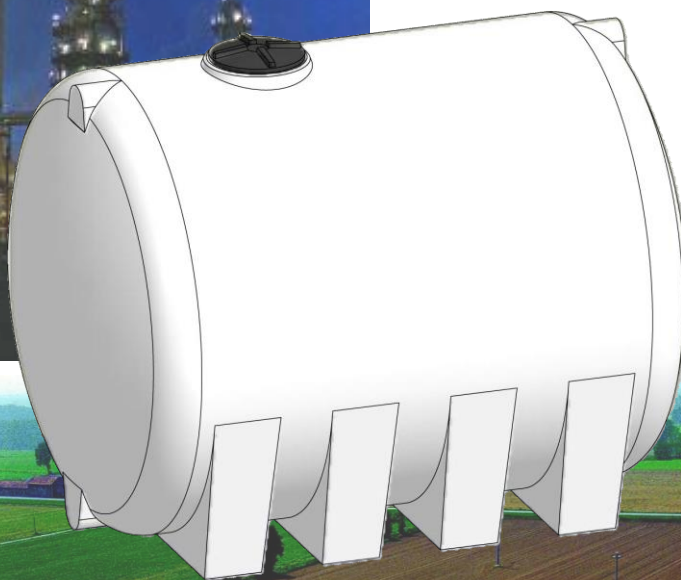
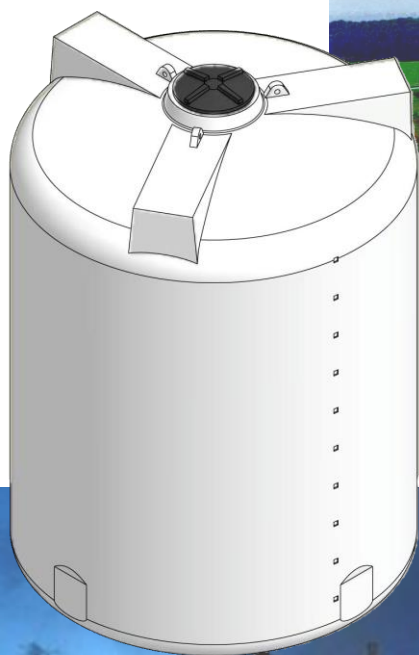


USER GUIDE

CONTAINERS / TANKS

INDUSTRY SERIES



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1 . INTRODUCTION

THE USE OF OUR TANKS IS VERY SIMPLE AND DOES NOT REQUIRE SPECIAL INSTRUCTION, BUT WE LIST OTHERWISE SOME USEFUL DETAILS AND SUGGESTION:

- The tanks must be used at atmospheric pressure and cannot be subjected to pressure or depression, the operating temperature is between -30° C and $+60^{\circ}$ C, don't place the tanks near heat sources;
- Our tanks are built considering the type of product, specific gravity, its aggressiveness and the operating temperature, these informations are transmitted to us by the customer when ordering, the thickness of the walls of the tanks are computed using the formula specified in the legislation **ASTM D 1998-97**.

The versions produced by us considering all these factors and the customer can choose between the following options:

- STANDARD execution for specific gravity max 1,3;
- OVERSIZED M16 execution for specific gravity max 1,6;
- OVERSIZED M18 execution for specific gravity max 1,8;
- OVERSIZED M20 execution for specific gravity max 2,0.

2 . IDENTIFICATION

Identify the model of the container is extremely simple, because the name of the series and the reference model are imprinted on it, near the areas suitable for the application of the piping.

There is also an additional plate that allows you to recognize any tank and artifact back to its production cycle, this takes a coded marking system, which is reserved to the producer.

At the time of supply to more easily identify the tanks, especially on larger or non-standard executions, there are specific alphanumeric written with indelible black marker, a reference to the customer, like the one on DDT with the addition, if necessary, of more references.

Be careful to the references that specify the version, this indicates the maximum specific gravity that can be contained, it is advisable to prefer versions with a wide margin of safety.

Legend:

