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A whole new era in edge processing



A member of the HOMAG Group



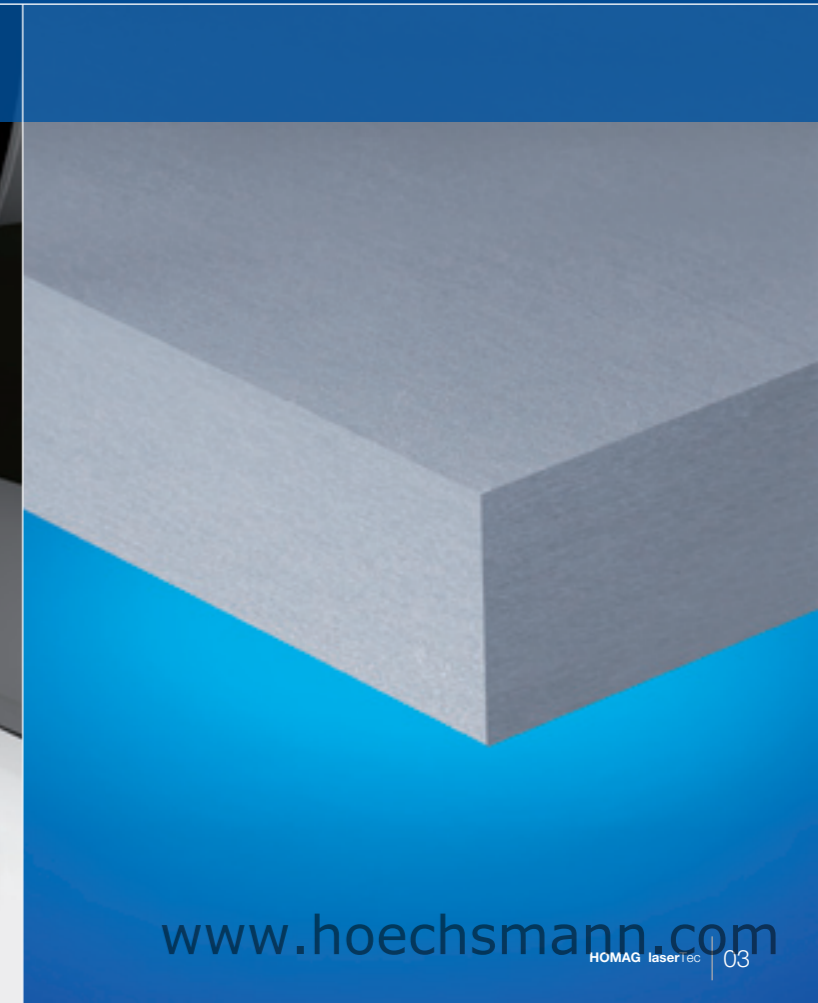
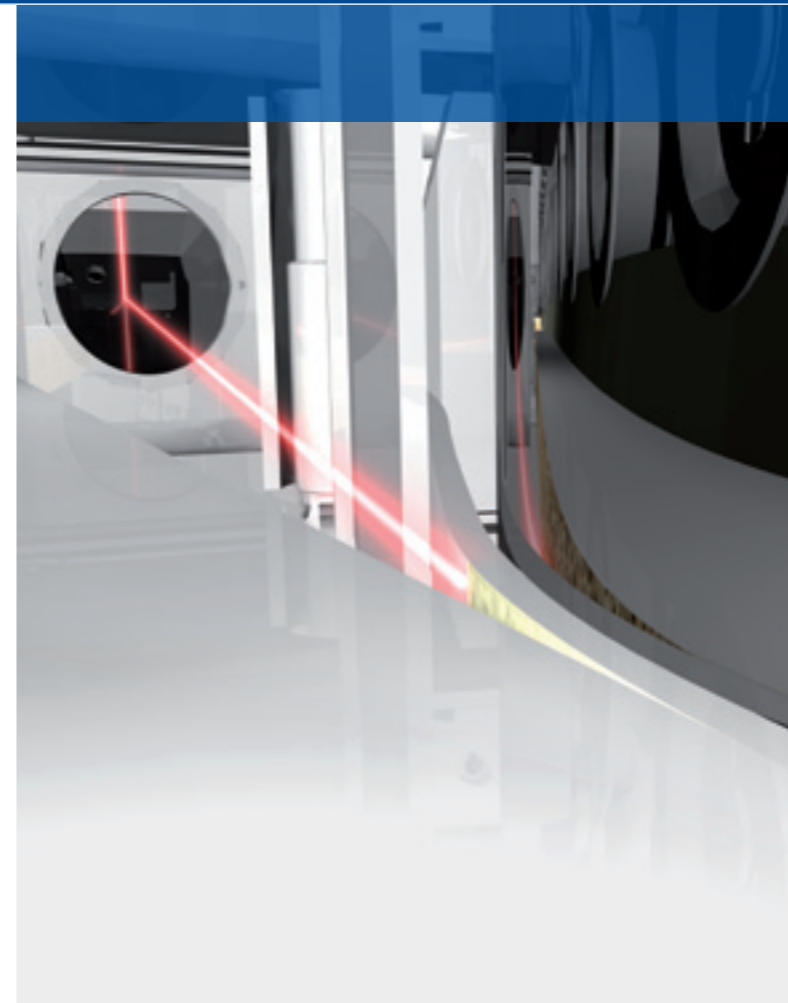
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HOMAG laserTec

