



CATSmart[®]

Continuous Autotransfusion System

The Fresenius Kabi CATS[®]mart Continuous Auto Transfusion System is designed for intra- and post-operative autotransfusion.

Quick to start technology features auto-start functionality

Easy to operate, agile design

Consistently high packed red cells hematocrit

Efficient data management

Performance

The unique continuous red cell separation process is designed for recycling blood during and after surgery (e.g., cardiac, orthopedic, and vascular) and ensures:

- Consistently high PRC (Packed Red Cell) hematocrit > 60,^{1,2,3} excellent wash-out quality with removal rates*

Heparin	> 99 ⁹
Potassium	> 95 ^{3,5}
Free Hb	> 95 ^{1,2,3,4}
Non-emulsified fat	> 99 ^{6,7}
Albumin	> 95 ^{2,5,9}
- Minimal risk of fat embolism and cognitive dysfunctions^{6,7}
- Efficient processing of small blood volumes for pediatrics¹
- PRC availability for transfusion at any time
- Faster red cell salvage process compared to discontinuous techniques¹
- Easy to read values of incoming and outgoing hematocrit values and process parameters on screen to allow in-process analysis
- Adjustment of suction vacuum on screen for quick and easy response to changes
- Autostart blood processing automatically starts the wash program based on a preselected volume

* Related to Low Volume Wash and Smart Wash program; performance of CATS[®]mart wash programs are essentially equivalent to C.A.T.S.[®] plus³.



Workflow Efficiency

"One-fits-all"

Washing chamber saves time and simplifies the handling; suitable for all blood volumes.

Sensors

Continuously monitor incoming and outgoing hematocrit values and red cell separation performance.

Unique height adjustment of corpus

For user convenience.

Efficient data management

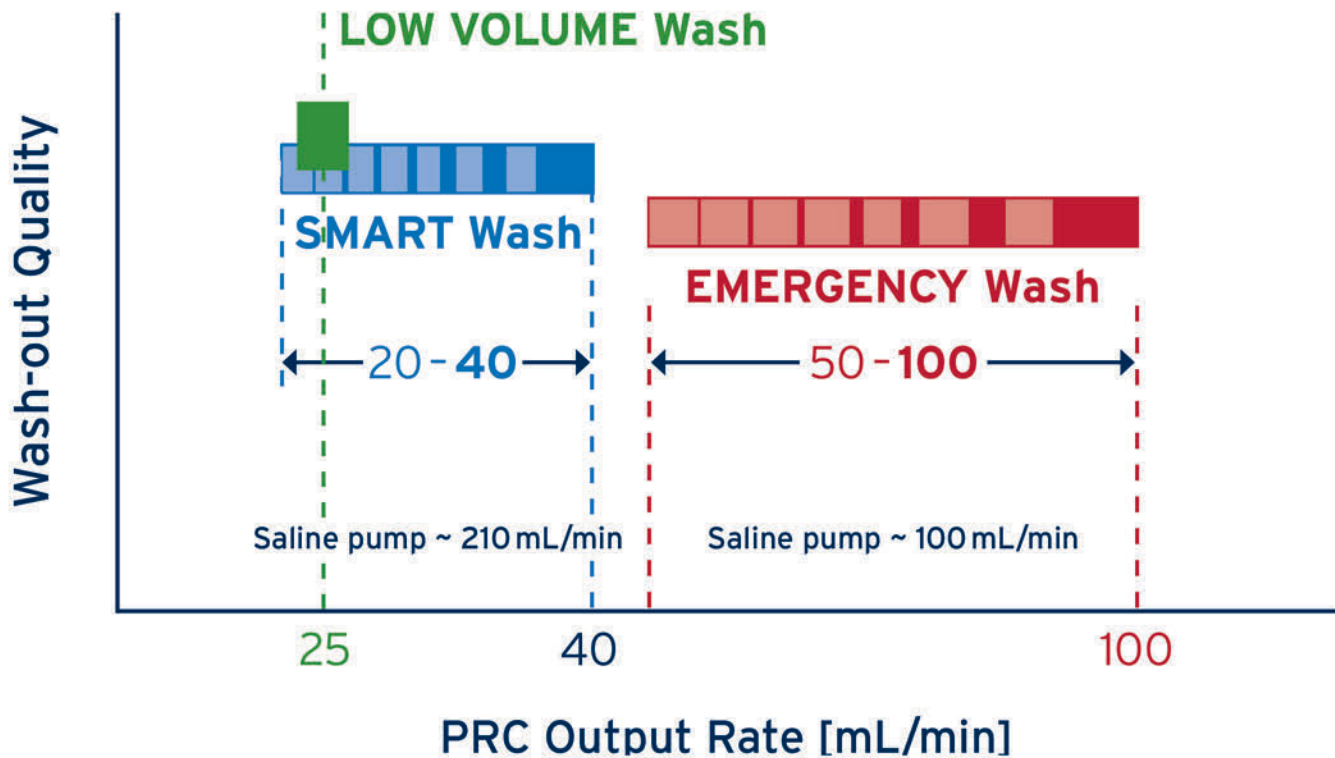
Bar code scanner and standard USB interface.

