InterElectronic

ATF SOLDERING SYSTEMS

INTRODUCTION

InterElectronic Hungary Ltd. offers equipments, machines and different materials (ESD) of different production technologies (SMT/THT/LED). Including high quality, special request fulfilling soldering machines, devices, tools, instruments and materials for the electronic industry and services.

SERVICES

Our each and every product has a warranty granted by the InterElectronic Hungary Ltd. For more complex appliances our company offers a well-needed training for set up and usage. We grant the repair of all of the products traded by our company during and after the warranty period. As well as we guarantee the continuous supply of accessories and instruments.

DEMONSTRATON

In case if any of our products aroused your interest the InterElectronic Hungary Ltd. would be glad to visit your company and hold a presentation of the product of your interest. As far as possible we serve you by bringing demo devices with us. In the most cases of our products we are proud possessors of references nation-wide. Major machines also could be observed at our partners' site.

PRICE LIST

Most of the prices of our products can be requested on our website and will be sent via email to you. In case of special and more complex machines the prices are given after consultation individually through a price offer. If you are interested in more information or user manuals of our products we recommend you to visit our website (www.interelectronic.com), which is updated continuously with professional information. We also recommend you to visit our office, where you can purchase any of the needed devices and spare parts of the product of your interest.

ORDER/SHIPPING

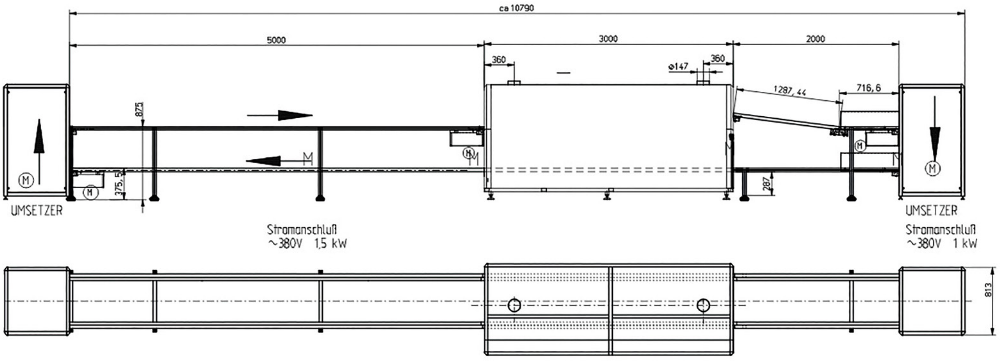
Our soon to be partners are welcomed to be helped via telephone, fax or e-mail. We use different ways of delivery, depending on the preference of our partner. We can deliver your purchased product by ourselves, by freight or courier service. The way of delivery might be negotiated previously. We offer you cash on delivery nation-wide!

TABLE OF CONTENT

At ATF all working stations are however designed ergonomically. But the ergonomic degree is to be defined by the customer: e. g. the conveyor might be elevated by 15° towards the operator to have a better view on the pcb or for easier assembly. Just in front of the wave soldering machine, the carriers are lowered to the horizontal position. The most suitable solution for your production environment must be developed individually and together.

BOARD HANDLING EQUIPMENTS

PERIPHERAL SYSTEM



By combining single wave soldering machines with peripheral systems it becomes a powerful assembly line individually designed for customized applications in which the solution is defined by the requirements. The diversity ranges from simple conveyor systems bringing the carrier back to the beginning of the wave soldering machine to complex lines with working stations for several people. Individually designed peripheral systems increase the efficiency.

WAVE SOLDERING SYSTEM

ATF-13/25

Dual-Wave Soldering System for Smaller Series

LEAD FREE

With a process width of up to 250 mm offers the ATF 13/25 all what is expected from a up-to-date wave soldering machine. It comes with a dual wave as standard; lead-free compatible solder pot and spray fluxer is available. Outstanding is the pump interlock: without any tools they are dismounted within 10 seconds. Than available space is no issue for thorough maintenance of the solder pot.

