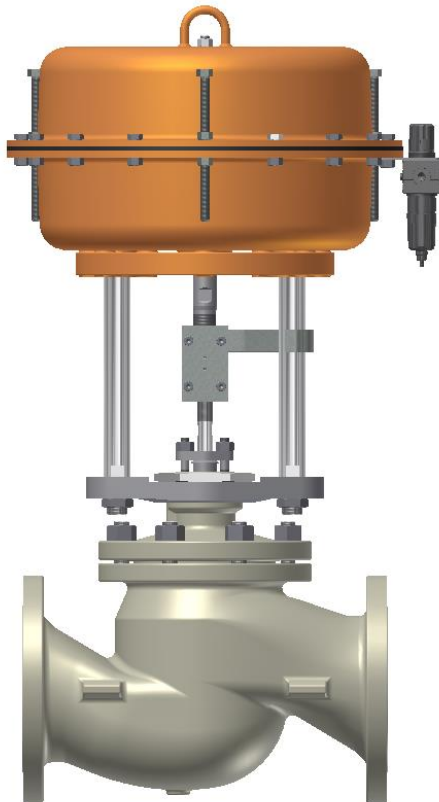


Series 800

High Pressure Control Valve



Series 800 Control Valve

Series 800 Globe valves are constructed for pressure ratings up to 1500 lbs.

Depending on the packing selected standard operating temperatures range between -10 to 300 °C. Special bonnets are available for temperatures outside these ranges. Readjustable gland packing available.

High-pressure valve for control of liquid and gaseous media in a robust streamlined construction. Pneumatic, electric or hydraulic actuators can be used.

CONTENTS

Specifications.....	2
Body – Bolting – Temperature Standards	3
Flow coefficients Control Valves.....	3
Flow coefficients Series 800.....	4
Dimensions and shipping weights.....	5

Features

- Compact
- Ease maintenance
- Full range trims
- EN and ASME valve bodies
- All kind of actuation
- Proven design



Specifications Series 800 Control Valves

Style	Top Entry Single Seated Straight Through Globe Valve							
Sizes	DN	15	25	40	50	80	100	150
	Inch	1/2	1	1 1/2	2	3	4	6
Pressure Ratings	PN 250 to 420							
	ANSI 1500 / 2500							
End Connections	Flanged	Raised Face (RF) / Raised face with groove for ring type joint (RTJ)						
	Butt weld ends	According to ANSI B16.5						
	Welded Ends	Socket Weld, Butt Weld						
Bonnet and Packing	Bonnet Type	Packing Type	Process Temperature in Degrees Celsius					
			Standard	PTFE V-Ring	-10 +220			
		PTFE Silk	-10 +220					
		Graphite	-200 +530					
	Extension	PTFE V-Ring	-60 +350					
		PTFE Silk	-10 +280					
		Graphite	-200 +530					
	Cryogenic	PTFE V-Ring	-200 +0					
		PTFE Silk	-200 +0					
Flow Direction	Liquids	Standard Proces	FTO					
		NRE 2	FTO / FTC					
		Cavitation Control	FTC					
		Flashing Proces	FTC					
	Gas / Steam	Standard Proces	FTO					
		Low Noise	FTO					
		Equal Percentage	=%					
		Linear	Lin					
Quick Opening	QO							
Rangeability	50 : 1							
Leakage rates	Trim Form (Valve Size in DN)							
		Class	Approx % of Cv	Standard	Low Flow	Pressure Balanced	Soft Seat	
	<i>to EN IEC 60534-4</i> <i>ANSI / FCI 70-2</i>	I	-	15 - 150	15 - 25	100 - 150	15 - 150	
		II	0,5	15 - 150	15 - 25	100 - 150	15 - 150	
		III	0,1	15 - 150	15 - 25	100 - 150	15 - 150	
		IV	0,01	15 - 150	15 - 25	100 - 150	15 - 150	
		V	0,001	15 - 50	15 - 25	-	15 - 150	
VI		0,0001	-	-	-	15* - 150		
* including Low Flow 15 - 25								
Trim Types	Single Seat	Standard	Plug, Metal and Soft Seat					
		Pressure Balanced	Plug, Metal and Soft Seat, Metal and Soft Seal Ring					
	Low Noise	Standard	Plug, Metal and Soft Seat					
		Pressure Balanced	Plug, Metal and Soft Seat, Metal and Soft Seal Ring					
	Cavitation Control	Standard	Plug, Metal Seat or Cage					
		Pressure Balanced	Plug, Metal Seat or Cage, Metal and Soft Seal Ring					
	Low Noise	NRE - 1	Standard Plug with Baffle Cage					
		NRE - 2	Multi Hole Plug / Cage					
		NRE - 21	Combination of NRE - 1 with NRE - 2					
	Cavitation Control	Multi Hole Plug / Cage with double drilled Holes						



