

GTS1 THIN SECTION & CUT-OFF TRIM SAW



Precision trimming and thin sectioning for geological research and production.

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GTS1

Thin Section Cut-off and Trim Saw

The GTS1 Thin Section Cut-off and Trim Saw is purpose-built for geological applications, delivering reliable cutting of hard and soft rocks, concretes, and cements. Its compact design, automated controls, and safety features make it ideal for both research laboratories and production environments, from preparing bulk samples to producing high volumes of thin sections.

With precise control through a variable speed linear drive and feed rate monitor, the GTS1 consistently produces thin, accurate sections down to 200 µm. This reduces lapping time, minimises sub-surface damage, and ensures repeatable results, making it a highly efficient solution for consumables growth and geological sample preparation.



1. GTS1 Thin Section Cut-off and Trim Saw complete with wall mountable control unit
2. Initial stage slabbing & trimming performed on GTS1 saw with slabbing deck
3. Later stage bulk thinning of the specimen

Key Features & Functionality

- Pre-thinning of slides down to 200 µm allows significant reduction in lapping time while maintaining excellent section quality.
- Cuts are highly repeatable with minimal sub-surface damage, delivering uniform results and reducing wear on the diamond blade.
- The variable speed linear drive system and feed rate monitor give the operator full control over the cutting process, ensuring optimum performance for different materials. This avoids many of the problems associated with gravity-fed systems, such as material shattering.
- The compact bench-top machine is constructed from cast aluminium and stainless steel, ensuring a long workign life cycce. The functional design of the machine also means that it is capable of allowing automatic operation during the cutting of bulk rocks and the thinning of mounted sections; it also allows cutting by hand to take place, should this be required.
- The acrylic hood encloses the work area during automatic operation to reduce noise and splashing, while optional shields and a coolant deflector support safe manual cutting. Bulk materials can be mounted on the sample table or fed by hand, and for thinning operations the vacuum chuckface attaches directly to the table.
- The slide holder passes parallel to the saw blade at a user adjustable distance allowing slide thickness variation and rock slice thickness. This distance can be accurately set by way of a dial gauge fitted to the sample table. The GTS1 also allows the pre-cutting of sections up to 125 x100mm in size from bulk material.
- This vacuum chuck slide holder accepts a variety of slide sizes and configurations:
 - 12 x (28 x 48mm)
 - 7 x (26 x 76mm)*
 - 3 x (51 x 76mm)*Special chuckfaces for sizes up to 150 x 100mm can be made to order.
- Advanced user control ensures precise, reliable cutting. The chuckface linear drive system moves samples smoothly through the saw blade, operated via an intuitive control panel. Using the feed rate monitor, operators can set the optimal speed for each material, minimising sub-surface damage and reducing excessive blade wear. This not only preserves sample integrity but also extends blade life, improving efficiency and cost-effectiveness.
- Additional flexibility ensures efficient operation. The VS2 Vacuum System, featuring a single-stage rotary vacuum pump, water trap, drain, and air admittance valve, can be mounted on a wall or bench for vacuum mounting samples on the GTS1 chuckface. An optional Coolant Recirculation Unit collects cutting debris from recycled coolant, promoting cleaner, safer, and more efficient cutting.

Technical Specifications

Power Supply	220-240v, 50Hz or 110V, 50/60Hz
Fuse Rating	10A (220/240V) or 15A (110V)
Saw Drive	0.55kW
Blade Diameter	300mm (x 2mm)
Blade Speed	1370 RPM
Slide Capacities	12 x (28 x 48mm) 7 x (26 x 76mm)* 3 x (51 x 76mm)*
Typical Feed Rates	0% = 0.3mm/s 100% = 1.0mm/s
SAW	
Height	440 mm
Width	776 mm
Depth	472 mm
CONTROL BOX	
Height	510 mm
Width	475 mm
Depth	238 mm
Machine Weight	60 kg
Packed Weight	85 kg

*A cover slide is required to cover the vacant vacuum holes on the chuck face using this configuration

Due to a continuous programme of development, Logitech reserves the right to change specifications without prior notice