

# Concrete Industry

## Admixture Measurement Products



- **Batch Controllers**
- **Flowmeters**
- **Computer/PLC interfaces**

- **Manual/Automatic Batching**
- **Admix Tanker flowmeters**
- **Shotcrete Application meters**

### ManuFlo - experience counts

Our operations began in 1965. Today, ManuFlo products are used in over 90% of all pre-mix concrete production plants throughout Australia, and are exported to regions including the Asia/Pacific, South America, and the Middle-East.

Australia's biggest three Admixture manufacturer and supplier companies use ManuFlo products for measurement and batching of liquids in their production facilities, distribution network and final dispensing at their customers' premix concrete production plants.

The ManuFlo philosophy: simple-to-use and reliable products, backed with rapid support.



**ManuFlo** ®™

Flow Measurement & Control Products  
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**Page 1**

Rev: 0705/1

# Concrete Industry Admixture Measurement Products

## APPLICATIONS

Many of our products are designed and manufactured to meet a diverse range of industry application requirements, guaranteeing simplicity of design and operation, quality, performance and competitive pricing.

## Plant Batching

Batching in plants can be manual, semi-automatically or fully-automatic.

### Manual Batching

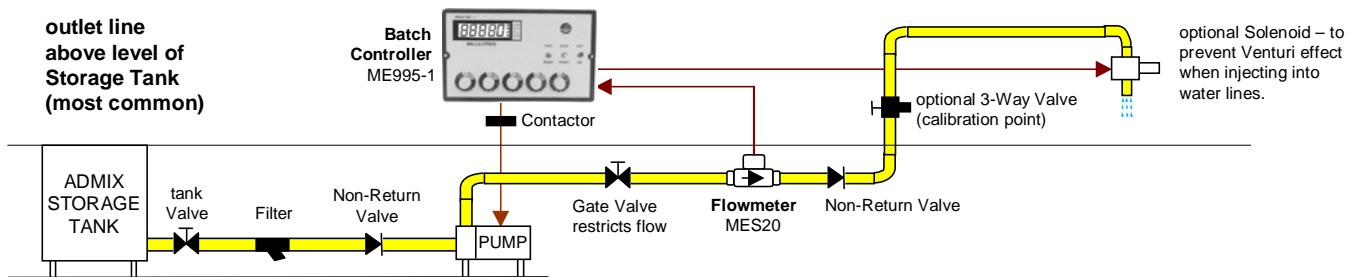
The batch operator manually starts and stops the flow, and uses a resetable Litres counter to get the desired quantity.



- The MESLCD series flowmeters are the preferred flowmeters for manual Admixture measurement.
- LCD Litres resetable display.
- Come in various sizes (20 to 50mm).
- To measure aggressive chemicals, a Ryton-MTL measuring chamber is available (for 20mm size only), and the body and couplings can also be Teflon coated.

### Semi-Automatic Batching

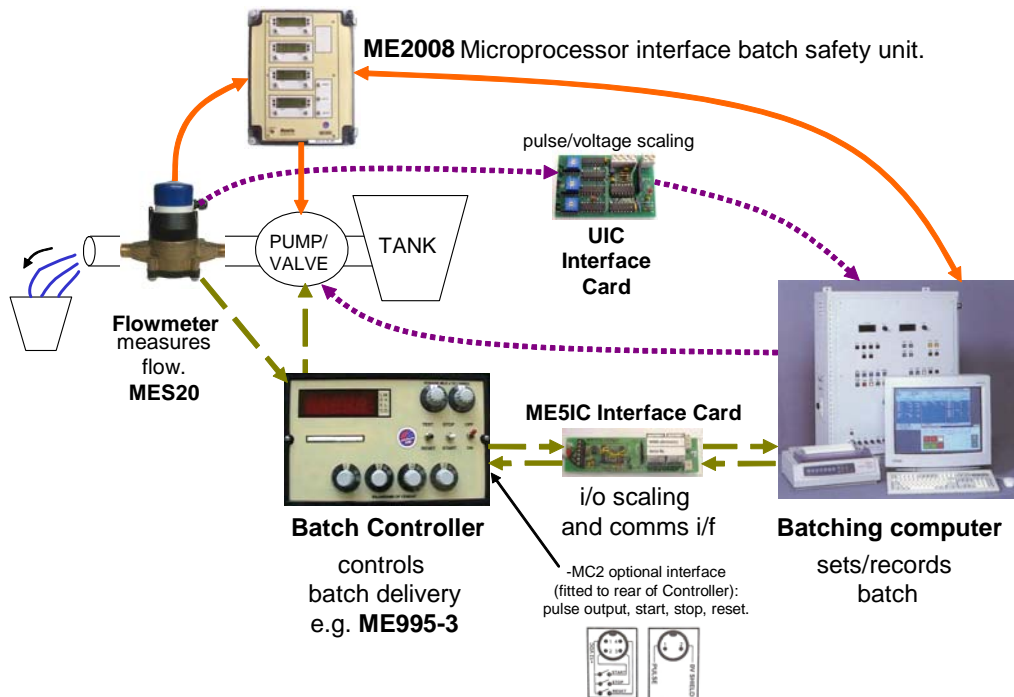
The batch operator sets the quantity to be batched, and the Batch Controller controls the flow to deliver the required batch quantity. A typical installation is:



