

## Product Comparison

LUCAS® 2 Chest Compression System  
vs. Zoll® AutoPulse® Non-invasive  
Cardiac Support Pump



LUCAS 2 chest compression system



AutoPulse

WHICH COMPRESSION DEVICE TO USE?		
Compressions per minute	at least 100	80 ±5
Compression depth	2.1 ± 0.1 (5 - 5.6 cm)	20% reduction in anterior-posterior chest depth +0.25/-0.5 inches (+0.6/-1.3 cm)
Compression method	Sternal Compressions	Circumferential Compressions
Compression forces at work	Intrathoracic pressure gradient differences	Intrathoracic pressure gradient differences
Power source	Rechargeable Lithium-ion Polymer Battery 3.3 Ah (typical)	Rechargeable Nickel Metal Hydride Battery 3.2 Ah (typical)
Typical operating time on one battery	45 minutes	30 minutes
Charge time between uses	Less than 4 hours	Less than 4.25 hours
Total solution weight (in carry case with extra battery)	22 lbs (10 kg)	39 lbs (18 kg)
Device weight (with battery)	17.2 lbs (7.8 kg)	25.6 lbs (11.6 kg)
Battery weight	1.3 lbs (0.59 kg)	5.1 lbs (2.3 kg)
Patient size	Sternal height of 6.7 to 11.9 inches (17 to 30.3 cm)	Chest circumference of 29.9 to 51.2 in (76 to 130 cm)
Chest width limits	Up to 17.7 inches (44.9 cm)	9.8 to 15 inches (25 to 38 cm)
Patient weight	The use of LUCAS is not restricted by patient weight	The AutoPulse is designed for adults with weight of no more than 300 lbs (136 kg)
Time to apply device	Interruptions in manual compressions of <20 seconds	Not specified
IP Rating	44	24
COST OF OWNERSHIP		
Cost of Device	\$14,495.00	\$10,995.00
Service support	\$1,095.00	\$1,095.00
Carry case	included with device	\$395.00
Batteries (for 1.5 hours run time)	\$615.00 (1 battery included with device)	\$1,725.00 (no batteries included with device)
Charger	\$945.00	\$1,795.00
Disposable (3 pack) starter kit	included with device	\$375.00
<b>Initial Investment</b>	<b>\$17,150.00</b>	<b>\$16,380.00</b>
COST PER USE		
Battery	\$2.97	\$5.75
Disposable	\$40.00	\$125.00
Standard operating costs over 1 year (100 uses)	<b>\$4,297.00</b>	<b>\$13,075.00</b>
Standard operating costs over 5 years (500 uses)	<b>\$21,485.00</b>	<b>\$65,375.00</b>

**LUCAS is very easy to use and requires fewer steps to apply than AutoPulse.  
LUCAS can be applied with interruptions to compressions of less than 20 seconds.**

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## LUCAS 2 chest compression system

### STEPS FOR OPERATION

- 1 Push on/off for 1 second to power up
- 2 Carefully put the back plate under the patient, immediately below armpits
- 3 Pull release rings to make sure claw locks are open and then let go of the release rings
- 4 Attach the support leg nearest to you on the back plate
- 5 Attach the other support leg to the back plate and listen for click
- 6 Pull up once to be sure parts are correctly attached
- 7 Center the suction cup over the chest, with lower edge immediately above the end of the sternum
- 8 Press the adjust button on the device and push down on the suction cup with two fingers until pressure pad touches patient's chest
- 9 Press pause to lock suction cup in place
- 10 Push activate to start compressions

**Note:** Defibrillation pads can be applied after LUCAS is applied and running

**Refer to your compression device operating instructions for actual operation of the device.**

## AutoPulse

### STEPS FOR OPERATION

- 1 Power up the AutoPulse
- 2 Sit patient up, make a single cut down the back of patient's clothing
- 3 Place posterior defibrillation/pacing pad on patient's back, if using anterior/posterior placement
- 4 Slide AutoPulse into position behind the sitting patient and lay the patient down onto the platform
- 5 Grasp clothing by the sleeves and pull down towards ankles to remove from both the front and the back of the torso
- 6 The anterior pad may be placed at this time
- 7 Position patient so he/she is centered laterally and that the armpits are aligned with the AutoPulse using the yellow line positioning guides on the platform
- 8 Close the LifeBand® around the patient's chest
- 9 Properly align the two sides of the LifeBand, place on top of patient's chest
- 10 Locate mating slot of band over the alignment tab
- 11 Press bands together to engage and secure Velcro® fastener
- 12 Lift up the LifeBand to the fullest, ensuring that the side bands are at a 90 degree angle to the platform, that they are not twisted or that there are no obstructions
- 13 Center the LifeBand on the patient's chest, placing it such that its center is over the area upon which manual compressions are conducted
- 14 Make sure the yellow upper edge of the LifeBand is aligned with patient's armpits and is over the yellow line on the AutoPulse platform
- 15 Press and release the start button once to begin compressions

## REFERENCE DOCUMENTS

- Power source cost per use is based on total number of uses per battery (200 for LUCAS 2 battery, 100 for AutoPulse battery)..
- All ZOLL AutoPulse pricing is based on 2011 quotes.
- ZOLL AutoPulse service plan listed is for a 1-year extended warranty for depot repair.
- LUCAS 2 Chest Compression System Instructions for Use (26500-003434, 2011).
- AutoPulse Resuscitation System Model 10 User Guide (P/N 11440-001, Rev. 3 2009).

**For further information please call 1.800.442.1142 or visit [www.physio-control.com](http://www.physio-control.com)**



**Physio-Control Headquarters**  
11811 Willows Road NE  
Redmond, WA 98052  
[www.physio-control.com](http://www.physio-control.com)

*Customer Support*  
P. O. Box 97006  
Redmond, WA 98073  
Toll Free 800 442 1142  
Fax 800 426 8049

**Physio-Control Canada**  
Medtronic of Canada Ltd  
99 Hereford Street  
Brampton, ON  
L6Y 0R3  
Tel 888 879 0977  
Fax 866 430 6115



**Jolife AB**, Scheelevägen 17, SE-223 70 LUND, Sweden