



**TERUMOBCT**  
Unlocking the Potential of Blood

## THERAPEUTIC PLASMA EXCHANGE

ADVANCING THERAPEUTIC APHERESIS AND CELL  
COLLECTIONS TO THE NEXT LEVEL OF PATIENT CARE

**SPECTRA OPTIA®** APHERESIS SYSTEM

## Versatility to help you provide exceptional patient care

Because each patient's needs are unique, the Spectra Optia system enables you to customize each therapeutic plasma exchange (TPE) procedure based on your patient's specific needs.

### PROCEDURE AND SYSTEM HIGHLIGHTS

Short procedure time <sup>1</sup>	Adds to patient comfort
Low platelet and red blood cell loss <sup>1</sup>	Contributes to patient safety
Low volume tubing set	Accommodates smaller patients and supports both patient comfort and safety
Automated Interface Management (AIM) system	Manages cellular separation and efficiently removes plasma
Pump precision	Helps to optimize fluid balance
Large, durable wheels on pivoting casters	Makes maneuvering the system throughout your facility easier
Intuitive graphical user interface	Guides you through the procedure Minimizes memorization and simplifies training
Convenient data management	Stores procedure data to export or print Helps you minimize manual data transcription and address regulatory requirements

### PERFORMANCE COMPARISON

	Spectra Optia® Apheresis System	COBE® Spectra Apheresis System
Plasma removal efficiency, <sup>1</sup> mean	87% ± 3%	79% ± 5%
Blood volume required to remove one plasma volume <sup>2</sup>	1.15 total blood volume (TBV)	1.27 TBV
Anticoagulant delivered to patient per liter of whole blood processed <sup>3</sup>	14.4 mL	23.3 mL
Patient platelet loss, <sup>1</sup> median	1.0%	3.6%
Extracorporeal volume (ECV) <sup>4</sup>	185 mL maximum <sup>5</sup>	285 mL

### TIME COMPARISON<sup>6</sup>

	Spectra Optia® Apheresis System	COBE® Spectra Apheresis System
Loading <sup>7</sup>	3 minutes	4 minutes
Priming	8 minutes	12 minutes
<b>Total setup</b>	<b>11 minutes</b>	<b>16 minutes</b>
Rinseback	6 minutes	8 minutes
<b>Total</b>	<b>17 minutes</b>	<b>24 minutes</b>
<b>Time savings</b>	<b>7 minutes</b>	

<sup>1</sup> Tormey CA, et al., "Improved Plasma Removal Efficiency for Therapeutic Plasma Exchange Using a New Apheresis Platform." *Transfusion* 2010; 50(2): 471-477.

<sup>2</sup> Calculations:  
Spectra Optia system –  $1/87 = 1.15$ ; COBE Spectra system –  $1/79 = 1.27$

<sup>3</sup> Calculations:  
Anticoagulant volume = 100 mL/9 (AC ratio of 10:9 parts blood, 1 part AC) = 111 mL  
Spectra Optia system:  $100\% - 87\% = 13\%$  of 111 mL = 14.4 mL AC/liter processed  
COBE Spectra system:  $100\% - 79\% = 21\%$  of 111 mL = 23.3 mL AC/liter processed  
Assumptions: AC ratio of 10  
NOTE: AC infusion rate of 0.8 to 1.2 mL/min/liter TBV was used during the clinical studies however not used directly in this calculation

<sup>4</sup> The extracorporeal volume is the total volume within the tubing set flow path. It equals the amount of saline required to completely fill the tubing set. Volume within the collection, saline, waste and/or replacement tubing is not included.

<sup>5</sup> Maximum ECV with reservoir filled to high level sensor (under certain infrequent alarm conditions)

<sup>6</sup> Timing study based on internal laboratory time studies using highly trained operators. All times are approximate and results may vary depending on operator experience. Actual procedure run time is not included in this summary due to dependency on patient and procedure parameters. Data on file.

