STOURFLEX
Technically Advanced Flexible Solutions

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Type JP121 Lateral Expansion Joint Flanged.

Now Available With Precision Fit Flexible Lagging Jackets To Suit JP121.

Specification

Double tied lateral expansion joint consisting of two multi - ply stainless steel grade 321 bellows, centre tube and mating surfaces (stainless steel wetted parts) fitted with zinc plated carbon steel van stone oval flanges and tie bar assembly drilled to BS4504 PN16.

Application

Stourflex double tied expansion joints are generally installed in changes in pipework direction and will accommodate lateral movement in one or two planes. This movement occurs due to thermal expansion or contraction or building settlement. They are suitable for use on HWS, L.T.H.W ,M.T.H.W. H.T.H.W., Steam and other hot liquids and gases.

Maximum working temperature 300ºC.
Maximum working pressure 16 bar at 120ºC.
Stourflex lateral 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 flange rating whichever the lower.

WRAS APPROVED PRODUCT Certificate No: 1209355

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)	Working Pressure @120°C (bar)	Cold Test Pressure (bar)
JP121-40-16	40	50	360	16	24
JP121-50-16	50	50	385	16	24
JP121-65-16	65	50	385	16	24
JP121-80-16	80	50	430	16	24
JP121-100-16	100	50	440	16	24
JP121-125-16	125	50	520	16	24
JP121-150-16	150	50	530	16	24
JP121-200-16	200	50	620	16	24
JP121-250-16	250	50	620	16	24
JP121-300-16	300	50	720	16	24

Lateral spring rates available upon request.

At temperatures above 120°C working pressure and movement will be reduced.

Where service conditions above 120ºC and 16bar exist or where additional movement is required non standard variations of the **Type JP121** are available on request.

Alternative flange materials and specifications are available on request.

Stourflex lateral expansion joints are supplied at their maximum overall length and must not be extended. Lateral 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.

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Installation, Operation and Maintenance Instructions for Double Tied Stainless Steel Lateral Expansion Joints

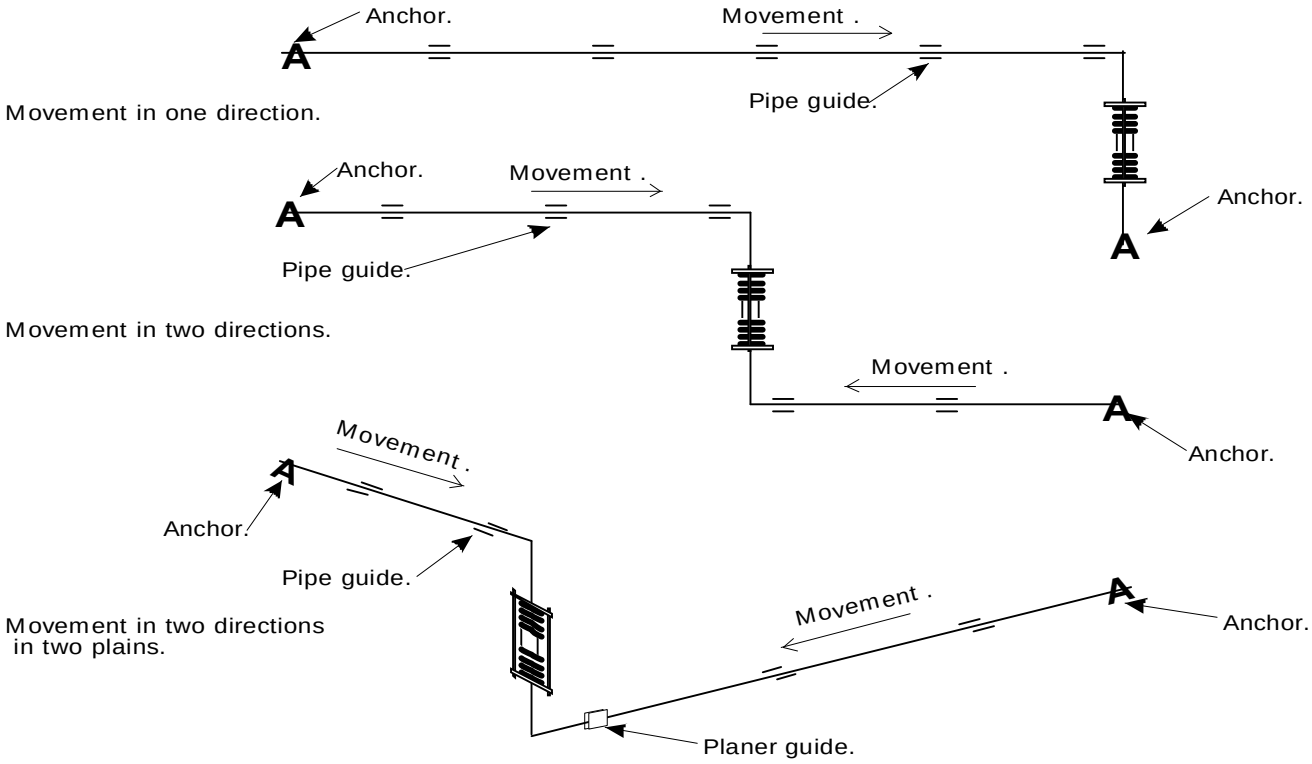
Storage Double tied stainless steel lateral expansion joints should be stored in a clean dry area and be protected from damage caused by other items of plant and equipment. Care should also be taken in transporting lateral expansion joints to prevent damage to the bellows

Inspection Double tied stainless steel lateral expansion joints should be inspected for any internal or external damage to the bellow's convolutions.

