

# 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 FlexFill™ 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™ 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 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
  - Bulk 1½" 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
  - 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 VHP Model

### PRODUCT OPTIONS

- Cyl-Tel gauge with blank face for DataOnline® 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



# PERMA-CYL® 5500 MP/VHP

## HIGH CAPACITY MICROBULK STORAGE SYSTEM

CAPACITIES	Perma-Cyl 5500 MP		Perma-Cyl 5500 VHP	
	Gross Volume	5510 liters	1456 gal	5434 liters
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	156,200 scf	4423 Nm <sup>3</sup>	151,700 scf	4296 Nm <sup>3</sup>
<b>GENERAL SPECIFICATIONS</b>				
MAWP	250 psig	17.2 barg	500 psig	34.5 barg
Operating Pressure / Relief Valve Settings	LP & MP		LP, MP, HP & VHP	
Overall Height w/ Piping & Lab Base	122 in	310 cm	122 in	310 cm
Width w/ Lab Base (MP - w/ VJ withdrawal)	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
<b>PERFORMANCE</b>				
Normal Evaporation Rate (% per day)**				
Nitrogen				.70%
Oxygen & Argon				.43%
Gas Supply Rate (Hang-On Vaporizer)***		4000 SCFH		113 Nm <sup>3</sup> H
Gas Supply Rate (Standalone Vaporizer)****		5000 SCFH		141 Nm <sup>3</sup> H
Gas Supply Rate (Dual Hang-On Vaporizer)****		6000 SCFH		170 Nm <sup>3</sup> H
<b>CONSTRUCTION</b>				
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 LN<sub>2</sub> 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 LN<sub>2</sub> down to 20% contents level with a maximum falloff in tank operating pressure of 30 psig (2 barg).

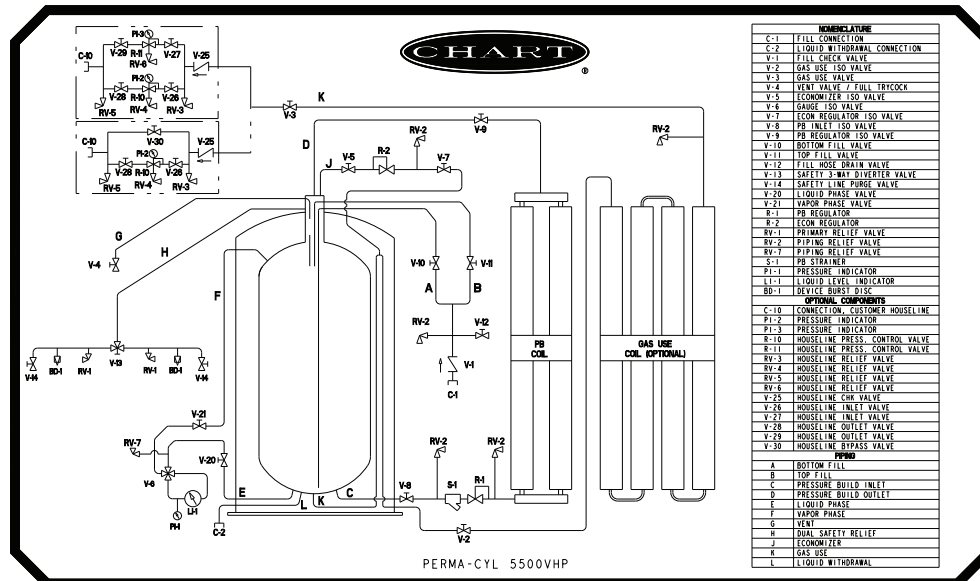


Photo shows the NEW 6000 SCFH hang-on process vaporizer available on 5500 VHP model.