# ASME Storage Containers 

## Determining Propane Vaporization Capacity <br> "Rule of Thumb" Guide for <br> ASME LP-GAS Storage Containers

$\mathbf{D}=$ Outside diameter in inches $\mathbf{L}=$ Overall length in inches
$\mathbf{K}=$ constant for percent volume of liquid in container.

| Percentage of <br> Container Filled | K <br> Equals | Propane Vaporization Capacity <br> at 0 $\boldsymbol{\text { F }}$ (in BTU/hr.) |
| :--- | :--- | :---: |
| 60 | 100 | D X L X 100 |
| 50 | 90 | D X L X 90 |
| 40 | 80 | D X L X 80 |
| 30 | 70 | D X L X 70 |
| 20 | 60 | D X L X 60 |
| 10 | 45 | D X L X 45 |

*These formulae allow for the temperature of the liquid to refrigerate to $-20^{\text {? }}$
(below zero), producing a temperature differential of $20{ }^{?}$ for the transfer of heat from the air to the container's "wetted" surface and then into liquid. The vapor space area of the vessel is not considered. Its effect is negligible.

## Vaporizing Capacities For Other Air Temperatures

Multiply the results obtained with the above formulae by one of the following factors for the prevailing air temperature.

| Prevailing Air <br> Temperature | Multiplier | Prevailing Air <br> Temperature | Multiplier |
| :--- | :--- | :--- | :--- |
| $-15^{?} \mathrm{~F}$ | 0.25 | $+5^{?} \mathrm{~F}$ |  |
| $-10^{?} \mathrm{~F}$ | 0.50 | $+10^{?} \mathrm{~F}$ | 1.25 |
| $-5^{?} \mathrm{~F}$ | 0.75 | $+15^{?} \mathrm{~F}$ | 1.50 |
| $0^{?} \mathrm{~F}$ | 1.00 | $+20^{?} \mathrm{~F}$ | 1.75 |

