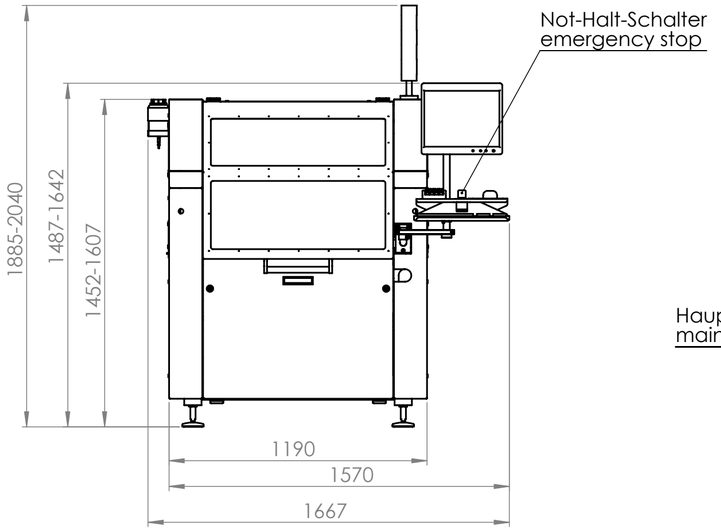
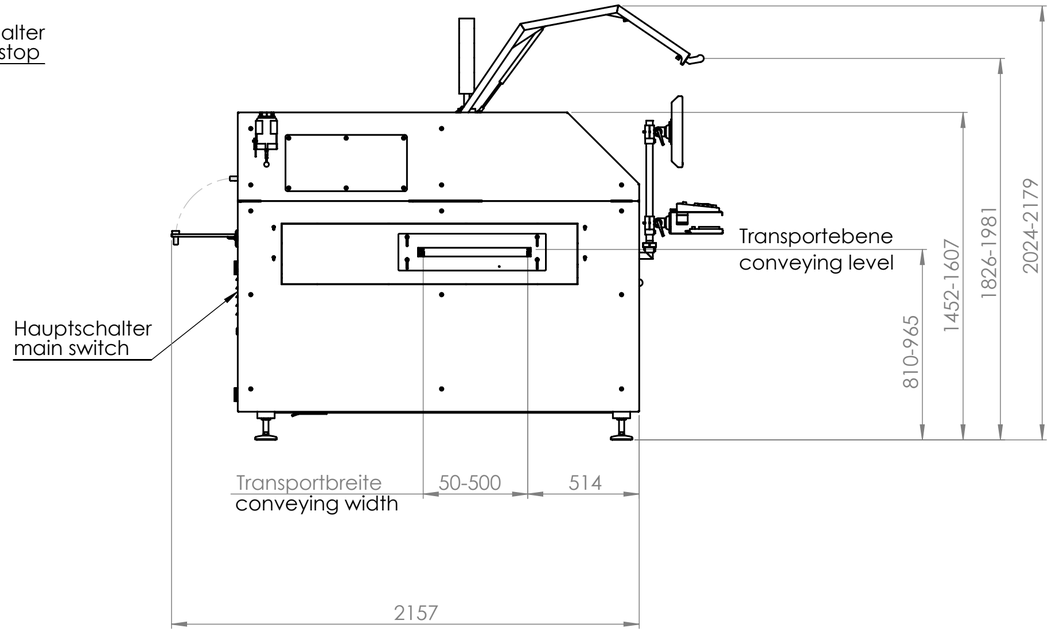
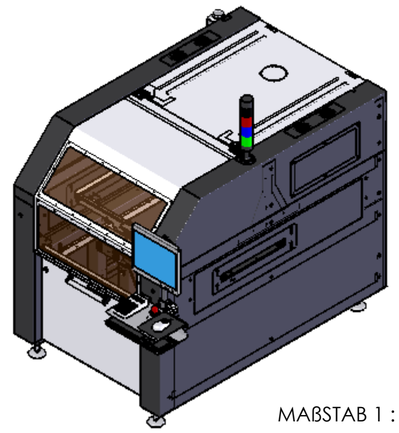
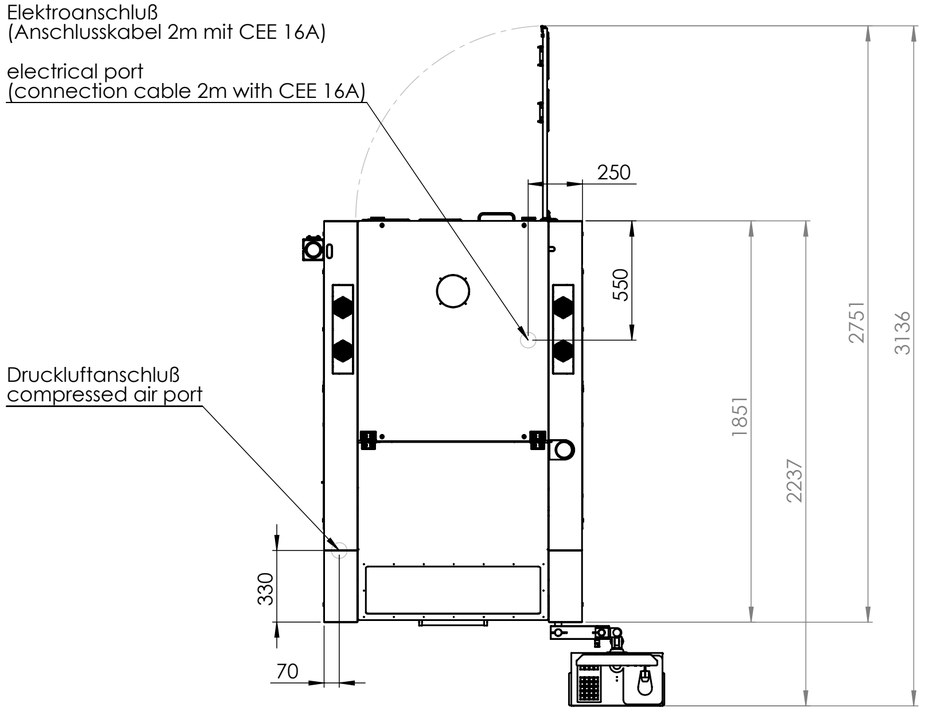






