

**LivaNova**

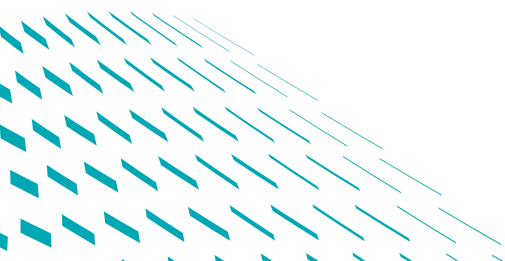
Health innovation that matters

**INSPIRE®**

Personalized Perfusion  
Proven Performance



Offering the most complete range of flow sizes  
to meet adult oxygenation needs


































# Leveraging worldwide leadership

## Our vision becomes reality

Inspire is a complete family of adult oxygenators designed from years of research and laboratory experience, input from clinical experts from around the world and the application of advanced manufacturing technologies that adhere to the highest quality standards.

When designing Inspire, our vision was to raise performance expectations and ease of use, while providing clinicians with new options in cardiopulmonary bypass.

## Our vision is now a reality.

		OPEN CIRCUIT RESERVOIR			CLOSED CIRCUIT RESERVOIR	
		 Dual chamber	 Single chamber	 Single chamber	 Soft shell venous reservoir	
OXY MODULES		INTEGRATED OPEN CIRCUIT RESERVOIR			INTEGRATED CLOSED CIRCUIT RESERVOIR	
 6 LPM w/o Filter		 <b>INSPIRE® 6 DUAL</b> PH.I.S.I.O.	 <b>INSPIRE® 6</b> PH.I.S.I.O.	 <b>INSPIRE® 6</b> START P	 <b>INSPIRE® 6 C</b> PH.I.S.I.O.	
 6 LPM with Filter		 <b>INSPIRE® 6F DUAL</b> PH.I.S.I.O.	 <b>INSPIRE® 6F</b> PH.I.S.I.O.		 <b>INSPIRE® 6F C</b> PH.I.S.I.O.	
 7 LPM w/o Filter		 <b>INSPIRE® 7 DUAL</b> PH.I.S.I.O.	 <b>INSPIRE® 7</b> PH.I.S.I.O.	 <b>INSPIRE® 7</b> START P	 <b>INSPIRE® 7 C</b> PH.I.S.I.O.	
 7 LPM with Filter		 <b>INSPIRE® 7F DUAL</b> PH.I.S.I.O.	 <b>INSPIRE® 7F</b> PH.I.S.I.O.		 <b>INSPIRE® 7F C</b> PH.I.S.I.O.	
 8 LPM w/o Filter		 <b>INSPIRE® 8 DUAL</b> PH.I.S.I.O.	 <b>INSPIRE® 8</b> PH.I.S.I.O.	 <b>INSPIRE® 8</b> START P	 <b>INSPIRE® 8 C</b> PH.I.S.I.O.	
 8 LPM with Filter		 <b>INSPIRE® 8F DUAL</b> PH.I.S.I.O.	 <b>INSPIRE® 8F</b> PH.I.S.I.O.		 <b>INSPIRE® 8F C</b> PH.I.S.I.O.	

# Inspired by...

## ...technology

A complete family of adult oxygenators



## Offering the most complete range of flow sizes to meet adult oxygenation needs

Inspire is a fully modular oxygenator system. 21 different integrated models can be created by flexibly combining oxygenator modules and venous reservoirs. Inspire HVR and HVR Dual feature one of the lowest minimum operating levels on the market, which contributes to a reduction in patient blood hemodilution.<sup>1</sup>

## Powerful, consistent performance

The Inspire family allows clinicians to **safely run perfusion procedures while ensuring powerful, consistent performance.**

In Inspire, the long path oxygenator membrane with remarkably efficient longitudinal flow design allows high levels of gas exchange at all rated flows.

Inspire polyurethane heat exchanger is capable of highly efficient heat transfer.

1. Habib et al., Adverse effects of low hematocrit during cardiopulmonary bypass in the adult: Should current practice be changed - The Journal of Thoracic and Cardiovascular Surgery - June 2003.



# Widely used by clinicians worldwide

## MINIMIZED IMPACT ON HEMODILUTION

Inspire is designed to minimize hemodilution, which can in turn lead to a reduction in blood transfusions and post-op AKI.<sup>1</sup>

It does this thanks to the low dynamic operating volume (DOV).

