

Catalogue  
[2021]

# LAFD

## TANKS AND EQUIPMENT

ATMOSPHERIC TANKS FOR CONVENTIONAL FUEL STORAGE, BIO-FUELS  
AND CHEMICAL PRODUCTS



ABOVE AND UNDERGROUND TANKS

SINGLE WALL TANKS

DOUBLE WALL TANKS

CHEMICAL PRODUCTS

**lapesa**

# lapesa

since 1964

ISO 9001

BUREAU VERITAS  
Certification



*guarantee of quality*



# ATMOSPHERIC TANKS

# LFD

Engineering,  
development  
and  
manufacture  
of tanks for  
conventional  
fuel storage,  
bio-fuels and  
chemical  
products.

**lapesa**  
*Solutions*

# lapesa



LFD

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- Tanks for the storage of liquid fuels [LFD] in single and double wall configuration for aboveground and underground installations of up to 400 m<sup>3</sup>.
  - **Fuels:** fuel, gas-oil, aviation gasoline, biofuels, ad-blue...
  - **Water:** cold water (with or without food grade), hot water.
  - **Chemicals:** sulfuric acid, methanol, ethanol, E85...
- Tanks with specific inner finishes and / or compatible steels with different products to be stored.



## COMMON CONSTRUCTION CHARACTERISTICS\*

**REGULATIONS:** The tanks are built according to the following standards:

- **UNE 62350-3:** Horizontal steel-polyethylene double wall tanks.
- **EN-12285-1:** Underground tanks.
- **EN-12285-2:** Aboveground tanks.

**CERTIFICATION:** **lapesa** supplies all tanks with inspection certificate according to EN or UNE standards. At the customer's request, a coating porosity test certificate, issued by **lapesa**, can be provided.

**SURFACE FINISHES ON DEMAND:** On request, we can supply our thick polyurethane finish for underground tanks, in a thickness of up to 2 mm. Interior finishes for aggressive contents. Special interior treatment for ad-blue storage.

**OPTIONS:** Our catalogue shows a wide range of models with capacities from 2 to 70 m<sup>3</sup>, with different possibilities and accessories for each of them. **lapesa** manufactures single and double wall tanks (steel/steel or steel/polyethylene), for aboveground or underground installation, compartmentalized... For specific requirements, contact us.

**ACCESSORIES:** On request, we have a series of accessories that complete and facilitate installation, such as manholes, covers, anodes for cathodic protection, leak detectors, level control equipment, prefabricated access chambers, double-locking foot valve (own design), anchorages...

**TRANSPORT:** We have our own fleet of trucks, of various capacities. To protect the tank coating, support wedges are included to prevent it rubbing on ground. Our trucks do not have high sides that could damage the tank.

**INSTALLATION:** In no case does **lapesa** perform the tank installation. Installation must be carried out by a fitter, according to the indications of the following standards:

- **UNE 109501 IN:** Installation of aboveground steel tanks or in pit.
- **UNE 109502 IN:** Installation of underground steel tanks.

The location of the anchoring bolts should be checked against the tank. The bolts should never be embedded without checking previously against the tank.

**TOLERANCES:** According to the constructive norms.



(\*) The tanks are built with laminated steel plate, according to the European standard **EN 10025**. The dished ends are made in one piece, up to a diameter of 2,500 mm. They incorporate reinforcement, under the manhole, against the impacts of the measuring rod.

## LFE\*\*\* MODELS

- Single wall tanks built in carbon steel.
  - For underground installation.
  - Dimensions and characteristics in accordance with UNE-EN 12285-1.
  - High mechanical strength steel according to EN 10025 Standard (carbon steel or stainless steel to order).
  - Zinc-plated steel bolts at inspection manholes.

### STANDARD SURFACE FINISHES

#### EXTERIOR:

- Shot blasting up to SA 2-1/2 grade.
- Coating with a thick layer of polyurethane, with a minimum thickness of 800 microns, which guarantees an electrical test voltage higher than 15 KV.
- Highly resistant coating to corrosion of any origin and spillage of liquid fuels.
- This type of finish gives the tank an unbeatable exterior appearance.
- The outer protection can be increased with anodes for cathodic protection. (See page 22)

**INTERIOR:** Clean of particles.

#### OTHER EXECUTIONS (ON DEMAND):

- Storage tank in stainless steel.
- Interior finishes for specific contents; ad-blue, methanol, ethanol, aviation gasoline, food grade cold water...

#### ALTERNATIVE OPTIONS:

- Other manhole diameters. Covers with special connections.
- Additional manholes.
- Tanks with several interior compartments.
- Different thicknesses of external coating (up to 2 mm).

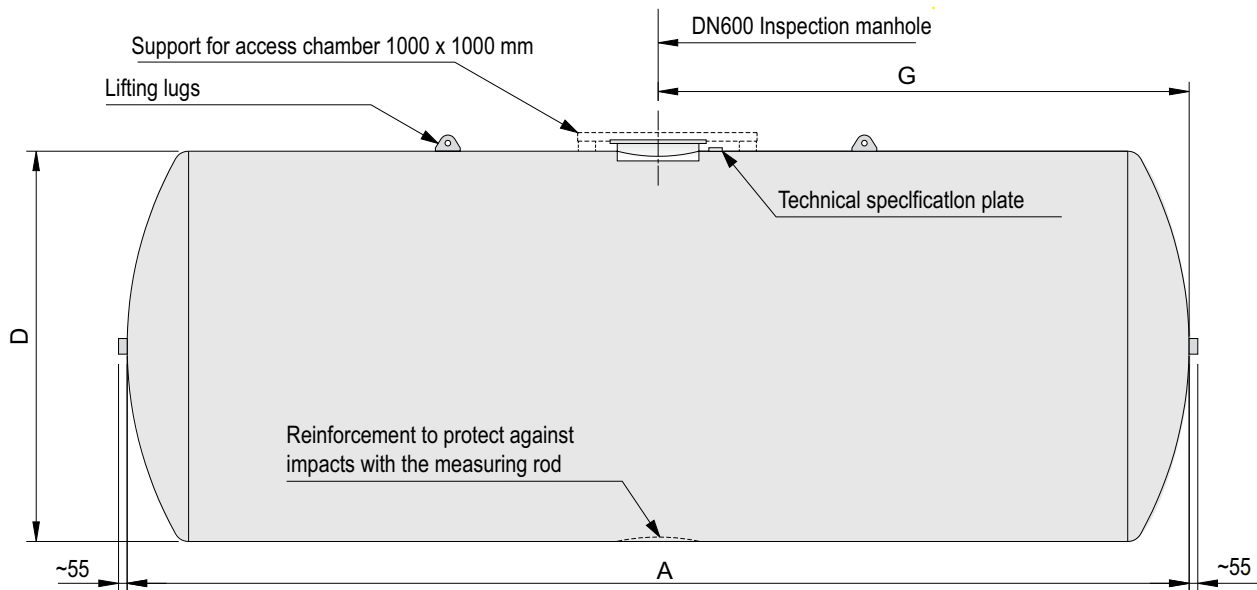
**STANDARD COVER:** (See page 22)

