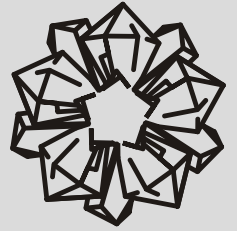# LABORATORY CONCRETE 3D PRINTER

STONE FLOWER
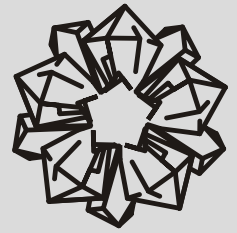
CONTACT

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Laboratory-scale 3D printer for mortar, concrete mixtures and clays. Is capable to print single-and two-component materials with the aggregate size up to 4-6mm using industrial continuous mortar or plaster pumps, and/or small piston extruders.

Customizable printing volume

The printing volume is defined by the customer, and typically reaches up to 150x300cm in horizontal plane, and up to 120cm tall. Printers with different dimensions, and elevated mechanical strength can be produced upon request. Current price for the 100x100x100cm^3 printing volume of the router is 23 400 EUR Netto, except shipping, installation costs.
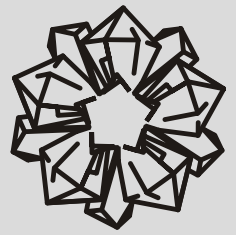*Please refer to the page below to find out the price for specific dimensions.*

https://www.stoneflower3d.com/store/concrete-3d-printer/

PRODUCT DESCRIPTION
CONCRETE 3D PRINTER STONE FLOWER

Compatible materials: concrete mixtures, mortars with aggregate size up to 6mm, fiber reinforced concrete or clays (fiber length up to 30 mm), foamed concrete, clay, porcelain, earth, biomaterials.

Printing speed up to 100mm/thanks to the rigid structure from high-grade aluminium alloy/painted steel.

Software: printer operates using standard g-code of Marlin/Repetier type. Compatible slicers are: Cura, Simplity3D, Repetier, Slic3R, Prusha slicer and similar. We provide Cura profile upon installation.

Printer control: to fit typical research and business environment through secure and stable printing, the printer has Ethernet connection, and has to be connected to the local network. Printing can be operated from the 7inch colorful touch screen, and through the web interface, from remote computer. In the local network, the printer can be accessed through the web-browser with its own IP address. The printing can be launched, controlled, paused, and resumed both, from the printer console, and remotely. The speed of the mortar print head is controlled from the front panel of the 3d printer. The feed rate of the mortar pump is controlled from the panel of the pump.

Printing bed: dry-wall, plywood, or hips plate, placed on the palette (12-17cm tall). The printed objects can be easily relocated with pallet truck or forklift.

Technical data

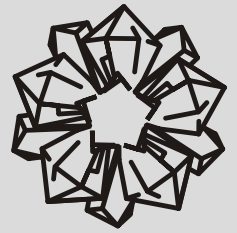Materials: high-grade aluminium alloy, painted steel.
Outer dimensions: horizontal effective stroke length + 70cm
Height = 2 x effective printing height + 50cm
The space, required for printer with printing volume 100x100x100cm (WxDxH) is 170x170x250cm.
Weight 350kg

MULTIMATERIAL PRINT HEAD 1/2K

The innovative mixing print head for mortars can work with single (1K) and two-component (2K) materials, including most cements, specifically designed for 3d printing. Print head has high speed and torque agitator, flexibly regulated through PWM or manual control. One can conveniently regulate the motor speed from the front panel of the printer. The rotor is equipped with replaceable and customizable blades. Inlet for accelerator is equipped with back-flow valve, to prevent clogging. Custom nozzles with diameter up to 50mm can be produced upon request.

Compatible materials: concrete mixtures, mortars with aggregate size up to 6mm, fiber reinforced concrete or clays (fiber length up to 30 mm), foamed concrete, clay, porcelain, earth, biomaterials.

Technical data

Motor type: BLDC + motor driver, 24V, 100W. Planetary gearbox 10:1.
Material: corrosion resistant stainless steel SS304
Mortar inlet: 25.4mm = 1 inch (BSP pipe thread, 1inch tri-clamp connector)
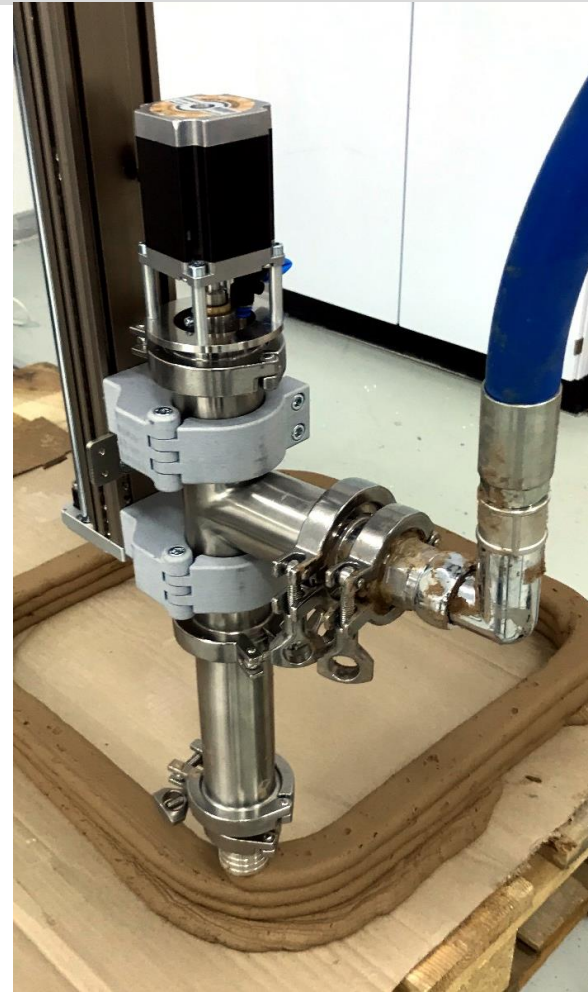Accelerator inlet: 3/8inch, 10/12mm (BSP pipe thread, push-in hose connector, back-flow valve)
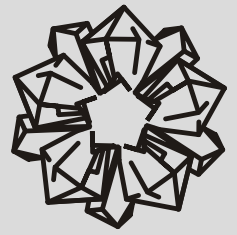Internal diameter 48mm.
Standard nozzle diameter: 35mm
Height of the print head: 450mm
Weight: ~ 5kg.

CEMENT PUMP

Highly efficient continuous mortar pump, equipped with standard progressive cavity pumping unit. Regulated feed rate from 1.6 to 10L/min. Hopper capacity 55L, allowed grain size up to 6mm. Long 15m hose with the standard adapters.

Specification

Model: PM-AGT-3000M
Motor power: 3000W, 220V AC
Protection: 30 A.
Maximum tire pressure: 2.5 bar
Protection class: IP54
Max. flow rate: 10.0L / min
Max. working pressure: 40bar.

Maximum grains size 4-6mm
Hopper capacity: 55L
Mortar hose length: 15 m (25 mm)
Air hose length: 15 m (12 x 8 mm)
Device dimensions: 1150x570x670 [mm]