$HSCO_2$ & N_2O

HORIZONTAL BULK STORAGE SYSTEMS

Our $HSCO_2$ & N_2O Series of Bulk Carbon Dioxide and Nitrous Oxide Storage Tanks are engineered for the efficient storage supply of carbon dioxide and nitrous oxide. For maximum lifetime thermal efficiency, the $HSCO_2$ and N_2O systems are manufactured with an all-welded outer container to contain our proprietary Composite Super Insulation™ system and superior vacuum technology.

PRODUCT HIGHLIGHTS

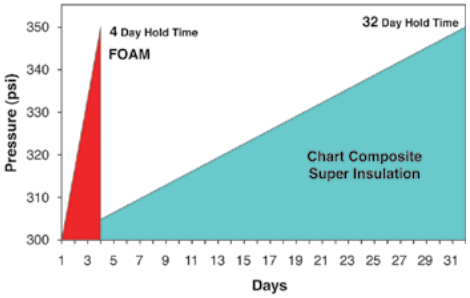
Vacuum-Jacketed Composite vs. Foam Insulation

- Lowest lifecycle costs for bulk CO_2 & N_2O storage
- Superior functional performance
- High–strength, dent resistant outer jacket eliminates deterioration of insulation, costly repairs, down-time
- Simplified plumbing reduces potential for piping leaks
- Eliminate product loss due to venting
- Hold time is 8 times longer than foam
- Refrigeration system not required for maintaining heat leak
- No monthly maintenance or electrical charges
- No manway required for condenser coil maintenance
- Two–year payback vs. foam tank
- Pressure builder and vaporizer systems available – see applications brochure P/N 21111520 for details
- Backed by a five-year vacuum warranty
- Optional internal vapor condensing coil available – see applications brochure P/N 21111520 for details

Horizontal benefits

- Low profile to meet your height restrictions
- Eliminates seismic concerns
- Replace existing foam footprint

