Okéanos
FIBERGLASS POOLS

DEWATERING WELL AND ARCHIMEDES THRUST

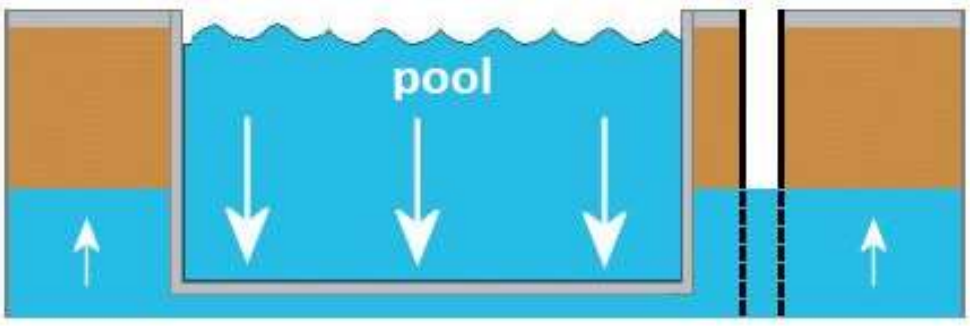
THE ARCHIMEDES' THRUST :

In this chapter, we are going to present you the Archimedes' thrust phenomenon, the measures that we set up and the recommendations that you will have to follow to avoid any risk of lifting the swimming pool.

Archimedes' principle shows us that there is a vertical pressure undergone by any body immersed in a liquid subjected to a field of gravity. Any airtight and air-filled element can then be put in flotation under the pressure of Archimedes' thrust.

In-ground pools, whatever the type, are concerned by this phenomenon.

If the water level on the outside is higher than the inside water level, the pool may rise and the walls will curve (deform) towards the inside.



Don’t worry, we are aware of this phenomenon, and we put in place the necessary measures to avoid any problems. Of course, this also goes through the pool owner, who must be aware of this physical law.

THE WATER LEVEL MUST ALWAYS BE KEPT ABOVE THE MIDDLE OF THE SKIMMER OPENING

THE DEWATERING WELL :

During the installation, a dewatering well has been positioned near your pool.

The dewatering well is a perforated drainpipe of the depth of the pool.

The function of this well is to allow the visualization and control of the water level present in your yard and therefore around your pool.

It will have to be cut at the level of the landscaping by your landscaper, covered by a removable lid or by the landscaping of your choice, but will **always have to remain accessible**.

Be careful not to condemn it when creating the landscaping.
This would make it impossible to visualize the accumulated water level in the ground.

Dewatering well

What is important to understand is that **the water level in the well must always be lower than the level in your pool**. This will prevent the phenomenon of Archimedes' thrust (pool lifting).

Here are the precautions to avoid lifting:

- Fill the pool as soon as possible after installation.
- Always keep the water level above the middle of the skimmer opening.
- Make sure the water level in the dewatering well is less than 24 inches (0.61 m) below the water level of the pool.
- Never empty your pool if there's water in your yard, near the pool (*visible through the dewatering well*).
- Never lower the water level of the pool in case of heavy rain or when thawing in spring. It's better to let it overflow.

To evacuate water from your yard and around your pool, it's recommended to install an automatic evacuation device.

The installation of a sump pump coupled with a water presence detector (float) will allow the automatic evacuation of excess water. Otherwise, you will have to perform a regular check and empty the excess water by activating the pump.

We recommend models with a vertical switch
due to the limited space in the well.

Models with other types of sensors are not recommended, as the float may get stuck on the well wall before the pump can be triggered.

To recap: A pool will never lift if its water level is at its maximum and the water level in the ground is lower. It's physically impossible!