Selection The Stourflex range of Double Tied stainless steel lateral expansion joints are designed to be used on a wide range of industrial applications. Check that the correct lateral 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 lateral expansion joints are being installed to accommodate the total amount of movement on the system.

Installation When lifting or moving double tied stainless steel lateral expansion joints into position they must be fully supported over their entire length. During installation they must be fully supported over their entire length to prevent damage to the bellows convolutions caused by excess movement. Lateral expansion joints are normally installed in changes in pipework direction. Lateral expansion joints should be fitted at their correct installation length. They should not be extended or compressed. Cold pull can be applied as and when required. If a lateral expansion joint has been supplied with internal flow sleeves, 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. Lateral expansion joints require anchors and guides to ensure their correct performance. For further details on the use of lateral expansion joints see guidance notes.

Typical examples where double tied stainless steel lateral expansion joints are used to accommodate thermal expansion in pipework.



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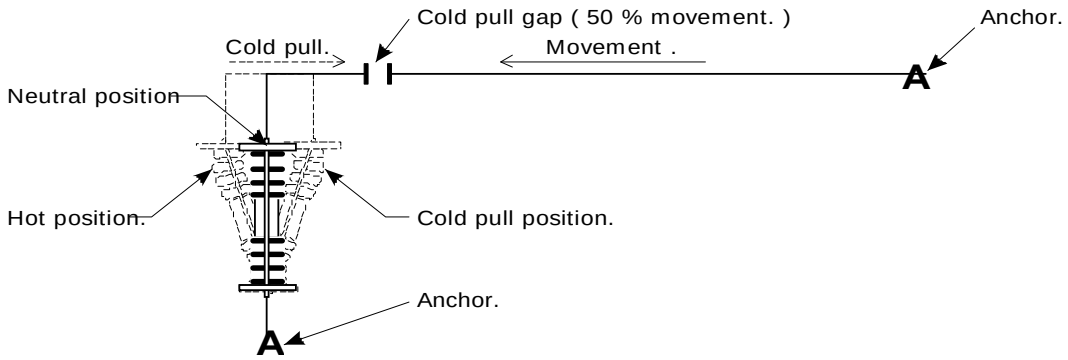
Installation, Operation and Maintenance Instructions for Double Tied Stainless Steel Lateral Expansion Joints Continued

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.



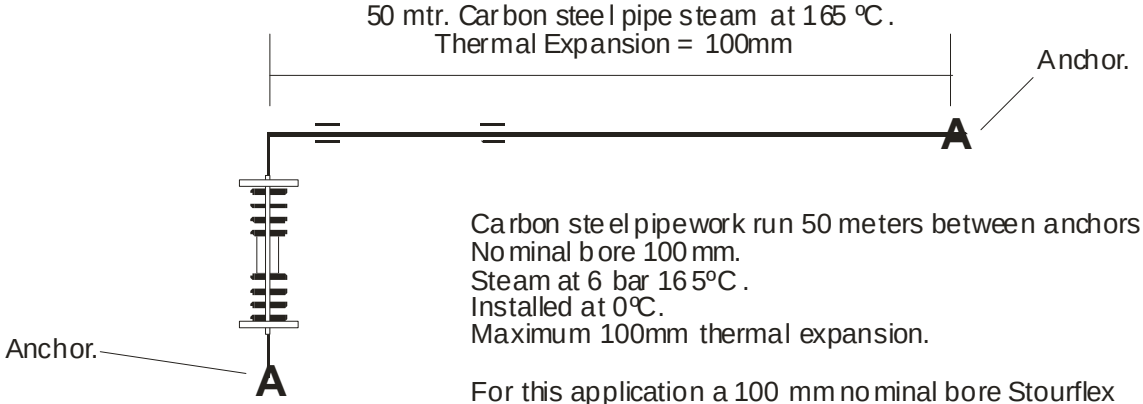
Test Pressure

If a hydraulic pressure test is to be carried out on a system containing lateral 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 lateral expansion joint being installed. A visual inspection of the double tied lateral expansion joint and associated pipework should be carried out during and after the test to ensure the installation is operating correctly.

Anchoring

Double tied lateral expansion joints must be securely anchored and adequately guided to ensure their correct performance. 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 lateral expansion joints being installed.

Example



Carbon steel pipework run 50 meters between anchors.
Nominal bore 100 mm.
Steam at 6 bar 165ºC.
Installed at 0ºC.
Maximum 100mm thermal expansion.

For this application a 100 mm nominal bore Stourflex **Type JP120** double tied stainless steel lateral expansion joint should be selected.
Movement capability +/-50mm (100mm total) lateral movement.

Maintenance

When properly installed and used at their correct operating temperature and pressure, double tied stainless steel lateral 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.