



Durco[®] Microfinish[™] Ball Valve

F O R C H E M I C A L S E R V I C E S



The Best Standard Stem Seal In The Industry

Bulletin VM-60f

Durco Microfinish Ball Valves Offer Superior Stem Seal

Durco Microfinish ball valves take stem seal performance and durability to a new standard. The unique stem sealing system significantly enhances life cycle capability while reducing turning torque. With the quality and performance you expect from Flowserve, these valves are becoming the standard of the CPI.

Lockout Device
Standard through 8 in (200 mm) valves.

Gland Nut
Along with belleville washers adjusts packing pressure to compensate for normal wear and temperature fluctuations.

Stem
Large diameter, 316SS blowout-proof stem standard on both carbon steel and stainless steel valves.

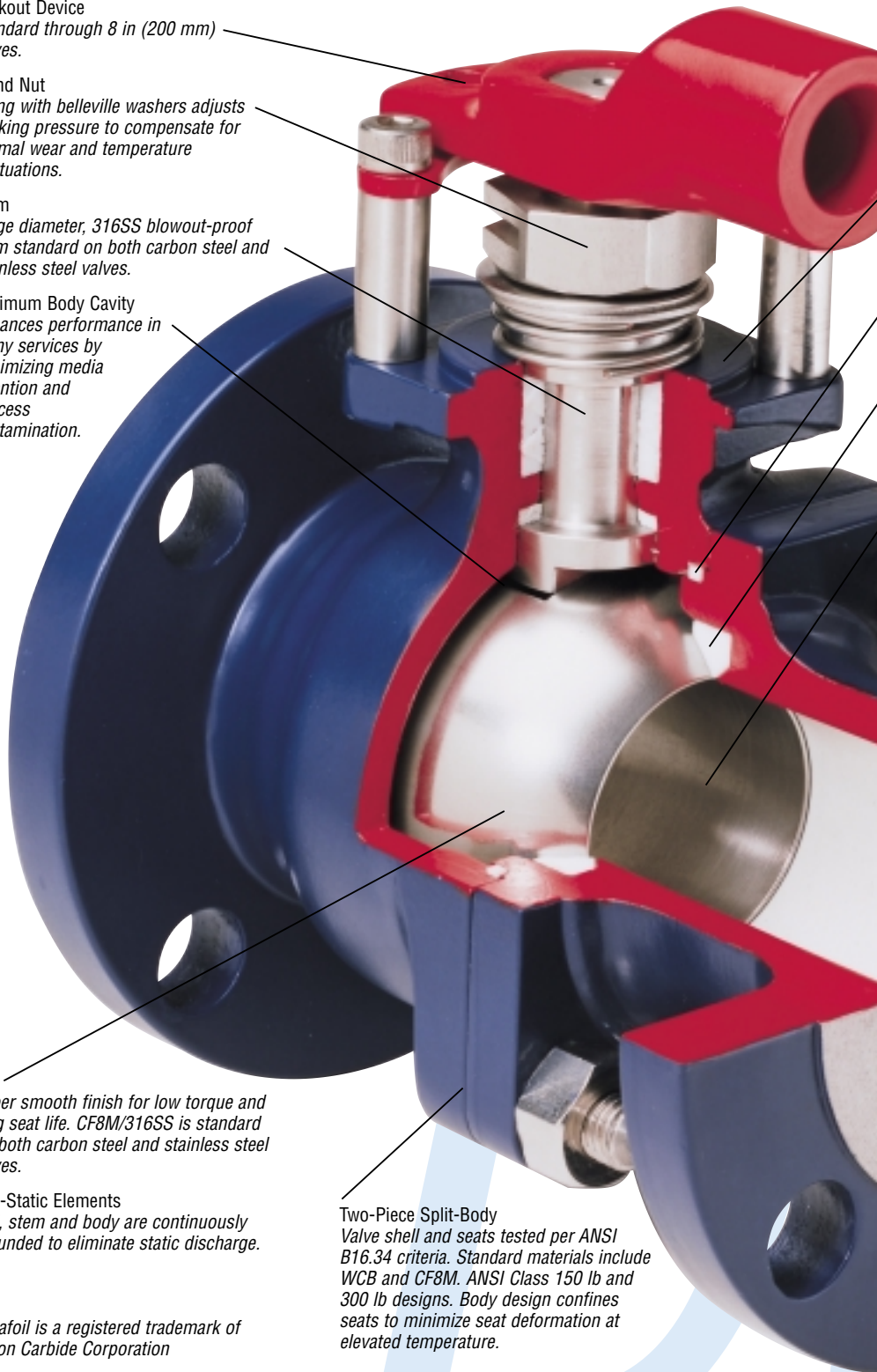
Minimum Body Cavity
Enhances performance in many services by minimizing media retention and process contamination.

Ball
Super smooth finish for low torque and long seat life. CF8M/316SS is standard for both carbon steel and stainless steel valves.

Anti-Static Elements
Ball, stem and body are continuously grounded to eliminate static discharge.

Two-Piece Split-Body
Valve shell and seats tested per ANSI B16.34 criteria. Standard materials include WCB and CF8M. ANSI Class 150 lb and 300 lb designs. Body design confines seats to minimize seat deformation at elevated temperature.

®Grafoil is a registered trademark of Union Carbide Corporation



The Best Standard Packing System In The Industry

Removable Handle
Increases flexibility, simplicity and security.

ISO 5211 Mounting Flange
Universal flange for easy, low cost actuation.

Body Gasket
PTFE standard. Grafoil® used for fire-sealed applications.

Seats
Durlon II standard for higher pressure and temperature applications. Optional virgin PTFE, carbon reinforced PTFE or glass reinforced PTFE.

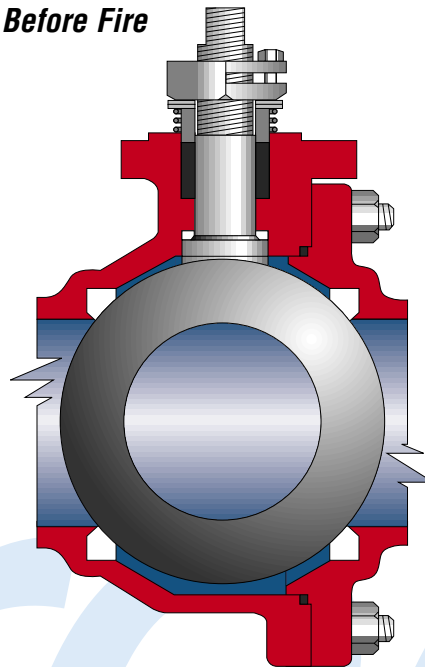
Large Port Openings
Maximize flow rates to meet or exceed competitive designs.



