

# Cast Iron Ball Valve



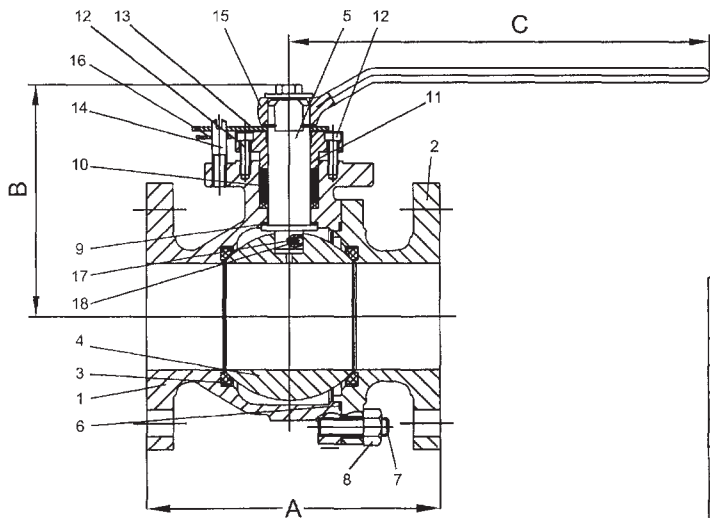
**Model #12FBAZ (Full Port)**  
**Class 125 (2" to 10")**

**FEATURES:**

- Same end to end dimension as conventional 125 lb. ANSI flanged iron gate valve
- Fast quarter turn open or closed operation
- Stainless steel ball and stem
- Positive shut-off
- Two-piece body construction
- 125 W.S.P.
- Integral ISO 5211 actuator mounting pad

**WORKING PRESSURE:**

- 125psi Steam, Basic Rating
- 200psi Cold Working Pressure



**Designed to ANSI B16.1,  
 tested to API 598. Face  
 to face to ANSI B16.10**

SIZE	INCH	2	2½	3	4	6	8	10
	MM	50	65	80	100	150	200	250
A	INCH	7	7.5	8	9	10.5	11.5	13
	MM	178	190.5	203	229	267	292	330
B	INCH	5	6.75	7.125	8.875	11.125	15.75	17.5
	MM	127	171	181	225	284	400	445
C	INCH	9	15.75	15.75	18	39.5	**	**
	MM	230	400	400	460	1000	**	**
Weight	lbs	22	34	38	58	118	247	339
	kgs	10	16	17	26	54	112	154

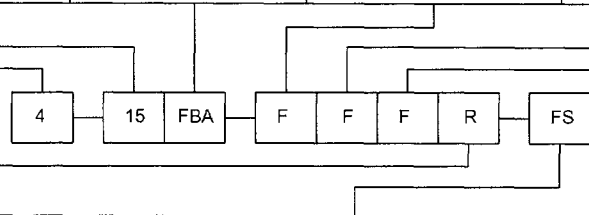
NO.	PART NAME	MATERIAL
1	BODY	ASTM A126-B
2	BONNET	ASTM A126-B
3	SEAT RING	PTFE
4	BALL	A182 F304
5	STEM	A182 F304
6	GASKET	PTFE
7	BOLTS	ASTM A307-B
8	NUTS	ASTM A307-B
9	THRUST WASHER	PTFE
10	PACKING	PTFE
11	PACKING GLAND	STEEL
12	PACKING BOLT	ASTM A307-B
13	STOP PLATE	STEEL
14	STOP PIN	STEEL
15	HANDLE	DUCTILE IRON
16	WASHER	STEEL
17	SPRING	STAINLESS STEEL
18	ANTI STATIC BALL	STAINLESS STEEL

