

## CATSmart

Continuous Autotransfusion System

# SIMPLY BRILLIANT. BRILLIANTLY SIMPLE.

- Technology that gets you up and running quickly
- Design that helps you operate smoothly
- Performance that lets you deliver for every patient



At the heart of CATSmart is our proprietary continuous-flow technology. Unlike bowl-based systems, its one-size-fits-all kit multi-tasks all process steps. Coupled with situation-specific wash programs, an Auto-Start function, and a PRC pump sensor, you can set up fast and be certain PRC is available when your patient needs it.

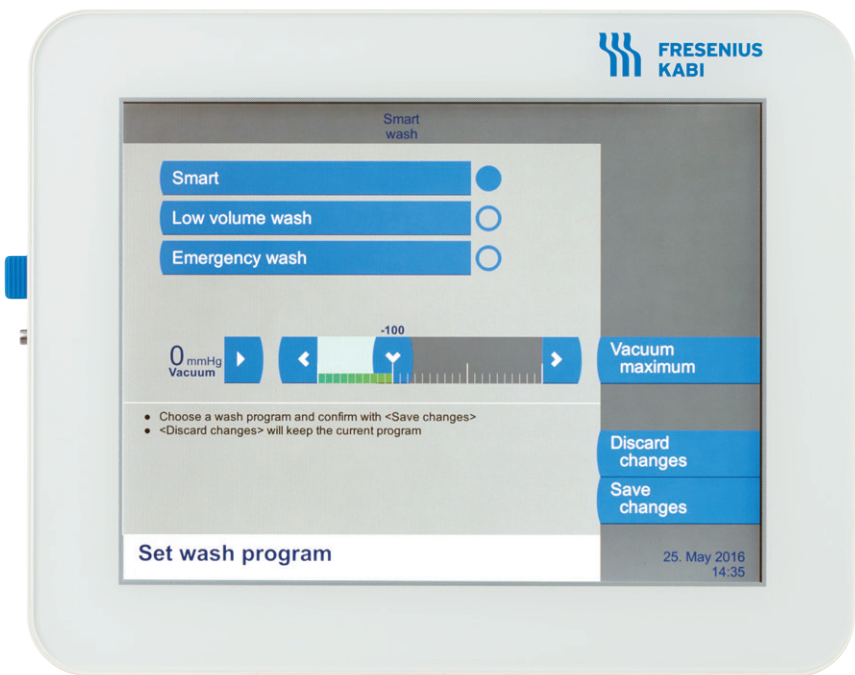
# Quick to start technology

## Wash Programs and Auto-Start

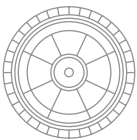
Clear settings for swift selections.

CATSmart's three wash programs – Smart, Low Volume, and Emergency – simplify your set-up and in-process changes.

The Auto-Start function can be pre-set based on the expected amount and speed of blood loss, so you can focus on your patient rather than monitoring the collection reservoir.



### Process technology



### Procedure duration

**Continuous access to PRC** while processing



**Intermittent access to PRC** between processing batches



### PRC Sensor

Reinfusion-ready with minimal mLs.

CATSmart's PRC sensor directs the system to start pumping to the reinfusion bag when PRC volume in the washing chamber registers at as little as 30 mL. Once in the bag, PRC can be accessed for patient use, immediately or whenever required, by pausing the system.

