

SLIPFORMER

SLIPFORMER EF5000



Key words: Elematic Slipformer EF5000, slipformer, hollow-core slabs, lintels, prestressed flooring, beams, beam & block floors, vineyard posts



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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.

Elematic Slipformer EF5000 is available only for the US market. For other markets, see X-Former X505.

The Elematic Slipformer is the right solution for a producer who needs versatility and flexibility.

The Elematic slipforming technology is based on a completely modern and safe design, utilizing the latest electronic controls.

Key Elematic Slipformer 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

ELEMATIC SLIPFORMER EF5000

Elematic Slipformer EF 5000 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 Slipformer EF 5000 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.

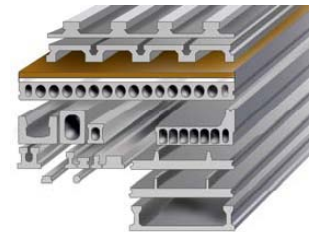
ALL ELECTRONIC

- 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

ELEMATIC-Slipformer EF 5000 is used to produce prestressed hollow-core slabs and wall panels with 7 and 9 voids, and various beams and half slabs.

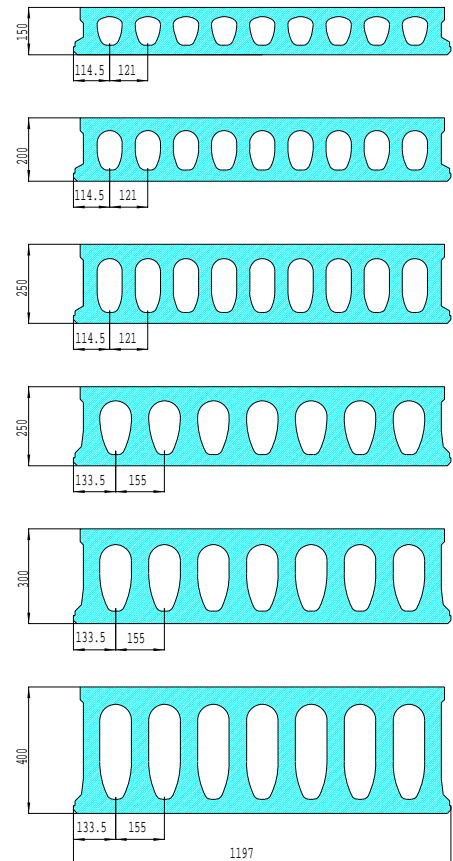
Casting width: 1.2 m

Thickness

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

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

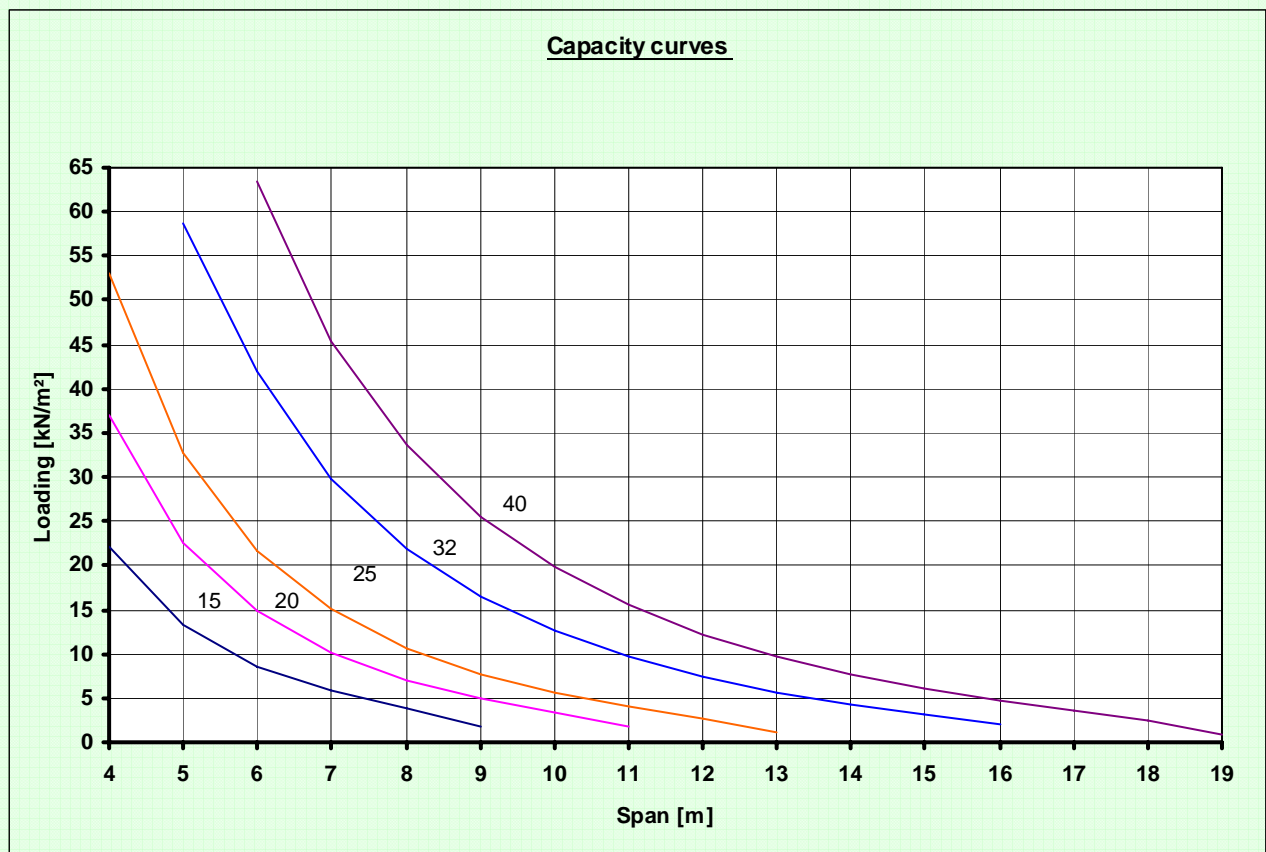
Standard slipformed hollow-core thicknesses and their weights



