



X87A-900 series

cryogenic stainless steel ASME class 300 flanged full port ball valve
1/2" thru 1"

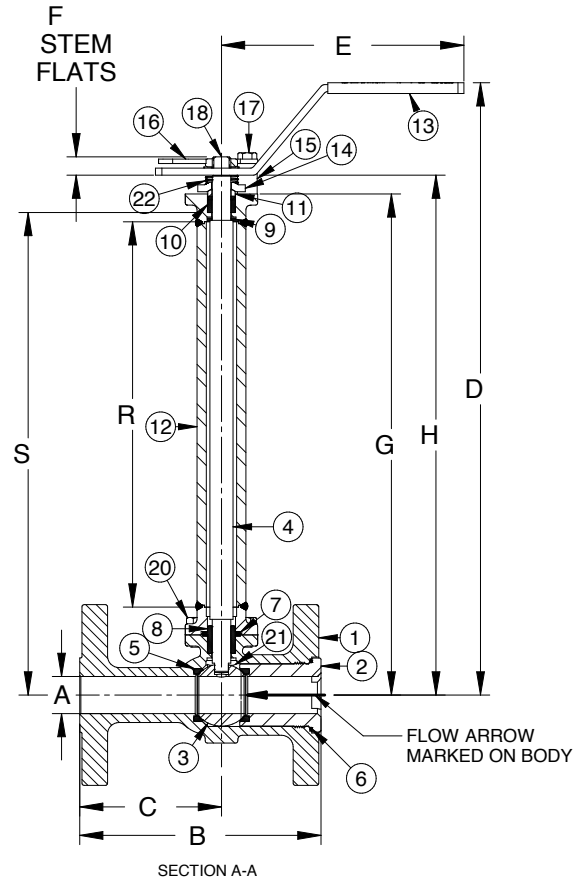
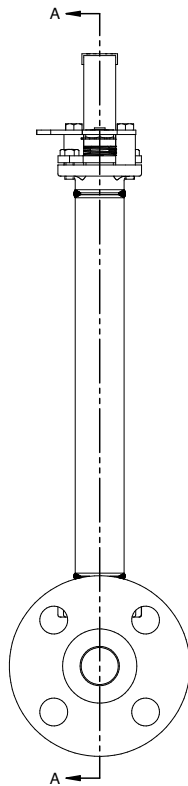
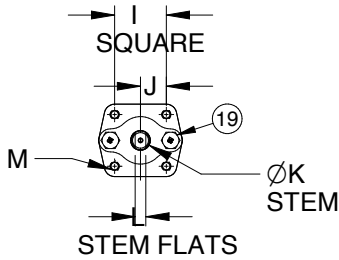
MADE IN USA

standard material list

	PART	MATERIAL
1	Body	ASTM A351-CF8M
2	Retainer	ASTM A276 Type 316
3	Ball	ASTM A351-CF8M or ASTM A276 Type 316
4	Stem	ASTM A276 Type 316
5	Seats	TFM 1700
6	Body Seal	Spiral Wound Graphite
7	Bonnet Seal	Spiral Wound Graphite
8	Stem Bushing	RPTFE
9	Stem Bearing	RPTFE
10	Stem Packing	Graphite Packing
11	Packing Gland	ASTM A276 Type 316

	PART	MATERIAL
12	Bonnet Extension	ASTM A351-CF8M & 316 Stainless Pipe
13	Lever & Grip	316 Stainless Steel with Vinyl Grip
14	Gland Plate	316 Stainless Steel
15	Stop	ASTM A276 Type 316
16	Lock Plate	302 or 304 Stainless Steel
17	Stop Screw	316 Stainless Steel
18	Stem Screw	Steel Zinc Plated
19	Gland Plate Screws	ASTM A193-B8 Class 2
20	Bonnet Screws	ASTM A193-B8 Class 1
21	Grounding Spring	316 Stainless Steel
22	Grounding Spring	316 Stainless Steel

