



Siempelkamp

Maschinen- und Anlagenbau

Presses and Plants for the Rubber Industry



Competence from a single source

Siempelkamp's service range for the rubber industry

For over 130 years Siempelkamp has been the expert for presses and plants for the production of flat panel materials and molded products. Experience, innovation and expert knowledge also characterize the presses and plants for the rubber industry. Next to planning, design and production processes, Siempelkamp also carries out the installation and start-up of the equipment. In this way, customers worldwide benefit from our proven "all from a single source" principle.

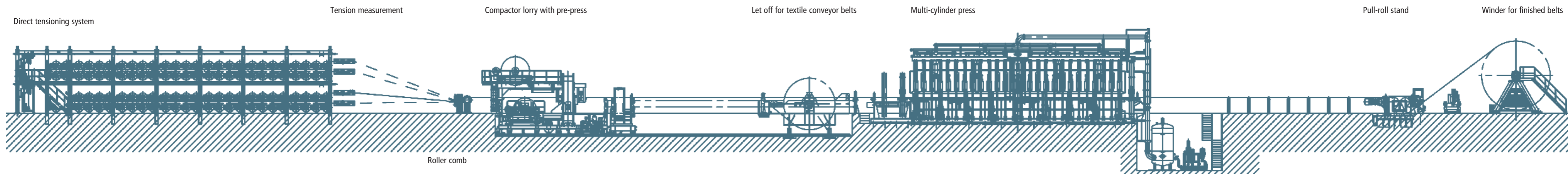
Siempelkamp press systems for products in the rubber industry convince with obvious advantages: They feature long-life cycles, high reliability and efficiency as well as unequaled repeat accuracy when obtaining the transparent process parameters. That is why the Krefeld machine and plant engineering company is the world market leader in the plant segment for the area of steel cord and textile conveyor belts: the majority of all conveyor belts used worldwide are manufactured on Siempelkamp equipment.

Siempelkamp presses are well suited for the reliable and economic production of many different rubber products for numerous application areas.



Headquarters of the Siempelkamp Group in Krefeld, Germany

Conveyor belt plant with direct tensioning system



The demands on conveyor belts are high: Worldwide they transport millions of tons of overburden, coal and ore across many kilometers daily. Despite being under extreme loads of materials, tensile forces and speeds, these conveyor belts will be used for many years. Nevertheless, they always have to have best directional stability. This can only be achieved through high production, plant and process quality.

standards provide best product quality through transparent and controllable process parameters.

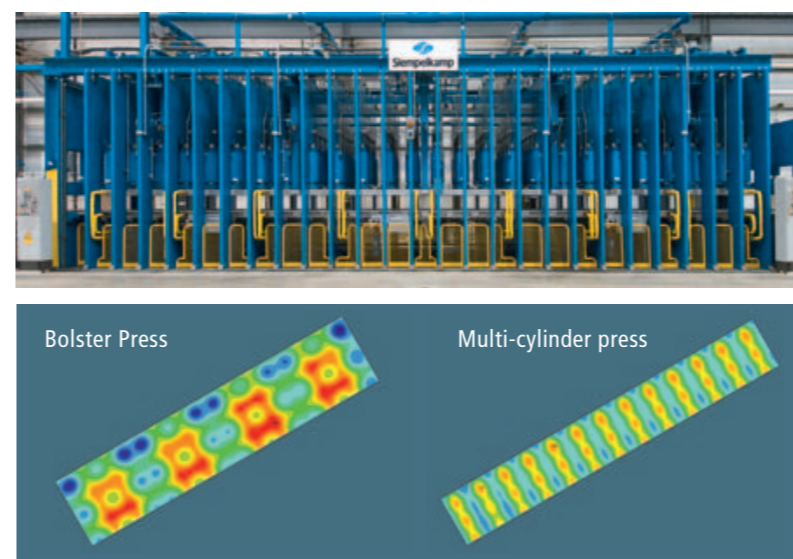
Features:

- Conveyor belt thickness starting at 5 mm
- Optimal pressure distribution through adjustable pressure zones
- High process stability
- Only small foundations necessary
- Low production costs
- High safety standards
- Extremely long operating life
- Maintenance-friendly
- Excellent thickness tolerances of the belts

Our durable and maintenance-friendly multi-cylinder press ensures that steel cord and textile conveyor belts manufactured on Siempelkamp equipment will meet these high quality requirements. This press can economically produce conveyor belts with a thickness starting at 5 mm. Optimal pressure distribution and high safety



