

Natural Gas Filters

Balston Compressed Gas Filters:

Balston high flow rate compressed gas filters offer exceptionally high efficiency coalescing filtration of compressed gas at high flow rates. Specifically designed to remove suspended liquids and dirt from pipeline natural gas, the housings are ASME Code Stamped up to 1440 psig. Equipped with Balston Microfibre® Grade DX Disposable Filter Cartridges, the filters are rated at 93% retention of 0.01 micron and essentially 100% retention of 1 micron liquid droplets and particles.



Product Features:

- Pressure rating to 1440 psig
- Meets US and Canadian codes for natural gas filters
- Flow rates to 183 million standard cubic feet per day
- High efficiency removal of suspended liquid and solid impurities

Sample and Instrumentation Filtration



High Pressure Process Gas Filtration



Stainless Steel Filtration Vessels for Corrosive Environments



High Volume Gas Filtration



Natural Gas Filters

2" Through 10" Line Size Filters



Model AKH-0280



Model AKH-0880

Balston Compressed Gas Filters

Balston high flow rate compressed gas filters offer exceptionally high efficiency coalescing filtration of compressed gas at high flow rates. Specifically designed to remove suspended liquids and dirt from pipeline natural gas, the housings are ASME Code Stamped up to 1440 psig. Equipped with Balston Microfibre® Grade DX Disposable Filter Cartridges, the filters are rated at 93% retention of 0.01 micron and essentially 100% retention of 1 micron liquid droplets and particles.

Since the coalesced liquid drains continuously from the filter cartridges as rapidly as it is collected, the filters have an unlimited capacity for liquid removal.

Each filter cartridge is mounted on a rigid permanent filter holder with a vibration-resistant removable tube retainer. The filter cartridge is self-gasketing, and the filter holder is designed so that a perfect seal is easily made, even when the tube is replaced by an operator unfamiliar with the equipment.

Series AKH, and AHC housings are available with inlet and outlet ports covering the range from 2" to 10" pipe sizes. The standard carbon steel units have pressure ratings from 665 to 1440 psig.

Each AHC assembly is equipped with internal support cores and one set of filter cartridges. Also available is a complete line of stainless steel filter housings ASME code stamped for a rated maximum operating pressure of 200 psig.

Natural Gas Filters

2" Through 4" Line Size Filters

Principal Specifications							
Model	Port Size Flange (7)	Closure Type*	Maximum Temperature (3)	Maximum Pressure (1)	Shipping Weight	Dimensions ()	Flange to Flange Dimension
AHC-0180-[]	2"	SD	130°F (54°C)	1440 psig	98 lbs.(44 kg)	32"H x 15"W x 4.5" (81cm x 38cm x 11cm)	14.5" (37cm)
AKH-0280-[]	3"	FSO	250°F (121°C)	665 psig	235 lbs.(107 kg)	41"H x 16"W x 8" (104cm x 41cm x 20cm)	15.63" (40cm)
AHC-0280-[]	3"	SD	130°F (54°C)	1440 psig	220 lbs.(100 Kg)	43"H x 17"W x 12" (109cm x 43cm x 30cm)	16.63" (42cm)
AKH-0480-[]	4"	FSO	250°F (121°C)	665 psig	270 lbs.(122 kg)	40"H x 21"W x 6" (102cm x 53cm x 15cm)	20.63" (52cm)
AHC-0480-[]	4"	SD	130°F (54°C)	1440 psig	450 lbs.(204 kg)	50"H x 21"W x 15" 20.63" (127cm x 53cm x 38cm)	

Notes:
1 Vessel is ASME Section VIII, Div. 1 code stamped for rated pressure. All AKC housing designs have CRN registration numbers assigned in all Canadian provinces.

Model	Port Size Flange (13)	Materials of Construction	Maximum Temperature	Maximum Pressure (10)	Shipping Weight	Dimensions (8, 11)	Flange to Flange Dimension
KS-0280-3	3"	316SS Housing, Viton Seals	200°F (93°C)	200 psig	140 lbs.	36"h x 15.6"w x 7.75" (91cm x 40cm x 20cm)	15.62" (40cm)
KS-0480-4	4"	316SS Housing, Viton Seals	200°F (93°C)	200 psig	210 lbs.	35.5"h x 20.6"w x 6.25" (90cm x 52cm x 16cm)	20.63" (52cm)

Notes:

- 1 Vessel is ASME Section VIII, Div. 1 code stamped for rated pressure.
- 2 All vessels are constructed of carbon steel with Type 303 stainless steel filter cartridge holders and Buna-N seals.
- 3 Maximum operating temperature of carbon steel vessel is 650°F (343°C). Minimum operating (process and ambient) temperature is -20°F (-30°C).

