Section 4 – Gas Metering

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4-1 Clearance to Gas Meters

<table>
<thead>
<tr>
<th>Object</th>
<th>Minimum Radial Distance from Regulator Vent</th>
<th>Desired Radial Distance from Regulator Vent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source of Ignition</td>
<td>3'</td>
<td>10'</td>
</tr>
<tr>
<td>Operable Windows and Doors</td>
<td>3'</td>
<td>10'</td>
</tr>
<tr>
<td>Sealed Combustion Intakes for Gas Appliances</td>
<td>3'</td>
<td>10'</td>
</tr>
<tr>
<td>All Other Intakes</td>
<td>3'</td>
<td>10'</td>
</tr>
<tr>
<td>Exhaust Vents</td>
<td>3' clearance required. Additionally, the meter assembly shall not be located directly below an exhaust vent that has potential to produce condensation and freeze up the regulator vent</td>
<td></td>
</tr>
</tbody>
</table>

1: 3' MINIMUM CLEARANCE ALSO APPLIES TO AREA IN FRONT OF METER
2: WINDOWS THAT CANNOT BE OPENED ARE EXEMPT FROM CLEARANCE REQUIREMENTS
3: THESE ITEMS MEET THE DESIRED CLEARANCE
4: THESE ITEMS MEET THE MINIMUM CLEARANCE REQUIREMENTS, BUT NOT THE DESIRED CLEARANCE
5: EXHAUST VENTS SHALL NOT BE LOCATED DIRECTLY ABOVE THE GAS METER SET IN ADDITION TO 3' MINIMUM CLEARANCE
6: TELEPHONE AND CABLE BOXES ARE NOT SOURCES OF ILLUMINATION
7: NO PART OF THE GAS METER ASSEMBLY SHOULD BE WITHIN A 30" WORKING SPACE IN FRONT OF THE ELECTRIC METER
4-2 Meter Size Dimensions

RESIDENTIAL METER
(UP TO 250 CFH)

Notes:

1. Customer piping must be electrically bonded per the National Electrical Code. See subsection 6-3 in the Web version of the manual.
2. The fuel run must be wrapped thru the wall. A double wrap of electrical tape is acceptable.
3. If flexible CSST tubing is used for fuel piping, additional meter support must be added. The use of steel pipe at the outlet of the meter bar and through the wall is recommended for this purpose.
4. For protection from vehicles, see subsection 4-3.
5. For protection from ice and snow, see subsection 4-6.
4-2  Meter Size Dimensions (Cont'd)

Notes:

1. Customer piping must be electrically bonded per the National Electrical Code. See subsection 6-3 in the Web version of the manual.
2. The fuel run must be wrapped thru the wall. A double wrap of electrical tape is acceptable.
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4-2 Meter Size Dimensions (Cont’d)

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1. Customer piping must be electrically bonded per the National Electrical Code. See subsection 6-3 in the Web version of the manual.
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5. For protection from ice and snow, see subsection 4-6.
4-2  Meter Size Dimensions (Cont’d)

COMMERCIAL / INDUSTRIAL
(2,200 – 16,000 SCFH)

Notes:
1. Raised-Face flange connection.
2. Flange size varies depending on customer load and metering pressure.
3. Connection to either top or bottom flange is acceptable.
4. For protection from vehicles, see subsection 4-3.
5. For protection from ice and snow, see subsection 4-6.
4-3 Meter Protection from Vehicles

Suggested Vehicular Protection for Meters and Regulators

Damage to a gas meter or piping can cause a potentially dangerous situation and result in serious injury or damage. It is the responsibility of the customer to provide a safe location for new gas meters and regulators.

It is preferred to avoid locations where vehicles could accidentally run into the gas meter and piping. If this is not possible, meter protection is usually needed to prevent accidental collision with the gas facilities. The customer, the building inspector, or the Company can determine if meter set protection is needed.

Suggested protection includes 4” or larger steel posts or a 6” concrete curb. The customer can choose to install either post(s) or a curb, or the Company can install posts for a fee. Company-installed protection will typically consist of one or more posts or protectors as shown in the pictures below.

Please call the Company for assistance if you have or think you may have a potentially dangerous meter location.

Notes:

1. The drawings above are typical post layouts for areas where protection is needed.
2. When installing the posts, use good judgment in areas such as alleys, driveways, walkways, etc.
3. Guidelines for Post Installation:
   a. Always call Diggers’ Hotline at 1-800-242-8511 prior to making any excavations.
   b. Posts shall not be driven.
   c. Posts should be level and plumb with other posts.
   d. Posts should be buried to a depth of 30” and should extend 36” above the ground.
   e. Tamped granular material shall be used around post or use approximately one foot of concrete or Speed-Crete and fill the balance of the hole with tamped granular material.
   f. Fill the post with sand or gravel and cap off with concrete.
4-4 Mobile Home Installation

Notes:

1. Gas meters are typically installed approximately 3-4 feet from the edge of the mobile home stand.
2. An approved mobile home connector is required to connect the meter set to the rigid piping that passes through the mobile home skirt. The connector must not pass through the skirting.
3. Furnaces and water heaters must have name plate stating: "Approved for mobile or manufactured home installation." The Company cannot provide gas to a water heater or furnace if not listed for installation in a mobile home.
4. Flexible CSST has not been approved as an acceptable joining material to a meter set on a mobile home, as governed by HUD.
5. For a full list of requirements related to mobile home piping installation reference NFPA 501A or contact an HVAC dealer.
4-5 Underground Fuel Runs

The state of Wisconsin has adopted two separate codes that govern customer piping systems.

The Wisconsin Uniform Dwelling Code has adopted the National Fuel Gas Code for residential-type customers. (Chapter SPS 323.16)

The Wisconsin Commercial Building Code has adopted International Fuel Gas Code. (Chapter SPS 361.05)

Both Gas Code books provide a complete list of requirements associated with underground fuel runs; including materials, methods of construction, how to enter a building, corrosion control, depth of cover, etc.

Plastic is not allowed aboveground and CSST is not approved for direct bury.

Shown below is a typical plastic underground fuel run.

**Approved Plastic Installation**
4-6 Meter Protection from Snow and Ice

The customer is responsible to provide a safe location for the gas and electric meters to protect them from damage.

A snow and ice shield is mandatory on the pitched side of metal buildings (provided by the customer). A shield is highly recommended for other areas. The company will determine if protection is required for gas meters, as required by code (DOT 192).

A typical snow and ice protective shield is shown below, but other methods may be used per the guidelines listed in the notes below the picture.

Notes:

1. The shield must be constructed to handle the force of falling ice/snow from a given height.
2. A metal shield should be constructed, primed, and painted with a minimum of 10 gauge metal.
3. The protective shield does not have to be constructed using metal, but must be constructed using good engineering and construction practices to complete #1 above.