

Anita- GMIQSH1Z QUICK START - Flight Line Bonding Console

AN INNOVATIVE BONDING CONTROL UNIT

GMI Aero offers in the series of Anita Bonding Consoles an innovative version optimised in size, features and with special features to meet the special requirements of Airlines and MROs for a quick and simple implementation for Flight Line Application. According to fundamental notions on explosive area classifications, the area surrounding the aircraft unfueled is considered potentially explosive because of presence **of potential flammable gaz (airplane fuel) .**The classification of the working area for portable equipment (in our case bonding console for composite repair) is **CLASS I - DIVISION 2.**



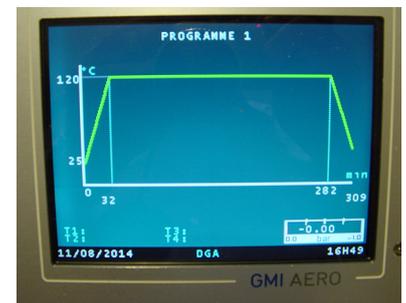
THE ANITA QUICK START CONCEPT

For the context of quick implementation in flight line, the operator needs an equipment light and robust, integrally equipped and with push-button operation in a very short step sequence. The system has been conceived to avoid programming in the field .the operator has just to check its vacuum bag and after connection of electrical and air services to run the cycle. Our Anita QSH1Z complies fully with these constraints in offering in a small compact volume, all functions needed for expediting a bonding process.

ENHANCED FEATURES

In a compact size the Anita QS offers:

- Temperature control for one zone power output with 6 thermocouples
- Clear visibility screen for process supervision and simple orders
- Programming of cycles:
through PC to constitute a built in field use library and transfer either through direct link or by USB key
- Quick Start of Cycle through two switches
- USB interface for cycle data logging and analysis on a PC
- Built in vacuum venturi pump (high performances)
- Vacuum sensing



ANTI HAZARDOUS SAFETY FEATURES

The **Anita QSH** complies with the safety conditions required by the european standard CENELEC EN 50016 or by NFPA 496. This is appropriate for Class I - Div 2 Area (ZONE 2 according to IEC) The design of safety features are based on the principle of venting permanently the volume of the console to prevent introduction of explosive gaz .

1. Control of On/Off Power

A timer safety allows powering of the console only after a certain duration of air purge

2. Protection of fire and explosion due to arcs

All connections either to the console, between cables and with heating blankets are made through connectors with a specific design. This design allows to disconnect under power without arcing.

3. Leak current detection

Circuits are built in to check that no current leak develops. In case of detection, power is automatically cut. This covers the possible current leak of a heating blanket.

4. Heating blanket safety design

They are equipped on lower side with a ground mesh and with anti-arcing connector.

TECHNICAL SPECIFICATIONS

- Dimensions: W x D x H: 350 x 280 x 170 mm - 13,7 x 11 x 9 in - Weight: 5 kg - 11 lb
- Volts: 220 or 120 VAC, **automatic switching**
- Power Capacity (V*I) : 30 Amps x 220 Volts = 6600 Watts (enough for 1 square meter blanket) or 30 x 120 Volts = 3600 Watts
- **Screen Panel** display for process supervision - Panel Dimensions: 115 x 86mm - 4.5 x 3.4 in.

INNOVATIVE FEATURES

- Proportional power output for precise temperature control
- Watch dog and safety associated circuits for operational security.

SENSING

- Thermocouple scanning capacity: type J or K to be specified at order, **6** channels
- 1 Vacuum electronic gauge for bag quality monitoring. This value is monitored permanently, displayed and recorded,
- Sensing precision: temperature better than 0,4 °C /0,8°F; vacuum better than 0,050 bar/1,5 in Hg

ALARMS

- Audible alarm,
- Clear messages and alarm Icons on screen
- Easy accessible external fuse

VACUUM GENERATION

- Venturi pump **built in** : with protection for no contamination by water or by oil ;high performances; vacuum limit 80 mb; flow : 121Nl/mn or 4,3 cfm

PROGRAMMING

- Easy programming of temperature and duration of Ramp up and plateau cycles (up to 2 plateaus) Several cycles can be installed in memory with clear description on screen panel
- Easy selection of the cycle to run through menu on the screen

CYCLE DATA ANALYSIS & REPORTING

- Cycles data are stored in memory and can be collected through a USB Key to be analysed on a PC.

CALIBRATION

- Easy calibration through PC dialogue (software provided)

DELIVERY CONTENT LIST

The Anita QSH1Z comes with all its accessories necessary :

- A Power cable: 1 unit, length 5 m (16 ft.)
- Blanket cable: 1 unit, length 3 m (10 ft)
- Ground Cable : 1 unit, length 3 m (10 ft)
- Vacuum Silicone Hose: 1 unit for pumping line, length 3 m (10 ft.)
- Vacuum Silicone Hose: 1 unit for return sensing of a bag, length 3 m (10 ft.)
- 2 Vacuum valves,
- Thermocouple cables: Qty 6; 3 m long (10 ft.): type J in standard version (type K on request)
- PC software for programming, reporting and calibration
- A User and Service Manual.



REFERENCES TO ORDER

- **Anita Bonding controller P/N:GMIQSH1Z**
 - *Thermocouples to be specified at the order J or K
- Heating blankets for Flight Line ; for dimensions and voltage - see our catalogue
- Case Standard colour yellow



Valves U and E left to right

CONSUMABLES & OPTION

- A box of 20 printer paper rolls P/N: GMIOTI010-01
- A box of 10 printer ink cartridges P/N: GMIOTI010-02
- A filter against oil and water recommended for the cleaning of purging air (see picture) P/N : GMIOTPF022
- A spare filter cartridge P/N : GMIOTPF022-01
- A venturi vacuum pump to be mounted on the bag itself P/N: GMIOTPV010 or 011 (US air in connector)



Left : Filter on purging air circuit ; right : Venturi vacuum pump mounted on its bag valve

HEATING BLANKETS FOR FLIGHT LINE OPERATIONS

Here below we give some typical dimensions of heating blankets
 V= 1 for 120 Volts ; V = 2 for 230 Volts.

Item	P/N	Dimensions in cm	
001	GMIHBH015015-1Z-V	15 X 15	1 electrical zone
002	GMIHBH020020-1Z-V	20 x 20	1 electrical zone
003	GMIHBH025025-1Z-V	25 X 25	1 electrical zone
004	GMIHBH030030-1Z-V	30 X 30	1 electrical zone
005	GMIHBH040040-1Z-V	40 X 40	1 electrical zone
006	GMIHBH050050-1Z-V	50 X 50	1 electrical zone
007	GMIHBH015050-1Z-V	15 x 50	1 electrical zone

Other dimensions available and round blankets as well. Consult us