Competence in LAMINATING









Welcome to the world of MEYER machines. We appreciate your interest in our products, system solutions, and services.

Since 1949, we have been writing internationally successful machine history when it comes to subject of bonding, coating, pressing, or molding.

We welcome the opportunity to convince you – visit us at our facility and take the opportunity to find the most suitable solution for you in our Competence Center.

As a family owned enterprise, we see the commitment to combine tradition and innovation - let's bond!

Foundation:1949Production area:15,000 m²Employees:170



#### **FUSING** LAMINATING SCATTERING KFK series - C Continuous fusing machines PST series - Powder scattering System RPS series - L - E, EL, X - Coating line - XL - E1 - P - E2 - E2 Leather - V Options See brochure "Scattering" - E4 - L. Discontinuous fusing machines Options - Tensile stress control - Ascending batch winder - Big batch winder - Electric winder - Handling systems - Material storage - Cross cutting device - Longitudinal cutting device See brochure "Fusing" Options - Edge trimming

#### PRESSES

- Thermo-molding - Thermo-stamping - Thermo-consolidation - Thermo-transfer



#### SERVICES

- After sales service
- Competence Center for customer trials
- Contract manufacture
- Contract laminating





solutions SYSTEM

The top belt unit can be adjusted by means of precise spindle function to adapt the gap perfectly to the material's thickness and product to be laminated.



Temperature Pressure Our flatbed laminating machines are continuously working, double belt presses with integrated contact heating and contact cooling.

The materials to be laminated are gently heated – the individual lengths of the heating zone achieve an optimal bonding with strong adhesive strength. After heating up the material, it is pressed by means of calander rollers or, per request, calibrated to a defined thickness.

Additional stabilization is reached by the cooling process inside the machine. Because of high precision workflow, flat passing, as well as precise height adjustments high-strength blanks up to a thickness of 150 mm can be laminated.

We look forward to advising you on the makeup of your machine as well as on the selection of your bonding materials – together we will find the optimal solution in our in-house Competence Center.

## KNOW HOW

With our lamination system solutions, we normally use thermoplastic adhesives as they provide a simple, environmentally friendly and, for almost any application, usable solution. In addition to environmental and health aspects, recyclability, purity of variety or fogging become an important matter.

Depending on the individualized specifications, alternative adhesive systems such as reactive adhesive can be run with our machines. There are four types of adhesives which can be used for composite production:

- Thermoplastics

- Reactive adhesions

- Self-adhesive systems

- Solvent adhesives



Powder



DESIGN

system modules



EZ 6

Zone 3

F7 8

EZ 4

Zone 2

Zone 1

### ntral ck change ments

Our heating modules are designed as "Quick Change" modules (precisely manufactured aluminum elements with special surface coating) for time and cost-effective exchange.

It is possible, depending on the specifications, to temper the zones, e.g. 9 zones in a top heating system as well as 9 zones in a bottom heating system, i.e. a total of 18 zones. Depending on heat requirements, we offer: Interval heating system (a.), Contact heating system (b.) or Contact PLUS heating system (c.).

The heating arrangement is characterized by three central zones flanked by three edge zones (EZ). This is the same for top and bottom heating systems resulting in 18 control zones for optimal temperature control.

Our heating and cooling system consist of individually spring-mounted elements adapting perfectly to the material to be laminated thus assuring a homogeneous heat transfer.

Spring element Heating element Material to be laminated

Established and proven modular design of the KFK series allows machine widths between 400 mm (15.7") and 3,100 mm (122.0").

Top heating system

Bottom heating system

EZ 5

400 mm (15.7") 600 mm (23.62") 800 mm (31.5") 1,100 mm (43.3") 1,300 mm (51.1") 1,500 mm (59.0") 1,700 mm (66.9")

## KNOW-HOW



The top belt unit is adjusted precisely by means of motorized spindles in order to adapt the gap between the belts perfectly to the material to be laminated.

In addition, the pressure and level of the top pressure roller can be adjusted for perfect calibration results. Constructive skills with the experience of over 6 decades of machine development and implementation have solidified our reputation as a reliable machine manufacturer worldwide.

Our in-house developed and partly patented modular solutions are characterized by longevity and, just in case, by easy and time-optimized exchangeability. This proverbial MEYER quality ensures our customers economical use of their machinery.



