Hitchins 1932 TECHNOLOGIES

Performance Through Technology and Service

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INFO SHEET

Discussion about Fibreglass Pool Bracing + Emptying

Swimming pools are designed to be stable when full of water. But when empty they can be subject to forces they are not normally exposed too. There is a possibility of quite a lot of pressure against the shell from the outside. For concrete pools when they were built, they would have been left empty for a month or so and can usually withstand this situation. Fibreglass pools are usually dropped into a hole and the sand and earth compacted around them. Such activity is done when the area is dry.

Working on an aged pool:

Years later when the pool is emptied, the pool may now have a high-water table or just saturated earth - sand fill surrounding it. 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 and they may bow inwards. To help prevent this (more so in fiberglass pools) internal bracing is used. In extreme cases the underlaying water table may lift the pool up.

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 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 on top, check water depth with broom handle)

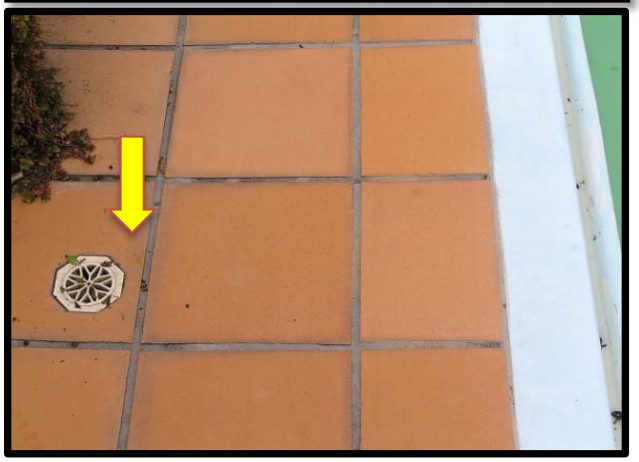

Fig2: A grating covering a tube near the pool to check the water table – level. (See arrow) You can dewater the pool area, by pumping water out via this feature. Remove cover, connect suitable hose and dewatering pump. (may need to leave running while working on pool)

HITCHINS TECHNOLOGIES PTY LTD ACN 119 448 501, **Postal:** PO Box 3186, Bonnells Bay NSW 2264, Australia
Phone: 1300 8879 20 Web: www.poolpaint.com.au Email: info@poolpaint.com.au

Emptying a pool:

We suggest for fibreglass pools not emptying if the water table is high, say less than 1 M deep and if between 1 – 2 M, proceed with 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 cover plate and then pull up the mushroom shaped cap, in the sump, which should let dirty water into the pool) (If seized, then try to force up with screw driver under lip) (ALWAYS a good idea to replace when pool empty, see your pool shop) Leave overnight and if okay continue empty pool.

Springy Floor?

You may notice some springiness in the 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 any doubt about the water pressure and use 2 – 3 braces across the pool. (Place as soon as you can get into the pool to work) These can be Acro props (Hire Company) or timber posts, both with a plywood panel about 600mm (2ft) square to spread the load. They will require moving as surface preparation and resurfacing are undertaken.

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