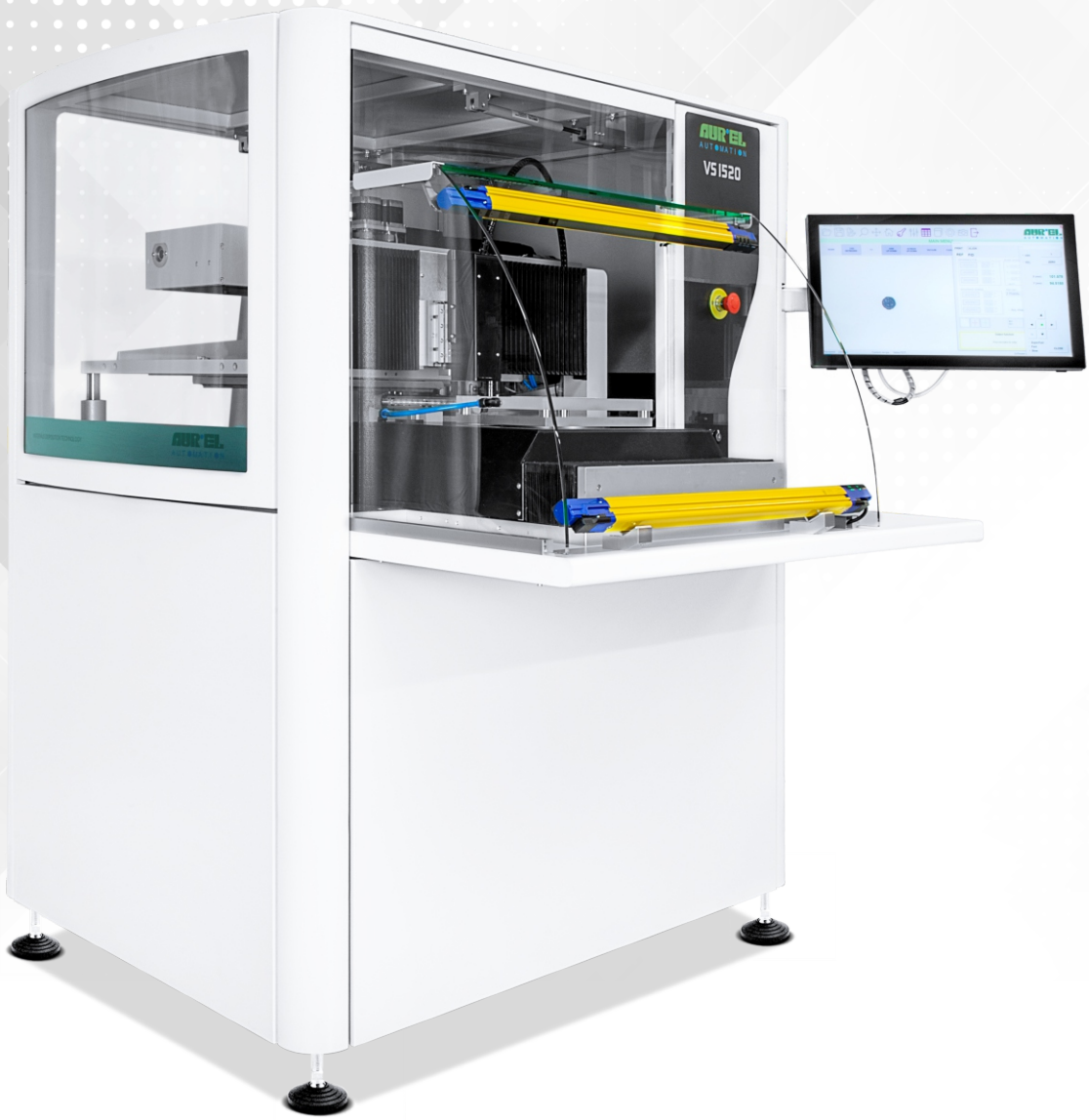
AUTOMATION DIVISION

VS1520A

HIGH PRECISION SCREEN PRINTER



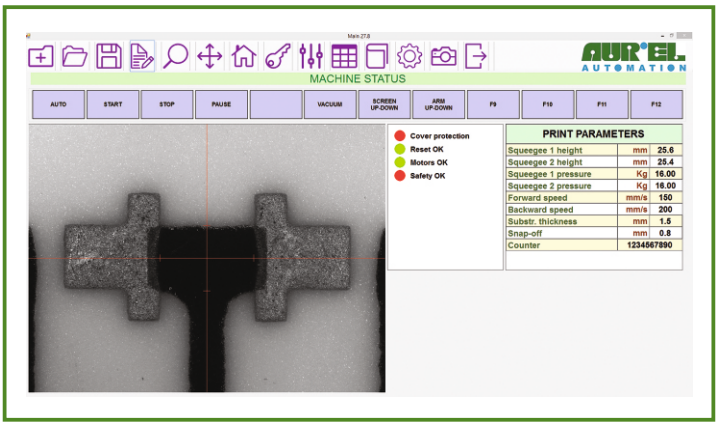
AUREL VS1520A uses highly advanced mechanical and electronic solution to guarantee superior quality in fine-line printing for multilayer hybrids circuits. The automatic vision system ensures resolution better than 2 microns.

All the machine's movements are motorized and programmable by S/W through an user friendly menù. All the print parameters (pressure, speed, down stop, print gap) are programmable and storable in work recipes to grant the minimum setup time.

APPLICATIONS

AUREL VS1520A is a free standing high precision screen printer with cabinet and security cover that can print area up to 400 x 300 mm, assuring uniform deposition from corner to corner.

Some applications for electronic and general industrial purposes are:



USER-FRIENDLY INTERFACE WITH TOUCH SCREEN MONITOR

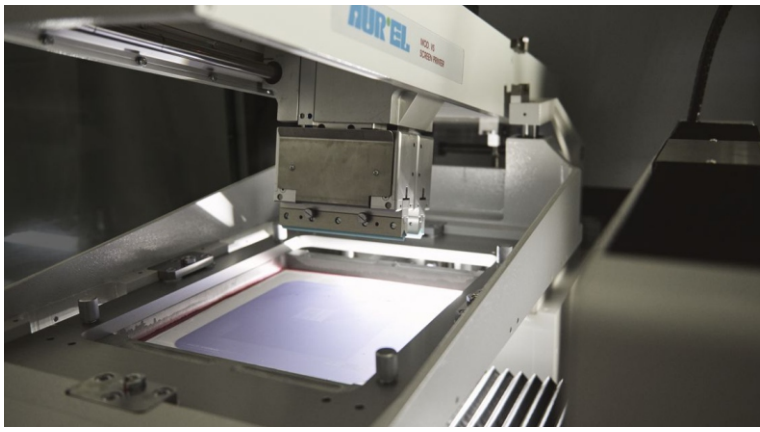
HEAD

- The intelligent head on high precision slides represents the latest state-of-the-art design with motorized and programmable axes for fine teaching and adjustment of parameters.
- High sensitive squeegee for fine-line printing, low pressure, constant angle, no vibration.
- DC motor driven head allows smooth movement and precise speed & stroke adjustment in both directions.
- Configurable head, single squeegee, double squeegee, squeegee and flood blade.
- Motorized and programmable screen Z axis for screen height and slow snap-off function - very important for fine line printing.

- Thick film and polymer pastes
- Multilayer Hybrids
- Solder paste for SMT
- Glues, adhesives, resins
- Through holes metallization
- Solder resist
- Flexible foils, PET film, paper
- Solar cells, semiconductors, glass, quartz
- Polymeric pastes LTCC and Via Filling
- Silver Sinter
- Heaters on metal substrates

CONTROL SYSTEMS

- The machine is PC controlled and allows a great deal of flexibility on all functions
- Windows © operating system
- Wide touch screen monitor with user friendly interface
- Print and flood, alternating print and after print delay
- Programmable print parameters (printing stroke, pressure, print gap & down stop)
- Machine diagnostic
- Machine hood & lifting and locking safety switches
- Work recipes storing and data logging



INTELLIGENT DOUBLE SQUEEGEE HEAD

FULL AUTOMATIC PRODUCTION LINE

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VS1520A HIGH PRECISION SCREEN PRINTER

