

# LivaNova

Cardiopulmonary

PRODUCT BROCHURE

## XTRA™

eXtraordinarily flexible,  
intuitive and powerful  
autotransfusion system



# Excellent performance from small to massive bleeding

LivaNova offers a long legacy of developing heart-lung machines and is recognized as the #1 cardiopulmonary bypass company worldwide with perfusionists across the globe benefiting from our proven reliability and innovation.

The Xtra autotransfusion system leverages our heart lung machine legacy while bringing together three decades of experience, improvement, and innovation in cell salvage – treating more than half a million patients per year.

With refined ergonomics and a reduced footprint for more manageable procedures, Xtra is a powerful, flexible and intuitive blood management solution ready to meet any surgical scenario.

## Providing the largest range of bowl sizes on the market



# The complete blood management solution

## Powerful

- Multiple sensors and indicators ensure safety
- High RBC hematocrit and wash quality
- Excellent heparin and protein removal
- High RBC recovery rate

## Flexible

- Smallest bowl size on the market (55ml)
- Widest range of bowl sizes on the market
- Sequestration, intra and post-op protocols
- Low minimum RBC mass required to process

## Intuitive

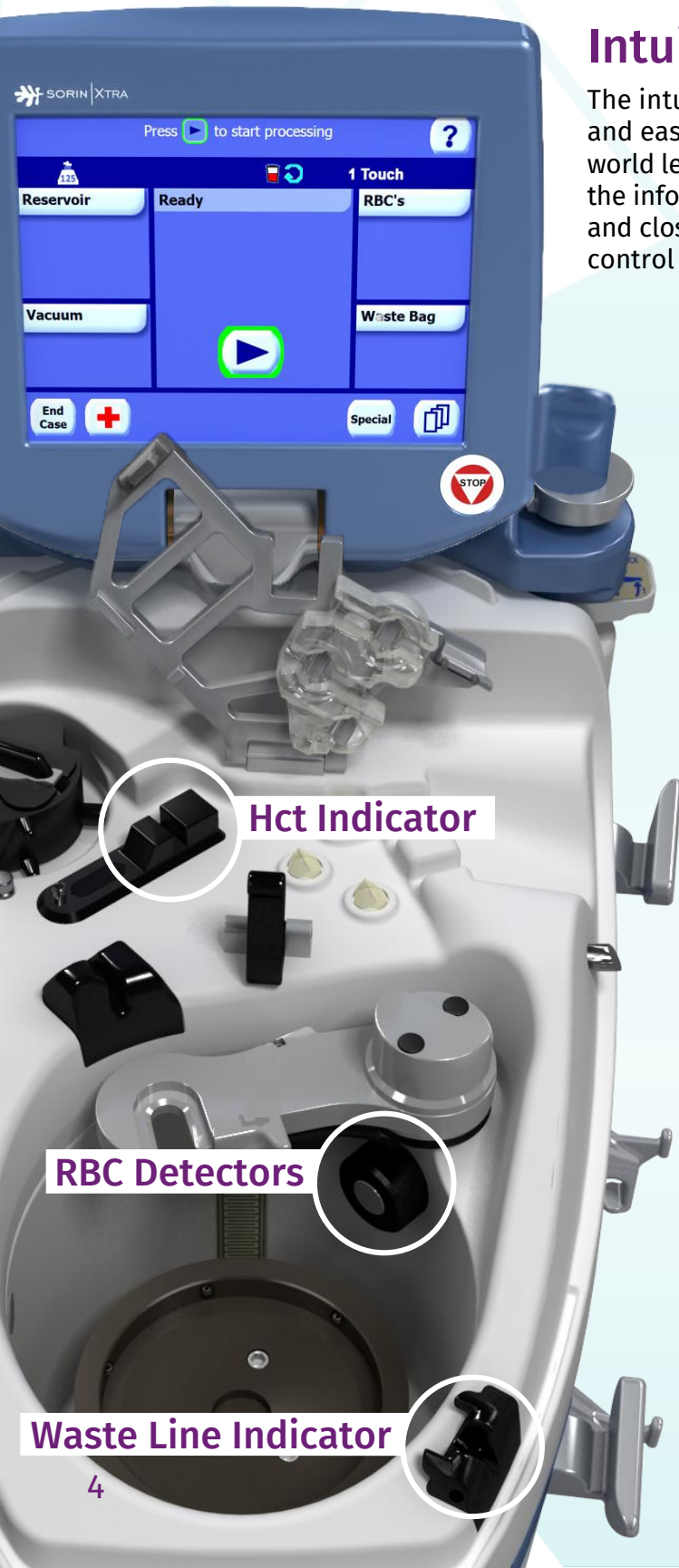
- Fast and intuitive set up and easy operation
- Fully automated from start of case to finish
- Intuitive user interface with color touch screen
- Small footprint for more manageable procedures
- Complete control over case data
- Fast processing for high volume blood loss
- Quiet and powerful vacuum pump

Smallest  
bowl size on  
the market  
**55ml**





# Comprehensive, compact and fully integrated autotransfusion system



## Intuitive User Interface

The intuitive user interface with touch screen monitor enables fast and easy setup putting everything at your fingertips. Inspired by our world leading heart lung machines, the monitor continually displays the information you need. With modular displets that can be opened and closed as needed, our easy to navigate menu gives you complete control throughout the case.