ACTUATOR MOUNTING



dimensions

PART NO.	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	R	S	WT.	Cv
X87A90301A	1/2" 300 FP	0.50	5.50	3.31	14.70	5.12	0.24	13.09	13.59	1.000	0.500	0.375	0.245	10-24 UNC	10.10	12.82	8	15
X87A90401A	3/4" 300 FP	0.75	6.00	3.56	15.85	5.54	0.22	14.07	14.69	1.392	0.696	0.500	0.287	1/4-20 UNC	10.00	13.65	13	19
X87A90501	1" 300 FP	1.00	6.50	3.82	16.50	6.53	0.47	13.50	14.01	1.392	0.696	0.500	0.287	1/4-20 UNC	10.38	13.00	15	75

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X87A-900 series

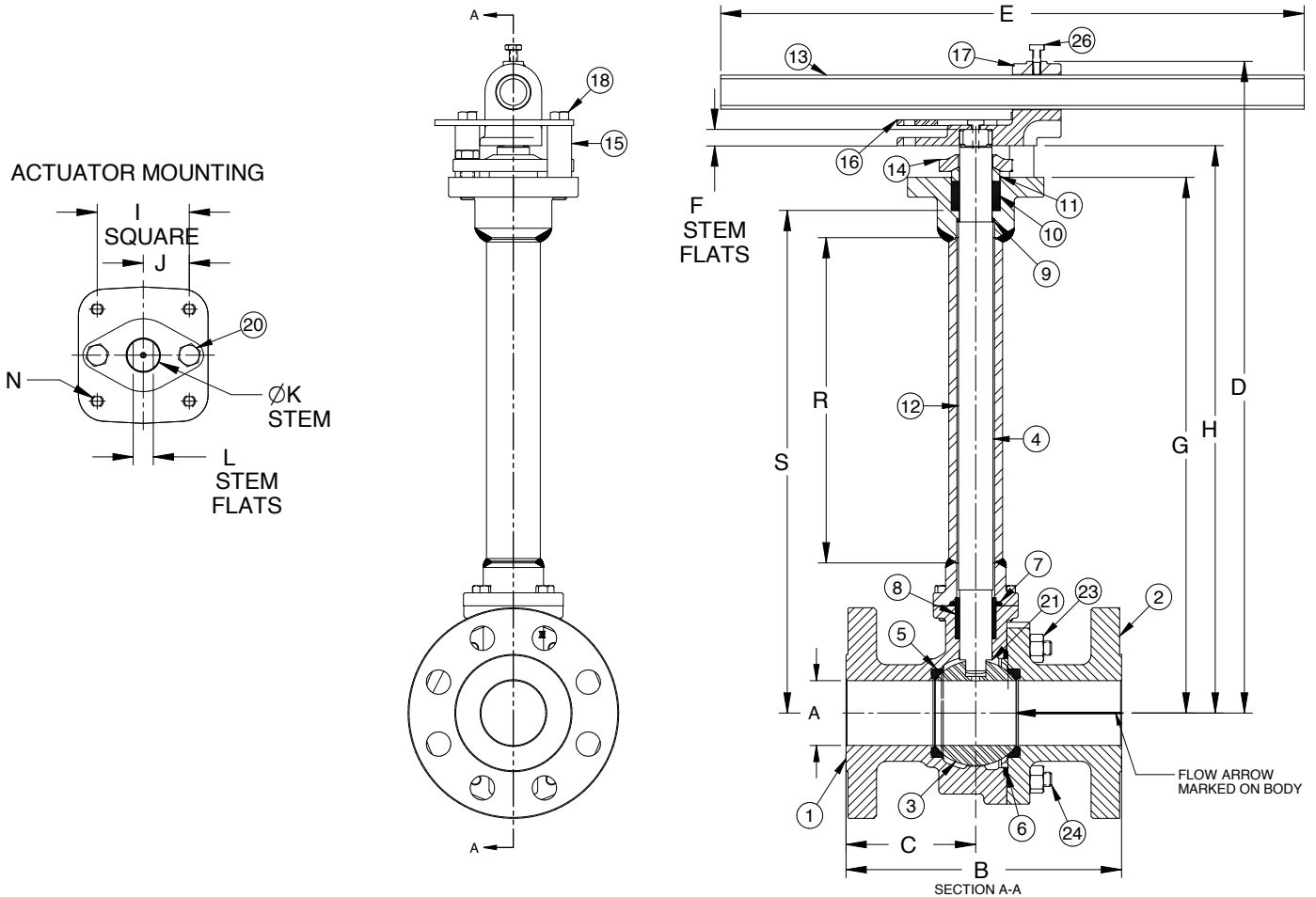
cryogenic stainless steel ASME class 300 flanged full port ball valve 1.5" thru 2"

