

# Meet the LUCAS<sup>®</sup> 3 Chest Compression System



# LUCAS System

Smart. Hardworking. Built for the future.

The LUCAS chest compression system has been helping lifesaving teams around the world deliver high-quality, Guidelines-consistent compressions; in the field, on the move and in the hospital.

With over 12 years of clinical experience, we proudly present the third generation LUCAS device, built on the LUCAS legacy. The LUCAS 3 chest compression system has improved features to facilitate maintenance and handling and allows for new insights through easy, wireless access to device data.



# LUCAS Case

Strong. Smart. Modern.

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## Hard Shell Case

- Polycarbonate
- Easy to clean
- Reflective badging
- Large multi-point handles
- Large zipper grips
- Adjustable backpack straps



## Molded Design

- Compact, portable and durable
- Protected and organised inside
- Smart storage compartment of accessories (batteries, straps, suction cups)
- Can also be used with the LUCAS 2 device



## Top Window

- Quick check of battery status (press MUTE button)



## Charge Port (on back of hard shell case)

- Charge the device without removing from the case

# LUCAS Slim Back Plate

Simple. Skinny.

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## Single Piece

- ~50% slimmer
- Easy to clean
- Tapered edge for easier adjustment
- Larger contact area for stability
- Additional attach points for transportation
- Can also be used also with LUCAS 2 devices



## Cath Lab/Fluoroscopy

- Allows for emergency angiography/angioplasty during ongoing LUCAS CPR
- Vague grid shadows in oblique views (see angiogram)
- For optimal performance; use PCI back plate (available separately)

# LUCAS Device Connectivity

Connected. Insights.

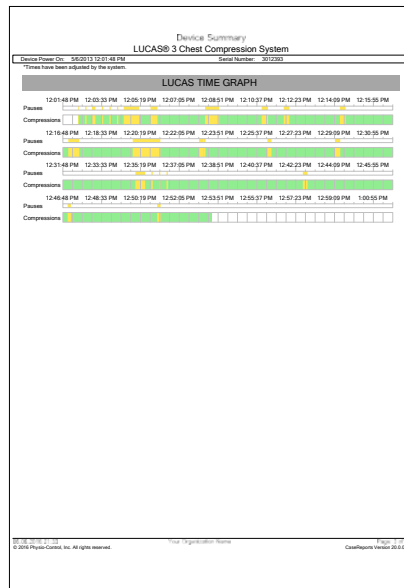
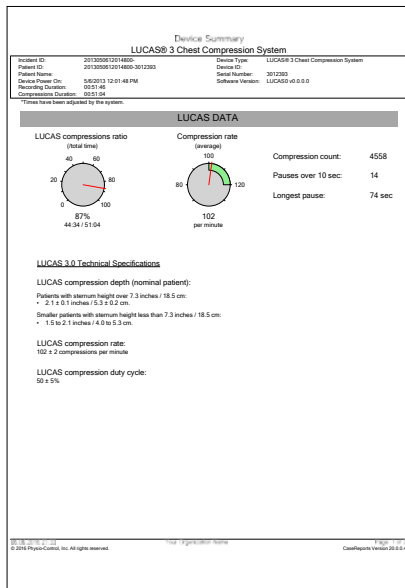
## Data-Enabled

- Post-event performance reports for review
- Bluetooth® connectivity
- Easy to pair with PC/Windows®
- LUCAS Report Generator software



## LUCAS Report Generator

- LUCAS chest compression statistics, pauses, user modes and device alarms and alerts
- Review LUCAS device performance data at the end of the case or shift
- Device summary, timeline and event log



\*Times have been adjusted by the system.

