



GMI
AERO

Innovation for Aircraft Maintenance
Composite and Metallic Structures
Equipment, Solution Engineering, Training

The Anita Bonding Console 4 Zones

P/N: GMIEZ4Z01

For Advanced Heating Processes.....

- Radome Repair,
- Helicopter Blade Repair,
- Engine Abradable Pad Bonding,
- Transcowl, Corecowl overall skin Bonding
- Up to 4 simultaneous (different) repairs

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PRESENTATION

The ANITA EZ4Z01 is derived from the same family as the famous ANITA version EZ09 with specific configuration in terms of heating zones. This version is designed to control either simultaneously or independently, heating processes through blankets connected up to 4 independent channels or zones. In a compact size, the ANITA EZ4Z01 offers all the features to control with an advanced software a bonding patch of small or large area or 4 independent curing cycles.

MAIN FEATURES

The ANITA EZ4Z01 features allow for:

- Curing control on 4 independent heating channels in order, either to cover a large area with different thermal answers or to expedite successively several repairs from 1 to 4. In this latter case, different cycles can be selected.
- A Simple and Easy programming for selection of operations and applications through a large **touch screen**
- A 12 thermocouple scan capacity : 3 thermocouples per zone
In option, an external scanner extension is proposed.
- Test of heating blankets, detection of connection and of blanket break.
- Data storage, **USB transfer and pdf and Excel file automatic reporting**



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Examples of programming screens

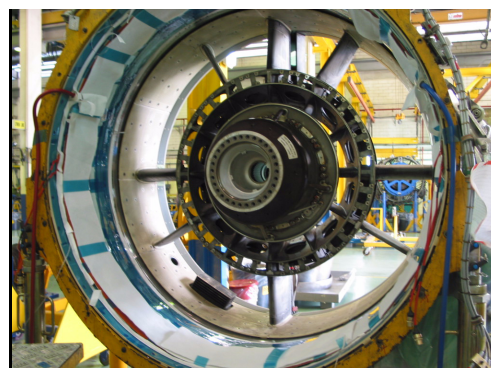
MAIN APPLICATIONS

The Anita model GMIEZ4Z model has been conceived to offer all the necessary functions to perform a sophisticated heat control process:

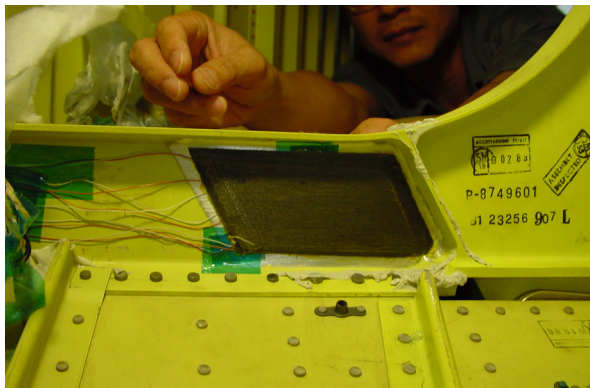
- a. a bonding repair on a **large** advanced carbon structure; this surface is thus covered by 4 heating mats or by mats with several heating independent areas,
- b. to control a **specific process** like, for example , the bonding of the silicone abrasable liner of a motor inlet (GE- CFM56 for example); here usually, two heating blankets, each one in 2 zones are used to cover the whole engine ring,
- c. the conduct of a **multi skin patch bonding**; for example on a metallic structure where it is necessary to bond a patch on the two faces of a structure and on others around,
- d. the repair of a structure with various thermal reaction profile like on a **helicopter blade**
- e. the repair of a large area on a **radome**. A blanket covering the tip of an Airbus A320 or Boeing 747 is usually designed in 4 independent electric circuits.

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ILLUSTRATIONS



*Left: a large surface of a transcowl covered by a 4 zone heating blanket
 Right: a complete ring abrasable silicone liner covered by a blanket. here 4 zones are differentiated and the ANITA 4Z controls the temperature of each zone*



*Left: a multi area of a metallic structure with bonded patches;
 Right: a special edge is bonded on the leading edge of the panel ; here there is a need of 4 zones on the blanket covering the edge in order to guarantee no gradient of temperature all along the line*



*Left: a radome with 4 large areas;
 Right: A long heating blanket designed with 4 zones for helicopter blade repair*

OPTIONAL EXPANDING POWER CAPACITY

If the total power of the blankets is higher than the installed capacity of the console (6000 watts under 220 volts), it is possible to amplify the switching power of the console with an external electrical inter-facer ; in this consideration, the power is coming from a 3 phase circuit 400 Volts. We can offer power amplifier up to 16 Kw.

PRINCIPAL ENGINEERING CHARACTERISTICS

- Dimensions: W x D x H: 350 x 260 x 260 mm - Weight: 11 Kg
- Volts: 230 or 120 VAC, **automatic switching**
- High Quality **Touch Screen Panel** for Operator Dialogue and Data visualisation - Screen Dimensions: 160 x 125 mm - 6.5 x 5 in.
- Sensing precision : temperature better than 0,5 °C /1,0°F; vacuum better than 0,050 bar/1,5 inHg
- Temperature measurements : through thermocouples , type J or K according to choice at the order.
- Vacuum circuits : 2

- Number of **independent** heating zones: 4
Each zone equipped with a power capacity of: 15 amps.
However total power must remain below 6000 watts
- **USB** connection for external data transfer
- Watch dog and safety associated circuits for safe operations.
- Printer with large standard paper,
- Audible alarm, and Mimics for alarms and heat actions



4 Power out connections

DELIVERY

The ANITA comes with all its accessories necessary to implement a bonding operation under vacuum: a complete set of cables, hoses, in a nice storage and transportation console.

Accessory Console:

Dim: 460 x 350-x 166 mm (18 x 14 x 7 in.); Weight: 10 Kg - 22 Lb.

Content List:

- A Power cable: 1 unit of length 5 m
- Blanket cable: 4 units of length 3 m .
- Vacuum Silicone Hoses: 2 units 3 m long
- Vacuum Valves (we offer two choices (see picture)
- Thermocouple cables:12 of 5 m long
- A grounding cable 3 m long
- A User and Service Manual.



Left model 2 (France)
Right model 1

REFERENCES TO ORDER

- P/N:GMIEZ4Z01-T*-V*
- T * specify at the order the type of thermocouples J or K
- V* Out of France , specify at the order the choice of vacuum valves to be delivered model 1 or 2