



THE MOST GENTLE,  
SAFE AND VERSATILE  
SOLUTION FOR  
ECMO AND ECLS





FROST & SULLIVAN

BEST  
2021 PRACTICES  
AWARD

GLOBAL EXTRACORPOREAL  
MEMBRANE OXYGENATION (ECMO)  
NEW PRODUCT INNOVATION AWARD



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



**GENTLE**

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

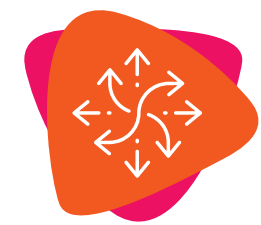
- Magnetic levitating pump technology for **minimized hemolysis**
- Phosphorylcholine coated circuit for **reduced platelets consumption**
- Up to 14 days disposable validation for **long term procedures**



**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
- Unique transport options** to address every therapeutic need across different hospital facilities



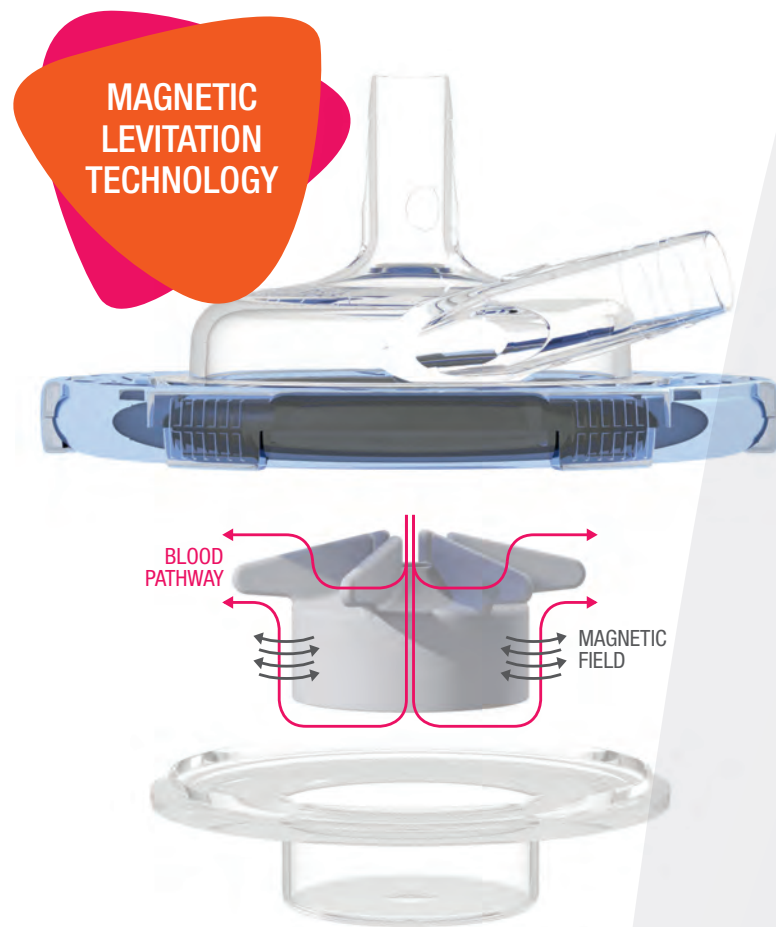
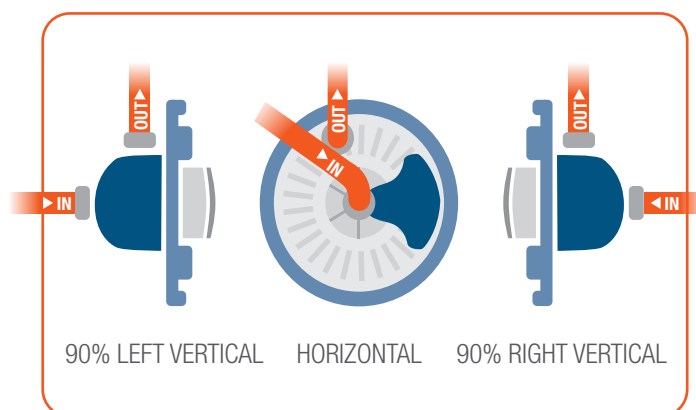
**GENTLE**

