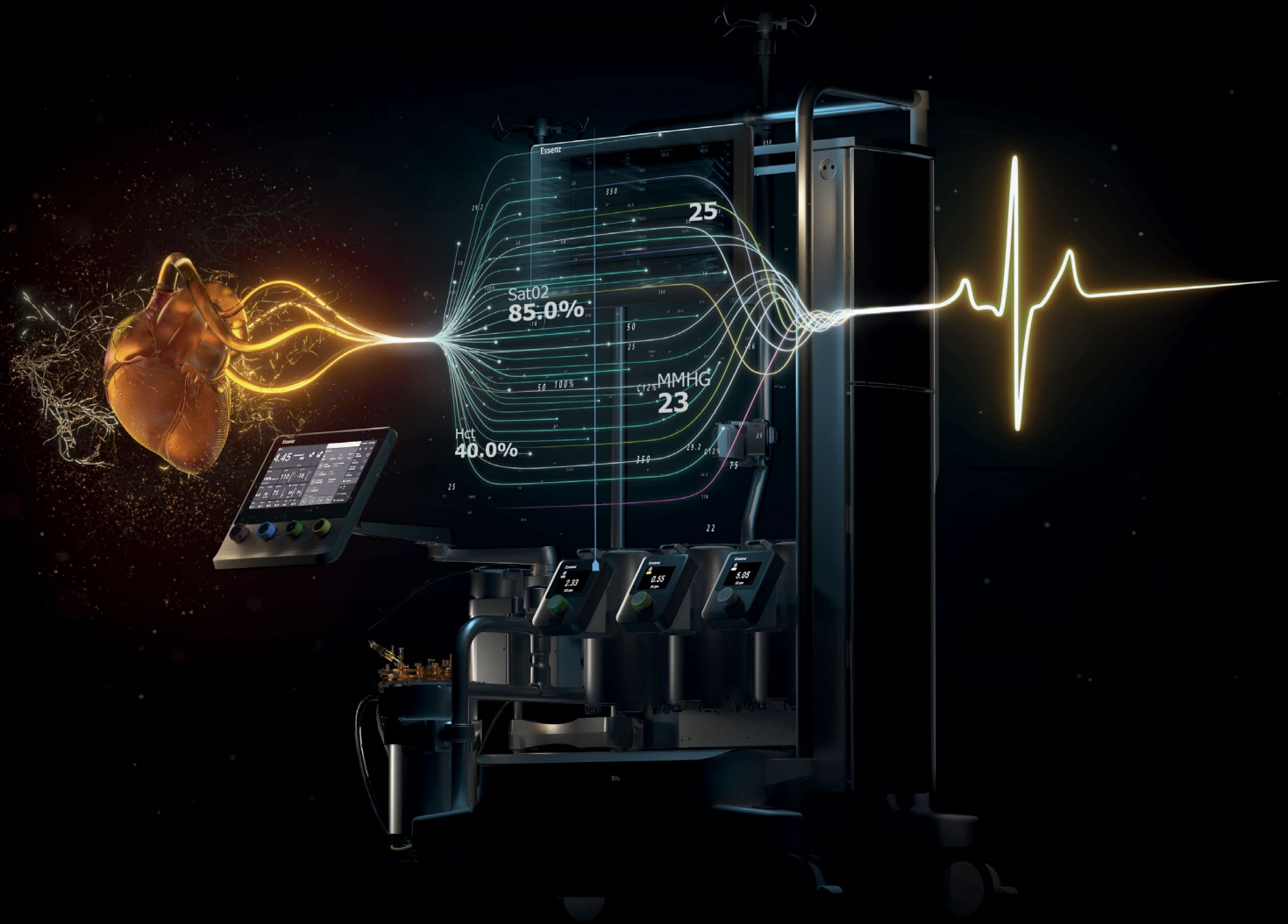


Essenz™

Perfusion System



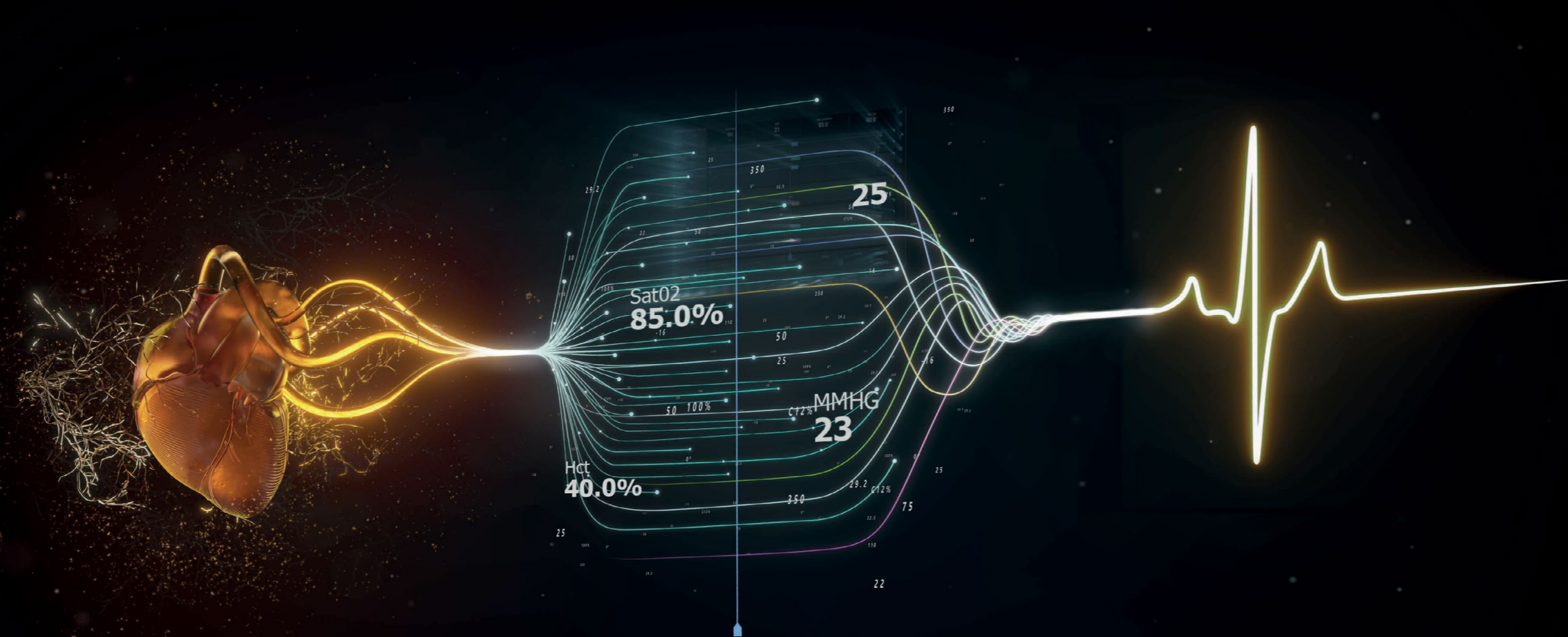
Elevating Perfusion into a New Era

The New Era of Perfusion

With technology advancements and an increased focus on patient outcomes, perfusion and the role of the perfusionist are changing and entering a New Era.

An era where data takes a central role in enabling truly patient-tailored care.

An era where, as a result, the spotlight can be placed on the true impact and value that perfusionists bring to clinical practice.



Elevating Perfusion into a New Era

In the OR, advanced cardiopulmonary technology and the highly skilled hand of the perfusionist perform as one.

Essenz™ is LivaNova's next-generation perfusion system that bridges five decades of proven performance, an enduring commitment to the safety of the patient, and the data accuracy you demand to bring more clinical wisdom to the OR.

The Wisdom of Breath and Beat

Grounded upon four key pillars – safety, intuitiveness, efficiency and patient-tailored care - Essenz is a complete system designed, validated and tested with more than 300 perfusionists, to provide clinical wisdom and a value-added solution to thrive into the New Era of Perfusion.



Essenz™ Perfusion System is LivaNova's integrated system encompassing **state-of-the-art heart-lung machine** with an **embedded Patient Monitor** for patient-tailored care, and **accurate sensing technology** for data-driven decision making.

The key components

State-of-the-art HLM

The heart-lung machine makes it possible to create a system layout that places devices and controls close to the perfusionists as well as the patient. The innovative cockpit provides one central view to control the device and check all perfusion and patient parameters in the right place at the right time, minimizing distractions.