Max. Temp.

- 250°F (121°C)
- 400°F (204°C)
- 500°F (260°C)

Seal Material

- Buna
- Viton
- Silicone

4 Model 20-211 drain is installed on all AKS housings. Maximum operating pressure for the 20-211 drain is 400 psig.

5 Differential Pressure Indicator and Auto-

matic Drain are not included with AHC and AKH Assemblies. Series AHC Assemblies are equipped with internal support cores and one set of filter cartridges.

6 ANSI Flange Classes:

- AKH Series: 300 lbs. R.F.S.O.
- AHC Series: 600 lbs. R.F.S.O.

7 Dimensions are height x width x center of flange-to-floor height.

*Closure Abbreviations:

- SD: Screw type closure with Buna N "O" ring
- FSO: Flat (flanged) top with swing bolts and Buna N "O" ring.

Natural Gas Filters

Ordering Information				
For assistance, call toll-free at 1-800-343-4048 8AM to 5PM Eastern Time				
Model	Automatic Float Drain	Differential Pressure Indicator (5)	Filter Cartridges No. Required	Box of 10 Cartridges (1)
AHC-0180-DX	---	---	1	200-80-DX
AKH-0280-DX	20-211 (8)	---	2	200-80-DX
AHC-0280-DX	---	---	2	200-80-DX
AKH-0480-DX	20-211 (8)	---	4	200-80-DX
AHC-0480-DX	---	---	4	200-80-DX
AKS-0280-DX	20-211 or 20-440 (14)	---	2	200-80-□
AKS-0480-DX	20-211 or 20-440 (14)	---	4	200-80-□

Notes:

9 To order filter cartridges, indicate Grade by putting appropriate letters after size designation. For example, to order Grade DX cartridges for KS-0280-3 housing, order 200-80-DX. Microfibre Filter Cartridges are sold in boxes of 10.

10 Vessel is ASME Section VIII, Division 1 code stamped for rated pressure at 200°F. Maximum pressure ratings are for temperatures to 200°F. Please consult factory for maximum pressure ratings at elevated temperatures.

11 All dimensions are approximate. Request certified drawing for installation dimensions.

12 Requires element retainer #27900, one for each cartridge. Order separately.

13 All flanges are ANSI 150#RFSSO.

14 20-211 Auto Float Drain, 20-440 Auto Electric Solenoid Drain.



Natural Gas Filters

6" Through 10" Line Size Filters

Principal Specifications

Model	Port Size Flange (7)	Closure Type*	Maximum Temperature (3)	Maximum Pressure (1)	Shipping Weight	Dimensions (8)	Flange to Flange Dimension
AKH-0880-[]	6"	FSO	250°F (121°C)	665 psig	560 lbs.(254 kg)	43"h x 25"w x 8.5" (109cm x 64cm x 22cm)	24.75" (63cm)
AHC-0880-[]	6"	SD	130°F (54°C)	1440 psig	980 lbs.(445 kg)	54"h x 25"w x 18" (137cm x 64cm x 46cm)	24.75" (63cm)
AKH-1480-[]	8"	FSO	250°F (121°C)	665 psig	1120 lbs.(508 kg)	54"h x 34"w x 16" (137cm x 86cm x 41cm)	34" (86cm)
AKH-2280-[]	10"	FSO	250°F (121°C)	665 psig	1430 lbs.(649 kg)	57"h x 36"w x 17" (145cm x 91cm x 43cm)	36" (91 cm)

Model	Port Size Flange (13)	Materials of Construction	Maximum Temperature	Maximum Pressure (10)	Shipping Weight	Dimensions (8, 11)	Flange to Flange Dimension
AKS-0880-[]	6"	316SS Housing, Viton Seals	200°F (93°C)	200 psig	360 lbs.(163 kg)	38"h x 24.75"w x 7.5" (97cm x 63cm x 19cm)	24.75" (63cm)
AKS-1480-[]	8"	316SS Housing, Viton Seals	200°F (93°C)	200 psig	590 lbs.(268 kg)	54"h x 34"w x 16.25" (137cm x 86cm x 41cm)	34" (86cm)
AKS-2280-[]	10"	316SS Housing, Viton Seals	200°F (93°C)	200 psig	880 lbs.(400 kg)	56"h x 36"w x 17.25" (142cm x 91cm x 44cm)	36" (91cm)

