

Masoneilan™ PXR™ Control Valve

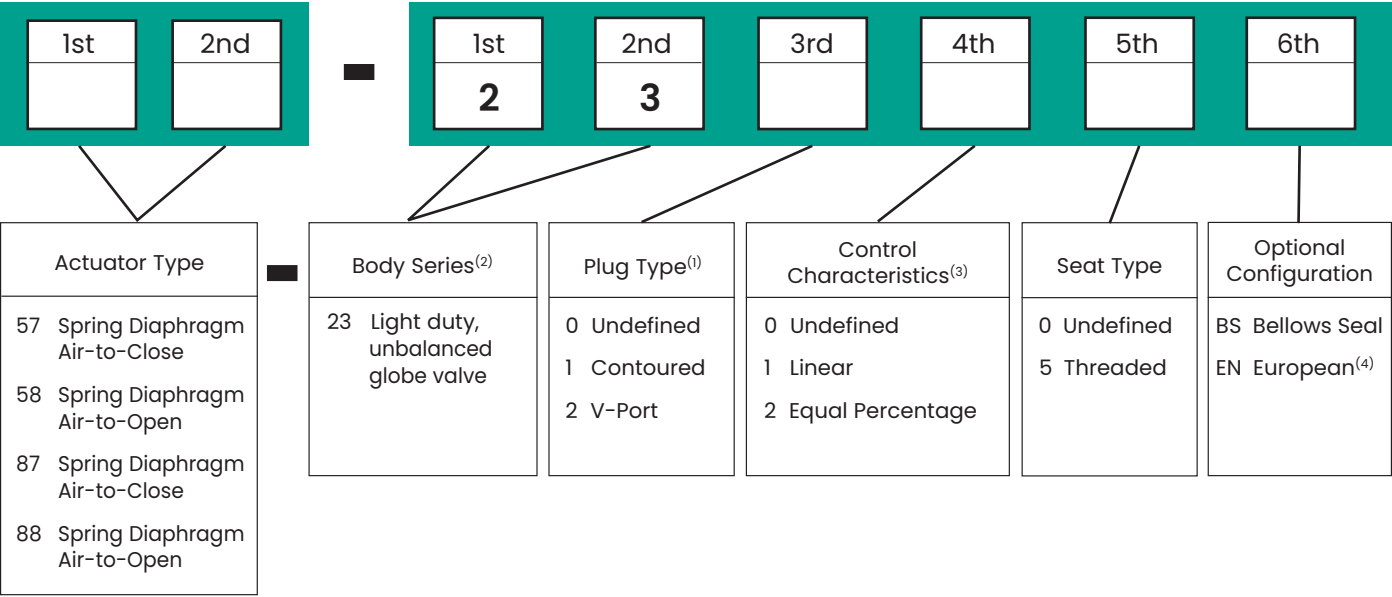
Performance X Reliability
Single Seated Globe Valve



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PXR Numbering System



Notes:

- 1. Any new numbering system other than the plug type and control characteristics mentioned in the above table is not allowed.
- 2. Angle body design is not allowed, consult Baker Hughes.
- 3. Low noise and anti-cavitation cages are not allowed.
- 4. European standard face to face as per EN558-1 (DIN 3202 F1)

Temperature Range and Seat Leakage

Contoured Trim and V-Port Trim

ISA 75.08.01 or Masoneilan Face to Face Standard

Valve Size		Body Rating		Seat Type	Packing Material	Temperature Range ⁽¹⁾		Seat Leakage IEC 60534-4 and ANSI/FCI 70.2 Class	
						Standard Bonnet			
NPS	DN	ASME	PN			min.	max.		
0.5 to 6	15 to 150	Class 150 to 300	20 to 40	Metal	Braided PTFE or FE Packing	-20°F (-29°C)	+450°F (+232°C)	IV	V
					Graphite or FE Packing	-20°F (-29°C)	+662°F (+350°C)		

EN 558-1 (DIN 3202 F1) Face to Face Standard

Valve Size		Body Rating	Seat Type	Packing Material	Temperature Range ⁽¹⁾		Seat Leakage IEC 60534-4 and ANSI/FCI 70.2 Class	
					Standard Bonnet			
NPS	DN	PN			min.	max.		
0.5 to 6	15 to 150	10 to 40 ⁽²⁾	Metal	Braided PTFE or FE Packing	-20°F (-29°C)	+450°F (+232°C)	IV	V
				Graphite or FE Packing	-20°F (-29°C)	+662°F (+350°C)		

1. Consult factory for other materials of construction and temperature limitations.
2. The flange dimensions are as per EN-1092-1.
3. Extended bonnet and lube configuration bonnet are not allowed.
4. For JIS flanges, consult factory.

Ratings and Connections

ISA 75.08.01 or Masoneilan Face to Face Standard

Valve Size		ASME Class 150	ASME Class 300
		RF	RF
0.5	15	X	X
0.75	20	X	X
1	25	X	X
1.5	40	X	X
2	50	X	X
3	80	X	X
4	100	X	X
6	150	X	X

Notes:
Standard flange finish of AARH = 125 to 250 µin (Ra = 3.2 to 6.3 µm).
Butt weld ends are not allowed; for more details consult Baker Hughes.
For EN-1092-1 PN rated valve with ISA face to face, consult Baker Hughes.

EN 558-1 (DIN 3202 F1) Face to Face Standard

Valve Size		PN10	PN16	PN25	PN40
		Type 21-B1	Type 21-B1	Type 21-B1	Type 21-B1
0.5	15	X	X	X	X
0.75	20	X	X	X	X
1	25	X	X	X	X
1.5	40	X	X	X	X
2	50	X	X	X	X
3	80	X	X	X	X
4	100	X	X	X	X
6	150	X	X	X	X

Notes:
Dimensions of flange are as per EN1092-1 and standard flange finish of AARH = 125 to 250 µin (Ra = 3.2 to 6.3 µm).
For other EN-PN connections and flange facing, consult the Baker Hughes.
Butt weld ends are not allowed ; for more details consult Baker Hughes.

C_v and F_L Versus Travel

ASME Class 150 or 300⁽¹⁾

Valve Sizes 0.5" through 6"

Direction: FLOW-TO-OPEN (FTO)
Flow Characteristic: LINEAR

Percent of Travel						10	20	30	40	50	60	70	80	90	100
F _L						0.93	0.93	0.92	0.92	0.91	0.91	0.91	0.9	0.9	0.9
Valve Size		Orifice Diameter		Travel		Rated C _v									
NPS	DN	Inch	mm	Inch	mm										
0.5	15	0.25	6.4	0.8	20.3	0.15	0.31	0.46	0.61	0.77	0.94	1.1	1.3	1.5	1.7
		0.375	9.52	0.8	20.3	0.27	0.55	0.8	1.1	1.35	1.65	2	2.3	2.65	3
		0.5	12.7	0.8	20.3	0.36	0.73	1.07	1.47	1.80	2.20	2.67	3.07	3.53	4
0.75	20	0.25	6.4	0.8	20.3	0.15	0.31	0.46	0.61	0.77	0.94	1.1	1.3	1.5	1.7
		0.5	12.7	0.8	20.3	0.54	1.1	1.6	2.2	2.7	3.3	4	4.6	5.3	6
		0.812	20.6	0.8	20.3	1.1	2.2	3.2	4.3	5.5	6.7	7.9	9.2	11	12
1	25	0.25	6.4	0.8	20.3	0.15	0.31	0.46	0.61	0.77	0.94	1.1	1.3	1.5	1.7
		0.5	12.7	0.8	20.3	0.54	1.1	1.6	2.2	2.7	3.3	4	4.6	5.3	6
		0.812	20.6	0.8	20.3	1.1	2.2	3.2	4.3	5.5	6.7	7.9	9.3	11	12
1.5	40	0.5	12.7	0.8	20.3	0.54	1.1	1.6	2.2	2.7	3.3	4	4.6	5.3	6
		0.994	25.2	0.8	20.3	2.1	4.2	6.1	7.9	9.9	12	14	15	17	18
		1.625	41.3	0.8	20.3	2.7	6.8	11	14	18	23	27	32	34	35
2	50	0.5	12.7	0.8	20.3	0.54	1.1	1.6	2.2	2.7	3.3	4	4.6	5.3	6
		0.994	25.2	0.8	20.3	2.2	4.4	6.4	8.4	10	12	14	16	18	19
		1.625	41.3	0.8	20.3	2.6	6.8	11	14	19	24	30	38	44	47
3	80	0.994	25.2	0.8	20.3	2.2	4.4	6.4	8.4	10	12	14	16	18	19
		1.625	41.3	0.8	20.3	2.7	7	11	15	19	24	30	40	47	52
		2.625	66.7	1.5	38.1	12	26	42	57	71	85	94	99	101	110
4	100	1.625	41.3	0.8	20.3	2.7	7.3	11	15	20	25	31	42	46	51
		2.625	66.7	1.5	38.1	13	27	42	61	76	90	104	120	125	130
		3.5	88.9	1.5	38.1	20	42	63	89	111	133	153	166	178	187
6	150	3.5	88.9	1.5	38.1	21	43	65	89	116	136	163	185	206	225
		5	127	2	50.8	64	126	182	232	283	307	328	349	371	385

1. Applies to equivalent PN rating valves too.
2. Custom C_v is not allowed

C_V and F_L Versus Travel

ASME Class 150 or 300⁽¹⁾

Valve Sizes 0.5" through 6"