#### TRANSPORT:

- To protect the coating of the tanks, support wedges are used to prevent rubbing on ground, and the trucks do not have high sides.







**MAIN CHARACTERISTICS**

Models Ref.	Nominal capacity m <sup>3</sup>	Empty weight, estimated (kgs)	Dimensions (mm)		
			D	A	G
LFE2000	2	475	1200	1972	986
LFE3000	3	520	1500	1980	1060
LFE5000	5	820	1750	2339	1167
LFE7500	7,5	1110	1750	3396	1167
LFE10	10	1425	1750	4574	1167
LFE15	15	1885	2200	4300	3370
LFE20	20,5	2110	2500	4600	1830
LFE25	25,3	2505	2500	5580	2790
LFE30	30	2885	2500	6580	3290
LFE40	39,9	3670	2500	8565	3980
LFE50	50,4	4580	2500	10740	5370
LFE60	60	5420	2500	12720	5955
LFE70	69,8	6195	2500	14700	7350

**LFED\*\*\* MODELS**

- Double wall tanks, inner and outer tank in carbon steel.
  - For underground installations.
  - Dimensions and characteristics in accordance with UNE-EN 12285-1.
  - Zinc-plated steel bolts and screws at inspection manholes.
  - Vacuum chamber chamber between outer and inner wall to detect leaks (See detection devices).
  - No civil works required for leak-proof containment. The double wall acts as a containment means.
  - Tank built with EN 10025 standard steel (carbon steel or stainless steel to order) with high mechanical and deformation strength that enables it to absorb impacts, vibrations (transit of vehicles, etc.) or moderate earth movements. Adequate resistance to modern additives, alcohols, etc.

**STANDARD SURFACE FINISHES**

**EXTERIOR:**

- Shot blasting up to SA 2-1/2 grade.
- Coating with a thick layer of polyurethane, with a minimum thickness of 800 microns, which guarantees an electrical test voltage higher than 15 KV.

**INTERIOR:** Clean of particles.

**OTHER EXECUTIONS (ON DEMAND):**

- Storage tank in stainless steel.
- Interior finishes for specific contents; ad-blue, methanol, ethanol, aviation gasoline, food grade cold water ...

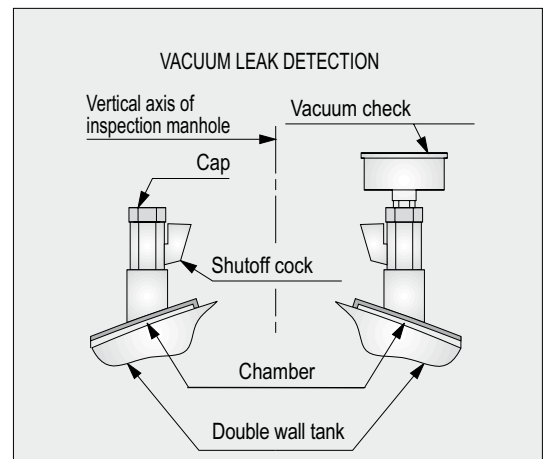
**STANDARD COVER:** (See page 22)

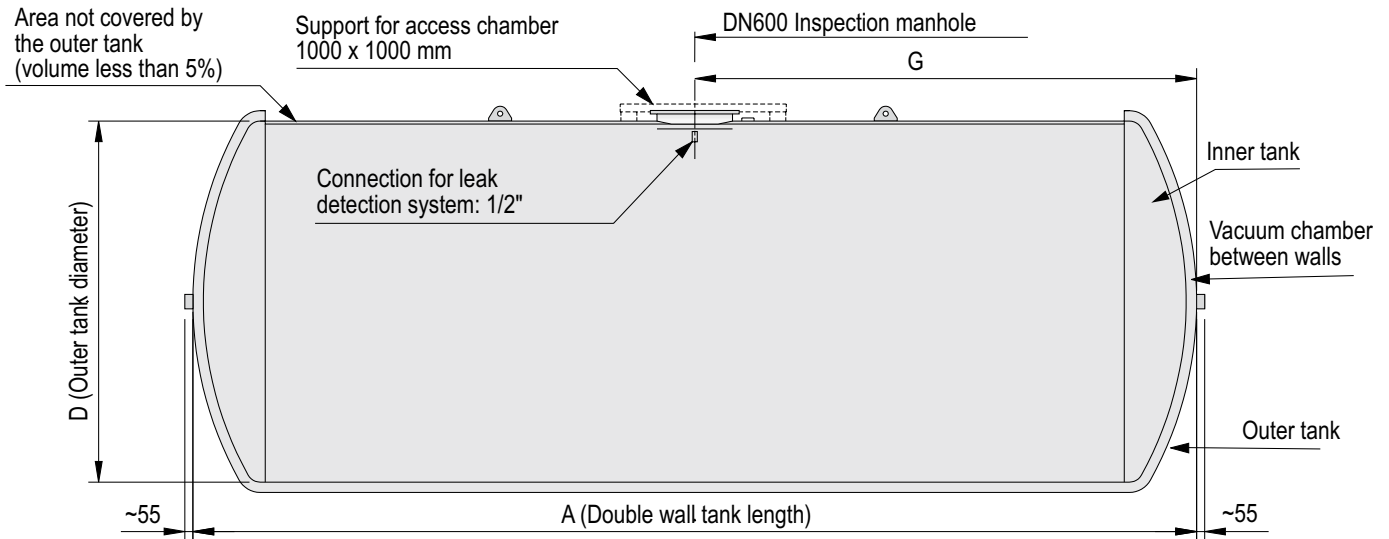
**ALTERNATIVE OPTIONS:**

- Other manhole diameters.
- Tanks with several inner compartments.
- Different thicknesses of external coating (up to 2 mm).

