HD02 Hemodialysis Monitor

Simple, Immediate, Access Patency, Dialysis Adequacy & Cardiac Function Tests Performed during Hemodialysis

Mobile patient monitoring systems
HD02 Monitor
Displays ultrasound signal intensity and delivered blood flow
- Ultrasound Flow/Indicator Dilution Technology
- New streamline design with mounted sensor
HD02 Software (loaded on supplied computer)
- Captures, analyzes and displays ultrasonic dilution curves
- Upon saline release, calculates selected parameter, stores patient data and trends measurements

H4E Flow/Dilution Sensors
Paired sensors pass ultrasound waves through dialysis tubing to measure blood flow and other parameters
- Sensors clip onto tubing connected to a patient’s blood lines.
- Simple saline infusion into the dialysis circuit or direct release from saline bag

HD02 Flow-QC® Features
- On-screen display of patient history during measurements
- Faster measurements
- Integrated tubing selection library

<table>
<thead>
<tr>
<th>General Features</th>
<th>HD01 Plus</th>
<th>HD02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Flow</td>
<td>included</td>
<td>included</td>
</tr>
<tr>
<td>Delivered Blood Flow</td>
<td>included</td>
<td>included</td>
</tr>
<tr>
<td>Recirculation</td>
<td>included</td>
<td>included</td>
</tr>
<tr>
<td>Cardiac Output</td>
<td>included</td>
<td>included</td>
</tr>
<tr>
<td>Patient Trace</td>
<td>added feature</td>
<td>Integrated with on-screen patient history during measurements</td>
</tr>
<tr>
<td>Data Recording</td>
<td>Computerized database</td>
<td></td>
</tr>
</tbody>
</table>

HD02 Flow-QC System: HD02 with software loaded on laptop

H4E Sensors

THE MEASURE OF BETTER RESULTS.
HD02 Specifications

SYSTEM COMPONENTS
HD02 Hemodialysis system consists of a bench-top electronic flow detection unit, clip-on flow sensors for dialysis tubing, a laptop computer, and Flow-QC® software.

SYSTEM FUNCTIONS
• Vascular Access Flow
• Cardiac Output
• Vascular Access Recirculation
• Delivered Blood (pump) Flow
• Patient Trace - chronological history of a patient’s access flow
• Analysis Assist: enhanced data analysis & inadvertent line reversal detection

PHYSICAL SPECIFICATIONS
• Weight/Size
  10 lb. (4.5 Kg)
  11” (27.8 cm) wide x 4”
  (9.12 cm) high x 14”
  (35.4 cm) deep
• Status Display: Character liquid crystal display for signal intensity and delivered blood flow
• Bloodline Flow Display
  5 character LED
• H4E Sensor Connector
  15 pin, high density D-Sub connector

H4E ULTRASONIC SENSOR SPECIFICATIONS
• Frequency of Operation: 3.6 MHz
• Mode of Operation: Transit-time burst excitation, 1.6% duty factor

• Ultrasound Output Level
  Factory-set, no interactive system features. Settings use “ALARA” principles (As Low As Reasonably Achievable) and are more than 30dB below FDA “pre-amendment levels,” recognized as acceptable USA insonification limits.

RECOMMENDED RECALIBRATION
Annual, for Monitor and H4E Sensor

ELECTRICAL SPECIFICATIONS
Power
AC Input: nominal: 100 - 240 VAC (±10% 50 - 60 Hz), 40 watts
Fuses: Two, 1.5A / 250V, 5 x 20 mm
Connector: International 3 conductor type IEC 320
Flow Monitor
Average Flow: BNC connector
  Output impedance 500 Ω ± 5V; filtered at 0.1Hz; 1V = 400 mL/min
  Pulsatile Flow: BNC connector Output
  impedance 500 Ω ± 5V; filtered at 5Hz;
  1V = 400 mL/min
• USB Output: 6-pin connector, vertical mount, standard USB specification
• Electrical Isolation: Hemodialysis Monitor complies with USA standards for medical and dental equipment (UL544) and European standards for medical and ultrasonic apparatus (DIN IEC 601-1, VDE 0750 -1/5.82, IEC 62D Sec. 31).
  Input leakage current < 50 µA; Patient leakage current < 10 µA; Patient Isolation > 2500 V, double insulated sensors.

PC-COMPATIBLE SOFTWARE
supplied with laptop computer

LAPTOP REQUIREMENTS (minimum)
• Windows XP
• 256 MB RAM
• ≥ 2G Pentium or Pentium-compatible processor
• ≥ 20GB hard drive
• 56KV90 modem
• built-in USB serial port

TO ORDER
Use the following Part Numbers
Monitor: HD02
Monitor for Flow-QC® tubing only:
  HD02-E
Ultrasonic Sensors: H4E
Tubing sets (box of 40): H4T1010-40
Rolling Stand: AOS1002

Transonic Systems Inc. is a global manufacturer of innovative biomedical measurement equipment. Founded in 1983, Transonic sells “gold standard” transit-time ultrasound flowmeters and monitors for surgical, hemodialysis, pediatric critical care, perfusion, interventional radiology and research applications. In addition, Transonic provides pressure and pressure volume systems, laser Doppler flowmeters and telemetry systems.

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