

The Watermark

The Newsletter From

Automated Water & Effluent Ltd

Summer 2017

Who is 35 This Year Happy Birthday

Automated Water & Effluent Ltd
On successfully trading for 35 years



We are pleased to announce this is our 35th year in business. We officially started trading on September 1st 1982. Where has the time gone?

Over those 35 years we have seen many changes to the products we are now supplying and the way we are supplying them. What is important, as much today as in 1982 or 1973 when I started as an instrument engineer in the service department, is Service.

Service is something we at Automated Water and Effluent Ltd pride ourselves on offering. You only offer a good service when you have a good product and good knowledge of that product. Product knowledge is not something

you learn by just reading the the product data sheet or handbook. It takes years of experience working with the product and being on site with customers for the commissioning of the equipment and fault finding problems that are not listed in any handbooks of common faults.

Then looking after the product for a customer, carrying out after sales servicing and calibration on the customer's installation.

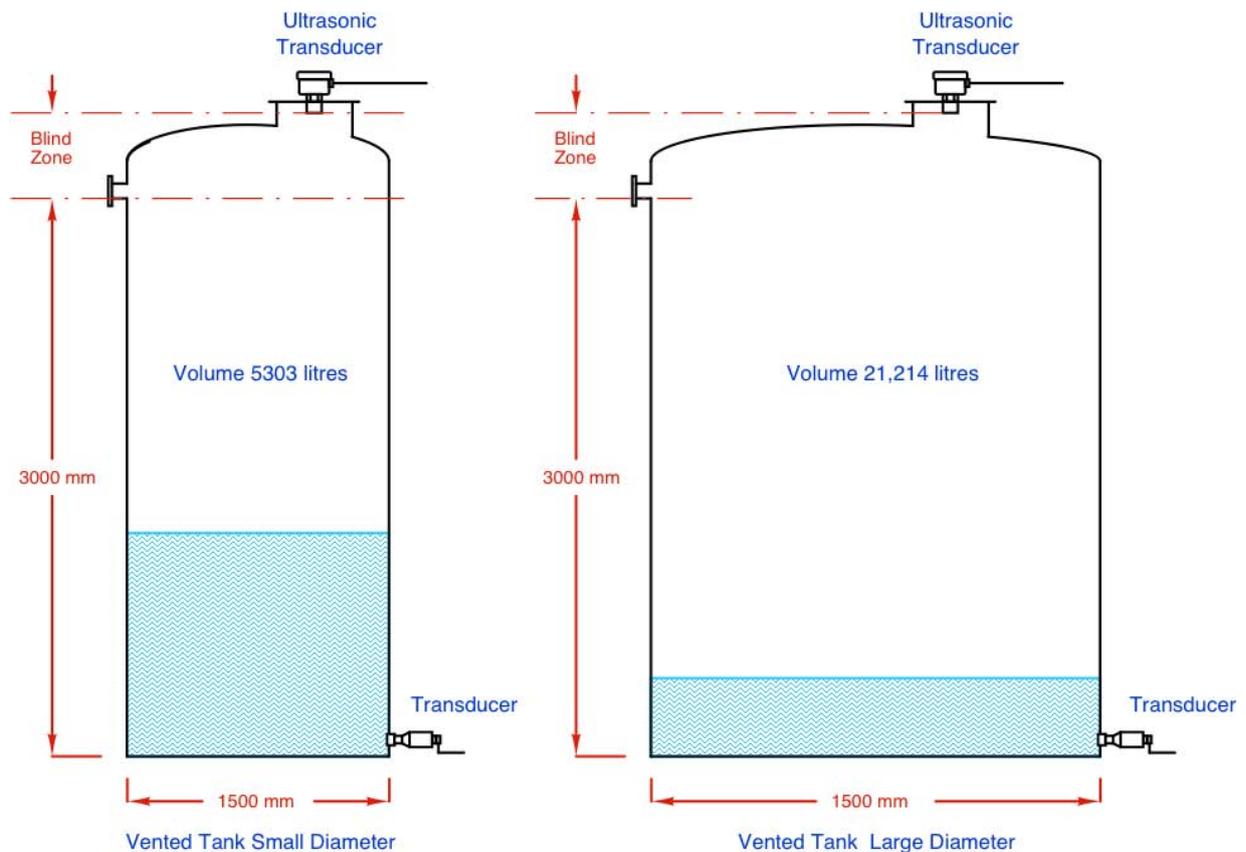
This way you learn how a product performs over an extended time period. In the case of Automated Water and Effluent Ltd this time period is now 35 years and counting.

We have seen new products supplied installed and commissioned and experienced how they have performed for our customers over the life of the product.

We still see customers using controller models APPL2 for pH and ACPL2 for conductivity which we supplied from 1986 to 1995 and our P7615 and C7615 which we supplied from 1995 to 2010. These instruments are very often installed in poor conditions, controlling the pH, redox, conductivity or measuring the discharge flow in waste water or water treatment plants at the back of some industrial process. That's our business!

Technical Tips

Tank Level & Contents



While visiting a customer we were asked about the accuracy of our level measuring instruments when used to measure the volume of chemical reagent in a storage tank. The customer had purchased equipment elsewhere and was unhappy with the accuracy he was obtaining.

The customer's process included mixing and blending special chemical reagents as intermediaries which were then delivered to his customers for use in their products. The ready mixed expensive chemical reagents were stored in several large diameter vertical tanks. The customer wanted to measure the volume of the tanks accurately, so

that sufficient volume was available to fill the tanker with the required delivery volume.

The problem with measuring the volume in a tank is not with the level transducer, which let's say, has an accuracy of $\pm 1\%$ of its full measuring range, which maybe fine.

But, when measuring the volume of the tank, the accuracy will not be $\pm 1\%$ of the tank volume because this will also depend upon the diameter of the tank. A 3.3 meter tall tank, 1.5m in diameter with a working height of 3 meters will hold 5303 litres. The same tank with 3m dia will hold 21214 litres. Both tanks are the same height and our transducer will

measure to ± 30 mm but each millimetre of level in the 1.5m diameter tank is equal to 1.77 litres, so the accuracy is ± 53.04 litres. However, each millimetre of level in the 3m diameter tank is equal to 7.071 litres, so the accuracy is ± 212 litres; a lot of chemical reagent. This could be even worse if this was alcohol which attracts duty to HM Customs and Excise.

Our recommendations were to use a flow meter and batch counter to accurately batch the desired volume into the tanker for delivery to his customers site. We are of course happy to supply batching systems to suit a wide range of chemical reagents.

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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