**LEAK DETECTION:**

- Standard supply: prepared according to the scheme to perform vacuum leak detection.
  - Vacuum to be made in factory.
  - Accessories fitted (pressure gauge and stopvalves).
- Optional supplies:
  - Chamber full of glycol mixture (for liquid leak detection).
  - Leak detection equipment by vacuum, pressure or liquid.





**MAIN CHARACTERISTICS**

Models Ref.	Nominal capacity m <sup>3</sup>	Empty weight, estimated (kgs)	Dimensions (mm)		
			D	A	G
LFED2000	2	670	1200	1972	989
LFED3000	3	800	1500	1990	925
LFED5000	5	1215	1750	2348	1167
LFED7500	7,5	1650	1750	3405	1167
LFED10	10	2105	1750	4563	1167
LFED15	15	3070	2200	4315	3376
LFED20	20,5	3550	2500	4610	1835
LFED25	25,3	4415	2500	5590	2794
LFED30	30	4795	2500	6590	3295
LFED40	39,9	6050	2500	8575	3985
LFED50	50,4	7465	2500	10750	5375
LFED60	60	8815	2500	12730	5960
LFED70	69,8	9995	2500	14710	7354

### LFEP\*\*\* MODELS

- Double wall tanks, inner tank in carbon steel and outer tank in Polyethylene.
  - For underground installations.
  - Outer tank built with high density polyethylene (HDPE) plate. Inner steel tank.
  - Dimensions and characteristics according to UNE-EN 62350-3 Standard.
  - Zinc-plated steel bolts and screws at inspection openings and at the access chamber support.
  - Vacuum chamber between outer and inner wall to detect leaks (See detection devices).
  - No civil works required for leak-proof containment. The double wall acts as a containment means.

#### INNER STEEL TANK:

Tank built in steel in accordance with european standard EN 10025 (carbon steel or stainless steel to order) with high mechanical and deformation strength that enables it to absorb impacts, vibrations (transit of vehicles, etc.) or moderate earth movements. Adequate resistance to modern additives, alcohols, etc.

#### OUTER HIGH DENSITY POLYETHYLENE TANK (HDPE):

- Acts as a safety containment means.
- Is a barrier to corrosion of any origin due to its high chemical stability.
- Covers the inner tank (except for the access area) completely, thus preventing corrosion of the steel.
- Is resistant to liquid fuel spillages, to soils, water and many acids and bases that might be present in terrain.
- Is a dielectric material.
- Is a semi-rigid material, allowing deformation without fracturing.
- Is resistant to impacts and vibrations (road traffic).

### STANDARD SURFACE FINISHES

#### LEAK DETECTION:

- Standard supply: prepared according to the scheme to perform vacuum leak detection.
  - Vacuum to be made in factory.
  - Accessories fitted (pressure gauge and cut-off keys).

**STANDARD COVER:** (See page 22)

#### ACCESS CHAMBER SUPPORT:

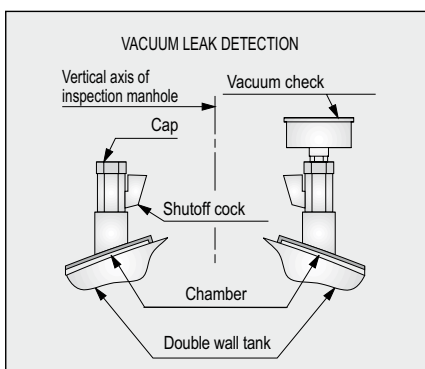
Square 1000x1000 mm (890x890 mm clearance).  
For the installation of a prefabricated access chamber. (See page 22)

#### ALTERNATIVE OPTIONS:

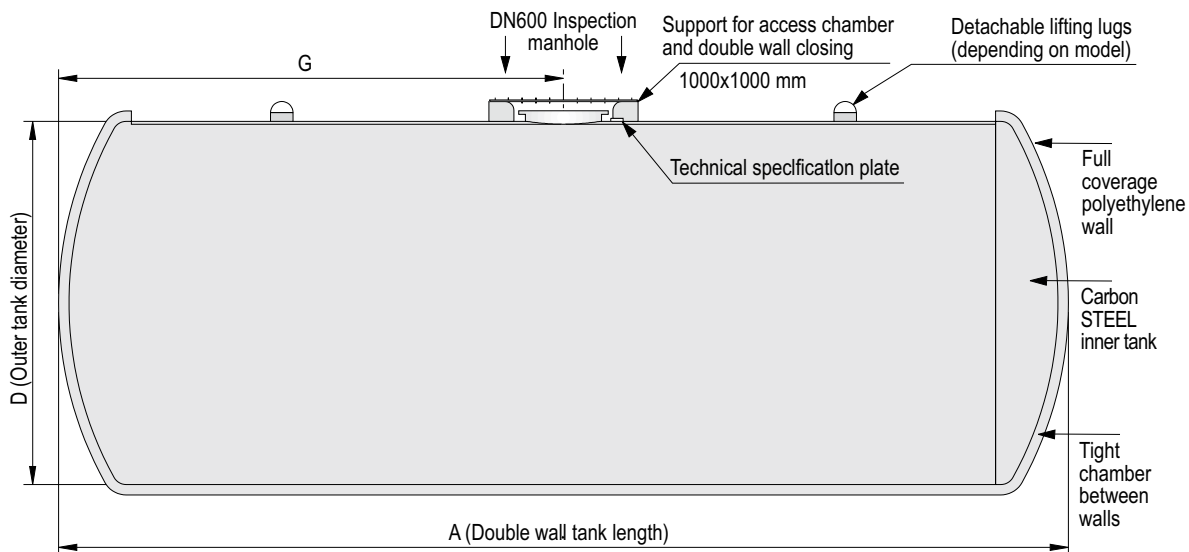
- Other manhole diameters. Covers with special connections.
- Additional manholes.
- Tanks with several inner compartments.
- Different thicknesses of external coating.

