Safety and Performance specifications of AED housing according "DEKRA Standard for AED cabinets in cooperation with the Dutch Heart Foundation")

Test program/Standard

Mechanical testing

- Impact resistance (IK testing) standard: IEC 62262/EN50102
  Requirements: IK 10 (=20Joule, height=400mm, M=5kg, R=50mm)
  Test at ambient temperature immediately after AED cabinet has been kept at -20^{0}C for at least 12 hours
  Compliance: IP 54 classification shall be achieved
- Static load resistance: standard IEC 61439-5 clause 10.2.101.2
  requirements: load of 1200N on top of the AED cabinet when mounted according instructions
  Compliance: no damage of the mounting system and of the cabinet. IP 54 classification shall still be achieved
- Shock load resistance: IEC 61439-5 clause 10.2.101.3
  requirements 15kg sand bag hanging on a rope mounted 1m above the cabinet. Bag will be swinging like a pendulum from a height of 1 m to the side of the cabinet
  compliance: no damage of the mounting system and of the cabinet. IP 54 classification shall still be achieved
- mechanical strength of the cover fixation
  requirements opening and closing the cover 10 times.
  compliance: IP 54 classification shall be achieved after cover have been mounted again
- Impact sharp-edged objects: IEC 61439-5 clause10.2.101.8
  M=5kg at a height of 400mm, striker element
  requirements Testing at ambient temperature after AED cabinet has been kept at -20^{0}C for at least 12 hours
  Compliance: IP 54 classification shall still be achieved

Environmental testing; Dust, Moisture, Corrosion and UV resistance

1. IP 54 according to IEC 60529
   requirements: load of 1200N on top of the AED cabinet
   Compliance: IP 54 classification shall be achieved on the closed cabinet, mounted on the way as specified by the manufacturer
2. Salt spray test according to IEC 60068-2-11, only to be executed in case of rusting/coated metal parts on the outside of the cabinet
   requirements: no scratches in metal before testing shall be made
   compliance: no rust which reduces reliability/robustness
3. UV resistance: Material used for cabinet shall be UV resistance
   requirements: plastic material shall have a UV resistance class (severity class to be defined)
   compliance: datasheet or UV test results of the used plastics shall be available

Electrical safety

1. Construction check, component check, electrical safety testing according IEC 60335-1
   requirements: no electrical and thermal hazards
   compliance: electrical safety guaranteed

Performance/Functional tests

- Temperature stability inside cabinet at AED position
  requirements: Taed ≥ 5°C at Tambient = -20°C and Taed ≤ 50° at Tambient = +45°C
  min and max temperature measured on AED pads, stabilizing temp for at least 4 hour
  compliance: Taed ≥5°C when Tambient of cabinet = -20° C.

- Accessibility: opening of the cabinet and taking out AED
  requirements: low illuminated room (position of Cabinet visible), tested by a test panel of 5 untrained persons > 18 years
  compliance: AED out of the box within 30 sec
- Marking rubbing test according to IEC 60598-1
  requirements: 15s smooth rubbing with cloth soaked with water and with petroleum
  compliance: marking shall be good readable

Optional

- Check on illuminance of door lock)*
- Graffiti resistance)*: Graffiti removable with cleaning substances according specifications of supplier
- AED cabinet must have the possibility to lock (integrated lock or option to mount a lock to the cabinet).
  requirements: reliable and easy to open locking system when integrated
  compliance: check functionality check of lock

Remarks

)* optional: when available or specified, functionality will be assessed.

this is not form part of the requirements to pass the AED housing test.