



ACOTEC WALL PRODUCTION

SEMI - PRO - EDGE FOR NON-LOAD BEARING PARTITION WALLS



OUR PROMISE. PROFITABLE PRECAST.

Elematic is a world leader in precast wall production technologies with 230 currently valid patents and largest annual R&D investment in the industry. That's why we can offer you large, smoothly-running factories or efficient solutions for small-scale production, whichever suits best to your needs, and safe and user-friendly machines and technologies that generate true added value for your wall manufacturing.

The Elematic Acotec line comes in three different technology levels: SEMI, PRO and EDGE. The options differ in terms of their automation, capacity and investment levels.

No matter which one you choose, the line is quick and simple to install, run and maintain as it consists of proven standard components. Even better, all lines require only limited factory space and can also be installed in existing production facilities. Acotec lines require only 900 m2 of space in the factory, so they can also be installed in smaller factories.

In our opinion, profitable precast is based on three cornerstones.

Lowest operational costs

Elematic production lines are optimized to supply the lowest operational costs in the precast business. During the initial stages of your factory construction, our project office and installation services guarantee that your production starts as scheduled.

Best end products

We want you to be proud of the products you supply to your customers. This is why the Acotec line features optimal extrusion for the best ratio of panel hardness and lightness. We also manufacture Acotec base plates from a thick, high-quality material that guarantees even panel surfaces.

Lifetime commitment

We stand by you at every step of your precast business and help you to find the smartest match to your needs from the initial definition of precast investment to precast production renewal. Our experienced experts guide you from building, investment and production planning to factory, line and machinery maintenance, optimization and renewal.

WHAT IS ACOTEC?

Elematic Acotec is a fast and profitable production technology for light, non-load bearing, room-high partition wall panels. The line covers the entire production process from concrete batching all the way to storage yard management and beyond. The Elematic Acotec production line offers low operating costs and wall panels of the highest quality.

Elematic is the original developer of Acotec technology. The industrialized panel production process translates into precise panel dimensions and flat panel surfaces. The panels are quick and easy to install – no plastering is needed at the construction site.

Where?

Acotec wall panels are ideal for places where excellent sound insulation is key and they are also well suited to bathrooms, kitchens, and shower rooms. Acotec wall panels also meet the strictest standards and requirements in terms of seismic durability, moisture and fire resistance. Acotec walls are fully recyclable.

Why?

Building with Acotec panels is six times faster than traditional brickwork and twice as fast as blockwork. Acotec panels offer time and labor savings of up to 50% compared to conventional partition wall building methods. In addition, Acotec wall panels have a thin structure, which means more floor space to use for other purposes in the building.



END PRODUCTS

- Lightweight panels
- Normal weight panels
- Partition walls
- Bathroom walls
- Fences

BENEFITS OF ACOTEC PANELS

- Fast, easy and safe to install
- Precise panel dimensions
- Completely level panel surfaces
- Thin panel structures
- Excellent noise and thermal insulation
- Moisture-resistance



BENEFITS AT A GLANCE

Smart design, low investment

Fast return on investment and simple to install, run and maintain. Requires little factory space – 900 m² – and land area. The line can also be installed in existing production facilities.

High productivity

The line needs only five people to produce up to 80 m²/h. Advanced production control with a fully visual user interface helps you to control the whole process from one point. Fast troubleshooting means less downtime.

IN FIGURES

Theoretical capacity 80 m²/h
 Personnel 5–7
 Production area 900 m²
 Land area 3,000–5,000 m²
 No. of plates 50
 Time to change product thickness: 0.5 h
 Concrete mix variations: Standard to lightweight aggregate concrete

All figures are estimates

SEMI

The SEMI line, with a production capacity of 80 m² per hour, is a simple line with a practical combined restacker-handler and automated key functions. It is an excellent choice for anyone starting up in the business.

KEY EQUIPMENT TO THE LINE INCLUDES:

Extruder

Fast, reliable and easy to maintain stationary extruder. Low-noise (<85 dB) and emission-free. Features three vibrators, compression and leveling equipment. Equipped with standard panel thickness sets as per the client's selection (68/75/85/92/100/120 mm).

Saw

Moving circular saw installed onto a roller conveyor. Sharp cuts, cutting speed 10 m/min.

Stacker

Fast and gentle stacking of panels. The system stacks the extruded products and their backing plates onto 4–10-piece stacks on steel pallets and transfers the pallets for precuring.

Restacker Handler

Picks up finished products and feeds plates to extruder, while separating B-quality panels.

Automation

Simple, modern graphic user interface shows detailed data on every function in the whole process. Ethercat-BUS makes line installation, operation and troubleshooting fast and easy.