Infed multi-cylinder press



Top: Multi-cylinder press, Bottom: Pressure distribution comparison



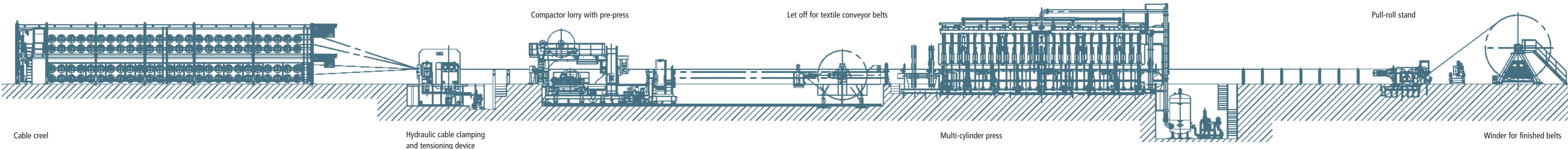
Winder with 2,000 mm belt

Parameters for standard presses

Conveyor belt width	from 1,200 mm	to	3,200 mm*
Conveyor belt thickness	from 5 mm	to	50 mm
Press lengths	from 10,600 mm	to	23,480 mm*
Specific surface pressure		up to	400 N/cm ²
Number of steel cords		up to	2 x 260
Winding capacity		up to	70 t

Twin belt curing is possible. *Extended specifications under preparation.

Conveyor belt plant with traditional steel cord tensioning system



Direct tensioning and measuring system



Direct tensioning system with roller comb

Siempelkamp plants for the production of steel cord and fabric conveyor belts are characterized by innovative technologies in order to manufacture high-quality belts suitable for heavy-duty demands. Customer advantages are easily recognizable with the new direct tensioning and measuring system for steel cords: This innovative steel cord tensioning concept allows the exact positioning and the uniform tensioning of the steel cords inside the belts. The electronically controlled steel cord tension distribution system opens up increased production safety, plant reliability and transparent product quality.

The direct tensioning system with integrated tension measuring allows 100% control over the actual steel cord tension distribution. The new concept includes a roller comb that replaces the fixed finger comb used in previous systems. In this way, the friction between comb and steel cables is eliminated. As a result, the abrasive wear

on the galvanized steel cables is reduced. Furthermore, compared to the traditional concept, the new roller comb ensures that the tension distribution will be deflected as little as possible.

Features:

- High production safety
- Increased plant reliability
- Exact quality reporting for optimized product quality
- Controlled tension distribution of the steel cords
- Precise distances between cords
- Reverse movement of steel cords and belts is possible
- Cord diameters ranging from 3 to 15 mm
- Steel cord tension per individual steel cord up to 4,000 N
- Low personnel requirements
- Maximum availability due to quick product changeover times



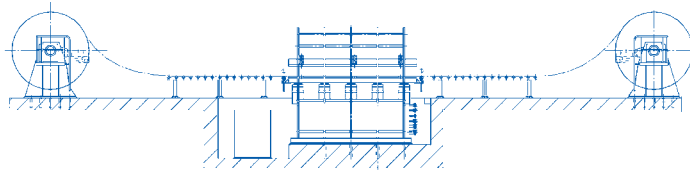
Direct tensioning system with...



...measuring devices for the steel cord tension

Repair presses for conveyor belts

Often the repair and restoration of damaged or worn out conveyor belts is highly economical. Siempelkamp offers complete conveyor belt repair workshops. Furthermore, the subsidiary Siempelkamp Logistics & Service can retrofit existing machines and plants, even those made by other manufacturers, according to the latest standards. This results in competitive products and higher productivity with low investment costs.



Features:

- Conveyor belt thickness ranging from 5 to 50 mm
- Conveyor belt width ranging from 800 to 3,200 mm
- Press lengths ranging from 1,500 to 6,000 mm
- Specific surface pressure up to 400 N/cm²



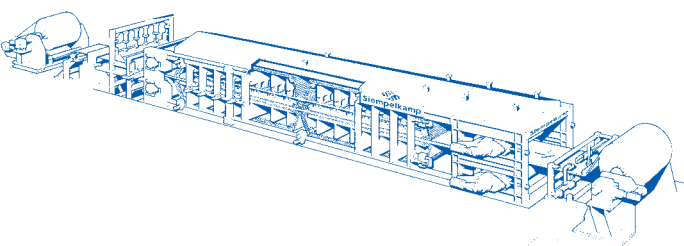
Conveyor belt repair press

Double-belt presses for conveyor belts, rubber sheets and rubber granulates

Siempelkamp's continuous double-belt presses economically manufacture flooring material and sandwich panels as well as mats and sheets with a smooth surface. The green rubber applied to a cable carpet is vulcanized under heat and pressure between two continuously moving steel belts inside the press. PVC belts are cured and afterwards cooled.

A "carpet" of calibrated roller rods runs between the steel belts and the fixed hot-platens. These rollers freewheel, transmitting the pressure and heat via the steel belt with optimal efficiency onto the product.

