Propane System Installation Guide

Table of Contents

1. Types of Propane Containers
2. Separation Requirements for Propane (LP Gas) Containers
3. Tank Installation Worksheet
4. Propane Consumer Profile

1. Types of Propane Containers

**DOT Portable Cylinders:**
DOT portable cylinders are those types of containers usually sized for 100 pound propane capacity and less and manufactured to the specifications of the U.S. Dept. of Transportation. These cylinders are not filled on site at the customers home but at a propane distribution plant and then transported and installed at the customers home. When the cylinder is empty it is returned to the propane plant for inspection and refilling.

**DOT Stationary Cylinders:**
DOT stationary cylinders are those types of containers usually sized from 200 to 420 pounds propane capacity and manufactured to the specifications of the U.S. Dept. of Transportation. These cylinders are filled on site at the customers home from a bulk delivery truck. These cylinders must be inspected and refilled at the customers home.

**ASME Aboveground Tanks:**
ASME aboveground tanks are usually sized 120 to 1,000 gallon water capacity, and manufactured to the specifications of the American Society of Mechanical Engineers. These tanks are considered stationary tanks and are installed aboveground on masonry foundations or blocks and filled on site at the customers home from a bulk delivery truck.

**ASME Underground Tanks:**
ASME underground tanks are usually sized 500 or 1,000 gallon water capacity and manufactured to the specifications of the American Society of Mechanical Engineers. These tanks are considered stationary tanks and are installed underground and filled on site at the customers home from a bulk delivery truck.

2. Separation Requirements for Propane Containers

The following figures are provided for informational reference purposes only. The figures are copies of those printed in “The LP-Gas Code”, NFPA 58, 2004 edition, Annex I. **Actual requirements for the spacing of propane containers will be specified and approved by the federal, state and local codes and regulations and the local Authority Having Jurisdiction for the location where the propane container is to be installed and/or utilized.**

Annex I contains Figures I.1 (a) through (c), which illustrate the separation distance required for the installation of LP-Gas containers up to 2000 gallons. The figures incorporate the distances required in Section 6.3 and Table 6.3.1 of the code. Because Table 6.3.1 is the most used item in the code, the need for clarity and unambiguous implementation of the table is of great importance. Figures I.1 (a) through (c) make it much easier for all users to properly apply Section 6.3 and Table 6.3.1.
Cylinder - Spacing

Notes:
1: 5 Ft minimum from relief valve in any direction away from any exterior source of ignition, openings into direct-vent appliances, or mechanical ventilation air intakes. Refer to 6.3.7.
2: If the cylinder is filled on site from a bulk truck, the filling connection and vent valve must be at least 10 ft from any exterior source of ignition, openings into direct-vent appliances, or mechanical ventilation air intakes.
3: Refer to 6.3.7.

NFPA 58, 2004 Edition, Annex I, Figure I.1(a)
Cylinders

(This figure for illustrative purposes only; local approved codes, regulations and the Authority Having Jurisdiction shall govern)
Aboveground ASME Tanks - Spacing

Notes:
1: Regardless of its size, any ASME container filled on site must be located so that the filling connection and fixed maximum liquid level gauge are at least 10 ft from any external source of ignition (e.g., open flame, window A/C, compressor), intake to direct-vented gas appliances, or intake to a mechanical ventilation system. Refer to 6.3.9.
2: Refer to 6.3.9.
3: This distance may be reduced to no less than 10 ft for a single container of 1200 gallon water capacity or less, provided such container is at least 25 ft from any other LP-Gas container of more than 125 gallons water capacity. Refer to 6.3.3.

NFPA 58, 2004 Edition, Annex I, Figure I.1(b)
Aboveground ASME Containers

(This figure for illustrative purposes only; local approved codes, regulations and the Authority Having Jurisdiction shall govern)
Notes:
1: The relief valve, filling connection, and liquid fixed maximum level gauge vent connection at the container must be at least 10 ft from any exterior source of ignition, openings into direct-vent appliances, or mechanical ventilation air intakes. Refer to 6.3.4.
2: No part of an underground container shall be less than 10 ft from an important building or line of adjoining property that can be built upon. Refer to 6.3.4.