Direction: FLOW-TO-OPEN (FTO)
Flow Characteristic: EQUAL PERCENTAGE

Percent of Travel						10	20	30	40	50	60	70	80	90	100
F _L						0.93	0.93	0.92	0.92	0.91	0.91	0.91	0.9	0.9	0.9
Valve Size		Orifice Diameter		Travel		Rated C _V									
NPS	DN	Inch	mm	Inch	mm										
0.5	15	0.25	6.4	0.8	20.3	0.05	0.08	0.11	0.18	0.3	0.5	0.8	1.1	1.5	1.7
		0.375	9.52	0.8	20.3	0.10	0.14	0.20	0.31	0.55	0.95	1.50	2.07	2.65	3
		0.5	12.7	0.8	20.3	0.13	0.19	0.27	0.41	0.74	1.27	2.01	2.76	3.53	4
0.75	20	0.25	6.4	0.8	20.3	0.05	0.08	0.11	0.18	0.30	0.50	0.80	1.1	1.5	1.7
		0.5	12.7	0.8	20.3	0.18	0.27	0.38	0.62	1.1	1.8	2.8	4	5.1	6
		0.812	20.6	0.8	20.3	0.43	0.60	0.86	1.2	2.3	4.3	6.8	9.1	11	12
1	25	0.25	6.4	0.8	20.3	0.05	0.08	0.11	0.18	0.30	0.50	0.80	1.1	1.5	1.7
		0.5	12.7	0.8	20.3	0.18	0.27	0.38	0.62	1.1	1.8	2.8	4	5.1	6
		0.812	20.6	0.8	20.3	0.43	0.60	0.86	1.2	2.3	4.3	6.8	9.1	11	12
1.5	40	0.5	12.7	0.8	20.3	0.18	0.27	0.38	0.62	1.1	1.8	2.8	4	5.1	6
		0.994	25.2	0.8	20.3	0.43	0.73	1.1	1.7	2.7	4.6	6.9	11	15	18
		1.625	41.3	0.8	20.3	1	2.8	4.4	6.3	11	19	27	32	36	37
2	50	0.5	12.7	0.8	20.3	0.18	0.27	0.38	0.62	1.1	1.8	2.8	4	5.1	6
		0.994	25.2	0.8	20.3	0.46	0.77	1.2	1.8	2.8	4.9	7.3	11	16	19
		1.625	41.3	0.8	20.3	1	2.8	4.5	6.4	12	20	29	37	43	47
3	80	0.994	25.2	0.8	20.3	0.46	0.77	1.2	1.8	2.8	4.9	7.3	11	16	19
		1.625	41.3	0.8	20.3	1.1	2.8	4.3	6.4	12	21	31	38	45	50
		2.625	66.7	1.5	38.1	3.4	7.6	11	17	26	46	71	90	101	107
4	100	1.625	41.3	0.8	20.3	1.1	2.9	4.5	6.5	12	21	31	39	45	51
		2.625	66.7	1.5	38.1	3.4	7.5	11	17	26	46	74	97	111	120
		3.5	88.9	1.5	38.1	4.9	11	16	25	43	75	112	142	166	183
6	150	3.5	88.9	1.5	38.1	5.3	11	16	26	45	77	116	149	173	201
		5	127	2	50.8	35	67	95	128	186	264	314	338	365	384

1. Applies to equivalent PN rating valves too.
2. Custom C_V is not allowed

Bellows Seal

Design Features

Standard Construction

Bellows seal configuration is fully compatible with the standard 23005 Series PXR trim and actuator options providing equivalent capacity capabilities for each valve size. The standard packing box design and packing design options are used as a secondary stem seal. The bellows seal option is available for ASME Class 150 and 300 only.

Rugged Design

The double ply formed bellows construction is an externally pressurized design that can operate up to the full valve ASME B16.34 300 class pressure rating, with higher pressure ratings supplied by special order. Guides are located above and below the bellows providing excellent stability to withstand flow induced and mechanical vibration.

Maximum Life

The bellows assembly is designed for 50% compression/extension to achieve zero stress at the valve mid-stroke position for maximum cycle life. Bellows torsional stresses are also minimized with the anti-rotation feature provided by flats on the plug stem.

High Quality

Each bellows sub-assembly is helium leak tested to verify weld integrity. Hydro testing bellows is optional. Mechanical travel stops are also designed into both the bellows and valve assemblies to prevent over compression or extension.

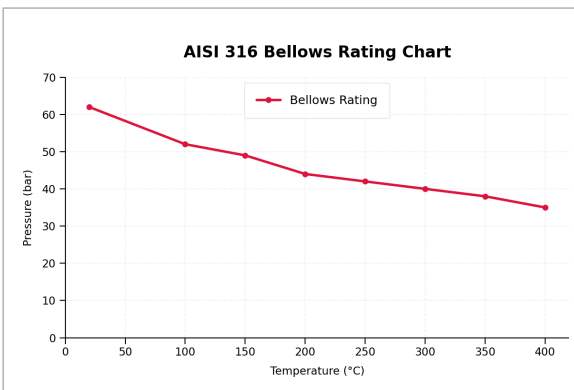
Smart Solution

Bellows useful lifespan can be monitored in the field by utilizing Masoneilan **SVI™**, SVI3 and other approved positioners with actual process data. This unique preventative maintenance option will help improve plant safety by identifying potential hazardous failures before they happen and reduce cost by eliminating premature bellows replacement.

Materials

Standard Material: 316/316L Stainless Steel

Optional Materials: Hastelloy C276
Monel 400



Size and Ratings

Pressure Ratings: ASME Class 150 and 300 – PN 10 and PN 50

Valve Size (in)	Belows Design Stroke		Life Cycle Ratings ⁽¹⁾		
			Maximum Stroke		
	in.	mm	100%	50%	25%
0.75 – 2	0.75	19	100,000 Cycles	600,000 Cycles	3,000,000 Cycles
3 – 4	1.50	38 ⁽¹⁾			
6	2.00	50.8			

1. Minimum expected average cycle life for Class 300 bellows operating at constant pressure.

Dimensions and Weights

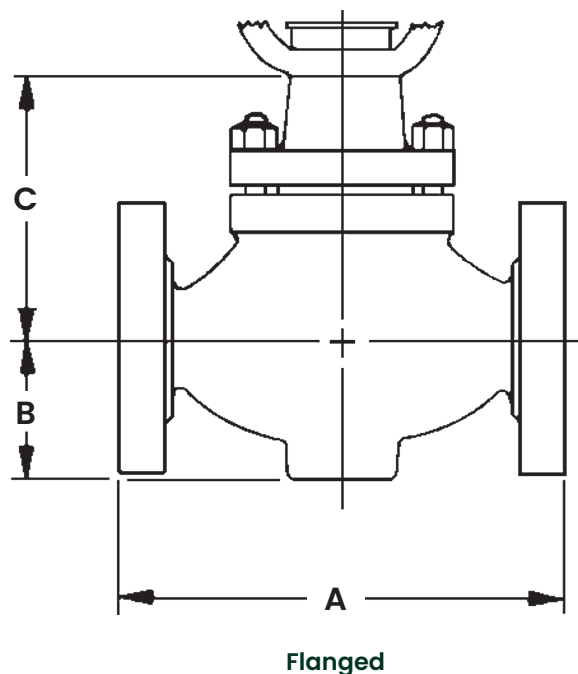
Body Sub-Assembly Dimensions

ISA (75.08.01) Standard for ASME Class 150 through 300 and PN 10, 16, 25, 40 (in inches)

Valve Size (NPS)	ASME Class 150		ASME Class 300		C
	A	B	A	B	
0.5	7.25	2.09	7.63	2.40	4.17
0.75	7.25	2.09	7.63	2.4	4.17
1	7.25	2.28	7.75	2.6	4.17
1.5	8.75	2.64	9.25	3.19	4.72
2	10	3.15	10.5	3.39	4.72
3	11.75	3.86	12.5	4.25	6.34
4	13.88	4.84	14.5	5.16	6.93
6	17.75	6.57	18.62	6.57	9.69

ISA (75.08.01) Or Masoneilan for ASME Class 150 through 300 and PN 20 through 40 (in mm)

Valve Size (DN)	ASME Class 150		ASME Class 300		C
	A	B	A	B	
15	184	45	193.5	47.5	124
20	184	53	193.5	61	106
25	184	58	197	66	106
40	222.3	67	235	81	120
50	254	80	266.7	86	120
80	298.5	98	317.5	108	161
100	352.6	123	368.3	131	176
150	451	167	473	167	246



Dimensions and Weights

Body Sub-Assembly Dimensions

EN 558 (DIN 3202 F1) for PN10 through PN40 (inches)

Valve Size (DN)	PN 10		PN 16		PN 25		PN 40		C
	A	B	A	B	A	B	A	B	
0.5	5.12	1.87	5.12	1.87	5.12	1.87	5.12	1.87	4.88
0.75	5.91	2.09	5.91	2.07	5.91	2.07	5.91	2.07	4.17
1	6.30	2.26	6.30	2.26	6.30	2.26	6.30	2.26	4.17
1.5	7.87	2.95	7.87	2.95	7.87	2.95	7.87	2.95	4.72
2	9.06	3.25	9.06	3.25	9.06	3.25	9.06	3.25	4.72
3	12.20	3.94	12.20	3.94	12.20	3.94	12.20	3.94	6.34
4	13.78	4.63	13.78	4.63	13.78	4.63	13.78	4.63	6.93
6	18.90	4.92	18.90	4.92	18.90	4.92	18.90	4.92	9.69

EN 558-1 (DIN 3202 F1) for PN10 through PN40 (mm)

Valve Size (DN)	PN 10		PN 16		PN 25		PN 40		C
	A	B	A	B	A	B	A	B	
15	130	47.5	130	47.5	130	47.5	130	47.5	124
20	150	53	150	52.5	150	52.5	150	52.5	106
25	160	57.5	160	57.5	160	57.5	160	57.5	106
40	200	75	200	75	200	75	200	75	120
50	230	82.5	230	82.5	230	82.5	230	82.5	120
80	310	100	310	100	310	100	310	100	161
100	350	117.5	350	117.5	350	117.5	350	117.5	176
150	480	125	480	125	480	125	480	125	246

Body Sub-Assembly Weights

ASME Class 150 or 300 (PN 20 or 40)

Lbs			Kg		
Valve Size (NPS)	ASME Class 150	ASME Class 300	Valve Size (DN)	ASME Class 150	ASME Class 300
0.5	15.43	16.31	15	7	7.4
0.75	15.1	17.3	20	6.84	7.8
1	15.7	19.2	25	7.11	8.7
1.5	24.1	30.7	40	10.95	13.9
2	31.6	35.8	50	14.32	16.3
3	60	70.8	80	27.2	32.1
4	79.8	97.4	100	36.21	44.2
6	TBD	213.6	150	TBD	96.9

EN 558 (DIN 3202 F1) Face to Face Standard (lbs)