The micro processor controller controls accurately the machine and is easy to operate. Optional the ATF 13/25 can be operated with a PC too . Next to profile mangement the PC-software collects SPC data for process documentation.

The ATF 13/25 is available as nitrogen machine as well or could be upgraded at any time.

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.

OPTIONS

- Pumpless spray fluxer
- Exhaust hood above spray fluxer
- Filter integrated in hood
- Convection preheater
- Tunnel above preheater
- Nitrogen inerting
- Pin code reader
- Interchangeadble solder pot
- Bench with panels and doors
- PC control
- PC-software
- Assembly conveyor system

SYSTEM

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

ATF-13/25
Dual-Wave Soldering System Description

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
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

Ceramic coating, chemical-thermal treatment of nozzles
Quick-lock solder pumps
Direct driven pumps (24V DC motors)
Removable flow ducts and nozzles
Solder temperature shown at digital display

Interchangeable solder pot

SOLDER WAVE

Special designed products 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.
1 PCB carrier included
Adjustable conveyor angle 5-9°
Conveyor speed shown at digital display

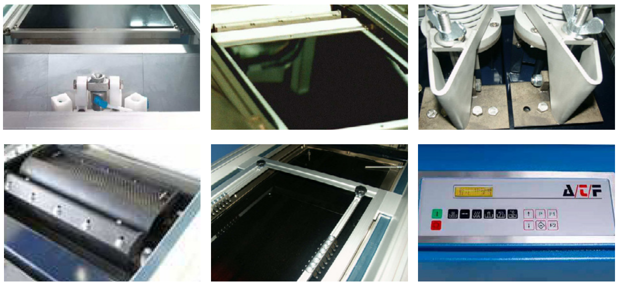
CONTROLLER

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

Pin Code reader
PC-software

PC-OPTION

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



☐ **Standard** ☐ **Optional**

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.

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.

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.

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. The Stop-and-Go software ensures that even heavy PCB’s are warmed up to the higher pre-heat temperature of lead-free soldering. Above the pre-heating the PCB is waiting a selectable time before it continues to move towards the wave. By this the pre-heat time is increased.

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 dismounted within 10 seconds. The machine comes with Dual-Wave (Chip and smooth wave) as standard. Other types of nozzles are available too.

CONVEYOR

Antistatic belts guarantee a smooth movement of the carriers and is driven by means a DC-motor. Free infeed and exit sections for easy loading and unloading. The solder angle is easy to adjust. Conveyor direction is left – right.

ATF-13/25
Dual-Wave Soldering System Specification

SPECIFICATIONS

Foot print	1600 x 850 mm
Height (without bench)	760 mm
Weight (without solder)	approx. 190 kg
Process width	250 mm
Pre-heat length	700 mm
Conveyor speed	0.2 – 2 m/min
Average conveyor speed	0.7 – 0.9 m/min
Solder angle	5 – 9 Grad
Max. solder pot temperature	300°C
Weight of solder (Pb-free)	ca. 120 kg
Volume of flux, foam fluxer	ca. 2.5 l
Volume of flux, spray fluxer	ca. 15 l
Load / unload section	600 mm
Exhaust volume (2 ducts)	600 m^3/h per duct
Duct	ø 150 mm
Colour	RAL 5007 und 7035
Nitrogen consumption (purity ^{3} 99,996 %)	5 - 8 m3/h with full load
Compressed Air	60 l/min, 6 bar
Power consumption (during heat-up, dependent upon configuration)	max. 16 kW
Power consumption stand-by	ca. 5 kW h
Power supply	3~N, PE 230/400 V, 50/60 Hz 3~N, PE 110/220 V on request

WAVE SOLDERING SYSTEM

ATF-23 & 23 F

Wave Soldering System for Medium Volume

as finger conveyor available too

With a process width of 330 mm offers the ATF23 sufficient throughput for most productions but requires very limited space only because of its small foot print. Although a midsize machine, the ATF 20 offers all benefits of high end wave soldering machines. Dual wave is standard, both lead-free compatible solder pot and spray fluxer is available. Highlight is the Auto-Detect feature of the spray fluxer which recognises automatically position, width and length of the PCB. Flux is sprayed on this area only.