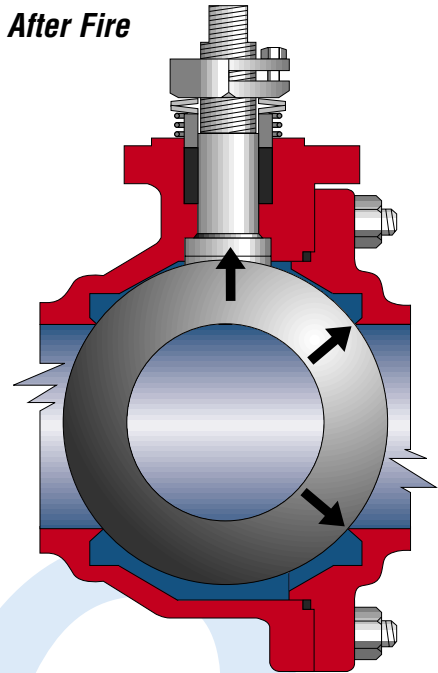
Positive stem seal even after 100,000 cycles

- PTFE cup and cone packing for unsurpassed seal life and cyclability. Standard on valves through 8 in (200 mm) sizes
- Smooth stem finish reduces torque and increases stem seal life
- Glass filled PTFE thrust washer aids sealing while reducing torque
- Belleville washers maintain constant load on cup and cone packing
- Stainless gland nut maintains packing compression through maximum operating temperature
- Double "D" stem positively indicates open or shut position

Before Fire



After Fire



Fire-sealed design meets API 607, Fourth Edition criteria

- Metal seat at the port opening provides line seal in the event the PTFE seat burns away in a fire
- Stem moves up to make a metal-to-metal seal

- Ball moves downstream to seal on metal seat
- Grafoil gasket forms the body seal
- Grafoil stem packing is standard for superior fire-sealed stem seal

Durco® Microfinish™ Ball Valve Stem Extensions

Precision cast to provide a sturdy and rugged platform on which to mount a manual operator or an actuated package, Durco Microfinish ball valve stem extensions are designed for the flanged, two-piece body.

These extensions have:

- Nominal 4 in (100 mm) height to accommodate pipe insulation
- Investment cast housing available in both WCB and CF8M
- Easy installation. Can be mounted in the field
- Extension has identical ISO mounting pad as the valve itself
- Set screw mount-to-stem to eliminate play
- 316 stainless steel stem
- Sizes 1 in (25 mm) through 6 in (150 mm) ASME Class 150; 1 in (25 mm) through 4 in (100 mm) ASME Class 300



Durco® Microfinish™ Ball Valve Stem Extensions

ASME Class 150, two-piece, flanged ball valves

Valve Size in (mm)	Bore	Part Number	List WCB	List CF8M
1 (25)	Regular	SE127	60	75
	Full	SE127	60	75
1-1/2 (40)	Regular	SE19	65	80
	Full	SE19	65	80
2 (50)	Regular	SE19	65	80
	Full	SE22	90	130
3 (80)	Regular	SE22	90	130
	Full	SE22	90	130
4 (100)	Regular	SE22	90	130
	Full	SE30	110	165
6 (150)	Regular	SE30	110	165

ASME Class 300, two-piece, flanged ball valves

Valve Size in (mm)	Bore	Part Number	List WCB	List CF8M
1 (25)	Regular	SE127	60	75
	Full	SE127	60	75
1-1/2 (40)	Regular	SE19	65	80
	Full	SE19	65	80
2 (50)	Regular	SE19	65	80
	Full	SE22	90	130
3 (80)	Regular	SE30	110	165
	Full	SE30	110	165
4 (100)	Regular	SE30	110	165



Available for immediate delivery

To order, include part number and material: WCB or CF8M.

Cost Effective Automated Valve Packages With Single Source Responsibility

Low torque Durco Microfinish ball valves with ISO 5211 mounting flange require less expensive actuation equipment and provide lower operating cost. Add to that the unequalled stem seal life of these valves – more than 100,000 cycles without stem leakage – and you have a best valve choice for your automated valve needs.



Port Diameter and Flow Coefficient

Flowserve offers unsurpassed flow rates for full bore valves and minimal flow loss for lower cost regular port valves.

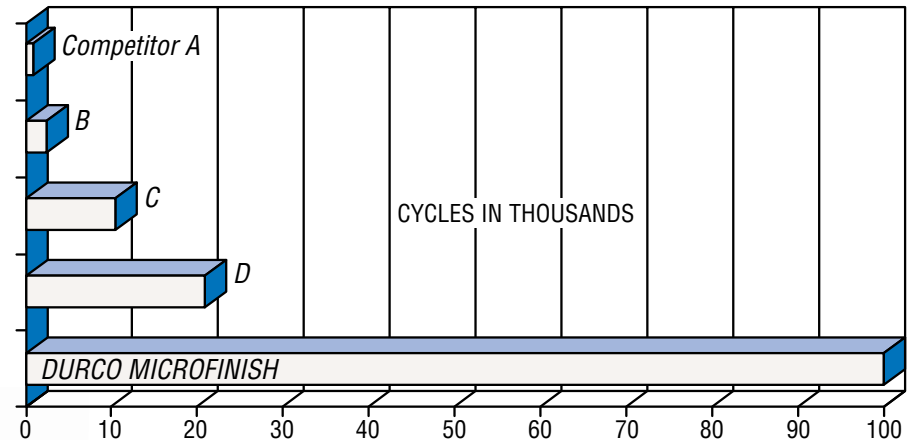
Life cycle stem seal testing results

In comparative ball valve testing, Durco Microfinish valves maintained stem seal integrity without packing adjustment after 100,000 cycles. That was up to five times more cycles than the best competitive valve could achieve.

