

OMEGAFLEX®, INC. *TracPipe*® Flexible Gas Piping Specification Sheet

Specification date _____

Project Name: _____

Model Number(s) - FGP-SS4-2000 FGP-SS4-1500 FGP-SS4-1250
FGP-SS4-1000 FGP-SS4-750 FGP-SS4-500 FGP-SS4-375

A. Standards & Certifications

All flexible gas piping system components must be:

A.1 CSA International Certified Corrugated Stainless Steel Tubing (CSST) Flexible Gas Piping with Mechanical Attachment **AutoFlare**® Fittings that conform to the latest ANSI standards for safe performance ANSI/CSA LC-1.

A.2 Underwriters Laboratories Classification Listed for Thru Penetration Fire Stop Requirements Ratings to include one, two and four hour tests.

A.3 Listed with FM (Factory Mutual) requirements for Flammable Gas Piping Systems.

B. Stainless Steel Tubing

B.1 Tubing shall be made from 300 series Stainless Steel Strip conforming to ASTM A240.

B.2 Tubing shall not be subjected to heat treating or annealing after the corrugation forming operation.

B.3 Tubing shall be suitable for operation with Natural Gas and LP Gas (Propane).

B.4 Tubing is rated for 5-PSI and 25-PSI.

B.5 Tubing must have elevated pressure ratings of 125G for sizes up to 1-1/4 inches and 25G for 1 -1/2 and 2-inch sizes for high-pressure applications permitted by the Local Distribution Utility. These elevated pressure ratings shall be demonstrated by test reports from the certification agency.

C. Plastic Jacket

C.1 The jacket shall be extruded from fire-retarded Polyethylene.

C.2 Chlorinated plastics such as PVC are not permitted.

C.3 ASTM E-84 flame spread rating shall not exceed 25.

C.4 ASTM E-84 smoke density rating shall not exceed 50.

C.5 Polyethylene is to be resistant to UV.

D. **AutoFlare** Mechanical Attachment Fittings

D.1 Fittings shall be made from yellow brass.

D.2 Fittings shall be equipped with a stainless steel insert to pilot on the tubing ID and provide a reliable flaring operation.

D.3 AutoFlare fittings are tested and listed by CSA International for concealed use where required.

D.4 AutoFlare fittings are available in straight, straight reducer, tee, reducer tee and coupling configurations.

D.5 Fittings shall provide a metal-to-metal seal (no gaskets)

E. Protective Devices

E.1 Striker Plates

E.1 A Striker plates shall be listed as part of the OMEGAFLEX, INC. TracPipe system and shall be marked with the symbol of the Manufacturer (OMEGAFLEX, INC.) and the listing Agency (CSA International).

E. 1 B Striker plates shall be made from carbon steel, heat-treated to RB40.

E. 1 C Striker Plates are available in Quarter, Half, Three Quarter, Full and 6 X 17 Configurations.

E.2 Floppy Conduit

E.2 A Floppy conduit used for additional protection with striker plates (type RW electrical conduit) is to be made from galvanized steel.

F. Accessories

F.1 Termination Mount Fittings are to be used to provide a secure termination for the tubing at moveable appliance locations and other "stub-out" points depending on building construction. Termination mount accessories consist of a plated carbon steel plate or brass mounting flange and an AutoFlare fitting. Fittings at termination mounts must be accessible and provide a fitting joint exterior to the building floor or wall.

F.2 Meter Termination Fittings may be used for exterior wall penetrations at meter locations and other penetrations such as roof top units. Meter termination consists of a plated carbon steel mounting plate and sleeve and an AutoFlare fitting. Fittings at meter termination outlets must be accessible and provide a fitting joint exterior to the building.

F.3 Manifolds are made from malleable iron either plastic-coated or uncoated. Manifolds may be mounted using available manifold brackets or Gas Load Centers; they may alternatively be mounted using conventional pipe mounting methods.

F.4 Pounds-to-inches line pressure regulators are available in several sizes

- REG 3: ½ inch threads,

- REG 5A: ¾ inch threads and

- REG 7: 1-1/4 inch threads.

- Regulators with Over Pressure Devices (OPD) are required for pressures above 2 psi.

Regulators shall be listed per ANSI Z21.80 or a recognized national standard for pressure regulators. Regulators must be mounted in an accessible location.

F.4.1 Regulators with included approved vent-limiting device (REG 3 and REG 5A) do not require venting to atmosphere provided they are mounted in a ventilated location (e.g. near a gas appliance which also requires placement in a ventilated area). Ventilated locations include (but are not limited to) mechanical rooms, attics, garages, and basements.

F.4.2 Approved vent limiters limit the fuel gas leakage to 2.5 cc per hour in the event of a diaphragm failure.

F.5 Shut-off valves must be approved for fuel gas service and must be rated for the pressure of the gas piping system installed. For elevated pressure sections an approved valve must be located upstream from the pounds-to-inches regulator.

