



Siempelkamp

Maschinen- und Anlagenbau

Complete plants for the wood-based panels industry



www.siempelkamp.com

Everything from one source: An integrated portfolio for complete production plants

Siempelkamp products and services are reliable. 250 lines installed and operating with ContiRoll® presses are a convincing reference. Our equipment ensures customers worldwide competitive advantages and has made Siempelkamp the world market leader.

The markets and general conditions in which our machinery is used are highly diverse. The reasons why customers decide to purchase Siempelkamp equipment are similar: Our experience with the technology and engineering of machinery and lines for the production of wood-based boards is unmatched, the quality of our products is high and our teams provide reliable results. Furthermore, all products and services are combined to an effective union under the Siempelkamp umbrella.

Siempelkamp has coherent solutions for your needs. If you let us know what type of wood you are processing and how many cubic meters of board you would like to manufacture, we will build you a complete production line for particleboard, MDF/HDF, door-skins, wood-fiber insulating boards, transformer boards or OSB.

Full service is no empty phrase for us. Together with our subsidiaries and stockholding companies we develop complete plant concepts. If necessary, we also provide for existing plant components as well as customer-provided supplies. As our customer you benefit from many compelling advantages:

Your benefits:

One single-source provider – uncompromising technology – quick ramp-ups!

No matter whether you order our complete scope of supply or part of it, our support is reliable, efficient and can be customized for both options:

- innovative machine concepts developed by our research and development department
- technical and engineering know-how ranging from the project planning to the design, production, assembly, start-up, and optimization of your equipment
- best value chain – we manufacture by ourselves – we make no concessions to quality and reliability!
- production facilities close to the customer (Krefeld, Kempen and Bad Kreuznach/Germany, Colzate/Italy, Blatnice/Czech Republic, Wuxi/China) and worldwide offices for after-sales service

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Pre-engineering

You would not purchase a production line every day and if you concluded a contract, you would decide in favor of a long-term business relationship. You should take your time to make such a commitment.

During the pre-engineering phase our customers are offered the opportunity of a first clear impression of our approach and competence in planning. Do you need the technical data that are necessary for obtaining your specific approval planning, for instance, in the field of environmental protection? We can assist you in gathering this data. We will also support you with the relevant information needed to figure out the optimal share of parts that can be produced locally. Furthermore, we will adjust our machinery and lines to your conditions at the construction site.

Owing to our pre-engineering the first economic efficiency calculations for the feasibility study and the business plan are also put on a firm footing. We supply you with the exact total investment costs as well as with the data that helps you calculate the budget for the parts that are acquired locally.

Build yourself a solid foundation for the assessment of your scheduling, financing, investments and rely on a trusty partner in the long run – make your decision in favor of Siempelkamp!

Financing support

In addition to plant technology, financing support is another support that we offer to guide your business in the right direction: Especially in current times, reliable financing is important, however,

often it is hard to find. We accompany our customers until financing is set, for example, by initiating contact with banks, public authorities and associations.



- ▶ 3-D product development on the screen
- ▶ Strong financing from the start



Complete plants from one source, using MDF as an example





Siempelkamp engineering: on the right track from the very beginning

Siempelkamp planning experts contribute decisively to the high technical level of our equipment for the making of wood-based products. These experts also lay the foundation for designing equipment that is economical and competitive. Our background includes over 60 years of experience and approximately 500 planned plants for the wood-based panels industry worldwide.

While sixty years ago the daily capacity on a flax line amounted to 120 m³ per day, today we design and build lines with a daily capacity of 3,000 m³ and more.

For this purpose our specialists offer a complete program including:

- technological consulting
- pre-investment studies including raw material and energy need calculations
- planning of complete production lines for all wood-based materials
- technological start-ups
- optimized production processes from the technological and economical point of view
- modernization, extension and modification of existing plants

Your benefit:

- minimal start-up periods, quick start-ups, steep ramp-up curves due to our applied knowledge from the start
- best possible use of available raw materials and resources
- technologically and economically optimal plants
- full service from the concept to the start-up



From wood-yard to finished particles: Front-end technology for particleboard plants

Complete plants starting from wood-yard to packing of the finished boards are Siempelkamp's specialty. Material preparation is very important within this arrangement based on the "all from one source" principle. Siempelkamp offers the complete range of machinery for the production of top-quality particles. Our drum flakers, knife-ring flakers, hammer mills or top layer mills help to ensure the production of premium chips and flakes. For shredding recycled woods residual wood shredders and hammer mills are available.

Our screening and separating units excel due to their special cutting technology. Smooth handling of flakes is provided by means of our disc, roller, oscillation and drum screens. Combined with innovative conveyor technology Siempelkamp operates as full-range supplier in the field of production of excellent top and medium layer flakes. For short-term buffering of the flakes bin and silo installations also form part of the scope of supplies as well as metering units feeding the downstream equipment.



