

## **DDU-100 AED Use in Wet Environments**

AED use in a wet environment can pose two distinct risks for rescuers and bystanders. The first risk is due to problems resulting from water ingress into the device and the second risk is due to conduction of the shock from the victim through the wet environment to the rescuer or bystanders. The design of the DDU-100 and standard AED training and use protocols effectively address these risks. The DDU-100 meets the same water ingress standards that the Philips FR2, Medtronic AEDs and Cardiac Sciences AEDs do. The conduction of shock energy away from the patient in wet environments has been studied using monophasic and biphasic devices in both fresh and salt water and has been shown not to pose a significant risk to operators, bystanders and patients.

Specifically, the DDU-100 AED has been tested to EN60529 IP54, which is the recognized standard for testing equipment for ingress of water and foreign objects. The “IP54” specifies the level of protection that the testing was done to. The “4” in “IP54” signifies that the testing was done to the “splashing” level (the higher the number, the higher the water protection - levels below our level are: 0 = not protected, 1 = vertical dripping, 2 = dripping, 3 = spraying). The “5” in “IP54” signifies that the unit was tested to the “dust-protected” level for foreign object ingress.

Note that the “IP54” level of testing is the *same exact level* that the Philips/Heartstream FR2 is certified to. Both the DDU-100 and FR2 meet *the same* water ingress standard. Also, note that the new Philips HeartStart OnSite AED does not meet this standard – it only meets the lowest level test for water ingress - level 1, “vertically dripping.” The DDU-100 also meets the same electrical safety standards (EN60601) that the FR2 does. And in fact, the DDU-100 meets a higher level of EMI immunity than the FR2 (this can be important if external sources of electromagnetic interference are present – such interference from two-way radios and cell phones).

The design of the DDU-100 has a number of significant features that contribute to its utility in wet environments. The case itself is made out of impact-resistant highly-insulating plastic. The unit also has non-conductive rubber overmolding material on the surfaces that are likely to be handled by the user providing excellent grip in wet environments. A rubberized handle makes the unit easy to carry, even in wet conditions. The same rubber material is used to form an extensive seal between the case halves for better water and dust resistance. In addition, the battery pack has a rubber gasket that seals the battery compartment when the battery pack is inserted.



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



**UK Office**  
**Keison Products,**  
**P.O. Box 2124, Chelmsford, Essex, CM1 3UP, England.**  
**Tel: +44 (0)330 088 0560**  
**Fax: +44 (0)1245 808399**  
**Email: [sales@keison.co.uk](mailto:sales@keison.co.uk)**

Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.