

LAMIPRESS®VARIO

lami-press.de



THE TECHNOLOGY AND ITS FEATURES

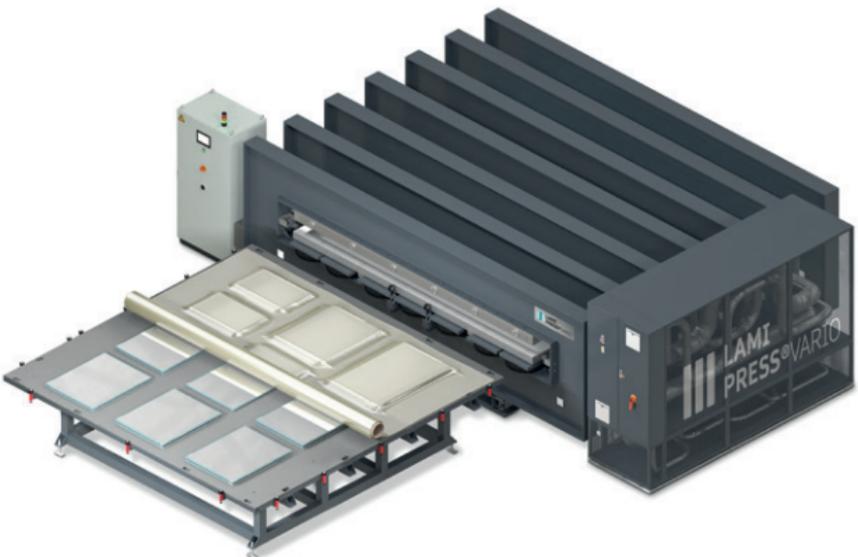
Vacuum and autoclave

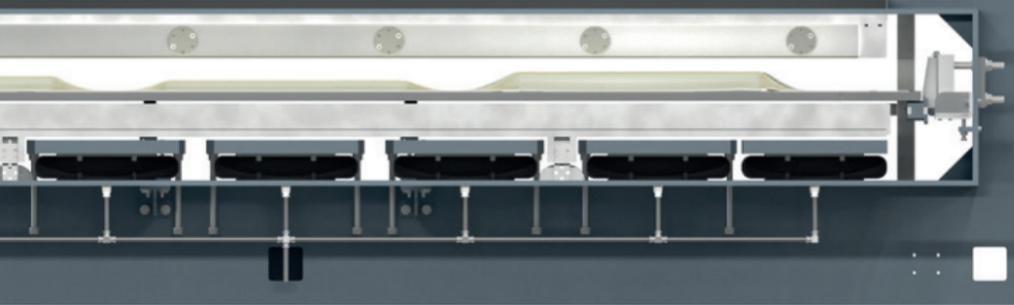
Our LAMIPRESS® VARIO is the consistent further development of the well-known autoclaves and autoclave-free systems! In LAMIPRESS®VARIO, energies such as vacuum, overpressure, and contact heat are combined to the “flat-bed vacuum autoclave” technology.

Impressing quality!

LAMIPRESS®VARIO, is a patented competitive edge in technology! LAMIPRESS®VARIO bears the CE mark. Our products are certified according to the Laminated Safety Glass Guidelines.

Fotoverbundglas Marl GmbH will accompany you from the very beginning. We gladly provide you sampling of products you want to manufacture. In this way we minimize your investment risk and ensure feasibility of your desired products.



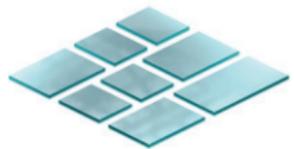


Variable and efficient

LAMIPRESS® provides maximum flexibility with regard to equipment and capacity utilization, as well as use of highly diverse glass and composite materials.

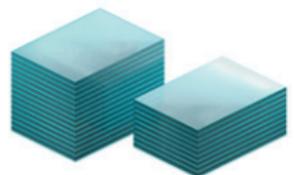
Flexible use

- > Unlimited production diversity
- > PVB and EVA films, special types of film, as well as combinations of different films
- > Functional final products: fire-protection glass, SentryGlas®, smart glass and much more



Simply faster

- > Cycle times of approximately 0 to 45 minutes, by contact heat (in the case of an optimum process design)



Cost-effective

- > Calculable cost of purchase
- > Low operating costs thanks to an energy-efficient technology (approximately 9 kWh/m² heating surface per cycle)
- > Good price for beginners: fully ready for use - as a compact class, price starts from approx. 290,000 €*



*Net price; no additional facilities, includes a transfer plate.

