



IU30 VACUUM IMPREGNATION UNIT

Easy-to-use vacuum impregnation unit, specially designed for porous materials

IU30 Vacuum Impregnation Unit

The IU30 is ideal for impregnation where the material types are too soft or friable for processing from raw state, such as soils, concretes, cements and clays. It is of particular use to laboratories with a high volume requirement for impregnated material, and for those looking to impregnate large format samples prior to further processing.



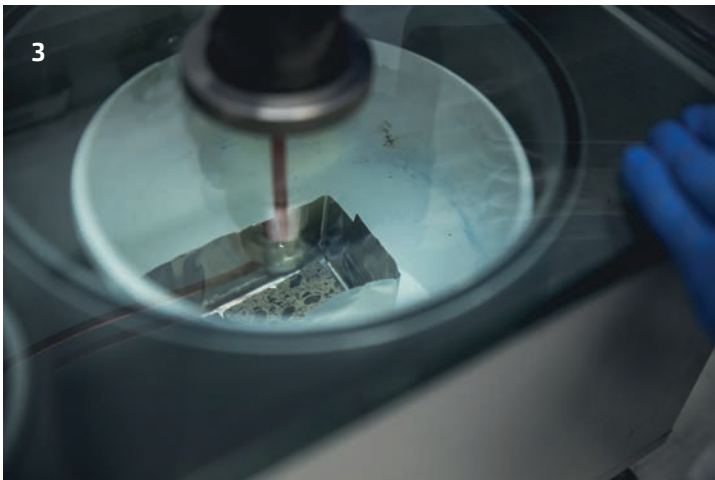
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1. IU30 Vacuum Impregnation Unit

2: The gauge provides a continuous indication of vacuum in the system

3: The large sample chamber is suitable for samples up to 150mm x 100mm (6 x 4"), and is also suitable for a number of smaller samples

4: The smaller (resin) chamber is of a similar design, and is connected to the sample chamber by way of a resin feed tube

Key Features & Functionality

- The IU30 is a self-contained unit designed to meet the needs of researchers for high quality encapsulation and impregnation of specimens with synthetic resins, offering both simplicity of use and ease of cleaning. The unit allows both sample and resin to be evacuated separately and delivers the resin to sample while it remains under vacuum. Admission of air to the sample chamber causes the specimen to be impregnated with resin under atmospheric pressure, resulting in superior quality samples.
- The unit consists of a robust metal base plate, onto which the internal components, resin, sample chambers and vacuum system are mounted. A removable metal front panel facilitates set-up and cleaning, and a rear casing of rigid PVC houses the control system and integral vacuum pump. The sample and resin chambers are securely sealed by a toughened glass lid.
- The main machine controls, including the vacuum and vent valves, and the vacuum gauge, are easily accessed via the control panel. The gauge provides a continuous indication of vacuum in the system, with an achievable vacuum level down to 2×10^{-3} mbar.
- A high performance two-stage rotary vacuum pump with gas ballast facility ensures excellent evacuation of the sample and is housed within the rear casing.
- The IU30 features cylindrical metal sample and resin chambers, located at the front of the unit for easy access. The large sample chamber is suitable for samples up to 150mm x 100mm (6 x 4"), and is also suitable for a number of smaller samples. The height of the chamber allows numerous rock samples to be evacuated/ impregnated at the same time, achieved by lay them on top of each other (up to a height of approx. 120mm).
- The smaller (resin) chamber is of a similar design, and is connected to the sample chamber by way of a resin feed tube. This is clamped shut to isolate the chambers from each other.
- The feed tube can be directed within the sample chamber, allowing the impregnation of a number of individual samples in their individual containers.
- Both chambers feature removable linings to prevent any resin contacting the metal surfaces and helping to reduce the time spent cleaning after impregnation. These linings can, if necessary, be disposed of after use, along with the resin feed tube, which connects the two chambers - a length of which is supplied with the unit.
- In porosity testing, fluorescent or blue dye can be added to the resin to aid pore definition. The dye resin fills all the pores and makes them easily distinguishable from the surrounding material.

Technical Specifications

Sample Size	150mm x 100mm (6 x 4") max. or various smaller samples
Machine Height (incl. filter)	610 mm
Machine Depth (incl. filter)	680 mm
Machine Width	520 mm
Sample Chamber Height	167 mm
Sample Chamber Diameter	255 mm
Resin Chamber Height	148 mm
Resin Chamber Diameter	150 mm
Power Supply	220/240V, 50/60Hz or 110V, 50/60Hz
Machine Weight	74 kg



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