

## Type JP113 Axial Expansion Joint Screwed.

Now Available With Precision Fit Flexible Lagging Jackets To Suit JP113.

**Specification** Axial expansion joint consisting of stainless steel grade 321 bellows assembly fitted with carbon steel female B.S.P. end connections. Complete with internal flow sleeve and white aluminium external protective sleeve. Fitted with movement indicator and limit clip.

**Application** Stourflex axial expansion joints are designed to accommodate pipe movements in an axial plane (straight runs) due to thermal expansion. They are suitable for L.T.H.W, M.T.H.W, steam and other hot liquids and gases.

The white aluminium external protective sleeve makes the Type JP113 particularly suitable for use where pipework is visible inside occupied buildings.

Maximum working temperature 250°C.  
 Maximum working pressure 10 bar at 200°C.  
 Stourflex axial expansion joints should not be used at both their maximum working temperature and pressure respectively.  
 Maximum test pressure = 1.5 x working pressure or 1.5 x end connection rating, whichever the lower.



Lagging - Stourflex are now able to offer a tailor made flexible lagging jacket to help reduce heat losses on LTHW systems and heat gains & condensation on CHW systems. Please ask for more information.

Part number	N.B. (mm)	Total Movement (-mm)	Overall Length (mm)	External Sleeve Outside Diameter (mm)	Effective Area (Cm <sup>2</sup> )	Working Pressure @200°C (bar)	Cold Test Pressure (bar)
JP113-15	15	45	260	40	7	10	15
JP113-20	20	45	260	40	7	10	15
JP113-25	25	45	285	50	12	10	15
JP113-32	32	45	320	60	17	10	15
JP113-40	40	45	320	75	27	10	15
JP113-50	50	45	320	75	27	10	15

White aluminium external protective sleeve complete with movement indicator and limit clip fitted as standard.

Remove limit clip after installation.

Supplied at maximum length do not extend.

Expansion joint convolutions should be protected from damage caused by rotational forces during installation.

Axial expansion joints must be securely anchored and adequately guided to ensure their correct performance.

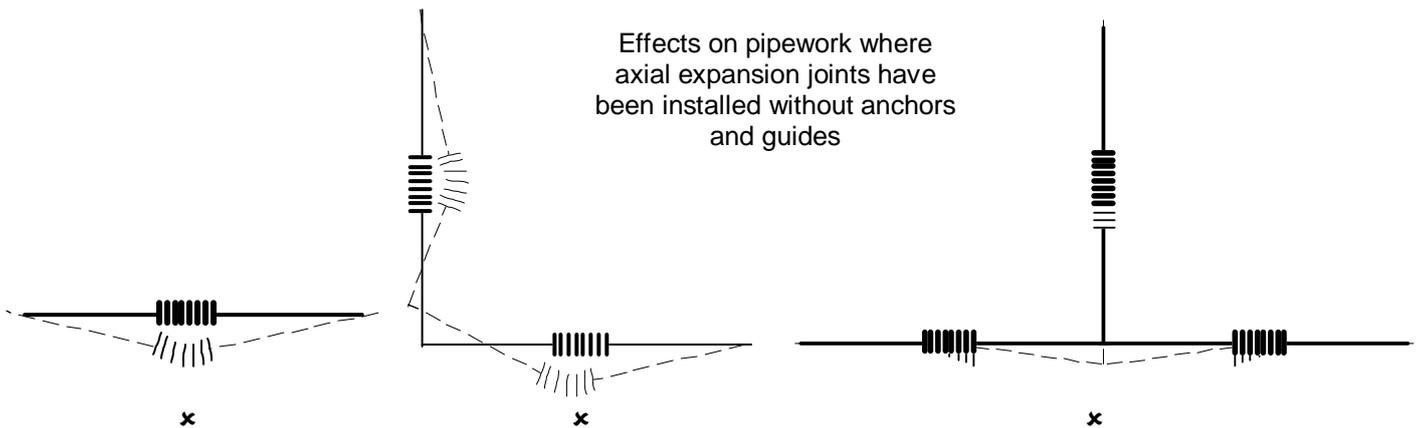
Omitting anchors and guides may result in failure of the system.

Please refer to guidance notes for the correct use and installation of Stourflex axial expansion joints.

