

VS-SERIES

MODEL 01 STORAGE SYSTEMS

Chart's VS Series Storage Systems, available in liquid nitrogen, oxygen or argon service, are offered in a wide range of sizes for applications requiring Maximum Allowable Working Pressures of 175 and 250 psig (12 and 17 bar) as standard. Other pressures are available upon request. This equipment is designed in accordance with ASME code.

Our composite insulation system gives you the competitive edge with high thermal performance, extended hold times, low life-cycle costs and light weight to reduce operational and installation costs. Chart leads the industry with an innovative modular piping system designed for performance, durability and low maintenance.



PRODUCT HIGHLIGHTS

- Piping modules designed for ease-of-access to all operational control valves with stainless steel interconnecting piping to minimize the number of connections, reducing maintenance and cost of ownership
- Component selection to improve operational performance – Combination Pressure Building/Economizer Regulator for easy pressure adjustment and extended Bonnet Bronze Control Valves for ease of operation
- High performance safety system with dual relief valves and rupture disks supplied as a standard
- New, innovative Vertical Fin Pressure Building System improves performance, while reducing frost and ice build-up to further reduce your maintenance costs
- Backed by an industry-leading warranty
- Interchangeable gauge systems with digital telemetry capable gauge and flexible stainless steel interconnection lines



Innovation. Experience. Performance.™

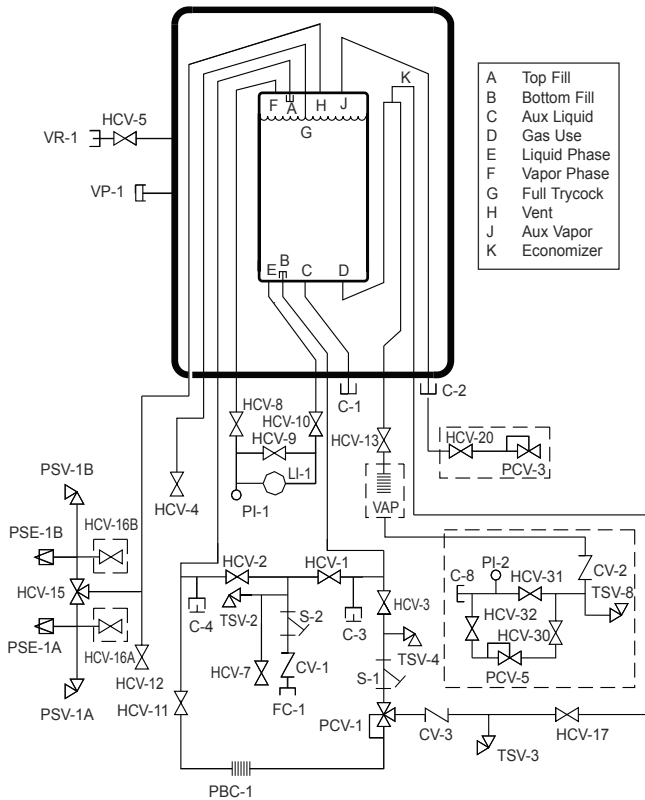
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Model	Gross Capacity		Nominal Capacity		Working Pressure*		Diameter		Height		Weight**		NER % /day in O ₂
	Gal	Liters	Gal	Liters	psig	bar	in	mm	in	mm	lbs.	Kg	
VS 525NC	540	2,044	491	1,859	250	17.2	66	1,676	102	2,591	3,800	1,724	.55
VS 900NC	929	3,517	845	3,197	250	17.2	66	1,676	134	3,404	5,100	2,313	.45
VS 1500NC	1,585	5,999	1,509	5,714	250	17.2	66	1,676	188	4,763	7,000	3,175	.33
VS 3000NC	3,158	11,995	3,037	11,495	175	12.1	86	2,184	228	5,791	12,600	5,715	.25
VS 6000NC	6,075	22,997	5,841	22,112	175	12.1	86	2,184	382	9,703	22,200	10,070	.15
					250	17.2					24,500	11,113	
VS 9000NC	9,447	35,761	9,084	34,387	175	12.1	114	2,896	347	8,814	33,000	14,970	.10
					250	17.2					36,800	16,700	
VS 11000NC	11,480	43,457	11,145	42,183	175	12.1	114	2,896	406	10,312	39,500	17,920	.10
					250	17.2					44,100	20,010	
VS 13000NC	13,513	51,152	13,119	49,661	175	12.1	114	2,896	465	11,811	46,700	21,190	.10
					250	17.2					52,100	23,640	
VS 15000NC	15,545	58,844	15,093	57,133	175	12.1	114	2,896	525	13,335	53,700	24,360	.10
					250	17.2					59,900	27,180	

