



### Features

- FAF1100, PN 16 flanged ball valve is operating by a ball having a hole with the same size as the flow section, through the help of the stem, rotating quarter turn(90 degree) between teflon seats where the ball to be parallel or perpendicular to the flow axis.
- Can be installed bidirectional.
- Through the stainless steel belleville spring reinforced teflon (PTFE) seats, 100% tight sealing is achieved in lowest and highest pressure ratings.
- Can be installed directly to the pump without any need for additional intermediary parts.
- The compatibility of teflon material with various flow types and its resistance to higher temperatures enables it to be used in wide range of applications.
- It is appropriate to be used in fully open or fully closed position.
- In fully open position, since there is no reduction in flow section, the head loss is nearly zero.
- Can be operated with lower torque ratings
- Suitable to install actuator and gearbox

### Temperature

- +200 °C

### PRODUCTION STANDARTS

DN15 → DN250

PN 16

|                             |   |
|-----------------------------|---|
| <b>Design</b>               | TS 3148 / DIN 3357  |
| <b>Connection</b>           | EN 1092-2 / ISO 7005-2  |
| <b>Face to Face</b>         | DN15-DN150: EN558 Series 14 / DIN 3202 F4<br>DN200-DN250: EN558 Series 27 / DIN 3202 F5 |
| <b>Marking</b>              | EN 19   |
| <b>Tests</b>                | EN 12266-1  |
| <b>Corrosion Protection</b> | Industrial Epoxy  |

### Product Description

FAF1100 series are robust and reliable flanged ball valves for fitting in between PN16 flanges. Body material in cast iron with stainless steel ball and stems are improving the durability of the valve. FAF1100 series are offering a large wide range of applications through to PTFE sealing.

### Versions

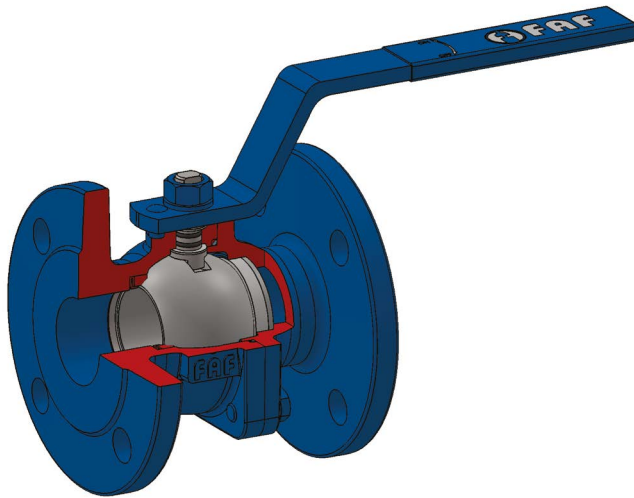
- Various ball, stem and body material alternatives available.
- Standard version with handlever
- Prepared for electrical actuator
- With electrical actuator
- Gearbox
- Custom production for specific orders

### Scope of Application

- Hot & cold water
- Superheated water
- Low pressure steam
- Power plants
- Fluids without acidity or alkalinity properties
- Chamber installation
- Installation in plants
- Pipelines
- Tanks
- Industry

# BALL VALVE

## FAF 1100



### MATERIAL SELECTION

|         |   |
|---------|---|
| Body    | EN-GJL-250 Cast Iron / GG25   |
| Ball    | 1.4016 - Stainless Steel<br>1.4021 - AISI 420 Stainless Steel<br>1.4016 - AISI 430 Stainless Steel<br>1.4301 - AISI 304 Stainless Steel |
| Stem    | 1.4021 - AISI 420 Stainless Steel<br>1.4301 - AISI 304 Stainless Steel (Optional)<br>1.4401 - AISI 316 Stainless Steel (Optional)       |
| Sealing | PTFE<br>Beleville spring  |

### PRODUCTS MODEL CODES

|         |                               |
|---------|-------------------------------|
| FAF1100 | BALL VALVE - PN16 - FULL BORE |
|---------|-------------------------------|

### VALVE TEST PRESSURE (Bar)

| MAX. OPERATING PRESSURE | BODY / SHELL TEST | SEAT TEST |
|-------------------------|-------------------|-----------|
| 10                      | 15                | 11        |
| 16                      | 24                | 17,6      |

