

## ACCESSORIES

- Valve equipment
- Cathodic protection equipment
- Covers / inspection chambers
- Anchor slabs
- Anti-flotation trays
- Booths for cylinders



### VALVE EQUIPMENT

Availability of valve equipment adapted to all our range of LPG storage tanks. The supply of valves is included in our standard range of tanks up to 59 m<sup>3</sup> capacity. As an option, the valve equipment can be supplied ready mounted on the tanks, with air-tightness test and tank inerted with nitrogen. Specific valves and equipment for special tanks can be supplied upon request.

### CATHODIC PROTECTION EQUIPMENT

Cathodic protection equipment for underground tanks, comprising magnesium anodes with connecting wires and terminals, suitable for the tank size and surface area. Bag of activating mix can be supplied as an option. Examples of anode installation and recommended distances for anodes around the underground tank are shown on page 18.

### COVERS/ /INSPECTION CHAMBERS

Lockable, hinged protective valve covers for aboveground tanks. Stainless steel or PVC valve inspection chambers for underground tanks. Special inspection chambers adapted to the characteristics of the tank and/or installation.

### ANCHOR SLABS FOR ABOVEGROUND TANKS

Concrete slabs for screwing down support legs of aboveground tanks up to 8.334 litres capacity. This system replaces the civil works required to support tanks and in many cases represents a considerable saving on installation costs.

### ANTI-FLOTATION TRAYS FOR UNDERGROUND TANKS

HDPE and PVC anti-flotation anchoring trays with support cradle, for 1.000 and 1.200 mm diameter underground tanks. Supplied already fitted to tanks, with side trays folded for transport.

### BOOTHS FOR CYLINDERS

Lockable galvanized steel plate booths with doors to store 13 kg and 35 kg LPG cylinders. Capacity: eight 35 kg cylinders or sixteen 13 kg cylinders in two-section version and twelve 35 kg cylinders or twenty-four 13 kg cylinders in the three-section version. The booth is supplied unassembled and palletized for assembling at site.

## VALVE EQUIPMENT / HORIZONTAL TANKS

### CAPACITY UP TO 13,0 m<sup>3</sup>

- Filling valve: connection to tank 1-1/4" NPT and connection to hose or pipe 1-3/4" ACME.
- Chek-lok 3/4" NPT to fit at drain.
- Limiter + stopvalve + 1-1/4" NPT plug for the liquid phase.
- Multi-valve 3/4" NPT at gas phase outlet, with pressure gauge, high point and flow rate limiter.
- External safety valves with valve manifold.
- ROCHESTER. magnetic level.
- Plug at connection of lower generatrix.

### CAPACITY FROM 13.1 to 20.0 m<sup>3</sup>

Same equipment as above, except for:

- Gas phase outlet: flow rate limiter and shutoff valve.
- High point valve and pressure gauge, in separate connection from gas phase outlet.

### CAPACITY FROM 20.1 to 50.0 m<sup>3</sup> (diameters 1.500 and 1.750 mm)

Same equipment as before, except for:

- Safety valves mounted on manifold.

### CAPACITY FROM 20.1 to 50 m<sup>3</sup> (diameters 2.200 and 2.450 mm)

Same equipment as the previous one except for:

- 1-1/4" Chek-lok for purge placement.
- ROCHESTER magnetic level MAGNETEL type.
- Buried tanks have a cap on the lower generatrix.

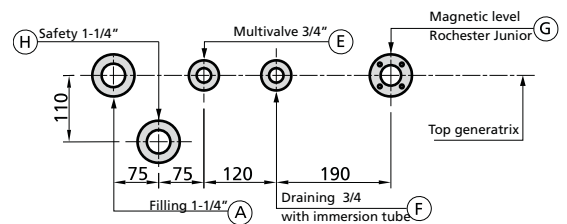
### CAPACITY GREATER THAN 50.1 m<sup>3</sup>

- Filling, liquid phase, gas phase: Flanges ASA 300# 2" NPT.
- High point valve and manometer.
- Chek-lok 1-1/4" NPT for drain (Except diameters >2.450: Flange ASA 300# 2" NPT).
- ROCHESTER MAGNETEL type 8" magnetic level.
- Safety valves mounted on manifold.
- Immersion bulb thermometer, 1/2" (tanks of more than 60 m<sup>3</sup>).

