

VTC SERIES

FULL EN 13458

Vertical Storage tanks
for Carbon Dioxide
and Nitrous Oxide

VTC series of cryogenic tanks are designed in accordance with the requirements for safe, easy and economical operation. Many of the features have been incorporated in close collaboration with leading industrial gas companies.

VTC series tanks are vertical, stationary, pressure vessels with perlite insulation for long term storage of cryogenic liquefied gases like CO₂, N₂O under pressure.

VTC series are available in capacities from 4,000 to 67,000 liters with pressures of 25 bar.

- in accordance with EN 13458 and conforming to directive 2014/68/EU
- fine grain / low temperature carbon steel inner vessel
- 4 legs design
- easy lifting and low cost erection using a single crane
- bolted bonnet globe valves with stainless steel bodies
- high performance PBU with optional electrical heater as PBU
- easily accessible relief valves with outlets directed away from the operating area
- with durable environmentally friendly coating for industrial standards

Chart Vacuum Technology®

Providing the best insulation system to protect your valuable gases from harsh ambient conditions results in lower pressure rise and lower losses, yielding better gas utilization.

Chart Vacuum Technology® is at the core of why Chart is recognized around the world as the premier supplier of cryogenic equipment.



Chart Industries Group D&S

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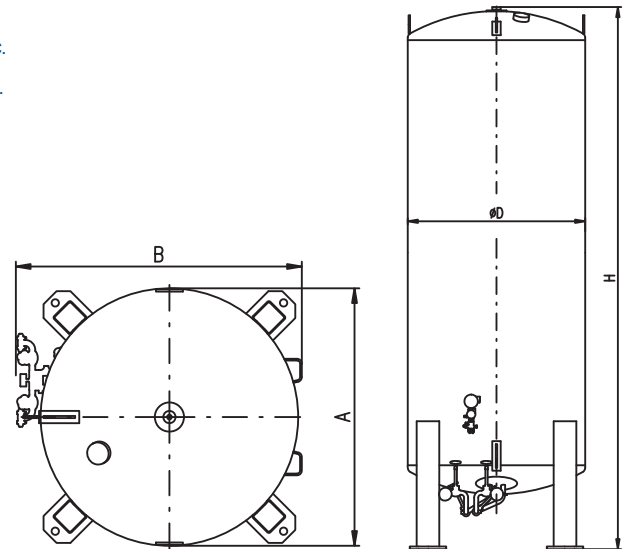
Specifications

Type		VTC4	VTC7	VTC10	VTC12	VTC17	VTC22	VTC27	VTC23	VTC33	VTC43	VTC36	VTC52	VTC60	VTC67	
Gross volume	Liters	4 120	7 270	10 430	11 630	16 610	21 590	26 570	22 920	33 080	43 240	36 130	51 700	59 430	67 270	
Net capacity (95% filling) ¹⁾	Liters	3 910	6 910	9 910	11 050	15 780	20 510	25 240	21 770	31 430	41 080	34 320	49 120	56 460	63 910	
	LN ₂ O	kg	4 340	7 300	10 470	11 670	16 670	21 660	26 600	23 000	33 190	43 380	36 250	51 870	59 630	67 490
	LCO ₂ ²⁾	kg	4 330	7 640	10 960	12 220	17 450	22 680	27 910	34 740	45 410	37 950	54 300	62 410	70 650	
Daily evaporation rate LCO ₂ ^{3)25 barg}	%/d	0,18	0,14	0,12	0,12	0,10	0,09	0,08	0,07	0,06	0,05	0,06	0,05	0,05	0,04	
Max. withdrawal rate LCO ₂ ⁴⁾	kg/h	115			140			160			205					
Max. withdrawal rate LCO ₂ ⁵⁾	kg/h	1 180			1 180			1 180			1 180					
Weight, empty	25 barg	kg	3 550	5 200	6 910	7 620	9 920	12 190	14 610	14 540	19 340	24 160	19 700	26 040	29 170	32 380
Diameter (D)	mm	1 800			2 100			2 500			3 000					
Overall width (A)	mm	2 000			2 100			2 500			3 000					
Overall depth (B)	mm	2 150			2 350			2 800			3 280					
Height (H) ⁶⁾	mm	4 030	5 840	7 650	6 430	8 430	10 430	12 430	8 610	11 610	14 610	8 890	11 890	13 390	14 950	

Notes:

- 1) Filling 95 % (equilibrium state at 1,013 bar).
- 2) Filling 95 % (equilibrium state at 10 bar).
- 3) based on pressure EN12213 (100 kPa and 15°C ambient temperature).
- 4) Stated withdrawal rates are with the standard flat fin PBU vaporizer at tank pressure 15 barg and 10°C. Stated withdrawal rates are for short term withdrawal (up to 3 hrs) at tank pressure 10 barg.
- 5) optionally in case of higher withdrawals of CO₂, electric vaporizer needed to be ordered, rate is for 4 kW.
- 6) Tanks with extended legs (for filling station) are app. 790 mm higher.

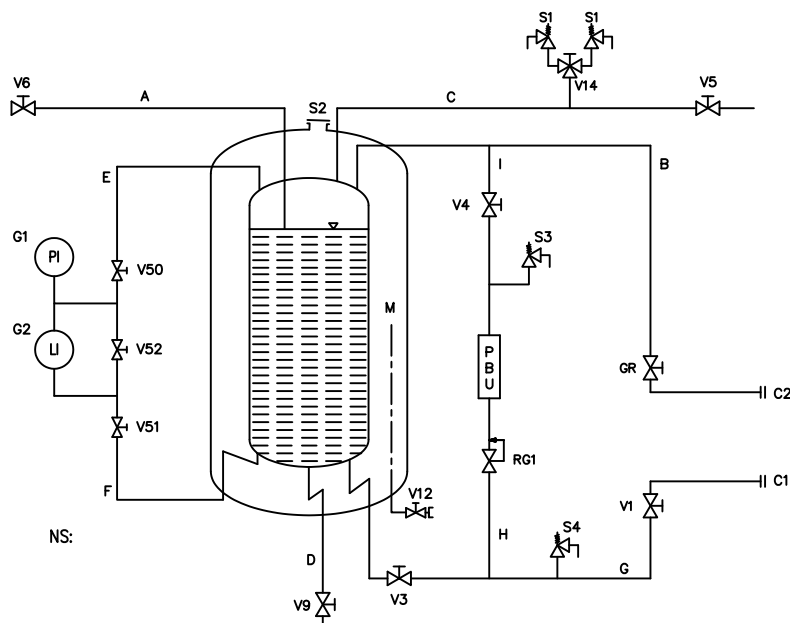
BASIC DIMENSIONS



Optional arrangement with electric heater

Nomenclature

- C1** Fill connection
- C2** Gas return connection
- GR** Gas return valve
- LI** Level indicator
- PBU** Pressure building vaporizer
- PI** Pressure indicator
- RG1** Pressure building regulator
- S1** Safety valves, inner vessel
- S2** Vacuum safety valve
- S3** Thermal relief valve, PB circuit
- S4** Thermal relief valve
- V1** Bottom fill valve
- V3** Isolation valve, bottom filling
- V4** Valve, PB outlet
- V5** Valve, vapor vent, gas outlet
- V6** Valve, trycock
- V9** Valve, liquid outlet
- V12** Vacuum pump down
- V14** Valve, safety relief section
- V50** Valve, LI vapor phase
- V51** Valve, LI liquid phase
- V52** Valve, LI equalization



* standard model – not all options shown



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