▲ Knife ring flaker

Top: Oscillating screen ▶
Roller separator ▶

◀ Sifter
◀ Bottom: Dry chip cleaner



Your benefit:

- sophisticated complete scope of supplies
- coherent mix of longtime technical and planning know-how
- perfect synergy and long life cycle of all components
- low production costs

Production of chips for MDF boards

Also for the production of premium MDF boards Siempelkamp has excellent know-how with regard to wood preparation characterized by high performance, low production cost and top-quality chips. This know-how already starts with the milling technology: For debarking of round wood Siempelkamp provides special rotor debarking systems; our drum chippers produce top-quality chips

owing to optimized chipping geometry and material feed. Short-term storage is exclusively ensured by means of bins or silos with different discharge systems as push-floor or live-bottom dischargers including metering and rotating screws. An exactly controlled discharge ranks first.

Your benefit:

- low production cost and high availability
- easy to operate
- low wear and reduced maintenance

Knife of a drumchipper ▶
Bottom: Drumchipper ▶

▼ Moving floor



Excellent milling technology for OSB production

For the manufacture of premium strands Siempelkamp developed the world's biggest strander. This "giant" (diameter of 2,500 mm – cutting width of 850 mm – 56 knives) achieves a strand throughput rate of 45 t/h bone dry with a chip thickness of 0.65 mm. Further features of

the Siempelkamp strander are shown by the new design. The front carrier ring is equipped with a set of high-quality wear segments. The improved knife arrangement additionally provides for improved strand quality. Best conditions for your OSB production.



Your benefit

- high throughput rate combined with top quality
- reduction of fines
- maximum operating efficiency due to minimized downtime and improved easier maintenance
- maximum cutting precision

- ◀ Debarker
- ◀ Bottom: OSB strander

- ▶ OSB strander



High-performance machines for efficient gluing

The modular concept of the Siempelkamp gluing and chemical treatment systems as well as metering and application systems does not only provide for an optimal cost-benefit ratio, but also for the best possible finished product. A homogenous and exact metering of the paste as well as optimal wetting of the particles are prerequisites for a board with good mechanical properties.

Our metering bins are high-performance machines ensuring the exact feed of the chips to the downstream gluing units. The improved levelling of the filling height and precise scales to control the metering make gluing even more efficient. The different machine sizes are perfectly matched to the plant capacity.

Siempelkamp's integrated chemical treatment systems serve the purpose of exact treatment and metering of glues and other formulations. These glue mixing stations are stocked with load cells in the treatment area, equipped with latest flow meters and tested in the Siempelkamp laboratory.

Owing to our gluing mixers long intervals of exposure thus ensuring the thorough mixing are achieved by means of an extended mixing chamber and reduced operating speeds. Due to reduced centrifugal forces chipping is minimized: new and easy-to-align mixing tools help to provide for quick and optimal guidance of the mixer adjustment.

▼ Top: Glue kitchen and dosing system

▼ Bottom: Blender for particles



MDF glue blending system: Optimal fiber wetting thanks to Ecoresinator

Owing to the innovative Siempelkamp glue blending system Ecoresinator it is given proof that up to 20% of resin can be saved through the special nozzle technology made by Schlick and the use of superheated steam in comparison with the traditional blow-line gluing process. Siempelkamp is your supplier for your MDF plant providing a ready-to-connect and complete glue injection system including switch cabinet and automation software. As a result thereof the classic advantage of the blow-line concept – very homogenous glue distribution – is combined with low consumption! In addition to that the Ecoresinator is suited for subsequent upgrade of an existing plant and can be installed in your line within a very short time.

