



XLam 3L-17/34

Laminator

Highest process quality and reliability due to innovative induction heating.

komax SOLAR



Laminator

The XLam 3L-17/34 laminator can be used for all module technologies and supplements the Komax product range for the manufacture of crystalline modules and thin film technology solutions. This is just one more product in the Komax Solar portfolio developed with a keen eye to process quality and reliability.



XLam laminator with three processing levels and inductive heating with thermo oil

Reproducible and precisely controllable lamination processes are crucial for achieving consistent quality in PV modules and efficient production with minimized processing times. To satisfy these requirements, the XLam 3L-17/34 incorporates hybrid heating featuring a unique and reliable induction heating system and an aluminum heating plate with a large thermal capacity and an active pin lifting system.

The machine does not need vacuum feedthroughs for thermal oil connections or temperature sensors or the pin lifting system, and has an automatic clamping/unclamping system for the membranes. These solutions are big pluses that open the way to high availability and low operating costs. With the three independent processing levels, operators enjoy the benefits of continuous module production, the partial availability of the machine in the event of a malfunction at one processing level, and the adaptability of laminator capacity to less than full capacity utilization in the production line. The footprint for a specific production capacity is much smaller than with standard laminators.

The conveyor and cover belts are Teflon-coated continuous belts with an active cleaning system. The cooling press allows controlling the cooling power and thus the limitation of temperature transients. This feature allows the limitation of temperature transients. The machine exhibits the same craftsmanship of all other Komax products and utilizes the TopControl graphical user interface and touch screen.





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Capacity (examples)

Module dimension	Thin film 100W/m ²	Crystalline 140W/m ²
600 × 1200 mm	25 MWp/year	45 MWp/year
1100 × 1300 mm	30 MWp/year	54 MWp/year
1000 × 1650 mm	35 MWp/year at 7000h/year, 18 min cycle time	62 MWp/year at 7000h/year, 14 min cycle time

Technical Data

Maximum module thickness	20 mm
Dimensions (W×H×D)	16500×3500×2600mm
Process area per level	1700×3400mm
Temperature uniformity	± 1.5 °C
Max. operating temperature	170 °C
Vacuum time	approx. 90sec to 1 mbar
Pin lifting system	grid 270×250mm
Cooling unit press pressure	250kg/m ²

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Your benefits:

- Exceptionally reproducible and stable processes thanks to the highly homogenous temperature of the heating plate
- Fast process
- High availability and low operating costs due to the reliable technical solutions employed
- Minimal footprint and adjustable production capacity featuring three independent processing levels
- Very good use of the machine's processing area when processing approx. 1000 × 1650 mm modules
- Minimal need for buffer capacity because of asynchronous production in the processing levels
- Possibility of controlled module cooling and immediate further processing of modules thanks to the cooling press

Komax Solar is your contact partner for solutions on the manufacturing of photovoltaic modules. We offer solutions for reliable and ultra-precise technology. Please contact us!