TANKERS FOR TRANSPORT OF LPG

Semi-trailer tankers or truck-mounted tanks with the option of complete transfer equipment for LPG transport and supply.

Lapesa LPG tanks, with volume capacities starting at 15 m³ for the rigid truck-mounted type and at 56 m³ for semi-trailer tankers, adapt to the specific demands of individual projects and their requirements in terms of tank and/or vehicle characteristics.

General/standard characteristics
- Tank for the transport of ADR class 2 liquefied gas under pressure.
- Design and construction according to ADR.
- Product to be contained: LPG (UN 1965), commercial propane and butane.
- With parasol aluminium plate covering 120° of cylinder.
- ADR design pressure: 25 bar.
- Maximum working pressure: 19.2 bar.
- Test pressure: 25 bar.
- Design temperature: -20°C to +50°C.

Controls and tests
- Inspections as per design code.
- 100% weld x-raying.
- Hydraulic test at 25 bar.
- Testing of tightness of unit with transfer equipment.
- Tests according to ADR.

Basic equipment
- Internal head valves with flow limiter and opening via automatic return lever, for connections to liquid phase and gas phase, with "fire-safe" type ball valve, sealable with blind cap.
- Valve with pressure gauge and high point indicator.
- Background drain valve.
- Rotating level.
- Thermowell temperature indicator.
- Safety valve (optional).
- DN500 manhole located on rear head.
- Electrical and pneumatic installation, according to ADR.

Transfer equipment
- Side or rear metal cabinet with liquid LPG transfer equipment.
- Background valves.
- Liquid transfer pump. Hydraulically or mechanically operated from drive shaft.
- Liquid LPG meter, with degasifier and temperature compensation.
- Reel for winding flexible supply hose. Hydraulically operated.
- Hose end with shutoff valve and ACME coupling.
- Decompression valves on pipes.
- Earth wire reel.

External finish
- Shot-blasting of unit SA 2 ½.
- Anti-corrosion protection of surface with coat of polyamide epoxy (60 microns).
- Top coat of white polyurethane (60 microns).

Options
- Design pressure and temperatures.
- Thicknesses, paint and colour of external finish.
- Signs on tank body.
SEMI-TRAILER TANKERS FOR TRANSPORT OF LPG
LT42 - LT48

SEMI-TRAILER TANKERS FOR TRANSPORT OF LPG

Semi-trailer tankers for transport of liquefied petroleum gases (LPG), with tank capacities of 42 or 48 m³ on a 3-axle trailer.

**Products to be transported:** class-2 gases (propane, butane, butylene, isobutene, propylene) and mixtures (A, A0, A01, A1, B, B1, B2, C).

**One compartment LPG tanker,** with internal baffles for partial transport.

**With aluminum sunshade** comprising 120° of the vessel, at upper side.

**Cabinet with service equipment.**

### VESSEL

- **Vessel homologation:** As transportable pressure vessel, according to 2010/35/UE (π marking), ADR, EN12493:2008
- **Vessel external diameter:** 2450 mm
- **Section:** Cylindrical, one compartment
- **Material:** Standardized carbon steel plate for pressure vessels, resilient to -20°C
- **Max. operating pressure:** 19,2 bar
- **Design pressure:** 25 bar
- **Hydraulic test pressure:** 25 bar
- **Design temperatures:** From -20 to +50 °C
- **Inspections and controls:** According to ADR requirements
- **Tank and chassis:** Both finished in white color
- **Inside vessel:** Clean
- **Outside vessel:** Sandblasted SA 2 ½ *
  - Primer: 65 microns epoxy polyamide
  - Topcoat: 55 microns white polyurethane
- **Documentation:**
  - Manufacturing dossier
  - ADR documentation
  - Instructions manual
  - Vehicle homologation documents

