



THE INTELLIGENT CHOICE

Autoclaved Aerated Concrete Production Plants

WEHRHAHN

Autoclaved aerated concrete plants

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 into 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 AAC, 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 mix formulae
- advice on marketing and application of AAC
- lime and dry mix mortar plants
- staff training
- comprehensive services covering all aspects of plant and process operation



Quality and feasibility comes first

Maximum System Performance

Maximisation of profits with sustainability guarantee: no system waste, lowest energy consumption and minimal consumption of raw materials.

We offer two plant concepts with capacities from 150 up to 2,000 m³ per day to ideally serve the individual requirements of our customers. The quality of the AAC products is equally high across the different plant concepts.

Which plant is the right choice for you? We will be happy to advise you. And the plant will be tailored to your specific requirements.

It is characteristic for both plant concepts that the cake is cut in an upright position. This enables maximum cutting precision and profiling of the cake before autoclaving.

Wehrhahn PLUS

700 – 1,400 m³/day.

It is the only AAC production plant on the market which produces cakes autoclaved in upright position without system waste. This results in an optimal cost benefit ratio and maximum capacity operation.

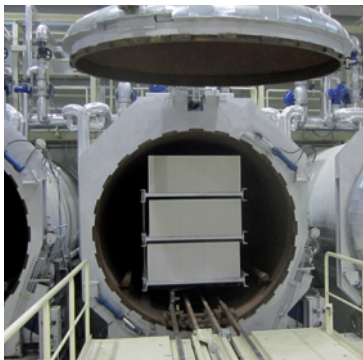
The main features of the PLUS plant are its compact plant design and easy handling of the AAC in the packing plant.

Wehrhahn SMART

200 – 2,000 m³/day

In SMART plants the cake is tilted back into the horizontal position after cutting to enable green cake separating before autoclaving.

In addition, it is possible to produce panels with super-smooth surfaces.



SMART: cake in horizontal position during autoclaving.



PLUS: autoclaving in an upright position.

Production of AAC 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

Autoclaved aerated concrete (AAC) is produced by mixing the raw materials sand or pulverised fuel ash, cement, anhydrite (gypsum), lime, water and a small quantity of aluminium powder.

Dosing and mixing system

Wehrhahn's fully automated dosing and mixing plant WECOMIX enables accurate dosing, weighing and mixing of all raw materials. The mixture is then poured into moulds, where chemical reactions cause it to rise like a cake.

Cutting

After the cake has attained sufficient strength, it is removed from the mould and cut with wires and knives into blocks or panels with precision accuracy. Hand holds, tongue and groove are cut before the cake is autoclaved in order to avoid milling into the hardened material – a sustainable cost-saving measure and an element of our „no system waste“ concept.

Autoclaving / Curing

After cutting, the AAC is hardened by autoclaving in a saturated steam atmosphere at a temperature of approx. 180 – 190°C. It is this steam curing that creates the unique crystalline structure and lends AAC its excellent qualities in comparison to building materials which are not steam cured.

Sorting and packing

After autoclaving the blocks or panels are packed and are then ready for dispatch to the construction site.

Automation

Wehrhahn technicians, IT specialists and automation engineers use their decades of experience to build control cabinets, connect machines and program PLC and PC controls conforming to the highest standards of functionality, safety and efficiency. Wehrhahn offers electric and automation solutions not only for Wehrhahn plants but also for all kind of production processes in a wide range of industrial branches.