Moreover, Inspire devices are characterized by the lowest minimum operating level in the reservoir (150 ml), outstanding low venous filter dynamic hold-up volume and low prime oxygenator modules.

## EFFECTIVE GASEOUS MICRO EMBOLI CONTROL

The Inspire reservoir design and oxygenator geometry contribute to reducing the gaseous embolic load to the patient. The use of Inspire integrated arterial filter further helps improve GME removal capacity. Literature studies report correlation between embolic load and neurological deficit.<sup>2,3</sup>

## SAFE, EASY AND FLEXIBLE FOR ALL ADULT PATIENT SIZES

The Inspire family is flexible and versatile. The compact oxygenator system requires minimal storage space. The simple bracket design allows easy and fast mounting of the oxygenator system. The bracket is available with a regular screw clamp and fast lock mechanism. Port orientation and system priming have been optimized to offer easy set-up and operational flexibility.

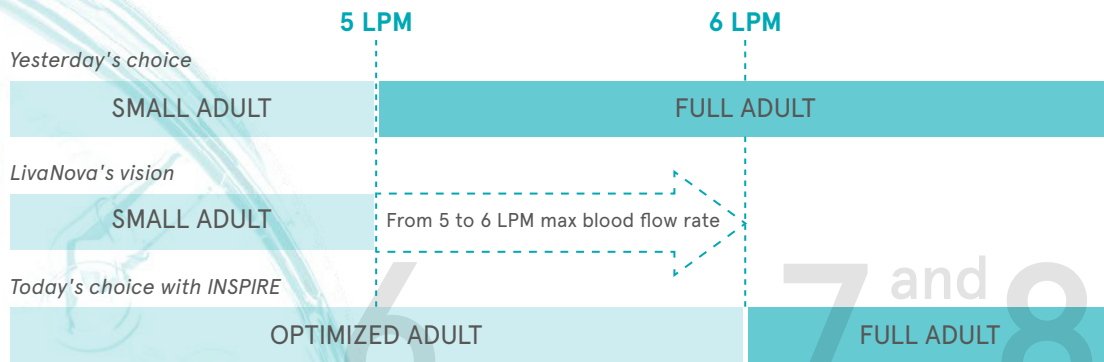
1. Ranucci M et al., Effects of priming volume reduction on allogeneic red blood cell transfusions and renal outcome after heart surgery. *Perfusion* 3/2015;Volume: 30: 2:120-126.

2. Stehouwer MC et al., Effect of Oxygenator Size on Air Removal Characteristics: A Clinical Evaluation. *ASAIO J.* 2016 Jul-Aug.

3. Shann KG et al., An evidence-based review of the practice of cardiopulmonary bypass in adults: a focus on neurologic injury, glycemic control, hemodilution, and the inflammatory response. *J Thorac Cardiovasc Surg* 2006;132:283-90.

# Paving the way in perfusion innovation for more than 40 years

## DESIGNED TO MEET ALL ADULT PATIENT PERFUSION NEEDS AND PRACTICES



## OPTIMIZED PERFUSION

The Inspire range is designed to provide efficient hemodilution, GME and oxygenator performance.

Prior to the introduction of Inspire, small adult devices were considered the benchmark for optimized perfusion, but were limited in flow to 5 l/min.

**Inspire 6 optimized adult oxygenator systems extend the benefits of small adult devices to a wider patient population.**

## ENHANCED BIOCOMPATIBILITY

Inspire is designed with a reduced blood contact surface area, helping minimize blood reaction to foreign-surfaces. The PH.I.S.I.O PC coating improves blood compatibility of the device by reducing platelet adhesion to the coated surfaces and may provide beneficial effects against inflammation and oxidative stress. Inspire adult oxygenators are manufactured with NO-DEHP material to further improve biocompatibility.

Moreover, the unique design of the Dual Reservoir ensures activated suction blood sequestration to reduce the inflammatory response. This, in combination with the PH.I.S.I.O PC coating, which minimizes platelet activation, may further reduce the inflammatory response.<sup>1,2</sup>

1. Shann KG et al., An evidence-based review of the practice of cardiopulmonary bypass in adults: a focus on neurologic injury, glycemic control, hemodilution, and the inflammatory response. - J Thorac Cardiovasc Surg 2006;132:283-90.
2. Albes JM, et al., Physiological coagulation can be maintained in extracorporeal circulation by means of shed blood separation and coating. - J Thorac Cardiovasc Surg 2003;126:1504-12.



