5000

FLEXIBLE RUBBER JOINT
FAF5000

PRODUCTION STANDARDS

DN25 ➔DN600
PN 10-16

Design	DIN 30680
Connection	EN 1092-1 / ISO 7005-1
Face to Face	DIN 30680
Marking	EN19
Tests	DIN30680
Corrosion Protection	Galvanisation

Features

- Provides tolerance that exposed temperature differences arising from expansion and contraction in pipelines.
- Lengthening and shortening of the pipeline composed of temperature differences absorb.
- It provides lateral and angular movement to stabilize the pipeline.
- Installation does not require gaskets and seals.
- Allows balancing of the pipeline lateral and angular movements.
- Contribute to the absorption of the water hammer from the system.
- Gasket and joint are not needed for installation.
- Provides easy installation due to rotary flanges.
- It is manufactured EPDM rubber as standard, it can be used NBR rubber if required.
- It can be supplied as various pressure class flanges.
- No gaskets required for installation.
- Are suitable to compensate thermal elongation or even misalignments.
- Are non-corrosive and abrasion-resistant elastomers.
- Unlike metal joints, which often require periodic replacement of the mating flange gaskets, FAF expansion joints being gasket-free are virtually maintenance free over their entire service life.
- Rubber Expansion joints are relatively light in weight, contributing to lower installation labour costs.
- Rubber expansion joints reduce heat loss, giving long maintenance-free service.
- Material properties such as hardness, elasticity, tensile strength, temperature resistance, etc., are rated to the corresponding application.
- Stock piled for quick delivery.

Temperature

- +130 °C

Product Description

FAF5000 Flexible Joint removes vibration and noise that occurs and transmitted along the line on pipeline facilities due to EPDM rubber body.

Versions

- Damp oscillation, noise and vibration
- Compensate motion
- Compensate expansion caused by differences in temperature
- Reduce tension
- Compensate ground and foundation settling
- Compensate imprecise assembly
- Serve as assembly and disassembly aids
- Provide an elastic wall seal for penetration assemblies
- Compensate pipeline movements

Accessories

- Type: universal, lateral and angular expansion joints
- Pipe connection type: flanged, threaded
- Rubber quality of the bellows: rated to the media transported in the pipes
- Bellows structure: rated to the pressure and temperature load

Scope of Application

- Hot & cold water
- Cooling towers
- Water & waste water applications

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* FAF5060 Rubber expansion joint with ductile iron flanges.

MATERIAL SELECTION	
Body	Fabric Reinforced EPDM Steel Reinforced EPDM
Flange	WCB Cast Steel EN-GJS-400 Ductile Iron
Sealing	EPDM NBR

PRODUCTS MODEL CODES	
FAF5000	**RUBBER EXPANSION JOINT**
FAF5060	RUBBER EXPANSION JOINT - DI
FAF5070	RUBBER EXPANSION JOINT - THREADED
FAF5100	AXIAL EXPANSION JOINT
FAF5200	EXTERNALLY PRESSURIZED 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
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.

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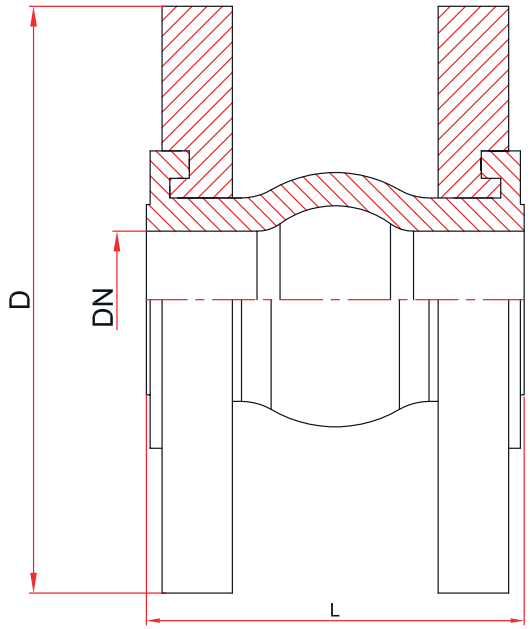
Technical Details & Drawing, Dimensions



