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## **Installation of CSI Flexible Metal Jumpovers**

### **Notes**

- The hose component of CSI Flexible Jumpovers is a thin-walled pressure containing device specifically formed to offer superior cycle life. However, this cycle life can be adversely impacted by improper installation. Practices that should be avoided include:
  - Using puncturing type tools (ie, nails, screwdrivers) near the hose braid,
  - Clamping pipe wrenches or vice grips on the braid or braid sleeve, and
  - Torquing or twisting the hose during installation
- Please refer to Figure 1 during the Installation Procedure.

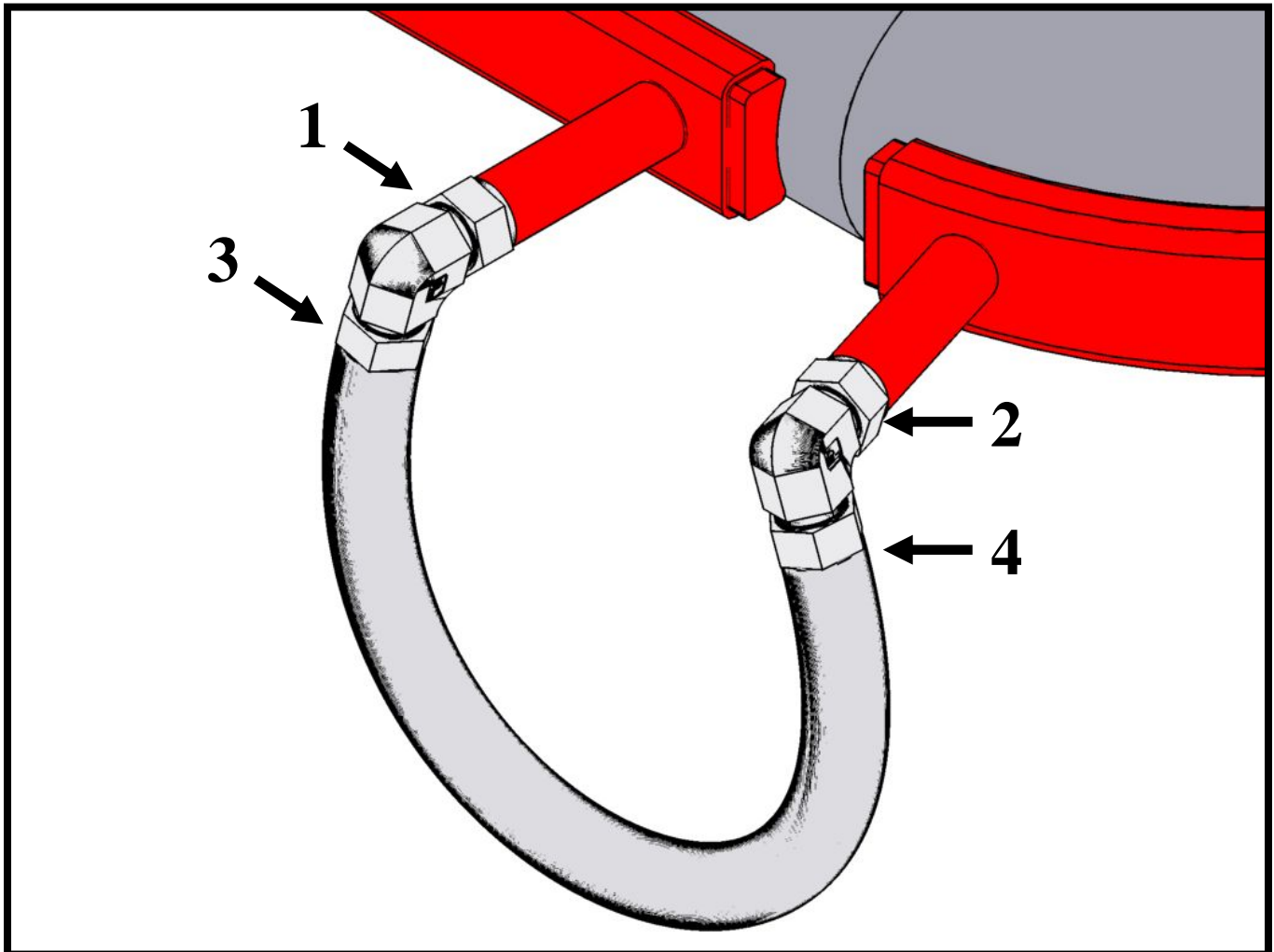
### **Installation Procedure**

- Hold the jumpover between couplings to check for proper length. Do not permanently deform jumpover to assure fit. If it appears the jumpover is too short, check to see if the right hose is being used per the installation drawing. (Each hose configuration has a unique label which is indicated on the installation drawing.)
- If the ControTrace or ControHeat connections are couplings, the jumpover will be supplied with an adapter on each end (MJIC X MNPT). Remove the adapter and install it into the coupling being sure to use the appropriate site-allowed sealant (ie, Teflon tape, pipe dope). If the ControTrace or ControHeat connections are JOE fittings, no adapter is required.
- The jumpover will feature two nuts on each end as shown in Figure 1. Each nut should be loose to allow free movement of the hose end prior to installation.
- Connect the 90° ends (1 & 2) to the ControTrace JIC fitting and tighten just enough to obtain thread engagement.
- Connect the hose ends (3 & 4) to the JIC fitting and tighten just enough to obtain thread engagement.
- Using a backing wrench on the elbow, fully tighten the 90° (1 & 2) to ControTrace JIC fitting using another wrench.
- Using a backing wrench, fully tighten the swivel nut (3 & 4) using another wrench. The backing wrench should be applied to the fixed hose nut to avoid twisting the hose during tightening.
- JIC connections should be tightened to the following minimum torque values:

Size	Minimum Torque Value (ft-lb)
1/2"	40
3/4"	80
1"	110

- Note: When installed, the hose should form a "U" shape as shown in Figure 1 to allow condensate to freely drain out of the ControTrace. If the hose forms an "n" shape, then condensate will collect in the ControTrace and degrade the heat transfer from the system.*

**Figure 1: Illustration of a Jumpover**



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