PRODUCT UPDATE BULLETIN

November 2018

To our valued customers,

In this pictorial bullet point bulletin are the latest developments from ManuFlo.

- New MES20-N compact body option along with new DSP digital Smart Pulse-head with chamber parts pictorial.
- UIC – universal interface cards –updated troubleshoot guide.
- ME995/3000 – extra wire protection covers / labelling.
- SHB/DHB/HB2500 extra labelling.

Other improvements;

- view August-2018 Catalogue with new products and Technical/training troubleshoot guides.
- Continued R&D program

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MES20– Introducing Upgraded Flowmeters MES20N

Specification Parameter	Original Models MES20 (since 1995)	New Models MES20N (from May 2018)	Difference	Inter-changeable MES20 ⇔ MES20N
Insertion length end to end	191 mm	191 mm	None	Yes
Connection thread	¾" BSP	¾" BSP	None	Yes
Pulse Head & resolution **LCD head**	Transistor, 1000 PPL Reset Total &/or Flow Rate	**DIGITAL-DSP**, 1000 PPL Reset Total &/or Flow Rate	None None	Yes (same pulse head) Yes (same LCD head)
Performance (Full range)	Acc. +/- 1.5%, Rate:+/- 0.2%	Acc. +/- 1.5%, Rate +/- 0.2%	None	Yes
Measuring chamber type	Nutating disc with shrouded mag.	Nutating disc with shrouded mag. Improved chamber	Slightly lower dome height but with **Faster Flowrates**	No
Meter body / base plate / base sealer gasket ring	Gun metal / nylon / NBR rubber	Gun metal / nylon / NBR rubber	Slightly lower height size, lighter weight.	(YES – for some parts)

New: Digital Smart Pulse "DSP" technology (vibration free) Pulsehead from Sept-2018 as standard
(Added features: Optional bi-directional pulse, forward/reverse pulse, pulse division programmable option e.g. 100ppl).

F.A.Q.

Q) The existing MES20 flowmeters work well, why are ManuFlo introducing a new model?
A) The Meter body is lighter weight & chamber section of the flowmeter has been upgraded. Model 'N' is a compact improved design with better manufacturing uniformity for mass production with lower cost spare parts.

Q) Can a current model MES20 be swapped out in their entirety for the new 'N' models?
A) Yes this is a like for like exchange, with same threaded connections & insert length so no pipe mods. needed.

Q) What if you want to swap a pulse head or LCD head from the new MES20N to an old MES20/LCD & vice versa?
A) No problem exactly the same pulse head & LCD head is used in the N versions with turn/snap fit coupling.
B) For testing the pulse-head you can no-longer "shake" it to generate pulses (old model), you need a Magnet to activate the internal DSP sensors. (Instead of shaking pulsehead, just approach the underside of the pulse head with pen/stick magnet {or chamber magnet} and rotate, this will generate pulses for testing).


Pulse head

TESTING


Magnet

Q) Can I use any of the internal measuring chambers from the new 'N' models in an MES20 & vice versa?
A) Generally No, however we will be keeping metering section spares of the existing MES20 for atleast the next 10 yrs.
(Note: Base plate, base and chamber gaskets, chamber base, shutter and roller, S/S screws interchangeable).