Lbs				
Valve Size (NPS)	PN 10	PN 16	PN 25	PN 40
0.5	15	15	15	15
0.75	16.7	16.7	16.7	16.7
1	18.5	18.5	18.5	18.5
1.5	28	28	28	28
2	34.5	34.5	34.5	34.5
3	62.5	62.5	72.8	72.8
4	79	79	96.4	96.4
6	188	188	216	216

EN 558-1 (DIN 3202 F1) for PN10 through PN40 (kg)

Lbs				
Valve Size (NPS)	PN 10	PN 16	PN 25	PN 40
15	6.80	6.80	6.80	6.80
20	7.57	7.57	7.57	7.57
25	8.39	8.39	8.39	8.39
40	12.70	12.70	12.70	12.70
50	15.65	15.65	15.65	15.65
80	28.35	28.35	33.02	33.02
100	35.83	35.83	43.72	43.72
150	85.27	85.27	97.97	97.97

Additional Weights for Bellows Seal Extension Bonnets

Valve Size		Estimated Additional Weight	
inches	mm	lbs	kg
0.5 to 1	15 to 25	4	1.8
1.5 to 2	40 to 50	4.4	2
3	80	18.3	8.3
4	100	20.4	9.25

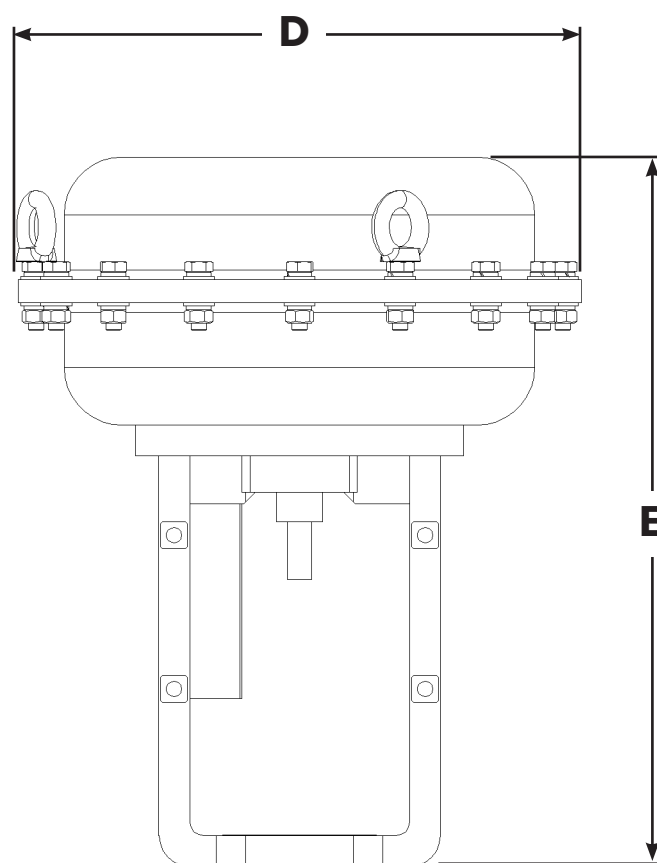
Note: Bellow seal design are limited to class rating 150-300.

Dimensions and Weights

Actuator Assembly

57 Series Actuator				
Size	D		E	
	mm	in.	mm	in.
250	252	9.9	332	13.0
290	294	11.5	369	14.5
370	374	14.7	410	16.1
480	482	18.9	629	24.7
550	560	22.0	678	26.6

58 Series Actuator				
Size	D		E	
	mm	in.	mm	in.
250	252	9.9	352	13.0
290	294	11.5	389	14.5
370	374	14.7	430	16.9
370L	374	14.7	480	18.8
480	482	18.9	649	25.5
550	560	22.0	698	27.4



Minimum required for Actuator Removal Clearance:

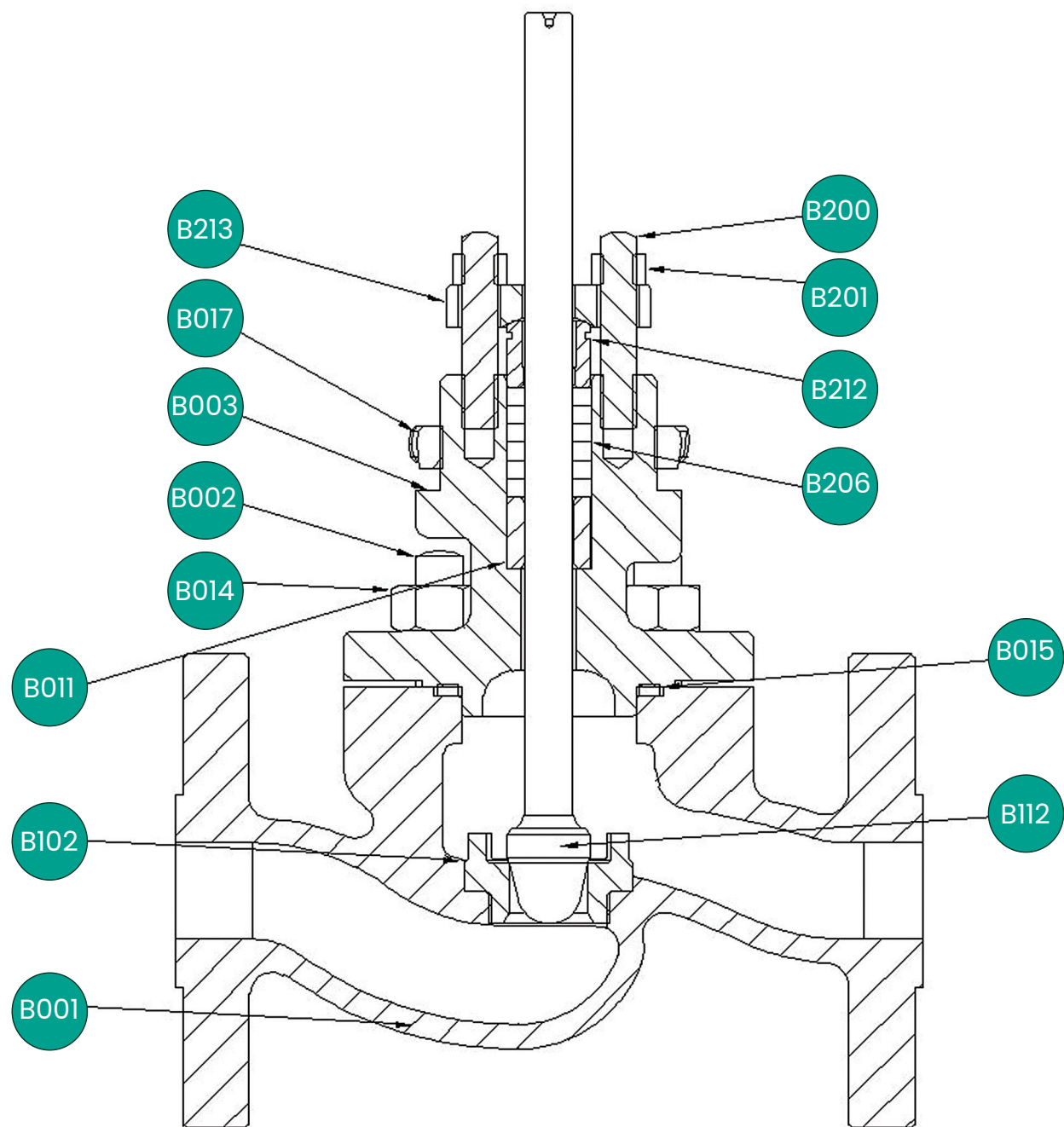
- 200 mm (7.87 in.) for actuator size 250 up to 370L
- 300 mm (11.81 in.) for actuator size 480 and 550

57 Series Actuator		
Size	kg	lbs
250	14	30.86
290	20	44
370	33	72.75
480	96	211.64
550	122	269

58 Series Actuator		
Size	kg	lbs
250	14	30.86
290	20	44
370	33	72.75
370L	51	112.43
480	96	211.64
550	122	269

PXR Standard Design Assembly Diagram

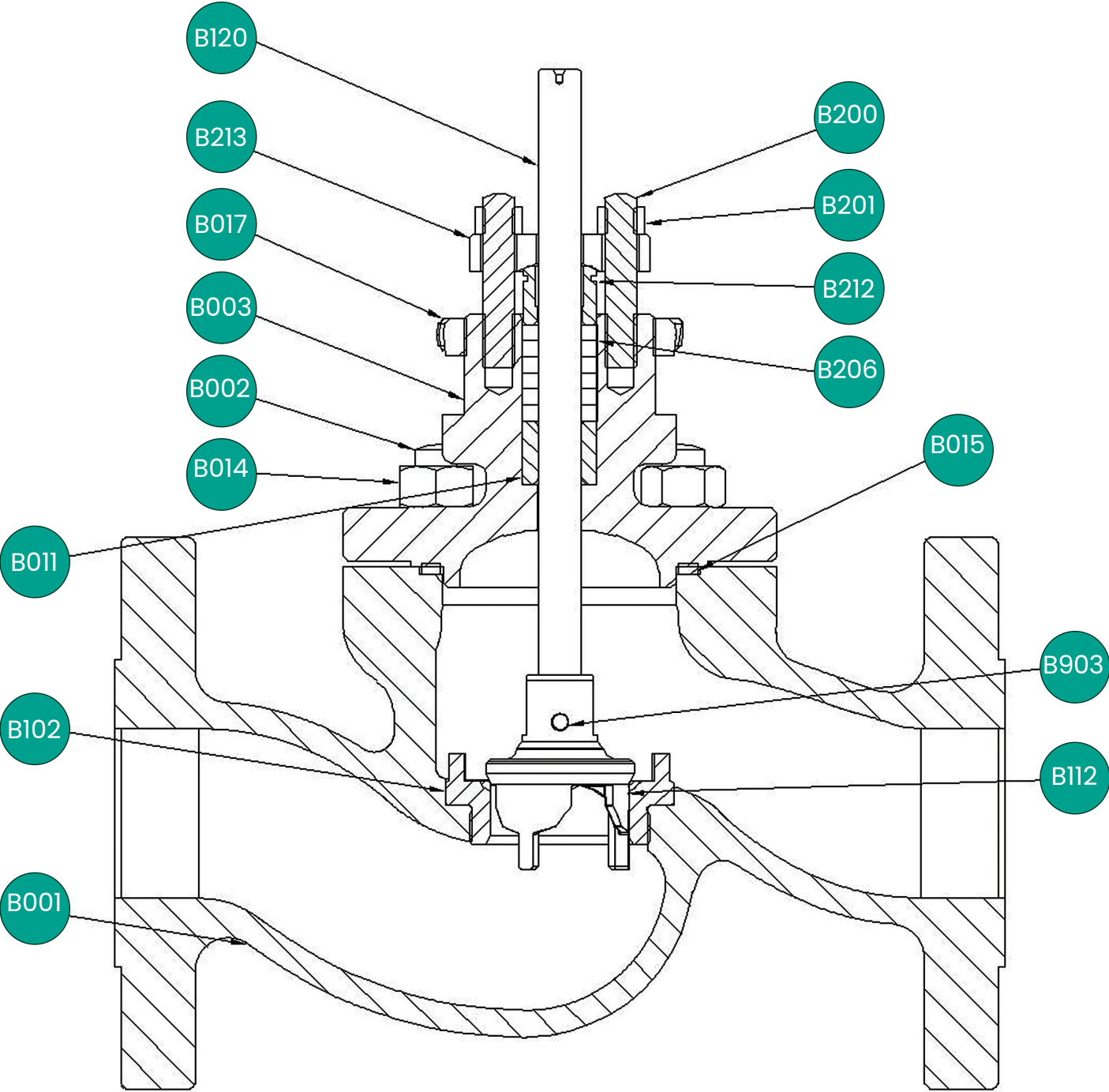
NPS 0.5" to 3" (when Orifice $\leq 1"$)



