

DAMPER VALVE

Light duty damper type
Butterfly valve

MODEL: KCV-501D Series



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General

The model **KCV-501D**,

In this series, both the valve body and disc are made of steel plate, Which brings about lightweight and simplified construction. This butterfly valve is suited to controlling flow and pressure of such fluids as low-pressure air and gases. Adjustment to high temperature is also relatively easy.

KCV-501D Butterfly Damper Valve is suitable for many different applications:

- Fluids: air, gas and fumes
- CHP and Incineration Plants
- Biomass and Biogas and Renewable Energy Plants
- Steel Industry and Furnaces
- Glass Industry, - Cement Plants, - Power Plants, - Heat recovery systems
- Boilers and Burners, - Chemical Industry, - Oil and Gas etc.

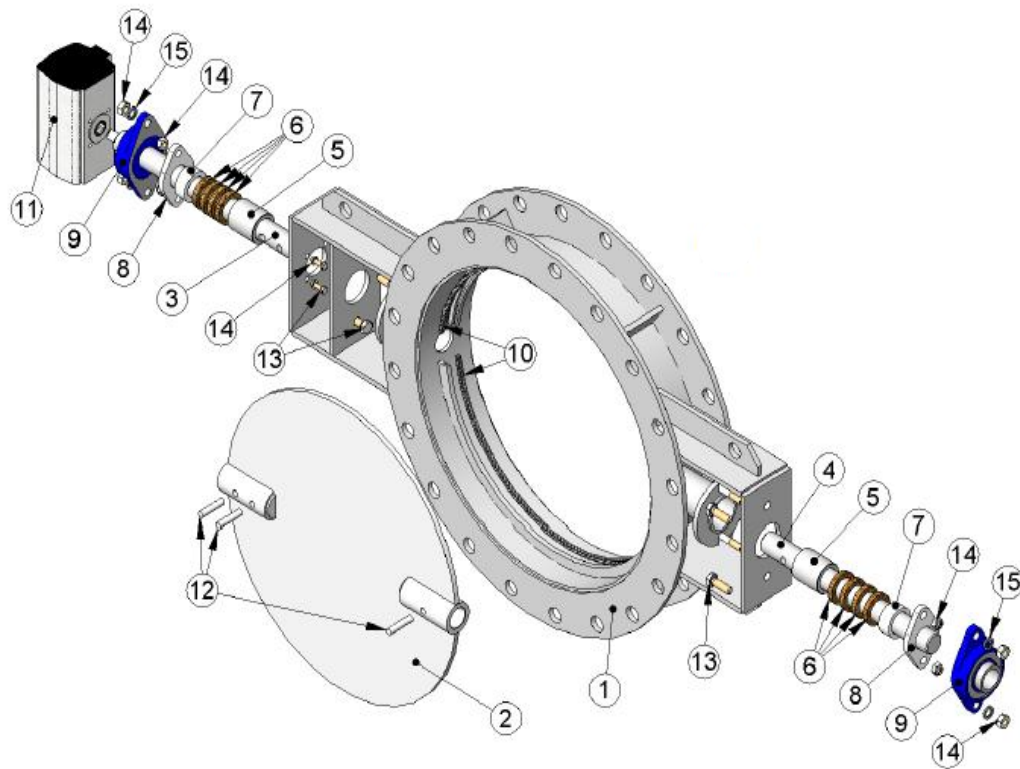


KCV-501D Damper type Butterfly valve

Standard specifications

Valve Model		KCV-501D (Damper type Butterfly valve)	
Valve Type		Cylinder actuator operated Damper valve	
BODY	Valve Size	3" ~ 60" (80A ~ 1500A)	
	Pressure Rating	ANSI 125#, 150# / JIS 2K, 5K, 10K, Others	
	End Connection	Flange End : RF, FF etc.	
	Flange Material	SS275(SS400), SUS304, SUS316	
	Body Material	SPHC(SS400), SUS304, SUS316	
	Bearing type for stem	22"(550A) and under	Inner bearing type : -5 ~ +200°C Outer bearing type : -5 ~ +700°C
		24"(600A) and over	Outer bearing type : -5 ~ +700°C
	Packing	Teflon : -5 ~ +200°C Graphite(Grafoil) : -5 ~ +700°C	
PERFORMANCE	Rated Cv Value	See "Rated Cv Value" page 5	
	Flow characteristics	Inherent characteristic: See Fig. 3	
	Rangeability	Damper standard : 15 : 1	
	Allowable seat leak ratio	See " Disc type and seat leakage" page 5	
ACTUATOR	Type	Spring return type / Double acting Cylinder type	
	Air supply(Spring range) Mpa	0.4, 0.5 (0 ~ 0.4, 0~0.5)	
	Hysteresis	Max. 1.5% of full stroke with positioner	
	Linearity	Max. 2.0 % of full stroke with positioner	
	Ambient temp	-20 ~ 70°C	
	Air connection	Rc 1/4", RC 3/8" etc.	
	Painting color	Maker standard	
	Accessory	Air set, Solenoid valve, Speed controller, Lock-Up valve, Limit switch & Box, Booster Relay, Proximity switch, Silencer, Manual handle, etc.	

Structure



Standard components List

No	①	②	③	④	⑤	⑥	⑦	⑧
Main part name	Body	Disc	shaft	shaft	Spacer	Gasket	Guide Holder	Gland flange
No	⑨	⑩	⑪	⑫	⑬	⑭	⑮	
Main part name	Support with bearing	Seal(Optional)	Actuator	Pin	Bolt	Nut	Washer	

Body / Disc material combination and Operating temperature

● Damper Valve Size 22”(550A) and under

Disc type	Bearing type (Operating temperature)	Material					
		Body	Disc	Stem	Back seat	Flange(JIS)	Flange(ANSI)
Damper type	Inner bearing type (-5 ~ 200°C)	SPHC	SPHC	SUS304	-	SS275	A105
			SUS304	SUS304		SS275	A105
		SUS304	SUS304	SUS304	-	SS275	A105
			SUS304	SUS304	-	SUS304	F304
			SUS316	SUS316	-	SS275	A105
			SUS316	SUS316		SUS304	F304
		SUS316	SUS316	SUS316	-	SUS316	F316
	Outer bearing type (-5 ~ 400°C)	SPHC	SS400	SUS304	-	SS275	A105
			SUS304	SUS304	-	SS275	A105
		SUS304	SUS304	SUS304	-	SS275	A105
			SUS316	SUS316	-	SS275	A105
	Outer bearing type (-5 ~ 700°C)	SUS304	SUS304	SUS304		SUS304	F304
			SUS316	SUS316	-	SUS304	F304
		SUS316	SUS316	SUS316	-	SUS316	F316

Back seat type	Inner bearing type (-5 ~ 200°C)	SPHC	SPHC	SUS304	SPHC	SS275	A105
			SUS304	SUS304	SPHC	SS275	A105
		SUS304	SUS304	SUS304	SUS304	SS275	A105
			SUS304	SUS304	SUS304	SUS304	F304
			SUS316	SUS316	SUS304	SS275	A105
			SUS316	SUS316	SUS304	SUS304	F304
		SUS316	SUS316	SUS316	SUS316	SUS316	F316
	Outer bearing type (-5 ~ 700°C)	SUS304	SUS304	SUS304	SUS304	SUS304	F304
			SUS316	SUS316	SUS304	SUS304	F304
		SUS316	SUS316	SUS316	SUS316	SUS316	F316

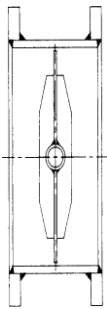
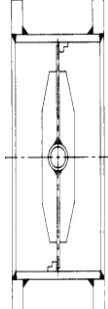
● Damper Valve Size 24”(600A) and Over

Disc type	Bearing type (Operating temperature)	Material					
		Body	Disc	Stem	Back seat	Flange(JIS)	Flange(ANSI)
Damper type	Outer bearing type (-5 ~ 400°C)	SPHC	SPHC	SUS304	-	SS275	A105
			SUS304	SUS304	-	SS275	A105
		SUS304	SUS304	SUS304		SS275	A105
			SUS316	SUS316		SS275	A105
	Outer bearing type (-5 ~ 700°C)	SUS304	SUS304	SUS304		SUS304	F304
			SUS316	SUS316	-	SUS304	F304
Back seat type	Outer bearing type (-5 ~ 400°C)	SPHC	SPHC	SUS304	SPHC	SS275	A105
			SUS304	SUS304	SPHC	SS275	A105
		SUS304	SUS304	SUS304	SUS304	SS275	A105
			SUS316	SUS316	SUS304	SS275	A105
	Outer bearing type (-5 ~ 700°C)	SUS304	SUS304	SUS304	SUS304	SUS304	F304
			SUS316	SUS316	SUS304	SUS304	F304
		SUS316	SUS316	SUS316	SUS316	SUS316	F316

Rated Cv Value

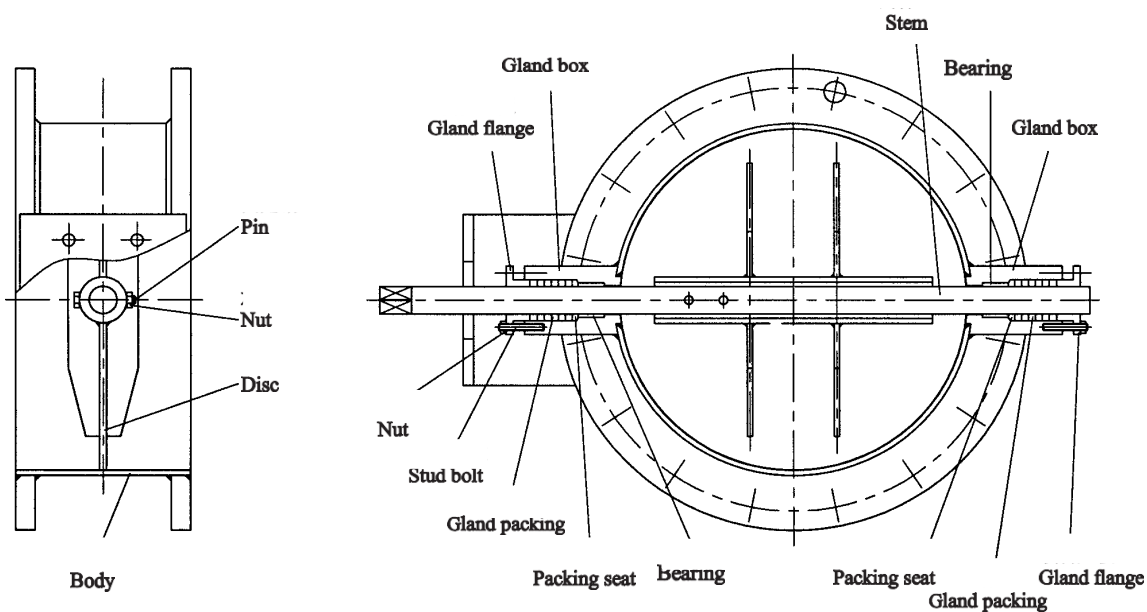
Valve Size inch (mm)	Cv at 60° disc opening		Cv at 90° disc opening	
	Damper type	Back seat type	Damper type	Back seat type
3" (80A)	158	-	320	-
4" (100A)	278	-	560	-
5" (125A)	425	295	900	585
6" (150A)	610	430	1280	845
8" (200A)	1040	750	2300	1500
10" (250A)	1700	1375	3500	2550
12" (300A)	2480	1980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