Valve Size in(mm)	Regular Port		Full Bore	
	Port Dia. in(mm)	C _v	Port Dia. in(mm)	C _v
1/2 (15)	0.38 (9.5)	8	0.50 (13)	20
3/4 (20)	0.50 (13)	15	0.75 (19)	40
1 (25)	0.75 (19)	34	1.00 (25)	90
1-1/2 (40)	1.25 (32)	120	1.50 (38)	230
2 (50)	1.50 (38)	140	2.00 (50)	450
3 (80)	2.25 (58)	325	3.00 (76)	1,100
4 (100)	3.00 (76)	540	4.00 (102)	2,200
6 (150)	4.00 (102)	970	6.00 (152)	5,200
8 (200)	6.00 (152)	2,000	8.00 (203)	10,000

C_v values are estimated. Consult Durco Technical Manual for accurate values.
To obtain K_v values: $K_v = \frac{C_v}{1.163}$

Stem Leakage Test Results



Test fluid was 60°F (16°C) water at 290° psi (20 bar). Each valve was fully pressurized while in the closed position; pressure was dumped to zero as valve opened. One cycle was counted each time the valve was turned open and then closed. For example, after 20,000 cycles the stem would have rotated 90° twice for a total of 40,000 rotations of 90°.

Actuation

Flowserve manufactures a complete line of valve automation systems under the Automax® brand, consisting of:

- SuperNova™ spring return and double acting rack and pinion actuators
- Stainless steel rack and pinion actuators
- EFC (epoxy filled composite) rack and pinion actuators

- Heavy-duty (high torque) rotary actuators
- Centura™ electric rotary actuators
- Apex™ modular positioning systems
- UltraSwitch™ limit switches
- Special control circuits
- Solenoid valves
- Actuator mounting kits and accessories

Actuator Sizing Torque Tables

Class 150 Standard Glass/Carbon Filled PTFE Seats

Valve Size in (mm)	Port Size	Torque @ 100psi		Torque @ 285 psi	
		In-lbs	Nm	In-lbs	Nm
1/2 (15)	BF	40	4.5	46	5.2
	RP	35	4.0	40	4.5
3/4 (20)	BF	70	7.9	85	9.6
	RP	35	4.0	40	4.5
1 (25)	BF	80	9.0	98	11.1
	RP	70	7.9	85	9.6
1-1/2 (40)	BF	230	26.0	276	31.2
	RP	163	18.4	197	22.3
2 (50)	BF	259	29.3	460	52.0
	RP	224	25.3	243	27.5
3 (80)	BF	660	74.6	1170	132.2
	RP	556	62.8	673	76.0
4 (100)	BF	1287	145.4	2038	230.3
	RP	750	84.7	1170	132.2
6 (150)	BF	3269	369.3	4800	542.3
	RP	1840	207.9	2530	285.8
8 (200)	BF	4800	542.3	6000	677.9
	RP	2640	298.3	3360	379.6

Note: These actuator sizing torque values are for clean clear service.

FB = Full Bore
RP = Regular Port

Actuator Sizing Torques for Firesafe Valves*

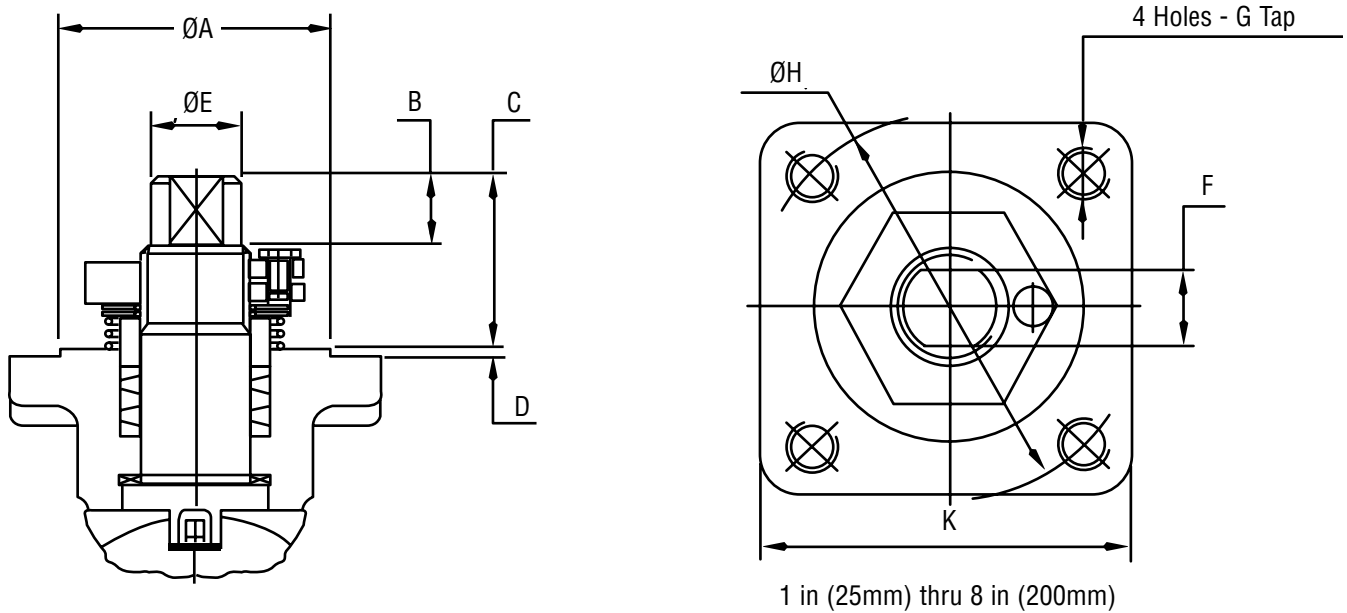
Valve Size in (mm)	Port Size	100 psi		285 psi	
		In-Lbs	Nm	In-Lbs	Nm
1/2 (15)	BF	65	7.3	80	9.0
	RP	65	7.3	80	9.0
3/4 (20)	BF	70	7.9	85	9.6
	RP	65	7.3	80	9.0

* All other firesafe valve size torques may be found in the table above.