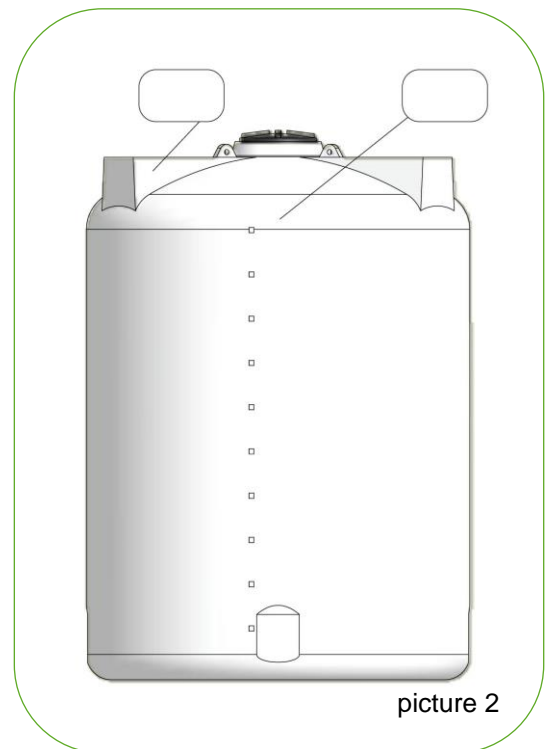
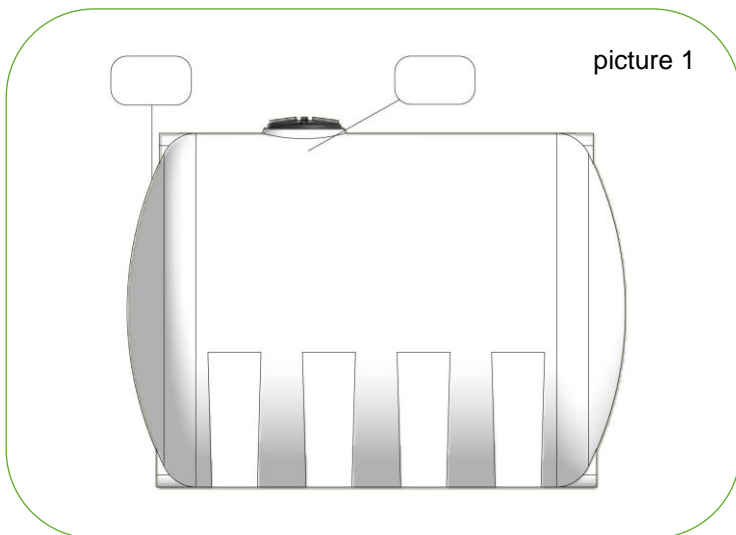
STD = 1,3

M16 = 1,6

M18 = 1,8

M20 = 2,0

LOCATION OF IDENTIFICATION PLATES



3 . DISCHARGING AND HANDLING

The polyethylene tanks due to their low weight, do not imply difficulties in discharging; for models up to 5 cubic meters is enough an ordinary forklift (picture 3).

The higher capacity, up to 10 cubic meters, presents some difficulties for the larger size and require the use of an extension cord to the forks of at least 2 meters, if transported vertically (picture 3).

If they are lying down, like for more capacity, should lay some planks on the forks forming a continuous plane, and approaching the truck and then will push the tank on the floor obtained plane (picture 6).

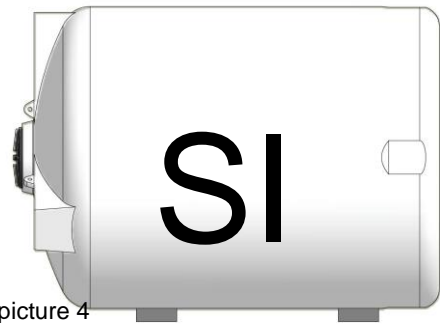
We recommend at least a 25 quintals forklift.

Storage tanks: lay flat planes without stones that can damage the bottom, avoid stacking and overlapping of weights.