## OUTLETS AND VALVES (1.000, 1.200, 1.500 and 1.750 diameter tanks)

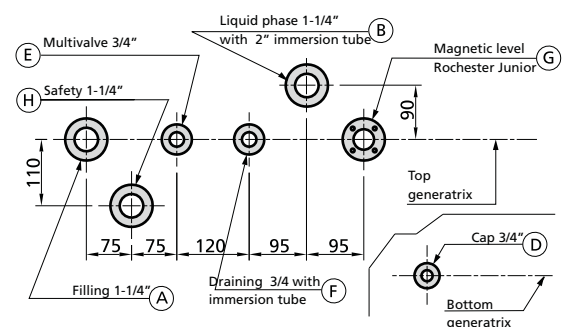
### 1.00 m<sup>3</sup> CAPACITY TANK

FUNCTION	CONNECTION	ACCESSORY	STD Ref.
A: Filling(1)	1-1/4" NPTH	Filling valve	Clesse ECG C08
E: Gas phase	3/4" NPTH	Multi-valve (with excess flow feature)	ECG X451 Clesse ECGX451 (+ regulation equipment of 40 kg/h)
F: Drainage	3/4" NPTH	Chek-lok	Rego 7590UT
G: Magnetic level	Rochester Junior	ø 1000 level	Roch. 6281 TM D1000
H: Safety	1-1/4" NPTH	Safety valve	RS 3131 + CD31



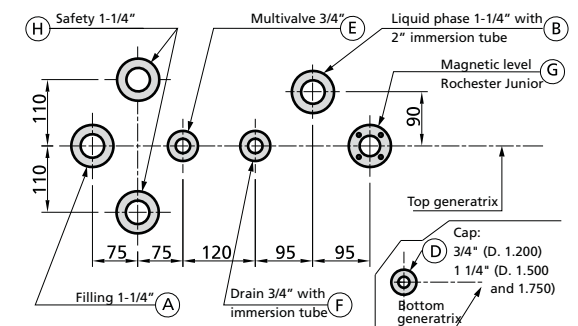
### 1.45 to 4.88 m<sup>3</sup> CAPACITY TANKS

FUNCTION	CONNECTION	ACCESSORY	STD Ref.
A: Filling(1)	1-1/4" NPTH	Filling valve	Omeca VRN-S D1200
B: Liquid phase	1-1/4" NPTH	Stopvalve with excess flow feature and plug	Rego A 8020 D
D: Bottom outlet	3/4" NPTH	Blind cap	
E: Gas phase	3/4" NPTH	Multi-valve (with excess flow feature)	Clesse ECGX451 (+ regulation equipment of 40 kg/h)
F: Drain	3/4" NPTH	Chek-lok	Rego 7590UT
G: Magnetic level	Rochester Junior	level	Roch. 6281 TM D1200
H: Safety	1 1/4" NPTH	Safety valve	RS3136 + CD36



### 4.95 to 13.0 m<sup>3</sup> CAPACITY TANKS

FUNCTION	CONNECTION	ACCESSORY	STD Ref.
A: Filling(1) ø 1200 ø 1500 ø 1750	1-1/4" NPTH 1-1/4" NPTH 1-1/4" NPTH	Filling valve Filling valve Filling valve	Omeca VRN-S D1200 Omeca VRN-S D1500 Omeca VRN-S D1750
B: Liquid phase	1-1/4" NPTH	Stopvalve with excess flow feature and plug	Rego A 8020 D
D: Bottom outlet	3/4" NPT ó 1-1/4" NPT	Blind cap	
E: Gas phase	3/4" NPTH	Multi-valve (Excess flow valve)	Rego 9101 DNP Rego 12472 (with adapter)
F: Drain	3/4" NPTH	Chek-lok	Rego 7590UT
G: Magnetic level	Rochester Junior	ø 1200 level ø 1500 level ø 1750 level	Roch. 6281 TM D1200 Roch. 6281 TM D1500 Roch. 6281 TM D1750
H: Safety	1-1/4" NPTH (2)	Safety valve	Rego RS3136+Rego CD36 (una o dos)



(1) The indicated valve in the STD option is limited to a filling of the 85%.