The micro processor controller controls accurately the machine and is easy to operate. Optional the ATF 23 can be operated with a PC too . Next to profile mangement the PC-software collects SPC data for process documentation.

The ATF 23 is available as nitrogen machine as well or could be upgraded at any time.

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.

OPTIONS

- Pumpless spray fluxer
- PCB Auto-Detect system
- Integrated filter above spray fluxer
- Convection preheater
- Tunnel above preheater
- Nitrogen inerting
- Pin code reader
- Interchangeable solder pot
- PC-software
- PC-version
- Assembly conveyor systems

SYSTEM

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

ATF-23 & 23F
Wave Soldering System Description

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
Dual-head spray fluxer
Programmable flux quantity

SOLDER POT READY FOR LEAD-FREE

Ceramic coating, chemical-thermal treatment of nozzles
Quick-lock solder pumps
Direct driven pumps (24V DC motors)
Removable flow ducts and nozzles
Solder temperature shown at digital display
Solder pot roll-out unit
Solder temperature shown at digital display

Interchangeable solder pot

SOLDER WAVE

Special designed products to reduce dross formation
Separate Microprocessor controlled wave heights
Dual wave as standard (Lambda and chip nozzle)
Wave intermittent operation

PC-OPTION

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

PREHEAT MODULE

High efficiency IR preheater
Fine adjustment of temperature
Ceran glass cover for easy cleaning
All values shown at digital display

Convection

CONVEYOR

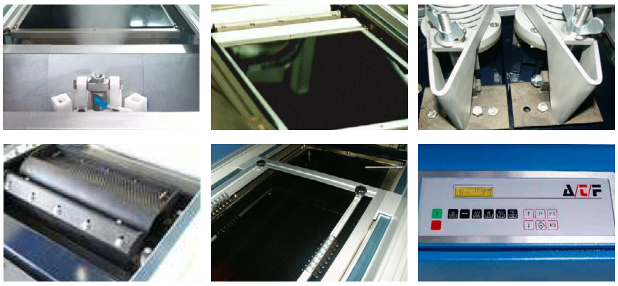
Finger conveyor
24V DC drive motor
Conveyor speed 0 – 2 m/min.
Adjustable conveyor angle 5-9°
Conveyor speed shown at digital display
V-fingers

L-fingers
Finger mix of L and V-type

CONTROLLER

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

Pin Code reader
PC-software



☐ **Standard** ☐ **Optional**

ATF-23 & 23F
Wave Soldering System Description

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.

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.

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.

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. The **Stop-and-Go** software ensures that even heavy PCB's are warmed up to the higher pre-heat temperature of lead-free soldering. Above the pre-heating the PCB is waiting a selectable time before it continues to move towards the wave. By this the pre-heat time is increased.

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 dismounted within 10 seconds. The machine comes with Dual-Wave (Chip and smooth wave) as standard. Other types of nozzles are available too.

CONVEYOR

The titanium finger conveyor is driven by means of a DC-Motor and guarantees a smooth movement of the PCB's. The width of the conveyor can be adjusted by means of a crank.The solder angle is easy to adjust.
Conveyor direction is left – right.

