



The new POWERFLUX expands the Ersa product range by another system which will revolutionize that part of the electronic manufacturing industry which is still processing through-hole technology components. The POWERFLUX is an in-line selective fluxer that provides a precise and defined flux deposition even in the smallest areas of a printed circuit board. Individual dots as well as tracks can be fluxed. The flux spraying is very precise. You can define to flux just the solder joint area, where- by the wetted surface can be as small as 2 mm. This precision allows that only the exact amount of flux is deposited as is needed to form the joint. Especially in the area of "selective" wave soldering using aperture masks, the POWERFLUX offers great advantages in relation to a reduced consumption of Flux (savings up to 95 %!) and the reduction of ionic contamination between PCB and mask. This stand-alone system is also compatible for non-Ersa carriers or masks and offers therefore high flexibility for all production environments.

To be able to use a second flux type, the system can be equipped with an additional flux storage

tank and a second spray head. The activation of the flux that is to be used is programmable and fully automatic. Alternatively, this second spray head could be used for the simultaneous fluxing of two assemblies, thereby doubling the throughput. It is interesting to know that up to four spray heads can be controlled! The high-performance control of the system allows, with an innovative function, the precise wetting of large areas. Without time-consuming stops of the fluxer axis, the spray heads are continuously in motion and are activated precisely at the programmed locations. To ensure the high reliability of the process, both automatic spray monitoring and a measurement of the dispensed flux volume are available.

The system software ensures intuitive and effective programming of the unit, and it records all relevant process- and production parameters (traceability) as per the ZVEI Standard. The graphical programming interface "CAD Assistant" offers a method for easy and very quick off-line programming. This feature allows the system to remain in production, thereby providing the highest possible equipment availability.

Technical Highlights

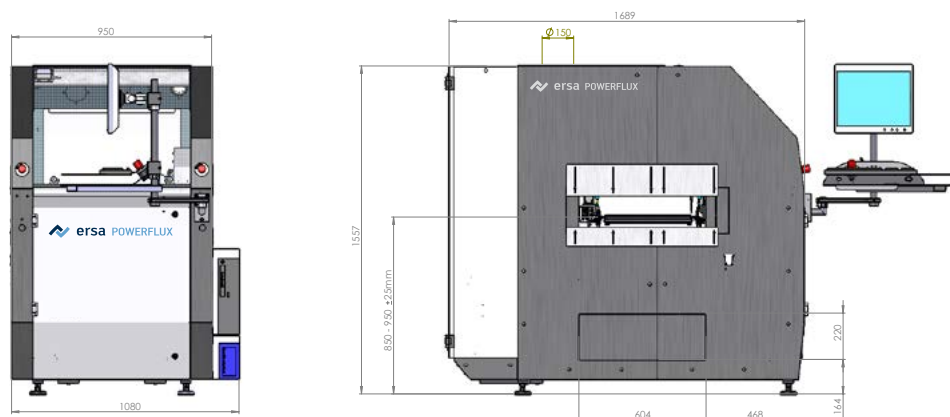
- Reduction of flux consumption up to 95 %
- Short payback period of for the Ersa POWERFLUX
- Reduction of flux residue on the printed circuit board
- Reduced maintenance efforts on the fluxer unit and soldering system
- Reduced efforts to maintain the solder masks or pallets
- Increased service life for the solder masks or pallets
- Ability to accept non-Ersa masks or pallets

Features Ersa POWERFLUX:

Pin-and-chain conveyor to transport bare boards or carriers/pallet/masks	■
Infeed- and exit module with pin-and-chain conveyor	□
Precision spray flux system with Microdrop spray head (130 µm)	■
Flux storage tank with flux level monitoring	■
Spray test function	■
PC control with process visualization	■
Programmable conveyor width adjustment	□
2 nd Microdrop spray head with larger nozzle (237 µm)	□
2 spray heads type "Krautzberger" with different nozzle sizes (127/145 µm)	□
Fast-spray system for simultaneous soldering (4 spray heads)	□
Spray head position fixed or adjustable	□
Printed circuit board locking mechanism	□
Screen-based user interface	□
Door- and viewing glass interlocks	□
Inline interface (SMEMA)	□
Scanner (barcode/matrix code)	□
Transponder reading device	□
Network adapter	□
Traceability system (as per ZVEI Standard)	□
CAD-Assistant	□
Remote maintenance	□

Standard ■ / Option □

Fluxing with the highest precision – Superior process safety even with high through put



General Data of System

Length:	1,689 mm
Width:	1,080 mm
Height:	1,557 mm
Height (when open)	2,060 mm
Weight:	appr. 450 kg
Paint/Color:	RAL 7035/7016

Conveyor System

Type:	Pin-and-chain conveyor
Conveyor speed:	0.2...10 m/min
Conveyor width:	60...406 mm, optional up to 508 mm
Conveyor width adjustment:	motorized, front rail fixed
Conveyor angle:	0°, not adjustable
PCB length:	120...508 mm
Max. PCB weight:	8 kg
Scrap edge of board:	3 mm
Max. height of components, top of board	120 mm (except areas along the scrap edge)
Max. height of components, underside of board:	30 mm, 60 mm depending on configuration
Positioning accuracy PCB:	±0.2 mm
Conveyor height above ground:	850/950 mm, ±25 mm

Fluxer module

Type:	Precision spray fluxing system
Volume of flux stored in tank:	2 liter
Spray nozzle:	130 µm, other orifice openings available
Spraying pressure:	0.5...1.0 bar
Width of spray deposited 1 nozzle	2...8 mm (with nozzle 130 µm), up to 18 mm with spray head type "Krautzberger"
Speed of fluxing:	max. 20 mm/s
Speed during positioning:	max. 400 mm/s
Positioning accuracy PCB:	±0.2 mm
Handling system:	2 axis system (x/y) with servo drives

Pneumatics

Compressed air connection	to be provided on site
Min. pressure intake:	6 bar
Max. air consumption:	<1.5 m³/h
Required connection:	Hose NW 8

Ambient Requirements

Ambient temperature:	10...35 °C
Humidity:	20...95 % (non-condensing)
Noise level:	<60 dB (A)

Exhaust

Exhaust port:	1x, ø 150 mm
Volume of air exhaust:	150 m³/h

Control

PC-based PLC
Process visualization
Input of process parameters
Weekly timer clock
Operating status indication
Password protection
Recording of production data, process data and traceability data

Protective Gas Technology (Nitrogen)

Compressed air connection	to be provided on site
Min. pressure intake:	6 bar
Recommended purity level:	5.0 (corresponds to a purity level of 99.999% or max. 10 ppm other gases)
N ₂ consumption:	appr. 0, 25 m³/hr.
Required connection:	Hose NW 8

Electrical Connection Data

Mains voltage:	1 x 230 V, N, PE-conductor net
Voltage tolerance:	±10 %
Frequency:	50/60 Hz
Back-up fuse (pre-fuse):	1 x 25 A (tr)
Nominal power:	5, 75 kW, depending on the option level. The actual requirement you will find on the name plate of the system.
Nominal current:	25 A

Safety Installations

Main switch:	lockable
Emergency switch:	1x switch present
Exhaust monitoring:	with differential pressure switch
Hood:	Release software / hardware safety switch