(Examples of valve equipment for Lapesa tanks)

## NOTES

The tanks are supplied upon request with valves mounted and inertized.

The external safety valves with check device allow valves to be dismantled in order to replace them, to carry out pressure tests, etc. without the need to empty the tank.

Note that the check device is not completely watertight once the safety valve has been removed.

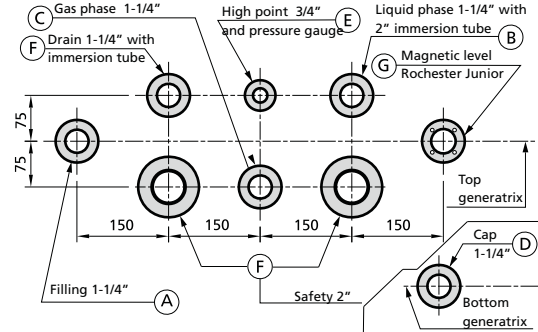
In the case of safety valves mounted in a manifold, the manifold has a mechanism inside that allows one of the valves to be replaced without the need to empty the tank.

Optionally, for 1 m<sup>3</sup> tanks, instead of supplying a regulation equipment of 40 kg/h, a regulation equipment of 12 kg/h can be supplied, and for tanks with a higher capacity than 5 m<sup>3</sup> a regulation equipment of 100 kg/h can be supplied.

**OUTLETS AND VALVES** (Tanks with 1.500 & 1.750 diameters)

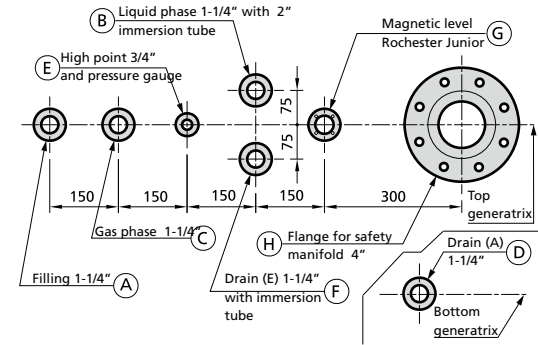
**15.0 to 20.0 m<sup>3</sup> CAPACITY TANKS**

FUNCTION	CONNECTION	ACCESSORY	STD Ref.
A: Filling (1) ø 1500 ø 1750	1-1/4" NPTH 1-1/4" NPTH	Filling valve Filling valve	Omega VRN-S D1500 Omega VRN-S D1750
B: Liquid phase	1-1/4" NPTH	Stopvalve with excess flow feature and plug	Rego A 8020 D
C: Gas phase	1-1/4" NPTH	Excess flow valve Shutoff valve	Rego A 8013 DA Rego A 7507 AP
E: High point and pressure gauge	3/4" NPTH	Valve	Rego A 2805 C
D: Bottom outlet	1-1/4" NPTH	Blind cap	Rego 7591UT
F: Drain	1-1/4" NPTH	Chek-lok	Rego 7591UT
G: Magnetic level	Rochester Junior	ø 1500 level ø 1750 level	Roch. 6281 TM D1500 Roch. 6281 TM D1750
H: Safety	2" NPTH (two)	Safety valve	Rego RS3145+CD45 (dos)