# Get connected to optimal data management practices

Connect is LivaNova's intuitive perfusion data management system designed to satisfy the needs of perfusionists.

It is an electronic charting system that allows continuous data recording and trends visualization aimed to support clinicians and institutions in their perfusion management and documentation goals, before, during and after cardiac surgery.

Connect is designed to decrease potential for human errors associated with perfusion practices.

## **GDP MONITOR CRITICAL PATIENT PARAMETERS AT YOUR FINGERTIPS**

Connect enables perfusion data management during cardiopulmonary bypass procedures. The addition of the GDP Monitor offers an added level of physiological monitoring in line with Goal-Directed Perfusion therapy.

GDP is a perfusion therapy aimed at reducing the occurrence of Acute Kidney Injury (AKI), shortening ICU and hospital length of stay by respecting the metabolic needs of each patient during cardiac procedures.<sup>1</sup>

LivaNova, together with leading clinicians that have studied the clinical benefits and improved patient outcomes associated with GDP, is at the forefront of creating global awareness of the advantages of this therapy. Furthermore, LivaNova implements and transparently provides the GDP formulas patented by Dr Marco Ranucci.<sup>1</sup>



1. Ranucci M. et al., GOAL-DIRECTED PERFUSION TO REDUCE ACUTE KIDNEY INJURY: A RANDOMIZED TRIAL J Thorac Cardiovasc Surg. 2018 Nov;156(5):1918-1927.e2. doi.org/10.1016/j.jtcvs.2018.04.045



## INTEGRATED OPEN CIRCUIT RESERVOIR

ITEM #	DEVICE	DESCRIPTION	# PER CASE
050713	INSPIRE 6	INSPIRE 6 LPM PHISIO OXY MODULE WITH INTEGRATED PHISIO HARD SHELL VENOUS RESERVOIR	2
050715	INSPIRE 6F	INSPIRE 6 LPM PHISIO OXY MODULE WITH INTEGRATED ARTERIAL FILTER AND PHISIO HARD SHELL VENOUS RESERVOIR	2
050717	INSPIRE 6 DUAL	INSPIRE 6 LPM PHISIO OXY MODULE WITH INTE GRATED PHISIO DUAL CHAMBER HARD SHELL VENOUS RESERVOIR	2
050719	INSPIRE 6F DUAL	INSPIRE 6 LPM PHISIO OXY MODULE WITH INTEGRATED ARTERIAL FILTER AND PHISIO DUAL CHAMBER HARD SHELL VENOUS RESERVOIR	2
050727	INSPIRE 7	INSPIRE 7 LPM PHISIO OXY MODULE WITH INTEGRATED PHISIO HARD SHELL VENOUS RESERVOIR	2
050730	INSPIRE 7F	INSPIRE 7 LPM PHISIO OXY MODULE WITH INTEGRATED ARTERIAL FILTER AND PHISIO HARD SHELL VENOUS RESERVOIR	2
050728	INSPIRE 7 DUAL	INSPIRE 7 LPM PHISIO OXY MODULE WITH INTEGRATED PHISIO DUAL CHAMBER HARD SHELL VENOUS RESERVOIR	2
050731	INSPIRE 7F DUAL	INSPIRE 7 LPM PHISIO OXY MODULE WITH INTEGRATED ARTERIAL FILTER AND PHISIO DUAL CHAMBER HARD SHELL VENOUS RESERVOIR	2
050714	INSPIRE 8	INSPIRE 8 LPM PHISIO OXY MODULE WITH INTEGRATED PHISIO HARD SHELL VENOUS RESERVOIR	2
050716	INSPIRE 8F	INSPIRE 8 LPM PHISIO OXY MODULE WITH INTEGRATED ARTERIAL FILTER AND PHISIO HARD SHELL VENOUS RESERVOIR	2
050718	INSPIRE 8 DUAL	INSPIRE 8 LPM PHISIO OXY MODULE WITH INTEGRATED PHISIO DUAL CHAMBER HARD SHELL VENOUS RESERVOIR	2
050720	INSPIRE 87F DUAL	INSPIRE 8 LPM PHISIO OXY MODULE WITH INTEGRATED ARTERIAL FILTER AND PHISIO DUAL CHAMBER HARD SHELL VENOUS RESERVOIR	2
050711	INSPIRE 6 START P	INSPIRE 6 LPM PHISIO OXY MODULE WITH INTEGRATED HARD SHELL VENOUS RESERVOIR	2
050726	INSPIRE 7 START P	INSPIRE 7 LPM PHISIO OXY MODULE WITH INTEGRATED HARD SHELL VENOUS RESERVOIR	2
050712	INSPIRE 8 START P	INSPIRE 8 LPM PHISIO OXY MODULE WITH INTEGRATED HARD SHELL VENOUS RESERVOIR	2

