

**STANDARD SPECIFICATION**

# ***DAMPER VALVES***

**KOREA CONTROL Co., Ltd.**

179-3, Gojan-dong, Namdong-gu, Incheon, Korea(405-816)

TEL : +82-32-322-5100

FAX : +82-32-431-5060

E-mail : cando001@naver.com

Website : www.koreacontrol.co.kr



**Hologram shall be put on all products manufactured in the factory.**



**600S Light Duty Damper Type Butterfly Valves**

**GENERAL**

The valve body and the disc of the 600S Series Butterfly Valves are made of machined steel plates. This allows light and simple construction. Typical applications are flow / pressure controls of low-pressure air and gas. High temperature fluid at low pressure levels can also be accommodated inexpensively and easily.

**STANDARD SPECIFICATIONS**

**BODY**

Series	DAMPER VALVE	
Body size	3"~60"(80A~1500A) The largest size manufactured : 160"(4000mm)	
Disc form	Damper type (See Fig. 2-1) 15deg Sealed type (See Fig. 2-2) Back Seat type (See Fig. 2-3)	
Flange ratings	JIS 2K, 5K, 10K	ANSI Class 125, 150
Body connections	Flanged	
Face to Face dimension	See pages 12~23.	
Main part materials	See Table	
Bearing type for Stem	BODY SIZE 22" AND UNDER Inner bearing type : -5~+600°C Outer bearing type : -5~+600°C BODY SIZE 24" AND OVER Outer bearing type : -5~+600°C	
Packing	Teflon-Asbestos : -5~+200°C Grafoil : -5~+600°C	
Painting color	Silver (Epoxy resin group) is standard. In the case of stainless steel body, no painting is standard.	



ACTUATOR

Actuator Type	Diaphragm type 5200TA	Pneumatic Cylinder type 6300RA, 7300RA	
Specification	Multi-spring type	Spring return type	Double acting type
Purpose	Modulation or On-Off		
Air supply (Spring range) kPa [gaug]	300 (80~200) 340 (80~200) 340 (120~300)	300, 400, 500	
Air piping connection	See pages 12~15.		
Action	Direct action	Air to valve shut	Signal increase: Valve shut or open
	Reverse action	Air to valve open	
Hysteresis	≤ 1% of FS with positioner	≤ 1.5% of full stroke with positioner	
Linearity	≤ ±2% of FS with positioner	≤ ±2% of full stroke with positioner	
Ambient Temp.	-10~+70°C	-20~+60°C	
Painting	Munsell N-6 (Epoxy resin group)	7300RA : Munsell N-6 (Epoxy resin group) 6300RA : Cylinder ... Hard aroclor coating End cap ... Blue	
Option	E/P-P-Positioner, Air-set, Solenoid valve, Limit switch, Position transmitter, Speed controller, Lock valve, Lock-up valve, Rotation stopper, Manual handle, etc.		