# Ball Valves

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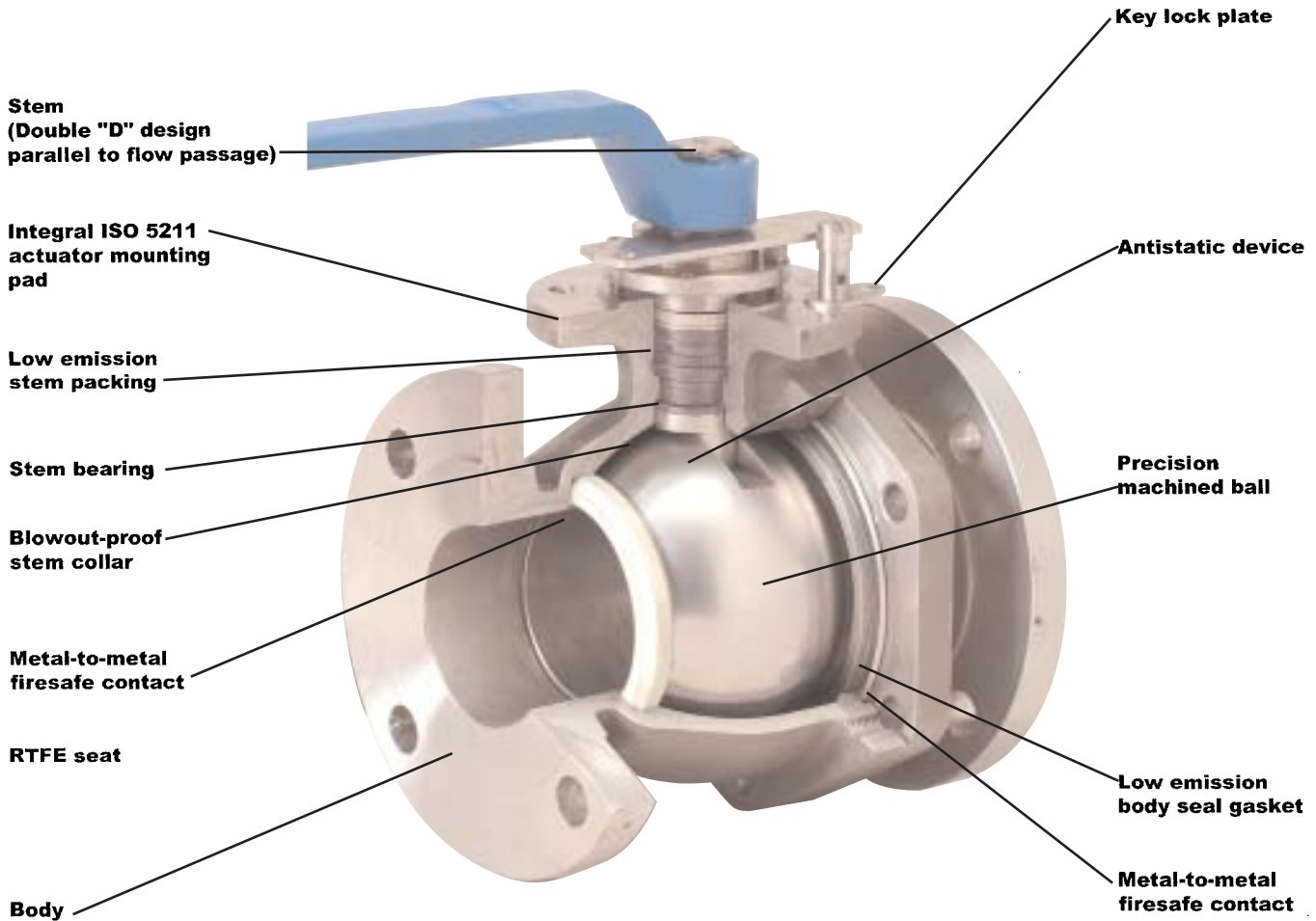
SIZE	PRESSURE RATING	TYPE	PORT	BODY & BALL MATERIAL		
				Suffix	ASTM Grade	Category
½"	12 - 125#	FBA - Ball Valve	F - Full Port S - Standard Port	W - WCB		- Cast Steel
¾"	15 - 150#			F - CF8M		- 316
1"	30 - 300#		A - CN7M		- Alloy 20	
1½"	60 - 600#		Z - A126B		- Cast Iron	
2"			C - CF8		- 304	
2½"			CL - CF3		- 304L	
3"			CN - CF8-C		- 347	
4"			CT - CF8-T		- 321	
5"			D - CD4MCu		- Duplex-SS	
6"			FL - CF3M		- 316L	
8"			G - CG8M		- 317	
10"			GL - CG3M		- 317L	
12"			HB - N12MV		- Hastalloy B	
14"			HC - CW12MW		- Hastalloy C	
16"			IN - CY40		- Inconel	
			L - LCC		- LCC	
		M1 - M35-1		- Monel		
		M2 - M35-2		- Monel		
		M3 - M35-H		- Monel		
		N - CZ100		- Nickel		
		SM - CK3M CuN		- 254SMO		



