

PERMA-CYL®

ON-SITE STORAGE SYSTEM - MICROBULK SOLUTIONS

The Perma-Cyl® MicroBulk Storage System allows users to enjoy the benefits of on-site gas delivery. Gone are the hassels, 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, they can hold their gas contents longer with lower pressure rise than other similar vessels. Their extraordinary thermal quality limits product losses during extended periods of little gas use.

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

PRODUCT BENEFITS

- The first fill-at-site solution for packaged or cylinder gas users
- Fast filling capable
- Single hose no-loss/low-loss filling
- Automatic fill shutoff when used with Orca truck
- Extended holding times
- Telemetry ready with Cyl-Tel® Liquid Level Gauge



PRODUCT ADVANTAGES

- Sizes, pressures and configurations to meet most applications
- Capacities from 230 liters to 5,500 liters (60.8 gal to 1350 gal)
- Pressures from 235 psig to 500 psig (16.2 barg to 34.5 barg)
- Patented 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
- Patented Cyl-Tel gauge supports remote alarms or telemetry communications
- High-pressure, high flow models for laser assist applications
- Combination pressure control regulators with micrometer adjustment knob or screw
- 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 VHP Pallet Base	
CAPACITY (Liters)															
Gross	240	240	276	276	450	450	450	688	1,056	1,550	2,042	2,911	2,911	5,434	
Net	230	230	265	265	420	420	420	645	950	1,455	1,945	2,707	2,707	5,110	
CAPACITY (Gallons)															
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	1,435	
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	1,350	
MAWP															
psig	230	350	230	350	350	250	500	350	350/500	350/500	350/500	350/500	350/500	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	34.5	
MAXIMUM PRE-SET OPERATING PRESSURE															
psig	125	300	125	300	300	125	450	300	300/450	300/450	300/450	300/450	300/450	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	31.0	
DESIGN SPECIFICATIONS															
DOT/ASME	DOT	DOT	DOT	DOT	DOT/ASME	ASME	DOT/ASME	ASME	ASME	ASME	ASME	ASME	ASME	ASME	
STORAGE CAPACITY (1)															
Nitrogen															
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	125,000	
Nm ³	142	134	152	152	271/272	272	271/272	449	689	1,013	1,257	1,750	1,750	3,540	
Oxygen															
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	154,900	
Nm ³	177	168	189	189	315/336	336	315/336	554	850	1,250	1,553	2,161	2,161	4,386	
Argon															
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	151,700	
Nm ³	172	163	183	183	306/328	328	306/328	542	832	1,223	1,519	2,115	2,115	4,296	
CO₂															
SCF	N/A	4,615	N/A	5,306	8312/8200	N/A	8312/8200	12,608	19,960	29,340	38,048	52,954	N/A	N/A	
Nm ³	N/A	130.7	N/A	150.3	235/232	N/A	235/232	357	564	830	1,000	1,390	N/A	N/A	
Lbs	N/A	528	N/A	607	951/938	N/A	951/938	1,442	2,283	3,356	4,352	6,058	N/A	N/A	
THERMAL PERFORMANCE (2) (NER%/Day)															
N ₂	1.8%	1.8%	2%	2%	1.9%/1.6%	1.6%	1.9%/1.6%	1%	1%	1%	1%	1%	1%	.7%	
O ₂ -Ar	1.12%	1.12%	1.4%	1.4%	1.2%/1%	1%	1.2%/1%	.62%	.62%	.62%	.62%	.62%	.62%	.43%	
CO ₂	N/A	.6%	N/A	.7%	.6%/1.5%	N/A	.6%/1.5%	.3%	.3%	.3%	.3%	.3%	N/A	N/A	
GAS DELIVERY RATE (LIN/LAR/LOX)															
SCF/H	400	400	400	400	575	575	575	660	960	1,350	1350/2000 ⁽³⁾	1350/2000 ⁽³⁾	2,000	3500/5000	
Nm ³ /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	
GAS DELIVERY RATE (CO₂)															
SCF/H	N/A	133	N/A	133	192	N/A	192	220	320	450	450/667	450/667	N/A	N/A	
Nm ³ /h	N/A	3.8	N/A	3.8	5.4	N/A	5.4	6.2	9.0	12.7	12.7/17.5	12.7/17.5	N/A	N/A	
Lbs/H	N/A	22	N/A	22	22	N/A	22	25	36	51	51/76	51/76	N/A	N/A	
DIMENSIONS															
Diameter															
in	26	26	26	26	30	30	30	42	42	48	48	59	59	80	
mm	660	660	660	660	762	762	762	1,067	1,067	1,219	1,219	1,499	1,499	2,032	
Height															
in	61.8/62	61.8/62	64.6/64.8	64.6/64.8	69	69	69	62.5	82	92/91	118.5/119.5	122/122.5	71	119	
mm	1570/1575	1570/1575	1641/1646	1641/1646	1,753	1,753	1,753	1,588	2,083	2337/2311	3,010/3,035	3099/3112	1,803	3,023	
Tare Weight															
lbs	300	340	340	340	688*	605*	812*	1,250*	1500/1750*	2200/2500**	2600/2950**	3300/4250**	3800/4250**	9100**	
kg	136	154	154	154	312	274	368	567	680/794	998/1134	1179/1338	1497/1928	1724/1928	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. CO₂ vessels are based on net capacity at 300 psig (20.7 barg). DOT vessels are per code.

2) Values are based on gross capacity.

3) Optional 3,500 SCF/H (92 Nm³/h) flow kit available.

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

Patents: 5,787,942 • 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. (base option: 265 lbs)

** Weights include lab bases.

Your Local Representative



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PN 11000938