

**stryker**

## High-quality CPR in the cath lab

allowing for  
continued PCI



**LUCAS® 3, v3.1**  
chest compression system

# Resuscitation guidelines

International guidelines recognise the value of mechanical chest compression devices in the cardiac catheterisation lab, with both the European Resuscitation Council (ERC) and American Heart Association (AHA) noting their potential use in the angiography suite.

## ERC

"On an angiography table with the image intensifier above the patient, delivering chest compressions with adequate depth and rate is almost impossible and exposes the rescuers to dangerous radiation. Therefore, **early transition to the use of a mechanical chest compression device is strongly recommended.**"<sup>4</sup>

## AHA

"The use of the mechanical chest compression devices may be considered in specific settings **where the delivery of high-quality manual compressions may be challenging or dangerous for the provider** (eg, prolonged CPR during hypothermic cardiac arrest, CPR in a moving ambulance, CPR in the angiography suite, CPR during preparation for ECPR)."<sup>3</sup>

Among patients suffering cardiac arrest treated with LUCAS in the cath lab, 25% had a good neurological outcome at hospital discharge compared to 10% treated with manual chest compressions.<sup>5</sup>

# 15,147

In a successful 2 hour 45 minute resuscitation, LUCAS administered 15,147\* guidelines-consistent compressions<sup>6</sup>

# +60%

Increased blood flow to the brain vs. manual CPR<sup>7</sup>

# 99%

of survivors had good neurological outcomes in large randomised control trial — LINC<sup>8</sup>

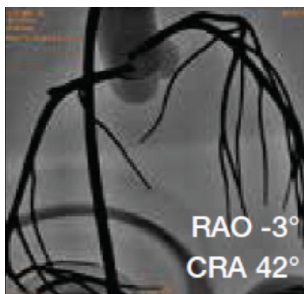
\*Calculated based on 102 compressions per minute x 165 min x .9  
(Compression fraction based on Olasveengen TM, Wik L, Steen PA. Quality of cardiopulmonary resuscitation before and during transport in out-of-hospital cardiac arrest. *Resuscitation*. 2008; 76(2):185-90.)



## Why choose LUCAS



High quality CPR  
in the cath lab



Allows for  
simultaneous  
catheterisation,  
angiography and PCI



Reduced radiation  
exposure for  
CPR provider



The device [LUCAS] enabled us to do the PCI with high-quality CPR. It's hard to maneuver radiation equipment around a human being doing chest compressions. With the LUCAS device, it's easier to do the intervention without obstacles and interruptions.<sup>1</sup>

— Jonathan Paul, MD,  
Interventional Cardiologist  
at University of Chicago Medicine, U.S.

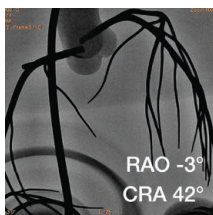
We can save patients that we would have thought were impossible to save before LUCAS.<sup>2</sup>

— Dr. Göran Olivecrona, MD, PhD  
Associate Director, Coronary Intervention Unit  
at Skåne University Hospital - Lund, Sweden