PERFORMANCE

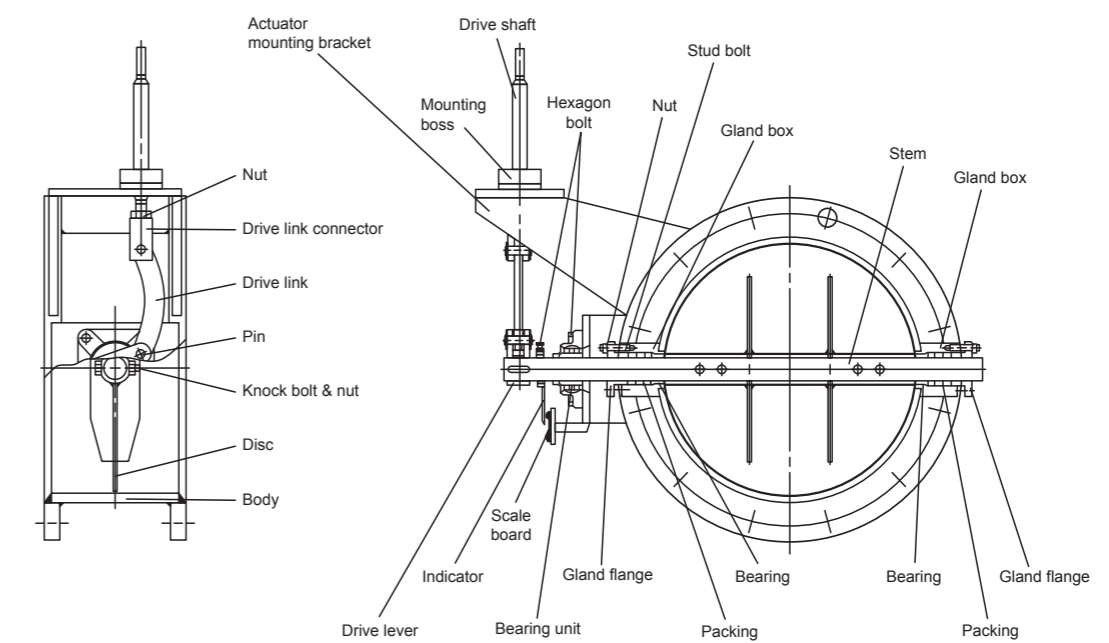
Rated Cv	See Table 2.
Flow characteristics	Inherent characteristic : See Fig. 3.
Rangeability	See Fig. 3.
Seat Leakage	See Fig. 2.
Allowable pressure drops	See Table 3.

OPTIONAL SPECIAL SPECIFICATIONS (Additional cost is required)

Special testing for Body	Material certificate, Liquid penetrant testing, Radiographic testing.
Special cleaning for Body	Oxygen clean, Oil-free, Water-free.
Special specification for Body and Actuator	Sand and Dust proof, Salty environment proof, Cold area proof, Tropical area proof, Do not use copper alloy, Vacuum service proof, Special piping and fitting, SUS bolt and nut for exposed parts, Non-standard painting.