As per generally accepted industry practice; if a valve is stroked once a:	
	factor
day or more	1.0
week or more	1.3
month or more	1.4
every four months	1.5



ISO 5211 Mounting Flange Dimensions



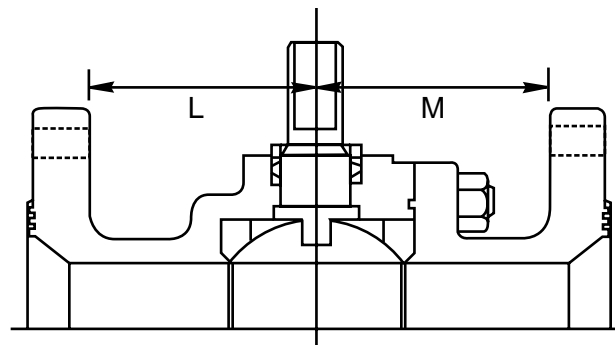
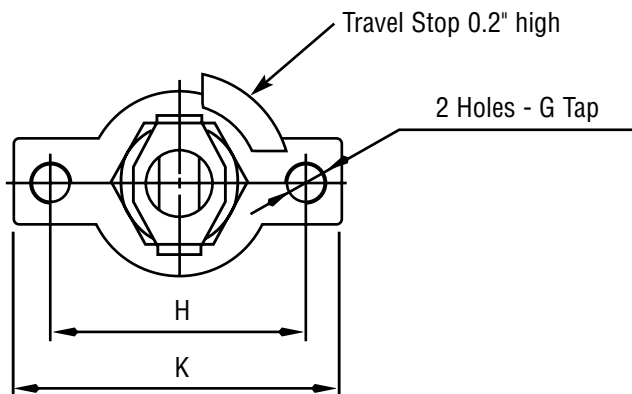
Full Bore, ANSI Class 150, 2-Piece Body

Valve Size in (mm)	ISO Flange	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	F in (mm)	H in (mm)	K in (mm)	L in (mm)	M in (mm)	G TAP
1/2 (15)	--	-- (--)	0.28 (7)	0.65 (16.5)	-- (--)	0.31 (8)	0.20 (5)	1.42 (36)	1.89 (48)	1.3 (33)	2.0 (52)	M5
3/4 (20)	--	-- (--)	0.41 (10.5)	0.93 (23.5)	-- (--)	0.47 (12)	0.35 (9)	1.65 (42)	2.17 (55)	1.2 (31.5)	2.3 (59.5)	M6
1 (25)	F04	1.18 (30)	0.41 (10.5)	0.94 (23.8)	0.12 (3)	0.47 (12)	0.35 (9)	1.65 (42)	1.69 (43)	1.5 (37.5)	2.6 (66.5)	M6
1-1/2 (40)	F05	1.38 (35)	0.59 (15)	1.27 (32.3)	0.12 (3)	0.71 (18)	0.55 (14)	1.97 (50)	1.89 (48)	2.3 (58.5)	3.1 (77.5)	M6
2 (50)	F07	2.17 (55)	0.59 (15)	1.85 (47)	0.12 (3)	0.87 (22)	0.67 (17)	2.76 (70)	2.64 (67)	2.1 (54)	3.6 (92)	M8
3 (80)	F07	2.17 (55)	0.59 (15)	1.85 (47)	0.12 (3)	0.87 (22)	0.67 (17)	2.76 (70)	2.64 (67)	2.7 (67.5)	3.8 (96.5)	M8
4 (100)	F10	2.76 (70)	0.59 (15)	1.89 (48)	0.12 (3)	1.08 (27.5)	0.87 (22)	4.02 (102)	3.70 (94)	2.8 (71)	4.3 (110)	M10
6 (150)	F12	3.35 (85)	0.87 (22)	2.30 (58.5)	0.12 (3)	1.43 (36.2)	1.06 (27)	4.92 (125)	4.41 (112)	6.8 (171.5)	6.8 (171.5)	M12
8 (200)	F14	3.94 (100)	1.18 (30)	2.90 (73.7)	0.16 (4)	1.77 (45)	1.42 (36)	5.51 (140)	5.12 (130)	7.9 (199.5)	7.9 (199.5)	M16

Regular Port, ANSI Class 150, 2-Piece Body

Valve Size in (mm)	ISO Flange	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	F in (mm)	H in (mm)	K in (mm)	L in (mm)	M in (mm)	G TAP
1/2 (15)	--	-- (--)	0.28 (7)	0.65 (16.5)	-- (--)	0.31 (8)	0.20 (5)	1.42 (36)	1.89 (48)	1.3 (33)	2.0 (52)	M5
3/4 (20)	--	-- (--)	0.28 (7)	0.65 (16.5)	-- (--)	0.31 (8)	0.20 (5)	1.42 (36)	1.89 (48)	1.4 (35.5)	2.2 (55.5)	M5
1 (25)	F04	1.18 (30)	0.41 (10.5)	0.93 (23.5)	0.12 (3)	0.47 (12)	0.35 (9)	1.65 (42)	1.69 (43)	1.5 (39)	2.6 (65)	M6
1-1/2 (40)	F05	1.38 (35)	0.59 (15)	1.27 (32.3)	0.12 (3)	0.71 (18)	0.55 (14)	1.97 (50)	1.89 (48)	2.7 (68)	2.7 (68)	M6
2 (50)	F05	1.38 (35)	0.59 (15)	1.27 (32.3)	0.12 (3)	0.71 (18)	0.55 (14)	1.97 (50)	1.89 (48)	2.3 (59)	3.4 (87)	M6
3 (80)	F07	2.17 (55)	0.59 (15)	1.85 (47)	0.12 (3)	0.87 (22)	0.67 (17)	2.76 (70)	2.64 (67)	2.9 (73.5)	3.6 (90.5)	M8
4 (100)	F07	2.17 (55)	0.59 (15)	1.85 (47)	0.12 (3)	0.87 (22)	0.67 (17)	2.76 (70)	2.64 (67)	3.6 (91)	3.5 (90)	M8
6 (150)	F10	2.76 (70)	0.59 (15)	1.89 (48)	0.12 (3)	1.08 (27.5)	0.87 (22)	4.02 (102)	3.70 (94)	4.3 (108.5)	4.2 (107.5)	M10
8 (200)	F12	3.35 (85)	0.87 (22)	2.30 (58.5)	0.12 (3)	1.43 (36.2)	1.06 (27)	4.92 (125)	4.41 (112)	4.6 (117)	4.6 (117)	M12

All dimensions are approximate and for illustration purposes only. For exact dimensions request certified dimensional prints.



