

# Diaphragm Type Gas Meter Installation Instructions

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These instructions are suggested when Itron-approved utility or installer company-established meter installation procedures and practices are not available.



**Warning** Itron does not endorse or warrant the completeness or accuracy of any third party meter installation procedures or practices, unless otherwise provided in writing by Itron. Follow your company's standard operating procedures regarding the use of personal protection equipment (PPE). Adhere to guidelines issued by your company in addition to those given in this document when installing meters.

Meter installation must comply with all federal, state, local building and safety regulations including Section 192.353 of Title 49 of the Code of Federal Regulations. The two pertinent paragraphs of Title Code 49 are:

1. Each meter and service regulator, whether inside or outside of a building must be in a readily accessible location and be protected from corrosion and other damage.
2. Each meter installed within a building must be located in a ventilated place and not less than 3 feet from any source of ignition or any source of heat which might damage the meter.

*The use of a meters outside of the temperature range from -30° to 120°F is not recommended. Meters accurately register flow in only one direction. The flow direction is marked on the meter casting with the word INLET. If you have questions regarding the selection and application of diaphragm type gas meters, contact your local Itron sales representative or Itron, Owenton, KY.*



**Warning** This product, as of the date of manufacture, is designed and tested to conform to all governmental and industry safety standards as they may apply to the manufacturer. The purchaser/user of this product must comply with all fire control, building codes, and other safety regulations governing the application, installation, operation, and general use of this meter to avoid leaking gas hazards resulting from improper installation, startup or use of this product.

To ensure safe and efficient operation of this product, Itron strongly recommends installation by a qualified professional.

## Before Start-Up

Read the meter badge data regarding maximum allowable operating pressure (MAOP) and capacity flow rate to be sure the meter meets installation requirements.

Sight (look) across both swivel flanges, or test with a suitable bar, to verify the swivel flanges are (nominally) in the same plane and will not cause excessive strain on the meter when the connection nuts are tightened.

### **To install a meter**

1. Before installation, blow out the service lines so no dirt, debris, or liquids of any kind are carried into the meter when the gas is flowing in the line.
2. Place a new connection washer (gasket) on each swivel pilot.
3. Support the meter so both hubs are against the connection washers. Hand-tighten the connection nuts.
4. In alternating fashion, tighten the connection nuts to an appropriate torque for the connection size.

### **To start-up a meter**

1. Before turning the gas on in a new installation, check the meter's downstream system to verify all connections are leak free. If a downstream valve is present, close the valve.
2. Avoid high differential pressure across the meter by opening the upstream and downstream valves very slowly. Slowly opening the valves prevents any pressure surges into or out of the meter.

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**Warning** Check the system for inadvertent and dangerous gas leaks. Avoid high differential pressure across the meter. Abnormal differential pressures can damage the meter's internal components.

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3. Crack each valve for a few seconds. Slowly, over a period of ten seconds (for ¼ psig systems) or more (for high pressure meters), turn each valve to the ¼ open position and then to the full open position.

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**Tip** Itron recommends installers pressurize the meter with the inlet valve so the meter runs forward.

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**Warning** If the outlet valve from the meter is opened first, locked off gas in a downstream section of a high pressure system could damage a meter with a Reverse Stop.

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4. After the meter is pressurized, check for leaks by applying a soap solution or other good leak detecting liquid to the connections.

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