

DP4 Precision Polishing System

The Logitech DP4 is a high speed polishing system for semi automated final stage polishing of hard materials, such as sapphire, silicon carbide or gallium nitride, to epitaxy ready quality surfaces.

Each of its four heads can process material up to 200mm / 8" Ø (or multiple smaller samples) and is capable of applying up to 50Kg of download on each carrier head, resulting in the DP4 having the highest sample throughput of any of our polishing systems.

Reduced Processing Times

Processing times for materials such as sapphire, silicon carbide (SiC) and gallium nitride (GaN) are notoriously lengthy due to their hardness. The solution to this problem comes in the shape of the DP4 precision polishing system.

The four processing stations allow a high number of substrates or components to be polished with repeatable surface flatness and material removal rates, making it ideal for high volume production. Furthermore, its ability to polish both hard and soft materials ensures it can work with virtually any optical or semiconductor material.

Each of the DP4's individual processing heads has built-in compression polishing technology, and can dramatically reduce processing times from anywhere between 70-400% over more traditional methods. For example, a theoretical throughput of approximately 144 polished 50mm / 2" Ø sapphire wafers per 8 hour shift can be achieved*.

User Friendly Interface

The DP4's advanced touch screen user interface has been designed to provide as much flexibility as possible, with increased control and automation available via both manual and automatic modes.

The manual mode provides access to individual process variables, thereby allowing operators to have extremely close control over process parameters. The automatic mode allows for complex, linked recipes to be created and stored in memory. This provides the operator with the ability to build a recipe library of automated and repeatable processes, and free up time to work on other tasks, safe in the knowledge that the samples will be polished to the required specification.

Industry Standard System Architecture

Door interlocks are installed, ensuring current health and safety regulations are adhered to, while the built-in fume cabinet caters for processes involving toxic materials.

Furthermore, the DP4 is designed with chemo-mechanical based polishing processes in mind, as all parts and components are sodium hypochlorite resistant. An internal peristaltic pump is incorporated to deliver the slurry to the processing pad.



- *Driven head technology dramatically reduces polishing time for hard materials*
- *Process up to 48 x 50mm / 2" Ø wafers or 4 x 200mm / 8" Ø wafers per run*
- *Ideal for polishing SiC, GaN, AlN and Sapphire*
- *Automated process recipes increase system flexibility, repeatability and usability*

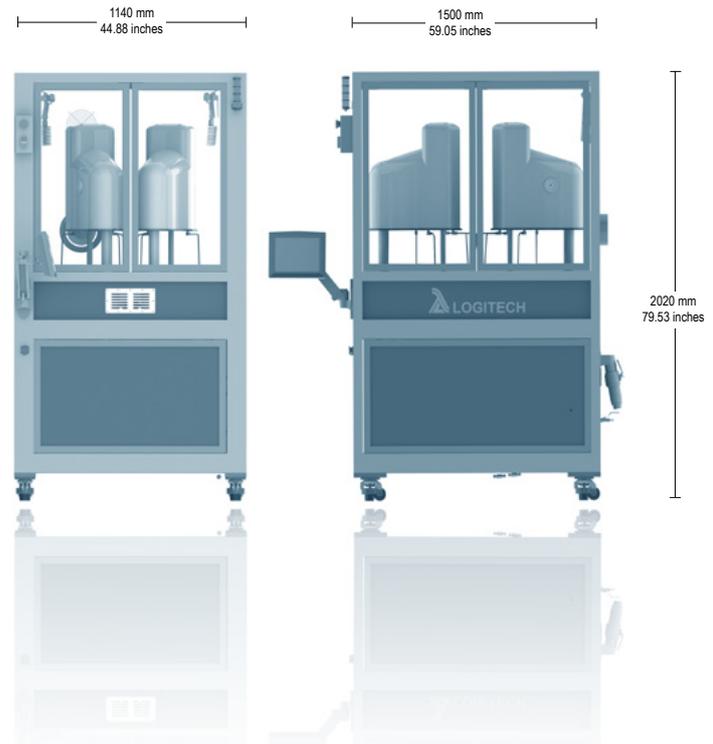
Typical Applications

As a high capacity unit, the DP4 is ideal for production environments and it offers a highly effective solution to those seeking to polish materials or components traditionally viewed as being hard to process.

With its variable download control, driven head technology and in-built automation, the DP4 is extremely versatile and is capable of being used with a wide range of polishing materials.

*depending on dimensions and start Ra.

Technical Specifications



Ordering Information

1DP4 DP4 Precision Polishing Machine

Accessories & Components

1PDP4S-0100	Plain plate base, (700mm / 27.6" Ø)
1PDE4-0400	Grooved polyurethane polishing plate(700mm/27.6" Ø)
1PDE4-0500	Non-Grooved polyurethane polishing plate(700mm/27.6" Ø)
1DP4T-0100	Single wafer template kit (one kit required per head)
1DP4T-0200	Multiple wafer template kit (one kit required per head)
1DPAC-0300	Wafer mounting plate, for up to 200mm / 8" Ø wafers
1DPAC-0400	Diamond conditioning plate

Consumables

0CON-137	SF1 Polishing Fluid, 25 ltrs
0CON-141	Chemlox Polishing Fluid, 4 ltrs
0CON-392	Cross Hatched, Grooved Polyurethane Polishing Pad, 700mm / 27.6" Ø
0CON-358	Chemcloth Polishing Cloth, 700mm / 27.6" Ø, (x10)

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