

# VHR SERIES

## HIGH-PERFORMANCE STORAGE SYSTEM

The VHR Series high-performance storage system creates a competitive advantage with industry-leading hold times and a stainless steel, low maintenance outer shell.

The VHR liquid bulk systems are economical customer stations designed to receive and hold liquid oxygen at a low temperature and pressure. This low-cost storage system is ideal for applications requiring liquid or reserve suppliers, such as hospitals, nursing homes and health care facilities, or as back-up to membrane/PSA systems.

### PRODUCT HIGHLIGHTS

- Dual relief and rupture disc vent system with a 3-way diverter valve
- Extended stem and packing valves on all liquid lines
- Liquid level gauge with low level alarm
- Stainless steel inter-connecting piping
- All stainless steel outer vessel eliminates the need for paint and surface maintenance
- Automatic self contained pressure building system maintains pressure for gas withdrawal
- Internal product vaporizer saves pad space and reduces maintenance costs
- Super-insulation system provides industry leading NER performance and extended product hold time
- Optional Certified lab test reports for medical oxygen service available



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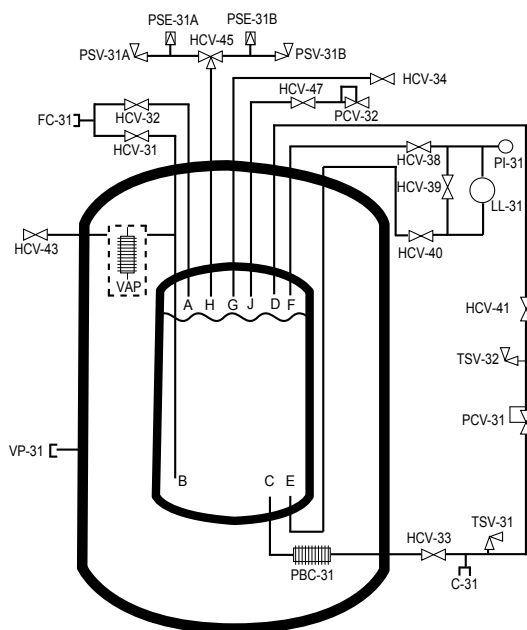
## HIGH-PERFORMANCE STORAGE SYSTEM

### Specifications

Model	VHR-120	VHR-260	VHR-400
<b>Capacity - Liquid (gal / liters)</b>			
Net	112 / 424	255 / 964	387 / 1,479
Gross	118 / 447	268 / 1,015	407 / 1,553
<b>Capacity - Gas @ 1 atm of 70° F (SCF / NM<sup>3</sup>)</b>			
Nitrogen	10,500 / 280	23,800 / 630	36,100 / 950
Oxygen	12,900 / 340	29,400 / 780	44,600 / 1,180
Argon	12,600 / 340	28,700 / 760	43,600 / 1,150
<b>Dimensions (in / cm)</b>			
Diameter	30 / 76	42 / 107	48 / 122
Height	80 / 203	94 / 239	100 / 254
<b>Weight (lbs / kg)</b>			
Tare	700 / 320	1,700 / 770	2,100 / 950
Nitrogen	1,400 / 640	3,500 / 1,590	4,800 / 2,180
Oxygen	1,710 / 780	4,200 / 1,910	5,800 / 2,630
Argon	1,950 / 890	4,700 / 2,130	6,600 / 2,990
<b>Maximum Pressure (psig / bar)</b>			
	250 / 17	250 / 17	250 / 17
<b>Gas Delivery Rate (SCFH O<sub>2</sub> / NM<sup>3</sup>h O<sub>2</sub>)</b>			
Normal*	340 / 10	620 / 18	790 / 22
Peak**	490 / 14	890 / 25	1,140 / 32
<b>Evaporation Rate (% per day of O<sub>2</sub>)</b>			
	1.1%	0.62%	0.62%

\* Normal flow rate is for eight hours with a minimum exit temperature of 32°F at an ambient temperature of 68°F.

\*\* Peak flow rate is for one hour with a minimum exit temperature of 32°F at an ambient temperature of 68°F.



NOMENCLATURE	
C-31	Purge connection
FC-31	Fill connection
HCV-31	Bottom fill valve
HCV-32	Top fill valve
HCV-33	PB inlet valve
HCV-34	Vent / full trycock valve
HCV-38	LL-31 vapor phase valve
HCV-39	LL-31 equalization valve
HCV-40	LL-31 liquid phase valve
HCV-41	PB outlet valve
HCV-43	Gas use valve
HCV-45	Safety relief selector
HCV-47	Economizer outlet valve
LL-31	Level indicator
PBC-31	Pressure building coil
PCV-31	Pressure control valve
PCV-32	Economizer regulator
PI-31	Pressure indicator
PSE-31A	Pressure safety element
PSE-31B	Pressure safety element
PSV-31A	Pressure relief valve
PSV-31B	Pressure relief valve
TSV-31	PB circuit
TSV-32	PB circuit
VAP	Gas use vaporizer
VP-31	Vacuum port

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