

## AFERsmart Plus™

Therapeutic apheresis system

AFERsmart Plus<sup>™</sup> allows you to perform the following treatments:

- Therapeutic Plasma exchange (Plasmapheresis)
- Double filtration plasmapheresis
- Selective apheresis
- Double filtration plasmapheresis and adsorption
- Hemoperfusion

## AFERsmart Plus™ Main features:

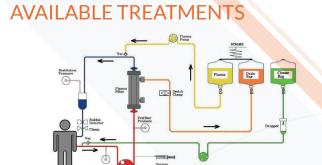
- Air-free pressure transducers (type DOME)
- Pre-assembled line kit
- Three peristaltic pump
- One syringe pump
- Double scale
- Heparin and/or citrate anticoagulant
- Proprietary self-adjusting clamps for plasma flow control (plasmaphereris)
- Automatic rinsing procedure of the plasma fractionator
- KALOS heater for blood/replacement fluid (optional)
- External console (optional)





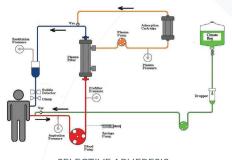


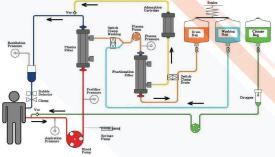


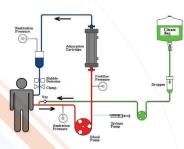


THERAPEUTIC PLASMAPHERESIS









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DOUBLE FILTRATION PLASMAPHERESIS AND ADSORPTION

**HEMOPERFUSION** 

	Operating conditions	Temperature from 15°C to 35°C   Relative humidity from 35% to 75% Atmospheric pressure from 700 to 1060 hPa				
	Transport conditions	Temperature from -10°C to +50°C   Relative humidity from 35% to 85% Atmospheric pressure from 500 to 1060 hPa				
	Power supply	230 VCA (±10%)   110 VCA (±10%)   50Hz/60Hz				
	Device lifetime	10 years				
	Power adsorption	Power adsorption in the worst conditions is 110 VA				
	Mechanical structure	Height: 365 mm   Width: 375 mm;   Depth: 300 mm Trolley dimensions: Trolley Base: 440 x 500 mm Maximum height pole: 1970 mm Trolley weight: 36Kg				
	Blood pump	Maximum flow range: [0 to 450] ml/min   Resolution: 5 ml/min				
	Plasma pump	[0 to 200] ml/min Adjustable flow range (by the operator): [0 to 30] % in relation to blood pump speed Resolution: 1ml/min				
	Citrate pump	Reachable flow range: [0 to 2000] ml/h   Resolution: 1 ml/min				
	Syringe pump	Supported syringes: 30 ml   Flow rate: [0.20] ml/h Sensitivity: 0.1 ml   Accuracy: +/- 0.2 ml or 2%				
	Venous pressure	Range: [-100, +500] mmHg   Sensitivity: 1 mmHg   Displayed resolution: 5 mmHg				
	Venous pressure (type DOME)	Range: [-300, +300] mmHg   Sensitivity: 1 mmHg   Displayed resolution: 5 mmHg				
	Pre-filter pressure (type DOME)	IRange: [-100, +500] mmHg   Sensitivity: 1 mmHg   Displayed resolution: 5 mmHg				
	Plasma pressure (type DOME)	Range: [-100, +500] mmHg   Sensitivity: 1 mmHg   Displayed resolution: 5 mmHg				
	UF pressure (type DOME)	Range: [-300, +500] mmHg   Sensitivity: 1 mmHg   Displayed resolution: 5 mmHg				

Bubble detector	Ultrasonic sensor. Sensitivity: 0.1 ml (at the flow rate of 100 ml/min)				
Washing and draining scale	Range: [0.6] kg   Sensitivity: 1g   Accuracy: ±20 g or ±1%				
Washing clam	Switch clamp with 4 independent ways Maximum closing pressure: 600 mmHg				
Drain clam	Switch clamp with 2 independent ways Maximum closing pressure: 600 mmHg				
Blood and hemoglobin detector	Detects traces of blood or hemoglobin in the ultra-filtered fluid  Optical sensor based on the spectroscopic analysis  Sensitivity: 0.5% of blood or 0.5% of hemoglobin				
Blood detector	Optical sensor able to detect blood inside the venous line. Sensitivity: 0.5%				
Drip sensor	Check the citrate flow by counting the drops. $ Drop \ volume = 50 L + -10 \% $				
User interface	The HMI consists of a colourful, integrated 5.7" display, a rotary selector to set the parameters and a membrane keyboard containing 3 keys for the most critical functions: blood pump's start and stop, alarm reset, assistance on the current operating alarm.				
Serial port RS232	Used to communicate with the external console and for software upgrades				
External console (optional)	A 10" external console.  Reads data about the device treatment and pictures the most important informations for the operator.  Saves the informations in an internal register and provides the automatic download of it on a USB stick.				

AFERSMART PLUS™ DISPOSABLES				
Code				
M90420R	AFERsmart Plus™ DFPP line with plasma heating bag			
M90422	AFERsmart Plus™ selective apheresis line			
M90424	AFERsmart Plus™ double filtration adsorption line			
M90426	AFERsmart Plus™ HEMOPERFUSION line			
M90428	AFERsmart Plus™ PLASMA EXCHANGE line			

## MANUFACTURER

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