Accurate sensing technology

Essenz is an integrated system including a level sensor and bubble sensor that is designed to protect patients from neurological damage¹.

Embedded Patient Monitor

Essenz Patient Monitor includes all the essential perfusion functionalities needed to manage data during a CPB procedure, as well as advanced functionalities to support the decision making.

Comprehensive service proposition

The Essenz Focus service offering is designed to specifically deliver on the hardware & software servicing needs of the New Era of Perfusion.



Propelling perfusion management into a New Era

Safe and reliable

- Built on proven **S5 reliability** and a reputation for **safe CPB management**
- **State-of-the-art safety precautions** on both hardware and software
- **Experienced sales and service teams**

Patient-tailored¹

- Equipped with **accurate sensing technology** and a **Patient Monitor²**
- **Goal-Directed Perfusion** implementation to provide insightful data³
- **Mast mounted pumps** allow to minimize priming volumes and thus reduce hemodilution⁴

Intuitive

- **Short learning curve** thanks to the intuitive user interface
- **Continuously recorded data and events** enhance traceability
- **World-class technology platform** allows for continuous advancements

Flexible and efficient

- **Versatile system** that can be adapted to individual needs of patients, workflows and users
- **Ergonomic design** creates an efficient experience
- **Seamless integration** with OR external devices and hospital information systems

¹ Cardiopulmonary bypass management and neurologic outcomes: an evidence-based appraisal of current practices. Hogue CW Jr, Palin CA, Arrowsmith JE. - Anesth Analg. 2006 Jul;103(1):21-37. doi: 10.1213/01.ANE.0000220035.82989.79. - PMID: 16790619

