PLANT AND MACHINES

Roller and flatbed laminating machines

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Wassmer GRUPPE

Roller and flatbed laminating machines

Typical work steps and materials:

- Cover thin adhesive tapes with foil to recover again
- Liner exchange
- Laminate foam on one or both sides with double-sided adhesive tape
- PE Foam
- PU Foam / PVC Foam
- EPDM Cellular rubber
- Solid rubber
- Mineral wool
- Nonwoven / Fleece
- Sheet material
- Rolls

Extensions, options:

- Winders and unwinders
- Longitudinal and cross cutting system
- Robotics

DESIGN ACCORDING TO CUSTOMER REQUIREMENTS

All plants and machines are designed and manufactured according to the specified requirements of the customer and the product.

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Roll laminating machine WKM-4-5-1800

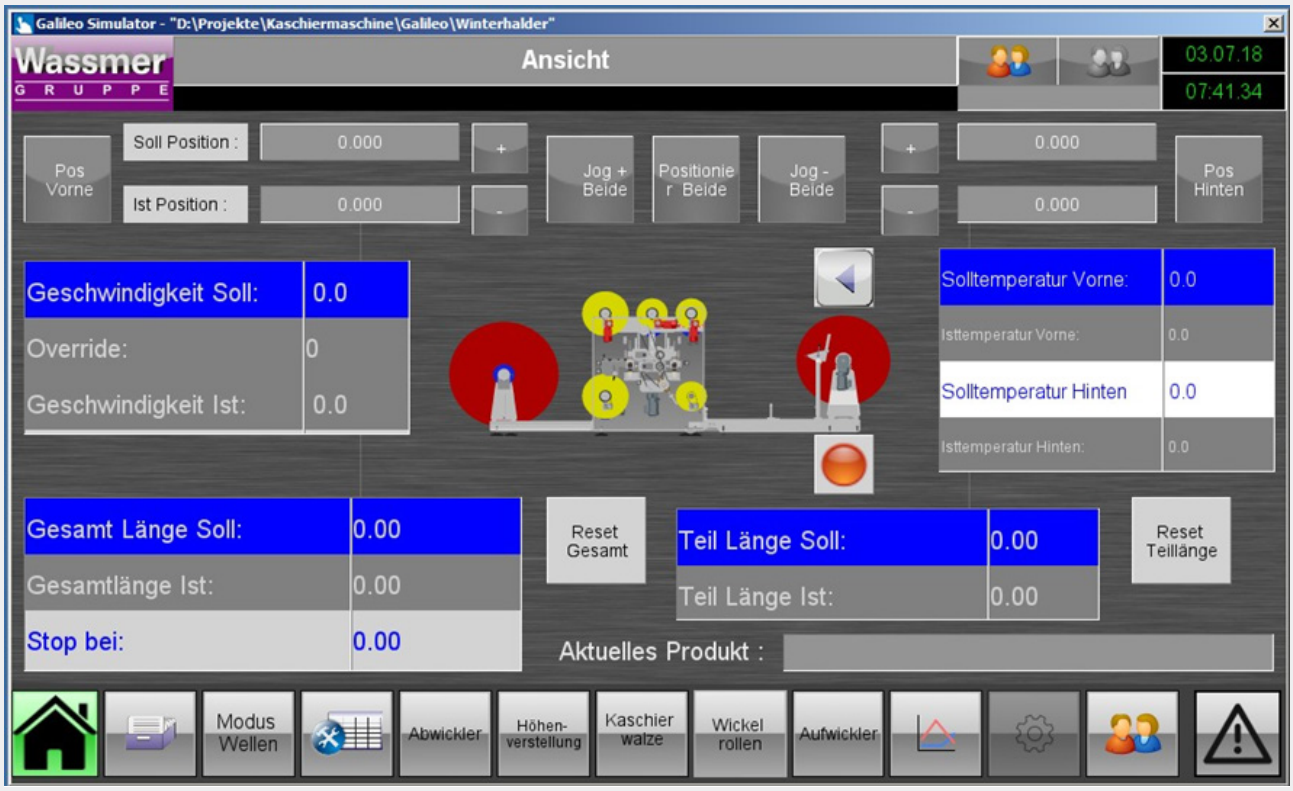
The Wassmer WKM-4-5-1800 roll laminating machine is designed for laminating (single or double-sided) films or double-sided adhesive tape onto various substrates.

The main component of the modular laminating line is the laminating unit with the stable, rubber-coated and heatable laminating rollers and the unwind and rewind shafts.