CATSmart[®]



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Consistency



Three specific wash programs

Low Volume Wash[®] is specially designed for pediatrics to process even small shed blood volumes containing about 40 mL¹ of red cells with a high recovery rate.

Smart Wash[®] ensures optimal balance between PRC output rate and wash-out performance. Standard program is recommended for the majority of surgical cases.

Emergency Wash[®] is the fastest cell salvage for quick access to washed PRC under emergency conditions.

1. Seyfried T, Breu A, Gruber M, Reipert J, Hansen E. Processing of small volumes in blood salvage devices. *Transfusion* 2014; 54: pp 2775
2. Nieuwenkamp C. Cell Salvage Quality in Continuous vs. Discontinuous Processing Devices. *Transfusion* 2014; 54 suppl2 p 93A
3. CATSmart in vitro verification data with banked blood - Fresenius-Kabi internal data file: 2015
4. Dong P, Che J, Li X, Tian M, Smith G. Quick biochemical markers for assessment of quality control of intraoperative cell salvage: a prospective observational study. *Journal of Cardiothoracic Surgery* 2014; 9: pp 86
5. Florio G, Valbonesi M, Lercari G, Frisoni R, Pollicardo N, Beraudo S, The Fresenius continuous autotransfusion system (CATS): preliminary studies and application. *The Int. J. of Artificial Organs*. 1996; Vol. 19, no. 7; pp 431
6. Booke M, van Aken, H, Storm M, Fritsche F, Wirtz S, Hinder F. Fat elimination from autologous blood. *Anesth Analg* 2001; 92: pp 341
7. Seyfried T, Haas L, Gruber M, Breu A, Loibl M, Hansen E. Fat removal during cell salvage: a comparison of four different cell salvage devices. *Transfusion early view* 23 FEB 2015|DOI: 10.1001/trf.13035
8. CATSmart user manual
9. CATSmart clinical evaluation - Fresenius-Kabi internal data file: 2015

Workflow Efficiency

Intuitive user guidance with movable touchscreen

Visualization of Incoming and outgoing hematocrit values and process parameters on screen

To allow in-process analysis for better patient management.

Adjustment of suction vacuum on screen using an integrated vacuum pump

Autostart blood processing

Automatically starts the wash program based on a preselected volume that allows the operator to focus on patient management.



CATSmart® Continuous Autotransfusion System

ORDERING INFORMATION

For more information, such as literature, technical details, and working procedures, as well as for equipment, please contact your local sales representative.

Autotransfusion Products

9005751	CATSmart®	-
Disposables		
9005103	AT3 Autotransfusion - Set	8/case
9005101	AT1 Autotransfusion - Set	8/case
9108471	ATR 120 Reservoir	8/case
9108411	ATR 40 Reservoir	8/case
9108571	ATR Cap Set	120 pc/outer box
9108481	ATS Suction line	8/case
9108501	ATF 120 Fast Start Kit with AT1	4/case
9108491	ATF 40 Fast Start Kit with AT1	4/case
9108503	ATF 120 Fast Start Kit with AT3	4/case
9108493	ATF 40 Fast Start Kit with AT3	4/case
9108552	ATV-70 Vacuum line	15/case
9108553	ATV-180 Vacuum line	12/case
9005361	Vacuum Adapter	-
9005141	PSQ Set	8/case
9108401	ATY Y-adapter	8/case
9108451	ATP Post OP Set	16/case
9108511	ATD Drainage Set	8/case
9108521	ATC Drainage Connector for ATC	30/case
9108431	ATO Oxygenator-Line	12/case
9006281	Waste bag 10 L	5/case
9005201	Reinfusion bag 1000 mL	20/case
9005161	Reinfusion bag with Y-Adapter	20/case
A2BB0500	BioR02 Plus BS	40 units

Accessories

9005781	Bar Code Scanner for CATSmart	1 unit
9005851	Vacuum Pump	1 unit
6780881	Bacterial Filter Paper	100 units
6799181	Hydrophobic Bacterial Filter	1 unit
M679011	Smoke Filter	1 unit
M649951	Overflow Protection	1 unit
9005771	Printer for CATSmart	1 unit
9005801	Black Ribbon for Printer CATSmart	1 unit
9005791	Paper for Printer CATSmart	1 unit
9005761	Tray for CATSmart	1 unit
9005861	ASM-Autostart Reservoir Holder cpl.	1 unit
M690991	ATH Holder	1 unit
900587	Cover Centrifuge Lid	1 unit
M689311SP	Extended IV Pole (204 cm/80.3 in)	1 unit
M689312SP	Extended IV Pole (204 cm/80.3 in) - Set	2 units

Technical Data

Wash Programs	PRC Flow
Low Volume Wash	30 mL/min
Smart Wash	28 mL/min
Emergency Wash	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	1400 - 2400 RPM



CE marked Class IIa according to
MDD 93/42/EEC
as amended by 2007/42/EC

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