Disc type and Seat leakage

Valve Size Inch (mm)	Seat leakage ≤CV at 90° Disc opening x % below	
	Damper type	Back seat type
3" (80A)	5%	2.0%
4~10" (100 ~ 250A)	3.5%	2.0%
12~18" (300 ~ 450A)	3.0%	2.0%
20 ~ 30" (500 ~ 700A)	2.0%	1.0%
32 ~ 60" (800 ~ 1500A)	1.5%	1.0%
Disc type	Damper type	Back seat type
		

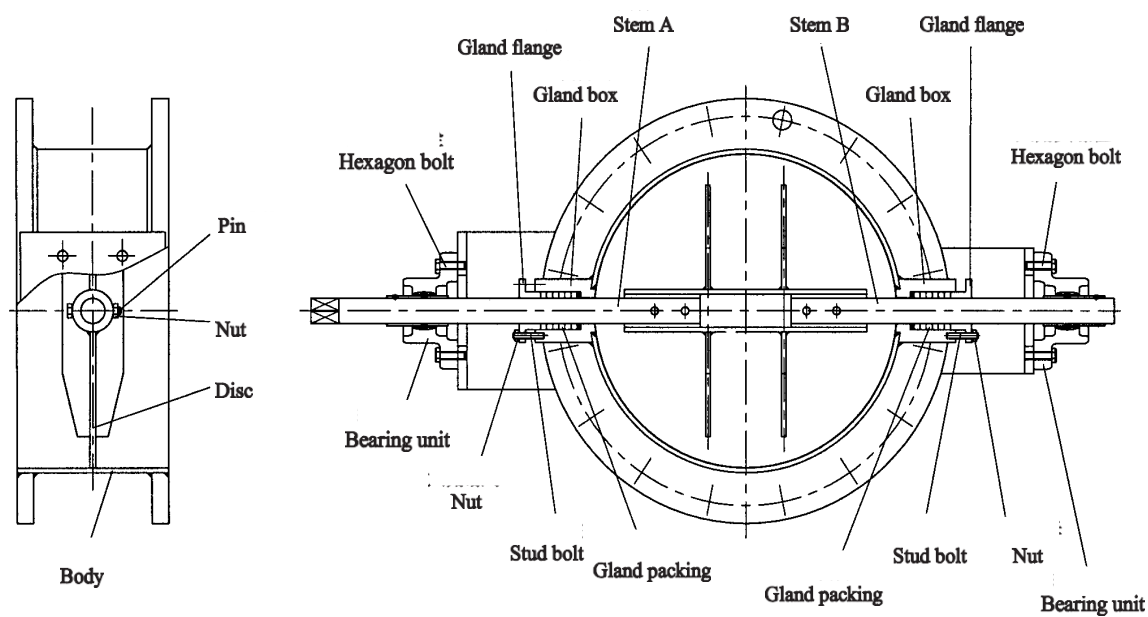
Body section view

● Inner bearing type



- Please mount the valve so that stem will be horizontal

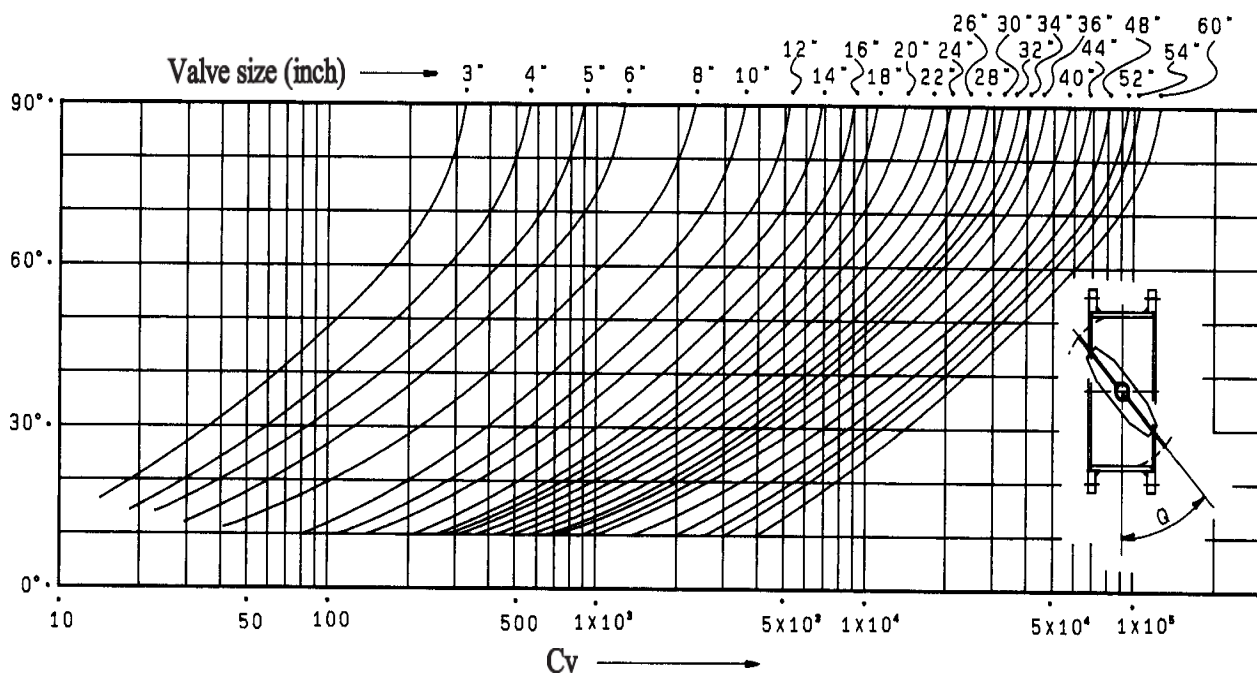
● Outer bearing type



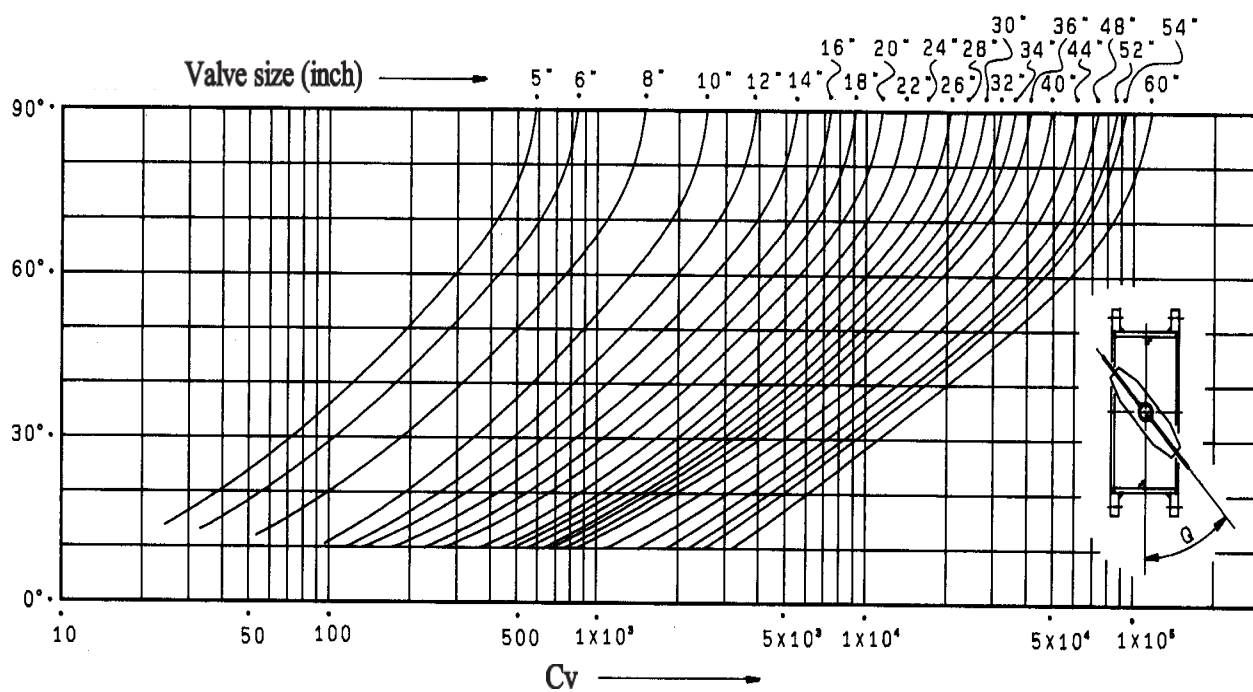
- Please mount the valve so that stem will be horizontal

Flow characteristics

Damper type



Back seat type



Allowable pressure drop for Cylinder actuator

Double acting type Cylinder Actuator (Model : KAR series)

- KCV-501D Damper type Air supply : 4.0 Bar
- Case of 60° Disc Opening

Valve Size inch (mm)	Allowable Shutoff pressure barG			Allowable pressure drop. (Bar) Packing : Teflon						
	Fluid Temp. °C			Actuator Size						
	<200	<400	<600	HP75	HP88	HP100	HP125	HP160	HP200	HP212
	Stem material SUS304, SUS316			AT201U	AT251U	AT301U	AT401U	AT501U	AT601U	AT701U
3B (80A)	4.9	1.59	1.19	2.39						
4B (100A)	4.9	0.940	0.705	1.21						
5B (125A)	3.92	0.607	0.450	0.622						
6B (150A)	2.79	0.784	0.617		0.590	0.978				
8B (200A)	1.9	0.460	0.343		0.248	0.378				
10B (250A)	0.97	0.264	0.196		1.09	1.93				
12B (300A)	0.558	0.166	0.127		0.63	1.12				
14B (350A)	0.607	0.176	0.137			0.70	0.169			
16B (400A)	0.411	0.137	0.098			0.047	0.113			
18B (450A)	0.284	0.107	0.078			0.033	0.079			
20B (500A)	0.499	0.225	0.166				0.053	0.109		
22B (550A)	0.372	0.176	0.147				0.040	0.082		
24B (600A)	0.156	0.156	0.117				0.031	0.063		
26B (650A)	0.137	0.137	0.098				0.024	0.049		
28B (700A)	0.117	0.117	0.088					0.039		
30B (750A)	0.264	0.264	0.186					0.032	0.066	
32B (800A)	0.235	0.235	0.176					0.027	0.055	
34B (850A)	0.205	0.205	0.147						0.045	
36B (900A)	0.186	0.186	0.127						0.037	
40B (1000A)	0.139	0.139	0.125						0.027	0.065
44B (1100A)	0.112	0.112	0.100							0.049
48B (1200A)	0.093	0.093	0.084							0.038
52B (1300A)	0.105	0.105	0.094							0.029
54B (1400A)	0.097	0.097	0.087							0.026
60B (1500A)	0.075	0.075	0.067							0.019

