

SUMAB R-400

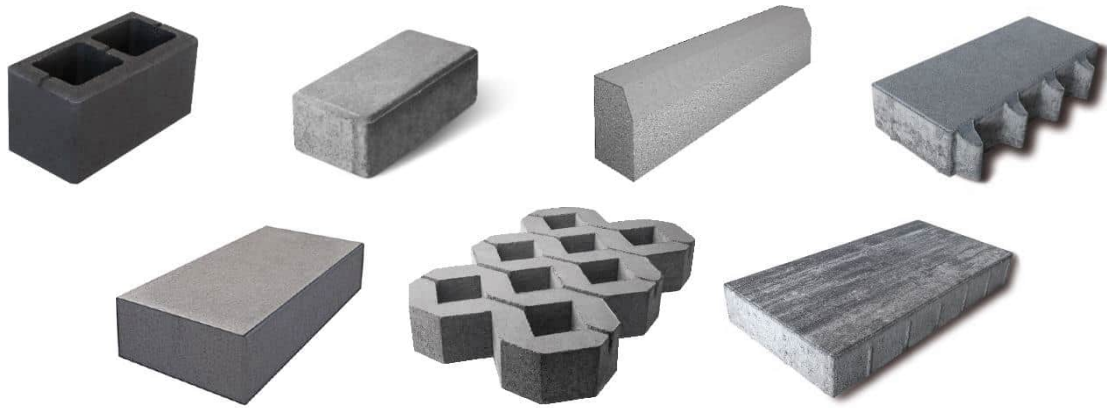
Block making machine



PRODUCT DESCRIPTION

R-400

Production capacity



R-400 with pallet size 1200x550 mm and useful area 1100x500 mm

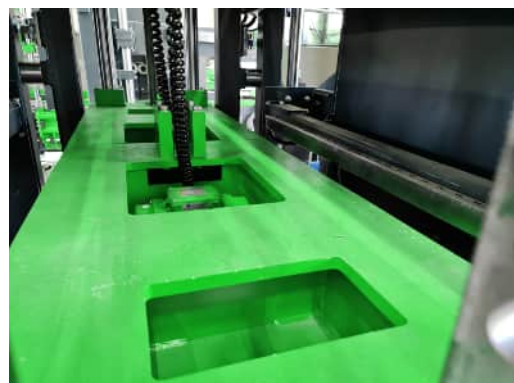
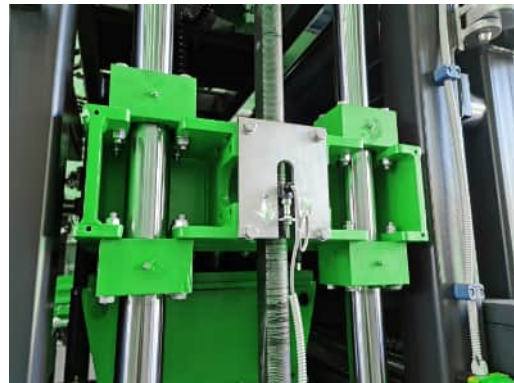
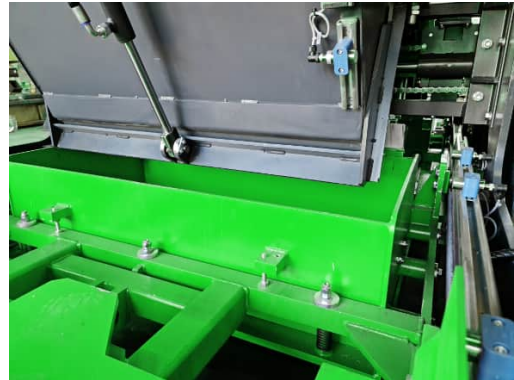
Product	Size	Facemix	Number products/ mould	Cycle time/sec.	Production capacity in 8h / 100%
Paving stone	10x20x6 cm	Without	20	15	760m ²
Paving stone	10x20x6 cm	With	20	20	570 m ²
Hollow block	20x20x40 cm	Without	5	18	8.000 pieces
Curbstone	12x18x100 cm	With	3	25	3.450 pieces
Curbstone	7x20x100 cm	With	6	25	6.900 pieces

* Actual production capacity depends on many factors and can differ from the theoretical values listed in the table above.