PXR Control Valve - Standard Design 0.5" up to 3"

PXR Standard Design Assembly Diagram

NPS 1.5" to 6" (when Orifice >1")



PXR Control Valve – Standard Design 1.5" up to 6"

PXR Standard Design

Materials of Construction

Carbon Steel Construction

Valve Sizes: NPS 0.5" to 3" **(when Orifice <=1")**
 Body Ratings: ASME Class 150 or 300

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350° C)
	Description	Materials	
B200	Packing Flange Stud	ASTM A193 GRADE B8 CLASS 1	
B201	Packing Flange Nut	ASTM A 194 GR 8	
B213	Packing Flange	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	
B212	Packing Follower	SOLUTION ANNEALED 316L STAINLESS STEEL	
B206	Packing	CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B003	Valve Bonnet	ASTM A216 GRADE WCC/WCB / EN 1.0619/1.0625	
B002	Body Stud	ASTM A193 GR B7/EN 1.7225	
B014	Body Stud Nut	ASTM A194 GRADE 2H	
B015	Body Gasket	316L STAINLESS STEEL SPIRAL WOUND GASKET WITH GRAPHITE FILLER	
B011	Guide Bushing	STELLITE NO.6 (UNS 30006)	
		HARDENED 440C STAINLESS STEEL	
B102	Seat Ring	HARDENED 410 STAINLESS STEEL	
		SOLUTION ANNEALED CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO.6 ASTM A 351 GRADE CF8M	
B112	Integrated plug	17-4 PH STAINLESS STEEL H1075	
		SOLUTION ANNEALED 316 STAINLESS STEEL	
		HARDFACING STELLITE NO.6 ON 316 STAINLESS STEEL	
B001	Valve Body	ASTM A216 GRADE WCC/WCB / EN 1.0619/1.0625	
B017	Drive Nut	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	

PXR Standard Design

Materials of Construction

Carbon Steel Construction

Valve Sizes: NPS 1.5" to 6" **(when Orifice >1")**

Body Ratings: ASME Class 150 or 300

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350° C)
	Description	Materials	
B120	Plug Stem	17-4 PH STAINLESS STEEL H1075	
		HARDENED ASTM A638 GRADE 660	
B200	Packing Flange Stud	ASTM A193 GRADE B8 CLASS 1	
B201	Packing Flange Nut	ASTM A 194 GR 8	
B213	Packing Flange	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	
B212	Packing Follower	SOLUTION ANNEALED 316L STAINLESS STEEL	
B206	Packing	CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B003	Valve Bonnet	ASTM A216 GRADE WCC/WCB / EN 1.0619/1.0625	
B002	Body Stud	ASTM A193 GR B7/EN 1.7225	
B014	Body Stud Nut	ASTM A194 GRADE 2H	
B015	Body Gasket	316L STAINLESS STEEL SPIRAL WOUND GASKET WITH GRAPHITE FILLER	
B011	Guide Bushing	STELLITE NO.6 (UNS 30006)	
		HARDENED 440C STAINLESS STEEL	
B102	Seat Ring	HARDENED 410 STAINLESS STEEL	
		HARDFACING STELLITE NO. 21 ON CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO. 21 ON CF8M STAINLESS STEEL	
B112	Plug	CA6NM CLASS B STAINLESS STEEL	
		SOLUTION ANNEALED CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO. 21 ON CF8M STAINLESS STEEL	
B903	Plug Stem Pin	SOLUTION ANNEALED 316 STAINLESS STEEL	
B001	Valve Body	ASTM A216 GRADE WCC/WCB / EN 1.0619/1.0625	
B017	Drive Nut	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	

1. Carbon steel body modules will provide the Austenitic Trim as the option.
Then Stellite n°6 guide bushing will be selected.

PXR Standard Design

Materials of Construction

Stainless Steel Construction

Valve Sizes: NPS 0.5" to 3" **(when Orifice ≤ 1")**
 Body Ratings: ASME Class 150 or 300

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350° C)
	Description	Materials	
B200	Packing Flange Stud	ASTM A193 GRADE B8 CLASS 1	
B201	Packing Flange Nut	ASTM A 194 GR 8	
B213	Packing Flange	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	
B212	Packing Follower	SOLUTION ANNEALED 316L STAINLESS STEEL	
B206	Packing	CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B003	Valve Bonnet	ASTM A351 GRADE CF8M / EN 1.4408	
		ASTM A351 GRADE CF3M /EN 14408 C:0.03/14409	
B002	Body Stud	ASTM A193 GR B7/EN 1.7225	
B014	Body Stud Nut	ASTM A194 GRADE 2H	
B015	Body Gasket	316L STAINLESS STEEL SPIRAL WOUND GASKET WITH GRAPHITE FILLER	
B011	Guide Bushing	STELLITE NO.6 (UNS 30006)	
		HARDENED 440C STAINLESS STEEL	
B102	Seat Ring	SOLUTION ANNEALED CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO.6 ASTM A351 GRADE CF8M	
		SOLUTION ANNEALED CF3M STAINLESS STEEL	
		HARDFACING STELLITE NO.6 ON ASTM A351 GR CF3M	
B112	Integrated plug	SOLUTION ANNEALED 316 STAINLESS STEEL	
		HARDFACING STELLITE NO.6 ON 316 STAINLESS STEEL	
		SOLUTION ANNEALED 316L STAINLESS STEEL	
		HARDFACING STELLITE NO.6 ON 316L STAINLESS STEEL	
B001	Valve Body	ASTM A351 GRADE CF8M / EN 1.4408	
		ASTM A351 GRADE CF3M /EN 14408 C:0.03/14409	
B017	Drive Nut	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	

PXR Standard Design

Materials of Construction

Stainless Steel Construction

Valve Sizes: NPS 1.5" to 6" **(when Orifice >1")**

Body Ratings: ASME Class 150 or 300

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350° C)
	Description	Materials	
B120	Plug Stem	SOLUTION ANNEALED 316 STAINLESS STEEL	
		SOLUTION ANNEALED 316L STAINLESS STEEL	
		HARDENED ASTM A638 GRADE 660	
B200	Packing Flange Stud	ASTM A193 GRADE B8 CLASS 1	
B201	Packing Flange Nut	ASTM A 194 GR 8	
B213	Packing Flange	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	
B212	Packing Follower	SOLUTION ANNEALED 316L STAINLESS STEEL	
B206	Packing	CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B003	Valve Bonnet	ASTM A351 GRADE CF8M / EN 1.4408	
		ASTM A351 GRADE CF3M / EN 14408 C:0.03/14409	
B002	Body Stud	ASTM A193 GRADE B7/EN 1.7225	
B014	Body Stud Nut	ASTM A194 GRADE 2H	
B015	Body Gasket	316L STAINLESS STEEL SPIRAL WOUND GASKET WITH GRAPHITE FILLER	
B011	Guide Bushing	STELLITE NO.6 (UNS 30006)	
B102	Seat Ring	HARDFACING STELLITE NO.21 ON CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO.21 ON CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO.21 ON CF3M STAINLESS STEEL	
		HARDFACING STELLITE NO.21 ON CF3M STAINLESS STEEL	
B112	Plug	SOLUTION ANNEALED CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO.21 ON CF8M STAINLESS STEEL	
		SOLUTION ANNEALED CF3M STAINLESS STEEL	
		HARDFACING STELLITE NO.21 ON CF3M STAINLESS STEEL	
B903	Plug Stem Pin	SOLUTION ANNEALED 316 STAINLESS STEEL	
B001	Valve Body	ASTM A351 GRADE CF8M / EN 1.4408	
		ASTM A351 GRADE CF3M / EN 14408 C:0.03/14409	
B017	Drive Nut	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	

PXR Standard Design

Materials of Construction

Hastelloy C276 Construction

Valve Sizes: NPS 0.5" to 3" **(when Orifice <= 1")**
 Body Ratings: ANSI Class 150 or 300

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350° C)
	Description	Materials	
B200	Packing Flange Stud	ASTM A193 GRADE B8 CLASS 1	
B201	Packing Flange Nut	ASTM A 194 GR 8	
B213	Packing Flange	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	
B206	Packing	CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B212	Packing Follower	HASTELLOY C276	
B003	Valve Bonnet ⁽¹⁾	ASTM A494 GRADE CW-12MW	
B014	Body Stud	ASTM A193 Grade B8 Class 2	
B015	Body Stud Nut	ASTM A194 GR 8	
B011	Body Gasket	HASTELLOY C SPIRAL WOUND GASKET WITH GRAPHITE FILLER	
B102	Guide Bushing	HAYNES ALLOY 25 SOLUTION ANNEALED	
B001	Seat Ring	ASTM B574 (UNS10276) HASTELLOY C276	
B112	Integrated plug	ASTM B574 (UNS10276) HASTELLOY C276	
B001	Valve Body	ASTM A494 GRADE CW-12MW	
B017	Drive Nut	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	

