

Model 03 (Mixing Service) & 04 (Diverting Service) THREE-WAY TYPE CONTROL VALVES

Three-way type control valves are used for controlling the fluids mutually to three directional pipings, i.e., **mixing service (Model 03)** and **diverting service (Model 04)**.

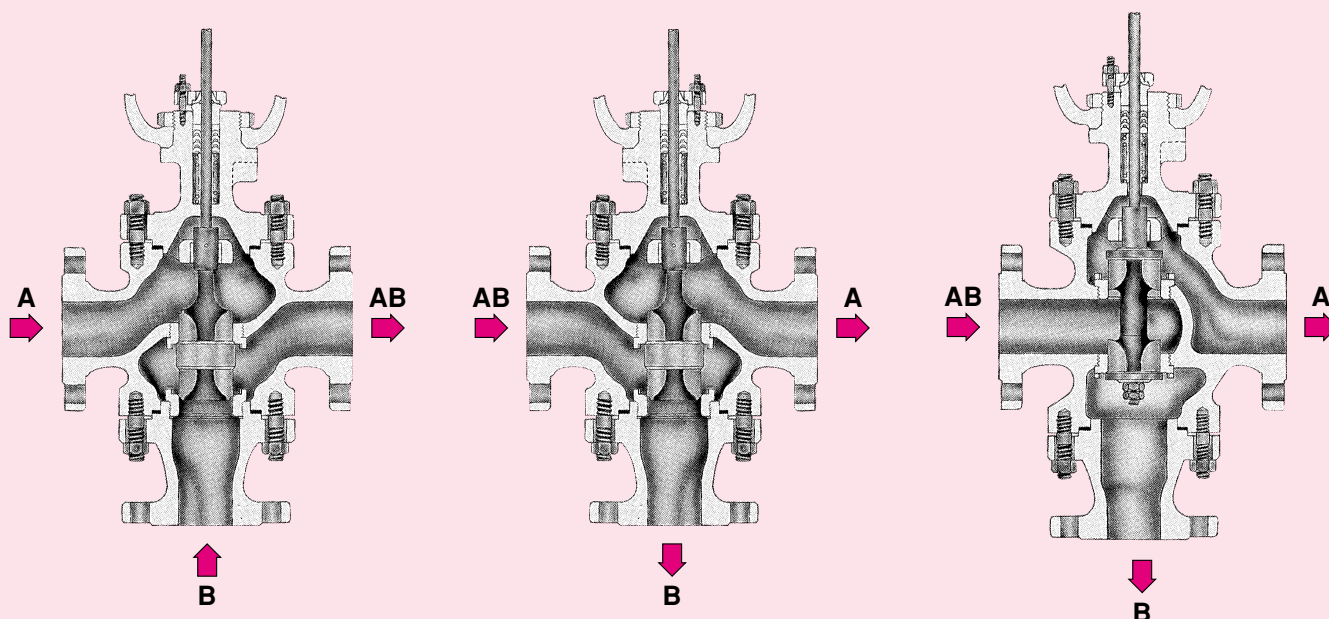
Model 03 valve body with valve size 65mm or smaller is applied to Model 04 diverting service.

The actuators are compactly designed multi-spring diaphragm operated type, and permit high thrust.

Model 03
(15A ~ 250A)

Model 04
(15A ~ 65A)

Model 04
(80A ~ 250A)



03
04

1. SPECIFICATIONS

Valve Type			Diaphragm operated three-way type control valve											
Valve Model No.			3803, 3804						2803, 2804					
VALVE BODY	Body Type		Model 03 mixing service, 04 diverting service, Globe type three-way											
	Valve Sizes (note 6)	(mm)	15	20	25	40	50	65	80	100	125	150	200	250
		(in.)	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8	10
	Pressure Rating		JIS 10K, 20K, 30K, 40K; ASME/JPI Class 150, 300, 600											
	End Connections		Flanged end : FF, RF, RJ, Male and female, Tongue and groove											
	Body Materials		A48 Cl.35, WCB, CF8, CF8M											
	Bonnet Type		Plain (−17℃ to +230℃), Finned (−20℃ to under −17℃, over +230℃) Bellows seal (See page 3)											
	Gland Type		Bolted gland											
	Packing(Non Asbestos)		Braided packing, Molded packing											
	Gaskets(Non Asbestos)		Flat gasket, Serrated gasket											
	Guiding		Port guide											
	Seat Type		Single seated (one seat per one flow direction)											