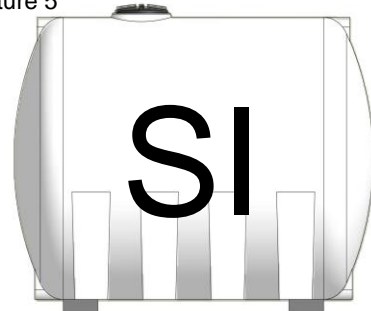
picture 3



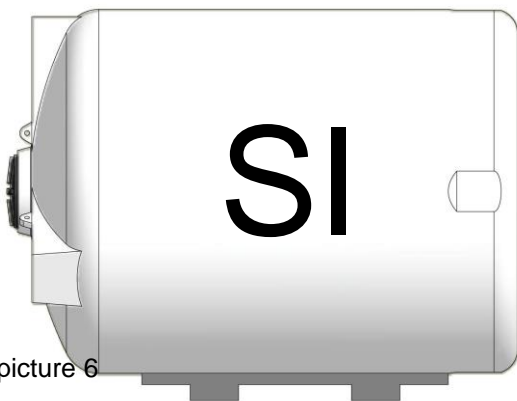
picture 4



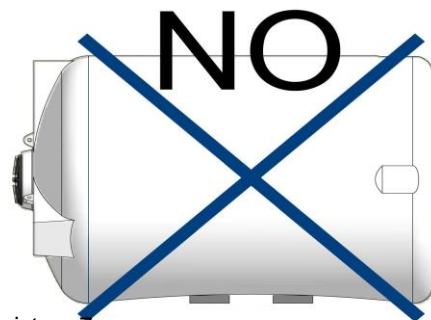
picture 5



picture 6



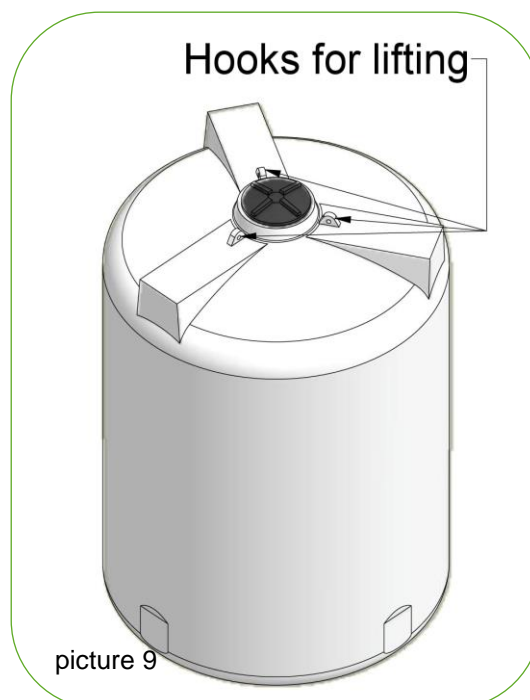
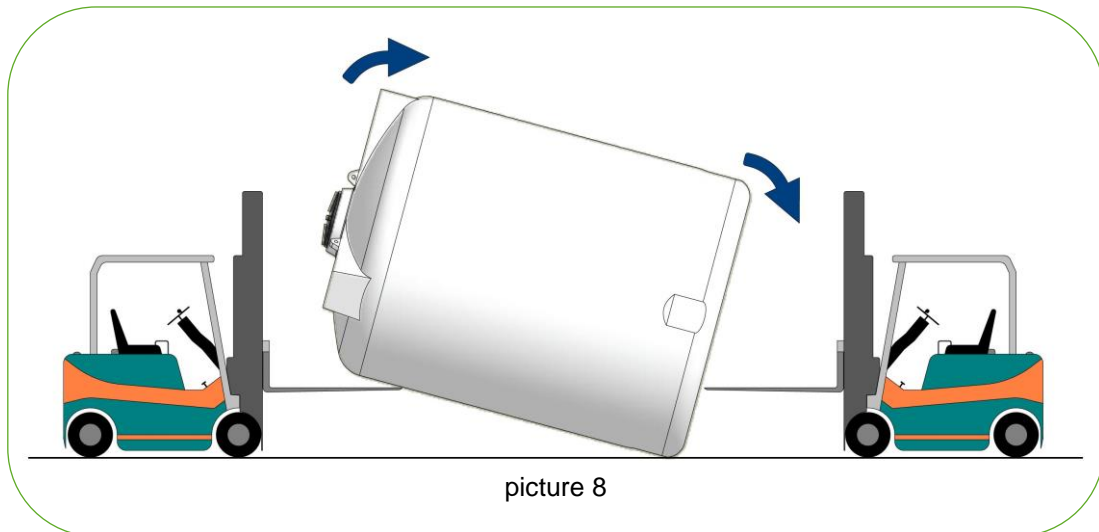
picture 7



