



Heating systems for wood,
solid surfaces & acrylics

EXPERTISE IN HEATING PLATEN TECHNOLOGY + SERVICE

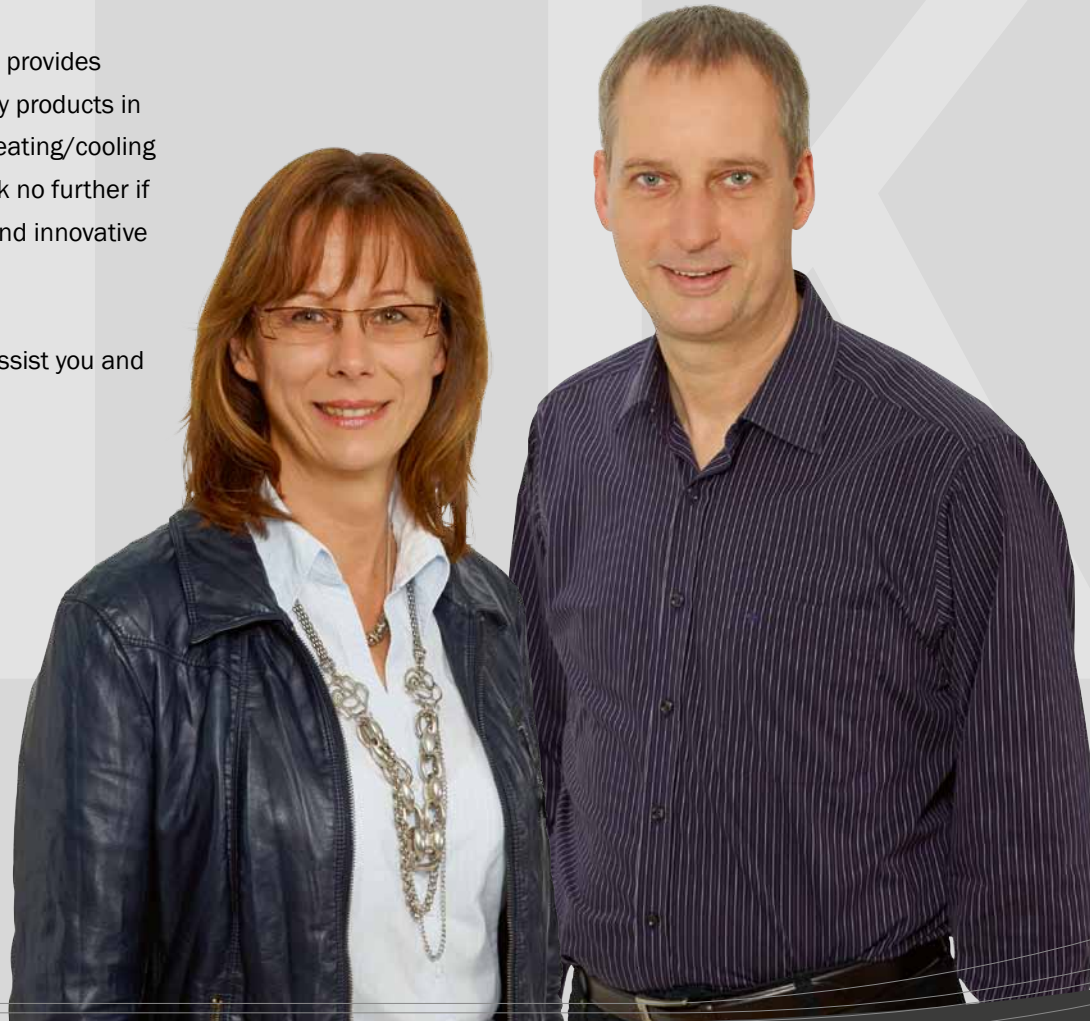
Welcome,

and thank you for taking an interest in our company.

ELKOM Elektroheizplattentechnik GmbH provides important developments and high-quality products in the fields of veneer press heating and heating/cooling platen and vacuum technologies. So look no further if you require individual technical advice and innovative solutions to these issues.

Please contact us: We will be happy to assist you and look forward to rising to your challenge.

Angelika Uphoff
Managing Partner



The competence.

Since the company was founded in 1981, its core competence has been in the development and manufacture of innovative heating platens for veneer presses and thermoforming systems for solid surfaces. Numerous patents and utility patents are testament to the company's innovative strength. Satisfied ELKOM customers worldwide rely on individual technical advice, on a professional realization and on committed service. Their trust obliges us to deliver top performance.