Event log				LUCAS® 3 Chest Compression System			
Patient ID:	Device ID:	Device Type:	Event ID:	Device ID:	Device Type:	Event ID:	Device ID:
201305561014800	3012393	LUCAS® 3 Chest Compression System	1001	3012393	LUCAS® 3 Chest Compression System	1001	3012393
Report Power On:	Device Power On:	Serial Number:	Software Version:	Report Power On:	Device Power On:	Serial Number:	Software Version:
05:30:03	05:30:03	3012393	LUCAS® v3.0.0.0	05:30:03	05:30:03	3012393	LUCAS® v3.0.0.0
Compressions Counted:	Compressions Counted:			Compressions Counted:	Compressions Counted:		
4558	4558			4558	4558		
Elapsed Time	Real Time	Description	Elapsed Time	Real Time	Description	Elapsed Time	Real Time
00:00:00	10:41:29 AM	Power On	00:00:00	10:41:29 AM	Continuous Mode	00:00:00	10:41:29 AM
00:00:00	10:41:58 AM	Adjust Mode	00:00:08	10:41:58 AM	Adjust Mode	00:00:08	10:41:58 AM
00:00:00	10:42:28 AM	Pause Mode	00:00:12	10:42:28 AM	Pause Mode	00:00:12	10:42:28 AM
00:00:16	10:42:12 AM	Continuous Mode	00:00:14	10:42:12 AM	Continuous Mode	00:00:14	10:42:12 AM
00:00:14	10:42:12 AM	Fast Compression	00:00:12	10:42:12 AM	Pause Mode	00:00:12	10:42:12 AM
00:01:05	10:42:22 AM	Pause Mode	00:00:14	10:42:22 AM	Adjust Mode	00:00:14	10:42:22 AM
00:01:05	10:42:24 AM	Start Position Adjustment Required	00:00:17	10:42:24 AM	Pause Mode	00:00:17	10:42:24 AM
00:01:29	10:42:37 AM	Start Position Adjustment Required	00:00:21	10:42:37 AM	Continuous Mode	00:00:21	10:42:37 AM
00:01:30	10:42:38 AM	Adjust Mode	00:00:24	10:42:38 AM	Start Position Adjustment Required	00:00:24	10:42:38 AM
00:01:36	10:42:32 AM	Pause Mode	00:00:34	10:42:32 AM	Pause Mode	00:00:34	10:42:32 AM
00:01:36	10:42:33 AM	Continuous Mode	00:00:39	10:42:33 AM	Continuous Mode	00:00:39	10:42:33 AM
00:01:46	10:42:14 AM	Pause Mode	00:00:42	10:42:14 AM	Start Position Adjustment Required	00:00:42	10:42:14 AM
00:01:47	10:42:16 AM	Adjust Mode	00:00:42	10:42:16 AM	Pause Mode	00:00:42	10:42:16 AM
00:03:09	10:42:18 AM	Pause Mode	00:00:43	10:42:18 AM	Adjust Mode	00:00:43	10:42:18 AM
00:03:09	10:42:22 AM	Continuous Mode	00:00:44	10:42:22 AM	Pause Mode	00:00:44	10:42:22 AM
00:03:09	10:42:36 AM	Start Position Adjustment Required	00:00:47	10:42:36 AM	Continuous Mode	00:00:47	10:42:36 AM
00:03:54	10:42:52 AM	Start Position Adjustment Required	00:10:10	10:42:52 AM	Pause Mode	00:10:10	10:42:52 AM
00:03:54	10:42:52 AM	Pause Mode	00:10:10	10:42:52 AM	Last Compression	00:10:10	10:42:52 AM
00:03:55	10:42:52 AM	Adjust Mode	00:10:13	10:42:52 AM	Power Off	00:10:13	10:42:52 AM
00:03:55	10:42:56 AM	Pause Mode					

## Device Summary

- Quick glance dials of ratio and rate
- Compression and pause data

## Time Graph

- Timeline from first LUCAS device compression to last
- Pauses automatically highlighted

## Event Log

- Insight into user interaction, device operational mode, battery information and any alarms

# LUCAS Device Report

Connected. Insights.

## Device Summary

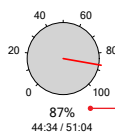
**Device Summary**  
**LUCAS® 3 Chest Compression System**

Incident ID: 2013050612014800	Device Type: LUCAS® 3 Chest Compression System
Patient ID: 2013050612014800-3012393	Device ID: 3012393
Patient Name:	Serial Number: 3012393
Device Power On: 5/6/2013 12:01:48 PM	Software Version: LUCAS0 v0.0.0.0
Recording Duration: 00:51:46	
Compressions Duration: 00:51:04	

\*Times have been adjusted by the system.

**LUCAS DATA**

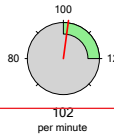
**LUCAS compressions ratio**  
(total time)



87%

44:34 / 51:04

**Compression rate**  
(average)



102  
per minute

Compression count: 4558

Pauses over 10 sec: 14

Longest pause: 74 sec

**LUCAS 3.0 Technical Specifications**

**LUCAS compression depth (nominal patient):**

Patients with sternum height over 7.3 inches / 18.5 cm:

- 2.1 ± 0.1 inches / 5.3 ± 0.2 cm.

Smaller patients with sternum height less than 7.3 inches / 18.5 cm:

- 1.5 to 2.1 inches / 4.0 to 5.3 cm.

