

# SEGMENTAL BALL VALVE

**Concentric type,  
Eccentric type**

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**MODEL: KCV-401C, KCV-402E Series**



# Segmental Ball Valve Concentric type (KCV-401C) Eccentric type (KCV-402E)

**Model: KCV-401C, 402E Series**

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## **General**

**KCV-401C** type is concentric segmental ball valve for modulating application.

V-notch cut at disc makes rangeability larger and creates shearing effect by disc and seal ring.

Therefore, suitable to large rangeability service and/or control of fluids with fiber and/or slurry.

**KCV-401E** type provides eccentric segmental ball valves for modulating application.

Comparing to globe valves, the body is compact, lightweight, and yet it has large capacity and large rangeability.



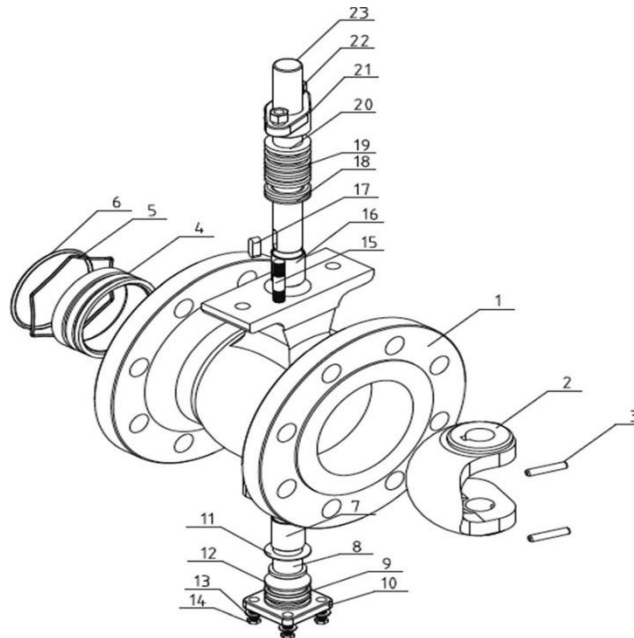
**KCV-401C** Concentric type Segmental Ball valve

## Standard specifications

Valve Model		KCV-401C (concentric type)	
		KCV-402E (Eccentric type)	
Valve Type		Cylinder actuator operated Segmental Ball Valve	
BODY	Valve Size		1" ~ 20" (25mm ~ 500mm)
	Pressure Rating		ANSI 150#~600# / JIS 10K~40K
	End Connection		WF, RF, FF
	Body Material		A216-WCB, A351-CF8, CF8M, etc.
	Seat ring	Soft seat	PTFE / RTFE / PEEK, etc. (-45 ~ 180°C)
		Metal seal	SUS304, 316+Surface treatment (Stellite, H.Cr plated. Etc.) (-45 ~ 400°C)
	Guide		Top & Bottom guide
	Bonnet		Body integral type
	Gasket		PTFE, SUS316 + Graphite spiral wound, Other alloy steels.
PERFORMANCE	Valve action		Direct, Reverse, Lock, Free
	Allowable Pressure For actuator		See "Allowable pressure drop." Page 7~12"
	Allowable seat leakage	Soft seat	ANSI B16. 104 Class VI
		Metal seal	ANSI B16. 104 Class IV, * Tight shut off – ANSI B16. 104 Class V
	Rangeability		100 : 1
	Rated Cv		See "Rated Cv value" Page 5~6
	Opening angle		401C : 90 Deg. / 402E : 60 Deg.
ACTUATOR	Action accuracy	Hysteresis	Max 2.0% F.S (with positioner)
		Linearity	Max $\pm 2.0\%$ F.S (with positioner)
	Type		KAR Pneumatic rotary cylinder (Spring return, Double acting Type)
	Operating angel		0 ~ 90°
	Supply air pressure		Spring return : 4.0, 5.0 BarG
			Double acting : 4.0 ~ 5.0 BarG
	Ambient temp		-20 ~ +80 °C
	Accessory		Air set, Solenoid valve, Speed controller, Lock-Up valve, Limit switch & Box, Booster Relay, Proximity switch, Silencer, Manual handle, etc.

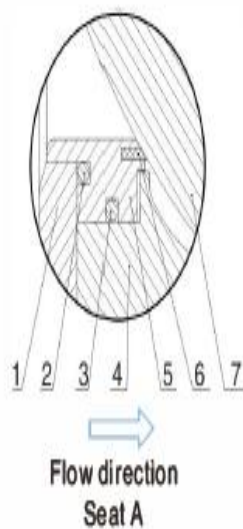
## Structure

- Design feature

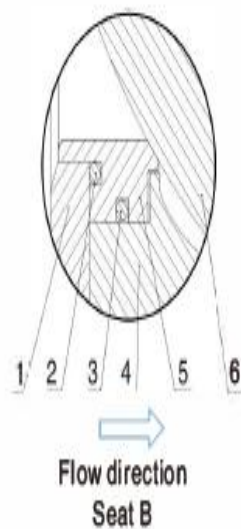


No.	Parts name	Material		
		WCB	CF8	CF8M
1	Body	WCB	CF8	CF8M
2	V-port segment	CF8+H Cr. Plated	CF8+H Cr. Plated	CF8M+H Cr. Plated
3	Pin	SUS304	SUS304	SUS316
4	Seat	SUS304+STL PTFE, RTFE	SUS304+STL PTFE, RTFE	SUS316+STL PTFE, RTFE
5	Spring	316LSS	316LSS	316LSS
6	O-Ring	Viton	Viton	Viton
7	Bearing	304SS+PTFE	304SS+PTFE	316SS+PTFE
8	Lower stem	304SS	304SS	316SS
9	O-Ring	Viton		
10	Gland packing	WCB	CF8	CF8M
11, 12	Gasket	PTFE		
13	Washer	410SS	304SS	316SS
14, 15	Bolt	Carbon steel	304SS	304SS
16	Bearing	304SS+PTFE	304SS+PTFE	316SS+PTFE
17	Key	304SS	304SS	316SS
18, 19, 20	Packing	Teflon or Graphite		
21	Gland Packing	WCB	CF8	CF8M
22	Nut	410SS	304SS	304SS
23	Upper stem	304SS	304SS	316SS

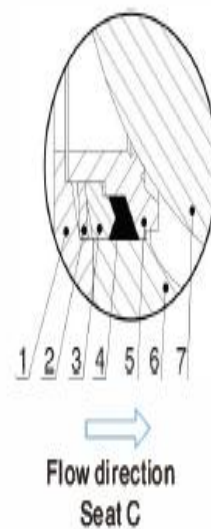
## Various Seat Option



No.	Parts	Temp Range
1	Retainer	-20~160°C
2	Spring	
3	O-Ring	
4	Valve Body	
5	Seat body	
6	Seat seal	
7	Ball	



No	Parts	Temp Range
1	Retainer	-20~120°C -20~200°C
2	Spring	
3	O-ring	
4	Valve Body	
5	Seat	
6	Ball	
7		

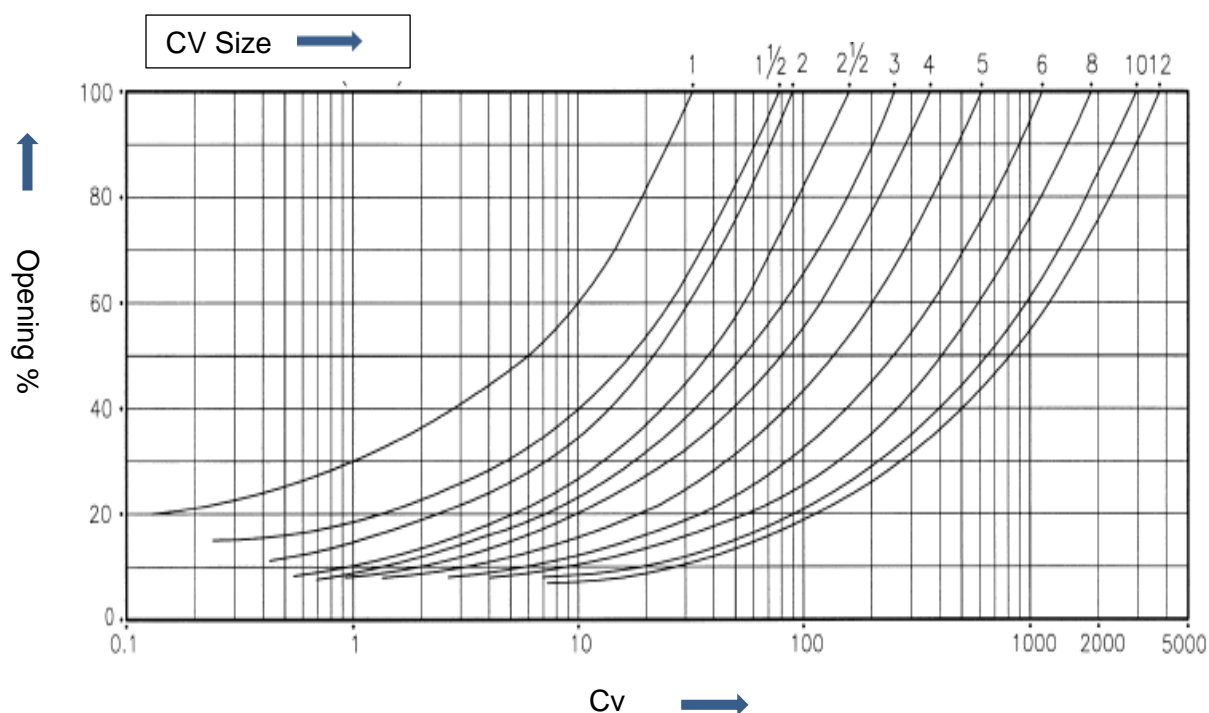


No	Parts	Temp. Range
1	Retainer	-20~400°C
2	Belville spring	
3	Plunge ring	
4	Graphite ring	
5	Metal seat	
6	Valve body	
7	Ball	

## Rated Cv Value

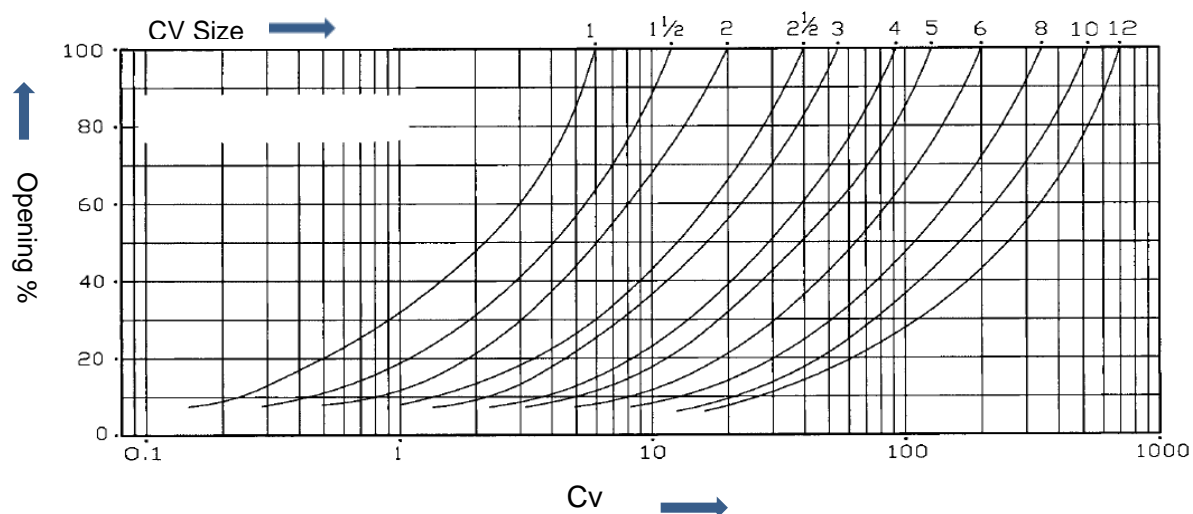
Size (Inch / mm)	401C Opening Angle : 90 Deg.	401E Opening Angle 60 Deg		
	Full Bore	Full bore	60% Reduced Bore	40% Reduced Bore
1" 25A	27	15	-	6
1-1/2" 40A	70	34	-	14
2" 50A	110	60	-	24
2-1/2" 50A	170	100	-	40
3" 80A	280	150	-	60
4" 100A	410	255	-	102
5" 125A	750	350	-	140
6" 150A	980	600	320	240
8" 200A	1720	1050	550	420
10" 250A	2900	1500	800	600
12" 300A	3800	1750	1100	700