#### TRANSPORT:

- To protect the coating of the tanks, support wedges are used to prevent rubbing on ground, and the trucks do not have high sides.



- Optional supplies:
  - Chamber full of glycol mixture (for liquid leak detection).
  - Leak detection equipment by vacuum, pressure or liquide.



**MAIN CHARACTERISTICS**

Models Ref.	Nominal capacity m <sup>3</sup>	Empty weight, estimated (kgs)	Dimensions (mm)		
			D	A	G
LFEP10	10	1455	2500	2440	1220
LFEP12	12	1605	2500	2840	1420
LFEP15	15	2270	2500	3520	1760
LFEP20	20,5	2420	2500	4620	1840
LFEP25	25,3	2815	2500	5600	2800
LFEP30	30	3230	2500	6600	3300
LFEP40	39,9	4070	2500	8580	3990
LFEP50	50,4	5085	2500	10760	5380
LFEP60	60	6015	2500	12740	5965
LFEP70	69,8	6855	2500	14720	7360



## LFE\*\*\*P MODELS

- Single wall tanks in carbon steel.
  - For aboveground installation.
  - Tanks have supports according to the EN 12285-2 standard for aboveground installation. The supports are welded to the body of the tank and with the same finish.
  - Dimensions and characteristics in accordance with UNE-EN 12285-2.
  - Zinc-plated steel bolts at inspection manholes.
  - Tank built in steel in accordance with european standard EN 10025 (carbon steel or stainless steel upon request) with high mechanical and deformation strength that enables it to absorb impacts, vibrations (transit of vehicles, etc.) or moderate earth movements. Adequate resistance to modern additives, alcohols, etc.

### STANDARD SURFACE FINISHES

#### EXTERIOR:

- Shot blasting up to SA 2-1/2 grade.
- Anticorrosion primer paint.
- White polyurethane finish.
- Highly resistant coating against corrosion of any origin and spillage of liquid fuels.
- This type of finish gives the tank an unbeatable exterior appearance.

**INTERIOR:** Clean of particles.

#### OTHER EXECUTIONS (ON DEMAND):

- Storage tank in stainless steel.
- Interior finishes for specific contents; ad-blue, methanol, ethanol, aviation gasoline, food grade cold water ...

**STANDARD COVER:** (See page 22)

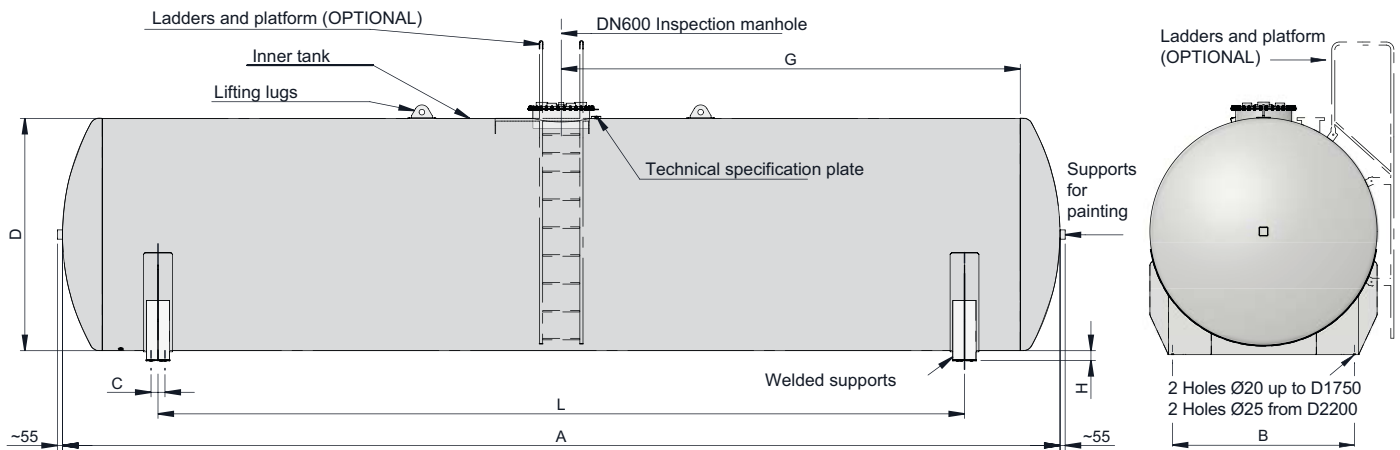
#### ALTERNATIVE OPTIONS:

- Other manhole diameters. Covers with special connections.
- Additional manholes.
- Tanks with several inner compartments.
- Different thicknesses of external coating.

#### TRANSPORT:

- To protect the coating of the tanks, support wedges are used to prevent rubbing on ground, and the trucks do not have high sides.