MADE IN USA

standard material list

	PART	MATERIAL
1	Body	ASTM A351-CF8M
2	Retainer	ASTM A351-CF8M
3	Ball	ASTM A351-CF8M or ASTM A276 Type 316
4	Stem	ASTM A276 Type 316
5	Seats	TFM 1700
6	Body Seal	Spiral Wound Graphite
7	Bonnet Seal	Spiral Wound Graphite
8	Stem Bushing	RPTFE
9	Stem Bearing	RPTFE
10	Stem Packing	Graphite Packing (API 641 Compliant)
11	Packing Gland	ASTM A276 Type 316
12	Bonnet Extension	ASTM A351-CF8M & 316 Stainless Pipe
13	Pipe Handle	316 Stainless Steel

	PART	MATERIAL
14	Gland Plate	316 Stainless Steel
15	Stop	ASTM A276 Type 316
16	Lock Plate	302 or 304 Stainless Steel
17	Handle Adaptor	316 Stainless Steel
18	Stop Screws	316 Stainless Steel
19	Stem Screw	18-8 Stainless Steel
20	Gland Plate Screws	ASTM A193-B8 Class 2
21	Bonnet Screws	ASTM A193-B8 Class 1
22	Grounding Spring	316 Stainless Steel
23	Grounding Spring	316 Stainless Steel
24	Body Joint Stud	ASTM A193-B8M
25	Body Joint Nut	ASTM A194 Grade 8
26	Adapter Screw	18-8 Stainless Steel



dimensions

PART NO.	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	R	S	WT.	Cv
X87A90701	1.5" 300 FP	1.50	7.50	3.50	17.24	6.65	0.72	15.00	15.69	1.949	0.974	0.625	0.412	-1	9.94	14.20	28	195
X87A90801	2" 300 FP	2.00	8.50	4.00	20.12	18.00	0.51	16.54	17.52	2.840	1.420	1.000	0.620	-1	10.04	15.52	48	410

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X87A-900 series

cryogenic stainless steel ASME class 300 flanged full port ball valve
3" thru 6"

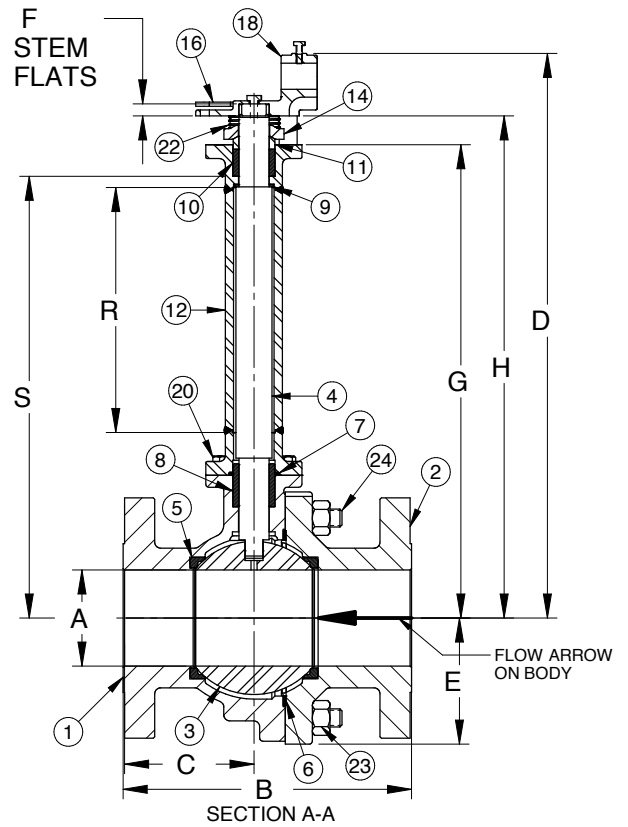
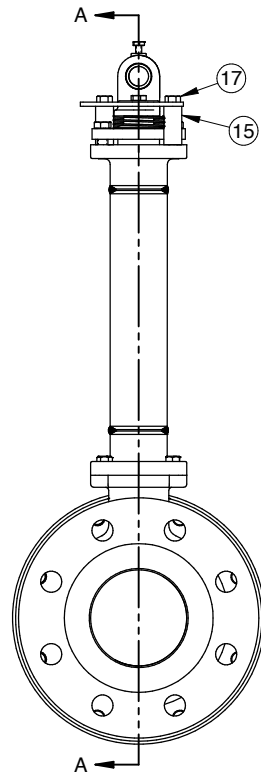
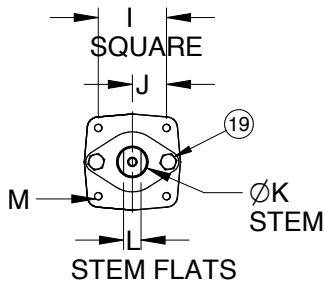
MADE IN USA

