



**CITY OF NOVI CITY COUNCIL**  
**SEPTEMBER 9, 2022**

**SUBJECT:** Consideration of approval to purchase one (1) Lucas 3 chest compression system for the Novi Fire Department from Stryker, an authorized sole sourced dealer, in the amount of \$16,060.06.

**Submitting department:** Public Safety- Fire Department

Department of Public Work- Fleet Division

<b>EXPENDITURE REQUIRED</b>	<b>\$ 16,060.06</b>
<b>AMOUNT BUDGETED</b>	<b>\$ 890,004</b>
<b>APPROPRIATION REQUIRED</b>	<b>\$ 0</b>
<b>LINE ITEM NUMBER</b>	<b>400-337.00-979.004- FIR017 Engine (replace 342)</b>

**BACKGROUND INFORMATION:**

The Novi Fire Department is requesting to purchase one Lucas 3 Chest Compression System. This equipment was budgeted with the 2022 Stuphen Fire Truck, which was approved on July 26, 2021 City Council meeting. The chest compression system's price is set to increase 9% in October, therefore, staff is requesting the purchase now for cost savings. It will be placed on the Ambulance 1 for use until the new 2022 Sutphen Fire Truck is estimated to be delivered July 2023.

The equipment assists on all cardiac arrest calls for service. The Lucas 3 Chest Compression System is a full automatic compression unit to assist police, fire, and EMS personnel with high quality compressions during a cardiac arrest. Being the system is fully automatic, will help reduce personnel fatigue from providing compressions on a cardiac arrest and create high quality compression for the duration of the call for service. This is the same unit as our partners at Superior EMS currently utilize on their advanced life support ambulances. Keeping with the same unit will help streamline training for all of our personnel.

It will be purchased as a sole source item, utilizing the Wayne County Bulk Buy quote that holds the only five (5) year warranty for the Lucas 3 chest compression system.

**RECOMMENDED ACTION:** Approval to purchase one (1) Lucas 3 chest compression system for the Novi Fire Department from Stryker, an authorized sole sourced dealer, in the amount of \$16,060.06.



## LUCAS

Quote Number: 10538024

Version: 1  
Prepared For: CITY OF NOVI  
Attn:

Quote Date: 06/01/2022  
Expiration Date: 08/30/2022

Remit to: **Stryker Medical**  
P.O. Box 93308  
Chicago, IL 60673-3308  
Rep: Jamie Smith  
Email: jamie.smith@stryker.com  
Phone Number:  
Mobile: (269) 303-1257

### Delivery Address

Name: CITY OF NOVI  
Account #: 1281638  
Address: 42975 GRAND RIVER AVE  
NOVI  
Michigan 48375-1731

### End User - Shipping - Billing

Name: CITY OF NOVI  
Account #: 1281638  
Address: 42975 GRAND RIVER AVE  
NOVI  
Michigan 48375-1731

### Bill To Account

Name: CITY OF NOVI  
Account #: 1281637  
Address: 45175 TEN MILE RD  
NOVI  
Michigan 48375-3006

### Equipment Products:

#	Product	Description	Qty	Sell Price	Total
1.0	99576-000063	LUCAS 3, v3.1 Chest Compression System, Includes Hard Shell Case, Slim Back Plate, (2) Patient Straps, (1) Stabilization Strap, (2) Suction Cups, (1) Rechargeable Battery and Instructions for use With Each Device	1	\$13,529.26	\$13,529.26
2.0	11576-000060	LUCAS Desk-Top Battery Charger	1	\$1,003.96	\$1,003.96
3.0	11576-000071	LUCAS External Power Supply	1	\$317.68	\$317.68
4.0	11576-000080	LUCAS 3 Battery - Dark Grey - Rechargeable LiPo	1	\$614.08	\$614.08
5.0	11576-000047	LUCAS Disposable Suction Cup (12 pack)	1	\$427.12	\$427.12
6.0	11576-000050	LUCAS Patient Wrist Straps (1 Pair)	1	\$88.92	\$88.92
7.0	21576-000074	LUCAS Stabilization Strap	1	\$79.04	\$79.04
<b>Equipment Total:</b>					<b>\$16,060.06</b>

