PHOENIX X36
Hemodialysis System

Making possible personal.
PHOENIX X36
The PHOENIX Hemodialysis System

The PHOENIX X36 Hemodialysis Delivery System is intended to be used to provide high-flux and low-flux hemodialysis, hemofiltration, and ultrafiltration on patients weighing 15 kg or more. With features such as real-time Kt/V monitoring through the DIASCAN monitoring system, compensated blood flow, full-color touch screen, and sodium and UF profiling, the PHOENIX X36 Hemodialysis System is designed to help provide effective hemodialysis therapy.

Multiple automatic features

• Machine safety tests at the beginning of each treatment
• Safety tests performed every morning
• Calibration of the UF system performed during treatment
• Testing of the DIACLEAR ultrafilter membrane

Clinical tools designed to assist patient monitoring

Compensated Blood Flow

• Actual blood flow compensated for the negative arterial pressure
• An accuracy of +/-10% of blood flow to pump speed*

DIASCAN Monitoring System

• Ionic Clearance and Plasma Conductivity measured during the treatment
• Forecast Kt/V delivers information on status during treatment
• Ability to compare previous patient treatments to assess dialysis efficacy
• Potential blood circuit issues can be monitored by comparing Ionic Clearance and blood flow
• Automatically calibrated every day

*In double needle mode, if the pressure before the pump, given by the pressure in the arterial chamber of the cartridge, is higher than -150 mmHg.
BICART Cartridge
- Online preparation of sodium bicarbonate solution
- BICART Cartridges come in 2 sizes
- BICART Cartridges can be reused within 24 hours

CARTRIDGE Blood Set
- Non-invasive system
- Compact bloodline
- Low extracorporeal blood volume: 103 mL
- Sterilized by gamma radiation.

Waste Handling Option
- Functionally integrated into the CARTRIDGE Blood Set
- Priming fluids go directly to the drain
- No priming bucket required

IT Connectivity
- Standard Ethernet network connection
- Connects to electronic medical record
- Integrates with patient prescription downloads with the EXALIS Dialysis Management Tool
Premier Partnership

It's a comprehensive program that keeps your product maintained to current manufacturer's specifications. Using computerized scheduled maintenance, original manufacturer's parts, and geographically placed certified technicians with certified test equipment, your machine performance is maintained at a fixed cost. This program provides:

- Solutions at a fixed cost
- Reduced downtime of machines
- No unforeseen equipment repair costs

Includes:

- Parts, labor, and travel
- One preventative maintenance per year per product
- Regulatory documentation
- Manufacturer’s parts.
- 4-hour call response
- Most repairs completed within 24-72 hours

Elite Partnership

This is a multi-level contract-based program. The program uses the customer's Gambro Certified staff to provide first look and minor repairs with the support of Gambro's technical phone team. Our GTS staff provides additional on-site support for more advanced issues and preventative maintenance.

Includes:

- Parts, labor, and travel
- One preventative maintenance per year per product
- Regulatory documentation
- Manufacturer’s parts.
- 4-hour call response
- Most repairs completed within 24-72 hours

Select Partnership

The Select partnership focuses on the annual preventative maintenance needed for machines each year and is designed to assist the clinic with overall operational effectiveness.

Includes:

- One preventative maintenance per year per product
- Regulatory documentation
## PHOENIX X36 Hemodialysis System Specifications

### Physical Dimensions
<table>
<thead>
<tr>
<th>Dimension</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>56.7 in without IV pole</td>
</tr>
<tr>
<td>Width</td>
<td>24 in</td>
</tr>
<tr>
<td>Depth of base</td>
<td>27.9 in</td>
</tr>
<tr>
<td>Footprint</td>
<td>671.3 in²</td>
</tr>
<tr>
<td>Footprint with back shelf</td>
<td>879.3 in²</td>
</tr>
<tr>
<td>Dry Weight</td>
<td>264.5 lb (120 kg)</td>
</tr>
</tbody>
</table>

### Electrical Power Supply Requirements
- 115 V ±10%, 60 Hz, 16 A (12 A without heat disinfection)
- or 230/240 V ±10%, 50/60 Hz, 10 A

### Water Supply Requirements
- Refer to both local and AAMI standards for water quality
- Pressure: 14.5 to 87 psig (100 to 600 kPa)
- Flow: 1.1 L/min
- Temperature: 50°F to 90°F (10°C to 32.2°C)

### Drain
- Maximum height above floor level: 39.4 in (1 m)
- Maximum distance to drain: 118.1 in (3 m)
- Flow: 1.1 L/min maximum
- Temperature: 203°F max (+95°C max)

### Dialysate Handling
<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Range</td>
<td>93.2°F (+34°C) to 103.1°F (+39.5°C)</td>
</tr>
<tr>
<td>Flow rate</td>
<td>350 to 800 mL/min with steps of 50 mL/min</td>
</tr>
<tr>
<td>Flow rate accuracy</td>
<td>±5%</td>
</tr>
</tbody>
</table>

### Blood Handling
| Blood Flow  | 10 to 530 mL/min |

- Non-invasive pressure monitoring
- Single Needle option available
- Heparin pump 0.0/0.5 to 10.0 mL/h linear infusion rates; delivery also by automatic or manual bolus
- Can accommodate 10, 20, and 30 mL syringes
- Ultrasonic Air Bubble Detector can detect bubbles as small as 20 μL
- Blood Leak Detector: infrared light detector

