



PRODUCT FEATURES

- GG 25 cast iron body and flange.
- Stainless steel sphere.
- Stainless steel belleville spring reinforcement.
- PTFE, sphere sealing ring, outer sealing ring and stem ring.
- Additional sealing quality is achieved by mounting the stem internally, supported by PTFE and O-Ring system.
- Flanges are according to ISO 7005 - 2.
- Valve mounting dimensions conform to DIN 3202 F4.
- Available in two types: Full-Bore (FAF 1000), Reduced-Bore (FAF 1050).
- Easy to use.
- Longer service life.
- PN 6 ball valves can easily be connected to circulation pumps, without any additional fittings.

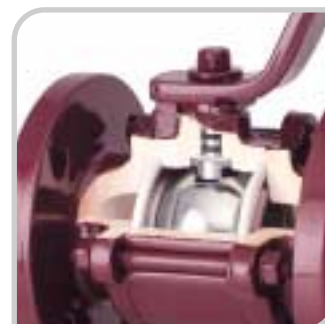
APPLICATIONS

Low pressure steam, cold and hot water systems, any fluid without acidity or alkalinity.

OPERATING TEMPERATURE

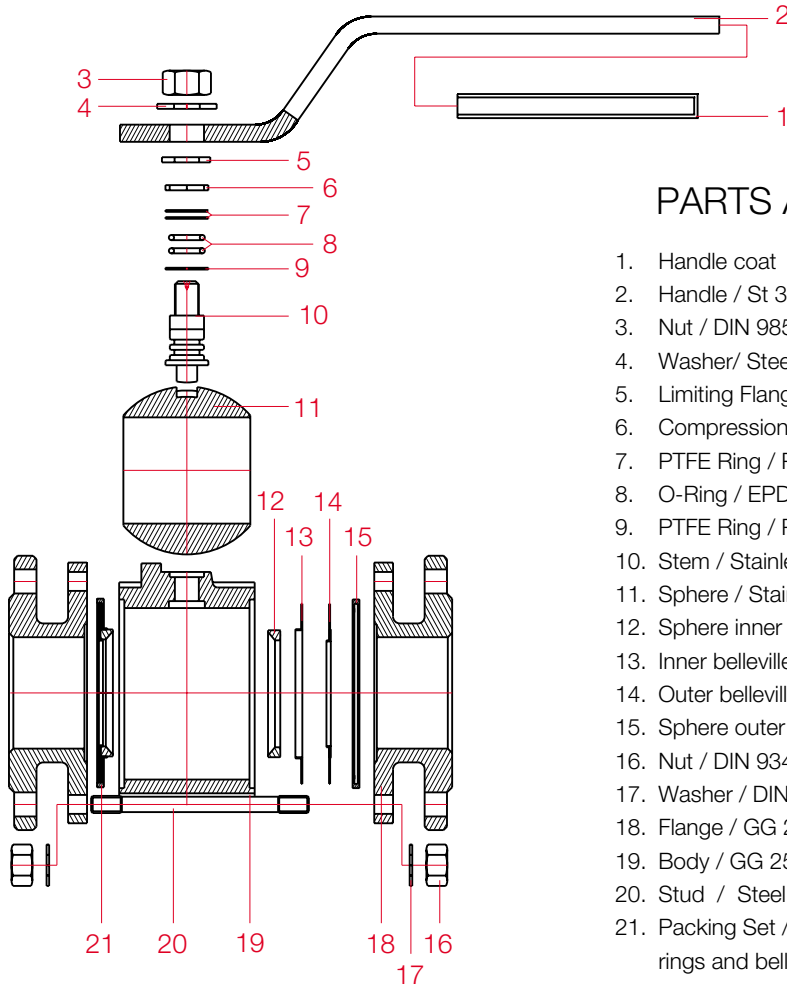
Max + 200°C 392°F

Document No : KA-01
Revision Date : 11/11/2003
Revision No : 01



PN 6 FLANGED BALL VALVE (FAF 1000 & 1050)

