



# STOURFLEX®

J & P Supplies Ltd

Expansion Joints & Pipeline Equipment

## Installation, Operation and Maintenance Instructions for Axial Expansion Joints Requiring Cold Draw.

### Storage.

Stainless steel axial expansion joints should be stored in a clean dry area and be protected from damage caused by other items of plant and equipment.

### Inspection.

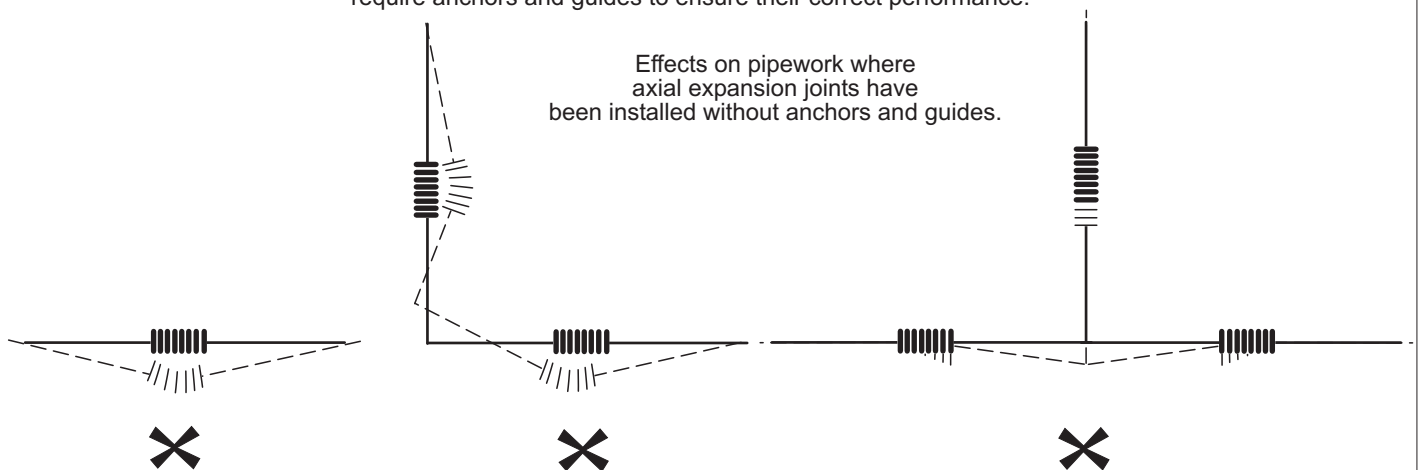
Stainless steel axial expansion joints should be inspected for any internal or external damage to the bellows convolutions.

### Selection.

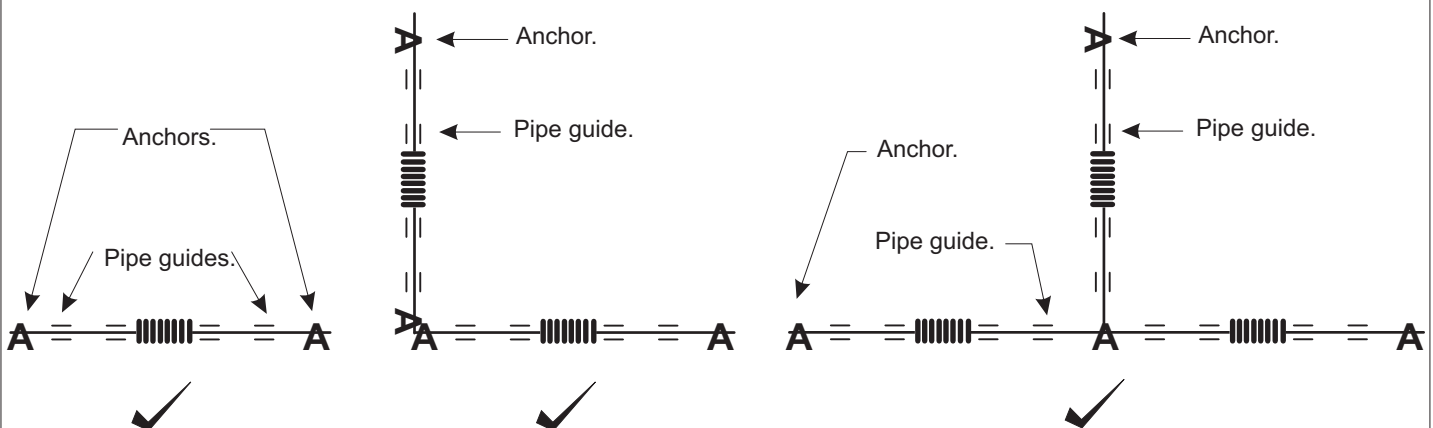
The Stourflex range of stainless steel axial expansion joints are designed to be used on a wide range of industrial applications. Check that the correct axial expansion joint has been selected for the operating conditions that exist. Temperature, pressure, total movement and the amount of Cold Draw should 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 of movement on the system.

