

**MAQUET**  
GETINGE GROUP

**CARDIOHELP SYSTEM  
DESIGNED TO SAVE LIVES**





## CARDIOHELP SYSTEM THE MULTI-THERAPY SOLUTION **MAQUET – THE GOLD STANDARD**



**For many years now, MAQUET Cardiovascular has been one of the world's leading manufacturers of heart-lung machines** and components for extracorporeal circulation. MAQUET has developed CARDIOHELP as a multi-therapy heart-lung assist system which can be rapidly deployed and used for a wide range of indications in intensive care, emergency medicine, cardiology and cardiac surgery. The CARDIOHELP device is a compact and light weight system making it ideal for transporting patients whilst on respiratory and/or circulatory support.

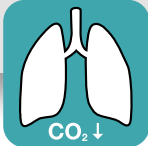

The CARDIOHELP System is used to restore and stabilize the patient's cardiopulmonary functions so clinicians can gain valuable time to save patients' lives – even in situations where no other alternatives were possible in the past. From resuscitation to both short and long term extracorporeal support the CARDIOHELP System has proven to be an effective and reliable life saver. It has a compact and functional design associated with intuitive software that optimises existing therapies and is compatible with the wide range of new upcoming therapies.

MAQUET – The Gold Standard.


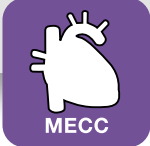
# CARDIOHELP SYSTEM

## ONE PLATFORM – MULTIPLE APPLICATIONS

### CARDIOHELP

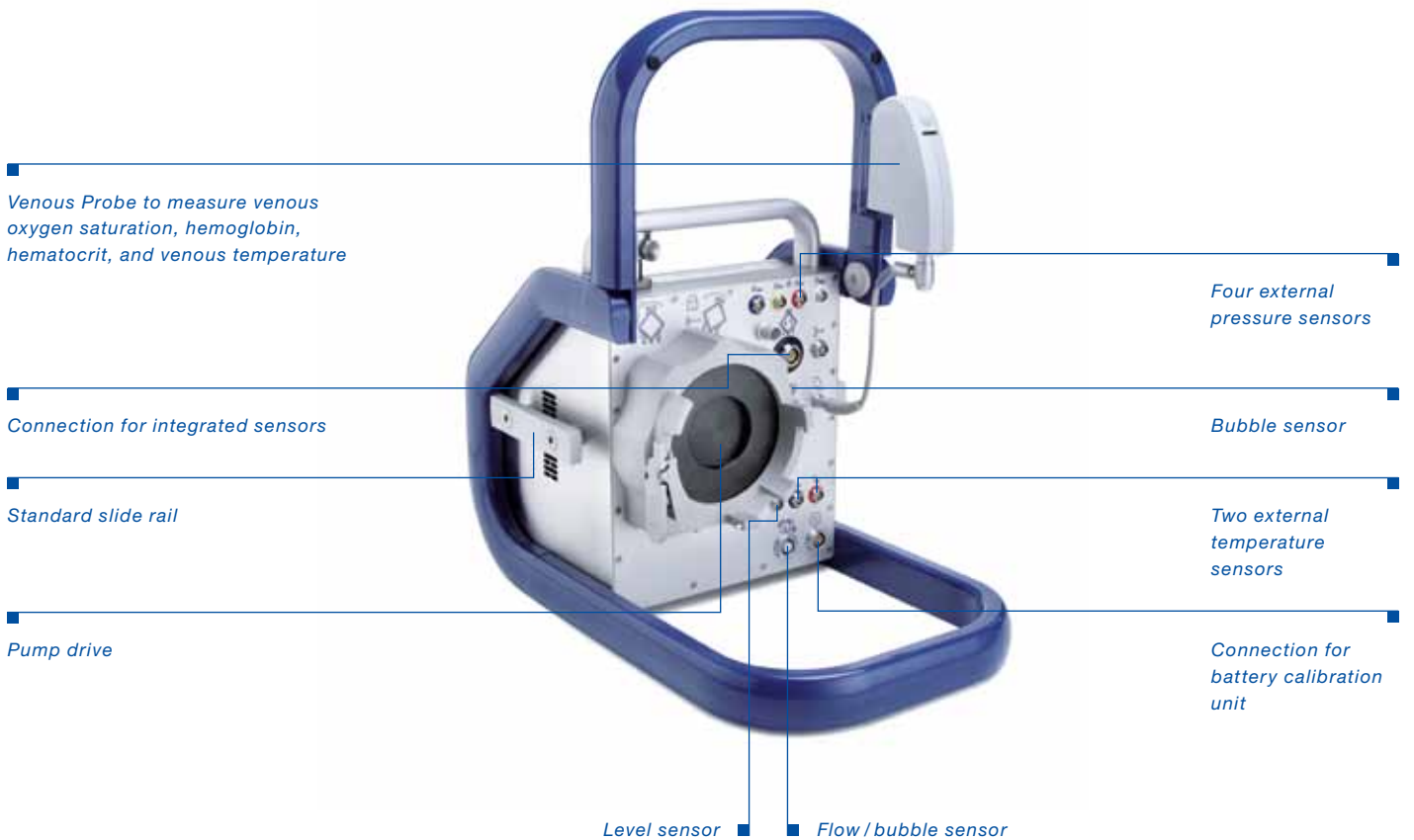