The laminating unit itself is also modular. It consists of 2 very stable machine stands, made of solid steel as a welded construction with a modern high-frequency vibration after-treatment to eliminate material stresses. The two machine stands on the left and right carry the entire drives, bearings and sensors of the laminating machine. They are connected to the laminating rollers and winding shafts by means of stable crossbars. This design makes it easy to adapt the construction to the customer's requirements, such as the width to be processed, the number, position or functionality of the shafts.

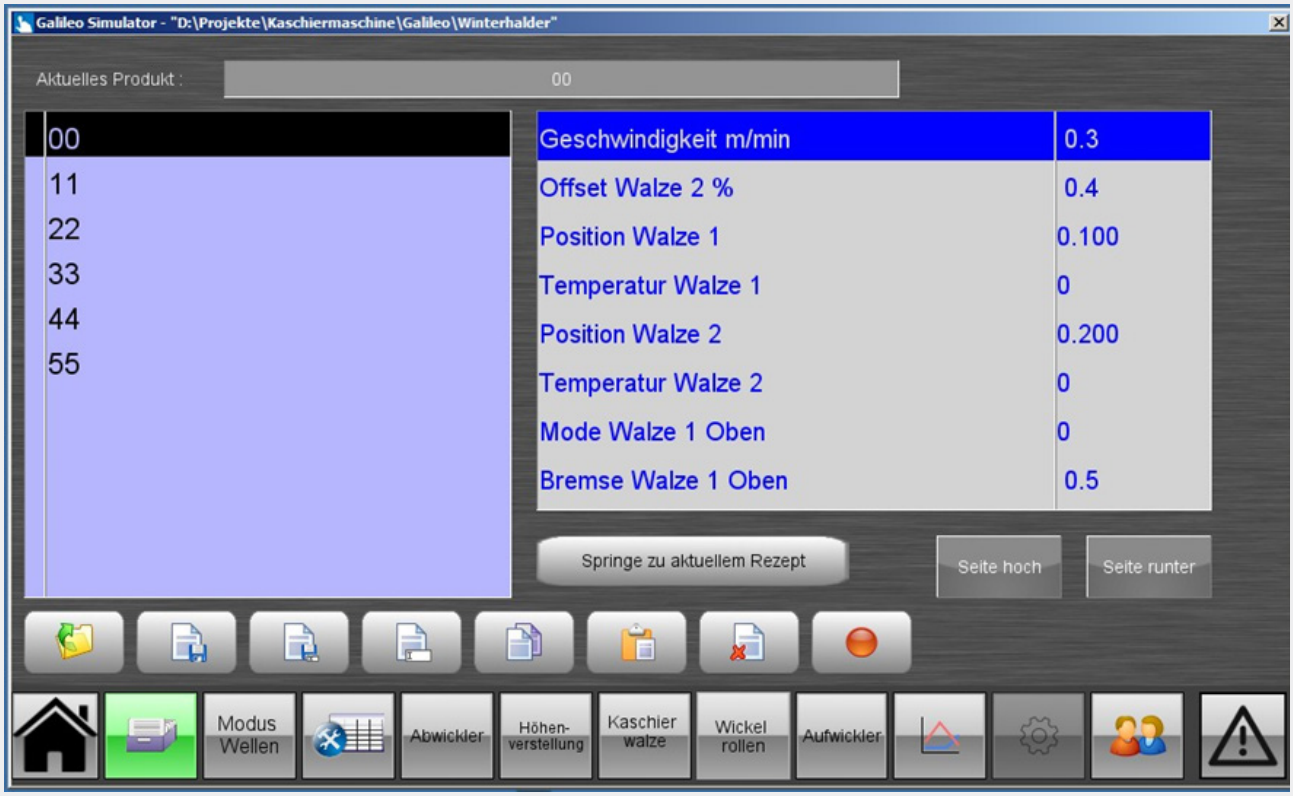
Further modules can be attached to the laminating unit. The most common attachments are unwinders and rewinders for large-volume substrate material (e.g. foams), infeed and outfeed tables for sheet material or cutting tables/longitudinal and cross cutters are possible on request.

The design of the machine, working width, number and position of the laminating rollers or winding shafts can be individually adapted to the customer's requirements. Parameters such as winding diameter, winding weights, stop of the shafts and couplings or braking systems can also be specified and executed according to customer requirements.