Please note: This information is not an official offer. Its purpose is only to better estimate the possibilities and the costs.

PRODUCT DIVERSITY AND ITS ADDED VALUE

Depending on the version and classification, **fire protection glass** protects from fire, smoke and/or heat radiation.
Your added value: By improving your fire protection glass, we convert it into laminated safety glass with static load-bearing capacity. Such glass provides both burglar and fire protection.

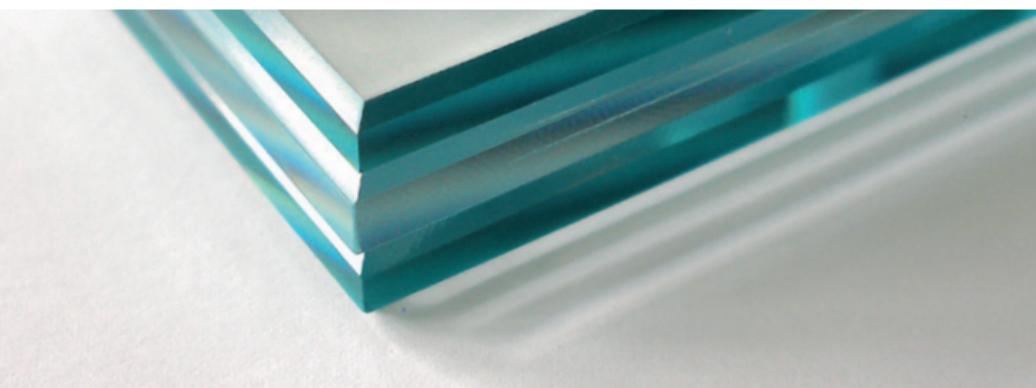
SentryGlas®-composite film consists of a thermoplastic (Ionoplast), which is up to five times harder and hundred times more rigid than conventional polyvinyl butyral (PVB) intermediate layers.

Your added value: To work with SentryGlas® in LAMI PRESS® is as easy and quick as with PVB films.

Smart glass (opaque/clear) with electrical switching from clear to opaque glass.

Your added value: In the case of LAMI PRESS®, the low rejection rate is less than 1%. This is pretty noticeable especially in the case of expensive smart films.

Gain from a full production diversity when selecting glasses and films.



INCREASE YOUR PERFORMANCE INDIVIDUALLY AND CUSTOMISED

**We will assist you from the very beginning and more.
This is our promise.**

We are convinced that our superior technology will fulfil your demand in the best possible way. Do you have special requirements on throughput and sizes? You can design your machine parameters very individually. Are you planning an automation of your machine? In cooperation with our partner HEGLA GmbH & Co. KG we will find an exclusive solution for you.

What additional services do we offer?

By means of trial samples, we ensure the feasibility of products you want to manufacture. Thus you have the opportunity to see the quality of LAMIPRESS® directly on your own product. In addition, we can train your staff on site in real daily production conditions. Moreover, we subsequently provide maintenance and support.

Research upon the customer's order!

Do you want to extend your product range? We make research and development work for you.

THE PRODUCT YOU WANT TO MANUFACTURE WILL REMAIN THE FOCAL POINT!

We will gladly send you an offer according to your individual needs.

DO YOU HAVE ANY QUESTIONS? DO NOT HESITATE TO CONTACT US.

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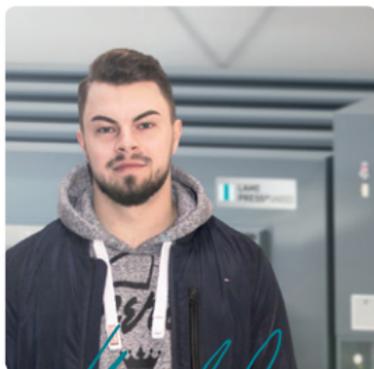
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We are looking forward to hearing from you. You can also send us your request by e-mail.



Mr Michael Muschiol,
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Engineer
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BSc.