Thomas Schalm
Managing Partner

The know-how.

ELKOM quality covers the entire manufacturing process: from design-engineering CAD/CAM handling to state-of-the-art five-axis machining centres to final production and assembly, commissioning and service.

The philosophy.

Working in close cooperation with customers and suppliers, outstanding product quality and committed service make ELKOM a globally recognized partner in many sectors of the industry.

“**ELKOM** products are the fruit of a long international experience in combination with innovative impulses from research and teaching.”

Clear, comprehensible, compelling:

Innovative heating platens for veneer presses

ELKOM offers ideal solutions for carpenters, joiners and quality-conscious woodworkers: Expand your range of services. Optimize quality and efficiency. Capitalize on the technological advantage.

With flexibility, short setting-up times and new scopes ELKOM products combine individual craftsmanship with the benefits of state-of-the-art technology, with all components being perfectly harmonized. The attractive acquisition costs guarantee an optimal cost-benefit ratio.

In short: ELKOM heating platen systems are simply a must for any open-minded and forward-looking craft enterprise.

Thermoforming systems for solid surfaces

ELKOM is a pioneer in the field of thermoforming technology for solid surfaces. From pre-heating systems to vacuum presses and thermal transfer systems to Multitherm systems: ELKOM developments play a key role in the plastic industry.

Our patented Multitherm system is the only technology worldwide in this field to combine several process steps in one device. It offers its users unbeatable advantages regarding constant quality and impressive efficiency in the processing of solid surfaces.

In short: For the plastics industry ELKOM guarantees individual solutions, constant product quality, and superior cost-effectiveness.

“To us, **service** means identifying your needs and offering solutions. With intuition, dedication and plenty of know-how.”

Competent advice

Our team will accompany you through changes, support you in the implementation of new systems, and advise you on the basis of accumulated know-how and years of experience.

Individual realizations

We love challenges: For individual special designs and products with special voltages you will be in good hands with us. We plan carefully, organize and realize accurately – just like you would expect from us.

Your project from A to Z

From advice to project planning and manufacture to delivery, assembly and commissioning: We are at your service and manage your project in a comprehensive and reliable way.

Professional assembly

Our master assemblers install the heating platen on site on your premises. They are familiar with all current press types and will adjust the equipment perfectly.

Fast repair

Time is money: Benefit from our 6-hour fast repair service. You bring us the defect heating platen in the morning (also third-party products) and pick up the repaired platen in the afternoon.



“The wide range of configuration possibilities of our products enables every company to have individual applications.”

One-of-a-kind in the industry: The ELKOM Test and Training Centre

We actively support you in the development of new production processes. In our Test and Training Centre you can subject new or projected technologies to a test run. We always have different materials on stock, and you can also run the test with your own material. We provide you with different test machines and devices, and we are on hand with help and advice.

The system advantages of heating platen technology.

High cost effectiveness

ELKOM products convince with their price-performance ratio; they are easy to operate and stand out for their fast operational readiness.

Energy efficiency

The 100% thermal flow from the heating conductor to the solid aluminium plate allows for particularly low power consumption, which saves costs and resources at the same time.

Long service life

Our patented ELKOM safety heating conductor system (DBP 4239568) is shock- and impact-resistant, and vibration- and wear-resistant. We grant a five-year long-term warranty on the system.

One for all

The design of the heating platens fits all veneer press brands. We only work with high-quality aluminium alloys. In combination with our solid ELKOM high-pressure insulation board this makes a pressure-resistant, high-strength compound.

Many possibilities

Parts with large and small surfaces can be veneered and pressed. The borderless platen design facilitates “push-through jobs”.

Serial quality

All surfaces come with gold-coloured hard-anodized surface as standard. Your benefit: minimal cleaning and maintenance effort, optimal scratch and abrasion resistance, and also low separating agent consumption. And last but not least: optimized pressing performance.

Flexible modular system

In case of surface damages caused by operating errors all components can be replaced individually and at a reasonable price. ELKOM provides top service – fast and without fuss.

