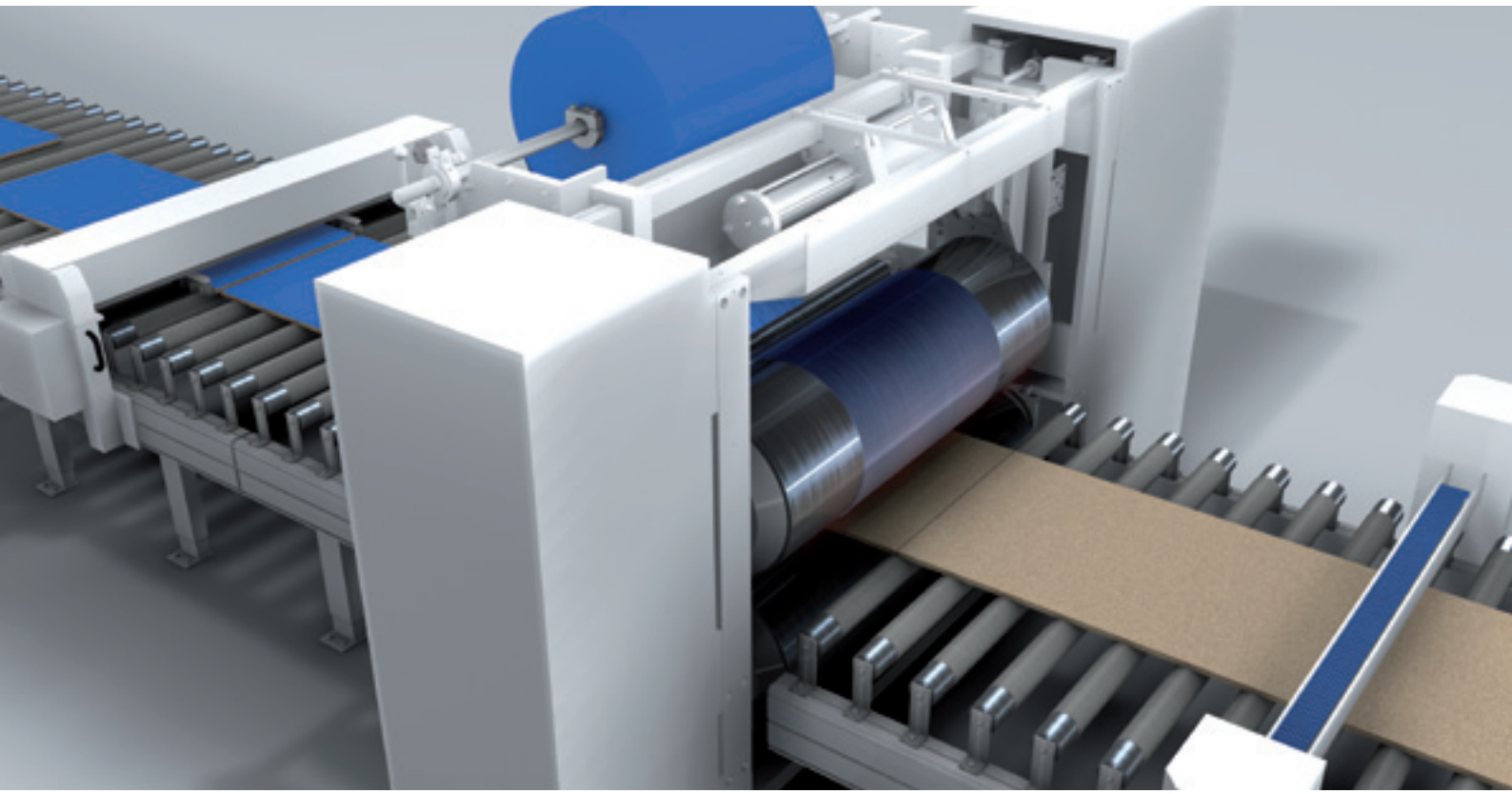
reacTec – laminating technology of the future



