COLTON INDUSTRIES

ISO 9001:2000 CERTIFIED

Installation, Operating & Maintenance Instructions

PCSS Series Braided Corrugated Stainless Steel Flex Connectors

Introduction:

The Colton PCSS Series of flexible metal pipe connectors (flexible metal hose) are a relatively inexpensive part of your piping system. Fabricated of thin-wall corrugated tubing, they cannot take as much abuse as the pipe. The connectors are designed to do a specific job and will give you excellent service if they are installed correctly.

Warning:

Piping systems can be dangerous - safety precautions must be observed. Before removing your connector from service, make sure that it has been isolated, the pressure released and, where necessary, the fluid between the isolation valves has been drained to an acceptable receptacle.

Installation:

Handle the braided assembly in such a manner as to protect the outer braid from damage. The braid covering is the PRESSURE controlling component of the assembly and must be kept intact during both handling and installation.

Install using the proper tools for the job. If wrenches are used, be sure they are not used on the braided section or the braid collar. Do not apply torsion to the assembly and if necessary, in the case of a long connector, support it during installation to prevent an excessive bend radius caused by its own weight.

Do not create sharp bends. If there is a bend, do not install if the bend is not as close to the center as possible. Do not install if a minimum of 2” of straight hose length is not present at each end of the connector.

Install the connector using the length of the assembly as designed for the application. Do not attempt to stretch or compress the connector during installation.

Ensure your piping is properly guided and anchored to prevent torsion or motion that is not perpendicular to the connector centerline. The inlet/outlet nipples or flanges must always be perfectly perpendicular to the axis of the connector.

If the piping meets at an angle, install a connector with a shallow curve along its entire length leaving a straight section (at least 2” of corrugation) at each end. This kind of installation will usually require a longer than standard length connector.

Note:

This fitting is NOT AN EXPANSION JOINT and it is NOT AN EXPANSION COMPENSATOR.
Although a connector can withstand a small amount of expansion amd/or contraction, it is not meant to take the place of an expansion joint or an expansion compensator. A flexible connector is usually selected to compensate for vibration, motion and/or noise reduction and can be considered for applications of misalignment, pressure stress and limited amounts of thermal expansion or contraction.

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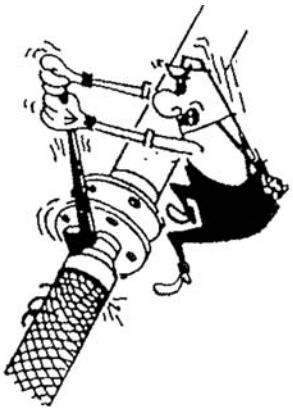
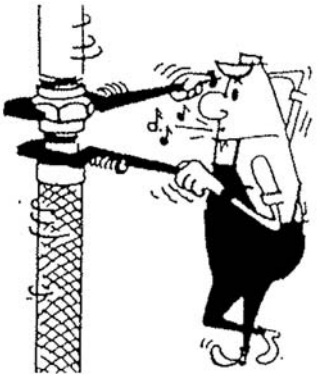
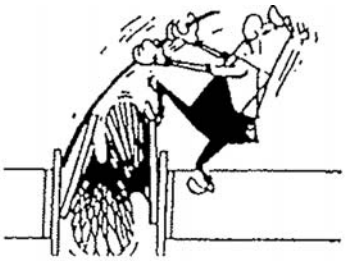
INSTALLATION HINTS

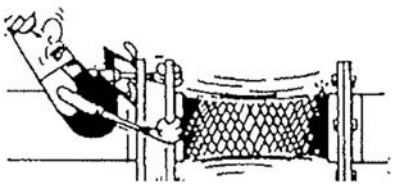


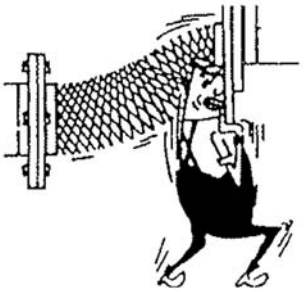
Don't impose torque or force rotate one end of the connector. This sets up residual torque stress in the connector which causes cracking of the corrugations or the fitting weld. On threaded connectors, use two wrenches to prevent torque stressing the connector and be sure to use the fitting end of the connector, do not apply to the braid collar.



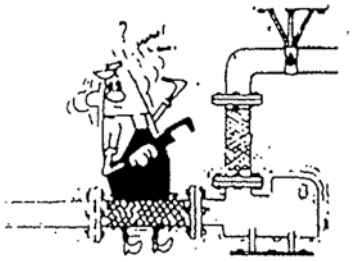


Don't compress or stretch a connector to make it fit. Compression stresses the corrugated element, slackens the braid pressure restrainer, reduces further compressive movement and generally results in early failure. Stretching places excessive stresses on the braid and braid collar and can result in early rupture.

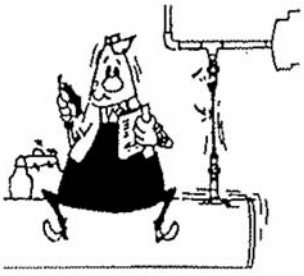




Don't force the connector into too much lateral offset as this puts it under extreme strain and in this position it cannot handle any other movement. And do not sharply bend the connector near the pipe end. The flange or fitting end must always remain perpendicular to the axis. If the piping meets at an angle, install the connector with a shallow curve along its entire length leaving a small straight section at each end.



Anchor the piping close to the connector at the end opposite to the source of the vibration. Failure to anchor in such a manner will result in transmission and possible amplification of the vibration through the piping. Use hangars on all adjacent piping; do not let the connector support any weight except its own. The light wall is designed to contain internal pressure, not carry external loads.



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