

CORI-FILL[®] Is Faster And More Accurate Than Weighing Scales

The European market leader in mass flow metering and control, Bronkhorst, is offering a modern alternative to the gravimetric or weighing scale method of dosing additives, fragrances, flavours and colourants, which promises shorter processing times, better product results and improved working atmospheres. Its latest CORI-FILL[®] compact fluid dosage assembly, which combines an extremely accurate CORI-FLOW or mini CORI-FLOW flowmeter with a suitable valve or pump, is capable of dosing the exact amount of fluid, whilst multiple instruments can be used for the simultaneous dosing of compounds.



CORI-FILL is suitable for a wide range of batching, blending, dosing, filling and sterilisation applications, at flow rates between 0.4g/hr and 600kg/hr. Aimed at the food & beverage, pharmaceutical, chemical, cosmetics, contact lens and life sciences industries, it has a compact footprint and requires no complex programming of additional hardware.

The conventional gravimetric method achieves the dosage of mass/volume through the use of a shut-off valve and a weighing scale, located under the valve's outlet nozzle. The weighing scale sends a signal to a PLC on receiving the correct dosage, then moves to another valve for the next compound to be added. This is a time-consuming process, with all compounds dosed one by one and a zeroing procedure required at each valve.

Due to the advanced CORI-FILL technology, with integrated batch counters and the facility to directly operate shut-off valves, it is capable of dosing the precise amount of compound into the collecting vessel, with just a brief reset command to start the next batch. The Coriolis direct mass measurement method eliminates volumetric variation caused by changing temperatures, viscosities and densities of the ingredients, leading to accurate, repeatable quantities batch after batch. As a result, the CORI-FLOW method is faster, more compact and accurate than weighing scales and product results are better, due to less evaporation of volatile fluids.

Moreover, it is possible to dose a number of fluid additives simultaneously, using multiple CORI-FILL instruments, leading to shorter production times, with no intermediate zeroing procedures. The amounts to be dosed can be easily preset by programming the onboard batch counters, via a fieldbus connection. The working atmosphere is also improved, as there is no dosing of additive into open storage vessels, of the kind needed for weighing scales.

CORI-FILL assemblies are offered with a choice of CORI-FLOW instruments, for flow rates between 20g/hr to 600kg/hr, or the highly compact mini CORI-FLOW series, for capacities from 0.4g/hr up to 30kg/hr. Either instrument type can be combined with a shut-off valve, for short batch sequences down to <0.3sec, a proportional valve, for longer dosing times >5 seconds, or a gear pump, for dosing without the need for pressurised vessels. The flowmeter's onboard PID controller is optimised for controlling the valve or pump, for an instant start to dosing duties. Accuracy is 0.5% or better for mass dosing and 1% for volume.

Thanks to a small footprint, the CORI-FLOW or mini CORI-FLOW instrument is able to be mounted close to the valve or pump, which minimises the internal pipework volume and results in fast response times, down to <0.3 sec, and a reduced risk of gas enclosure in the tubing, potentially causing delay effects. This also produces a highly compact dosing solution.

Ready assembled and pre-tested CORI-FILL fluid dosage assemblies are available from Bronkhorst UK, Cathrine House, London Road, Sawston CB22 3XE, tel 01223 833222 www.bronkhorst.co.uk

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