SEAT	OPTIONS	Example:
<b>T - PTFE</b> <b>R - Glass-filled TFE</b> <b>G - Graphite Reinforced TFE</b> <b>M - Stellite overlaid stainless steel</b> <b>S - Special (specify)</b>	<b>FS - Firesafe (API 607)</b> <b>NACE - NACE</b> <b>GO - Gear Operator</b> Full Actuation also available	<b>To order a 4" 150# 316 SS Full Port Ball Valve with RTFE Seats and Firesafe, use ordering number 4-15FBA-FFFR-FS</b>

# Davis Split Body Ball Valve Features

This is an illustrated cross-section of a typical Davis split body, floating type ball valve to exhibit the basic design concept. The actual design of a valve may be slightly different from this illustration, depending on its size and pressure class.



## Extensive safety considerations

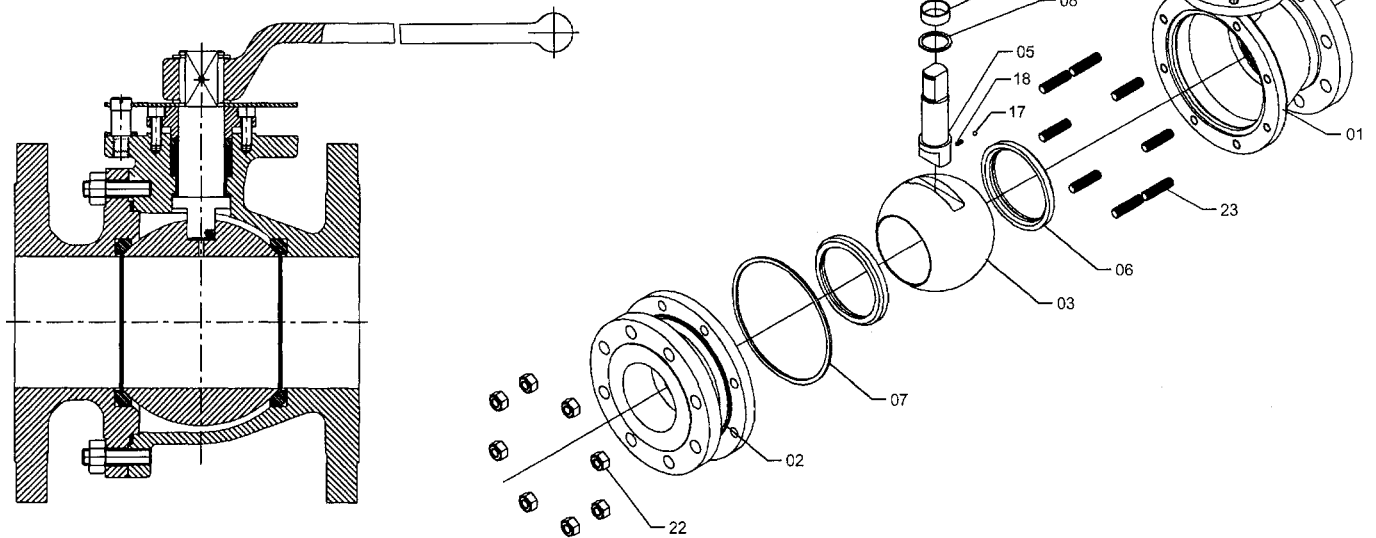
Davis ball valves are designed with extensive safety considerations for users. Blow-out proof stems, provision of locking devices and prevention of misalignment of lever handles provide safe handling in the field and trouble-free operation in the plant. Antistatic devices and firesafe seal design assure the economic benefits of smooth, steady plant operation.