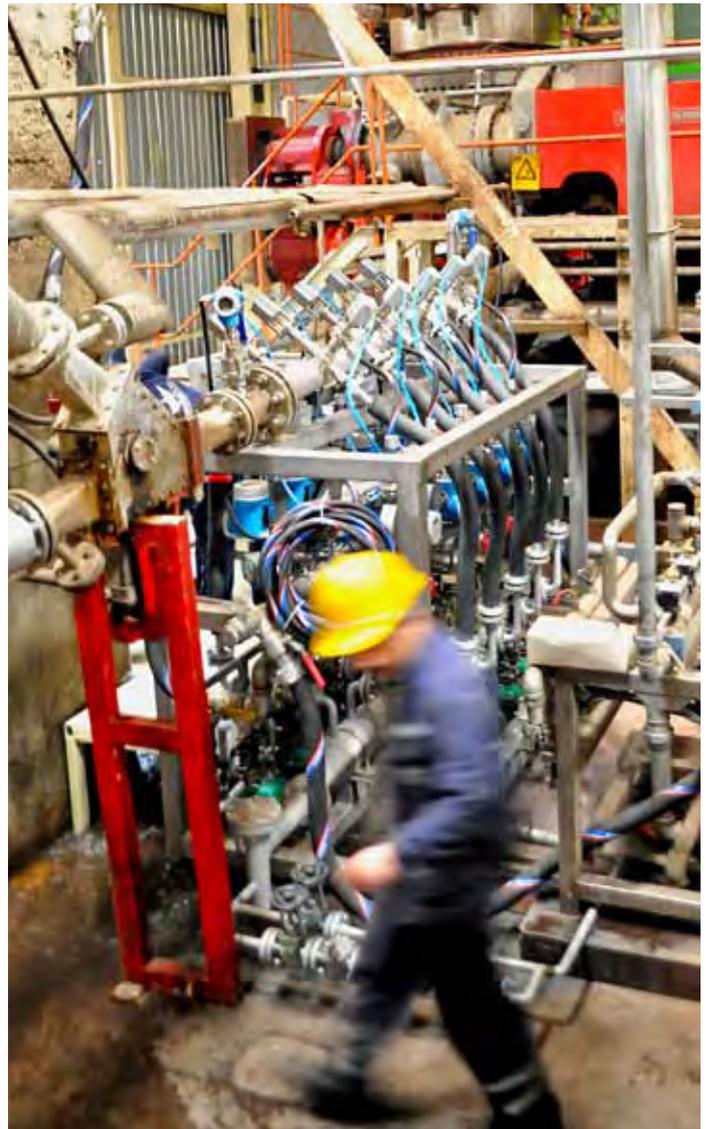
Your benefit:

- upgrade of existing plants within a very short time
- optimal cost benefit ratio due to resin savings of up to 20%
- exact metering of the paste thanks to intelligent control
- optimal homogenous fiber wetting

▼ Top and bottom: Ecoresinator



▼ Ecoresinator at Starwood, Turkey



Energy plants

Energy plants: The focus is on efficiency

Over 24 years of market experience and more than 60 operating energy system concepts ranging from 12 to 85 MW are first-class references: Büttner stands for integral engineering concepts for the supply of stable process heat in the form of thermal oil, steam and hot gas used particularly in the wood-processing industry.

No matter whether they are used for the production of MDF, particle-board or OSB: Our energy plant concepts are customized to your needs and general conditions. This incorporates the economical handling of your resources because Büttner energy plants utilize waste materials from panel-board production to generate most of the energy required to run a plant: thermal oil for the press, steam

for the refiner and flue gases for the dryer. To provide maximum efficiency, our plants can be fueled by anything from bark and start-up fibers to sander dust and rejected panels or low-grade fuel from outside the plant such as recycled wood material unsuitable for production.

Turnkey combined heat and power generation plants are also integral part of the portfolio. This is more than a trendsetting concept because these biomass plants offer tremendous ecological advantages. We provide all services ranging from the planning of these plants and preparation of the biomass to the steam turbine including training and documentation.



Your benefit:

- economical handling of resources – reduced costs by using waste material from panel-board production
- higher efficiency for existing energy plants through targeted upgrade concepts
- lower CO₂ emissions by using biomass power plants – as a result thereof you depend less on energy imports



Drying of particles and fibers: We have the right solution!

The Büttner range of products includes in the field of dryers flash-tube pre-dryers, directly and indirectly heated drum dryers for particles and strands as well as single-stage and 2-stage fiber flash-tube dryers which are used for industrial drying on a large scale. All systems focus on energy savings and a reduction of the exhaust air. The components of a drying plant include our in-house developed heating systems and burners as well as automation systems according to the latest technology.

As part of the Siempelkamp portfolio the dryers also contribute to closing our service chain. Just as integrated is the related service. From the planning and construction of individual dryer systems to the delivery of component parts and economic manufacture of large components such as drums close to their final destination including assembly and start-up – an all-inclusive scope of supplies and services!



Your benefit:

- advance innovation due to in-house testing facility
- drying capacities of 3 to more than 60 t/h bone dry
- low specific energy consumption
- proven component parts and dryers with high safety standards
- individual solutions for different exhaust gas cleaning systems
- reduced transport costs by manufacturing locally including quality control
- worldwide organization and specialized handling of challenging transports to your construction site
- short assembly and start-up times due to our experienced specialists
- increased performance and upgrades for your existing equipment from all manufacturers



- ▲ Fiber dryer
- ◀ Energy system

Particle dryer ▶

The forming line with Siempelkamp forming systems

A wood-based board is only as good as the forming systems that form the mat. No matter whether you process particles, fibers or strands – we have developed comparably outstanding forming systems with comprehensive research effort for each material.

