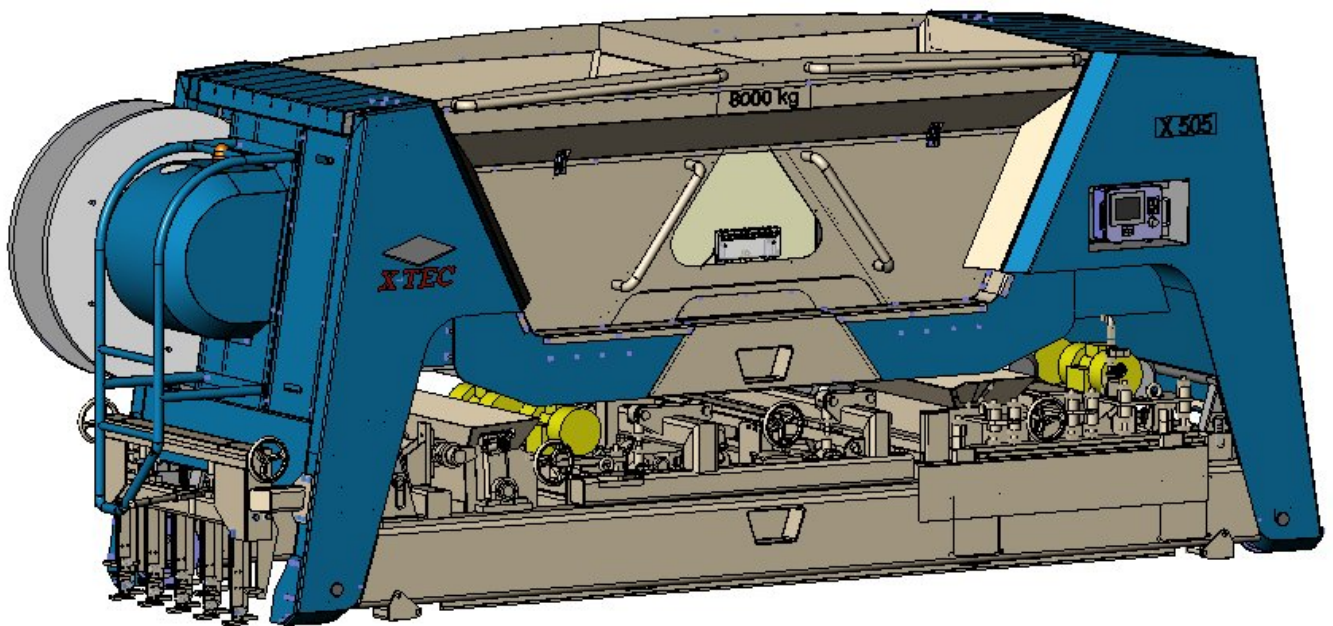


## SLIPFORMER

### X-FORMER X505



*Key words: X-Former X505, slipformer, hollow-core slab, lintel, prestressed flooring, beam, beam & block floor, vineyard post*



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## 1. Introduction

A slipformer is a production machine for a variety of pre-stressed products, e.g. hollow-core floor slabs, hollow-core wall panels, solid floor planks, ribbed slabs, lintels, T and I-beams and even for vineyard posts.

X-Former X505, a product of Elematic Group, is the right solution for a producer who needs versatility and flexibility. It is an efficient and economical solution when you need more than one hollow-core slab thickness and your product mix consists of different types of prestressed products.

Switching from one slab height to another is easy and the change only takes about 2–3 h. Switching from one product to another is even easier and takes less than 30 min.

The X-Former X505 is a paragon of user friendliness — there are fewer parts to change, fewer adjustments needed, and more variation in the products it can turn out.