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

## MAGNETIC LEVITATING PUMP TECHNOLOGY FOR MINIMIZED HEMOLYSIS<sup>1</sup>

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

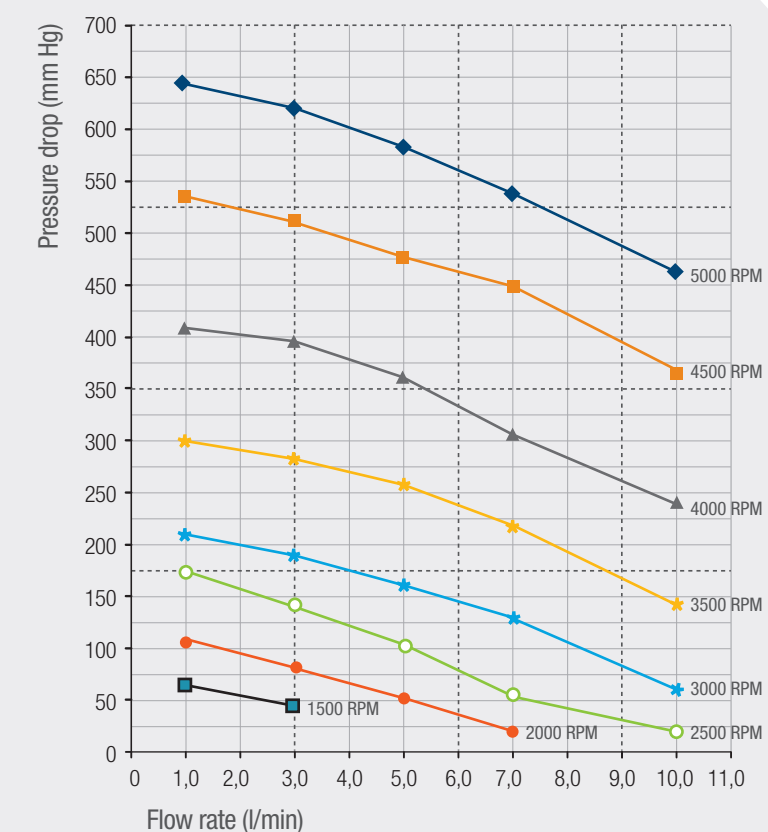
### Materials in contact with blood

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

### Hydraulic performance data: PERFORMANCE GRAPH

Pressure differential vs. flow rate (average of TIME 0 samples data).  
Data gathered from test in accordance with ISO 18242 standard.  
Conditions: Anticoagulated Bovine Blood, Hb = 12±1 g/dL, Temp. 37±1°C.

PERFORMANCE GRAPH



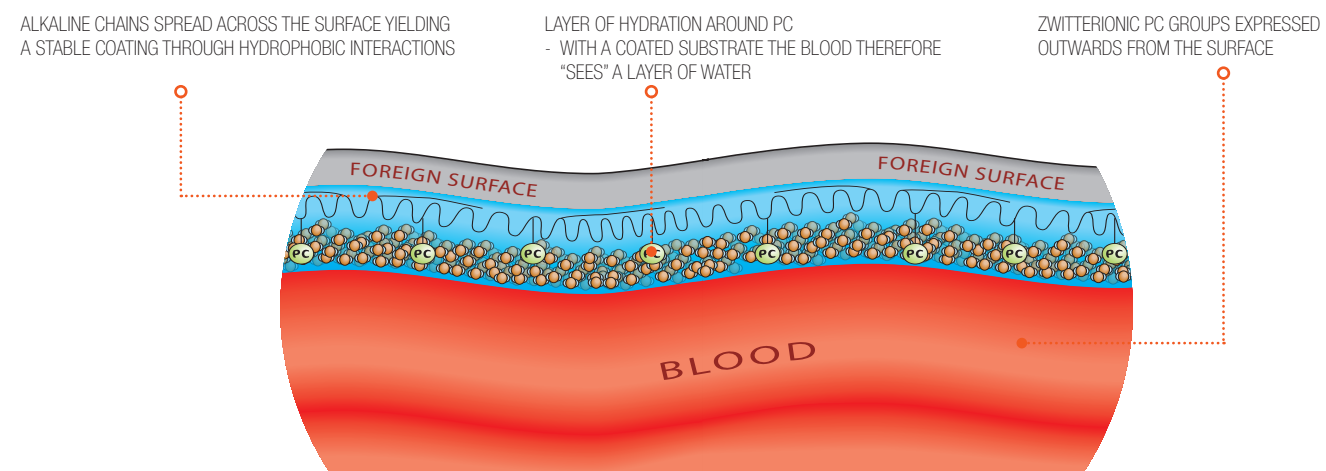
<sup>1</sup> Condello et al. Magnetic levitation pump versus constrained vortex pump: a pilot study on the hemolysis effect during minimal invasive extracorporeal circulation, Journal of Cardiothoracic Surgery, 2021