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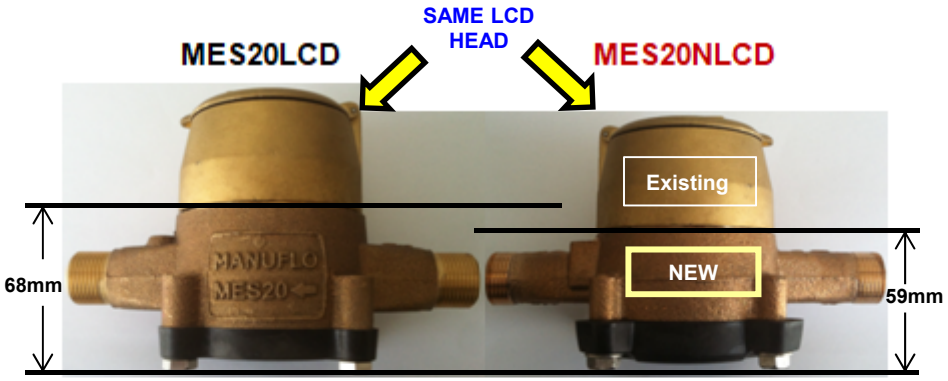
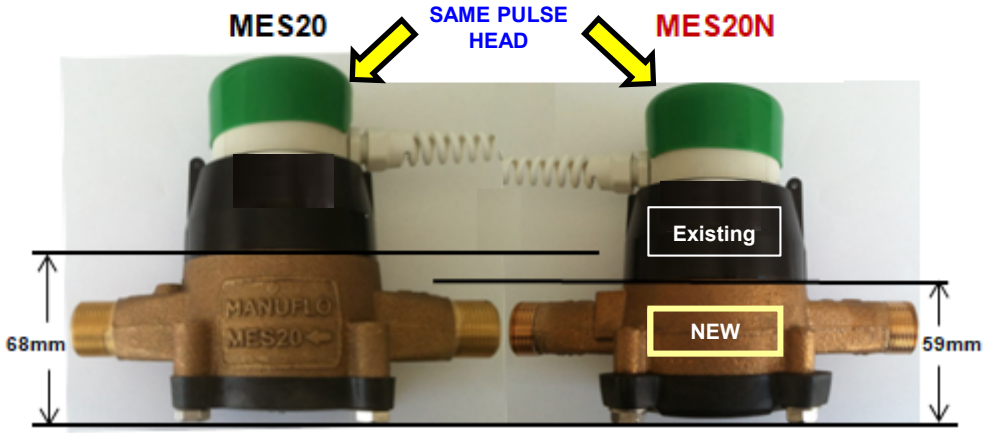
MES20 flowmeters – Introducing **new** improved model **MES20N-(DSP)**

- with new "Digital Smart pulse"





SAME PHYSICAL INSERTION LENGTH

Existing NEW

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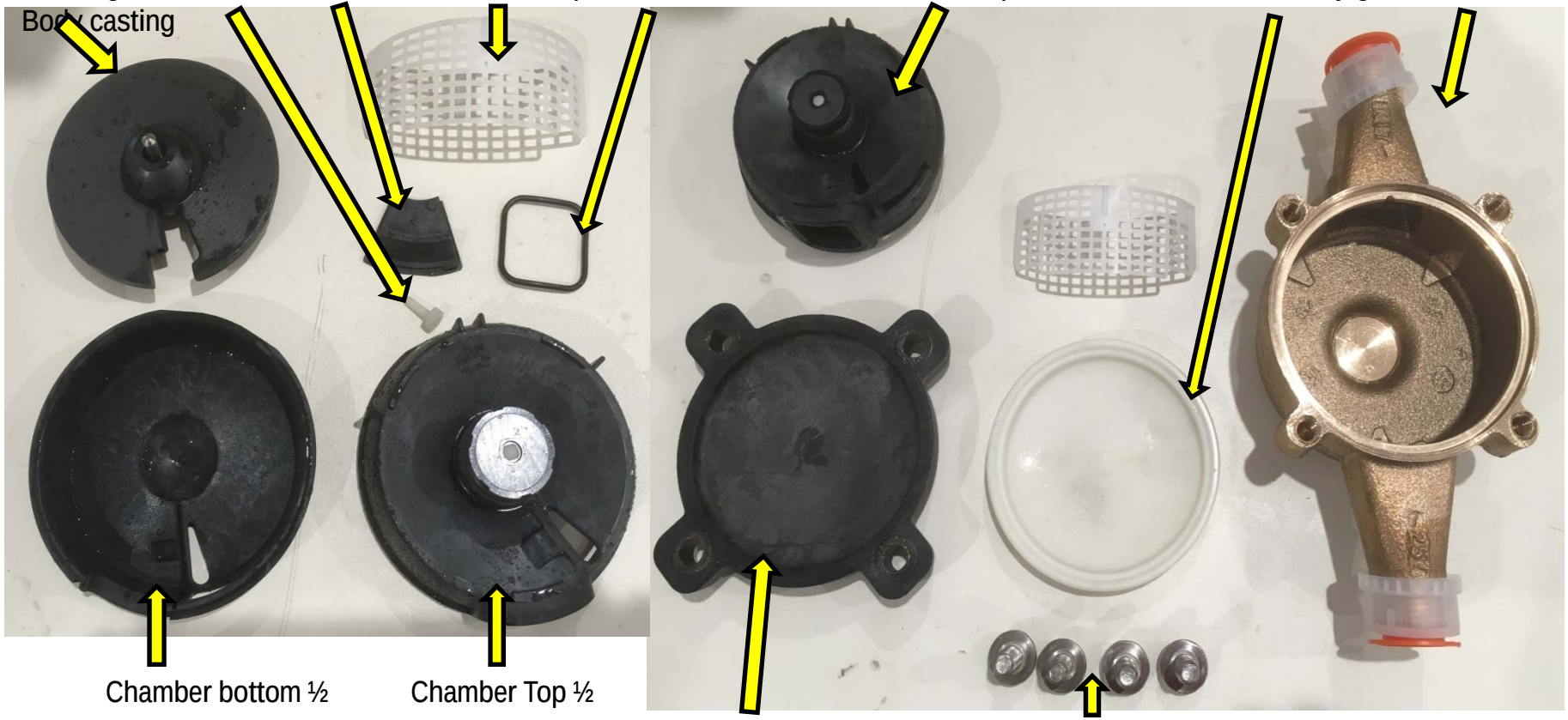
MES20 flowmeters – Introducing **new** model **MES20N - parts disected**

