



APPROVED

For Fire Protection Systems



LISTED

EX28995

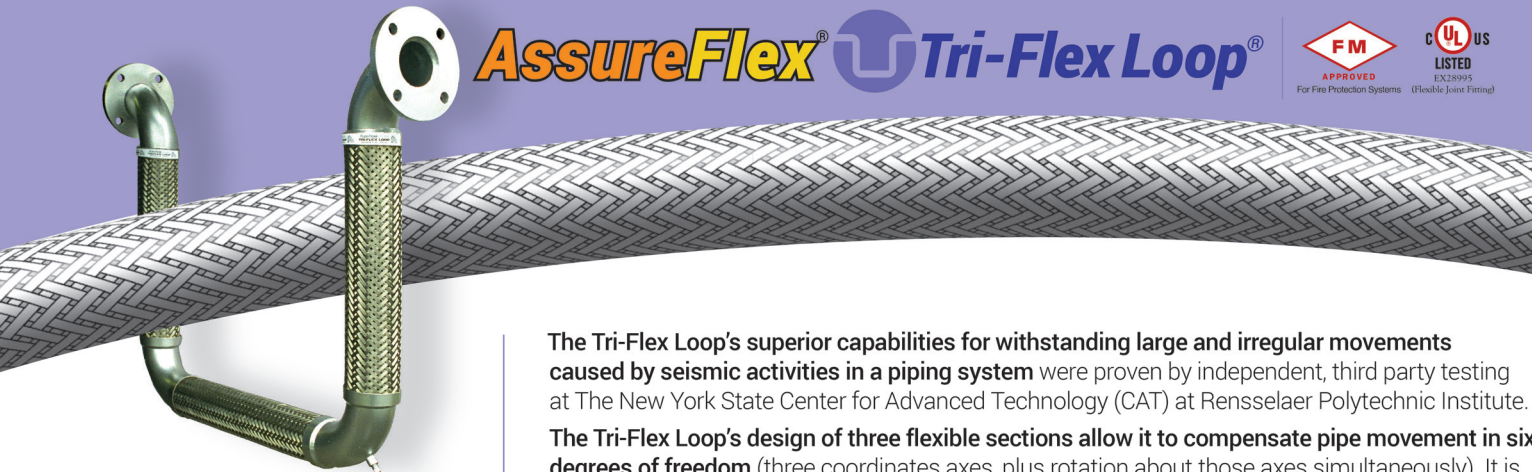
(Flexible Joint Fitting)

# AssureFlex®

When you're making critical piping connections  
nothing but, **Tri-Flex Loop®** should go over your head.

 **FLEX-HOSE** CO. INC.

A world of difference in critical piping connections since 1968.™



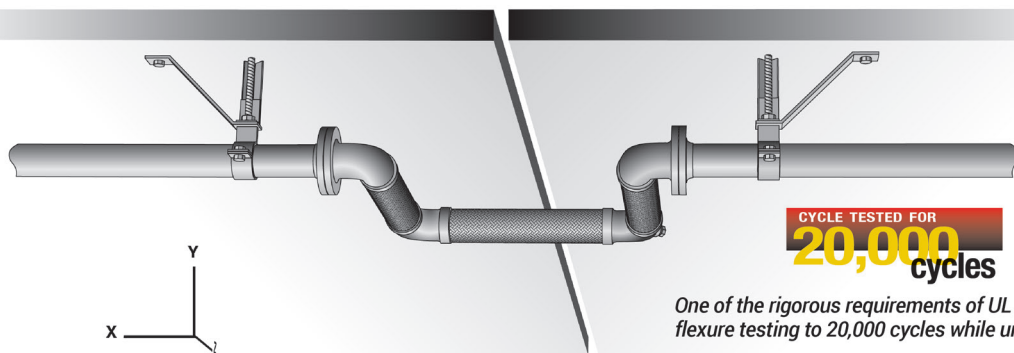
# Seismic Connectors

Horizontal Pipe Run Spanning a Building Seismic Joint

The Tri-Flex Loop's superior capabilities for withstanding large and irregular movements caused by seismic activities in a piping system were proven by independent, third party testing at The New York State Center for Advanced Technology (CAT) at Rensselaer Polytechnic Institute.

