

# SIPHON 100®

FILL PLANT BULK STORAGE SYSTEM – 100% OF THE PRODUCT 100% OF THE TIME

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Chart has engineered the Siphon 100® Bulk Storage Tank to provide an economical, reliable and high-performance storage system for pump filling high-pressure cylinders, liquid cylinders and transports. Current cryogenic tanks have worked for years, but increased efficiencies are now available with the Siphon 100 system allowing you to utilize 100% of the liquid contents.

The Siphon 100 system combines two revolutionary technologies in cryogenic bulk tanks. Its improved “thermal-siphoning” system reduces and efficiently reprocesses the heat from pumping. Additionally, this system’s Composite Super Insulation™ is 30% to 70% more efficient than Perlite in reducing the effects of heat transfer from the atmosphere.

## PRODUCT ADVANTAGES

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- Thermal-siphon design manages heat from pump cool down, keeping storage tank pressure down
- Simple and reliable automatic pump start-up in three minutes
- Pump priming at tank pressure of 10 psi (0.69 bar) or less without the necessity for pressure building\*
- Vacuum insulated pod provides colder liquid to pump reducing cavitation
- Extended legs add head pressure to pump without increasing liquid inventory for improved pump performance
- Reduce liquid cylinder & Orca™ MicroBulk Delivery System filling losses
- Longer life of high-wear pump parts
- Capability to operate two pumps at once (liquid and HP pump)
- Adapters available to match all standard pumps
- Inner vessel designed and built to ASME Section VIII Division 1 code

\* Pump filling only. Add pressure builder if liquid filling large quantities from Siphon 100 tank.



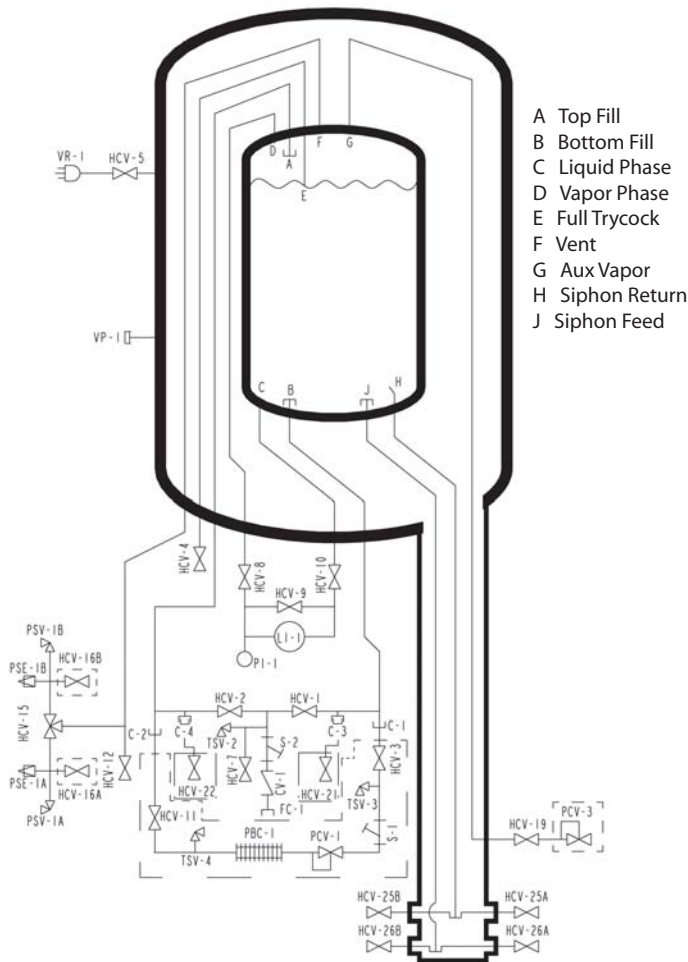
Innovation. Experience. Performance.®

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Model	Gross Capacity		Net Capacity		MAWP*		Diameter		Height		Weight**		NER % /day in O <sub>2</sub> / Ar	NER % /day in N <sub>2</sub>
	Gal	Liters	Gal	Liters	psig	bar	in	mm	in	mm	lbs.	Kg		
VS 1500SC	1,640	6,208	1,580	5,981	250	17.2	66	1,676	240	6,096	6,200	2,818	.35	.56
VS 3000SC	3,150	11,924	3,030	11,470	175	12.1	86	2,184	271	6,883	12,800	5,810	.25	.40
VS 6000SC	6,010	22,750	5,770	21,842	175	12.1	86	2,184	425	10,795	21,300	9,660	.15	.24
VS 9000SC	9,354	35,410	8,990	34,031	175	12.1	114	2,896	398	10,109	32,100	14,560	.10	.16
VS 11000SC	11,410	43,192	10,960	41,438	175	12.1	114	2,896	457	11,608	37,900	17,191	.10	.16
VS 13000SC	13,470	50,989	13,060	49,437	175	12.1	114	2,896	516	13,106	44,300	20,094	.10	.16
VS 15000SC	15,520	58,750	15,060	57,008	175	12.1	114	2,896	575	14,605	50,600	22,952	.10	.16

\* MAWP - Maximum Allowable Working Pressure. \*\* Weights are for ASME design. (NER) = Normal Evaporation Rate



## Nomenclature

C-1	Connection, Aux Liquid	PSV-1A	Pressure Safety Valve, Inner Vessel
C-2	Connection, Aux Vapor	PSV-1B	Pressure Safety Valve, Inner Vessel
C-3	Connection, Secondary Aux Liquid	S-2	Strainer, Fill Line
C-4	Connection, Secondary Aux Vapor	TSV-2	Thermal Safety Valve, Fill
CV-1	Check Valve, Fill Line	TSV-6	Thermal Safety Valve, Fill
FC-1	Connection Fill	VP-1	Vacuum Port
HCV-1	Valve, Bottom Fill	VR-1	Vacuum Readout, Outer Vessel
HCV-2	Valve, Top Fill		
HCV-4	Valve, Full Trycock	<b>OPTIONAL VALVES (Dashed Lines)</b>	
HCV-5	Valve, Vacuum Gauge Tube	HCV-3	Valve, PB Inlet
HCV-7	Valve, Fill Line Drain	HCV-11	Valve, PB Outlet
HCV-8	Valve, LI-1 Vapor Phase	HCV-16A	Valve, Relief Line Purge
HCV-9	Valve, LI-1 Equalization	HCV-16B	Valve, Relief Line Purge
HCV-10	Valve, LI-1 Liquid Phase	PBC-1	Pressure Bldg Coil, Inr Ves
HCV-12	Valve, Vapor Vent	PCV-1	Pressure Control Valve, Inr Ves
HCV-15	Valve, Safety Relief Selector	PCV-3	Pressure Control Valve, Back Pressure
HVC-19	Valve, Aux Vapor	S-1	Strainer, Pressure Builder
HCV-25A	Valve, VS-Siphon Return	TSV-3	Thermal Safety Valve, PB Circuit
HCV-25B	Valve, VS-Siphon Return	TSV-4	Thermal Safety Valve, PB Circuit
HCV-26A	Valve, VS-Siphon Feed	HCV-21	Valve, Secondary Aux, Liquid, Installed at C-3
HCV-26B	Valve, VS-Siphon Feed	HCV-22	Valve, Secondary Aux Vapor, installed at C-4
LI-1	Level Indicator, Inr Ves		
PI-1	Pressure Indicator, Inr Ves		
PSE-1A	Press Safety Element, Inner Ves.		
PSE-1B	Press Safety Element, Inner Ves.		