Our VSCO₂ & N₂O 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 VSCO₂ and N₂O systems are manufactured with an all-welded outer container to contain our proprietary Composite Super Insulation™ system and superior vacuum technology.

**VACUUM-JACKETED COMPOSITE vs. FOAM INSULATION**

- An ultra-low heat leak – eliminating the need for a costly refrigeration system in most applications.
- No costly down time to refurbish water-soaked or deteriorated foam insulation.
- Lowest lifecycle costs for bulk CO₂ & N₂O storage
- Hold time is 8 times longer than new foam designs

**PRODUCT HIGHLIGHTS**

- Stainless steel inner vessel and piping eliminates dry ice safety concerns & complies with food grade standards
- Inner vessel designed and built to ASME Section VIII, Div. 1 pressure vessel code
- Oxygen cleaned inner vessel and piping per CGA S4.1
- Internal top head cleaning baffle for internal cleaning with external system eliminates need for manway
- CGA fill and return fittings with drain valves standard on all models
- Analog & digital (telemetry ready) liquid level gauges available with flexible stainless steel connecting lines
- 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
- Optional refrigeration system for condensing coil available
- Long-life urethane paint system

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**Thermal Performance - VSCO₂ Vacuum Jacketed vs. Foam CO₂ Tanks**

- 4 Day Hold Time
- 32 Day Hold Time
- Chart Composite Super Insulation
**Nomenclature**

- **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, Safety Relief Selector
- **HCV-18** Valve, Auxiliary Liquid
- **HCV-19** Valve, Auxiliary Vapor
- **LI-1** Level Indicator, Inner Vessel
- **Pl-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, Otr Ves., 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

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Auxiliary refrigeration valves on HCV-1A and HCV-4A not included in C-5 and C-6 optional N₂O service.