LAMIPRESS® is a
registered trademark of:

 **FOTOVERBUND
GLAS MARL**

LAMIPRESS®VARIO

We design your customised system individually tailored to your needs. No matter to what industry you supply your flat glass products - gain from advantages of LAMIPRESS®VARIO.

We would like to show you three examples how our customers use this technology. Such parameters as targeted daily throughput, space, shift schedule, sizes of laminated glass products, budget, etc. are to be specified by the customer for our cost calculation. Of course, the price varies depending on the equipment of your LAMIPRESS®.

Compact Class

Production specification:
50 m² in a 8-hour shift
with a minimum of 4 transfer plates

Sizing:
7.14 m² net production area
Possible net sizes 2.80 m x 2.55 m
Space required: 7.56 m x 6.04 m

Design:
Two-piece heating plate
Five carriers
Six bellows systems per carrier
172 kW heating/cooling system

Consumption:
Electricity: approx. 78 kWh per cycle
Water: about 1,300 litre per cycle

Middle Class

Production specification:
100 m² in a 8-hour shift
with a minimum of 4 transfer plates

Sizing:
14.28 m² net production area
Possible net sizes 3.00 m x 4.76 m
Space required: 7.76 m x 10.44 m

Design:
Three-piece heating plate
Seven carriers
Six bellows systems per carrier
328 kW heating/cooling system

Consumption:
Electricity: approx. 148 kWh per cycle
Water: about 2,500 liters per cycle

The Flagship

Production specification:
150 m² in a 8-hour shift
with a minimum of 4 transfer plates

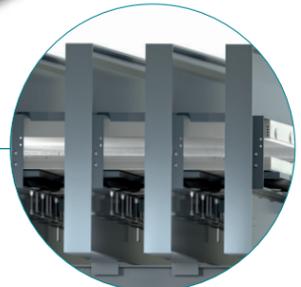
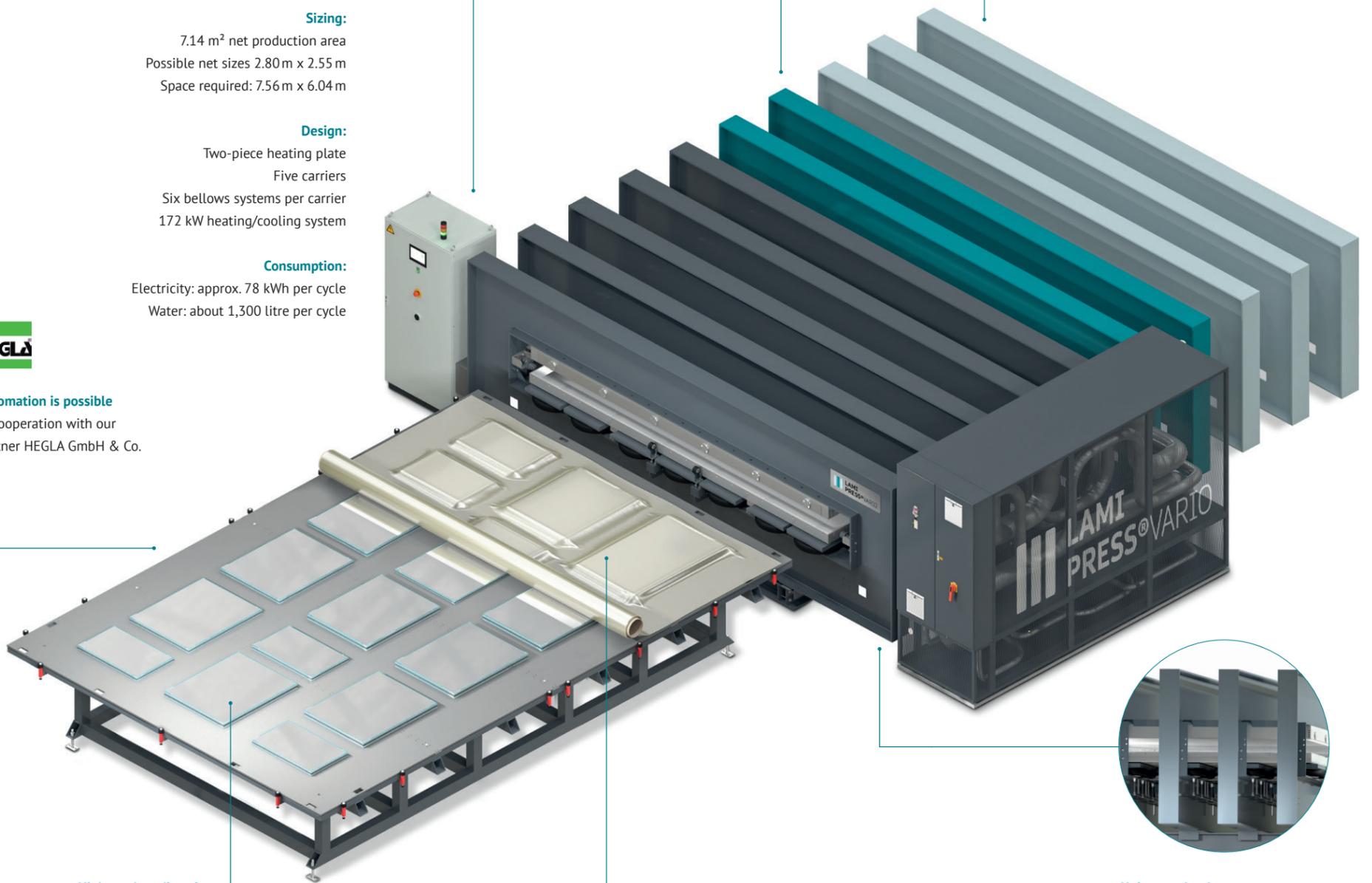
Sizing:
21.42 m² net production area
Possible net sizes 3.24 m x 6.60 m
Space required: 8.00 m x 14.12 m

