

# VERSAFLOW 3/35 GLOBAL EDITION

Ersa inline selective soldering machine



# VERSAFLOW 3/35 GLOBAL EDITION

Ready for the future



## Highlights Ersa VERSAFLOW 3/35

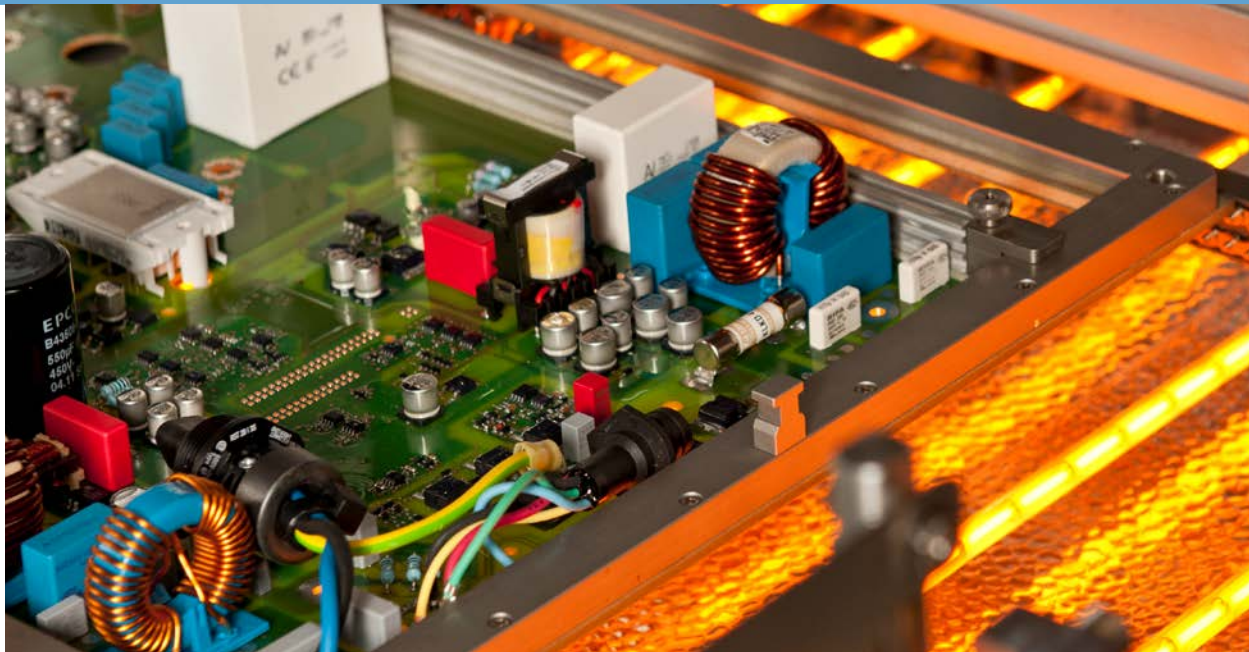
- Inline selective soldering machine for the integration in inline production concepts
- Parallel process due to the separation of flux, preheating and soldering process
- Increased throughput through dual solder pot technology
- Easy & intuitive user interface
- Delivery time: 4 weeks

Ersa selective soldering systems are the technology leaders worldwide. Based on absolutely stable processes and reproducible parameters, they ensure the customer top standards when it comes to quality, costs and delivery service.

The machine configuration of the **VERSAFLOW 3/35 GLOBAL EDITION** consists of flux, preheat and solder module with segmented conveyor system. It incorporates all options necessary to meet the customer's requirements on tomorrow's manufacturing processes. The additional purchase of options is thus not necessary. Apart from the technical features, the short delivery period of a mere four weeks is a major highlight.

The conveyor width is adjustable via the software and handles all common PCB sizes up to a maximum of 508 x 508 mm. The preheating ensures optimum through heating of the assembly before the actual soldering process. Assemblies that require very little heat can also be soldered without additional preheating.

The **VERSAFLOW 3/35** features both bottom and top-side heating. Depending on the size of the assembly, the eight emitters of the heating modules can be operated partially in groups (4-2-2). Energy-efficient preheating is the focus here. In addition, a top-side convection heater is installed in the solder module assuring a constant PCB temperature during the entire soldering process.



