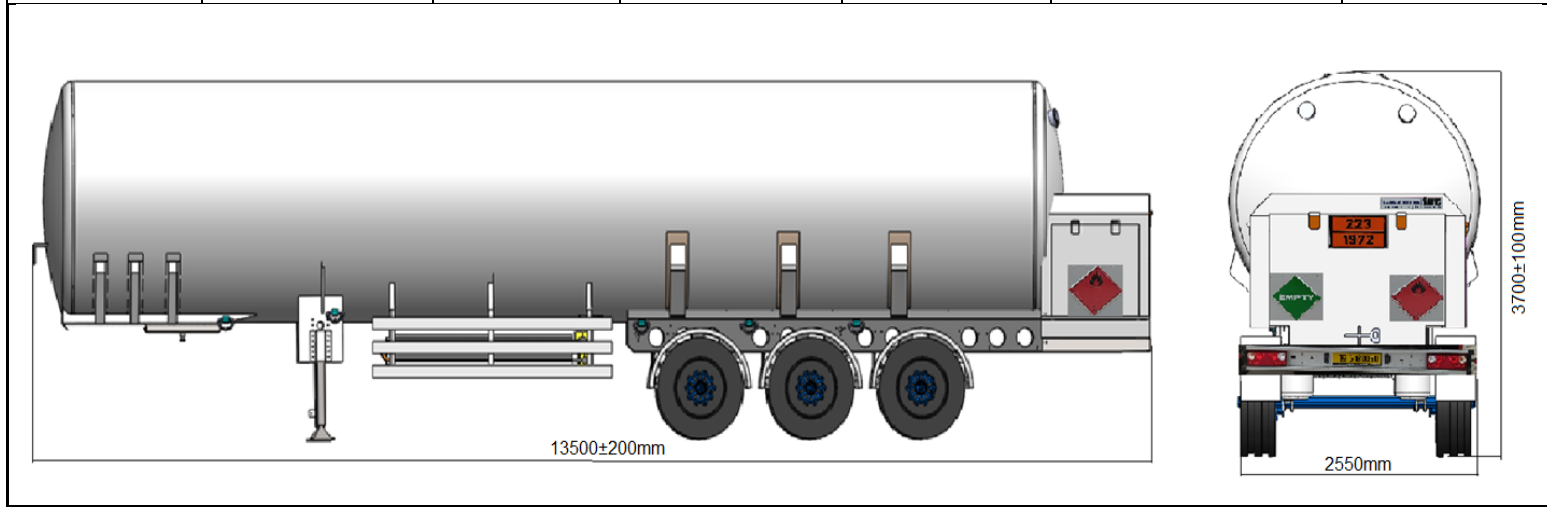




## 52M<sup>3</sup> LNG CRYOGENIC TRAILER SPECIFICATIONS

Volume	Diameter Outer vessel (mm)	MAWP	MAWP Trailer Empty Weight (kg) (±3%)	Tractor Weight (kg)	Payload(kg) (±3%)	Max Weight in KG
52000 liters	2550	7 barg	12700	7500	19800	40000



### 1. INNER VESSEL SPECIFICATIONS

- 1.1 **Design Codes:** ADR + TPED + EN 13530-2 + IMDG
- 1.2 **Design Temperature:** -196 °C / + 50 °C
- 1.3 **Material:** Stainless Steel EN 10028-7
- 1.4 **Maximum Working Pressure:** 7 bar
- 1.5 **Baffles:** According Standar Requirements
- 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:** EN 10025-2 S355J2
- 2.2 **Design Temperature:** -20 °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 7 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:**

3 emergency buttons are mounted, 1 in cabinet 2 on legs – (To be able to open/close each of the pneumatic valves within cabinet and on each side of the semi-trailer.

- ✓ **Emergency button panel:**

Within the cabinet to be able to open/close each of the pneumatic valves

### **4 PIPING**

- ✓ **Material/Malzeme:** 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

### **6 PRESSURE GAUGE/MANOMETER**

- ✓ 0-10 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
- ✓ Samsom Media 5
  - Please check option tables for brand

## **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 PUMP (OPTIONAL)**

- ✓ Hydraulic Pump 600 liter flow rate
- ✓ All hydraulic connections for proper pump operation
  - Please check option tables for brand

## **11 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.

## **12 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.

## **13 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)

## **14 3RD PARTY APPROVAL**

- ✓ Tank inspected and stamped by European Approval Agency
- ✓ Technical Documents will be submitted on product delivery time.
- ✓ All ADR Certifications will be provided to customer upon project completion.

## **15 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

## **16 TRAILER SUB FRAME SPECIFICATIONS**

- ✓ **Axles:** BPW Disk Brake Axels ( tri axel – single tires) or equivalent.
- ✓ **Breaking System:** WABCO EBS-ABS
- ✓ **Rims:** Aluminum.
- ✓ **Optional** spare tire is available to be located on the trailer.
- ✓ **King Pin:** JOST 2 “ or applicable equivalent
- ✓ **Parking Legs:** Jost double telescopic, 24 ton capacity or applicable equivalent
- ✓ **Cabinet:** Aluminum
- ✓ **Lighting:** Ex-proof lights will be used inside and outside of cabinet ADR approved.
- ✓ **Rear bumper:** to be Fold up bumper will be used in accordance with ADR approved.
- ✓ **Fire Extinguishers:** 2 x (fire extinguisher cabinets will be placed on the side faces of both sides of the tank.)
- ✓ **Fenders:** Italian type, glossy black, EU fenders
- ✓ **Tool Box:** EU made, black shiny
- ✓ **Electricity Connections :** Europoint Aspock ( ADR Approved)
- ✓ **Anti-tow breaking system:** Wabco
- ✓ **Earthing cable:** 20 meters of earthing cable to be located in the rear cabin