03
04

VALVE BODY	Valve Plug Shapes			V-Port (V), Quik opening (Q)					
	Plug Characteristics			Linear, Quik opening					
	Trim Materials			SUS 316					
	Treatment of Trim			See page 3 “Main Materials”					
ACTUATOR	Actuator Type			Model 3800 Multi-spring type single acting diaphragm Actuator			Model 2800 Spring type single acting diaphragm Actuator		
	Actuator Sizes			N24	N28	N33S	N40	500S	650S
	Max. Stroke (mm)			25	38	38	65	65	65
	Supply Air Press.			120(1.2), 240(2.4), 280(2.8) kPaG(kgf/cm²G)				120(1.2), 240(2.4), 280(2.8) kPaG(kgf/cm²G)	
	Spring Range			20 ~ 100(0.2 ~ 1.0), 40 ~ 200(0.4 ~ 2.0) 80 ~ 200(0.8 ~ 2.0) kPaG(kgf/cm²G)				20 ~ 100(0.2 ~ 1.0), 40 ~ 200(0.4 ~ 2.0) 60 ~ 220(0.6 ~ 2.2) kPaG(kgf/cm²G)	
	Action			Direct action (DA), Reverse action (RA)					
	Materials			(Diaphragm) Cloth reinforced chloroprene rubber, (Yoke) FC200					
	Air Connection			Rc ¼, Rc ⅜ (only 650S)					
	Ambient Temperature			-20℃ ~ +70℃ (※ -50℃ ~ -20℃, +70℃ ~ +100℃)				-30℃ ~ +70℃ (※ -50℃ ~ -30℃, +70℃ ~ +100℃)	
	Painting Color				Silver, (No painting on stainless steal)				
(1) VALVE CHARACTERISTICS AND PERFORMANCE	Control Mode			Throttling control, On-off control					
	Valve Action			See page 4 [Service Configuration]					
	Applicable Press. Range			9.81 MPaG (100 kgf/cm²G) or less (Pressure limit shall conform to the standard of material & pressure temperature rating)					
	Applicable Temp. Range			-20℃ ~ +300℃ (3)/(5) (Temperature limit shall conform to the standard of material & pressure temperature rating)					
	Allowable Differential Press.			See page 5 “Allowable Shut-off Pressure”					
	Rated Cv Value			See page 5 “Rated Cv Value”					
	Flow Characteristics			See page 5 “Flow Characteristics”					
	Inherent Rangeability			50 : 1					
	Allowable Seat leakage Rate	Metal Seat	V-Port	0.1 % of rated Cv (ANSI/FCI Class Ⅲ),※ 0.05 % of rated Cv					
			Quick Opening	0.05 % of rated Cv					
		Soft Seat	Quick Opening	0.01 % of rated Cv (ANSI/FCI Class Ⅳ),※ 0.001 % of rated Cv					
	Action Accuracy	Hysteresis Error (with Positioner)		Max. 2 % F.S.					
		Linearity (with Positioner)		Max. ± 2 % F.S.					
OPTIONS ※	Valve Body			Jacket type,Special treatment for trim					
	Actuator			Handwheel (Top-mounted handwheel, Side-mounted handwheel) Travel stop, Diaphragm material Ethylene propylene rubber. Yoke material : SCPH2					
	Accessories			Pneumatic positioner (PA92A), Electro-pneumatic positioner (EA91A, EA90A, EA10S) Air filter regulator (MR2000), Limit switch, Solenoid valve. Booster relay. Speed controller, Lock up valve, Pneumatic operated valve.					
	Others			The High Pressure Gas Safety Low Certification, Oil Free, Water -Free, Sandproof, Dustproof, Anti-salt damage, Vacuum service, Cold district spec. Tropical district spec. External exposure bolt & nut S.S. Optional painting color.					

- [Notes] (1) Valve performance is represented under the condition of standard packing (P4519 + V7010)
 (2) ※ Manufactured and mounted as option according to customer's request.
 (3) Do not exceed the maximum differential temperature 150℃ in each inlet fluid for mixing service.
 (4) For slurry service or high temperature service (over 300℃) ※ contoured plug and ※ support guiding are provided (Model 03-P & 04-P).
 In this case rangeability is 30 : 1.
 (5) For an application, service condition lower than -20℃, please contact our sales office.
 (6) Body pattern for valve size 1/2"(15mm) and 3/4"(20mm) is the same.
 All the specification for valve size 1/2"(15mm) is the same as for the size 3/4"(20mm) except connection flanges.

