theartof flow

TECHNICAL CATALOGUE

INDEX

BALL VALVE
FAF 1100

PRODUCTION STANDARTS

DN15 →DN300
PN 16

Design	TS 3148 / DIN 3357
Connection	EN 1092-2 / ISO 7005-2
Face to Face	DN15-DN150: EN558 Series 14 / DIN 3202 F4 DN200-DN300: EN558 Series 27 / DIN 3202 F5
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Industrial Epoxy

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 compatibilty 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.
- Blue painting colour RAL 5005, 30 microns thickness.
- Can be operated with lower torque ratings.
- Suitable to install actuator and gearbox.
- ISO 5211 mounting pad.

Temperature

- -10°C / +200 °C

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 hand lever
- 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	1.4301 - AISI 304 Stainless Steel 1.4016 - AISI 430 Stainless Steel 1.4021 - AISI 420 Stainless Steel
Stem	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (Optional) 1.4401 - AISI 316 Stainless Steel (Optional)
Sealing	PTFE SS Beleville spring

PRODUCTS MODEL CODES	
FAF1100	**BALL VALVE - PN16 - FULL BORE**

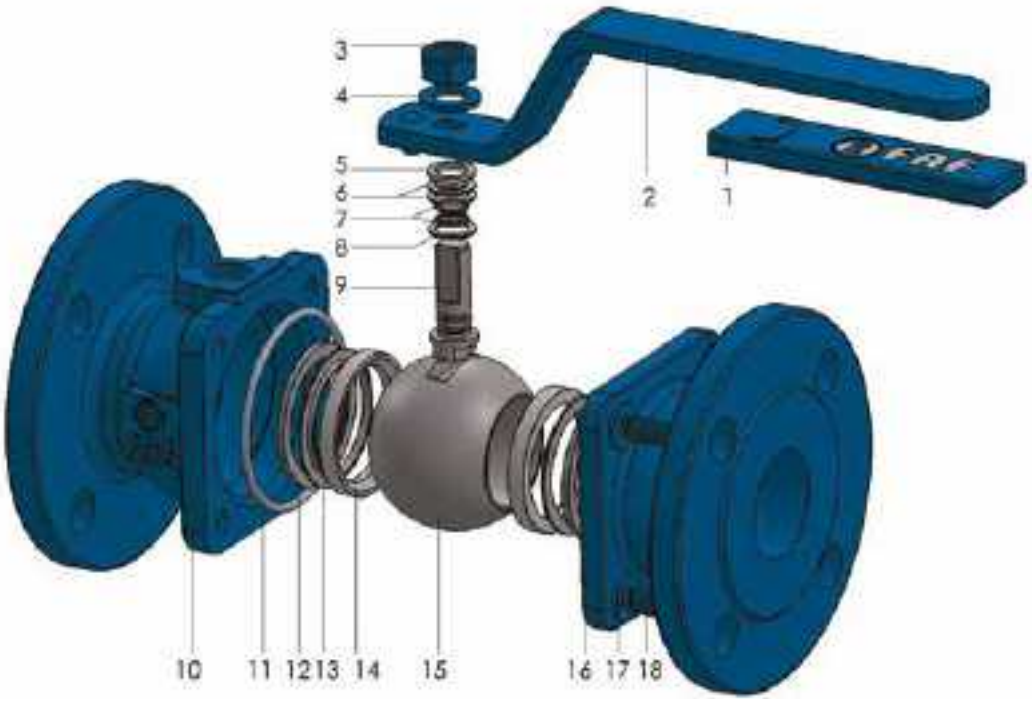
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

BALL VALVE
FAF 1100

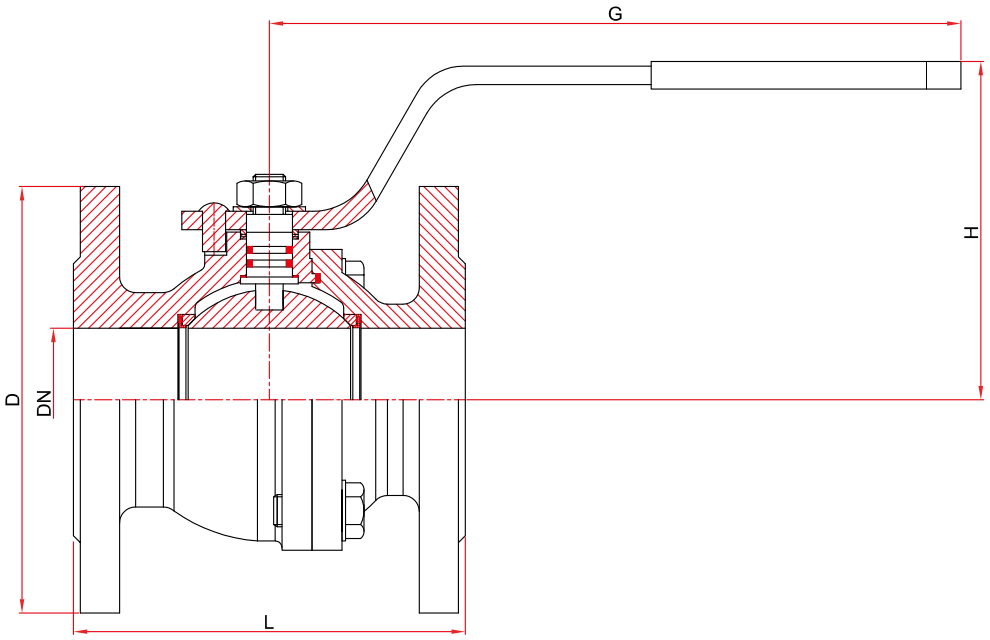
Material List



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 / GG25
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 1.4301/1.4016/1.4021
16	FLANGE	EN-GJL-250 Cast Iron / GG25
17	WASHER	DIN 125
18	BOLT	DIN 933

BALL VALVE
FAF 1100

Technical Details & Drawing, Dimensions



DN	DIMENSION				RATINGS			STUD SIZE	BOLT / NUT QTY	FASTENING MOMENT Nm	WRENCH SIZE (mm)
Ømm	D	L	H	G	KV m³/h	Tork Nm	Weight kg				
15	95	115	95	160	18	12	2,5	M12X50	4X2	85	19
20	105	120	100	180	35	14	2,8	M12X55	4X2	85	19
25	115	125	105	180	65	14	3,3	M12X55	4X2	85	19
32	140	130	110	180	115	20	4,9	M16X65	4X2	205	24
40	150	140	125	260	190	35	6,1	M16X65	4X2	205	24
50	165	150	130	260	310	39	8,2	M16X65	4X2	205	24
65	185	170	145	310	600	84	11,7	M16X65	4X2	205	24
80	200	180	155	310	950	90	14,8	M16X70	8X2	205	24
100	220	190	180	310	1630	93	19,9	M16X75	8X2	205	24
125	250	200	220	500	2700	96	30,5	M16X80	8X2	205	24
150	285	210	240	500	5000	190	37	M20X80	8X2	400	30
200	340	400	295	700	8000	200	102,4	M20X90	12X2	400	30
250	405	450	320	1000	12200	380	150	M24X100	12X2	691	36
300	455	500	320	1000	12200	380	135	M24X100	12X2	691	36

BALL VALVE
FAF 1100

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 coulter priming coat is applied on the inner surfaces of the body and the flanges, however, if there exist 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.

BALL VALVE
FAF 1100

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
5. water-proof covering.
6. Protect all parts of the valve at all times.
7. 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

2500
Y-TYPE STRAINER

5000
RUBBER
EXPANSION JOINT

2350
CHECK VALVE DUAL

2300
CHECK VALVE
WAFER SWING

2270
CHECK VALVE SWING

2250
CHECK VALVE LIFT

3700
GEARBOX

3770
ELECTRIC ACTUATOR

BALL VALVE
FAF 1200

PRODUCTION STANDARTS

DN15 →DN300
PN 16

Design	DIN 3357
Connection	EN 1092-2 / ISO 7005-2
Face to Face	DN15-DN100: EN 558 Series 1 / DIN3202 F1 DN125-DN300: EN 558 Series 27 / DIN3202 F5
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Industrial Epoxy

Features

- FAF1200, 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 plate 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 suitable to be used in fully open or fully closed position.
- In fully open position, since there is no reduction in flow section, the pressure loss is almost zero.
- Can be operated with lower torque ratings.

Temperature

- +200°C

Product Description

FAF1200 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. FAF1200 series are offering a large wide range of applications through to PTFE sealing and Stainless steel plate spring.

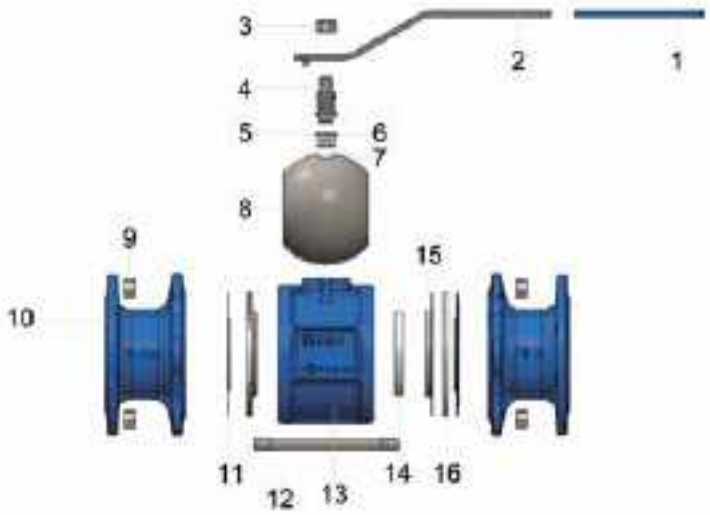
Versions

- Various ball, stem and body material alternatives available.
- Standard version with hand lever
- Prepared to be compatible with electrical actuator with electrical actuator
- Can be manufacturing with gearbox
- Custom production for specific orders

Scope of Application

- Hot & cold water
- Low Pressure Steam
- Fluids without acidity or alkalinity properties
- Installation in plants
- Tanks
- Industry

BALL VALVE
FAF 1200



MATERIAL SELECTION	
Body	EN-GJL-500 DCUTILE IRON / GG50
Ball	1.14016 - AISI 430 Stainless Steel 1.4301 - AISI 304 Stainless Steel (optional 1.4401 - AISI 316 Stainless Steel (optional)
Stem	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (optional) 1.4401 - AISI 316 Stainless Steel (optional)
Sealing	PTFE Beleville spring

PRODUCTS MODEL CODES	
FAF1200	**BALL VALVE - PN16 - FULL BORE**

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

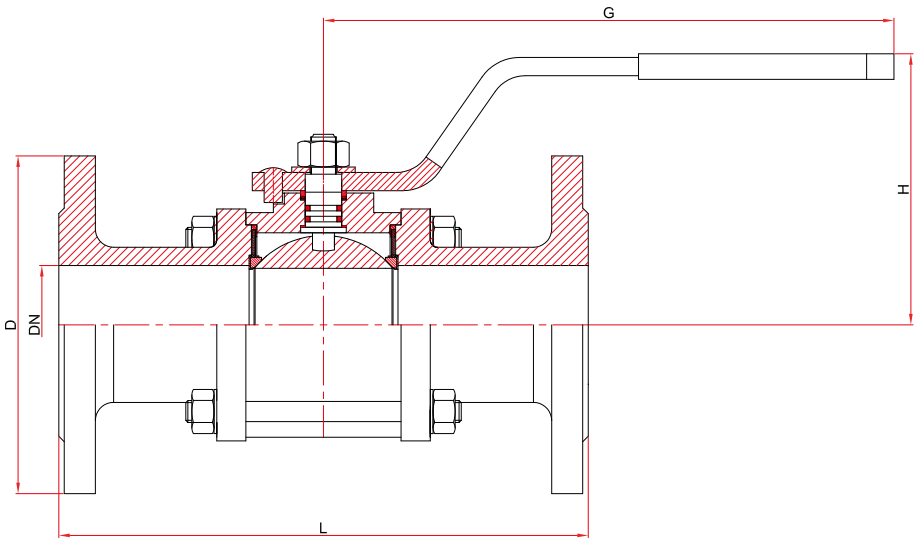
Note

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

NO	ITEM	MATERIALS
1	PLASTIC COVER FOR HANDLEVER	PVC
2	HANDLEVER	St-37 STEEL
3	SAFETY NUT	DIN 985 EN ISO 4035
4	DRIVE SHAFT	STANLESS STEEL 1.4021
5	COMPRESSION WASHER	C45 STEEL st37 STEEL
6	PTFE WASHER	PTFE
7	O-RING	VITON
8	BALL	STANLESS STEEL 1.4016 /1.4301
9	NUT	ISO 4032
10	FLANGE	EN GJL 500 (Ductile Iron)
11	BELEVILLE SPRING	STANLESS STEEL 1.4016
12	STUD	DIN933
13	BODY	EN GJL 500 (Ductile Iron)
14	BALL INMER SEALING GASKET	PTFE
15	BELEVILLE SPRING	STANLESS STEEL 1.4016
16	BALL OUTSIDE SEALING GASKET	PTFE

BALL VALVE
FAF 1200

Technical Details & Drawing, Dimensions



DN	DIMENSION				RATINGS			STUD SIZE	BOLT / NUT QTY	FASTENING MOMENT Nm	WRENCH SIZE (mm)
Ømm	D	L	H	G	KV m³/h	Tork Nm	Weight kg				
15	95	130	95	160	18	12	2,9	M12X50	4X2	85	19
20	105	150	110	180	35	16	4,25	M12X55	4X2	85	19
25	115	160	115	180	65	26	5,5	M12X55	4X2	85	19
32	140	180	115	180	115	26	6,8	M16X65	4X2	205	24
40	150	200	125	230	190	31	7,4	M16X65	4X2	205	24
50	165	230	130	230	310	31	8,65	M16X65	4X2	205	24
65	185	290	145	280	600	45	16,3	M16X65	4X2	205	24
80	200	310	155	280	950	65	16,35	M16X70	8X2	205	24
100	220	350	200	310	1630	70	26,7	M16X75	8X2	205	24
125	250	325	220	500	2700	75	37,15	M16X80	8X2	205	24
150	285	350	255	500	5000	115	45	M20X80	8X2	400	30
200	340	400	295	680	8000	200	80,65	M20X90	12X2	400	30
250	405	450	315	920	12200		143,5	M24X100	12X2	691	36
300/250	455	500	320	920	12400		152,7	M24X100	12x2		

BALL VALVE
FAF 1200

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.S
- 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 gasket from our company, or you may have 1,5 mm Klinger gasket material cut according to the gasket seat.
- PTFE rings over the stem and O-rings must be replaced with new ones.
- Epoxy coulter priming coat is applied on the inner surfaces of the body and the flanges, however, if there exist oxidations, these regions must be cleaned and repainted with similar coatings.
- Do not paint the stem hole and the flange packing set compression surface.
- Do not paint the stem hole and flange-packing gasket surface. y Inspect stud threads and nuts. Replace deformed or rusty parts. y 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.

BALL VALVE
FAF 1200

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 the 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 the 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

BALL VALVE
FAF 1400

PRODUCTION STANDARDS

DN15 →DN300
PN 40

Design	EN 331 - TS 9809
Connection	EN 1092-2 / ISO 7005-2 PN40
Face to Face	DN15-DN125: EN 558 Series 1 / DIN3202 F1 DN150: EN 558 Series 28 / DIN3202 F7
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Industrial Epoxy

Features

- FAF1400, PN 40 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.

Temperature

- +200 °C

Product Description

FAF1400 series are robust and reliable flanged ball valves for fitting in between PN40 flanges. Body material in ductile with stainless steel ball and stems are improving the durability of the valve. FAF1400 series are offering a large wide range of applications through to PTFE sealing

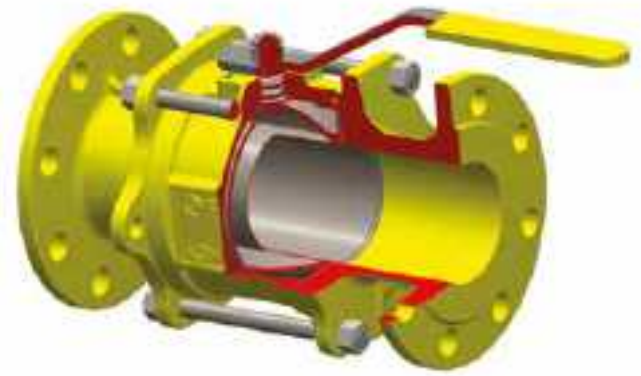
Versions

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

Scope of Application

- LPG
- Natural gas
- Superheated water
- Low Pressure Steam
- Power plants
- Industry
- Fluids without acidity or alkalinity properties
- Chamber installation
- Installation in plants
- Pipelines
- Tanks
- Industry

BALL VALVE
FAF 1400



MATERIAL SELECTION	
Body	EN-GJS-500 Ductile Iron / GGG50
Ball	1.4016 AISI 430 Stainless Steel 1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (optional) 1.4401 - AISI 316 Stainless Steel (optional)
Stem	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (optional) 1.4401 - AISI 316 Stainless Steel (optional)
Sealing	PTFE

PRODUCTS MODEL CODES	
FAF1400	**BALL VALVE - PN40 - FLANGED - FULL BORE**
FAF1440	BALL VALVE - PN40 - THREADED END
FAF1445	BALL VALVE - CL800 - SCREWED END
FAF1450	BALL VALVE - PN40 - FLANGED - REDUCED BORE

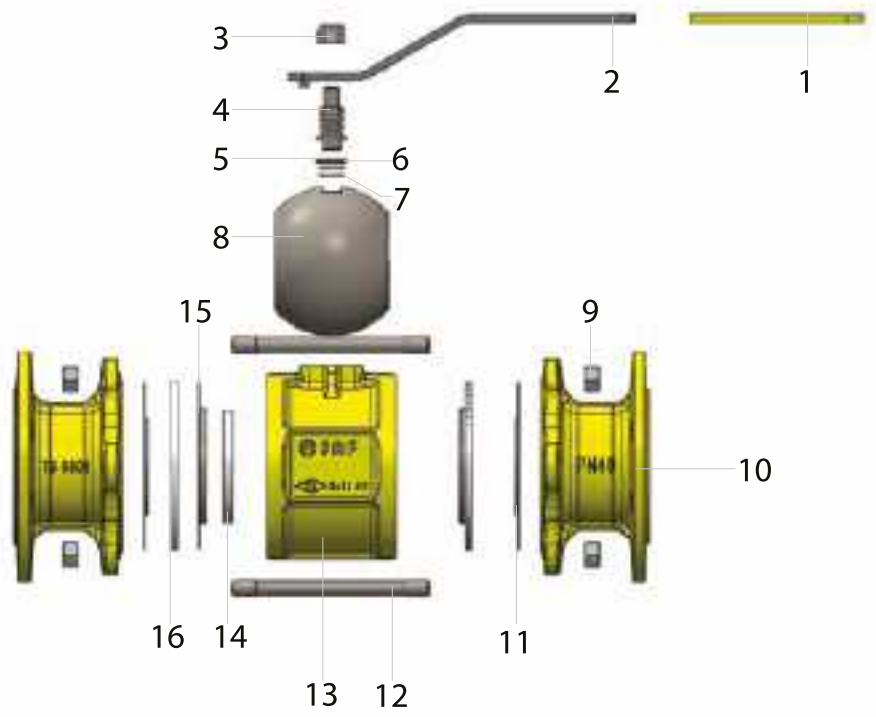
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
25	37,5	27,5
40	60	44
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

BALL VALVE
FAF 1400

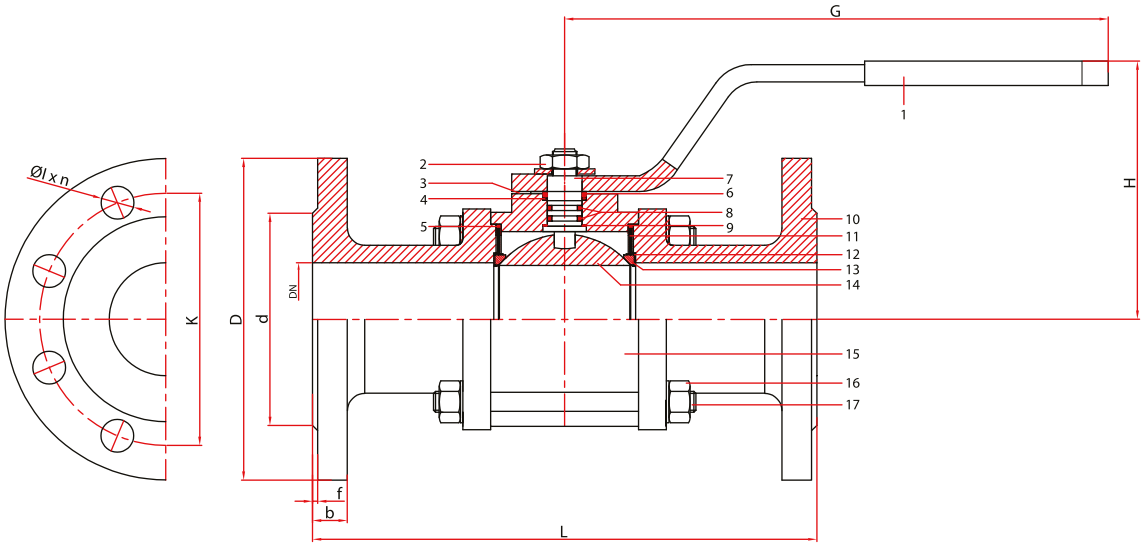
Material List



NO	ITEM	MATERIALS
1	PLASTIC COVER FOR HANDLEVER	PVC
2	HANDLEVER	St-37 STEEL
3	SAFETY NUT	DIN 985 EN ISO 4035
4	DRIVE SHAFT	STANLESS STEEL 1.4021
5	COMPRESSION WASHER	C45 STEEL st37 STEEL
6	PTFE WASHER	PTFE
7	O-RING	VITON
8	BALL	STANLESS STEEL 1.4016 /1.4301
9	NUT	ISO 4032
10	FLANGE	EN GJL 500 (Ductile Iron)
11	BELEVILLE SPRING	STANLESS STEEL 1.4016
12	STUD	DIN933
13	BODY	EN GJL 500 (Ductile Iron)
14	BALL INMER SEALING GASKET	PTFE
15	BELEVILLE SPRING	STANLESS STEEL 1.4016
16	BALL OUTSIDE SEALING GASKET	PTFE

BALL VALVE
FAF 1400

Technical Details & Drawing, Dimensions



DN	DIMENSION				RATINGS			STUD SIZE	BOLT / NUT QTY	FAS-TENING MOMENT Nm	WRENCH SIZE (mm)
Ømm	D	L	H	G	KV m³ / h	Tork Nm	Weight Kg				
15	95	130	95	160	18	12	2,8	M12X50	4X2	85	19
20	105	150	100	160	35	12	4,25	M12X55	4X2	85	19
25	115	160	105	180	65	12	5,5	M12X55	4X2	85	19
32	140	180	110	180	115	12	6,8	M16X70	4X2	205	24
40	150	200	125	230	190	20	7,4	M16X70	4X2	205	24
50	165	230	130	230	310	20	8,9	M16X75	4X2	205	24
65	185	290	145	280	600	45	16,3	M16X80	8X2	205	24
80	200	310	155	280	950	95	16,35	M16X80	8X2	205	24
100	235	350	180	310	1630	175	28,1	M20X90	8X2	400	30
125	270	400	220	500	2700	290	65	M24X100	8X2	691	36
150	300	450	240	500	5000	345	104	M24X110	8X2	691	36
200	375	550	295	680			103,7	M24X110	12X2		
250	450	650	320	920			191,9	M27X110	12X2		
300/250	515	750	320	920			192	M30X130	16X2		

BALL VALVE
FAF 1400

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 gasket from our company, or you may have 1,5 mm Klinger gasket material cut according to the gasket seat.
- PTFE rings over the stem and O-rings must be replaced with new ones.
- Epoxy coulter priming coat is applied on the inner surfaces of the body and the flanges, however, if there exist oxidations, these regions must be cleaned and repainted with similar coatings.
- Do not paint the stem hole and the flange packing 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 O-rings. 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.

BALL VALVE
FAF 1400

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. Always protect all parts of the valve.
6. Protect rubber seat of resilient wedge valves from ozone and hydro-carbons (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 the Ball Valve Range

3700
GEARBOX

3770
ELECTRIC ACTUATOR

2300
CHECK VALVE
WAFER SWING

2330
CHECK VALVE
WAFER SWING

2350
CHECK VALVE DUAL

5000
RUBBER
EXPANSION JOINT

BALL VALVE
FAF 1440

PRODUCTION STANDARDS

DN15 →DN25
PN 16-25-40

Design	EN 331 / EN 1983
Connection	Threaded EN ISO 228-1
Face to Face	DIN3202 / M3
Marking	EN 19
Tests	EN 12266-1 / EN 331
Corrosion Protection	Industrial Epoxy

Features

- FAF1440, welding end 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.
- Ball and stem are stainless steel, sealings are Teflon (PTFE).
- Default production is with female/female connection.
- On request, can be manufactured with male/male, male/female and welding end connections.
- It has high-pressure resistance. Pressure ratings can be PN 16/25/40.
- 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.

Sıcaklık

- +200 °C

Product Description

FAF1440 series are robust and reliable ball valves for fitting in between PN40 networks. Steel body material and stainless steel ball and stems are improving the durability of the valve. The valves are offering a large wide range of applications in thanks to PTFE sealing.

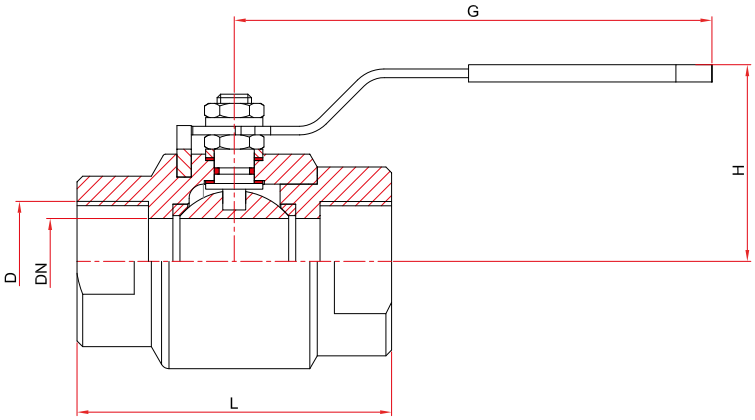
Versions

- Various ball, stem and body material alternatives available.
- Standard version with hand lever
- Custom production for specific orders

Scope of Application

- LPG
- Natural gas
- Superheated water
- Steam
- Power plants
- Industry
- Fluids without acidity or alkalinity properties
- Pressurized air

BALL VALVE
FAF 1440



MATERIAL SELECTION	
Body	1.0037 - ST37 Steel ASTM A-105 Forged Steel 1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel
Ball	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (Optional) 1.4401 - AISI 316 Stainless Steel (Optional)
Stem	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (Optional) 1.4401 - AISI 316 Stainless Steel (Optional)
Sealing	TEFLON (PTFE)

PRODUCTS MODEL CODES	
FAF1400	BALL VALVE - PN40 - FLANGED - FULL BORE
FAF1440	**BALL VALVE - PN40 - SCREWD END**
FAF1445	BALL VALVE - CL800 - SCREWED END
FAF1450	BALL VALVE - PN40 - FLANGED - REDUCED BORE

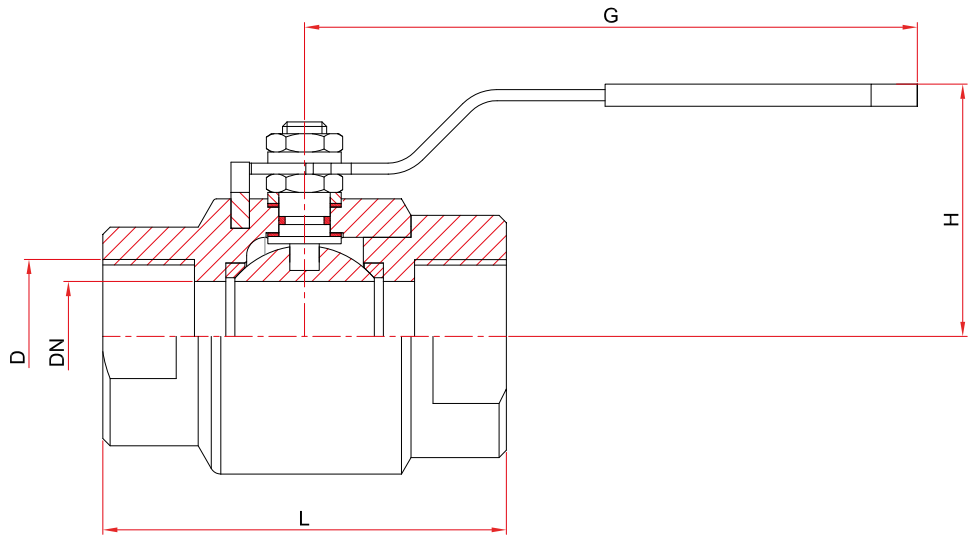
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
25	37,5	27,5
40	60	44
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

BALL VALVE
FAF 1440

Technical Details & Drawing, Dimensions



DN	DIMENSION				RATINGS		
Ømm	D	L	H	G	KV m^3 / h	Tork Nm	Weight Kg
15	R 1/2	75	60	160	18	7	0,9
20	R 3/4	80	70	180	35	7	1,4
25	R 1	90	75	180	65	7	1,6

GLOBE VALVE
FAF 2100

PRODUCTION STANDARDS

DN15 ➔DN250
PN 16

Design	EN 13789
Connection	EN 1092-2 / ISO 7005-2 Flanged
Face to Face	EN 558 Series 1 / DIN 3202 F1
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Industrial Epoxy

Features

- Has cast iron body; stem and sealing seat are made of stainless steel.
- They provide precise flow control.
- A good seal is ensured by the frictionless contact of the flap with the seat.
- It is suitable for frequent opening and closing.
- Since the shaft presses the valve directly onto the seat, the sealing is positively affected. For this reason, globe valves should be preferred instead of gate valves as shut-off valves in cases of high-pressure flows that may pose a danger to the atmosphere.
- For using in high temperatures, can be coated with high temperature resistant coating.
- No maintenance needed, can be operated with lower torque ratings.
- Zero stem leakage eliminates media loss and satisfies environmental regulations.

Temperature

- 10°C ≤ +160 °C (Short term 180 °C)

PRODUCTS MODEL CODES	
FAF2100	**GLOBE VALVE**
FAF2130	GLOBE VALVE - BELLOW SEAL

Product Description

FAF2100 Globe Valve, maintains 100% tight sealing through the graphite gasket on the stainless-steel disc moving perpendicular to the flow axis and seating on the machined metal seat inside the body.
Globe Valves work with the logic that the valve at the end of the shaft sits on the flow hole and stops the flow, or it opens with the fluid pressure and allows the passage.

Versions

- Standard version with handwheel

Scope of Application

- Steam
- Superheated water
- Hot & cold water
- Power & heat engineering
- Industrial technologies
- Fluids without acidity or alkalinity properties

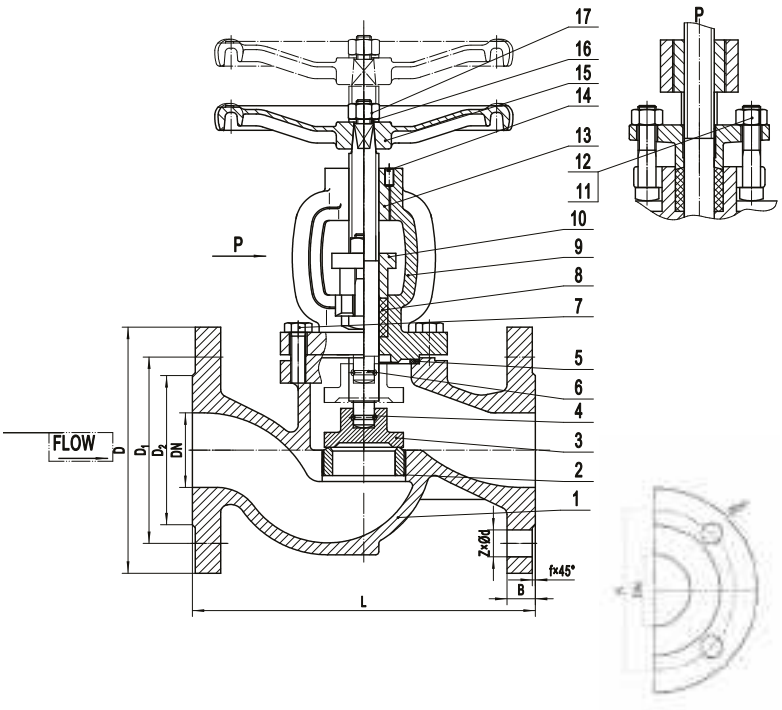
Note

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

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

GLOBE VALVE
FAF 2100

Technical Details & Drawing, Dimensions



NO	ITEM	MATERIALS
1	BODY	EN GJL 250 (GG25)
2	BODY SEALING RING	SS304
3	DISC	DN15-DN65 Z2Cr13/ DN80-DN300 A105
4	STAINLESS STEEL WIRE	SS304
5	GASKET	STEEL+ EXAPNDED GRAPHITE
6	STEM	1.4301 STAINLESS STEEL
7	BOLT	ASTM A27
8	PACKING	EXAPNDED GRAPHITE
9	BONNET	QT 400 (GGG40)
10	GLAND	CAST IRON(GG20)
11	T SHAPE OF BOLT	ASTM A27
12	NUT	NO 25 CAST STEEL
13	STEM NUT	HPb59-2 BRASS
14	SOLTED FLAT AND SET SCREW	ASTM A27
15	HAND WHEEL	QT450-10
16	FLAT WASHER	EN 1.0254 (St 37)
17	NUT	NO 25 CAST STEEL

DN (mm)	D	K	d	Øl x n	f	b	L	H	G	KV m³/h	Torque Nm	Weight (kg)
15	95	65	46	14 x 4	2	14	130	165	95	5	15	3,6
20	105	75	56	14 x 4	2	16	150	170	100	8	20	4,2
25	115	85	65	14 x 4	2	16	160	180	120	11	20	5,4
32	140	100	76	19 x 4	2	18	180	215	140	18	30	8,3
40	150	110	84	19 x 4	2	18	200	225	140	28	30	9,3
50	165	125	99	19 x 4	2	20	230	235	200	47	40	14,1
65	185	145	118	19 x 4	2	20	290	265	200	72	40	19,4
80	200	160	132	19 x 8	2	22	310	300	240	126	100	28,9
100	220	180	156	19 x 8	2	24	350	340	280	170	160	38,3
125	250	210	184	19 x 8	2	26	400	390	360	267	200	60,6
150	285	240	211	23x8	2	26	480	430	360	380	250	78,8
200	340	395	266	23 x 12	2	30	600	490	400	683	350	122,9
250	405	355	319	28 x 12	3	32	730	600	400	1057	500	208
300	460	410	375	28 x 12	3	32	850					

GLOBE VALVE
FAF 2100

General information

- The design of Globe Valves is designed in such a way that the working medium is then closed due to the spool, which fits as tightly as possible inside the main body of the device. The spool is driven by a hinge that is attached to the rod. When the flywheel rotates, the rod is set in motion and progressively moves the spool.
- Globe valves can operate in one of two positions: closed or open.

Advantages and disadvantages of valves

The use of Globe valves is due to the many advantages they have:

- Products are easy to repair;
- Have a high assessment of the reliability and quality of shutting down the work flow;
- Overlaps and openings occur quite smoothly and easily, without overloading the system at the moment of changing position;
- Can withstand high environmental pressure inside the pipeline without collapsing;
- Operating temperature range – from – 10 to +160 degrees Celsius;
- Fairly easy to install;
- Despite all the above advantages of using these valves, when overlapping for a long time, dirt and other excess impurities may accumulate in the device due to its complex shape;
- the medium moves through the valve only in one position (it is impossible to use the product as a control tool).

Installation of Globe valves

Before installing a Globe valve in a pipeline, the liquid supply, if any, must be shut off. Then the pipe sections that will be connected by the shut-off element should be cleaned of dirt, dust and grease deposits, both outside and inside. They should also be cut evenly, without damage, burrs, etc.

Two valve designs according to the type of stem seal:

1. FAF 2100 Globe Valve

- The simplest and most common valve design, characterized by low cost, high maintainability, and the need for maintenance. The tightness of the stem seal is achieved due to a soft packing (oil seal) filling the space between the movable stem and the valve body. The packing is pressed by the oil seal bushing and, as it wears out, requires periodic tightening and replacement. Valves with a stem seal are used on water and steam pipelines.

2. FAF 2130 Globe Valve Bellow seal

- Characterized by high reliability, complete tightness, does not require maintenance, but also has a higher price than valves with a stuffing box seal. Complete tightness of the seal is ensured by a stainless-steel bellows that separates the body cavity in contact with the working medium and the valve cover in which the fixed stem nut is secured. Valves with a bellows stem seal are used on pipelines transporting water, steam, and compressed air.

Valve installation and assembly.

- Below is a general list of recommendations for installing valves with flanged connections to a pipeline, which should be followed unless otherwise specified in the installation instructions.
- The valves are installed in any mounting position on a vertical or horizontal pipeline, except for the position with the stem down. The valve is unidirectional, so the direction of movement of the working medium must coincide with the arrow on the body. The working medium is supplied under the spool. It is not allowed to use the valve in reverse mode, otherwise, during prolonged operation, this may lead to breakage of the spool.

Protection of the housing from bending stresses

- The valve body should not experience bending, torsion, tension, or compression stresses from the connected pipelines, especially for valves with a cast iron body. The mating flanges must be parallel; alignment of the flange angle by installing additional gaskets and tightening the mounting bolts is not allowed. When installing valves on long straight sections of pipeline exposed to variable temperatures of the working environment or ambient air, a fixed support or an axial thermal elongation compensator with guides should be installed at the valve to prevent displacement of the pipeline relative to its axis. The required compensating capacity of the compensator, depending on the length of the pipeline and the temperature of the working medium, can be calculated in the section of thermal expansion of pipes.

Installation features

- Pipelines and pipeline systems have to be installed in such way that no tensions from thermal expansion (or other) of the pipeline may have impact on the valves.
- Before installation, the pipeline must be cleaned off all dirt such as sand, dust, welding residues etc.
- Verify that the valve is suitable for the operating specifications of the medium (installation); such as maximum.
- Operating pressure, maximum operating temperature, corrosiveness, and abrasiveness, etc.
- Verify that the distance between the flanges, where the valve will be connected, is equal to the length of the valve body.
- All protection devices for transport and storage have to be removed before installation.
- The arrow on the valve body must be in the same direction of the liquid flow.
- Valves shall be assembled to the pipeline in fully closed position.
- Use gaskets between the valve flanges and the counter flanges. The gasket should be suitable for operation.
- The flanges which the valve will be assembled should be in the same axis and the flange surfaces should be parallel to each other.
- Upon completion of installation, hydraulic tests for strength and density should be performed on the pipeline section.
- During hydraulic testing, the valve shutter must be either fully open or fully closed.

2130

GLOBE VALVE BELLOW SEAL
FAF 2130

PRODUCTION STANDARDS

DN15 →DN300
PN 16

Design	EN 13789
Connection	EN 1092-2 / ISO 7005-2 Flanged
Face to Face	EN558 Series 1 / DIN 3202 F1
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Industrial Epoxy

Features

- Long cycle life bellows designed and qualification tested for high pressure/temperature applications.
- Reduced gland leakage. The use of bellows reduces leakage from the gland components.
- Zero stem leakage eliminates media loss and satisfies environmental regulations.
- Zero maintenance results in lower operating costs.
- Easy maintenance. The valves are effective for reducing maintenance costs as the gland packing does not need to be regularly retorqued.
- Maintains liquid quality. The valve stem and gland components are sealed with bellows to prevent contact with liquids in pipes.

Temperature

- +160 °C(11Bar)
- +250 °C(06Bar)

Product Description

FAF2130 Globe Valve is sealed to the stem and the bonnet with precision welds. The welds need to be performed in close proximity to other valve parts, which can cause damage to the bellows, stem, backseat and packing if not done carefully. FAF does not recommend the replacement of a bellows in the field.

Versions

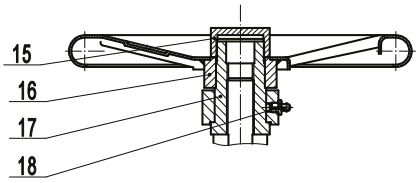
- Standard version with handwheel

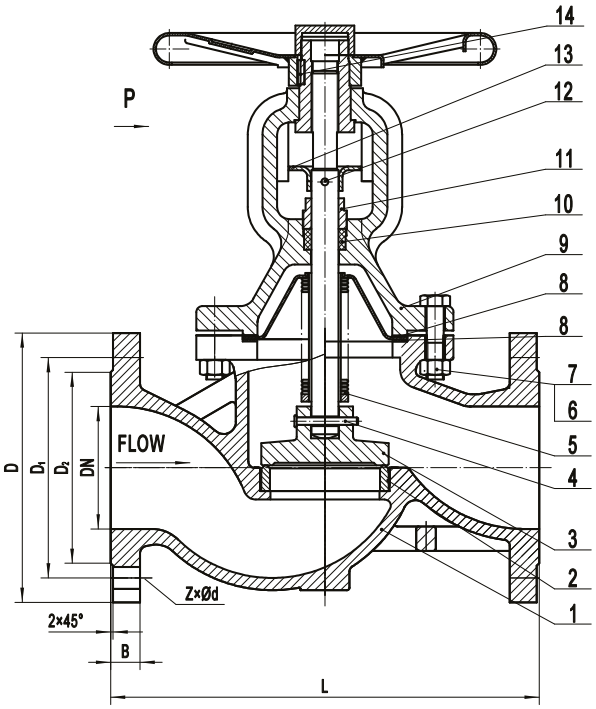
Scope of Application

- Steam
- Superheated Water
- Hot Water
- Cold Water
- Pressurized air systems
- Fluids without acidity or alkalinity properties

GLOBE VALVE BELLOW SEAL
FAF 2130

Technical Details & Drawing, Dimensions





NO	ITEM	MATERIALS
1	Body	GG25
2	Body Sealing Ring	1.4021 (SS420)
3	Disc	DN15-100: SS420; DN125-200: A105
4	Pin (Type A)	1.4021 (SS420)
5	Bellow Parts Diagram	SS304 Bollow
6	Hexagon Head Bolts	ASTM A27
7	1 Type Hexagonal Nut	ASTM A27
8	Gasket	STEEL + Expanded Graphite
9	Bonnet	GG25
10	Packing	Expanded Graphite
11	Bolts	EN 1.0254 (St 37)
12	Elastic Cone Pin - Straight Flute - Heavy Type	EN 1.0503 (C45)
13	Location - Limited Plate	EN 1.0254 (St 37)
14	Ordinary Flat Key Type A	EN 1.0503 (C45)
15	Nut	EN 1.0254 (St 37)
16	Handwheel	EN 1.0254 (St 37)
17	Stem Nut	ZcuCn38Mn2Pb2 BRASS
18	Strait Hydraulic Grease Nipples	

PRODUCTS MODEL CODES	
FAF2130	GLOBE VALVE - BELLOW SEAL
FAF2100	GLOBE VALVE

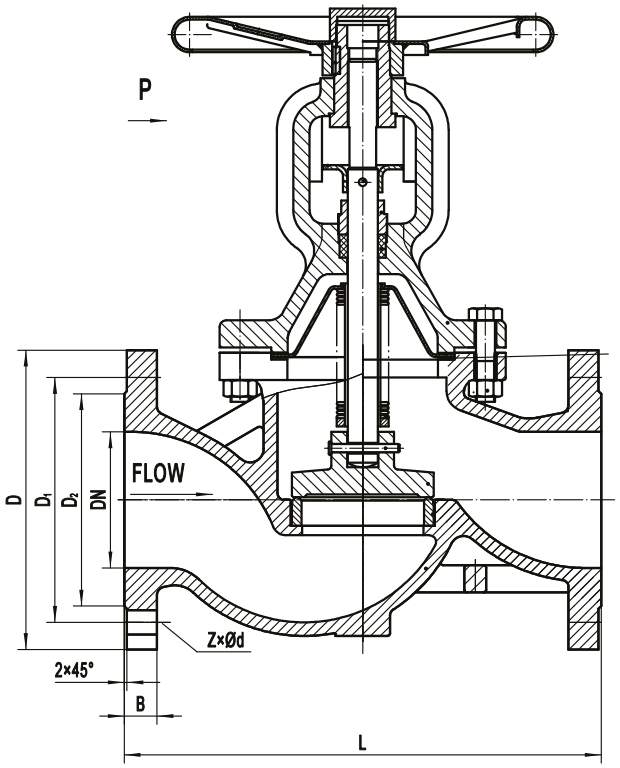
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

GLOBE VALVE BELLOW SEAL
FAF 2130

Technical Details & Drawing, Dimensions



DN (mm)	D	K	d	Ølxn	f	b	L	H	G	KV m³/h	Torque Nm	Weight (kg)
15	95	65	46	14 x 4	2	14	130	165	95	5	15	3,8
20	105	75	56	14 x 4	2	16	150	170	100	8	20	4,1
25	115	85	65	14 x 4	2	16	160	180	120	11	20	5,7
32	140	100	76	19 x 4	2	18	180	215	140	18	30	8,4
40	150	110	84	19 x 4	2	18	200	225	140	28	30	9,9
50	165	125	99	19 x 4	2	20	230	235	200	47	40	13,6
65	185	145	118	19 x 4	2	20	290	265	200	72	40	20,6
80	200	160	132	19 x 8	2	22	310	300	240	126	100	28,6
100	220	180	156	19 x 8	2	24	350	340	280	170	160	40
125	250	210	184	19 x 8	2	26	400	390	360	267	200	60
150	285	240	211	23x8	2	26	480	430	360	380	250	78,6
200	340	395	266	23 x 12	2	30	600	490	400	683	350	124
250	405	355	319	28 x 12	3	32	730	600	400	1057	500	
300	460	410	375	28 x 12	3	32	850					

LIFT TYPE CHECK VALVE
FAF 2250

Features

- Stainless steel disc, which is positioned vertical to flow direction seats on sealing surface that processed on the body via expander, force and provides %100 tight sealing.
- The valve is opened via fluid force when it is at closed position and it is closed via expander force when system pressure decreases.
- Valve can be used in horizontal and vertical position due to the sealing is achieved by the spring.
- The valve has cast iron body, stainless steel disc and graphite seal.
- The body coated with wet epoxy paint as standard. It can be coated with fusion-bonded epoxy if required.
- All external surfaces are primed and painted for corrosion resistance.
- Designed with focus on easy access to maintenance. By unscrewing a few bolts the bonnet assembly including hinge and disc can be removed from the body, and maintenance can be performed.
- Designed with focus on easy access to maintenance. By unscrewing a few bolts, the bonnet assembly including hinge and disc can be removed from the body, and maintenance can be performed.
- Zero stem leakage eliminates media loss and satisfies environmental regulations.
- When the system pressure decreases, it closes by spring force.
- Effective for energy savings. Energy loss due to leakage is controlled, helping to prevent global warming and protecting the environment.

Temperature

- +160 °C (11Bar)
- +250 °C (06Bar)

PRODUCTION STANDARDS

DN15 ➔DN250
PN 16

Design	EN 13789
Connection	EN 1092-2 1997 / ISO 7005-2
Flanged Face to Face	EN 558 Series 1 / DIN 3202
Marking	EN19
Tests	EN 12266-1
Corrosion Protection	Industrial Epoxy

Product Description

FAF2250 Lift type check valve let to fluids in the facility required downstream and ceases the flow in case of reverse flow.
The purpose of this check valve design is to prevent media backflow and maintain consistent fluid flow. Functioning as a type of check valve, its main role is to permit fluid movement in one direction while blocking it in the opposite direction. Failure to do so can cause significant damage to the system or equipment, leading to substantial setbacks. Lift check valves of this type are commonly made from robust materials such as stainless steel, cast iron, and carbon steel. They are engineered to withstand high-pressure conditions, extreme temperatures, and rapid fluid velocities.

Versions

- Standard version with cast iron wedge
- Custom production for specific orders

Scope of Application

- Steam
- Superheated water
- Hot & cold water
- Industrial technologies
- Fluids without acidity or alkalinity properties

VALVE TEST PRESSURE (Bar)

MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6

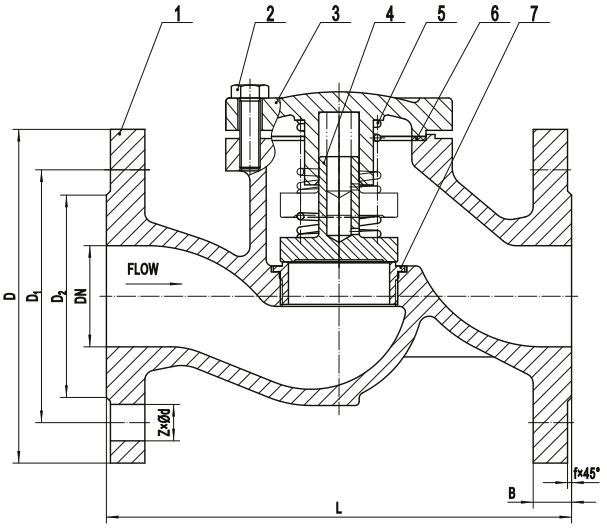
100% of the valves are subjected to hydrostatic tests at FAF facilities.

Note

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

LIFT TYPE CHECK VALVE
FAF 2250

Technical Details & Drawing, Dimensions



Material List

NO	ITEM	MATERIALS
1	BODY	EN-GJL-250 CAST IRON
2	BOLT	NO 35 STEEL
3	BONNET	EN-GJL-250 CAST IRON
4	DISC	1.4301 - AISI 304 STAINLESS STEEL
5	SPRING	1.4301 - AISI 304 STAINLESS STEEL
6	GASKET	STEEL +EXPANDED GRAPHITE
7	BODY SEALING RING	1.4301 - AISI 304 STAINLESS STEEL

DN (mm)	D	D1	D2	Øl x n	f	B	L	H	KV m³/h	Weight (kg)
15	95	65	46	14x4	2	14	130	50	3	2,8
20	105	75	56	14x4	2	16	150	50	5,5	3,4
25	115	85	65	14x4	2	16	160	60	8	4,5
32	140	100	76	19x4	2	18	180	75	13	6,4
40	150	110	84	19x4	2	18	200	80	20	8,5
50	165	125	99	19x4	2	20	230	80	33	12,3
65	185	145	118	19x4	2	20	290	110	50	18
80	200	160	132	19x8	2	22	310	120	88	25,2
100	220	180	156	19x8	2	24	350	135	119	35,6
125	250	210	184	19x8	2	26	400	165	187	51
150	285	240	211	23x8	2	26	480	190	266	67
200	340	295	266	23x12	2	30	600	225	478	110
250	405	355	319	28x12	4	32	730	295	740	201,1

SWING CHECK VALVE
FAF 2270

PRODUCTION STANDARDS

DN40 →DN300
PN 10-16

Design	EN 12334 / EN16767
Connection	EN 1092-2 / ISO 7005-2 - Flanged
Face to Face	EN 558 Series 48 / DIN 3202 F6
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Features

- With the start of movement at defined flow direction on the system, the disc leaves the flow section by turning around its axis and allows the flow pass.
- The disc fixed inside the body in located on the flow axis.
- Sealing is achieved by rubber coated disc
- All external surfaces are primed and painted for corrosion resistance.
- Can be installed in either vertical (upward flow only) or horizontal (cover upright) applications.
- Designed with focus on easy access to maintenance. By unscrewing a few bolts the bonnet assembly including hinge and disc can be removed from the body, and maintenance can be performed.
- Zero stem leakage eliminates media loss and satisfies environmental regulations.
- Effective for energy savings.
- Stock piled for quick delivery.

Temperature

- For water, sewage and neutral liquids
- EPDM: -40°C /+100°C short term 150°C

Product Description

FAF2270 Swing Check Valve is ideal for all basic commercial/industrial general backflow prevention applications. Durable ductile iron construction resists pipeline stresses and distortion.

Versions

- Standard version with ductile iron body and disc
- Custom production for specific orders

Scope of Application

- Chamber installation
- Pipelines
- Water treatment plants
- Pumping stations
- Tanks
- Seawater applications
- Power plants
- Industry

SWING CHECK VALVE
FAF 2270

MATERIAL SELECTION	
Body	EN-GJS-500 Ductile Iron / GGG50
Bonnet	EN-GJS-500 Ductile Iron / GGG50
Stem	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (Optional) 1.4401 - AISI 316 Stainless Steel (Optional)
Sealing	EPDM
Coating	Electrostatic Powder Epoxy / FBE

PRODUCTS MODEL CODES	
FAF2270	**SWING CHECK VALVE - PN16**
FAF2271	SWING CHECK VALVE - PN10 (Optional)

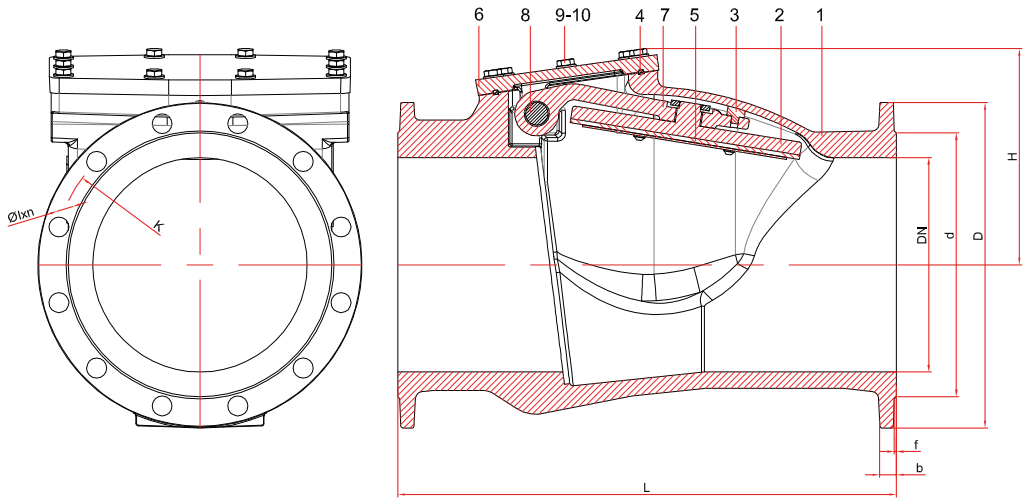
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

SWING CHECK VALVE
FAF 2270

Technical Details & Drawing, Dimensions



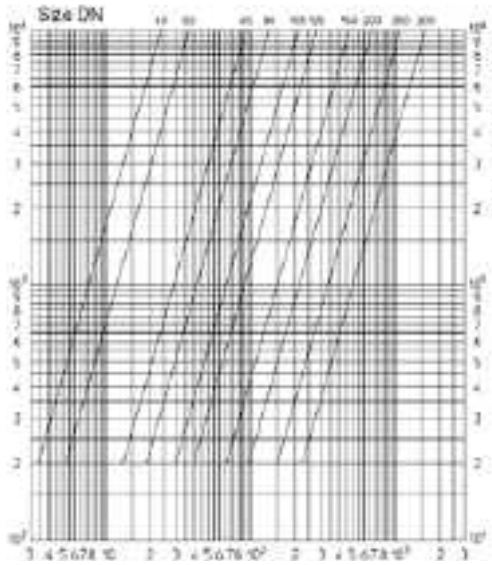
Material List

NO	ITEM	MATERIALS
1	BODY	GJS50 DUCTILE IRON
2	DISC	ST37 STEEL + EPDM
3	SCREWED WEDGE	SCREW EPDM
4	BONNET GASKET	EPDM
5	SEALING GASKET	EPDM
6	BONNET	GJS50 DUCTILE IRON
7	HINGE	EN GJS 500
8	KEY	STAINLESS STELL 1.4021
9	BOLT	GALVANISED STEEL
10	WASHER	GALVANISED STEEL

DN	PN	D	K	d	Øl x n	f	b	L	H	Weight (kg)
50	10/16	165	125	99	19x4	3	19	200	120	9,9
65	10/16	185	145	118	19x4	3	19	240	145	14,8
80	10/16	200	160	132	19x8	3	19	260	155	16,85
100	10/16	220	180	156	19x8	3	19	300	160	21,5
125	10/16	250	210	184	19x8	3	19	350	175	30,25
150	10/16	285	240	211	23x8	3	19	400	185	40,3
200	10	340	295	266	23x08	4	20	500	235	64
200	16	340	295	266	23x12	4	20	500	235	65,7
250	10	400	355	319	23x12	4	22	600	270	97,8
250	16	400	355	319	28x12	4	22	600	270	97,8
300	10	455	410	370	23x12	4	24,5	700	305	137,4
300	16	455	410	370	28x12	4	24,5	700	305	137,05

SWING CHECK VALVE
FAF 2270

PRESSURE LOSS DIAGRAM



DIAMATER	Kv
DN 40	85
DN 50	132
DN 65	326
DN 80	490
DN 100	770
DN 125	1020
DN 150	1700
DN 200	2410
DN 250	3870
DN 300	5670

2270C

SWING CHECK VALVE WITH COUNTER WEIGHT
FAF 2270C

PRODUCTION STANDARDS

DN40 →DN300
PN 10-16

Design	EN 12334
Connection	EN 1092-2 / ISO 7005-2 - Flanged
Face to Face	EN 558 Series 48 / DIN 3202 F6
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Features

- Countervalve weight allows installation of both horizontal and vertical pipes on the right and left sides of the mill, counterweight, and lever on both sides of the check valve.
- With the start of movement at defined flow direction on the system, the disc leaves the flow section by turning around its axis and allows the flow pass.
- The disc fixed inside the body in located on the flow axis.
- The disc opens depending on the flow rate and moves freely depending on the flow.
- Sealing is achieved by metal to metal seating. Rubber coated disc is available. (Optional)
- Sealing is achieved by rubber coated disc.
- All external surfaces are primed and painted for corrosion resistance.
- Can be installed in either vertical (upward flow only) or horizontal (cover upright) applications.
- Designed with focus on easy access to maintenance. By unscrewing a few bolts the bonnet assembly including hinge and disc can be removed from the body, and maintenance can be performed.
- Zero stem leakage eliminates media loss and satisfies environmental regulations.
- Effective for energy savings.
- Stock piled for quick delivery.

Temperature

- For water, sewage and neutral liquids
- EPDM: -40°C /+100°C short term 150°C

Product Description

FAF2270C Swing Check Valve Counterweight is ideal for all basic commercial/industrial general backflow prevention applications. Durable ductile iron construction resists pipeline stresses and distortion.

Versions

- Standard version with ductile iron body and disc
- Custom production for specific orders

Scope of Application

- Chamber installation
- Pipelines
- Water treatment plants
- Pumping stations
- Tanks
- Seawater applications
- Power plants
- Industry

SWING CHECK VALVE WITH COUNTERWEIGHT
FAF 2270C

MATERIAL SELECTION	
Body	EN-GJS-500 Ductile Iron / GGG50
Bonnet	EN-GJS-500 Ductile Iron / GGG50
Stem	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (Optional) 1.4401 - AISI 316 Stainless Steel (Optional)
Sealing	EPDM
Coating	Electrostatic Powder Epoxy

PRODUCTS MODEL CODES	
FAF2270C	**SWING CHECK VALVE - PN16**
FAF2271C	SWING CHECK VALVE - PN10 (Optional)

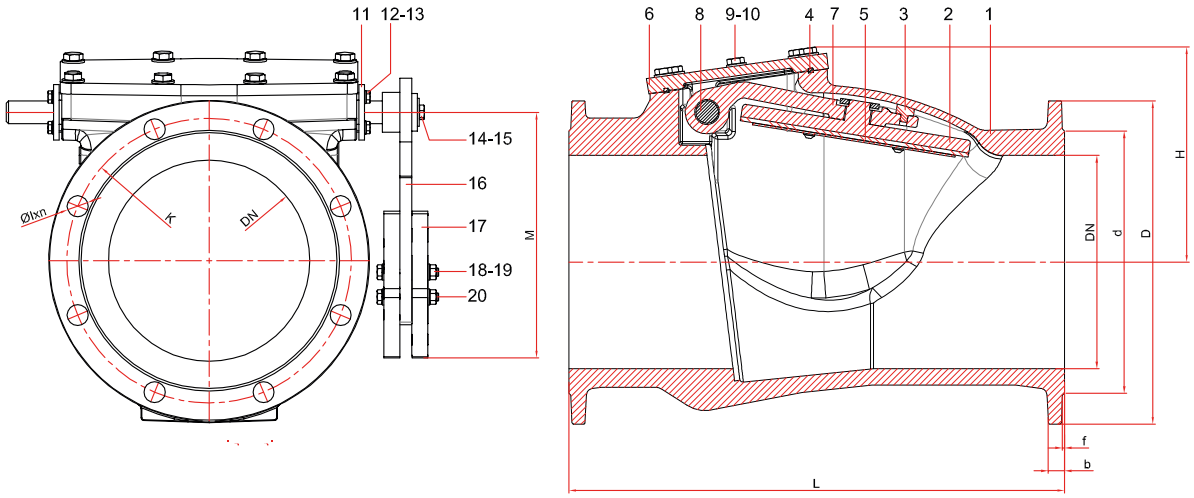
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

SWING CHECK VALVE WITH COUNTER WEIGHT
FAF 2270C

Technical Details & Drawing, Dimensions



Material List

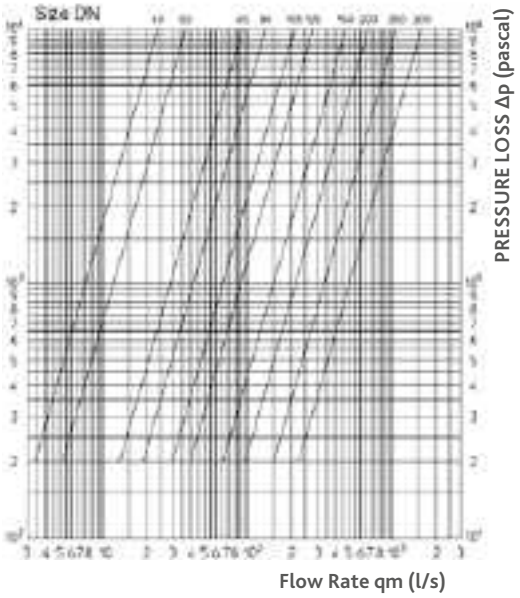
NO	ITEM	MATERIALS
1	BODY	GJS50 DUCTILE IRON
2	DISC	ST37 STEEL + EPDM
3	SCREWED WEDGE	SCREW EPDM
4	BONNET GASKET	EPDM
5	SEALING GASKET	EPDM
6	BONNET	GJS50 DUCTILE IRON
7	HINGE	EN GJS 500
8	KEY	STAINLESS STELL 1.4021
9	BOLT	GALVANISED STEEL
10	WASHER	GALVANISED STEEL

NO	ITEM	MATERIALS
11	BEARING	M58 BRASS
12	BOLT	GALVANISED STEEL
13	WASHER	GALVANISED STEEL
14	BOLT	GALVANISED STEEL
15	WASHER	GALVANISED STEEL
16	WEIGHT LEVER	ST 37 STEEL
17	NUT	GALVANISED STEEL
18	WASHER	GALVANISED STEEL
19	WASHER	GALVANISED STEEL
20	BOLT	GALVANISED STEEL

DN	PN	D	K	d	Øl x n	f	b	L	H	Weight (kg)
50	10/16	165	125	99	19x4	3	19	200	120	10,7
65	10/16	185	145	118	19x4	3	19	240	145	16
80	10/16	200	160	132	19x8	3	19	260	155	18,4
100	10/16	220	180	156	19x8	3	19	300	160	24,6
125	10/16	250	210	184	19x8	3	19	350	175	34,25
150	10/16	285	240	211	23x8	3	19	400	185	45,1
200	10	340	295	266	23x08	4	20	500	235	73,25
200	16	340	295	266	23x12	4	20	500	235	72,6
250	10	400	355	319	23x12	4	22	600	270	105,9
250	16	400	355	319	28x12	4	22	600	270	105,5
300	10	455	410	370	23x12	4	24,5	700	305	151,4
300	16	455	410	370	28x12	4	24,5	700	305	151,4

SWING CHECK VALVE WITH COUNTERWEIGHT
FAF 2270C

PRESSURE LOSS DIAGRAM



DIAMATER	Kv
DN 40	85
DN 50	132
DN 65	326
DN 80	490
DN 100	770
DN 125	1020
DN 150	1700
DN 200	2410
DN 250	3870
DN 300	5670

TILTING CHECK VALVE
FAF 2280

PRODUCTION STANDARDS

DN100 ➜DN1400
PN 10-16-25

Design	EN 12334 / EN 16767
Connection	EN 1092-2 / ISO 7005-2 - Flanged
End Connection	EN 558 Series 14 / DIN 3202 F4
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy WRAS Approved (Optional)

Features

- Ensures 100% sealing with the "T" section ring fixed to the outer diameter of the disc fully facing the seat surface inside the body perimeter made of stainless steel welding.
- The sealing that can be made of EPDM, (NBR and VITON) optional materials can be dismantled and replaced easily on field conditions.
- Inner and outer surfaces of the valve is coated with (250) microns thickness of fusion bonded epoxy. Higher thicknesses are availabe upon request.
- Low moments are obtained by decreasing the friction through self lubricating bushings.
- Can bear high stretching stresses on the pipeline through the ductile iron body and disc.
- High impact resistance.
- Pressure loss is at minimum level by double shaft design.
- Counter weight allows installation of both horizontal and vertical pipes on the right and left sides of the mill, counterweight, and lever on both sides of the check valve.
- The disc opens depending on the flow rate and moves freely depending on the flow.
- The position adjusts to the working conditions through to the adjustable weight.
- Lifting lugs and feet ease the balance during transport and installation.
- Sealing gaskets made of EPDM, NBR or VITON supplied according to operating conditions and demand can be disassembled and replaced easily in field conditions.
- With the o-rings on the bearing bushings, disc pin holes are protected against corrosion (Dry shaft).
- Retaining ring is assembled to the disc with imbus bolts, the disc is protected against corrosion by placing o-rings under the bolts.