Features and options

Features and options	R-400
Pallet length (mm)	1200
Pallet width (mm)	550
Fast pallet takeout device	O
Tamper head vibration	O
Facemix equipment	O
Transversal cleaning brush for curbstone	O
Laser sensor for material level inside of main hopper	O
Laser sensor for material level inside of main hopper	O
Color-mix device	O
Servomotor powered filling box main mix	O
Servomotor powered filling box face mix	O
Automatic height adjustment of main mix floor	O
Automatic height adjustment of face mix floor	O
Automatic movement of main mix device	O
Automatic movement of face mix device	O
Automatic locking of main mix unit	O
Automatic locking on face mix unit	O
Servomotors vibration system	O
High performance hydraulic	O
Active agitator for main mix	O
Active agitator for face mix	O
Stamp bottom plate for special products	O
Pneumatic scraper for main mix filling box	O
Pneumatic scraper for face mix filling box	O
Face mix rolling device	O
Polystyrene inserting device	O
Pneumatic tamperhead clamping	O
Automation supervision system	O
Tele-service device	O
500 mm production height	O
25 mm production height	O



O - Optional equipment I – Included as standard

R-400 machine description

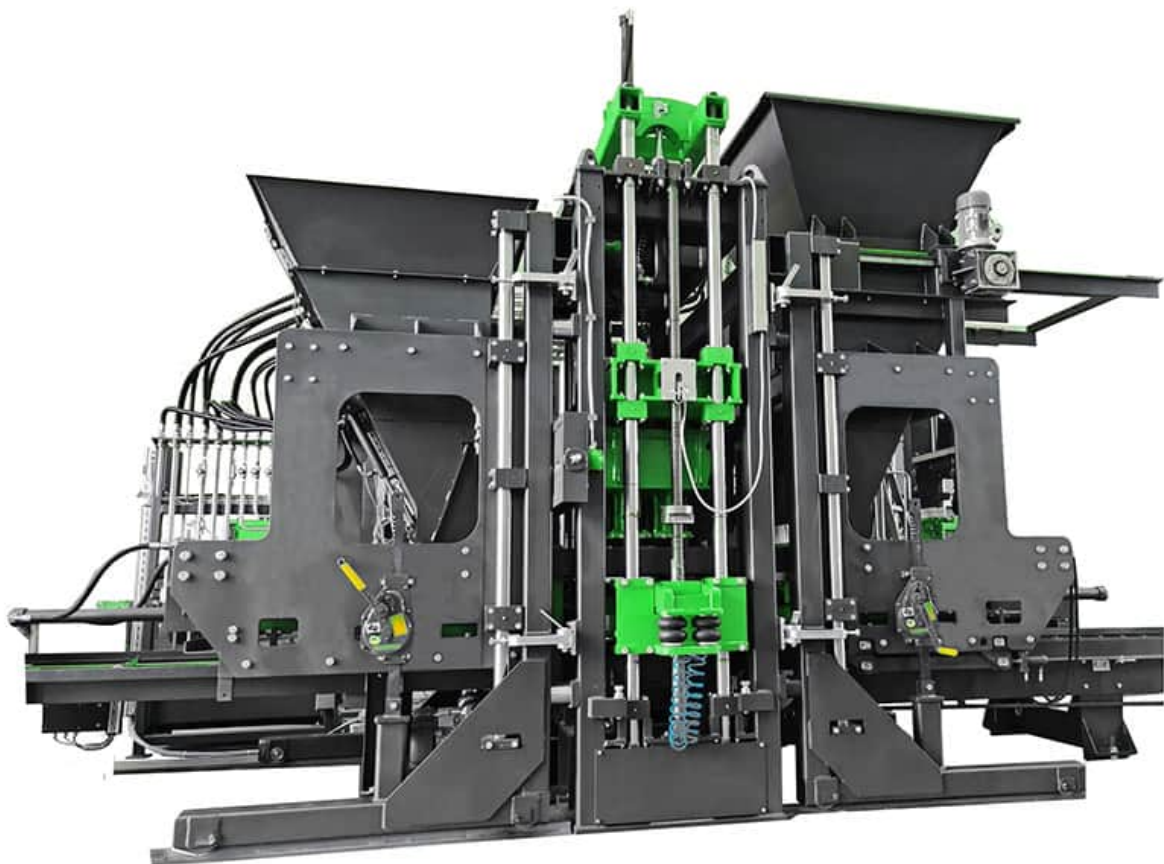
R-400 machine used for the highest product quality of hollow blocks, solid blocks, paving stones, curbstones, water channels, garden elements, chimneys and more.

Machine structure

Heavy duty frame structure with square tubes. The mould and tamper head system runs hydraulically in a chromed guide column system (4 guides). Thick columns are hard chromed, ground and mounted in easily exchangeable bronze bushes.

The mould system is attached to the guide columns. Two bottom mounted hydraulic cylinders attached to a rigid steel synchronizing shaft drive the demoulding stroke.

