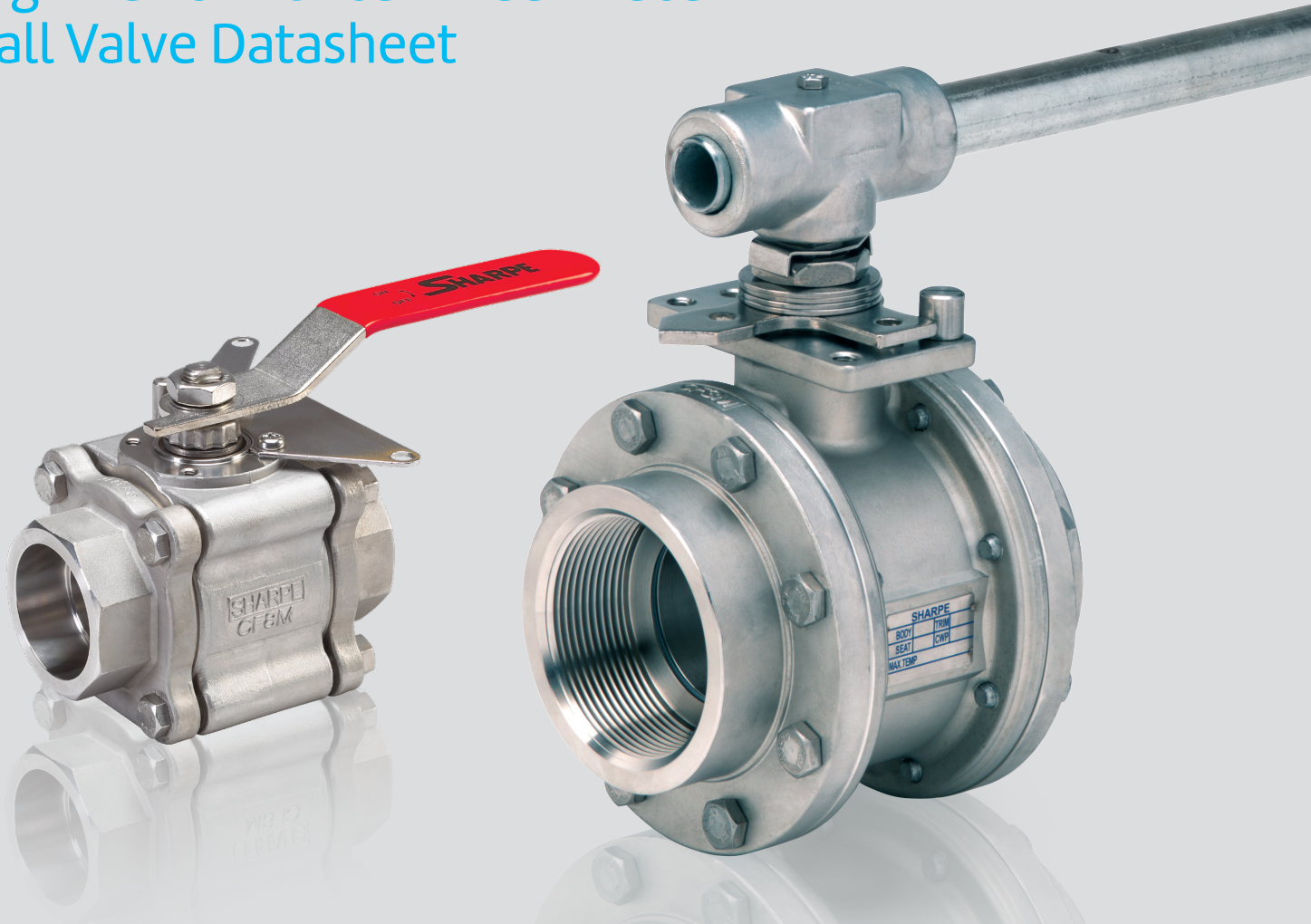


Building connections that last™



Sharpe® Series W84/W99

High Performance Three-Piece
Ball Valve Datasheet



High Performance Three–Piece Ball Valve

Sharpe® Series W84/W99



Design and Features:

Body Material

316 Stainless Steel, Carbon Steel & Alloy 20

Three–Piece Design

In–line serviceable swing–out center section allows easy access to internal valve components without disturbing alignment of pipe.

