



THE INTELLIGENT CHOICE

Fibre Cement Production Plants

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High quality, economic and flexible.

Characterised by outstanding precision, productivity and reliability.

Wehrhahn supplies complete plants and individual machines customised to specific requirements. We also offer upgrading of existing plants from other suppliers to meet today's latest technical standards.

All regional factors such as the availability of raw materials and climatic conditions are carefully considered in the overall concept, along with individual requirements concerning plant capacity, location, available space, level of investment, etc.

As the global market leader, we also set standards in cost effectiveness and energy saving management: energy saving motors, electric energy saving systems, heat and steam recovery systems are just a few of the Wehrhahn standards. Intelligent machine settings and recording of production and process data enable our customers to produce in the most efficient way.

From preparation of the raw materials to recycling of Fibre Cement, the production process is efficient and environmentally friendly.

The Wehrhahn group offers:

- planning, designing and manufacturing
- innovative, high-quality technology
- highly qualified staff for installation and commissioning
- scientific assistance and support to the production process
- laboratory and research services including development of mixing formulas
- advice on marketing and application of Fibre Cement
- lime and dry mix mortar plants
- staff training
- comprehensive services covering all aspects of plant and process operation



Efficient, fully automated sheet production plants.

Maximum System Performance

Maximisation of profits with sustainability guarantee: zero system waste, lowest energy consumption and minimal consumption of raw materials.

Together with our clients, we create production plants specifically tailored to individual needs and local conditions.

Each plant has a modular design, enabling expansion with market demands. Plant components can always be added – e.g. a press section or a fully automated transport system – without changing the existing machines.

Raw Materials

Fibre cement sheets consist of cellulose or synthetic fibres embedded in a matrix of cement or CSH

- Cellulose or synthetic fibres as reinforcement
- cement
- sand (in autoclaved sheets)
- water



Cellulose fibre processing plants.

Plant Types

For the production of fibre cement sheets, two technologies have proved suitable:

CC = Cellulose Cement Sheets

CC sheets are produced from cement and fillers. A mixture of virgin cellulose and PVA or PAN fibres serves as fibre reinforcement. The plant capacities range from 2 - 20 t/h.

CCA = Cellulose Cement Autoclaved Sheets

CCA sheets are made from cement, finely ground silica sand and additives. Fibre reinforcement is by virgin cellulose, and to some extent by waste paper for sheets applied internally. Capacity: 2 - 20 t/h.

Compressed sheets

CC and CCA sheets can be compressed in a stack or single sheet press. This increases the bulk density, frost resistance and flexural strength.

Which technology for which product?

CC sheets for:

Roofing (corrugated or flat sheets)	Lap sidings (e.g. home wall cladding)
Façades	Façades
Fencing	Fencing
	Dry walls and ceilings

Production of Fibre Cement in detail

Every individual part of a production plant is a link in a long chain of actions and reactions. The key is perfect flow.

Wehrhahn offers automation solutions not only for Wehrhahn plants but also for many production processes across a wide variety of different industries.

Schematic production process:

Raw Material preparation

After the sand is ground and the cellulose prepared, the sand and cellulose slurry are stored in silos.

Dosing and mixing system

Fully automated mixing of raw materials in the Wehrhahn dosing and mixing plant WECOMIX ensures consistent quality. After further dilution the slurry is fed into the sheeting machine.

The sheeting machine

Rotating sieve cylinders in the 2 to 6 tubs of the sheeting machine filter the solids out of the fibre cement mixture. The sieve cylinders transfer the thin material layers onto the felt. The layers are dewatered and then accumulated at the forming roller until the required sheet thickness is reached and the sheet is cut off.

Sheet thickness measuring system

The automatic sheet thickness control system guarantees minimal thickness variation within the production series. The consequent savings in raw materials and waste reduction improve the cost-effectiveness of the plant.

Cutting / Pressing

Wehrhahn offers a full range of cutting equipment, e.g. cutting press, guillotine, circular knife and water jet cutter. All Wehrhahn stack and single sheet

presses for corrugated or flat sheets ensure the excellent quality of the final products.

Autoclaving CCA

Over several hours, the sheets are cured in autoclaves in a saturated steam atmosphere. Process control and monitoring are done using the automatic Wehrhahn autoclave control system WACO. Similarities to the production of AAC have enabled Wehrhahn to accumulate comprehensive expertise in autoclave technology which is put at the disposal of our clients.

Alternative: Air curing

The sheets are stacked and stored at ambient temperature until they are cured.

Colouring plants

Many fibre cement sheets on the market have a surface coating or are thoroughly colour pigmented. Wehrhahn supplies colouring plants tailored to the relevant product and the climatic conditions in the client's country.



Fast electromechanical stacker robots.



Stack or single sheet presses
for compressed sheets.



A SUSTAINABLE AND ECONOMIC BUILDING MATERIAL
WITH A RANGE OF SUPERIOR QUALITIES:

Moisture resistant,
frost-proof, eco-friendly,
affordable and flexible.
Excellent fire protection.



© Cembrit slates for beautiful
facade application.



Fibre cement facades withstand
even the most challenging weather
conditions.

Fibre cement. Unique versatility.

For facades, roofing and internal applications:
fibre cement is heat-resistant and frost-proof, non-combustible
and resistant to termite infestation.

Building standards are becoming ever more stringent: architects and developers want high-quality materials, investors are building with a strict eye on economic consideration and extreme weather conditions require appropriate building materials.

Fibre cement takes account of all these demands. It has proved itself in building construction and is prized as a flexible yet economic building material. Production and material composition are subject to strict ecological building regulations. Fibre cement is deemed completely safe.

Fibre cement sheets are used all around the world in residential, public, commercial and industrial

construction and often in the agricultural sector.

Facades and fences.

Available in a range of colours and formats. Fibre cement in plank form with a surface wood pattern is a particularly popular choice.

Fibre cement facades are an alternative to traditional render. They can also be installed in winter when rendering is no longer possible.

Internal applications.

Fibre cement sheets provide excellent fire protection characteristics, are suitable for use in wet rooms and have an impressively high level of stability in comparison to gypsum boards.

Roofing.

Fibre cement sheets have been used for decades in roofing. The sheets are corrugated or produced in the form of small slates. Available in various formats and colours.

Organic Fibres
Cellulose and/or PVA and PAN
Inorganic matrix
Cement, sand (for autoclaved sheets) and fillers
Fire rating
A2
Application
Exterior and interior



© Cembrit as an architectural design element, fibre cement shows unsurpassed versatility.



© Cembrit side panels applied for new or traditional architectural taste.

EFFICIENT, FEASIBLE AND CUSTOM-MADE.
WE BUILD FOR YOUR SUCCESS.

Wehrhahn production plants made in Germany.

A team of highly qualified engineers and technicians develop solutions and concepts for the production of AAC, fibre cement, quicklime and dry mix mortar – including intelligent automation systems.

As a traditional family-owned business, Wehrhahn has been producing state of the art production plants for the building material industry since 1892.

Over 200 plants for the production of autoclaved aerated concrete blocks and panels, fibre cement sheets and pipes, lime plants and

numerous other special designs are in use across all climate zones throughout the world. This makes us global leaders.

The work of our research and development team – in conjunction with customers and scientists – has resulted in successful exclusive

Wehrhahn products such as our zero system waste technology, our tilting system with bed remover and our patented custom-made machines.

Use our experience to your benefit – whether as an already established customer or interested new investor.

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The company headquarters in Delmenhorst. Home to our design and manufacturing sectors and laboratory.