

Assembly Instruction

Measuring Capsule-Flow Metering Unit MD1

Heat Meter Minocal® Q_n 0,6 – 2,5

(Installation in horizontal pipes and vertical down/rising pipes)

1. Application / Function

The flow metering unit (VMT) Minocal® MD1 is preferably intended for the heat meter processing unit Minocal® WR1-1. It is available for the installation in the Minol single pipe connectors (EAS) Minocal® and also as a special model for the EAS 2"-systems .

A horizontal and vertical installation is allowed. An installation "over-head" is not allowed.

2. Remark for the installation

We recommend to protect the heat meter from contamination with filters, as the heating systems can not be completely flushed of remains.

The installation of the flow metering unit VMT should only be carried out by skilled workers.

Shut-off devices in front of and behind the flow metering unit should be provided.

Install the VMT always in return flow (cooler lane). If it is necessary to install the VMT in forward flow due to lack of place or other reasons please order processing units with option „installation in forward flow“!

Install the VMT at the deepest point of the pipe so that there will be no air cushions.

Don't use extension pieces or flow direction converters.

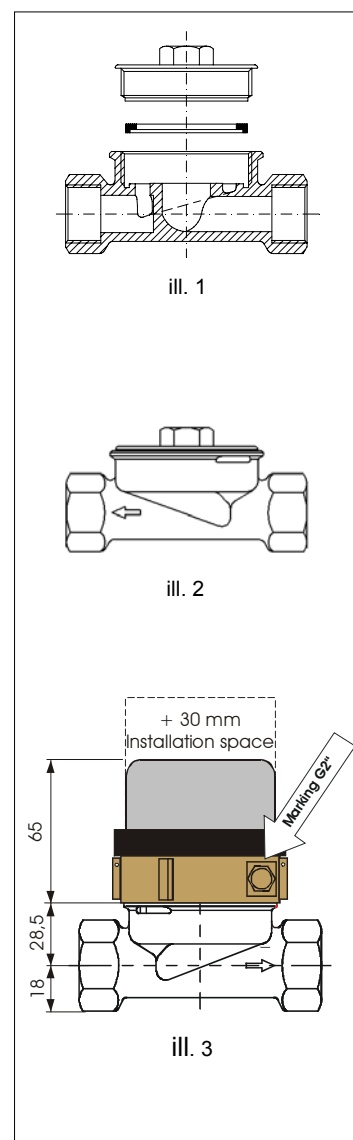
Pay attention to the installation lengths of the VMT. Keep 3 cm space for the mounting (see ill. 3).

Centre distance between two VMT at least 135 mm. Keep a 20 cm minimum distance between the VMT and electromagnetic sources of interferences such as switches, regulators, pumps etc.

The standard cable length of the impulse cable is 3m. Don't break, lengthen or cut the cable. A cable length of 10m is available against extra charge.

3. First installation of the flow metering unit

- 3.1. Compare the connection thread of the VMT and single pipe connector (EAS). The model for EAS 2"-systems has got a special mark (ill. 3).
- 3.2. Flush the pipe thoroughly.
- 3.3. Close the shut-off devices.
- 3.4. Open the cover of the EAS with a socket wrench SW 22. Take out the cover and the L-sealing ring (ill. 1). Clean the sealing surface.
- 3.5. Unpack the VMT and check if it is in a good condition.
- 3.6. Insert the attached new L-sealing ring in the intended groove.



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- 3.7. Insert the VMT into the EAS. Find the beginning of the thread by shortly turning it with slight pressure anti-clockwise and screw the VMT with the socket wrench clockwise.
- 3.8. Open the shut-off devices carefully. Check for leaks and control the function during heating operation. Seal the VMT on the EAS.

4. Exchange of the flow metering unit



- 4.1. Compare the connection thread of VMT and EAS. The model for EAS 2"-systems has got a special mark (ill. 3).
- 4.2. Close shut-off devices.
- 4.3. Disconnect the impulse cable of the VMT from the processing unit.
- 4.4. Screw the measuring unit out of the EAS with a socket wrench.
- 4.5. Remove the L-sealing ring of the EAS and clean the sealing surfaces of the EAS .
- 4.6. Install the new measuring unit according to points 3.1 - 3.8.

5. Connection of the VMT at the processing unit

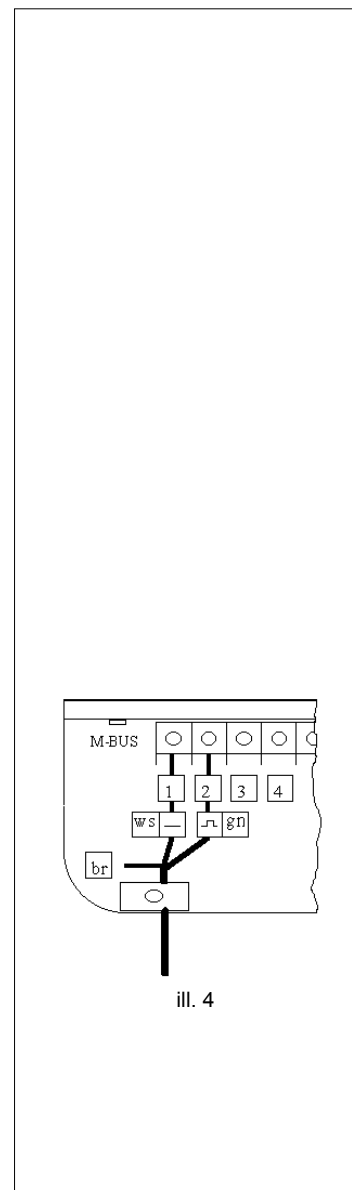
Impulse validity of the processing unit and the flow metering unit have to be identical (1 litre per impulse).

Keep a minimum distance of the impulse cable of 5 cm to other distribution mains (for example power).

The flow metering units are supplied with a three-pole cable connection. The accumulation of the leads are marked with a label on the impulse cable. For the pulse output is valid: impulse validity 1 l/imp, $U_{\max} = 20 \text{ V}$, $I_{\max} = 1 \text{ mA}$, minimal pulse width 20 ms.

- Mass potential  (white) on clamp 1
- impulse  (green) on clamp 2
- Don't strip and don't clamp the brown cable

For contact make sure that the clamp screws are on the wire and not on the insulation.



After finishing the installation: Check all connection parts for leaks!