EXTRUDER

EXTRUDER EL900EW

Key words: Elematic Extruder EL900EW, extruder, hollow-core slabs, wide hollow-core slabs, hollow-corewall panels, pre-stressed flooring.

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1. Introduction

An extruder is a production machine for a variety of sizes of hollow-core floor slabs. The extruder is the right solution for a producer who needs to manufacture different sizes of hollow core slabs with varying quantities.

Key Elematic Extruder features:

The design of Elematic extruders is not only good looking but also most practical, easy to keep clean and includes several technical advancements.

- A wide range of standard, heavier and lighter slab cross-sections
- Most function parameters are factory-set
- Robust and well-engineered heavy-duty construction

ELEMATIC EXTRUDER EL900EW

- A single machine for producing either one 2400-mm-wide slab or two 1200-mm-wide slabs.
- Cross-sections for 1 x 2400-mm-wide slabs available from 200 mm up to 320 mm, and for 2 x 1200 mm wide slabs from 200 mm up to 400 mm

1.1. Advantages

PROVEN RELIABILITY

- The EL900EW is based on the well-known extruder technology used earlier for producing 1200-mm-wide slabs: hundreds of extruders of this type have been delivered in the past 10 years to all five continents

TOP SURFACE QUALITY AND ACCURACY OF DIMENSIONS

- The original shear compaction technology with latest inventions in machinery development optimizes the compaction of concrete and produces high quality products

HIGH WEAR RESISTANCE

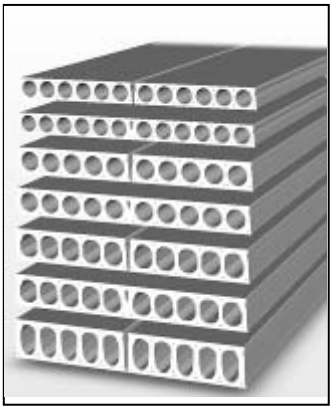
- The main wearing parts are engineered with maintenance-friendliness in mind, and are made of the most wear-resistant materials to achieve a long service life

MINIMIZING DOWNTIME

- The EL900EW is comprised of a universal power unit and slab-specific exchangeable nozzle modules, which enable prompt and effortless changing from one slab size to another

EASY OPERATION

- The functions and their parameters are preset, requiring no monitoring of the casting stages



1.2. General data

The Elematic-Extruder EL900EW serves for production of pre-stressed hollow-core slabs and wall panels with 12 to 10 voids.

Casting width: 1 x 2.4 m or 2 x 1.2 m.

Thickness

- Hollow-core slabs 200 – 320 mm
- Hollow-core wall panels 200 – 265 mm

1.3. 1.3 Detailed data

Extruder EL900EW hollow-core slabs

Modular hollow-core slab sets
width **1 x 2.4 m**

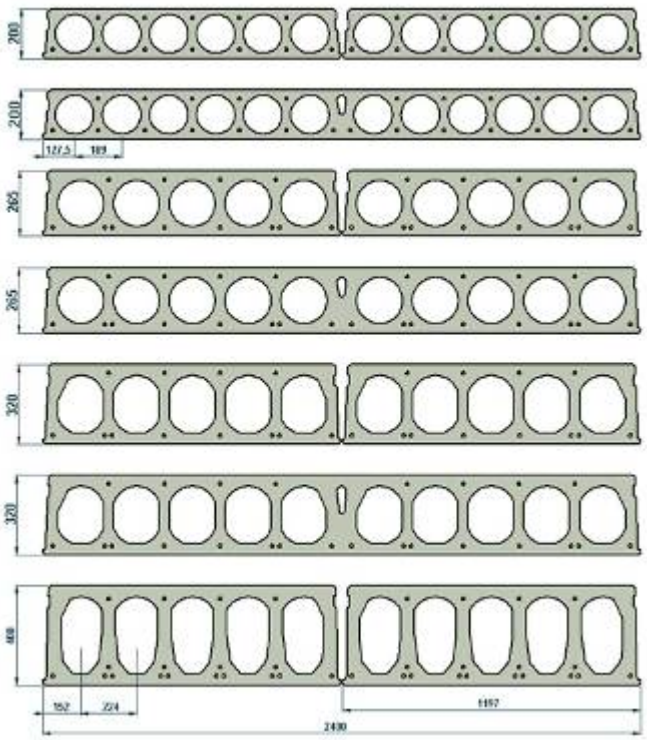
	Height mm	kg/m²
12-voids	200	245
10-voids	265	355
	320	390

