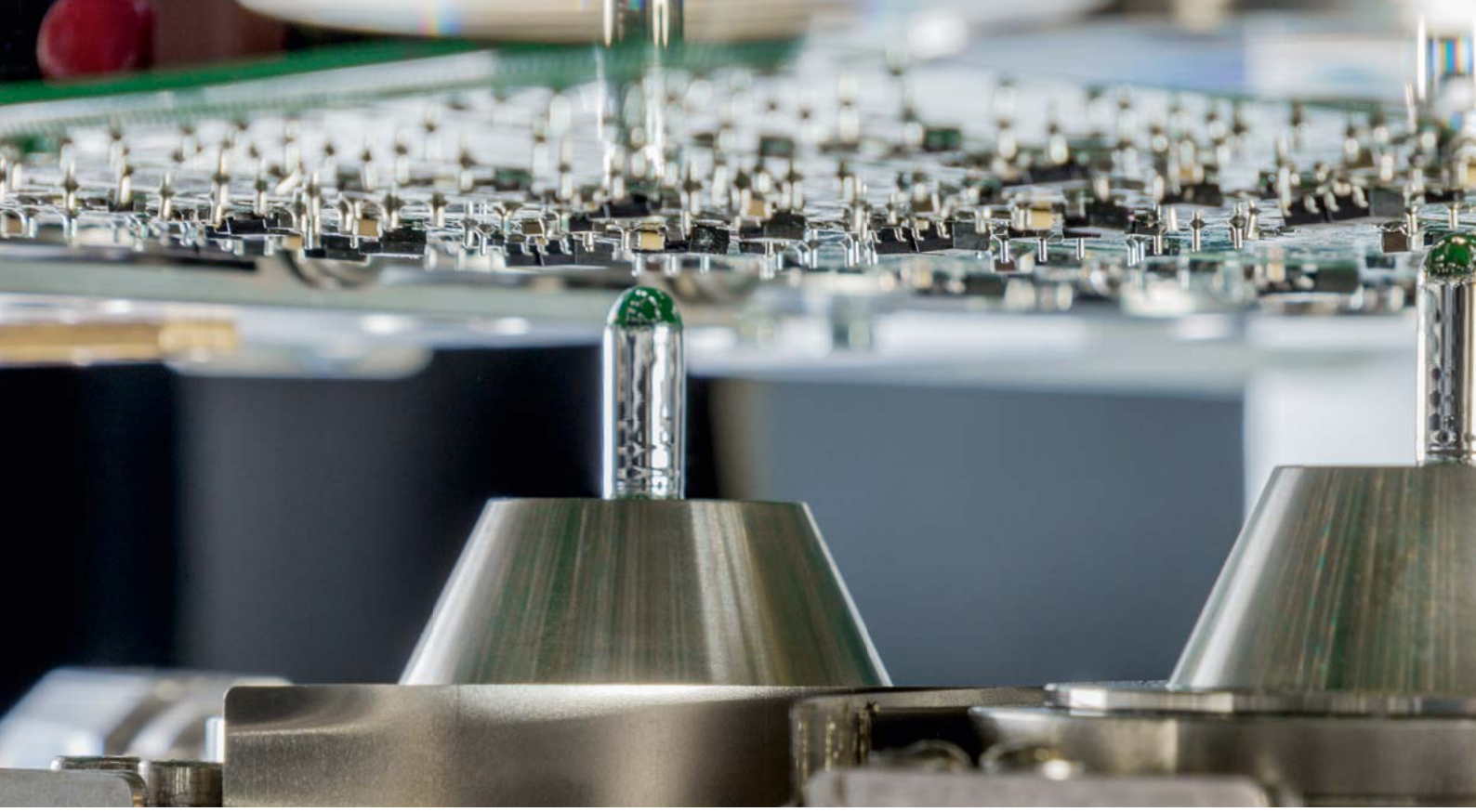
kurtz ersa

VERSAFLOW 4/55

Making the best even better!
The next generation of VERSAFLOW

GLOBAL. AHEAD. SUSTAINABLE.



