Autotransfusion Products

Order-No.	Description
9005401	Fresenius C.A.T.S®plus, 230V/50Hz
9005081	Fresenius C.A.T.S®plus, 120V/60Hz (USA)
9029071	Vacuum pump Bora, 45 l/m, 230V/50Hz for C.A.T.S®plus
9029061	Vacuum pump Bora, 45 l/m, 115V/60Hz (USA) for C.A.T.S®plus
9050021	Vacuumregulator, Fina VAC 800, 1 each
9029151	USB-Mo.U.S.E data transfer to PC
9029161	Scanner for C.A.T.S®plus data entry for lot.nr and patient ID
9108441	ATH Reservoir holder, 1 each
9005101	AT1 Autotransfusion set. Washing chamber and tubing set for cell salvage with Fresenius C.A.T.S®plus 8/case
9108491	ATF 40 Fast start kit. 4/case
9108501	ATF 120 Fast start kit. 4/case
9108411	ATR 40 Collection Reservoir. 8/case
9108471	ATR 120 Collection Reservoir. 8/case
9108481	ATS Suction line. Aspiration and anticoagulant tubing set. 8/case
9108551	ATV Sterile vacuum line. 12/case
9005201	Reinfusion bag 1000 ml. 20/case
9005161	Reinfusion bag with Y-adapter 1000 ml. 20/case
9108401	ATY Y-adapter. 8/case
9108451	ATP Post-Op set for postoperative collection of drainage blood. 8/case
9006281	Waste Bag 10 liter. 5/case
9005141	PSQ Plasma sequestration set. 16/case
9005151	PSQ-DD Plasma sequestration set for direct draw. 10/case

Technical information

Wash Programs:	RCC Flow
High Quality Wash	20 – 40 ml/min
Low Volume Wash	25 ml/min
Quality Wash	20 – 45 ml/min
High Flow Wash	30 – 70 ml/min
Emergency Wash	50 – 100 ml/min

Transfer Programs:	Blood Flow
Blood Transfer 190	190 ml/min
Blood Transfer 350	350 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

References

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6. Tawfick WA, O'Connor M, Hynes N, Sultan S. Implementation of the Continuous AutoTransfusion System (C.A.T.S®) in Open Abdominal Aortic Aneurysm Repair: An Observational Comparative Cohort Study. Vascular and Endovascular Surgery 2008;42:32-39.
7. Dahmani S, Orliaguet GA, Meyer PG, Blanot S, Renier D, Carli PA. Perioperative blood salvage during surgical correction of craniosynostosis in infants. British Journal of Anaesthesia 2000;85:550-555.
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9. Florio G, Valbonesi M, Lercari G, Frisoni R, Pollicardo N, Beraudo S. The Fresenius continuous autotransfusion system (C.A.T.S®): preliminary studies and application. The International Journal of Artificial Organs 1996;19:431-434.
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C.A.T.S®plus

AUTOTRANSFUSION SYSTEM

The continuous
blood flow technique

FRESENIUS KABI
caring for life

C.A.T.S®*plus* – the continuous **blood flow technique**

Complete
fat* elimination[1,2,3,4,5]

The only one
using continuous blood flow technique[** 6]

One set
for all applications[7,8]

Consistently
high haematocrit[9,10]

C.A.T.S®*plus* is the only autotransfusion device on the market using continuous blood flow technique. The C.A.T.S®*plus* continuous flow concept is a patented technique for washing blood in various types of surgeries, which makes it possible to use one set only, for all applications independent of the bleeding volumes. More than 2 million patients have been treated with Fresenius C.A.T.S® devices#.

* non-emulsified fat

** Fresenius Kabi patented. The C.A.T.S® continuous flow concept is a patented technique for washing blood in various types of surgeries, which makes it possible to use only one set for all applications independent of the bleeding volumes.

\# internal data

C.A.T.S®*plus* is the expert for **these application areas:**

CARDIAC SURGERY

- Ultrafast processing[10,11]
- Complete fat elimination[1,2,3,4,5]
- Consistently high haematocrit[9,10]
- Lowest cell trauma[12]