The Tri-Flex Loop's design of three flexible sections allow it to compensate pipe movement in six degrees of freedom (three coordinates axes, plus rotation about those axes simultaneously). It is the safest and most reliable means of absorbing movement resulting from random seismic shift.

The Tri-Flex Loop is capable of accommodating seismic displacements for vertical piping between floors of the building, where pipes pass through or bridge building seismic joints or building expansion joints. They are also used for horizontal piping across building seismic and building expansion joints to accommodate the resultant drift of each building unit, or where rigidly supported pipes connect to equipment mounted on vibration isolators.

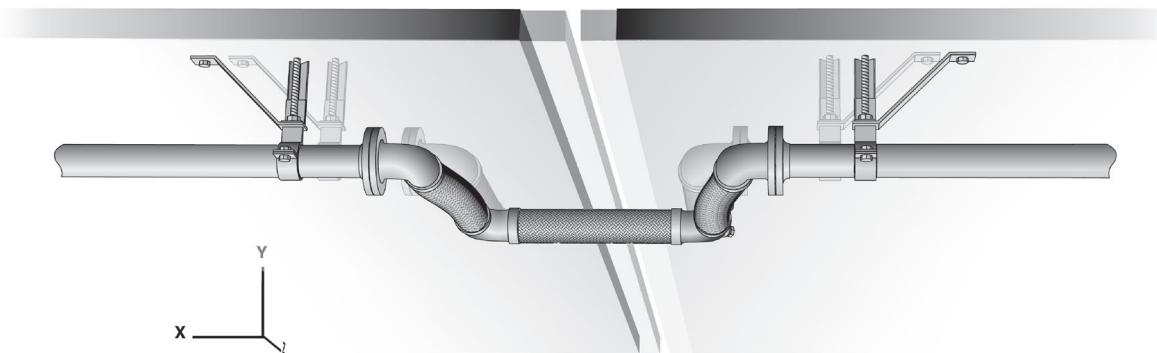


One of the rigorous requirements of UL 536 testing was flexure testing to 20,000 cycles while under pressure!

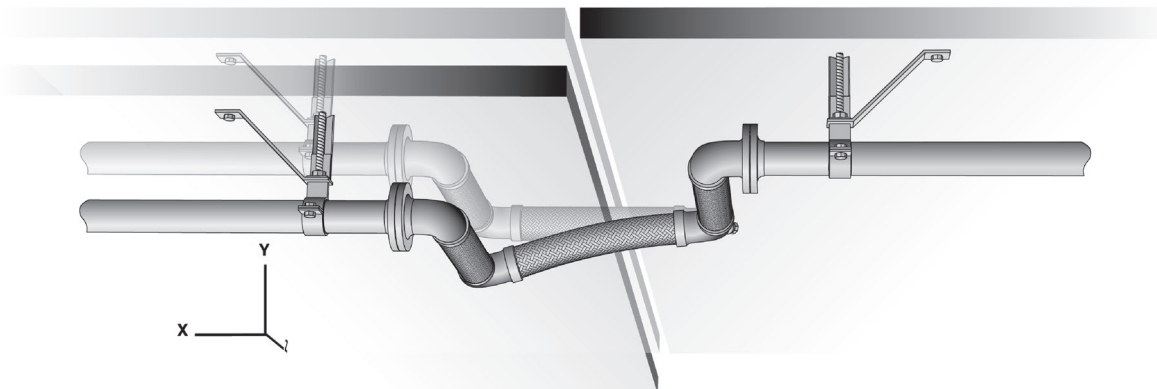
**C U L U S**  
**LISTED**  
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(Flexible Joint Fitting)

**LISTED**  
Tri-Flex Loop® stainless steel 1"-4" for compressed and combustible gases at 175PSI at ambient temperature 33NB

## Seismic Horizontal Displacement



## Seismic Vertical Displacement





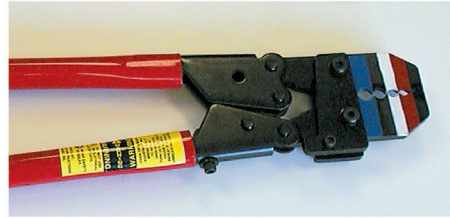
# Hanger Assembly Kit and Accessories

Save Labor Costs with these Tri-Flex Loop Accessories!