Nutating disc., Roller, Shutter Plate , Filter Spacer, Chamber Gasket, 20-5N complete chamber, Bottom body gasket, Body casting



Chamber bottom ½ Chamber Top ½

Base Plate, S/S310 /316 screws x4

20-5N CHAMBER PARTS **MES20-N dis-assembled**

Low Doserate issues Q&A (e.g. AEA)

- What are the specific problems experienced ?**Accuracy when dosing 20 Mls Per Cubic Mtr !** Provide some stats ? **Asked for 2.4 on the Controller , run anywhere between 2.6 > 3.6 on a regular basis .**
- Does this mean, you dial up 2.4m3 and the display reads 2.4 but you get 2.6 to 3.6 in volume in your jug. Or the display runs up and over to 2.6-3.6 and the volume is the same collected as is shown on the display ?
- Confirming ..it sounds the display overshoots right ? and the overshoot display corresponds to volume. ??
- The overshoot should be consistently the same. If its after performing below tasks and you achieve a consistant overrun…then you set the 'Preact" overshoot volume deduct setting at rea of unit. (fr page.18).
- Is it a pulse fail issue when using ME995-2C batch controllers ? **Never a pulse fail , always an over run issue . Ok so choke the gate down so the pump runs at a slower flowrate. Less overflow. If you choke it a lot the ME995 might pulsefail… the you need to fit a capacitor to reduce sensitivity (page.24 of training manual).**
- Is it an over-run issue with liquid ? i.e. **Yes O/Dose of AEA Air (soapy liquid) which is critical to get right** . agreed
- Is it an accuracy issue ? **Yes !**
- Problems when using the ME2008 **? Not using a ME2000 , using a 995 . Ok**
- What are your minimum batch quantities you are trying to achieve ? **They are asking to achieve 20 Milliliters Per Cubic Mtr of Concrete . So 20 Mls is the smallest amount asked for. We are going to downsize the hose from the pump to the flowmeter to 12 mm also to see if this helps . Yes the complete hoseline from flowmeter onward should be ½". There should be a gate valve to restrict flowrate between pump and flowmeter inlet as well. If it's a PD pumps then you should fit a re-circulation line to take out the pressure and causing overshoot (see page.2). The same may apply to centrifuge pumps, choking pumps under pressure can stuff the seals… hence recirc line.**

- The MES20 when restricted is still capable of measuring precisely even at low flows down to 1.5 LPM … 25 mls/sec. @1.5% accuracy. (lowest 0.8 LPM … 13mls/sec. @5%)

- NOTE: Backflow issues… unit stops… but then slowing counts up after batch complete. Could be a faulty non-return valve… as unit will count as liquid flows back.
- Failing all this we could offer a small bore magflow e.g. AMM15, MM15

Interface Cards - UIC – Pulse Trouble Shoot

- **If there is no pulse output or it is erratic from the UIC**

1. Check that the HTU settings on the UIC card are not set to H=0 T=0 U=0, and are correct for your application.
2. Turn off power to the UIC, NOW SET a VALUE e.g. HTU=100, then turn the power on again.
3. Run some fluid through the flowmeter (or simulate flow by inputting pulses to the UIC card).
4. Observe if the UIC's output LED blinks at the rate expected for the divided output pulse rate.
5. If the problem still exists, repeat steps 1 to 4 (2-3 times) until the UIC card autocorrects itself.
6. If the UIC does not autocorrect, then return the suspect UIC card to ManuFlo for further checking or repair.

