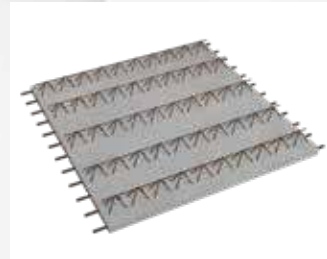
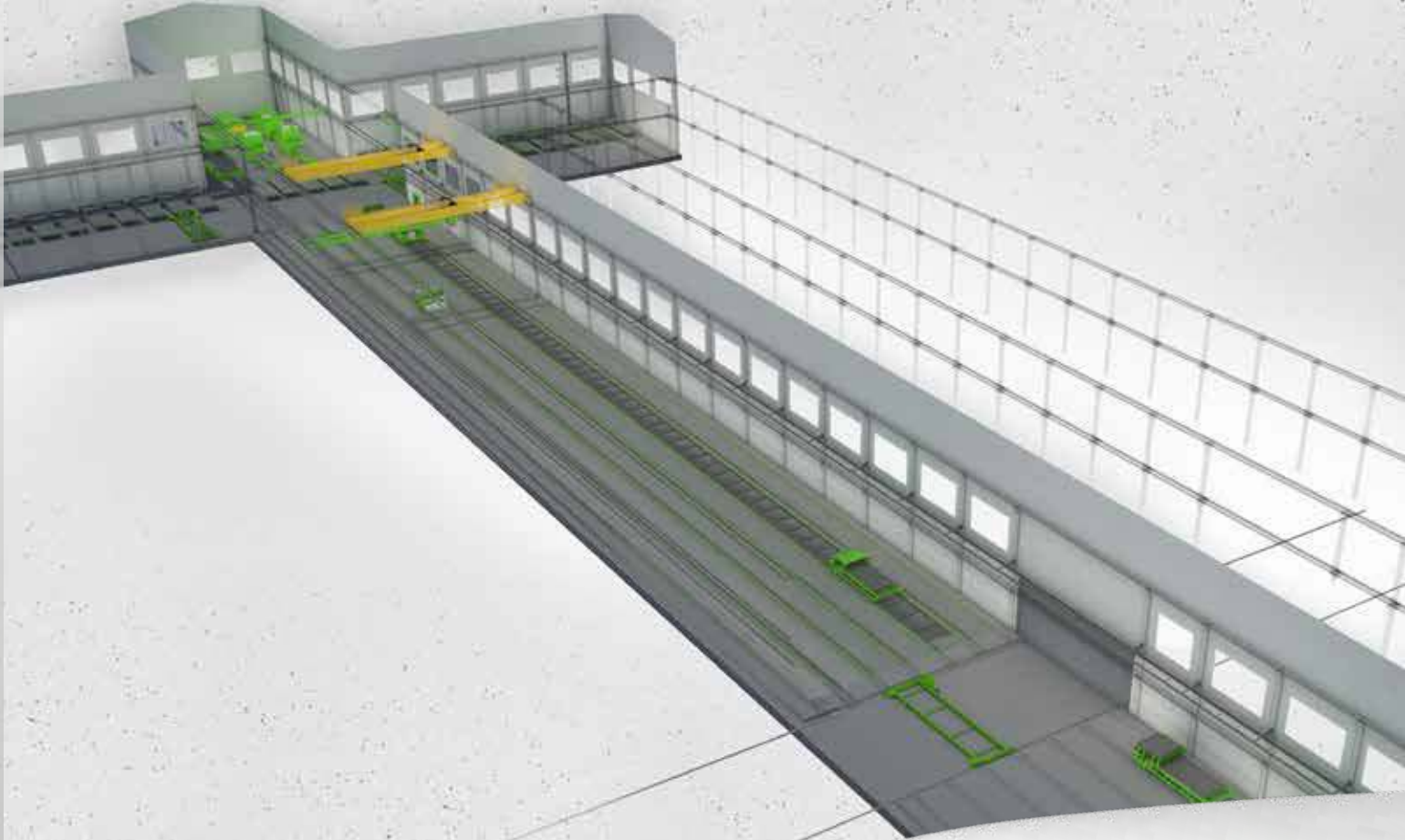