▲ **Machine control system**

▼ **Recipe management and recipe parameters**



Application

- PLC control with touch operating panel
- Wassmer remote maintenance system
- Recipe management
  - Default of all parameters, or
  - Storing the manually set parameters in the recipe
- Speed control of the laminating rollers
- Position control of the laminating rollers
- Adjusting the leading edge 2nd pair of laminating rollers
- Diameter-dependent speed control of the winding shafts
- Direction of rotation control of the winding shafts
- Diameter-dependent braking torque control of the magnetic particle brakes
- Diameter-dependent drive torque control of the rewind shafts
- Automatic run length measurement with stop function
- Default order total run length
- Specification of partial run lengths (length per winding/roll)
- Default material change length unwinder
- Automatic gluing position feed (adjustable distance) from cutting to splicing position
- Operation via foot pedal (on/off, jog or continuous operation)
- Foot pedal front and rear (infeed and outfeed side)
- Main control panel with flexible swivel arm
- Auxiliary control panel on the discharge side
- Moment-controlled advance of the rewinder
- Heating control of the heating rollers
- Presetting and control of the over-ride values (speed and torque)
- Position travel rewind shaft to change position of the swivel device

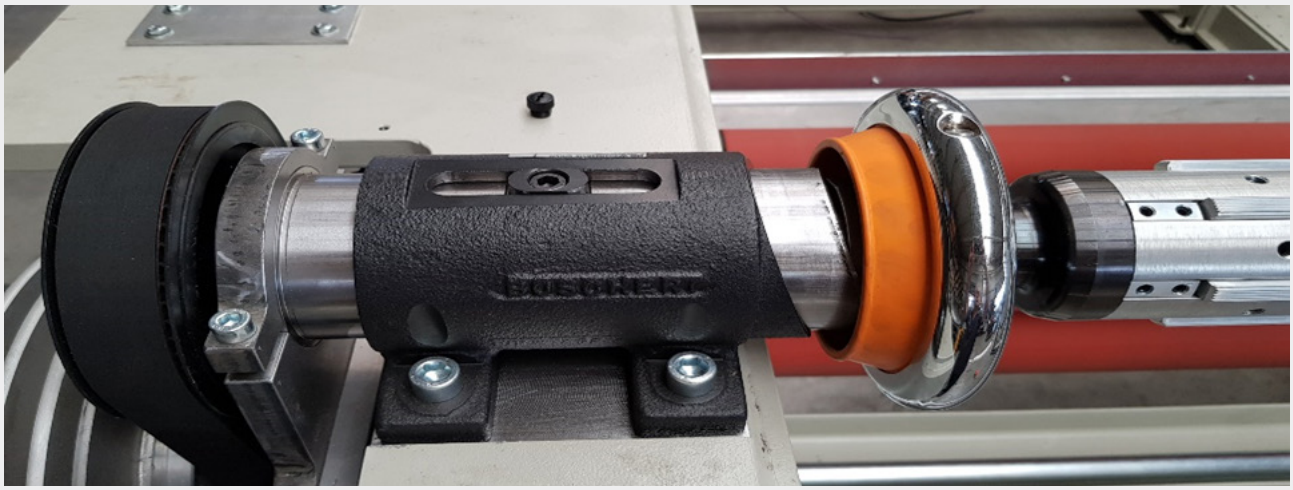
▲ Liner exchange from paper liner to a PE liner for better die-cutting properties e.g. for kiss-cut punching

Application examples

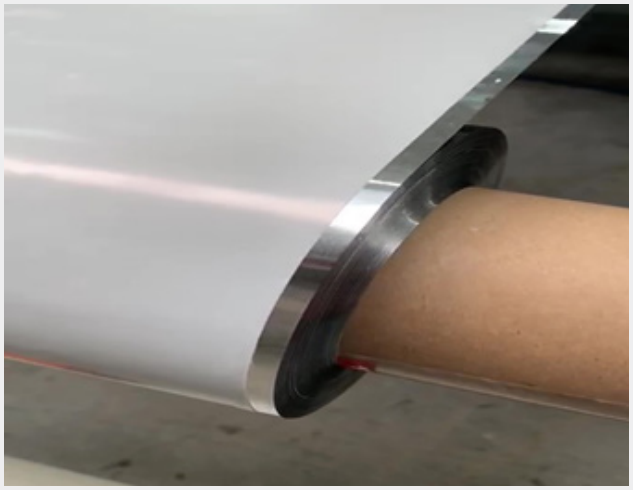
▼ Winding shaft with swivel device for easy material change

