

# 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 or carbon steel
- Blow-out proof stem design
- 100% air tested under water at 80-100 psi
- Working pressure: 2000 WOG
- Temperature range: -20°F to +450°F
- ISO 5200 direct mounting pad
- Locking device



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

Size	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Grease	38.9	38.9	47.8	79.7	97.4	141.6	194.7	292.1
Non-Grease	53.1	53.1	70.8	115.1	159.3	221.3	309.8	469.1

### Ordering Schematic



Series  
46 Series



Material  
22 Carbon  
33 Stainless  
44 Alloy 20  
77 Hastalloy C  
99 Duplex 2507



Port Design  
F Full Port  
R Reduced Port



Packing  
G Grafoil  
T Teflon



Seat  
C Carbon  
P Peek  
T Teflon  
TM Super Teflon  
TC Carbon Super Teflon  
M Metal Seated



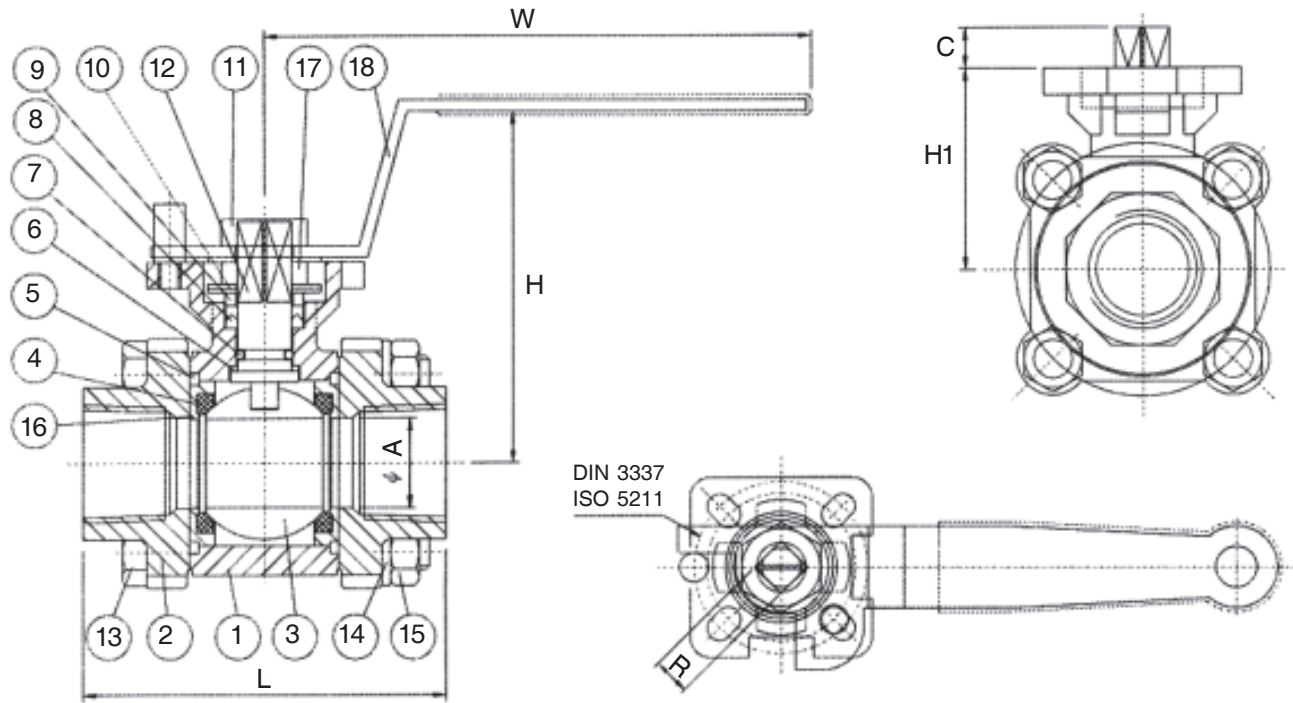
End Connections  
BW Butt Weld  
S Threaded  
SW Socket Weld  
F Flanged

**J-Flow**

J-Flow  
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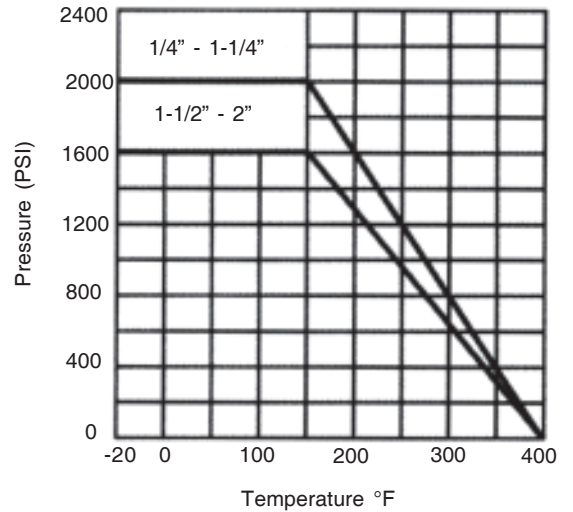
# Engineering

## Dimensions



Size	ISO5211	W	H	H1	C	R	L	0A
1/4"	F03/F04	4.7	2.9	1.5	0.35	0.35	2.8	0.46
3/8"	F03/F04	4.7	2.9	1.5	0.35	0.35	2.8	0.50
1/2"	F03/F04	4.7	2.9	1.5	0.35	0.35	2.8	0.59
3/4"	F03/F04	4.7	3.0	1.8	0.35	0.35	3.1	0.79
1"	F04/F05	5.2	3.3	2.1	0.43	0.43	3.5	1.00
1-1/4"	F04/F05	5.2	3.4	2.4	0.43	0.43	4.3	1.26
1-1/2"	F05/F07	7.2	4.0	2.7	0.55	0.55	4.7	1.50
2"	F05/F07	7.2	4.4	3.1	0.55	0.55	5.5	2.00

## Temperature Chart



Item	Part Name	Materials	
1	Body	A351 Gr. CF8M	A216 Gr. WCB
2	End Cap	A351 Gr. CF8M	A216 Gr. WCB
3	Ball	SS316	SS304
4	Seats	PTFE	PTFE
5	Gasket	PTFE	PTFE
6	Thrust Washer	PEEK	SS316
7	O-Ring	Viton	PTFE
8	Stem Packing	PTFE	PTFE
9	Washer	SS316	SS304
10	Bevel Washer	SS301	SS301
11	Nut	SS304	SS304
12	Stem	SS316	SS316
13	Bolt	SS304	SS304
14	Bolt Washer	SS304	SS04
15	Bolt Nut	SS304	SS304
16	Seat Ring	SS316	SS304
17	Prevaling Nut	SS04	SS304
18	Handle	SS304	SS304