Stem Design

Live–loaded, bottom entry, blowout proof anti static stem features packing that extends valve cycle life over conventional ball valves and is the best choice for actuation.

Stem seals are live–loaded using Belleville springs to provide consistent sealing forces, reducing or eliminating the need for frequent seal adjustment.

Tongue and Groove Design

Fully encapsulated body seals, allowing ends to be welded in–line, without time consuming and labor intensive disassembly.

Design compensates for bolt expansion and reduces the chance of external leakage.

Helps prevent seal ruptures in high pressure, cryogenic or steam applications.

Floating Ball Design

Precision engineered and machined solid stainless steel ball with relief hole in the stem slot prevents build–up of cavity pressure while the valve is open.

Encapsulated Body Bolts

Heavy duty stainless steel bolting is protected from outside environment assuring valve integrity.

Ideal for wash–downs.

Slotted Seat Design

Relief slots help equalize body pressure and assure leak–tight sealing. Seats also provide a wiping action that cleans ball and seats each time valve is cycled.

Variety of End Combinations

A wide choice of end connections are available including, but not limited to; threaded, socket weld, butt weld, flanged and flush bottom tank pad ends.

ISO 5211 Integral Mounting Pad

Ideal for actuation.

Centering lip feature assures precise alignment of bracket, stem and coupler. Actuators may be retrofitted on existing Sharpe® Series W84/W99 without disruption of line integrity.

Allows for secondary containment unit to be added when necessary.

Lockable Handle

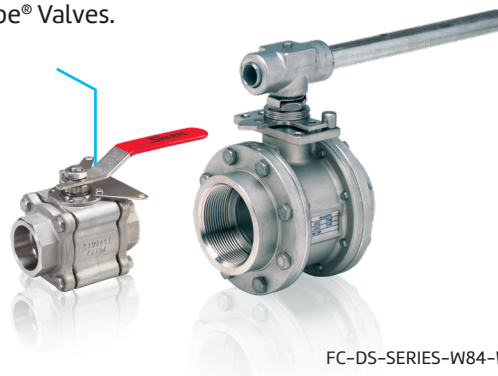
All Sharpe® Series W84/W99 valves are supplied with lever or pipe handles and are designed to permit locking the valve in either the open or closed position.

Traceability

Body and end piece castings are marked with heat codes providing traceability to the chemical analysis and material test reports performed at the foundry. CMTR's (Certified Material Test Reports) are available upon request.

Two Year Limited Warranty

Sharpe® Valves warrants its steam valves, Series W, against defects in manufacturing provided the products are used for the purposes for which they are manufactured and sold. Such warranty shall be binding on Sharpe® Valves for a period of two years from the date of shipment. The purchaser's right of remedy under this warranty shall be limited to the repair or replacement of products found to be defective by Sharpe® Valves.