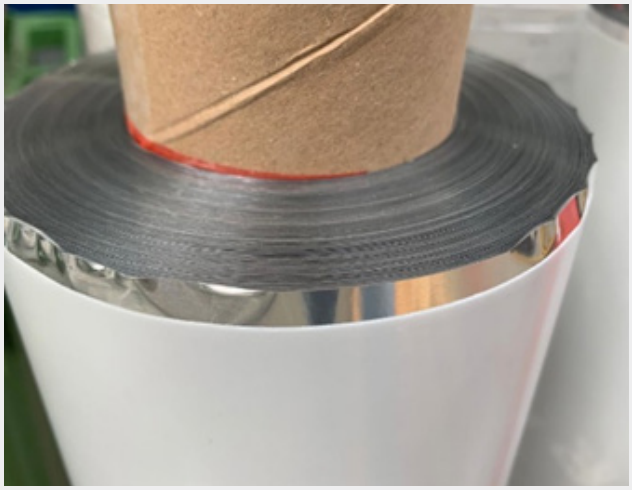
▲ Manual cutting device with clamping bar for cutting the laminated product to length

Application examples



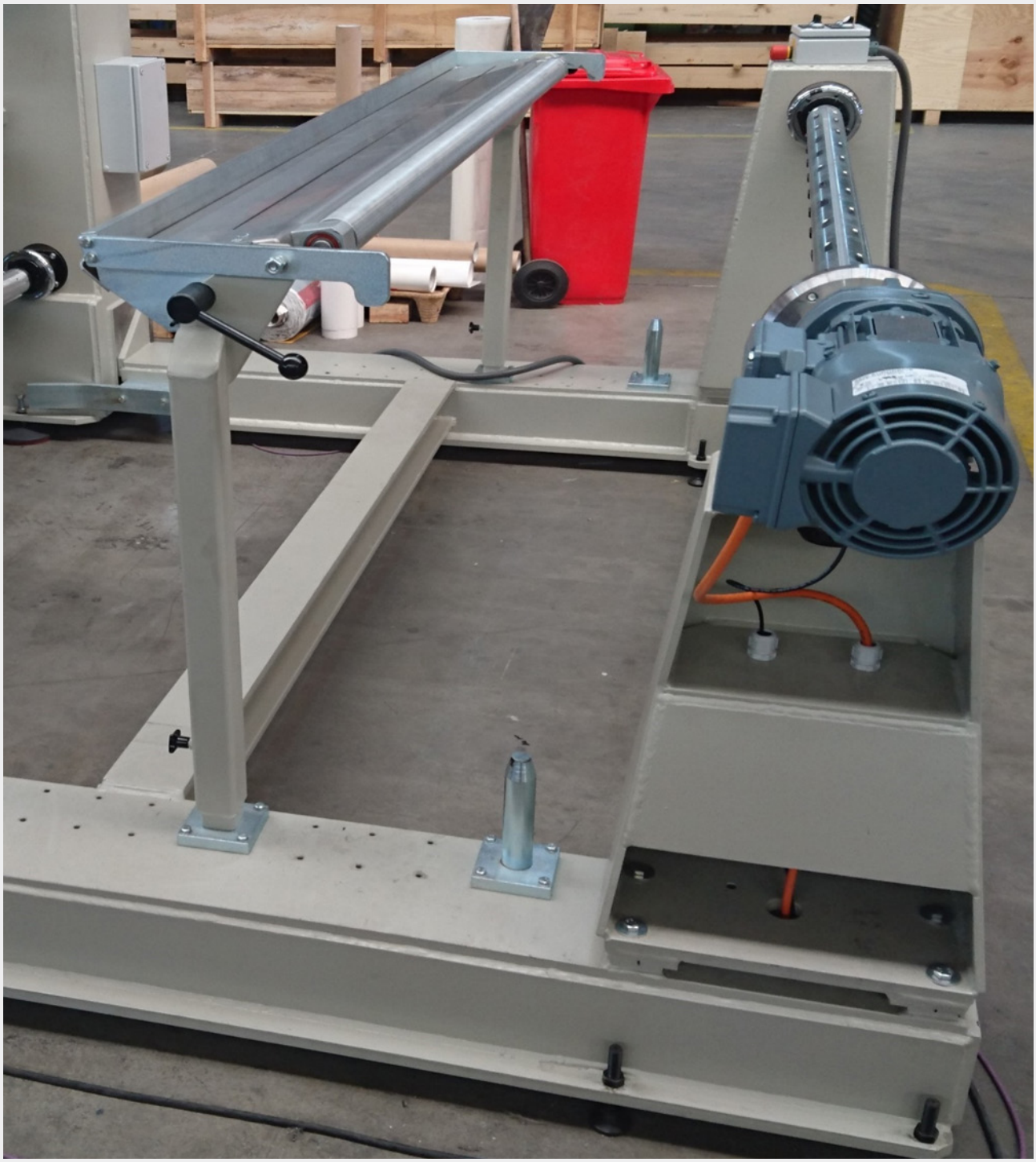
▲ Shaft holder lateral adjustment for web edge correction and
▼ for optimum winding of the materials





Web tension control

Web tension control by torque-controlled drive of the rewinder with swivel arm. The advantage is that no distortion is introduced, e.g. with thin PU foams in the laminating process foam / adhesive. Warping could cause problems with the restoring force of the foam in further processing such as die-cutting (kiss-cut or die-cut).