Together with the ContiRoll® press these state-of-the-art systems represent technically and technologically matured machine units. High-quality wood-based boards satisfying your most challenging customers are the result!



◀ Surface layer wind forming machine



◀ Mechanical particle mat-forming machine

Siempelkamp mat-forming systems: coherent concepts

System	Surface layer	Core layer	Method
Particleboard	WindFormer	CageFormer	classic
	CrownFormer	CrownFormer	mechanical
	CrownFormer	CageFormer	combination
	WindFormer	CrownFormer	combination
MDF	StarFormer	–	mechanical
OSB	DiscFormer	FinFormer	classic
CSL/OSL	DiscFormer	–	modified

Your benefit:

- high mat-forming precision and reliability for all systems
- homogenous core layers, finest surface layers during particle mat forming
- levelling head levels the fiber mat surface and makes scalping of excess fiber off the mat obsolete



- ◀ MDF mat-forming machine with levelling head
- ◀ Bottom: MDF forming head drives

- ▼ OSB mat-forming machine



ContiRoll® technology: simply great!

Among continuous presses the ContiRoll® has had the leading position for a long time and has made Siempelkamp the world market leader. The ContiRoll®, the centerpiece of a forming and press line, is designed for all wood-based materials. In 1985 we built the first ContiRoll®. The key data for this press were a length of 16 m (52.5 ft) and a daily capacity of 300 m³.

24 years and a series of developmental milestones later, the world's longest ContiRoll® press with a length of 77 m (252.6 ft) was put into operation. Daily capacities of more than 3,000 m³ are no longer visions of the future. In the course of the ContiRoll® history more than 250 press lines were ordered and put into operation by Siempelkamp. The design principle has remained the same, the technical details, however, were fine-tuned over the course of time.

With the new ContiRoll® generation 8 Siempelkamp has again raised the bar. The standard version was upgraded by means of a new pressure distribution plate concept and an increased number of cylinders. Owing to the improved pressure distribution within the press material savings of up to 15% can be achieved.

Depending on capacity and board size requirements, customers can select from three different design concepts. The presses are suitable for the production of all wood-based materials such as particleboard, MDF/HDF, OSB/OSL, CSL and offer the same technical performance.



▲ ContiRoll® infeed

- ◀ Top: 7 x 42.1 m ContiRoll® for particleboard
- ◀ Bottom: 77 m ContiRoll®

	Design 1 (standard)	Design 2	Design 0
Nominal press width	6 – 10 ft	up to 12 ft, extremely high specific pressure profiles possible	4 and 5 ft (5 ft adjustable to 4 ft)
Nominal hotplaten length	up to 50 m (164.5 ft)	from 50 m (164.5 ft) to over 80 m (262.5 ft)	up to 40 m (131.2 ft)
Hydraulic function beam	supported by a platform	supported by a platform	installed next to the press
Board thickness	2 – 40 mm	2 – 40 mm	2 – 40 mm
Special feature	–	extraordinary stable operation	for smaller capacities

Thin MDF

Siempelkamp is a world leader of presses for the production of thin MDF ranging from 1.5 to 4.0 mm. Due to Siempelkamp technology allowing production speeds of up to 2,000 mm/s, this product can also

be produced economically with a high quality. Thin MDF has been increasingly superseding thin fiberboards produced in a wet-manufacturing process and used, for example, for furniture rear panels.

Your benefit:

- short assembly times
- quick start-ups
- stable ramp-up curves
- high reliability
- lowest thickness tolerances – little material removal = your advantage!



◀ Top: Mat spraying before ContiRoll® ▶ Thin MDF line with compactor
 ▶ Bottom: Pre-heater ▶ Thin MDF



Classic hydraulic single and multi-daylight presses for fixed panel length: robust, established, efficient

Single as well as multi-daylight presses are an optimal solution whenever the product range does not require size variations or whenever special process technologies require an alternative to continuous press systems. They are used for the production of the entire wood-based products range including particleboard, MDF, HDF, CSL or OSB. Our largest multi-daylight press achieves a maximum daily production capacity of up to 2,400 m³. Theoretically even higher capacities could be achieved utilizing this technology!

Furthermore, we supply single-daylight steam injection presses with a hotplaten length of up to 25 m (82 ft). For wet-manufactured products we offer presses with up to 30 daylights. We also provide forming systems, pre-presses, loading and unloading units that are exactly tailored to the presses.

