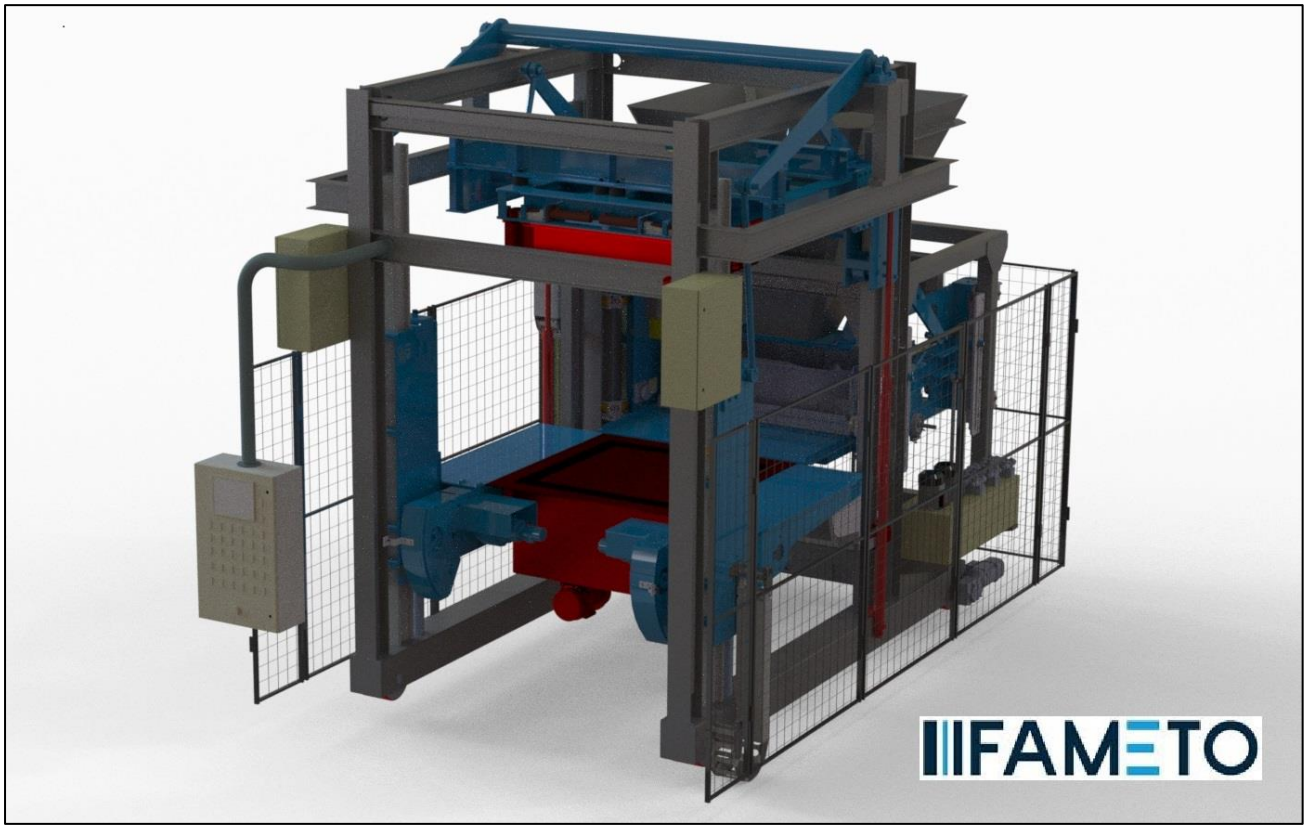
106 Rue Alain Gossuin
27210 BOULLEVILLE
Tél : 02.32.57.78.14
Fax : 02.32.57.79.08
www.fameto-beton.fr
BROCHURE UNIVERSA 1P- 2024-EN

BOULLEVILLE, le 02/07/2024

MACHINE TYPE UNIVERSA 1P



106 Rue Alain Gossuin
27210 BOULLEVILLE
Tél : 02.32.57.78.14
Fax : 02.32.57.79.08
www.fameto-beton.fr

INTRODUCTION OF THE UNIVERSA 1P MACHINE

The machine UNIVERSA:

- Is a complete and autonomous immediate demoulding machine allowing manufacture of concrete elements.