## Flow characteristics (KCV-401C)

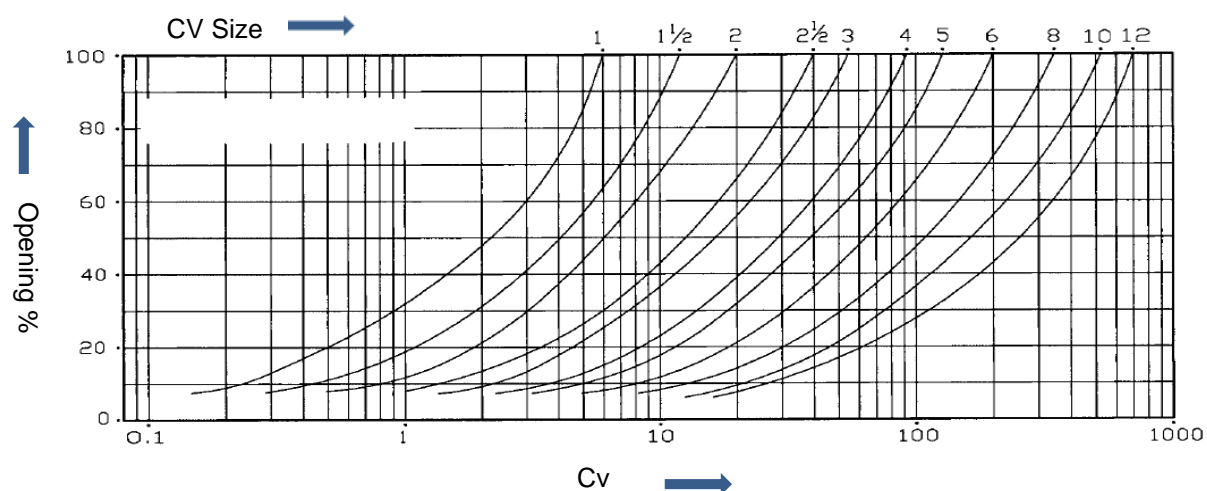


## Flow characteristics (KCV-402E)

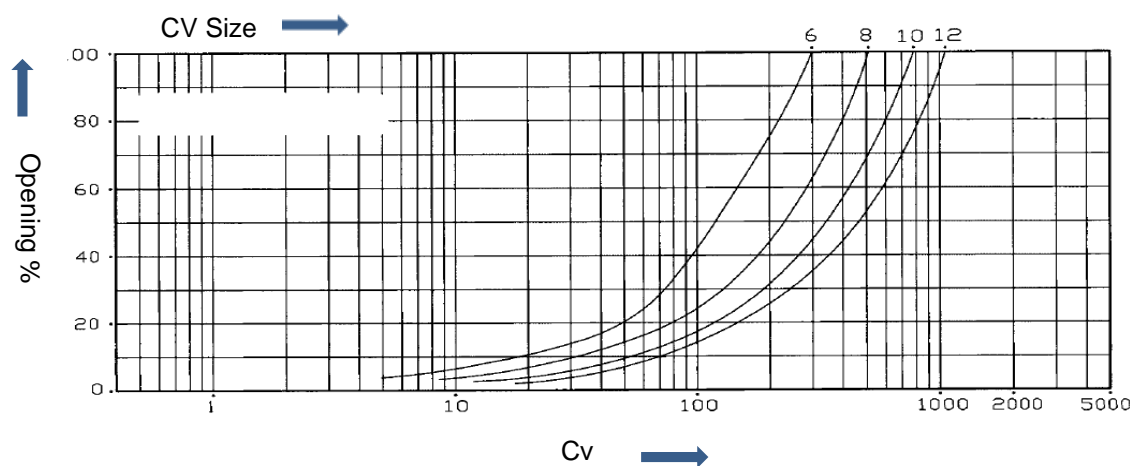
- Metal seat : Full Bore (Rangeability 100 : 1)



- Metal seat : 40% Reduced Bore (Rangeability 40 : 1)



- Metal seat : 60% Reduced Bore (Rangeability 60 : 1)



# Double acting Pneumatic Cylinder Actuator (Model : KAR series)

## ● KCV-401C Full Bore Ball

- Air supply **(4.0Bar )**
- Gland Packing : **Low torque type(TEFLON)**
- Shut : Allowable pressure drops at shut off
- $\Delta P$  : Allowable pressure drops at disc full opening

Actuator		Seal ring	Purpose	Allowable pressure drops(Mpa)											
HKC	A/T			1B	1-1/2B	2B	2-1/2B	3B	4B	5B	6B	8B	10B	12B	
HP63	AT101U	PTFE RTFE	Shut	3.17	1.29										
			△P	0.74	0.30										
		SUS316	Shut	0.70	0.70										
			△P	0.35	0.30										
		SUS316+ SS	Shut	5.00	3.09										
			△P	0.74	0.30										
HP75	AT201U	PTFE RTFE	Shut	3.95	3.35	2.13	1.27	0.68							
			△P	1.72	0.81	0.53	0.29	0.16							
		SUS316	Shut	0.70	0.70	0.70	0.70	0.41							
			△P	0.35	0.35	0.35	0.29	0.16							
		SUS316+ SS	Shut	5.00	5.00	5.00	2.78	1.31							
			△P	1.72	0.81	0.53	0.29	0.16							
HP88	AT251U	PTFE RTFE	Shut		3.35	2.13	1.27	1.23							
			△P		1.32	0.85	0.48	0.27							
		SUS316	Shut		0.70	0.70	0.70	0.70							
			△P		0.35	0.35	0.35	0.27							
		SUS316+ SS	Shut		5.00	5.00	2.78	2.59							
			△P		1.32	0.85	0.27	0.27							
HP100	AT301U	PTFE RTFE	Shut					2.03	0.67						
			△P					0.46	0.16						
		SUS316	Shut					0.70	0.38						
			△P					0.35	0.16						
		SUS316+ SS	Shut					0.50	1.50						
			△P					0.46	0.16						
HP115	AT351U	PTFE RTFE	Shut					2.03	1.37	0.72	0.40				
			△P					0.79	0.30	0.16	0.12				
		SUS316	Shut					0.70	0.70	0.42	0.18				
			△P					0.35	0.30	0.16	0.12				
		SUS316+ SS	Shut					4.50	3.05	1.46	0.85				
			△P					0.79	0.30	0.16	0.12				



Actuator		Seal ring	Purpose	Allowable pressure drops(Mpa)										
HKC	A/T			1B	1-1/2B	2B	2-1/2B	3B	4B	5B	6B	8B	10B	12B
HP125	AT401U	PTFE RTFE	Shut					2.03	1.99	1.11	0.64			
			△P					0.81	0.43	0.24	0.18			
		SUS316	Shut					0.70	0.70	0.70	0.37			
			△P					0.35	0.35	0.24	0.18			
		SUS316+ SS	Shut					4.50	0.43	2.25	1.36			
			△P					0.81	0.43	0.24	0.18			
HP145	AT451U	PTFE RTFE	Shut						2.01	1.89	1.13	0.47		
			△P						0.70	0.38	0.29	0.09		
		SUS316	Shut						0.70	0.70	0.70	0.30		
			△P						0.35	0.35	0.29	0.09		
		SUS316+ SS	Shut						4.48	3.37	2.38	0.77		
			△P						0.70	0.38	0.29	0.09		
HP160	AT501U	PTFE RTFE	Shut						2.01	2.52	1.53	0.67		
			△P						0.80	0.52	0.39	0.13		
		SUS316	Shut						0.70	0.70	0.70	0.47		
			△P						0.35	0.35	0.35	0.13		
		SUS316+ SS	Shut						4.48	4.95	3.21	1.14		
			△P						0.80	0.52	0.39	0.13		
HP180	AT551U	PTFE RTFE	Shut							2.52	1.53	0.99	0.52	0.39
			△P							0.73	0.55	0.19	0.09	0.07
		SUS316	Shut							0.70	0.70	0.60	0.36	0.26
			△P							0.35	0.35	0.19	0.09	0.07
		SUS316+ SS	Shut							4.95	3.21	1.71	0.89	0.64
			△P							0.73	0.55	0.19	0.09	0.07
HP200	AT601U	PTFE RTFE	Shut									1.46	0.80	0.57
			△P									0.27	0.14	0.10
		SUS316	Shut									0.60	0.56	0.40
			△P									0.27	0.14	0.10
		SUS316+ SS	Shut									2.56	1.38	1.04
			△P									0.27	0.14	0.10
HP210	AT651U	PTFE RTFE	Shut									2.09	1.46	1.04
			△P									0.49	0.26	0.19
		SUS316	Shut									0.60	0.60	0.60
			△P									0.30	0.26	0.19
		SUS316+ SS	Shut									3.71	2.59	2.00
			△P									0.49	0.26	0.19

### Spring return Pneumatic Cylinder Actuator (Model : KAR series)

#### ● KCV-401C Full Bore Ball

- Air supply **(4.0Bar )**
- Gland Packing : **Low torque type(TEFLON)**
- Shut : Allowable pressure drops at shut off
- $\Delta P$  : Allowable pressure drops at disc full opening

Actuator		Seal ring	Purpose	Allowable pressure drops(Mpa)										
HKC	A/T			1B	1-1/2B	2B	2-1/2B	3B	4B	5B	6B	8B	10B	12B
HP75	AT201U	PTFE RTFE	Shut	1.50	0.50									
			△P	0.37	0.13									
		SUS316	Shut	0.70	0.22									
			△P	0.34	0.13									
		SUS316+ SS	Shut	4.43	0.95									
			△P	0.37	0.13									
HP88	AT251U	PTFE RTFE	Shut	2.64	1.04	0.59	0.35							
			△P	0.65	0.26	0.17	0.09							
		SUS316	Shut	0.70	0.60	0.30	0.16							
			△P	0.35	0.26	0.17	0.09							
		SUS316+ SS	Shut	5.00	2.41	1.18	0.37							
			△P	0.65	0.26	0.17	0.09							
HP100	AT301U	PTFE RTFE	Shut	3.95	2.08	1.29	0.77	0.33						
			△P	1.19	0.52	0.33	0.19	0.09						
		SUS316	Shut	0.07	0.70	0.07	0.46	0.15						
			△P	0.35	0.35	0.33	0.19	0.09						
		SUS316+ SS	Shut	5.00	5.00	2.95	1.47	0.48						
			△P	1.19	0.52	0.33	0.19	0.09						
HP115	AT351U	PTFE RTFE	Shut			2.13	1.27	0.81						
			△P			0.64	0.35	0.20						
		SUS316	Shut			0.70	0.70	0.50						
			△P			0.35	0.35	0.20						
		SUS316+ SS	Shut			5.00	2.78	1.59						
			△P			0.64	0.35	0.20						
HP125	AT401U	PTFE RTFE	Shut			2.13	1.27	1.12	0.22					
			△P			0.83	0.46	0.26	0.07					
		SUS316	Shut			0.70	0.70	0.70	0.04					
			△P			0.35	0.35	0.26	0.04					
		SUS316+ SS	Shut			5.00	2.78	2.35	0.51					
			△P			0.83	0.46	0.26	0.07					