2. MAIN MATERIALS

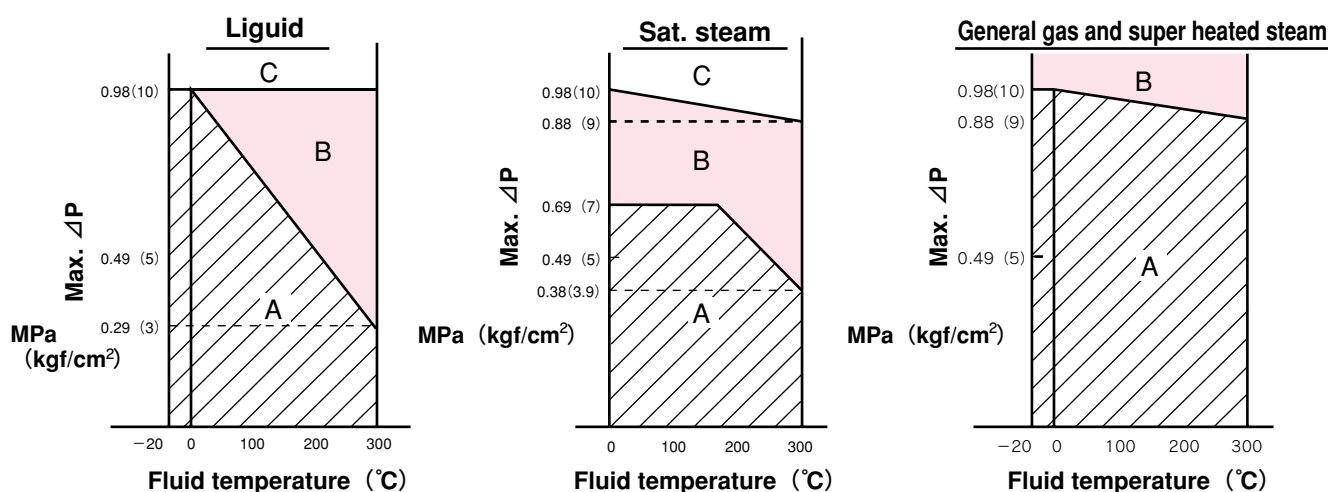
1 Typical Combination of Materials

Parts Name		Materials			
Body, Bonnet		A48 CI.35	WCB	CF8	CF8M
Trim	Seat Ring	SUS 316			
	Valve Plug	SUS 316			
	Valve Stem	SUS 316			
Guide Bushing		SUS 630			SUS 316
Stud Bolt & Nut		SS400/SS400	A193 Gr B7/S45C (H) (Class 150 or less S45C (H)/S45C (N))		SUS304/SUS304 (Class 600 only A193GrB8 Cl.2/SUS304)

- [Notes] (1) This table shows typical combination of materials. The combination may be subject to change by pressure, temperature and kind of fluid.
 (2) Material designation is represented by new JIS(SI Unit). Please be noted that approval drawing and other documents might be specified by old material designation.
 (3) Trim materials may be used casting instead of bar materials.

2 Pressure and Temperature Range for CoCr Alloy Hard Facing on Trim

A : CoCr Alloy is not required B : CoCr Alloy seat C : Seat-ring CoCr Alloy face and valve plug CoCr Alloy seat

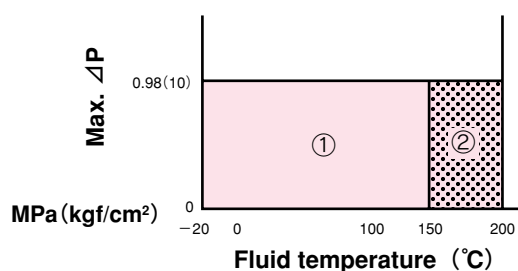


- [Notes] (1) CoCr Alloy seat or higher grade surface treatment is required for On-Off valves.
 (2) CoCr Alloy face or higher grade surface treatment is required for flushing services.

3 Pressure and Temperature Range of Soft Disc

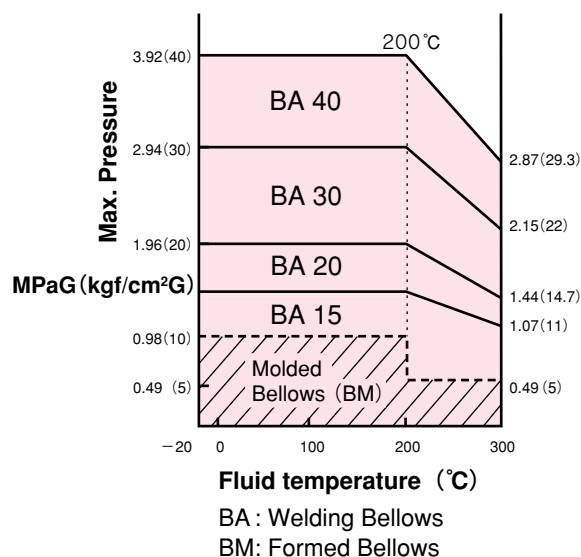
(Quick Opening only)

Disc Materials : ① PTFE
 ② Glass reinforced PTFE



4 Pressure and Temperature Range of Bellows Seal Bonnet

Bellows Material : SUS 316 L



3. SCOPE OF PRODUCTION

1 Combination of Valve Body and Actuator

Valve Model No.		3803, 3804				2803, 2804	
Valve Size		N24	N28	N33S	N40	500S	650S
15, 20 (mm)	1/2, 3/4 (in.)	●	●	●			
25	1	●	●	●			
40	1 1/2	●	●	●	●	●	
50	2	●	●	●	●	●	
65	2 1/2	●	●	●	●	●	
80	3		●	●	●	●	●
100	4		●	●	●	●	●
125	5				●	●	●
150	6				●	●	●
200	8				(●)	●	●
250	10				(●)	●	●

[Note]

(●) is available only in case of 40kPaG (0.4kgf/cm²G) of off-balance.

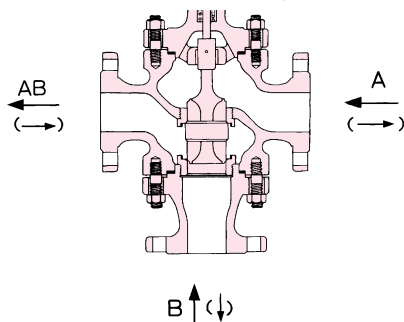
2 Scope of Port

Full port size is only available in correspondence with valve size. (Reduced port valve is not available.)