Ersa VERSAFLOW 4/55

Fit for the future of selective soldering

The world's leading inline selective soldering system **VERSAFLOW** meets the highest demands in flexibility and throughput. The Ersa **VERSAFLOW 4/55** is the 4th generation, built to match production requirements from high volume, low mix to high mix, low volume.

New innovative features make the **VERSAFLOW 4/55** fit for future demands. With almost endless possibilities of configurations, the modular system can ideally be custom-fitted to any requirement. Up to 4 spray heads can be installed in the flux modules of the **VERSAFLOW 4/55**. Flux application is controlled by a laser system. This enables a safe automated production.

Apart from infrared emitters and convection heaters, the heating module can also be equipped with the power convection heating ensuring an efficient, safe and homogenous warm-up of even most complex PCBs.

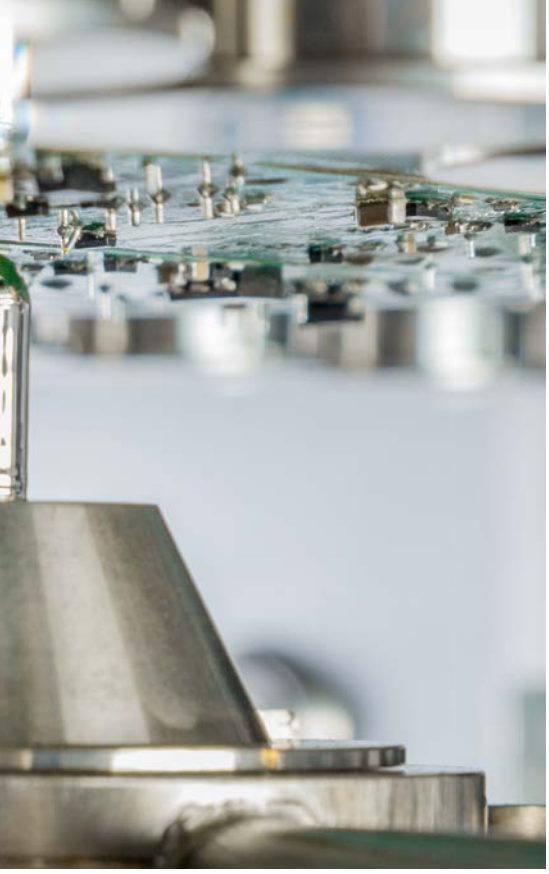
The machine configuration of **VERSAFLOW 4/55** may include up to 3 solder modules with one or two single wave pots per soldering module. The **VERSAFLEX** solder module drives the system flexibility to completely new dimensions.

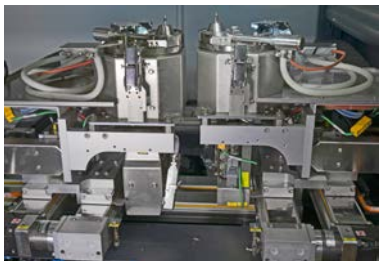
The intuitively operable system software **ERSASOFT 5** is based on newest Microsoft technology, and it is operated via 24" touchscreen. It also permits complete process monitoring and visualization, and

Highlights:

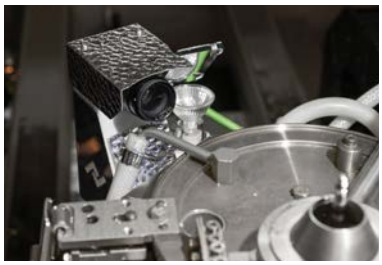
- Max. PCB size 508 x 508 mm
- Fluxer Y variable
- Power convection
- Dual pot Y-Z variable
- Automatic nozzle activation
- ERSASOFT 5
- VERSAFLEX
- VERSACAM
- VERSAEYE

IPC-HERMES-9852
The global standard for "M2M" in SMT assembly





VERSAFLEX soldering module



VERSACAM

Power convection

Dual pot Y-Z variable

it reduces the time required to configure process parameters. Complete process data management, documentation of all process- and system relevant data as well as an interface for the integration of traceability as per ZVEI protocol respectively MES systems are important features.