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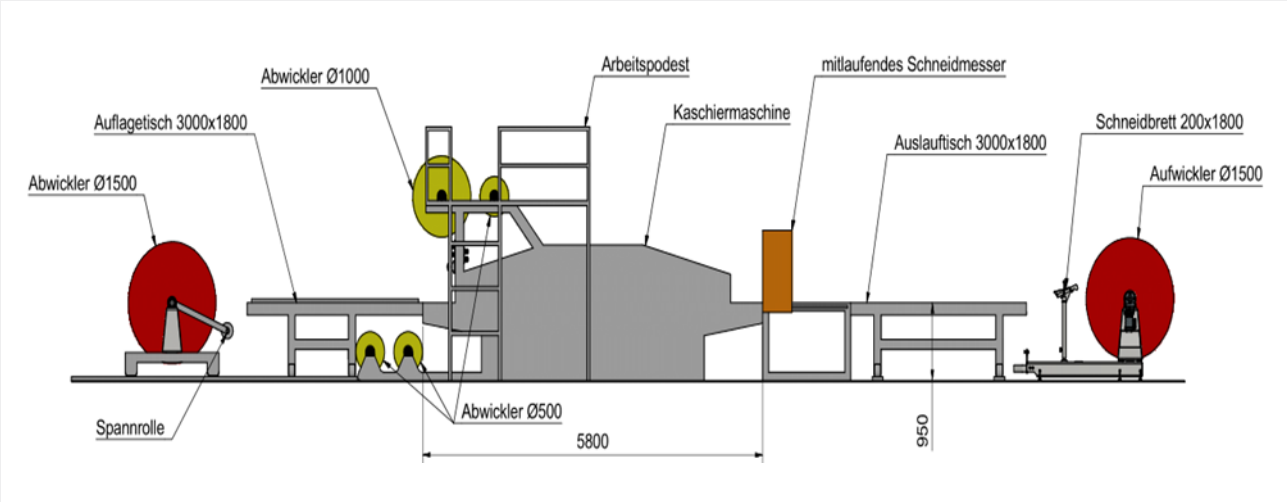
Flatbed laminator FBKM-1600

- Unwinder with tension roller and magnetic powder brake max. diameter 1.500mm
- Infeed table on rollers with manually adjustable stop and scale for sheet goods 3.000x1.800mm
- Bottom 1 x unwind and 1 x rewind/unwind with magnetic powder brake up to max. Ø 500mm
- Top 1 x unwind up to max. Ø 1,000mm and rewind/unwind with magnetic powder brake max. Ø 500mm
- Ionisation bar against static charge in the inlet.
- Flatbed laminator with a max. working width of 1,600mm incl. spreader roller with drive.
- Scaffolding with railing for loading the reels from above.
- Top and bottom Teflon bands approx. 0.25mm thick - with non-stick coating
- Adjustable running speed 1 - 20m/min
- Height adjustment from 0 - 125 mm
- Temperature range of the upper and lower heating zone adjustable up to 180 degrees.
- Conveyor belt on the outfeed side with a running cross cutter.
- Outfeed table for sheet goods 3000x1800mm
- Driven rewinder max. Ø 1.500mm with magnetic powder brake and with cutting board for manual cutting to length / cutting.
- Siemens SPS control system

Flatbed laminator FBKM-1600

Our flatbed laminators are continuously operating double belt presses with integrated contact heating and contact cooling. After heating, the laminated material is pressed with calender rollers. Due to a precise height adjustment, even sheets with a material thickness of up to 125mm can be laminated. All relevant parameters can be set and monitored via a proven Siemens touch control system.

