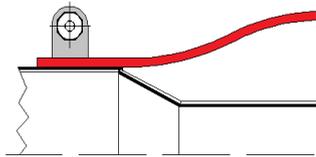


INSTALLATION AND ASSEMBLY INSTRUCTIONS

Belt Type Expansion Joint

Take out the expansion joint and make sure that the surface is not damaged. The steel parts of the pipes or counter flanges must be inspected before the assembly, making sure that the surface underneath is free of sharp edges or damaged areas.

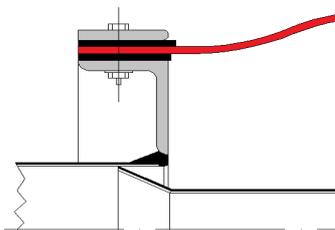


In case of flanges with strap clamps:

Locate the compensator onto the tube or the system where is going to be installed.

Stretch it well until is perfectly adapted.

Hold it firmly with band clamps or other fastener.



In case of drilled flanges:

Begin assembly a compensator with a joint with screwed flanges in the middle of the compensator on the side across from the area where the joint/seam is to be placed.

Continue placing the rest of counter flanges following the contour of the band, making sure the fabric is taut and unwrinkled. **Leave the part of joint/seam of the compensator without placing the counter flanges** in order to proceed with the closure of fabric layers.

Now we can proceed to overlap the fabric layers alternately, beginning from the inside.

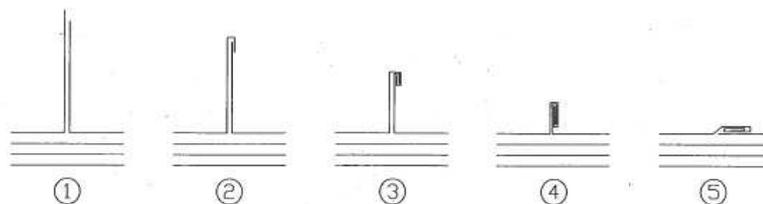
First inner Layer: the first inner layer is cut to the proper length with approximately 150 mm overlap. Place a bent needle with thread (provided with the compensator) and make stitches 20 mm wide 10 mm apart across the entire width.

Second Layer: the second layer should be sewn with bent needle and thread as the first one, separated at approx 150 mm from the first layer joint. Make sure the fabric is perfectly taut.

Third Layer and others: for all the layers before the PTFE one, the procedure is the same as for the second layer, leaving always about 150 mm of distance between seams.

Teflon Layer: PTFE layers can't be sewn, so we need to stack the PTFE foil atop one another, staple the end and make multiple folds, 40 mm wide each other (as the example below) Once folded, you can put a few pieces of tape until the flanges are screwed.

This type of closure should be applied to all PTFE layers (or materials whose appearance and composition resembles Teflon), whether they are placed in the middle or as the last layer.

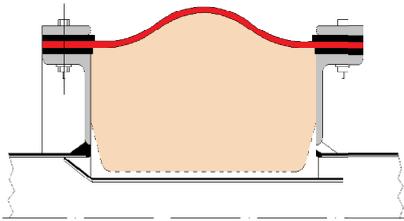


Next Layer (if exist): the procedure is the same as per first or second layers.

Outer Layer: Silicone is applied to both surfaces to be joined. After stack one layer atop another, we should press it well in order to have a complete contact between both sides. The drying time will depend on the ambient temperature and may range between one and two hours. **After this procedure fix the rest of the counter flanges**

INSTALLATION AND ASSEMBLY INSTRUCTIONS

Belt Type Expansion Joint with insulation pillow



Before the assembly of the compensator, a pre-insulation pack should be positioned in the space between the fabric compensator and pass tube.

Enter the bolster to fill the entire gap (if the bolster is divided into several sections, they should be placed one by one around the whole perimeter).

Place the compensator onto the tube or the system where is going to be installed. Stretch it well until is perfectly adapted. Hold it firmly with band clamps or other fastener.

In case of drilled flanges: Begin assembly a compensator with a joint with screwed flanges in the middle of the compensator on the side across from the area where the joint/seam is to be placed. Continue placing the rest of counter flanges following the contour of the band, making sure the fabric is taut and unwrinkled. **Leave the part of joint/seam of the compensator without placing the counter flanges** in order to proceed with the closure of fabric layers.

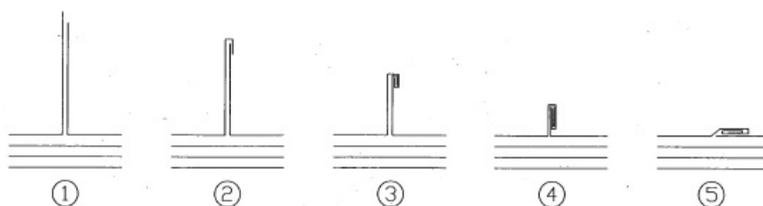
Now we can proceed to overlap the fabric layers one by one, beginning from the inside.