standard material list

PART	MATERIAL
1	Body
2	Retainer
3	Ball
4	Stem
5	Seats
6	Body Seal
7	Bonnet Seal
8	Stem Bushing
9	Stem Bearing
10	Stem Packing
11	Packing Gland
12	Bonnet Extension

PART	MATERIAL
13	Pipe Handle
14	Gland Plate
15	Stop
16	Lock Plate
17	Stop Screw
18	Handle Adapter
19	Gland Plate Screws
20	Bonnet Screws
21	Grounding Spring
22	Grounding Spring
23	Lock Washer
24	Body Joint Nut
25	Body Joint Stud

ACTUATOR MOUNTING



dimensions

PART NO.	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	R	S	WT.	Cv
X87A90001	3" 300 FP	3.00	11.12	5.24	22.30	4.06	0.50	18.51	19.70	2.840	1.420	1.250	0.725	3/8-16 UNC	10.19	17.19	96	1021
X87A90A01	4" 300 FP	4.00	12.00	5.44	23.49	5.25	0.50	19.69	20.89	2.840	1.420	1.250	0.725	3/8-16 UNC	10.19	18.38	151	2016
X87A90C01	6" 300 FP	6.00	15.88	6.82	29.99	7.30	1.00	24.03	25.73	4.596	2.298	2.000	1.375	3/4-10 UNC	10.61	22.28	384	4837

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X87A-900 series

cryogenic stainless steel ASME class 300 flanged full port ball valve
8"