The innovative **dual pot solder module** creates substantial added value to the production as it allows to double throughput when soldering PCB panels. Both solder pots are equipped with the proven low-maintenance electromagnetic pumps. The solder level is monitored permanently and maintained at a specified level with the automatic solder wire feeder. Manual filling of the pots and thus associated downtimes can be omitted.

The **process monitoring camera** visualizes the solder process and allows it to be traced in detail. In this way, the quality of the solder joints is thus verifiable in real time.

The **accessories package** supplied together with the machine includes all the necessary tools for the selective soldering process, like the **Ersa CAD Assistant 3** for the offline generation of soldering programs, which represents a high added value. Both CAD files and image files of PCBs can be used as basis for the program generation. The programming is possible directly on the machine or on an external PC while the machine is in operation. This reduces set-up times during product change or restarts to a minimum.

#### Basic configuration

- Precision spray fluxer with spray test function and flux level monitoring
- Bottom-side IR preheater
- Segmented pin-and-chain conveyor
- Maximum PCB size: 508 x 508 mm
- PC control
- Process visualization including solder protocol, process data writer, monitoring function, maintenance and error message indication, password protection
- Solder bath with electromagnetic solder pump
- Solder level and solder wave height monitoring

# VERSAFLOW 3/35 ELITE GLOBAL EDITION

Ersa VERSAFLOW 3/35 ELITE  
GLOBAL EDITION

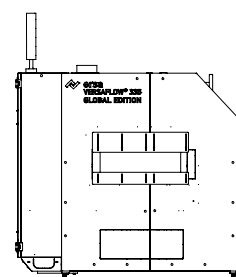
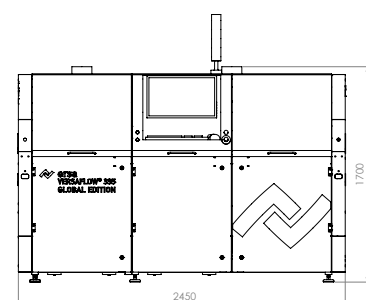
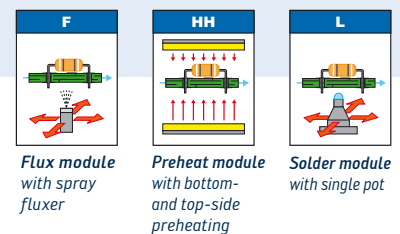


## Configuration

- Programmable conveyor width
- Conveyor edge 5 mm
- Additional top-side sensor
- Glass cover support
- Spray head 130 µm, stainless steel
- Side positioning unit to hold PCBs
- Preheating, top-side, in front of solder module, convection
- Roller conveyor in solder module
- Automatic solder wire feeder
- Automatic nozzle activation
- High-resolution camera
- 22" TFT video monitor
- SMEMA communication interface for infeed
- SMEMA communication interface for outfeed

## Option

- Top-side heating in solder module 1



# VERSAFLOW 3/35 ELITE plus GLOBAL EDITION



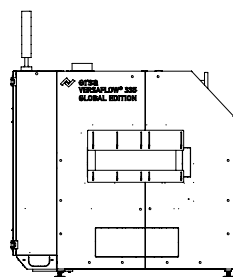
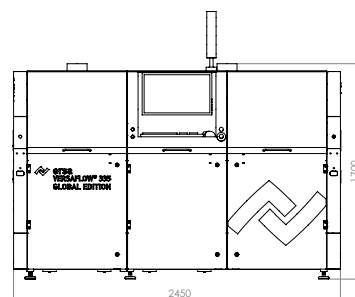
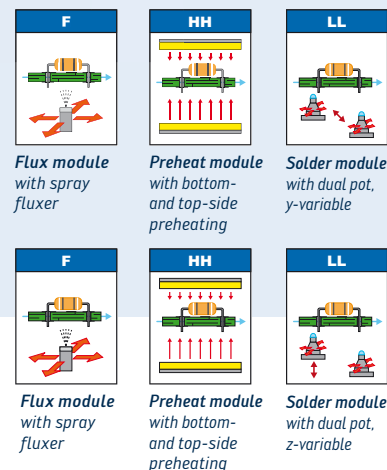
Ersa VERSAFLOW 3/35 ELITE plus  
GLOBAL EDITION