### Fully-Automatic Batching

The PLC/Computer sets the quantity to be batched and the flow is automatically controlled to deliver the required batch quantity. Common configurations are:

- flowmeter - ME2008 - PLC/Computer. ME2008 provides batching safeties.
- - - flowmeter - UIC - PLC/Computer, for sight bottle applications.
- - - flowmeter - Batch Controller - MC2/ME5IC - PLC/Computer. Batch Controller provides batch safeties.



## Concrete Industry Admixture Measurement Products

### Admix Delivery Trucks



- The MFS Electromagnetic flowmeter is ideal for Admix delivery trucks and shotcrete applications.
- Unsurpassed accuracy, and widest possible flow range. Handles widest range of aggressive liquids.
  - Display can be on-board or remote. • Fully programmable. • Pulse and 4-20mA outputs. • Sizes 15-250mm.
  - Forward/reverse Grand Total, Flowrate and velocity displays. • Easy reset of Total.
  - Robust construction for industrial use, virtually maintenance free with no moving parts.
  - Empty pipe detection. • Bore is obstructionless - no headlosses, no need for filters.

### Batch Printer System

The TMP Batch Printer System contains:

- **ME3000 Batch Controller:**
  - 6 digit LCD Microprocessor Batch Controller. Panel mount. IP64.
  - Front keypad. Displays in ml / L / kL with decimal point.
  - Fully programmable functions.
  - With logic, pulse, and current output options.
  - with RS232 serial connector for ticket printer output (date/time/batch).
- **APM-n93XS Ticket printer**, for cusody transfer dockets.
  - Epson thermal ticker printer, with power supply.

all wired and mounted in an IP64 hinged lockable box.

The Batch Printer System is used with MFS or RMS flowmeters.



### Continuous Dosing Applications

For continuous dosing applications, such as Shotcrete or mixing, common configurations that show Flowrate and Total are:



MES20 flowmeter with FRT303-B Indicator



RMS Electromagnetic flowmeter



MFS Electromagnetic flowmeter



MES20LCD5DP flowmeter (Total or Flowrate)

## COMPONENTS

### Batch Controllers



**ME995-1**

For preset liquid batch control applications, the ME995-1 Batch Controller has millilitres selectable to 90000 in 10ml increments. • For use with 1000 pulse/Litre flowmeters. • Has a preact (overflow deduct) feature, 4 LED status indicators and diagnostic safeties. • Rear 10-pin Weidmuller receptacle plug means changeover or upgrade is instant with no rewiring necessary. • Can be easily interfaced with PLCs through optional interface plug.



**ME3000**

The next generation ManuFlo single channel Batch Controller, with internal event log. Optional computer control interface and printer interface for batch tickets. • Programmable, can be used with any flowmeter. • Has 2 line x 16 character LCD display to show settings and any alarm messages. • touchpad data entry. • Pulse and 4-20mA output. • Run/flow/output indicator LEDs

### Total/Flowrate Indicator



**FRT303**

Flowrate, resetable Total and Grand Total Indicator. Power options: internal Lithium battery (5-10 year life), Loop powered, external 5-30VDC, or external 240vac.