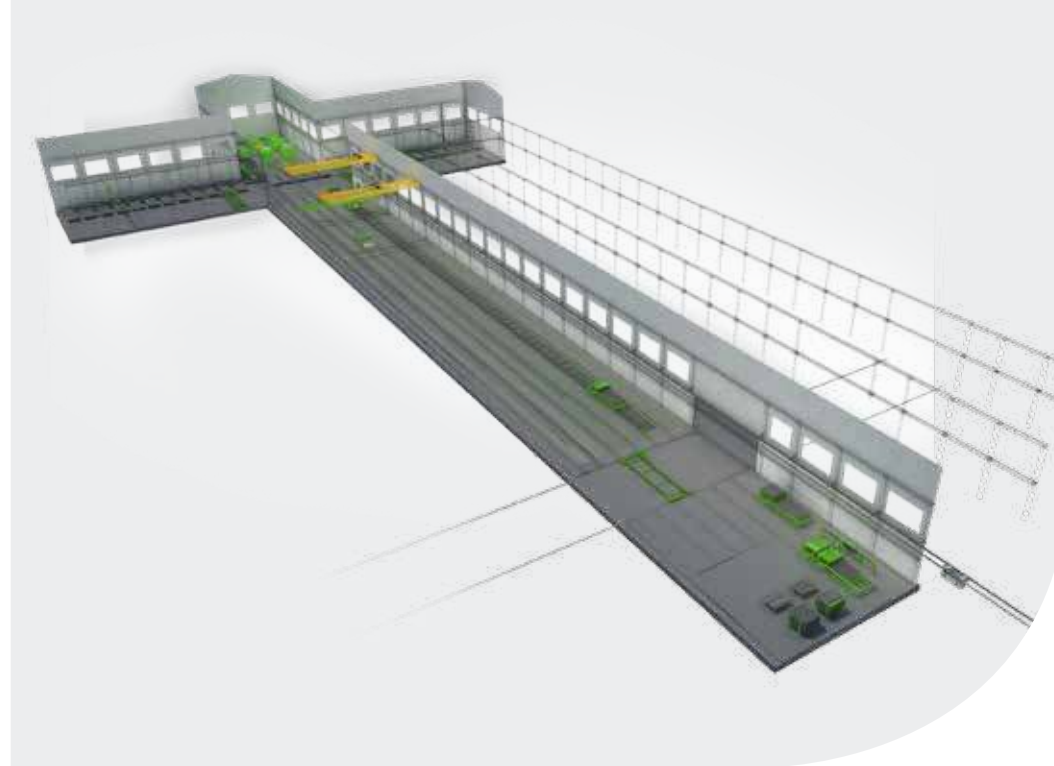
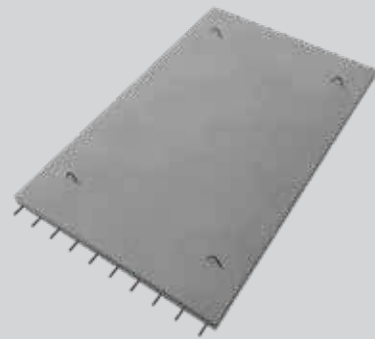
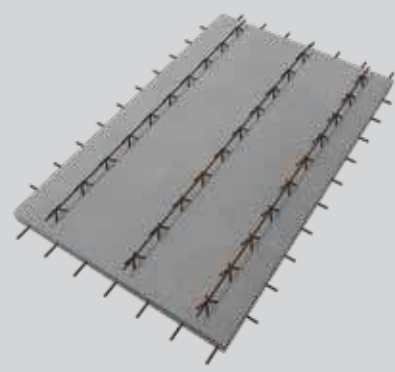


SMART EVOLUTION



PRECAST FLOOR PRODUCTION

LONG LINE FOR HALF SLABS



HALF SLAB LONG LINE FOR EFFICIENT FLOOR STRUCTURE PRODUCTION

Latest technology with a new generation factory automation system

Precast half slabs are an excellent choice for a floor structure in apartment houses, villas and cottages. Compared to cast-in-situ methods, a half-slab structure clearly saves man hours and material costs.

Elematic half slab long line is a fast and advanced technology for the production of non-stressed and pre-stressed half slabs of varying lengths and widths. The production takes place on six adjacent 150 meters long casting beds. The maximum production capacity per day is 4 500 m². This is reached in three shifts, with two castings. The annual production capacity of the line is 1 400 000 m².

