

Admix Supplier Dispensing Equipment

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ManuFlo®™

Flow Measurement & Control Products

Manufacturers of Flowmeters/Controllers/Displays/Interface products since 1965



ABN:47-002-946-303

MANU ELECTRONICS PTY LTD

41 Carter Rd Brookvale

Sydney NSW 2100 Australia

Tel: +61 2 9905-4324, +61 2 9938-1425

Fax: +61 2 9938-5852

Web: www.manuelectronics.com.au

Email: sales@manuelectronics.com.au

Table Of Contents

1.0	MES SERIES FLOWMETERS - NUTATING DISC, POSITIVE DISPLACEMENT - <i>WIDELY USED FOR ADMIXTURES</i>	3
1.1	MES-P Pulse output flowmeters (-DSP or -DSP-OC) (25+ yrs chamber operating life)^	3
1.2	MES-M mechanical totaliser display flowmeter Sizes 20 to 40mm	4
1.4	MES-LCD4 / MES-LCD6 Flowmeters – Flowrate & or Resettable Total - widely used for Admixtures	5
1.5	SPARE PARTS for MES series flowmeters	6
2.0	CMM COMPACT MINI-MAG INDUSTRIAL GRADE FLOWMETERS (SIZES 15, 20 & 25 MM) (<i>IDEAL FOR CHEMICAL ADMIXTURES /SLUMPSTAND WATER</i>).....	8
2.1	MME MINI MAG. COMPACT FLOWMETERS WITH TFT DISPLAY (SIZES 15, 20 & 25 MM) (<i>IDEAL FOR BREWERIES & CHEMICAL APPS.</i>)	8
2.2	MM MiniMAG COMPACT ELECTROMAGNETIC FLOWMETERS WITH DISPLAY (SIZES 15 - 50 MM)	9
2.3	AMM MINI MAG. BUDGET ADMIXTURE FLOWMETERS (SIZES 15, 20 & 25 MM) <i>IMPROVED MODEL</i>	9
2.4	MFS MagMaster™ Electromagnetic Flowmeter with display and outputs * SPARE PARTS & REPAIR SERVICE *	9
3.0	RMS ROSEMOUNT HIGH PRESSURE PROCESS ELECTROMAGNETIC FLOWMETERS (GROUT / SLURRY)	10
4.0	KMS502F ELECTROMAGNETIC FLANGED FLOWMETERS WITH ‘S50’ DISPLAY & OUTPUTS	11
4.1	KMS302F MAGNETIC FLANGED FLOWMETERS -‘S300’ DISPLAY & OUTPUTS (FOR GROUT, ADMIX, OXIDES & SLURRIES) PATTERN APPROVED FOR CT BILLING.	12
5.0	CONNECTION KITS FOR FLANGED OR WAFER-STYLE FLOWMETERS.....	14
6.	BATCH CONTROLLERS	15
6.1	ME995 PRESET BATCH CONTROLLER SERIES – ROTARY SWITCH KNOB SELECTOR MODELS	15
6.2	ME3000 PRESET BATCH CONTROLLER – KEYPAD MICROPROCESSOR MODEL	16
6.3	BATCH CONTROLLER PLC INTERFACING AND OPTIONS.....	17
6.4	BATCH CONTROLLER SPARES	18
6.5	INTERFACE CARDS TO PLC, FOR BATCH CONTROLLERS WITH FLOWMETERS	18
6.6	ME6008M BATCH MONITOR PRINTER DRIVER UNIT.....	18
6.7	FIELD ENCLOSURES TO HOUSE ME995/ME3000 BATCH CONTROLLERS.....	19
7.0	PLC/COMPUTER INTERFACE BATCH PRODUCTS	20
7.1	ME2008/ME2000 MICROPROCESSOR SAFETY MANAGEMENT INTERFACE BATCHING CARD.....	20
7.1.1	ME2008/ME2000 MICROPROCESSOR SAFETY MANAGEMENT INTERFACE BATCHING CARD (OPTIONS / SPARES)	21
7.1.2	ME2008/ME2000 Expansion / Spares / Upgrades	21
7.2	UIC FLOWMETER INTERFACE PULSE SCALING CARD.....	21
8.1	FRT303 REMOTE LARGE LCD DUAL FLOWRATE/RESET TOTAL & GRAND TOTALISER IP65 INDICATOR WITH OPTIONAL OUTPUTS	22
8.2	ME5 REMOTE LCD FLOWRATE OR RESET TOTALISER IP65 INDICATOR (LARGE DIGITS)	22
8.3	ME4 REMOTE LCD RESET TOTALISER IP65 INDICATOR (LARGER DIGITS –IDEAL FOR REMOTE DISPLAYS ON SLUMPSTANDS) <i>ME4-T-P</i>	22
9.0	SYSTEMS NOTE: A RANGE OF PRODUCTS FROM THIS CATALOGUE CAN BE MIXED AND MATCHED TO FORM SYSTEMS.	23
9.1	DOSING LOW FLOWRATE CHEMICALS	23
9.2	SHOTCRETE ADMIXTURE FLOWMETERS	23
9.3	GROUT / OXIDE / SLURRY FLOWMETERS (FOR MEASURING LIQUIDS UPTO 80% SOLIDS)	24
9.4	CONCRETE BATCH PLANT OR GENERAL WATER BATCHING SYSTEMS.....	24
9.5	CONCRETE BATCH PLANT OR GENERAL CHEMICAL ADMIX BATCHING SYSTEMS (+KITS)	24
9.6	PTBS PORTABLE TROLLEY BATCH SYSTEM (FOR AUTOMATIC BATCHING OF LIQUIDS).....	25
9.7	TMP AUTO BATCHING CUSTODY TRANSFER TICKET PRINTER SYSTEM (USED PRIMARILY WITH ELECTROMAGNETIC FLOWMETERS)	26
9.8	TMP-1 MANUAL BATCHING CUSTODY TRANSFER DOCKET PRINTER SYSTEM (SINGLE CHANNEL)	27
10.1	OPTIBAR - PRESSURE SENSORS WITH ATEX, IECEX CERTIFICATES	28

10.2	OGF SERIES - OVAL GEAR PD FLOWMETERS PULSE / MECHANICAL RESETTABLE (FOR CHEMICALS, FUELS, OILS, SOLVENTS)	28
11.	WATER FLOWMETERS FOR BATCH PLANTS AND SYSTEMS	29
11.1	MRT20-T2 20mm LCD RESETABLE COUNTER CONCRETE TRUCK FLOWMETER (+ MRTU4 option)	29
11.2	SLUMP STAND FLOWMETERS AND SYSTEMS FOR CONCRETE BATCH PLANTS	30
11.3	RPFS - Rota Pulse (Paddlewheel) insertion Flow Sensors	31
	PIPE ADAPTER FITTINGS & ACCESSORIES for all MRTU & RPFS FLOWMETER slip insertion models	31
12.	FILTERS, ELECTRICAL ACCESSORIES AND SOLENOID, GATE, BALL VALVES, PUMPS	32
12.1	FILTERS. Y-STRAINER CARTRIDGE TYPE	32
12.2	ELECTRICAL ACCESSORIES – CONTACTORS, SIGNAL CABLE AND POWER SUPPLIES	32
12.3	SOLENOID CONTROL VALVES - METAL	33
12.4	GATE VALVES, CHECK VALVES, 3WAY BALL VALVES.	33
12.5	PUMPS	34
12.6	DATA LOGGERS	34
12.7	MEHR Multi-jet and Turbine cold water mechanical totaliser flowmeter (optionally also with pulse output)	34
13.	OTHER SERVICES - CALIBRATIONS, REPAIRS, TRAINING, DESIGN	35
14.	DELIVERY	35
15.	TERMS AND CONDITIONS OF SALE	36
16.	QUOTE REQUEST FORMS	38

Flowmeter Selection Guide for liquid admixtures

ADMIX Chemicals & Conditions	Positive Displacement Flowmeters					Electromagnetic Flowmeters								
	MES20	MES20-T	MES25	MES32	MES40	CMM10	CMM20	CMM25	AMM15	AMM20	AMM25	KMS25	KMS40	
Water Based	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Corrosive	—	✓	—	—	—	✓	✓	✓	✓	✓	✓	✓	✓	
None Conductive	✓	✓	✓	✓	✓	—	—	—	—	—	—	—	—	
Slurries / Oxides	—	—	—	—	—	—	—	✓	✓	✓	✓	✓	✓	
1.5 - 70 Litres/min	✓	✓	—	—	—	0.5-30	✓	✓	0.5-40	✓	✓	✓	—	
2.7 - 112 Litres/min	—	—	✓	—	—	✓	✓	✓	✓	✓	✓	✓	✓	
3.8 - 185 Litres/min	—	—	—	✓	—	—	—	✓	—	—	—	✓	✓	
7.5 - 375 Litres/min	—	—	—	—	✓	✓	—	—	—	—	—	—	✓	
> 375 Litres/min	—	—	—	—	—	—	—	—	—	—	—	✓	✓	
*Pulses (> F) & (< R)	✓	✓	✓	✓	✓	—	—	—	—	—	—	✓	✓	
Empty Pipe Detection	—	—	—	—	—	✓	✓	✓	✓	✓	✓	✓	✓	
Pulses per litre	1000	1000	555	267	112	1000	500	100	1000	1000	500	1-1000	1-1000	

* Pulses Forward & Reverse on same train

ManuFlo flowmetered systems delivering decades of uninterrupted performance dispensing chemical admixtures in thousands of Concrete Batch Plants worldwide since 1965;

- Consider updating to new MES-DSP.OC pulse-heads
- ME2000/08 Upgrade with v1.8 software and new higher power regulation upgrades
- ME995 operating for over 2 decades, consider an upgrade
- AMM-v2, CMM or KMS magflow measurement options

Enquire for other ManuFlo Flowmeter options and packaged systems.



MES



AMM





KMS

- Simplistic technology easy to operate
- No issues with foaming product
- Most applications: no solenoid valves required
- No flushing required
- Suitable for dosing applications
- AS31379 & NMI NSS1671 approved devices
- Easy calibration procedure
- MM/KMS Magflows include totaliser display

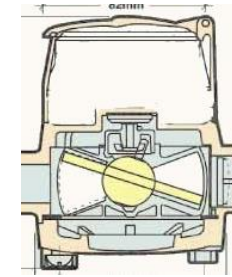
The ManuFlo Advantage

1.2 MES-M mechanical totaliser display flowmeter Sizes 20 to 40mm

- Non-resettable mechanical display reads in M³ (down to 1 Litre).
- ideal for precision data logging and batching, with mechanical display and Reed pulse o/p.
- Measures liquids to Specific Gravity 1.4
- Nutating disc P.D. measuring chamber.
- Small Impurities can pass through measuring chamber without jamming.
- Low hydraulic thrust minimises wear.
- Comprehensive Spare Parts.

- IP68 submersable rated vacuum sealed
- Accuracy: $\pm 1.5\%$, Repeatability: $\pm 0.2\%$
- Maximum working pressure: 1160 kPa
- Maximum liquid temperature: 50 °C
- Connection:
20, 25, 32 mm : threaded BSP (male)
40mm : flanged BSP (female)

MES series
Approvals:
C700-AWWA
SDWA-NSF372



<u>Order Code</u>	<u>Description</u>	<u>Flowrange #</u> <u>Litres/min</u>
	Mechanical accumulative total display	
MES20N-M-E	20mm flowmeter (compact) , mechanical non-resettableTotal, threaded 3/4" BSP(m) ends	1.5 - 83
MES25M	25mm flowmeter mechanical non-resettableTotal, threaded 1" BSP (m) ends	2.7 - 112
MES32M	32mm " " , threaded 1 1/4" BSP (m) ends	3.8 - 185
MES40M	40mm " " , flanged 1 1/2" BSP (f) ends	7.5 - 375

-T Tefzel-lined body. Add suffix to any 20 & 25mm MES-type flowmeter order code.

-E EDPM black base gasket seal (in lieu of white rubber) for MES20-N 20mm size only.

The flowrange is for $\pm 1.5\%$ accuracy. Can measure outside this flowrange, but at reduced accuracy; Flowrange is for water. For Admix flowrange, divide water flowrate by the Admix sg.

(1) At $\pm 5\%$ accuracy, MES flowmeters can measure down to: 20mm: 0.5 Litres/min; 25mm: 1.0 L/m; 32mm: 1.5 L/m; 40mm: 2.8 L/m;



MES25M



"-E" seal

1.3 MES20-S-T with Ryton MTL chamber / Teflon coated body for Low.PH-chemicals and petroleum liquids.

Used for corrosive Admixtures chemicals and petroleum/oil based products.

Ryton-MTL Hi-chemical/petroleum-resistant measuring chamber, EDPM or Viton seals.

- Measures liquids to Specific Gravity 1.4
- Nutating disc measuring principle to 1060 kPa.
- **"-T" Tefzel-lined body version** for corrosive liquids.
- Connection: threaded 3/4" BSP (male)

Digital pulse output version

- has exclusive 1 millilitre / 1 pulse output (for sg ≥ 1.1)
- requires +5 to 30 VDC supply @current 5 to 25mA
- accuracy: $\pm 1.5\%$, repeatability: $\pm 0.3\%$, Temp. to 60c

TEFZEL COATED (Green) Body lining for corrosives

Contact Switch pulse output version

- 56 pulses/Litre (61ppl for sg ≥ 1.1)
- accuracy: $\pm 1.5\%$, repeatability: $\pm 0.3\%$



<u>Order Code</u>	<u>Size – Bsp(m)</u>	<u>* Pulse Output for Specific Gravity ≥ 1.1</u>	<u>Flowrange</u> <u>L./min.</u>
MES20-S-T	20 or 25 mm	900 to 1000 ppL Digital DSP pulse output (EDPM/Viton seals)	5 – 75
-R	" "	54 to 60 ppL Contact closure switch	"

Alternative options include: AMM15/20 15-20mm (1000ppl) +12-24VDC, / CMM10 (1000ppl), CMM25(100ppl), MME15(1000ppl) +24VDC, all for conductive fluids. F-OM25PH 25mm PPS-meter (107ppl) for all conductive or non-conductive clean fluids. (NOTE: all within this catalog.)



PULSE RATE PER VOLUME may vary due to S.G. So flowmeter must be ONSITE CALIBRATION CHECKED

1.4 **MES-LCD4 / MES-LCD6** Flowmeters – Flowrate & or Resettable Total - widely used for Admixtures

- *Ideal for Precision Batching applications.*
- Closing the lid resets the display total.
- Measures liquids to Specific Gravity 1.4
- Nutating disc P.D. measuring chamber.
- Small Impurities can pass through measuring chamber without jamming.
- Low hydraulic thrust minimises wear.
- Internal Lithium battery (10+ year battery life)
- Accurate: ± 1.5% full scale flowrange (unaffected by SG)
- Repeatability: ± 0.2%
- Maximum working pressure: 1160 kPa
- Maximum liquid temperature: 50 °C
- Connection: 20, 25 & 32 mm : threaded BSP(m)
40 mm : flanged BSP(f)



FEATURES:

- **4 digit resettable total with EXTRA LARGE Digits**
or
- **6 digits total in Litres (L)**
up to **3 decimal place and rate** in Litres per minute (L/M) or Litres per second (L/S) with **1 dec.place.** (specify which at time of ordering)
- **External re-program/cal. via NFC software.**
- **Default Display is LPM and total LITRES**

Industrial grade product
All Gunmetal body and housing
Toughened glass face (scratch proof)



Dual LCD Rate + Total Display
MESLCD6 version



Order Code	Description	Flowrange # Litres/min
4 Digit:- LCD LITRES digital resettable (LARGER DISPLAY SIZE)		
MES20N-LCD4	20mm 4-digit LCD resettable total LITRES flowmeter, threaded 3/4" BSP(m) ends	1.5 - 75
MES20LCD4	20mm 4-digit " " " " " " " " (prev.type)	0.5 - 1.5 - 75
MES25LCD4	25mm 4-digit LCD resettable total LITRES flowmeter, threaded 1" BSP(m) ends	2.7 - 112
MES32LCD4	32mm 4-digit LCD resettable total LITRES flowmeter, threaded 1 1/4" BSP(m) ends	3.8 - 185
MES40LCD4	40mm 4-digit LCD resettable total LITRES flowmeter, flanged 1 1/2" BSP(f) ends	7.5 - 375
-DP1	LCD digital resettable (Litres, with 1 decimal place, rate LPM 1dec.pl.)	
-F	Flowrate only display version, with 4 digit larger LCD, in LITRES/MIN. to 1 dec.place	
6 Digit:- LCD LITRES digital resettable + flowrate LPM 1dec.pl.)		
MES20N-LCD6	20mm 6-digit LCD resettable total LITRES + rate LPM flowmeter, threaded 3/4" BSP(m) ends	1.5 - 75
MES25LCD6	25mm 6-digit LCD resettable total LITRES + rate LPM flowmeter, threaded 1" BSP(m) ends	2.7 - 112
MES32LCD6	32mm 6-digit LCD resettable total LITRES + rate LPM flowmeter, threaded 1 1/4" BSP(m) ends	3.8 - 185
MES40LCD6	40mm 6-digit LCD resettable total LITRES + rate LPM flowmeter, flanged 1 1/2" BSP(f) ends	7.5 - 375
-DP1	LCD digital resettable (Litres, with 1 decimal place, rate LPM 1dec.pl.)	
Optionals:-		
-T	Tefzel-lined body. Add suffix to any 20 & 25mm MES-type flowmeter order code.	
-E	EDPM "black" base seal gasket (in lieu of white rubber) for MES20-N and MES20 -20mm size only	
NFC.AGM8	Re-calibration software with AGM8-Phone-strong NFC signal (or download install free on Andriod)	
-PO	Pulse Output via m12 plug-set. 5m/s.pls.width. 1/1ltr. or 1/0.1ltr. (ABS housing)	



MES20LCD4DP

NEW Bronze Housing



-F flowrate option



Pulse Out

The flowrange is for ±1.5% accuracy. Can measure outside this flowrange, but at reduced accuracy. Flowrange is for water. For Admix flowrange, divide water flowrate by the Admix sg.
(1) At ±5% accuracy, MES flowmeters can measure down to: 20mm: 0.5 Litres/min; 25mm: 1.0 L/m; 32mm: 1.5 L/m; 40mm: 2.8 L/m;

1.5 SPARE PARTS for MES series flowmeters

SPARE PARTS for MES20-S /-ST models only

Product Code **Description** (for MES20-S /-ST Ryton-MTL chamber flowmeters)

20-5-S	20mm Ryton-MTL Chamber (chemical/petroleum resistant). Includes measuring chamber, viton base seal and Teflon spacer.
20-3-S	Spacer -Teflon
20-DST	Drive shaft - black Nylon glass filled.
20-CB	Ceramic barium Magnet – special chemically resistant
SPARE SEALS	
20-6-S	Chamber Gasket VITON (square)
20-7-S	Base sealer gasket VITON (chemical/petroleum resistant).
20-7E	Base sealer gasket EDPM (chemicals resistant).