² Preventive Strategies for Minimizing Hemodilution during Cardiopulmonary Bypass in the Cardiac Surgical Patient - August 2015 - Journal of Cardiothoracic and Vascular Anesthesia 29(6) DOI:10.1053/j.jvca.2015.08.002
³ Lukaszewski M et al., "The use of data science to analyse physiology of oxygen delivery in the extracorporeal circulation" BMC Cardiovasc Disord. 2019;19(1):292
⁴ Goal-Directed Perfusion to reduce Acute Kidney Injury: A Randomized Trial Ranucci M, et al. J Thorac Cardiovasc Surg. 2018 Nov;156(5):1918-1927.e2. doi.org/10.1016/j.jtcvs.2018.04.045
⁵ Inflammatory response to cardiopulmonary bypass: mechanisms involved and possible therapeutic strategies. - Wan S, LeClerc JL, Vincent JL. Chest. 1997 Sep;112(3):676-92. doi: 10.1378/chest.112.3.676.PMID: 9315800 - [5]

A New Era inside and outside the OR

As market leaders in cardiopulmonary for the past 50 years, we take pride in our focus on building and providing reliable perfusion solutions, services and partnerships to support your hospital.



C-Level

- **Optimized care:** Essenz is designed with perfusionists to optimize care coordination and productivity for the entire interoperative team, providing a New Era of safety and reliability.
- **Informed decision making:** By unlocking the potential of individualized care, Essenz intra-operative Quality Indicators will help drive informed decision-making for the entire OR team.
- **Continuity of care:** By fully integrating with the hospital infrastructure, Essenz ensures continuity of care by enabling seamless processes and workflows, and flexibly adapts to your security and data protection standards.

OR Director/OR team

- **Informed decision making:** By unlocking the potential of individualized care, Essenz intra-operative Quality Indicators will help drive informed decision-making for the entire OR team.
- **Continuity of care:** By fully integrating with the hospital infrastructure, Essenz ensures continuity of care by enabling seamless processes and workflows, and flexibly adapts to your security and data protection standards.
- **Tailored learning opportunities:** A blended training approach, including on-site, eLearning, and simulation sessions, allows the full perfusion team to be onboarded and make the most of the Essenz™ Perfusion System.

Purchasing Materials Manager

- **Long-term value:** Through scheduled product releases, the Essenz System remains up to date and will continue to support the implementation of best practice in the evolving world of cardiac surgery, amortizing its total cost of investment.
- **Budget control and planning:** The four Essenz Focus service packages give options to build suitable servicing contracts that meet your budget and servicing needs.
- **Flexible purchasing options:** Essenz adapts to your hospital purchasing needs with options including outright purchase, usage agreement, buy-back, equity rentals and capital leasing.

Discover Essenz™ Perfusion System

Visit our website to learn more or contact your local representative and step into a New Era with us.



Essenz™ Perfusion System

Important Safety Information

Heart-Lung Machine

Devices are intended to perform, control, monitor and support extracorporeal blood circulation replacing the mechanical pumping function of the heart, monitoring and regulating physiologic parameters during procedures requiring extracorporeal circulation.

US: Essenz HLM is intended to be used during cardiopulmonary bypass for procedures lasting six (6) hours or less.

Essenz Patient Monitor

The Essenz Patient Monitor software is a modularly structured software program package that is exclusively used with LivaNova heart-lung machines. The system allows detailed recording of perfusion data during cardiopulmonary bypass procedures as well as the processing and evaluation of this data. The data may be recorded automatically or entered manually. The LivaNova Perfusion System Monitor is a panel PC intended to be exclusively used with LivaNova heart lung machines as a base and user interface for the Essenz Patient Monitor software.

CONTRAINDICATIONS: No contraindications are known if the devices are used for the purpose described and in accordance with the stated operating conditions. Do not use the devices for any purpose other than indicated.

WARNINGS: The devices must be used in accordance with the instructions for use provided. For a complete listing of warnings please refer to the Instructions for Use. Medical intervention and therapeutic procedure must not be based solely on the Essenz Patient Monitor perfusion records (reports).

PRECAUTIONS: Federal law (U.S.A.) restricts these devices to sale by or on the order of a physician. For a complete listing of precautions/cautions please refer to the Instructions for Use. The devices should be used by qualified and skilled personnel, able to follow the indications and instructions for use contained in the information provided by the manufacturer.

Not approved in all geographies, consult your labeling. Please visit the LivaNova website to receive instructions for use containing full prescribing information including indications, contraindications, warnings, precautions and adverse events.

Legal Manufacturer:

LivaNova Deutschland
Lindberghstrasse 25
D-80939 Munich,
Germany

Distributed in the USA by:

LivaNova USA
14401 W 65th Way
Arvada, CO 80004, USA

Distributed in Canada by:

LivaNova Canada Inc.
280 Hillmount Road, Unit 8
Markham, ON L6C 3A1, Canada



www.essenzperfusion.com



This brochure is only approved for countries where the product is approved.



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