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HOMAG laserTec – The quantum leap for furniture production

Edge gluing quality that has never been seen before – HOMAG laserTec is the new production technique set to revolutionize the furniture manufacturing industry. This technique uses a laser beam to melt the surface to be glued, which is then pressed directly onto the workpiece. The result: edges of the very highest quality.



Increase the quality and productivity of your furniture production with HOMAG laserTec. You won't find a more efficient and cost-effective way of using resources.

HOMAG laserTec achieves extreme production economy:

- Reduced rejects quota
- Simple operating processes
- Low ancillary costs
- Maximum availability

laserTec



Revolutionary technology

Compared to conventional glue-based methods, HOMAG **laserTec** is a clear winner: While conventional methods involve melting granulate at relatively high temperature levels to produce glue which is applied to the workpiece using a rotating roller, **laserTec** simplifies the process enormously. This entails melting the surface to be glued using a laser beam and then pressing it directly onto the workpiece. The laser beam is automatically deflected over the entire width of the edge band by an oscillating mirror.

Increased productivity

The extreme operating simplicity and immediate production readiness of the **laserTec** system mean more parts produced per unit of time, eliminating unproductive waiting periods and set-up work for colour changes. Separate settings for glue quantity and temperature are no longer required, nor are entries for different materials such as chipboard or MDF, with all the associated risk of gluing errors. Laser joining will allow you to achieve consistent production quality and to reduce the staff costs associated with post-processing and finishing. All good reasons why this machine investment is certain to benefit your business.

In comparison to conventional hot-melt glue technology on throughfeed machines:

- **laserTec** saves up to 36,911 kWh per annum
- Energy savings: over 40 %
- Reduction of CO₂ emissions: by up to 26 tons per annum
- Cost savings: up to 4,430 € per annum

Use HOMAG laserTec to achieve a previously unattainable standard of visual quality in the processing of edges and corners. At the same time, you benefit from enormous flexibility in the selection of materials and colours.

Highest processing quality

HOMAG laserTec can be used to process all commonly used edging types. It produces an invisible surface-to-edge transition (zero joint). The consistently high standard of processing quality substantially reduces the scrap quota for optimum series production reliability.

This is a technology to place you well out ahead of your competitors in terms of quality. At the same time, operation of the new diode laser offers major economic benefits, particularly in comparison to other laser systems.

For the entire laser edge spectrum

HOMAG laserTec can be used to process all types of currently popular edging types such as PVC, ABS, PP, PMMA, wood veneer or melamine. The laser-active layer can be individually adjusted in line with product and customer requirements. Higher heat and moisture resistance levels can be achieved than with conventional gluing methods.