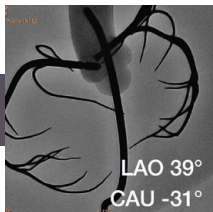


# The difference is in the angles

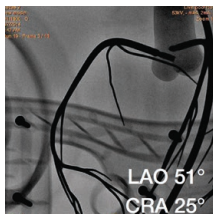
## Cranial



## Caudal



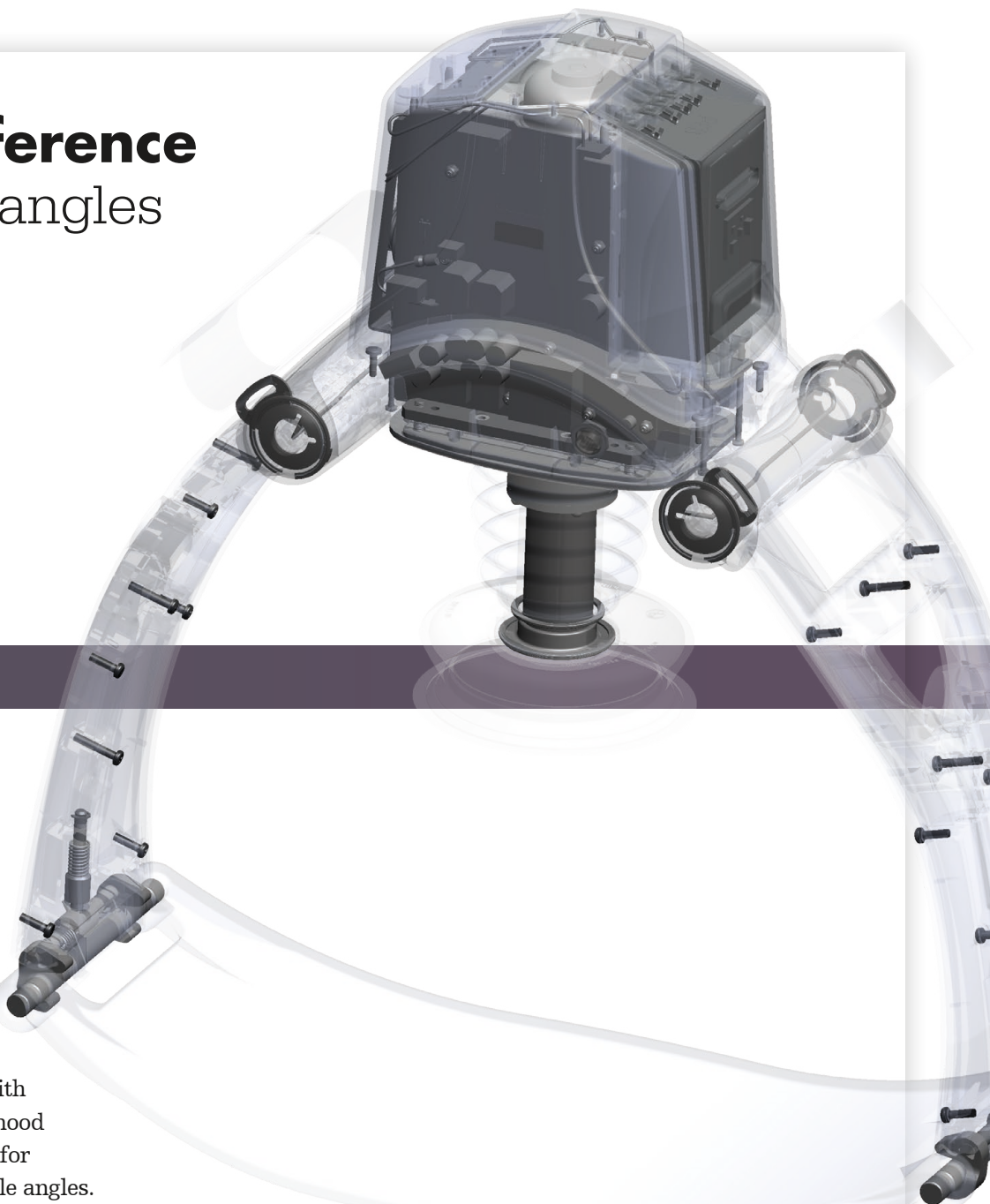
## Lateral



LUCAS is mostly radiotranslucent, with the exception of the hood and piston, allowing for projections at multiple angles.

\* Images above show a Wire Heart (Bayer Pharmaceuticals) consisting of wire coronaries attached to a plastic aorta on a metal stand with plastic base to depict the coronary arteries.

\*\* Image above is a simulated drawing depicting radiotranslucency of LUCAS





The carbon fibre LUCAS PCI back plate (optional) is intended specifically for use in the cath lab. Preemptively placing the LUCAS PCI Back Plate (without upper part attached) allows for full visualisation of arterial tree from all angles and for a rapid deployment of LUCAS if needed.