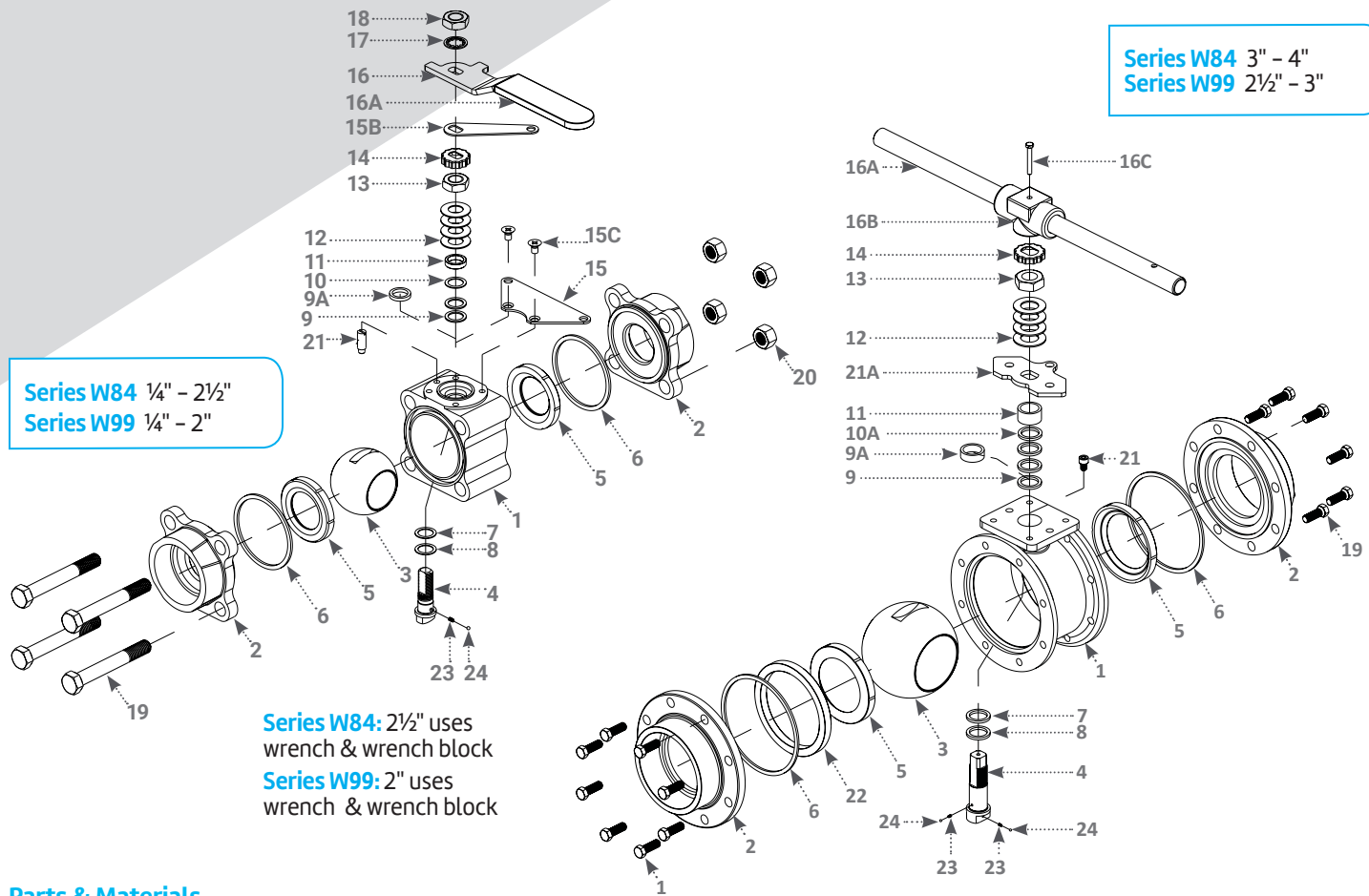


High Performance Three-Piece Ball Valve

Sharpe® Series W84/W99

Series W84 3" - 4"
Series W99 2½" - 3"

Series W84 ¼" - 2½"
Series W99 ¼" - 2"



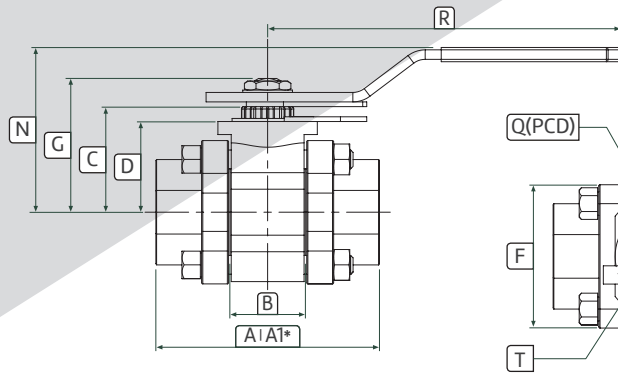
Series W84: 2½" uses
wrench & wrench block
Series W99: 2" uses
wrench & wrench block

