



Swiss made

SPRAY TECHNOLOGY KU-453 SERIES

over 40 installations worldwide



Spray coating always from top

- double sided with flash off/turn over device between
- constant identical coating quality for both substrate sides (twice from top, with identical modules with equal settings)

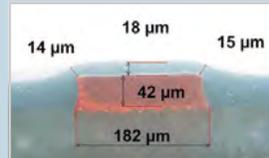
Features

- modular system, expandable according your needs
- single or double sided coating, 0,3 to 1,5m/min
- easy to operate, parameter setting on HMI with recipe



Quality aspects

- compatible with most common ink systems on the market
- constant and reproducible, high quality coating (heated air supply for spray gun)
- ink free holes with high aspect ratio
- high edge coverage
- uniform coating thickness without built up at substrate edges
- lacquer free edges left and right, adjustable, keeps the transport system free of spray material
- smooth drying, shorter exposure/developing time, resulting in higher resolution



Why Solder Mask spray coating?

• High traces (Automotive)

- Better process window for drying & resolution



• Rigid flex – topography (MIL – aerospace)

- Large process window, coating quality & resolution

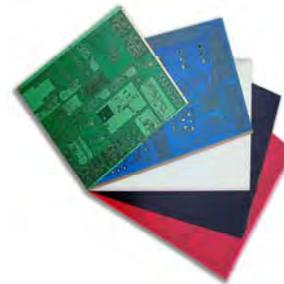


• Direct Image technology

- thinner between pads, less masks in holes, less energy consumption necessary



Up to five (5) different colors? High flexibility? Fast change of ink? We have a solution!



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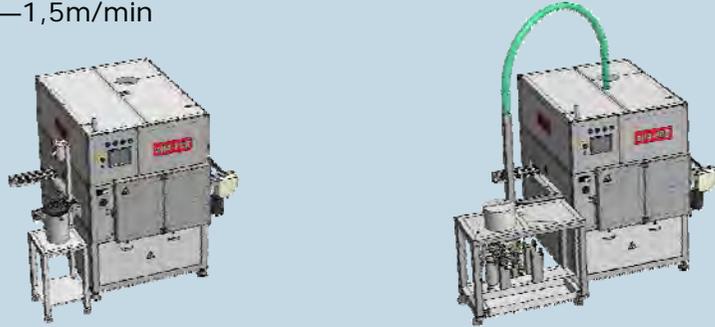
SPRAY TECHNOLOGY KU-453 SERIES

over 40 installations worldwide

all4-PCB[®]
WORLDWIDE

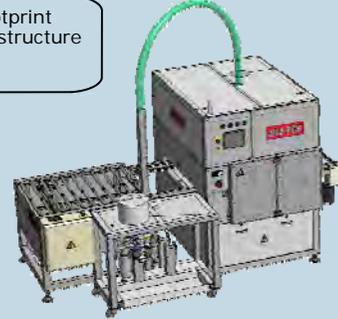
single side coating modules, w/o drying

- 0,3—1,5m/min



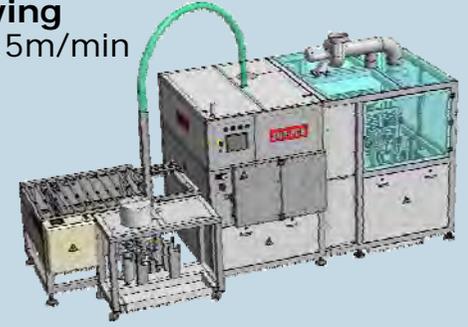
KU 453 dimension: 220 x 180 x 200 cm (L x W x H)

- small footprint
- low infrastructure
- flexible



double side coating w/o drying

- 0,3—1,5m/min



single side coating (2x)

