

CRYO-CONTROL

STORAGE SYSTEMS

Chart's Cryo-Control Series storage systems are tailored for liquid or gas applications in nitrogen, oxygen, or argon service. These systems are offered in a wide range of sizes, with a maximum allowable working pressure of 250 psig (17 bar). This line of storage systems offers all of the proven performance and technology found in any of Chart's standard storage offerings, along with several additional features.



FEATURES

- Robust industrial control system featuring Tank-Tel and PLC control, provides low-maintenance and automated operation of all components
- Pressure building set point easily adjusted electronically by the push of a button
- Electro-mechanical pressure building circuit ensures accurate pressure control
- System includes a vacuum insulated withdrawal valve and a variety of actuator options for ultimate system efficiency and integration
- System configuration allows for easy expansion as your business needs grow
- Redundant fill valves
- Optional pressure control circuit provides additional security against tank over-pressurization
- Optional emergency stop control immediately halts delivery and pressure building for a safe shut-down of the system
- Optional gas filtration and purification
- Optional on-site telemetry for system data tracking

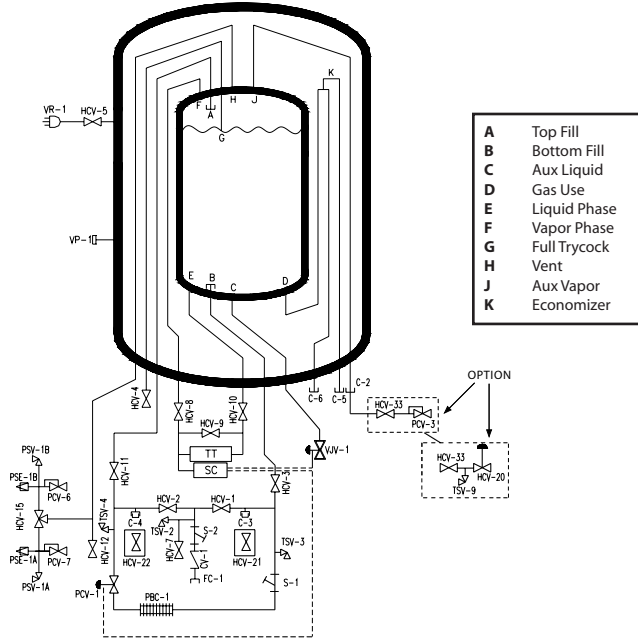


Innovation. Experience. Performance.™

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Liquid Control System

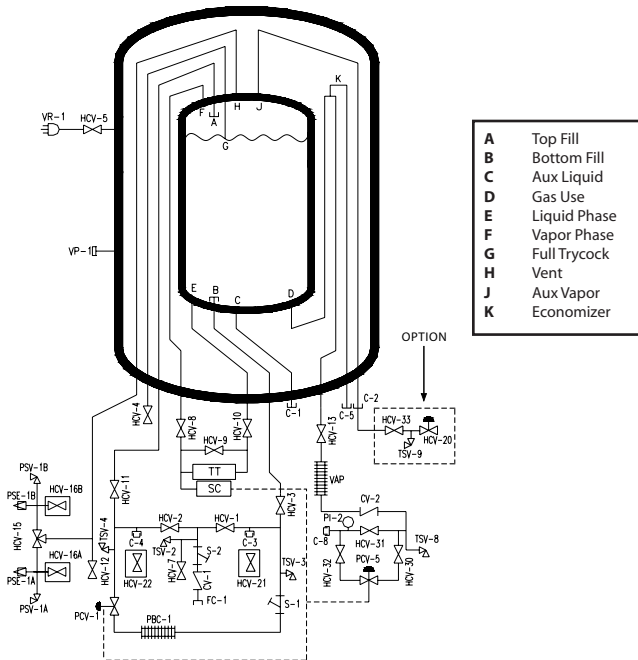


NOMENCLATURE

C-2	Connection, Aux Vapor	TSV-2	Thermal Safety Valve, Fill
C-3	Connection, Secondary Aux Liquid	TSV-3	Thermal Safety Valve, PB Circuit
C-4	Connection, Secondary Aux Vapor	TSV-4	Thermal Safety Valve, PB Circuit
C-5	Cap, Economizer	VJV-1	Valve, Vacuum Jacket Aux Liquid
C-6	Cap, Gas Use	VP-1	Vacuum Port
CV-1	Check Valve, Fill	VR-1	Vacuum Readout, Outer Vessel
FC-1	Connection, Fill		
HCV-1	Valve, Bottom Fill		
HCV-2	Valve, Top Fill		
HCV-3	Valve, Redundant Bottom Fill	HCV-20	Valve, Aux Vapor Press Control
HCV-4	Valve, Full Trycock	HCV-21	Valve, Sec Aux Liquid
HCV-5	Valve, Vacuum Gauge Tube	HCV-22	Valve, Sec Aux Vapor
HCV-7	Valve, Fill Line Drain	HCV-33	Valve, Aux Vapor
HCV-8	Valve, LI-1 Vapor Phase	TSV-9	Thermal Safety Valve, Aux Vapor
HCV-9	Valve, LI-1 Equalization	PCV-3	Pressure Control Valve, aux vap
HCV-10	Valve, LI-1 Liquid Phase		
HCV-11	Valve, Redundant Top Fill		
HCV-12	Valve, Vapor Vent		
HCV-15	Valve, Safety Relief Selector		
TT	Tank Tel (Liq Level, Press Inr Ves)		
SC	System Controller		
PBC-1	Pressure Building Coil, Inr.Vessel		
PCV-1	Pressure Control Valve		
PCV-6	Pressure Control Valve, NER		
PCV-7	Pressure Control Valve, NER		
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		

NOTE: Optional valves

Gas Control System



NOMENCLATURE

C-1	Connection, Aux Liquid	VP-1	Vacuum Port
C-2	Connection, Aux Vapor	VR-1	Vacuum Readout, Outer Vessel
C-3	Connection, Secondary Aux Liquid	C-8	Connection, Customer Housetine
C-4	Connection, Secondary Aux Vapor	CV-2	Check Valve, Housetine
C-5	Cap, Economizer	HCV-30	Valve, Inlet Housetine
CV-1	Check Valve, Fill	HCV-31	Valve, Bypass Housetine
FC-1	Connection, Fill	HCV-32	Valve, Outlet Housetine
HCV-1	Valve, Bottom Fill	PCV-5	Pressure Control Vlv, Housetine
HCV-2	Valve, Top Fill	PI-2	Pressure Indicator, Housetine
HCV-3	Valve, Redundant Bottom Fill	TSV-8	Thermal Safety Valve, Housetine
HCV-4	Valve, Full Trycock	VAP	Vaporizer, Product Withdrawal
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-16A	Valve, Relief Line Purge
HCV-10	Valve, LI-1 Liquid Phase	HCV-16B	Valve, Relief Line Purge
HCV-11	Valve, Redundant Top Fill	HCV-20	Valve, Aux Vapor Press Control
HCV-12	Valve, Vapor Vent	HCV-21	Valve, Sec Aux Liquid
HCV-13	Valve, Gas Use	HCV-22	Valve, Sec Aux Vapor
HCV-15	Valve, Safety Relief Selector	HCV-33	Valve, Aux Vapor
TT	Tank Tel (Liq Level, Press Inr Ves)	TSV-9	Thermal Safety Valve, Aux Vapor
SC	System Controller		
PBC-1	Pressure Building Coil, Inr.Vessel		
PCV-1	Pressure Control Valve		
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, PB Circuit		
TSV-4	Thermal Safety Valve, PB Circuit		

NOTE: Optional valves

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