

4600 Series

Three Piece Ball Valves

Features & Benefits

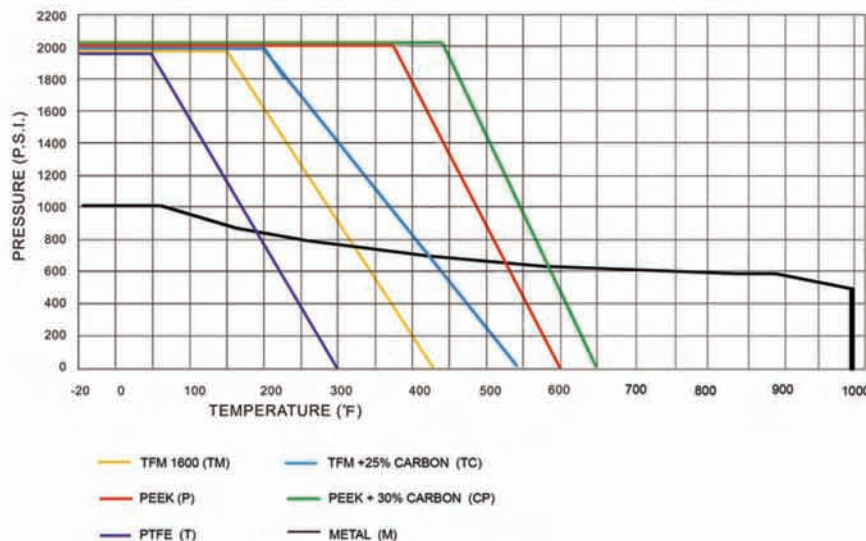
- Three piece high performance ball valve
- Body and end caps quality investment casting
- Available in stainless steel, carbon steel and alloys
- Blow-out proof stem design
- 100% air tested under water at 80-100 psi
- Working pressure: 2000 WOG
- Temperature range: -20°F to +600°F
- ISO 5200 direct mounting pad
- Locking device



Break-Torque Value (in/lbs at 0 psi)

	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
Grease	50	50	75	100	150	200	275	350	475

Temperature Chart



Flow Coefficient

1/4"	19
3/8"	19
1/2"	19
3/4"	37
1"	59
1-1/4"	84
1-1/2"	145
2"	249
2-1/2"	569
3"	785

Ordering Schematic

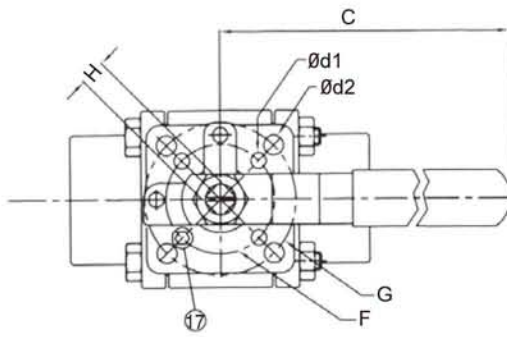
Size	Series	Material	Port Design	Packing	Seat	End Connections
1/4"	46 Series	23 Carbon	F Full Port	G Grafoil	M Metal Seated	BW Butt Weld
3/8"		33 Stainless	R Reduced	TM Super Teflon	P Peek	S Threaded
1/2"		44 Alloy			T Teflon	SW Socket Weld
3/4"		77 Hastalloy C			TM Super Teflon	F Flanged
1"		99 Duplex 2507			TC Carbon	ESW Ext. Socket Weld
1-1/4"					Super Teflon	EBW Ext. Butt Weld
1-1/2"					PC Carbon Peek	
2"						
2-1/2"						
3"						