BENEFITS AT A GLANCE

- Production flexibility:
 - pre-stressed slabs
 - non-stressed slabs
 - slab length and width can vary
- Low operating costs due to high automation level
- Large production capacity
- Fast production pace
- High space utilization rate
- Excellent slab quality with efficient vibration, bed heating and maturity control

IN FIGURES

Capacity 1 400 000 m²/a
 max. 4,500 m²/day (two castings)

Personnel 11 persons
 working in 3 shifts
 (production line operations)

Production area.... 5200 m²

Land area..... 15,500 m²

Typical casting
 bed size..... (2.8 x 150 m)

HOW DOES THE LINE WORK?

All work phases in the long line are mechanized or automated. Production planning, line control and machine operations are taken care by FloorMES manufacturing execution system.

Service functions and material storage flows are optimized according to production needs. Reinforcements are produced just-in-time and automatically moved to the correct production station. Two side-shifters and a reinforcement wagon with a boom crane take care of their efficient transportation.

The long line also has a flexible side form stock and an efficient form handling process. An automatically produced load list shows how many pieces of each form

length are required in the process. A high pressure washer – 400 bar – takes care of the cleaning.

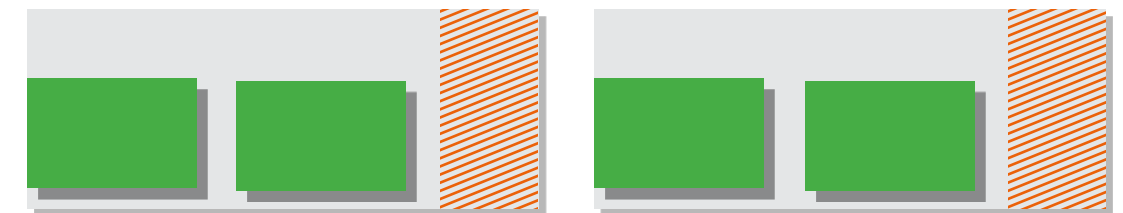
The casting bed features strong steel foundation with heating pipes for accelerated concrete curing. The bed is totally planar, and it is equipped with a removable standard side form on each side.

An automatic plotter marks slab widths, lengths and recesses on the bed. This ensures accuracy of measurements and minimizes errors.

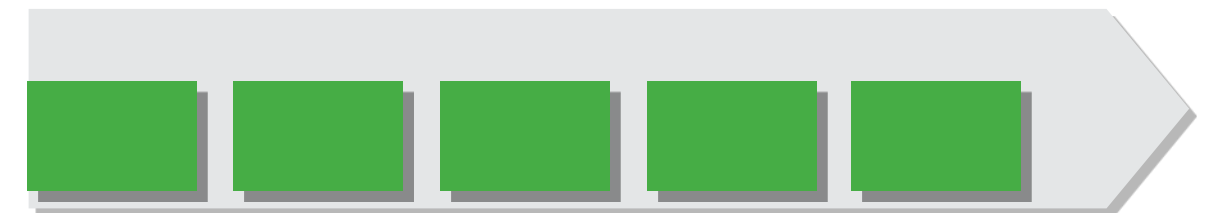
In addition, the line features a possibility to change machines on both ends of the line which means decreased waiting time in the process.

TOP PRODUCTIVITY

CIRCULATION LINE



LONG LINE



Long line technique in half slab production may supply even 60% better productivity compared to circulation line.



NEW PLOTTER SPEEDS UP PRODUCTION

The plotter marks openings and cuts, as well as codes for identification on cast slab surface. It can also mark the sides of elements.

The battery-powered plotter positions itself with a laser and moves independently on wheels on the casting bed rails. No cabling is required.

Plotting details are generated from ELiPlan plant design.



STAY AHEAD OF COMPETITION WITH NEW GENERATION FACTORY AUTOMATION

The long line comes with new generation factory automation that ensures seamless information transfer between machine operations and process control throughout the production – from slab design all the way to storage and shipping. Advanced automation translates into high capacity and fast pace production.

ELEMATIC ELIPLAN AND FLOORMES

Elematic ELiPLAN is an enterprise resource planning solution designed for precast production. It covers sales support, material management, production, warehouse management, transportation and machinery maintenance. ELiPLAN can manage just one production line or multiple factories and product types.

→ Optimizing the use of factory resources and minimizing waste reduces operating costs.