Stable and steady run of conveyor belts

Top: chain guided conveyor belts as reliable solution allowing the installation of very thin belts

Bottom: proportionally tracked conveyor belts for easy belt change

Modular design and constructive skills enabling a time-optimized belt change of installed systems with only short downtimes.





## KFK-C

Flatbed laminating machine

y suitable to lamixtiles, textile-like s rigid blanks with be processed witlt of an integrated also be coated.

#### Compact solutions with the skills of the Great



The system KFK-C is optimally suitable to laminate multilayer materials. Textiles, textile-like and flexible materials as well as rigid blanks with a thickness up to 50 mm can be processed without any difficulties. As a result of an integrated cooling system, materials may also be coated.

Furthermore, this machine is suitable to calibrate voluminous materials on account of the 4-fold height adjustment and adjustable calibration rollers. Adjustable sloped inlet.

The installation of endless belts is possible. The belts are proportionally tracked resulting in minimal cross movements



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 Technical data:		
Width (mm)	1,100 1,500 1,900	
Height adjustment	quadruple, 0 to 50 mm (1.96") manual	
Heating zone Interval (mm)	1,550	
Cooling zone Interval (mm	980	
Running speed (m/min.)	1 to 15	
Versions	Integrated heating and cooling zone Only with heating zone Only with cooling zone	



Designed in sturdy frame construction, we install separately spring-mounted elements, large roller diameters for precise pressure and combine chain guided, servo-driven conveyor belts.

The height adjustment as well as level adjustments of the top pressure roller is motorcontrolled by means of a precisely adjustable lifting spindle. All relevant parameters can be set and controlled via proven SIEMENS touch control.



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#### The solid solution for multi-purpose use



Technical data:					
Width (mm)	1,100	1,300	1,500	1,700	1,900
	2,100	2,300	2,500		
Height adjustment	0 to 150 i	mm (5.90")	)		
Heating zone (mm)	1,350				
Cooling zone (mm)	1,150				
Control zones (number)	18				
Running speed (m/min.)	0.5 to 30				
Options	Endless t Length o Chilled p	oelt f loading t ressure ro	oelt llers		



KFK-EL

Designed in sturdy frame construction, we install separately spring-mounted elements, large roller diameters for precise pressure and combine chain guided, servo-driven conveyor belts. The reliable and powerful heating system can be designed in three different versions of heating capacities.



#### Higher energy input for increased demands







The combination of a reliable and powerful heating system with an effective cooling system allows processing of challenging materials with increased cooling demand.

#### Heating and cooling in perfect balance







Designed in sturdy frame construction, we install separately spring-mounted elements, large roller diameters for precise pressure and combine chain guided, servo-driven conveyor belts.

Integrated heating and cooling zone / Only with heating zone /

Only with cooling zone







## High-pressure double-belt press

This precise system development represents the processing of organo sheets, fiber reinforced composites, and composites. Due to the consistent design for high pressures and high temperatures as well as the modular design, this is the economical alternative to the traditional steel belt lines.

Technical highlights are coated steel elements, hydraulic belt tension, hydraulically generated high pressure by means of pressure rollers, and pneumatic surface pressure onto the material to be laminated.

#### Hydraulic belt tension

Extensive insulation

Large drive rollers

Pneumatic surface pressure

Heating and cooling elements made of steel transfer significantly higher forces onto the material to be laminated than conventional standard machines.

#### Highest pressures at high temperatures



\*Max. working temperature for PTFE coated belts: 250°C \*\*Max. pressure using double shell pressure rollers

Technical data:					
Width (mm)	1,100	1,500	1,900		
Working width (mm)	1,000	1,400	1,800		
Length heating module (mm)	1,500, extendable in	1,500 mm modules			
Length cooling module (mm)	1,500, extendable in	1,500 mm modules			
Heating power / module (kW)	96	131	166		
Temperature max. (°C)*	300	300	300		
Line pressure of rollers max. (N/mm), rubber-coated	70 (70) **	70 (70)**	37 (55)**		
Surface pressure of rollers max. (N/cm²), rubber-coated	260 (260) **	260 (260)**	170 (220)**		
Pressure 800 mm zone max. (N/cm²)	10	10	10		
Pressure in all 4 zones max. (N/cm <sup>2</sup> )	3.6	3.6	3.6 <b>13</b>		
Total pressure max. (N/cm²)	14.6	14.6	14.6		
Height adjustment	0 - 150 mm (5.90")	0 - 150 mm (5.90")	0 - 150 mm (5.90")		
Dimensions L x W x H (mm)	6,300 x 2,600 x 2,350	6,300 x 3,000 x 2,350	6,300 x 3,400 x 2,350		
Weight approx. (kg)	19,000	22,000	25,000		