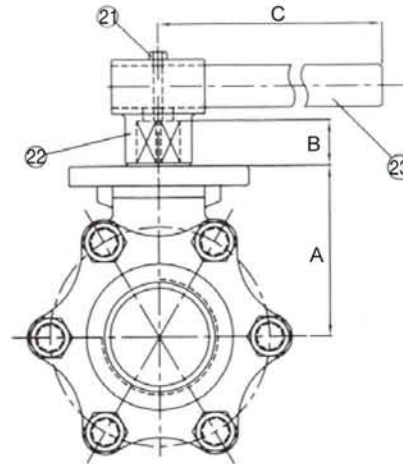
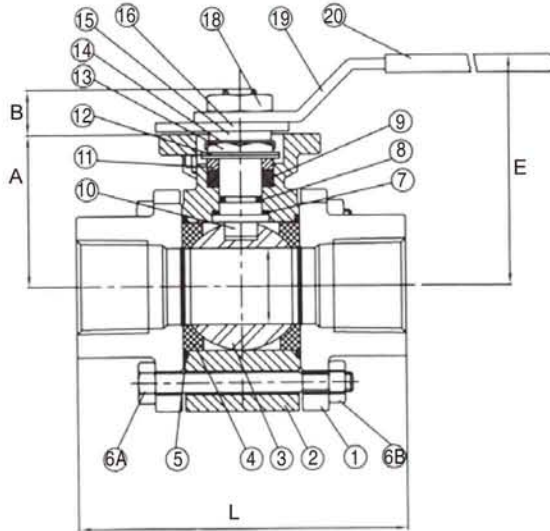
Master Distributor in China & Taiwan
Quko Int'l Development Limited
 Unit B, 17/F, EGL Tower, 83 Hung To Road, Kwun Tong,
 Kowloon, Hong Kong, China
 Tel: (852) 2344 0201 Fax: (852) 2343 6078
 Email: sales@qukointl.com Website: www.qukointl.com



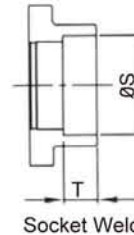
Engineering



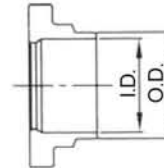
Size: 1/4" — 1-1/2"



Size 2"



Socket Weld



Butt Weld
(Schedule 40/80)

* Valve can be welded in-line without disassembly as long as ball is kept full open

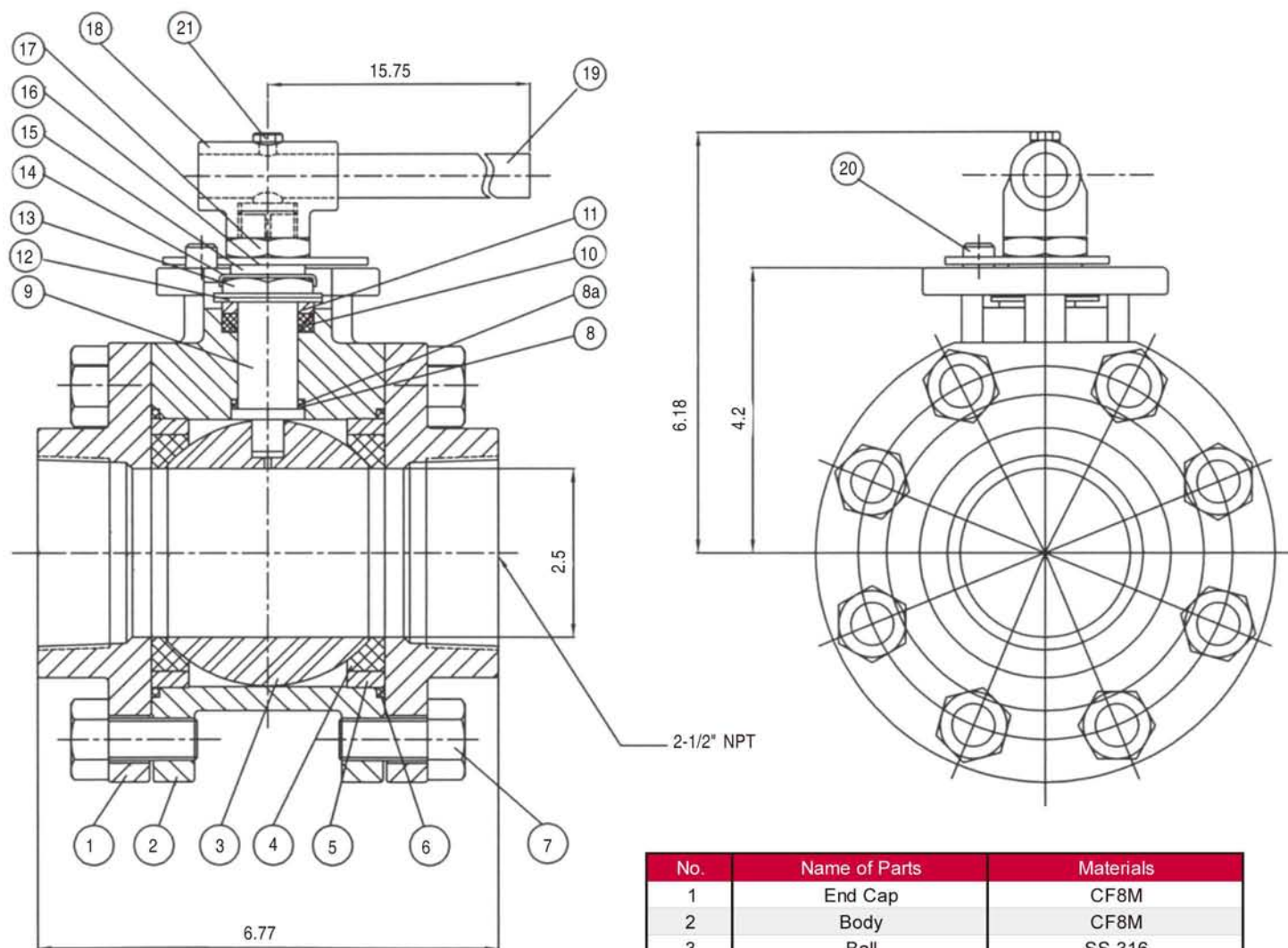
Size	A	B	C	D	d1	d2	E	F	G	H	L	P	Q	SW		BS (40#)	
														S	T	OD	ID
1/4"	1.73	0.43	5.12	0.43	0.24	0.24	2.4	1.42	1.65	0.35	2.60	0.39	0.49	0.56	0.44	0.55	0.35
3/8"	1.73	0.43	5.12	0.49	0.24	0.24	2.4	1.42	1.65	0.35	2.60	0.47	0.57	0.69	0.44	0.67	0.52
1/2"	1.73	0.43	5.12	0.59	0.24	0.24	2.4	1.42	1.65	0.35	2.68	0.59	0.69	0.86	0.50	0.84	0.63
3/4"	1.89	0.55	6.10	0.79	0.24	0.24	2.7	1.65	1.97	0.43	3.62	0.79	0.89	1.07	0.56	1.05	0.81
1"	2.09	0.55	6.10	0.98	0.24	0.28	3.2	1.65	1.97	0.43	4.09	0.98	1.10	1.33	0.63	1.31	1.05
1-1/4"	2.36	0.71	8.07	1.26	0.28	0.35	3.5	1.97	2.76	0.55	4.45	1.26	1.38	1.67	0.69	1.66	1.38
1-1/2"	2.68	0.71	8.07	1.50	0.28	0.35	3.8	1.97	2.76	0.55	4.88	1.50	1.61	1.92	0.72	1.91	1.59
2"	3.43	0.79	11.81	1.97	0.35	0.45	4.5	2.76	4.02	0.67	5.75	1.97	2.13	2.01	0.84	2.38	2.06