1/2 in (15 mm) and 3/4 in (20 mm) only

Full Bore, ANSI Class 300, 2-Piece Body

Valve Size in (mm)	ISO Flange	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	F in (mm)	H in (mm)	K in (mm)	L in (mm)	M in (mm)	G TAP
1/2 (15)	--	-- (--)	0.28 (7)	0.65 (16.5)	-- (--)	0.31 (8)	0.20 (5)	1.42 (36)	1.89 (48)	2.2 (55.5)	2.2 (55.5)	M5
3/4 (20)	--	-- (--)	0.41 (10.5)	0.93 (23.5)	-- (--)	0.47 (12)	0.35 (9)	1.65 (42)	2.17 (55)	2.0 (52)	2.7 (68)	M6
1 (25)	F04	1.18 (30)	0.41 (10.5)	0.94 (23.8)	0.12 (3)	0.47 (12)	0.35 (9)	1.65 (42)	1.69 (43)	2.3 (57.5)	2.9 (72.5)	M6
1-1/2 (40)	F05	1.38 (35)	0.59 (15)	1.27 (32.3)	0.12 (3)	0.71 (18)	0.55 (14)	1.97 (50)	1.89 (48)	2.3 (59)	3.5 (89)	M6
2 (50)	F07	2.17 (55)	0.59 (15)	1.85 (47)	0.12 (3)	0.87 (22)	0.67 (17)	2.76 (70)	2.64 (67)	3.2 (80.5)	3.6 (90.5)	M8
3 (80)	F10	2.76 (70)	0.59 (15)	1.89 (48)	0.12 (3)	1.08 (27.5)	0.87 (22)	4.02 (102)	3.62 (92)	4.2 (107)	4.6 (118)	M10
4 (100)	F12	3.35 (85)	0.87 (22)	2.30 (58.5)	0.12 (3)	1.43 (36.2)	1.06 (27)	4.92 (125)	4.41 (112)	4.3 (108)	5.2 (133)	M12
6 (150)	F14	3.94 (100)	1.18 (30)	2.90 (73.7)	0.16 (4)	1.77 (45)	1.42 (36)	5.51 (140)	5.12 (130)	5.9 (151)	7.0 (178)	M16
8 (200)	F16	5.12 (130)	1.18 (30)	3.35 (85)	0.20 (5)	2.20 (56)	1.81 (46)	6.50 (165)	6.14 (156)	6.2 (158.5)	10.3 (260.5)	M20

Regular Port, ANSI Class 300, 2-Piece Body

Valve Size in (mm)	ISO Flange	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E in (mm)	F in (mm)	H in (mm)	K in (mm)	L in (mm)	M in (mm)	G TAP
1/2 (15)	--	-- (--)	0.28 (7)	0.65 (16.5)	-- (--)	0.31 (8)	0.20 (5)	1.42 (36)	1.89 (48)	2.1 (53)	2.3 (57.5)	M5
3/4 (20)	--	-- (--)	0.28 (7)	0.65 (16.5)	-- (--)	0.31 (8)	0.20 (5)	1.42 (36)	1.89 (48)	2.2 (56)	2.5 (64)	M5
1 (25)	F04	1.18 (30)	0.41 (10.5)	0.93 (23.5)	0.12 (3)	0.47 (12)	0.35 (9)	1.65 (42)	1.69 (43)	2.4 (60)	2.8 (70)	M6
1-1/2 (40)	F05	1.38 (35)	0.59 (15)	1.27 (32.3)	0.12 (3)	0.71 (18)	0.55 (14)	1.97 (50)	1.89 (48)	2.3 (59)	3.5 (89)	M6
2 (50)	F05	1.38 (35)	0.59 (15)	1.27 (32.3)	0.12 (3)	0.71 (18)	0.55 (14)	1.97 (50)	1.89 (48)	3.4 (85.5)	3.4 (85.5)	M6
3 (80)	F10	2.76 (70)	0.59 (15)	1.89 (48)	0.12 (3)	1.08 (27.5)	0.87 (22)	4.02 (102)	3.70 (94)	4.4 (113)	4.4 (113)	M10
4 (100)	F10	2.76 (70)	0.59 (15)	1.89 (48)	0.12 (3)	1.08 (27.5)	0.87 (22)	4.02 (102)	3.70 (94)	5.0 (128)	4.4 (113)	M10
6 (150)	F12	3.35 (85)	0.87 (22)	2.30 (58.5)	0.12 (3)	1.43 (36.2)	1.06 (27)	4.92 (125)	4.41 (112)	6.5 (164)	6.5 (165)	M12
8 (200)	F14	3.94 (100)	1.18 (30)	2.90 (73.7)	0.16 (4)	1.77 (45)	1.42 (36)	5.51 (140)	5.12 (130)	6.6 (168.5)	6.6 (167.5)	M16

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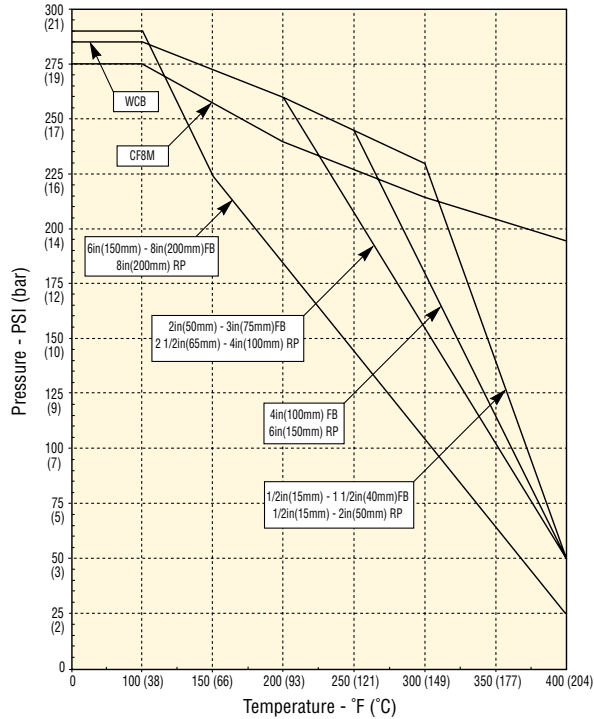
Pressure/Temperature Ratings

Durco Microfinish valves offer a choice of seats.

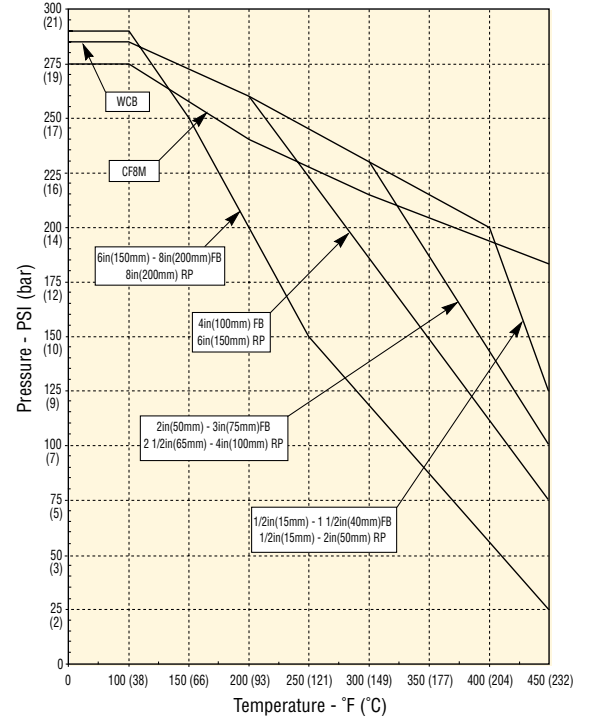
Choose the seat material that best meets your application needs. Replace seats easily to suit changing process conditions.