The perfect result

HOMAG laserTec stands for first-class gluing results: Not only does it produce an invisible surface-to-edge transition,

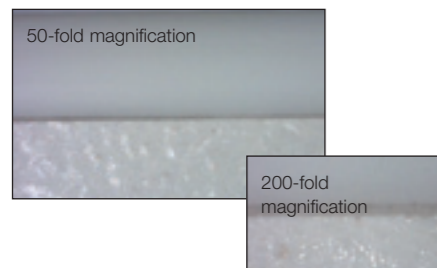
the optimum bond achieved means that adhesion strength between the edge and workpiece is considerably higher than when using conventional techniques.

The free-flowing polymer penetrates into the structure of the substrate where it hardens, resulting in a mechanical bond (adhesion) between the two materials.

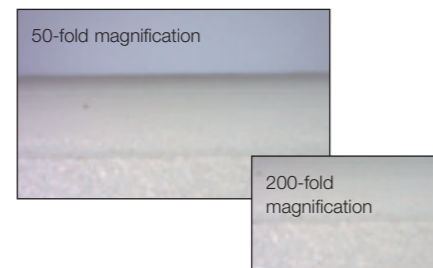
User-friendly application

HOMAG laserTec is a functionally reliable technique that guarantees high process security. All the operator needs to do is enter or scan in the edging type. Operation takes place without the need for complex maintenance work. The workpiece and the downstream processing units and tools are far less susceptible to contamination than when using conventional gluing techniques. You won't find a better guarantee of added savings and rationalization potential while still improving quality.

Conventional technology (EVA)



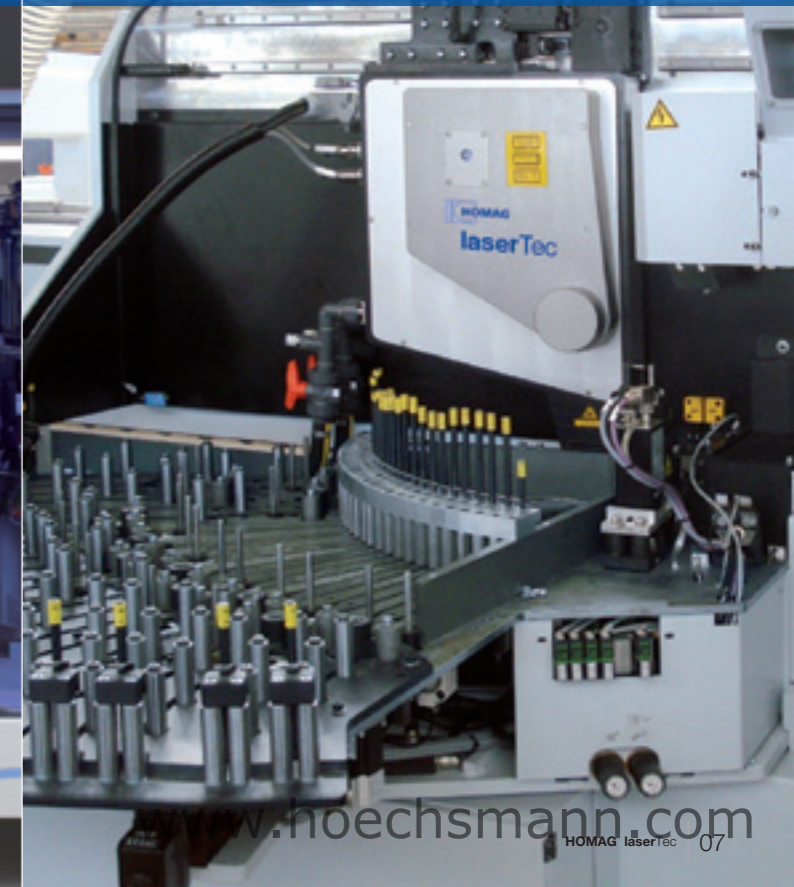
Laser joined (PP)



A perfect finish with HOMAG laserTec:

- Previously unattainable standard of quality
- Homogenous workpiece appearance

laserTec



HOMAG laserTec helps you achieve first-class gluing results with the benefit of simple operating processes and lower ancillary costs.

Efficient production with HOMAG laserTec:

- No logistical cost for glue
- No complex manual input required
- No auxiliary materials such as separating and cleaning agents
- No waiting times and set-up costs for colour changes
- No energy consumption without productive results
- No contamination and cleaning problems

laserTec



Reduced use of resources

In addition to quality gains and technical advantages, HOMAG **laserTec** helps you to use fewer resources: Expensive PU adhesives are not required and the logistics associated with them are superfluous. The cost of auxiliary materials such as separating and cleaning agents is also reduced. Secured process parameters result in a reduced scrap quota – meaning lower material input in this area too.