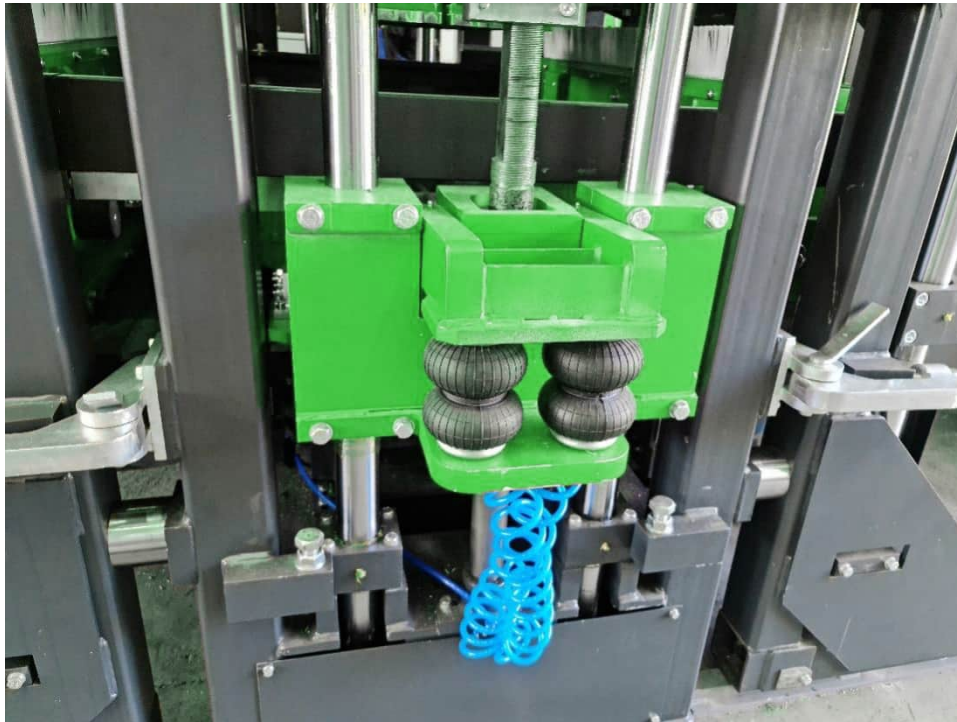
Tamper head is guided by four guide columns in total and is equipped with easily exchangeable bushings. Tamper head is driven by 2 hydraulic cylinders that powers the tamper head stroke.



Mould mounting

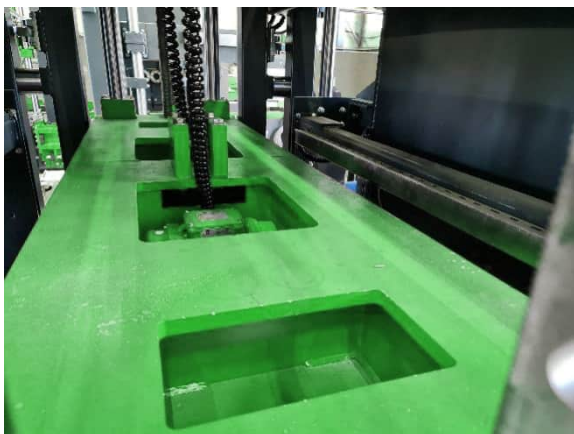
Mould is fixed by fast mould clamping system with 2 double pneumatic pillows from both sides for the fast exchange of the mould. Pneumatic clamping of the mould allows fast mounting and unmounting of the mould.

Pneumatic system of the mould change allows fast and simple mould exchange in just a 10 minutes.



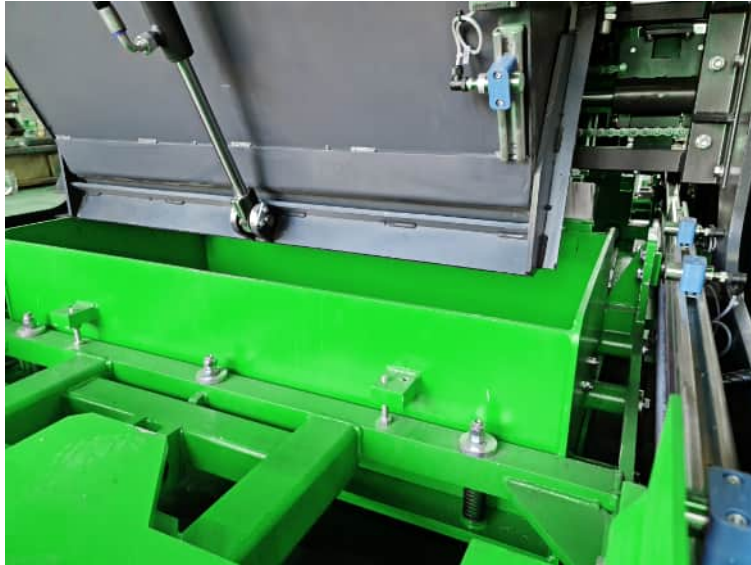
Tamper head

The tamper head plate is attached to the tamper head bridge with 6 mushroom screwed squeezers (pneumatically clamped as option) and equipped with 2 strong vibrators. Mushroom screwed squeezers are driven by pneumatics. This system allows fast attaching and de-attaching of the tamperhead.