PROCESS

- 1 Batching and mixing
- 2 Casting
- 3 Cutting
- 4 Stacking
- 5 Overnight curing
- 6 Restacking and plate handling
- 7 Cleaning (option)



PRO

The PRO line offers a mid-level capacity of 100 m² per hour with automated functions for all main processes: sawing, trimming, stacking, restacking, cleaning, oiling, plate handling and pallet circulation.

KEY EQUIPMENT TO THE LINE INCLUDES:

Extruder. Fast, reliable and easy to maintain stationary extruder. Low-noise (<85 dB) and emission-free. Features three vibrators, compression and leveling equipment. Equipped with standard panel thickness sets as per the client's selection (68/75/85/92/100/120 mm).

Saw. Moving circular saw installed onto a roller conveyor. Sharp cuts, cutting speed 10 m/min.

Trimmer. Adds flexibility to end products. Trimmer enables the product length to be adjusted by up to 20 cm.

Recycling. Efficient recycling of rejected slabs and trimmed material guarantees low waste and decreases production costs. Concrete is returned to the extruder to be recasted.

Stacker. The system stacks the extruded products and their backing plates onto 4–10-piece stacks on steel pallets quickly and gently, and transfers the pallets for pre-curing.

Restacker. Picks up precured products and returns plates to the process. Stacks A-grade products into 4–10-piece delivery stacks and separates B-grade products.

Plate Handler. Fast feeding of plates guarantees the non-stop operation of the extruder.

Cleaning. Efficient cleaning and oiling of plates for high quality wall panels and long plate service life.

Automation. A simple, modern graphical UI shows detailed data on every function in the process. Ethercat-BUS makes line installation, operation and troubleshooting quick and easy. Plate quality is controlled with sensors to ensure consistently high quality. The modern control system assists in troubleshooting with visual indication of fault locations and shows fault-specific instructions for corrections. The reporting function allows constant monitoring of capacity, raw material consumption and panel weight.



BENEFITS AT A GLANCE

Low operational costs

Efficient process control and fast troubleshooting keep downtime low and the line running smoothly.

Best end products

Custom-made, high-precision plates and efficient plate preparation supply the best possible panel surface quality.

Save material with recycling

Easy recycling at the push of a button: The concrete is returned to the extruder to be casted again. Minimizes production costs.



PROCESS

- 1 Batching and mixing
- 2 Casting
- 3 Cutting
- 4 Trimming
- 5 Stacking
- 6 Overnight curing
- 7 Restacking
- 8 Plate handling and cleaning
- 9 Packing



IN FIGURES

- Theoretical capacity 100 m²/h
- Personnel 2–4
- Production area 900 m²
- Land area 3,000–5,000 m²
- No. of plates 500
- Time to change product thickness: 0.5 h
- Concrete mix variations: Standard to lightweight aggregate concrete

All figures are estimates



BENEFITS AT A GLANCE

Low operational costs

Fully automatic functions and fast troubleshooting keep downtime low and the line running smoothly.

Best end products

Fast curing in an insulated chamber with high temperature and constantly high humidity. Automatic packing keeps the panels moist but external humidity out, further improving the strengthening process.

High panel quality

The industrialized panel production process translates into precise panel dimensions and flat panel surfaces. The panels are therefore quick and easy to install – no plastering is needed at the construction site.

IN FIGURES

Theoretical capacity 120 m²/h
 Personnel 2
 Production area 900 m²
 Land area 3,000–5,000 m²
 No. of plates 500
 Time to change product thickness: 0.5 h
 Concrete mix variations: Standard to lightweight aggregate concrete

All figures are estimates

EDGE

The fully automatic Acotec EDGE offers a top-rate capacity of 120 m² per hour and needs only two operators to run. In addition to the automation of the PRO line, EDGE also features automatic curing and packing, as well as camera monitoring.

KEY EQUIPMENT TO THE LINE INCLUDES:

THE SAME PARTS AS PRO LINE:

- Extruder
- Saw
- Trimmer
- Recycling
- Stacker
- Restacker
- Plate Handler
- Cleaning
- Automation

ONLY IN EDGE:

Automatic curing

Automatic transfer of pallets. Fast curing at high temperature in an insulated and humid curing chamber. Possibility to locate the curing chamber outside and minimize the required hall space.

Automatic strapping

Efficient, unmanned strapping of panels.

Automatic Packing

Automatic packing with plastic film improves the curing process and keeps rainwater away from the panels.

Safety wire

Panels can be equipped with safety wiring. Improves safety during the panel installation phase on-site as well as during earthquakes as safety wire stops loose pieces of concrete from falling down.

