

Series 82/83 and AF82/AF83 Full-Port Ball Valves

Full-port valves offer maximum capacity, minimum restriction and optional fire-rated design

Series 82 – ANSI 150# Flanged Full-Port Ball Valve

Series 83 – ANSI 300# Flanged Full-Port Ball Valve

Flowserve Worcester Controls Flanged, Full-Port Valves are designed to meet recognized industry standards in a wide variety of industries, including chemical processing, petrochemical, oil and gas production, pulp and paper and others.

Capable of handling a wide range of liquids, suspended solids and gases in these industries, these valves offer all the advantages inherent in a ball valve: quick, quarter-turn operation, visual indication of the valve position, straight uninterrupted flowpath, and compact size. Plus, the full-port feature minimizes the pressure drop across the valve—important for critical process applications, while maximizing flow capability and throughput economy—for general line services.

Designed with fire safety in mind, their rugged construction facilitates inspection and repair while ensuring long life and durability. Like all Worcester ball valves, they offer tighter shutoff, high cycle life, low torque operation, and the ability to automate with a choice of actuation.

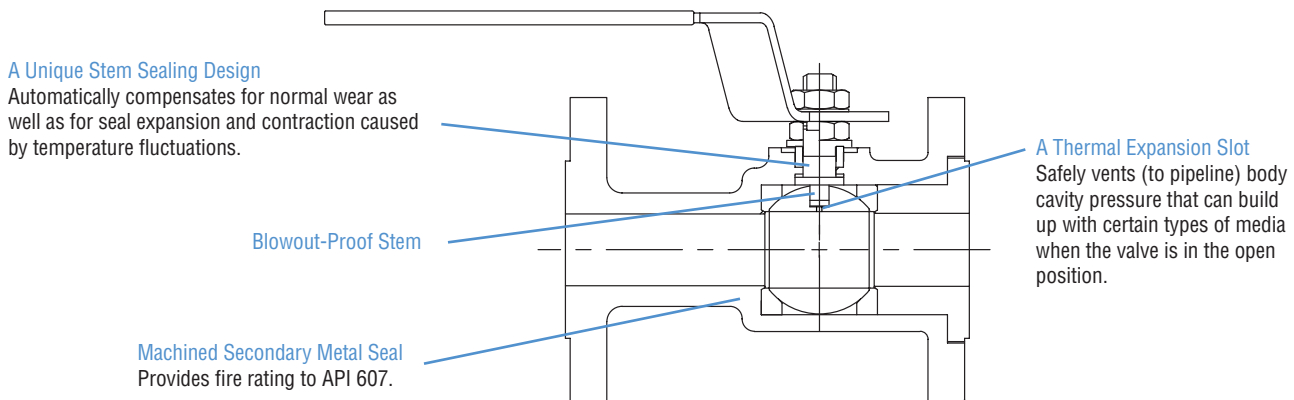
When you consider these and other features that we have built in as standard to our 82 and 83 Series Valves, you will know why Worcester Controls has been at the forefront of ball valve technology for over 30 years, and you will know why so many engineers specify Worcester—No Equal.

Secondary metal seats provide fire safety—machined into the seat area of the body cavity are raised metal lips which perform several functions.

In normal service they help support the seats, to prevent them from deforming and also help shield them from abrasive media.

If the valve should be subjected to a fire, the lip acts like a dam to prevent the softening downstream seat from being forced into the port and creating a leak.

When the seat is totally sublimated in a fire, the lip acts as a secondary seat, forming the metal-to-metal seal with the ball.