## References

- 1 White Paper – University of Chicago Medicine LUCAS Cath Lab, GDR 3330316\_B
- 2 "Cath Lab Staff Saves Lives in 'Impossible' Cases With LUCAS 2 Chest Compression System." *Diagnostic and Interventional Cardiology*, 14 Dec. 2011, [www.dicardiology.com/content/cath-lab-staff-saves-lives-impossible-cases-lucas-2-chest-compression-system](http://www.dicardiology.com/content/cath-lab-staff-saves-lives-impossible-cases-lucas-2-chest-compression-system).
- 3 2015 American Heart Association Guidelines for CPR and ECC. *Circulation*. 2015;132(suppl 2):S319
- 4 ERC European Resuscitation Council Guidelines for Resuscitation 2015. *Resuscitation*. 95 (2015):S170
- 5 Wagner H, Hardig BM, Rundgren M, et al. Mechanical chest compressions in the coronary catheterisation laboratory to facilitate coronary intervention and survival in patients requiring prolonged resuscitation efforts. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*. 2016;24:4)
- 6 Case study Regions Hospital St. Paul, GDR 3318844\_A.
- 7 Carmona Jimenez F, Padro P, Garcia A, et al., Cerebral flow improvement during CPR with LUCAS, measured by Doppler. *Resuscitation*. 2011; 82S1:30,AP090. [This study is also published in a longer version, in Spanish language with English abstract, in *Emergencias*. 2012;24:47-49]
- 8 Rubertsson S, Lindgren E, Smekal, D et al. Mechanical chest compressions and simultaneous defibrillation vs conventional cardiopulmonary resuscitation in out-of-hospital cardiac arrest. The LINC randomised trial. *JAMA*. 2013;311(1):53-61.

**For further information, please contact your Stryker representative or visit our website at [strykeremergencycare.com](http://strykeremergencycare.com)**

## Emergency Care

This document is intended solely for the use of healthcare professionals. A healthcare professional must always rely on his or her own professional clinical judgment when deciding whether to use a particular product when treating a particular patient. Stryker does not dispense medical advice and recommends that healthcare professionals be trained in the use of any particular product before using it.

The information presented is intended to demonstrate Stryker's product offerings. A healthcare professional must always refer to operating instructions for complete directions for use indications, contraindications, warnings, cautions, and potential adverse events, before using any of Stryker's products. Products may not be available in all markets because product availability is subject to the regulatory and/or medical practices in individual markets. Please contact your representative if you have questions about the availability of Stryker's products in your area. Specifications subject to change without notice. The products depicted are CE marked in accordance with applicable EU Regulations and Directives

Stryker or its affiliated entities own, use, or have applied for the following trademarks or service marks: LUCAS, Stryker. All other trademarks are trademarks of their respective owners or holders.

The absence of a product, feature, or service name, or logo from this list does not constitute a waiver of Stryker's trademark or other intellectual property rights concerning that name or logo.

12/2019

GDR 3343155\_A / Copyright © 2019 Stryker



**CE Class IIb (2460)**

Jolife AB  
Scheelevägen 17  
Ideon Science Park  
SE-223 70  
LUND, Sweden

### Distributed by:

Stryker UK Ltd  
Stryker House  
Hambridge Road  
Newbury, Berkshire  
RG14 5AW  
United Kingdom

Stryker European  
Operations B.V.  
Herikerbergweg 110  
1101 CM Amsterdam  
Netherlands  
Tel +31 (0)43 3620008  
Fax +31 (0)43 3632001

Stryker Australia Pty Ltd  
8 Herbert Street  
St Leonards NSW 2065  
Australia  
Toll Free Tel 1800 987 982  
Toll Free Fax 1800 890 892

Stryker New Zealand Limited  
515 Mt Wellington Highway  
Mt Wellington, Auckland 1060  
New Zealand  
Tel +61 2 9415 5900  
Fax +61 2 80767672