MAIN CHARACTERISTICS

Models Ref.	Nominal capacity m <sup>3</sup>	Empty weight, estimated (kgs)	Number of anchorings	Dimensions (mm)						
				D	A	G	L	H	B	C
LFE2000P	2	535	2	1200	1972	986	1000	100	750	80
LFE3000P	3	600	2	1500	1980	1060	760	100	1000	80
LFE5000P	5	965	2	1750	2339	1167	900	100	1300	125
LFE7500P	7,5	1260	2	1750	3396	1167	1950	100	1300	125
LFE10P	10	1575	2	1750	4574	1167	3105	100	1300	125
LFE15P	15	2150	2	2200	4300	3370	2450	100	1800	150
LFE20P	20,5	2390	2	2500	4600	1830	2520	100	2000	150
LFE25P	25,3	2785	2	2500	5580	2790	3500	100	2000	150
LFE30P	30	3165	2	2500	6580	3290	4500	100	2000	150
LFE40P	39,9	3950	2	2500	8565	3980	6500	100	2000	150
LFE50P	50,4	4795	2	2500	10740	5370	8680	100	2000	150
LFE60P	60	5570	2	2500	12720	5955	10650	100	2000	150
LFE70P	69,8	6345	2	2500	14700	7350	12600	100	2000	150

**LFED\*\*\*P MODELS**

- Double wall tanks, inner and outer tank in carbon steel.
  - For aboveground installations.
  - Tanks have supports according to the EN 12285-2 standard for aboveground installation. The supports are welded to the body of the tank and with the same finish.
  - Dimensions and characteristics in accordance with UNE-EN 12285-2.
  - Zinc-plated steel bolts and screws at inspection manholes.
  - No civil works required for leak-proof containment. The double wall acts as a containment means.
  - Tank built in EN 10025 standard steel (carbon steel or stainless steel upon request) with high mechanical and deformation strength that enables it to absorb impacts, vibrations (transit of vehicles, etc.) or moderate earth movements.

**STANDARD SURFACE FINISHES**

**EXTERIOR:**

- Shot blasting up to SA 2-1/2 grade.
- Anticorrosion primer paint.
- White polyurethane finish.
- Highly resistant coating against corrosion of any origin and spillage of liquid fuels.

**INTERIOR:** Clean of particles.

**OTHER EXECUTIONS (ON DEMAND):**

- Storage tank in stainless steel.
- Interior finishes for specific contents; ad-blue, methanol, ethanol, aviation gasoline, food grade cold water ...

**STANDARD COVER:** (See page 22)

**ALTERNATIVE OPTIONS:**

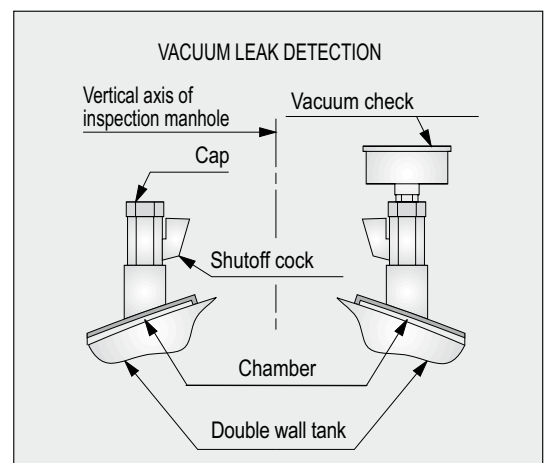
- Other manhole diameters. Covers with special connections.
- Additional manholes.
- Tanks with several inner compartments.
- Different thicknesses of external coating

**TRANSPORT:**

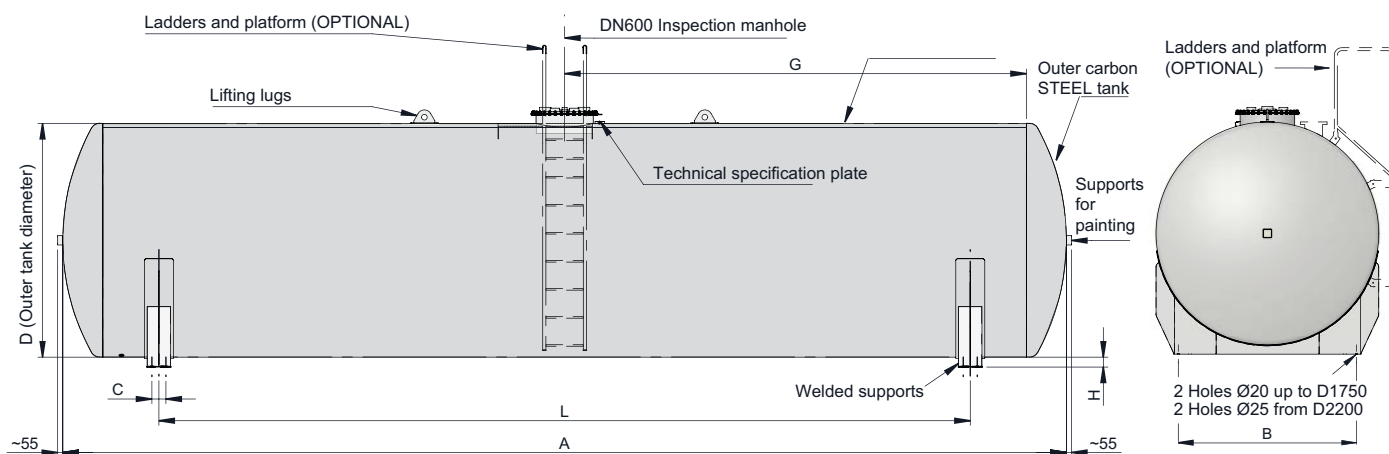
- To protect the coating of the tanks, support wedges are used to prevent rubbing on ground, and the trucks do not have high sides.

**LEAK DETECTION:**

- Standard supply: prepared according to the scheme to perform vacuum leak detection.
  - Vacuum to be made in factory.
  - Accessories fitted (pressure gauge and stopvalves).
- Optional:
  - Chamber full of glycol mixture (for liquid leak detection).
  - Leak detection equipment by vacuum, pressure or liquid.







## MAIN CHARACTERISTICS

Models Ref.	Nominal capacity m <sup>3</sup>	Empty weight, estimated (kgs)	Number of anchorings	Dimensions (mm)						
				D	A	G	L	H	B	C
LFED2000P	2	730	2	1200	1972	989	1000	100	750	80
LFED3000P	3	880	2	1500	1990	925	760	100	1000	80
LFED5000P	5	1365	2	1750	2348	1167	900	100	1300	125
LFED7500P	7,5	1795	2	1750	3405	1167	1950	100	1300	125
LFED10P	10	2250	2	1750	4563	1167	3105	100	1300	125
LFED15P	15	3335	2	2200	4315	3376	2450	100	1800	150
LFED20P	20,5	3830	2	2500	4610	1835	2520	100	2000	150
LFED25P	25,3	4695	2	2500	5590	2795	3500	100	2000	150
LFED30P	30	5075	2	2500	6590	3295	4500	100	2000	150
LFED40P	39,9	6330	2	2500	8575	3985	6500	100	2000	150
LFED50P	50,4	7645	2	2500	10750	5375	8680	100	2000	150
LFED60P	60	9030	2	2500	12730	5960	10650	100	2000	150
LFED70P	69,8	10145	2	2500	14710	7354	12600	100	2000	150

**LF\*\*\*V MODELS**

- Single wall stainless steel and / or carbon steel tanks, for vertical installations.
- For aboveground installations.
- Different interior and exterior finishes.
- Storage capacities up to 200 m<sup>3</sup>.
- Different construction possibilities.
- Tanks calculated with the Eurocode in the event of earthquakes, wind and snow loads.