FloorMES manufacturing execution system targets at low operational costs and a smooth, continuous precast production process. The system optimizes the use of casting beds and work schedules and reduces waste. It also offers one single point of access to production planning and automatic work progress monitoring for immediate correction of any deviations.

→ Achieve smooth, continuous precast floor production and low operational costs.

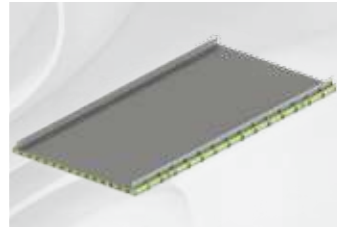


[Unlike many others] "Elematic did not spare any effort and kept providing us with technical support, making it possible for us to complete the installation and get our factory back on track". [during and after IS crisis in 2014]

Bu Young Song
Team Manager of Plant Team 1
Bismayah New City Project, Iraq by Hanwha E&C
South Korea

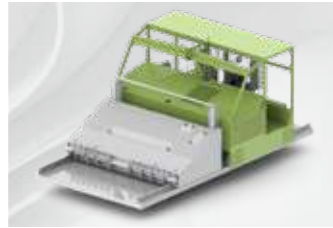


STANDARD EQUIPMENT



BED E9-360

Designed for production of precast concrete half slabs. Maximum load 360 kg/m². Maximum half-slab height 150 mm.



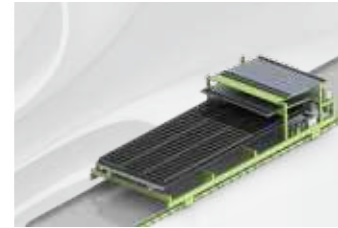
PREPARER P7-1200PW-lpg

Cleans the casting bed and side forms, pulls the prestressing strands and oils the bed surface in a half slab production line.



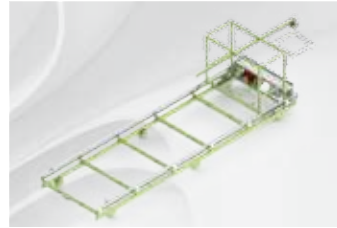
SIDE FORM

Purpose-designed aluminium side forms to be used in the production of half slabs in precast factory.



WAGON E9-10s

Transports crosswise and longitudinal sideforms to and from castings beds. Purpose-designed for half slab side forms.



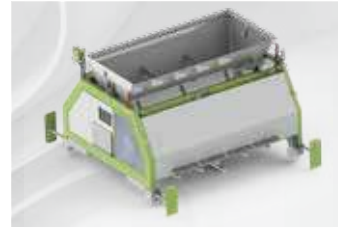
WAGON E9-4r

Used to transport loaded and unloaded reinforcement platforms and to lift individual reinforcements onto the casting bed when the side forms are already in place.



PALLET FOR REINFORCEMENTS

Designed for transferring reinforcements from reinforcement machines to assembly stations and to/from Wagon E9-4r on a half slab production line.



CASTER E9-40a

A casting machine for automatic and high capacity casting of half slab and solid slab with wet concrete on a long bed.



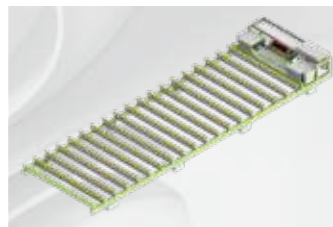
SIDE SHIFTER E9-30s

Moves the machines of half slab long line from bed to bed. The position of the side shifter is measured with a laser positioning system.



PALLET TRANSFER MODULE

A module of side shifter. Transfers the reinforcement pallets from and to reinforcement transport wagon and from and to assembly station/reinforcement machines.



WAGON E9-25t

Moves ready hardened slabs from casting beds to the storage yard. It is battery driven and manually operated via radio remote control. The load is distributed on four wheel pairs.



CLEANING MACHINE E9-400c

Cleans steel and aluminium side forms used in precast production line with high pressure water jet. It also dries them with air flow and oils them.

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 by 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.



PRECAST FLOOR PRODUCTION LONG LINE FOR HALF SLABS

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' business in a smart way. That's why we are trusted by 40% of the world's precasters.

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Elematic Oyj • Aiolantie 2, 37800 Akaa, Finland
Tel. +358 3 549 511 • E-mail sales@elematic.com