

THE MOST GENTLE  
SAFE AND VERSATILE  
SOLUTION FOR  
ECMO AND ECLS







The most **gentle**, **safe** and **versatile** solution for ECMO (Extracorporeal Membrane Oxygenation) and ECLS (Extracorporeal Life Support) enabling all HCPs (Health Care Providers) to easily manage any situation in different environments



## GENTLE

**Features state of the art technology for optimal biocompatibility**

Magnetic levitating pump technology for **minimized hemolysis**

Phosphorylcholine coated circuit for **reduced platelets consumption**

Up to 14 days disposable validation for **long term procedures**



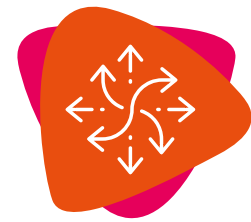
## SAFE

**Designed for optimal patient safety**

Non invasive sensing system for **optimal patient monitoring**

Integrated back-up system for **extra safety** in case of failure

Auxiliary external battery for **extra procedural time** in case of emergency



## VERSATILE

**Portable and flexible to address a variety of different practices**

Compact design for **easy transport**  
**Optimized circuits** for ECMO and ECLS

Proprietary Leonardo trolley for **convenient transportability across different hospital facilities**







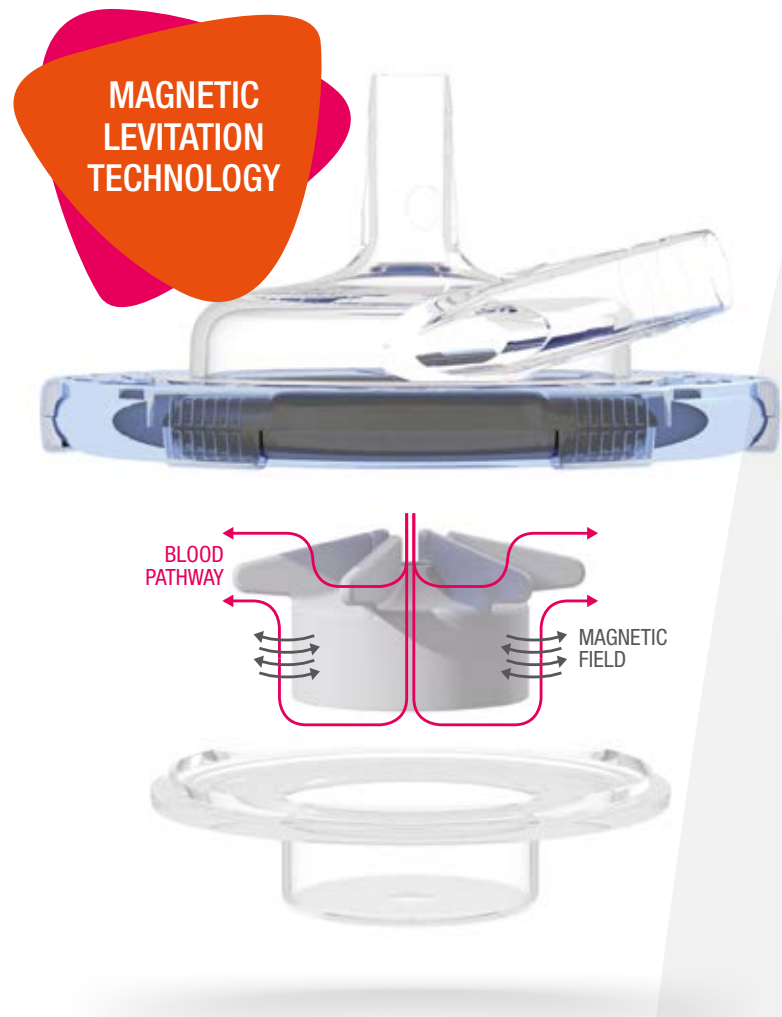
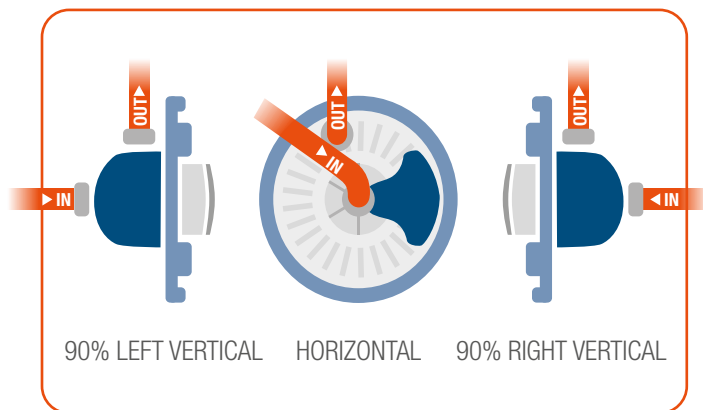
**GENTLE**

