

Series 2000 Control Valves Globe-Double Seated, Top & Bottom Guide



for promotes more tightness and heavy duty control
Series 2000 Single Seated Globe Valve with
Model 880 Actuator and Limit S/W with Sol V/V

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Welcome to Valstone

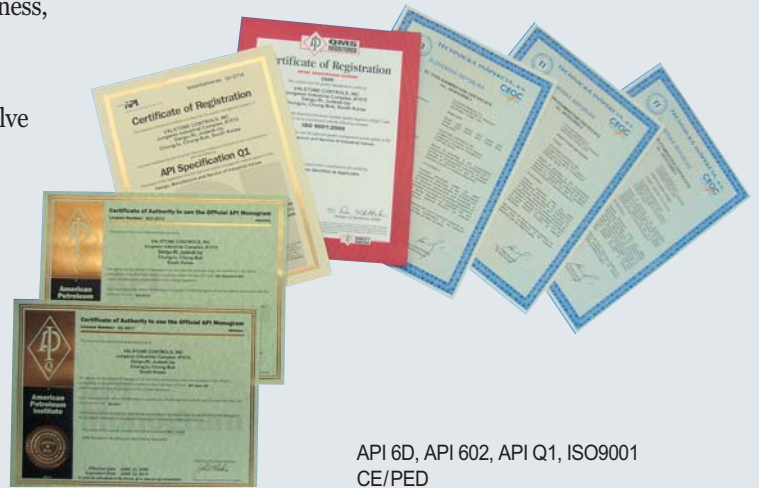
Valstone, a pioneer in process equipments business has expanded the number of capabilities and solutions.

Depending upon your needs can be the single-source supplier of this products evaluations and reliability solutions thereby reducing the total cost of process equipment ownership.

Valstone is committed to serving the industries where we do business,

1. Control Valves for General Service
2. Control Valves for Severe Service, Including 'OMEGA' Trim Valve
3. Steam Let-down Control Valves
4. Anti-surge Valves
5. Control Valves with Butterfly, Ball, Segment Ball (V-Notch, Eccentric)
6. Control Choke Valves
7. Pressure Regulating Valves
8. Retrofit Kit (Trim, Actuator, Instruments) for Up-grade

providing our customers satisfaction with innovative, high-quality products and services.



API 6D, API 602, API Q1, ISO9001
CE/PED



Numbering System

2	0	0	0	-	880
Body Type		Characteristic	Plug Type	Actuator Type	
20 Globe Double Seated		0 Linear 1 EQ % 2 Modified %	0 Down Seating air to close 1 Up Seating air to open	Spring Diaphragm 870 Multi-Spring Type Air to Close 880 Multi-Spring Type Air to Open Cylinder 670 Spring Cylinder 680 Springless Cylinder 700 Hydraulic 900 Electric Motor	

Manufacturing Range

Description	Manufacturing Range	Remark
Body Size	2"(50 mm) ~ 16"(400 mm)	
Ratings	ANSI Class 150 ~ 1500	
Connections	Flanged, Butt-Weld	
Body Material	A216 Gr-WCB, A351 Gr-CF8M, Alloy Steel available	
Trim Material	304, 316 SST., Alloy Steel available	

General Specifications

Flow Direction : Flow to Open and Flow to Close

Max. Fluid Temperature : 650 °C

Min. Fluid Temperature : -198 °C

Seat Leakages : ANSI B16.104 Class II

* Option -1 : ANSI B16.104 Class V for Teflon Soft Seat & Seal (-198 °C ~ 230 °C)