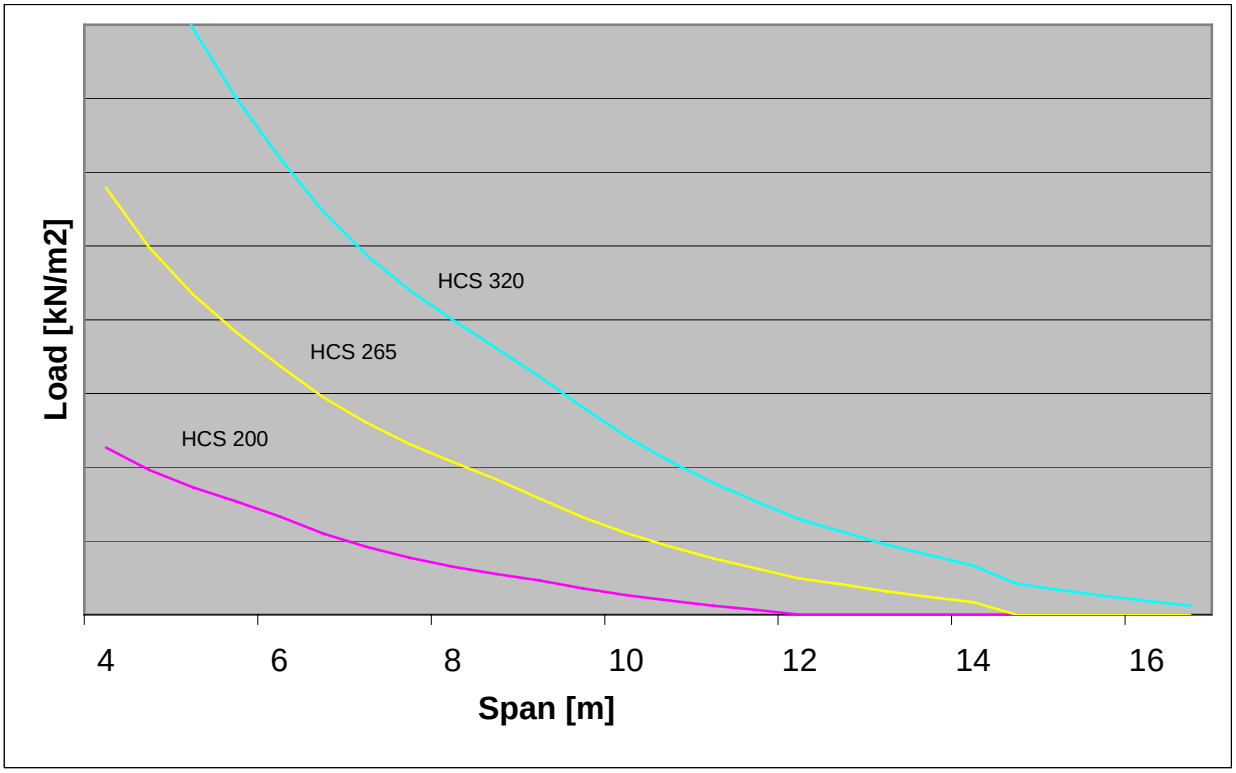
Modular hollow-core slab sets
width **2 x 1.2 m**

