



# STOURFLEX

Technically Advanced Flexible Solutions

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## Type JP118 Axial Expansion Joint Weld End.

Now Available With Precision Fit Flexible Lagging Jackets To Suit JP118.

**Specification** Axial expansion joint consisting of stainless steel grade 321 bellows assembly fitted with carbon steel weld pipe ends.

**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 use on L.T.H.W., M.T.H.W., H.T.H.W., steam and other hot liquids and gases.

Maximum working temperature 300°C.  
 Maximum working pressure 16 bar at 120°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)	Force to Compress (N/mm)	Effective Area (Cm <sup>2</sup> )	Working Pressure @120°C (bar)	Cold Test Pressure (bar)
JP118-25	25	+10 -20	210	50	16	16	24
JP118-32	32	+10 -20	215	50	18	16	24
JP118-40	40	+10 -20	220	60	23	16	24
JP118-50	50	+10 -20	210	104	37	16	24
JP118-65	65	+20 -40	295	44	58	16	24
JP118-80	80	+20 -40	290	89	79	16	24
JP118-100	100	+20 -40	300	126	128	16	24
JP118-125	125	+20 -40	310	160	183	16	24
JP118-150	150	+20 -40	325	217	268	16	24
JP118-200	200	+20 -40	345	347	437	16	24
JP118-250	250	+20 -40	335	295	705	16	24
JP118-300	300	+20 -40	335	248	984	16	24

Stainless steel grade 321 internal flow sleeve fitted as standard. External protective sleeve available on request.

Where service conditions above 300°C or 16bar exist or where additional movement is required non standard variations of the Type JP118 are available if required.

Stourflex axial expansion joints are supplied at their neutral length shown above and may be extended on installation (cold draw) to achieve total movement. Do not exceed total movement.

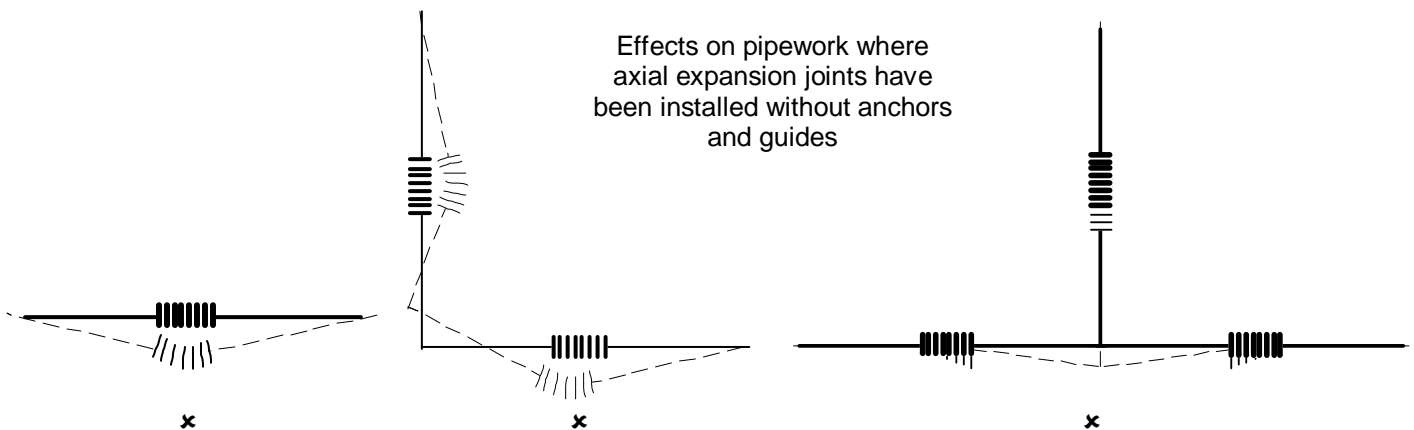
Axial expansion joints must be securely anchored and adequately guided to ensure their correct performance. Omitting anchors and guides may result in failure of the system.

