
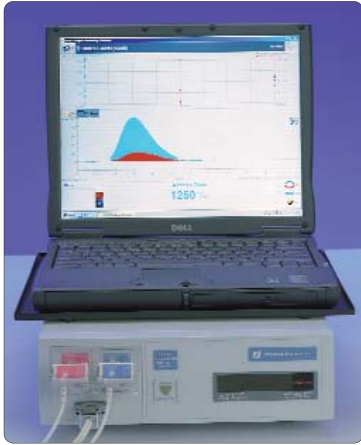


Flow-QC® Hemodialysis Monitor



Hemodialysis Products

C2. HD02 Flow-QC® Hemodialysis Monitor

| CAT # | DESCRIPTION |
|-------------------------|--|
| HD02 | <p>Hemodialysis Monitor with HD02 Monitor Software. Requires H4E Flow/Dilution Sensors and H4E Sensors laptop computer. Measures Vascular Access Flow, Access Recirculation, Delivered Blood Flow, and Cardiac Output.* Includes 1 year full service warranty.</p> <p><i>* Flow-QC® tubing segment and syringe warmer required for Cardiac Output Measurement</i></p> |
| |   |
| | <p>HD02 Monitor with Computer</p> |
| HD02-E | <p>Hemodialysis Monitor: pre-calibrated exclusively for Flow-QC® tubing sets. <i>(Exclusive availability in Europe).</i></p> |
| H4E | <p>Flow/Dilution Sensors for use with HD02 and HD02-E Monitors. Includes 1 year full service warranty.</p> |
| Computer | <p>Laptop preloaded with HD02 software.</p> |
| ADT1010-40 | <p>Flow-QC® Tubing Sets Box of 40 tubing sets: Required for Cardiac Output measurements in USA, Canada, Europe.</p> |
| AOS1002 | <p>Rolling Stand for convenient HD02 transport between patients.</p> |
| AOS03 | <p>Rolling Trolley for convenient HD02 transport between patients. <i>(Exclusive availability in Europe)</i></p> |
| ZB1000 | <p>Travel Bag with wheels, retractable handle to store or transport HD02 systems.</p> |
| On-site Training | <p>Initial installation of Transonic Flow-QC Hemodialysis Monitors includes one on-site, in-service training with follow-up phone assistance to assure proficient operation of the system. Engineering assistance to further connect the monitor's data to any other data base is available at an extra fee. Additional in-service training visits may be contracted at an additional fee.</p> |



C2. HD02 Flow-QC® Hemodialysis Monitor cont.

Warranty Transonic Systems warrants for a period of one (1) year from date of shipment that the Flow-QC® Monitor and Flowsensors will remain free from defects resulting from faulty material or workmanship. Transonic Systems further warrants that the Flow Monitor and Flowsensor will stay in calibration during its first year of use, if used and stored according to standard clinical apparatus practices. Transonic Systems warrants that, upon delivery, the computer will run the supplied Flow QC® Hemodialysis Monitor software.

Post Warranty Service Programs

Purchased with the equipment, the post-warranty service programs extend the normal one-year warranty, as follows:

- **Calibration:** includes Certificate of Calibration demonstrating NIST traceability. Certificate also reports the status upon receipt (in or out of tolerance)
 - annual calibration of flowsensors
 - annual calibration of flow monitor
- **Repair:** Any repair needed that falls under the scope of the original warranty (see below)
- **Technical Support:** Available by phone or email
- **Software Updates:** Minor software revisions available via website as they are issued.

Return shipping of equipment to Transonic Systems Inc. is the customer's responsibility. Return shipping to the customer is paid by Transonic Systems Inc.

AORCS1 One (1) Year Full Service Warranty Extension

AORCS3 Three (3) Year Full Service Warranty Extension



HD02 Monitor on rolling stand (AOS1002)



HD02 Monitor on trolley (AOS03)

Flow-QC® Hemodialysis Monitor



C2. HD02 System (Specifications) cont.

◆ SYSTEM COMPONENTS

The Transonic Hemodialysis Monitor package 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 SYSTEM 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
- ≥ 24 x CD Rom
- 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 |