## 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 (Heparin Induced Thrombocytopenia)<sup>2</sup>.



### 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.**





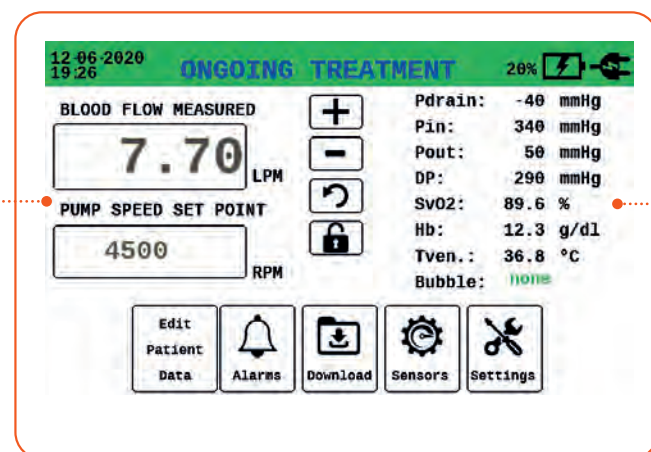
**SAFE**

**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)

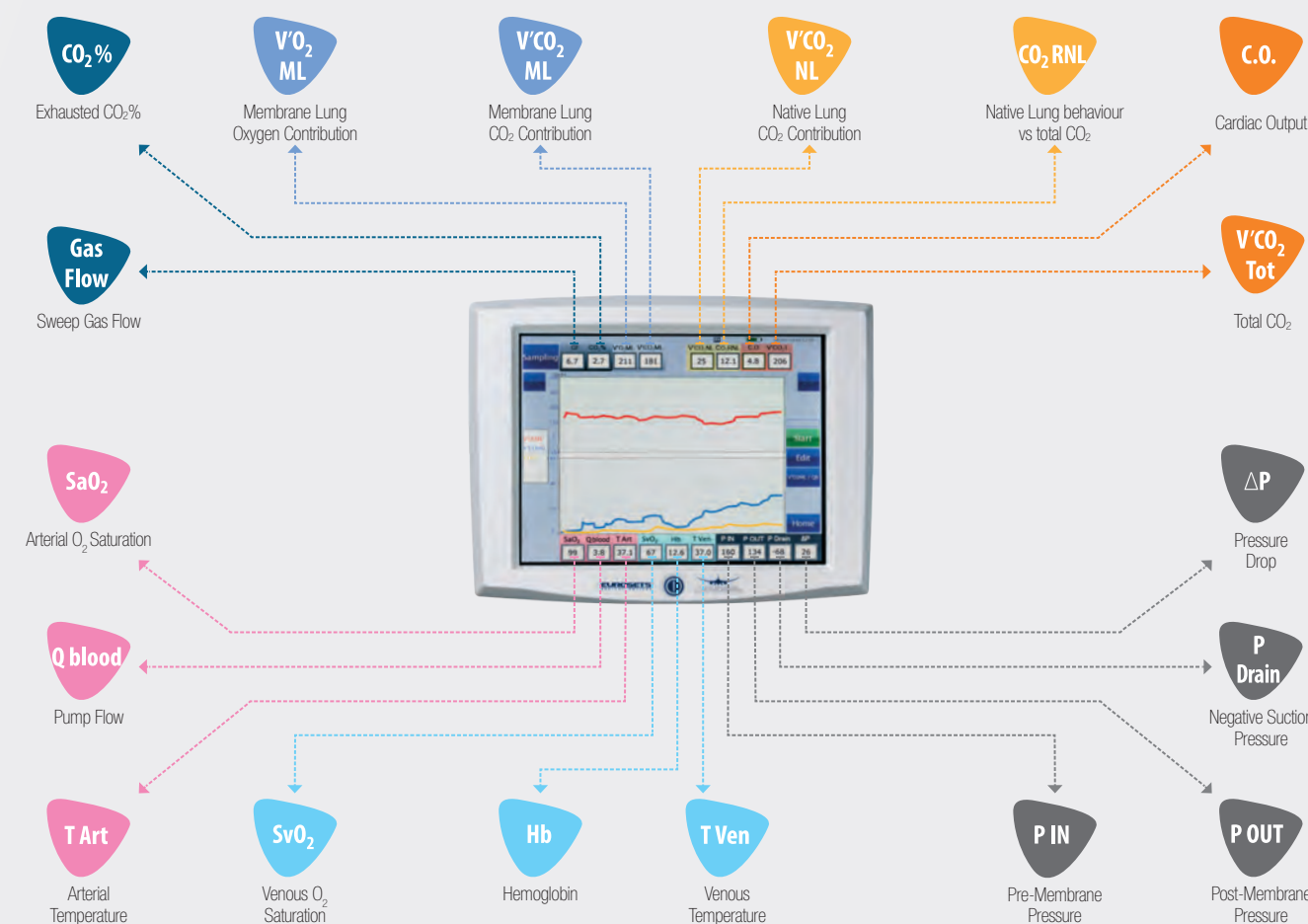
- ③ Drainage pressure ( $P_{DRAIN}$ )
- ④ Pre oxygenator pressure ( $P_{IN}$ )
- ⑤ Post oxygenator pressure ( $P_{OUT}$ )
- ⑥ Oxygenator Pressure drop
- ⑦ Oxygen venous saturation ( $SVO_2$ )
- ⑧ Hemoglobin (HB)
- ⑨ Blood venous temperature ( $T_{VEN}$ )
- ⑩ Air bubble detector



