

# Commercial Food Service Gas Connectors

Stainless Steel Braided for durability, PVC coated for sanitation, and 360° rotational fittings for free movement.

## Certifications & Approvals

- ANSI Z21.69 / CSA 6.16 Connectors for Movable Gas Appliances
- A restraining device is required for all moveable gas equipment.





# Applications

- Movable Caster-Mounted Gas Appliances
- Stationary Gas Appliances
- Stationary Countertop Gas Appliances

### Benefits

- Stainless Steel Braided Construction
- PVC Coated
- 360° rotation at both ends







#### Materials

Tubing	Stainless Steel 304(ASTM A240)			
Braid	Stainless Steel 304(ASTM A240)			
Coating	Yellow or Black PVC			
Fitting	Zinc-Plated Steel S45C			

### FC STEEL Food Service Gas Connector

FC STEEL moveable grade gas connector is composed of a 301 stainless steel corrugated tube covered with a tight weave stainless steel braid. The outside hose coating is an antimicrobial PVC coating that inhibits growth of bacteria, mold and mildew on the connector. Rotational technology fittings on both ends of the connector rotate 360 degrees, greatly reducing stress at both connector ends.

#### FC STEEL Countertop Gas Connector

This countertop connector is composed of a 304 stainless steel corrugated tube covered with a tight weave stainless steel braid. The outside hose coating is a antimicrobial PVC coating that inhibits growth of bacteria, mold and mildew on the connector.

### FC STEEL Commercial Stationary Gas Connector

This durable, corrosion-resistant stainless steel non-moveable gas connector is designed with safety in mind and is a CSA approved gas connector. It is composed of a 304 stainless steel corrugated tube and coated with an antimicrobial PVC coating that inhibits growth of bacteria, mold and mildew on the connector. This connector is designed for the connection of high BTU gas cooking appliances used in restaurants.

#### Pressure-Temperature

Rated Operating Temperature	-40°F to 150°F (-40°C to 65°C)			
Rated Pressure	0.5 psi			

# **Food Service**

#### Specifications

- CSST Tubing : Stainless Steel 304 (ASTM A 240)
- Fittings : Zinc-Plated steel S45C
- Braid : Stainless Steel 304 (ASTM A 240)
- Coating : Yellow PVC, Coating will not hold a flame
- Max. operating pressure 1/2 psi.
- For indoor use only.

#### **Certifications & Approvals**

ANSI Z 21.69/ CSA 6.16 Connectors for Movable Gas Appliances A Restraining device is required for all moveable gas equipment.

### Countertop

#### Specifications

- CSST Tubing : Stainless Steel 304 (ASTM A 240)
- Fittings : Zinc-Plated steel S45C
- Braid : Stainless Steel 304 (ASTM A 240)
- Coating : Yellow PVC

#### **Certifications & Approvals**

ANSI Z 21.24/ CSA 6.10 ANSI Z 21.75/ CSA 6.27



ับร

#### Connector Minimum Flow Capacity

Straight Length Capacity (BTU/Hr., 0.64 SpGr., 1,000 BTU per cubic ft. at 0.5" W.C. pressure drop)

	Series	ID	OD	12"	18"	24"	30"	36"	48"	60"	72"
	014	1/4"	3/8"	48,000	43,800	40,000	36,400	33,400	28,300	24,900	23,100
-	038	3/8"	1/2"	102,000	93,100	85,000	77,100	71,100	60,500	53,200	49,100
	012	1/2"	5/8"	180,000	164,200	150,000	136,000	125,000	106,000	93,200	86,000
	034	3/4"	1"	290,900	290,900	290,900	270,500	255,900	215,900	197,400	173,900

The above flow capacities are the minimum performance requirement per ANSI Z 21.24/ CSA 6.10 and ANSI Z 21.75/ CSA 6.27. FC STEEL Gas Connectors exceed these minimum flow capacities requirements.

### Stationary

#### Specifications

- CSST Tubing : Stainless Steel 304 (ASTM A 240)
- Fittings : Zinc-Plated steel S45C
- Coating : Black PVC

#### **Certifications & Approvals**

ANSI Z 21.24/ CSA 6.10 ANSI Z 21.75/ CSA 6.27



#### **Connector Minimum Flow Capacity**

Straight Length Capacity (BTU/Hr., 0.64 SpGr., 1,000 BTU per cubic ft. at 0.5" W.C. pressure drop)

Series	ID	OD	12"	18"	24"	30"	36"	48"	60"	72"
012	1/2"	5/8"	180,000	164,200	150,000	136,000	125,000	106,000	93,200	86,000
034	3/4"	1"	-	-	290,900	270,500	255,900	215,900	197,400	173,900
010	1"	1/4"	-	-	581,800	545,200	515,900	442,700	398,900	347,300

The above flow capacities are the minimum performance requirement **FC STEEL** Gas Connectors exceed these minimum flow capacities requirements.