Temperature

- For water, sewage and neutral liquids
- EPDM: -40°C /+100°C short term 150°C
- NBR: -30°C /+90°C short term 110°C
- VITON: -30°C /+225°C short term 250°C)

Product Description

FAF2280 Series Tilting Check Valve consists of a circular disc with conical rim, hinged about a fixed pivot above its centre-line and offset from the plane of the seat, sealing against a body seat clamped be- tween the two sections of the valve body.

Versions

- Standard version with various pressure standards
- Custom production for specific orders.
- Sealing gaskets can be made of EPDM, NBR or VITON (Optional)

General Information

- Valve is designed to be leakproof and with anti-blow out shaft system when driving component are removed.

Scope of Application

- Pipelines
- Water Treatment Plants
- Pumping stations
- Tanks
- Seawater applications
- Power plants (cooling water pipelines)
- Industry

TILTING CHECK VALVE
FAF 2280

MATERIAL SELECTION	
Body	EN-GJS-500 Ductile Iron / GGG50
Disc	EN-GJS-500 Ductile Iron / GGG50
Shaft	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (Optional) 1.4401 - AISI 316 Stainless Steel (Optional) 1.4462 - Duplex Stainless Steel (Optional)
Sealing	EPDM NBR (Optional) VITON (Optional)

PRODUCTS MODEL CODES	
FAF2280	**TILTING CHECK VALVE PN16**
FAF2281	TILTING CHECK VALVE PN10
FAF2282	TILTING CHECK VALVE PN25

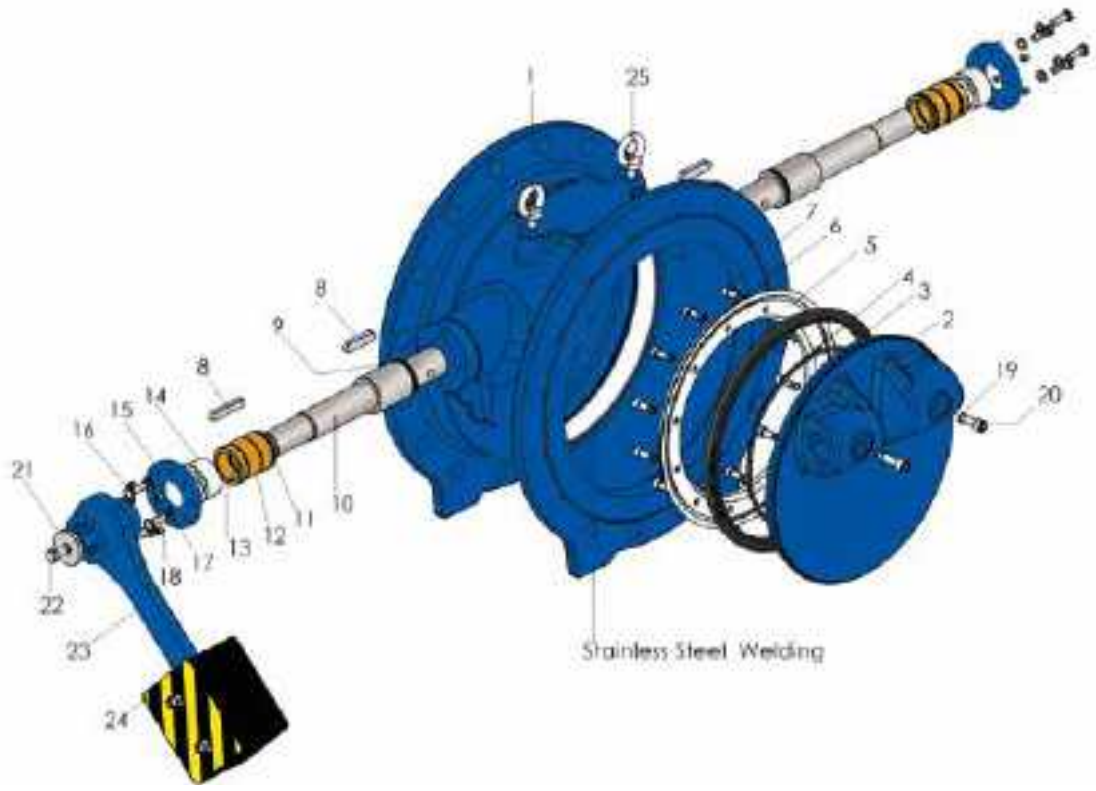
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
25	37,5	27,5
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

TILTING CHECK VALVE
FAF 2280

Material List

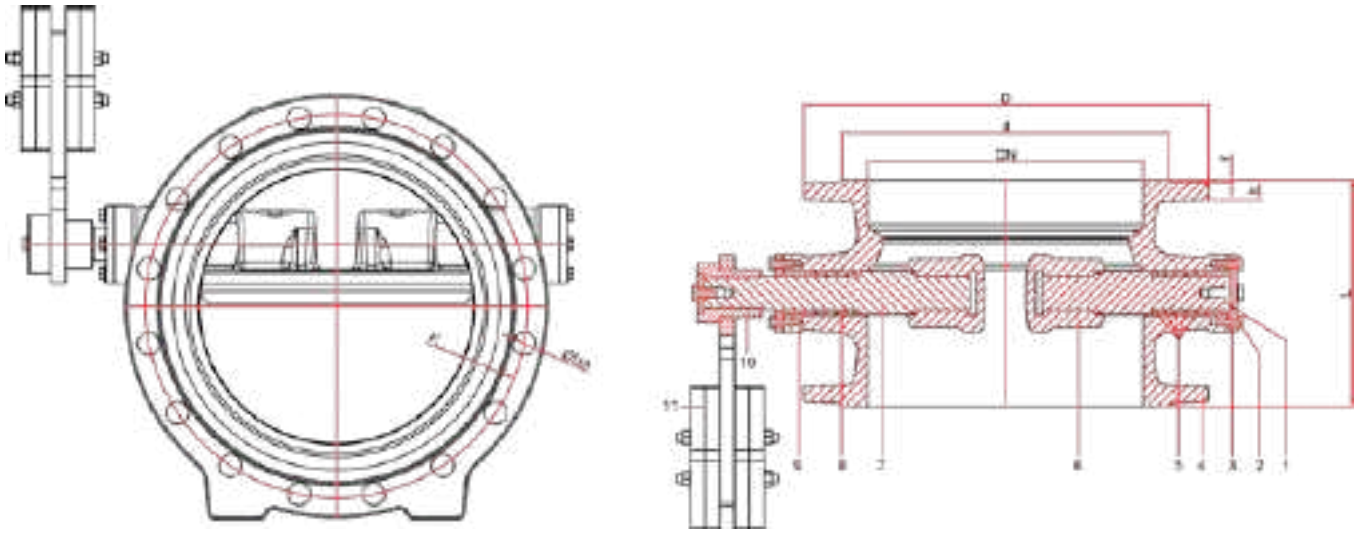


NO	ITEM	MATERIALS
1	BODY	EN GJS 500
2	DISC	EN GJS 500
3	SEALING RING	EPDM
4	O-RING	NBR / EPDM
5	RETAINING RING	St-37/STEEL 1.0254 / STAINLESS STEEL 1.4301 / 1.4401
6	O RİNG	NBR / EPDM
7	İMBUS BOLT	STAINLESS STEEL A2
8	KEY	STEEL
9	O-RING	NBR / EPDM
10	SHAFT	STAINLESS STEEL 1.4021
11	O-RING	NBR / EPDM
12	BUSHING	BRONZE

NO	ITEM	MATERIALS
13	O RING	NBR / EPDM
14	SHAFT BEARING	DELRIN
15	COVER	STEEL 1.0254
16	HEXAGON BOLTS	STAINLESS STEEL 1.4021
17	WASHER	STAINLESS STEEL 1.4021
18	SETSCREW	STAINLESS STEEL A2
19	O RING	NBR / EPDM
20	IMBUS BOLT	STAINLESS STEEL A2
21	WASHER	STAINLESS STEEL 1.4021
22	HEXAGON BOLTS	STAINLESS STEEL 1.4021
23	LEVER	STEEL 1.0254
24	WEIGHT	STEEL 1.0254
25	LIFTING LUGS	STEEL

TILTING CHECK VALVE
FAF 2280

Technical Details & Drawing, Dimensions



DIMENSIONS - PN10													
DN (mm)	D	K	d	Ølxn	f	b	L	O	L1	e1	h1	h2	Weight (kg)
100	220	180	156	19x8	3	19	190	101	202	203	170	22	19,2
150	285	240	211	23x8	3	19	210	148	202	230	187	36	27,2
200	340	295	266	23x8	4	20	230	200	250	280	215	40	44
250	400	350	319	23x12	4	22	250	248	250	335	215	50	62
300	455	400	370	23x12	4	24,5	270	282	300	360	263	60	83,8
350	505	460	429	23x16	4	24,5	290	39	400	412	328	75	138,5
400	565	515	480	28x16	4	24,5	310	385	400	470	335	85	150,6
450	615	565	530	28x20	4	25,5	330	432	500	515	410	95	224,15
500	670	620	582	28x20	4	26,5	350	481	500	545	430	105	277,2
600	780	725	682	31x20	5	30	390	576	600	570	468	125	375
700	895	840	794	31x24	5	32,5	430	675	700	660	580	155	559
800	1015	950	901	34x24	5	35	470	780	800	755	645	175	666,4
900	1115	1050	1001	34x28	5	37,5	510	872	900	940	775	200	940
1000	1230	1160	1112	37x28	5	40	550	970	1000	850	805	210	1140
1200	1455	1380	1328	41x32	5	45	630						1920
1400	1675	1590	1530	44x36	5	46	710						2700

TILTING CHECK VALVE
FAF 2280

DIMENSIONS - PN16													
DN (mm)	D	K	d	Ølxn	f	b	L	O	L1	e1	h1	h2	Weight (kg)
100	220	180	156	19x8	3	19	190	101	202	203	170	22	19,2
150	285	240	211	23x8	3	19	210	148	202	230	187	36	27,2
200	340	295	266	23x12	4	20	230	200	250	280	215	40	44
250	400	355	319	28x12	4	22	250	248	250	335	215	50	60,45
300	455	410	370	28x12	4	24,5	270	282	300	360	263	60	81,85
350	520	470	429	28x16	4	26,5	290	39	400	412	328	75	135,1
400	580	525	480	31x16	4	28	310	385	400	470	335	85	158,6
450	640	585	548	31x20	4	30	330	432	500	515	410	95	222
500	715	650	609	34x20	4	31,5	350	481	500	545	430	105	227,2
600	840	770	720	37x20	5	36	390	576	600	570	468	125	413
700	910	840	794	37x24	5	39,5	430	675	700	660	580	155	570
800	1025	950	901	41x24	5	43	470	780	800	755	645	175	775
900	1125	1050	1001	41x28	5	46,5	510	872	900	940	775	200	940
1000	1255	1170	1112	44x28	5	50	550	970	1000	850	805	210	1200
1200	1485	1390	1328	50x32	5	57	630						1920
1400	1685	1590	1530	50x36	5	60	710						2700

DIMENSIONS - PN25								
DN (mm)	D	K	d	Ølxn	f	b	L	Weight (kg)
100	230	190	156	23x8	3	19	190	19,2
150	300	250	211	28x8	3	20	210	27,2
200	360	310	274	28x12	4	22	230	46
250	425	370	330	31x12	4	24,5	250	65
300	485	430	389	31x16	4	27,5	270	96,9
350	555	490	448	34x16	4	30	290	140
400	620	550	503	37x16	4	32	310	175
450	670	600	548	37x20	4	34,5	330	230
500	730	660	609	37x20	4	36,5	350	S300
600	844	770	720	41x20	5	42	390	420

TILTING CHECK VALVE
FAF 2280

General Information

- The FAF2280 check valve with an inclined seat and counterweight is installed on water pipes as a shut-off device to prevent the reverse flow of the working medium and hydraulic shock.
- The inclined seat type, quick-opening and closing, is equipped with reliable sealing - EPDM rubber.
- The counterweight keeps the disk in fully open position, reducing flow resistance, and also contributes to better sealing in closed position at low pressure.
- Closing in two ways: fast closing and slow closing. Fast closing helps to avoid pump damage due to backflow, while slow closing helps to avoid the hydraulic shock effect, protecting the pipeline.
- The valve is manufactured by high-strength casting method, with relatively low weight.
- Characterized by easy installation and long service life.

Operating Principles

- After starting the pump, the disk opens under the pressure of the medium.
- With increasing pressure and flow rate, the disk moves to fully open position.
- At this moment, the counterweight rises up. The torque created by the counterweight balances the closing torque created by the disk weight, reducing flow resistance.
- Positive pressure disappears, under the influence of its own weight, the disk starts to close, and at this moment, under the influence of backflow, the disk closes faster.
- During fast closing, the buffer flow is in the return phase, and the disk transitions to slow closing mode. The fast closing bolt should be adjusted to control the fast closing time.
- When the disk is in slow closing mode, the hydraulic shock prevention effect is achieved.
- The slow closing speed is also adjusted by the bolt.
- When the disk is in closed position, the counterweight and lever rotate in the direction of flow by 30°, the counterweight-induced torque forces the valve to close, increasing the sealing elasticity and closure density when the medium pressure in the pipeline is low.

Transportation and Storage

- Check valves can be transported by any means of transport.
- Valves should be stored in places that prevent clogging (preventing atmospheric precipitation and contamination), under cover, on wooden pallets, to avoid direct contact of the valve with the ground.
- Valves should be protected from any direct external mechanical impact that may cause equipment damage.
- During storage, make sure that the valves are in closed position.
- To ensure uninterrupted operation of check valves, it is necessary to carefully read and constantly follow the information contained in this manual. Failure to comply with safety rules can lead to:
- Personnel injuries.
- Danger to the environment and the valve.
- Failure in the operation of valve/set main functions.
- Violation of planned maintenance and repairs.
- Electrical, mechanical, and chemical hazards to personnel.
- Environmental damage caused by hazardous leaks.
- No modifications or alterations are allowed in products supplied by “FAF Valve Company”. The company “FAF Valve Company” is not responsible for any damages caused by non-compliance with the instructions in this manual or modification without prior permission.
- Installation, operation, and technical maintenance of check valves must be carried out by professionally trained personnel. Despite the fact that all FAF VANA products are manufactured in accordance with international rules and standards, valves represent a potential hazard if used incorrectly or for purposes other than intended.
- All personnel responsible for storage, installation, use, technical maintenance, and dismantling of valves must carefully read and fully understand this document. Before performing any actions on the valve or pipeline, familiarize yourself with and understand all international and local safety rules. Take all necessary precautions.
- If any repairs are needed, there should be no pressure in the pipeline, and all liquid, if necessary, should be drained.
- Warning signs should be placed around the work area.
- The use of original spare parts ensures the operational safety of the products. The manufacturer is not responsible for damages caused by the use of non-original parts or accessories.
- If the valve needs to be removed, liquid must be drained from the pipeline. Relevant precautions should be taken considering that the remaining liquid will freely flow out after valve disassembly.
- Avoid sudden movements during lifting, moving, and lowering of the valve. Sudden movements can damage the valve and/or lifting mechanisms. Lifting should only be done through mounting holes located on the housing.

TILTING CHECK VALVE
FAF 2280

Installation Manual & Comissioning Instructions

- Operation and maintenance of check valves with inclined seat, counterweight (and hydrobrake) are allowed by personnel who have undergone appropriate training on the structure of check valves, safety rules, requirements of this technical description, and have skills in working with shut-off valves.
- Maintenance personnel performing routine work, disassembly, assembly, and repair of check valves must use serviceable tools, have personal protective equipment, and comply with fire safety requirements.
- Valves and pipes operated at high (> 60°C) or low (<0°C) temperatures must be insulated or a warning sign “Do Not Touch” must be installed.
- Ensure that the installed counterflanges on the pipeline comply with international standards according to EN 1092-1 / ISO 7005-1.
- Before installation, check the flange gasket surfaces and clean if necessary. Prepare sealing gaskets, selecting them according to temperature, pressure, and fluid type.
- Prepare the dimensions and quantity of connecting elements (bolts, nuts, washers).
- Since any traces of corrosion and welding, contaminants, and other residues can cause valve deformation and leakage, they should be removed from the line using air or steam before valve installation.
- The center of the pipe where the valve should be installed must be on the same axis, the counter flanges must be perpendicular to the pipe axis, and the bolt holes on the flanges must be on the same axis. Otherwise, axial displacements may occur, leading to stresses on the valve, causing leaks.
- If construction work will continue after valve installation, the valve must be protected from external factors; it should be covered with suitable protective materials. Damage to the valve during processes such as excavation, painting, or concrete pouring should be avoided.
- Ensure that flanges connected to the pipeline do not shift towards the valve during bolt tightening. Despite possible tensile stresses, we recommend using dismantling inserts to avoid this.
- Adequate space should be provided for convenient operation, maintenance, dismantling, and cleaning of the valve in the chamber where the valve is installed.
- Install the valve on the pipeline using gaskets and necessary installation tools, starting from one side and then moving to the other side, avoiding tensile stress formation. Tighten the bolts and nuts alternately with the specified tightening torque.
- Do not close the valve until all residues are removed from the pipe.
- Considering the pressure rating indicated on the valve, perform a pressure tightness test at 1.1 times the specified pressure to detect and rectify any faults in a timely manner.
- Check and inspect the check valves periodically according to the rules and norms adopted by the valve operating company.

Seal Replacement

- Ensure that there is no pressure in the line during the replacement of the disc ring seal. Adhere to safety rules.
- The disc ring seal can be replaced without removing the disc or valve from the pipeline. However, the valve must be accessible, at least when disconnected from one side of the pipeline.
- The disc should be in fully open position.
- To remove the screws and locking ring, alternately loosen the screws.
- Remove the disc ring seal and sealing rings.
- Install the new disc ring seal and sealing rings in place, lightly lubricating them with approved grease beforehand.
- Bolts should be tightened alternately with the specified tightening torque as per the table provided.
- Torque tightening values (N*m) for disc ring seal screws: [Insert torque values table here].
- Note: Please insert the specific torque values table for disc ring seal screws according to the manufacturer's specifications.

DN100 DN150	DN200-DN250 DN300	DN350 DN1000 included
8.7	21.2	42

Replacing the shaft sealing ring:

Ensure that there is no pressure in the line. Pay attention to safety rules.

The valve must be accessible when disconnected from one side of the pipeline.

The disc should be in the fully open position. Unscrew the bolts and remove the top cover.

Remove the pins on the disc and take off the sealing rings. When removing the main shaft, extract the main shaft bearing and upper bushing from the housing; be careful not to damage the key of the main shaft.

Replace the sealing rings with new ones and install them in their places, lightly lubricating them with approved grease beforehand.

Assembly should be done in the reverse order of disassembly; special attention should be paid to properly aligning the top cover “end-to-end” using hex head installation bolts.

If leakage occurs in the closed position after maintenance, adjustment can be made using installation bolts (21-25); for this, loosen the bolts of the lower and upper covers.

M6	M8	M10	M12	M16	M20	M24	M30
8.7	21.2	42	73	180	370	603	1300

TILTING CHECK VALVE
FAF 2280

Troubleshooting

All repair and service works must be carried out by qualified personnel using suitable tools and original spare parts.

Problem	Cause	Remedial Action
Valve cannot be operated	Foreign material jammed inside the valve	Fully open the valve and take out the dirt inside the valve
Leaks in the body seat	Valve not completely closed	Fully close the valve by checking the weight
	Valve sealing rind worn or damaged	Replace sealing ring
Leask in valve pipe installation and body	Gaskets damaged	Replace gaskets
	Bolts/nuts are loose	Tighten according to mentioned torque values
Valve makes noise	Valve operating beyond its limits	Check the working conditions and design features. Change valve installation location or change the valve type suitable for the area of usage
	Wrong installation position. (Valve is too close to a reducer, elbow, control valve, etc.)	Change installation position
Torque value very high	Deposit (lime, sand, etc.) accumulation may happened on the body seat	Fully open the valve and clean the deposit
	Pipeline is dry, sealing ring is dry	Apply approved lubricant or silicone on body seat and sealing ring

TILTING CHECK VALVE - HYDRAULIC BRAKE
FAF 2280D

PRODUCTION STANDARDS

DN200 ➔DN1600
PN 10-16-25

Design	EN16767
Connection	Flanged EN 1092-2 / ISO 7005-2 -
End Connection	EN 558 SERIAL 14 / DIN 3202 F4
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy WRAS Approved (Optional)

Features

- The sealing that can be made of EPDM, NBR and VITON materials can be dismantled and replaced easily on field conditions.
- Inner and outer surfaces of the valve is coated with 300 microns thickness of fusion bonded epoxy. Higher thicknesses are available upon request.
- Hydraulic braked swing check valves prevent the occurrence of hard brakes due to the effect of the braking system and virtually eliminate the noise, ram impact and damage.
- Ensures 100% sealing with the "T" section ring fixed to the outer diameter of the disc fully facing the seat surface inside the body perimeter made of stainless steel welding.
- Low moments are obtained by decreasing the friction through self lubricating bushings.
- Can bear high stretching stresses on the pipeline through the ductile iron body and disc.
- High impact resistance.
- Reduces the pressure loss through the disc designed in accordance with the direction of flow.
- Pressure loss is at minimum level by double shaft design.
- Counterweight allows installation of both horizontal and vertical pipes on the right and left sides of the mill, counterweight, and lever on both sides of the check valve.
- The clapper opens depending on the flow rate and moves freely depending on the flow.
- The position adjusts to the working conditions thanks to the adjustable weight.
- Lifting lugs and feet ease the balance during transport and installation.
- Hydraulic braked swing check valves prevent the occurrence of hard brakes due to the effect of the braking system and virtually eliminate the noise, ram impact and damage.
- The closing speed can also be adjusted in accordance with the operating conditions in the swing check valves with hydraulic brake.
- With the o-rings on the bearing bushings, disc pin holes are protected against corrosion (Dry shaft).
- Retaining ring is assembled to the disc with imbus bolts, the disc is protected against corrosion by placing o-rings under the bolts.
- Inner and outer surface of the valve is coated with minimum 300 micron thickness FBE coating.

Temperature

- y For water, sewage and neutral liquids
- EPDM: -40°C /+100°C short term 150°C
- NBR: -30°C /+90°C short term 110°C

Product Description

FAF2280D Series Tilting Check Valve The tilting check valve consists a circular disc with conical rim, hinged about a fixed pivot above its center-line and offset from the plane of the seat, sealing against a body seat clamped between the two sections of the valve body. FAF 2280D hydraulic brake system can be assembled to disc closing unit if it is required at project. The rate of closure can be controlled due to tilting check valve with hydraulic brake system and the system passes to static position slightly. The installation equipment protected from impact strength.

Versions

- Standard version with various pressure standards.
- Custom production for specific orders.
- Sealing gaskets can be made of EPDM, NBR or VITON.

General Information

Valve is designed to be leakproof and with anti blow out shaft system when driving component (lever or hydraulic piston) are removed.

Scope of Application

- Pipelines
- Water Treatment Plants
- Pumping stations
- Tanks
- Seawater applications
- Power plants (cooling water pipelines)
- Industry

TILTING CHECK VALVE - HYDRAULIC BRAKE
FAF 2280D

MATERIAL SELECTION	
Body	EN-GJS-500 Ductile Iron / GGG50
Disc	EN-GJS-500 Ductile Iron / GGG50
Shaft	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel 1.4462 - Duplex Stainless Steel
Sealing	EPDM, NBR, VITON

PRODUCTS MODEL CODES	
FAF 2280D	**PN16 WITH HYDRAULIC BRAKE SYSTEM**
FAF 2281D	PN10 WITH HYDRAULIC BRAKE SYSTEM
FAF 2282D	PN25 WITH HYDRAULIC BRAKE SYSTEM

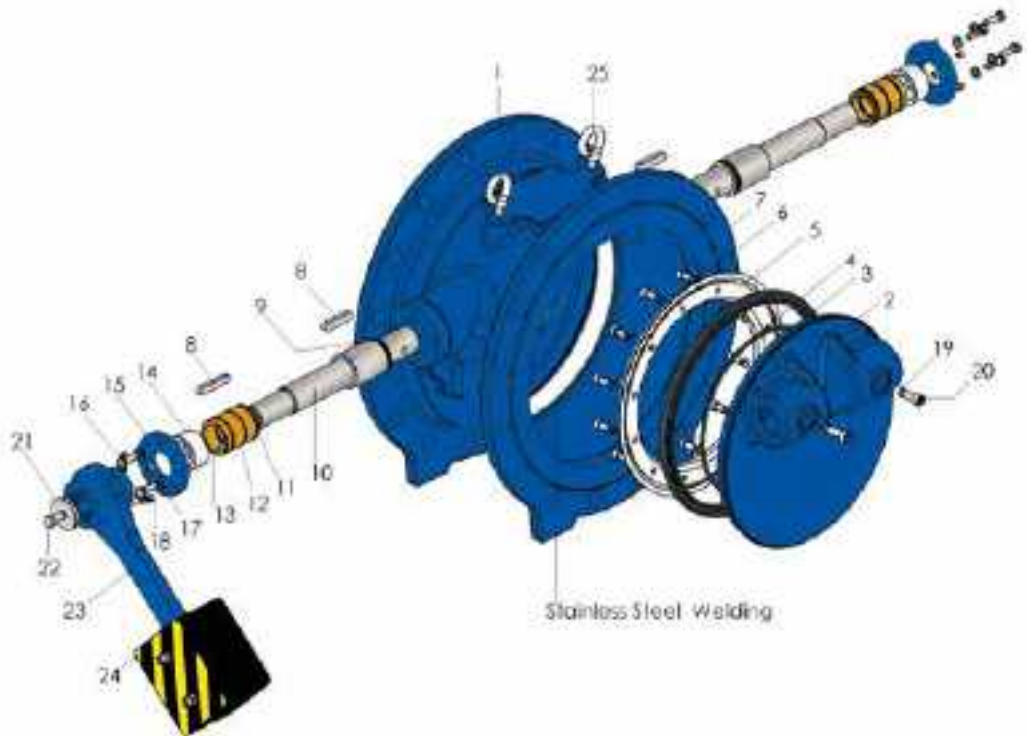
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
25	37,5	27,5
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

TILTING CHECK VALVE - HYDRAULIC BRAKE
FAF 2280D

Material List

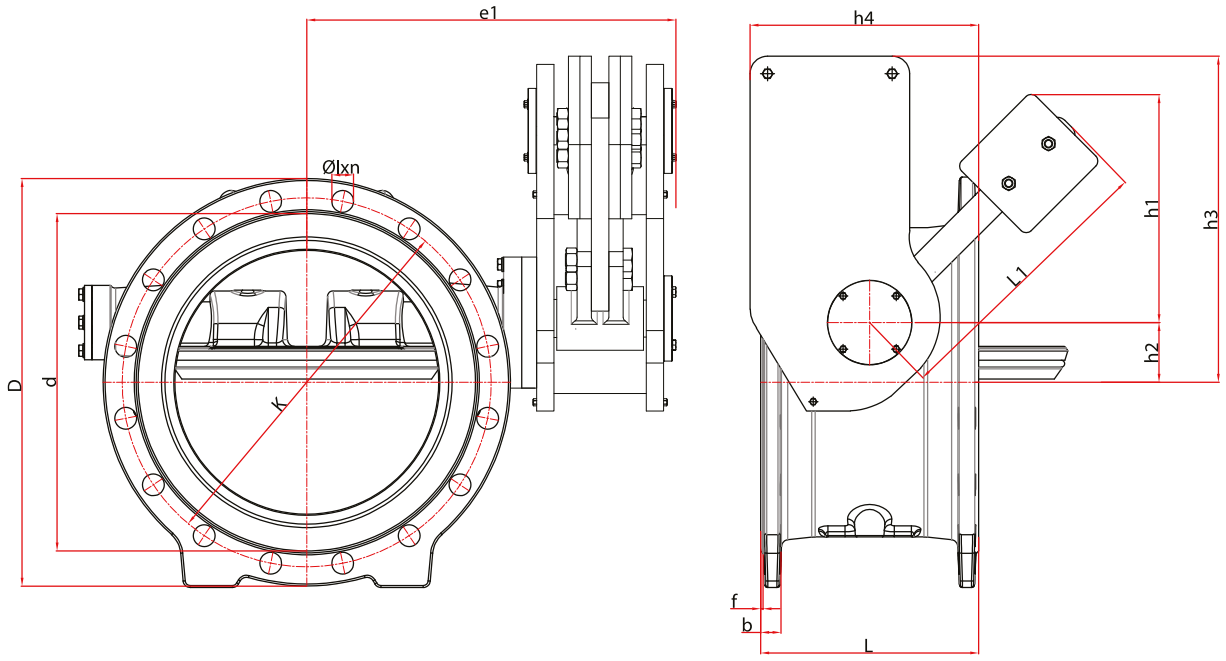


NO	ITEM	MATERIALS
1	BODY	EN GJS 500
2	DISC	EN GJS 500
3	SEALING RING	EPDM
4	O-RING	NBR / EPDM
5	RETAINING RING	STEEL 1.0254 OR STAINLESS STEEL 1.4301 / 1.4401
6	O RING	NBR / EPDM
7	IMBUS BOLT	STAINLESS STEEL A2
8	KEY	STEEL
9	O-RING	NBR / EPDM
10	SHAFT	STAINLESS STEEL 1.4021
11	O-RING	NBR / EPDM
12	BUSHING	BRONZE

NO	ITEM	MATERIALS
13	O RING	NBR / EPDM
14	BUSH	DELRIN
15	COVER	STEEL 1.0254
16	HEXAGON BOLTS	STAINLESS STEEL 1.4021
17	WASHER	STAINLESS STEEL 1.4021
18	SETSCREW	STAINLESS STEEL A2
19	O RING	NBR / EPDM
20	IMBUS BOLT	STAINLESS STEEL A2
21	WASHER	STAINLESS STEEL 1.4021
22	HEXAGON BOLTS	STAINLESS STEEL 1.4021
23	LEVER	STEEL 1.0254
24	WEIGHT	St-37 STEEL
25	LIFTING LUGS	STEEL

TILTING CHECK VALVE - HYDRAULIC BRAKE
FAF 2280D

Technical Details & Drawing, Dimensions



DIMENSIONS - PN10																
DN (mm)	D	K	d	Ølxn	f	b	L	O	L1	e1	e2	h1	h2	h3	h4	Weight (kg)
100	220		156	19x8	3	19	190	101	202	210	171	170	22	260	270	25
150	285	240	211	23x8	3	19	210	148	202	231	196	187	36	283	264	36
200	340	295	266	23x8	4	20	230	200	250	320	272	215	40	460	255	54
250	400	350	319	23x12	4	22	250	248	250	368	310	215	50	470	265	78
300	455	400	370	23x12	4	24,5	270	282	300	397	341	263	60	480	277	105
350	505	460	429	23x16	4	24,5	290	39	400	440	374	328	75	562	328	163
400	565	515	480	28x16	4	24,5	310	385	400	490	430	335	85	572	341	200
450	615	565	530	28x20	1804	25,5	330	432	500	530	480	410	95	590	350	264,4
500	670	620	582	28x20	4	26,5	350	481	500	560	510	430	105	600	360	303
600	780	725	682	31x20	5	30	390	576	600	655	633	468	125	722	545	410
700	895	840	794	31x24	5	32,5	430	675	700	710	695	580	155	1080	775	629
800	1015	950	901	34x24	5	35	470	780	800	795	780	645	175	1100	835	860
900	1115	1050	1001	34x28	5	37,5	510	872	900	845	915	775	200	1280	860	1045
1000	1230	1160	1112	37x28	5	40	550	970	1000	945	917	805	210	1290	880	1450
1200	1455	1380	1328	41x32	5	45	630							1920		1920
1400	1675	1590	1530	44x36	5	46	710							2700		2100

TILTING CHECK VALVE - HYDRAULIC BRAKE
FAF 2280D

Technical Details & Drawing, Dimensions

DIMENSIONS - PN16																
DN (mm)	D	K	d	Ølxn	f	b	L	O	L1	e1	e2	h1	h2	h3	h4	Weight (kg)
100	220	180	156	19x8	3	19	190	101	202	210	171	170	22	260	270	25
150	285	240	211	23x8	3	19	210	148	202	231	196	187	36	283	264	36
200	340	295	266	23x12	4	20	230	200	250	320	272	215	40	460	255	54
250	400	355	319	28x12	4	22	250	248	250	368	310	215	50	470	265	78
300	455	410	370	28x12	4	24,5	270	282	300	397	341	263	60	480	277	110
350	520	470	429	28x16	4	26,5	290	39	400	440	374	328	75	562	328	170
400	580	525	480	31x16	4	28	310	385	400	490	430	335	85	572	341	210,6
450	640	585	548	31x20	4	30	330	432	500	530	480	410	95	590	350	264,4
500	715	650	609	34x20	4	31,5	350	481	500	560	510	430	105	600	360	345
600	840	770	720	37x20	5	36	390	576	600	655	633	468	125	722	545	480
700	910	840	794	37x24	5	39,5	430	675	700	710	695	580	155	1080	775	650
800	1025	950	901	41x24	5	43	470	780	800	795	780	645	175	1100	835	910
900	1125	1050	1001	41x28	5	46,5	510	872	900	845	915	775	200	1280	860	1050
1000	1255	1170	1112	44x28	5	50	550	970	1000	945	917	805	210	1290	880	1650
1200	1485	1390	1328	50x32	5	57	630							1920		1920
1400	1685	1590	1530	50x36	5	60	710							2700		2100

DIMENSIONS - PN25														
DN (mm)	D	K	d	Ølxn	f	b	L	L1	e1	h1	h2	h3	h4	Weight (kg)
100	230	190	156	23x8	3	19	190	202	210	170	22	260	270	25
150	300	250	211	28x8	3	20	210	202	231	187	36	283	264	36
200	360	310	274	28x12	4	22	230	250	320	215	40	460	255	54
250	425	370	330	31x12	4	24,5	250	250	368	215	50	470	265	78
300	485	430	389	31x16	4	27,5	270	300	397	263	60	480	277	110
350	555	490	448	34x16	4	30	290	400	440	328	75	562	328	170
400	620	550	503	37x16	4	32	310	400	490	335	85	572	341	210
450	670	600	548	37x20	4	34,5	330	500	530	410	95	590	350	230
500	730	660	609	37x20	4	36,5	350	500	560	430	105	600	360	345
600	844	770	720	41x20	5	42	390	600	655	468	125	722	545	497

TILTING CHECK VALVE - HYDRAULIC BRAKE
FAF 2280D

General

- y Tilting check valve are designed to close in emergency conditions by means of preventing the backflow of the fluid on the pipeline without the need of manual operation or additional source of energy. These check valves are used for the purpose of isolating the pipeline in emergency conditions.
- y Tilting check valves open with the flow and close with the stop of flow by the help of counterweight.
- y The closing characteristics of the Tilting check valve can be arranged by changing the position of the weight attached on the counter le- ver.
- A check valve with a hydraulic damper works like a normal valve.
- Its difference is that it has a hydraulic brake.
- Its working principle is to direct, open or close the valve depending on the flow speed and pressure.
- The valve block has a control valve that can be used to adjust the degree of opening and closing speed.
- There are positions from 0 to 9
- 0-closed
- 9-maximum open
- The purpose of the hydraulic brake is not to open abruptly.
- It will close slowly in 1-2 positions.
- Quickly close in 8-9 positions.
- However, the valve will brake in any position within 30% when it is close to closing.

Transportation and Storage

- y Check valves should be protected during transportation and storage with a proper cover.
- y Check valves should be stored in a such a way to ensure proper usage after prolonged storage periods. This includes below point.
- y Precautions needs to be taken for dirt, freezing or corrosion, In cold climates the inside of the valve must be kept drained of any water to prevent freezing.
- y Temperature range should be kept between + 5 ° C to +50 ° C.
- y Sealing parts (resilient parts) should not be directly exposed to sun light and/or UV lights and hydro- carbons (solvents, paints and oils, etc.).
- y Should be stored in a dry and ventilated place.
- Should not be in direct contact with sand and other wastes.
- Valves should be stored in a partially open position.
- When possible, keep valves out of the weather.
- When stored outside, valve stem should be in a vertical position, and whenever possible, valves should be covered with a water-proof covering.
- Always protect all parts of the valve.

Instructions for Maintenance, Inspection and Installation

- To maintain safe and trouble-free usage of check valves, this manual should be reviewed carefully, and the information given should be applied continuously.
- Non-compliance with safety instructions would cause below results.
- Personal injuries
- Threats for both environment and the valve
- Malfunction of basic functions of valve / facility.
- Failure of foreseen maintenance and repair applications
- Threats to human due to electrical, mechanical and chemical effects.
- Damage of hazardous leakage to the environment
- No revision on change on the valve can be made for the products supplied by “FAF VALVE”. In case of non-compliance of the information supplied in this guide or for any revision made on the valve, “FAF VALVE” cannot be kept responsible for any damage or loss that may occur.
- The installation, operation and maintenance processes of check valves should be done with authorized personnel. Even all “FAF VALVE” products are manufactured according to international directives and standards, with non-appropriate or out of scope usage, valves are equipment’s that carry a potential danger.
- Any personnel responsible from the storage, installation, operation, maintenance and disassembly of the check valve should carefully read this document and well understand. Before starting any work on valves or pipeline, all international and local safety regulations should be reviewed and understood, all necessary precautions should be taken.
- If any repair will be done, there should no pressure on the pipe- line, if needed all fluid needs to be discharged and warning sign- boards needs to be placed around working area. If the valve to be repaired is a discharge valve, precautions need to be taken to avoid the area to be flooded with water.
- Using original spare parts will maintain operational safety of the products. Manufacturer can- not be kept liable for any damage that may occur due to usage of non-original spare parts.
- If a valve needs to be disassembled from the line, pipeline should be discharged. Since, after disassembly of the valve, the remaining fluid on the pipeline will flow freely, necessary precautions need to be taken.
- Sudden movements should be avoided during lifting, moving and unloading the valve. Sudden movements may damage the valve and/or the lifting equipment. Lifting the valve should only done through the lifting lugs located on the valve body.
- During lifting process, valve may move to one side involuntarily. The lifting operation done by crane should be done by experienced personnel and during lifting operation no one should enter working area except the crane operator.

Testing

1. Do not backfill valves before the 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 the body of valves.

TILTING CHECK VALVE - HYDRAULIC BRAKE
FAF 2280D

Installation Manual & Commissioning Instructions

- Make sure that the installer is qualified and well informed.
- Use appropriate lifting devices by checking the weight capacity and dimensions.
- The valves and pipes operated with high (> 60 ° C) or low (<0 ° C) temperatures should be isolated or a warning sign stating "Do not touch" should be placed.
- At potable water pipelines, with greasing, cleaning and coating operations make sure that approved materials are used.
- On the pipeline, make sure the counter flanges installed are according to international standard norms as per EN 1092-1 / ISO 7005-1
- Prior to installation check the flange gasket surfaces, clean if needed. Make ready the sealing gaskets by selecting according to temperature, pressure and fluid type.
- Make ready the dimensions and quantities of connection elements (bolts, nuts, washers).
- Electrical cables should be installed by qualified personnel.
- Electrical equipment regulations applicable to hazardous locations (e.g. national/international standards) should be examined. It should be installed in dry places. voltage and frequency must be the same as those stated on the identification plate.
- Before installing the valve, remove any such residue from the line by air or steam, as corrosion, welding burrs, dirt and residue on your pipeline may cause deformation and leakage on the valve.
- The pipe alignment to which the valve is connected must be the same axis, the opposite flanges perpendicular to the pipe axis, and the flange bolt holes must be on the same axis. Water piping should be properly supported. Otherwise, there may be leakage in the valve due to axial misalignment causing tension on the valve!
- Flush the water line completely.
- If the construction process is to continue, the valve must be protected from external factors by being placed under suitable protective material. Due to excavation, paint application, concrete pouring, etc. valve should not be damaged after the process.
- Special attention should be given to prevent the flanges attached to the pipeline from being pulled towards the valve during bolt tightening. Although there may be tensile stresses, it is advisable to utilize dismantling joints along with the check valve to mitigate such issues.
- Allow sufficient space for easy use, maintenance, disassembly and cleaning of the valve in the environment where the valve is located.
- Connect the fittings between the flanges of the valve with the specified connection equipment and without first permitting one side of the valve and then the other side not to allow tensile stress to occur. Take the clearances of bolts and nuts and tighten each other at the specified torque.
- Do not close the check valve before cleaning the residue inside the pipeline.
- Considering the nominal pressure marked on the valve; Leak check should be done with 1.1 times of this pressure valve in closed position

Replacing Disc Sealing

- Make sure that there is no pressure when the disc seal is replaced. Attention should be paid to safety regulations.
- The gasket can be replaced without removing the disc or removing the valve from the pipeline. However, at least, the valve should be accessible by separating it from one side of the pipeline.
- The disc must be in the fully open position.
- The bolts must be loosened reciprocally and the bolts and the retaining ring must be removed.
- The sealing ring and O-rings must be removed.
- The new sealing ring and O-rings must be gently lubricated with approved lubricant.
- Bolts must be tightened reciprocally using torque values specified on the table.
- Torque values for the disc sealing bolts (Nm)

DN100 DN150	DN200-DN250 DN300	DN350 and DN1000 included
8.7	21.2	42

Shaft Area O-Ring Replacement

- Make sure that there is no pressure on the line. Attention should be paid to safety regulations.
- The valve should be accessible by separating it from one of the pipelines.
- Remove the top cover by its bolts.
- Remove the O-rings by removing the bolts on the disc.
- With the pulling means, the main shaft should be pulled out, the upper adjustment bushing, the upper bushing and the control shaft must be removed out of the body and the key on the control shaft should not be dropped.
- O-rings should be replaced with new ones, lightly lubricated with approved lubricant and installed on its place.
- Make sure the setscrew allen area and upper cover fully faces each other and apply reverse operations of the disassembly process.
- The same operations must be performed on the opposite side.
- After maintenance, if the closed position leakage occurs, the bolts in the lower cover and upper cover area needs to be loosened and adjustment can be done by the help of setscrews.
- Bolts must be tightened reciprocally by using torque values specified in the table

M6	M8	M10	M12	M16	M20	M24	M30
8.7	21.2	42	73	180	370	603	1300

TILTING CHECK VALVE - HYDRAULIC BRAKE
FAF 2280D

Troubleshooting

All repair and service works must be carried out by qualified personnel using suitable tools and original spare parts.

Problem	Cause	Remedial Action
Valve cannot be operated	Foreign material jammed inside the valve	Fully open the valve and take out the dirt inside the valve
Leaks in the body seat	Valve not completely closed	Fully close the valve by checking the weight
	Valve sealing rind worn or damaged	Replace sealing ring
Leask in valve pipe installation and body	Gaskets damaged	Replace gaskets
	Bolts/nuts are loose	Tighten according to mentioned torque values
Valve makes noise	Valve operating beyond its limits	Check the working conditions and design features. Change valve installation location or change the valve type suitable for the area of usage
	Wrong installation position. (Valve is too close to a reducer, elbow, control valve, etc.)	Change installation position
Torque value very high	Deposit (lime, sand, etc.) accumulation may happened on the body seat	Fully open the valve and clean the deposit
	Pipeline is dry, sealing ring is dry	Apply approved lubricant or silicone on body seat and sealing ring

2290

BALL CHECK VALVE
FAF 2290

PRODUCTION STANDARDS

DN40 ➜DN300
PN 10-16

Design	EN 12334 / EN 16767
Connection	Flanged EN 1092-2 / ISO 7005-2
Face to Face	EN 558 Series 48 / DIN 3202 F6
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Bonded Epoxy

Features

- The ball rotates during operation eliminating the risk of impurities getting stuck on the ball.
- Can be installed in either vertical (upward flow only) or horizontal (cover upright) applications.
- Removable bonnet for cleaning or changing the ball without disassembly out of the pipeline.
- Smooth bore eliminates the risk of deposits at the bottom.
- Designed with focus on easy access to maintenance. By unscrewing a few bolts, the bonnet assembly including hinge and ball can be removed from the body, and maintenance can be performed.
- All external surfaces are primed and painted for corrosion resistance.

Temperature

- For water, sewage and neutral liquids
- NBR: -30°C /+90°C short term 110°C
- EPDM: -40°C /+100°C short term 150°C

Product Description

FAF2290 Ball Check Valve is favourite and proven valve model in the submersible water and wastewater industry for decades. The valve is full bore thanks to the moving of the ball with self-cleaning features.

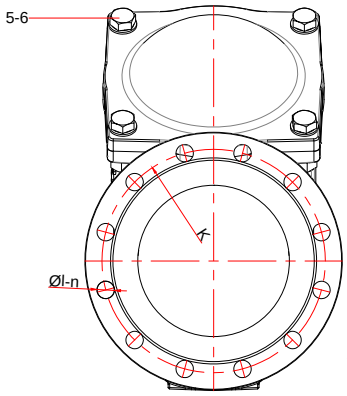
Versions

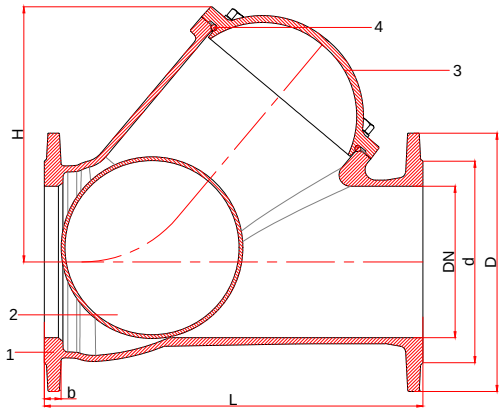
- Standard version with NBR rubber vulcanised steel ball
- Custom production for specific orders

Scope of Application

- Non-potable water
- Sewage applications
- Wastewater treatment
- Neutral liquids
- Industrial applications

BALL CHECK VALVE
FAF 2290





MATERIAL SELECTION	
Body	EN- GJS-500 Ductile Iron / GGG50
Bonnet	EN- GJS-500 Ductile Iron / GGG50
Ball	Steel + NBR / EPDM
Gasket	NBR/ EPDM
Bolting	Stainless Steel

PRODUCTS MODEL CODES	
2290	**BALL CHECK VALVE**
2295	BALL CHECK VALVE THREADED

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.

NO	ITEM	MATERIALS
1	Body	Ductile Iron GGG50
2	Bonnet	Ductile Iron GGG50
3	Ball	Steel+NBR/EPDM
4	Bonnet Gasket	NBR/EPDM
5	Bolting	Stainless Steel AISI304

DN (mm)	PN	L	D	D1	D2	n-Φd	b	h
40	10/16	180	150	110	84	4-19	19	90
50	16/10	200	165	125	99	4-19	19	100
65	16/10	240	185	145	118	4-19	19	125
80	16/10	260	200	160	132	8-19	19	136
100	16/10	300	220	180	156	8-19	19	185
125	16/10	350	250	210	184	8-19	19	196
150	16/10	400	285	240	211	8-23	19	265
200	10	500	340	295	266	8-23	20	340
200	16	500	340	295	266	12-23	20	340
250	10	600	400	355	319	12-23	22	420
250	16	600	400	355	319	12-28	22	420
300	10	700	500	455	370	12-23	24,5	480
300	16	700	500	455	370	12-28	24,5	480

Associated Products for the Ball Valve Range

6500
KNIFE GATE VALVE

6550
KNIFE GATE VALVE

3900
DISMANTLING JOINT

2295

BALL CHECK VALVE THREADED
FAF 2295

PRODUCTION STANDARDS

DN25 ➔DN80
PN 10-16

Design	EN 12334
Connection	Threaded EN 228
Face to Face	EN 558 Basic Series-1 48 / DIN 3202 F6
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Bonded Epoxy

Features

- The ball rotates during operation eliminating the risk of impurities getting stuck on the ball.
- Can be installed in either vertical (upward flow only) or horizontal (cover upright) applications.
- Removable bonnet for cleaning or changing the ball without disassembly out of the pipeline.
- Smooth bore eliminates the risk of deposits at the bottom.
- Designed with focus on easy access to maintenance. By unscrewing a few bolts, the bonnet assembly including hinge and ball can be removed from the body, and maintenance can be performed.
- All external surfaces are primed and painted for corrosion resistance.

Temperature

- For water, sewage and neutral liquids
- NBR: -30°C /+90°C short term 110°C
- EPDM: -40°C /+100°C short term 150°C

Product Description

FAF2295 Threaded end BSPT Ball Check Valve is favorite and proven valve model in the submersible water and wastewater industry for decades. The valve is full bore thanks to the moving of the ball with self-cleaning features.

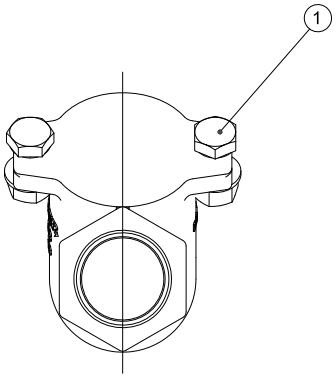
Versions

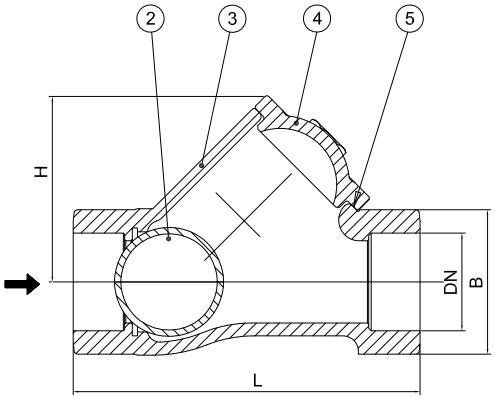
- Standard version with NBR rubber vulcanized steel ball
- Custom production for specific orders

Scope of Application

- Non-potable water
- Sewage applications
- Wastewater treatment
- Neutral liquids
- Industrial applications

BALL CHECK VALVE THREADED
FAF 2295





MATERIAL SELECTION	
Body	EN- GJS-500 Ductile Iron / GGG50
Bonnet	EN- GJS-500 Ductile Iron / GGG50
Ball	Steel + NBR /EPDM
Gasket	NBR/ EPDM
Bolting	AISI 304

PRODUCTS MODEL CODES	
FAF2295	**BALL CHECK VALVE THREADED**
FAF2290	BALL CHECK VALVE

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.

NO	ITEM	MATERIALS
1	Body	Ductile Iron GGG50
2	Bonnet	DUCTILE IRON GGG50
3	Ball	Steel+NBR/EPDM
4	Bonnet Gasket	NBR/EPDM
5	Bolting	Stainless Steel AISI304

DN (mm)	NPS	L	B	H
25	1	120	45	64
32	1 ¼	135	50	72
40	1 ½	145	60	85
50	2	175	70	100
65	2 ½	200	90	125
80	3	248	108	160

Associated Products for the Ball Valve Range

6500
KNIFE GATE VALVE

6550
KNIFE GATE VALVE

3900
DISMANTLING JOINT

WAFER SWING CHECK VALVE
FAF 2300-2330

PRODUCTION STANDARDS

DN15 ➔DN700
PN 10-16

Design	EN 14341
Connection	Wafer Type EN 1092-1 / ISO 7005-1
Face to Face	EN 558 Series 97
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	FAF 2330 - Cataphoretic coating

Features

- The disc hinged on the body is placed within the flow section.
- y With the start of movement at defined flow direction on the system, the disc leaves the flow section by turning in its axis and allows the flow pass.
- When the flow stops, the disc sits on the EPDM sealing rings placed on the body through disc spring force and maintains %100 tight sealing.
- Deigned to maintain the minimum head loss on the pipeline.
- Through its short installation length and eye screw (hook), easy to install between two flanges.
- Due in part to their oversized, heavier discs, typical full-sized swing check valves only fully open at an average flow rate of 11 ft/s. When activated at a lower flow rate, these valves loose true controllability and do not fully open.
- A partially open disc creates an obstruction that produces a higher pressure drop and fluttering of the valve disc - disturbing the flow and increasing the chance of water hammer.
- FAF2300 is suitable to eliminate these problems. It has been engineered to accelerate line media through the valve and achieve a virtually unobstructed full opening in low pressure.
- Constructed with stainless steel swing.
- Body can be made of galvanized carbon steel (FAF2330) or stainless steel (FAF2300). Disc is made of 1.4301/AISI 304 stainless steel for both types.
- Has stainless steel body, disc and spring.
- Can be installed in horizontal or vertical position
- No maintenance needed.
- Effective for preventing minor leakage.

Temperature

- +130 °C

Product Description

FAF2300 Wafer type Check Valve, while allowing the flow moving to the desired flow direction, stops the flow when exposed to backflow.

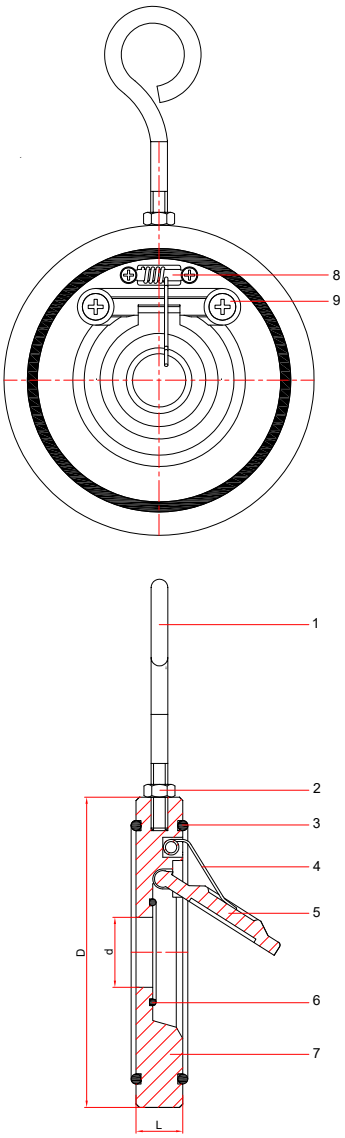
Versions

- FAF2300 Standard version as stainless steel
- FAF2330 Standard version as WCB cast steel
- Custom production for specific orders

Scope of Application

- Steam
- Hot & cold water
- Power & heat engineering
- Pressurized Air
- Industrial technologies
- Fluids without acidity or alkalinity properties

WAFER SWING CHECK VALVE
FAF 2300-2330



PRODUCTS MODEL CODES	
FAF2300	WAFER CHECK VALVE - STAINLESS STEEL
FAF2330	WAFER CHECK VALVE - CARBON STEEL
FAF2340	CHECK VALVE - FORGED
FAF2350	DUAL CHECK VALVE - STAINLESS STEEL
FAF2355	DUAL CHECK VALVE - NICKEL
FAF2370	WAFER CHECK VALVE - CARBON STEEL
FAF2371	WAFER CHECK VALVE - CARBON STEEL

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
25	37,5	27,5
16	24	17,6
10	15	11
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.

NO	ITEM	MATERIALS
1	Hook	Steel
2	Nut	Dın 934
3	O-Ring	EPDM
4	Spring	Stainless Steel
5	Disc	Stainless Steel 1.4301 - AISI 304
6	O-Ring	EPDM
7	Body	FAF2300 -Stainless Steel1.4301(AISI 304) FAF2330 WCB CAST STEEL
8	Shaft	Stainless Steel
9	Bolt	Stainless Steel

Technical Details & Drawing, Dimensions

DN mm	DIMENSION						RATINGS		STUD SIZE	BOLT/ NUT QTY	FAS-TENING MOMENT Nm	WRENCH SIZE (mm)
	L	d	PN6	PN10	PN16	PN25	KV m³/h	Weight Kg				
25	14	14	65	74	74	74	35	0,4	M12X70	4	85	19
32	14	17	76	84	84	84	55	0,5	M16X75	4	205	24
40	14	22	88	94	94	94	88	0,7	M16X75	4	205	24
50	14	32	98	109	109	109	160	0,9	M16X80	4	205	24
65	14	40	118	129	129	129	245	1,3	M16X80	4	205	24
80	14	54	134	144	144	144	400	1,5	M16X90	8	205	24
100	18	70	154	164	164	170	615	2,4	M16X90	8	205	24
125	18	92	184	195	195	198	1000	3,3	M16X100	8	205	24
150	20	112	209	220	220	228	1500	4,8	M20X110	8	400	30
200	22	154	264	275	275	285	2350	8,1	M20X120	12	400	30
250	26	200	319	330	330	343	3100	13,6	M24X140	12	691	36
300	32	240	375	380	385	403	4000	21,3	M24X150	12	691	36
350	38	270	425	438	444	460	5900	25,8	M24X170	16	691	36
400	44	310	475	490	495	517	7500	52,4	M27X180	16	1010	41
450	50	360	530	540	557	567			M27X180			
500	56	405	580	596	617	624		80	M30X200			
600	60	486	680	695	734	731		120	M33X200			
700	62	580	781	802	810	831		200	M33X200			

WAFER SWING CHECK VALVE
FAF 2300-2330

Installation

- All personnel involved in working with the product must carefully read these instructions before installing, dismantling and operating the product.
- ATTENTION! It is prohibited to exceed the maximum pressure and temperature limits marked on the metal plate on the product body.
- Installation and maintenance of the product should only be carried out by trained specialists.
- Correct installation ensures reliable operation throughout the entire service life of the equipment.

Requirements before installation

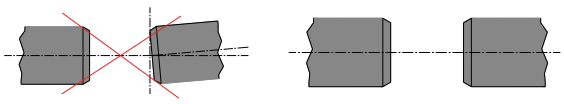
- Check the suitability of the valve for working with the transported medium, the operating parameters of the system and environmental conditions, check the free movement of the disc.
- The internal cavity of the pipeline on which the valve is installed must be cleaned of dirt, sand, scale, and foreign objects.
- The valve should be removed from the packaging immediately before installation.
- Inspect the valve for any mechanical damage or defects.
- Installation of fittings
- Fittings that operate according to the direction of flow must be installed on the pipeline in such a way that the direction of flow coincides with the direction of the arrow on the body.
- During installation, it is necessary that the flanges on the pipeline are installed without distortions.
- The bolts of flange connections must be tightened evenly in a cross pattern.
- The valves must not be subject to pipe loads.
- After starting the system, make sure there are no leaks at the wafer connections.

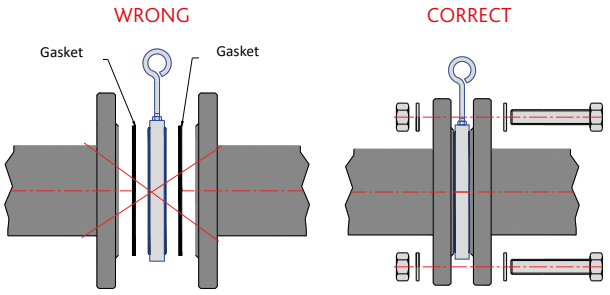
Installation method

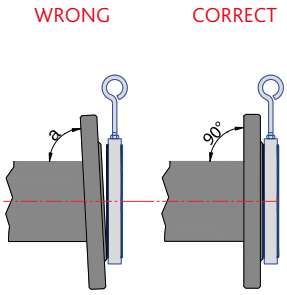
- ON A VERTICAL pipeline – when the flow moves from bottom to top;
- ON HORIZONTAL – with the mounting hook up;
- Other installation methods are NOT ALLOWED!

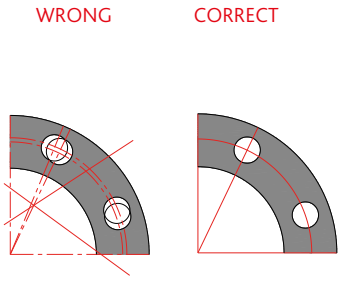
Exploitation

- The valve is controlled by the flow of the working medium.
- In the absence of pressure or the presence of a reverse flow of the working medium, the valve disc is lowered onto the sealing surface of the body seat:
- under its own weight and under the influence of the reverse flow of the medium for a single-leaf model
- under the action of springs and the reverse flow of the medium for a two-leaf model and blocks the flow area of the valve, creating an obstacle to the reverse flow of the medium.
- Work to replace the valve must be carried out with the pumping equipment turned off, and the pressure and temperature in the pipeline section must be removed.
- It is prohibited to use the valve in operating conditions exceeding those stated in the product data sheet.
- For timely detection and elimination of malfunctions, it is necessary to periodically inspect the valve in accordance with the rules and regulations of the operating organization.
- Depending on the quality of the working environment and the requirements for operating conditions, the valve must be inspected and serviced at least once a year.
- The manufacturer reserves the right, without notifying the consumer, to make changes to the design of the product to improve its technological and operational parameters









2350

DUAL CHECK VALVE
FAF 2350

PRODUCTION STANDARDS

DN25 ➔DN600
PN 16-25

Design	EN 12334
Connection	Wafer Type EN 1092-1 / ISO 7005-2
Face to Face	EN 558 Series 16
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Features

- The body and the disc when the determined flow in the system starts.
- The disc hinged on the body is placed within the flow section.
- Halves stainless steel disc, which are positioned in the body seats on sealing EPDM gaskets and provides 100% tight sealing.
- Expanders shorten and halves discs lap and let to flow between the body and the disc when the determined flow in the system starts.
- With the start of movement at defined flow direction on the system, the disc leaves the flow section by turning in its axis and allows the flow pass.
- When the flow stops, the disc sits on the EPDM sealing rings placed on the body through disc spring force and maintains 100% tight sealing.
- Deigned to maintain the minimum head loss on the pipeline.
- Through its short installation length and eye screw (hook), easy to install between two flanges.
- A partially open disc creates an obstruction that produces a higher pressure drop and fluttering of the valve disc - disturbing the flow and increasing the chance of water hammer.
- Constructed with stainless steel disc.
- Can be installed in horizontal or vertical position
- No maintenance needed.

Temperature

- For water, sewage and neutral liquids
- EPDM: -40°C /+100°C short term 150°C

Product Description

FAF2350 Dual Check Valve let to fluids in the facility required downstream and ceases the flow in case of reverse flow.

