



# STOURFLEX®

J & P Supplies Ltd

Expansion Joints & Pipeline Equipment

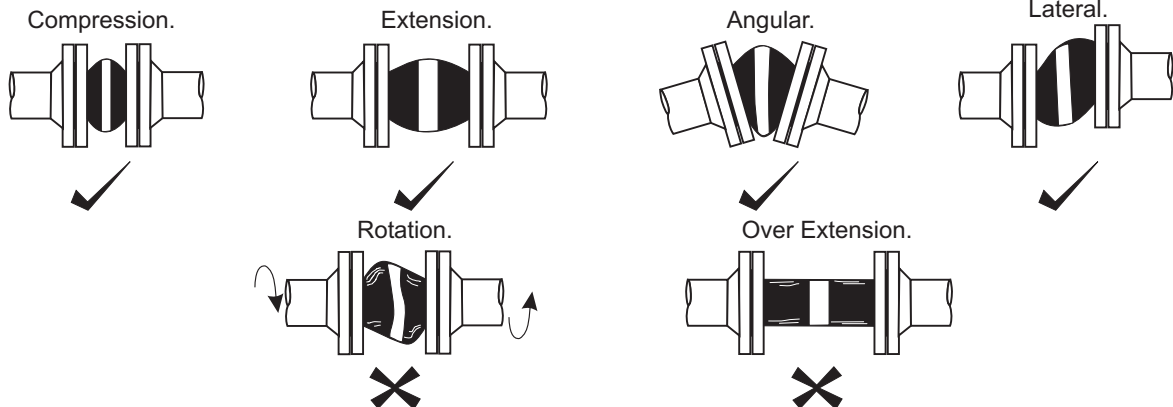
## Installation, Operation and Maintenance Instructions for Rubber Bellows.

**Storage.** Rubber bellows should be stored in a cool dark clean area and be protected from damage caused by other items of plant and equipment.

**Inspection.** Rubber bellows should be inspected for internal and external damage prior to installation. The rubber bellows sealing surface should be clean and free from any debris that would prevent a seal or cause damage to the bellows in service.

**Selection.** The Stourflex range of rubber bellows are supplied at varying installation lengths, with different movement capabilities and are suitable for a wide range of industrial applications. Check that the correct rubber bellows have 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, also check whether vacuum conditions exist and if so whether a vacuum support ring is required and has been fitted.

**Installation.** Rubber bellows should be installed at their neutral (supplied) length. Confirm that the gap left between the mating flanges in the pipework corresponds exactly with the neutral (supplied) length of the rubber bellows. Pipework should be true and straight. Any adjustments should be made to the pipework before the rubber bellows are fitted. See appropriate Stourflex data sheets for the installation length of the rubber bellows being installed.



Only the correct mating flanges should be used. They should be the same size and drilling and have a similar sealing face as that of the rubber bellows. They must be clean and free from any debris, sharp edges etc. to prevent damage occurring to the sealing face of the bellows. For mating flanges with a different sealing face diameter a composite gasket should be used to prevent any sharp edges cutting into the rubber sealing face.



Flange bolts must not be overtightened, bolts should be tightened gradually and evenly and in a crosswise manner. Bolts should be positioned so that the bolt head is nearest the bellows to prevent the bolt damaging the bellows in service. Tightness of bolts should be checked approximately seven days after installation.



