PACE TECHNOLOGIES
WWW.METALLOGRAPHIC.COM

NANO-1200S

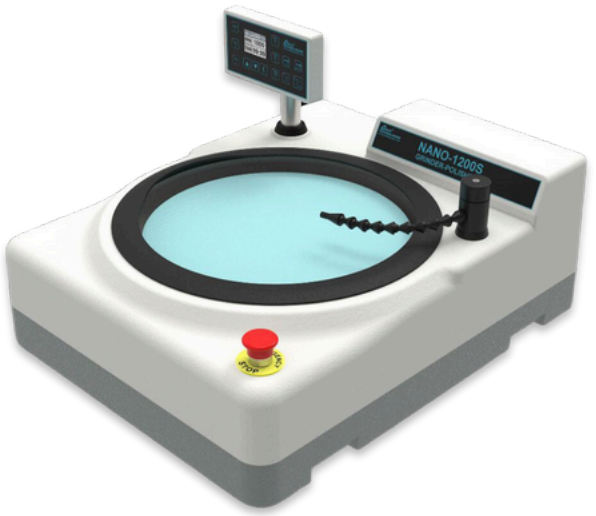
12 & 14-INCH MANUAL POLISHER

MANUAL GRINDING AND POLISHING

Increased Sample Capacity | Easy to Use | Reliable Performance

2 year warranty
Limited warranty

SPECIFICATION	NANO-1200S
Working wheels	12 and 14-inch wheel diameter
Stations	Single wheel
Speed	Variable: 100-1000 rpm Grinding: 600-1000 rpm Polishing: 100-600 rpm
Power Supply	110 / 220V
Motor	1.33 hp (1000 W) dynamic high torque servo motor
Dimensions (W x D x H)	20 x 16 x 25-inch (510 x 420 x 640 mm)
Weight	95 lbs (43 kg)



Larger Polishing Surface
The NANO-1200S is our largest single wheel manual grinder-polisher, designed to handle the demands of wet grinding and polishing for metallographic specimens. With its impressive size and capabilities, it offers exceptional performance for processing multiple specimens simultaneously. It is available with 12-inch or 14-inch single working wheels, accommodating samples that occupy up to one-third of the wheel's diameter.

Tailored Speed & Directional Control
The variable speed range of 100–1000 rpm, adjustable in 10-rpm increments, gives users precise control to match grinding and polishing speeds to their specific requirements. Its reversible rotation (CCW and CW) further enhances versatility, catering to diverse sample needs.

High-Performance Motor & Intuitive Interface
Powered by a robust 1.33 hp (1000W) dynamic high-torque servo motor, the NANO-1200S delivers consistent torque across the entire speed range for dependable performance. The full-color LCD screen and intuitive controls enable quick programming of speed and time parameters, ensuring efficient and repeatable results. A timer function (1 second to 99 minutes) provides added convenience, automatically shutting off the machine when the set time elapses for safety and ease of use.

Streamlined Integration for Comprehensive Workflows
For a fully integrated workflow, the NANO-1200S is designed to seamlessly connect with the FEMTO-2200S and FEMTO-2500S auto polishing heads, creating a streamlined solution for metallographic sample preparation.

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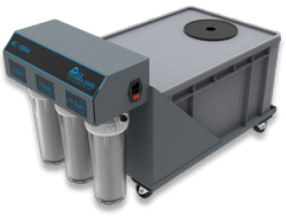
APPLICATIONS

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

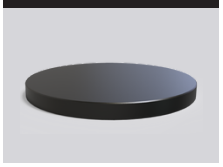
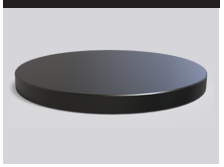
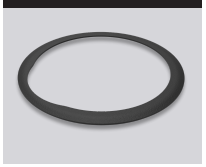
Autopolishing Head
FEMTO-2200S / 2500S
(Optional)

Automatic Dispenser
ZETA-2000S (Optional)



Recirculating Filter
RC-1000A (Optional)

NANO-1200S ACCESSORIES

12-inch Anodized Working Wheel	14-inch Anodized Working Wheel	12 & 14-inch Splash Guard	12-inch Paper Ring	14-inch Paper Ring	12 & 14-inch Wheel Cover
					
PW-1200A	PW-1400A	PTM-225-001	PTM-225-005	PTM-225-006	PTM-225-007

GRINDING PROCESS OVERVIEW

The grinding step in metallography removes cutting damage, planarizes specimens, and eliminates material to reach the area of interest.

Common Abrasives for Grinding:

Silicon Carbide (SiC): A synthetic abrasive with a hardness of ~2500 HV, SiC is ideal for cutting and grinding due to its sharp edges and durability. Available in grit sizes from 60 (coarse) to 1200 (fine).

Alumina: Derived from bauxite, alumina comes in two phases: softer gamma (Mohs 8) and harder alpha (Mohs 9, 2000 HV). Mainly used for final polishing.

Diamond: The hardest material (Mohs 10, 8000 HV), diamond is available in natural or synthetic forms. Polycrystalline diamond is recommended for rough polishing in metallography.

Zirconia: A tough but less common abrasive, zirconia is durable but less sharp, requiring higher pressures. Best for coarse grinding with 60 or 120 grit sizes.

POLISHING	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 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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