## Advanced Data Management

XTRA offers complete control over your data allowing you to view case information at anytime, print a report, or download multiple cases on a flash drive. XTRA also interfaces with the Essenz Heart Lung Machine.

- Internal memory stores thousands of past cases
- Integrated printer provides permanent record
- Interfaces with Essenz Heart Lung Machine

## Dual Sensor Technology

Providing on-screen at-a-glance information, XTRA maximizes multiple sensor technology to continually display critical data throughout the case.

### Hct Indicator

Integrated non-invasive optical indicator measures RBC concentration of the inlet blood during the Fill Phase and outlet blood during the Empty Phase.

### Dual RBC Detectors

Two optical sensors maximize bowl filling and increase capacity providing a better supernatant washout and high outlet hematocrit.

### Waste Line Color Indicator

Optical indicator that monitors wash quality.

Hct Indicator

RBC Detectors

Waste Line Indicator

## Compact Ergonomic Design

XTRA was specifically designed to maximize space in an operating room environment through compact ergonomics and a functional design that improves operator interaction in all situations.

### Small Footprint

Compact size allows XTRA to fit in small spaces to maximize available space.



### Excellent Visibility

Transparent hood for complete visibility and enhanced access.



### Effortless Mobility

Large handles and casters for effortless movement.



### Large Storage Area

Ample capacity for all of the procedure disposables needed.



## XVAC Modular Vacuum Pump

The XVAC modular vacuum pump is extremely quiet and powerful, offering flexibility as a standalone unit or fully integrated into the XTRA system.



### Integrated or Standalone

When placed within the XTRA system, XVAC can be activated and operated from the dedicated display on the user interface. When used as a standalone unit, XVAC can be operated from its own control panel.

### Two Operative Modes

XVAC has two different modes including Intra and Post, delivering an optimized solution for perioperative blood recovery. XVAC can also be immediately activated once turned on for critical and emergency situations.

### Vacuum Power Ranges:

- -50 to -150 mmHg (Intra-operative mode - high vacuum capacity)
- -10 to -100 mmHg (Post-operative mode - gentle aspiration for wound drainage connection)



# Flexibility<sup>1</sup> through multiple protocols

XTRA offers a choice of intra-operative, post-operative and sequestration protocols, providing flexibility and fully automated operation from the start to the end of the case.

## Intra-Operative Factory Protocols

### Popt



**Designed to obtain:**

- Very high Hct<sup>2</sup>
- Excellent supernatant removal<sup>3</sup>
- Good processing speed<sup>3</sup>

**Achieved by:**

- Two step filling at different flow rates and automated stand-by
- Dual RBC detector technology for optimal bowl filling (active for XTRA Bowl 55 and XTRA Bowl 225)

### Pfat



**Designed to obtain:**

- Removal of fat particles
- Excellent supernatant removal
- Good Hematocrit

**Achieved by:**

- Newly designed fat removal phase
- High wash flows

### Pstd



**Designed to obtain:**

- High processing speed (225 bowl)<sup>3</sup>
- Good hematocrit<sup>3</sup>
- Good wash quality<sup>3</sup>

**Achieved by:**

- Simple one-step automatic filling
- Can adjust flows (fill/wash/empty)
- High wash and empty flows

## Post-Operative Factory Protocol

### Post-op



**Designed to obtain:**

- A configuration suitable for post-op applications

**Achieved by:**

- Activating the same settings of the Popt protocol
- Automatically switching to gentle aspiration with Xvac post-op mode



## Preoperative Sequestration Factory Protocols

### PPP • PRP1 • PRP2



The preoperative sequestration protocols enable the recovery of plasma and platelets from the patient's whole blood into bags prior to surgery.

Technical claims supported by LivaNova data on file. 1. Bauman, et al, (2015) Evaluation of the minimum volume of salvaged blood required for the successful use of two different autotransfusion device. *Ped Anesth*. 25:258–264. 2. Overvest, et al. Clinical evaluation of the Sorin XTRA autotransfusion system. *Perfusion* 2012, 27(4) 278–283 3. Seyfried, et al. The impact of bowl size, program setup, and blood hematocrit on the performance of a discontinuous autotransfusion system. *Transfusion*. 2017 Mar;57(3):589–598.



# Fast and intuitive setup

XTRA was specifically designed to make setup quick and easy with snap-in bowl mounting and automatic pump loading and unloading.