4 . POSITIONING

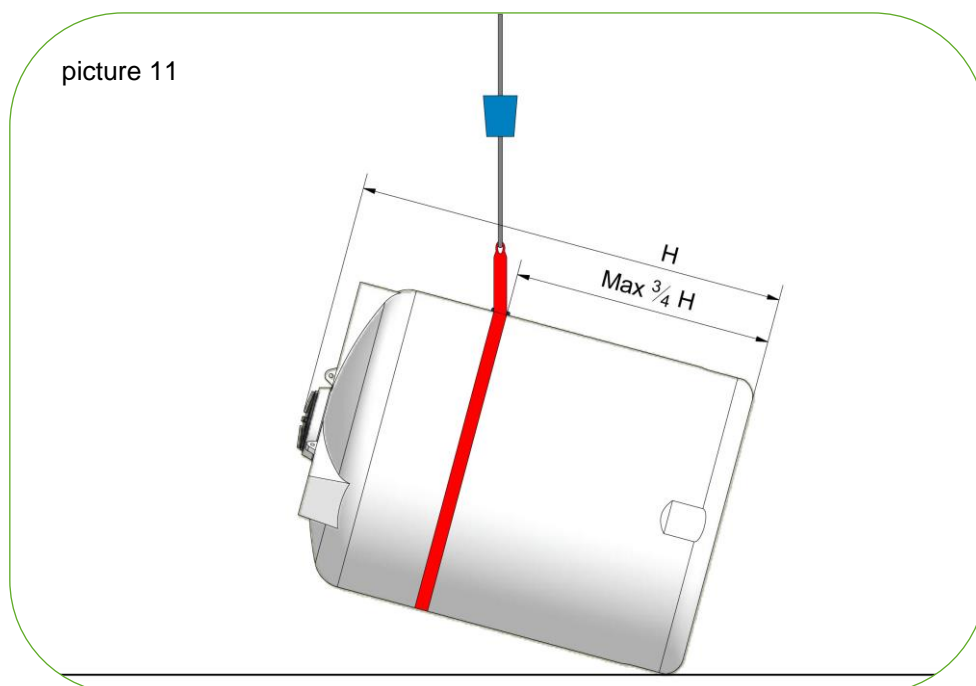
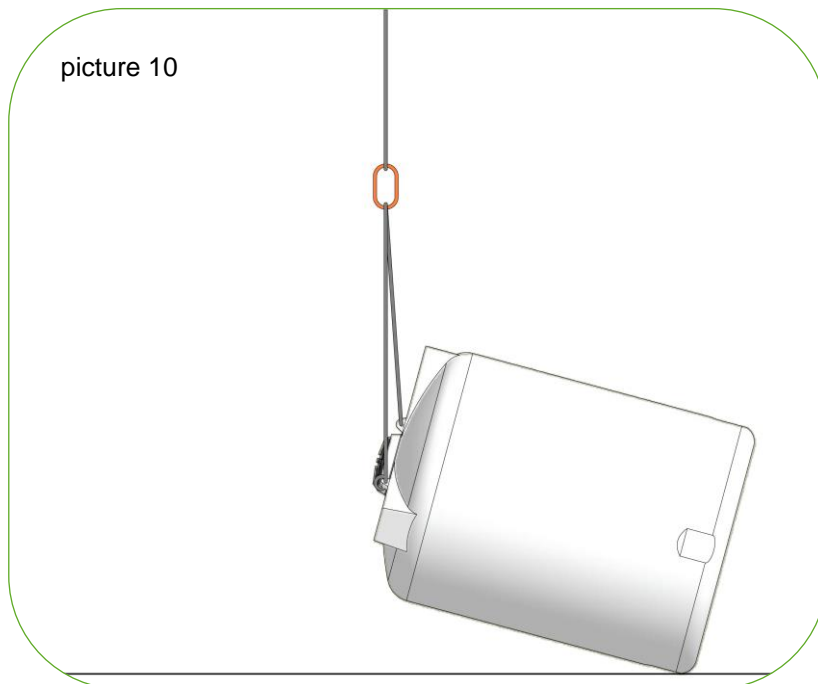
The positioning of the tanks is extremely simple and easy up to a capacity of about 5 cubic meters, due to the rather small size, a common forklift is enough, preferably with extended forks, to avoid damaging the bottom with the tips (picture 3).

For capacity up to 10 cubic meters require particular attention during commissioning vertical, because normally they are transported lying down, you should use two forklifts (picture 8), one that raises the front other one that guide the rear and rests the tank on the ground, this task is easier if you have a crane, the tanks are equipped with special hooks for lifting (picture 9).



For capacity for more than 10 cubic meters, we recommend the use of a crane (picture 10), using the hooks on the tanks (picture 9) or alternatively a fabric band tie it about $\frac{3}{4}$ of its height (picture 11).

ALWAYS USE EYE BOLTS OR FABRIC BANDS



5 . INSTALLATION ADVICE

Verify the container's type, model, supplied with any accessories, if suitable for containing the product for which we are preparing to install, the same model is manufactured in different types of color and thickness, if in doubt contact your supplier.

If the product is aggressive, check the chemical compatibility in the table of chemical resistance, if it is not on the list please contact the supplier.

Use only pipe, fittings and valves made of material compatible with the product included, if in doubt contact your supplier.

The container should not show signs of abrasion caused by shocks in the transport and / or handling, otherwise contact the supplier for a careful evaluation of the damage, if they relate to a discharge unit, replace it with a new one for safety.

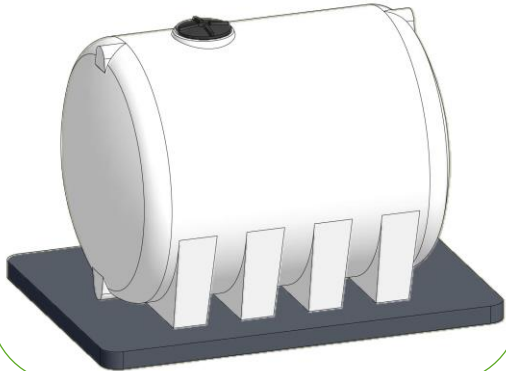
Place the tank ONLY on a flat level, adequate for the weight of the container full, smooth, clean and free of rocks and / or roughness that might damage the bottom (picture 12 and 14).

The bottom of the tank must rest completely on a continuous plane (picture 12 and 14) or it will suffer irreparable damage or violent rupture.