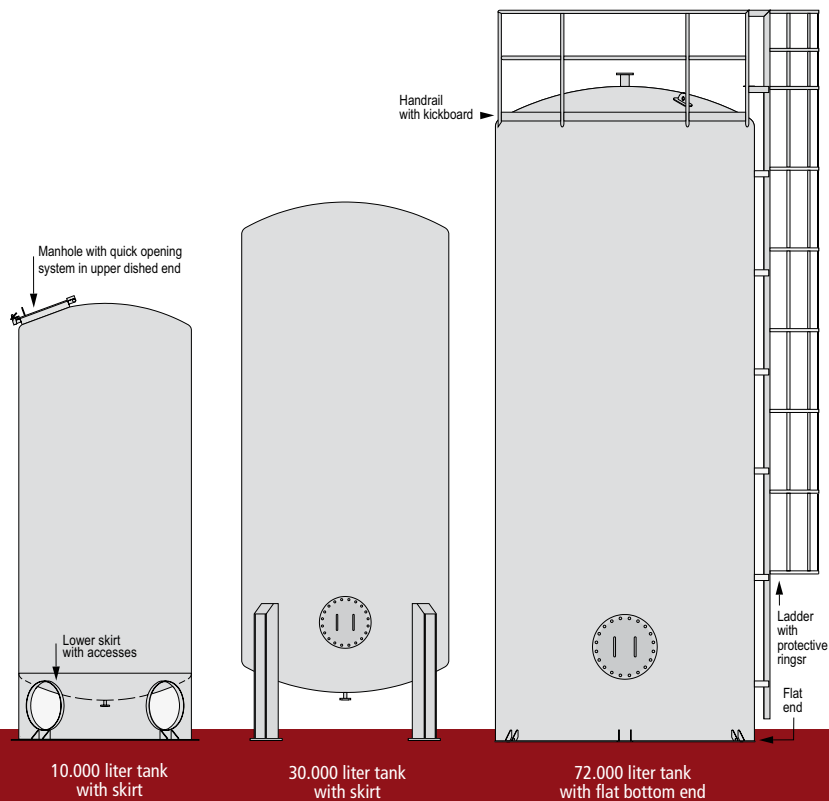
**STANDARD SURFACE FINISHES**

**EXTERIOR:**

- Primer.
- Polyurethane finish.

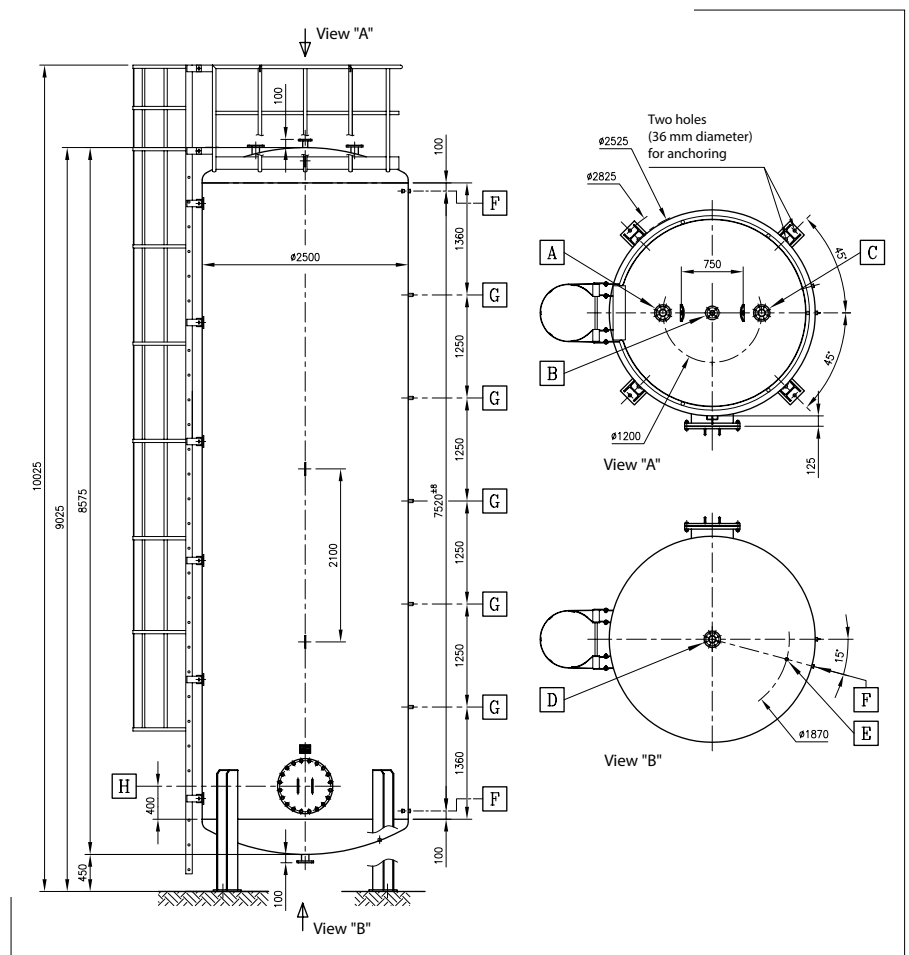
**ACCESSORIES**

- Ladders, handrails, platforms, etc.