**LUCAS compression rate:**  
102 ± 2 compressions per minute

**LUCAS compression duty cycle:**  
50 ± 5%

10.05.2015 21:33 © 2016 Physio-Control, Inc. All rights reserved.
Your Organization Name
Page: 1 of 2 CaseReports Version 20.0.0.4

Device name, case date, case time and duration

Consistent, high-quality LUCAS compressions

Compression count, pauses >10 seconds and longest pause readout

Compression ratio between first and last LUCAS compression

LUCAS device technical specifications

## Time Graph

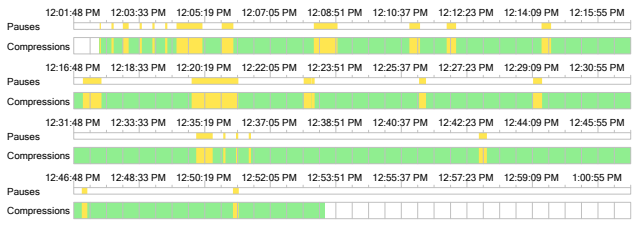
- Time Axis
- Pauses (automatic by device or user initiated)
- Compressions (device only)

**Device Summary**  
**LUCAS® 3 Chest Compression System**

Device Power On: 5/6/2013 12:01:48 PM	Serial Number: 3012393
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\*Times have been adjusted by the system.

**LUCAS TIME GRAPH**



# Specifications

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## Compressions

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**Compression Frequency:** 102 ± 2 compressions per minute

**Compression depth (nominal patient):**

- 2.1± 0.1 inches / 53±2 mm for patients with sternum height greater than 7.3 inches / 185 mm
- 1.5 to 2.1 inches / 40 to 53 mm for patients with sternum height less than 7.3 inches / 185 mm

**Compression/Decompression Duty Cycle:** 50 ± 5%

**Patients Eligible for Treatment:**

- 6.7 to 11.9 inches / 17.0 to 30.3 cm sternum height (anterior – posterior)
- 17.7 inches / 44.9 cm chest width

The use of the LUCAS device is not restricted by patient weight.

## Device specifications

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**Height x Width x Depth (assembled):** 22.0 x 20.5 x 9.4 inches / 56 x 52 x 24 cm

**Height x Width x Depth (stowed in backpack):** 22.8 x 13.0 x 10.2 inches / 58 x 33 x 26 cm

**Weight device with battery (no straps):** 17.7 lbs / 8.0 kg

**Device storage temperature:** -4°F to +158°F / -20°C to +70°C

**Device IP Classification:** IP43

## Operation

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**Power Source:** Battery – Rechargeable Lithium-ion Polymer (LiPo), and (optional) external power supply or car cable

**Battery run time (typical):** 45 minutes (typical), prolonged operation time with (optional) external power supply or car power cable

**External Power supply:** 100-240VAC, 50/60Hz, 2.3A, Class II, Output 24VDC, 4.2A

**Car Power Cable:** Voltage / Current 10-28VDC / 0-10A

**Operating temperature:**

- +32°F to +104°F / +0°C to +40°C
- -4°F / -20°C for 1 hour after storage at room temperature

## Battery specifications

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**Battery charge time:**

Charged in the device using external power supply:

- Less than two hours at room temperature (+72°F/+22°C)

Charged in the external battery charger:

- Less than four hours at room temperature (+72°F/+22°C)

**Battery weight:** 1.3 lbs / 0.6 kg

**Battery capacity:** 3300 mAh (typical), 86 Wh

**Battery voltage:** 25.9 V

**Interval for replacement of battery:** recommendation to replace battery every 3 to 4 years or after 200 uses (of more than 10 minutes each time)

**Battery charge temperature:** +32°F to +104°F / +0°C to +40°C (+68°F to +77°F / +20°C to +25°C preferred)

**Battery storage temperature:** +32°F to +104°F / 0°C to +40°C (-4°F to +158°F / -20°C to +70°C ambient for less than a month)

**Battery IP Classification:** IP44

## Data transmission post-event

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**Radio module:** Bluetooth® v2.1 + EDR Class 1 - up to 3Mbps, Modulation method; 8DPSK, π/4 DQPSK, GFSKFSK, Operating channel; BT 2.4GHz: Ch. 0 to 78, Frequency range; 2.4000 to 2.4835 GHz, Radio frequency; Output Power (Bluetooth) Max + 10dBm

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The LUCAS 3 device is for use as an adjunct to manual CPR when effective manual CPR is not possible (e.g., transport, extended CPR, fatigue, insufficient personnel).