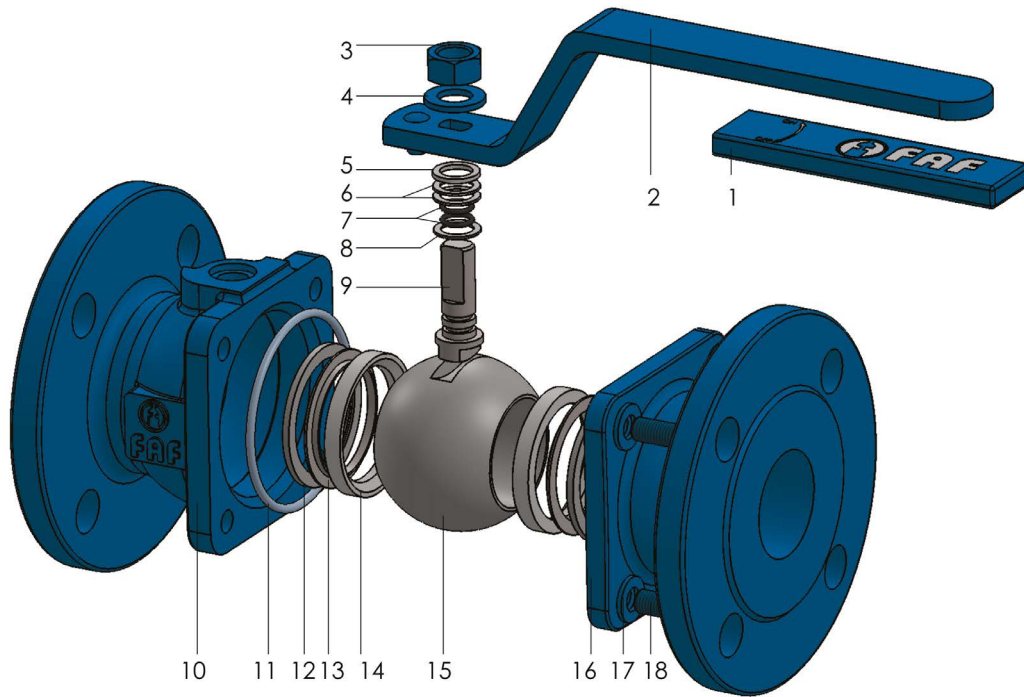
100% of the valves are subjected to hydrostatic tests at FAF facilities.

### Note

- For proper use and safety precautions please follow the installation and operating instructions.