**Features state of the art  
technology for optimal  
biocompatibility**

## MAGNETIC LEVITATING PUMP TECHNOLOGY FOR MINIMIZED HEMOLYSIS

The impeller's contact-free environment ensures:

- ♥ Optimal flow dynamics
- ♥ Reduced blood stagnation areas
- ♥ Minimal friction and shear stress



Precise rotor control and stability is guaranteed by 32,000 controls every second.

The magnetic field is automatically adjusted to compensate for external movements and bumps.



## Technical Features

### Limitations

Blood flow range:	0-10 l/min
Centrifugal pump speed:	0-5000 rpm
Blood pathway volume:	39 ml
Max blood pathway pressure	800 mmHg (107 kPa)
Patient weight:	≥20 kg

### Ports

Blood inlet:	3/8" (9.53 mm)
Blood outlet:	3/8" (9.53 mm)
P <sub>drain</sub> pressure monitoring port (on dedicated configuration only):	Female Luer Lock ISO 594-2

### Materials in contact with blood

Housing:	Polycarbonate (PC)
Rotor:	Polycarbonate (PC)
Luer cap:	Polyethylene (PE)
Biocompatible coating:	Phosphorylcholine (PC)

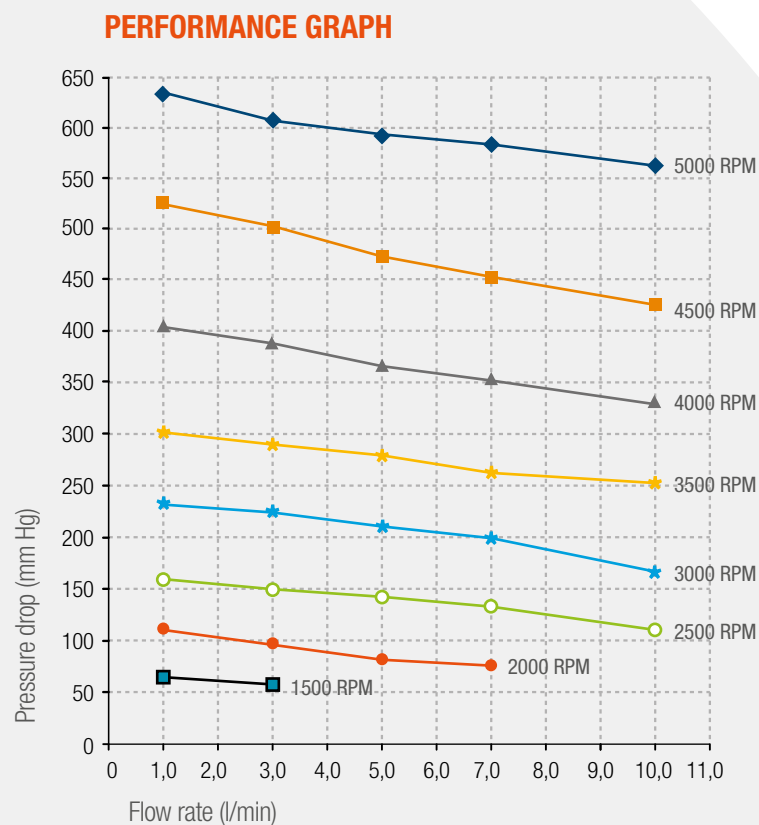
### Hydraulic performance data: PERFORMANCE GRAPH

Data gathered from test in accordance with ISO 18242 standard.

Conditions: Anticoagulated Bovine Blood,

Hb =  $12 \pm 1$  g/dL,

Temp.  $37 \pm 1$  °C.



## PHOSPHORYLCHOLINE COATED CIRCUIT FOR REDUCED PLATELETS CONSUMPTION

Phosphorylcholine is the predominant lipid headgroup found within the outer layer of cell membranes.