## ECMOLife circuit can be connected 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

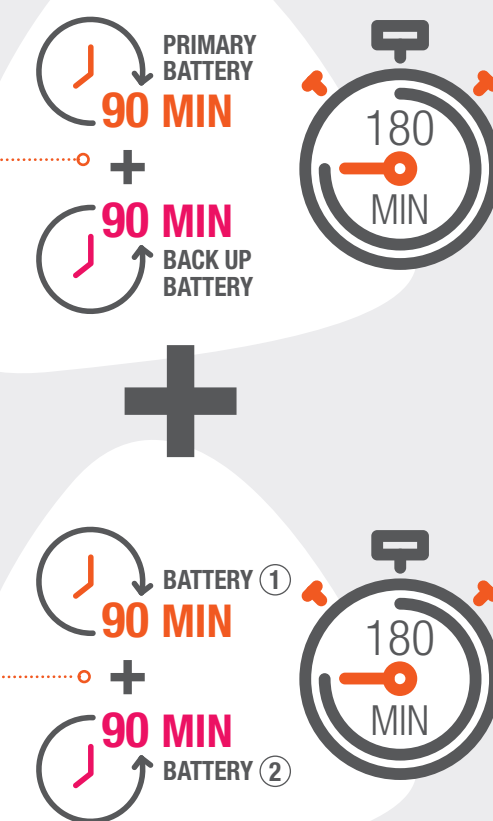


## INTEGRATED BACK UP SYSTEM FOR EXTRA SAFETY IN CASE OF FAILURE

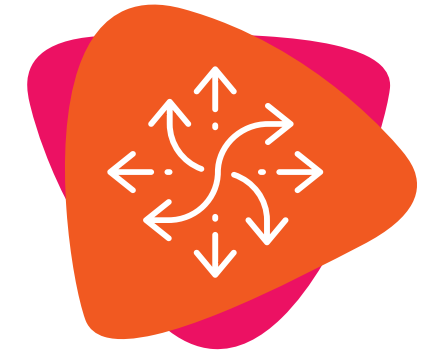
- ♥ The ECMOLIFE Pump is the only device available on the market with an integrated back-up system that acts as a perfectly functioning replacement in case of failure, ensuring increased patient safety.
- ♥ Compared to standard manual hand cranks, the integrated back-up system ensures superior comfort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



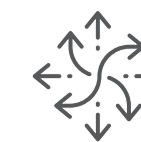
ECMOLife is approved for both intra and inter hospital transport. The device not only meets the existing mandatory regulations, but also underwent testing according to UNECE Regulation No.10 to further confirm its electromagnetic compatibility.



