

# VSi-CO<sub>2</sub> SERIES

## VERTICAL STORAGE INTEGRATED BULK SYSTEM

The VSi-CO<sub>2</sub> Series is engineered for the efficient supply of carbon dioxide gas in any outdoor installation. All components are tank mounted and prefabricated, minimizing installation time and costs. The VSi-CO<sub>2</sub> Series has other standard features along with pre-engineered options to satisfy all your requirements for a complete turnkey installation. For maximum lifetime thermal efficiency, the VSi-CO<sub>2</sub> Series uses an all-welded outer jacket to contain our proprietary Composite Super Insulation™ system and superior vacuum technology, providing:

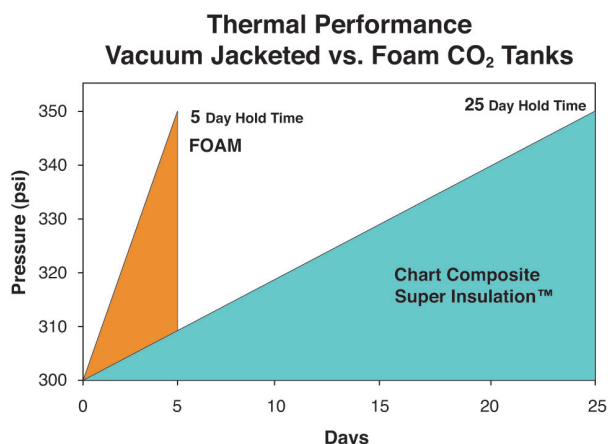
- An ultra-low heat leak – eliminating the need for a costly refrigeration system in most applications
- No downtime to refurbish water-soaked or deteriorated foam insulation

### PRODUCT HIGHLIGHTS

- All-in-one tank mounted design greatly minimizes installation time
- Standard electric PB & process gas vaporizers with controls
- Stainless steel inner vessel & piping eliminates dry ice concerns
- Inner vessel designed & built to ASME Section VIII, Div. 1 code
- Backed by a five-year vacuum warranty
- Adjustable low temperature cutoff switch
- Single field connection for gas use line
- Pressure & liquid level transmitters
- Optional refrigeration system w/ internal vapor condensing coil

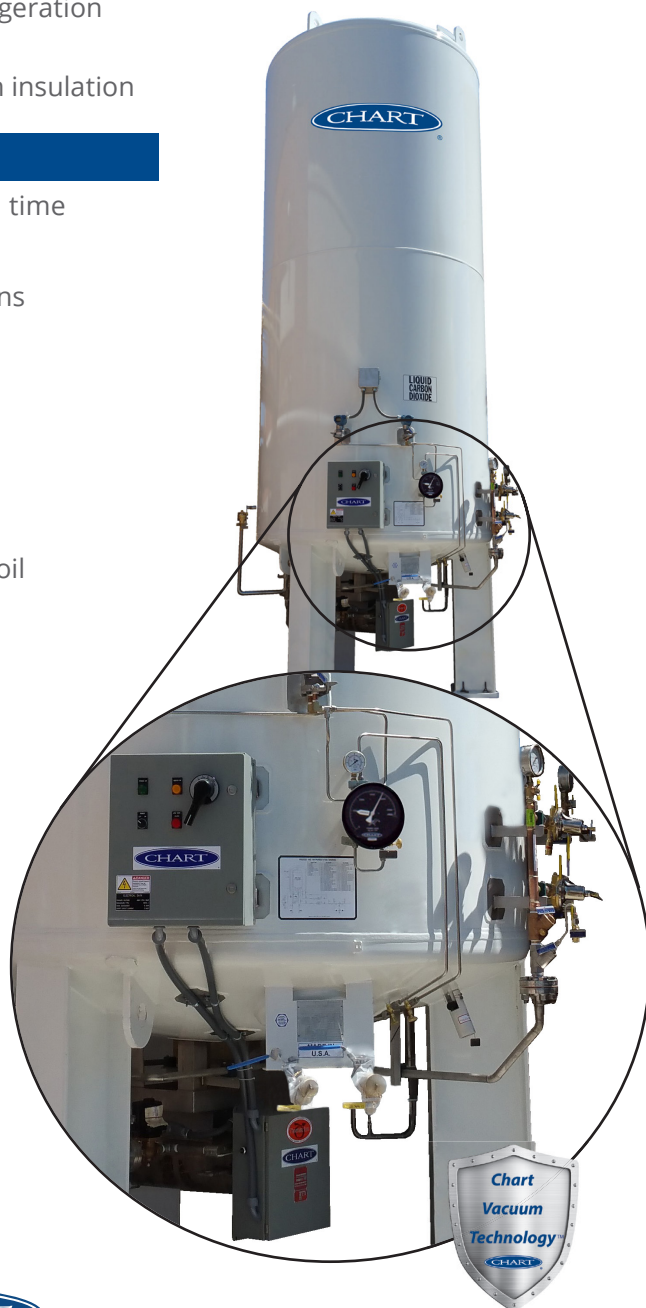
### Vacuum Jacketed vs. Foam CO<sub>2</sub> tanks