Fig. 1 BODY ASSEMBLY SECTION VIEW FOR DIAPHRAGM ACTUATOR

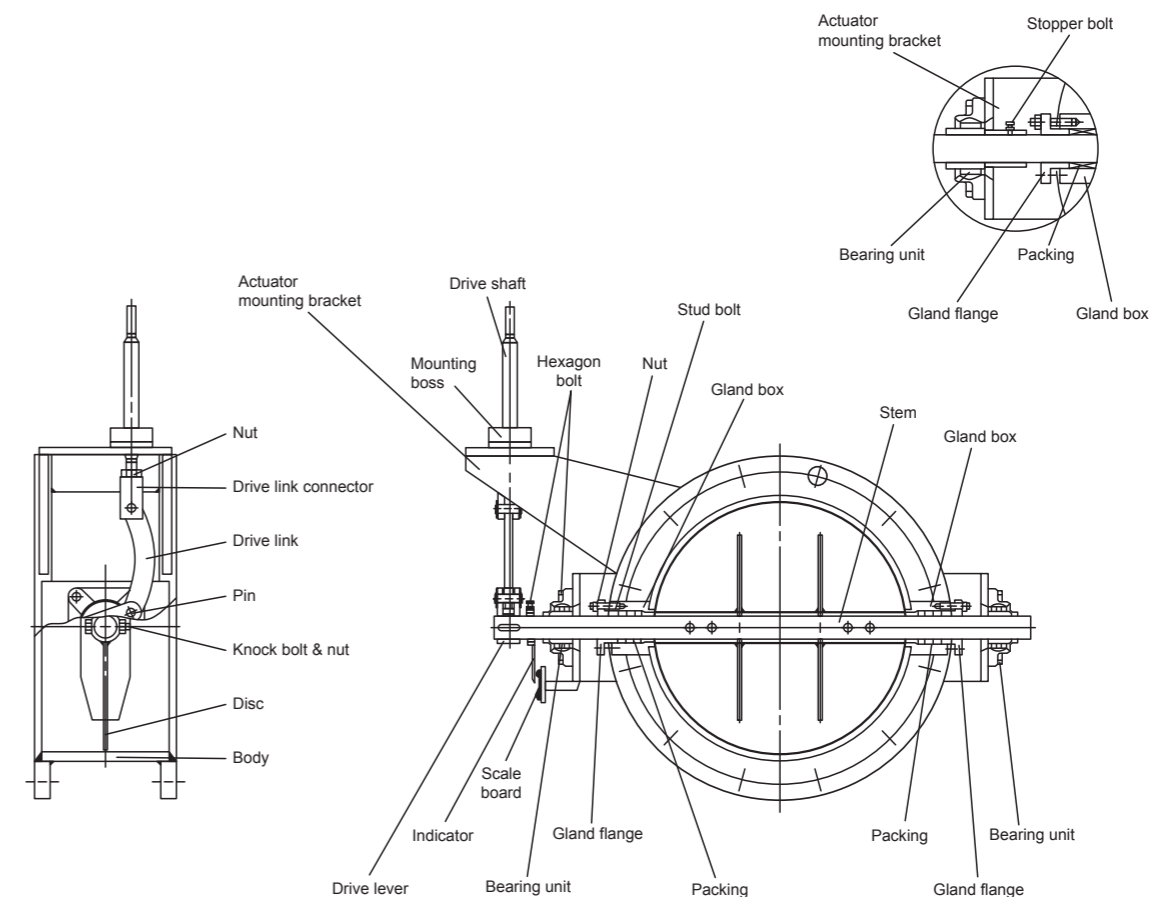
Fig. 1-1 INNER BEARING TYPE



Please mount the valve so that stem will be horizontal.

Fig. 1-2 OUTER BEARING TYPE

OUTER BEARING TYPE FOR FLUID TEMP. 400°C AND OVER



Please mount the valve so that stem will be horizontal.

**Table 1 BODY/TRIM STANDARD MATERIAL COMBINATION AND OPERATING TEMPERATURE**

Table 1-1 BODY SIZE 22" AND UNDER

Disc form	Bearing type (operating Temp.)	Materials						
		Body	Disc	Stem	Back seat	Body flange	Bearing	
Damper type	Inner bearing type (-5~+200°C)	SS400	SS400	SUS304	-	SS400	Reinforced Teflon	
			SUS304	SUS304	-	SS400		
		SUS304	SUS304	SUS304	-	SUS304		
			SUS316	SUS316	-	SS400		
			SUS316	SUS316	-	SUS304		
			SUS316	SUS316	-	SUS316		
	Outer bearing type (-5~+400°C)	SS400	SS400	SUS304	-	SS400	Standard type	
			SUS304	SUS304	-	SS400		
		SUS304	SUS304	SUS304	-	SUS304		
			SUS316	SUS316	-	SS400		
			SUS316	SUS316	-	SUS304		
			SUS316	SUS316	-	SUS316		
	Outer bearing type (-5~+600°C)	SUS304	SUS304	SUS304	-	SUS304	Oil-less	
			SUS316	SUS316	-	SUS304		
		SUS316	SUS316	-	SUS316			
	15deg sealed type	Inner bearing type (≤6": -5~150°C) (≤8": -5~100°C)	SS400	SS400	SUS304	-	SS400	Reinforced Teflon
				SUS304	SUS304	-	SS400	
			SUS304	SUS304	SUS304	-	SUS304	
SUS316				SUS316	-	SS400		
SUS316				SUS316	-	SUS304		
SUS316				SUS316	-	SUS316		
Back seat type	Inner bearing type (-5~+200°C)	SS400	SS400	SUS304	SS400	SS400	Reinforced Teflon	
			SUS304	SUS304	SS400	SS400		
		SUS304	SUS304	SUS304	SUS304	SS400		
			SUS316	SUS316	SUS304	SS400		
			SUS316	SUS316	SUS304	SUS304		
			SUS316	SUS316	SUS316	SUS316		
	Outer bearing type (-5~+600°C)	SUS304	SUS304	SUS304	SUS304	SUS304	Oil-less	
			SUS316	SUS316	SUS304	SUS304		
		SUS316	SUS316	SUS316	SUS316	SUS316		
			SUS316	SUS316	SUS316	SUS316		