1.3. Detailed data

1.3.1 Slipformed hollow-core slabs

Performance curves of slipformed hollow core slabs



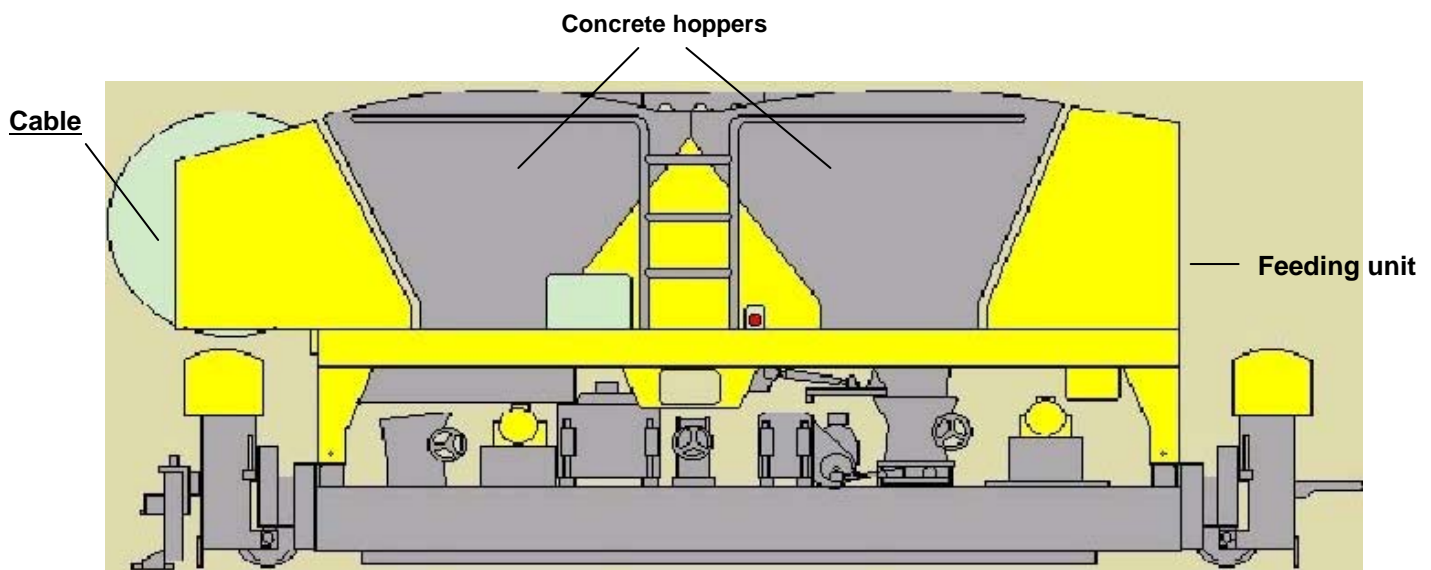
The curves provide the indicative load bearing with a deflection limit under variable loading to 1/800 of the span.

2. Key features

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.

The Elematic slipformer is designed for a casting width of 1.2 m.

The Elematic slipformer EF5000 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.

NEW IN ELEMATIC EF5000 SLIPFORMER

- Cross-sections of 7- and 9-void hollow-core slabs
- Structure of hollow tubes
- Compaction technique
- Control System

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; only casting speed needs to be adjusted. The speeds of all other operations are synchronized with the casting speed.

The casting parameters are saved in the system memory for each product separately for 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

The Slipformer EF5000 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, the changes in product range and slab heights are easy and fast to carry out.

3.3. Additional required components

- Basic set of hollow-core pipes and side plates, for 7 or 9 voids
- The vibrating shoes for vibrating stage I and the front and the rear plates of feeding hoppers are chosen according to the above parts
- Hollow-core sleeves and dowel bars are selected according to the required slab heights.

4. Technical data

Dimensions	mm	Weight	kg		
Length	6140	Total	8920	Connection power	22 kW
Width	1640	Feeding unit	3020	Feeding unit silos	2 x 1,75 m ³
Height	2560	Casting unit	5900	Casting speed	0.3 – 2.0 m/min
Wheelbase	4685			Return speed, empty	40 m/min
Rail gauge	1290 (norm. Elematic)				

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.