Double acting type Cylinder Actuator (Model : KAR series)

● KCV-501D Damper type Air supply : 4.0 Bar

- Case of 60° Disc Opening

Valve Size inch (mm)	Allowable Shutoff pressure barG			Allowable pressure drop. (Bar) Packing : Grafoil (Grphite)						
	Fluid Temp. °C			Actuator Size						
	<200	<400	<600	HP75	HP88	HP100	HP125	HP160	HP200	HP212
	Stem material SUS304, SUS316			AT201U	AT251U	AT301U	AT401U	AT501U	AT601U	AT701U
3B (80A)	4.9	1.59	1.19	1.08						
4B (100A)	4.9	0.940	0.705	0.56						
5B (125A)	3.92	0.607	0.450	0.46						
6B (150A)	2.79	0.784	0.617		0.507					
8B (200A)	1.9	0.460	0.343		0.214					
10B (250A)	0.97	0.264	0.196		0.074					
12B (300A)	0.558	0.166	0.127		0.043					
14B (350A)	0.607	0.176	0.137			0.058				
16B (400A)	0.411	0.137	0.098			0.038				
18B (450A)	0.284	0.107	0.078			0.027				
20B (500A)	0.499	0.225	0.166				0.047	0.102		
22B (550A)	0.372	0.176	0.147				0.035	0.077		
24B (600A)	0.156	0.156	0.117				0.027	0.059		
26B (650A)	0.137	0.137	0.098				0.021	0.047		
28B (700A)	0.117	0.117	0.088					0.037		
30B (750A)	0.264	0.264	0.186					0.030	0.064	
32B (800A)	0.235	0.235	0.176					0.025	0.053	
34B (850A)	0.205	0.205	0.147						0.045	
36B (900A)	0.186	0.186	0.127						0.037	
40B (1000A)	0.139	0.139	0.125						0.027	0.065
44B (1100A)	0.112	0.112	0.100							0.049
48B (1200A)	0.093	0.093	0.084							0.038
52B (1300A)	0.105	0.105	0.094							0.029
54B (1400A)	0.097	0.097	0.087							0.026
60B (1500A)	0.075	0.075	0.067							0.019

Spring return type Cylinder Actuator (Model : KAR series)

● **KCV-501D Damper type Air supply : 4.0 Bar**

- Case of 60° Disc Opening

Valve Size inch (mm)	Allowable Shutoff pressure barG			Allowable pressure drop. (Bar) Packing : Teflon					
	Fluid Temp. °C			Actuator Size					
	<200	<400	<600	HP88	HP100	HP125	HP160	HP200	HP212
	Stem material SUS304, SUS316			AT251U	AT301U	AT401U	AT501U	AT601U	AT701U
3B (80A)	4.9	1.59	1.19	0.619	1.36				
4B (100A)	4.9	0.940	0.705	0.317	0.683				
5B (125A)	3.92	0.607	0.450	0.163	0.351				
6B (150A)	2.79	0.784	0.617		0.200	0.533			
8B (200A)	1.9	0.460	0.343		0.85	0.225			
10B (250A)	0.97	0.264	0.196			0.097	0.229		
12B (300A)	0.558	0.166	0.127			0.058	0.132		
14B (350A)	0.607	0.176	0.137				0.083	0.171	
16B (400A)	0.411	0.137	0.098				0.056	0.115	
18B (450A)	0.284	0.107	0.078				0.039	0.081	
20B (500A)	0.499	0.225	0.166					0.054	0.149
22B (550A)	0.372	0.176	0.147					0.041	0.111
24B (600A)	0.156	0.156	0.117					0.031	0.085
26B (650A)	0.137	0.137	0.098					0.025	0.067
28B (700A)	0.117	0.117	0.088					0.019	0.054
30B (750A)	0.264	0.264	0.186						0.042
32B (800A)	0.235	0.235	0.176						0.036
34B (850A)	0.205	0.205	0.147						0.029
36B (900A)	0.186	0.186	0.127						0.024
40B (1000A)	0.139	0.139	0.125						0.017
44B (1100A)	0.112	0.112	0.100						0.013
48B (1200A)	0.093	0.093	0.084						0.011
52B (1300A)	0.105	0.105	0.094						
54B (1400A)	0.097	0.097	0.087						
60B (1500A)	0.075	0.075	0.067						

Spring return type Cylinder Actuator (Model : KAR series)

● **KCV-501D Damper type Air supply : 4.0 Bar**

- Case of 60° Disc Opening

Valve Size inch (mm)	Allowable Shutoff pressure barG			Allowable pressure drop. (Bar) Packing : Grafoil (Grphite)					
	Fluid Temp. °C			Actuator Size					
	<200	<400	<600	HP88	HP100	HP125	HP160	HP200	HP212
	Stem material SUS304, SUS316			AT251U	AT301U	AT401U	AT501U	AT601U	AT701U
3B (80A)	4.9	1.59	1.19		0.793				
4B (100A)	4.9	0.940	0.705		0.405				
5B (125A)	3.92	0.607	0.450		0.208				
6B (150A)	2.79	0.784	0.617		0.120	0.451			
8B (200A)	1.9	0.460	0.343		0.051	0.190			
10B (250A)	0.97	0.264	0.196			0.062	0.194		
12B (300A)	0.558	0.166	0.127			0.035	0.112		
14B (350A)	0.607	0.176	0.137				0.070	0.159	
16B (400A)	0.411	0.137	0.098				0.047	0.107	
18B (450A)	0.284	0.107	0.078				0.033	0.075	
20B (500A)	0.499	0.225	0.166					0.048	0.141
22B (550A)	0.372	0.176	0.147					0.036	0.106
24B (600A)	0.156	0.156	0.117					0.028	0.083
26B (650A)	0.137	0.137	0.098					0.022	0.065
28B (700A)	0.117	0.117	0.088					0.017	0.051
30B (750A)	0.264	0.264	0.186						0.039
32B (800A)	0.235	0.235	0.176						0.033
34B (850A)	0.205	0.205	0.147						0.025
36B (900A)	0.186	0.186	0.127						0.021
40B (1000A)	0.139	0.139	0.125						0.015
44B (1100A)	0.112	0.112	0.100						0.012
48B (1200A)	0.093	0.093	0.084						0.10
52B (1300A)	0.105	0.105	0.094						
54B (1400A)	0.097	0.097	0.087						
60B (1500A)	0.075	0.075	0.067						

Double acting type Cylinder Actuator (Model : KAR series)

- KCV-501D Damper type Air supply : 4.0 Bar
- Case of 90° Disc Opening

Valve Size inch (mm)	Allowable Shutoff pressure barG			Allowable pressure drop. (Bar) Packing : Teflon						
	Fluid Temp. °C			Actuator Size						
	<200	<400	<600	HP75	HP88	HP100	HP125	HP160	HP200	HP212
	Stem material SUS304, SUS316			AT201U	AT251U	AT301U	AT401U	AT501U	AT601U	AT701U
3B (80A)	4.9	1.59	1.19	0.148						
4B (100A)	4.9	0.940	0.705	0.0756						
5B (125A)	3.92	0.607	0.450	0.0389						
6B (150A)	2.79	0.784	0.617		0.0369	0.611				
8B (200A)	1.9	0.460	0.343		0.155	0.236				
10B (250A)	0.97	0.264	0.196		0.068	0.121				
12B (300A)	0.558	0.166	0.127		0.039	0.070				
14B (350A)	0.607	0.176	0.137			0.044	0.106			
16B (400A)	0.411	0.137	0.098			0.029	0.071			
18B (450A)	0.284	0.107	0.078			0.021	0.025			
20B (500A)	0.499	0.225	0.166				0.019	0.068		
22B (550A)	0.372	0.176	0.147				0.015	0.051		
24B (600A)	0.156	0.156	0.117				0.012	0.039		
26B (650A)	0.137	0.137	0.098				0.010	0.031		
28B (700A)	0.117	0.117	0.088					0.024		
30B (750A)	0.264	0.264	0.186					0.020	0.041	
32B (800A)	0.235	0.235	0.176					0.017	0.034	
34B (850A)	0.205	0.205	0.147						0.028	
36B (900A)	0.186	0.186	0.127						0.023	
40B (1000A)	0.139	0.139	0.125						0.017	0.041
44B (1100A)	0.112	0.112	0.100							0.031
48B (1200A)	0.093	0.093	0.084							0.024
52B (1300A)	0.105	0.105	0.094							0.018
54B (1400A)	0.097	0.097	0.087							0.016
60B (1500A)	0.075	0.075	0.067							0.011

Double acting type Cylinder Actuator (Model : KAR series)

● KCV-501D Damper type Air supply : 4.0 Bar

- Case of 90° Disc Opening

Valve Size inch (mm)	Allowable Shutoff pressure barG			Allowable pressure drop. (Bar) Packing : Grafoil (Graphite)						
	Fluid Temp. °C			Actuator Size						
	<200	<400	<600	HP75	HP88	HP100	HP125	HP160	HP200	HP212
	Stem material SUS304, SUS316			AT201U	AT251U	AT301U	AT401U	AT501U	AT601U	AT701U
3B (80A)	4.9	1.59	1.19	0.679						
4B (100A)	4.9	0.940	0.705	0.350						
5B (125A)	3.92	0.607	0.450	0.300						
6B (150A)	2.79	0.784	0.617		0.317					
8B (200A)	1.9	0.460	0.343		0.136					
10B (250A)	0.97	0.264	0.196		0.046					
12B (300A)	0.558	0.166	0.127		0.027	0.077				
14B (350A)	0.607	0.176	0.137			0.036				
16B (400A)	0.411	0.137	0.098			0.024				
18B (450A)	0.284	0.107	0.078			0.017				
20B (500A)	0.499	0.225	0.166				0.017	0.064		
22B (550A)	0.372	0.176	0.147				0.013	0.048		
24B (600A)	0.156	0.156	0.117				0.011	0.037		
26B (650A)	0.137	0.137	0.098					0.029		
28B (700A)	0.117	0.117	0.088					0.023		
30B (750A)	0.264	0.264	0.186					0.019	0.040	
32B (800A)	0.235	0.235	0.176					0.016	0.033	0.080
34B (850A)	0.205	0.205	0.147							0.066
36B (900A)	0.186	0.186	0.127							0.056
40B (1000A)	0.139	0.139	0.125							0.041
44B (1100A)	0.112	0.112	0.100							0.030
48B (1200A)	0.093	0.093	0.084							0.023
52B (1300A)	0.105	0.105	0.094							0.018
54B (1400A)	0.097	0.097	0.087							0.016
60B (1500A)	0.075	0.075	0.067							0.011