1. Not applicable for PED applications (Contact Baker Hughes).

PXR Standard Design

Materials of Construction

Hastelloy C276 Construction

Valve Sizes: NPS 1.5" to 6" **(when Orifice >1")**

Body Ratings: ANSI Class 150 or 300

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350° C)
	Description	Materials	
B120	Plug Stem	ASTM B574 (UNS10276) HASTELLOY C276	
B200	Packing Flange Stud	ASTM A193 GRADE B8 CLASS 1	
B201	Packing Flange Nut	ASTM A 194 GR 8	
B213	Packing Flange	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	
B206	Packing	CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B212	Packing Follower	HASTELLOY C276	
B003	Valve Bonnet ⁽¹⁾	ASTM A494 GRADE CW-12MW	
B002	Body Stud	ASTM A193 Grade B8 Class 2	
B014	Body Stud Nut	ASTM A194 GR 8	
B015	Body Gasket	HASTELLOY C SPIRAL WOUND GASKET WITH GRAPHITE FILLER	
B011	Guide Bushing	HAYNES ALLOY 25 SOLUTION ANNEALED	
B102	Seat ring	HAYNES ALLOY 25 SOLUTION ANNEALED	
B112	Plug	ASTM B574 (UNS10276) HASTELLOY C276	
B903	Plug Pin	HASTELLOY C-22	
B001	Valve Body ⁽¹⁾	ASTM A494 GRADE CW-12MW	
B017	Drive Nut	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	

1. Not applicable for PED applications (Contact Baker Hughes).

PXR Standard Design

Materials of Construction

Monel 400 Construction

Valve Sizes: NPS 0.5" to 3" (when Orifice <= 1")
Body Ratings: ANSI Class 150 or 300

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350° C)
	Description	Materials	
B200	Packing Flange Stud	ASTM A193 GRADE B8 CLASS 1	
B201	Packing Flange Nut	ASTM A 194 GR 8	
B213	Packing Flange	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	
B206	Packing	CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B212	Packing Follower	ASTM B164 CLASS A (UNS N04400)	
B003	Valve Bonnet ⁽¹⁾	ASTM A494 ALLOY M-35-1	
B002	Body Stud	ASTM A193 Grade B8 Class 2	
B014	Body Stud Nut	ASTM A194 GR 8	
B015	Body Gasket	INCONEL 625 SPIRAL WOUND GASKET WITH GRAPHITE FILLER	
B011	Guide Bushing	ASTM B865 (UNS N05500) AGE HARDENED WITH NICKEL PLATING	
B102	Seat Ring	ASTM B865 (UNS N05500) AGE HARDENED	
B112	Integrated plug	ASTM B865 (UNS N05500) AGE HARDENED	
B001	Valve Body ⁽¹⁾	ASTM A494 ALLOY M-35-1	
B017	Drive Nut	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	

1. Not applicable for PED applications (Contact Baker Hughes).

PXR Standard Design

Materials of Construction

Monel 400 Construction

Valve Sizes: NPS 1.5" to 6" **(when Orifice >1")**

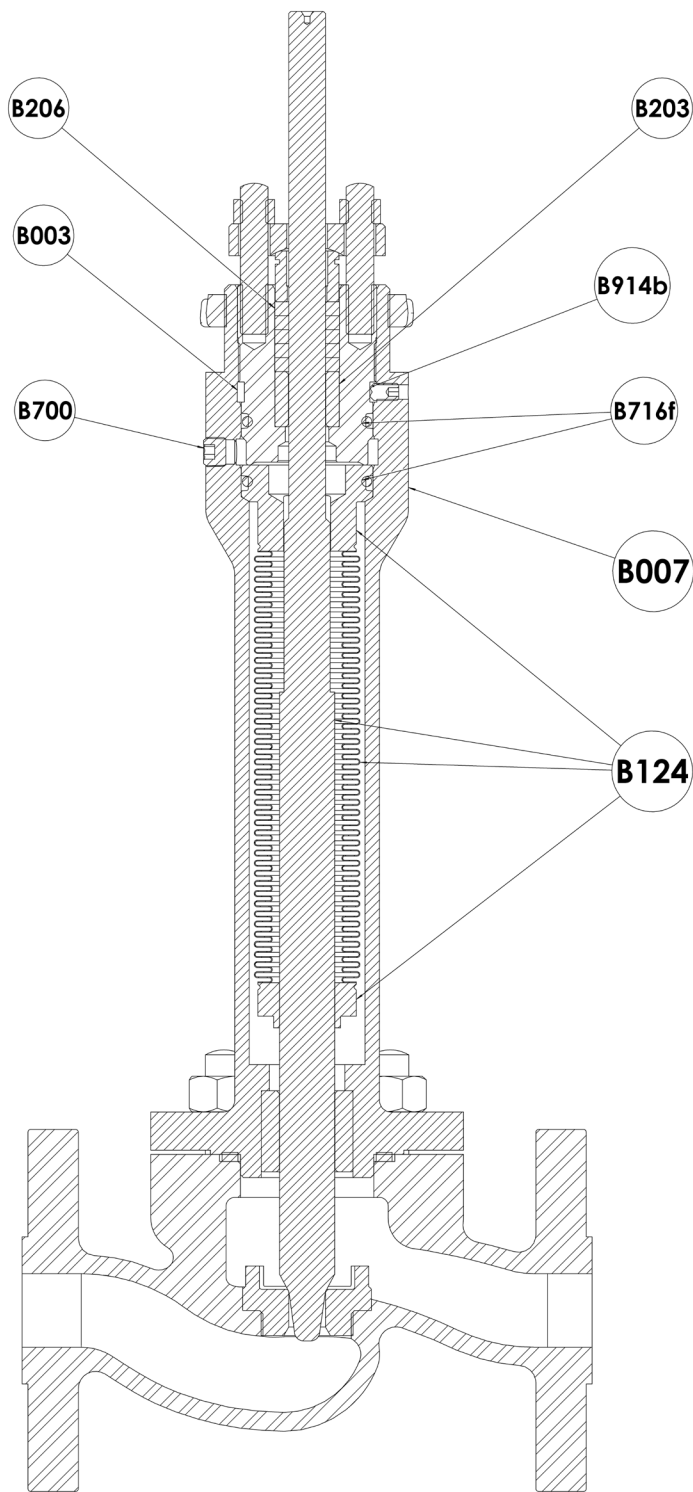
Body Ratings: ANSI Class 150 or 300

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350° C)
	Description	Materials	
B120	Plug Stem	ASTM B865 (UNS N05500) AGE HARDENED	
B200	Packing Flange Stud	ASTM A193 GRADE B8 CLASS 1	
B201	Packing Flange Nut	ASTM A 194 GR 8	
B213	Packing Flange	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	
B206	Packing	CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B212	Packing Follower	ASTM B164 CLASS A (UNS N04400)	
B003	Valve Bonnet ⁽¹⁾	ASTM A494 ALLOY M-35-1	
B002	Body Stud	ASTM A193 Grade B8 Class 2	
B014	Body Stud Nut	ASTM A194 GR 8	
B015	Body Gasket	INCONEL 625 SPIRAL WOUND GASKET WITH GRAPHITE FILLER	
B011	Guide Bushing	ASTM B865 (UNS N05500) AGE HARDENED WITH NICKEL PLATING	
B102	Seat ring	ASTM B164 CLASS A (UNS N04400) (MONEL 400) WITH ELECTROLESS NICKEL PLATING	
B112	Plug	ASTM B865 UNS N05500) AGE HARDENED	
B903	Plug Pin	INCONEL 625 (UNS N06625) BASE NICKEL ALLOY	
B001	Valve Body ⁽¹⁾	ASTM A494 ALLOY M-35-1	
B017	Drive Nut	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	

1. Not applicable for PED applications (Contact Baker Hughes).

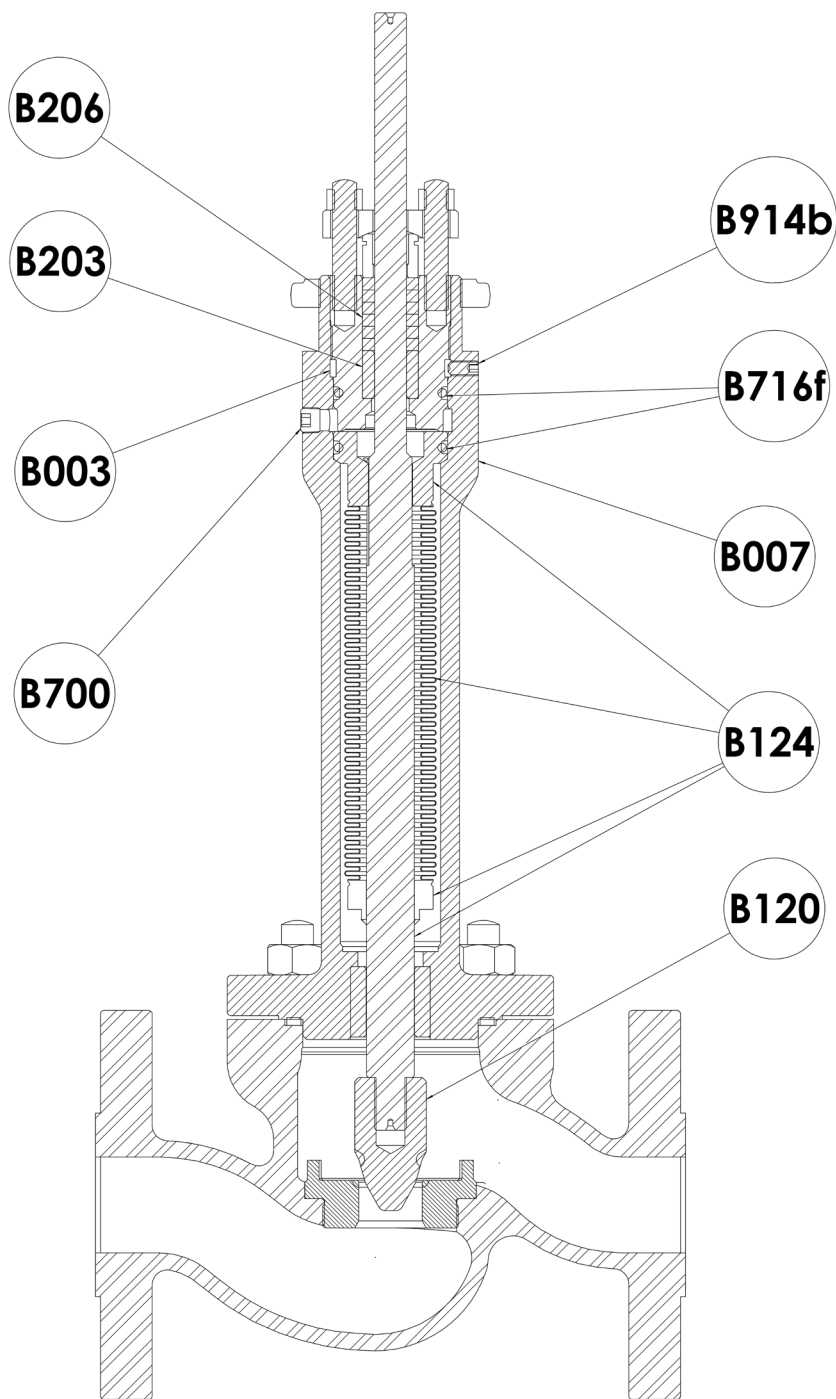
PXR Bellows Seal Design Assembly Diagram