NFPA 58, 2004 Edition, Annex I, Figure I.1(c)
Underground ASME Containers

(This figure for illustrative purposes only; local approved codes, regulations and the Authority Having Jurisdiction shall govern)
## A. CUSTOMER INFORMATION

1. Name: _____________________________
2. Address: ___________________________
   ___________________________________
3. City: ___________________ Zip_________
4. Type of Installation: ________________
5. Work Order No. ______________________

## B. TANK INFORMATION

1. Tank: UG____ AG____ Quantity_______
2. Water Capacity: _____________________
3. Serial No: __________________________

## C. LOCATION

1. Distance to Important Bldg:_________
2. Distance to Property Line: ___________
3. Distance to Sources of Ignition: ______
4. Distance to Stored Combustibles:_______
5. Distance to Flammable Liquids:_________

## D. SPECIAL CONSIDERATIONS

1. Septic Tank: ________________________
2. Underground Utilities: _______________
3. Drainage: ___________________________
4. Security Fence: ______________________
5. Soft Ground: ________________________
6. Access to Tank: _____________________

## E. SPECIAL NOTES

_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
Propane Consumer Profile

Customer Name: ___________________________________________________________________________

Mailing Address: _________________________________________ City __________________ Zip ________
Installation Address: ______________________________________ City __________________ Zip ________

Home Phone: ____________________ Work Phone: ____________________ Cell: ____________________

Owner Name: _____________________________________________________________________________
Address: _____________________________________________ City ________________Zip _____________

Home Phone: ____________________ Work Phone: ____________________ Cell: ____________________

Contractor/Builder Name: __________________________________________________________________
Address: ______________________________________________ City _________________ Zip __________

Home Phone: ____________________ Work Phone: ____________________ Cell: ____________________

Residential Installation:

1) Will indoor gas appliances be used year-round?   Yes ______ No ______
2) Will outdoor gas appliances be used year-round?   Yes ______ No ______
3) Does customer entertain large groups during cold weather?  Yes ______ No ______
4) Is Propane container accessible by all-weather and adequate access Roads capable of handling bobtail trucks?    Yes ______ No ______
5) Does customer want propane container concealed?   Yes ______ No ______
   Landscaping _____    Underground _____     Screening _____
6) Is location altitude in excess of 2,000 feet above sea level?  Yes ______ No ______
7) Is location access limited by steep grades and/or periodic snow and ice or other severe circumstances?    Yes ______ No ______
8) If critical service factors apply, mark Yes and describe them:  Yes ______ No ______
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

Load Profile: _____ Moderate Seasonal Load
 _____ High Load Demand in Severe Weather
 _____ High Altitude
 _____ Container Access Limited in Severe Weather
 _____ Critical Service Factors Apply

Profile Completed By: _____________________________________________________________________

Date: _________________________________
### Residential Customer Gas Appliance Listing

Check all that apply & fill in the Appliance Nameplate Ratings in **MAXIMUM BTU INPUTS**:

<table>
<thead>
<tr>
<th>Indoor Gas Appliances MAX BTUH/CFH</th>
<th>Outdoor Gas Appliances MAX BTUH/CFH</th>
</tr>
</thead>
<tbody>
<tr>
<td>_______Furnace # 1 ____________________</td>
<td>_______Pool Heater #1 ____________________</td>
</tr>
<tr>
<td>_______Furnace # 2 ____________________</td>
<td>_______Spa Heater ____________________</td>
</tr>
<tr>
<td>_______Furnace # 3 ____________________</td>
<td>_______BBQ Grill #1 ____________________</td>
</tr>
<tr>
<td>_______Boiler # 1 ____________________</td>
<td>_______BBQ Grill #2 ____________________</td>
</tr>
<tr>
<td>_______Fireplace # 1 ____________________</td>
<td>_______Infrared Heater #1 ____________________</td>
</tr>
<tr>
<td>_______Fireplace # 2 ____________________</td>
<td>_______Infrared Heater #2 ____________________</td>
</tr>
<tr>
<td>_______Fireplace # 3 ____________________</td>
<td>_______Infrared Heater #3 ____________________</td>
</tr>
<tr>
<td>_______Water Heater #1 ____________________</td>
<td>_______Fireplace #1 ____________________</td>
</tr>
<tr>
<td>_______Water Heater #2 ____________________</td>
<td>_______Fireplace #2 ____________________</td>
</tr>
<tr>
<td>_______Water Heater #3 ____________________</td>
<td>_______Fireplace #3 ____________________</td>
</tr>
<tr>
<td>_______Clothes Dryer #1 ____________________</td>
<td>_______Gaslight #1 ____________________</td>
</tr>
<tr>
<td>_______Range/Oven ____________________</td>
<td>_______Gaslight #2 ____________________</td>
</tr>
<tr>
<td>_______Cook Top ____________________</td>
<td>_______Gaslight #3 ____________________</td>
</tr>
<tr>
<td>_______Other ____________________</td>
<td>_______Generator ____________________</td>
</tr>
</tbody>
</table>

**Total Maximum Indoor Load:** ____________  **Total Maximum Outdoor Load:** ____________

**Total Maximum Distribution System Load:** (Indoor + Outdoor Loads) = ____________

**Total Effective Container Load:**

**Effective Load Factor:** ____ X Max Total System Load = ____________

**Notes:**

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________