

F14A

Floating Ball Valve, ASME CLASS 150 / CLASS 300



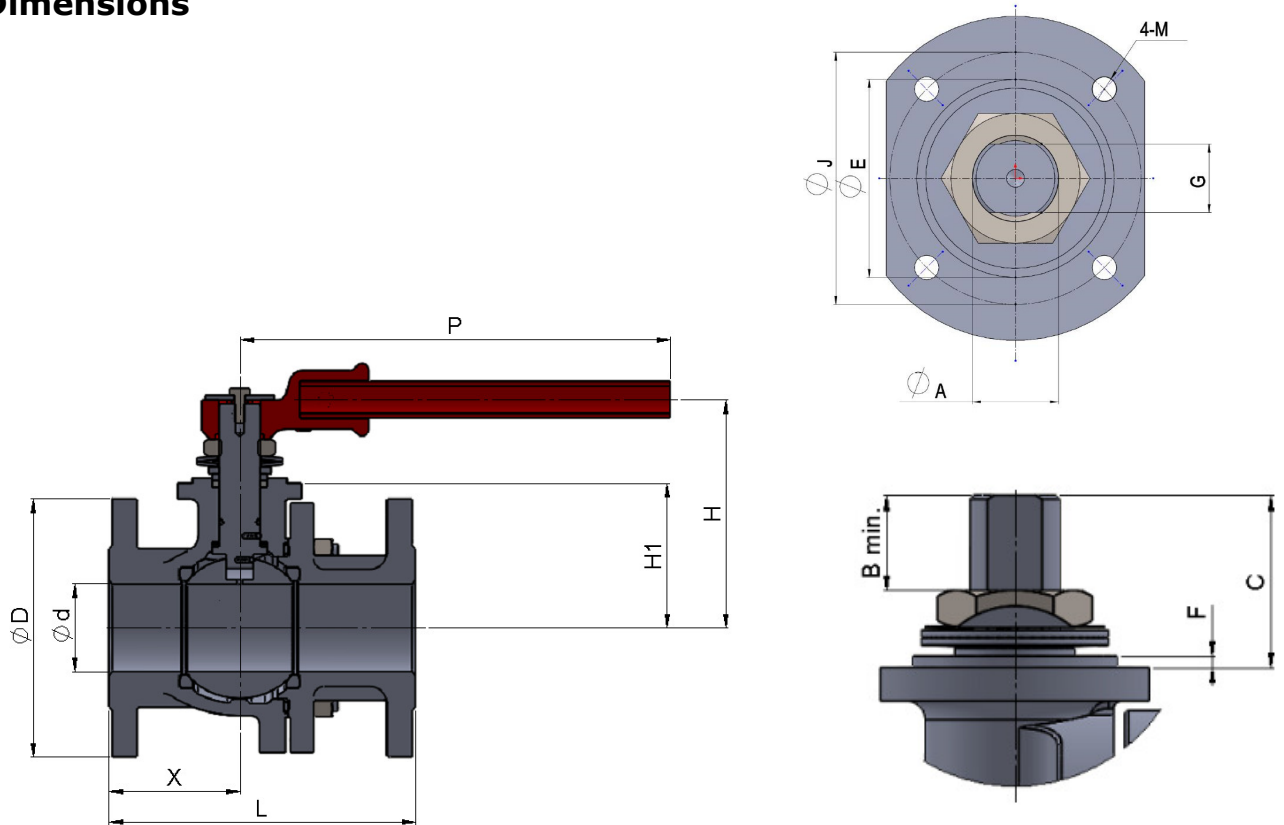
Features

- Full bore. Split body
- **Design Standards:** ISO 17292 / ASME B16.34 / API 608
- **Flanges:** ASME B16.5, RF
- **Lengths/Face-to-face:** ASME B16.10
- **Leak test:** EN 12266-1 Rate A / API 598
- **Top flange:** ISO 5211
- **Seats:** Modified PTFE TFM™ 1600 ball seats provide enhanced sealing performance and longer life
- **Stem:** Anti-static and proof Blow-out
- Autoadjustable packing
- NACE MR0175