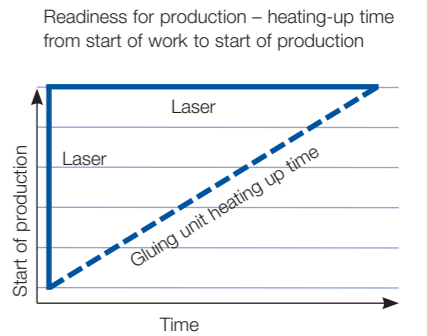
Energy saving effects

First of all, HOMAG **laserTec** saves space, as it is integrated into the machine just like any other unit. At the same time, **laserTec** is far superior to methods using glue: As there is no longer any heating up period required, no energy is used without productivity. Compared to the CO₂ laser technique, **laserTec** benefits from a lower electrical connected load and also requires no buffer gas.

Environmental production and occupational safety

Glueless production is particularly environmentally friendly, as it eliminates glue fumes and prevents any risk of hot-melt glue being burnt in the machine.

The **laserTec** method from HOMAG has a class 1 laser safety rating, making it safe for use without hesitation in any kind of furniture production.



Laser edging offers all-round benefits: HOMAG equips its CNC processing centres with laserTec technology, consistently transferring the quantum leap achieved in edge joint quality to shaped components.

For the entire laser edge spectrum

Whether stationary or throughfeed technology – now almost all kinds of edging materials can be simply and reliably processed with a zero joint. This innovation means that all workpieces can now be produced with the same high quality and aesthetic standard – no matter what their shape. Whether table tops or shop fronts, work tops or kitchen cabinet doors, roller shutter cabinet side elements or shelves for living room furniture – HOMAG offers perfect edges for your customers every time.

Energy savings

The **laserTec** method is not just a smart solution, it is efficient too. Compared to traditional edge banding methods on CNC processing centres, energy consumption is reduced by around 20 %.

Compared to conventional hot-melt glue technology on CNC processing centres:

- **laserTec** saves up to 2,250 kWh per annum
- Energy savings: over 20 %
- Reduction of CO₂ emissions: by up to 1,6 tons per annum
- Cost savings: up to 270 € per annum

