



93-100 Series



Carbon Steel Uni-Body Ball Valve

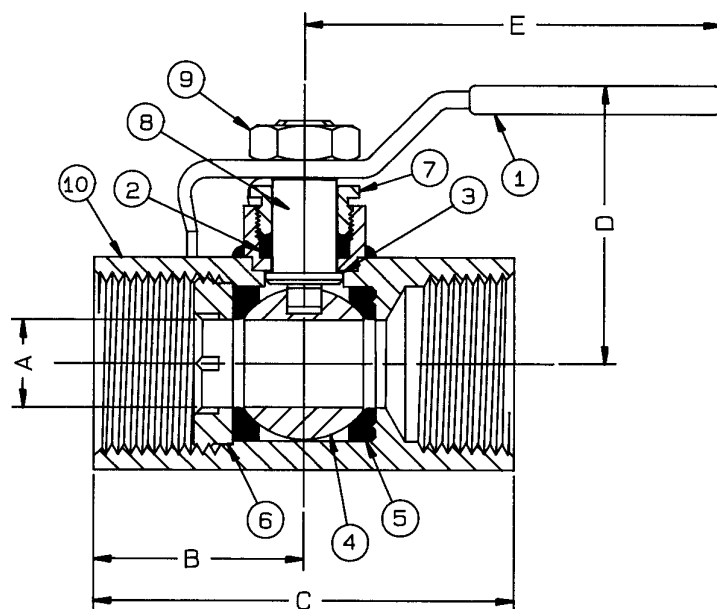
Threaded, 1/4" to 1" 2000 psig WOG, 1-1/4" to 2" 1500 psig WOG, Cold Non-Shock. 150 psig Saturated Steam.
Federal Specification: WW-V-35C, Type: II, Composition: CS, Style: 3.
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES

- (-24) Certified to API standard 607, 4th Edition, Class 600 burn
- Uni-body barstock steel design
- Reinforced seats and seals
- Blow-out-proof stem design
- Adjustable packing gland
- Compact
- Nitride corrosion protection

STANDARD MATERIAL LIST

1. Lever and grip	Steel, zinc plated w/vinyl	6. Retainer	A108-CS
2. Stem packing	MPTFE	7. Gland nut	A108-CS
3. Stem bearing	RPTFE	8. Stem	A108-CS zinc plated
4. Ball	A108-CS chrome plated	9. Lever nut (Screw 1/4" to 1/2")	Steel, zinc plated
5. Seat (2)	RPTFE	10. Body	A108-CS



VARIATIONS AVAILABLE:

93-140 Series (316 SS Ball & Stem)

OPTIONS AVAILABLE:

(SUFFIX)	OPTION	SIZES
-02-	Static Grounded	1/4" to 2"
-03-	1-1/4" CS Stem Extension	1/4" to 2"
-04-	2-1/4" CS Stem Extension	1/4" to 2"
-07-	Steel Tee Handle	1/4" to 2"
-08-	90° Reversed Stem	3/4" to 2"
-10-	SS Lever & Nut	1/4" to 2"
-14-	Side Vented Ball (Uni-Directional)	1/4" to 2"
-15-	Wheel Handle, Steel	1/4" to 1-1/2"
-19-	Lock Plate (Suggest "92")	1/4" to 2"
-24-	Graphite Packing	1/4" to 2"
-45-	Less Lever & Nut	1/4" to 2"
-60-	Grounded Ball & Stem	3/4" to 2"
-P01-	BSPP (Parallel) Thread Connection	1/4" to 2"
-T01-	BSPT (Tapered) Thread Connection	1/4" to 2"

CARBON STEEL UNI-BODY SATURN® BALL VALVE

NUMBER	SIZE	A	B	C	D	E	Wt.
93-101-01	1/4"	.38	1.14	2.18	1.63	3.68	.56
93-102-01	3/8"	.38	1.14	2.18	1.63	3.68	.56
93-103-01	1/2"	.38	1.14	2.18	1.63	3.68	.56
93-104-01	3/4"	.50	1.35	2.66	1.75	3.68	.79
93-105-01	1"	.63	1.51	3.03	1.93	4.68	1.27
93-106-01	1-1/4"	.81	1.79	3.62	2.09	4.68	2.26
93-107-01	1-1/2"	1.00	1.96	4.00	2.71	5.50	3.57
93-108-01	2"	1.25	2.08	4.71	2.92	5.50	5.94