Avoid installation near sources of heat and incompatible products with polyethylene.



picture 14

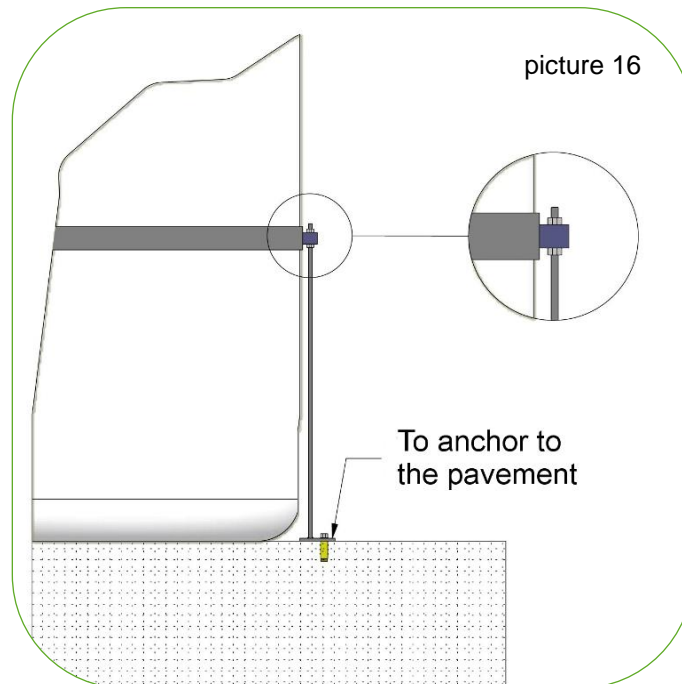


NO

picture 15

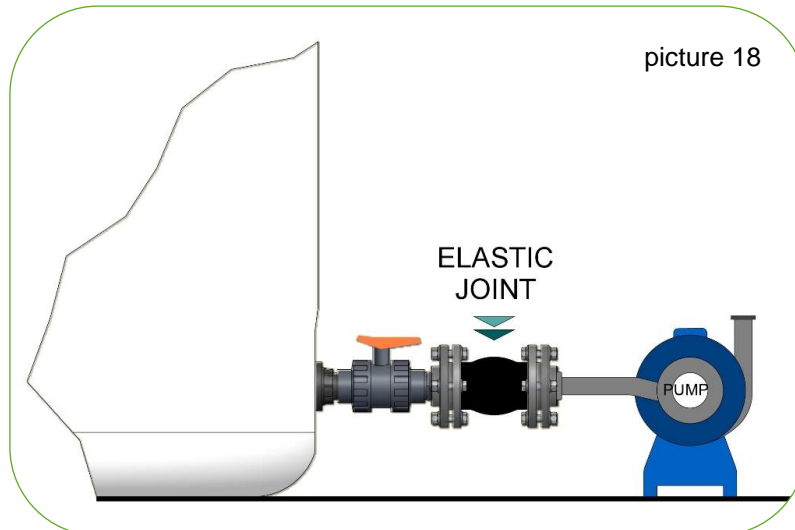
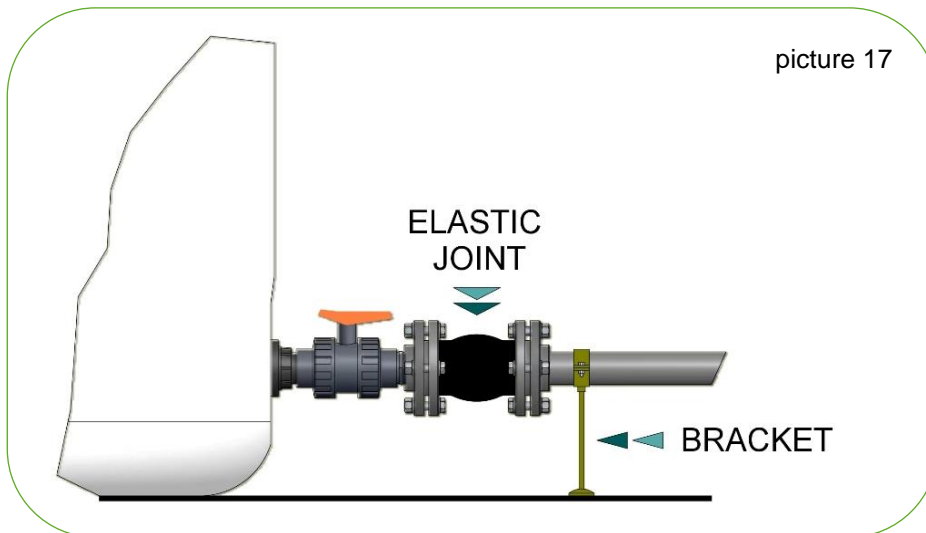
If windy areas, we recommend to anchor the tank by a belt attached to the floor, the danger of tipping is high when the tank is almost empty and the wind is very strong (picture 16).

picture 16



5.1. CONNECTIONS

Consider the expansion tank during filling and emptying, the pipes don't have to load the containers and / or their accessories, especially if exposed to sudden temperature changes or connected to pumps, and these must be properly amortized using elastic couplings or flexible connections and media support.