Spring return type Cylinder Actuator (Model : KAR series)

● **KCV-501D Damper type Air supply : 4.0 Bar**

- Case of 90° Disc Opening

Valve Size inch (mm)	Allowable Shutoff pressure barG			Allowable pressure drop. (Bar) Packing : Teflon					
	Fluid Temp. °C			Actuator Size					
	<200	<400	<600	HP88	HP100	HP125	HP160	HP200	HP212
	Stem material SUS304, SUS316			AT251U	AT301U	AT401U	AT501U	AT601U	AT701U
3B (80A)	4.9	1.59	1.19	0.387	0.850				
4B (100A)	4.9	0.940	0.705	0.198	0.427				
5B (125A)	3.92	0.607	0.450	0.102	0.219				
6B (150A)	2.79	0.784	0.617		0.125	0.333			
8B (200A)	1.9	0.460	0.343		0.053	0.141			
10B (250A)	0.97	0.264	0.196			0.061	0.143		
12B (300A)	0.558	0.166	0.127			0.036	0.083		
14B (350A)	0.607	0.176	0.137				0.052	0.107	
16B (400A)	0.411	0.137	0.098				0.035	0.072	
18B (450A)	0.284	0.107	0.078				0.024	0.051	
20B (500A)	0.499	0.225	0.166					0.034	0.093
22B (550A)	0.372	0.176	0.147					0.026	0.069
24B (600A)	0.156	0.156	0.117					0.019	0.053
26B (650A)	0.137	0.137	0.098					0.016	0.042
28B (700A)	0.117	0.117	0.088					0.012	0.034
30B (750A)	0.264	0.264	0.186						0.026
32B (800A)	0.235	0.235	0.176						0.022
34B (850A)	0.205	0.205	0.147						0.018
36B (900A)	0.186	0.186	0.127						0.015
40B (1000A)	0.139	0.139	0.125						0.010
44B (1100A)	0.112	0.112	0.100						
48B (1200A)	0.093	0.093	0.084						
52B (1300A)	0.105	0.105	0.094						
54B (1400A)	0.097	0.097	0.087						
60B (1500A)	0.075	0.075	0.067						

Spring return type Cylinder Actuator (Model : KAR series)

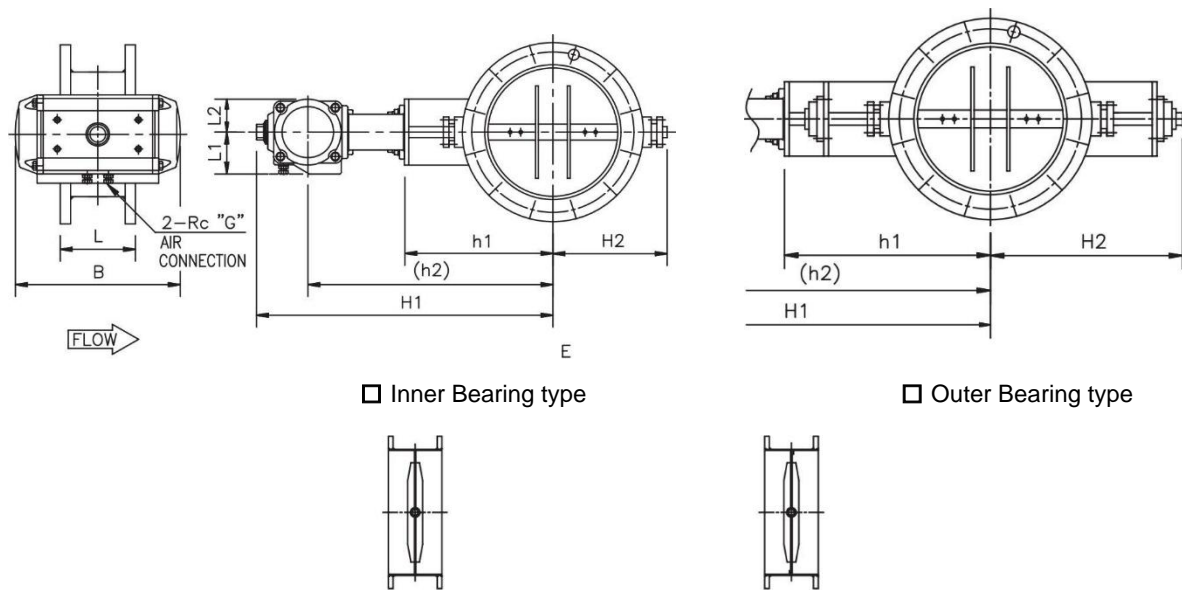
● **KCV-501D Damper type Air supply : 4.0 Bar**

- Case of 90° Disc Opening

Valve Size inch (mm)	Allowable Shutoff pressure barG			Allowable pressure drop. (Bar) Packing : Grafoil (Graphite)					
	Fluid Temp. °C			Actuator Size					
	<200	<400	<600	HP88	HP100	HP125	HP160	HP200	HP212
	Stem material SUS304, SUS316			AT251U	AT301U	AT401U	AT501U	AT601U	AT701U
3B (80A)	4.9	1.59	1.19		0.496				
4B (100A)	4.9	0.940	0.705		0.253				
5B (125A)	3.92	0.607	0.450		0.130				
6B (150A)	2.79	0.784	0.617		0.075	0.282			
8B (200A)	1.9	0.460	0.343		0.032	0.119			
10B (250A)	0.97	0.264	0.196			0.039	0.121		
12B (300A)	0.558	0.166	0.127			0.022	0.070		
14B (350A)	0.607	0.176	0.137				0.044	0.099	
16B (400A)	0.411	0.137	0.098				0.029	0.067	
18B (450A)	0.284	0.107	0.078				0.021	0.047	
20B (500A)	0.499	0.225	0.166					0.030	0.088
22B (550A)	0.372	0.176	0.147					0.023	0.066
24B (600A)	0.156	0.156	0.117					0.018	0.052
26B (650A)	0.137	0.137	0.098					0.014	0.041
28B (700A)	0.117	0.117	0.088					0.010	0.032
30B (750A)	0.264	0.264	0.186						0.024
32B (800A)	0.235	0.235	0.176						0.020
34B (850A)	0.205	0.205	0.147						0.015
36B (900A)	0.186	0.186	0.127						0.013
40B (1000A)	0.139	0.139	0.125						
44B (1100A)	0.112	0.112	0.100						
48B (1200A)	0.093	0.093	0.084						
52B (1300A)	0.105	0.105	0.094						
54B (1400A)	0.097	0.097	0.087						
60B (1500A)	0.075	0.075	0.067						

DAMPER Valve

KCV-501D - Double acting cylinder



☐ Inner Bearing type

☐ Outer Bearing type

☐ Damper type

☐ Back seat type

DIMENSIONS

unit : mm

Valve Size	<input type="checkbox"/> JIS 2K <input type="checkbox"/> JIS 5K <input type="checkbox"/> JIS 10K <input type="checkbox"/> ANSI 125# <input type="checkbox"/> ANSI 150#										Actuator				
	L	<input type="checkbox"/> Inner bearing				<input type="checkbox"/> Outer bearing				Cylinder size		B	L1	L2	G
		h1	h2	H1	H2	h1	h2	H1	H2	A/T	HP				
<input type="checkbox"/> 3" (80A)	200	150	320	390	135	230	400	470	195	<input type="checkbox"/> 201U	<input type="checkbox"/> 75	215	52	43	1/8
			325	400			405	480		<input type="checkbox"/> 251U	<input type="checkbox"/> 88	250	57	50	1/8
			365	445			445	525		<input type="checkbox"/> 301U	<input type="checkbox"/> 100	270	67	56	1/4
<input type="checkbox"/> 4" (100A)	200	160	330	400	140	240	415	485	205	<input type="checkbox"/> 201U	<input type="checkbox"/> 75	215	52	43	1/8
			335	410			420	495		<input type="checkbox"/> 251U	<input type="checkbox"/> 88	250	57	50	1/8
			375	455			455	540		<input type="checkbox"/> 301U	<input type="checkbox"/> 100	270	67	56	1/4
<input type="checkbox"/> 5" (125A)	200	180	350	420	160	260	430	500	220	<input type="checkbox"/> 201U	<input type="checkbox"/> 75	215	52	43	1/8
			355	430			435	510		<input type="checkbox"/> 251U	<input type="checkbox"/> 88	250	57	50	1/8
			395	475			475	555		<input type="checkbox"/> 301U	<input type="checkbox"/> 100	270	67	56	1/4
<input type="checkbox"/> 6" (150A)	200	195	370	445	175	275	450	525	245	<input type="checkbox"/> 251U	<input type="checkbox"/> 88	250	57	50	1/8
			410	490			490	570		<input type="checkbox"/> 301U	<input type="checkbox"/> 100	270	67	56	1/4
			440	545			520	625		<input type="checkbox"/> 401U	<input type="checkbox"/> 125	345	82	70	1/4
<input type="checkbox"/> 8" (200A)	200	260	435	510	195	360	535	610	305	<input type="checkbox"/> 251U	<input type="checkbox"/> 88	250	57	50	1/8
			475	555			575	655		<input type="checkbox"/> 301U	<input type="checkbox"/> 100	270	67	56	1/4
			505	610			605	710		<input type="checkbox"/> 401U	<input type="checkbox"/> 125	345	82	70	1/4
<input type="checkbox"/> 10" (250A)	200	295	470	545	220	395	570	645	340	<input type="checkbox"/> 251U	<input type="checkbox"/> 88	250	57	50	1/8
			510	590			610	690		<input type="checkbox"/> 301U	<input type="checkbox"/> 100	270	67	56	1/4
			540	645			640	745		<input type="checkbox"/> 401U	<input type="checkbox"/> 125	345	82	70	1/4
			585	735			685	835		<input type="checkbox"/> 501U	<input type="checkbox"/> 160	440	99	880	1/4
<input type="checkbox"/> 12" (300A)	200	315	490	565	245	415	590	665	360	<input type="checkbox"/> 251U	<input type="checkbox"/> 88	250	67	56	1/4
			530	610			630	710		<input type="checkbox"/> 301U	<input type="checkbox"/> 100	270	82	70	1/4
			560	665			660	765		<input type="checkbox"/> 401U	<input type="checkbox"/> 125	345	99	880	1/4
			605	755			705	855		<input type="checkbox"/> 501U	<input type="checkbox"/> 160	440	112	110	1/4

Flange is according to the standard which is described on specification sheet

Note :

DRAWING No.

