



### Highest throughput, optimized N<sub>2</sub> and energy balance, best process control and maximum machine uptimes.

Featuring a process length of more than 6 meters split into 20 heating zones and 3 cooling zones, the Ersa HOTFLOW 4/20 is the workhorse of Ersa's latest reflow oven generation. It characterizes by its high energy efficiency and provides a vastly increased throughput while maintaining the customary high process- and soldering quality.

The reduction of operating cost is based on the use of economical and efficient fan motors, which reduce the consumption of power, and on

the superior control of the N<sub>2</sub> system, which reduces the consumption of N<sub>2</sub> by 20%. All in all, total energy saving is in the range of 25%.

From a productivity versus floor space requirement standpoint, the HOTFLOW sets the industry standard. With dual or triple track options, it is possible to increase throughput considerably without increasing floor space! Tracks run at their own set speed and at their own PCB width for maximum flexibility.

It is now possible to run as many as three different products simultaneously at three different set speeds and widths. Only highest quality materials have been used in order to guarantee the highest machine availability. Finally, all major parts are exchangeable within only minutes in order to keep machine downtime to an absolute minimum.

#### Unique Technology Advantages:

- Dual and triple track transport increases throughput
- Optimized heat transfer, minimized Delta T, zone separation & temperature controlled cooling
- Switchable internal/external cooling unit
- 100% tested process tunnel (gas sealed)
- Lowest energy and N<sub>2</sub> consumption
- New process control software
- Best machine uptime
- Heating modules retractable without any tools
- Energy efficient blower motors
- Ultra Low-Mass Center Support
- Grip Transport

#### Software-Highlights

- New process control software (EPC)
- ERSASOFT – process data recorder
- ERSASOFT – user friendly machine control
- AUTOPROFILER for rapid offline profiling
- Standby & sleep mode
- Job management

#### Features Ersa HOTFLOW 4/20

Bottom-side preheating, 7 convection modules	■
Cooling step 2 with 4 convection modules top and bottom, controlled cooling zone 1	□
Adjustable fan speed in soldering & cooling zones	■
Adjustable fan speed in preheating zones	□
Nitrogen equipment	□
Residual oxygen monitoring	□
Nitrogen consumption measurement	□
Intelligent N <sub>2</sub> control with 3 measuring points	□
Residue Terminator	□
Pyrometer	□
Cooling aggregate	□
Outfeed cooling	■
Bottom-side motor cooling	■
Temperature monitoring of the cooling zone	■
Cooling step 1, top and bottom	■
External cold water supply	□
Grip Transport	□
Low-mass conveyor, 560 mm	■
Low-mass track conveyor 1 to 3	□
Adjustable speed for each track conveyor	□
Low-mass support tubes, 540 mm/21" width	□
Low-mass center support 1 to 3 with uninterrupted rest	□
Program controlled width adjustment for conveyors and center support	□
Automatic chain lubrication	■
PC with TFT screen	■
TFT touch screen	□
Status indication light	■
Emergency power supply (transport, hood, SPS, PC)	□
Online servicing	□
Temperature measurement device (SENSOR SHUTTLE)	□
Ersa process control (EPC)	□
AUTOPROFILER	□
Energy measurement	□
Energy consumption calculation	■
Quick profile change	□

standard ■ / option □



Grip conveyor for extremely thin PCB or flexfoils



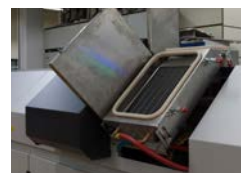
Multi track conveyor for variable PCB width