TECHNICAL DRAWING AND MATERIALS



PARTS AND MATERIALS

1. Handle coat / Plastic
2. Handle / St 37 steel
3. Nut / DIN 985
4. Washer/ Steel
5. Limiting Flange / Steel
6. Compression Ring/ Steel
7. PTFE Ring / PTFE
8. O-Ring / EPDM
9. PTFE Ring / PTFE
10. Stem / Stainless steel SAE-304
11. Sphere / Stainless steel SAE-304 or DIN 1-4086
12. Sphere inner sealing ring / PTFE
13. Inner belleville spring / Stainless steel SAE-304
14. Outer belleville spring / Stainless steel SAE-304
15. Sphere outer sealing ring / PTFE
16. Nut / DIN 934
17. Washer / DIN 127
18. Flange / GG 25 cast iron
19. Body / GG 25 cast iron
20. Stud / Steel
21. Packing Set / consist of inner-outer sealing rings and belleville springs.

MATERIAL PROPERTIES

MATERIAL TYPE	MATERIAL PROPERTY
GG 25 Cast Iron	Tensile strength = 250-350 N/mm ² Hardness = Max. 250 Brinell (BHN)
GGG 40 Ductile Iron	Tensile strength = 400-550 N/mm ² Hardness = 135 - 185 Brinell (BHN)
Stainless Steel DIN 1-4086	C = 0.9 - 1.3 Si Max.=2 Mn Max.=1 Cr = 27 - 30
Stainless Steel SAE-304	C max = 0.08 Si Max.=1 Mn Max.=2 Cr = 18-20 Ni = 8 - 10.5
Stainless Steel SAE-316	C max = 0.08 Si Max.=1 Mn Max.=2 Cr = 16-18 Ni = 10- 14
PTFE	Density= 2.13-2.23 gr/cm ³ Tensile strength = 250-300 kg/cm ² Operating Temperature = -85°C / +200°C 392°F
PTFE (25 % Carbon)	Density= 2.1-2.2 gr/cm ³ Tensile strength = 165-170 kg/cm ²
Graphitic Ring	Graphite purity = %98 Density= min. 1.6 gr/cm ³
St 37	C = <= 0.2 P Max.= 0.06 S Max.= 0.05 Tensile strength = 360-440 N/mm ²
Steel (Ç1030)	C = 0.30 P Max.= 0.06 S Max.= 0.06 Tensile strength = 490 N/mm ²

BOLT DIMENSIONS

DN	BOLT		NUT QUANTITY	TIGHTENING TORQUE (Kgm)	WRENCH OPENING (mm)
	DIMENSIONS	QUANTITY			
40	M 12 X 45	4 x 2	4 x 2	7	18
50	M 12 X 45	4 x 2	4 x 2	7	18
65	M 12 X 45	4 x 2	4 x 2	7	18
80	M 16 X 55	4 x 2	4 x 2	16	24
100	M 16 X 55	4 x 2	4 x 2	16	24

Note: Dimensions according to standard flanges

PN 6 FLANGED BALL VALVES MAINTENANCE INSTRUCTIONS

Follow the instructions below to perform maintenance and cleaning of FAF PN 6 Flanged Ball Valves.

DISMOUNTING :

- Make sure that there is no fluid supply on the line where the valve is detached.
- Unscrewing the connection bolts and nuts in opposite pairs, detach the valve from the line.
- Unscrew in opposite pairs the nuts (16) of the studs (20) connecting the flanges and the body. Remove the washers (17) and detach the body (19) from two flanges.
- Turn the handle (2) to closed position and remove the packing set (21) located in two sides.
- Push the sphere (11) slightly to remove it from the body.
- Unscrew the nut (3) on the handle. Remove the washer (4), handle (2), limiting flange (5), compression ring (6), PTFE Rings (7), respectively from the stem. To remove the stem (10) press on it to drop inside the body.
- Remove the O-Rings (8) on the stem.
- Remove the PTFE Ring (9) on the stem.

