

HOME-FLEX®

Installation Practices & Guidelines

- HOME-FLEX Corrugated Stainless Steel Tubing (CSST) flexible gas piping material must be installed by a Qualified Installer who has been certified in the use of HOME-FLEX or VPC Alpha-FLEX gas piping systems. Certification can be completed by reading the HOME-FLEX System Design and Installation Manual and registering with VPC to obtain a Qualified Installer Card by either mailing in the registration card at the back of the manual, or filling out the online form at home-flex.com. In submitting either the printed or online registration, you are asserting that you understand all aspects of the installation requirements and local plumbing, mechanical, electrical and/or building codes applicable at the locale where HOME-FLEX is to be installed. If you do not understand all aspects of the installation requirements and local codes, locate a Qualified Installer in your area who does. You must presently possess, or attain prior to installing, a Qualified Installer Card to install HOME-FLEX CSST.
- Only components provided or specified by VPC as part of the piping system are to be used in the installation. HOME-FLEX components are interchangeable with Alpha-FLEX components.
- Never use HOME-FLEX flexible gas tubing or system components as a ground electrode or as a grounding path for appliances or electrical systems. HOME-FLEX tubing and system components should never be in contact with electrical appliances or systems.
- HOME-FLEX flexible gas tubing routed in a location which is concealed, constrained and within 3 inches of a potential threat must be protected against damage by protection devices listed in the HOME-FLEX System Design and Installation Manual. Contact with sharp objects or harmful substances should be avoided.
- Tubing shall be protected from puncture threats, using striker plates or other devices as specified in the manual, at all points of penetration through studs, joists, plates, or similar structures. The extent of protection is defined as follows
 - At all points of penetration less than 2 inches (50.8 mm) from any edge of a stud, joist, plate, etc., a striker plate is required to provide protection at the area of support and within 5 inches (127 mm) of each side (if appropriate) of the support.
 - At points of penetration 2 to 3 inches (50.8 to 76.2 mm) from any edge of a stud, joist, plate, etc., no protection is required.
 - Tubing routed horizontally through studs shall be protected from puncture threats between the studs using shielding devices specified.
- The width of the installed striker plate at the points of penetration through wall studs, floor joists, plates, sills, etc., shall be at least 1.5 times the outside diameter of the tubing.
- Open ends of the tubing are to be temporarily plugged or taped closed prior to installation to prevent entrance of dirt, dust, or other debris.
- The protective yellow jacketing should be kept in place as much as possible to protect the tubing from corrosive threats. Contact with chemicals containing chlorides must be followed by a thorough rinse and wipe dry.
- Installation clearance holes for routing HOME-FLEX are to be approximately ½ inch greater than the outer diameter (OD) of the tubing. Drilling of any structural member must be in conformance with the local building codes. Refer to Table A for the recommended drill hole sizing.
- HOME-FLEX shall be supported with non-metallic pipe straps, bands, or hangers suitable for the size and weight of the tubing at intervals not to exceed those shown in Table B. When supporting CSST tubing runs, the use of other conductive metallic systems such as metallic appliance vents, metallic ducting and piping, and electrical cables must be avoided.
- Undue stress and strain on the tubing and fittings should be avoided. Also avoid sharp bends, stretching, kinking, or twisting of the CSST tubing (Table C).
- Sizing of HOME-FLEX CSST must be performed using the capacity tables found in the HOME-FLEX System Design and Installation Manual or online at home-flex.com.
- HOME-FLEX CSST must not be connected directly to moveable appliances. Connections to moveable appliances such as ranges and clothes dryers should be accomplished with a HOME-FLEX Flexible Appliance Connector, or similar device.
- Regulators are suitable for multi-poise mounting. When using a vent limiting device, the regulator must be mounted in a horizontal upright position. For outdoor venting, the vent line must be at least the same size as the vent connection and no longer than 30 feet before upsizing. When mounting a regulator outdoors, remove vent limiting device and position regulator in-vented with open port down.
- A manifold assembly utilizing a pounds-to-inches regulator shall include a shut-off valve ahead of the regulator and be installed in an accessible location so that the regulator can be inspected, maintained, and serviced.
- Buried or embedded tubing: HOME-FLEX shall not be buried directly in the ground or directly embedded in concrete (i.e.: patio slabs, foundations, and walkways). When it is necessary to bury or embed CSST, the tubing shall be routed inside a non-metallic, watertight conduit that has an inside diameter at least ½ inch greater than the OD of the CSST. Conduit installed outdoors shall be sealed at any exposed end to prevent water from entering. No mechanical joint fittings are permitted within the conduit. Note: CSST must be buried in accordance with all local building codes.
- HOME-FLEX flexible gas piping systems must be pressure tested for leaks during rough construction in accordance with all local codes. In the absence of local requirements, test in accordance with Part 4 of the NFPA National Fuel Gas Code, ANSI Z223.1, and/or CSA B149.1. For a 'one-part' pressure-test, the regulator should be removed from the system. For a 'two-part' test, the regulator should be isolated from downstream test pressures.
- Installation alongside of a structure: When installed along the outside of a structure (between the ground and height of 6 ft) in an exposed condition, HOME-FLEX tubing shall be protected from mechanical damage inside a protective hosing, conduit, or chase. A conduit or chase is not required if the tubing is installed in a location where the CSST will not be subject to mechanical damage.
- Direct meter hook-ups: Refer to the installations and illustrations shown in the HOME-FLEX System Design and Installation Manual. CSST shall not be used as a means of support for the gas meter. Also check with your local code official or authority having jurisdiction on meter hook-ups. Some restrictions may apply. Local code requirements will always take precedence.
- Manual gas valves listed as complying with IAS US Requirement 3-88 and/or CR910 and not listed as complying with ASME B 16.33 and/or CGA 3.11 shall not be installed outdoors.
- Where it is necessary to install HOME-FLEX through sheet metal enclosures (such as fireplaces), the tubing shall be routed or supported to prevent physical contact with the enclosure. If direct contact cannot be avoided, the CSST tubing must be protected by rubber grommets, bushings, HOME-FLEX Flexible Protective Conduit, PVC tape, thermal contraction sleeve material, or minimum of four wraps of 10mil duct tape, to ensure that no physical contact will be made between the metal and CSST tubing that could cause mechanical wear.
- In accordance with the NFPA 54 Section 7, VPC requires proper bonding of the HOME-FLEX gas piping system to the structure's electrical grounding system. This must be performed by a qualified person recognized by the local jurisdiction as capable of performing such work. These requirements are for all HOME-FLEX CSST installations.

Table A

Recommended Routing Holes for Installation of HOME-FLEX Tubing	
Tubing Size	Horizontal Support Spacing
1/2 in (13mm)	6 ft
3/4 in (19 mm)	8 ft (USA)
1 in (25 mm)	6ft (CAN)

Table B

Recommended Horizontal and Vertical Support Spacing		
Tubing Size	Horizontal Support Spacing	Vertical Support Spacing
1/2 in (13mm)	6 ft	10 ft
3/4 in (19 mm)	8 ft (USA)	
1 in (25 mm)	6ft (CAN)	

Table C

Recommended Minimum Bend Radius		
Tubing Size	Absolute Min. Bend Radius	Recommended Min. Bend Radius
1/2 in (13mm)	1 1/4 in (32 mm)	3 in (75 mm)
3/4 in (19 mm)	1 5/8 in (42 mm)	
1 in (25 mm)	2 in (51 mm)	5 in (125 mm)

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