



TREPOVI

HANDLING MANUAL
FILTERS & PRESSURE TANKS

Basic Operation / Maintenance / Warranty

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A - Basic Operations

A.1- Lifting and Unload:

Upon reception of tanks, and before to unload from truck, it must be inspected that no damages have been suffered in transport. If any incidence is detected it must be registered in delivery note from forwarder. Otherwise, it will be understood that has arrived in perfect conditions.

Handling of Horizontal tanks in unload operations should be according to standard procedures: Lifting of tanks will be done only with Polyester slings, hanging tank from the centre, or with two (2) slings at the ends in large tanks.

Vertical filters / tanks will be lifted using lifting lugs supplied, all at once and with an angle of 60°.

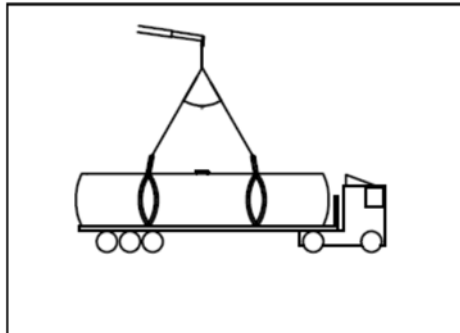
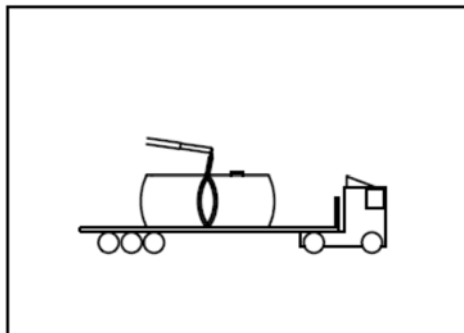
Metal cables or chains will never be used.

Horizontal Tanks and Filters:

It will be used polyester slings. Never chains or metallic cables.

Tank / Filter will be lift from the centre, lacing the tank from the centre of gravity.

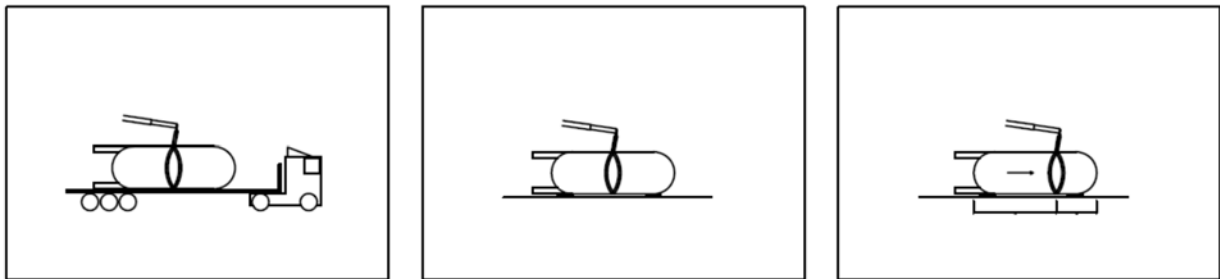
In large tanks, it is recommended to use two (2) slings and hang the tank at the ends, joining them with another sling at an angle close to 60°.



Vertical Tanks and Filters:

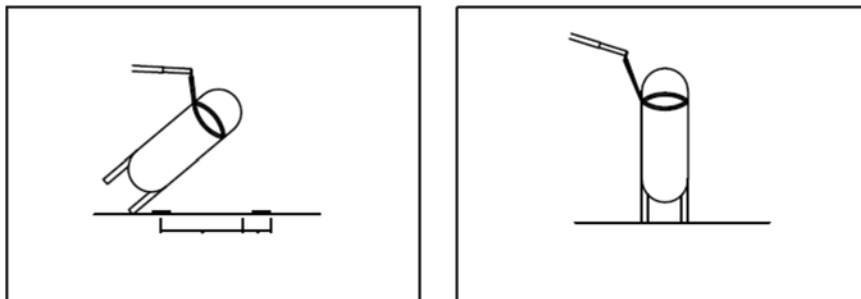
It will be used polyester slings. Never chains or metallic cables.