Responsibility & sustainability

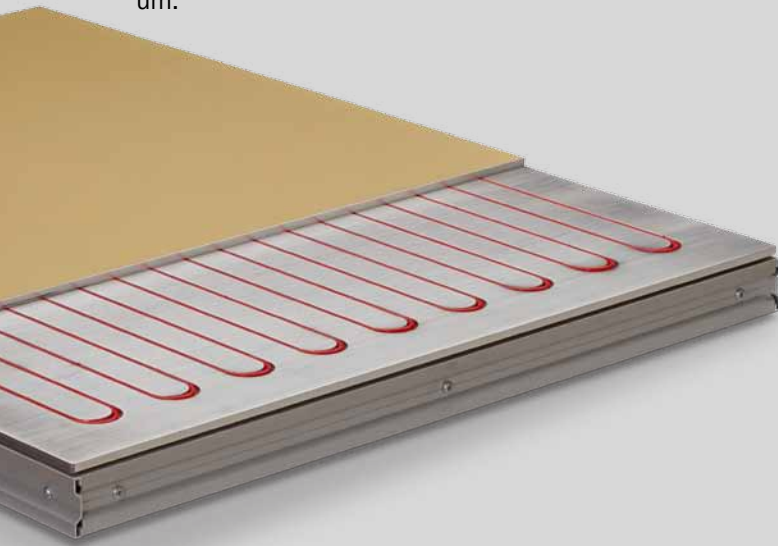
Eco-compatible and sustainable manufacture in combination with consistent recycling of all materials is a matter of course in our house. In all processes – from product engineering to waste disposal – we consider and optimize all social and environmentally relevant aspects.

COMBINED ELECTRICAL HEATING PLATEN

ELECTRICAL SYSTEM PROFILE HEATING PLATEN

Market-leading standard heating platen system for all veneer press brands

- High-quality, pressure-resistant construction: We only work with high-quality aluminium alloys in combination with our solid ELKOM high-pressure insulating plate.
- Veneers in top quality: compelling plane and smooth surfaces
- Exclusive ELKOM safety heating conductor system (DBP 4239568): shock- and impact-resistant, and vibration- and wear-resistant. With ELKOM long-term warranty (5 years).
- Gold-coloured hard-anodized surface as standard: this innovative ELKOM development makes the surface abrasion-resistant and easy to clean.
- Low power consumption: the patented heating conductor facilitates a direct thermal flow to the aluminium.



Designed to improve the pressure resistance of press beds

- Smart ELKOM solution: the solid sandwich electrical heating platen and the system profile sandwich make a high-pressure resistant and torsion-free assembly, which reinforces unstable press beds effectively.



- Veneers in top quality: compelling plane and smooth surfaces
- Exclusive ELKOM safety heating conductor system (DBP 4239568): shock- and impact-resistant, and vibration- and wear-resistant. With ELKOM long-term warranty (5 years).
- Gold-coloured hard-anodized surface as standard: this innovative ELKOM development makes the surface abrasion-resistant and easy to clean.
- Low power consumption: the patented heating conductor facilitates a direct thermal flow to the aluminium.
- Pressure-resistant design: We only work with high-strength aluminium alloys in combination with the cemented system profile carrier plate.
- Improved temperature stability due to increased heat storage capacity

Technical data:

Standard sizes: 1200 x 800 mm - 4000 x 1600 mm

Heating power: 2,8 - 3,3 kW/m² - depending on plate size

Voltage: 230/400 Volt

Working temperature: up to 130 °C / heating-up time approx. 20 min
up to 100 °C / special heating platens of up to 250 °C available

Compressive strength: 1200 N/cm² max., extremely high flexural strength

Other sizes/voltages/performances available on request

DUAL SYSTEM HEATING PLATEN

For saving energy costs by making use of heating water

- Perfect for water- and oil filling: the liquid medium system is based on the patented ELKOM ÖKOTHERM platen system. It is maintenance-free and non-corrosive.
- Precise temperatures: in high-temperature applications or in highly stressed presses a thermal oil filling with an additional pump can be connected in order to achieve extremely precise temperatures.
- The perfect solution for membrane presses, vacuum presses, forming presses and punch presses
- Applications for precision heating platens in the plastics industry
- Temperature-stable large area heating systems for tool and mould temperature control
- Gold-coloured hard-anodized surface as standard: this innovative ELKOM development makes the surface abrasion-resistant and easy to clean.



Technical data:

Standard sizes: 1200 x 800 mm - 4000 x 1600 mm

Heating power: 3,5 kW/m² and more, depending on the application

Voltage: 230/400 Volt

Working temperature: up to 250 °C max.

Compressive strength: 1200 N/cm² max.

Other sizes/voltages/performances available on request



“Veneered surfaces are compelling for their design and quality.”