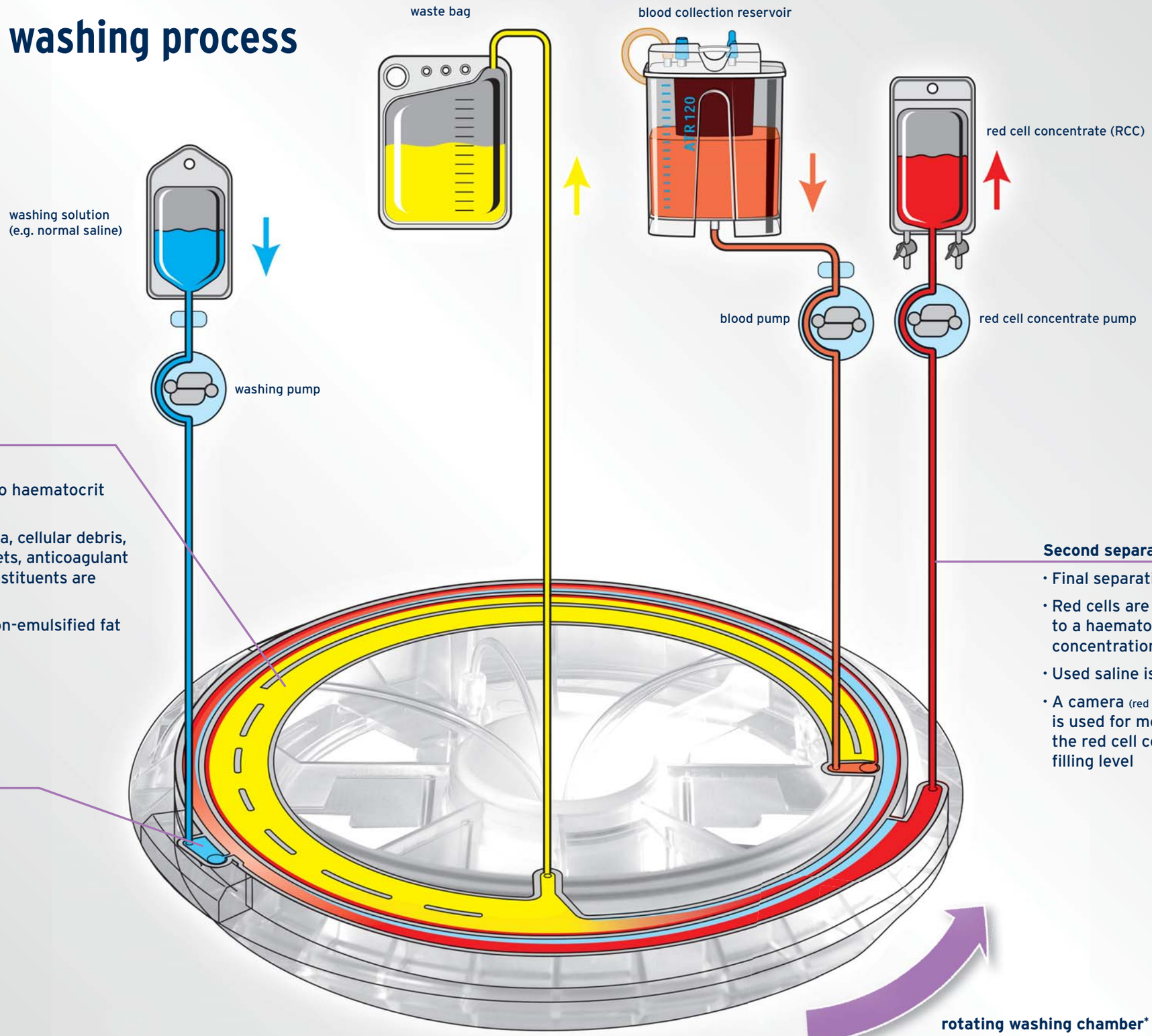
ORTHOPAEDIC SURGERY

- Volume independent[7,8]
- One set for all applications[7,8]
- Low volume wash[13]

OTHER APPLICATION AREAS
where C.A.T.S® is being used

- Trauma
- Transplant
- Vascular surgery
- Obstetrics
- Paediatrics

C.A.I.S®plus – the continuous **washing process**



1 First separation phase

- Initial separation stage
- Blood is concentrated to haematocrit of approx. 80%
- Most of the blood plasma, cellular debris, white blood cells, platelets, anticoagulant and other unwanted constituents are separated out
- Complete removal of non-emulsified fat