Table 1-2 BODY SIZE 24" AND OVER

Disc form	Bearing type (operating Temp.)	Materials						
		Body	Disc	Stem	Back seat	Body flange	Bearing	
Damper type	Outer bearing type (-5~+400°C)	SS400	SS400	SUS304	-	SS400	Standard type	
			SUS304	SUS304	-	SS400		
		SUS304	SUS304	SUS304	-	SUS304		
			SUS316	SUS316	-	SS400		
			SUS316	SUS316	-	SUS304		
			SUS316	SUS316	-	SUS316		
	Outer bearing type (-5~+600°C)	SUS304	SUS304	SUS304	-	SUS304	Oil-less	
			SUS316	SUS316	-	SUS304		
		SUS316	SUS316	SUS316	-	SUS316		
			SUS316	SUS316	-	SUS316		
15deg sealed type	Outer bearing type (-5~+100°C)	SS400	SS400	SUS304	-	SS400	Standard type	
			SUS304	SUS304	-	SS400		
		SUS304	SUS304	SUS304	-	SUS304		
			SUS316	SUS316	-	SS400		
			SUS316	SUS316	-	SUS304		
			SUS316	SUS316	-	SUS316		
Back seat type	Outer bearing type (-5~+400°C)	SS400	SS400	SUS304	SS400	SS400	Standard type	
			SUS304	SUS304	SUS304	SS400		
		SUS304	SUS304	SUS304	SUS304	SUS304		
			SUS316	SUS316	SUS304	SS400		
			SUS316	SUS316	SUS304	SUS304		
			SUS316	SUS316	SUS316	SUS316		
	Outer bearing type (-5~+600°C)	SUS304	SUS304	SUS304	SUS304	SUS304	Oil-less	
			SUS316	SUS316	SUS304	SUS304		
		SUS316	SUS316	SUS316	SUS316	SUS316		
			SUS316	SUS316	SUS316	SUS316		

Table 2 Cv VALUE

Valve size Inch (mm)	Cv at 60° disc opening			Cv at 90° disc opening		
	Disc form			Disc form		
	Damper type	15° sealed type	Back seat type	Damper type	15° sealed type	Back seat type
3 (80)	158	150	-	320	320	-
4 (100)	278	265	-	560	560	-
5 (125)	425	420	295	900	900	585
6 (150)	610	585	430	1280	1280	845
8 (200)	1040	1010	750	2300	2300	1500
10 (250)	1700	1630	1375	3500	3500	2550
12 (300)	2480	2400	1980	5200	5200	3900
14 (350)	3300	3200	2690	6800	6800	5500
16 (400)	4350	4200	3600	9000	9000	7400
18 (450)	5500	5300	4450	11000	11000	9100
20 (500)	6800	6500	5500	14000	14000	11500
22 (550)	8200	7800	6900	17500	17500	14000
24 (600)	9800	9300	8300	20500	20500	17000
26 (650)	12000	10900	10000	24000	24000	20500
28 (700)	14000	12600	11300	28000	28000	23900
30 (750)	16200	14500	13100	32000	32000	27800
32 (800)	17300	16500	14600	36400	36400	31900
34 (850)	19500	18600	16600	41000	41000	36000
36 (900)	23000	20900	19000	46000	46000	41000
40 (1000)	27000	25000	24800	57000	57000	49000
44 (1100)	34000		30000	68000		61000
48 (1200)	39000		35700	81000		73000
52 (1300)	46000		41900	95000		85600
54 (1350)	49200		45200	103500		92300
60 (1500)	61000		57000	125000		115000

Fig. 2 DISC FORM AND SEAT LEAKAGE

Valve size Inch (mm)	SEAT LEAKAGE ≤ Cv AT 90 DEG DISC OPENING × OPENING × % BELOW		
3 (80)	5.0%	0.5%	2.0%
4~10 (100~250)	3.5%	0.45%	2.0%
12~18 (300~450)	3.0%	0.4%	2.0%
20~30 (500~750)	2.0%	0.3%	1.0%
32~60 (800~1500)	1.5%	0.2%	1.0%

