



# STOURFLEX®

J & P Supplies Ltd

Expansion Joints & Pipeline Equipment

## Installation, Operation and Maintenance Instructions for Single and Twin Sphere 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.

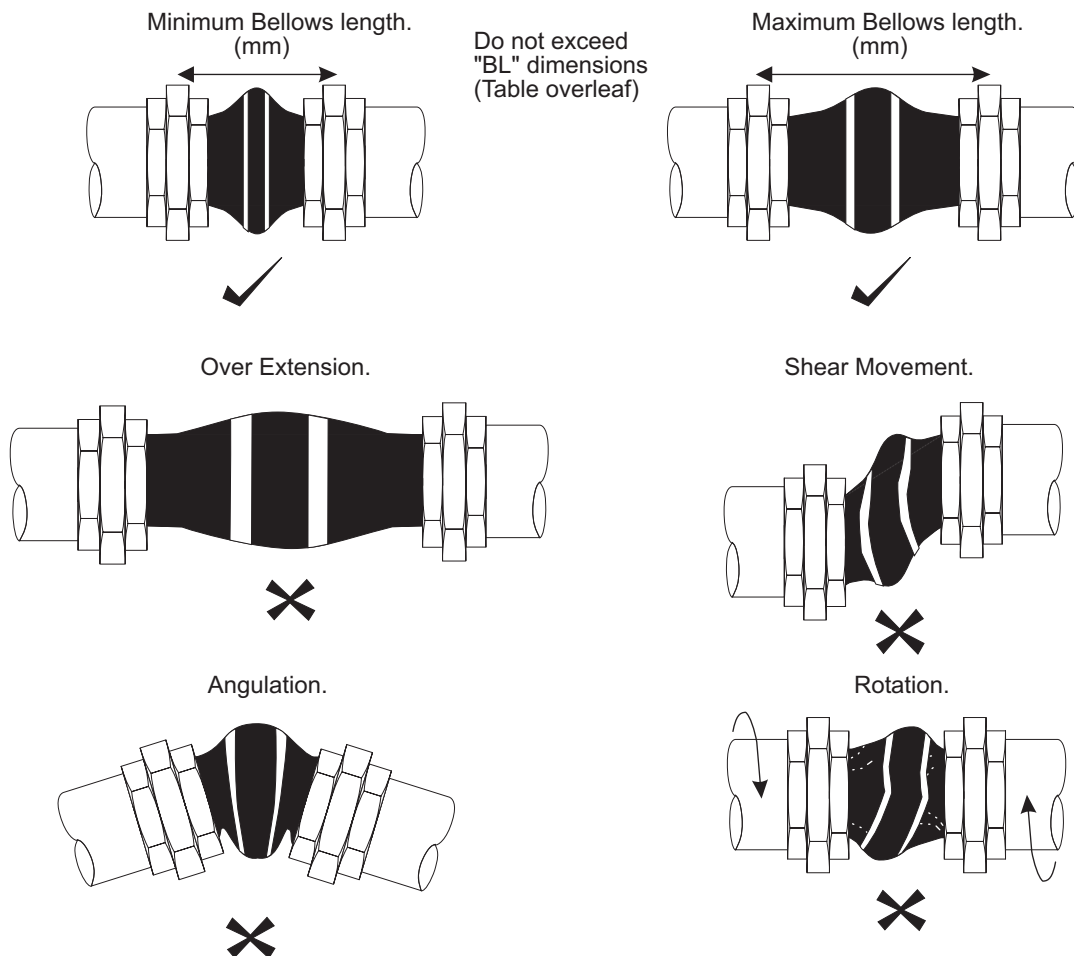
Rubber bellows should be inspected for internal and external damage prior to installation. Both the rubber bellows sealing surface and the union sealing face should be clean and free from any debris that would prevent a seal or cause damage to the bellows in service.

### Selection.

Check that the correct rubber bellows 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.

### Installation.

Rubber bellows should be installed at their neutral length and pipework should be true and straight. Adjustments should be made to the pipework if dimensions exceed the movement capabilities of the bellows being installed.



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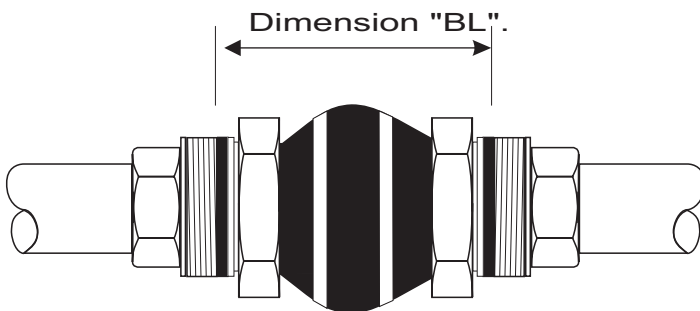
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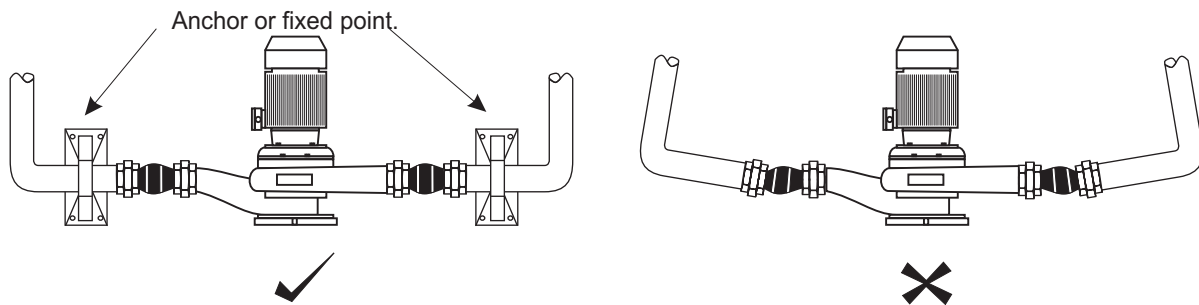
**Installation Continued.** The union ends should be removed from the bellows assembly and fitted to the pipework or pump with the correct dimension "BL" left to position the bellows. The unions should then be tightened evenly with care being taken not to rotate the bellows membrane or overtighten the rubber sealing face. Unions should be rechecked after approximately seven days.



N.B (mm)	Dimension "BL" (mm)	
	Maximum	Minimum
20	155	145
25	145	135
32	140	130
40	130	120
50	125	115

**Pressure Test.** If a hydraulic pressure test is to be carried out on a system containing rubber bellows ensure that 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.



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 Single and Twin Sphere rubber bellows will give many years of trouble free service. However rubber bellows should be periodically inspected for signs of deterioration. If insulation is to be used this should be removable to allow inspection to be carried out. Unions should be checked and retightened if required. Rubber bellows should not be painted as this may reduce the bellows service life. If fine hair cracks become evident in the 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. Rubber bellows are 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.