Thieme 3030/20 H Screen Printing Machine (2021) with Vision System & Natgraph 110 High-Performance Dryer (2021)
Included in lot 29831-3
www.AllSurplus.com/asset/3/29831

Details taken from Thieme original order confirmation
Items such as delivery, commissioning, training etc. that are not capable of being sold or transferred have been excluded.

This information is provided from the original Thieme order confirmation. Liquidity Services does no have the technical expertise to inspect the equipment itself and guarantee that the equipment is exactly as described in Thieme's original order confirmation. Prospective buyers are reminded that they should inspect the equipment and satisfy themselves as to the presence of the items listed and their condition before submitting offers or bids.

Thieme 3030/20 H Screen Printing Machine (2021) with Vision System
Included in lot 29831-3
www.AllSurplus.com/asset/3/29831

¾-automatic flatbed screen printing machine
Cross-blade version / special format
Parallel lifting upper unit Automatic gripper/belt delivery
Max. print format 900 x 1,050 mm Max. sheet format 930 x 1,070 mm
Max. screen frame format 1,250 x 1,600 mm
Max. print material height ½-automatic 50 mm
Max. print material height ¾-automatic 4 mm (optional up to 16 mm)
Number of printing cylinders: 3
Number of flood cylinders: 2
Band output height: 850 mm (+/- 10 mm) Working height (top of table): 980 mm (+/- 10 mm) Cleaning position (approx.) 500 mm
Programmable screen printing form distance: 4 - 50 mm
Frequency-controlled squeegee drive Programmable squeegee path
Pneumatic screen clamping
Pneumatic master frame clamping
3-point system for screen positioning
Motorized screen alignment in 3 axes
Multiple squeegees
Adjustable blow-back
Pneumatic positioning pins can be individually switched on/off, 1 each on the left and right, 5 at the rear
Conveyor outfeed
Screen insertion optionally on the left or right
Siemens PLC control 1516F with touchscreen control panel
Modem for remote diagnostics
Foot control

Special options:
Extended table guides
Smaller vacuum holes in the Printing table 1.1-1.2mm for foils
Anti-drip device, folds on one side during flooding prevents drips in the open screen, can be switched on/off, extends the printing time by approximately 1 second

Print table equipment for low-scratch printing with
separate blow-back control

blow-back air sections between the grippers so that the sheet falls onto the conveyor belt via air cushions and rounded and polished corners and edges on the print table and the gripper cutouts
Murtfeld bar at the end of the table, mounted and polished between the grippers
additional blow-off with compressed air

Large anti-static package consisting of blow-back air nozzles between the grippers with ionized blow air, anti-static bars with ionized blow air from above and below on the delivery belt, anti-static lift

Programmable doctor blade pressure

2 print holder holders in Maximum dimensions

2 flood plates with spring steel inserts in maximum dimensions

VA table support rails for shorter screen printing form distance

Vision system for screen alignment from above
The days of manual screen adjustment via rotary adjustment are a thing of the past. Convert your Thieme screen printing machine in no time and gain valuable production time. All this with the highest precision and virtually no waste.

How it works:
During screen production, two precisely aligned screen markings are copied. When the screen is inserted into the machine and roughly positioned on the 3-point system, the two alignment points are located in the defined camera window. The camera system detects the position of the alignment points and thus the position of the screen and moves the screen to the target position using a motor. This allows for fine positioning of the screen.

Technical specifications:
Number of cameras: 2 (fixed, non-adjustable)
Mechanical repeatability: ± 40 µm (tolerance)
Alignment mark: round, white, diameter: 1.5 mm
Screen adjustment: electric motor
Alignment window: 12 mm x 12 mm

Mechanical repeatability is measured using registration marks affixed to the screen. Tolerance is verified using 50 measured values, where all measured values are within this tolerance. Measurements are performed exclusively during factory acceptance testing at Thieme.
Standardization of screen sizes is mandatory.

Vision system substrate alignment, including Siemens control
Reduced waste while simultaneously increasing accuracy? No contradiction with the new Thieme Vision System! Increase your productivity and quality. The Thieme Vision System takes you to a new level of quality.

How it works:
Before the first print, the sheet can be manually aligned against locating pins or automatically aligned to the material edge. Depending on the number of cameras, 2-4 registration marks are printed on the first print. With each subsequent print, the camera system records the position of the registration marks from the first print – or alternatively, the material edge. The air-cushioned print table with the fixed substrate moves to the target position.
After the final alignment, the print table moves under the upper unit, and the substrate is printed. Various alignment scenarios can be selected via the control system (e.g., mediation in the event of material shrinkage).

Number of cameras: 2 (up to 4 possible)
Mechanical repeatability for alignment according to print feducial: ± 40 µm (tolerance)
Alignment marking: flexible
Alignment time for print feducials: 1 - 2 s (depending on tolerance and accuracy)
Control system: Siemens
Table alignment: electric motor, air bearing
Table drive: servo motor
Alignment window: 12 mm x 12 mm

Mechanical repeatability is measured using registration marks on the printing table.
Table in printing position under the upper work. Tolerance verified using 50 measured values, all of which are within this tolerance. Measurements are performed exclusively during factory acceptance testing at Thieme.

Alignment based on the material edge increases the alignment time or reduces the alignment accuracy => impacts the mechanical repeatability of the system.

- Wandres Top Cleaner cleaning and ionization system.
When the print table is stopped to write/read the DMC code, the Wandres print buffer is deactivated so that the brush runs on the sheet with minimal pressure
Alternatively
- TEKNEK cleaning and ionization system

Traceability
MES interface Thieme printing press
MES interface Natgraph dryer
MES interface JSON

DMC printer Keyence MGK1000 (between cleaning and printing station) including DMC reader MKC1 on linear axis
DMC reader Keyence SR1000 at the dryer outlet, manually adjustable

Setup process with cordless handheld scanner (if possible: Datalogic Quickscan)

When the print table retracts, it stops at each DMC track to print the code. Cycle time extension per stop approx. 4-5 seconds (to be determined precisely).

The offer is based on a status-based OPC UA interface for machine status and order data, as well as a bidirectional JSON interface for product data.
The storage and requested release for further process steps of the component is sent to the higher-level system (ALS) via JSON; no buffering of results is provided. A circulation register exists between the printer and the dryer.
The system-internal time serves as a timestamp and is printed on the component as a DMC with the received order data and sent to ALS. The consecutive numbering is based on the expiring order-based target quantity.

Natgraph High-Performance Dryer Model 110, belt width 1100 mm
consisting of:
Inlet module: 1000 mm
High-pressure warm air module 1: 2000 mm, max. 85°C
High-pressure warm air module 2: 2000 mm, max. 85°C
High-pressure warm air module 3 + IR: 2000 mm, max. 85°C with 6 IR radiators
Recirculating air cooling module: 2000 mm, active cooling module: 2000 mm
Outlet section: 500 mm

Total length: 11,500 mm
Special version with Siemens S7-1200 controller

Filter options:
- Natgraph fresh air filter M6 (EN799:2012) for the warm air modules.
- Natgraph fresh air filters 2 x M6 (EN799:2012) for the recirculating cooling zone
- Natgraph circulation filter M6 (EN799:2012) for the warm air modules.

Please note that we cannot provide any information regarding stackability after drying. This must be investigated and assessed by the customer in their own tests, taking into account the combination of ink/drying/film/print motif/process.

Natgraph tray chute, max. sheet format 1120 x 860 mm