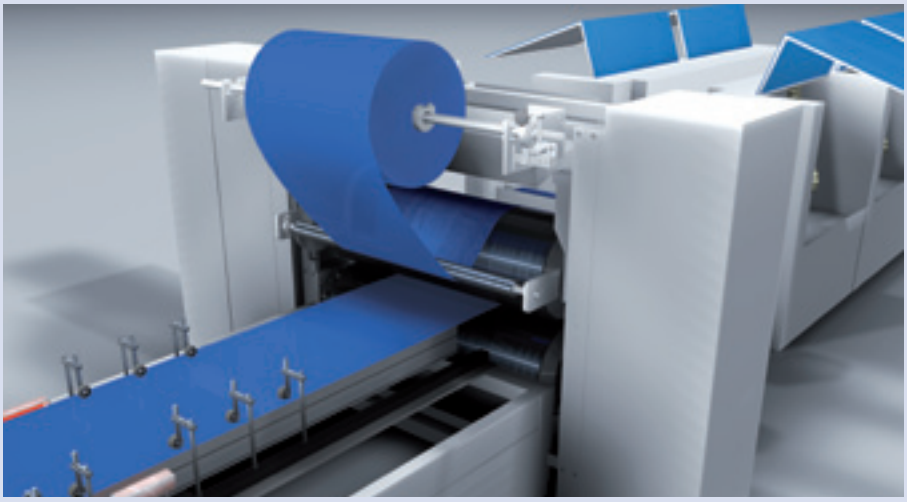
The best of everything for everyone

Laminating is now so much more than just laminating

reacTec **lamination, an innovative process solution for surface and edge coating, has redefined quality and economy in the production of furniture and structural elements. The reac**Tec **process involves reactivating coating material pre-treated with adhesive by the dual effects of heat and pressure, with subsequent application onto panels.**

New lamination method reac Tec **offers an array of impressive benefits**

reacTec was developed by the HOMAG Group in close cooperation with Henkel and Nordson. Compared to the three familiar gluing methods involving urea resin adhesive, dispersion adhesive and hot-melt, the new **reac**Tec laminating method scores from almost every point of view. This innovative method combines the benefits of the hot-melt technique with the advantages of the urea adhesive method.



The basis of the reac Tec **method**

- New hot sealing adhesive which complies with every conceivable requirement in terms of temperature and moisture resistance, permitting an outstanding adhesive bond
- New glue application system based on a new generation of wide-slot nozzles which allow work with application volumes of 20 g/m^2 and upwards. This makes a major contribution towards cost saving
- New mechanical engineering concept in the field of application and process technology

reacTec **– economical laminating method of the future**

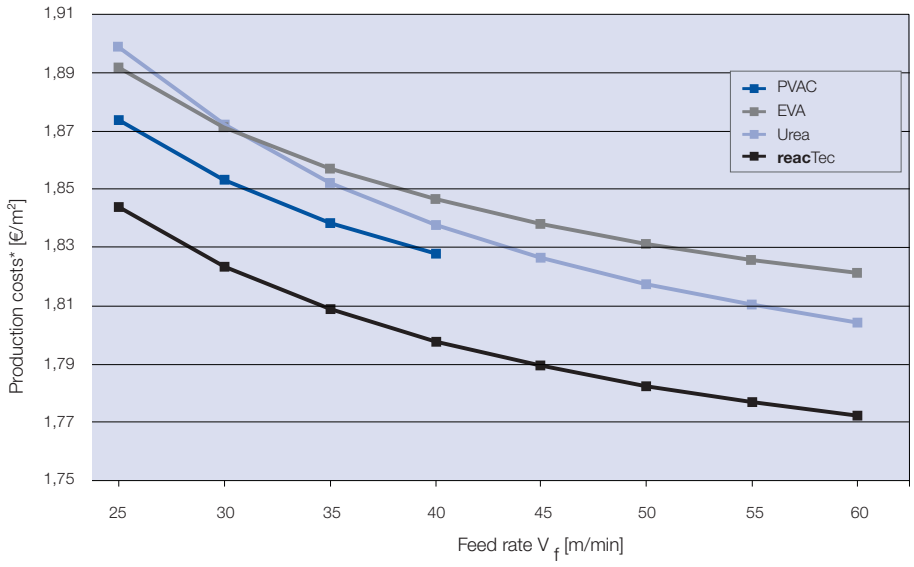
reacTec is highly impressive in application both in terms of economy with favourable production costs and ecologically due to its high environmental compatibility.