## Configuration

- Programmable conveyor width
- Conveyor edge 5 mm
- Additional top-side sensor
- Glass cover support
- Spray head 130 µm, stainless steel
- Side positioning unit to hold PCBs
- Preheating, top-side, in front of solder module, convection
- Roller conveyor in solder module
- 2nd solder pot, y-variable or z-variable
- Automatic solder wire feeder
- Automatic nozzle activation
- High-resolution camera
- 22" TFT video monitor
- SMEMA communication interface for infeed
- SMEMA communication interface for outfeed

## Option

- Top-side heating in solder module 1



# VERSAFLOW 3/35 PRO GLOBAL EDITION



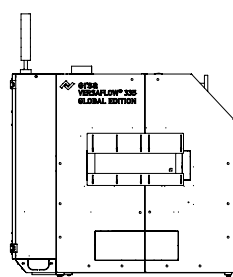
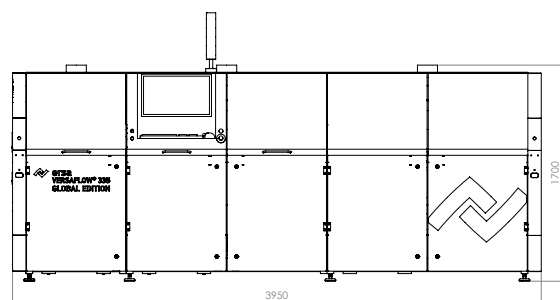
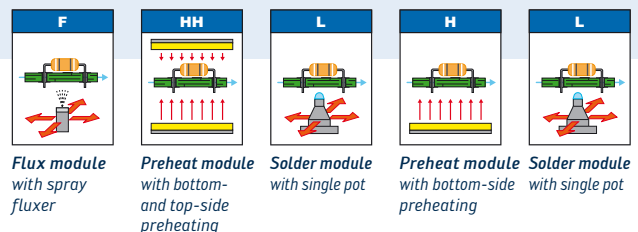
Ersa VERSAFLOW 3/35 PRO  
GLOBAL EDITION

## Configuration

- Programmable conveyor width
- Conveyor edge 5 mm
- Additional top-side sensor
- Glass cover support
- Spray head 130 µm, stainless steel
- Side positioning unit to hold PCBs
- Preheating, top-side, in front of solder module 1, convection
- Preheating, bottom side, in front of solder module 2
- Automatic solder wire feeder and nozzle activation in solder module 1 and 2
- Roller conveyor in solder module 1 and 2
- High-resolution camera in solder module 1 and 2
- Second solder module with single pot
- SMEMA communication interface for infeed
- SMEMA communication interface for outfeed
- 22" TFT video monitor

## Options

- Top-side heating in solder module 1
- Preheating, top side, in front of solder module 2
- Top-side heating in solder module 2



# VERSAFLOW 3/35 ULTRA GLOBAL EDITION



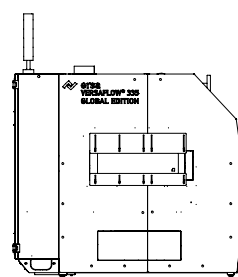
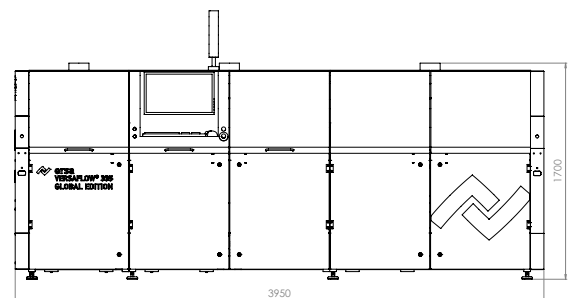
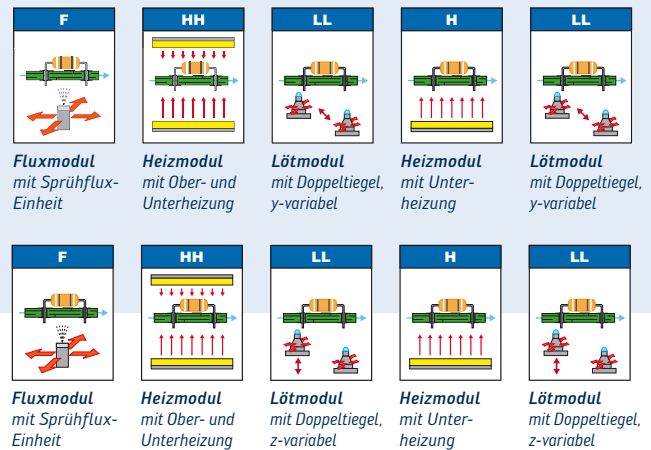
Ersa VERSAFLOW 3/35 ULTRA  
GLOBAL EDITION