Data Sheets on our entire range of Batch Controllers can be downloaded from our website at <http://www.manuelectronics.com.au/>

# Concrete Industry Admixture Measurement Products

## Flowmeters



### MES series

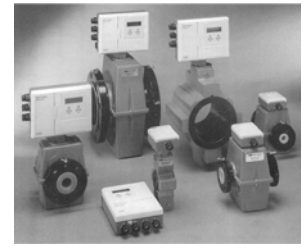
- MES series flowmeters are the preferred flowmeter for **Admixture measurement**.
- Available in various sizes (20 to 50mm), output modes (LCD resetable display, transistor output - 1000 pulses/Litre for accuracy or Reed Switch output), and can measure Total Litres or Flowrate.
- For aggressive chemicals, a Ryton-MTL measuring chamber is available, (for 20mm size only) and the body and couplings can also be Teflon coated.



### RMS

**High performance Electromagnetic flowmeter** to measure conductive liquids.

- Concrete industry applications include: **high speed Admix batching, Admix delivery tanker transfers, Shotcrete, Grout liquid measurement, Slurry water in Premix Concrete Plants.**
- Robust construction, virtually maintenance free with no moving parts, obstructionless bore, handles aggressive liquids, has wide flow range, unaffected by specific gravity or viscosity variations of the liquid.
- Fully programmable through an optional display.
- Pulse and 4-20mA outputs.
- Sizes 4-150 mm.
- Optional flange connection kit.



### MFS

**Electromagnetic flowmeter series, ideal for truck tankers and shotcrete applications.** Unsurpassed accuracy, and widest possible flow range. Handles widest range of aggressive liquids.

- Display can be on-board or remote.
- Is fully programmable.
- Forward/reverse Grand Total, Flowrate and velocity displays.
- Easy reset of Total.
- Has pulse and 4-20mA outputs.
- Bore is obstructionless - no headlosses, no need for filters.
- Robust construction for industrial use, virtually maintenance free with no moving parts.
- Empty pipe detection.
- Sizes 15-250mm.
- Optional flange connection kit.

## Computer/PLC Interfaces



### ME2008

The ME2008 is a microprocessor-based **batch safety interface for management of flowmetering admixture liquids in the concrete production industries**, and removes the need for sight bottle dispensers.

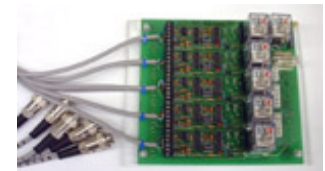
The software incorporates safety features designed to cover, detect and warn for most flowmetering faults during/after the batch cycle, making the flowmetering system one of the safest in the world.



### UIC/A2 and UIC/D

The **UIC/A2** is a **Universal Interface Card** with pulse scaling, for connecting a flowmeter to a PLC input. It has 24-240vac triac switching isolated pulse output, and 5-12 VDC sink pulse output.

The **UIC/D Universal Interface Card** with pulse scaling provides 5-30 VDC open collector 4N33 opto-isolated pulse output and 5-12 VDC sink output.



### ME51C

The ME51C is a **5-channel Interface Card providing a communications interface and i/o scaling.**

- Up to 5 ME995 Batch Controllers can be connected to a PLC/Computer.
- The ME51C has pulse dividers, 240vac triac optos, start relays, reset relay, 2metres wired comms cable, and 5 pin interface plug (suits Eagle or computers using Opto22 yellow case inputs and black case outputs).
- Note: Batch Controller requires the '-5P' plug option to connect to a ME51C-5.

The ME2008 can be created as a 2, 4, 6 or 8 channel unit, and can be used with a wide range of signal output flowmeters in conjunction with a range of PLC/Computer auto batch systems. Has accumulated batch Grand Totals for inventory records, instantaneous flowrate display reading, Maximum Batch Limit setting, and scaleable Output Pulse to PLC/Computer. All parameters and entries are fully programmable via a plug-in hand held keypad. Settings are easily retrieved and displayed.