WHY CALPLAS?

(See more at www.calplas.com)

Polyester technology.

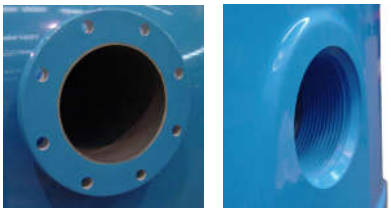
Calplas uses hand lay out. This means that the fiberglass reinforcement is just working in the principal stress directions: vertical and horizontal. Others technologies which are mixed in other manufacturers not only do not have these fiberglass properties but they have some parts the fiberglass in all directions which gives, from the technical point of view, some random possible behavior of the material.

This technology is also key to have a precise and unique mechanical properties of the polyester. This is the reason why a filter under pressure of calplas do not expand while all others do that. This "expansion" due to the reasons mentioned above, is dangerous in the long term and causes undesirable stress and fatigue after some years. **In other words complete reliability.**

Fiber glass view. It is key that the fiberglass is oriented in the directions of the maximum tensions the filter will have to handle.

Connections

Any thread, any flange, is part of the body. All is polyester. PVC fittings are avoided since the PVC and the Polyester do not stick together with 100% liability. If PVC flanges are used (such us in our competitors) some parts have to go through the wall of the polyester. this is a source of problems. obviously we avoid this situations and all CALPLAS connections are polyester manufactured.



Flanges and threaded connections are part of the body. Any PVC fitting is avoided due to mechanical risk.

Steel parts inside

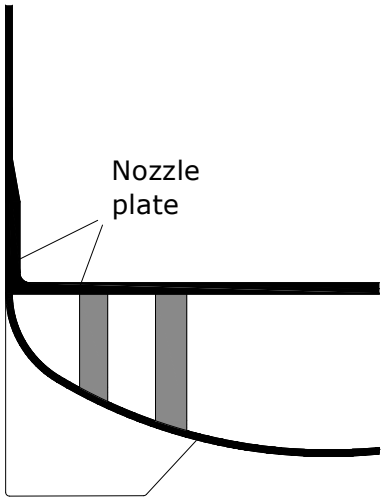
CALPLAS is unique in having steel reinforcements in key and critical parts. Steel is brought under a unique process developed by CALPLAS consisting treating physically and chemically to ensure a correct assembling with the fiberglass. The nozzle plate is internally reinforced by a steel grid specially designed for each diameter. Manholes, and emptying holes have also steel reinforcements. This use of steel and the way to use it in critical points of the vessels allow CALPLAS to have a big market in water treatment with high pressures where no other polyester manufacturer can compete. Water treatment field do not allow a single mistake (a factory cannot be stopped). This experience in water treatment makes that working with low pressures like the one used in swimming pool field is far away for being a challenge for CALPLAS. CALPLAS is the unique polyester manufacturer that have 3000 diameter nozzle plates working in vessels under 6 bars.

Due to confidential reasons (many of our practices are being copied by other manufactures, we cannot show pictures of steel parts embedded in the filters). This is a key point for us. We show it when we have visits in the factory do not allow to take pictures.

Nozzle plate (Models: DPS DPS CPS…)

This is another key point. Nozzle plate in all other manufacturers are always made out of the vessel, then make the drills, and at a last it is "glued" to the filter. This task reduces the cost of manufacturing but makes the border of the nozzle plate too week. We have samples of broken nozzle plates in the past in all manufacturers. Never in Calplas.

CALPLAS manufactures the nozzle plate together with the body, this is the reason why a unique and complete liability of our nozzle plates. If we add this to the fact that it is internally reinforced with a steel grid and supported from the bottom part it can be find out why Calplas is used to manufacture not only vessels with a bottom nozzle plate, but others required in water treatment with two or three nozzle plates in the same vessel. in such cases since no other manufacturer can deal with this products our only competitor are the stainless steel vessel manufacturers. But our quality and liability cannot be reached by any other polyester manufacturer.