## OPTIMIZED CIRCUITS FOR EITHER ECMO OR MCS

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 ECMO Oxygenator Module

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



14  
days  
validated

1. Pieri et al., A new phosphorylcholine-coated polymethylpentene oxygenator for extracorporeal membrane oxygenation: a preliminary experience, Perfusion, 2013

## UNIQUE TRANSPORT OPTIONS TO ADDRESS EVERY THERAPEUTIC NEED ACROSS DIFFERENT HOSPITAL FACILITIES

The Proprietary **Leonardo Trolley**, available in **two different configurations**, is designed as a stable and compact workstation for ECMOLife.



Leonardo  
Trolley

- **Leonardo Trolley** features the unique possibility that part of the trolley can be used as accessory shelf adaptable to any stretchers.
- **Leonardo Slim** is characterized by a minimized footprint and a unique and patented design that allow ECMOLife operations also very narrow environments.



Intra-hospital Transport

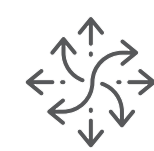


**FOIL** is the only device in the market that is **certified and validated to carry ECLS devices on a stretcher** between the patient's legs.

- ♥ High-quality carbon-fiber design for minimized weight
- ♥ Ergonomic tailored wings that increase comfort for patients and operators
- ♥ Can be safely attached to any stretcher
- ♥ Ensures convenient positioning of ECMOLife during any type of transports