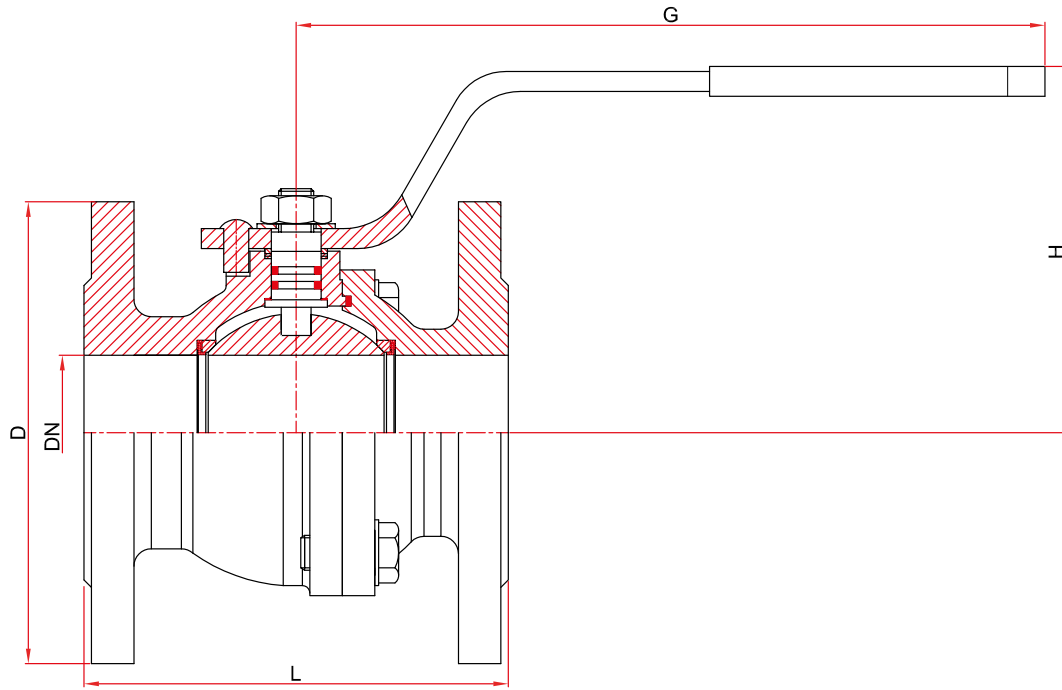


### Material List



| NO | ITEM                        | MATERIALS                      |
|----|-----------------------------|--------------------------------|
| 1  | PLASTIC COVER FOR HANDLEVER | PVC                            |
| 2  | HANDLEVER                   | St-37 STEEL                    |
| 3  | SAFETY NUT                  | DIN 985                        |
| 4  | WASHER                      | DIN 125                        |
| 5  | COMPRESSION WASHER          | C45 STEEL                      |
| 6  | PTFE WASHER                 | PTFE                           |
| 7  | O-RING                      | VITON                          |
| 8  | PTFE WASHER                 | PTFE                           |
| 9  | DRIVE SHAFT                 | STANLESS STEEL 1.4021          |
| 10 | BODY FLANGE                 | EN GJL 250 CAST IRON           |
| 11 | O-RING                      | SILICONE                       |
| 12 | BALL OUTSIDE SEALING GASKET | SILICONE                       |
| 13 | BELEVILLE SPRING            | STANLESS STEEL 1.4016          |
| 14 | BALL INMER SEALING GASKET   | PTFE                           |
| 15 | BALL                        | STANLESS STEEL 1.4301 / 1.4016 |
| 16 | FLANGE                      | EN GJL 250 CAST IRON           |
| 17 | WASHER                      | DIN 125                        |
| 18 | BOLT                        | DIN 933                        |

### Technical Details & Drawing, Dimensions



| DN  | DIMENSION |     |     |      | RATINGS |                      |         | STUD SIZE | BOLT / NUT QTY | FASTENING MOMENT Nm | WRENCH SIZE (mm) |
|-----|-----------|-----|-----|------|---------|----------------------|---------|-----------|----------------|---------------------|------------------|
|     | Ømm       | D   | L   | H    | G       | KV m <sup>3</sup> /h | Tork Nm |           |                |                     |                  |
| 15  | 95        | 115 | 95  | 160  | 18      | 12                   | 2,5     | M12X50    | 4X2            | 85                  | 19               |
| 20  | 105       | 120 | 100 | 180  | 35      | 12                   | 2,8     | M12X55    | 4X2            | 85                  | 19               |
| 25  | 115       | 125 | 105 | 180  | 65      | 12                   | 3,4     | M12X55    | 4X2            | 85                  | 19               |
| 32  | 140       | 130 | 110 | 180  | 115     | 12                   | 4,4     | M16X65    | 4X2            | 205                 | 24               |
| 40  | 150       | 140 | 125 | 260  | 190     | 20                   | 6,4     | M16X65    | 4X2            | 205                 | 24               |
| 50  | 165       | 150 | 130 | 260  | 310     | 20                   | 8,2     | M16X65    | 4X2            | 205                 | 24               |
| 65  | 185       | 170 | 145 | 310  | 600     | 30                   | 12,8    | M16X65    | 4X2            | 205                 | 24               |
| 80  | 200       | 180 | 155 | 310  | 950     | 35                   | 15,4    | M16X70    | 8X2            | 205                 | 24               |
| 100 | 220       | 190 | 180 | 310  | 1630    | 45                   | 21,8    | M16X75    | 8X2            | 205                 | 24               |
| 125 | 250       | 200 | 220 | 500  | 2700    | 70                   | 30,4    | M16X80    | 8X2            | 205                 | 24               |
| 150 | 285       | 210 | 240 | 500  | 5000    | 115                  | 37,5    | M20X80    | 8X2            | 400                 | 30               |
| 200 | 340       | 400 | 295 | 700  | 8000    | 175                  | 107     | M20X90    | 12X2           | 400                 | 30               |
| 250 | 405       | 450 | 315 | 1000 | 12200   | 325                  | 157,5   | M24X100   | 12X2           | 691                 | 36               |



### Ball Valve Maintenance Instructions

Follow the instructions below to perform maintenance and cleaning of 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 the plug over the body with the help of the pins from the body.
- Flanged ball valves are made of flange and body. Unscrewing in opposite pairs of nuts take the nuts out and remove the flange.
- Turn the handle to closed position and pull the sphere out of the body by turning it slightly.
- Unscrew the nut on the handle. Remove the washer, handle, and the compression ring in written order.
- Remove the PTFE rings over the stem.
- Remove the stem pressing on it to drop inside the body.
- Remove the PTFE sealing cord from the flange.
- Remove the O-rings over the stem.

