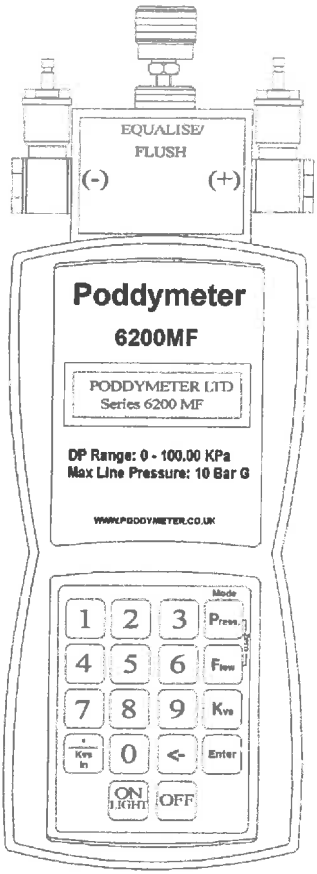
Poddymeter

Series 6200MF Hydronic Manometer



Issue 1

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Introduction

The 6200MF is an electronic hand held instrument for the measurement of flows and water differential pressures on double regulating valves and other D.P. devices where the KVs factor is known.

The instrument displays differential and line pressures in KPa, and flows in l/Sec with an appropriate Kvs factor programmed in.

The 6200MF is housed in a rugged case with protective rubber boot and seal. It is supplied as standard in a carry case with a clip on hanging strap, a pair of Binder adaptors, valve and tubing set, and calibration certificate.

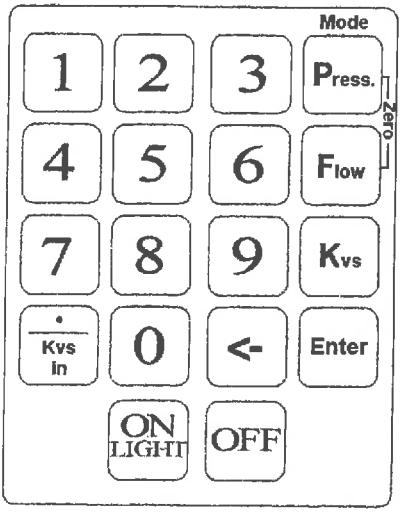
Specification

- **Range :** 0 – 100.00 KPa differential
- 0 - 1000 KPa line pressure
- **Max Line & single port overpressure :** 10 BAR G
- **Accuracy:** 0 – 20 KPa : +/- 0.1 KPa

  Over 20 KPa : +/- 0.2 KPa or 0.5% whichever is greater

- **Battery Life :** 100 hours approx
- **Transducer wetted parts :** 316 stainless steel
- **Size & weight :** 280 x 110 x 50 mm ; 0.9 KG
- **Calibration period :** 12 Months
- **Warranted for 12 months from date of purchase. Excludes undue wear and tear, physical damage and over pressurisation.**

Keyboard Layout & Function



Key	Function
On/Light	Powers up the unit, and backlight. Relights backlight if unit still on.
Off	Shuts down the unit, clearing KVs factor. Light remains on until capacitor is drained
Press.	Displays line pressure and differential pressure.If pressure is below **0.75 KPa** Will zero the unit.
Flow	Displays flow in L/Sec and differential pressure . If pressure is below **1.0 KPa** Will zero the flow.
Kvs in	Inputs Kvs value in range 0.5 - 2500
Kvs	Displays the current inputted Kvs value & DP
<-	Back/delete

Operating Instructions

1) Connect the flexible limbs to the instrument ports with the valve at the instrument end. Conventionally red for positive and blue for negative. Open the equalising/flushing valve on the top manifold, close the isolating valves, and connect to the appropriate positive & negative ports on the D.P device to be measured.
2) Turn on the instrument and open the isolating valves, allowing all the air to be flushed from the limbs. (Failure to do so may give false readings due to static head differences, especially at low D.P.s.)
3) Close the tube isolating valves and press 'press'/zero button to obtain exact zero.
4) Close the equalising/flushing valve, and reopen the isolating valves. The unit will now be displaying correct differential and line pressure.
5) For flow readings use 'Kvs in' button, input the Kvs value and press Enter. Then press 'Flow' button. Display will now show flow in L/Sec and differential pressure in KPa. Press Kvs button at any time to display the current inputted value.
6) Use the 'Flow' and 'Press' buttons to toggle between flow and pressure readings. Note: Below 0.75 KPa 'press' and 1 KPa 'flow' this will zero the instrument. IMPORTANT – if any pressure above 10 Bar is encountered, the display will show: 'over pressure reduce now'. If this occurs, shut the tube isolating valves and disconnect immediately.

Note – When using the keypad, ensure the buttons are positively depressed and held for a second to ensure recognition. (This is to avoid accidental input)

Disconnection

When readings are complete, open the equalising/flushing valve, close the tube isolating valves, and remove adaptors from the D.P. source.
Drain out the excess fluid in the manifold before storage
Turn off the instrument to conserve battery life.(Note – this will clear stored Kvs value).

Calibration

The instrument is supplied with a calibration certificate against a UKAS certified master gauge.
We would recommend the instrument is returned every 12 months for calibration & recertifying.
Flow calculation using KVs valve factor
(obtainable from valve manufactures charts & tables)
To calculate flow from KPa D.P. reading, the following formula is used in the instruments internal programming:
Flow (L/Sec) = [KVs x √D.P. (KPa)] ÷ 36
Conversely
D.P. (KPa) = (36 x Flow (L/Sec) ÷ KVs)^2

Transducer limitations

The 6200MF uses a 316 stainless steel twin transducer system, each being able to withstand up to 10 Bar pressure with no damage. This will mean that even if all the pressure of the system is applied to one side only, providing 10 bar is not exceeded, no damage will result. Should the pressure exceed this value, the display will show: 'overpressure reduce now'

The transducers in the series 6200MF are fully temperature compensated for the temperature range 0 – 50 Deg C. No harm will occur within the range -20 to +120 Deg C, but accuracy will be impaired.

The transducer arrangement has been designed such that if damage or failure should occur, replacement and recalibration costs are reduced to a minimum.

Battery replacement.

The instrument is supplied with 4 x AA batteries, with an approx. life of 100 hours.
When the batteries require replacement, the display will show ' batt lo'.
To access the battery compartment, the rubber shroud needs to be slightly pulled to one side on the rear of the instrument for access to the cover retaining screws.
Once replaced, reaffix battery cover, ensuring rubber shroud is in correct position.

Precautions/Trouble shooting

Avoid any moisture ingress. The instrument casing is protected with seals and gaskets, but water should be avoided where practical as it may enter and cause damage.

There is a level of electronic damping in the instrument to cope with the normal fluctuation that occurs in most situations, so allow a few seconds for readings to stabilise (including zero setting).
If unit reads '-1' or will not zero even with tubes disconnected, return to Poddymeter for examination/repair

Disposal

At the end of the instruments life, please dispose via electrical recycling, or return to Poddymeter Ltd, and we will arrange disposal.

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