### ProCare Products:

#	Product	Description	Years	Qty	Sell Price	Total
8.1	78000703	ProCare LUCAS Prevent Service: Annual onsite preventive maintenance inspection and unlimited repairs including parts, labor and travel with battery coverage for LUCAS 3, v3.1 Chest Compression System, Includes Hard Shell Case, Slim Back Plate, (2) Patient Straps, (1) Stabilization Strap, (2) Suction Cups, (1) Rechargeable Battery and Instructions for use With Each Device	4	1	\$5,106.80	\$5,106.80
<b>ProCare Total:</b>					<b>\$5,106.80</b>	



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P.O. Box 93308

Chicago, IL 60673-3308

Rep: Jamie Smith

Email: jamie.smith@stryker.com

Phone Number:

Mobile: (269) 303-1257

### Price Totals:

Estimated Sales Tax (0.000%):	\$0.00
Freight/Shipping:	\$177.39
Grand Total:	\$21,344.25

Prices: In effect for 30 days

Terms: Net 30 Days

Contact your local Sales Representative for more information about our flexible payment options.

**Capital Terms and Conditions:**

Deal Consummation: This is a quote and not a commitment. This quote is subject to final credit, pricing, and documentation approval. Legal documentation must be signed before your equipment can be delivered. Documentation will be provided upon completion of our review process and your selection of a payment schedule. Confidentiality Notice: Recipient will not disclose to any third party the terms of this quote or any other information, including any pricing or discounts, offered to be provided by Stryker to Recipient in connection with this quote, without Stryker's prior written approval, except as may be requested by law or by lawful order of any applicable government agency. A copy of Stryker Medical's Acute Care capital terms and conditions can be found at [https://techweb.stryker.com/Terms\\_Conditions/index.html](https://techweb.stryker.com/Terms_Conditions/index.html). A copy of Stryker Medical's Emergency Care capital terms and conditions can be found at <https://www.strykeremergencycare.com/terms>.

# 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.



## 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.

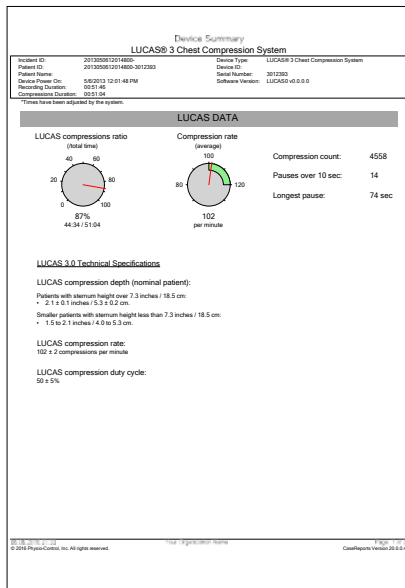
## Data-Enabled

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



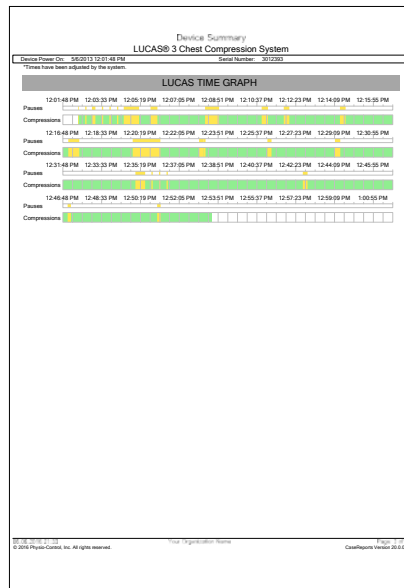
## LUCAS Report Generator

- 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



## 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**  
**LUCAS® 3 Chest Compression System**

Device ID: 2016860310425660-31150005  
 Patient ID: 5630913  
 Device Type: LUCAS® 3 Chest Compression System  
 Patient Name: 5630913 12:01:48 PM  
 Device ID: 2016860310425660-31150005  
 Serial Number: 3012803  
 Software Version: LUCAS® v3.0.0.0  
 \*Times have been adjusted by the system.