The UL Listed Seismic Wire Rope/Cable™ used in our hanger assemblies conform to the requirements of the ASCE (American Society of Civil Engineers) guidelines for structured applications of wire rope, in that the cable is pre-stretched and the permanent end fittings maintain the breakstrength of the cable with a safety factor of two.



- Color Coded
- Pre-stretched
- Breakstrength Certified



Color coded, factory cable cutter & crimper to meet cable specifications



Color coded for Tri-Flex Loop installations of 10" and larger in diameter



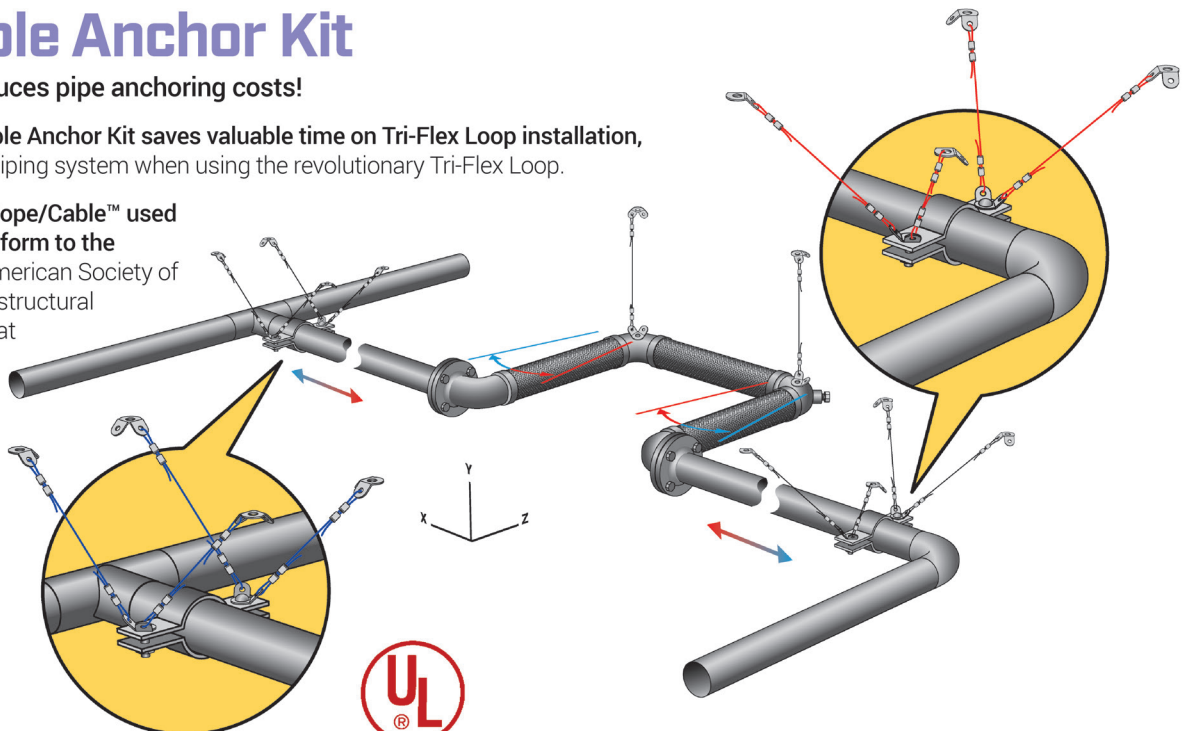
Color coded for Tri-Flex Loop installations of up to 8" diameter

# Factory Cable Anchor Kit

It's simple, reliable & it reduces pipe anchoring costs!