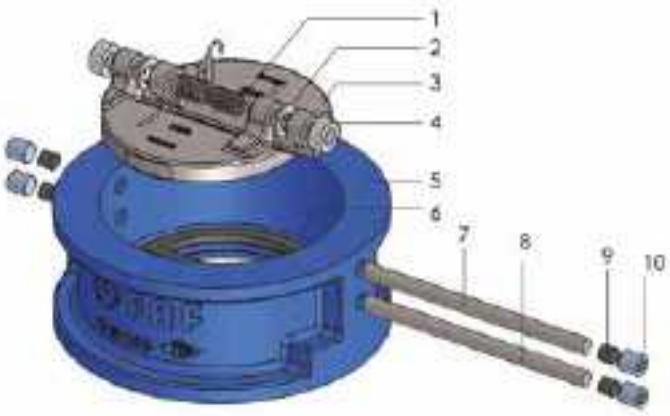
Versions

- Standard version as stainless-steel disc
- Custom production for specific orders

Scope of Application

- Steam
- Hot & cold water
- Power & heat engineering
- Pressurized Air
- Industrial technologies
- Fluids without acidity or alkalinity properties

DUAL CHECK VALVE
FAF 2350



NO	ITEM	MATERIALS
1	SPRING	Stainless Steel
2	WASHER	PTFE
3	DISC	Stainless Steel 1.4301 - AISI 304
4	WASHER	PTFE
5	BODY	EN GJL 250 Cast Iron / GG25
6	DISC GASKET	EPDM
7	END SHAFT	Stainless Steel 1.4021 - AISI 420
8	DISC SHAFT	Stainless Steel 1.4021 - AISI 420
9	GASKET	EPDM
10	SETSCREW	Stainless Steel

PRODUCTS MODEL CODES	
FAF2300	WAFER CHECK VALVE - STAINLESS STEEL
FAF2330	WAFER CHECK VALVE - CARBON STEEL
FAF2340	CHECK VALVE - FORGED
FAF2350	**DUAL CHECK VALVE - STAINLESS STEEL**
FAF2355	DUAL CHECK VALVE - NICKEL
FAF2370	WAFER CHECK VALVE - CARBON STEEL
FAF2371	WAFER CHECK VALVE - CARBON STEEL

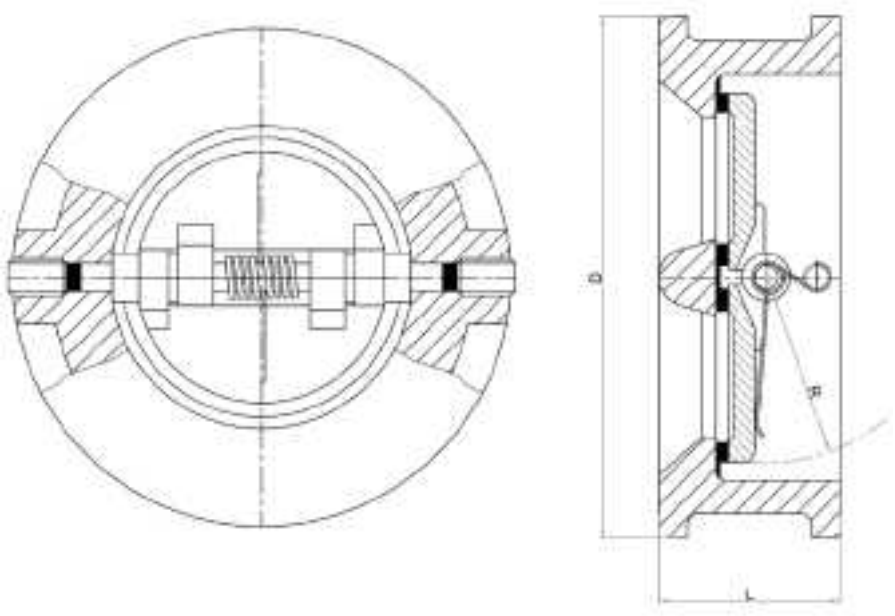
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

DUAL CHECK VALVE
FAF 2350

Technical Details & Drawing, Dimensions



DN	DIMENSION				RATINGS		STUD SIZE	BOLT/NUT QTY	NUT	
mm	D	L	D1	R	KV m³/h	Weight Kg			FASTENING MOMENT Nm	WRENCH SIZE (mm)
40	92	33	37	23	30	1,1	M16X100	4	205	24
50	107	43	40	27	45	1,7	M16X110	4	205	24
65	127	46	60	35	70	2,3	M16X120	4	205	24
80	142	64	70	42	120	3,6	M16X140	8	205	24
100	162	64	88	50	240	4,4	M16X140	8	205	24
125	192	70	115	64	350	6,4	M16X150	8	205	24
150	218	76	134	77	650	9,1	M20X160	8	400	30
200	273	89	182	102,5	1300	14,1	M20X170	12	400	30
250	328	114	220	125	2100	26,6	M24X210	12	691	36
300	378	114	260	146	3500	36,1	M24X210	12	691	36
350	437	127	298	170	5000	50	M24X230	16	691	36
400	488	140	350	195	8000	59,7	M27X250	16	1010	41

Mounting

- The Axis of the FAF DUAL CHCKVALVE should be in vertical position when the pipeline is horizontal
- The Axis of the FAF DUAL CHCKVALVE should be in a position that allow Fluid to when the pipeline is vertical.
- During installation, it is advised to keep 3 to 6 times the minimum diameter upstream (2 x DN) and downstream (06xDN) of a bend or equipment. This helps to avoid turbulent areas that could lead to increased wear risk.
- When connecting the pump outlet, it is recommended to follow appropriate standards for assembly.

2370-2371

DISC CHECK VALVE
FAF 2370-2371

PRODUCTION STANDARDS

DN15 ➔DN250
PN 16

Connection	Wafer Type EN 1092-1 / ISO 7005-1
Face to Face	EN 558 Series 49
Marking	EN 19
Tests	EN 12266-1

Features

- The body and the disc when the determined flow in the system starts.
- The expander shortens and the disc shrinks back and let to flow between the body and the disc when the determined flow in the system starts.
- It can be used at horizontal and vertical positions.
- With its short installation length and hooks on the body it can be installed easily.
- The disc hinged on the body is placed within the flow section.
- With the start of movement at defined flow direction on the system, the disc leaves the flow section by turning in its axis and allows the flow pass.
- Deigned to maintain the minimum head loss on the pipeline.
- Due in part to their oversized, heavier discs, typical full-sized swing check valves only fully open at an average flow rate of 11 ft/s. When activated at a lower flow rate, these valves loose true controllability and do not fully open.
- A partially open disc creates an obstruction that produces a higher pressure drop and fluttering of the valve disc - disturbing the flow and increasing the chance of water hammer.
- Constructed with stainless steel spring.
- Has brass body, stainless steel disc and spring.
- No maintenance needed.
- Effective for preventing minor leakage.

Temperature

- +200 °C

Product Description

FAF2370 Disc-O check valve let to fluids in the facility required downstream and ceases the flow in case of reverse flow. Stainless steel disc, which is positioned in brass body seats on sealing surface that processed on the body via expander force and provides 100% tight sealing.

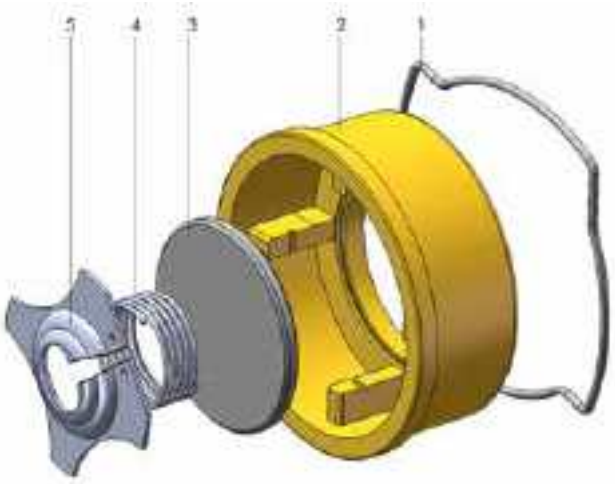
Versions

- Standard version as brass body and stainless steel disc
- Custom production for specific orders

Scope of Application

- Steam
- Hot & cold water
- Power & heat engineering
- Pressurized Air
- Industrial technologies
- Fluids without acidity or alkalinity properties

DISC CHECK VALVE
FAF 2370-2371



NO	ITEM	MATERIALS
1	MOUNTIN SPRING	1.4310 - AISI 302 Stainless Steel
2	BODYS	FAF 2370 CUZN40PB2 MS 58 - BRASS FAF 2371 DN125 AND OVER: EN-GJS-400 (GGG40)
3	DISC	1.4301 - AISI 304 Stainless Steel
4	SPRING	1.4310 - AISI 302 Stainless Steel
5	DISC GUIDE	1.4301 - AISI 304 Stainless Steel

PRODUCTS MODEL CODES	
FAF2300	WAFER CHECK VALVE - STAINLESS STEEL
FAF2330	WAFER CHECK VALVE - CARBON STEEL
FAF2340	CHECK VALVE - FORGED
FAF2350	DUAL CHECK VALVE - STAINLESS STEEL
FAF2355	DUAL CHECK VALVE - NICKEL
FAF2370	**WAFER CHECK VALVE - CARBON STEEL**
FAF2371	**WAFER CHECK VALVE – DUCTILE IRON**

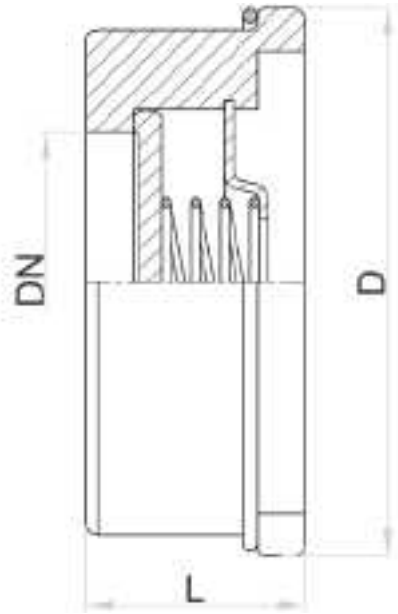
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

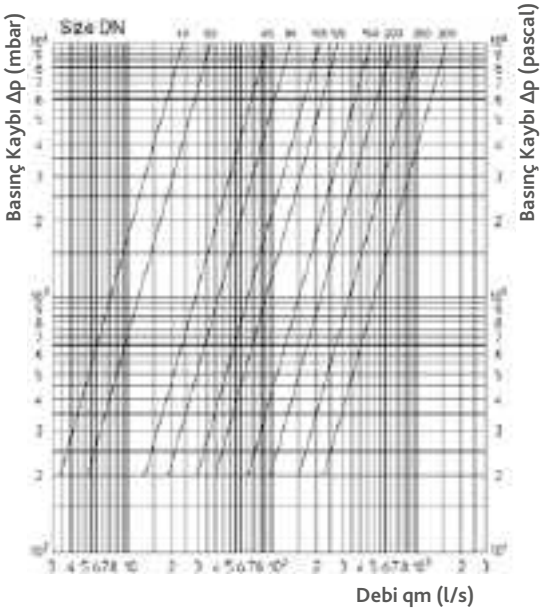
- For proper use and safety precautions please follow the installation and operating instructions.

DISC CHECK VALVE
FAF 2370-2371

Technical Details & Drawing, Dimensions



DN	DIMENSION		RATINGS		STUD SIZE	BOLT/ NUT QTY	FAS-TENING MOMENT Nm	WRENCH SIZE (mm)
mm	D	L	KV m³/h	Weight Kg				
15	40	16	4	0,1	M12X70	4	85	19
20	47	20	7,5	0,15	M12X80	4	85	19
25	56	22	11	0,2	M12X80	4	85	19
32	72	28	19	0,46	M16X90	4	205	24
40	82	32	36	0,590	M16X100	4	205	24
50	95	40	47	0,950	M16X110	4	205	24
65	115	46	85	1,320	M16X120	4	205	24
80	132	50	123	2	M16X130	8	205	24
100	152	60	247	3,05	M16X140	8	205	24
125	184	90	393	8	M16X170	8	205	24
150	209	106	683	10,4	M20X200	8	400	30
200	264	140	1324	21	M20X240	12	400	30



DIMENSION	KVS VALUE
DN 40	85
DN 50	132
DN 65	326
DN 80	490
DN 100	770
DN 125	1020
DN 150	1700
DN 200	2410
DN 250	3870
DN 300	5670

NOZZLE (SILENT) CHECK VALVE
FAF 2390

PRODUCTION STANDARDS

DN40 →DN500
PN 10-16-25-40

Design	EN12334
Connection	EN1092-2 / ISO 7005-2
Marking	EN 19
Tests	EN 12266
Corrosion Protection	Electrostatic Powder Epoxy

Features

- Nozzle check valves are spring-loaded, which helps to ensure a positive seal when the valve is closed, preventing backflow.
- Compact in size, making them suitable for use in tight spaces or applications where space is limited.
- Nozzle check valves have a low cracking pressure, meaning they open easily when there is forward flow, minimizing pressure drop and energy loss.
- Easy to install and can be used in a variety of configurations, including vertical, horizontal, or angled orientations.
- High strength ductile iron body used for durability and less weight.
- Coated with powder epoxy both inside & outside for corrosion resistance.
- Hydrodynamic design with spring ensures non slamming and water hammerless.
- Comply with EN 558-1, ISO 5752 and EN 1092-2, ISO 7005-2 flange dimension.

Temperature

- For water, sewage and neutral liquids
- EPDM: -40°C /+100°C short term 150°C

Product Description

FAF2390 Nozzle (Silent) Check Valve is designed to allow fluid to flow in one direction only and to close automatically to prevent backflow. It's important to ensure that the materials used in the valve are compatible with the fluid being handled to prevent contamination.

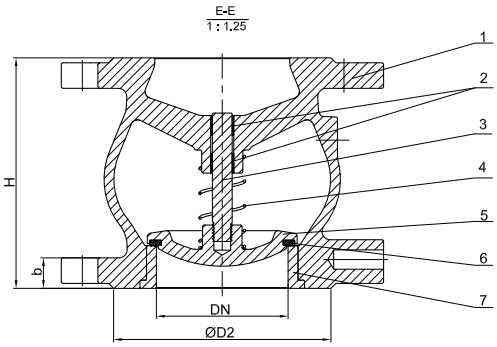
Versions

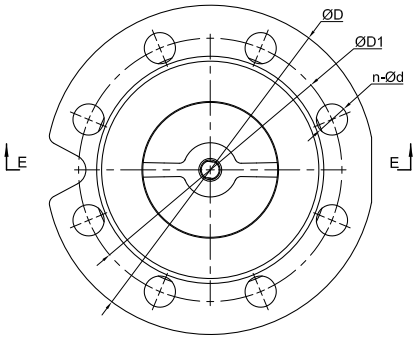
- Standard version
- Custom production for specific orders

Scope of Application

- Water and wastewater treatment
- Oil & Gas systems
- Industry

NOZZLE (SILENT) CHECK VALVE
FAF 2390





NO	ITEM	MATERIALS
1	BODY	GGG-40 / GG25 / GS-C 25 / SS 304 / 316
2	BUSHING	NYLON
3	STEM	STAINLESS STEEL
4	SPRING	STAINLESS STEEL
5	DISC	Ductile Iron/ GG25 / GS-C 25 /Bronze / SS
6	SEAL	EPDM / NBR / Teflon / Bronze / SS
7	SEAT	Ductile Iron /Brass / Bronze / SS

LEAKAGE TEST	EN 12266	
PN	**Seat Test x 1,1**	**Shell Test x 1,5**
PN 10	11 Bar	15 Bar
PN 16	18 Bar	24 Bar
PN 25	28 Bar	38 Bar
PN 40	44 Bar	60 Bar

Nominal Pressure		PN10 PN16												
Nominal Diameter	DN	40	50	65	80	100	125	150	200	250	300	350	400	500
Valve Dimensions	H	85	100	120	140	170	200	230	300	354	410	472	560	670
Flange Dimensions	D	150	165	185	200	220	250	285	340	400	455	505	565	670
DIN EN 1092 PN 10	D1	110	125	145	160	180	210	240	295	350	400	460	515	620
Flange Dimensions	L	150	165	185	200	220	250	285	340	400	455	520	580	715
DIN EN 1092 PN 16	D1	110	125	145	160	180	210	240	295	355	410	470	525	650
Weight	kg	4,2	5,8	8,1	10,2	14,5	24	32	53	94	140	225	312	540

STRAINER Y-TYPE
FAF 2500

PRODUCTION STANDARDS

DN15 →DN600
PN 10-16-25

Connection	EN 1092-2 / ISO 7005-2 - Flanged
Face to Face	EN 558 Series 1 / DIN 3202 F1 / TS 11494
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Product Description

FAF2500 Y-Strainers are installed in a piping system to remove unwanted debris from the pipeline, protecting expensive equipment downstream such as pumps, meters, spray nozzles, compressor, and turbines. They can be placed in a horizontal or vertical pipeline as long as the screen is in a downward position.

Features

- Y-Type strainer is used for filtering the mass particles inside the flow through the steel filter chamber situated in the body.
- Straining is accomplished with an internal mesh lined straining element, the size of which should be determined based on the size of the smallest particle to be removed. Recommended for installation upstream of control valves.
- Double filter Construction avaids water hammer effects.
- By removing the cover placed on the body, detailed cleaning can be performed or filter can be replaced. Quick removal of lid for maintenance.
- The hole diameters on the filters are determined in order to have a minimum effect on the head loss and flow rate.
- According to request, the hole diameters of the filters can be manufactured in different dimensions.
- Inner and outer surfaces of the Y-type strainer are coated with fusion boded powder epoxy (FBE) optionally with industrial epoxy.
- DN 15-DN 200 Filter size: 20 Mesh.
- DN 250- DN 400 Filter size: 40 Mesh.
- Filter mesh size can be changed according to request.
- Plug MS58 BRASS.
- Stock piled for quick delivery.

Temperature

- For water, sewage and neutral liquids
- EPDM: -40°C /+100°C short term 150°C
- +200 °C(Optional)

Versions

- Standard version
- Custom production for specific orders
- Fusion bonded epoxy (FBE) coating
- Industrial Epoxy coating

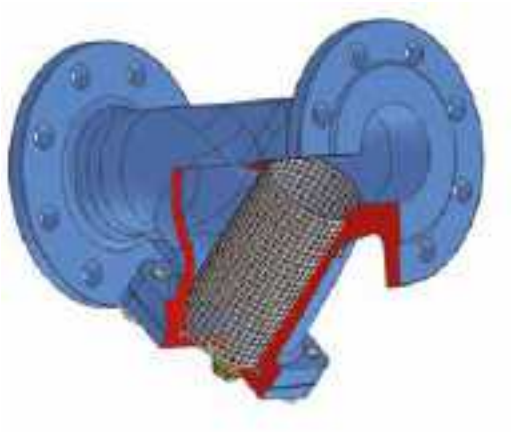
Spare Parts

- Stainless steel filters
- Sealing Gasket

Scope of Application

- Chamber installation
- Installation in plants
- Pipelines
- Water treatment plants
- Pumping stations
- Tanks, reservoirs
- Seawater applications
- Power plants (cooling water pipelines)
- Industry

STRAINER Y-TYPE
FAF 2500



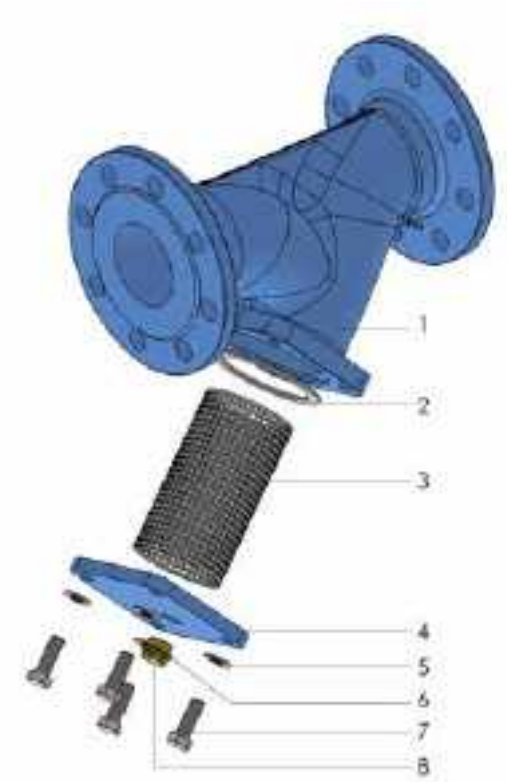
MATERIAL SELECTION	
Body	EN-GJS-500 DUCTILE IRON / GGG50
Filter	1.4301 - AISI 304 Stainless Steel
Plug	DN 15-350 MS 58-Brass, DN 400-500 Stainless Steel

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.

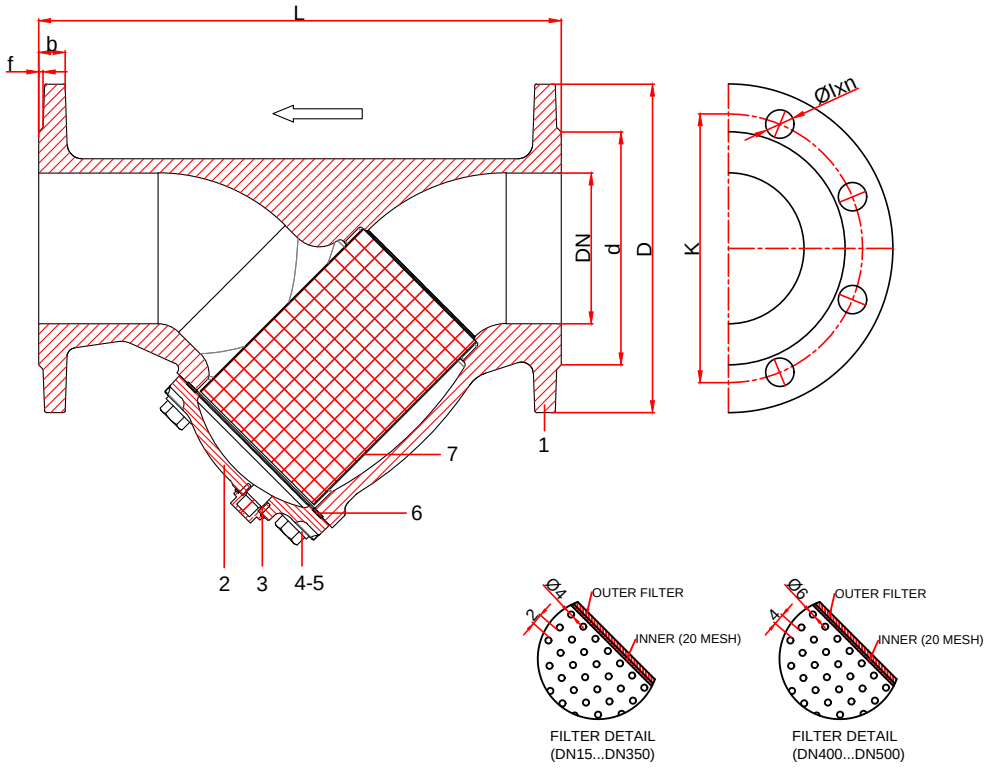
Material List



NO	ITEM	MATERIALS
1	BODY	EN-GJS-500 DUCTILE IRON
2	SEALING GASKET	KLINGERITE
3	FILTER	1.4301 STAINLESS STEEL
4	COVER	ST 37 STEEL
5	WASHER	GALVANIZED STEEL
6	CIRCLIP	DIN 472
7	BOLTS	GALVANIZED STEEL
8	PLUG	DN 15-350 MS 58-Brass, DN 400-500 Stainless Steel

STRAINER Y-TYPE
FAF 2500

Technical Details & Drawing, Dimensions



DN (mm)	PN	D	K	d	Øl x n	f	b	L	Weight (kg)
15	10/16	95	65	46	14x4	2	14	130	2,1
20	10/16	105	75	56	14x4	2	16	150	2,5
25	10/16	115	85	65	14x4	3	16	160	4,2
32	10/16	140	100	76	19x4	3	18	180	4,9
40	10/16	150	110	84	19x4	3	18	200	5,9
50	10/16	165	125	99	19x4	3	19	230	8,1
65	10/16	185	145	118	19x4	3	19	290	11,4
80	10/16	200	160	132	19x8	3	19	310	13,85
100	10/16	220	180	156	19x8	3	19	350	17,8
125	10/16	250	210	184	19x8	3	19	400	27,33
150	10/16	285	240	211	23x8	3	19	480	37,75
200	10	340	295	266	23x8	4	20	600	70
200	16	340	295	266	23x12	4	20	600	70
250	10	400	350	319	23x12	4	22	730	121
250	16	400	355	319	28x12	4	22	730	121
300	10	455	400	370	23x12	4	24,5	850	167,85
300	16	455	410	370	28x12	4	24,5	850	167,85
350	10	520	460	429	23x12	4	26,5	980	225
350	16	520	470	429	28x12	4	26,5	980	225
400	10	580	515	480	28x16	4	28	1100	340
400	16	580	525	480	31x16	4	28	1100	340
500	10	715	620	582	28x20	4	31,5	1250	580
500	16	715	650	609	34x20	4	31,5	1250	580

STRAINER Y-TYPE
FAF 2500

DN (mm)	PN 25 DIMENSIONS						
	D	K	d	Øl x n	f	b	L
15	95	65	46	14x4	2	16	130
20	105	75	56	14x4	2	16	150
25	115	85	65	14x4	3	18	160
32	140	100	76	19x4	3	19	180
40	150	110	84	19x4	3	19	200
50	165	125	99	19x4	3	19	230
65	185	145	118	19x8	3	19	290
80	200	160	132	19x4	3	19	310
100	235	190	156	23x8	3	19	350
125	270	220	184	28x8	3	19	400
150	300	250	211	28x8	3	20	480
200	360	310	274	28x12	4	22	600
250	425	370	330	31x12	4	24,5	730
300	485	430	389	31x16	4	27,5	850
350	555	490	448	34x16	4	30	980
400	620	550	503	37x16	4	32	1100
500	730	660	609	37x20	4	36,5	1250

Installation, Commissioning, Maintenance

- Position the inclined filter upstream of the equipment to be safe-guarded.
- Follow the installation direction as indicated by an arrow on the body.
- This aligns with the water flow from the cartridge's interior to its exterior.
- Ensure the filter element is facing downward.
- Here is an example of how to install an inclined filter.
- Caution: Make sure there is enough space for the filter cartridge.

Maintenance

- After each initial water system startup, conduct systematic checks and cleaning; flushing should not harm the filter.
- Regular cleaning of the filter is necessary.
- When reassembling, gradually tighten the filter cover.
- Replacement parts such as the seal between the body and cover and the filter cartridge should be with original pieces. They are available if needed please contact FAF team to supply.

BUTTERFLY VALVE - WAFER
FAF 3500

PRODUCTION STANDARDS

DN40 →DN600
PN 6-10-16 CLASS 150

Design	EN 593
Connection	Wafer Type ISO 7005-1 EN 1092-1
Face to Face	EN 558 Series 20
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Product Description

FAF3500 Wafer Type Butterfly Valve is a quarter-turn rotational motion valve, which is used to stop, regulate and start flow. 90° rotation of the handle provides a complete closure or opening of the valve.

Features

- Equipped with various disc materials, it can be used in different flow types and applications, offering EPDM, NBR, and VITON seat options.
- Compared to other valve types, it offers advantages such as lightweight, easy installation, and cost-effectiveness due to its compact dimensions.
- The head loss is minimized through the double-shaft design of the FAF Valve.
- Higher coating thicknesses can be applied upon request.
- Sizes up to DN 300 (inclusive) come with a hand lever as the default option, while DN 350 (inclusive) and above are supplied with a gear box by default.
- Electrical or pneumatic actuators can be directly fitted on the valve top flange (ISO 5211) without the need for additional intermediary parts.
- It can be installed in any desired position and is maintenance-free.
- Four flange mounting semi-lugs ensure the correct valve location during installation.
- The valve body and disc are accurately machined, resulting in low operating torque, long service life, and reliability.

Versions

- Standard version with hand wheel
- With gearbox + FAF3700
- With pneumatic actuator + FAF3750
- With electrical quarter-turn actuator + FAF3770
- With electrical multi-turn actuator + FAF3780
- Custom production for specific orders

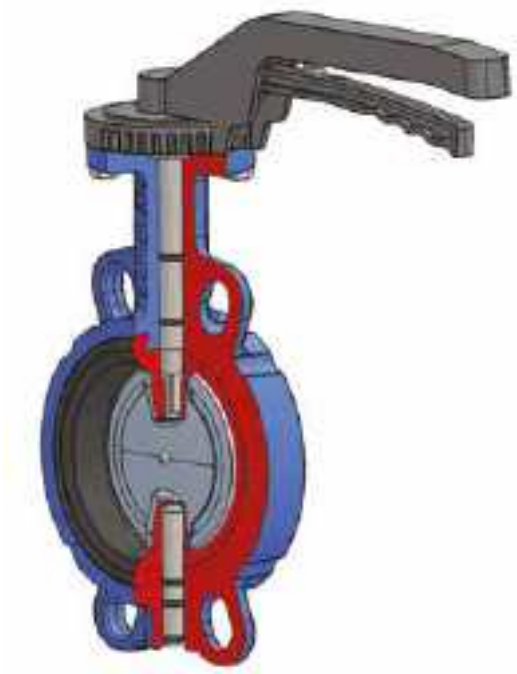
Temperature

- Maximum working temperature -10°C / 100°C Peak temperature 150°C in short-term operations. (EPDM)
- Maximum working temperature -10°C / 90°C Peak temperature 110°C in short-term operations. (NBR)
- Maximum working temperature -10°C / 225°C Peak temperature 250°C in short-term operations. (VITON)

Scope of Application

- Chamber installation
- Installation in plants
- Pipelines
- Water treatment plants
- Pumping stations
- Tanks
- Seawater applications
- Power plants (cooling water pipelines)
- Industry

BUTTERFLY VALVE - WAFER
FAF 3500



MATERIAL SELECTION	
Body	EN-GJL-250 Cast Iron / GG25 DN40-150 EN-GJS-400 Ductile Iron / GGG40 DN 200-600
Disc	1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel EN-GJS - 400 Ductile Iron / GGG40 Nickel Coated Aluminium Bronze PTFE
Stem	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (Optional) 1.4401 - AISI 316 Stainless Steel (Optional)
Sealing	EPDM (NBR, VITON, NEOPREN, PTFE - optional)
Gearbox	EN GJL 250 (DN 350 and above)

PRODUCTS MODEL CODES	
FAF 3500	**SS 304 DISC - EPDM SEALING**
FAF 3501	SS 304 DISC - NBR SEALING
FAF 3502	SS 304 DISC - VITON SEALING
FAF 3503	SS 304 DISC - NEOPREN SEALING
FAF 3550	NICKEL DISC - EPDM SEALING
FAF 3551	NICKEL DISC - NBR SEALING
FAF 3552	NICKEL DISC - VITON SEALING
FAF 3553	NICKEL DISC - NEOPREN SEALING
FAF 3560	SS 316 DISC - EPDM SEALING
FAF 3561	SS 316 DISC - NBR SEALING
FAF 3562	SS 316 DISC - VITON SEALING
FAF 3563	SS 316 DISC - NEOPREN SEALING
FAF 3570	ALU. BRONZR DISC - EPDM SEALING
FAF 3571	ALU. BRONZR DISC - NBR SEALING
FAF 3572	ALU. BRONZR DISC - VITON SEALING
FAF 3573	ALU. BRONZR DISC - VITON SEALING
FAF 3573	ALU. BRONZR DISC - NEOPREN SEALING

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

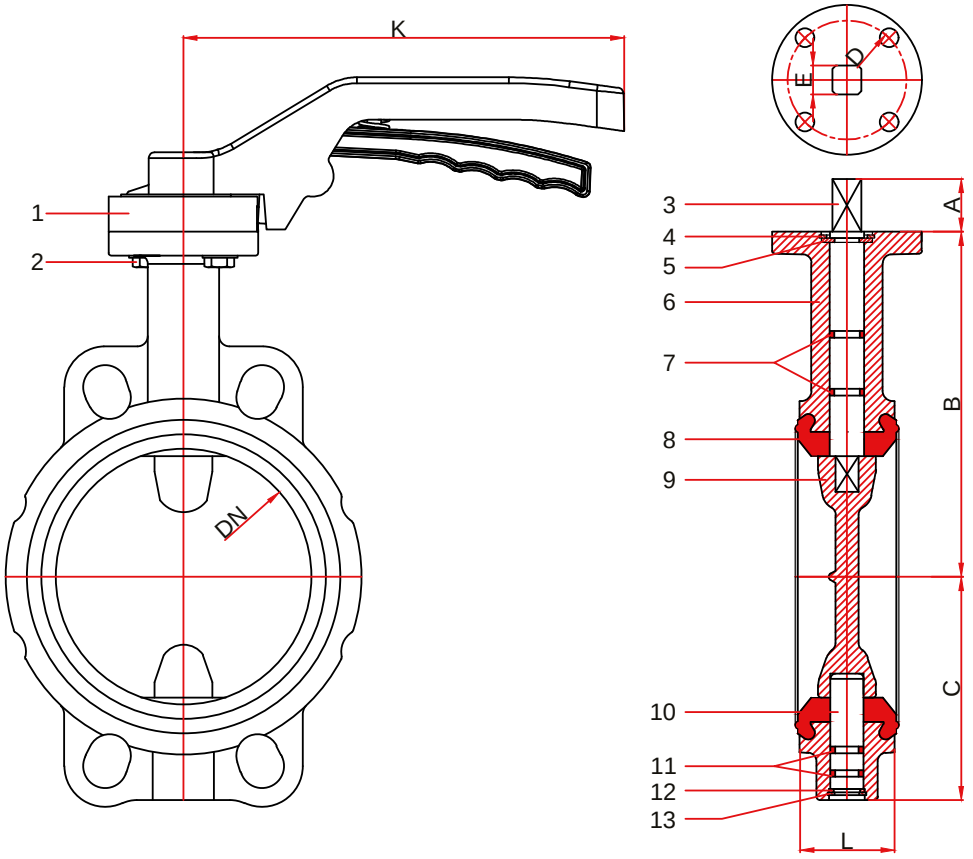
- For proper use and safety precautions please follow the installation and operating instructions.

BUTTERFLY VALVE - WAFER
FAF 3500

Material List

NO	ITEM	MATERIALS
1	HANDLE	ALUMINUM
2	BOLTS	A2
3	BODY	EN GJL 250 CAST IRON (GG25) EN GJS 500 DUCTILE IRON (GGG50)
4	GASKET	EPDM / NBR / VITON / NEOPREN
5	DISC	STAINLESS STEEL 1.4301 / 1.4401 DUCTILE IRON + NICKEL COATING
6	RETAINING RING	DIN 472
7	WASHER	A2
8	DRIVE SHAFT	STAINLESS STEEL 1.4021
9	O RING	EPDM, NBR
10	CENTERING SHAFT	STAINLESS STEEL 1.4021
11	O RING	EPDM, NBR
12	WASHER	STAINLESS STEEL 1.4016
13	RETAINING RING	DIN 472

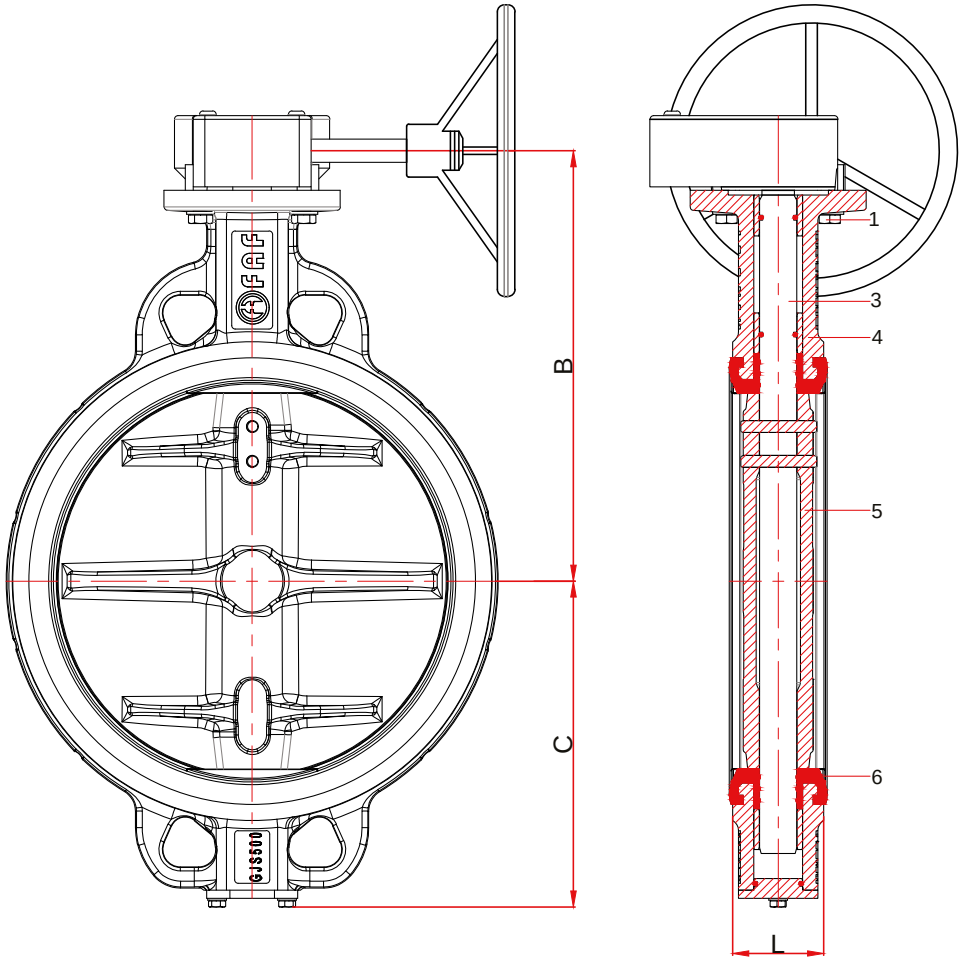
BUTTERFLY VALVE - WAFER
FAF 3500



DN (mm)	A	B	C	D	E	K	L	WEIGHT (kg)
40	20	122	56	50	11X11	188	35	2,1
50	20	127,5	62	50	11X11	188	43	2,7
65	20	134	70	50	11X11	188	46	3,2
80	20	159	92	50	11X11	188	46	3,6
100	20	169	101	70	14X14	258	52	5,5
125	20	180	116	70	14X14	258	56	7
150	20	203	131	70	17X17	258	56	8,5
200	23	228	164	102	17X17	358	60	13,8
250	24	266	196	102	20X20	358	68	18,9
300	30	290	235	102	23X23	358	78	30,3

BUTTERFLY VALVE - WAFER
FAF 3500

Technical Details & Drawing, Dimensions DN 350-600



DN (mm)	B	C	L
350	380	272	78
400	413	297	102
450	448	336	114
500	504	369	127
600	580	542	154

BUTTERFLY VALVE - WAFER
FAF 3500

WAFER-LUG TYPE BUTTERFLY VALVE											
DN	STAINLESS FLAP			NICKEL PLATED FLAP			ELECTRICAL ACTUATOR CONNE-CTION DIMENSIONS			PNEUMATIC ACTUATOR CONNECTION DIMENSIONS	
	TORQUE VALUES - Nm			TORQUE VALUES- Nm			TS EN 5211 5210		ROTATIONS	TS EN 5211	
	6 BAR	10 BAR	16 BAR	6 BAR	10 BAR	16 BAR	F	SHAFT SIZE nm	FULL OPEN/ CLOSE	F	SHAFT SIZE mm
40	15	15	15	10	10	15	F05	11X11			
50	15	15	15	15	15	20	F05	11X11			
65	15	15	15	20	26	26	F05	11X11			
80	16	19	23	22	26	26	F05	11X11			
100	49	50	54	48	54	54	F07	14X14			
125	61	67	70	63	72	80	F07	14X14			
150	70	81	100	84	90	106	F07	17X17			
200	144	149	171	94	155	175	F10	17X17			
250	180	200	240	210	230	270	F10	22X22			
300	250	260	380	280	290	340	F10	22X22			
350	550	600	660	550	600	660	F12	ø 28		F12	27X27
350* G.BOX	25	32	45	25	32	45	F10	ø 20	10		
400	850	900	1050	850	900	1050	F14	ø 36		F14	36X36
400* G.BOX	75	85	100	75	85	100	F10	ø 20	12		
450	1100	1300	1600	1100	1300	1600	F14	ø 42		F14	36X36
450* G.BOX	45	47	54	45	47	54	F10	ø 20	50		
500	2100	2500	2900	2100	2500	2900	F16	ø 50		F16	46x46
500* G.BOX	100	105	115	100	105	115	F10	ø 20	10		
600	3200	3800	4500	3200	3800	4500	F25	ø 60		F16	46x46
600* G.BOX	100	110	115	100	110	115	F10	ø 20	70		

- These are the torque values taken from the valve shaft outlet while the valve is under pressure.
- DN350-400-450-500-600 are standard production gearboxes.
- The data in the table is for water at 20°C and includes a 20% safety factor.
- These are the torque values taken from the output shaft of the gearbox compatible with the actuator while the valve is under pressure.
- When using fluids that can increase torque (such as dusty, non-slippery fluids, air, and dry gas), a 30% safety factor should be added to the data in the table.
- A double-acting 90° rotary pneumatic actuator should be used.

BUTTERFLY VALVE - WAFER
FAF 3500

Butterfly Valve Maintenance Instructions

Montage

- It is essential for all personnel involved in working with the product to carefully read and understand this instruction before assembly, disassembly, and operation.
- WARNING! It is prohibited to exceed the maximum pressure and temperature limits marked on the metal plate on the product housing.
- Installation and maintenance of the product should be carried out only by trained specialists.
- For the installation of wafer butterfly valves, only flanges with collars (GOST12821) should be used.
- Leave space between the flanges for easy installation and removal of the valve. The valve should smoothly pass between them without damaging the seat seal.
- Position the disc in a semi-open position so that its edge does not exceed the width of the valve.
- Attention! Do not damage the seal.
- Before tightening the bolts, rotate the valve disc to the fully open position. Tighten the bolts until they touch the flanges of the disc valve housing. To prevent leaks and misalignment, tighten the bolts diagonally, applying appropriate force.
- Attention! The use of additional seals is not allowed.

Technical Maintenance

- Disassembly and repair of the product should only be carried out by qualified specialists.
- Before disassembling the disc valve, ensure that the pipeline is not under pressure or electrical voltage. In the case of working with hot or cold media, after depressurizing the pipeline, ensure that the disc valve housing has the ambient temperature of the surroundings.
- When working with aggressive or toxic media, ensure that the pipeline before and after the disc valve is completely free of the working medium. Use specialized clothing and all necessary protective equipment.

Demontage

- Before starting the disassembly process, disconnect the actuator from the control cables and pipelines, if the actuator is installed on the product.
- Ensure that there is no working medium in the pipeline.
- Before loosening the fastening bolts, rotate the valve disc to the open position. Gently loosen the bolts until there is enough space between the disc valve and the flanges for the product to be removed freely.
- Rotate the valve disc so that the edges of the disc do not obstruct the removal of the valve from the space between the flanges. After this, the disc valve can be disassembled..

Disassembly

- Remove the control device (handle, gearbox, actuator) from the top flange of the valve housing.
- Remove the retaining ring and extract the centering stem using an M6x20 bolt.
- Use retaining ring pliers to remove the stem retaining ring (8). Remove the stem.
- If necessary, remove the disc using a rubber mallet.
- Use a wide screwdriver to remove the seal.

Inspection and Maintenance

- The following methods of periodic preventive maintenance are recommended:
- Operate the disc valve in fully open and fully closed positions to ensure the valve's functionality.
- Check the bolts of the flange connection for loosening, and tighten if necessary.
- Inspect the valve and the surrounding area for leaks on the surfaces of the flanges or stem connections..

Assembly

- Lubricate the internal part of the housing with silicone oil.
- Insert the new seat seal in such a way that the centers of the holes for the centering and upper stems align with the openings in the housing.
- Apply silicone oil to the seat seal to facilitate assembly.
- Place O-rings (11) on the centering stem and install the stem (10).
- Then, install the disc.
- Secure the stem (10) with a washer and retaining ring.
- Place O-rings (9) on the stem (8) and install it.
- Ensure that the stem (square part) aligns with the square hole in the disc and finally install the stem using a rubber mallet.
- Complete the installation of the stem by securing the thrust and retaining rings on it.
- Reinstall the control device (handle, gearbox, actuator).

Associated Products for the Butterfly Valve Range

3700
GEARBOX

3770
ELECTRIC ACTUATOR

2500
Y-TYPE STRAINER

2350
CHECK VALVE DUAL

5000
RUBBER
EXPANSION JOINT

2300
CHECK VALVE
WAFER SWING

7360
THREADED ARV

BUTTERFLY VALVE - LUG TYPE
FAF 3600

PRODUCTION STANDARDS

DN40 →DN400
PN 16

Design	EN 593
Connection	Lug Type EN 1092-2 / ISO 7005-2
Face to Face	EN 558 Series 20 / ISO 5752 Series 20
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Product Description

FAF3600 Lug Type Butterfly Valve is a quarter-turn rotational motion valve, which is used to stop, regulate and start flow. 90° rotation of the handle provides a complete closure or opening of the valve.

Features

- Equipped with various disc materials, this valve can be used in different flow types and various applications, thanks to the available EPDM, NBR, and VITON seat options.
- Compared to other valve types, its compact dimensions offer advantages such as lightweight construction, easy installation, and cost-effectiveness.
- The FAF Valve features a double-shaft design, resulting in minimal head loss.
- Hand levers come as the default option for sizes up to DN 300 (inclusive), while sizes DN 350 (inclusive) and above are supplied with a gear box by default.
- Electrical or pneumatic actuators can be directly fitted onto the valve's top flange (ISO 5211), eliminating the need for additional intermediary parts.
- In addition to its primary function as an on-off valve, it can also serve for proportional flow control.
- This valve can be installed in any desired position, is maintenance-free, and boasts precisely machined components, resulting in low operating torque, a long service life, and high reliability.

Versions

- Standard version with a handwheel
- With gearbox (FAF3700)
- With a pneumatic actuator (FAF3750)
- With an electrical quarter-turn actuator (FAF3770)
- With an electrical multi-turn actuator (FAF3780)
- Custom production available for specific orders

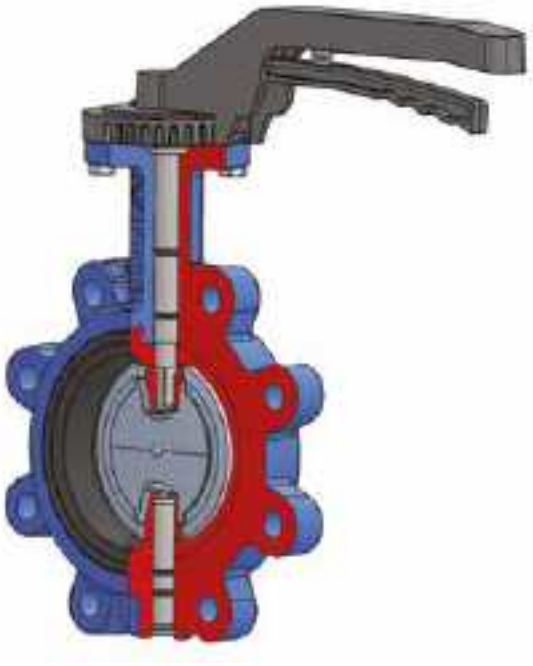
Temperature

- Maximum working temperature -10°C / 100°C Peak temperature 150°C in short-term operations. (EPDM)
- Maximum working temperature -10°C / 90°C Peak temperature 110°C in short-term operations. (NBR)
- Maximum working temperature -10°C / 225°C Peak temperature 250°C in short-term operations. (VITON)

Scope of Application

- Chamber installation
- Installation in plants
- Pipelines
- Water treatment plants
- Pumping stations
- Tanks
- Seawater applications
- Power plants (cooling water pipelines)
- Industry

BUTTERFLY VALVE - LUG TYPE
FAF 3600



MATERIAL SELECTION	
Body	EN-GJL-250 Cast Iron / GG25 EN-GJS-500 Ductile Iron / GGG50
Disc	Stainless Steel 1.4301 / 1.4401 Ductile Iron + Nickel Coating
Stem	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (Optional) 1.4401 - AISI 316 Stainless Steel (Optional)
Sealing	EPDM (NBR, VITON, NEOPREN, PTFE - optional)
Gearbox	EN GJL 250 (DN 350 and above)

PRODUCTS MODEL CODES	
FAF 3600	**SS 304 DISC - EPDM SEALING**
FAF 3601	SS 304 DISC - NBR SEALING
FAF 3602	SS 304 DISC - VITON SEALING
FAF 3603	SS 304 DISC - NEOPREN SEALING
FAF 3650	NICKEL DISC - EPDM SEALING
FAF 3651	NICKEL DISC - NBR SEALING
FAF 3652	NICKEL DISC - VITON SEALING
FAF 3653	NICKEL DISC - NEOPREN SEALING
FAF 3660	SS 316 DISC - EPDM SEALING
FAF 3661	SS 316 DISC - NBR SEALING
FAF 3662	SS 316 DISC - VITON SEALING
FAF 3663	SS 316 DISC - NEOPREN SEALING
FAF 3670	ALU. BRONZR DISC - EPDM SEALING
FAF 3671	ALU. BRONZR DISC - NBR SEALING
FAF 3672	ALU. BRONZR DISC - VITON SEALING
FAF 3673	ALU. BRONZR DISC - NEOPREN SEALING

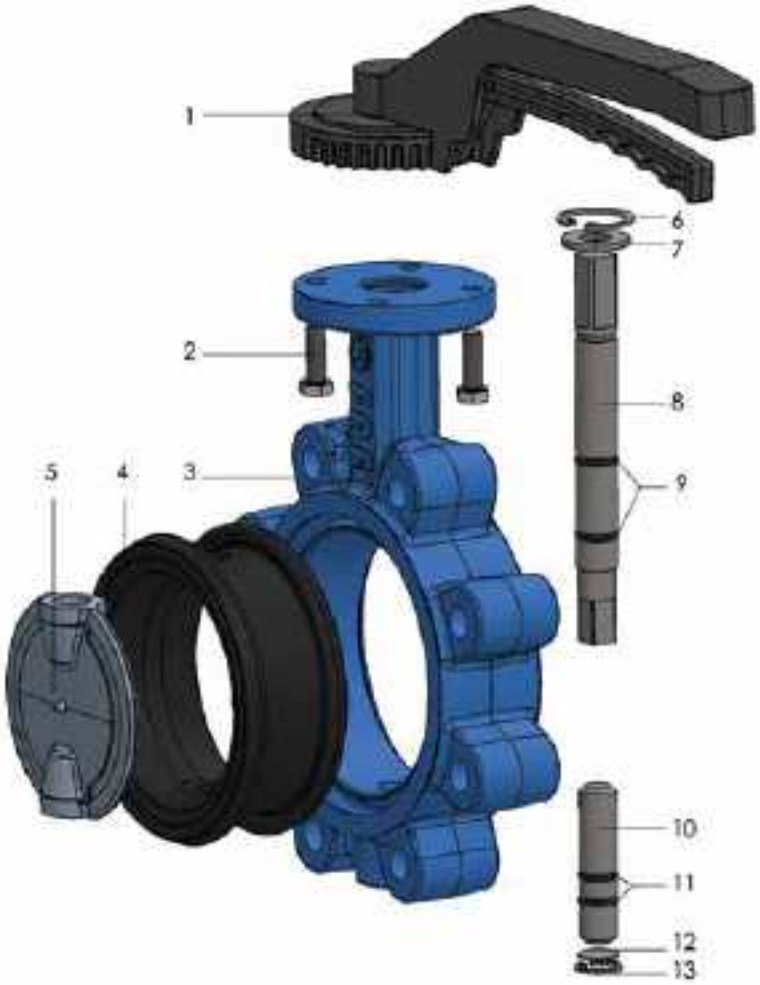
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

BUTTERFLY VALVE - LUG TYPE
FAF 3600

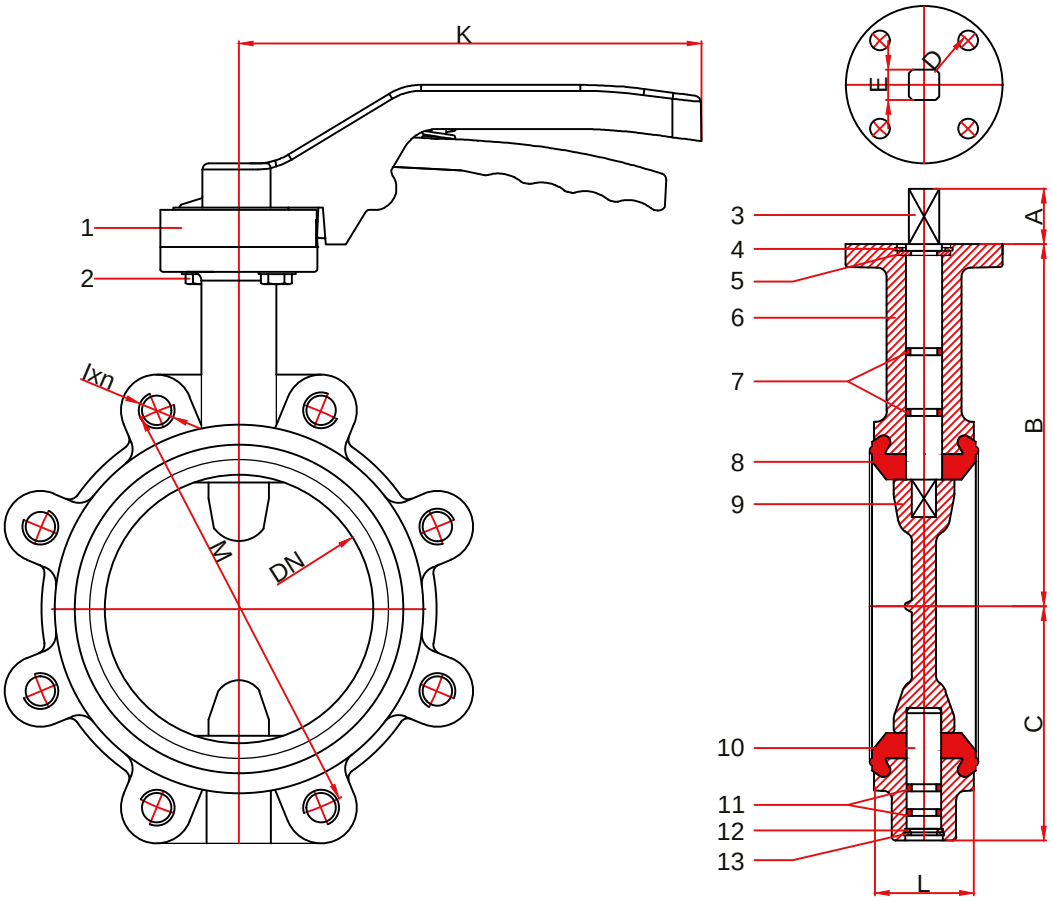
Material List



NO	ITEM	MATERIALS
1	HANDLEVER	ALUMINUM
2	BOLTS	A2
3	BODY	EN GJL 250 CAST IRON (GG25) EN GJS 500 DUCTILE IRON (GGG50)
4	GASKET	EPDM / NBR / VITON / NEOPREN
5	DISC	STAINLESS STEEL 1.4301 / 1.4401 DUCTILE IRON + NICKEL COATING
6	RETAINING RING	DIN 472
7	WASHER	A2
8	DRIVE SHAFT	STAINLESS STEEL 1.4021
9	O RING	NBR, EPDM
10	CENTERING SHAFT	STAINLESS STEEL 1.4021
11	O RING	NBR, EPDM
12	WASHER	STAINLESS STEEL 1.4016
13	RETAINING RING	DIN 472

BUTTERFLY VALVE - LUG TYPE
FAF 3600

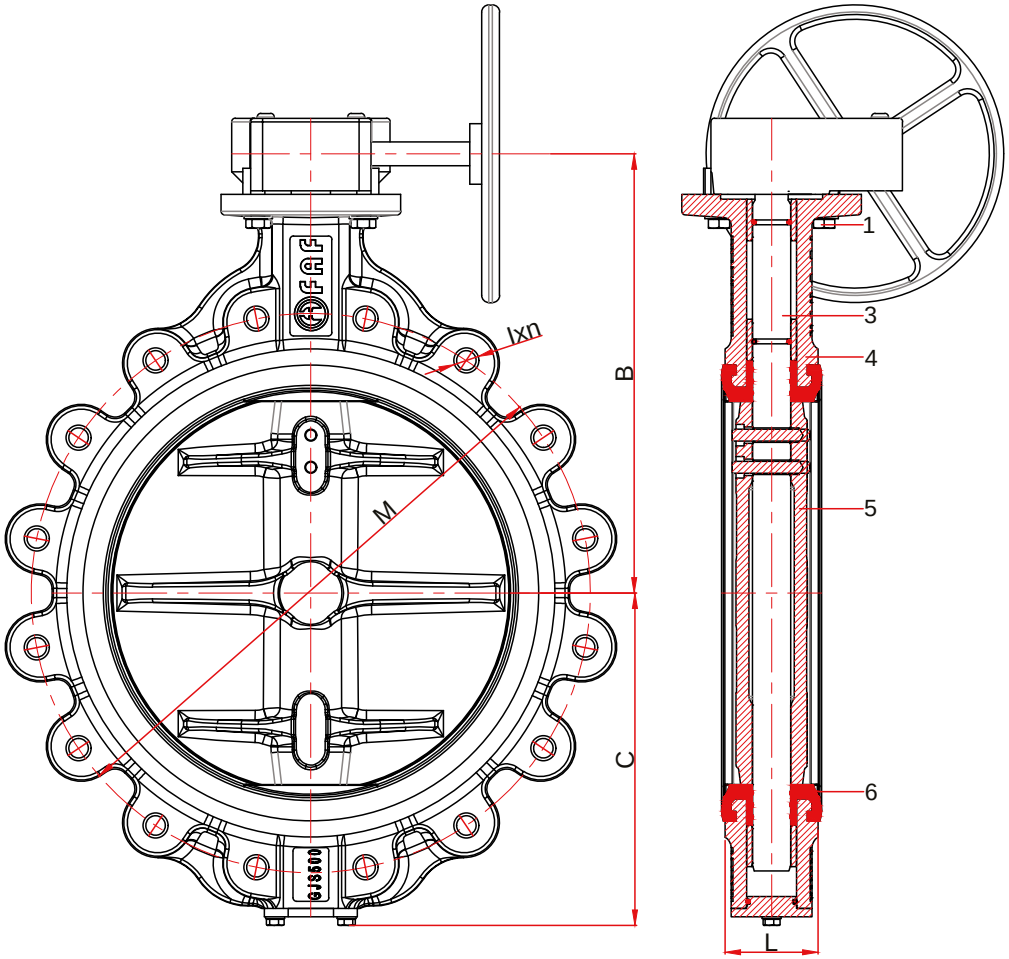
Technical Details & Drawing, Dimensions



DN (mm)	A	B	C	D	E	K	L	M	lxn	WEIGHT (kg)
40	20	122	50	50	11x11	188	35	190	M16x4	2,5
50	20	127,5	50	50	11x11	188	43	190	M16x4	3,2
65	20	134	50	50	11x11	188	46	190	M16x4	3,7
80	20	159	50	50	11x11	188	46	190	M16x8	5,1
100	20	169	101	70	14x14	258	52	255	M16x8	7,2
125	20	180	115	70	14x14	258	56	255	M16x8	8,9
150	20	203	131	70	17x17	258	56	255	M20x8	10,7
200	23	228	164	102	17x17	358	60	355	M20x12	18
250	24	266	196	102	22x22	358	68	355	M24x12	26,6
300	30	290	223	102	23x23	358	68	355	M24x12	39,9

BUTTERFLY VALVE - LUG TYPE
FAF 3600

Technical Details & Drawing, Dimensions DN 350-600



DN (mm)	B	C	M	Ølxn	L	WEIGHT (kg)
350	370	280	470	M24x16	78	68
400	410	312	525	M27x16	102	110
450	450	343	585	M27x20	114	149
500	500	376	650	M30x20	127	216
600	585	460	770	M33x20	154	327

BUTTERFLY VALVE - LUG TYPE
FAF 3600

WAFER-LUG TYPE BUTTERFLY VALVE											
DN	STAINLESS FLAP			NICKEL PLATED FLAP			ELECTRICAL ACTUATOR CONNE-CTION DIMENSIONS			PNEUMATIC ACTUATOR CONNECTION DIMENSIONS	
	TORQUE VALUES - Nm			TORQUE VALUES- Nm			TS EN 5211 5210		ROTATIONS	TS EN 5211	
	6 BAR	10 BAR	16 BAR	6 BAR	10 BAR	16 BAR	F	SHAFT SIZE nm	FULL OPEN/ CLOSE	F	SHAFT SIZE mm
40	15	15	15	10	10	15	F05	11X11			
50	15	15	15	15	15	20	F05	11X11			
65	15	15	15	20	26	26	F05	11X11			
80	16	19	23	22	26	26	F05	11X11			
100	49	50	54	48	54	54	F07	14X14			
125	61	67	70	63	72	80	F07	14X14			
150	70	81	100	84	90	106	F07	17X17			
200	144	149	171	94	155	175	F10	17X17			
250	180	200	240	210	230	270	F10	22X22			
300	250	260	380	280	290	340	F10	22X22			
350	550	600	660	550	600	660	F12	ø 28		F12	27X27
350* G.BOX	25	32	45	25	32	45	F10	ø 20	10		
400	850	900	1050	850	900	1050	F14	ø 36		F14	36X36
400* G.BOX	75	85	100	75	85	100	F10	ø 20	12		
450	1100	1300	1600	1100	1300	1600	F14	ø 42		F14	36X36
450* G.BOX	45	47	54	45	47	54	F10	ø 20	50		
500	2100	2500	2900	2100	2500	2900	F16	ø 50		F16	46x46
500* G.BOX	100	105	115	100	105	115	F10	ø 20	10		
600	3200	3800	4500	3200	3800	4500	F25	ø 60		F16	46x46
600* G.BOX	100	110	115	100	110	115	F10	ø 20	70		

- These are the torque values taken from the valve shaft outlet while the valve is under pressure.
- DN350-400-450-500-600 are standard production gearboxes.
- The data in the table is for water at 20°C and includes a 20% safety factor.
- These are the torque values taken from the output shaft of the gearbox compatible with the actuator while the valve is under pressure.
- When using fluids that can increase torque (such as dusty, non-slippery fluids, air, and dry gas), a 30% safety factor should be
- added to the data in the table.
- A double-acting 90° rotary pneumatic actuator should be used.

BUTTERFLY VALVE - LUG TYPE
FAF 3600

Butterfly Valve Maintenance Instructions

Montage

- It is essential for all personnel involved in working with the product to carefully read and understand this instruction before assembly, disassembly, and operation.
- WARNING! It is prohibited to exceed the maximum pressure and temperature limits marked on the metal plate on the product housing.
- Installation and maintenance of the product should be carried out only by trained specialists.
- For the installation of wafer butterfly valves, only flanges with collars (GOST12821) should be used.
- Leave space between the flanges for easy installation and removal of the valve. The valve should smoothly pass between them without damaging the seat seal.
- Position the disc in a semi-open position so that its edge does not exceed the width of the valve.
- Attention! Do not damage the seal.
- Before tightening the bolts, rotate the valve disc to the fully open position. Tighten the bolts until they touch the flanges of the disc valve housing. To prevent leaks and misalignment, tighten the bolts diagonally, applying appropriate force.
- Attention! The use of additional seals is not allowed.

Technical Maintenance

- Disassembly and repair of the product should only be carried out by qualified specialists.
- Before disassembling the disc valve, ensure that the pipeline is not under pressure or electrical voltage. In the case of working with hot or cold media, after depressurizing the pipeline, ensure that the disc valve housing has the ambient temperature of the surroundings.
- When working with aggressive or toxic media, ensure that the pipeline before and after the disc valve is completely free of the working medium. Use specialized clothing and all necessary protective equipment.

Demontage

- Before starting the disassembly process, disconnect the actuator from the control cables and pipelines, if the actuator is installed on the product.
- Ensure that there is no working medium in the pipeline.
- Before loosening the fastening bolts, rotate the valve disc to the open position. Gently loosen the bolts until there is enough space between the disc valve and the flanges for the product to be removed freely.
- Rotate the valve disc so that the edges of the disc do not obstruct the removal of the valve from the space between the flanges. After this, the disc valve can be disassembled..

Disassembly

- Remove the control device (handle, gearbox, actuator) from the top flange of the valve housing.
- Remove the retaining ring and extract the centering stem using an M6x20 bolt.
- Use retaining ring pliers to remove the stem retaining ring (8). Remove the stem.
- If necessary, remove the disc using a rubber mallet.
- Use a wide screwdriver to remove the seal.

Inspection and Maintenance

- The following methods of periodic preventive maintenance are recommended:
- Operate the disc valve in fully open and fully closed positions to ensure the valve's functionality.
- Check the bolts of the flange connection for loosening, and tighten if necessary.
- Inspect the valve and the surrounding area for leaks on the surfaces of the flanges or stem connections..

Assembly

- Lubricate the internal part of the housing with silicone oil.
- Insert the new seat seal in such a way that the centers of the holes for the centering and upper stems align with the openings in the housing.
- Apply silicone oil to the seat seal to facilitate assembly.
- Place O-rings (11) on the centering stem and install the stem (10).
- Then, install the disc.
- Secure the stem (10) with a washer and retaining ring.
- Place O-rings (9) on the stem (8) and install it.
- Ensure that the stem (square part) aligns with the square hole in the disc and finally install the stem using a rubber mallet.
- Complete the installation of the stem by securing the thrust and retaining rings on it.
- Reinstall the control device (handle, gearbox, actuator).

Associated Products for the Butterfly Valve Range

3700
GEARBOX

3770
ELECTRIC ACTUATOR

2500
Y-TYPE STRAINER

2350
CHECK VALVE DUAL

5000
RUBBER
EXPANSION JOINT

2300
CHECK VALVE
WAFER SWING

7360
THREADED ARV

GEARBOX
FAF 3700

PRODUCTION STANDARDS

DN40 →DN400
PN 10-16

Design	EN ISO 5211
Marking	EN ISO 5211
Tests	EN ISO 5211
Corrosion Protection	Electrostatic Powder Epoxy

Features

- Has cast iron body; stem and sealing seat are made of stainless steel.
- Lowering the minimum torque force allows the opening and closing of the valve by single operator.
- While the open-close torque of the valve with gearbox decreases, the number of turns needed to open-close the valve increase.
- Attention should be paid on the connection dimensions and gearbox ratio when selecting an actuator for the valve.
- The DN dimensions and gearbox types mentioned on the table are given according to the general applications.
- It is advised to receive support from FAF Valve technical staff while selecting gearboxes.
- Most of the valves require an operator torque that can only be achieve with a gearbox. There are part turn and quart turn manual actuators.
- Manual actuation is usually drove by handwheels. Valves whose access location makes difficult to operate on them can be drove by chain wheels.
- For security, the driver can be out of the gearbox spigot.
- Only authorized operators who bring the handwheel or wrench nut with them can operate the valve.