### 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 internal flow sleeve it should be installed with the "→" in 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.





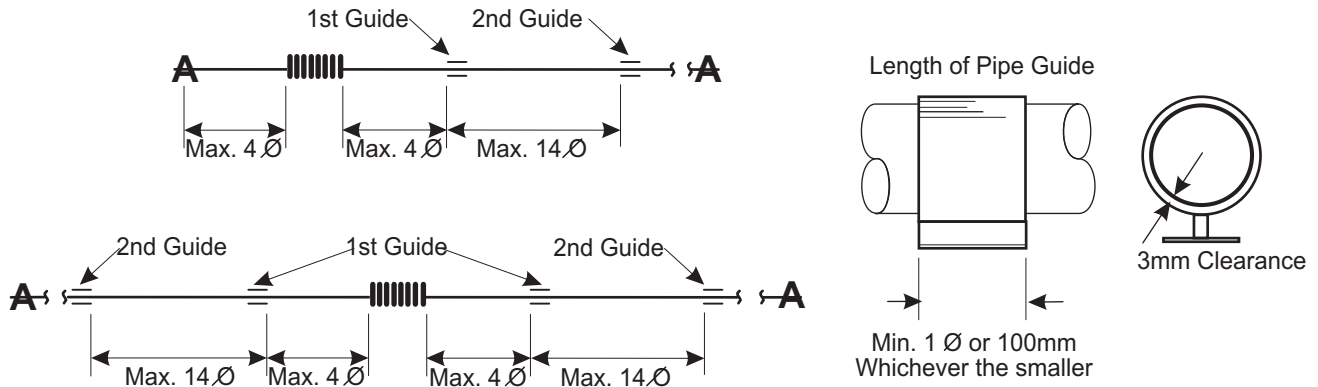
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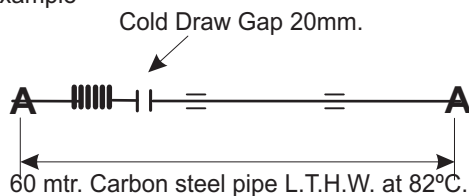
**Installation Continued.** Pipework should be correctly aligned with guides being installed to prevent buckling whilst allowing movement to be directed into the axial expansion joint. Details are given below for 1st and 2nd guide spacing. Remaining pipe guides should be installed as per specification 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. Ensure that the test pressure ( usually 1.5 x 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 spring rate of the bellows. See guidance notes for details and calculations on anchoring of pipework. Anchors are used to divide the system into manageable sections. Anchors must be spaced to suit the axial expansion joints being installed.

Example



Thermal Expansion = 54mm

Carbon steel pipework run 60 meters between anchors.  
Nominal bore 100 mm.  
L.T.H.W. system at 82°C .  
Installed at 0°C.  
Maximum 54mm thermal expansion.

For this application a 100mm nominal bore Stourflex  
**Type JP116VS** axial expansion joint should be selected.  
Axial Movement capability +20 / -40 mm ( 60mm total )  
The expansion joint should be extended by 20mm  
( Cold Draw ) on installation.

**Maintenance** When properly installed and used at their correct operating temperature and pressure, stainless steel axial expansion joints will give many years of trouble free service. However the expansion joints should be periodically inspected for signs of deterioration. Anchors and pipe alignment should also be examined. Anchor failure can result in a breakdown of the system. If insulation is to be used it should be removable to allow inspection to be carried out.