

# PERMA-CYL®

ON-SITE STORAGE SYSTEM - MICROBULK SOLUTIONS

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The Perma-Cyl® MicroBulk Storage System allows users to enjoy the benefits of on-site gas delivery. Gone are the hassles, waste and expense of full-for-empty gas cylinders. Using Perma-Cyl tanks, there are no cylinders to change, no residual gas losses, no back, hand or foot injuries from handling cylinders, and no lost or damaged cylinders.

The Perma-Cyl tank is reliable, efficient and more economical than comparable transportable cylinders. Designed for a higher level of thermal efficiency, it can hold its gas contents longer with lower pressure rise than other similar-type vessels. The Perma-Cyl tank's extraordinary thermal quality limits product losses during extended periods of little or no gas use.

This innovative storage system incorporates a top fill float designed to allow single-hose filling without losses under normal conditions. It automatically shuts off the Orca™ MicroBulk Delivery System for a safe and reliable fill.

## PRODUCT ADVANTAGES

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- Sizes, pressures and configurations to meet most applications
- Capacities from 230 liters to 5500 liters (60.8 gal to 1350 gal)
- Supply pressures up to 450 psig
- Automatic fill shut-off feature with optional fill box allows for remote filling from outside the building or compound when a Perma-Cyl tank is installed indoors
- Orca truck automatically safely stops the fill process when Perma-Cyl tank is full
- Cyl-Tel® Liquid Level Gauge supports remote alarms or telemetry communications
- High-pressure, high flow models available for laser assist gas applications
- Outdoor or indoor installation and operation