**22.0 to 38.3 m<sup>3</sup> CAPACITY TANKS**

FUNCTION	CONNECTION	ACCESSORY	STD Ref.
A: Filling (1) ø 1500 ø 1750	1-1/4" NPTH 1-1/4" NPTH	Filling valve Filling valve	Omega VRN-S D1500 Omega VRN-S D1750
B: Liquid phase	1-1/4" NPTH	Stopvalve with excess flow feature and plug	Rego A 8020 D
C: Gas phase	1-1/4" NPTH	Excess flow valve Shutoff valve	Rego A 8013 DA Rego A 7508 AP
D: Underground	1-1/4" NPTH	Blind cap	Rego 7591UT
E: High point and pressure gauge	3/4" NPTH	Valve	Rego A 2805 C
F: Underground (bleed)	1-1/4" NPTH	Chek-lok	Rego 7591UT
G: Magnetic level	Rochester Junior	ø 1500 level ø 1750 level	Roch. 6281 TM D1500 Roch. 6281 TM D1750
H: Safety	ASA 4" 300# Flange	Safety valve	See page 17

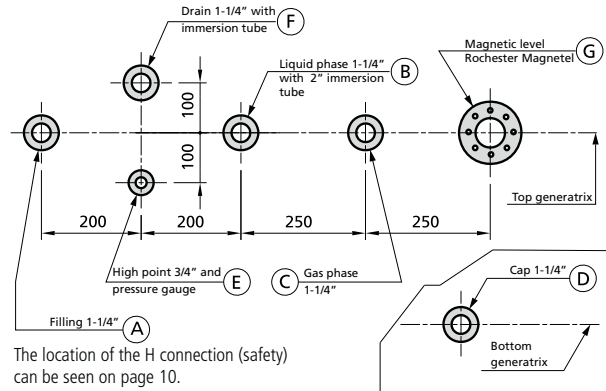


(1) The indicated valve in the STD option is limited to a filling of the 85%.  
(Examples of valve equipment for Lapesa tanks)

**OUTLETS AND VALVES** (2.200 & 2.450 diameter underground tanks)

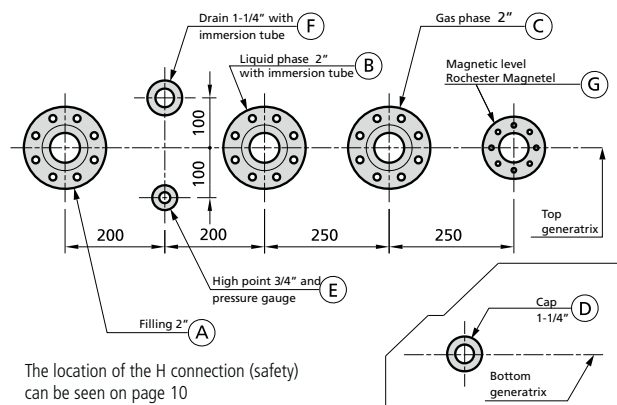
**22.6 to 50.0 m<sup>3</sup> CAPACITY TANKS**

FUNCTION	CONNECTION	ACCESSORY	STD Ref.
A: Filling	1-1/4" NPTH	Filling valve	Rego 7879 C
B: Liquid phase	1-1/4" NPTH	Stopvalve with excess flow feature and plug	Rego A8020D
C: Gas phase	1-1/4" NPTH	Excess flow valve Shutoff valve	Rego A 8013 DB Rego A 7509 BP
D: Cap	1-1/4" NPTH	Blind cap	Rego 7591UT
E: High point and pressure gauge	3/4" NPTH	High point valve	Rego A 2805 C
F: Drain	1-1/4" NPTH	Chek-lok	Rego 7591UT
G: Magnetic level	Rochester Magnetel (special flange)	2200 level ø 2450 level	Roch. 6360 08 TM D2200 Roch. 6360 08 TM D2450
H: Safety	ASA 4" 300# Flange	Valve manifold	See table