INSPECTION AND CLEANING :

- Replace the sphere if excessive scratches and nicks are noted. If lime stains are observed on the sphere, clean the sphere in water with wet sandpaper (400). While maintenance processes, avoid damaging the sphere processed in 0.01 mm sensitive CNC machines.
- Packing set located on two sides of the body consists of belleville spring (13-14) and inner-outer sealing (12-15) elements. If any crack, tear or cut observed on the inner (12)-outer (15) rings or if the belleville spring and rings are deformed, request a new packing set from our company.
- PTFE ring and O-Rings on the stem must be replaced with new ones.
- Epoxy coultar priming coat is applied on the inner surfaces of the body and the flanges, however, if there exists oxidations, these regions must be cleaned and repainted with similar coatings. (Do not paint the stem hole and the flange-packing set compression surface).
- Inspect stud threads and nuts. Replace deformed or rusty parts.
- Clean all materials carefully and proceed to mounting.

MOUNTING :

- Place PTFE Ring (9) and O-Rings (8) of the stem (10). Lightly grease the surfaces of the O-Rings. Mount the stem through body cavity without damaging O-Rings. On the upper side, mount the PTFE Rings, compression ring (6), limiting flange (5), handle (2), washer (4) and the nut (3), respectively. Tighten the nut to finish the mounting of the stem.
- Turn the handle to closed position, place the sphere inside the body as the canal on the sphere will be parallel to the stem key. Check if the sphere can freely move forward, back, up and down inside the body cavity.
- Mount the packing set on two sides of the body as the inner rings will face the sphere.
Position the mounted body between two flanges, place studs, nuts and washers and tighten the nuts in opposite pairs to eliminate the gaps.

Note: It is highly recommended to open and close our valves once in 15 days for a longer service life after installation.

PRESSURE / TEMPERATURE RATINGS FOR CAST IRON (GG 25) FLANGES
(REFERENCE ISO 7005-2 TABLE 16)

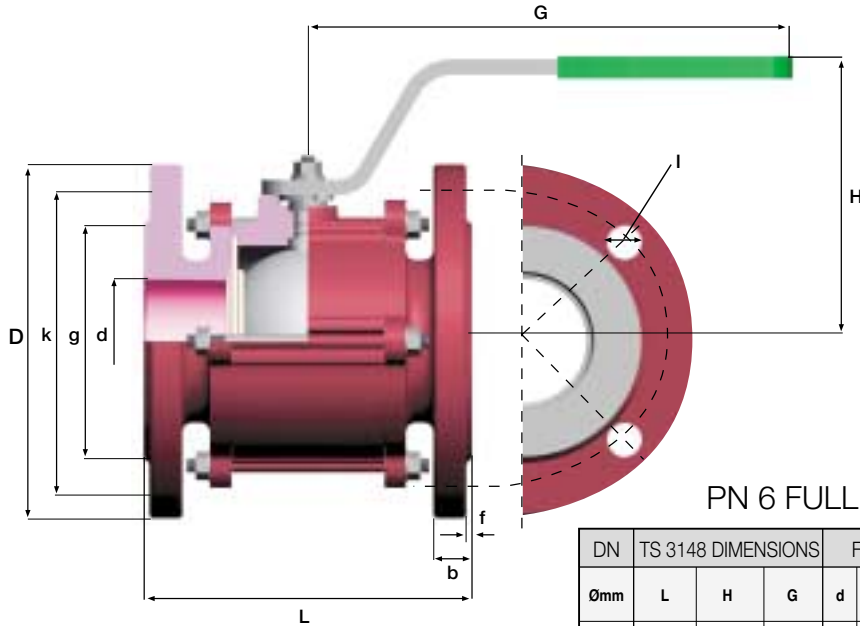
Pressure ISO PN	TEMPERATURE °C					
	-10 to 120	150	200	250	300	350
	Maximum operating pressure (bar)					
10	10	9,5	9	8	7	5,5
16	16	15,2	14,4	12,8	11,2	8,8
20	15,5	14,8	13,9	12,1	10,2	8,6
25	25	23,8	22,5	20	17,5	13,8
40	40	38	36	32	28	22
50	40,2	39	36	35	33	31