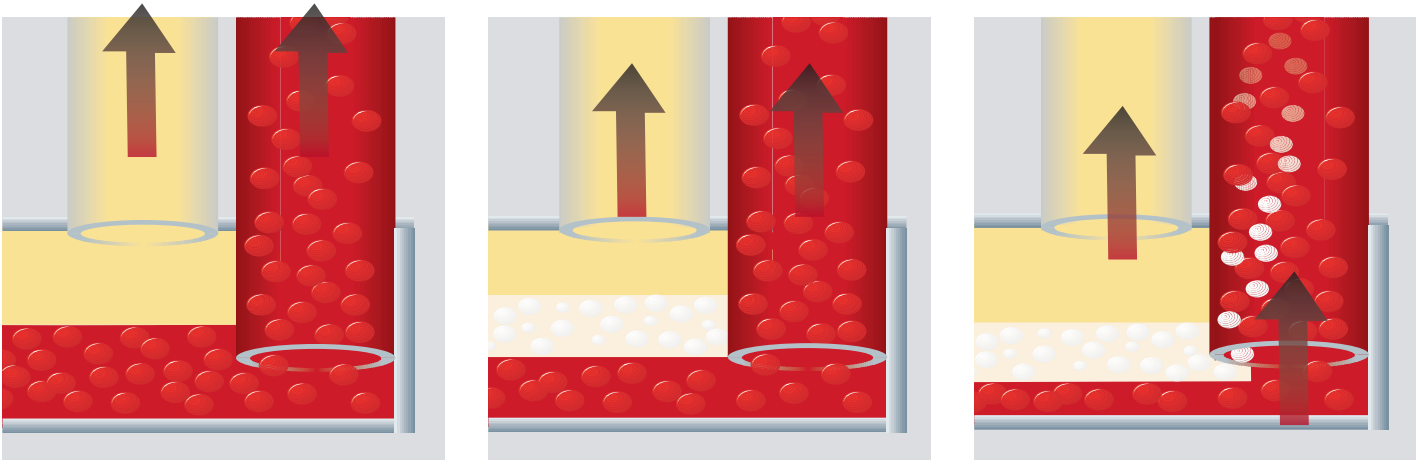
<sup>7</sup> Time includes unpacking coils, bags, snapping on cassette or cartridge, threading lines into valves, pressure sensors, air chamber and collect concentration monitor (COBE Spectra system only), connecting fluids, loading fluid detectors, unpacking, and loading channel and loop.

How it Works

AIM SYSTEM

Through constant interface monitoring, interpretation and adjustments, the AIM system is designed to make TPE safe and efficient.

- 1. Monitors** the interface position and the thickness of the separated blood components
- 2. Interprets** the interface information using a patented optical detection system
- 3. Adjusts** the pumps and valves automatically to manage the interface position, ensuring the cellular components are returned to the patient and “pure” plasma is removed

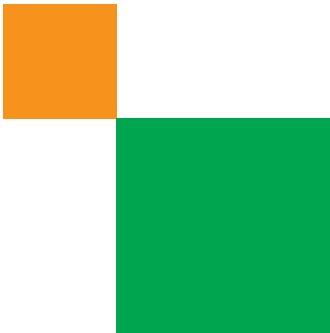


The AIM system repeats this cycle throughout the procedure.