KCV-501D-DA-N-01

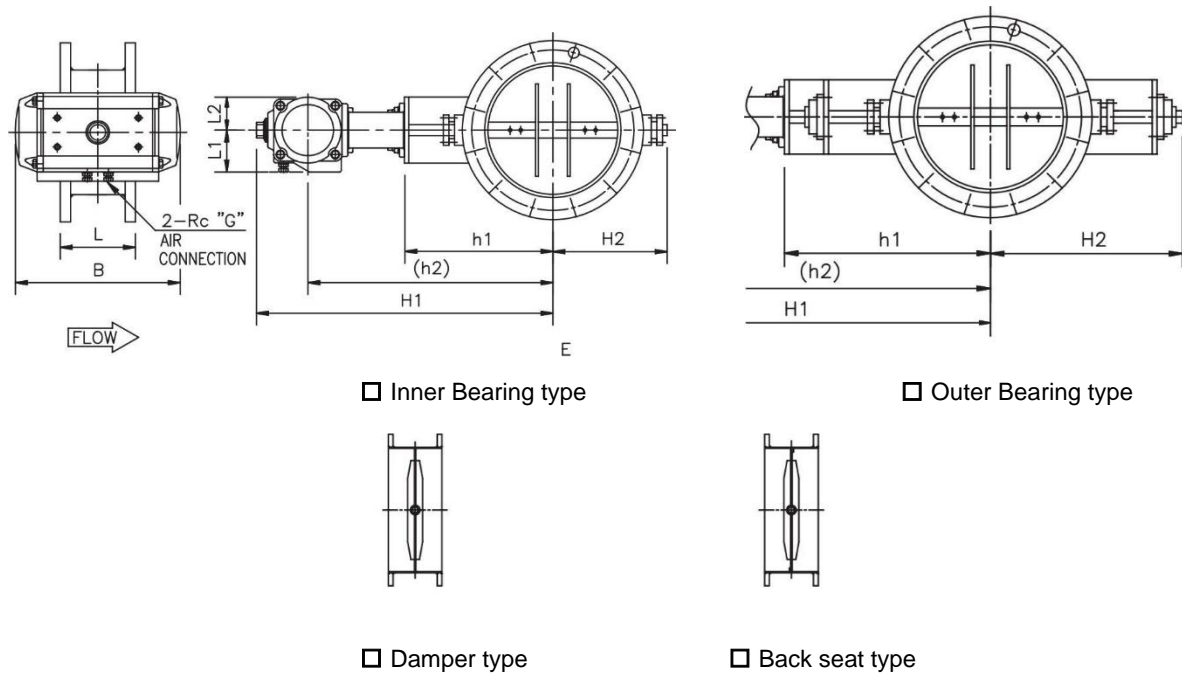
REV.

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KOCON

DAMPER Valve

KCV-501D - Double acting cylinder



DIMENSIONS

unit : mm

Valve Size	□JIS 2K □JIS 5K □JIS 10K □ANSI 125# □ANSI 150#									Actuator					
	L	□ Inner bearing				□ Outer bearing				Cylinder size		B	L1	L2	G
		h1	h2	H1	H2	h1	h2	H1	H2	A/T	HP				
□ 14” (350A)	200	340	555	635	270	440	655	735	390	□ 301U	□ 100	270	67	56	1/4
			585	690			685	790		□ 401U	□ 125	345	82	70	1/4
			630	780			730	880		□ 501U	□ 160	440	99	88	1/4
			685	855			785	955		□ 601U	□ 200	545	112	110	1/4
□ 16” (400A)	200	380	595	675	295	480	695	775	430	□ 301U	□ 100	270	67	56	1/4
			625	730			725	830		□ 401U	□ 125	345	82	70	1/4
			670	820			770	920		□ 501U	□ 160	440	99	88	1/4
			725	895			825	945		□ 601U	□ 200	545	112	110	1/4
□ 18” (450A)	200	410	625	705	315	510	725	805	460	□ 301U	□ 100	270	67	56	1/4
			655	760			755	860		□ 401U	□ 125	345	82	70	1/4
			700	850			800	950		□ 501U	□ 160	440	99	88	1/4
			755	925			855	1025		□ 601U	□ 200	545	112	110	1/4
□ 20” (500A)	250	440	685	790	390	490	735	840	450	□ 401U	□ 125	345	82	70	1/4
			730	880			780	930		□ 501U	□ 160	440	99	88	1/4
			785	955			835	1005		□ 601U	□ 200	545	112	110	1/4
			830	1045			880	1095		□ 701U	□ 212	730	166	165	1/2
□ 22” (550A)	250	445	690	795	420	545	790	895	510	□ 401U	□ 125	345	82	70	1/4
			735	885			835	985		□ 501U	□ 160	440	99	88	1/4
			790	960			890	1060		□ 601U	□ 200	545	112	110	1/4
			835	1050			935	1150		□ 701U	□ 212	730	166	165	1/2

Flange is according to the standard which is described on specification sheet

Note :

DRAWING No.

KCV-501D-DA-N-02

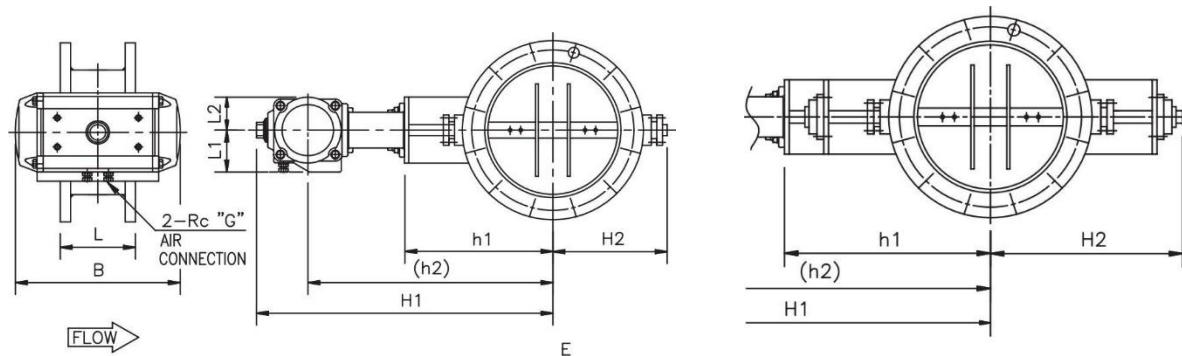
REV.

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KOCON

DAMPER Valve

KCV-501D - Double acting cylinder



☐ Inner Bearing type

☐ Outer Bearing type



☐ Damper type

☐ Back seat type

DIMENSIONS

unit : mm

Valve Size	□ JIS 2K □ JIS 5K □ JIS 10K □ ANSI 125# □ ANSI 150#									Actuator					
	L	□ Inner bearing				□ Outer bearing				Cylinder size		B	L1	L2	G
		h1	h2	H1	H2	h1	h2	H1	H2	A/T	HP				
□ 24” (650A)	250	-	-	-	-	565	810	915	525	□ 401	□ 125	345	82	70	1/4
-			-	-			855	1005		□ 501	□ 160	440	99	88	1/4
-			-	-			810	1080		□ 601	□ 200	545	112	110	1/4
-			-	-			855	1170		□ 701	□ 212	730	166	165	1/2
□ 26” (650A)	300	-	-	-	-	610	855	960	550	□ 401	□ 125	345	82	70	1/4
-			-	-			900	1050		□ 501	□ 160	440	99	88	1/4
-			-	-			955	1125		□ 601	□ 200	545	112	110	1/4
-			-	-			1000	1215		□ 701	□ 212	730	166	165	1/2
□ 28” (700A)	300	-	-	-	-	710	1000	1150	650	□ 501	□ 160	440	99	88	1/4
-			-	-			1055	1225		□ 601	□ 200	545	112	110	1/4
-			-	-			1100	1315		□ 701	□ 212	730	166	165	1/2
□ 30” (750A)	300	-	-	-	-	670	1070	1220	630	□ 501	□ 160	440	99	88	1/4
-			-	-			1125	1295		□ 601	□ 200	545	112	110	1/4
-			-	-			1170	1385		□ 701	□ 212	730	166	165	1/2
□ 32” (800A)	300	-	-	-	-	695	985	1135	655	□ 501	□ 160	440	99	88	1/4
-			-	-			1040	1210		□ 601	□ 200	545	112	110	1/4
-			-	-			1085	1300		□ 701	□ 212	730	166	165	1/2
□ 34” (850A)	300	-	-	-	-	720	1065	1235	680	□ 601	□ 200	545	112	110	1/4
-			-	-			1110	1325		□ 701	□ 212	730	166	165	1/2
□ 36” (900A)	300	-	-	-	-	750	1095	1265	715	□ 601	□ 200	545	112	110	1/4
-			-	-			1140	1355		□ 701	□ 212	730	166	165	1/2

Flange is according to the standard which is described on specification sheet

Note :

DRAWING No.

KCV-501D-DA-N-03

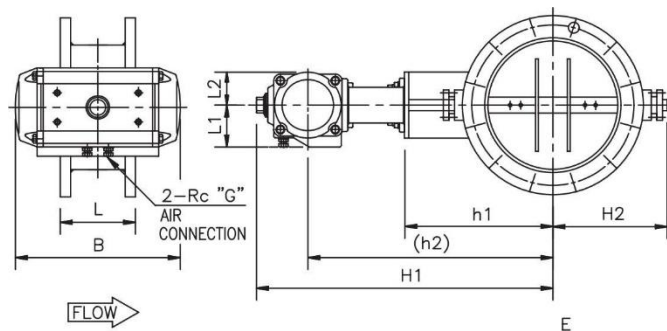
REV.

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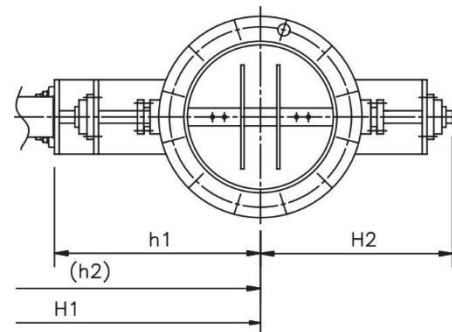
KOCON

DAMPER Valve

KCV-501D - Double acting cylinder



☐ Inner Bearing type



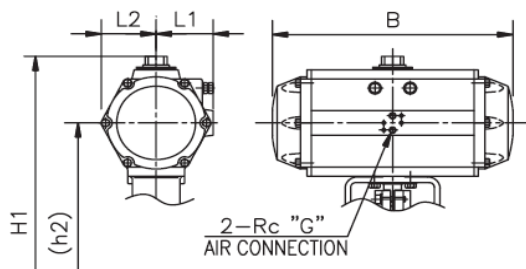
☐ Outer Bearing type



☐ Damper type



☐ Back seat type



☐ AT 701U (HP 212)

DIMENSIONS

unit : mm

Valve Size	□JIS 2K □JIS 5K □JIS 10K □ANSI 125# □ANSI 150#									Actuator					
	L	□ Inner bearing				□ Outer bearing				Cylinder size		B	L1	L2	G
		h1	h2	H1	H2	h1	h2	H1	H2	A/T	HP				
□ 40” (1000A)	400	—	—	—	—	910	1255 1300	1425 1515	870	□ 601 □ 701	□ 200 □ 212	545 730	112 166	110 165	1/4 1/2
□ 44” (1100A)	400	—	—	—	—	960	1350	1565	920	□ 701	□ 212	730	166	165	1/2
□ 48” (1200A)	450					1010	1400	1615	1020	□ 701	□ 212	730	166	165	1/2
□ 52” (1300A)	450	—	—	—	—	1055	1445	1660	1050	□ 701	□ 212	730	166	165	1/2
□ 54” (1400A)	450	—	—	—	—	1080	1470	1685	1120	□ 7501	□ 212	730	166	165	1/2
□ 60” (1600A)	450	—	—	—	—	1155	1545	1760	1175	□ 701	□ 212	730	166	165	1/2

Flange is according to the standard which is described on specification sheet

Note :

DRAWING No.