Approvals

- Fire test Certification: API 607 ed. 7th / ISO 10497 ed. 3rd
- PED 2014/68/UE approval for CE marked products.
- Fugitive Emission Certification: ISO 15848-1 (2015)
- CRN approval
- Marine Division certificate
- ATEX approval
- SIL IEC 61508 – 2010 Certification
- AD 2000 W0/A4
- EAC TR CU

Dimensions



Class 150																		
Size	General Dimensions [mm]															Kv	Weight	
inch.	Ød	ØD	L	X	P	H	H1	A	B	C	E	F	G	J	M	ISO 5211	[m ³ /h] [bar]	[Kg]
1/2"	14	90	108	45,5	150	90	23,5	10	9,5	18	25	1,5	6	36	M5	F03	19	2
3/4"	19	100	117	52	150	95	29	10	8	16,5	25	1,5	6	36	M5	F03	40,5	2,5
1"	25	110	127	54,5	150	106	30,5	12	10	20,5	35	2	8	50	M6	F05	79,5	3,5
1.1/2"	38	125	165	80,5	200	126	61	14	13,5	29	35	2	9	50	M6	F05	208,5	7
2"	51	150	178	76	250	133	84	24	24	46	55	3	19	70	M8	F07	433	12,3
3"	76	190	203	90	250	153	104	24	24	46	55	3	19	70	M8	F07	1062	23
4"	102	230	229	114,5	500	201	130	36	38,5	66	70	3	22	102	M10	F10	2158	40
6"	152	280	267	134	750	240	169	36	38,5	66	70	3	22	102	M10	F10	5662	76
8"*	203	343	457	228	-	342	231	50**	42**	64,5**	100	3	30*	140	M16	F14	9201	180
10"*	254	406	533	266	-	378	286	65	171,5	174,5	130	3	18	165	M20	F16	15269	255
12"*	305	485	610	305	-	440	315	65	171,5	174,5	130	3	18	165	M20	F16	22971	360

(*) Manual Gear

(**) Bare stem

Class 300																		
Size	General Dimensions [mm]															Kv	Weight	
inch.	Ød	ØD	L	X	P	H	H1	A	B	C	E	F	G	J	M	ISO 5211	[m ³ /h] [bar]	[Kg]
1/2"	14	95	140	49,5	150	90	23,5	10	9,5	18	25	1,5	6	36	M5	F03	16,5	2,8
3/4"	19	115	152	62	150	95	29	10	8	16,5	25	1,5	6	36	M5	F03	35,5	3,5
1"	25	125	165	66	150	106	30,5	12	10	20,5	35	2	8	50	M6	F05	70	5,2
1.1/2"	38	155	190	96	200	126	61	14	13,5	29	35	2	9	50	M6	F05	194,5	10,5
2"	51	165	216	106	350	133	84	24	24	46	55	3	19	70	M8	F07	392,5	15,5
3"	76	210	283	127	350	153	104	24	24	46	55	3	19	70	M8	F07	900	31
4"	102	255	305	152,5	500	201	130	36	38,5	66	70	3	22	102	M10	F10	1871	55
6"	152	320	403	201,5	1000	240	169	36	38,5	66	70	3	22	102	M10	F10	4608	115
8"*	203	381	502	251	-	342	231	50**	42**	64,5**	100	3	30*	140	M16	F14	8779	239
10"*	254	445	568	284	-	378	286	65	171,5	174,5	130	3	18	165	M20	F16	14791	297
12"*	305	521	648	324	-	440	315	65	171,5	174,5	130	3	18	165	M20	F16	22287	450