# Davis Ball Valve Construction Materials

NO.	PART NAME	A 216-WCB	A 351-CF8M	A 351-CN7M
01	BODY	A 216-WCB	A 351-CF8M	A 351-CN7M
02	ADAPTER	A 216-WCB	A 351-CF8M	A 351-CN7M
03	BALL	A 351-CF8M	A 351-CF8M	A 351-CN7M
04	HANDLE	A 216-WCB/DI	A 216-WCB/DI	A 216-WCB/DI
05	STEM	A 276-316	A 276-316	A 351-CN7M
06	SEAT RING	RTFE GLASS FILLED 25%	RTFE GLASS FILLED 25%	RTFE GLASS FILLED 25%
07	GASKET	PTFE *	PTFE *	PTFE *
08	THRUST WASHER	RTFE GLASS FILLED 25%	RTFE GLASS FILLED 25%	RTFE GLASS FILLED 25%
09	SLEEVE	RTFE GLASS FILLED 25%	RTFE GLASS FILLED 25%	RTFE GLASS FILLED 25%
10	GLAND PACKING	PTFE *	PTFE *	PTFE *
11	GLAND WASHER	A 276-316	A 276-316	A 351-CN7M
12	HELICAL SPRING	A 276-316	A 276-316	A 276-316
13	GLAND	A 276-304/A 351-CF8	A 276-304/A 351-CF8	A 351-CN7M
14	GLAND BOLTS	A 193-GrB7	A 193-GrB8	A 193-GrB8
15	STOPPER PLATE	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL
16	STOPPER PIN	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL
17	BALL ANTISTATIC	A 276-316	A 276-316	A 276-316
18	SPRING ANTISTATIC	A 313-302	A 313-302	A 313-302
19	HEX SOCKET SET SCREW	CARBON STEEL-C40	CARBON STEEL-C40	CARBON STEEL-C40
20	CIRCLIP	CARBON STEEL-C40	CARBON STEEL-C40	CARBON STEEL-C40
21	KEY LOCK PLATE	STAINLESS STEEL	STAINLESS STEEL	STAINLESS STEEL
22	HEX NUT	A 194-2H	A 194-B	A 194-BM
23	STUD	A 193-B7	A 193-B8	A 193-B8M

\* FLEXIBLE GRAPHITE IN FIRESAFE DESIGN

This illustration is representative of a typical Davis ball valve. The actual design of a valve may be slightly different from this illustration, depending on its size and pressure class.



# Ball Valve Full Port

**Model #15FBA-F**  
**Class 150 (1/2" to 12")**

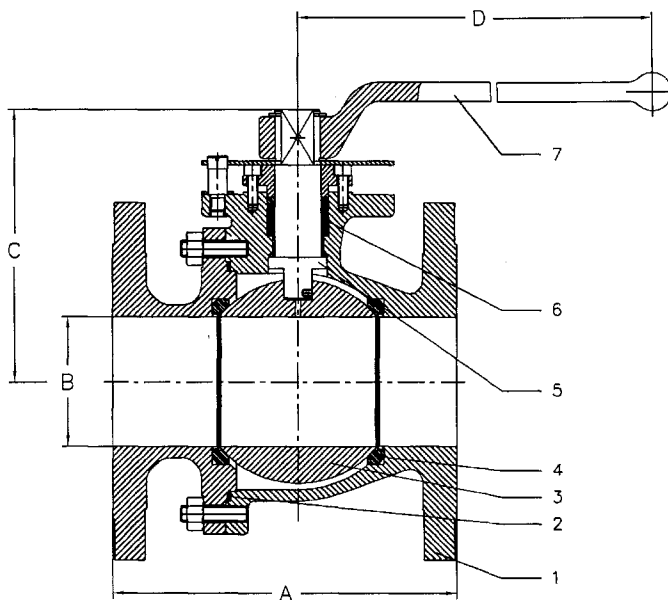


## DESIGN SPECIFICATIONS

GENERAL VALVE DESIGN	API 608
PRESSURE TEMPERATURE RATING	ANSI B16.34
WALL THICKNESS	ANSI B16.34
FLANGE DESIGN	ANSI B16.5
FACE TO FACE DIMENSION	ANSI B16.10
MATERIALS	ASTM
VALVE TESTING	API 598
VALVE FIRE SAFE TESTING	API 607

NO.	PART NAME	A 216-WCB	A 351-CF8M
1	BODY	A 216-WCB	A 351-CF8M
2	GASKET	PTFE *	PTFE *
3	BALL	A 351-CF8M	A 351-CF8M
4	SEAT	RTFE GLASS FILLED 25%	RTFE GLASS FILLED 25%
5	STEM	A 276-316	A 276-316
6	PACKING	PTFE *	PTFE *
7	HANDLE	A 216-WCB/DI	A 216-WCB/DI