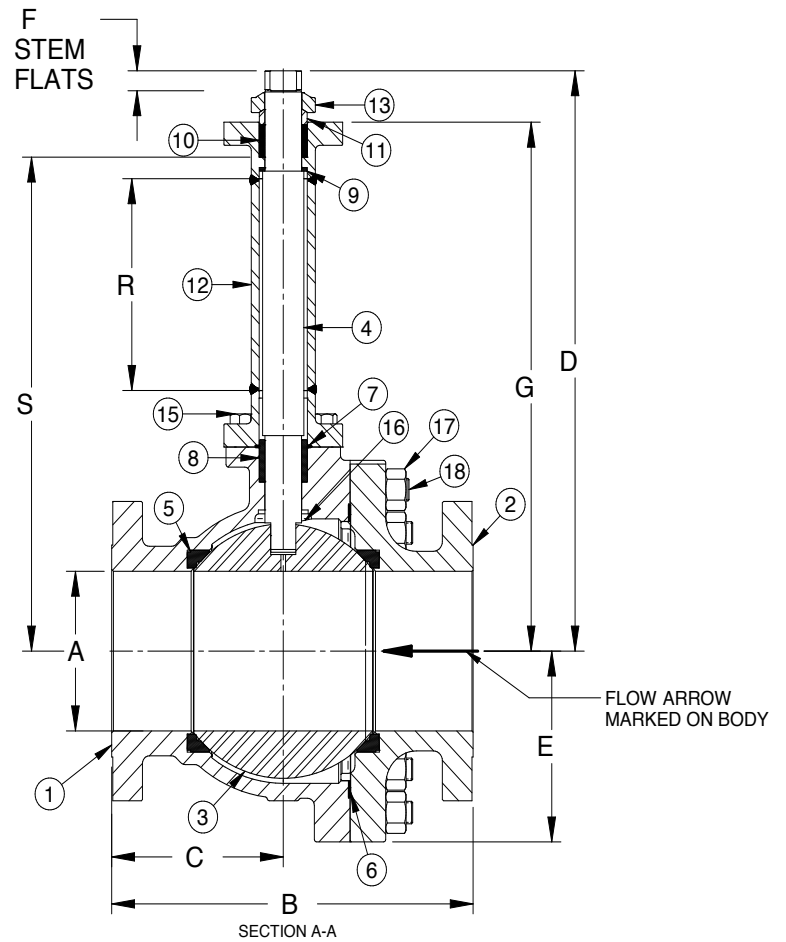
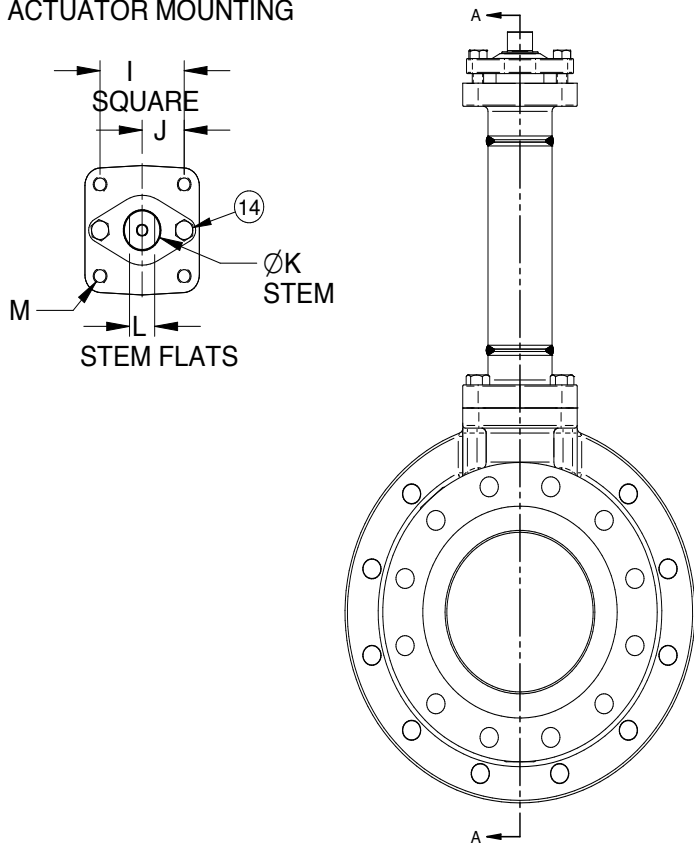
MADE IN USA

standard material list

PART	MATERIAL
1	Body
2	Retainer
3	Ball
4	Stem
5	Seats
6	Body Seal
7	Bonnet Seal
8	Stem Bushing
9	Stem Bearing

PART	MATERIAL
10	Stem Packing
11	Packing Gland
12	Bonnet Extension
13	Gland Plate
14	Gland Plate Screws
15	Bonnet Screws
16	Grounding Spring
17	Body Joint Nut
18	Body Joint Stud

ACTUATOR MOUNTING



dimensions

PART NO.	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	R	S	WT.	Cv
X87A90E01	8" 300 FP	8.00	19.75	9.38	29.08	9.56	1.00	26.51	-	4.596	2.298	2.000	1.375	3/4-10 UNC	10.61	24.76	655	9250

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flow data and torque values

options available

- To specify an option, replace the "01" standard suffix with the suffix of the option.
- To specify multiple options, replace the "01" suffix with the desired suffixes in the numerical order shown below. NOTE: Not all suffixes can be combined together.