Specific pressure ranging from 150 to 500 N/cm²



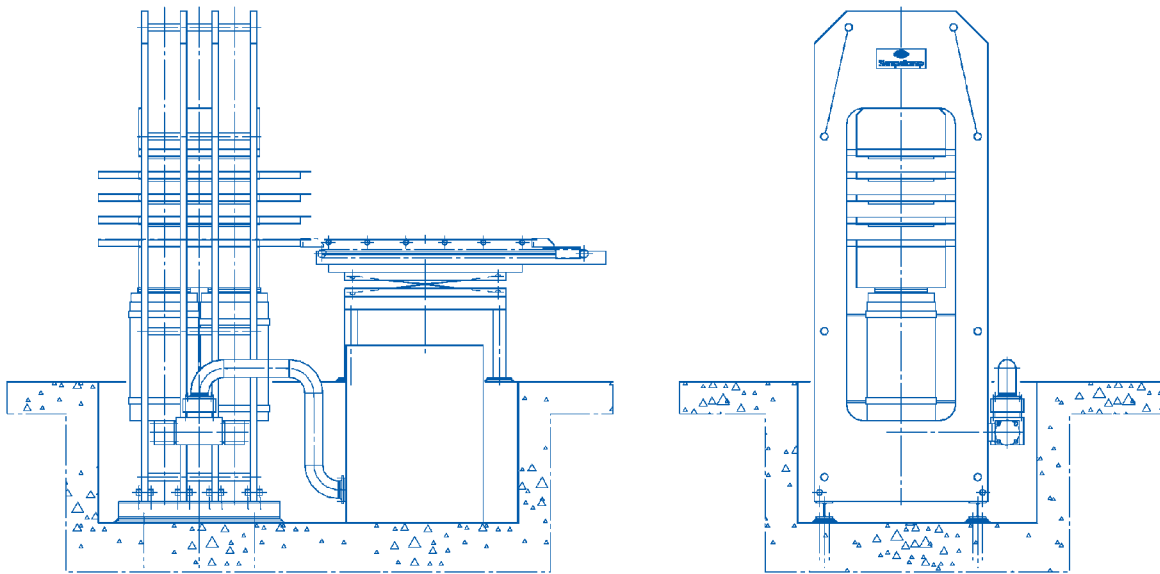
Features:

- Product widths: 1,400 mm and 2,400 mm
- Press lengths: 10–25 m
- Capacity increase up to 200% for heating/cooling processes
- Energy savings up to 80% for heating/cooling processes
- Pressures up to 500 N/cm²
- Improved pressure distribution due to dynamic process control
- No down-time due to laborious product handling
- No visible transitions on the product surface
- Improved surface quality
- No release agents



Siempelkamp double-belt press for PVC and rubber conveyor belts

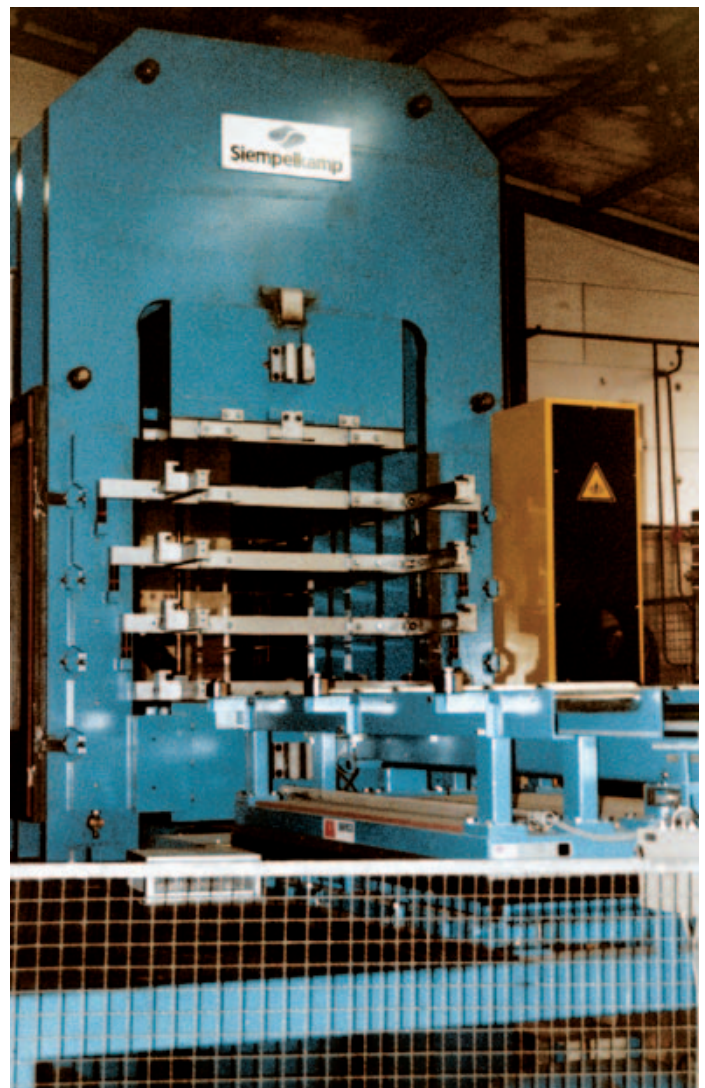
Multi-daylight presses for mats, sheets and flooring materials