(*) Manual Gear

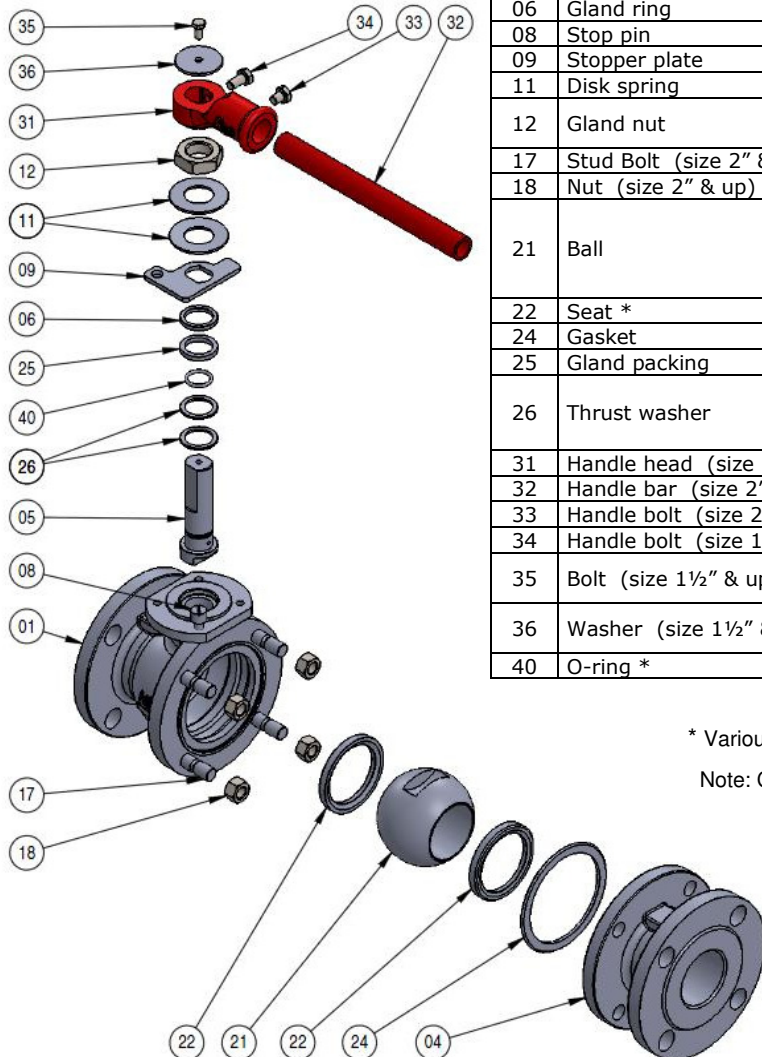
(**) Bare stem

Operation Torque (BTO)

Valve Size	Maximum differential pressure [barg] / Operation torque [Nm]									
	5	10	15	20	25	30	35	40	45	51
1/2"	2,5	2,5	2,5	2,7	2,7	2,7	2,7	3	3	3
3/4"	5	5,1	5,5	5,5	5,5	5,7	5,9	5,9	6,2	6,2
1"	9	9,5	9,7	10,1	10,1	10,1	10,1	10,3	10,3	10,5
1 1/2"	14	14	14,5	14,5	14,5	14,5	15	15	15,5	17,5
2"	37	37,5	38	38	39,5	39,5	40,5	42,5	44,5	48
3"	50	51	58	60	63	65	70	75	85	95
4"	110	115	118	120	145	160	170	180	190	195
6"	240	245	250	260	265	285	350	370	405	410
8"	400	420	475	500	550	585	620	660	705	750
10"	1200	1300	1350	1400	1440	1490	1525	1540	1565	1600
12"	1825	1910	1950	2000	2010	2025	2040	2070	2085	2100