### ROLLING UNIT FEATURES

- **AXLES/WHEELS:** Three axles BPW type with 20” bushing.
  - Two wheels per axle. Disc brake: 430x45.
- **SUSPENSION:** Pneumatic.
- **TIRES:** Two wheels per axle. Tire size 385/65 R 22.5.
  - Continental. Aluminum wheel rims, semi polished.
- **KING-PIN:** 2” king-pin with plate, removable from outside, as per standard ISO 337.
- **BRAKE SYSTEM:** According to 71/320/CE Directive. Twin-circuit EBS 2SM + RSS.
  - Coupling heads as per standard ISO 1728, with filter.
  - Air brake for parking with pneumatic actuators on 2 axles.
- **PARKING LEGS:** Mechanically operated, telescopic. Static load: 50 ton. Max raised load: 24 ton.
- **ELECTRICAL INSTALLATION:** 24 Volt power rating, two 7-pole sockets as per ISO 1185 (24N) and 3731 (24S).
  - Rear lights with 6 functions: reversing light, fog light, brake light, 2 position lights, flashers lights.
  - Side lights. Hermetically sealed connection box.
- **OTHERS:** Rubber mudguards with rain flaps for each wheel. Aluminum rear fender, CE approved.
- **ACCESSORIES:** Set of wheel and hub spanners. Wheel gauges. Tool box. Two 9 kg dry powder extinguishers (box included). Product plates and ADR signage. Front and rear reflector devices. Chocks.

### TANKER TYPE

<table>
<thead>
<tr>
<th>TANKER TYPE</th>
<th>LT42</th>
<th>LT48</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volumetric capacity</td>
<td>m³</td>
<td>42</td>
</tr>
<tr>
<td>Tare weight of semi-trailer</td>
<td>Tn</td>
<td>11,8</td>
</tr>
<tr>
<td>Product (LPG, 85%, 0,5 Kg/l) load</td>
<td>Tn</td>
<td>17,7</td>
</tr>
<tr>
<td>Tractor unit</td>
<td>Tn</td>
<td>7,0</td>
</tr>
<tr>
<td>Total weight of fully loaded vehicle</td>
<td>Tn</td>
<td>36,5</td>
</tr>
<tr>
<td>L: Set length</td>
<td>mm</td>
<td>10,270</td>
</tr>
</tbody>
</table>

* Dimensions and estimated weights
LIQUID PHASE CONNECTION (FILLING AND OUTLET):
- Connection to tank: 3" flange.
- 3" flanged internal valve with excess flow and pneumatic actuator.
- Ball valve 3'', fire safe.
- Set WECO 2".

GAS PHASE CONNECTION (FILLING AND OUTLET):
- Connection to tank: 2'' threaded.
- 2" threaded internal valve with excess flow and pneumatic actuator.
- Ball valve 2'', fire safe.
- Set WECO 2''.

PURGE: Drain valve 1 1/4" with manual opening and safety valve.

MANHOLE: Size ND450. Equipment included:
- Manual rotary level 1".
- Multivalve for manometer and maximum level indicator.
- Pocket sensor for thermometer.

SAFETY VALVE:
- Safety: 2 threaded valves 3" NPT, Rego brand. In upper generatrix.

PNEUMATIC INSTALLATION: Pneumatic levers system for opening and closing the internal valves. Emergency stop button with auto-lock for closing internal valves and pump.

HYDRAULIC INSTALLATION:
- Quick connection for hydraulic connection to tractor head.
- Valve for actuating the hydraulic motor of LPG pump.
- Elements to be installed on tractor head (out of Lapesa scope):
  - Hydraulic pump for actuating the hydraulic motor of LPG pump.
  - Oil tank.
  - Refrigeration system for hydraulic circuit.
  - Rest of necessary valves for the correct operation of the hydraulic circuit.

OTHER ELEMENTS
- Tool box.
- Two 12 kg dry powder extinguishers (inside box).
- Product plates and ADR signage.
- Reel for grounding (earthing).

OPTIONAL
- Tank inertization with nitrogen.

SERVICE EQUIPMENT: Cabinet for liquid phase and gas phase connections (without transfer equipment).
SEMI-TRAILER TANKERS FOR TRANSPORT AND DISTRIBUTION OF LPG

Semi-trailer tankers for transport and distribution of liquefied petroleum gases (LPG), with tank capacities of 42 or 48 m³ on a 3-axle trailer.

Products to be transported: class-2 gases (propane, butane, butylene, isobutene, propylene) and mixtures (A, A0, A01, A1, B, B1, B2, C).

One compartment LPG tanker, and with internal baffles for partial transport.

With aluminum sunshade comprising 120° of cylinder, at upper side.

Cabinet with transfer equipment. The cabinet with transfer equipment is available with or without autofilling system.