Body : Double Seated Top and Bottom Guide

Bonnet Type : Stud Bolted

* Standard Type : -20 ~ 280 °C

* Extension Type : 281 ~ 650 °C & under -20 °C

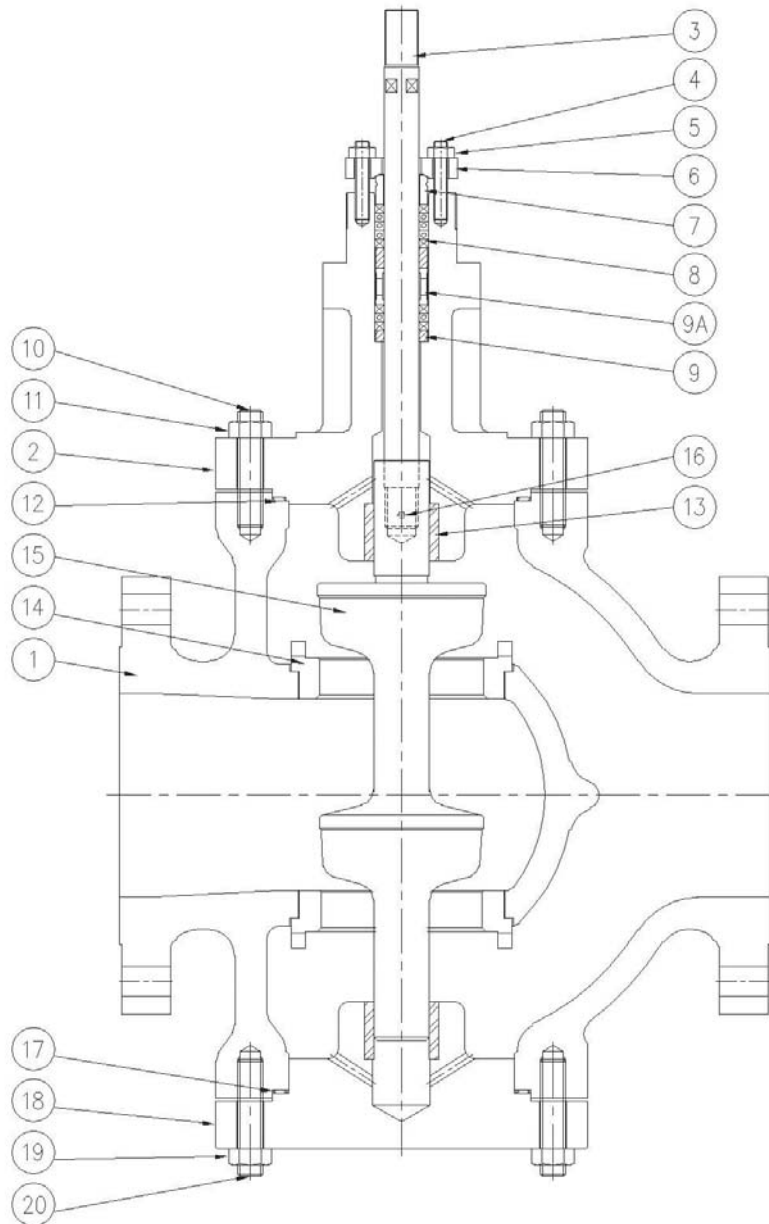
Flow Characteristics : Linear , Equal Percentage, Modified %

Cv Ratio : 50:1

Diaphragm actuators enclosed, Heavy duty Cylinders(spring-cylinder and double-cylinder) available.

Applicable for various Instruments (Positioner, SOV, Lim. S/W,)

Body Constructions



1 Body	8 Packing	14 Seat Ring
2 Bonnet	9 Packing Spacer	15 Plug
3 Plug Stem	9A Lantern Ring	16 Plug Stem Pin
4 Packing Stud	10 Body Stud	17 Bottom Flange Gasket
5 Packing Nut	11 Body Nut	18 Bottom Flange
6 Packing Flange	12 Body Gasket	19 Bottom Flange Nut
7 Gland	13 Guide Bushing	20 Bottom Flange Stud

Body Materials : Carbon Steel or Alloy Steel

Description	Material	Description	Material
1 Body	ASTM A216 Gr-WCB / Alloy Steel available	10 Body Stud	A193 B7
2 Bonnet	ASTM A216 Gr-WCB / Alloy Steel available	11 Body Nut	A194 2H
3 Plug Stem	316 Stainless Steel	12 Body Gasket	316 SST with Grafoil Filler
4 Packing Stud	316/304 Stainless Steel	13 Guide Bushing	Solid Stellite / 440C Stainless Steel
5 Packing Nut	316/304 Stainless Steel	14 Seat Ring	316 Stainless Steel
6 Packing Flange	316/304/303 Stainless Steel	15 Plug	316 Stainless Steel
7 Gland	316/304/303 Stainless Steel	16 Plug Stem Pin	316 Stainless Steel
8 Packing	PTFE Carbon Fiber / Graphite / Grafoil + Graphite	17 Bottom Flange Gasket	316 Stainless Steel with Grafoil Filler
9 Packing Spacer	316/304/303 Stainless Steel	18 Bottom Flange	ASTM A216 Gr-WCB / Alloy Steel available
9A Lantern Ring	316/304/303 Stainless Steel	19 Bottom Flange Nut	A194 2H
		20 Bottom Flange Stud	A193 B7

