Body Rating		ANSI Class 300 / JIS20K			
Body Material JIS/ASTM		SCPH2/A216WCB, SCS13A		SCS14A/ A351-CF8M	
Ball	Material	A 351 CF8	A 351 CF8	A 351 CF8M	A 351 CF8M
	Treatment	Buffing	Buffing	Buffing	Buffing
Stem	Material	SS630	SS630	SS316	SS316
	Treatment	Heat Treatment	Heat Treatment	–	–
Bearing	Material	SS316	SS316	SS316	SS316
	Treatment	Chrome Plated	Chrome Plated	Chrome Plated	Chrome Plated
Seal Ring	Type	F Type	C Type	F Type	C Type
	Material	Reinforced TFE MoS2 Filled	Reinforced TFE Carbonfiber Filled	Reinforced TFE MoS2 Filled	Reinforced TFE Carbonfiber Filled
Seat leakage		Tight Shut off	Tight Shut off	Tight Shut off	Tight Shut off
Operating Temperature	SCPH2 Body	-5 To +230	-5 To +250	-20 To +230	-20 To +250
	SCS13A Body	-20 To +230	-20 To +250		

Table: 1-1D.1 H -Class Body/Valve Size 1/2” to 5”(15 to 125mm)

Valve size		1/2" to 5"(15 to 125 mm)			
Body Rating		ANSI Class 600 / JIS 40K			
Body Material JIS/ASTM		SCPH2/A216WCB, SCS13A / CF8		SCS14A/ A351-CF8M	
Ball	Material	SCS13A / CF8		SCS14A / CF8M	SCS14A / CF8M
	Treatment	HCr + Buffing		HCr + Buffing	HCr + Buffing
Stem	Material	SS630		SS316	SS316
	Treatment	Heat Treatment		–	–
Bearing	Material	SS316		SS316	SS316
	Treatment	Chrome Plated		Chrome Plated	Chrome Plated
Seal Ring	Type	C Type		F Type	C Type
	Material	PEEK / Carbon Filled Teflon		PEEK / Carbon Filled Teflon	PEEK / Carbon Filled Teflon
	Back Ring	NBR	VITON	VITON	VITON
Operating Temperature	A 216 WCB	-5 To +60	-5 To +170	-10 To +170	-10 To +170
	A 351 CF8	-20 To +60	-10 To +170		
Seat leakage		Tight Shut off		Tight Shut off	Tight Shut off

Table: 1-1F.1 S -Class Body/Valve Size 1/2” to 5”(15 to 125mm)

Valve size		1/2" to 5"(15 to 125 mm)			
Body Rating		ANSI Class 900,1500 / JIS 63K			
Body Material JIS/ASTM		SCPH2/A216WCB, SCS13A / CF8		SCS14A/ A351-CF8M	
Ball	Material	A 351 CF8		A 351 CF8M	A 351 CF8M
	Treatment	HCr + Buffing		HCr + Buffing	HCr + Buffing
Stem	Material	SS630		SS630	SS630
	Treatment	Heat Treatment		–	–
Bearing	Material	Nitronic 60		Nitronic 60	Nitronic 60
	Treatment	Stellite 60		Stellite 60	Stellite 60
Seal Ring	Type	C Type		F Type	C Type
	Material	Carbon Filled Teflon		Carbon Filled Teflon	Carbon Filled Teflon
	Back Ring	NBR	VITON	VITON	VITON
Operating Temperature	A 216 WCB	-5 To +60	-5 To +170	-10 To +170	-10 To +170
	A 351 CF8	-20 To +60	-10 To +170		
Seat leakage		Tight Shut off		Tight Shut off	Tight Shut off

Table 1-2 TRUNNION TYPE

Table 1-2A L Class Body / Valve Size 4" to 42" (100 to 1050 mm)

Body Rating		ANSI Class 150 / JIS10K					
Body Material JIS/ASTM		SCPH2/A216WCB, SCS13A/A351 CF8				SCS14A/ A351-CF8M	
Ball	Material	SCS13A / A 351 CF8		SCS13A / A 351 CF8		SCS14A / A 351 CF8M	SCS14A / A 351 CF8M
	Treatment	Buffing		Buffing		Buffing	Buffing
Stem	Material	SS304		SS304		SS316	SS316
	Treatment	–		–		–	–
Bearing	Material	SS316		SS316		SS316	SS316
	Treatment	Chrome Plated		Chrome Plated		Chrome Plated	Chrome Plated
Seal Ring	Type	F Type		C Type		F Type	C Type
	Material	Reinforced PTFE (MoS2 Filled)		Reinforced PTFE (Carbonfiber Filled)		Reinforced PTFE (MoS2 Filled)	Reinforced PTFE (Carbonfiber Filled)
	Back Ring	NBR	VITON	NBR	VITON	VITON	VITON
Operating Temperature	SCPH2 Body	-5 To +60	-5 To +170	-5 To +60	-5 To +170	-10 To +170	-10 To +170
	SCS13A Body	-20 To +60	-10 To +170	-20 To +60	-10 To +170		
Seat leakage		Tight Shut off		Tight Shut off		Tight Shut off	Tight Shut off

Table 1-2B M Class Body / Valve Size 4”to 42”(100 to 1050 mm)

Body Material JIS/ASTM		SCPH2/A216WCB, SCS13A / A 351 CF8				SCS14A/ A351-CF8M	
Ball	Material	SCS13A / A 351 CF8		SCS13A / A 351 CF8		SCS14A / A 351 CF8M	SCS14A / A 351 CF8M
	Treatment	Buffing		Buffing		Buffing	Buffing
Stem	Material	SS630		SS630		SS316	SS316
	Treatment	Heat Treatment		Heat Treatment		–	–
Bearing	Material	SS316		SS316		SS316	SS316
	Treatment	Chrome Plated		Chrome Plated		Chrome Plated	Chrome Plated
Seal Ring	Type	F Type		C Type		F Type	C Type
	Material	Reinforced TFE (MoS2 Filled)		Reinforced TFE (Carbonfiber Filled)		Reinforced TFE (MoS2 Filled)	Reinforced TFE (Carbonfiber Filled)
	Back Ring	NBR	VITON	NBR	VITON	VITON	VITON
Operating Temperature	SCPH2 Body	-5 To +60	-5 To +170	-5 To +60	-5 To +170	-10 To +170	-10 To +170
	SCS13A Body	-20 To +60	-10 To +170	-20 To +60	-10 To +170		
Seat leakage		Tight Shut off		Tight Shut off		Tight Shut off	Tight Shut off

Table 1-2C. H & S Class Body / Valve Size 4" to 42" (100 to 1050 mm)

Valve size		6" to 36"(150 to 900 mm)			
Body Rating		ANSI Class 600 / JIS 40K			
Body Material JIS/ASTM		SCPH2/A216WCB, SCS13A / CF8		SCS14A/ A351-CF8M	
Ball	Material	SCS13A / CF8		SCS14A / CF8M	SCS14A / CF8M
	Treatment	HCr + Buffing		HCr + Buffing	HCr + Buffing
Stem	Material	SS630		SS316	SS316
	Treatment	Heat Treatment		–	–
Bearing	Material	SS316		SS316	SS316
	Treatment	Chrome Plated		Chrome Plated	Chrome Plated
Seal Ring	Type	C Type		F Type	C Type
	Material	PEEK		PEEK	PEEK
	Back Ring	NBR	VITON	VITON	VITON
Operating Temperature	A 216 WCB	-5 To +60	-5 To +170	-10 To +170	-10 To +170
	A 351 CF8	-20 To +60	-10 To +170		
Seat leakage		Tight Shut off		Tight Shut off	Tight Shut off

Table : 2 **Cv Value (90^{o} Opening)**

Table : 2-1 L Class Body, M Class Body & H Class Body

Full Bore Type					
Inch	mm	Rated Cv	Inch	mm	Rated Cv
1/2	(15)	14	14	(350)	30700
3/4	(20)	40	16	(400)	41245
1	(25)	77	18	(450)	55570
1 1/2	(40)	205	20	(500)	70045
2	(50)	400	22	(550)	86752
2 1/2	(65)	715	24	(600)	103732
3	(80)	1040	26	(650)	130530
4	(100)	2120	28	(700)	151830
5	(125)	3690	30	(750)	177900
6	(150)	5070	32	(800)	198370
8	(200)	10265	34	(850)	214745
10	(250)	16900	36	(900)	249050
12	(300)	25900	42	(1050)	–

Reduced Port Type		
Inch	mm	Rated Cv
4x3	100x80	660
5x4	125x100	1335
6x5	150x125	2405
8x6	200x150	2645
10x8	250x200	5340
12x10	300x250	9675
14x12	350x300	19595
16x14	400x350	20165
18x16	450x400	29150
20x18	500x450	39505
24x20	600x500	34030
30x24	750x600	42060
36x30	900x750	80940
42x40	1050x1000	–

Table : 2-2 S Class Body

Valve Size		Rated Cv		Valve Size		Rated Cv	
		900#	1500#			900#	1500#
3/4B	20A	31	31	14B	350A	24000	16000
1B	25A	46	46	16B	400A	26000	22000
1.5B	40	150	150	18B	450A	38000	28000
2B	50A	320	320	20B	500A	54000	35000
2.5B	65A	460	460	22B	550A	--	--
3B	80A	900	700	24B	600A	59000	50000
4B	100	1800	1300	26B	650A	--	--
6B	150	4300	3100	28B	700A	--	--
8B	200	7500	6400	30B	750A	--	--
10B	250	12000	9600	36B	900A	--	--
12B	300A	21000	13500	42B	1050A	--	--

Fig: 1Seal Ring Operating Temperature-Pressure Rating

Fig: 1-1 Floating Type (Ball Size 1/2” to 8”)
F Type Seal Ring (Pure Teflon)

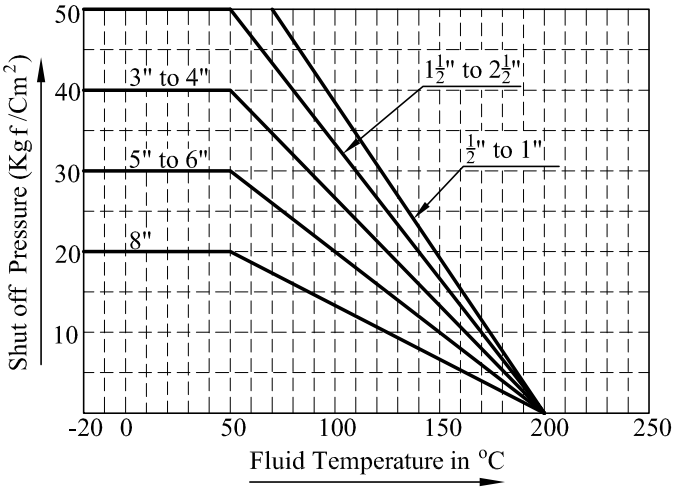


Fig: 1-2 Floating Type (Ball Size 1/2” to 8”)
F -Type Seal Ring (Reinforced Teflon MoS2 Filled)

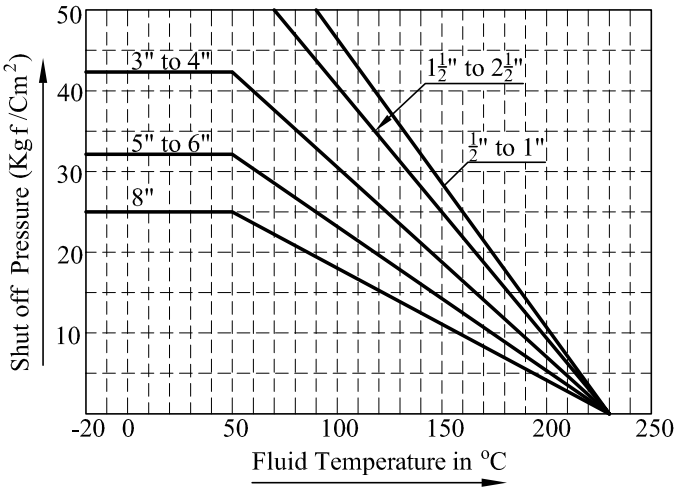


Fig: 1-3 Floating Type (Ball Size 1/2” to 8”)
C -Type Seal Ring (Carbon fiber Filled Teflon)

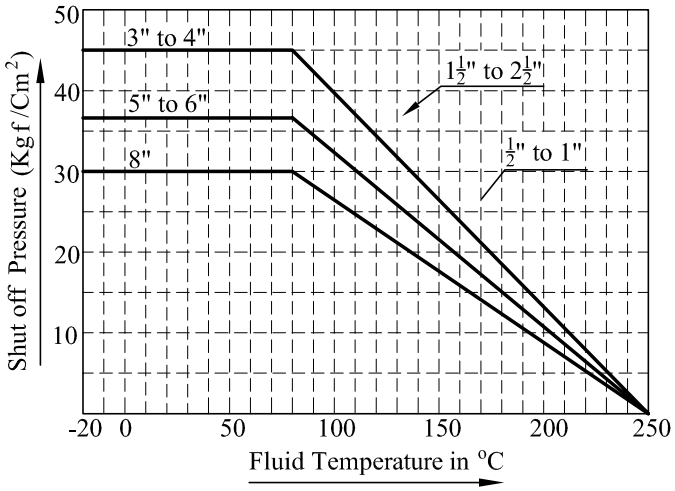


Fig : 1-4 Trunnion Type (Ball Size 4" to 42")
F&C -Type Seal Ring / VITON Back Ring

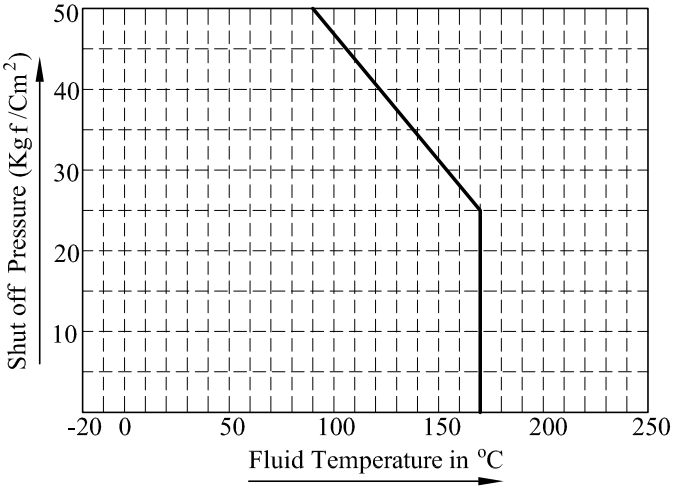


Fig : 1-5 Trunnion Type (Ball Size 4" to 42")
F&C -Type Seal Ring / NBR Back Ring

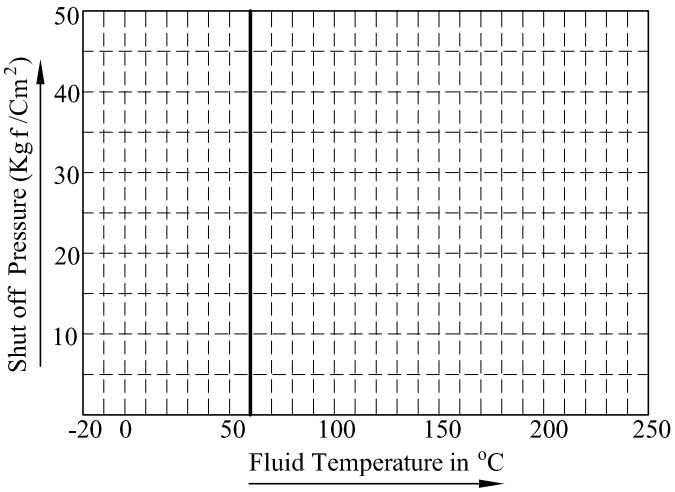


Fig: 1-6 Trunnion Type (For H-Class Type)
PEEK Type Material / Carbon Filled Teflon

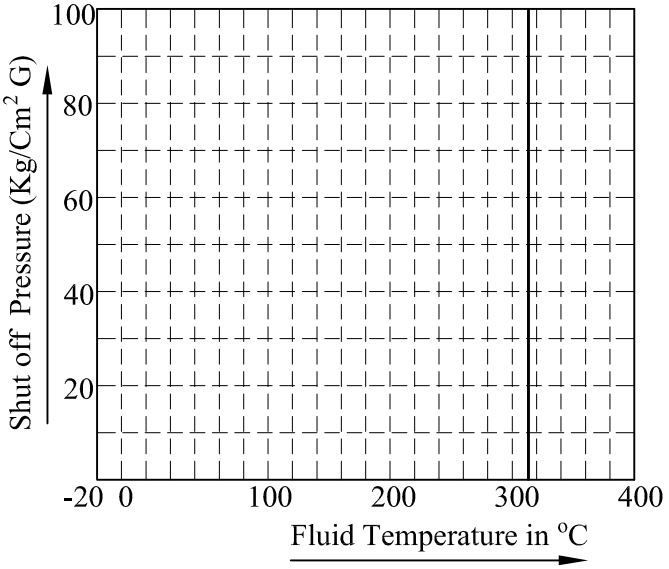


Fig: 2 Gasket Temperature / Pressure rating

Fig: 2-1 Teflon (VAL7010)

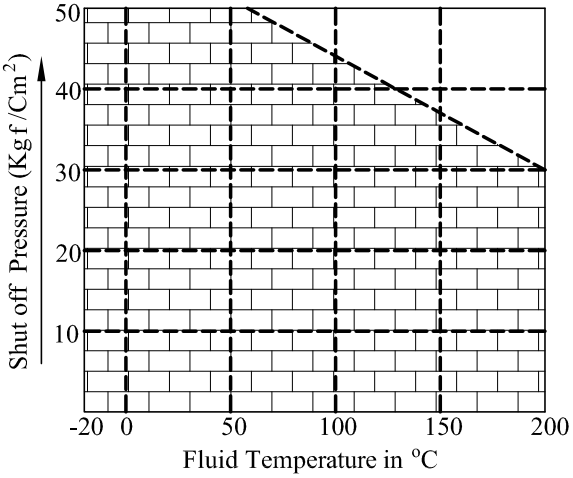


Fig: 2-2Asbestos (VAL 1500AC)

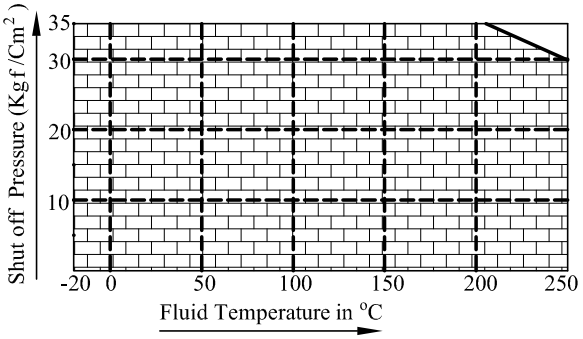


Fig: 2-3 Pillar foil (P6631)

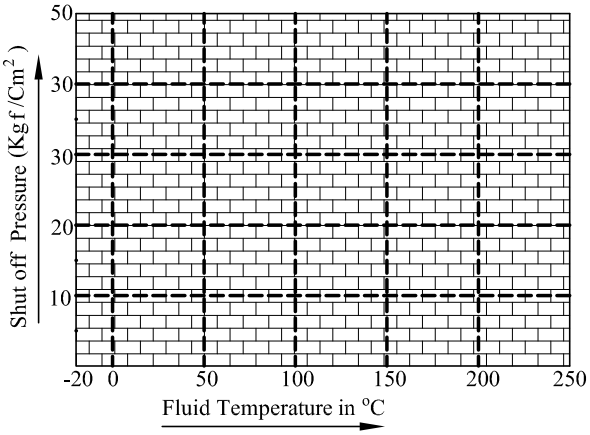


Fig: 2-4 **GRAFOIL SHEET**

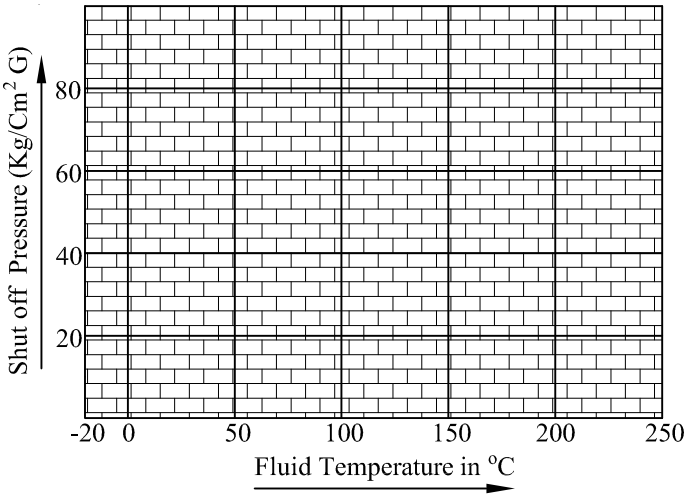


Fig: 2-5 **SPRIAL WOUND METAL (GRAFOIL+SS316) FOR H CLASS**

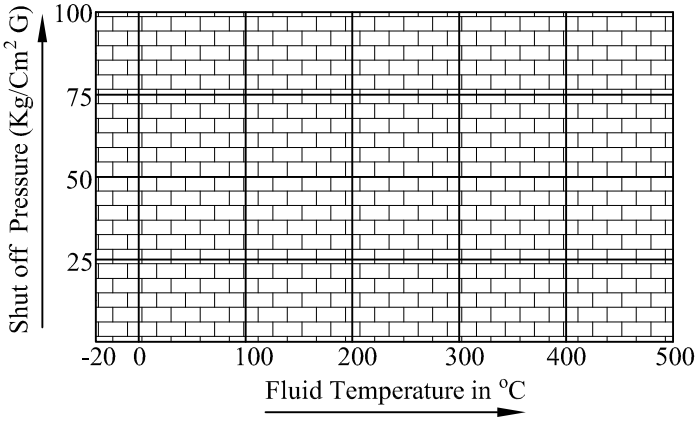
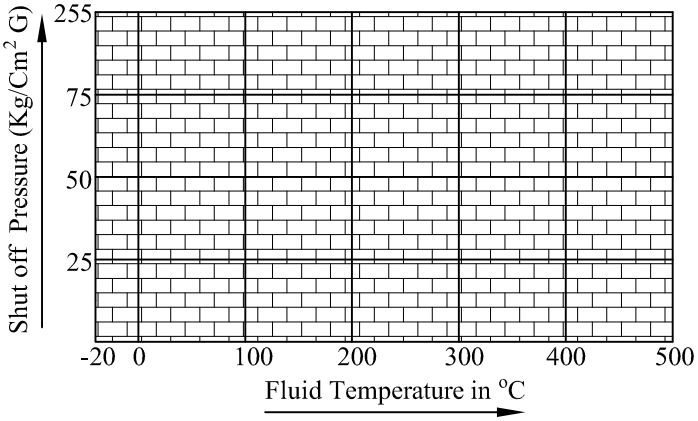


Fig: 2-6 **SERRATED METAL GASKET (SS316) FOR S CLASS**



Note:

Grafoil material will be suitable upto -196°C ~ 450°C temperature and pressure upto 100 kgf/cm2

Fig: 3 Gland Packing Temperature /Pressure rating

Fig: 3-1 Teflon Asbestos (P4513+P4513L)
Oxidizing Fluids (P4514+P#2S)

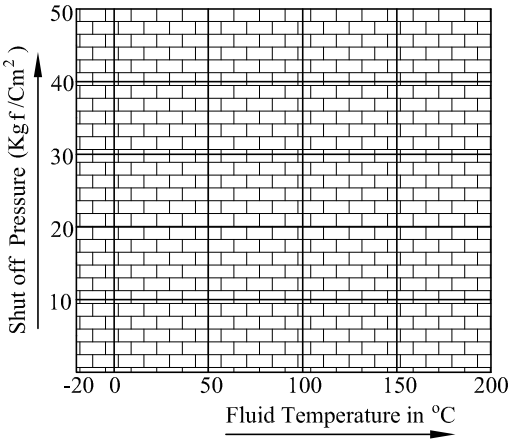


Fig: 3-2 Pillar foil (P6616A+P316)

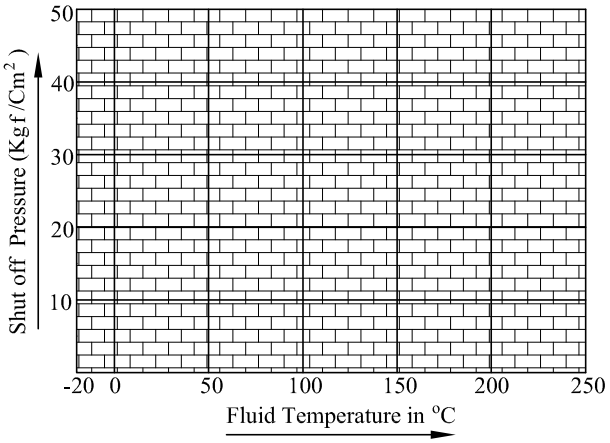
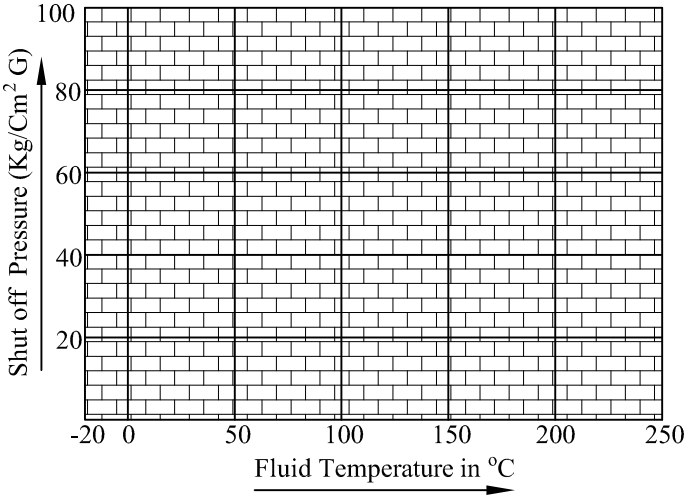


Fig: 3-3 **GRAFOIL**



Note:

Grafoil material will be suitable upto -196°C ~ 450°C temperature and pressure upto 100 kgf/cm2

Fig : 4 Typical Material of Construction for Floating & Trunnion Ball Valve

Size : 1/2" to 6"
Rating : ANSI 150#, 300#, 600#, 900#, 1500#

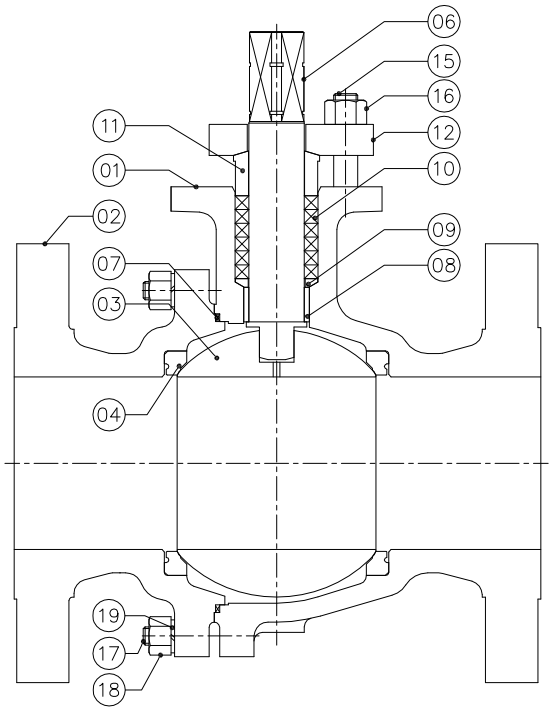


Fig : 4-1

Size : 4" to 16"
Rating : ANSI 150#, 300#, 600#, 900#, 1500#

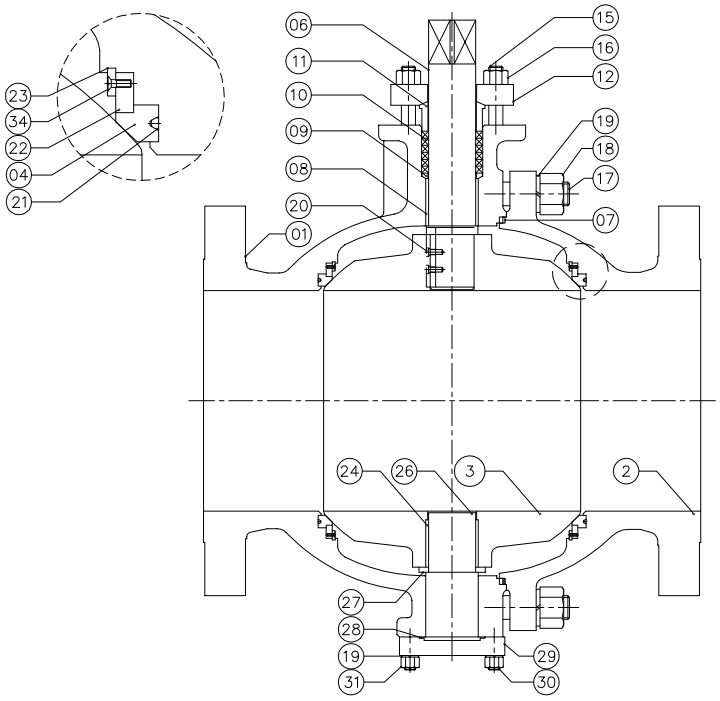


Fig : 4-2

Fire Safe Design (Two Piece) **Size : 4" to 16"**
Rating : ANSI 150#, 300#, 600#, 900#, 1500#

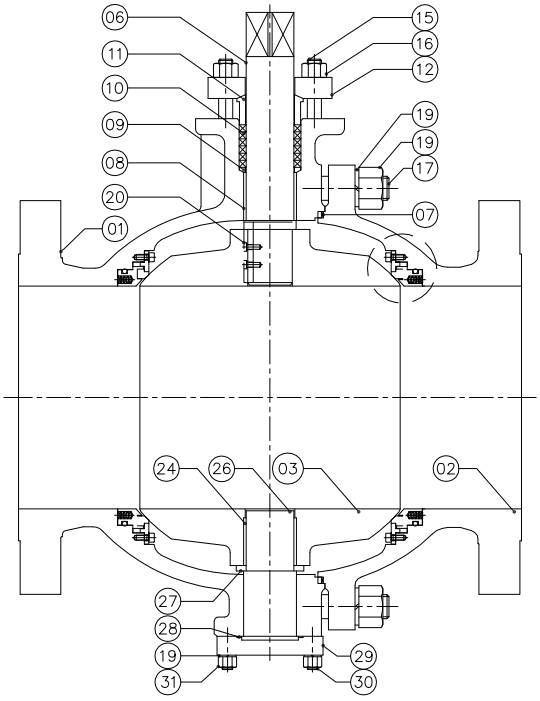


Fig : 4-3

Fire Safe Design (Three Piece) **Size : 18" to 42"**
Rating : ANSI 150#, 300#, 600#, 900#, 1500#

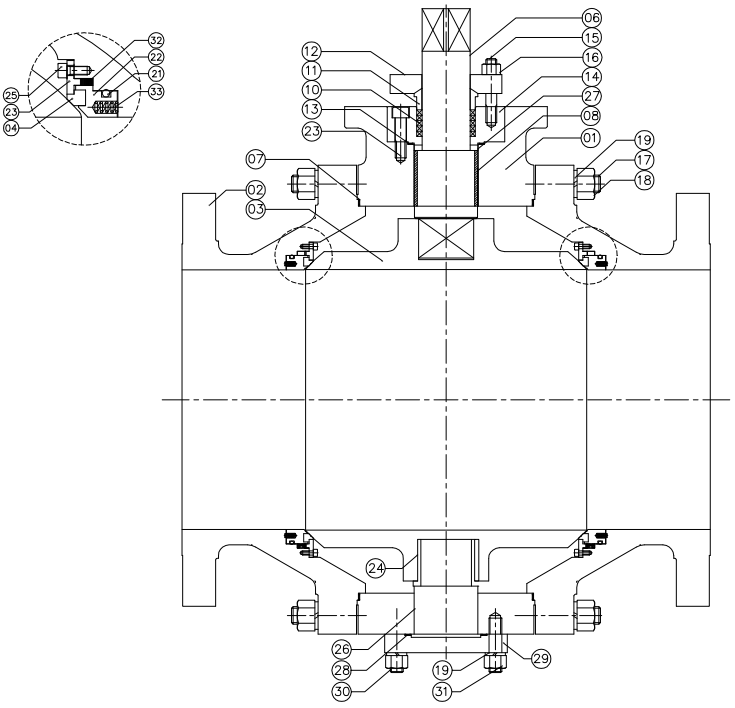


Fig : 4-4

Metal seat with seal ring in Trunnion type Ball Valve

Fire Safe Design (Two Piece) **Size : 4" to 16"**
Rating : ANSI 150#, 300#, 600#, 900#, 1500#

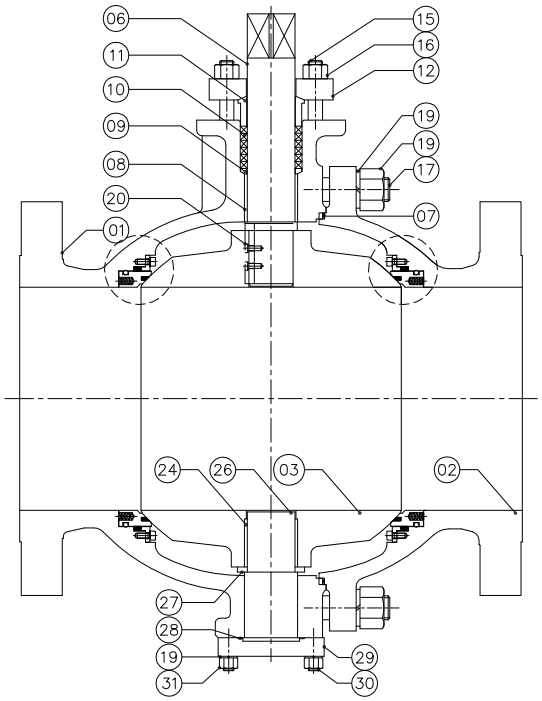


Fig : 4-5

Fire Safe Design (Three Piece) **Size : 18" to 42"**
Rating : ANSI 150#, 300#, 600#, 900#, 1500#

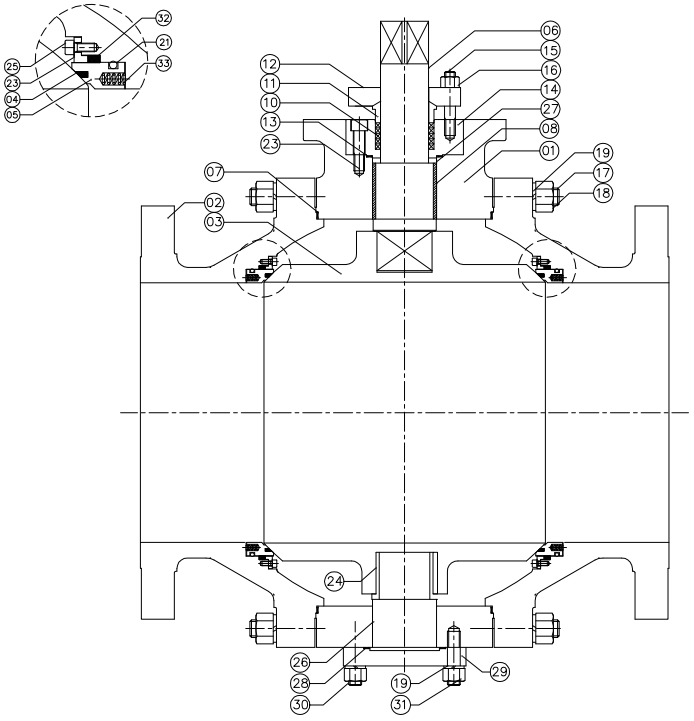


Fig : 4-6

For Cryogenic Appication Extension Type Body **Temperature Range : -50 C to -196 C**

Floating Type

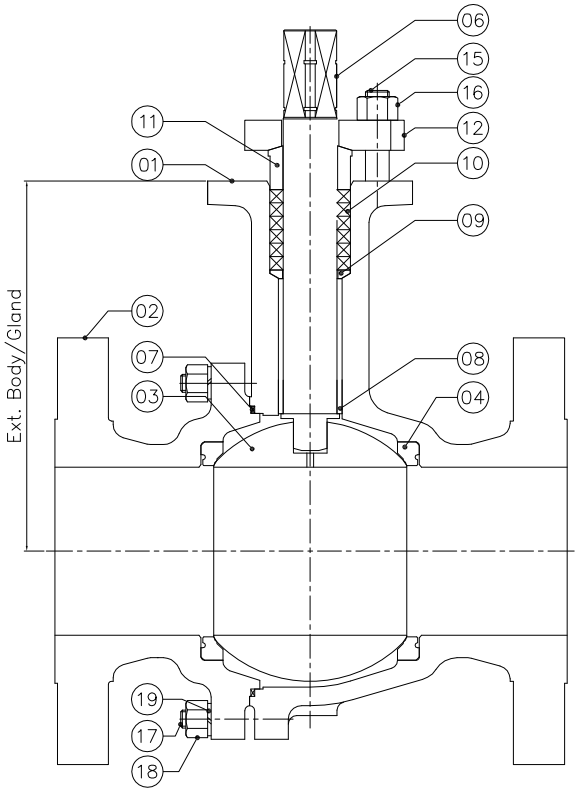


Fig : 4-7

Trunnion Type

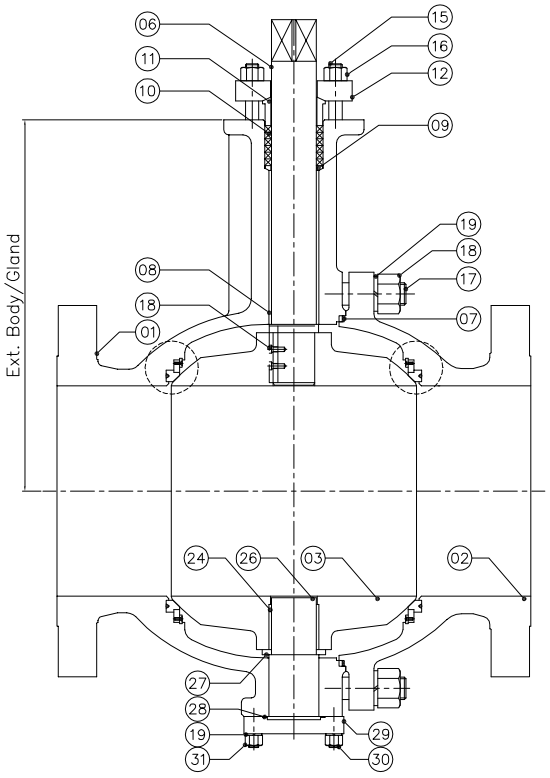


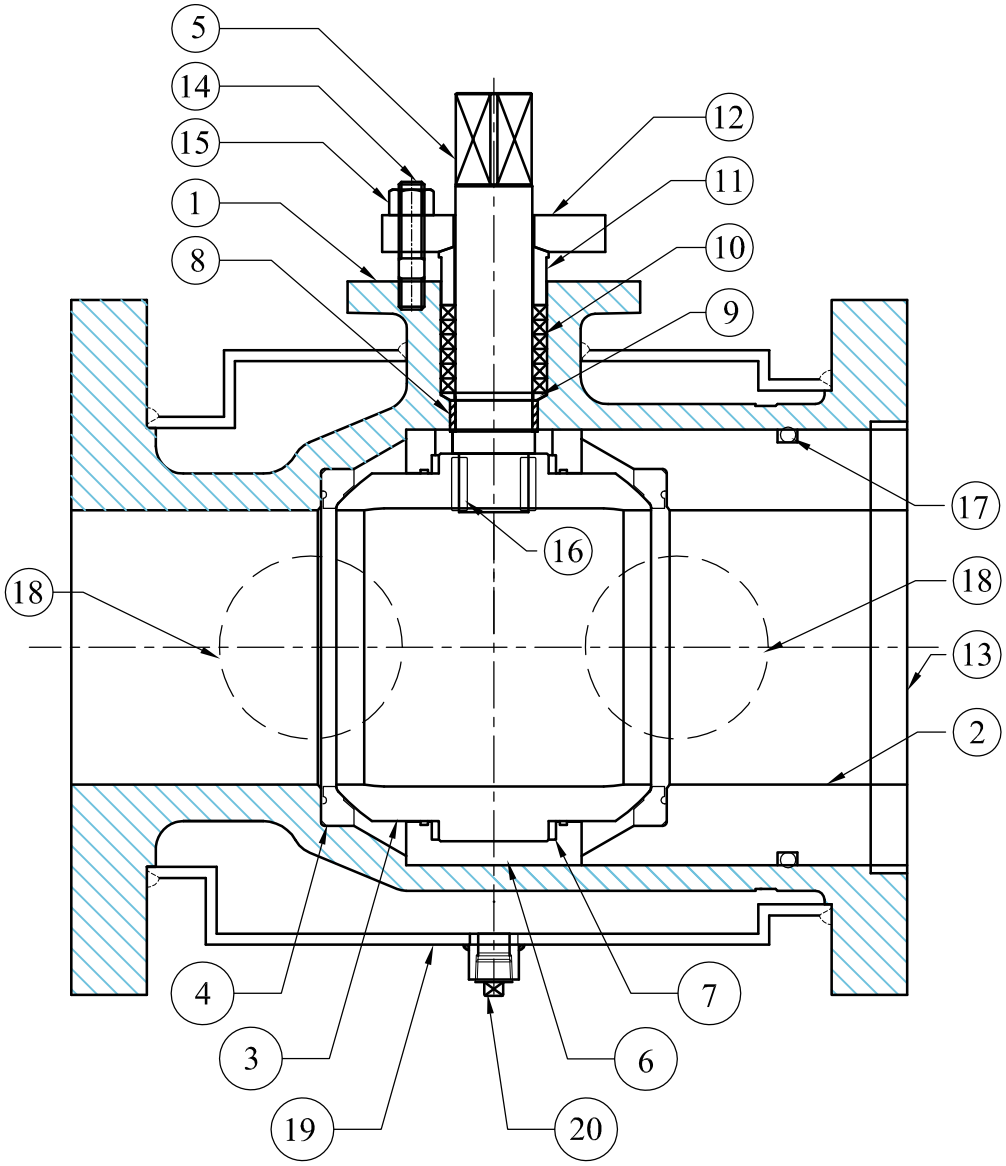
Fig : 4-8

Material of Construction for Floating & Trunnion Ball Valve

SL No:	Description	Material
1	Body	A216-WCB /A351-CF8M / A351-CF3M /A351-CF8 / A352-LCB
2	Body Cap	A216-WCB /A351-CF8M / A351-CF3M /A351-CF8 / A352-LCB
3	Ball	SS316 / SS316L / A351-CF8M / A351-CF3M
4	Seal Ring	PTFE / CF-PTFE / PEEK
5	Seat Ring	SS316 / SS316L / A351-CF8M / A351-CF3M
6	Stem	SS316 / SS316L /A564 Gr 630 + Heat Treatment
7	Gasket (Body side)	Spiral Wound Graphite / Spiral Wound PTFE
8	Stem Bearing	SS316 + HCr / SS316L + HCr
9	Packing Seat	SS316 / SS316L
10	Gland Packing	Braided Graphite / Braided PTFE
11	Gland Ring	SS316 / SS316L
12	Gland Flange	SS304
13	Gasket (Gland side)	Spiral Wound Graphite / Spiral Wound PTFE
14	Gland Plate	SS316 / A105
15	Gland Stud Bolt	Alloy-Steel / Stainless Steel
16	Gland Nut	Alloy-Steel / Stainless Steel
17	Body Stud Bolt	Alloy-Steel / Stainless Steel
18	Body Nut	Alloy-Steel / Stainless Steel
19	Spring Washer	Spring Steel / Stainless Steel
20	Stem Key	SS316 / SS316L /A564 Gr 630 + Heat Treatment
21	O Ring	NBR / Viton
22	Seat Holder	SS316 / SS316L / A351-CF8M / A351-CF3M
23	Retainer	SS316 / SS316L
24	Bottom Bearing	SS316 + HCr / SS316L + HCr
25	Hex. Socket Screw	Alloy-Steel / Stainless Steel
26	Bottom Guide	SS316 / SS316L /A564 Gr 630 + Heat Treatment
27	Thrust Ring	SS316 / SS316L
28	Gasket (Bottom side)	Spiral Wound Graphite / Spiral Wound PTFE
29	Bottom Flange	SS316 / A105
30	Bottom Stud Bolt	Alloy-Steel / Stainless Steel
31	Bottom nut	Alloy-Steel / Stainless Steel
32	Packing	Braided Graphite
33	Coil Spring	Inconel X 750
34	Counter Sunk Screw	Stainless Steel

***Special Materials like Hastelloy-C ,Monel, Sanicro etc.
will be available on request

Fig : 5 301K Ball Valve with Steam Jacket Upto 14 Inch



Sl No	Description
01	Body
02	Body Cap
03	Ball
04	Seal ring
05	Stem
06	Inner guide
07	Guide ring
08	Bearing
09	Packing Seat
10	Gland Packing

Sl No	Description
11	Gland Ring
12	Gland Flange
13	Retainer
14	Gland Stud
15	Gland Nut
16	Key
17	O ring
18	Connection Flange
19	Steam jacket pipe
20	Socket&drain plug

Structural View of Steam Jacket

Fig : 6-1

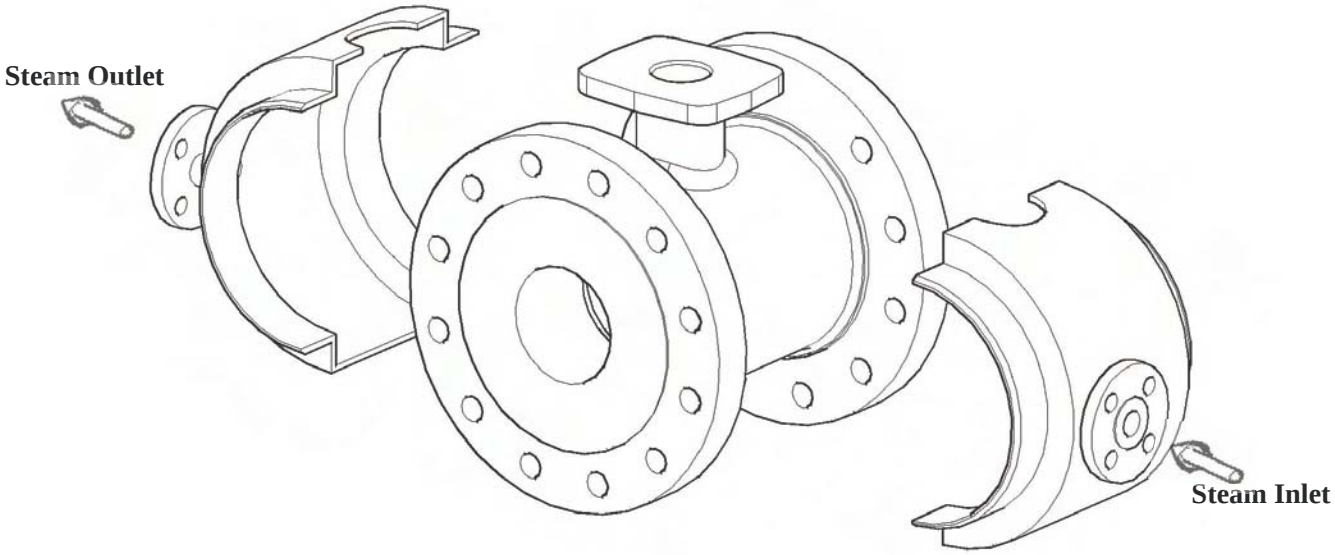


Fig : 6-2

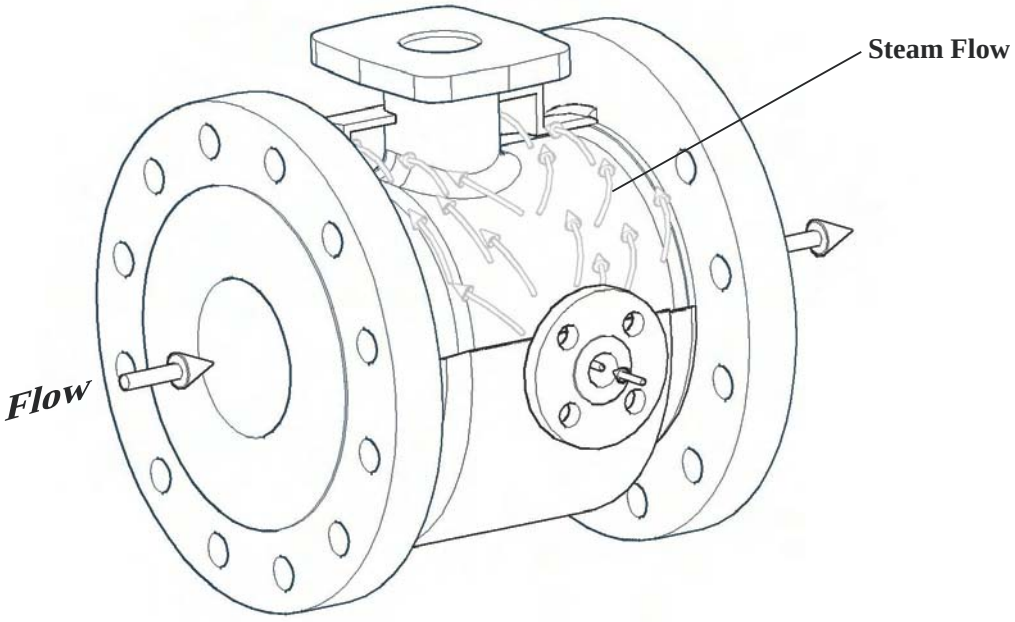


Fig : 6-3

INTEGRAL DOUBLE BLOCK AND BLEED

The double block and bleed condition is available up to 14" 600#When the ball is in the closed position the body cavity pressure may be drained down to zero' by opening the bleed valve and draining the fluid by removing the drain plug. Each seat works independently assuring tight shutoff seal against ball on the upstream and downstream side.