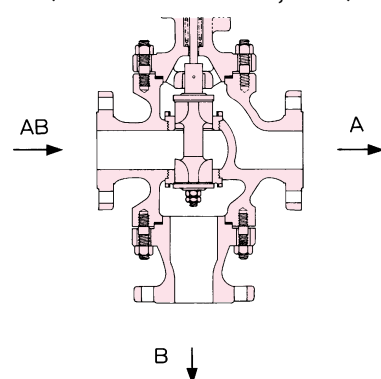
4. SERVICE CONFIGURATION

Model 03 Mixing Service (Classification M1, M2)

Model 04 Diverting service (Classification D1-S, D2-S)



Model 04 Diverting Service (Classification D1-L, D2-L)



Flow Condition				Flow Direction		
Model No. Service	Classification	Decrease in Supply Air Press.	Increase in Supply Air Press.	Valve Size (mm)	Flow	Action of Actuator
03 Mixing	M1			15 ~ 250		DA
	M2			15 ~ 250		RA
04 Diverting	D1-S			15 ~ 65		DA
	D1-L			80 ~ 250		RA
	D2-S			15 ~ 65		RA
	D2-L			80 ~ 250		DA

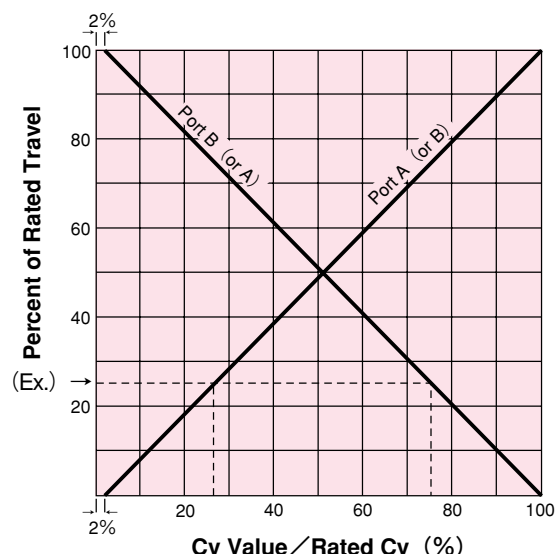
[Notes] (1) The body for mixing service is used for diverting service in valve size 15mm thru 65mm.
(2) Please specify this classification mark on your order.

5. FLOW CHARACTERISTICS

1 Rated Cv Value

Port Size		Rated Travel (mm)	V-Port	Quick Opening
(mm)	(in.)			
15, 20	1/2, 3/4	15	6.5	9
25	1		10.5	13
40	1 1/2	20	24	27
50	2	25	40	46
65	2 1/2		60	72
80	3	38	84	100
100	4		140	165
125	5	50	200	270
150	6		290	400
200	8	65	500	660
250	10		750	1100
Inherent Rangeability			50 : 1	—

2 Flow Characteristics



[Example]

In Classification D1-L diverting service (see page 4), when the valve is opened 25% of the full travel, approx 74% of total flow rate in upper port AB flows out through down port B, and the rest 26% flows out through another down port A. As the travel increases further, the flow rate decreases through port B and increases through port A.

6. ALLOWABLE DIFFERENTIAL PRESSURE

1 Off-balance Classification

Unit : kPaG(kgf/cm²G)

Action	Spring Range Actuator Size		Supply Air Pressure	Off- balance	Positioner
	N24 ~ N40	500, 650			
V-Port	20 ~ 100 (0.2 ~ 1.0)		120 (1.2)	20 (0.2)	With/Without
	40 ~ 200 (0.4 ~ 2.0)		240 (2.4)	40 (0.4)	With
	—	60 ~ 220 (0.6 ~ 2.2)	280 (2.8)	60 (0.6)	
	80 ~ 200 (0.8 ~ 2.0)	—	280 (2.8)	80 (0.8)	
Quick opening	40 ~ 200 (0.4 ~ 2.0)		240 (2.4)	40 (0.4)	—
	—	60 ~ 220 (0.6 ~ 2.2)	280 (2.8)	60 (0.6)	
	80 ~ 200 (0.8 ~ 2.0)	—	280 (2.8)	80 (0.8)	

2 Allowable Shut-off Pressure

Unit : MPa(kgf/cm²)

Port Size		V-Port										
		15, 20 (mm)	25	40	50	65	80	100	125	150	200	250
Actuator Size	Offbalance	1/2, 3/4 (in.)	1	1 1/2	2	2 1/2	3	4	5	6	8	10
N24	20(0.2)	0.98(10)	0.69(7.1)	0.34(3.5)	0.20(2.1)	0.13(1.4)						
	40(0.4)	1.96(20)	1.37(14)	0.69(7.1)	0.41(4.2)	0.27(2.8)						
	80(0.8)	4.02(41)	2.74(28)	1.37(14)	0.83(8.5)	0.55(5.7)						
N28	20(0.2)	1.27(13)	0.90(9.2)	0.45(4.6)	0.26(2.7)	0.17(1.8)	0.12(1.3)	0.06(0.7)				
	40(0.4)	2.64(27)	1.76(18)	0.90(9.2)	0.53(5.5)	0.35(3.6)	0.25(2.6)	0.14(1.5)				
	80(0.8)	5.29(54)	3.53(36)	1.76(18)	1.07(11)	0.71(7.3)	0.50(5.2)	0.29(3.0)				
N33	20(0.2)	1.96(20)	1.27(13)	0.65(6.7)	0.39(4.0)	0.26(2.7)	0.18(1.9)	0.10(1.1)				
	40(0.4)	3.92(40)	2.64(27)	1.27(13)	0.79(8.1)	0.52(5.4)	0.37(3.8)	0.21(2.2)				
	80(0.8)	7.84(80)	5.29(54)	2.64(27)	1.56(16)	0.98(10)	0.75(7.7)	0.44(4.5)				
N40	20(0.2)			0.93(9.5)	0.55(5.7)	0.37(3.8)	0.26(2.7)	0.14(1.5)	0.09(1.0)	0.06(0.7)	0.03(0.4)	0.01(0.2)
	40(0.4)			1.86(19)	1.07(11)	0.74(7.6)	0.52(5.4)	0.30(3.1)	0.21(2.2)	0.13(1.4)	0.07(0.8)	0.04(0.5)
	80(0.8)			3.72(38)	2.15(22)	1.47(15)	0.98(10)	0.61(6.3)	0.40(4.1)	0.28(2.9)	—	—
500	20(0.2)			1.47(15)	0.93(9.5)	0.61(6.3)	0.44(4.5)	0.25(2.6)	0.16(1.7)	0.11(1.2)	0.05(0.6)	0.03(0.4)
	40(0.4)			3.04(31)	1.86(19)	1.17(12)	0.89(9.1)	0.51(5.3)	0.33(3.4)	0.23(2.4)	0.12(1.3)	0.08(0.9)
	60(0.6)			4.60(47)	2.74(28)	1.86(19)	1.27(13)	0.77(7.9)	0.50(5.1)	0.35(3.6)	0.19(2.0)	0.12(1.3)
650	20(0.2)						—	—	—	—	—	—
	40(0.4)						1.47(15)	0.90(9.2)	0.57(5.9)	0.41(4.2)	0.23(2.4)	0.14(1.5)
	60(0.6)						2.25(23)	1.27(13)	0.87(8.9)	0.61(6.3)	0.35(3.6)	0.22(2.3)