NPS 0.5" to 4" (when orifice size <0.812")



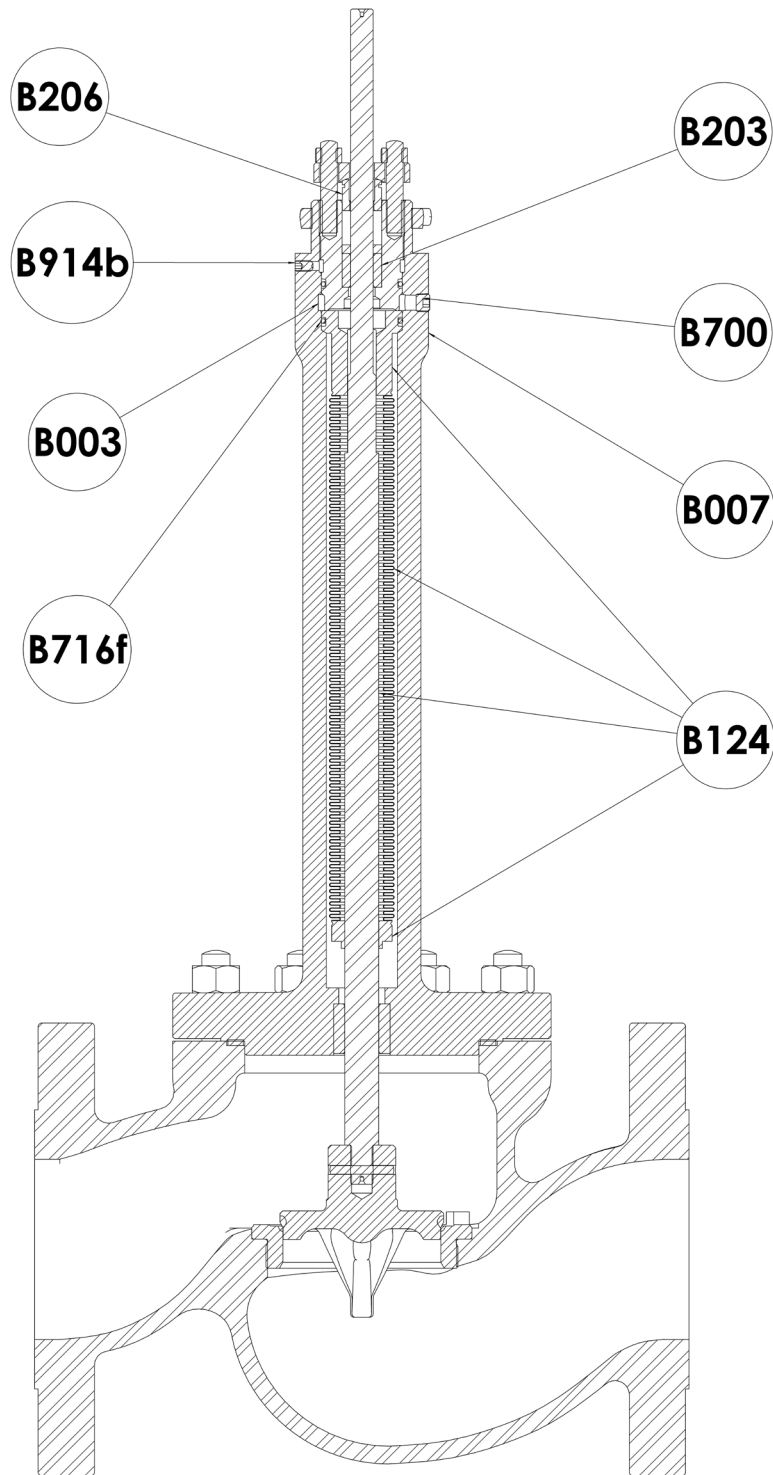
PXR Bellows Seal Design Assembly Diagram

NPS 0.5" to 4" (when orifice size = 0.812" and 0.994")



PXR Bellows Seal Design Assembly Diagram

NPS 0.5" to 4" (when orifice size >1")



PXR Bellows Seal Design

Materials of Construction

Carbon Steel Construction

Valve Sizes: NPS 0.5" to 4" **(when Orifice >1")**

Body Ratings: ANSI Class 150 or 300

Ref. No. ⁽²⁾	Temperature Range		-20°F (-29° C)	662°F (350° C)
	Description		Materials	
B003	Bonnet Spud		ASTM A479 TY 316/316L / 1.4401/1.4404 EN 10272	
B007	Extended Bonnet		ASTM A216 GRADE WCC/WCB / EN 1.0619/1.0625	
B124	Stainless Steel Bellows and Stem Assembly	Stem	SOLUTION ANNEALED 316 STAINLESS STEEL	
		Bellows	AUSTENITIC ST. ST. TYPE 316	
		Upper Adapter	GENERAL SERVICE ANNEALED 316L ST ST	
		Lower Adapter		
	Hastelloy C ⁽³⁾ Bellows and Stem Assembly	Stem	HASTELLOY C276	
		Bellows	HASTELLOY C276	
		Upper Adapter	HASTELLOY C276	
		Lower Adapter		
	Monel 400 ⁽³⁾ Bellows and Stem Assembly	Stem	ASTM B865 (UNS N05500) AGE HARDENED	
		Bellows	ASTM B164 CLASS A (UNS N04400)	
		Upper Adapter	ASTM B164 CLASS A (UNS N04400)	
		Lower Adapter		
B203	Packing Bushing		STELLITE NO.6 OR EQUIVALENT	
B206	Packing		CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B700	Plug – 1/8" NPT		AUSTENITIC STAINLESS STEEL	
B716f	O-ring ⁽⁴⁾		VITON-A 65-75 SHORE A	
B914b	Hex. Socket set screw		A4-80 (ISO 3506) 316L	

1. Materials for other components are same as listed for Standard Carbon Steel Construction.
2. Items No. B120 (plug stem) and B003 (bonnet) in Standard Materials of Construction tables should be removed and replaced by items above.
3. Optional Hastelloy C, Monel 400 Bellows construction available.
4. Viton usable for the entire temperature range due to bonnet height (check by thermal analysis).

PXR Bellows Seal Design

Materials of Construction

Stainless Steel Construction⁽¹⁾

Valve Sizes: NPS 0.5" to 4" **(when Orifice >1")**
 Body Ratings: ANSI Class 150 or 300

Ref. No. ⁽²⁾	Temperature Range		-20°F (-29° C)	662°F (350° C)
	Description		Materials	
B003	Bonnet Spud		ASTM A479 TY 316/316L / 1.4401/1.4404 EN 10272	
B007	Extended Bonnet		ASTM A351 GRADE CF8M / EN 1.4408	
B124	Stainless Steel Bellows and Stem Assembly	Stem	SOLUTION ANNEALED 316 STAINLESS STEEL	
		Bellows	AUSTENITIC ST. ST. TYPE 316	
		Upper Adapter	GENERAL SERVICE ANNEALED 316L ST ST	
		Lower Adapter		
	Hastelloy C ⁽³⁾ Bellows and Stem Assembly	Stem	HASTELLOY C276	
		Bellows	HASTELLOY C276	
		Upper Adapter	HASTELLOY C276	
		Lower Adapter		
	Monel 400 ⁽³⁾ Bellows and Stem Assembly	Stem	ASTM B164 CLASS A (UNS N04400)	
		Bellows	ASTM B164 CLASS A (UNS N04400)	
		Upper Adapter	ASTM B164 CLASS A (UNS N04400)	
		Lower Adapter		
B203	Packing Bushing		STELLITE NO.6 OR EQUIVALENT	
B206	Packing		CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B700	Plug – 1/8" NPT		AUSTENITIC STAINLESS STEEL	
B716f	O-ring ⁽⁴⁾		VITON-A 65-75 SHORE A	
B914b	Hex. Socket set screw		A4-80 (ISO 3506) 316L	

- Materials for other components are same as listed for Standard Stainless-Steel Construction.
- Items No. B120 (plug stem) and B003 (bonnet) in Standard Materials of Construction tables should be removed and replaced by items above.
- Optional Hastelloy C, Monel Bellows Construction available.
- Viton usable for the entire temperature range due to bonnet height (check by thermal analysis).

