CSST Gas Pipe Installation Requirements

BB-19

RESIDENTIAL BULLETIN

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In the City of Ellensburg all Corrugated Stainless Steel Tubing (CSST) gas piping systems shall be installed in accordance with the terms of their approval, the conditions of listing, the manufacturer's instructions and the most current edition of the International Fuel Gas Code (IFGC 404.2) and the requirements of the most current edition of the Uniform Plumbing Code and National Fuel Gas Code (ANSI Z223.1/NFPA 54).

- The installation shall conform to the manufacturer's specifications for bending tolerances, vertical and horizontal supports, striker plates, proper fittings & piping, properly sized piping, wall penetrations have been properly sealed and other requirements as prescribed by the manufacturer.

Installation instructions must be on site at time of inspection.
The CSST installer shall provide the inspector with the CSST manufacturer's installation instructions.

1. All CSST shall be listed in accordance with *ANSI LC 1/CSA 6.26 (IFGC 403.5.4). This listing states that the installation instructions shall contain "A warning to the installer that the installation instructions shall be followed as prescribed by the manufacturer."*

The CSST installer shall be trained and certified for the installation of the CSST system.
Installers shall show inspector certification card. Certification card must be on site at time of inspection (Exception: Certification may be provided to the City Building Department prior to inspection to be kept on file)

Fittings <u>are not</u> interchangeable between different manufacturers of CSST.
CSST fittings and components are part of the CSST piping system and shall be as specified by the manufacturer.

Concealed tubing shall be protected from puncture threats, using the shielding devices specified by the manufacturer, at all points of penetration through studs, joists, plates or similar structures (Fig. 4).
The extent of the protection shall be as follows (*ANSI LC 1/CSA 6.26)*.

1. At points of penetration less than 2 inches from any edge of a stud, joist, plate, etc., a listed striker plate is required to provide protection at the area of support and within 5 inches of each side (if appropriate) of the support. (Fig. 1, Fig. 2, Fig. 3).

Figure 1

Figure 2

Figure 3

Figure 4

2. At points of penetration 2 to 3 inches from any edge of a stud, joist, plate, etc., a listed ¼ striker plate is required to provide protection throughout the area of support.
3. At points of penetration greater than 3 inches from any edge of a stud, joist, plate, etc., no protection is required.
4. Tubing routed horizontally through studs shall be protected from puncture threats between the studs using the shielding devices provided (i.e. clearances, stud spacing, striker plates & floppy Steel Conduit as specified by the manufacturer) (Fig. 2).
5. CSST greater than 1 inch inside diameter installed within hollow cavity walls of 2 x 4 construction shall be protected along the entire concealed run length with Steel Conduit.
6. The width of the installed striker plate, at the points of penetration through wall studs, floor joists, plates, sills, etc., shall be out at least 1.5 times the outside diameter of the tubing.
7. At termination points not covered by the ANSI standard, flexible steel conduit (heavy wall) shall be installed as additional protection and extend a minimum of 6" (Fig 6.). If the termination is less than 36" from where the tubing passes through a stud, joist, plate, etc., then the entire length of the tubing requires the flexible steel conduit protection (Fig. 5).

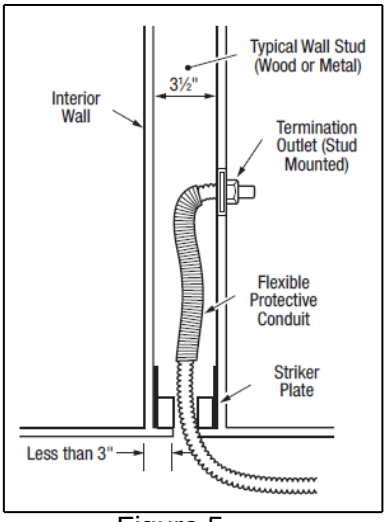

Figure 5

Exception: The City of Ellensburg will allow non-manufacturer supplied striker plates provided that the steel shield plates shall be a minimum of 0.0575 (No. 16 gage) steel and a minimum dimension as required by the manufacturer for protection (IFGC 404.7)


Figure 6

CSST <u>shall not</u> be connected directly to log lighters, ranges, dryers, or other gas utilization appliances. CSST must terminate with a fitting flange with no kinks, and be protected from physical damage 5" each side of stud.

Inspection and pressure test required of the piping system at rough-in prior to cover. The whole house gas test shall be at the meter location (Minimum 10 lbs for min. of 10 minutes residential).

Underground beneath buildings: CSST is not listed for direct burial and shall not be located in solid floors unless in a code approved channel or conduit. See the International Fuel Gas Code for specific code requirements (IFGC 404.8).

Bonding: Corrugated stainless steel tubing (CSST) gas piping systems and piping systems containing one or more segments of CSST shall be bonded to the electrical service grounding electrode system or, where provided, the lightning protection grounding electrode system.

- The bonding jumper shall connect to a metallic pipe, pipe fitting or CSST fitting.
- The bonding jumper shall not be smaller than 6 AWG copper wire or equivalent.
- The length of the bonding jumper between the connection to a gas piping system and the connection to a grounding electrode system shall not exceed 75 feet. Any additional grounding electrodes used shall be bonded to the electrical service grounding electrode system or, where provided, the lightning protection grounding electrode system.
- Bonding connections shall be in accordance with NFPA 70.
- Devices used for making the bonding connections shall be listed in accordance with UL 476.