PRESSURE / TEMPERATURE RATINGS FOR DUCTILE IRON (GGG 40) FLANGES
(REFERENCE ISO 7005-2 TABLE 17)

Pressure ISO PN	TEMPERATURE °C						
	-10 to 40	120	150	200	250	300	350
	Maximum operating pressure (bar)						
10	10	10	9,7	9,2	8,7	8	7
16	16	16	15,5	14,7	13,9	12,8	11,2
20	17,5	15,5	14,8	13,9	12,1	10,2	8,6
25	25	25	24,3	23	21,8	20	17,5
40	40	40	38,8	36,8	34,8	32	28
50	44	40,2	39	36	35	33	31

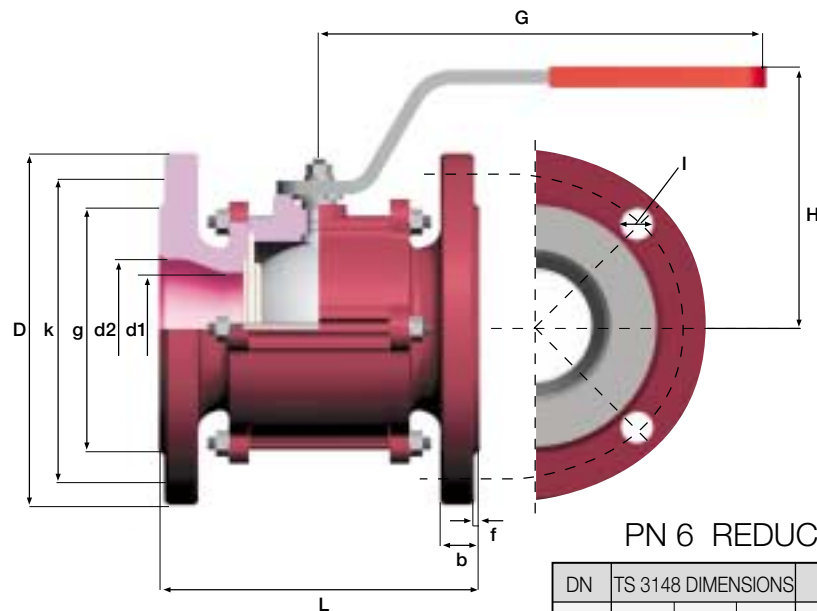
PN 6 FLANGED BALL VALVE (FAF 1000 & 1050)

DIMENSIONS AND PRODUCT DATA



FAF 1000
PN 6 FULL - BORE FLANGED BALL VALVES

DN	TS 3148 DIMENSIONS			FLANGE ACC. TO ISO 7005-2							PRODUCT DATA			
Ømm	L	H	G	d	g	k	D	I	b	f	Number of Holes	KVS m ³ /h	Torque Nm	Weight Kg
40	140	105	190	40	78	100	130	14	16	3	4	190	24	5,68
50	150	115	250	50	88	110	140	14	16	3	4	310	30	7,11
65	170	135	250	65	108	130	160	14	16	3	4	600	60	10,99
80	180	155	370	80	124	150	190	19	18	3	4	950	90	16,32
100	190	175	370	100	144	170	210	19	18	3	4	1630	150	23,53



FAF 1050
PN 6 REDUCED - BORE FLANGED BALL VALVES

DN	TS 3148 DIMENSIONS			FLANGE ACC. TO ISO 7005-2							PRODUCT DATA				
Ømm	L	H	G	d1	d2	g	k	D	I	b	f	Number of Holes	KVS m ³ /h	Torque Nm	Weight Kg
40/32	140	105	190	32	40	78	100	130	14	16	3	4	110	18	4,96
50/40	150	105	190	40	50	88	110	140	14	16	3	4	178	24	6,13
65/50	170	115	250	50	65	108	130	160	14	16	3	4	300	30	8,51
80/65	180	135	250	65	80	124	150	190	19	18	3	4	360	60	13,23
100/80	190	155	370	80	100	144	170	210	19	18	3	4	590	90	17,82