Ordering Information

For assistance, call toll-free at 1-800-343-4048 8AM to 5PM Eastern Time

Model	Automatic Float Drain	Differential Pressure Indicator (5)	Filter Cartridges No. Required	Box of 10 Cartridges
AKH-0880-DX	20-211 (4)	—	8	200-80-DX
AHC-0880-DX	—	—	8	200-80-DX
AKC-1480-DX	20-211	41-071	14	200-80-DX
AKC-2280-DX	20-211	41-071	22	200-80-DX
AKS-0880-DX or BX	20-211 or 20-440 (14)	—	8	200-80-DX or BX
AKS-1480-DX or BX	20-211 or 20-440 (14)	—	14	200-80-DX or BX
AKS-2280-DX or BX	20-211 or 20-440 (14)	—	22	200-80-DX or BX

Natural Gas Filters

Flow Rates

High Pressure Filter Housings

Flow Rate at 2 psi Drop at Indicated Line Pressure with 200-80-DX filter Cartridges														
Assembly	40 psig		100 psig		200 psig		400 psig		600 psig		1000 psig		1400 psig	
	MM SCFD	SCFM	MM SCFD	SCFM	MM SCFD	SCFM	MM SCFD	SCFM	MM SCFD	SCFM	MM SCFD	SCFM	MM SCFD	SCFM
AHC-0180	0.8	595	1.8	1250	3.3	2340	6.5	4515	9.4	6700	15.9	11050	22.2	15400
AKH-0280 AHC-0280	1.7	1190	3.6	2500	6.7	4680	13.0	9030	19.2	13400	31.8	22100	44.4	30800
AKH-0480 AHC-0480	3.5	2430	7.3	5100	13.8	9550	26.5	18400	39.5	27300	64.9	45100	90.5	62900
AKH-0880 AHC-0880	7.0	4910	14.8	10300	27.8	19300	53.6	37200	79.5	55200	131	91100	183	127000
AKH-1480	12.3	8580	25.9	18000	48.5	33700	93.6	65050	139	96400	--	--	--	--
AKH-2280	19.2	13350	40.3	28000	75.4	52400	145	101000	216	150000	--	--	--	--

MM SCFD = Million Standard Cubic Feet per Day

SCFM = Standard Cubic Feet per Minute

Stainless Steel Filter Housings

Flow Rate (SCFM) at 2 psi Drop at Indicated Line Pressure								
Assembly	Grade	2 psig	20 psig	60 psig	80 psig	100 psig	150 psig	200 psig
AKS-0280	DX	364	760	1630	2065	2500	3600	4680
	BX	90	190	400	510	620	890	1160
AKS-0480	DX	760	1540	3320	421	5100	7300	9550
	BX	180	380	810	1025	1240	1780	2320
AKS-0880	DX	1500	3120	6710	8505	10300	14800	19300
	BX	360	750	1620	2050	2480	3560	4640
AKS-1480	DX	2620	5450	11720	14860	18000	25800	33700
	BX	630	1310	2830	3585	4340	6230	8120
AKS-2280	DX	4080	8470	18230	23115	28000	40200	52400
	BX	1000	2070	4460	5655	6850	9840	12800

Natural Gas
Filters

Natural Gas Filters

Low Pressure Natural Gas Filters

New LF/FF Series Multiple Cartridge Filter Assemblies

These filter assemblies provide high efficiency filtration of gas at very high flow rates. With inlet and outlet ports accommodating 3" to 10" pipe sizes, the new LF/FF Series housings are capable of flow rates up to a maximum capacity of 37,350 SCFM at 100 psig. The standard carbon steel units, which are generally in stock (through 6" line sizes), have pressure ratings up to 250 psig.

All LF/FF series housings are ASME Code Stamped for the rated maximum operating pressure. All FF Series vessels have built-in legs for floor mounting. Selected models have swing bolt enclosures for easy access to the internals. The filter cartridges in all models are sealed by tightening the threaded retainer cap onto the rigid tie rod, ensuring a leak tight seal on both ends of the cartridge.

