#### **HEART FAILURE MONITORING SYSTEM**

# CardioMEMS™ HF System

Hospital Electronics System



## **Product Highlights**

- The CardioMEMS™ HF System is a CE Marked heart failure (HF) monitor proven to significantly reduce HF hospital admissions and improve quality of life in NYHA Class III patients. When used by clinicians to manage HF, the CardioMEMS HF System is:
  - Safe and reliable 98,6% of patients were free from device or system complications<sup>1</sup>
  - Clinically proven reduced HF admissions by 62%<sup>2</sup>
  - Proactive and personalized patient management through direct monitoring of PA pressure and titration of medications
- The CardioMEMS HF System provides direct pulmonary artery (PA) pressure monitoring using the sensor, patient electronics system and the Merlin.net™ Patient Care Network website to manage patient data. Patient-initiated

- sensor readings are wirelessly transmitted to an electronics unit and stored in a secure website for clinicians to access and review
- The hospital electronics system is used by the implanting physician to zero the sensor, based upon simultaneous readings from the PA catheter
- The hospital electronics system is designed for use by health care professionals to record PA pressure from the sensor, eliminating the need for patients to carry their electronics to the hospital or doctor's office
- The hospital electronics system powers the sensor using RF energy; receives and processes the frequency information from the sensor; and converts the data into pressure waveforms, PA pressure values and heart rate measurements

## **Ordering Information**

Contents: Hospital Electronics System

MODEL NUMBER	DESCRIPTION
CM3000	Hospital Electronics System
CM3010	Printer
CM3011	Printer Serial Cables
CM3012	Printer Power Cables
CM3013	Printer Paper
CM3020	US Power Cord 125V 7A
CM3025	AUS Power Cord 250V, 2,5A, A.0 250V 2,5A
CM3021	EU Power Cord CEE 7/16, C7, 8 ft min, Class II, A.O 250V 2,5A
CM3023	UK Power Cord 2,5 Amp, C7, A.0, 250V 2,5A
CM3022	Power Supply Cable
CM3030	Barcode Scanner
CM3040	Wi-Fi <sup>†</sup> Adaptor
CM3024	Power Cord Clip

<sup>. 1.</sup> Abraham, W. T., Adamson, P. B., Bourge, R. C., Aaron, M. F., Costanzo, M. R., Stevenson, L. W.,...Yaday, J. S., (2011). Wireless pulmonary artery haemodynamic monitoring in chronic heart failure: a randomized controlled trial. The Lancet, 377(9766), 658-666. doi:10.1016/S0140-6736(11)60101-3.

<sup>2.</sup> Angermann C., Abmus B., et al. Pulmonary Artery Pressure Guided Therapy in Ambulatory Patients with Symptomatic Heart Failure The CardioMEMS European Monitoring Study for Heart Failure (MEMS-HF). European J of Heart Failure. 2020.10.1002/ejhf.1943

### CardioMEMS<sup>™</sup> HF System

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### **Product Specifications**

Models Electronics Unit	CM3000
Dimensions (H x W x L, cm)	29 x 14 x 26,5
Weight (kg)	3,6kg
Power	
Supply Voltage	12v DC, 6A
Provided Power Supply	Medical Grade Class II. Input: 100-240V, 50-60Hz. Output:
	12v DC, 6A. Manufacturer part number: CS-001301.
Power Cord	Use only power cord supplied by manufacturer.
Radiofrequency (RF) Characte	ristics
Transmitted Electrical Power	< 1 mW e.r.p.
Operating Frequency	30-37,5 MHz (under normal operating conditions
	the measurement bandwidth is approximately 1 MHz
	within the operating frequency range)
Processing Capabilities	
I/O	USB, VGA
Display	
Touch Screen	Resistive
Brightness	250 cd/m <sup>2</sup>
Resolution	800 x 480, color
Antenna	
Diameter	23
Weight (kg)	2,7 (antenna with pillow)
Cable	Reference manufacturer's part number CS-000135
Environmental	
Operation	5° to 40° C (41° to 104° F), 15% to 93% humidity (non-condensing),
	700-1060 hPa (electronics), 800-1150 hPa (implanted sensor)
Transportation	-25° C to 70° C (-13° to 158° F), 15% to 93% humidity, 850-1150 hPa
Storage	-25° C to 70° C (-13° to 158° F), 15% to 93% humidity, 850-1150 hPa

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Brief Summary: Prior to using these devices, please review the Instructions for Use for a complete listing of indications, contraindications, warnings, precautions, potential adverse events and directions for use.

Indications and Usage: The CardioMEMS™ HF System is indicated for wirelessly measuring and monitoring pulmonary artery (PA) pressure and heart rate in New York Heart Association (NYHA) Class III heart failure patients who have been hospitalized for heart failure in the previous year. The hemodynamic data are used by physicians for heart failure management and with the goal of reducing heart failure hospitalizations.

Contraindications: The CardioMEMS HF System is contraindicated for patients with an inability to take dual antiplatelet or anticoagulants for one month post implant.

Potential Adverse Events: Potential adverse events associated with the implantation procedure include, but are not limited to, the following: Infection, Arrhythmias, Bleeding, Hematoma, Thrombus, Myocardial infarction, Transient ischemic attack, Stroke, Death, and Device embolization

Limitations: Patients must use their own Apple‡ or Android‡ mobile device to receive and transmit information to the myCardioMEMS™ mobile app. To do so the device must be powered on, app must be installed and data coverage (cellular or Wi-Fi‡) available. The myCardioMEMS™ app can provide notification of medication adjustments and reminders, requests for lab work and acknowledgement that the PA pressure readings have been received. However there are many internal and external factors that can hinder, delay, or prevent acquisition and delivery of the notifications and patient information as intended by the clinician. These factors include: patient environment, data services, mobile device operating system and settings, clinic environment, schedule/configuration changes, or data processing.



 $\ddagger$  Indicates a third-party trademark, which is property of its respective owner.

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