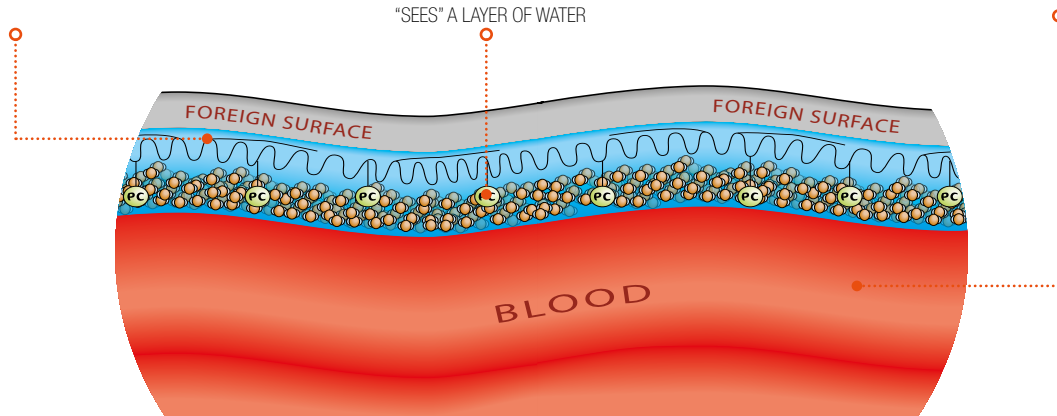
Phosphorylcholine has a natural affinity for water and binds water tightly around itself.

- ♥ **Reduces platelet consumption remarkably.**<sup>1</sup>
- ♥ **Phosphorylcholine coating is suitable for patients with acute HIT (Heparine Induced Thrombocytopenia)**<sup>2</sup>.

ALKALINE CHAINS SPREAD ACROSS THE SURFACE YIELDING A STABLE COATING THROUGH HYDROPHOBIC INTERACTIONS

LAYER OF HYDRATION AROUND PC  
- WITH A COATED SUBSTRATE THE BLOOD THEREFORE "SEES" A LAYER OF WATER

ZWITTERIONIC PC GROUPS EXPRESSED OUTWARDS FROM THE SURFACE



### REFERENCES

1. R. Lorusso et al. **Effects of phosphorylcholine coating on extracorporeal circulation management and postoperative outcome: a double-blind randomized study.** Interactive CardioVascular and Thoracic Surgery 8 (2009) 7–11.
2. F.Pappalardo et al. **Bioline® heparin-coated ECMO with bivalirudin anticoagulation in a patient with acute heparin-induced thrombocytopenia: the immune reaction appeared to continue unabated.** Perfusion 2009; 24: 135–137





## UP TO 14 DAYS DISPOSABLE VALIDATION FOR LONG TERM PROCEDURES

The optimized circuits for ECMO and ECLS are validated for 14 days, ensuring **optimal performance throughout the entire period.**







**SAFE**

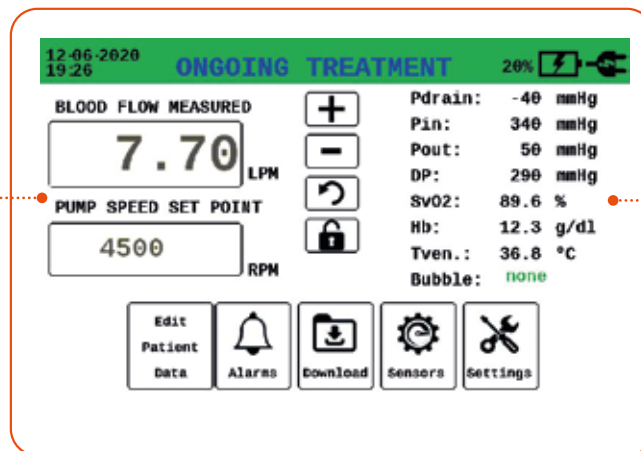
**Designed for optimal  
patient safety**

## NON INVASIVE SENSING SYSTEM FOR OPTIMAL PATIENT MONITORING

The ECMOLIFE system is equipped with 5 non invasive sensors ensuring continuous monitoring of 10 parameters displayed simultaneously and in real time, providing the operator with **full control of the procedure**.

### 10 Parameters displayed

- ① Blood flow (LPM)
- ② Pump speed (RPM)