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

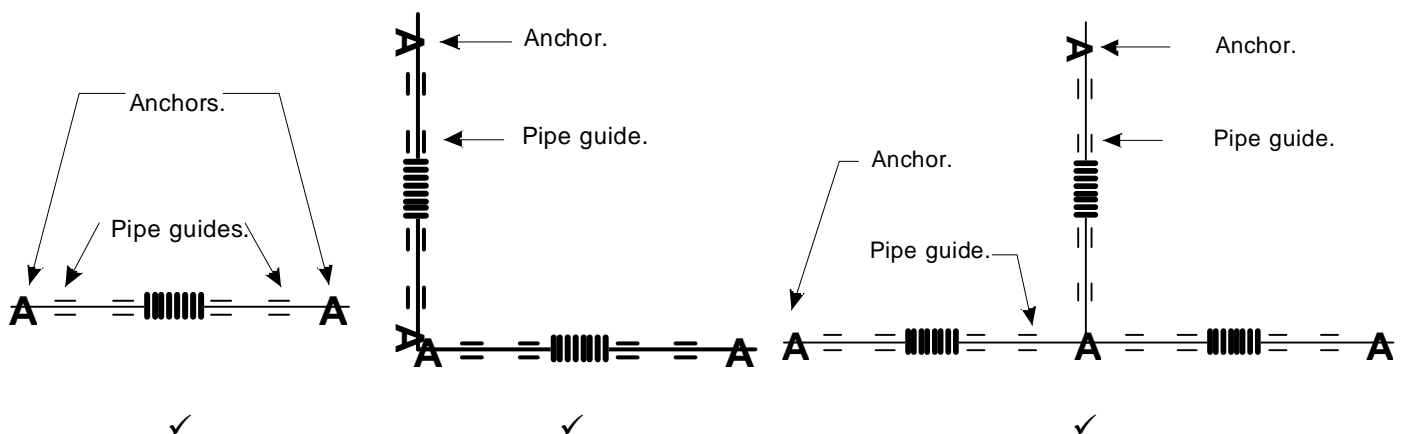


## Installation, Operation and Maintenance Instructions for Stainless Steel Axial Expansion Joints Requiring Cold Draw

- 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 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 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.

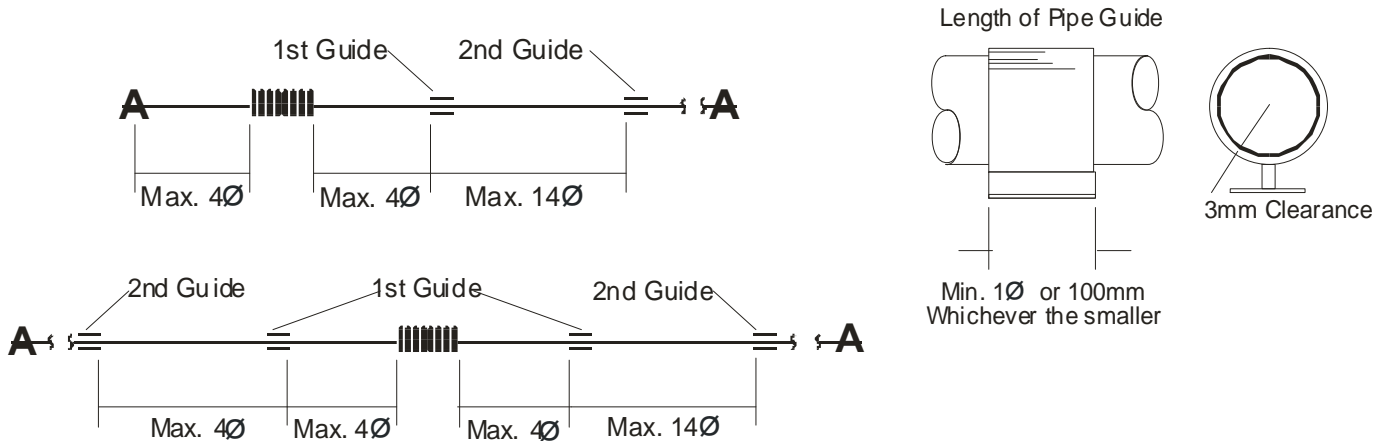




## Installation, Operation and Maintenance Instructions for Stainless Steel Axial Expansion Joints Requiring Cold Draw Continued

### 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.



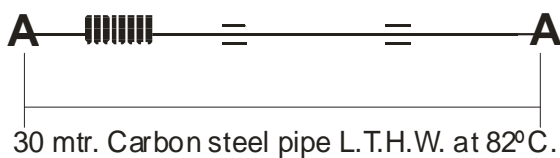
### Test Pressure

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 = 27mm

Carbon steel pipework run 30 meters between anchors.  
 Nominal bore 65mm.  
 L.T.H.W. system at 82°C .  
 Installed at 0°C.  
 Maximum 27mm thermal expansion.

For this application a 65mm nominal bore Stourflex Type JP116VS axial expansion joint should be selected. Movement capability +20/-40mm 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.