



# 76F-100-A Series

## Stainless Steel Full Port Ball Valve



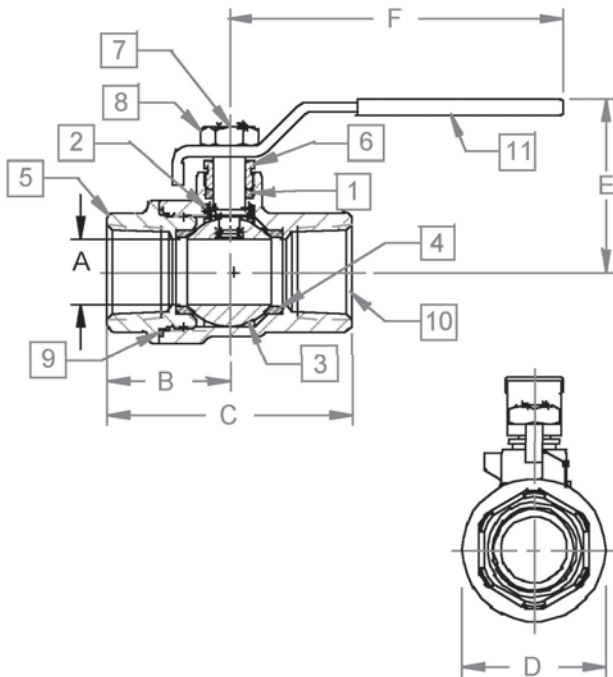
Threaded, 1/2"-2" 1000 psig CWP Cold Non-Shock, (See referenced P/T chart)  
 150 psig Saturated Steam, Vacuum Service to 29 inches Hg.  
 Federal Specification: WW-V-35C, Type: II, Composition: SS, Style: 3.  
 MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

### FEATURES

- Investment cast components
- Reinforced seats
- Two-piece body
- Blow-out-proof stem design
- Adjustable packing gland
- Meets NACE MR-01-75-2000
- SS lever and nut
- Available with SS latch lock lever (-27)

### STANDARD MATERIAL LIST

1. Stem packing	MPTFE	6. Gland	A276-316 SS
2. Stem bearing	RPTFE	7. Stem	A276-316 SS
3. Ball	A276-316 SS	8. Lever nut	304 SS
4. Seat (2)	RPTFE	9. Body Seal	RPTFE
5. Retainer	A351-CF8M	10. Body	A351-CF8M
		11. Lever and grip	SS w/vinyl



### OPTIONS AVAILABLE:

SUFFIX	OPTION	SIZES
-02-	Stem Grounded	1/2" to 2"
-08-	90° Reversed Stem	1/2" to 2"
-14-	Side Vented Ball (Uni-Directional)	1/2" to 2"
-24-	Graphite Packing	1/2" to 2"
-27-	SS Latch-Lock Lever & Nut	1/2" to 2"
-30-	Cam-Lock and Grounded	1/2" to 2"
-32-	SS Tee Handle & Nut	1/2" to 2"
-39-	SS Hi-Rise Locking Wheel Handle, SS Nut	1/2" to 2"
-40-	Cyl-Loc and Grounded	1/2" to 2"
-44-	Seal Welded	1/4" to 2"
-45-	Less Lever & Nut	1/2" to 2"
-46-	Latch Lock Lever - Lock in Closed Position Only	1/2" to 2"
-47-	SS Latch Lock Oval Handle	1/2" to 2"
-48-	SS Oval Handle (No Latch) & Nut	1/2" to 2"
-49-	Assembled Dry	1/2" to 2"
-56-	Multifill Seats & Packing	1/2" to 2"
-57-	Oxygen Cleaned	1/2" to 2"
-60-	Static Grounded Ball & Stem	1/2" to 2"
-P01-	BSPP (Parallel) Thread Connection	1/2" to 2"
-T01-	BSPT (Tapered) Thread Connection	1/2" to 2"

### STAINLESS STEEL FULL PORT BALL VALVE

NUMBER	SIZE	A	B	C	D	E	F	WT.
76F-103-01A	1/2"	.50	1.21	2.35	1.27	1.73	3.85	0.57
76F-104-01A	3/4"	.75	1.39	2.77	1.62	1.96	3.85	0.91
76F-105-01A	1"	1.00	1.67	3.34	2.00	2.27	4.75	1.38
76F-106-01A	1-1/4"	1.25	1.96	3.92	2.73	3.21	7.77	4.17
76F-107-01A	1-1/2"	1.50	2.05	4.10	2.92	3.31	7.77	4.69
76F-108-01A	2"	2.00	2.37	4.74	3.75	3.69	7.77	6.90

**For Pressure/Temperature Ratings,  
 Refer to Page M-10, Graph No. 8**

# FLOW DATA

## For Apollo® Ball Valves

The listed Cv "factors" are derived from actual flow testing, in the Apollo® Ball Valve Division, Conbraco Industries, Inc., Pageland, South Carolina. These tests were completed using standard "off the shelf" valves with no special preparation and utilizing standard schedule 40 pipe. It should be understood that these factors are for the valve only and also include the connection configuration. The flow testing is done utilizing water as a fluid media and is a direct statement of the gallons of water flowed per minute with a 1 psig pressure differential across the valve/connection unit. Line pressure is not a factor. Because the Cv is a factor, the formula can be used to estimate flow of most media for valve sizing.