VISION

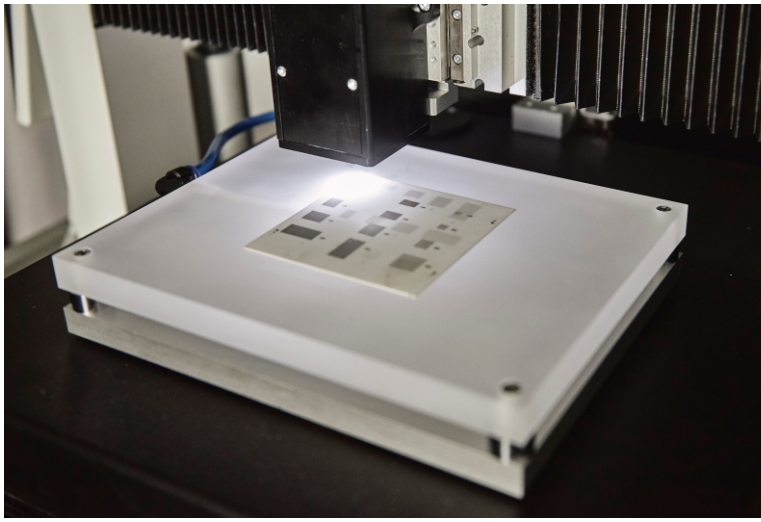
The vision camera is mounted on a X axis with linear motor. The movement on this axis and the movement of the table in the Y-axis cover the complete substrate area.

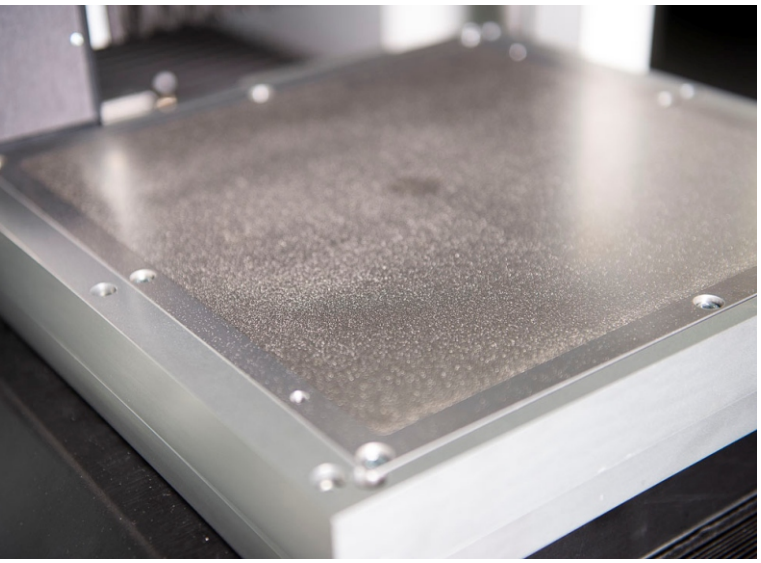
This allows to look at the fiducial marks, the vias or a pad wherever they are placed on the substrate.

A special optic and IR lighting system is integrated in the TV-camera assembly. Room lighting or PCB colours no longer influence the reliability of the vision system.

The vision system is PC based with a very advanced software for easy teaching and automatic adjustment of all parameters and values.

AUTOMATIC VISION SYSTEM





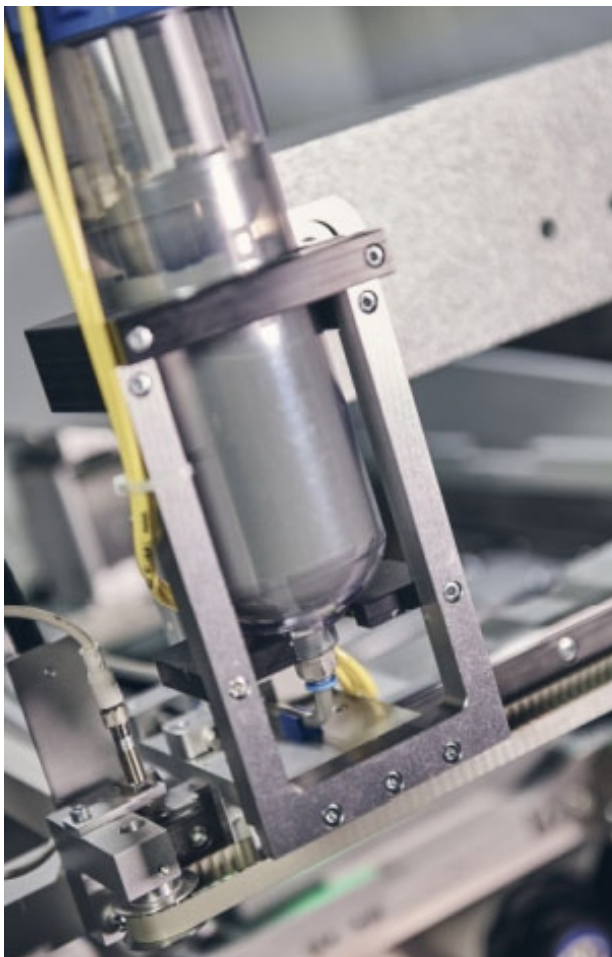
MICROPOROUS TABLE FOR FLEXIBLE SUBSTRATE & GREEN TAPE