Your benefit

- short ramp-ups resulting in time and cost savings
- high capability when processing large capacities
- high availability
- simple operation, use, and maintenance
- owing to robust design also suited for difficult general requirements



- ▲ 16-daylight press, size 8' x 24'
- ◀ 12-daylight press, size 12' x 34'

Short cycle presses: highly precise and versatile

No matter whether single board, double board or multi-power press: Our short cycle press plants for surface laminating of particle-boards, MDF or HDF became firmly established in the market. Siempelkamp offers a customized solution for every requirement: High-precision paper lay-up systems for laminate flooring or proven inline lay-up system – optimally suited for applications in the field of furniture panels.

Since 2011 Siempelkamp has collaborated with the leading manufacturer in China: HAPCO, mechanical engineering company supplying the wood-based materials industry. So we are well positioned for production and sales of short cycle presses. Both partners benefit from the synergies resulting of their specific strengths in the production of short cycle press lines.

Optimal pressure distribution with KT700

Higher pressure equals an improved profile – based on this formula Siempelkamp developed the new multi-piston design for its short-cycle press KT700. It has been uncompromisingly designed for quality and has opened up new products in the field of surface laminating due to high pressing force.

The main feature is – additionally to the multi-piston design – the innovative cylinder design: The cylinders are arranged in three or more rows inside the frame opening. This design ensures an optimal pressure distribution also owing to the new adapted control technology. Thus relief panels significantly enhanced their profile by means of the KT technology. Due to their three-dimensional surface, the natural wood, rock or imaginative appearance of the product takes shape. Thanks to the new KT700 the look and the feel of the material is very realistic!

Your benefit:

- high pressing force of up to 700 N/cm²
- optimal pressure distribution thanks to multi-piston design, three- and multi-cylinder rows as well as adapted control technology
- full size reduction
- precise parallelism due to innovative mounting of upper hotplaten



- ▲ Precision paper lay-up for laminate flooring

- ▶ Top: Hightech short-cycle press KT700
- ▶ Bottom: The HAPCO short-cycle press



Finishing lines: perfection last but not least

Cooling and stacking lines, sanding lines, cut-to-size technology, high-stack, high bay or crane storage systems as well as packing lines: Siempelkamp has the right concept for processing of wood-based materials following the press.

All production processes downstream a press are managed by our products. For each panel-type material we develop the optimal finishing concept, design state-of-the-art system technology and

produce at the highest level – and that always tailored exactly to the specific needs of the customer. We have been continuously adjusting this portfolio to ever increasing production speeds and capacities.



◆ Cutting, cooling, stacking



▲ High bay storage with fully automatic transfer cart

Your benefit:

- individual solutions customized to your needs and product portfolio
- high plant performance due to latest technology and high availability
- intra-logistics matched to the demands of the wood-processing industry provided by the industrial specialist makes sure that both material and information flow smoothly in your production
- improved efficiency thanks to our upgrade and service packages



- ▲ Storage
- ▶ Top: Cut-to-size line
- ▶ Bottom: Cut-to-size saw
- ▼ Sanding, stacking



Automation technology: Measuring, operating, controlling, and handling – all from one source

What would Siempelkamp machinery and plants be without our experts for automation and control technology? These experts combine control processes, feedback control tasks, operation and visualization with capable automation solutions that can be optimally integrated into your business processes.

Your benefit is our focus, that is, the simple handling of the machines as well as the metrological and technical interplay between machine and control. These conditions make optimal product quality and efficiency possible. Next to a high degree of standardization, we offer concepts that are customized to your needs.

The high-quality engineering regarding our automation technology is also reflected in the optimal planning and production of switchgears including the latest production processes.

In respect of the use of electrical components, control systems, network components, the drive technology, operation and monitoring as well as the process control for the entire machine or line, our automation solutions are standardized.



Your benefit:

- standardized automation technology for machines or entire lines
- high-quality electrical component parts of well-known control and drive manufacturers
- engineering that is always up to date in the field of automation technology
- optimally customized automation solutions for your machines and processes
- integrated measurement and control technology for optimal product quality
- monitoring devices for preventive maintenance
- switchgears that are matched to the automation concept
- competent start-ups

◀ Control room inside a production facility for wood-based products

Switchgear cabinet production: Highly specialized industrial electronics made by Siempelkamp

Switchgear assemblies can be called the central nervous system of a plant. They supply all machines and line components with electrical energy and generate control signals for the automated process steps during production.

Siempelkamp switchgear assemblies contribute their part to increase the availability of your line and to improve product quality. As hub nodes they concentrate any information describing the present line and processing condition. You can select between a standardized or customized solution.



◀ Switchgear cabinet production

Your benefit:

We provide professional, economic and on-schedule order management due to close cooperation and common location with the electrical engineering department and the overall project management for your line!