Each assembly is equipped with a stainless steel automatic float drain, differential pressure indicator, and a set of filter cartridges (except where noted).



NEW!

High Flow Coalescing Filter Media HFC Grade

Efficiency: 99.5% @ 0.3 micron

Balston's HFC media consists of two layers. The outer layer features a dense matrix of glass fibers. It provides highly efficient coalescing aerosol removal and very low pressure drop. The inner layer, or initial stage of filtration, effectively traps dirt particles, protecting and extending the life of the outer layer. A metal retainer is used for strength and stability. This media is used in bulk coalescing applications and when relatively high efficiency and low pressure drop are required.



High Efficiency Coalescing Media HEC Grade

Efficiency: 99.97% @ 0.3 micron

Air Flow: Inside to Outside

This coalescing element is composed of an epoxy saturated borosilicate glass micro-fiber tube. The HEC grade filter has a pleated cellulose inner layer as a built-in prefilter. This element is metal retained for added strength, and includes a synthetic fabric layer.



HEC filters are used when "total removal of liquid aerosols and suspended fines" is required. Because of its overall performance characteristics, this grade is most often recommended.

Benefits

Low Pressure Drop	Heat and Chemical Resistant
Lower Change out/Labor Costs	No Wet Zone
Lower Energy Costs	Oleophobic/Hydrophobic
High Dirt Holding Capacity	High Burst Strength

Natural Gas Filters

Low Pressure Natural Gas Filters

**HFC MEDIA Max. Rated Flows (SCFM) at Various Operating Pressures
(0.25 psi pressure drop)**

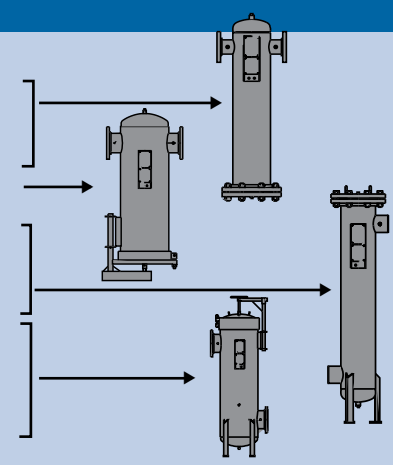
Model Number	2 PSIG	20 PSIG	40 PSIG	80 PSIG	100 PSIG	125 PSIG	150 PSIG	175 PSIG	200 PSIG	220 PSIG	250 PSIG
ALN3-0128-HFC	363	753	1187	2056	2490	3033	3575	4118	4661	5095	5746
ALF3-0128-HFC	363	753	1187	2056	2490	3033	3575	4118	4661	5095	5746
ALF4-0125-HFC	483	1004	1583	2741	3320	4044	4767	5491	6215	6793	N/A
ALF6-0136-HFC	725	1507	2375	4112	4980	6065	7151	8236	9322	10190	N/A
ALF6-0336-HFC	1088	2260	3562	6167	7470	9098	10726	12354	13983	15285	N/A
AFN3-0128-HFC	363	753	1187	2056	2490	3033	3575	4118	4661	5095	5746
AFF3-0128-HFC	363	753	1187	2056	2490	3033	3575	4118	4661	5095	5746
AFF4-0125-HFC	483	1004	1583	2741	3320	4044	4767	5491	6215	6793	N/A
AFF6-0136-HFC	725	1507	2375	4112	4980	6065	7151	8236	9322	10190	11493
AFF6-0328-HFC	1088	2260	3562	6167	7470	9098	10726	12354	13983	15285	N/A
AFF8-0428-HFC	1450	3013	4750	8223	9960	12131	14302	16472	18644	20380	22984
AFF10-0728-HFC	2538	5273	8312	14391	17430	21229	25028	28826	32627	35665	40222
AFF12-1128-HFC	3988	8286	13062	22614	27390	33360	39330	45298	51271	56045	63206
AFF16-1528-HFC	5438	11299	17812	30837	37350	45491	53632	61770	69915	76425	86190