- Lowest lifecycle costs for bulk CO<sub>2</sub> storage
- Superior functional performance manages liquid quality
- Hold time is 5 times longer than new foam
- Refrigeration system not required for maintaining heat leak



### IDEAL APPLICATIONS

- Wastewater pH Balancing
- Beverage Carbonation Production
- Modified Atmosphere Packaging (MAP)
- Breweries and Brew Houses
- Greenhouse Growing



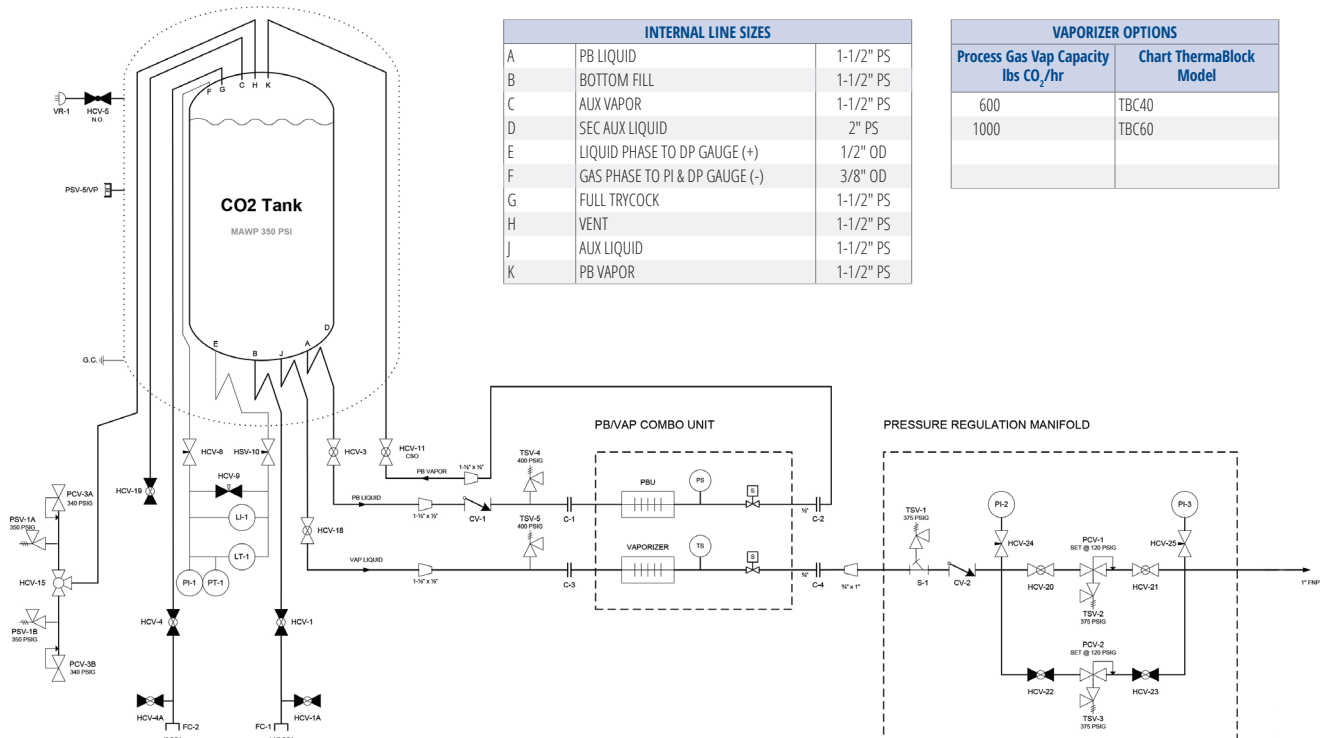
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## VERTICAL STORAGE INTEGRATED BULK SYSTEM