ELECTRICAL HEATING BAR
pre-heating device

The indispensable helper in edge banding and pre-tempering



- Over 30 years of experience: ELKOM electrical heating bars have proved their worth in edge presses, frame presses, edge banding devices and in pre-tempering.
- The perfect solution: an integrated stepless control with an insulated adjusting knob.
- For a strong performance: a fixed 3-metre industrial cable with bend relief and 230 Volt Schuko plug
- Long service life: the slide-in heating system is resistant to wear and tear, shock and impact. Please note: in order to minimize the risk of wear we do not use wrapped heating wires.
- Gold-coloured hard-anodized surface as standard: this innovative ELKOM development makes the surface abrasion-resistant and easy to clean.

Standard sizes and types:

Type	Length	Cross section	Heating power
EST 6	600 mm	64 x 46 mm	275 Watt
EST 11	1100 mm	64 x 46 mm	550 Watt
EST 16	1600 mm	64 x 46 mm	825 Watt
EST 21	2100 mm	64 x 46 mm	1100 Watt
EST 26	2600 mm	64 x 46 mm	1375 Watt
EST 31	3100 mm	64 x 46 mm	1650 Watt
EST 36	3600 mm	64 x 46 mm	1925 Watt
EST 41	4100 mm	64 x 46 mm	2200 Watt

Voltage: 230 Volt

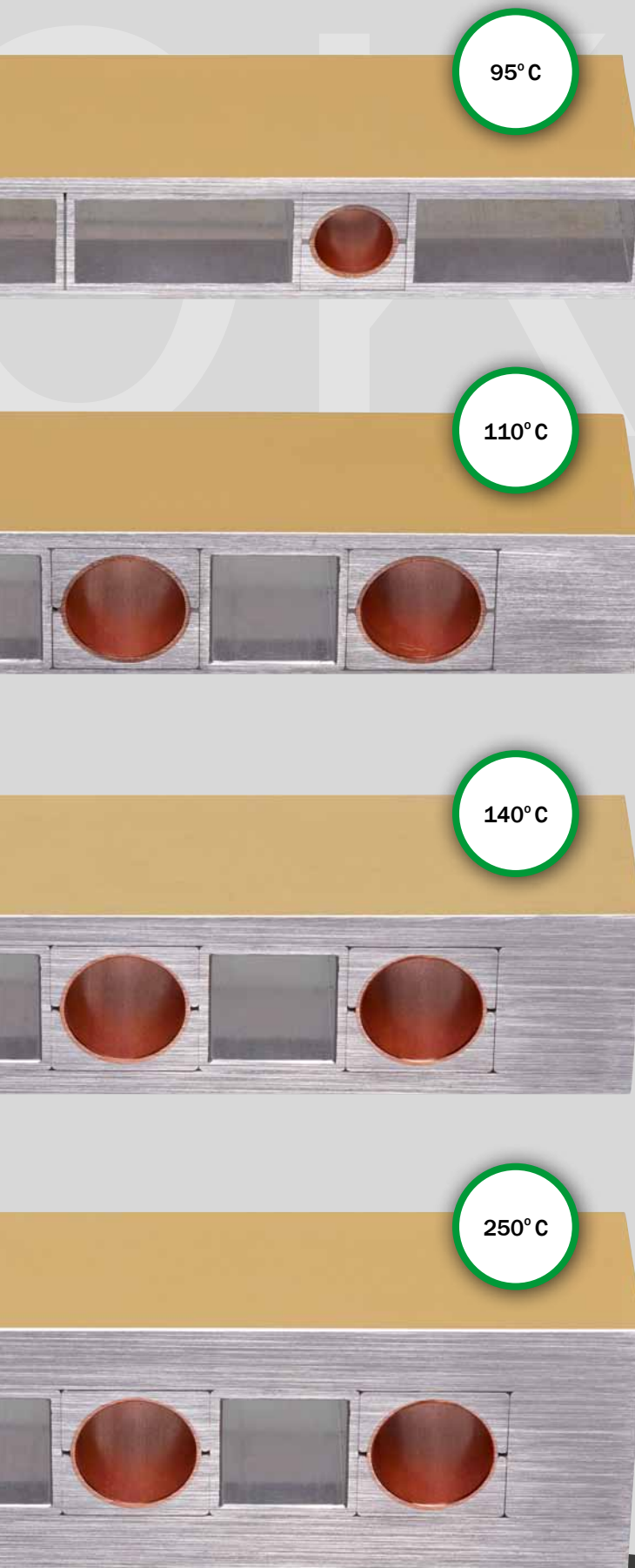
Working temperature: up to 160 °C max.

Compressive strength: 200 N/cm² max.

TEMPERATURE CONTROL SYSTEMS

- ELKOM temperature control systems and control cabinets are always custom-designed and adapted to your requirements.
- Control systems are designed on the basis of microstats, digital controllers and self-optimizing electronic controllers.
- For special applications PLC systems with ramp control are available.