**HEC MEDIA Max. Rated Flows (SCFM) at Various Operating Pressures
(1.5 psi pressure drop)**

Model Number	2 PSIG	20 PSIG	40 PSIG	80 PSIG	100 PSIG	125 PSIG	150 PSIG	175 PSIG	200 PSIG	220 PSIG	250 PSIG
ALN3-0128-HEC	218	454	715	1238	1500	1827	2154	2481	2808	3069	3462
ALF3-0128-HEC	218	454	715	1238	1500	1827	2154	2481	2808	3069	3462
ALF4-0125-HEC	219	605	954	1651	2000	2436	2872	3308	3744	4092	N/A
ALF6-0136-HEC	437	908	1431	2477	3000	3654	4308	4962	5616	6139	N/A
ALF6-0328-HEC	654	1362	2145	3714	4500	5481	6462	7443	8424	9207	N/A
AFN3-0128-HEC	218	454	715	1238	1500	1827	2154	2481	2808	3069	3462
AFF3-0128-HEC	218	454	715	1238	1500	1827	2154	2481	2808	3069	3462
AFF4-0125-HEC	291	605	954	1651	2000	2436	2872	3308	3744	4092	N/A
AFF6-0136-HEC	437	908	1431	2477	3000	3654	4308	4962	5616	6139	6923
AFF6-0328-HEC	654	1362	2145	3714	4500	5481	6462	7443	8424	9207	N/A
AFF8-0428-HEC	872	1816	2860	4952	6000	7308	8616	9924	11232	12276	13848
AFF10-0728-HEC	1526	3178	5005	8666	10500	12789	15078	17367	19656	21483	24234
AFF12-1128-HEC	2398	4994	7865	13618	16500	20097	23694	27291	30888	33759	38082
AFF16-1528-HEC	3270	6810	10725	18570	22500	27405	32310	37215	42120	46035	51930

Housing Selection Chart

Model Number	HFC Replacement Element	HEC Replacement Element	Port Size	Port Type	# of Elements
LINE MOUNT VESSELS					
ALN3-0128-H?C	510-28- HFC	510-28-HEC	3	NPT	1
ALF3-0128-H?C	510-28- HFC	510-28- HEC	3	FLANGE	1
ALF4-0125-H?C	850-25- HFC	850-25- HEC	4	FLANGE	1
ALF6-0136-H?C	850-36- HFC	850-36- HEC	6	FLANGE	1
ALF6-0328-H?C	510-28- HFC	510-28- HEC	6	FLANGE	3
FLOOR MOUNT VESSELS					
AFN3-0128-H?C	510-28- HFC	510-28- HEC	3	NPT	1
AFF3-0128-H?C	510-28- HFC	510-28- HEC	3	FLANGE	1
AFF4-0125-H?C	850-25- HFC	850-25- HEC	4	FLANGE	1
AFF6-0136-H?C	850-36- HFC	850-36- HEC	6	FLANGE	1
AFF6-0328-H?C	510-28- HFC	510-28- HEC	6	FLANGE	3
AFF8-0428-H?C	510-28- HFC	510-28- HEC	8	FLANGE	4
AFF10-0728-H?C	510-28- HFC	510-28- HEC	10	FLANGE	7
AFF12-1128-H?C	510-28- HFC	510-28- HEC	12	FLANGE	11
AFF16-1528-H?C	510-28- HFC	510-28- HEC	16	FLANGE	15