WORKTABLE

- High precision fast linear motors. Alignment on the X-Y and Theta axes between screen and substrate.
- Substrate hold down by vacuum, Venturi ejector included.
- Vacuum detector for substrate presence and chamber sensor.
- Easily exchange different fixtures according to the substrate size: acrylic or aluminium nest, micro porous stone, multi-holes chuck, universal table for PCBs.

OTHER OPTIONS

- Paste Reload Dispenser
- PHM, Programmable Holes Metallization and VIA filling
- Substrate cleaning via roller contact, air knife, ionizer bar
- Led UV LAMP
- Bar code reader
- Pneumatic screen locking
- PPI, Post Print Inspection
- Climatization system
- Automatic stencil cleaning (only for stencil)



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SPECIFICATIONS VS1520A

FEATURES

Max print area	400 x 300 mm
Max substrate size	450 x 350 mm
Max squeegee width	320 mm
Max screen size	15" x 20" (option 21" x 21")
X-Y adjustment	± 12 mm
Z adjustment (screen height)	± 10 mm
Theta adjustment (rotation)	± 3°
Print stroke	50 ÷ 480 mm
Squeegee speed	0 ÷ 300 mm/sec
Squeegee pressure	0 ÷ 16 Kg (more on request)
Max weight on the table	10 Kg
Printing capacity	10 ÷15 sec + print time

ACCURACY

Table X axis resolution	0.001 mm
Table Y axis resolution	0.0001 mm
Table theta axis resolution	0.001°
Squeegee and screen parallel	± 0.01 mm/100 m
Total system repeatability	± 0.012 mm

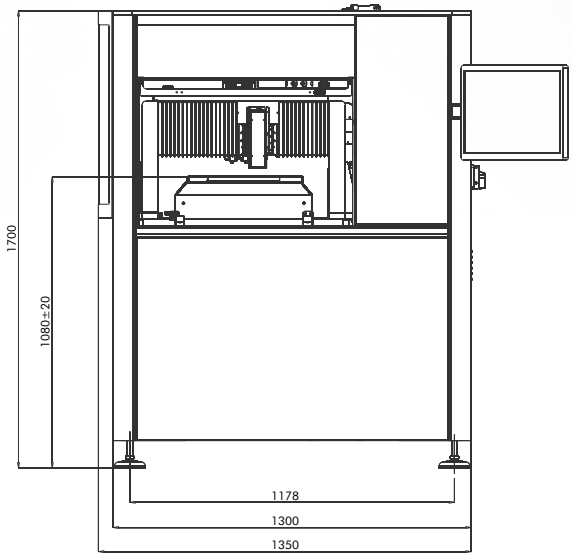
VISION SPECIFICATIONS

TV camera axis resolution (X1 axis)	0.0001 mm
Vision system repeatability	± 0.001 mm
TV Camera field of view	Min. 2 x 1.5 - Max. 8 x 6 mm
Fiducial Dimensions	Min. 0.2 x 0.2 - Max 3 x 3 mm

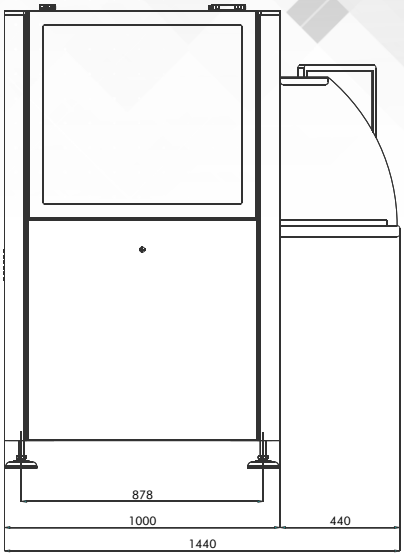
DIMENSION & UTILITIES

Dimensions	1440W x 1350L x 1700H mm
Approx. weight	700 Kg
Compressed air supply	5 Ate - 50 Nl/min MIN
Power supply	230V - 50Hz - 10A

FRONT VIEW



SIDE VIEW



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