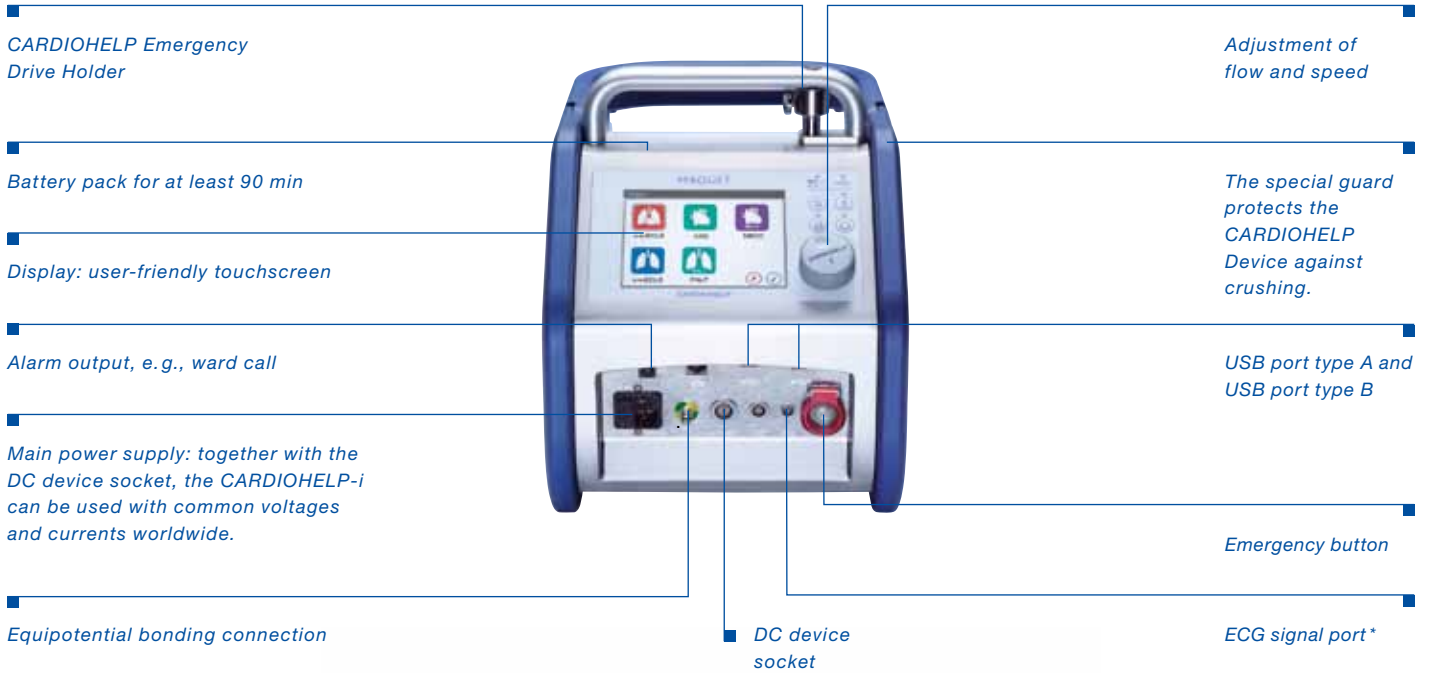
	Pump Assisted Lung Protection	Respiratory Assist	Respiratory & Cardiac Assist
<b>Application</b>	<b>Pump Assisted Lung Protection</b>	<b>Respiratory Assist</b>	<b>Respiratory &amp; Cardiac Assist</b>
<b>Disposable</b>	<b>PALP Set*</b>	<b>HLS Set Advanced 5.0 HLS Set Advanced 7.0 ECLS Set 2.8*</b>	<b>HLS Set Advanced 5.0 HLS Set Advanced 7.0 ECLS Set 2.8*</b>
<b>Place</b>	ICU/IMC/ER	ICU/ER/OR	ICU/Cath Lab/ER/OR
<b>Fields of application</b>	<ul style="list-style-type: none"> <li>■ Early ARDS</li> <li>■ Decompensated hypercarbic COPD</li> <li>■ Hypercapnia</li> </ul>	<ul style="list-style-type: none"> <li>■ ARDS</li> <li>■ Pulmonary embolism</li> <li>■ Septic shock</li> <li>■ Bridge to lung transplant</li> </ul>	<ul style="list-style-type: none"> <li>■ Respiratory failure with cardiac impairment</li> <li>■ Circulatory failure with respiratory impairment</li> <li>■ Cardiogenic shock</li> <li>■ Myocardial infarction</li> <li>■ Resuscitation</li> <li>■ Bridge to transplant</li> </ul>
<b>Duration of use</b>	Up to 30 days	Up to 30 days	Up to 30 days
<b>Flow</b>	0.2–0.8 l/min	HLS 5.0: 0.5–5.0 l/min HLS 7.0: 0.5–7.0 l/min ECLS: 0.2–2.8 l/min	HLS 5.0: 0.5–5.0 l/min HLS 7.0: 0.5–7.0 l/min ECLS: 0.2–2.8 l/min
<b>Temperature regulation</b>	–	33–40 °C	15–40 °C
<b>Transport</b>	Air/Ground	Air/Ground	Air/Ground
<b>“thApp” – Therapy Application modes</b>			
	<b>PALP</b>	<b>v-v-ECLS</b>	<b>v-a-ECLS</b>