### VERTICAL

Model	Gross Capacity		Net Capacity		MAWP*		Diameter		Height		Weight**		NER %/day in CO <sub>2</sub>
	Ton	Tonne	Ton	Tonne	(psig)	(bar)	in	mm	in	mm	(lbs)	(kg)	
6 Ton	6.9	6.3	6.6	6.0	350	24.1	66	1,727	232	5,893	7,400	3,357	.15
14 Ton	13.2	12.0	12.6	11.4	350	24.1	86	2,184	264	6,706	13,700	6,214	.08
30 Ton	30.7	27.8	29.1	26.4	350	24.1	114	2,900	327	8,306	31,700	14,379	.05
50 Ton	47.7	43.3	45.4	41.1	350	24.1	114	2,900	442	11,227	44,300	20,094	.04

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



NOMENCLATURE					
Tag	Description	Tag	Description	Tag	Description
CV-1	PB INLET CHECK VALVE	LIT-1	LEVEL TRANSMITTER	CV-2	PRESSURE REGULATION MANIFOLD
FC-1	CONNECTION, FILL	PCV-3A	PRESSURE CONTROL VALVE. ECON/VENT	HCV-20	INLET CHECK VALVE
FC-2	CONNECTION, VAPOR RETURN/FULL TRYCOCK	PCV-3B	PRESSURE CONTROL VALVE. ECON/VENT	HCV-21	REGULATOR INLET ISOLATION VALVE
G. C.	GROUNDING LUG	PI-1	INNER VESSEL PRESSURE INDICATOR	HCV-22	REGULATOR OUTLET ISOLATION VALVE
HCV-1	BOTTOM FILL VALVE	PIT-1	PRESSURE TRANSMITTER	HCV-23	REGULATOR INLET ISOLATION VALVE
HCV-1A	BOTTOM FILL DRAIN VALVE	PSV-5/VP	VACUUM PORT	HCV-24	REGULATOR OUTLET ISOLATION VALVE
HCV-3	PB LIQUID VALVE	PSV-1A	PRESSURE SAFETY VALVE, INNER	HCV-25	PRESSURE GAUGE ISOLATION VALVE
HCV-4	FULL TRYCOCK / VAP. RETURN VALVE	PSV-1B	PRESSURE SAFETY VALVE, INNER	PI-2	PRESSURE GAUGE
HCV-4A	FULL TRYCOCK/ VAP RETURN DRAIN VALVE	TSV-4	TEMPERATURE SAFETY VALVE	PI-3	PRESSURE GAUGE
HCV-5	VACUUM GAUGE TUBE VALVE	TSV-5	TEMPERATURE SAFETY VALVE	PCV-1	PRESSURE REGULATOR
HCV-8	LI-1 VAPOR PHASE VALVE	VR-1	VACUUM READOUT	PCV-2	PRESSURE REGULATOR
HCV-9	LI-1 EQUALIZATION VALVE			S-1	INLET STRAINER
HCV-10	LI-1 LIQUID PHASE VALVE			TSV-1	TEMPERATURE SAFETY VALVE
HCV-11	PB VAPOR VALVE			TSV-2	TEMPERATURE SAFETY VALVE
HCV-15	SAFETY RELIEF SELECTOR VALVE			TSV-3	TEMPERATURE SAFETY VALVE
HCV-18	AUXILIARY LIQUID VALVE				
HCV-19	AUXILIARY VAPOR VALVE				
LI-1	INNER VESSEL LEVEL INDICATOR				

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