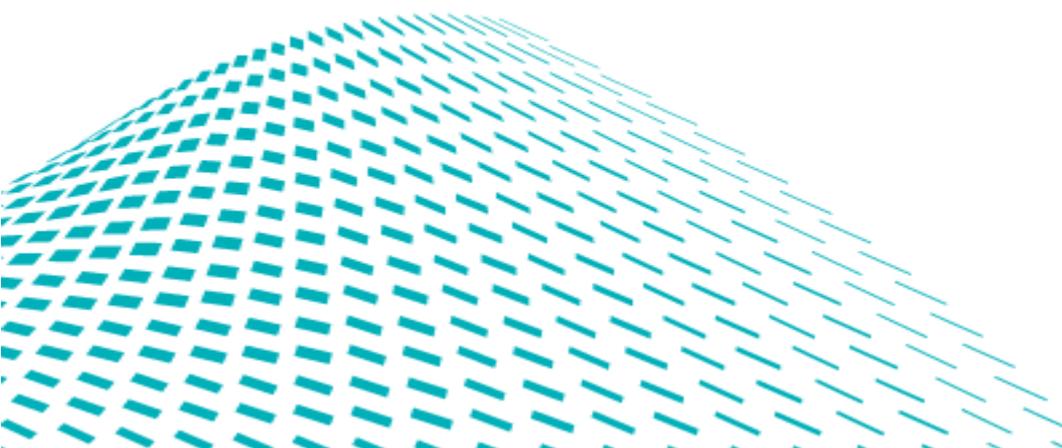


# S5 heart-lung-machine Ready to Meet Any Challenge



# MODULARITY

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## READY TO MEET ANY CHALLENGE

Our 40 years of experience in developing and producing extracorporeal perfusion systems, the implementation of our users' wishes and the continual development of our technologies has led to the creation of a machine of outstanding design, function and safety.

# MODULARITY

## 5th Generation HLM

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### What's modular:

- Console for 3 to 5 roller pumps
- Panel with 1 to 6 display and control modules
- Mast-mounted roller pumps
- Flexible mast system



# SAFETY

## Central Alarm Management

The S5's alarm management highly contributes to facilitating the application of extracorporeal perfusion technology.

- ▶ Full text messages for alarms and warnings
- ▶ One key each for muting, clearing and overriding alarm
- ▶ Differentiable audible alarm and warning tones



## System Display

In case of alarms and/or warnings, all events are indicated according to their priority. They are displayed as symbols and full text messages.

- Simultaneous display of 4 events max.
- Selection via scroll key
- Individual clearance



### **Display and Control Module (DCM) Replacement**

The modular concept of the S5 system panel enables easy and quick replacement of all DCMs.

- All DCMs physically identical
- Displayed information remains saved
- Quick emergency replacement



# SAFETY

UPS up to 130 Minutes

## Uninterruptible Power Supply (UPS)

The UPS incorporated in the E/P-pack can bridge a power failure of up to 90 minutes (20 min. at full load).

- Mains power supply
- UPS (remaining battery time in hh:mm)
- UPS (remaining battery time below 60 %)



# FLEXIBILITY

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## Rotatable Pump Heads

All pumps are rotatable to optimize the tubing layout for alignment to the oxygenator, thus avoiding kinks and bents and reducing the tubing length, artificial surface area and the priming volume.

- Rotate in 15° increments
- 180° and/or 240° total rotation
- Self-locking mechanism
- Omega-shaped pump head
- High-precision occlusion mechanism



# FLEXIBILITY

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## S5 Mast Mounted Pumps

Four different versions of pumps  
may be  
mounted on the masts

- SCP
- Large roller pump
- Small roller pump
- Small double head pump



# FLEXIBILITY

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## S5 Swivel arms

Various different swivel arms are attachable to the mast system to take up roller pumps and disposables

- Lower priming volume
- Pediatric applications



### **Incremental Encoder (IE)**

The proven increased longevity and reliability of incremental encoders over potentiometers has led to the decision of replacing speed potentiometers with IEs.

- Both, fine and course adjustment capabilities
- No mechanical end of range
- Maintenance-free speed knob



# TECHNOLOGY

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## Direct-Drive

The pumps' direct-drive DC brushless motors represent the latest technology. The console and/or mast pumps are available in two sizes: RP 150 (150mm I.D.) and DRP 85 (85mm I.D.). The direct-drive technology ensures years of problem-free performance.

- Reduced noise and vibration
- Prolonged lifetime
- Maintenance-free, reliable pump drive
- Belts and gearboxes superfluous
- Smaller dimensions, less weight



# TECHNOLOGY

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## User Interface

The S5's sophisticated user interface paves the way for quick and simple configurability to easily change to different perfusion protocols or individual patient needs.

- One touch accessibility
- Clearly structured menus
- Safe navigation due to a truly intuitive user interface



# ERGONOMICS

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## Flexible Mast System

The highest degree of flexibility is possible due to the new mast system concept; only one tool is required to adjust the push grip, horizontal mast, movable telescope mast and the vertical telescope masts.



## 3 Seconds to Go

The S5 System is operated by a PC-independent software using state-of-the-art microcontrollers in conjunction with a high-integrity serial CAN bus. The system incorporates intelligent and intuitively operable software programs for fast and simple configuration. No boot time is required after power-up, i.e. the perfusion system is ready for operation within 3 seconds.



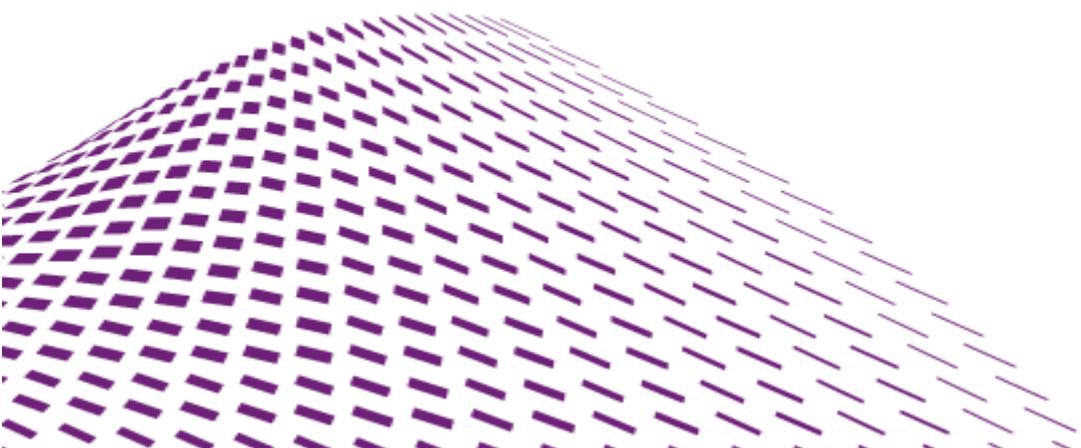
# QUALITY

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