### Continuous Processing

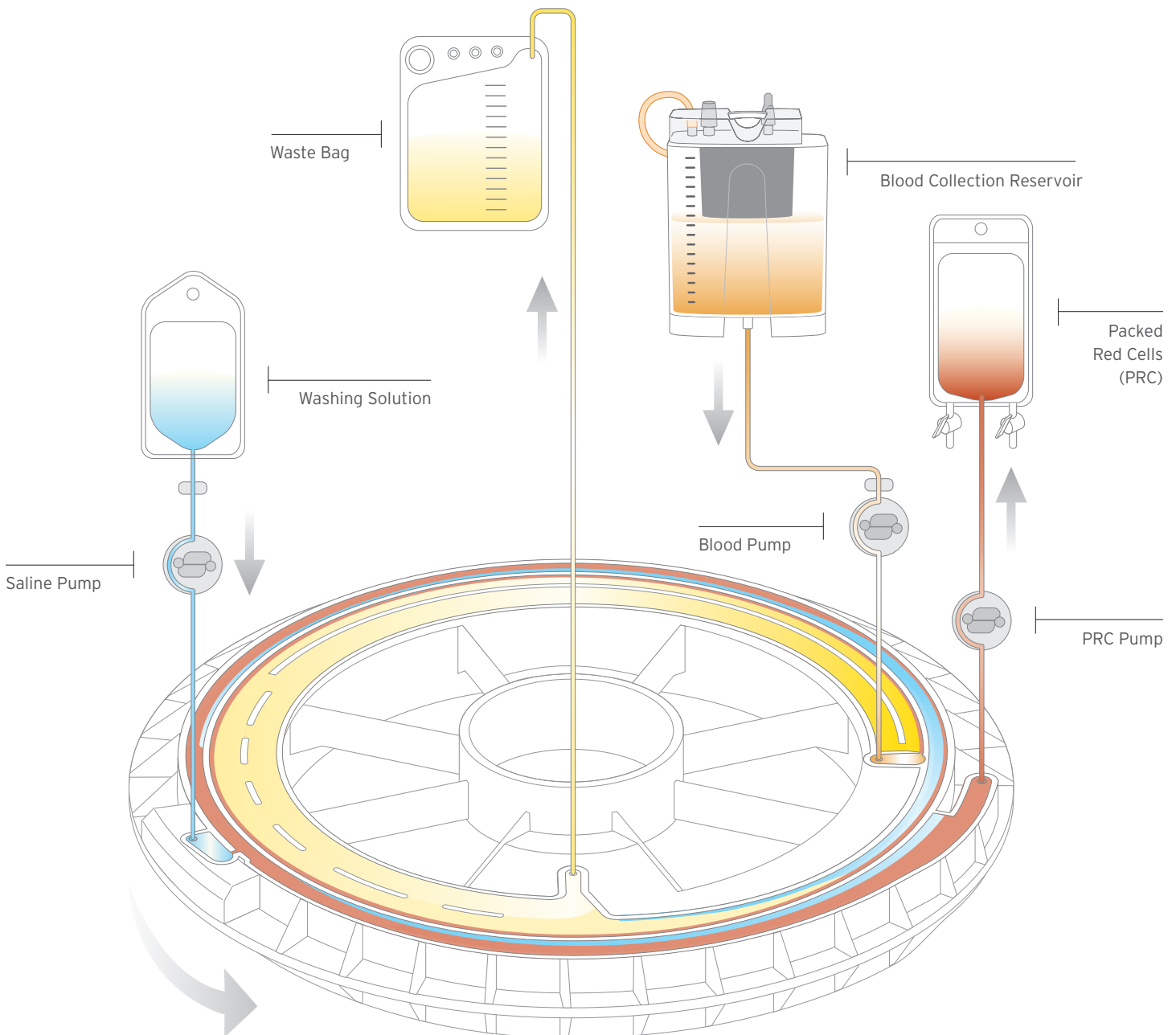
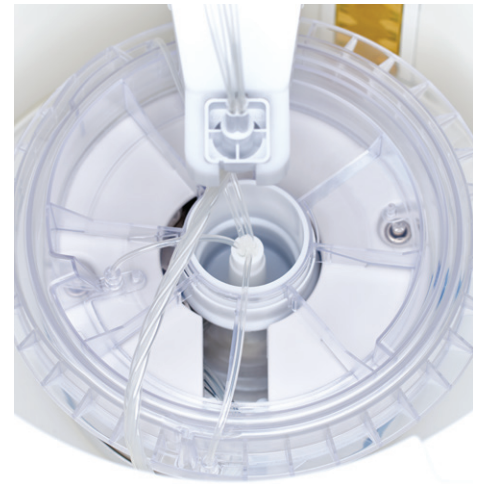
## All-at-once ease. Non-stop results.

CATSmart continuously pushes shed blood through the spiral channel of the washing chamber and simultaneously separates, washes, and packs red cells. The PRC sensor monitors the RBC interface and auto-adjusts pump flow rates, for optimal results, every time.