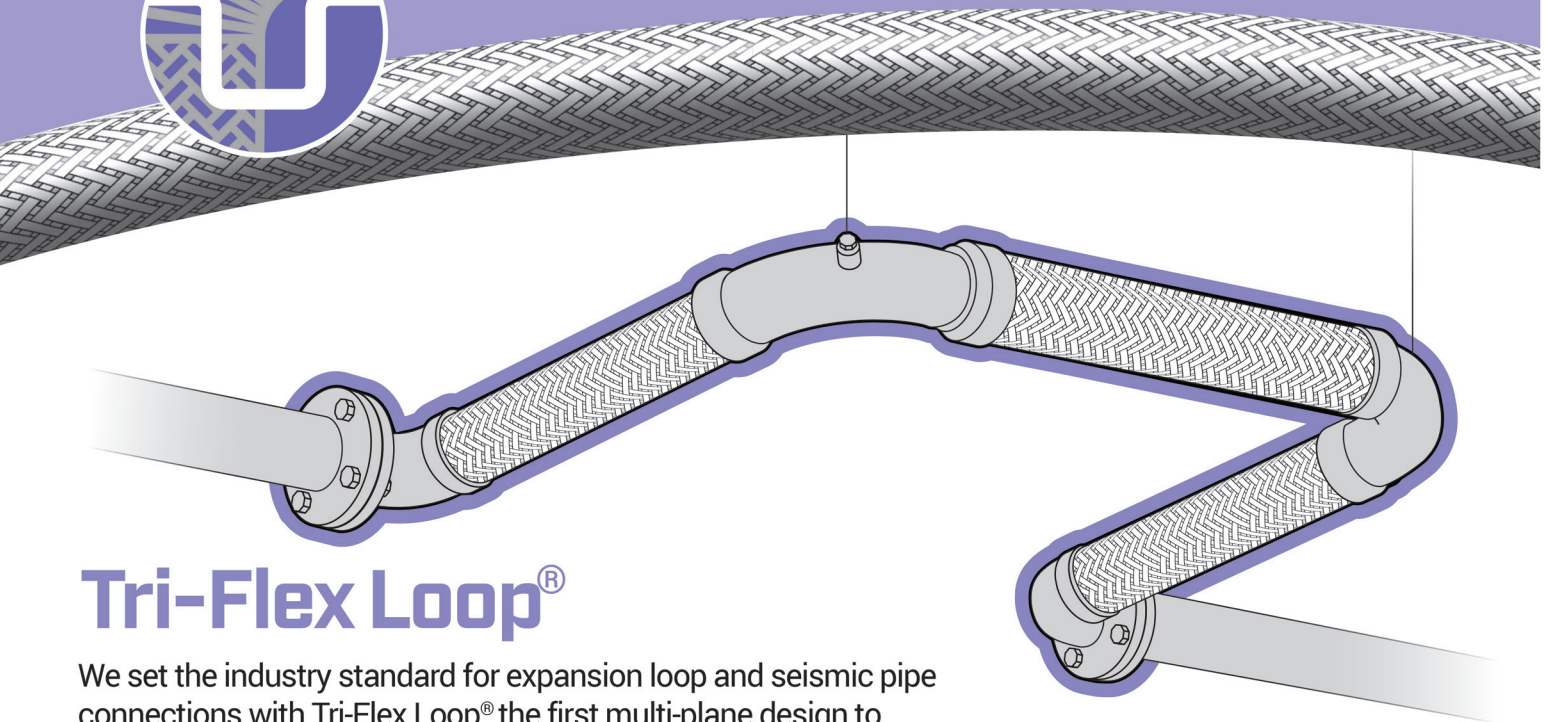
The Tri-Flex Loop Factory Cable Anchor Kit saves valuable time on Tri-Flex Loop installation, making it easy to anchor the piping system when using the revolutionary Tri-Flex Loop.

The UL Listed Seismic Wire Rope/Cable™ used in our hanger assemblies conform to the requirements of the ASCE (American Society of Civil Engineers) guidelines for structural applications of wire rope, in that the cable is pre-stretched and the permanent end fittings maintain the break strength of the cable with a safety factor of two.



- Color Coded
- Factory Assembled
- Simply install over pipe & fasten to above structure
- Color Coded
- Pre-stretched
- Breakstrength Certified

\* UL 9P62 Loos



## Tri-Flex Loop®

We set the industry standard for expansion loop and seismic pipe connections with Tri-Flex Loop® the first multi-plane design to reduce expansion devices in a piping system by 50%.