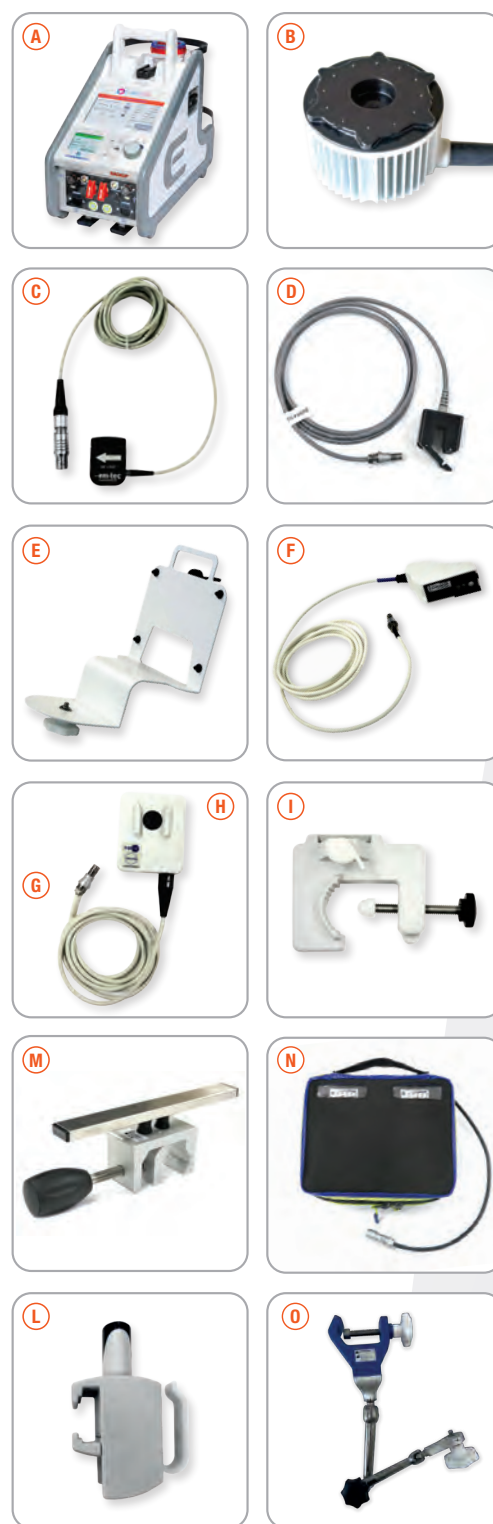
ECMO Transport



## ORDERING GUIDE

REUSABLE		
CODE	DESCRIPTION	N°/PACK
<b>EU5086</b>	<b>ECMOLIFE SYSTEM</b>	<b>1</b>
	includes: Console _____	1 <b>(A)</b>
	Motor driver _____	2 <b>(B)</b>
	Clamp on transducer sct 3/8" x 3/32" _____	2 <b>(C)</b>
	Air sensor 3/8" x 3/32" ecls _____	1 <b>(D)</b>
	Bracket _____	1 <b>(E)</b>
	Venous probe _____	1 <b>(F)</b>
	ECMOLife pressure sensor cable _____	3 <b>(G)</b>
	Logical pressure transducer _____	3 <b>(H)</b>
	Holder for reusable pressure transducer _____	3 <b>(I)</b>
	ECMOLife power cord EU _____	2
	3 to 1 SM Holder Plate _____	1
<b>EU5093</b>	<b>LEONARDO Trolley</b>	<b>1</b>
	includes: ECMOLIFE Cable Holder _____	1 <b>(L)</b>
	REOMED 1000 isolating trans-formers 1000VA _____	1
	REOMED Plug C13-C14 _____	2
<b>EU5094</b>	<b>LEONARDO Slim</b>	<b>1</b>
	includes: ECMOLIFE Cable Holder _____	1 <b>(L)</b>
	REOMED 1000 isolating trans-formers 1000VA _____	1
	REOMED Plug C13-14 _____	2

- ★ Product not manufactured by EUROSETS S.r.l.
- Products in bold are manufactured and certified by Eurosets S.r.l.
- ECMOLife System, ECMOLife Heater Cooler and Single-use codes are CE<sub>0123</sub> Certified



REUSABLE		
CODE	DESCRIPTION	N°/PACK
<b>R229P01-010</b>	<b>MAX BLEND 0-15 LPM</b>	<b>1</b> ★
<b>R100P26</b>	Bracket, Pole mount, gas blender	1 ★
<b>R129P91</b>	Air Tube	1 ★
<b>R129P94</b>	Oxygen Tube	1 ★
<b>R219P31</b>	3 in 1 single pack (connector gas outlet)	1 ★
<b>EU3941</b>	<b>ECMOLIFE HEATER COOLER</b>	<b>1</b>
	includes: HC Unit _____	1
	UK AND EU Power Supply Cables _____	1
	Hoses 1,5m _____	2
	Hanses connection tube _____	1
	Water Discharge Hose (Female) _____	1
<b>EU3943</b>	Hoses 3m	2
<b>EU3898</b>	<b>ECMOLIFE Ambulance Plate holder</b>	<b>1</b>
<b>EU3996</b>	<b>FOIL Transport System</b>	<b>1</b>
<b>EU3898</b>	<b>ECMOLIFE Ambulance 24V Power</b>	<b>1</b>
<b>MX 263</b>	<b>3 to 1 SM Holder Plate</b>	<b>1</b> ★
<b>EU10775</b>	<b>ECMOLIFE Power Cord GB</b>	<b>1</b> ★
<b>EU10996</b>	<b>ECMOLIFE Power Cord BR</b>	<b>1</b> ★
<b>2M85274</b>	<b>Holder with BAR 25x10 mm</b>	<b>1</b> (M) ★
<b>EU3899</b>	<b>ECMOLIFE Auxiliary batteries Kit with transport bag</b>	<b>1</b> (N)
<b>EU2511</b>	<b>ECMOLIFE Holder Motor Driver</b>	<b>1</b> (O)

SINGLE USE		
CODE	DESCRIPTION	N°/PACK
<b>14AG70232</b>	<b>ECMOLIFE ECMO tubing set</b> Includes: Oxy, pump, circuit, press. Transducers Metallux 3 to1	<b>1</b>
<b>14AG70232/SM</b>	<b>ECMOLIFE ECMO tubing set</b> Includes: Oxy, pump, circuit, press. Transducers Smith Medical	<b>1</b>
<b>14AG70231</b>	<b>ECMOLIFE VAS tubing set</b> Includes pump, circuit, press. Transducers Smith Medical	<b>1</b>
<b>AG70232/PP</b>	<b>ECMOLife 6 hrs Tubing Set</b> PP Oxy, pump, circuit, press. Transducers Smith Medical	<b>1</b>
<b>EU5083</b>	<b>ECMO ADULT console Sterile</b> (Stand alone ECMO Oxy)	<b>2</b>
<b>AG5078</b>	<b>ECMOLIFE centrifugal pump</b> (without luer port)	<b>1</b>
<b>EU1589</b>	<b>Smith Medical single use pressure transducer</b>	<b>1</b> ★



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