Parts & Materials

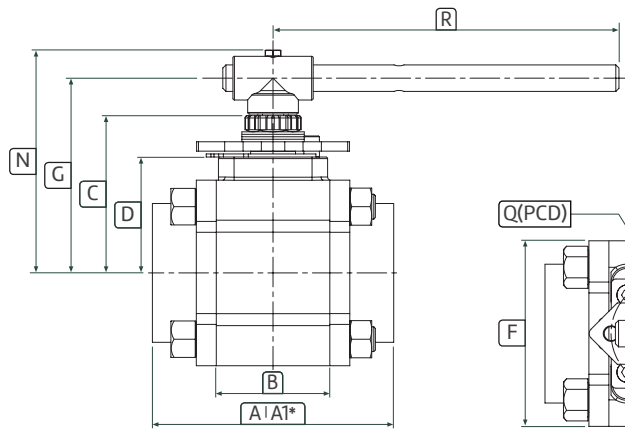
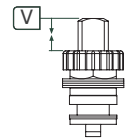
Part No.	Part	Qty	Material	Part No.	Part	Qty	Material
1	Body	1	316 Stainless Steel: ASTM A351 CF8M Carbon Steel: ASTM A216 WCB Alloy 20: ASTM A351 CN7M	14	Lock Tab	1	300 Series Stainless Steel
2	Ends	2	316L Stainless Steel: ASTM A351 CF3M Carbon Steel: ASTM A216 WCB Alloy 20: ASTM A351 CN7M	15	Lower Lock Latch	1	300 Series Stainless Steel
3	Ball	1	316 Stainless Steel, Alloy 20	15B	Upper Lock Latch	1	300 Series Stainless Steel
4	Stem	1	316 Stainless Steel, Alloy 20	15C	Latch Bolt	2	300 Series Stainless Steel
5	Seat	2	Nova, PEEK	16	Handle (¼" - 2")	1	300 Series Stainless Steel
6	Body Seal	2	Graphite	16A	Wrench (3" - 4")	1	Galvanized
7	Thrust Bearing	1	Nova (UHMWPE with UHMWPE Seats)	16B	Wrench Block	1	300 Series Stainless Steel
8	Thrust Bearing	1	PEEK (UHMWPE with UHMWPE Seats)	16C	Hex Head Bolt	1	300 Series Stainless Steel
9	Stem Packing	2	Nova (UHMWPE with UHMWPE Seats)	17	Lock Washer	1	300 Series Stainless Steel
9A	Stem Packing	1-2	Graphite	18	Handle Nut (¼" - 2")	1	300 Series Stainless Steel
10	Seal Protector	1	PEEK	19	Body Bolts	4/16	304 Stainless Steel
10A	Washer	1	300 Series Stainless Steel	20	Nuts	4	300 Series Stainless Steel
11	Gland	1	300 Series Stainless Steel	21	Stop Pin	1	300 Series Stainless Steel
12	Belleville Washer	4	300 Series Stainless Steel	21A	Stopper	1	300 Series Stainless Steel
13	Packing Nut	1	300 Series Stainless Steel	22	Seat Retainer	1	300 Series Stainless Steel Carbon Steel
				23	Anti-Static Spring	1	Hard Drawn Stainless Steel
				24	Anti-Static Ball	1	300 Series Stainless Steel