ÖKOTHERM® (patented)

Liquid-medium heating platen – the leading energy-saving heating platen system for all presses

- Patented design: copper pipes with good thermal conductivity, embedded in heat-conducting aluminium profiles – this successful idea for energy-saving heating platen systems came from ELKOM.
- Best possible temperature constancy: the precise surface temperature is achieved by means of a constantly circulating medium, ruling out any fluctuations.
- Retrofitting possible: The ÖKOTHERM® system can be used for both heating- and cooling processes. Subsequent retrofitting from electrical to Ökotherm platens is possible.
- Gold-coloured hard-anodized surface as standard: this innovative ELKOM development makes the surface abrasion-resistant and easy to clean.
- Best quality: corrosion- and wear-resistant through exclusive use of non-ferrous metals
- Together for the future: quality-oriented press manufacturers offer ELKOM-ÖKOTHERM® as standard.

Technical data:

Standard sizes:	1200 x 800 mm - 4000 x 1600 mm any special size available on request
Temperatures:	with pressure water up to 150 °C with thermal oil up to 250 °C
Compressive strength:	1200 N/cm ² max., depending on the temperature applied



The smart alternative: The ÖKOTHERM® energy-saving system

Our ÖKOTHERM® energy-saving system represents a high-quality alternative to conventional electrical heating platens. Once again, ELKOM GmbH proves its expertise and pioneering role with this technology that is compelling for its particularly strong performance at low energy costs.

The patented heating platens feature a particularly high efficiency. Users greatly appreciate their enormous tensile strength (up to 1200 N/cm²), which provides maximum operational safety in everyday use.

The idea, the function

Heated water is conducted under pressure at high velocity through the pipes of the ÖKOTHERM® platens by means of a special pump. Only the thermal energy being extracted from the cold pressed product is compensated here. There are neither over- nor under temperatures. The heat is constantly held available in the water reservoir. The whole system is a closed circuit and, consisting entirely of copper and stainless steel, non-corrosive.

The development of thermoforming technology for solid surfaces

Material and requirements

Acrylic-based solid surfaces are a fascinating material: hard and solid, yet easy to mould according to your requirements. It allows for a variety of creations – in the home and in public buildings, in hospitals and hotels as well as in the field of design or in technical applications – boundless possibilities indeed. Our clientele includes the most renowned enterprises and research centres worldwide.

One of the first

Already in the early 1980s, when thermoforming technology for solid surfaces was still in its infancy, ELKOM developed complex pre-heating systems to make solid surface and other materials thermoelastically deformable.

Serial quality

In the 1990s the development was forced because the manufacturers and the materials industry demanded professional machines. ELKOM developed its MIKUTHERM pre-heating system and the VAKUTHERM membrane press.

Industrial manufacturing technique were applied for the first time (monitored heating cycles – monitored cooling under vacuum), guaranteeing constant quality in the work pieces. ELKOM developments have always played a key role.

A patent with benefits

The MULTITHERM technology was first presented in 2002. This patented and hence exclusive ELKOM technology represents the “all-in-one” solution in one machine. In addition to its excellent price-performance ratio it offers the user unbeatable advantages and individual modifications.



“Patented and exclusive ELKOM technology since 2002”

MIKUTHERM-JUNIOR pre-heating device

The simple pre-heating system for the trade and on the building site



- Top and bottom industrial heating platen made of 12 mm-thick aluminium plate with uniform temperature distribution for tempering the materials on both sides (prevents discolouration and warpage)
- High-quality insulation on both sides
- Easy to open and close with insulated handholds
- Electronic temperature control
- Temperature range continuously variable up to 200 °C
- Ready for operation in only 15 minutes
- Anodized, wear-resistant surfaces
- Portable – can also be used on the building site