### 1.1. Advantages

#### GREATER DURABILITY

- The main wear parts are engineered with maintenance-friendliness kept in mind and made of most wear-resistant materials to achieve a long service life

#### QUICK CHANGEABILITY

- For speed and accuracy and minimizing down time, the connections between the casting unit and the feeding unit are made with quick couplings, saving production time and money

#### ALL ELECTRONIC

- Electronic settings for different products are stored in the system, thus eliminating readjusting when changing from one thickness to another
- The precise, reliable electric operations that have replaced high-maintenance traditional hydraulics movement are accurate and easy to control

#### ENVIRONMENT AND USER FRIENDLINESS

- No hydraulics means no leaking oil and no contamination because of it
- Low energy consumption

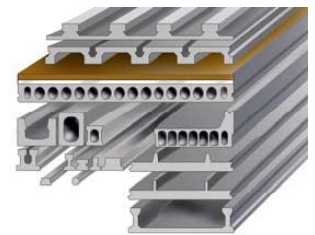
### 1.2. General data

X-Former X505 is used to produce prestressed hollow-core slabs and wall panels with 7 and 9 voids, and various beams and half slabs.

Casting width: 1.2 m

Thickness

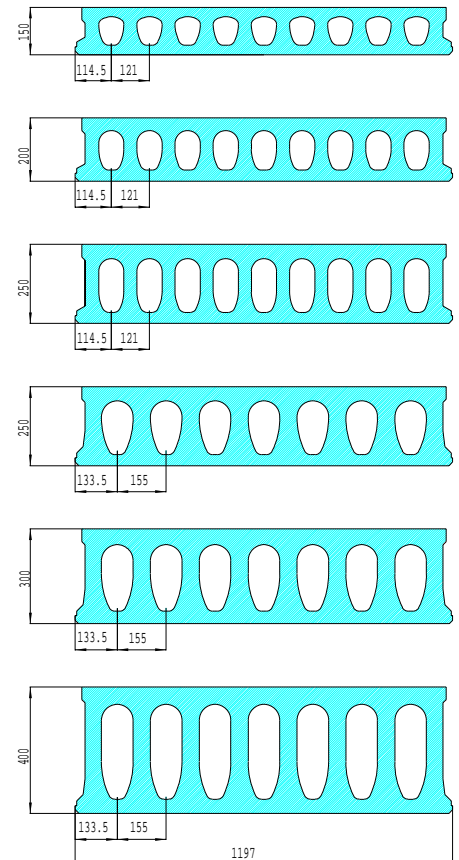
- Hollow-core slabs 120 - 400 mm
- H-C wall panels 120 - 200 mm
- T-beams 60 – 200 mm
- Solid slabs 70 - 200 mm.



