

# VS-DSS SERIES

## VERTICAL DISTRIBUTOR STORAGE SYSTEM

Chart's VS-DSS (Distributor Storage System) Series of vertical bulk storage stations are engineered for superior performance, durability and value. Equipped with our proprietary Composite Super Insulation™ (a light-weight system offering better thermal performance than Perlite), the VS-DSS series provides reduced product losses and a slower rate of pressure rise during periods of non-use. Backing up this performance is a competitive 2-year vacuum warranty.

Available in the 1500, 3000, and 6000 gallon (5700, 11,400, and 23,000 liter) models, the VS-DSS series features the industry standard thermal performance. The modular plumbing system has been selectively optimized to meet the flow requirements of a complete range of liquid or gas applications. With a comprehensive set of plumbing features, each circuit has been carefully designed to match the demands placed on these vessel sizes. Dual safety relief devices are standard, and tank mounted vaporizers are optional on 1500 gallon sizes.

### PRODUCT ADVANTAGES

- Sizes, pressures and configurations to meet most applications
- Backed by our standard 2-year vacuum warranty
- Leg design provides better access to anchor bolts for quicker installation
- Lower tare weight reduces freight and pad costs
- Long-life urethane paint system
- Plumbing built in accordance with ASME B31.3 code and leak tested at 1.1 times the MAWP
- Inner vessel designed and built to ASME Section VIII Division 1 code

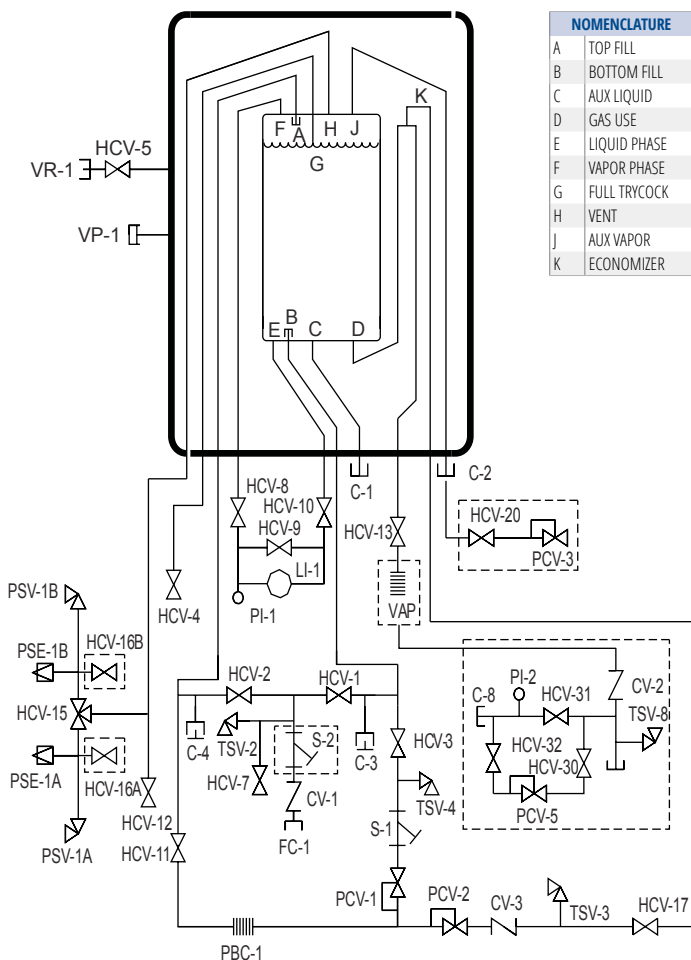


Cooler By Design. ®

## VERTICAL DISTRIBUTOR STORAGE SYSTEM

Model	Gross Capacity		Net Capacity		MAWP*		Flow Capacity**		Diamter		Height		Weight***		NER %/day	NER %/day
	Gal	Liters	Gal	Liters	(psig)	(bar)	SCFH	Nm³/hr	in	mm	in	mm	(lbs)	(kg)	in O₂ /AR	in N₂
VS 1500SC-DSS	1,649	6,208	1,580	5,981	250	17.2	9,000	237	66	1,676	196	4,978	6,200	2,818	.35	.56
VS 3000SC-DSS	3,150	11,924	3,030	11,470	250	17.2	18,000	473	86	2,184	228	5,791	12,800	5,806	.25	.40
VS 6000SC-DSS	6,010	22,750	5,770	21,842	250	17.2	18,000	473	86	2,184	383	9,728	21,500	9,752	.15	.24

\*\*\*Weights are for ASME design (NER) = Nominal Evaporation Rate



NOMENCLATURE	
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

<b>NOMENCLATURE</b>			
<b>Tag</b>	<b>Description</b>	<b>Tag</b>	<b>Description</b>
C-1	CONNECTION, AUX LIQUID	PSV-1B	PRESSURE SAFETY VALVE, INR VESSEL
C-2	CONNECTION, AUX VAPOR	S-1	STRAINER, PRESSURE BUILDING
C-3	CONNECTION, SECONDARY AUX LIQUID	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		<b>NOTE: OPTIONAL VALVES (NOT SHOWN)</b>
HCV-3	VALVE, PB INLET	HCV-18	VALVE, LIQUID WITHDRAWAL (FROM C-1)
HCV-4	VALVE, FULL TRYCOCK	HCV-19	VALVE, VAPOR RETURN (FROM C-2)
HCV-5	VALVE, VACUUM GAUGE TUBE	HCV-21	VALVE, SEC AUX LIQUID (FROM C-3)
HCV-7	VALVE, FILL LINE DRAIN	HCV-22	VALVE, SEC AUX VAPOR (FROM C-4)
HCV-8	VALVE, LI-I VAPOR PHASE		
HCV-9	VALVE, LI-I EQUALIZATION		<i>*dashed lines represent optional components</i>
HCV-10	VALVE, LI-I LIQUID PHASE	C-8	CONNECTION, CUSTOMER HOUSELINE
HCV-11	VALVE, PB OUTLET	CV-2	CHECK VALVE, HOUSELINE
HCV-12	VALVE, VAPOR VENT	HCV-16A	VALVE, RELIEF LINE PURGE
HCV-13	VALVE, VAPORIZER INLET	HCV-16B	VALVE, RELIEF LINE PURGE
HCV-15	SAFETY RELIEF SELECTOR VALVE	HCV-20	VALVE, ECONOMIC VENT
HCV-17	VALVE, ECONOMIZER	HCV-30	VALVE, INLET HOUSELINE
LI-1	LEVEL INDICATOR, INNER VESSEL	HCV-31	VALVE, BYPASS HOUSELINE
PBC-1	PRESSURE BUILDING COIL, INR VESSEL	HCV-32	VALVE, OUTLET HOUSELINE
PCV-1	PRESSURE CONTROL VALVE, INR VESSEL	PCV-3	PRESSURE CONTROL VALVE, ECONO VENT
PCV-2	PRESSURE CONTROL VALVE, ECONO	PCV-5	PRESSURE CONTROL VALVE, HOUSELINE
PI-1	PRESSURE INDICATOR, INR VESSEL	PI-2	PRESSURE INDICATOR, HOUSELINE
PSE-1A	PRESSURE SAFETY ELEMENT, INR VESSEL	S-2	STRAINER, FILL
PSE-1B	PRESSURE SAFETY ELEMENT, INR VESSEL	TSV-8	THERMAL SAFETY VALVE, HOUSELINE
PSV-1A	PRESSURE SAFETY VALVE, INR VESSEL	VAP	VAPORIZATION, PRODUCT WITHDRAWAL