Batch Controller/Housing Box: 240vac re-labelling

ME188/995/999/3000 WEIDMULLER PLUG 240vac Upgrade

The beauty of the ManuFlo pluggable batch controller modular systems now in use for over 40 years (since 1978) is that any faulty/malfunctioning batch controller can be easily removed/swapped, via its STV Weidmuller pluggable connector system and replaced with a another ME-series batch controller. They are a very safe/sturdy plug set for 240vac wiring. (Without having to removing wires or having to call an electrician).

This rapid replacement ability has allowed countless times to troubleshoot by swapping with another ME995 controller, where the batcher needs to complete a load of concrete so that the concrete trucks can deliver to construction sites on time.

This is increasingly important in country towns or remote sites, where rapid problem solving is required.

(There is available a further protection cover that's clips on top of the plug; Part # WC)

The procedure to swap controllers is to simply remove the two front screws, pull out the controller and then grabbing the Weidmuller plug at opposing ends pry apart the mating plugs. (Never pull apart plugs by the wires).

Due to the nature of the design of the plug, the chance of ever receiving an electric shock from frayed wires etc, if following this procedure is avoided. It's been common procedure for over 40 years, without any incidents.

But with updated OH&S in industry sites and procedures... we suggest the following upgrade option to the ManuFlo equipment;

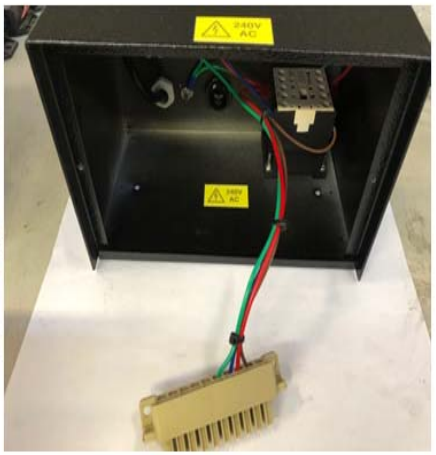
WE RECOMMEND:-

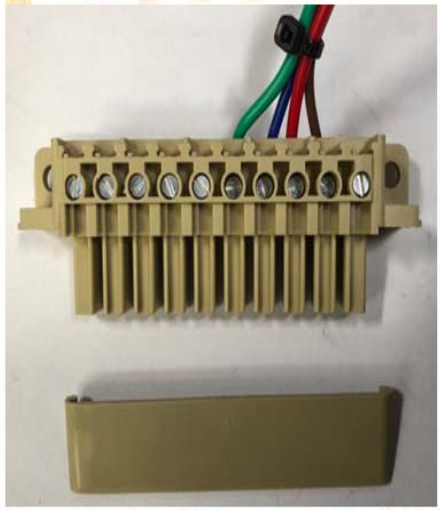
1/ Sticking 240vac labels inside/outside the housing boxes and on the top of the batch controllers.

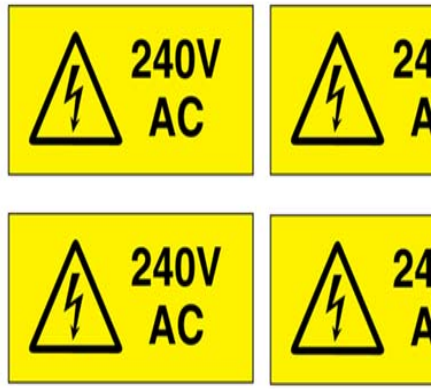
2/ Upgrading the plug with the clip on cover (Part# WC). –as shown below diagrams.

We must bear in mind we have equipment out there still in use over 30 years old that predates a lot of today's current OH&S procedures.

So as a consequence the above procedures are recommended to satisfy any OH&S concerns.







Extra protection clip-on covers are available. (Part# WC)