

HOTFLOW 3/20

Reflow soldering on the highest quality level at the lowest operating costs



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Highest throughput, ideal energy balance, optimized process control and maximum machine uptimes.



Highlights HOTFLOW 3

- Dual, triple and quad track conveyor increases throughput
- Optimized heat transfer, minimized ΔT , zone separation & temperature controlled cooling
- Low energy and N2 consumption
- Maximum machine availability
- Low-mass center support, return within the system tunnel
- Intelligent N2 control with 3 measuring points
- Energy-efficient blower motors

The third HOTFLOW generation is based on the patented Ersa heating technology. During its development, the focus was on optimizing the heat transfer. Ersa has fundamentally revised the process tunnel. The result: a minimal energy and nitrogen consumption. Cooling and process control have also been further improved. The process tunnel, which has been tested for tightness, guarantees permanently stable processes in the system.

The HOTFLOW 3 series sets the industry standard for productivity to footprint ratio. Double to quattro track conveyor options allow an increase in throughput of up to 400 % without the need for additional floor space.

Maximum flexibility: The HOTFLOW 3 can handle up to four different conveyor speeds simultaneously. Conveyor widths can be adjusted precisely. If required, the optional center support is separately activable. Thus a wide variety of assemblies can be processed simultaneously with the HOTFLOW 3.

In order to maximize system availability, all maintenance-relevant parts have been made easy to access. Important maintenance tasks are possible "on the fly", while the system is in operation. This also applies to condensate management with cleaning granulate. The heating and cooling modules can be removed without any tools.



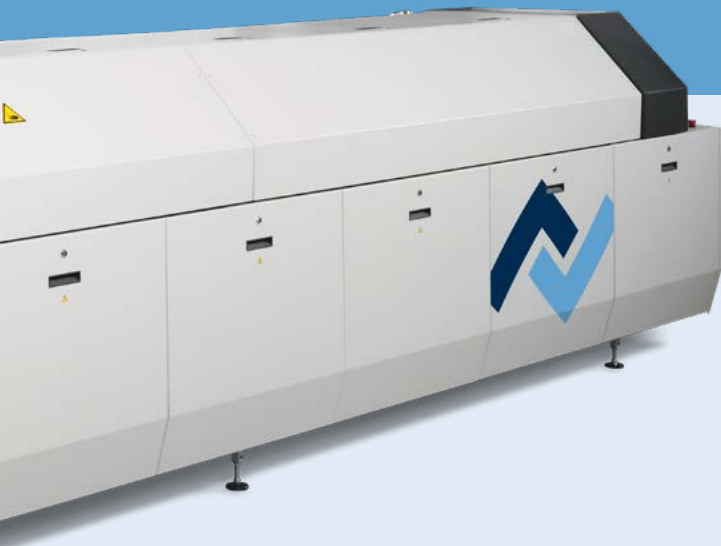
Maintenance-friendly condensation management with cleaning granulate



Maintenance on the fly: machine is operating while the condensation management is being cleaned



Quick and easy servicing through excellent accessibility



Basic configuration

- 7 top-side preheating zones, 3 top and bottom-side peak zones
- Cooling step 1, basic cooling from the top and bottom side
- Adjustable fan speed (cooling and peak zone)
- Temperature monitoring of the cooling zone
- Top and bottom-side motor cooling
- Energy consumption management
- Automatic chain lubrication
- 100 % tested process tunnel (gas sealed)
- Heating and cooling modules retractable without any tools

The automatic chain lubrication guarantees an optimal function of the conveyor system without additional effort.

The intuitive Ers machine control enables easy handling including storage and exchange of temperature profiles and product data. With the AUTOPROFILER, the user can even create new temperature profiles offline and then use them immediately in production. HOTFLOW 3 also offers process data acquisition and a traceability connection including flat module tracking for demonstrably reliable processes.