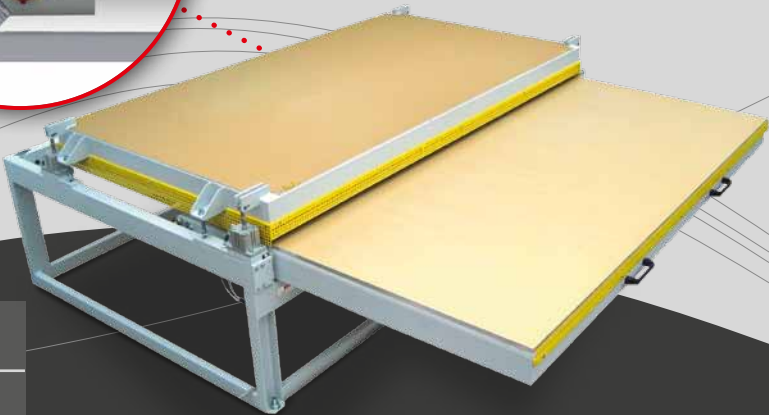
MIKUTHERM-OPTIMAL pre-heating station

Pre-heating system for serial production and continuous operation

- Top and bottom industrial heating platen made of 18 mm-thick solid aluminium to guarantee constant temperatures
- Smooth-running drawer with ball bearing guides
- The upper platen moves up and down with pneumatic cylinders
- Material thickening only takes a few seconds, hence no risk of pressure marks or discolouration on the valuable material
- Central control cabinet with main switch, energy-saving individual digital controllers for each heating platen for up to 200 °C
- Solid steel design



- No work between hot platens and considerably increased safety compared to conventional hinged-lid devices. No segmentation of heating platens, hence smooth, plane surfaces and precise temperature distribution at all times



Standard sizes:

1200 x 300 mm	Heating power 3200 Watt 400 Volt 50/60 Hz
1400 x 300 mm	Heating power 3500 Watt 400 Volt 50/60 Hz
1600 x 300 mm	Heating power 4300 Watt 400 Volt 50/60 Hz
1800 x 300 mm	Heating power 4800 Watt 400 Volt 50/60 Hz
2000 x 300 mm	Heating power 5300 Watt 400 Volt 50/60 Hz
2200 x 300 mm	Heating power 5800 Watt 400 Volt 50/60 Hz

Other sizes/voltages/performances available on request

Technical data:

Sizes:	1100 x 1100 mm - 3800 x 1100 mm
Worktop height/table:	850 mm
Connected load:	6,4 - 30 kw (depending on the size)
Voltage:	400/690 Volt 3-phased
Temperature:	0 - 200 °C continuously variable
Material thicknesses:	up to 25 mm as standard (up to 100 mm available on request)

Other sizes/voltages/performances available on request

VAKUTHERM quality vacuum press

The high-quality vacuum membrane press for industry and trade

- Solid steel design with a high load-bearing capacity – also suitable for moulds and tools made of steel or aluminium
- Vacuum worktop made of solid aluminium as standard; heatable and/or coolable on request
- Integrated heating or cooling medium connections for metal tools as standard
- High-performance vacuum pump with vacuum tank integrated in the table design
- Central control unit for vacuum pump, vacuum valve, main switch, control signal lamps
- Double-welded torsion-free vacuum frame made of aluminium profiles, insulated handholds on all sides, gas springs for easy opening and closing; sturdy, solid steel hinges at the back (adjustable)
- Membranes available in various designs: silicone membrane for thermoforming 2 or 3 mm thick, transparent or coloured, natural rubber membrane or volume membrane
- Special table configurations available



Technical data:

Standard sizes:	1000 x 1000 mm - 3750 x 1300 mm
Vacuum pumps:	dry running or oil-lubricated
Voltage:	230/400 Volt as standard, 50-60 Hz

Other sizes/voltages/performances available on request

VAKUTHERM vacuum membrane press configurations



ELKOM vacuum worktop (heatable and coolable)
Sublimation process with VAKUTHERM

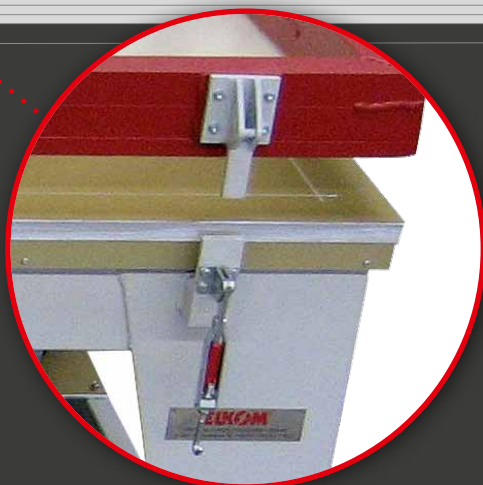
- The ideal complement to your vacuum press for printing on solid surfaces, acrylic glass, ceramics, fabric and many more
- The entire vacuum worktop is heatable and coolable. We offer various solutions, depending on the desired manufacturing size.
- The sublimation platen can also be used in many other applications, which makes it multifunctional and cost-efficient in use.

ELKOM volume membrane
for processing tall components

- Optional feature for forming components of up to 1000 mm in height. Fast integration in existing ELKOM vacuum frames or quick-change frame systems possible.
- Grey silicone membrane, 3 mm thick; temperature-resistant up to 220 °C, elongation up to 600 %.