Unit : MPa(kgf/cm²)

Quick Opening												
Port Size		15, 20 (mm)	25	40	50	65	80	100	125	150	200	250
Actuator Size	Offbalance	¹ / ₂ , ³ / ₄ (in.)	1	1 ¹ / ₂	2	2 ¹ / ₂	3	4	5	6	8	10
N24	40(0.4)	1.86(19)	1.27(13)	0.63(6.5)	0.35(3.6)	0.23(2.4)						
	80(0.8)	3.72(38)	2.54(26)	1.27(13)	0.71(7.3)	0.48(4.9)						
N28	40(0.4)	2.45(25)	1.56(16)	0.83(8.5)	0.46(4.7)	0.30(3.1)	0.20(2.1)	0.12(1.3)				
	80(0.8)	4.90(50)	3.23(33)	1.66(17)	0.93(9.5)	0.61(6.3)	0.42(4.3)	0.26(2.7)				
N33	40(0.4)	3.62(37)	2.35(24)	1.17(12)	0.68(7.0)	0.45(4.6)	0.31(3.2)	0.19(2.0)				
	80(0.8)	7.25(74)	4.80(49)	2.45(25)	1.37(14)	0.91(9.3)	0.62(6.4)	0.38(3.9)				
N40	40(0.4)			1.66(17)	0.96(9.8)	0.64(6.6)	0.44(4.5)	0.27(2.8)	0.17(1.8)	0.12(1.3)	0.06(0.7)	0.03(0.4)
	80(0.8)			3.43(35)	1.86(19)	1.27(13)	0.88(9.0)	0.54(5.6)	0.36(3.7)	0.25(2.6)	—	—
500	40(0.4)			2.84(29)	1.56(16)	1.07(11)	0.73(7.5)	0.46(4.7)	0.30(3.1)	0.21(2.2)	0.11(1.2)	0.07(0.8)
	60(0.6)			4.31(44)	2.35(24)	1.56(16)	1.07(11)	0.68(7.0)	0.45(4.6)	0.32(3.3)	0.17(1.8)	0.11(1.2)
650	40(0.4)						1.27(13)	0.79(8.1)	0.52(5.4)	0.38(3.9)	0.20(2.1)	0.13(1.4)
	60(0.6)						1.86(19)	1.17(12)	0.79(8.1)	0.56(5.8)	0.31(3.2)	0.20(2.1)

- [Notes] (1)  portion shows standard combination of valve Body and Actuator.
 (2) Shut-off pressure of this table shows the valve only with standard gland packing (P4519 + V7010).
 (3) The Unit of Off-balance is kPaG(kgf/cm²G)

7. MAIN DIMENSIONS AND WEIGHTS

1 Face-to-Face Dimensions of Valve

Model 03 (Mixing Service)

Unit : mm

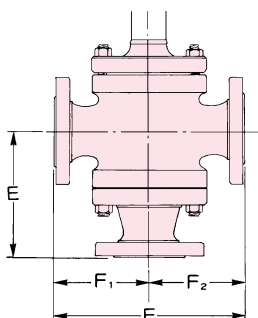
Press. Rating	Valve Size	JIS 10K RF ASME 150RF			JIS 20K RF ASME 300RF			JIS 30K, 40K RF ASME 300RJ, 600RF			ASME 600RJ		
		F ₁	F ₂	E	F ₁	F ₂	E	F ₁	F ₂	E	F ₁	F ₂	E
15,20	1/2, 3/4	184	92	135	194	97	135	206	103	140	206	103	140
25	1	184	92	135	197	98.5	135	210	105	140	210	105	140
40	1 1/2	222	111	168	235	117.5	168	251	125.5	173	251	125.5	173
50	2	254	127	180	267	133.5	180	286	143	185	289	144.5	185
65	2 1/2	276	138	200	292	146	200	311	155.5	205	314	157	205
80	3	298	149	220	317	158.5	220	337	168.5	237	340	170	237
100	4	352	176	245	368	184	245	394	197	275	397	198.5	275
125	5	403	201.5	280	425	212.5	280	457	228.5	310	460	230	310
150	6	451	225.5	320	473	236.5	320	508	254	350	511	255.5	350
200	8	543	271.5	370	568	284	370	610	305	408	613	306.5	408
250	10	708	354	450	708	354	450	752	376	478	755	377.5	478