Actuator		Seal ring	Purpose	Allowable pressure drops(Mpa)										
HKC	A/T			1B	1-1/2B	2B	2-1/2B	3B	4B	5B	6B	8B	10B	12B
HP145	AT451U	PTFE RTFE	Shut					1.98	0.61	0.24				
			△P					0.46	0.16	0.08				
		SUS316	Shut					0.70	0.34	0.05				
			△P					0.35	0.16	0.05				
		SUS316+ SS	Shut					4.39	1.39	0.53				
			△P					0.46	0.16	0.08				
HP160	AT501U	PTFE RTFE	Shut					2.03	0.91	0.43				
			△P					0.61	0.22	0.11				
		SUS316	Shut					0.70	0.54	0.19				
			△P					0.35	0.22	0.11				
		SUS316+ SS	Shut					4.50	2.03	0.90				
			△P					0.61	0.22	0.11				
HP180	AT551U	PTFE RTFE	Shut						1.45	0.76	0.43	0.13		
			△P						0.33	0.18	0.14	0.03		
		SUS316	Shut						0.70	0.45	0.21	0.04		
			△P						0.33	0.18	0.14	0.03		
		SUS316+ SS	Shut						3.22	1.54	0.91	0.16		
			△P						0.33	0.18	0.14	0.03		
HP200	AT601U	PTFE RTFE	Shut						2.01	1.30	0.76	0.29		
			△P						0.53	0.28	0.22	0.06		
		SUS316	Shut						0.70	0.70	0.46	0.17		
			△P						0.35	0.28	0.22	0.06		
		SUS316+ SS	Shut						4.48	2.59	1.61	0.46		
			△P						0.53	0.28	0.22	0.06		
HP211	AT651U	PTFE RTFE	Shut							2.51	1.52	0.65	0.33	0.24
			△P							0.53	0.40	0.14	0.07	0.05
		SUS316	Shut							0.70	0.70	0.45	0.21	0.15
			△P							0.35	0.35	0.14	0.07	0.05
		SUS316+ SS	Shut							4.93	3.09	1.09	0.52	0.36
			△P							0.53	0.40	0.14	0.07	0.05
HP212	AT701U	PTFE RTFE	Shut							2.52	1.53	0.98	0.52	0.38
			△P							0.75	0.57	0.20	0.10	0.07
		SUS316	Shut							0.70	0.70	0.58	0.35	0.25
			△P							0.35	0.35	0.20	0.10	0.07
		SUS316+ SS	Shut							4.95	3.21	1.69	0.87	0.63
			△P							0.75	0.57	0.20	0.10	0.07

# **Double acting Pneumatic Cylinder Actuator (Model : KAR series)**

## ● **KCV-402E**

- Air supply **(4.0Bar )**
- Gland Packing : **Low torque type(TEFLON)**
- Shut : Allowable pressure drops at shut off
- $\Delta P$  : Allowable pressure drops at disc 60 Deg.opening

Actuator		Seal ring	Purpose	Allowable pressure drops(Mpa)											
HKC	A/T			1B	1-1/2B	2B	2-1/2B	3B	4B	5B	6B	8B	10B	12B	
HP63	AT101U	SUS630	Shut	3.94	1.32										
			△P	1.44	0.58										
		SUS316	Shut	3.94	1.32										
			△P	1.44	0.58										
HP75	AT201U	SUS630	Shut	5.01	4.36	1.97	0.42								
			△P	3.82	1.57	0.78	0.21								
		SUS316	Shut	5.01	4.36	1.97	0.42								
			△P	3.82	1.57	0.78	0.21								
HP88	AT251U	SUS630	Shut			3.71	1.26	0.72							
			△P			1.33	0.50	0.30							
		SUS316	Shut			3.23	1.26	0.72							
			△P			1.33	0.50	0.30							
HP100	AT301U	SUS630	Shut			5.01	2.23	1.42	0.50						
			△P			2.03	0.84	0.52	0.17						
		SUS316	Shut			3.23	2.32	1.42	0.50						
			△P			2.03	0.84	0.52	0.17						
HP115	AT351U	SUS630	Shut				4.41	2.80	1.24	0.73					
			△P				1.54	0.96	0.39	0.26					
		SUS316	Shut				4.41	2.80	1.24	0.73					
			△P				1.54	0.96	0.39	0.26					
HP125	AT401	SUS630	Shut					3.84	1.79	1.11	0.45				
			△P					1.30	0.53	0.38	0.16				
		SUS316	Shut					3.48	1.79	1.11	0.45				
			△P					1.30	0.53	0.38	0.16				
HP145	AT451	SUS630	Shut						3.09	1.90	0.90				
			△P						0.92	0.71	0.30				
		SUS316	Shut						3.09	1.90	0.90				
			△P						3.92	0.71	0.30				

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## Spring return Pneumatic Cylinder Actuator (Model : KAR series)

### ● KCV-402E

- Air supply (4.0Bar )
- Gland Packing : **Low torque type(TEFLON)**
- Shut : Allowable pressure drops at shut off
- $\Delta P$  : Allowable pressure drops at disc 60 deg opening

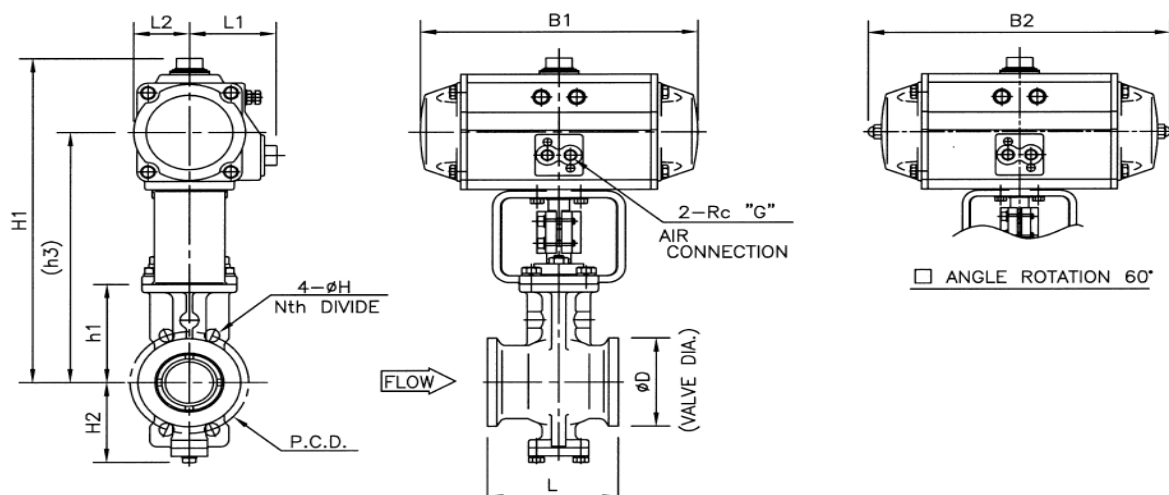
Actuator		Seal ring	Purpose	Allowable pressure drops(Mpa)											
HKC	A/T			1B	1-1/2B	2B	2-1/2B	3B	4B	5B	6B	8B	10B	12B	
HP75	AT201U	SUS630	Shut	1.81											
			△P	0.56											
		SUS316	Shut	1.81											
			△P	0.56											
HP88	AT251U	SUS630	Shut	4.11	1.04										
			△P	1.29	0.51										
		SUS316	Shut	4.11	1.04										
			△P	1.29	0.51										
HP100	AT301U	SUS630	Shut	5.01	2.94	1.25									
			△P	2.42	0.99	0.49									
		SUS316	Shut	5.01	2.94	1.25									
			△P	2.42	0.99	0.49									
HP115	AT351U	SUS630	Shut		5.01	2.66	0.75								
			△P		1.81	0.90	0.27								
		SUS316	Shut		5.01	2.66	0.75								
			△P		1.81	0.96	0.27								
HP125	AT401U	SUS630	Shut			3.74	1.27	0.73							
			△P			1.18	0.43	0.26							
		SUS316	Shut			3.23	1.27	0.73							
			△P			1.18	0.43	0.26							
HP145	AT451	SUS630	Shut				2.61	1.60							
			△P				0.84	0.51							
		SUS316	Shut				2.61	1.60							
			△P				0.84	0.51							
HP160	AT501	SUS630	Shut				3.96	2.49	1.06						
			△P				1.25	0.77	0.29						
		SUS316	Shut				3.96	2.49	1.06						
			△P				1.25	0.77	0.29						

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# Segmental Ball valve- Double acting Cylinder

## KCV-401C ( Concentric Type)

Valve size : 1"~3"



Dimension

unit : mm

Valve size	Face to Face -L-	D	JIS10K, 20K, 30K ANSI150, 300				Actuator						
			h1	h3	H1	H2	HKC	A/T	B1	B2	L1	L2	G
□1" (25A)	102	64	100	270	335	75	□ HP 63	□ AT101	160	180	65	36	1/4
				280	350		□ HP75	□ AT201	215	240	70	43	1/4
□1-1/2" (40A)	114	82	110	280	345	95	□ HP 63	□ AT101	160	180	65	36	1/4
				280	350		□ HP75	□ AT201	215	240	70	43	1/4
				285	365		□ HP88	□ AT251	250	275	75	50	1/4
□2" (50A)	124	100	125	295	365	105	□ HP75	□ AT201	215	240	70	43	1/4
				300	380		□ HP88	□ AT251	250	275	75	50	1/4
□2-1/2" (65A)	143	118	135	305	375	120	□ HP75	□ AT201	215	240	70	43	1/4
				310	390		□ HP88	□ AT251	250	275	75	50	1/4
				-	-		□ HP100	□ AT301	270	305	85	56	1/4
				-	-		□ HP115	□ AT351	315	355	95	64	1/4
□3" (80A)	165	130	145	320	390	140	□ HP75	□ AT201	215	240	70	43	1/4
				325	405		□ HP88	□ AT251	250	275	75	50	1/4
				330	415		□ HP100	□ AT301	270	305	85	56	1/4
				340	445		□ HP115	□ AT351	315	355	95	64	1/4
				365	475		□ HP125	□ AT401	345	385	100	70	1/4

Valve size	JIS 10K				JIS20K				JIS30K				ANSI 150				ANSI 300			
		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H
1" (25A)	□	-	-	-	□	-	-	-	□	-	-	-	□	-	-	-	□	-	-	-
1-1/2"(40A)	□	-	-	-	□	-	-	-	□	-	-	-	□	-	-	-	□	-	-	-
2" (50A)	□	-	-	-	□	120	8	19	□	130	8	19	□	-	-	-	□	127	8	19
2-1/2"(65A)	□	-	-	-	□	140	8	19	□	160	8	23	□	-	-	-	□	149.4	8	22
3"(80A)	□	150	8	19	□	160	8	23	□	170	8	23	□	-	-	-	□	168.1	8	22

Note :

DRAWING No.

KCV-401C-XXXX-W-01

REV.