20-5-S



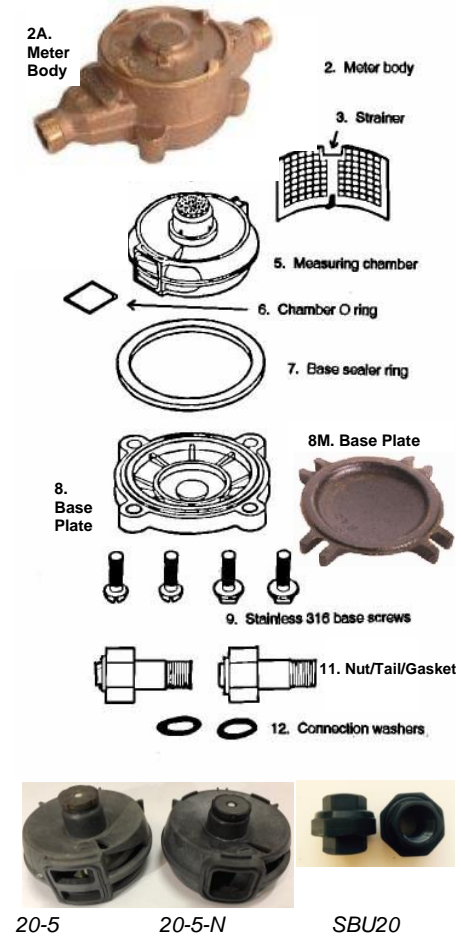
-1 1. Pulsehead complete capsule 1A. LCD display capsule head

* For the MES spares below, the Order Code format is "size-code" e.g. "20-5" is chamber for 20mm MES flowmeter

SPARE PARTS for all MES models

Code*	Description	Price				
		20mm	20mm (N)	25mm	32mm	40mm
-1	Digital Smart Pulse Pulsehead (round) complete capsule					
-DSP	(DSP) with internal pull-up resistor fitted: more suited for other equip.					
-OC	(DSP-OC) without internal pull-up : suitable for ManuFlo equipment					
-1R	Reed Switch Pulsehead (square) complete capsule					
-1A	LCD 4 digit reset total Litres 1.dec.pt capsule –Bronze Housing					
-1B	LCD Rate/6digit reset Litres 1.dec.point display capsule – Bronze Housing					
-1F	LCD Flowrate (Lites/min, to 1 dec.pl.) display capsule –Bronze Housing					
1M	Mechanical running (non-resettable) Total display capsule –Poly. Housing					
-B	Industrial Grade Hi-impact Bronze housing/lid (for upgrades of Poly)					
2A	Meter body(N) (coupling-free, 3/4" BSP male connection), without chamber					
3	Strainer					
5	Measuring chamber (complete with chamber O'ring seal) (ceramic-barium magnet c/w plastic shroud)					
6	Chamber O ring					
7	Base sealer gasket ring –rubber (cup gasket –white for "-N" version)					
7E	Base sealer gasket ring –EDPM O-ring seal					
7N-E	Base sealer 'black' gasket –EDPM (in lieu of white gasket)					
8	Base plate Synthetic Polymer plastic					
8M	Base plate (cast iron) } with Nylon inner cover plate (suits –S and –T)					
9	Stainless 316 base screw					
11	Nut/Tail/Gasket connection kit(pair)-for old body only (metric)					
12	Connection washer (each) - for old body/gasket only					
13	Oval flange kit (pair)					
BC	Chamber and New Body (parts 2A - 7, 8M and 9 above)					
SBU	Barrel Connection Unions –Polyprop –BSP(f) -comes as a pair					

NOTE : " MES20N " version compact low profile body and standard MES20 20mm sizes -top capsule is same & interchangeable.



20-5 20-5-N SBU20

* For spare MES capsule components, the Product Code format is "size-code" e.g. "25-g" is a spare glass lens for a 25mm MES flowmeter

Code*	Description	20 mm	25 mm	32 mm	40 mm
a	Housing Shroud (plastic)				
-B	Housing Shroud (brass) and lid (brass) –industrial grade				
bL	Lid with magnet, for 20mm MES20LCD4 (4 digits, no dp)				
b	Lid with magnet (for all other MES models)				
c	hinge pin				
d	locking plate				
e	security pin				
f	magnet				
g	glass lens				



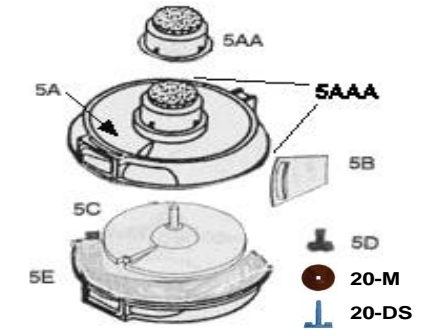
New Brass Housing



Polyprop barrel union connectors p42

* For spare MES measuring chamber components, Product Code format is "size-code" e.g. "25-5C" is a spare disc for a 25mm MES flowmeter

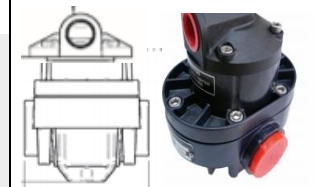
Code*	Description	20 mm	20mm (N) New Chamber	25 mm	32 mm	40 mm
Measuring chamber internal components						
5AAA	Control block assembly with fixed Chamber top / magnet					
5AA	Control block assembly					
5B	Shutter plate					
5C	Wobble disc (generally must buy a complete chamber -POA when available)					
5D	Roller guide pin					
5E	Chamber bottom only					
20-CSM	Magnet - ceramic Barium (upgrading old) *					
20-DST	Drive shaft, black Nylon glass filled (for 20mm flowmeter only) *					



1.6 MES25FP Oval Rotor PD pulse flowmeter (for very corrosive Admixtures / chemicals / AdBlue)

Size: 25mm


Order Code	Description	Flowrange* Litres/min
MES25FP	25mm (1")Bsp-f Oval Gear pulse flowmeter to 80°C, Digital Pulse <u>405 pulses/litre</u> . Max.Pressure 5bar., Acc. ±1.5%. Repeatability 0.1%. PPS/Ryton Body & Rotors. Viton seals.(FKM, Nitrile as options) IP65 rated cable gland entry. Dimensions: 105 L, 125 H, 80 W. Weight: 1kg. Q.Max.flowrate decreases proportionally higher viscosity/SG. (200mesh filter recommended). Ideal for chemicals/petroleum/Adblue based products. (Not suitable for stong acids/ozidizers) <u>Note: Requires a filter prior to meter</u> (Ideal for non-conductive fluids).	10 - 150
-R	Contact closure pulse option (30vdc<200mA <u>102 pulses/litre</u> .)	"



2.0 CMM Compact Mini-Mag Industrial Grade Flowmeters (sizes 15, 20 & 25 mm) *(Ideal for chemical admixtures /slumpstand water)*

- 15mm, 20mm and 25mm sizes. Very robust industrial grade all S/S-316 / Alloy light weight design.
- **+ 24 VDC powered.** Connection via mating M12 5pin 3mtr cable lead plug-set included.
- Accuracy @ ±1.5% with 0.3% repeatability of rate.. Measures from 50 µS/cm.
- Pressure rating to 1600 kPa (16 bar). Temp range -20°C to 90°C
- Peek lined sensor, SS316 electrodes with integrated ground ring. BSP(m) threaded ends..
- Accuracy is unaffected by varying viscosity or specific gravity of liquids.
- High resolution NPN Forward direction pulse, for full pipe flow measurement. *with Virtual Empty Pipe Detection.*
- Accuracy largely unaffected by varying viscosities or specific gravities of liquids measured.




<u>Order Code</u>	<u>Description</u>	<u>Pulses / Litre</u>		
CMM15	• ½" MiniMag (15mm -Bsp(m) connection, 7mm ID bore). With pulse output.	1000		
CMM20	• ¾" MiniMag (20mm -Bsp(m) connection, 10mm ID bore). With pulse output.	500		
CMM25	• 1" MiniMag (25mm -Bsp(m) connection, 20mm ID bore). With pulse output.	100		
<i>Note: 1" unit widely used on slumpstands for recycle water with ME4T reset counter</i>				
OPTIONS				
CV12-24	12 VDC input to 24 VDC output power step-up converter external module. 2 Amp. [TRACO]			
SBU	Optional Polyprop barrel union pair available: 15, 20 & 25mm (see Sect.8 page.51)			 Unions

2.1 MME Mini Mag. Compact Flowmeters with TFT display (sizes 15, 20 & 25 mm) *(ideal for breweries & chemical apps.)*

- 15, 20 & 25mm electromagnetic flowmeters with display and outputs. +19-30VDC powered.
- Onboard illuminated TFT display shows **resettable** Total (Litres), Flowrate (LPM) & Temperature.
- Full Measurement range: @ ±0.8% accuracy.(0.2% repeatability). With >20 µS/cm conductivity.
- Pulse NPN/PNP (1 to 1000ppl) and mA outputs (fully programmable) via m12 plug/cable set.
- Robust SS316 housing / electrodes with integrated grounding, Peek lined sensor, pressure to 16bar.
- ISO-G1 BSP(m) parallel threaded ends. Optional coupling connectors available or fit your own Sanitary SIP fittings.
- Accuracy is unaffected by varying viscosity or specific gravity of liquids. Temp. -20°C to 90°C
- Supplied pre-programmed to desired specs. + 5mtr lead (with empty pipe detect)
- SS316 coupling connection kits available



<u>Order Code</u>	<u>Description</u>	<u>Pulses / Litre</u>		
MME15	• ½" MiniMag (15mm connection, 11mm ID bore). With pulse output.	1 - 1000		
MME20	• ¾" MiniMag (20mm connection, 16mm ID bore). With pulse output.	1 - 100		
MME25	• 1" MiniMag (25mm connection, 20mm ID bore). With pulse output.	1 - 100		
OPTIONS:				
-TRB-JB	Resettable total button for easy reset function with M12 pwr inlet -mounted to IP65 handheld box			

2.2 MM MiniMag compact Electromagnetic Flowmeters with Display (sizes 15 - 50 mm)

- Low-cost, very compact and light-weight design. No moving parts. Virtually maintenance free.
- 4-digit on-board LED display shows non-resettable Total (Litres) or Flowrate (Litres/min). + Temperature.
- Measured liquid must have conductivity of at least 20 $\mu\text{S/cm}$.
- NPN/PNP Open Collector pulse output. + 4-20mA output. With M12 connection and 5-metre cable lead.
- Accuracy: $\pm 2\%$; Repeatability: $\pm 0.2\%$. To 16 bar; to 70 $^{\circ}\text{C}$; weight fr. 0.5 kg; 19-30 VDC powered.
- Stainless Steel body, PEEK liner, SS316 electrodes. IP67. (no empty pipe).
- Pre-programmed for your application. NOTE: Pulses can be re-programmed to your desired specification.



Order Code	Description	Pulses / Litre	Flowrange (Litres/min)
MM10	1/4" MiniMag (8mm connection, 4mm bore) electromagnetic flowmeter. 0.5kg	1000	0.005 - 3
MM15	• 1/2" MiniMag (15mm connection, 8mm bore) electromagnetic flowmeter. 0.6kg	100	0.1 - 25
MM20	• 3/4" MiniMag (20mm connection, 12mm bore). 1.2kg	100	0.2 - 50
MM25	• 1" MiniMag (25mm connection, 15mm bore). 1.5kg	100	0.3 - 100
MM50	• 2" MiniMag (50mm connection, 38mm bore). 3.5kg	10	5.0 - 600

2.3 AMM Mini Mag. Budget Admixture Flowmeters (sizes 15, 20 & 25 mm)

- 15 and 20mm models are directly interchangeable with MES20 20mm flowmeters (1000ppl & +12-24VDC).
- Measurement range: 0.2 to 10 m/s @ $\pm 2\%$ accuracy. To 1000 kPa (10 bar). 12-24 VDC powered models.
- PVDF lined sensor, SS316 probes, integrated ground ring. BSP(m) threaded ends with BSP(f), c/w connectors (SBU).
- Accuracy is unaffected by varying viscosity or specific gravity of liquids. Forward pulse direction. NEW m12 plug/lead
- Upgraded model with +12-24VDC pwr/pulse range with virtual empty pipe detection.

improved model

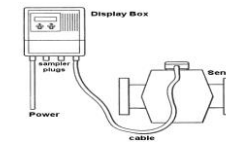


Order Code	Description	Pulses / Litre	Flowrange (Litres/min)
AMM15	• 1/2" MiniMag (15mm connection, 8mm ID bore). With pulse output. +12VDC	1000	1 - 35
AMM20	• 3/4" MiniMag (20mm connection, 14mm ID bore). With pulse output. " (Direct swap with MES20)	1000	3 - 100
AMM25	• 1" MiniMag (25mm connection, 18mm ID bore). With pulse output. "	500	5 - 160

2.4 MFS MagMaster™ Electromagnetic Flowmeter with display and outputs

* SPARE PARTS & REPAIR SERVICE *

- Transmitter/display IP65 units, 90-260vac powered with **resettable total option**.
- All display and output parameters custom programmed; re-programmable via serial com port using Windows HyperTerminal. (some are keypad configureable units).
- Minor Repairs where possible charged at \$143/hr. Note: Minimum charge policy
- Total Recondition/Test/repair/calibrate Magmaster Transmitter-Display & Sensor (# Service-MAG fr-\$795)



SPARES

313-TR1 / TR3	Transmitter/display in enclosure complete, 90-250vac (some preloved)
313-LCD	LCD dot matrix back-lit display module
MFS-WAND	Spare magnetic swipe wand, on Stainless Steel cable
-TRB	Totaliser Reset Button

Ongoing Service / Repair / Calibration Support / Spare Parts Facility.