- Allows to carry out small and large series of different elements.

- Estimated production from 4* to 30** pieces per hour.
- Mould replacement in 2 hours
- Allows to manufacture a large variety of products.

Possibility to make more than 40 types of standard products.

Product height between 50 and 750mm

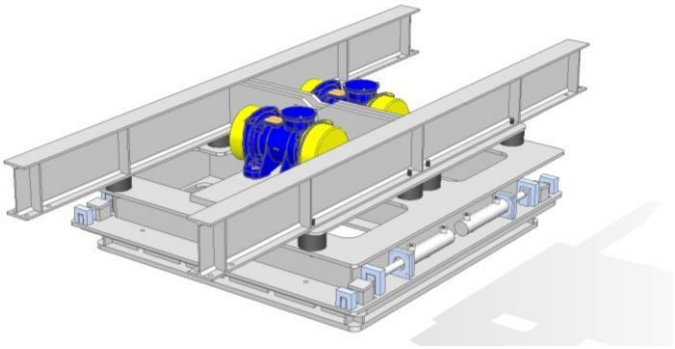
Maximum production sizes : 1300x1300 mm

Maximum product weight: 800 kg

non-exhaustive list of manufactures

106 Rue Alain Gossuin
27210 BOULLEVILLE
Tél : 02.32.57.78.14
Fax : 02.32.57.79.08
www.fameto-beton.fr

- offers options to improve product quality, cycle times and ergonomic workstations.



vibrators on tamper head

Autres options d'amélioration de la qualité et de la productivité
Other options for improving quality and productivity

- Automatic Oiling of moulds

Autres options d'amélioration de l'ergonomie
Others options for ergonomics improvements

- Robotic smothing system

The UNIVERSA 1P machine works on a concrete floor without any rails. Is equipped with device to change track once arrived at the end of the available area. A steering wheel is lowered back and allows a rotation of the machine.
Come fed among a bucket installed on a forklift.
Optionally is possible to install a level sensor in the hopper to make a direct call to the concrete mixing plant.

106 Rue Alain Gossuin
27210 BOULLEVILLE
Tél : 02.32.57.78.14
Fax : 02.32.57.79.08
www.fameto-beton.fr

PRODUCTION DATA CONCERNING THE MANUFACTURED PRODUCTS

In the following table you can have an estimate of the manufacturing capacity for square wells with the UNIVERSA 1P machine.

Wells with 2 external and 1 internal dies					
Regards	Dim int	Dim ext	h	Qté	Prod/Heure
30	240	300	270	8	152
40	330	410	330	6	72
50	400	470	330	4	72
60	500	600	400	2	36
70	600	700	400	2	36
Wells with 3 internal dies					
Regards	Dim int	Dim ext	h	Qté	Prod/Heure
30	240	300	270	12	230
40	330	410	330	9	170
50	400	470	330	4	72
60	500	600	400	4	72
70	600	700	400	2	36

106 Rue Alain Gossuin
27210 BOULLEVILLE
Tél : 02.32.57.78.14
Fax : 02.32.57.79.08
www.fameto-beton.fr

DESCRIPTION	Nb de pièces par moule *Number of parts per mould*	Production horaire estimée (cycle/heure) *Estimated hourly production (cycle/hour)*
CHANNEL DN 100	4	40
CHANNEL DN 200	4	40
CHANNEL DN 300	4	40
CHANNEL DN 400	2	22

106 Rue Alain Gossuin
27210 BOULLEVILLE
Tél : 02.32.57.78.14
Fax : 02.32.57.79.08
www.fameto-beton.fr

UNIVERSA 1P MOBILE

The UNIVERSA 1P MOBILE machine is the solution for mass production of high-quality concrete products; here is described the main characteristics:

OUTILLAGE ET TECHNOLOGIE DISPONIBLE *TOOLS AND TECHNOLOGY AVAILABLE*	Versions UNIVERSA 1P
Démoulage direct / *Direct demoulding*	
Démoulage par retournement / *Demoulding by turning*	X
Pilon / *Press*	X
Tapis / *Belt concrete distribution*	
Tiroir / *Drawer to fill concrete*	X
Vibrateur sur pilon / *Vibrator on press*	X
Variation amplitude vibration / *Vibration amplitude variation*	
Variation fréquence vibration / *Variation frequency vibration*	X
Adaptation automatique hauteur moule du tiroir / *Automatic adaptation drawer mold height*	
ACCESSOIRES OPTIONNELS *OPTIONAL ACCESSORIES*	
Cabine anti-bruit / *Anti-noise cabin*	O
Equipement de manutention de sortie de produits frais / *Outpout handling equipment for fresh products*	
Empileur fin ligne sortie produit / *Stacker end line output product*	
Equipement d'entrée des planches dans la machine / *Equipment input boards in the machine*	
Empileur de planches / *Stacker of planks*	
Changement moule automatique / *Automatic mold change*	
Deuxième tiroir pour double couche / *Second drawer for double layer*	
Hydraulique avec variation de vitesse / *Hydraulic with speed variation*	
Robot pour armature / *Robot for reinforcement*	
Robot pour huilage moules / *Robot for oiling moulds*	O
Robot pour insertion anneaux de base / *Robot for bottom ring insertion*	
Système de talochage / *Float system*	O
Tecnologie OVERMOLD / *OVERMOLD technology*	O
Blocage planches / *Pallet clamping*	O

X included
O optional

106 Rue Alain Gossuin
27210 BOULLEVILLE
Tél : 02.32.57.78.14
Fax : 02.32.57.79.08
www.fameto-beton.fr

UNIVERSA 1P Machine is composed of the following elements:

- A concrete filling drawer ensures high speed and quality of manufacture. The drawer has 2 synchronized stirrers that keep the concrete soft. Two scrapers (front and back) collect concrete and clean the top of the mould. The drawer is mobile, it is positioned at the start under the concrete hopper. The drawer is filled and moves to the mould for filling. When finished, the drawer moves back and forth from the area to allow demoulding.
  It runs on rails, fixed part on the machine frame and part on the movable sides of the "1P". It is driven by hydraulic cylinders.

- All moulds are provided of vibrating motors bolted at the chassis. One scrupulous study of fixing point allows a good vibration transmission to the concrete. The vibration is easily adapted with the automation system that allow a control of working frequency in each phase of compacting.
  All moulds, during vibration and filling, are supported on the base of the machine chassis and suspended on silent blocs. They are not attached to the lifting and rotating device during this phase. Only when the mould needs to be lifted and turned for demoulding, 4 pawns, operated by jacks, take the mould on the sidewall and block it on the moving arms. This system significantly reduces the transmission of vibrations to mechanical components and extends their service life.
  The tamper head is bolted to the press of the machine.

- The demoulding is executed by the Rotation process: in the case that one board should be necessary to produce the elements it will be placed on top of the mould by means of the arm with hoist. (optional and not quoted) The mould + board assembly rotates until it comes to the ground. The mould rises, and the fresh product remains on the board. Some products don't need a board for demoulding. In this case, products are demoulded directly on the ground. ***The production of most of the product does not require the use of a board.***

- One tamper head with two vibrators are installed and allow the finish touch of the upper surface. At the end of filling and compacting phase the tamper head descend and press on to the concrete, making the needed shape. This process increases the compaction of the product.

- A control cabinet is positioned in front of the machine. A touch screen is used to adjust the filling and vibration parameters. The position of the machine members is managed by linear transducers. This minimizes the sensors installed on the machine and eliminates the adjustments and concerns inherent to the sensors. All machine parameters are saved as "recipe data" for each mould. The starting of the machine and the launches in manufacture are thus immediate and without any manual adjustment.