\* FLEXIBLE GRAPHITE IN FIRESAFE DESIGN



SIZE	INCH	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12
	MM	15	20	25	40	50	65	80	100	150	200	250	300
A	INCH	4.25	4.62	5.00	6.50	7.00	7.50	8.0	9.0	15.5	18.0	21.0	24.0
	MM	108	117.3	127	165.1	177.8	190.5	203.2	228.6	393.7	457.2	533.4	609.6
B	INCH	0.59	0.79	1	1.5	2	2.5	3	4	6	8	10	12
	MM	15	20	25	38	51	64	76	102	152	203	254	305
C	INCH	2.26	2.4	3.44	4.65	5	6.44	6.75	8.35	10.65	12.87	17.85	21.54
	MM	57.5	61	87.5	118	129	163.5	171.5	212	270.5	327	453.5	547
D	INCH	5.12	5.12	6.3	9	9	15.75	15.75	17.32	33.46	59		
	MM	130	130	160	230	230	400	400	440	850	1500		
Weight	LBS	3.5	5	11	15	25	44	52	92	208	374	573	1263
	KGS	1.5	2	5	7	11	20	23	42	95	170	260	573

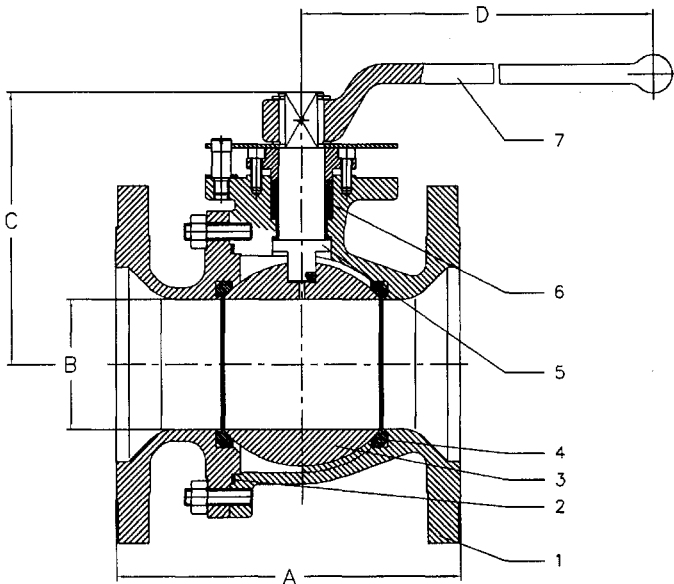


# Ball Valve Standard Port

**Model #15FBA-S**  
**Class 150 (1½" to 12")**

## DESIGN SPECIFICATIONS

GENERAL VALVE DESIGN	API 608
PRESSURE TEMPERATURE RATING	ANSI B16.34
WALL THICKNESS	ANSI B16.34
FLANGE DESIGN	ANSI B16.5
FACE TO FACE DIMENSION	ANSI B16.10
MATERIALS	ASTM
VALVE TESTING	API 598
VALVE FIRE SAFE TESTING	API 607



NO.	PART NAME	A 216-WCB	A 351-CF8M
1	BODY	A 216-WCB	A 351-CF8M
2	GASKET	PTFE *	PTFE *
3	BALL	A 351-CF8M	A 351-CF8M
4	SEAT	RTFE GLASS FILLED 25%	RTFE GLASS FILLED 25%
5	STEM	A 276-316	A 276-316
6	PACKING	PTFE *	PTFE *
7	HANDLE	A 216-WCB	A 216-WCB

\* FLEXIBLE GRAPHITE IN FIRESAFE DESIGN

SIZE	INCH	1½	2	2½	3	4	5	6	8	10	12
	MM	40	50	65	80	100	125	150	200	250	300
A	INCH	6.50	7.00	7.50	8.0	9.0	10.0	10.50	11.50	13.00	14.0
	MM	165.1	177.8	190.5	203.2	228.6	254	267	292	330	256
B	INCH	1.1	1.5	2	2	3	4	4	6	8	10
	MM	28	38	50.8	50.8	76	102	102	152	203	254
C	INCH	3.44	4.64	5	5.85	6.75	8.35	8.37	10.67	12.87	17.85
	MM	87.5	118	129	149	171	212	213	271	327	454
D	INCH	6.3	9	15.75	15.75	15.75	20	20	39.37	39.37	
	MM	160	230	400	400	400	510	510	1000	1000	
Weight	LBS	13	22	31	36	64	107	111	226	353	678
	KGS	6	10	14	17	29	49	51	103	160	308