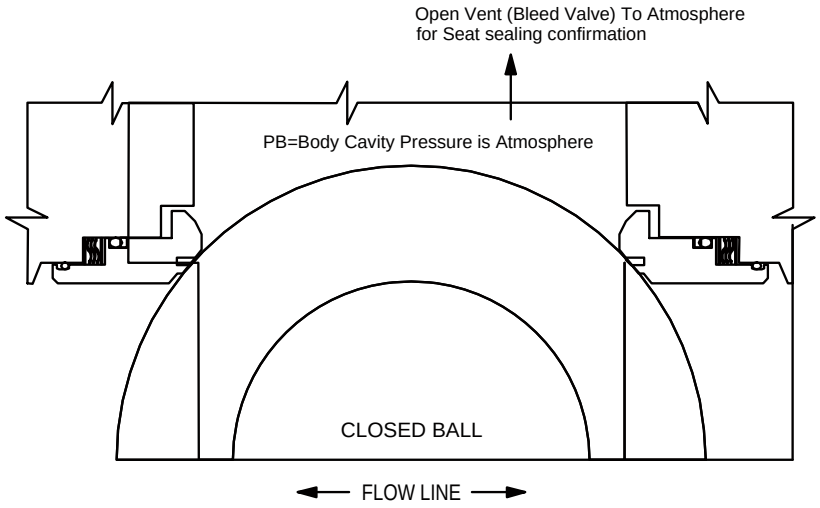


Fig : 7-1

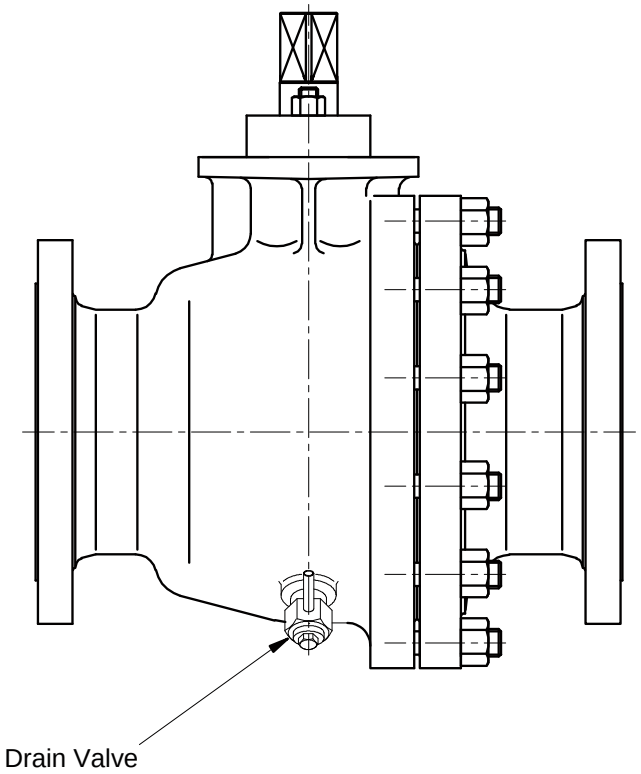


Fig : 7-2

V-TYPE BALL (EQUAL %) Up to 12" 300

The profile of the V-ball determines the flow characteristic of the valve and can be changed to suit the application. 10º, 30º, 60º and 90º V-balls are the most commonly used, but several other profiles are readily available. The Linear-V is a slot in the ball that can be machined for precise flow requirements. The Filler-V is used when you need maximum flow for filling followed by precise flow to accurately control the levels. The High Turndown-V maximizes flow in the open position, and provides fine flow control when the valve is partially closed. The transition between high flow and fine control with the Vari-V is extremely smooth.

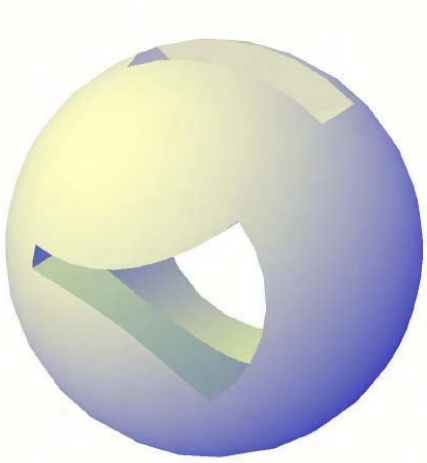


Fig : 8-1

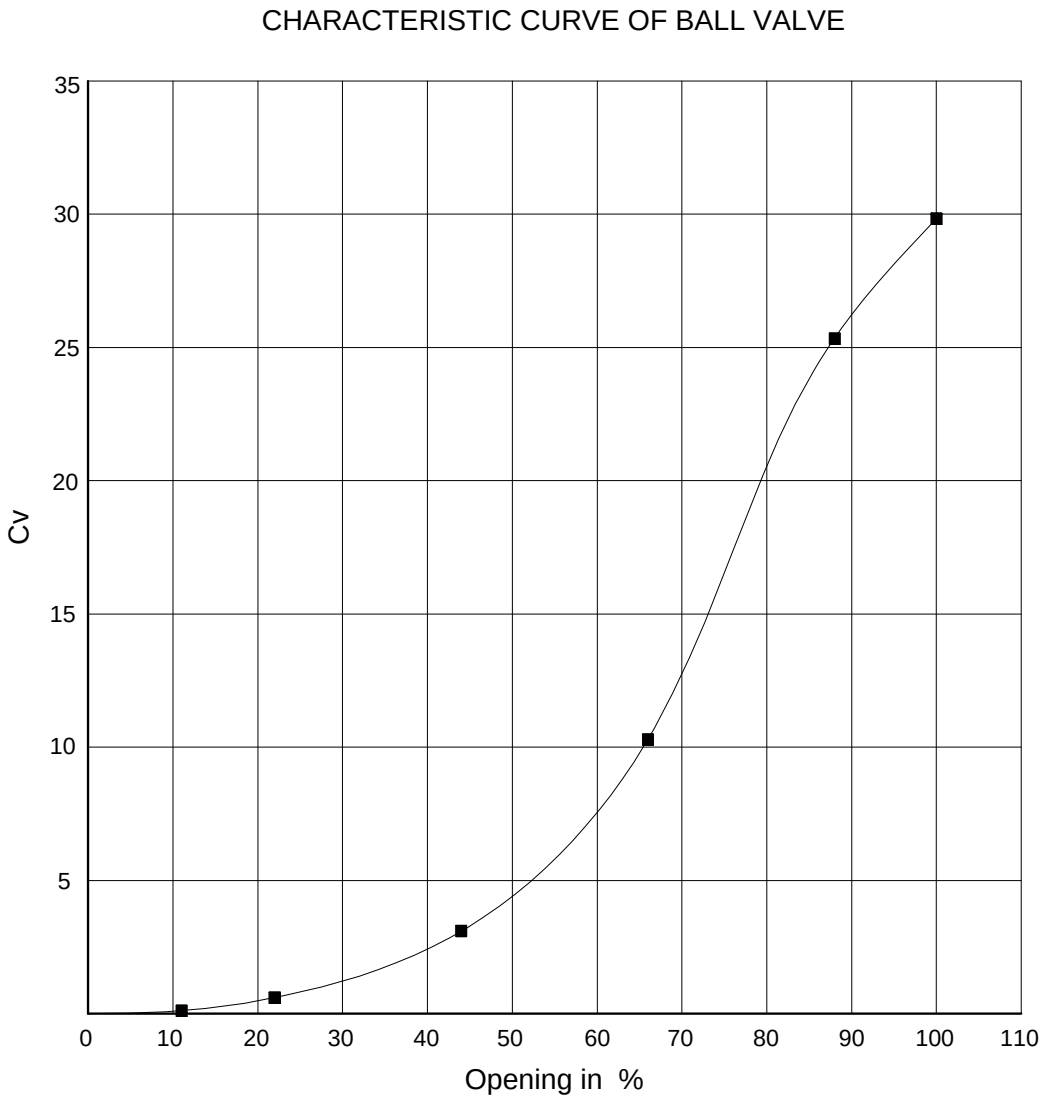


Fig : 8-2

Table 3 Maximum Allowable Shutoff Pressure (Unit : Kgf/cm2G)

Table 3-1 L Class Body : Double Acting Pneumatic Cylinder Actuator

Table 3-1A Seal ring : T type (pure Teflon) , F type (Reinforced Teflon/MoS2)

Actuator series size			Air Supply Kgf/cm2 G	Packing : Teflon Asbestos (P4513+P4513L, P4513+P#2S) Valve Type : Floating type Ball Size												Pillorfoil (P6616A +P316) Valve Type : Floating type Ball Size											
				1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
6600RA	1pisto	60S	4	20.0	20.0	20.0	17.0										20.0	20.0	20.0								
			5	20.0	20.0	20.0	20.0										20.0	20.0	20.0	14.4							
	2 piston	60	4				20.0	20.0												20.0	20.0						
			5				20.0	20.0												20.0	20.0						
		90	4					20.0	20.0	20.0	11.0										20.0	20.0	20.0	6.3			
			5					20.0	20.0	20.0	15.3										20.0	20.0	20.0	12.9			
		130	4							20.0	20.0	18.4	10.8										20.0	20.0	16.0	9.6	
			5							20.0	20.0	20.0	13.7										20.0	20.0	20.0	12.5	
6500RA	2 piston	170	4									20.0	20.0	12.3	11.6	6.4									20.0	19.6	11.7
			5									20.0	20.0	12.8	15.3	8.6									20.0	19.6	11.6
		200	4												18.8	12.3											
			5												18.8	16.2											
		280	4													20.0											
			5													20.0											

Table 3-1B Seal ring : C type (Carbon Fiber filled Teflon)

Actuator series size			Air Supply Kgf/cm2 G	Packing : Teflon Asbestos (P4513+P4513L, P4513+P#2S) Valve Type : Floating type Ball Size												Pillorfoil (P6616A +P316) Valve Type : Floating type Ball Size											
				1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
6600RA	1pisto	60S	4	20.0	20.0	20.0											20.0	20.0	20.0								
			5	20.0	20.0	20.0											20.0	20.0	20.0								
	2 piston	60	4				20.0	6.4												19.8							
			5				20.0	15.6												20.0							
		90	4					20.0	20.0	11.4											20.0	20.0	7.7				
			5					20.0	20.0	19.4											20.0	20.0	16.6				
		130	4							20.0	20.0	12.0	4.2										20.0	20.0	9.4	2.6	
			5							20.0	20.0	15.2	8.0										20.0	20.0	13.9	6.4	
6500RA	2 piston	170	4									20.0	13.9	8.0	9.5	4.9									20.0	12.7	7.6
			5									20.0	13.9	8.3	12.5	7.0									20.0	12.7	7.6
		200	4												15.8	10.2											
			5												15.8	13.8											
		280	4													18.0											
			5													18.0											

Table 3-2 L Class Body : Spring Return Pneumatic Cylinder Actuator

Table 3-2A Seal ring : T type (pure Teflon) , F type (Reinforced Teflon/MoS2)

Actuator series size			Air Supply Kgf/cm2 G	Packing : Teflon Asbestos (P4513+P4513L, P4513+P#2S) Valve Type : Floating type Ball Size												Pillorfoil (P6616A +P316) Valve Type : Floating type Ball Size											
				1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
6600RA	1pisto	60S	4	20.0	20.0	108.0											20.0	108.0									
			5	20.0	20.0	20.0											20.0	20.0									
	2 piston	60	4	20.0	20.0	20.0											20.0	20.0	20.0								
			5	20.0	20.0	20.0											20.0	20.0	20.0								
		90	4				20.0	20.0	4.1											20.0	20.0						
			5				20.0	20.0	11.2											20.0	20.0						
		130	4						20.0	20.0	12.7	1.7										20.0	20.0	8.0			
			5						20.0	20.0	16.2	5.4										20.0	20.0	13.8			
6500RA	2 piston	170	4								20.0	20.0	14.8	5.1	4.9									20.0	20.0	13.5	4.5
			5								20.0	20.0	18.7	7.7	6.6									20.0	20.0	17.4	7.1
		200	4										20.0	12.8	15.0	8.4										19.6	11.8
			5										20.0	12.8	18.8	11.0										19.6	11.8
		280	4													18.5											
			5													20.0											

Table 3-2B Seal ring : C type (Carbon Fiber filled Teflon)

Actuator series size			Air Supply Kgf/cm2G	Packing : Teflon Asbestos (P4513+P4513L, P4513+P#2S) Valve Type : Floating type Ball Size												Pillorfoil (P6616A +P316) Valve Type : Floating type Ball Size											
				1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
6600RA	1pisto	60S	4	20.0													8.5										
			5	20.0													20.0										
	2 piston	60	4	20.0	20.0	20.0											20.0	20.0	8.2								
			5	20.0	20.0	20.0											20.0	20.0	20.0								
		90	4				20.0	9.0											20.0	20.0	3.5						
			5				20.0	18.9											20.0	20.0	13.4						
		130	4					20.0	20.0	13.7	1.5										20.0	20.0	10.0				
			5					20.0	20.0	20.0	6.1										20.0	20.0	15.5				
6500RA	2 piston	200	4								20.0	16.4	8.4		3.5									20.0	15.0	7.7	
			5								20.0	20.0	12.1	2.7	5.1									20.0	19.3	11.3	1.9
		280	4										13.9	8.3	12.4	6.8									20.0	12.7	7.6
			5										13.9	8.3	15.8	9.0									20.0	12.7	7.6
		360	4													15.8											
			5													18.0											

Table 3-3 L Class Body : Electric motor Actuator (3400 RA)

Table 3-3A Seal ring : T type (pure Teflon) , F type (Reinforced Teflon/MoS2)

Actuator series code(Kgf-m)		Packing : Teflon Asbestos (P4513+P4513L, P4513+P#2S)													Pillorfoil (P6616A +P316)									
		Valve Type : Floating type										Trunnion			Valve Type : Floating type									
		Ball Size										Ball Size			Ball Size									
		1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
34A1RA 34AARA	(02)	20.0	20.0	20.0											20.0	20.0	20.0								
34A2RA 34ABRA	(05)				20.0	20.0												20.0	14.7						
34B1RA	(10)						20.0	8.1											20.0	12.9	2.4				
34B2RA	(20)							20.0	12.8											20.0	20.0	8.4			
34C1RA	(30)								19.9	9.2												17.5	5.0		
34C2RA	(50)									16.6	9.8											20.0	14.5	8.5	
34C3RA	(60)									20.0	11.8												18.1	10.6	
34D1RA	(100)										20.6	8.3	7.3	3.8									20.0	19.0	7.7
34D2RA	(150)											12.7	12.0	6.6										19.6	11.8

Table 3-3B Seal ring : C type (Carbon Fiber filled Teflon)

Actuator series code(Kgf-m)		Packing : Teflon Asbestos (P4513+P4513L, P4513+P#2S)													Pillorfoil (P6616A +P316)									
		Valve Type : Floating type										Trunnion			Valve Type : Floating type									
		Ball Size										Ball Size			Ball Size									
		1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"
34A1RA 34AARA	(02)	20.0	20.0	20.0											20.0	20.0	8.2								
34A2RA 34ABRA	(05)				20.0												20.0	12.3							
34B1RA	(10)					20.0	5.1											20.0	20.0						
34B2RA	(20)						20.0	14.0												20.0	10.3				
34C1RA	(30)							20.0	11.0												20.0	7.8			
34C2RA	(50)								20.0	9.6												20.0	7.0		
34C3RA	(60)									13.2	5.5												11.7	3.9	
34D1RA	(100)									20.0	13.2	3.5	5.7	2.7									20.0	12.4	2.7
34D2RA	(150)										13.9	8.7	9.8	5.2										12.7	7.7

Table 3-4 M Class Body : Double Acting Pneumatic Cylinder Actuator

Table 3-4A Seal ring : F type (Reinforced Teflon/MoS2)

Actuator series size			Air Supply Kgf/cm2G	Stem Material ss.	Packing : Teflon Asbestos (P4513+P4513L, P4513+P#2S)												Pillarfoil (P661GA + P316)									
					Valve Type : Floating										Trunnion		Floating Type									
					Ball Size										Ball Size		Ball Size									
					1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
6600RA	1piston	60S	4	630	51	51	51	17										51	51	51							
				304,316	51	51	51	17										51	51	51							
			5	630	51	51	51	29.1										51	51	51	14.4						
				304,316	51	51	51	29.1										51	51	51	14.4						
	2 piston	60	4	630				49.1	26												41						
				304,316				49.1	26												41						
			5	630				51	33												51						
				304,316				51	33												51						
		90	4	630				51	51	40	23	11									51	51	35	20	6.3		
				304,316				51	51	40	23	11									51	51	35	20	6.3		
			5	630				51	51	51	29	15.3									51	51	47	26.9	12.9		
				304,316				51	51	51	29	15.3									51	51	47	26.9	12.9		
		130	4	630						51	43	37	18.4	10.8									51	43	36	16	9.6
				304,316						51	38	37	18.4	10.8									51	33.8	35	16	9.6
			5	630						51	43	43	23.4	13.7									51	43	43	21.8	12.5
				304,316						51	38	38.6	33.4	13.7									51	33.8	35	21.3	12.5
6500RA	2 piston	170	4	630									33	29.9	23	11.6	6.4								33	28.6
				304,316									33	21.4	23	11.6	5.4								33	19.6
			5	630									33	33	29.7	15.3	8.6								33	33
				304,316									33	21.4	23.9	15.2	8.6								33	19.6
		200	4	630											40	21.4	12.3									33
				304,316											23.5	18.6	12.3									19.6
			5	630											51	27.9	16.2									33
				304,316											23.8	18.8	16.2									19.6
		280	4	630												41	32									
				304,316												18.8	21									
			5	630												41	40									
				304,316												18.8	21									

Table 3-4B Seal ring : C type (Carbon Filled Teflon)

Actuator series size			Air Supply Kgf/cm2G	Stem Material ss.	Packing : Teflon Asbestos (P4513+P4513L, P4513+P#2S)												Pillarfoil (P661GA + P316)									
					Valve Type : Floating										Trunnion		Floating Type									
					Ball Size										Ball Size		Ball Size									
					1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
6600RA	1piston	60S	4	630	51	51	51											51	51	43							
				304,316	51	51	51											51	51	42							
			5	630	51	51	51											51	51	51							
				304,316	51	51	51											51	51	51							
	2 piston	60	4	630				30.2	6.4												19.8						
				304,316				30.2	6.4												19.8						
			5	630				40	15.6												35.6						
				304,316				40	15.6												35.6						
		90	4	630				51	51	26.6	11.4										61	61	23.2	7.7			
				304,316				51	42	26.6	11.4										31	37.9	23.3	7.7			
			5	630				51	51	34.2	19.4										31	51	31	16.4			
				304,316				51	42	34.2	19.4										51	37.9	31	16.4			
		130	4	630						51	45	24.5	12	4.2									51	45	22.9	9.4	2.6
				304,316						43.8	24.8	24.5	12	4.2									38.9	22	22.9	9.4	2
			5	630						51	45	31	15.2	8									51	45	29.4	13	6.4
				304,316						43.8	24.8	25.2	15.2	8									38.9	22	22.9	13.9	6.4
6500RA	2 piston	170	4	630									33	19.5	19.6	9.5	4.9									31.8	19.5
				304,316									23.8	13.9	19.6	9.5	4.9									21.7	12.7
			5	630									37	24.8	25.5	12.2	7									37	24.8
				304,316									23.8	13.9	20.3	12.6	7									21.7	12.7
		200	4	630										29.8	25	18	10.2										29.8
				304,316										13.9	20.3	15.8	10.2										12.7
			5	630										29.8	45	23.7	13.8										29.8
				304,316										13.9	20.3	15.8	13.8										12.7
		280	4	630												35.7	27.8										
				304,316												15.8	18										
			5	630												35.7	37										
				304,316												15.8	18										

Table 3-5 M Class Body : Spring Return Pneumatic Cylinder Actuator

Table 3-5A Seal ring : F type (Reinforced Teflon/MoS2)

Actuator series size			Air Supply Kgf/cm2G	Stem Material ss.	Packing : Teflon Asbestos (P4513+P4513L, P4513+P#2S)												Pillarfoil (P661GA + P316)									
					Valve Type : Floating										Trunnion		Floating Type									
					Ball Size										Ball Size		Ball Size									
					1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
6600RA	1piston	60S	4	630	51	46.6	10.8											51	10.8								
				304,316	51	46.6	10.8											51	10.8								
			5	630	51	51	27.5											51	39.5								
				304,316	51	51	27.5											51	39.5								
	2 piston	60	4	630	51	51	51											51	51	45							
				304,316	51	51	51											51	51	45							
			5	630	51	51	51											51	51	51							
				304,316	51	51	51											51	51	51							
		90	4	630				51	28	4.1										51	45	23					
				304,316				51	28	4.1										51	45	23					
			5	630				51	35	11.2										51	51	31					
				304,316				51	35	11.2										51	51	31					
		130	4	630					51	43.8	24.8	12.7	1.9									51	38	22	8		
				304,316					51	43.8	24.8	12.7	1.9									51	38	22	8		
			5	630					51	51	31.4	16.2	5.4									51	30	28.6	13.8		
				304,316					51	51	31.4	16.2	5.4									51	50	28.6	13.8		
6500RA	2 piston	170	4	630								43	25.2	14.8	10.7	4.9									43	23	13.5
				304,316								38.7	25.2	14.8	10.7	4.9									35.1	23	13.5
			5	630								43	31	18.7	13.9	6.6									43	29	17.4
				304,316								38.7	31	18.7	13.9	6.6									35.1	29	17.4
		200	4	630									33	33	29.2	15	8.4									33	33
				304,316									33	21.4	23.8	15	8.4									33	19.6
			5	630									33	33	36	19.3	11									33	33
				304,316									33	21.4	23.8	18.8	11									33	19.6
		280	4	630												31	18.5										
				304,316												18.8	18.5										
			5	630												40	22.6										
				304,316												18.8	21										

Table 3-5B Seal ring : C type (Carbon Filled Teflon)

Actuator series size			Air Supply Kgf/cm2G	Stem Material ss.	Packing : Teflon Asbestos (P4513+P4513L, P4513+P#2S)												Pillarfoil (P661GA + P316)									
					Valve Type : Floating										Trunnion		Floating Type									
					Ball Size										Ball Size		Ball Size									
					1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
6600RA	1piston	60S	4	630	51													8.6									
				304,316	51													8.6									
			5	630	51													48.8									
				304,316	51													48.8									
	2 piston	60	4	630	51	51	26.6											51	51	8.2							
				304,316	51	51	26.6											51	51	8.2							
			5	630	51	51	48											51	51	30							
				304,316	51	51	48											51	51	30							
		90	4	630			51	34.6	9											51	24.8	3.5					
				304,316			51	34.6	9											51	24.8	3.5					
			5	630			51	44	18.9											51	38.8	13.4					
				304,316			51	44	18.9											51	38.8	13.4					
		130	4	630					51	28.6	13.7	1.5										51	25.3	10			
				304,316					42	28.6	13.7	1.5										37.9	25.3	10			
			5	630					51	36	20.5	6.1										51	32.9	18.6			
				304,316					42	36	20.5	6.1										37.9	32.9	18.6			
6500RA	2 piston	170	4	630								33.3	16.4	9.4	8.8	3.5								31	15	7.7
				304,316								25.2	16.4	9.4	8.8	3.5								22.9	15	7.7
			5	630								41	20.7	12.1	11.6	5.1								40	19.3	11.3
				304,316								25.2	20.7	12.1	11.6	5.1								22.9	19.3	11.3
		200	4	630									37	24.4	25	12.4	6.8								37	23.6
				304,316									23.8	13.9	20.3	12.4	6.8								21.7	12.7
			5	630									37	29.8	31.8	16	9								37	28.6
				304,316									23.8	13.9	20.3	15.8	9								21.7	12.7
		280	4	630												27	15.8										
				304,316												15.8	15.8										
			5	630												34	20.3										
				304,316												18.8	18										

Table 3-6 M Class Body : Electric Actuator (3400 RA)

Table 3-6A F type (Reinforced Teflon/MoS2)

Actuator Size Code (Kgf-m)	Stem Material ss	Packing : Teflon Asbestos (P4513+P4513L, P4513+P#2S)													Pillarfoil (P6616A+P316)									
		Valve Type : Floating										Trunnion type			Floating Type									
		Ball Size													Ball Size									
		½"	¾"	1"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"	½"	¾"	1"	1½"	2"	2½"	3"	4"	5"	6"
34A1RA 34AARA(02)	630	51.0	51.0	51.0											51.0	51.0	45.0							
	504,316	51.0	51.0	51.0											51.0	51.0	45.0							
34A2RA 34ABRA (02)	630				43.5	23.0											51.0	35.3	14.7					
	504,316				43.5	23.0											51.0	35.3	14.7					
34B1RA (10)	630				51.0	48.4	20.8											51.0	44.0	12.9				
	504,316				51.0	48.4	20.8											51.0	44.0	12.9				
34B2RA (20)	630					51.0	44.3	25.1	12.8										51.0	39.3	22.3			
	504,316					51.0	44.3	25.1	12.8										51.0	39.3	22.3			
34C1RA (30)	630						51.0	38.1	19.9											51.0	35.8	17.5		
	504,316						51.0	38.1	19.9											51.0	33.8	17.5		
34C2RA (50)	630							43.0	34.1	16.6	9.8										43.0	31.6	14.5	
	504,316							38.1	34.1	16.6	9.8										33.8	31.6	14.5	
34C3RA (60)	630								40.0	20.2	11.8											38.6	18.1	10.6
	504,316								38.7	20.2	11.8											35.1	18.1	10.6
34D1RA (100)	630									33.0	20.2	15.2	7.3	3.8									32.3	19.0
	504,316									33.0	20.2	15.2	7.3	3.8									32.3	19.0
34D2RA (150)	630									33.0	30.7	23.7	12.0	6.5									33.0	29.5
	504,316									33.0	21.4	23.7	12.0	6.5									33.0	19.5

Table 3-6B Seal ring : C type (Carbon Fiber filled Teflon)

Actuator Size Code (Kgf-m)	Stem Material ss	Packing : Teflon Asbestos (P4513+P4513L, P4513+P#2S)													Pillarfoil (P6616A+P316)									
		Valve Type : Floating										Trunnion type			Floating Type									
		Ball Size													Ball Size									
		½"	¾"	1"	1½"	2"	2½"	3"	4"	5"	6"	8"	10"	12"	½"	¾"	1"	1½"	2"	2½"	3"	4"	5"	6"
34A1RA 34AARA (02)	630	51.0	51.0	26.6											51.0	51.0	8.2							
	504.316	51.0	51.0	26.6											61.0	61.0	8.2							
34A2RA 34ABRA (02)	630			61.0	28.8												51.0	12.3						
	504.316			51.0	28.8												51.0	12.3						
34B1RA (10)	630				51.0	31.5												61.0	28.8					
	504.316				51.0	31.5												61.0	28.8					
34B2RA (20)	630					61.0	28.9												51.0	25.6				
	504.316					42.0	28.9												37.9	25.6				
34C1RA (30)	630						44.2	25.0												40.9	23.2			
	504.316						43.8	24.8												38.9	22.0			
34C2RA (50)	630						51.0	42.4	22.2											51.0	40.6	20.6		
	504.316						43.8	24.8	22.2											38.9	22.0	20.6		
34C3RA (60)	630								26.8													25.2		
	504.316								25.2													22.9		
34D1RA (100)	630									22.4	13.2	12.7	5.7	2.7									21.1	12.4
	504.316									22.4	13.2	12.7	5.7	2.7									21.1	12.4
34D2RA (150)	630									34.1	20.0	20.2	9.8	5.2									32.7	19.2
	504.316									23.8	13.9	20.2	9.8	5.2									21.7	12.7

Table 4 Net Weight of Standard Valve and Actuator Combined , (Unit : Kgs)

only standard types are represented.Weights of accessories, a hand wheel and the like are not included.

Full Bore Type

Actuator type,size			Pneumatic Cylinder Actuator							Pneumatic Cylinder Actuator							Electric Motor (Weather proof)			
			Double Acting type							Double Acting type							34AARA 34ABRA 34A1RA 34A2RA	34B1RA 34B2RA	34C1RA 34C2RA 34C3RA	34D1RA 34D2RA
Valve size	Body rating		6600RA				6500RA			6600RA				6500RA						
	ANSI	JIS	60S	60	90	130	170	200	280	60S	60	90	130	170	200	280				
½" (15mm)	150 #	10 K	8							10.5							12			
	300 #	20 K	8.5							11							12.5			
¾" (20mm)	150 #	10 K	8.5							11	12						12.5			
	300 #	20 K	10							12	13						12.5			
1" (25mm)	150 #	10 K	10							12.5	13.5	19.5					14			
	300 #	20 K	12							14.5	15.5	21.5					16			
1 ½" (40mm)	150 #	10 K		15.5	19							24.5					19	24.5		
	300 #	20 K		16.5	22							27.5					22	27.5		
2" (50mm)	150 #	10 K		20	23.5							29	47				23.5	29		
	300 #	20 K		22	25.5							31	48				23.5	31		
2 ½" (65mm)	150 #	10 K			27.5	33						33	51					33		
	300 #	20 K			36.5	42						42	60					42	70	
3" (80mm)	150 #	10 K			33.5	39							57					39	67	
	300 #	20 K			44.5	50							68					50	78	
4" (100mm)	150 #	10 K			48.5	54							72	167				54	82	
	300 #	20 K			64.5	70							88	183				70	98	
5" (125mm)	150 #	10 K				83	141						101	195	311				111	200
	300 #	20 K				105	163						123	218	333				133	223
6" (150mm)	150 #	10 K				113	171							226	341				141	230
	300 #	20 K				151	209	206						264	379				179	269
8" (200mm)	150 #	10 K					217							272	367					277
	300 #	20 K					242	295						267	412					300
10" (250mm)	150 #	10 K					330	380						385	500	700				390
	300 #	20 K					375	425	585					430	545	745				435
12" (300mm)	150 #	10 K					460	510	650						630	630				520
	300 #	20 K					542	595	732						712	912				600

Reduced Bore Type

4 x 3" (100 x 50mm)	150 #	10 K			43.5	49							67					49	77	
	300 #	20 K			68.5	64							82					64	92	
5 x 4" (125 x 100mm)	150 #	10 K			58.5	64							82	177				64	92	
	300 #	20 K			74.5	50							95	193				80	108	
6 x 5" (150 x 125mm)	150 #	10 K				95	154						114	209	324				124	214
	300 #	20 K				101	159						119	214	329				129	219
6 x 6" (200 x 150mm)	150 #	10 K				119	177							232	347				147	237
	300 #	20 K				145	204	254						259	374				174	264
10 x 8" (250 x 200mm)	150 #	10 K					232							287	402					292
	300 #	20 K					257	310						312	427					317
12 x 10" (300 x 250mm)	150 #	10 K					358	410						413	528	728				418
	300 #	20 K					400	450	500					455	339	770				460
14 x 12" (350 x 300mm)	150 #	10 K					515	565	780						885	885				575
	300 #	20 K					590	640	780						760	960				650

Steam Jacket type (ANSI 150#, JIS 10K Only)

1½" X ½" X ½" (40X15X15mm)	14							16.5							18				
1½" X ¾" X ¾" (40X20X20mm)	15							17.5	18.5						19				
2" X 1" X 1" (50X25X25mm)	18							20.5	21.5	27.5					22				
2½"X 1½" X 1½" (65X40X40mm)		26.5	30							35.5					30	35.5			
3"X 2" X 2" (80X50X50mm)		35	38.5							44	62				38.5	44			
4"X 2½" X 2½" (100X65X65mm)			48.5	54						54	72					54			
4"X 3" X 2½" (100X80X65mm)			50.5	56							74					56	84		
6"X 4" X 3" (150X100X80mm)			93.5	99							117					99	127		
8"X 5" X 4" (200X125X100mm)			95.5	101							119	214					129	219	
8"X 6" X 5" (200X150X115mm)				128	186						146	241	356				156	246	
10"X 8" X 6" (250X200X150mm)				137	213							270	385					275	

NOTE : For Higher Size & Rating refer to factory sales

Fig :9 Torque Chart

Fig :9-1 Non Fire Safe Type

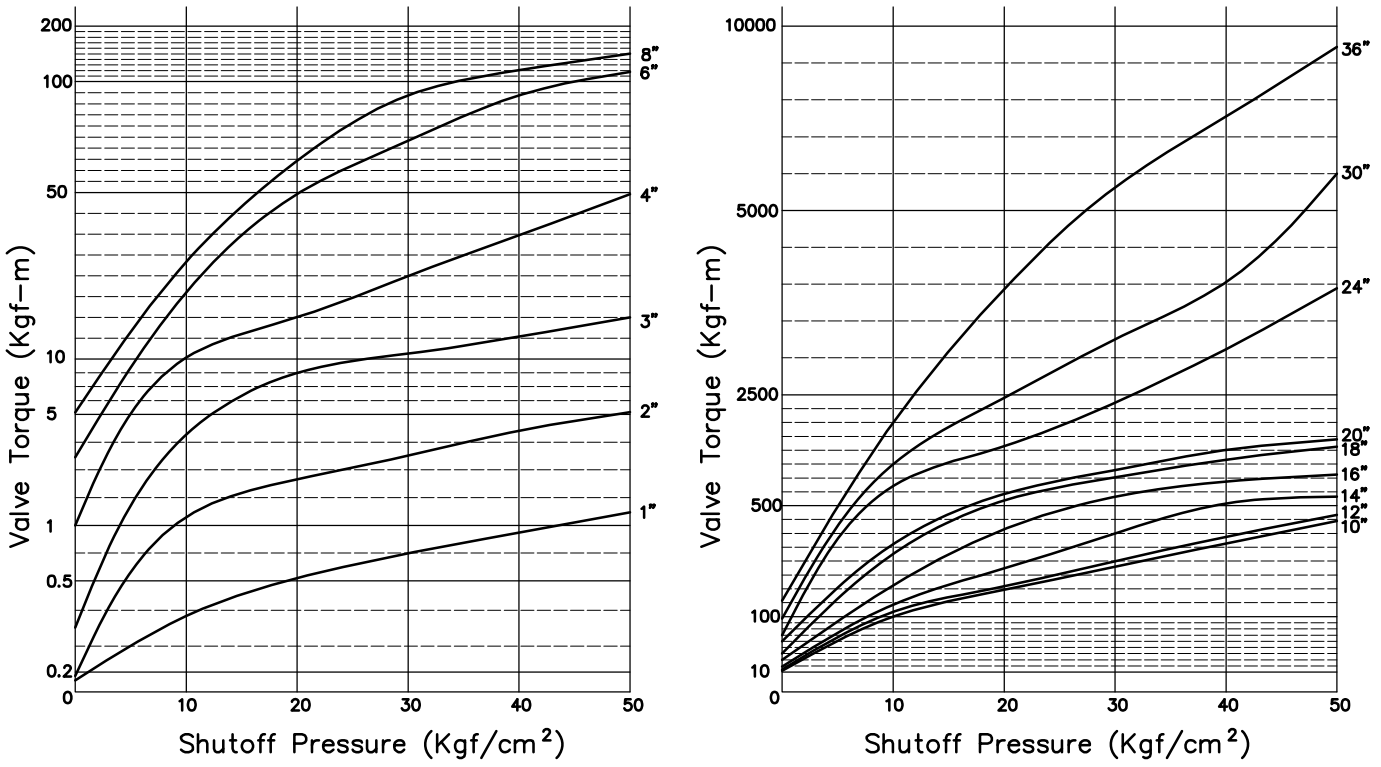
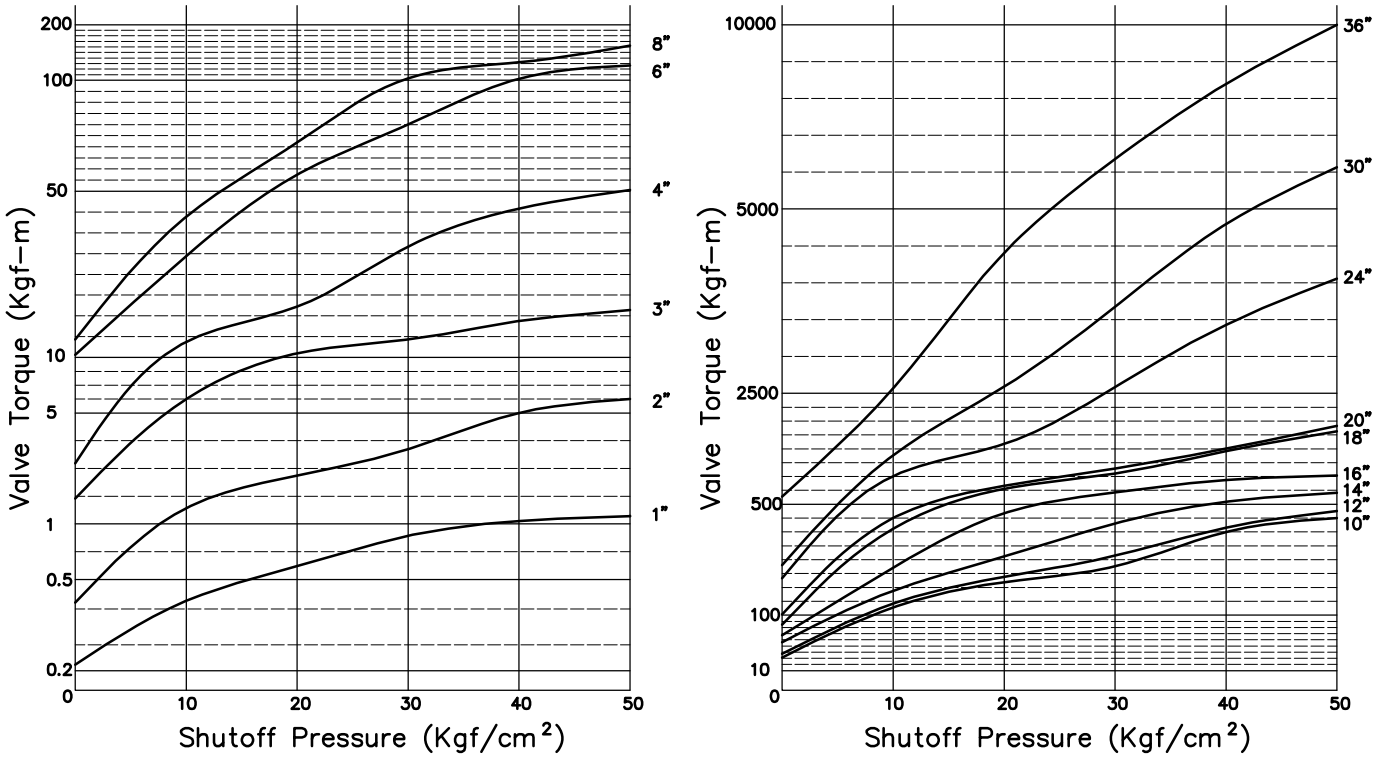


Fig :9-2 Fire Safe Type

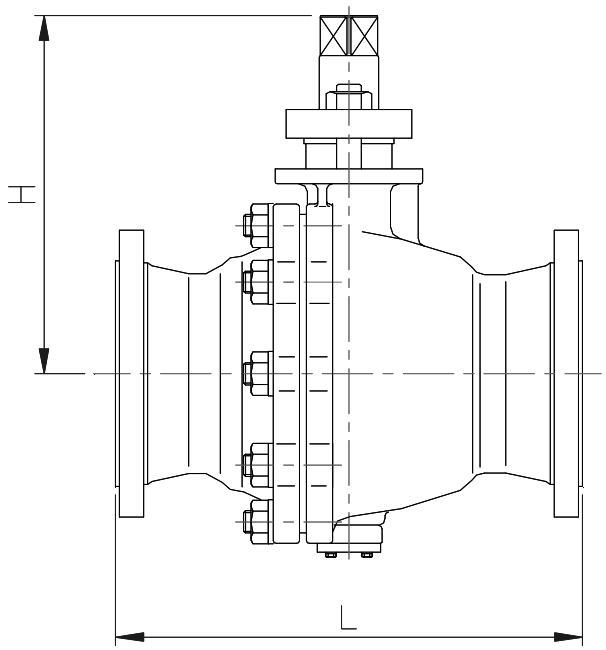


For Actuator Selection
Actuator Torque = KxValve Torque
Value of K

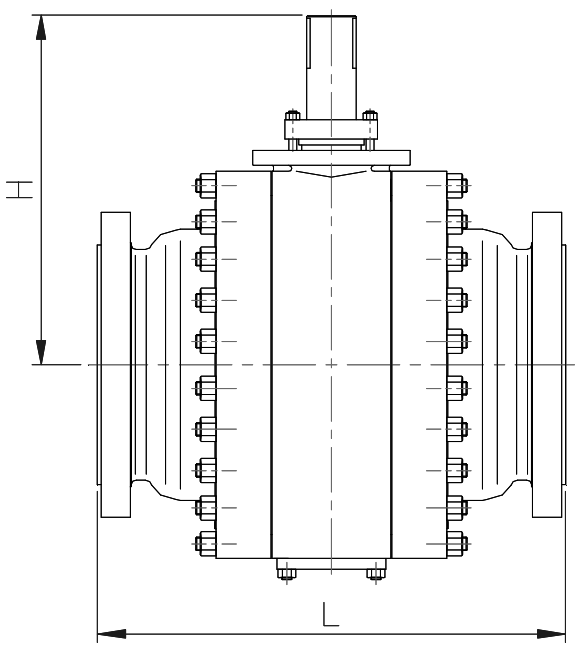
for Liquid = 1.35
for Gas = 1.6
Slurry = K > 2

Material
Seat : Carbon Filled Teflon
Stem : 17-4 PH

Fig :10 Dimension Details

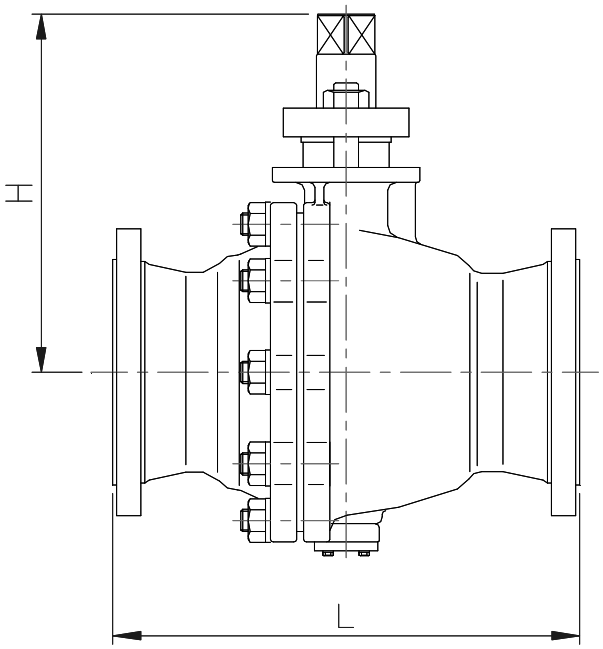


301K Two Piece Ball Valve

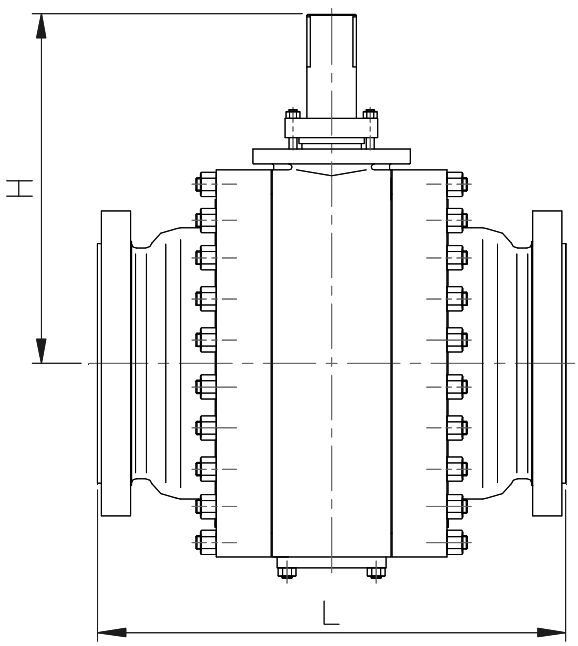


301K Three Piece Ball Valve

SL NO	VALVE SIZE	ANSI #150 L	H	WEIGHT (Kg)	ANSI #300 L	H	WEIGHT (Kg)
1	0.5	108	60	5	RE	60	6
2	3/4	117	63	6	152	63	7
3	1	127	75	8	165	75	10
4	1.5	165	85	15	190	85	17
5	2	178	91	18	216	91	19
6	2.5	191	110	27	241	110	34
7	3	203	130	43	283	130	45
8	4	229	160	85	305	160	87
9	6	394	200	210	457	200	212
10	8	457	250	280	502	250	282
11	10	533	315	470	568	315	473
12	12	610	380	720	648	380	723
13	14	686	420	930	762	420	933
14	16	762	470	1035	838	470	1260
15	18	864	505	1340	914	505	1345
16	20	914	550	1200	991	550	1741
17	24	1067	615	2780	1143	615	3100
18	30	1295	850	4100	1397	850	4930
19	36	1524	1020	5108	1727	1020	6000
20	42	1860	.....	.....	1930	.....	.....