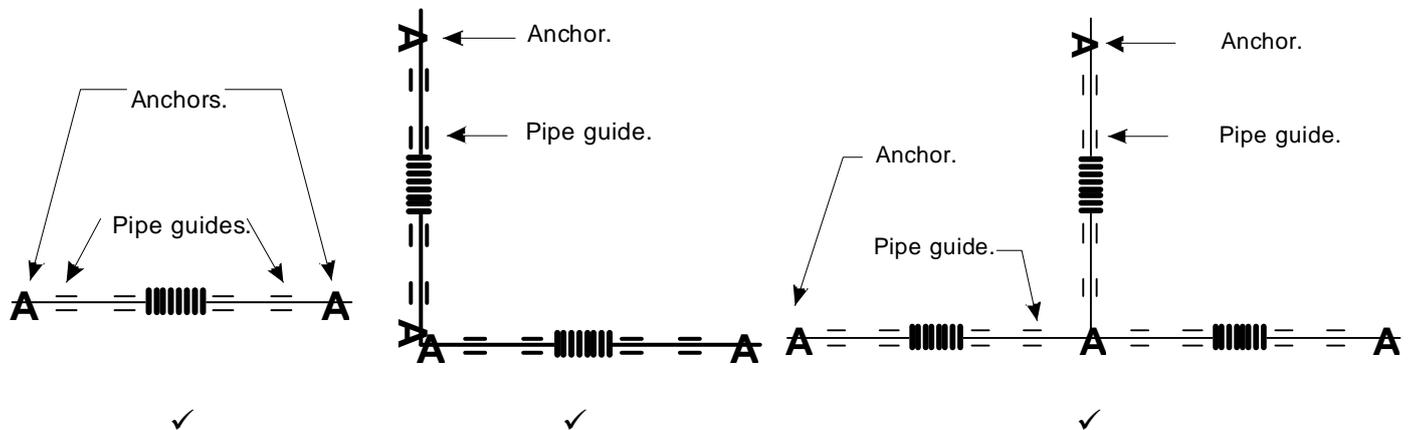
All Stourflex products should be installed in accordance with our fitting instructions.

## Installation, Operation and Maintenance Instructions for Stainless Steel Axial Expansion Joints

- 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 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 expansion joints should be fitted at their correct installation length. They should not be extended. 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.



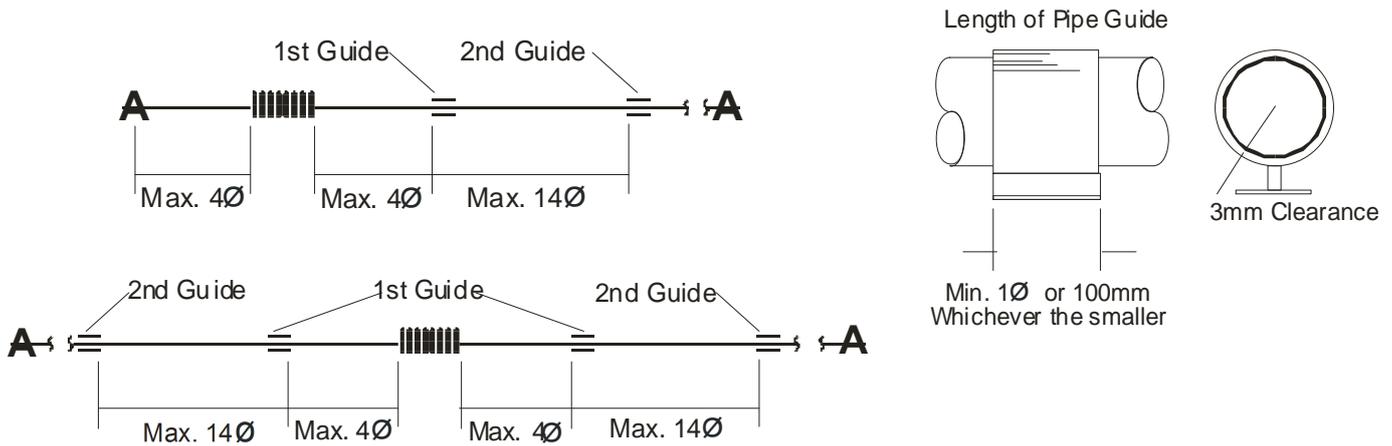
Anchors and pipe guides are essential to ensure the correct performance of the axial expansion joints. Ensure that only one axial expansion joint is installed between anchors.



## Installation, Operation and Maintenance Instructions for Stainless Steel Axial Expansion Joints Continued

### 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.



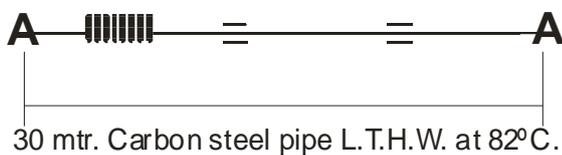
### Test Pressure

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  $n = 27\text{mm}$

Carbon steel pipework run 30 meters between anchors.  
Nominal bore 50mm.  
L.T.H.W. system at 82°C .  
Installed at 0°C.  
Maximum 27mm thermal expansion.

For this application a 50mm nominal bore Stourflex Type JP113 axial expansion joint should be selected. Movement capability -45mm axial.

### 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.