- Virgin PTFE for optimum chemical resistance
- Glass or carbon reinforced PTFE for high pressure/temperature applications

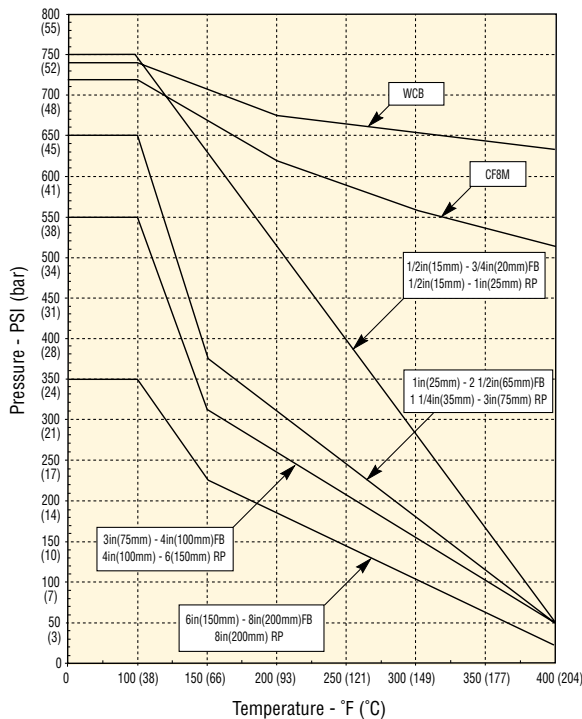
ANSI Class 150 - 2-Piece Design PTFE Seats



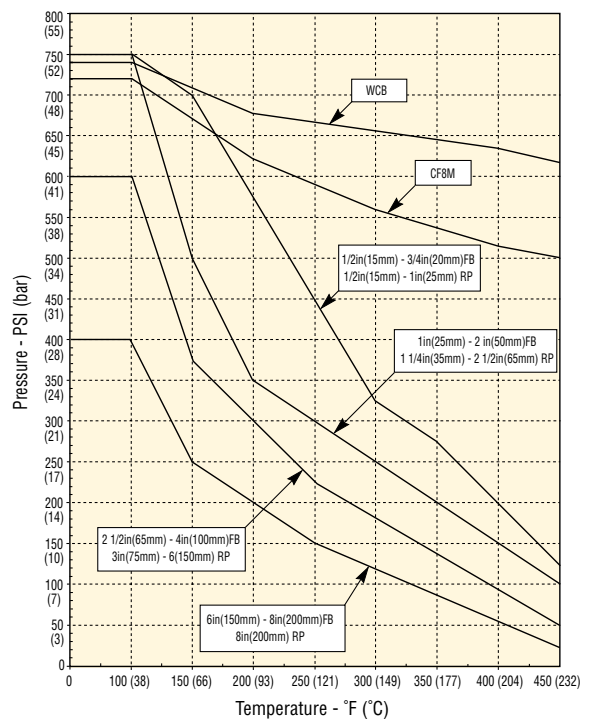
ANSI Class 150 - 2-Piece Design Glass or Carbon Reinforced PTFE and Durlon



ANSI Class 300 - 2-Piece Design PTFE Seats



ANSI Class 300 - 2-Piece Design Glass or Carbon Reinforced PTFE and Durlon

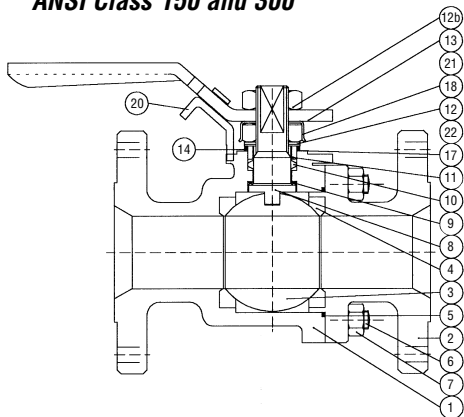


Valve Standards, Construction and Materials

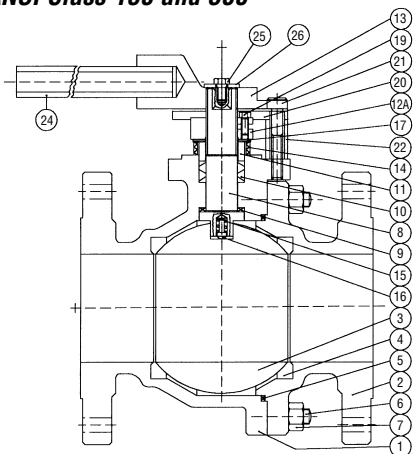
Standards Applicable To Durco Microfinish Ball Valves

- ANSI B16.34 – Design and testing
- ANSI B16.10 – Short pattern face-to-face dimensions
- ANSI B16.5 – Pipe flanges and flanged fittings
- MSS-SP72 – Design
- MSS-SP25 – Valve identification marking
- API 607, Fourth Edition – Fire sealed design
- ISO 5211.1 – Actuator mounting flange