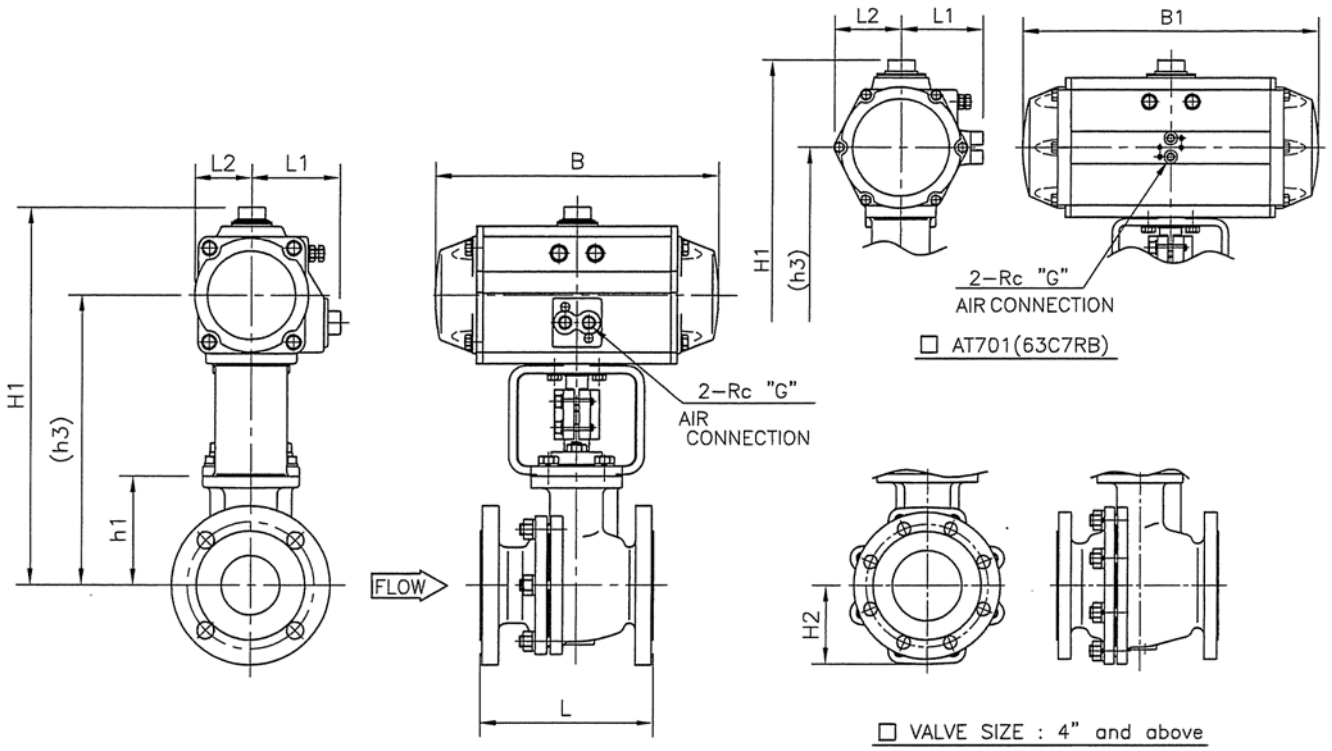
301K Two Piece Ball Valve



301K Three Piece Ball Valve

SL NO	VALVE SIZE	ANSI #600 L	H	WEIGHT (Kg)	ANSI #900 L	H	WEIGHT (Kg)	ANSI #1500 L	H	WEIGHT (Kg)
1	0.5	165	75	4	216	85	6	216	100	12
2	3/4	190	95	10	229	105	17	229	130	23
3	1	266	82	12	254	125	21	254	155	44
4	1.5	241	100	20	306	135	29	305	180	62
5	2	292	125	30	368	145	68	368	210	74
6	2.5	330	140	41	419	160	74	419	230	72
7	3	356	165	61	381	175	86	470	265	85
8	4	432	173	92	457	190	135	546	300	310
9	6	559	230	275	610	260	244	705	325	390
10	8	660	300	320	737	345	480	832	395	698
11	10	787	330	772	838	385	800	991	460	1380
12	12	838	340	993	965	.....	.....	1130	.....	.....
13	14	889	385	1322	1029	.....	.....	1257	.....	.....
14	16	991	490	2470	1130	.....	.....	1384	.....	.....
15	18	1092	535	2880	1219	.....	.....	1537	.....	.....
16	20	1194	585	3100	1321	.....	.....	1664	.....	.....
17	24	1397	640	4100	1549	.....	.....	1943	.....	.....
18	30	1651	930	6705	1803	.....	.....	2251	.....	.....
19	36	2083	1250	7600	2182	.....	.....	2556	.....	.....
20	42	2387	.....	10350	2515	.....	.....	.....	.....	.....

BALL VALVE *Spring return cylinder*



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No,		FACE TO FACE L			h1	h3	H1	H2	ACTUATOR					
		L class Body		M class Body										
		☐ JIS 10K RF	☐ ANSI class 150 RF ☐ JPI class 150 RF	☐ JIS 20K RF ☐ ANSI class 300 RF ☐ JPI class 300 RF					Cylinder Size	B	L1	L2	G	CODE No,
90	☐ ½" (15A)	110	108	140	60	230	295	—	☐ AT101	160	65	36	1/4	63C1RB
91	☐ ¾" (20A)	120	117	152	63	240	310		☐ AT201	215	70	43	1/4	63C2RB
01	☐ 1" (25A)	130	127	165	75	255	325	—	☐ AT201	215	70	43	1/4	63C2RB
						260	340		☐ AT251	250	75	50	1/4	63CARB
93	☐ 1½"(40A)	165	165	190	85	260	340		☐ AT251	250	75	50	1/4	63CARB
						265	350	—	☐ AT301	270	85	56	1/4	63C3RB
						275	380		☐ AT351	315	95	64	1/4	63CBRB
02	☐ 2" (50A)	180	178	216	91	270	355		☐ AT301	270	85	56	1/4	63C3RB
						280	385	—	☐ AT351	315	95	64	1/4	63CBRB
						305	415		☐ AT401	345	100	70	1/4	63C4RB
94	☐ 2½"(65A)	190	190	241	120	340	450	—	☐ AT401	345	100	70	1/4	63C4RB
						380	500		☐ AT451	410	110	80	1/4	63CCRB
03	☐ 3" (80A)	200	203	283	130	390	510	—	☐ AT451	410	110	80	1/4	63CCRB
						400	530		☐ AT501	440	120	88	1/4	63C5RB
04	☐ 4"(100A)	230	229	305	160	450	580		☐ AT501	440	120	88	1/4	63C5RB
						480	640	115	☐ AT551	490	125	99	1/4	63CDRB
						490	660		☐ AT601	545	130	110	1/4	63C6RB
05	☐ 5"(125A)	300	356	381	185	510	670		☐ AT551	490	125	99	1/4	63CDRB
						520	690	140	☐ AT601	545	130	110	1/4	63C6RB
						545	745		☐ AT651	625	150	131	3/8	63CERB
06	☐ 6"(150A)	340	394	403	200	560	760	160	☐ AT651	625	150	131	3/8	63CERB
						575	790		☐ AT701	730	185	165	1/2	63C7RB
08	☐ 8"(200A)	450	457	——	250	610	810	210	☐ AT651	625	150	131	3/8	63CERB
						625	840		☐ AT701	730	185	165	1/2	63C7RB

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

E–301K–6300RB–S–N

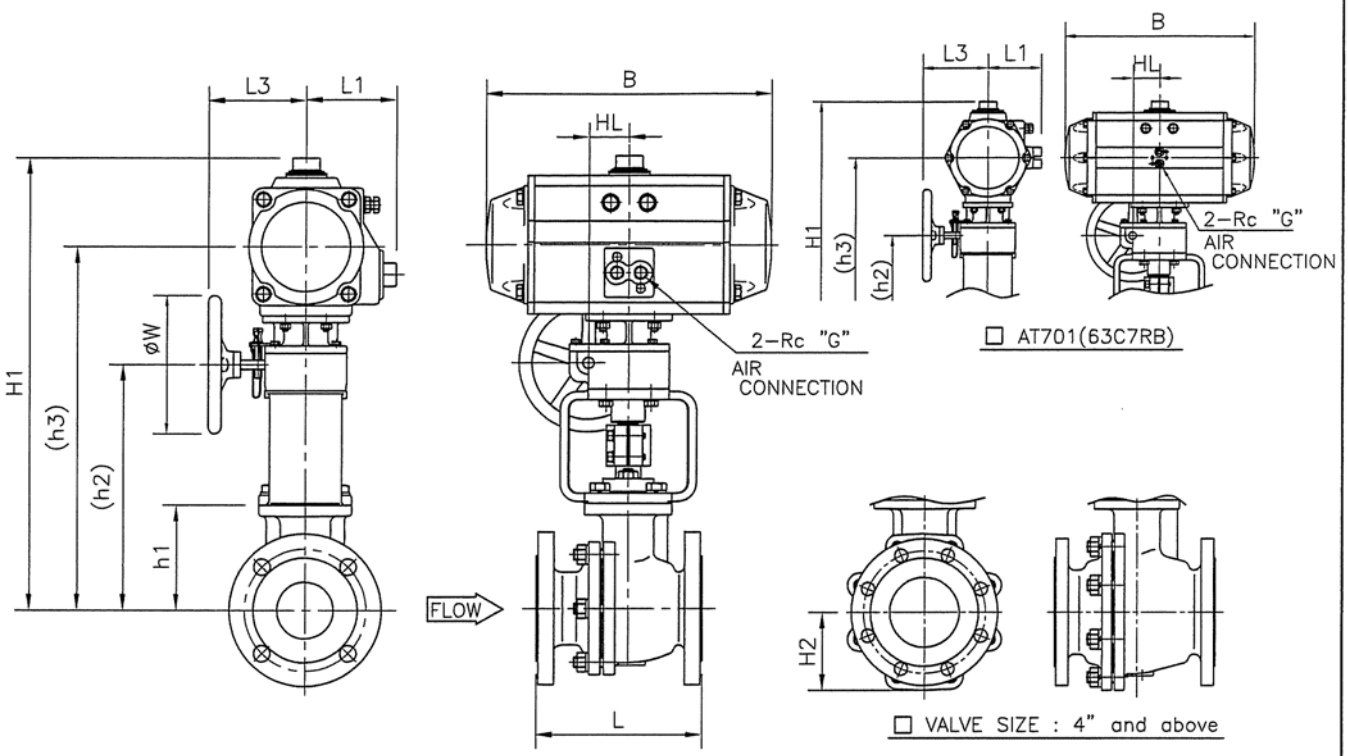
REV.

A

KOSO

—— —— ED–01B

BALL VALVE *Spring return cylinder with Side handle*



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No,		FACE TO FACE L			h1	h2	h3	H1	H2	ACTUATOR							
		L class Body		M class Body													
		☐ JIS 10K RF	☐ ANSI class 150 RF ☐ JPI class 150 RF	☐ JIS 20K RF ☐ ANSI class 300 RF ☐ JPI class 300 RF						Cylinder Size	B	L1	L3	HL	W	G	CODE No,
90	☐ ½" (15A)	110	108	140	60	225	355	420	—	☐ AT101	160	65	140	56	155	1/4	63C1RB
91	☐ ¾" (20A)	120	117	152	63	230	365	435	—	☐ AT201	215	70	140	56	155	1/4	63C2RB
01	☐ 1" (25A)	130	127	165	75	240	380	450	—	☐ AT201	215	70	140	56	155	1/4	63C2RB
							385	465		☐ AT251	250	75	140	56	155	1/4	63CARB
93	☐ 1½"(40A)	165	165	190	85	265	410	490	—	☐ AT251	250	75	140	56	155	1/4	63CARB
							400	485		☐ AT301	270	85	140	56	155	1/4	63C3RB
							410	515		☐ AT351	315	95	140	56	155	1/4	63CBRB
02	☐ 2" (50A)	180	178	216	91	270	405	490	—	☐ AT301	270	85	140	56	155	1/4	63C3RB
							415	520		☐ AT351	315	95	140	56	155	1/4	63CBRB
							420	530		☐ AT401	345	100	140	56	155	1/4	63C4RB
94	☐ 2½"(65A)	190	190	241	120	305	455	565	—	☐ AT401	345	100	140	56	155	1/4	63C4RB
						320	495	615		☐ AT451	410	110	155	69	305	1/4	63CCRB
03	☐ 3" (80A)	200	203	283	130	330	505	625	—	☐ AT451	410	110	155	69	305	1/4	63CCRB
							515	640		☐ AT501	440	120	155	69	305	1/4	63C5RB
04	☐ 4"(100A)	230	229	305	160	390	575	700	115	☐ AT501	440	120	155	69	305	1/4	63C5RB
						420	625	785		☐ AT551	490	125	235	90	400	1/4	63CDRB
							635	810		☐ AT601	545	130	235	90	400	1/4	63C6RB
05	☐ 5"(125A)	300	356	381	185	445	650	810	140	☐ AT551	490	125	235	90	400	1/4	63CDRB
							660	835		☐ AT601	545	130	235	90	400	1/4	63C6RB
						475	730	930		☐ AT651	625	150	355	106	630	3/8	63CERB
06	☐ 6"(150A)	340	394	403	200	490	745	945	160	☐ AT651	625	150	355	106	630	3/8	63CERB
							760	975		☐ AT701	730	185	355	106	630	1/2	63C7RB
08	☐ 8"(200A)	450	457	——	250	540	795	995	210	☐ AT651	625	150	355	106	630	3/8	63CERB
							810	1025		☐ AT701	730	185	355	106	630	1/2	63C7RB

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

E–301K–6300RB–S–S

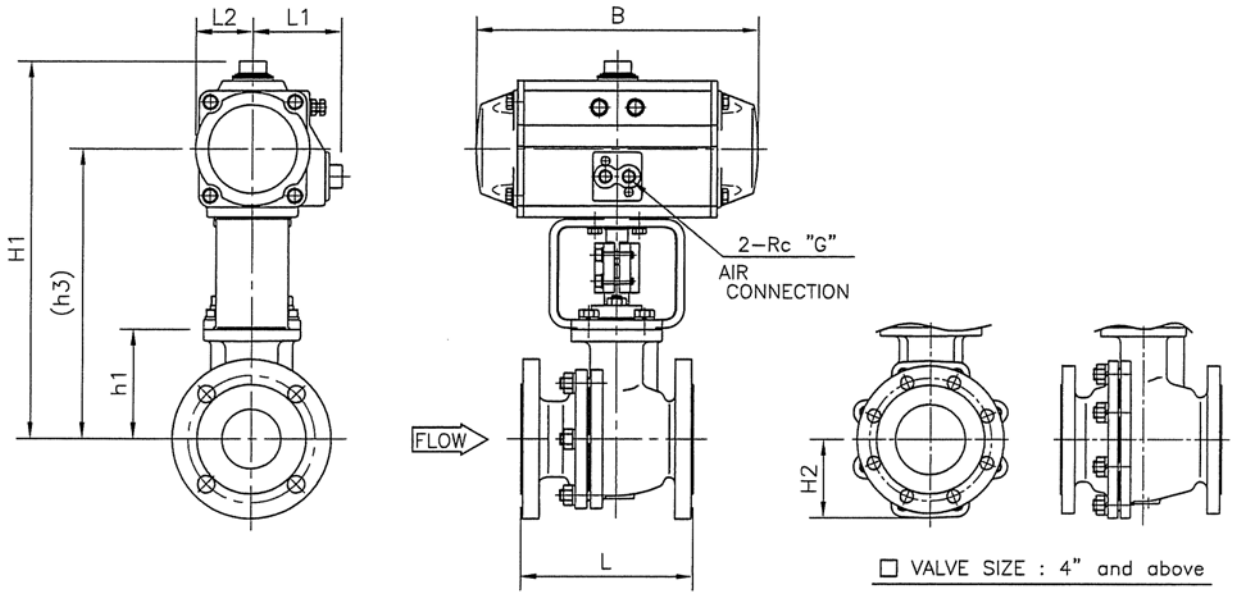
REV.

A

KOSO

—— —— ED–01B

BALL VALVE *Double acting cylinder*



DIMENSIONS

UNIT : mm

CODE No,	VALVE SIZE	FACE TO FACE L			h1	h3	H1	H2	ACTUATOR					
		L class Body		M class Body										
		☐ JIS 10K RF	☐ ANSI class 150 RF ☐ JPI class 150 RF	☐ JIS 20K RF ☐ ANSI class 300 RF ☐ JPI class 300 RF					Cylinder Size	B	L1	L2	G	CODE No,
90	☐ ½" (15A)	110	108	140	60	230	295	—	☐ AT101	160	65	36	1/4	63C1RB
91	☐ ¾" (20A)	120	117	152	63	235	295	—	☐ AT101	160	65	36	1/4	63C1RB
						240	310		☐ AT201	215	70	43	1/4	63C2RB
01	☐ 1" (25A)	130	127	165	75	245	310	—	☐ AT101	160	65	36	1/4	63C1RB
						255	325		☐ AT201	215	70	43	1/4	63C2RB
93	☐ 1½"(40A)	165	165	190	85	255	325	—	☐ AT201	215	70	43	1/4	63C2RB
						260	340		☐ AT251	250	75	50	1/4	63CARB
02	☐ 2" (50A)	180	178	216	91	260	330	—	☐ AT201	215	70	43	1/4	63C2RB
						265	345		☐ AT251	250	75	50	1/4	63CARB
94	☐ 2½"(65A)	190	190	241	120	300	380	—	☐ AT251	250	75	50	1/4	63CARB
						305	390		☐ AT301	270	85	56	1/4	63C3RB
03	☐ 3" (80A)	200	203	283	130	315	400	—	☐ AT301	270	85	56	1/4	63C3RB
						325	430		☐ AT351	315	95	64	1/4	63CBRB
						350	460		☐ AT401	345	100	70	1/4	63C4RB
04	☐ 4"(100A)	230	229	305	160	385	490	115	☐ AT351	315	95	64	1/4	63CBRB
						405	515		☐ AT401	345	100	70	1/4	63C4RB
						445	560		☐ AT451	410	110	80	1/4	63CCRB
05	☐ 5"(125A)	300	356	381	185	475	595	140	☐ AT451	410	110	80	1/4	63CCRB
						485	615		☐ AT501	440	120	88	1/4	63C5RB
06	☐ 6"(150A)	340	394	403	200	500	630	160	☐ AT501	440	120	88	1/4	63C5RB
						525	685		☐ AT551	490	125	99	1/4	63CDRB
						535	705		☐ AT601	545	130	110	1/4	63C6RB
08	☐ 8"(200A)	450	457	——	250	575	735	210	☐ AT551	490	125	99	1/4	63CDRB
						585	755		☐ AT601	545	130	110	1/4	63C6RB

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

DRAWING No.

E–301K–6300RB–W–N

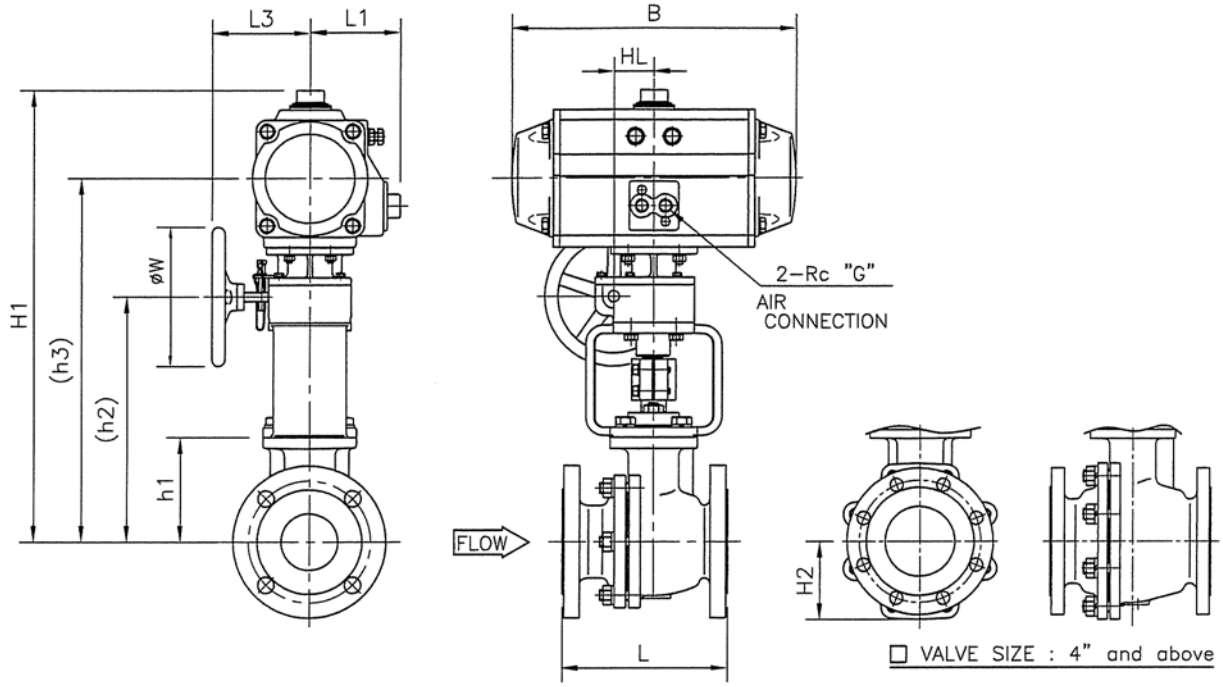
REV.

A

KOSO

—— —— ED–01B

BALL VALVE *Double acting cylinder with Side handle*



DIMENSIONS

UNIT : mm

VALVE SIZE CODE No.		FACE TO FACE L			h1	h2	h3	H1	H2	ACTUATOR							
		L class Body		M class Body													
		☐ JIS 10K RF	☐ ANSI class 150 RF ☐ JPI class 150 RF	☐ JIS 20K RF ☐ ANSI class 300 RF ☐ JPI class 300 RF						Cylinder Size	B	L1	L3	HL	W	G	CODE No.
90	☐ ½" (15A)	110	108	140	60	225	355	420	—	☐ AT101	160	65	140	56	155	1/4	63C1RB
91	☐ ¾" (20A)	120	117	152	63	230	360	420	—	☐ AT101	160	65	140	56	155	1/4	63C1RB
							365	435		☐ AT201	215	70	140	56	155	1/4	63C2RB
01	☐ 1" (25A)	130	127	165	75	240	370	435	—	☐ AT101	160	65	140	56	155	1/4	63C1RB
							380	450		☐ AT201	215	70	140	56	155	1/4	63C2RB
93	☐ 1½"(40A)	165	165	190	85	265	405	475	—	☐ AT201	215	70	140	56	155	1/4	63C2RB
							410	490		☐ AT251	250	75	140	56	155	1/4	63CARB
02	☐ 2" (50A)	180	178	216	91	270	410	480	—	☐ AT201	215	70	140	56	155	1/4	63C2RB
							415	495		☐ AT251	250	75	140	56	155	1/4	63CARB
94	☐ 2½"(65A)	190	190	241	120	305	450	530	—	☐ AT251	250	75	140	56	155	1/4	63CARB
							440	525		☐ AT301	270	85	140	56	155	1/4	63C3RB
03	☐ 3" (80A)	200	203	283	130	315	450	535	—	☐ AT301	270	85	140	56	155	1/4	63C3RB
							460	565		☐ AT351	315	95	140	56	155	1/4	63CBRB
							465	575		☐ AT401	345	100	140	56	155	1/4	63C4RB
04	☐ 4"(100A)	230	229	305	160	370	515	620	115	☐ AT351	315	95	140	56	155	1/4	63CBRB
							520	630		☐ AT401	345	100	140	56	155	1/4	63C4RB
						390	565	685		☐ AT451	410	110	155	69	205	1/4	63CCRB
05	☐ 5"(125A)	300	356	381	185	425	600	720	140	☐ AT451	410	110	155	69	205	1/4	63CCRB
							610	735		☐ AT501	440	120	155	69	205	1/4	63C5RB
06	☐ 6"(150A)	340	394	403	200	440	625	750	160	☐ AT501	440	120	155	69	205	1/4	63C5RB
						465	670	830		☐ AT551	490	125	225	90	305	1/4	63CDRB
							680	855		☐ AT601	545	130	225	90	305	1/4	63C6RB
08	☐ 8"(200A)	450	457	——	250	515	720	880	210	☐ AT551	490	125	225	90	305	1/4	63CDRB
							730	905		☐ AT601	545	130	225	90	305	1/4	63C6RB

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET.

NOTE:

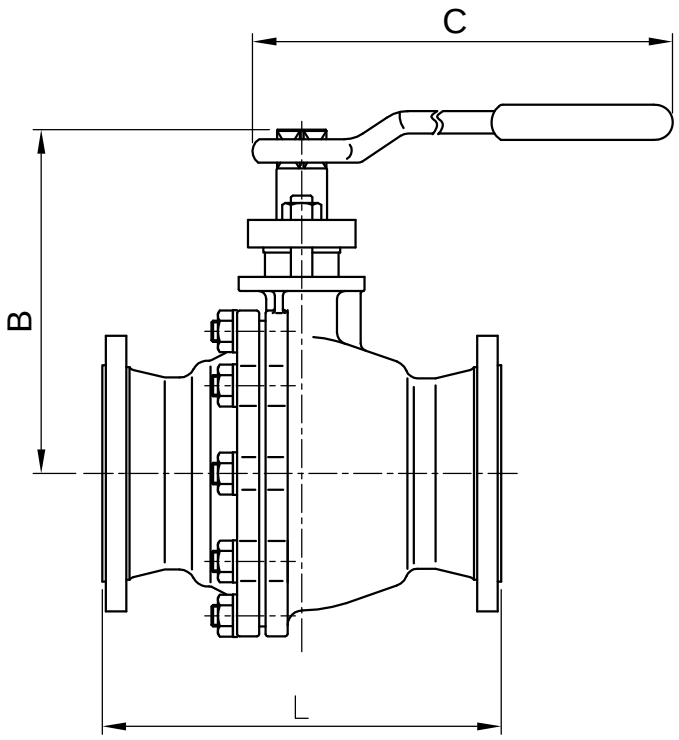
DRAWING No.
E–301K–6300RB–W–S
REV. A

KOSO

—— —— ED–01B

BALL- VALVE 301K with Hand lever

UNIT : mm



DIMENSIONS

CODE No:	VALVE SIZE	FACE TO FACE "L" L - Class Body ☐ ANSI 150 CLASS	FACE TO FACE "L" M - Class Body ☐ ANSI 300 CLASS	A	B	C
90	☐ 1/2" (15A)	108	140	60	90	130
91	☐ 3/4" (20A)	117	152	63	100	130
01	☐ 1" (25A)	127	165	75	120	180
93	☐ 1 1/2" (40A)	165	190	85	145	185
02	☐ 2" (50A)	178	216	91	165	245
94	☐ 2 1/2" (65A)	190	241	110	230	265
03	☐ 3" (80A)	203	283	130	245	280
04	☐ 4" (100A)	229	305	160	290	310
06	☐ 6" (150A)	394	403	200	335	350

*FLANGE ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET

NOTE: SOFT SEATED BALL VALVE

DRAWING No.

E–301K–90–06–HL

REV.

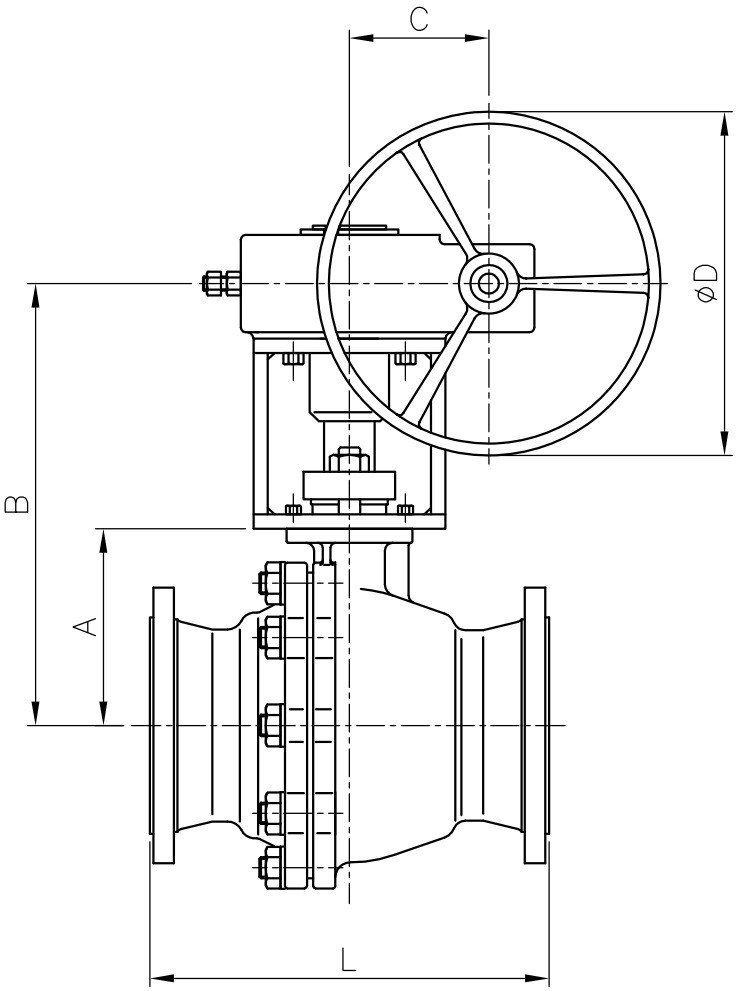
A

KOSO

ED–01B

BALL- VALVE 301K with Gear operation

UNIT : mm



DIMENSIONS

VALVE SIZE CODE No:		FACE TO FACE "L" L - Class Body ☐ ANSI 150 CLASS	 M - Class Body ☐ ANSI 300 CLASS	A	B	C	D
06	☐ 6" (150A)	394	403	200	330	70	Φ350
08	☐ 8" (150A)	457	502	250	335	70	Φ350
10	☐ 10" (250A)	533	568	315	460	90	Φ500
12	☐ 12" (300A)	610	648	380	700	90	Φ500
14	☐ 14" (350A)	686	762	420	775	90	Φ500

*FLANGE ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET

NOTE: SOFT SEATED BALL VALVE

DRAWING No.

E–301K–6–14–GO

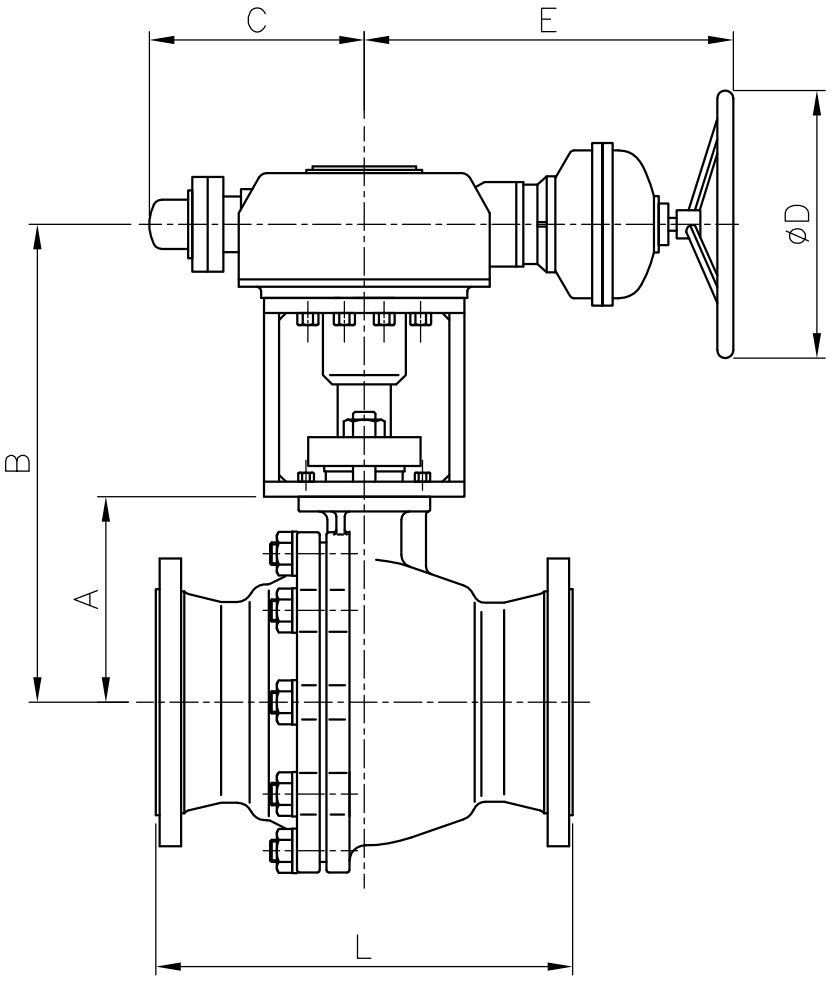
REV. A

KOSO

ED–01B

BALL- VALVE 301K with Gear operation

UNIT : mm



DIMENSIONS

VALVE SIZE CODE No:		FACE TO FACE "L" L - Class Body ☐ ANSI 150 CLASS	 M - Class Body ☐ ANSI 300 CLASS	A	B	C	D	E
16	☐ 16" (400A)	762	838	470	855	340	400	445
18	☐ 18" (450A)	864	914	505	900	340	400	445
20	☐ 20" (500A)	914	991	550	1000	400	640	525
22	☐ 22" (550A)	---	1092	575	1150	400	640	525
24	☐ 24" (600A)	1067	1143	615	1300	400	640	525

*FLANGE ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON SPECIFICATION SHEET

NOTE: SOFT SEATED BALL VALVE

DRAWING No.

E–301K–16–24–GO

REV.

A

KOSO

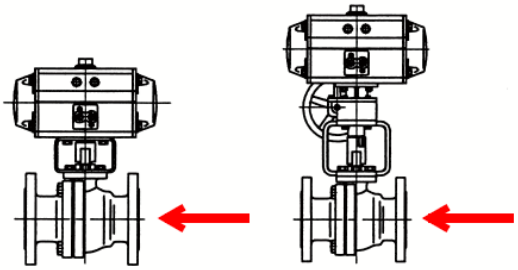
ED–01B

6300RB/300W 配管取付姿勢図 複動形・単動形

MOUNTING FORM Double acting and Spring return type

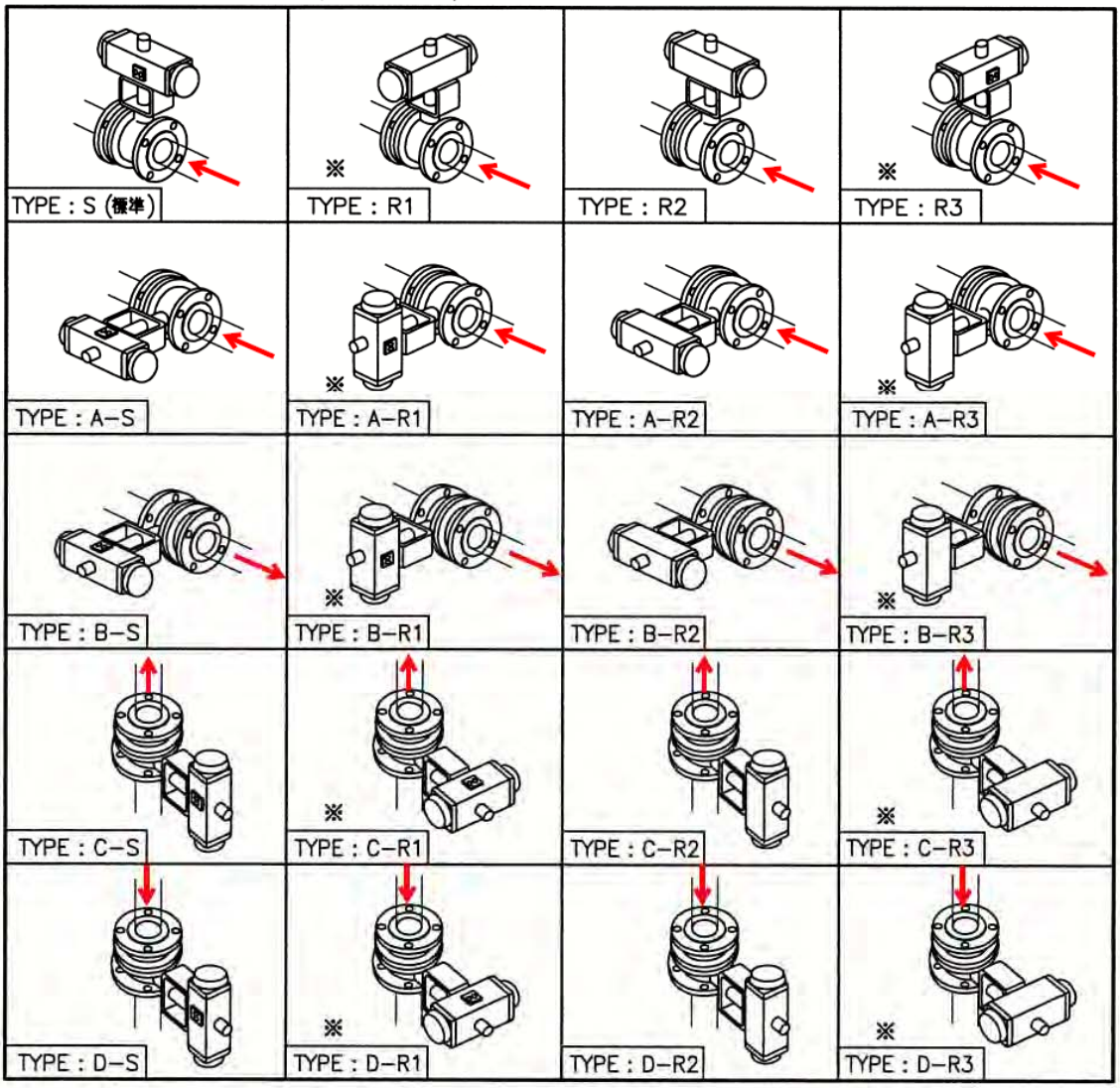
ハンドル無し
Without Handle

ハンドル付き
With Handle



TYPE : S (標準)
(Standard)

ハンドル付きのTYPE : R1およびR3
グループ(※印)は取付けは出来ません。
Type R1, A–R1, B–R1, C–R1, D–R1 and type R3, A–R3, B–R3, C–R3, D–R3 are not applicable for the Actuator with Hand wheel.