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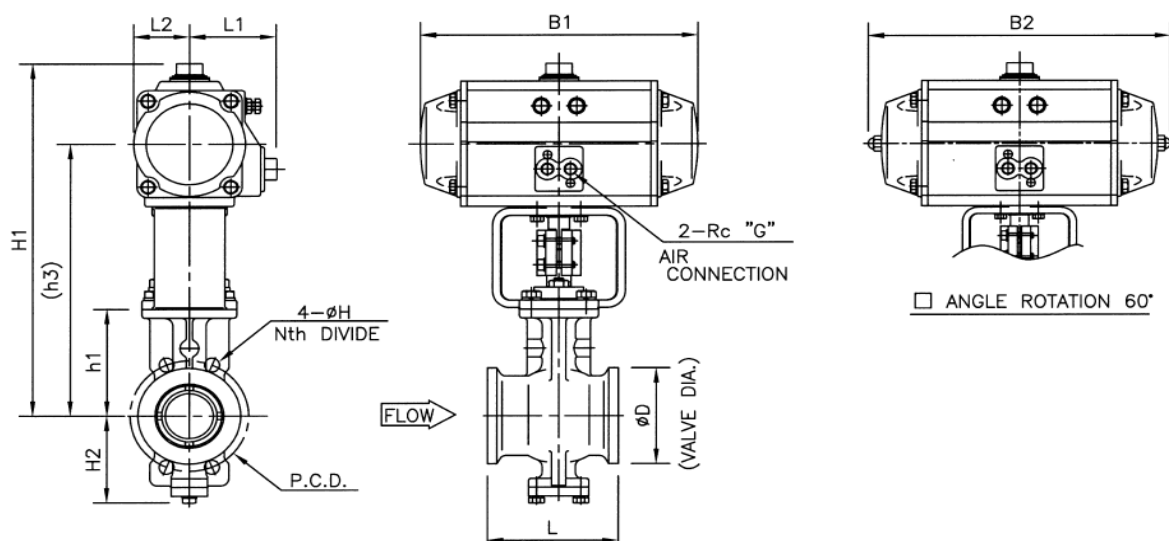
**KOCON**



# Segmental Ball valve- Double acting Cylinder

## KCV-401C ( Concentric Type)

Valve size : 4"~5" & PCD information



Dimension

unit : mm

Valve size	Face to Face -L-	D	□JIS10K, 20K, 30K ANSI150, 300				Actuator						
			h1	h3	H1	H2	HKC	A/T	B1	B2	L1	L2	G
□4" (100A)	194	155	180	365	450	140	□ HP100	□ AT301	270	305	85	56	1/4
				375	480		□ HP115	□ AT351	315	355	95	64	1/4
				400	510		□ HP125	□ AT401	345	385	100	70	1/4
				440	560		□ HP145	□ AT451	410	455	110	80	1/4
				450	580		□ HP160	□ AT501	440	485	120	88	1/4
				-	-		□ HP180	□ AT551	490	540	125	99	1/4
				-	-		□ HP200	□ AT601	545	600	130	110	1/4
□5" (120A)	213	185	215	440	545	265	□ HP115	□ AT351	315	355	95	64	1/4
				460	570		□ HP125	□ AT401	345	385	100	70	1/4
				500	615		□ HP145	□ AT451	410	455	110	80	1/4
				505	635		□ HP160	□ AT501	440	485	120	88	1/4
				535	695		□ HP180	□ AT551	490	540	125	99	1/4
				-	-		□ HP200	□ AT601	545	600	130	110	1/4
				-	-		□ HP211	□ AT651	625	685	150	131	3/8

Valve size	JIS 10K				JIS20K				JIS30K				ANSI 150				ANSI 300			
		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H
4" (100A)	□	175	8	19	□	185	8	23	□	195	8	25	□	190.5	8	19	□	200.2	8	22
5" (125A)	□	210	8	23	□	225	8	25	□	250	8	25	□	215.9	8	22	□	235	8	22

Note :

DRAWING No.

KCV-401C-XXXX-W-02

REV.

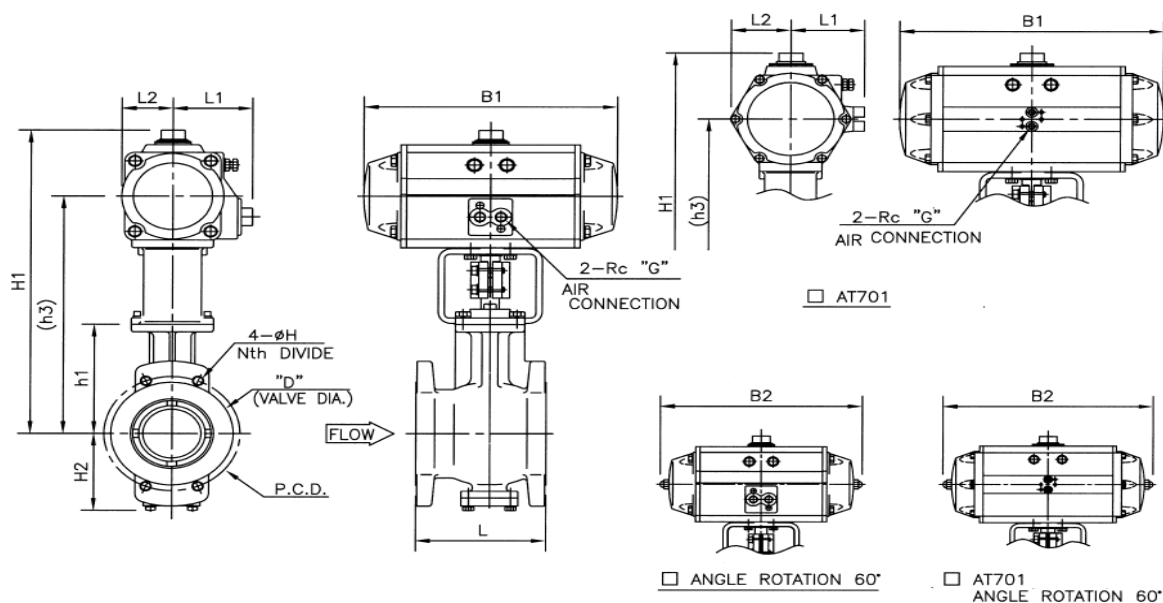
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**KOCON**

# Segmental Ball valve- Double acting Cylinder

KCV-401C ( Concentric Type)

Valve size : 6"~12"



Dimension

unit : mm

Valve size	Face to Face -L-	D	□JIS10K, 20K, 30K ANSI150, 300				Actuator						
			h1	h3	H1	H2	HKC	A/T	B1	B2	L1	L2	G
□6" (150A)	229	216	230	455	560	165	□ HP115	□ AT351	315	355	95	64	1/4
				475	585		□ HP125	□ AT401	345	385	100	70	1/4
				515	630		□ HP145	□ AT451	410	455	110	80	1/4
				520	650		□ HP160	□ AT501	440	485	120	88	1/4
				550	710		□ HP180	□ AT551	490	540	125	99	1/4
				-	-		□ HP200	□ AT601	545	600	130	110	1/4
				-	-		□ HP211	□ AT651	625	685	150	131	3/8
				-	-		□ HP212	□ AT701	730	805	185	165	1/2
□8" (200A)	243	264	275	565	685	205	□ HP145	□ AT451	410	455	110	80	1/4
				575	705		□ HP160	□ AT501	440	485	120	88	1/4
				600	760		c	□ AT551	490	540	125	99	1/4
				610	780		□ HP200	□ AT601	545	600	130	110	1/4
				635	835		□ HP211	□ AT651	625	685	150	131	3/8
				650	865		□ HP212	□ AT701	730	805	185	165	1/2
□10" (250A)	297	328	310	650	810	240	□ HP180	□ AT551	490	540	125	99	1/4
				660	830		□ HP200	□ AT601	545	600	130	110	1/4
				685	885		□ HP211	□ AT651	625	685	150	131	3/8
				700	915		□ HP212	□ AT701	730	805	185	165	1/2
□12" (300A)	338	373	345	685	845	270	□ HP180	□ AT551	490	540	125	99	1/4
				695	865		□ HP200	□ AT601	545	600	130	110	1/4
				720	920		□ HP211	□ AT651	625	685	150	131	3/8
				735	950		□ HP212	□ AT701	730	805	185	165	1/2

Note :

DRAWING No.

KCV-401C-XXXX-W-03

REV.

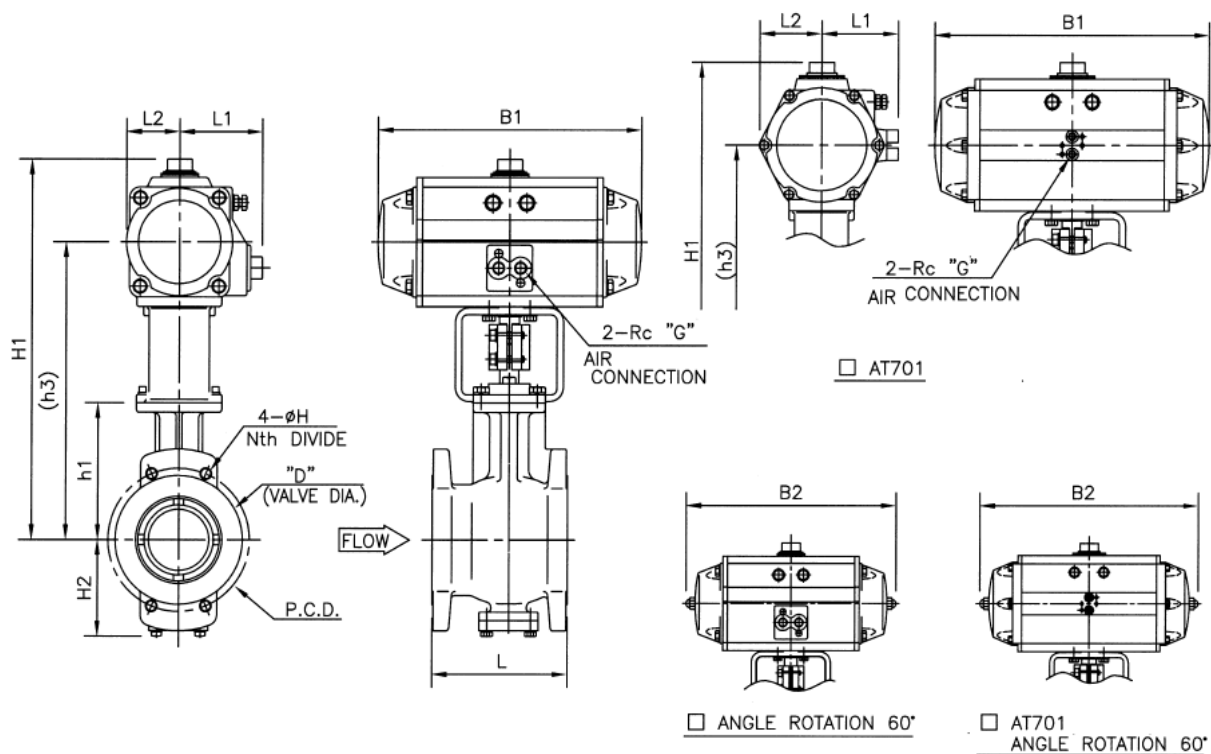
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KOCON

# Segmental Ball valve- Double acting Cylinder

## KCV-401C ( Concentric Type)

valve size : 6~12" & PCD information



### Dimension

unit : mm

Valve size	JIS 10K				JIS20K				JIS30K				ANSI 150				ANSI 300			
		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H
6" (150A)	□	240	8	M20	□	260	12	M22	□	275	12	M24	□	241.3	8	3/4" UNC	□	269.7	12	3/4" UNC
8" (200A)	□	290	12	M20	□	305	12	M22	□	320	12	M24	□	298.4	8	3/4" UNC	□	330.2	12	7/8" UNC
10" (250A)	□	355	12	M22	□	380	12	M24	□	390	12	M30x3	□	362	12	7/8" UNC	□	387.4	16	1" UNC
12" (300A)	□	400	16	M22	□	430	16	M24	□	450	16	M30x3	□	431.8	12	7/8" UNC	□	450.8	16	1-1/8" UNC

Note :

DRAWING No.