Body Materials : Stainless Steel

Description	Material	Description	Material
1 Body	ASTM A351 Gr-CF8 / A351 Gr-CF8M	10 Body Stud	A193 B7
2 Bonnet	ASTM A351 Gr-CF8 / A351 Gr-CF8M	11 Body Nut	A194 2H
3 Plug Stem	316 Stainless Steel	12 Body Gasket	316 SST with Grafoil Filler
4 Packing Stud	316/304 Stainless Steel	13 Guide Bushing	Solid Stellite / 440C Stainless Steel
5 Packing Nut	316/304 Stainless Steel	14 Seat Ring	316 Stainless Steel
6 Packing Flange	316/304/303 Stainless Steel	15 Plug	316 Stainless Steel
7 Gland	316/304/303 Stainless Steel	16 Plug Stem Pin	316 Stainless Steel
8 Packing	PTFE Carbon Fiber / Graphite / Grafoil + Graphite	17 Bottom Flange Gasket	316 Stainless Steel with Grafoil Filler
9 Packing Spacer	316/304/303 Stainless Steel	18 Bottom Flange	ASTM A351 Gr-CF8 / A351 Gr-CF8M
9A Lantern Ring	316/304/303 Stainless Steel	19 Bottom Flange Nut	A194 2H
		20 Bottom Flange Stud	A193 B7

Flow Coefficients - Rated Cv

Valve Size (inch)	Orifice Diameter Upper/Lower (mm)		Travel (mm)	Percent of Valve Travel									
				10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2"	37	34	20	0.6	1.1	1.5	2	2.8	4.2	5.5	8.5	12.3	19
	51	48	20	1.4	2.8	3.8	5.3	7.2	10.5	13.9	21.6	31.2	48
3"	48	45	38	1.3	2.6	3.5	4.8	6.6	9.7	12.8	19.8	28.6	44
	67	64	38	3.3	6.6	8.8	12	16.5	24.2	31.9	49.5	71.5	110
4"	60	58	38	2.3	4.7	6.2	8.6	11.7	17.2	22.6	35.1	50.7	78
	89	87	38	5.8	12	16	21	29.2	42.9	56.5	87.7	126	195
6"	89	87	51	5	11	14	20	27	40	52	81	117	180
	133	131	51	14	27	36	50	68	99	130	202	292	450
8"	118	115	64	9	18	24	33	45	66	87	135	195	300
	178	175	64	23	45	60	83	112	165	217	337	487	750
10"	133	131	64	14	28	37	51	69	101	133	207	299	460
	222	219	64	35	70	93	127	174	255	336	522	754	1160
12"	162	159	89	20	39	52	72	98	143	189	293	423	650
	267	264	89	49	97	130	178	243	356	469	729	1053	1620
14"	311	308	102	60	120	160	220	300	440	580	900	1300	2000
16"	356	352	102	77	153	207	281	384	563	742	1152	1664	2560

V-Port Trim

Flow Characteristics : EQUAL PERCENTAGE

Valve Size (inch)	Orifice Diameter Upper/Lower (mm)		Travel (mm)	Percent of Valve Travel									
				10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
2"	37	34	20	1.9	3.8	5.7	7.6	9.5	11.4	13.3	15.2	17.1	19
	51	48	20	4.8	9.6	14	19	24	28.8	33.6	38.4	43.2	48
3"	48	45	38	4.4	8.8	13	18	22	26.4	30.8	35.2	39.6	44
	67	64	38	11	22	33	44	55	66	77	88	99	110
4"	60	58	38	7.8	16	23	31	39	46.8	54.6	62.4	70.2	78
	89	87	38	20	39	59	78	97.5	117	136	156	175	195
6"	89	87	51	18	36	54	72	90	108	126	144	162	180
	133	131	51	45	90	135	180	225	270	315	360	405	450
8"	118	115	64	30	60	90	120	150	180	210	240	270	300
	178	175	64	75	150	225	300	375	450	525	600	675	750
10"	133	131	64	46	92	138	184	230	276	322	368	414	460
	222	219	64	116	232	348	464	580	696	812	928	1044	1160
12"	162	159	89	65	130	195	260	325	390	455	520	585	650
	267	264	89	162	324	486	648	810	972	1134	1296	1458	1620

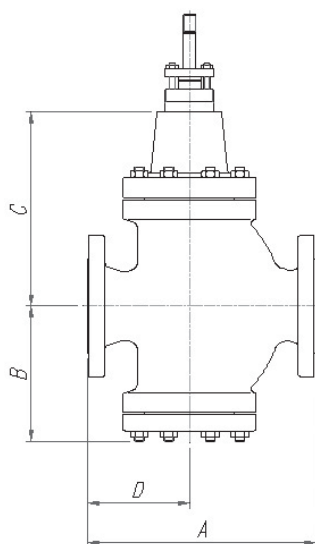
Contoured Trim

Flow Characteristics : LINEAR

The Cv values shown in our catalogue are for reference only. Valstone qualified engineer can design and modify the seat design to meet different customer's requirements. Valstone is continuing to develop and improve valve designs.