Atmospheric tanks for the storage of chemical products for industrial application.

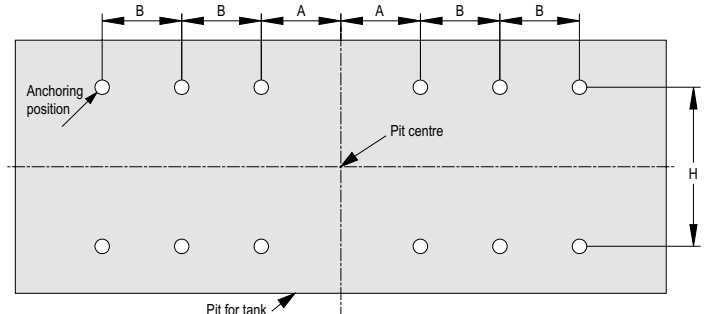
Specific designs for the storage of POLYOLS and ISOCYANATES, for industries that use foams derived from these products in their production plants, including sets of platforms and walkways, all them suitable for the geometric arrangement of tank sets in the plant.



### INSTRUCTIONS FOR INSTALLING AND ANCHORING UNDERGROUND TANKS

The following indications are valid for:

- Single or double wall steel tanks and double wall polyethylene tanks. Installed according to UNE109502:10.
- Polyester moorings of 10 Tn capacity.
- Standard lapesa tanks.



#### NUMBER OF ANCHORS AND POSITION:

By way of example, the standard position and number of anchorings to be placed in the Lapesa tank are indicated. The way to proceed with the placement of the anchorings is as follows:

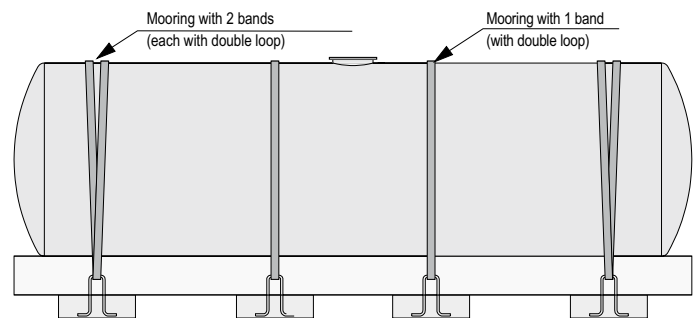
- **Step 1:** Find the centre of the space in which the tank is to be installed.
- **Step 2:** To the right of the centre, position an anchor at distance A (see table).
- **Step 3:** Measuring from the last anchor, the following one must be placed at distance B.
- **Step 4:** If the table indicates 3 x 1000 this means that 3 anchors must be fitted at a distance of 1000 mm from each other.
- **Step 5:** Repeat steps 2 to 4 to the left of the centre.

The distance H will be calculated taking into account the diameter of the tank, and the chosen installation criteria (standards, regulations). If distance H is greater than the tank diameter, the anchors must be placed at an angle so that the bands pull in the anchoring direction.



#### ANCHORS LAYOUT

Models Ref.	Nominal capacity m <sup>3</sup>	Diameter mm	Number of anchors	Number of bandss	Dimensions (mm)	
					A	B
LFE 3000	3	1500	2	2	675	--
LFE 5000	5	1750	2	2	560	--
LFE 7500	7.5	1750	2	2	920	--
LFE 10	10	1750	2	2	1625	--
LFE 15	15	2200	2	2	1450	--
LFE 20	20.2	2500	2	2	1720	--
LFE 25	25.3	2500	2	4	2210	--
LFE 30	30	2500	2	4	2710	--
LFE 40	39.9	2500	4	4	1250	2450
LFE 50	50.4	2500	4	6	1790	3000
LFE 60	60	2500	4	6	1880	3900
LFE 70	69.7	2500	6	8	1880	2x2400



Example of anchoring a 50 m<sup>3</sup> tank

of the other, or knotting together. Special attention must be paid to tensioning.

The position of the anchors will be symmetrical with respect to the center of the tank (a greater number of anchors on one side than on the another) is not admissible.

The anchors with two bands will be placed at the ends of the tank.

It must be taken into account that the straps should be placed as vertical as possible, without one being on top

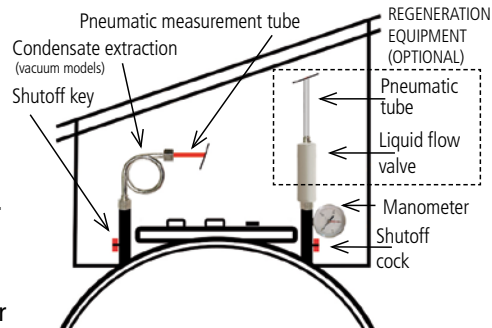
## LEAK DETECTOR FUGALARM MODEL

### MODELS:

- Fugalarm-V, Model for vacuum.
- Fugalarm-P, Model for pressure.

### SYSTEM CHARACTERISTICS:

- Manufactured according to EN 13160 and CE certified.
- Acoustic and visual indicators of the status of the system.
- Large display with indication, in absolute value, of the degree of pressure or vacuum, in the interstitial chamber.
- Buttons for testing and stopping the alarms, as well as for accessing the menu options.
- Switched relays for remote indication of alarm signals.
- Built-in zener barrier.
- Dimensions: 110 x 215 x 40 mm.



## LEVELMATIC CONTROL LEVEL

The LevelMatic set includes all the necessary items for the installation of a level measurement system, control and display (in volume or height) of horizontal tanks.

The level system consists of a control panel, an electropneumatic intermediate console, a copper level probe that is introduced through the upper part the tank, and a pneumatic tube probe / console interconnection.

The operating principle is based on the remote measurement of the hydrostatic pressure that applies the column of product on the level probe. The level probes are electricity-free and do not have their own ignition source.