Note: Safety factor not included

Material List



Pos.	Description	Carbon Steel	Stainless Steel
01	Body	ASTM A216 Gr.WCC	ASTM A351 Gr.CF8M / ASTM A351 Gr.CF3M
04	Cap	ASTM A216 Gr.WCC	ASTM A351 Gr.CF8M / ASTM A351 Gr.CF3M
05	Antistatic stem*	ASTM A182 Gr.F316 / ASTM A479 Type 316	ASTM A182 Gr.F316 / ASTM A479 Type 316
06	Gland ring	ASTM A479 Type 316	ASTM A479 Type 316
08	Stop pin	Stainless Steel	Stainless Steel
09	Stopper plate	Stainless Steel	Stainless Steel
11	Disk spring	Stainless Steel	Stainless Steel
12	Gland nut	Stainless Steel (1/2" - 2") Carbon Steel (3" - 6")	Stainless Steel
17	Stud Bolt (size 2" & up)	ASTM A193 Gr.B7M	ASTM A193 Gr.B8M
18	Nut (size 2" & up)	ASTM A194 Gr.2HM	ASTM A194 Gr.8M
21	Ball	ASTM A479 Type 316 EN 10213 1.4408 ASTM A351 Gr.CF8M ASTM A182 Gr.F316	ASTM A479 Type 316 EN 10213 1.4408 ASTM A351 Gr.CF8M ASTM A182 Gr.F316
22	Seat *	H-PTFE (TFM 1600)	H-PTFE (TFM 1600)
24	Gasket	Graphite + 316L	Graphite + 316L
25	Gland packing	Graphite	Graphite
26	Thrust washer	PTFE + 25% Graphite (size 1/2", 3/4" & 1") PTFE (size 1 1/2" & up)	PTFE + 25% Graphite (size 1/2", 3/4" & 1") PTFE (size 1 1/2" & up)
31	Handle head (size 2" & up)	Ductile Iron	Ductile Iron
32	Handle bar (size 2" & up)	Carbon Steel	Carbon Steel
33	Handle bolt (size 2" & up)	Stainless Steel	Stainless Steel
34	Handle bolt (size 1 1/2" & up)	Stainless Steel	Stainless Steel
35	Bolt (size 1 1/2" & up)	Stainless Steel (1 1/2" - 2") Carbon Steel (3" - 6")	Stainless Steel
36	Washer (size 1 1/2" & up)	Stainless Steel (1 1/2" - 2") Carbon Steel (3" - 6")	Stainless Steel
40	O-ring *	FKM	FKM

* Various stem, seats and O-rings materials are available as optional.

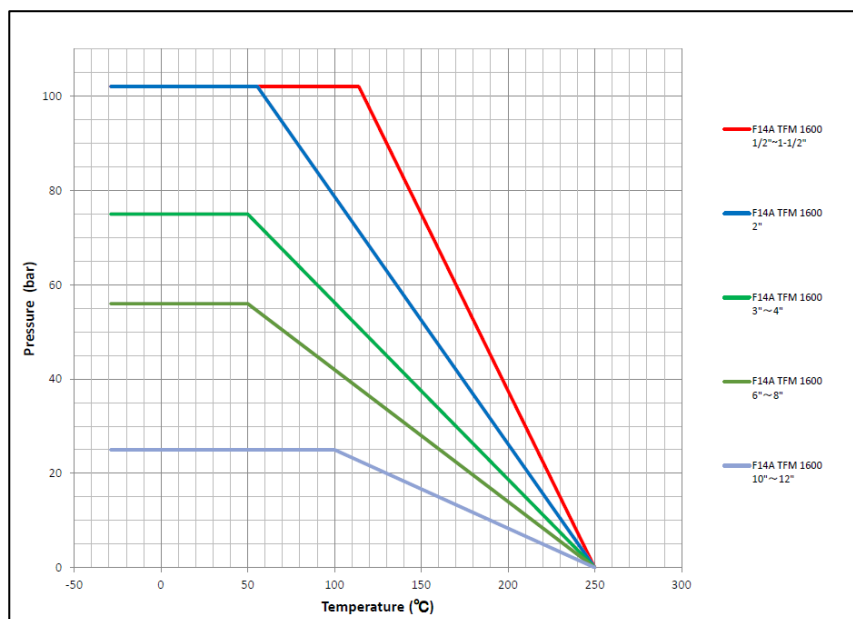
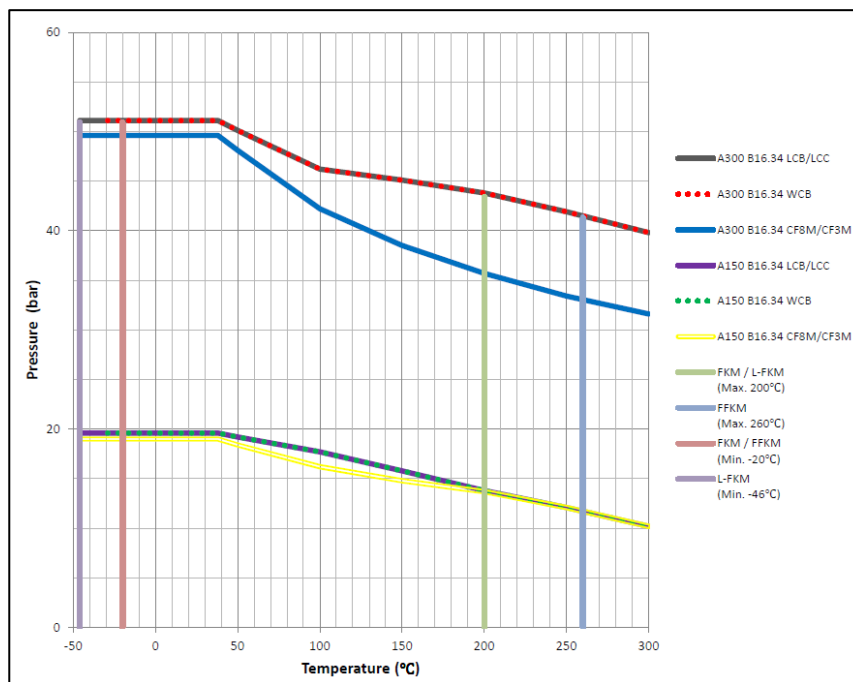
Note: Components arrangement may vary depending on the size.