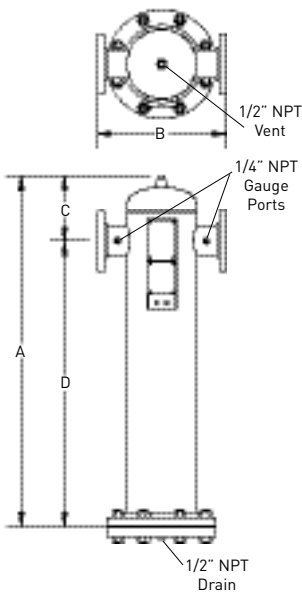


Natural Gas Filters

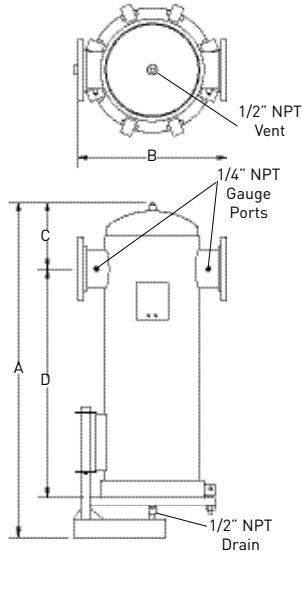


Natural Gas Filters

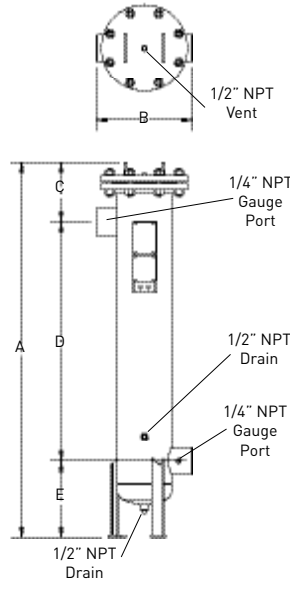
Drawings, Dimensions & Specifications



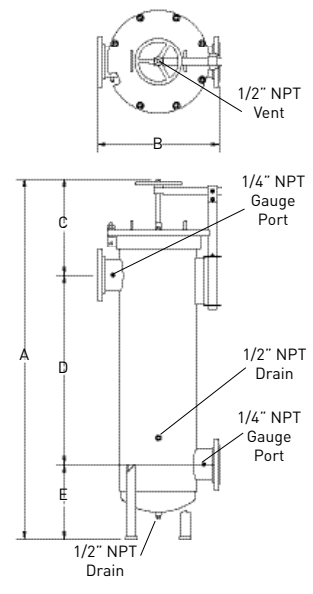
Refer to this drawing for:
ALN3
ALF3
ALF4
ALF6-0136



Refer to this drawing for:
ALF6-0328



Refer to this drawing for:
AFN3
AFF3
AFF4
AFF6-0136



Refer to this drawing for:
AFF6-0328
AFF8
AFF10
AFF12
AFF16

Dimensions	A	B	C	D	E	Element Removal Clearance (Inches/centimeters)	Sump Capacity (gallons/liters)	Weight (pounds/kilograms)
ALN3	43.1/109.5	15.0/38.1	7.7/19.5	35.4/89.9	-	28/71.1	0.81/3	190/86
ALF3	43.1/109.5	16.0/40.6	7.7/19.5	35.4/89.9	-	28/71.1	0.81/3	190/86
ALF4	42.7/108.5	20.0/50.8	9.7/24.6	33.0/83.8	-	25/63.5	2.0/7	380/173
ALF6-0136	56.4/143.3	20.0/50.8	11.4/29.0	45.0/114.3	-	36/91.4	2.0/7	380/173
ALF6-0328	57.8/146.8	26.0/66.0	11.0/27.9	39.8/101.1	-	28/71.1	2.0/7	340/155
ALFN3	58.9/149.6	15.0/38.1	9.4/23.8	37.5/95.2	12.0/30.4	28/71.1	1.1/4	190/86
AFF3	58.9/149.6	16.0/40.6	9.4/23.8	37.5/95.2	12.0/30.4	28/71.1	1.2/4	200/91
AFF4	63.3/160.7	20.0/50.8	12.3/31.2	35.0/88.9	16.0/40.6	25/63.5	4.2/16	370/168
AFF6-0136	75.3/191.2	20.0/50.8	12.3/31.2	47.0/119.3	16.0/40.6	36/91.4	3.6/14	410/186
AFF6-0328	77.3/196.3	26.0/66.0	20.8/52.8	40.5/102.8	16.0/40.6	28/71.1	5.0/19	340/155
AFF8	87.3/221.7	30.0/76.2	25.8/65.5	42.5/108.0	19.0/48.3	28/71.1	8.7/33	550/250
AFF10	96.0/243.8	34.0/86.3	28.5/72.4	45.5/115.5	22.0/55.8	28/71.1	14.8/56	750/341
AFF12	101.0/256.5	44.0/111.7	27.5/69.8	47.5/120.6	26.0/66.0	28/71.1	25.5/97	1300/591
AFF16	112.0/284.4	52.0/132.0	32.0/81.3	50.0/127.0	30.0/76.2	28/71.1	56.2/213	1700/773

Materials of Construction

Body: Carbon Steel
Paint: Epoxy Enamel (Gray)
Internals: Epoxy powder painted carbon steel
Seals: Inorganic flange gasket (single element vessels)
 Fluorocarbon o-ring (multi element vessels)
Internal Coating: Epoxy enamel

Specifications

Max Pressure: Up to 220-250 PSIG (Consult Flow Chart)
Max Temperature: 450°F/232°C
Meets A.S.M.E. Code, Section VIII, Division 1:
Note: Consult factory for special requirements