From the ecological viewpoint, **reac**Tec offers a number of key benefits: Its energy requirement is 50 % lower compared to urea, and the adhesive requirement around 60 % lower compared to EVA.

ecoPlus

Optimum product characteristics

Unlike water-based dispersion adhesives, **reac**Tec uses no water during the application process. This eliminates the possibility of swelling in the wood-based materials used and so ensures a marked improvement in surface quality. The new HOMAG Group **reac**Tec method presents the ideal combination of process stability and physical characteristics, lending **reac**Tec the potential to be the most economical laminating process and the gold standard for the future.



Sample calculation

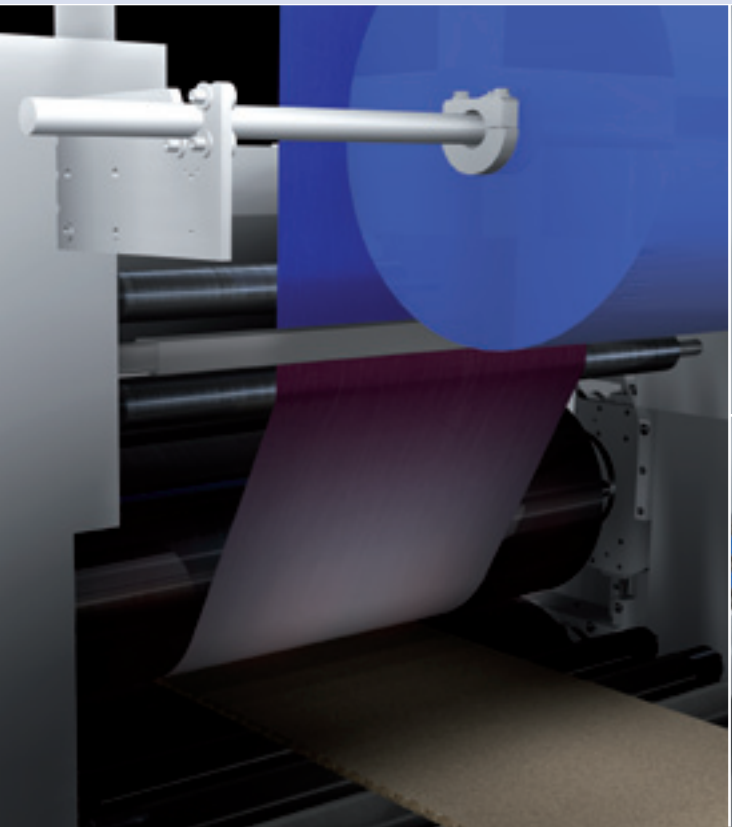
Reduction of the application volume from 50 to 20 g cuts the amount of glue used by 4 tons per day.

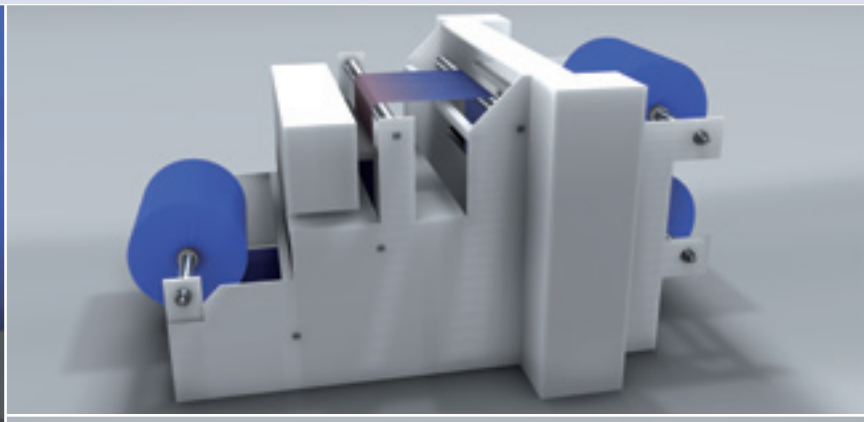
This means: 1 truck fewer on the roads every week and 400 000 € less spent on adhesives every year.