Red Cells   Plasma   White Cells, Platelets

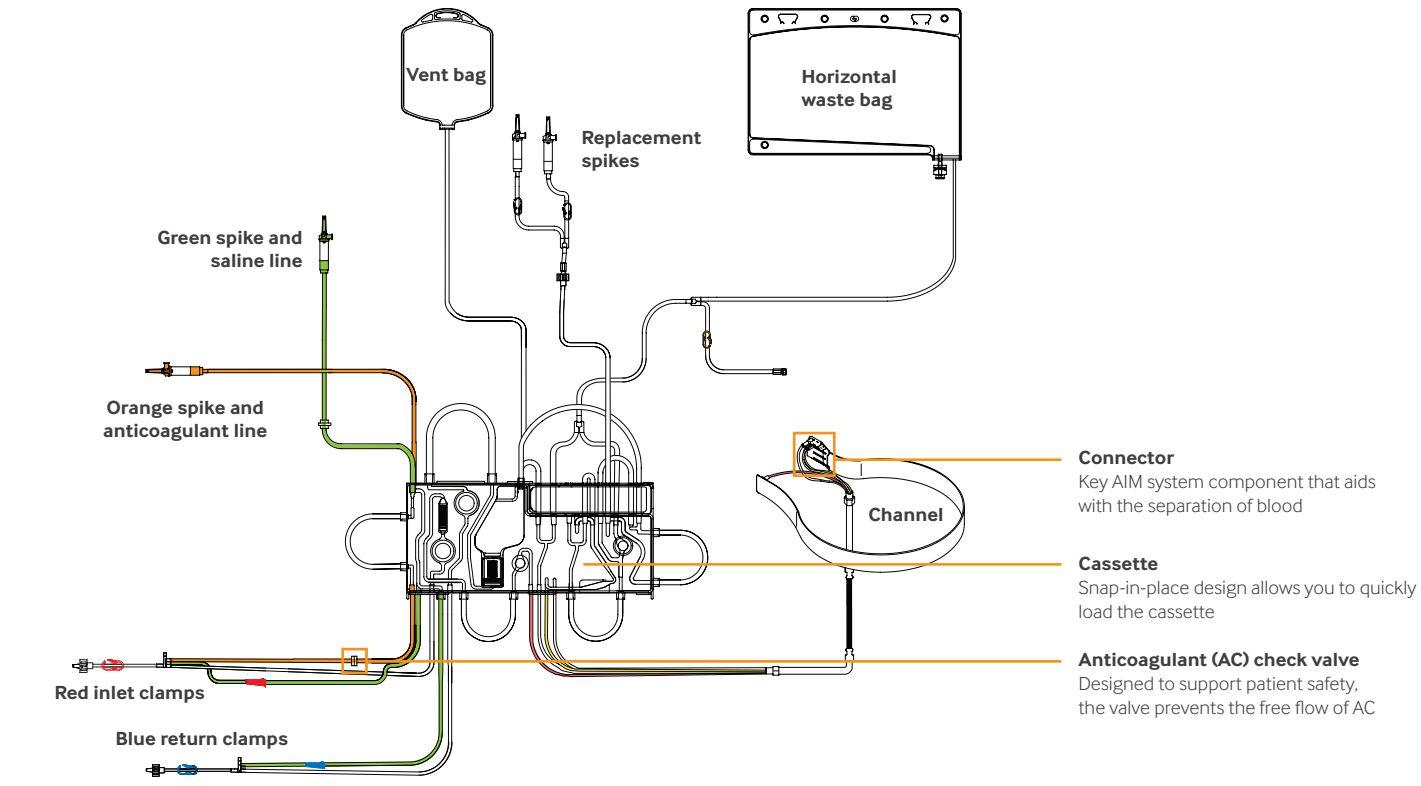


A view inside the Spectra Optia system centrifuge chamber, where blood is separated into its cellular components.





EXCHANGE TUBING SET



Low volume tubing set (Maximum ECV* = 185mL)	Accommodates smaller patients and supports patient comfort and safety
Compact packaging	Minimizes the space required for storage
Color-coded components	Simplifies setup and operation

\*Maximum ECV with reservoir filled to high-level sensor (maximum occurs under infrequent alarm conditions)

Working with you

Each and every interaction we have with you is important. By fostering open and ongoing relationships, we bring more value to you and the patients we’re all focused on serving.

Even after the technology is in place, we continue to serve you with:

- Education and training
- Technical support
- Clinical and scientific support
- Customer support
- Users groups and professional networks

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