High Performance Three-Piece Ball Valve

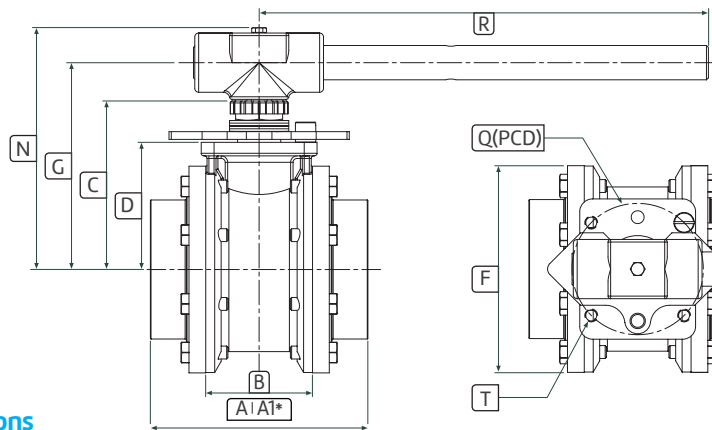
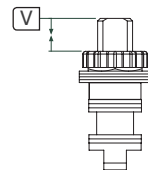
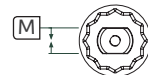
Sharpe® Series W84/W99



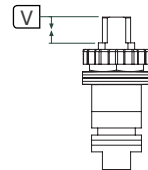
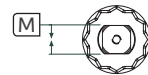
Series W84 1/2" – 2"
Series W99 1/4" – 1 1/2"



Series W84 2 1/2"
Series W99 2"



Series W84 3" – 4"
Series W99 3"



Dimensions

Standard Port W84	Full Port W99	A*	A1*	B	C	D	F	G	L	M	N	ε Q (ISO)	R	T	V
1/4", 3/8", 1/2"	1/4", 3/8"	2.62	2.62	0.82	1.22	1.06	1.81	1.58	3/8"-24 UNF	0.220	2.15	1.42 (F03)	4.53	M5 x P0.8	0.34
3/4"	1/2"	2.87	2.87	0.97	1.27	1.13	1.94	1.65	3/8"-24 UNF	0.220	2.28	1.42 (F03)	4.53	M5 x P0.8	0.39
1"	3/4"	3.72	3.72	1.25	1.73	1.51	2.38	2.23	1/2"-20 UNF	0.295	2.70	1.65 (F04)	5.79	M5 x P0.8	0.52
1 1/4"	1"	4.25	4.25	1.61	1.90	1.70	2.78	2.43	1/2"-20 UNF	0.295	2.89	1.65 (F04)	5.79	M5 x P0.8	0.53
1 1/2"	1 1/4"	4.58	4.50	1.90	2.17	1.73	3.12	2.90	3/4"-18 UNF	0.342	3.15	1.97 (F05)	6.78	M6 x P1.0	0.73
2"	1 1/2"	5.03	5.06	2.21	2.39	1.90	3.60	3.09	3/4"-18 UNF	0.342	3.37	1.97 (F05)	6.78	M6 x P1.0	0.73
2 1/2"	2"	5.88	5.87	2.93	3.98	2.85	4.77	4.88	M20 x P2.5	0.551	5.61	2.75 (F07)	8.73	M8 x P1.25	0.74
3"	2 1/2"	6.65	6.65	3.27	5.01	3.89	6.46	6.14	1" - 14 UNS	0.748	6.14	4.02 (F10)	13.74	M10 x P1.5	0.69
4"	3"	8.43	8.43	4.29	5.60	4.48	8.00	6.73	1" - 14 UNS	0.748	7.81	4.02 (F10)	13.74	M10 x P1.5	0.69

Note: *A – W84 Face to Face dimension for threaded, butt weld & socket weld ends | *A1 – W99 Face to Face dimension for threaded, butt weld & socket weld ends.