For unload tanks from truck, it will be lift from the centre, lacing the tank from the centre of gravity. Tank will be deposited on two pallets on the floor.



For the elevation and installation of tank / filter in vertical position, sling position will be moved towards a third of the height of the tank (upper part) and it will be lifted carefully, always with something under the lower end, avoiding dragging the tank or hitting it.

If lifting lugs are installed, it will be used for lifting, working all of them and with the slings at an angle of 60°. **It will never be pulled only from one lifting lug.**



Important Remarks for Installation of tanks:

- Base where tank will be installed must be reinforced concrete, completely smooth and levelled (**max. tolerance ± 3 mm**).
- Fixing anchors will never be pulled.
- In case of filters or tanks with legs, they will never be lifted by pulling legs.
- If lifting lugs are installed, lifting must be from all of them at once, never from only one.
- Elevation of tank must be done smoothly, avoiding impacts on the ground
- Anchorage of filter to the ground will be through expansion screws or chemical anchors. In case of earthquake or wind conditions, our Technical Department can give you recommendations.

A.2 - Set - up:

Previous Check:

It is possible that due to external factors occurred during transportation, such as vibrations, temperature changes, handling... it will be necessary a VISUAL inspection and CHECKING of tightness of components installed in tanks BEFORE to run any operation with the equipment.

It is necessary to check that all **nozzles and collectors** are correctly installed into the filter with appropriate tightness. Torque for each piece, will be recommended by manufacturer.

Manholes will be checked with correct installation of O-rings / flat gaskets, and appropriate tightness of screws.

In case of other accessories such as valves, sight glasses, manometers, and others, their installation must be checked. Connection of each component will be according particular recommendations for each case. Our Technical Department will give you especial recommendations.

Cleaning:

It is recommended to wash filters with water at room temperature, without pressure, to remove dirt residues generated in transport or assembly. If necessary, neutral soap can be used.

Safety:

Installation must include necessary safety elements to ensure that, at any time, design pressure is not exceeded, or there is no vacuum pressure by using double effect suction cups, rupture disks, pressure switched or others.

Design pressure, as well as differential pressure at nozzle plate is well defined in the drawings and identification plate of filter.

In Nozzle plate filters is essential to ensure that **maximum differential pressure will never be exceeded, in both the washing or filtration.**

Working Conditions:

- Backwash water: It is recommended **always backwashing with clean water**, or previously filtered. If dirty water is used, nozzles and distributors can be collapsed, increasing differential pressure which could seriously damage plate.

In addition, pressure drop will also increase during filtering and lifetime of nozzles will be shortened. Total replacement of Nozzles will be necessary.

- Temperature: Max. design temperature will never be exceeded.

- Cleaning: **Chemical products will not be used** for cleaning or regeneration unless stated in equipment specifications. In case of doubt, it must be consulted to our Technical Department.

- Pressure: It is necessary continuous monitoring of pressures to avoid exceed design pressure.

- Torque: It must be checked that flanges and manholes are correctly closed. Tightening of screws will be done in cross, and with torque according following table:

Nominal pipe diameter (mm)	Torque (Nm)	Nominal pipe diameter (mm)	Torque (Nm)
25	20	300	75
32	20	350	95
40	20	400	88
50	20	450	115
65	23	500	115
80	27	600	163
100	20	700	108
125	30	800	156
150	34	900	190
200	47	1000	197
250	50		

- Load of media: To fill filter with media, filter will be filled with water up to about 40 cm above nozzles. Filter media will be charged carefully without step on nozzles and collectors. Filtration media will be homogeneously distributed. After final charge, it must be left completely flat. It can be done by backwashing until the bed is levelled.

- Purge: Once filter is filled, air will be purged manually or automatically with appropriate valves.

Before run any process with the filter, it must be checked that no leaks in joints and unions.

Once filtration is started, it will be checked that safety devices work correctly.

