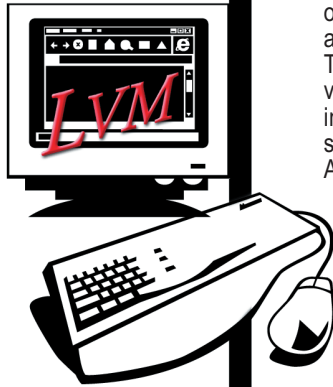


LVM

systems for volume batching of liquid additives

INTRODUCTION TO THE SYSTEM



The LVM batching systems are one of the best methods for volumetric measurement of LIQUID ADDITIVES used normally in concrete, such as: fluidizers, superfluidizers, admixtures, waterproofer, antifreeze, etc.

The system is composed of: a clear Plexiglas CYLINDER with a graduated band to permit visual reading of the liters, with a minimum subdivision of deciliters; a PUMP UNIT that includes a two-way corrosion-proof electric pump with a variable delivery capacity, a solenoid valve for discharge toward the utility and all the necessary fittings; a TRANSDUCER AND CONTROL board that enables interfacing with automatic batching systems and monitoring of two thresholds for minimum (empty) and maximum safety level. Everything is fully isolated electrically from the rest of the plant as a guarantee against any interference.

For concrete batching plants that work exclusively in MANUAL mode, through the electrical switchboard or an additional panel it is possible to control batching and discharge, visually following the level inside the graduated cylinder and stopping the discharge automatically once the empty or zero-scale control is reached.

For concrete batching plants that also work in AUTOMATIC mode, the transducing system mounted inside the cylinder supplies a high-precision analog system in order to batch the requested quantity according to the formula and volume of the mix. Here again, the discharge is stopped by the same empty threshold in order to guarantee that batching will always start up again from the same zero point.

To avoid increasing the number of analog channels on the PLC when there is more than one batcher, a special card will be available to sum the various analog transducers mounted in the respective cylinders. Through this card, the additives must be batched in sequence rather than simultaneously, as would occur if the batching were done in a single weigher.

The graduated cylinder is normally installed in the control booth so that the operator can handle manual batching. However, by mounting it remotely it is possible to connect a digital display screen downstream from the LVMs, complete with a batching SETPOINT that can be programmed through the keyboard.

In order to meet the various needs of this sector, three batching versions have been created: a 15-liter model (actual capacity 14 liters) ideal for the quantities batched in plants for precast production, a 45-liter model (actual capacity 42 liters) and a 60-liter model, which are ideal for plants designed for truckmixer loading up to 12 cubic meters per load.



Quality

QUALITY ASSURANCE SYSTEM

TECHNICAL FEATURES

LVM/15 BATCHER

- Plexiglas cylinder, max. capacity 15 l, effective 14 l.
- Adjustable two-way pump, 0.55 kW 380 Vac (or others on request), delivery head 15 m, delivery 30 l/min.
- 3/4" electropneumatic valve, 24 Vac (or others on request).
- Proportional potentiometer transducer.
- Reading range from 0 to 14 liters.
- Minimum division on graduated scale: 1 dl.
- Measurement accuracy error lower than 0.5%.
- Analog output for automated devices: 0-10 Vdc.
- Control board power supply: 24 Vac/10 VA.
- Operating temperature: 0-40°C.
- Storage temperature: 0-50°C.
- Weight of cylinder unit: approx. 13 Kg.
- Weight of pump unit: approx. 8 Kg.

LVM/45 BATCHER

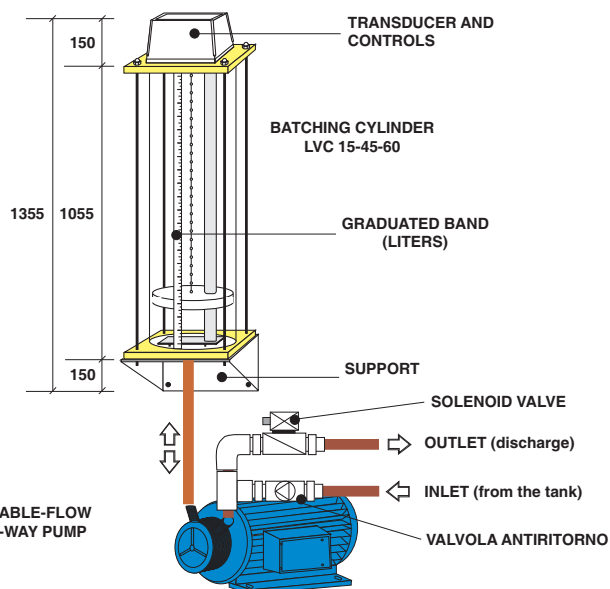
- Plexiglas cylinder, max. capacity 45 l, actual 42 l.
- Adjustable two-way pump, 0.55 kW 380 Vac (or others on request), delivery head 15 m, delivery 35 l/min.
- 3/4" electropneumatic valve, 24 Vac (or others on request).
- Proportional potentiometer transducer.
- Reading range from 0 to 42 liters.
- Minimum division on graduated scale: 1 dl.
- Measurement accuracy error less than 0.5%.
- Analog output for automated devices: 0-10 Vdc.
- Control board supply: 24 Vac/10 VA.
- Operating temperature: 0-40°C.
- Storage temperature: 0-50°C.
- Weight of cylinder unit: approx. 18 Kg.
- Weight of pump unit: approx. 8 Kg.

LVM/60 BATCHER

- Plexiglas cylinder, max. capacity 60 l, actual 60 l.
- Adjustable two-way pump, 0.55 kW 380 Vac (or others on request), delivery head 15 m, delivery 35 l/min.
- 3/4" electropneumatic valve, 24 Vac (or others on request).
- Proportional potentiometer transducer.
- Reading range from 0 to 60 liters.
- Minimum division on graduated scale: 1 dl.
- Measurement accuracy error less than 0.6%.
- Analog output for automated devices: 0-10 Vdc.
- Control board supply: 24 Vac/10 VA.
- Operating temperature: 0-40°C.
- Storage temperature: 0-50°C.
- Weight of cylinder unit: approx. 21 Kg.
- Weight of pump unit: approx. 8 Kg.

OPTIONAL

- MY51P series display instrument, 5 figures with 7 segments, resolution of 5000 divisions, calibration and selections through the keyboard, 0-10 Vdc analog output, three thresholds that can be set through the keyboard, 24 VAC/10 VA power supply, container to DIN standards 72x144, operating temperature 0-50 °C.



APPLICATION EXAMPLE