ATF-23 & 23F
Wave Soldering System Specification

SPECIFICATIONS

Foot print	1600 x 1000 mm
Height (without bench)	1400 mm
Weight (without solder)	approx. 255 kg
Process width	330 mm
Pre-heat length	700 mm
Conveyor speed	0.2 – 2 m/min
Average conveyor speed	0.8 – 1.0 m/min
Solder angle	5 – 9 Grad
Max. solder pot temperature	300°C
Weight of solder (Pb-free)	ca. 180 kg
Volume of flux, foam fluxer	ca. 4 l
Volume of flux, spray fluxer	ca. 15 l
Load / unload section	600 mm
Exhaust volume (2 ducts)	600 m^3/h per duct
Duct	ø 150 mm
Colour	RAL 5007 and 7035
Nitrogen consumption (purity ^{3} 99,996 %)	5 - 8 m3/h with full load
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)	max. 16 kW
Power consumption stand-by	ca. 5 kW h
Power supply	3~N, PE 230/400 V, 50/60 Hz 3~N, PE 110/220 V on request

WAVE SOLDERING SYSTEM

ATF-33
Wave Soldering System for High Volume

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.

OPTIONS

- Pumpless spray fluxer
- PCB Auto-Detect system
- Integrated filter above spray fluxer
- Convection preheater
- Tunnel above preheater
- Nitrogen inerting
- Pin code reader
- Interchangeable solder pot
- PC-software
- PC-version
- Assembly conveyor systems

SYSTEM

- Lead-free ready solder pot, with removable flow ducts
- Stainless steel foam fluxer
- 2 IR-preheater zones, with direct driven solder pumps
- 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

With process width of 330 or 400 mm, the ATF 33 is good for highest throughputs and offers all benefits of a high end wave soldering machine. But requires very limited space only because of its small foot print. Dual wave is standard, both lead-free compatible solder pot and spray fluxer is available. There are several highlights: the Auto-Detect feature of the spray fluxer recognises automatically position, width and length of the PCB. Flux is sprayed on this area only. To make maintenance as easy as possible, the solder pot can be rolled out of the machine completely without removing any cables or connections. And last but not least, by using a second solder pot it is easy and fast to switch from one alloy to another.

For preheating different infrared preheater and convection is available. Outstanding is the pump interlock: without any tools they are dismounted within 10 seconds. Than available space is no issue for thorough maintenance of the solder pot.

The micro processor controller controls accurately the machine and is easy to operate. Optional the ATF 33 can be operated with a PC too. Next to profile mangement the PC-software collects SPC data for process documentation.

The ATF 33 is available as nitrogen machine as well or could be upgraded at any time.

ATF-33
Wave Soldering System Description

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
Dual-head spray fluxer
Programmable flux quantity

SOLDER POT READY FOR LEAD-FREE

Ceramic coating, chemical-thermal treatment of nozzles
Quick-lock solder pumps
Direct driven pumps (24V DC motors)
Removable flow ducts and nozzles
Solder temperature shown at digital display
Solder pot roll-out unit
Solder temperature shown at digital display

Interchangeable solder pot

SOLDER WAVE

Special designed products to reduce dross formation
Separate Microprocessor controlled wave heights
Dual wave as standard (Lambda and chip nozzle)
Wave intermittent operation

PC-OPTION

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

PREHEAT MODULE

High efficiency IR preheater
Fine adjustment of temperature
Ceran glass cover for easy cleaning
All values shown at digital display

Convection

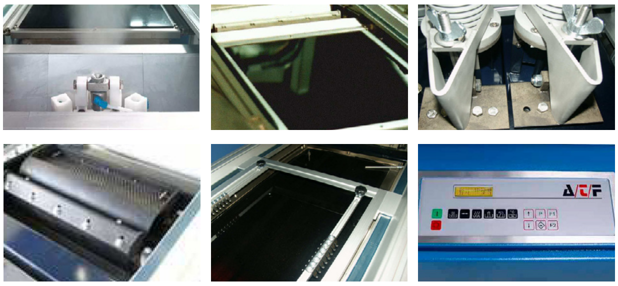
CONTROLLER

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

Pin Code reader
PC-software

CONVEYOR

Belt driven conveyor
24V DC drive motor
Conveyor speed 0 – 2 m/min.
Adjustable conveyor angle 5-9°
2 PCB carriers included
Horizontal input and output section



☐ **Standard** ☐ **Optional**

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.