**The Tri-Flex Loop's superior design is the only flexible pipe loop that absorbs and compensates pipe movement in six degrees of freedom.** (three coordinates axes, plus rotation about those axes simultaneously.)

The multiplane movement design can reduce expansion devices required in a piping system by up to 50%. It is the safest and most reliable means of absorbing movement resulting from thermal changes and random seismic shifts in a piping system.

### Simplifies Piping Design

The Tri-Flex Loop does not impose pressure thrust on the piping system. The braid is designed to take the stress of pressurization containing the core, reducing anchor loads by 93% compared to mechanical pipe loops and 98% less than expansion joints.

Tri-Flex Loops also eliminate pipe guides required by traditional pipe designs such as mechanical pipe loops or expansion joints.

### Compact Design increases useable space and reduces system cost

The Tri-Flex Loop uses 64% less space than a mechanical pipe loop, and eliminates six welds. Fewer fittings and welds can be achieved in the piping system by positioning the Tri-Flex Loop at directional changes and rotating one of the Tri-Flex elbows during manufacturing to incorporate directional change, eliminating 90° elbow in the field. It can also be designed to incorporate elevation changes in the piping system, saving space, fewer fittings and welds.

### Applications

Flex-Hose Co.'s UL536 listed Tri-Flex Loop and seismic connectors are approved for compressed and combustible gases. Other common applications for the Tri-Flex Loop include steam, condenser water, hot water, domestic hot water and chilled water.

Tri-Flex Loop makes a world of difference in your critical piping connections. They are designed to handle working pressures up to 1325 psi, or full vacuum and operating temperatures of -400°F to 1500°F.

Tri-Flex Loops are manufactured with 321 (ASTM A240) grade stainless steel or bronze (ASTM C51000) grade annular corrugated close pitch metal flexible hose.

Tri-Flex Loops are available with flanged ends, steel male NPT ends, weld ends, grooved ends, copper female sweat, or press fit ends.

### Passing the Test!

The Tri-Flex Loop's superior capabilities for withstanding large and irregular movements caused by seismic activities in a piping system were proven by independent, third party testing at The New York State Center for Advanced Technology (CAT) at Rensselaer Polytechnic Institute.

The Tri-Flex Loop's unique design of three flexible sections allow it to compensate pipe movement in six degrees of freedom (three coordinates axes, plus rotation about those axes simultaneously). It is the safest and most reliable means of absorbing movement resulting from random seismic shift.

The Tri-Flex Loop is capable of accommodating seismic displacements for vertical piping between floors of the building, where pipes pass through or bridge building seismic joints or building expansion joints. They are also used for horizontal piping across building seismic and building expansion joints to accommodate the resultant of the drifts of each building unit, or where rigidly supported pipes connect to equipment mounted on vibration isolators.

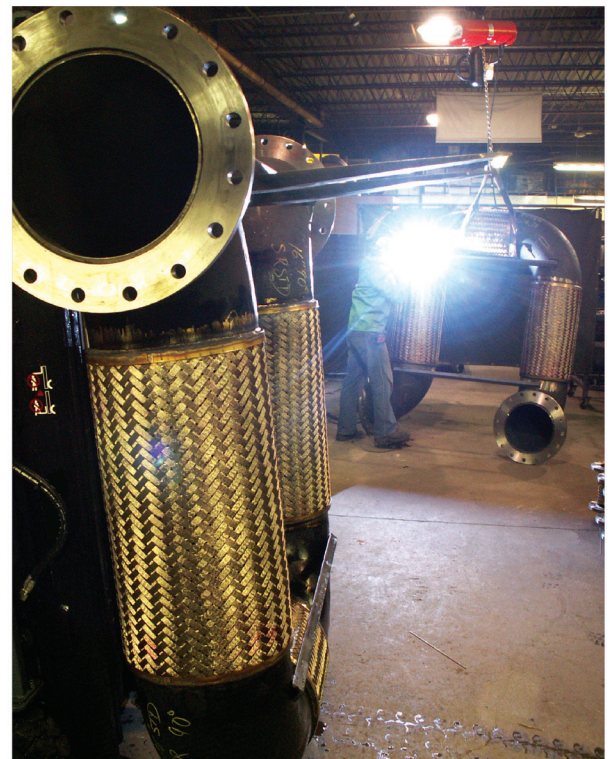
### Quality Assurance... Precision Manufacturing

Tri-Flex Loop units are pressure tested prior to release for shipment and have a five (5) year product replacement warranty.

