

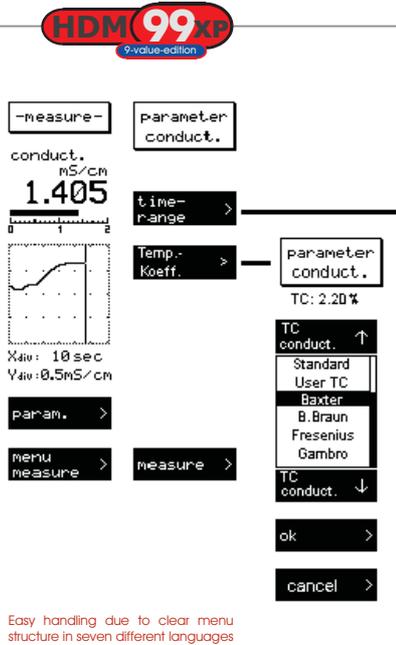


Dialysis Reference Meters

Performance comes from innovation

HDM99XP

The gold standard
The all-in-one tool

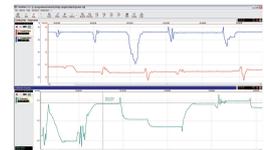


Measuring Channels

- Conductivity
- Temperature
- Pressure
- pH
- Flow
- Voltage
- Frequency
- Time Period
- Events

Key Features

- **Nine Measuring Channels**
The all in one tool
- Can be used with any brand of dialysis machine
- Selectable temperature coefficient (By dialysis machine manufacturer) for high accuracy conductivity measurement
- Allows conductivity measurement of RO water
- Allows field calibration
- Graphical display of measurements
- Voltage measurement with oscilloscope function
- USB and RS232 Computer Interface for data acquisition



- Canada Medical Device license
- FDA 510(k) approval

Dialysis requires reliability and accuracy

Hemodialysis calls for high reliability and extreme accuracy. The HDM99XP Reference Meter allows highly accurate and reliable measurement of conductivity, temperature, pressure, pH, flow, voltage, frequency, time period and events.

Conductivity is measured over four measuring ranges from 0.00 to 200 mS/cm. Consequently, a full array of commonly used measurements may be taken beginning with the conductivity of the RO water and ending with the total conductivity of the dialysate concentrate.

The device has been developed by specialists and integrates the know-how and experience of 30 years in the design of reference meters for dialysis. Intelligent product details along with innovative technology deliver great value.

Advanced technology

Advanced processor technology combined with highly developed software results in a completely new type of measuring instrument with special features on a level of accuracy not achievable with other units.

The HDM99XP stands out from all the other instruments on the market because of its large graphic display. The displayed text is user-selectable in English, French, Spanish, Italian, Portuguese, Dutch or German. There are different ways, including plotting, to display the measurements. The progress of all measurement parameters can be thus observed for the purpose of fault diagnosis. There is an oscilloscope function built into the plotting display for voltage.

The device is truly an all-in-one tool for the busy dialysis technician.

Quality

The HDM99XP is produced under a certified quality management system (ISO 13485:2003). We offer an annual calibration service with certification in accordance with ISO 17025.



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Specifications

Conductivity

Range 0 ... 200 mS/cm
 Accuracy 0 ... 199.9 uS/cm +/- 0.6 uS/cm
 200 ... 1999 uS/cm +/- 6 uS/cm
 2 ... 19.99 mS/cm +/- 0.03 mS/cm
 20 ... 30 mS/cm +/- 0.06 mS/cm
 > 30 mS/cm +/- 1% from URV
 Temperature coefficient selectable.

Temperature

Range 0 ... 100 °C
 Resolution 0.01 °C
 Accuracy 25 ... 40°C +/- 0.05 °C
 Otherwise +/- 0.1 °C

Pressure

Range -700 ... 1900 mmHg (2.5 Bar)
 Units mmHg, kPa, atm, psi or bar - selectable
 Resolution 0.1 mmHg
 Accuracy 0 ... 300 mmHg +/- 0.5 mmHg
 Otherwise +/- 1 mmHg

pH

Range pH 0 ... 14
 Resolution pH 0.01
 Accuracy pH +/- 0.02

Flow

Range 100 ... 2000 ml/min
 Resolution 1 ml/min
 Accuracy 100 ... 500 ml/min +/- 1.0% of reading
 Otherwise +/- 3.0% of reading

Voltage

Range +/- 40 V DC / 28 VAC
 Frequency up to 3 kHz
 Resolution 0.01 V
 Accuracy +/- 0.125% from full scale value

Frequency

Range 250 kHz
 Input voltage 5...24 V
 Resolution 1 Hz
 Accuracy +/- 0.2% of reading

Period Duration

Range up to 1000 sec
 Input voltage 5...24 V
 Resolution 1 msec
 Accuracy +/- 0.2% of reading

Pulse/Event

Range 99999
 Input voltage 5...24 V

Interface USB and RS232 - electrically insulated

Power supply

Internal rechargeable NiMH battery 7.2V / 4Ah
 External medical grade charger
 Input Voltage 90 ... 264 V / 47... 63 Hz
 Output Voltage 12 V DC, 1000 mA

Dimensions & Weight

270 x 120 x 50 mm - 10.6" x 4" x 1.8"
 1.1 Kg - 2.4 lbs including probe

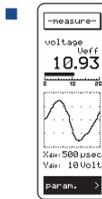
The #1 multifunction conductivity probe

- Modern 4-pole electrode in carbon plastic technology for conductivity measurement. Years of experience have proven this design and construction absolutely linear and stable. The Electrode may be used either as flow through or dip electrode. May also be used for testing RO water and dialysate concentrate. The pressure connector has an automatic closure. This enables the measurement of dialysate pressure without any additional adapters.



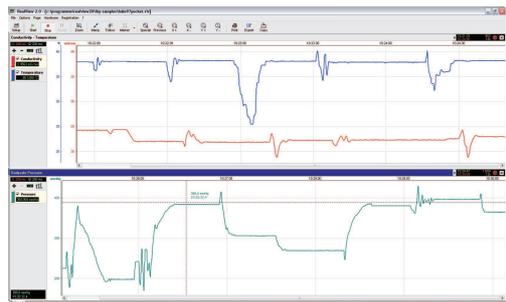
Helpful measurement options

- High accuracy flow measurement for calibration of dialysate, blood pump flow and RO output flow.



Oscilloscope function allows to show alternating signal typically found in dialysis machines

- Due to the extreme accuracy of the pressure measurement the HDM99XP allows to calibrate blood pressure measurement devices in accordance with DIN EN 1060.
- Event counting allows for example to count how often a valve is switching
- The HDM99XP meter has an USB- and RS232 interface for easy connection to a personal computer. The IBPView software allows the user to collect and visualize data taken from measurements with the HDM99XP.



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