# SYSTEM

Cardiac Assist	Cardiac Surgery & Intervention		
<p><b>ROTASSIST Set 9.9*</b> <b>ROTASSIST Set 2.8*</b></p>	<p><b>MECC-i Set*</b></p>	<p><b>Cardiac Intervention Set*</b></p>	<p>Application</p> <p>Disposable</p>
<p>ICU/OR</p>	<p>OR/Hybrid OR</p>	<p>Cath Lab/Hybrid OR</p>	<p>Place</p>
<ul style="list-style-type: none"> <li>■ Post-cardiotomy failure</li> <li>■ Bridge to decision or recovery</li> <li>■ Pre- or post-transplant support</li> <li>■ Acute cardiac failure of different origins</li> </ul>	<ul style="list-style-type: none"> <li>■ CABG</li> <li>■ AVR</li> <li>■ Pre- and post-operative heart-lung support</li> </ul>	<ul style="list-style-type: none"> <li>■ Elective high risk PCI</li> <li>■ Other elective cardiac interventions</li> </ul>	<p>Fields of application</p>
<p>Up to 30 days</p>	<p>Up to 6 hours</p>	<p>Up to 6 hours</p>	<p>Duration of use</p>
<p>9.9: 0.5–9.9 l/min 2.8: 0.2–2.8 l/min</p>	<p>0.5–7 l/min</p>	<p>0.5–7 l/min</p>	<p>Flow</p>
<p>–</p>	<p>15–40 °C</p>	<p>15–40 °C</p>	<p>Temperature regulation</p>
<p>Air / Ground</p>	<p>–</p>	<p>–</p>	<p>Transport</p>
			<p>“thApp” – Therapy Application modes</p>
<p>VAD</p>	<p>MECC</p>		

\*These new upcoming therapy sets will be compatible with the new **CARDIOHELP** software release