Tri-Flex Loops are UL Listed, CSA Certified and FM Approved and our manufacturing utilizes state-of-the-art welding

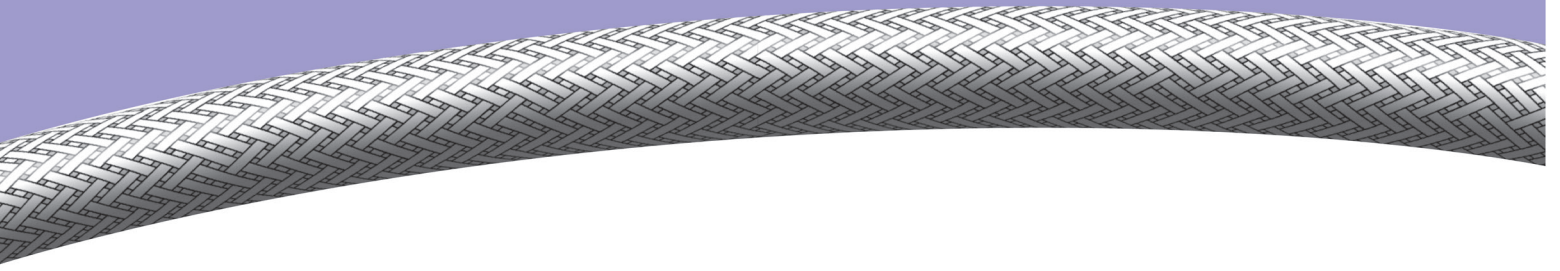
technology. Flex-Hose Co. welders are ASME (American Society of Mechanical Engineers) Section IX certified.

Tri-Flex Loops are 100% dye penetrant tested at the seal welds. The seal weld joins the hose, braid, and collar. It is one of the most critical welds in the manufacturing process.



**Standard Sizes 1/2" to 12" I.D.  
Custom sizes available to 30" I.D.  
Other alloys and custom styles available.  
Please consult factory.**





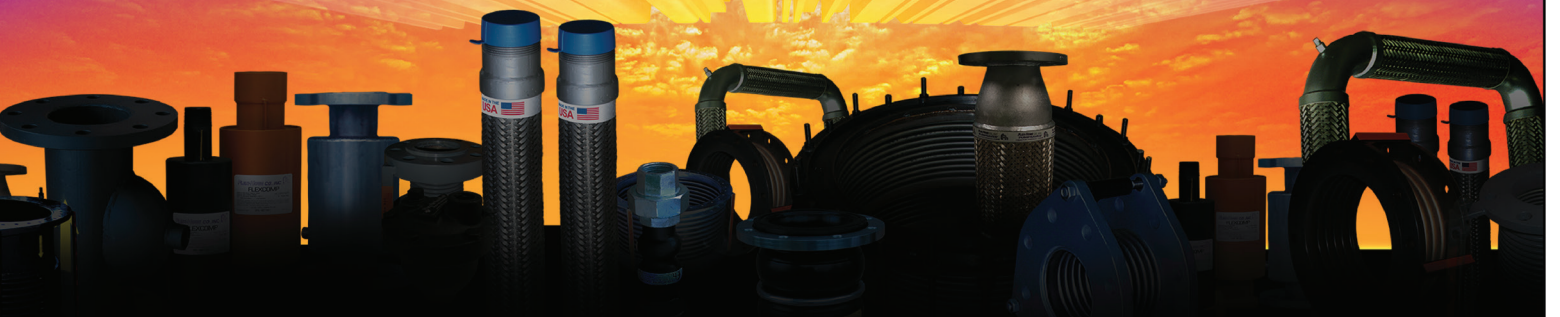
*A world of difference in critical piping connections since 1968.™*

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**A WORLD OF DIFFERENCE IN...**



*...Critical Piping Connections*

*...American Manufacturing*

*...Quality 3rd Party Listings*

*...Engineering & Design Services*

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