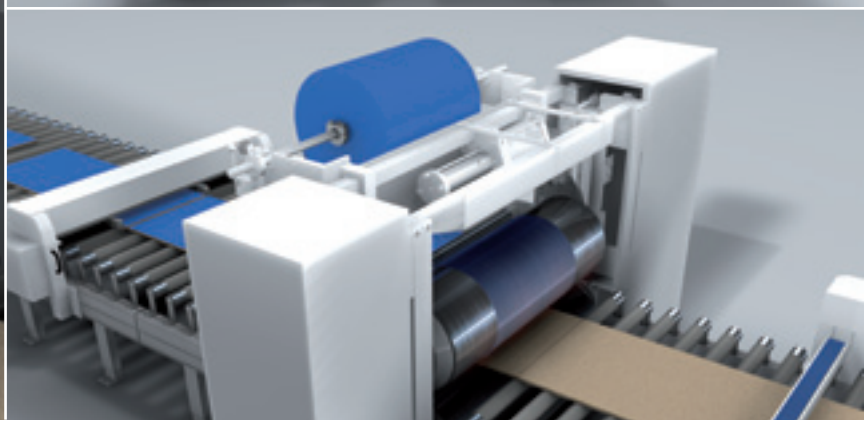
* Inclusive of substrate and top layer material and taking into account the rejects quota

More flexibility due to inline and offline methods

Depending on your requirements, reac Tec **is supplied in two different process methods. Do you aim to both apply the adhesive, laminate and wrap in one and the same plant? If so, the inline method is for you. The offline method entails separate coating and laminating processes. This means that production can take place in different locations.**







reacTec **Inline method**

Spreading the adhesive onto the coating material and the application of decor film onto the workpiece are carried out in a single plant. This involves using customarily available material coils with a width of up to max. 1 300 mm. The method is ideal for low-cost production of large batch sizes.

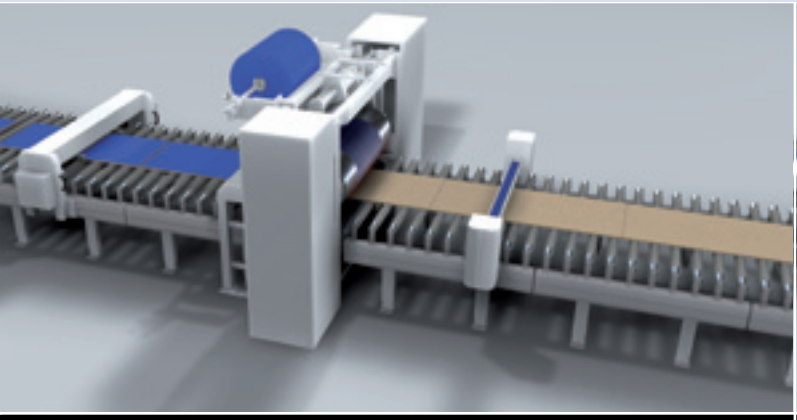
reacTec **Offline method**

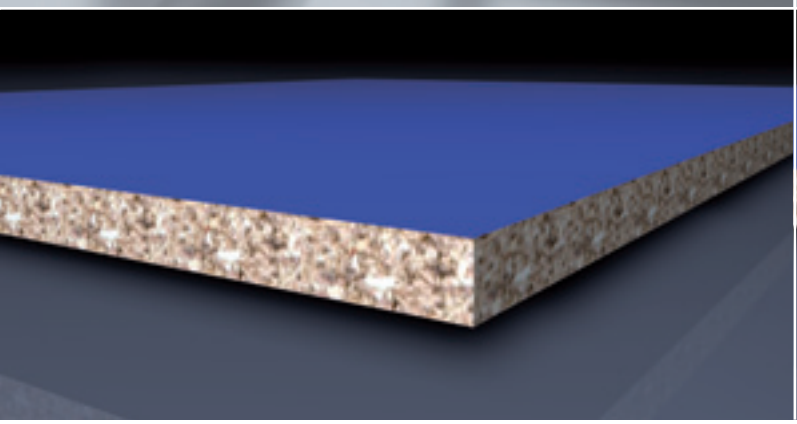
Here, the adhesive is coated on the decor film in a separate machine. The second machine applies the coating material onto the workpieces. The two machines required for these processes can be located at different sites. This means for instance that a paper manufacturer can coat its paper rolls and the furniture manufacturer can laminate its workpieces with the coating material offline using **reac**Tec. The coating is reactivated by a heated laminated roller. This method offers a high degree of flexibility coupled with minimal maintenance costs.