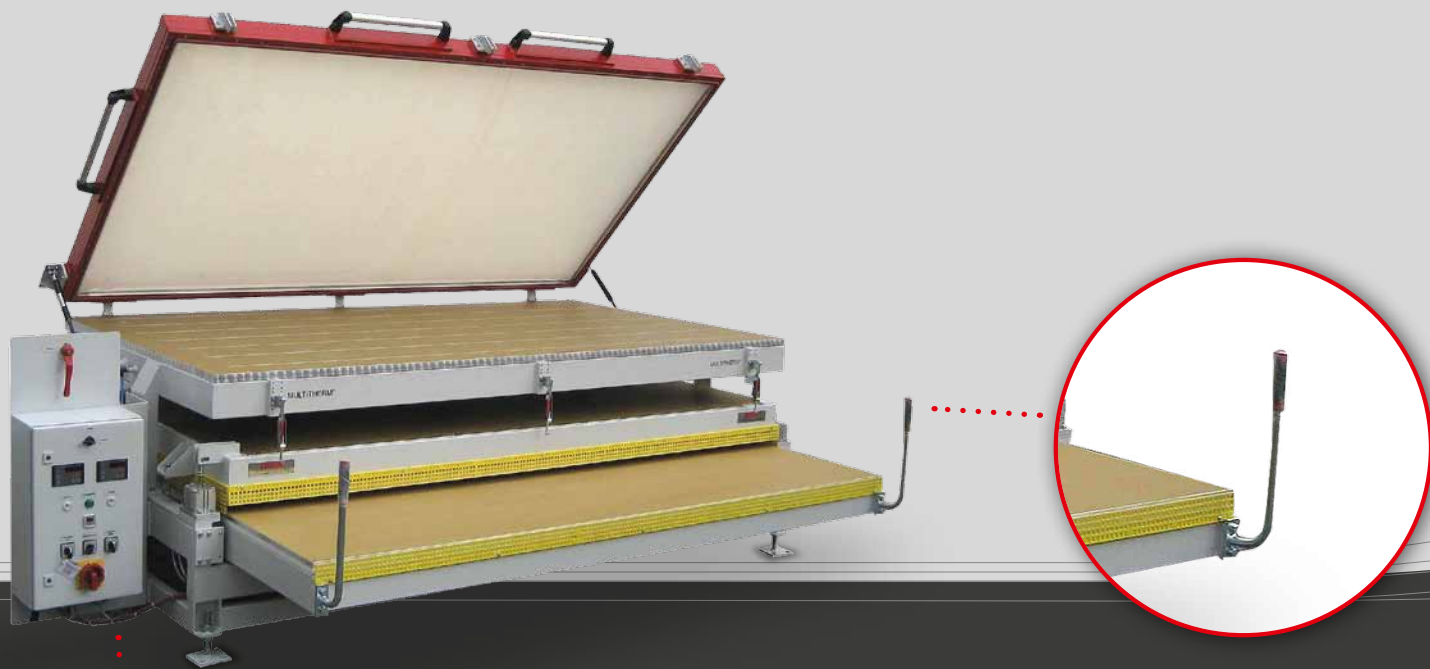
ELKOM heating hood
The perfect add-on option for heating tall components and parts to be moulded

- Solid and optionally insulated steel design
- The performance of the hot-air heated hood is calculated based on and adapted to customer requirements.
- The electric temperature control is integrated in existing control systems or can be adjusted separately by means of digital temperature controls.



MULTITHERM® Basic (patented)
Thermoforming machine

- Four work steps in only one machine!
- Pre-heating – sublimation – forming – recooling
- Solid steel design with a high load-bearing capacity for heavy moulds and large components
- Vacuum worktop made of solid aluminium as standard; heatable and/or coolable on request
- Integrated heating or cooling medium connections for metal tools as standard
- Double-welded torsion-free vacuum frame made of aluminium profiles, insulated handholds, gas springs for easy opening and closing; sturdy, solid steel hinges at the back (adjustable)
- Membranes available in various designs: silicone membrane, natural rubber membrane, or volume membrane with or without quick-change frame for extremely tall components
- Pre-heating device with top and bottom ELKOM 18 mm-thick industrial heating platen (contact heat) to guarantee constant temperatures
- Central control cabinet with main switch, individually adjustable digital controllers for each heating platen for up to 200 °C and additional vacuum regulation, timer with acoustic or visual signal
- MULTITHERM® BASIC is well suited for individual moulding of solid surfaces and composites, acrylic glass, and laminations such as leather and textiles.