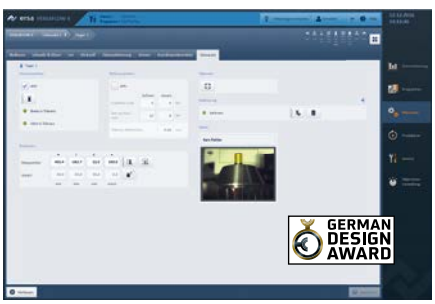
Basic configuration:

- Roller conveyor
- Side fixing in flux module
- ERSASOFT 5
- Precision spray flux system with spray test function and flux level monitoring
- Lower IR preheater
- Maximum PCB size 508 x 508 mm

- PC control with touch screen monitor
- Process visualization including solder protocol, process data writer, monitoring function, maintenance and error message indication, password protection
- Exhaust air monitoring
- Solder bath with electromagnetic solder pump
- Solder level- and solder wave height monitoring

Fluxer, Y variable

Automatic nozzle activation



ERSASOFT 5

VERSAFLEX

Individual adjustment of solder pots in X-Y-Z

Due to increasing product changes in electronics production, it is necessary to exchange solder nozzles or readjust solder pots by hand.

The Ersa VERSAFLEX solder module sets completely new standards with regard to flexibility. As its name already suggests, this solder module is available for the VERSAFLOW 4/55 selective soldering systems and guarantees maximum flexibility.

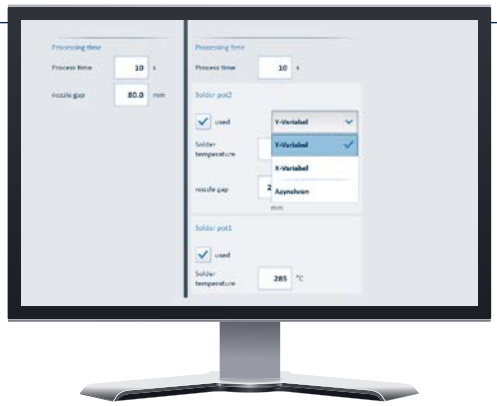
Like the already existing Ersa dual pot systems the innovative VERSAFLEX module offers substantial added value for the production: doubling of throughput with PCB panels, use of different solder alloys or nozzle shapes without any changes required.

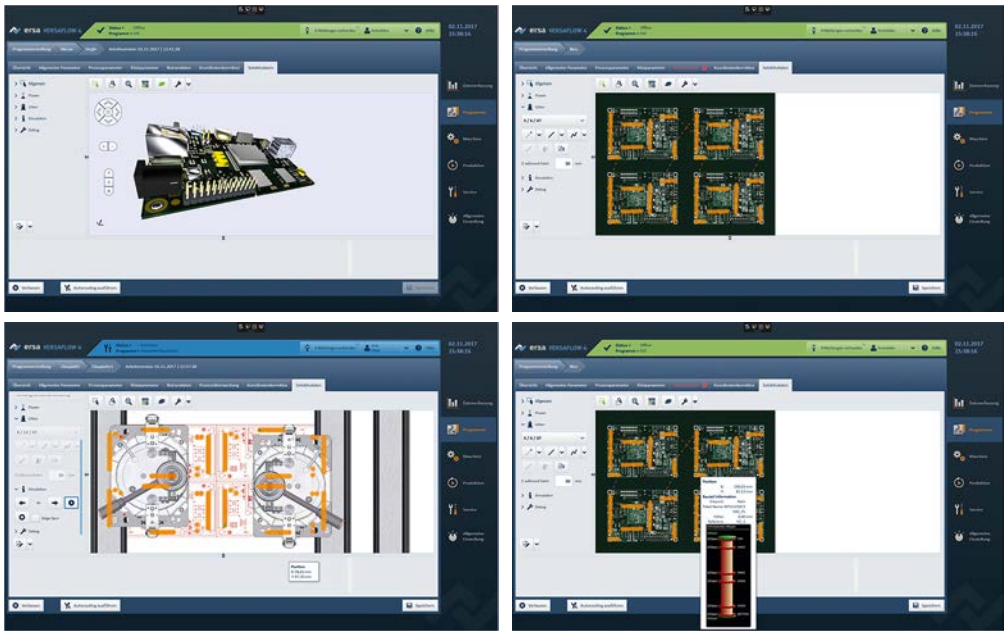
The two solder pots are installed on two independent axes. In this way, the pots can be moved and adjusted individually in X-Y-Z direction. Thus PCB panels can be soldered simultaneously in X or Y direction. In addition, the CAD Assistant 4 offers offline programming with automatic optimization of cycle times. The result is highest flexibility at shortest cycle time.