## INTEGRATED CLOSED CIRCUIT RESERVOIR

ITEM #	DEVICE	DESCRIPTION	# PER CASE
050721	INSPIRE 6F C	INSPIRE 6 LPM PHISIO OXY MODULE WITH INTEGRATED ARTERIAL FILTER AND SVR 1200 RESERVOIR	2
050732	INSPIRE 7F C	INSPIRE 7 LPM PHISIO OXY MODULE WITH INTEGRATED ARTERIAL FILTER AND SVR 1200 RESERVOIR	2
050722	INSPIRE 8F C	INSPIRE 8 LPM PHISIO OXY MODULE WITH INTEGRATED ARTERIAL FILTER AND SVR 1200 RESERVOIR	2









## OXY MODULES

ITEM #	DEVICE	DESCRIPTION	# PER CASE
050700	INSPIRE 6 M	INSPIRE 6 LPM PHISIO OXY MODULE	2
050702	INSPIRE 6F M	INSPIRE 6 LPM PHISIO OXY MODULE WITH INTEGRATED ARTERIAL FILTER	2
050725	INSPIRE 7 M	INSPIRE 7 LPM PHISIO OXY MODULE	2
050729	INSPIRE 7F M	INSPIRE 7 LPM PHISIO OXY MODULE WITH INTEGRATED ARTERIAL FILTER	2
050701	INSPIRE 8 M	INSPIRE 8 LPM PHISIO OXY MODULE	2
050703	INSPIRE 8F M	INSPIRE 8 LPM PHISIO OXY MODULE WITH INTEGRATED ARTERIAL FILTER	2

## HVR

ITEM #	DEVICE	DESCRIPTION	# PER CASE
050704	INSPIRE HVR	INSPIRE PHISIO HARD SHELL VENOUS RESERVOIR	2
050705	INSPIRE HVR DUAL	INSPIRE PHISIO DUAL HARD SHELL VENOUS RESERVOIR	2

## ACCESSORIES

ITEM #	DEVICE	DESCRIPTION	# PER CASE	IMAGE
050706	INSPIRE SVR 1200	INSPIRE PHISIO 1200 SOFT SHELL VENOUS RESERVOIR	1	
050640	INSPIRE BKT	BRACKET FOR INSPIRE OXY MODULES AND INTEGRATED OXYGENATOR SYSTEMS	1	
48-42-10	IINSPIRE BKT FAST*	BRACKET FOR INSPIRE OXY MODULES AND INTEGRATED OXYGENATOR SYSTEMS WITH FAST CLAMP * To be ordered as an accessory of Sorin S5 and C5 HLMs	1	
050641	INSPIRE BKTH	BRACKET FOR INSPIRE HVR AND DUAL HVR RESERVOIRS	1	
050642	INSPIRE BKT COMBO	BRACKET FOR COMBINED INSPIRE SVR SYSTEMS TO BE USED IN CONJUNCTION WITH INSPIRE BKT 1200 and 1200S BRACKETS	1	
050645	INSPIRE BKT 1200	BRACKET FOR INSPIRE SVR 1200	1	
050646	INSPIRE BKT1200 S	SQUEEZER FOR INSPIRE SVR 1200 TO BE USED IN CONJUNCTION WITH INSPIRE BKT, INSPIRE BKT FAST, INSPIRE BKT 1200 AND INSPIRE BKT COMBO BRACKET	1	
042229000	TEMPERATURE PROBES	TEMPERATURE PROBES	2	

Not all products available in all geographies. Please consult the labeling.



Manufactured by:

**Sorin Group Italia Srl**

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LivaNova's Green Leaf program

The Sorin Group Italia Quality  
System complies with:  
EN ISO 13485:2016

CE  
0123

For professional use. Please contact us through our website to receive instructions for use containing full prescribing information, including indications, contraindications, warnings, precautions and adverse events. Not approved in all geographies. Consult your labeling.

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