

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.

Superior results

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, while 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, on to 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 easier access. The large sample chamber accepts samples up to 150mm x 100mm (6 x 4"), although a number of smaller samples can be accepted. 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).

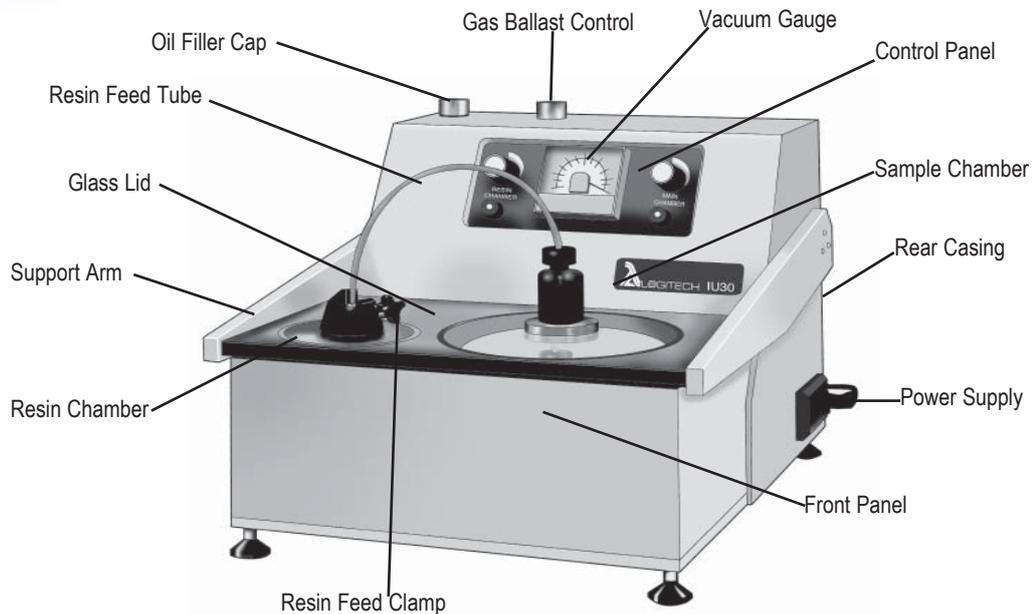


- *Independent evacuation of resin and samples*
- *Large sample capacity (up to 150x100mm)*
- *Easy cleaning and set-up*
- *Compact, bench-top unit*
- *Integral vacuum pump*

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.



Operating Sequence

1. Prepared samples are placed in suitable moulds in the IU30 sample chamber.
2. The lid and feed tube clamp are tightly closed.
3. The sample chamber, and thus the sample(s), is evacuated until an acceptable vacuum is indicated on the vacuum gauge. This is particularly useful for difficult samples which may have to be evacuated for many hours to remove all traces of gas.
4. The resin is mixed and poured into the resin chamber. The resin chamber is evacuated and the resin allowed to outgas. (Resins with highly volatile components may not be suitable.)
5. The resin delivery tube is manoeuvred so that a sample is positioned below it and the clamp released to allow a charge of resin into the mould.
6. Air is admitted to the system, causing the sample(s) to be impregnated under atmospheric pressure.

Accessories, Components & Consumables

A comprehensive range of accessories, components and consumables are available to support these systems, enabling optimum results and longevity of the machines. A selection of supporting products can be found below, for a more comprehensive listing please go to www.logitech.uk.com

Technical Specifications

Power supply:	220/240V, 50-60Hz 110V, 50-60Hz
Height:	500mm approx.
Width:	520mm approx.
Depth:	600mm approx.
Net weight:	74kg approx.
Gross weight (packed):	115kg approx.

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