For Pressure/Temperature Ratings,
Refer to Page M-12, Graph No. 13
(1/4" to 1")

Refer to Page M-11, Graph No. 11
(1-1/4" to 2")

C_v FACTORS
87A-100 & 88A-100 SERIES

SIZE	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10" ⁽¹⁾
FULL OPEN	86	104	234	375	673	1099	1902	3890

C_v FACTORS
87A-200 & 88A-200 SERIES

SIZE	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10" ⁽¹⁾
FULL OPEN	15	19	75	195	410	545	1021	2016	4837	9250	15170

(1) Calculated Data

C_v FACTORS
9A-100, 90-100, 91-100,
92-100, 93-100 & 96-100 SERIES

SIZE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
OPEN 90°	8.3	6.7	5.7	10	16	25	40	62

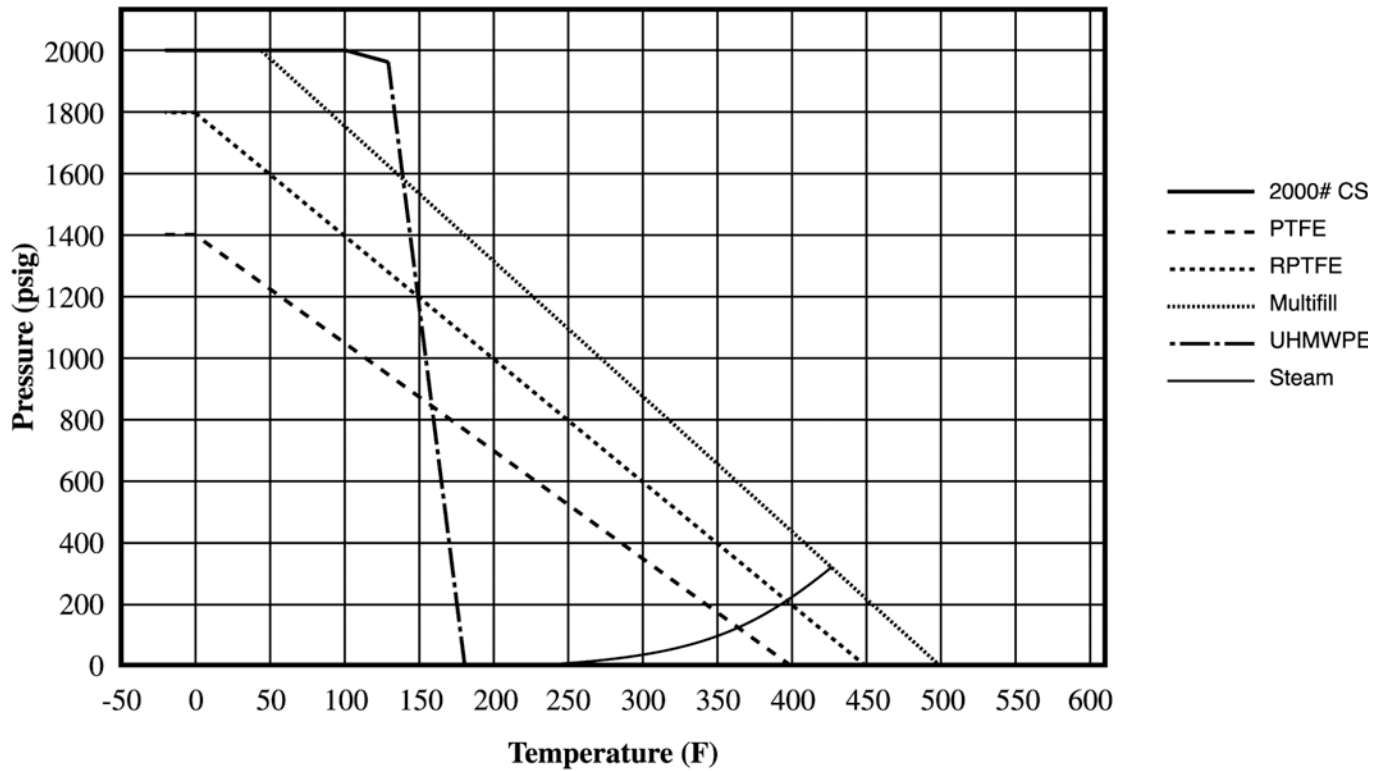
C_v FACTORS
70-600 & 76-600 SERIES

SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
FULL OPEN	5.4	12	14	21	34	47

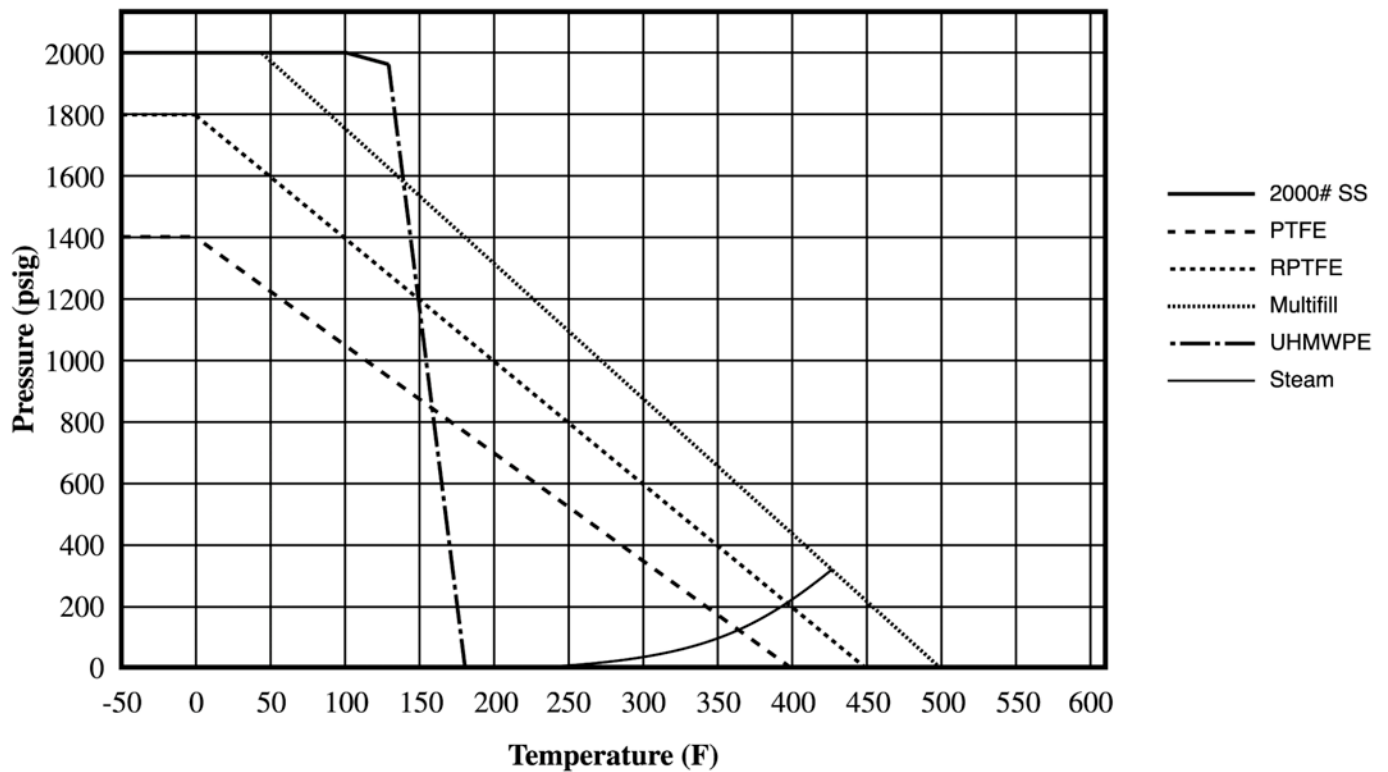
C_v FACTORS
"72" SERIES

SIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
FULL OPEN	26	48	65	125	170	216