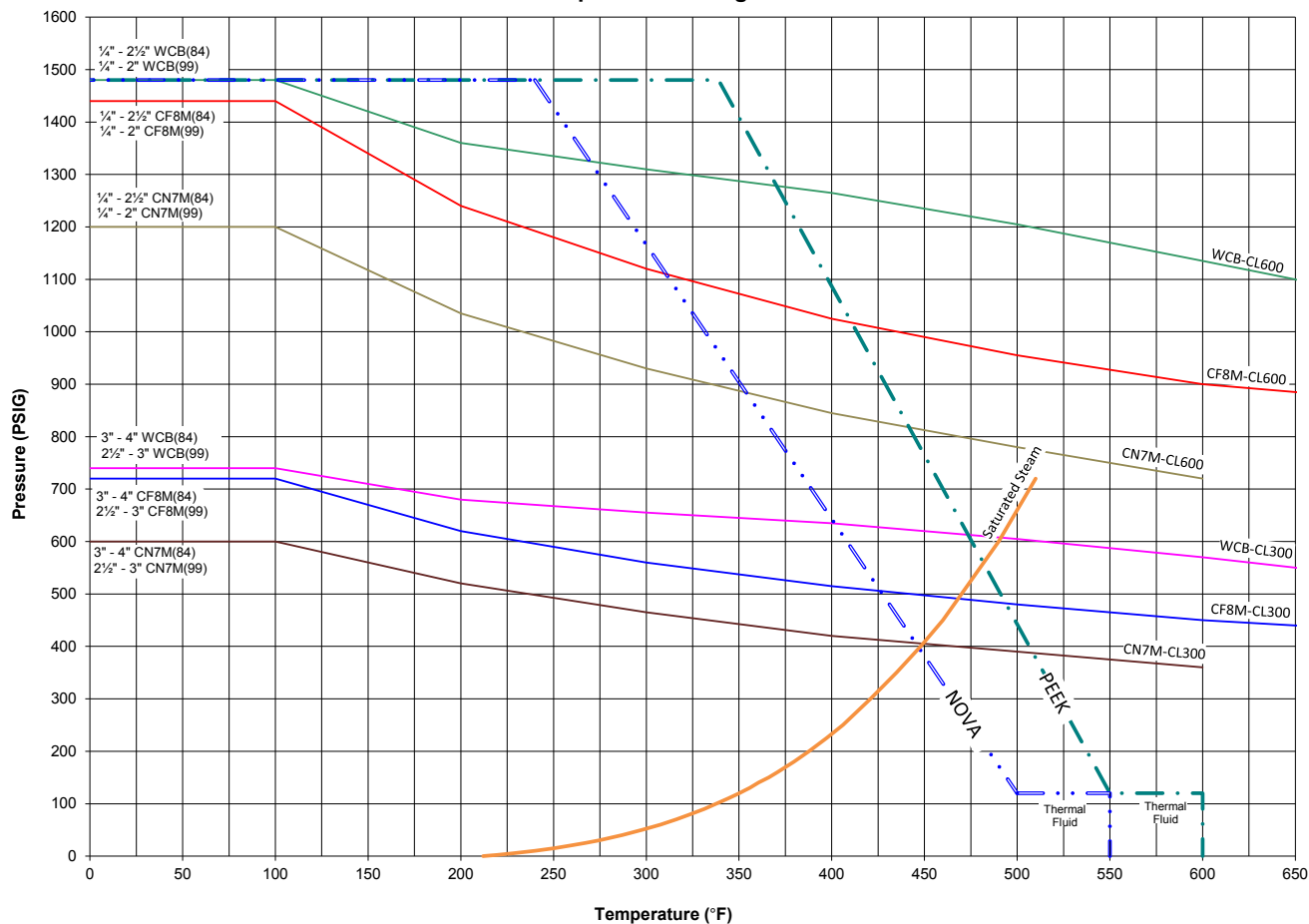
The dimensions above are for informational purpose only. Please refer to Sharpe® Valves if you need dimensions for construction.