**TANKS WITH CAPACITIES GREATER THAN 52,2 m<sup>3</sup>**

FUNCTION	CONNECTION	ACCESSORY	STD Ref.
A: Filling	2" NPTH on 2" 300# flange	One-way Shutoff valve	Rego A 3400 L4 Rego A 7513 FP
B: Liquid phase	2" NPTH on 2" 300# flange	Excess flow valve Shutoff valve	Rego A 3500 P4 Rego A 7513 FP
C: Gas phase	2" NPTH on 2" 300# flange	Excess flow valve Shutoff valve	Rego A 3500 P4 Rego A 7513 FP
D: Cap	1-1/4" NPTH	Blind cap	Rego 7591UT
E: High point and pressure gauge	3/4" NPTH	High point valve	Rego A 2805 C
F: Drain	1-1/4" NPTH	Chek-lok	Rego 7591UT
G: Magnetic level	Rochester Magnetel (special flange)	ø 2200 level ø 2450 level	Roch. 6360 08 TM D2200 Roch. 6360 08 TM D2450
H: Safety	ASA 4" 300# Flange	Valve manifold	See table



## OUTLETS AND VALVES (Aboveground tanks with 2.200 and 2.450 diameters)

### 22.6 to 50.0 m<sup>3</sup> CAPACITY TANKS

FUNCTION	CONNECTION	ACCESSORY	STD Ref.
A: Filling	1-1/4" NPTH	Filling valve	Rego 7879 C
B: Liquid phase	1-1/4" NPTH	Stopvalve with excess flow feature and plug	Rego A8020D
C: Gas phase	1-1/4" NPTH	Excess flow valve Shutoff valve	Rego A 8013 DB Rego A 7509 BP
D: Drain	1-1/4" NPTH	Chek-lok	Rego 7591UT
E: High point and pressure gauge	3/4" NPTH	High point valve	Rego A 2805 C
G: Magnetic level	Rochester Magnetel (special flange)	ø 2200 level ø 2450 level	Roch. 6342 08 EM D2200 Roch. 6342 08 EM D2450
H: Safety	Brida ASA 4" 300#	Valve manifold	See table



### TANKS OF CAPACITY higher than 52,2 m<sup>3</sup>

FUNCTION	CONNECTION	ACCESSORY	STD Ref.
A: Filling	2" NPTH on 2" 300# flange	One-way Shutoff valve	Rego A 3400 L4 Rego A 7513 FP
B: Liquid phase	2" NPTH on 2" 300# flange#	Excess flow valve Shutoff valve	Rego A 3500 P4 Rego A 7513 FP
C: Gas phase	2" NPTH on 2" 300# flange	Excess flow valve Shutoff valve	Rego A 3500 P4 Rego A 7513 FP
D: Drain	1-1/4" NPTH	Chek-lok	Rego 7591UT
E: High point and pressure gauge	3/4" NPTH	High point valve	A 2805 C
G: Magnetic level	Rochester Magnetel (special flange)	ø 2200 level ø 2450 level	Roch. 6342 08 EM D2200 Roch. 6342 08 EM D2450
H: Safety	ASA 4" 300# Flange	Valve manifold	See table

(Examples of valve equipment for Lapesa tanks)  
Valves location can be checked on page 9.



## OUTLETS AND VALVES

(Aboveground tanks with diameters greater than 2.450)

### TANKS WITH CAPACITIES GREATER THAN 60,0 m<sup>3</sup>

FUNCTION	CONNECTION	ACCESSORY	STD Ref.
A: Filling	2" NPTH on 2" 300# flange	One-way Shutoff valve	A 3400 L4 A 7513 FP
B: Liquid phase	2" NPTH on 2" 300# flange	Excess flow valve Shutoff valve	A 3500 P4 A 7513 FP
C: Gas phase	2" NPTH on 2" 300# flange	Excess flow valve Shutoff valve	A 3500 P4 A 7513 FP
D: Drain	2" NPTH on 2" 300# flange	Excess flow valve Shutoff valve	A 3500 P4 A 7513 FP
E: High point and pressure gauge	3/4" NPTH	High point valve	Rego A 2805 C
G: Magnetic level	Rochester Magnetel (special flange)	ø 3.000 level ø 3.500 level ø 4.000 level ø 4.200 level	6342 08EM D3000 6342 08EM D3500 6342 08EM D4000 6342 08EM D4200
H: Safety	ASA 4" 300# Flange	Valve manifold	See table

