



SAMANTHA GMIST07

Patch Bonding Control for Safety Slide Repairs

Figure 1: Samantha , heating circuit, safety slide



PRESENTATION

The “Samantha” (P/N: GMIST0704) Console has been developed to handle the bonding process of repair patches on aircraft safety slides.

The console groups all the instrumentation of measurement, power, programming, safety, and printer for quality control; PC supervision is also provided.

The electronic circuits have been specially studied to control a heating electric power to provide a soft current appropriate to the specific nature of the very light fabric patch material.

This innovative equipment improves quality of bonding and productivity in operations.



FUNCTIONS

All functions are under control of a specific software for programming a cycle, firing and running a cycle.

TEMPERATURE PROGRAMMING

The cycle is relative to the adhesive and is programmed in a straightforward and easy procedure. The operator has just to dial two parameters: a plateau temperature and its duration. All other cycle data are calculated by the computer.

It is also possible to program a cycle through a special software provided for PC (ANITALK ST). The cycles are then stored in memory. They have just to be called by their number for run.



TEMPERATURE SENSING

The bonding process requires temperature sensing through thermocouples. They are positioned on our specific heating circuits. The operator has not to care with any pre positioning operation.

HEATING CIRCUIT

A specific heating circuit technology has been developed. The resistance circuit is designed to offer a smooth and well distributed power. The circuit is insulated between layers of silicone. The circuit is also designed to be installed easily and to be maintained in position by a load on its upper surface. The circuit can be laid on empty or inflated bodies.

Figure 2: Heating circuit with special protective upper support



HEATING CHANNEL NUMBER:

Up to **4** heating channels can power up to **4 patches simultaneously**.

PROCESS CONTROL

The innovating design of the power system produces a smooth heat control appropriate to heat a mass of some tens of grams with an excellent control of rate with no risk of high excess of temperature. The combination of the two innovations, heater and console circuits, allow to conduct the operations on slide skins inflated or deflated.

DISPLAY

All information suitable for the process follow up is displayed on the front panel.

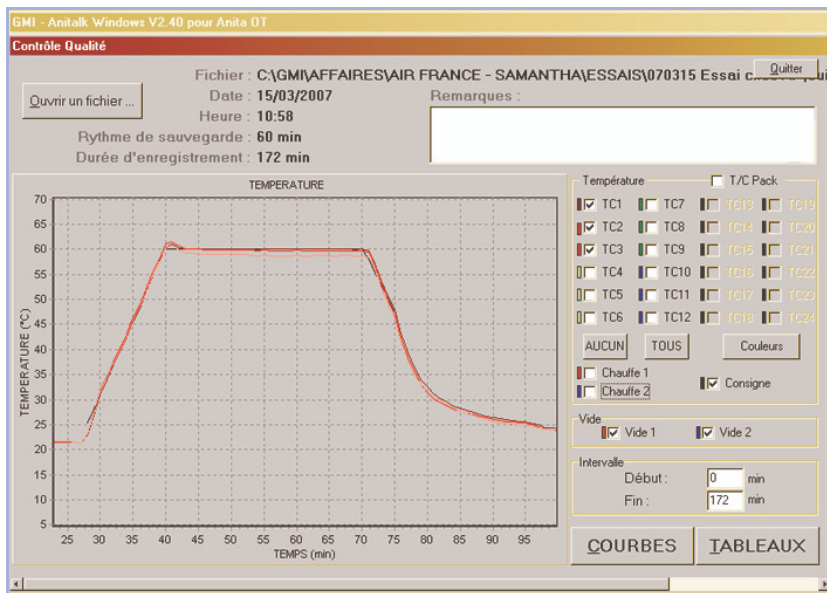
- temperatures, duration
- status of cycle, alarms.

PRINT FOLLOW UP

A panel printer is installed. It delivers a print out of all operations in course and a quality report.

PC INTERFACE AND SOFTWARE

Optionally a PC can be connected on line during a heating cycle or off line. A special software ANITALK-ST is delivered that allow: programming for cycle library development, process supervision or quality document elaboration.



SPECIFICATIONS

- Dimensions and weight: console closed 47 x 35 x 25 cm; 8 Kg
- temperature measurement by thermocouple type J. Up to 12; 3 per heating channel. Precision: better than +/-0,5 °C.
- heating channel simultaneous control capability: 4
- Power: 220 Volts or 120 Volts to be specified at the order.
- calibration of measurement circuits: by PC software ANITALK ST.
- Cable and accessory console delivered. Dimensions: 47 x 35 x 17 cm; Weight with cables: 8 kg around. Content as below.
- Cables
Power in cable: 8 meters long - Qty 1,
Heating circuit cable: 5 meters long. Qty 4,
- Heating Circuits
We offer circular and rectangular heating circuits. Some circuits, when large are designed with 2 or 4 independent heating circuits.

STANDARD DELIVERY SET

- The bonding console Samantha
- The accessory console containing:
 - 1 power cables
 - 4 blanket cables
 - 2 heating circuits of diameter 150 and 240 mm
 - A PC USB link cable
 - PC Software Anitalk ST for programming and quality data treatment
 - A User and Service Manual

TO ORDER

1. The Samantha Bonding Control System

Table 1 :Available Configurations according to Voltage

Model	P/N
Under 220 Volts	GMIST0704-2
Under 120 Volts	GMIST0704-1

2. For heating circuits: Standard dimensions as in the following table.

Table 2 :Standard circuits

Dimensions mm	Independent heating zones *	P/N
Diameter 150	1	GMIHBSA015-1Z-X**
Diameter 240	1	GMIHBSA024-1Z-X
200 x 300	1	GMIHBSA020030-1Z-X
150 x 400	1	GMIHBSA015040-1Z-X
Diameter 320	1	GMIHBSA032-1Z-X
200 x500	2	GMIHBSA020050-2Z-X
200 x 750	4	GMIHBSA02075-4Z-X

NOTE :* a heating circuit with 2 zones needs 2 heating channels on the console.
 ** X = 1 for 120 Volts ; =2 for 220 Volts



Figure 3: View of repair patches