Efficient cooling in outfeed section



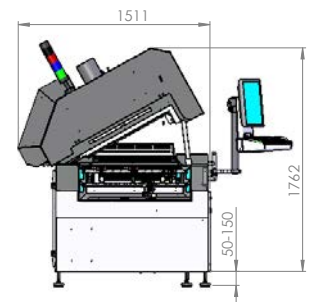
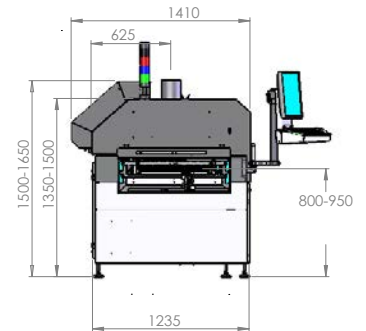
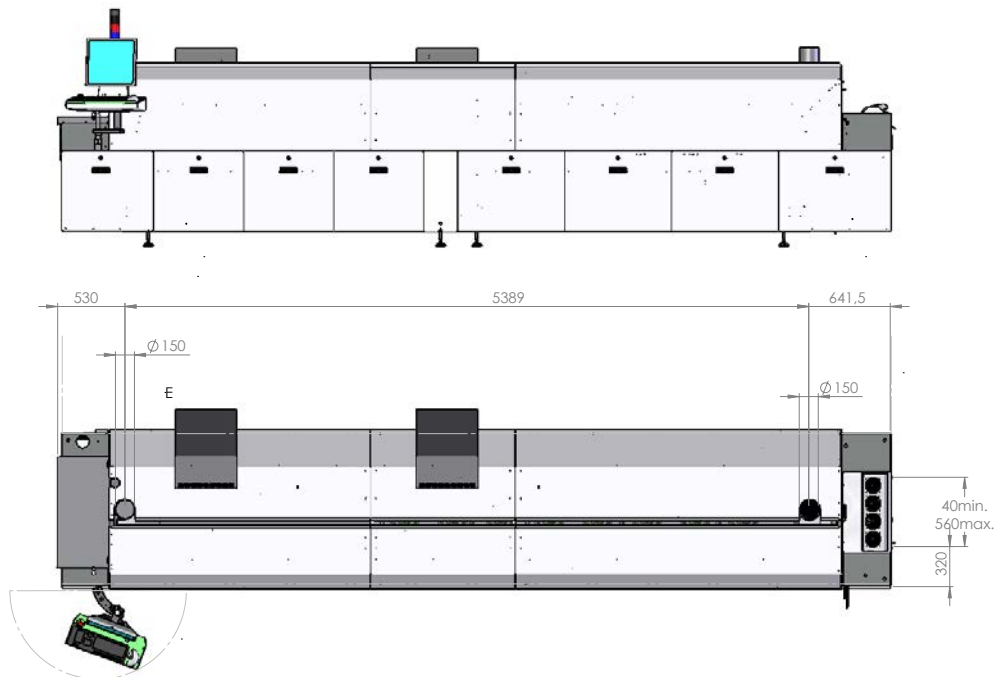
Retractable nozzle sheets for quick maintenance



Optimized access to maintenance units



Ersa AUTOPROFILER: Easy offline profiling for highest machine uptimes.



### Dimensions (Basic machine):

Length:	6,600 mm
Width:	1,410 mm
Height:	1,350 – 1,500 mm
Height (open):	1,670 – 1,820 mm
Weight:	approx. 2,600 kg
Paint:	RAL 7035/7016

### Conveyor system:

Working width:	45 – 560 mm
Working width (PCB center support):	45 – 560 mm
Board clearance (standard):	+32/-40 mm
Center support pin height:	19 mm
Conveyor speed:	20 – 200 cm/min
Conveyor height from floor:	820 – 980 mm
Pin-and-chain conveyor:	3 mm edge clearance option: 4 mm, 5 mm,

### Process zone:

Process length:	5,920 mm
Heating zone:	3,805 mm
Cooling zone:	2,115 mm
Infeed zone:	620 mm
Process chamber width:	approx. 745 mm

### Heating system:

Convection share:	100 %
Gas flow/module:	approx. 500 m <sup>3</sup> /h (17,657 ft <sup>3</sup> /h), adjustable
Convection modules:::	10 top/10 bottom
Preheating:::	7 top/7 bottom
Soldering zone:	3 top/3 bottom
Nominal rating per module:	3,3 kW

### Cooling:

Cooling zone:	4-stage version and water recooling
Coolant:	water/R134A (option)/air
Ambient temperature:	max. 32°C (90°F)

### Nitrogen option:

Gas injection:	in process zones
Pressure control:	4,5 – 10 bar

### Safety devices:

1 x Main switch
2 x Emergency-Stop buttons
2 x Exhaust monitors

### Electrical data:

Power:	5-wire-system, 3 x 400 V, N, PE
Power tolerance range:	±10 %
Frequency:	50/60 Hz
Max. fuse rating:	3 x 63 A
Nominal rating: (subject to configuration)	70 kW – 90 kW
Reduced rating:	45 kW
Continuous rating for operation	ca. 10 – 15 kW

### Exhaust rating:

Exhaust stacks:	2 stacks, 150 mm (6") ø each
Exhaust volume per stack:	300 – 600 m <sup>3</sup> /h
Exhaust monitoring per stack:	integrated

### Noise level:

Permanent noise level:	65 dB (A)
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