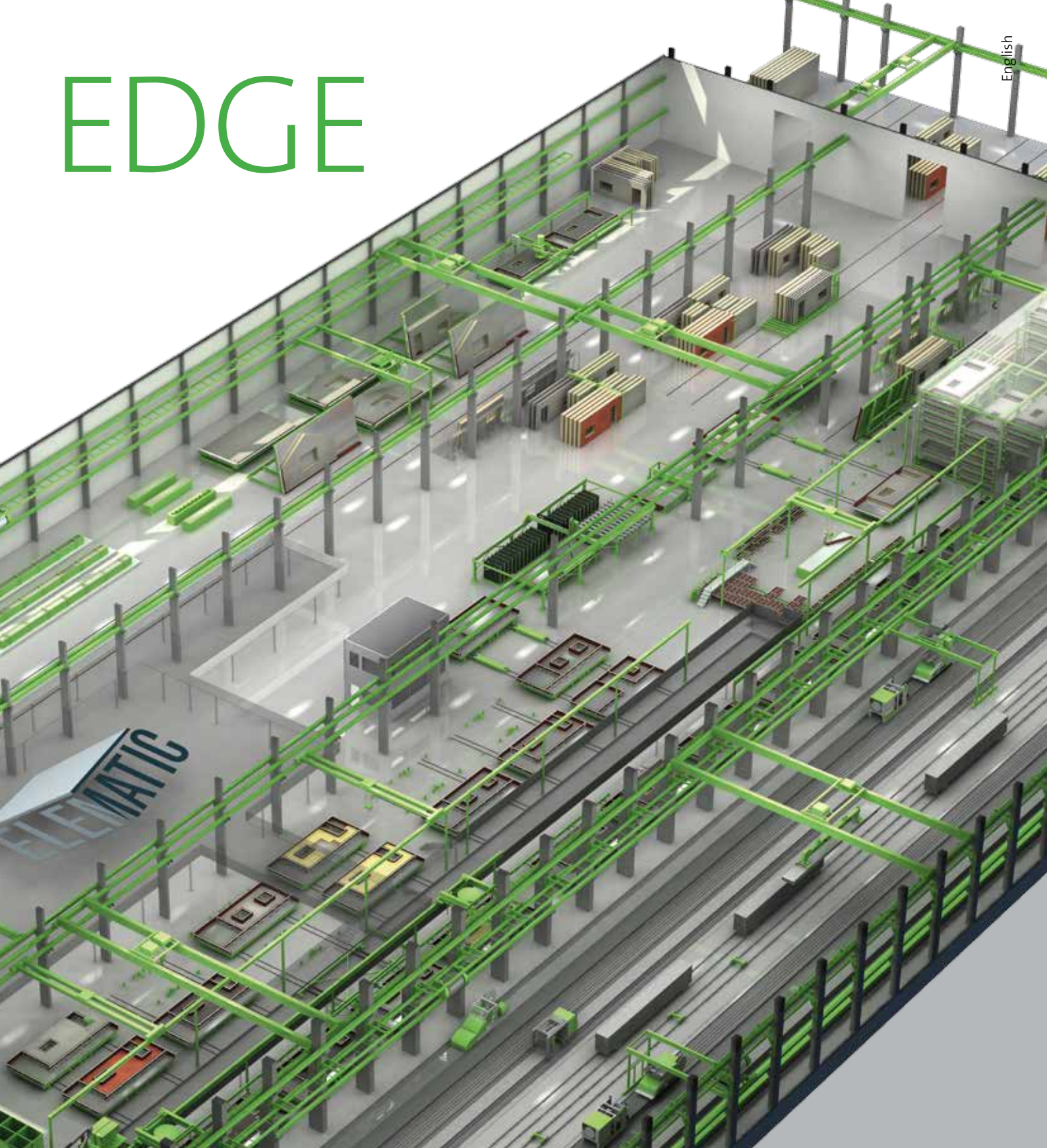


# EDGE

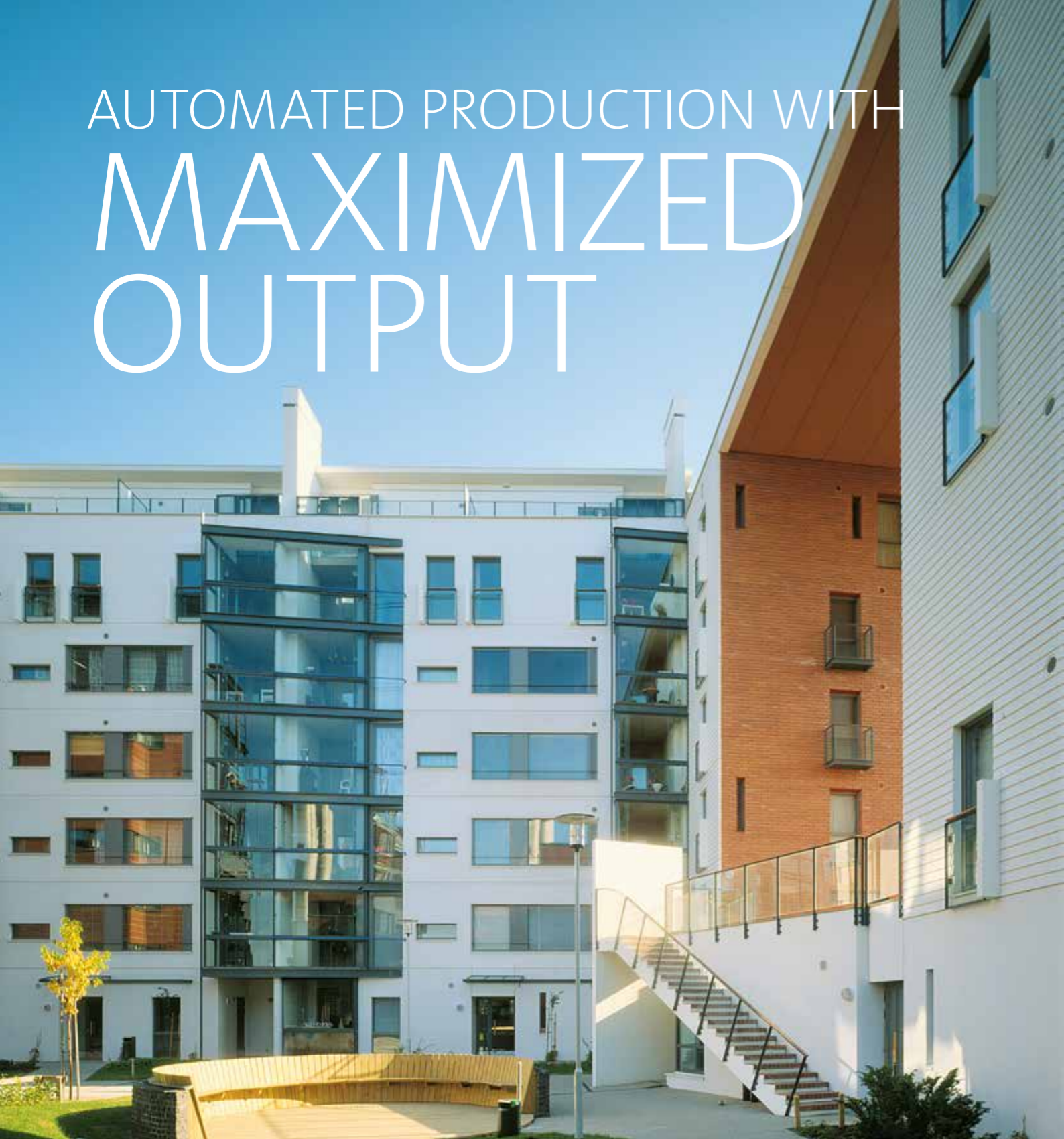
English



COMPLETE PRECAST PLANT



# AUTOMATED PRODUCTION WITH MAXIMIZED OUTPUT



Precast concrete is one of the world's most common building materials. It is adaptable and affordable – and saves a significant amount of materials and resources.

### **Saving concrete**

The precast hollow-core slab is a good example. Production saves up to 50 percent in concrete compared to cast-in-situ floors. And with Elematic's shear compaction technology, consumption is reduced even more.