KCV-401C-XXXX-W-04

REV.

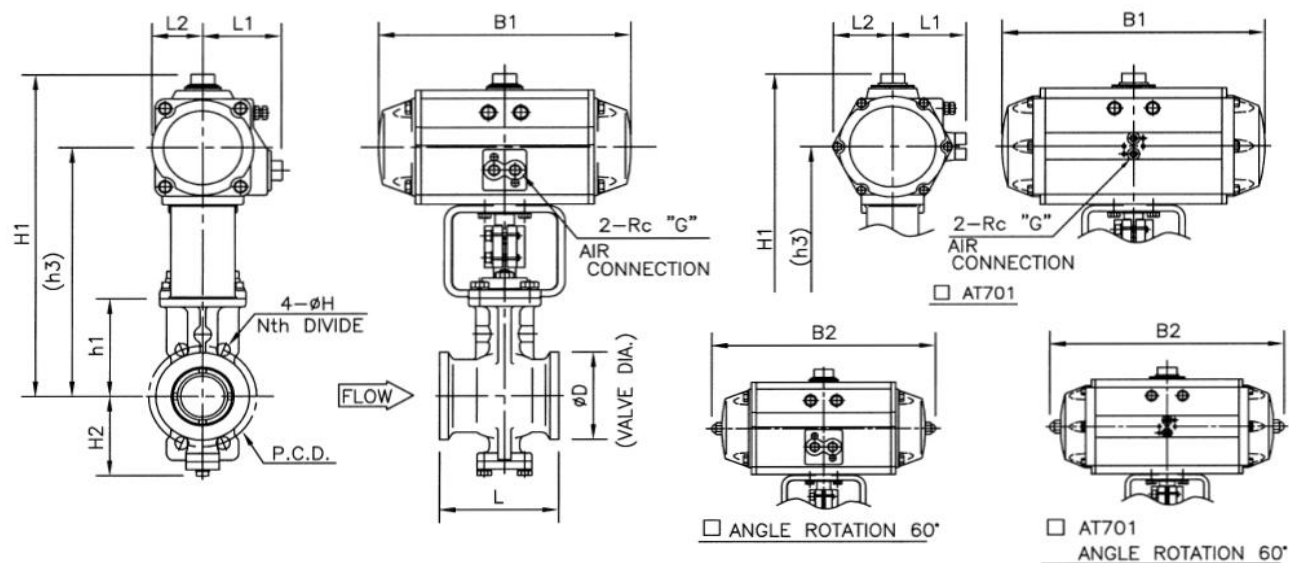
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**KOCON**

# Segmental Ball valve- Spring return Cylinder

## KCV-401C ( Concentric Type)

Valve size : 1"~2"



Dimension

unit : mm

Valve size	Face to Face -L-	D	□JIS10K, 20K, 30K ANSI150, 300				Actuator						
			h1	h3	H1	H2	HKC	A/T	B1	B2	L1	L2	G
□1" (25A)	102	64	100	280	350	60	□ HP75	□ AT201	215	240	70	43	1/4
				285	365		□ HP88	□ AT251	250	275	75	50	1/4
				290	275		□ HP100	□ AT301	270	305	85	56	1/4
				-	-		□ HP115	□ AT351	315	355	95	64	1/4
□1-1/2" (40A)	114	82	110	280	350	75	□ HP75	□ AT201	215	240	70	43	1/4
				285	365		□ HP88	□ AT251	250	275	75	50	1/4
				290	275		□ HP100	□ AT301	270	305	85	56	1/4
				-	-		□ HP115	□ AT351	315	355	95	64	1/4
				-	-		□ HP125	□ AT401	345	385	100	70	1/4
				-	-		□ HP145	□ AT451	410	455	110	80	1/4
□2" (50A)	124	100	125	300	380	95	□ HP88	□ AT251	250	275	75	50	1/4
				305	390		□ HP100	□ AT301	270	305	85	56	1/4
				315	420		□ HP115	□ AT351	315	355	95	64	1/4
				340	450		□ HP125	□ AT401	345	385	100	70	1/4
				-	-		□ HP145	□ AT451	410	455	110	80	1/4
				-	-		□ HP145	□ AT451	410	455	110	80	1/4

Valve size	JIS 10K				JIS20K				JIS30K				ANSI 150				ANSI 300			
		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H
1" (25A)	□	-	-	-	□	-	-	-	□	-	-	-	□	-	-	-	□	-	-	-
1-1/2"(40A)	□	-	-	-	□	-	-	-	□	-	-	-	□	-	-	-	□	-	-	-
2" (50A)	□	-	-	-	□	120	8	19	□	130	8	19	□	-	-	-	□	127	8	19

Note :

DRAWING No.

KCV-401C-XXXX-SR-01

REV.

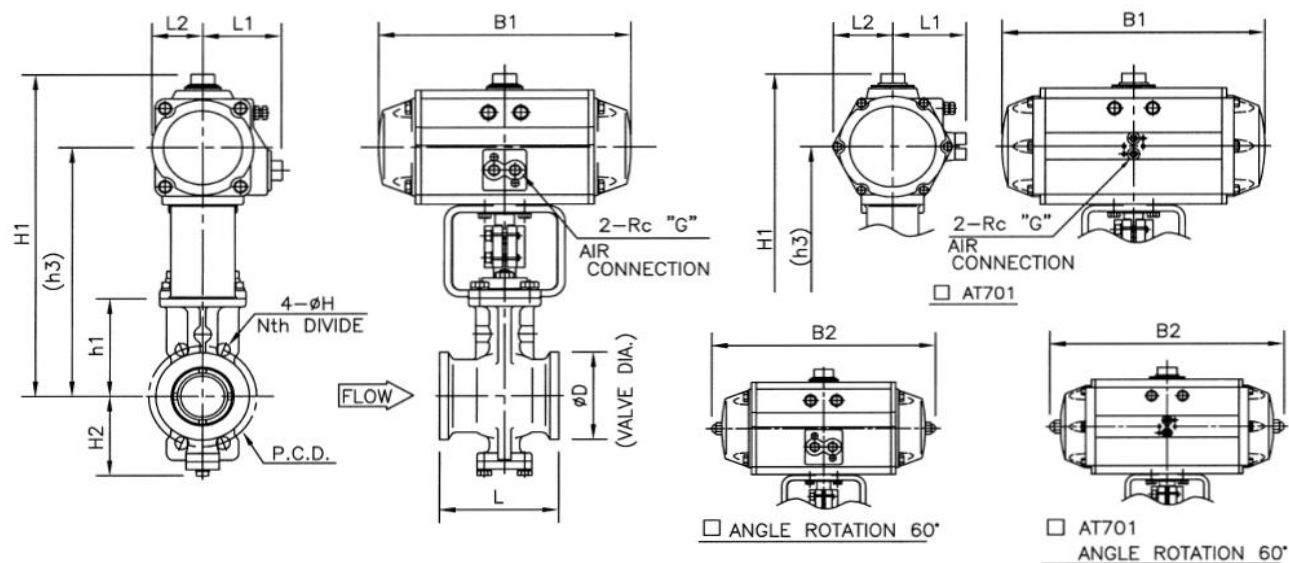
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**KOCON**

# Segmental Ball valve- Spring return Cylinder

## KCV-401C ( Concentric Type)

Valve size : 2-1/2"~4"



### Dimension

unit : mm

Valve size	Face to Face -L-	D	□JIS10K, 20K, 30K ANSI150, 300				Actuator						
			h1	h3	H1	H2	HKC	A/T	B1	B2	L1	L2	G
□2-1/2" (65A)	143	118	135	310	390	105	□ HP88	□ AT251	250	275	75	50	1/4
				315	400		□ HP100	□ AT301	270	305	85	56	1/4
				325	430		□ HP115	□ AT351	315	355	95	64	1/4
				350	460		□ HP125	□ AT401	345	385	100	70	1/4
				-	-		□ HP145	□ AT451	410	455	110	80	1/4
				-	-		□ HP160	□ AT501	440	485	120	88	1/4
□3" (80A)	165	130	145	340	445	120	□ HP115	□ AT351	315	355	95	64	1/4
				365	475		□ HP125	□ AT401	345	385	100	70	1/4
				405	525		□ HP145	□ AT451	410	455	110	80	1/4
				415	545		□ HP160	□ AT501	440	485	120	88	1/4
				-	-		□ HP180	□ AT551	490	540	125	99	1/4
				-	-		□ HP200	□ AT601	545	600	130	110	1/4
□4" (100A)	194	155	180	400	510	140	□ HP125	□ AT401	345	385	100	70	1/4
				440	560		□ HP145	□ AT451	410	455	110	80	1/4
				450	580		□ HP160	□ AT501	440	485	120	88	1/4
				445	605		□ HP180	□ AT551	490	540	125	99	1/4
				455	625		□ HP200	□ AT601	545	600	130	110	1/4

Valve size	JIS 10K				JIS20K				JIS30K				ANSI 150				ANSI 300			
		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H
2-1/2"(65A)	□	-	-	-	□	140	8	19	□	160	8	23	□	-	-	-	□	149.4	8	22
3"(80A)	□	150	8	19	□	160	8	23	□	170	8	23	□	-	-	-	□	168.1	8	22
4" (100A)	□	175	8	19	□	185	8	23	□	195	8	25	□	190.5	8	19	□	200.2	8	22

Note :

DRAWING No.

KCV-401C-XXXX-SR-02

REV.

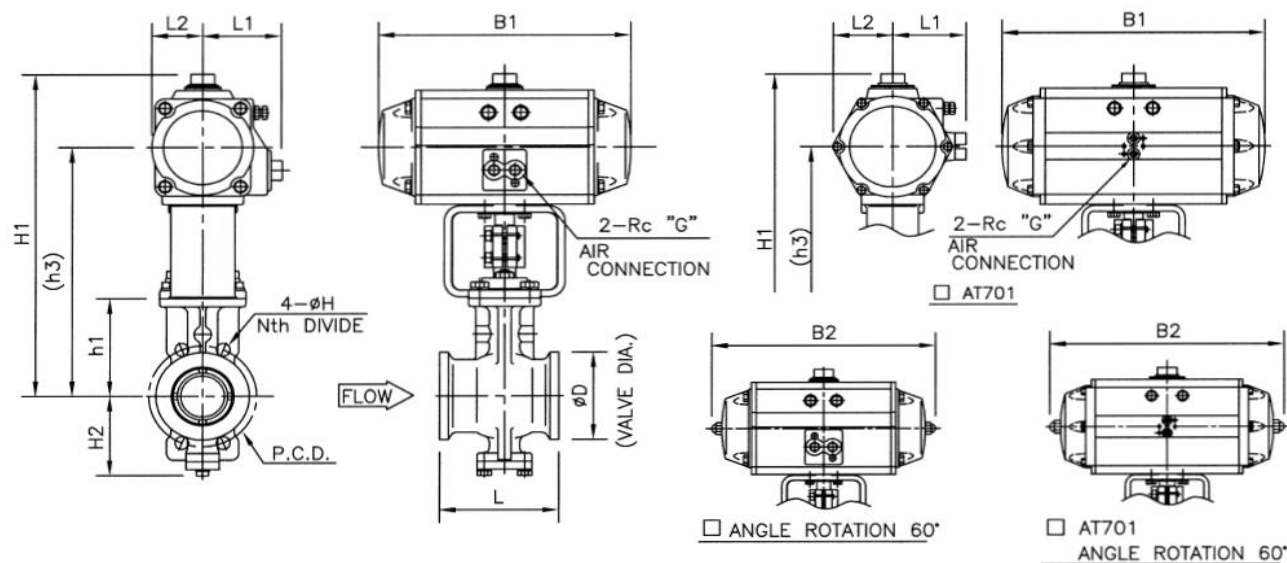
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**KOCON**