備 考
Remarks

ステムが真下になる、逆さ取付は避けて下さい。
Please do not mount the valve unit upside down.

→ の矢印は流れ方向を示します。
→ Indicates the flow direction.

REV.
A1
30/04/2008

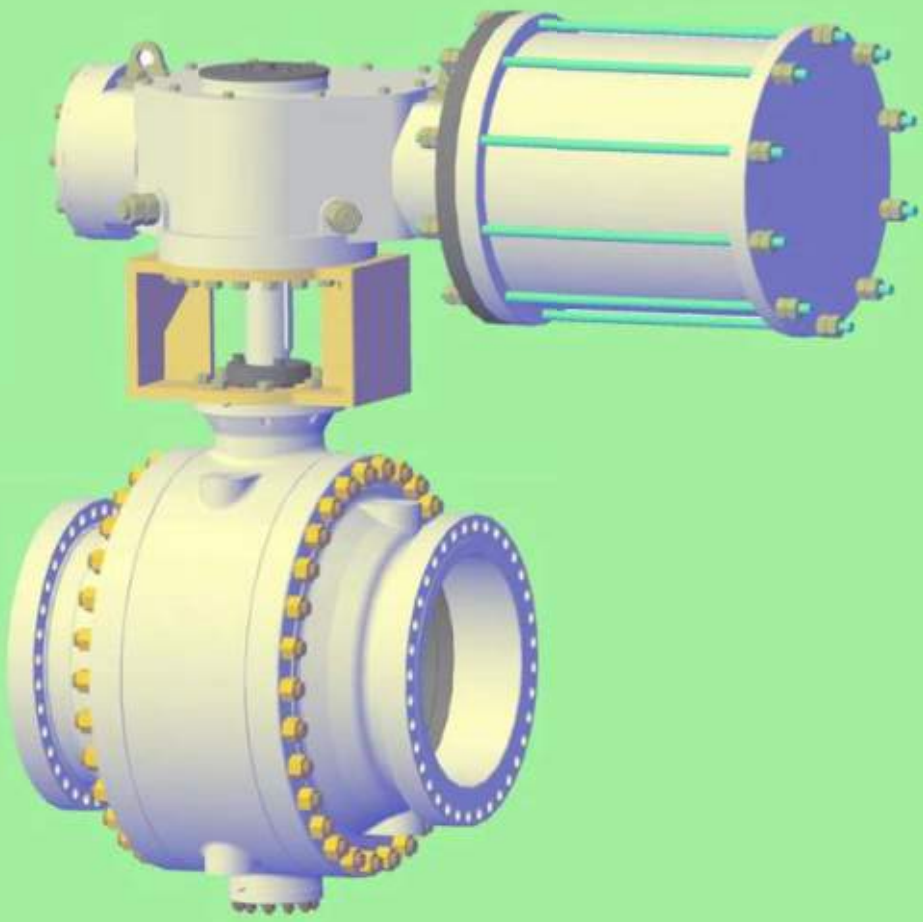
KOSO

STANDARD SPECIFICATION

ストレートスルー形
自動操作メタルボールバルブ

STRAIGHT THROUGH
AUTOMATIC METAL BALL VALVE

300W SERIES



KOSO

STANDARD SPECIFICATION

KOSO

300W Metal Ball Valves

概　要

このシリーズは、ボールとシートの表面にタングステン(またはクロム)カーバイトを施し、独自のラッピング技術によって、広範囲の温度・圧力条件下で漏れ量ゼロを可能にしたバルブです。グランド部はライブローディング構造となっており、グランド部からの漏れも防止します。
HVOF 溶射(社内施工)を用いてコーティングされるタングステン(またはクロム)カーバイトは、非常に硬く、優れた耐摩耗性を発揮します。また、ボールとシートが面タッチとなっており、セルフクリーニング効果で異物の進入を防ぎます。シンプルな構造でありながら、スラリー流体や磨耗性物質が混入している流体などの過酷な条件に最適なボールバルブです。

GENERAL

This series provide Zero-Leakage ball valves in several service applications with high temperature and/or high pressure. The ball and seat are hard coated with chrome carbide or tungsten carbide, which has high erosion and abrasion resistance, using KOSO-owned HVOF coating system. They are mate-lapped based on our own technique to ensure 100% sealing .Live loading also ensures zero emissions. The ball never leaves the seat and wipes contaminants away. This self-cleaning action prevents the interference and damage from contaminants. Therefore, this valve is suitable for the slurry service and the abrasive service. This valve can select any flow characteristic according to the service condition by changing the ball window shape.

Note:
1. The descriptions of all the products contained in this catalogue are general in nature and the products are subject to KOSO's Standard Warranty and other terms and conditions as contained in the applicable contract for such products.
2. We reserve the right to change or modify Product Design or construct without prior notice and without any obligation to make such modification / change on products previously or subsequently sold.

標準仕様　STANDARD SPECIFICATIONS

弁本体部　BODY

シリーズ	Series	300W (2方フルボア形)　300W (2 way full bore type & reduced bore type)
弁サイズ	Body size	3/4 ~ 42B (20 ~ 1050A)
トリム材質	Trim materials	標準材質組合せおよび、使用温度・弁座許容漏洩量は表1を参照下さい。 See Table 1 for hardening treatment and operating pressure-temperature.
弁本体定格	Body ratings	Lクラス : JIS10K, ANSI Class 150 L Class body :JIS10K, ANSI Class 150
		Mクラス : JIS16K, JIS20K, JIS30K , ANSI Class 300 M Class body : JIS16K, JIS20K, JIS30K , ANSI Class 300
		Hクラス : JIS40K,ANSI Class 600 H Class body : JIS40K,ANSI Class 600
		S クラス : JIS63K,ANSI Class 900, ANSI Class1500 S Class body : JIS63K,ANSI Class 900, ANSI Class1500
		X クラス : ANSI Class2500 X Class body : ANSI Class2500
弁本体接続	Body connections	フランジ形 (JIS : RF スムース、　ANSI : RF スパイラルセレーション) Flange type (JIS : RF Smooth、 ANSI : RF Serrated spiral)
ボデー材質	Body material	JIS : SCPH2, SCS13A, SCS14A etc, ANSI : A216-WCB, A351-CF8M, A351-CF8
パッキン	Packing	使用温度・圧力範囲は図2を参照して下さい。 See Fig 2 for pressure/temperature rating.
ガスケット	Gasket	使用温度・圧力範囲は図3を参照して下さい。 See Fig 3 for pressure/temperature rating.
塗装色	Painting Color	マンセルN-6(エポキシ樹脂系) 但し、ステンレス鋼には塗装しません。 Munsell N-6 (Epoxy resin group) is standard. In the case of stainless steel body, no painting is standard.

駆動部　ACTUATOR

仕様 / Specification	型式 / Type	63C0RB : シリンダ-式　Pneumatic cylinder type	
		単動形　Spring return type	複動形　Double acting type
用途	Purpose	モジュレイション・オンオフ　Modulation On-off	
供給空気圧力	Air supply	300, 400, 500kPa[gauge]	300 ~ 500kPa[gauge]
出力軸回転角	Angle rotation	90 deg	
配管接続口	Connection	AT101 ~ AT601 : Rc1/4　AT651 : Rc3/8　AT701 : Rc1/2	
正作動	Direct action	空気圧増加で弁閉　Air to valve shut	空気又は電気信号により、弁開または弁閉 Valve open or shut by air or electric signal.
逆作動	Reverse action	空気圧増加で弁開　Air to valve open	
許容周囲温度	Ambient Temp.	-20 ~ +60℃	
標準塗装色	Painting	シリンダ : アルマイト処理　エンドキャップ : グレー Cylinder : anodic coating　End cap : Gray	
オプション	Option	手動操作機構、エアーセット、電磁弁、リミットスイッチ、スピード調整器、その他 Manual handle, Air-set, Solenoid valve, Limit switch, Speed controller, etc.	

仕様 / Specification	型式 / Type	6400RB シリンダ-式　Pneumatic cylinder type
		複動形　Double acting type
用途	Purpose	モジュレイション・オンオフ　Modulation On-off
操作源	Air supply	空気圧　300 ~ 500kPa〔gauge〕
配線接続口	Connection	RC 1/2
出力回転角	Angle rotation	60°or　90°
作動	Action	弁開、弁閉、停止の選択　Manual selection Valve open, shut, stop
許容周囲温度	Ambient Temp.	- 20 ~ + 60℃
標準塗装色	Painting	マンセルN-6(エポキシ樹脂系)　Mansell N-6 (Epoxy resin group)
オプション	Option	E/P・ P/P ポジショナー、エアセット、リミットスイッチ、電磁弁、スピード調査器、 ロック弁、　開度制限機構、開度発信機、手動操作機構、ボリュームタンク E/P Positioner,P/P Positioner,Air-set,Limit switch,Solenoid valve,Speed controller,

付加仕様（有償）
OPTIONAL SPECIAL SPECIFICATIONS (additional cost is required)

弁本体部及び駆動部特殊仕様 Special specification for Body and Actuator	塩害仕様、寒冷地対策、熱帯地仕様、特殊空気配管、特殊ｼﾞｮｲﾝﾄ、 内面ﾊﾌ研磨、外気露出部SUSボルトナット、指定塗装色,ｽﾗﾘｰ対策 Salty environment proof,Cold area proof,Tropical area proof,Special piping and fitting,Buffing on fluid paath,SUS bolt and nut for exposed parts, Non-standard painting,Slurry　Proof.

表 1　弁本体とトリムの標準材質組合せおよび、使用温度範囲・弁座許容漏洩量

Table 1　BODY/TRIM STANDARD MATERIAL COMBINATION AND OPERATING　TEMPERATURE・SEAT LEAKAGE

Cr：クロムカーバイトコーティング(HV1100) 高温蒸気に適している高温でも高硬度を維持する
WcCr：タングステンクロムカーバイト(HV1200)すべての環境に適しているが Wc より硬度が下がる
Wc：タングステンカーバイトコーティング(HV1400)スラリー流体に適している。
HT：熱処理

Cr：Chrome carbide coating (HV1100) : Suitable for super-heated steam / High hardness for high temperature available.

WcCr：Tungsten Chrome carbide coating (HV1200) :　Suitable for all environment. (Lower hardness than Wc).

Wc：Tungsten carbide coating (HV1400) : Suitable for slurry.

HT：Heat treatment

表 1-1 弁本体部材質：SCPH2/WCB,SCPH21/WC6,SCPH61/C5
Table1-1 Body Material：SCPH2/WCB, SCPH21/WC6, SCPH61/C5

本体部材質 Body material		SCS13A/A351-CF8 SCS14A/A351-CF8M				
コーティング Coating	形式 Type	Wc		WcCr		Cr
	材質 Material	88Wc-12Co		73Wc-20Cr-7Ni		$80Cr_3C_2$20Ni-Cr
ボール&シートリング Ball & Seat-ring	材質 Material	SUS316/SCS14A				A182-316F
ステム Stem	材質 Material	SUS630				A638-Gr.660
	処理 Treatment	HT+QPQ				HT+Grコーティング HT+Gr Coating
パッキン Packing		6315CL		6315CL		6610CH+6710CH
内部パッキン Inside packing		オーリング O-ring	グラファイト Graphite	オーリング O-ring	グラファイト Graphite	グラファイト Graphite
使用温度℃ OperationTemp.		-20 ~ +180	-45 ~ +400	-20 ~ +180	-45 ~ +400	+400 ~ +538
弁座許容漏洩量 Seat leakage		ClassV or ClassVI				MSSP-61

表 1-2 弁本体部材質：SCS13A/CF8,SCS14A/CF8M
Table1-2 Body Material：SCS13A/CF8, SCS14A/CF8M

本体部材質 Body material		SCS13A/A351-CF8 SCS14A/A351-CF8M				
コーティング Coating	形式 Type	Wc		WcCr		Cr
	材質 Material	88Wc-12Co		73Wc-20Cr-7Ni		$80Cr_3C_2$20Ni-Cr
ボール&シートリング Ball & Seat-ring	材質 Material	SUS316/SCS14A				A182-316F
ステム Stem	材質 Material	SUS630				A638-Gr.660
	処理 Treatment	HT+QPQ				HT+Grコーティング HT+Gr Coating
パッキン Packing		6315CL		6315CL		6610CH+6710CH
内部パッキン Inside packing		オーリング O-ring	グラファイト Graphite	オーリング O-ring	グラファイト Graphite	グラファイト Graphite
使用温度℃ OperationTemp.		-20 ~ +180	-45 ~ +400	-20 ~ +180	-45 ~ +400	+400 ~ +538
弁座許容漏洩量 Seat leakage		ClassV or ClassVI				MSSP-61

表 2　弁本体材質の使用温度・圧力範囲
Table 2　BODY MATERIAL /OPERATING PRESSURE-TEMPERATURE RATING
Table 2-1 ANSI　　UNIT：MPa[gaug]

温度 Temp ℃	Class 150						Class 300						Class 600					
	SCPL1 LCB	SCPH2 WCB	SCPH21 WC6	SCPH61 C5	SCS13A CF8	SCS14A CF8M	SCPL1 LCB	SCPH2 WCB	SCPH21 WC6	SCPH61 C5	SCS13A CF8	SCS14A CF8M	SCPL1 LCB	SCPH2 WCB	SCPH21 WC6	SCPH61 C5	SCS13A CF8	SCS14A CF8M
-	ー	ー	ー	ー	1.90	1.90	ー	ー	ー	ー	4.95	4.95	ー	ー	ー	ー	9.91	9.92
-45~38	1.84	ー	ー	ー	1.90	1.90	4.78	ー	ー	ー	4.95	4.95	9.57	ー	ー	ー	9.91	9.92
-5~38	1.84	1.96	1.99	1.99	1.90	1.90	4.78	5.10	5.16	5.16	4.95	4.95	9.57	10.20	10.32	10.32	9.91	9.92
50	1.81	1.92	1.92	1.92	1.84	1.84	4.72	5.00	5.10	5.16	4.77	4.80	9.46	10.01	10.22	10.32	9.56	9.62
100	1.72	1.76	1.76	1.76	1.56	1.61	4.51	4.63	4.88	5.14	4.08	4.21	9.02	9.27	9.74	10.29	8.17	8.43
150	1.57	1.57	1.57	1.57	1.39	1.47	4.40	4.51	4.63	5.01	3.62	3.85	8.78	9.04	9.26	10.03	7.26	7.69
200	1.40	1.40	1.40	1.40	1.25	1.37	4.26	4.38	4.54	4.88	3.27	3.56	8.54	8.75	9.09	9.75	6.54	7.12
250	1.20	1.20	1.20	1.20	1.16	1.20	4.05	4.16	4.44	4.62	3.04	3.34	8.11	8.33	8.88	9.26	6.10	6.67
300	1.01	1.01	1.01	1.01	1.01	1.01	3.76	3.87	4.23	4.23	2.91	3.15	7.54	7.74	8.48	8.48	5.80	6.32
350	0.84	0.84	0.84	0.84	0.84	0.84	3.59	3.69	4.01	4.01	2.81	3.03	7.18	7.38	8.04	8.04	5.60	6.07
375		0.73	0.73	0.73	0.73	0.73		3.64	3.88	3.88	2.77	2.96		7.28	7.75	7.75	5.54	5.93
400		0.64	0.64	0.64	0.64	0.64		3.44	3.65	3.65	2.74	2.91		6.89	7.31	7.31	5.48	5.81
425		0.55	0.55	0.55	0.55	0.55		2.88	3.50	3.44	2.71	2.87		5.74	7.01	6.91	5.42	5.72
450		0.47	0.47	0.47	0.47	0.47		1.99	3.38	3.08	2.68	2.81		4.00	6.75	6.17	5.37	5.61
475		0.37	0.37	0.37	0.37	0.37		1.35	3.16	2.58	2.65	2.73		2.70	6.32	5.17	5.30	5.46
500		0.28	0.28	0.28	0.28	0.28		0.88	2.77	2.02	2.60	2.67		1.75	5.55	4.04	5.20	5.37
525		0.18	0.18	0.18	0.18	0.18		0.51	2.02	1.53	2.19	2.57		1.03	4.04	3.07	4.77	5.15
538		0.13	0.15	0.15	0.15	0.15		0.34	1.63	1.34	2.18	2.53		0.72	3.26	2.69	4.55	5.06

表 2-2 JIS

Table 2-2 JIS

UNIT: MPa〔gauge〕

温　度 Temp ℃	10K	20K	30K		40K	
	SCPH2	SCPH2	SCPH2	SCPH21	SCPH2	SCPH21
-5 ~ 120	1.37	3.33	4.99	4.99	6.66	6.66
~ 220	1.17	3.03	4.50	4.50	6.07	6.07
~ 300	0.98	2.84	4.21	4.21	5.58	5.58
~ 350		2.54	3.82	3.82	5.09	5.09
~ 400		2.25	3.33	3.72	4.50	4.99
~ 425		1.96	2.94	3.52	3.92	4.70
~ 450						4.41
~ 475						4.11
~ 490						3.92
~ 500						3.72
~ 510						3.52

表 3　CV 値

Table 3　CV VALUE

Valve Size		Rated Cv				
		150#,300#	600#	900#	1500#	2500#
3/4B	20A	45	40	31	31	16
1B	25A	75	65	46	46	32
1.5B	40	235	210	150	150	80
2B	50A	400	345	320	320	195
2.5B	65A	755	645	460	460	260
3B	80A	1105	985	900	700	390
4B	100	1930	1755	1800	1300	680
6B	150	4940	4475	4300	3100	1500
8B	200	10135	8615	7500	6400	3200
10B	250	16900	13110	12000	9600	5600
12B	300A	25520	21860	21000	13500	6900
14B	350A	30700	26969	24000	16000	9500
16B	400A	41245	35025	26000	22000	14400
18B	450A	55570	45639	38000	28000	20000
20B	500A	70045	55095	54000	35000	25000
22B	550A	86752	66828	--	--	--
24B	600A	103732	80860	59000	50000	29000
26B	650A	130530	97560	--	--	--
28B	700A	151830	110276	--	--	--
30B	750A	177900	136664	--	--	--
36B	900A	249050	194190	--	--	--
42B	1050A	309970	282775	--	--	--

図1　トリム材質組合せに対する使用温度と差圧
Fig.1　OPERATING TEMPERATURE AND PRESSURE DROPS FOR TRIM MATERIAL COMBINATIONS

○材質における最大使用範囲すべて使用可。
　ただしコーティング材による温度制限有り。
You can use max. range for pressure and fluid temparature of each material.
But coating shall narrow the range of temparature.
*O-リングとは、シートリングの裏漏れ防止材です。
　高温高圧時はV-パッキンを使用.
O-rings : Soft parts set on the back of seatrings for leak prevention.

For high temparature, V-packings shall be provided.

図 1-1 弁本体定格　：150#
Fig1-1 Body Rating　：150#

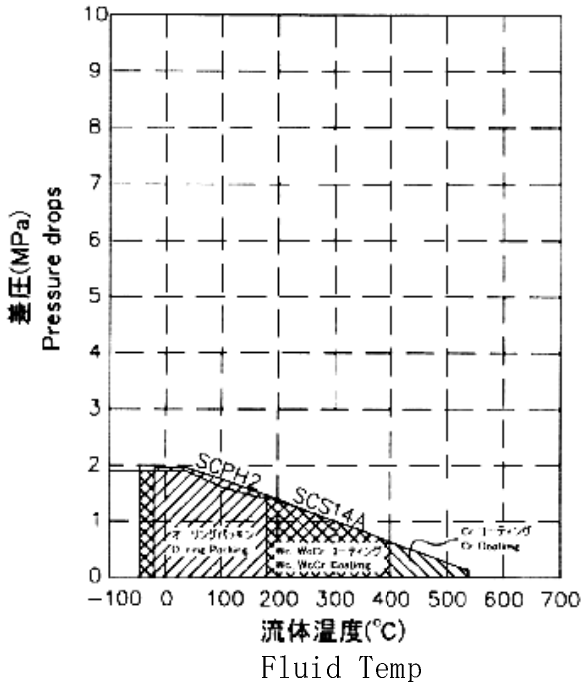


図 1-2 弁本体定　：300#
Fig1-2 Body Rating　：300#

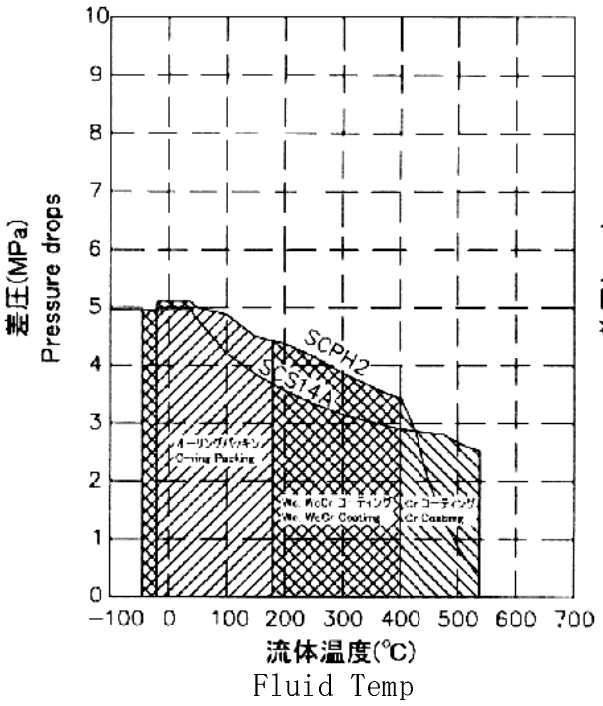


図 1-3 弁本体定格：600#
Fig1-3 Body Rating: 600#

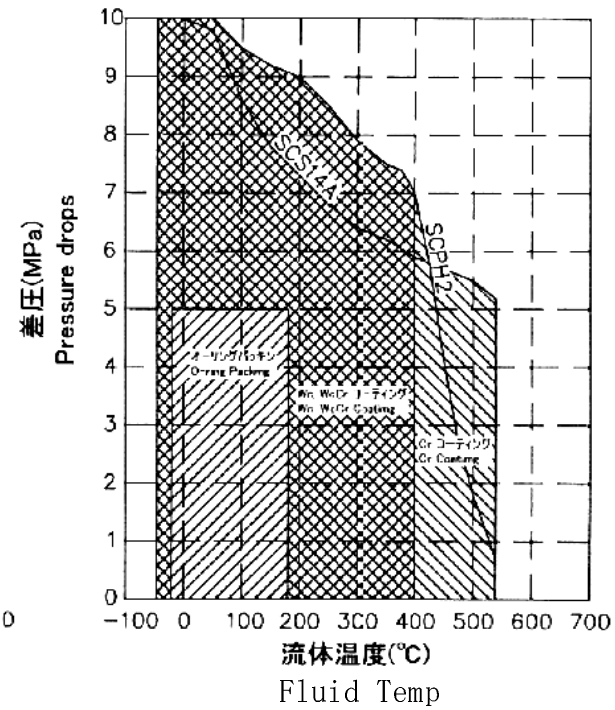


図 2 パッキン使用温度・圧力範囲
Fig 2GLAND PACKING PRESSURE TEMPERATURE RATING

図 2-1：P6315CL
Fig2-2：P6315CL

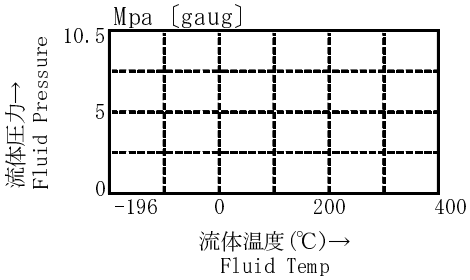


図 2-2 ：P6610CH+P6710CH
Fig2-2：P6610CH+6710CH

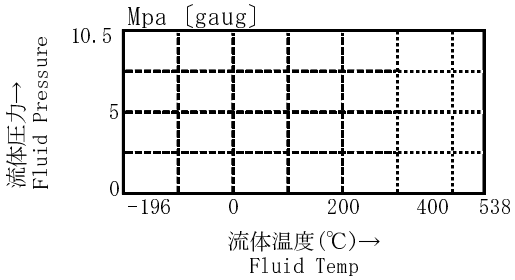


図3　ガスケット使用温度・圧力範囲
Fig 3　GASKET PRESSURE-TEMPERATURE RATINGS
図3-1 グラフォイル
Fig 3-1 GRAFOIL

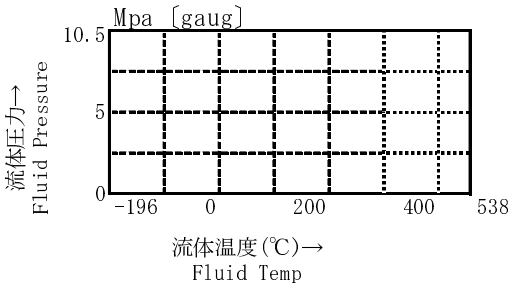
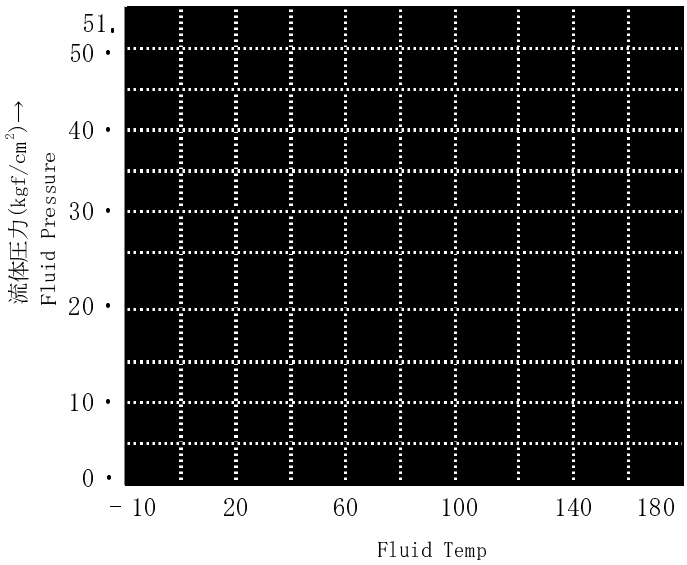


図3-2　O-リング
Fig 3-2 O-ring



O-Ring Materials
Up to 100° C ：NBR
Up to 180° C ：VITON

ACTUATOR SELECTION

表4　許容締切流体圧力（単位 ： MPa）

Table 4 ALLOWABLE SHUT OFF PRESSURE (UNIT: MPa)

表4-1 複動形シリンダ駆動部

Table:4-1 DOUBLE ACTING PNEUMATIC CYLINDER ACTUATOR

6300RB : JIS 10K, JIS 20K, JIS30K / ANSI CLASS 150, 300										
駆動部サイズ・コード Actuator & code	供給空気圧 Air SUP. kPa	弁サイズ　Valve size (inch)								
		3/4	1	1 1/2	2	2 1/2	3	4	6	8
AT51 63C0RB	400	0.7	----	----	----	----	----	----	----	----
	500	1	----	----	----	----	----	----	----	----
AT101 63C1RB	400	1.7	0.7	----	----	----	----	----	----	----
	500	2.3	1	----	----	----	----	----	----	----
AT201 63C2RB	400	4	2.1	----	----	----	----	----	----	----
	500	5	2.8	----	----	----	----	----	----	----
AT251 63CARB	400	----	3.8	1	----	----	----	----	----	----
	500	----	4.9	1.3	----	----	----	----	----	----
AT301 63C3RB	400	----	----	1.6	----	----	----	----	----	----
	500	----	----	2.2	----	----	----	----	----	----
AT351 63CBRB	400	----	----	3	1.4	----	----	----	----	----
	500	----	----	3.9	1.8	----	----	----	----	----
AT401 63C4RB	400	----	----	4.1	2	0.7	----	----	----	----
	500	----	----	5	2.5	1	----	----	----	----
AT451 63CCRB	400	----	----	----	3.3	1.3	0.6	----	----	----
	500	----	----	----	4.2	1.8	0.9	----	----	----
AT501 63C5RB	400	----	----	----	4.4	1.9	1	----	----	----
	500	----	----	----	5	2.4	1.3	0.7	----	----
AT551 63CDRB	400	----	----	----	----	2.7	1.4	0.9	----	----
	500	----	----	----	----	3.5	1.9	1.4	----	----
AT601 63C6RB	400	----	----	----	----	3.95	2.1	1.7	----	----
	500	----	----	----	----	5	2.8	2.4	----	----
AT651 63CERB	400	----	----	----	----	----	3.9	3.5	0.6	----
	500	----	----	----	----	----	4.9	4.5	1.0	----
AT701 63C7RB	400	----	----	----	----	----	----	5	1.4	----
	500	----	----	----	----	----	----	----	2.0	0.8

6300RB : JIS 40K / ANSI CLASS 600						
弁サイズ　Valve size (inch)						
3/4	1	1-1/2	2	2-1/2	3	4
----	----	----	----	----	----	----
----	----	----	----	----	----	----
----	----	----	----	----	----	----
2	----	----	----	----	----	----
3.7	----	----	----	----	----	----
4.9	2.6	----	----	----	----	----
6.4	3.5	----	----	----	----	----
8.2	5	----	----	----	----	----
9.7	5.5	----	----	----	----	----
10	7.2	2	----	----	----	----
----	9.6	2.8	----	----	----	----
----	10	3.7	----	----	----	----
----	----	3.9	----	----	----	----
----	----	5	2.3	----	----	----
----	----	6.4	3.1	----	----	----
----	----	8.2	4	----	----	----
----	----	8.6	4.2	----	----	----
----	----	10	5.4	2.3	----	----
----	----	----	5.9	2.55	----	----
----	----	----	7.5	3.3	----	----
----	----	----	8.4	3.75	----	----
----	----	----	10	4.85	2.6	2.1
----	----	----	----	6.7	3.65	3.25
----	----	----	----	8.5	4.7	4.4
----	----	----	----	10	5.6	5.3
----	----	----	----	----	7.1	6.9

Table 4-1A DOUBLE ACTING PNEUMATIC CYLINDER ACTUATOR

表4-1A 7300RA,6500RA,6400RB:JIS10K,JIS20K,JIS30K/ANSICLASS150,300							
駆動部サイズ・コード Actuator & code	供給空気圧 Air SUP. kPa	弁サイズ　Valve size (inch)					
		3	4	6	8	10	12
280 7328RA	400	5.2	5.2	1.75	0.65	----	----
	500	----	----	2.5	1.05	----	----
375 7337RA	400	----	----	5.2	3	1.65	1
	500	----	----	----	4.05	2.3	1.45
170 6500RA	400	2.55	2.2	----	----	----	----
	500	3.3	3	----	----	----	----
200 6500RA	400	4.7	4.65	0.9	----	----	----
	500	5.2	5.2	1.45	----	----	----
280 6500RA	400	----	----	3.8	1.85	0.9	0.5
	500	----	----	5.05	2.6	1.35	0.8
200 6400RB	400	----	----	5.2	4.45	2.55	1.6
	500	----	----	----	----	3.45	2.2
280 6400RB	400	----	----	----	----	5.2	4.45
	500	----	----	----	----	----	5.2

JIS 40K /ANSI CLASS 600					
弁サイズ　Valve size (inch)					
3	4	6	8	10	12
6.45	6.25	----	----	----	----
8.2	8.15	2.2	----	----	----
10	10	5.2	2.55	----	----
----	----	6.8	3.5	----	----
2.35	----	----	----	----	----
3.1	2.6	----	----	----	----
4.45	4.1	----	----	----	----
5.75	5.5	----	----	----	----
10	10	3.4	----	----	----
----	----	4.55	2.15	----	----
10	10	7.4	3.8	2.15	----
----	----	9.55	5.05	3	----
----	----	10	9.7	6.05	3.95
----	----		10	7.85	5.15

表5　許容締切流体圧力（単位 ： MPa）

Table 5 ALLOWABLE SHUT OFF PRESSURE (UNIT: MPa)

表5-1　複動形シリンダ駆動部　　Table 5-1 SPRING RETURN ACTUATOR

6300RB : JIS 10K, JIS 20K, JIS30K / ANSI CLASS 150, 300								
駆動部サイズ・コード Actuator & code	供給空気圧 Air SUP. kPa	弁サイズ Valve size (inch)						
		3/4	1	1-1/2	2	2-1/2	3	4
AT51	400	----	----	----	----	----	----	----
63C0RB	500	----	----	----	----	----	----	----
AT101	400	----	----	----	----	----	----	----
63C1RB	500	0.5	----	----	----	----	----	----
AT201	400	1.15	----	----	----	----	----	----
63C2RB	500	1.6	0.6	----	----	----	----	----
AT251	400	2.1	0.9	----	----	----	----	----
63CARB	500	2.8	1.35	----	----	----	----	----
AT301	400	3.45	1.75	----	----	----	----	----
63C3RB	500	4.5	2.4	0.5	----	----	----	----
AT351	400	5.2	3.35	0.8	----	----	----	----
63CBRB	500	----	4.35	1.15	----	----	----	----
AT401	400	----	4.5	1.2	----	----	----	----
63C4RB	500	----	5.2	1.65	0.65	----	----	----
AT451	400	----	----	2.2	0.95	----	----	----
63CCRB	500	----	----	2.9	1.3	----	----	----
AT501	400	----	----	3.2	1.45	----	----	----
63C5RB	500	----	----	4.15	1.95	0.7	----	----
AT551	400	----	----	4.35	2.05	0.75	----	----
63CDRB	500	----	----	5.2	2.7	1.05	----	----
AT601	400	----	----	----	3.2	1.3	0.6	----
63C6RB	500	----	----	----	4.15	1.75	0.85	----
AT651	400	----	----	----	5.2	2.5	1.3	0.8
63CERB	500	----	----	----	----	3.25	1.75	1.3
AT701	400	----	----	----	----	3.65	1.95	1.55
63C7RB	500	----	----	----	----	4.65	2.55	2.2

6300RB : JIS 40K / ANSI CLASS 600					
弁サイズ Valve size (inch)					
3/4	1	1-1/2	2	2-1/2	3
----	----	----	----	----	----
----	----	----	----	----	----
----	----	----	----	----	----
----	----	----	----	----	----
----	----	----	----	----	----
----	----	----	----	----	----
----	----	----	----	----	----
----	----	----	----	----	----
2.45	----	----	----	----	----
3.15	----	----	----	----	----
4.15	2.15	----	----	----	----
5.65	3	----	----	----	----
7.3	4.05	----	----	----	----
7.5	4.2	----	----	----	----
9.6	5.5	----	----	----	----
10	7.2	2	----	----	----
----	9.2	2.7	----	----	----
----	10	3	----	----	----
----		3.9	----	----	----
----	----	4.1	----	----	----
----	----	5.3	2.5	----	----
----	----	6.3	3	----	----
----	----	8.05	3.9	----	----
----	----	10	5.5	2.35	----
----	----	----	7.05	3.1	----
----	----	----	7.85	3.45	----
----	----	----	9.95	4.5	2.35

Table 5-1A SPRING RETURN ACTUATOR

表5-1B　7300RA, 6500RA, 6400RB : JIS 10K, JIS 20K, JIS30K / ANSI CLASS 150, 300							
駆動部サイズ・コード Actuator & code	供給空気圧 Air SUP. kPa	弁サイズ Valve size (inch)					
		3	4	6	8	10	12
280	400	1.95	1.55	----	----	----	----
7300RA	500	2.55	2.25	----	----	----	----
375	400	5.2	5.2	1.15	----	----	----
7300RA	500	----	----	1.7	0.6	----	----
200	400	1.75	1.3	----	----	----	----
6500RA	500	2.3	1.95	----	----	----	----
280	400	4.9	4.9	1	----	----	----
6500RA	500	5.2	5.2	1.55	0.5	----	----
360	400	----	----	3.3	1.55	0.7	----
6500RA	500	----	----	4.45	2.2	1.15	0.7

JIS 40K / ANSI CLASS 600		
弁サイズ Valve size (inch)		
3	4	6
----	----	----
2.4	----	----
4.95	4.65	----
6.35	6.15	----
----	----	----
2.15	----	----
4.7	4.35	----
6	5.75	----
10	10	2.95
----	----	3.95

表6　許容締切流体圧力（単位 ： MPa）

Table 6　ALLOWABLE SHUT OFF PRESSURE (UNIT: MPa)

表6-1 複動形シリンダ駆動部

Table:6-1 DOUBLE ACTING PNEUMATIC CYLINDER ACTUATOR

6500RB : JIS 10K, JIS 20K / ANSI CLASS 150, 300											
駆動部サイズ・コード Actuator & code	供給空気圧 Air SUP. kPa	弁サイズ　Valve size (inch)									
		10	12	14	16	18	20	24	30	36	42
6555	400	----	----	4.4	4.3	2.5	1.7	----	----	----	----
	500	----	----	5.2	5.2	3.5	2.4	----	----	----	----
6565	400	----	----	----	----	4.9	3.5	1.5	1	----	----
	500	----	----	----	----	5.2	4.6	----	----	----	----
6575	400	----	----	----	----	----	----	2.5	1.5	1	----
	500	----	----	----	----	----	----	----	----	----	----
6583	400	----	----	----	----	----	----	4.5	3	2.5	----
	500	----	----	----	----	----	----	----	----	----	----
6590	400	----	----	----	----	----	----	5	4	3.2	----
	500	----	----	----	----	----	----	----	----	----	----

表6-1A 複動形シリンダ駆動部

Table:6-1A DOUBLE ACTING PNEUMATIC CYLINDER ACTUATOR

6500RB : JIS 40K / ANSI CLASS 600											
駆動部サイズ・コード Actuator & code	供給空気圧 Air SUP. kPa	弁サイズ　Valve size (inch)									
		10	12	14	16	18	20	24	30	36	42
6555	400	8.5	5.6	4	3	----	----	----	----	----	----
	500	10.1	7.3	5.3	3.9	----	----	----	----	----	----
6565	400	----	10.1	7.6	5.7	6.5	----	----	----	----	----
	500	----	----	9.8	7.3	----	----	----	----	----	----
6575	400	----	----	10.1	8	9	6.5	----	----	----	----
	500	----	----	----	10.1	----	----	----	----	----	----
6583	400	----	----	----	----	10.2	10.2	5.5	----	----	----
	500	----	----	----	----	----	----	----	----	----	----
6590	400	----	----	----	----	----	----	7.2	5.5	----	----
	500	----	----	----	----	----	----	----	----	----	----

***For Higher rating torque values refer to Factory Sales**

HVOF (High Velocity Oxygen Fuel) Spray coating in our factory

<HVOF溶射（High Velocity Oxygen Fuel）※社>

高圧酸素と燃料ガスを使用した高速フレーム溶射です。
フレーム燃焼速度は超音速度(マッハ6)に達し、溶射粉末が高速に加速されることで、極めて緻密で高密着力を有する皮膜を形成しま。

By using high pressure oxygen and fuel very high velocity coating is achieved. The flame velocity of over MAC 6 is achieved by this process. The coating powder hitting the surface at high velocity gives a very good adhesion to the coating at very high accuracy in dimensional tolerances.

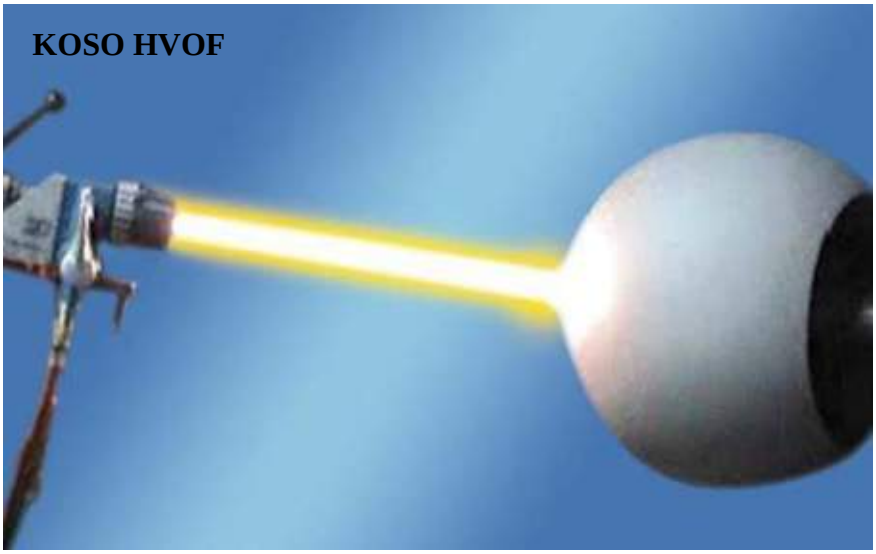
硬度比較	
ステライトNo.6	HrC40
メテコ16C	HrC60
ハードクロム	HrC64
クロムカーバイド	HrC66～69

＜クロムカーバイド/タングステンカーバイドコーティング＞
クロムカーバイド/タングステンカーバイドは、非常に硬く、研 磨にはダイアモンドが必要とされます。
非常に優れた耐摩耗性を示し、また、高温時に硬度が低下しない特性も持ち合わせています。

Hardness comparison	
Stellite 6	HrC40
Metco 16C	HrC60
Hard chrome	HrC64
Chromium Carbide	HrC66 to 69

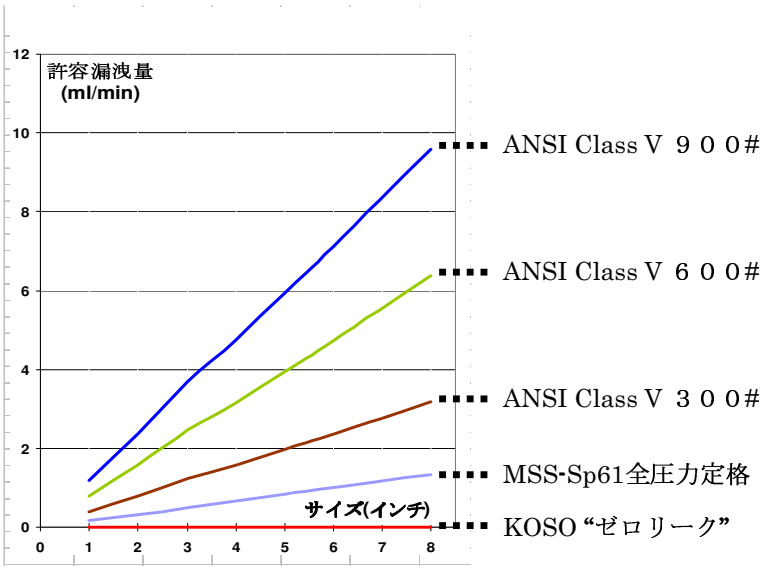
Chromium carbide and Tungsten carbide coating:

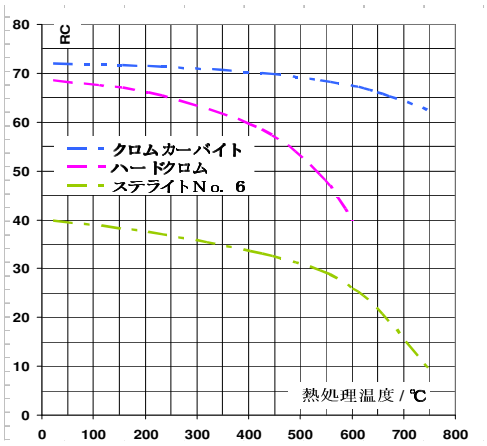
Chromium carbide and tungsten carbide are very hard that diamond is required for lapping. These coatings have high wear and abrasion resistance. Hardness is not reduced in high temperature condition.