- The hydraulic system consists of two variable flow pumps that can be used to adjust all movements according to the need of the product. A tank capable with air cooling allows continuous work of the "1P" machine.

- The machine moves on the floor by means of 4 wheels, 2 of them moved by a motor gear reduction. One steering wheel are placed at the centre of one side of the machine and put in contact with the ground by a hydraulic cylinder. With this wheel it is possible to change of raw or adjust the direction. The wheels are made of high load rubber and are not afraid of the stones that may fall from the machine.

- The control system makes possible to carry out the most efficient program for each product in a simple way. From the screen all phases are under control.

106 Rue Alain Gossuin
27210 BOULLEVILLE
Tél : 02.32.57.78.14
Fax : 02.32.57.79.08
www.fameto-beton.fr

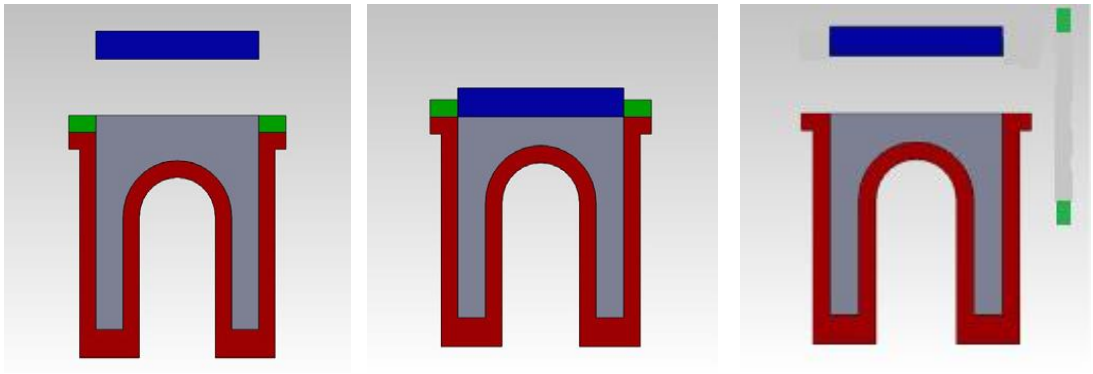
OVER MOLD TECHNOLOGY
(optional)

With this technology the UNIVERSA 1P machine realizes special elements.

This technology consists in superimposing an extra thickness on the mould (red), a steel plate of the necessary thickness (green), which acts as a tank for the concrete.

After filling the tamper head press drops and produces a strong compression (blue) by compacting the concrete until reaching the level of the mould without the additional sheet metal.

The Press rises, the "overmold" comes out of the mould area to allow demoulding operations.
This technique allows a high compaction and a faster filling of the mould. It is a usable technique for some products.



106 Rue Alain Gossuin
27210 BOULLEVILLE
Tél : 02.32.57.78.14
Fax : 02.32.57.79.08
www.fameto-beton.fr

UNIVERSA 1P DATA

DESCRIPTION	*DESCRIPTION*	*UNITE*	*DONNEES*
Dimension produit - hauteur	*Product dimensions - height*	mm	50 : 750
Dimension produit - en plan	*Product dimensions – off plants*	mm	1300X1300
Poids max. produit	*Weight of product*	kg	800
Poids max. moule	*Weight of mould*	kg	800
Temps de cycle estimé	*Estimated cycle time*	s	120 : 600
Dimension planches	*Pallet dimensions*	mm	1500 x 1500 x 50
Capacité trémie	*Hopper capacity*	m3	1.5
Hauteur trémie	*Hopper height*	mm	3450 mm
Force max. vibration	*Max. vibration force*	kN	45
Fréquence	*Frequency*	rpm	0 : 4500
Puissance vibration*	*Vibration power*	kW	4.8
Puissance centrale hydraulique	*Hydraulic power*	kW	11+11
Puissance totale installée	*Total power*	kW	34

* Vibrators are parts of the moulds. Here is shown the maximum power can be installed.