High Performance Three-Piece Ball Valve

Sharpe® Series W84/W99



Pressure-Temperature Ratings Series W84/W99



Standard Port (W84) Full Port (W99)
Class 600 ½" – 2½" **Class 600** ¼" – 2"
Class 300 3" – 4" **Class 300** 2½" – 3"

Performance Data

W84	W99	C _v Flow Coefficient	Equivalent Length of Pipe (Feet)	Approx. Weight (lbs.)	Port Size
¼"	-	8	1.9	1.20	.44
⅜"	¼"	8	1.9	1.20	.44
½"	⅜"	8	1.9	1.20	.44
¾"	½"	12	6.3	1.70	.56
1"	¾"	32	3.1	3.00	.81
1¼"	1"	46	6.3	4.00	1.00
1½"	1¼"	80	4.3	6.00	1.25
2"	1½"	120	7.5	8.00	1.50
2½"	2"	240	5.00	25.00	2.00
3"	2½"	350	8.3	30.00	2.50
4"	3"	720	10.4	50.20	3.25

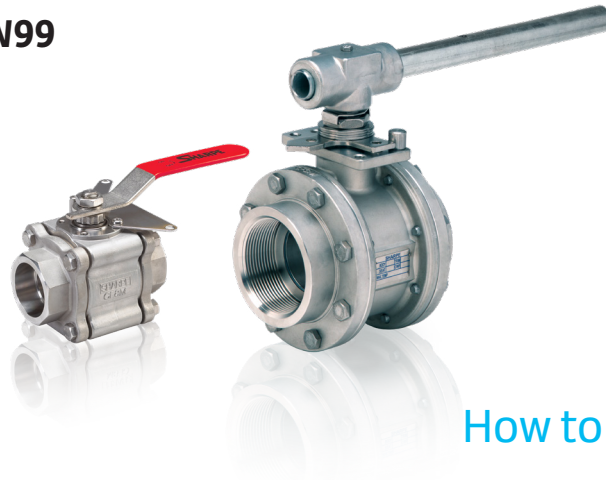
Applicable Standards

Body Wall Thickness	ASME B16.34
SW & Threaded Ends	ASME B16.11
Butt-weld Ends	ASME B16.25
Flange Dimensions	ASME B16.5
Basic Design	ASME B16.34 (Note 1)
Testing (Options)	ASME B16.34 API 598

Note 1:
When specified, valves can be furnished in accordance with ASME B16.34 requirements.

High Performance Three-Piece Ball Valve

Sharpe® Series W84/W99



How to order Series W84/W99

1"	W84	-	4	6	N	G	-	TE	-	OH
Size	Series		Body & Ends	Ball & Stem	Seat	Seal		Ends		Options

Size		Valve Series		Body & Ends		Seat		Ends		Options	
W84	W99	W84	Standard Port	2	Alloy 20*	N	Nova	TE	Threaded Ends (NPT)	OH	Oval Handle (up to 2")
-	¼"	W99	Full Port	4	Carbon Steel	P	Virgin PEEK	SW	Socketweld	L	Lockable Stem Extension
-	⅜"			6	Stainless Steel			BW10	Buttweld SCH 10*		
½"	½"							BW40	Buttweld SCH 40		
¾"	¾"							BW80	Buttweld SCH 80		
1"	1"										
1¼"	1¼"										
1½"	1½"										
2"	2"										
2½"	2½"										
3"	3"										
4"	-										

Note:
*POA.

About ASC Engineered Solutions

ASC Engineered Solutions is defined by quality—in its products, services and support. With more than 1,400 employees, the company's portfolio of precision-engineered piping support, valves and connections provides products to more than 4,000 customers across industries, such as mechanical, industrial, fire protection, oil and gas, and commercial and residential construction. Its portfolio of leading brands includes ABZ Valve®, AFCON®, Anvil®, Anvil EPS, Anvil Services, Basic-PSA, Beck®, Catawissa, Cooplet®, FlexHead®, FPPI®, Gruvlok®, J.B. Smith, Merit®, North Alabama Pipe, Quadrant®, SCI®, Sharpe®, SlideLOK®, SPF® and SprinkFLEX®. With headquarters in Commerce, CA, and Exeter, NH, ASC also has ISO 9001:2015 certified production facilities in PA, TN, IL, TX, AL, LA, KS, and RI.



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Building connections that last™

FC-DS-SERIES-W84-W89-v01 20211014

