

Wave Soldering System



ATF 43

Lead-free ready



System:

- Lead-free ready solder pot, with removable flow ducts
- Stainless steel foam fluxer
- 3 IR-preheat zones, with Ceran glass cover
- Dual wave, with direct driven solder pumps
- Wave intermittent operation
- Belt-driven pallet conveyor
- Microprocessor controlled
- Solder pot roll-out unit
- Meets VDE safety regulations

Options:

- Pumpless spray fluxer
- PCB Auto-Detect system
- Integrated filter above spray fluxer
- Convection preheater
- Tunnel above preheater
- Automatic solder bar feeder
- Nitrogen inerting
- Cooling fans at machine unload end
- Pin code reader
- Interchangeable solder pot
- PC-software
- PC-version
- Assembly conveyor systems

Description Wave Soldering System ATF 43



System

- Sturdy steel base frame
- All modules constructed for easy maintenance

- Rigid hoods include antistatic safety glass allow full monitoring of working process
- 2 exhaust ducts, 1 over the flux area, the other over the solder area



Fluxer module

- Foam fluxer fitted as standard
- Whole unit is adjustable in height
- Air regulator pressure gauge and flow control valve

- Spray fluxer with Auto-Detect (recognizes size and position of pcb)
- Dual-head spray fluxer
- Programmable flux quantity



Preheat module

- High efficiency IR preheater
- Fine adjustment of temperature
- Ceran glass cover for easy cleaning

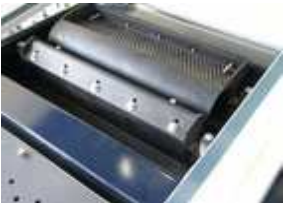
- All values shown at digital display
- Convection



Solder pot ready for Lead-free

- Combination of ceramic coating (solder pot, flow ducts and pumps) and chemical-thermal treatment of nozzles.
- Quick-lock solder pumps
- Direct driven pumps (24V DC motors)

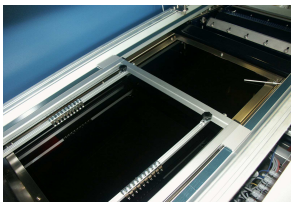
- Solder temperature shown at digital display
- Solder pot roll-out as standard
- Interchangeable solder pot



Solder wave

- Special designed flow ducts to reduce dross formation
- Separate Microprocessor controlled wave heights

- Dual wave as standard (Lambda and chip nozzle)
- Wave intermittent operation



Conveyor

- Belt driven conveyor
- 24V DC drive motor
- Conveyor speed 0 – 2 m/min.

- 2 PCB carriers included
- Horizontal input and output section
- Adjustable conveyor angle 5-9°



Controller

- Microprocessor controller (with a 2-line display)
- User friendly operation, multi lingual
- Solder pot on/off timer
- Memory of 99 recipes

- Pin Code reader
- PC-software

- standard
- optional



PC-option

- For profile management
- For process documentation the relevant data are recorded, with password protection
- Incl. LAN network connection
- Incl. flat screen monitor

Distributed via:

A/T/F GmbH

Bildstraße 27

D-97903 Collenberg

Tel: + 49 9376 9711 0

Fax: + 49 9376 9711 29

e-mail: info@atf-collenberg.de

www.atf-collenberg.de

Dual-Wave Soldering System ATF 43

Machinery

The welded steel base frame is pre-conditioned for a long term reliability. Hinged doors allow easy and fast access to the machine. Large windows allow free vision of the process.
The unit can be upgraded for operation in nitrogen atmosphere at any time.

Control unit

The closed-loop control unit is microprocessor driven with memory for up to 99 different profiles. The user friendly multilingual software (English, French, German, Italian and Spanish) allows easy access to all parameter. The data are shown on a LCD Display.
The timer function allows to define individual on/off daily set points. Once activated, the solder pot temperature drops at night to save energy thus reducing dross build up.

Foam fluxer

The basic machine is equipped with a foam fluxer. The aerator stone generates highly homogeneous micro foam. The height of the entire fluxer unit can be easily adjusted. All parts are made out of stainless steel, for maintenance they are easy to remove.

Exhaust and Filter

To effectively remove vapours, exhaust ducts are located above the fluxer and the solder pot. Above the spray fluxer is an integrated filter, this is fitted inside the stainless steel extraction hood to ensure no unfiltered atomised flux is exhausted.

Pre-Heating

The ceramic middle-wave infrared (IR) emitter warm up the PCB gently. The panels are covered by Ceran glass. This allows easy cleaning of the pre-heat section.

Solder Module

To protect the solder module against lead-free soldering alloys two different techniques are used. The solder pot, flow ducts and pumps are coated with a special composite ceramic. The nozzles (chip and main wave) are protected by a special thermal-chemical treatment. Both methods prevent deterioration by high tin content lead-free soldering alloys.

The pumps are directly driven by heavy-duty motors without any belt. The ducts developed by ATF can be removed easily and reduce significantly the chance of dross clogging the nozzles. When idling, the wave is reduced automatically to a minimum to reduce excessive dross build up. With the next PCB the pump speed is increased to the nominal value.

The pump interlock is outstanding: without any tools they are dismantled within 10 seconds. The machine comes with Dual-Wave (Chip and smooth wave) as standard. Other types of nozzles are available too. The solder pot can be rolled out for easy maintenance.

Conveyor

Antistatic belts guarantee a smooth movement of the carriers and is driven by means a DC-motor. The conveyor is segmented into two sections. One belt runs through the fluxer, the second through pre-heating and solder pot. Horizontal sections at both ends allow easy loading and unloading.

The solder angle is easy to adjust. Due to the special construction of the conveyor, the distance of the conveyor to the wave remains constant. Conveyor direction is left – right.

Technical Data

Foot print	3100 x 1100 mm
Height	1430 mm
Weight (without solder)	Approx. 500 kg
Pre-heat zones	3
Pre-heat length	1700 mm
Conveyor speed	0.2 – 2.5 m/min
Average conveyor speed	1 – 1.3 m/min
Solder angle	5 – 9 Grad
Max. solder pot temperature	300°C
Weight of solder (Pb-free)	Approx. 320 kg
Volume of flux, foam fluxer	Approx. 4.5 l
Volume of flux, spray fluxer	Approx. 15 l
Load / unload section	600 mm
Exhaust volume (2 ducts)	600 m ³ /h per ducts
Duct	Ø 150 mm
Colour	RAL 5007 und 7035
Nitrogen consumption (purity ≥ 99,996 %)	5 - 6 m ³ /h with full load
Nitrogen pressure supply	6 bar
Compressed air – foam fluxer	60 l/min, 6 bar
Compressed air – spray fluxer	200 l/min, 6 bar
Power consumption (during heat-up, dependent upon configuration)	Approx. 35 kW
Power consumption stand-by	Approx. 8 kW h
Power supply	3~N, PE 230/400 V, 50/60 Hz 3~N, PE 110/220 V on request