3.0 RMS Rosemount High Pressure Process Electromagnetic Flowmeters (GROUT / SLURRY)

- **Measures: Liquid Grout, Slurries, Oxides, Silica, Chemicals & Recycled waters.**
- Robust alloy housed integral mounted electronics 8732E with toughened glass face.
- With LCD Display Module (-M4) shows dual line flowrate & accumulative or (-AX) resettable totaliser. Repositionable in 90 degree angle steps to suit install. (Programmable to desired engineering units). All units pre-programmed to desired settings, prewired and flow tested, ready for install.
- **WAFFER (8711) HIGH PRESSURE SENSOR ideal for GROUT to 5100kPa.** or FLANGED ANSI-150 (8705) sensor with Tefzel or Teflon liner, Stainless Steel 316 or Hastelloy-C electrodes (With Empty Pipe detection).
- Process liquid requires a conductivity of at least 5 microsiemens/cm.
- Measures velocity range 0.01 - 10m/s. Accuracy $\pm 0.5\%$ of rate (0.9 to 10 m/s).
- Liquid temperature: Integral: -20 to 70 °C, Remote: -20 to 149 °C for Tefzel liner.
- Pressure: 15-150mm wafer sizes to 740 psi (5100 kPa) **#8711 HIGH PRESSURE**, 4-8mm wafer & 15-150mm flanged sizes #8705 to 290 psi (2000 kPa).
- **Pulse and 4-20mA outputs.** Power supply standard 90-250 vac, or optional 12-42 VDC.
- Fully programmable to user specification via HART protocol or -M4 local display.
- Approved for Class III Hazardous Applications (NEMA 4x). (Upto 80% solids @35hz coils)
- **Coils set on 30Hz for Grout/oxides/slurries**



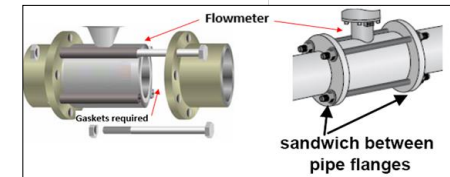
RMS 8732 transmitter with 8711 wafer sensor flowmeter



RMS-M4 with PVC flange kit



How to fit Wafer sensors



Order Code	Description	Flowrange (Litres/min)			
		min ($\pm 10\%$)	min ($\pm 5\%$)	min ($\pm 0.5\%$)	max ($\pm 0.5\%$)
RMS004-M4	4 mm Wafer sensor (8711), S/S316 or Hast-C electrodes, Tefzel or Teflon liner, 90-250vac. with backlit LCD display: dual line flowrate & accumulative or resettable totaliser	0.01	0.02	0.2	6.2
RMS008-M4	8 mm	0.05	0.1	0.8	25.1
RMS015-M4	15 mm	0.15	0.4	3.6	107
RMS025-M4	25 mm	0.5	1.0	10	305
RMS040-M4	40 mm	1.0	2.5	25	720
RMS050-M4	50 mm	2.0	4	40	1180
RMS080-M4	80 mm	4.0	9	90	2616
RMS100-M4	100 mm	8.0	14	140	4500
RMS150-M4	150 mm	20.0	34	341	10225

- OPTIONS** to order, add as suffix to the RMS flowmeter product code
- DC DC powered transmitter 12 - 42 VDC (or 15-50 VDC).
 - TRB External 'Totaliser Reset Button' for manual batching (with AX-model)
 - F 15-50mm: ANSI-150 flanged Sensor (8705)
 - R Remote mounted Display-Transmitter from Sensor via 2mtr signal cable (longer on request) Ideal for high temperature applications to 177 °C (Teflon liner), 149 °C (Tefzel liner). Process Temp: 15-150mm sizes to 135 °C, 4-8mm sizes to 90 °C.
 - IS Intrinsically safe S/S rated gland entries.



4.0 KMS502F Electromagnetic Flanged Flowmeters with 'S50' display & outputs

- **For waste water, Admixture chemicals (upto 20% solids).**
- K-MAGS wired & custom programmed.
- Polyprop. liner, Hastelloy C electrodes Australian Flanges or ANSi150
- Virtually maintenance free. No moving parts.
- Self verifying. Accuracy: $\pm 0.5\%$.
- 85 - 253 vac or 17 – 31 vdc powered
- Totaliser up to 10 digits. With Flowrate display.
- **Open collector Pulse to 10kHz & 4-20mA**
- Integral display or Remote, via 2-metres cable to flowsensor.
- Durable cast alloy display box. Grounding earth ring supplied.
- Programmable via 4 tactile buttons or via magnetic wand or HART to PC.
- IP68 flow sensor (remote version when potted).
- Process temperature: -5 to 120 °C. (Polyprop.)
- Measured liquid must have conductivity of at least 5 $\mu\text{S/cm}$ (20 $\mu\text{S/cm}$ for water)



Order Code	Description	Flowrange (Litres/min)		
		min ($\pm 1\%$)	min ($\pm 0.5\%$)	max ($\pm 0.5\%$)
KMS502-025F	25 mm AS2129 (Table E) flanged, Polyprop liner, Hastelloy C electrodes. 85-253 vac	1.5	14	295
KMS502-040F	40 mm " " " " " " " " " " " "	10	100	700
KMS502-050F	50 mm AS4087 Class 16 flanged, Polyprop liner, Hastelloy C electrodes. 85-253 vac	13	133	1050
KMS502-080F	80 mm " " " " " " " " " " " "	22	267	2666
KMS502-100F	100 mm " " " " " " " " " " " "	34	417	4167
KMS502-150F	150 mm " " " " " " " " " " " "	83	1050	10500
KMS503-025F	25 mm AS2129 Reduced Bore flanged, Rilsen liner, S/S-316 electrodes. 85-253 vac	0.7	7	265
KMS503-040F	40 mm " " " " " " " " " " " "	1.6	10	600
KMS503-050F	50 mm " " " " " " " " " " " "	2.6	20	700

SPECIAL zero straight pipe runs before or after for KMS503 flowsensors

OPTIONS to order, add as suffix to the KMS flowmeter product code:

- R Remote wired display/transmitter with 2m cable (add "-R" to code)
- XCn Extra cable (where n in Product Code = extra cable length in metres)
- SJP Sensor Junction Potted for IP68 applications where sensor is located in pit
- DC 17-31 VDC powered
- ANSI ANSI-150 flanged sensor drill hole spacing (in lieu of AS4087)
- S100 12-31 VDC with S100 display option with easy resettable display (for "-TRB" reset button add \$155)
- 506 Sanitary SS-316 flowtube Tri-Clamp connections



4.1 KMS302F Magnetic Flanged Flowmeters -‘S300’ display & outputs (for grout, admix, oxides & slurries)

Pattern approved for CT billing

- **For grout, oxides, silicafume, recycle-water & selected slurry applications (upto 60% solids).**
 - Polypropylene liner, Hastelloy C electrodes
 - K-MAGS Fully wired and custom programmed.
 - Flow sensor sizes 25 to 150mm
 - Flanged connection suites ANSI-150 or AS4087 flanges
 - Self verifying. Accuracy: $\pm 0.3\%$.
 - 85 - 253 vac or 11 – 31 vdc powered
 - Totaliser up to 10 digits. With Flowrate display.
 - Integral display or Remote via 2-metres cable to flowsensor
 - Durable cast alloy display box (integral) or (remote).
 - **Pulse and 4-20mA outputs. HART protocol.**
 - Programmable via reflective buttons or via HART to PC
- Built in flow profiler for higher accuracy
 - Self verifying Accuracy: $\pm 0.3\%$
 - IP68 remote flow sensor (when potted).
 - Empty pipe detection.
 - Pressure rating to 1600 kpa:
 - Process temperature: -25 °C to 120 °C
 - Measured liquid must have conductivity of at least 5 $\mu\text{S/cm}$ (20 $\mu\text{S/cm}$ for water)
 - 85 – 253vac powered. Optional 11-31 vdc.

IDEAL For GROUT MEASUREMENT



Order Code	Description	Flowrange (Litres/min)#	
		min ($\pm 0.3\%$)	max ($\pm 0.3\%$)
KMS302P-025F	25 mm ANSI 150 LB flanged, Polypropylene liner, Hast-C electrodes. 85-253vac	30	330
KMS302P-040F	40 mm ANSI 150 LB flanged, Polypropylene liner, Hastelloy C electrodes. 85-253vac	80	905
KMS302P-050F	50 mm ANSI 150 LB flanged, Polypropylene liner, Hastelloy C electrodes. 85-253vac	75	1413
KMS302P-080F	80 mm ANSI 150 LB flanged, Polypropylene liner, Hastelloy C electrodes. 85-253vac	150	3619
KMS302P-100F	100 mm ANSI 150 LB flanged, Polypropylene liner, Hastelloy C electrodes. 85-253vac	250	5655
KMS302P-150F	150 mm ANSI 150 LB flanged, Polypropylene liner, Hastelloy C electrodes. 85-253vac	1050	10500

OPTIONS to order, add as suffix to the KMS flowmeter product code

- R3 Remote wired display/transmitter with 2m cable (add “-R” to code)
- TRB Totaliser Reset Button
- DC 11-31 VDC powered
- XCn Extra cable (in excess of the standard 2 mtrs), where n in Product Code = extra length in mtrs)
- MB Modbus communication
- APA Pattern Approved or OIML certification
- NATA Flowmeter Tested & Certified at NATA Lab
- CT Transfer approved certifications (ideal for chemical delivery tankers)

AS4747 / NMI-M10
Pattern Approved
For Custody Transfers



The flowrange is for the stated accuracy. Flowmeter can measure below this flowrange, but at reduced accuracy

4.2 KMS307W Magnetic Wafer Flowmeters with 'non wetted electrodes' for corrosive, abrasive & very low conductive liquids

Features of 'The Ultimate Magflow Solution'

- The Latest 'Capacitive Mag' Technology
- Unsurpassed performance in the most difficult applications
- No electrodes in contact with medium, maintenance free
- Extremely hard wearing high performance ceramic liner
- Will work on extremely ultra low conductive liquids
- Suitable for CIP & SIP cleaning
- Operation in liquids with up to 75% solids content

Typical Applications:

- Water mixed with oil or metallic particles, Adhesives
- Fibrous & high viscos products: molasses, syrup etc
- Oil-based products: vegetable oils
- Low conductive liquids: alcohols, spirits, glucols, glycerine etc
- Dairy products: fat creams, milk, cheese, yoghurt etc

Specifications:

- Flow sensor sizes 25mm to 100mm
- Ceramic liner with non wetted capacitive electrodes
- Wafer connection suites ANSI 150lb & TABLE flanges
- Self-verifying. Accuracy: $\pm 0.5\%$ +/- 5mm/s. Empty pipe detection.
- 85 - 253 vac or 11 - 31 vdc powered ,
- Integral 'S300 CAP' display with Totaliser and With Flowrate display. .
- Durable die cast aluminium display box (Optional 316 L SST)
- **Pulse to 10kHz and 4-20mA outputs.** HART protocol.
- Programmable via front or via HART
- Pressure DN25-80: 1600 kPa, Process temp. -40 °C to 100 °C
- Measured liquid conductivity as low as 0.05 $\mu\text{S}/\text{cm}$ or
- 1 $\mu\text{S}/\text{cm}$ in the case of Demineralised water
- # Can measure below stated flowrange, but at reduced accuracy.

Toxic, aggressive & abrasive mediums
Abrasive slurries: grouts, cement, Emulsions
including paint & bitumen



Order Code	Description	($\pm 2\%$)	($\pm 0.5\%$)	($\pm 0.5\%$)
KMS307-025W	25 mm, Wafer, Ceramic liner, non wetted electrodes , with Integral 'S300 CAP' Display, 85 - 253 VAC	4	30	330
KMS307-040W	40 mm " " " "	11	75	905
KMS307-050W	50 mm " " " "	14	80	1413
KMS307-080W	80 mm " " " "	31	150	3619
KMS307-100W	100 mm " " " "	56	250	5655
-TRB	Totaliser Reset Button (mounted at cable gland entry)			
-DC	11-31 VDC powered			
-VR	Virtual Reference grounding option for IFC300 (instead of grounding rings on corrosive media)			

Note: These are special meters designed for difficult applications they are not part of our stock inventory therefore must be ordered from the factory with lead time up to **8 weeks**.

Order Code Spare Replacement KMS MagFlow Transmitter/Displays 240vac (for DC units add "-D")

K-050	General Display Remote/Integral display head – water/chemicals, 240vac or (19-30vdc)
K-100	Display with reset option Remote/Integal head – water/chemicals, 240vac or (11-30vdc)
K-300	Highest spec Display all functions Integral head – slurry/grout/chem. 240vac or (11-30vdc)



5.0 CONNECTION KITS for flanged or wafer-style flowmeters

CONNECTION KITS - PVC

- **Table D/ANSI-150** QTY 2 x PVC Slip Flange kit. To 1200 kPa (12 bar).
- With bolts and neoprene gaskets with 316S/S Earth Grounding ring with strap.
For all MAGFLOWS KMS (>15mm) and RMS flowmeters.
- supplied already mounted to flowmeter sensor for easy install.

Order Code **Size mm**

CK-PVC15	15
CK-PVC25	25
CK-PVC40	40
CK-PVC50	50
CK-PVC80	80
CK-PVC100	100
CK-PVC150	150



CONNECTION KITS - GALVANISED IRON

- **Table D & E** Galvanised Iron Flanged Connection Kits. To 1600 kPa
- Galvanised Iron threaded BSP(f) entries with neoprene gaskets (earthed to GAL flange).
- For PMS (>15mm), KMS, , MEH, RMS & WP flowmeters.
- supplied already mounted to flowmeter for easy install.

Order Code **Size mm**

FK-GAL15	15
FK-GAL25	25
FK-GAL40	40
FK-GAL50	50
FK-GAL80	80
FK-GAL100	100
FK-GAL150	150



- **ANSI-150** QTY 2 x PVC slip flanges with bolts, neoprene gaskets.
- for all other conventional flowmeter types. To 1200 kPa (12 bar).
- supplied already mounted to flowmeter for easy install.

Order Code **Size mm**

FK-PVC15	15
FK-PVC25	25
FK-PVC40	40
FK-PVC50	50
FK-PVC80	80
FK-PVC100	100
FK-PVC150	150



- **ANSI-150** Stainless Steel 316 flanges with Steel bolts, neoprene gaskets for flowmeters. To 1600 kPa (16 bar).
- supplied already mounted to flowmeter for easy install.

Order Code **Size mm**

FK-SS15	15
FK-SS25	25

Larger sizes available on request

CAMLOCKS:- Available on request

Spare EARTH RINGS Stainless Steel (1mm or 1.5mm thickness)

Order Code **Size mm**

ER15	15
ER25	25
ER40	40
ER50	50
ER80	80
ER100	100
ER150	150



6. BATCH CONTROLLERS

6.1 ME995 Preset Batch Controller series – Rotary switch knob selector models

Order Code	Description	Admix Discount	Input ppl ⁽¹⁾
ME995-1	MILLILITRES 5 digits 90000 maximum. 240 vac I/O.		1000
ME995-1A	MILLILITRES 4 digits 9000 maximum		1000
ME995-2	VARIABLE DOSERATE (mls x 10 / m ³), CUBIC METRES (Displays mls)		1000
ME995-2H	HIGH DOSERATE (mls x 10 / m ³), CUBIC METRES (Displays mls)		1000
ME995-2C	VARIABLE DOSERATE (mls x 10 / m ³), CUBIC METRES (Displays m ³)		1000
ME995-2CH	HIGH DOSERATE (mls x 10 / m ³), CUBIC METRES (Displays m ³)		1000
ME995-3	VARIABLE DOSERATE (mls x 10 / 100kg), KG OF CEMENT (Displays mls)		1000
ME995-3H	HIGH DOSERATE (mls x 10 / 100kg), KG OF CEMENT (Displays mls)		1000
ME995-3K	VARIABLE DOSERATE (mls x 10 / 100kg), KG OF CEMENT (Displays kgs)		1000
ME995-3KH	HIGH DOSERATE (mls x 10 / 100kg), KG OF CEMENT (Displays kgs)		1000
ME995-4	LITRES 99.990 maximum		1000
ME995-6	LITRES 99.9 maximum, with decimal point		1000
ME995-7	LITRES 9999 maximum, with K-factor calibration (x17 multiplier input)		1 - 999 (2)
ME995-7D	LITRES 999.9 maximum, with decimal point and K-factor calibration x1		1 - 999 (2)
ME995-7D-S	LITRES 99.9 maximum, with decimal point and K-factor calibration x1		1 - 999 (2)
ME995-7H	LITRES 99990 maximum, min.batch selection 10 litres.		1 - 999
ME999	MLS./LITRES Multi-role programmable batch controller (with RS232 print/log)		0.1 to 1000



ME995-7



ME999

Multi-role batch controller
Coming in 2022 !!

(ME995x1 Input pulse max. = 7KHz)
(ME995x17 input pls. max. = 400Hz)



(1) ME995 models with 1000 ppl (pulses per litre) only suitable for use with MES20, AMM15/20, MME15 or other flowmeters with 1000 ppl output or 1 millilitre per pulse. (e.g ME995-1).

ME995-7, -7D, -7DS models suitable with a larger range of pulse flowmeters e.g. MES25>, RPFS-P, KMS mags. etc. ME999 with any flowmeter

25+ years operational life !

NOTE: ManuFlo recommends back to base service/upgrade check after 10-15yrs use.



ME995-1



ME995-1A



ME995-2



Rear View



ME995-2C



ME995-2CH



ME995-3



ME995-3KH



ME995-3K



ME995-4



ME995-6



ME995-7



ME995-7D-S

6.2 ME3000 Preset Batch Controller – Keypad microprocessor model

OrderCode Description

- ME3000**
- 6 digit LCD Microprocessor Batch Controller. Panel mount type.
 - Front keypad. IP64.
 - Displays batch in ml / Litres / kL / grams / KG / US Gallons.
 - Flowrate display.
 - Fully programmable e.g. input pulses/Litre (K-factor). Batching safety features.
 - 240 vac I/O. With logic, pulse, and current output options.
 - Ticket print quantity is programmable e.g. can print double tickets.