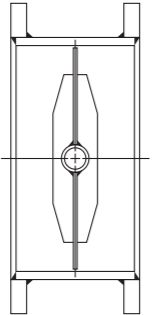
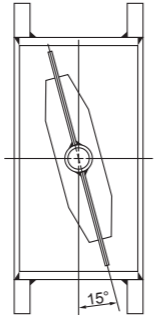
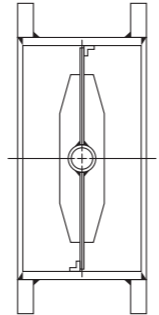
Disc form	Fig. 2-1 DAMPERTYPE	Fig. 2-2 15 DEG SEALED TYPE	Fig. 2-3 BACK SEAT TYPE
			

Fig. 3 FLOW CHARACTERISTICS

Fig. 3-1 DAMPER TYPE

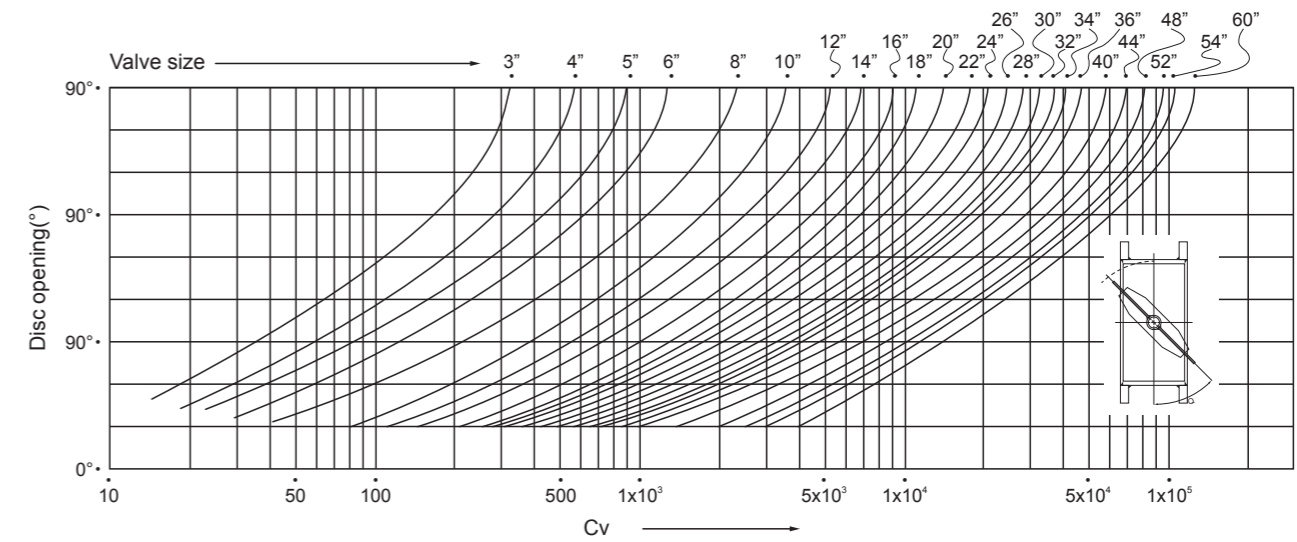


Fig. 3-2 15 DEG SEALED TYPE

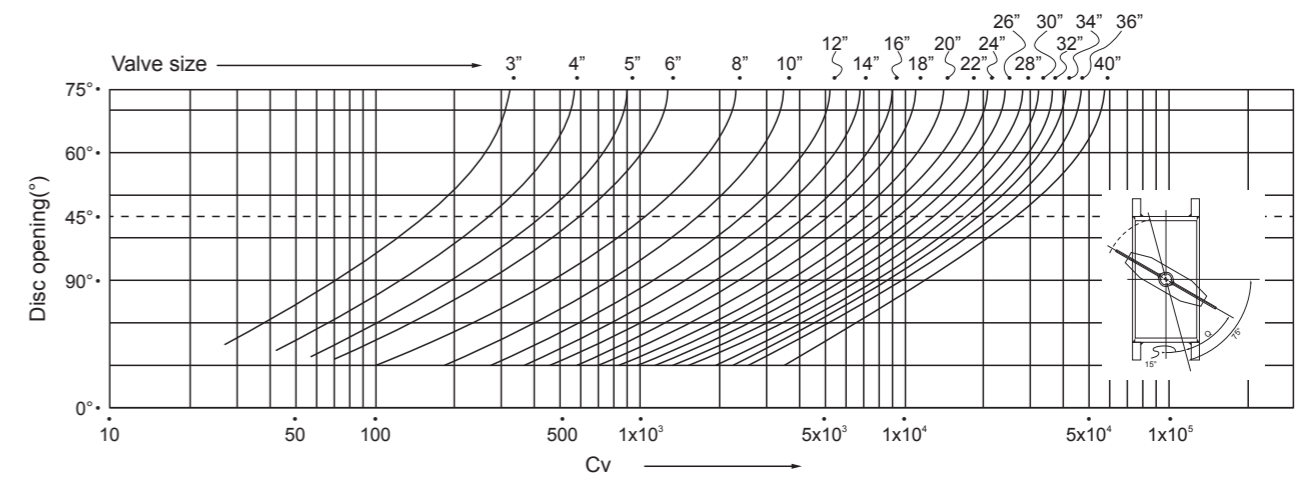
