

FOR SALE**Niebling HPF SAMK400 High Pressure Forming Machine (2022)****Included in lot 29831-1**<https://www.allsurplus.com/asset/1/29831>

This information is provided from the original Niebling order confirmation. Liquidity Services does not have the technical expertise to inspect the equipment itself and guarantee that the equipment is exactly as described in Arburg'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.

Items such as delivery, commissioning, training, remote service, remote monitoring, production & set up assistance that are not capable of being sold or transferred have been excluded.

Niebling HPF SAMK400 High Pressure Forming Machine (2022)**Included in lot 29831-1**<https://www.allsurplus.com/asset/1/29831>

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SAMK 400

1.00 ST KW.45.21

High-pressure forming machine

High-pressure forming machine (HPF) for printed and unprinted plastic films and laminates

Software-controlled, individual control of all high-pressure parameters (pressure, filling time/inflow velocity, holding time, venting, temperature).

- High-pressure control unit with proportional valve, dome pressure reducer, and air heating system for filling and venting the forming tool.
- Infrared heating module with 42 individually controllable heating elements in the top and bottom heating sections to generate a precise and project-specific temperature distribution of the top and bottom surfaces of the film material.
- Forming tool(s) can be temperature-controlled up to 150°C via the master mold.
- System control with all production-relevant parameters using a Siemens industrial PC via touchscreen.
- Cycle time approx. 30 seconds plus film handling.*
- Contactless forming (only high pressure from above) allows the use of specially coated materials, e.g., "Hard Coat".

Forming height (maximum): 58 mm (+ 20 mm / - 38 mm)

- Forming area (standard): ~ 400 x 245 [mm], customizable to the project
- Forming area (maximum): ~ 400 x 265 [mm]

- Machine capability index: cmk=1.67
- Machine availability: > 90%
- Forming position accuracy*: < +/- 0.3 mm
- Material thicknesses that can be formed: 150 µm – 750 µm (others upon request)
- Possibility of upgrading to a fully automated system (with EEM or EEM+FAM).

Technical specifications (standard version / EEM version / EEM+FAM version):

- Rated power: 18.5 kW / 21 kW / 25 kW (consumption approx. 5-10 kW)
- Rated current: 32 A / 35 A / 40 A
- Pre-fuse: max. 50 A (32 A - 50 A)
- Connection cable cross-section: max. 35 mm²
- Operating voltage: 3 x 400 V, 50 Hz + N + PE
- Clamping force: 135 t
- Maximum mold pressure: 110 bar
- High-pressure connection**: 250 bar
- High-pressure outlet: Ø 50.8 mm (2 inches)
- Low-pressure air connection: 6 - 10 bar
- Dimensions (length x width x height): please request the enclosed sheet
- Weight: ~ 4.5 t

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ISO-7 cleanroom version

for SAMK 400 EEM+FAM

Hardware modification to enclose all potentially contaminated parts, such as columns, chains, motors, etc.

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Uninterruptible Power Supply

For a controlled shutdown of the operating system in the event of a power outage or severe power fluctuations that result in the failure of machine operation.

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Integrated into system (SAMK400)

Cleaning of the film using an ionized air stream.

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Integrated into system (EEM+FAM)

Cleaning of the film using an ionized air stream.

80

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Hardware and Software Module

A key factor in high-pressure forming is, among other things, the constant temperature of the substrates to be formed. For this reason, this module is highly recommended for monitoring the temperature of each individual sheet being processed during production.

- Stationary line pyrometer for non-contact recording of the temperature distribution on the substrate to be formed during the process from heating to forming station.
- Based on this information, the parameters can be optimally adjusted for the component/project to ensure optimal substrate heating.
- Visualization of the thermal images on the machine control monitor with visual merging of the individual heating elements.
- For production purposes, temperature fluctuations within measurement ranges can be defined, and a warning message can be issued in the event of deviations.

Technical specifications:

- Measuring temperature range: 50 - 350 °C
- Line frequency: 256 lines per second
- Spectral range: 8 - 14 µm
- Sensor: 128 elements - line scan pyrometer
- Aperture angle: 40 x 0.3°

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Up to 350 bar

High-pressure compressor with integrated filter/dryer/cooling unit

Incl. soundproof enclosure

Technical Specifications

- Medium: Air
- Intake temperature: +5 to +45 °C
- Ambient temperature: +5 to +45 °C
- Operating pressure: 90 to 350 bar
- Delivery capacity: 500 l/min (according to ISO 1217)
- Speed: 1,230 rpm
- Compression stages: 4
- Number of cylinders: 4
- Sound pressure level: 73 dB(A) ± 2 dB(A) (ISO 3744)
- Power consumption at nominal pressure: ~ 12 kW
- Dimensions LxWxH: 1543x802x1915 [mm]
- Weight: 545 kg

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EEM+FAM for SAMK 400

- Automatic loading and unloading module for films from a 2-bay magazine for

continuous and unmanned production. Magazine filling is also possible during the cycle.

- Approximately 30-40% reduced and consistent cycle time, with minimal operator involvement (only for filling), i.e., typically ≤ 30 seconds total cycle time including film handling.
- Automatic removal of protective films from the top side of common films (e.g., XtraForm or Makrofol HF with hardcoat, PC with PMMA, PC, PMMA).
- Extraction unit including container for collecting the removed protective films (not integrated into the system for 24/7 operation) is optionally available.
- Three handling modules guarantee optimal cycle times through independently programmable commands.
- Unformed films are automatically placed on the forming pallet after loading from the protective film removal device.
- After the forming cycle, the film sheets are placed on a conveyor belt for passage through the UV tunnel.
- Consistent quality of positioning on the forming pallet, independent of the operator.
- Sword brush system (Wandres) for micro-cleaning of the film underside can be integrated (optional).

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Including remote start and off

Located outside the cleanroom, emptied every shift.

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Integrated in EEM module

- **Cleaning and ionization of the film underside with Wandres sword brush system (not for manual film feed).**
- **Active extraction must be provided by the customer.**
 - o SAMK 400 connection: $\varnothing$ 60 mm
 - o Extraction capacity: 520 m³/h
 - o Vacuum: min. - 500 Pa
 - o Flow velocity: min. 28 m/s

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Incl. remote start and off

Dust extractor for extraction on the Wandres brush, placed outside a clean room, maximum hose length 8-10 m.

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FESTO OVEM vacuum nozzles

Use of the latest FESTO OVEM vacuum nozzles for film handling for cost savings through integrated air-saving function.

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Hardware and software

- Design, hardware integration and cabling, electrical plan
- 2x Keyence SR-2000 after magazine removal and before (or after) protective film removal module
- Reading barcodes and linking the information to the PLC with the parameter set
- In case of NOK, ejection of the films, writing error messages and NOK notes to the PLC
- In case of 3 NOK, stopping the machine for inspection by the operator

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Hardware and software

- Design, hardware integration and cabling, electrical plan
- Scanning the master mold using an RFID chip reader
- Scanning the mold inserts using the installed SR-1000 scanner during insertion (alternatively, if space is limited, manual scanning before installation in the master mold)
- Retrieving saved parameter settings and comparing them with the supplied foils