NOTE: ME3000 has same plug and dimensions, and is interchangeable with, ME995/ME188.

OPTIONS (see also page 17)

- SC**
- optional rear RS232 male serial connector for ticket printer output (date/time/batch).
 - Number of batch ticket copies (1 or 2) is user programmable.
- FP**
- RS232 port on front (includes XC4834 RS232 to USB converter cable), in addition to an RS232 port at back, for easy access to download data to laptop.
- XC4834**
- DB9 Serial to USB converter.

SYSTEMS (see Page 39 for more details, and for options / spares / accessories).

- TMP-DC**
- **Batch Printer System.**
 - comprises ME3000-SC and TTP-A5 printer, wired and mounted in a hinged lockable powder-coated steel box.
 - with 12-24 VDC power supply.
- TMP-AC**
- as above, but with 240 vac power supply.



ME3000



-SC Rear Port



-FP Front Port

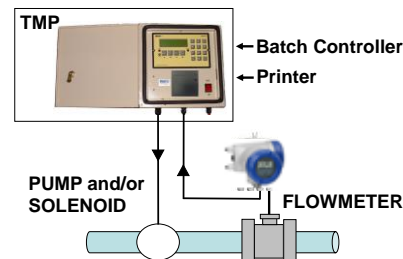


OUTPUT TO PUMPSOLENOID PULSE INPUT POWER

TMP-DC



TMP is ideal for delivery trucks or loading and discharge locations where custody transfer docket is required.



Ideal for use with a range of flowmeters e.g. electromagnetic.



Example batch ticket.



TTP-A5 printer.

6.3 BATCH CONTROLLER PLC INTERFACING and OPTIONS

Order Code **Description**

Options for ME995 and ME3000 Batch Controllers. To order, add as suffix to Order Code

-MC	4-pin PLC external (volt free) command plug set - start, stop, reset.
-MC2	2-pin plug with OPTO 4N33 open collector pulse output includes 4-pin external command (start, stop, reset) plug for PLCs (specify PLC type when ordering). (1p/1ml. for all models unless stated below, ME995-7D = 1p/0.1Ltr., ME995-7= 1p/1Ltr.)
-Sn	combined with -MC2, for 10, 20, 50 or 100 ml/pulse output Note: This option is not applicable for the ME3000, because it is programmable.
-5P	5-pin computer interface plug: start, stop, reset, pulse, +12V. (fitted to ME995 for use with ME51C interface to PLC/computer e.g. Jonel, COMMANDbatch).
-DC-OC	12-24 VDC power supply input / output drive, with Open Contact output drive (5 Amps) which is via external voltages e.g. 12 or 24 VDC, 110 or 240vac
-24VAC-OC	24 vac power supply input / output drive (Neutral can be to Ground or floating)
-110-OC	110 vac power supply input / output drive
-OC	240vac supply, Open Contact output drive (5 Amps). Drive is via external voltages e.g. 12 or 24 VDC, 110 or 240vac
-SSRBC	External command: start, stop, reset, for connection to HB2510-SSR housing box. (is needed for Batch Controller when ordered with HB2510 box).
CV12-24	12 VDC input to 24 VDC output power step-up converter external module. 2 Amp. [TRACO] (required when wishing to power a 24VDC magflow from a ME995 or ME3000 batch controller)
Options for ME995 series Batch Controllers only	
-S12	switch: two product changeover output drive (ME995 series only). Allows 2 flowmeter-inputs, 2 x pump output drives.
-SX1-17	x1 - x17 rear switch (for ME995-7 only) for wider range pulse input for flowmeter selection
-AO	contact output: alarm/batch-complete voltage relay or logic state.
TSBC	Toggle switch Boot Cover QTY.3 (To increase start/stop/rest/on-off commands to IP64 rating)
Options for ME3000 Batch Controllers only	
-OPA	Alarm output
-OPB	Batch Complete output
-OPC	4-20mA output
-SC	RS232 male serial connector at back of Controller, for ticket printer output (date/time/batch).
-FP	RS232 port on front of Controller (includes RS232 to USB converter cable).
-PTBS	Portable Trolley Batch System – wired complete with pump, hoses, enclosure, plug & play use



- **MC2**

For -MC2, the output is:
i) 1p/1 ltr. with ME995-7.
ii) 1p/0.1 ltr with ME995-7D.
iii) 1p/1mls. other models, or as designated.



-5P 5-pin computer interface plug, for use with ME51C interface cards to COMMANDbatch / Jonel computers.



CV12-24

-S12
Two Product Sequential Selection



TSBC
Toggle boot cover



PTBS
Trolley batch system

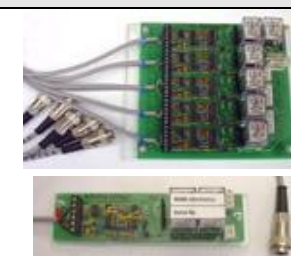
6.4 Batch Controller Spares

<u>Order Code</u>	<u>Description</u>
BP2	2-pin plug
BP4	4-pin plug
BP5	5-pin plug
FUS	Fuse, 5x20mm, 1.25A, 250vac
SK	Selector knob with cap
SKD	Selector knob, 0-9 number dial and cap (top row -for Doserate)
ST	Stator stickers (4 per sheet)
W	10-pin Weidmuller plug receptacle
WC	STV terminal screws insulation clip-on cover to AS3000 (for above "W" 10-pin receptacle)
TS	Toggle Switch for ME995 series (start/stop)(test/reset)(on/off)



6.5 INTERFACE CARDS to PLC, for Batch Controllers with Flowmeters

<u>Order Code</u>	<u>Description</u>
ME5IC-5	5 channel INTERFACE CARD e.g. ME995-controller/MES20 to Computer PLC, with pulse dividers, 240vac triac optos, start relays, reset relay, 2metres wired comms cable, and 5 pin interface plug (Suits COMMANDbatch or computers using Opto22 yellow case inputs & black case outputs). Note: Batch Controller requires the '-5P' plug option to connect to ME5IC-5.
ME5IC-1	1 channel interface card, for 1 admixture.
ME5IC-1W	1 channel interface card, for WATER e.g. use with ME995-7.
	<u>Options</u>
-2C	Suffix code for any ME5IC card, for 5-30VDC sinking pulse output e.g. for Jonel computer. <i>See the ME5IC datasheet for more I/O voltage options.</i>



ME5IC-5

ME5IC-1W

6.6 ME6008M Batch Monitor Printer Driver Unit

<u>Order Code</u>	<u>Description</u>
ME6008M-E	<ul style="list-style-type: none"> Batch Monitor Printer Driver Unit. Monitors up to 8 channels. 240vac powered. For manual batch plants that need QA printout of flowmetered additives or water. Automatic end-of-batch printing and datalogging. Used with serial printers LX-300+II or DP8340. Batch number ID. Real time clock. Grand Total memory and recall. IP65 touchpad. Now with infinity timeout option and Rear PLC log/print command input.
ME6008M-DC	As above, but 12-24 VDC powered.
ME6008M1	As above units but 1 channel only used with thermal ticket printer for custody transfers (TMP1)
-E	Update of older (ME6008M) units with infinity software and PLC external command print
-FP	RS232 port on front of ME6008M (includes RS232 to USB converter cable), in addition to the RS232 port at the back of ME6008M, for easy access to download data to laptop.
LX350	<ul style="list-style-type: none"> 9-pin Impact Dot Matrix printer. 1 line report. 204mm wide printout, 80 characters. fast print speed of up to 357 Characters Per Second (12 CPI). Bi-directional printing. Tractor feed. 128 KB data buffer. Built-in Serial, Parallel and USB Interface. 220-250 vac powered.



ME6008M-E




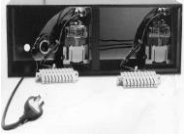


LX350



-FP Front Port

6.7 FIELD ENCLOSURES to house ME995/ME3000 Batch Controllers

<u>Order Code</u>	<u>Description</u>	
HB2510	IP65 waterproof polycarbonate single enclosure, with hinged transparent lid cover. With gland kit. New stronger design with 2 stainless steel hinges and clips. Door opens downwards. 200 x 300 x 150 mm	 HB2510 (shown with Batch Controller)
-C240W	240vac contactor, internally wired. To drive pump. 4.4kW (up to 8.8 kW on request)	
-SSR	External command: Start, Stop, Reset. IP65. Large push buttons fitted to box #	
-RWSSR	Remote Wand (Start/Stop/Reset) for housing box, with 10 metre lead and plugset # # Note: Must order at the same time as the Housing Box.	 -RWSSR
SHB	Single metal housing box (for housing one Batch Controller). Powder coated.	
SHB1	Single box, wired with 240vac contactor*, plug-in 240vac pump outlet, and plug.	 SHB
SHB1-T	as for SHB1 above, but with terminal wiring entry connection instead of 240vac pump outlet.	
SHB2	Single box, wired with 2x 240vac contactors*, 2x plug-in 240vac pump outlet, and plug.	
DHB	Dual metal housing box (for housing two Manu controllers). Powder coated.	
DHB2	Dual box, wired with 2x 240vac contactors*, 2x pump outlets, and 2x plugs for Batch Controllers.	 DHB2
DHB2-T	as for DHB2, but with terminal wiring entry connections (instead of mains lead and pump outlets).	
-110C	110vac contactor* (instead of 240vac). Option for any housing box.	
-U	Pump outlets and cable entrances mounted UNDERNEATH the housing box, instead of at rear.	
-RHS	Pump outlets and cable entrances mounted on RIGHT HAND SIDE of housing box, instead of rear.	

* contactor is suitable for 1 hp pumps (4.4 kW standard. Up to 8.8kW on request)



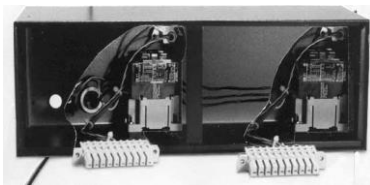
HB2510-SSR: waterproof enclosure (shown with Batch Controller)



SHB1: Single Housing Box, wired (Front)



SHB1-T: Single Housing Box, wired, terminal entry (Front)



DHB2: Dual Housing Box wired.



SHB1: Single Housing Box, wired (Rear)



SHB1-T: Single Housing Box, wired, terminal entry (Rear)

7.0 PLC/COMPUTER INTERFACE BATCH PRODUCTS

7.1 **ME2008/ME2000** Microprocessor safety management interface batching card

*Provides an impressive array of safety features and management systems for flowmetering of liquid admixtures. Inventory management functions. * Manual Batching capability.*

<u>Order Code</u>	<u>Description</u>
ME2008-8	MICROPROCESSOR INTERFACE BATCH SAFETY UNIT. (inbuilt rate +inventory totals) <ul style="list-style-type: none"> • Accepts most flowmeter types. Interfaces with computer/PLC systems. • Dot-matrix dual LCD counters, 4x plug-in dual-channel modules. • 8 channels (8 admixtures) on motherboard, variable pulse divisions, AC triac or DC opto output pulse switching with pulse limiter. • Standard unit comes with 240vac supply and start/reset/pulse logic, 240vac pulse output (suits PLC computer batch systems incl. COMMAND/JONEL batch etc). Wall mount enclosure. • with a hand held plug-in keypad programming module. • Manual batching facility on front panel
ME2008-6	<ul style="list-style-type: none"> • as for ME2008 above, but with plug-in modules for 6 admixtures. • has 3x dual counter/processor modules (can fit 1 more dual module), in motherboard.
ME2008-4	<ul style="list-style-type: none"> • as for ME2008 above, but with plug-in modules for 4 admixtures. • has 2x dual counter/processor modules (can fit 2 more dual module), in motherboard.
ME2000-6	<ul style="list-style-type: none"> • Similar to ME2008 above, but motherboard has maximum of 6 channels. • has 3x dual counter/processor modules (can't fit more), plugged in to motherboard.
ME2000-2-CV	<ul style="list-style-type: none"> • as above, but ADMIX COMPACT VERSION. 2 channels only (no expansion). • Box size (mm) : 225 L x 180 W x 90 D
ME2002-CV-W	• As above, with WATER BATCHING Software suits water flowmeters high volume batches

To order, must also choose one option from EACH of the following three groups:

Supply Voltage (Motherboard)

-1A	240 vac power supply (with new high pwr Torriod Transformer & pwr regulator)
-1B	110 vac power supply “ “ “ “
-1C	24 vac power supply
-1D	24 VDC power supply (with new high pwr regulator)

Start Input/Output Drives and Master Reset (Modules)

-2A	240 vac start/reset relay logic fitted
-2B	110 vac start/reset relay logic fitted
-2C	24 vac start/reset relay logic fitted
-2D	24 VDC start/reset relay logic fitted

Pulse output

-3A	240 vac (Moc3041) triac pulse output switching (only with -1A 240v power supply option)
-3B	Same ac voltage as for the start/reset option (i.e 24 vac or 110 vac)
-3C	5-30 VDC open collector pulse output. Suits Jonel/Compubatch/Autocon computers.

e.g. for COMMANDbatch computer, order ME2008-8-1A-2A-3A; for Jonel-Archer computer, order ME2008-8-1A-2A-3C; for all DC computer i/o, order ME2008-8-1D-2D-3C.



ME2008-8

-CV



**See next page
for ME2008
expansion/spares**



**ME2020 – Smart Board LCD unit
Coming in 2022**

7.1.1 ME2008/ME2000 Microprocessor safety management interface batching card (options / spares)

<u>Options</u>	<u>Description</u>
6CAT5E	For 6-channel ME2000: 3-way external panel, for programming up to 3 dual-ch modules. (Includes HP-CAT5E programmer with CAT5E plug – for upgrades of ME2000).
8CAT5E	For 8-channel ME2008: 4-way external panel, for programming up to 4 dual ch modules. (Includes HP-CAT5E programmer with CAT5E plug - only when ordered with a ME2008).
2CAT5E	As above but for ME2000-CV or –W: 1-way ext. panel, for 2 channel unit with DCPM
-IR	Independent Reset, per 2-channel module in the ME2008.
-USoz	USA units (non-metric) - Display in US ounces
-V1.8	Software ver.1.8 IC to enable/disable display/comparator function (replacement/upgrade).
-AO	Alarm logic output. Open contact relay.
WSC	Wima suppression capacitors, with long leads. 0.1µF, 275 volts (placed across contactor coils)
4N33	IC: 5 - 30 VDC white OPTO (for U3 & U4 sockets of ME2000/2008, for DC pulse output)
MOC3043	IC: 24-240 vac Triac OPTO (for U1 & U2 sockets of ME2000/2008, for ac pulse output)



**4-way
8CAT5E
with
included
HP-CAT5E
programmer**

7.1.2 ME2008/ME2000 Expansion / Spares / Upgrades

<u>Order Code</u>	<u>Description</u>
DCPM	Extra dual-channel module, expand ME2000 or ME2008 (specify the I/O config., ac/DC etc)
HP	Spare hand held plug-in keypad programming module, for ME2000 or ME2008.
HP-CAT5E	As above but Programmer with CAT5E plug
HK	Spare Hinge kit for ME2000/08
SS	Spare Springed Screw
SPK	Spare rear I/O connection plugs kit complete for 8ch unit
T240VAC	New Toroid High-Pwr Transformer kit to upgrade existing AC pwr. ME2000/2008 units
VR2412	New High-Pwr voltage regulator package to upgrade DC powered ME2000/2008 units
WH10	Wiring harness kit, to parallel flowmeter pulses from an ME2000/2008 and connect to ME6008M 8-channel Batch Monitor Printer Driver Unit
DCPM-W	Dual Channel module with WATER BATCHING software V1.9, plug-in module for ME2000/2008. Suits interface of most flowmeters to the PLC/computer batching system. (specify the I/O config., ac/DC etc) (for higher volume batching of water)



DCPM



HP



T240vac upgrade

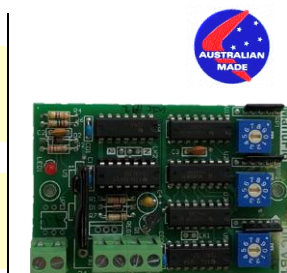


VR2412



7.2 UIC Flowmeter Interface Pulse Scaling Card

<u>Order Code</u>	<u>Description</u>
UIC/A2	<ul style="list-style-type: none"> • UNIVERSAL INTERFACE CARD with pulse scaling (flowmeter to PLC input) • 24-240 vac triac switching pulse output, and 5-12 VDC sink pulse output. • Heavy duty. High isolation. x10 input scaling. 5-12 VDC powered.
UIC/A1	<ul style="list-style-type: none"> • similar to UIC/A2, but 220-240 vac lower current pulse switching via triac opto.
UIC/D	<ul style="list-style-type: none"> • UNIVERSAL INTERFACE CARD with pulse scaling (flowmeter to PLC input) • 5-30 VDC open collector 4N33 opto-isolated pulse output and 5-12 VDC sink output. • 5-12 VDC powered or optionally 24VDC, (Regulated 12vdc pwr aux. pwr for flowmeters)
-24DC	<ul style="list-style-type: none"> • option: 24 VDC powered (instead of 5-12 VDC) with 12VDC supply to flowmeter.