PREFIX	SERIES	SIZE	SUFFIX	STANDARD
X-	87A-903	1/2"	01	*X- prefix designates cryogenic version and includes the following options as standard. (-14) Side Vented Ball (Uni-directional) (-49) No Lubrication. Assembled Dry (-EF) Graphite Packing (API 641 Compliant)
	87A-904	3/4"		
	87A-905	1"		
	87A-907	1.5"		
	87A-908	2"		
	87A-900	3"		
	87A-90A	4"		
	87A-90E	8"		

SUFFIX	OPTION
-01	Standard Configuration
-49-	No Lubrication. Assembled Dry
-57-	Oxygen Cleaned
-82-	Flat Face Flanges
-96-	PCTFE Seats
-CE-	CE Marking. See Page D-3 "Product Approvals" for Availability
-MG-	Gear Operator with Standard Handwheel
-MH-	Gear Operator with Standard Handwheel & Locking Device
-MJ-	Gear Operator with Oversize Handwheel
-MK-	Gear Operator with Oversize Handwheel & Locking Device
-MP-	Positive Material Identification
-TC-	With Test Certificate
-XR-	Radiography
-DP-	Dye penetrate
-TR-	Hydrostatic Test with Certified Report & MTR

torque values

CV factors for apollo valves

VALVE	SIZE (IN.)											
	1/4	3/8	1/2	3/4	1	1.25	1.5	2	3	4	6	8
87A-100 Series	--	--	--	--	--	--	86	104	375	673	1099	1902
87A-200 Series	--	--	15	19	75	--	195	410	1021	2016	4837	9250
87A-700 Series	--	--	--	--	--	--	86	104	375	673	1099	1902
87A-900 Series	--	--	15	19	75	--	195	410	1021	2016	4837	9250
87A-F00 Series	--	--	--	--	75	--	195	410	1021	2016	4837	9250

SEATS	VALVE SIZE STD PORT (INCHES)	DIFFERENTIAL PRESSURES (PSIG) (IN.-LBS.)									
		0	100	200	300	400	500	600	700	740	LSST*
PCTFE	1/2" FP 300	121	128	130	133	136	138	141	144	147	150
	3/4" FP 300	162	170	174	177	181	184	188	192	196	200
	1" FP 300	182	191	195	199	203	208	212	216	221	225
	1.5" FP 300	404	425	434	443	452	461	471	480	490	500
	2" FP 300	1616	1702	1736	1772	1808	1845	1882	1921	1960	2000
	3" FP 300	3395	3573	3646	3721	3796	3874	3953	4034	4116	4200
PCTFE	4" FP 300	4445	4679	4775	4872	4972	5073	5177	5282	5390	5500
	6" FP 300	8082	8508	8681	8858	9039	9224	9412	9604	9800	10000
	8" FP 300	12123	12761	13022	13288	13559	13836	14118	14406	14700	15000

