



TWIN CITY HOSE INC.

Install Hints for Metal Hose

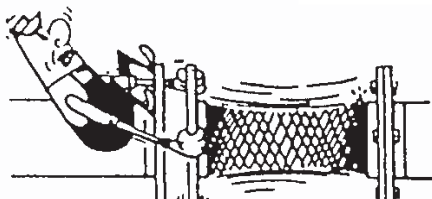
A flexible metal pipe connector (or flexible metal hose) is a relatively expensive part of your piping system. Fabricated of thin-wall tubing, it cannot take as much abuse as pipe of the same nominal diameter. The connectors are designed to do a specific job, and will give you excellent service if they are installed properly. Carelessness and lack of foresight have proven costly in many jobs. **Install it correctly, if you want it to work correctly.**

Don't COMPRESS a flexible connector to make it fit! Installing it under compression stresses corrugated element, slackens braid pressure-restrainer, reduces further compressive movement, and generally results in early failure.

DO be sure to install it at exact normal free length as supplied. If connector is too long, shorten piping.

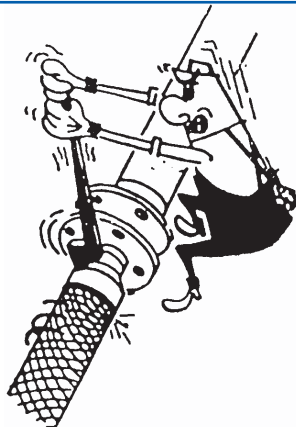


Don't STRETCH connector to fit a gap longer than its factory-furnished length. Stretching places excessive residual stresses on braid and fittings. Result? Early rupture.

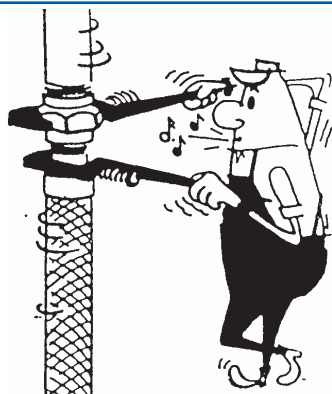


DO measure carefully to be sure connecting pipe is cut to exact length.

Don't FORCE-ROTATE one end of connector to match bolt holes in mating flange. This sets up residual torque-stress in connector, which causes cracking of corrugations or fitting joint. A flexible connector absorbs vibration, or slow movement perpendicular to its axis. It is NOT capable of withstanding torque.



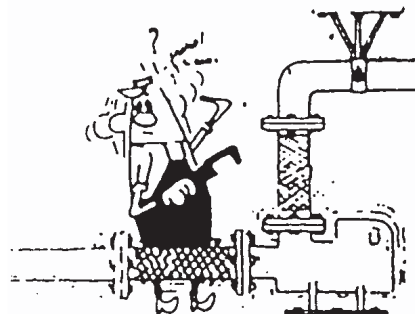
DO be sure all bolt holes are perfectly lined up before welding pipe flange into place. Best insurance is use of one floating flange, to ease matching of bolt holes.



Don't IMPOSE TORQUE on connector when making up fittings and don't use a wrench on the ferrule or on the braid. Where a hex end is provided, use it. If not, use the wrench on the fitting length provided. Always use two wrenches, to keep the hose from being torqued as the joint is made up.

Don't let welding sparks hit the braid; they may burn some of the braid stands. Protect braid with asbestos cloth or place other non-flammable material in front of it when piping must be welded very close nearby.

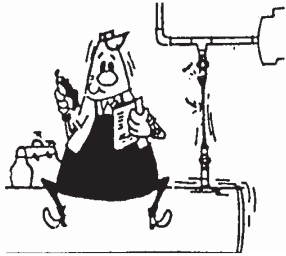
Don't DON'T FAIL TO ANCHOR. Anchor piping close to flexible connector, at end opposite source of vibration. If not, hose will transmit all vibration to pipe line, it may even amplify it. Anchor flexible metal hose at the piping end, never at the equipment end. If hose is not securely anchored, it will transmit all vibration to the piping system. Not only that, it will often act like a spring and actually amplify the vibrations. Whenever possible, install flexible connector to pump, compressor, or other vibrating equipment- before valves, pipe line, fittings so that most vibration is absorbed and isolated instead of being transmitted.





Install Hints for Metal Hose

Don't BEND HOSE sharply near fittings. Fitting end or flange face must always remain perfectly perpendicular to axis of hose. If piping meets at an angle, install hose with a shallow curve along its entire length, leaving small straight section at each end. This kind of installation generally requires a longer hose. Consult Twin City Hose.

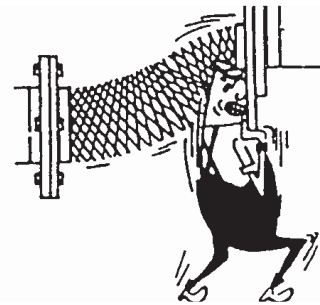


Don't LET HOSE support any weight except its own. Its light wall was designed to contain internal pressure, but not to carry external loads. Extra weight will stress and stretch it.

DO use hangers on all adjacent piping. Install hangers before installing hose, to be certain weight of pipe is on hangers.

Don't FORCE HOSE into too much lateral offset. This puts it under great strain. Also, it cannot then handle any movement of any kind. Avoid excessive force.

DO check with TCH literature and do not exceed maximum permissible offset. For large offsets, we can furnish factory pre-bent units.



Installation Checklist

You will get best results with flexible pipe connectors if you answer these questions before ordering:

1. Pipe size and material of pipeline and equipment?
2. Specify liquid or gas conveyed?
3. Working pressure (if known). Minimum? Normal working? Maximum? Static? Pulsating? Shock?
4. What kind of valve in the line closest to the connector? (Permits hose manufacture to determine if there may be sudden closing or openings which may cause water hammer or shock waves.)
5. Temperature (if known)? Minimum? Working? Maximum? Ambient?
Will maximum pressure and temperature occur at same time?
6. Any special space limitations?
7. How much vibration anticipated? Amplitude, cycles, frequency?
8. Will equipment be mounted on vibration-isolating mounts?
9. How much pipeline thermal growth? (If known, furnish a rough piping schematic, plus temperature fluctuations.)
10. Which types of end fittings are preferred?