Thermal Performance - $HSCO_2$
Vacuum Jacketed Vs Foam CO_2 Tanks



CHART®
Cooler By Design.®

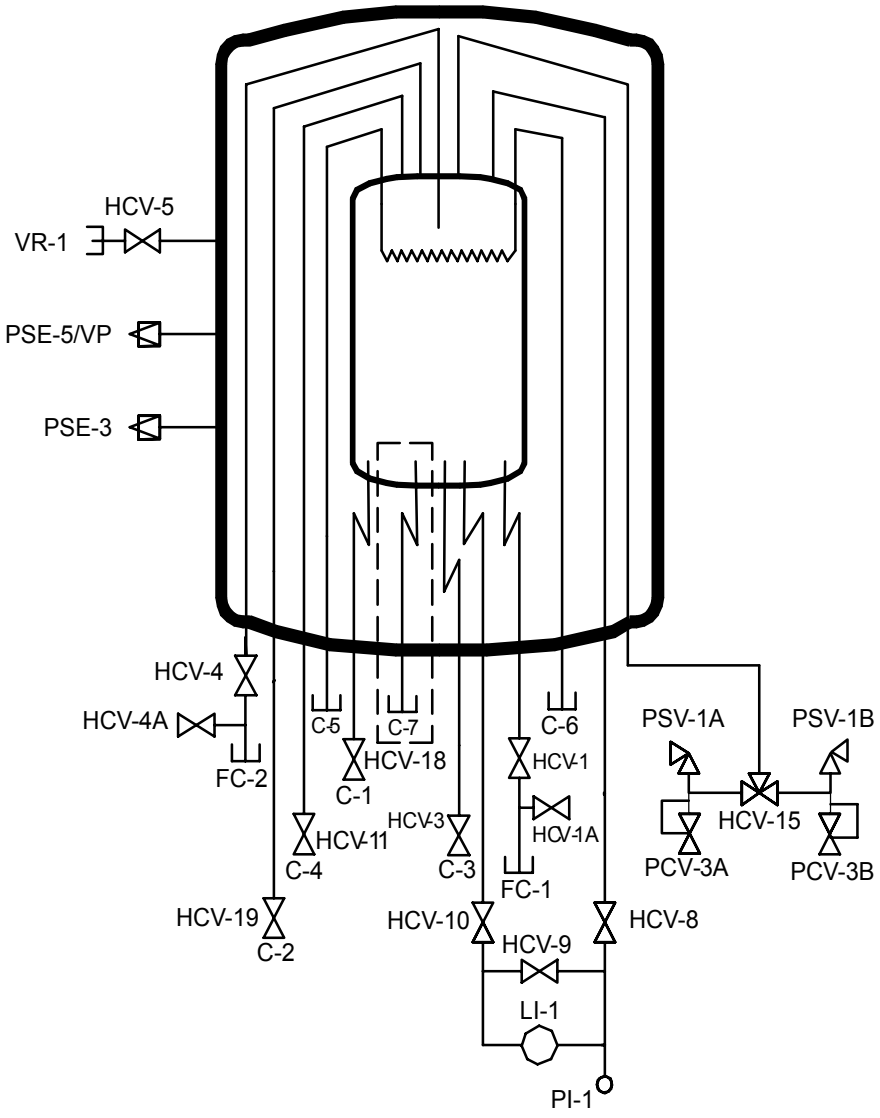
HSCO_2 & N_2O

HORIZONTAL BULK STORAGE SYSTEMS

Specifications

Model	CO_2				N_2O				MAWP*		Length		Width		Height		Weight**		NER %/day
	Gross Capacity		Net Capacity		Gross Capacity		Net Capacity												
	Ton	Tonne	Ton	Tonne	Ton	Tonne	Ton	Tonne	(psig)	(bar)	in	mm	in	mm	in	mm	(lbs)	(kg)	in CO_2 /N_2O
6 Ton	6.9	6.3	6.7	6.0	8.5	7.7	8.0	7.3	350	24.1	188	4,775	68	1,728	80	2,032	8,500	3,856	.24
14 Ton	13.2	12.0	12.6	11.4	12.9	11.7	12.3	11.2	350	24.1	233	5,913	86	2,184	95	2,413	17,400	7,890	.12
30 Ton	32.9	29.8	31.2	28.3	32.1	29.2	30.5	27.7	350	24.1	280	7,112	114	2,900	127	3,226	31,900	14,470	.08
50 Ton	51.1	46.3	48.5	44.0	49.9	45.3	47.4	43.0	350	24.1	396	10,058	114	2,900	127	3,226	43,300	19,641	.06

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



NOMENCLATURE	
Tag	Description
C-1	CONNECTION, AUXILIARY LIQUID
C-2	CONNECTION, AUXILIARY VAPOR
C-3	CONNECTION, PB LIQUID
C-4	CONNECTION, PB VAPOR
FC-1	CONNECTION, FILL
FC-2	CONNECTION, VAPOR RETURN/FULL TRYCOCK
HCV-1	VALVE, BOTTOM FILL
HCV-1A	VALVE, DRAIN
HCV-3	VALVE, PB LIQUID
HCV-4	VALVE, VAPOR RETURN/FULL TRYCOCK
HCV-4A	VALVE, DRAIN
HCV-5	VALVE, VACUUM GAUGE TUBE
HCV-8	VALVE, LI-1 VAPOR PHASE
HCV-9	VALVE, LI-1 EQUALIZATION
HCV-10	VALVE, LI-1 LIQUID PHASE
HCV-11	VALVE, PB VAPOR
HCV-15	VALVE, SAFTEY RELIEF SELECTOR
HCV-18	VALVE, AUXILIARY LIQUID
HCV-19	VALVE, AUXILIARY VAPOR
LI-1	LEVEL INDICATOR, INNER VESSEL
PI-1	PRESSURE INDICATOR, INNER VESSEL
PCV-3A	PRESSURE CONTROL VALVE, ECON VENT
PCV-3B	PRESSURE CONTROL VALVE, ECON VENT
PSE-3	PRESSURE SAFETY ELEMENT, OUTER VESSEL
PSE-5/VP	PRESSURE SAFETY ELEMENT, OUTER VESSEL, VAC PORT
PSV-1A	PRESSURE SAFETY VALVE, INNER VESSEL
PSV-1B	PRESSURE SAFETY VALVE, INNER VESSEL
VR-1	VACUUM READOUT, OUTER VESSEL
	REFRIGERATION OPTION
C-5	CONNECTION, AUXILIARY REFRIGERATION
C-6	CONNECTION, AUXILIARY REFRIGERATION
	DASHED LINE REPRESENTS ADDITIONAL LINE (STANDARD ON 30/50 TON ONLY)
C-7	CONNECTION, SECONDARY AUXILIARY LIQUID

Auxiliary refrigeration valves on HCV-1A and HCV-4A not included in C-5 and C-6 optional N_2O service.

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