### 1.3. Detailed data

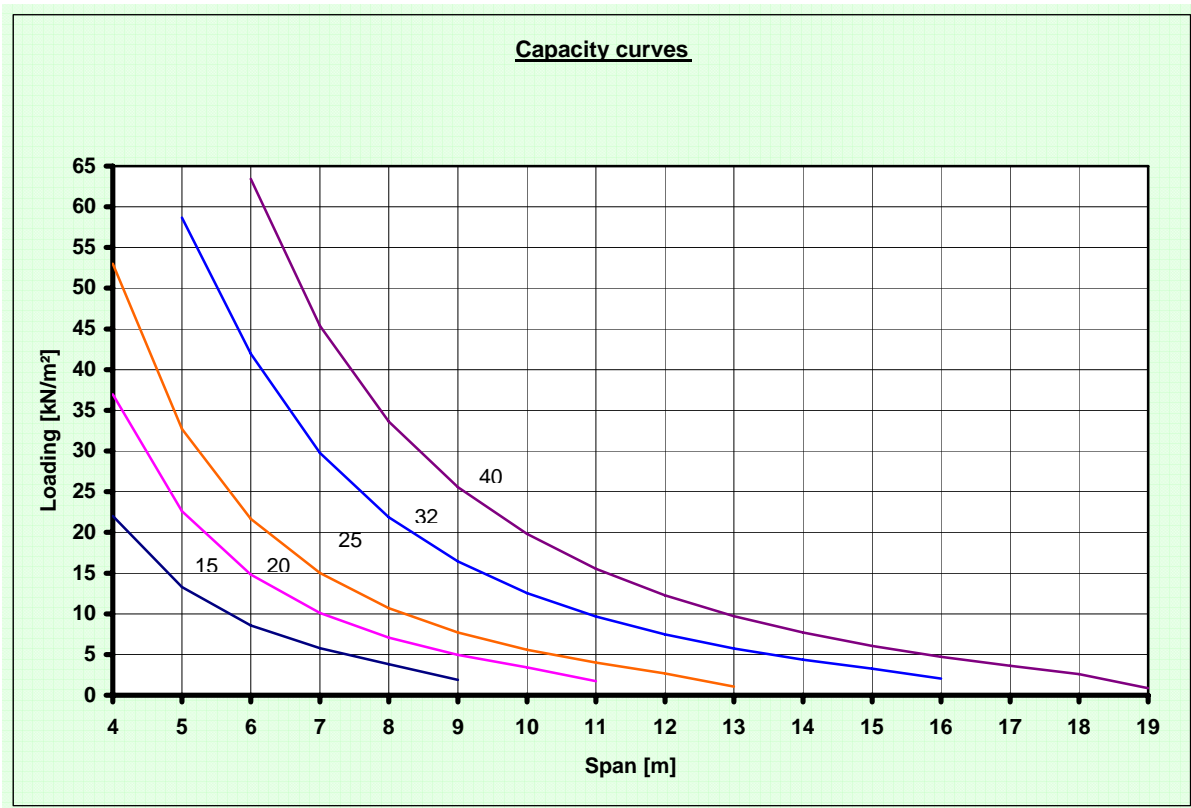
Standard thicknesses and weights of slipformed hollow-core slabs

Height, mm	Weight, kg/m <sup>2</sup>
9-voids 120	200
150	239
200	305
250	354
7-voids 200	327
250	381
320	456
400	540



## Performance curves of slipformed hollow-core slabs

The curves provide the indicative load bearing with a deflection limit under variable loading to 1/800 of the span.

