

High Speed Lapping & Polishing System

The High Speed lapping and polishing machine is specifically designed for processing Diamond and similar hard materials, used in production and research laboratories.

Superior real time analytical capabilities

The Logitech High Speed Lapping and Polishing machine provides a flexible, extremely reliable system for processing and analysis of hard materials, such as Gallium Nitride, Sapphire, Diamond and Silicon Carbide.

An array of advanced in-situ sensors constantly provide the operator with real-time process information. Monitored parameters include the CoF (during polishing), pad, slurry, plate and carrier/pad interface temperatures. These sensors will relay information back to the operator in order to identify and evaluate important process conditions or process stability - factors which are paramount for optimal performance.

Lapping Capability

The substantial lapping workstation has a 40cm (16") diameter plate. For optimum results, the machine has been designed to work in combination with a Logitech Precision Lapping Jig.

The chemically resistant high speed system comes supplied as standard with the ability to process substrates, part wafers and full wafers up to 4"/100mm in diameter using a variety of Logitech lapping jigs. The range of jigs includes:

Precision Jig	Sample Capacity	Suitable Materials
PP6	100mm/4"	All Hard Materials
PP8D	100mm/4"	Diamond Only

Polishing Capability

Materials are quickly and easily polished using a Logitech Polishing pad on the 400mm (16") polishing plate.

The system carrier can apply high downloads to increase the polishing rate on harder materials, whilst the head back pressure can be used to adjust the sample shape.

The machine has been designed for speed and flexibility, providing quick and easy change over of plates and multiple polishing pad options.

Enhanced Control at your fingertips

The user interface on the high speed system utilises internationally accepted analytical software technology (Labview 10). All functions are controlled via the touch panel. Data can be taken from the in-situ process sensors and sub-systems and exported (via the USB port) to third party statistical or analytical software. The ability to extract information in standard file formats provide added benefits though a greater understanding of the reactions occurring during the processes.



- *Ideally suited for processing hard materials such as Diamond, Sapphire, GaN and SiC*
- *Precise Parallelism Control*
- *High Pressure Polishing*
- *Advanced sensor array comprising, slurry, Co-Efficient of Friction (CoF), pad/plate interface temperature*
- *Variable plate speed up to 300 rpm*

The ability to automate various system operations, means that an entire process, consisting of various sub-processes, can be initiated and left unmanned. This allows the operator to work on other tasks safe in the knowledge that the system is automatically performing the specified recipe or system operations.

Adaptable and portable - Logitech quality as standard

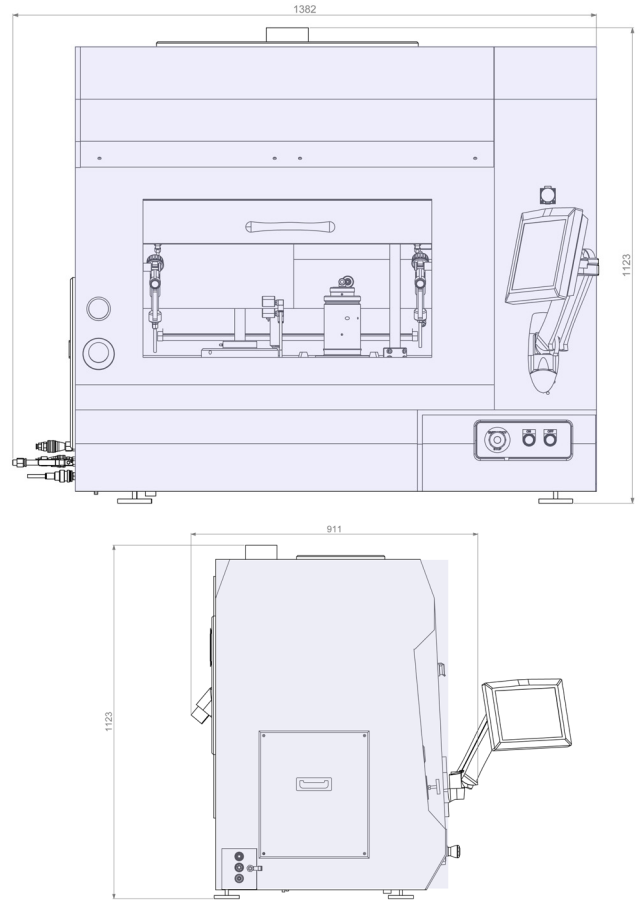
Plate speed can be set at any value from 0 to 300 rpm, according to the requirements of individual processes.

In summary, the High Speed Lapping and Polishing machine has been designed from the ground up to achieve the highest possible standards of processing control, in laboratories with limited space, without sacrificing system performance.

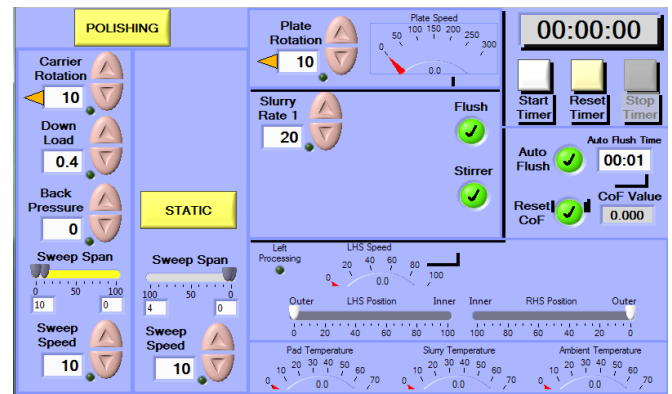
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Technical Specifications

Product code:	1CM43
Power supply	240v 16A single inlet
Fuse rating:	16A
Plate speed:	0 - 300rpm
Plate diameter	400mm
Plate rotation	Clockwise & counter clockwise
Carrier rotation speed	0 -100 rpm
Max. Carrier back pressure	0 - 50psi / 344kPa
Max. Carrier down pressure / load	9psi / 62kPa
Min. Carrier down pressure / load	0.4psi / 2.8kPa
Carrier sizes available	up to 100mm/4" diameter
Lapping jig chuck face diameter	120mm
Height:	1123mm
Depth:	911mm
Width	1382mm
Packed weight	440Kg
Machine weight	292Kg
Polishing plate weight	6.5Kg
Lapping plate weight	20Kg
Slurry flow rate	20-500ml/min
Chemical compatibility	Acidic & alkaline CMP slurries
Cabinet details	Self contained chemical resistant, bench top cabinet.



Labview Software



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

Accessories

- Template kit
- 4" Carrier body for High Speed Lapping and Polishing Machine
- Precision Lapping Jig: PP61; PP62 or PP8D

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