< 許容漏洩量 >

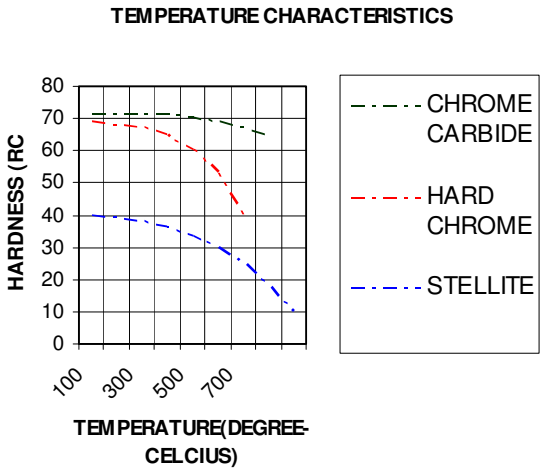
工装のメタルボールバルブは、ゼロリークを提供します。

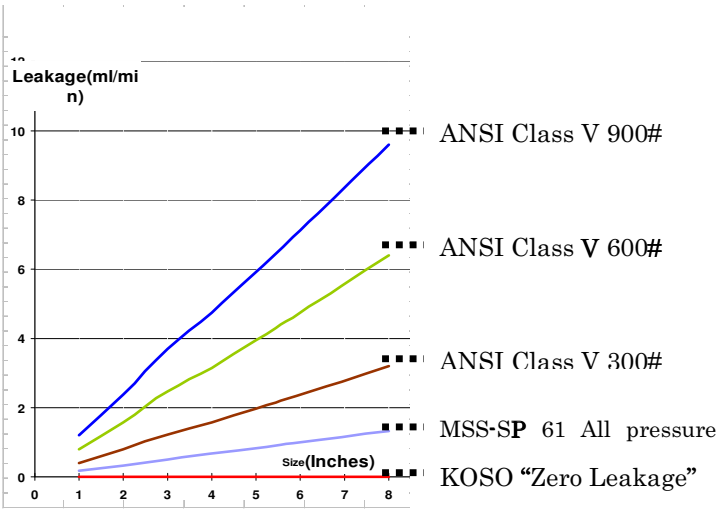




Seat Leakage

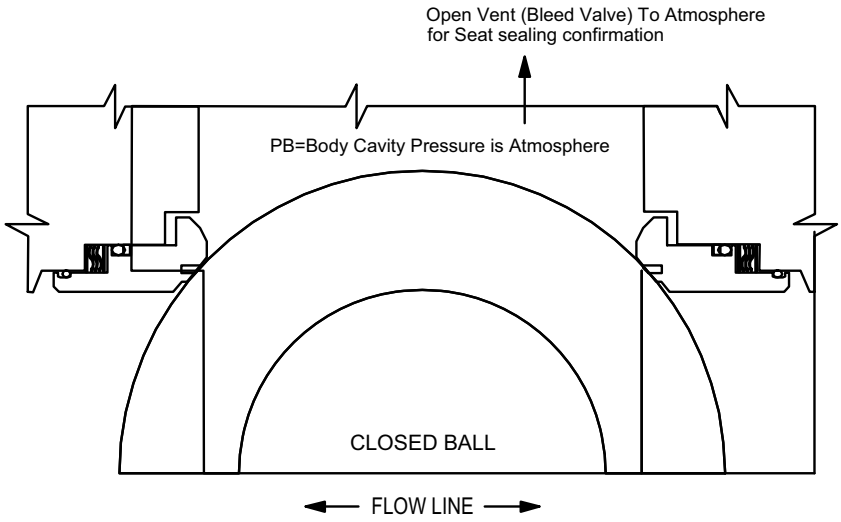
Koso metal seated Ball valves provides Zero seat Leakage

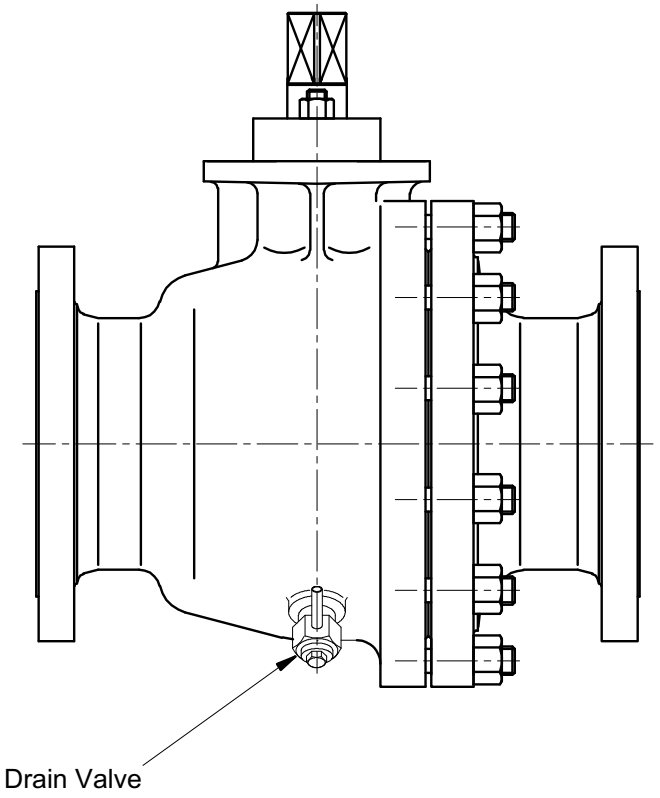




INTEGRAL DOUBLE BLOCK AND BLEED

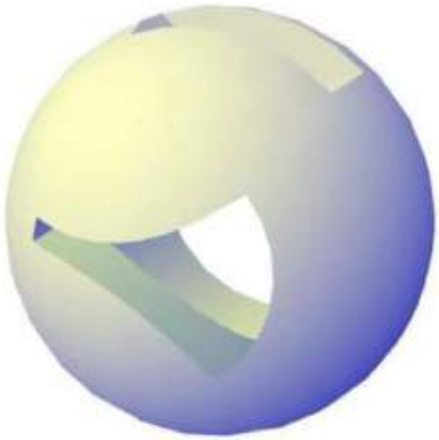
The double block and bleed condition is available up to 14" 600#When the ball is in the closed position the body cavity pressure may be drained down to zero' by opening the bleed valve and draining the fluid by removing the drain plug. Each seat works independently assuring tight shutoff seal against ball on the upstream and downstream side.



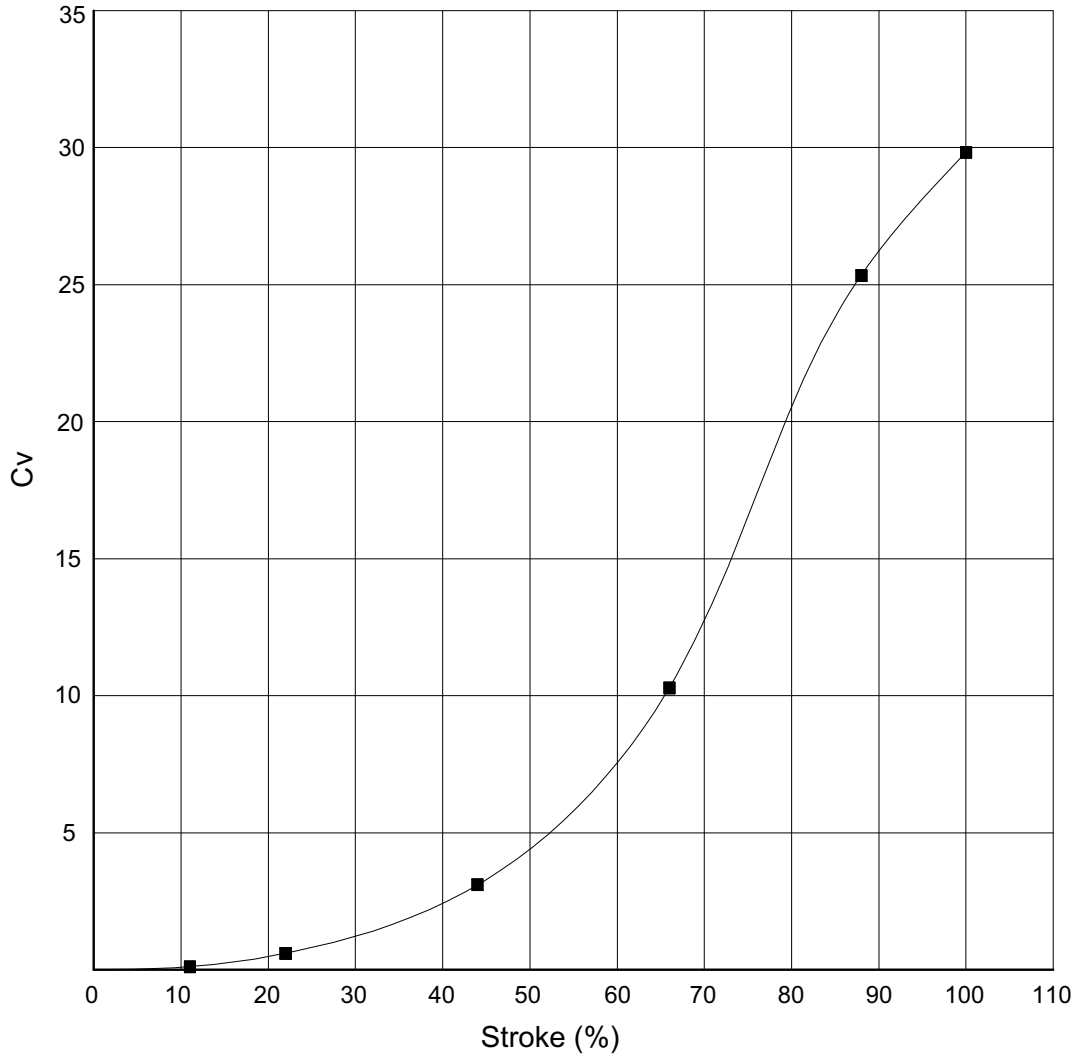


V-TYPE BALL (EQUAL %) Up to 12" 300

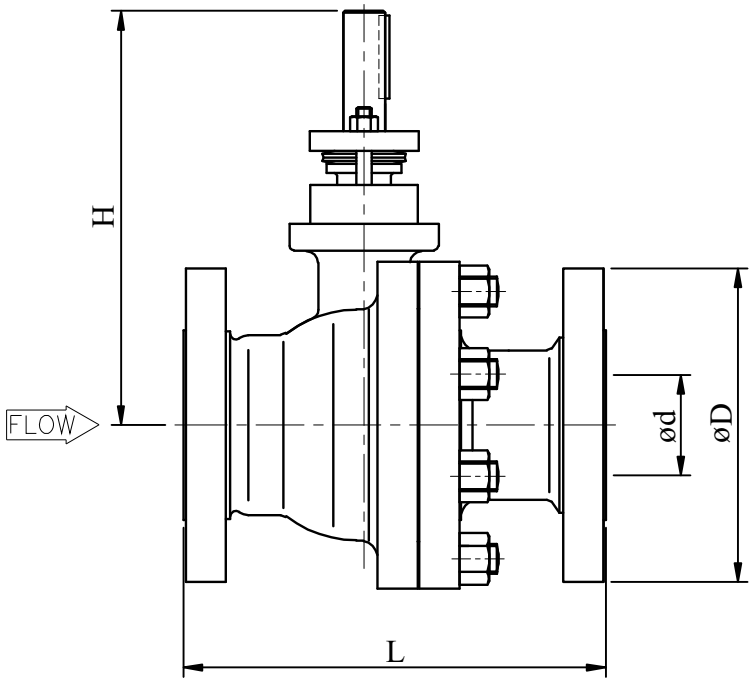
The profile of the V-ball determines the flow characteristic of the valve and can be changed to suit the application. 10º, 30º, 60º and 90º V-balls are the most commonly used, but several other profiles are readily available. The Linear-V is a slot in the ball that can be machined for precise flow requirements. The Filler-V is used when you need maximum flow for filling followed by precise flow to accurately control the levels. The High Turndown-V maximizes flow in the open position, and provides fine flow control when the valve is partially closed. The transition between high flow and fine control with the Vari-V is extremely smooth.



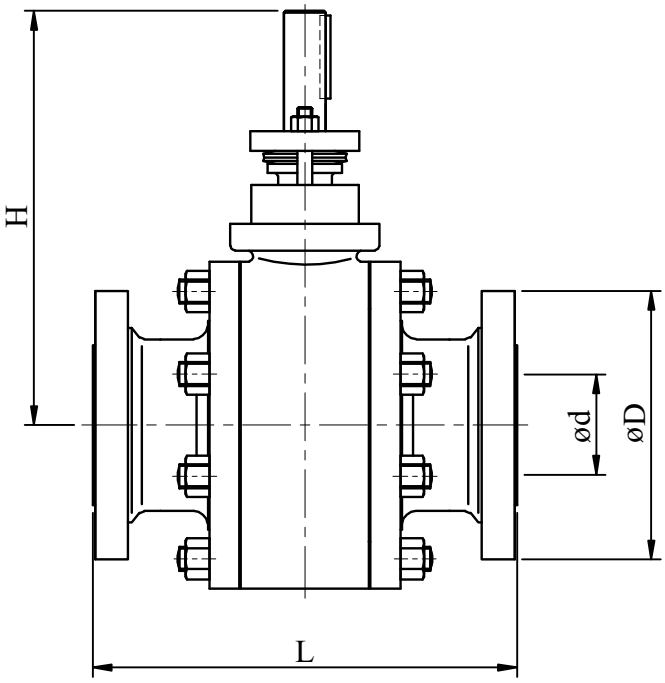
CHARACTERISTIC CURVE OF BALL VALVE



DIMENSIONAL DETAILS



2 Piece construction



3 Piece construction

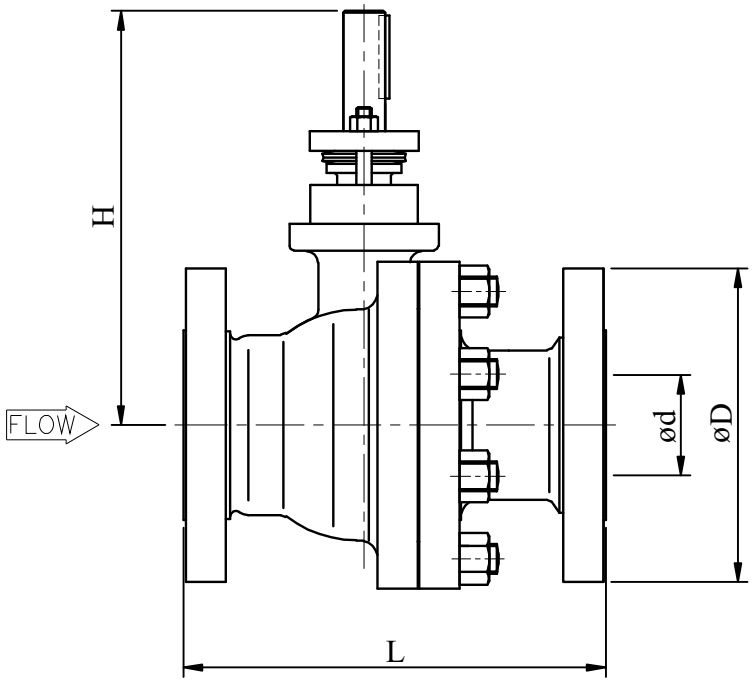
Size	ANSI 150#				
	L	H	Ød	ØD	Wt.(kg)
3/4B	117	150	20	100	5.5
1B	127	155	25	110	7
1.5B	165	202	38	125	12.5
2B	178	216	49	150	15
2.5B	191	300	62	180	20
3B	203	259	74	190	32
4B	229	340	100	230	50
6B	394	575	150	280	180
8B	457	590	201	345	260
10B	533	698	252	405	390
12B	610	775	303	485	650
14B	686	830	334	535	800
16B	762	780	385	595	1000
18B	864	800	436	635	1100
20B	914	908	487	700	1200
22B	-	-	538	-	-
24B	1067	890	589	815	2900
26B	1143	-	633	870	-
28B	1245	-	684	925	-
30B	1295	1270	735	985	-
36B	1524	1380	874	1170	-
42B	-	-	1020	1345	-

Size	ANSI 300#				
	L	H	Ød	ØD	Wt.(kg)
3/4B	152	153	20	115	8
1B	165	175	25	125	10
1.5B	190	222	38	155	17
2B	216	225	49	165	18.5
2.5B	241	300	62	190	30
3B	283	319	74	210	45
4B	305	385	100	255	87
6B	457	575	150	320	215
8B	502	590	201	380	285
10B	268	690	252	445	475
12B	648	775	303	520	720
14B	762	830	334	585	935
16B	838	780	385	650	1400
18B	914	800	436	710	1350
20B	991	933	487	775	1750
22B	1092	-	538	-	-
24B	1143	1145	589	915	3800
26B	1245	-	633	970	-
28B	1346	-	684	1035	-
30B	1397	1270	735	1090	6300
36B	1727	1380	874	1270	9700
42B	-	-	1020	1209	-

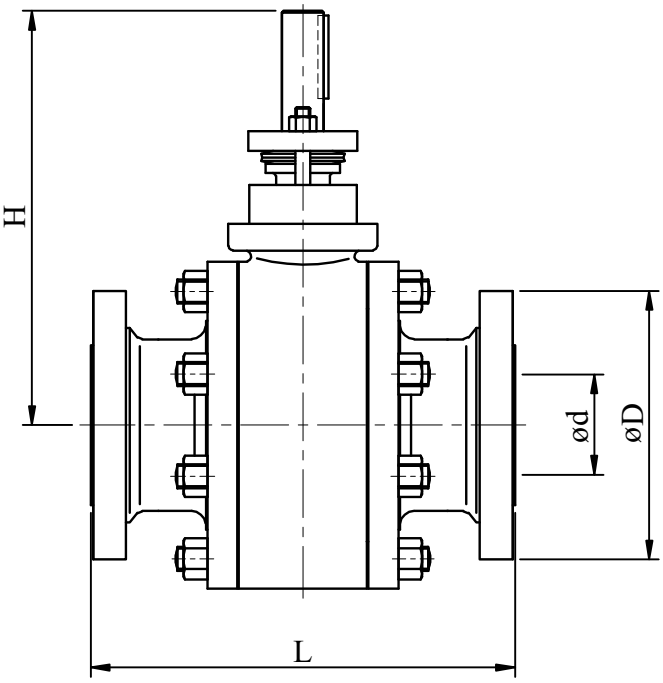
Size	ANSI 600#				
	L	H	Ød	ØD	Wt.(kg)
3/4B	190	188	20	115	10
1B	216	182	25	125	11.5
1.5B	241	225	38	155	21
2B	292	293	49	165	30
2.5B	330	310	62	190	45
3B	356	337	74	210	61
4B	432	380	100	275	138
6B	559	570	150	355	275
8B	660	675	201	420	460
10B	787	760	252	510	772
12B	838	830	303	560	995
14B	889	850	334	605	1325
16B	991	741	385	685	2470
18B	1092	-	436	745	-
20B	1194	-	487	815	-
22B	1295	-	538	-	-
24B	1397	-	589	940	-
26B	1448	-	633	1015	-
28B	1549	-	684	1075	-
30B	1651	-	735	1130	-
36B	2083	-	874	1315	-
42B	-	-	1020	1405	-

ANSI 4500# Available upon request.

DIMENSIONAL DETAILS



2 Piece construction



3 Piece construction

Size	ANSI 900#				
	L	H	Ød	ØD	Wt.(kg)
3/4B	229	155	19	130	18
1B	254	160	25	150	29
1.5B	305	200	38	180	44
2B	368	251	49	215	72
2.5B	419	290	62	245	79
3B	381	330	74	240	86
4B	457	390	100	290	240
6B	610	520	150	380	525
8B	737	635	201	470	1100
10B	838	670	252	545	1750
12B	965	790	303	610	2300
14B	1029	895	322	640	2900
16B	1130	950	373	705	3300
18B	1219	1200	423	785	3720
20B	1321	1350	471	855	4500
22B	-	-	522	-	-
24B	1549	1500	570	1040	-
26B	1651	-	617	1085	-
28B	-	-	665	1170	-
30B	1880	-	712	1230	-
36B	2286	-	855	1460	-
42B	-	-	1006	1560	-

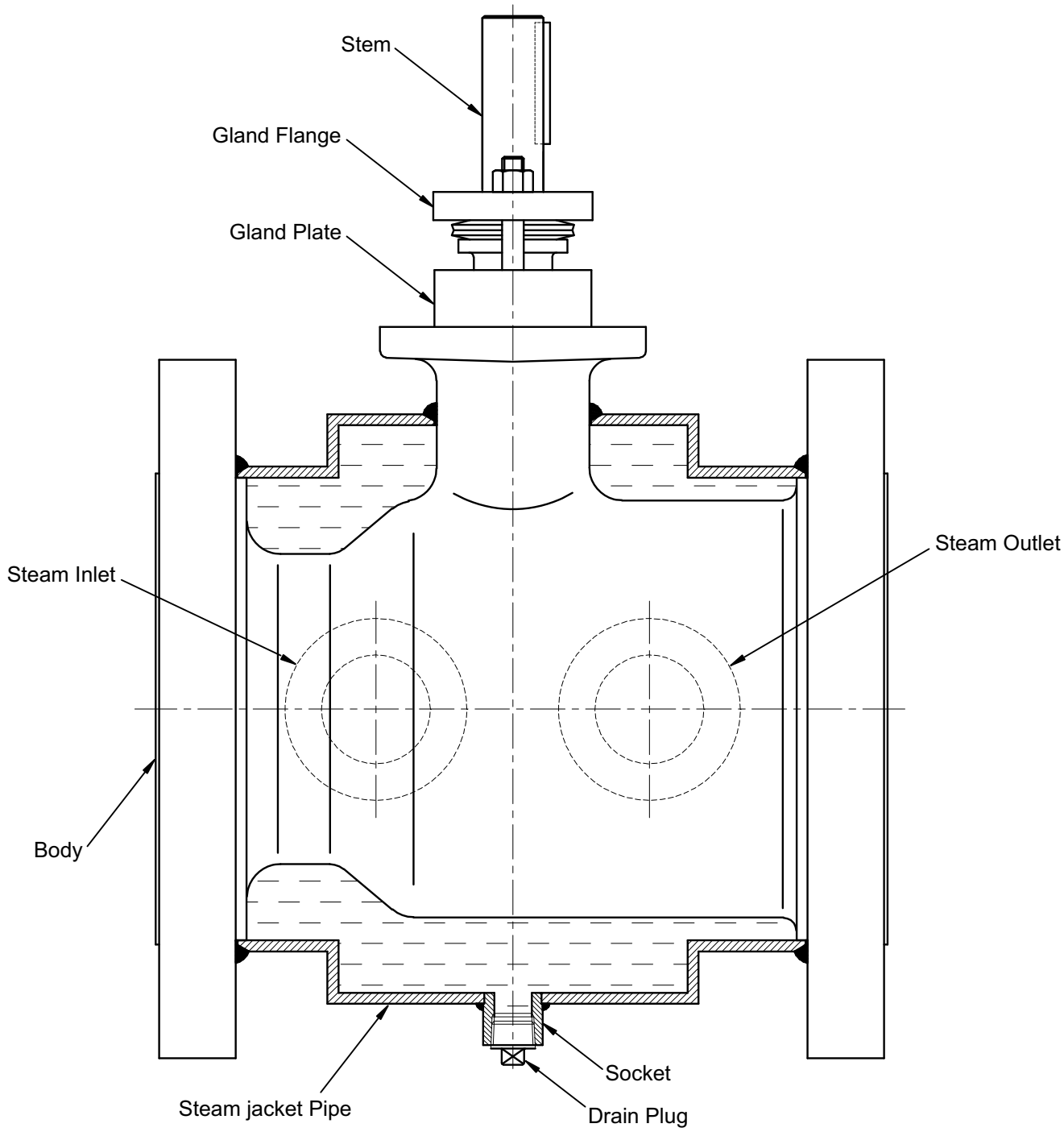
Size	ANSI 1500#				
	L	H	Ød	ØD	Wt.(kg)
3/4B	216	162	19	130	30
1B	254	306	25	150	35
1.5B	330	220	38	180	55
2B	368	257	49	215	75
2.5B	419	330	62	245	90
3B	470	410	74	265	170
4B	546	495	100	310	290
6B	705	530	144	395	640
8B	832	620	192	485	1050
10B	991	850	239	585	1730
12B	1130	1000	287	675	2800
14B	1257	1150	315	750	3600
16B	1384	1300	360	825	4800
18B	1537	1550	406	915	6200
20B	1664	1700	454	985	8000
22B	-	-	500	-	-
24B	-	-	546	1170	-
26B	1943	-	594	-	-
28B	-	-	665	-	-
30B	-	-	686	-	-
36B	-	-	819	-	-
42B	-	-	-	-	-

Size	ANSI 2500#				
	L	H	Ød	ØD	Wt.(kg)
3/4B	229	175	19	140	34
1B	254	190	25	160	45
1.5B	305	210	38	205	68
2B	451	250	42	235	105
2.5B	508	320	52	265	160
3B	578	365	62	305	205
4B	673	410	87	355	400
6B	914	660	131	485	960
8B	1022	845	179	550	1920
10B	1270	990	223	675	2300
12B	1422	1200	265	760	2700
14B	-	-	292	-	-
16B	-	-	333	-	-
18B	-	-	374	-	-
20B	-	-	419	-	-
22B	-	-	-	-	-
24B	-	-	-	-	-
26B	-	-	-	-	-
28B	-	-	-	-	-
30B	-	-	-	-	-
36B	-	-	-	-	-
42B	-	-	-	-	-

ANSI 4500# Available upon request.

- On application

FULLY JACKETED BALL VALVES (Up to 12" 300#)

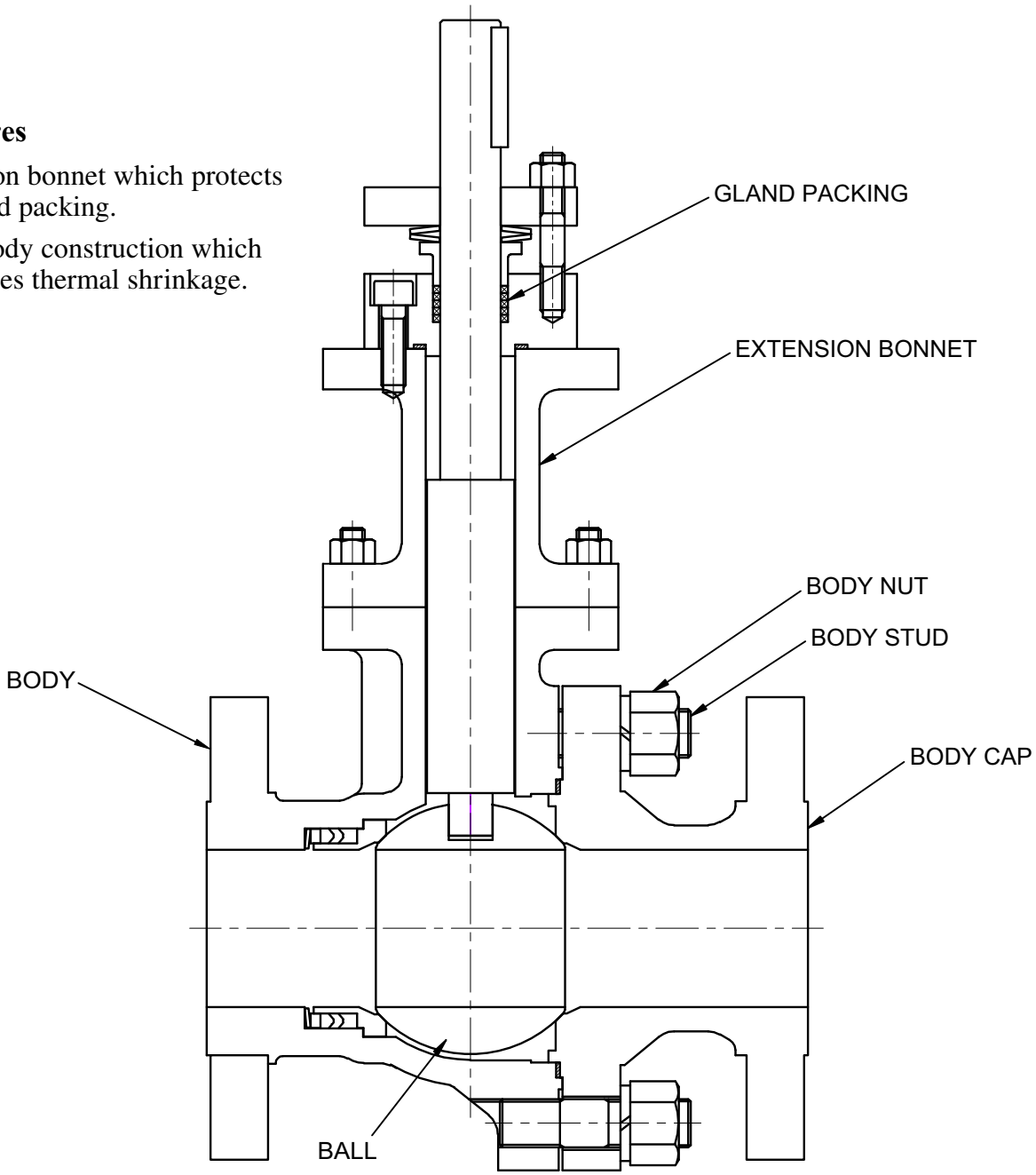


For Low temperature and Cryogenic Appication (Up to 12" 600#)

Temperature Range : -50 C to -196 C

Key Features

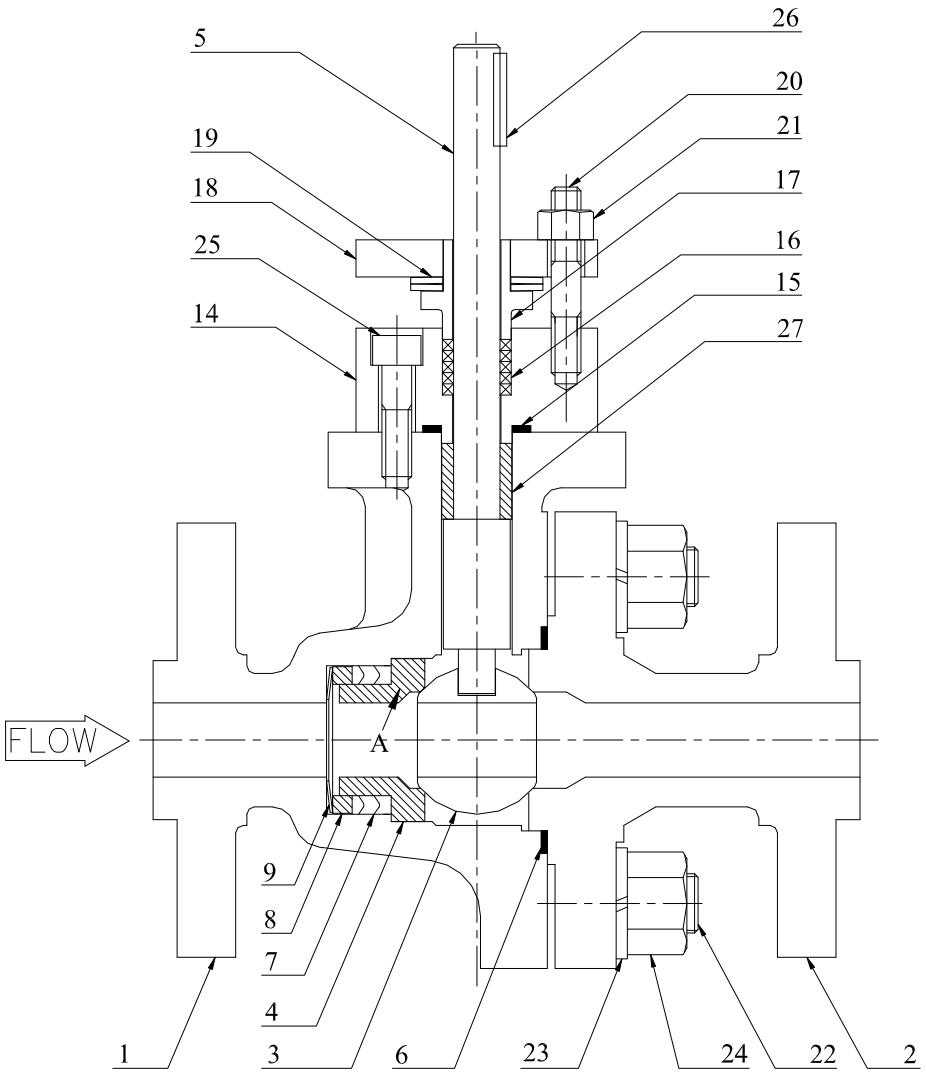
- Extension bonnet which protects the gland packing.
- Rigid body construction which minimizes thermal shrinkage.



MATERIAL OF CONSTRUCTION

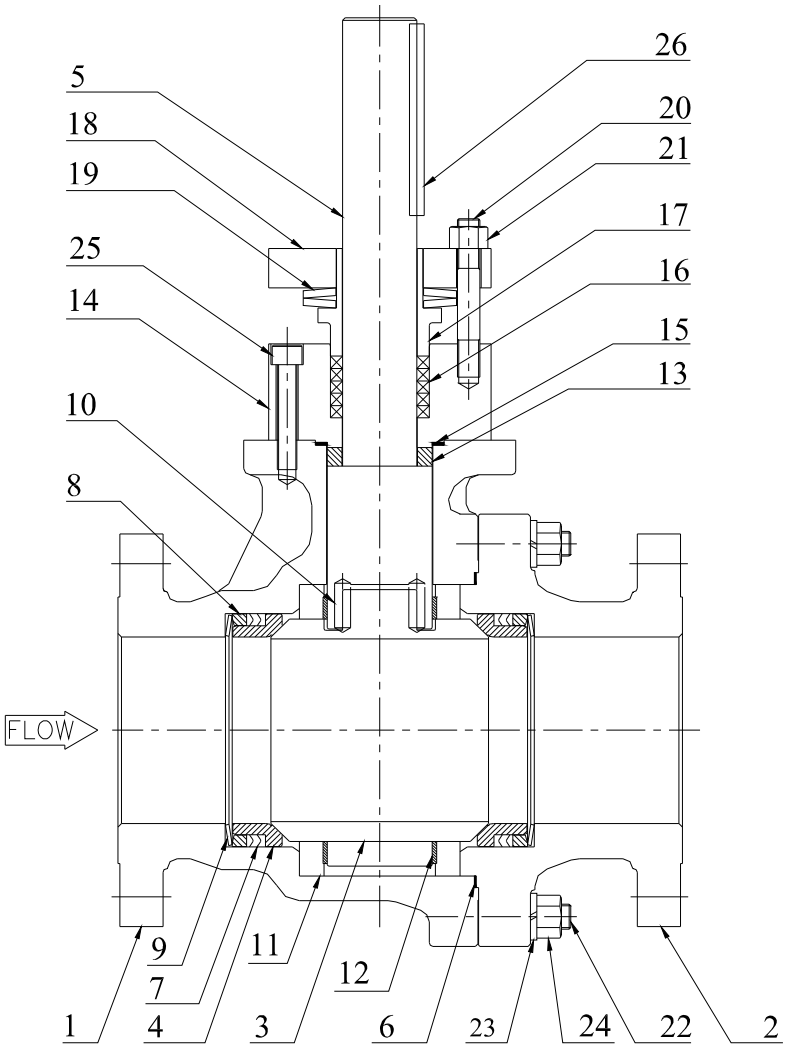
No.	Description	Material
1	Body	A351 CF8/LCB
2	Body Cap	A351 CF8/LCB
3	Ball	A351 CF8
4	Extension Bonnet	A351 CF8/LCB
5	Gland Packing	PCTFE (Kel-F)
6	Body Stud	A 320 Gr.L7M
7	Body Nut	A 194 Gr.7M

Internal Structure and Parts List



Metal Seated Ball Valve Floating Type (Up to 3 inch)

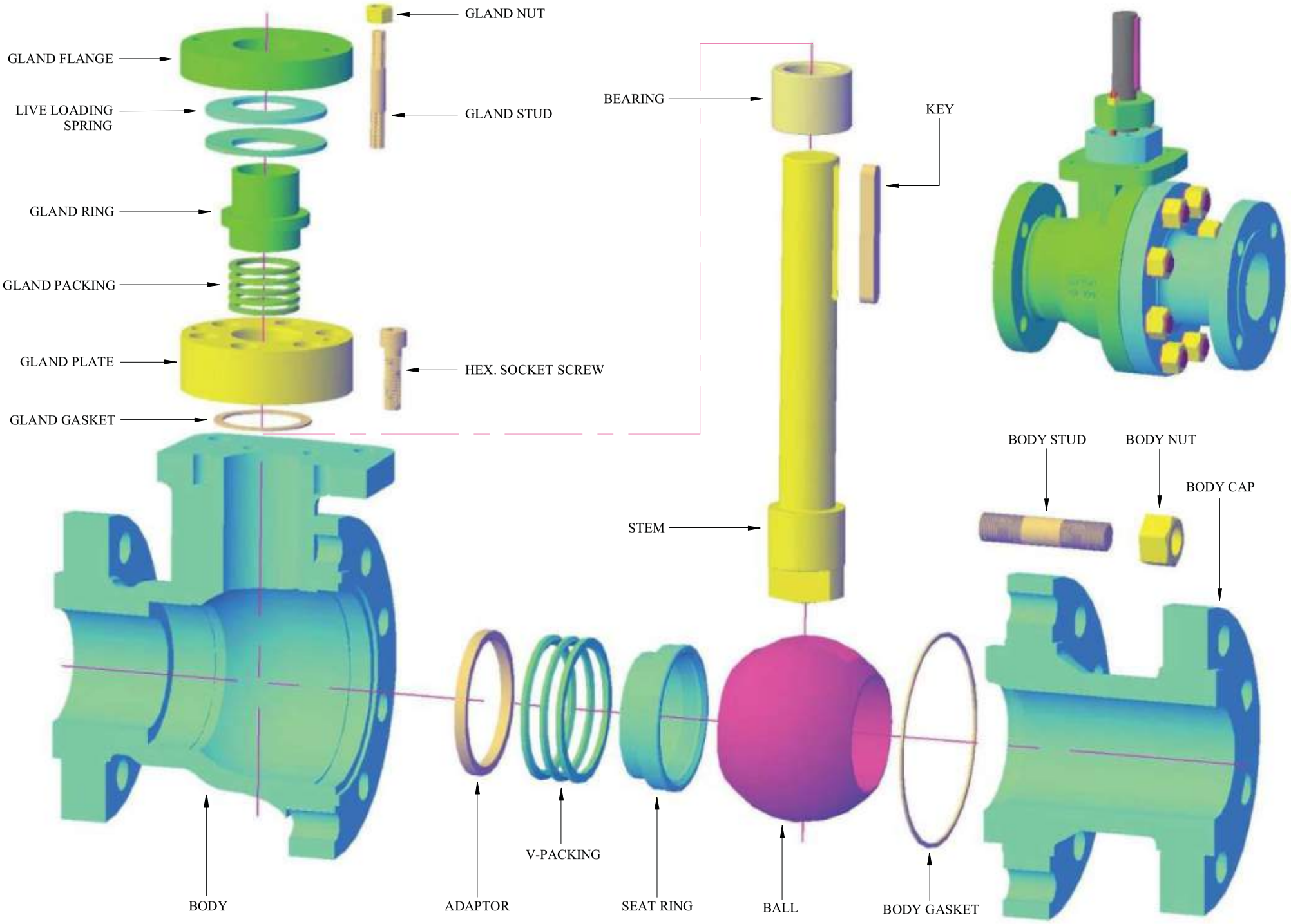
No.	Description	Material	No.	Description	Material
1	Body	A216 WCB/A351 CF8M	17	Gland Ring	SS 316
2	Body Cap	A216 WCB/A351 CF8M	18	Gland Flange	SS 304
3	Ball	SS 316	19	Live Load Spring	Inconel 718
4	Seat Ring	SS316+Coating	20	Gland Stud	SS 304
5	Stem	17-4 PH	21	Gland Nut	SS 304
6	Body Gasket	T1806GR	22	Body Stud	A 193 Gr.B7/SS 316
7	V-Packing	Grafoil+SS	23	Spring Washer	Spring Steel/SS 304
8	Back Ring	SS 316	24	Body Nut	A 194 Gr.2H/SS 316
9	Belleville Spring	Inconel 718	25	Hex. S ocket Screw	A 193 Gr.B7/SS 316
14	Gland Plate	SS 316	26	Key	17-4 PH
15	Gland Gasket	T1806GR	27	Bearing	Nitronic 60
16	Gland Packing	P6315CL			



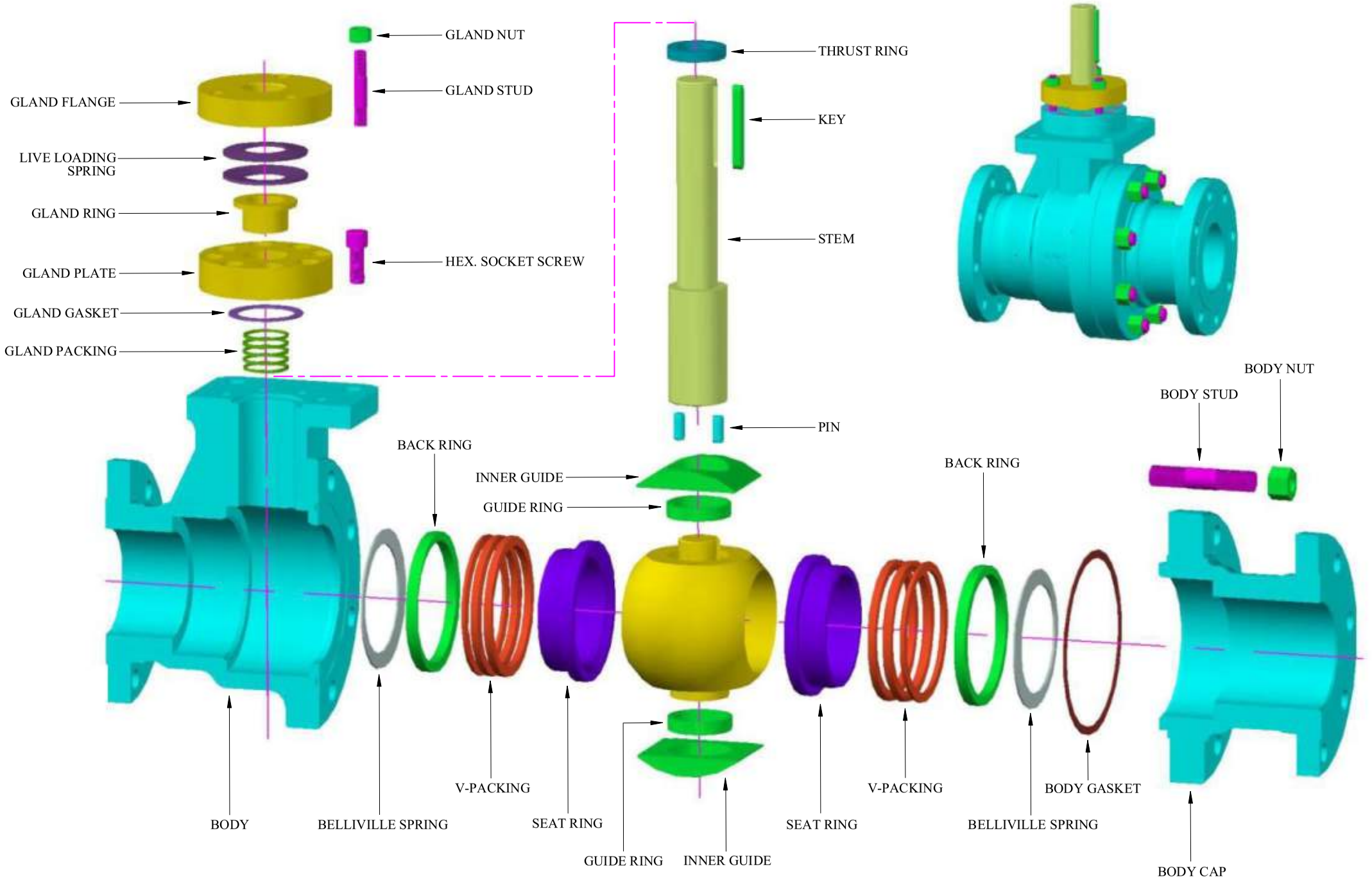
Metal Seated Ball Valve **Trunnion Type** (4 Inch and above)

No.	Description	Material	No.	Description	Material
1	Body	A216 WCB/A351 CF8M	14	Gland Plate	SS 316
2	Body Cap	A216 WCB/A351 CF8M	15	Gland Gasket	T1806GR
3	Ball	A351 CF8M	16	Gland Packing	P6315CL
4	Seat Ring	SS316+Coating	17	Gland Ring	SS 316
5	Stem	17-4 PH	18	Gland Flange	SS 304
6	Body Gasket	T1806GR	19	Live Load Spring	Inconel 718
7	V-Packing	Grafoil+SS	20	Gland Stud	A 193 Gr.B7/SS 316
8	Back Ring	SS 316	21	Gland Nut	A 194 Gr.2H/SS 316
9	Belleville Spring	Inconel 718	22	Body Stud	A 193 Gr.B7/SS 316
10	Stem Pin	17-4 PH	23	Spring Washer	Spring Steel/SS 304
11	Inner Guide	SS 316+Stellite	24	Body Nut	A 194 Gr.2H/SS 316
12	Guide Ring	SS 316+Stellite	25	Hex. S ocket Screw	A 193 Gr.B7/SS 316
13	Thrust Ring	SS 316+Stellite	26	Key	17-4 PH