(Examples of valve equipment for Lapesa tanks)



## TABLE OF MANIFOLDS FOR SAFETY VALVES

MAKE	CAEN			REGO		
	CDS	CTS	CCS	8572	8573	8574
Model						
Manifold discharge (m <sup>3</sup> /min.air)	403	806	1209	300	601	910
Maximum allowable surface area of underground tank (m <sup>2</sup> )	129,7	302,1	495,2	90,5	211,2	350,2
Maximum allowable surface area of aboveground tank (m <sup>2</sup> )	84	195,5	320,5	58,6	136,7	226,7

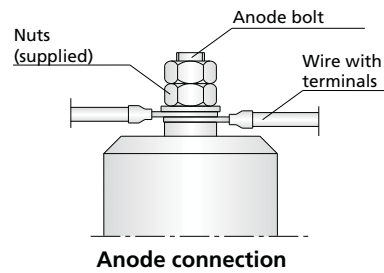
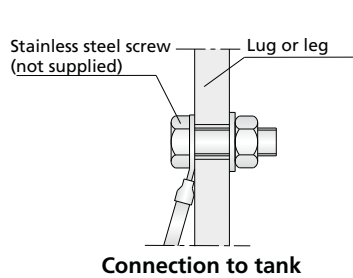
This table can be used to choose the type of manifold according to the discharge that the tank requires or the surface area it has. Manifold discharges are carried out at an opening pressure of 20 bar and at 20% overpressure. Manifold valves are set at 20 bar  
Connection of manifold to tank: ASA 4"300#

**CATHODIC PROTECTION FOR UNDERGROUND TANKS**

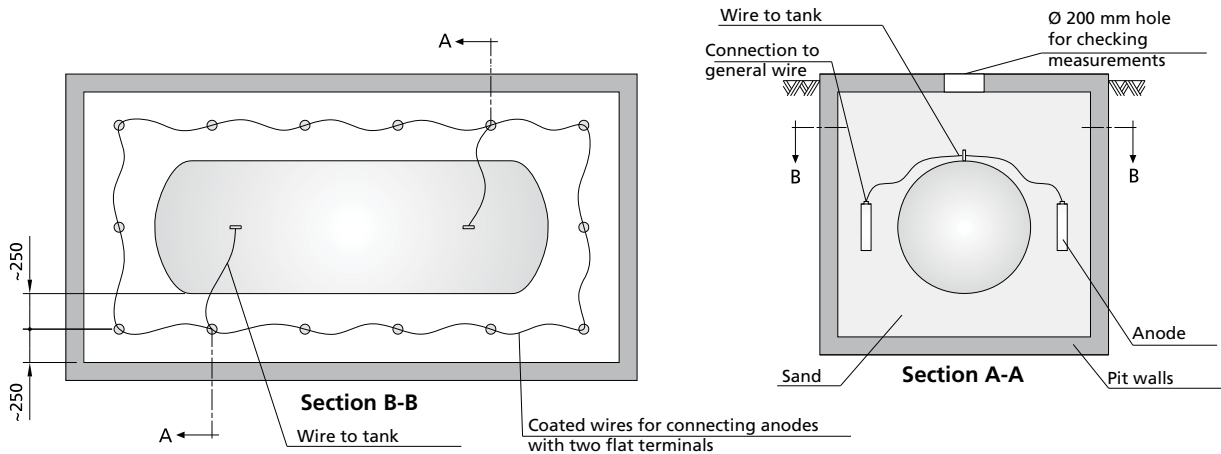
When considered advisable, the underground tank should be equipped with active protection against corrosion. The type of cathodic protection equipment will be decided by specialized technicians, taking into account the specific characteristics of each installation. The following is an example of the cathodic protection system that LAPESA can supply, with sacrificial anodes (without impressed current).

- Anodes usually last 15 years, generating the potential specified in the standard, however it depends on the type of soil and the area in which it is installed. In some cases it will be necessary to place an activating mix around the anode.
- Anodes are connected to the tank through special holes in the lifting lugs.
- Optionally the cathodic protection equipment can be supplied with a bag of activating mix.

