



# HS Series

## Bulk Stations



Chart Storage Systems Division, the leader in cryogenic bulk tanks, is pleased to present the new *Horizontal Series Bulk Stations* for liquid Nitrogen, Oxygen or Argon service. These *HS Bulk Stations* are engineered and built with the same quality you have come to expect, and have standard features along with pre-engineered options sure to satisfy all of your requirements. Chart's *HS Series Bulk Stations* are designed to ASME code and available in 175 and 250 psig (12 and 17 bar) as standards, with other pressures available upon request.

Advanced insulation technology provides longer holding times and the continuing development of insulation systems has resulted in unsurpassed performance. Our XCEL composite insulation is a lightweight system offering superior performance, and is easier to maintain offering longer product hold times.

Features and benefits include:

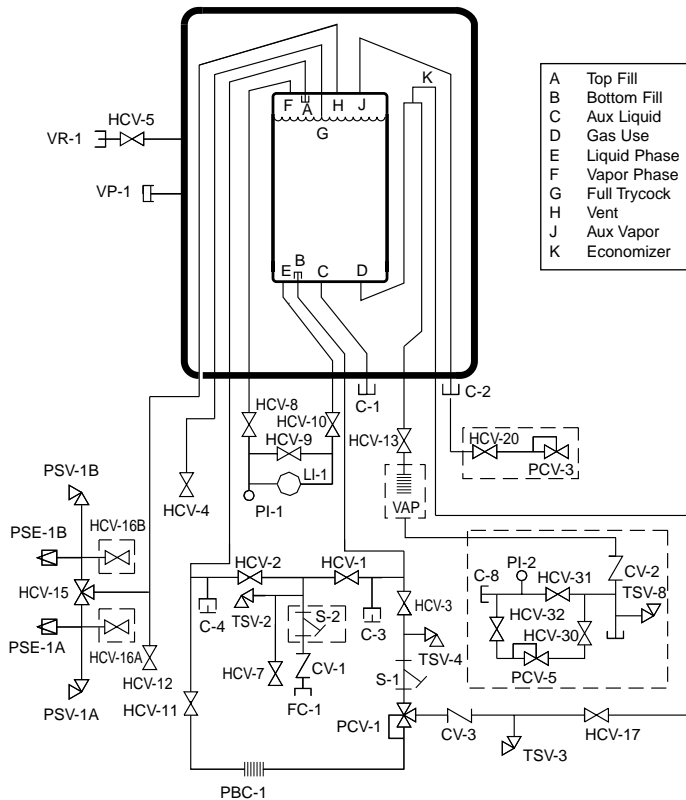
- ◆ All welded piping modules
- ◆ Heavy duty bronze valves with extended bonnets
- ◆ Valve bonnet uniformity to reduce spare parts
- ◆ Highest grade components for low to zero maintenance
- ◆ Combination pressure building and economizer regulator for easy pressure adjustment
- ◆ Standard level gauge is the ITT Barton Model 227 differential pressure indicator
- ◆ Optional level gauges include ITT Barton Model 288A with alarm contacts or customer specified differential pressure transmitter

# HS Series Bulk Stations

Model	Gross Capacity		Nominal Capacity		Working Pressure*		Diameter		Length		Weight***		NER % /day in O <sub>2</sub>
	Gal	Liters	Gal	Liters	psig	bar	in	mm	in	mm	lbs.	Kg	
HS 1500NS	1,585	5,999	1,509	5,714	250	17.2	68	1,728	195	4,953	7,800	3,540	.33
HS 3000NC	3,158	11,995	3,037	11,495	175 250	12.1 17.2	86	2,184	240	6,096	12,500 13,400	5,670 6,080	.25
HS 6000NC	6,075	22,997	5,841	22,112	175 250	12.1 17.2	86	2,184	390	9,906	22,600 25,100	10,260 11,390	.15
HS 9000NC	9,449	35,767	9,085	34,391	175 250	12.1 17.2	114	2,896	343	8,712	32,700 36,600	14,840 16,610	.10
HS 11000NC	11,478	43,449	11,144	42,183	175 250	12.1 17.2	114	2,896	403	10,236	39,300 43,800	17,830 19,870	.10
HS 13000NC	13,513	51,151	13,119	49,661	175 250	12.1 17.2	114	2,896	462	11,735	46,000 51,400	20,870 23,320	.10
HS 15000NC	15,545	58,846	15,093	57,132	175 250	12.1 17.2	114	2,896	523	13,284	53,200 59,400	24,140 26,950	.10

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

\*\*\* Weights are for ASME designs



Nomenclature			
C-1	Connection, Aux Liquid	S-1	Strainer, Pressure Building
C-2	Connection, Aux Vapor	TSV-2	Thermal Safety Valve, Fill
C-3	Connection, Secondary Aux Liq.	TSV-3	Thermal Safety Valve, Economizer
C-4	Connection, Secondary Aux Vapor	TSV-4	Thermal Safety Valve, PB Circuit
CV-1	Check Valve, Fill	VP-1	Vacuum Port
CV-3	Check Valve, Economizer	VR-1	Vacuum Readout, Outer Vessel
FC-1	Connection Fill		
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, Vaporizer Inlet		
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/Econo 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		
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		
<b>NOTE: Optional valves (not shown)</b>			
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)		
<i>*Dashed lines represent optional components</i>			
C-8	Connection, Customer Houeline		
CV-2	Check Valve, Houeline		
HCV-16A	Valve, Relief Line Purge		
HCV-16B	Valve, Relief Line Purge		
HCV-20	Valve, Economizer Vent		
HCV-30	Valve, Inlet Houeline		
HCV-31	Valve, Bypass Houeline		
HCV-32	Valve, Outlet Houeline		
PCV-3	Pressure Control Valve, Econo Vent		
PCV-5	Pressure Control Valve, Houeline		
PI-2	Pressure Indicator, Houeline		
S-2	Strainer, Fill		
TSV-8	Thermal Safety Valve, Houeline		
VAP	Vaporizer, Product Withdrawal		



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