### Flow of Liquid

$$Q = Cv \sqrt{\frac{\Delta P}{SpGr}}$$

$$\text{or } \Delta P = \frac{(Q)^2 (SpGr)}{(Cv)^2}$$

Where:

Q = flow in US gpm  
 ΔP = pressure drop (psig)  
 SpGr = specific gravity at flowing temperature  
 Cv = valve constant

### Flow of Gas

$$Q = 1360 Cv \sqrt{\frac{(\Delta P) (P_1)}{(SpGr) (T)}}$$

$$\text{or } \Delta P = \frac{5.4 \times 10^{-7} (SpGr) (T)}{(Q)^2} (Cv)^2 (P_2)$$

Where:

Q = flow in SCFH  
 ΔP = pressure drop (psig)  
 SpGr = specific gravity (based on air = 1.0)  
 P<sub>1</sub> = outlet pressure-psia (psig + 14.7)  
 T = (temp. °F + 460)  
 Cv = valve constant

### Cv FACTORS

#### SERIES:

70-100, 71-100, 71AR, 73A-100,  
 74-100, 76-100, 76AR, 80-100  
 81-100, 89-100

SIZE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
OPEN   90°	8.4	7.2	15	30	43	48	84	108	503	370	670

### Cv FACTORS

#### 76F, 77, 77AR, 77C, 77D SERIES

SIZE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
OPEN   90°	8.1	15	15	51	68	125	177	389	503

### Cv FACTORS

#### 82-100/200, 83R-100/200/700, 85R-100/200, 86R-100/200/700, 83-500/600, 86-500/600/900 SERIES

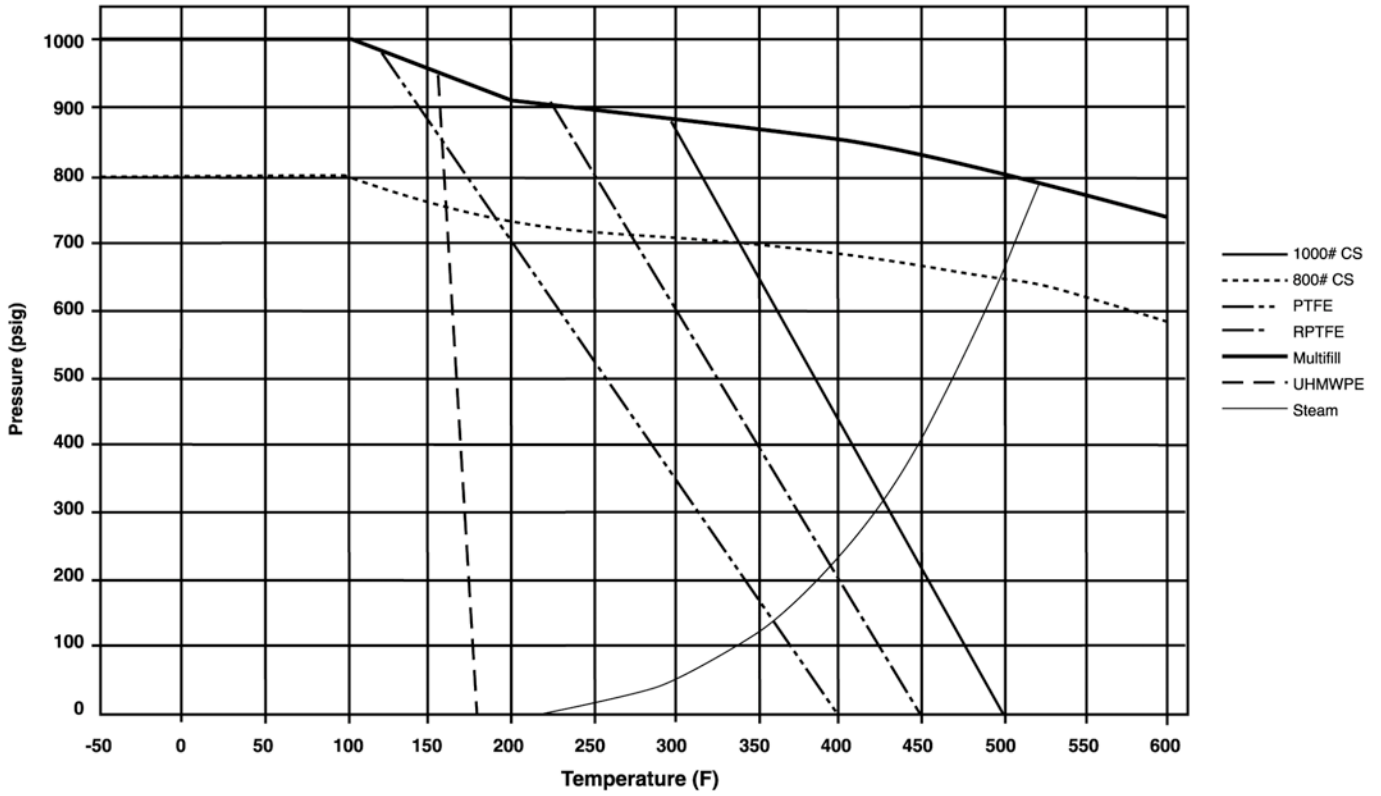
SIZE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"
OPEN   90°	8.1	14	26	51	68	120	170	376	510	996	1893

### Cv FACTORS

#### 83A/83B, 86A/86B, 86C SERIES

SIZE	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
OPEN   90°	8.1	14	26	51	68	120	170	376

## 1000# CS P-T Rating (Graph 7)



## 1000# SS P-T Rating (Graph 8)