Pneumatic tube  
Main console  
Condensate extraction



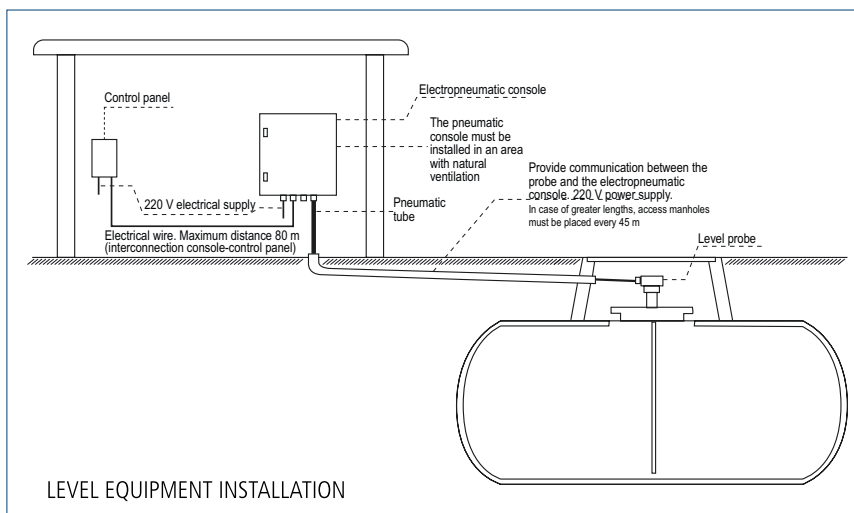
### SYSTEM CHARACTERISTICS:

- Level control system by bubbling that enables 10 tanks to be measured by just one unit.
- The relative density of the product to be contained must be less than 1,1. (On request it can be manufactured for higher densities).

- Electricity-free probes, without an ignition source. Standard probe with 1 "G thread and 2,500 mm length, made of brass and copper. On demand they can be manufactured with other materials and lengths.

- It has a control panel with a color graphic display and a touch screen as well as a relay for activating external alarms.

- Integrated web server for LAN networks connection using TCP / IP protocol. It has a web page in XML language so that the inventory level is automatically updated in ERP systems (Navision, Oracle, etc.) and the possibility of connecting to industrial networks with ModBUS serial RTU.



LEVEL EQUIPMENT INSTALLATION

### REINFORCED POLYETHYLENE ACCESS CHAMBER

40 Holes  $\varnothing 16$

94 94 94 94 94 94 94 94 94 94

□ 940

□ 885

ACCESS CHAMBER BASE

CONTOUR CHAMBER BASE  
PREFAB. P.E. 55"

Access chamber cover

Clearance

$\varnothing 760$

600

1230 max.

1335

Access chamber support

### EQUIPMENT FOR MAN-HOLES AND PORTS

Equipped with complete suction elements  
Different number of suction elements  
Discharge pipe and guide pipe for measuring rod  
Covers for man-holes and ports of different sizes.

DOUBLE LOCKING FOOT VALVE

2" GAS-H  
ISO 228/1

Top body

Double lock

Bottom body

Filter

205

Manhole cover

Suction pipe

### FILLING PORT ADAPTORS

Quick coupling for connection to discharge hose

DIN 28450 VK80/BM80 PN10 coupling with cap and chain

Adapter for filling port  
3" GAS-M to 4" GAS-F

4" GAS-M coupling to cover

Manhole cover

DN 100 tank overflow protection valve (Optional)

### AERATION "TEE"

1-1/2" GAS-H  
ISO 228/1

Tank aeration "tee" with grids at the inlets

### SUPPORT FOR BOLTING THE PE ACCESS CHAMBER

Manhole cover

Tank

### STANDARD INSPECTION MANHOLE PLATE

NOMINAL DIAMETER 600

3" GAS

3" GAS

4" GAS

4" GAS

1-1/2" GAS

3" GAS

3" GAS

### ANODES AND CONNECTION CABLES FOR CATHODIC PROTECTION

Magnesium anode. Ref.22.800

Terminal  $\varnothing 8$

Sheathed cable, 0.75 KV

MB

### COVER WITH COIL

### MEASURING RODS (Aluminium)

Marks every one centimetre, with separate table for volumetric readings.  
Antislatic material according to UNE-EN 13463-1"

markings

tank diameter

### OVERFILL PROTECTION VALVE

Limit at 90%, it includes top and bottom pipes

Loading hatch 4"

Valve presence indicator

Adapter 4"

100

Represents valve mod. 440B

P.A.

150

### DETACHABLE LADDER AND PLATFORMS

Platform



# WORLDWIDE PROJECTS

## MARKETS

### EUROPA

ANDORRA  
GERMANY  
ARMENIA  
AUSTRIA  
BELGIUM  
BULGARIA  
FINLAND  
FRANCE  
HOLLAND  
IRELAND  
ITALY  
NORWAY  
POLAND  
PORTUGAL  
UNITED KINGDOM  
RUSSIA  
SLOVENIA  
SPAIN  
SWITZERLAND

### AMERICA

ARGENTINA  
BOLIVIA  
CHILE  
COLOMBIA  
CUBA  
DOMINICAN REP.  
GUADALUPE ISLAND  
MEXICO  
PERU

### AFRICA

ALGERIA  
ANGOLA  
BENIN  
CAMEROON  
CHAD  
IVORY COAST  
GABON  
REUNION ISLAND  
KENYA  
MADAGASCAR  
MOROCCO  
MAURITANIA  
NAMIBIA  
NIGER  
NIGERIA  
SOUTHAFRICA  
TANZANIA  
TUNISIA

### MIDDLE EAST

EMIRATES  
JORDANIA  
KUWAIT  
LEBANON  
OMAN  
QATAR  
SAUDI ARABIA

### ASIA

BANGLADESH  
MONGOLIA  
SRI LANKA  
VIETNAM

### OCEANIA

AUSTRALIA  
NEW ZELAND

### SOUTH POLE

ANTARCTICA







**lapesa**  
*Solutions*



# lapesa

## Lapesa Grupo Empresarial

Pol. Ind. Malpica - Calle A, Parcela 1-A

50016 ZARAGOZA (España)

Tel.: 976 465 180 / Fax: 976 574 393

mail: [lapesa@lapesa.es](mailto:lapesa@lapesa.es)

[www.lapesa.es](http://www.lapesa.es)



ISO 9001  
BUREAU VERITAS  
Certification