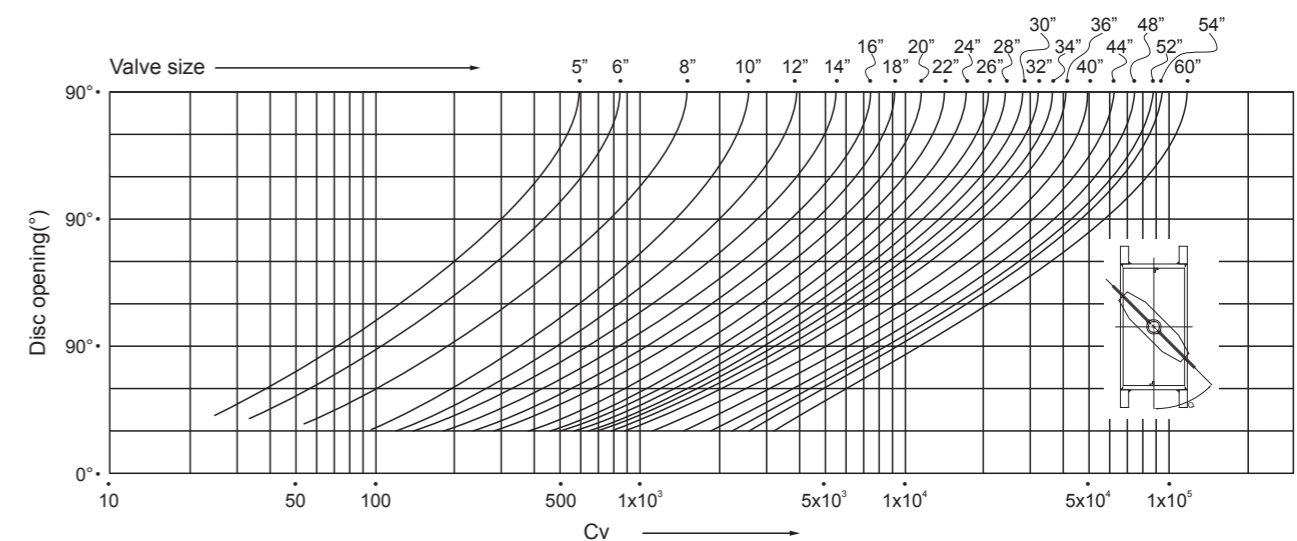
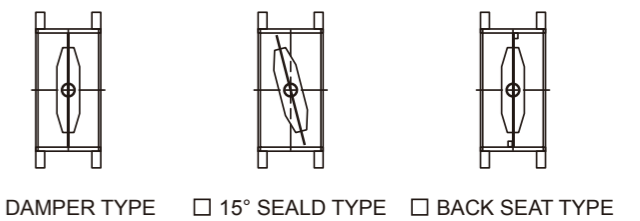
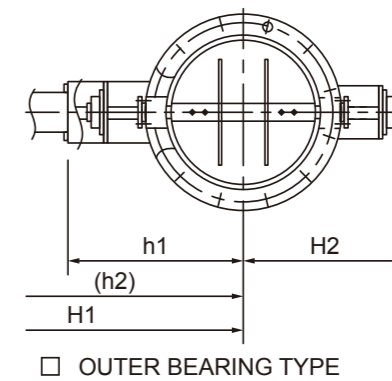
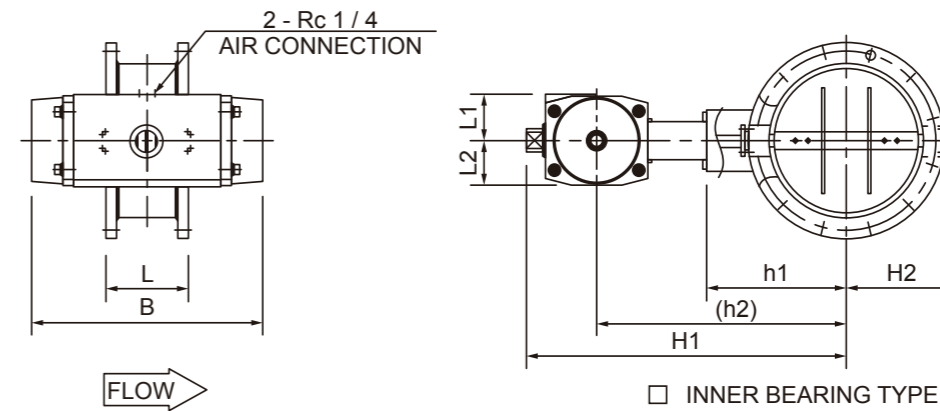
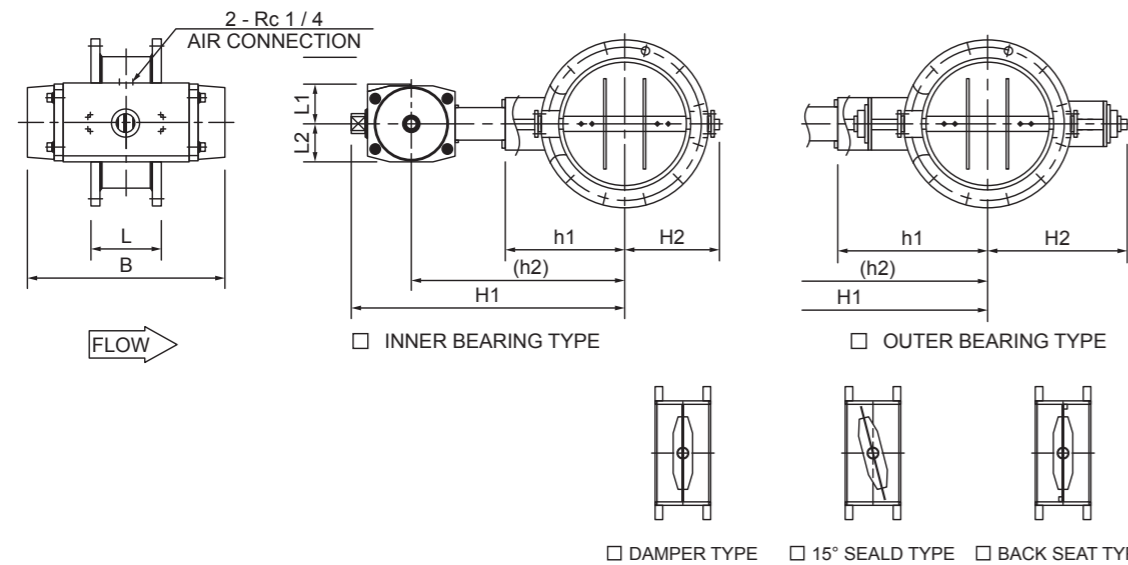