Improved heat transfer with a high density of Ers multijet nozzles



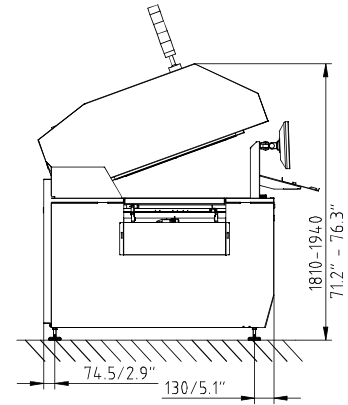
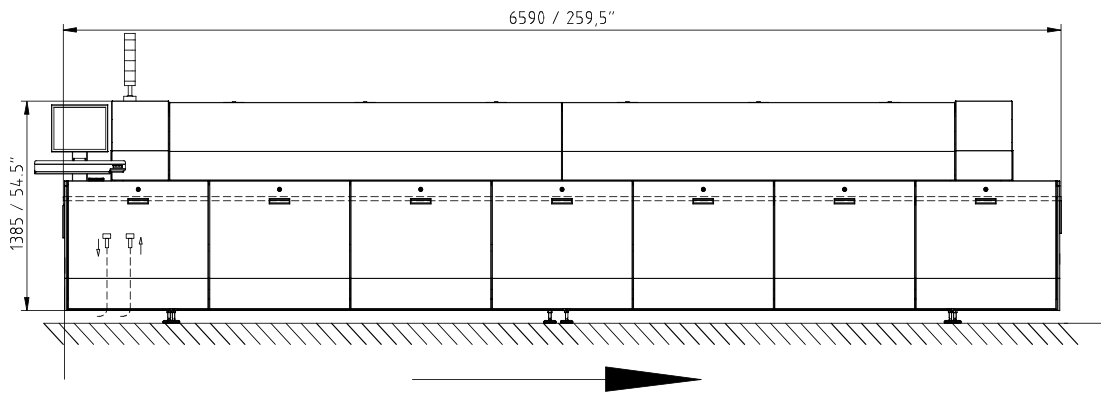
Process tunnel, tested for tightness, guarantees long-term stability



Multitrack conveyor for variable PCB widths

HOTFLOW 3/20

Technical data



Specifications refer to the basic machine and may vary depending on the configuration.

Dimensions (Basic machine):	
Length:	6,590 mm
Width:	1,530 mm
Height:	1,450 – 1,580 mm
Height (open):	1,810 – 1,940 mm
Weight (incl. options):	approx. 3,200 kg
Paint:	RAL 7035/7016

Conveyor system:	
Working width:	45 – 580 mm
Working width (PCB center support):	45 – 580 mm
Board clearance (standard):	+25/-37 mm
Board clearance (option):	+35/-37 mm
Center support pin height:	15 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)

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

Process zone:	
Process length:	5,190 mm
Heating zone:	3,700 mm
Cooling zone:	1,490 mm
Infeed/Outfeed zone:	700 mm
Process chamber width:	approx. 770 mm

Heating system:	
Convection share:	100%
Gas flow/module:	approx. 500 m³/h adjustable, Multijet system
Convection modules:	10 top/3 – 10 bottom
■ Preheating:	7 top/7 bottom (option)
■ Soldering zone:	3 top/3 bottom
Nominal rating/module:	3.3 kW

Cooling:	
Cooling zone:	Ersa Multijet system; 4-stage version and water recooling
Coolant:	water/R407C (option)/air
Ambient temperature:	max. 32°C

Safety devices:	
1x main switch	
4x Emergency-Stop buttons	
2x 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 100 A
Nominal rating:	65 kW – 104 kW (subject to configuration)
Reduced rating:	44 kW
Continuous rating for operation:	approx. 12 – 19 kW

Exhaust rating:	
Exhaust stacks:	2 stacks, 150 mm (6") ø each
Exhaust volume per stack:	400 m³/h
Exhaust monitoring per stack:	integrated

Noise level:	
Permanent noise level:	< 70 dB (A)

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