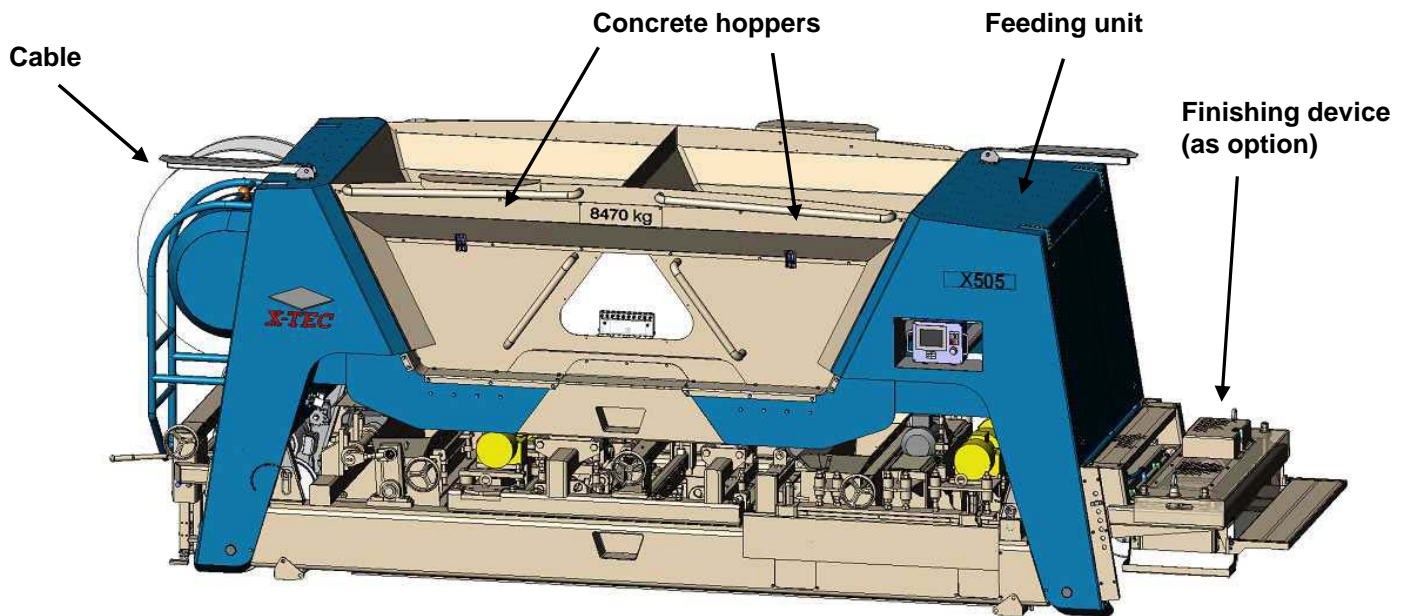


## 2. Key features

- Cross-sections available up to 400 mm
- Stepless adjustment of functions
- Electronic 4 wheel drive
- Fast transfer speed
- Powerful top vibrating beam to secure the bond of the top strands
- The latest electronic components and logic control system

The slipformer technique is based on vibration compaction. The slipformer casts the slabs in two layers and the voids are formed as mechanized molds vibrate and they move back and forth.

X-Former X505 consists of two main parts: a feeding unit and a casting unit. The description “slipformer with two stages” indicates how many different filling and compacting phases are used by the casting unit to form the slab.



The feeding unit is a twin-hopper system, out of which concrete is fed by means of a plate feeder into the feeding hoppers of the casting unit. After that, the concrete is compacted by vibrating units. If the concrete producer has various casting units, a single feeding unit can be moved from one casting unit to another, e.g. for the production of hollow-core slabs, I-beams, and ribbed slabs.

#### **TOUCH SCREEN CONTROL SYSTEM — making it difficult to forget**

The new control system is operated via a touch screen. The adjustments needed during casting are minimized.

The casting parameters are saved in the system memory for each product separately and available always when similar products are produced. Casting can always be started with the best speed values and no adjusting. In addition, the learning time typical for conventional slipformers is not necessary.

### 3. Product components

X-Former X505 includes a feeding unit and a casting unit (an upper part and a lower part)

#### 3.1. Feeding unit

The feeding unit contains two silos, out of which concrete is fed into the casting unit. When switching to another product, the feeding unit is removed to function together with other casting units (for producing hollow-core slabs, I-beams, and ribbed slabs)

#### 3.2. Casting unit

The casting unit is the product-specific part of slipformer. Due to its modular design and standard interchangeable parts, changes in product range and slab heights are easy and fast to carry out.

The power unit is to be chosen according to the product to be cast.

#### 3.3. Additional required components

A set for hollow-core slabs contains: core tube set, bottom bars of side molds, and heightenings of dowel bars. (The product height of one slab type can be varied by changing the core tube set and heightenings of dowel bars).

For changing the product type, all product-specific parts are to be replaced by those of the set in question.

Core and side mold sets of different casting unit types are not interchangeable. For the product change over, the whole casting unit must be changed. It is advisable to acquire a whole new casting unit in this case.

#### 4. Technical data

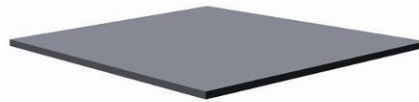
Dimensions	mm	Weight	kg		
Length	5700	Total	8050	Connection power	32 kW
Width	1650	Feeding unit	3020	Feeding unit silos	2 x 1,3 m <sup>3</sup>
Height	2560	Casting unit	5030	Casting speed	0.5 – 2.0 m/min
Wheelbase	4695			Return speed, empty	40 m/min
Rail gauge	1290 (norm. Elematic plate)				

#### 5. Additional information





**Elematic** is a leading supplier of precast concrete machinery and equipment as well as the only supplier capable of delivering complete production plants anywhere in the world. Elematic's superior technology and industry expertise is currently in use in more than 100 countries across five continents. Elematic is headquartered in Toijala, Finland.



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