2 Washing phase:

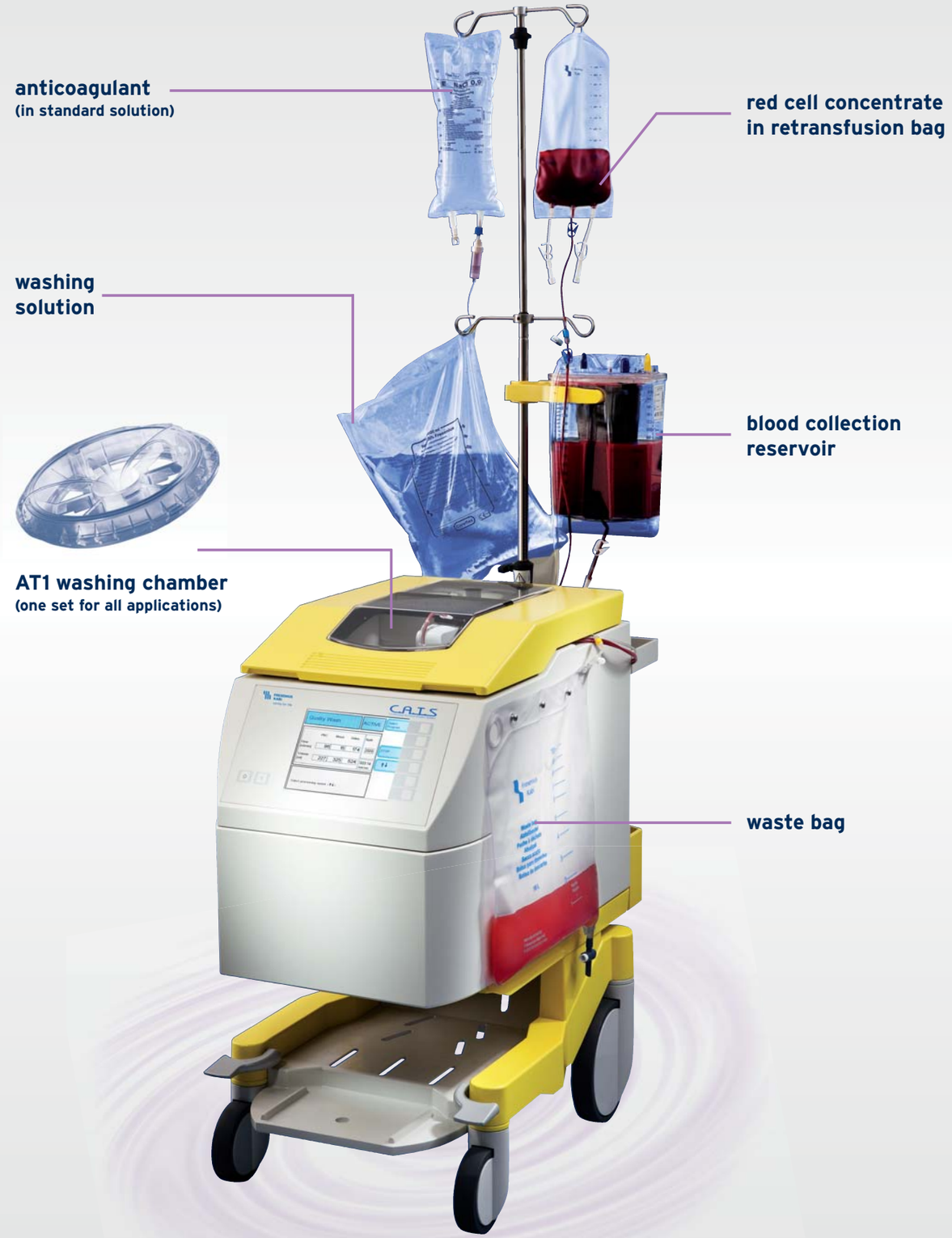
- Red blood cells are resuspended with saline
- Further removal of blood plasma

3 Second separation phase

- Final separation stage
- Red cells are packed to a haematocrit concentration of 60–65%
- Used saline is removed
- A camera (red cell sensor) is used for monitoring the red cell concentrate filling level

rotating washing chamber*

* the chamber is depicted upside down for illustrative purposes



C.A.T.S®*plus* – the full range **of benefits**

Complete fat elimination

The continuous washing process eliminates non-emulsified fat originating in bone marrow or subcutaneous tissue.

Plasma sequestration

Fully automatic procedure for separating patient blood into packed red cells, platelet rich plasma and platelet poor plasma.

Ultrafast processing

The emergency wash program produces up to 100 ml of packed red cells per minute (uninterrupted operation).

Easy and safe set up

The easy, safe set up and automatic functions guarantee fast and safe handling, even in critical situations.

Consistently high haematocrit

The innovative technology and resulting continuous process gives C.A.T.S®*plus* an edge on consistently providing autologous red cell concentrate with consistently high haematocrit.

Data transfer management

C.A.T.S®*plus* optionally includes a dedicated bar code scanner and USB stick that can easily be used to transfer data to a computer or hospital management system.

One set for all applications

The continuous process allows users to perform quantitative processing with no leftover blood – ideal for low volumes and paediatric use.