KCV-501D-DA-N-04

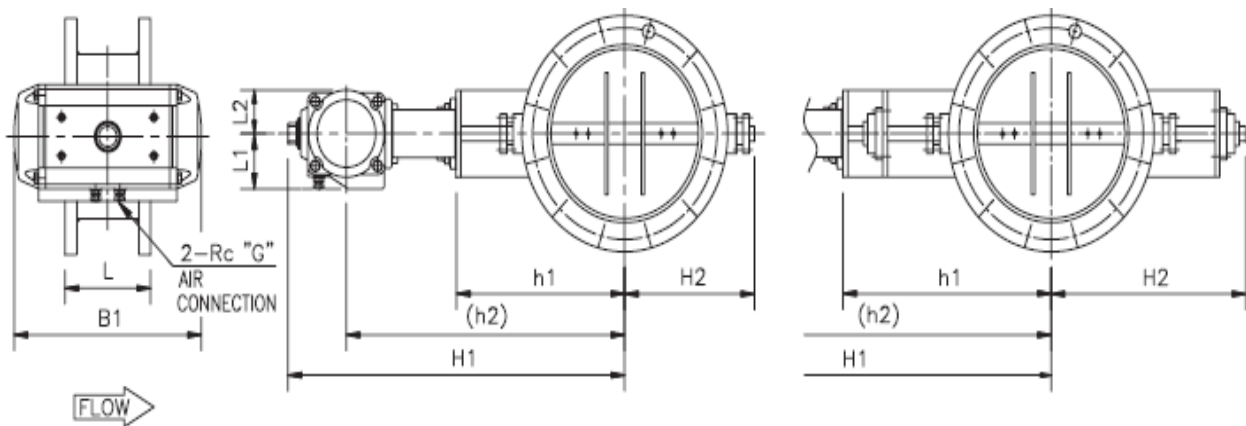
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KOCON

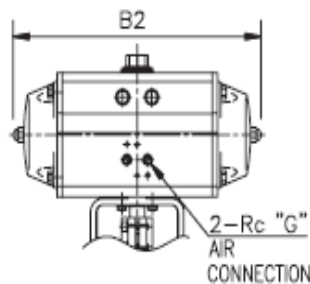
DAMPER Valve

KCV-501D – Spring return cylinder



☐ Inner bearing type

☐ Outer Bearing type



☐ Direct acting 60°

☐ Damper type

☐ Back seat type

DIMENSIONS

unit : mm

Valve size	□JIS 2K □JIS 5K □JIS 10K □ANSI 125# □ANSI 150#									Actuator						
	L	□ Inner Bearing				□ Outer Bearing				Cylinder size		B1	B2	L1	L2	G
		h1	h2	H1	H2	h1	h2	H1	H2	A/T	HP					
□ 3" (80A)	200	150	320	390	135	230	400	460	195	□ 201U	□ 75	215	240	52	43	1/8
			325	400			405	480		□ 251U	□ 88	250	275	57	50	1/8
			365	445			445	525		□ 301U	□ 100	270	305	67	56	1/4
□ 4" (100A)	200	160	330	400	140	240	415	485	205	□ 201U	□ 75	215	240	52	43	1/8
			335	410			420	495		□ 251U	□ 88	250	275	57	50	1/8
			375	455			455	540		□ 301U	□ 100	270	305	67	56	1/4
□ 5" (125A)	200	180	350	420	160	260	430	500	220	□ 201U	□ 75	215	240	52	43	1/8
			355	430			435	510		□ 251U	□ 88	250	275	57	50	1/8
			395	475			475	555		□ 301U	□ 100	270	305	67	56	1/4
□ 6" (150A)	200	195	370	445	175	275	450	525	245	□ 251U	□ 88	250	275	57	50	1/8
			410	490			490	570	305	□ 301U	□ 100	270	305	67	56	1/4
			440	545			520	625	340	□ 401U	□ 125	345	385	82	70	1/4
□ 8" (200A)	200	260	435	510	195	360	535	610	360	□ 251U	□ 88	250	275	57	50	1/8
			475	555			575	655		□ 301U	□ 100	270	305	67	56	1/4
			505	610			605	710		□ 401U	□ 125	345	385	82	70	1/4

Flange is according to the standard which is described on specification sheet

Note :

DRAWING No.

KCV-501D-SR-N-01

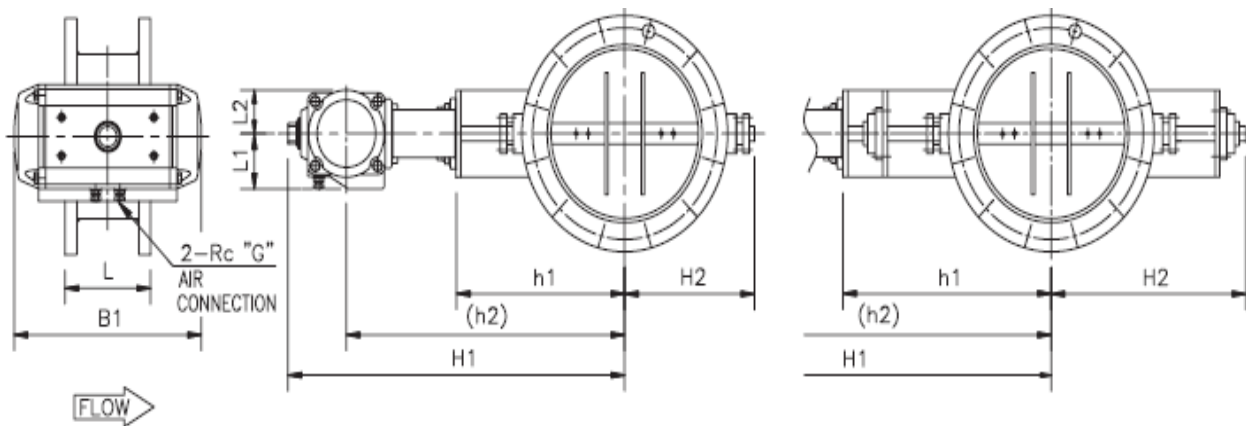
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KOCON

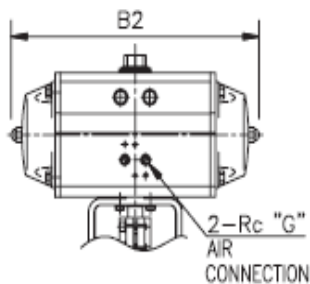
DAMPER Valve

KCV-501D – Spring return cylinder



☐ Inner bearing type

☐ Outer Bearing type



☐ Direct acting 60°

☐ Damper type

☐ Back seat type

DIMENSIONS

unit : mm

Valve Size	□ JIS 2K □ JIS 5K □ JIS 10K □ ANSI 125# □ ANSI 150#									Actuator						
	L	□ Inner Bearing				□ Outer Bearing				Cylinder size		B1	B2	L1	L2	G
		h1	h2	H1	H2	h1	h2	H1	H2	A/T	HP					
□ 10" (250A)	200	295	470	545	220	395	570	645	340	□ 251U	□ 88	250	275	57	50	1/8
			510	590			610	690		□ 301U	□ 100	270	305	67	56	1/4
			540	645			640	745		□ 401U	□ 125	345	385	82	70	1/4
			585	735			685	835		□ 501U	□ 160	440	485	99	88	1/4
□ 12" (300A)	200	315	490	565	245	415	590	665	360	□ 251U	□ 88	250	275	57	50	1/8
			530	610			630	710		□ 301U	□ 100	270	305	67	56	1/4
			560	665			660	765		□ 401U	□ 125	345	385	82	70	1/4
			605	755			705	855		□ 501U	□ 160	440	485	99	88	1/4
□ 14" (350A)	200	340	555	635	270	440	655	735	390	□ 301U	□ 100	270	305	67	56	1/4
			585	690			685	790		□ 401U	□ 125	345	385	82	70	1/4
			630	780			730	880		□ 501U	□ 160	440	485	99	88	1/4
			685	855			785	955		□ 601U	□ 200	545	600	112	110	1/4
□ 16" (400A)	200	380	595	675	295	480	695	775	430	□ 301U	□ 100	270	305	67	56	1/4
			625	730			725	830		□ 401U	□ 125	345	385	82	70	1/4
			670	820			770	920		□ 501U	□ 160	440	485	99	88	1/4
			725	895			825	945		□ 601U	□ 200	545	600	112	110	1/4

Flange is according to the standard which is described on specification sheet

Note :

DRAWING No.