Coating competence for surfaces and edges

The reac Tec **laminating method offers you a range of impressive benefits for coating both the surfaces and edges of workpieces. You manufacture products with a top-quality optical appeal, as well as achieving an excellent cost-to-performance ratio and reducing your costs.**

reacTec **for coating surfaces**

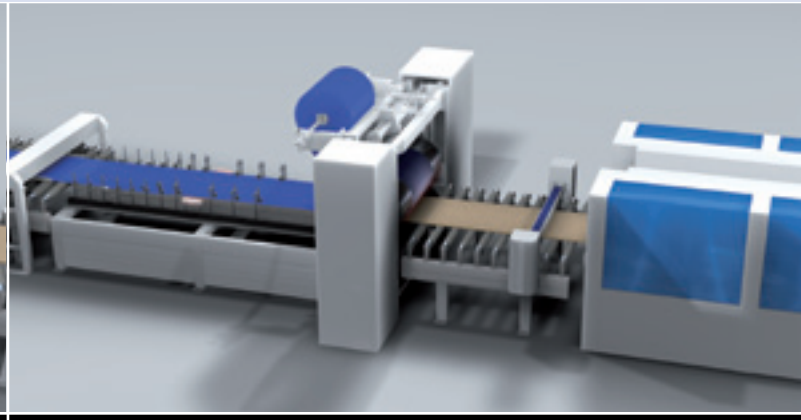


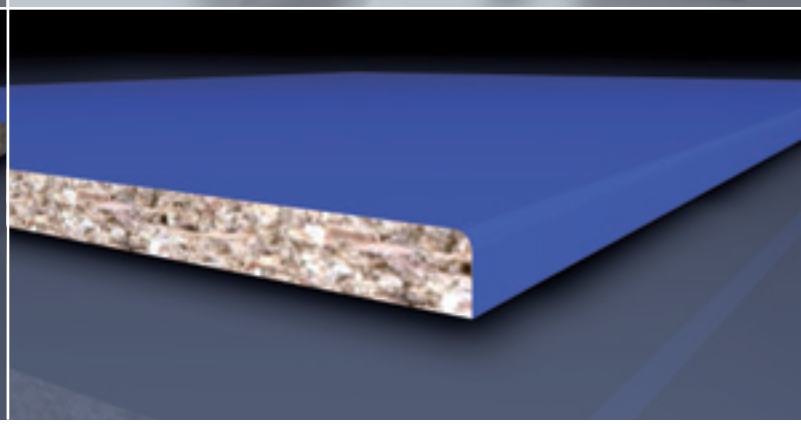


Surface laminating with reac Tec

Surface lamination using the **reac**Tec method takes place continuously with either film or paper.

Coat surfaces and edges with reac Tec **(complete**Line**)**





completeLine **with reac**Tec

completeLine plants are capable of sizing raw panels, coating the surface and simultaneously sealing the narrow surface of the longitudinal side. The material being laminated is wrapped with film or paper in a continuous process. The result: a workpiece which has no visible join along the longitudinal edge – with an identical appearance of the face and narrow surface.

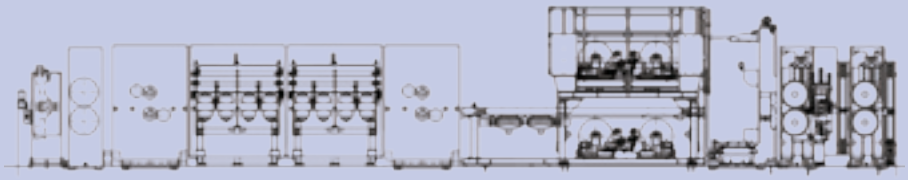
Benefits:

- High performance through use of the continuous process
- Excellent surface quality in terms of hardness, heat and moisture resistance
- Optically top quality workpieces produced using low-cost substrate material