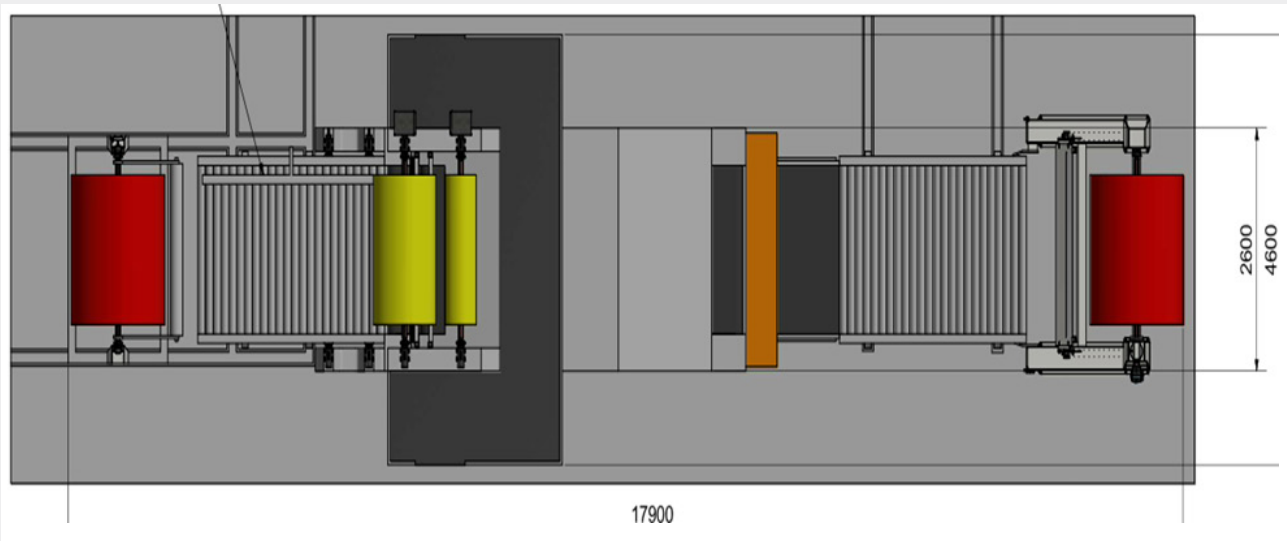
- structural width: 2.600 mm
- Working width: 1.600 mm
- Machine length: 5.800 mm
- Height adjustment: 0 – 125 mm
- Heating area: 2.500 mm
- Cooling zone: 1.500 mm
- Feeding speed: 1 – 20m/min
- Operating temperature: max. 180 Grad
- Electrical equipment
  The scope of delivery of the machine includes the complete electrical equipment.



