

METRALOOP™ EXPANSION JOINT THERMAL APPLICATION OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS

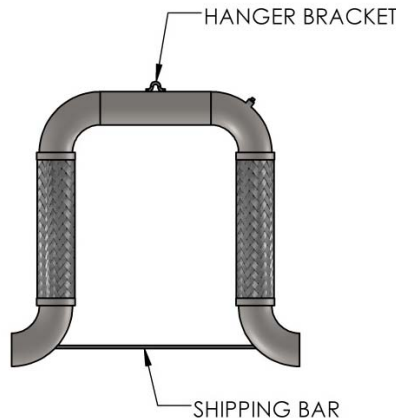
General: The MetraLoop™ consists of two parallel sections of corrugated hose and braid with connecting fittings as specified for project requirements. The Metraloop can accommodate axial and lateral movement.

Application / Notes:


1. The Metraloop is used in a wide range of services from cryogenic to steam and applications such as compensation for thermal expansion and contraction, seismic movement, and building settlement.
2. Metraloops will be shipped with a tag that specifies it's rated movement. Confirm that the system movements are within the rating of the Metraloop.
3. Verify that the system pressures do not exceed the published at ratings of the Metraloop found on www.metroflex.com
4. Metraloops can be installed at any point of the pipe run between anchors.
5. The general Metroflex recommendation is that a guide be used on each side of the Metraloop if any of the hanger rods deflect 4° or more due to the pipe movement.

Installation:

1. Inspect joint for shipping damage, insure that the shipping bar is intact.
2. During installation, make sure that the sections of flexible hose and braid are protected from damage and overextension. Weld splatter must be kept away from the flexible legs.
3. Nesting Clearance. Often several Metraloops are nested inside of each other, when this is the case the installer should verify that there is enough clearance between the Metraloops after insulation to allow for the full expected movement. Refer to the submittal for the nest.
4. When required, Metraloops should be insulated with flexible unicellular, mineral wool or fiberglass insulation. Ridged insulations should be avoided on the hose element to avoid point loading the hose. Insulation should be selected and installed to avoid moisture entrapment.
5. For Copper sweat applications, cold strap the fitting that is being soldered or brazed. Thoroughly flush flux from the inside of the system, clean off any flux from the outside of the hose.
6. Metraloops are shipped with shipping bars to maintain the Loops neutral position. Shipping bars must be removed after installation

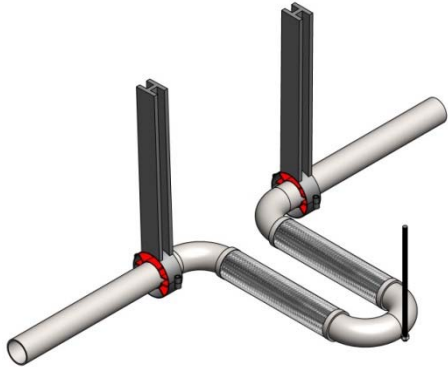


7. The 180° return fitting must be supported in a way that allows lateral movement. Nested loops may have two hanger brackets on the 180° return. 2.5" Diameter and smaller stock loops +/-4" Movement are self-supporting and do not need any additional support.

CUSTOMER _____ PROJECT _____ ENGINEER _____ ARCHITECT _____ PRO. OR P.O. NO. _____				
	DESCRIPTION: METRALOOP EXPANSION JOINT THERMAL APPLICATION Operation, Installation and Maintenance Instructions			
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">DRAWING BY: JC</td> <td style="width: 33%;">DATE: 01-05-16</td> <td style="width: 33%;">DRAWING NO. LOOP-OIM 1 of 3</td> </tr> </table>	DRAWING BY: JC	DATE: 01-05-16	DRAWING NO. LOOP-OIM 1 of 3
DRAWING BY: JC	DATE: 01-05-16	DRAWING NO. LOOP-OIM 1 of 3		

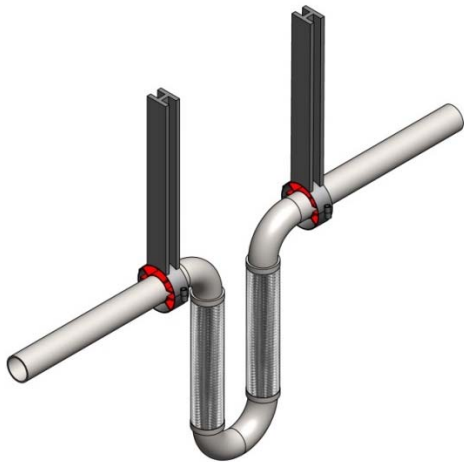
METRALOOP™ EXPANSION JOINT THERMAL APPLICATION OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS

Installation Continued:

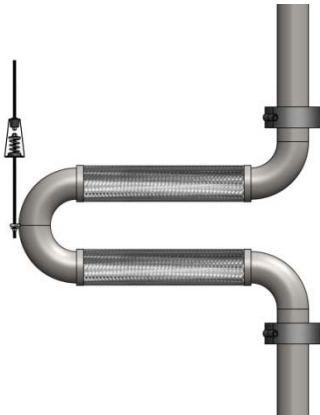


Provided a hanger for loops 3" diameter and larger. The hanger rod must allow the 180° return fitting to move horizontally.

Horizontal is the recommended installation for STEAM applications. Consult factory for steam applications.



For horizontal pipe runs with the Metraloop hanging down, no additional support for the 180° return fitting is required.



Provided a hanger for loops 3" diameter and larger.

The hanger rod or support must be spring loaded to allow the 180° to move up and down.

CUSTOMER _____

PROJECT _____

ENGINEER _____

ARCHITECT _____

PRO. OR P.O. NO. _____



DESCRIPTION:

METRALOOP EXPANSION JOINT THERMAL APPLICATION

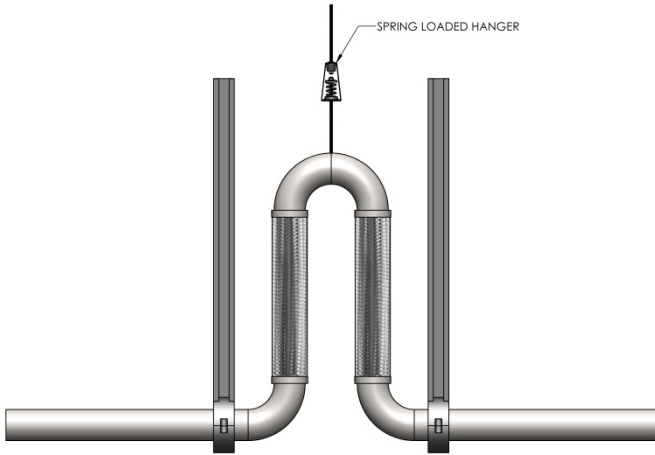
Operation, Installation and Maintenance Instructions

DRAWING BY: JC DATE: 01-05-16

DRAWING NO. LOOP-OIM 2 of 3

METRALOOP™ EXPANSION JOINT THERMAL APPLICATION OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS

Installation Continued:



Provided a hanger for loops 3" diameter and larger.

The hanger rod or support must be spring loaded to allow the 180° to move up and down.

Testing:

1. See Metraflex's published data for allowable test pressure.
2. Metraflex recommends hydrostatic test only. If an air test is performed, appropriate safety precautions must be made.


Steam Precautions:

1. For steam applications Metraflex recommends the use of double braiding for the hose.
2. Metraflex recommends that flexible hose products be only installed in well trapped systems.

Maintenance:

The Metraloop is maintenance free and has no serviceable parts. Periodic visual inspections should be done. Inspections should be made after any seismic event.

Contact Metraflex or your local Metraflex Representative with ANY questions.

<p>CUSTOMER _____</p> <p>PROJECT _____</p> <p>ENGINEER _____</p> <p>ARCHITECT _____</p> <p>PRO. OR P.O. NO. _____</p>				
	<p>DESCRIPTION:</p> <p style="text-align: center;">METRALOOP EXPANSION JOINT THERMAL APPLICATION</p> <p style="text-align: center;">Operation, Installation and Maintenance Instructions</p>			
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">DRAWING BY: JC</td> <td style="width: 33%;">DATE: 01-05-16</td> <td style="width: 33%;">DRAWING NO. LOOP-OIM 3 of 3</td> </tr> </table>	DRAWING BY: JC	DATE: 01-05-16	DRAWING NO. LOOP-OIM 3 of 3
DRAWING BY: JC	DATE: 01-05-16	DRAWING NO. LOOP-OIM 3 of 3		