



Siempelkamp

Maschinen- und Anlagenbau

Siempelkamp hot platens

High-quality panel products guaranteed



Siempelkamp – Drilled hot platens since 1883

In 1883, the company founder Gerhard Siempelkamp started his own business with an idea: he began to supply the textile industry in Krefeld with hot platens which could be heated directly by means of drilled channels. Soon Siempelkamp also specialised in the production of hydraulic presses and opened up new markets, for example in the wood-based product, rubber and plastic industries. Today Siempelkamp experts still design and produce hot platens, of course, according to the latest state-of-the-art. A thorough quality assurance scheme provides maximum production uptime.



Advantages of the Siempelkamp hot platens:

- + Best suitable steel quality
- + High surface quality
- + Narrow shape and position tolerances
- + Uniform channel system due to precise bore holes
- + Low-stress and strain connections of the channel system
- + No build-up of strain during pressing
- + Uniform temperature distribution over the product
- + Enormous stability to stress
- + High uptime
- + Long service life
- + Very cost-effective production

Fabrication of a Siempelkamp hot platen

1. Surface machining

The high quality of the Siempelkamp hot platens is achieved, amongst other things, by the selection of the most suitable material. The raw steel plates are ordered according to the Siempelkamp technical standard (SN) on the basis of special requirements and with the corresponding factory certificates: a highly wear-resistant material – such as SHG V400 III in the case of hot platens used for the production of wood-based products.



The special pre-treatment of the raw material has also been continuously refined by Siempelkamp over 130 years. Here, the company uses a precision milling process with ceramic milling tools, thereby achieving the highest surface qualities. The low-stress all-surface machining process is carried out in accordance with the Siempelkamp technical standard (SN) and is based on decades of experience and the expertise of our company. The plane parallelism and flatness of the hot platens after machining are +/- 0.1 mm.

Working steps:

1. Delivery of the raw steel plates
2. Corundum blasting
3. Check for rolling defects/blow holes
4. Preparation by means of a straightening press
5. Low-stress, all-surface machining

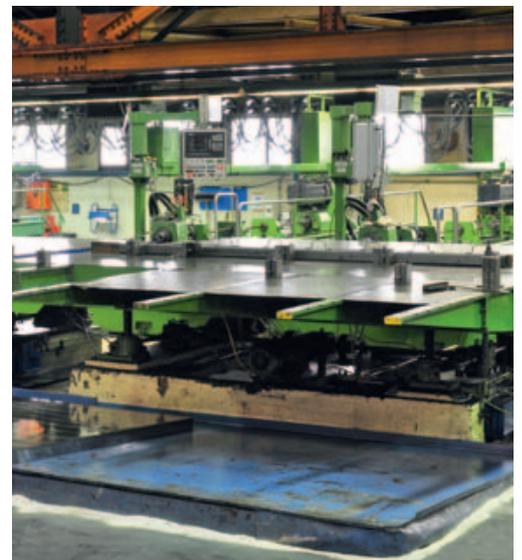


2. Deep hole drilling

The mechanical accuracy of the channel systems in the massive steel plates is achieved by drilling them precisely centred and uniformly on four special deep-hole drilling units. The precise channels with a minimal hole run-out enable uniform temperature distribution within the hot platen. This is supported by the special channel bends, which ensure low flow losses at extremely high flow rates.

Working steps:

6. Deep hole drilling
7. Machining of the channel bends
8. Cleaning and deburring the channels



3. Welding

The bends and sealing systems of the Siempelkamp hot platens are welded through completely in one pass without any plugs by means of a welding machine using the SAW method. This method significantly improves the absorption of thermal stresses during the subsequent hot and cooling processes. Depending on the application, various strip sealing systems are used as well.

Working steps:

9. Submerged-arc welding of the bends and sealing systems (with welded strip seals/rod bend)



4. Finishing

Finishing in this case is a low-stress process using high-precision surface machining systems with permanent magnetic chucks. The surface quality is continuously checked in this manufacturing step as well to ensure best overall quality of the hot platens.

Working steps:

10. Machining
11. Pre-milling of the bracket locations
(in the case of ContiRoll® hot platens)
12. Bore holes on the rear face
(in the case of ContiRoll® hot platens)
13. Finishing of the product face
14. Finishing of the rear face
15. Continuous quality checks of the surfaces



5. Assembly

The hot platens for the ContiRoll® are finally pre-assembled and provided with connection stubs, insulation bays and lugs. Before they are delivered, all Siempelkamp hot platens are finally subjected to a multiple of their operating pressure and ultrasound quality checks.

Working steps:

16. Welding on the connection stubs
(assembly plates)
17. Flushing the channel system and pressure test (leak test)
18. Check of surface hardness
19. Corundum blasting of the connection points
(in the case of ContiRoll® hot platens)
20. Pre-assembly of the insulation bays and lugs
(in the case of ContiRoll® hot platens)
21. Preservation and paint-finish
22. Packaging and dispatch



The best-quality raw material and the particular manufacturing process make Siempelkamp's hot platens a class apart, guaranteeing the production of high-quality panel products.

Beyond hot platens for the new plant business, Siempelkamp also offers various services in this field:

- Spare parts service for existing plants (e.g. insulation material)
- Repairs and modernisations of hot platens that have proven their worth in operation (electric, hydraulic, mechanical)
- Repair of hot platens in customers' plants on site
- Hot platens for third-party presses
- Technical/technological advice
- Re-assembly by specialists