PXR Bellows Seal Design

Materials of Construction

Carbon Steel Construction⁽¹⁾

Valve Sizes: NPS 0.5" to 4" **(when orifice = 0.812" and 0.994")**

Body Ratings: ANSI Class 150 or 300

Ref. No. ⁽²⁾	Temperature Range		-20°F (-29° C)	662°F (350° C)
	Description		Materials	
B003	Bonnet Spud		ASTM A479 TY 316/316L / 1.4401/1.4404 EN 10272	
B007	Extended Bonnet		ASTM A216 GRADE WCC/WCB / EN 1.0619/1.0625	
B124	Stainless Steel Bellows and Stem Assembly	Stem	SOLUTION ANNEALED 316 STAINLESS STEEL	
		Bellows	AUSTENITIC ST. ST. TYPE 316	
		Upper Adapter	GENERAL SERVICE ANNEALED 316L ST ST	
		Lower Adapter		
	Hastelloy C ⁽³⁾ Bellows and Stem Assembly	Stem	HASTELLOY C276	
		Bellows	HASTELLOY C276	
		Upper Adapter	HASTELLOY C276	
		Lower Adapter		
	Monel 400 ⁽³⁾ Bellows and Stem Assembly	Stem	ASTM B865 (UNS N05500) AGE HARDENED	
		Bellows	ASTM B164 CLASS A (UNS N04400)	
		Upper Adapter	ASTM B164 CLASS A (UNS N04400)	
		Lower Adapter		
B120	Plug		CA6NM CLASS B STAINLESS STEEL	
			SOLUTION ANNEALED CF8M STAINLESS STEEL	
			HARDFACING STELLITE NO. 21 ON CF8M STAINLESS STEEL	
B203	Packing Bushing		STELLITE NO.6 OR EQUIVALENT	
B206	Packing		CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B700	Plug – 1/8" NPT		AUSTENITIC STAINLESS STEEL	
B716f	O-ring ⁽⁴⁾		VITON-A 65-75 SHORE A	
B914b	Hex. Socket set screw		A4-80 (ISO 3506) 316L	

1. Materials for other components are same as listed for Standard Carbon Steel Construction.
2. Items No. B120 (Integral Plug) and B003 (bonnet) in Standard Materials of Construction tables should be replaced by items above.
3. Optional Hastelloy C, Monel 400 Bellows Construction available.
4. Viton usable for the entire temperature range due to bonnet height (check by thermal analysis).

PXR Bellows Seal Design

Materials of Construction

Stainless Steel Construction⁽¹⁾

Valve Sizes: NPS 0.5" to 4" **(when orifice =0.812" and 0.994")**

Body Ratings: ANSI Class 150 or 300

Ref. No. ⁽²⁾	Temperature Range		-20°F (-29° C)	662°F (350° C)
	Description		Materials	
B003	Bonnet Spud		ASTM A479 TY 316/316L / 1.4401/1.4404 EN 10272	
B007	Extended Bonnet		ASTM A351 GRADE CF8M / EN 1.4408	
B124	Stainless Steel Bellows and Stem Assembly	Stem	SOLUTION ANNEALED 316 STAINLESS STEEL	
		Bellows	AUSTENITIC ST. ST. TYPE 316	
		Upper Adapter	GENERAL SERVICE ANNEALED 316L ST ST	
		Lower Adapter		
	Hastelloy C ⁽³⁾ Bellows and Stem Assembly	Stem	HASTELLOY C276	
		Bellows	HASTELLOY C276	
		Upper Adapter	HASTELLOY C276	
		Lower Adapter		
	Monel 400 ⁽³⁾ Bellows and Stem Assembly	Stem	ASTM B164 CLASS A (UNS N04400)	
		Bellows	ASTM B164 CLASS A (UNS N04400)	
		Upper Adapter	ASTM B164 CLASS A (UNS N04400)	
		Lower Adapter		
B120	Plug		SOLUTION ANNEALED CF8M STAINLESS STEEL	
			HARDFACING STELLITE NO. 21 ON CF8M STAINLESS STEEL	
			SOLUTION ANNEALED CF3M STAINLESS STEEL	
			HARDFACING STELLITE NO.21 ON CF3M STAINLESS STEEL	
B203	Packing Bushing		STELLITE NO.6 OR EQUIVALENT	
B206	Packing		CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B700	Plug – 1/8" NPT		AUSTENITIC STAINLESS STEEL	
B716f	O-ring ⁽⁴⁾		VITON-A 65-75 SHORE A	
B914b	Hex. Socket set screw		A4-80 (ISO 3506) 316L	

1. Materials for other components are same as listed for Standard Stainless-Steel Construction.

2. Items No. B112 (Integral Plug) and B003 (bonnet) in Standard Materials of Construction tables should be removed and replaced by items above.

3. Optional Hastelloy C, Monel Bellows Construction available.

4. Viton usable for the entire temperature range due to bonnet height (check by thermal analysis).

PXR Bellows Seal Design

Materials of Construction

Carbon Steel Construction⁽¹⁾

Valve Sizes: NPS 0.5" to 4" **(when orifice <0.812")**
 Body Ratings: ANSI Class 150 or 300

Ref. No. ⁽²⁾	Temperature Range		-20°F (-29° C)	662°F (350°C)
	Description		Materials	
B003	Bonnet Spud		ASTM A479 TY 316/316L / 1.4401/1.4404 EN 10272	
B007	Extended Bonnet		ASTM A216 GRADE WCC/WCB / EN 1.0619/1.0625	
B124	Stainless Steel Bellows and Stem Assembly	Integral Plug	SOLUTION ANNEALED 316 STAINLESS STEEL	
		Bellows	AUSTENITIC ST. ST. TYPE 316	
		Upper Adapter	GENERAL SERVICE ANNEALED 316L ST ST	
		Lower Adapter		
	Hastelloy C ⁽³⁾ Bellows and Stem Assembly	Integral Plug	HASTELLOY C276	
		Bellows	HASTELLOY C276	
		Upper Adapter	HASTELLOY C276	
		Lower Adapter		
	Monel 400 ⁽³⁾ Bellows and Stem Assembly	Integral Plug	ASTM B164 CLASS A (UNS N04400)	
		Bellows	ASTM B164 CLASS A (UNS N04400)	
		Upper Adapter	ASTM B164 CLASS A (UNS N04400)	
		Lower Adapter		
B203	Packing Bushing		STELLITE NO.6 OR EQUIVALENT	
B206	Packing		CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B700	Plug – 1/8" NPT		AUSTENITIC STAINLESS STEEL	
B716f	O-ring ⁽⁴⁾		VITON-A 65-75 SHORE A	
B914b	Hex. Socket set screw		A4-80 (ISO 3506) 316L	

- Materials for other components are same as listed for Standard Carbon Steel Construction.
- Items No. B112 (Integral Plug) and B003 (bonnet) in Standard Materials of Construction tables should be replaced by items above.
- Optional Hastelloy C, Monel 400 Bellows Construction available.
- Viton is usable for the entire temperature range due to bonnet height (check by thermal analysis).

PXR Bellows Seal Design

Materials of Construction

Stainless Steel Construction

Valve Sizes: NPS 0.5" to 4" **(when orifice <0.812")**
 Body Ratings: ANSI Class 150 or 300

Ref. No. ⁽²⁾	Temperature Range		-20°F (-29° C)	662°F (350° C)
	Description		Materials	
B003	Bonnet Spud		ASTM A479 TY 316/316L / 1.4401/1.4404 EN 10272	
B007	Extended Bonnet		ASTM A351 GRADE CF8M / EN 1.4408	
B124	Stainless Steel Bellows and Stem Assembly	Integral Plug	SOLUTION ANNEALED 316 STAINLESS STEEL	
		Bellows	AUSTENITIC ST. ST. TYPE 316	
		Upper Adapter	GENERAL SERVICE ANNEALED 316L ST ST	
		Lower Adapter		
	Hastelloy C ⁽³⁾ Bellows and Stem Assembly	Integral Plug	HASTELLOY C276	
		Bellows	HASTELLOY C276	
		Upper Adapter	HASTELLOY C276	
		Lower Adapter		
	Monel 400 ⁽³⁾ Bellows and Stem Assembly	Integral Plug	ASTM B164 CLASS A (UNS N04400)	
		Bellows	ASTM B164 CLASS A (UNS N04400)	
		Upper Adapter	ASTM B164 CLASS A (UNS N04400)	
		Lower Adapter		
B203	Packing Bushing		STELLITE NO.6 OR EQUIVALENT	
B206	Packing		CARBON CORE BRAIDED PTFE / GRAPHITE / LE PACKING	
B700	Plug – 1/8" NPT		AUSTENITIC STAINLESS STEEL	
B716f	O-ring ⁽⁴⁾		VITON-A 65-75 SHORE A	
B914b	Hex. Socket set screw		A4-80 (ISO 3506) 316L	

- Materials for other components are same as listed for Standard Stainless-Steel Construction.
- Items No. B112 (Integral Plug) and B003 (bonnet) in Standard Materials of Construction tables should be replaced by items above.
- Optional Hastelloy C, Monel 400 and Inconel 625 Bellows Construction available.
- Viton is usable for the entire temperature range due to bonnet height (check by thermal analysi

PXR Standard Design

Body Modules

Valve Sizes: NPS 0.75" to 6"

Body Ratings: ASME Class 150 or 300

Carbon Steel Body Module

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350°C)
	Description	Materials	
B001/ B003	Valve Bonnet and Body	ASTM A216 GRADE WCC/WCB EN 1.619/1.625	
B002	Body Studs	ASTM A193 GR B7 EN 1.7225	
B014	Body Stud Nuts	ASTM A194 Grade 2H	
B011	Guide Bushing	HARDENED 440C STAINLESS STEEL	

Note: Carbon steel body modules will provide the Austenitic Trim as the option. Then Stellite N°6 guide bushing will be selected.