For the application after-sales service of additional accessories, contact your supplier specifying the use and placement, you will be guided in choosing the type and application procedure, ensuring greater safety and durability to your containers.

The application of accessories in different positions from those provided on the individual tanks and / or incorrect application procedures may compromise the integrity and life of the tank.

6. ACCESSORIES

The tanks can be equipped with many accessories commissioned by the customer, some may be mounted directly by our company, others can be supplied disassembled and packed in boxes and assembled by the customer at the time of installation of the tank following all the necessary precautions.

The most requested and used accessories are the fitting (picture 19), they are made of polypropylene with male thread GAS and are equipped with two O-rings in EPDM or Viton or Silicone.

If the application of the fitting is directly made by the customer, it is useful to pass on some important information to best achieve this operation:

1. Drill the hole size "D" in the desired point using a drill with a hole saw (Table 1).
2. After you drill the hole, it must drool the hole externally and internally taking care not to create any of the steps.
3. Insert the nozzle from the inside, making sure that the O-ring is correctly positioned in its seat.
4. Insert the O-ring from the outside and slide the pusher plate, tighten the nut and tighten it using a key chain or one of our special equipment, being careful not to twist the fitting.

TABLE 1	HOLES SIZE BY FITTING								
Ø FITTING ("GAS")	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
Ø HOLE (mm)	21	27	33	42	48	60	75	90	110

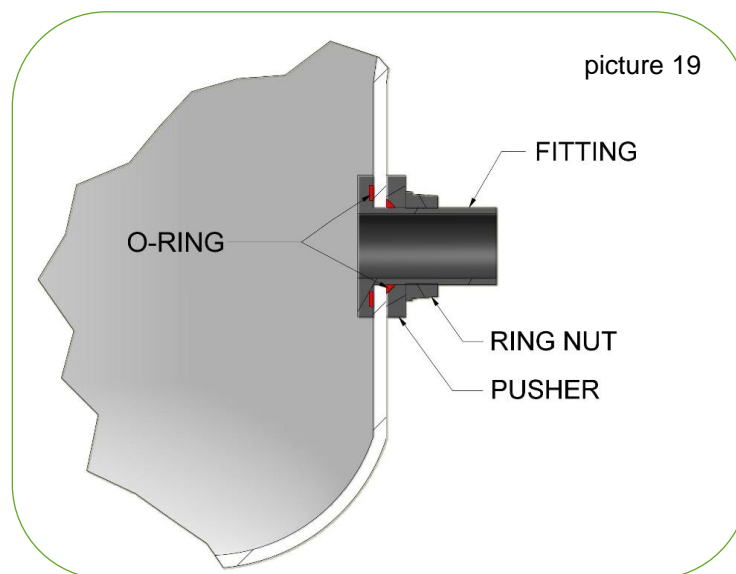
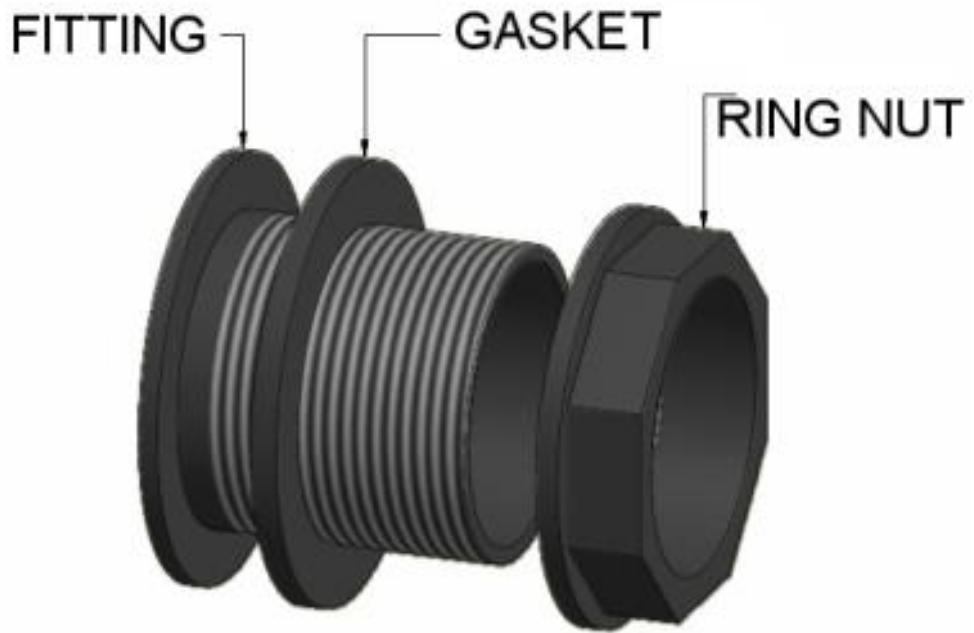