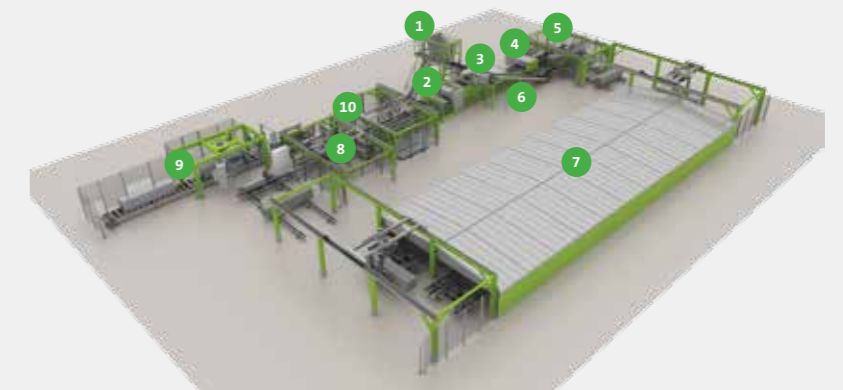
Control cameras

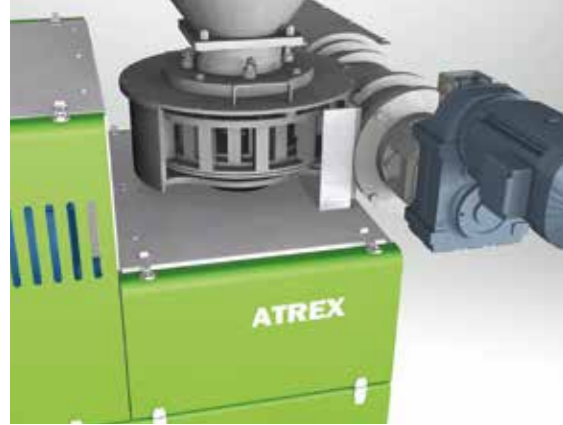
Control cameras supervise the whole process and decrease the need for separate supervisors.



PROCESS

- 1 Batching and mixing
- 2 Casting
- 3 Cutting
- 4 Trimming
- 5 Stacking
- 6 Recycling
- 7 Overnight curing
- 8 Retacking
- 9 Packing
- 10 Plate handling and cleaning





FAST, PROFITABLE AND HIGH-QUALITY PRODUCTION

All Elematic Acotec lines feature an advanced production control system and a simple, modern user interface that shows detailed data on every function in the whole process. Various real-time reports – on production rate, running hours and more – are also generated automatically. Each line is constructed of proven, standard components, which makes the line operationally very reliable.

The lines' modular structure and integrated electricity with the ETHERCAT bus system guarantee rapid installation and start-up times.

The Elematic Acotec line also features a safety-promoting design: all doors are equipped with safety sensors and multiple light curtains prevent accidents. The production process is environmentally friendly as it is silent and non-vibrating, and the raw material can be recycled so no waste is created. The line's low energy consumption keeps production costs low.

COST SAVINGS WITH ATREX CONTINUOUS CRUSHING MIXER

The ATREX® continuous crushing mixer simplifies the Acotec panel production process and gives clear savings in production costs. With ATREX, lightweight aggregate of up to grade 30 can be directly introduced to the production line, instead of storing several specific grades and crushing and screening prior to usage. The continuous process also allows cement feeding according to production requirements, which decreases material loss. The ATREX continuous crushing mixer is available as an option on all Acotec lines.



QUICK AND EASY PANEL INSTALLATION

An ergonomic wagon makes Acotec panel installation quick and easy. A large grip handle together with two robust front wheels ensures smooth mobility. The wagon is manually operated, with hydraulic, radio-controlled panel lifting function.



WORKING TOGETHER FOR CONCRETE RESULTS

We offer a wide range of services that help to support your precast operation and to provide you with concrete results. Your precast operation is in the best possible hands.

Care

We offer continuing expert care to ensure higher uptime. A comprehensive range of services and technical support are available to you throughout the lifetime of your precast plant: from commissioning and maintenance to upgrades and modernization. Our experienced service experts can help you to resolve any issues you may have using proven industry best practices. Fast support is provided throughout the day from our Helpdesk services in four locations: Finland, the USA, the UAE and India.

The Elematic E-shop is open 24/7, enabling you to order high-quality spare and wear parts at your convenience. The OEM parts are guaranteed to fit your equipment and provide you with the lowest long-term operational costs.

Grow

Together with Elematic's consultation services, your operation can reach new heights of profitability. We can help you to detect bottlenecks, optimize production, and find the most cost effective recipes to improve your efficiency and ensure a higher return on your investment.

Create

Our design services work closely with you to help you implement the most successful precast solutions. We are here to help you every step of the way, providing precast expertise for your project from the initial stages of concept design through to structural engineering for precast buildings.



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Elematic provides precast concrete technology, production lines, equipment and related services that help customers succeed. We are the global technology and market leader in precast concrete technology for residential and non-residential buildings.

Our precast production technology is highly respected worldwide for its high quality, excellent productivity and efficiency, and advanced solutions. We believe in continuous improvement of our operations and offering to develop our customers' businesses in a smart way. That's why we are trusted by 40% of the world's precasters.

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SMART EVOLUTION

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