Stainless Steel Body Module

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350°C)
	Description	Materials	
B001/ B003	Valve Bonnet and Body	ASTM A351 GRADE CF8M / EN 1.4408	
		ASTM A351 GR CF3M /EN 14408 C :0.03/14409	
B002	Body Studs	ASTM A193 GR B7/EN 1.7225, ZINC PLATING	
B014	Body Stud Nuts	ASTM A194 Grade 2H ZINC PLATING	
B011	Guide Bushing	STELLITE NO.6 (UNS 30006)	

Common Parts for Body Modules

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350°C)
	Description	Materials	
B200	Packing Flange Studs	ASTM A193 GR B8 CL1	
B201	Packing Flange Nuts	ASTM A194 GR 8	
B213	Packing Flange	LOW CARBON STEEL GRADES DICHROMATE ZINC PLATED	
B212	Packing Follower	SOLUTION ANNEALED 316L STAINLESS STEEL	
B015	Body Gasket	316L STAINLESS STEEL WITH GRAPHITE FILLER	
B017	Drive Nut	LOW CARBON STEEL GRADES	
B704	Flow Arrow	AUSTENITIC STAINLESS STEEL	
B902	Drive Screw	AUSTENITIC STAINLESS STEEL	
B713	Serial Plate	AUSTENITIC STAINLESS STEEL	

PXR Standard Design Trim Modules

Austenitic Trim Module for Carbon Steel Body Modules

NPS 0.5" to 3" (when Orifice $\leq 1"$)

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350°C)
	Description	Materials	
B102	Seat Ring	SOLUTION ANNEALED CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO.6 ASTM A351 GRADE CF8M	
B112	Integrated Plug	SOLUTION ANNEALED 316 STAINLESS STEEL	
		HARDFACING STELLITE NO.6 ON 316 STAINLESS STEEL	

NPS 1.5" to 6" (when Orifice $> 1"$)

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350°C)
	Description	Materials	
B120	Plug Stem	SOLUTION ANNEALED 316 STAINLESS STEEL	
		HARDENED ASTM A638 GRADE 660	
B102	Seat Ring	HARDFACING STELLITE NO. 21 ON CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO. 21 ON CF8M STAINLESS STEEL	
B112	Plug	SOLUTION ANNEALED CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO. 21 ON CF8M STAINLESS STEEL	
B903	Plug Stem Pin	SOLUTION ANNEALED 316 STAINLESS STEEL	

PXR Standard Design Trim Modules

Austenitic Trim Module for Stainless Steel Body Modules

NPS 0.5" to 3" (when Orifice ≤1")

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350°C)
	Description	Materials	
B102	Seat Ring	SOLUTION ANNEALED CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO.6 ASTM A351 GRADE CF8M	
		SOLUTION ANNEALED CF3M STAINLESS STEEL	
		HARDFACING STELLITE NO.6 ON ASTM A351 GR CF3M	
B112	Integrated Plug	SOLUTION ANNEALED 316 STAINLESS STEEL	
		HARDFACING STELLITE NO.6 ON 316 STAINLESS STEEL	
		SOLUTION ANNEALED 316L STAINLESS STEEL	
		HARDFACING STELLITE NO.6 ON 316L STAINLESS STEEL	

NPS 1.5" to 6" (when Orifice >1")

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350°C)
	Description	Materials	
B120	Plug Stem	SOLUTION ANNEALED 316 STAINLESS STEEL ⁽¹⁾	
		SOLUTION ANNEALED 316L STAINLESS STEEL ⁽¹⁾	
		HARDENED ASTM A638 GRADE 660	
B102	Seat Ring	HARDFACING STELLITE NO.21 ON CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO.21 ON CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO.21 ON CF3M STAINLESS STEEL	
		HARDFACING STELLITE NO.21 ON CF3M STAINLESS STEEL	
B112	Plug	SOLUTION ANNEALED CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO.21 ON CF8M STAINLESS STEEL	
		SOLUTION ANNEALED CF8M STAINLESS STEEL	
		HARDFACING STELLITE NO.6 ON CF8M STAINLESS STEEL	
B903	Plug Stem Pin	SOLUTION ANNEALED 316 STAINLESS STEEL	

1. 316 stem is to be replaced by Grade 660 when required due to high pressure drop.

PXR Standard Design Trim Modules

Martenistic Trim Module for Carbon Steel Body Modules

NPS 0.5" to 3" (when Orifice <=1")

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350°C)
	Description	Materials	
B102	Seat Ring	HARDENED 410 STAINLESS STEEL	
B112	Integrated Plug	17-4 PH STAINLESS STEEL H1075	

NPS 1.5" to 6" (when Orifice >1")

Ref. No.	Temperature Range	-20°F (-29° C)	662°F (350°C)
	Description	Materials	
B120	Plug Stem	17-4 PH STAINLESS STEEL H1075	
B102	Seat Ring	HARDENED 410 STAINLESS STEEL	
B112	Plug	CA6NM CLASS B STAINLESS STEEL	
B903	Plug Stem Pin	SOLUTION ANNEALED 316 STAINLESS STEEL	

PXR Standard Design

Seat Ring & Plug Combinations

For Stainless Steel Body Modules

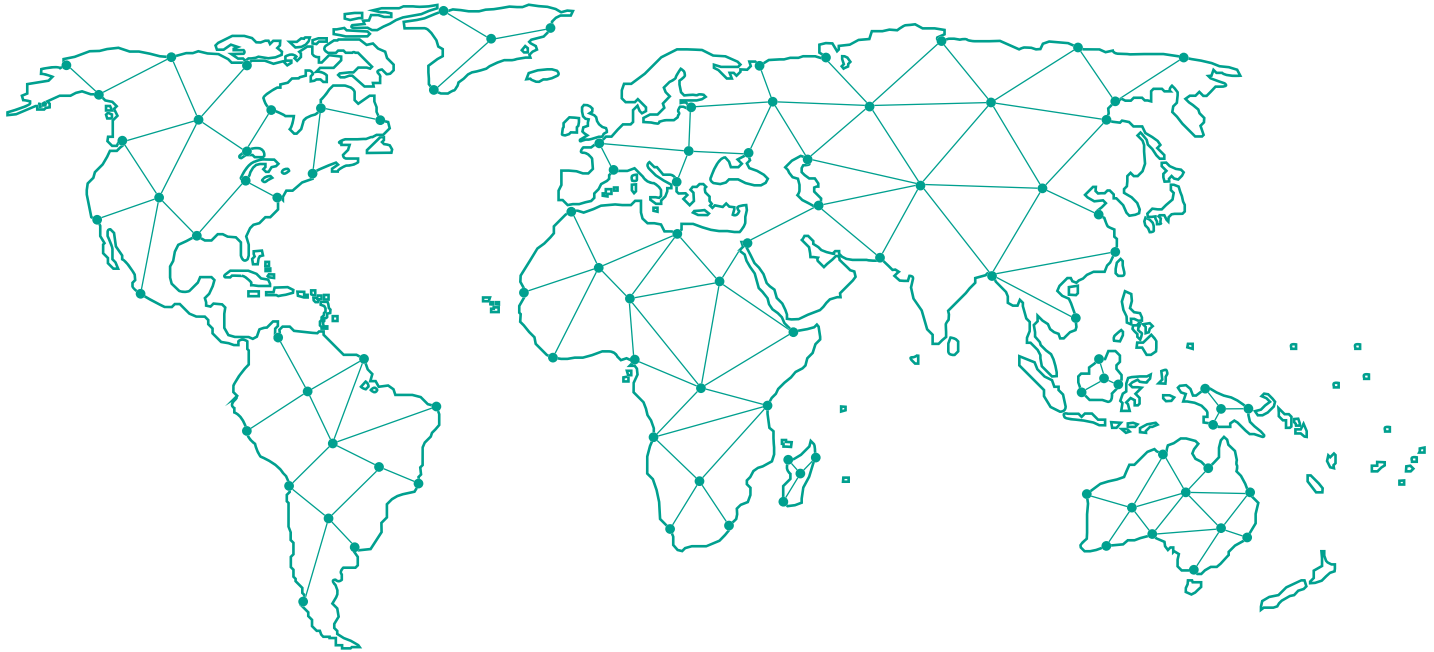
Valve Size (in)	Orifice Size (in)	Part Type	Plug Material	Part Type	Seat Ring Material	Standard or Optional
0.75-3	<=1	Integrated Plug	316 St. St.	Seat Ring	A351 gr CF8M	Standard
0.75-3	<=1	Integrated Plug	316 St. St. w/Stellite n°6 HF on Seat	Seat Ring	A351 gr CF8M w/Stellite n°6 Seat	Optional
0.75-3	<=1	Integrated Plug	316L St. St.	Seat Ring	A351 gr CF3M	Optional
0.75-3	<=1	Integrated Plug	316L St. St. w/Stellite n°6 HF on Seat	Seat Ring	A351 gr CF3M w/Stellite n°6 Seat	Optional
1.5-6	>1	V-port Plug	A351 gr CF8M (316 St. St.)	Seat Ring	A351 gr CF8M w/Stellite n°21 Seat & Guide	Standard
1.5-6	>1	V-port Plug	A351 gr CF8M w/Stellite n°21 HF on Seat	Seat Ring	A351 gr CF8M w/Stellite n°21 Seat & Guide	Optional
1.5-6	>1	V-port Plug	A351 gr CF3M (316L st.st.)	Seat Ring	A351 gr CF3M w/Stellite n°21 Seat & Guide	Optional
1.5-6	>1	V-port Plug	A351 gr CF3M w/Stellite n°21 HF on Seat	Seat Ring	A351 gr CF3M w/Stellite n°21 Seat & Guide	Optional

For Carbon Steel Body Modules

Valve Size (in)	Orifice Size (in)	Part Type	Plug Material	Part Type	Seat Ring Material	Standard or Optional
0.75-3	<=1	Integrated Plug	17-4 PH	Seat Ring	Hardened 410	Standard
0.75-3	<=1	Integrated Plug	316 St. St.	Seat Ring	A351 gr CF8M	Optional
0.75-3	<=1	Integrated Plug	316 St. St. w/Stellite n°6 on Seat	Seat Ring	A351 gr CF8M w/Stellite n°6 Seat	Optional
1.5-6	>1	V-port Plug	CA6NM	Seat Ring	Hardened 410	Standard
1.5-6	>1	V-port Plug	A351 gr CF8M (316 St. St.)	Seat Ring	A351 gr CF8M w/Stellite n°21 Seat & Guide	Optional
1.5-6	>1	V-port Plug	A351 gr CF8M w/Stellite n°21 on Seat	Seat Ring	A351 gr CF8M w/Stellite n°21 Seat & Guide	Optional

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