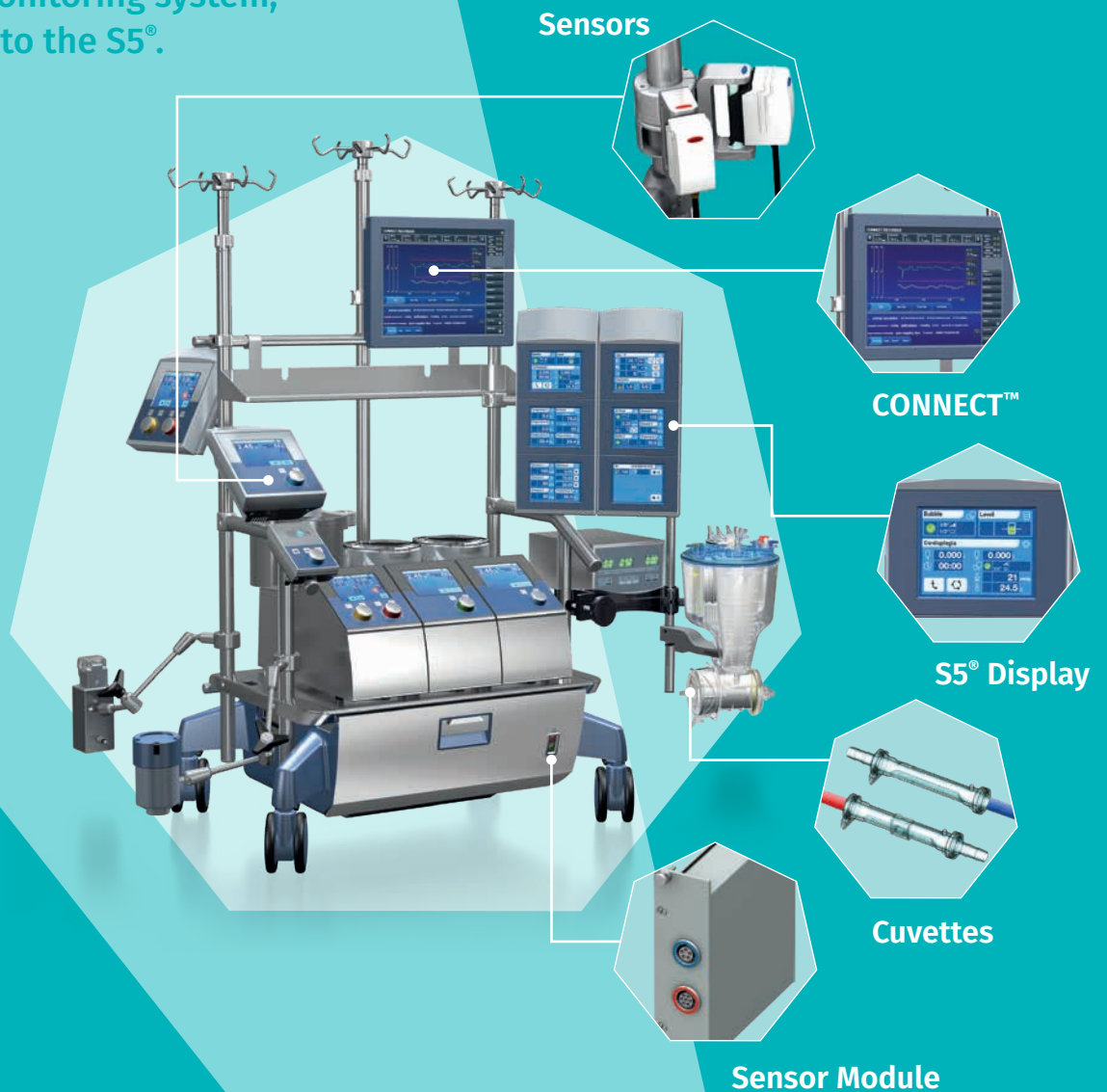


B-Capta[®]

The new ready-to-go in-line blood-gas monitoring system, integrated into the S5[®].



