

Cerolevin Portable Tanks – Problem, Consequence, Solution and Quality concerns.

Problem

1. Shortage on the market of suitable 450 – 900 litre tanks that have a fall to the drain and filler ports.
2. Many tanks have fittings that don't have a 100% seal.
3. Generally speaking tanks cannot be stacked in order to efficiently utilise available space.
4. The few stacking arrangements on the market make for restricted access to the filler/drain caps and valves.
5. Moving a small tank with a pallet-jack or forklift often poses problems. Tanks of up to a 1 000 litres or less can easily be moved by a pallet-jack or forklift. Some tanks are designed to be moved while others have to be treated gingerly to avoid damaging the tank. Portable tanks do not always stand on bases that have the correct load points enabling them to be lifted and set down by a pallet-jack or forklift without an undue risk of damaging the tank or its fittings. A portable tank shouldn't have to be emptied in order to be moved.
6. Stainless steel tanks have double-skin cooling jackets mounted on the outside of the tanks' shell, but polyethylene, cement, amphora, foudre, fibreglass and epoxy lined mild steel tanks make use of stainless steel heat exchanger plates mounted inside the tank immersed in the liquid to be heated or cooled. The incorrect liquid volume to plate surface area ratio and the mounting of internal heat exchanger plates often pose problems.
7. The litre price of tanks in the small tank market i.e. below 3 000 litres goes up as the volume comes down, due to the ever decreasing litre per square metre ratio. Adding all the bells and whistles in the way of fittings further hikes the price as just a single valve costs in the order of R1 500.
8. Transferring or racking a product from tank to tank under reductive conditions can also add to the cost if an expensive pump and pump-over equipment is used.
9. More thought must go into finding practical answers to make small portable tanks functional, hygienic, user friendly and affordable.

Consequence

1. Tanks without a fall to the drain port are a pain to clean properly. A fall to the filler port is imperative to ensure that air is not trapped in the tank's headspace.
2. Hygiene control is impossible if product is continuously dripping from leaking caps and valves.
3. Small tanks that cannot be stacked stand around on pallets or on the floor taking up valuable floor space.
4. Often ports are awkwardly placed so that when tanks are shoved around like any other pallet of stuff, drain caps or valves are accidentally snapped off. Accessing filler and drain caps and valves must also be achieved without losing too much skin off one's knuckles due to restricted access.
5. Being able to shift a tank without having to empty it first is somewhere between a convenience and an absolute necessity. A tank is often needed where the work is being carried out, thereby allowing an operator to concentrate on one task at a time rather than trying to be in two places at once. Too many costly losses occur when product is pumped to a tank without the drain cap in place or a valve left open.

6. A heat exchanger plate with insufficient surface area is ineffective at critical moments such as when heat generated in the liquid needs to be transferred or when heat needs to be transferred into the liquid to be warmed. Plates that are mounted on filler caps or lids impede access to the tank due to the fact that the inlet/outlet hoses carrying the cooling/heating mediums are attached to the plate.
7. Unreliable, cheap screw caps that do not seal often come at a price due to product spoilage.
8. Not being able to process products reductively leads to product spoilage and oxidation.
9. The many types of small tanks on the market are somewhere between expensive, non-functional, unhygienic and user unfriendly.

Solution – Cerolevin Tanks

1. A generous fall to the drain and filler ports.
2. Drain and filler screw caps are water tight.
3. Galvanised stands are stackable both vertically or staggered.
4. Staggered stacking makes for unrestricted access to drain and filler ports.
5. 4-way pallet jack and forklift friendly and are portable and stackable when full.
6. Heat exchanger plates have the correct surface area and are practically mounted.
7. Reliable inexpensive drain and filler caps are a feature. The long handled manual drain-stopper-tool is an inexpensive yet effective alternative to having a dedicated valve on each tank. When the drain hole is stoppered the drain screw cap can be removed and the outflow of fluid can then be regulated by the hand operated stopper tool.
8. An affordable, filler cap mounted, gas pressurised racking wand ensures the soft reductive transfer of liquids. An alternative is to make use of a siphon pipe and employ gravity to softly transfer liquids. Tanks can be lifted by forklift or by an overhead crane with an electric chain hoist.
9. Tanks are portable, functional, hygienic, user friendly and affordable.

For more information contact

info@cerolevin.com

+27 82 807 5910