### **Combining looks and economy**

Precast can be both beautiful and cost-efficient – like sandwich panels produced with Elematic technology. The panels are insulated, which reduces energy consumption for cooling and heating. And the outer layer of the façade can have a variety of looks, such as brickwork, polished marble or granite.

## THE EDGE PLANT

Elematic's EDGE production lines and machines are especially designed for precasters seeking very high capacity, a wide product range, and highly automated precast production.

The EDGE plant is the most advanced in the world. It is the ideal solution for the experienced precaster in markets where precast is a well established building method and demand is high. EDGE includes state-of-the-art machinery and the highest possible level of automation, which also increases safety. And finally, what makes this the most cost-efficient solution for large scale precast

production – ELIPLAN ERP. Software that enables optimized production control, real-time production flows, secured uptime, controlled material consumption, amongst other things. Additionally BIM software can be connected to ELIPLAN – thus extending control from structural design all the way out to the construction site.



### **Benefits at a glance**

- Fast and cost-efficient production with high automation
- Higher safety due to automation
- Flexible production
- High-quality end products
- Automated transportation and distribution of concrete
- Quick transport of ready-made products
- Optimized production with ELIPLAN ERP
- Reduced environmental impact with slurry recycling system

### **Wall Products**

- Sandwich panels
- Solid panels
- Cladding panels
- Solid slabs

### **Floor Products**

- Hollow-core slabs
- Solid slabs
- Ribbed slabs
- T-beams

In figures	Capacity/day	Personnel
Wall	1600–3024 m <sup>2</sup>	30–35
Floor	2880 m <sup>2</sup>	10

All figures are estimates

# THE EDGE WALL PLANT

EDGE Wall plant consists of the EDGE Wall production line, Battery molds and Tilting tables.

## EDGE Wall production line

To maximize productivity the tables are moved automatically between the different process steps. Logistics is cleverly solved by means of a central transfer wagon that ensures smooth “traffic”.

Concrete transportation and table preparation (side forms shuttering) are both entirely automated. This saves valuable time and keeps productivity high.

Casting is done with a casting machine designed for efficient compaction and accurate dosing to save concrete.