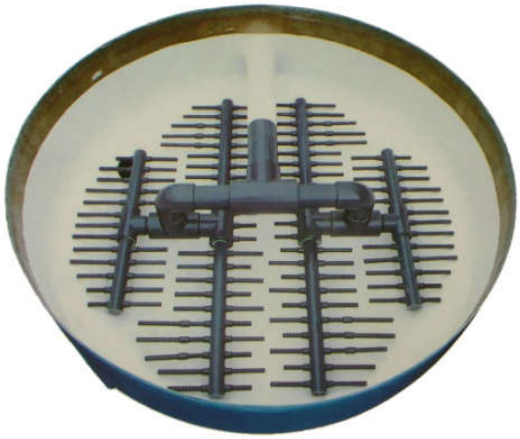


Nozzle plate is manufactured together with the body and is part also of the walls of the vessel. No single nozzle plate problem during more than 30 years. No one is able to say this.

The requirement of manufacturing the nozzle plate in such a way makes that the nozzle plate have to be drilled as shown in the picture. After drilling special sealing is done to each hole. Special tools are used in order to have the optimum finishing on each hole

Distribution system with arms (Models: FB, D, DC…)

Each filter distribution with arms has been designed for an optimum flowrate according the different flanges available for the filter during the filtration.



As important as the filtration is the backwash. This is the way we regenerate the filter for a proper filtration again. Maximizing the filtration area is a key point and also avoiding dead zones were bacteria can grow causing preferential pathways and a bad performance of the filter.

Piping and length and distribution is calculated so that the water comes equally throughout the complete length of the arms. Ensuring the best backwash possible. An inadequated distribution design can make water just come out throughout the first half of the arms, producing a poor backwash and probably causing severe problems of dead zones where bacteria can grow dramatically, and creating preferential pathways. Filter could be collapsed and channeling would appear

Top distribution

Top distribution is also the key of a good filtration. With Calplas GRP top diffuser filter bed will be flat and water will spread through all the filtration area.

Openings in the filters.

CALPLAS Openings came out of the mold. No holes are made (which is not a good practice) for accessing to the filter. This avoids future problems on the filter in this points. Lateral manhole lid is manufactured in plasticized steel to avoid corrosion and top elliptical access is manufactured in GRP. This accesses are manufactured also with steel inside.

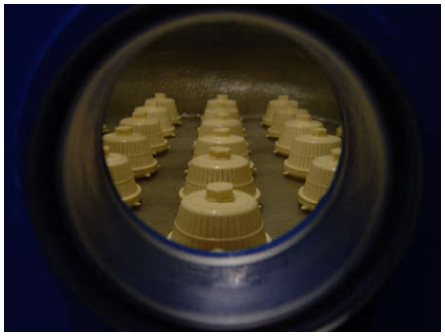
Elliptical manhole internal pressure closing

Bottom emptying access

Lateral manhole Ø420 / Ø500 mm

Sightglasses:

The purpose of a sightglass is to see clearly the inside part of a filter. 100% methacrylate Calplas sightglass will allow to perfectly see the inside of the filter.



Temperature and pressure hammer

CALPLAS is specially focused in those markets where quality and reliability is a key point. We have 25 years of experience in selling swimming pool vessels to Japan (asuka company http://asuka-roka.co.jp/). Japan market is very difficult not only because of the quality required by Japanese culture but also because the working temperature is 40ºC and the water hammer are significant because the water column between the swimming pool and the filter is usually bigger than in Europe.

Finishing

External view and finishing is important and no other filter can be compared to CALPLAS. But internal finishing is more important for the performance. Again the vast experience of Calplas in water treatment and in Japan with higher temperatures and pressure than the ones used in Europe have given a unique experience and feedback for the adequate internal lining required by filters are for an optimal performance.

Fish farms installations are very similar as swimming pools installations in flow rate and pressure. However the washing cycles are much more frequent (typically twice a day). CALPLAS have filters installed in such stressing conditions from about 30 years ago. Visiting one of this facilities is one of the ways of showing our customers what CALPLAS is and the liability of our products.

Testing

Each filter is tested before leaving our manufacturing plant. Calplas design pressure for pools is 2.5 bar and tested at 3.75 bar.

Calplas philosophy

We are water treatment product manufacturer. We started in 1970 in the industrial sector and we were required to manufacture filters by some swimming pool companies due to the lack of quality of the products in the market.

Calplas has an industrial philosophy, NO FAILURE IS ALLOWED, and we apply it to every single product we manufacure, it does not matter if this filter goes to an oil platform in the norther sea or into a pool, this filter will not fail.

We take care of the details to manufacture our filters to be the best, because many little things make a huge difference.