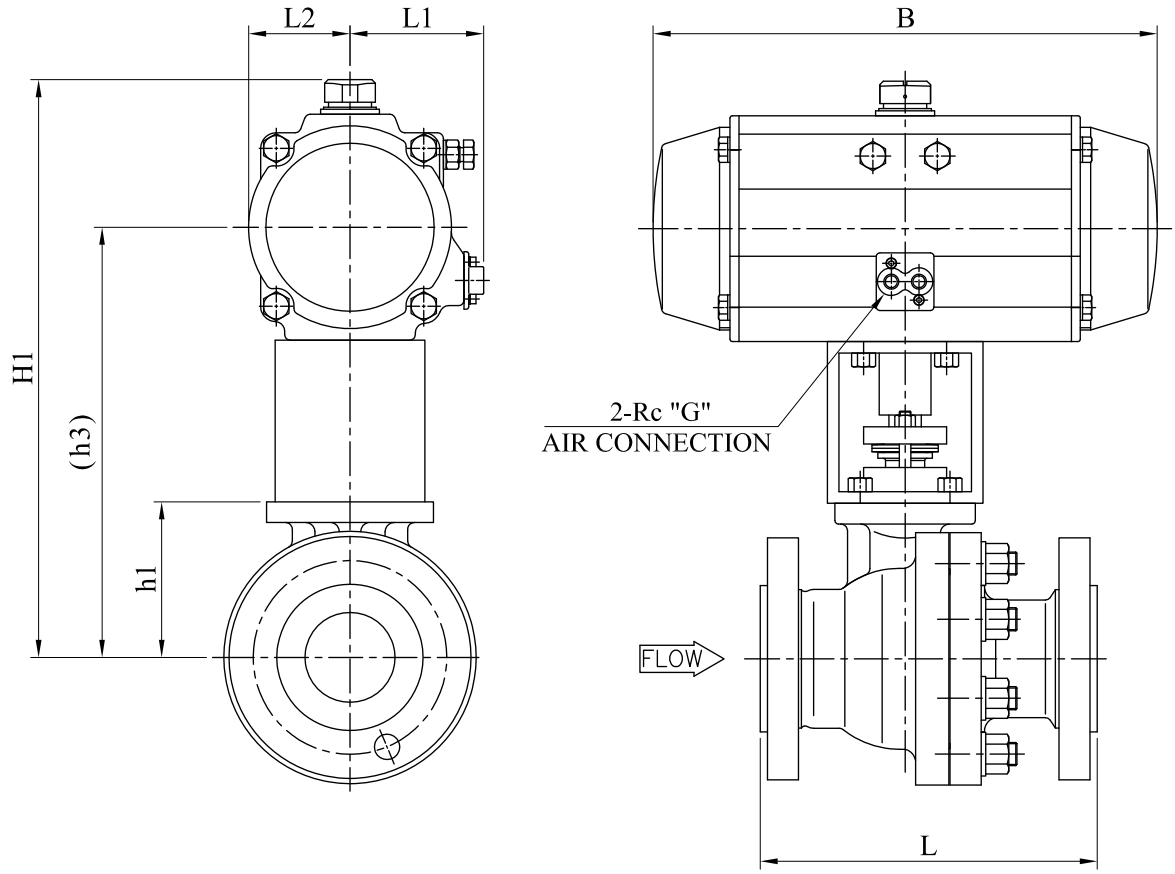
METAL SEATED BALL VALVE (FLOATING TYPE)



METAL SEATED BALL VALVE (TRUNNION TYPE)



BALL- VALVE 300W Double acting cylinder



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	ACTUATOR					
								CYL. SIZE	B	L1	L2	G	CODE NO.
1	3/4"	150#,300#	JIS 10K,20K	152	83	100	155	AT51	140	41	29	1/4	63C0RB
2					83	110	170	AT101	160	65	36	1/4	63C1RB
3					83	115	185	AT201	215	70	43	1/4	63C2RB
4		600#	JIS 40K	190	83	235	300	AT101	160	65	36	1/4	63C1RB
5					83	245	315	AT201	215	70	43	1/4	63C2RB
6					83	250	330	AT251	250	75	50	1/4	63CARB
7					83	235	320	AT301	270	85	56	1/4	63C3RB
8	1"	150#,300#	JIS 10K,20K	165	80	225	285	AT101	160	65	36	1/4	63C1RB
9					80	230	300	AT201	215	70	43	1/4	63C2RB
10					80	240	315	AT251	250	75	50	1/4	63CARB
11		600#	JIS 40K	216	85	240	310	AT201	215	70	43	1/4	63C2RB
12					85	245	320	AT251	250	75	50	1/4	63CARB
13					85	250	335	AT301	270	85	56	1/4	63C3RB
14					85	260	360	AT351	315	95	64	1/4	63CBRB
15	1.5"	150#,300#	JIS 10K,20K	190	95	255	335	AT251	250	75	50	1/4	63CARB
16					95	260	345	AT301	270	85	56	1/4	63C3RB

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

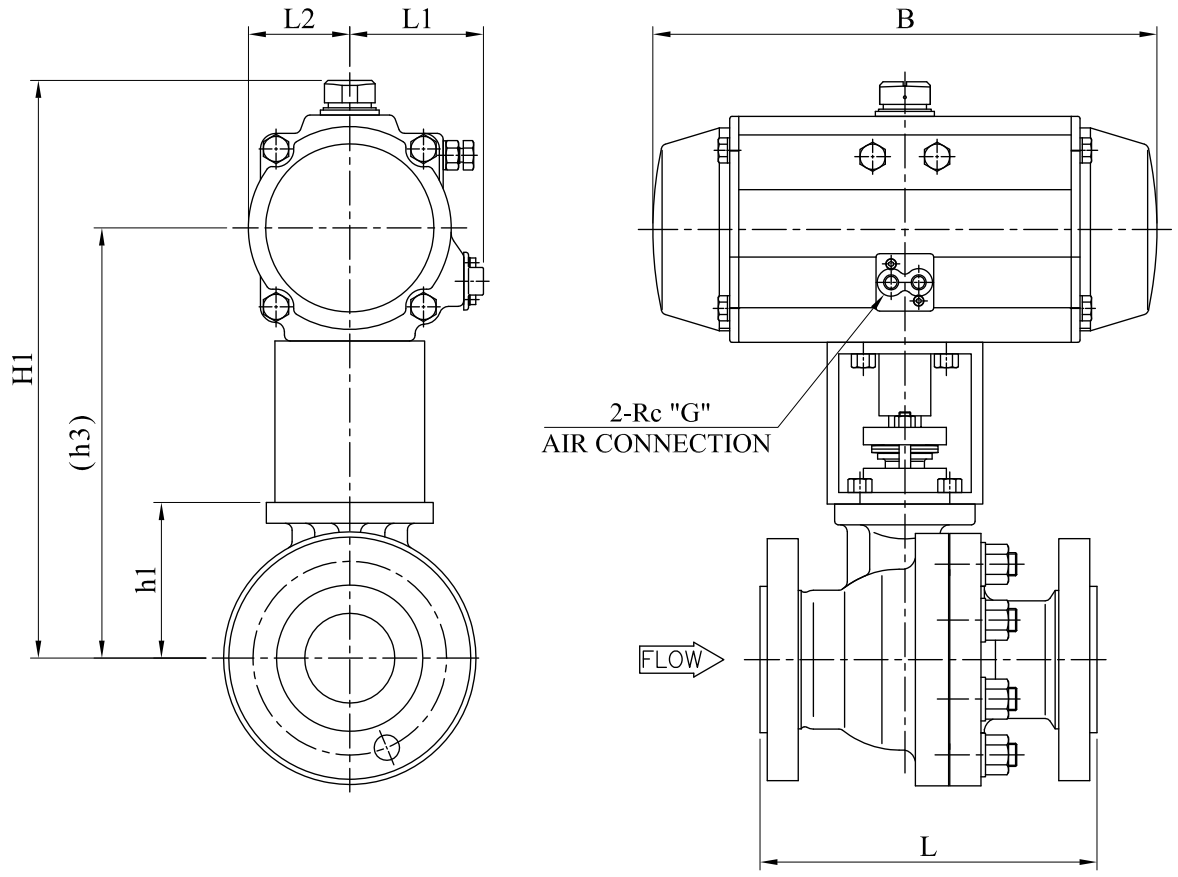
DRAWING No.

REV.

A

KOSO

BALL- VALVE 300W Double acting cylinder



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	ACTUATOR					
								CYL. SIZE	B	L1	L2	G	CODE NO.
17	1.5"	150#,300#	JIS 10K,20K	190	95	270	375	AT351	315	95	64	1/4	63CBRB
18					95	275	385	AT401	345	100	70	1/4	63C4RB
19		600#	JIS 40K	241	105	300	385	AT301	270	85	56	1/4	63C3RB
20					105	310	410	AT351	315	95	64	1/4	63CBRB
21					105	315	425	AT401	345	100	70	1/4	63C4RB
22					105	325	445	AT451	410	110	80	1/4	63CCRB
23					105	335	460	AT501	440	120	88	1/4	63C5RB
24	2"	150#,300#	JIS 10K,20K	216	100	295	400	AT351	315	95	64	1/4	63CBRB
25					100	300	410	AT401	345	100	70	1/4	63C4RB
26					100	310	430	AT451	410	110	80	1/4	63CCRB
27					100	320	450	AT501	440	120	88	1/4	63C5RB
28		600#	JIS 40K	292	120	385	495	AT401	345	100	70	1/4	63C4RB
29					120	405	525	AT451	410	110	80	1/4	63CCRB
30					120	410	540	AT501	440	120	88	1/4	63C5RB
31					120	370	530	AT551	490	125	99	1/4	63CDRB

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

DRAWING No.

REV.

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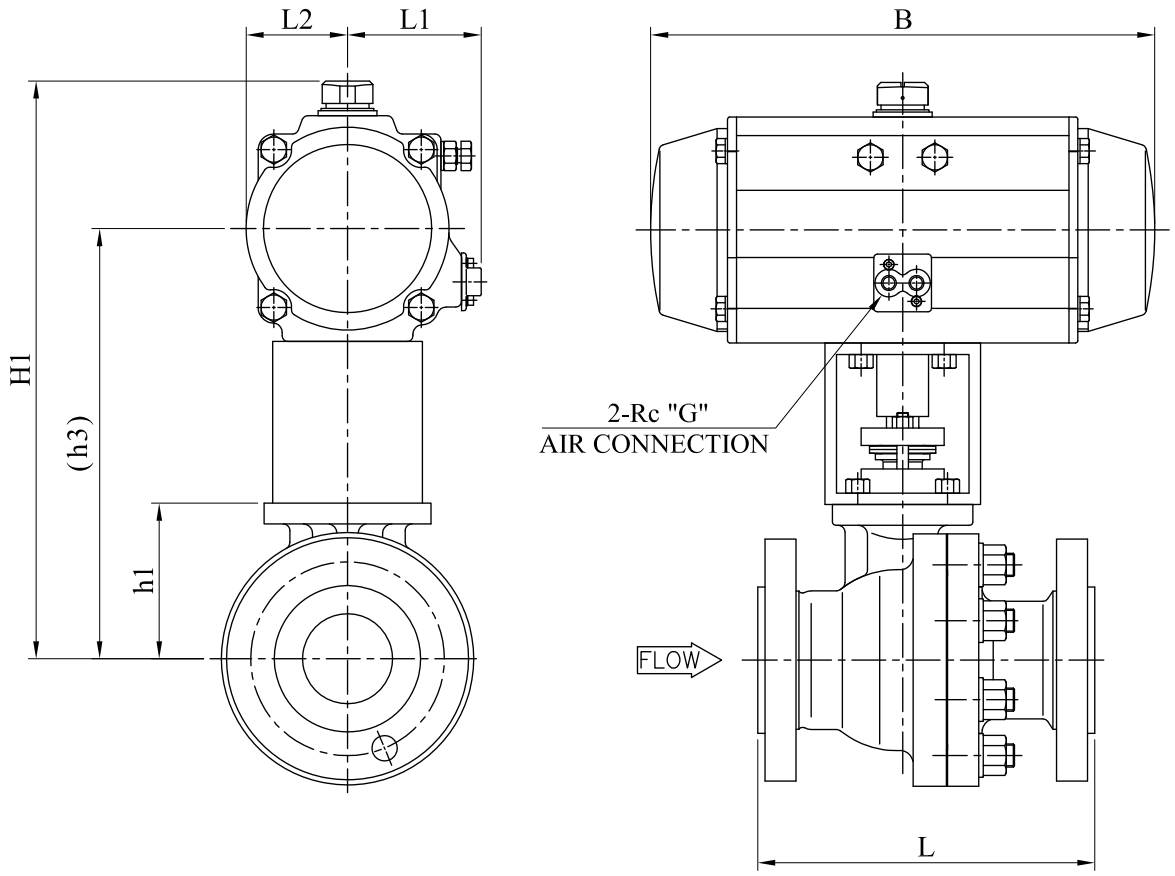
KOSO

BALL- VALVE 300W Double acting cylinder



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	ACTUATOR					
								CYL. SIZE	B	L1	L2	G	CODE NO.
32	2"	600#	JIS 10K,20K	292	120	380	550	AT601	545	130	120	1/4	63C6RB
33	2.5"	150#,300#	JIS 40K	241	135	395	505	AT401	345	100	70	1/4	63C4RB
34					135	400	520	AT451	410	110	80	1/4	63CCRB
35					135	410	540	AT501	440	120	88	1/4	63C5RB
36					135	430	585	AT551	490	125	99	1/4	63CDRB
37					135	435	610	AT601	545	130	120	1/4	63C6RB
38		600#	JIS 40K	330	135	410	540	AT501	440	120	88	1/4	63C5RB
39					135	425	585	AT551	490	125	99	1/4	63CDRB
40					135	435	605	AT601	545	130	120	1/4	63C6RB
41					135	465	660	AT651	625	160	131	3/8	63CERB
42					135	475	690	AT701	730	185	165	1/2	63C7RB
43	3"	150#,300#	JIS 10K,20K	283	135	400	515	AT451	410	110	80	1/4	63CCRB
44					135	405	535	AT501	440	120	88	1/4	63C5RB
45					135	410	570	AT551	490	125	99	1/4	63CDRB
46					135	420	595	AT601	545	130	120	1/4	63C6RB

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

DRAWING No.

REV.

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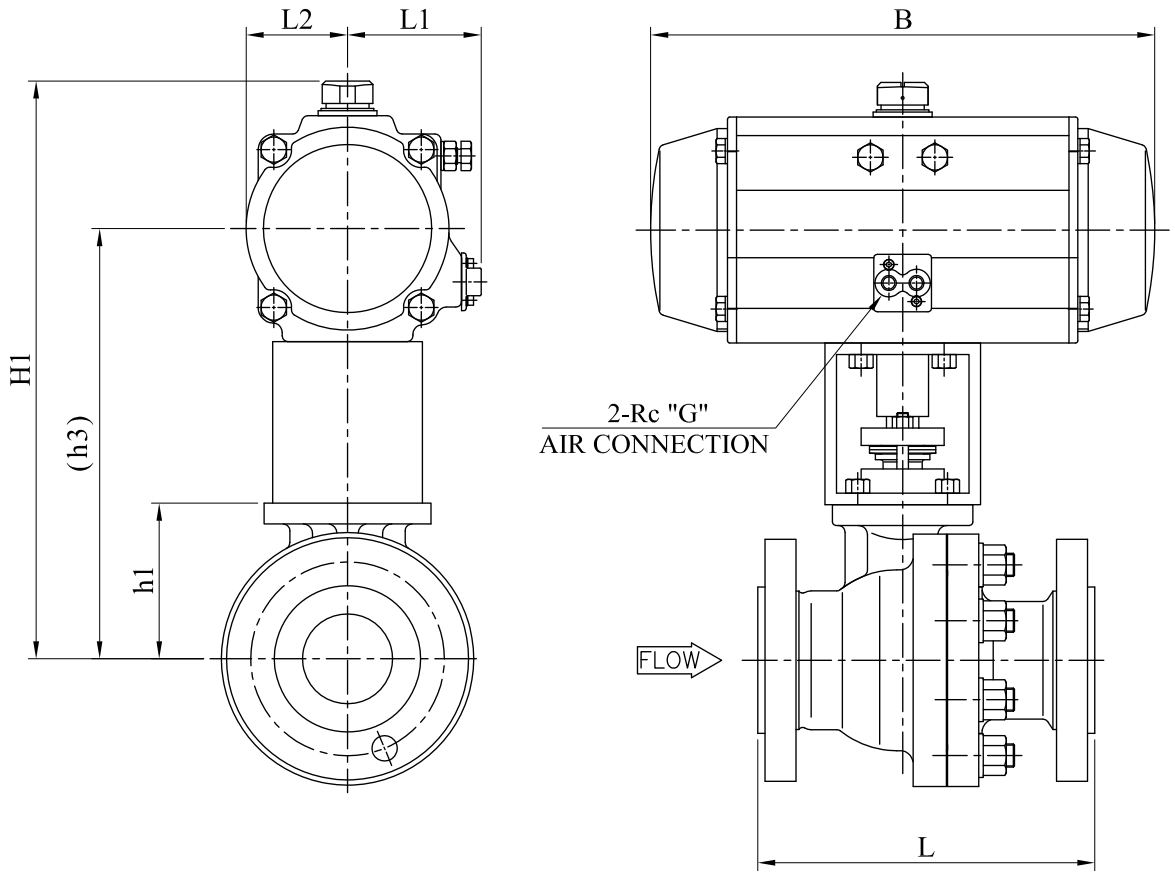
KOSO

BALL- VALVE *300W Double acting cylinder*



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	ACTUATOR					
								CYL. SIZE	B	L1	L2	G	CODE NO.
47	3"	150#,300#	JIS 10K,20K	283	135	420	615	AT651	625	160	131	3/8	63CERB
48		600#	JIS 40K	356	152	490	665	AT601	545	130	120	1/4	63C6RB
49					152	510	710	AT651	625	160	131	3/8	63CERB
50					152	525	740	AT701	730	185	165	1/2	63C7RB
51	4"	150#,300#	JIS 10K,20K	356	180	500	630	AT501	440	120	88	1/4	63C5RB
52					180	510	670	AT551	490	125	99	1/4	63CDRB
53					180	520	690	AT601	545	130	120	1/4	63C6RB
54					180	545	740	AT651	625	160	131	3/8	63CERB
55					180	555	710	AT701	730	185	165	1/2	63C7RB
56		600#	JIS 40K	432	190	550	720	AT601	545	130	120	1/4	63C6RB
57					190	580	775	AT651	625	160	131	3/8	63CERB
58					190	590	805	AT701	730	185	165	1/2	63C7RB
59	6"	150#,300#	JIS 10K,20K	457	235	765	965	AT651	625	160	131	3/8	63CERB
60					235	780	995	AT701	730	185	165	1/2	63C7RB
61	8"	150#,300#	JIS 10K,20K	502	275	815	1030	AT701	730	185	165	1/2	63C7RB

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

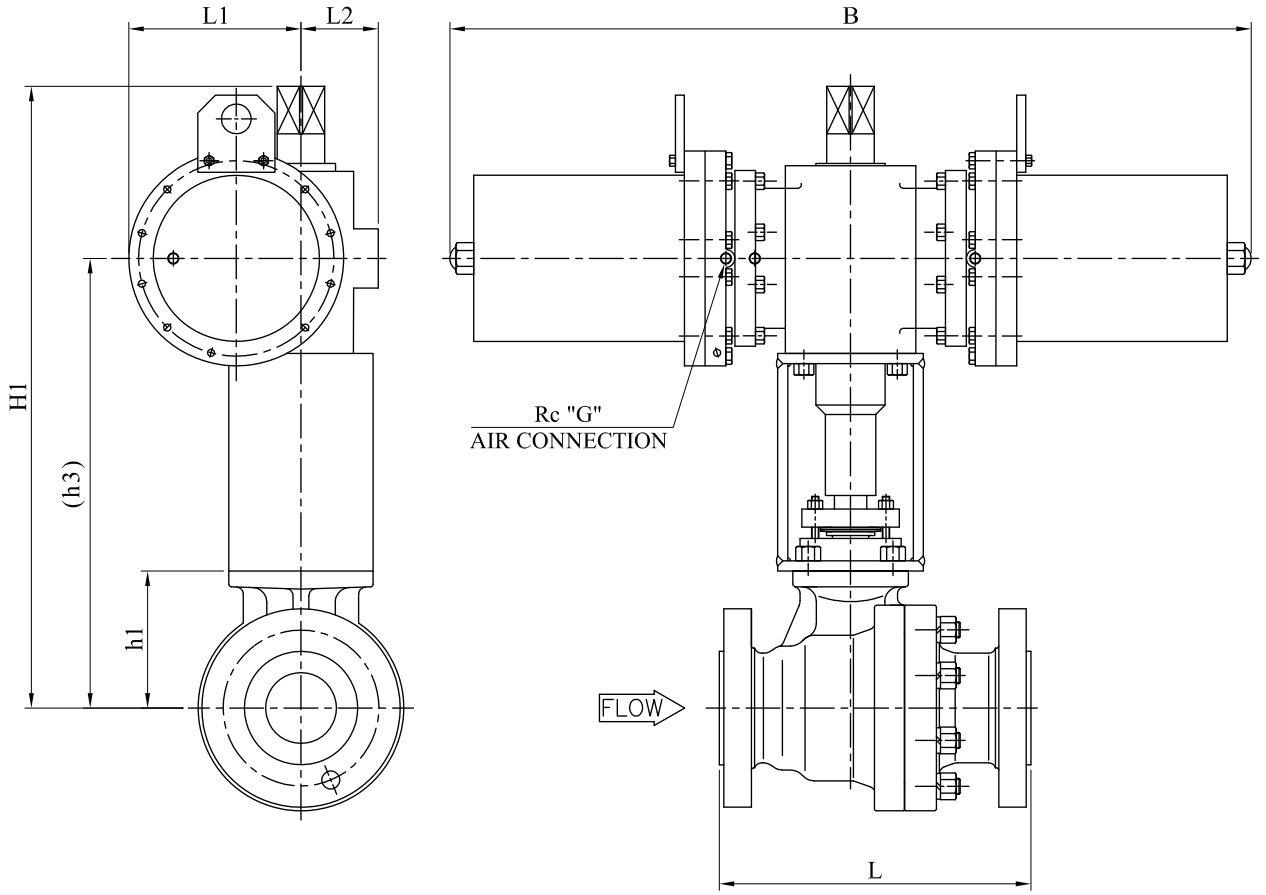
DRAWING No.

REV.

A

KOSO

BALL- VALVE 300W Double acting cylinder



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	ACTUATOR					
								CYL. SIZE	B	L1	L2	G	CODE NO.
1	3"	150#,300#	JIS 10K,20K	283	135	500	710	Ø170	880	135	185	3/8	6517RA
2					135	535	755	Ø200	1110	230	100	1/2	6520RA
3		600#	JIS 40K	356	152	550	755	Ø170	880	135	185	3/8	6517RA
4					152	580	790	Ø200	1110	230	100	1/2	6520RA
5					152	650	925	Ø280	1350	290	130	1/2	6528RA
6	4"	150#,300#	JIS 10K,20K	356	180	590	795	Ø170	880	135	185	3/8	6517RA
7					180	620	840	Ø200	1110	230	100	1/2	6520RA
8		600#	JIS 40K	432	190	625	830	Ø170	880	135	185	3/8	6517RA
9					190	655	865	Ø200	1110	230	100	1/2	6520RA
10					190	725	1000	Ø280	1350	290	130	1/2	6528RA
11	6"	150#,300#	JIS 10K,20K	457	235	810	1030	Ø200	1110	230	100	1/2	6520RA
12					235	880	1170	Ø280	1350	290	130	1/2	6528RA
13		600#	JIS 40K	559	245	865	1140	Ø280	1350	290	130	1/2	6528RA
14	8"	150#,300#	JIS 10K,20K	502	275	905	1195	Ø280	1350	290	130	1/2	6528RA
15		600#	JIS 40K	660	285	970	1245	Ø280	1350	290	130	1/2	6528RA
16	10"	150#,300#	JIS 10K,20K	568	320	1010	1300	Ø280	1350	290	130	1/2	6528RA
17	12"	150#,300#	JIS 10K,20K	648	370	1105	1395	Ø280	1350	290	130	1/2	6528RA

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

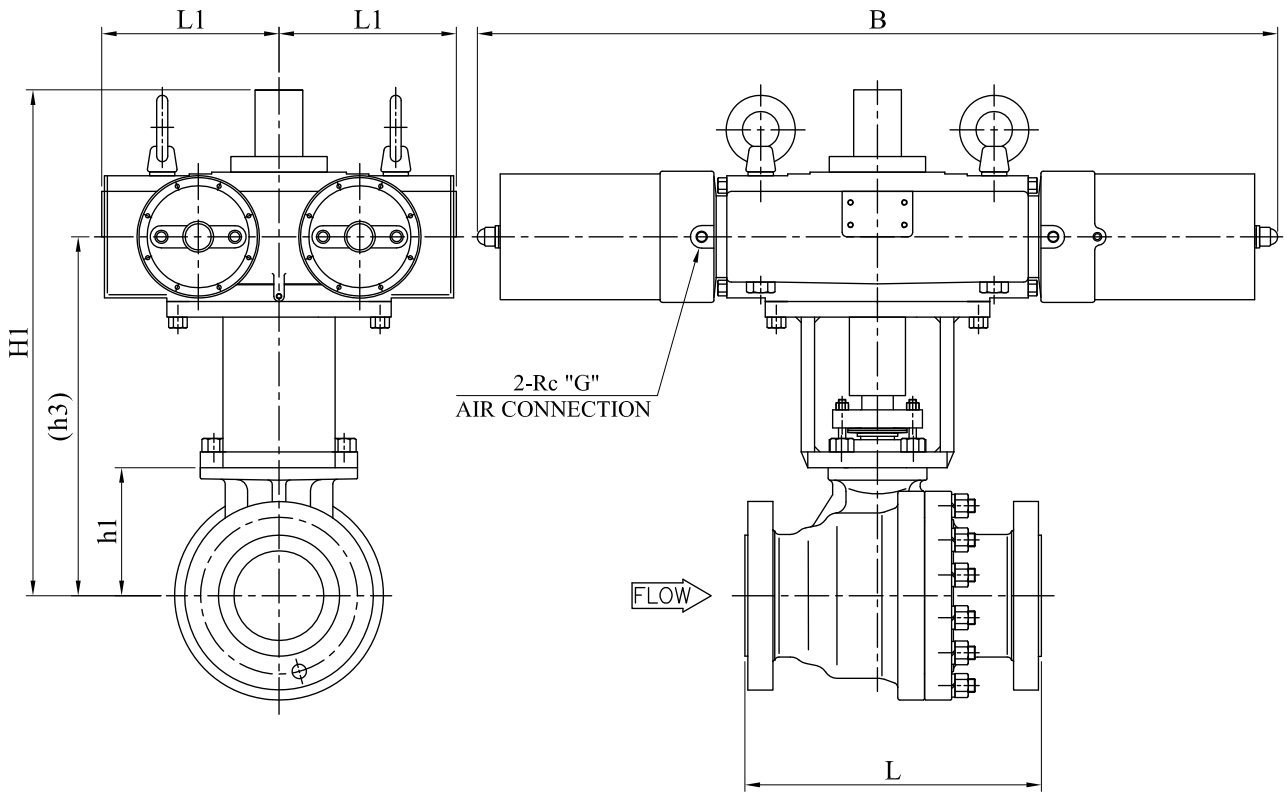
DRAWING No.

REV.

A

KOSO

BALL- VALVE 300W Double acting cylinder



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	ACTUATOR					
								CYL. SIZE	B	L1	L2	G	CODE NO.
1	3"	600#	JIS 40K	356	152	530	835	Ø200	1690	345	345	1/2	6420RB
2	4"	600#	JIS 40K	432	190	580	885	Ø200	1690	345	345	1/2	6420RB
3	6"	150#,300#	JIS 10K,20K	457	235	720	980	Ø200	1690	345	345	1/2	6420RB
4		600#	JIS 40K	559	245	760	1065	Ø200	1690	345	345	1/2	6420RB
5					245	785	1110	Ø280	1980	395	395	1/2	6428RB
6	8"	150#,300#	JIS 10K,20K	502	275	785	1045	Ø200	1690	345	345	1/2	6420RB
7		600#	JIS 40K	660	285	835	1140	Ø200	1690	345	345	1/2	6420RB
8					285	860	1185	Ø280	1980	395	395	1/2	6428RB
9	10"	150#,300#	JIS 10K,20K	568	320	830	1135	Ø200	1690	345	345	1/2	6420RB
10					320	855	1185	Ø280	1980	395	395	1/2	6428RB
11		600#	JIS 40K	787	340	950	1255	Ø200	1690	345	345	1/2	6420RB
12					340	975	1300	Ø280	1980	395	395	1/2	6428RB
13	12"	150#,300#	JIS 10K,20K	648	370	950	1255	Ø200	1690	345	345	1/2	6420RB
14					370	975	1300	Ø280	1980	395	395	1/2	6428RB
15		600#	JIS 40K	838	390	1065	1390	Ø280	1980	395	395	1/2	6428RB

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

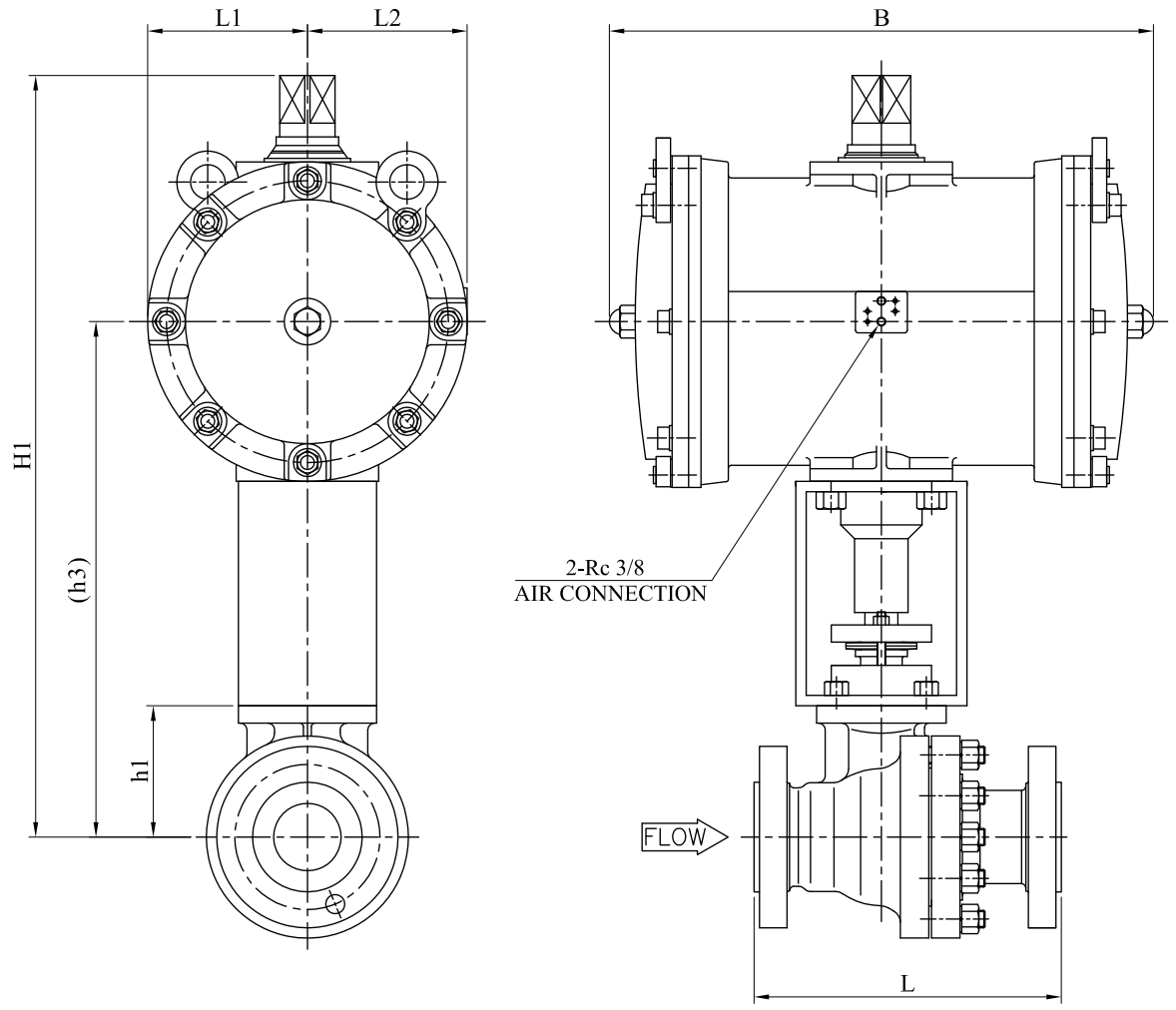
DRAWING No.

REV.

A

KOSO

BALL- VALVE 300W Double acting cylinder



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	ACTUATOR					
								CYL. SIZE	B	L1	L2	G	CODE NO.
1	3"	150#,300#	JIS 10K,20K	283	135	595	880	Ø280	630	185	185	3/8	7328RA
2		600#	JIS 40K	356	152	645	930	Ø280	630	185	185	3/8	7328RA
3					152	730	1095	Ø375	815	240	240	3/8	7337RA
4	4"	150#,300#	JIS 10K,20K	356	180	685	970	Ø280	630	185	185	3/8	7328RA
5		600#	JIS 40K	432	190	720	1005	Ø280	630	185	185	3/8	7328RA
6					190	805	1170	Ø375	815	240	240	3/8	7337RA
7	6"	150#,300#	JIS 10K,20K	457	235	875	1160	Ø280	630	185	185	3/8	7328RA
8					235	960	1330	Ø375	815	240	240	3/8	7337RA
9		600#	JIS 40K	559	245	860	1145	Ø280	630	185	185	3/8	7328RA
10					245	940	1310	Ø375	815	240	240	3/8	7337RA
11	8"	150#,300#	JIS 10K,20K	502	275	910	1195	Ø280	630	185	185	3/8	7328RA
12					275	985	1350	Ø375	815	240	240	3/8	7337RA
13		600#	JIS 40K	660	285	1045	1415	Ø375	815	240	240	3/8	7337RA
14	10"	150#,300#	JIS 10K,20K	568	320	1085	1455	Ø375	815	240	240	3/8	7337RA
15	12"	150#,300#	JIS 10K,20K	648	370	1180	1550	Ø375	815	240	240	3/8	7337RA

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

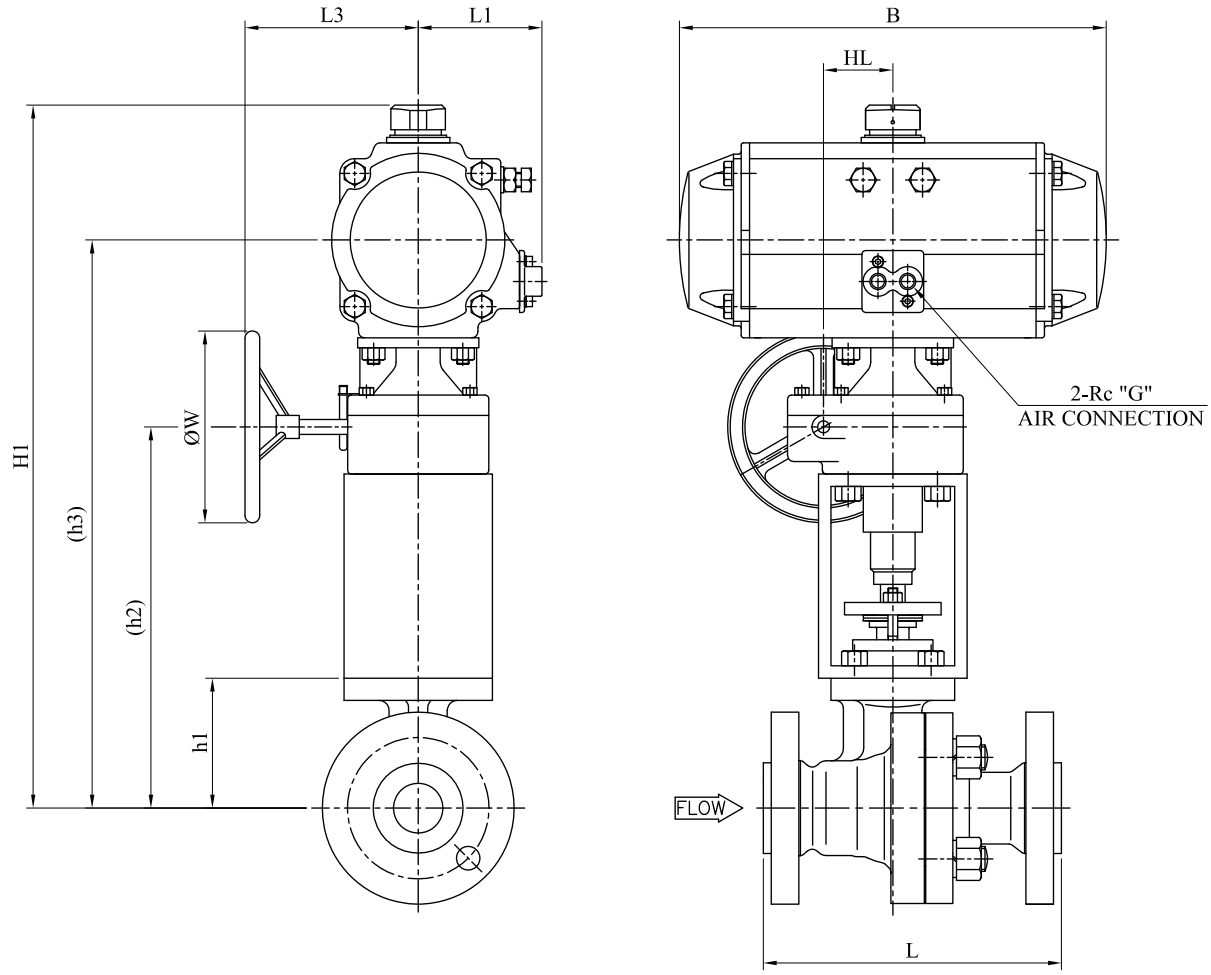
DRAWING No.

REV.

A

KOSO

BALL- VALVE *300W Double acting cylinder with Hand wheel*



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h2	h3	H1	ACTUATOR							
									CYL. SIZE	B	L1	L3	HL	W	G	CODE NO.
1	3/4"	150#,300#	JIS 10K,20K	152	75	280	410	470	AT101	160	65	140	56	155	1/4	63C1RB
2					75	280	415	490	AT201	215	70	140	56	155	1/4	63C2RB
3		600#	JIS 40K	190	83	300	430	495	AT101	160	65	140	56	155	1/4	63C1RB
4					83	300	440	510	AT201	215	70	140	56	155	1/4	63C2RB
5					83	300	445	525	AT251	250	75	140	56	155	1/4	63CARB
6					83	300	435	520	AT301	270	85	140	56	155	1/4	63C3RB
7	1"	150#,300#	JIS 10K,20K	165	80	285	415	480	AT101	160	65	140	56	155	1/4	63C1RB
8					80	285	425	495	AT201	215	70	140	56	155	1/4	63C2RB
9					80	285	430	510	AT251	250	75	140	56	155	1/4	63CARB
10		600#	JIS 40K	216	85	295	430	505	AT201	215	70	140	56	155	1/4	63C2RB
11					85	295	440	515	AT251	250	75	140	56	155	1/4	63CARB
12					85	295	430	515	AT301	270	85	140	56	155	1/4	63C3RB
13					85	295	440	540	AT351	315	95	140	56	155	1/4	63CBRB
14	1.5"	150#,300#	JIS 10K,20K	190	95	300	445	525	AT251	250	75	140	56	155	1/4	63CARB
15					95	300	435	520	AT301	270	85	140	56	155	1/4	63C3RB

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

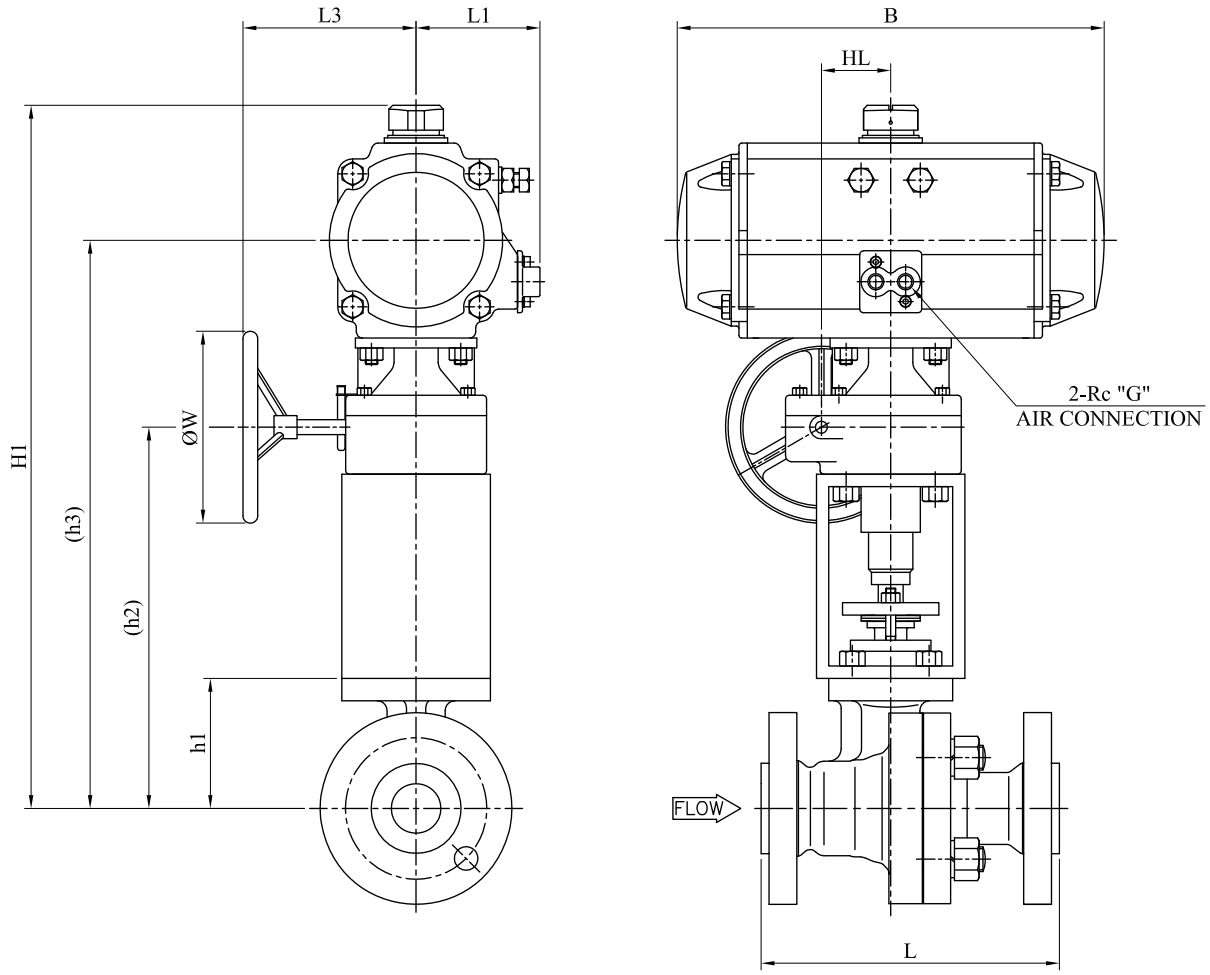
DRAWING No.

REV.

