The innovative Perma-Cyl® 7000 MicroBulk Storage System is the latest addition to the Perma-Cyl product line of fast-fill onsite MicroBulk storage vessels. Designed for configuration to any LIN, LAR or LOX gas or liquid application, the Perma-Cyl 7000 MicroBulk tank is available with a standard VHP maximum allowable working pressure. It is engineered to supply up to 10,000 SCFH for short periods of time to satisfy the most demanding gas applications. With our industry-exclusive configure to order plumbing (offered in LP, MP, HP and VHP operating pressures), you can build your own Perma-Cyl 7000 MicroBulk tank to meet your business plan and your customer’s requirements.

The Perma-Cyl 7000 MicroBulk tank comes with many of the standard Perma-Cyl features including the FlexFill™ Piping and dual safety tree. Additionally, this model comes with a standard dual-fin external PB vaporizer and an optional side-mounted vaporizer rated at 4000 SCFH. This package optimizes the platform for high capacity/high flow applications.

When filled with the Orca™ MicroBulk Delivery System, the Perma-Cyl 7000 MicroBulk tank is designed for a safe automatic shut-off with no filling losses under normal operating conditions. The Perma-Cyl series is designed to store liquefied gas contents for long periods of time without venting, limiting product losses during periods with little or no use.

**Product Highlights**

- Fast, accurate fills
  - Automatic fill shut-off works with Orca delivery system
  - FlexFill™ top and bottom fill piping standard
  - Large fill piping provides up to 70 GPM fill rate
- WIKA liquid level gauge with connections for telemetry and phase line isolation valves
- Easy to use instruments and controls
  - Located at user height
  - Dual safeties and rupture disc with diverter valve (standard)
  - 1” FPT bottom withdrawal port
  - Bulk 1½” CGA fill fitting
  - Isolation valves for regulator and liquid level gauge
  - Vacuum thermocouple (standard)
- Long life, low maintenance
  - Stainless steel piping, outer top head and bottom plate
  - Heavy-duty galvanized pallet base standard
  - High performance epoxy enamel finish (outer shell)

- Application ready
  - Choice of configurations to meet customer needs
  - Choice of options to meet your requirements
  - On-board high efficiency pressure-builder vaporizer supports up to 10,000 SCFH gas supply for short periods of time with fast pressure recovery
  - Service: LIN, LAR, LOX
  - Easy economical installation
    - Ships upright
    - No crane required
    - Indoors or outdoors (local codes permitting)

**Product Options**

- Cyl-Tel® Digital Liquid Level Gauge
- Isolation valves for remote telemetry
- 4,000 SCFH mounted vaporizer*
- 5,000 SCFH free standing Thermax® vaporizer*
- 10,000 SCFH free standing Thermax® vaporizer*

* Process vaporizers do not come standard. Customer must specify either the 4,000 SCFH hang on style, the 5,000 or 10,000 SCFH stand alone, or the vaporizer can be supplied by the customer. The Perma-Cyl 7000 VHP MicroBulk tank is capable of flowing up to 10,000 SCFH for short periods, 4-5 hours, with a properly sized stand alone vaporizer.
HIGH CAPACITY MICROBULK STORAGE SYSTEM

**CAPACITIES**

<table>
<thead>
<tr>
<th>Perma-Cyl 7000 VHP</th>
<th>Perma-Cyl 7000 VHP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Volume</td>
<td>6965 liters</td>
</tr>
<tr>
<td>Net Volume</td>
<td>6662 liters</td>
</tr>
<tr>
<td>Gas Storage Capacity ( @ 1 Atm &amp; 68° F / 20° C)*</td>
<td></td>
</tr>
<tr>
<td>Oxygen</td>
<td>202,500 scf</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>163,800 scf</td>
</tr>
<tr>
<td>Argon</td>
<td>197,900 scf</td>
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<tr>
<td></td>
<td>5323 Nm³</td>
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<tr>
<td></td>
<td>4306 Nm³</td>
</tr>
<tr>
<td></td>
<td>5202 Nm³</td>
</tr>
</tbody>
</table>

**GENERAL SPECIFICATIONS**

MAWP: 500 psig  34.5 barg

Operating Pressure / Relief Valve Settings: LP, MR, HP & VHP

**PERFORMANCE**

Normal Evaporation Rate (% per day)**

| Nitrogen | .70% |
| Oxygen & Argon | .43% |

Gas Supply Rate (Onboard Vaporizer)***: 4000 SCFH 113 Nm/H

Gas Supply Rate (Standalone Vaporizer): 5000 SCFH 141 Nm/H

Gas Supply Rate (Standalone Vaporizer): 10,000 SCFH 282 Nm/H

**CONSTRUCTION**

Design & Manufacturing Code: ASME Sec. VIII Div. 1

Outer Vessel - Shell: Painted Carbon Steel

Outer Vessel - Head & Plate: Stainless Steel

Vaporizer (Onboard): Aluminum

Footnotes:

Specifications subject to change without prior notice.

*Values are based on net capacity at 0 psig (0 barg). See the inside back cover of the MicroBulk Systems Product Catalog (P/N 11926802) for conversion densities and Chart’s Tank Sizing App.

**Values are based on gross volume.

***Eight hours continuous flow @ 70°F with LN₂, down to 20% contents level with a maximum falloff in tank operating pressure of 15 psig (1 barg), and a minimum exit gas temperature of 6°F.

****Eight hours continuous flow @ 70°F with LN₂, down to 20% contents level with a maximum falloff in tank operating pressure of 30 psig (2 barg).

*****Four hours continuous flow @ 70°F with LN₂, down to 20% contents level with a maximum falloff in tank operating pressure of 30 psig (2 barg).

Photo shows the OPTIONAL 4000 SCFH hang on process vaporizer. (Needs to be specified when ordered.)