UIC/A2

Widely used with MES-P and MagFlow flowmeters for interfacing to PLC batching computers

8.1 **FRT303** REMOTE **LARGE** LCD Dual Flowrate/Reset Total & Grand Totaliser IP65 Indicator with optional outputs

<u>Order Code</u>	<u>Description</u>
	(All programmable units, 2Khz input for any flowmeter, Reed, NPN, Coil)
FRT303-B	LCD 6d flowrate, 7d reset total & grand totaliser indicator. IP65 enclosure. Internal battery powered.
FRT303-B-P	as for FRT303-B above, but includes Pulse Output option.
FRT303-D	LCD flowrate, reset total & grand totaliser indicator. IP65 enclosure. External 5-30VDC powered.
FRT303-D-P	as for FRT303-D above, but includes Pulse Output option
FRT303-D-E	as for FRT303-D-P above, but includes Hi/Lo setpoints, Pulse & 4-20mA isolated output options.
FRT303-A-P	LCD flowrate, reset total & grand totaliser indicator. IP65 enclosure. 240vac powered.
FRT303-A-E	as for FRT303-A-P above, but includes Hi/Lo setpoints, Pulse & 4-20mA isolated output options.
	Options
-LBP	Larger internal lithium pluggable battery 3.6v-AA (in lieu of PCB mounted -allows 12+yrs)
-RSB	Push Button reset switch function (in lieu of capacitive touch type).
-SSB	Stainless Steel outer enclosure. Hinged lid. Lockable.(to house and protect FRT303)
	FRT303 Spares: - LCD \$94, Upper PCB-only(no LCD) \$474, Lower PCB \$494, Lid/Cover set \$145, Housing \$ 95



8.2 **ME5** REMOTE LCD Flowrate or Reset Totaliser IP65 Indicator (Large digits)

<u>Order Code</u>	<u>Description</u>
ME5-F-B	LCD 5 digit Flowrate indicator. IP65 enclosure. Internal battery pwr. (for reed & coil flowmeters only)
ME5-F-D	LCD 5 digit Flowrate indicator. IP65 enclosure. Ext 5-30VDC powered. (as above)
ME5-F-A	LCD 5 digit Flowrate indicator. IP65 enclosure. 240vac powered.
ME5-T-B	LCD 5 digit reset Totaliser indicator, IP65 enclosure. Internal battery. (for reed & coil flowmeters only)
ME5-T-B-P	LCD 5 digit reset Totaliser indicator, with pulse output. IP65 enclosure. Internal battery. (as above)
ME5-T-D-P	LCD 5 digit reset Totaliser indicator, with pulse output. IP65 enclosure. Ext 5-30VDC pwr.
ME5-T-A-P	LCD 5 digit reset Totaliser indicator, with pulse output. IP65 enclosure. 240vac pwr.



8.3 **ME4** REMOTE LCD Reset Totaliser IP65 Indicator (Larger digits –ideal for remote displays on slumpstands)

<u>Order Code</u>	<u>Description</u>
ME4-T	LCD 4 digit Resettable Total indicator. IP65 ABS enclosure. Int.bat.pwr. Flip top magnetic reset. (500hz int.max.clk) (e.g. Ideal for Slumpstands when using CMM25 for Recycle water –requires ext. 24vdc pwr).
-PC	Pulse output open collector (1/1 ltr.)



<u>ME5-F FLOWRATE LCD Indicator – Order Codes</u>	<u>ME5-T TOTALISER LCD Indicator – Order Codes</u>	<u>ME4-T TOTALISER LCD Indicator – Order Codes</u>
Nominate at time of order: Litres, KL per Sec., Min., or Hours. +dec. pts.	Nominate at time of order: Litres, KL + dec.pts.(Refer to datasheets)	With optional pulse output.
TECHNICAL Note: When ME5 & FRT303 units are 240vac configured, volt. Supply to flowmeter is 9VDC. When configured as 5-24VDC pwr units the volt. supply to NPN flowmeters is proportionally the same.		
FRT303 / ME5: Suitable with RPFS range slip insertion rotor flowmeters (most flowmeters) to suit remote display applications.		

8.4 **ME6 ME8** REMOTE LCD Resettable or Running Totaliser Indicator (Small digits)


<u>Order Code</u>	<u>Description</u>
	(1 pulse 1 count input only – 20Hz max. input -not scalable)
ME6	LCD 6 digit reset Totaliser indicator, IP54 panel mount, Internal battery. (20hz. for contact closure input 1/1p)
ME8	LCD 8 digit panel mount reset counter (10Khz) 1/1p. int.bat.pwr.(8mm H digits) Ideal for contact closure flowmeters e.g. MEH, PWM, WP. MRP/MRT –P pulse output, truck cabins etc



specifications may change without notice. ATM-0621

9.0 SYSTEMS Note: a range of products from this catalogue can be mixed and matched to form systems.

9.1 Dosing Low Flowrate Chemicals


<u>Order Code</u>	<u>Description</u>	
KMS104P-006F	<ul style="list-style-type: none"> 6mm precision electromagnetic Wafer flowmeter for dosing applications 4 - 20mA control output., digital pulse output, Ideal for cement plants. flowrange: 0.05 - 20 Litres/minute (3.0 - 1200 Litres/hour) 90 - 240vac powered or 11 – 31 VDC pwr. (other sizes available) 	
MM series MME series	<ul style="list-style-type: none"> 4mm to 25mm compact electromagnetic flowmeters for dosing or batch applications with LED display. M12 connection 4 - 20mA output., digital pulse output, flowrange: 0.3 – 6000 Litres/hour. 18 – 30VDC powered 	
RMS004-M4	4mm, 8mm & 15mm Wafer Magflows with Rate/Total LCD, mA & Pulse <ul style="list-style-type: none"> Flowranges from 0.02 Litres/min. AC or DC pwr. 	

KMS

RMS



MM

9.2 Shotcrete Admixture Flowmeters

<u>Order Code</u>	<u>Description</u>	
KMS104F-015F-DC-TRB	15mm electromagnetic flowmeter, for Shotcrete admixture. <ul style="list-style-type: none"> Integral display shows flowrate and resettable Total. 11-31 VDC powered. ANSI-150 flanged, Hastelloy-C4 electrodes, PTFE liner. Flowrange @ ±2% accuracy: 0.5 – 106 Litres/minute. to 2000 kPa (20 bar), pulse and 4-20mA outputs 	
-RR	Remote display via 2-metres cable shows flowrate & resettable total	

Integral 0° Degrees

Integral 45 Degrees

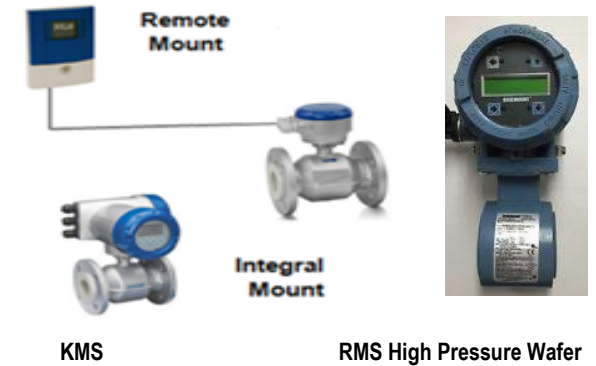
SHOTCRETE DOSING SYSTEM		
FRT303-D-E	Flowrate / Reset Total / Grand Total - Dosing Admix System complete. <ul style="list-style-type: none"> +24VDC powered with direct 24VDC to flowmeters (or when powered by +12VDC power to flowmeters use CV12-24 step-up pwr module) +12 VDC input to 24 VDC output power step-up converter external module. 2A. 240vac power pack IP65 with regulated 24VDC power to FRT/flowmeter Stainless Steel outer enclosure, Hinged lid. Lockable (to house/protect FRT303). Push button reset function (in lieu of capacitive touch type). 	 <p><i>Pictured wired with FRT303-D-E / MM15 & SSB 316- enclosure. SS316 lockable box</i></p>
CV12-24 240-24D-IP -SSB -RSB	<p><i>all wired with 5-metre cable to flowmeter and 2 metre power cord.</i></p> <p><i>NOTE: or use with other flowmeters in this catalogue e.g. MES20, CMM, MM, MME magflows</i></p> <p><i>NOTE: for AMM,CMM,MM magflows you must power with 24vdc</i></p>	
<u>With</u> MM15 MM20 MM25	MM15 (½") BSP-m Magnetic flowmeter (16bar). Range 0.1 - 25 Litres/min. MM20 (¾") BSP-m Magnetic flowmeter (16bar). Range 0.2 - 50 L/min. MM25 (1") BSP-m Magnetic flowmeter (16bar). Range 0.3 - 100 L/min.	

CV12-24

9.3 Grout / Oxide / Slurry Flowmeters (for measuring liquids upto 80% solids)

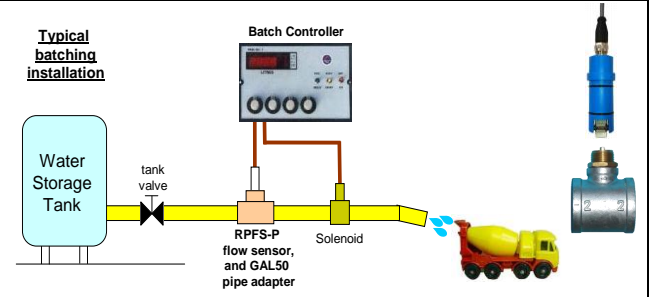
Order Code	Description
KMS302P-025F	<ul style="list-style-type: none"> 25mm electromagnetic flowmeter, for liquid Grout/Oxide/Slurry mixes. Integral display shows Flowrate and resettable Total. 90 - 250 vac powered. (or 11-30VDC) ANSI-150 flanged, Hast-C4 electrodes, PolyProp liner. Flowrange @ ±2% accuracy: 1.5 – 295 Litres/minute.
RMS025-M4	25mm WAFER MAGFLOW HIGH PRESSURE OPTION to 5100kPa (740 Psi) 36hz coils
Options:-	
-R3	remote display version also available
-TRB	Totaliser reset button
-DC	11-31 VDC powered, instead of ac powered

Larger sizes available



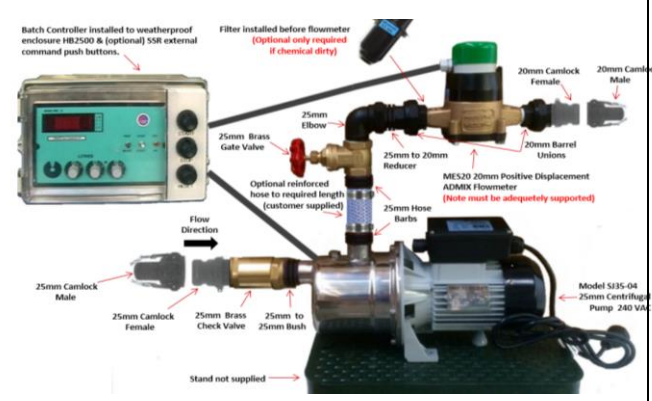
9.4 Concrete Batch Plant or General Water Batching Systems

Code	Description
MWBS	<p>Classic Concrete Plant WATER Batch System: ME995-7 Batch Controller, RPFS-P flow sensor, GAL50 pipe adapter</p> <p>OR create your own system with alternate and/or additional components:</p> <ul style="list-style-type: none"> Batch Controller: panel mount type.with optional housing enclosures (pg.18-22) Interface options: to PLC/computers (pg.20) Flow Sensor: insertion RPFS-P type with various pipe size adapters (pg.33) Magflow type: for recycle / slurry water (pg.12-14) add solenoid valves (pg.35) Signal cable (pg.34)



9.5 Concrete Batch Plant or General Chemical Admix Batching Systems (+Kits)

Code	Description
MABS	<p>Classic Concrete Plant CHEMICAL ADMIX Batch System: ME995-6 Batch Controller with MES20-N admixture flowmeter</p> <p>OR create your own system with alternate and/or additional components:</p> <ul style="list-style-type: none"> Batch Controller: ME995 series models of your choice to suit (pg.18-21) Housing Enclosures for Controllers: order SHB, DHB, HB2510 options to suit (pg.22) Flowmeters: order MES or AMM, CMM, MM flowmeters to suit. (pg.10, 22, 23) Interface options: to PLC/computers (pg.20) Pump: order pump to suit. (pg.36) *Optional Filters: (pg.34) Cable: order length of signal cable from Flowmeter to Batch Controller (pg.34)
AK2520	<p>Ancillary Kit -consisting of: brass gate valve, brass non-return valve, sleeves, elbows, unions & Camlocks. (Hose lines use re-inforced only & Chemical Storage Tanks —buy locally).</p>



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9.6 PTBS Portable Trolley Batch System (for automatic batching of liquids)

Order Code	Description
PTBS	<p>Portable Trolley Batch System. 240 vac powered system, fully wired plug & play system ready to go. (Simply connect inlet and outlet hoses to the hose-barb camlock system).</p> <ul style="list-style-type: none"> • Trolley 2-wheel (leight weight) fully plumbed, with non-return valve, gate service/restriction valve, Barrel unions for easy removal or access to flowmeter, Camlocks for easy pipe connection. • HB2510 IP65 Housing Box with Stainless Steel hinges – fully internally wired • Davey SJ35-04 Centrifugal Pump, 1"bsp-f connections. SS304 impellar, EDPM seals 240vac, 2.3 Amps, 370watt. IP55 motor. 2900 rpm. 40 Litres/min. Head height up to 25 metres. (suitable for non-corrosive admixtures) • Dimmensions: 1300mm high x 530mm wide x 460mm deep. Weight:

And select from the following price adder options to complete your system:

Batch Controller options:

ME3000	<ul style="list-style-type: none"> ○ ME3000 keypad selection Batch Controller, fully programmable
-FP	<ul style="list-style-type: none"> ○ ME3000 option: RS232 port on front (includes XC4834 RS232 to USB converter cable) for easy access to download data to laptop or smart phone.

or

ME995-7D	<ul style="list-style-type: none"> ○ ME995-7D rotary dial selection Batch Controller
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With below Flowmeter options:

MES20-NE	i)	MES20-N	20mm nutating disc PD flowmeter, 1.5 - 75 Litres/min, 1000ppl
MES25	ii)	MES25	25mm nutating disc PD flowmeter, 2.7 - 112 Litres/min, 555ppl
CMM25	iii)	CMM25	25mm electromagnetic flowmeter, 5.0 - 250 Litres/min, 100ppl

Pump upgrade option:

-PPD	<p>Positive Displacement Pump options: Mono Pumps 240vac CP25 @30LPM, CP800 @80LPM, CP1600 @120LPM. I/O 1 to 1 1/2" BSP-f Onga Pumps 240vac JS110 @45LPM, JS120 @ 90LPM, I/O 1" to 1 1/4" BSP-f threaded connections. Stats@10mtrs/H. Self-priming to 6 metres up to 25 metres head. (specs.with water) Ideal for higher S.G chemicals and faster flow delivery requirements.</p>
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Consult ManuFlo for additional process control measurement instrumentation solutions not listed in this catalogue



Portable Trolley Batch System
HB2510 / ME3000 / MES20N
version pictured



9.7 **TMP Auto Batching Custody Transfer Ticket Printer System** (used primarily with electromagnetic flowmeters)

Contains:

- ME3000 Batch Controller (or soon with optional ME999)
 - 6 digit LCD Microprocessor Batch Controller. Panel mount. IP64.
 - Front keypad. Displays in ml / L / kL / Gal with decimal point.
 - Number of batch ticket copies is user programmable.
 - Fully programmable functions. With logic, pulse, and current output options.
 - with RS232 serial connector for ticket printer output (date/time/batch).
- TTP-A5
 - thermal ticket printer, with power supply.
 - for custody transfer dockets.
- all wired and mounted in a IP64 hinged lockable powder-coated steel box.



ME3000 / ME999



TMP

Order Code	Description
TMP-DC	<ul style="list-style-type: none"> • ME3000 Batch Controller and TTP-A5 printer Fully wired and mounted in a hinged lockable box. • 12-24VDC powered.
TMP-AC	<ul style="list-style-type: none"> • ME3000 Batch Controller and TTP-A5 printer Fully wired and mounted in a hinged lockable box. • 240vac powered

Optional

- FP
- ESS
- USG

-FP

- Optional front RS232 port, so batch log can be downloaded to a laptop.
- Includes DB9 serial to USB converter for laptops without a serial port.

-ESS

- Stainless Steel 316 enclosure, instead of powder coated (300mm W x 400mm H x 200mm D).