To meet all of tomorrow's requirements we offer an upgrade package for the innovative VERSAFLEX module making you ready for the future: This update allows to independently solder two individual joints at the same time.

Highlights:

- Simultaneous soldering of PCB panels in X or Y direction
- Highest flexibility at the fastest cycle time
- Automatic cycle time optimization due to offline program generation with CAD Assistant 4





CAD ASSISTANT 4

Fast, intuitive and comfortable

The efficient generation of complex solder programs is of great importance. The Ersa CAD Assistant 4 provides for an offline program generation while the machine is in operation! This ensures highest machine availability.

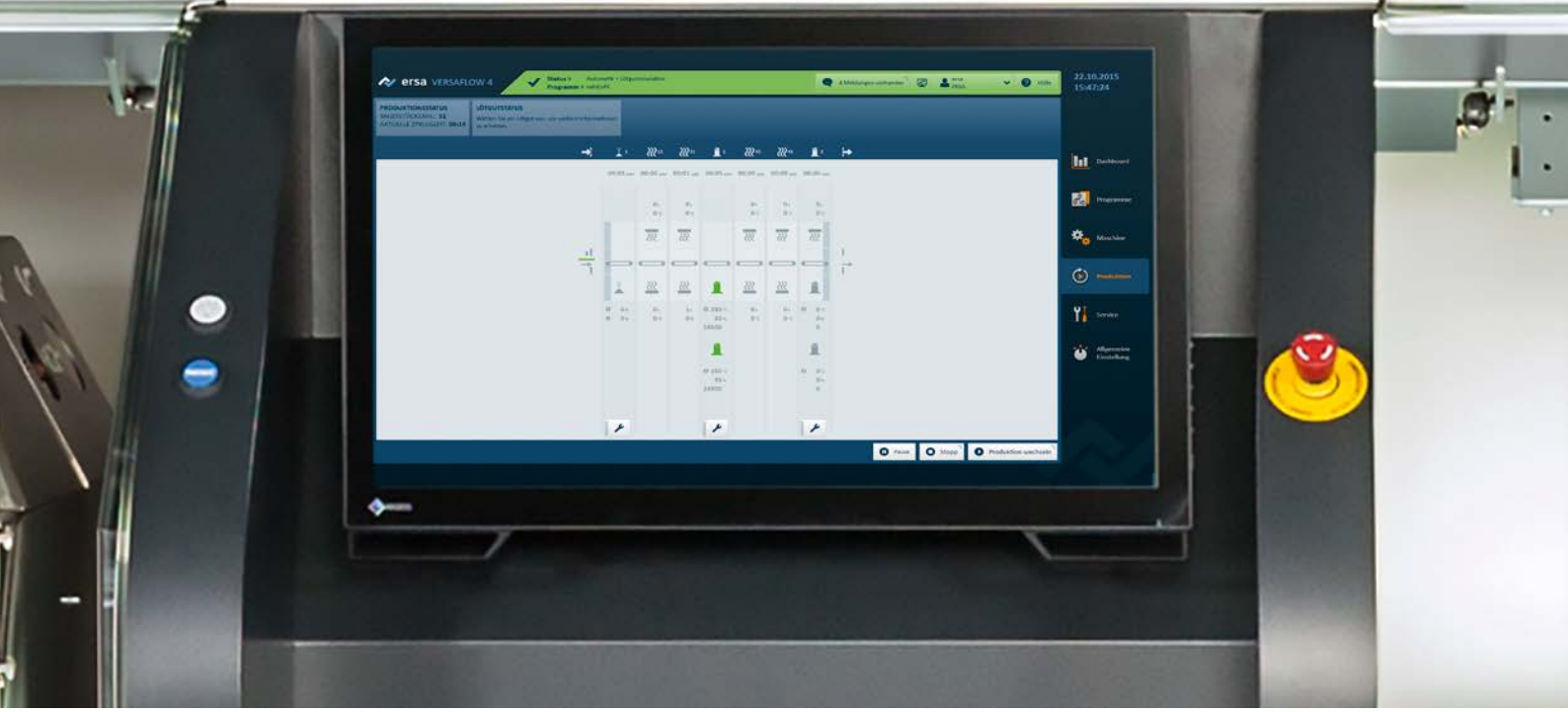
CAD Assistant 4 considers the specific equipment configuration in the generation of a solder program. Furthermore, it supports solder modules with two independent axes (VERSAFLEX). The data sets of the CNC axes are processed using Drag&Drop. Furthermore, CAD Assistant 4 includes pre-defined data sets the user can easily adapt to his specific application. Errors during program creation are prevented by a plausibility check. Both CAD files of PCBs and image files of PCB scans can be used as basis in the program generation with CAD Assistant 4.