A

KOSO

BALL- VALVE *300W Double acting cylinder with Hand wheel*



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h2	h3	H1	ACTUATOR							
									CYL. SIZE	B	L1	L3	HL	W	G	CODE NO.
17	1.5"	150#,300#	JIS 10K,20K	190	95	300	445	550	AT351	315	95	140	56	155	1/4	63CBRB
18					95	300	450	560	AT401	345	100	140	56	155	1/4	63C4RB
19		600#	JIS 40K	241	105	335	475	555	AT301	270	85	140	56	155	1/4	63C3RB
20					105	335	480	585	AT351	315	95	140	56	155	1/4	63CBRB
21					105	335	490	595	AT401	345	100	140	56	155	1/4	63C4RB
22					105	355	530	650	AT451	410	110	155	69	305	1/4	63CCRB
23					105	355	540	670	AT501	440	120	155	69	305	1/4	63C5RB
24	2"	150#,300#	JIS10K,20K	216	100	330	475	580	AT351	315	95	140	56	155	1/4	63CBRB
25					100	330	480	590	AT401	345	100	140	56	155	1/4	63C4RB
26					100	350	525	645	AT451	410	110	155	69	305	1/4	63CCRB
27					100	350	535	660	AT501	440	120	155	69	305	1/4	63C5RB
28		600#	JIS 40K	292	120	405	555	665	AT401	345	100	140	56	155	1/4	63C4RB
29					120	425	600	720	AT451	410	110	155	69	305	1/4	63CCRB
30					120	425	610	735	AT501	440	120	155	69	305	1/4	63C5RB
31					120	450	655	815	AT551	490	125	235	90	400	1/4	63CDRB

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

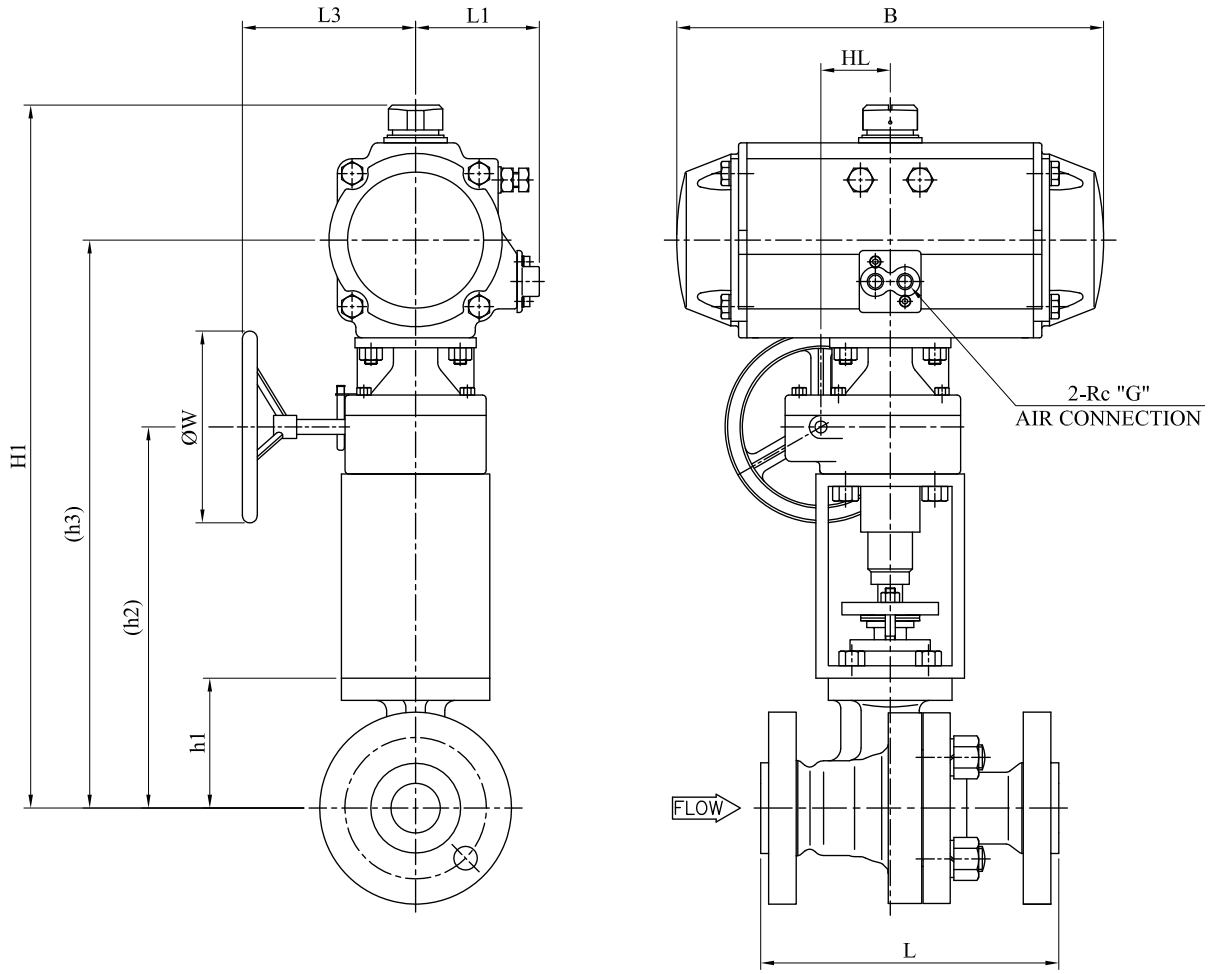
DRAWING No.

REV.

A

KOSO

BALL- VALVE *300W Double acting cylinder with Hand wheel*



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h2	h3	H1	ACTUATOR							
									CYL. SIZE	B	L1	L3	HL	W	G	CODE NO.
32	2"	600#	JIS 40K	292	120	450	665	840	AT601	545	130	235	90	400	1/4	63C6RB
33	2.5"	150#,300#	JIS 10K,20K	241	135	410	560	670	AT401	345	100	140	56	155	1/4	63C4RB
34					135	430	605	725	AT451	410	110	155	69	305	1/4	63CCRB
35					135	430	615	740	AT501	440	120	155	69	305	1/4	63C5RB
36					135	455	660	820	AT551	490	125	235	90	400	1/4	63CDRB
37					135	455	670	845	AT601	545	130	235	90	400	1/4	63C6RB
38		600#	JIS 40K	330	135	432	615	745	AT501	440	120	155	69	305	1/4	63C5RB
39					135	455	660	820	AT551	490	125	235	90	400	1/4	63CDRB
40					135	455	670	845	AT601	545	130	235	90	400	1/4	63C6RB
41					135	490	745	945	AT651	625	160	355	106	630	3/8	63CERB
42					135	490	760	975	AT701	730	185	355	106	630	1/2	63C7RB
43	3"	150#,300#	JIS 10K,20K	283	135	430	605	725	AT451	410	110	155	69	305	1/4	63CCRB
44					135	430	615	745	AT501	440	120	155	69	305	1/4	63C5RB
45					135	455	660	820	AT551	490	125	235	90	400	1/4	63CDRB
46					135	455	670	845	AT601	545	130	235	90	400	1/4	63C6RB

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NOTE:

DRAWING No.

REV.

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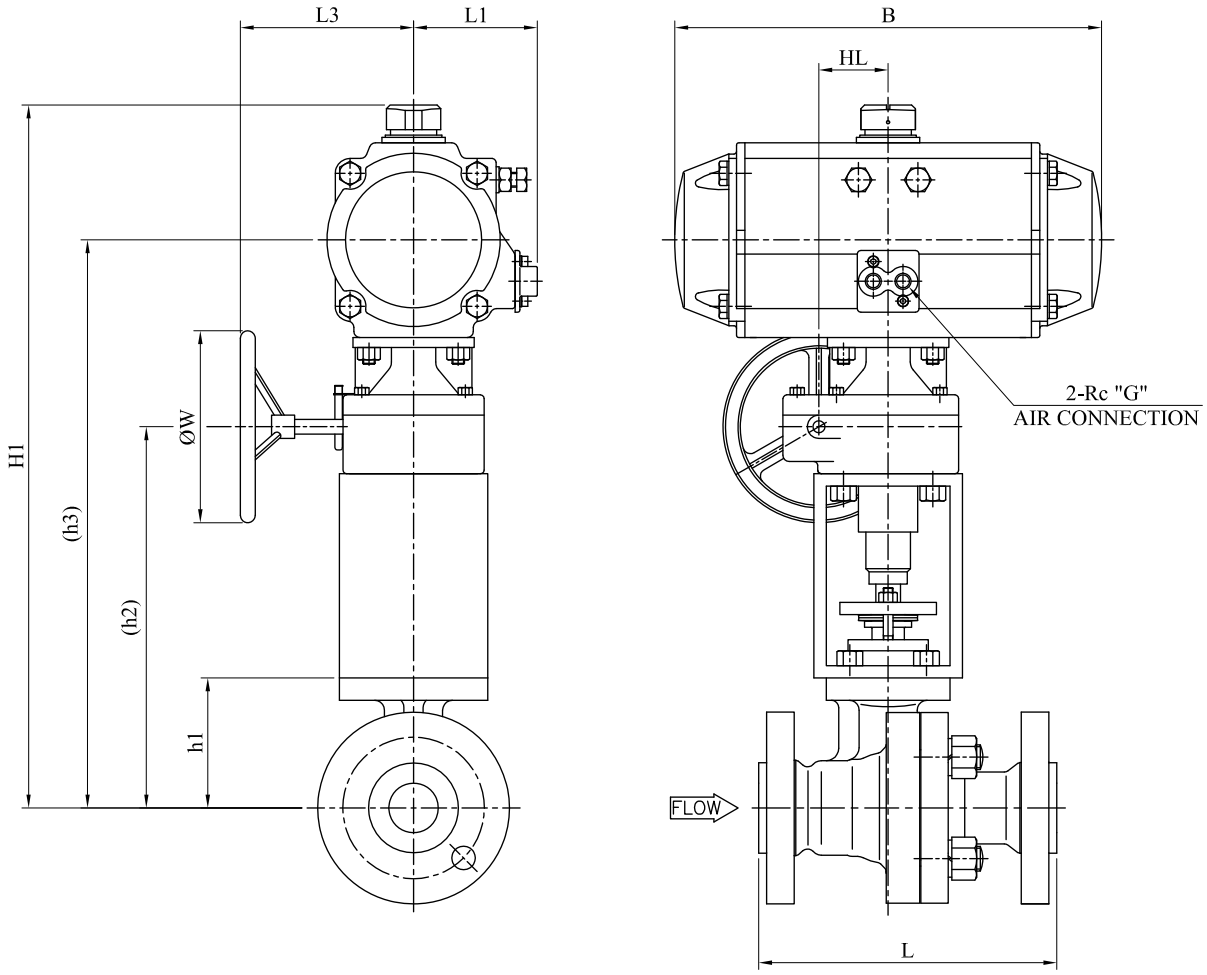
KOSO

BALL- VALVE *300W Double acting cylinder with Hand wheel*



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h2	h3	H1	ACTUATOR							
									CYL. SIZE	B	L1	L3	HL	W	G	CODE NO.
47	3"	150#,300#	JIS 10K,20K	283	135	490	745	945	AT651	625	160	355	106	630	3/8	63CERB
48		600#	JIS 40K	356	152	505	720	895	AT601	545	130	235	90	400	1/4	63C6RB
49					152	540	795	995	AT651	625	160	355	106	630	3/8	63CERB
50					152	540	810	1025	AT701	730	185	355	106	630	1/2	63C7RB
51	4"	150#,300#	JIS 10K,20K	356	180	520	700	830	AT501	440	120	155	69	305	1/4	63C5RB
52					180	545	750	905	AT551	490	125	235	90	400	1/4	63CDRB
53					180	545	760	930	AT601	545	130	235	90	400	1/4	63C6RB
54					180	575	830	1030	AT651	625	160	355	106	630	3/8	63CERB
55					180	575	845	1060	AT701	730	185	355	106	630	1/2	63C7RB
56		600#	JIS 40K	432	190	570	785	955	AT601	545	130	235	90	400	1/4	63C6RB
57					190	600	855	1055	AT651	625	160	355	106	630	3/8	63CERB
58					190	600	870	1085	AT701	730	185	355	106	630	1/2	63C7RB
59	6"	150#,300#	JIS 10K,20K	457	235	770	1025	1220	AT651	625	160	355	106	630	3/8	63CERB
60					235	770	1040	1250	AT701	730	185	355	106	630	1/2	63C7RB
61	8"	150#,300#	JIS 10K,20K	502	275	780	1050	1265	AT701	730	185	355	106	630	1/2	63C7RB

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NOTE:

DRAWING No.

REV.

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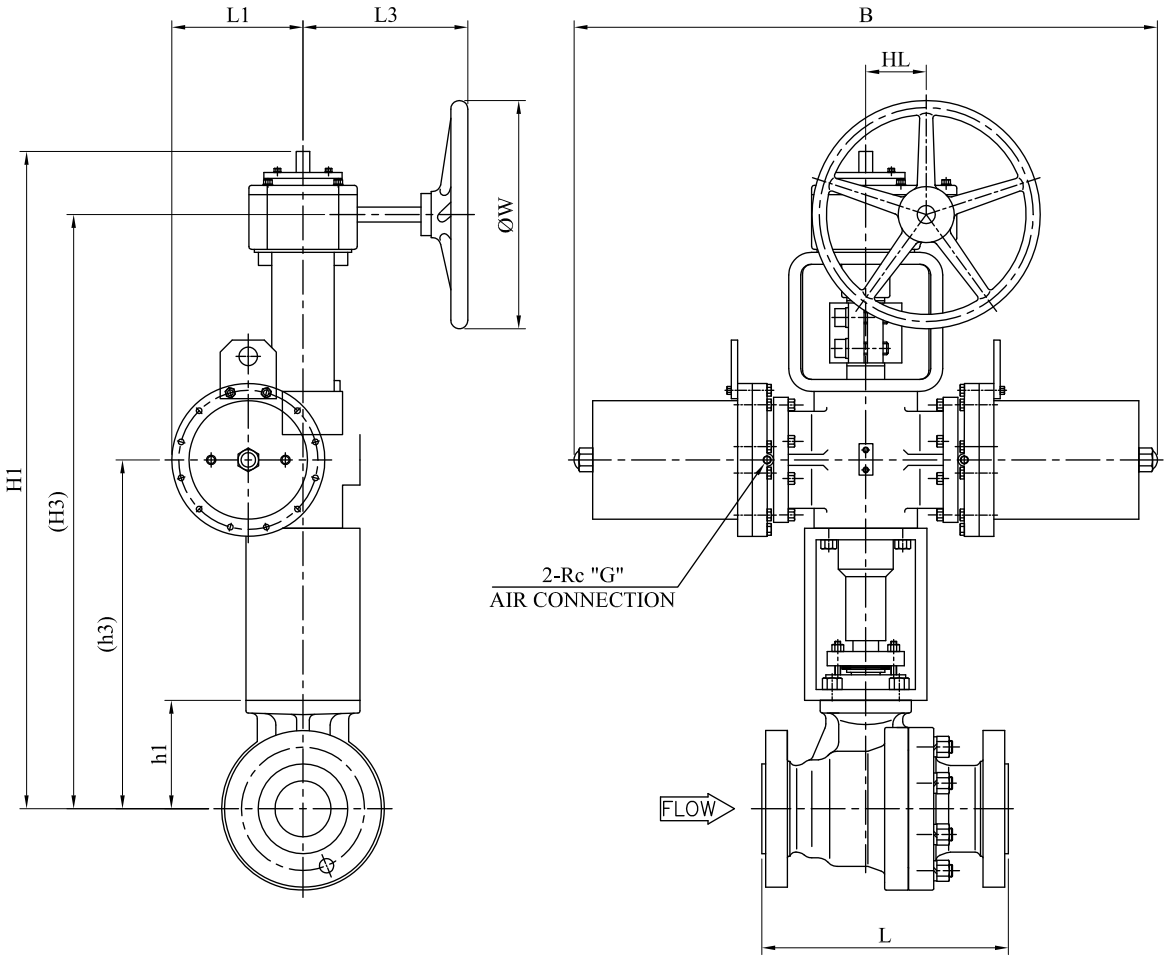
KOSO

BALL- VALVE 300W Double acting cylinder



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	H3	ACTUATOR							
									CYL. SIZE	B	L1	L3	HL	W	G	CODE NO.
1	3"	150#,300#	JIS 10K,20K	283	135	500	940	850	Ø170	880	135	220	90	300	3/8	6517RA
2					135	535	1060	950	Ø200	1110	230	355	106	400	1/2	6520RA
3		600#	JIS 40K	356	152	550	990	900	Ø170	880	135	220	90	300	3/8	6517RA
4					152	580	1110	1000	Ø200	1110	230	355	106	400	1/2	6520RA
5					152	650	1275	1165	Ø280	1350	290	395	152	560	1/2	6528RA
6	4"	150#,300#	JIS 10K,20K	356	180	590	1025	935	Ø170	880	135	220	90	300	3/8	6517RA
7					180	620	1150	1040	Ø200	1110	230	355	106	400	1/2	6520RA
8		600#	JIS 40K	432	190	625	1050	960	Ø170	880	135	220	90	300	3/8	6517RA
9					190	655	1175	1065	Ø200	1110	230	355	106	400	1/2	6520RA
10					190	725	1335	1230	Ø280	1350	290	395	152	560	1/2	6528RA
11	6"	150#,300#	JIS 10K,20K	457	235	810	1335	1225	Ø200	1110	230	355	106	400	1/2	6520RA
12					235	880	1505	1395	Ø280	1350	290	395	152	560	1/2	6528RA
13		600#	JIS 40K	559	245	865	1495	1385	Ø280	1350	290	395	152	560	1/2	6528RA
14	8"	150#,300#	JIS 10K,20K	502	275	905	1515	1410	Ø280	1350	290	395	152	560	1/2	6528RA
15		600#	JIS 40K	660	285	970	1600	1490	Ø280	1350	290	395	152	560	1/2	6528RA
16	10"	150#,300#	JIS 10K,20K	568	320	1010	1625	1515	Ø280	1350	290	395	152	560	1/2	6528RA
17	12"	150#,300#	JIS 10K,20K	648	370	1105	1715	1610	Ø280	1350	290	395	152	560	1/2	6528RA

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

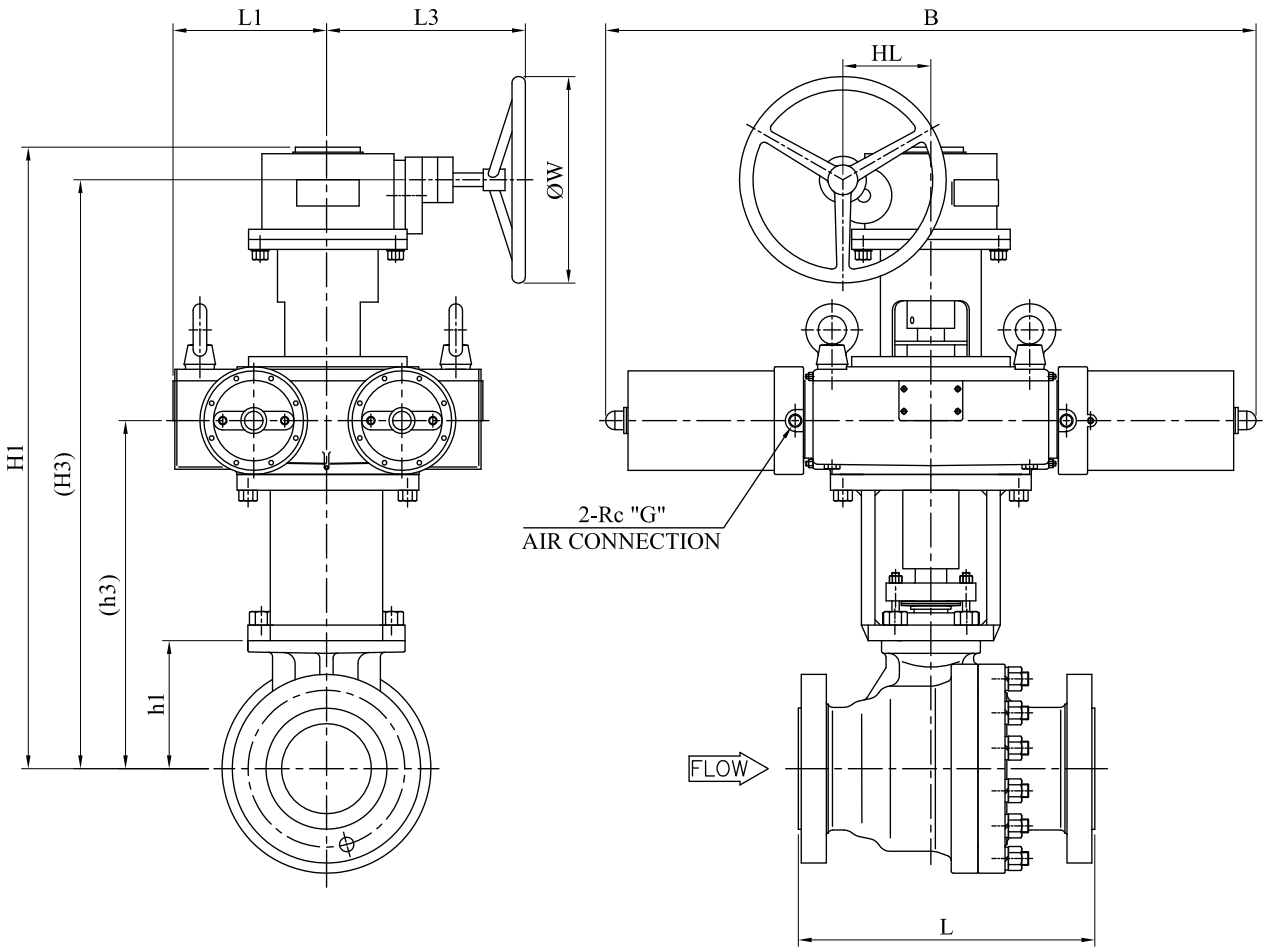
DRAWING No.

REV.

A

KOSO

BALL- VALVE 300W Double acting cylinder



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	H3	ACTUATOR							
									CYL. SIZE	B	L1	L3	HL	W	G	CODE NO.
1	3"	600#	JIS 40K	356	152	530	610	500	Ø200	1690	345	440	196	460	1/2	6420RB
2	4"	600#	JIS 40K	432	190	580	1210	1135	Ø200	1690	345	440	196	460	1/2	6420RB
3	6"	150#,300#	JIS 10K,20K	457	235	720	1375	1305	Ø200	1690	345	440	196	460	1/2	6420RB
4		600#	JIS 40K	559	245	760	1365	1295	Ø200	1690	345	440	196	460	1/2	6420RB
5					245	785	1425	1355	Ø280	1980	395	523	118	460	1/2	6428RB
6	8"	150#,300#	JIS 10K,20K	502	275	785	1390	1315	Ø200	1690	345	440	196	460	1/2	6420RB
7		600#	JIS 40K	660	285	835	1470	1400	Ø200	1690	345	440	196	460	1/2	6420RB
8					285	860	1530	1460	Ø280	1980	395	523	118	460	1/2	6428RB
9	10"	150#,300#	JIS 10K,20K	568	320	830	1495	1425	Ø200	1690	345	440	196	460	1/2	6420RB
10					320	855	1555	1485	Ø280	1980	395	523	118	460	1/2	6428RB
11		600#	JIS 40K	787	340	950	1560	1485	Ø200	1690	345	440	196	460	1/2	6420RB
12					340	975	1620	1545	Ø280	1980	395	523	118	460	1/2	6428RB
13	12"	150#,300#	JIS 10K,20K	648	370	950	1590	1515	Ø200	1690	345	440	196	460	1/2	6420RB
14					370	975	1650	1575	Ø280	1980	395	523	118	460	1/2	6428RB
15		600#	JIS 40K	838	390	1065	1690	1615	Ø280	1980	395	523	118	460	1/2	6428RB

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NOTE:

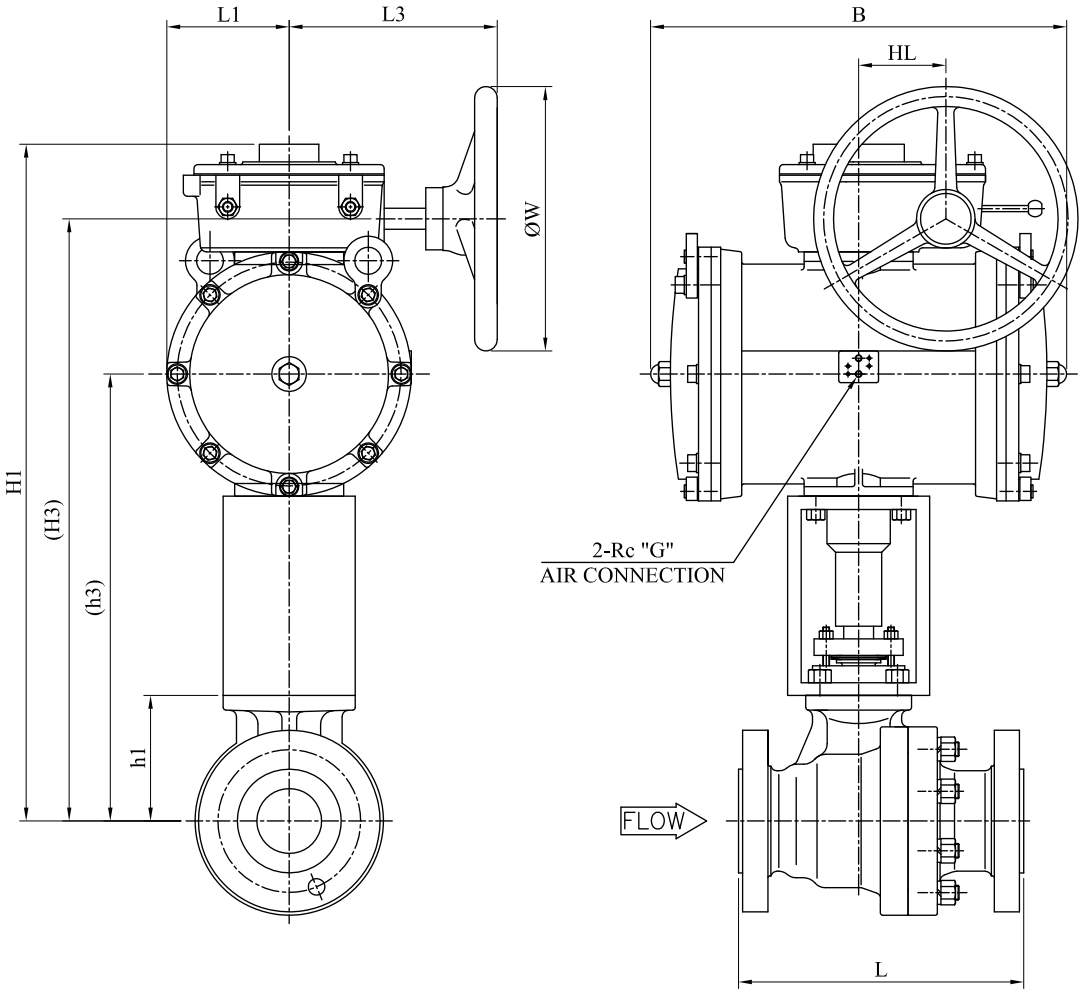
DRAWING No.

REV.

A

KOSO

BALL- VALVE 300W Double acting cylinder



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	H3	ACTUATOR							
									CYL. SIZE	B	L1	L3	HL	W	G	CODE NO.
1	3"	150#,300#	JIS 10K,20K	283	135	595	935	820	Ø280	630	185	315	108	400	3/8	7328RA
2		600#	JIS 40K	356	152	645	985	870	Ø280	630	185	315	108	400	3/8	7328RA
3					152	730	1120	1020	Ø375	815	240	380	165	630	3/8	7337RA
4	4"	150#,300#	JIS 10K,20K	356	180	685	1020	910	Ø280	630	185	315	108	400	3/8	7328RA
5		600#	JIS 40K	432	190	720	1045	935	Ø280	630	185	315	108	400	3/8	7328RA
6					190	805	1180	1080	Ø375	815	240	380	165	630	3/8	7337RA
7	6"	150#,300#	JIS 10K,20K	457	235	875	1215	1100	Ø280	630	185	315	108	400	3/8	7328RA
8					235	960	1350	1250	Ø375	815	240	380	165	630	3/8	7337RA
9		600#	JIS 40K	559	245	860	1205	1090	Ø280	630	185	315	108	400	3/8	7328RA
10					245	940	1340	1240	Ø375	815	240	380	165	630	3/8	7337RA
11	8"	150#,300#	JIS 10K,20K	502	275	910	1225	1115	Ø280	630	185	315	108	400	3/8	7328RA
12					275	985	1360	1260	Ø375	815	240	380	165	630	3/8	7337RA
13		600#	JIS 40K	660	285	1045	1445	1345	Ø375	815	240	380	165	630	3/8	7337RA
14	10"	150#,300#	JIS 10K,20K	568	320	1085	1470	1370	Ø375	815	240	380	165	630	3/8	7337RA
15	12"	150#,300#	JIS 10K,20K	648	370	1180	1560	1460	Ø375	815	240	380	165	630	3/8	7337RA

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

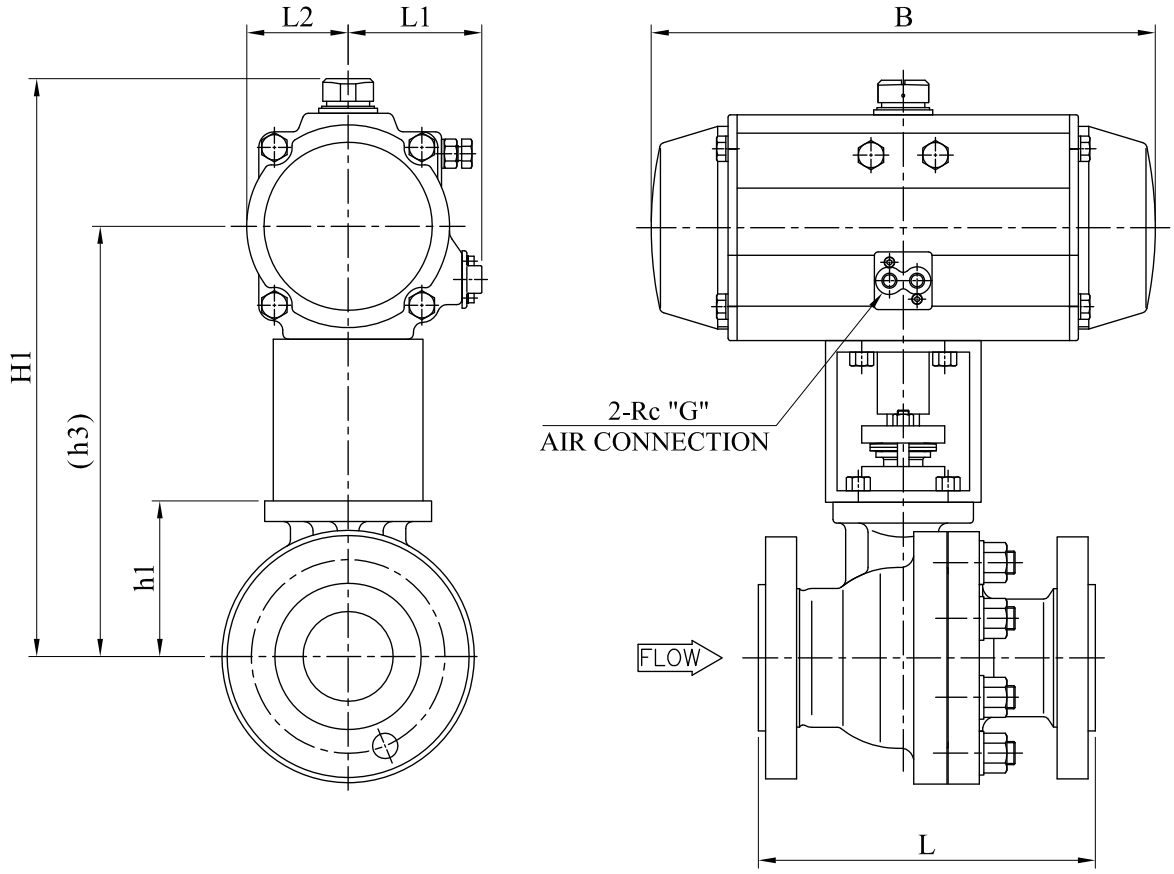
DRAWING No.

REV.

A

KOSO

BALL- VALVE *300W Spring return cylinder*



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	ACTUATOR					
								CYL. SIZE	B	L1	L2	G	CODE NO.
1	3/4"	150#,300#	JIS 10K,20K	152	75	220	280	AT101	160	65	36	1/4	63C1RB
2					75	225	295	AT201	215	70	43	1/4	63C2RB
3					75	235	310	AT251	250	75	50	1/4	63CARB
4					75	240	325	AT301	270	85	56	1/4	63C3RB
5					75	250	350	AT351	315	95	64	1/4	63CBRB
6		600#	JIS 40K	190	83	250	330	AT251	250	75	50	1/4	63CARB
7					83	235	320	AT301	270	85	56	1/4	63C3RB
8					83	265	370	AT351	315	95	64	1/4	63CBRB
9					83	240	350	AT401	345	100	70	1/4	63C4RB
10					83	250	370	AT451	410	110	80	1/4	63CCRB
11	1"	150#,300#	JIS 10K,20K	165	80	230	300	AT201	215	70	43	1/4	63C2RB
12					80	240	315	AT251	250	75	50	1/4	63CARB
13					80	245	330	AT301	270	85	56	1/4	63C3RB
14					80	255	355	AT351	315	95	64	1/4	63CBRB
15					80	260	370	AT401	345	100	70	1/4	63C4RB
16		600#	JIS 40K	216	85	250	335	AT301	270	85	56	1/4	63C3RB
17					85	260	360	AT351	315	95	64	1/4	63CBRB
18					85	265	370	AT401	345	100	70	1/4	63C4RB

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NOTE:

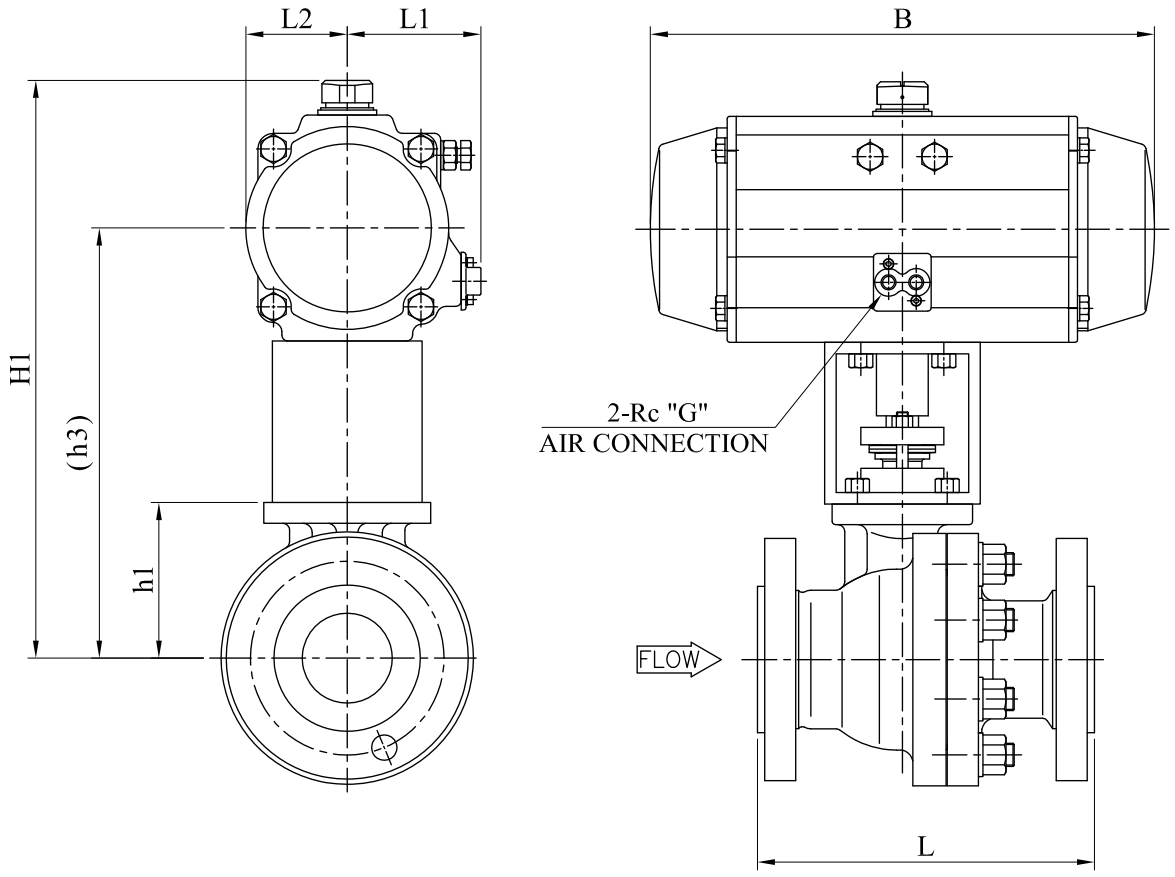
DRAWING No.

REV.

A

KOSO

BALL- VALVE *300W Spring return cylinder*



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	ACTUATOR					
								CYL. SIZE	B	L1	L2	G	CODE NO.
19	1"	600#	JIS 40K	216	85	275	390	AT451	410	110	80	1/4	63CCRB
20					85	280	410	AT501	440	120	88	1/4	63C5RB
21	1.5"	150#,300#	JIS 10K,20K	190	95	260	345	AT301	270	85	56	1/4	63C3RB
22					95	270	375	AT351	315	95	64	1/4	63CBRB
23					95	275	385	AT401	345	100	70	1/4	63C4RB
24					95	285	405	AT451	410	110	80	1/4	63CCRB
25					95	295	425	AT501	440	120	88	1/4	63C5RB
26					95	300	460	AT551	490	125	99	1/4	63CDRB
27		600#	JIS 40K	241	105	325	445	AT451	410	110	80	1/4	63CCRB
28					105	335	460	AT501	440	120	88	1/4	63C5RB
29					105	345	505	AT551	490	125	99	1/4	63CDRB
30					105	350	530	AT601	545	130	120	1/4	63C6RB
31					105	385	585	AT651	625	160	131	3/8	63CERB
32	2"	150#,300#	JIS 10K,20K	216	100	300	410	AT401	345	100	70	1/4	63C4RB
33					100	310	430	AT451	410	110	80	1/4	63CCRB
34					100	320	450	AT501	440	120	88	1/4	63C5RB
35					100	340	495	AT551	490	125	99	1/4	63CDRB
36					100	350	520	AT601	545	130	120	1/4	63C6RB

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NOTE:

DRAWING No.

REV.

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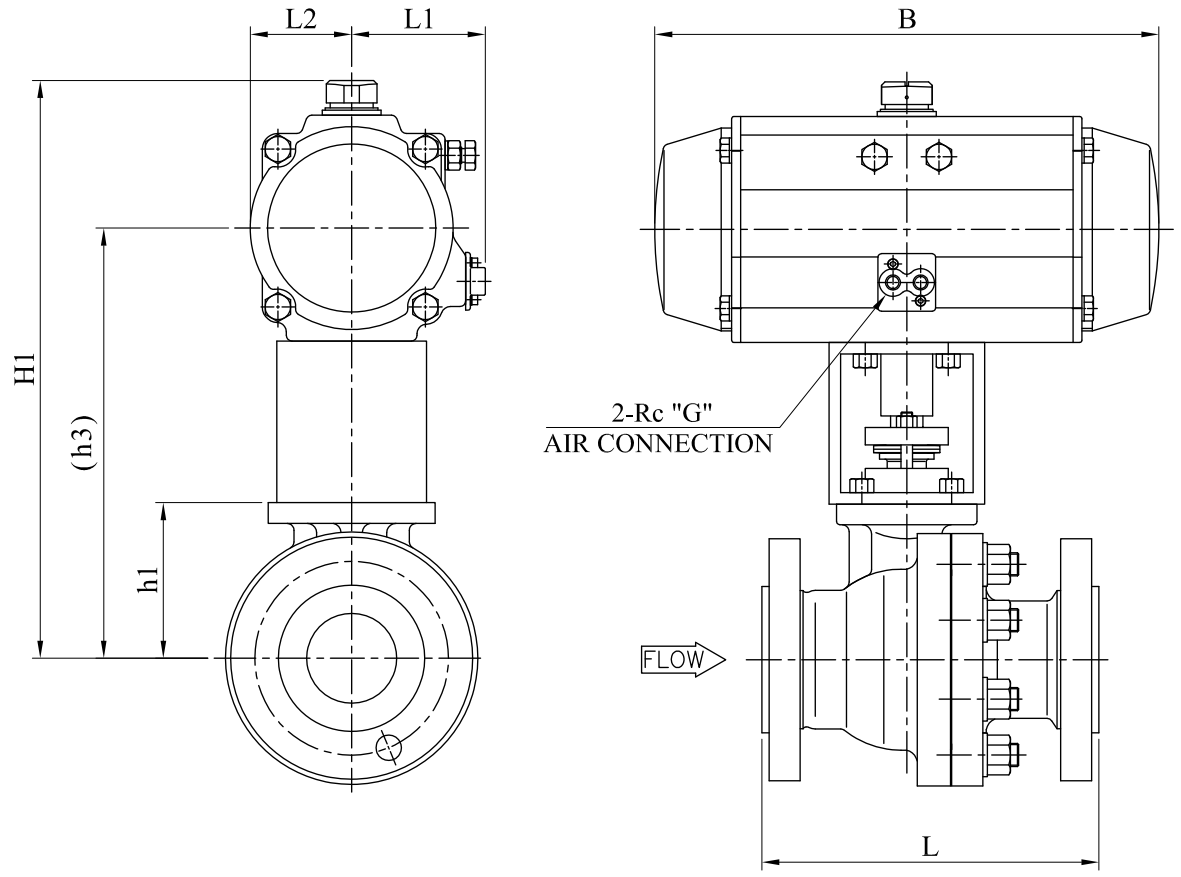
KOSO

BALL- VALVE *300W Spring return cylinder*



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	ACTUATOR					
								CYL. SIZE	B	L1	L2	G	CODE NO.
37	2"	150#,300#	JIS 10K,20K	216	100	375	575	AT651	625	160	131	3/8	63CERB
38		600#	JIS 40K	292	120	370	530	AT551	490	125	99	1/4	63CDRB
39					120	380	550	AT601	545	130	120	1/4	63C6RB
40					120	455	655	AT651	625	160	131	3/8	63CERB
41					120	470	685	AT701	730	185	165	1/2	63C7RB
42	2.5"	150#,300#	JIS 10K,20K	241	135	410	540	AT501	440	120	88	1/4	63C5RB
43					135	430	585	AT551	490	125	99	1/4	63CDRB
44					135	435	610	AT601	545	130	120	1/4	63C6RB
45					135	465	665	AT651	625	160	131	3/8	63CERB
46					135	480	695	AT701	730	185	165	1/2	63C7RB
47		600#	JIS 40K	330	135	465	660	AT651	625	160	131	3/8	63CERB
48					135	475	690	AT701	730	185	165	1/2	63C7RB
49	3"	150#,300#	JIS 10K,20K	283	135	420	595	AT601	545	130	120	1/4	63C6RB
50					135	420	615	AT651	625	160	131	3/8	63CERB
51					135	475	690	AT701	730	185	165	1/2	63C7RB
52		600#	JIS 40K	356	152	525	740	AT701	730	185	165	1/2	63C7RB
53	4"	150#,300#	JIS 10K,20K	356	180	545	740	AT651	625	160	131	3/8	63CERB
54					180	555	710	AT701	730	185	165	1/2	63C7RB

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

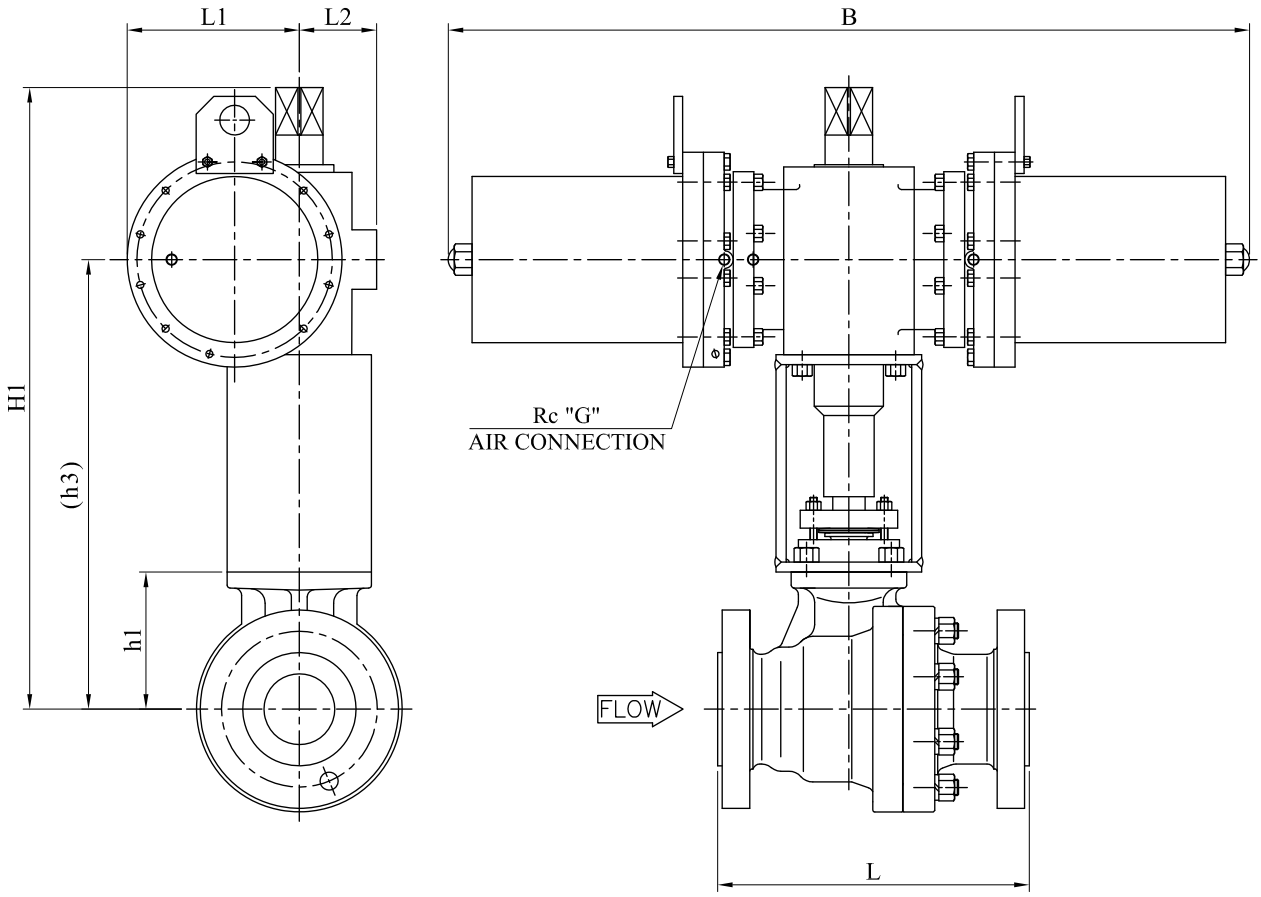
DRAWING No.