Product Description

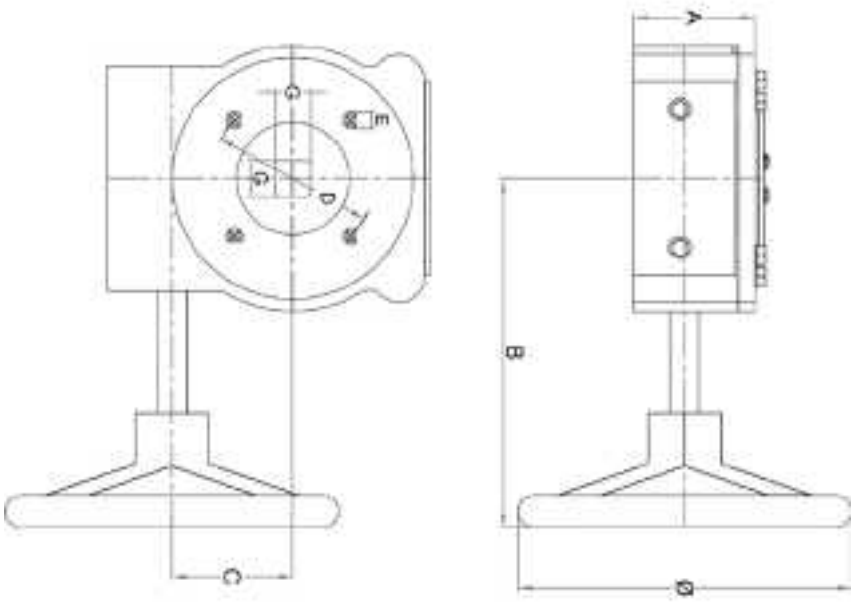
FAF3700 Gearbox is used for decreasing the torque needed to rotate the stem through the help of gears with ratio. Gearboxes are designed for FAF Butterfly Valves

Scope of Application

- Lug & wafer type butterfly valves
- Double eccentric butterfly valve
- Concentric butterfly valves
- Gate valves
- Ball valves

GEARBOX
FAF 3700

Technical Details & Drawing, Dimensions



DN (mm)	Ø	A	B	C	EN ISO 5211			GxG
					Flange Type	D	E	
40	190	60	160	47	F 07	70	M8	11x11
50								
65								
80								
100	190	65	165	45	F 07	70	M8	14x14
125								
150	190	65	165	45	F 07	70	M8	17x17
200	295	70	235	67	F 10	102	M10	17x17
250	295	70	235	67	F 10	102	M10	22x22
300	295	90	230	70	F 10	102	M10	22x22
350	295	90	230	70	F 12	125	M12	22x22
400	390	110	240	120	F 14	140	M16	27x27

BUTTERFLY VALVE
DOUBLE ECCENTRIC FLANGED
FAF 3800

PRODUCTION STANDARDS

DN100 ➔DN2000
PN 10-16-25

Design	EN 593
Connection	EN 1092-2 ISO 7005-2 - Flanged
End Connection	EN 558 Series 14 DIN 3202 F4
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy WRAS Approved (Optional)

Product Description

FAF3800 Double Eccentric Flanged Butterfly Valve operates by rotating the disc with a quarter turn (90 degrees), ensuring 100% sealing with the sealing section ring fixed to the outer diameter of the disc, fully facing the seat surface inside the body perimeter made of stainless steel welding. The WRAS-approved epoxy coating makes it suitable for potable water systems.

Features

- The double eccentric structure ensures low operating torques and zero leakage performance.
- The valve features inner and outer surfaces coated with an average 250-micron thickness of fusion-bonded epoxy (FBE), with a minimum of 300 microns available upon request.
- Higher thicknesses are available upon request.
- Low moments are achieved by reducing friction through self-lubricating bushings.
- The ductile iron body and disc enable the valve to withstand high stretching stresses on the pipeline.
- The valve boasts high impact resistance.
- Pressure loss is minimized through a disc designed in accordance with the direction of flow.
- Double shaft design results in minimal pressure loss.
- Sealing gaskets made of EPDM (default), NBR, or VITON can be disassembled and replaced easily in the field, according to operating conditions and demand.
- The o-rings on the bearing bushings protect the disc pin holes against corrosion (Dry shaft).
- A retaining ring is assembled to the disc with imbus bolts, further protecting the disc against corrosion by placing o-rings under the bolts.
- A gearbox assembled on the top flange allows for easy valve opening and closing with very low torques.
- Lifting lugs and feet facilitate weight balance during transport and installation.
- Stainless steel welding enhances the valve's sealing resistance.

Temperature

- Maximum working temperature -10°C / 100°C Peak temperature 150°C in short-term operations. (EPDM)
- Maximum working temperature -10°C / 90°C Peak temperature 110°C in short-term operations. (NBR)
- Maximum working temperature -10°C / 225°C Peak temperature 250°C in short-term operations. (VITON

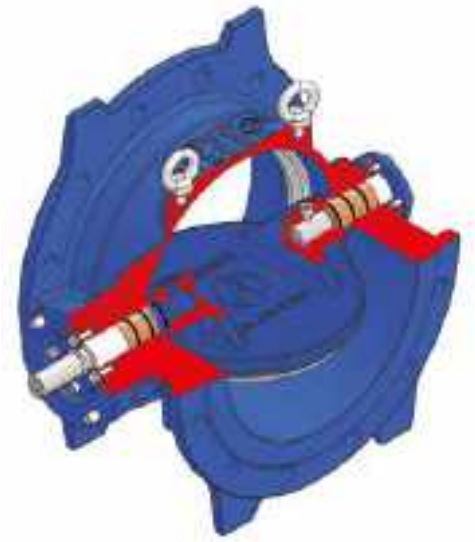
Versions

- Standard version with gearbox (IP68-optional) and handwheel
- Gearbox ready to install actuator
- With electrical actuator
- Custom production for specific orders

Scope of Application

- Chamber installation
- Installation in plants
- Pipelines
- Water treatment plants
- Pumping stations
- Tanks and reservoirs
- Seawater applications
- Power plants (cooling water pipelines)
- Industry

BUTTERFLY VALVE
DOUBLE ECCENTRIC FLANGED
FAF 3800



MATERIAL SELECTION	
Body	EN-GJS-500 Ductile Iron / GGG50
Disc	EN-GJS-500 Ductile Iron / GGG50
Stem	1.4021 - AISI 420 Stainless Steel (Default) 1.4301 - AISI 304 Stainless Steel (Optional) 1.4401 - AISI 316 Stainless Steel (Optional)
Sealing	EPDM (NBR, VITON Optional)
Gearbox	EN GJL 250 - Enclosure Class - IP67
Retaining Ring	ST.37 Steel (Default) 1.4301 - AISI 304 Stainless Steel (Optional) 1.4401 - AISI 316 Stainless Steel (Optional)

Standards

Criteria	Old Standards	New Standards
Design	EN 11341, DIN 3354, BS 5155	EN 593
End Connection	DIN 3202, BS 5155	EN 558-1 Series 14
Flange	DIN 2501, BS 4504	ISO 7005, EN 1092
Test	DIN 3230	EN 12266, EN 1074
Casting	GGG 40 - GGG 50	EN GJS 400-15, EN GJS 500-7
Stainless Steel	X20Cr13, AISI 420-AISI 304-AISI 316	1.4021-1.4301-1.4401

General Information About Double Eccentric Flanged Butterfly Valves

- Valve sealing rate: EN 12266-1 / 2. Leakage is not allowed.
- Valve is designed to be leakproof and with anti blow out shaft system when driving component (lever, gear box, actuator) are removed.
- High flow rates are critical for Double Eccentric Flanged Butterfly Valves. Thus the flow rate of the network must conform to the following table.

PS BAR	Highest Flow Rate (m/s)	
	Liquid Fluid	Gas Fluid
up to 6	2,5	25
6<PS≤10	3	30
10<PS≤16	4	35
PS>16	5	40

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
25	37,5	27,5
40	60	44
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

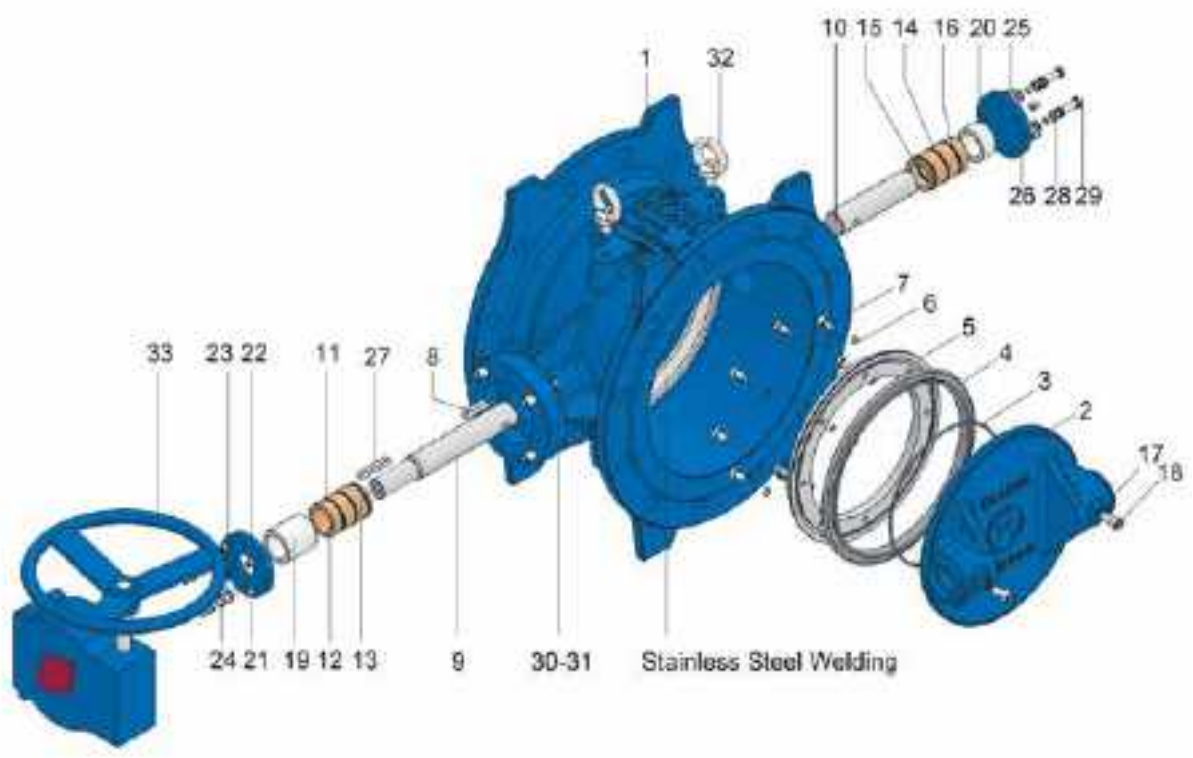
PRODUCTS MODEL CODES	
FAF3800	**BUTTERFLY VALVE - PN16**
FAF3810	BUTTERFLY VALVE - PN10
FAF3825	BUTTERFLY VALVE - PN25

Note

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

BUTTERFLY VALVE
DOUBLE ECCENTRIC FLANGED
FAF 3800

Material List

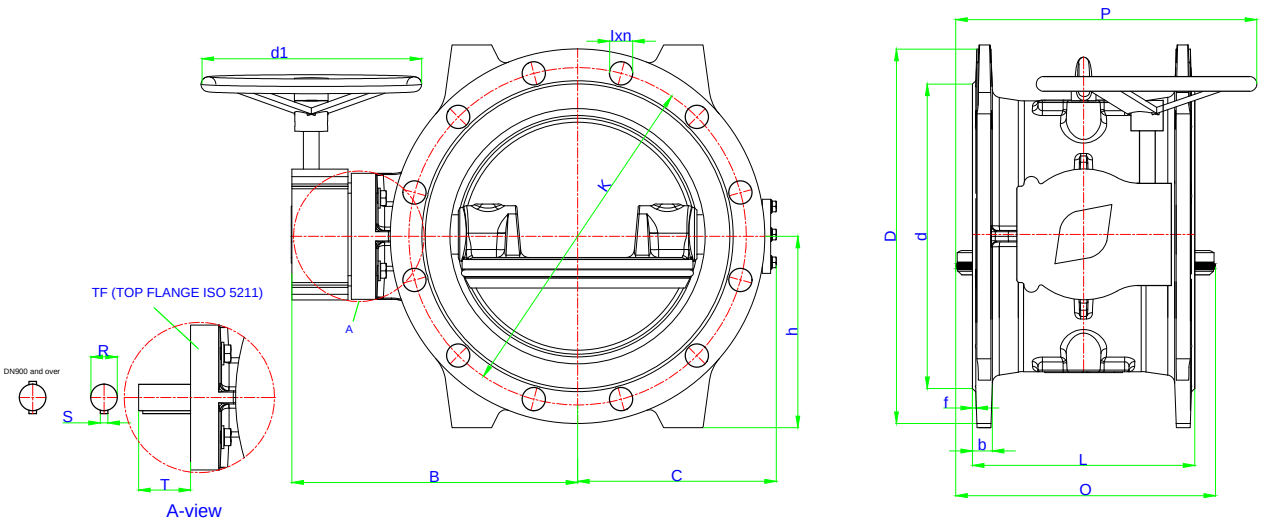


NO	ITEM	MATERIALS
1	BODY	EN GJS 500
2	DISC	EN GJS 500
3	O-RING	NBR / EPDM
4	SEALING RING	EPDM / NBR /VITON
5	RETAINING RING	STEEL ST 37
6	O RING	NBR / EPDM
7	IMBUS BOLT	STAINLESS STEEL A2
8	KEY	STEEL 1.0254
9	MAIN SHAFT	STAINLESS STEEL 1.4021
10	SUPPORT SHAFT	STAINLESS STEEL 1.4021
11	O-RING	NBR / EPDM
12	O-RING	NBR / EPDM
13	BUSHING	BRONZE
14	O-RING	NBR / EPDM
15	O-RING	NBR / EPDM
16	SUPPORT SHAFT BUSHING	BRONZE

NO	ITEM	MATERIALS
17	O RING	NBR / EPDM
18	IMBUS BOLT	STAINLESS STEEL A2
19	MAIN SHAFT BEARING	DELRIN
20	SUPPORT SHAFT BEARING	DELRIN
21	SETSCREW	STAINLESS STEEL A2
22	TOP COVER	STEEL 1.0254
23	WASHER	STAINLESS STEEL A2
24	HEXAGON BOLTS	STAINLESS STEEL A2
25	SETSCREW	STAINLESS STEEL A2
26	BOTTOM COVER	STEEL 1.0254
27	KEY	STEEL 1.0254
28	WASHER	STAINLESS STEEL
29	HEXAGON BOLTS	STAINLESS STEEL A2
30	WASHER	STAINLESS STEEL
31	HEXAGON BOLTS	STAINLESS STEEL A2
32	LIFTING LUGS	GALVANIZED STEEL
33	GEAR BOX	EN GJL 250 - ENCLOSURE CLASS (IP68 OPTIONAL)

BUTTERFLY VALVE
DOUBLE ECCENTRIC FLANGED
FAF 3800

Technical Details & Drawing, Dimensions



*Valve torque safety factor is not included

DIMENSIONS - PN16																	BARE SHAFT TORQUE		
DN (mm)	D	K	d	Ølxn	f	b	L	O	B	C	h	d1	P	R	S	T	TOP FL	VALVE TORQUE * (Nm)	Kv m³ / h	Weight (kg)
100	220	180	156	19x8	3	19	190	101	183	119	110	100	141	21,7	8	45	F10	90	600	25.00
150	285	240	211	23x8	3	19	210	148	225	150	145	100	227	21,7	8	45	F10	240	1400	35.00
200	340	295	266	23x12	4	20	230	200	275	189	172	250	278	21,7	8	45	F10	260	2500	40.00
250	405	355	319	28x12	4	22	250	248	297	220	205	350	366	27,8	8	55	F12	280	4200	50.00
300	460	410	370	28x12	4	24,5	270	282	342	242	232	500	458	27,8	8	55	F12	750	5700	70.00
350	520	470	429	28x16	4	26,5	290	339	370	264	280	600	548	35,7	10	65	F14	1250	7800	99.00
400	580	525	480	31x16	4	28	310	385	431	310	292	700	634	41,7	12	65	F14	1760	13000	140.00
450	640	585	548	31x20	4	30	330	432	462	340	322	700	668	49,6	16	80	F16	2500	15000	165.00
500	715	650	609	34x20	4	31,5	350	481	524	379	360	700	641	59,6	18	80	F16	3200	19000	245.00
600	840	770	720	37x20	5	36	390	576	589	437	422	600	715	59,6	18	110	F25	5100	28000	284.00
700	910	840	794	37x24	5	39,5	430	675	663	480	458	500	724	79,7	22	110	F25	7200	38000	350.00
800	1025	950	901	41x24	5	43	470	780	728	548	517	500	776	79,7	22	110	F25	12000	50000	580.00
900	1125	1050	1001	41x28	5	46,5	510	872	845	614	570	500	940	99,8	28	130	F30	19000	67000	750.00
1000	1255	1170	1112	44x28	5	50	550	970	905	665	634	600	989	119,7	32	130	F30	24000	90000	957.00
1200	1485	1390	1328	50x32	5	57	630	1157	1025	800	750	600	1322	119,7	32	165	F35	26000	130000	1,310.00

*Valve torque safety factor is not included

BUTTERFLY VALVE
DOUBLE ECCENTRIC FLANGED
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DIMENSIONS - PN10																	BARE SHAFT TORQUE		
DN (mm)	D	K	d	Ølxn	f	b	L	O	B	C	h	d1	P	R	S	T	TOP FL	VALVE TORQUE * (Nm)	Kv m^3 / h	Weight (kg)
100	220	180	156	19x8	3	19	190	101	183	119	110	100	141	21,7	8	45	F10	60	600	17.30
150	285	240	211	23x8	3	19	210	148	215	150	145	100	213	21,7	8	45	F10	200	1400	22.90
200	340	295	266	23x8	3	20	230	200	265	189	172	200	239	21,7	8	45	F10	230	2500	31.50
250	400	350	319	23x12	3	22	250	248	290	220	205	250	302	27,8	8	55	F12	240	4200	50.00
300	455	400	370	23x12	4	24,5	270	282	342	242	232	400	408	27,8	8	55	F12	600	5700	70.00
350	505	460	429	23x16	4	24,5	290	339	366	264	280	600	536	35,7	10	65	F14	900	7800	98.00
400	565	515	480	28x16	4	24,5	310	385	430	310	292	600	571	41,7	12	65	F14	1040	13000	135.00
450	615	565	530	28x20	4	25,5	330	432	447	340	322	700	658	49,6	16	80	F16	1800	15000	160.00
500	670	620	582	28x20	4	26,5	350	481	505	379	360	700	692	59,6	18	80	F16	2000	19000	236.00
600	780	725	682	31x20	5	30	390	576	584	437	422	600	638	59,6	18	110	F25	2880	28000	260.00
700	895	840	794	31x24	5	32,5	430	675	636	480	451	500	714	79,7	22	110	F25	4200	38000	315.00
800	1015	950	901	34x24	5	35	470	780	728	548	517	500	776	79,7	22	110	F25	8000	50000	550.00
900	1115	1050	1001	34x28	5	37,5	510	872	789	614	564	500	913	99,8	28	130	F30	13700	67000	650.00
1000	1230	1160	1112	37x28	5	40	550	970	905	665	634	600	989	119,7	32	130	F30	20400	90000	880.00
1200	1455	1380	1328	41x32	5	45	630	1157	1025	800	735	600	1322	119,7	32	165	F35	22000	130000	1,300.00

*Valve torque safety factor is not included.

DIMENSIONS - PN25								
DN (mm)	D	K	d	Ø l x n	f	b	L	Weight (kg)
100	235	190	156	23x8	3	19	190	
150	300	250	211	28x8	3	20	210	37,2
200	360	310	274	28x12	4	22	230	49,8
250	425	370	330	31x12	4	24,5	250	78
300	485	430	389	31x16	4	27,5	270	99,5
350	555	490	448	34x16	4	30	290	
400	620	550	503	37x16	4	32	310	
450	670	600	548	37x20	4	34,5	330	
500	730	660	609	37x20	4	36,5	350	
600	845	770	720	41x20	5	42	390	
700	960	875	820	44x24	5	46,5	430	
800	1085	990	928	50x24	5	51	470	
900	1185	1090	1028	50x28	5	55,5	510	
1000	1320	1210	1140	57x28	5	60	550	

BUTTERFLY VALVE
DOUBLE ECCENTRIC FLANGED
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FLANGED BUTTERFLY VALVE								
DN	TORQUE VALUES - Nm					TOP FLANGE DIAMETERS FOR	SHAFT SIZE mm	ROTATIONS REQUIRED
	3-BAR	6-BAR	10-BAR	16-BAR	25-BAR	F	Ø	FULL OPEN/ CLOSE
100	12	12	12	12	12	F10	20	9
125	16	16	16	16	16	F10	20	9
150	12	12	12	24	41	F10	20	9
200	12	34	40	52	73	F10	20	9
250	26	38	44	56	72	F10	20	9
300	17	35	49	73	120	F10	20	10
350	20	38	54	80	120	F10	20	12
400	25	40	45	70	100	F10	20	14
450	50	60	80	100	120	F10	20	13
500	35	40	50	80	110	F10	20	28
600	50	60	80	100	120	F10	20	PN10=28 PN16-25=55
700	40	55	70	75	120	F10	20	PN10=87 PN16-25=117
800	50	50	85	90	160	PN10-16=F10 PN25 =F14	PN10-16:20 PN25:30	PN10=87 PN16=117 PN25=183
900	70	80	90	140	-	PN10 =F10 PN16=F14	PN10: 20 PN16 :30	PN10=117 PN16=183
1000	90	90	150	180	-	F14	30	183
1200	75	90	160	235	-	F14	30	272
1400	90	102	135	160	-	F14	30	413
1600	200	250	300	340	-	F14	30	388

- These are the torque values taken from the output shaft of the gearbox compatible with the actuator while the valve is under pressure.
- In the use of fluids that can increase the torque (dusty, non-slippery fluids, air and dry gas), a 30% safety factor should be added to the data in the table.
- Data in the table; It is for water at 20°C and contains a 20% safety factor.
- Data measured from DN400..DN1000 ROTORK, DN1200 - 1400 - 1600 TMG gearbox.

BUTTERFLY VALVE
DOUBLE ECCENTRIC FLANGED
FAF 3800

Double Eccentric Flanged Butterfly Valves can be classified according to various designs

1- According to disc design & seating of disc inside the body:

- Centric (Concentric)
- Eccentric
- Double Eccentric
- Triple Eccentric

2- According to drive type:

- Hand Lever
- Manual Gearbox
- Actuated (Electric or Pneumatic)

Advantages of Double Eccentric Flanged Butterfly Valve

- Smaller dimensions and lower weight compared to other valve types.
- Easy installation due to its small dimensions and lower weight.
- Gearboxes facilitate opening and closing with low torque.
- Minimal maintenance required. When the sealing ring is damaged, it can be easily replaced without the need for qualified personnel or special tools. This operation can even be performed on large-sized valves without disassembling them from the line.

Points to be considered with Double Eccentric Flanged Butterfly Valve Operation;

- First and foremost, the most appropriate valve needs to be chosen depending on the area of application and conditions.
- In general, butterfly valves can be used for regulating and controlling flow, but they should not be used for the purpose of reducing flow. The water jets occurring from reduced flow can damage the sealing rings, causing the valves to lose their sealing properties. In cases where reduced flow is needed, this requirement should be clearly defined, and an appropriate design should be arranged to accommodate this condition.
- Butterfly valves should not be used for discharge purposes. Due to hydrodynamic moments caused by high flow rates during discharge, opening and closing the valve beyond certain degrees may not be possible. For these kinds of applications, conic valves or plunger valves should be used.
- Another crucial consideration when using butterfly valves is that these valves are operated with high-ratio gearboxes. In many cases, high forces are applied to the valves to maintain sealing, and closure is achieved by attaching an extension pipe to the handwheel. With the right-sized gearbox, there is no need for such applications. A valve can be opened or closed by one person. When a worm gear-equipped gearbox on a butterfly valve is closed, disc movement is halted by the limit pins available on the gearboxes. Forcing the valve beyond this point will not improve sealing; instead, it may damage the gearbox.
- To facilitate the installation of butterfly valves, the position and placement of the gearbox can be adjusted. This information should be communicated to our company by the client before the manufacturing phase.
- Valves should not be used outside the operating pressure, operating temperature, and type of fluid parameters mentioned in the manual. To prevent the valve from experiencing high pressure and distortion within the system, they should be installed at specific distances from bends and outlet points. Typically, this distance should be approximately 3 to 5 times the valve diameter.
- In places where valves are rarely used, it is advisable to perform one open/close cycle every 3-4 months.

Safety Manual for Maintenance, Inspection and Installation Works

- For trouble-free use of butterfly valves, carefully review and consistently apply this manual. Failure to follow safety instructions can result in:
- Personal injuries
- Environmental risks and valve damage
- Major valve or facility malfunctions
- Disruption of planned maintenance and repairs
- Risks from electrical, mechanical, and chemical exposure
- Environmental damage due to hazardous leaks
- Modifications or changes to FAF Valve Company products are not permitted. FAF Valve Company is not liable for damages or losses resulting from non-compliance or unauthorized modifications.
- Butterfly valve storage, installation, use, maintenance, and disassembly must be performed by trained personnel. All international and local safety instructions should be understood, and precautions taken before working on the valve or pipeline.
- During repairs, depressurize the pipeline, drain fluids, and use warning signs. Turn off remotely controlled devices like actuators. Take precautions against devices with stored energy. When handling drain valves, prevent sudden water filling.
- Use original spare parts for product safety; non-original parts can cause damage for which the manufacturer is not responsible.
- To remove a valve, depressurize the pipeline. Be cautious as residual fluids may flow freely. Lift, move, and lower the valve without sudden movements. Use the lifting lugs on the body.
- If lifting with a crane, involve specialists, as the valve may move involuntarily. During the operation, only authorized personnel should be present, and no one other than the operator should enter the work area. Any work on the actuated valve can be performed after the actuator has been disconnected from the power supply, following the procedure outlined in the operating instructions.
- Before installing the valve, remove any potential corrosion, welding particles, dirt, or residue that could deform the valve and cause leakage. Use compressed air or steam to clean the line.
- Ensure that the pipe centers where the valve will be installed are aligned along the same axis. The counter flanges should be perpendicular to the pipe axis, and the flange bolt holes must also be on the same axis. Misalignment could create stress on the valve and lead to leakage.
- If construction work continues after valve installation, protect the valve from external factors by covering it with suitable protective materials. Avoid damage from processes like excavation, paint application, or concrete pouring.
- Take care not to pull the flanges toward the valve when tightening the bolts. To address any potential tensile stresses, we recommend using dismantling joints in conjunction with the butterfly valves.
- Ensure there is enough space in the chamber where the valve is located to facilitate ease of use, maintenance, disassembly, and cleaning.
- Install the valve on the pipeline using interflange gaskets and the necessary installation equipment. Begin with the first side and then proceed to the second side, avoiding any pulling stress. Tighten the bolts and nuts reciprocally to the specified torque values.
- Do not close the valve before cleaning any residue inside the pipe.
- Operate the valve in the directions indicated on the gearbox.
- The valve's open and close limit switches on the gearbox are set during production. If necessary, these switches can be readjusted using the setting screws on the gearbox during commissioning.
- Considering the nominal pressure marked on the valve, it is essential to perform a leakage inspection at 1.1 times this pressure.

BUTTERFLY VALVE
DOUBLE ECCENTRIC FLANGED
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Replacing The Disc Sealing Ring

Make sure that there is no pressure on the line during disc sealing ring replacement. Attention should be paid to safety regulations.

The sealing ring can be replaced without removing the disc or removing the valve from the pipeline. However, at least the valve should be accessible by detaching it from one of the pipeline side.

Disc should be in fully opened position.

The bolts (7) and the retaining ring (5) should be removed by loosening the bolts reciprocally.

The sealing ring (4) and o-rings (3-6) should be removed.

The new sealing ring (4) and o-rings (3-6) should be assembled to their locations by gently lubricating with approved lubricant.

Bolts must be tightened reciprocally by the torque values specified on the table.

Torque values (Nm) for the disc sealing ring bolts

DN100 DN150	DN200-DN250 DN300	DN350 and DN1200 included
8.7	21.2	42

Shaft Area O-Ring Replacement

- Ensure that there is no pressure in the line and adhere to safety regulations. To access the valve, detach it from one side of the pipeline. Make sure the valve disc is in the fully open position. Remove the gearbox (33) by taking out the bolts and washers (30-31) and then remove the key (27) from the shaft. Detach the top cover (22) by removing the bolts (24-23) and also remove the bolt(s) (18) on the disc, then take out the o-rings (17). By pulling the main shaft, remove the main shaft (9), the main shaft bearing (19), and the upper bushing (13) from the body (1), ensuring you don't drop the key (8) from the main shaft. Replace o-rings (11-12-17) with new ones, lightly lubricate them with approved lubricant, and place them in their positions. Reassemble in the reverse order of disassembly, aligning the top cover correctly and securing it with the allen key area setscrews (21). Ensure that the disc and gearbox position indicator match each other. Detach the bottom cover (22) by removing the bolts (28-29). By pulling the support shaft, remove the support shaft (10), the support shaft bushing (16), and the support shaft bearing (20) from the body (1). Replace o-rings (14-15) with new ones, lightly lubricate them with approved lubricant, and fit them into their positions. Reassemble in the reverse order of disassembly, aligning the bottom cover (26) correctly and securing it with the allen key area setscrews (25). After maintenance, if there's leakage in the closed position, you can adjust it using the setscrews (21-25) by loosening the bolts on the bottom and upper cover areas. Then, reassemble the gearbox by tightening the bolts.

M6	M8	M10	M12	M16	M20	M24	M30
8.7	21.2	42	73	180	370	603	1300

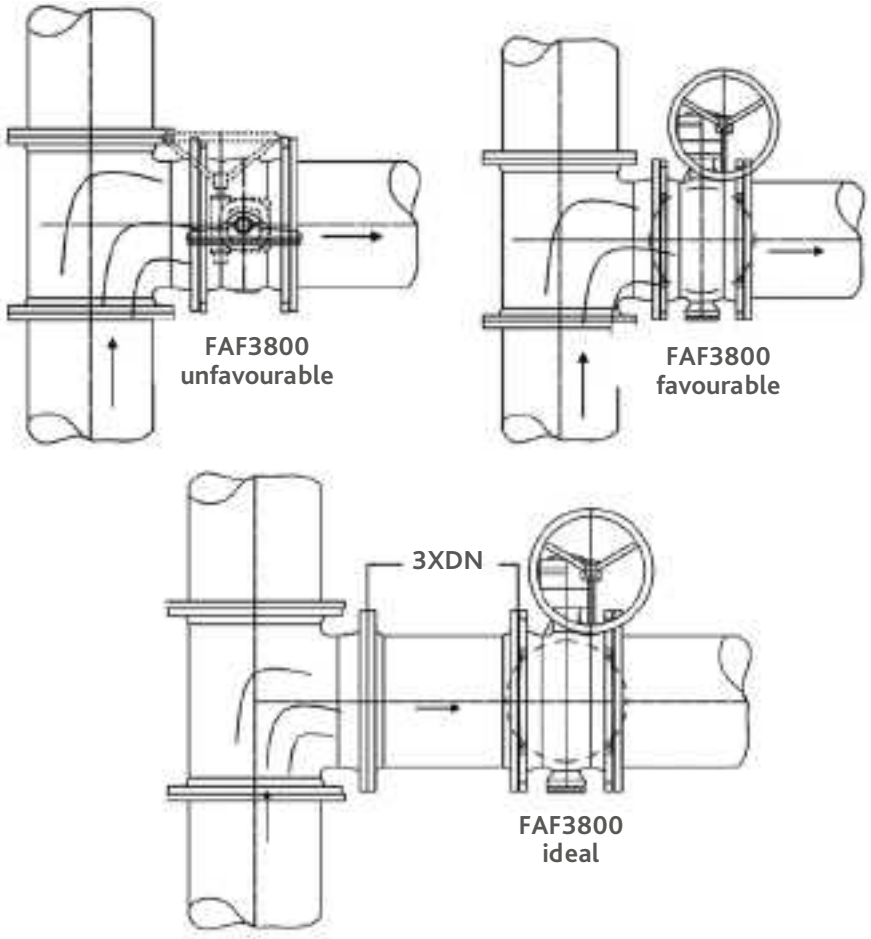
Troubleshooting

All repair and service works must be carried out by qualified personnel using suitable tools and original spare parts

Problem	Cause	Remedial Action
Valve cannot be operated	Foreign material jammed inside the valve	Fully open the valve and take out the dirt inside the valve
	Gearbox blocked	The gearbox settings must be checked or the gearbox must be turned in the opposite direction
	Electric actuator problem	Check the electrical connection and settings of actuator
Leaks in the body seat	Valve not completely closed	Fully close the valve by checking the mechanical position indicator
	Valve sealing rind worn or damaged	Replace sealing ring
Leaks in valve pipe installation and body	Gaskets damaged	Replace gaskets
	Bolts/nuts are loose	Tighten according to mentioned torque values
Valve makes noise	Valve operating beyond its limits	Check the working conditions and design features. Change valve installation location or change the valve type suitable for the area of usage
	Wrong installation position. (Valve is too close to a reducer, elbow, control valve, etc.)	Change installation position
Torque value very high	Deposit (lime, sand, etc.) accumulation may happened on the body seat	Fully open the valve and clean the deposit
	Pipeline is dry, sealing ring is dry	Apply approved lubricant or silicone on body seat and sealing ring

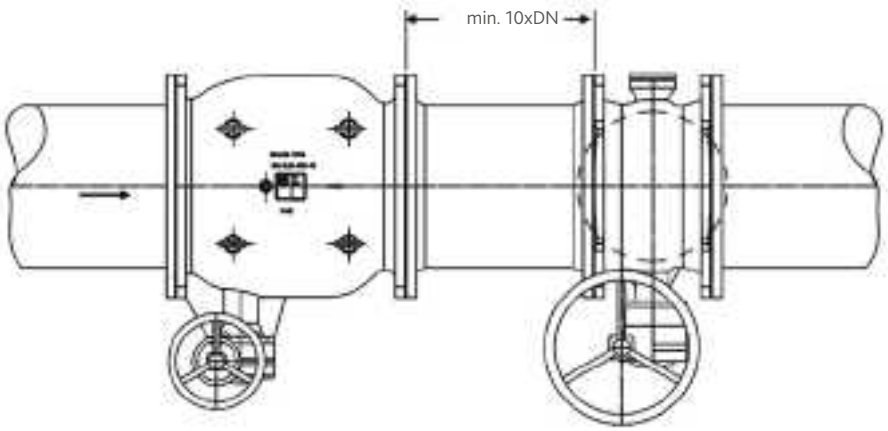
BUTTERFLY VALVE
DOUBLE ECCENTRIC FLANGED
FAF 3800

- Branches and elbows may cause the disk to vibrate
- A damping zone between the branch/elbow and the valve is ideal.



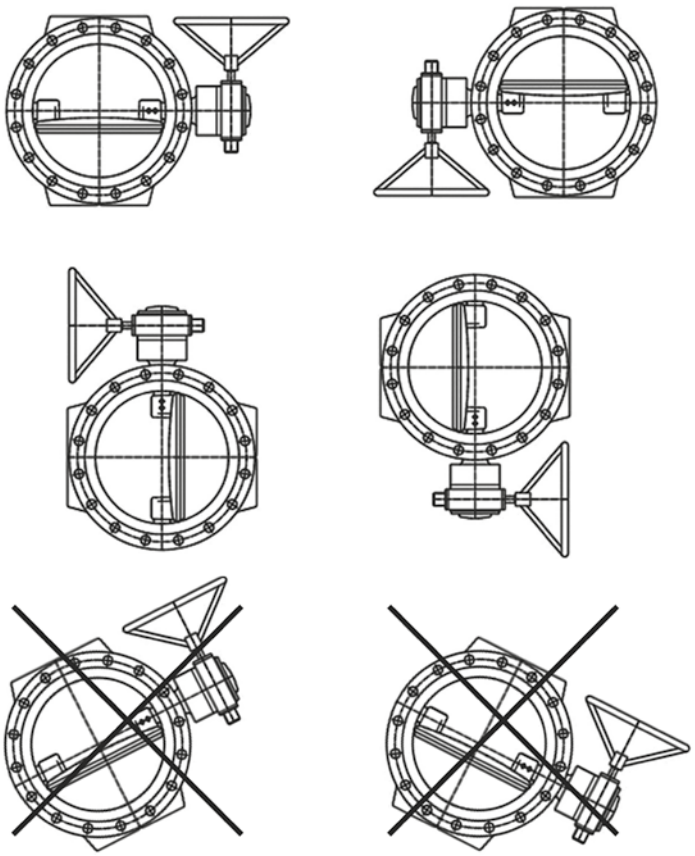
Picture 1: Installation of FAF3900 Flanged Butterfly Valve at elbows and branches.

- When installing abutterfly valve downstream of a control valve of a plunger valve, make sure that there is enough space between them (minimum 10xDN)



BUTTERFLY VALVE
DOUBLE ECCENTRIC FLANGED
FAF 3800

- Picture 2: Installation of FAF3900 Flanged Butterfly Valve with control valves installed upstream



Associated Products for the Double Eccentric Flanged Butterfly Valve Range

3960
FLANGE ADAPTOR

3900
DISMANTLING JOINT

5000
RUBBER
EXPANSION JOINT

2280
CHECK VALVE TILTING

3780
ELECTRIC ACTUATOR

2500
Y-TYPE STRAINER

7330
DYNAMIC ARV

BUTTERFLY VALVE U TYPE
FAF 3800U

PRODUCTION STANDARDS

DN40 →DN2000
PN 10-16

Design	EN 593
Connection	EN 1092-2 ISO 7005-2 Flanged
End Connection	EN 558 Series 20
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy WRAS Approved (Optional)

Features

- PTFE bushing ensures maximum shaft support.
- 360° polished disc assures a positive on-off action.
- Hard-backed cartridge seat.
- Universal ISO5211 mounting pad.
- Flow curve tends to a straight line, offering excellent regulation performance.
- Bubble-tight sealing with no leakage during pressure tests.
- Wide selection of materials applicable for various mediums.
- Higher thicknesses are available upon request.
- Stem sealing is not easily deformed, avoiding leakage issues.
- Overall support is good, stable, and solid.
- The use of less rubber in the seat results in minimal expansion, making it easy to control the torque value within an appropriate range.
- Applies to two pieces of non-sealed connection; the structure is simple and convenient for maintenance.
- The butterfly disc has an automatic alignment function, achieving a tight combination of disc and seat.
- Phenolic back seat features no loss, tensile strength, anti-leak properties, and convenient replacement.
- The seat sealing surface and phenolic back act as a whole, reducing deformation and extending the service life.

Temperature

- Maximum working temperature -10°C / 100°C Peak temperature 150°C in short-term operations. (EPDM)
- Maximum working temperature -10°C / 90°C Peak temperature 110°C in short-term operations. (NBR)
- Maximum working temperature -10°C / 225°C Peak temperature 250°C in short-term operations. (VITON)

Product Description

The FAF3800U U-Type Flanged Butterfly Valve is a resilient-seated, double-flange design with a centric bearing disc. The valve features a simple and compact construction, allowing for quick 90º on-off operation. It has a straightforward structure, excellent interchangeability, and an affordable price.

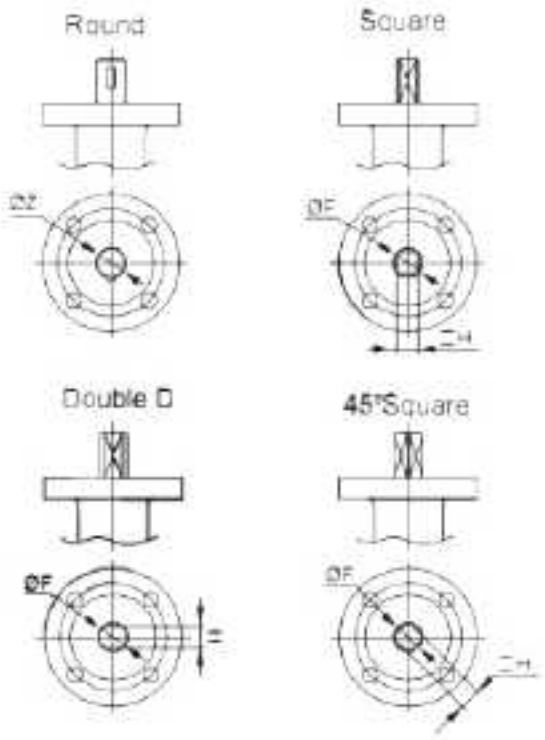
Versions

- Standard version with gearbox
- Prepared for electrical actuator
- With electrical actuator
- Custom production for specific orders

Scope of Application

- Chamber installation
- Installation in plants
- Pipelines
- Water treatment plants
- Pumping stations
- Tanks
- Seawater applications
- Power plants (cooling water pipelines)
- Industry

BUTTERFLY VALVE U TYPE
FAF 3800U



MATERIAL SELECTION	
Body	EN-GJL-250 Cast Iron / GG25 EN-GJS-400 Ductile Iron / GGG40
Disc	A351 CF8M Stainless Steel EN-GJS-400 Ductile Iron / GGG40
Stem	1.4401 - AISI 316 Stainless Steel 1.4021 - AISI 420 Stainless Steel
Sealing	EPDM NBR

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

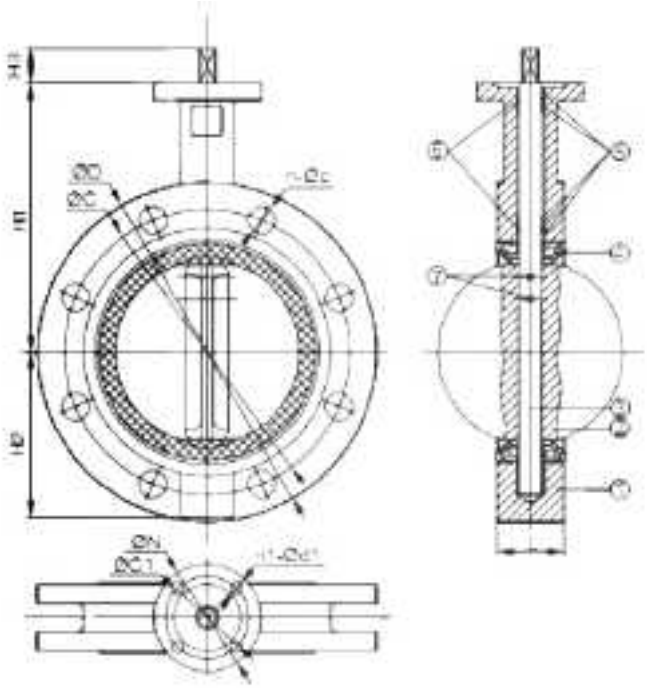
- For proper use and safety precautions please follow the installation and operating instructions.

Material List

NO	ITEM	MATERIALS
1	BODY	EN-GJL-250 CAST IRON
2	DISC	A351 CF8M STAINLESS STEEL
3	STEM	1.4401 - AISI 316 STAINLESS STEEL
4	SEAT	EPDM
5	BUSHING	PTFE
6	O-RING	EPDM
7	PIN	A351 CF8M STAINLESS STEEL

BUTTERFLY VALVE U TYPE
FAF 3800U

Technical Details & Drawing, Dimensions



Size		L	H1	H2	H3	ISO5211				DIN2501 PN16			φZ	φF	H
DN	NPS					TOP	φN	ΦC1	n1-φd1	ΦD	φC	n-φd			
40	1.5"	33	139	75	29	F05	65	50	4-φ8	150	110	4-φ18	12.6	12.1	9
50	2"	43	161	82.5	29	F05	65	50	4-φ8	165	125	4-φ18	12.6	12.1	9
65	2-1/2"	46	175	92.5	29	F05	65	50	4-φ8	185	145	4-φ18	12.6	12.1	9
80	3"	46	181	100	29	F05	65	50	4-φ8	200	160	8-φ18	12.6	12.1	9
100	4"	52	200	110	29	F07	90	70	4-φ10	220	180	8-φ18	15.77	14.1	11
125	5"	56	213	125	29	F07	90	70	4-φ10	250	210	8-φ18	18.92	18.1	14
150	6"	56	226	142.5	29	F07	90	70	4-φ10	285	240	8-φ22	18.92	18.1	14
200	8"	60	260	170	35	F010	125	102	4-φ12	340	295	12-φ22	22.1	22.2	17
250	10"	68	292	202.5	35	F010	125	102	4-φ12	405	355	12-φ26	28.45	28.2	22
300	12"	78	337	230	35	F010	125	102	4-φ12	460	410	12-φ26	31.6	28.2	22
350	14"	78	368	260	45	F010	125	102	4-φ12	520	470	16-φ26	31.6	28.2	22
400	16"	102	400	290	51.2	F014	175	140	4-φ18	580	525	16-φ30	33.15	28.2	22
450	18"	114	422	324	51.2	F014	175	140	4-φ18	640	585	20-φ30	38	36.2	27
500	20"	127	480	357.5	64.2	F014	175	140	4-φ18	715	650	20-φ33	41.15	36.2	27
550	22"	154	537	378	70.2	F016	210	165	4-φ22	N/A	N/A	N/A	50.65	48.2	36
600	24"	154	562	420	70.2	F016	210	165	4-φ22	840	770	20-φ36	50.65	48.2	36

Size		L	H1	H2	H3	ISO5211				DIN2501 PN10			φZ	φF	H
DN	NPS					TOP	ΦN	ΦC1	n1-Φd1	ΦD	ΦC	n-Φd			
700	28"	165	624	455	85	F25	300	254	8-φ18	895	840	24-Φ30	55	60.2	46
750	30"	167	646	499	86	F25	300	254	8-φ18	965	900	24-Φ30	55	60.2	46
800	32"	190	672	513	85	F25	300	254	8-φ18	1015	950	24-Φ33	55	60.2	46
900	36"	203	720	563	118	F25	300	254	8-φ18	1115	1050	28-Φ33	75	72.2	55
1000	40"	218	800	628	130	F25	300	254	8-φ18	1230	1160	28-Φ36	85	72.2	55
1050	42"	251	825	740	150	F25	300	254	8-φ18	N/A	N/A	N/A	85	72.2	55
1100	44"	254	825	740	128	F25	300	254	8-φ18	1340	1270	32-Φ36	95	72.2	55
1200	48"	254	940	844	150	F30	350	298	8-φ22	1455	1380	32-Φ39	105	98.2	75

DISMANTLING JOINT
FAF 3900

PRODUCTION STANDARTS

DN100 ➜DN2000
PN 10-16-25

Connection	FLANGED EN 1092-2 ISO 7005-2
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Features

- The dismantling joint FAF 3900 allows you to install fittings on the pipeline due to its variable mounting size, which has a positive effect on production time.
- There is no need for additional equipment for installation and dismantling.
- EPDM sealing kit.
- Manufactured from high-strength cast iron, providing high resistance to static loads and temperature fluctuations in the pipeline.
- Electrostatic epoxy powder coating technology ensures high adhesion of the coating to the surface of the housing.
- The use of a dismantling insert simplifies calculations for design organizations and allows you to avoid inaccuracies in estimates and drawings due to its adjustable length.
- It reduces operation time and is particularly suitable for simplifying the installation and removal of isolation valves, control valves, check valves, non-return valves, flow metering valves, pump sets, pressure reducing valves, flanged pipes, and fittings.

Temperature

- Maximum working temperature -10°C / 100°C Peak temperature 150°C in short-term operations. (EPDM)

Product Description

Dismantling Joints play a decisive role in the design and layout of pipelines and valves. They are essential aids during the installation and removal of pipe sections and valves. The FAF3900 Dismantling Joint provides easy installation of valves into pipelines due to its variable installation size.

Versions

- Standard version with galvanized steel bolts, studs, and washers
- Standard version with stainless steel bolts, studs, and washers
- Custom production for specific orders

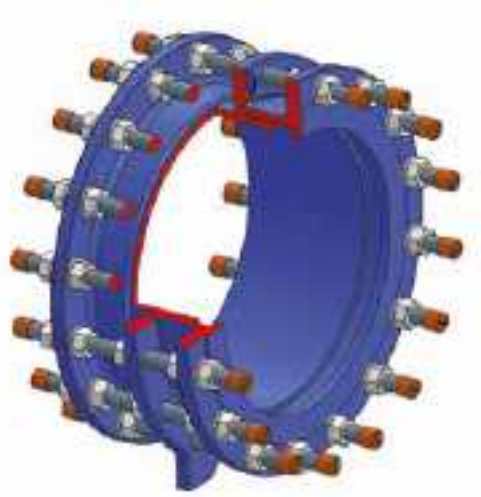
Scope of Application

- Potable water
- Distribution Lines
- Industrial Applications
- Water treatment plants

Note

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

DISMANTLING JOINT
FAF 3900

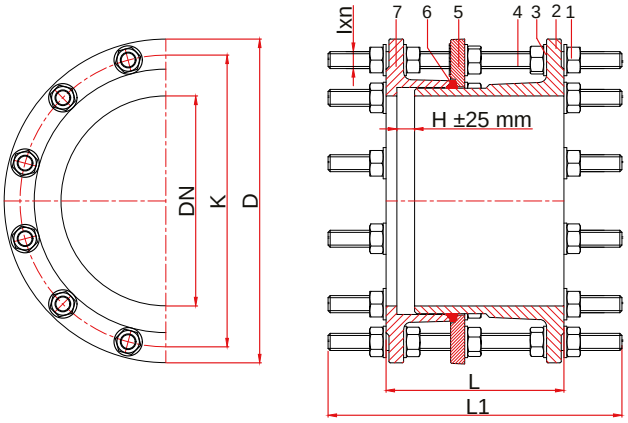


MATERIAL SELECTION	
Flange Long	EN GJS 500 (Ductile Iron)
Flange Short	EN GJS 500 (Ductile Iron)
Stud Nut	Galvanized steel (Default) 1.4021 - AISI 304 Stainless steel (Optional) 1.4401 - AISI 316 Stainless steel (On request))
Sealing	EPDM

PRODUCTS MODEL CODES	
FAF3900	**Dismantling Joint PN 16**
FAF3910	Dismantling Joint PN 10
FAF3925	Dismantling Joint PN 25

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
25	37,5	27,5
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

DISMANTLING JOINT
FAF 3900



NO	ITEM	MATERIALS
1	NUT	GALVANIZED STEEL / STAINLESS STEEL AISI 420
2	OUTER FLANGE	EN GJS 500
3	WASHER	GALVANIZED STEEL / STAINLESS STEEL AISI 420
4	STUD	GALVANIZED STEEL / STAINLESS STEEL AISI 420
5	PRESSING FLANGE	EN GJS 500
6	SEAL	EPDM
7	INNER FLANGE	EN GJS 500

DIMENSIONS PN16						
DN (mm)	D	K	Øl x n	L	L1	Weight (kg)
50	165	125	M16X4	180	280	
65	185	145	M16X4	180	280	
80	200	160	M16X8	200	320	
100	220	180	M16X8	200	320	19.6
125	250	210	M16X8	200	320	23.5
150	285	240	M20X8	200	320	31,4
200	340	295	M20X12	220	340	46,1
250	400	355	M24X12	230	370	62,5
300	455	410	M24X12	250	410	79,8
350	520	470	M24X16	260	410	105
400	580	525	M27X16	270	430	147,3
450	640	585	M27X20	270	430	150
500	715	650	M30X20	280	440	153
600	840	770	M33X20	300	500	209
700	910	840	M33X24	300	500	254,4
800	1025	950	M36X24	320	520	310
900	1125	1050	M36X28	320	520	370
1000	1255	1170	M39X28	340	565	655
1200	1485	1390	M45X32	360	605	730
1400	1685	1590	M45X36	380	630	890

DIMENSIONS PN16						
DN (mm)	D	K	Øl x n	L	L1	Weight (kg)
50	165	125	M16X4	180	280	
65	185	145	M16X4	180	280	
80	200	160	M16X8	200	320	
100	220	180	M16X8	200	320	19.6
125	250	210	M16X8	200	320	23,5
150	285	240	M20X8	200	320	31,4
200	340	295	M20X8	220	340	43,2
250	400	350	M20X12	220	360	59,6
300	455	400	M20X12	220	360	69,1
350	505	460	M20X16	230	360	88,4
400	565	515	M24X16	230	370	107,3
450	615	565	M24X20	250	390	130,6
500	670	620	M24X20	260	390	152
600	780	725	M27X20	260	410	202
700	895	840	M27X24	260	410	248,2
800	1015	950	M30X24	290	460	323
900	1115	1050	M30X28	290	460	416
1000	1230	1160	M33X28	290	500	491
1200	1455	1380	M36X32	320	520	730
1400	1675	1590	M39X36	360	600	890

DISMANTLING JOINT
FAF 3900

Advantages of Dismantling Joints

- • Simplifies the installation and replacement of flange equipment during retrofitting.
- • The dismantling insert allows for adding, repairing, or replacing flange equipment on the pipeline.
- • Thanks to the adjustable mounting size, eliminates the need for precise measurements during flange connection.
- • Reliability and durability.
- • Excellent performance under various operating conditions.
- • No need for complex equipment for installation (just a set of wrenches is sufficient), and can be removed at any time.
- • 100% sealing of the connection, due to the presence of a seal.
- • Possibility of adjusting the length of bolts.
- • Wide range of applications - can be installed on almost any structures and pipelines.

Installation

Tightening the tie bolts requires only a wrench and a torque wrench. Due to the fewer number of bolts compared to the holes in the pipeline/flange, and the fact that the bolts serve as connectors for the flanges, the installation process is expedited, providing a reliable, load-resistant system with nominal pressure equal to the flange pressures.

The range consists of

A wide range of diameters from DN 100 to DN 2000 is available. We offer options for nominal pressures and various flange drillings. Upon request, we can manufacture dismantling inserts of larger sizes and non-standard connections.

The Range

Check the flanges to ensure that you are using the correct dismantling insert FAF3900. Also, verify the installation length to ensure the correct mounting distance is maintained. • Ensure that no foreign objects have gotten between the gasket and the seal. • Avoid using loose tie bolts or bolts that are too short to achieve the required tightening torque. • Prevent foreign objects from entering the threads to ensure proper tightening. • Be particularly careful when tightening the bolts and follow the recommended torque tightening process.

Associated Products for Dismantling Joints Range

6000
GATE VALVE RESILIENT
SEATED (F4)

3800 BUTTERFLY VALVE
FLANGED DOUBLE
ECCENTRIC

2280
CHECK VALVE TILTING

FLANGE ADAPTOR
FAF 3960

Characteristics

- Easy and quick to install in field conditions.
- Does not require the use of additional gaskets.
- Does not require the use of special tools for installation.
- Suitable for installation on steel, cast iron, asbestos-cement, plastic, and fiberglass reinforced pipes.
- If necessary, for installing smaller diameter pipeline fittings on larger diameter pipelines, an adapter with a reduced passage can be used.
- Connection type to the pipeline - socket.
- Connection type to the equipment - flanged.
- High sealing ensures no loss of pumped medium and complies with environmental standards.

Temperature

- Maximum working temperature -10°C / 100°C Peak temperature 130°C in short-term operations. (EPDM)

PRODUCTION STANDARDS

DN40→DN600
PN 16

Connection	EN593
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Product Description

The flange adapter FAF3960 is designed for installing flange equipment on various types of pipelines.

Variations

- Standard version
- Custom manufacturing according to customer's specific requirements.

Application

- Assembly of mounting units for various types and sizes of pipes.

Enviroment

- Water, Wastewater

Scope of Application

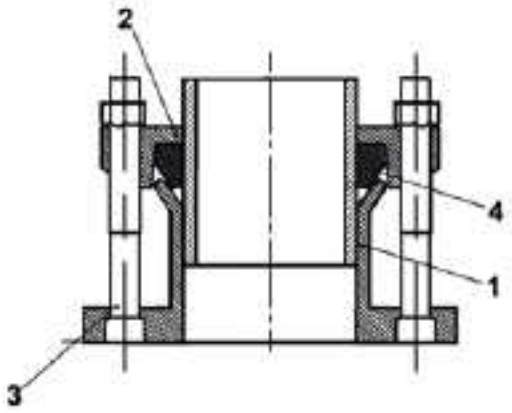
- Assembly of Flanged Installation Units to various pipes with different sizes and materials.

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
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.

FLANGE ADAPTOR
FAF 3960



NO	ITEM	MATERIALS
1	BODY	Ductile iron GGG50 EN 1563
2	COUNTER FLANGE	Ductile iron GGG50 EN 1563
3	SCREW*	Stainless steel AISI 304 1449-2 304 S15
4	GASKET	EPDM ACS EN 681-1

Type	Internal Diameter (b)	Internal Height (h1)	"Total Adaptor Height (h2)"	"Adaptor Coupling Thickness (mm)"	Flange	"Flange Outside Diameter (d)"	Sup-pression Flange	Bolts and Nuts	Gasket	Coating
DN 80 88*103 FLANGE ADAPTOR	103 mm	125 mm	200 mm	5 MM ST37	"DN 80 PN 10-16"	EN 1092	GGG 40	"M14/200 ST37 4 sets"	EPDM	Epoxy (Blue Color)
DN 100 109*126 FLANGE ADAPTOR	128 mm	125 mm	200 mm	5 MM ST37	"DN 100 PN 10-16"	EN 1092	GGG 40	"M14/200 ST37 4 sets"	EPDM	Epoxy (Blue Color)
DN 125 138*153 FLANGE ADAPTOR	155 mm	125 mm	200 mm	5 MM ST37	"DN 125 PN 10-16"	EN 1092	GGG 40	"M14/200 ST37 4 sets"	EPDM	Epoxy (Blue Color)
DN 150 159*181 FLANGE ADAPTOR	183 mm	125 mm	200 mm	5 MM ST37	"DN 150 PN 10-16"	EN 1092	GGG 40	"M14/200 ST37 4 sets"	EPDM	Epoxy (Blue Color)
DN 200 215*230 FLANGE ADAPTOR	243 mm	125 mm	200 mm	5 MM ST37	"DN 200 PN 10-16"	EN 1092	GGG 40	"M14/200 ST37 4 sets"	EPDM	Epoxy (Blue Color)
DN 200 230*243 FLANGE ADAPTOR	243 mm	125 mm	200 mm	5 MM ST37	"DN 200 PN 10-16"	EN 1092	GGG 40	"M14/200 ST37 4 sets"	EPDM	Epoxy (Blue Color)
DN 250 280*300 FLANGE ADAPTOR	302 mm	125 mm	200 mm	5 MM ST37	"DN 250 PN 10-16"	EN 1092	GGG 40	"M14/260 ST37 6 sets"	EPDM	Epoxy (Blue Color)
"DN 300 315*332 FLANGE ADAPTOR"	334 mm	125 mm	200 mm	5 MM ST37	"DN 300 PN 10-16"	EN 1092	GGG 40	"M14/260 ST37 6 sets"	EPDM	"Epoxy (Blue Color)"
"DN 300 340*357 FLANGE ADAPTOR"	357 mm	125 mm	200 mm	5 MM ST37	"DN 300 PN 10-16"	EN 1092	GGG 40	"M14/260 ST37 6 sets"	EPDM	"Epoxy (Blue Color)"
"DN 350 369*385 FLANGE ADAPTOR"	391 mm	125 mm	200 mm	5 MM ST37	"DN 350 PN 10-16"	EN 1092	GGG 40	"M14/260 ST37 6 sets"	EPDM	"Epoxy (Blue Color)"
"DN 350 394*411 FLANGE ADAPTOR"	413 mm	125 mm	200 mm	5 MM ST37	"DN 350 PN 10-16"	EN 1092	GGG 40	"M14/260 ST37 8 sets"	EPDM	"Epoxy (Blue Color)"
"DN 400 418*435 FLANGE ADAPTOR"	437 mm	125 mm	200 mm	5 MM ST37	"DN 400 PN 10-16"	EN 1092	GGG 40	"M14/260 ST37 8 sets"	EPDM	"Epoxy (Blue Color)"
"DN 400 449*472 FLANGE ADAPTOR"	474 mm	125 mm	200 mm	5 MM ST37	"DN 400 PN 10-16"	EN 1092	GGG 40	"M14/260 ST37 8 sets"	EPDM	"Epoxy (Blue Color)"
"DN 500 495*512 FLANGE ADAPTOR"	514 mm	125 mm	200 mm	5 MM ST37	"DN 500 PN 10-16"	EN 1092	GGG 40	"M14/260 ST37 10 sets"	EPDM	"Epoxy (Blue Color)"

FLANGE ADAPTOR
FAF 3960

Type	Internal Diameter (b)	Internal Height (h1)	"Total Adaptor Height (h2)"	"Adaptor Coupling Thickness (mm)"	Flange	"Flange Outside Diameter (d)"	Suppression Flange	Bolts and Nuts	Gasket	Coating
"DN 500 521*538 FLANGE ADAPTOR"	540 mm	125 mm	200 mm	5 MM ST37	"DN 500 PN 10-16"	EN 1092	GGG 40	"M14/260 ST37 10 sets"	EPDM	"Epoxy (Blue Color)"
"DN 500 552*572 FLANGE ADAPTOR"	574 mm	125 mm	200 mm	5 MM ST37	"DN 500 PN 10-16"	EN 1092	GGG 40	"M14/260 ST37 10 sets"	EPDM	"Epoxy (Blue Color)"
"DN 600 601*618 FLANGE ADAPTOR"	620 mm	125 mm	200 mm	5 MM ST37	"DN 600 PN 10-16"	EN 1092	GGG 40	"M14/260 ST37 12 sets"	EPDM	"Epoxy (Blue Color)"
"DN 600 623*640 FLANGE ADAPTOR"	640 mm	125 mm	200 mm	5 MM ST37	"DN 600 PN 10-16"	EN 1092	GGG 40	"M14/260 ST37 12 sets"	EPDM	"Epoxy (Blue Color)"
"DN 600 675*700 FLANGE ADAPTOR"	700 mm	125 mm	200 mm	5 MM ST37	"DN 600 PN 10-16"	EN 1092	GGG 40	"M14/260 ST37 12 sets"	EPDM	"Epoxy (Blue Color)"

COUPLING
FAF 3970

PRODUCTION STANDARDS

DN40→DN600
PN 16

Product Description

FAF3970 pipe couplings is a semi-connection part enables the necessary repair and modifications on the pipelines, connecting pipes with different type and diameter.

Versions

- Standard version
- Custom production for specific orders

Scope of Application

- Universal couplings are used as a junction products between pipes or tubes of various material: steel, cast iron, PVC, etc.

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

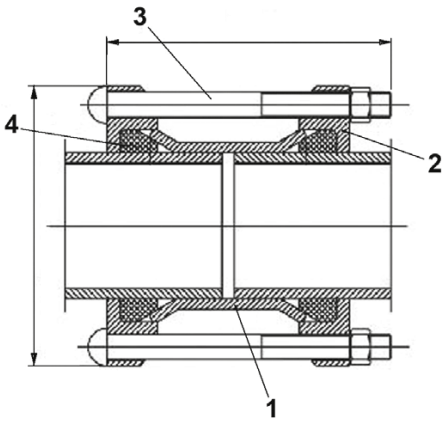
- For proper use and safety precautions please follow the installation and operating instructions.

Features

- No need to cut off the whole flow on the pipeline.
- Can be applied very quickly and easily in field conditions.
- No need to use additional sealing gaskets.
- No need to use special tools for installation.
- Can be used with pipes made of steel, ductile iron, PVC, cast iron, GRP, and concrete pipes with asbestos.
- Pipes with high diameter differences can be connected to each other by using reduced bore pipe couplings.
- No need to use special tools for installation.

