

## AEDs COMPLIANT TO 10 SECONDS TIME-TO-SHOCK

Currently, the 4 AEDs listed below are compliant:



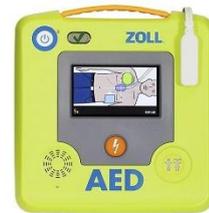
Philips HS1



Philips FRx



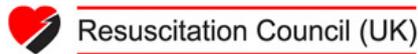
Physio Control  
Lifepak CR2



Zoll AED 3

These are compliant since they are capable of analysing AND delivering a shock within 10 seconds after interrupting CPR (10 seconds or less hands-off time).

The recommendation “Never interrupt CPR compressions for more than 10 seconds.”<sup>1)</sup> can be found in the 2015 Resuscitation Guidelines of these institutions:



## Maximum CPR interruption: 10 seconds

- Why are these 10 seconds so critically important?
- CPR interruption    Chance of Survival
 

<b>&lt;10 seconds</b>	<b>80%</b>
<b>10-15 seconds</b>	<b>40%</b>
<b>15+ seconds</b>	<b>&lt;20%</b>

<sup>1)</sup> In Exhibit 1) please find all relevant quotes in detail as published by the 3 institutions

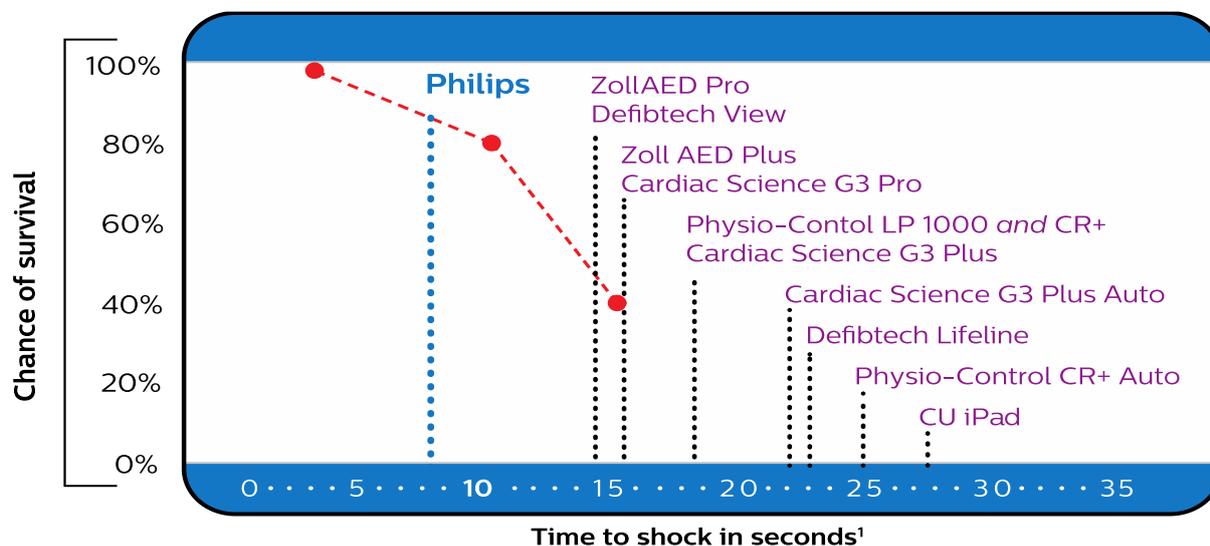
<sup>2)</sup> Please note this was already proven by a Philips study in 2002, see Exhibit 2) for details

## Exhibit 1) Summary of quotes as published by the Resuscitation Council (UK), the European Resuscitation Council and the American Heart Association in their respective Official 2015 Resuscitation Guidelines

- 1) Published by the Resuscitation Council (UK) in the Adult basic life support and automated external defibrillation Guidelines 2015:
  - Table 1: BLS/AED detailed sequence of steps:  
*"Do not interrupt compressions by more than **10 seconds** to deliver two breaths."*
  - Minimise pauses in chest compressions:  
*"Pre- and post-shock pauses of less than **10 seconds**, and minimising interruptions in chest compressions...are associated with improved outcomes."*
  - Rescue breaths:  
*"The maximum interruption in chest compression to give two breaths should not exceed **10 seconds**."*
  
- 2) Published by the European Resuscitation Council in the Summary of the main changes in the ERC Resuscitation Guidelines 2015:
  - Summary of changes since the ERC 2010 guidelines:  
*"Do not interrupt chest compressions for more than **10 seconds** to provide ventilations."* (p 2)
  - Minimising pauses in chest compressions:  
*"Pre- and post-shock pauses of less than **10 seconds**, ....., are associated with improved outcomes."* (p 9)
  - Use of an automated external defibrillator:  
*"The maximum interruption in chest compression to give two breaths should not exceed **10 seconds**;"* (p 9)
  
- 3) Published by the American Heart Association in the 2015 AHA Guidelines Highlights:
  - BLS "Don'ts of Adult High-Quality CPR" table:  
*"Should not interrupt compressions for greater than **10 seconds**."* (p 10)
  - Summary of High-Quality CPR Components for BLS Providers:  
*"Limit interruptions in chest compressions to less than **10 seconds**."* (p 12)
  - In Part 5: Adult Basic Life Support and Cardiopulmonary Resuscitation Quality  
*"..., it is reasonable to pause compressions for less than **10 seconds** to deliver 2 breaths."* (5.4.2)

Exhibit 2) Philips Study on CPR interruption (study 2002, graph 2016)

### Graph: Survival is closely linked to the speed of shock delivery after CPR



*Interruptions of precordial compression for rhythm analysis that exceed 15 seconds before each shock compromise the outcome of CPR and increase the severity of post-resuscitation myocardial dysfunction.<sup>1</sup>*

To have access to the full study, please follow the link below:

[Yu T,Weil MH,Tang W.Adverse Outcomes of Interrupted Precordial Compression During Automated Defibrillation. Circulation. 2002; 106:368-372.](#)

Please note, the Graph from Philips is from 2016, 3 other AEDs which have become compliant (as listed on page 1) are not listed in the Graph above, however these 3 AEDs are compliant as well.