TABLE 2

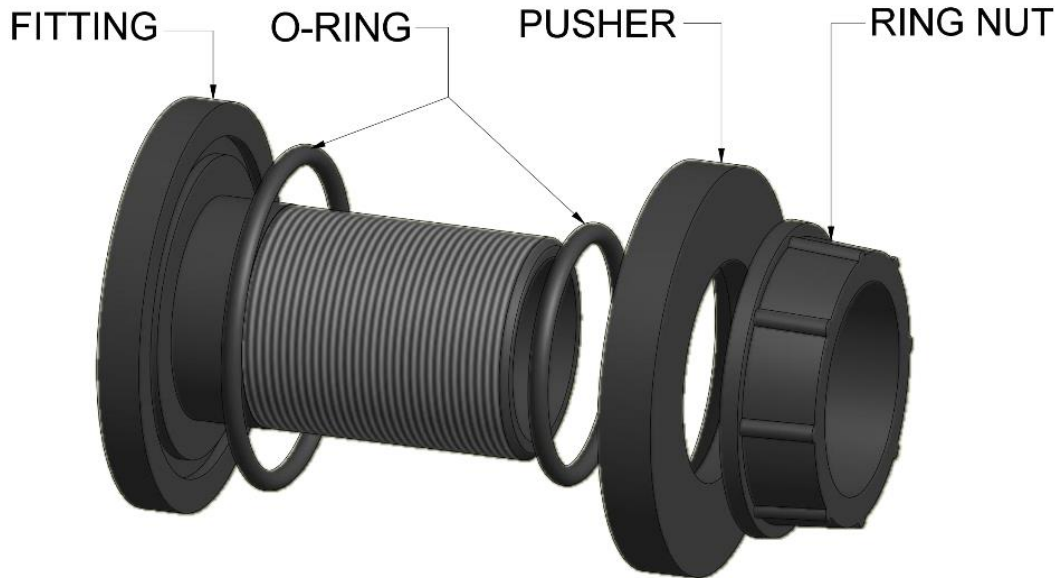
FITTING LIGHT SERIES



SLD ("GAS) Gasket EPDM	1/2"	3/4"	1"	1 ¹ / ₄ "	1 ¹ / ₂ "	2"	2 ¹ / ₂ "
SLA ("GAS) Food Gasket	1/2"	3/4"	1"	1 ¹ / ₄ "	1 ¹ / ₂ "	2"	--
SL2D ("GAS) O-Ring EPDM With double threaded connection	1/2"	3/4"	1"	1 ¹ / ₄ "	1 ¹ / ₂ "	2"	--