P-T Rating

Class 150					
Pressure-Temperature Ratings [bar]					
Temperature	Size	1/2" ~ 8"		10" ~ 12"	
		WCC	CF8M - CF3M*	WCC	CF8M
-29°C ~ 38°C		19,8	19	19,8	19
200°C		13,8	13,7	8,3	8,3

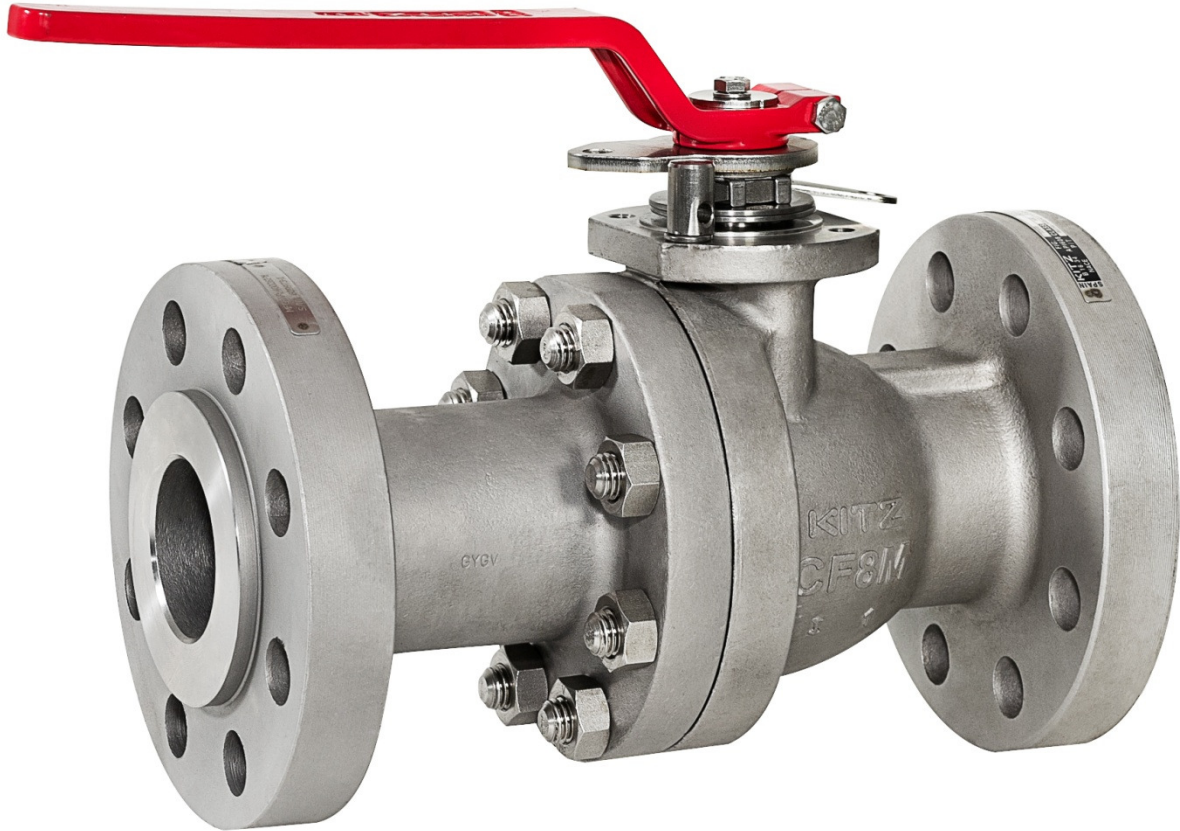
Class 300											
Pressure-Temperature Ratings [bar]											
Temperature	Size	1/2" ~ 1 1/2"		2"		3" ~ 4"		6" ~ 8"		10" ~ 12"	
		WCC	CF8M	WCC	CF8M/CF3M*	WCC	CF8M/CF3M*	WCC	CF8M/CF3M*	WCC	CF8M
-29°C ~ 38°C		51,7	49,6	51,7	49,6	51,7	49,6	51,7	49,6	25	
200°C		37,5		26,2		18,7		14		8,3	