# Segmental Ball valve- Spring return Cylinder

## KCV-401C ( Concentric Type)

Valve size : 5"~6"



### Dimension

unit : mm

Valve size	Face to Face -L-	D	JIS10K, 20K, 30K ANSI150, 300				Actuator						
			h1	h3	H1	H2	HKC	A/T	B1	B2	L1	L2	G
□5" (125A)	213	185	215	440	545	165	□ HP115	□ AT351	315	355	95	64	1/4
				460	570		□ HP125	□ AT401	345	385	100	70	1/4
				500	615		□ HP145	□ AT451	410	455	110	80	1/4
				505	635		□ HP160	□ AT501	440	485	120	88	1/4
				535	695		□ HP180	□ AT551	490	540	125	99	1/4
				-	-		□ HP200	□ AT601	545	600	130	110	1/4
				-	-		□ HP211	□ AT651	625	685	150	131	3/8
□6" (160A)	229	216	230	455	560	165	□ HP115	□ AT351	315	355	95	64	1/4
				475	585		□ HP125	□ AT401	345	385	100	70	1/4
				515	630		□ HP145	□ AT451	410	455	110	80	1/4
				520	650		□ HP160	□ AT501	440	485	120	88	1/4
				550	710		□ HP180	□ AT551	490	540	125	99	1/4
				-	-		□ HP200	□ AT601	545	600	130	110	1/4
				-	-		□ HP211	□ AT651	625	685	150	131	3/8

Valve size	JIS 10K				JIS20K				JIS30K				ANSI 150				ANSI 300			
		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H
5" (125A)	□	210	8	23	□	225	8	25	□	250	8	25	□	215.9	8	22	□	235	8	22
6" (150A)	□	240	8	M20	□	260	12	M22	□	275	12	M24	□	241.3	8	3/4" UNC	□	269.7	12	3/4" UNC

Note :

DRAWING No.

KCV-401C-XXXX-SR-03

REV.

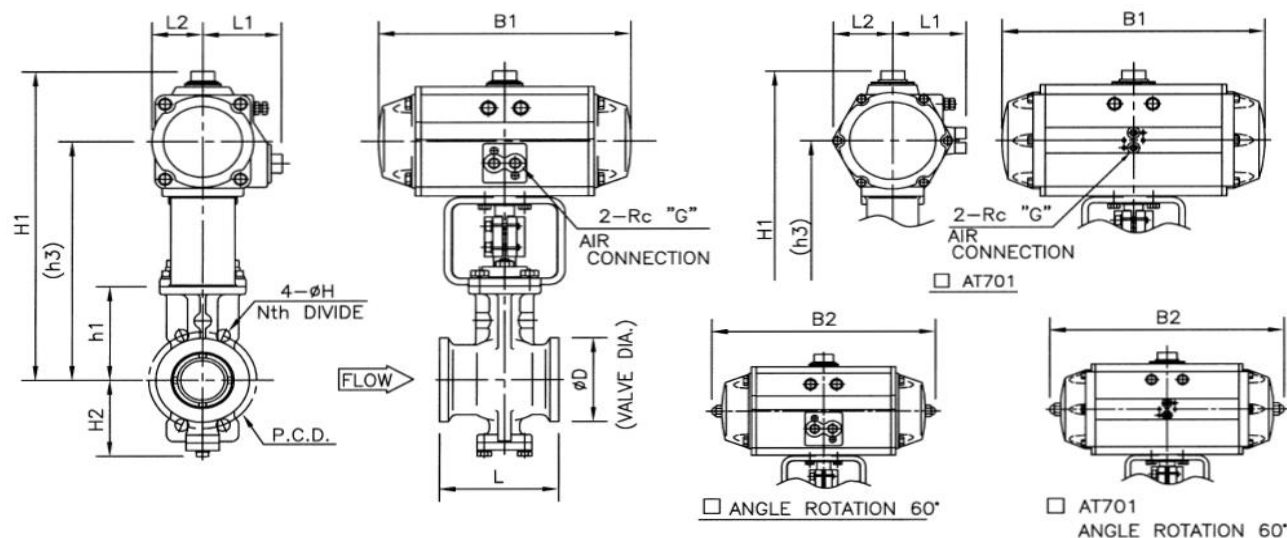
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**KOCON**

# Segmental Ball valve- Spring return Cylinder

## KCV-401C ( Concentric Type)

Valve size : 8"~12"



### Dimension

unit : mm

Valve size	Face to Face -L-	D	JIS10K, 20K, 30K ANSI150, 300				Actuator						
			h1	h3	H1	H2	HKC	A/T	B1	B2	L1	L2	G
□8" (200A)	243	264	275	565	685	205	□ HP145	□ AT451	410	455	110	80	1/4
				575	705		□ HP160	□ AT501	440	485	120	88	1/4
				600	760		□ HP180	□ AT551	490	540	125	99	1/4
				610	780		□ HP200	□ AT601	545	600	130	110	1/4
				635	835		□ HP211	□ AT651	625	685	150	131	3/8
				650	865		□ HP212	□ AT701	730	805	185	165	1/2
□10" (250A)	297	328	310	650	810	240	□ HP180	□ AT551	490	540	125	99	1/4
				660	830		□ HP200	□ AT601	545	600	130	110	1/4
				685	885		□ HP211	□ AT651	625	685	150	131	3/8
				700	915		□ HP212	□ AT701	730	805	185	165	1/2
□12" (300A)	338	373	345	685	845	270	□ HP180	□ AT551	490	540	125	99	1/4
				695	865		□ HP200	□ AT601	545	600	130	110	1/4
				720	920		□ HP211	□ AT651	625	685	150	131	3/8
				735	950		□ HP212	□ AT701	730	805	185	165	1/2

Valve size	JIS 10K				JIS20K				JIS30K				ANSI 150				ANSI 300			
		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H		P.C.D	N	H
8" (200A)	□	290	12	M20	□	305	12	M22	□	320	12	M24	□	298.4	8	3/4" UNC	□	330.2	12	7/8" UNC
10" (250A)	□	355	12	M22	□	380	12	M24	□	390	12	M30x3	□	362	12	7/8" UNC	□	387.4	16	1" UNC
12" (300A)	□	400	16	M22	□	430	16	M24	□	450	16	M30x3	□	431.8	12	7/8" UNC	□	450.8	16	1-1/8" UNC

Note :

DRAWING No.

KCV-401C-XXXX-SR-04

REV.

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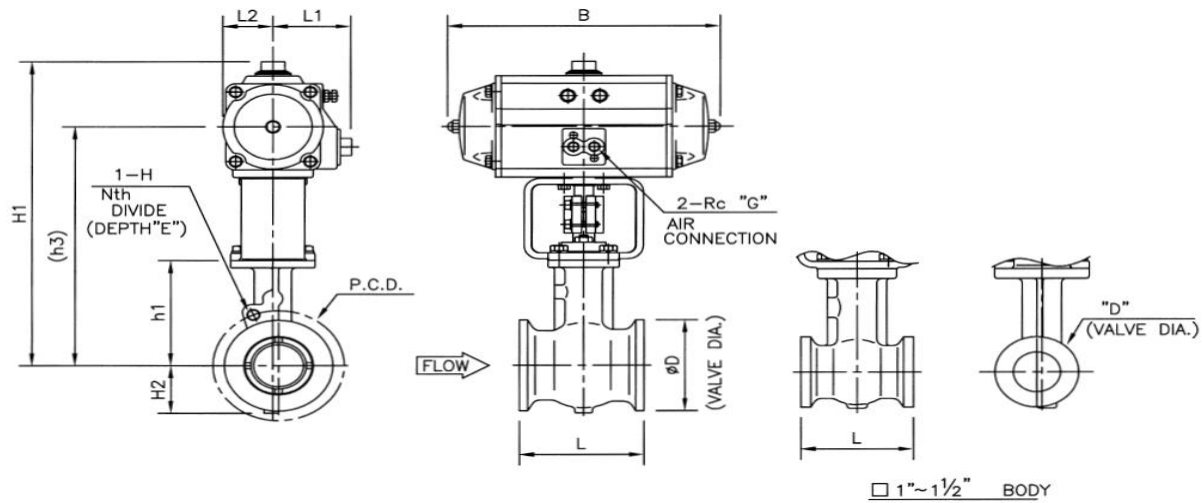
KOCON



# Segmental Ball valve- Double acting Cylinder

KCV-402E ( Eccentric Type)

Valve size : 1"~3"



Dimension

unit : mm

Valve size	Face to Face0 -L-	D		□ JIS10K, 20K, ANSI150, 300				Actuator					
		□ JIS	□ ANSI	h1	h3	H1	H2	HKC	A/T	B	L1	L2	G
□ 1" (25A)	102	65	51	100	270	330	35	□ HP 63	□ AT101	180	65	36	1/4
					270	340		□ HP75	□ AT201	240	70	43	1/4
□ 1-1/2" (40A)	114	85	73	110	280	340	45	□ HP 63	□ AT101	180	65	36	1/4
					280	350		□ HP88	□ AT201	240	70	43	1/4
□ 2" (50A)	124	100	92	125	295	365	50	□ HP75	□ AT201	240	70	43	1/4
					300	375		□ HP88	□ AT251	275	75	50	1/4
					305	390		□ HP100	□ AT301	305	85	56	1/4
□ 2-1/2" (65A)	143	120	105	135	310	380	60	□ HP75	□ AT201	240	70	43	1/4
					315	390		□ HP88	□ AT251	275	75	50	1/4
					320	405		□ HP100	□ AT301	305	85	56	1/4
					330	430		□ HP115	□ AT351	355	95	64	1/4
□ 3" (80A)	165	130	127	145	325	400	70	□ HP88	□ AT251	275	75	50	1/4
					330	415		□ HP100	□ AT301	305	85	56	1/4
					340	440		□ HP115	□ AT351	355	95	64	1/4
					365	475		□ HP125	□ AT401	385	100	70	1/4

Valve size	JIS 10K					JIS20K					ANSI 150					ANSI 300				
		P.C.D	N	H	E		P.C.D	N	H	E		P.C.D	N	H	E		P.C.D	N	H	E
1" (25A)	□	-	-	-		□	-	-	-		□	-	-	-	-	□	-	-	-	
1-1/2"(40A)	□	-	-	-		□	-	-	-	20	□	-	-	-	-	□	-	-	-	
2" (50A)	□	-	-	-		□	120	8	M16	20	□	-	-	-	-	□	127	8	5/8"UNC	20
2-1/2"(65A)	□	-	-	-		□	140	8	M16	20	□	-	-	-	-	□	149.4	8	3/4"UNC	22
3"(80A)	□	150	8	M16		□	160	8	M20	20	□	-	-	-	-	□	168.1	8	3/4"UNC	25

Note :

DRAWING No.

KCV-402E-XXXX-W-01

REV.