1/2 in (15 mm) – 1-1/2 in (40 mm) ANSI Class 150 and 300



2 in (50 mm) – 8 in (200 mm) ANSI Class 150 and 300

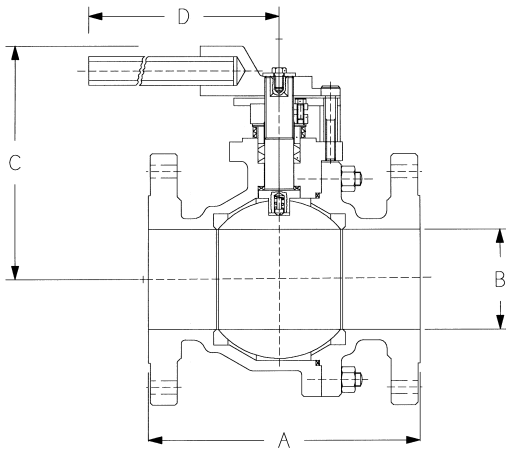


Item No.	Part Description	Valve Alloy		Remarks
		Stainless Steel	Carbon-Stainless Steel	
1	Body	CF8M	WCB	
2	Tailpiece	CF8M	WCB	
3	Ball	CF8M/316 SS	CF8M/316 SS	
4*	Seat	Durlon II	Durlon II	
5*	Body Seal	Virgin TFE	Virgin TFE	Grafoil for Firesealed
6	Body Stud	Grade B8 Class 2	Grade B7	
7	Body Nut	Grade 8	Grade 2H	
8	Stem	316 SS	316 SS	
9*	Stem Washer	Glass Filled TFE	Glass Filled TFE	
10*	Stem Seal	Virgin TFE	Virgin TFE	Grafoil for Firesealed
11	Gland	316 SS	316 SS	
12	Gland Nut	304 SS	304 SS	2 in (50mm) BR and smaller
12A	Check Nut	304 SS	304 SS	2 in (50mm) BF and larger
12B	Lever Nut	304 SS	Carbon Steel Plated	2 in (50mm) BR and smaller
13	Adapter	Ductile Iron	Ductile Iron	2 in (50mm) BF and larger
13	Lever	Carbon Steel	Carbon Steel	2 in (50mm) BR and smaller
14	Antistatic Body Spring	304 SS	304 SS	
15	Antistatic Stem Spring	316 SS	316 SS	2 in (50mm) BF and larger
16	Antistatic Plunger	316 SS	316 SS	2 in (50mm) BF and larger
17	Spring Disc	304 SS	304 SS	
18	Lock Strip	304 SS	304 SS	2 in (50mm) BR and smaller
19	Check Nut Bolt	Grade B8	Grade B.8	2 in (50mm) BF and larger
20	Locking Plate	202 SS	202 SS	1 in (25mm) BF and larger 2-Piece
21	Stopper Bolt	Stainless Steel	Stainless Steel	1 in (25mm) BF and larger 2-Piece
22	Bushing	Stainless Steel	Stainless Steel	1 in (25mm) BF and larger 2-Piece
23	Metal Tag	202 SS	202 SS	
24	Adapter Pipe	Carbon Steel	Carbon Steel	2 in (50mm) BF and larger
25	Adapter Bolt	Carbon Steel	Carbon Steel	2 in (50mm) BF and larger
26	Adapter Washer	Carbon Steel	Carbon Steel	2 in (50mm) BF and larger

* Recommended spare parts.

Durco Microfinish Ball Valves Dimensions

Full Bore, ANSI Class 150, 2-Piece Body



Valve Size in (mm)	A in (mm)	B in (mm)	C in (mm)	D in (mm)	Weight lbs (kgs)
1/2 (15)	4.25 (108)	0.50 (13)	3.27 (83)	6.89 (175)	3.5 (1.6)
3/4 (20)	4.61 (117)	0.75 (19)	3.98 (101)	6.89 (175)	5.3 (2.4)
1 (25)	5.00 (127)	1.00 (25)	4.13 (105)	6.89 (175)	6.8 (3.1)
1-1/2 (40)	6.50 (165)	1.50 (38)	4.72 (120)	7.24 (184)	12.6 (5.7)
2 (50)	7.01 (178)	2.00 (51)	5.83 (148)	11.88 (302)	22.1 (10.0)
3 (80)	7.99 (203)	3.00 (76)	6.57 (167)	18.98 (482)	43.4 (19.7)
4 (100)	9.02 (229)	4.00 (102)	7.91 (201)	23.31 (592)	76.3 (34.6)
6 (150)	15.50 (394)	6.00 (152)	10.47 (266)	30.71 (780)	143.3 (65.0)
6S (150)†	10.51 (267)	6.00 (152)	10.47 (266)	30.71 (780)	143.3 (65.0)
8 (200)	18.00 (457)	8.00 (203)	14.96 (380)	35.43 (900)	235.9 (107.0)
8S (200)†	11.50 (292)	8.00 (203)	14.96 (380)	35.43 (900)	235.9 (107.0)

† Short pattern

Face-to-face dimensions meet ANSI B16.10 design criteria. Flange dimensions, finish and drillings are to ANSI B16.5 pipe flanges and flanged fittings.

All dimensions are approximate and for illustration purposes only. For exact dimensions request certified dimensional prints.

Full Bore, ANSI Class 300, 2-Piece Body

Valve Size in (mm)	A in (mm)	B in (mm)	C in (mm)	D in (mm)	Weight lbs (kgs)
1/2 (15)	5.51 (140)	0.50 (13)	3.27 (83)	6.89 (175)	6.2 (2.8)
3/4 (20)	5.98 (152)	0.75 (19)	3.98 (101)	6.89 (175)	8.8 (4.0)
1 (25)	6.50 (165)	1.00 (25)	4.13 (105)	6.89 (175)	11.0 (5.0)
1-1/2 (40)	7.48 (190)	1.50 (38)	4.72 (120)	7.24 (184)	22.1 (10.0)
2 (50)	8.50 (216)	2.00 (51)	5.83 (148)	12.09 (307)	33.1 (15.0)
3 (80)	11.14 (283)	3.00 (76)	7.20 (183)	23.31 (592)	68.4 (31.0)
4 (100)	12.01 (305)	4.00 (102)	9.02 (229)	30.71 (780)	114.7 (52.0)
6 (150)	15.87 (403)	6.00 (152)	13.58 (345)	35.43 (900)	231.5 (105.0)
8 (200)	19.75 (502)	8.00 (203)	15.91 (404)	39.37 (1000)	487.3 (221.0)