- advantage due to the many years of experience in the production of switchgear assemblies
- production of switchgear assemblies according to DIN ISO, CUL, UL, NEMA
- CUL, UL-approval directly in-house by authorized personnel
- intelligent production processes and use of high-quality components which in turn leads to an increase in plant availability
- delivery of switchgear assemblies only after inspection

SicoScan: following a comprehensive approach

We pay special attention to the interaction of automation technology and measurement as well as process control technology. Only in this way an integrated structure of automation solutions unfolding their full effect and efficiency in our lines can develop.

Well-received among our customers is SicoScan: This Siempelkamp product represents the integration of proven quality measurement systems into the automation and process control technology.

All parameters fostering optimal board qualities are displayed through SicoScan. Highlight of the SicoScan concept is that not a single measurement device is focused, but the complete system up to the data transfer with Prod-IQ®. SicoScan can be easily integrated into existing systems.

Your benefit:

- high-level measurement technology
- combination of measurement technology and control engineering for maximum board quality and precision
- standardized operation through integration into the complete system
- configurable reporting for your application
- lower costs through the integration into your existing systems
- database with the process control system



◀ Thickness gauge

Prod-IQ®: innovative process control technology with IQ factor

We have developed Prod-IQ® in order to analyze and optimize every part of Siempelkamp plants for the production of wood-based boards. This process control system provides the essential tools for continuously improving process cycles and operation of Siempelkamp plants.

The highlights are:

- generation of reliable and up-to-date management key figures (plant availability, performance, consumption, costs)
- online quality forecast which otherwise could only be determined through destructive material testing (e.g. tensile and bending strength, thickness swelling)
- condition-based maintenance and service

We offer the following types of process control systems:

- Every new ContiRoll® plant is equipped with Prod-IQ.basics. Siempelkamp is thus able to prove the performance of the plant to the final acceptance procedure.
- Further details are provided by means of Prod-IQ.business including shift, day and month reports as well as management and dryer reports.
- Prod-IQ.quality allows for the safe and reliable online quality forecast of quality features for particleboard, MDF and OSB which otherwise would only be possible through destructive material testing in a laboratory.
- Prod-IQ.maintenance optimizes maintenance and servicing of your plant.



Your benefit:

- according to the aspect "total cost of ownership" the customer has access to all consumption and capability data required for performance evaluation
- reproducible optimal product quality after any changeover
- easy-to-handle automated implementation of company-wide standards
- integration into existing plants possible, for an increase in efficiency
- systematical increase of your savings potential
- preventive maintenance

Example of a plant					
amount of production	1000	m ³ /day	costs of wood	50	€/to
average density	650	kg/m ³	costs of glue	250	€/to
average of earned profit	40	€/m ³	personell cost staff	50	€/to
Benefits					
	value	experience from	remarks		
reduction of downtimes in %	1.5	1.5 - 2.5	downtime analyse detect failures easier		
increase first quality %	1.0	1.0 - 2.0	online quality control		
material savings in %	2.5	2.5 - 3.0	increased process capability -> lighter boards - same quality		
increase press speed in %	0.5	0.5 - 6.0	closer to guaranteed quality		
time savings for reports in h/day	1.0	1.0 - 2.0	automatic generated reports and KPIs		
cost optimization ('Tacho') in %	0.5	0.5 - 1.5	increased awareness of costs		
benefits in € / day	2405	Sum			
Cost reduction in € / day	2295	(factory costs)			
Cost reduction in € / year	837675				

- ◀ Top: Management data
- ◀ Bottom: Cost reduction

Line concepts for innovative wood-based products

Siempelkamp's pioneering as a specialist for plants for processing panel-type products is based on our intuition for new markets and the need for innovative products.

Wood-fiber insulation board

Siempelkamp has developed a new process for the production of wood-fiber insulation boards used to protect against heat, cold and impact sound. The new dry-manufacturing process allows the production of boards with a thickness of 20 (0.8 in) to 300 mm thus realizing savings of up to 30% of energy per ton in comparison with the traditional wet process. By means of adjustable

density, panel lengths as well as widths the wood-fiber insulation board can be manufactured in a highly flexible way providing for optimal conformity to very different applications required.

Siempelkamp presses also allow for the production of flexible wood-fiber insulation boards used for traditional common rafter insulation in the field of roof construction. A handling system matched to the product completes the package – including diagonal and cut-to-size saws, profiling lines, de-stacking and feeding units as well as packing line.



- ▲ Wood-fiber insulation board line
- ▼ Insulation boards with a thickness of up to 300 mm

- ▼ Wood-fiber insulation board with tongue and groove



Door-skins

Door-skins are thin, compression-molded MDF that are glued to a wooden framework and, in this way, make it easy and economical to produce cassette doors. Siempelkamp builds the fastest lines with an annual output of up to 11 million boards.