First inner Layer: the first inner layer is cut to the proper length with approximately 150 mm overlap. Place a bent needle with thread (provided with the compensator) and make stitches 20 mm wide 10 mm apart across the entire width.

Second Layer: the second layer should be sewn with bent needle and thread as the first one, separated at approx 150 mm from the first layer joint. Make sure the fabric is perfectly taut.

Third Layer and others: for all the layers before the PTFE one, the procedure is the same as for the second layer, leaving always about 150 mm of distance between seams.

Teflon Layer: PTFE layers can't be sewn, so we need to stack the PTFE foil atop one another, staple the end and make multiple folds, 40 mm wide each other (as the example below) Once folded, you can put a few pieces of tape until the flanges are screwed. This type of closure should be applied to all PTFE layers (or materials whose appearance and composition resembles Teflon), whether they are placed in the middle or as the last layers.



Next Layer (if exist): the procedure is the same as per first or second layers.

Outer Layer: Silicone is applied to both surfaces to be joined. After stack one layer atop another, we should press it well in order to have a complete contact between both sides. The drying time will depend on the ambient temperature and may range between one and two hours. **After this procedure fix the rest of the counter flanges**

INSTALLATION AND ASSEMBLY INSTRUCTIONS

With Insulation Pillow and Stainless Steel Net

Installation of pre-insulation pack: stainless steel net and rock lane.
Insulation bolster will be placed previously to the compensator.

Steps to follow:

Step nº 1



The stainless steel net should be extended around the gap where the expansion joint will be placed (around the metal shirt in case it exists).

It can be shaped in the desired form, circular or rectangular.

The stainless steel net width is greater than the gap of the compensator as the "excess" of each side is folded and welded to the flange with small metal plates.

These metal plates shall be spaced one from another with about 150mm.



Photograph 1 and 2.

Step nº 2



The first layer of rock lane should be placed around all the diameter of the assembly.

The rock lane has at one side a stainless steel net. This side should be placed towards the inside part, the way it never get in contact with the fabric compensator, as it can cause damage

Photograph 3.

Step nº 3



Place the rest of rock lane layers



Photograph 4.

HANDLING INSTRUCTIONS FOR FABRIC EXPANSION JOINTS

1º The customer must notify COMDIFLEX that the material under this warranty, has been received in perfect condition at the agreed place of delivery, within a maximum period of 15 (fifteen) days from the delivery date. In case that COMDIFLEX has not received written acknowledgement from the customer within fifteen days from the delivery of the product, it will be assumed that the product has been received in perfect condition by the customer.

2º Fabric compensators are very sensitive to stress from impact, compressive stress and contact with sharp objects. Therefore, the boxes (containing the compensators during the translation) should be handled with care, during loading and discharge, avoiding strokes and sudden maneuvers.

3º During intermediate storage prior to the assembly the compensator should be stored in its original packaging, with care in an enclosed building, keeping them in a dry place (at a temperature not less than 5 degrees Celsius). The packing boxes should not be opened until de immediate assembly of the compensator.

4º If the box has to be handled and/or transported from the storage place to the assembly place, it should be done carefully avoiding sudden blows. The box should be open just before the process of assembly. If the boxes contain more than one compensator, and if some of them will not be assembly immediately, the box should be closed again until the next process of assembly.

5º In the process of assembly and/or manipulation (with corresponding elevation elements used) it should be prevented any blow or sudden maneuver with sharp edges and sharp elements that may damage the textile part of the compensator.

6º Prevent damage during assembling work in the vicinity of the compensator by taking safety measurements. A suitable cover must be used to protect the upper part of the compensator from falling objects such as electrodes, screws or tools. During the assembly process, there must not be placed sharp elements (bolts, tools, etc.) in the textile part of the compensator (particularly pointed elements with sharp edges). It is completely discouraged from step on the textile part of the compensator at any circumstance.

7º In the event of welding and grinding work being conducted near the compensator, it must be protected by means of insulation from excessive temperature influence or from welding sparks.

8º Once completed the assembly process of the compensator, it should be ensured that during the operation process, the compensator is protected from the impact of sharp objects, stones, external heat or other negative elements that could damage the textile part. There should be avoided all the welding processes close to the textile part (less than 3 meters), as the sparks can produce serious damage to the fabric surface of the compensator.



***Note:** this document is a summary of the general instructions for the installation and assembly of the expansion joints. Please refer to any special additional instructions accompanying the individual textile compensator