REV.

A

KOSO

BALL- VALVE 300W Spring return cylinder



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	ACTUATOR					
								CYL. SIZE	B	L1	L2	G	CODE NO.
1	3"	150#,300#	JIS 10K,20K	283	135	535	755	Ø200	1110	230	100	1/2	6520RA
2					135	595	925	Ø360	2140	315	230	1/2	6536RA
3		600#	JIS 40K	356	152	580	790	Ø200	1110	230	100	1/2	6520RA
4					152	650	925	Ø280	1350	290	130	1/2	6528RA
5					152	650	980	Ø360	2140	315	230	1/2	6536RA
6	4"	150#,300#	JIS 10K,20K	356	180	620	840	Ø200	1110	230	100	1/2	6520RA
7					180	660	970	Ø360	2140	315	230	1/2	6536RA
8		600#	JIS 40K	432	190	725	1000	Ø280	1350	290	130	1/2	6528RA
9					190	725	1055	Ø360	2140	315	230	1/2	6536RA
10	6"	150#,300#	JIS 10K,20K	457	235	880	1170	Ø280	1350	290	130	1/2	6528RA
11					235	885	1215	Ø360	2140	315	230	1/2	6536RA
12		600#	JIS 40K	559	245	865	1195	Ø360	2140	315	230	1/2	6536RA
13	8"	150#,300#	JIS 10K,20K	502	275	905	1195	Ø280	1350	290	130	1/2	6528RA
14					275	910	1240	Ø360	2140	315	230	1/2	6536RA
15	10"	150#,300#	JIS 10K,20K	568	320	1010	1340	Ø360	2140	315	230	1/2	6536RA
16	12"	150#,300#	JIS 10K,20K	648	370	1105	1435	Ø360	2140	315	230	1/2	6536RA

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

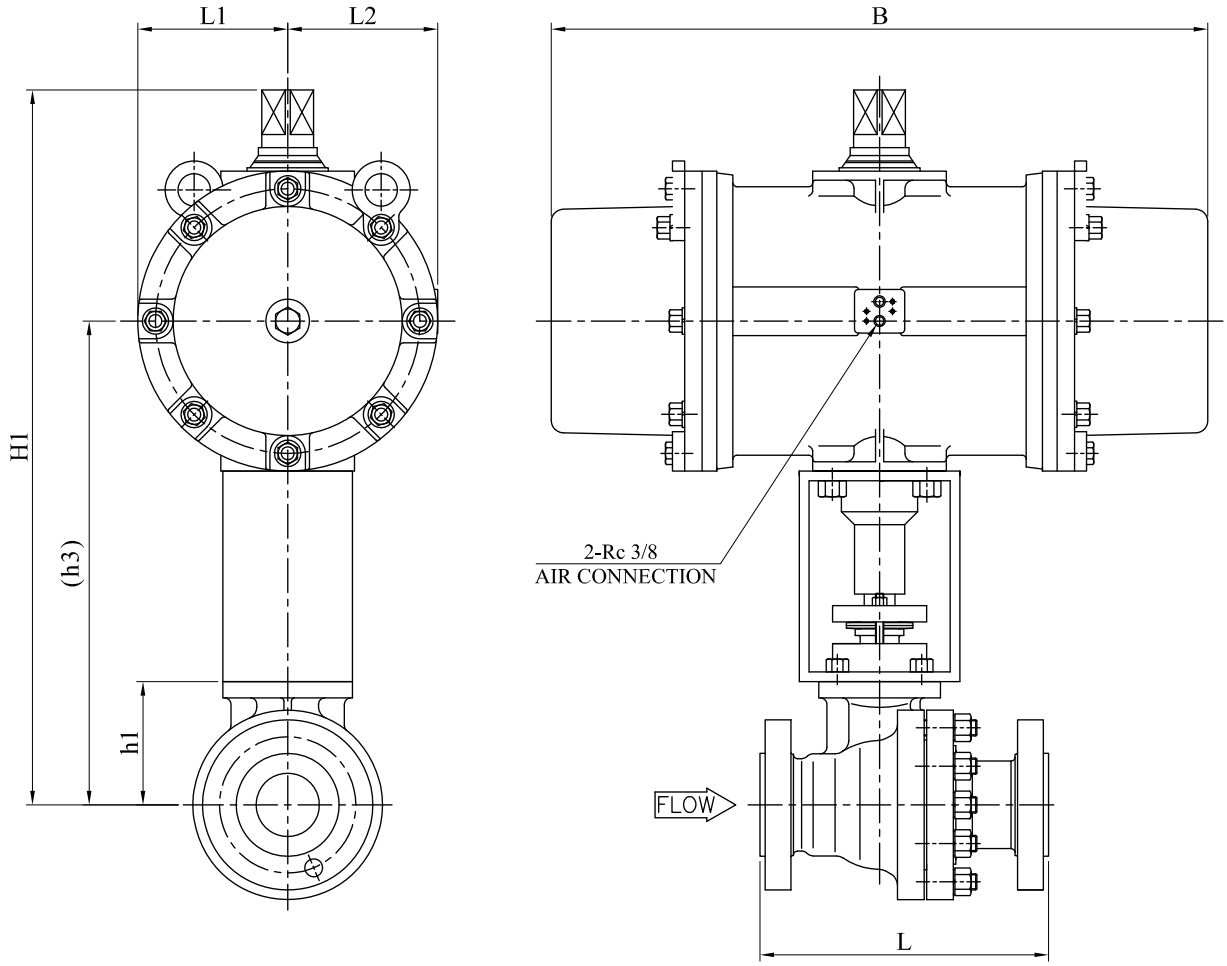
DRAWING No.

REV.

A

KOSO

BALL- VALVE 300W Spring return cylinder



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	ACTUATOR					
								CYL. SIZE	B	L1	L2	G	CODE NO.
1	3"	150#,300#	JIS 10K,20K	283	135	595	880	Ø280	630	185	185	3/8	7328RA
2					135	675	1045	Ø375	815	240	240	3/8	7337RA
3		600#	JIS 40K	356	152	645	930	Ø280	630	185	185	3/8	7328RA
4					152	730	1095	Ø375	815	240	240	3/8	7337RA
5	4"	150#,300#	JIS 10K,20K	356	180	685	970	Ø280	630	185	185	3/8	7328RA
6					180	775	1140	Ø375	815	240	240	3/8	7337RA
7		600#	JIS 40K	432	190	805	1170	Ø375	815	240	240	3/8	7337RA
8	6"	150#,300#	JIS 10K,20K	457	235	960	1330	Ø375	815	240	240	3/8	7337RA
9	8"	150#,300#	JIS 10K,20K	502	275	985	1350	Ø375	815	240	240	3/8	7337RA

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

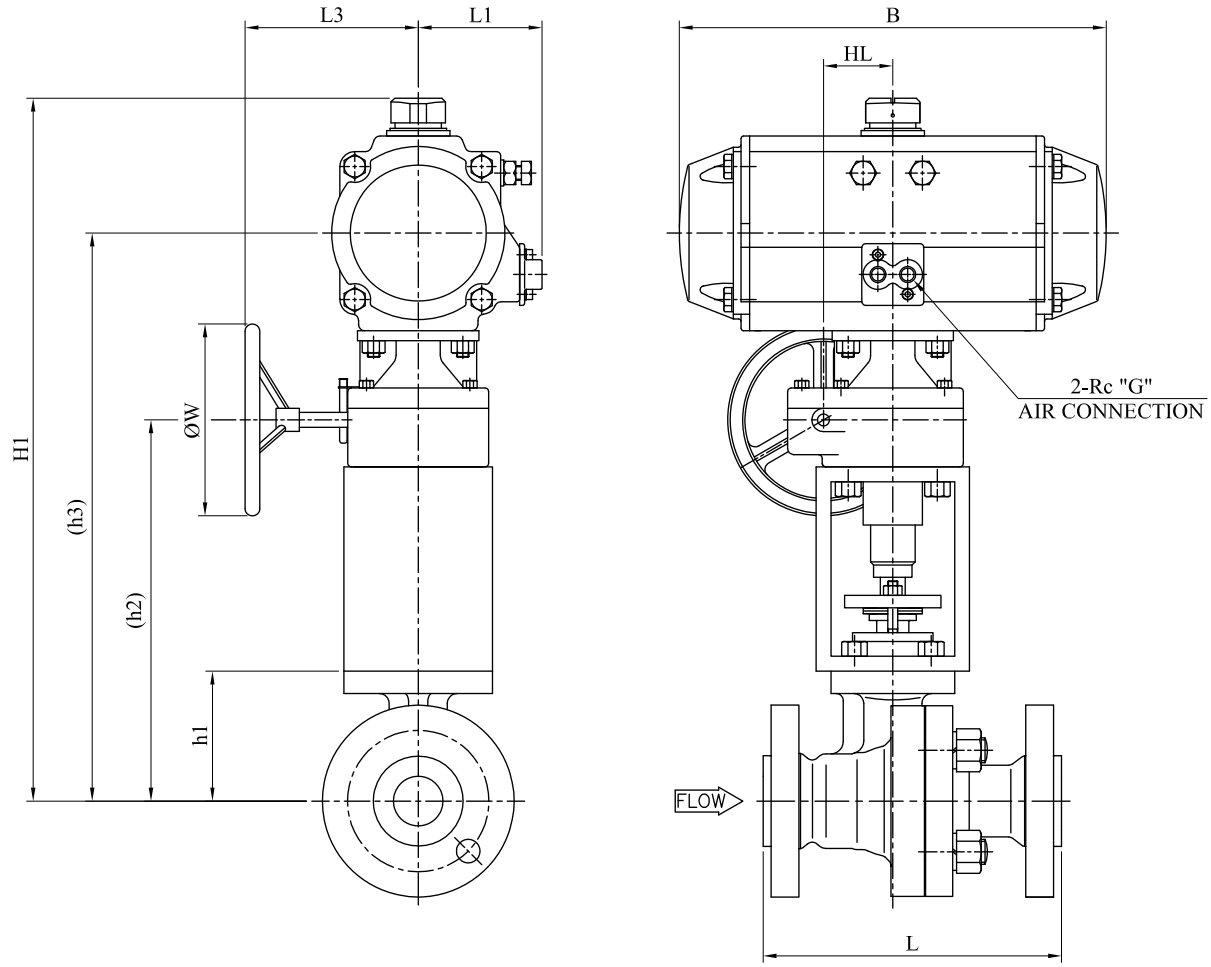
DRAWING No.

REV.

A

KOSO

BALL- VALVE *300W Spring return cylinder with Hand wheel*



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h2	h3	H1	ACTUATOR							
									CYL. SIZE	B	L1	L3	HL	W	G	CODE NO.
1	3/4"	150#,300#	JIS 10K,20K	152	75	280	410	470	AT101	160	65	140	56	155	1/4	63C1RB
2					75	280	415	490	AT201	215	70	140	56	155	1/4	63C2RB
3					75	280	425	500	AT251	250	75	140	56	155	1/4	63CARB
4					75	280	415	500	AT301	270	85	140	56	155	1/4	63C3RB
5					75	280	425	525	AT351	315	95	140	56	155	1/4	63CBRB
6		600#	JIS 40K	190	83	300	445	525	AT251	250	75	140	56	155	1/4	63CARB
7					83	300	435	520	AT301	270	85	140	56	155	1/4	63C3RB
8					83	300	445	550	AT351	315	95	140	56	155	1/4	63CBRB
9					83	300	450	560	AT401	345	100	140	56	155	1/4	63C4RB
10					83	320	495	615	AT451	410	110	155	69	305	1/4	63CCRB
11	1"	150#,300#	JIS 10K,20K	165	80	285	425	495	AT201	215	70	140	56	155	1/4	63C2RB
12					80	285	430	510	AT251	250	75	140	56	155	1/4	63CARB
13					80	285	425	505	AT301	270	85	140	56	155	1/4	63C3RB
14					80	285	435	535	AT351	315	95	140	56	155	1/4	63CBRB
15					80	285	440	545	AT401	345	100	140	56	155	1/4	63C4RB
16		600#	JIS 40K	216	85	295	430	515	AT301	270	85	140	56	155	1/4	63C3RB
17					85	295	440	540	AT351	315	95	140	56	155	1/4	63CBRB
18					85	295	445	555	AT401	345	100	140	56	155	1/4	63C4RB

*FLANGE IS ACCORDING TO THE STANDARD WHICH IS DESCRIBED ON THE SPECIFICATION SHEET.

NOTE:

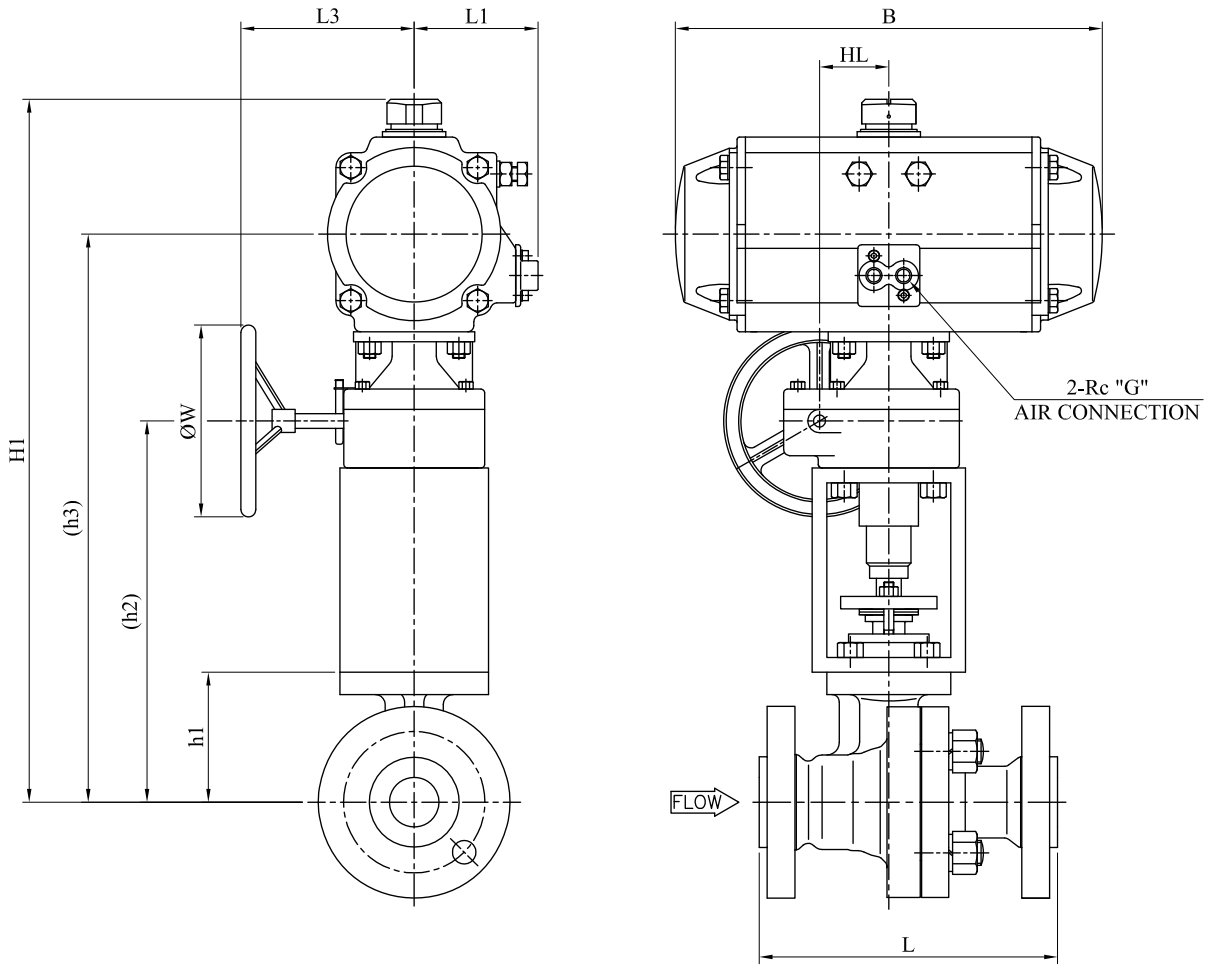
DRAWING No.

REV.

A

KOSO

BALL- VALVE *300W Spring return cylinder with Hand wheel*



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h2	h3	H1	ACTUATOR							
									CYL. SIZE	B	L1	L3	HL	W	G	CODE NO.
19	1"	600#	JIS 40K	216	85	315	490	605	AT451	410	110	155	69	305	1/4	63CCRB
20					85	315	495	625	AT501	440	120	155	69	305	1/4	63C5RB
21	1.5"	150#,300#	JIS 10K,20K	190	95	300	435	520	AT301	270	85	140	56	155	1/4	63C3RB
22					95	300	445	550	AT351	315	95	140	56	155	1/4	63CBRB
23					95	300	450	560	AT401	345	100	140	56	155	1/4	63C4RB
24					95	320	495	615	AT451	410	110	155	69	305	1/4	63CCRB
25					95	320	505	630	AT501	440	120	155	69	305	1/4	63C5RB
26					95	345	550	710	AT551	490	125	235	90	400	1/4	63CDRB
27		600#	JIS 40K	241	105	355	530	650	AT451	410	110	155	69	305	1/4	63CCRB
28					105	355	540	670	AT501	440	120	155	69	305	1/4	63C5RB
29					105	380	585	745	AT551	490	125	235	90	400	1/4	63CDRB
30					105	380	595	770	AT601	545	130	235	90	400	1/4	63C6RB
31					105	415	670	870	AT651	625	160	355	106	630	3/8	63CERB
32	2"	150#,300#	JIS 10K,20K	216	100	330	480	590	AT401	345	100	140	56	155	1/4	63C4RB
33					100	350	525	645	AT451	410	110	155	69	305	1/4	63CCRB
34					100	350	535	660	AT501	440	120	155	69	305	1/4	63C5RB
35					100	375	580	740	AT551	490	125	235	90	400	1/4	63CDRB
36					100	375	590	765	AT601	545	130	235	90	400	1/4	63C6RB

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NOTE:

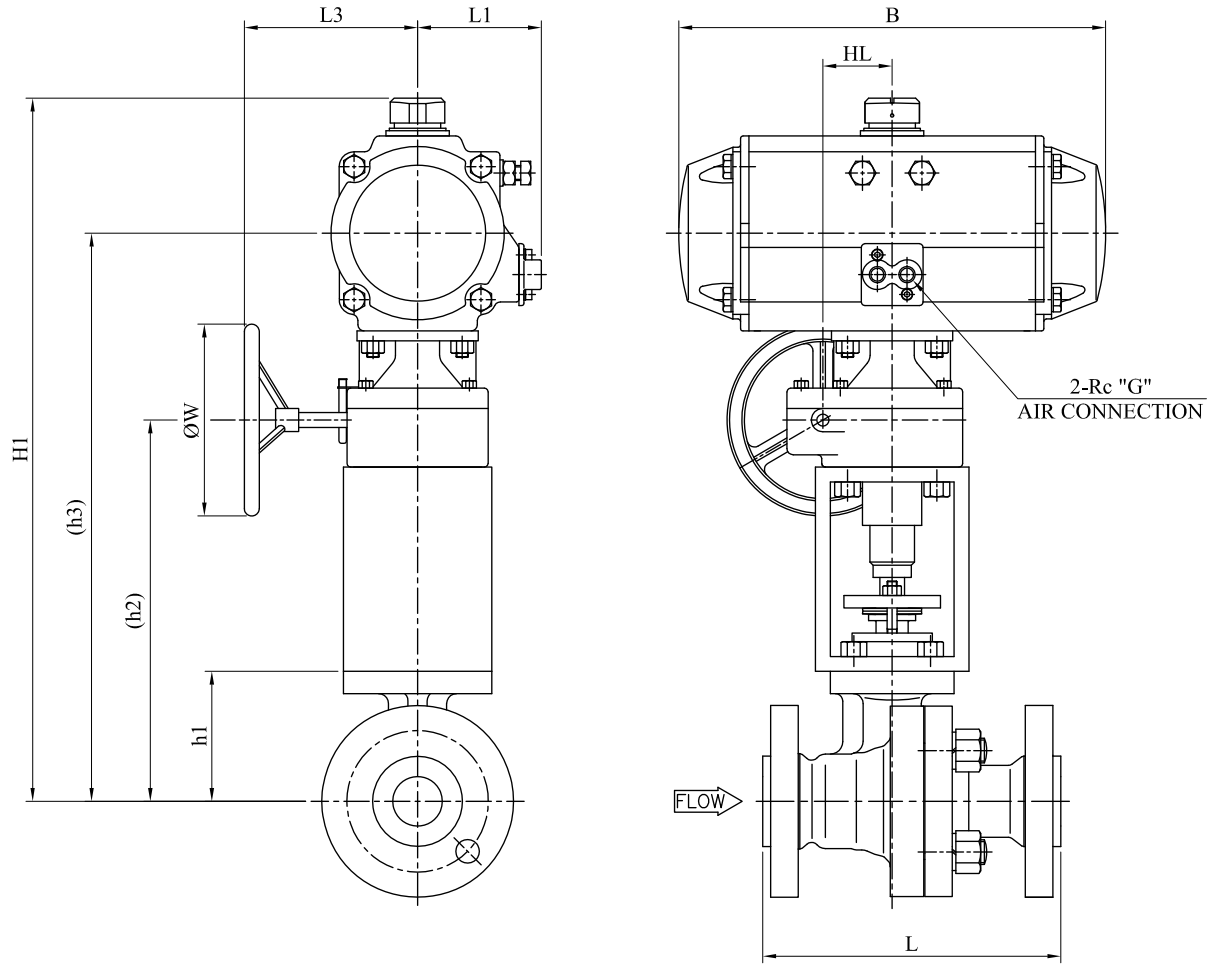
DRAWING No.

REV.

A

KOSO

BALL- VALVE *300W Spring return cylinder with Hand wheel*



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h2	h3	H1	ACTUATOR							
									CYL. SIZE	B	L1	L3	HL	W	G	CODE NO.
37	2"	150#,300#	JIS 10K,20K	216	100	410	665	860	AT651	625	160	355	106	630	3/8	63CERB
38		600#	JIS 40K	292	120	450	655	815	AT551	490	125	235	90	400	1/4	63CDRB
39					120	450	665	840	AT601	545	130	235	90	400	1/4	63C6RB
40					120	485	740	940	AT651	625	160	355	106	630	3/8	63CERB
41					120	485	755	970	AT701	730	185	355	106	630	1/2	63C7RB
42	2.5"	150#,300#	JIS 10K,20K	241	135	430	615	740	AT501	440	120	155	69	305	1/4	63C5RB
43					135	455	660	820	AT551	490	125	235	90	400	1/4	63CDRB
44					135	455	670	845	AT601	545	130	235	90	400	1/4	63C6RB
45					135	490	745	945	AT651	625	160	355	106	630	3/8	63CERB
46					135	490	760	975	AT701	730	185	355	106	630	1/2	63C7RB
47		600#	JIS 40K	330	135	490	745	945	AT651	625	160	355	106	630	3/8	63CERB
48					135	490	760	975	AT701	730	185	355	106	630	1/2	63C7RB
49	3"	150#,300#	JIS 10K,20K	283	135	455	670	845	AT601	545	130	355	106	630	1/4	63C6RB
50					135	490	745	945	AT651	625	160	355	106	630	3/8	63CERB
51					135	490	760	975	AT701	730	185	355	106	630	1/2	63C7RB
52		600#	JIS 40K	356	152	540	810	1025	AT701	730	185	355	106	630	1/2	63C7RB
53	4"	150#,300#	JIS 10K,20K	356	180	575	830	1030	AT651	625	160	355	106	630	3/8	63CERB
54					180	575	845	1060	AT701	730	185	355	106	630	1/2	63C7RB

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NOTE:

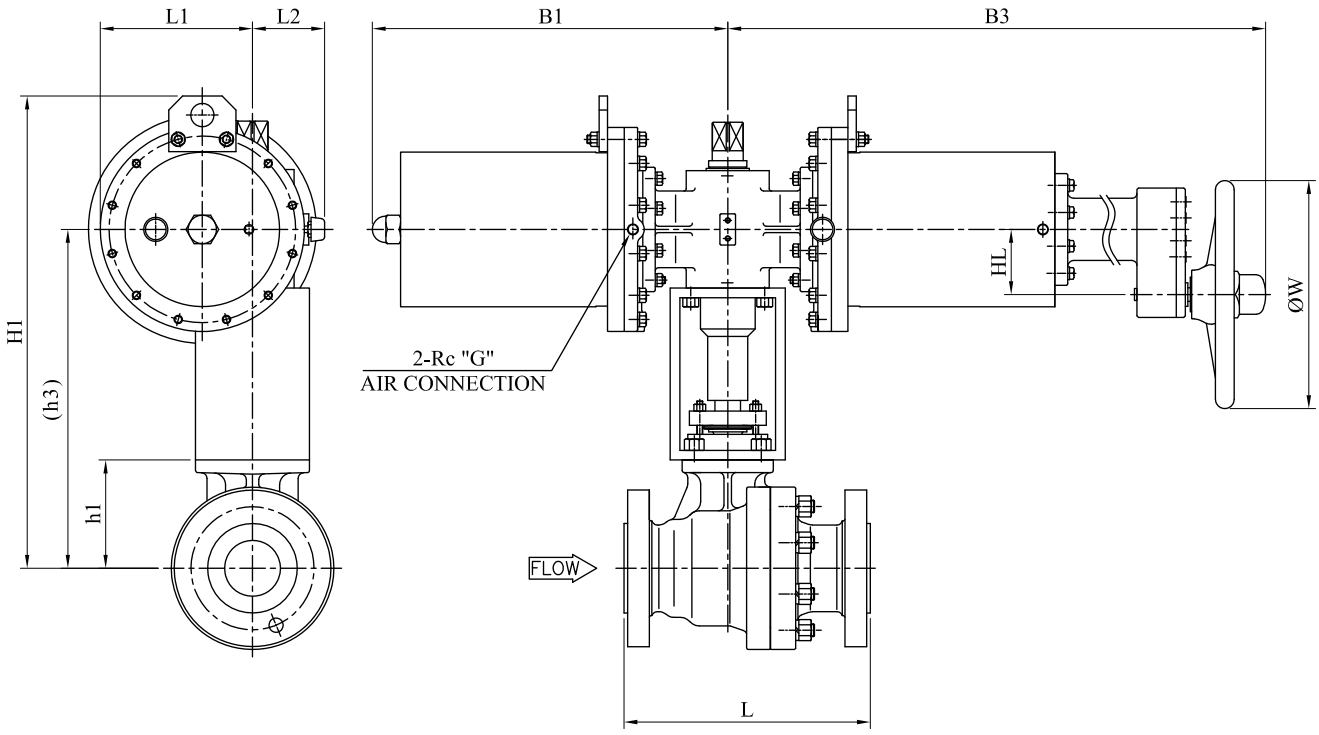
DRAWING No.

REV.

A

KOSO

BALL- VALVE *Spring return cylinder with Hand wheel*



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	ACTUATOR								
								CYL. SIZE	B1	B3	L1	L2	HL	W	G	CODE NO.
1	3"	150#,300#	JIS 10K,20K	283	135	535	755	Ø200	770	1330	211	135	0	400	1/2	6520RA
2					135	595	925	Ø360	1070	1990	315	265	196	590	1/2	6536RA
3		600#	JIS 40K	356	152	580	790	Ø200	770	1330	211	135	0	400	1/2	6520RA
4					152	650	925	Ø280	865	1615	275	165	108	590	1/2	6528RA
5					152	650	980	Ø360	1070	1990	315	265	196	590	1/2	6536RA
6	4"	150#,300#	JIS 10K,20K	356	180	620	840	Ø200	770	1330	211	135	0	400	1/2	6520RA
7					180	660	970	Ø360	1070	1990	315	265	196	590	1/2	6536RA
8		600#	JIS 40K	432	190	725	1000	Ø280	865	1615	275	165	108	590	1/2	6528RA
9					190	725	1055	Ø360	1070	1990	315	265	196	590	1/2	6536RA
10	6"	150#,300#	JIS 10K,20K	457	235	880	1170	Ø280	865	1615	275	165	108	590	1/2	6528RA
11					235	885	1215	Ø360	1070	1990	315	265	196	590	1/2	6536RA
12		600#	JIS 40K	559	245	865	1195	Ø360	1070	1990	315	265	196	590	1/2	6536RA
13	8"	150#,300#	JIS 10K,20K	502	275	905	1195	Ø280	865	1615	275	165	108	590	1/2	6528RA
14					275	910	1240	Ø360	1070	1990	315	265	196	590	1/2	6536RA
15	10"	150#,300#	JIS 10K,20K	568	320	1010	1340	Ø360	1070	1990	315	265	196	590	1/2	6536RA
16	12"	150#,300#	JIS 10K,20K	648	370	1105	1435	Ø360	1070	1990	315	265	196	590	1/2	6536RA

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NOTE:

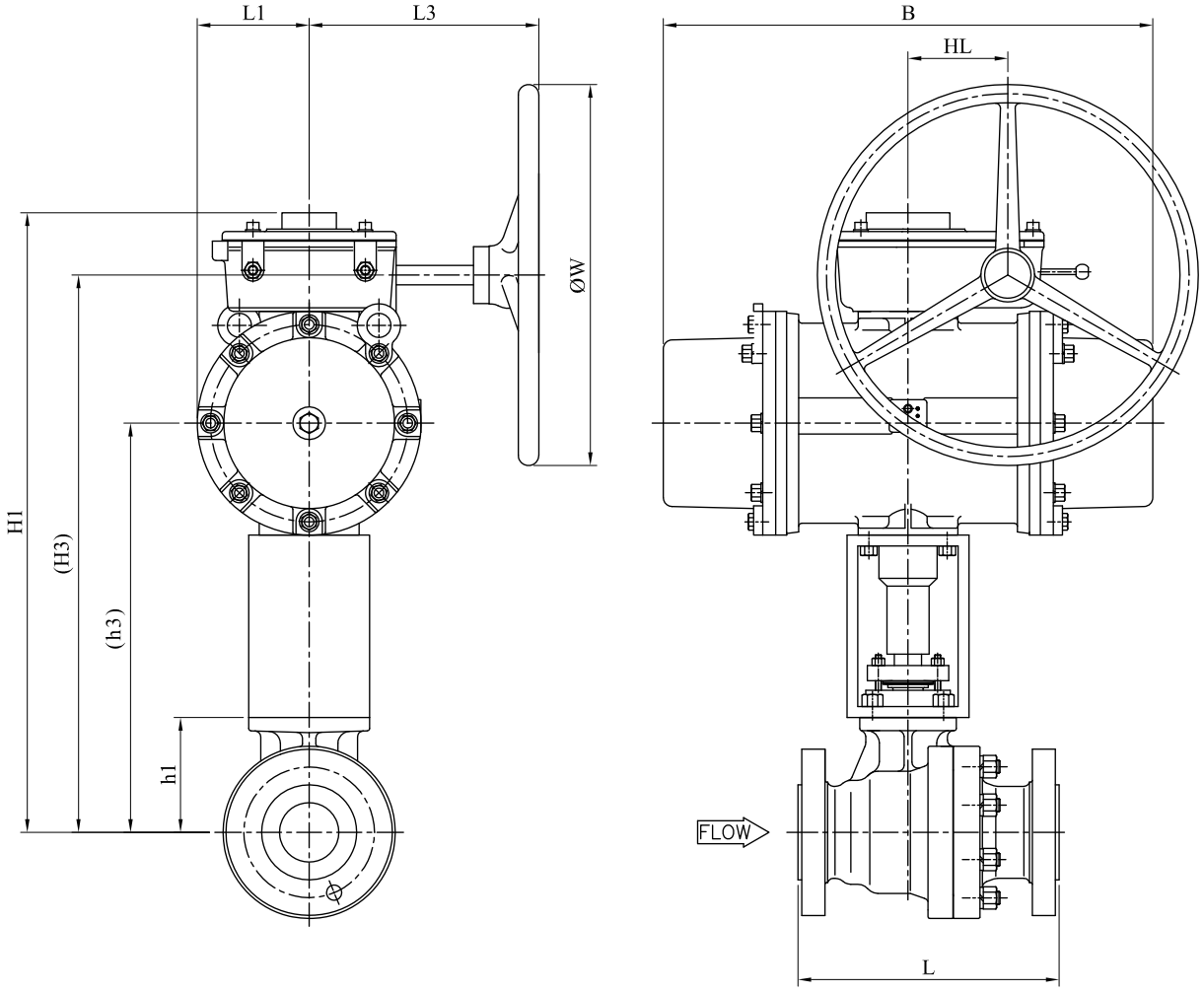
DRAWING No.

REV.

A

KOSO

BALL- VALVE *Spring return cylinder with Hand wheel*



DIMENSIONS

UNIT : mm

SL NO	VALVE SIZE	ANSI Class (RF)	JIS (RF)	L	h1	h3	H1	H3	ACTUATOR							
									CYL. SIZE	B	L1	L3	HL	W	G	CODE NO.
1	3"	150#,300#	JIS 10K,20K	283	135	595	935	830	Ø280	630	185	380	165	630	3/8	7328RA
2					135	675	1040	960	Ø375	815	240	467	269	630	3/8	7337RA
3		600#	JIS 40K	356	152	645	985	880	Ø280	630	185	380	165	630	3/8	7328RA
4					152	730	1090	1010	Ø375	815	240	467	269	630	3/8	7337RA
5	4"	150#,300#	JIS 10K,20K	356	180	685	1020	920	Ø280	630	185	380	165	630	3/8	7328RA
6					180	775	1130	1050	Ø375	815	240	467	269	630	3/8	7337RA
7		600#	JIS 40K	432	190	805	1155	1075	Ø375	815	240	467	269	630	3/8	7337RA
8	6"	150#,300#	JIS 10K,20K	457	235	960	1320	1240	Ø375	815	240	467	269	630	3/8	7337RA
9	8"	150#,300#	JIS 10K,20K	502	275	985	1335	1255	Ø375	815	240	467	269	630	3/8	7337RA

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NOTE:

DRAWING No.

REV.

A

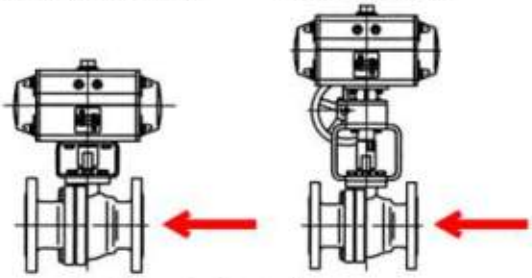
KOSO

6300RB/300W 配管取付姿勢図 複動形・単動形

MOUNTING FORM Double acting and Spring return type

ハンドル無し
Without Handle

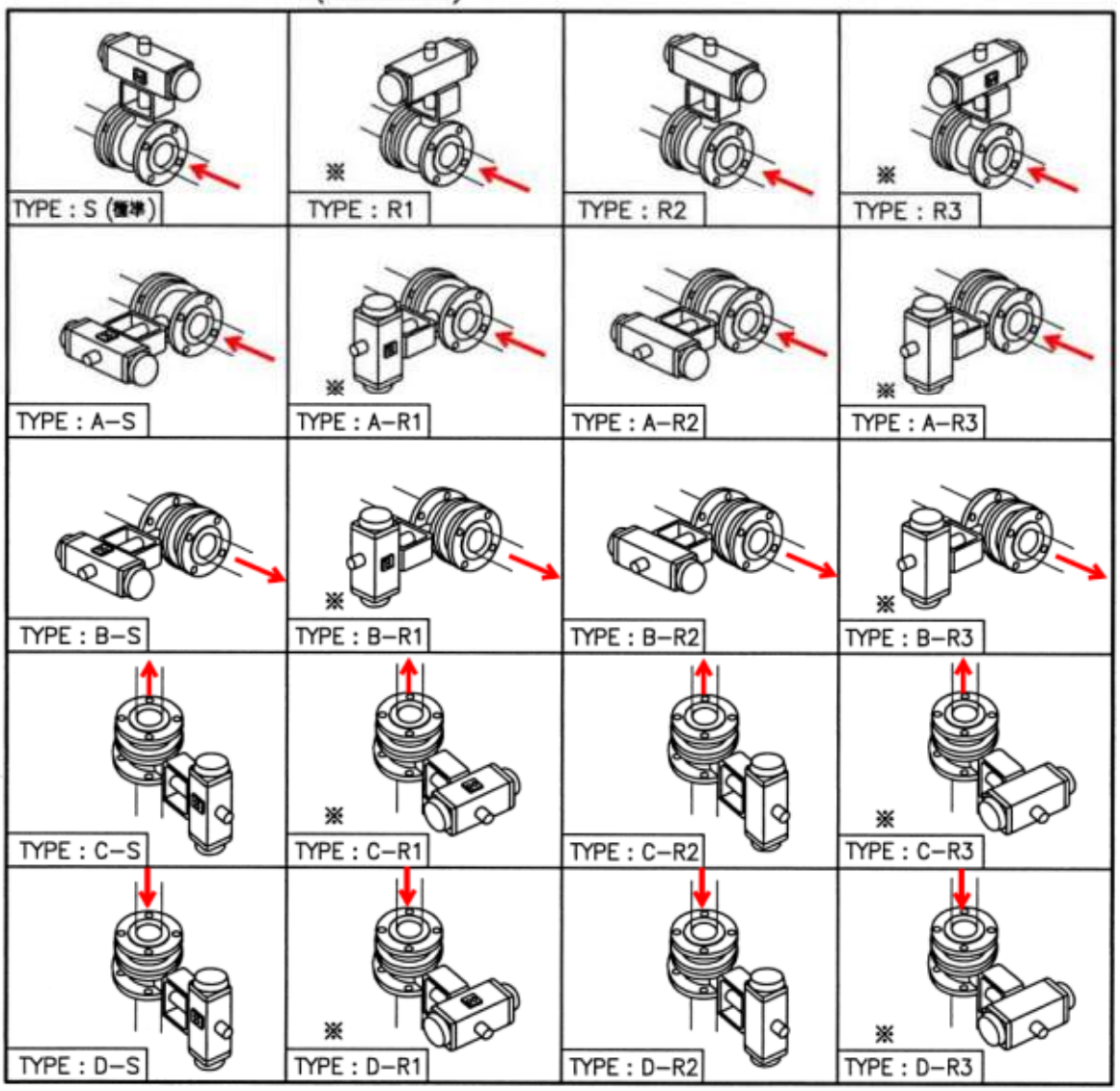
ハンドル付き
With Handle



TYPE : S (標準)
(Standard)

ハンドル付きのTYPE : R1およびR3
グループ(※印)は取付けは出来ません。

Type R1, A–R1, B–R1, C–R1, D–R1 and type R3, A–R3, B–R3, C–R3, D–R3 are not applicable for the Actuator with Hand wheel.



備 考
Remarks

ステムが真下になる、逆さ取付は避けて下さい。
Please do not mount the valve unit upside down.

→ の矢印は流れ方向を示します。
→ Indicates the flow direction.

REV.	
A1	KOSO
30/04/2008	

APPLICATIONS

POWER

- Boiler Drains
- Startup Vents
- Electronic Relief Valves
- Feedwater Isolation
- Turbine Bypass Systems
- Continuous Boiler Blowdown
- Gauge Glass Drains
- Above & Below Seat Drains
- Boiler Feedpump Recirculation Valves
- Attemporator Spray Control
- Sight Glass Drains
- Above & Below Seal Drains
- Boiler Feedpump Recirculation Valves
- Attemporator Spray Control
- Soot Blower Regulators
- Steam Dump Valves
- Ash Handling Valves
- Main Steam Stop Valves
- Seal Steam Regulators
- Turbine Drain Valves
- Instrument Isolation Valves
- Feedwater Heater Drains

Our design department is focused on creating solutions for your process applications

HYDROCARBONS

Coker Applications:
- Switching Valves
- Feed Isolation Valves
- Overhead Vapor Line Valves
- Cutting Water Isolation Valves

FCCU Applications:
- Catalyst Handling Valves
- Slurry Isolation & Control Valves
- Steam Valves

CCR Applications:
- Lockhopper Feed Valves

H-Oil Upgrading & LC Fining Applications:
- Catalyst Addition & Withdrawal
- Filter and Pump Isolation Valves
- Overhead Vapor Isolation & Control Valves
- High Delta-P Isolation & Control Valves

Ethylene Applications:
- Steam Decoke Isolation Valves
- Furnace Isolation Valves
- Steam Vent Valves
- Quench Oil Isolation & Control Valves

Polyethylene Applications:
- Isolation Valves
- High Cycle (PTO) Valves
- Reactor Block Valves

APPLICATIONS

MINING

Slurry Transportation Systems:
Pump Discharge Isolation
Pipeline Valve Stations
Rupture Disk Isolation

Mineral Concentrators:
Thickener Underflow Block Valves
Filter Press Manifold Valves
Slurry Transfer Systems
PRV Isolation Valves

Autoclaves:
Vessel Feed & Discharge
Acid Injection
Gas Injection
Steam Injection

Roasters:
Oxygen Feed
Inspection Port

Waste Disposal:
Paste Backfill Distribution
Tailing Distribution

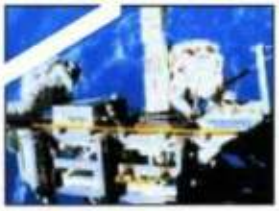
PULP & PAPER

Boiler Vent & Drain Valves
Liquor Isolation & Control
Rapid Drain Valves
Steam Isolation Valves
Sky Valves
Dryer Pressure Control
Digester Steam Control
Lime Mud Isolation & Control

OIL & GAS

Steam & Water Injection Valves
Wellhead Choke Isolation Valves
SAGD Isolation Valves
Compressor Recycle Valves
Pig Launcher & Receiver Valves
ESD Valves
Vent to Flare Valves
Sour Gas Isolation & Control Valves
Cryogenic Valves

AEROSPACE



Vacuum Chamber Isolation Valves
Combustion Testing Isolation
& Control Valves
Cryogenic Fluid Isolation Valves

APPLICATIONS