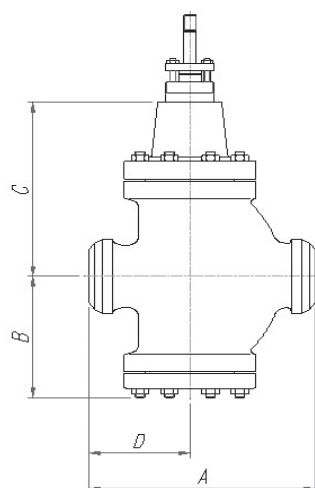
Dimensions

(unit : mm)



Valve Size (inch)	ANSI CLASS													
	150-600 BW, SW		150				300				600			
	A	D	RF		RTJ		RF		RTJ		RF		RTJ	
2"	235	105	254	117	267	124	267	124	282	132	286	133	289	135
3"	337	159	298	140	311	146	318	149	333	157	337	159	340	160
4"	394	187	353	167	365	173	368	175	384	183	394	187	397	189
6"	508	222	451	194	464	200	439	205	489	213	508	222	511	224
8"	610	251	543	217	556	224	568	230	584	238	610	251	613	252
10"	705	292	625	252	638	259	660	270	676	278	705	292	708	294
12"	813	327	730	286	743	292	768	305	784	313	813	327	816	329
14"	933	371	851	330	864	337	889	349	905	357	933	371	937	373
16"	981	438	899	399	911	405	937	419	953	427	981	438	984	440

(unit : mm)



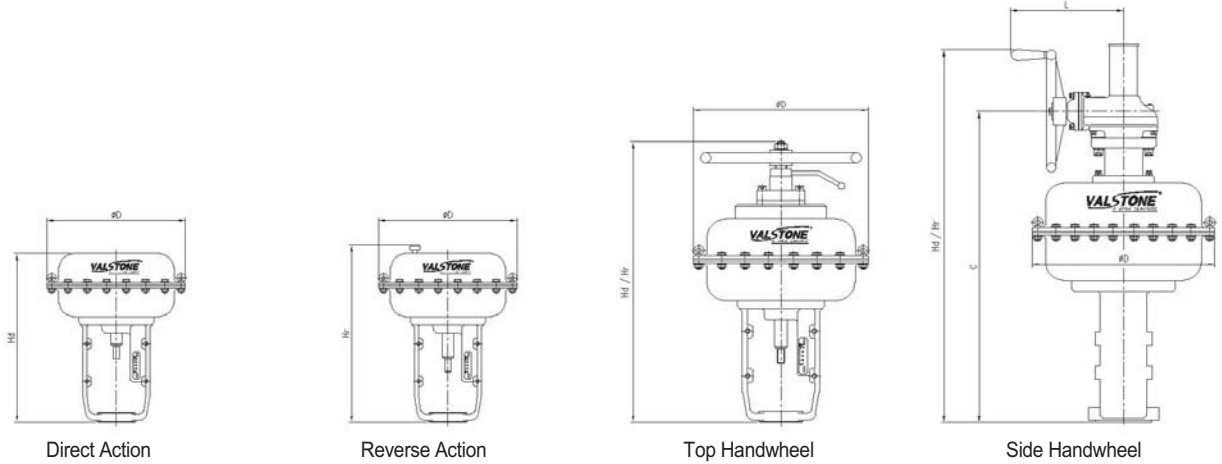
Valve Size (inch)	ANSI CLASS									
	900,1500 BW, SW		900				1500			
	A	D	RF		RTJ		RF		RTJ	
2"	311	149	311	149	314	151	311	149	314	151
3"	406	191	387	181	391	183	406	191	409	192
4"	483	229	464	219	467	221	483	229	486	230
6"	610	279	530	240	533	241	610	279	616	282
8"	765	353	708	324	711	325	765	353	775	357
10"	905	422	829	384	832	386	905	422	914	427
12"	1026	449	895	397	899	399	1026	449	1041	457

(unit : mm)

	Valve Size (inch)									
	2"	3"	4"	6"	8"	10"	12"	14" (ANSI 150-600 only)	16" (ANSI 150-600 only)	
B (Max)	152.4	198.12	205.74	284.48	340.36	375.92	452.12	546.1	566.42	
D (Max)	182.88	236.22	241.3	320.04	373.38	416.56	502.92	612.14	662.94	