A comparison of laminating methods

Compared to the familiar laminating method using urea resin glue, dispersion adhesive and hot melt, reac Tec **wins hands down. Due to its favourable production costs, reacTec is the most economical of the laminating methods. Because it uses only minimal energy and adhesive, this system also offers impressive green credentials.**

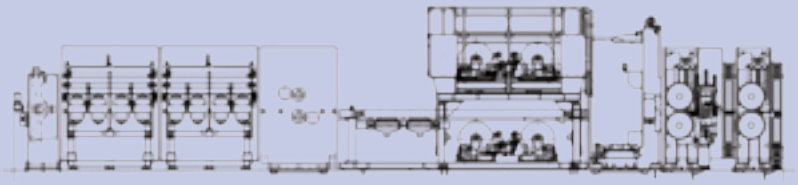
UF



Urea process:

- Cost-effective, compliant with the highest requirements
- For papers and films
- Water and heat-resistant
- Pressure-resistant

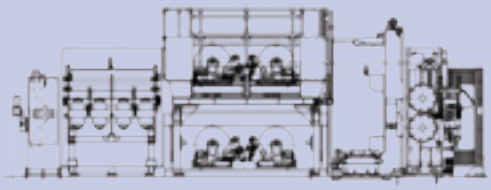
PVAC



White adhesive process:

- Universally suitable for CPL and thermoplastic films
- For moisture-resistant and temperature-resistant furniture, e. g. bathroom and kitchen furniture

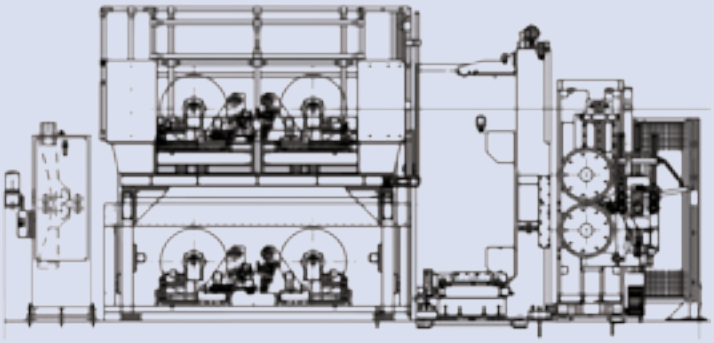
EVA



Hot melt process:

- User-friendly for series production processes
- For surface laminating and wrapping
- High feed rates
- Excellent surface quality

reacTec



The new reac Tec **process:**

- Moisture-resistant similar to urea
- Temperature-resistant similar to urea
- Bond line hardness similar to urea
- Operating convenience as for hot melt glue
- For the thinnest coating materials
- No formaldehyde emissions

Gluing process – selection criteria	UF	PVAC	EVA	reacTec
	Urea formaldehyde	Poly-vinyl acetate	Ethylene-vinyl acetate	Inline/Offline
	Urea resin adhesive	**Dispersion adhesive**	**Hot melt glue**	**Hot melt glue**
Quality				
Water resistance	+	0	-	+
Heat resistance	+	0 +	-	+
Pressure resistance / surface hardness	+	0	-	+
Chip swelling	0	-	+	+
Suitable for:				
Decor paper	+	+	+	+
Thin laminate	-	+	0	+
Thermoplastics	0 -	0 +	+	Work in progress

Gluing process – selection criteria	UF	PVAC	EVA	reacTec	reacTec
	Urea formaldehyde	Poly-vinyl acetate	Ethylene-vinyl acetate	Inline	Offline
	Urea resin adhesive	**Dispersion adhesive**	**Hot melt glue**	**Hot melt glue**	**Hot melt glue**
Investment costs	-	+	+	+	++
Space requirement / plant length	-	0	+	+	+
Energy input	-	-	+	+	++
Production speed	+	-	+ +	+ +	++
Production safety	-	-	+	+	++
Insensitivity to different production speeds	-	-	+	+	+
Possible to laminate surfaces	+	+	+	+	+
Possible to laminate edges	-	-	+	+	+

++ Very good
+ Good
0 Satisfactory
- Adequate

Technical data and photos are not binding in every detail. We reserve the right to make changes.

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A VDMA campaign

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