# Food Service Gas Connector Installation Guide

Please read the following instruction carefully. Failure to fully read, comply, and follow the cautions may results in severe injury or death.

#### ▲ CAUTIONS AND WARNINGS

•The installation MUST BE compliant with the National Fuel Gas Code (ANSI Z223.1) and local gas installation codes.

- Installation and testing MUST BE performed by qualified personnel. Make sure that the gas supply and all the appliance gas valves are shut off before connecting to the gas supply.
- Gas outlet shall be in same room as appliance and the connector must not be concealed within or run through any wall, floor, or partition. Gas connections shall not be in contact with surfaces of temperatures in excess of 110°C (230°F), sharp edges or wiring.
- The final assembly must be tested for leaks after installation. Open flame or any sources of ignition must not be used for the testing. Leak test solutions may cause corrosion and <u>WATER RINSE AFTER TESTING</u>. To check leakage on the gas supply piping system, see National Fuel Gas Code Z223.1, NFPA 54 or CSA B149.1, Natural Gas and Propane Gas Instal lation Code. If odor of gas is detected, turn off the gas to the appliance and have a qualified professional fix the source of the leak.
- <u>STRONG CLEANING SOLUTIONS OR CHEMICAL SUBSTANCES MUST NOT COME IN CONTACT WITH THE CONNECTOR</u>. These may include acids, solvents, fluxes with zinc chloride, or other chlorinated chemicals. In case of contact, rinse down the connector with water and dry thoroughly.
- An accessible manual shut-off valve must be installed at the outlet of the gas supply piping system upstream of the connector.
- · Contact with foreign objects, wiring or substances shall be avoided.
- Avoid movement after installation on fixed appliances.
- Bending and flexing of connectors on moveable appliances (e.g. those factory equipped with casters) should be limited to pulling and pushing the appliance in or out for cleaning or maintenance.
- Connectors are for use only on piping systems having fuel gas pressure not in excess of 1/2 psi (3.5 kPa). Flexible connections are suitable for use with 1st, 2nd and 3rd family gases only on piping systems operating at a pressure not exceeding 50 mbar.
- DO NOT REUSE FOR ANOTHER APPLIANCE OR AT ANOTHER LOCATION. In addition to the main gas supply shut-off valve, an approved accessible manual gas shut-off valve MUST BE installed upstream of the gas connector (within 6 feet of the equipment it serves). Each piece of equipment must have its own shut-off valve.
- DO NOT USE the quick-disconnect coupling is as the primary gas shut off.
- The quick disconnect <u>MUST BE INSTALLED</u> so that the gas enters the coupling half and exits the nipple half. You must follow the flow direction arrows that are permanently marked on the coupling.
- <u>NEVER INSERT</u> screwdrivers, probes, etc. into the quick disconnect coupling. The valve seat can be damaged or forced off center.
- The connector shall not be kinked, twisted, or torqued when installed.
- Make sure that all fittings are tightened properly. When installing Safety System® connector, two 14 inch adjustable wrenches (minimum size) are recommended as installation tools.
- Adequate means must be provided to limit the movement of castered appliances. A restraining device is <u>REQUIRED</u> for all types of moveable gas appliances.
- When installing an equipment line-up with dual fed front manifold gas inlets, DO NOT use a quick-disconnect coupling.
- Appliance MUST BE disconnected prior to maximum movement. DO NOT OVEREXTEND the gas connector assembly.

# Turn off gas supply.

fuel gas codes require a gas shut-off valve within six feet of the appliance

# 2

Clean all pipe threads with a wire brush and rag to ensure connections are free of any debris such as metal shavings, rust, dirt, oil or water.

# 3.

Warp thread tape staring at outer adge of threads moving in toward hex

thread tape or sealant is applied to the pipe threads. Do not apply sealant on the flared end of fitting or inside connector nut.



▲ Turn off gas supply before disconnecting old appliance. In absence of manual shut-off valve near appliance location, gas MUST be shut off at main valve, near meter.

4. Wrench tighten connectior

If necessary, thread new manual shutoff valve onto gas supply pipe, wrench tighten.

# 5

Thread flare nuts of gas connector onto shut-off valve and steel fitting. Wrench tighten all connections.

# 6

Connect Restraining Cable and test for any leak before use.



Required System Parts

Qty. 1 : Commercial gas connector kit.

#### **Required tool**

• Wrenches

• Pipe dope or gas pipe thread tape

Leak detection solution

# INSTALLATION INSTRUCTION