TABLE 3

HEAVY SERIES FITTING

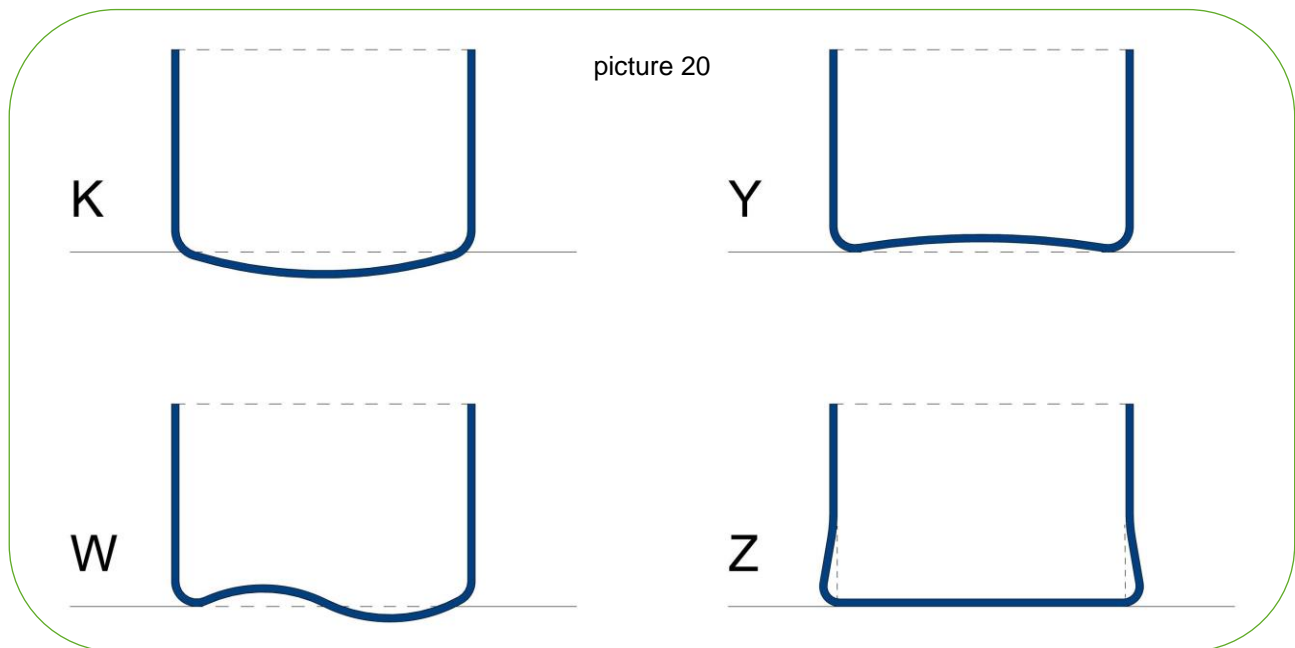


SPD ("GAS) O-Ring EPDM	1"	1"1/4	1"1/2	2"	2"1/2	3"	4"
SPV ("GAS) O-Ring VITON	1"	1"1/4	1"1/2	2"	2"1/2	3"	4"
SPS ("GAS) O-Ring Silicone	1"	1"1/4	1"1/2	2"	2"1/2	3"	4"
SPDT ("GAS) O-Ring EPDM With internal piping	1"	1"1/4	1"1/2	2"	2"1/2	3"	4"
SPVT ("GAS) O-Ring VITON With internal piping	1"	1"1/4	1"1/2	2"	2"1/2	3"	4"
SPST ("GAS) O-Ring Silicone With internal piping	1"	1"1/4	1"1/2	2"	2"1/2	3"	4"

TABLE 4		SUPER HEAVY SERIES FITTING				
SSD ("GAS) O-Ring EPDM	2"	2" ¹ / ₂	3"	4"	5"	
SSV ("GAS) O-Ring VITON	2"	2" ¹ / ₂	3"	4"	5"	

7. BOTTOM TANK (DEFORMATIONS)

The polyethylene tanks are rotationally moulded and they are of semi-rigid type and it is normal that the bottom of the large tanks presents some deformations in different forms (PICTURE 20 POS. K-Y-W), after vertical placement these undulations disappear adapting to the floor on which they are supported when they are filled, the bottom will take the final shape with a slightly flared or pear shape (PICTURE 20 POSITION Z).



8. ADVICE FOR THE USER

- Always check before beginning transfer operations that vent is open and unobstructed to prevent the implosion during emptying.
- Do not place weights on the upper cap of the tank and don't walk on it.
- The tank must be moved only if it is empty.
- If the tank is used for storage of multiple products, make sure that any residue is compatible with the new product.
- Caution: The current regulations provide that the tanks containing chemicals should be placed in a safety tub of adequate capacity.

After placing the tank and making the connections of the pipes before filling with the product for which it was purchased, must be checked for leaks or cracks present on the tank and accessories caused by shipping or handling.

9. MAINTENANCE

Most tanks require no special maintenance to their structure, but related to the product contents, if it generates sediments or bridges, you must remove them periodically in order to avoid the clogging of the exhaust unit which could cause a violent emptying and a consequent implosion, urging in a bloody manner throughout.

In the same attention also require vent and overflow.

During the change seasonal it must check the tightness of the groups of discharge, being composed by different materials, including gaskets, and then subjected to different thermal expansion.

The tanks equipped with frames and / or metal bases, require a periodic restoration of the painted parts, in particular in respect of welds that must always be well protected.

10. WARRANTY

TANKS FROM OUR COMPANY PRODUCTS ARE GUARANTEED FOR A PERIOD OF TWELVE MONTHS FROM THE DATE OF DELIVERY UNLESS OTHERWISE AGREED IN TRADE.

The warranty period may also vary due to align with the laws of the country in which you install the tank.

The warranty covers any manufacturing defects and is also extended to the accessories supplied with the tank.

The warranty does not cover:

- damage caused by transport (the material is supplied ex works loaded on trucks);
- aesthetic defects;
- damage caused by improper installation;
- damage caused by installation of accessories or components not supplied by our company;
- damage caused by wrong use of the tank;
- damage caused by the use of non-compatible products with the polyethylene (the customer must precise when purchasing the tank, which product it will contain, we recommend to consult the chemical resistance table attached).

The warranty is void if:

- incorrect installation;
- installation of accessories or components not supplied by our company;
- storage of products not compatible with the polyethylene and not agreed with our company;
- modifications of parts of the tank or of its original components;
- poor maintenance or inadequate;
- damage caused by external agents;
- unauthorized repair.

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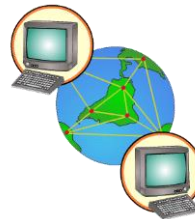
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