-USG

- Display in US Gallons and **110vac powered system**

UPS-DC

- Uninterruptable Power Supply. 24VDC to 14.5 VDC. 4.5 Ah, 3hrs backup @ 1.5A

UPS-AC

- Uninterruptable Power Supply. 240VAC to 14.5 VDC. 4.5 Ah, 3hrs backup @ 1.5A

SPARES/ACCESSORIES

T-TP50

- **Thermal Paper** for TTP-A5 thermal ticket printer (box of 50 rolls)

T-TP

- **Thermal Paper** for TTP-A5 thermal ticket printer (single roll) 57 x 46mm (52g)

TTP-A5

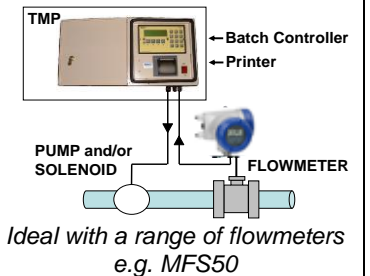
- **Thermal Ticket Printer.** 9600 baud. 5-9 VDC powered.
- suitable for custody transfer dockets for ME3000-SC.
- without power supply (power supply is separate item, see below)

T-ACPS

- **AC power supply module** for TTP-A5 printer.
- Input: 240vac, output: 5VDC. 3 Amp.

T-DCPS

- **DC power supply module** for TTP-A5 printer.
- Input: 12-24VDC, output: 5VDC. 3 Amp.



-FP Front Port



UPS-DC

* BATCH DISPENSED *
80035 29/06/05 14:35
0000002.1 L

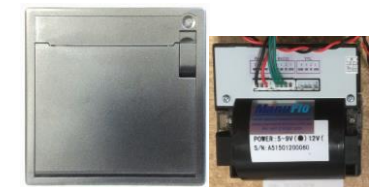
Example batch ticket



240VAC > 5VDC



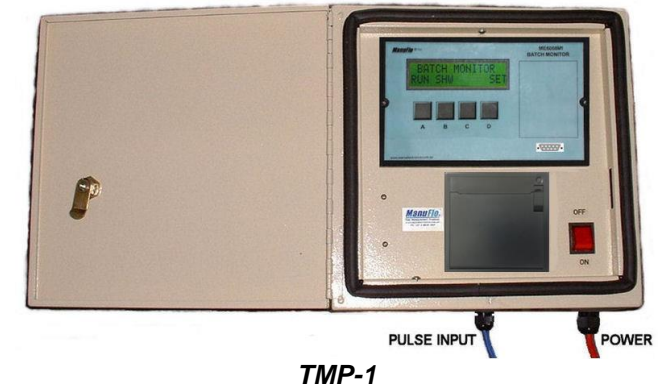
12/24VDC > 5VDC



TTP-A5 ticket printer

9.8 TMP-1 Manual Batching Custody Transfer Docket Printer System (single channel)

- For manual batching.
- Ideal for delivery trucks or loading and discharge locations where a custody transfer docket is required.
- At the end of each manual batch, the TMP-1 (after a settable period of wait time if there is no activity i.e. flow of liquid stops) automatically provides batch quantity printout with date, time and Batch ID.
- Number of batch ticket copies is user programmable.
- Front keypad. Displays in ml / L / Gal with decimal point.



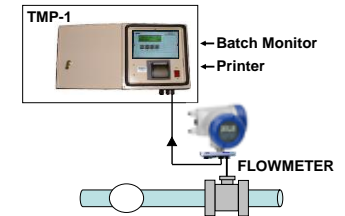
Contains:

- ME6008M1 1-channel Batch Monitor Printer Driver Unit , with optional **front serial port** to download internal log of 500 batches to a laptop.
 - TTP-A5 thermal docket printer, with power supply.
- all wired and mounted in a IP64 hinged lockable powder-coated steel box (300mm W x 300mm H x 200mm D).

<u>Order Code</u>	<u>Description</u>
TMP-1-DC	<ul style="list-style-type: none"> • ME6008M1 1-channel Batch Monitor Printer Driver Unit and TTP-A5 printer, fully wired and mounted in a hinged lockable box. • 12-24VDC powered.
TMP-1-AC	<ul style="list-style-type: none"> • As above, but 240vac powered
TMP-1-110	<ul style="list-style-type: none"> • As above, but 110vac powered
<u>Optional</u>	
-FP	<ul style="list-style-type: none"> • Optional front RS232 port, so batch log can be downloaded to a laptop. • Includes DB9 serial to USB converter for laptops without a serial port.
-ESS	<ul style="list-style-type: none"> • Stainless Steel 316 enclosure, instead of powder coated (300mm W x 400mm H x 200mm D).
UPS-DC	<ul style="list-style-type: none"> • Uninterruptable Power Supply. 24VDC to 14.5 VDC. 4.5 Ah, 3hrs backup @ 1.5A
UPS-AC	<ul style="list-style-type: none"> • Uninterruptable Power Supply. 240VAC to 14.5 VDC. 4.5 Ah, 3hrs backup @ 1.5A
<u>SPARES/ACCESSORIES</u>	
T-TP50	<ul style="list-style-type: none"> • Thermal Paper for TTP-A5 thermal ticket printer (box of 50 rolls)
T-TP	<ul style="list-style-type: none"> • Thermal Paper for TTP-A5 thermal ticket printer (single roll) • 57 x 46mm (52g)
TTP-A5	<ul style="list-style-type: none"> • Thermal Ticket Printer. 9600 baud. 5-9 VDC powered. • suitable for custody transfer dockets for ME6008M1. • without power supply (power supply is separate item, see below)
T-ACPS	<ul style="list-style-type: none"> • AC power supply module for TTP-A5 printer. • Input: 240vac, output: 5VDC. 3 Amp.
T-DCPS	<ul style="list-style-type: none"> • DC power supply module for TTP-A5 printer. • Input: 12-24VDC, output: 5VDC. 3 Amp.
ME6008M1	<ul style="list-style-type: none"> • 1-channel Batch Monitor Printer Driver Unit (specify voltage when ordering)



-FP Front Port



Ideal with a range of flowmeters e.g. KMS50, MES40

```

* BATCH DISPENSED *
80035 29/06/09 14:35
00000020 L
    
```

example
batch
ticket



TTP-A5 ticket printer



240VAC > 5VDC



12/24VDC > 5VDC

10. UMT8 UNIVERSAL PULSE COUNT I/O TESTER with pulse generator + mag-swipe

UMT8 The Ultimate Pulse Count & Generator TESTING TOOL for commissioning or troubleshooting devices

- A must for every field technician
- Outputs Frequency pulses @10Hz – test any digital input device e.g. ME2008, UIC, ME995, PLC's etc
- Input counter with high speed capability to 5kHz, test npn/pnp, open collector, contact closure, volt free, pulses from most flowmeter types on the market.
- Test any MES-P optical transistor and MES-DSP digital PULSE HEADS.
- 8 digit LCD, magnet wand swipe for resetting the counter and for testing MES-DSP pulseheads.
- Complete with carry bag and test leads



10.1 OPTIBAR - Pressure Sensors with ATEX, IECEx certificates

PC5060-C range (ideal for Grout/Slurries)

- Robust ceramic diaphragm, Reference accuracy up to +/-0.05%
- Process temperatures up to 150°C / 302 F
- 4..20mA/HART , Profibus PA, Foundation Fieldbus
- 24vdc powered with display



Order Code	Description
PC5060-C	Specification details on application

Price	Discount
from 1895.00	nett

10.2 OGF series - Oval gear PD flowmeters Pulse / Mechanical resettable (for Chemicals, Fuels, Oils, Solvents)

Order Code	Description	Pls/Ltr.	S/S-316 pulse	Aluminium pulse	Aluminium with Mech.Reset	(Litres/min.)	Prices \$ Net
F-OM04	4mm (1/8") Pulse output flowmeter	2800			n/a	0.0167 – 0.6	
F-OM06	6mm (1/4") Pulse output flowmeter	1050	"	"	n/a	0.033 - 1.66	
F-OM08	8mm 3/8" Pulse output flowmeter	355	"	"	n/a	0.25 – 9.2	
F-OM15	15mm (1/2") Pulse output or mechanical resettable total + running total	84				1 – 40	
F-OM25	25mm (1") Pulse output " " " " " "	27	"	"	"	10 – 150	
F-OM40	40mm (1 1/2") Pulse output or mechanical resettable total + running total	14	"	"	"	15 – 250	
F-OM50	50mm (2") Pulse output " " " " " "	6.5	"	"	"	30 – 450	
F-OM80	80mm (3") Pulse output or mechanical resettable total + running total	2.65	"	"	"	35 - 750	
-MR	Mechanical Register Type for sizes 15-80mm (replaces blind pulse register)						
-SS	S/S-316 body in lieu of aluminium		POA				
-EGM	NPN higher rate pulses available		POA				
-ER	LCD electronic display module		POA				
-ISR	INTRINSICLY SAFE Rated options		POA				
Pressures from 20-40bar ranges. To 120c Temp., PPS rotors and Viton seals supplied as standard. Ceramic carbide shafts. Intrinsic safe options available on request.							
					Connection:- Sizes 04 to 80mm is BSP-F threaded, Flanged options available. <u>Recommend a filter installed prior to OGF flowmeters</u>		



11. WATER FLOWMETERS for Batch Plants and Systems

11.1 MRT20-T2 & MRP20-T2 20mm LCD RESETABLE COUNTER CONCRETE TRUCK FLOWMETER

- Custom designed and built primarily for use on Concrete Transit Mixers (agitators).
- **Designed for harsh environments.**
- Hinged lid protects LCD from sunlight.
- ASA robust cover
- Unaffected by water hammer, compressed air, mild frozen or light recycled water.
- No damage to meter if run above its maximum flowrate.
- shows **total in Litres.**, closing lid resets total.
- 4-digit LCD (12mm high) counts in LITRES.
- Accuracy: $\pm 2\%$ (at 0.7 - 7 m/s flow velocity), calibration certificate issued.

- Flowrange: 8 - 120 Litres/min. for 20mm size
- Durable marine-grade S/S paddle rotor.
- Internal 3.6 v Lithium Battery (10+ year life).
- Sealed IP65 digital display compartment.
- Access for re-calibration
- Repeatability $\pm 0.5\%$, Temp to 55 °C
- Pressure to 1100Kpa
- 19mm ID bore, with gun-metal flowtube
- $\frac{3}{4}$ " BSP (male) threaded connection ends.
- Size: 270 L x 105 H x 85 W (mm)
- with v.3 PCB with NFC Re-calibration
- Optional pulse output via M12 plug-set



<u>Order Code</u>	<u>Description</u>	<u>Litres/min</u>
MRT20-T2	<ul style="list-style-type: none"> • 20mm digital LCD "Litres" resetable counter flowmeter to 50°C • Gunmetal flowtube with $\frac{3}{4}$" BSP male threaded pipe connection ends 	8 -120
MRP20-T2	<ul style="list-style-type: none"> • 20mm digital LCD "Litres" resetable counter gunmetal flowmeter to 50°C • All Gunmetal flowtube with $\frac{3}{4}$" BSP male threaded pipe connection ends 	8 -120
-PG	• Pulse output option (1 Litre/1 pulse), via PG7 M12 IP67 plug set, 5mtr cable	
-D1	• Litres to 1 dec.pl. (pulse becomes 1 per 0.1 ltr)	
MRTU4	Resettable flowmeter 4 digit LCD in litres for slumpstands etc	
GAL25-T2	25mm galvanised pipe 1"bsp-m with keyway adaptor fitted to above and calibrated	
GAL **	Galvanised bsp-f tees with keyway adaptor, Sizes 25, 32, 50 and 50mm	
SS **	SS316 bsp-f tees with keyway adaptor, Sizes 25, 32, 40 and 50mm	
PVC **	PVC cat.19 slip tees adaptor, Sizes 25, 32, 40 and 50mm (e.g. PVC25M = 25mm size)	

* The stated flowrange is for $\pm 2\%$ accuracy. Measures outside this flowrange, but at reduced accuracy.



MRTU4-P-GAL50



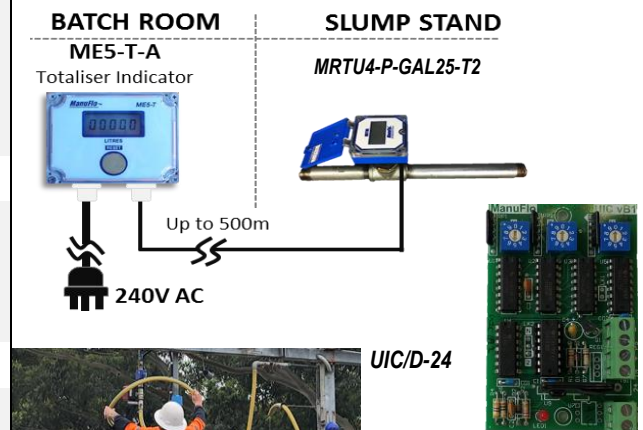
-P pulse option



MRPU4-P-GAL25M-T2
Slumpstand meter

11.2 Slump Stand Flowmeters and Systems for Concrete Batch Plants

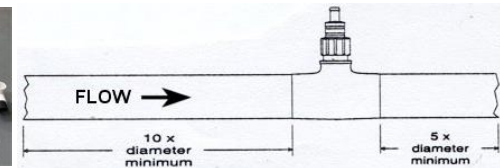
Order Code	Description	Discount
	<u>OPTION:1 Insertion Paddlewheel type (for Fresh & Grey water)</u>	
MRTU4-GAL25-T2	25mm Resettable LCD insertion Bat.pwr. Flowmeter (20 to 220 LPM) 1"bsp-m galvanised pipe connection ends (Note: larger pipe sizes avail. for higher flowrate)	10%
-P	Pulse output via m12 plug. (Option: for future pulse transmission to batchroom)	10%
-PG	Pulse output option (1/1-ltr standard), with flex flying lead M12 IP67 & 5-metre lead. 0.1/1/10/100 Litres / 1 Pulse (scaleable); 100 Hz maximum, 5 ms pulse width.	10%
	<u>OPTION:2 Magnetic Flowmeter -no moving parts (for Recycle/slurry water)</u>	
ME4-T	4-digit larger LCD Litres -remote IP65 int.bat.pwr counter with flip lid top reset	10%
-PC	c/w pulse output (Option: for future pulse re-transmission to batchroom). wired via 3mtrs cable to	10%
CMM25	CMM25 25mm MAGFLOW flowmeter 100ppl (5 to 250 LPM) +24VDC powered. (1"BSP-m SS-316 connection c/w Poly SBU25 union connection kit)	10%
-JB3W	with Junction Box 3way cable gland entry, with inbuilt terminals, IP65 (Magflow & display prewired into J-box for easy instal)	10%
	<u>Dual - Slump Stand / Batch Room system –option adders</u>	
	<i>When driver adds water - Batch Room display simultaneously counts.</i>	
ME5-T-D-P	ME5-T-D-P batchroom LCD reset counter, 12-24VDC powered, with DC pulse output.	10%
ME5-T-A-P	ME5-T-A-P batchroom LCD reset counter, 240vac powered, with DC pulse output.	10%
	<u>OPTION: Pulse conditioning/scaling/boosting to transmit to PLC/Computer input:-</u>	
UIC/DC-24D	Universal interface scaling card, scales pulses to 5-30VDC computer inputs	10%
UIC/AC1-24D	Universal interface scaling card, scales pulses to 240VAC computer inputs NOTE: +24VDC UIC powered interface cards (in lieu of 5-12vdc pwr).	10%
	<u>Technical Notes:</u>	
	<i>Pls output of MRP, MRT, ME4-T and ME5-T flowmeter/counter are fixed 5m/s. pulse width suitable for loggers or Manuflo equip only. The pulse is not strong enough to drive PLC inputs directly. For PLC input apps. a ManuFlo UIC interface card is required to boost the signal pulse at the input end of the PLC.</i>	
	<i>For Truck ID integration consult ManuFlo or your Computer Batch System rep for incorporation of automated water added at slump into the QC batch logging process.</i>	



Pictured:
Concrete Truck Driver at Slumpstand with ME4T-PC with CMM25 mag c/w pulse re-transmission to batchroom UIC to PLC input

11.3 RPFS - Rota Pulse (Paddlewheel) insertion Flow Sensors

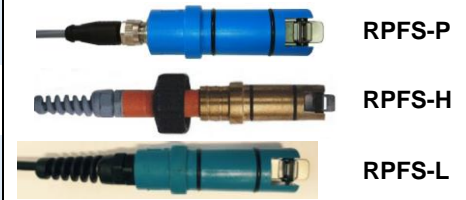
- Paddlewheel insertion type flow sensor.
- **General purpose, value flow sensor for many applications involving clean liquids**
- Simple installation & maintenance.
- Durable Marine-grade S/S paddlewheel rotor Australian made since 1984.
- $\pm 2.5\%$ accuracy @ velocity range 0.5 to 8.5 m/sec.
- $\pm 1.5\%$ over linear range 0.7 to 7.0 m/sec
- Repeatability $\pm 1.0\%$.
- Large range of pipe adapter fittings in sizes 15-100mm (50 °C or 120 °C temperature models).
- Suitable for liquids of Specific Gravity ≤ 1.0