03/2009/A18



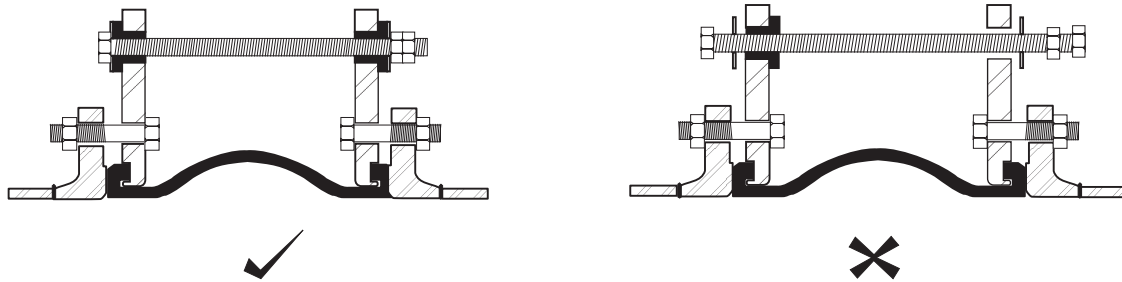
# STOURFLEX®

J & P Supplies Ltd

Expansion Joints & Pipeline Equipment

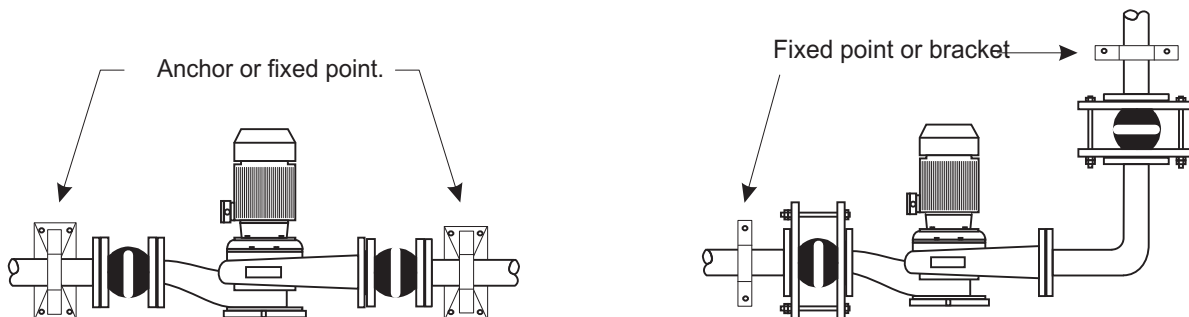
## Installation, Operation and Maintenance Instructions for Rubber Bellows.

**Installation Continued.** When tied rubber bellows are being used they must be installed at their neutral (supplied) length. Recheck installation length and movement capabilities of the bellows being installed. Ensure that the steel washers and the rubber top hat washers have been correctly fitted. Tie bar assemblies should be uniformly tightened and bolts rechecked after approximately seven days.

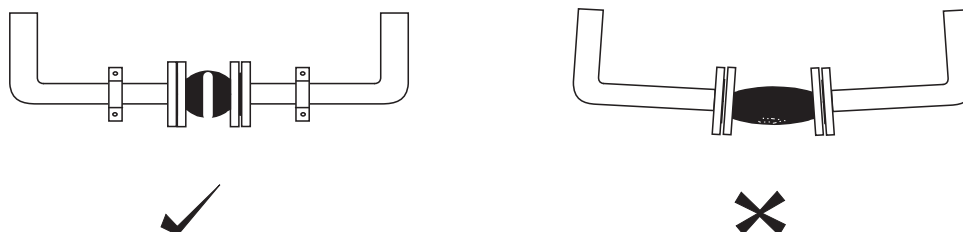


**Pressure Test.** If a hydraulic pressure test is to be carried out on a system containing rubber bellows ensure that the anchors are correctly fitted before the test is carried out. Also ensure that the test pressure (usually 1.5 x working) does not exceed the test pressure of the rubber bellows.

**Anchoring.** Rubber bellows must be anchored to ensure their correct performance. Tied rubber bellows should be selected for sizes above 80mm and where pressures exceed 3 bar.



Rubber bellows will exert a pressure thrust in service and must be anchored to protect adjacent pipework and equipment. Rubber bellows will extend under pressure and must be anchored to prevent this happening.



**Maintenance.** When properly installed and used at their correct operating temperature and pressure rubber bellows will give many years of trouble free service. However rubber bellows should be inspected periodically for signs of deterioration. If insulation is to be used this should be removable to allow inspection to be carried out. Flange bolts should be checked and re-tightened if required. Rubber bellows should not be painted as this may reduce service life. If fine hair cracks become evident in bellows membrane this is a sign that the bellows is nearing the end of its service life and should be replaced at the next convenient opportunity. A rubber bellows is an important part of any heating or chilled water system and consideration should be given to keeping a quantity of spares that would prevent a long term shutdown of the system.

03/2009/A19