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Replaces	

Performance Through Technology and Service

INFO SHEET

Discussion of Fiberglass Pool Emptying, Valves and Bracing

Below ground swimming pools are designed to be stable when full of water, but, when empty they can be subjected to forces not normally exposed to. There is a possibility of quite of lot of pressure against the shell from the outside. Concrete pools that are left empty for long periods of time during construction are able to withstand this situation. Fibreglass pools are usually dropped into a hole when the ground is dry and the sand/gravel and earth compacted around them.

Later on, when the pool needs to be emptied for repairs or repainting, the water table level may be high or the earth - sand fill surrounding it may be saturated due to rain or other reasons.

When the pool is full, the pressures are equal and there are no problems, but once empty there is no water inside the pool to keep the walls stable so they may bow inwards, or the pool may pop up due to pressure from below. To help prevent this (more so in fiberglass pools) internal bracing may be required.

Hydrostatic Valve:

To help reduce this pressure differential there are hydrostatic valves fitted in the deepest part of most pools.

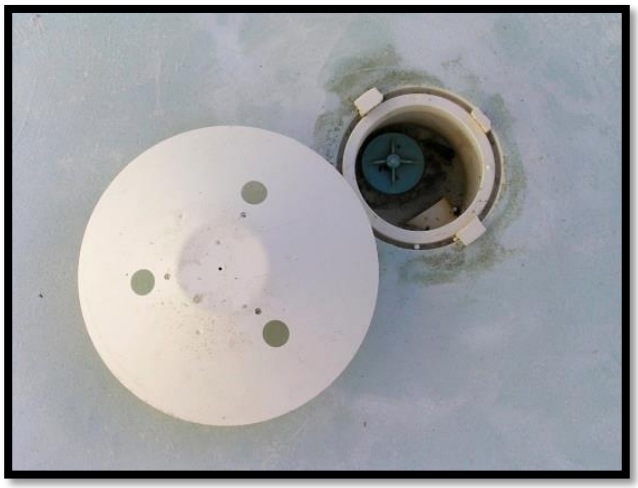

Fig 1: Typical hydrostatic valve assembly

See "**Info Sheet: Hydrostatic Valves**" for more details

Some pools will have an inspection - dewatering pipe near the pool which can be used to determine the ground water level. (It's usually located in the surrounding tiled area and will have a shower waste grill/skimmer lid on top, check water depth with broom handle)

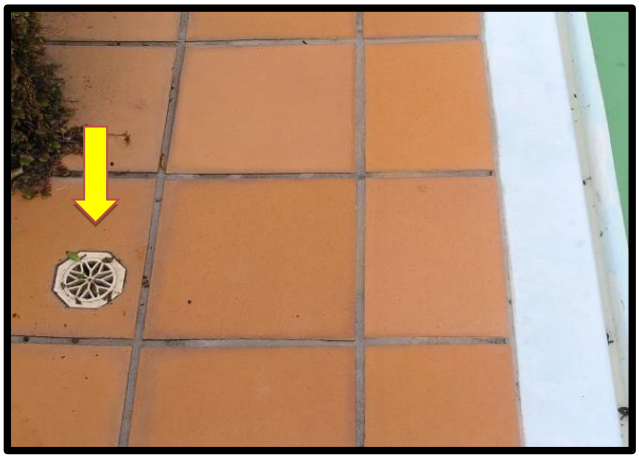

Fig2: A grating covering a tube near the pool to check the water table – level. (See arrow) You can insert a hose here and pump out if too high. Will take time so do a few days before you want to empty the pool.

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Phone: 321 3105346Web: paintnforget.com Email: info@paintnforget.com

Emptying the pool:

We recommed to refrain from emptying fiberglass pools if the water table is high, say less than 3ft deep and if it is between 3 – 6ft to proceed with extreme caution. It's not advisable to leave a fibreglass pool empty if heavy rain is expected. Refill to about half full if you can, to get some stability.

Test the situation by emptying the pool about 1/3 and leave overnight so as to check on any pressures, bulges or movement of the shell. If okay, then empty a further 1/3, so you can release the hydrostatic valve.

To release valve, lift off the cover plate and pull up the mushroom shaped cap in the sump, which should let dirty water into the pool. If the valve has seized, then try to force up with screwdriver under lip. It's ALWAYS a good idea to replace the valve when the pool is empty. Leave overnight and if it's okay continue empty pool.

Springy Floor?

You may notice some springiness in the pool floor, though hopefully no bulges. Try not to walk on any springy areas and use some plywood sheets to spread the load, while preparing the pool. Fibreglass is quite resilient, but continuous flexing is not good. Also, older fibreglass pools may be somewhat brittle with age or if of poor quality and may crack if flexed.

Bracing across the pool:

Bracing should be considered if in doubt about the water pressure, use at least 2 – 3 braces across the pool and place them as soon as you can get into the pool to work. These can be Shoring Props or timber posts, each resting on a plywood panel about (2ft) square to spread the load. They will require moving as surface preparation and resurfacing are undertaken.

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Phone: 321 3105346Web: paintnforget.com Email: info@paintnforget.com