*CF3M → This material is available in the following sizes 2", 3" 4" and 6"



F14AN

Floating Ball Valve, ASME Class 600



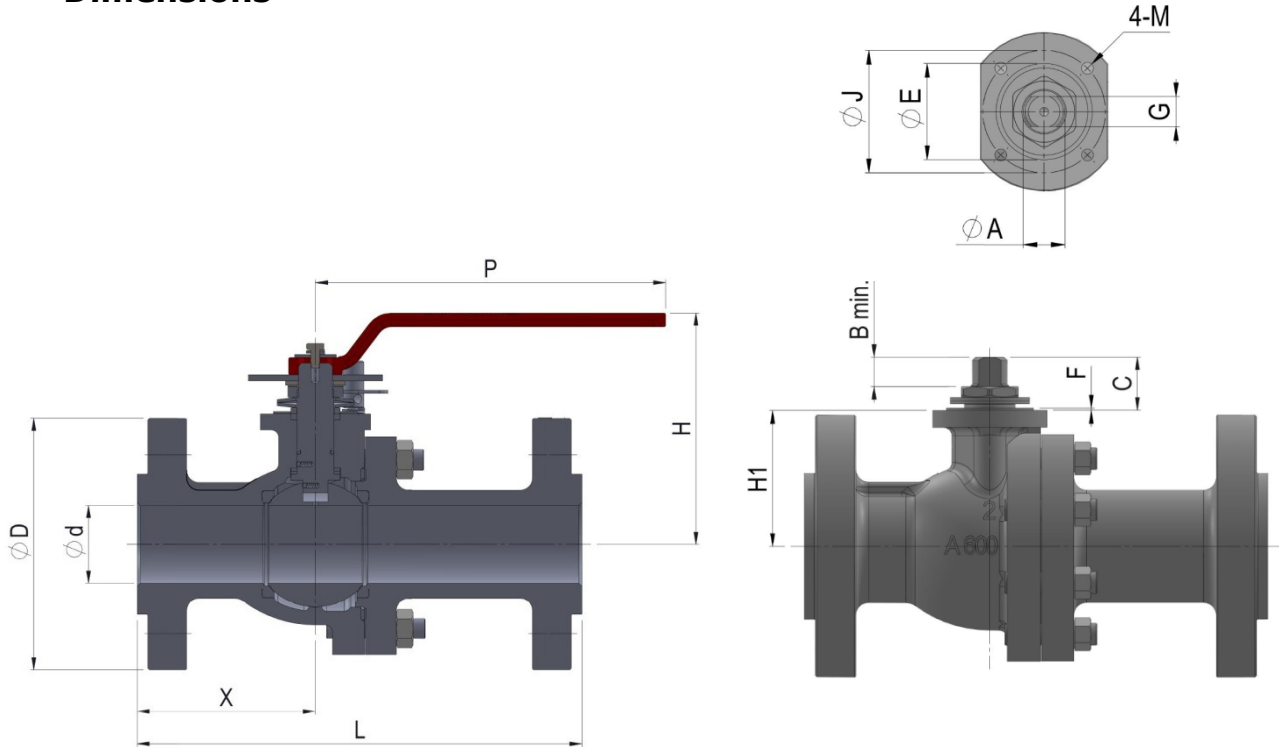
Features

- Full bore. Split body
- **Design Standards:** API 608/ISO 17292/ASME B16.34
- **Flanges:** ASME B16.5, RF
- **Lengths/Face-to-face:** ASME B16.10
- **Leak test:** EN 12266-1 Rate A / API 598
- **Top flange:** ISO 5211 top mount and CAPI stem dimension for global automation conformity.
- **Seats:** HYPATITE® ball seats provide enhanced sealing performance and longer life.
- **Stem:** Anti-static and proof Blow-out.
- **Handle:** Lever "pynch type" (1" and above)
- NACE MR0103 compliance available.