# Ball Valve Full Port



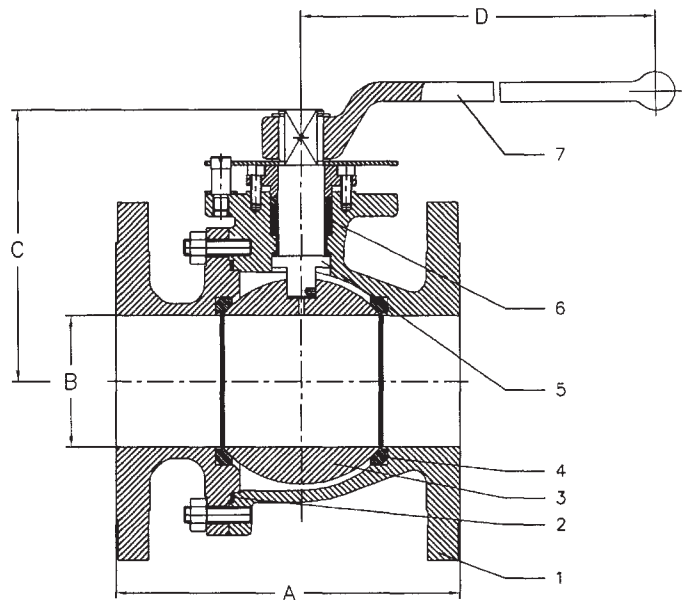
**Model #30FBA-F**  
**Class 300 (1/2" to 12")**

## DESIGN SPECIFICATIONS

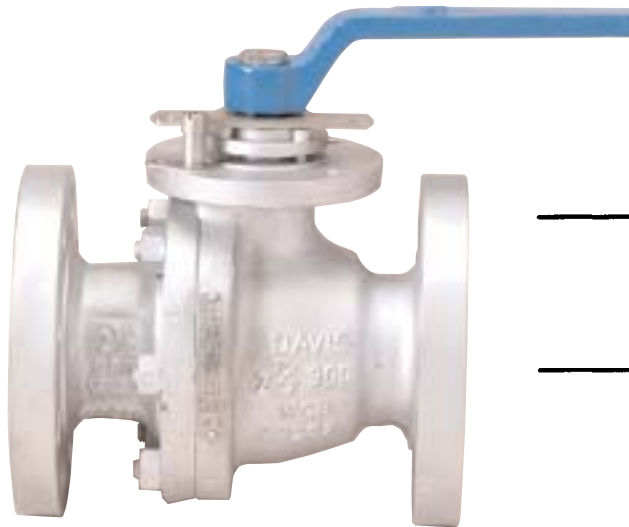
GENERAL VALVE DESIGN	API 608
PRESSURE TEMPERATURE RATING	ANSI B16.34
WALL THICKNESS	ANSI B16.34
FLANGE DESIGN	ANSI B16.5
FACE TO FACE DIMENSION	ANSI B16.10
MATERIALS	ASTM
VALVE TESTING	API 598
VALVE FIRE SAFE TESTING	API 607

NO.	PART NAME	A 216-WCB	A 351-CF8M
1	BODY	A 216-WCB	A 351-CF8M
2	GASKET	PTFE *	PTFE *
3	BALL	A 351-CF8M	A 351-CF8M
4	SEAT	RTFE GLASS FILLED 25%	RTFE GLASS FILLED 25%
5	STEM	A 276-316	A 276-316
6	PACKING	PTFE *	PTFE *
7	HANDLE	A 216-WCB	A 216-WCB

