

Composite Curing and Repair System, based in Infrared heaters and OPLC

The equipment consists of two main systems, one for the heating and vacuum control required to cure the composite structure protection adhesive and the other system to hold the composite structure in a suitable

Item n°01: Composite Structure Support Stand

It is a steel frame with a rotatable support to hold the composite structure. This item receives the left or right hand composite structure in horizontal position. Thanks to the rotatable frame and to the bearings installed in the equipment, the customer will be able to rotate the composite structure and place it in vertical position and upside down in horizontal position. The item also has brake wheels to make it transportable.

Item n°02: Heating & Vacuum System

It is a steel frame that supports the infrared heaters and the electrical cabinet with the vacuum and control system. The frame has an aperture to receive the Composite Structure Support Stand and position it between the IR Heaters.

The frame also has brake wheels to make it transportable.

Implementation Example



Fig1. Example of a Composite Curing and Repair System



Fig 2. Example of a Structure Support Stand



Fig 3. Heating and Vacuum System during EMC tests

Technical Specs

- Taylor made infrared heating area
- 8 controllable heating areas
- 16.5kW total power heating
- 16 Non-Contact Temperature sensors
- Vacuum producing line
- Reusable Vacuum Bag included
- Consolidation table and compartment attached to one side of the equipment
- Main control via OPLC
- Solid state relays
- Overheat protection system

Advanced temperature control. Step by step run mode.

Electrical characteristics

Nominal Voltage: 400Volts (+6% to -10%) 50Hz
(+0.3%) Supply Source Code A

Power consumption: 18kW

Maximum Current: 45A

Plugs and sockets used for the AGE mains power supply are rated at 63 amperes and conform to EN 60309 with 5 contacts (3 phase and neutral and earth) with the earth contact at clock position 6h.

User interface

The user is guided step by step to run the process introducing the data by the touch panel.

Data storage

All temperature and vacuum pressure data are saved to a file and stored in a SD Card.

CE mark

The equipment is CE marked under the next directives:

2006/95/EC Low Voltage Electrical Equipment (LVD) 02 Feb 2007

2004/108/EC Electromagnetic Compatibility (EMC) 20 July 2007

2011/65/EU Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (known as the "RoHS" Directive)



Fig 4. Heat controlled in 8 areas



Fig 5. Engineering Configuration

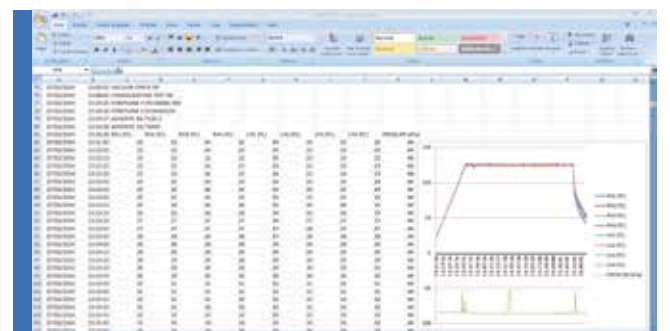


Fig 6. Data exportable to Excel

- Wheeled directional and brakes
- Dimensions: 1831x1470x2855mm
- Weight: 390 Kg

Taylor made heating area
Customizable control
CE marked