Approvals

- Fire test Certification: API 607 ed. 6th / ISO 10497 ed. 3rd
- PED 2014/68/UE approval for CE marked products.
- Fugitive Emission Certification: ISO 15848-1 (2015)
- CRN approval
- Marine Division certificate
- ATEX approval

Dimensions



SIZE	DIMENSIONS [mm]																Kv	Weight
	GENERAL DIMENSIONS						TOP WORKS											
Inch	Ød	ØD	L	X	P	H	ØA	B min	C	ØE	F	G	J	M	H1	ISO 5211	[m³/h] [bar]	(Kg)
1/2"	14	95	165	82,5	130	89	10	7	17	25	1,5	7	36	M5	25	F03	15,5	3
3/4"	19	115	190	95	130	93	10	7	17	25	1,5	7	36	M5	29	F03	32	4,2
1"	25	125	216	108	160	103	14	11	26	30	1,5	11	42	M5	39,5	F04	60,5	6
1.1/2"	38	155	241	102,5	160	125	14	11	26,5	30	1,5	11	42	M5	61,5	F04	172	11,5
2"	51	165	292	117	230	152	22	17	34	55	1,5	17	70	M8	85,5	F07	338	18
3"	76	210	356	136,5	400	174,4	22	17	33,5	55	1,5	17	70	M8	110,5	F07	850	35
4"	102	275	432	216	400	206,5	28	22	45	70	1	22	102	M10	134	F10	1572	69