Process reliability and reduced downtimes

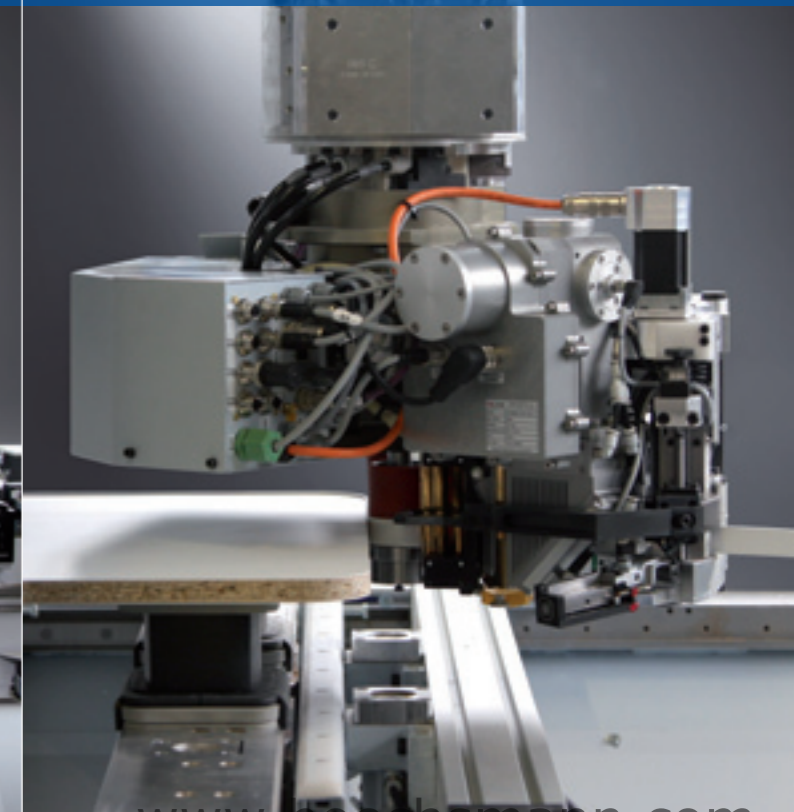
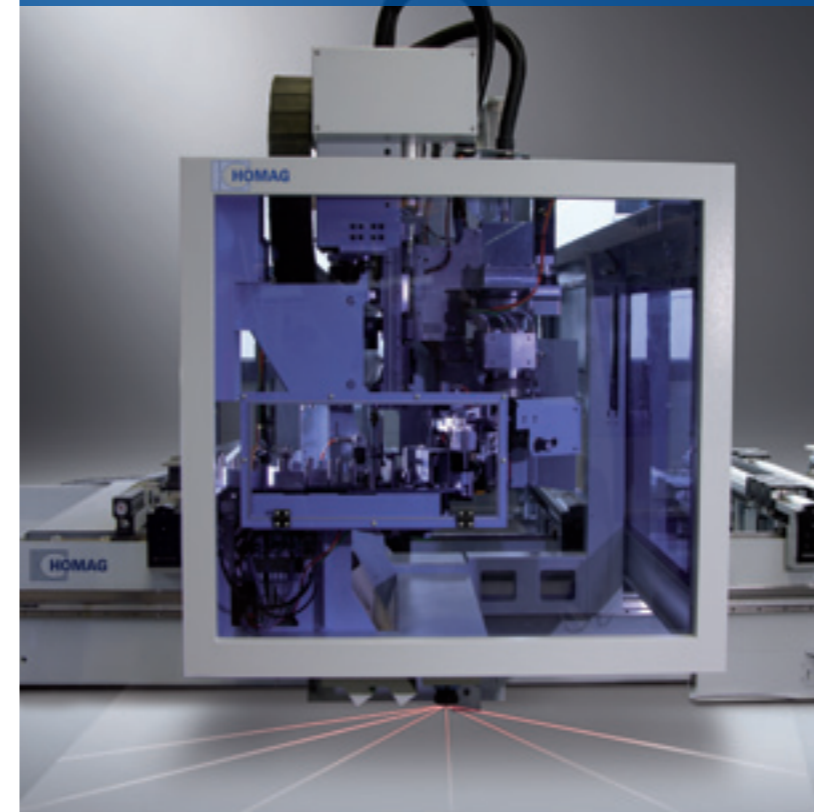
Process reliability, machine availability, cleaning work and energy consumption are all substantially improved by using the **laserTec** method. The art of edge banding using stationary technology has now reached the peak of perfection, manual intervention to adjust the gluing unit is a thing of the past. You can now cut out the time and expense entailed in monitoring, maintenance and cleaning of the glue tank and applicator unit. This also applies to the time-consuming wait for the glue to heat up – because glue is now no longer needed.

The process parameters can be used both for throughfeed and stationary processing.

Impressive arguments in favour of using laserTec on CNC processing centres

- Perfect, uniform edges in **laserTec** quality for all workpieces – including shaped components
- Immediate readiness for operation with no waiting times
- No setting work required
- Simple operating processes
- No auxiliary materials such as separating and cleaning agents