### AT3 Kit

## One-size-fits-all efficiency.

CATSmart's AT3 kit simplifies inventory, decision-making, and set up. The single-sized washing chamber can process any volume of shed blood – an easy choice for every patient or procedure. And with all components pre-connected, including the new hematocrit sensor, installation is equally easy.



CATSmart's features and functions include a lighter, slimmer, more agile, and fully adjustable body, a tablet-sized display, quiet-run acoustics, and accessible data management tools.\* All specifically designed to take into account your unique workflow, work style, and work space.

# Easy to operate design

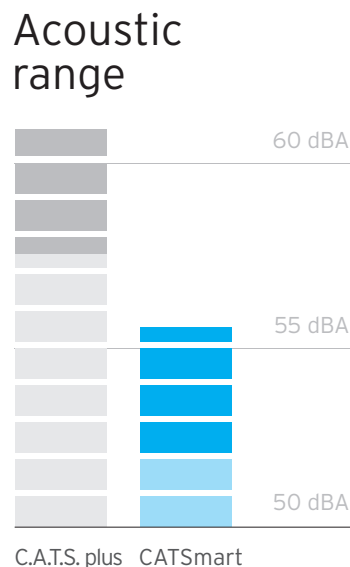
## Acoustics

Runs quiet, so you can stay focused.

CATSmart's enhanced soundproofing surrounding both the washing chamber and vacuum pump minimizes equipment-related distractions in your OR – it takes three CATSmart devices running side-by-side to generate the decibel level of one C.A.T.S. plus.

Up to  
**50%**  
quieter

CATSmart fades into the background of your OR.



## Data Management

In-reach tools.  
Complete reports.

CATSmart's USB interface and optional barcode scanner and matrix printer add speed and simplify accurate data collection and transfer to meet rising reporting needs.



\* Compared to CATS Plus Autotransfusion System



### Body

Light, slim, agile.  
For stunning mobility.

Weighing 17lbs lighter and measuring 9" shorter than its predecessor – with smooth-glide, 360°-spin wheels and a bi-pedal, fast-brake system – CATSmart's body is easy to adjust and nimble to maneuver.

### Display

Quick-glance data.  
Glove-touch controls.

CATSmart's full-color interface makes it easy to see patient data in any light and simple to access all functionality – including Set-up and Help – even in gloved hands.

### Adjustability

Sitting or standing,  
it's all within reach.

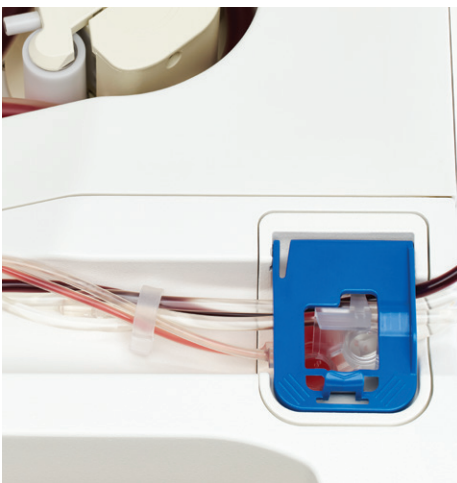
CATSmart lets you position control right at your fingertips – and eye level. The body raises or lowers to one of five comfort-set heights and the display arm swings smoothly for a clear line of sight to procedure data.

Turn and pull the knob located at the rear of the device to unlock CATSmart's spring-assisted body.



Regardless of the wash program you select, CATSmart delivers PRC with high hematocrit and washout rates – including non-emulsified fat – for every patient and every program, while its on-board vacuum and suction system give you the control to manage hemolysis.

# Sure to deliver performance



## HCT Sensor

Keeps an eye on quality.

CATSmart's two ultrasonic sensors continuously measure incoming and outgoing hematocrit levels. All captured data is visualized, real-time, on the display and can be recorded for post-op reporting or review.

## Vacuum Pump

On-board for on-demand viability.

CATSmart makes it easy for you with a built-in, optional vacuum pump that's controlled through the touchscreen display.