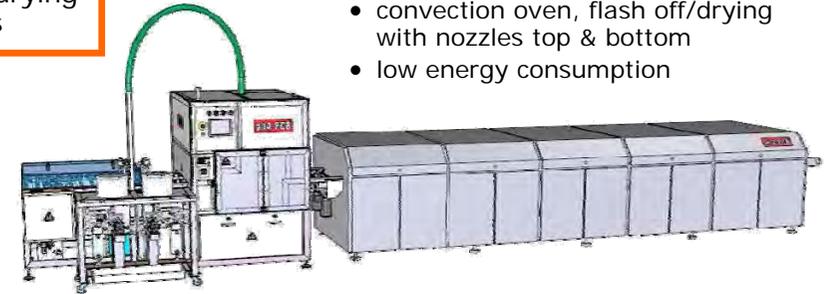
- coating 1- flash off/drying/cooling
- coating 2- flash off/drying/cooling
- 0,3—1,2m/min



capacity of coating lines are limited through the drying capacity of the oven system and process settings

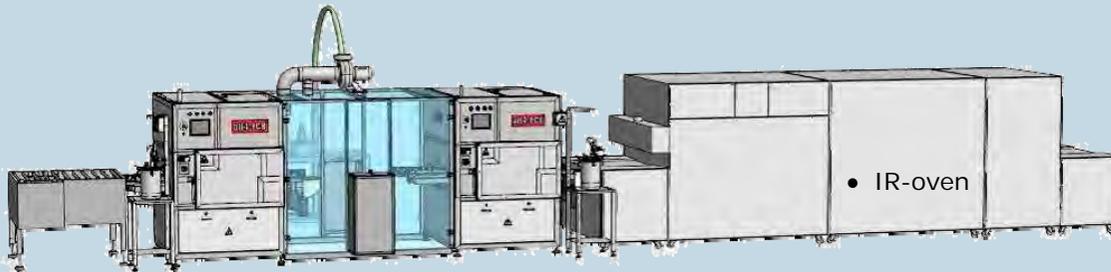
- IR-oven

- convection oven, flash off/drying with nozzles top & bottom
- low energy consumption



double sided coating in one step

- coating 1- flash off/flip—coating 2—flash off/drying/cooling
- 0,3—1,2m/min



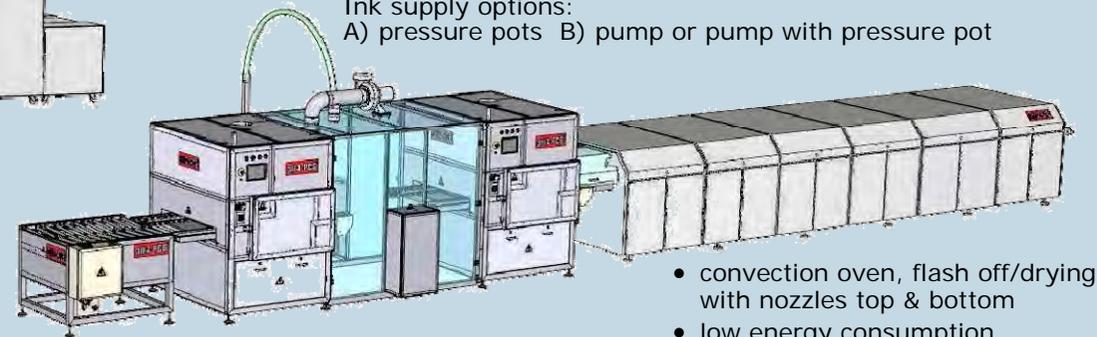
- IR-oven

Technical specification

Transport width: 300—760mm (12—30")
 Panel length: 300—1500mm (12—60")
 Panel thickness: 1-10mm, (1/25"-2,5") depending on width
 Lacquer-free edge: 0-10mm, (0"-2/5") adjustable
 Max. twist: max. 1% (diagonal)
 Parallelism of panel: 0,5mm, (1/50") rounded edges
 Speed of transport system: 0,5—1,5m/min (1.75—5ft/min)

Ink supply options:

A) pressure pots B) pump or pump with pressure pot



- convection oven, flash off/drying with nozzles top & bottom
- low energy consumption

Worldwide in use with various inks from different manufacturers:





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INK DELIVERY SYSTEMS KU-453 SERIES

all4-PCB®
WORLDWIDE

up to 5 different products, ready to use

A) with one (1) pressure pot delivery system

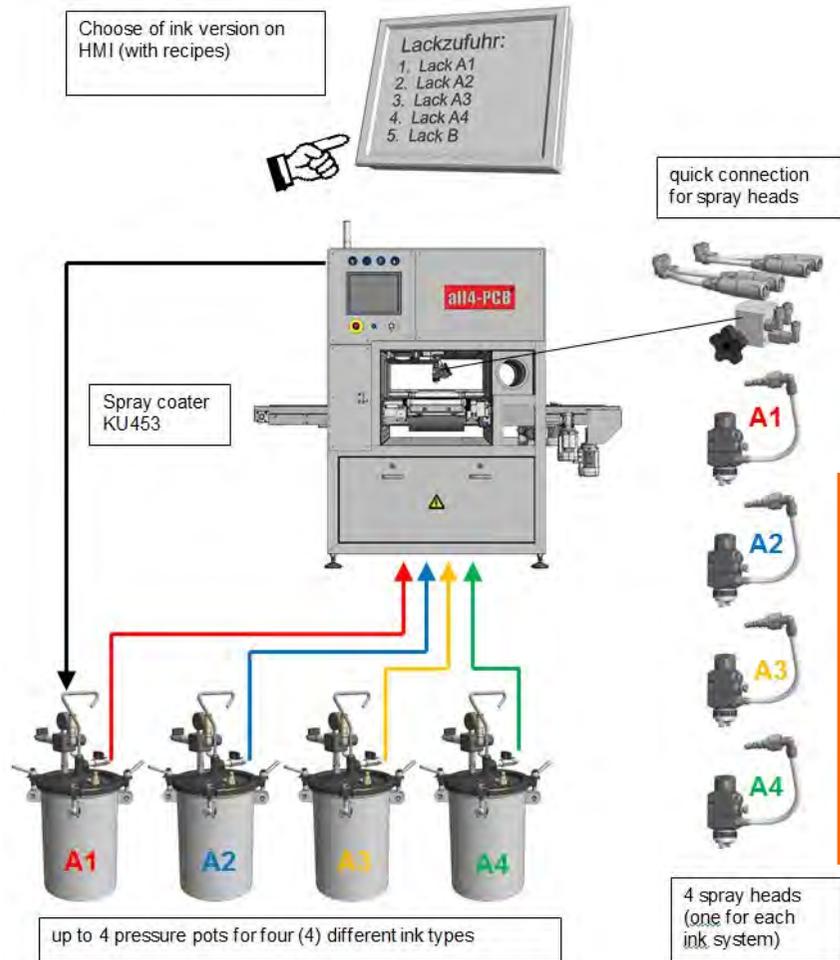
optional:

expandable up to max. 4 pressure pot delivery systems

B) combination pump and (1) pressure pot delivery system

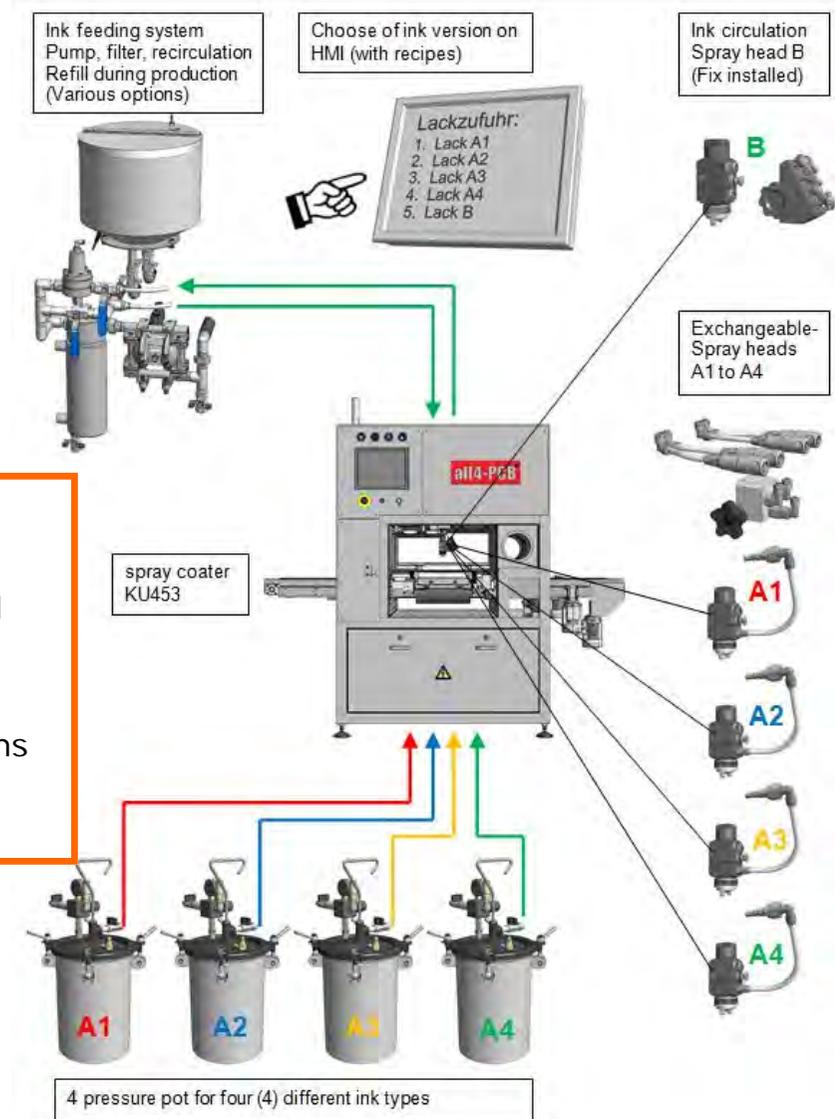
optional:

expandable up to max. 4 pressure pot delivery systems



Quality
all parameter controlled
works with recipe
operated by Touch Panel/HMI

High flexibility
fast change of products
separated ink delivery systems
up to 5 different products
constant ready for use!



available options for A) & B)

Ink mixer, inliner for pressure pot, waage, service station for spray head, heat-and cooling unit to keep constant ink temperature, ink filter etc.



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IMPORTANT FEATURES KU-453 SERIES



STANDARD FEATURES KU453—HARDWARE included in basic module

- air heaters (1 x shaping air/1 x atomisation)
- width adjustment (input on screen)
- linear drive with servo (precise coating thickness)
- HMI & PLC control unit, recipe storage
- remote PC (data back up, data transfer etc.)
- air extraction system with ventilator
- in- & outlet transport section for handling
- constant controlled transport system
- small footprint
- low energy consumption/minimized infrastructure
- housing & solid base frame made of stainless steel

optional available:

- lacquer recycling system (additional cost)

STANDARD FEATURES KU453—OPERATOR SYSTEM parameter on screen with recipes

- precise shaping pressure of the spray head
- precise atomisation pressure of spray head
- precise air temperature setting
- precise transversal speed of spray nozzle
- precise panel transport of complete line
- precise lacquer pressure variable

optional available with pump delivery system refill during production & ink recycling

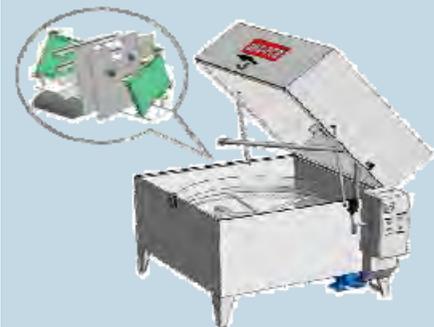
- if needed we can supply a cooling/heating unit easy connection on double housed filter system
- viscosity meter for constant lacquer viscosity
- ink temperature

with horizontal all4-PCB oven:

complete coating and drying system on one screen

OPTION: Cleaning unit, recommended

fast and simple cleaning of the spray chamber parts within a few minutes



approx. 130 liter Soda 1%
- cheap process over years

For the cleaning service the parts of the spray chamber can be taken out without tools for cleaning.

Together with the small filters this is a cheaper process over years than to dispose big filter units.

OPTION:

Gap reduction unit KU470

especially when a automatic loader is in front of the spray coater module

This unit centers the incoming boards and feed them centrally in the transport system of the spray coater unit. The incoming board stops directly in front of the board in advance. The gap between the two boards is reduced to a minimum.



The boards will be transported nearly without any gap through the spray coater. With this unit the spray process is constantly running, the throughput of the process increase.

OPTION: ovens

IR oven



convection air oven



v-bar transport



chain with pin left & right