Fig. 3-3 BACK SEAT TYPE





## DIMENSIONS

UNIT : mm

VALVE SIZE	□ JIS 5KFF			□ JIS 10KRF			□ ANSI 150#RF			ACTUATOR					
	CODE NO.	L	□ INNER BEARING TYPE				□ OUTER BEARING TYPE				Cylinder Size	B	L1	L2	CODE No.
			h1	h2	H1	H2	h1	h2	H1	H2					
03 □ 3" (80A)	200	160	330	400	135	315	485	555	285	□ KP75	202	49	43	KP Series	
			335	410			490	565		□ KP88	230	53	49	KP Series	
			375	455			530	610		□ KP100	271	63	55	KP Series	
04 □ 4" (100A)	200	175	345	415	140	325	500	570	295	□ KP75	202	49	43	KP Series	
			350	425			505	580		□ KP88	230	53	49	KP Series	
			390	470			540	625		□ KP100	271	63	55	KP Series	
05 □ 5" (125A)	200	195	365	435	160	340	510	580	310	□ KP75	202	49	43	KP Series	
			370	445			515	590		□ KP88	230	53	49	KP Series	
			410	490			555	635		□ KP100	271	63	55	KP Series	
06 □ 6" (150A)	200	210	385	460	170	360	535	610	330	□ KP88	230	53	49	KP Series	
			425	505			575	655		□ KP100	271	63	55	KP Series	
			455	560			605	710		□ KP125	360	73	70	KP Series	
08 □ 8" (200A)	200	240	415	490	195	385	560	635	355	□ KP88	230	53	49	KP Series	
			455	535			600	680		□ KP100	271	63	55	KP Series	
			485	590			630	735		□ KP125	360	73	70	KP Series	
10 □ 10" (250A)	200	300	475	550	220	420	595	670	390	□ KP88	230	53	49	KP Series	
			515	595			635	715		□ KP100	271	63	55	KP Series	
			545	650			665	770		□ KP125	360	73	70	KP Series	
			590	740			710	860		□ KP145	464	91	88	KP Series	
12 □ 12" (300A)	200	325	500	575	245	440	615	690	410	□ KP88	230	53	49	KP Series	
			540	620			655	735		□ KP100	271	63	55	KP Series	
			570	675			685	790		□ KP125	360	73	70	KP Series	
			615	765			730	880		□ KP145	464	91	88	KP Series	
14 □ 14" (350A)	200	345	560	640	270	465	680	760	440	□ KP100	271	63	55	KP Series	
			590	695			710	815		□ KP125	360	73	70	KP Series	
			635	785			755	905		□ KP145	464	91	88	KP Series	
16 □ 16" (400A)	200	380	595	675	295	505	720	800	480	□ KP100	271	63	55	KP Series	
			625	730			750	855		□ KP125	360	73	70	KP Series	
			670	820			795	945		□ KP145	464	91	88	KP Series	
18 □ 18" (450A)	200	410	625	705	315	530	745	825	510	□ KP100	271	63	55	KP Series	
			655	760			775	880		□ KP125	360	73	70	KP Series	
			700	850			820	970		□ KP145	464	91	88	KP Series	

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

## DIMENSIONS

UNIT : mm

VALVE SIZE	□ JIS 5KFF			□ JIS 10KRF			□ ANSI 150#RF			ACTUATOR					
	CODE NO.	L	□ INNER BEARING TYPE				□ OUTER BEARING TYPE				Cylinder Size	B	L1	L2	CODE No.
			h1	h2	H1	H2	h1	h2	H1	H2					
20 □ 20" (500A)	250	440	685	790	355	580	825	930	550	□ AT40	360	73	70	63A4RA	
			730	880			870	1020		□ AT40	464	91	88	63A5RA	
22 □ 22" (550A)	250	475	720	825	385	610	855	960	580	□ AT40	360	73	70	63A4RA	
			765	915			900	1050		□ AT40	464	91	88	63A5RA	
24 □ 24" (600A)	250	-	-	-	-	635	880	985	605	□ AT40	360	73	70	63A4RA	
			-	-			925	1075		□ AT40	464	91	88	63A5RA	
26 □ 26" (650A)	300	-	-	-	-	660	905	1010	630	□ AT40	360	73	70	63A4RA	
							950	1100		□ AT40	464	91	88	63A5RA	
28 □ 28" (700A)	300	-	-	-	-	690	980	1130	660	□ AT40	464	91	88	63A5RA	
30 □ 30" (750A)	300	-	-	-	-	725	1015	1165	700	□ AT40	464	91	88	63A5RA	
32 □ 32" (800A)	300	-	-	-	-	780	1070	1220	730	□ AT40	464	91	88	63A5RA	

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