## PERMA-CYL. 5500 MP/VHP

HIGH CAPACITY MICROBULK STORAGE SYSTEM

The innovative Perma-Cyl® 5500 MicroBulk Storage System allows for fast fills onsite. Designed for configuration to any LIN, LAR or LOX gas or liquid application, the Perma-Cyl 5500 system comes in MP and VHP operating pressures. Both of these versions are engineered to supply up to 5000 SCFH to satisfy the most demanding gas applications. With our industry-

exclusive configure to order plumbing, you can build your own Perma-Cyl 5500 system to meet your business plan and your customer's requirements.

The Perma-Cyl 5500 system comes with many of the standard Perma-Cyl features including the FlexFillTM Piping Option and the dual safety tree. Additionally, this model comes with a standard dual-fin external PB vaporizer and an optional hang-on vaporizer rated at 4000 SCFH, or dual hang-on vaporizers with up to 6000 SCFH flow capability. This package optimizes the platform for high capacity/high flow applications.

When filled with the Orca<sup>™</sup> MicroBulk Delivery System, the Perma-Cyl 5500 storage system 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 OPTIONS**

- Cyl-Tel gauge with blank face for DataOnline<sup>®</sup> system
- VJ withdrawal valve (½" female bayonet left or right
- orientation, MP model only)\*
- Isolation valves for remote telemetry
- 4000 SCFH mounted vaporizer\*\*
- 5000 SCFH free standing Thermax® vaporizer\*\*
- 6000 SCFH mounted vaporizer\*\* (1)
- \* Built to order option only allow for longer delivery time.
- \*\* Process vaporizers do not come standard. Customer must specify either the 4000/6000 SCFH hang on style, the 5000 SCFH stand alone, or the vaporizer can be supplied by the customer.

(1) VHP Only



Perma-Cyl 5500 MP Model with VJ withdrawal valve left orientation



## **PRODUCT ADVANTAGES**

- Fast, accurate fills
  - Automatic fill shut-off works with Orca delivery system
  - FlexFill<sup>™</sup> top and bottom fill piping standard
  - Large fill piping provides up to 70 GPM fill rate
  - Bulk 11/2" CGA fill fitting
- Cyl-Tel® or WIKA Liquid Level Gauge
  - Digital and accurate
  - Built-in user-selectable scales
  - Telemetry ready
- Easy to use instruments and controls
  - Located at user height
  - Dual safeties and rupture disc with diverter valve (standard)
  - ½" FPT bottom withdrawal port
  - 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
  - $\,\cdot\,$  On-board high efficiency pressure-builder vaporizer supports up to
    - 6000 SCFH gas supply with fast pressure recovery
  - Service: LIN, LAR, LOX
- Easy economical installation
  - Ships upright
  - No crane required
  - Indoors or outdoors (local codes permitting)
- \* See MicroBulk Systems Product Catalog (P/N 11926802) for ordering information.



## PERMA-CYL. 5500 MP/VHP

HIGH CAPACITY MICROBULK STORAGE SYSTEM

| Capacities                                      | Perma-Cyl 5500 MP | Perma-Cyl 5500 MP    |             | Perma-Cyl 5500 VHP    |  |
|---|-------------------|----------------------|-------------|-----------------------|--|
| Gross Volume                                    | 5510 Liters       | 1456 Gal             | 5434 Liters | 1435 Gal              |  |
| Net Volume                                      | 5262 Liters       | 1390 Gal             | 5110 Liters | 1350 Gal              |  |
| Gas Storage Capacity (@ 1 Atm & 68°F / 20°C)*   |                   |                      |             |                       |  |
| Oxygen  | 159,400 scf       | 4514 Nm <sup>3</sup> | 154,900 scf | 4386 Nm <sup>3</sup>  |  |
| Nitrogen  | 128,700 scf       | 3644 Nm <sup>3</sup> | 125,000 scf | 3540 Nm <sup>3</sup>  |  |
| Argon   | 156,800 scf       | 4423 Nm <sup>3</sup> | 151,700 scf | 4296 Nm <sup>3</sup>  |  |
| General Specifications                          |                   |                      |             |                       |  |
| MAWP  | 250 psig          | 17.2 barg            | 500 psig    | 34.5 barg             |  |
| Dperating Pressure / Rellef Valve Settings      | LP &              | LP & MP              |             | LP, MP, HP & VHP      |  |
| Overall Height w/ Piping & Lab Base             | 112 in            | 310 cm               | 122 in      | 310 cm                |  |
| Width w/ Lab Base (MP - w/ VJ withdrawl)        | 88 x 102 in       | 224 x 259 cm         | 86 x 102 in | 218 x 259 cm          |  |
| Tank Diameter                                   | 80 in             | 203 cm               | 80 in       | 203 cm                |  |
| Tare Weight w/ Pallet Base & 4000/6000 SCFH Vap | 6800 lbs          | 3084 kg              | 9100 lbs    | 4128 kg               |  |
| Performance                                     |                   |                      |             |                       |  |
| Normal Evaporation Rate (% per day)**           |                   |                      |             |                       |  |
| Vitrogen  |                   | .70%                 |             |                       |  |
| Dxygen & Argon                                  |                   | .43%                 |             |                       |  |
| Gas Supply Rate (Hang-On Vaporizer)**           | 4000              | 4000 SCFH            |             | 113 Nm³H              |  |
| Gas Supply Rate (Standalone Vaporizer)\****     | 5000              | 5000 SCFH            |             | 141 Nm <sup>3</sup> H |  |
| Gas Supply Rate (DUal Hang-On Vaporizer)****    | 6000              | 6000 SCFH            |             | 170 Nm <sup>3</sup> H |  |
| Construction                                    |                   |                      |             |                       |  |
| Design & Manufacturing Code                     |                   | ASME Sec. VII Div. 1 |             |                       |  |
| Duter Vessel - Shell                            |                   | Painted Carbon Steel |             |                       |  |
| Duter Vessel - Head & Plate                     |                   | Stainless Steel      |             |                       |  |
| /aporizer (Onboard)                             |                   | Aluminum             |             |                       |  |

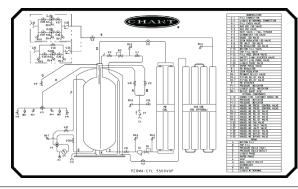
Footnotes: Specifications subject to change without prior notice.

\*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).



Your Local Representative



Photo shows the NEW 6000 SCFH hang-on process vaporizer available on 5500 VHP model.



Cooler By  $\operatorname{Design}_{\scriptscriptstyle \circledast}$ 

Chart Inc. U.S. : 1-800-400-4683 Worldwide: 1-952-243-8800 www.microbulk.com

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