KCV-501D-SR-N-02

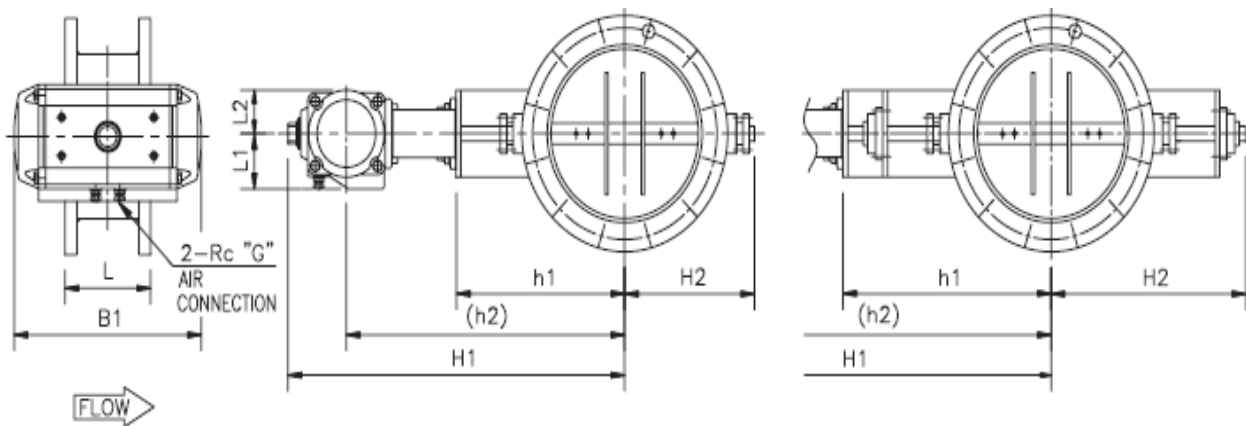
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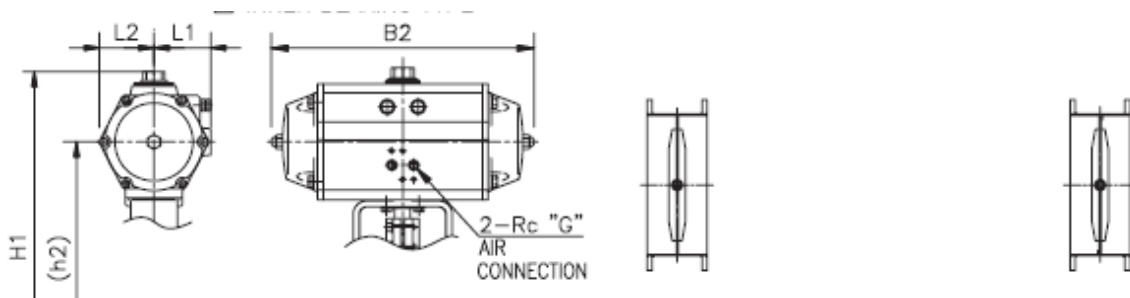
DAMPER Valve

KCV-501D – Spring return cylinder



☐ Inner bearing type

☐ Outer Bearing type



☐ AT701U

☐ Direct acting 60°

☐ Damper type

☐ Back seat type

DIMENSIONS

unit : mm

Valve Size	<input type="checkbox"/> JIS 2K <input type="checkbox"/> JIS 5K <input type="checkbox"/> JIS 10K <input type="checkbox"/> ANSI 125# <input type="checkbox"/> ANSI 150#								Actuator							
	L	<input type="checkbox"/> Inner Bearing				<input type="checkbox"/> Outer Bearing				Cylinder size		B1	B2	L1	L2	G
		h1	h2	H1	H2	h1	h2	H1	H2	A/T	HP					
<input type="checkbox"/> 18" (450A)	200	410	625	705	315	510	725	805	460	<input type="checkbox"/> 301U	<input type="checkbox"/> 100	270	305	67	56	1/4
			655	760			755	860		<input type="checkbox"/> 401U	<input type="checkbox"/> 125	345	385	82	70	1/4
			700	850			800	950		<input type="checkbox"/> 501U	<input type="checkbox"/> 160	440	485	99	88	1/4
			755	925			855	1025		<input type="checkbox"/> 601U	<input type="checkbox"/> 200	545	600	112	110	1/4
<input type="checkbox"/> 20" (500A)	250	440	685	790	390	490	735	840	450	<input type="checkbox"/> 401U	<input type="checkbox"/> 125	345	385	82	70	1/4
			730	880			780	930		<input type="checkbox"/> 501U	<input type="checkbox"/> 160	440	485	99	88	1/4
			785	955			835	1005		<input type="checkbox"/> 601U	<input type="checkbox"/> 200	545	600	112	110	1/4
			830	1045			880	1095		<input type="checkbox"/> 701U	<input type="checkbox"/> 212	730	805	166	165	1/4
<input type="checkbox"/> 22" (550A)	250	445	690	795	420	545	790	895	510	<input type="checkbox"/> 401U	<input type="checkbox"/> 125	345	385	82	70	1/4
			735	885			835	985		<input type="checkbox"/> 501U	<input type="checkbox"/> 160	440	485	99	88	1/4
			790	960			890	1060		<input type="checkbox"/> 601U	<input type="checkbox"/> 200	545	600	112	110	1/4
			835	1050			935	1150		<input type="checkbox"/> 701U	<input type="checkbox"/> 212	730	805	166	165	1/4
<input type="checkbox"/> 24" (600A)	250	-	-	-	-	565	810	915	525	<input type="checkbox"/> 401U	<input type="checkbox"/> 125	345	385	82	70	1/4
				-			855	1005		<input type="checkbox"/> 501U	<input type="checkbox"/> 160	440	485	99	88	1/4
				-			910	1080		<input type="checkbox"/> 601U	<input type="checkbox"/> 200	545	600	112	110	1/4
				-			955	1170		<input type="checkbox"/> 701U	<input type="checkbox"/> 212	730	805	166	165	1/4

Flange is according to the standard which is described on specification sheet

Note :

DRAWING No.

KCV-501D-SR-N-03

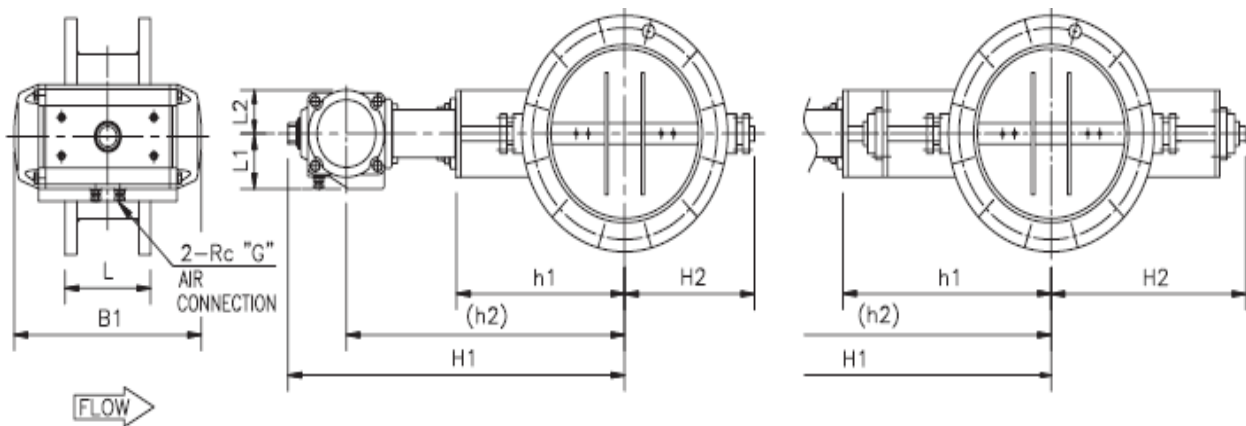
REV.

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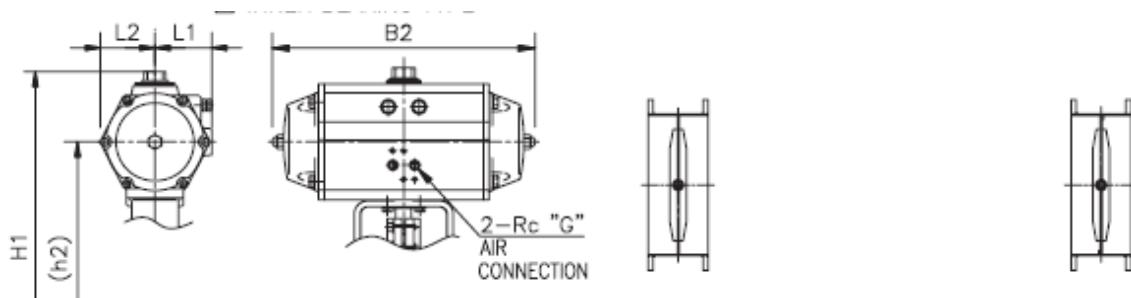
DAMPER Valve

KCV-501D – Spring return cylinder



☐ Inner bearing type

☐ Outer Bearing type



☐ AT701U

☐ Direct acting 60°

☐ Damper type

☐ Back seat type

DIMENSIONS

unit : mm

Valve Size	<input type="checkbox"/> JIS 2K <input type="checkbox"/> JIS 5K <input type="checkbox"/> JIS 10K <input type="checkbox"/> ANSI 125# <input type="checkbox"/> ANSI 150#									Actuator						
	L	<input type="checkbox"/> Inner Bearing				<input type="checkbox"/> Outer Bearing				<input type="checkbox"/> Cylinder size		B1	B2	L1	L2	G
		h1	h2	H1	H2	h1	h2	H1	H2	A/T	HP					
<input type="checkbox"/> 26" (650A)	300	-	-	-	-	610				<input type="checkbox"/> 401U	<input type="checkbox"/> 125	345	385	82	70	1/4
			-	-			<input type="checkbox"/> 501U	<input type="checkbox"/> 160		440	485	99	88	1/4		
			-	-			<input type="checkbox"/> 601U	<input type="checkbox"/> 200		545	600	112	110	1/4		
			-	-			<input type="checkbox"/> 701U	<input type="checkbox"/> 212		730	805	166	165	1/2		
<input type="checkbox"/> 28" (700A)	300	-	-	-	-	710				<input type="checkbox"/> 401U	<input type="checkbox"/> 125	345	385	82	70	1/4
			-	-			<input type="checkbox"/> 601U	<input type="checkbox"/> 200		545	600	112	110	1/4		
			-	-			<input type="checkbox"/> 701U	<input type="checkbox"/> 212		730	805	166	165	1/2		
<input type="checkbox"/> 30" (750A)	300	-	-	-	-	670				<input type="checkbox"/> 401U	<input type="checkbox"/> 125	345	385	82	70	1/4
			-	-			<input type="checkbox"/> 601U	<input type="checkbox"/> 200		545	600	112	110	1/4		
			-	-			<input type="checkbox"/> 701U	<input type="checkbox"/> 212		730	805	166	165	1/2		
<input type="checkbox"/> 32" (800A)	300	-	-	-	-	695				<input type="checkbox"/> 401U	<input type="checkbox"/> 125	345	385	82	70	1/4
			-	-			<input type="checkbox"/> 601U	<input type="checkbox"/> 200		545	600	112	110	1/4		
			-	-			<input type="checkbox"/> 701U	<input type="checkbox"/> 212		730	805	166	165	1/4		
<input type="checkbox"/> 34" (850A)	300	-	-	-	-	720				<input type="checkbox"/> 601U	<input type="checkbox"/> 200	545	600	112	110	1/4
			-	-			<input type="checkbox"/> 701U	<input type="checkbox"/> 212		730	805	166	165	1/2		
<input type="checkbox"/> 36" (900A)	300	-	-	-	-	750				<input type="checkbox"/> 601U	<input type="checkbox"/> 200	545	600	112	110	1/4
			-	-			<input type="checkbox"/> 701U	<input type="checkbox"/> 212		730	805	166	165	1/2		

Flange is according to the standard which is described on specification sheet

Note :

DRAWING No.