MAßSTAB 1 : 25



Daten Maschine:

f_n:	50/60 Hz	
U_n:	400 V ± 10%	
Elektro-Anschluß:	3 phase/N/PE	electrical port
Max. Vorsicherung:	16 A	max. prefuse
Leistungsaufnahme:	ca. 3000 VA	power consumption
Druckluftanschluss:	min.5bar,max.6bar	compressed air port
Luftverbrauch:	ca. 5,5 l/min	air consumption
Betriebstemperatur:	15-40°C	operating temperature
Maschinengewicht: (Basisausstattung)	1070kg	weight of machine (basis equipment)

-0.1

Blatt 1 von 1

	Tag	Name
Maße ohne Toleranzangabe ISO 2768-mK		
Werkstückkanten ISO 13715		
Bearb.	31.10.12	lie
Gepr.		

kurtz ersa
ERSA GmbH, D-97877 Wertheim

Werkstoff: Material <nicht festgelegt>

Versaprint S1

(Rev.C)

Zeichnung:

EMA1487

Materialnr.:-

A2

M 1:20

Nr.	Änderung	Datum	Name	Gewicht: 610040.30 g	Ersatz für:	Ersetzt durch:

Ersa VERSAPRINT

A revolutionary print solution with integrated Post Print AOI

kurtz ersa

Ersa VERSAPRINT
A revolutionary printer with fully integrated Post Print AOI

Market research shows that nearly 80 % of the defects produced in an SMT production line result primarily from the printing process with approx. 64 % and from the reflow process with approx. 15 %. Ersa, Europe's largest manufacturer of soldering systems, has accepted this SMT challenge and has expanded its product range by screen printers. This consequential step clearly defines Ersa's role as a strategic system supplier taking increased responsibility for the entire SMT processes of printing and reflow.

New technology

The revolutionary Line Scan Technology (LIST) camera and the TRT (Triple Rail Transport) define the focus of the core competence of this new printer: true time savings via optimized parallel processing and 100 % post print AOI integrated into the machine.

LIST - Line Scan Technology

Today's printers use a standard camera for alignment and the same camera to rapidly shoot many small field-of-view pictures for inspection. Ersa revolutionizes these processes via the use of a line sensor based camera for both alignment and inspection. Unlike commercial scanners, the LIST camera has top and bottom contact image sensors (CIS) and an array of rod lenses specifically designed for the VERSAPRINT application. Standard cameras take many pictures of a very small area, whereby the LIST camera scans an entire length of 260 mm at a speed of 35 mm per second! From an inspection speed standpoint, Ersa's Line Scan Technology will set the new standard. The fastest inspection speed in a printer today is 1,200 mm²/s. The LIST camera in the VERSAPRINT achieves the world's fastest inspection speed of 9,100 mm²/s! In addition to inspection speed, the scanning of the entire substrate offers many additional advantages.

Parallel processing: TRT Triple Rail Transport

Optimizing production efficiency remains the foremost goal of SMT equipment manufacturers. In a printing machine, the major process steps are printing, transporting, cleaning and inspecting. The printing, for example, can be conducted simultaneously or parallel to an inspection process and can achieve a relative cycle time savings. The VERSAPRINT revolutionizes parallel processing based on a TRT Triple Rail Transport and the 100 % inspection capability offered by LIST. The two most time consuming processes of printing and inspection can run parallel in order to achieve a tremendous cycle time savings!

Print head: CPC Continuous Pressure Control

Closed loop print pressure control offers the best print results. Weight compensation of print head and squeegee realizes low print pressure for highly sensitive applications. Mounting the squeegee is very easy and fast and is conducted from the front side of printing head.