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.

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.

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 dismounted 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 preheating 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.

ATF-33
Soldering System Description

SPECIFICATIONS

Foot print	2500 x 1100 mm
Height (without bench)	1430 mm
Weight (without solder)	approx. 450 kg
Pre-heat zones	2
Pre-heat length	1200 mm
Conveyor speed	0.2 – 2.5 m/min
Average conveyor speed	0.9 – 1.2 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 duct
Duct	ø 150 mm
Colour	RAL 5007 and 7035
Nitrogen consumption (purity ³ 99,996 %)	5 - 8 m3/h with full load
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. 27 kW
Power consumption stand-by	Approx. 7 kW h
Power supply	3~N, PE 230/400 V, 50/60 Hz 3~N, PE 110/220 V on request

WAVE SOLDERING SYSTEM

ATF-43 & 43 F
Wave Solder for Highest Speed

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.

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

SYSTEM

- Lead-free ready solder pot, with removable flow ducts
- Stainless steel foam fluxer
- 3 IR-preheater 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

With a length of the preheat zone of 1.70 meter and process width of 330 or 400 mm offers the ATF 43 sufficient capacity for real high speed productions and offers all benefits of a high end wave soldering machine. But requires very limited space only because of its small foot print. Dual wave is standard, both lead-free compatible solder pot and spray fluxer is available. There are several highlights: the Auto-Detect feature of the spray fluxer recognises automatically position, width and length of the PCB. Flux is sprayed on this area only. To make maintenance as easy as possible, the solder pot can be rolled out of the machine completely without removing any cables or connections. And last but not least, by using a second solder pot it is easy and fast to switch from one alloy to another.

For preheating different infrared preheater and convection is available. Outstanding is the pump interlock: without any tools they are dismounted within 10 seconds. Than available space is no issue for thorough maintenance of the solder pot.
The micro processor controller controls accurately the machine and is easy to operate. Optional the ATF 43 can be operated with a PC too. Next to profile mangement the PC-software collects SPC data for process documentation.

The ATF 43 is available as nitrogen machine as well or could be upgraded at any time.

Available with belt and finger conveyor.

ATF-43 & 43F
Wave Soldering System Description

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
Dual-head spray fluxer
Programmable flux quantity

SOLDER POT READY FOR LEAD-FREE

Ceramic coating, chemical-thermal treatment of nozzles
Quick-lock solder pumps
Direct driven pumps (24V DC motors)
Removable flow ducts and nozzles
Solder temperature shown at digital display
Solder pot roll-out unit
Solder temperature shown at digital display

Interchangeable solder pot

SOLDER WAVE

Special designed flwo ducts to reduce dross formation
Separate Microprocessor controlled wave heights
Dual wave as standard (Lambda and chip nozzle)
Wave intermittent operation

PC-OPTION

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

PREHEAT MODULE

High efficiency IR preheater
Fine adjustment of temperature
Ceran glass cover for easy cleaning
All values shown at digital display

Convection

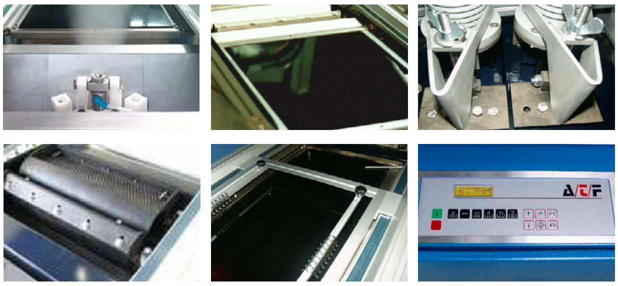
CONTROLLER

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

Pin Code reader
PC-software

CONVEYOR

Belt driven conveyor
24V DC drive motor
Conveyor speed 0 – 2 m/min.
Adjustable conveyor angle 5-9°
2 PCB carriers included
Horizontal input and output section



☐ **Standard** ☐ **Optional**

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.