- ▲ Door-skin line
- ▼ Door-skins for residential doors

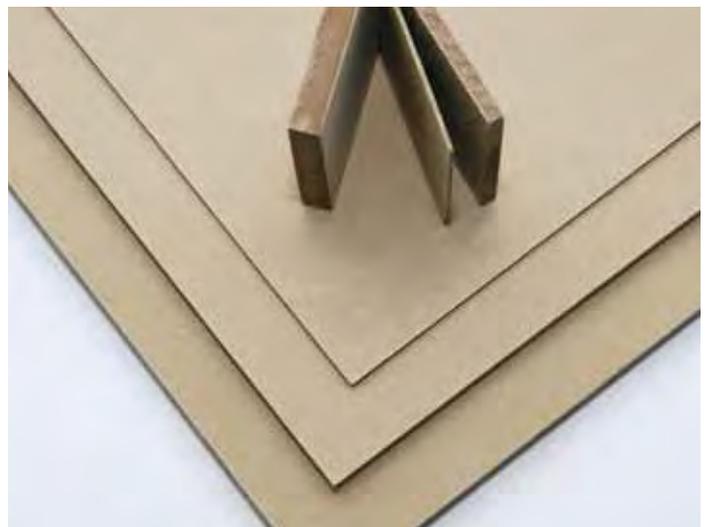


Transformer boards

Siempelkamp multi-daylight presses process the entire range of wood-based materials in up to 30 daylight. They make wet-manufactured products such as insulation material for high-voltage transformers. The characteristics of this product include high density, consistent thickness, surface smoothness, high mechanical strength, flexibility, aging resistance, and of course, excellent electrical insulating properties.



- ▲ Transformer board press
- ▼ Transformer boards with different thicknesses



Full speed ahead for three-shift operation: starting up and ramping up of the line

Knowing that time is money, a quick ramp-up is the foremost objective of all plant operators. Our core competence includes carrying out the start-up and ramp-up processes in the shortest time possible so that the plant can quickly start three-shift operation.

Three Siempelkamp teams bring out the best in your plant: Mechanical, electrical as well as technological commissioning is carried out through our specialists in a professional and closely

monitored manner so that the ramp-up can follow right after. Start-up periods of less than six weeks from the beginning of commissioning to full production are not rare. So you will save time and money providing a cutting edge to your business.



Your benefit:

- steep and stable ramp-up curve
- time savings = budget savings



- ▲ Left: Start-up
- ▲ Right: The first produced board



- ◀ Ramping up the line

Top: Maintenance ▶
Center and bottom: Modification and upgrading ▶

Service: Effective support around the world

“We need to go where our customers are settled” is Siempelkamp’s philosophy. This also and especially applies to our service. No matter whether you need spare parts service or modification packages, our service teams support you to increase the performance of your existing presses with customized solutions. Thus, you save time, money and downtimes. In the area of field service we also offer worldwide support in case of problems, downtimes, inspections or maintenance.

Our growing number of new foreign offices and subsidiaries allows you the advantage of being able to make use of a fine-meshed

service network. Through additional locations in more countries we plan to expand our direct customer contact and onsite service in the future. Another advantage: our service business includes targeted service experience in Küsters and Metso press makes.

An additional component of our sophisticated service is our spare parts inventory. We plan on expanding and optimizing the inventories in order to guarantee quicker delivery times.



Your benefit in the field of modifications and upgrading:

- best possible optimization of existing plants – better product properties, higher performance, less wear, higher availability
- higher plant safety

Your benefit in the field of spare parts:

- reliability through original spare parts which are specifically built for your systems – thus ensuring maximum highest reliability with regard to the particular product and application-specific requirements
- quick identification of the appropriate parts as well as quick availability
- prevention of unnecessary downtimes through flexible production and strong logistics
- reduced costs during downtimes due to local availability

Your benefit in the area of field service:

- best solutions for your problems due to the know-how of the maker
- expert support for inspections and maintenance
- reduced costs during downtimes due to local availability

Worldwide production locations

Considering that innovative technologies shall become profitable for you, the general conditions have to be right, that is, the production locations.

Siempelkamp produces in several different locations: In Krefeld, Germany, our head office, we have been present for over 125 years. Here, we have largely invested over the past years in order to bring our production up to date.

At our subsidiary CMC Texpan located in Colzate, Italy, we have been producing machines for forming lines for a long time and, recently, started producing glue-blending systems there.

The necessity to produce a growing number of performance-increasing components closer to their markets has advanced the decision

to open two new production sites. Since 2004 we have been producing with Wuxi Machinery Co. Ltd., Beijing, to meet the requirements of our Asian customers quickly and in a targeted manner. At this production site we have been especially focusing on the production of components with a high share of manual labor.

At the end of 2008 we opened up another production facility in Blatnice, Czech Republic. Here a wide variety of forming line components ranging from parts for the mat-former to the roller conveyor has been produced. Owing to the new facility we are able to provide for quicker supplies to our European customers.