#### Inspection and cleaning

The following periodic preventative maintenance practices are recommended:

- 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 0,01mm sensitive CNC machines.
- The package of gasket set, consists of Inner belleville spring and Sphere inner sealing, is on the flange and body side. The inner and outer rings of the gasket package should not have any cracks, tears or cuts observed, or the angled surfaces of the inner ring that meet with the ball should not involve any deep scratches or collapses. The stainless rings should not be deformed. If any of these above exists, demount the gasket package set from the flange and the body and request a new one from our company.
- You may request a new cover gaskets from our company or you may have 1,5 mm Klingerit gasket material cut according to the gasket seat.
- PTFE rings over the stem and O-rings must be replaced with new ones.
- Epoxy coultter 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 flangepacking set compression surface.
- Do not paint the stem hole and flange-packing gasket surface.
- Inspect stud threads and nuts. Replace deformed or rusty parts.
- Clean all materials carefully and proceed to mounting.

#### Mounting

- Place the PTFE ring of the stem and the Orings. 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, handle, washer and the nut respectively.
- Mount the packing set on the body as the inner rings will face the sphere.
- 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 (as the inner rings will face the sphere) and the PTFE ring on the flange. Position the mounted body between two flanges, place studs, nuts and washers and tighten the nut 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.

### Operating Instructions

#### Inspection On Delivery

1. Check for possible damage in shipment, conformance to specifications, opening direction, shortages, etc.
2. Carefully unload all valves - do not drop valve - do not lift valve using gearing, bypass or other appendage as a hook.
3. Valve should be opened and then closed to make sure it works properly. Also check opening direction against the order instruction.
4. Any problems should be reported immediately to delivery company and note on bill of lading, signed by the driver on customer's copy.

#### Inspection Before Installation

1. Check to see the valve end-joints are clean.
2. The valve should not be damaged.
3. Open and close valve - make sure it works properly.
4. Keep valve closed when placing in trench.
5. Inspect casting for damage.
6. Inspect epoxy coating and repair breaks using compatible coating material.

#### Testing

1. Do not backfill valves before hydrostatic system test. Leave the valves exposed while the pipeline is being pressurized. Check to see that all valve joints and pressure containing bolting, including bonnet bolts, are tight.
2. Valves can be tested (but not operated) at 1,1 times the rated pressure of the valve.
3. After testing, steps should be taken to relieve any trapped pressure in body of valves.

#### Storage

1. Valves should be stored in a partially open position.
2. When possible, keep valves out of the weather.
3. In cold climates the inside of the valve must be kept drained of any water to prevent freezing.
4. When stored outside, valve stem should be in a vertical position, and whenever possible, valves should be covered with a water-proof covering.
5. Protect all parts of the valve at all times.
6. Protect rubber seat of resilient wedge valves from ozone and hydrocarbons (solvents, paints and oils, etc.).

#### Installation

1. Flush the water line completely.
2. Handle valve carefully.
3. Prepare pipe ends in accordance with pipe manufacturers' instructions.
4. Install valve using appropriate instructions for the specified joint (flanged, mechanical joint, slip-on, etc.).
5. Water piping should be properly supported to avoid line stress on valve.
6. In buried applications, make sure that the valve box does not transmit traffic loads or other stress to the valve.
7. Do not use valves to force a pipeline into position.
8. Do not deflect any valve/pipe joint.
9. Protect exterior epoxy coating during backfill.

### Associated Products for Ball Valve Range



3700  
GEARBOX



3770  
ELECTRIC ACTUATOR



2300  
CHECK VALVE  
WAFER SWING



2350  
CHECK VALVE DUAL



2500  
Y-TYPE STRAINER



2250  
CHECK VALVE LIFT



2270  
CHECK VALVE SWING



5000  
RUBBER  
EXPANSION JOINT