



Trasonic
Flow-QC® Monitor

HD02 Specifications

**GOLD STANDARD
PATIENT CARE**



HD02 Flow-QC Monitor & Sensors

- Access Patency Surveillance
- Dialysis Adequacy
- Cardiac Output Tests
- Immediate Results
- Performed during Routine Dialysis

Portable Patient Monitoring System

HD02 Monitor

Displays ultrasound signal intensity and delivered blood flow

- Ultrasound Flow/Indicator Dilution Technology
- Streamline design with mounted sensor holder

HD02 Software

Captures, analyzes and displays ultrasonic dilution curves. Upon saline release, calculates selected parameter, stores patient data and generates chronological trending.

H4E Flow/Dilution Sensors

Pair of 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

KEY Features

- **Gold Standard Technology**
HD02 is the access management system to which all other systems are compared.
- **Superior Acoustic Accuracy**
Ultrasound dilution sensors are calibrated for all manufacturers' blood lines.
- **Intuitive Software**
Easy-to-use software guides you through the measurement protocols.
- **Historical Patient Trending**
On-screen history provides information to dialysis staffs to assist in treatment recommendations.
- **Documentation on Interventions**
Capable of documenting intervention type, access location and intervention date.
- **Exceptional Database Management**
System automatically keeps track of all measurement results and user-defined information.
- **Quick Database Searches**
Identify patients on alert list or by clinical criteria.



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SYSTEM COMPONENTS

The Trasonic® Hemodialysis Monitor package consists of a bench-top electronic flow detection unit, flow/dilution sensors and PC-compatible HD02 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 "pre-amendment levels," recognized as acceptable USA insonification limits.

RECOMMENDED SYSTEM CALIBRATION

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 ± 5.0 volts range
Output impedance 500 Ω
Filtered at .1Hz; 1V = 400 ml/min
Pulsatile Flow: BNC connector ± 5.0 volts range
Output impedance 500 Ω
Filtered at 5Hz; 1V = 400 ml/min
- **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 HD02 SOFTWARE

MINIMUM SYSTEM REQUIREMENTS

- Windows XP
- 256 MB RAM
- ≥ 2 GHz Pentium or Pentium-compatible processor
- ≥ 20GB hard drive
- ≥ 24 x CD Rom
- 56KV90 modem
- built-in USB port

TO ORDER

USE THE FOLLOWING PART NUMBERS

| | |
|--------------------------|------------|
| Monitor: | HD02 |
| Ultrasonic Sensors: | H4E |
| Tubing sets (box of 40): | ADT1010-40 |
| Rolling Stand: | AOS1002 |