	Height mm	kg/m²
6-voids	200	241
5-voids	265	350
	320	386
	400	485

Modular hollow-core wall panel sets
width **1 x 2.4 m**

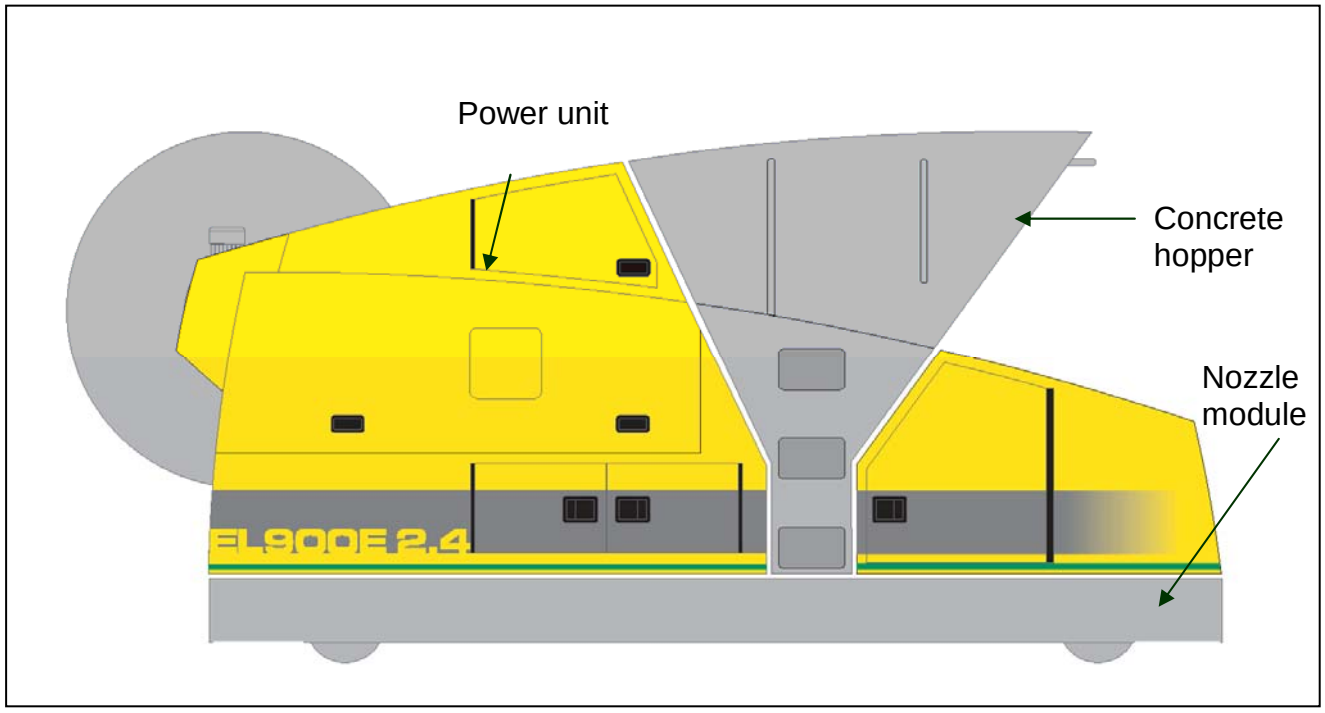
12-voids	200	256
10-voids	265	340





Informative capacity curves for 2400-mm-wide slabs.

2. Key features



The extruder technique is based on the shear compaction method. Due to this method the extruder is noiseless. The extruder casts the slabs in one phase and the voids are formed due to the pressure of the feeding screws and mechanized moving hollow tubes.

The Elematic extruder is designed for a casting width of 2.4 m.

The EL900EW consists of two main parts: a universal power unit and a slab-specific nozzle module.

The power unit contains one concrete silo, out of which concrete is fed into the feeding screws of the nozzle module, and main operating motors. The number of feeding screws of the nozzle modules varies according to the number of voids of the HC-slabs. Fed concrete mix is compacted in the nozzle module. The extruder moves during the cast reacting to the pressure, created by the feeding screws. The power unit can be removed to function with other nozzle modules.

3. Product components

The Elematic Extruder EL900EW includes a power unit and nozzle module.

3.1. Power unit

The power unit includes the concrete silo, main motors, and main electric box and control panel.

3.2. Nozzle module

The nozzle module includes a set of feeding screws, side plates, top plate and strand guides. The nozzle module defines the slab height and the shape of voids. For producing other slab types, the nozzle module or the set of exchange parts has to be changed. The standard nozzle modules are designed for manufacturing 2400-mm-wide slabs with 12- and 10-voids. Using a splitting plate, it is also possible to produce 2 x 6- or 2 x 5-void hollow core slabs.

3.3. Additional required components

- Two cable drums and power cables
- Extension part for concrete hopper of power unity.
- Additional Exchange Parts to change the module to produce different slab cross-sections with same number of voids.
- Service Modem for Extruder.

4. Technical data

Extruder EL900EW **Dimensions**					
Length		5440	mm	With cable drums	
Width		3000	mm		
Height:		2220-2300	mm	Depends on nozzle module	
Wheelbase		3790	mm		
Rail gauge		2490	mm	(Standard Elematic bed)	
Concrete silo		3.5	m^3		
Weight:					
Total		13000-14500	kg	Depends on nozzle module	
Power unit		5900	kg	With 2 cable drums and 130 m cables	
Nozzle module		7100-8600	kg	Depends on nozzle module	
Electro technical Data					
Connection power		2 x 49	kW	400 V, 50 Hz	

5. Additional information

Elematic EL900E extruders are helping our customers to profit in more than 40 countries all over the world.

Elematic is a leading supplier of pre-cast 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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