\* FLEXIBLE GRAPHITE IN FIRESAFE DESIGN



SIZE	INCH	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12
	MM	15	20	25	40	50	65	80	100	150	200	250	300
A	INCH	5.5	6	6.5	7.5	8.5	9.5	11.12	12	15.88	19.75	22.38	25.5
	MM	140	152	165	191	216	241	282	305	403	502	569	648
B	INCH	0.59	0.79	1	1.5	2	2.5	3	4	6	8	10	12
	MM	15	20	25	38	51	64	76	102	152	203	254	305
C	INCH	2.26	2.4	3.41	4.65	5	6.44	6.75	8.35	10.65	12.87	17.85	21.54
	MM	57.5	61	86.5	118	129	163.5	171.5	212	270.5	327	453.5	547
D	INCH	5.12	5.12	6.3	9	9	15.75	15.75	33.46	39.37	59		
	MM	130	130	160	230	230	400	400	850	1000	1500		
Weight	LBS	3.7	5	11	15	33	49	112	203	267	459	529	904
	KGS	1.7	2	5	7	15	22	51	92	121	208	240	410

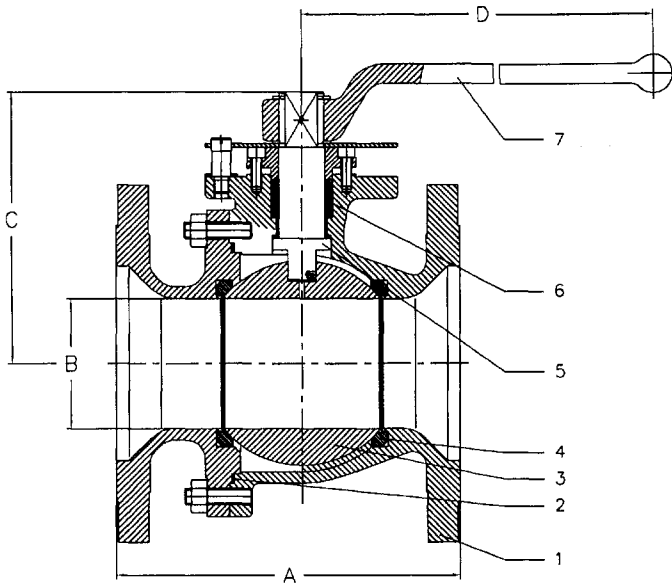


# Ball Valve Standard Port

**Model #30FBA-S**  
**Class 300 (1½" to 12")**

## DESIGN SPECIFICATIONS

GENERAL VALVE DESIGN	API 608
PRESSURE TEMPERATURE RATING	ANSI B16.34
WALL THICKNESS	ANSI B16.34
FLANGE DESIGN	ANSI B16.5
FACE TO FACE DIMENSION	ANSI B16.10
MATERIALS	ASTM
VALVE TESTING	API 598
VALVE FIRE SAFE TESTING	API 607



NO.	PART NAME	A 216-WCB	A 351-CF8M
1	BODY	A 216-WCB	A 351-CF8M
2	GASKET	PTFE *	PTFE *
3	BALL	A 351-CF8M	A 351-CF8M
4	SEAT	RTFE GLASS FILLED 25%	RTFE GLASS FILLED 25%
5	STEM	A 276-316	A 276-316
6	PACKING	PTFE *	PTFE *
7	HANDLE	A 216-WCB	A 216-WCB

\* FLEXIBLE GRAPHITE IN FIRESAFE DESIGN

SIZE	INCH	1½	2	2½	3	4	6	8	10	12
	MM	40	50	65	80	100	150	200	250	300
A	INCH	7.5	8.5	9.5	11.12	12	15.88	16.5	18	19.75
	MM	191	216	241	282	305	403	419	457	502
B	INCH	1.1	1.5	2	2	3	4	6	8	10
	MM	28	38	50.8	50.8	76	102	152	203	254
C	INCH	3.44	4.64	5	5.85	6.75	8.37	10.63	12.87	17.85
	MM	87.5	118	129	149	171	213	270	327	454
D	INCH	6.3	9	15.75	15.75	15.75	33.5	39.37	59	
	MM	160	230	400	400	400	850	1000	1500	
Weight	LBS	14	28	40	53	79	183	318	518	1362
	KGS	6	13	18	24	36	83	144	235	617