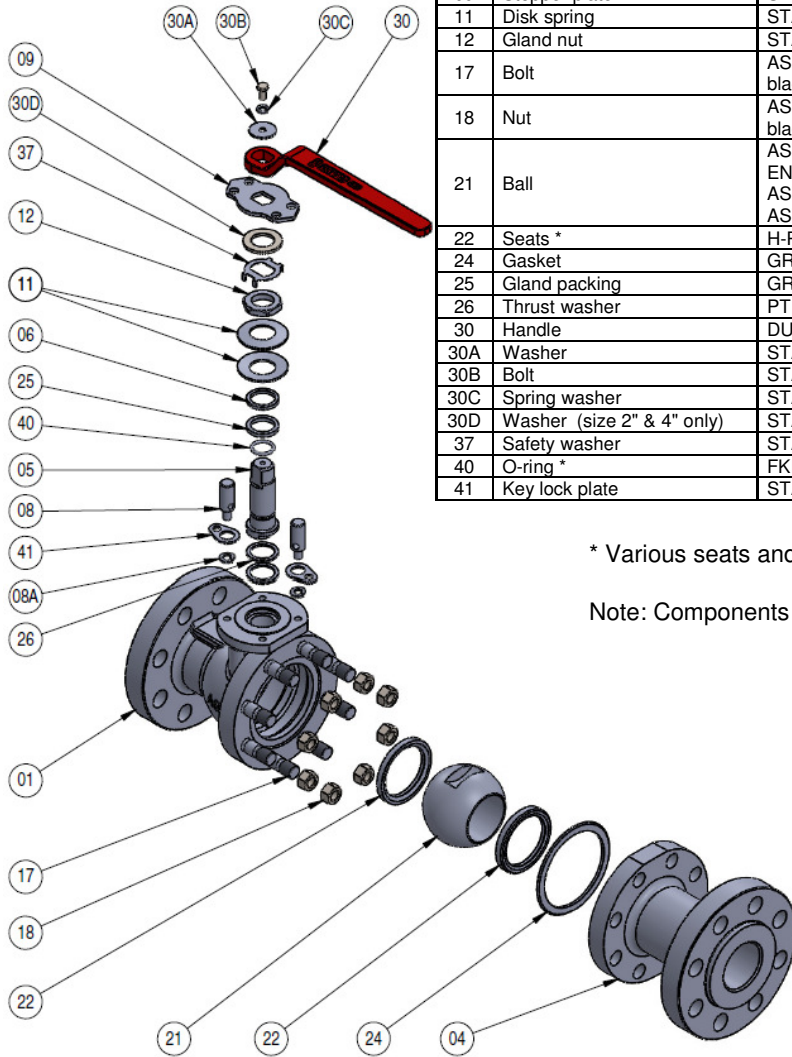
P-T Rating

PRESSURE-TEMPERATURE RATINGS [bar]							
Temperature [°C]	O-Ring / Seat Material	1/2"-1.1/2"		2"		3"-4"	
		WCB	CF8M	WCB	CF8M	WCB	CF8M
38	All STD Materials	102	99	102	99	102	99
140	H-NBR Max	77		58		41,5	
200	FKM Max FKM-LT Max	37,5		26,3		18,8	
250	H-PTFE Max	0		0		0	

Operation Torque

Valve Size	Maximum differential pressure[bar] / Operation torque(BTO)[Nm]									
	10	20	30	40	50	60	70	80	90	102
1/2"	3,2	3,9	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5
3/4"	5,8	5,8	6,5	6,5	6,5	6,5	6,5	6,5	6,5	6,5
1"	11,7	12,4	12,4	12,4	12,4	12,4	12,4	12,4	12,4	13
1.1/2"	17,5	17,5	17,5	17,5	18,2	20,8	23,4	26	26	27,3
2"	52	52	52	52	52	58,5	58,5	58,5	58,5	58,5
3"	84,5	97,5	110,5	114	120	125,4	125,4	125,4	125,4	125,4
4"	136,5	143	143	162,5	195	227,5	227,5	240,5	247	247

Material List



item	DESCRIPTION	CARBON STEEL	STAINLESS STEEL
01	Body	ASTM A216 Gr.WCB	ASTM A351 Gr.CF8M
04	Cap	ASTM A216 Gr.WCB	ASTM A351 Gr.CF8M
05	Antistatic stem	ASTM A182 Gr.F316 / ASTM A479 Type 316	ASTM A182 Gr.F316/ASTM A479 Type 316
06	Gland ring	ASTM A479 Type 316	ASTM A479 Type 316
08	Stop pin	STAINLESS STEEL	STAINLESS STEEL
08A	Spring washer (2" & 3" only)	STAINLESS STEEL	STAINLESS STEEL
09	Stopper plate	STAINLESS STEEL	STAINLESS STEEL
11	Disk spring	STAINLESS STEEL	STAINLESS STEEL
12	Gland nut	STAINLESS STEEL	STAINLESS STEEL
17	Bolt	ASTM A193 Gr.B7M (with black coating)	ASTM A193 Gr.B8M
18	Nut	ASTM A194 Gr.2HM (with black coating)	ASTM A194 Gr.8M
21	Ball	ASTM A479 Type 316 EN 10213 1.4408 ASTM A351 Gr.CF8M ASTM A182 Gr.F316	ASTM A479 Type 316 EN 10213 1.4408 ASTM A351 Gr.CF8M ASTM A182 Gr.F316
22	Seats *	H-PTFE	H-PTFE
24	Gasket	GRAPHITE + 316L	GRAPHITE + 316L
25	Gland packing	GRAPHITE	GRAPHITE
26	Thrust washer	PTFE	PTFE
30	Handle	DUCTILE IRON	DUCTILE IRON
30A	Washer	STAINLESS STEEL	STAINLESS STEEL
30B	Bolt	STAINLESS STEEL	STAINLESS STEEL
30C	Spring washer	STAINLESS STEEL	STAINLESS STEEL
30D	Washer (size 2" & 4" only)	STAINLESS STEEL	STAINLESS STEEL
37	Safety washer	STAINLESS STEEL	STAINLESS STEEL
40	O-ring *	FKM-LT	FKM-LT
41	Key lock plate	STAINLESS STEEL	STAINLESS STEEL

* Various seats and O-rings materials are available as optional.

Note: Components arrangement may vary depending on the size