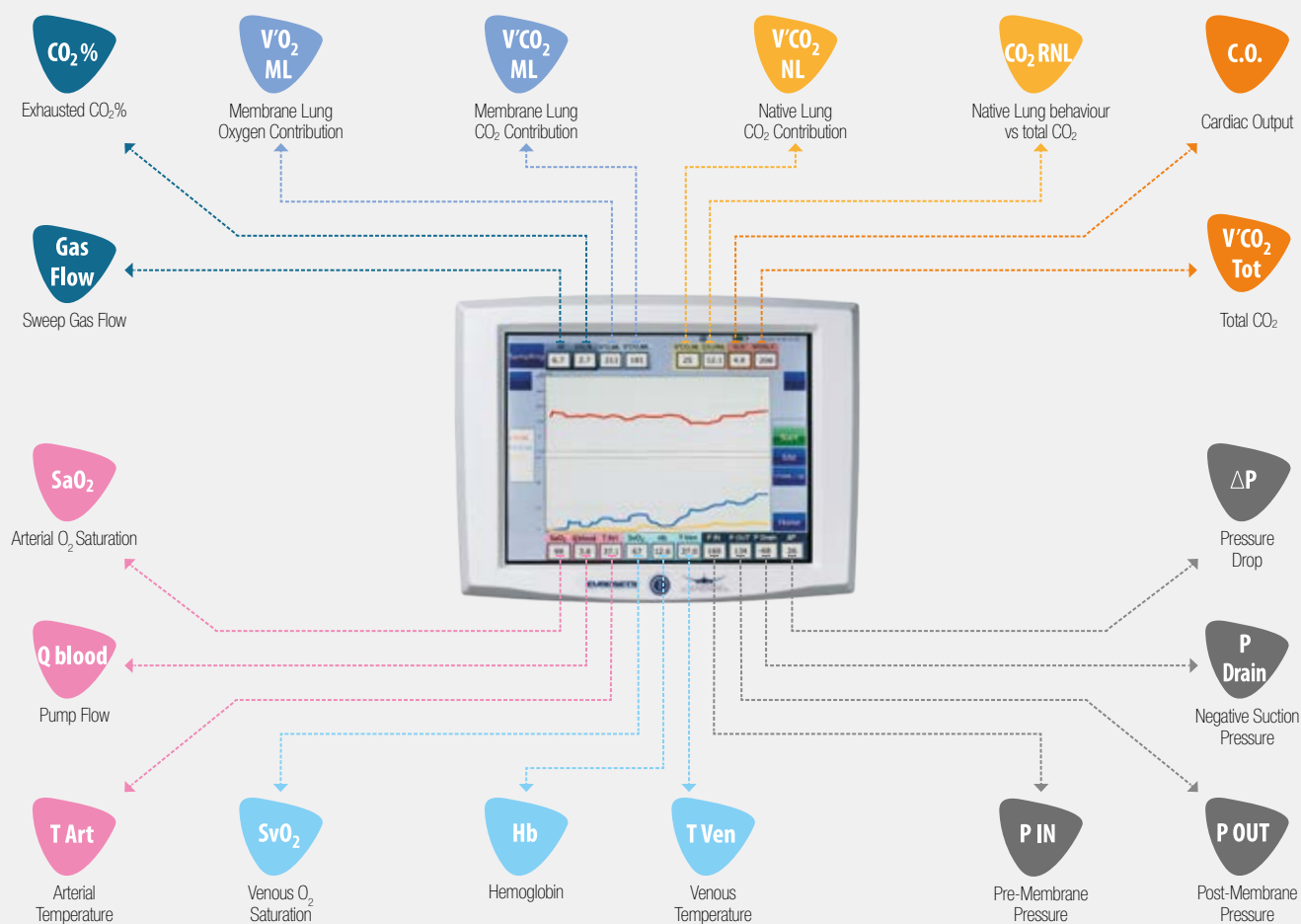
- ③ Drainage pressure ( $P_{DRAIN}$ )
- ④ Pre oxygenator pressure ( $P_{IN}$ )
- ⑤ Post oxygenator pressure ( $P_{OUT}$ )
- ⑥ Oxygenator Pressure drop
- ⑦ Oxygen venous saturation ( $SVO_2$ )
- ⑧ Hemoglobin (HB)
- ⑨ Blood venous temperature ( $T_{VEN}$ )
- ⑩ Air bubble detector



## ECMOLIFE can be connected in the ICU to the LANDING ECMO adding an additional cuvette along the arterial line.

LANDING ECMO displays 18 parameters in real time for optimal patient monitoring. Thanks to these 18 parameters, HCPs can easily evaluate:

- Procedure efficacy
- Metabolic-hemodynamic patient's pattern
- Interdependency between the Membrane Lung and the Native Lung