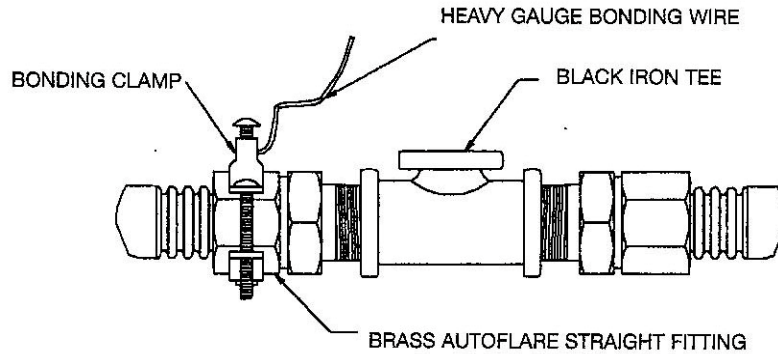
F.6 Overpressure protection devices must be installed for elevated systems higher than 2-PSI to prevent downstream pressure from exceeding 2-PSI in the event of regulator failure.

G. Electrical Bonding/Grounding

G.1 The TracPipe flexible gas piping system must be bonded to an effective ground-fault current path per NFPA 70 and NFPA 54 in accordance with the instructions contained in this section.

G.2 For bonding of the conventional yellow-jacketed *TracPipe*® system, a bonding clamp must be attached to the brass AutoFlare® fitting adapter (adjacent to the pipe thread area –see Figure below) or to a black pipe component (pipe or fitting) located in the same electrically continuous gas piping system as the AutoFlare® fitting. The corrugated stainless steel portion of the gas piping system SHALL NOT be used as the bonding attachment point under any circumstances. The bonding conductor shall be bonded per the *National Electrical Code* NFPA 70. Bonding electrode conductor sizing shall be in accordance with NFPA 70 Article 250, Section and Table 250.66.

G3. For bonding of CounterStrike with enhanced lightning protection, see **Section I** below.



BRASS BONDING CLAMPS

Part No.	Fits <i>TracPipe</i> ® AutoFlare® Fitting	Fits Iron Pipe Size
FGP-GC-1	3/8", 1/2"	1/2", 3/4", 1"
FGP-GC-2	3/4", 1", 1-1/4"	1-1/4", 1-1/2", 2"
FGP-GC-3	1-1/2", 2"	2-1/2", 3", 4"

H. Underground and Under Building Slab Installations

TracPipe PS-II

Model Number(s) - FGP-UGP-375 FGP-UGP-500 FGP-UGP-750
 FGP-UGP-100 FGP-UGP-125 FGP-UGP-150 FGP-UGP-200

H.1 CSST underground and under building slab installations shall be made using pre-sleeved TracPipePS-II system or other sleeve configurations meeting code requirements and acceptable to the local administrative authority.

H.2 Underground piping shall consist of CSST sleeved with a black integral polyethylene sleeve. The external polyethylene sleeve shall be designed to withstand the superimposed loads. The external protective sleeve shall have internal vent channels lengthwise to direct any leakage along the pipe to the end fittings. Fittings shall consist of AutoFlare fittings with a plastic containment coupling and ¼" NPT vent port, to provide venting as required.

H.3 For gas piping under building slabs, Plumbing, Mechanical and Fuel Gas Code requirements shall be followed for encasement within a conduit and venting to the atmosphere. The construction of the pre-sleeved system shall provide the encasement and venting capabilities required by the codes.

H.4 Underground fittings may be used with TracPipe PS-II system. All metallic parts of the buried fittings shall be wrapped in a code-approved manner (e.g. mastic used for wrapping metallic pipe). Underground fittings are not permitted under the slab of a building.

Superimposed Loading Chart

TracPipe PS/PS-II Size	3/8	1/2	3/4	1	1- 1/4	1-1/2	2
Max. Superimposed Loading <i>psf</i>	9640	7254	5409	4203	3390	2901	2124

Notes: 1. Super-imposed loading includes all dead load and live load combinations.
 2. Maximum buried depth of 36" : 3. Soil Density : 120 pcf: 4. Factor of safety used: 4.

CounterStrike®

Model Number(s) FGP-CS-375 FGP-CS-500 FGP-CS-750
 FGP-CS-100 FGP-CS-125 FGP-CS-150 FGP-CS-200

I.1 Primary protection from nearby lightning strikes for all metallic systems within a building is recommended to be provided by proper grounding of the electrical system and equipotential bonding of all metallic systems including the gas piping system. Grounding and bonding shall be in accordance with the National Electrical Code NFPA 70 and the National Fuel Gas Code NFPA 54.

I.2 The installation of a lightning protection system per NFPA 780 is recommended in areas prone to a high level of lightning strikes to protect the building in the event of a direct strike.

I.3 CounterStrike shall consist of TracPipe stainless steel pressure liner and an engineered polymer jacket. The jacket shall be designed to enhance the energy dissipating properties of the flexible gas piping. CounterStrike shall be tested by a recognized lightning laboratory.

I.4 There are no additional bonding requirements for CounterStrike imposed by the manufacturer's installation instructions. Improved CounterStrike is to be bonded in accordance with the National Electrical Code NFPA 70 Article 250.104 and the National Fuel Gas Code NFPA 54, and any local requirements which may be in excess of the national codes.

I.5 Wherever possible, TracPipe and CounterStrike CSST runs should be installed with a bend radius of 8 inches or more.

I.6 For additional protection, TracPipe PS-II may be used for the trunk line running from the meter to a central location within the building.