

REVOLUTIONIZING Bleeding Management with Point-of-Care Viscoelastic Testing



Quantra[®]
QPlus[®] System

Quantra Hemostasis Analyzer
QPlus Cartridge

 **HEMOSONICS**



A Breakthrough in Point-Of-Care Efficiency

Improving patient outcomes and facilitating goal-directed therapy is the primary focus of any diagnostic system. But the new Quantra system is breaking new ground in **point-of-care viscoelastic testing (VET)** by combining rapid time to results, actionable outputs, and simple, intuitive design.

SEER Sonorheometry, the revolutionary ultrasound technology, is the foundation of this remarkably efficient and reliable analyzer, which offers a menu of rapid whole blood tests in a sleek, self-contained cartridge.

The Quantra is a true POC system designed to enable clinicians to make timely, informed **bleeding management** decisions when time to treatment is critical.

The Next Generation of Viscoelastic Coagulation Testing

- Fully automated, closed system
- Rapid start; smooth run; robust to vibration¹
- Accepts standard blue-top tubes
- No wait time after draw; no pipetting
- Simple three-push workflow
- **SEER Sonorheometry**: direct measurement of physical properties of the clot; no mechanical clot disruption²
- Easy to read, actionable outputs
- Strong correlation with standard laboratory tests and other VET systems³⁻⁶
- Excellent precision
- LIS/EHR network ready
- Built-in Quality Control; two levels of external QC
- Results are available on/off CPB



1. Allen TW, Viola F. *Med Lab Observer*. 2018 Sept;50(9):30-34.

2. Ferrante EA, et al. *Anesth Analg*. 2016; 123:1372-9

3. Naik BI, et al. *Anesth Analg*. 2016;123:1380-1389.

4. Huffmyer JL, et al. *Anesth Analg*. 2016;123:1390-1399.

5. Reynolds PS, et al. *Anesth Analg*. 2016;123:1400-1407.

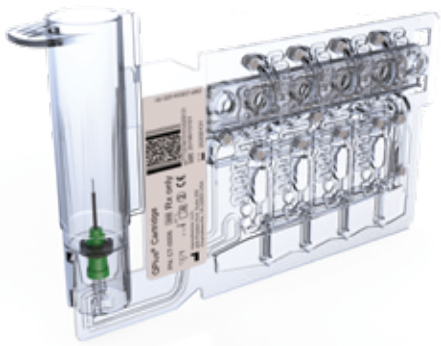
6. Baryshnikova E, et al. *J Cardiothorac Vasc Anesth*. 2019;33:1590-1598.

7. Winegar DA, Viola F. Abstract, AACC 2020

Cartridge-based System for Hemostasis Monitoring in Critical Care Settings



- **Cardiovascular Surgery**
- **Major Orthopedic Surgery**



Intuitive, color-coded “dials” display gives you a quick snapshot of key coagulation parameters.

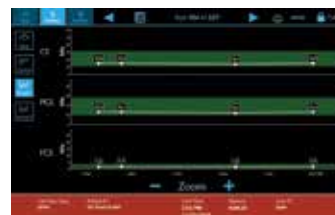
• **QPlus cartridge rapidly identifies:**

- Clotting time (CT)
- Heparinase clot time (CTH) and clot time ratio (CTR): likelihood of heparin influence
- Clot stiffness (CS)
- Platelet contribution to clot stiffness (PCS)
- Fibrinogen contribution to clot stiffness (FCS)

• **Complete results typically available in 15 minutes or less**

The Quantra System is currently the only VET system that *directly* outputs *both* Fibrinogen and Platelet contributions to clot stiffness (FCS and PCS, respectively), giving the clinicians the opportunity to better determine which products are required with a bleeding patient.

Trends



Curves



Multiple display options for a comprehensive review.

After only 30 minutes of training on the Quantra QPlus System, new users were able to read and interpret the results of the Dials display with >96% proficiency.⁷



Quantra QPlus Output Parameters

Parameter	Unit	Reportable Ranges	Healthy Reference Ranges*
Clot Time (CT)	seconds (sec)	60 - 480	104-166
Heparinase Clot Time (CTH)	seconds (sec)	60 - 480	103 - 153
Clot Time Ratio (CTR)	no units (ratio)	0.8 to 4	Calculated parameter. CTR values > 1.4 indicate the prolongation of intrinsic CT, likely due to the influence of heparin.
Clot Stiffness (CS)	hectoPascals (hPa)	2 - 65	13.0 - 33.2
Fibrinogen Contribution to Clot Stiffness (FCS)	hectoPascals (hPa)	0.2 - 30	1.0 - 3.7
Platelet Contribution to Clot Stiffness (PCS)	hectoPascals (hPa)	2 - 50	11.9 - 29.8

*A reference range study was conducted for the QPlus cartridge by collecting whole blood samples from 129 healthy donors across three sites. The data were evaluated as recommended in EP28-A3c "Defining, Establishing and Verifying Reference Intervals in the Clinical Laboratory; Approved Guideline - Third Edition" CLSI, October 2010. The reference ranges determined from these studies are expressed as the central 95% confidence interval of the mean. It is recommended that each hospital/laboratory confirm these ranges or establish its own expected values for the populations it serves.

Principle

Sonic Estimation of Elasticity via Resonance (SEER) Sonorheometry is an ultrasound-based technology that measures the shear modulus of whole blood during coagulation.

Configuration

Cartridge based closed system; Closed tube sampling

Sample Volume

3.2% citrated venous whole blood 3 mL
Undiluted venous whole blood 2.7 mL

Physical Characteristics and Footprint

Dimensions	36 cm (w) X 49 cm (h) X 30 cm (d)
Weight	16.5 kg
Clearance	Top 2.5 cm, Sides 5.5 cm, Rear 5.5 cmHeat
Output	75 Watts

Electrical Specifications

Voltage	100-240 VAC
Current	1.3 A
Power	Input Maximum 250 Watts
Frequency	50/60 Hz
Power Connection Standard	3-prong grounded

Display

Color touch screen 22 cm x 14 cm

Connectivity

Data Input and Output	3 USB in the rear; 1 USB in front 1- RJ45 in the rear
Integrated Outputs	CLSI LIS02-A2, CLSI POCT01-A2
Middleware Drivers	RALS, TELCOR, Siemens POCCElator
LIS / HIS / Other Middleware	Developed as needed

In the United States, the Quantra QPlus System (Quantra Hemostasis Analyzer, QPlus Cartridge, and Quantra Quality Controls Level 1 and 2) has been cleared through the FDA de novo process.

The expanded Quantra System (Quantra Hemostasis Analyzer, QPlus and QStat Cartridges, and their respective Quality Controls Level 1 and 2) is CE Marked.

Product availability is subject to fulfillment of regulatory requirements in each market.

In the United States, the QStat Cartridge and respective controls are available for Investigational Use Only.

Results obtained with the Quantra Systems should not be the sole basis for patient diagnosis. Rx Only.

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System Parts and Accessories

System Component	Ref. #
Quantra Hemostasis Analyzer	HS-002
QPlus Cartridge, Kit of 10	KT-0004
Quantra Desktop Remote Viewer Software	KT-0039
QPlus Quality Control Level 1, Kit of 4 (Lyophilized)	KT-0023
QPlus Quality Control Level 2, Kit of 4 (Lyophilized)	KT-0024
US Power Cord/Barcode Scanner Kit	KT-0037
Cleaning Cartridge, Kit of 10	KT-0012
Quantra Printer	KT-0015
Printer Paper Kit, 10 rolls	KT-0030

For a full listing of the instrument features, configurations, specifications, and parts, please contact HemoSonics, LLC