For the vulcanization of rubber sheets, mats and flooring material with smooth or profiled surfaces, Siempelkamp supplies multi-daylight presses with loader and unloader units. These presses have been proven for decades. Due to their precise operation, they guarantee the production of high-quality, sophisticated and profiled product surfaces.

Features:

- Press sizes starting at 1,200 x 1,200 mm
- Specific pressures of 400–1,200 N/cm²
- Thermal oil, steam or water heated
- High precision and material savings
- Best availability
- High reliability
- New equipment available also without large heat transfer systems



4-daylight press

Plants for tire treads



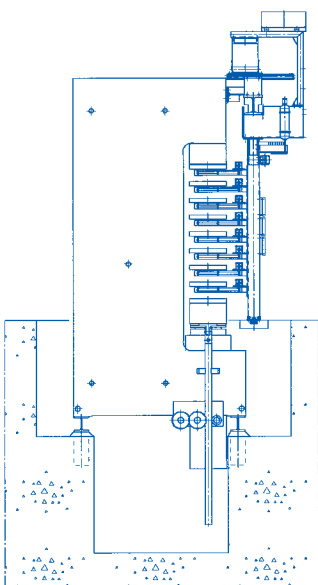
Single C-frame press

Tire retreading of semi-trucks avoids large amounts of waste and, at the same time, lowers the high fixed costs of the transport industry. Regarding functional safety, longevity and mileage, these retreaded tires compare to new tires.

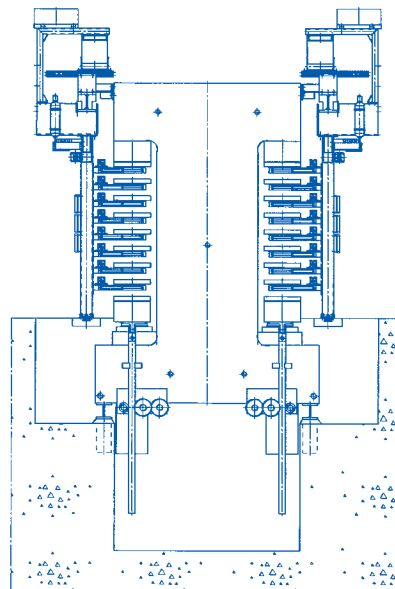
Siempelkamp has supplied multi-daylight presses for the production of treads for tire retreading for almost three decades. In this area we are an experienced and proven partner for stand-alone presses as well as for complete press lines.

Features:

- Single and double C-frame vulcanizing presses
- 3,800 mm x 600 mm, 6–8 daylight
- 10,800 mm x 600 mm, 6–8 daylight
- Specific pressure: 500 N/cm² onto the hot-platen area
- Including oil unit, PC control, quick loader and unloader devices and high-speed mold changing device
- Uniform pressure distribution
- Low material loss
- Quick loading and unloading
- Smooth loading due to integrated loading cages



Single C-frame design



Double C-frame design

Our universal range of products for the rubber industry

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Plants for steel cord and textile conveyor belts



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Double-belt presses for conveyor belts, rubber sheets and rubber granulates



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Multi-daylight presses for mats, sheets and flooring materials

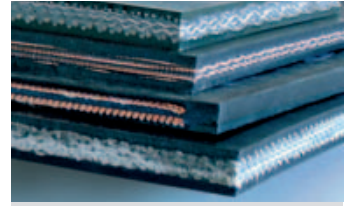


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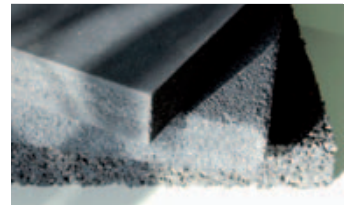
Plants for tire treads



Steel cord belts



Textile conveyor belts



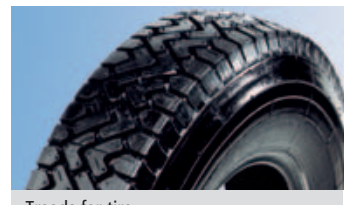
Rubber granulates



Rubber sheets/mats with smooth surface



Rubber sheets/mats with profiled surface



Treads for tire retreading



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