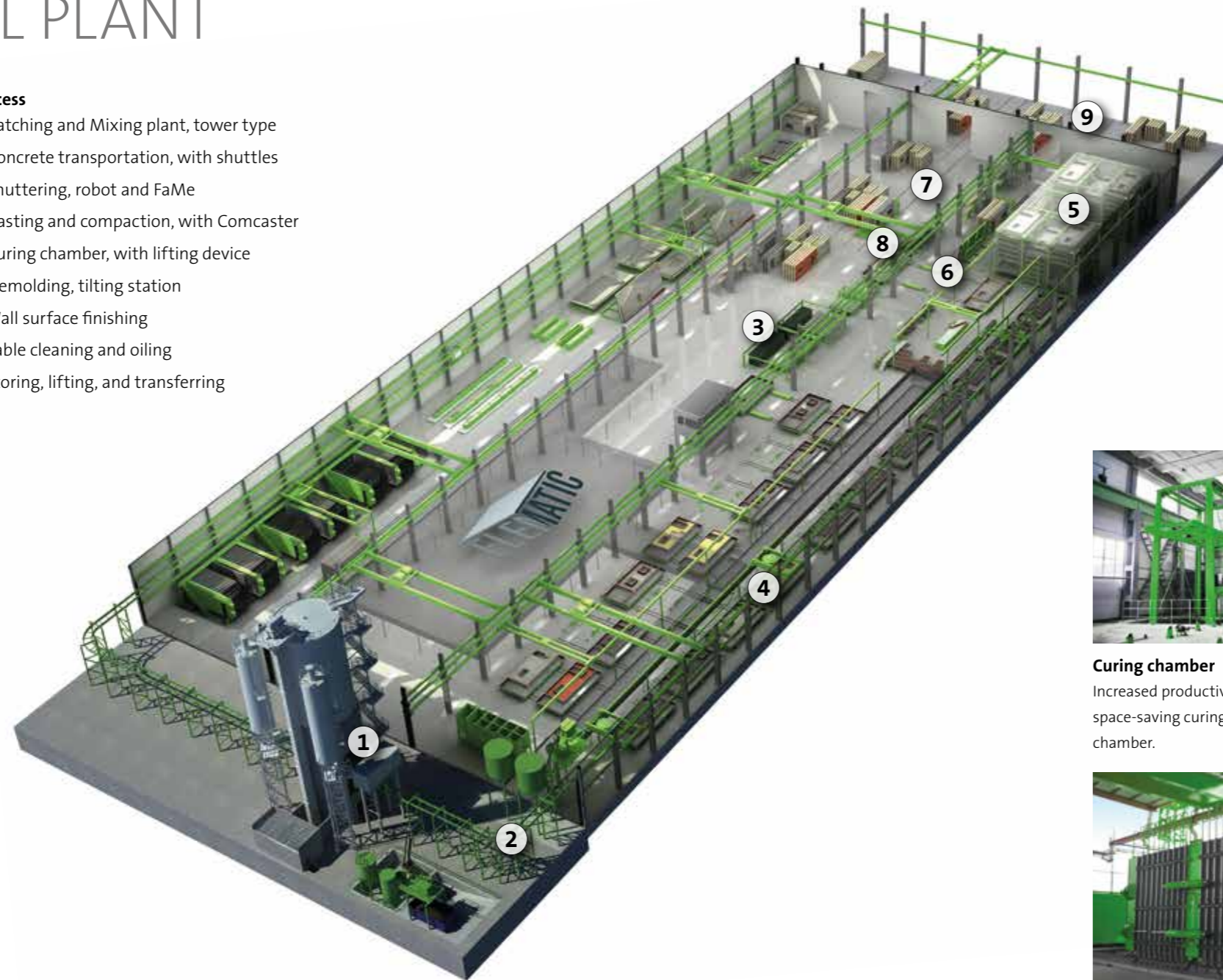
To quickly make room for new castings all tables are stacked for curing in a separate curing chamber. The tables are sturdy steel constructions with high load-bearing capacity (> 600 kg/m<sup>2</sup>). The exceedingly smooth steel surface of the tables creates wall products which require minimal finishing work.

## Benefits at a glance

- Consistent and high production capacity
- High productivity with product-specific table routing
- Very efficient shuttering with robot
- Concrete saving with accurate and fast dosing
- Increased productivity with curing chamber
- Sturdy steel tables
- Little finishing work

## Process

1. Batching and Mixing plant, tower type
2. Concrete transportation, with shuttles
3. Shuttering, robot and FaMe
4. Casting and compaction, with Comcaster
5. Curing chamber, with lifting device
6. Demolding, tilting station
7. Wall surface finishing
8. Table cleaning and oiling
9. Storing, lifting, and transferring



## STANDARD EQUIPMENT



### Comcaster E9-2500

Easy-to-operate, radio controlled casting/compaction. Accurate and fast dosing saves raw material and time.



### Curing chamber

Increased productivity with fast and space-saving curing in special curing chamber.



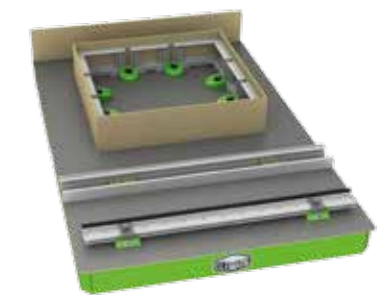
### Shuttering robot E9

Fast, exact, and automatic positioning of side forms.



### Battery molds

High productivity of solid wall products by means of vertical casting. Takes up very little space.



### FaMe

Fast preparation of side forms and openings with light, recyclable aluminum profiles and magnets.

## Molds

Battery molds for efficient solid wall production. Tilting tables for special sized products. Area reservation for stairs and other special molds.