Design:
Four-piece heating plate
Nine carriers
Seven bellows systems per carrier
508 kW heating/cooling system

Consumption:
Electricity: approx. 229 kWh per cycle
Water: about 3,800 liters per cycle
No water consumption in the case of open-air cooling (all models)



Automation is possible
in cooperation with our partner HEGLA GmbH & Co.



High product diversity

Combining with various composite films, e.g. PVB, EVA, SentryGlas®, as well as laminated safety glass made from float, ESG, TVG, structure glass or special glass is possible.

Silicone mat

The mat divides the minimum process area space in two parts. So it separates the pressure atmosphere (above the mat) from the vacuum atmosphere (below the mat).

Unique technology

The worldwide patented carrier system replaces the autoclave pressure vessel. In addition, this method utilises contact heating that is physically the most efficient way of heat transfer.

Does LAMIPRESS®VARION require any maintenance?

Our machine is almost completely maintenance-free. It has only few wear parts. To ensure that maintenance is needed only in exceptional cases, we pay particular attention to our free-of-charge training of the customer's staff. We take the time to train your employees in the best way. You can rely upon this. We know that you can be 100% satisfied, only if the machine is 100% fully functioning.

Do you have any questions? Do not hesitate to contact us.

Get to know us personally and form your own opinion about our products. We look forward to hearing from you.

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Technical data:

Heating and cooling equipment	Heating capacity/device: 20 kW per 1 m ² heating surface
	Cooling performance/device: 20 kW per 1 m ² heating surface
	Supply voltage: 400 V three-phase current
Heating and cooling plate	Surface finish: silver-anodized
	Operating temperature: max. 160 °C
Cover plate (optional)	Performance: 4 kW/m ²
Control system	Type: WAGO or SIEMENS
Pneumatic bellow System	Supply pressure: 8 bar
External vacuum pump	Type: Rotary vane O 5.6, oil-lubricated, air-cooled
	Motor: 0.3 kW, 1,350 rpm, 50 Hz, 220 V
	Performance: up to -970 mbar
Process area	Operating pressure: 1.2 bar
	Process vacuum: max. -900 mbar
	Max. feed height: 95 mm

Consumption rates:

Energy	8–10 kWh/m ² heating surface per cycle (depending on the glass package thickness)
Water	150 litres/m ² heating surface per cycle
	With free-air cooling and tank pump system: 0 litres/m ² heating surface per cycle
Cycle times	About 30–45 minutes (depending on the glass package thickness)

For all models, additional facilities such as transfer plate, open-air cooling tank with pump and integrated cover heating are only supplied upon request.