* 400, 500 psig tanks are available upon request
(NER) = Nominal Evaporation Rate

** Weights are for ASME designs



- A Top Fill
- B Bottom Fill
- C Aux Liquid
- D Gas Use
- E Liquid Phase
- F Vapor Phase
- G Full Trycock
- H Vent
- J Aux Vapor
- K Economizer

Nomenclature

C-1	Connection, Aux Liquid	S-1	Strainer, Pressure Building
C-2	Connection, Aux Vapor	S-2	Strainer, Fill
C-3	Connection, Secondary Aux Liq.	TSV-2	Thermal Safety Valve, Fill
C-4	Connection, Secondary Aux Vapor	TSV-3	Thermal Safety Valve, Economizer
CV-1	Check Valve, Fill	TSV-4	Thermal Safety Valve, PB Circuit
CV-3	Check Valve, Economizer	VP-1	Vacuum Port
FC-1	Connection Fill	VR-1	Vacuum Readout, Outer Vessel
HCV-1	Valve, Bottom Fill		
HCV-2	Valve, Top Fill		
HCV-3	Valve, PB Inlet		
HCV-4	Valve, Full Trycock		
HCV-5	Valve, Vacuum Gauge Tube		
HCV-7	Valve, Fill Line Drain		
HCV-8	Valve, LI-1 Vapor Phase		
HCV-9	Valve, LI-1 Equalization		
HCV-10	Valve, LI-1 Liquid Phase		
HCV-11	Valve, PB Outlet		
HCV-12	Valve, Vapor Vent		
HCV-13	Valve, Product Supply		
HCV-15	Valve, Safety Relief Selector		
HCV-17	Valve, Economizer		
LI-1	Level Indicator, Inner Vessel		
PBC-1	Pressure Building Coil, Inr. Ves.		
PCV-1	Pressure Control Valve		
PI-1	Pressure Indicator, Inner Vessel		
PSE-1A	Pressure Safety Element, Inr Ves		
PSE-1B	Pressure Safety Element, Inr Ves		
PSV-1A	Pressure Safety Valve, Inr Ves		
PSV-1B	Pressure Safety Valve, Inr Ves		
S-1	Strainer, Pressure Building		
S-2	Strainer, Fill		
TSV-2	Thermal Safety Valve, Fill		
TSV-3	Thermal Safety Valve, Economizer		
TSV-4	Thermal Safety Valve, PB Circuit		
VP-1	Vacuum Port		
VR-1	Vacuum Readout, Outer Vessel		

NOTE: Optional valves (not shown)

HCV-18	Valve, Liquid Withdrawal (From C-1)
HCV-19	Valve, Vapor Return (From C-2)
HCV-21	Valve, Sec Aux Liquid (From C-3)
HCV-22	Valve, Sec Aux Vapor (From C-4)

**Dashed lines represent optional components*

C-8	Connection, Customer Housetine
CV-2	Check Valve, Housetine
HCV-16A	Valve, Relief Line Purge
HCV-16B	Valve, Relief Line Purge
HCV-20	Valve, Economizer Vent
HCV-30	Valve, Inlet Housetine
HCV-31	Valve, Bypass Housetine
HCV-32	Valve, Outlet Housetine
PCV-3	Pressure Control Valve, Econo Vent
PCV-5	Pressure Control Valve, Housetine
PI-2	Pressure Indicator, Housetine
TSV-8	Thermal Safety Valve, Housetine
VAP	Vaporizer, Product Withdrawal

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