PERMA-CYL HORIZONTAL

MICROBULK HORIZONTAL STORAGE SYSTEM

Chart has created a horizontal version of the very popular Perma-Cyl[®] 3000 HP and VHP. This new product offering has the same performance as our 3000 HP and VHP, but in a package that is easily delivered on a flatbed truck and short enough to fit under a 6' fence. It also utilizes our new FlexFill technology.

FlexFill is a top and bottom fill circuit that replaces the top float assembly so the driver can control the tank pressure while filling the Perma-Cyl. This new design maintains the auto shut-off feature with the Orca delivery unit for a safe and reliable fill. The FlexFill uses technology adopted from our LNG fueling system which allows for a ventless fill. This patented automatic dispensing system simulates the same process drivers have used for years to safely fill Perma-Cyl storage tanks with a single hose. The new FlexFill feature works with all Orca models, both new and existing.





PRODUCT ADVANTAGES

- Capacity of 3,000 liters (715 gal)
- Pressures up to 500 psig (34.5 barg)
- All 304 stainless steel construction
- Patented automatic fill shut-off feature with optional fill box allows for remote filling from outside the building or compound when a Perma-Cyl is installed indoors
- Orca automatically safely stops the fill process when Perma-Cyl is full
- Patented Cyl-Tel gauge supports remote alarms or telemetry communications
- Separate pressure build and economizer regulators
- · Outdoor or indoor installation and operation
- · Optional VJ withdrawal on HP style tanks
- · Forklift access from all sides



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| CAPACITIES | 3000 HP - Horizontal | | 3000 VHP - Horizontal | |
|---|-------------------------------|------------------------|-------------------------------|------------------------|
| Gross Volume | 770 gal | 2911 liters | 770 gal | 2911 liters |
| Net Volume | 715 gal | 2707 liters | 715 gal | 2707 liters |
| Gas Storage Capacity (@ 1 Atm & 68° F / 20° C)* | | | | |
| Oxygen | 82,239 scf | 2161 Nm ³ | 82,239 scf | 2161 Nm ³ |
| Nitrogen | 66,592 scf | 1750 Nm ³ | 66,592 scf | 1750 Nm ³ |
| Argon | 80,425 scf | 2115 Nm ³ | 80,425 scf | 2115 Nm ³ |
| GENERAL SPECIFICATIONS | | | | |
| Relief Valve Setting / MAWP | 350 psi | 24.1 bar | 500 psi | 34.5 bar |
| Overall Height w/ Piping & Base | 71 in | 1803 mm | 71 in | 1803 mm |
| Width w/ Piping & Base | 68 in | 1727 mm | 68 in | 1727 mm |
| Length w/ Piping | 124 in | 3150 mm | 124 in | 3150 mm |
| Length w/ Base | 132 in | 3353 mm | 132 in | 3353 mm |
| Tank Diameter | 59 in | 1499 mm | 59 in | 1499 mm |
| Tare Weight | 3800 lbs | 1724 kg | 4250 lbs | 1928 kg |
| PERFORMANCE | | | | |
| Normal Evaporation Rate (% per day)** | | | | |
| Nitrogen | 1% | 1% | 1% | 1% |
| Oxygen & Argon | 0.62% | 0.62% | 0.62% | 0.62% |
| Gas Supply Rate | 2000 scfh | 52.4 Nm ³ H | 2000 scfh | 52.4 Nm ³ H |
| CONSTRUCTION | | | | • |
| Design & Manufacturing Code | ASME Sec. VIII Div. 1 | | ASME Sec. VIII Div. 1 | |
| Outer Vessel | Type 304 SS | | Type 304 SS | |
| Multi-Function Vaporizer (Standard) | Ambient Side-Mounted Aluminum | | Ambient Side-Mounted Aluminum | |

Footnotes: Specifications subject to change without prior notice.

Patents: 6,128,908 • 5,954,101 • 6,799,429.

*Values are based on net capacity at 0 psig (0 barg). See page 19 of Chart's MicroBulk Systems Product Catalog (P/N 11926802) for conversion densities. **Values are based on gross volume.

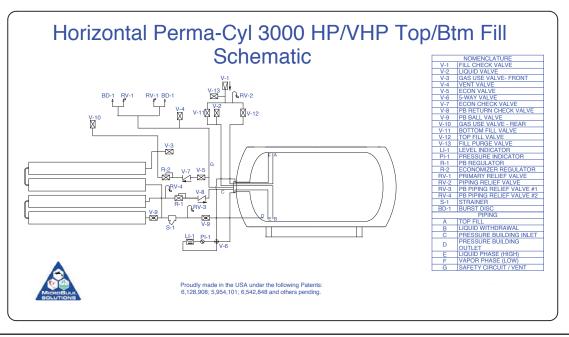


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