KCV-501D-SR-N-04

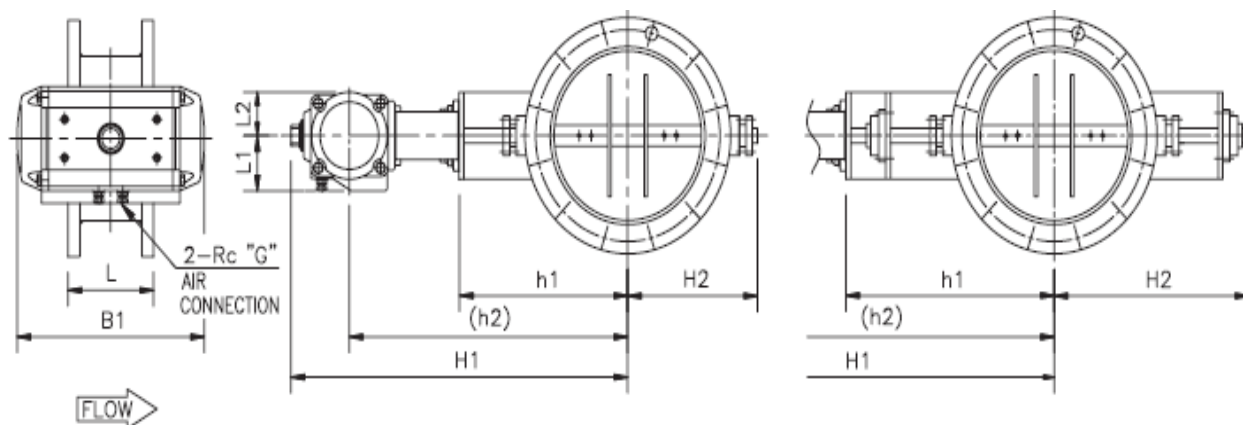
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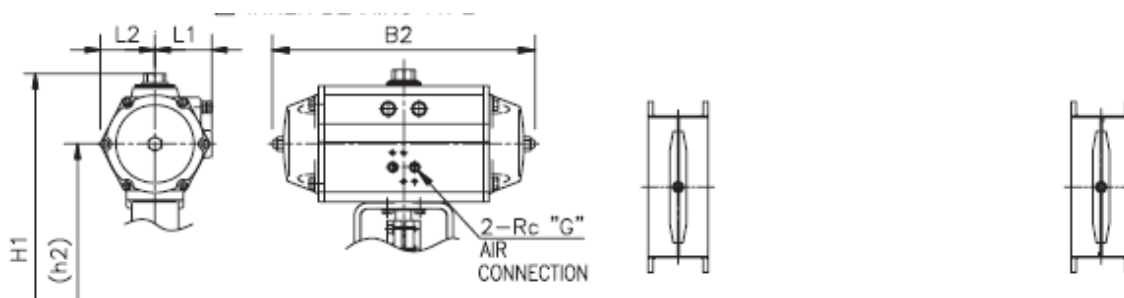
DAMPER Valve

KCV-501D – Spring return cylinder



☐ Inner bearing type

☐ Outer Bearing type



☐ AT701U

☐ Direct acting 60°

☐ Damper type

☐ Back seat type

DIMENSIONS

unit : mm

Valve Size	<input type="checkbox"/> JIS 2K <input type="checkbox"/> JIS 5K <input type="checkbox"/> JIS 10K <input type="checkbox"/> ANSI 125# <input type="checkbox"/> ANSI 150#									Actuator						
	L	<input type="checkbox"/> Inner Bearing				<input type="checkbox"/> Outer Bearing				Cylinder size		B1	B2	L1	L2	G
		h1	h2	H1	H2	h1	h2	H1	H2	A/T	HP					
<input type="checkbox"/> 40" (1000A)	300	-	-	-	-	910	1245	1415	870	<input type="checkbox"/> 601U	<input type="checkbox"/> 200	545	600	112	110	1/4
			-	-				1290		1505	<input type="checkbox"/> 701U	<input type="checkbox"/> 212	730	805	166	165
<input type="checkbox"/> 44" (1100A)	300	-	-	-	-	960	1350	1565	920	<input type="checkbox"/> 701U	<input type="checkbox"/> 212	730	805	166	165	1/2
<input type="checkbox"/> 48" (1200A)	300	-	-	-	-	1010	1400	1615	970	<input type="checkbox"/> 701U	<input type="checkbox"/> 212	730	805	166	165	1/2
<input type="checkbox"/> 52" (1300A)	300	-	-	-	-	1055	1445	1660	1020	<input type="checkbox"/> 701U	<input type="checkbox"/> 212	730	805	166	165	1/2
<input type="checkbox"/> 54" (1350A)	300	-	-	-	-	1080	1470	1685	1050	<input type="checkbox"/> 701U	<input type="checkbox"/> 212	730	805	166	165	1/2
<input type="checkbox"/> 60" (1500A)	300	-	-	-	-	1155	1545	1760	1120	<input type="checkbox"/> 701U	<input type="checkbox"/> 212	730	805	166	165	1/2

Flange is according to the standard which is described on specification sheet

Note :

DRAWING No.

KCV-501D-SR-N-05

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DAMPER Valve Code Number

DAMPER Valve Basic Model

KCV-501D		Damper type												
Basic Model	-	(1)	-	(2)	(3)	(4)	(5)	(6)	-	(7)	(8)	(9)	-	(10)
KCV501D	-	10	-	5	4	D	I	2	-	JC	4	4	-	D

Ex) KCV501D – 10-54DI2 – JC44 – D

(1) Body Size	
03	3B (80A)
04	4B (100A)
05	5B (125A)
06	6B (150A)
08	8B (200A)
10	10B (250A)
12	12B (300A)
14	14B (350A)
16	16B (400A)
18	18B (450A)
20	20B (500A)
22	22B (550A)
24	24B (600A)
26	26B (650A)
28	28B (700A)
30	30B (750A)
32	32B (800A)
34	34B (850A)
36	36B (900A)
40	40B (1000A)
44	44B (1100A)
48	48B (1200A)
52	52B (1300A)
54	54B (1400A)
60	60B (1500A)
XX	Special size

(2) Flange Rating	
2	JIS 2K
5	JIS 5K
1	JIS10 K
A	ANSI 125#
B	ANSI 150#
Z	Special Rating
(3) End connection	
1	RF
4	FF
Z	Special connection
(4) Disc type	
D	Damper type
B	Back seat type
X	Other
(5) Flow characteristic	
I	Inherent
Z	Other
(6) Bearing type	
1	Inner bearing
2	Outer bearing
Z	Special type

(7) Flange Material	
JC	SS275
J4	SUS304
J6	SUS316
AC	A105
A4	F304
A6	F316
XX	Special
(8) Body Material	
C	SPHC
4	SUS304
6	SUS316
XX	Special
(9) Disc Material	
C	SPHC
4	SUS304
	SUS316
XX	Special
(10) Operator	
D	Double Acting Cylinder
S	Spring Return Cylinder
E	Electric Actuator
Z	Other

● APPENDIX

Pressure temperature Rating Table

Temp (°C)	ANSI 150#			ANSI 300#			ANSI 600#		
	A216-WCB	A351-CF8	A351-CF8M	A216-WCB	A351-CF8	A351-CF8M	A216-WCB	A351-CF8	A351-CF8M
-5~38	20	19	19	52	51	51	104	101	101
93	18	16	17	48	42	44	96	84	87
149	16	14	15	46	38	39	92	76	79
204	14	13	14	45	35	36	89	70	72
260	12	12	12	43	33	34	85	65	67
316	10	10	10	40	31	32	80	62	63
343	9	9	9	39	30	31	77	61	62
371	8	8	8	37	30	31	75	59	61
399	7	7	7	36	29	30	71	58	60
427	6	6	6	29	28	30	58	57	59
454	5	5	5	22	28	30	45	56	59
482	4	4	4	16	27	29	32	55	58
510	2	2	2	9	27	27	19	54	54
538	1	1	1	6	25	26	12	50	51
566		1	1		23	26	17	46	51
593		1	1		18	21		36	43
621		1	1		14	17		29	33
649		1	1		12	13		23	26
677		1	1		9	10		19	21
704		1	1		8	8		16	17
732		1	1		7	7		13	13
760		1	1		5	5		11	11
788		1	1		4	4		8	8
816		1	1		3	3		6	6

Allowable temperature range of Body material

Body material Trim Material	JIS	SCPL1	SCPH2	SCS13A	SCS14A	SCS16A
	ASTM	A352-LCB	A216-WCB	A351-CF8	A351-CF8M	A351-CF3M
SUS316		-45~300°C	-5~300°C	-196~300°C	-196~300°C	-
SUS316L		-45~300°C	-5~300°C	-196~300°C	-196~300°C	-196~300°C
410SS		-	-5~425°C	-	-	-
SUS316 stellite		-45~350°C	-5~425°C	-196~550°C	-196~550°C	-
SUS316L stellite		-45~350°C	-5~425°C	-196~550°C	-196~450°C	-196~450°C
SUS316+Soft seat		-45~230°C	-5~230°C	-80~230°C	-80~230°C	-
SUS316+Soft seat		-45~230°C	-	-80~230°C	-80~230°C	-80~230°C

Allowable Seat Leakage Class

Applicable Code: ANSI B 104-1976 / ANSI/FCI 70-2-2006

Leakage Class Designation	Allowable max. Leakage	Test fluid	Test pressure
Class I	-	-	Not Specified
Class II	0.5% of rated capacity	Air or water	45-60 Psig or max. operating differential whichever is lower
Class III	0.1% of rated capacity	Air or water	45-60 Psig or max. operating differential whichever is lower
Class IV	0.01% of rated capacity	Air or water	45-60 Psig or max. operating differential whichever is lower
Class V	0.0005 ml per minute of water per inch of port diameter per psi differential	Water	Max service pressure drop across valve plug, not to exceed ANSI body rating.
	4.7 standard ml per minute of air per inch of orifice diameter	Air or N2	3.5BarG (50psi)
Class VI	Not to exceed amounts shown in following table based on port diameter.	Air or nitrogen	50 Psig or max rated differential pressure across valve plug whichever is lower.

Allowable Seat Leakage (Class VI)

Port Size (mm)	cc / min	Bubbles pre minute
1	0.15	1
1-1/2	0.30	2
2	0.45	3
1-1/2	0.60	4
3	0.90	6
4	1.70	11
6	4.00	27
8	6.75	45

Allowable Seat Leakage (Class IV)

Port Size(mm)	liter / min)	Port Size(mm)	liter / min)
1/2	0.61	2-1/2	9.22
3/4	1.10	3	12.90
1	1.84	4	22.13
1-1/4	2.70	5	34.42
1-1/2	3.44	6	50.40
2	5.53	8	79.91

- Test fluid: Air (Pressure 4kgf/cm2G)

MEMO :

KOCON

Specifications are subject to change without notice.

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