Model 04 (Diverting Service)

Unit : mm

Press. Rating	Valve Size	JIS 10K RF ASME 150RF			JIS 20K RF ASME 300RF			JIS 30K, 40K RF ASME 300RJ, 600RF			ASME 600RJ		
		F ₁	F ₂	E	F ₁	F ₂	E	F ₁	F ₂	E	F ₁	F ₂	E
15,20	1/2, 3/4	184	92	135	194	97	135	206	103	140	206	103	140
25	1	184	92	135	197	98.5	135	210	105	140	210	105	140
40	1 1/2	222	111	168	235	117.5	168	251	125.5	173	251	125.5	173
50	2	254	127	180	267	133.5	180	286	143	185	289	144.5	185
65	2 1/2	276	138	200	292	146	200	311	155.5	205	314	157	205
80	3	298	139	248	317	148.5	248	337	158.5	265	340	160	265
100	4	352	161	280	368	169	280	394	182	310	397	183.5	310
125	5	403	186	320	425	197	320	457	213	350	460	214.5	350
150	6	451	208	360	473	219	360	508	236.5	390	511	238	390
200	8	543	246	430	568	259	430	610	285	468	613	286.5	468
250	10	708	328	500	708	328	500	752	361	528	755	362.5	528

- [Notes] (1) Face-to-face dimension in  shaded zone conforms to IEC60534-3-1 (JIS B2005-3-1) and ANSI/ISA-S75.08.01.
 (2) Face-to-face dimension of male and female, tongue and groove flange for JIS 10K-30K (ASME 150, ASME 300) are identical with JIS 30K RF.
 (3) Face-to-face dimension for diverting service with valve size 20mm thru 65mm conforms to the dimension for mixing service with same size.
 (4) As to the contoured plug and support guiding valves used for slurry service or high temperature service (over 300 °C), dimension "E" differ from above table.
 (5) Since pressure rating of valve size 10" (250mm) is ASME 300, the Face-to-Face dimension is the same as JIS10K (ASME 150) and JIS20K (ASME 300).



2 Standard Dimensions

Unit : mm

Valve Size		Actuator Size	D	Model 03 (Mixing Service)										Model 04 (Mixing Service)										C _R
				Plain Bonnet	Finned Bonnet				Bellows seal Bonnet				Plain Bonnet	Finned Bonnet				Bellows seal Bonnet						
					10K		20K and over		Molded		Welded			10K		20K and over		Molded		Welded				
(mm)	(in.)				G	C	G	C	G	C	G	C		G	C	G	C	G	C	G	C			
15, 20	1/4, 3/4	N24	240		425		465		480		610		680		425		465		480		610		680	C+25
		N28	280	124	460	168	505	181	520	311	650	383	720	124	460	168	505	181	520	311	650	383	720	
		N33S	330		520		560		575		705		775		520		560		575		705		775	
25	1	N24	240		425		465		480		610		680		425		465		480		610		680	
		N28	280	124	460	168	505	181	520	311	650	383	720	124	460	168	505	181	520	311	650	383	720	
		N33S	330		520		560		575		705		775		520		560		575		705		775	
40	1 1/2	N24	240		440		495		510		680		725		440		495		510		680		725	
		N28	280	143	480	195	535	211	550	381	720	427	765	143	480	195	535	211	550	381	720	427	765	
		N33S	330		535		590		605		775		820		535		590		605		775		820	
50	2	N24	240		455		505		525		690		770		455		505		525		690		770	
		N28	280	156	495	208	545	224	560	390	730	469	810	156	495	208	545	224	560	390	730	469	810	
		N33S	330		550		600		620		785		860		550		600		620		785		860	
65	2 1/2	N24	240		465		520		535		700		780		465		520		535		700		780	
		N28	280	167	505	219	560	235	575	401	740	480	820	167	505	219	560	235	575	401	740	480	820	
		N33S	330		560		610		630		795		875		560		610		630		795		875	
80	3	N28	280		530		590		615		885		910		560		615		640		910		945	
		N33S	330	194	590	249	640	275	670	546	940	570	965	222	615	277	670	303	695	574	970	606	1000	
		N40	400	222	740	264	780	288	805	636	1155	658	1175	250	770	292	810	316	835	664	1180	686	1205	
100	4	N28	280		555		610		635		905		930		590		645		670		940		970	
		N33S	330	217	610	272	665	298	690	566	960	594	990	252	645	307	700	333	725	601	995	633	1025	
		N40	400	245	760	287	805	311	830	656	1175	678	1195	280	800	322	840	346	865	691	1210	713	1230	
125	5	N40	400		815		850		880		1280		1340		855		890		920		1320		1380	
		500S	500	298	1035	335	1070	362	1100	762	1500	823	1560	338	1075	375	1110	402	1140	802	1540	863	1600	C+160
150	6	N40	400		830		865		890		1290		1355		870		905		930		1330		1395	C+25
		500S	500	311	1045	348	1085	375	1110	775	1510	836	1570	351	1085	388	1125	415	1150	815	1550	876	1610	C+160
200	8	N40	400		880		920		950		1430		1515		940		980		1010		1490		1575	—
		500S	500	361	1095	403	1140	433	1175	915	1650	999	1735	421	1155	463	1200	493	1235	975	1710	1059	1795	C+160
		650S	650	366	1395		1435		1470		1970	1024	2055		1455		1495		1525		2035	1084	2115	C+250
250	10	N40	400		920		990		950		1470		1555		970		1040		1040		1520		1605	—
		500S	500	401	1135	473	1210	473	1215	955	1690	1039	1775	451	1185	523	1260	523	1260	1005	1740	1089	1825	C+160
		650S	650	406	1435		1505		1510		1980	1064	2095		1485		1555		1555		2065	1114	2145	C+250