All movements of the fluxer as well as the solder pots are graphically entered on the image of the board, after which the process data is added. Program files created with CAD Assistant 4 can easily be verified by means of process simulations and can immediately be used in the selective soldering machine.

The software upgrade VERSAFLEX ULTRA provides maximum flexibility and further optimized processes: Both solder pots can be moved fully independently in X-Y-Z. Due to the new autorouting feature, the generation of complex solder programs is super easy: The user only enters the tracks or single joints to be fluxed and soldered. CAD Assistant 4 then automatically sets the machine movements in the most efficient way.

Highlights:

- Intuitive programming due to graphic user interface
- Optimized cycle times by means of auto-routing
- Automatic and optimized assignment of fluxing and soldering jobs to the available modules
- Prevention of crashes by the definition of exclusion areas
- Program simulation to verify settings
- Support of solder modules with two independent axes (VERSAFLEX)
- Simple scaling of the assembly
- Management of up to 3 solder modules
- File import of CAD formats: ODB++, IPC 2581, GenCAD
- File import of image formats: .jpg, .bmp, .png, .tif, .gif



SIMPLE. CLEARLY ARRANGED. EFFICIENT.

Controlling and documenting with ERSASOFT 5

Ersa's selective soldering systems of the 4th generation are delivered with the state-of-the-art ERSASOFT 5 operating software.

Apart from its modern visualization the proven system operation software convinces by its operator-oriented, user-friendly structure. Through individual user interfaces, each group of operators receives, at one glance, the data and information it requires. The interface is also more comfortable with regard to process monitoring. Thanks to modern PiP technology (picture in picture), the soldering parameters as well as the process images are available at one glance, providing optimal control for each individual soldering process.

Through an additional monitor, up to 6 single nozzles can be permanently displayed for the purpose of process monitoring. By a mouse click, the individual nozzle can be enlarged to full screen for closer observance of the soldering process.