laserTec

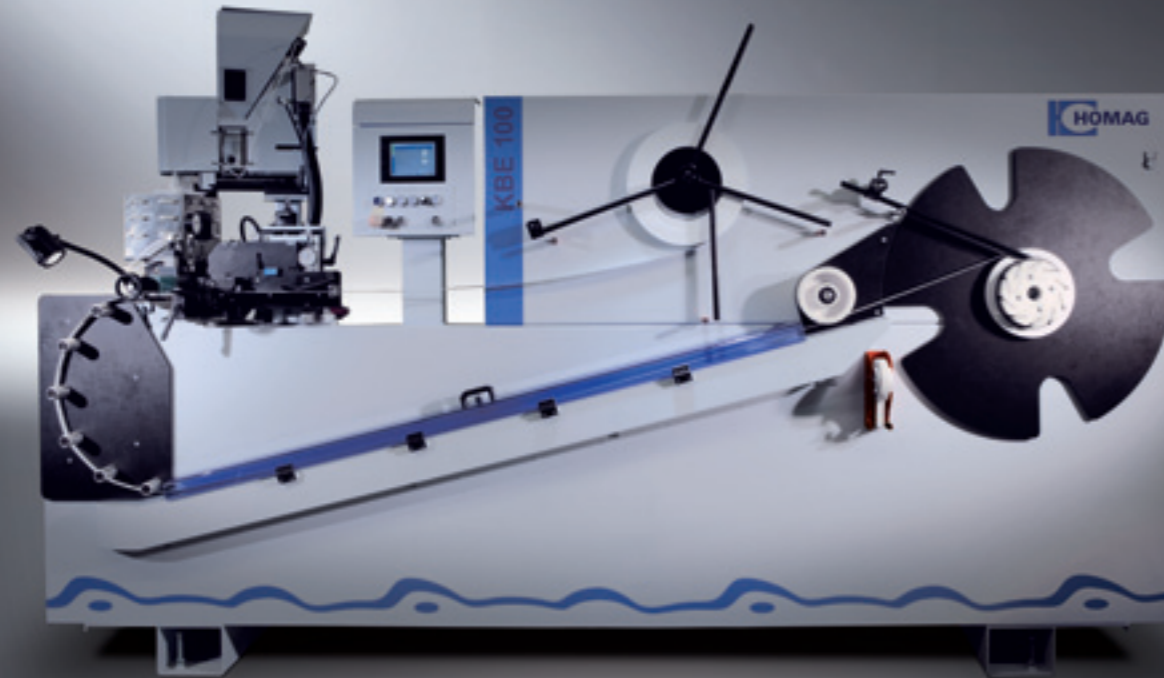


Full flexibility for laser edges on demand – available when you need them: Produce laser edges yourself using the KBE 100 edge precoating machine.

Your advantages:

- Only one edge quality in stock
- Produce small quantities yourself
- Edges available in all previous decor styles also for **laserTec**
- Can be used worldwide

laserTec



Why not make your own laser edges? Using the new KBE 100 you can prepare conventional edges for processing with laserTec.

Edge bands for laser processing are currently not available in all decor types and finishes. The development of new decor products takes time which the market is often not able to accept. A particular problem when it comes to the supply of laser edges are the minimal quantities required for small production runs, as the manufacture of co-extruded edging materials requires the placement of minimum order sizes. To allow users to produce even small quantities for **laserTec** processing, HOMAG offers a new solution.

Gain flexibility with the new edge precoating machine KBE 100:

With the KBE 100 edge precoating machine, furniture manufacturers have the opportunity to prepare conventional edge bands for processing with **laserTec**.

Coils of the required edge decor are unwound in the KBE 100, coated with a special adhesive, and then wound up again. This means that any optional edge band with the required decor finish can be made available immediately for processing with **laserTec**. Using the KBE 100 allows the furniture manufacturer to make available its own laser edges around the world at short notice as and when required.

HOMAG laserTec – a whole new era in edge processing

Ever more stringent quality expectations in the furniture industry and demands for more efficient use of resources in production are posing tough new challenges for edge banding. With the laser joining technique, HOMAG has developed the next technology generation for top-quality narrow edge sealing. HOMAG laserTec is the key to more successful production.

The HOMAG Group has been granted patents and industrial property rights for laser joining by the German Patent and Trade Mark Office. International patents are pending.

Technical data laserTec *	Throughfeed plants	CNC processing centres
Feed rate	up to 30 m/min. (60 m/min. optional)	up to appr. 15 m/min.
Workpiece thickness	40 mm 60 mm optional	60 mm --
Diode laser with wavelength	980 nm	980 nm
Laser safety class	1 (with protective equipment)	1 (with protective equipment)
Number of edging channels	1 / 2 / 6 / 12 / 24 / 48	1 / 2 / 6
Edge thickness:		
Coil material	up to max. 3 mm	up to max. 3 mm
Fixed length material	up to max. 6 mm optional, depending on magazine	up to max. 3 mm

* Depending on edging material