# THE CARDIOHELP DEVICE CONNECTIONS AND COMPONENTS



\*For future use, not supported by current software

## THE CARDIOHELP DEVICE

### BENEFITS AND TECHNICAL DATA

#### CARDIOHELP device:

- The CARDIOHELP-i is ideally designed for use in the intensive care unit, operating room, catheter laboratory and emergency room
- The compact and functional design gives maximum flexibility and easy handling of the device and the CARDIOHELP-i disposables
- The combination of a touchscreen with a newly designed user interface allows greater intuitive control even in emergency situations

#### Safety features:

- The patient's blood parameters can be accessed by continuous inline measurement including temperature, hemoglobin, hematocrit and venous saturation, while integrated sensors provide a comprehensive overview of pressures and the flow rate
- Sophisticated safety management allows individual alarms, warning limits and interventions to be set thereby assuring a high degree of safety during use
- CARDIOHELP-i provides an extensive back-up system with a 90 min battery supply (when fully charged) and an Emergency Drive. Furthermore the CARDIOHELP can be run in a special Emergency Mode
- An automatic screen lock prevents accidental operating and configuration changes

Technical Data	CARDIOHELP-i
Dimensions (H x W x D) with guard closed	315 x 255 x 427 mm (without holder / disposable)
Weight	Approx. 10 kg
Display	5.7" LCD touchscreen
Sensors	4 x External pressures 3 x Internal pressures 2 x External temperatures 2 x Internal temperatures 1 x Venous oxygen saturation 1 x Hemoglobin 1 x Hematocrit 1 x Flow-bubble sensor 1 x Bubble sensor 1 x Level sensor
Operating voltage range	11–28 Volt DC 100–240 Volt AC / 50–60 Hz
Interfaces for	1 x USB port type A (for data export on USB stick) 1 x USB port type B (for data recording system and service purposes) 1 x Connection for alarm output (ward call)
Battery operating time	Min. 90 min (fully charged batteries)



## CARDIOHELP DISPOSABLES CONVENIENT HANDLING



*HLS Module Advanced*



*QUADROX-IR*



*ROTASSIST with Drive Adapter  
and Venous Probe*



## CARDIOHELP SYSTEM THE PERFECT SOLUTION FOR PATIENT TRANSPORT

- The world's smallest portable heart-lung support system – perfect for safe and effective inter- and intra-hospital patient transport by air or ground
- Intuitively operated system which can be deployed rapidly in emergency situations
- Transport of severely ill patients to specialized centers during ongoing circulatory support
- Approvals conforming to RTCA DO 160\*, EN 13718 Part 1, EASA Part 21, BK117 & EC145 (air ambulance) and EN 1789 (road ambulance)
- Secure installation in any ambulance and various helicopter types
- Broad variety of transport accessories such as the HKH 8860 Mobile Holder, HKH 8850 Base Plate and the CARDIOHELP Trolley System is available
- Connection to the electrical system on a helicopter or ground transport vehicle
- Integrated lithium-ion batteries guarantee 90 minutes of operating time when fully charged



\* Section 4 Cat. A2, 7, 8, 15, 20 Cat. R, 21 Cat. M, 25 Cat. A (ESD)

## COMPLETELY EQUIPPED SPRINTER CART XL A STABLE, COMPACT AND MULTI-FUNCTIONAL WORKSTATION





**For local contact:**

Please visit our Website  
[www.maquet.com](http://www.maquet.com)

# MAQUET

## GETINGE GROUP

MAQUET Cardiopulmonary AG  
Kehler Str. 31  
76437 Rastatt, Germany  
Phone: +49 7222 932-0  
Fax: +49 7222 932-1888  
[info.cp@maquet.com](mailto:info.cp@maquet.com)  
[www.maquet.com](http://www.maquet.com)

GETINGE GROUP is a leading global provider of products and systems that contribute to quality enhancement and cost efficiency within healthcare and life sciences. We operate under the three brands of ArjoHuntleigh, GETINGE and MAQUET. ArjoHuntleigh focuses on patient mobility and wound management solutions. GETINGE provides solutions for infection control within healthcare and contamination prevention within life sciences. MAQUET specializes in solutions, therapies and products for surgical interventions, interventional cardiology and intensive care.