Order Code Description

- | Order Code | Description | Litres/min |
|------------|---|----------------|
| RPFS-P | <ul style="list-style-type: none"> • Rota Pulse Flow Sensor, NPN pulse output, 50°C (M12 Plug-in 5m lead +lockcap) • For use with Batch Controllers/PLCs e.g. ME995-7, IP67. 5-30VDC pwr. To 1300 kPa | as per fitting |
| RPFS-H | <ul style="list-style-type: none"> • Rota Pulse Flow Sensor, NPN pulse output, Hi-Temp (2m lead + lockcap) • For use with hot liquids up to 120°C. To 2000 kPa IP65. 5-30VDC pwr. | as per fitting |
| RPFS-L | <ul style="list-style-type: none"> • Rota Pulse Flow Sensor, inductive coil pulse o/p, 120°C (2m lead + lockcap) • For use with battery-operated indicators e.g. FRT303-B IP65. To 1034 kPa | as per fitting |

Litres/min



PIPE ADAPTER FITTINGS & ACCESSORIES for all [MRTU & RPFS FLOWMETER slip insertion](#) models

Order Code	Description	White PVC F-Slip-Socket Tees with glued grey PVC adaptor keyway insert	Pipe OD mm	Approx PPL	Litres/Min ⁽²⁾	
For PN6, PN12, PN18 Series 1 PVC pipe sections						
PVC25	25mm (1")	PVC Class18, Cat.19 high pressure pipe slip(f) adapter fitting to 1100 kPa	33.5	75	20 - 230	 Locking Cap Included
PVC40	40mm (1½")	" " " " " " " "	48.2	30	50 - 620	
PVC50	50mm (2")	" " " " " " " "	60.3	20	90 - 980	 PVC100
PVC80	80mm (3")	" " " " " " " "	89.0	7.3	190 - 2490	
PVC100	100mm (4")	" " " " " " " "	114.3	4.6	300 - 3990	
Galvanised Malleable Cast Iron parallel thread BSP(f) pipe tees with adaptor keyway insert						
SS25	25mm (1")	SS316 Adaptor fitting (female BSP threaded ends), to 1600 kPa		75	20 - 250	
GAL32	32mm (1¼")	Galvanised Iron Adaptor fitting (female BSP threaded ends), to 1600 kPa		46	30 - 410	
GAL40	40mm (1½")	" " " " " " " "		30	50 - 640	
GAL50	50mm (2")	" " " " " " " "		20	90 - 980	
GAL80-T2	80mm (3")	BSP (male) tapered threaded ends. BSPB welded into 600mm long Gal. pipe.		7.3	190 - 2490	
Other pipe fittings adaptors:-						
Include SS316 tees, Brass Tees, various Saddleclamps, BSP adapter pipe screw inserts.						

Pictured MRTU4-P-GAL50

specifications may change without notice. ATM-0621

12. FILTERS, ELECTRICAL ACCESSORIES and SOLENOID, GATE, BALL VALVES, PUMPS

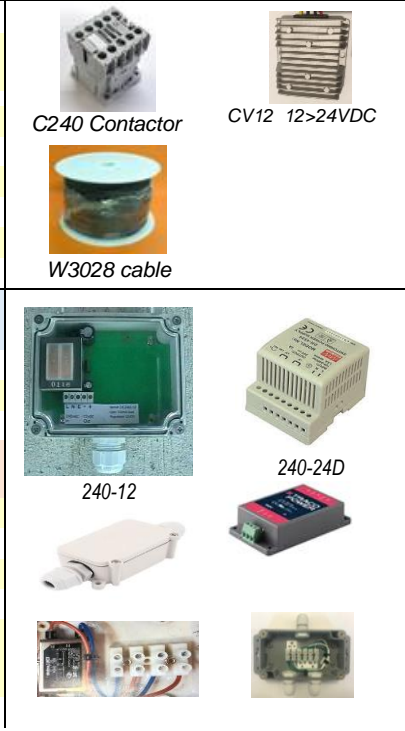
12.1 Filters. Y-strainer cartridge type.

<u>Order Code</u>	<u>Description</u> (Recommended for positive displacement flowmeters)
A20/800	20mm Polyprop. Y-strainer Filter, with 800 micron nylon filter cartridge 3/4" BSP-m
A20/300	20mm Polyprop. Y-strainer Filter, with 300 micron nylon filter cartridge 3/4" BSP-m
FC-XXX	SPARE Filter Cartridge, FC-800 800micron for MES20, FC-300 300micron for MEA15
HRT20/400	20mm Plastic, Y-strainer Filter with 400 micron filter cartridge 3/4" BSP-F swivel connection
HRT25/400	25mm Plastic, Y-strainer Filter with 400 micron filter cartridge 1" BSP-F swivel connection
HRT40/400	40mm Plastic, Y-strainer Filter with 400 micron filter cartridge 1 1/2" BSP-F swivel connection
Check Valves	
ACV20	20mm check valve. Polypropelene. Spring loaded. BSP (female) threaded.
ACV25	25mm check valve. Polypropelene. Spring loaded. BSP (female) threaded.







12.2 Electrical accessories – contactors, signal cable and power supplies

<u>Order Code</u>	<u>Description</u>
C240	Contactor GE N.O. 240vac 2 line, 4kW rating, industrial grade. (Ideal for isolation between ManuFlo controllers and 1 h.p. 1" single phase pump motor units)
W3020	Signal cable, light duty, 2-core wire braid screen shielded - 100m roll . AWG27
W3040	Signal cable, light duty, 4-core wire braid screen shielded - 100m roll. AWG27
W3028	Signal cable, heavy duty, 2-core wire braid screen shielded - 100m roll . AWG24
W3029	Signal cable, heavy duty, 2-core wire braid screen shielded - 300m roll. AWG24
WB-1575	Signal cable, light duty, 6-core screened - 100m roll
WB-1578	Signal cable, light duty, 9-core screened - 100m roll
240-24D-IP	24 VDC reg.pwr. supply pack, 240 vac source, 2 Amp in IP65 box -ideal for DC Magflows
DC12	12 VDC reg.pwr. supply pack, 240 vac source, upto 500 mA [MP-3011]
240-12	12 VDC reg.pwr. supply pack, 240 vac source, 1A.,IP65 ENCLOSURE. -ideal for UIC cards
CV12-24	12 VDC to 24 VDC power stepup converter . 2 Amp. -ideal for flowmeters
CV12-24	12 VDC input to 24 VDC output power step-up converter external module. 2 Amp. [TRACO] (required when wishing to power a 24VDC compact Magflow from a ME995, ME3000, ME2008)
CV24-12	24 VDC to 12 VDC power stepdown converter module. 3 Amp.
ENC	IP65 enclosure, 120x95x60mm. Ideal for housing UIC cards, and used for FRT303 and ME5.
240-24D	240vac input to 24VDC reg.output. 2.5 Amps -for DC Magflows (MP3192) wall mount IP65
VLSF	240vac Voltage Load SURGE FILTER
JB	Junction Box IP65 rated 2way PG9 glanded entry (ideal for linking cables)
B-PS	Pulse Splitter module. (allows 1 input pulse to split into 2 separate outputs)







specifications may change without notice. ATM-0621

12.3 Solenoid Control Valves - Metal

<u>Order Code</u>	<u>Description</u>	
BA25A-SS	25mm SS316 ball valve with 6.8 W electric air assist solenoid control coil N.C.	
	OTHER SIZES on REQUEST	
	Nominate Coil voltages: 12VDC, 24VDC, 24vAC, 110vAC, 240vAC Other Valve Types on request	
<u>Order Code</u>	<u>Description</u>	
Angle Seat Valves, 0 to 16 bar, BSP(f) threaded connection, air assisted.		
AS15	15mm Angle Seat SS316 solenoid valve with electric coil (normally closed), NBR seals.	
AS20	20mm “ “ “ “	
AS25	25mm “ “ “ “	
AS32	32mm “ “ “ “	
AS40	40mm “ “ “ “	
AS50	50mm “ “ “ “	
	Other seal options available	
	Nominate Coil voltages: 12VDC, 24VDC, 24vAC, 110vAC, 240vAC Other Valve Types on request	
		
		Sol. Coil
		For Admix or water. Air assisted. Quick acting.

12.4 Gate Valves, Check Valves, 3way Ball Valves.

Connectors for MES, MM and AMM Series Flowmeters		
<u>Order Code</u>	<u>Description</u>	
SBU15	15 mm Barrel Unions (Pair, QTY 2). BSP female ends. Polypropylene.	
SBU20	20 mm “ “ “ “	
SBU25	25 mm “ “ “ “	
SBU32	32 mm “ “ “ “	
SBU40	40 mm “ “ “ “	
Manual Gate Valves and Spring Check Valves		
T15GV	½” Gate Valve. BSP (female). Multi-turn. Brass.	
T20GV	¾” “ “ “ “ “	
T25GV	1” “ “ “ “ “	
15BSCV	½” Spring Check Valve. BSP (female). In-line. Brass.	
20BSCV	¾” “ “ “ “ “ “ “	
25BSCV	1” “ “ “ “ “ “ “	
3WV20T	¾” 3 way Ball Valve (T-port) Nickle plated brass (or all SS-304) BSP(f). Instal for decanting/calibration checks.	
3WV25T	1” “ “ “ “ “ “ “ “ “ “ “	

12.5 PUMPS

<u>Order Code</u>	<u>Size</u>	<u>Type</u>	<u>Description</u>	<u>Power supply</u>	<u>Watts</u>	<u>Packed Weight kg</u>	<u>Carton Dimensions mm</u>
ONGA413	1"	Onga 413	Single phase centrifugal pump 0.5hp, < 50LPM @12m/H	240vac	400	8.1	380 x 190 x 260
SJ35-04	1"	Davey SJ35-04	<ul style="list-style-type: none"> Single phase centrifugal pump. 45 Litres/min. @10m/H IP55 motor. 2900 rpm. 2.3 Amps.. 	240vac	370	6.0	

Other suggested pump options:- Onga 400 (CF) 413-417 series centrifuge pump series. Onga (PD) Pumps 240vac JS110 @45LPM, JS120 @ 90LPM, I/O 1" to 1 1/4" BSP-f threaded connections. Mono (PD) Pumps 240vac CP25 @30LPM, CP800 @80LPM, CP1600 @120LPM. I/O 1 to 1 1/2" BSP-f.



Davey SJ-35 Series Pumps – ideal for low cost delivery of water-based admixtures

- built to cover a wide range of applications. suitable for pumping clean non-aggressive liquids without solids or fibres in suspension. Strong durable.
- manufactured from molded materials giving superior resistance to corrosion. SS304
- Efficient design produces greater flow whilst maintaining low power consumption. Maximum working pressure : 410 kPa, Liquid temp. range 1 – 50 °C
- Max. Ambient temp. 55 °C. Motor: TEFC 2 Pole Continuously rated.
- Nominal speed: 2900 rpm, IP rating: IP55

USE RE-INFORCED HOSE LINES for Admixture installs.

General Pump application use info:

Centrifuge (CF) Pumps general use for typical chemical admixtures.
Positive Displacement (PD) Pumps ideal for dispensing higher S.G. liquids Delivering faster flowrates and head heights. These pumps generate higher pressures so ManuFlo recommends a recirculation pressure relief flow line be installed. Refer to our technical guides.

12.6 Data Loggers

<u>Order Code</u>	<u>Description</u>	<u>Price</u>	<u>Discount</u>
ME-USB-5+	<ul style="list-style-type: none"> Counter, Event and State USB Data Logger. 1 event count input (not scaleable). Volt-free open contacts, or input voltages up to 24 VDC. Stores up to 1,000,000 timed events. With internal 1yr Lithium.bat. 3.6v 1/2AA, Windows control software & measurement leads. Suitable for low pulse resolution flowmeters e.g. 1 pulse/ 1 Litre, (or e.g. 5, 10,100,1000 ltrs). 	445.00	10 %
Loggers	<p>ManuFlo flowmeters connect to loggers with GSM, SPRS, SMS and Control emailed data collection with Web Portal options. Manuflo recommendations include:- Aegis: DataCell-D/rtx, Halytech: Spider, Outpost: WASP2-3G-1L, SUMS: Smartpipe. E-State Automation: Remote Telemetry Solutions. CORETEX: Concrete Truck Fleet Solutions.</p>		
-CW	ManuFlo mounts/connects/wires & optionally tests chosen logger to flowmeters of choice	POA	



12.7 MEHR Multi-jet and Turbine cold water mechanical totaliser flowmeter (optionally also with pulse output)

<ul style="list-style-type: none"> • Ideal for irrigation and process applications. • Ideal for gravitational low flows. • Small impurities are able to be passed without blockage. • Running (non-resetable) mechanical total. 	<ul style="list-style-type: none"> • Reed Switch pulse output versions available. • Can connect pulse output models to ManuFlo Indicators to provide resetable total display. • ± 2% accuracy (Qtransitional - Qmax) 	<ul style="list-style-type: none"> • To 50 °C. To 1000 kPa (PN10). • Available in sizes of 15 to 300mm. Sizes 15 to 50mm with 1 pulse/Litre output. 																																		
<table border="1"> <thead> <tr> <th><u>Order Code</u></th> <th><u>Description</u></th> <th colspan="3"><u>Flowrange (L/min)</u></th> </tr> <tr> <th></th> <th></th> <th><u>min ±5%</u></th> <th><u>min ±2%</u></th> <th><u>max ±2%</u></th> </tr> </thead> <tbody> <tr> <td>MEH20R1</td> <td>25 mm Totaliser with reed pulse o/p (1 pulse/ 1 Litre) with BSP (male) couplings. Multi-jet.</td> <td>0.8</td> <td>4</td> <td>83</td> </tr> <tr> <td>MEH25R1</td> <td>25 mm " " " "</td> <td>1.2</td> <td>6</td> <td>115</td> </tr> <tr> <td>MEH32R1</td> <td>32 mm " " " "</td> <td>2.0</td> <td>10</td> <td>200</td> </tr> <tr> <td>MEH40R1</td> <td>40 mm (1 pulse/ 1 Litre) with BSP (male) couplings. Multi-jet.</td> <td>3.3</td> <td>17</td> <td>330</td> </tr> <tr> <td>MEH50R1</td> <td>50 mm " " " "</td> <td>7.5</td> <td>25</td> <td>500</td> </tr> </tbody> </table>	<u>Order Code</u>	<u>Description</u>	<u>Flowrange (L/min)</u>					<u>min ±5%</u>	<u>min ±2%</u>	<u>max ±2%</u>	MEH20R1	25 mm Totaliser with reed pulse o/p (1 pulse/ 1 Litre) with BSP (male) couplings. Multi-jet.	0.8	4	83	MEH25R1	25 mm " " " "	1.2	6	115	MEH32R1	32 mm " " " "	2.0	10	200	MEH40R1	40 mm (1 pulse/ 1 Litre) with BSP (male) couplings. Multi-jet.	3.3	17	330	MEH50R1	50 mm " " " "	7.5	25	500	
<u>Order Code</u>	<u>Description</u>	<u>Flowrange (L/min)</u>																																		
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MEH25R1	25 mm " " " "	1.2	6	115																																
MEH32R1	32 mm " " " "	2.0	10	200																																
MEH40R1	40 mm (1 pulse/ 1 Litre) with BSP (male) couplings. Multi-jet.	3.3	17	330																																
MEH50R1	50 mm " " " "	7.5	25	500																																

specifications may change without notice. ATM-0621

ADMIX CATALOGUE LIST 2021 v1.0

ManuFlo®™

See www.manuelectronics.com.au / www.manuflo.com for product data sheets.

13. OTHER SERVICES - Calibrations, Repairs, Training, Design

CALIBRATIONS

- **Offsite** calibration on NMI-certified loadcell wet test system (to NMI-NSS1671) at ManuFlo factory per flowmeter
 - **As above** but flowmeters above 50mmΦ > or uncommon, difficult to program or adapt models per flowmeter
 - **On-site** calibration verification of flowmeters, and issue of certificate. per flowmeter
 - **NATA** registerd NSW_laboratory certificate for custody transfer applications (AS3565 or WSA11) x 1 flowmeter
 - **Equipment matching/system/setup charges; wiring and calibrating** per system
- e.g wiring FRT303-B display with RPFS-L + GAL80 pipe adaptor & wet test 1 point calibrating on Flowrig.