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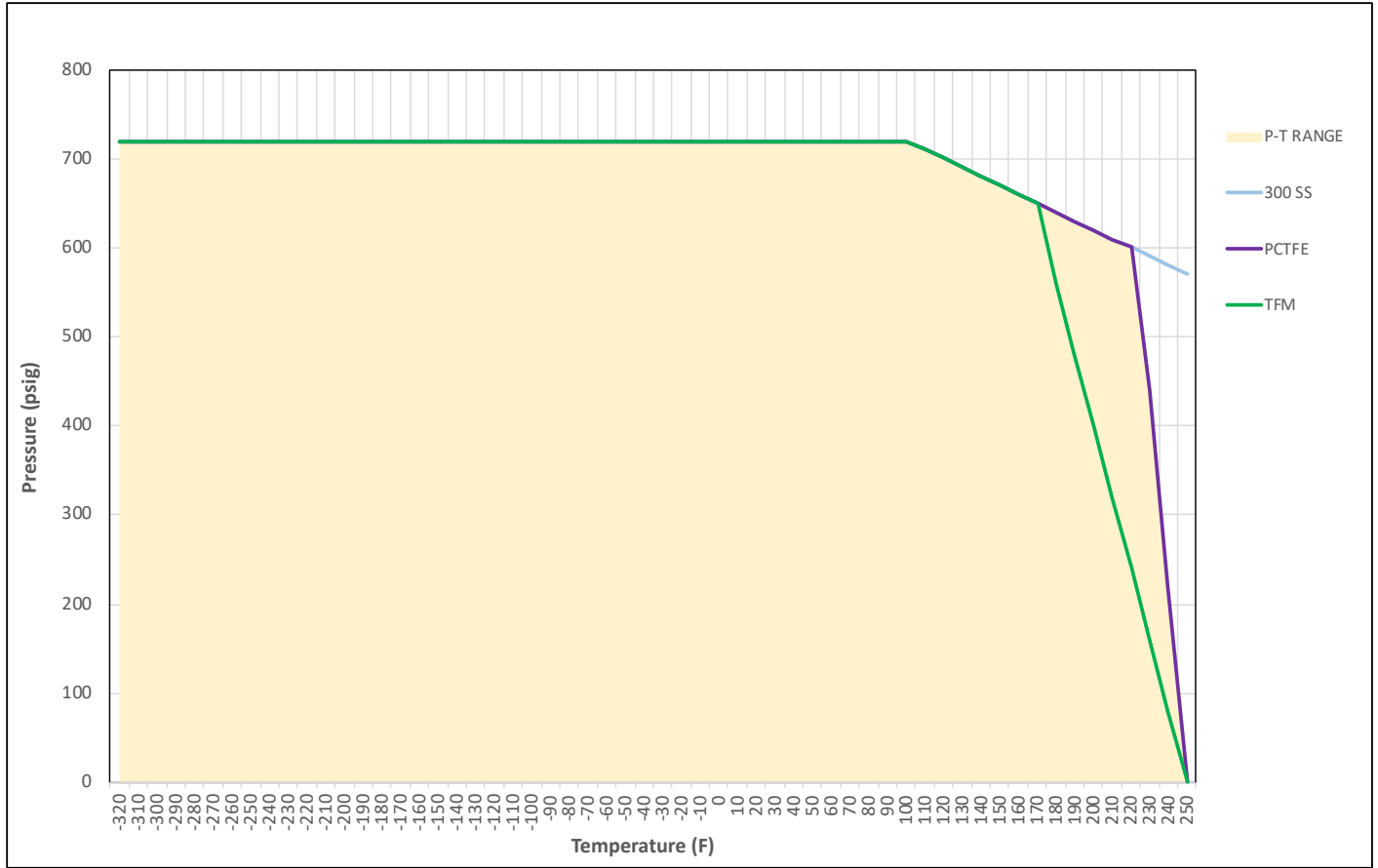
pressure/temperature ratings

engineering data

CLASS 300

(SS) ASTM A351-CF8M OR ASTM A351-CF3M

GRAPH 2



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customer service 704.841.6000

aalberts-ips.us





features & benefits

ASME cryogenic flanged ball valves

X87A series

standards compliance

Except where specifically noted all valves within this family of products complies with the requirements of this listed standard.

- ASME B16.5 "Pipe Flanges and Flanged Fittings"
- ASME B16.10 "Face to Face Dimensions of Valves"
- ASME B16.34 "Valves - Flanged, Threaded, and Welding End"
- ASME B31.1 "Power Piping"
- ASME B31.3 "Chemical Plant and Petroleum Refinery Piping"
- ASME B31.8 "Gas Transmission and Distribution Piping Systems"
- ASME B6364 "Valves for Cryogenic Service"
- API 607 "Fire Test - Soft Seated Quarter Turn Valves"
- API 608 "Ball Valves - Flanged, Threaded, and Welding End"
- API 641 "Type Testing of Quarter-turn Valves for Fugitive Emissions"
- MSS SP-25 "Standard Marking System for Valves"
- MSS SP-61 "Pressure Testing of Steel Valves"
- MSS SP-72 "Ball Valves with Flanged or Buttweld Ends"
- NACE MR0175 (2000)
- NACE MR0103 (2003)

standard features

Except where specifically noted all valves within this family of products include all listed features as standard.

- Two Position Locking Device (Valves 6" Full Port, 8" Standard Port and smaller)
- ISO 5211 Mounting Pad Bolt Pattern
- Side Vented Ball for Thermal Expansion
- Anti-static Grounded Ball and Stem
- Blowout-Proof Stem Design
- Vacuum Service to 29 inches of Hg
- CE Marking (with "-CE" suffix)
- API 641 (Low E) Compliant

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