- ✓ B-Capta[®] is designed to easily and accurately monitor Arterial and Venous Blood Gas Parameters even in long and complex Pediatric and Adult cardiopulmonary bypass procedures.
- ✓ B-Capta[®] provides an in-line continuous monitoring of the patient's blood parameters and allows the operator to quickly react to parameters' changes.
- ✓ B-Capta[®] supports the implementation of the Goal-Directed Perfusion (GDP) therapy in Connect, that enables perfusionists to maintain accurate perfusion procedure records.^{1,2}

Patient blood parameters can change rapidly during cardiopulmonary bypass (CPB) procedures due to many dynamic conditions.

Blood gas analyzers only reflect the patient's clinical condition at the exact moment the sample is drawn, meaning that, by the time the result is received, the blood gas parameters no longer reflect the patient's actual condition.^{3,4}

In line monitoring systems may improve patient outcome during cardiopulmonary bypass procedures.^{3,4}

By continuously monitoring the patient's blood gas parameters, B-Capta can support the Perfusionist during the entire CPB procedure.



Proven safe and reliable

B-Capta is based on an **accurate and reliable optical-based technology**, improved to guarantee the highest level of accuracy and reliability when measuring patient blood gas parameters, even in long and complex cardiopulmonary bypass procedures.



Accurate and continuous measurements

B-Capta allows accurate monitoring of pO₂ and temperature in the Arterial line and saturation, HCT /Hb and temperature in the Venous line. It does not provide calculated parameters, but only measured values to guarantee accurate monitoring.



Pediatric and adult procedures with the same sensor

The B-Capta **Arterial and Venous sensors fit all disposable cuvette sizes**, allowing the perfusionist to use the same sensor for both pediatric and adult procedures.

They are easy to couple with the relevant disposable cuvettes as they are identified by different color-coded labels.



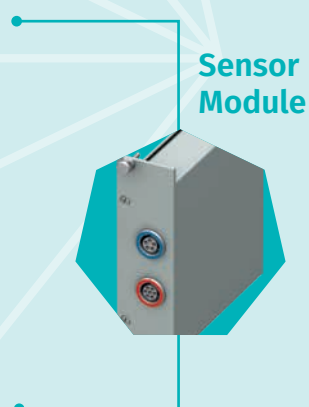
Ready-to-go

B-Capta **does not require any calibration** procedure to set the device measurements, allowing the perfusionist to save time during device set up, especially in emergency cases.



Easy parameters alignment with ABL measurement

B-Capta's innovative technology embeds a compensation algorithm to easily adjust the blood gas parameters according to those of the Hospital Laboratory Blood Gas Analyzer (ABL) **to ensure trending accuracy during the entire procedure.**





Easy and intuitive user interface

The Venous and Arterial parameters monitored by B-Capta are shown in the S5[®] system panel.

The B-Capta user **interface is intuitive and easy to use**: easy parameter configuration and menu navigation, clearly displayed parameters and accessible system panel layout.



S5[®] user-experience

The B-Capta display is integrated in the S5[®] heart-lung machine allowing the perfusionist to:

- Do without additional external monitors and holders that may obstruct the perfusionist's view during the procedure
- Have all patient and procedure parameters in the same location, reducing the levels of stress felt by the perfusionist during the procedure.



Visual and audible warnings

B-Capta has an integrated warning system based on thresholds selected by the user, providing visual and audible indicators when parameters fall outside said thresholds.



Accurate perfusion records

Throughout the entire procedure, **the B-Capta blood gas values are automatically transferred to CONNECT[™]**, LivaNova's data management system, enabling the perfusionist to maintain **accurate perfusion procedure records**.



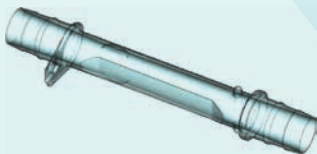
Support the implementation of Goal-Directed Perfusion (GDP) therapy in Connect^{1,2}

The **B-Capta Arterial and Venous parameters can be used to feed the GDP formulas in CONNECT[™]**, as they are continuously transferred to Connect during the procedure through the S5[®] serial interface.^{1,2}

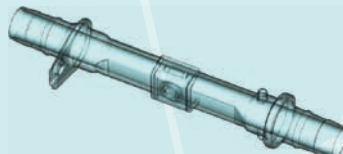


Disposable solution tailored to customers' needs

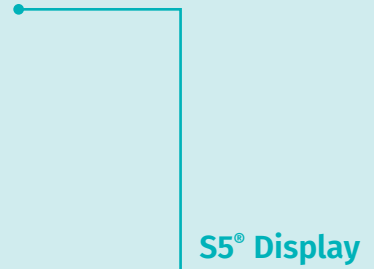
The Venous and Arterial disposable cuvettes are available as sterile stand-alone disposables or included in the Perfusion Tubing Systems, both pre-connected and not.