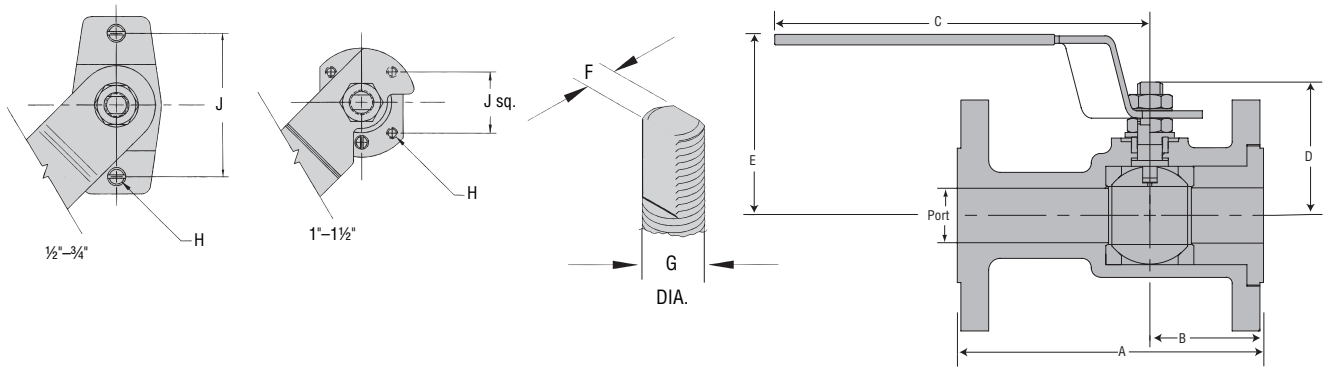


Specifications

- Sizes: ½", ¾", 1", 1½", 2½", 10"
(For 2" and 10" sizes, see Series 818 and 828 brochure)
- Flanges: Series 82 – ANSI 150# flanges, Series 83 – ANSI 300# Flanges.
- Body: One-piece (½"–1½") and two-piece (2½", 10") construction available in 316 – stainless steel ASTM A351 GR. CF8M; or carbon steel ASTM A216, GR. WCB.
- Body Studs: ASTM A193 GRB7 (2½", 10" only)
- Nut: ASTM A194 GR2H (2½", 10" only)
- Ball and Stem: 316 stainless steel. (½"–1½" solid ball only)
- Seats: TFE seats, Reinforced TFE seats. Polyfill® seats are available, consult Flowserve.
- Body Seal: TFE (82 & 83) or TFE-coated stainless steel (½"–1½" AF82 & AF83). Graphite (2½", 10" AF82 & AF83 only)
- Operation: ½"–2½" valves are supplied with a handle operator. 10" requires a gear operator. Gear operators, which are sold separately, can be seen in brochure WCABR1005. Pneumatic and electric actuators are also available.
- Standards: ANSI B16.10 Face-to-face dimensions.* ANSI B16.5 150# and 300# flange dimensions. ANSI B16.34, ANSI B31.1, ANSI B31.3. MSS SP-72. API 6D, pipeline valves. BS 5251, Anti-static, fire rating, available as option. NACE MR-01-75 (Revision 1984) API 607 tested.

*Note: 10" Series 82 & 83 meet "long patterns" face-to-face dimensions.

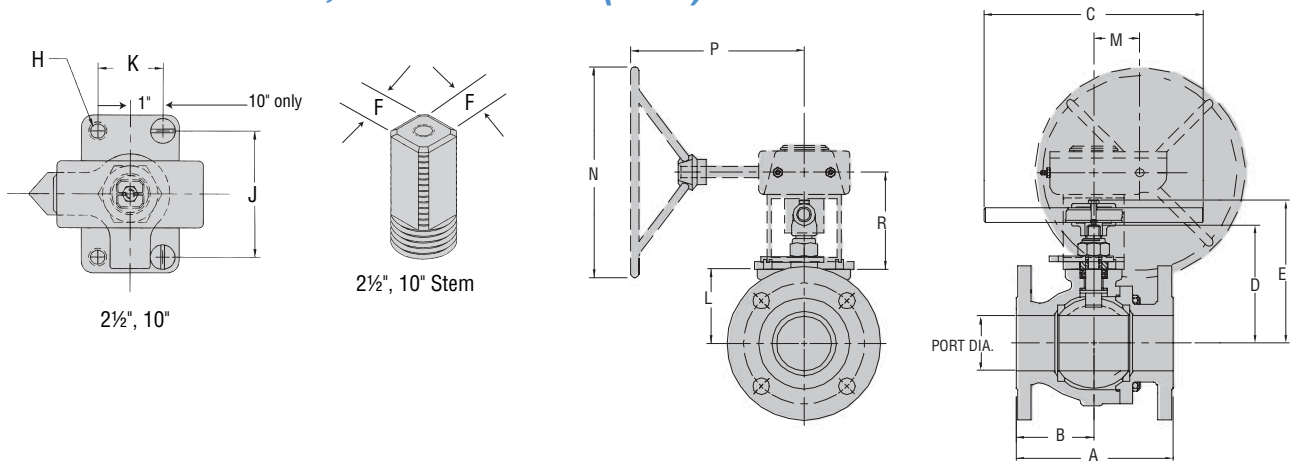
Dimensions ½"-1½" – inches (mm)



Valve Size		Series 82 150#		Series 83 300#		C	D	E	F	G	H	J
inches	port	A	B	A	B							
½"	.56	4.25	1.81	5.50	1.81	5.53	1.66	2.98	.22	.38	¼ - 20	2.13
	(14.2)	(108)	(46.0)	(140)	(46.0)	(140.5)	(41.7)	(75.7)	(5.6)	(9.7)		(54.1)
¾"	.81	4.62	2.31	6.00	2.31	6.53	2.19	3.40	.30	.44	¼ - 20	2.50
	(20.6)	(117.5)	(58.6)	(152.4)	(58.6)	(165.9)	(755.6)	(86.4)	(7.6)	(11.2)		(63.5)
1"	.1	5	2.56	6.5	2.56	6.31	2.38	3.78	.30	.44	¼ - 20	1.17
	(25.40)	(127)	(65.0)	(165.1)	(65.0)	(160.3)	(60.5)	(96.0)	(7.6)	(11.2)		(29.7)
1½"	1.5	6.5	2.74	7.5	2.74	8.10	3.06	4.77	.34	.56	¼ - 20	1.39
	(38.1)	(165.1)	(69.6)	(190.5)	(69.6)	(205.7)	(77.7)	(121.2)	(8.6)	(14.2)		(35.3)

Dimensions are for layout purposes only. For tolerances contact Flowserve. Metric dimensions are converted from standard English.