Elapsed Time	Real Time	Description	Elapsed Time	Real Time	Description
00:00:00	12:01:48 PM	Power On	00:05:50	12:07:38 PM	Continuous Mode
00:00:00	12:01:48 PM	Adjust Mode	00:05:08	12:07:06 PM	Adjust Mode
00:00:16	12:02:04 PM	Pause Mode	00:05:12	12:07:10 PM	Pause Mode
00:00:16	12:02:10 PM	Continuous Mode	00:05:14	12:07:12 PM	Continuous Mode
00:00:14	12:02:12 PM	First Compression	00:05:12	12:07:10 PM	Pause Mode
00:00:25	12:02:23 PM	Pause Mode	00:05:14	12:07:12 PM	Adjust Mode
00:00:25	12:02:24 PM	Start Position Adjustment Required	00:05:17	12:07:15 PM	Pause Mode
00:00:29	12:02:27 PM	Start Position Adjustment Required	00:05:21	12:07:19 PM	Continuous Mode
00:00:30	12:02:28 PM	Adjust Mode	00:05:24	12:07:22 PM	Start Position Adjustment Required
00:00:36	12:02:34 PM	Pause Mode	00:05:34	12:07:32 PM	Pause Mode
00:00:35	12:02:33 PM	Continuous Mode	00:05:39	12:07:37 PM	Continuous Mode
00:00:35	12:02:34 PM	Pause Mode	00:05:42	12:07:40 PM	Start Position Adjustment Required
00:00:37	12:02:36 PM	Adjust Mode	00:05:42	12:07:40 PM	Pause Mode
00:00:39	12:02:38 PM	Pause Mode	00:05:43	12:07:41 PM	Adjust Mode
00:00:39	12:02:38 PM	Continuous Mode	00:05:44	12:07:42 PM	Pause Mode
00:00:39	12:02:38 PM	Start Position Adjustment Required	00:05:47	12:07:45 PM	Continuous Mode
00:00:54	12:02:52 PM	Start Position Adjustment Required	00:10:10	12:02:58 PM	Pause Mode
00:00:54	12:02:52 PM	Pause Mode	00:10:10	12:02:58 PM	Last Compression
00:00:55	12:02:53 PM	Adjust Mode	00:10:23	12:03:29 PM	Power Off
00:00:55	12:02:55 PM	Pause Mode			

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 Compliance Version: 20.0.0.4

## Event Log

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

# LUCAS Device Report

Connected. Insights.

## Device Summary

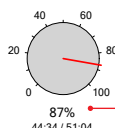
**Device Summary**  
**LUCAS® 3 Chest Compression System**

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**

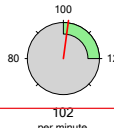
**LUCAS compressions ratio**  
(total time)



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

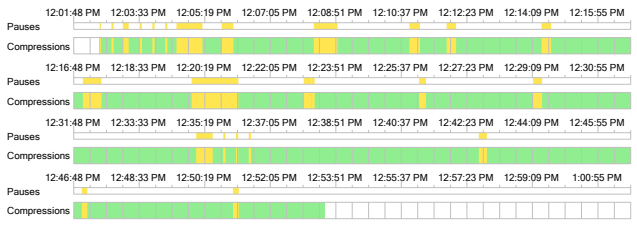
- Time Axis
- Pauses (automatic by device or user initiated)
- Compressions (device only)

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

Device Power On: 5/6/2013 12:01:48 PM	Serial Number: 3012393
---------------------------------------	------------------------

\*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

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).

For further information, please contact Physio-Control at 800.442.1142 (U.S.), 800.895.5896 (Canada) or visit our website at [www.physio-control.com](http://www.physio-control.com)



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