Pre-wiring of the machines

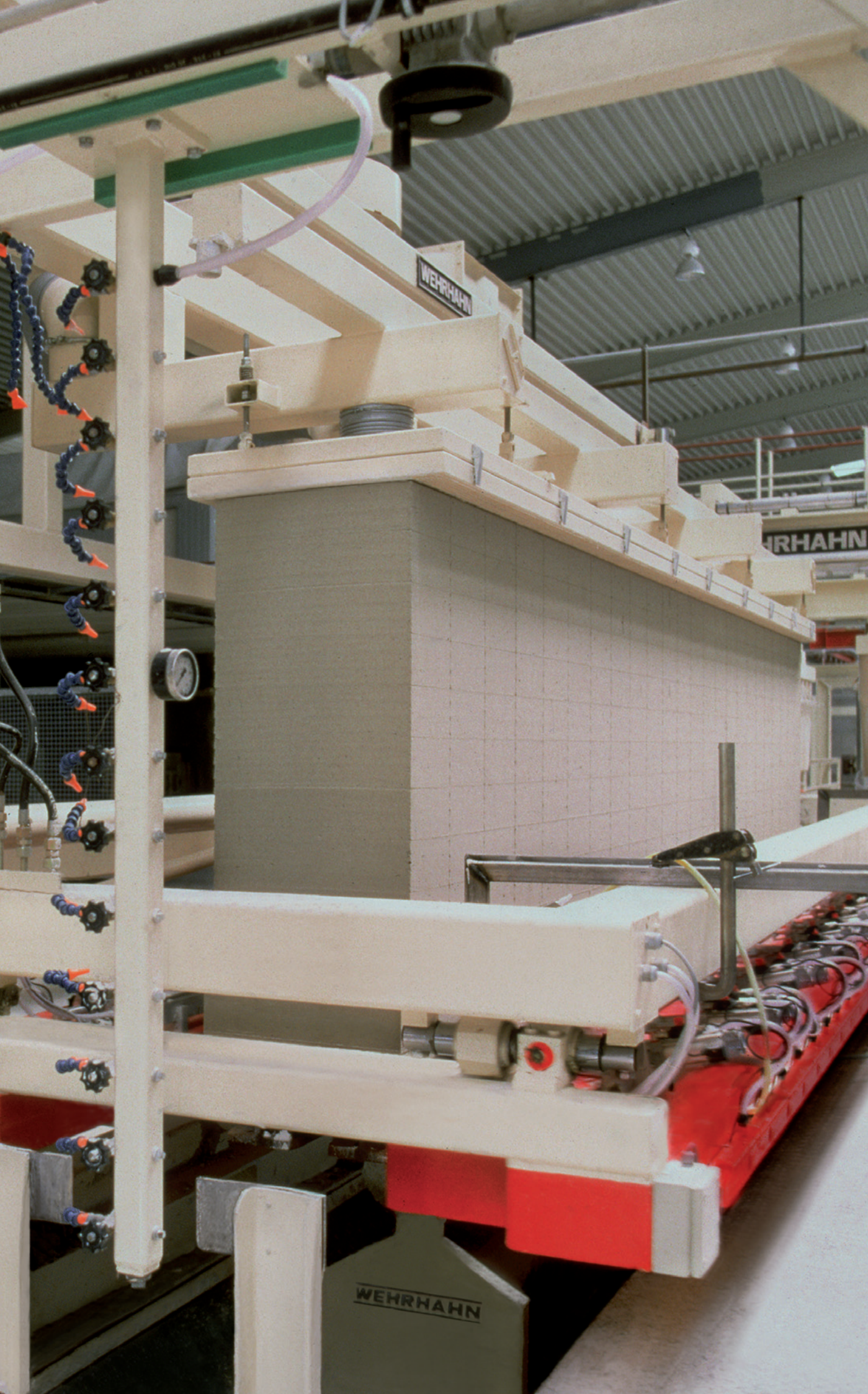
“Machine for the socket”: Wherever possible the electric equipment like motor starters and PLC inputs/outputs are integrated and prewired in the machine. This reduces the cost for the buyer and facilitates faster and simpler start-up of the plant.

Electric engineering

Efficient planning by ePLAN certified engineers for fast and trouble-free installation. This includes not only the electric design for the control cabinets and machines, but also the design for the local cabling of the whole production plant.



High precision cutting machines





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

Insulation.

Fire protection.

Noise protection.

Structural load-bearing.

Recyclability.



Reinforced AAC panels
as load-bearing wall and roof
elements



Vertically applied wall panels
can be installed quickly and
easily

AAC – a lightweight champion

Whether as blocks or reinforced panels – in many countries around the world autoclaved aerated concrete is the number one eco-friendly wall construction material.

Autoclaved aerated concrete (AAC) is used in practically all branches of the construction industry: from residential and commercial buildings to large prestigious complexes and industrial plants. It is suitable for all types of wall construction, as infill panels or blocks between concrete or steel pillars, partition walls, fireproof walls and single or double shell exterior walls.

Maximum efficiency and minimal use of resources.

For production of 5 m³ of AAC, only 1 m³ of raw material are needed. In comparison to other building materials, energy consumption during the production process is extremely low.

Excellent eco-balance.

All raw materials are from natural

sources and can be found almost everywhere: lime, cement, sand or fly ash, water and small quantities of aluminium powder. Autoclaved aerated concrete is 100% recyclable during production and is ecologically friendly in production and further processing.

Outstanding insulation properties. Perfect insulation, excellent fire resistance and high compressive strength at comparably low density make AAC the perfect construction material, even for areas of seismic activity.

Low weight and very easy handling. AAC can be worked on quickly and easily using simple tools directly on the construction site.

Unsurpassed feasibility can be achieved thanks to the low weight, very precise dimensions and excellent thermal properties.

AAC is five times lighter than concrete and two to three times lighter than other bricks. The properties of AAC help investors to reduce cost for the foundation and other structural elements of the buildings.

Dry density
300 – 700 kg/m ³
Compressive strength
2 – 7.5 N/mm ²
Thermal conductivity
0.08 – 0.18 W/mK
Fire rating
0.5 – 4 hours



Blocks – accurate dimensions and easy to install



Typical application: in private houses or for building complexes of any size

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 – have resulted in successful exclusi-

ve Wehrhahn products such as our no system waste technology, tilting system with bed remover and 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.