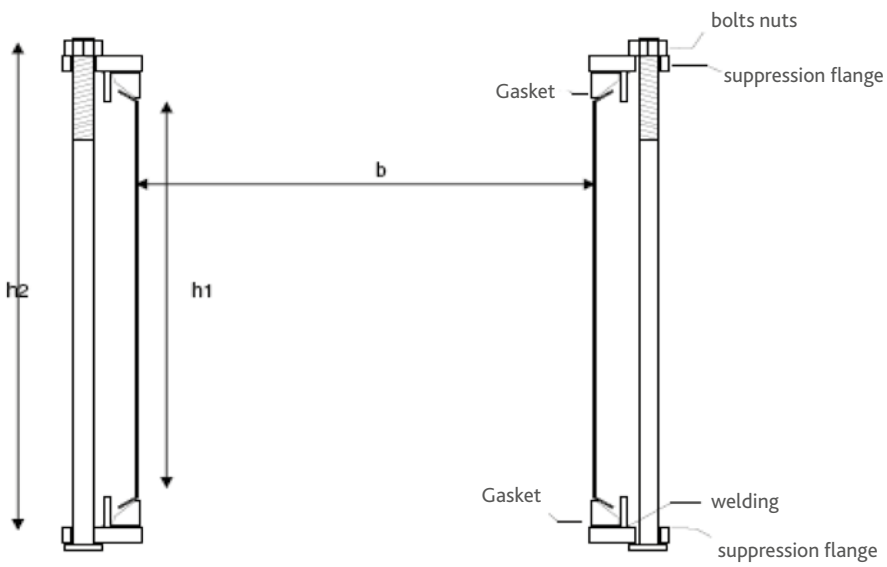
Temperature

- Maximum working temperature -10°C / 100°C Peak temperature 130°C in short-term operations. (EPDM)



NO	ITEM
1	SLEEVE
2	END RING
3	BOLT AND NUT
4	GASKET

COUPLING
FAF 3970



Type	Internal Diameter (b)	Internal Height (h1)	"Total Adaptor Height (h2)"	"Adaptor Coupling Thickness (mm)"	Suppression Flange	Bolts and Nuts	Gasket	Pressure Range	Coating
"DN 80 88*103 Coupling"	103 mm	190 mm	260 mm	5 mm ST37	GGG 40	"M14/270 ST 37 4 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 100 109*126 Coupling"	128 mm	190 mm	260 mm	5 mm ST37	GGG 40	"M14/270 ST 37 4 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 125 138*153 Coupling"	155 mm	190 mm	260 mm	5 mm ST37	GGG 40	"M14/270 ST 37 4 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 150 159*181 Coupling"	183 mm	180 mm	260 mm	5 mm ST37	GGG 40	"M14/270 ST 37 4 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 200 215*230 Coupling"	243 mm	180 mm	260 mm	5 mm ST37	GGG 40	"M14/270 ST 37 4 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 200 230*243 Coupling"	243 mm	180 mm	260 mm	5 mm ST37	GGG 40	"M14/270 ST 37 4 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 250 270*285 Coupling"	302 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 6 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 250 280*300 Coupling"	302 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 6 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 300 315*332 Coupling"	334 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 6 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 300 340*357 Coupling"	359 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 6 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 350 369*385 Coupling"	391 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 6 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 350 394*411 Coupling"	413 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 8 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 400 418*435 Coupling"	437 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 8 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 400 449*472 Coupling"	474 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 8 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 450 470*485 Coupling"	489 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 8 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 500 495*512 Coupling"	514 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 10 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 500 521*538 Coupling"	540 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 10 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 500 552*572 Coupling"	574 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 12 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 600 601*618 Coupling"	620 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 10 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 600 623*640 Coupling"	640 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 12 Sets"	EPDM	10-16-25	Epoxy (Blue Color)
"DN 600 675*700 Coupling"	700 mm	250 mm	350 mm	5 mm ST37	GGG 40	"M14/360 ST 37 12 Sets"	EPDM	10-16-25	Epoxy (Blue Color)

BRASS BALL VALVE
FAF 4000

PRODUCTION STANDARTS

DN15 →DN100
PN 16-25

Design	TSE CEN / TS 13547
Connection	Threaded EN ISO 228-1
Face to Face	TSE CEN / TS 13547
Marking	TSE CEN / TS 13547
Tests	TSE CEN / TS 13547

Features

- It has brass material, which is made of copper and zinc composite. It is manufactured by die forcing in moulds and by precision machining on CNC machines.
- FAF branded brass valves made of MS58 quality brass. It has high durability and impact resistance at low temperature. It can be used at water installations.
- The valves are suitable for line assembly in pipeline, the principal aim is to open and close flow in distribution systems.
- Recommended for open/close applications.
- It is recommended to wrap the valve body with wet rags or employ other heat absorbing techniques to avoid damaging valve seats and thread sealant.
- Tightening stem packing after soldering may be required.
- Leakproof stem.
- Stock piled for quick delivery.

Temperature

- -10, +110 °C

Product Description

FAF4000 Brass Ball Valve works parallel or vertical position to flow axis by rotating quarter tour (90 degrees) between teflon seats via a ball which is big as flow section through control shaft.

Scope of Application

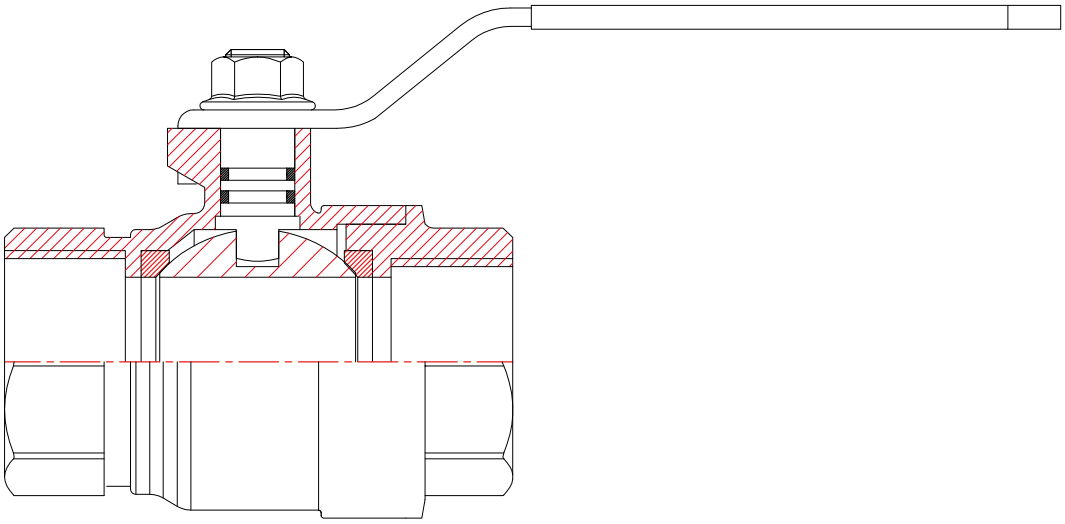
- Hot & cold water
- Steam
- Lubricants
- Heating & cooling
- Housing & industrial applications
- Compressed air installations
- Liquid fuels
- Various gases (excluding flammable gases)

PRODUCTS MODEL CODES	
FAF4000	**BALL VALVE**
FAF4100	GAS BALL VALVE
FAF4200	BRASS Y-STRAINER
FAF4300	BRASS SPRING CHECK VALVE
FAF4350	BRASS SWING CHECK VALVE

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
25	37,5	27,5
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

BRASS BALL VALVE
FAF 4000

Technical Details & Drawing, Dimensions



MATERIAL SELECTION	
Body	CuZn40Pb2 -Nickel Plated
Bonnet	CuZn40Pb2 - Nickel Plated
Lever	ST37 Steel + PVC Coated
Stem	CuZn39Pb3
Ball	CuZn40Pb2 - Chrome Plated
Seals	PTFE - Teflon
O-Ring	NBR
Nut	Galvanized Coated Steel

Pipe Thread	Nominal Dimension	d(mm)	L(mm)	B(mm)	C(mm)
1/2''	15	14	50	85	43
3/4''	20	17	57	85	47
1''	25	24	71	97	47
1 1 /4''	32	30	75	111	60
1 1/2''	40	38	87	153	77
2''	50	50	105	153	85

GAS BALL VALVE
FAF 4100

PRODUCTION STANDARDS

DN15 →DN100
PN 16-25

Design	EN 331
Connection	Threaded EN ISO 228-1
Face to Face	EN 331
Marking	EN 331
Tests	EN 331

Features

- It has brass material, which is made of copper and zinc composite. It is manufactured by die forcing in moulds and by precision machining on CNC machines.
- FAF branded brass valves made of MS58 quality brass. It has high durability and impact resistance at low temperature. It can be used at water installations.
- The valves are suitable for line assembly in pipeline, the principal aim is to open and close flow in distribution systems.
- Recommended for open/close applications.
- It can be manufactured as FAF4110 Locked ball valve, which provides (Open-Close) locking option
- Leakproof stem.
- Stock piled for quick delivery.

Temperature

- -10, +110 °C

Product Description

FAF4100 Brass Ball Valve for gas applications works parallel or vertical position to flow axis by rotating quarter tour (90 degrees) between teflon seats via a ball which is big as flow section through control shaft.

Scope of Application

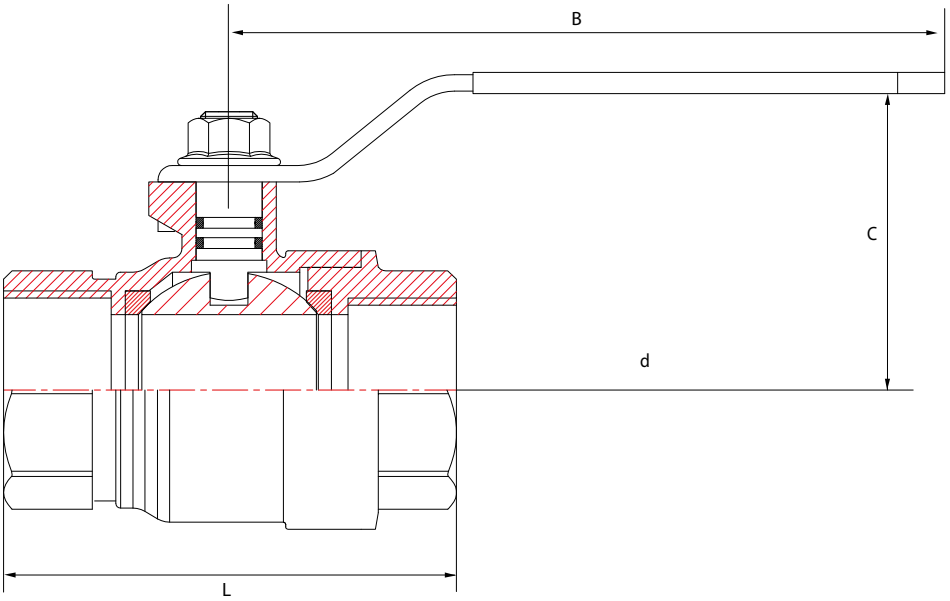
- Gas
- Pressurized air
- LPG
- Steam
- Heating & cooling
- Housing & industrial applications
- Compressed air installations
- Various gases (excluding flammable gases)

PRODUCTS MODEL CODES	
FAF4100	**GAS BALL VALVE**
FAF4110	GAS BALL VALVE with locking option
FAF4000	BALL VALVE
FAF4200	BRASS SPRING CHECK VALVE
FAF4300	BRASS SWING CHECK VALVE
FAF4350	BRASS SWING CHECK VALVE

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
25	37,5	27,5
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

GAS BALL VALVE
FAF 4100

Technical Details & Drawing, Dimensions



MATERIAL SELECTION	
Body	CuZn40Pb2 -Nickel Plated
Bonnet	CuZn40Pb2 - Nickel Plated
Lever	ST37 Steel + PVC Coated
Stem	CuZn39Pb3
Ball	CuZn40Pb2 - Chrome Plated
Seals	PTFE - Teflon
O-Ring	NBR
Nut	Galvanized Coated Steel

Pipe Thread	Nominal Dimension	d(mm)	L(mm)	B(mm)	C(mm)
1/2''	15	14	50	85	43
3/4''	20	17	57	85	47
1''	25	24	71	97	47
1 1 /4''	32	30	75	111	60
1 1/2''	40	38	87	153	77
2''	50	50	105	153	85

BRASS Y-STRAINER
FAF 4200

PRODUCTION STANDARDS

DN15 →DN50
PN 16-25

Connection	Threaded EN ISO 228-1
Face to Face	EN 331
Marking	EN 19
Tests	EN 12266-1

Features

- It provides protection to sensitive and high cost installation equipment from mass particles.
- By removing the cover placed on the body, detailed cleaning can be made or filter can be replaced
- The hole diameters on the filters are determined in order to have a minimum effect on the head loss and flow rate
- FAF branded brass products made of MS58 quality brass. It has high durability and impact resistance at low temperature.
- Stock piled for quick delivery.

Temperature

- -10, +110 °C

Product Description

FAF 4200 Brass Strainer is used for filtering the mass particles inside the flow through the flow passing inside the steel filter chamber situated in the body.

Scope of Application

- Hot & cold water
- Lubricants
- Heating & cooling
- Housing & industrial applications
- Compressed air installations

PRODUCTS MODEL CODES	
FAF4200	**BRASS Y-STRAINER**
FAF4000	BRASS BALL VALVE
FAF4100	BRASS BALL VALVE - GAS
FAF4300	BRASS SPRING CHECK VALVE
FAF4350	BRASS SWING CHECK VALVE

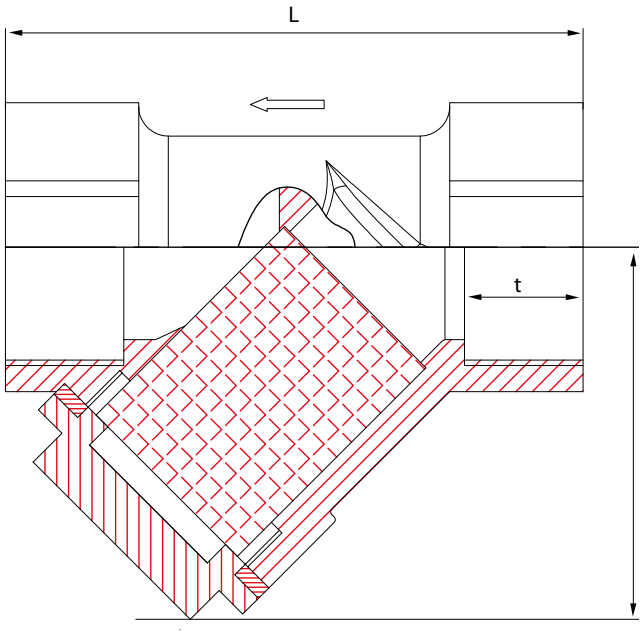
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

MATERIAL SELECTION

Body	CuZn40Pb2 - Brass
Bonnet	CuZn40Pb2 - Brass
Filter	AISI 304 Stainless Steel Mesh - 50 mesh/cm2
O-Ring	EPDM

BRASS Y-STRAINER
FAF 4200

Technical Details & Drawing, Dimensions



DN	ΦD	G	t	L	H
15	15	1/2"	12	57	39
20	20	3/4"	12	64.5	44
25	25	1"	14.5	78	55
32	32	1 1/4"	13.5	94	67
40	40	1 1/2"	13	98.5	71
50	50	2"	15	111.5	95

* Valves can be produced with bigger sizes when requested.

SPRING SILENT CHECK VALVE
FAF 4300

PRODUCTION STANDARDS

DN15 →DN80
PN 10-16-25

Connection	Threaded EN ISO 228-1
Marking	EN 19
Tests	EN 12266-1

Features

- ABS plastic disc, which is positioned vertical to flow direction seats on sealing surface that processed on the body via expander, force and provides %100 tight sealing.
- The expander shortens and the disc shrinks back and let to flow between the body and the disc when the determined flow in the system starts.
- It can be used at horizontal and vertical positions.
- FAF branded brass products made of MS58 quality brass. It has high durability and impact resistance at low temperature.
- Stock piled for quick delivery.

Product Description

FAF4300 Spring Silent Check Valve let to fluids in the facility required downstream and ceases the flow in case of reverse flow.

Scope of Application

- Hot & cold water
- Lubricants
- Heating & cooling
- Housing & industrial applications
- Compressed air installations

Temperature

- -10, +110 °C

PRODUCTS MODEL CODES	
FAF4300	**BRASS SPRING CHECK VALVE**
FAF4350	BRASS SWING CHECK VALVE
FAF4000	BALL VALVE
FAF4100	GAS BALL VALVE
FAF4200	BRASS Y-STRAINER

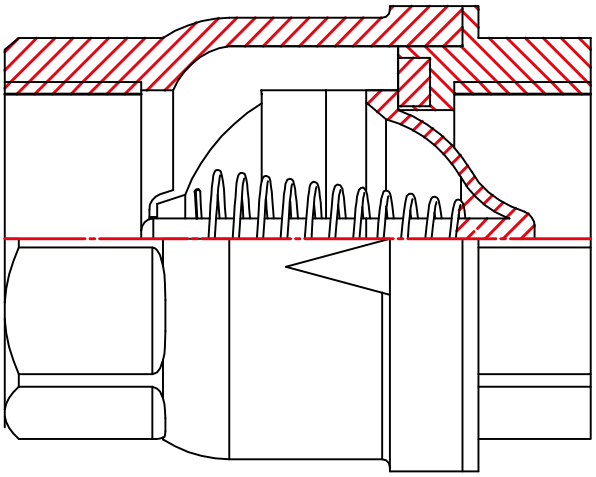
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
25	37,5	27,5
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

MATERIAL SELECTION

Body	CuZn40Pb2 - Brass
Bonnet	CuZn40Pb2 - Brass
Disc	ABS Plastic
O-Ring	EPDM

SPRING SILENT CHECK VALVE
FAF 4300

Technical Details & Drawing, Dimensions



Pipe Thread	Nominal Dimension	d(mm)	L(mm)	B(mm)	C(mm)
1/2''	15	14	50	85	43
3/4''	20	17	57	85	47
1''	25	24	71	97	47
1 1 /4''	32	30	75	111	60
1 1/2''	40	38	87	153	77
2''	50	50	105	153	85

* Valves can be produced with bigger sizes when requested.

SWING CHECK VALVE
FAF 4350

PRODUCTION STANDARTS

DN15 →DN50
PN 16-25

Connection	Threaded EN ISO 228-1
Marking	EN 19
Tests	EN 12266-1

Features

- Stainless steel disc, which is positioned vertical to flow direction seats on sealing surface that processed on the body via expander, force and provides %100 tight sealing.
- The expander shortens and the disc shrinks back and let to flow between the body and the disc when the determined flow in the system starts.
- It can be used at horizontal and vertical positions.
- FAF branded brass products made of MS58 quality brass. It has high durability and impact resistance at low temperature.
- Stock piled for quick delivery.

Product Description

FAF4300 Spring Silent Check Valve let to fluids in the facility required downstream and ceases the flow in case of reverse flow.

Scope of Application

- Hot & cold water
- Lubricants
- Heating & cooling
- Housing & industrial applications
- Compressed air installations

Temperature

- -10, +110 °C

PRODUCTS MODEL CODES	
FAF4300	BRASS SPRING CHECK VALVE
FAF4350	**BRASS SWING CHECK VALVE**
FAF4000	BALL VALVE
FAF4100	GAS BALL VALVE
FAF4200	BRASS Y-STRAINER

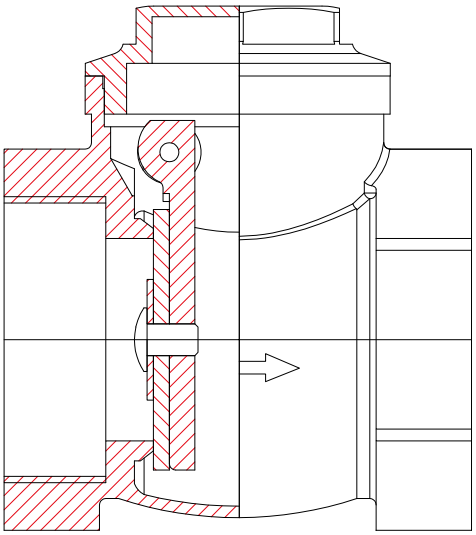
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
25	37,5	27,5
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

MATERIAL SELECTION

Body	CuZn40Pb2 - Brass
Bonnet	CuZn40Pb2 - Brass
O-Ring	EPDM

SWING CHECK VALVE
FAF 4350

Technical Details & Drawing, Dimensions



PN	G(mm)	B(mm)	C(mm)	(bar)
15	1/2''	44	46	10
20	3/4''	52	55	10
25	1''	62	63	10
32	1 1 /4''	72	76	8
40	1 1/2''	80	85	8
50	2''	93	100	8

* Valves can be produced with bigger sizes when requested.

ANGLE RADIATOR VALVE
FAF 4400

PRODUCTION STANDARDS

DN15	
Design	TS 579
Connection	Threaded EN ISO 228-1
Marking	EN 19
Tests	TS 579

Features

- Stainless steel disc, which is positioned vertical to flow direction seats on sealing surface that processed on the body via expander, force and provides %100 tight sealing.
- The expander shortens and the disc shrinks back and let to flow between the body and the disc when the determined flow in the system starts.
- It can be used at horizontal and vertical positions.
- FAF branded brass products made of MS58 quality brass. It has high durability and impact resistance at low temperature.
- Stock piled for quick delivery.

Temperature

- -10, +120 °C

Product Description

FAF4400 Angle Type Radiator Valve maintains %100 tight sealing by the disc seats on sealing within the flow section through rotating the handwheel.

Scope of Application

- Hot water
- Radiators
- Industrial Applications

PRODUCTS MODEL CODES	
FAF4400	**ANGLE RADIATOR VALVE**
FAF4400	THERMOSTATIC RADIATOR VALVE
FAF4500	STRAIGHT RADIATOR VALVE

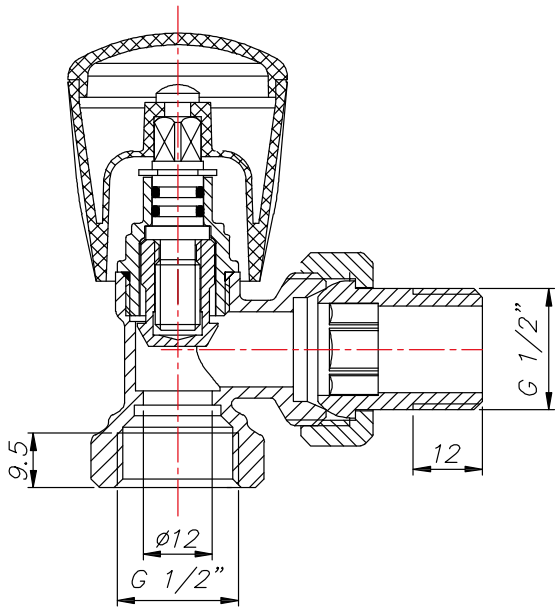
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

MATERIAL SELECTION

Body	CuZn40Pb2 - Brass, Nickel Plated
Sealing Group	CuZn40Pb2 - Brass
Nipple Joint Nut	CuZn40Pb2 - Brass, Nickel Plated
Handwheel	ABS
Coupling Bobbin	CuZn40Pb2 - Brass, Nickel Plated
Fastening screw	Galvanized Steel

ANGLE RADIATOR VALVE
FAF 4400

Technical Details & Drawing, Dimensions



A	B	R1	R2
24	72	1/2"	1/2"
16	71	1/2"	1/2"

* Valves can be produced with bigger sizes when requested.

STRAIGHT RADIATOR VALVE
FAF 4500

Features

- It is connected at entrance and exit of installation equipments of heat systems, set the flow adjustment and maintains the heating control.
- It can be installed to two pipes which are on the same line.
- FAF branded brass valves made of MS58 quality brass. It has high durability and impact resistance at low temperature.
- Stock piled for quick delivery.

Temperature

- -10, +110 °C

PRODUCTS MODEL CODES	
FAF4500	**STRAIGHT RADIATOR VALVE**
FAF4440	THERMOSTATIC RADIATOR VALVE
FAF4400	ANGLE RADIATOR VALVE
FAF4400	THERMOSTATIC RADIATOR VALVE

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
25	37,5	27,5
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

PRODUCTION STANDARTS

DN15

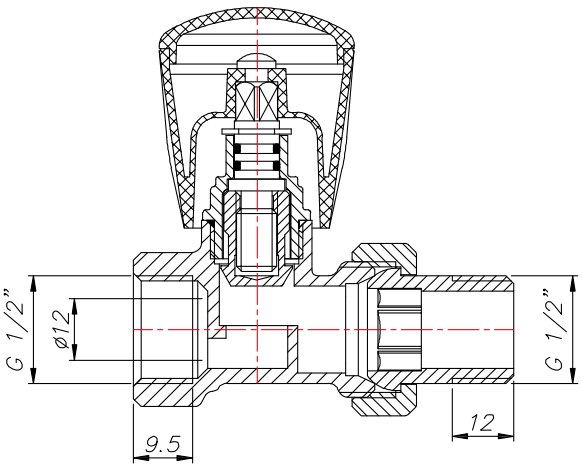
Design	TS 579
Connection	Threaded TS 579
Marking	TS 579
Tests	TS 579

Product Description

FAF4500 Angle type radiator valve maintains 100% tight sealing by the disc seats on sealing within the flow section through rotating the hand wheel.

Scope of Application

- Hot water
- Radiators
- Industrial Applications



MATERIAL SELECTION

Body	CuZn40Pb2 - Brass, Nickel Plated
Sealing Group	CuZn40Pb3 - Brass
Nipple Joint Nut	CuZn40Pb2 - Brass, Nickel Plated
Handwheel	ABS
Coupling Bobbin	CuZn40Pb2 - Brass, Nickel Plated
Fastening screw	Galvanized Steel

FLEXIBLE RUBBER JOINT
FAF 5000

PRODUCTION STANDARDS

DN25 ➔DN600
PN 10-16

Design	TS 10879/DIN 30680
Connection	Flanged TS EN 1092-1 / ISO 7005-1
Face to Face	TS 10879
Marking	EN19 / TS10879
Tests	TS10879
Pressure Rating	PN-10 / PN-16

Features

- Protects the pipeline from stresses that occur due to temperature changes when the system lengthens when heating or shortens when cooling.
- Compensates for axial, lateral and angular movements.
- No additional sealing required during installation.
- Movable flanges make installation easy.
- The housing is made from EPDM as standard; custom production from NBR is possible upon customer request.
- The body is reinforced with nylon cord and rigid steel wire rings.
- Unlike metal connections, which often require periodic replacement of the mating flange gaskets, FAF expansion joints without gaskets require virtually no maintenance throughout their service life.
- Rubber expansion joints are relatively lightweight, which helps reduce installation labor.
- Rubber expansion joints reduce heat loss, ensuring long service life without maintenance.
- Operation is prohibited if the product is damaged or cannot be repaired.

Temperature

- Maximum working temperature -10°C / 70°C Peak temperature 80°C in short-term operations. (EPDM)
- Maximum working temperature -5°C / 60°C Peak temperature 70°C in short-term operations. (NBR)

Product Description

The rubber flange compensator FAF5000 is part of a pipeline engineering system that allows you to smooth out vibrations in pipelines. It is used to compensate for thermal expansion and working displacements of connected pipelines, as well as to reduce the level of vibration and noise emanating from equipment in the system (pumping or compressor units.

Purpose

- Protection against vibration shocks
- Compensation for multi-level displacement and pipeline extension
- Suppression of vibration and noise
- Compensation for expansion caused by temperature differences
- Compensation for longitudinal pipeline displacements
- Reducing tension in the pipeline.

Scope of Application

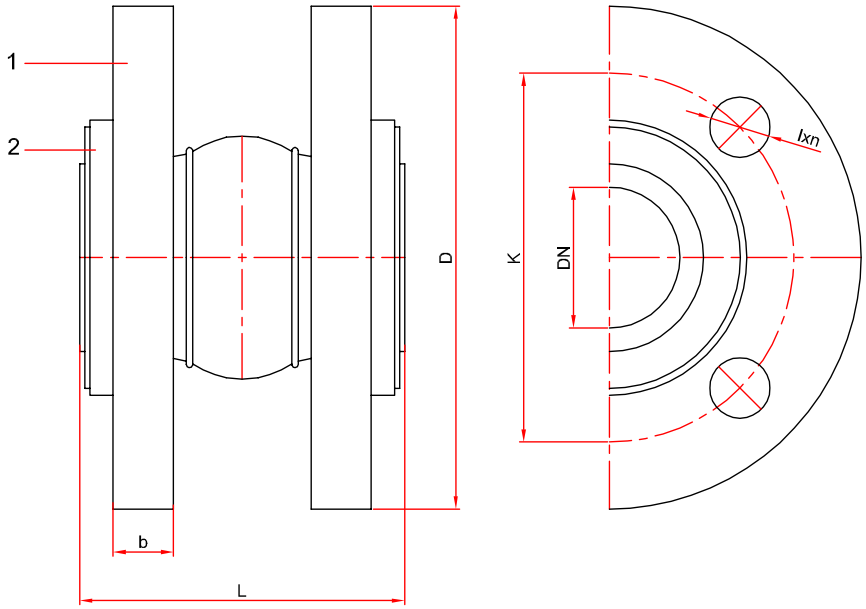
- Fans
- Vibration absorbers
- Coolers
- Air conditioning and ventilation systems
- Industrial piping systems
- Power plants
- Iron and steel industry
- Water and pollution control systems

Working environment

- Water, hot water, air, liquids and gases that are not aggressive to compensator materials .

FLEXIBLE RUBBER JOINT
FAF 5000

Technical Details & Drawing, Dimensions

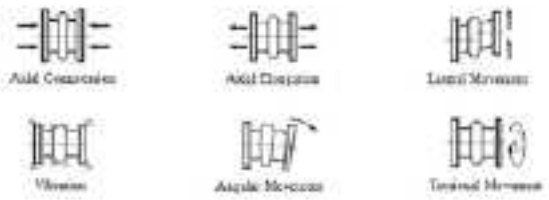


* Valves can be produced with bigger sizes when requested.

DN (mm)	PN	D	K	l x n	b	L	KG
25	16	115	85	14x4	16	95	2.90
32	16	140	100	18x4	18	95	3.50
40	16	150	110	18x4	18	95	4.90
50	16	165	125	18x4	20	105	5.80
65	16	185	145	18x4	20	115	7.20
80	16	200	160	18x8	20	135	8.10
100	16	220	180	18x8	22	150	11.10
125	16	250	210	18x8	22	165	14.20
150	16	285	240	22x8	24	180	19.80
200	16	340	295	22x12	26	210	26.30
250	16	405	355	26x12	29	230	34.00
300	16	460	410	26x12	32	245	44.00
350	16	520	470	26x16	35	240	54.00
400	16	565	515	26x16	32	245	
450	16	615	565	26x20	36	250	
500	16	670	620	26x20	38	270	
600	16	780	725	30x20	42	260	

FLEXIBLE RUBBER JOINT
FAF 5000

* FAF5060 Rubber expansion joint with ductile iron flanges.



MATERIAL SELECTION	
Body	Fabric Reinforced EPDM Steel Reinforced EPDM
Flange	Galvanized Steel Ductile Iron
Sealing	EPDM NBR

PRODUCTS MODEL CODES	
FAF5000	**RUBBER EXPANSION JOINT**
FAF5060	RUBBER EXPANSION JOINT - DI
FAF5070	RUBBER EXPANSION JOINT - THREADED

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

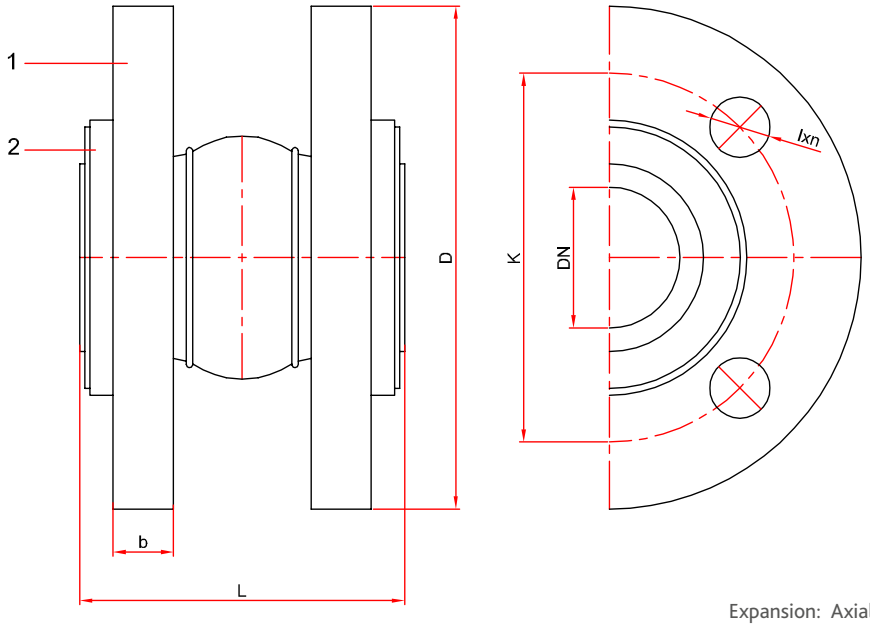
- For proper use and safety precautions please follow the installation and operating instructions.

Permissible displacements in operating mode				
DN	**Axial compres-sion**	**Axial tension**	**Angular deviation**	**Lateral deviation**
32-50	10	6	10°	10
65-80	15	8	10°	10
100-200	20	12	10°	15
250-600	20	14	10°	15

DN	**Axial compres-sion**	**Axial tension**	**Angular deviation**	**Lateral deviation**
32-50	8	3	5°	4
65-80	12	5	5°	5
100-200	18	6	5°	6
250-350	20	8	5°	10

FLEXIBLE RUBBER JOINT
FAF 5000

Technical Details & Drawing, Dimensions



Expansion: Axial + 15mm - 20 mm
Radial 15 mm
Angular 10°

* Valves can be produced with bigger sizes when requested.

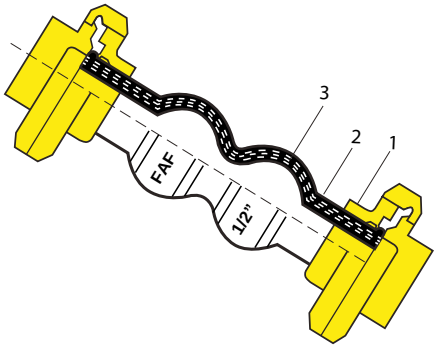
NO	ITEM	MATERIALS
1	Flange	Galvanized steel
2	Body	EPDM

DN(mm)	D	K	l x n	b	L	KG
20	105	75	14x4	16	100	1.50
25	115	85	14x4	16	100	2.30
32	140	100	19x4	18	100	2.90
40	150	110	19x4	19	100	3.50
50	165	125	19x4	19	100	3.90
65	185	145	19x4	19	100	4.90
80	200	160	19x8	19	100	5.10
100	220	180	19x8	19	100	6.80
125	250	210	19x8	19	120	8.60
150	285	240	23x8	19	120	12.30
200	340	295	23x12	20	120	16.60
250	400	355	28x12	22	130	

FLEXIBLE RUBBER JOINT
FAF 5000

MATERIAL SELECTION	
Body	Malleable Iron
Rubber	EPDM

DIMENSIONS						
			Axial Distance			
INC	DN(mm)	L	Extend	Contract	Lateral Distance	KG
1/2	15	200	5 - 6	22	22	0.45
3/4	20	200	5 - 6	22	22	0.75
1	25	200	5 - 6	22	22	1.20
11/4	32	200	5 - 6	22	22	1.50
11/2	40	200	5 - 6	22	22	2.10
2	50	200	5 - 6	22	22	2.60
21/2	65	265	8 - 10	22	22	4.20
3	80	265	5 - 6	22	22	



NO	ITEM	MATERIALS
1	Connection Record	Mallable Iron
2	Rubber	EPDM
3	Nylon Cord	Nylon

FLEXIBLE RUBBER JOINT
FAF 5000

Installation Instructions

Montage

- Before installation, inspect the expansion joints externally and internally for damage and the presence of foreign objects.
- The installation length must correspond to the construction length of the compensator.
- Compensators can be installed in any spatial position.
- The flange expansion joint is installed between two supports.
- The installation location of rubber expansion joints must be in close proximity to one of the fixed supports, at a distance from the support of no more than 2Du. If it is not possible to install it next to a fixed support, then it is necessary to install it between two sliding supports.
- Only one product can be placed between the supports.
- Make sure the bolt/stud holes are aligned with the counter flange holes.
- During installation, it is recommended to use collar flanges in accordance with GOST 33259-2015 Type 11. It is also permissible to install vibration compensators between flat flanges in accordance with GOST 33259-2015 Type 01. In this case, in order to avoid damage to the rubber body, be sure to clean the internal weld seam from burrs.
- Expansion joints are equipped with rotating steel flanges, simplifying installation and reducing the risk of damage to the elastic element due to torsional deformation.
- When installing compensators, it is prohibited to use additional seals in the form of elastic wafer gaskets, because a tight connection is ensured by the rubber lip of the compensator itself.
- The bolt holes must be accurately aligned with the corresponding holes in the counter flanges. The nuts are installed on the side opposite the elastic elements.
- When installing expansion joints, it is necessary to control the maximum permissible bolt tightening torques.
- To complete this step, tighten the bolts only with a torque wrench. The first tightening is in one pass crosswise (“star pattern”), before tightening - no more than 20% of the maximum torque, then relaxation for at least 30 minutes. After putting the system into operation, it is recommended to periodically tighten the bolts to the torques indicated in the table.

Tightening torques for compensator bolts, Nm				
DN	First tightening	Second tightening	Third tightening	Lateral deviation
	PN10/PN16	PN10/PN16	PN10	PN16
25-80	10	50	60	80
100-150	10	50	80	100
200-300	15	50	90	100
350-500	15	50	110	120
600	15	100	180	200

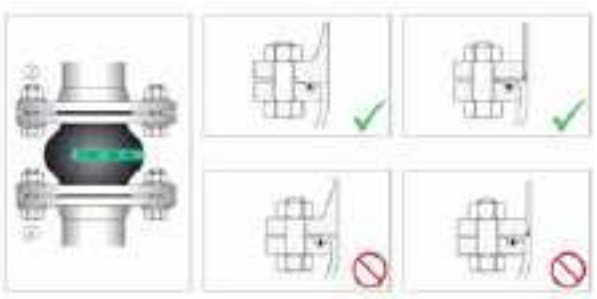
- If a leak occurs between the mating flange and the rubber cuff of the compensator during subsequent pressurization, the bolts should be tightened to the torque specified in the table. Do not exceed the specified values, as this may damage the sealing surface. In extreme cases, additional force of 3-4% of the nominal value can be applied.

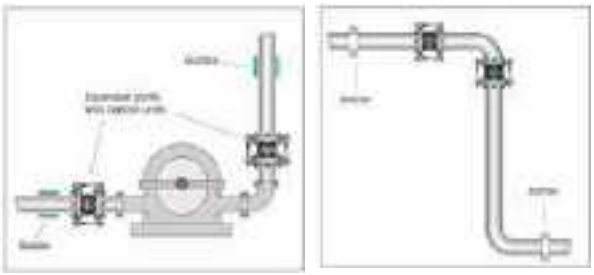
Storage conditions

- Expansion joints should be stored horizontally in a dark, dry, cool and ventilated area.
- Avoid exposure to direct sunlight.

Operating and maintenance procedures

- Expansion joints provide optimum performance when they are used at the temperature/pressure for which they were manufactured.
- The life of expansion joints is limited and depends on pressure, temperature, environmental conditions, ozone exposure, material compatibility, range of motion and proper mounting.
- Under normal conditions, the compensator does not require special maintenance. However, periodic inspections help extend the service life.
- Work to replace the compensator must be carried out with the pumping equipment turned off, the pressure in the pipeline section must be relieved and, if necessary, the temperature reduced.





- The manufacturer reserves the right, without notifying the consumer, to make changes to the design of the product to improve its technological and operational parameters.

AXIAL EXPANSION JOINT
FAF 5100

PRODUCTION STANDARTS

DN32 →DN600
PN 16

Design	TS 10880 / DIN 30681
Connection	Flanged End EN 1092-1 / ISO 7005-1 Welding End EN 12627
Face to Face	TS 10880 / DIN 30681
Marking	EN 19 / TS 10880 / DIN 30681
Tests	TS 10880 / DIN 30681

Features

- FAF Axial Expansion Bellows are designed to control vibrations, reduce noise, relieve stress, prevent system shock, and compensate for misalignment and movement.
- They absorb dimensional differences and vibrations caused by thermal variations.
- With the liner option, they prevent erosion on the bellows that could occur at high flow velocities with vibration and abrasion.
- The use of braided metal connectors for applications such as pumps, compressors, and other mechanical equipment enhances overall system operation.
- They allow for balancing of lateral and angular pipeline movements.
- Their rotary flanges facilitate easy installation.
- These expansion joints dampen mechanical vibrations and reduce sound conducted through solids in pumps and compressors.
- They compensate for thermal movements and vibrations in flue gas ducts of boilers and engines.
- They serve as assembly aids for pumps, fittings, and plate heat exchangers.
- Expansion joints find applications where safety, health, environment, durability, and lifetime are of concern. The bellows are made from stainless steel strip, which is first welded to a thin-walled tube and then formed into a bellow.
- They can be manufactured with rotary flanges (FAF5110), Welding Ends (FAF5120), or Fixed Flanges (FAF5130).
- We maintain a stockpile for quick delivery.
- Axial displacement +/- 4 mm
- Lateral displacement +/- 3 mm

Temperature

- -20, +430 °C

Product Description

FAF 5100 Axial Expansion Joints mitigate vibration and variations caused by the expansion and contraction resulting from temperature differences in pipelines.

Purpose

- Compensation for temperature changes in pipeline lengths
- Removing vibration loads, sealing pipelines
- Prevention of destruction and deformation of pipelines
- Compensation for misalignment of pipeline connections

Versions

- Type: Universal, side, corner
- Type of connection: flange and welding

Scope of Application

- Hot and cold water supply
- Industry
- Central heating
- Pumps and compressors
- Shipbuilding
- Heat supply

Advantages

- Hot and cold water supply
- Industry
- Central heating
- Pumps and compressors
- Shipbuilding
- Heat supply

AXIAL EXPANSION JOINT
FAF 5100

PRODUCTS MODEL CODES	
FAF5111	AXIAL EXPANSION JOINT Rotating Flanged, L= 30mm, With liner
FAF5112	AXIAL EXPANSION JOINT Rotating Flanged, L= 30mm, Without liner
FAF5113	AXIAL EXPANSION JOINT Rotating Flanged, L= 360mm, With liner
FAF5114	AXIAL EXPANSION JOINT Rotating Flanged, L= 60mm, Without liner
FAF5121	AXIAL EXPANSION JOINT Welding End, L= 30mm, With liner
FAF5122	AXIAL EXPANSION JOINT Welding End, L= 30mm, Without liner
FAF5123	AXIAL EXPANSION JOINT Welding End, L= 60mm, With liner
FAF5124	AXIAL EXPANSION JOINT Welding End, L= 60mm, Without liner
FAF5131	AXIAL EXPANSION JOINT Fixed Flanged, L= 30mm, With liner
FAF5132	AXIAL EXPANSION JOINT Fixed Flanged, L= 30mm, Without liner
FAF5133	AXIAL EXPANSION JOINT Fixed Flanged, L= 60mm, With liner
FAF5134	AXIAL EXPANSION JOINT Fixed Flanged, L= 60mm, Without liner
FAF5000	RUBBER EXPANSION JOINT - LONG TYPE
FAF5200	EXTERNALLY PRESSURIZED EXPANSION JOINT
FAF5300	ANGULAR EXPANSION JOINT
FAF5400	DILATATION EXPANSION JOINT
FAF5500	VIBRATION EXPANSION JOINT
FAF5600	DECORATIVE EXPANSION JOINT

MATERIAL SELECTION

Body	1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel 1.4541 - AISI 321 Stainless Steel
Flange	1.0037 - ST 37 Steel 1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel
Liner	1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel 1.4541 - AISI 321 Stainless Steel

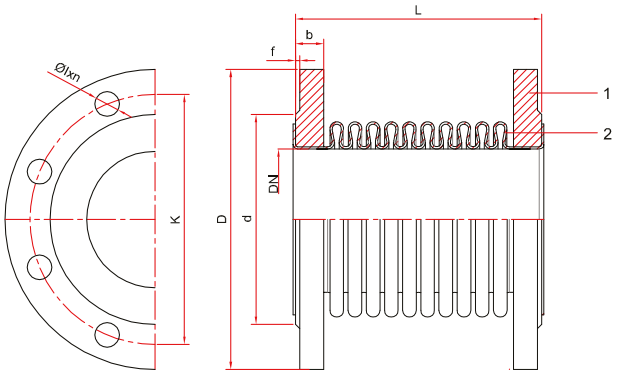
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

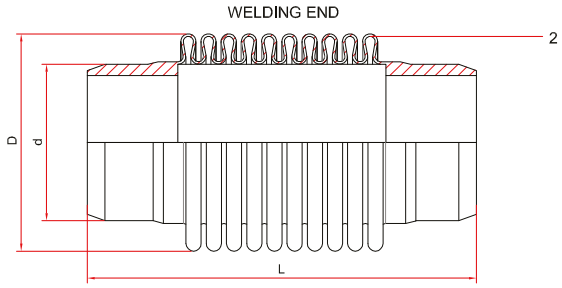
Note

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

AXIAL EXPANSION JOINT
FAF 5100

Technical Details & Drawing, Dimensions





* Valves can be produced with bigger sizes when requested.

ROTARY / FIXED FLANGED									WELDING END			
DN(mm)	D	K	d	l x n	b	f	L +/-5	Expansions Range	D	d	L +/-5	Expansions Range
32	140	100	78	18x4	18	2	125	-20/+10	58	42,4	195	-20/+10
40	150	110	88	18x4	18	3	125	-20/+10	62	48,3	195	-20/+10
50	165	125	102	18x4	20	3	125	-20/+10	76	60,3	195	-20/+10
65	185	145	122	18x4	20	3	130-185	-20/+10 -40/+20	92	76,3	210 270	-20/+10 -40/+20
80	200	160	138	18x8	20	3	130-185	-20/+10 -40/+20	110	88,9	210 270	-20/+10 -40/+20
100	220	180	158	18x8	22	3	130-190	-20/+10 -40/+20	141	114,3	210 280	-20/+10 -40/+20
125	250	210	188	18x8	22	3	130-200	-20/+10 -40/+20	165	139,7	210 280	-20/+10 -40/+20
150	285	240	212	22x8	24	3	135-200	-20/+10 -40/+20	200	165,1	250 315	-20/+10 -40/+20
200	340	295	268	22x12	26	3	140-210	-20/+10 -40/+20	252	219,1	250 320	-20/+10 -40/+20
250	405	355	320	26x12	29	3	145-215	-20/+10 -40/+20	313	273195	290 360	-20/+10 -40/+20

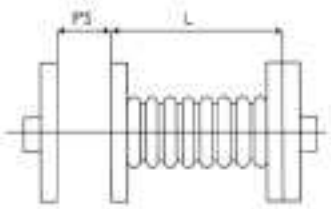
AXIAL EXPANSION JOINT
FAF 5100

No more than 1 (one) compensator can be installed between two fixed supports;

- The axis of the pipeline section on which the bellows compensator is installed and the axis of the compensator must coincide;
- The surfaces of the connecting flanges must be strictly perpendicular to the axis of the pipeline;
- Before starting pressure tests, check the loads on the pipeline, fixed supports and guide supports.

Pre-setting the Expansion Joints

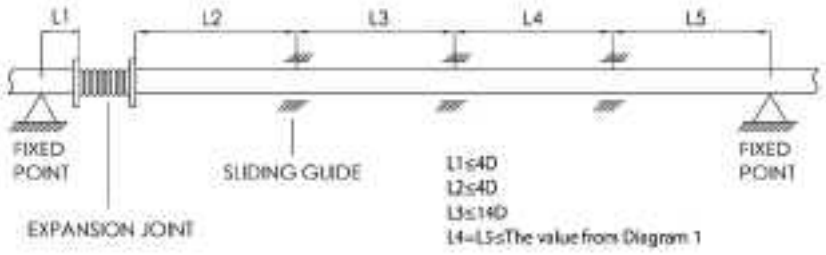
- Expansion joints could be pre-stressed. As the expansion joints are often installed in cold pipelines they may be prestressed in order to absorb larger movements. An example of pre-stressing amount is given below. Half of the total expansion amount may be practically considered. Expansion joint gap in the pipelines should be as big as L+PS. One side of the expansion joint should be assembled to counter flange, other must be assembled via long bolts to be tighten equally.



$$PS = \frac{\Delta L}{2} - \Delta L \frac{T_i - T_{min}}{T_{max} - T_{min}}$$

ΔL = Expansion amount
T_i = Ambient temperature
T_{min} = Minimum temperature
T_{max} = Maximum temperature

CALCULATION OF ANCHOR (FIX POINT) LOADS



AXIAL EXPANSION JOINT
FAF 5100

Installation

Preparation

Check compensator

Check outside joint cover for damage

Check alignment

Check the piping system for misalignment, as misalignment reduces the working range of the expansion joint

Check support

Weight must not be carried by joint Support with hangers or anchors

Check flanges

Clean all mating flanges surfaces

Do not scratch or damage surfaces during cleaning

Inspection

Stainless steel axial expansion joints should be inspected for any internal or external damage to the bellows convolutions.

Selection

FAF Valve range of stainless steel axial expansion joints are designed to be used on a wide range of industrial applications. Check that the correct axial expansion joint has been selected for the operating conditions that exist. Temperature, pressure and movement should all be confirmed as the wrong selection may result in failure of the system. Check that the correct number of axial expansion joints are being installed to accommodate the total amount.

Installation

- Stainless steel axial expansion joints requiring Cold Draw will be supplied at their neutral length and should be extended on installation by up to 50% of their movement capability. If an expansion joint has been supplied with an internal flow sleeve, it should be installed with the correct flow direction. Bellows convolutions should be protected from damage during installation due to rotation or weld spatter, etc. Stainless steel axial expansion joints should only be installed in straight pipework runs. Stainless steel axial expansion joints require anchors and guides to ensure their correct performance. Anchors and pipe guides are essential to ensure the correct performance of the axial expansion joints. Ensure that only one axial expansion joint is installed between anchors. Pipework should be correctly aligned with guides being installed to prevent buckling while allowing movement to be directed into the axial expansion joint. Remaining pipe guides should be installed as per the specification or details given in guidance notes..

Test Pressure

- If a hydraulic pressure test is to be carried out on a system containing axial expansion joints, ensure that anchors and guides have been correctly fitted before the test is carried out. Additionally, ensure that the test pressure (usually 1.5 times the working pressure) does not exceed the test pressure of the axial expansion joint being installed.

Anchoring

- Axial expansion joints must be securely anchored and adequately guided to ensure their correct performance. Anchors must have sufficient strength to withstand the forces created by internal pressure, total pipe weight, thermal expansion, and the spring rate of the bellows. Please refer to the guidance notes for detailed information and calculations on anchoring pipework. Anchors are utilized to divide the system into manageable sections. It is essential to space anchors to suit the axial expansion joints being installed.

Handling

- Do not lift with ropes or bars through the bolt holes. If lifting through the bore, use padding or a saddle to distribute the weight. Avoid letting expansion joints sit vertically on the edges of the flanges for any period of time.

Additional Tips

- If an expansion joint is to be installed underground or submerged in water, contact the manufacturer for specific guidelines. For outdoor installations, ensure that the cover material will withstand ozone, sunlight, etc. Recommended materials include Neoprene and Chlorobutyl. Additionally, consider using materials painted with weather-resistant paint for added ozone and sunlight protection. Check the tightness of retaining rings two or three weeks after installation and retighten as necessary.

Service Conditions

- Ensure that the expansion joint rating for temperature, pressure, vacuum, movements, and the selection of elastomeric materials match the system requirements. Contact FAF Valve if the system requirements exceed those of the selected expansion joint.

Alignment

- Expansion joints are not designed to compensate for piping misalignment errors. Pipe misalignment should be no more than 1/8" in any direction. Misalignment of an expansion joint will reduce the rated movements and can induce severe stress on the material properties, thereby causing a reduced service life.

Anchoring

- Anchors are required whenever a piping system changes direction. Expansion joints should be located as close as possible to anchor points. If an anchoring system is not used, it is recommended to install control rods on the expansion joint to prevent excessive movements caused by pressure thrust in the line.

Pipe Support

- Piping must be supported to ensure that expansion joints do not bear any pipe weight.

EXTERNALLY PRESSURIZED JOINT
FAF 5200

PRODUCTION STANDARDS

DN32 →DN250
PN 16

Design	DIN 30681
Connection	Flanged End EN 1092-1 / ISO 7005-1 Welding End EN 12627
Face to Face	DIN 30681
Marking	DIN 30681
Tests	DIN 30681

Features

- FAF External Pressurized Expansion Joints are preferred in long pipelines in order to use fewer expansion joints, reduce the number of fixed points and roller bearings that increase installation costs.
- They are available with a Rotary Flange or welding end.
- These joints absorb high amounts of expansion caused by thermal differences.
- The pressure balance maintained through fluid pressure affecting the outer bellow prevents sprains on the bellow.
- Since the bellow is isolated from the environment, it is not affected by external forces.
- Twists that may occur are eliminated via pressure balance provided by fluid pressure influencing the outer surface of the bellows.
- Due to isolation from the external environment, the risk of impairment from external factors is minimized.
- Additionally, they are favorable for use with fluids like boiling oil, where high safety factors are preferred.
- Large amounts of axial movement can be absorbed using a long bellows that would otherwise have caused squirming.
- They serve as assembly aids for pumps, fittings, and plate heat exchangers.
- Expansion joints are used in numerous applications concerning safety, health, environment, durability, and lifetime. Bellows are made from stainless steel strips that are first welded to a thin-walled tube and then formed into a bellow.
- They can be manufactured with rotary flanges (FAF5411) or welding ends (FAF5421).
- Stock is piled for quick delivery

Temperature

- -20, +430 °C

Product Description

The FAF5200 External Pressurized Expansion Joint is preferred for pipelines experiencing expansion due to temperature differences.

Purpose

- Absorbs significant amounts of axial compression and extension.
- Eliminates pressure instability.
- Does not restrain pressure thrust.
- Absorbs pipeline expansion, compensates for misalignment, and eliminates piping stresses.
- Prevents costly failures and downtime caused by pipeline vibration transmission.
- Customized to address your vibration problems.

Versions

- Types: Universal, lateral, and angular expansion joints.
- Pipe connection types: Flanged and threaded.
- Bellows structure: Designed to withstand pressure and temperature loads.
- External pressurized expansion joints are customized solutions available in all dimensions, sizes, and materials.

Scope of Application

- Steam
- Hot and cold water
- Potable water
- Superheated water
- Gas networks
- Chemicals
- Pressurized air
- Central heating
- Pumps and compressors

EXTERNALLY PRESSURIZED JOINT
FAF 5200

MATERIAL SELECTION	
Body	1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel 1.4541 - AISI 321 Stainless Steel
Flange	1.0037 - ST 37 Steel 1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel
Interior Pipe	1.0037 - ST 37 Steel 1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel
Exterior Pipe	1.0037 - ST 37 Steel 1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel

PRODUCTS MODEL CODES	
FAF5211	External Pressurized Expansion Joint, Rotating Flanged, L= 30mm
FAF5212	External Pressurized Expansion Joint, Rotating Flanged, L= 60mm
FAF5213	External Pressurized Expansion Joint, Rotating Flanged, L= 90mm
FAF5214	External Pressurized Expansion Joint, Rotating Flanged, L= 120mm
FAF5221	External Pressurized Expansion Joint, Welding End, L= 30mm
FAF5222	External Pressurized Expansion Joint, Welding End, L= 60mm
FAF5223	External Pressurized Expansion Joint, Welding End, L= 90mm
FAF5224	External Pressurized Expansion Joint, Welding End, L= 120mm
FAF5000	RUBBER EXPANSION JOINT - LONG TYPE
FAF5100	AXIAL EXPANSION JOINT
FAF5300	ANGULAR EXPANSION JOINT
FAF5400	DILATATION EXPANSION JOINT
FAF5500	VIBRATION EXPANSION JOINT
FAF5600	DECORATIVE EXPANSION JOINT

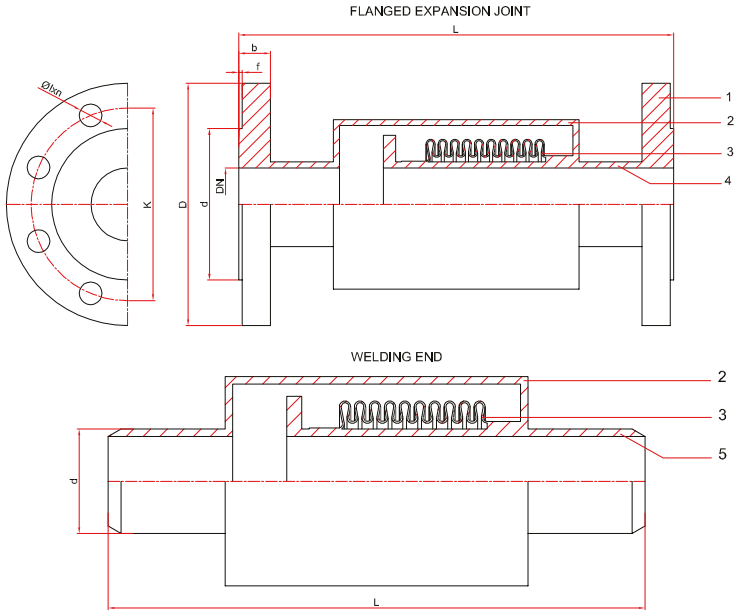
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

EXTERNALLY PRESSURIZED JOINT
FAF 5200

Technical Details & Drawing, Dimensions



* Valves can be produced with bigger sizes when requested.

FLANGED EXPANSION JOINT										WELDING END			
DN (mm)	D	K	d	Øl x n	b	f	L +/-5	Expansions Range	Weight KG	D	d	L +/-5	Expansions Range
32	140	100	78	18x4	18	2	360 490 520	-20/+10 -40/+20 -60/+30	5,4 6,6 7,8	76,1	42,4	280 375 455	-20/+10 -40/+20 -60/+30
40	150	110	88	18x4	18	3	380 500 530	-20/+10 -40/+20 -60/+30	6,7 8,2 9,6	88,9	48,3	280 375 455	-20/+10 -40/+20 -60/+30
50	165	125	102	18x4	20	3	370 480 510	-20/+10 -40/+20 -60/+30	9,5 11,6 13,7	114	60,3	285 375 490	-20/+10 -40/+20 -60/+30
65	185	145	122	18x4	20	3	370 470 500	-20/+10 -40/+20 -60/+30	11,0 13,5 16,0	114	76,1	295 385 500	-20/+10 -40/+20 -60/+30
80	200	160	138	18x8	20	3	375 475 500	-20/+10 -40/+20 -60/+30	14,5 17,5 20,7	140	88,9	300 390 510	-20/+10 -40/+20 -60/+30
100	220	180	158	18x8	22	3	380 480 510	-20/+10 -40/+20 -60/+30	18,2 20,7 24,3	165	114	300 390 510	-20/+10 -40/+20 -60/+30
125	250	210	188	18x8	22	3	380 490 520	-20/+10 -40/+20 -60/+30	24,7 30,0 35,3	219	140	310 410 520	-20/+10 -40/+20 -60/+30
150	285	240	212	22x8	24	3	400 510 540	-20/+10 -40/+20 -60/+30	28,0 33,5 41,0	219	165	320 425 535	-20/+10 -40/+20 -60/+30
200	340	295	268	22x12	26	3	420 530 560	-20/+10 -40/+20 -60/+30	50,0 57,5 70,5	324	219	375 485 595	-20/+10 -40/+20 -60/+30
250	405	355	320	26x12	29	3	440 540 570	-20/+10 -40/+20 -60/+30	61,8 72,0 93,5	356	273	375 485 595	-20/+10 -40/+20 -60/+30

ANGULAR EXPANSION JOINT
FAF 5300

PRODUCTION STANDARTS

DN32 ➔DN250
PN 16

Design	TS10880 / DIN 30681
Connection	Flanged End EN 1092-1 / ISO 7005-1 Welding End EN 12627
Face to Face	TS10880 / DIN 30681
Marking	TS10880 / DIN 30681
Tests	TS10880 / DIN 30681
Corrosion Protection	Electrostatic Epoxy

Features

- FAF External Pressurized Expansion Joints are preferred in long pipelines in order to use a fewer number of expansion joints and reduce the number of fixed points and roller bearings, which increase installation costs.
- Rotary Flange or welding neck is produced in the joints.
- They absorb high amounts of expansion due to thermal differences.
- With the help of pressure balance maintained through fluid pressure affecting the outer bellow, the possibility of sprain on the bellow is prevented.
- Since the bellow is isolated from the environment, it is not affected by external forces.
- Twists that may occur are eliminated via pressure balance, provided by fluid pressure, to influence the outer surface of the bellows.
- Due to being isolated from the external environment, the risk of impairment is minimized due to external factors.
- Additionally, they are favorable for use with fluids like boiling oil, in which high safety factors are preferred.
- Large amounts of axial movement can now be absorbed using a long bellows that would otherwise have squirmed.
- They serve as assembly aids for pumps, fittings, and plate heat exchangers.
- Expansion joints are used in many applications concerning safety, health, environment, durability, and lifetime. Bellows are made from stainless steel strips, which are first welded to a thin-walled tube and then formed into a bellow.
- They can be manufactured as rotary flanges (FAF5210) or welding ends (FAF5220).
- Stock is piled for quick delivery.

Temperature

- -20, +430 °C

Product Description

The FAF5200 External Pressurized Expansion Joint is preferred in pipelines where expansion arises from temperature differences.

Purpose

- Absorbs significant amounts of axial compression and extension.
- Eliminates pressure instability.
- Does not restrict the pressure thrust.
- Also absorbs pipeline expansion, compensating for misalignment and eliminating piping stresses.
- Prevents costly failures and downtime caused by pipeline vibration transmissions.
- Customized to address your vibration issues.

Versions

- Types: universal, lateral, and angular expansion joints.
- Pipe connection types: flanged, threaded.
- Bellows structure: designed to withstand pressure and temperature loads.
- Our externally pressurized expansion joints are customized solutions available in all dimensions, sizes, and materials.

Scope of Application

- Steam systems
- Hot and cold water pipelines
- Potable water distribution networks
- Superheated water systems
- Gas transmission and distribution networks
- Chemical processing plants
- Pressurized air systems
- Central heating and cooling systems
- Pumps and compressors installations

ANGULAR EXPANSION JOINT
FAF 5300

MATERIAL SELECTION	
Bellow	1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel 1.4541 - AISI 321 Stainless Steel
Body	1.0037 - ST 37 Steel 1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel
Flange	1.0037 - ST 37 Steel 1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel

PRODUCTS MODEL CODES	
FAF5311	Angular Expansion Joint, Flanged, 50-100mm
FAF5312	Angular Expansion Joint, Flanged, 100-100mm
FAF5313	Angular Expansion Joint, Flanged, 100-150mm
FAF5314	Angular Expansion Joint, Flanged, 100-200mm
FAF5321	Angular Expansion Joint, Welding End, 50-100mm
FAF5322	Angular Expansion Joint, Welding End, 100-100mm
FAF5323	Angular Expansion Joint, Welding End, 100-150mm
FAF5324	Angular Expansion Joint, Welding End, 100-200mm
FAF5000	RUBBER EXPANSION JOINT - LONG TYPE
FAF5100	AXIAL EXPANSION JOINT
FAF5200	EXTERNAL PRESSURIZED EXPANSION JOINT
FAF5400	DILATATION EXPANSION JOINT
FAF5500	VIBRATION EXPANSION JOINT
FAF5600	DECORATIVE EXPANSION JOINT

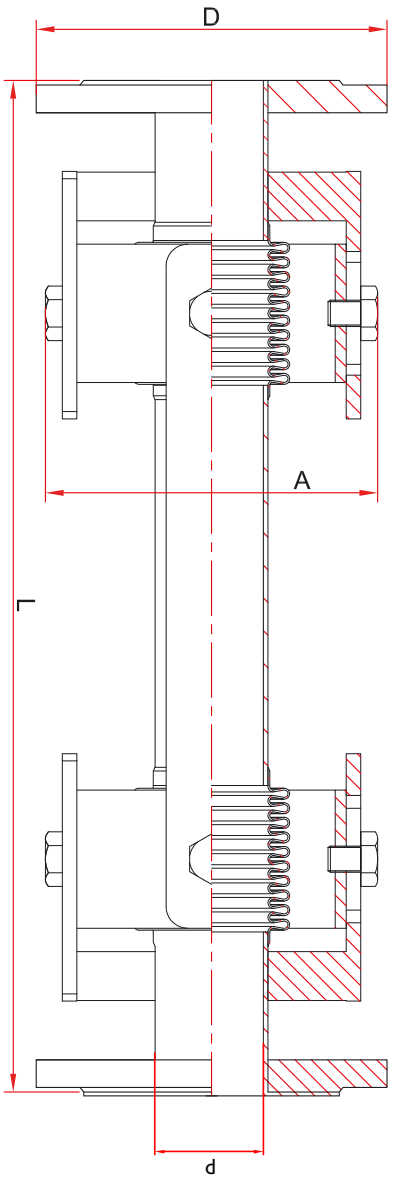
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	18
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

ANGULAR EXPANSION JOINT
FAF 5300

Technical Details & Drawing, Dimensions



DN	WELDING END ANGULAR EXPANSION JOINT						
	DIMENSION						
	A	d	Expansion Range and Length (L +/-5)				
mm			X	Y,Z:+/-50	Y,Z+/-100	Y,Z+/-150	Y,Z+/-200
32	135	42,4	100	710	910	1110	1310
40	135	48,3	100	710	910	1110	1310
50	150	60,3	100	785	985	1185	1395
65	165	76,1	100	785	985	1235	1495
80	205	88,9	100	815	1015	1245	1475
100	255	114,3	100	815	1035	1295	1545
125	285	139,7	100	965	1165	1475	1765
150	370	165,1	100	965	1165	1475	1765
200	405	219,1	100	1120	1320	1670	2020
250	455	273	100	1120	1320	1670	2020

FLANGED ANGULAR EXPANSION JOINT						
DIMENSION						
D	A	Expansion Range and Length (L +/-5)				
		X	Y,Z:+/-50	Y,Z+/-100	Y,Z+/-150	Y,Z+/-200
140	135	100	720	920	1120	1320
150	135	100	720	920	1120	1320
165	150	100	800	1000	1200	1410
185	165	100	800	1000	1250	1510
200	205	100	830	1030	1260	1490
220	255	100	850	1050	1310	1560
250	285	100	980	1180	1490	1780
285	370	100	980	1180	1490	1780
340	405	100	1140	1340	1690	2040
405	455	100	1160	1340	1690	2040

* Valves can be produced with bigger sizes when requested.