- The Venous cuvettes are available in three sizes: 1/2", 1/4", 3/8"



- The Arterial cuvettes are available in two sizes: 3/8", 1/4"



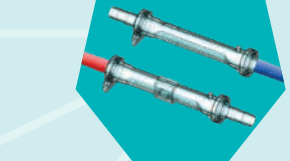
S5[®] Display

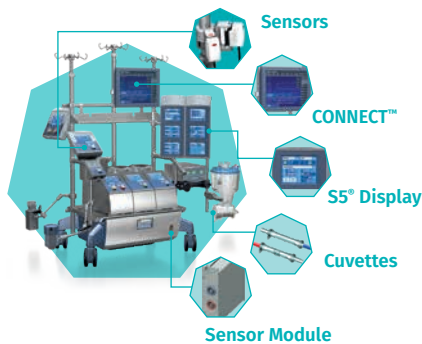


CONNECT[™]



Cuvettes





B-Capta®

B-Capta article numbers – Equipment & Disposable

	P/N	Sensor Module Venous & Arterial	Venous Sensor & Ref. Element	Venous Ref. Element Holder	Arterial Sensor & Ref. Element	Arterial Ref. Element Holder
FULL SYSTEM	25-95-00	YES	YES	YES	YES	YES
SYSTEM VENOUS ONLY	25-95-05	YES	YES	YES	/	/

VENOUS CUVETTES	Article Number
1/2"	05184
3/8"	05183
1/4"	05182

ARTERIAL CUVETTES	Article Number
3/8"	05191
1/4"	05190

B-Capta technical details

Components	Measured Parameters	Operating Range	Resolution	Measurement Unit	Accuracy	Technology
VENOUS SENSOR	SvO ₂	40.0 - 99.9	0.1	%	0,46; +/-1,68	Optical reflectance
	Hct	13.0 - 48.0	0.1	%	-0,71; +/-0,77	
	Hb	4.1 - 15.7	0.1	g/dl	-0,21; +/-0,25	
		41 - 157	1	g/l		
	venT	2.5 - 9.7	0.1	mmol/l		Infrared sensor
ARTERIAL SENSOR	pO ₂	50 - 400	1	mmHg	0,30%; +/-5,96	Optical fluorescence
		6.7 - 53.3	0.1	kPa		
	artT	15.0 - 41.0	0.1	°C	0,17; +/-0,26	Infrared sensor

	Cuvette connector size	Min Flow rate	Max Flow rate
VENOUS CUVETTE	1/2"	0.5 l/min	8 l/min
	3/8"	0.2 l/min	6 l/min
	1/4"	0.1 l/min	2.5 l/min
ARTERIAL CUVETTE	3/8"	0.2 l/min	8 l/min
	1/4"	0.1 l/min	2.5 l/min

References:

1. Ranucci M. et al., Carbon dioxide production during cardiopulmonary bypass: pathophysiology, measure and clinical relevance - Perfusion 2016.
2. Ranucci M. et al., Oxygen Delivery During Cardiopulmonary Bypass and Acute Renal Failure After Coronary Operations - ATS 2005.
3. Ottens J. et al., Improving Cardiopulmonary Bypass: Does Continuous Blood Gas Monitoring Have a Role to Play? - JECT. 2010;42:191-198.
4. Trowbridge CC et al., The Effects of Continuous Blood Gas Monitoring During Cardiopulmonary Bypass: A Prospective, Randomized Study-Part II - The Journal of Extracorporeal Technology, 2000.
5. Merkle F. et al., Evaluation of attention, perception and stress levels of clinical cardiovascular perfusionists during cardiac operations:a pilot study- Perfusion 2019.

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