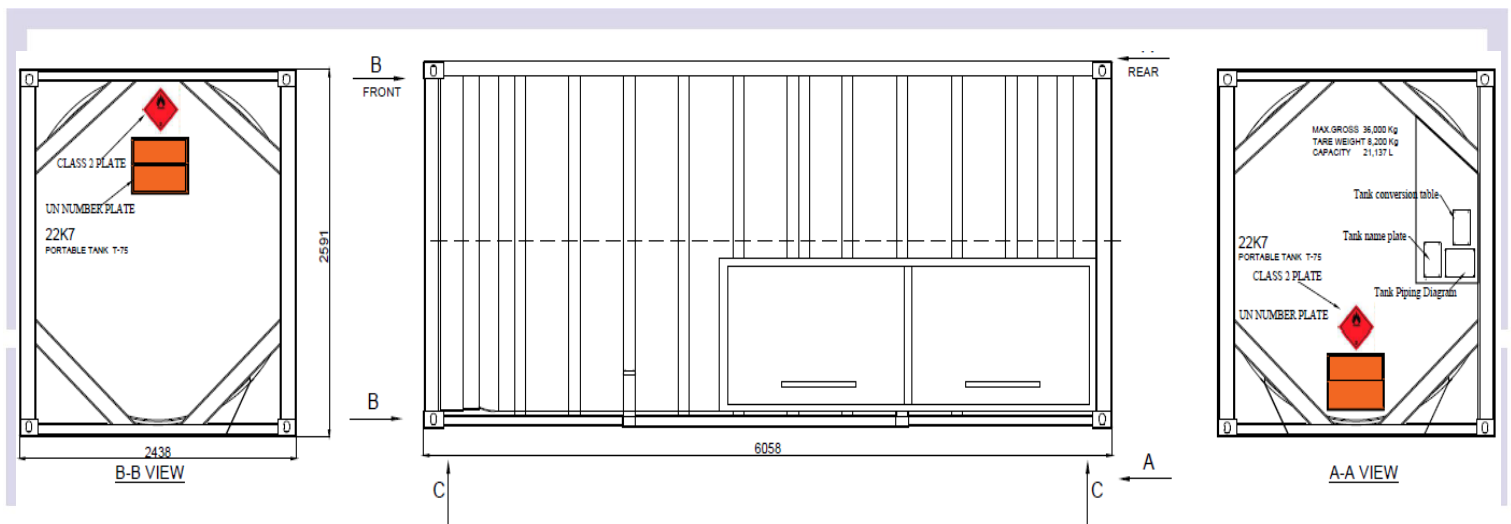


20 FT CRYOGENIC CONTAINER SPECIFICATIONS

TYPE TANK	Volume	Dimension Container (mm)	MAWP	Container Empty Weight (kg) (±3%)	Payload(kg) (±3%)
20 FT 1CCC	21500 litres	2438x2591x6058	22 barg	8250	LOX 22000 kg LIN 16500 kg LAR 22000 kg CO2 21500 kg ETHILEN 11507 kg LNG 9510 kg LN2O 25841 kg



1. INNER VESSEL SPECIFICATIONS

- 1.1 Design Codes:** 1496-3 /ADR/RID/IMDG /TIR /CSC/EN 13530-2 & ANNEXC/ASME SEC.VIII DIV.1
- 1.2 Design Temperature:** -196 °C / + 20 °C
- 1.3 Material:** 1.4301/1.4307 EN 10028-7
- 1.4 Maximum Working Pressure:** 22 bar
- 1.5 Baffles:** According Standard Requirements EN 10204 3.1
- 1.6 NDT:** %100 VT, %100 X-RAY on the inner vessel, 100% dye penetrant on the inner vessel nozzles

2. OUTER VESSEL SPECIFICATIONS:

- 2.1 Material:** Carbon Steel 1.4301/1.4307 EN 10028-7 S355J2 EN 10025-2 (OPTIONAL)
- 2.2 Design Temperature:** -40 °C / + 50 °C
- 2.3 Design Pressure:** -14 PSI / -1 bar
- 2.4 NDT:** %100 VT,
- 2.5 %100 Helium Check**

3 SAFETY DEVICES (PLEASE SEE THE P&I DIAGRAM)

3.1. Safety Valves:

- ✓ 4 x 22 barg each pair is connected to each other with a diverter valve. Line safety valves will be placed on locations where gas pressure might potentially increase at.
- ✓ Herose

3.2. Vacuum Accerories

- ✓ **Vacuum evacuation valve:**
Jacket Relief (Vacuum safety disc) calculated in accordance with design codes mounted on outer vessel surface.
- ✓ **Vacuum Reading TC Tube:** (DV6-R) + Hokes TC Tube Valve
- ✓ **Vacuum Valve**