Body – Bolting – Temperature Standards

EN Grades

Body / Bonnet Material	Description	Standard Norm for Body / Bonnet Material	Temperature Range	Bolting Material	Standard Norm for Bolting Material
1.0619 ¹	Carbon Steel	EN 10213	-10 + 450 °C	1.7218	EN 10269
1.4581 ²	Stainless Steel	EN 10213	-100 + 450 °C	1.4571	EN 10272
1.7357 ³	High Temperature Steel	EN 10213	-10 + 530 °C	1.7709	EN 10269
1.1131 ⁴	Low Temperature Steel	EN 10213	-40 + 450 °C	1.7218	EN 10269
1.4469 ⁵	Duplex (Oil & Gas)	EN 10213	-70 + 450 °C	1.4980	EN 10269
1.4536	Duplex (Chemical)	SEW 410-7	-45 + 450 °C	1.4980	EN 10269

Notes:

- 1 For Sizes up to and including 2 Inch, Bonnet Material is 1.5638 to EN 10213
- 2 For Sizes up to and including 2 Inch, Bonnet Material is 1.4571 to EN 10272
- 3 For Sizes up to and including 2 Inch, Bonnet Material is 1.7335 to EN 10273
- 4 For Sizes up to and including 2 Inch, Bonnet Material is 1.5638 to EN 10213
- 5 For Sizes up to and including 2 Inch, Bonnet Material is 1.4462 to EN 10272

ASTM Grades

Body / Bonnet Material	Grade	Description	Temperature Range	Bolting Material	Grade
SA-352 ⁶	LCC	Low Temperature Carbon Steel	-46 + 345 °C	SA-320	L7
SA-216 ⁷	WCB	Carbon Steel	-29 + 425 °C	SA-193	B7
SA-182 ⁸	F51	Duplex	-70 + 315 °C	SA-453	660
SA-351 ⁹	CF8M	Stainless Steel	-200 + 540 °C	SA-193	B8
SA-217 ¹⁰	WC6	High Temperature Steel	-29 + 595 °C	SA-193	B7

Notes:

- 6 For Sizes up to and including 2 Inch, Bonnet Material is SA 350 Gr. LF2
- 7 For Sizes up to and including 2 Inch, Bonnet Material is SA 105
- 8 For Sizes up to and including 2 Inch, Bonnet Material is SA 479 Gr. S31803
- 9 For Sizes up to and including 2 Inch, Bonnet Material is SA 182 Gr. F316H
- 10 For Sizes up to and including 2 Inch, Bonnet Material is SA 739 Gr. B11

Flow Co-efficients Control Valves

Type	Trim	Flow Direction	z-Values ¹¹					Kc	FI	XT
			Rates Cv 0,001-1,0	Rates Cv 1,0-4,0	Rates Cv 6,3 - 40	Rates Cv 56 - 160	Rates Cv > 200			
2000	Parabolic Plug	Open ¹²	0,7	0,6	0,4	0,35	-	0,68	0,9	0,72
		Close	0,5	0,45	0,25	0,2	-	0,58	0,78	0,54
9000	V-Port Plug	Open	-	-	0,35	0,3	0,25	0,65	0,9	0,72
		Close	-	-	0,35	0,3	0,25	0,65	0,86	0,66
800	Cage Ports	Open	-	0,45	0,4	0,35	0,3	0,7	0,9	0,72
		Close	-	0,45	0,4	0,35	0,3	0,72	0,88	0,72
800-30	Cage Holes	Open	-	0,5	0,45	0,45	0,4	0,7	0,95	0,72
		Close	-	0,5	0,45	0,45	0,4	0,72	0,95	0,75
	Cav. Contr.	Close	-	-	0,6	0,6	0,55	0,9	0,95	0,8
2003 / 13	V-Port	Mix	-	-	0,35	0,3	0,25	0,65	0,86	0,62
9003 / 13	Plug	Divert	-	-	0,35	0,3	0,25	0,65	0,86	0,66

Notes:

- 11 Apply for 75% of Valve Opening
- 12 Preferred Flow Direction



Flow Co-efficients Series 800

Cv Standard Trims										
		Valve Size	Inch mm	1 25	1½ 40	2 50	3 80	4 100	6 150	
Seat Diameter in mm		Full		27	42	51	78	96	149	
Characteristics	Linear	Trim Size		Cv values						
		Full		15	37	58	130	210	420	
	Reduced		8.2	19	29	58	74	190		
	Equal Percentage	Full		13	33	52	120	190	365	
		Reduced		7.4	19	29	74	116	235	
	Quick Opening	Full		-	42	62	145	220	-	
Cv Low Flow Trims										
Seat Diameter in mm		Full		10	10					
		1st Reduction		5	5					
		2nd Reduction		3	3					
Characteristics	Linear	Trim Size		Cv values						
		Full		1.17, 1.9, 2.9						
		1st Reduction		0.29, 0.47, 0.74						
	2nd Reduction		0.01, 0.019, 0.029, 0.047, 0.074, 0.117, 0.19							
	Equal Percentage	Full		1.17, 1.9, 2.9						
		1st Reduction		0.29, 0.47, 0.74						
Cv Low Noise Trims										
Seat Diameter in mm		Valve Size	Inch mm	1 25	1½ 40	2 80	3 80	4 100	6 150	
Seat Diameter in mm		Same as for Standard Trims								
Characteristics	NRE - 2	Linear	Trim Size		Cv values					
			Full		15	33	47	105	163	260
	Reduced		7.4	12	19	47	74	116		
	Equal Percentage	Full		12	26	37	82	130	190	
		Reduced		7.4	16	23	52	82	116	
	NRE - 21	Linear	Full		13	29	42	93	116	190
			Reduced		7.4	11	16	42	65	105
	Equal Percentage	Full		11	23	33	74	93	145	
		Reduced		7.4	14	21	47	74	93	
	Cavitation Control	Linear	Full		15	33	47	105	163	260
			Reduced		7.4	12	19	47	74	116
	Equal Percentage	Full		12	26	37	82	130	190	
		Reduced		7.4	16	23	52	82	116	
	NRE-21	Linear	Full		0.12, 0.29, 0.74, 1.2, 2.4			Available for 1/2 and 1 Inch Valve Size Only		
Low Flow	Equal Percentage	Full		0.29, 0.74, 1.2, 2.4						
Valve Factors										
FI and Xt	Trim Style		Standard		Low Flow		NRE 2		NRE-21 Cav Con	
	Flow Direction		FTO	FTC	FTO	FTC	FTO	FTC	FTO	FTC
	FI	Full Trim	0.9	0.8	0.95	0.9	0.9	0.8	0.9	0.95
		Reduced Trim	0.95	0.88	0.95	0.9	0.95	0.88	0.95	0.95
	Xt	Full Trim	0.73	0.58	0.8	0.73	0.73	0.58	0.73	-
		Reduced Trim	0.8	0.7	0.8	0.73	0.8	0.7	0.8	-



Dimensions and shipping weights

Dimensions		Valve	Actuator size	A	A	C (dia)	H1	H2	X
Millimetres	Size			ANSI	ANSI		Std	Ext	Clear- Ance to Remove Act.
	mm	Inch		1500	2500	Metric thread	Bon- net	Bon- net	
	25	1		254	308	M12 x 1	210	300	70
	40	1 ½		305	384	M16 x 1,5	280	345	70
	50	2		368	470	M16 x 1,5	280	440	70
	80	3		470	546	M16 x 1,5	320	460	70
	100	4		546	673	M24 x 1,5	480	460	70
	150	6	2112/2112T	705	914	M24 x 1,5	500	480	70
	150	6	2016/2016T	705	914	M24 x 1,5	500	480	80

Shipping Weights ¹

Valve Size		Standard bonnet		Extension bonnet	
mm	inch	1500	2500	1500	2500
mm	inch	kg	kg	kg	Kg
25	1	25	35	28	40
40	1 ½	45	60	50	70
50	2	70	90	80	100
80	3	130	160	145	180
100	4	230	300	255	330
150	6	470	620	520	700

Notes:

- 1 Body assembly only
- 2 Dimensions according AMSE B16.10

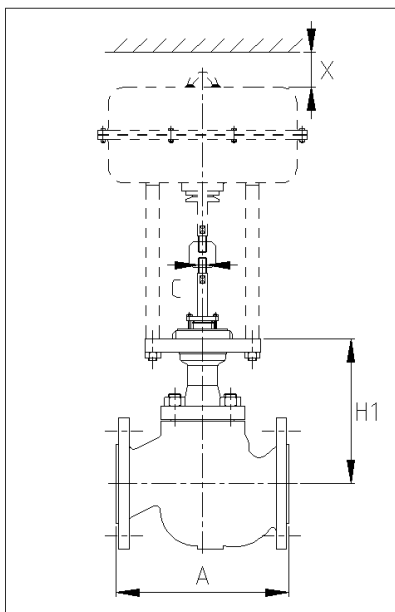


Fig. 1: Valve with standard bonnet

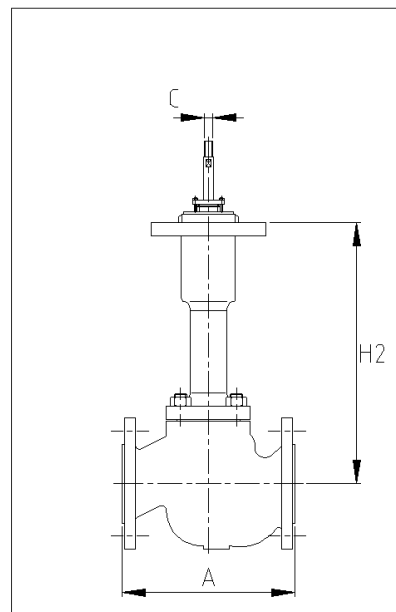


Fig. 2: Valve with extension bonnet



Valves according:

- CE
- ATEX
- PED
- EN / NEN / ANSI / ASME



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