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

DN	DIMENSION		RATINGS		STUD SIZE	BOLT/NUT QTY	FASTENING MOMENT Nm	WRENCH SIZE (mm)
mm	D	L	Pressure Bar	Weight kg				
25	115	95	16	2,3	M12X60	4X2	85	19
32	140	95	16	3,7	M16X60	4X2	205	24
40	150	95	16	3,8	M16X60	4X2	205	24
50	165	105	16	4,7	M16X60	4X2	205	24
65	185	115	16	5,6	M16X60	4X2	205	24
80	200	135	16	7,1	M16X65	8X2	205	24
100	220	150	16	7,5	M16X65	8X2	205	24
125	250	165	16	10,8	M16X70	8X2	205	24
150	285	180	16	12,5	M20X75	8X2	400	30
200	340	210	16	16,7	M20X80	12X2	400	30
250	405	230	16	18,5	M24X90	12X2	691	36
300	460	245	16	29,2	M24X90	12X2	691	36
350	520	255	16	46	M24X100	16x2	691	36
400	565	255	10	48	M24X110	16X2	691	36
450	615	255	10	51	M24X110	20X2	691	36
500	670	255	10	57,0	M24X120	20X2	691	36
600	780	260	10	70,0	M27X130	20x2	1010	41

* Valves can be produced with bigger sizes when requested.

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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

Installation

Lubricants

- There is no lubricant needed. Insert bolts from arch side
- Set bolt heads next to the arch
- The bolts must not have contact to the arch of the joint
- Tighten bolts gradually and equally in a star-like crossing patterns around flange
- The tightening torque must not exceed the maximum allowed
- torque of the joint or flange.

Life expectancy of rubber expansion joints

The service life of rubber expansion joints depends on process conditions as well as environmental influences. If the expansion joint demonstrates signs of external damage, deformations or visible alteration, replace it as soon as possible. To check natural aging, the Shore hardness of the joints can be used as an indicator.

Service Conditions

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

Alignment

Expansion joints are not designed to make up 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 of the material properties, thus causing 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 that control rods be installed on the expansion joint to prevent excessive movements from occurring due to pressure thrust of the line.

Pipe Support

Piping must be supported so expansion joints do not carry any pipe weight.

Mating Flanges

- Install the expansion joint against the mating pipe flanges and install bolts so that the bolt head is against the expansion joint flange. Flange-to-flange dimensions of the expansion joint must match the breech opening*.
- Make sure mating flanges are clean and are FLAT FACED TYPE. When attaching beaded end flange expansion joints to raised face flanges, the use of ring gaskets is required to prevent metal flange faces from cutting rubber bead during installation.
- Never install expansion joints next to wafer type check or butterfly valves. Serious damage to the rubber flange bead can result due to lack of flange mating surface and/or bolt connection.

Storage

- Store expansion joints in a dry/cool location such as a warehouse.
- Store flange face down on a pallet or wooden platform.
- Do not store other heavy items on top of expansion joint(s).
- Ten-year shelf life can be expected with ideal conditions.

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. Do not let expansion joints sit vertically on the edges of the flanges for any period of time.

Additional Tips

- Insulation over a non-metallic rubber expansion joints is not recommended; however, if the insulation is required, it should be made removable to permit easy access to the flange area, to check bolting.
- It is acceptable (but not necessary) to lubricate the expansion joint flanges with a thin film of graphite dispersed in glycerin or water to ease disassembly at a later time.
- Do not weld in the near vicinity of a non-metallic expansion joint.
- If an expansion joint is to be installed underground, or will be submerged in water, contact the manufacturer for specific guidelines.
- If the expansion joint will be installed outdoors, make sure the cover material will withstand ozone, sunlight, etc. Materials such as Neoprene and Chlorobutyl are recommended. Materials painted with weather-resistant paint will give additional ozone and sunlight protection.
- Check the tightness of retaining rings two or three weeks after installation and retighten as necessary.