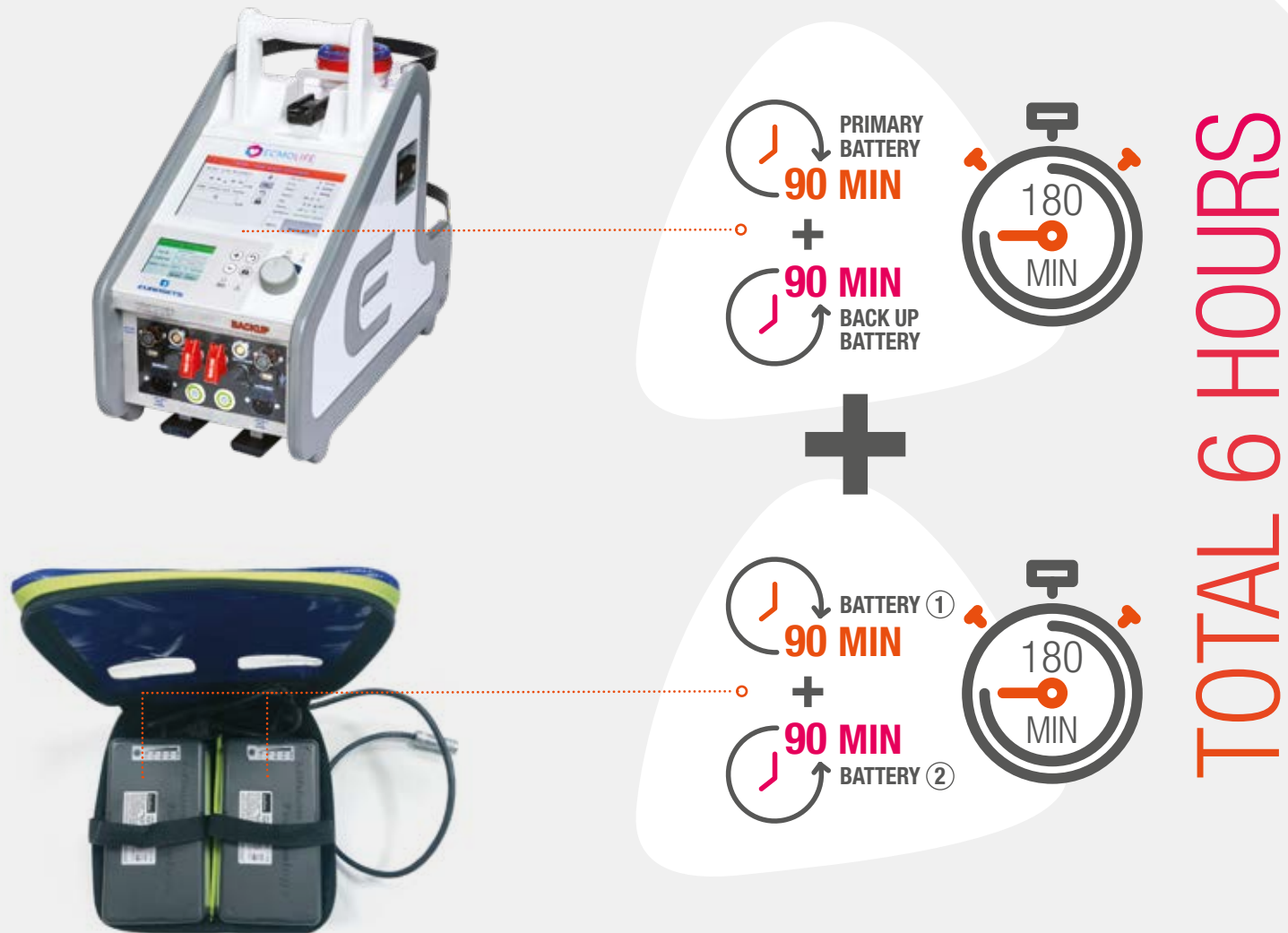
## INTEGRATED BACK UP SYSTEM FOR EXTRA SAFETY IN CASE OF FAILURE

- ♥ The ECMOLIFE Pump **is the only device available on the market with an integrated back-up system that acts as a perfectly functioning replacement in case of failure**, ensuring increased patient safety.
- ♥ Compared to standard manual hand cranks, the integrated back-up system ensures superior comfort for HCPs.





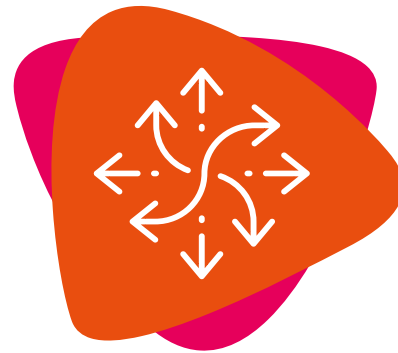
## AUXILIARY EXTERNAL BATTERY FOR EXTRA PROCEDURAL TIME IN CASE OF EMERGENCY











## VERSATILE

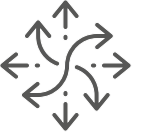
Portable and flexible  
to address a variety  
of different practices

## COMPACT DESIGN FOR EASY TRANSPORT



ECMOLife is approved for both intra and inter hospital transport. The device not only meets the existing mandatory regulations, but also underwent testing according to UNECE Regulation No.10 to further confirm its electromagnetic compatibility. Test conducted ensure ECMOLife safety during transport.