## TYPICAL END PRODUCTS

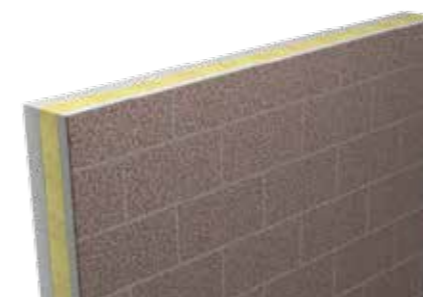
### EDGE Wall production line in figures

Theoretical capacity	1600–3024 m <sup>2</sup> /day (one casting)
Personnel	30–35
Production area	9000 m <sup>2</sup>
Land area	70000 m <sup>2</sup>
No. of tables	40–60
Typical table size	4.0 x 10 m

All figures are estimates



Sandwich panels



Cladding panels



Solids panels



Solids slabs

# THE EDGE FLOOR PRODUCTION LINE

The eight beds have long-lasting special steel surfaces, an integrated heating system and also a system for maturity control. Bed preparation (cleaning, oiling, and pulling strands) is managed by the preparer machine. Bundle prestressing of strands saves valuable time in bed preparation. Concrete transportation is entirely automated. This too saves time and keeps productivity high.

The production line offers maximum flexibility thanks to double set-up of key machines and equipment. Produce different end products with our slipformer or save cement with our fully automated extruder – or get both machines.

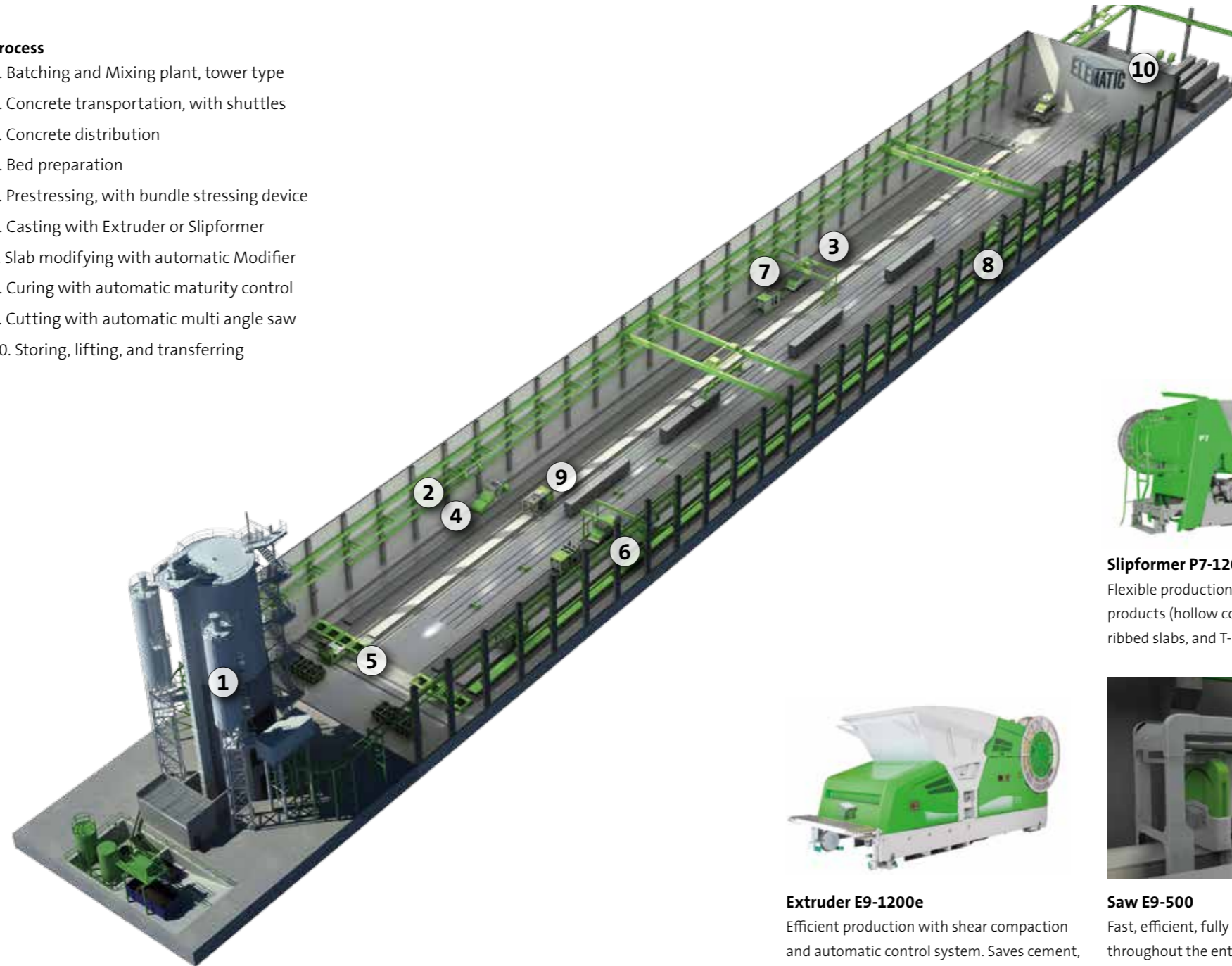
After curing, the slabs are cut with a fully automated saw – yet another time saver.

