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CRYOGENIC TANK

Tank designed for the storage of liquid gas at cryogenic temperatures, specifically CO₂.

Made up of two concentric vessels build out of carbon steel with highly efficient heat insulation between them.

Vertical tank supported on four feet anchored to the ground.

Tank capacity range: **6, 11, 15, 20, 32, 46** and **60 m³**.

DESIGN

Service pressure: **22 bar**. For other options, please consult.

Service temperature: **-40 °C**.

Type approval: in accordance with European Pressure Equipment directive: **2014/68/UE** and **EN 13445** harmonised standards for the directive.

INNER TANK

The choice of inner tank material between carbon steel or stainless steel depends on the degree of humidity and purity of the gas to be stored in it and the cleanliness level required.

- A) Inner tank made of **carbon steel specifically for low temperatures**.
- B) Please ask us about the Lapesa range of inner tanks made of **austenitic stainless steel**.

THERMAL INSULATION

The grade of thermal insulation in the tank and its efficiency are critical for ensuring minimal gas leakage and to enable long-term storage of liquid gases at constant low temperature.

In **lapesa** tanks, this is achieved by stuffing the cavity between the two tanks with specific, high-performance insulating material and a high degree of vacuum in the chamber, which includes an absorbent to provide greater vacuum stability. Also available single wall tank with rigid injected polyurethane

OUTER FINISH

The outer surface is shot blasted and protected with two coats of paint: a highly efficient anti-corrosion primer followed by a white glossy polyurethane topcoat. For single wall tanks with rigid injected polyurethane, the outer finish would be that of the metallic outer layer.

FITTINGS

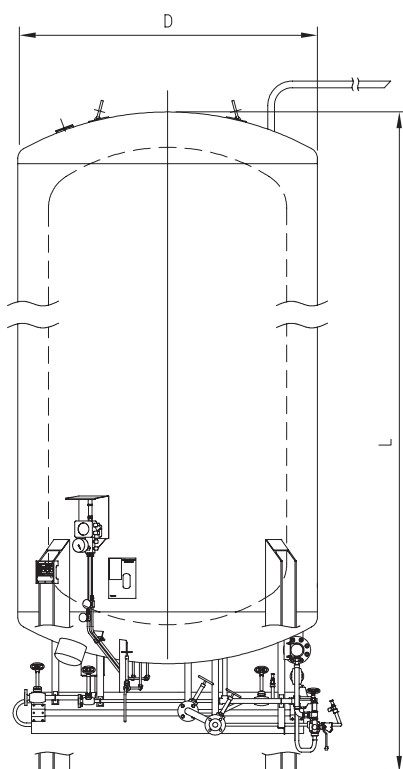
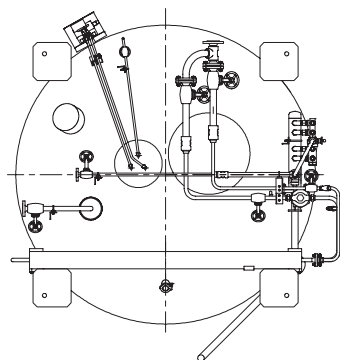
Stainless steel piping: equipped throughout with stainless steel fittings (branch pipes and cut-off valves).

PRESSURE CONTROL

Tanks are fitted with an automatic pressure increase system (outer coil) to off-set any drop in pressure that may take place when draining off gas or liquid.



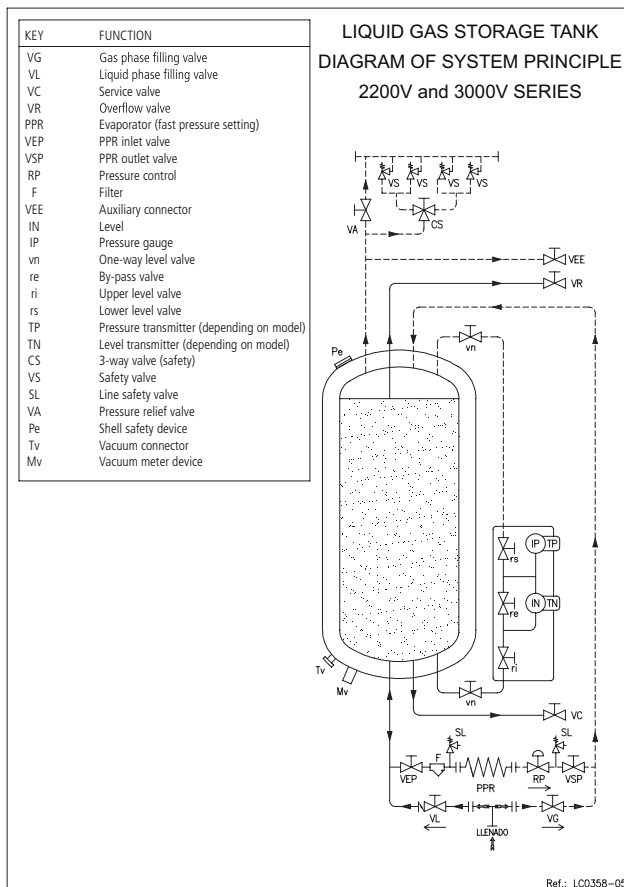
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INNER TANK MADE OF CARBON STEEL

Models with 6, 11, 15, 20, 32, 46 & 60 m³ capacity

These drawings and table represent the double wall tanks with vacuum and insulating material



MODELS AND MAIN FEATURES

MODELS	LCC 6 V	LCC 11 V	LCC 15 V	LCC 20 V	LCC 32 V	LCC 46 V	LCC 60 V
Volume (m ³)	6,1	10,6	15,2	19,8	32,0	46,0	59,9
Outer diameter D (mm)	2.200	2.200	2.200	2.200	3.000	3.000	3.000
Total height L (mm)	4.250	6.200	8.150	10.100	8.450	11.350	14.250
Weight when empty (kg)	4.400	7.200	9.300	11.600	18.900	22.500	25.900
Weight of CO ₂ contents (kg)*	6.400	11.130	15.960	20.790	33.600	48.300	62.900
Maximum liquid discharge rate (kg/h)**	400	400	400	400	950	950	950
Evaporation rate (% CO ₂ /day)	0,06	0,05	0,04	0,04	0,03	0,03	0,03

* Weight at 10 bar pressure and tank 95% full.

** Flow rate for standard PBU (pressure build up unit) and with 14 bar pressure. For other options, please consult.

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ISO 9001
BUREAU VERITAS
Certification



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