▲ **Side view**

Sketch

▼ **Top view**

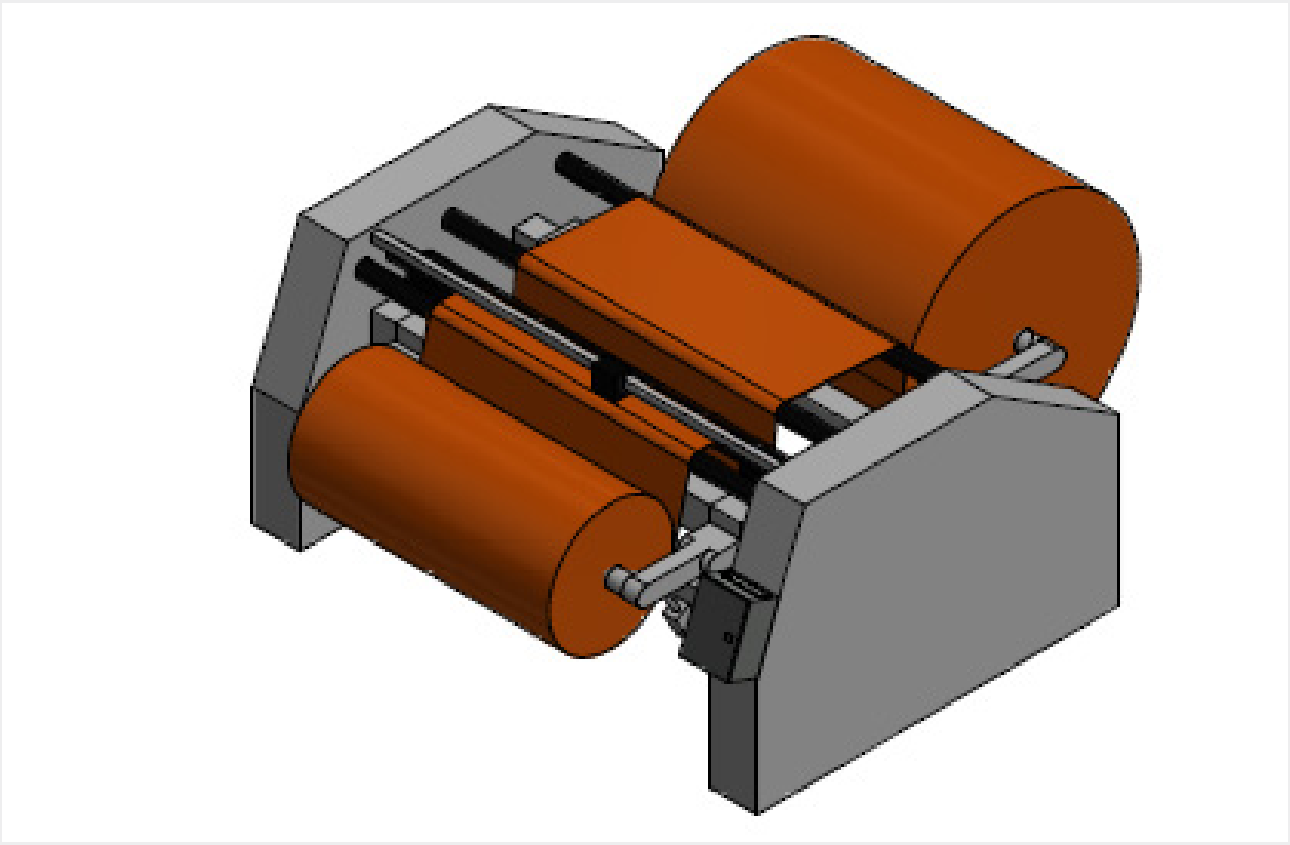


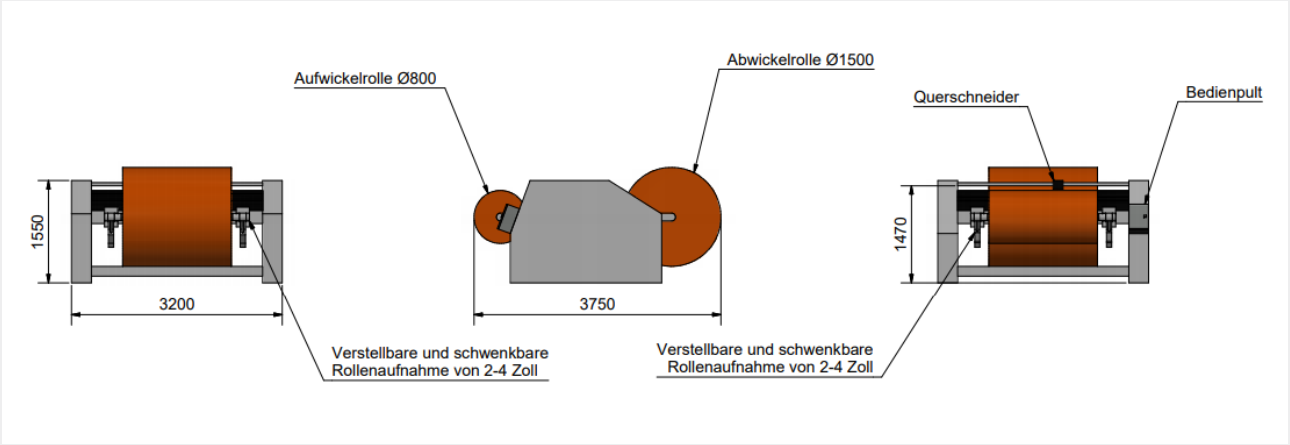
One of the advantages of a flatbed laminator is that it is possible to introduce the temperature into the material via a certain heating zone, so that optimum adhesion can be achieved when laminating two substrates, such as a PU foil with a melamine foam.