### Ultrafiltration Rate
<table>
<thead>
<tr>
<th>Range</th>
<th>0.0 to 4.0 kg/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>±2%</td>
</tr>
<tr>
<td>Maximum Total</td>
<td>30 kg, to be obtained in a linear treatment time of up to 8 hours</td>
</tr>
<tr>
<td>Target Weight Loss:</td>
<td></td>
</tr>
</tbody>
</table>

### Included Features
- Arterial and venous pressure monitoring
- Color touch screen
- DIASCAN Monitoring System
- Compensated blood flow
- UF and Sodium Profiling
- Blood Pressure monitoring
- BICART Cartridge Holder
- DIACLEAR Ultrafilter Holder
- Central Concentrate Connection
- pH Probe
- Ethernet port standard

### Options
- Battery Backup Kit
- Single Needle
Contact your local Baxter sales representative to learn more about the product.
For Customer Support call 800-525-2623.

Rx Only. For the safe and proper use of the device mentioned herein, refer to the appropriate operator's manual.

References:

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www.baxter.com
DIASCAN Monitoring System
A Quality Assurance Tool

Plan.

Establish Objectives and Processes

In the dialysis world, this is the patient’s prescription. The PHOENIX X36 Hemodialysis System and the DIASCAN Monitoring System can help manage a patient’s prescription by providing instant feedback on key items that can assist the clinician in making key decisions regarding the patient prescription.

Clinical Tools

Blood Flow

By accounting for the negative arterial pressure that is created when pulling blood out of the body, the PHOENIX X36 Hemodialysis System displays the actual blood flow rate next to the pump speed that has an accuracy of +/-10%.* The negative pressure can create an 8-15% reduction in the actual blood flow rate and the deviation may reduce the treatment efficacy by the same amount.2 PHOENIX X36 is the only machine on the US market to display the actual blood flow rate which can be used by the clinician to monitor and adjust the therapy.

DIASCAN Monitoring System

Introduced over 15 years ago, the DIASCAN Monitoring System has had worldwide clinical use. It measures conductivity on the dialysate side of the dialyzer and calculates two parameters: Ionic Clearance and Plasma Conductivity.1

Ionic Clearance

The correlation between urea clearance and ionic clearance is roughly equivalent as urea and sodium are of similar molecular weight. The use of ionic clearance can be substituted for urea clearance in this non-invasive tool.3 The ionic clearance is also used in an Ionic Kt/V calculation that can be trended by treatment.

Plasma Conductivity

This provides a correlation to the patient’s sodium concentration and can be useful in analyzing the patient’s sodium level during and after treatment.1 Plasma conductivity can be helpful in individualizing sodium prescriptions and when using sodium profiling to manage fluid shift and intra-dialytic hypotensive episodes.3

*If in double needle mode, and when pressure before the pump, given by the pressure in the arterial chamber of the cartridge, is higher, or less negative than -150 mmHg.

Do.

Treatment Process

Monitoring Clearance

As clearance can be affected by issues within the blood circuit, dialysate circuit, or treatment time, even a small change in clearance may impact a treatment.3 Below is an example of induced recirculation due to incorrect needle direction.

Monitoring Plasma Conductivity

During Sodium Profiling

Sodium profiling is one way to manage fluid shift and intra-dialytic hypotensive episodes.3 The ability to track plasma conductivity throughout the treatment can give immediate information for a sodium profile, providing the opportunity to adjust the sodium prescription if needed.
Study.

Trending

Patient & Treatment Trending

Trending the patient’s Kt/V each treatment can assist in identifying trends sooner than in monthly labs. These additional points of reference can help the clinician make an informed decision about every patient.

Act.

Manage

Analyze the differences to determine the root cause of insufficient dialysis dose and help reduce the treatment variability.

- Determine optimal blood flow
- Determine optimal dialysate flow
- Monitor patient reaction to prescription
- Monitor and trend Kt/V each treatment
- Monitor clearance for treatment issues or vascular access issues
- Monitor patient reaction to sodium profile
- Monitor patient sodium level and determine optimal sodium prescription

Vascular Access Surveillance

As blood flow is one of the many reasons for a decreased clearance, one can compare blood flow and clearance for an indication of access recirculation. If the ionic clearance blood flow ratio is less than 50%, it can be an indication of significant access recirculation in patients with an arteriovenous fistulae.\(^5\) Trending the patient’s ionic clearance blood flow ratio can help identify potential access stenoses. Use this ratio during every treatment for non-invasive access surveillance with no need for additional disposables or equipment.

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Be proactive with your patient care, not reactive.

Contact your sales representative to learn how the DIASCAN Monitoring System can help manage the treatment data and quality plan processes.

Customer Experiences

“We started with our DIASCAN in December of 2010 and had about a three-month window there where we just wanted to make sure that we were doing everything that we were supposed to be doing. We didn’t put everything in place at one time, we did it by steps and that was very helpful to the staff...We educated our patients, we educated our doctors, we educated the staff before we actually went out and got started. Not very difficult to implement, it was just a little bit of a process..."

- Judy, RN; Good Samaritan, Lebanon, PA

“The DIASCAN [sic] has allowed us to very quickly intervene with access problems. The staff will identify a decrease in the online Kt/V and they will report it to the physician or the nurse practitioner quickly and have interventions done within a very short period of time.”

- Marianne, RN; Good Samaritan, Lebanon, PA

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