## Innovative disposable design:

- XTRA's bowl design provides quick 360° snap-in mounting onto centrifuge plate
- One-hand mechanism for locking and unlocking bowl to/from centrifuge arm
- Cartridge and tubing design that helps ensure easy and straightforward setup
- Lid-guided tubing positioning into seat when closing and locking the lid clamp
- Automatic pump loading and unloading at the beginning and end of the case



## Built on a Legacy of Intelligent Design and Proven Performance

XTRA shares the same DNA as the Essenz Heart Lung Machine developed in Munich, Germany by the same designers, engineers and industry leaders. For over 30 years LivaNova has treated over 6.5 million autotransfusion patients and is recognized as a world leader. With dedication toward research and unmatched experience, LivaNova continues to lead the industry with innovative ATS solutions.



# Order Guide

## Equipment and Accessories

Identification	Code	Description	Quantity/Case
<b>XTRA</b>	75221	XTRA Equipment 110V 50Hz Version	1
<b>XVAC</b>	75307	XVAC Vacuum Pump 110V Version	1
<b>XTRA Accessories</b>	65643	Printer Cartridges Paper Roll Kit	4
	65696	Centrifuge Well Fluid Container	1
	65714	XVAC Trap	1

## Disposables, Miscellaneous Processing Components and Adapters

Type	Item	Description	Quantity/Case	Type	Item	Description	Quantity/Case
<b>Procedure Sets</b>	04354	Procedure Set TX/55	3	<b>Reservoirs</b>	04358	XRES T Blood Collection Reservoir	6
	04355	Procedure Set TX/125	3		04359	XRES B Blood Collection Reservoir	6
	04356	Procedure Set TX/175	3	<b>Sequestration Sets</b>	04315	Sequestration Set X	40
	04357	Procedure Set TX/225	3				
	04361	Procedure Set BX/55	3	<b>Blood Sampling</b>	007 016 000	Blood Access Sampling Adapter	25
	04362	Procedure Set BX/125	3				
	04363	Procedure Set BX/175	3	<b>Suction Assemblies</b>	04373	AAL Aspiration and Anticoagulation Line 1/4"	10
	04364	Procedure Set BX/225	3				
<b>Bowl Sets</b>	04378	Proc Set BX/225 120µm	3	<b>Miscellaneous Processing Components &amp; Adapters</b>	04272	XRES Blood Collection Reservoir Holder	1
	04350	Bowl Set X/55	6		04333	Cardio Kit	60
	04351	Bowl Set X/125	6		04368	BRB1 Blood Reinfusion Bag X, 1 Liter	50
	04352	Bowl Set X/175	6		04369	Waste Bag X 10LT	10
<b>Collection Sets</b>	04353	Bowl Set X/225	6		04371	Reservoir Outlet "Y" XRES B	12
	04360	Collection Set TX	6		04379	Vacuum Extension Line	50
	04366	Collection Set TX Cardio	6		04380	Tandem Reservoir "Y" Adapter	20
	04365	Collection Set BX	6				
	04367	Collection Set BX Cardio	6				
	04376	Collection Set BX 120µm	6				
	04377	Coll Set BX Cardio 120µm	6				

## Important Safety Information

1. **INDICATIONS FOR USE:** The XTRA Autotransfusion System is indicated for intraoperative and postoperative recovery of blood, washing of the processed blood and preoperative sequestration (with indirect patient connection). Typical clinical applications of autotransfusion include the following surgical specialties: Cardiovascular, Orthopedics, Thoracic, Transplant Surgery, Emergency (Trauma), Neurosurgery, Obstetrics and Gynecology, and Urology. The XVAC is indicated for use only with the XTRA, an autologous blood recovery system indicated for intra- and post-operative autotransfusion, as well as for pre-operative sequestration.

2. **CONTRAINDICATIONS:** There are no known contraindications for the XTRA. However, the use of blood processed by this device may be contraindicated under some circumstances. The responsibility for the use of the device in all cases belongs solely to the physician in charge.

3. **WARNINGS:** The device must be used in accordance with the instructions for use. For a complete listing of warnings, please refer to the Instructions for Use which accompany each product.

4. **PRECAUTIONS:** The XTRA must be used only with XTRA disposables. Federal law (U.S.A.) restricts this device to sale by or on the order of a physician. For a complete listing of precautions/cautions please refer to the Instructions for Use which accompany each product.

The devices should be used by qualified and skilled personnel, able to follow the indications and instructions for use contained in the information provided by the manufacturer. Please contact us through our website ([www.sorinmanuals.com](http://www.sorinmanuals.com)) to receive instructions for use containing full prescribing information including indications, contraindications, warnings, precautions and adverse events.

The information contained in this summary represents partial excerpts taken from the product labeling. The information is not intended to serve as a substitute for a complete and thorough understanding of the device nor does this information represent full disclosure of all pertinent information concerning the use of this product. Not approved in all geographies. Consult your labeling.

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