Dimensions 2½", 10" – inches (mm)



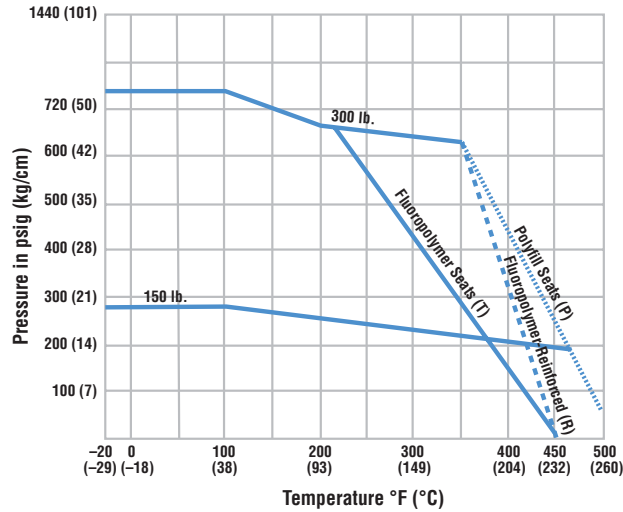
Valve Size		Series 82 150#		Series 83 300#		C	D	E	F	H	J	K	L	M	N	P	R	Valve Weights lb. (kg)			
inches	port	A	B	A	B													Series 82	Series 83		C.S.
																		C.S.	S.S.	C.S.	
2½"	2.5	7.5	3.54	9.5	3.67	24.00	5.67	7.20	.75	M10	3.38	1.75	3.86	-	-	-	-	44	41	50	47
	(63.5)	(190.5)	(90)	(241.3)	(93.2)	(610)	(144)	(183)	(19)		(86)	(44)	(98)	-	-	-	-	(20)	(19)	(23)	(21)
10"	10	21	10.51	22.37	11.2	-	15.50	-	1.38	5/8-11	8.25	2.25	12.13	4.37	18.00	10.19	18.44	559	497	792	726
	(254)	(533.4)	(267.0)	(568.2)	(284.4)	-	(394)	-	(35)		(210)	(57)	(308)	(111)	(457)	(259)	(468)	(254)	(226)	(360)	(330)

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C_v Data

Valve Size	C _v (USGPM)
½"	32
¾"	54
1"	105
1½"	275
2½"	780
10"	18,500

Seat Pressure/Temperature Ratings



How to Order

Valve Size	Series	Body	Ball and Stem	Seats	Body Seal	End Connections	Variations
½"	82 - 150#	4 - Carbon Steel	6 - Stainless steel	T - TFE (not available on 10" valves)	T - (82 & 83 only)	150 - ANSI 150 (82 & AF82 only)	See below
¾"	AF82 - 150#	6 - 316 Stainless Steel		R - Reinforced TFE	M - TFE coated 316 S.S. AF82 & AF83 (fire-rated only)	300 - ANSI 300 (83 & AF83 only)	
1"	83 - 300#			P - Polyfill (not available on 10" valves)	Z - Graphite (2½", 10" AF83 & AF83 only)		
1½"	AF83 - 300#						
2½"							
10"							

ORDERING EXAMPLE: A 1" Series 83 300# full-port valve with a carbon steel body, stainless steel ball and stem, reinforced TFE seats and a TFE Body Seal.

* Variation Listing (V-numbered options)

Blank	No Variations	V33	Oxygen Service without Source Inspections	V58	B16.34 Compliance
V3	Upstream Relief Hole	V36	Certificate of Compliance	V59	Extended Oval Handle
V5	Hydrostatic Testing	V37	Certificate of Compliance & Hydro Testing	V66	Certificate of Compliance, European Valve Orders
V6	Source Inspection	V46	Silicone-Free Lubricant		
V17	Grounding Thrust Bearing	V48	Extended Lever Handle		
V20	Oxygen Service				
V32	Oval Handle				

Polyfill® is a registered trademark of Flowserve Corporation.

Flowserve Corporation has established industry leadership in the design and manufacture of its products. When properly selected, this Flowserve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Flowserve products should be aware that Flowserve products might be used in numerous applications under a wide variety of industrial service conditions. Although Flowserve can (and often does) provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of Flowserve products. The purchaser/user should read and understand the Installation Operation Maintenance (IOM) instructions included with the product, and train its employees and contractors in the safe use of Flowserve products in connection with the specific application.

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For more information about Flowserve Corporation, visit www.flowserve.com or call USA 1-800-225-6989.

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