It is necessary to periodically check properly function of safety devices, as well as detection of any possible leak especially in connections.

B - MAINTENANCE

B.1 - Media replacement:

Methodology for replacement can be done by different ways depending on filter design, properties of media and installation itself. If you have any doubt, our Technical department can give recommendations.

B.2 - Spare Parts:

Lifetime for different components of tanks and filters will vary depending on the conditions of use, as well as type of liquid storage / filtered.

Components that need to be replaced regularly are:

- Nozzles and collectors. Load of work will define lifetime (in good conditions, 10 years).
- Filtration media: Amount and type will be defined by the operator according to their service conditions.

Other components which are not consumable but could be damaged in maintenance operations are:

- Flat gaskets in flanges and openings.
- Screws for close flanges and openings.

B.3 - Other Recommendations:

If filter will be in stand by for a long time, it is recommended to empty it and leave it clean, to avoid clogging and incrustations.

In filters or tanks installed outdoors, it is recommended to paint regularly to improve external appearance and ensure appropriate protection against UV radiation (sun) on the GRP body (Glass reinforced polyester).

In the event that filter / tank has valves, sight glass, supports or other accessories, maintenance can be consulted to our Technical department.

C - WARRANTY

TREPOVI SL warrants that Products and Parts manufactured supplied are free from defects in materials and workmanship under normal use and service.

This warranty applies only to original purchaser and begin on the date of delivery of the material for a period of 2 years.

Terms, limitations and obligations are described below:

Obligations:

Should a material defect in workmanship, materials or products covered by this warranty become evident during the applicable warranty period, Trepovi S.L. will remedy, repair or replace the defective Product or Part with a limit value not exceeded the purchase price paid. Terms of this warranty are subject to laws and regulations of our country. Any legal procedure will be only competent at the Solsona (Lleida) tribunal.

Procedure:

In all instances of a Product or Part warranty claim, and prior to providing any warranty remedy, you shall:

1.- Notify us in written form a warranty claim within five (5) business days of your receipt of the claim, stating the serial number and a brief description of the problems encountered.

For warranty claim that includes property damage or bodily injury you shall notify us in written form, to allow us act accordingly.

2.- Investigate the claim, which may include digital photographs of the installed Product, verifying proper installation, or other means of validating the claim and verifying the damages claimed.

3.- In case not material defect can be demonstrated from previous data, Trepovi will request return the defective product to us freight prepaid, no later than the expiration date of the warranty period provided in this Limited warranty.

Exclusions of this Warranty:

- 1.- Defects not reported to us within the applicable warranty period.
- 2.- Any items manufactured by other companies.
- 3.- Problems resulting from failure to comply with installation, operation or maintenance instructions.
- 4.- Damage caused by acts of nature or problems resulting from abuse, misuse, negligence or accident.
- 5.- Problems resulting in whole or in part from alteration, modification or attempted repair of these Products or Parts.
- 6.- Damage or failure of a Product or Part caused by friction, wear, chemical attack or debris build-up on wear parts. "wear parts" include, but are not limited to: filter-nozzles, distributors, adapters and connectors, nuts and washers, as well as parts requiring replacement under recommended maintenance procedures, such as cartridge filters, filter elements, O-rings and gaskets.
- 7.- Noncompliance with applicable codes and ordinances
- 8.- Damage due to impacts, corrosive liquids, gases or chemicals.
- 9.- Damages due to hydro-pneumatic or pneumatic use.
- 10.- Labour to install warranted parts and trip charges including mileage are the responsibility of the system owner.

Additional Exclusions:

- 1.- Failure to operate equipment in accordance with the limitations stated on the product label.
- 2.- Failure to properly size equipment to manufacturer recommendations.
- 3.- Use of products or parts with water containing sediment or chemicals.
- 4.- Injury to equipment or any part thereof caused by exposure to vacuum, freezing, external impact, chemical attack from liquid and gasses, fire, floods or lightning.
- 5.- Chemical Barrier abrasion caused by faulty distribution systems.
- 6.- Exposure of plastic surfaces to incompatible lubricants or sealants.