

Tubing should be supported in a workman like manner with metallic pipe straps, bands, brackets, hangers or building structural components suitable for the size of piping support intervals are not to exceed those shown in Table 4.3. A proper support is one which is designed to be used as a pipe hanger, does not damage the tubing during installation, and provides full support of the tubing once installed. Plastic zip ties and/or cable ties are not to be used as the primary support for the CSST tubing.

ATTENTION:

WHEN SUPPORTING WARDFlex® YELLOW JACKETED CSST AVOID USING CONDUCTIVE METALLIC SYSTEMS SUCH AS, DUCTING, PIPING, VENTING, AND ELECTRICAL CABLES TO SUPPORT THE PIPING.

WARDFlex® system components shall not be exposed to any acids, bases, salts or other caustic materials. Some chemical compounds have been identified that may aggressively corrode 304 stainless steel. Contact with these chemicals should be absolutely avoided. Any contact should immediately and thoroughly be washed off. The plastic covering is not affected by these compounds and will protect the tubing as long as it is undamaged. Should the plastic covering become damaged, wrapping 2 layers of WARDFlex® self fusing tape around the exposed area will help prevent from exposure to the caustic materials. See the list below of some chemicals to avoid.

CHEMICALS TO AVOID INCLUDE, BUT NOT LIMITED TO:

- Hydrochloric Acid (common name: muriatic or brick wash)
- Zinc Chloride and Ammonium Chloride (soldering flux, pool algaecide)
- Calcium or Sodium Hypochlorite (bleach or pool chemicals)
- Copper Chloride (may be found in fungicides or wood preservatives)
- Ferric Chloride (swimming pool flocculent)
- Phosphoric Acid (scale removers)
- Sodium Chloride (salt water)
- Sulfuric Acid (battery acid)
- Leak detection with chloride-containing compounds found in some common soap (e.g., dishwashing soap) can corrode WARDFlex®. Avoid use of these compounds in connection with WARDFlex®.



Any leak detection solution coming in contact with the WARDFlex® System should have a sulfur and halogen content of less than 10 ppm of each (ASTM E515-05 section 7.4).



4.3.5 MODIFICATION TO EXISTING SYSTEM

- A. New Ceilings in Unfinished Rooms/Basements - CSST fittings originally installed in accessible ceiling locations can be concealed in the event a ceiling is installed at a later date.
- B. Extension to Existing Tubing Run - Concealed CSST can be modified to permit an extension to another appliance location provided there is sufficient capacity to supply both applications at the same time. If an accessible location for the modification is not available, the existing tubing run can be modified with a tee fitting, resulting in a concealed fitting.
- C. When any modification to an existing CSST installation leads to concealed tubing, protection devices may be required. Refer to Section 4.4 for details on protection.

4.3.6 OUTDOOR INSTALLATIONS

Per CSA/ANSI LC-1 CSA 6.26 WARDFlex® CSST products are approved for installation where exposure to outdoor environments can occur. The following guidelines shall be followed when installing WARDFlex® outdoors to protect tubing and fittings from the effects of weather.

- A. The covering shall remain intact as much as practical for the given installation. Any portion of exposed stainless steel shall be wrapped with tape (e.g. PVC, Self Fusing Silicone) or sleeved (e.g. PVC, Polyolefin) to prevent corrosive attack by acid wash or other caustic compounds that may be present. If contact with caustic compounds should occur ensure that all traces are immediately removed to prevent premature corrosion failure.
- B. WARDFlex® mechanical joint fittings shall be protected from the effects of weather when used outdoors. After the connection is made to outdoor equipment the fitting assembly shall be wrapped with tape (e.g. PVC, Self Fusing Silicone) or by applying shrink sleeves (e.g. PVC, Polyolefin) around the entire assembly.
- C. When installed outdoors between grade and six feet above WARDFlex® must be protected inside non-metallic conduit or installed in a location where it will not be subjected to mechanical damage.
- D. When installed in crawl spaces or underneath mobile homes, WARDFlex® shall be installed in accordance with these installation instructions.

4.3.7 FIRE RATED CONSTRUCTION

- A. WARDFlex® have been reviewed for installation through UL Classified fire rated construction and is listed for use in a number of UL Through Penetration Firestop System Listings. See Table 4.6 for a complete listing. System numbers are subject to change and deletion be sure to verify systems in the latest revision of UL Fire Resistance. In the event there is a conflict between this guide and UL, UL takes precedence.

TYPICAL INSTALLATIONS

