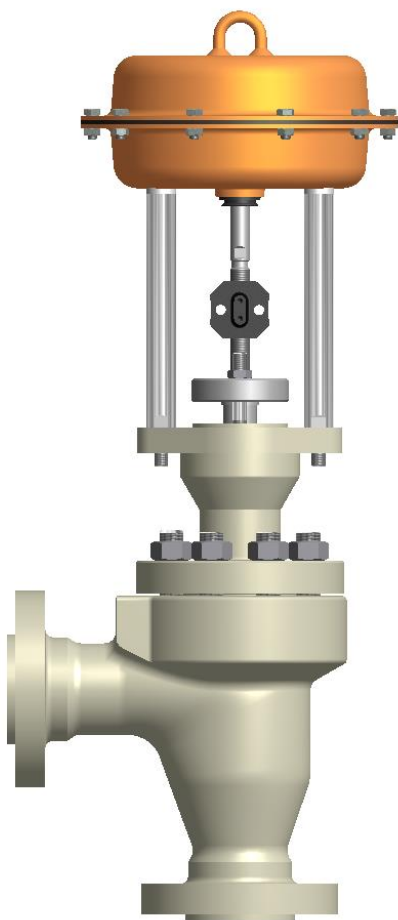


Series 800-30

High Pressure Control Valve



Series 800-30 Control Valve

Series 800-30 Angle valves are constructed for pressure ratings from ANSI Class 150 up to ANSI Class 2500.

Depending on the bonnet selected operating temperatures range between -50 to 450 °C.

Special bonnets are available for temperatures outside these ranges. Re-adjustable stem packing for low emission available.

The design is very applicable for high pressure control of liquid and gaseous media due to the robust 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 800-30.....	4
Dimensions and shipping weights.....	5

Features

- Compact
- Ease maintenance
- Full range trims
- EN and ASME valve bodies
- Various actuation
- Proven design
- Fully interchangeable bonnets and trims.



Specifications Series 800-30 Control Valves

Style	Top Entry Single Seated Straight Through Globe Valve										
Sizes	DN (mm)	25	50	65	80	100	150	200	250	300	
	Inch	1	2	2 ½	3	4	6	8	10	12	
Pressure Ratings	ANSI 300, 600, 900, 1500 / PN 40, 65, 100, 160, 250, 400, DN 25 to 300 (1 inch to 12 inch)										
End Connections	Flanged	Raised face (RF)									
	ANSI 300, 600	Raised face with small groove									
	900	Raised face with groove for ring type joint (RTJ)									
	Flanged	Raised face (RF)									
	PN 40, 64, 100, 160	Raised face with groove according to DIN 2512									
	Butt Weld Ends	According to ANSI B16.5									
		According to DIN 3239 B									
	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						
	Bellows Seal	Same as Extension Bonnet									
	Cryogenic	PTFE V-Ring			-200 +0						
		PTFE Silk			-200 +0						
Flow Direction	Pressure	Liquids	FTC for Standard, NRE-2 and NRC trim								
		Gas/ Steam	FTC for Standard, NRE-2 and NRC trim								
	Balanced	Liquids	FTC for Standard								
		Gas/ Steam	FTO for Standard, NRE-2 and NRE-21 trim								
Characteristics	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								
	=%, Lin, QO	Pressure Balanced	Plug, Metal and Soft Seat, Metal and Soft Seal Ring								
	Low Noise	Standard	Plug, Metal and Soft Seat								
	=%, Lin, QO	Pressure Balanced	Plug, Metal and Soft Seat, Metal and Soft Seal Ring								
	Cavitation Control	Standard	Plug, Metal Seat or Cage								
	=%, Lin, QO	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

z-Values¹¹

Type	Trim	Flow Direction	Rates Cv 0,001-1,0	Rates Cv 1,0-4,0	Rates Cv 6,3 - 40	Rates Cv 56 - 160	Rates Cv > 200	Kc	FI	XT
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
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 800-30

Cv Standard Trims		Valve Size	Inch	1	1½	2	3	4	6	8
			mm	25	40	50	80	100	150	200
Seat Diameter in mm		Full		27	42	51	78	96	149	233
Characteristics	Trim Size	Cv values								
		Linear	Full	15	37	58	130	210	420	825
		1st Reduced	8.2	19	29	58	74	190	365	
	Equal Percentage	Full	13	33	52	120	190	365	650	
		1st Reduction	7.4	19	29	74	116	235	420	
	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		
		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