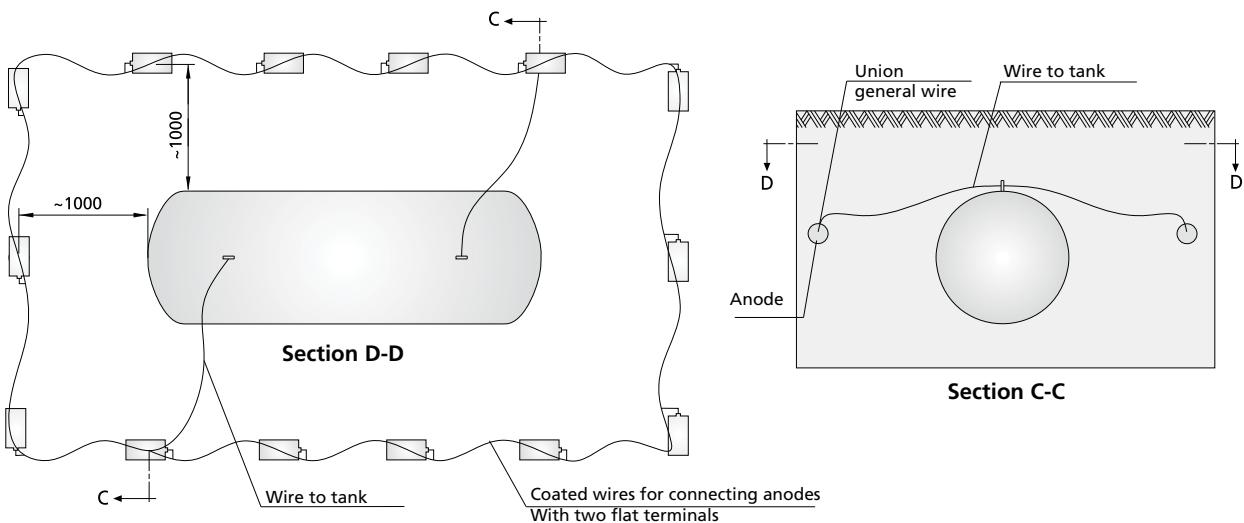
**DETAIL OF INSTALLATION\* OF ANODES IN UNDERGROUND TANKS**



**LOCATION OF ANODES IN UNDERGROUND TANK WITH PIT**



**LOCATION OF ANODES IN UNDERGROUND TANK WITHOUT PIT**



(\*) Insulate connections with self-vulcanizing tape. Ensure correct contact of all connections. The tank should be electrically insulated from the rest of the installation (pipes, etc.).

**BOOTHS FOR CYLINDERS**

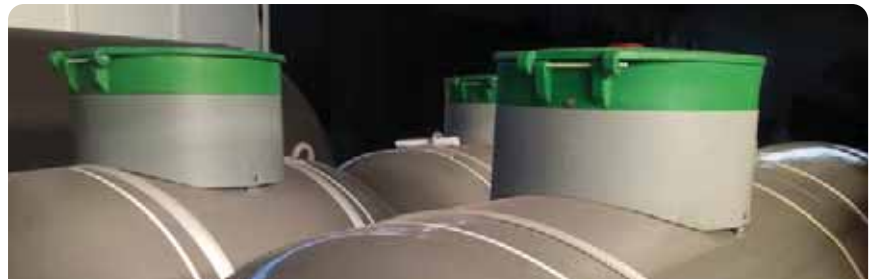


**COVERS / INSPECTION CHAMBERS**



COVERS ON ABOVEGROUND TANKS

**lapesa**  
*Solutions*



**REGULATION EQUIPMENT (100 kg/h)**



INSPECTION CHAMBERS ON UNDERGROUND TANKS

**ANCHOR SLABS**



ANCHOR SLABS FOR ABOVEGROUND TANKS



ANTI-FLOTATION TRAYS FOR UNDERGROUND TANKS