<table>
<thead>
<tr>
<th>TANKER TYPE</th>
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<th>LTT48</th>
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<tbody>
<tr>
<td>Volumetric capacity</td>
<td>m³</td>
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* Dimensions and estimated weights

VENUESS

Vessel homologation
As transportable pressure vessel, according to 2010/35/UE (t marking), ADR, EN12493:2008
Vessel external diameter
2450 mm
Section
Cylindrical, one compartment
Material
Standardized carbon steel plate for pressure vessels, resilient to -20°C
Max. operating pressure
19.2 bar
Design pressure
25 bar
Hydraulic test pressure
25 bar
Design temperatures
From -20 to +50 °C
Inspections and controls
According to ADR requirements
Tank and chassis
Both finished in white color
Inside vessel
Clean
Outside vessel
Sandblasted SA 2 ½''
Primer: 65 microns epoxy polyamide
Topcoat: 55 microns white polyurethane

Documentation
Manufacturing dossier
ADR documentation
Instructions manual
Vehicle homologation documents

ROLLING UNIT FEATURES

- **AXLES/WHEELS:** Three axles BPW type with 20” bushing. Two wheels per axle. Disc brake: 430 x 45.
- **SUSPENSION:** Pneumatic.
- **TIRES:** Two wheels per axle. Tire size 385/65 R 22.5. Continental. Aluminum wheel rims, semi polished.
- **KING-PIN:** 2” king-pin with plate, removable from outside, as per standard ISO 337.
- **BRAKE SYSTEM:** According to 71/320/CE Directive. Twin-circuit EBS 2SM + RSS. Coupling heads as per standard ISO 1728, with filter. Air brake for parking with pneumatic actuators on 2 axles.
- **PARKING LEGS:** Mechanically operated, telescopic. Static load: 50 ton. Max raised load: 24 ton.
- **ELECTRICAL INSTALLATION:** 24 Volt power rating, two 7-pole sockets as per ISO 1185 (24N) and 3731 (24S). Rear lights with 6 functions: reversing light, fog light, brake light, 2 position lights, flashers lights. Side lights. Hermetically sealed connection box.
- **OTHERS:** Rubber mudguards with rain flaps for each wheel. Aluminum rear fender, CE approved.
- **ACCESSORIES:** Set of wheel and hub spanners. Wheel gauges. Tool box. Two 9 kg dry powder extinguishers (box included). Product plates and ADR signage. Front and rear reflector devices. Chocks.
P&I FOR TANKERS LT42 & LT48

**TRANSFER EQUIPMENT WITHOUT "AUTO-FILLING"**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Pump aspiration line</td>
<td>3&quot; flanged internal valve with excess flow and pneumatic actuator</td>
</tr>
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<td>Pump autofilling line</td>
<td>Ball valve 2&quot; // 3 ¼&quot; MACME connection</td>
</tr>
<tr>
<td>Pump return line</td>
<td>1 ½&quot; bypass valve CORKEN type T166-1.5CAU</td>
</tr>
<tr>
<td>Pump return line</td>
<td>1 ½&quot; back pressure check valve</td>
</tr>
<tr>
<td>Pump impulsion line with meter</td>
<td>2 units of pressure gauge with insulating lock</td>
</tr>
<tr>
<td>Meter return line</td>
<td>Volumetric flow meter Liquid Controls MA-7 GY10 (including temperature compensator)</td>
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<tr>
<td>Dispensing hose</td>
<td>Elastic coupling // Excess flow valve</td>
</tr>
<tr>
<td>Gas phase line</td>
<td>Ticket printer (for installation in truck tractor head)</td>
</tr>
<tr>
<td>Empty</td>
<td>2 units of ball valve 2&quot;, fire safe</td>
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<tr>
<td>Dispensing valve with ACME coupling 1 ¾&quot;</td>
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**TRANSFER EQUIPMENT WITH "AUTO-FILLING"**

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**SERVICE EQUIPMENT** (outside the transfer cabinet):

**PNEUMATIC INSTALLATION:** Pneumatic levers system for opening and closing the internal valves. Emergency stop button with auto-lock for closing internal valves and pump.

**SAFETY VALVE:**
- Safety: 2 threaded valves 3" NPT.

**HYDRAULIC INSTALLATION:**
- Quick connection for hydraulic connection to tractor head.
- Valve for actuating the hydraulic motor of LPG pump.
- Elements to be installed on tractor head (out of Lapesa scope):
  - Hydraulic pump for actuating the hydraulic motor of LPG pump.
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**PURGE:** Drain valve 1 ¼" with manual opening and safety valve.

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- Manual rotary level 1".
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- Pocket sensor for thermometer.

**OTHER ELEMENTS**
- Tool box.
- Reel for grounding (earthing).
- Two 12 kg dry powder extinguishers (inside box).
- Product plates and ADR signage.

**OPTIONAL**
- Tank inertization with nitrogen.

lapesa reserves the right to make technical changes in this product.