Worldwide production locations:

▼ Top and bottom: Krefeld / Germany

▼ Top: Bad Kreuznach / Germany, bottom: Blatnice, Czech Republic



Since 2009 Hombak Maschinen- und Anlagenbau GmbH located in Bad Kreuznach, Germany, has been part of the Siempelkamp Group. Thus our scope of supplies and services – starting from the reduction of wood to the manufacture of wood-based panels has been fully completed and optimally introduced in the market.

The Ventapp group located in Kempen, Germany, has joined our group of Siempelkamp Machine and Plant Engineering at the beginning of 2012. From the integration of the Ventapp competencies – metal processing, equipment manufacturing as well as industrial radial fans – important synergies have been resulting within the Siempelkamp portfolio.

Your benefit:

- short distances to customers
- reduced costs
- high quality due to a higher share of own production

▼ Top and bottom: Wuxi / China



▼ Top and bottom: Colzate / Italy



Research and Development

Our research and development center always thinks and works a step ahead: Our objectives are better quality and higher capacities, on top of that the conservative use of resources and the exhaustion of energy-saving potentials. Resulting thereof are consistently optimized processes, technologies and systems that make your equipment fitter and more capable.

Examples: Customer-related analyses are carried out on existing equipment. Prototypes, on the other hand, are checked under actual manufacturing conditions in our testing facility. Raw materials and panel-type products are regularly analyzed in our laboratory. Siempelkamp mobile and stationary instrumentation is dedicated to test machine functions as well as environmental conditions and operational safety.



Your benefit:

- new processes that ensure your market success
- innovative technologies developed through the intensive exchange of information with universities and research institutions
- knowledge transfer from different market segments
- short implementation periods by means of advance project planning and design
- people and machines are in line with one another
- transparency of functions and modes of operation
- improved reliability
- practical transfer of knowledge
- helping people help themselves

Siempelkamp Academy

To continuously enhance your knowledge is important for competent plant operation and ensures the long-term success of your company.

We support you by providing your employees with targeted training in our products. For example in our real-life control room we will show you the authentic functions of your new equipment in customer and subject-specific training sessions.

Furthermore, we offer the following training classes to you and your team at the Siempelkamp Academy:

- Basic training in hydraulics
- Training in the operation of your equipment in a real-life control room
- Training in equipment servicing and maintenance



Siempelkamp used machinery: first-class – second-hand

Only Siempelkamp knows Siempelkamp plants exactly. For that reason the pre-owned machinery department has become something of an institution within our corporate structure. We re-purchase field-tested machinery and match them in close cooperation with the different specialized engineering departments to the specific customer needs. Siempelkamp makes old equipment fit for state-of-the-art operation and additionally offers the new operating company perspectives about what the future holds for their increases in capability.

We put the obvious into practice: we dispose of the largest installed base worldwide and know it like the palm of our hands. Beyond the range of our own machinery you are provided with the complete knowledge of Küsters, Bison and Metso presses which may be particularly interesting at the time when you are looking for a low-cost initial investment.

Your benefit:

- concentrated know-how in favor of a more complete performance chain
- equipment trade based on a trusting business relation!
- well-founded expert reports for sellers – custom-fit equipment updates for buyers
- gapless service ranging from the expertise to the disassembly
- custom-fit orientation on the buyer's needs:
 - by retrofitting with replacement components for the fully functional status of your equipment
 - optional, according to customer preference, by increasing the performance through innovative upgrades
- solutions that are in line with the budget and deliver great performance



◆ Assembly and disassembly by expert teams





Siempelkamp Maschinen- und
Anlagenbau GmbH & Co. KG



Siempelkamp CZ s. r. o.



Hombak Maschinen- und Anlagenbau GmbH



Siempelkamp Maschinenfabrik GmbH



ATR Industrie-Elektronik GmbH



Sicoplan N.V.



Siempelkamp Logistics & Service GmbH



Büttner Energie- und
Trocknungstechnik GmbH



Ventilatoren – Apparatebau



Siempelkamp (Wuxi) Machinery Manufacturing
Co. Ltd., China



CMC S.r.l.



W. Strothmann GmbH

Sales companies/Representatives

Australia

Siempelkamp Pty Ltd.

Brazil

Siempelkamp do Brasil Ltda.

China

Siempelkamp (Wuxi) Machinery Manufacturing
Ltd., Beijing

France

Siempelkamp France Sarl

India

Siempelkamp India Pvt. Ltd.

Russia

Siempelkamp Moskau

Singapore

Siempelkamp Pte Ltd.

Spain

Siempelkamp Barcelona

Turkey

Siempelkamp Istanbul

USA

Siempelkamp L.P.