Innovation. Experience. Performance.®

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### SPECIFICATIONS

MODEL	230L MP, LCCM Sq/Rnd Base w/Casters	230L HP, LCCM Sq/Rnd Base w/Casters	265L MP, LCCM Sq/Rnd Base w/Casters	265L HP, LCCM Sq/Rnd Base w/Casters	450L HP Plate Base	450L MP Plate Base	450L VHP Plate Base	700L HP Plate Base	1000L HP/VHP Plate Base	1500L HP/VHP Pallet Base	2000L HP/VHP Pallet Base	3000L HP/VHP Pallet Base	3000L HP/VHP Horizontal Forklift Base	5500L MP/VHP Pallet Base
<b>CAPACITY (Liters)</b>														
Gross	240	240	276	276	450	450	450	688	1,056	1,550	2,042	2,911	2,911	5510/5434
Net	230	230	265	265	420	420	420	645	950	1,455	1,945	2,707	2,707	5262/5110
<b>CAPACITY (Gallons)</b>														
Gross	63.4	63.4	72.9	72.9	118.9	118.9	118.9	181.8	279.0	409.5	539.5	770	770	1456/1435
Net	60.8	60.8	70.0	70.0	111.0	111.0	111.0	170.4	251.0	384.4	513.9	715	715	1390/1350
<b>MAWP</b>														
psig	230	350	230	350	350	250	500	350	350/500	350/500	350/500	350/500	350/500	250/500
barg	15.9	24.1	15.9	24.1	24.1	17.2	34.5	24.1	24.1/34.5	24.1/34.5	24.1/34.5	24.1/34.5	24.1/34.5	17.2/34.5
<b>PRE-SET OPERATING PRESSURE</b>														
psig	125	300	125	300	300	125	450	300	300/450	300/450	300/450	300/450	300/450	125/450
barg	8.6	20.7	8.6	20.7	20.7	8.6	31.0	20.7	20.7/31.0	20.7/31.0	20.7/31.0	20.7/31.0	20.7/31.0	8.6/31.0
<b>DESIGN SPECIFICATIONS</b>														
DOT/ASME	DOT	DOT	DOT	DOT	DOT/ASME	ASME	DOT/ASME	ASME	ASME	ASME	ASME	ASME	ASME	ASME
<b>STORAGE CAPACITY (1)</b>														
<b>Nitrogen</b>														
SCF	5,024	4,734	5,769	5,769	8875/10332	10,332	7922/10332	15,860	24,350	35,790	47,847	66,592	66,592	128700/125000
Nm <sup>3</sup>	142	134	152	152	271/272	272	271/272	449	689	1,013	1,257	1,750	1,750	3644/3540
<b>Oxygen</b>														
SCF	6,244	5,930	7,186	7,186	11124/12760	12,760	11124/12760	19,600	30,070	44,220	59,089	82,239	82,239	159400/154900
Nm <sup>3</sup>	177	168	189	189	315/336	336	315/336	554	850	1,250	1,553	2,161	2,161	4514/4386
<b>Argon</b>														
SCF	6,073	5,763	6,982	6,982	10812/12478	12,478	10812/12478	19,160	29,400	43,220	57,786	80,425	80,425	156200/151700
Nm <sup>3</sup>	172	163	183	183	306/328	328	306/328	542	832	1,223	1,519	2,115	2,115	4423/4296
<b>THERMAL PERFORMANCE (2) (NER%/Day)</b>														
N <sub>2</sub>	1.8%	1.8%	2%	2%	1.9%/1.6%	1.6%	1.9%/1.6%	1%	1%	1%	1%	1%	1%	.7%
O <sub>2</sub> -Ar	1.12%	1.12%	1.4%	1.4%	1.2%/1%	1%	1.2%/1%	.62%	.62%	.62%	.62%	.62%	.62%	.43%
<b>GAS DELIVERY RATE (LIN/LAR/LOX)</b>														
SCFH	400	400	400	400	575	575	575	660	960	1,350	1350/2000 <sup>(3)</sup>	1350/2000 <sup>(3)</sup>	2,000	3500/5000 <sup>(4)</sup>
Nm <sup>3</sup> h	10.5	10.5	10.5	10.5	15.1	15.1	15.1	18.6	25.2	35.4	35.4/52.4	35.4/52.4	52.4	99/141
<b>DIMENSIONS</b>														
<b>Diameter</b>														
in	26	26	26	26	30	30	30	42	42	48	48	58	58	80
mm	660	660	660	660	762	762	762	1,067	1,067	1,219	1,219	1,473	1,473	2,032
<b>Height</b>														
in	61.8/62	61.8/62	64.6/64.8	64.6/64.8	69	69	69	62.5	82	92/91	118.5/119.6	122/122.25	71	119
mm	1570/1575	1570/1575	1641/1646	1641/1646	1,753	1,753	1,753	1,588	2,083	2337/2311	3,010/3,037	3099/3105	1,803	3,023
<b>Tare Weight</b>														
lbs	300	340	370	430	688*	605*	812*	1,250*	1500/1750*	2200/2500**	2600/3860**	3300/4500**	3800/4250**	6800/9100**
kg	136	154	168	195	312	274	368	567	680/794	998/1134	1179/1751	1497/2045	1724/1928	3084/4128

All specifications are subject to change without prior notice.

1) Values are based on net capacity at 0 psig (0 barg) for ASME vessels.

DOT vessels are per code.

2) Values are based on gross capacity.

3) Optional 3,500 SCFH (92 Nm<sup>3</sup>h) flow kit available.

4) Optional 3,500 SCFH hang on vaporizer or 5,000 SCFH stand alone vaporizer.

Patents: 5,954,101 • 6,542,848 - Other Patents Pending

DOT- Department of Transportation, 4L Code

ASME- American Society of Mechanical Engineers, Section VIII, Division 1

Contact Factory for Canadian Approvals.

\*Weights do not include lab base option. (265 lbs) \*\*Weights include lab bases.

All dimensions are measured from the floor to the top of the highest plumbing component.

See Perma-Max Literature for Specifications on CO<sub>2</sub> (PN 20890958 & 21176920)

## Your Local Representative



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