

PN 40 FLANGED BALL VALVE (FAF 1400)



PRODUCT FEATURES

- GGG 40, Ductile iron body and flange.
- Stainless steel sphere.
- Stainless steel Belleville spring reinforcement.
- PTFE, sphere sealing ring and stem ring.
- Additional sealing quality is achieved by mounting the stem internally, supported by PTFE and viton O-ring system.
- Valve mounting dimensions conform to DIN 3202 F1+ F7 (F17).
- Flanges according to ISO 7005-2
- Longer service life
- Actuator flange dimensions conform to: ISO 5211

APPLICATIONS

Natural gas, LPG, steam, industrial applications, any fluid without acidity or alkalinity.

OPERATING TEMPERATURE

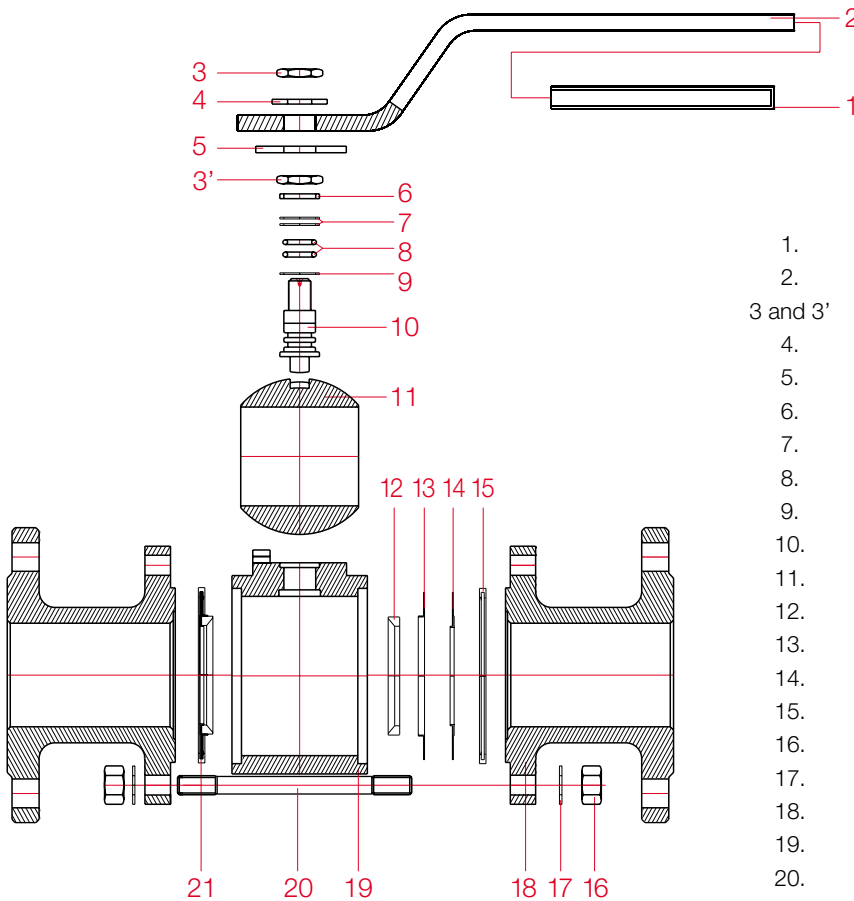
Max +200°C 392°F



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TECHNICAL DRAWING AND MATERIALS



ITEMS AND MATERIALS

1. Handle coat / Plastic
2. Handle / St 37 steel
- 3 and 3' Nut / EN ISO 4035
4. Washer/ Steel
5. Rivet / Steel
6. Compression Ring / Steel
7. PTFE Ring / PTFE
8. O-Ring / Viton
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 / GGG 40 ductile iron
19. Body / GGG 40 ductile 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
St 50	C = 0.30 P Max.= 0.06 S Max.= 0.06 Tensile strength = 490 N/mm ²

PN 40 FLANGED BALL VALVE MAINTENANCE INSTRUCTIONS

Follow the instructions below to perform maintenance and cleaning of PN 40 Flanged Ball Valve Maintenance instructions.

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), compression ring (6), PTFE Rings (7) from the stem, respectively. To remove the stem (10) press on it to drop inside the body.
- Remove the O-Rings (8) 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 elements (12-15). 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 and O-Rings of the stem. 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 Ring, compression ring, handle, ring and the nut, respectively. Tighten the nut to finish the mounting of the stem.
- Turn the handle to close 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)