## OPTIMIZED CIRCUITS FOR ECMO AND ECLS

The circuits for ECMO and ECLS come completely pre-connected and assembled in a kit.

Oxygenator and pump are located on a dedicated bracket assuring:

- ♥ Easy and quick disposable set up
- ♥ Clear view of circuits integrity



## Dedicated Cannulae solution for ECMO and ECLS

**30**  
days  
validated



Revas Venous  
Femoral Cannula



Revas Arterial  
Femoral Cannula

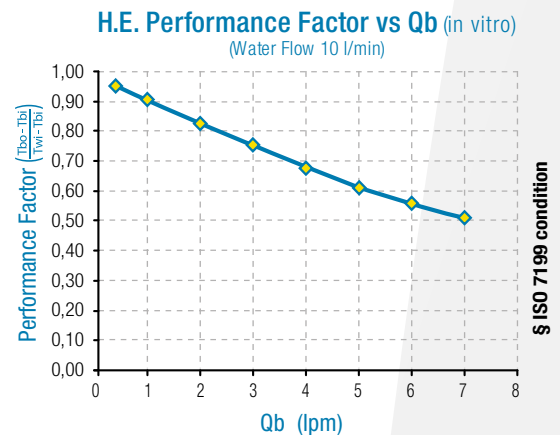
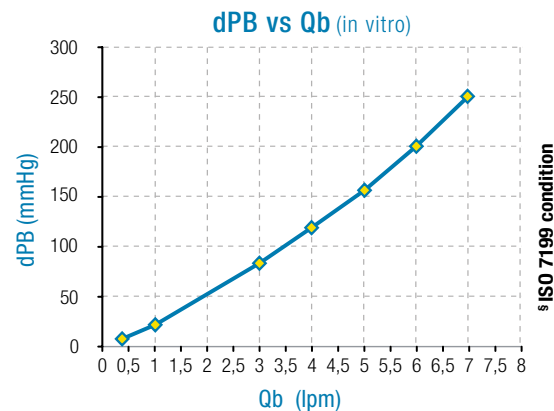
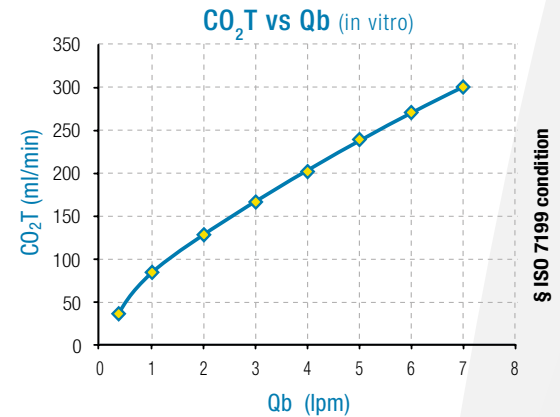
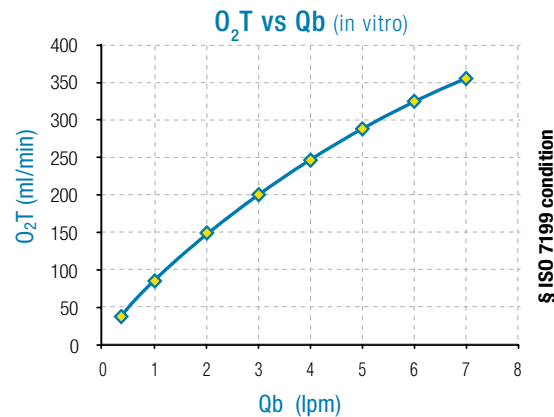


## 14 Days ECMO oxygenator module

The ECMO adult oxygenator is clinically proven to be an efficient solution for prolonged cardio-respiratory support <sup>1,2,4</sup> and is **highly biocompatible**<sup>3</sup>.



