

V-LOOP™ EXPANSION JOINT THERMAL APPLICATION OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS

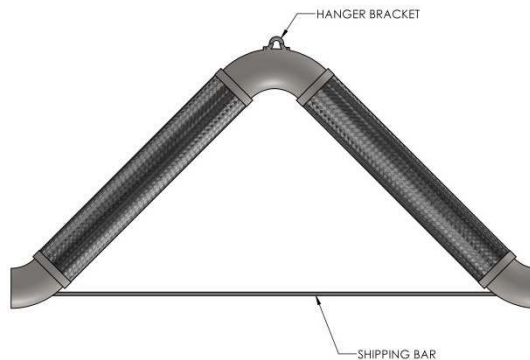
General: The V-Loop™ consists of two sections of corrugated hose and braid with connecting fittings as specified for project requirements. The V-Loop can accommodate axial and lateral movement.

Application / Notes:

1. The V-Loop is used in a wide range of services from hot water to steam and applications such as compensation for thermal expansion and contraction, seismic movement, and building settlement.
2. V-Loops will be shipped with a tag that specifies its rated movement. Confirm that the system movements are within the rating of the V-Loop.
3. Verify that the system pressures do not exceed the published at ratings of the V-Loop found on www.metraflex.com
4. V-Loops can be installed at any point of the pipe run between anchors.
5. The general Metraflex recommendation is that a guide be used on each side of the V-Loop 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 V-Loops are nested inside of each other, when this is the case the installer should verify that there is enough clearance between the V-Loops after insulation to allow for the full expected movement. Refer to the submittal for the nest.
4. When required, V-Loops 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. V-Loops are shipped with shipping bars to maintain the Loops neutral position. Shipping bars must be removed after installation.



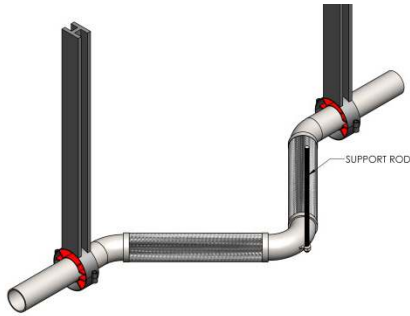
7. The 90° return fitting must be supported in a way that allows lateral movement. 2.5" Diameter and smaller loops for +-4" Movement are self-supporting and do not need any additional support.

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| CUSTOMER _____ |
| PROJECT _____ |
| ENGINEER _____ |
| ARCHITECT _____ |
| PRO. OR P.O. NO. _____ |

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| DESCRIPTION: | |
| V-LOOP EXPANSION JOINT THERMAL APPLICATION | |
| Operation, Installation and Maintenance Instructions | |
| DRAWING BY: JC | DATE: 01-05-16 |
| DRAWING NO. VLOOP-OIM 1 of 3 | |

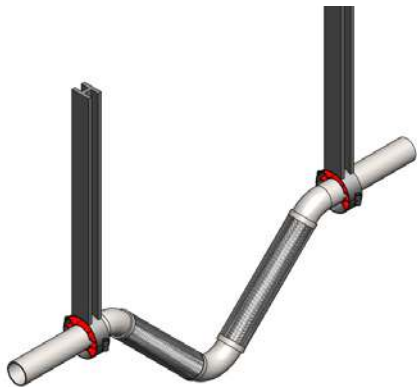
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Installation Continued:



Provided a hanger for V-Loops 3" diameter and larger. The hanger rod must allow the 90° return fitting to move horizontally.

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



For horizontal pipe runs with the V-Loop hanging down, no additional support for the 90° return fitting is required.



Provided a hanger for V-Loops 3" diameter and larger.

The hanger rod or support must be spring loaded to allow the 90° to move up and down.

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ENGINEER _____

ARCHITECT _____

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DESCRIPTION:

V-LOOP EXPANSION JOINT THERMAL APPLICATION

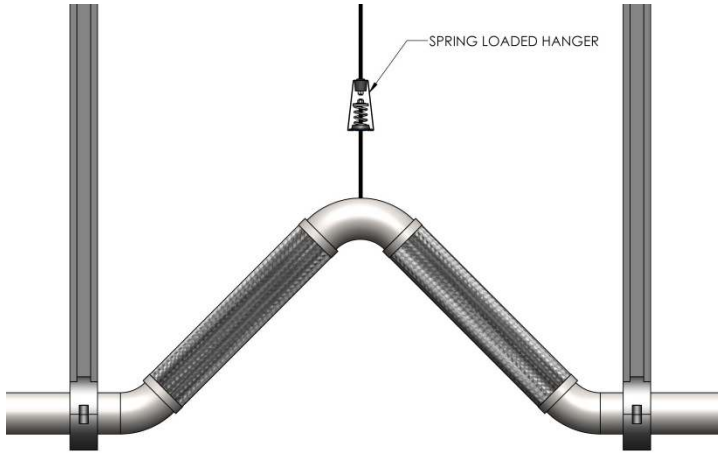
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V-LOOP™ EXPANSION JOINT THERMAL APPLICATION OPERATION, INSTALLATION AND MAINTENANCE INSTRUCTIONS

Installation Continued:



Provided a hanger for loops 3" diameter and larger.

The hanger rod or support must be spring loaded to allow the 90° 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.

Precautions:

Clearance for movement of the 90° return must be made. Due to the geometric configuration of V-Loops, the 90° return fitting will move out of its neutral position equal to the movement of the pipe.


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 V-Loop 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.

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