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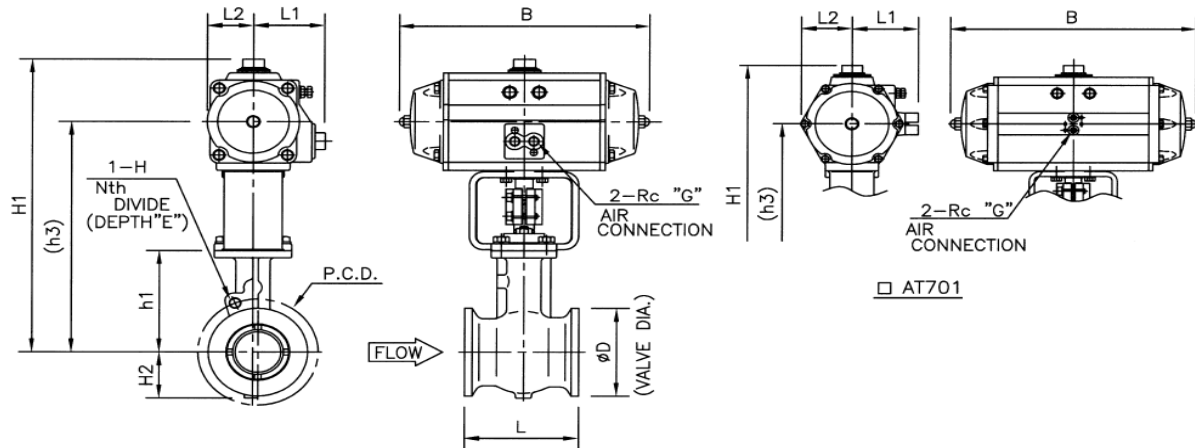
KOCON



# Segmental Ball valve- Double acting Cylinder

KCV-402E ( Eccentric Type)

Valve size : 4"~6"



Dimension

unit : mm

Valve size	Face to Face0 -L-	D		□ JIS10K, 20K, ANSI150, 300				Actuator					
		□ JIS	□ ANSI	h1	h3	H1	H2	HKC	A/T	B	L1	L2	G
□ 4" (100A)	194	155	157	180	395	480	80	□ HP100	□ AT301	305	85	56	1/4
					405	505		□ HP115	□ AT351	355	95	64	1/4
					425	535		□ HP125	□ AT401	385	100	70	1/4
					465	580		□ HP145	□ AT451	455	110	80	1/4
					470	600		□ HP160	□ AT501	485	120	88	1/4
□ 5" (125A)	213	186	186	215	440	540	110	□ HP115	□ AT351	355	95	64	1/4
					460	570		□ HP125	□ AT401	385	100	70	1/4
					500	615		□ HP145	□ AT451	455	110	80	1/4
					505	635		□ HP160	□ AT501	485	120	88	1/4
					535	695		□ HP180	□ AT551	540	125	99	1/4
□ 6" (150A)	229	216	216	230	490	600	135	□ HP125	□ AT401	385	100	70	1/4
					520	640		□ HP145	□ AT451	455	110	80	1/4
					530	660		□ HP160	□ AT501	485	120	88	1/4
					555	715		□ HP180	□ AT551	540	125	99	1/4
					565	735		□ HP200	□ AT601	600	130	110	1/4
					575	790		□ HP211	□ AT651	685	150	131	3/8

Valve size	JIS 10K					JIS20K					ANSI 150					ANSI 300				
	□	P.C.D	N	H	E	□	P.C.D	N	H	E	□	P.C.D	N	H	E	□	P.C.D	N	H	E
4" (100A)	□	175	8	M16	20	□	185	8	M20	25	□	190.5	8	5/8" UNC	20	□	200.2	8	3/4" UNC	20
5" (125A)	□	210	8	M20	25	□	225	8	M22	25	□	215.9	8	3/4" UNC	25	□	235	8	3/4" UNC	25
6" (150A)	□	240	12	M20	25	□	260	12	M22	27	□	241.3	8	3/4" UNC	25	□	269.7	12	3/4" UNC	25

Note :

DRAWING No.

KCV-402E-XXXX-W-02

REV.

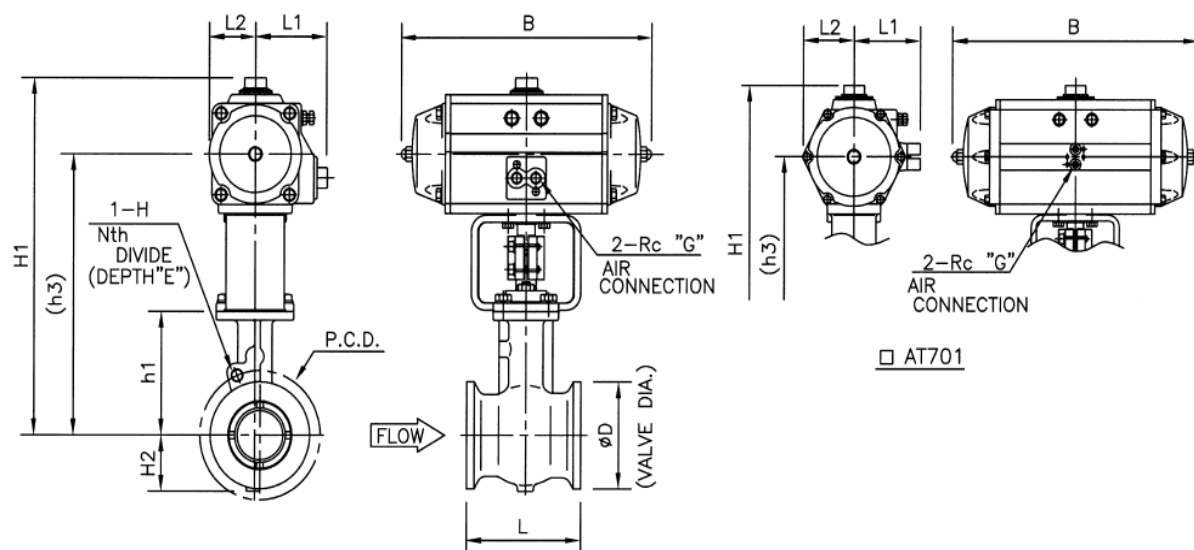
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KOCON

# Segmental Ball valve- Double acting Cylinder

KCV-402E ( Eccentric Type)

Valve size : 8"~12"



## Dimension

unit : mm

Valve size	Face to Face 0 -L-	D		□JIS10K, 20K, ANSI150, 300				Actuator					
		□ JIS	□ ANSI	h1	h3	H1	H2	HKC	A/T	B	L1	L2	G
□8" (200A)	243	265	270	275	575	705	135	□ HP160	□ AT501	485	120	88	1/4
					600	760		□ HP180	□ AT551	540	125	99	1/4
					610	780		□ HP200	□ AT601	600	130	110	1/4
					635	835		□ HP211	□ AT651	685	150	131	3/8
□10" (250A)	297	324	324	310	650	810	165	□ HP180	□ AT551	540	125	99	1/4
					660	830		□ HP200	□ AT601	600	130	110	1/4
					685	885		□ HP211	□ AT651	685	150	131	3/8
					700	915		□ HP212	□ AT700	805	185	165	3/8
□12" (300A)	338	370	381	345	685	845	190	□ HP180	□ AT551	540	125	99	1/4
					695	865		□ HP200	□ AT601	600	130	110	1/4
					720	920		□ HP211	□ AT651	685	150	131	3/8
					735	950		□ HP212	□ AT700	805	185	165	3/8

Valve size	JIS 10K					JIS20K					ANSI 150					ANSI 300				
		P.C.D	N	H	E		P.C.D	N	H	E		P.C.D	N	H	E		P.C.D	N	H	E
8" (200A)	□	290	12	M20	25	□	305	12	M22	27	□	298.4	8	5/8" UNC	25	□	330.2	12	3/4" UNC	28
10" (250A)	□	355	12	M22	27	□	380	12	M24	30	□	362	12	7/8" UNC	28	□	387.4	16	3/4" UNC	30
12" (300A)	□	400	16	M22	27	□	430	16	M24	30	□	431.8	12	7/8" UNC	30	□	450.8	16	3/4" UNC	35

Note :

DRAWING No.

KCV-402E-XXXX-W-03

REV.

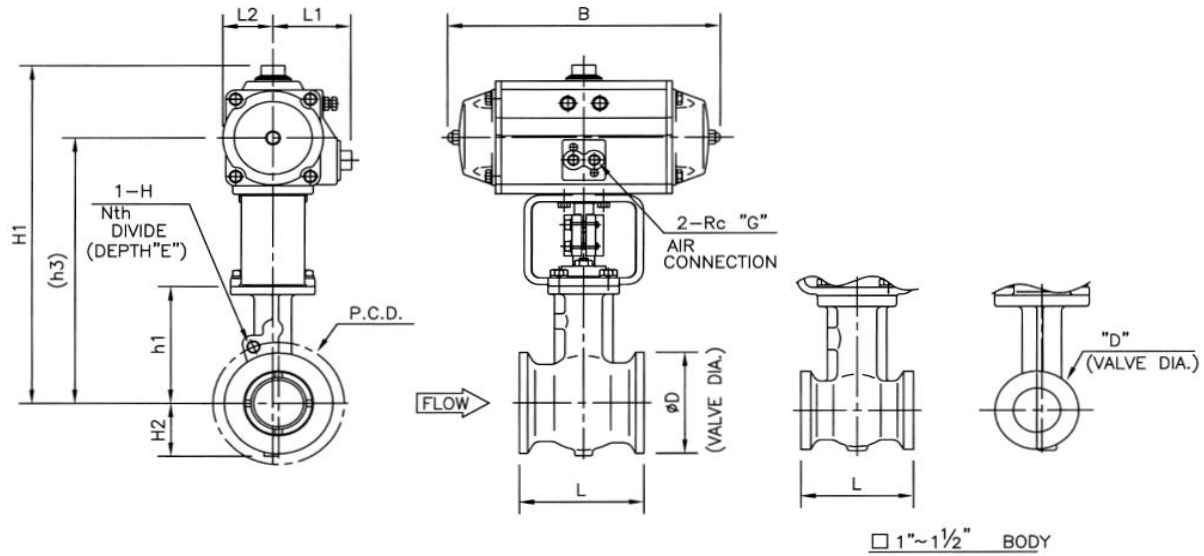
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KOCON

# Segmental Ball valve- Spring return Cylinder

KCV-402E ( Eccentric Type)

Valve size : 1" ~ 2-1/2"



Dimension

unit : mm

Valve size	Face to Face0 -L-	D		□JIS10K, 20K, ANSI150, 300				Actuator					
		□ JIS	□ ANSI	h1	h3	H1	H2	HKC	A/T	B	L1	L2	G
□1" (25A)	102	65	51	100	270	340	35	□ HP75	□ AT201	240	70	43	1/4
					275	350		□ HP88	□ AT251	275	75	50	1/4
					280	365		□ HP100	□ AT301	305	85	56	1/4
□1-1/2" (40A)	114	85	73	110	285	360	45	□ HP88	□ AT251	275	75	50	1/4
					290	375		□ HP100	□ AT301	305	85	56	1/4
					300	400		□ HP115	□ AT351	355	95	64	1/4
□2" (50A)	124	100	92	125	305	390	50	□ HP100	□ AT301	305	85	56	1/4
					315	415		□ HP115	□ AT351	355	95	64	1/4
					340	450		□ HP125	□ AT401	385	100	70	1/4
□2-1/2" (65A)	143	120	105	135	330	430	60	□ HP115	□ AT351	355	95	64	1/4
					355	465		□ HP125	□ AT401	385	100	70	1/4
					395	515		□ HP145	□ AT451	455	110	80	1/4
					405	535		□ HP160	□ AT501	485	120	88	1/4

Valve size	JIS 10K					JIS20K					ANSI 150					ANSI 300				
		P.C.D	N	H	E		P.C.D	N	H	E		P.C.D	N	H	E		P.C.D	N	H	E
1" (25A)	□	-	-	-		□	-	-	-		□	-	-	-	-	□	-	-	-	
1-1/2"(40A)	□	-	-	-		□	-	-	-	20	□	-	-	-	-	□	-	-	-	
2" (50A)	□	-	-	-		□	120	8	M16	20	□	-	-	-	-	□	127	8	5/8"UNC	20
2-1/2"(65A)	□	-	-	-		□	140	8	M16	20	□	-	-	-	-	□	149.4	8	3/4"UNC	22

Note :

DRAWING No.