GENERAL REPAIRS & SERVICE SUPPORT POLICY CHARGES

- **Full reconditioning, repairs & replacement parts for most products (min. charge for service/calibration is 1 hour).**
- For products 5 years and older a minimum equipment service/repair/reconditioning/upgrade charge applies +parts required
- **ME995** series batch controllers (fpr pre.2010. built)
 - **MRP20 / MRPU4** LCD reset flowmeters
- **ME2000** 6ch. interface cards (for pre.2010.built)
 - As above but fitted to pipe & calibrated
- **ME2008** 8ch. interface cards (for pre.2010.built)
 - **MRT** range flowmeters
- **UIC** universal interface cards
 - **ME3000** controllers
- **TMP / TMP1** ticket printing batch/monitor systems
 - **MES** pulse output flowmeters
- **FRT303** indicators
 - **MESLCD** resettable flowmeters
- **ME5** indicators
 - **MFS, PMS, RMS** Magflow flowmeters

Limited support / parts for:-
ME693, ME697, ME188



**ManuFlo
Servicing
Saves \$\$\$**

TRAINING

- Customised training course and manual on Admixture and Water Batching Equipment. 1/2 day. (Meal supplied)

DESIGN

- Special flowmeters and systems designed or configured on application.

14. DELIVERY

All prices in Australian Dollars (excluding GST). GST is not applicable for International purchasers.

Area	Courier	Weight *	Notes
Sydney Metropolitan	Couriers Please	up to 20 kg	
Australia-wide	Toll Air Bag (overnight)	up to 3 kg	} Consignments to Northern Territory & remote area
	Toll Air Bag (overnight)	up to 5 kg	
	TNT Road or Air	over 5 kg	
International	TNT/Fedex or DHL	unlimited	
	Australia Int. Post	To 25kg	

* also subject to dimension restrictions. # NOTE: • There may be a surcharge for some remote areas throughout Australia.

15. TERMS AND CONDITIONS OF SALE

1. Definitions

"Manu Electronics" and "ManuFlo" mean Manu Electronics Pty Limited, its agents and assigns.

"Customer" includes the Customer's agents and permitted assigns.

"Persons" includes corporations, partnerships and unincorporated associations.

"Equipment" means the goods agreed to be supplied and includes parts and supplies which may subsequently be supplied under any warranty given in relation to the Equipment.

"Agreement" means the agreement for supply of Equipment between Manu Electronics and the Customer of which these "Terms and Conditions of Sale" form part.

"Charges" include all monies payable by the customer to Manu Electronics in relation to the supply of Equipment.

"Ex works" has the same meaning as is ascribed to that term in Incoterms 1990.

"Manufacturer" means the manufacturer of the Equipment or any parts thereof, its agents and assigns.

"ACDC" means the Australian Commercial Disputes Centre Limited.

Words importing the singular number shall include the plural and vice versa.

2. Conditions

- 2.1 These Terms and Conditions of Sale apply to all agreements for the supply of Equipment by Manu Electronics and are varied or excluded only where such variation or exclusion is in writing and signed by a director of Manu Electronics and either is expressed to be a variation of these Terms and Conditions of Sale or is so inconsistent with them as to allow no other interpretation than that they have been intentionally varied.

3. Quotations and Entry into Agreement

- 3.1 No brochure, catalogue, price list, internet page, quotation or other communication published or forwarded by Manu Electronics to the Customer, whether in writing or not, shall constitute anything other than an invitation by Manu Electronics to the Customer to do business. Any purchase order placed by the Customer with Manu Electronics constitutes only an offer to purchase Equipment. Notwithstanding any prior communication between Manu Electronics and the Customer, there shall be no obligation by Manu Electronics to accept an offer to purchase Equipment made by the Customer. The Customer's order may be accepted either by issue to the Customer of a Confirmation of Order or by delivery of the Equipment.
- 3.2 The Equipment are sold and accepted with the understanding and agreement that in the event that there is any conflict between these conditions and the conditions of the Customer's purchase order or other request, these Terms and Conditions of Sale of Manu Electronics shall prevail.
- 3.3 No quotation or other invitation to do business forwarded or other document published by Manu Electronics to the Customer constitutes a representation by Manu Electronics to the Customer that the Equipment detailed in the quotation or publication or the prices set out in it shall be available to the Customer. Any quotation or other publication may be altered or withdrawn by Manu Electronics at any time.

4. Orders

- 4.1 When ordering from Manu Electronics, product Order Codes and product descriptions must be stated. An official order number must be provided.

5. Return of Equipment

- 5.1 The Customer shall inspect all goods supplied upon delivery. Manu Electronics shall not be liable for shortages and other errors in delivery unless the Customer submits notice in writing to Manu Electronics within seven (7) days of the delivery to which the claim relates.
- 5.2 If notice is not provided within seven (7) days of delivery, Manu Electronics shall only accept return of Equipment at its sole discretion, and a re-stocking fee shall apply as determined by Manu Electronics.
- 5.3 If the Customer wishes to return goods for reasons other than the goods being defective (e.g. ordered incorrectly) then a re-stocking fee shall apply as determined by Manu Electronics.
- 5.4 Goods cannot in any circumstances be returned to Manu Electronics:
- (a) without the prior consent of an authorised employee of Manu Electronics; and,
 - (b) unless Manu Electronics agree to the mode, cost of, and responsibility for, freight; and
 - (c) unless accompanied by the Customer's address and contact details, and a description of the problem.
- 5.5 In urgent situations, Manu Electronics may at its sole discretion elect to replace items prior to receiving returned damaged goods.

6. Functionality and Performance

- 6.1 Due to continuous product improvement, Manu Electronics reserves the right to change product specifications, pricing and technical information without prior notice.
- 6.2 All drawings and specifications shall remain the sole property of Manu Electronics. Small deviations or slight variations from such information, specifications or data which do not substantially affect the functionality of the Equipment will not entitle the Customer to either reject the Equipment upon delivery or make any claim in respect thereof.
- 6.3 Any information provided by Manu Electronics in relation to the performance of Equipment represents only a guide as to the performance of the Equipment under standard industry operating conditions.
- 6.4 The Customer is solely responsible for ensuring that the Equipment, as installed, complies with any relevant code or standard.

7. Charges

- 7.1 Unless specifically stated otherwise, all prices are manufacturer list prices ex-works (Brookvale NSW Australia), expressed net of any applicable freight and insurance charges, customs duty, and (for Australia only) GST, which shall be added to the amount to be paid by the Customer. A reseller is not obligated to comply with list prices. Prices are subject to change without prior notice.
- 7.2 Account Customers shall pay to Manu Electronics all Charges within thirty (30) days from invoice date, unless otherwise agreed in writing, without reduction or deferment on account of any claim, counterclaim or setoff.
- 7.3 Payment shall be by Visa/Mastercard, direct deposit or, for approved Customers, by cheque. Where payment is by Visa/Mastercard, Manu Electronics may at its sole discretion add a 2% merchant surcharge to the price. VISA/Mastercard orders are limited to AUD\$3,000.00. Where payment is by Direct Deposit, the Customer shall fax or e-mail a payment advice to Manu Electronics on the day of the deposit, quoting the relevant Invoice or Quote number if available as a reference. International payments shall be by International Money Transfer/Electronic Funds Transfer with faxed or e-mailed payment advice.
- 7.4 Notwithstanding anything else appearing in the Agreement, all Charges shall immediately become due if the Customer fails to make any payment when due, becomes subject to the bankruptcy laws or enters into any composition with its creditors or enters into liquidation or suffers a receiver and manager to be appointed to all or part of its assets.

8. Property in Equipment Purchased

- 8.1 Manu Electronics shall retain title to the Equipment until it has received payment in full for them.
- 8.2 Until the legal and equitable title to the Equipment passes to the Customer, the Customer shall:
- (a) hold the Equipment as bailee of Manu Electronics returnable at will and without prior demand by Manu Electronics;
 - (b) upon demand by Manu Electronics immediately deliver up the Equipment to Manu Electronics; and
 - (c) hereby authorises Manu Electronics to enter without notice upon the premises upon which the Equipment are stored for the purpose of taking possession thereof.
- 8.3 The Customer shall be liable for any damage arising from or in connection with the recovery of possession of the Equipment by Manu Electronics.

9. Delivery and Risk

- 9.1 Generally, deliveries in the Sydney Metropolitan Area will be by Couriers Please, and Australia-wide by Toll Express or, for shipments over 5 kg, by TNT. International deliveries will be by DHL, TNT or DANZAS. Choice of courier is at the discretion of Manu Electronics, and Manu Electronics reserve the right to not send shipments by post. Where possible, deliveries Australia-wide are next day from order placement (for stock items). International delivery is normally 2-7 working days. Risk in the Equipment passes to the Customer when the Equipment are loaded at the Brookvale NSW premises of Manu Electronics for delivery to the Customer. Manu Electronics is not responsible nor liable for payment for damage to shipments that occurs whilst en-route from and to Manu Electronics.
- 9.2 Delivery dates represent only an estimation in good faith of the date of delivery of the Equipment and are not binding on Manu Electronics. Time is not of the essence of the Agreement. Under no circumstances shall Manu Electronics be liable for damages (including consequential special and incidental damages) for failure to deliver or delay in delivery howsoever occasioned.
- 9.3 If Manu Electronics determines that it is or may be unable to deliver the Equipment within a reasonable time or at all, Manu Electronics may at its sole discretion terminate the Agreement. In the event of termination the Customer shall have no claim against Manu Electronics for any damage, loss or expense whatsoever.
- 9.4 Manu Electronics reserves the right to deliver the Equipment by instalments and to invoice the Customer for each instalment of Equipment delivered where, in the opinion of Manu Electronics, it is reasonable to do so.
- 9.5 Failure by the Customer to pay any installment, or any other amount when due, shall entitle Manu Electronics to withhold or delay delivery of any remaining Equipment.

10. Equipment Warranty and Limitation of Liability

- Each Manu Electronics product is warranted by Manu Electronics to be free from defects in material and workmanship for a period of one year from the initial date of shipment to the customer. If after examination by Manu Electronics factory or field personnel it is determined that the Equipment was not altered, abused, misused, incorrectly installed, operated outside of its technical specifications, involved in an accident or damaged by an act of God, then:
- (a) Manu Electronics is obligated to repair or replace without charge all parts determined to be defective subject to the limitations given above.
- (b) Subject to condition 9.2, Manu Electronics is obligated to pay for transportation charges return leg back to Customer only (method and courier selected by Manu Electronics), if product repair/replacement is within the one year warranty period.
- (c) The Customer, whether in Australia or overseas, must pay freight charges, insurance, and any tax or duties for the return of Equipment to the Manu Electronics factory, at Brookvale NSW Australia.
- (d) This warranty is the sole and exclusive warranty as regards the products sold by Manu Electronics and there are no other warranties of merchantability, fitness or otherwise express or implied; Manu Electronics specifically disclaiming any other such warranty. No representative or agent of Manu Electronics, except its directors, is authorized to modify, enlarge or extend the above warranty, and only a written document signed by the directors specifically mentioning this warranty shall be effective to modify, enlarge or extend the same.
- (e) The Equipment are sold and accepted with the understanding and agreement that Manu Electronics' liability for damages is limited to the replacement of the Manu Electronics Equipment with a similar or new model, and that Manu Electronics shall not be liable for any consequential damages.

- (f) For equipment repaired under warranty, the warranty period for repaired or replaced parts does not exceed the warranty period applicable to the product originally delivered.
- (g) For equipment repaired after the original warranty period has expired, the warranty period for repaired or replaced parts is 3 months from the date of shipment back to the customer after repair, and the warranty on the equipment is only on the repaired or replaced parts and not on the equipment as a whole.

11. Force Majeure

- 11.1 Manu Electronics will not be liable for any loss or damage suffered by the Customer due to any delay or any breach or default under the Agreement in circumstances where such delay, breach or default results from causes beyond Manu Electronics' reasonable control including but not limited to any beach or default under the Agreement by the Customer, compliance with any laws, regulations, orders, acts, instructions or priority requests of governments, acts of God, fires, floods, weather, strikes, lockouts, factory shutdown or alterations, embargoes, wars, riots, delay or shortage in transportation or inability to obtain labour, manufacturing facilities, electricity or other materials from Manu Electronics' or the Manufacturer's usual sources.

12. Dispute Resolution

- 12.1 The Agreement shall be governed by the laws of the State of New South Wales and the parties shall submit to the jurisdiction of the Courts of that State.
- 12.2 Prior to the institution of any legal proceedings, or any referral to arbitration, any dispute, controversy or claim arising out of or relating to this Agreement or the breach, termination or invalidity of it shall first be the subject of mediation administered by a mediator agreed to by both parties. In the event that the parties fail to agree on a mediator within fourteen (14) days of written notification of a dispute, controversy or claim, then mediation shall be administered by the Australian Commercial Disputes Centre Limited (ACDC).
- 12.3 In the event that the dispute, controversy or claim has not been resolved within twenty eight (28) days after the appointment of the mediator (or such other period as agreed to in writing between the parties), the dispute, controversy or claim, at the election of either party, may be submitted to arbitration, administered by ACDC. The arbitrator shall not be the same person as the mediator and shall be agreed between the parties from a panel suggested by ACDC, or, failing agreement, an arbitrator appointed by ACDC.
- 12.4 Any mediation or arbitration meetings shall be held in Sydney Australia.

13. General

- 13.1 If any provision or paragraph of this document is determined to be illegal and unenforceable it shall not affect the enforceability of any other provision or paragraph of this document.
- 13.2 Headings are included for ease of reference and do not form part of or effect interpretation of these conditions.

14. Discounts

- 14.1 **Discounts are per line item, unless otherwise indicated. Any quantity discounts apply on a per Purchase Order Number basis, and cannot be spread across Purchase Order Numbers.**

16. QUOTE REQUEST FORMS

----- FLOWMETER QUOTATION REQUEST FORM -----

To help select the correct product for your needs, please answer as many questions as possible. Fax the completed page to Manu Electronics, at fax number : + 61 2 9938-5852
IT IS ESSENTIAL TO ANSWER THE QUESTIONS MARKED WITH AN ASTERISK (*)

* What is the application:

- manual batching tradewaste concrete truck agitator
 automatic/semi-automatic batching irrigation concrete slump stand
 domestic water metering other _____

Does the application have any restrictions? e.g. can't have any metal in contact with the liquid.

* What is the liquid to be measured?

- fuel tradewaste water - clean water - recycled fuel
 other: _____

Does the liquid have unusual properties?

- corrosive contains fibrous matter has suspended particles viscous
 other: _____

* What is the pipe size (mm)?

- 20 25 32 40 50 80 100 150 other _____ (mm)

What is the type of pipe?

- Galvanised Iron PVC Stainless Steel other: _____

What flowmeter connection type is needed to connect to the pipe?

- flanges hose threaded other: _____

* What is the expected flowrange: _____ to _____ Litres/min

What measurement accuracy is required? ±1% ±2% ±5% other: _____%

What is the temperature: of the liquid? _____ °C, of ambient _____ °C

What type of output is required? pulse 4-20mA High/Low Flow alarm

* Do you want to display:

- Flowrate:** Flowrate units? e.g. Litres/Min _____
 Total: Total units? e.g. Litres _____
Is total to be re-settable? yes no
 Grand Total: Grand Total units? e.g. KL _____

Where is the display to be located?

- integral remote, under 2 metres away
 remote, _____ metres away

* What type of power supply is required?

- internal battery (i.e. no external power)
 external DC : 5-25V 12 V other: _____
 external AC: 240v 110v other: _____

Is the flowmeter to be connected to other equipment?

- Batch Controller PLC/Computer
 Flowrate Indicator Totaliser Indicator
 other: _____

* Where is the meter to be delivered? for freight estimate

city state country

* Your Name: _____

* Company: _____

Fax: () _____ * phone: () _____

email: _____

Other requirements: e.g. IP Rating _____

----- **BATCH CONTROLLER QUOTATION REQUEST FORM** -----
 To help select the correct product for your needs, please answer as many questions as possible. Fax the completed page to Manu Electronics, at fax number : + 61 2 9938-5852
IT IS ESSENTIAL TO ANSWER THE QUESTIONS MARKED WITH AN ASTERISK (*)

*** What is the application?**

- Concrete Admixture batching water batching
 other _____

*** What are the batch units?**

- Litres millilitres
 other _____

*** What is the batch quantity?** e.g. 20.0 to 50.5 Litres

minimum: _____ maximum: _____

*** What power supply is available for the Batch Controller?**

voltage: _____ ac DC

*** What power supply is required to operate solenoid/pump?**

voltage: _____ ac DC

Is an interface to a PLC/Computer required?

no yes, the type is: _____

How will the Batch Controller be mounted?

Panel Mount Indoor Outdoor

What is the pulse rate of the attached flowmeter?

1000 pulses / Litre Other: _____

Do you already know the Batch Controller model needed?

- ME3000
 ME995-1 ME995-1A
 ME995-2 ME995-2H ME995-2C ME995-2CH
 ME995-3 ME995-3H ME995-3K ME995-3KH
 ME995-4
 ME995-6
 ME995-7 ME995-7D ME995-7DS ME999

Other requirements:

*** Where is the Batch Controller to be delivered?** for freight estimate

_____ city state country

*** Your Name:** _____

*** Company:** _____

Fax: () _____

*** phone:** () _____

email: _____

Consult ManuFlo for additional process control measurement instrumentation solutions not listed in this catalog