Wassmer coreless rewinder 1.650

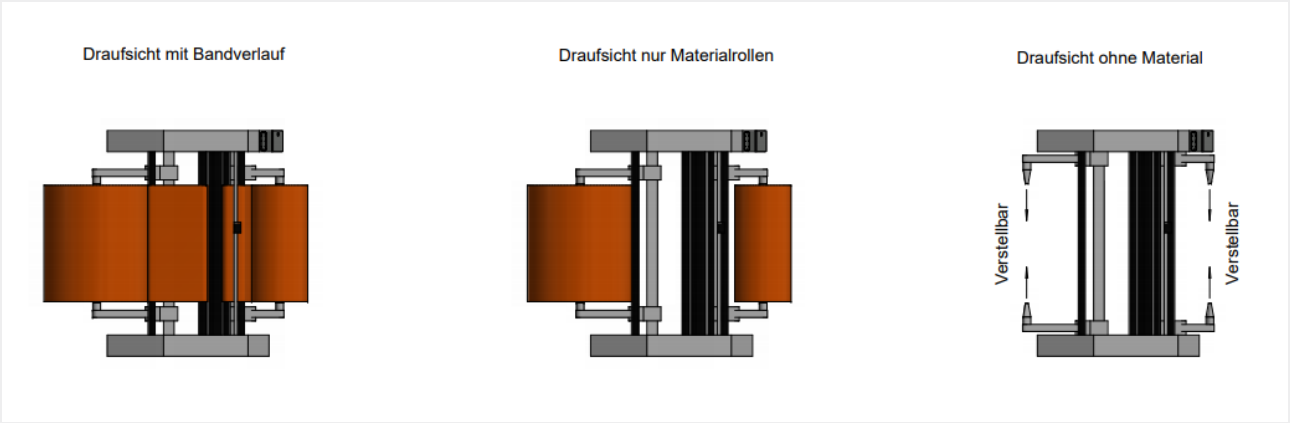
Consisting of:

1. machine frame consists of a stable and torsion-resistant base frame.
2. swivelling unwinding unit (manual, pneumatic) with centrically adjustable and core-less tapered holder for 2,3 and 4 inch cores. We use magnetic powder brakes to prevent distortion of the material.
3. max. Roller diameter = 1.500 mm
4. rewinding unit swivelling (manual, pneumatic) centrically traversable coreless with tapered receptacle and force-controlled drive with FU.
5. max. Roller diameter 800 mm
6. The centric adjustment is carried out with a precise ball screw and servo motor. (The operator enters the dimension and the adjustment moves to the dimension).
7. 3 x fixed rubberised rollers without drive
8. 1 x tensioning roller in the middle with pneumatic tensioning.
9. dancer roll during winding with pneumatic tensioning.
10. ionising bar on up- and unwinding
11. cross cutter manual
12. Siemens control with 7" display and contactless length measurement.
13. winding speed up to 200m/min possible depending on material
14. inching operation with pedal on the rewind side.
15. roll width max. 1.650 mm




Aufwickelrolle Ø800
Abwickelrolle Ø1500
Querschneider
Bedienpult
1550
3200
3750
1470
Verstellbare und schwenkbare Rollenaufnahme von 2-4 Zoll
Verstellbare und schwenkbare Rollenaufnahme von 2-4 Zoll

Sketch


Draufsicht mit Bandverlauf
Draufsicht nur Materialrollen
Draufsicht ohne Material
Verstellbar
Verstellbar

Wassmer Milling Machine Center 100

Support table as solid aluminium plate, milled with support bars with connection to the vacuum system prepared for insertion of a protective plate by the customer. Sealing grooves and valve inserts can be individually recessed by the customer.

- with automatic lubrication
- with automatic tool measurement
- with safety fence closed on three sides, with light barrier

Description and technical data:
Solid machine frame in welded construction with torsion-resistant cantilever for precise machining at maximum feed rates. All drives with preloaded ball rail systems and preloaded ball screw spindles. Digital drive system of the axes and servo motors.

Traversing range

- in X-direction max. 2.400 mm
- in Y-direction max. 1.200 mm
- in Z-direction max. 250 mm
- Feed rate in X- u. Y-direction 0 - 30 m/min.
- Feed rate Z-direction 0 - 20 m/min.

Main spindle

- water-cooled
- Power 7,5 kW
- Rotational speed 1.000 - 18.000 U/min.
- C-axis, standard rotatable 90°
- Tool holder HSK 63 F

Vacuum voltage

- Vacuum pump, air-cooled, power 63 m³/h
- Compressed air 6 bar

Tool magazine

- Tool places, linear, max. 15 places

Feeding

- Mains voltage 400 V / 50 Hz
- Full load current 25 A
- Nominal power 7,5 kW
- Max. pre-fuse 32 A
- Feed line max. 5 x 6 mm²

Dimension of the machine, without control cabinet

- appr. 3.240 x 2.315 x 2.500 mm
- Space requirement with safety fence or cabin approx. 4,720 x 3,760 mm

Overview of info material:

- Single sided grinding machines
- Two-sided and three-sided grinding machines
- CNC-controlled machines
- Sawing machines
- Drilling machines
- Complete refractory systems, technical ceramics
- Complete systems for graphite machining
- Plants for building materials and ceramics
- **Lamination machines**

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GRUPPE

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