DILATATION EXPANSION JOINT
FAF 5400

PRODUCTION STANDARTS

DN32 →DN250
PN 16

Design	TS 10880 / DIN 30681
Connection	Flanged End EN 1092-1 / ISO 7005-1 Welding End EN 12627
Face to Face	TS 10880 / DIN 30681
Marking	TS 10880 / DIN 30681
Tests	TS 10880 / DIN 30681
Corrosion Protection	Electrostatic Epoxy

Features

- Consisting of two bellows separated by an intermediate pipeline, the universal compensator is used for absorbing large lateral movements.
- Generally, it is used at transition points between buildings with different floor levels to prevent damage to existing pipelines after building exercises and collapses.
- The expansion joint allows for significant lateral movement in all planes, which can be increased by extending the length of the central pipe.
- It can accommodate greater axial, lateral, and angular movements compared to a single tied expansion joint.
- If designed with only two tie rods spaced at 180 degrees, the universal tied expansion joint will absorb both lateral and angular movements. To restrict angular movement, four tie rods are provided at intervals of 90 degrees around the circumference.
- If more than two tie rods are used, the expansion joint will only absorb lateral movement.
- It is commonly used at building transition points with varying base levels, during ground movements, and to prevent pipeline damage after building collapses.
- Control rods are typically included to distribute movement equally between the two bellows, but they are not designed to withstand pressure thrust.
- Available in flanged type (FAF5410) and welding neck type (FAF5420).
- Stocked for quick delivery.

Temperature

- -20, +430 °C

Product Description

FAF5400 Expansion Joints, also known as universal expansion joints, consist of two bellows separated by an intermediary pipe. They are designed to relieve stress on the pipeline by absorbing significant lateral movements.

Advantages

- Simple and robust construction
- Absorbs large amounts of lateral, angular, and axial movements
- Cost-effective
- Easy to install
- Requires low maintenance

Versions

- Type: Universal, lateral, and angular expansion joints
- Pipe connection type: Flanged or threaded
- Rubber quality of the bellows: Rated according to the media transported in the pipes
- Bellows structure: Rated to withstand the pressure and temperature load

Scope of Application

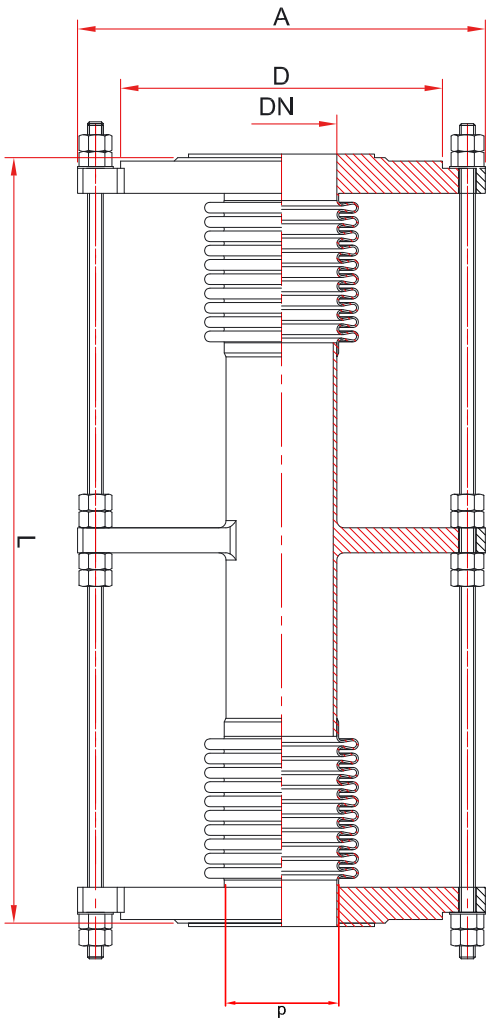
- Dilatation
- Fire fighting installations
- Pipelines
- Storage tanks
- Heat exchangers
- Pumps & compressors

DILATATION EXPANSION JOINT
FAF 5400

PRODUCTS MODEL CODES	
FAF5411	Dilatation Expansion Joint, Flanged, A:30mm, L:25mm
FAF5412	Dilatation Expansion Joint, Flanged, A:30mm, L:50mm
FAF5413	Dilatation Expansion Joint, Flanged, A:30mm, L:75mm
FAF5414	Dilatation Expansion Joint, Flanged, A:30mm, L:100mm
FAF5415	Dilatation Expansion Joint, Flanged, A:60mm, L:25mm
FAF5416	Dilatation Expansion Joint, Flanged, A:60mm, L:50mm
FAF5417	Dilatation Expansion Joint, Flanged, A:60mm, L:75mm
FAF5418	Dilatation Expansion Joint, Flanged, A:60mm, L:100mm
FAF5421	Dilatation Expansion Joint, Welded, A:30mm, L:25mm
FAF5422	Dilatation Expansion Joint, Welded, A:30mm, L:50mm
FAF5423	Dilatation Expansion Joint, Welded, A:30mm, L:75mm
FAF5424	Dilatation Expansion Joint, Welded, A:30mm, L:100mm
FAF5425	Dilatation Expansion Joint, Welded, A:60mm, L:25mm
FAF5426	Dilatation Expansion Joint, Welded, A:60mm, L:50mm
FAF5427	Dilatation Expansion Joint, Welded, A:60mm, L:75mm
FAF5428	Dilatation Expansion Joint, Welded, A:60mm, L:100mm
FAF5000	RUBBER EXPANSION JOINT - LONG TYPE
FAF5100	AXIAL EXPANSION JOINT
FAF5200	EXTERNALLY PRESSURIZED EXPANSION JOINT
FAF5300	EXTERNAL PRESSURIZED EXPANSION JOINT
FAF5500	VIBRATION EXPANSION JOINT
FAF5600	DECORATIVE EXPANSION JOINT

DILATATION EXPANSION JOINT
FAF 5400

Technical Details & Drawing, Dimensions



DN	WELDING END ANGULAR EXPANSION JOINT						
	DIMENSION						
	A	d	Expansion Range and Length (L +/-5)				
mm			X	Y,Z:+/-25	Y,Z+/-50	Y,Z+/-75	Y,Z+/-100
32	130	42,4	30	540	640	740	840
40	135	48,3	30	540	640	740	840
50	160	60,3	30	510	710	810	910
65	185	76,1	60	610	710	810	910
80	220	88,9	60	660	760	860	960
100	255	114,3	60	660	760	860	960
125	280	139,7	60	700	900	1000	1100
150	335	165,1	60	700	900	1000	1100
200	410	219,1	60	750	950	1050	1150
250	490	273	60	850	1050	1150	1250

FLANGED DILATATION EXPANSION JOINT						
DIMENSION						
D	A	Expansion Range and Length (L +/-5)				
		X	Y:+/-25	Y:+/-50	Y:+/-75	Y:+/-100
140	200	30	250	350	450	550
150	210	30	250	350	450	550
165	235	30	350	450	550	650
185	255	60	350	450	550	650
200	290	60	400	500	600	700
220	310	60	400	500	600	700
250	340	60	450	650	750	850
285	395	60	450	650	750	850
340	470	60	500	700	800	900
405	555	60	600	800	900	1000

* Valves can be produced with bigger sizes when requested.

VIBRATION EXPANSION JOINT
FAF 5500

PRODUCTION STANDARTS

DN32 ➔DN250
PN 16

Design	TS10880 / DIN 30681
Connection	FLANGED EN 1092-1 / ISO 7005-1
Face to Face	TS10880 / DIN 30681
Marking	EN 19/ TS10880 / DIN 30681
Tests	TS10880 / DIN 30681
Corrosion Protection	Electrostatic Epoxy

Features

- These absorbers, which have a compact and flexible structure, can replace rubber joints in high-pressure and pump connection installations where corrosive fluids are used.
- They are made of multilayer bellows with a compact structure.
- They are often used to eliminate vibration at the pump inlet and outlet.
- High pressure and cavitation replace rubber expansion joints in the flow.
- The forces caused by flow pressure are eliminated by limiting axial movements through the existing limit rods, eliminating the need for fixed support.
- Assembling without welding prevents material deterioration.
- Unlike rubber expansion joints, stainless steel bellows do not suffer from atmospheric damage when used in an outdoor installation.
- Stockpiled for quick delivery

Temperature

- -20, +430 °C

Product Description

FAF5500 Vibration Absorber Expansion Joint is used in absorption-pressure lines to isolate vibration and is generally manufactured with two-ply bellows.

Advantages

- Simple and robust construction
- Absorbs large amount of lateral, angular and axial movements
- Inexpensive
- Easy to install
- Low maintenance

Scope of Application

- Hot & cold water
- Superheated water
- Potable water
- Steam
- Gas networks
- Chemicals
- Pressurized Air
- Heat exchangers
- Pumps & compressors

VIBRATION EXPANSION JOINT
FAF 5500

MATERIAL SELECTION	
Bellow	1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel 1.4541 - AISI 321 Stainless Steel
Body	1.0037 - ST 37 Steel 1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel
Flange	1.0037 - ST 37 Steel 1.4301 - AISI 304 Stainless Steel 1.4401 - AISI 316 Stainless Steel

PRODUCTS MODEL CODES	
FAF5500	**VIBRATION EXPANSION JOINT, Flanged**
FAF5520	VIBRATION EXPANSION JOINT, Welding End
FAF5000	RUBBER EXPANSION JOINT - LONG TYPE
FAF5100	AXIAL EXPANSION JOINT
FAF5200	EXTERNALLY PRESSURIZED EXPANSION JOINT
FAF5300	EXTERNAL PRESSURIZED EXPANSION JOINT
FAF5400	DILATATION EXPANSION JOINT
FAF5600	DECORATIVE EXPANSION JOINT

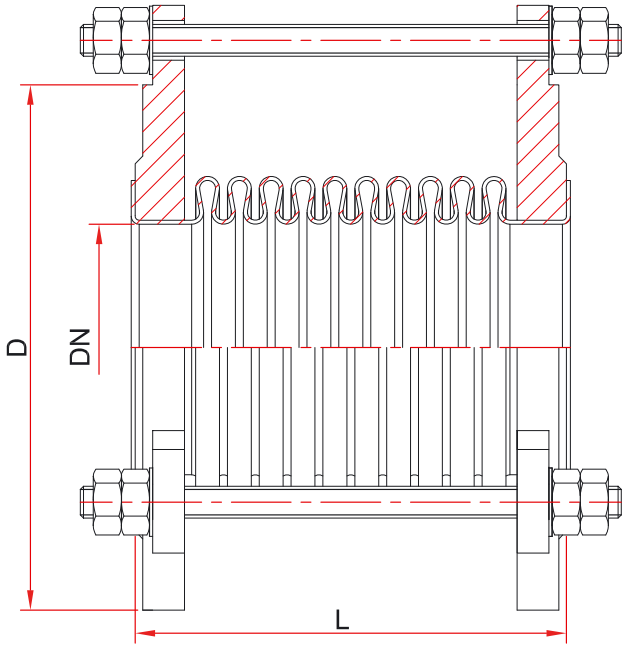
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

VIBRATION EXPANSION JOINT
FAF 5500

Technical Details & Drawing, Dimensions



DN	DIMENSION			RATINGS		BOLT DIMENSION	BOLT / NUT QTY	FASTENING MOMENT Nm	WRENCH SIZE (mm)
mm	D	L +/-5	Expansion Range	Effective Area cm²	Weight kg				
32	140	110	-20/+10	21	3,2	M16X60	4X2	205	24
40	150	120	-20/+10	24	4,1	M16X60	4X2	205	24
50	165	120	-20/+10	36	5,5	M16X60	4X2	205	24
65	185	120	-20/+10	57	6,7	M16X60	4X2	205	24
80	200	120	-20/+10	77	8,8	M16X65	8X2	205	24
100	220	120	-20/+10	126	9,5	M16X65	8X2	205	24
125	250	125	-20/+10	180	12,5	M16X70	8X2	205	24
150	285	130	-20/+10	263	16,0	M20X75	8X2	400	30
200	340	150	-20/+10	434	22,00	M20X80	12X2	400	30
250	405	165	-20/+10	670	27,5	M24X90	12X2	691	36

* Valves can be produced with bigger sizes when requested.

RESILIENT SEATED GATE VALVE
FAF 6000

PRODUCTION STANDARTS

DN40 →DN800
PN 10-16-25

Design	EN 1171
Connection	EN 1092-2 ISO7005-2 Flanged
Face to Face	EN 558 Series 14 / DIN3202
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy WRAS Approved

Features

- 100% tight sealing is achieved through EPDM covered wedge fully contacting the fusion bonded epoxy coated flow surface.
- The body and bonnet are manufactured from ductile iron castings. It is resistant to high tensile stress occurring in pipelines.
- Low operating torque due to plastic sliding guides on the wedge
- Maintenance-free and corrosion-resistant stem sealing.
- With O-ring sealing.
- Up to DN 300 (inclusive) sizes are supplied with hand wheel as default DN 350 (inclusive) and above can be supplied with gear box as optional.
- Large conical stem hole in the wedge prevents stagnant water.
- Wedge and body guide rails ensure stable operation.
- Stainless steel stem with rolled threads for high strength & low operation torque.
- Inner and outer surfaces are coated with minimum 250 microns fusion bonded epoxy. 300 microns is also available.
- Suitable to use with aboveground and underground applications. Can be operated with actuator, gearbox, handwheel and extension spindle.
- the top of the shaft bearing, and shaft nuts are made of MS58 brass. High precision machining enables low operation torques.
- Full bore characteristics without disruption of flow results in low pressure drops across the valve.

Temperature

- For water, sewage and neutral liquids min. -10°C /max. 80°C
- EPDM: -40°C - 100°C short term
- NBR: -30°C - 90°C short term

Product Description

FAF6000 Resilient-seated gate valve with bolted cover connection; made of premium materials and with special coating designed as both clockwise (default) and anti-clockwise directions (optional).

Versions

- Standard version with handwheel
- Standard version without handwheel
- With ISO top flange and gearbox
- Ready for actuator connection
- With operation cap
- With top flange ready for actuator connection
- With electrical actuator

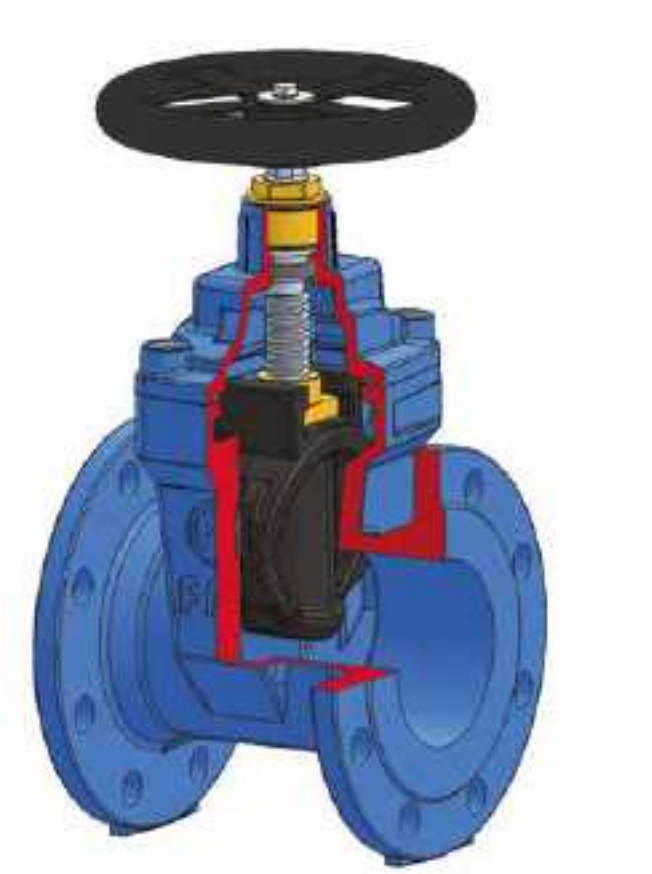
Accessories

- Telescopic extension spindle FAF7250
- Rigid extension spindle
- Surface box cast iron FAF7250K
- Flange adaptors, FAF3960
- Dismantling joints, FAF3900
- Handwheels

Scope of Application

- Pipelines
- Water treatment plants
- Pumping stations
- Tanks
- Seawater applications
- Power plants (cooling water pipelines)
- Industry

RESILIENT SEATED GATE VALVE
FAF 6000



MATERIAL SELECTION	
Body	EN-GJS-500 Ductile Iron / GGG50
Bonnet	EN-GJS-500 Ductile Iron / GGG50
Stem	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (Optional) 1.4401 - AISI 316 Stainless Steel (Optional)
Sealing	EPDM (Approved for potable water)
Coating	Electrostatic Powder Epoxy Approved For Drinking Water Min. 300 Microns (Optional)

PRODUCTS MODEL CODES	
FAF6000	**RESILIENT SEATED GATE VALVE - PN16**
FAF6010	RESILIENT SEATED GATE VALVE - PN10
FAF6025	RESILIENT SEATED GATE VALVE - PN25
FAF6050	RESILIENT SEATED GATE VALVE - BS 5163

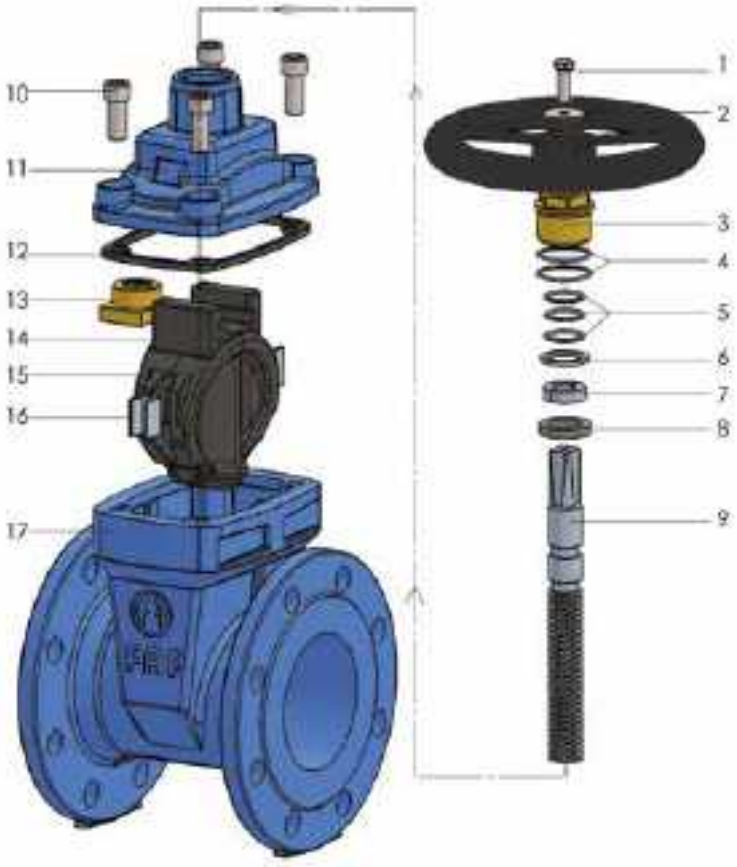
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
25	37,5	27,5
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

RESILIENT SEATED GATE VALVE
FAF 6000

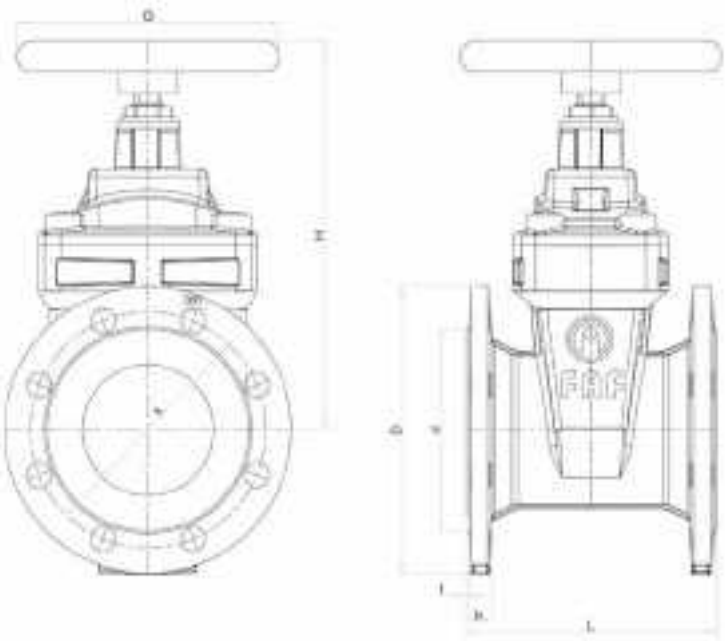
Material List



NO	ITEM	MATERIALS
1	BOLT	DIN 933 A2/A4
2	WASHER	STEEL
3	SHAFT NUT	CUZN40PB2 BRASS
4	O-RING	NBR/EPDM
5	O-RING	NBR/EPDM
6	WASHER	PTFE
7	WASHER	STEEL
8	NUTRING	EPDM
9	DRIVE SHAFT	AISI 420/304/316
10	IMBUS BOLT	DIN 912 A2/A4
11	COVER	EN GJS 500 DUCTILE
12	COVER GASKET	EPDM
13	SLIDE NUT	CUZN40PB2 BRASS
14	WEDGE TOP	EPDM / NBR
15	WEDGE	EN GJS 500 DUCTILE
16	WEDGE GUIDE	POLYMER
17	BODY	EN GJS 500 DUCTILE

RESILIENT SEATED GATE VALVE
FAF 6000

Technical Details & Drawing, Dimensions



DN (mm)	PN	D	L	H	Kv (m^3/h)	Torque (Nm)	f	b	G	d	k	Ølxn	WEIGHT (kg)
40	10/16	150	140	210	140	18/21	3	19	160	84	110	4XØ19	8,40
50	10/16	165	150	230	220	19/23	3	19	160	99	125	4XØ19	8,70
65	10/16	185	170	265	370	20/30	3	19	180	118	145	4XØ19	11,80
80	10/16	200	180	285	560	22/38	3	19	200	132	160	8XØ19	13,75
100	10/16	220	190	325	880	43/55	3	19	200	156	180	8XØ19	17,65
125	10/16	250	200	350	1380	47/55	3	19	250	184	210	8XØ19	23,00
150	10/16	285	210	390	2300	52/53	3	19	250	211	240	8XØ23	30,95
200	10	340	230	500	4090	88	4	20	320	266	295	8XØ23	51,20
	16	340	230	500	4090	91	4	20	320	266	295	12XØ23	51,65
250	10	400	250	595	6390	100	4	22	350	319	350	12XØ23	87,00
	16	400	250	595	6390	115	4	22	350	319	355	12XØ28	84,20
300	10	455	270	675	9200	100	4	24.5	350	370	400	12XØ23	119,60
	16	455	270	675	9200	115	4	24.5	350	370	410	12XØ28	118,20
350	10	505	290	785	11370	100	4	24.5	450	429	460	16XØ23	190,00
	16	520	290	785	11370	132	4	26.5	450	429	470	16XØ28	195,00
350 - GEARBOX	10	505	290	785	11370	27	4	24.5	450	429	460	16XØ23	198,10
	16	520	290	785	11370	47	4	26.5	450	429	470	16XØ28	203,10
400	10	565	310	900	16350	90	4	24.5	500	480	515	16XØ28	249,70
	16	580	310	900	16350	130	4	28	500	480	525	16XØ31	249,70
400 - GEARBOX	10	565	310	900	16350	29	4	24.5	500	480	515	16XØ28	269,50
	16	580	310	900	16350	46	4	28	500	480	525	16XØ31	269,50
500	10	670	350	1000	25560	114	4	26.5	600	582	620	20XØ28	421,00
	16	715	350	1000	25560	144	4	31.5	600	609	650	20XØ34	421,00
500 - GEARBOX	10	670	350	1000	25560	25	4	26.5	600	582	620	20XØ28	439,80
	16	715	350	1000	25560	48	4	31.5	600	609	650	20XØ34	439,80
600	10	780	390	1200	37000	660	5	30	600	682	725	20XØ31	618,80
	16	840	390	1200	37000	720	5	36	600	720	770	20XØ37	632,80
600 - GEARBOX	10	780	390	1200	37000	89	5	30	600	682	725	20XØ31	638,60
	16	840	390	1200	37000	118	5	36	600	720	770	20XØ37	652,60

RESILIENT SEATED GATE VALVE
FAF 6000

Advantages of Resilient Seated Gate Valves

Resilient-seated gate valves are used for reliable and safely supply of hot & cold water, potable water, wastewater management, and for the supply of fire water. Compared to metal seated gate valves, resilient seated gate valves have many advantages.

The body is relatively simple, the good casting process for a wide range. The sealing performance is very good, so that the sealing surface is less eroded when it's full open. Resilient seat gate valves have good shut-off and bi-directional properties. The pressure loss through the valve is minimal.

Lighter, more durable, reduced carbon footprint.

Safety Manual for Maintenance, Inspection and Installation Works

For trouble-free use of flexible seat gate valves, this manual should be carefully studied, and the information provided should be applied constantly.

Failure to follow the safety instructions will cause the following problems.

- Personal injuries,
- Danger for both environment and valve,
- Malfunction of the major valve / facility functions
- Failure of the projected maintenance and repair applications,
- Danger to people connected to electrical, mechanical, and chemical effects.
- Damage to the environment caused by dangerous leakage.

No alterations or amendments can be applied to the products provided by FAF Valve Company. FAF Valve Company disclaims any liability for any harm or losses that may ensue from non-adherence to the guidance delineated in this manual or the unauthorized modification thereof.

The installation, operation, and upkeep of gate valves necessitate the engagement of suitably qualified personnel. While all FAF VALVE products adhere to global regulations and standards, valves can pose potential hazards when subjected to improper handling or employed for purposes beyond their designated scope. It is imperative that all individuals responsible for the storage, installation, operation, maintenance, and dismantling of these valves meticulously peruse and comprehend this document. Additionally, a comprehensive understanding of both international and local safety directives is mandatory before undertaking any actions concerning the valve or associated pipeline. All requisite precautions should be meticulously observed.

If any repairs are to be made, there should be no pressure on the pipeline, and if necessary, all fluid should be drained, and warning signs should be placed around the working area.

Devices that can be remotely controlled, such as actuators should be switched to off position. Precautions should be taken to prevent operation of those kind of devices working with stored energy such as compressed air, pressurized water, hydraulic uninterruptible power supply, etc. If a drain valve is to be repaired or removed, precautions must be taken to prevent the work area from suddenly filling with water.

The use of original spare parts will ensure the operational safety of the products. The manufacturer cannot be held responsible for damage caused by use of non-original parts or accessories.

If a valve needs to be removed, the pipeline should be discharged. The necessary precautions should be taken due to the remaining fluid which will flow freely after the valve has been removed.

Avoid sudden movements during the lifting, moving, and lowering of the valve. Sudden movements may damage the valve and/or lifting equipment. The lifting must only be done from the lifting lugs located on the body.

The valve may move involuntarily aside during the lifting operation with a crane. Lifting by crane should be done by a specialist personnel and no one other than the operator should enter the working area during the operation.

Any operation on the actuated valve can be done after the actuator has been removed from the power supply. The procedure described in the operating instructions must be followed to switch off the actuator.

RESILIENT SEATED GATE VALVE
FAF 6000

Operating Instructions

Inspection On Delivery

- Check for possible damage in shipment, conformance to specifications, opening direction, shortages, etc.
- Carefully unload all valves - do not drop valve – do not lift valve using gearing, by-pass, or other appendage as a hook.
- Valve should be opened and then closed to make sure it works properly. Also check opening direction against the order instruction.
- 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

- Check that valve end-connections are clean.
- The valve must not be damaged.
- Open and close the valve - make sure it is working properly.
- Keep valve closed when placing in trench.
- Inspect the casting for damage.
- Inspect the epoxy coating and repair any breaks using compatible coating material.

Testing

- 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.
- Operation torque test: Seat: PN rate X 1.1 PN / Body: PN Rate X 1.5 PN (in bar).
- After testing, steps should be taken to relieve any trapped pressure in body of valves.

Storage

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

Installation

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

Operation

The operation of a resilient wedge valve will "feel" different to the valve operator compared to an older style double-disc gate valve. In normal circumstances, less operating torque is needed as the resilient wedge valve just closes, or on opening. Valve operators must adhere to the 'number of turns to open' for the valve size in question, rather than relying solely on the feel of the valve.

Associated Products for the Resilient Seated Gate Valve Range

3900
DISMANTLING JOINT

7250
EXTENSION SPINDLE
SURFACE BOX

STEM CAP

2500
Y-TYPE STRAINER

7330
DYNAMIC ARV

5000
RUBBER
EXPANSION JOINT

2270
CHECK VALVE
SWING

RESILIENT SEATED GATE VALVE
FAF 6200

PRODUCTION STANDARTS

DN40 →DN800
PN 10-16

Design	EN 1171 / EN 1074
Connection	EN 1092-2 / ISO 7005-2 - Flanged
Face to Face	EN 558 Series 15 / DIN 3202 F5
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy WRAS Approved (Optional)

Features

- 100% tight sealing is achieved through EPDM covered wedge fully contacting the fusion bonded epoxy coated flow surface.
- The body and bonnet are manufactured from ductile iron castings. It is resistant to high tensile stress occurring in pipelines.
- Low operating torque due to plastic sliding guides on the wedge
- Maintenance-free and corrosion-resistant stem sealing.
- With O-ring sealing.
- Up to DN 300 (inclusive) sizes are supplied with hand wheel as default DN 350 (inclusive) and above can be supplied with gear box as optional.
- Large conical stem hole in the wedge prevents stagnant water.
- Wedge and body guide rails ensure stable operation.
- Stainless steel stem with rolled threads for high strength & low operation torque.
- Inner and outer surfaces are coated with minimum 250 microns fusion bonded epoxy. 300 microns is available
- Suitable to use with aboveground and underground applications. Can be operated with actuator, gearbox, handwheel and extension spindle.
- The top of the shaft bearing and shaft nuts are made of MS58 brass. High precision machining enables low operation torques.
- Full bore characteristics without distruption of flow results in low pressure drops across the valve.

Temperature

- For water, sewage and neutral liquids min. -10°C /max. 80°C
- EPDM: -40°C - 100°C short term
- NBR: -30°C - 90°C short term

Product Description

FAF6200 Resilient-seated gate valve with bolted cover connection; made of premium materials and with special coating designed as both clockwise (default) and anti-clockwise directions. (optinal)

Versions

- Standard version with handwheel
- Standard version without handwheel
- With ISO top flange and gearbox
- Ready for actuator connection
- With operation cap
- With top flange ready for actuator comection
- With electrical actuator

Accessories

- Rigid extension spindle
- Dismantling joints, FAF3900
- Handwheels

Scope of Application

- Pipelines
- Water treatment plants
- Pumping stations
- Tanks
- Seawater applications
- Power plants (cooling water pipelines)
- Industry

RESILIENT SEATED GATE VALVE
FAF 6200

MATERIAL SELECTION	
Body	EN-GJS-500 Ductile Iron / GGG50
Bonnet	EN-GJS-500 Ductile Iron / GGG50
Stem	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (Optional) 1.4401 - AISI 316 Stainless Steel (Optional)
Sealing	EPDM (Approved for potable water)
Coating	Electrostatic Powder Epoxy Approved For Drinking Water Min. 300 Microns (Optional)

PRODUCTS MODEL CODES	
FAF6200	**RESILIENT GATE VALVE F5**
FAF6000	RESILIENT GATE VALVE
FAF6050	RESILIENT GATE VALVE - BS 5163

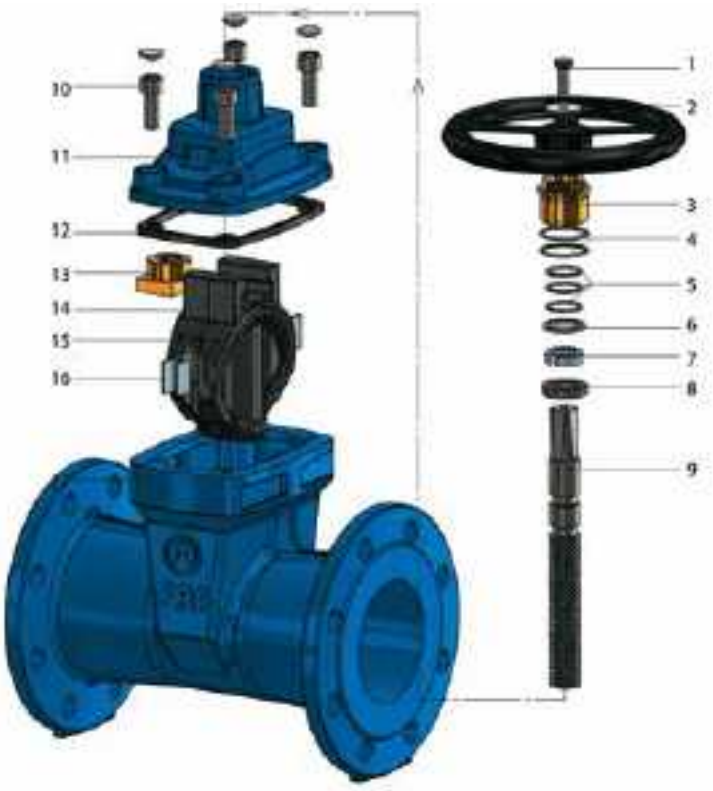
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
25	37,5	27,5
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

RESILIENT SEATED GATE VALVE
FAF 6200

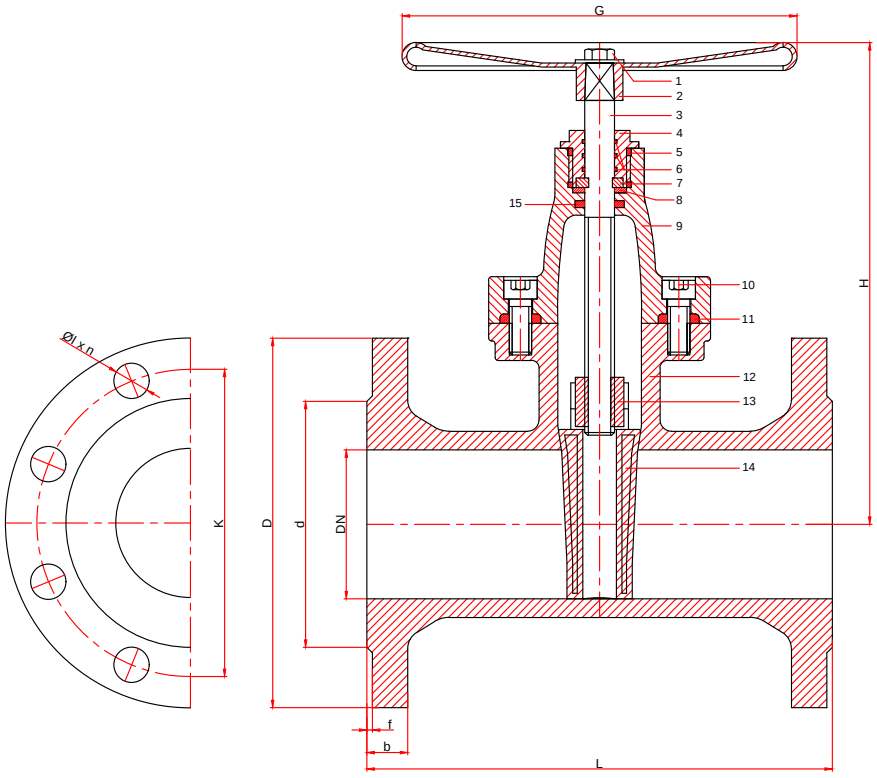
Material List



NO	ITEM	MATERIALS
1	BOLT	DIN 933 A2/A4
2	WASHER	STEEL
3	SHAFT NUT	CUZN40PB2 BRASS
4	O-RING	NBR/EPDM
5	O-RING	NBR/EPDM
6	WASHER	PTFE
7	WASHER	STEEL
8	NUTRING	EPDM
9	DRIVE SHAFT	AISI 420/304/316/316L
10	IMBUS BOLT	DIN 912 A2/A4
11	COVER	EN GJS 500 DUCTILE
12	COVER GASKET	EPDM
13	SLIDE NUT	CUZN40PB2 BRASS
14	WEDGE TOP	EPDM / NBR
15	WEDGE	EN GJS 500 DUCTILE
16	WEDGE GUIDE	POLYMER
17	BODY	EN GJS 500 DUCTILE

RESILIENT SEATED GATE VALVE
FAF 6200

Technical Details & Drawing, Dimensions



DN (mm)	PN	D	L	H	Kv (m³/h)	Torque (Nm)	f	b	G	d	k	Ølxn	Weight KG
40	10/16	150	240	210	140	18/21	3	19	160	84	110	4XØ19	
50	10/16	165	250	225	220	19/23	3	19	160	99	125	4XØ19	9,00
65	10/16	185	270	255	370	20/30	3	19	180	118	145	4XØ19	12,80
80	10/16	200	280	290	560	22/38	3	19	200	132	160	8XØ19	16,40
100	10/16	220	300	330	880	43/55	3	19	200	156	180	8XØ19	20,90
125	10/16	250	325	380	1380	47/55	3	19	250	184	210	8XØ19	28,20
150	10/16	285	350	415	2300	52/53	3	19	250	211	240	8XØ23	35,50
200	10	340	400	480	4090	88	4	20	320	266	295	8XØ23	60,80
	16	340	400	480	4090	92	4	20	320	266	295	12XØ23	63,00
250	10	400	450	555	6390	100	4	22	350	319	350	12XØ23	117,60
	16	400	450	555	6390	115	4	22	350	319	355	12XØ28	117,60
300	10	455	500	650	9200	100	4	24.5	350	370	400	12XØ23	153,00
	16	455	500	650	9200	115	4	24.5	350	370	410	12XØ28	153,00
350	10	505	550	775	11370	100	4	24.5	450	429	460	16XØ23	154,60
	16	520	550	775	11370	132	4	26.5	450	429	470	16XØ28	154,60
350 GB	10	505	550	775	11370	27	4	24.5	450	429	460	16XØ23	162,70
	16	520	550	775	11370	47	4	26.5	450	429	470	16XØ28	162,70
400	10	565	600	850	16350	90	4	24.5	500	480	515	16XØ28	
	16	580	660	850	16350	130	4	28	500	480	525	16XØ31	
400 GB	10	565	600	850	16350	29	4	24.5	500	480	515	16XØ28	
	16	580	600	850	16350	46	4	28	500	480	525	16XØ31	
500	10	670	700	1000	25560	114	4	26.5	600	582	620	20XØ28	
	16	715	700	1000	25560	144	4	31.5	600	609	650	20XØ34	
500 GB	10	670	700	1000	25560	25	4	26.5	600	582	620	20XØ28	
	16	715	700	1000	25560	48	4	31.5	600	609	650	20XØ34	
600	10	780	800	1200	37000	660	5	30	600	682	725	20XØ31	
	16	840	800	1200	37000	720	5	36	600	720	770	20XØ37	
600 GB	10	780	800	1200	37000	89	5	30	600	682	725	20XØ31	
	16	840	800	1200	37000	118	5	36	600	720	770	20XØ37	

RESILIENT SEATED GATE VALVE
FAF 6200

Advantages of Resilient Seated Gate Valves

Resilient-seated gate valves are used for reliable and safe supply of hot & cold water, potable water, wastewater management, and, also for the supply of fire water.

Compared to metal seated gate valves, resilient seated gate valves have many advantages.

The body is relatively simple, the good casting process for a wide range. The sealing performance is very good, so that the sealing surface is less eroded when it's full open. Resilient-seated gate valves have good shutoff characteristics and bidirectional. The pressure loss through the valve is minimal.

Lighter, more durable, reduced carbon footprint.

Safety Manual for Maintenance, Inspection and Installation Works

For the trouble-free usage of resilient seated gate valves, this manual should be reviewed carefully, and information supplied should be applied continuously.

Not following the safety instructions will cause below issues.

- Personal injuries,
- Danger for both environment and valve,
- Malfunction of the major valve / facility functions,
- Failure of the projected maintenance and repair applications,
- Danger to people connected to electrical, mechanical, and chemical effects.
- Damage to the environment caused by dangerous leakage.

No modifications or changes can be made to the products supplied by FAF Valve Company. FAF Valve Company shall not be liable for any damage or damages that may result from the failure to comply with the information given in this manual or modification without prior authorization.

Installation, use and maintenance of the gate valves should be done with professionally trained people. Although all FAF VALVE products are manufactured in accordance with international regulations and standards, valves are potentially hazardous if not used properly or used for purposes other than their intended use. All responsible personnel for the storage, installation, use, maintenance, and disassembly of the valves should carefully read and well understand this document. All international and local safety instructions must be reviewed and understood before taking any action on the valve or pipeline. All necessary precautions must be taken.

If any repairs are to be made, there should be no pressure on the pipeline, and if necessary, all fluid should be drained, and warning signs should be placed around the working area.

Devices that can be remotely controlled, such as actuators should be switched to off position. Precautions should be taken to prevent operation of those kind of devices working with stored energy such as compressed air, pressurized water, hydraulic uninterruptible power supply, etc. If a drain valve is to be repaired or uninstalled, precautions must be taken to ensure that the working zone is suddenly filled with water.

The use of original spare parts will ensure the operational safety of the products. The manufacturer cannot be held responsible for damage caused by use of non-original parts or accessories.

If a valve needs to be removed, the pipeline should be discharged. The necessary precautions should be taken due to the remaining fluid which will flow freely after the valve has been removed.

Avoid sudden movements during the lifting, moving, and lowering of the valve. Sudden movements may damage the valve and/or lifting equipment. The lifting must only be done from the lifting lugs located on the body.

The valve may move involuntarily aside during the lifting operation with a crane. Lifting by crane should be done by a specialist personnel and no one other than the operator should enter the working area during the operation.

Any operation on the actuated valve can be done after the actuator has been removed from the power supply. The procedure described in the operating instructions must be followed to switch off the actuator.

RESILIENT SEATED GATE VALVE
FAF 6200

Operating Instructions

Inspection On Delivery

- Check for possible damage in shipment, conformance to specifications, opening direction, shortages, etc.
- Carefully unload all valves - do not drop valve – do not lift valve using gearing, by-pass or other appendage as a hook.
- Valve should be opened and then closed to make sure it works properly. Also check opening direction against the order instruction.
- 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

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

Testing

- 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.
- Porduct test rates: Seat: PN rate X 1.1 PN / Body: PN Rate X 1.5 PN (in bar).
- After testing, steps should be taken to relieve any trapped pressure in body of valves.

Storage

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

Installation

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

Operation

The operation of a resilient wedge valve will "feel" different to the valve operator compared to an older style double-disc gate valve. In normal circumstances, less operating torque is required as the resilient wedge valve just closes, or on opening. Valve operators should be instructed to adhere to the 'number of turns to open' for the size of valve in question rather than rely only upon the feel of the valve.

Associated Products for the Resilient Seated Gate Valve Range

3900
DISMANTLING JOINT

7250
EXTENSION SPINDLE
SURFACE BOX

STEM CAP

2500
Y-TYPE STRAINER

7330
DYNAMIC ARV

5000
RUBBER
EXPANSION JOINT

2270
CHECK VALVE
SWING

KNIFE GATE VALVE
FAF 6500-6550

6500 6550

PRODUCTION STANDARTS

DN50 ➜DN600
PN 10

Connection	EN 1092-2 / ISO 7005-2
Face to Face	EN 558 Series 20
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Product Description

The FAF6500 Knife Gate Valve consists of a sliding cover inside a narrow body. The upper parts of the gate valve extend out of the body from the open or closed positions. This knife gate valve is suitable for liquids that contain a maximum of 5% suspended solids. If it will be used for solids, we recommend installing it with the body indicating the contrary flow direction.

Features

- Unidirectional sealing is available, and attention should be paid to the installation direction.
- One-way sealing is available, and attention should be paid to the installation direction.
- Can be installed at the end of a pipeline between two flanges or by using an opposing flange.
- Bonnet sealing gasket can be replaced online.
- Suitable for actuated operation with an additional top flange.
- Knife-shaped wedge design, cutting fibre fluids, makes it suitable for use in wastewater treatment plants, textile, and food industries.
- NBR rubber gasket seat is placed inside the body cavity.
- The open and closed position of the blade can be monitored with the mechanical position indicator.
- The body and transition connection are fixed with self-locking nuts.
- Gate, stem, bolts, and nuts are made of acid-resistant stainless steel.
- Slim design and low weight.
- Various seal and packing materials available.
- Manual (handwheel), pneumatic piston (with double limit switch), electric actuator, and gearbox options are available.
- Due to design, operating pressure is lower than the nominal pressure for larger diameters. Please ask for technical support.
- It has two-way sealing feature in sizes DN400 and above.

Temperature

- For sewage and neutral liquids min. -10°C /max. 80°C
- NBR: -30°C - 90°C short term

Versions

- Rising stem
- Non-rising stem
- Standard version with hand wheel
- Suitable for electrical actuator
- With electrical actuator
- With gearbox IP68
- Custom production for specific orders

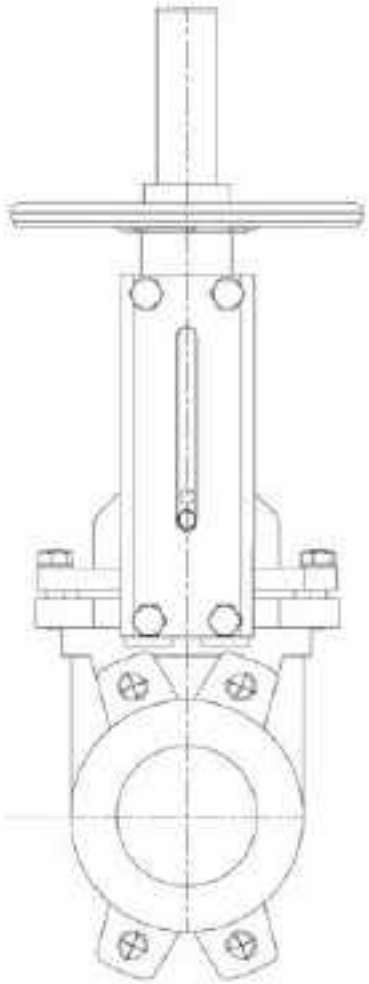
Accessories

- Rigid extension spindle
- Dismantling joints, FAF3900
- Handwheels

Scope of Application

- Mud fluids
- Waste, hot, cold water
- Installation in plants
- Water treatment plants
- Pumping stations
- Water tanks
- Seawater applications
- Power plants (cooling water pipelines)
- Industrial applications

KNIFE GATE VALVE
FAF 6500-6550

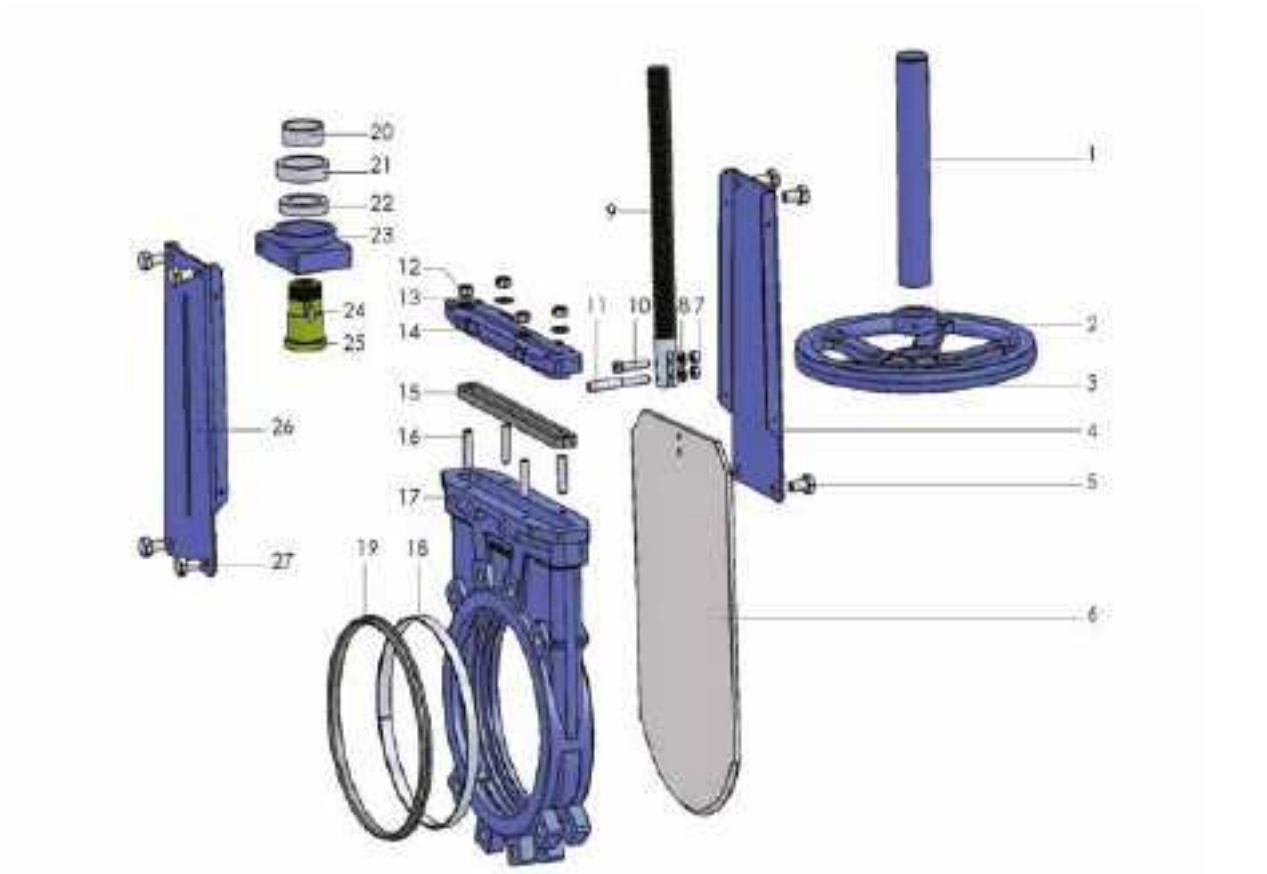


MATERIAL SELECTION	
Body	EN-GJS-500 Ductile Iron / GGG50
Disc	1.4301 - AISI 420 Stainless Steel
Stem	1.4021 - AISI 304 Stainless Steel 1.4301 - AISI 420 Stainless Steel
Sealing	NBR, EPDM (Optional)
Gearbox	EN GJL 250 - ENCLOSURE CLASS - IP68

	VALVE TEST PRESSURE (Bar)		
	MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
DN600	4	6	4,4
DN50 - 500	10	15	11
100% of the valves are subjected to hydrostatic tests at FAF facilities.			

KNIFE GATE VALVE
FAF 6500-6550

Material List

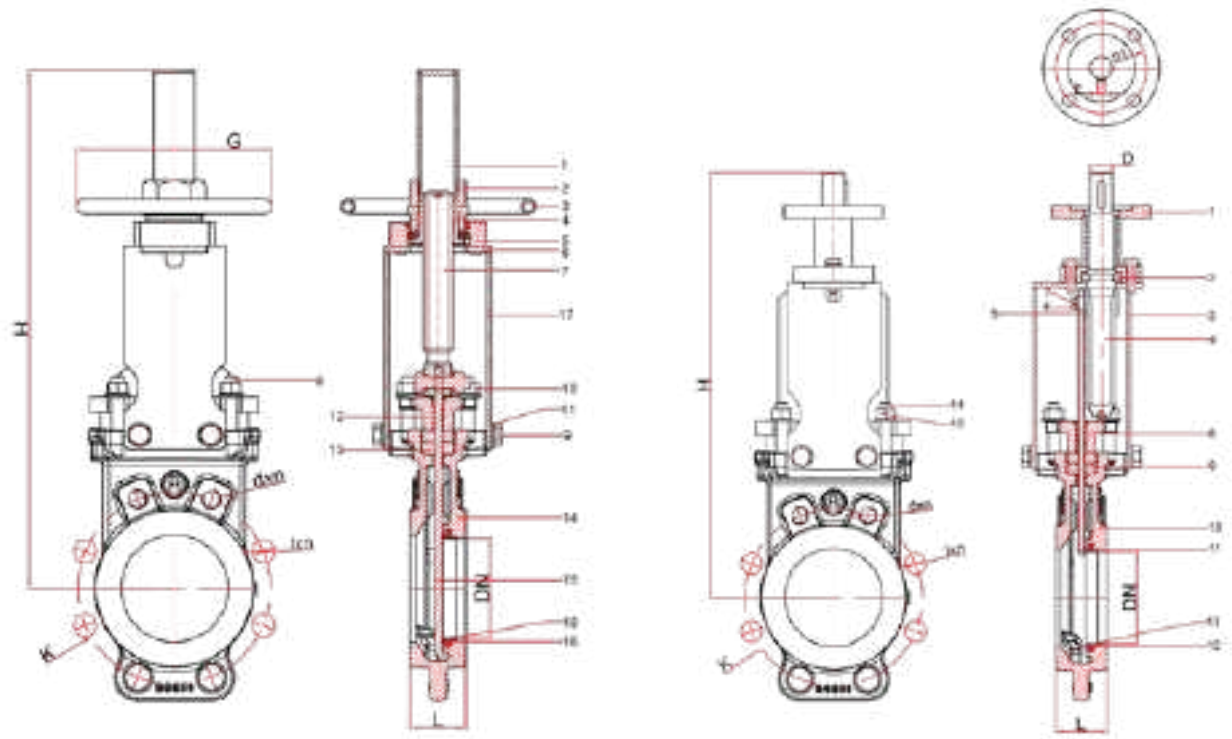


NO	ITEM	MATERIALS
1	STEM COVER	STEEL St 37
2	HANDWHEEL NUT	STEEL
3	HANDWHEEL	STEEL St 37
4	PLATE	STEEL
5	BOLT	STAINLESS STEEL
6	KNIFE WEDGE	STAINLESS STEEL 1.4301
7	NUT	STAINLESS STEEL
8	WASHER	STAINLESS STEEL
9	DRIVE SHAFT	STAINLESS STEEL 1.4021
10	BOLT	STAINLESS STEEL
11	PIN	STAINLESS STEEL 1.4021
12	NUT	STAINLESS STEEL
13	WASHER	STAINLESS STEEL
14	RETAINING COVER	EN GJS 500 DUCTILE IRON

NO	ITEM	MATERIALS
15	GASKET	POLYMER
16	SCREW	STEEL CK 45
17	BODY	EN GJS 500 DUCTILE IRON
18	GASKET BEARING	STAINLESS STEEL1.4301
19	SEALING GASKET	NBR
20	RETAINING PIPE	STEEL
21	BEARING NUT	STEEL
22	BEARING	STEEL
23	FLANGE	STEEL
24	WEDGE	STEEL
25	SHAFT NUT	CuZn40Pb2 BRASS
26	SUPPORT PLATE	STEEL
27	BOLTS	STAINLESS STEEL

KNIFE GATE VALVE
FAF 6500-6550

Technical Details & Drawing, Dimensions



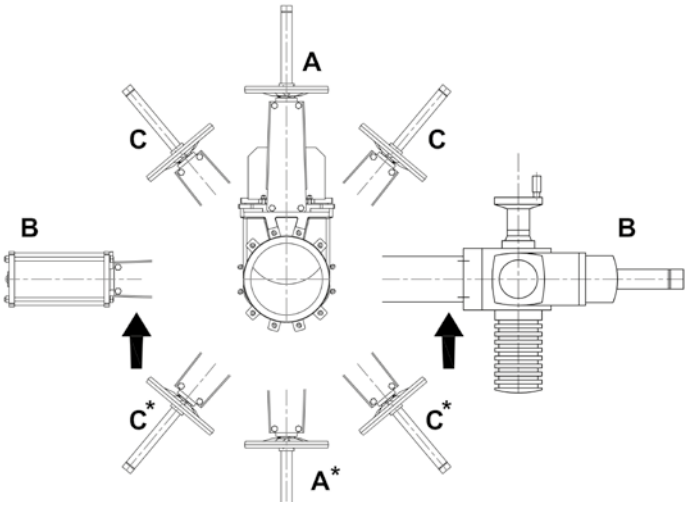
DN (mm)	K	L	H	G	Ød/n	Øl/n	Torque (Nm)	WEIGHT (kg)
50	125	43	380	180	M16X2	19x2	15	7,90
65	145	43	430	180	M16X2	19x2	15	10,00
80	160	50	480	200	M16X2	19x6	15	12,80
100	180	50	510	200	M16X4	19x4	15	12,80
125	210	50	580	220	M16X4	19x4	15	14,80
150	240	60	670	250	M20X4	23x4	15	18,50
200	295	60	815	300	M20X4	23x4	36	28,00
250	350	70	1000	320	M20X8	23x4	44	46,90
300	400	70	1150	350	M20X8	23x4	94	65,00
350	460	96	1315	440	M20X10	23x6	105	96,50
400	515	100	1500	500	M26X10	28x6	117	128,00
600	725	110	2300	1000	M27X8	31x12	250	400,00

Maximum working pressures

- *DN600: Commissioning pressure should be maximum 4 bars.

KNIFE GATE VALVE
FAF 6500-6550

Knife Gate Valve Installation Methods



Dismounting

- Gate valves can be installed in open areas, premises, and wells. Personnel who have studied the valve design and operating instructions requirements should handle the installation and maintenance of valves.
- Before installation, conduct an external inspection of the valves for damage, check internal cavities for the presence of foreign objects, and ensure smoothness of operation. Close the gate valve completely without exerting excessive force.
- Close the knife completely without applying excessive an effort.
- During installation, ensure that the flanges on the pipeline are installed without distortion. Valves must not be subjected to stress from the pipeline. If necessary, supports must be provided to remove the load on the valve from the pipeline. Before installation, the pipeline must be cleaned of dirt, scale, sand, etc.
- The direction of the medium flow must coincide with the arrow on the valve body for valves with one-way sealing. Gate valves can be installed on horizontal pipelines in almost all positions.
- Recommended Position: A - B - C
- Not Recommended Position, Should Avoid: A* - B* - C*.
- The flywheel or drive must be positioned vertically. Valves are supplied with loose seals. After completing the installation work and when filling the system with water, it is necessary to evenly tighten the oil seal bolts crosswise until water stops leaking through the stuffing box. The valve must maintain a smooth operation.
- Replacing the stuffing box and seat seals:
- Gland and seat seals for gate valves need periodic replacement. The duration of their service life and frequency of replacement are determined by the conditions of use and operation.

Exploitation

- After installation, perform a test opening and closing of the valves, ensuring the gate moves smoothly. It is not recommended to apply significant force to close the fittings, as this may damage the gate, reducing the service life of the shut-off valves and causing a lack of tightness in the closed state when the gate is deformed. Avoid hydraulic shocks. Care, maintenance, and valve replacement must be done with the valve switched off and the pumping equipment in the pipeline section depressurized. Do not use valves in working conditions exceeding those stated in the product passport or disassemble the valve under pressure.
-
- For timely detection and elimination of faults, it is necessary to periodically inspect the valve in accordance with the rules and regulations of the operating company organizations. If the valve remains in one place for an extended period and in the same position, it is recommended to perform a full opening-closing cycle at least four times a year.

Associated Products for Knife Gate Valve Range

2290
BALL CHECK VALVE

2295
BALL CHECK VALVE THREADED

3770
ELECTRIC ACTUATOR

3780
ELECTRIC ACTUATOR

7250
EXTENSION SPINDLE
SURFACE BOX

3700
GEARBOX

RESILIENT SEATED GATE VALVE
FAF 6600

PRODUCTION STANDARTS

DN25 ➔DN50
PN 16

Design	EN 1171 / EN 1074
Connection	EN ISO 228-1 Threaded
Face to Face	EN 558
Marking	EN 19
Tests	EN 12266-1
Pressure Class	PN 16
Corrosion Protection	Electrostatic Powder Epoxy WRAS Approved

Features

- Full Bore and Threaded connection.
- Stainless steel spindle with rolled thread and bearing.
- Total surface rubbered wedge with a replaceable spindle nut.
- The body and bonnet are manufactured from ductile iron castings. They are resistant to high tensile stress occurring in pipelines.
- Low operating torque due to plastic sliding guides on the wedge.
- Maintenance-free and corrosion-resistant stem sealing.
- 100% tight sealing is achieved through an EPDM-covered wedge fully contacting the fusion-bonded epoxy-coated flow surface.
- Wedge and body guide rails ensure stable operation.
- Stainless steel stem with rolled threads for high strength and low operation torque.
- Full bore characteristics without disruption of flow result in low pressure drops across the valve.

Temperature

- For water, sewage and neutral liquids min. -10°C /max. 80°C
- EPDM: -40°C - 100°C short term

Product Description

FAF6600 Threaded Service Valve with internal threads for water applications. Bolted cover connection made of premium materials and with special coating designed for both clockwise and anticlockwise directions.

Versions

- Standard version without handwheel
- With handwheel
- With gearbox
- With top flange
- Prepared for electrical actuator
- With electrical actuator

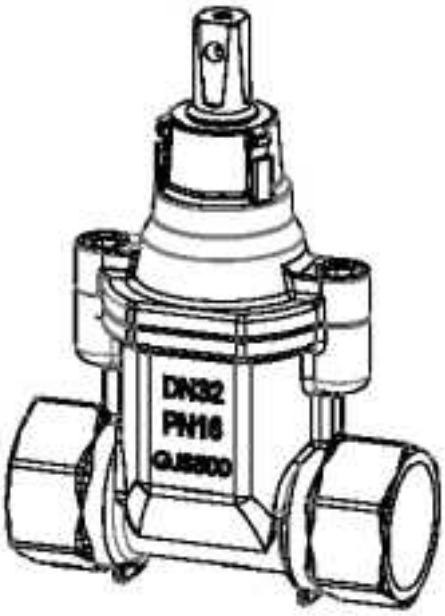
Accessories

- Telescopic extension spindle FAF7250
- Rigid extension spindle
- Surface box cast iron FAF7250K
- Handwheels

Scope of Application

- Hot & cold water
- Water Treatment Plants
- Pumping stations
- Tanks
- Seawater applications
- Power plants (cooling water pipelines)
- Industry

RESILIENT SEATED GATE VALVE
FAF 6600



MATERIAL SELECTION	
Body	EN-GJS-500 DUCTILE IRON / GGG50
Bonnet	EN-GJS-500 DUCTILE IRON / GGG50
Stem	1.4021 - AISI 420 Stainless Steel 1.4301 - AISI 304 Stainless Steel (Optional) 1.4401 - AISI 316 Stainless Steel (Optional)
Sealing	EPDM APPROVED FOR DRINKING WATER
Coating	ELECTROSTATIC POWDER EPOXY APPROVED FOR DRINKING WATER

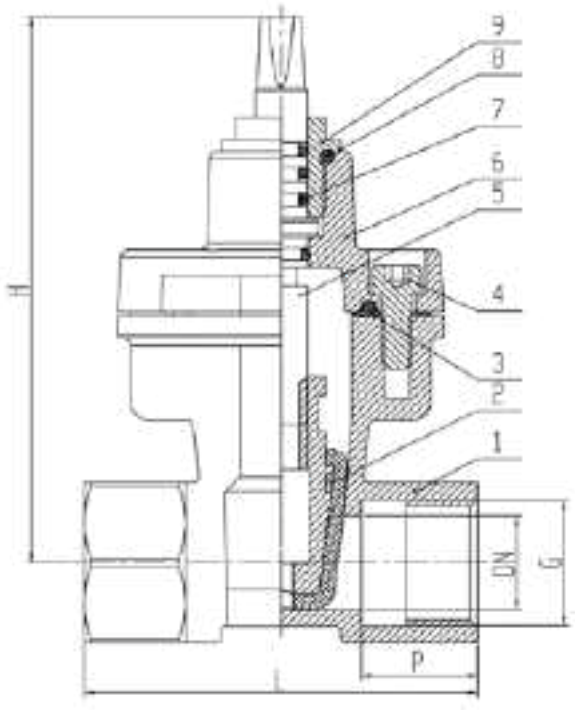
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

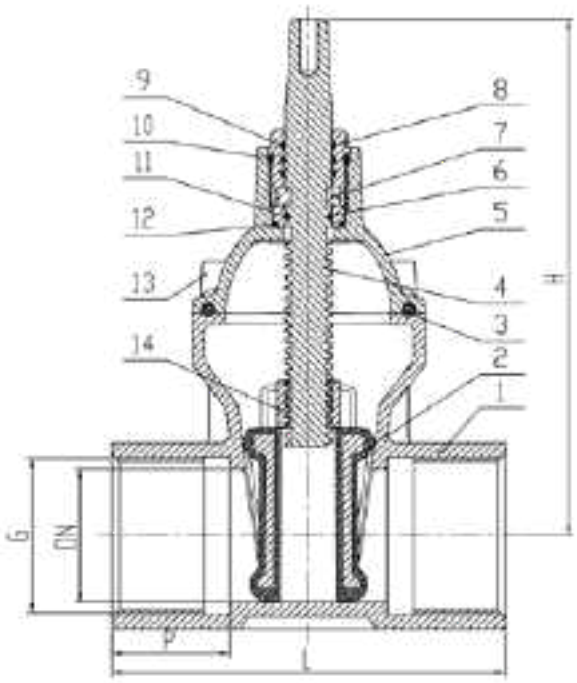
- For proper use and safety precautions please follow the installation and operting instructions.