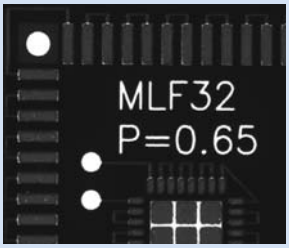
VERSAPRINT S1

Unique technology advantages

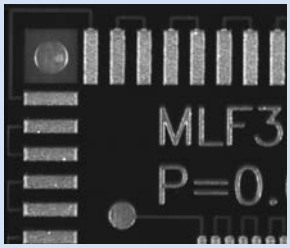
- True parallel processing for high quality & speed
- LIST camera for 100 % inspection at line speed
- Intelligent stencil cleaning via 100 % inspection
- Least floor space required & lowest invest
- Closed-loop process control for print & post print inspection
- Easy to program & easy to use
- One contact for printer & post print inspection

Benefits of LIST for post print inspection

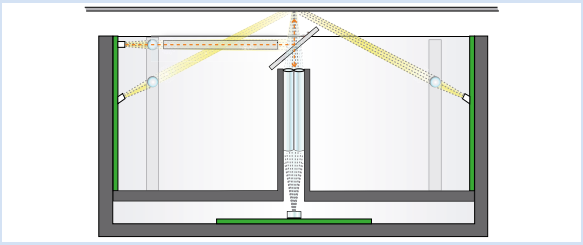
- Scanning entire substrate enables operator to setup and teach the fiducials marks very easy
- System detects position and location of fiducial marks and aligns the unprinted board accordingly
- Reduction of setup time
- Minimising of operator errors
- High-resolution and distortion-free pictures



Direct lighting



Diffuse lighting



LIST camera detail showing direct and diffuse lighting

Intelligent stencil cleaner

The intelligent, closed loop stencil wiper automatically starts a cleaning cycle upon the result of a stencil inspection failure. The Gravity Fed Solvent Dispenser ensures exact volume application via monitoring of the cleaning paper. Fast changeover of cleaning paper is possible without using tools. Constant speed control of paperwind assures optimal process stability.

VERSAPRINT inspection capability

The revolutionary LIST camera offers advanced inspection capabilities not often found in a printing machine. Detection of paste on pad, detection of print offset, detection of bridges, and finally detection of stencil smearing and blockage can be all managed at line speeds!

VERSAPRINT P1

Ersa VERSAPRINT
Technical data & machine options

Technical data:	VERSAPRINT P1	VERSAPRINT S1
Substrate handling		
Substrate size (X x Y) [mm]	min. 80 x 50; max. 460 x 460	min. 80 x 50; max. 550 x 500
Triple Rail Transport mode [mm]	min. 80 x 50; max. 310 x 460 optional: max. 420 x 460	
Substrate thickness [mm]	0.5 - 6	0.5 - 6
Stencil mount		
Stencil size [mm]	min. 450 x 450; max. 737 x 737 Adjustable without adapter	min. 450 x 450; max. 737 x 737 Adjustable without adapter
Print head	2 independent print heads; continuous pressure control in a closed-loop system; adjustable squeegee down stop weight compensation for different squeegee length	2 independent print heads; continuous pressure control in a closed loop-system; adjustable squeegee down stop weight compensation for different squeegee length
Print force [N]	0 - 260	0 - 260
Vision		
Camera	2 line scan cameras, one for each direction (stencil/PCB)	2 line scan cameras, one for each direction (stencil/PCB)
Programming	Proprietary "Teach In" method	Proprietary "Teach In" method
Performance		
Repeatability	± 12.5 µm @ 6 Sigma	± 12.5 µm @ 6 Sigma
Print accuracy	± 25 µm @ 6 Sigma	± 25 µm @ 6 Sigma
Cycle time [s]	< 12 + print	< 14 + print
Inspection speed	9,100 mm²/s (L: 260 mm x 35 mm/s)	9,100 mm²/s (L: 260 mm x 35 mm/s)
Setup time [min]	< 10	< 10
Product change [min]	< 2	< 2
Machine operation		
Graphic user interface	SEMI Standard E95-1101	SEMI Standard E95-1101
Machine dimensions		
Width x depth x height [mm]	approx. 1490 x 1850 x 1607	approx. 1190 x 1850 x 1607

Machine options matrix:	VERSAPRINT P1	VERSAPRINT S1
LIST camera	x	x
Standard camera	option	option
Triple rail 310 mm - parallel processing	x	–
Triple rail 420 mm - parallel processing	option	–
Single rail - serial processing	–	x
Stencil cleaner - with vacuum	x	x
Dispenser (stencil)	option	option
Dispenser (PCB)	option	option
Data matrix / bar code	option	option
Set-up control	option	option
SPC	option	option
Temperature control	option	option

Ersa GmbH
Leonhard-Karl-Str. 24
97877 Wertheim
Germany

Tel. +49 9342 800-0
Fax +49 9342 800-100
info@ersa.de
www.kurtzersa.de

kurtz ersa