

Water Softening for potable water

A Swiss airport had been experiencing significant problems with their water softening treatment. The local water supply required treatment to prevent scaling in the pipework.

The existing treatment system required a salt solution to be dosed from a storage tank close to the pumps over a 350m pipe-run to the water supply. The piping system had a series of valves and pipes which were not sealed correctly when they were installed and the pipe work contained a large proportion of air.

Consequently, although the magdrive pumps which were transferring the solution were of good quality, they ran dry. The pumps required replacing every 3 months and were considered to be the wrong pump type.

Due to the scale of the airport's construction and layout, it was not possible to install new pipe work and valves and a far more robust pumping solution was required which would not only dose the solution accurately, but also require maintenance as infrequently as a mag drive centrifugal pump.



Verder UK recommended a Verderflex Dura 35 peristaltic pump. The Verderflex Dura brand is well established in the water and wastewater industry for the delivery of abrasive and corrosive solutions such as lime chemical, sodium hypochlorite and sodium hydroxide.

The working principle of a peristaltic pump consists of a hose, which is housed in a casing and squeezed by a rotor, which determines the speed of the pump.

As the only part in contact with the fluid is a flexible hose, the pump can run dry and certainly tolerate air in the pipes. The pump itself was sized to run slowly, so as to increase the hose life.

The estimate of running time at less than 1200 hours per year with one year between hose changes was considered extremely favourable.



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