KFK-V

Technical data:

Working width (mm)

Length / zone (mm)

Heating power (kW)

Weight (kg)

Length of all zones (mm)

Thickness lamin. mat. max. (mm) 5 Running speed (m/min.)

Temperature max. (°C)

Pressure / zone max. (bar) 0.8 Pressure in all zones max. (bar) 3.5

800

250

800

4,000

0.1 to 7

7,000

Dimensions L x W x H (mm) 5,000 x 2,500 x 1,700

continuous vacuum laminating machine

with high zone pressures.



#### The patented solutions for vacuum lamination

Flexible thin films, functional textiles or composites - even with height differences in the material to be laminated - are processed in each of the 5 zones under vacuum conditions avoiding air pockets in a continuous production process in an effective and energy-saving way.

Optimal laminating results ensure the zones, separately adjustable in vacuum and temperature, which are individually designed as heating or cooling zones depending on the specifications. Additionally, they can be equipped with IR heating elements.



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KFK-L

We developed this laboratory laminating machine for smaller sizes as well as for manageable volumes. This stand-alone version represents a compact solution with one heating zone, equipped with separately spring-mounted elements and an integrated cooling zone.

#### Small system solution – modular add-ons



IR heating field

The level of the pressure rollers as well as the pressure are individually manually adjustable. Steady guided conveyor belts and the intuitive operator guidance by means of the proven SIEMENS control represents new quality for laminating machines.

Winder

Using extension modules for roll-off and winders, scattering, as well as IR heating fields makes it a complete laminating line.

Powder / Granulate

scattering device

Roll-off devices

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Technical data:		<b>*</b>	
Width (mm)	400	600	
Height adjustment	0 to 25 mm (0.98")		
Heating zone (mm)	470		
Cooling zone (mm)	360		

0,2 to 9

Options

Running speed (m/min.)

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For more efficiency and cost-effectiveness

With experience and conviction, we develop the optimal production lines according to the specifications of the project. Take advantage of our decade-long accumulated know-how.

#### Web and foil lamination



#### Powder lamination



#### Thermo lamination





# **COMPETENCE CENTER**

In our well equipped Competence Center, all relevant parameters to achieve the perfect customer solution can be worked out together with our engineers. On site, we will find the ideal solution together – let's bond!

#### Thermo lamination of granulates



#### Lamination with separate cooling unit

# Roll-off device Heating zones Cooling zones Flatbed cooling machine Winder Boging Cooling to Cooling zones (in the state of the state o

#### Powder coating with calander

Ascending batch winder with dancer control of tensile stress



**OPTIONS** 



Tensile stress control by means of measuring and expander rollers





Electric winder with tensile stress control



Big-batch winder with dancer control of tensile stress



Automatic filling device for powder scattering device

18

## Production lines MODULES

#### Powder scattering device with IR heating field



Our in-house developed modules and optional components increase the safety, economic efficiency and relieve the operator as far as possible.

It is our goal to develop together with you, the ideal and most efficient configuration for your laminating application. We take pleasure in comprehensively advising you – just let us know your preferences. For perfect production arrangement



Edge trimming with adjustable width

Longitudinal cutting device









Cross cutting device, moving, with circular or pulling knives

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System solutions for bonding technique for

- Garment industry
- **Textile industry** (textile lamination, powder coating...)
- Technical textiles (powder coating, impregnation...)
- Automotive interior and acoustics
- Composites (honeycomb sandwich sheets, fiber reinforced composites...)
- Medical (consolidate, calibrate, membrane foil coating...)

Together we are able to configure your ideal machine concept during free initial trials. Visit our **Competence Center**.

We look forward to the challenge.

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