RESILIENT SEATED GATE VALVE
FAF 6600

Material List



DN20/25/32



DN40/50

NO	ITEM	MATERIALS
1	BODY	DUCTILE IRON
2	DISC	EPDM + DUCTILE IRON
3	BONNET GASKET	NBR
4	STEM	AISI304 STAINLESS STEEL
5	BONNET	GGG50
6	THRUST WASHER	CUzN39Pb1
7	THRUST	CUzN39Pb1
8	THRUST NUT	CUzN39Pb1
9	O-RING	NBR
10	O-RING	NBR
11	O-RING	NBR
12	O-RING	NBR
13	BOLTS	AISI304 STAINLESS STEEL
14	STEM NUT	CUzN39Pb1

Technical Details & Drawing, Dimensions

SIZE	DN20	DN25	DN32	DN40	DN50
L	95	105	120	130	150
H	145	145	150	202	197
G	¾"	1"	1 ¼"	1 ½"	2"
P	27	30	32	37	45
TORQUE (N.M)	15	15	15	30	30

HYDRANT ABOVE GROUND
FAF 7100

PRODUCTION STANDARTS

DN80 →DN100
PN 16

Design	EN 14384
Connection	EN 1092-2 / ISO 7005-2 - Flanged
Marking	EN 19
Tests	EN 14384
Corrosion Protection	Electrostatic Powder Epoxy

Features

- The hydrant's water intake mouths are located above ground.
- It is designed and manufactured according to EN 14384 standards.
- It can be put into operation easily and quickly. By turning the control spindle in the head section clockwise with the hydrant key, it can be opened and closed.
- It can be produced in different sizes or lengths.
- The water remaining in the hydrant is released with the drain valve after use.
- The hydrant should be closed in cold weather. Thus, to prevent the water inside from freezing, it is drained from the outlets. Care should be taken to ensure that the drain valves are in the drainable position during assembly.
- Sphero cast iron body, stainless steel control spindle.
- It should be filled with gravel or similar materials for easy repair during installation.
- All body and cover plate components are coated with epoxy powder adhesive applied by fusion.
- When installing hydrants, they should be cleaned with pressurized air or water to prevent dirt from entering, and a dirt trap should be placed on the water inlet line.
- There are 2 separate water intake mouths, and the covers are made of aluminum material.
- It is suitable to remove one of the aluminum covers during opening to release the air inside the hydrant.

Temperature

- +90 °C

PRODUCTS MODEL CODES	
FAF7100	**HYDRANT**
FAF7150	HYDRANT UNDERGROUND
FAF7160	HYDRANT RUSSIAN TYPE

Product Description

The FAF7100 Hydrant provides water to the fire brigade crew during potential fire incidents for swift treatment.

Versions

- Custom production for specific orders

Accessories

- Hydrant N-Part, FAF7100N
- Hydrant Key, FAF7100KEY

Scope of Application

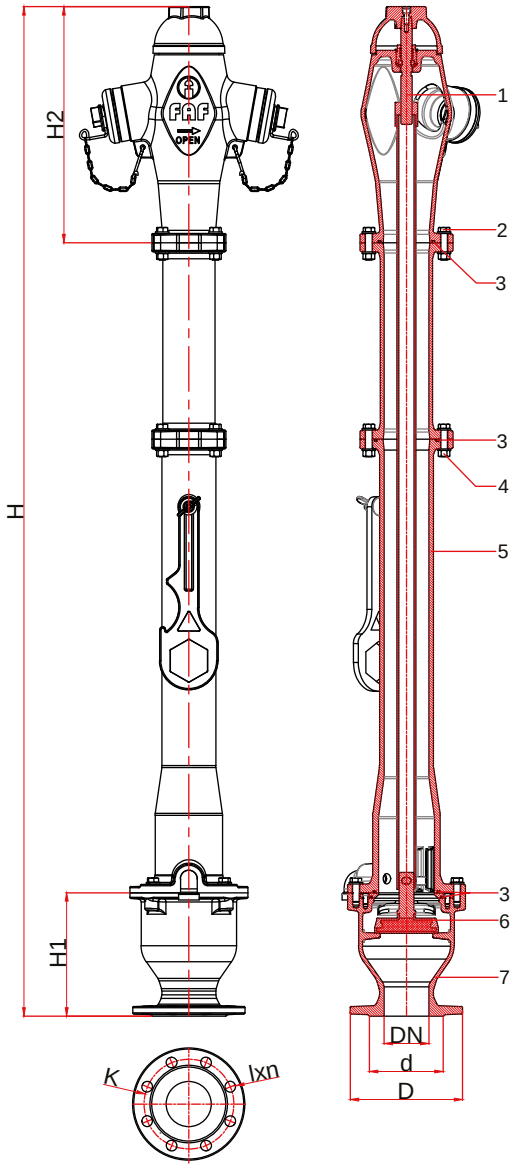
- Fire protection

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
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.

HYDRANT ABOVE GROUND
FAF 7100



N Part

Hydrant Key

NO	ITEM	MATERIALS
1	STEM	STAINLESS STEEL / 1.4021
2	BOLT	DIN 993
3	O - RING	NBR
4	NUT	DIN 934
5	PIPE	EN GJS 400 (DUCTILE IRON)
6	DISC	EN GJS 400 (DUCTILE IRON)
7	BODY	E EN GJS 400 (DUCTILE IRON)

DN (mm)	d	D	K	Øl x n	H1	H2	L	H1	H2	H ±3	Weight (kg)
80	132	200	160	19x8	220	421	300	345	195	1450 1750 2150	62,60 76,3
100	156	220	180	19x8	220	421	300	345	195	1450 1750 2150	 74,3 87,60

HYDRANT - UNDERGROUND
FAF 7150

PRODUCTION STANDARTS

DN80 →DN100
PN 16

Design	EN 14339
Connection	EN 1092-2 / ISO 7005-2 - Flanged
Marking	EN 19
Tests	EN 14339
Corrosion Protection	Electrostatic Powder Epoxy

Features

- The hydrant body and water intake mouth are underground. It has a single exit.
- It is designed and manufactured according to EN 14339 standards.
- It can be put into operation easily and quickly. It is opened and closed by rotating the control shaft on the head of the hydrant with the switch key.
- There is no drain valve in the underground hydrant. The body is cast iron.
- The water intake cover is made of aluminum.
- It is appropriate to remove the aluminum cover of hydrants when opening them to discharge the air inside.
- To prevent dirt from entering the hydrants while they are being installed, the line should be cleaned with compressed air or water and a dirt trap should be placed on the water inlet line.
- It is recommended to install it together with an underground fire hydrant boiler.
- All body and cover plate components are coated with fusion bonded powder epoxy.
- Cast iron body, stainless steel control shaft.
- Main valve easily removable from body or earth line flange.
- Hydrants are designed for high performance and easy installation, maintenance and repair.

Temperature

- +80 °C

PRODUCTS MODEL CODES	
FAF7100	HYDRANT
FAF7150	**HYDRANT UNDERGROUND**
FAF7160	HYDRANT RUSSIAN TYPE

Product Description

FAF7150 Underground hydrant is provided water to fire brigade crew at possible fire moment to treat rapidly.

Versions

- Custom production for specific orders

Accessories

- Hydrant N-Part, FAF7100N
- Hydrant Key, FAF7100KEY

Scope of Application

- Fire protection

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
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.

HYDRANT - UNDERGROUND
FAF 7150

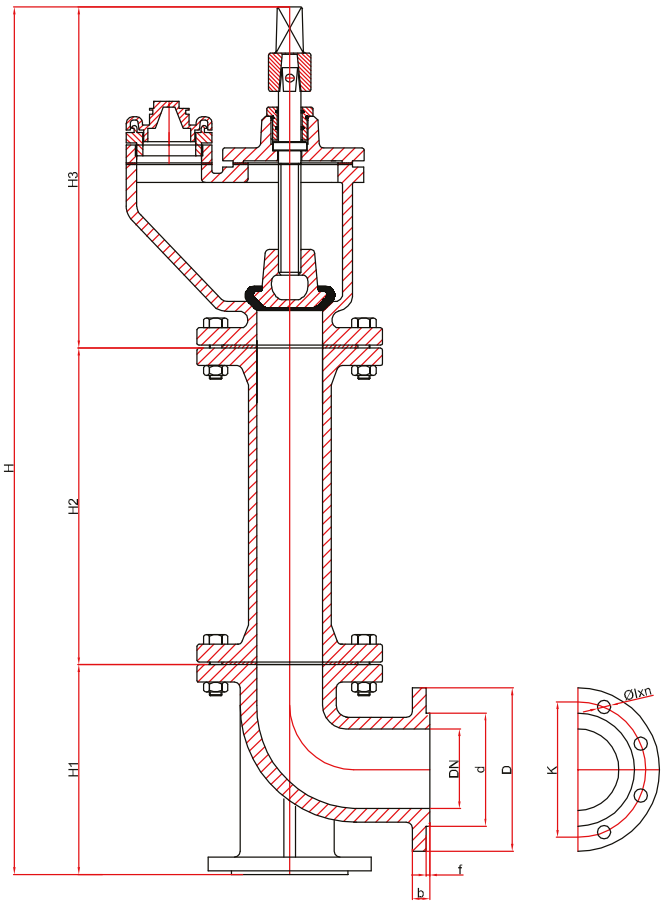
Technical Details & Drawing, Dimensions

Hydrant

Hydrant Surface Box

N Part

Hydrant key



ITEM	MATERIALS
STEM	STAINLESS STEEL 1.4021
PLUG	ALUMINIUM - BRASS
BOLT	DIN 933
SEALING	EPDM
NUT	DIN 934
PIPE	EN GJL 250 (CAST IRON)
BODY	EN GJL 250 (CAST IRON)

DN (mm)	D	K	d	ØI x n	f	b	H1	H2	H3	H ±3 cm	Weight (kg)
80	200	160	132	19x8	3	22	260	430	370	1060	33
100	220	180	156	19x8	3	24	260	430	370	1060	35

HYDRANT - RUSSIAN TYPE
FAF 7160

PRODUCTION STANDARTS

DN80 →DN100
PN 16

Design	EN 14339
Connection	EN 1092-2 / ISO 7005-2 Flanged
Marking	EN 19
Tests	EN 14339
Corrosion Protection	Industrial Epoxy

Features

- Manufactured and designed according to Russian standards.
- It is put into operation easily and quickly. The hydrant is mounted underground.
- It can be manufactured in 3 different L length sizes: H=50 cm – 75 cm – 100 cm.
- The fire brigade water intake port is on the upper head, and the water intake apparatus is in the fire brigade response team.
- Due to its design, the bottom connection flange and gasket are not suitable for DIN standard flanges.
- Please contact FAF Valve for supply. Hydrant connection flanges can be made as crescents.
- All body and cover components are coated with fusion-bonded powder epoxy.
- Hydrants are designed for high performance and high flow rate.
- The body can be made of cast iron or ductile iron material. Both are in PN 16 pressure class.

Temperature

- +80 °C

PRODUCTS MODEL CODES	
FAF7160	**HYDRANT RUSSIAN TYPE**
FAF7150	HYDRANT UNDERGROUND
FAF7100	HYDRANT

Product Description

FAF7160 Hydrant is provided water to fire brigade crew at possible fire moment to treat rapidly.

Versions

- Custom production for specific orders

Accessories

- Hydrant N-Part, FAF7100N
- Hydrant Key, FAF7100KEY

Scope of Application

- Fire protection

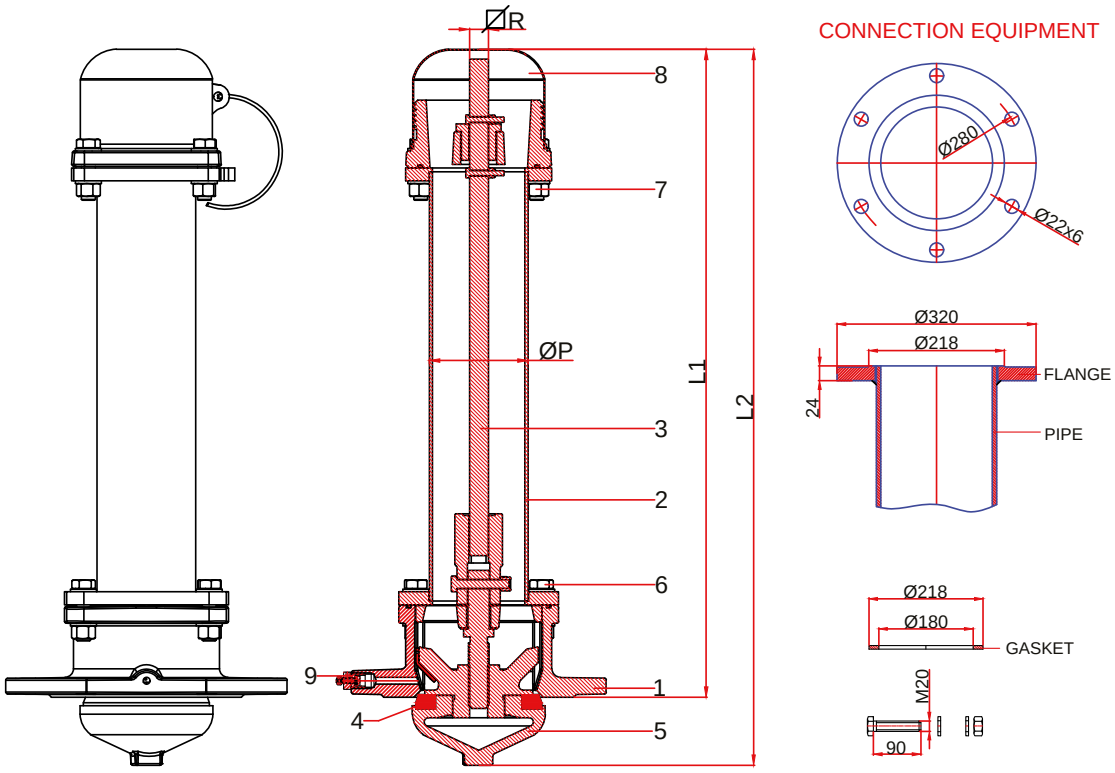
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

HYDRANT - RUSSIAN TYPE
FAF 7160

Technical Details & Drawing, Dimensions



NO	ITEM	MATERIALS
1	BODY	EN-GJL-250 / CAST IRON
2	PIPE	S275JR (GALVANIZED)
3	STEM	STAINLESS STEEL 1.4021
4	SEALING	EPDM
5	DISC	EN GJL 250 (CAST IRON)
6	BOLD	DIN 933
7	NUT	DIN 934
8	BONNET	PLASTIC
9	AUTOMATIC DISCHARGE AREA	BRASS

DN (mm)	L1	L2	ØP	R	Weight (kg)
53	500	568	120	22X22	45,00
75	750	830	114	22X22	52,00
100	1000	1080	114	22X22	60,00
125	1250	1330	114	22X22	69,10
150	1500	1580	114	22X22	75,00
175	1750	1830	114	22X22	186,70
200	2000	2080	114	22X22	95,00
225	2250	2330	114	22X22	103,70
250	2500	2580	114	22X22	114,10

FOOT VALVE
FAF 7200

PRODUCTION STANDARTS

DN100 ➔DN600
PN 10-16

Connection	EN 1092-2 / ISO 7005-2
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Features

- The structure is a combination of a filter and a check valve.
- Through its filter, the clean fluid transfer to the pump is maintained.
- The spring check valve inside the body prevents backflow and discharge from the pipeline.
- Designed for usage at pipeline edges inside the reservoir, suitable for use on clean water lines. Zero steam leakage eliminates media loss and satisfies environmental regulations.
- Effective for energy savings. Energy loss due to leakage is controlled, helping to prevent global warming and protect the environment.

Temperature

- For water, sewage and neutral liquids min. -10°C /max. 80°C
- EPDM: -40°C - 100°C short term

Product Description

The FAF7200 Foot Valve is an installation instrument used in pump suction lines to prevent the discharge of fluid into the reservoir when the system is in a static position and to prevent waterless operation of the pump when started.

Versions

- Cast Iron Body (GG25)
- Ductile Iron disc (EN GJS 400)
- Stainless Stell Filter AISI 304
- Custom production for specific orders

Scope of Application

- Tanks
- Reservoir lines
- Suction lines
- Agriculture irrigation applications.

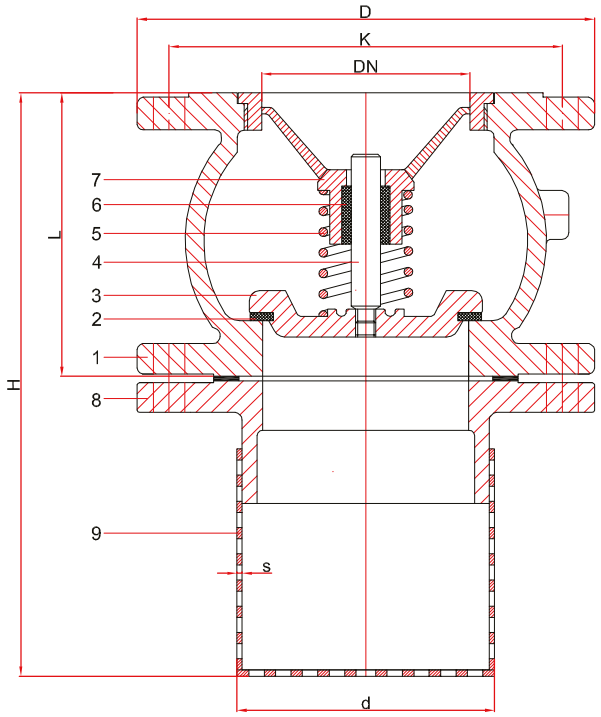
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

FOOT VALVE
FAF 7200

Technical Details & Drawing, Dimensions



NO	ITEM	MATERIALS
1	BODY	EN-GJS-400 DUCTILE IRON
2	SEALING	EPDM
3	DISC	EN-GJS-400 DUCTILE IRON
4	STEM	STAINLESS STEEL 1.4301
5	SPRING	STAINLESS STEEL 1.4301
6	RING	PTFE
7	GUIDE	EN-GJS-400 DUCTILE IRON
8	FLANGE	EN-GJS-400 DUCTILE IRON
9	BASKET	STAINLESS STEEL 1.4301

Nominal Pressure	PN	10/16													
Nominal Diameter	DN	40	50	65	80	100	125	150	200	250	300	350	400	500	600
Valve Dimension	L	85	100	120	140	170	200	230	288	354	395	472	560	670	710
	H	185	200	245	280	320	400	450	510	600	650	735	860	1020	1400
	d	71	81	101	111	140	161	190	235	295	354	410	454	554	654
	S	1,5						2					2,5		
Kv Values	Kv	47	99	159	222	396	619	890	1120	2010	2459	2843	4280	6914	9533
Flange Dimensions DIN EN 1092 PN 10	D	150	165	185	200	220	250	285	340	395	445	505	565	670	780
	K	110	125	145	160	180	210	240	295	350	400	460	515	620	725
Flange Dimensions DIN EN 1092 PN 16	D	150	165	185	200	220	250	285	340	405	460	520	580	715	840
	K	110	125	145	160	180	210	240	295	355	410	470	525	650	770
Weight	Kg	6,2	8,8	11	14	19,5	30,5	39,5	64,5	110	156	250	342	590	630

EXTENSION SPINDLE & SURFACE BOX SET
FAF 7250

Features

- The extension spindle is made of ST37 steel, spindle protector is made of PE, and the surface box is made of cast iron. It can be manufactured according to project requirements.
- FAF 7250 is manufactured with St 37 steel and PE protection. Rigid and telescopic types are available.
- FAF 7250K is manufactured with ductile iron and can fit any type of valve.
- Telescopic bowl set size range, height 45-70 cm; 65-110cm ; Can be extended or shortened from 105-175 cm and can be adjusted to any length within the size range
- Extension spindle for gate valves for water, neutral liquids, and gas.
- Rigid type is also available.

Product Description

FAF7250 Extension Spindle Set is used for control valves installed underground from above ground. Surface box kit is made of protected extension spindle, interconnect components and surface box.

Versions

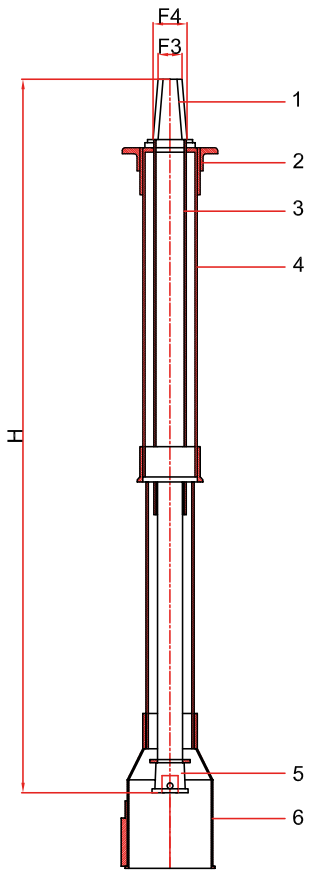
- 3 different lengths in telescopic type
- Desired length measurement in rigid type
- Custom production for specific orders

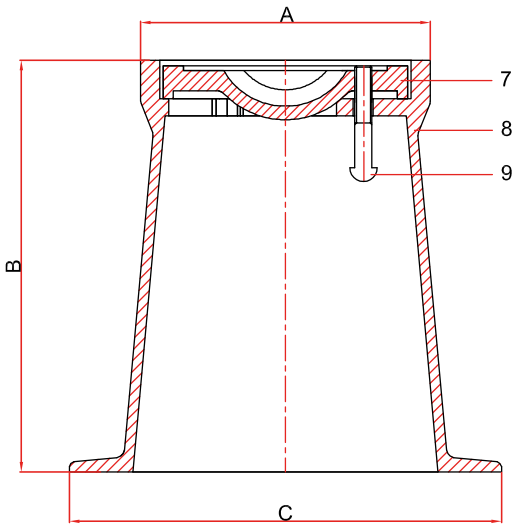
Scope of Application

- Fire protection
- Steam
- Hot & cold water
- Potable Water
- Superheated Water
- Gas Networks
- Chemicals
- Pressurized Air

PRODUCTS MODEL CODES	
FAF7251	SURFACE BOX
FAF7250	**TELESCOPIC TYPE EXTENSION SPINDLE**
FAF7250R	RIGID TYPE EXTENSION SPINDLE
FAF7250T	T-KEY

EXTENSION SPINDLE & SURFACE BOX SET
FAF 7250





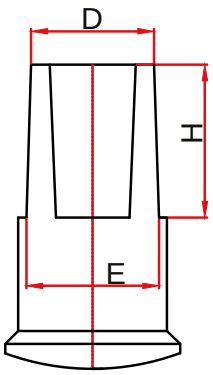
NO	ITEM	MATERIALS
1	KEY ADAPTOR	EN-GJS-400 / EN-GSJ-500 DUCTILE IRON
2	LOCKNUT	PE100
3	STEM	20X20MM SQUARE (GALVANIZED)
4	UPSIDE COVER	PE 100
5	STEM ADAPTOR	EN-GJS-400 / EN-GSJ-500 DUCTILE IRON
6	DAUMSIDE ADAPTOR	PE 100
7	COVER	EN-GJS-400 / DUCTILE IRON
8	BODY	EN-GJS-500 / DUCTILE IRON
9	PIN	ST-37 STEEL

VALVE STEM (H)	
DIAMETER (DN)	LENGTH
40 - 50 mm	450 - 700 mm
65 - 80 mm	
100 - 125 - 150 mm	650 - 1100 mm
200 mm	1050 - 1750 mm
250 - 300 mm	

KEY ADAPTER	
F3	23 ±2 mm
F4	32 ±2 mm

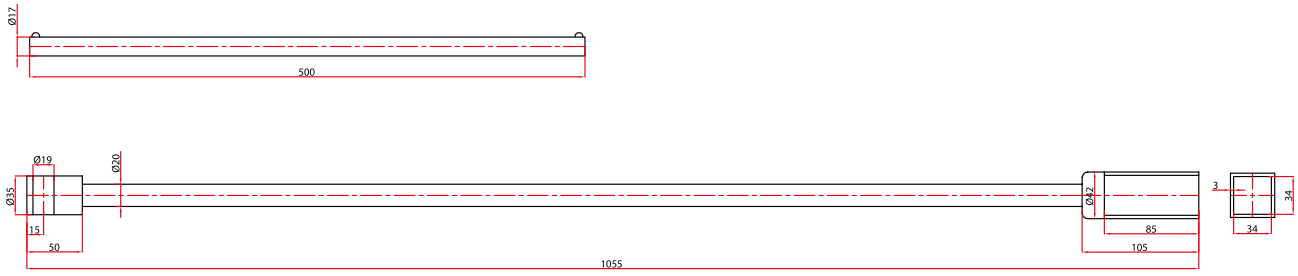
EXTENSION SPINDLE & SURFACE BOX SET
FAF 7250

DN (mm)			
40 50	14	20	29
65 80	17	24	34
100 125 150	19	26	38
200	24	30	42
250 300	27	35	47



SURFACE BOX		
A	B	C
180	165	235

FAF7250R Rigd Type Extension Spindle Technical Drawing



Weight 3,90 kg

Weight 3,90 kg

SINGLE ORIFICE ARV
FAF 7310

PRODUCTION STANDARDS

DN50 ➔DN200
PN 10-16

Design	EN 1074-4
Connection	EN 1092-2 / ISO 7005-2
Marking	EN 19
Tests	EN 12266
Corrosion Protection	Electrostatic Powder Epoxy

Features

- The hydrant body and water intake port are underground. It has a single outlet.
- It is designed and manufactured according to TS EN 14339 standards.
- It can be put into operation easily and quickly. It is opened and closed by rotating the control shaft on the head of the hydrant with the switch key.
- There is no drain valve in the underground hydrant. The body is cast iron.
- The water intake cover is made of aluminum.
- It is appropriate to remove the aluminum cover of hydrants when opening them to discharge the air inside.
- To prevent dirt from entering the hydrants while they are being installed, the line should be cleaned with compressed air or water and a dirt trap should be placed on the water inlet line.
- It is recommended to install it together with an underground fire hydrant boiler. All body and cover plate components are coated with fusion bonded powder epoxy.
- Cast iron body, stainless steel control shaft. yEasily removable main valve from body or ground line flange.
- Hydrants are designed for high performance and easy installation, maintenance and repair.
- Working pressure range: 0.2 – 16 bar.

Temperature

- For water, sewage and neutral liquids min. -10°C /max. 80°C
- EPDM: -40°C - 100°C short term

Product Description

FAF7310 Single Orifice ARV is intended for releasing air in potable water transmission lines and water networks after installation or during pipeline emptying and refilling for maintenance purposes. This type of arv do not have an air vacuuming function.

Accessories

- Gate valve, FAF6000
- Butterfly valve, FAF3500-3600
- Flange adaptor, FAF3960

Scope of Application

- Pump suction lines
- Water lines
- Water supply network
- Line valves
- Venturi meters
- Plunger and turbine pumps

SINGLE ORIFICE ARV
FAF 7310

PRODUCTS MODEL CODES	
FAF7310	**SINGLE ORIFICE ARV**
FAF7320	DOUBLE ORIFICE ARV
FAF7330	NON-SLAM DYNAMIC ARV
FAF7340	DOUBLE ORIFICE NON-SLAM (Kinetic) ARV
FAF7350	COMBINATION (Underground -Street) ARV
FAF7360	THREADED ARV
FAF7370	WASTE WATER ARV

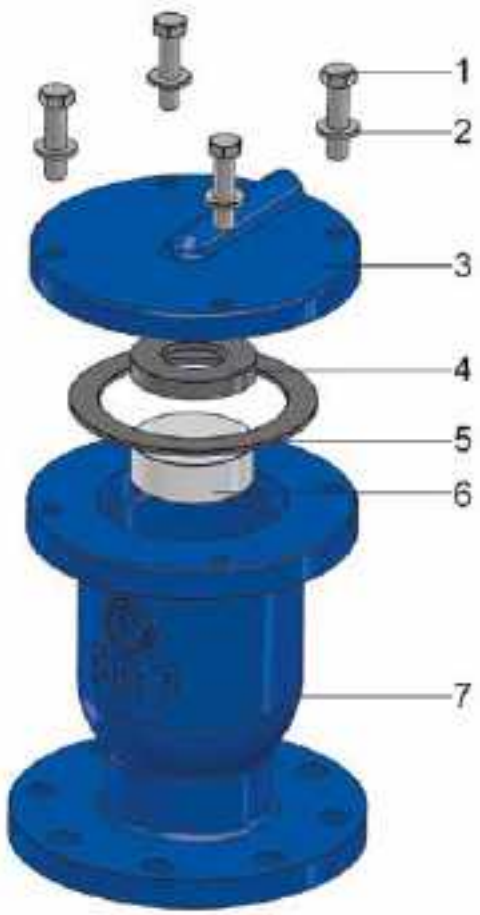
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

SINGLE ORIFICE ARV
FAF 7310

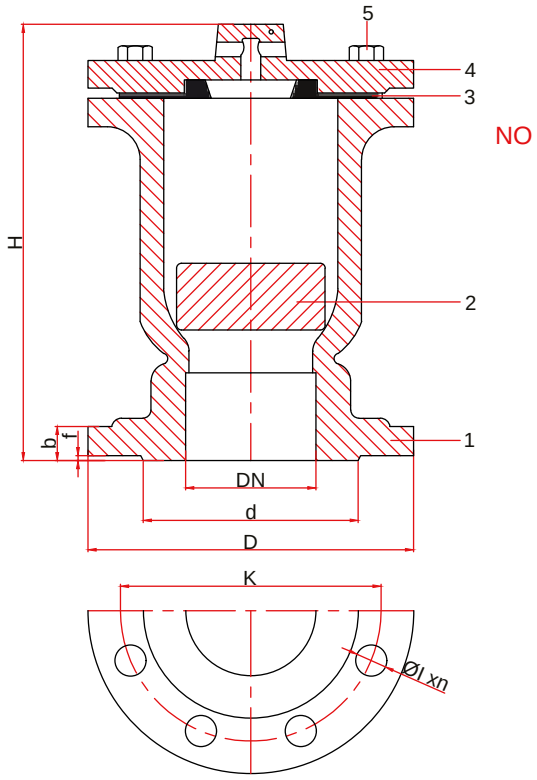
Material List



NO	ITEM	MATERIALS
1	BOLT	EN GJS 400 (DUCTILE IRON)
2	FLOAT	POLIETILEN
3	COVER GASKET	EPDM
4	COVER	EN GJS 400 (DUCTILE IRON)
5	BOLD	GALVANIZED STEEL
6	FLOAT	POLYETHYLENE
7	BODY	EN GJS 400 (DUCTILE IRON)

SINGLE ORIFICE ARV
FAF 7310

Technical Details & Drawing, Dimensions



DIMENSIONS									
DN (mm)	PN	D	K	d	l x n	f	b	H	Weight (kg)
50	PN10/16	165	125	99	Ø19x4	3	19	227	6,2
65		185	145	118	Ø19x4	3	19	229	7,4
80		200	160	132	Ø19x8	3	19	236	7,2
100		220	180	156	Ø19x8	3	19	236	8,3
125		250	210	184	Ø19x8	3	19	372	15,8
150		285	240	211	Ø23x8	3	19	372	17,5
200	PN 10	340	295	266	Ø23x8	4	20	372	22,3
200	PN 16	340	295	266	Ø23x12	4	20	372	22,3

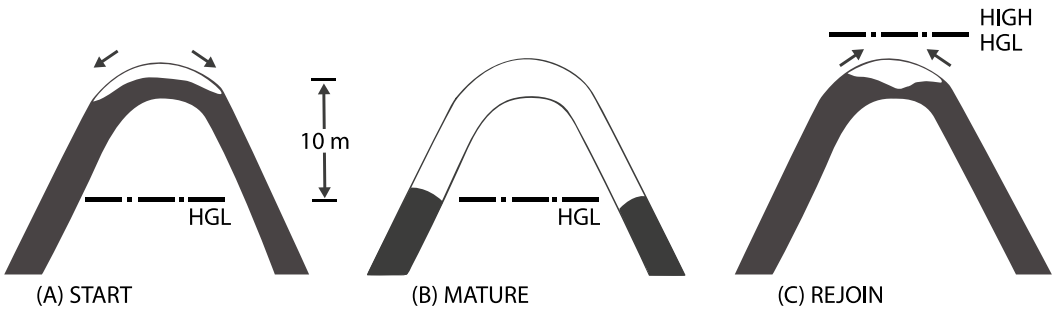
SINGLE ORIFICE ARV
FAF 7310

General Informatıon About Arv's

- Air vacuuming and release are crucial for pipeline operation and safety. Many problems faced with pipelines are related to the air left inside the pipe that cannot be released.
- The pipeline is initially filled with air before being filled with water.
- There exists 2% dissolved air in the water, which can vaporize due to temperature changes or pressure drops.
- Each pump absorbs a certain amount of air.

Effects of Air

- Air in the pipeline narrows the filled water section and increases operating costs.
- Sometimes, trapped air can completely stop the flow, depending on the nature of the pump.
- During peak periods, trapped air can suddenly move, creating turbulence and vibration in the pipeline.
- The corrosion rate accelerates.
- It causes faulty flow meter readings.
- It affects the operation of control valves.
- In some cases, trapped air can arrive at such a moment that it causes the pipe to explode.



DOUBLE ORIFICE ARV
FAF 7320

PRODUCTION STANDARTS

DN50 ➔DN100
PN 10-16

Design	EN 1074-4
End Connection	EN 1092-2 / ISO 7005-2
Marking	EN 19
Tests	EN 12266
Corrosion Protection	Electrostatic Powder Epoxy

Features

- Ductile Iron Body, flanged connection according to EN 1092-2.
- One of the most important features of the impact-free dynamic suction cup is that the air discharge diameter is the same as the inlet diameter.
- Its single-cell design and low weight provide great advantages in installation and use.
- High-resistant float parts made of HDPE eliminate the effects of deformation and wear.
- It prevents shock impacts resulting from sudden closing.
- It eliminates the problem of not being able to fully evacuate the air due to premature closing.
- Impact-free dynamic suction cups are four-function suction cups that perform the functions of air release, air release under pressure and suction.
- Working pressure range: 0.2 – 16 bar.

Temperature

- For water, sewage and neutral liquids min. -10°C /max. 80°C
- EPDM: -40°C - 100°C short term

Product Description

FAF7320 Double Orifice ARV is designed for releasing existing air in potable water transmission lines and water networks after installation or during pipeline maintenance, as well as during emptying and refilling of the pipeline. It is also intended for vacuuming air into the pipe during pipeline emptying due to maintenance or failure circumstances.

Accessories

- Gate valve, FAF6000
- Butterfly valve, FAF3500-3600
- Flange adaptor, FAF3960

Scope of Application

- Pump suction lines
- Water lines
- Water supply network
- Line valves
- Venturi meters
- Plunger and turbine pumps
- Agricultural irrigation applications

DOUBLE ORIFICE ARV
FAF 7320

PRODUCTS MODEL CODES	
FAF7310	SINGLE ORIFICE ARV
FAF7320	**DOUBLE ORIFICE ARV**
FAF7330	NON-SLAM DYNAMIC ARV
FAF7340	DOUBLE ORIFICE NON-SLAM (Kinetic) ARV
FAF7350	COMBINATION (Underground -Street) ARV
FAF7360	THREADED ARV
FAF7370	WASTE WATER ARV

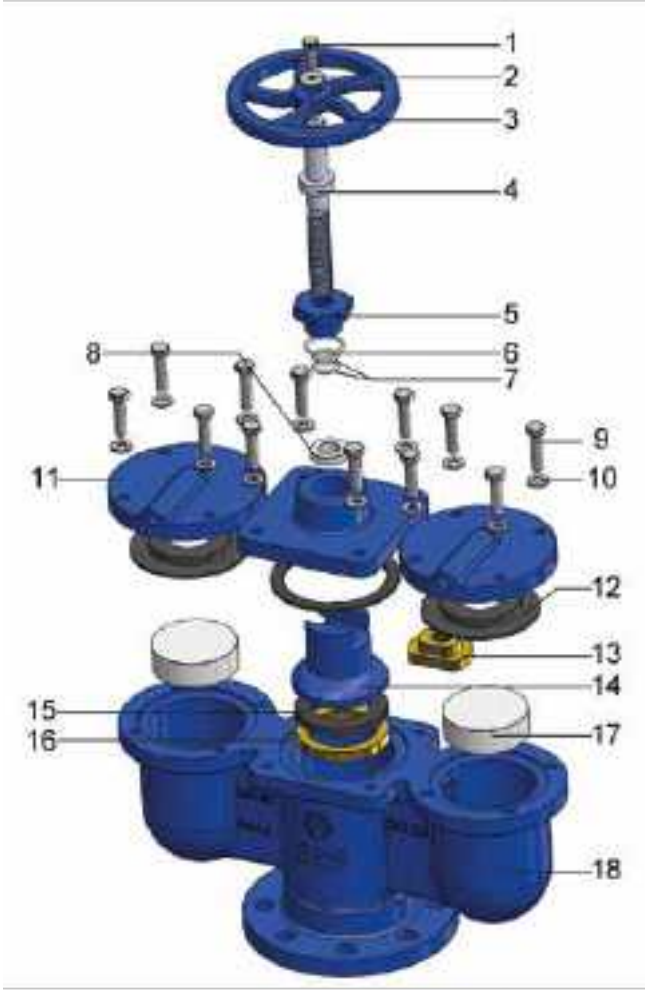
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

DOUBLE ORIFICE ARV
FAF 7320

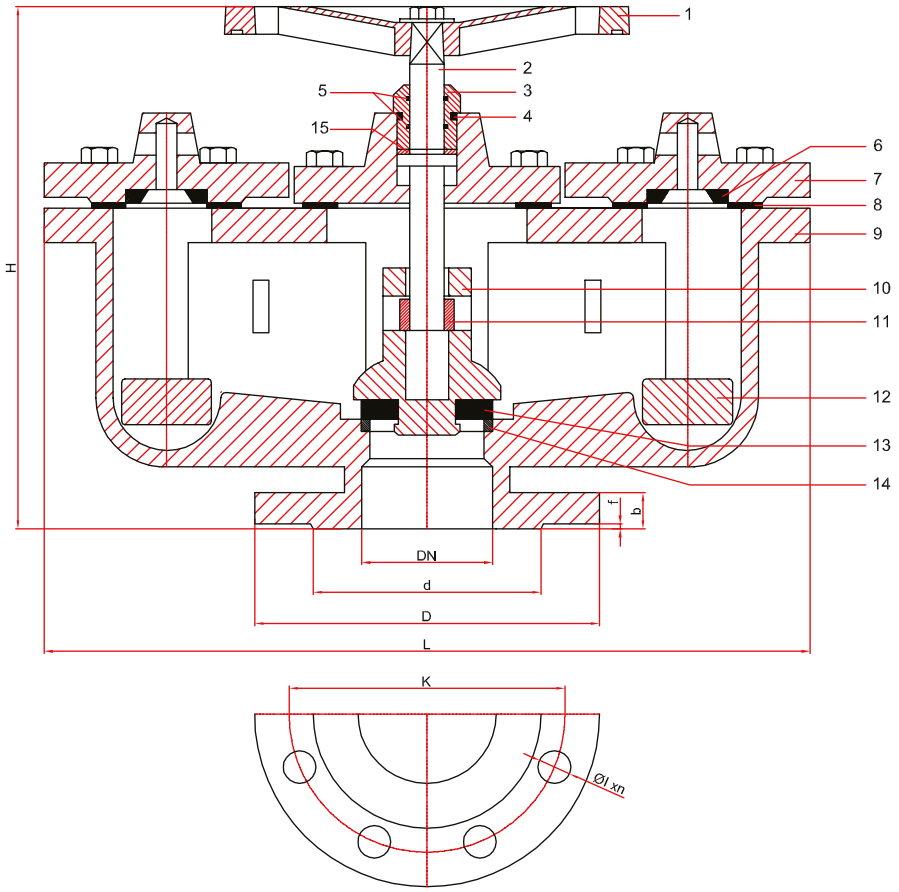
Material List



NO	ITEM	MATERIALS
1	HAND WHEEL	EN GSJ 400 DUCTILE IRON
2	SHAFT	X20Cr13
3	RAGOR	EN GSJ 400 DUCTILE IRON
4	COVER O-RING	EPDM
5	RAGOR O-RING	EPDM
6	MID-SIDE COVER GASKET	EPDM
7	COVER SIDE	EN GSJ 500 DUCTILE IRON
8	COVER SIDE SEARCH GASKET	EPDM
9	BODY	EN GSJ 500 DUCTILE IRON
10	SLIDE	EN GSJ 500 DUCTILE IRON
11	MOVING NUT	MS 58
12	SPHERE	POLYETHYLEN
13	SLIDE GASKET	EPDM
14	O-RING	POLYETHYLEN
15	RING	EPDM
16	SEAT	MS58 BRASS
17	FLOAT	POLYETHYLENE
18	BODY	EN GSJ 500 DUCTILE IRON

DOUBLE ORIFICE ARV
FAF 7320

Technical Details & Drawing, Dimensions



DIMENSIONS									
DN (mm)	PN	D	K	d	I x n	f	b	H	Weight (kg)
50	PN10/16	165	125	99	19x4	3	20	275	6,20
65		185	145	118	19x4	3	20	275	6,90
80		200	160	132	19x8	3	20	280	7,60
100		220	180	156	19x8	3	24	280	8,20
125				184	19x8	3	26	280	15,00
150				211	23x8	3	26	400	17,50
200	PN16			266	Ø23x8	4	26	400	22,00
200	PN16			266	Ø23x12	4	30	400	22,00

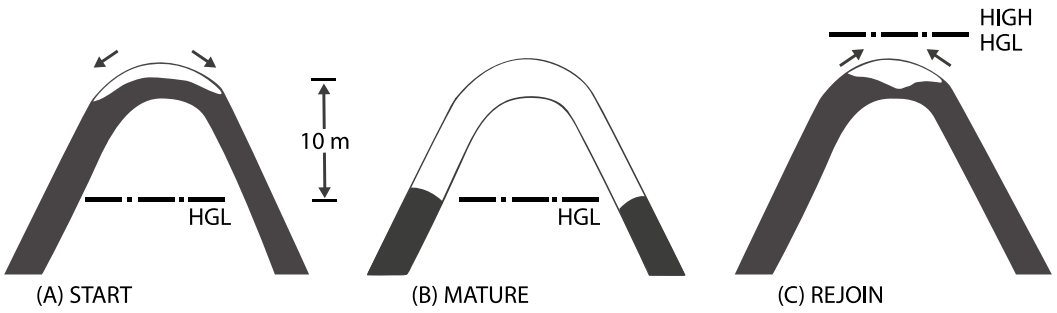
DOUBLE ORIFICE ARV
FAF 7320

General Information About Arv's

- Air vacuuming and release are vital for pipeline operation and safety. In fact, many problems encountered with pipelines are related to the air trapped inside the pipe that cannot be released.
- The pipeline is initially filled with air before being filled with water.
- There is approximately 2% dissolved air in the water, which can vaporize due to temperature changes or pressure drops.
- Each pump absorbs a certain amount of air.
- Incorrect installations.

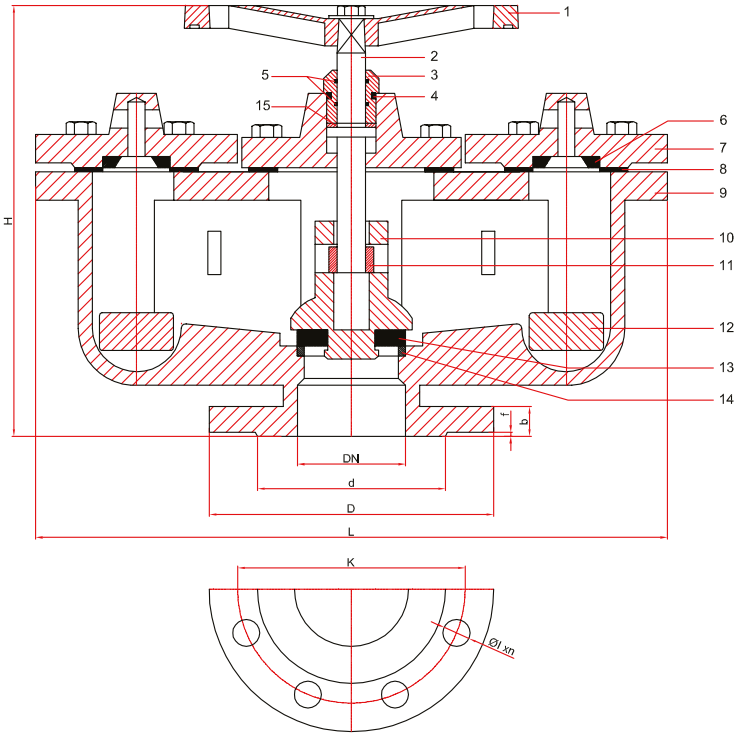
Effects of Air

- Air in the pipeline narrows the filled water section and increases operating costs.
- Sometimes, trapped air can completely stop the flow, depending on the pump's nature.
- During peaks, trapped air moves suddenly, creating turbulence and vibrations in the pipeline.
- The corrosion rate accelerates.
- It causes faulty flow meter readings.
- It affects the operation of control valves.
- In some cases, trapped air can arrive at such a moment that it causes the pipe to explode.



DOUBLE ORIFICE ARV
FAF 7320

General Information about ARV's



Problems, Usage

- Leakage due to float deformation and rubber damage is the most common complaint in rubber-coated sphere float designs.
- In some designs, the air release valve is deactivated because the float becomes jammed in the large orifice during closure.
- The main issue discussed in the literature is closure problems, referred to as dynamic (premature) closure, occurring before the entire pipeline air mass is released.
- During air release, it is not possible to hold the float in place after a certain airflow, as it is subject to aerodynamic laws. Consequently, it is absorbed, closing the large orifice.

Non-slam Dynamic ARV

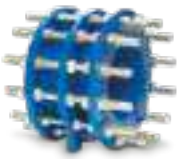
- Non-slam dynamic air release valves (ARVs) are a type of ARV that remain open and do not require maintenance or monitoring. They continuously release air through the float orifice even when the anti-shock floater is closed, addressing all the issues associated with double orifice ARVs through their design and functionality. The central float ensures the system's safety by releasing air bubbles occurring under pressure.
- These valves are installed inside ARV chambers on pipelines, with isolation valves such as gate and wafer butterfly valves placed below the dynamic ARVs and double orifice ARVs

Associated Products for Double Orifice Arv Range

3800
BUTTERFLY VALVE
DOUBLE ECCENTRIC FLANGED

6000
RESILIENT SEATED
GATE VALVE

2280
TILTING CHECK VALVE



3900
DISMANTLING
JOINT

7330

NON-SLAM DYNAMIC ARV
FAF 7330

PRODUCTION STANDARTS

DN50 →DN250
PN 10-16

Design	EN 1074-4
End Connection	EN 1092-2 / ISO 7005-2
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Features

- Ductile Iron Body, flanged connection according to EN 1092-2.
- One of the most important features of the impact-free dynamic suction cup is that the air discharge diameter is the same as the inlet diameter.
- Its single-cell design and low weight provide great advantages in installation and use.
- High-resistant float parts made of HDPE eliminate the effects of deformation and wear.
- It prevents shock impacts resulting from sudden closing.
- It eliminates the problem of not being able to fully evacuate the air due to premature closing.
- Impact-free dynamic suction cups are four-function suction cups that perform the functions of air release, air release under pressure and suction.
- Working pressure range: 0.2 – 16 bar.

Temperature

- For water, sewage and neutral liquids min. -10°C /max. 80°C
- EPDM: -40°C - 100°C short term

Product Description

FAF7330 Non-Slam Dynamic ARV is designed to release existing air in potable water transmission lines and water networks after installation or during pipeline emptying and refilling due to maintenance works.

Scope of Application

- Pump suction lines
- Water lines
- Water supply network
- Line valves
- Venturi meters
- Plunger & turbine pumps

NON-SLAM DYNAMIC ARV
FAF 7330

PRODUCTS MODEL CODES	
FAF7310	SINGLE ORIFICE ARV
FAF7320	DOUBLE ORIFICE ARV
FAF7330	**NON-SLAM DYNAMIC ARV**
FAF7340	DOUBLE ORIFICE NON-SLAM (Kinetic) ARV
FAF7350	COMBINATION (Underground -Street) ARV
FAF7360	THREADED ARV
FAF7370	WASTE WATER ARV

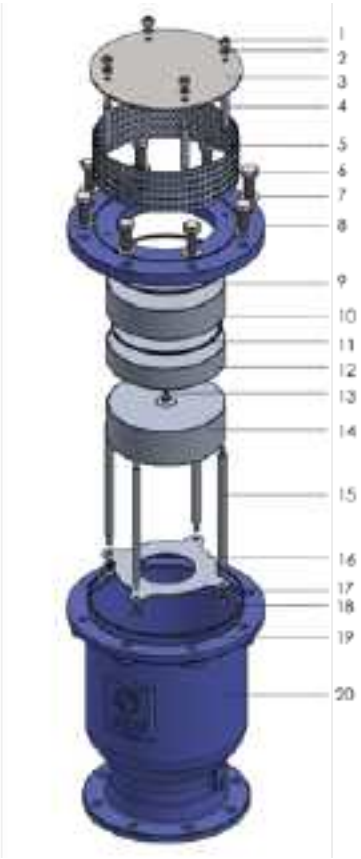
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

- For proper use and safety precautions please follow the installation and operating instructions.
- It provides 100% impermeability with its special design gasket and stainless cover flange.
- Prevents leakage including low pressure usage (0.2 bar).
- The filter and cover plate are designed to completely cover the body. In this way, possible external wastes in the field are prevented from entering the suction cup.
- It is produced so that the total hole area in the filter is not less than the cross-sectional area of the nominal diameter.
- The periphery of HDPE floaters is equipped with stainless steel guides/studs to ensure precise operation.
- Body and cover are coated with powder epoxy. Metal parts in contact with the fluid are protected against corrosion by using stainless steel.
- It has an aerodynamic structure that prevents premature closing without disturbing the air flow.

NON-SLAM DYNAMIC ARV
FAF 7330

Material List

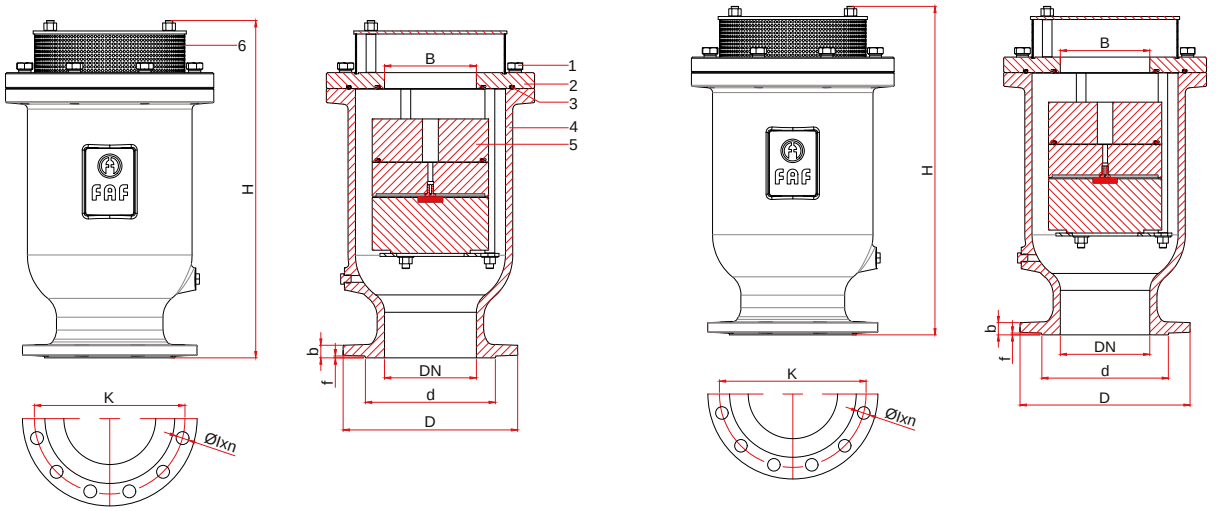


NO	ITEM	MATERIALS
1	NUT	STAINLESS STEEL A2
2	WASHER	STAINLESS STEEL A2
3	UPPER COVER	1.4016 STAINLESS STEEL
4	STUD	14021 STAINLESS STEEL
5	FILTER	STAINLESS STEEL A2
6	BOLT	STAINLESS STEEL A2
7	WASHER	STAINLESS STEEL A2
8	BONNET	STEEL
9	O-RING	NBR - EPDM
10	UPPER FLOAT	PP (Polipropilen)
11	O-RING	NBR - EPDM
12	MIDDLE FLOAT	PP (Polipropilen)
13	ORIFICE	14021 STAINLESS STEEL
14	LOWER FLOAT	PP (Polipropilen)
15	STUD	14021 STAINLESS STEEL
16	FLANGE	14021 STAINLESS STEEL
17	WASHER	STAINLESS STEEL A2
18	NUT	STAINLESS STEEL A2
19	O-RING	NBR - EPDM
20	BODY	EN GJS 500 DUCTILE IRON

NO	ITEM	MATERIALS
1	BODY	EN GJS 500
2	BONNET	EN GJS 500
3	STUD	AISI420
4	LOWER FLOAT	PP (Polipropilen)
5	UPPER FLOAT	PP (Polipropilen)
6	FLANGE	AISI430
7	O-RING	NBR - EPDM
8	O-RING	NBR - EPDM
9	BOLT	A2
10	WASHER	AISI430
11	WASHER	AISI430
12	MIDDLE FLOAT	PP (Polipropilen)
13	ORIFICE	AISI420
14	SEALING	EPDM
15	BOLT	A2
16	WASHER	AISI304
17	NUT	BRASS
18	FILTER RING	AISI430
19	FILTER	AISI430

NON-SLAM DYNAMIC ARV
FAF 7330

Non-Slam Dynamic ARV Technical Details



DIMENSIONS									
DN (mm)	PN	D	K	d	Øl x n	f	b	H	Weight (kg)
50	PN 10	165	125	99	Ø19x4	3	19	300	11,70
65		185	145	118	Ø19x4	3	19	328	14,90
80		200	160	132	Ø19x8	3	19	330	17,60
100	PN 16	220	180	156	Ø19x8	3	19	373	24,75
150		285	240	211	Ø23x8	3	19	556	62,75
200	PN 16	340	295	266	Ø23x12	4	20	625	119,25
250	PN 16	400	355	319	Ø28x12	4	22	694	185,35
300	PN 16	455	410	370	Ø28x12	4	24,5	694	185,35

NON-SLAM DYNAMIC ARV
FAF 7330

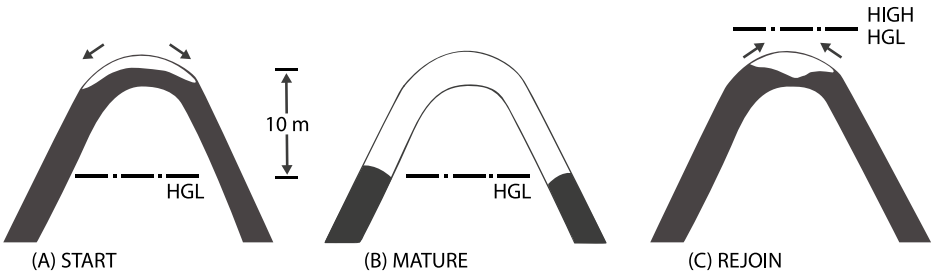
General Information about ARV's

General Information About Arv's

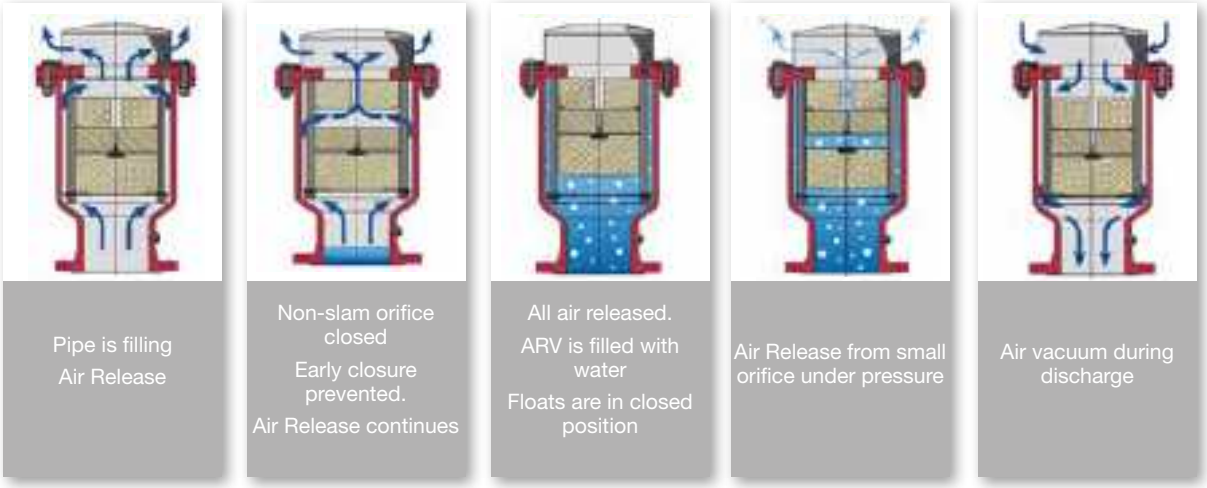
- Air vacuuming and release are vital for pipeline operation and safety. Many problems faced with pipelines are related to the air left inside the pipe that cannot be released.
- The pipeline is already filled with air before being filled with water.
- Approximately 2% of dissolved air in the water can vaporize due to temperature changes or pressure drops.
- Each pump absorbs a certain amount of air.
- Incorrect installations.

Effects of Air

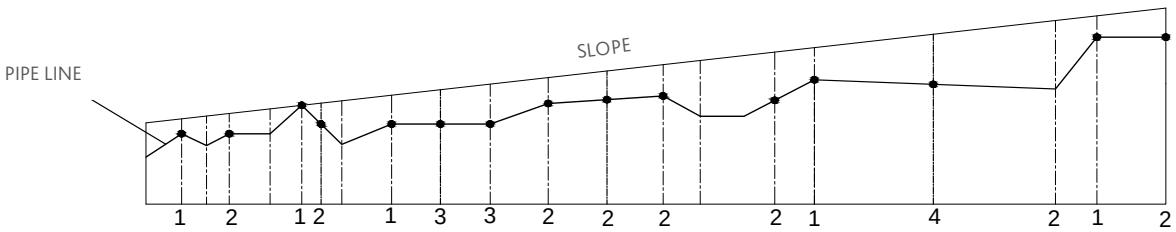
- Air in the pipeline narrows the water section and increases operating costs.
- Trapped air can sometimes stop the entire flow, depending on the pump's nature.
- During peaks, trapped air moves suddenly, creating turbulence and vibration in the pipeline.
- The corrosion rate accelerates.
- It causes faulty flow meter readings.
- It affects the operation of control valves.
- In some cases, the jammed air can cause the pipe to explode.



Suction Cup Usage – Working – Application

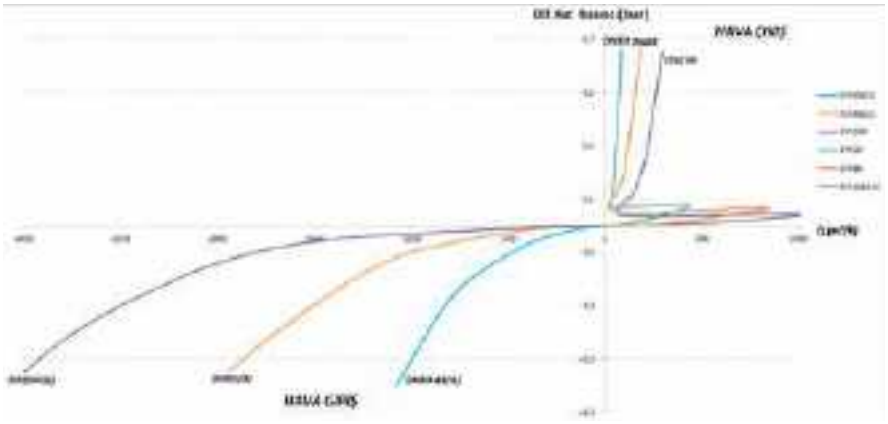


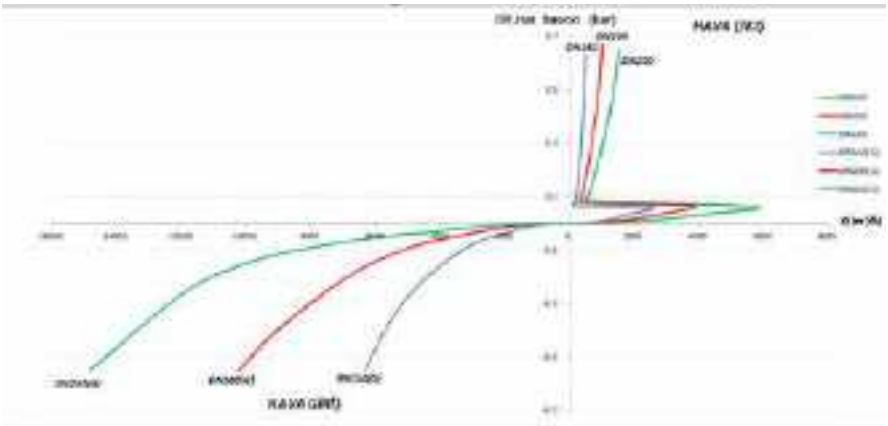
Pipe is filling Air Release	Non-slam orifice closed Early closure prevented. Air Release continues	All air released. ARV is filled with water Floats are in closed position	Air Release from small orifice under pressure	Air vacuum during discharge



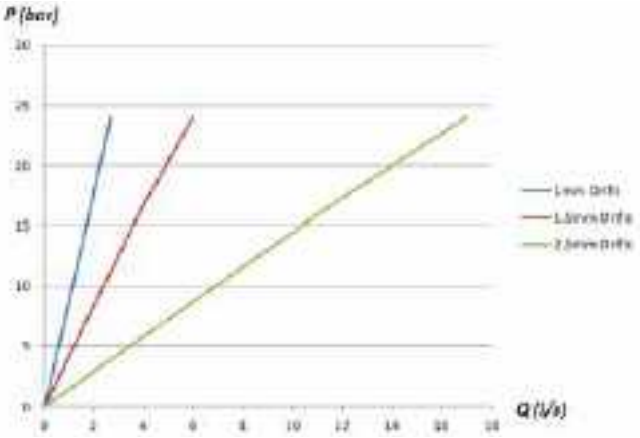
NON-SLAM DYNAMIC ARV
FAF 7330

General Information about ARV's
ARV Selection Criteria





ORIFICE SELECTION	
ARV Size	Orifice Size
DN50	1mm
DN65	1mm
DN80	1.5mm
DN100	1.5mm
DN150	1.5mm
DN200	2.5mm
DN250	2.5mm



ARV Factory Acceptance Test Requirements

1. Reistance Test
2. Hydrostatic Test
3. Low Pressure Sealing Test
4. Air Release
5. Air Release under pressure
6. Vaccum tests

NON-SLAM DYNAMIC ARV
FAF 7330

Associated Products for Non-Slam Dynamıc Arv Range

3800
BUTTERFLY VALVE
DOUBLE ECCENTRIC FLANGED

6000
RESILIENT SEATED
GATE VALVE

2280
TILTING CHECK VALVE

3900
DISMANTLING
JOINT

DOUBLE ORIFICE NON-SLAM (KINETIC) ARV
FAF 7340

PRODUCTION STANDARTS

DN50 ➔DN300
PN 10-16-25

Design	EN 1074-4
End Connection	EN 1092-2 / ISO 7005-2
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Features

- Double Orifice Non-Slam Kinetic ARV is used to vacuum air into the pipe during pipeline maintenance or failure circumstances and to release small air particles that may occur during operation.
- Double Orifice Non-Slam Kinetic ARV is installed onto the pipe with a flanged connection.
- One of the most important features of Double Orifice Kinetic ARV compared to conventional Double Orifice ARVs is that the air outlet diameter is the same size as the inlet diameter.
- Double Orifice Kinetic ARVs are known as four-function ARVs: air release, air vacuum, prevention of blocking due to sudden closure, and releasing air under pressure with the help of the second orifice.
- They eliminate the problem of early closure.
- They offer a significant advantage during installation and operation with their single-body design and low weight.
- High-resistant float parts made of HDPE eliminate the negative effects of deformation and abrasion.
- The body and cover are made of ductile iron with a blue epoxy coating.
- Release valves can be manufactured with flanged or screwed ends.
- The working pressure range is 0.2 – 16 bar.