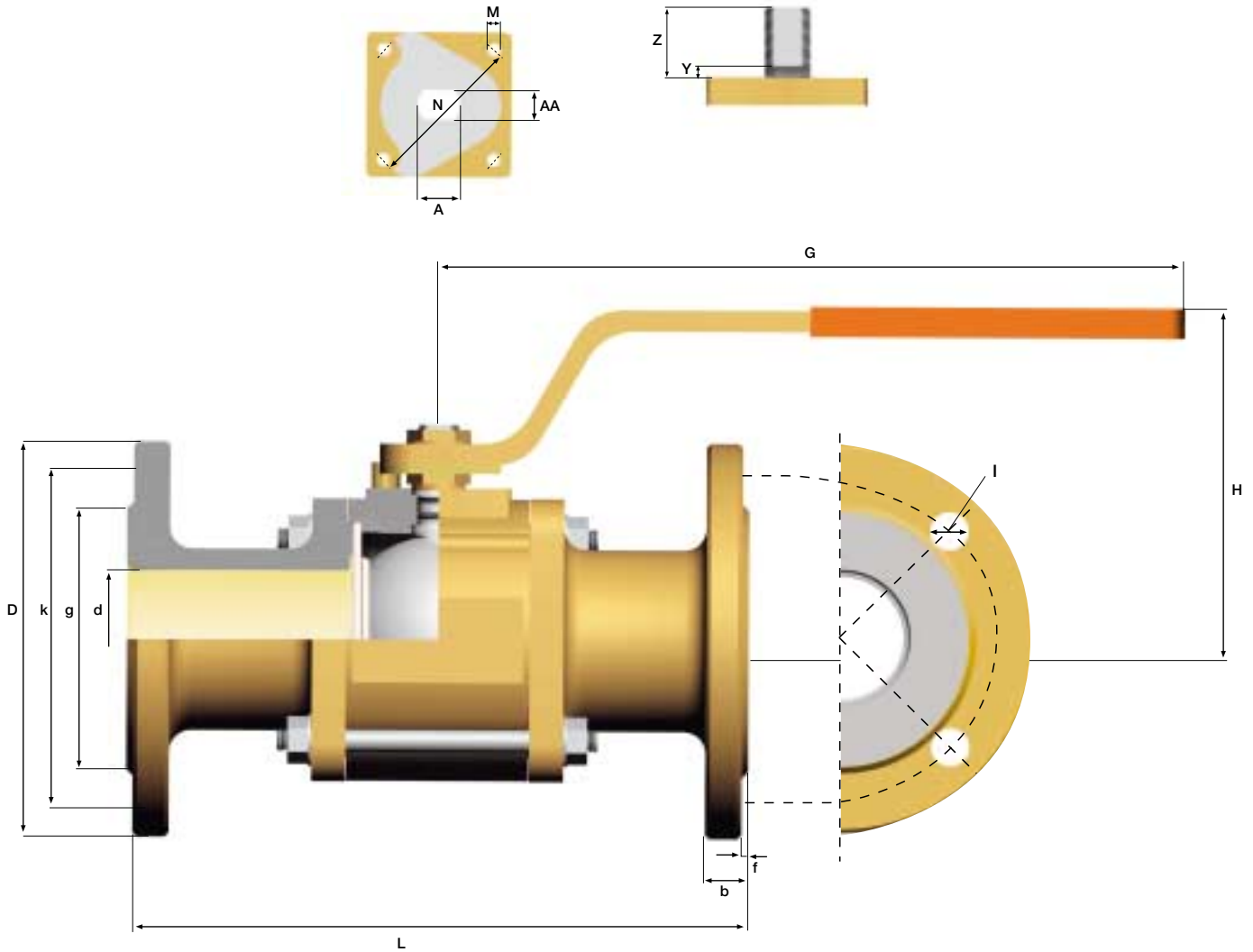
Pressure ISO PN	TEMPERATURE °C					
	-10 to 120	150	200	250	300	350
	Maximum operating pressure (bar)					
10	10	9,5	9	8	7	5,5
16	16	15,2	14,4	12,8	11,2	8,8
20	15,5	14,8	13,9	12,1	10,2	8,6
25	25	23,8	22,5	20	17,5	13,8
40	40	38	36	32	28	22
50	40,2	39	36	35	33	31

PRESSURE / TEMPERATURE RATINGS FOR DUCTILE IRON (GGG 40)

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 40 FLANGED BALL VALVE (FAF 1400)

DIMENSIONS AND PRODUCT DATA



FAF 1400

PN 40 FLANGED BALL VALVE

DN	DIMENSIONS DIN 3202			FLANGE ACC. TO													PRODUCT DATA			
				ISO 7005 - 2						ISO 5211		Stem Dimensions								
Ømm	L	H	G	d	g	k	D	I	b	f	Number of Holes	M	N	A	AA	Y	Z	KV m³/h	Torque Nm	Weight Kg
25	160	115	180	24	65	85	115	14	16	3	4	M5	F03	14	9	4	22	65	10	4.95
32	180	130	250	30	76	100	140	19	18	3	4	M5	F03	14	9	4	22	115	18	6.88
40	200	135	300	38	84	110	150	19	19	3	4	M6	F05	16	10	4	24	190	24	9.14
50	230	145	300	47	99	125	165	19	19	3	4	M6	F05	16	10	4	24	310	30	12.31
65	290	155	300	62	118	145	185	19	19	3	8	M8	F07	20	14	3	27	600	60	18.02
80	310	175	300	76	132	160	200	19	19	3	8	M8	F07	20	14	3	27	950	90	26.26
100	350	220	500	95	156	190	235	23	19	3	8	M8	F07	28	20	6	41	1630	150	45.63
125	400	235	500	119	184	220	270	28	23.5	3	8	M10	F10	28	20	6	41	2700	210	69.85
150	450	275	700	142	211	250	300	28	26	3	8	M12	F12	40	30	13	51	5000	220	102.50