## Configuration

- Programmable conveyor width
- Conveyor edge 5 mm
- Additional top-side sensor
- Glass cover support
- Spray head 130 µm, stainless steel
- Side positioning unit to hold PCBs
- Preheating, top-side, in front of solder module 1, convection
- Preheating, bottom side, in front of solder module 2
- 2nd solder pot in solder module 1 and 2, y-variable or z-variable
- Automatic solder wire feeder and nozzle activation in solder module 1 and 2
- Roller conveyor in solder module 1 and 2
- High-resolution camera in solder module 1 and 2
- SMEMA interfaces for infeed and outfeed
- 22" TFT video monitor

## Options

- Top-side heating in solder module 1
- Preheating, top side, in front of solder module 2
- Top-side heating in solder module 2
- Additional spray head for cycle time reduction
- Additional spray head for 2 flux storage tanks



# Technical data

## VERSAFLOW 3/35 GLOBAL EDITION

Dimensions	VERSAFLOW 3/35 with 1 solder module	VERSAFLOW 3/35 with 2 solder modules
Length:	2,450 mm	3,950 mm
Width:	1,750 mm	1,750 mm
Height:	1,650 mm	1,650 mm
Weight:	approx. 1.100 kg	approx. 1.900 kg
Nominal power:	approx. 35 kW	approx. 50 kW

### Conveyor system

Typ:	Segmented pin-and-chain conveyor/ roller conveyor for PCB transport without workpiece carrier
PCB width:	60 – 508 mm
PCB length:	120 – 508 mm
Clearance from PCB edge:	5 mm
PCB top-side clearance:	max. 120 mm
PCB bottom-side clearance:	max. 30 mm
Conveyor speed:	0.2 – 10 m/min
Mask/PCB weight:	max. 8 kg

### Flux module

Type:	high-precision spray fluxer
Positioning system:	2-axis, servo motor driven
Flux storage tank:	1.8 l
Positioning speed:	1 – 400 mm/s
Fluxer speed:	20 mm/s
Positioning accuracy:	± 0.25 mm
Spray width:	2 – 8 mm (130 µm spray head)

### Preheating

Type:	IR emitter bottom side, convection top side
Power:	max. 12 kW IR emitter, max 5 kW convection
Temperature:	up to 200 °C

### Solder module

Solder wave height:	max. 5 mm
Clearance from PCB edge:	min. 3 mm
Solder volume:	approx. 14 kg Sn63Pb; approx. 13 kg lead-free
Solder temperature:	max. 330°C
Warm-up time:	75 min. (up to 280 °C)
Positioning speed:	x/y: 2 – 200 mm/s z: 2 – 100 mm/s
Soldering speed:	10 mm/s
Positioning accuracy:	± 0.25 mm

### Nitrogen technology

Nitrogen supply:	to be supplied locally
Nitrogen injection:	N <sub>2</sub> cover over the solder bath
Required pressure:	6 bar
Consumption:	approx. 2 m <sup>3</sup> /h per pot
Particle cleanliness (recommendation):	5.0

### Compressed air

Compressed air supply:	to be supplied locally
Required pressure:	6 bar
Consumption	< 5 m <sup>3</sup> /h

### Electrical data

Power:	5-wire-system, 3x230/400 V, N, PE
Power tolerance range:	+6 %, –10 %
Frequency:	50 / 60 Hz
Safety fuse:	approx. 34 A

### Exhaust rating

Exhaust stacks:	2 pc., OD 150 mm
Exhaust volume per stack:	250/200 m <sup>3</sup> /h

### Environmental specs/noise level

Ambient temperature:	15 – 35 °C
Permanent sound level:	< 65 dB (A)

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