Temperature

- For water, sewage and neutral liquids min. -10°C /max. 80°C
- EPDM: -40°C - 100°C short term

Product Description

FAF7340 Double Orifice Non-Slam Kinetic ARV; to be used for the purpose of releasing the existing air in the potable water transmission lines and water networks after installation or during emptying and refilling the pipeline due to maintenance works.

Scope of Application

- Pump suction lines
- Water lines
- Water supply network
- Line valves
- Venturi meters
- Plunger & turbine pumps

DOUBLE ORIFICE NON-SLAM (KINETIC) ARV
FAF 7340

PRODUCTS MODEL CODES	
FAF7310	SINGLE ORIFICE ARV
FAF7320	DOUBLE ORIFICE ARV
FAF7330	NON-SLAM DYNAMIC ARV
FAF7340	**DOUBLE ORIFICE NON-SLAM (Kinetic) ARV**
FAF7350	COMBINATION (Underground -Street) ARV
FAF7360	THREADED ARV
FAF7370	WASTE WATER ARV

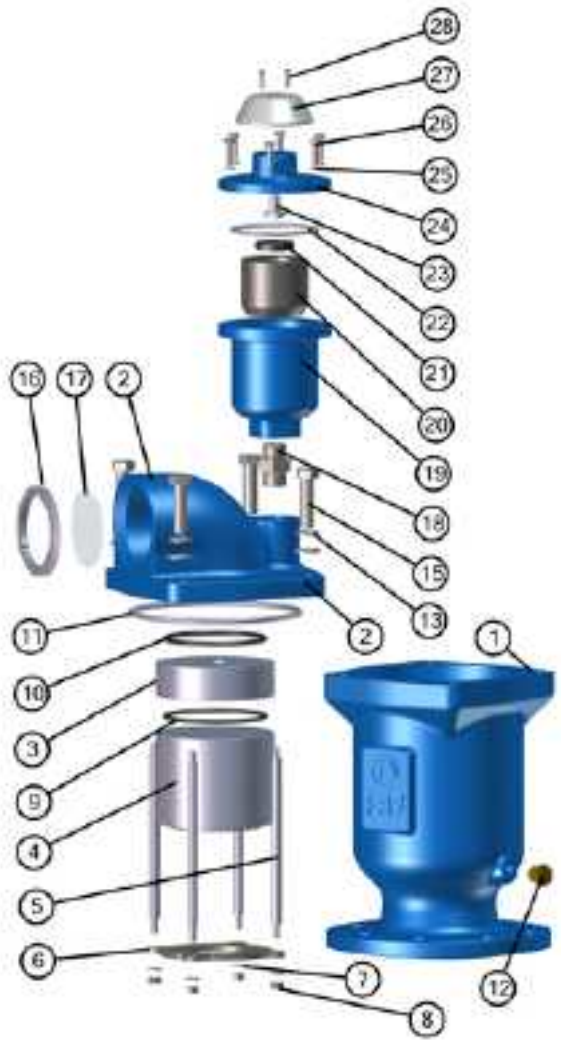
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities		

Note

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

DOUBLE ORIFICE NON-SLAM (KINETIC) ARV
FAF 7340

Material List

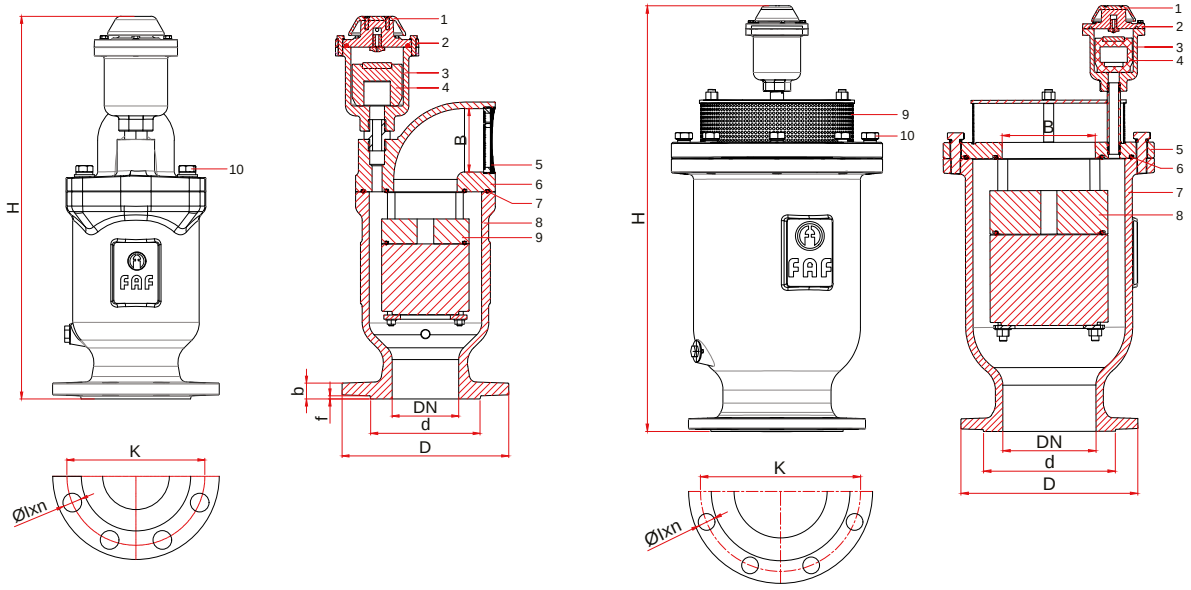


NO	ITEM	MATERIALS
1	BODY	EN GJS 500
2	BONNET	EN GJS 500
3	UPPER FLOAT	HDPE
4	LOWER FLOAT	HDPE
5	STUD	AISI304
6	FLANGE	AISI430
7	WASHER	AISI304
8	NUT	AISI304
9	O-RING	NBR - EPDM
10	O-RING	NBR - EPDM
11	O-RING	NBR - EPDM
12	NUT	BRASS
13	WASHER	AISI304
14	WASHER	AISI304
15	BOLT	AISI304
16	FILTER RING	AISI420
17	FILTER	AISI304
18	NIPPLE	AISI304
19	DN25 ARV BODY	EN GJS 500
20	DN25 ARV FLOAT	HDPE
21	SEALING	NBR - EPDM
22	O-RING	NBR - EPDM
23	ORIFICE	AISI420
24	DN25 ARV BONNET	EN GJS 500
25	WASHER	AISI304
26	BOLT	AISI304
27	COVER	PLASTIC
28	BOLT	ISO 10642

DOUBLE ORIFICE NON-SLAM (KINETIC) ARV

FAF 7340

Technical Details & Drawing, Dimensions



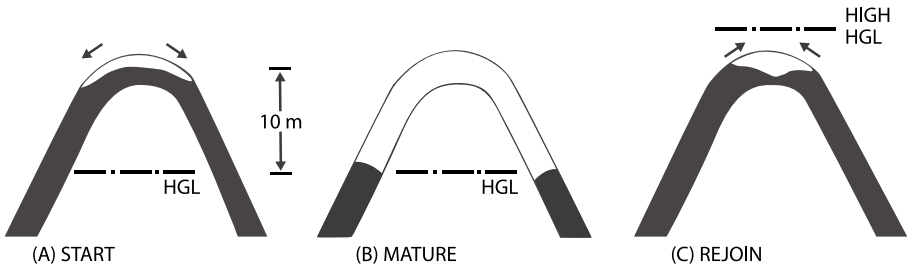
General Information about ARV's

- Air vacuum and release is vital for the pipeline operation and safety. Many problems faced with the pipelines are related with the air left inside the pipe that cannot be released. Where does the air in the pipeline come from?
- Pipeline is already filled with air before filling with water.
- There exists 2% dissolved air in the water, which can vaporise by temperature change or pressure drop.
- Each pump absorbs a certain amount of air.
- Incorrect installations.

Effects of Trapped Air

- Air in the pipeline narrows the water section and increases operating costs.
- Trapped air can sometimes stop the entire flow, depending on the pump's nature.
- During peaks, trapped air moves suddenly, creating turbulence and vibration in the pipeline.
- The corrosion rate accelerates.
- It causes faulty flow meter readings.
- It affects the operation of control valves.
- In some cases, the jammed air can cause the pipe to explode.

DOUBLE ORIFICE NON-SLAM (KINETIC) ARV
FAF 7340



ARV Factory Acceptance Test Requirements

- At peak points, trapped air suddenly moves, creating turbulence and vibration in the pipeline.
- The corrosion rate accelerates.
- It causes faulty flow meter readings.
- It affects the operation of control valves.
- In some cases, the jammed air arrives at a moment that causes the pipe to explode.

7350

COMBINATION (UNDERGEROUND-STREET) ARV
FAF 7350

PRODUCTION STANDARTS

DN50 →DN80
PN 10-16

Design	EN 1074-4
End Connection	EN 1092-2 / ISO 7005-2
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Features

- For the ARVs used in water transmission and main pipelines, manholes need to be built, closed with a cover, and locked. These manholes need to be sufficiently sized to allow personnel access.
- Manholes are generally constructed of concrete and secured with a concrete or steel cover.
- Considering the smallest size of these manholes to be 1.5x2 meters, in main streets in cities with heavy traffic and narrow streets, building these manholes is not always possible. As a result, there are excessive pipe bursts, leakages, and areas where water supply is insufficient.
- When maintenance is required, the ARVs can be completely removed without disturbing the system or cutting off the water supply to the pipeline where they are installed. There is no need to dig up the soil. After maintenance, they can be placed back in the same position and continue to function.
- Combination ARVs are manufactured in DN50 and DN80 sizes. DN100 and DN150 sizes can be manufactured upon request.
- Combination ARVs are available in 0.75, 1.00, 1.25, and 1.50 meter height options. Upon request, higher dimensions can be manufactured. For the available sizes, the surface box dimension to be used should be 300mm.

Temperature

- For water, sewage and neutral liquids min. -10°C /max. 80°C
- EPDM: -40°C - 100°C short term

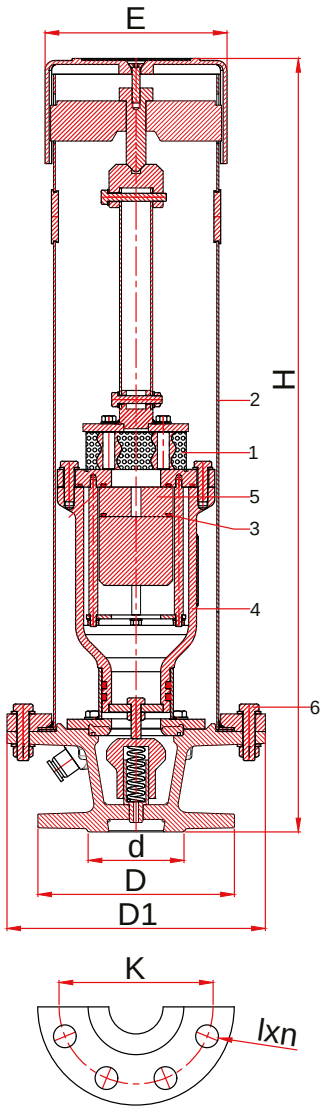
Product Description

FAF7350 Combination ARV is a special type of ARV that eliminates the need for the construction of manholes and associated costs. It can be connected directly to the pipeline without a service valve, and its main structure is a non-slam dynamic ARV buried underground.

Scope of Application

- Pump suction lines
- Water lines
- Water supply network
- Line valves
- Venturi meters
- Plunger & turbine pumps

COMBINATION (UNDERGEROUND-STREET) ARV
FAF 7350



MATERIAL SELECTION	
ARV	Ductile Iron - EN GJS 500
Lower Flange	Ductile Iron - EN GJS 500
Cover	Stainless Steel
Upper Cap	Plastic
Filter	Stainless Steel
Seating House	Precision EN GJS 500
Check Valve	PE Disc with Spring

PRODUCTS MODEL CODES	
FAF7310	SINGLE ORIFICE ARV
FAF7320	DOUBLE ORIFICE ARV
FAF7330	NON-SLAM DYNAMIC ARV
FAF7340	DOUBLE ORIFICE NON-SLAM (Kinetic) ARV
FAF7350	COMBINATION (Underground -Street) ARV
FAF7360	THREADED ARV
FAF7370	WASTE WATER ARV

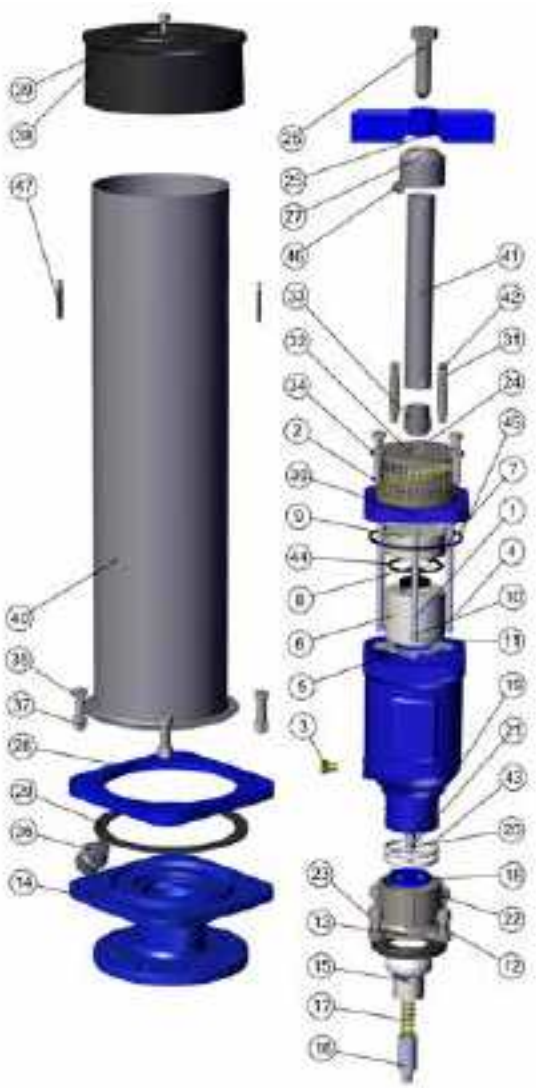
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

COMBINATION (UNDERGEROUND-STREET) ARV
FAF 7350

Material List



NO	ITEM	MATERIALS
1	BODY STUD	SS420
2	FILTER	SS430
3	NUT 1/2"	BRASS
4	BODY	GGG-50
5	FLANGE PLATE	SS420
6	LOWER FLOAT	HIGH DENSITY PE
7	FLOAT SEALING	EPDM
8	ORİFICE	SS420
9	UPPER FLOAT	HIGH DENSITY PE
10	M6 WASHER	SS304
11	M6 NUT	SS304
12	SOCKET FLANGE	SS304
13	CHECKVALVE SEALING	EPDM
14	50-80 FLANGE	GGG-50
15	CHECKVALVE	POM
16	CHECKVALVE PIN	POM
17	SPRING	SS316
18	CENTERING PLATE	SS420
19	CHECKVALVE COMPRESSION BOLT	SS304
20	M8 NUT	SS304
21	M8 WASHER	SS304
22	M 10 BOLT	SS304
23	M 10 WASHER	SS304
24	PIPE LOWER FIXING BOLT	SS304
25	CENTERING SHEET	GGG-50
26	COMPRESSION BOLT	SS304
27	COMPRESSION FLANGE	SS420
28	FIXING FLANGE	GGG-50/S127
29	BODY SEALING	EPDM
30	ARV BONNET	S1-37
31	FILTER PIN	SS420
32	FILTER BONNET	ST-37
33	PIPE CENTERING PIECE	SS304
34	BOLT+WASHER	SS304
35	BOLT+WASHER	SS304
36	DISCHARGE	GGG-50
37	M12 NUT WASHER	SS304
38	BONNET	GGG-50
39	M8 BONNET FIXING BOLT	SS304
40	COVER PIPE	SS304
41	CENTERING PIPE	SS304
42	M8 NUT+WASHER	SS304
43	ARV O-RING	EPDM
44	FLOAT O-RING	EPDM
45	BONNET O-RING	EPDM
46	PIPE UPPER FIXING BOLT	SS304
47	SIDEWAY CAPS	EPDM

COMBINATION (UNDERGEROUND-STREET) ARV
FAF 7350

Technical Details & Drawing, Dimensions

Min. Working Pressure	0,2 BARS
Max. Working Pressure	16 BARS
Hydrostatic Test Pressure	17.6 BARS
Shell test Pressure	24 BARS
Max Air Flow	900 m3/h

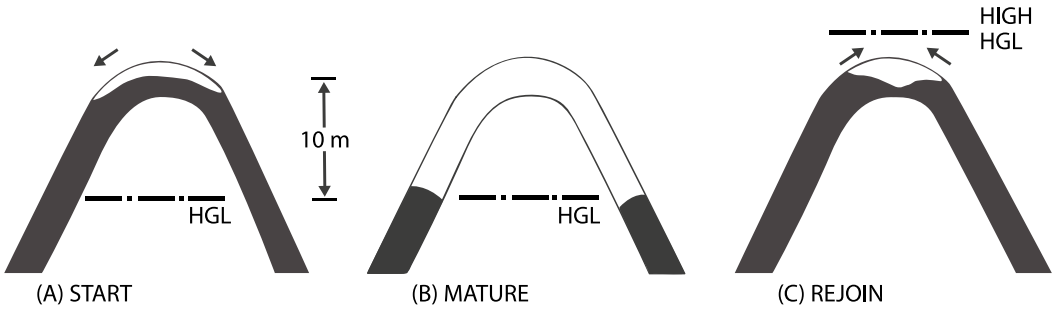
DIMENSIONS (mm)									
SIZE	D	K	d	Øl/n	f	b	H	D1	E
DN50	165	125	99	19x4	3	19	787	264	185
DN80	200	160	132	19x8	3	19	787	264	185

General Information About Arv's

- Air vacuuming and release are vital for pipeline operation and safety. In fact, many problems encountered with pipelines are
- Where does the air in the pipeline come from?
- The pipeline is already filled with air before being filled with water.
- There exists 2% dissolved air in the water, which can vaporize due to temperature changes or pressure drops.
- Each pump absorbs a certain amount of air.

Effects of Air

- Air in the pipeline narrows the water section and increases operating costs.
- Trapped air can sometimes stop the entire flow, depending on the pump's nature.
- During peaks, trapped air moves suddenly, creating turbulence and vibration in the pipeline.
- The corrosion rate accelerates.
- It causes faulty flow meter readings.
- It affects the operation of control valves.
- In some cases, the jammed air can cause the pipe to explode.



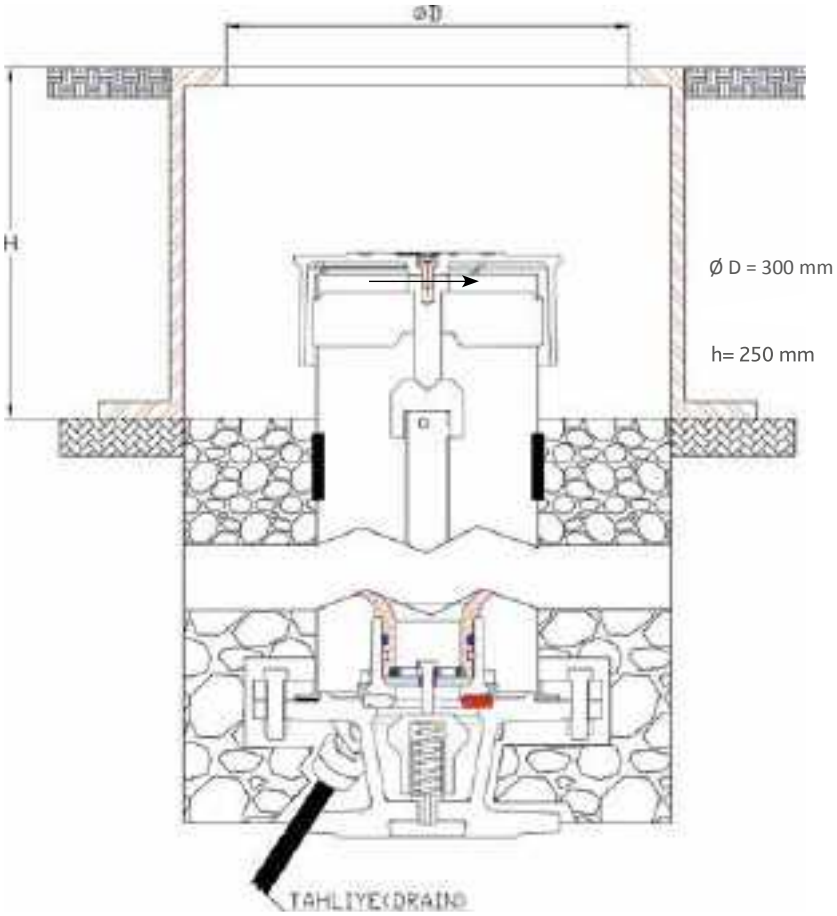
COMBINATION (UNDERGEROUND-STREET) ARV
FAF 7350

Combination (Underground-Street) ARV Installation

- Combination air release valves (ARVs) are utilized in buried underground water networks to release air inside the pipes and vacuum air to prevent pipe deformation, water leakages, or losses, particularly in areas prone to pipe bursts. These valves ensure proper water service even when water criteria are appropriate.
- For installation, firmly install the flanged spigot or flanged clamp onto the main pipe. If using a flanged spigot, ensure proper welding to prevent any deficiencies that could lead to leakage or vacuum issues.
- During flanged clamp installation, ensure that the sealings are correctly aligned and the clamp is securely tightened.
- After installing the spool and clamp, place the gasket on the flange and then position the ARV on the flange. Secure the bolts and nuts firmly. Next, attach an extension pipe with a length of 1-1.5 meters to the discharge entrance located under the ARV. Spread some pebble stones to the level of the open-end side of the pipe and carefully fill the area above the ARV's plastic cover. The surface box height should be 250mm. Once you have arranged the distance from the surface, place the surface box at ground level and fill the ground part with concrete to secure it. You can continue the filling process after completing this step.

Type of Installation

- Combination air release valves (ARVs) are utilized underground in water networks prone to pipe bursts to release air trapped inside the pipes and vacuum air into the pipe, preventing pipe deformation, water leakages, or losses, even when water service is sufficient or meets appropriate criteria.
- For installation, firmly attach the flanged spigot or flanged clamp to the main pipe. If using a flanged spigot, ensure it is welded properly to prevent any deficiencies that could cause leakage or vacuum issues.
- When installing the flanged clamp, ensure the sealings are properly aligned and the clamp is securely tightened.
- After installing the spool and clamp, place the gasket on the flange and then position the ARV on the flange. Securely tighten the bolts and nuts. Next, attach an extension pipe with a length of 1-1.5 meters to the discharge entrance located under the ARV. Spread some pebble stones to the level of the open-end side of the pipe and carefully fill the area above the ARV's plastic cover. The surface box height should be 250mm. Once you have arranged the distance from the surface, place the surface box at ground level and fill the ground part with concrete to secure it. You can continue the filling process after completing this step.



7350

COMBINATION (UNDERGEROUND-STREET) ARV
FAF 7350

General Information About Arv's

- Air vacuuming and release are crucial for pipeline operation and safety. Many issues faced by pipelines are related to the air trapped inside the pipes that cannot be released.
- The pipeline is initially filled with air before being filled with water.
- There is approximately 2% dissolved air in the water, which can vaporize due to temperature changes or pressure drops.
- Each pump absorbs a certain amount of air.
- Incorrect installations.

ARV Placement Position Suggestions ARV Application

- At peak points along the pipeline.
- In case of an increase in downward slope or a decrease in upward slope.
- At intervals of every 600 to 1000 meters in long linear pipelines.
- At intervals of every 600 meters in long sloping lines, maximum.
- At intervals of every 400-500 meters in water networks.
- Alternative ARV placement interval corresponding to Items 3 and 4 can be calculated
- As PIPELINE DIAMETER (DN, mm) X 1 (meter). (DN1000 mm X 1 meter = 1000 meters)

Effects of Air

- Air in the pipeline narrows the filled water section and increases operational costs.
- Sometimes, trapped air can completely stop the flow, depending on the nature of the pump

THREADED ARV
FAF 7360

PRODUCTION STANDARTS

DN15 →DN50
PN 10-16-25-40

Design	EN 1074-4
End Connection	THREADED ISO 228-1
Marking	EN 19
Tests	EN 12266-1 / 1074-4
Corrosion Protection	Electrostatic Powder Epoxy

Features

- The FAF7360 series threaded air valve has two functions of air release when filling the pipeline and air intake when emptying the pipeline.
- Threaded Air Release Valve to be used for the purpose of vacuuming air into the pipe during emptying the pipeline due to maintenance or failure circumstances. In addition, to release small air particules that may occur time to time during operation.
- Compass lever technology to allow large air release capacity through the nozzle.
- Double O-ring to guarantee the perfect water tightness during working conditions.
- Gasket compression control thanks to the adjustable nozzle.Body and cover in ductile iron GJS 500.
- Float in stainless steel AISI 304.
- Lever and pivots in AISI 304.
- Nozzle in stainless steel AISI 304.
- Minimum working pressure 0,2 bar.

Temperature

- -10 °C +70 °C

Product Description

FAF7360 Threaded ARV to be used for the purpose of releasing the exsiting air in the potable water transmission lines and water networks after installation or during emptying and refilling the pipeline due to maintenance works.

Scope of Application

- Pump suction lines
- Water lines
- Water supply network
- Line valves
- Venturimeters
- Plunger & turbine pumps

Working Conditions

- Treated water max. 70°C
- Max. pressure 40 bar
- Min. pressure 0,2 bar

THREADED ARV
FAF 7360

PRODUCTS MODEL CODES	
FAF7310	SINGLE ORIFICE ARV
FAF7320	DOUBLE ORIFICE ARV
FAF7330	NON-SLAM DYNAMIC ARV
FAF7340	DOUBLE ORIFICE NON-SLAM (Kinetic) ARV
FAF7350	COMBINATION (Underground -Street) ARV
FAF7360	**THREADED ARV**
FAF7370	SEWAGE ARV

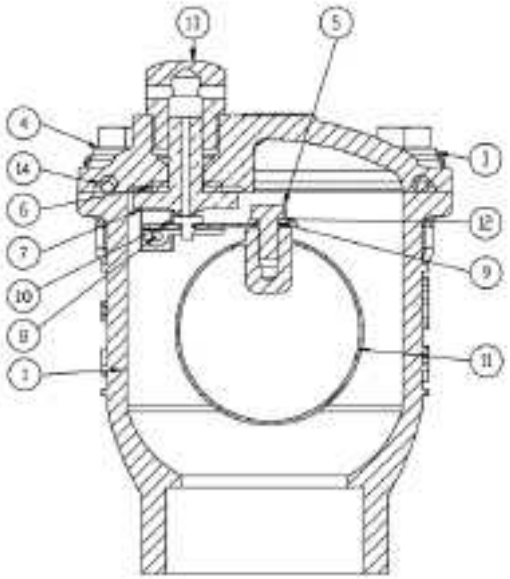
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
25	37,5	27,5
40	60	44
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Note

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

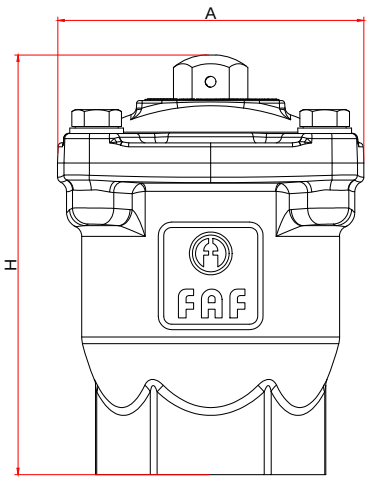
THREADED ARV
FAF 7360

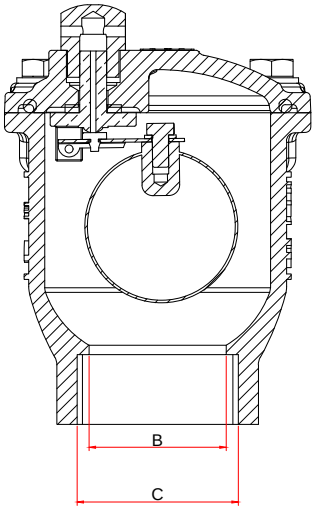
Material List



NO	ITEM	MATERIALS
1	BODY	EN GJS 500
2	COVER	EN GJS 500
3	WASHER	STAINLESS STEEL A2
4	BOLT	STAINLESS STEEL A2
5	BOLT	STAINLESS STEEL A2
6	O-RING	EPDM
7	NOOZLE	AISI 304
8	PIN	AISI 304
9	FLOAT LEVER	AISI 304
10	NOOZLE GASKET	EPDM
11	FLOAT	AISI 304
12	WASHER	STAINLESS STEEL A2
13	NOOZLE COVER	AISI 420
14	O-RING	NBR

Technical Details & Drawing, Dimensions





DIMENSIONS				
DN (mm)	INC - C	B	A	H
15	1/2	15	114	156
20	3/4	20	114	156
25	1	25	114	156
32	1 1/4	32	114	156
40	1 1/2	40	114	156
50	2	50	114	156

SEWAGE AIR RELEASE VALVE
FAF 7370

PRODUCTION STANDARTS

DN100 →DN150
PN 10-16

End Connection	EN 1092-2 / ISO 7005-2
Marking	EN 19
Tests	EN 12266-1
Corrosion Protection	Electrostatic Powder Epoxy

Features

- It ensures the evacuation of air when filling the wastewater main transmission lines and ensures sufficient air entry into the pipe during line discharge.
- It is a self-operating automatic control element that prevents shocks resulting from sudden closing.
- The body cross-sectional area has the minimum cross-sectional area of the valve nominal diameter with the large stainless floater cross-sectional area at the air outlet.
- In this way, the amount of fluid entering the body is not subject to narrowing at the outlet, thus increasing the air discharge capacity.
- It has an aerodynamic structure that prevents premature closing without disrupting the air flow.
- Metal parts in contact with the fluid are protected against corrosion by using AISI 316 stainless steel.
- Flanged connection according to EN 1092-2
- Sealing and orifice NBR gaskets
- Working pressure range: 0.2 – 16 bar.

Temperature

- For waste water min. -10°C /max. 80°C
- NBR: -10°C / max. 90°C short term

Product Description

FAF7370 Sewage Air Release Valve to be used for the purpose of releasing air in the sewage water lines after installation or during emptying and refilling the pipeline.

Accessories

- Knife Gate Valve, FAF6500-6550
- Ball Check Valve, FAF2290

Scope of Application

- Sewerage main transmission lines
- Treatment facilities
- Solid/residue pieces remaining undissolved in irrigation systems
- In cases where air suction cups for purified water cannot be used due to the risk of clogging

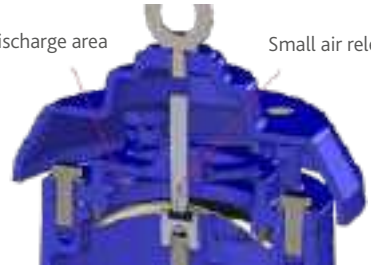
SEWAGE AIR RELEASE VALVE
FAF 7370

PRODUCTS MODEL CODES	
FAF7310	SINGLE ORIFICE ARV
FAF7320	DOUBLE ORIFICE ARV
FAF7330	NON-SLAM DYNAMIC ARV
FAF7340	DOUBLE ORIFICE NON-SLAM (Kinetic) ARV
FAF7350	COMBINATION (Underground -Street) ARV
FAF7360	THREADED ARV
FAF7370	**SEWAGE ARV**

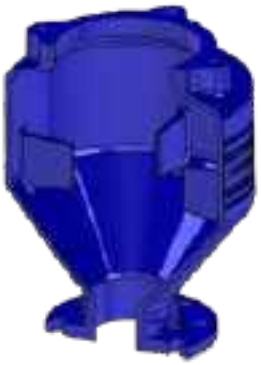
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
100% of the valves are subjected to hydrostatic tests at FAF facilities.		

Large air discharge area

Small air release area



- Large air release during of the pipeline filling.
- Small air release under pressure pipeline.
- Large air intake during pipeline evacuation.
- Strong body and float structure against sudden water hammer and rapid closing.
- Prevents shock impacts resulting from sudden closing.

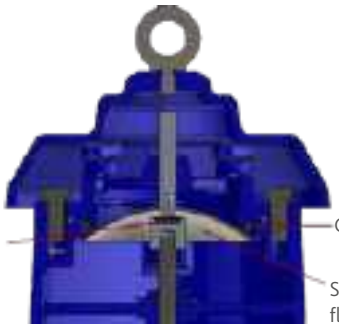


- It has a wide body structure designed in the form of a funnel to prevent the accumulation of oily or other residues.
- Ribbed structure that provides guidance within the body to ensure the orientation of the buoy and prevent turbulence.
- Cover with protection against impacts during fast filling.
- The movable block, combined with AISI 316 float and rod, is placed inside the body and forms the air discharge system.

Note

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

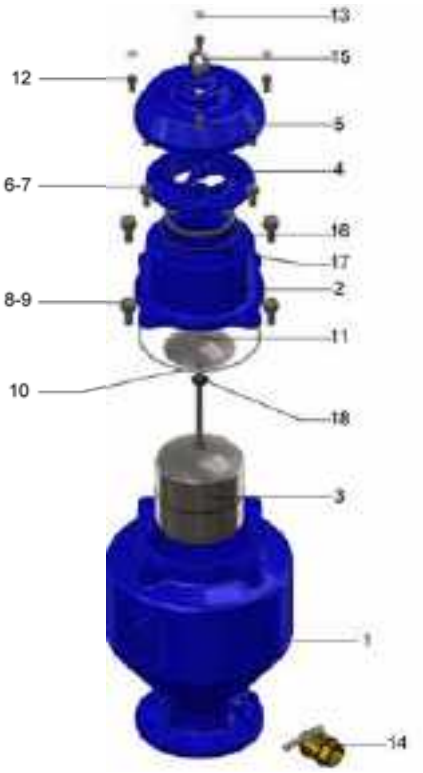
- Maintenance can be easily done from above without removing the suction cup from the line.
- Drain valve for hopper control, cleaning and draining.
- The cover, which prevents possible external waste from entering the suction cup, has a structure that completely closes the entrance.
- Easy assembly with the carrying hook on the cover



- By fixing the sealing gasket between the cover and the flange, the risk of the gasket coming out of its channel at low and high pressures is eliminated.
- During operation, the gasket constantly contacts the stainless float and ensures sealing.
- These contacts minimize the wear of the gasket, ensuring a longer life
- 100% sealing is ensured.

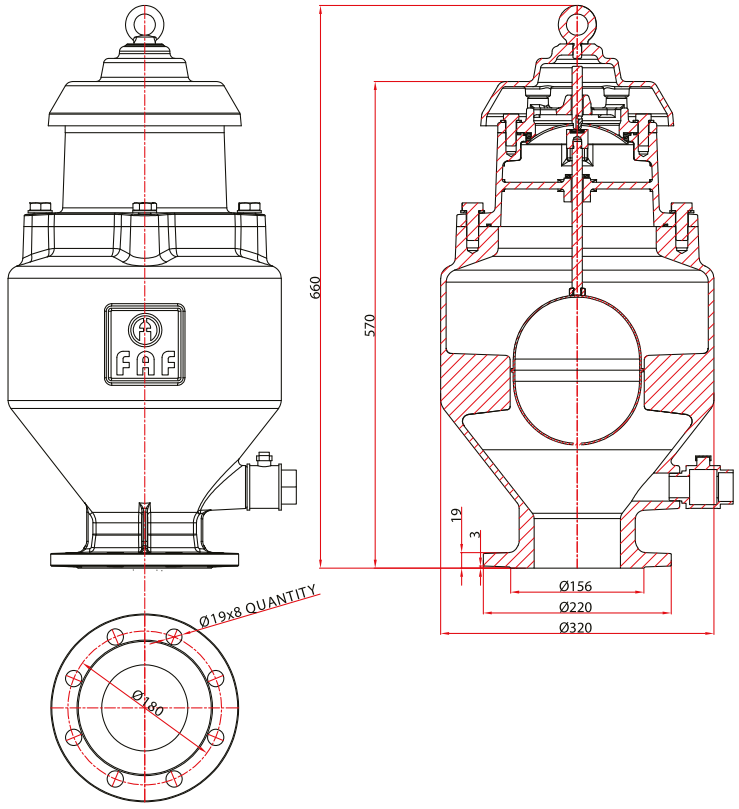
SEWAGE AIR RELEASE VALVE
FAF 7370

Material List



NO	ITEM	MATERIALS
1	LOWER BODY	EN GJS-500-7 DUCTILE IRON
2	UPPER BODY	EN GJS-500-7 DUCTILE IRON
3	FLOAT	AISI 316 STAINLESS STEEL
4	BONNET	EN GJS-500-7 DUCTILE IRON
5	UPPER BONNET	EN GJS-500-7 DUCTILE IRON
6	BOLT	A2
7	WASHER	A2
8	BOLT	A2
9	WASHER	A2
10	O-RING	NBR
11	ORIFICE SEALING	NBR
12	IMBUS BOLT	A2
13	PLUG	PLASTIC
14	DN25 BALL VALVE	BRASS
15	CARRY HOOK	STAINLESS STEEL
16	SEALING	NBR
17	O-RING	NBR

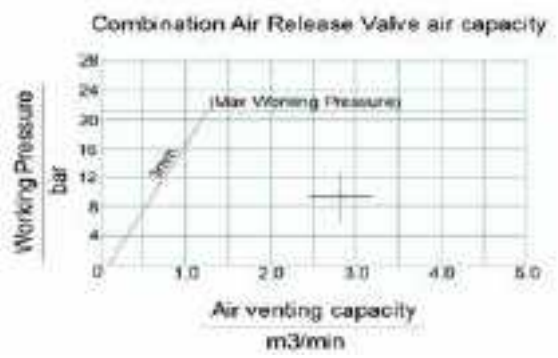
Sewage ARV Technical Details
DN100



SEWAGE AIR RELEASE VALVE
FAF 7370

General Information About Sewage Arv's

- During operation, air is discharged according to the nozzle diameter.
- For DN100 PN10-16 suction cup, nozzle measurement is 3mm diameter.



Sewage ARV Maintenance Instructions

- The About Sewage Arv is designed to not require maintenance within a certain periodic interval.
- However, in case of need for cleaning and maintenance.
- The flow in the line should be cut off or the valve, which should be kept under the suction cup for safety/maintenance purposes, should be turned to the closed position.
- The maintenance, repair / cleaning process is designed to be carried out without the need to remove the valve from the installation line and without requiring special tools and expertise.
- Only for cleaning the inner chamber:
- Turn the brass valve to the open position by providing water inflow to the suction cup from the DN25 brass ball valve number 14. Clean the inner area of the suction cup with pressurized water and turn the ball valve to the closed position.
- For detailed maintenance, the suction cup can be disassembled and maintained.
- Respectively:
- Remove the plastic cover No. 13 from its slot using a screwdriver.
- Remove the bolts number 12 and take the top cover number 5.
- Remove the bolt and washer No. 6-7 and take the top cover No. 4.
- Remove the 16-17 o rings and gaskets.
- By removing the bolt and washer No. 8-9, carefully take the upper body No. 2, the O-ring and the float kit No. 3 from the body.

Inspection and maintenance

- Check the bolt threads. If it is deformed, replace it with a new one.
- Carefully clean and assemble all materials.
- Replace the o-rings and gaskets with new ones.
- Request from our company for spare parts.

Assembly

- Lightly lubricate the O-rings and seals. Replace the O-ring and Gasket without damaging them.
- Assemble it in the reverse order of disassembly.

Associated Products for the Sewage ARV

6500
KNIFE GATE VALVE

6550
KNIFE GATE VALVE

2290
BALL CHECK VALVE

HYDRAULIC CONTROL VALVES
FAF 7400 Series

PRODUCTION STANDARTS

DN50 ➔DN300

Operation Pressure	0,7 - 16 bar (10 - 240 psi)
Connection	Flanged EN1092-2 Threaded ISO (BSP) - ANSI (NPT
Corrosion Protection	Electrostatic Powder Epoxy

Features

- Due to rubber diaphragm in closed valve, it ensures positive seal.
- Provides minimum pressure loss and free flow in open valve at demanded flow amounts.
- The only moving part that regulates open/closed and modulation positions in valve is the diaphragm.
- Line pressure in valve can be controlled by exterior pressure weld equivalent to line pressure.
- Easy use and maintenance due to simple design
- There is no corroding shaft, palier or gasket in valves.
- Does not require maintenance in operation for a long time due to its corrosion resistant components.
- Has a long working life in operation since coating has been made with phosphorylation and over-dried epoxy powder paint
- Performs perfect modulation in variable flows and even too low flow rates close to zero.
- Has a wide range of application with use of different pilot valves.

Temperature

- -10 °C +80 °C

Control by a pilot valve bound to the valve;

- Open Position: Trapped pressure in the actuator suppresses the pressure on the diaphragm and valve is opened when the relief port on pilot valve is completely opened.
- Modulation Position: Pilot valve ensures the diaphragm to stay in a fixed position in adjusting position by balancing the pressure and flow in and out of the actuator.

Working Principle

CLOSED OPEN MODULATION

Product Description

FAF7400 Hydraulic Control Valve Series are designed to assume control for pressure, flow and water level, are automatic hydraulic control valves running by network pressure. These valves running by network pressure are used for agricultural irrigation, supply of water, fire extinguishing, and various applications of industrial systems.

Working Principle

Control by three-way selector valve that is bounded

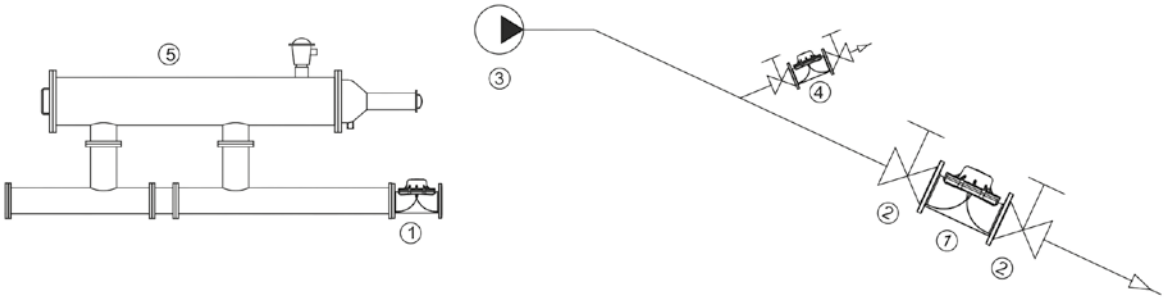
- Closed Position: Flow over the actuator is provided by inlet port or an exterior pressure supplier and valve is closed by applying pressure onto the diaphragm.
- Open Position: Once the trapped pressure in valve actuator is relived, interior line pressure moves the diaphragm upward, valve is opened and free flow is provided.
- Modulation Position: lt ensures the diaphragm to stay in a fixed position by balancing the flow in and out of the actuator.

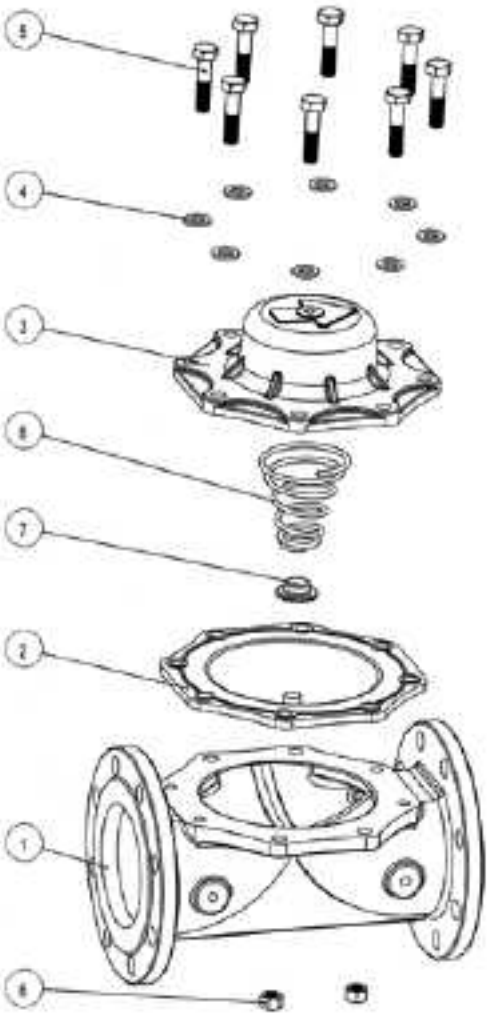
Scope of Application

- Agricultural irrigation
- Supply of water fire extinguishing
- Various applications of industrial systems
- Fire extinguishing
- Oil & gas applications
- Household implementation

HYDRAULIC CONTROL VALVES
FAF 7400 Series

Model Application





NO	PARTS
1	Pressure Sustaining Control Valve
2	Insulating Valve
3	Pump
4	Line Valve
5	Automatic Filter

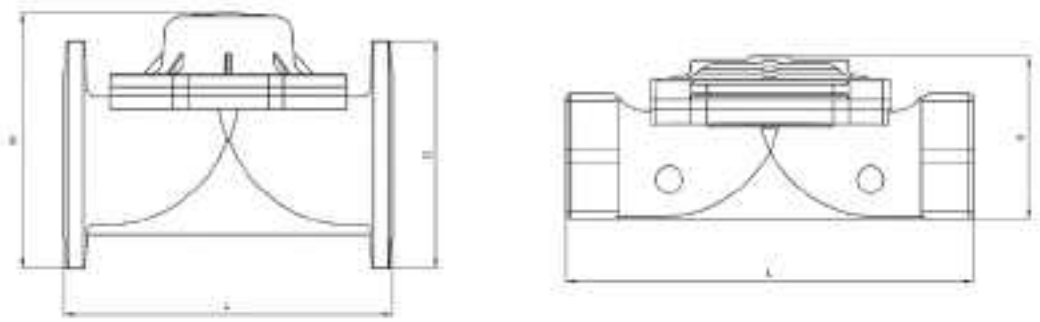
CONTROL VALVES MODEL CODES	
FAF 7410	Pressure Reducing Control Valve
FAF 7420	Solenoid Controlled Pressure Reducing Control Valve
FAF 7430	Pressure Sustaining Control Valve
FAF 7440	Pressure Sustaining - Pressure Reducing Control Valve
FAF 7450	Pressure Relief Control Valve
FAF 7460	Float Level Control Valve
FAF 7470	Electric Float Level Control Valve
FAF 7480	Surge Anticipating Control Valve
FAF 7490	Flow Control Valve
FAF 7500	Horizontal Pump Control Valve
FAF 7510	Vertical Pump Control Valve
FAF 7520	Solenoid Control Valve
FAF 7530	Manual Control Valve

NO	ITEM	MATERIALS
1	BODY	EN-GJL-250 CAST IRON (GG25)
2	DIAPHRAM	COURT FABRIC-REINFORCED NATURAL RUBBER
3	COVER	EN-GJL-250 CAST IRON (GG25)
4	WASHER	PLATED STEEL
5	BOLT	PLATED STEEL
6	NUT	PLATED STEEL
7	SPRING THRUST RING	POLYAMID
8	SPRING	SST 302

VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
16	24	17,6
100% of the valves are subjected to leakiness tests at FAF facilities.		

HYDRAULIC CONTROL VALVES
FAF 7400 Series

Dimensions And Weight



Flanged Valves

DN		L		D		H		WEIGHT	
inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
2"	50	8	204	6.4	165	6.4	165	33	15
2½"	65	8.1	206	7.2	185	7.2	185	36	16.5
3"	80	11.4	290	7.8	200	7.8	200	57	26
4"	100	11.6	296	8.6	220	8.6	220	61	28
5"	125	12.3	314	9.8	250	9.8	250	72	33
6"	150	16.2	413	11.2	285	12.6	321	125	57
8"	200	18.5	470	13.3	340	18.8	403	187	85
10"	250	18.5	470	16	407	17	433	226	103
12"	300	20.8	530	18.3	466	19.5	497	316	145

Threaded Valves

DN		L		H		WEIGHT	
inch	mm	inch	mm	inch	mm	lbs	kg
2"	50	8.1	206	4.2	107	28.6	13
2½"	65	9	230	4.3	110	30.8	14
3"	80	13.7	350	5.7	145	44	20

Suggested Operating Valves

Operating Pressure	Standard	0,7 - 16 bar (10 - 240 psi)
Temperature	Minimum Operating Temperature	-10°C
	Maximum Operating Temperature	+80°C
Connection	Flanged	EN1092-2 ISO 7005-2
	Threaded	ISO (BSP) - ANSI (NPT)
Coating	Standard	Polyester
	Optional	Epoxy

HYDRAULIC CONTROL VALVES

FAF 7400 Series

TECHNICAL DAT

FLUID COMPATIBILITY CHART

1-2 = AP PROPRIATE
3 = CAN BE USED WHEN OBLIGED TO
4 = SHALL BE TESTED BEFORE USE
5 = NOT APPROPRIATE

CHEMICAL/FLUID	RUBBER					METAL				
	NBR	MVQ (silicon)	FKM (Viton)	EPDM	PTFE	Carbon Steel	Cast Iron	Stainless Steel 304	Stainless Steel 316	Bronze
Ammonia	2	5	3	1	1	1	1	1	1	5
Ammonium Sulfate	1	4	1	1	1	5	5	3	1	3
Aniline	3	3	3	5	1	5	5	1	1	5
Acetic Acid	3	5	3	2	1	5	5	3	3	3
Acetylene	1	1	1	1	1	1	1	1	1	1
Acetone	3	3	3	1	1	1	1	1	1	1
Asphalt	5	5	4	5	1	1	1	1	1	1
Waste Water	2	1		1	1	1	5	1	1	1
Boric Acid (Diluted)	1	1	1	1	1	5	5	1	1	1
Steam	5	5		1	1	5	5	1	1	3
Butane (Gas)	1	4	1	3	1	1	1	1	1	1
Mud	1			5		3	3	1	1	
Sea Water	1	1	1	1	1	3	3	3	3	1
Diesel Fuel	1	2	1	3	1		5	1	1	3
Natural Gas	1		1	5	1	1	1	1	1	1
Fuel Oil	3		1	5		3	5	1	1	1
Phosphoric Acid (Diluted)	3	5	1	1	1	5	5	3	3	5
Gas Oil	1		1	5		3	5	1	1	3
Glucose (Diluted)	1	1	1	1	1	1	1	1	1	1
Weather	1	1	1	1	1	1	1	1	1	1
Glucose (Diluted)	1	1	1	1	1	1	1	1	1	1
Hydrogen	1	1	1	1	1	1	1	1	1	1
Carbon Dioxide (Dry)	1	1	1	1	1	5	5	1	1	1
Tar	3	5	4	3	1	1	1	1	1	1
Chromic Acid (Diluted)	3	5	1	4	1	5	5	5	3	5
Methanol	2	1		1	1	1	1	1	1	1
Mineral Water	1	1	1	1	1	3	5	1	1	1
Mineral Oil	1	2	1	3	1	5	5	5	5	5
Nitric Acid (Concentrated)	3	5	3	3	1	5	5	1	3	5
Oil	1		1	5			5	3	5	5
Propane (Liquid, Gas)	1	1	1	5	1	1	1	1	1	1
Citric Acid (Diluted)	1	4	1	1	1	5	5	3	1	1
Sodium Sulfate	1	4	1	1	1	5	5	1	1	5
Nitrate Of Soda	1	4	1	1	1		5	1	1	3
Water	1	2	1	1	1	1	1	1	1	1
Milk	1	1	1	2	1	5	5	1	1	1

HYDRAULIC CONTROL VALVES

FAF 7400 Series

TECHNICAL DAT

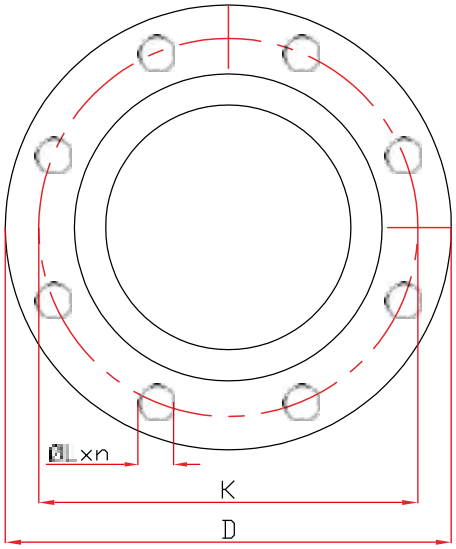
GASKET SIZE CHART

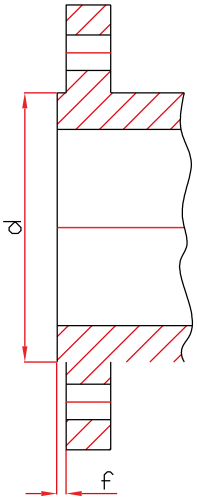
DN	INTERIOR DIA (d)	EXTERIOR DIA (D)				
mm		PN6	PN10	PN16	PN25	PN40
15	22	44	51	51	51	51
20	27	54	61	61	61	61
25	34	64	71	71	71	71
32	43	76	82	82	82	82
40	49	86	92	92	92	92
50	61	96	107	107	107	107
65	77	116	127	127	127	127
80	89	132	142	142	142	142
100	115	152	162	162	168	168
125	141	182	192	192	194	194
150	169	207	218	218	224	224
200	220	262	273	273	284	290
250	273	317	328	329	340	352
300	324	373	378	384	400	417
350	356/368	423	438	444	457	474
400	407/420	473	489	495	514	546
450	458/470	528	539	555	564	571
500	508/520	578	594	617	624	628
600	610/620	679	695	734	731	
700	712/720	784	810	804	833	
800	813/820	890	917	911	942	747
900	915/920	990	1017	1011	1042	
1000	1016/1025	1090	1124	1128	1154	

HYDRAULIC CONTROL VALVES
FAF 7400 Series

TECHNICAL DAT

DIN FLANGE DIMENSIONS





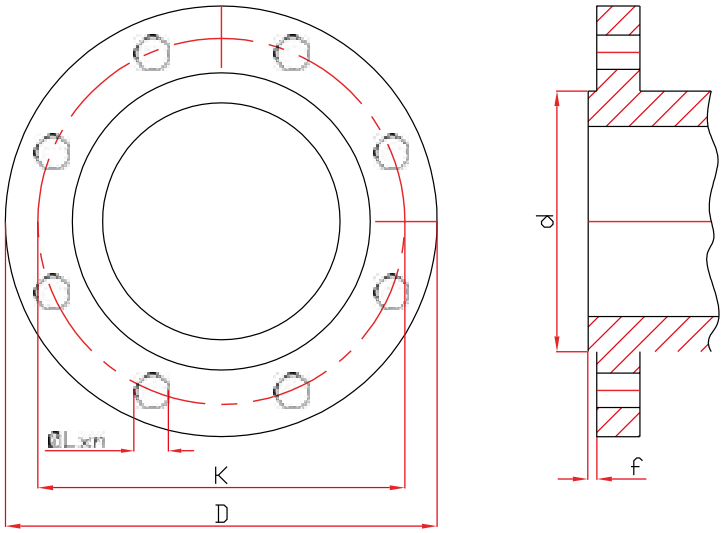
D : Flange externel diameter
d : Gasket surface diameter
f : Gasket surface length
K : Stud holes axial diameter
L : Stud hole diameter
n : Number of Stud holes

DN	PN6						PN10						PN16						PN25						PN40					
mm	D	d	f	K	L	n	D	d	f	K	L	n	D	d	f	K	L	n	D	d	f	K	L	n	D	d	f	K	L	n
15	80	38	2	55	11	4	95	46	2	65	14	4	95	46	2	65	14	4	95	46	2	65	14	4	95	46	2	65	14	4
20	90	48	2	65	11	4	105	56	2	75	14	4	105	56	2	75	14	4	105	56	2	75	14	4	105	56	2	75	14	4
25	100	58	3	75	11	4	115	65	3	85	14	4	115	65	3	85	14	4	115	65	3	85	14	4	115	65	3	85	14	4
32	120	69	3	90	14	4	140	76	3	100	19	4	140	76	3	100	19	4	140	76	3	100	19	4	140	76	3	100	19	4
40	130	78	3	100	14	4	150	84	3	110	19	4	150	84	3	110	19	4	150	84	3	110	19	4	150	84	3	110	19	4
50	140	88	3	110	14	4	165	99	3	125	19	4	165	99	3	125	19	4	165	99	3	125	19	4	165	99	3	125	19	4
65	160	108	3	130	14	4	185	118	3	145	19	4	185	118	3	145	19	4	185	118	3	145	19	8	185	118	3	145	19	8
80	190	124	3	150	19	4	200	132	3	160	19	8	200	132	3	160	19	8	200	132	3	160	19	8	200	132	3	160	19	8
100	210	144	3	170	19	4	220	156	3	180	19	8	220	156	3	180	19	8	235	156	3	190	23	8	235	156	3	190	23	8
125	240	174	3	200	19	8	250	184	3	210	19	8	250	184	3	210	19	8	270	184	3	220	28	8	270	184	3	220	28	8
150	265	199	3	225	19	8	285	211	3	240	23	8	285	211	3	240	23	8	300	211	3	250	28	8	300	211	3	250	28	8
200	320	254	4	280	19	8	340	266	4	295	23	8	340	266	4	295	23	12	360	274	4	310	28	12	375	284	4	320	31	12
250	375	309	4	335	19	12	395	319	4	350	23	12	405	319	4	355	28	12	425	330	4	370	31	12	450	345	4	385	34	12
300	440	363	4	395	23	12	445	370	4	400	23	12	460	370	4	410	28	12	485	389	4	430	31	16	515	409	4	450	34	16
350	490	413	4	445	23	12	505	429	4	460	23	16	520	429	4	470	28	16	555	448	4	490	34	16	580	465	4	510	37	16
400	540	463	4	495	23	16	565	480	4	515	28	16	580	480	4	525	31	16	620	503	4	550	37	16	660	535	4	585	41	16
450	595	518	4	550	23	16	615	530	4	565	28	20	640	548	4	585	31	20	670	548	4	600	37	20	685	560	4	610	41	20
500	645	568	4	600	23	20	670	582	4	620	28	20	715	609	4	650	34	20	730	609	4	660	37	20	755	615	4	670	44	20
600	755	667	5	705	28	20	780	682	5	725	31	20	840	720	5	770	37	20	845	720	5	770	41	20	890	735	5	795	50	20

HYDRAULIC CONTROL VALVES
FAF 7400 Series

TECHNICAL DAT

ANSI FLANGE DIMENSIONS



D : Flange externel diameter
d : Gasket surface diameter
f : Gasket surface length
K : Stud holes axial diameter
L : Stud hole diameter
n : Number of Stud holes

DN	NPS	d	CLASS 150						CLASS 300						CLASS 300					
mm	inç		D	f	K	L inch(mm)	Bolt Size	n	D	f	K	L inch(mm)	Bolt Size	n	D	f	K	L inch(mm)	Bolt Size	n
15	1/2"	35,1	90	1,6	60,3	5/8 (15,9)	1/2"	4	95	1,6	66,7	5/8 (15,9)	1/2"	4	95	6,4	66,7	5/8 (15,9)	1/2"	4
20	3/4"	42,9	100	1,6	69,9	5/8 (15,9)	1/2"	4	115	1,6	82,6	3/4 (19,0)	5/8"	4	115	6,4	82,6	3/4 (19,0)	5/8"	4
25	1"	50,8	110	1,6	79,4	5/8 (15,9)	1/2"	4	125	1,6	88,9	3/4 (19,0)	5/8"	4	125	6,4	88,9	3/4 (19,0)	5/8"	4
32	1	63,5	115	1,6	88,9	5/8 (15,9)	1/2"	4	135	1,6	98,4	3/4 (19,0)	5/8"	4	135	6,4	98,4	3/4 (19,0)	5/8"	4
40	1	73,2	125	1,6	98,4	5/8 (15,9)	1/2"	4	155	1,6	114,3	7/8 (22,2)	3/4"	4	155	6,4	114,3	7/8 (22,2)	3/4"	4
50	2"	91,9	150	1,6	120,7	3/4 (19,0)	5/8"	4	165	1,6	127	3/4 (19,0)	5/8"	8	165	6,4	127	3/4 (19,0)	5/8"	8
65	2	104,6	180	1,6	139,7	3/4 (19,0)	5/8"	4	190	1,6	149,2	7/8 (22,2)	3/4"	8	190	6,4	149,2	7/8 (22,2)	3/4"	8
80	3"	127	190	1,6	152,4	3/4 (19,0)	5/8"	4	210	1,6	168,3	7/8 (22,2)	3/4"	8	210	6,4	168,3	7/8 (22,2)	3/4"	8
100	4"	157,2	230	1,6	190,5	3/4 (19,0)	5/8"	8	255	1,6	200	7/8 (22,2)	3/4"	8	275	6,4	215,9	1 (25,4)	7/8"	8
125	5"	185,7	255	1,6	215,9	7/8 (22,2)	3/4"	8	280	1,6	235	7/8 (22,2)	3/4"	8	330	6,4	266,7	1	1"	8
150	6"	215,9	280	1,6	241,3	7/8 (22,2)	3/4"	8	320	1,6	269,9	7/8 (22,2)	3/4"	12	355	6,4	292,1	1	1"	12
200	8"	269,7	345	1,6	298,5	7/8 (22,2)	3/4"	8	380	1,6	330,2	1 (25,4)	7/8"	12	420	6,4	349,2	1 1/4 (31,8)	1 1/8"	12
250	10"	323,9	405	1,6	362	1 (25,4)	7/8"	12	445	1,6	387,4	1	1"	16	510	6,4	431,8	1 3/8 (34,9)	1 1/4"	16
300	12"	381	485	1,6	431,8	1 (25,4)	7/8"	12	520	1,6	450,8	1 1/4 (31,8)	1 1/8"	16	560	6,4	489	1 3/8 (34,9)	1 1/4"	20
350	14"	412,8	535	1,6	476,3	1	1"	12	585	1,6	514,4	1 1/4 (31,8)	1 1/8"	20	605	6,4	527	1 1/2 (38,1)	1 3/8"	20
400	16"	469,9	595	1,6	539,8	1 1/8 (28,6)	1"	16	650	1,6	571,5	1 3/8 (34,9)	1 1/4"	20	685	6,4	603,2	1 5/8 (41,3)	1 1/2"	20
450	18"	533,4	635	1,6	577,9	1 1/4 (31,8)	1 1/8"	16	710	1,6	628,6	1 3/8 (34,9)	1 1/4"	24	745	6,4	654	1 3/4 (44,4)	1 5/8"	20
500	20"	584,2	700	1,6	635	1 1/4 (31,8)	1 1/8"	20	775	1,6	685,8	1 3/8 (34,9)	1 1/4"	24	815	6,4	723,9	1 3/4 (44,4)	1 5/8"	24
600	24"	692,2	815	1,6	749,3	1 3/8 (34,9)	1 1/4"	20	915	1,6	812,8	1 5/8 (41,3)	1 1/2"	24	940	6,4	838,2	2 (50,8)	1 7/8"	24

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VALVE COMPANY

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