Regular Port, ANSI Class 150, 2-Piece Body

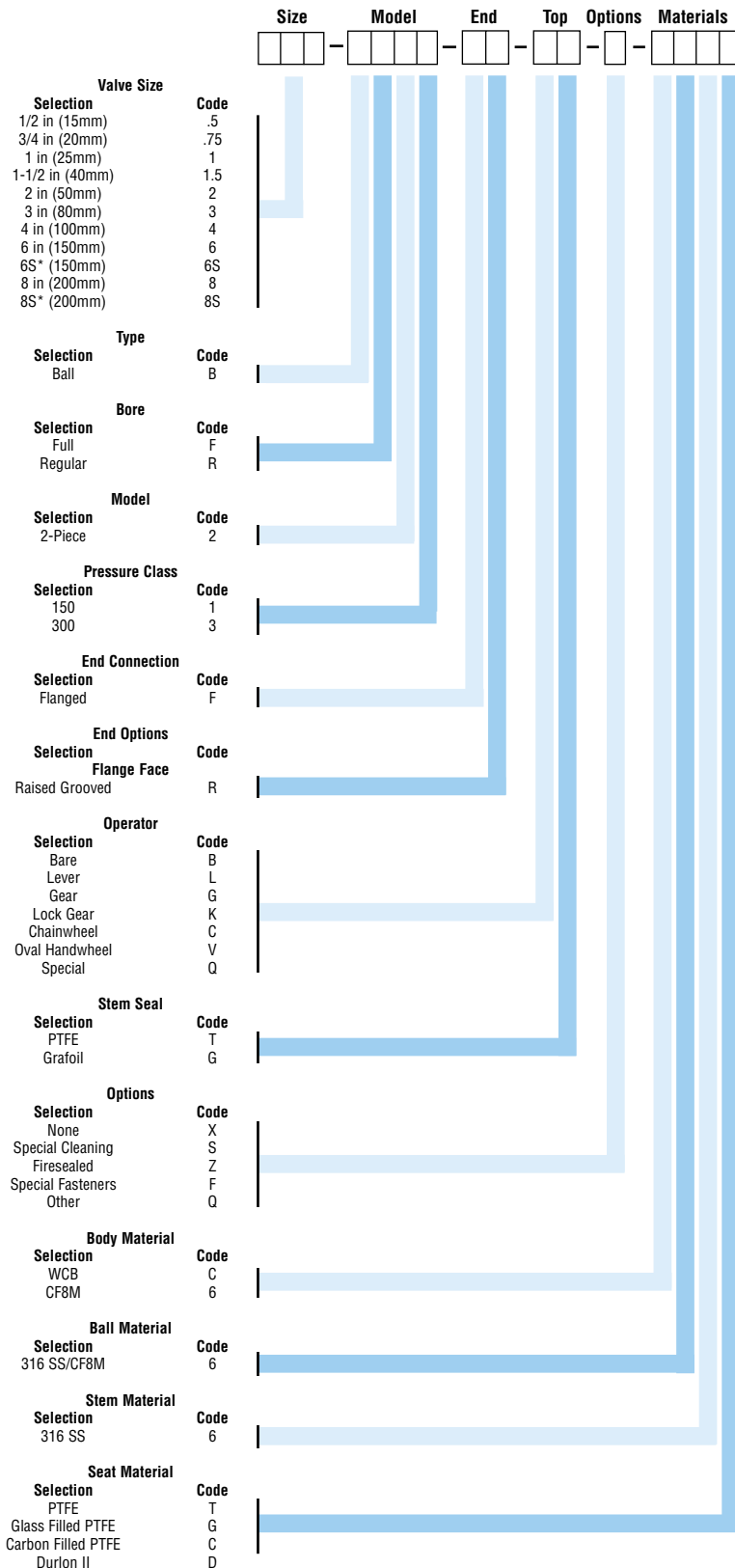
Valve Size in (mm)	A in (mm)	B in (mm)	C in (mm)	D in (mm)	Weight lbs (kgs)
1/2 (15)	4.25 (108)	0.38 (9.5)	3.27 (83)	6.89 (175)	2.9 (1.3)
3/4 (20)	4.61 (117)	0.50 (13)	3.27 (83)	6.89 (175)	4.4 (2.0)
1 (25)	5.00 (127)	0.75 (19)	3.98 (101)	6.89 (175)	6.0 (2.7)
1-1/2 (40)	6.50 (165)	1.25 (32)	4.61 (117)	7.24 (184)	11.5 (5.2)
2 (50)	7.01 (178)	1.50 (38)	4.72 (120)	7.24 (184)	17.2 (7.8)
3 (80)	7.99 (203)	2.25 (58)	6.06 (154)	18.98 (482)	36.8 (16.7)
4 (100)	9.02 (229)	3.00 (76)	6.57 (167)	18.98 (482)	57.8 (26.2)
6 (150)	10.51 (267)	4.00 (102)	7.91 (201)	23.31 (592)	90.4 (41.0)
8 (200)	11.50 (292)	6.00 (152)	10.47 (266)	30.71 (780)	182.4 (82.7)

Regular Port, ANSI Class 300, 2-Piece Body

Valve Size in (mm)	A in (mm)	B in (mm)	C in (mm)	D in (mm)	Weight lbs (kgs)
1/2 (15)	5.51 (140)	0.38 (9.5)	3.27 (83)	6.89 (175)	5.5 (2.5)
3/4 (20)	5.98 (152)	0.50 (13)	3.27 (83)	6.89 (175)	7.7 (3.5)
1 (25)	6.50 (165)	0.75 (19)	3.98 (101)	6.89 (175)	9.9 (4.5)
1-1/2 (40)	7.48 (190)	1.25 (32)	4.61 (117)	7.24 (184)	20.9 (9.5)
2 (50)	8.50 (216)	1.50 (38)	4.72 (120)	7.24 (184)	25.4 (11.5)
3 (80)	11.14 (283)	2.25 (58)	6.69 (170)	19.37 (492)	56.2 (25.5)
4 (100)	12.01 (305)	3.00 (76)	7.20 (183)	23.31 (592)	91.5 (41.5)
6 (150)	15.87 (403)	4.00 (102)	9.02 (229)	30.71 (780)	154.4 (70.0)
8 (200)	16.50 (419)	6.00 (152)	13.58 (345)	35.43 (900)	266.8 (121.0)



How To Specify Durco Microfinish Ball Valves



• Short pattern ANSI Class 150 lb full port only

Selection, Installation, Operation and Maintenance

Although Flowserve can, and often does, provide general guidelines, it is obviously not possible to provide application specific data and warnings for all conceivable applications. The purchaser/end user must therefore assume the ultimate responsibility for the proper selection, installation, operation and maintenance of the products. Read the appropriate IOM available from Cookeville, TN 38501 before installing, operating or repairing any valve. The purchasers/end user should train its employees and/or contractors in the safe use of the Flowserve products in connection with the purchaser's manufacturing processes.

Design Changes

In order to follow Flowserve's commitment to continuous improvement, we reserve the right to change product and performance specifications without notice.



Flowserve has the answer to your corrosion resistant, quarter-turn valving needs.

Clockwise from top right.

Durco® BTV-2000

PTFE or UHMWPE lined chemical service valve

Atomac®

Lined ball valves

- ANSI/ISO, standard and full port
- Specialty valves
- Valve products and accessories

Durco® SleeveLine®

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- G4E – DIN Mounting Pad
- G4 Marathon™
- TSG4 Severe Service

Durco® T-Line®

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