**14**  
days  
validated



### REFERENCES

1. S.Calvi et al. **55 days ECMO support for post-cardiotomy, by-ventricular failure: a case report.** Abstract presented at 14<sup>th</sup> FEECT congress, 2011.
2. Nagi el Shouki, M.Stiller. **Case report of 19 days extra corporeal life support with a new ECMO oxygenator.** Abstract presented at 14<sup>th</sup> FEECT congress, 2011.
3. M.Pieri et al. **A new phosphorylcholine-coated polymethylpentene oxygenator for extracorporeal membrane oxygenation: a preliminary experience.** Perfusion 2012; Volume: 28 issue: 2, page(s): 132-137.
4. M.Belliato et al. **A brief clinical case report of real-time monitoring of oxygenator performances and patient-machine interdependency during a prolonged VvECMO support.** J Clin Monit Comput. 2017 Oct;31(5):1027-1033



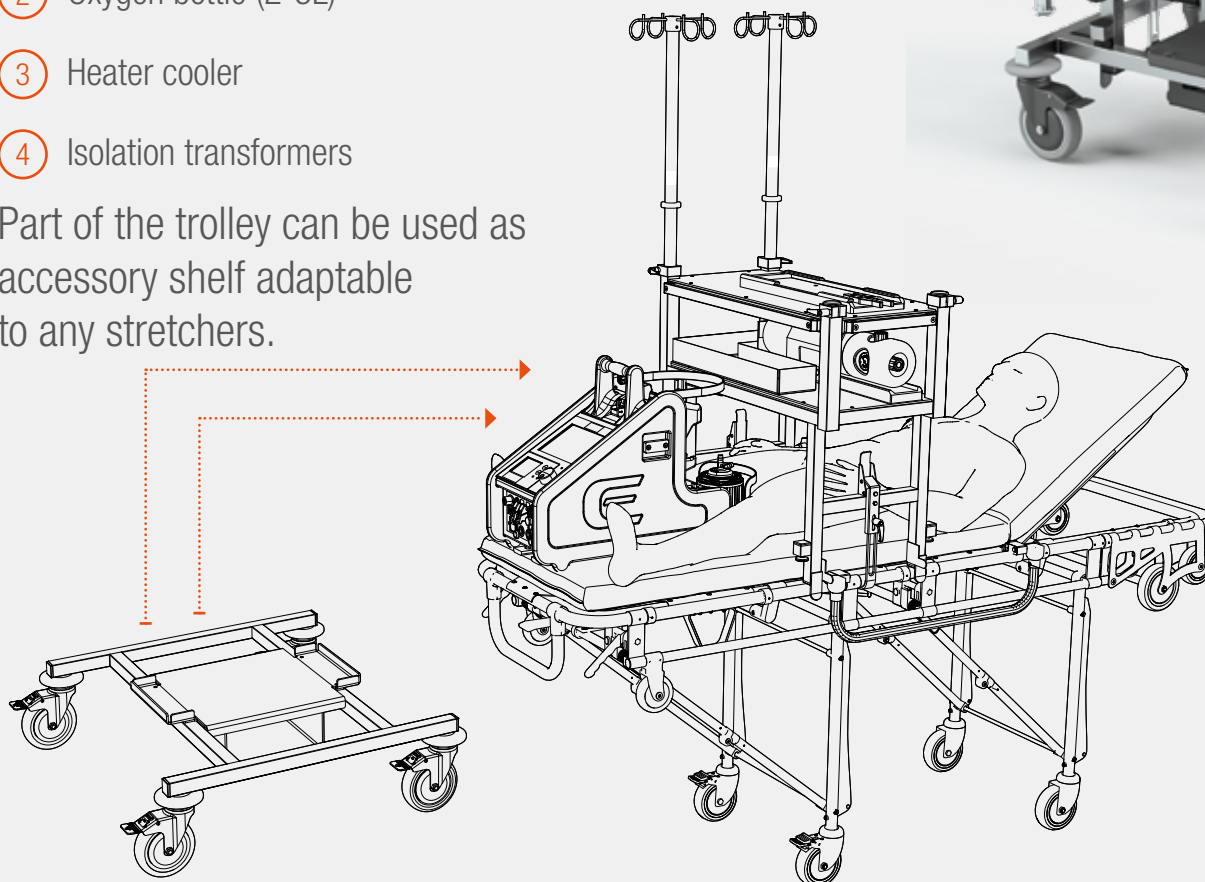
## THE PROPRIETARY LEONARDO TROLLEY FOR CONVENIENT TRANSPORTABILITY ACROSS DIFFERENT HOSPITAL FACILITIES

The Leonardo trolley has been designed **to facilitate easy transportation accross hospital facilities.**


















Leonardo consists of 2 IV Poles and 4 level floors to hold:


- ① ECMOLIFE console
- ② Oxygen bottle (2-5L)
- ③ Heater cooler
- ④ Isolation transformers

Part of the trolley can be used as accessory shelf adaptable to any stretchers.






