PACE TECHNOLOGIES
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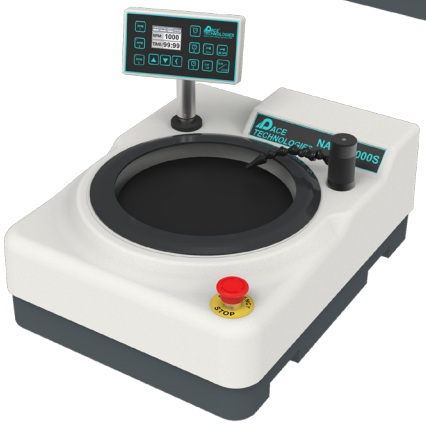
NANO-S

8 & 10-INCH MANUAL POLISHERS

MANUAL GRINDING AND POLISHING

Easy To Use | Reliable Performance | Multiple Options Available

SPECIFICATION	NANO-1000S	NANO-2000S
Working wheels	8 and 10-inch diameter	8 and 10-inch diameter
Stations	Single wheel	Double wheel
Speed	**Variable**: 100-1000 rpm **Grinding**: 600-1000 rpm **Polishing**: 100-600 rpm	**Variable**: 100-1000 rpm **Grinding**: 600-1000 rpm **Polishing**: 100-600 rpm
Power supply	110 / 220V	110 / 220V
Motor	1 hp (750 W) dynamic torque servo motor	1 hp (750 W) dynamic torque servo motor
Dimensions (W x D x H)	16.5 x 15 x 15.2-inch (420 x 380 x 385 mm)	29.5 x 22.5 x 15.2-inch (751 x 571 x 385 mm)
Weight	63 lbs (29 kg)	110 lbs (50 kg)



The **NANO-S Manual Grinder Polishers** are versatile and high-performance machines designed to meet the demands of precise grinding and polishing applications. Available in single (NANO-1000S) or double wheel (NANO-2000S) options each supporting 8 or 10-inch working wheels.

Featuring a variable speed range of 100-1000 rpm in 10 rpm increments, the NANO-S allows users to precisely adjust the grinding and polishing speed to match their specific needs. The CCW and CW direction control enables versatile operation, accommodating various sample requirements.

Equipped with a 1 hp (750W) high torque dynamic servo motor, the NANO-S delivers constant torque across the full range of motor speeds, ensuring consistent and reliable performance. With rapid programmable speed and time selection, users can easily set and adjust the desired parameters for efficient and consistent results. The timer function allows for countdown capability, automatically turning off the machine once the set time is reached, ensuring convenience and safety.

Designed for seamless integration, the NANO-S features electrical connections for the FEMTO-1100S/1500S auto polishing system, allowing for a comprehensive and streamlined metallographic sample preparation workflow.

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2 year warranty
Limited warranty

APPLICATIONS

- Metals
- Ceramics
- Polymers
- Composites
- Aerospace
- Electronics
- Biomaterials

Autopolishing Head (optional)

Automatic Dispenser (optional)

Recirculating Filter (optional)

GRINDING PROCESS OVERVIEW

The purpose of the grinding step is to remove damage from cutting, planarize the specimen(s), and to remove material approaching the area of interest.

The typical abrasives used for grinding include:

Silicon Carbide

SiC is a manufactured abrasive produced by a high temperature reaction between silica and carbon. It has a hexagonal-rhombohedral crystal structure and has a hardness of approximately 2500 HV. It is an ideal abrasive for cutting and grinding because of its hardness and sharp edges. Available in various grit sizes from very coarse 60 grit to very fine 1200 grit.

Alumina

Alumina is a naturally occurring material (Bauxite). It exits in either the softer gamma (mohs 8) or harder alpha (mohs 9, 2000 HV) phase. Alumina abrasives are used primarily as a final polishing abrasive.

Diamond

The hardest material known to man (mohs 10, 8000 HV). It has a cubic crystal structure, and is available as a natural or an artificial product. For metallographic applications, polycrystalline diamond is recommended as a rough polishing abrasive.

Zirconia

Zircon, or zirconium silicate, is another less common abrasive used for coarse grinding. It is a very tough abrasive, so it lasts longer, however it is generally not as hard or sharp, and thus requires higher pressures to be effective. Typically 60 or 120 grit sizes have been found to be the most useful grain sizes for metallographic grinding with zircon.

POLISHING PAD	APPLICATION
CERMESH	Ceramics, glass and minerals grinding with 30-45 micron diamond
POLYPAD	Rough polishing with 9-15 micron diamond
TEXPAN	Excellent general purpose pad for polishing with diamond, alumina or colloidal silica
BLACKCHEM	Recommended for polishing with colloidal silica
DACRON	Fine diamond polishing
NYPAD	Fine diamond polishing
GOLDPAD	Fine diamond polishing
ATLANTIS	Fine diamond polishing
MICROPAD	Excellent final polishing pad with alumina
TRICOTE	Final polishing
NAPPAD	Final polishing
MOLTEC	Final polishing
FELT PAD	Final polishing of glass and large surface area parts

CE

Machinery directive 2006/42/EC
RoHS Directive 2011/65/EU

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