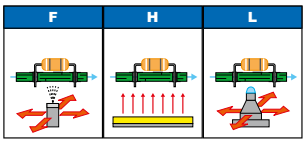
GERMAN DESIGN AWARD

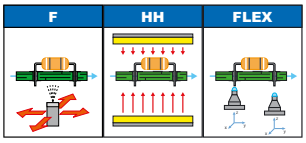
Highlights:

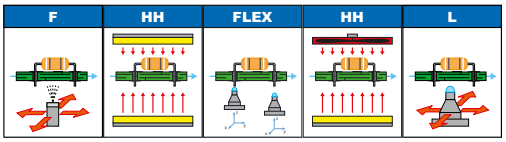
- Intuitive user guidance
- Modern design
- PiP-function/process monitoring
- Individual user interfaces
- Integrated CAD Assistant 4

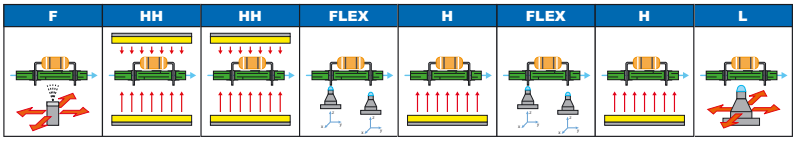
THE ERSA MODULAR SYSTEM

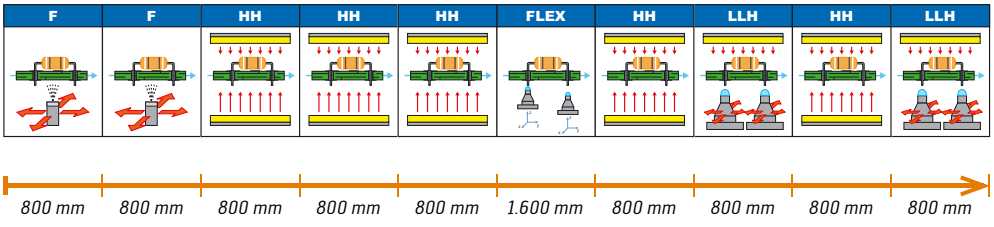
We optimize the soldering process for your specific needs







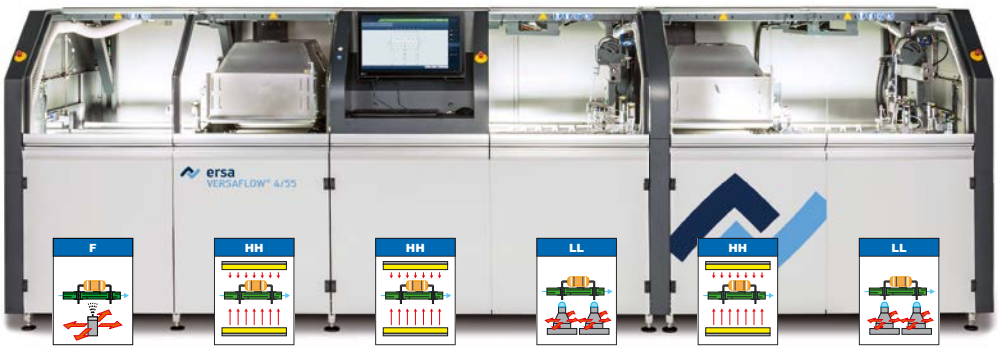




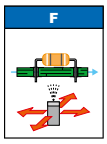
Configuration examples

The combinations of the arrangement of different modules show only some of the possibilities of the extremely flexible Ersa modular system concept.

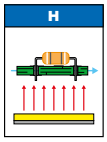
Depending on a customer's request, with the addition of the optional dual pot feature, throughput could be substantially enhanced without increasing floor space requirements.