Cv Low Noise Trims		Valve Size	Inch	1	1½	2	3	4	6	8	
			mm	25	40	50	80	100	150	200	
Seat Diameter in mm		Same as for Standard Trims									
Characteristics	NRE - 1	Linear	Cv values								
			Full	15	33	47	105	163	260	580	
	Reduced	7.4	12	19	47	74	116	190			
	Equal Percentage	Full	12	26	37	82	130	190	465		
		Reduced	7.4	16	23	52	82	116	290		
	NRE - 21	Linear	Full	13	29	42	93	116	190	495	
			Reduced	7.4	11	16	42	65	105	163	
	Equal Percentage	Full	11	23	33	74	93	145	390		
		Reduced	7.4	14	21	47	74	93	260		
	Cavitation Control	Linear	Full	15	33	47	105	163	260	580	
			Reduced	7.4	12	19	47	74	116	190	
	Equal Percentage	Full	12	26	37	82	130	190	465		
		Reduced	7.4	16	23	52	82	116	290		
	NRE-21	Linear	0.12, 0.29, 0.74, 1.2, 2.4					Available for 1/2 and 1 Inch Valve Size Only			
Low Flow	Equal Percentage	0.29, 0.74, 1.2, 2.4									

Valve Factors

FI and Xt	Trim Style Flow Direction	Standard		Low Flow		NRE - 2		NRE - 21		Cav Con	
		FTO	FTC	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	0.9	0.95	0.95
	Reduced Trim	0.95	0.88	0.95	0.9	0.95	0.88	0.95	0.95	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			



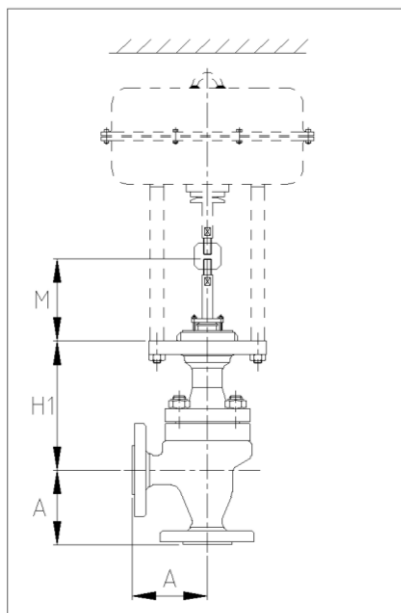
Dimensions and shipping weights

Dimensions Millimetres	Body Size		A								H1	H2	M	
			PN				ANSI							
			40	64	250	Ext bnt	600	900	1500	2500	Std.	Extend.		
		mm	Inch	160								Bnt.	Bnt.	
2109	25	1	130	130	130	130	130	130	130	145	175	295	95	
2112			175	175	175	175	175	175	175	175	175	175	295	95
2112/2112T	40	1½	150	150	150	150	150	150	150	150	235	380	95	
2112/2112T	50	2	175	175	175	175	175	175	175	175	210	380	95	
2112-50 & T-50	80	3	225	225	225	225	225	225	225	225	310	480	95	
2116			310	480	100									
2112-50 & T-50	100	4	260	260	260	260	260	260	260	260	320	500	95	
2116			320	500	100									
2112-50 & T-50	150	6	350	350	350	350	350	350	350	350	430	600	95	
2116			430	600	100									

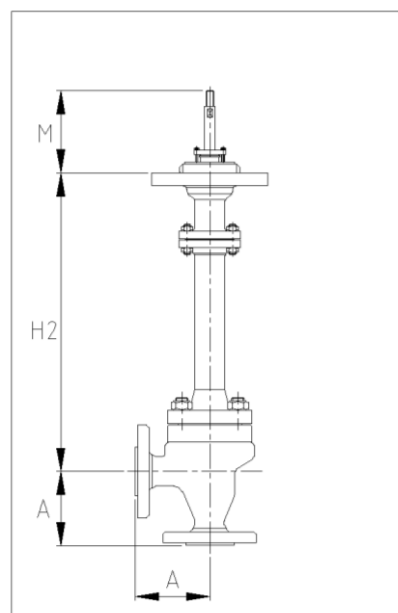
Shipping Weights	Body Size		Standard Bonnet		Extension Bonnet	
			>= ANSI 900	>= ANSI 900	>= ANSI 600	>= ANSI 900
	mm	Inch	Kg	Kg	Kg	Kg
	25	1	30	35	35	40
	40	1	50	55	60	60
	50	2	55	55	65	65
	80	3	100	100	120	120
	100	4	150	150	180	180
	150	6	300	300	350	350

Notes:

- 1 Valve open (full travel)
- 2 Body assembly only



Valve with standard bonnet



Valve with extension bonnet



Valves according:

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



PEB Pipeline Equipment B.V.

PO Box 186
 2700 AD Zoetermeer
 Stephensonstraat 30
 2723 RN Zoetermeer
 The Netherlands

Telephone: 00 31 79 3417714
 Telefax: 00 31 79 3313502
 Website: www.peb.nl
 E-mail: info@peb.nl

June, 2015
 Revision 3