3.3. EMERGENCY ACCESSORIES:

- ✓ **Emergency buttons:**
1 emergency buttons are mounted, (To be able to open/close each of the pneumatic valves on the Container.)
- ✓ **Emergency button panel:**
Within the cabinet to be able to open/close each of the pneumatic valves

4 PIPING

- ✓ **Material:** Seamless AISI 304/304L stainless steel or equivalent sizes and thicknesses are ranged from.
SCH 10 to 80 (2mm to 6mm) according to EN 13530-2 requirements

Note: All pipe connections will be welded with TIG welding method

5 VALVES

- ✓ **Globe Valves:** Please check option tables for brand
- ✓ **Pneumatic Valves:** Please check option tables for brand
- ✓ **Safety Valves:** Please check option tables for brand

- ✓ **3-way diverter valve:** Please check option tables for brand
- ✓ Herose
- ✓ Please see attached P&I Diagram

6 PRESSURE GAUGE/MANOMETER

- ✓ 0-40 Barg and another one for oil pressure. One within the cabinet
- ✓ Pakkens
 - Please check option tables for brand

7 LIQUID LEVEL GAUGE

- ✓ Readings to be in % or mmWC
- ✓ Samson Media 5

8 CGA – FILL CONNECTIONS

- ✓ Customer will supply the filling connections.

9 INSULATION

- ✓ **Insulation Type:** Super insulation + Vacuum
- ✓ **Warm Vacuum retention test:** To be applied over 72 hours at ambient temperature within the inner vessel warm vacuum guarantee at below 50 microns
- ✓ **Cold Retention Test:** To be applied over 72 hours with liquid nitrogen up to at least 25% of the inner vessel. Cold retention vacuum is below 10 microns.

10 WELDING PROCEDURES

- ✓ Circumferential Welds-Submerged Arc Welding
- ✓ Parts exposed to pressure – TIG
- ✓ WPS, PQR's, and process tests (Destructive tests according to code requirement, vs.) will be placed in technical document.

11 CLEANING PROCEDURE

- ✓ Cleaning Procedures to be performed in accordance with, EN 12300 "Cryogenic Vessels-Cleanliness for cryogenic Service".
- ✓ All piping and inside of tank will be purified from oil.

12 PAINT PROCEDURE

- ✓ SA 2 ½" Sand blasting
- ✓ 50-75 microns zinc primer
- ✓ 100-150 microns epoxy prime coating
- ✓ 70-80 microns – polyurethane coating
- ✓ Min. 220 microns coating
- ✓ Paint Color: White (Ral 9010)

13 3RD PARTY APPROVAL

- ✓ Tank inspected and stamped by European Approval Agency

- ✓ Technical Documents will be submitted on product delivery time.
- ✓ All Certifications will be provided to customer upon project completion.

14 DOCUMENTS TO BE DELIVERED TO CUSTOMER:

15.1. Certificates of Product

15.2. Technical Documents and Certificates

- ✓ Declaration of Conformity
- ✓ Technical Properties
- ✓ Schematic Drawing of Product

15.3. Quality Plan

15.4. Material Certificates

- ✓ Material – Equipment List and Certificates
- ✓ P&I Diagram

15.5. Welding Procedures, Welder List and Certificates

- ✓ Certified Welder List
- ✓ Weld Map
- ✓ Welder's Qualification Certificates

15.6. Manufacturing Control Reports

- ✓ Cutting Plan for Body and Heads
- ✓ Welding Arrangement and Welder Id
- ✓ Dimensional Control Report For Heads of Tank
- ✓ Mechanical and Bending Property Report of Welding Test Plate

15.7. Non Destructive Test Reports

- ✓ Radiographic Test Arrangement Chart
- ✓ Reports of Radiographic Test
- ✓ Certificates of RT Personnel
- ✓ Penetrant Test Arrangement Chart
- ✓ Penetrant Test Reports
- ✓ Certificate of PT Personnel
- ✓ Visual Examination Report
- ✓ Certificate of VT Personnel

15.8. Test and Control Report

- ✓ Tank Dimension Control Report

- ✓ Mechanical Cleaning Report
- ✓ Tank Cleaning Report
- ✓ Pressure Test Report
- ✓ Annular Space Tightness Test Report
- ✓ Helium Tightness Test Report
- ✓ Moisture Control Report
- ✓ Vacuum Test Report
- ✓ Safety Valves Set Pressure Check Report
- ✓ Tank and Accessories Final Leak Test Report
- ✓ PBU Vaporize Pressure Test Report
- ✓ Grounding Test Report
- ✓ Paint Control Report

15.9. Other Documents

- ✓ Copy of Name Plates
- ✓ Tank Calibration Chart

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