# Ball Valve

## Full Port & Standard Port

**Model #60FBA-F, #60FBA-S**

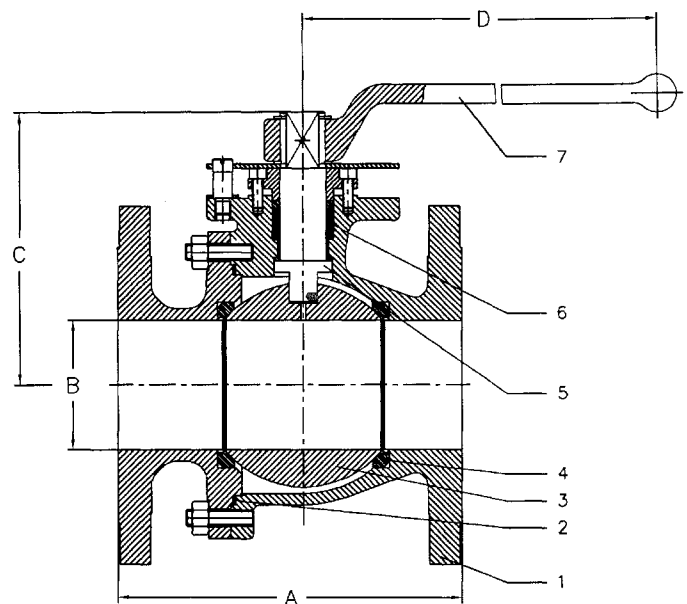
**Class 600 (1/2" to 4" Full Port, 1 1/2" to 6" Standard Port)**

### DESIGN SPECIFICATIONS

GENERAL VALVE DESIGN	API 608
PRESSURE TEMPERATURE RATING	ANSI B16.34
WALL THICKNESS	ANSI B16.34
FLANGE DESIGN	ANSI B16.5
FACE TO FACE DIMENSION	ANSI B16.10
MATERIALS	ASTM
VALVE TESTING	API 598
VALVE FIRE SAFE TESTING	API 607

NO.	PART NAME	A 216-WCB	A 351-CF8M
1	BODY	A 216-WCB	A 351-CF8M
2	GASKET	PTFE *	PTFE *
3	BALL	A 351-CF8M	A 351-CF8M
4	SEAT	RTFE GLASS FILLED 25%	RTFE GLASS FILLED 25%
5	STEM	A 276-316	A 276-316
6	PACKING	PTFE *	PTFE *
7	HANDLE	A 216-WCB	A 216-WCB

\* FLEXIBLE GRAPHITE IN FIRESAFE DESIGN



### FULL PORT

SIZE	INCH	1/2	3/4	1	1 1/2	2	2 1/2	3	4
	MM	15	20	25	40	50	65	80	100
A	INCH	6.5	7.5	8.5	9.5	11.5	13	14	17
	MM	165	191	216	241	292	330	356	432
B	INCH	0.59	0.79	1	1.5	2	2.5	3	4
	MM	15	20	25	38	51	64	76	102
C	INCH	2.26	2.4	3.44	4.65	5	6.44	6.75	8.35
	MM	57.5	61	87.5	118	129	163.5	171.5	212
D	INCH	5.12	5.12	9	15.75	15.75	36	36	39.37
	MM	130	130	230	400	400	910	910	1000
Weight	LBS	9	12	15	31	43	55	86	187
	KGS	4	6	7	14	20	25	39	85

### STANDARD PORT

SIZE	INCH	1 1/2	2	2 1/2	3	4	6
	MM	40	50	65	80	100	150
A	INCH	9.5	11.5	13	14	17	22
	MM	241	292	330	356	432	559
B	INCH	1.1	1.5	2	2	3	4
	MM	28	38	50.8	50.8	76	102
C	INCH	3.44	4.64	5	5.85	6.75	8.37
	MM	87.5	118	129	149	171	213
D	INCH	9	15.75	27.5	27.5	36	39.37
	MM	230	400	700	700	910	1000
Weight	LBS	31	40	93	99	183	342
	KGS	14	18	42	45	83	155

# SEAT PRESSURE / TEMPERATURE RATING FOR TWO PIECE FLOATING BALL VALVE

Temp F	#150(psi)		#300(psi)		#600(psi)
	RTFE	PTFE	RTFE	PTFE	RTFE
0	285	285	740	740	1480
50	285	285	740	740	1480
100	285	285	740	740	1480
150	275	270	650	630	1280
200	265	255	580	550	1080
250	260	250	480	430	900
300	250	245	390	320	680
350	200	200	290	200	500
400	150	100	200	100	290
450	100	---	100	---	100
500					