PRC Quality

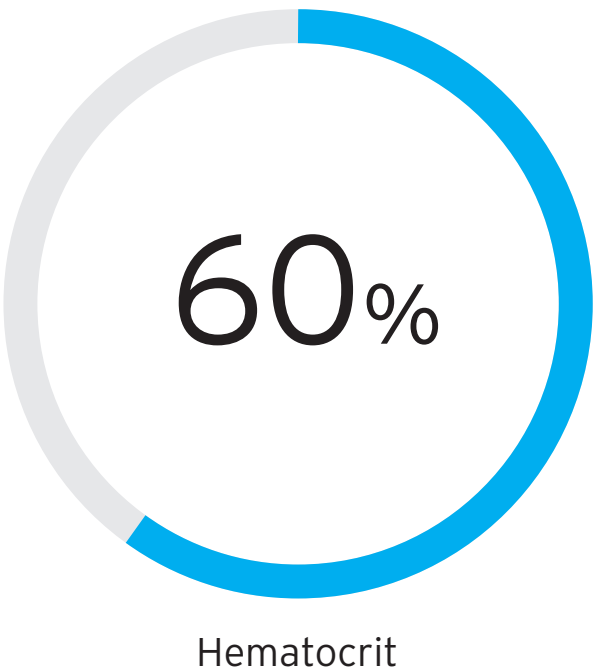
High HCT. Low fat.  
No tradeoffs.

All three of CATSmart's wash programs deliver RBC recovery levels above 85% along with impressive HCT and washout rates. You will never need to sacrifice high HCT for low non-emulsified fat – CATSmart provides both, at the same time, minimizing patient risk of postoperative cognitive decline and fat embolisms.<sup>1</sup>

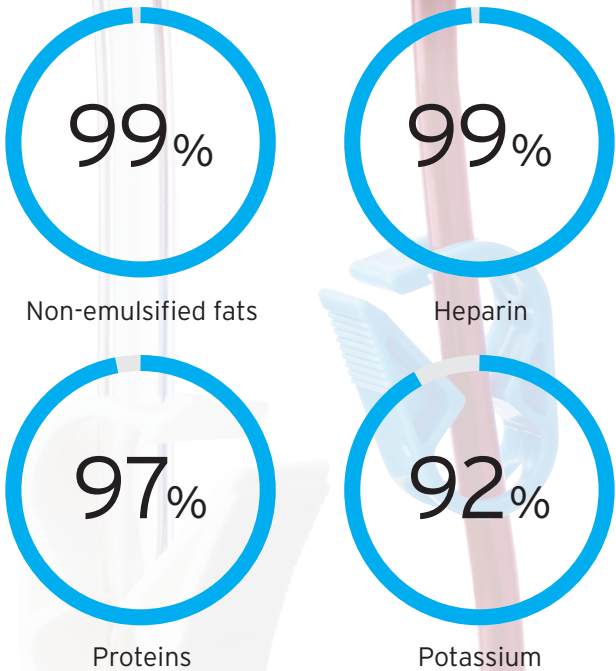
|                     | Wash Program                |                 |                     |
|---------------------|-----------------------------|-----------------|---------------------|
|                     | Low Volume<br>200mL   700mL | Smart<br>1000mL | Emergency<br>1000mL |
| Hematocrit          | 56   62                     | 64              | 57                  |
| Non-emulsified fats | >99*                        | >99             | >99                 |
| Heparin             | >99*                        | >99             | >99                 |
| Albumin             | 99   97                     | 99              | 95                  |
| Proteins            | 98   97                     | 99              | 94                  |
| Potassium           | 92   92                     | 94              | 90                  |
| Hemolysis           | .15   .06                   | .04             | .02                 |
| Values above are %  |                             |                 |                     |

\* Starting volume was 400mL for Low Volume wash

CATSmart delivers<sup>2</sup>  
On average regardless of wash program



CATSmart eliminates<sup>2</sup>  
Without reducing final HCT levels



1. Data on file at Fresenius Kabi.  
2. As demonstrated in published studies.

## Technical Information

| Wash Programs         | PRC Flow        |
|-----------------------|-----------------|
| Low Volume Wash       | 25 mL/min       |
| Smart Wash            | 20 - 40 mL/min  |
| Emergency Wash        | 50 - 100 mL/min |
| Delivery Flow Rates   |                 |
| Red Blood Cell Pump   | 0 - 190 mL/min  |
| Shed Blood Pump       | 0 - 350 mL/min  |
| Washing Solution Pump | 0 - 400 mL/min  |
| Centrifuge Speed      | 0 - 2400 rpm    |

DESIGNED AND MANUFACTURED BY  
FRESENIUS KABI IN FREIDBERG, GERMANY.

