

Dosing hypochlorite in new wastewater treatment plant

The City of Eagan in North Minnesota, USA required a pump capable of accurately dosing 15% sodium hypochlorite or 'hypo' for their new wastewater treatment plant. Hypo has outstanding disinfection properties, used in wastewater treatment to kill off bacteria before being discharged back into the environment, and in water treatment as one of the primary methods of drinking water disinfection.

Hypochlorite is a challenging product to pump as; when being pumped, Hypo tends to off-gas, causing some pump types like diaphragm pumps to vapour lock. After evaluating several pump choices from a number of manufacturers, they decided to use the Verderflex VF10 peristaltic hose pump for the job. The ten pumps will be put to immediate use in this new area of the treatment plant. Each Verderflex VF10 pump is capable of flow rates up to 48 US GPH and at pressures up to 175 PSI.

Verderflex pumps can pump both gas and liquid, ensuring the liquid stream receives a consistent dose. Peristaltic pumps are the perfect pump choice for dosing sodium hypochlorite and Verderflex pumps can be found in wastewater treatment plants worldwide.

Variations in hose types

The fluid being dosed is kept totally enclosed within the rubber hose which is then compressed by a rotating shoe, forcing the liquid inside along. Upon restitution of the hose the resulting vacuum draws in more



liquid. This process is known as peristalsis and is what makes the peristaltic pump the first choice for liquid metering. Variations in hose type allow for low strength and even high strength hypo dosing.

Long hose life

The wastewater plant needs to run as cost efficiently as possible and the City of Eagan were impressed with the long hose life

given by the Verderflex hose and the ease of maintenance when the hose needed to be changed. "We were really pleased with the installation at the City of Eagan Wastewater Treatment Plant. There were many other pumps considered for this application, but in the end the ease of maintenance, the proven reliability, and the exceptional hose life of Verderflex's superior design won out. As a result of

this installation, a similar project located nearby chose Verderflex for these same reasons and a third customer in the state just recently purchased a new Dura after hearing all of the positive feedback and new features of this design. These pumps have certainly been a success for us

in this industry". – Tom Eisemon, National Sales Manager, GPM Pumps (Master Distributor for Verderflex in US).

Because of the pumping process used by peristaltic pumps, the hose is the only part that ever comes onto contact with the fluid being pumped. Not only does this

mean that the pump is hygienic and leak free, it also means that there are no moving parts to become clogged or damaged. The only maintenance required is to change the hose, which is done quickly and efficiently, keeping downtime to an absolute minimum, saving costs and increasing profits.

Dura Hose Doses Calcium Hypochlorite

Dura replaces calcium hypo diaphragm pump 3 x Dura 25 with PP flanges replaced problem vapour locking diaphragm dosing pumps Calcium Hypo diaphragm pumps. Sterilisation of water supply is dependent on Hypochlorite being dosed and this water is then supplied to one of Johannesburg's largest informal settlements.



Dosing and Transfer of Refuse Leachate

The Suzhou Waste Incineration Plant have installed 12 Verderflex® peristaltic pumps as part of the leachate process and injection system. The abrasive leachate is pumped from the collection reservoir, through an automatic cleaning filter and collected in a draining reservoir.