ORDERING GUIDE

REUSABLE			
CODE	DESCRIPTION	N°/PACK	
EU5086	ECMOLIFE SYSTEM	1	
	includes: Console	1	
	Motor driver	2	
	Clamp on transducer sct 3/8" x 3/32"	2	
	Air sensor 3/8" x 3/32" ecls	1	
	Bracket	1	
	Venous probe	1	
	Ecmolife pressure sensor cable	3	
	Logical pressure transducer	3	
	Holder for reusable pressure transducer	3	
	Ecmolife power cord EU	2	
EU5093	LEONARDO Trolley	1	
	ECMOLIFE Cables Holder	1	
	includes: REOMED 1000 isolating trans-formers 1000VA	1	
	REOMED Plug C13-C14	2	
EU10775	ECMOLIFE Power Cord GB	1	
2M85274	Holder with BAR 25x10 mm	1	 
EU3899	ECMOLIFE Auxiliary batteries Kit with transport bag	1	
EU2511	ECMOLIFE Holder Motor Driver	1	

 Product not manufactured by EUROSETS S.r.l. - The CE mark, if applicable, is applied by the manufacturer.



REUSABLE			
CODE	DESCRIPTION		N°/PACK
R229P01-010	MAX BLEND 0-15 LPM		1 *
R100P26	Bracket, Pole mount, gas blender		1 *
R129P91	Air Tube		1 *
R129P94	Oxygen Tube		1 *
R219P31	3 in 1 single pack (connector gas outlet)		1 *
R219P31	ECOMLIFE HEATER COOLER		1
includes: HC Unit			1
UK and EU Power Supply Cables			1
Hoses 1,5m (x2)			1
Hanses connection tube			1
Water discharge hose (female)			1
EU3943	Hoses 3m		2
EU3898	ECMOLIFE Ambulance Plate holder		1
EU3953	ECMOLIFE Ambulance 24V Power		1

SINGLE USE			
CODE	DESCRIPTION		N°/PACK
14AG70232	ECMOLIFE ECMO tubing set Includes: Oxy, pump, circuit, press. transducers Metallux 3to1		1
14AG70232/SM	ECMOLIFE ECMO tubing set Includes: Oxy, pump, circuit, press. transducers Smith Medical		1
14AG70231/SM	ECMOLIFE VAS tubing set Includes pump, circuit, press. transducers Smith Medical		1
EU5083	ECMO ADULT console Sterile (Stand alone ECMO Oxy)		2
AG5078	ECMOLIFE centrifugal pump (without luer port)		1
AG5079	ECMOLIFE centrifugal pump W/Pdrain (with luer port)		1
EU1589	Smith Medical sigle use pressure transducer (CE0473 - Smith Medical code: MX960XXP1)		1 *



## EUROSETS EUROPE

### ITALY

Eurosets S.r.l.  
Strada Statale 12, 143  
41036 Medolla (MO)  
Italy  
Ph: +39 0535 660311  
Fax: +39 0535 51248  
info@eurosets.com

### BENELUX

Eurosets Benelux  
Winstar Park,  
Rue Provinciale, 62  
1301 Bierges (Wavre)  
Belgium  
Ph: +32 10237993  
info.nl@eurosets.com  
info.be@eurosets.com

### FRANCE

Eurosets France Sarl  
Immeuble LE FONTENOY  
96, Boulevard Vivier  
Merle  
69423 LYON Cedex 03  
Ph: +33 962191542  
Fax: +33 970066573  
info.fr@eurosets.com

### GERMANY

Eurosets GmbH  
Industriestr. 29  
82194 Gröbenzell  
Ph: +49 81426671227  
Fax: +4981426671229  
info.de@eurosets.com

## EUROSETS ASIA

### CHINA

Eurosets (Suzhou) Medical Device Ltd.  
Suite 1308-2, The Summit (South Block)  
No. 119, Suzhou Avenue West,  
Suzhou Industrial Park - 215000, Greater China.  
苏州工业园区苏州大道西119  
号苏悦广场南楼1308-2, 215000,  
更大的中国  
info.cn@eurosets.com



Prodotto da  
Manufactured by  
Fabriqué par  
Hersteller  
Fabricado por

Eurosets s.r.l.  
Strada Statale 12, n°143  
41036 Medolla (MO) Italy  
Tel: +39 0535 660311  
Fax: +39 0535 51248  
E-mail: info@eurosets.com  
eurosets.com

STERILE EO



Latex free



Distribuito da  
Distributed by  
Distribué par  
Vertrieb  
Distribuido por