Technical data:

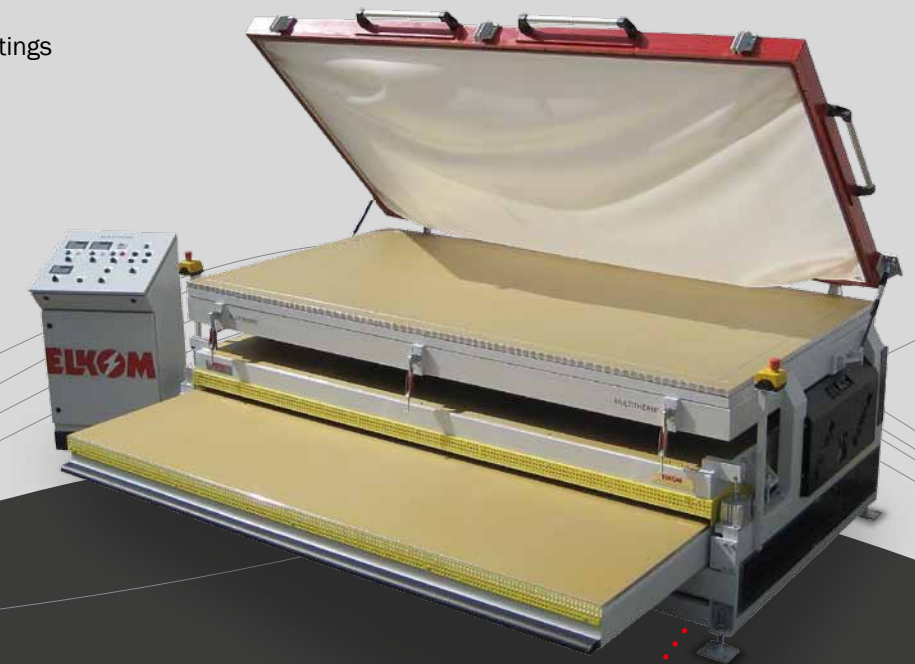
Standard sizes:	1300 x 1000 mm - 3800 x 1300 mm
Vacuum pump:	dry running or oil-lubricated
Heating power:	12,5 bis 35,5 kw (depending on the size)
Voltage:	230/400 Volt 3-phased

Other sizes/voltages/performances available on request



MULTITHERM® AUTOMATIK (patented)
High-performance thermoforming machine

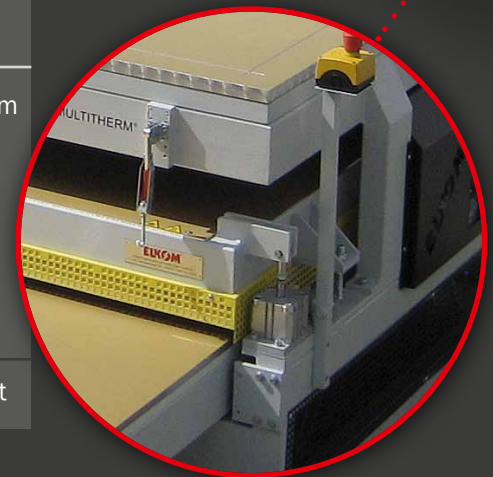
- High performance, small footprint: The unique patented concept has proved itself with leading fabricators of solid surfaces and acrylic worldwide. It is a logical further development of the MULTITHERM® BASIC version.
- Extremely solid and strong steel weldment as a basis for the entire pre-heating and forming technology
- Pre-heating device with top and bottom ELKOM 18 mm-thick industrial heating platen (contact heat) to guarantee constant temperatures.
- The PLC-controlled easy and centralized operation of all functions of the pre-heating device, which includes the extendible and retractable drawer, shortens work processes.
- Clearly arranged control of vacuum settings
- Additional features such as automatic opening and closing of the vacuum frame, vacuum apertures for additional sensor connections within the vacuum, or interfaces for implementing the system in your process control etc. are also available on request.
- MULTITHERM® AUTOMATIC is well suited for individual moulding and serial production of solid surfaces and composites, acrylic glass, and laminations such as leather and textiles.



Technical data:

Standard sizes:	1300 x 1100 mm - 3800 x 1300 mm
Vacuum pump:	dry running or oil-lubricated
Heating power:	12,5 bis 35,5 kw (depending on the size)
Voltage:	230/400 Volt 3-phased

Other sizes/voltages/performances available on request



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