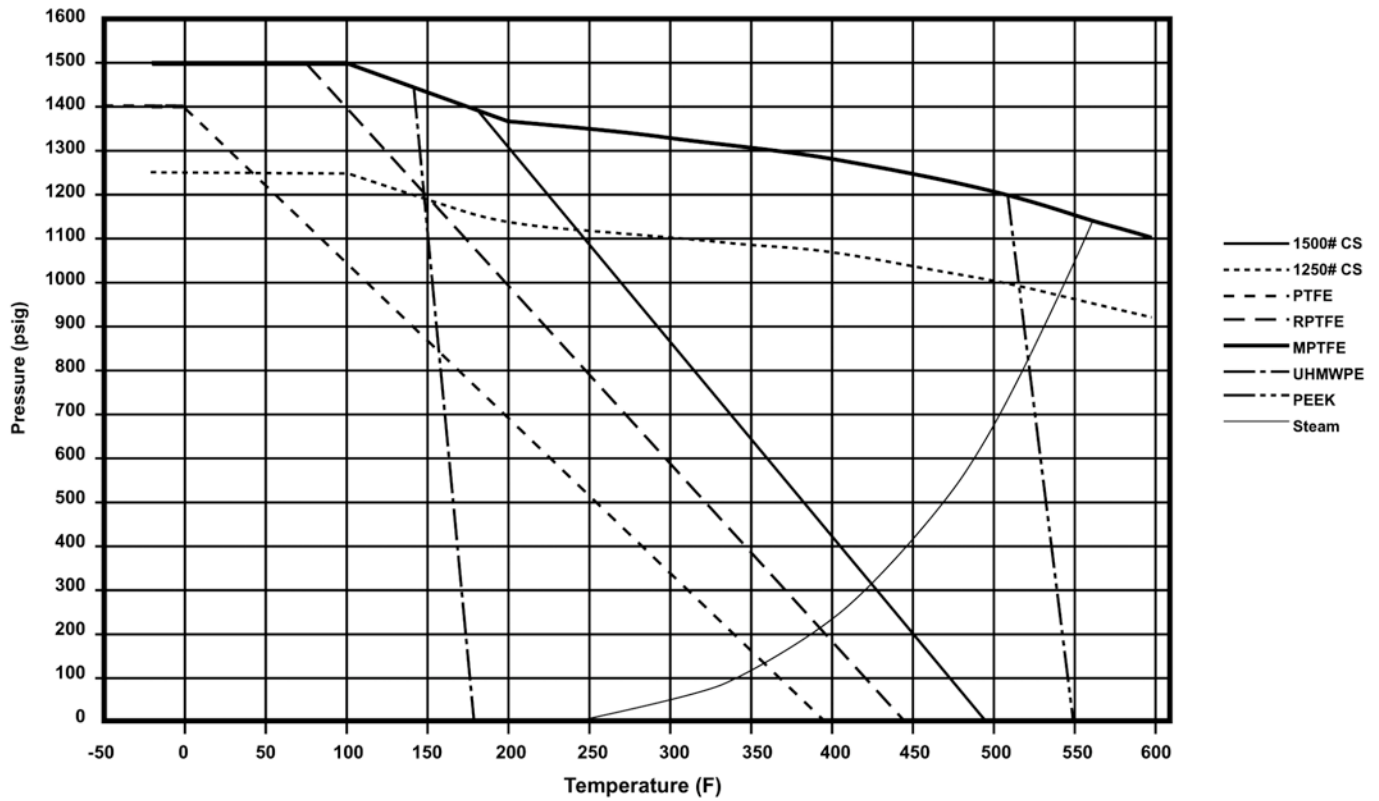
2000# CS P-T Rating (Graph 13)



2000# SS P-T Rating (Graph 14)



1500# CS P-T Rating (Graph 11)



1500# SS P-T Rating (Graph 12)