03
04

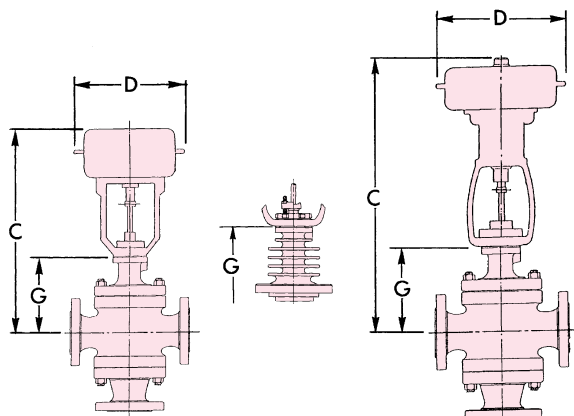
- [Notes] (1) Dimension C applies for direct acting actuator. For reverse acting actuator, dimension CR applies.
(2) The figures, indicated lower part of the column marked ※, only apply to the rating of JIS 40K(ASME 600).

Plain Bonnet Type Finned Bonnet Type

Actuator Size

N24 ~ N40

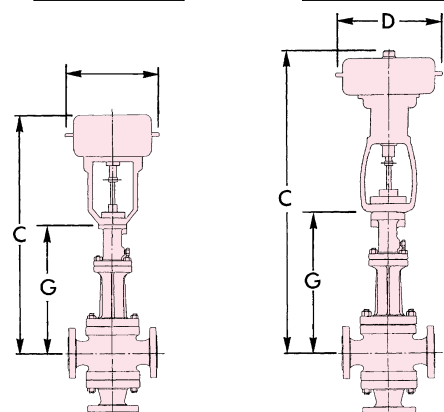
500, 650



Bellows Seal Bonnet Type

N24 ~ N40

500, 650



3 Weights

Following table shows standard weights for valve body assembly completed with actuator except accessories. As to the weights not represented in this table, please contact your nearest our sales office.

Model 03

Unit : kg

Valve Size	(mm)	15-20		25		40		50		65		80		100		125		150		200			250		
	(in.)	1/2, 3/4		1		1 1/2		2		2 1/2		3		4		5		6		8			10		
Press.Rating	10K	20,30 40K ASME 300,600	10K	20,30 40K ASME 300,600	10K	20,30 40K ASME 300,600	10K	20,30 40K ASME 300,600	10K	20,30 40K ASME 300,600	10K	20,30 40K ASME 300,600	10K	20,30 40K ASME 300,600	10K	20,30 40K ASME 300,600	10K	20,30 40K ASME 300,600	10K	20K	30,40K	10K	20K	30,40K	
Actuator Size	ASME 150	ASME 300,600	ASME 150	ASME 300,600	ASME 150	ASME 300,600	ASME 150	ASME 300,600	ASME 150	ASME 300,600	ASME 150	ASME 300,600	ASME 150	ASME 300,600	ASME 150	ASME 300,600	ASME 150	ASME 300,600	ASME 150	ASME 300	ASME 600	ASME 150	ASME 300	ASME 600	
N24	23	27	26	35	35	43	39	50	49	62															
N28	26	30	29	38	38	46	42	53	52	65	61	83	82	123											
N33S	35	39	53	47	47	55	51	62	61	74	70	92	91	132											
N40											95	117	116	157	148	194	178	221	274	350	490	485	574	720	
500S															184	230	214	257	310	386	525	520	610	765	
650S																			495	571	710	705	795	950	