No.	Name of Parts	Materials	No.	Name of Parts	Materials
1	End Cap	CF8M	12	Disk Washer	SS 301
2	Body	CF8M	13	Stem Nut	SS304
3	Ball	SS 316	14	Nut Stop	SS304
4	Ball Seats	RPTFE/Delrin	15	Space Washer	SS304
5	Gasket	PTFE	16	Plater	SS304
6A	Bolts	SS 304	17	Stop Pin	SS304
6B	Bolt Nut	SS 304	18	Handle Nut	SS304
7	Thrust Washer	PEEK	19	Handle	SS304
8	O-Ring	Viton	20	Handle Cover	Plastic
9	Stem Packing	PTFE	21	Set Bolt	SS 304
10	Stem	SS 316	22	Lever Head	CF8
11	Gland	SS 304	23	Lever	Steel Pipe

316 handle, stem nut, body bolts, gland bushing are available



Engineering



* Valve can be welded in-line without disassembly as long as ball is kept full open

No.	Name of Parts	Materials
1	End Cap	CF8M
2	Body	CF8M
3	Ball	SS 316
4	Ball Seats	TFM
5	Seat Housing	SS 316
6	Gasket	TFM
7	Bolts	SS 304
8	Thrust Washer	PEEK
8a	Thrust Washer	TFM
9	Stem	SS 316
10	Stem Packing	TFM
11	Gland Washer	SS 304
12	Disk Washer	SS 301
13	Gland Nut	SS 304
14	Nut Stop	SS 304
15	Space Washer	SS 304
16	Stop Plater	SS 304
17	Stem Nut	SS 304
18	Lever Head	CF8
19	Lever	Steel Pipe
20	Stop Pin	SS 304
21	Set Bolt	SS 304

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