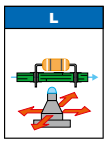
Legend:



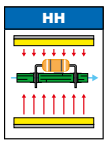
Flux module with spray fluxer



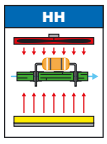
Preheat module with bottom-side heating



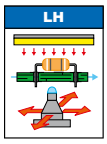
Solder module with single pot



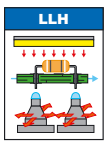
Preheat module with bottom- and top-side heating



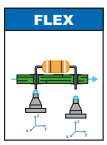
Preheat module with power convection



Solder module with single pot and top-side heating

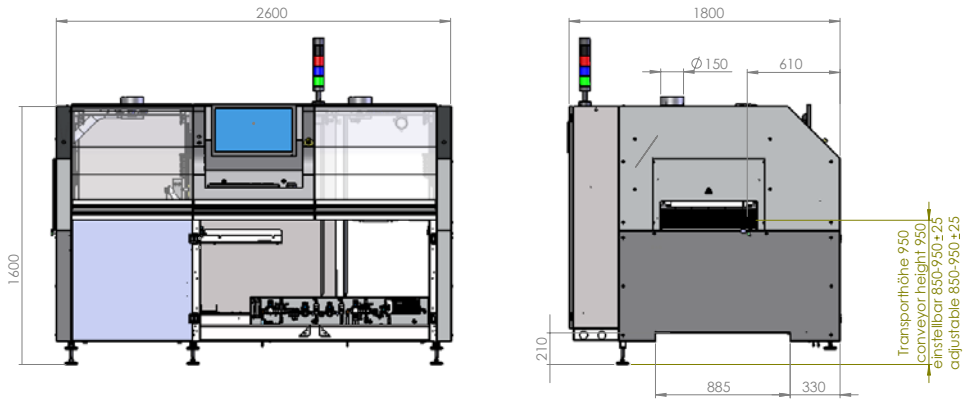


Solder module with dual pot and top-side heating



VERSAFLEX solder module

Technical data VERSAFLOW 4/55



VERSAFLOW 4/55 (basic system)	
Length:	2,600 mm
Width:	1,800 mm
Height:	1,600 mm
Weight:	1,500 kg
Type:	inline
PCB loading:	manual/automatic

Electrical data	
Power:	5-wire system, 3 x 230/400 V, N, PE
Power tolerance range:	±6 %, -10 %
Frequency:	50/60 Hz
Power consumption:	22 kW
Safety fuse:	max. 45 A

Conveyor system	
Type:	roller conveyor
PCB width:	50 – 508 mm (single track)
PCB length:	127 – 508 mm
Clearance from PCB edge:	3 mm
PCB top-side clearance:	max. 120 mm
PCB bottom-side clearance:	max. 60 mm
Speed:	0.2 – 15 m/min
Mask/PCB weight:	8 kg
(heavy load conveyor, option)	(15 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:	±0.15 mm
Spray width:	2 – 8 mm (130 µm nozzle)

Preheat module	
Type:	IR bottom-side (basis), top-side convection (option), top-side power convection (option)
Power:	12 kW per IR heater, 5 kW (convection), 6 kW (power convection)
Temperature:	200 °C

Nitrogen technology	
Nitrogen supply:	to be supplied locally
Nitrogen injection:	N2 cover over the solder bath
Required pressure:	max. 6 bar
Consumption:	approx. 1.5 m³/h per pot
Particle cleanliness:	5.0 (recommendation)

Miniwave 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 to 280 °C
Positioning speed:	X/Y; 2 – 200 mm/s
Soldering speed:	10 mm/s
Positioning accuracy:	±0.15 mm

Compressed air	
Compressed air supply:	to be supplied locally
Required pressure:	max. 6 bar
Consumption:	< 5 m³/h

Exhaust rating	
Exhaust stacks:	2 pc., OD 150 mm
Exhaust volume per stack:	300 m³/h

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

Worldwide presence:

America:
usa@kurtzersa.com

Asia:
asia@kurtzersa.com

Vietnam:
info-kev@kurtzersa.com

France:
kefrance@kurtzersa.com

Mexico:
info-kmx@kurtzersa.com

China:
info-esh@kurtzersa.com

India:
india@kurtzersa.com

Ersa GmbH
Leonhard-Karl-Str. 24
97877 Wertheim/Germany
Phone +49 9342 800-0
Fax +49 9342 800-127
info@ersa.de
www.ersa.com

kurtz ersa