The Watermark

The Newsletter From Automated Water & Effluent Ltd Autum 2012

TAM SERIES DOSING PUMPS

As many of our customers know us for our effluent / waste water instrumation and we are starting to be well known for our red electronic dosing pumps.
However we also have a range of motor driven dosing pumps sometimes refered to as mechanical diaphragm or spring return dosing pumps. The dosing is still by a diaphragm which moves back and forward with ball valves for the suction and discharge.
The pump is driven by an electric motor and reduction gearbox connected to a cam arrangement to provide a receipting action to operate the diaphragm.
The gearbox ratio provides one of four output speeds selected at ordering stage and one of 3 stroke lengths providing a range of 12 different outputs. The size of the pump head fitted increases as the stroke length increases to provide a larger output. The length of the stroke may be manually adjusted by a micrometer dial adjustment from zero to 100%. For automatic control a servo motor controlled by an industry standard 4 -20 mA current signal can be specified and fitted during manufacture. The pump models are know as TAM 2, 4 or 6 which is related to the stroke length and offers outputs from 20 Ltrs/Hr up to 460 Ltrs/Hr . To suit a wide range of chemical reagents which customers request to dose we are able to offer dosing heads in PVC, PP, PVDF or 316 Stainless steel. Electric motors are usually 400 volt three phase with an option for 230 VAC single phase and Ex-D if required.
For use with inverters we are able to fit oversized motors or for applications which may require long periods of slow running or installation in hot areas we are able to offer fan assisted motors for improved cooling.

If you need data sheets or hand books on the TAM series of RDP dosing pumps then please contact Mrs. Vera Young by telephone **01785 254597.** or e-mail vyoung@awe-ltd.co.uk.

Happy Birthday AWE

Happy birthday Automated Water & Effluent Ltd Its 30 years ago since we officially started trading on September 1st 1982. We would like to say a special thank you to all our loyal customers who have stayed with us over the last 30 years. Also a thank you to our staff with the 4 members of our service and technical department having a total of over 100 years service between us. Not many companies in our industry have have such a long and stable track record as Automated Water & Effluent Ltd. We are of course working hard to adapt our business for the next 30 years of looking after our loyal customer base

Teflon Junction

We are now able to supply our P8000 series high performance combination pH and Redox electrodes with a porous teflon liquid junction. This is ideal for solutions which are incompatible with ceramic, some solutions can slowly dissolve the ceramic junction such as strong acid or alkali solutions. Other substances can block the ceramic junction such as biological effluents which may contain fats oils or grease.

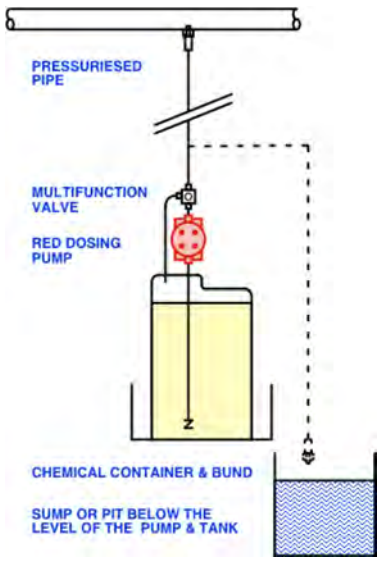
Technical Tips

Dosing Up Hill & Down Hill

A regular customer called recently as he had liquid coming out of the discharge hose from his red dosing pump when he disconnected the dosing hose from the injection valve and the red dosing pump was not running.
Further discussions revealed that the solution being pumped was located higher than the dosing pump and the discharge point was lower than the dosing pump. The ball valves in many small pumps operate by gravity and will allow the liquid to flow through the pump head with this kind of installation. When the pump was in service with the injection connected and installed into a line with 3 bar pressure there was no problem.
Always fit an isolating valve when installing a pump on flooded suction
Had the discharge been to an open vessel, sump or pit this would have been a problem and you must not use the injection valve with its spring loaded ball valve as these are only set to a couple of PSI and are not up to the job.

The answer is to use our multi function valve AC-VM. This clever little device screws on to the outlet valve of the Red Dosing pump with a special connector provided and an outlet hose to go back into the chemical container.
The functions of the AC-VM are as a safety valve to relieve the pressure back to the chemical container in the event of the discharge becoming blocked (or someone fitting an isolating valve which is not recommended). As a loading valve to give the pump some pressure to work against, as an anti syphon valve to prevent siphoning when dosing down hill. As a priming valve to allow the pump to pump back into the chemical container until the head is full and the valves are wetted and as a drain valve to allow the dosing hose to be drained before disconnecting the pump for maintenance.
AC-VM valves are available preset to either 6 bar or 12 bar back pressure in polypropylene with PTFE diaphragm and either Viton or EPDM seals.

Typical Application



AC-VM Multifunction valve

THE GRAPEVINE

From time to time we get enquiries passed to us from other suppliers in our trade. This is usually because they have a problem and we are good at helping customers with problems. So we had a confectionary manufacturer who discharged his effluent in a sump located under the site road. Not an ideal location to neutralise his pH this was further aggravated by the discharge being above 60 oC.
Our normal suggestion would be to pump to a balance tank above ground level where both the temperature and pH spikes could be balance out. However space was a problem so they where stuck with carrying out the neutralisation under ground. This had the problem of maintaing the pH electrodes in a hot steamy pit with access being via a man-way in the road. With all the normally associated H&S rules plus confined space working problems; maintaining these electrodes is time consuming and hence unnecessarily costly. The answer was to pump out a sample with a pump located close to the sump. Which would flow through an inline pH electrode system mounted on a bypass for easy removal for calibration. Then discharge via an inline mixer back to the opposite side of the sump. The chemical dosing was injected before the inline mixer. This way all the equipment was mounted inside our custom made polypropylene dosing enclosures easily accessible above ground level for calibration and maintiance. Remember, you heard it on the AWE grapevine.

Automated Water & Effluent Ltd

AWE House Antom Court, Tollgate Drive, Beaconside, Stafford, ST16 3AF UK.
Tel: 01785 254597 Fax: 01785 257724
www.awe-ltd.co.uk email sales@awe-ltd.co.uk

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