**Fresenius Kabi USA**  
Three Corporate Drive  
Lake Zurich, Illinois 60047  
847 550 2300  
888 391 6300  
[www.fresenius-kabi.us/catsmart](http://www.fresenius-kabi.us/catsmart)



INFUSE ~ TRANSFUSE ~ NOURISH

DISTRIBUTED EXCLUSIVELY IN THE US BY:

**Terumo Cardiovascular Group**  
6200 Jackson Road  
Ann Arbor, Michigan 48103-9300  
Tel: +1.734.663.4145 or 1.800.521.2818  
Fax: +1.734.663.7981 or 1.800.292.6551  
[www.terumo-cvgroup.com](http://www.terumo-cvgroup.com)



©2016 Terumo Cardiovascular Systems Corporation.  
Terumo® is a registered trademark of Terumo Corporation.  
September 2016. 872941

## Order Information

| Order Number                          | Description   | Units/Case |
|---------------------------------------|---|------------|
| Hardware and Hardware Accessories     |   |            |
| 9005901                               | CATSmart Autotransfusion System   | 1          |
| 9005861                               | CATSmart Auto-Start Reservoir Holder  | 1          |
| M690991                               | CATSmart ATH Reservoir Holder   | 1          |
| 9005761                               | CATSmart Tray   | 1          |
| M695501                               | Centrifuge Lid Cover  | 1          |
| 9005781                               | CATSmart Scanner  | 1          |
| 9005771                               | CATSmart Matrix Printer   | 1          |
| 9005801                               | CATSmart Black Ribbon for Matrix Printer  | 1          |
| 9005791                               | CATSmart Paper for Matrix Printer   | 1          |
| Aspiration Assembly                   |   |            |
| 9005851                               | CATSmart Vacuum Pump  | 1          |
| 9108554                               | ATV Vacuum Line (70cm)  | 15         |
| 9108544                               | ATV Vacuum Line (180cm)   | 12         |
| M649951                               | Overflow Protector  | 1          |
| 6799181                               | Hydrophobic Filter  | 1          |
| M679011                               | Smoke Filter  | 1          |
| 6780881                               | Bacterial Filter  | 100        |
| Disposable Sets                       |   |            |
| 9108444                               | ATF 40 Fast Start Kit (AT3)<br>Includes AT3 Set, 40 micron collection reservoir,<br>ATS Suction Line, 10L Waste Bag, PRC Reinfusion Bag   | 4          |
| 9104444                               | ATF 120 Fast Start Kit (AT3)<br>Includes AT3 Set, 120 micron collection reservoir,<br>ATS Suction Line, 10L Waste Bag, PRC Reinfusion Bag | 4          |
| 9108494                               | ATF 40 Fast Start Kit (AT1)<br>Includes AT1 Set, 40 micron collection reservoir,<br>ATS Suction Line, 10L Waste Bag, PRC Reinfusion Bag   | 4          |
| 9108504                               | ATF 120 Fast Start Kit (AT1)<br>Includes AT1 Set, 120 micron collection reservoir, ATS<br>Suction Line, 10L Waste Bag, PRC Reinfusion Bag | 4          |
| Individual Components and Accessories |   |            |
| 9005444                               | AT3 Autotransfusion Set   | 8          |
| 9005104                               | AT1 Autotransfusion Set   | 8          |
| 9108414                               | ATR 40 Collection Reservoir   | 8          |
| 9108474                               | ATR 120 Collection Reservoir  | 8          |
| 9108484                               | ATS Suction Line  | 8          |
| 9108434                               | ATO Oxygenator Line   | 20         |
| 9006284                               | Waste Bag 10 L  | 20         |
| 9005204                               | Reinfusion Bag 1000mL   | 20         |
| 9005164                               | Reinfusion Bag 1000mL w/Y Adapter   | 20         |
| 9108404                               | ATY Y Adapter   | 8          |
| 9108574                               | ATR Cap Set   | 120        |