## Benefits at a glance

- Time and labor saving bed preparation with preparer and bundle prestressing
- Low cement consumption with shear compaction technology and compaction control
- Faster and better curing with bed heating system
- Optimal time for cutting with maturity control
- Increased productivity with fully automated cutting
- Low impact on environment, health and safety with quartz dust and slurry control

## Process

1. Batching and Mixing plant, tower type
2. Concrete transportation, with shuttles
3. Concrete distribution
4. Bed preparation
5. Prestressing, with bundle stressing device
6. Casting with Extruder or Slipformer
7. Slab modifying with automatic Modifier
8. Curing with automatic maturity control
9. Cutting with automatic multi angle saw
10. Storing, lifting, and transferring

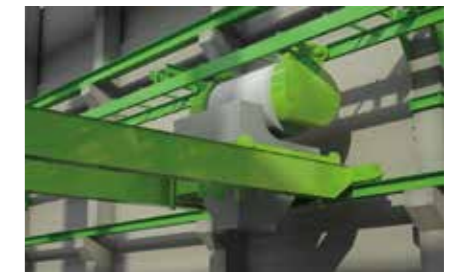


## STANDARD EQUIPMENT



### Modifier E9-1200m

Fast, easy, and accurate slab markings and openings. Fully automated.



### Shuttle E9-2800

Fast and automatic transportation of concrete to the casting machine.



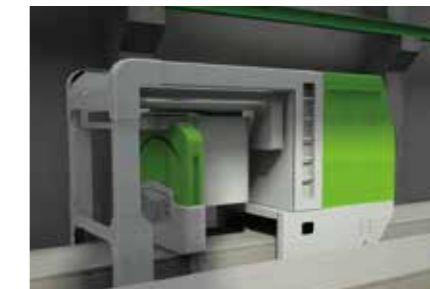
### Slipformer P7-1200s

Flexible production of different end products (hollow core, half slabs, ribbed slabs, and T-beams).



### Extruder E9-1200e

Efficient production with shear compaction and automatic control system. Saves cement, prolongs component lifetime. Gives very accurate dimensions.



### Saw E9-500

Fast, efficient, fully automated cutting throughout the entire bed length. Programmable cutting cycles for individual products. Low noise.



### Preparer E9-1200p

Efficient bed preparation by one operator. Used for cleaning, oiling, and pulling strands over the bed. Bundle prestressing saves time.

## TYPICAL END PRODUCTS

### EDGE Floor production line in figures

Theoretical capacity	2880 m <sup>2</sup> /day (two castings)
Personnel	10
Production area	5000 m <sup>2</sup>
Land area	9000 m <sup>2</sup>
No. of beds	8
Max. end product height	500 mm

All figures are estimates



Extruder: Hollow-core slabs



Slipformer: Hollow-core slabs



Slipformer: Ribbed slabs, Half slabs



Slipformer: T-beams

Elematic supplies precast concrete machinery and complete production plants for building construction worldwide. Elematic is the leading one-stop-supplier for precast concrete technology. Our customers are in the precast business of floors, walls, frames and foundations – or even all of them. Precast solutions for all needs – from small scale production plants to huge ones with the same high standards for structural and architectural design. Support throughout the life cycle assisting customers to achieve maximum profitability regardless of investment level.

That's our offer.