Actuators and Handwheels

Model 870 / 880 Diaphragm Actuators

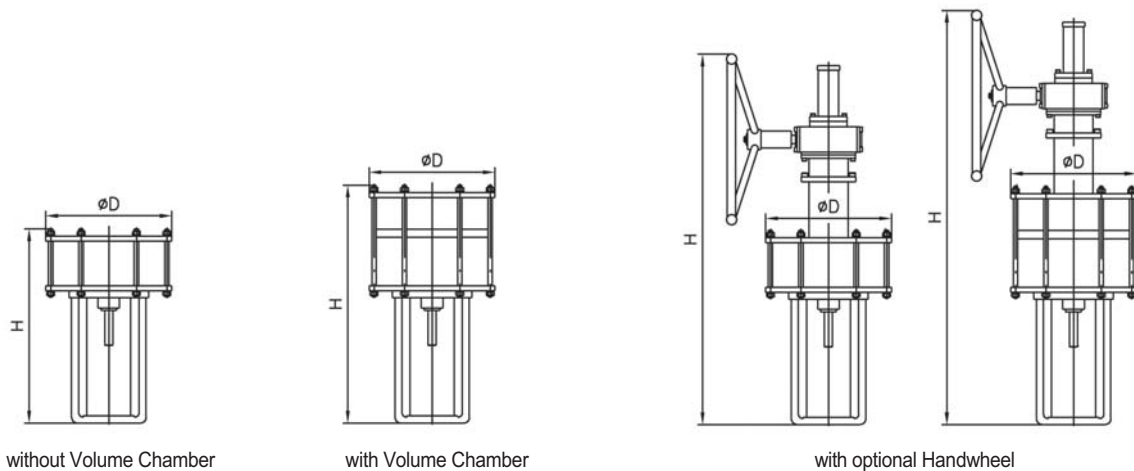


Dimensions

(unit : mm)

Actuator Size	D	Without Handwheel		With Handwheel				
		DA	RA	Handwheel Type	DA	RA	C	L
		Hd	Hr		Hd	Hr		
#25	250	332	352	Top	450	473	-	-
#29	290	369	419	Top	534	569	-	-
#37	370	410	460	Top	575	620	-	-
#48	480	629	679	Side	979	979	779	260
#55	550	678	728	Side	1,098	1,098	848	300
#55H	550	728	778	Side	1,148	1,148	848	300

Model 670 / 680 Cylinder Actuators



* Please refer to 670 / 880 Actuator Catalog

Weight

Body Sub - Assembly

(unit : Kg')

Valve Size (inch)	BW, SW up to 600 lbs.	Flanged				
		ANSI Class				
		150	300	600	900	1500
2"	23	68	73	79	135	135
3"	50	111	116	122	180	185
4"	87	138	141	152	223	229
6"	165	234	240	270	405	413
8"	303	363	374	435	653	662
10"	530	612	626	680	1021	1021
10"	659	771	789	862	1293	1293

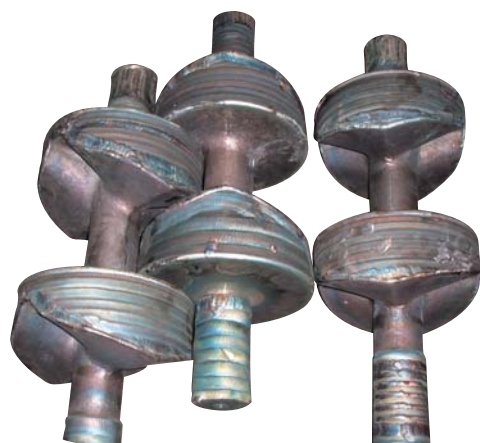
Actuator

(unit : Kg')

Actuator Size	Standard	With Handwheel	
		Top	Side
#25	10	13	15
#29	19	25	27
#37	37	46	49
#48	92	108	112
#55	116	140	145
#55H	120	144	150

Accessories

- * Positioners
 - Smart, E/P, P/P Positioners for Single / Double Acting
- * Instruments Valves
 - Transfer (Trip) Valves, Volume Booster Relay
 - Air Regulators (Air set), Speed Control Valves
- * Limit Switches
- * Solenoid Valves



Note







Valstone, Valves that Work!!

- 1. Control Valves for General Service*
- 2. Control Valves for Severe Service, Including 'OMEGA' Trim Valves*
 - 3. Control Chock Valves*
 - 4. V-Notch Control Valves*
 - 5. Anti-Surge Valves*
- 6. Pressure Regulating Valves*
- 7. Retrofit for Up-grade*