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.

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.

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 dismounted 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 preheating 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.

ATF-43 & 43 F
Wave Soldering System Description

SPECIFICATIONS

Foot print	3100 x 1100 mm
Height (without bench)	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 duct
Duct	ø 150 mm
Colour	RAL 5007 and 7035
Nitrogen consumption (purity ^{3} 99,996 %)	5 - 8 m3/h with full load
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

ATF VP 400 Vapour Phase for Small foot print

MACHINERY

The ATF vapour phase VP 400 consists of the lower soldering compartment containing the vapour phase which height is limited by heat exchangers which are cooled by the built-in cooling aggregate. Above these coolers the thermally separated the cooling zone is located for a gentle cooling down of the assembly.

VAPOUR PHASE

Unique feature is the temperature profile control software: by defining up to 20 temperature set values, the machine will run the respective profile automatically. The distinct algorithm ensures the tray with the pcb is exposed accurately to the required temperatures with the corresponding times. No matter whether the machine has been switched on recently or is running for hours: the VP 400 control algorithm makes sure, that the temperature profile is the same.

The controller is operated by turning and pushing one knob only and can store up to 4 independent solder profiles. Memory extension is possible with an additional Smart Card.

The VP 400 is network-compatible and a IP-address is preinstalled (C-net). At the infeed section a vapour condensation trap reduces loss of vapour to its minimum. Because of the built-in cooling unit no external cooling water is needed and the machine is ready for operation, just plug it to power and fill the medium in.

Vapour Phase Specifications

SPECIFICATIONS

Foot print	1400 x 710 mm
Height	1400 mm
Weight	ca. 200 kg
Max. size pcb	400 x 400 mm
Max. temperature	270°C
Programmable temperature steps	15
Volume media	ca. 10 kg
Colour	RAL 5007 und 7035
Power consumption	300°C
Power consumption stand-by	Approx. 320 kg
Power supply	Approx. 4.5 l

STANDARD OPTIONS

- small footprint
- vapor phase performs like a large convection oven
- low power consumption (~4,5KVA)
- no Nitrogen required
- no exhaust facilty required
- any temperature profile can be set up
- Real time temperture profile with out the use of temperature-shuttle
- Low maintenance
- Low cost of ownership
- Low invest

ADDITIONAL OPTIONS

- Large foot print required
- 8-10 zone oven requires about 5-6m length
- High power consumption ~ 80KVA
- requires nitrogen
- requires exhaust system (add. cost and installation)
- high running costs
- High investment

ATF SLS-400 Selective Solder

MACHINERY

Air-less high precision fluxer, interchangeable solder pot

SELECTIVE SOLDER

Robust construction, easy accessibility and highly reliability process parameter are some of numerous characteristics the ATF selective machine offers. Special attention is paid for the design of the motion system. Only if the movement of PCB is without any vibration, reproducible high quality solder joints can get achieved.

The special IR preheater is designed to provide excess of energy. Basd on this Voc-free- flux is no challenge; IPA based flux is even easier to process. The software allows import of Gerber files and the use of a scan of the PCB.

The scan will be displayed on the screen, solder joints can bet selected via mouse click. As an alternative the PCB may programmed manually by using the x and y positions.

ATF 25/16 Flex Solder

MACHINERY

Air-less high precision fluxer, interchangeable solder pot

SELECTIVE SOLDER

Rigid design offers high accuracy. Easy acces combined with low investment are some of numerous advantages, the Flex Solder offers.

Vibrationless rigid motion-system assures constant quality. The special flow duct design avoids dross coming inside the nozzle.

Use of Nitrgen atmosphere is recommended to reduce dross and achieve high quality level. Thousandfald approved ATF IR-Preheat ensures uniform temperature rise.

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