Model 04

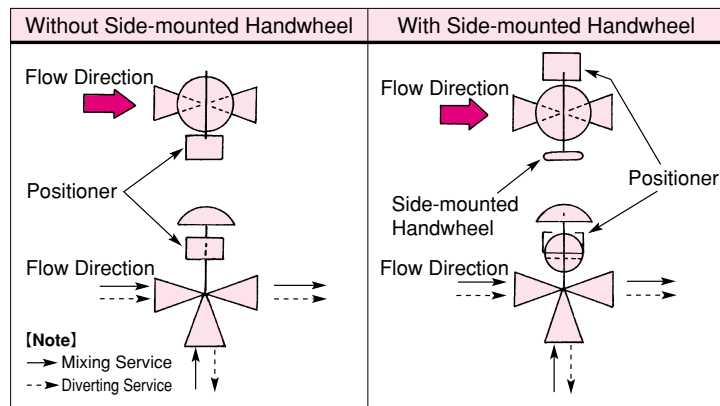
Unit : kg

Valve Size	(mm)	15:20		25		40		50		65		80		100		125		150		200			250		
	(in.)	1/2, 3/4		1		1 1/2		2		2 1/2		3		4		5		6		8			10		
Press.Rating		10K ASME 150	20,30 40K ASME 300,600	10K ASME 150	20,30 40K ASME 300,600	10K ASME 150	20,30 40K ASME 300,600	10K ASME 150	20,30 40K ASME 300,600	10K ASME 150	20,30 40K ASME 300,600	10K ASME 150	20,30 40K ASME 300,600	10K ASME 150	20,30 40K ASME 300,600	10K ASME 150	20,30 40K ASME 300,600	10K ASME 150	20K ASME 300	30,40K ASME 600	10K ASME 150	20K ASME 300	30,40K ASME 600		
Actuator Size																									
N24		23	27	26	35	35	43	39	50	49	62														
N28		26	30	29	38	38	46	42	53	52	65	66	92	103	134										
N33S		35	39	53	47	47	55	51	62	61	74	75	101	112	143										
N40												100	126	137	168	173	224	218	256	335	410	520	515	605	780
500S																209	250	254	292	371	446	550	550	640	815
650S																				556	631	735	735	825	1000

[Note] The weights of actuator size 500S and 650S shows on direct action.

8. MOUNTING ORIENTATIONS

Standard mounting orientations are as follows.



※ Stellite® is registered trademarks of Deloro Stellite Group.



株式会社 本山製作所

MOTOYAMA ENG. WORKS, LTD.

<http://www.motoyama-cp.co.jp>

本 社 工 場 〒981-3697 宮城県黒川郡大衡村大衡字亀岡5-2 TEL(022)344-4511(代表) / FAX(022)344-4522
E-mail : info@motoyama-cp.co.jp

Main Office & Factory 5-2, Ohira Aza Kameoka, Ohira-mura, Kurokawa-gun, Miyagi, 981-3697, Japan
TEL +81-22-344-4511 / FAX +81-22-344-4522
E-mail : info-overseas@motoyama-cp.co.jp

●販売・サービスネットワーク

東 京 支 店	〒210-0007 神奈川県川崎市川崎区駅前本町 10-5 クリエ川崎 11F	TEL (044) 381-8770(代表)	FAX (044) 381-8772
大 阪 支 店	〒550-0014 大阪市西区北堀江 1 丁目 12-19 クリモビル 3F	TEL (06) 6535-8111(代表)	FAX (06) 6535-8655
国 際 営 業 部	〒210-0007 神奈川県川崎市川崎区駅前本町 10-5 クリエ川崎 11F	TEL (044) 381-8771	FAX (044) 381-8773
札 幌 営 業 所	〒001-0912 札幌市北区新琴似 12条7丁目 1-47 リバティタウンP棟 101号	TEL (011) 766-1520	FAX (011) 766-1521
東 北 営 業 所 大 衡 サービスセンター	〒981-3697 宮城県黒川郡大衡村大衡字亀岡 5-2	TEL (022) 344-1761	FAX (022) 344-1762
上 越 営 業 所 上 越 サービスセンター	〒942-0036 新潟県上越市大字東中島 2393番地	TEL (025) 542-5151	FAX (025) 542-5152
関 東 営 業 所 千 葉 サービスセンター	〒290-0046 千葉県市原市岩崎西 1 丁目 5-19	TEL (0436) 21-4400	FAX (0436) 21-3540
静 岡 営 業 所	〒422-8033 静岡県駿河区登呂 4 丁目 28-5	TEL (054) 269-5377	FAX (054) 237-5855
名 古 屋 営 業 所 中 部 サービスセンター	〒481-0012 愛知県北名古屋市久地野安田 36番地	TEL (0568) 26-6681	FAX (0568) 26-6631
水 島 営 業 所	〒710-0042 岡山県倉敷市二日市 358	TEL (086) 486-3381	FAX (086) 486-3382
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四 国 営 業 所 新 居 浜 サービスセンター	〒792-0896 愛媛県新居浜市阿島 1 丁目 6-26	TEL (0897) 47-8993	FAX (0897) 47-8995
大 分 営 業 所 大 分 サービスセンター	〒870-0141 大分県大分市三川新町 1 丁目 3-23	TEL (097) 576-7032	FAX (097) 576-7033

●海外関連会社

本山閥門(大連)有限公司 〒116601 中国 遼寧省大連市金州新区港興大街 39 号 14-7 TEL +86-411-6589-1277 FAX +86-411-6589-1278

●海外販売代理店

中国、韓国、台湾、シンガポール、インドネシア、マレーシア、サウジアラビア

●SALES AND SUPPORT NETWORK

Overseas Marketing & Sales Dept. : 11th Floor, Clie Kawasaki, 10-5, Ekimae-honcho, Kawasaki-ku, Kawasaki-city, Kanagawa, 210-0007 Japan

TEL: +81-44-381-8771 FAX : +81-44-381-8773

Domestic Sales Branches : Tokyo, Osaka, Sapporo, Tohoku, Joetsu, Kanto, Shizuoka, Nagoya, Hanshin, Tokuyama, Shikoku, Oita

●OVERSEAS AFFILIATED COMPANY

MOTOYAMA VALVE (DALIAN) CO., LTD

Gangxing Street 39-14-7, Jinzhou New District, Dalian-city, 116601 China

TEL: +86-411-6589-1277

FAX: +86-411-6589-1278

●OVERSEAS NETWORK

China, Korea, Taiwan, Singapore, Indonesia, Malaysia, Saudi Arabia

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