Filling system for main mix:

The base filling system is a heavy frame structure made of one piece cut thick steel plates. Mounted on it is a concrete hopper with material hopper door and a level indicator.



Door hopper opening by hydraulic cylinder (electrical motor option) that is filling the filling box with concrete. Opening of the hopper door to fill concrete in filler box is controlled by PLC and opening time can be programmed in the terms of quantity and time of hold. Main mix frame of base concrete is de-attachable for fast and simple maintenance of the central part of the machine.

The wear resistant filling box floor plate is 20 mm thick total and easily exchangeable.

Agitator of main mix filling box:

The base filling system filling box is equipped with agitator driven by hydraulic cylinder. This device speed up filling concrete from filling box to the mould cavities and by that speeds up cycle time. Agitator rollers run on same forklift profile as the filler box. There are different possibilities of grid shapes depending on mould used and agitator greed is easily exchanged for different mould types if necessary.

Filling system of face mix unit:

The base filling system is a heavy frame structure made of one piece cut thick steel plates. Mounted on it is a concrete hopper with hopper door and a level indicator. Complete system is mounted on 4 wheels thus device can be moved when maintenance work need to be done or for mould change.

The wear resistant filling box floor plate is 20 mm thick total and easily exchangeable. Face mix floor lifting for easy transport of small height product under face mix unit is an option. Automatic lifting option of the base mix device by the means of hydraulic cylinder for adjusting the floor of filling box to the height of the mould.



Hydraulic equipment:

Separately from the machine frame there is oil tank with a capacity of 300 liters. The pumps and motor are mounted on the side of the tank. Furthermore there is a return filter with dirt indicator, oil level indicator, oil cooler and an oil heater (option) to pre-warm the oil. Maximum pressure is 170 bars. All electrically operated valves are standard, and CETOP interchangeable (**VICKERS** - England solenoid operated valves). Pressure regulators for all machine parts with hydraulically powered movements.



Stone height adjusting:

Stone height is adjusted by proximity end switch sensor, and as standard included option “stop over height” for tamper head stroke stopping when stone height is reached. Therefore accurate heights can be reached on this way.



Electric control:

Full automatic control of all machine functions is done by **SIEMENS S7 PLC**. It consists of a main board, control panels and input and output junction boxes. All 3-phase wiring, inverters switch and control units are housed in the main board. The wiring is simple and can be extended anytime. Switches and pushbuttons for manual and setup mode are installed in the control panel. The control interface is with touch sensitive display easy to use and diagnostic system that indicates errors. All electrical system is prewired and pre-tested to save time for installation on customers side. Proximity sensors –limit switches: All necessary proximity switches, electric eyes as well as safety switches on safety gates.



General technical data of machine R-400:

Pre-silo contents – core concrete	1.3 m ³
Filling box contents – core concrete	1.3 m ³

Technical data

lifting height unit	350 mm
Board size (massive wood)	1.200 x 550 x 50 mm
Usable mould width	1100 mm
Usable mould depth	500 mm
Maximum mould height	350 mm (500 mm option)
Minimal mould height	40 mm (25 mm option)

WEIGHT

Net weight with facemix device, without pallet transport	13.500 kg
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OIL TANK

filling volumes	300 l
maximal pressure	170 bar

ELECTRO TECHNOLOGY

Network tension	400 V / 50 Hz
Nominal performance machine only	21 kW
Pre-fuse	160 A
Control voltage	230 V / 50 Hz
Control voltage hydraulics valves	24 V
Automation system	Siemens S7



Moulds for machine R-400

MOULD CASE

- Heat – cut from one piece of high – yield special steel and successively surface hardened by means of heat treating.
- Very high wear resistance
- Laying spacers on entire manufacture height.
- Hardness achieved about 60/62 HRC with 1/1.5 mm. of depth.
- Plates, supports and other parts Fe 430

TAMPER HEAD

- Special steel tempers, milled and polished by precision automatic machines and surface hardened by means of heat-treating. Hardness achieved about 60/62 HRC with 0.5/0.8 mm of depth.
- Machine –adjustment of every single temper on the case with progressive numbering of the pressers.
- Plates, supports and other parts Fe 430