KCV-402E-XXXX-SR-01

REV.

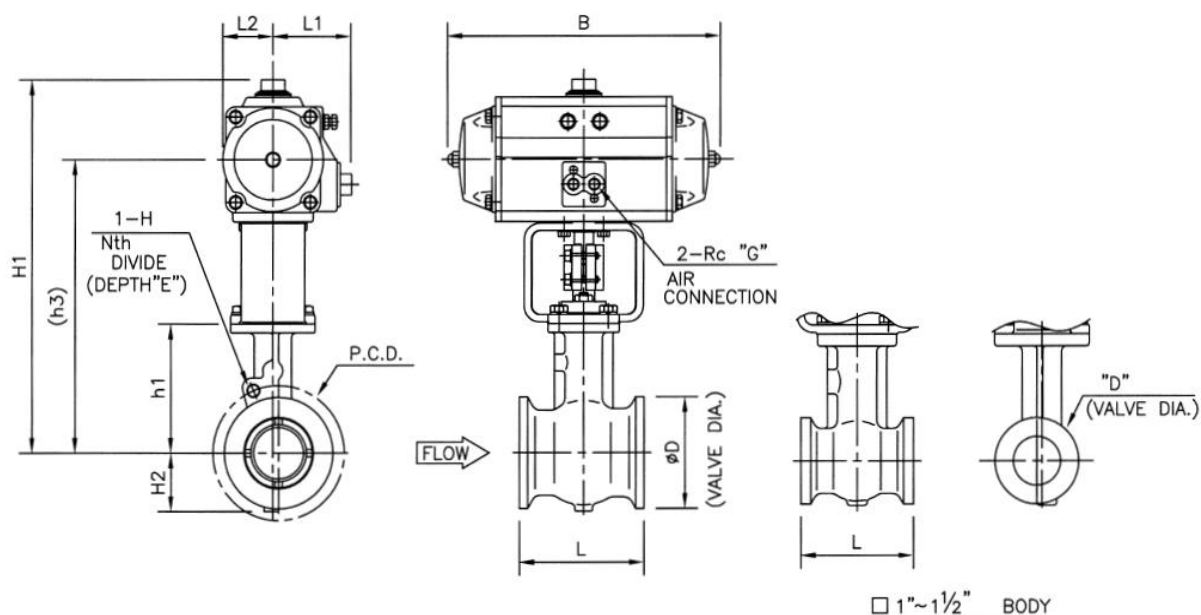
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KOCON

# Segmental Ball valve- Spring return Cylinder

KCV-402E ( Eccentric Type)

Valve size : 3" ~ 4"



Dimension

unit : mm

Valve size	Face to Face0 -L-	D		□ JIS10K, 20K, ANSI150, 300				Actuator					
		□ JIS	□ ANSI	h1	h3	H1	H2	HKC	A/T	B	L1	L2	G
□ 3" (80A)	165	130	127	145	365	475	70	□ HP125	□ AT401	385	100	70	1/4
					405	525		□ HP145	□ AT451	455	110	80	1/4
					415	545		□ HP160	□ AT501	485	120	88	1/4
					410	570		□ HP180	□ AT551	540	125	99	1/4
□ 4" (100A)	194	155	157	180	470	600	80	□ HP160	□ AT501	485	120	88	1/4
					500	660		□ HP180	□ AT551	540	125	99	1/4
					510	680		□ HP200	□ AT601	600	130	110	1/4

Valve size	JIS 10K					JIS20K					ANSI 150					ANSI 300				
	□	P.C.D	N	H	E	□	P.C.D	N	H	E	□	P.C.D	N	H	E	□	P.C.D	N	H	E
3" (80A)	□	150	8	M16	20	□	160	8	M20	25	□	-	-	-	-	□	-	-	-	-
4" (100A)	□	175	8	M16	20	□	185	8	M20	25	□	190.5	8	3/4" UNC	20	□	200.2	8	3/4" UNC	20

Note :

DRAWING No.

KCV-402E-XXXX-SR-02

REV.

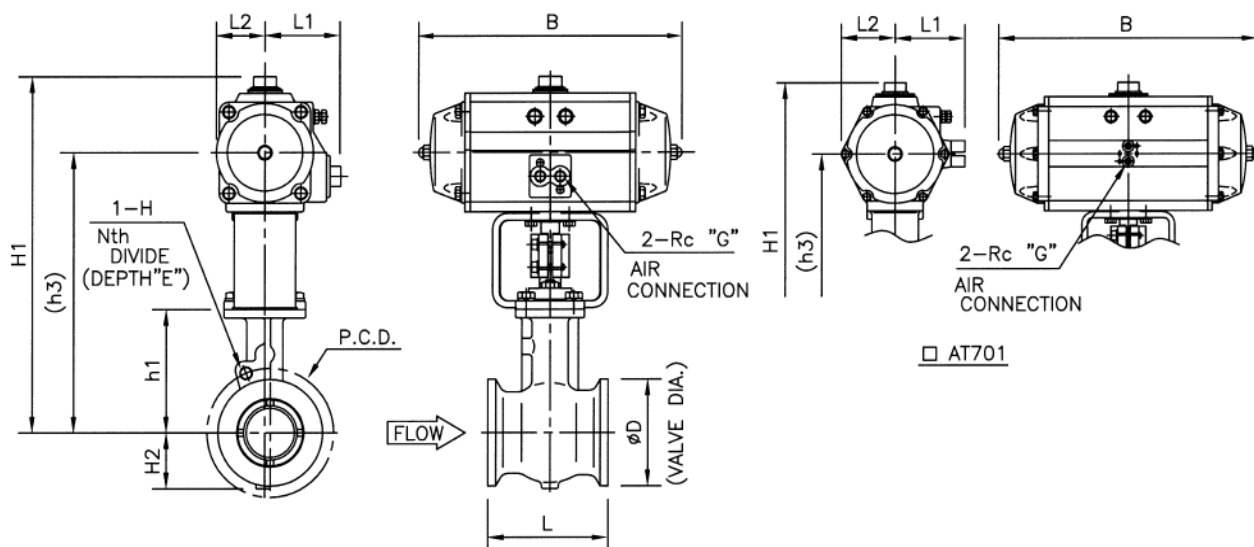
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KOCON

# Segmental Ball valve- Spring return Cylinder

## KCV-402E ( Eccentric Type)

Valve size : 5" ~ 10"



□ AT701

### Dimension

unit : mm

Valve size	Face to Face0 -L-	D		□ JIS10K, 20K, ANSI150, 300				Actuator					
		□ JIS	□ ANSI	h1	h3	H1	H2	HKC	A/T	B	L1	L2	G
□ 5" (125A)	213	186	186	215	535	695	90	□ HP180	□ AT551	540	125	99	1/4
					545	715		□ HP200	□ AT601	600	130	110	1/4
					575	775		□ HP211	□ AT651	685	150	131	3/8
□ 6" (150A)	229	216	216	216	565	735	110	□ HP200	□ AT601	600	130	110	1/4
					590	790		□ HP211	□ AT651	685	150	131	3/8
					605	820		□ HP212	□ AT701	805	185	165	1/2
□ 8" (200A)	243	265	270	270	635	835	135	□ HP211	□ AT651	685	150	131	3/8
					650	865		□ HP212	□ AT701	805	185	165	1/2
□ 10" (250A)	297	324	324	310	685	885	165	□ HP211	□ AT651	685	150	131	3/8
					700	915		□ HP212	□ AT701	805	185	165	1/2

Valve size	JIS 10K					JIS20K					ANSI 150					ANSI 300				
		P.C.D	N	H	E		P.C.D	N	H	E		P.C.D	N	H	E		P.C.D	N	H	E
5" (125A)	□	210	8	M20	25	□	225	8	M22	25	□	215.9	8	3/4" UNC	25	□	235	8	3/4" UNC	25
6" (150A)	□	240	8	M20	25	□	260	12	M22	27	□	241.3	8	3/4" UNC	25	□	269.7	12	3/4" UNC	25
8" (200A)	□	290	12	M20	25	□	305	12	M24	27	□	298.4	8	3/4" UNC	25	□	330.2	12	7/8" UNC	28
10" (250A)	□	355	12	M20	27	□	380	12	M24	30	□	362	12	7/8" UNC	28	□	387.4	16	1" UNC	30

Note :

DRAWING No.

KCV-402E-XXXX-SR-03

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**KOCON**

## KOCON Segmental Ball Valve Code Number

## Segmental Ball Valve Basic Model

KCV-401C	Concentric Type
KCV-402E	Eccentric Type

Basic Model	-	(1)	(2)	(3)	-	(4)	(5)	(6)	(7)	-	(8)	(9)	(10)	(11)
KCV401C	-	03	1	W	-	C2	0	1	4S	-	S	D	R	0

Ex) KCV401C – 031W-C2014S-SDR

(1) Body Size	
01	1(25A)
93	1-1/4(32A)
94	1-1/2(40A)
02	2(50A)
03	3(80A)
04	4(100A)
05	5(125A)
06	6(150A)
08	8(200A)
10	10(250A)
12	12(300A)
14	14(350A)
16	16(400A)
18	18(450)
20	20(500)
Z	Other
(2) Rating	
1	JIS 10K / ANSI150#
2	JIS20K / ANSI300#
3	ANSI600#
Z	Other
(3) End Connection	
W	Wafer
R	RF
S	Special (Other)
(4) Body Material	
C2	A216-WCB
S4	A351-CF8
S6	A351-CF8M
Z0	Other (Special)

(5) Ball Size (Bore size)		
0	Full bore	
Z	40% Reduced DISC	
	60% Reduced DISC	
(6) DISC Material		
1	CF8 + Hcr. coated	
2	CF8M + Hcr. coated	
Z	Other	
(7) Seat Material		
4S	304+STL	
6S	316+STL	
PT	PC TFE	
PE	PEEK	
Z	Others	
(8) Actuator Type		
S	Spring Return type cylinder	
D	Double Acting Type Cylinder	
M	Motor operated	
(9) Actuator size		
**	KAR-H	KAR-A
A	HP63	AT101U
B	HP75	AT201U
C	HP88	AT250U
D	HP100	AT301U
E	HP115	AT350U
F	HP125	AT401U
G	HP145	AT451U
H	HP160	AT501U
I	HP180	AT551U
J	HP200	AT601U
K	HP210	AT651U
L	HP212	AT701U
M	-	AT751U
N	-	AT801U
MO	MOV	
Z	Other	

[illegible]

## ● 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℃	-5~300℃	-196~300℃	-196~300℃	-
SUS316L		-45~300℃	-5~300℃	-196~300℃	-196~300℃	-196~300℃
410SS		-	-5~425℃	-	-	-
SUS316 stellite		-45~350℃	-5~425℃	-196~550℃	-196~550℃	-
SUS316L stellite		-45~350℃	-5~425℃	-196~550℃	-196~450℃	-196~450℃
SUS316+Soft seat		-45~230℃	-5~230℃	-80~230℃	-80~230℃	-
SUS316+Soft seat		-45~230℃	-	-80~230℃	-80~230℃	-80~230℃

## 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 :**

Specifications are subject to change without notice.

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