

SAMPLE
PREPARATION
SYSTEMS

PHOENIX 4000

BUEHLER®

Single Sample
Capability

Central or Single
Sample Force
Application

Versatile

Heavy Duty



A New Concept in High Performance Sample Preparation Systems



Precision and efficiency of operation know no compromise. As a result, the new PHOENIX 4000 family of sample preparation systems from BUEHLER® represents an entirely new concept in grinding and polishing machines . . . a family of machines without compromise.

Heavy Duty Design

The design basis for PHOENIX 4000 systems is a high technology process known as mineral casting. Mineral casting produces a composite material with the weight, feel and consistency of natural granite. This material is corrosion proof, non-conductive, chemically inert and dimensionally stable. Its high density and sound absorbing properties virtually eliminate unwanted vibration. Use of mineral

casting for the base structures of all PHOENIX 4000 systems helps to produce equipment that is literally "rock solid."

Single Sample Force

All PHOENIX 4000 systems offer both single and central sample force application, making them ideal for all levels of sample throughput requirements. Touchpad controls coupled with LED parameter displays ensure a combination of ease of operation with reliability, even under the most challenging working conditions.

Versatile

The PHOENIX 4000 family of preparation systems includes both single and twin wheel models with two different ranges of wheel speeds: 150/300 rpm

or 50-600 rpm. All models can be fitted with 10" or 12" diameter wheels. Operation with new universal design specimen holders ensures positive clamping for both hot and cold mounted samples.

Quality Results

PHOENIX 4000 systems are designed for use in the preparation of metals and other engineering materials for microstructural analysis. The combination of precision design, heavy duty construction, single and multiple sample capability, single and central sample force application, and ease of operation make them the solid choice for low, medium and high volume sample throughput in both production and laboratory environments.

Technical Data

System Configuration: Grinder/polisher base with pneumatic/electrically-driven head

Operation: Semiautomatic or manual

Sample Capacity: Individual force mode, up to 6 samples; central force mode, up to 10 samples per holder, depending on the holder

Sample Sizes: 1" to 2" (25mm to 50mm) diameter mounted samples; holders also available for unmounted samples and special applications

Mains Power: 220V/60Hz/3 phase or 380-415V/50Hz/3 phase

Compressed Air: 80 PSI filtered, regulated air; quick release coupling standard

Water: 1/2" supply operational from 15-85 PSI source

Motor: 0.65 HP (500 watts)

Platen Speeds: 150/300 rpm or 50-600 rpm

Head Speed: 150 rpm

Controls: Touch-pad type with LED displays including:

- Single and central force application
- Sample force - up to 22.5 lbs. for single sample force, up to 101 lbs. for central force application
- Wheel speed
- Head/Wheel relative rotational direction: complementary or contra
- Time select and set: 0 to 99 min.
- Water On/Off
- Cycle Start and Stop

Control Voltage: 24 VDC, 0.1 A

Other Features:

- Robust and acoustically damped mineral cast structure
- All controls located in system base for operational convenience and safety
- Large bowl drain
- Drip-type abrasive suspension dispenser
- Quick lock/unlock specimen holder chuck
- Belt-driven platens for quiet operation

Weights:

Single Wheel Unit 209 lbs. (95kg)
Twin Wheel Unit 282 lbs. (128kg)

Dimensions:

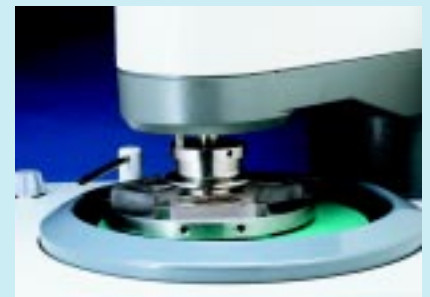
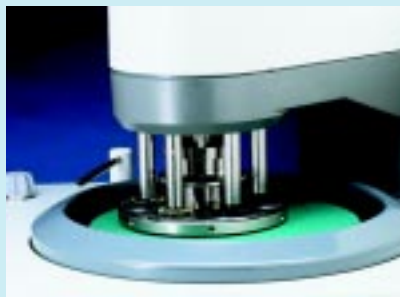
Unit	Width	Depth	Height
Single	23 ⁵ / ₈ " (600mm)	25 ⁵ / ₈ " (650mm)	22 ⁵ / ₈ " (575mm)
Twin	38 ¹ / ₂ " (978mm)	25 ⁵ / ₈ " (650mm)	22 ⁵ / ₈ " (575mm)



PHOENIX 4000 systems are available in both single and twin wheel models, with a choice of variable or two fixed platen speeds.



All operator controls and LED parameter displays are located on one easy to use touch-pad fascia panel.



All PHOENIX 4000 systems give the operator the choice of preparing samples using single or central force application.



A complete series of specimen holders accommodates both compression and cold mounted samples as well as a broad range of large unmounted and irregularly shaped specimens.

System Specifications

49-4001-260 PHOENIX 4000 Sample Preparation System, complete with single wheel 2 speed grinder/polisher base and integral power head. Includes single and central sample force operational modes, splash ring, cover, installation kit and operating instructions. For 220V/60Hz/3 phase mains. Platens, specimen holders and loading plate supplied separately.

49-4001-400 PHOENIX 4000 Sample Preparation System, same as 49-4001-260 but for 380-415/50Hz/3 phase mains.

49-4101-260 PHOENIX 4000 Sample Preparation System, complete with single wheel variable speed grinder/polisher base and integral power head. Includes single and central sample force operational modes, splash ring, cover, installation kit and operating instructions. For 220V/60Hz/3 phase mains. Platens, specimen holders and loading plate supplied separately.

49-4101-400 PHOENIX 4000 Sample Preparation System, same as 49-4101-260 but for 380-415V/50Hz/3 phase mains.

49-4002-260 PHOENIX 4000 Sample Preparation System, complete with twin wheel 2 speed grinder/polisher base and integral power head. Includes single and central sample force operational modes, splash rings, covers, installation kit and operating instructions. For 220V/60Hz/3 phase mains. Platens, specimen holders and loading plate supplied separately.

49-4002-400 PHOENIX 4000 Sample Preparation System, same as 49-4002-260 but for 380-415V/50Hz/3 phase mains.

49-4102-260 PHOENIX 4000 Sample Preparation System, complete with twin wheel variable speed grinder/polisher base and integral power head. Includes single and central sample force operational modes, splash rings, covers, installation kit and operating instructions. For 220V/60Hz/3 phase mains. Platens, specimen holders and loading plate supplied separately.

49-4102-400 PHOENIX 4000 Sample Preparation System, same as 49-4102-260 but for 380-415V/50Hz/3 phase mains.

Accessories

49-1777 Aluminum Platen, 12" (300mm) diameter.

40-0500 Aluminum Platen, 10" (250mm) diameter.

60-2425 Specimen Loading Plate, for 60-5200 series specimen holders.

49-8001 Drive Adapter for MOTOPOL™ Specimen Holders, one required for each holder.

49-8002 Drive Adapter for AUTOMET® Barrel Type Specimen Holders, one required for each holder.

Specimen Holders

FOR SINGLE SAMPLE FORCE OPERATION:

60-2100 Specimen Holder Plate, with six 2" cavities.

Distance Rings for use with 60-2100 Specimen Holder Plate, set of six.

Catalog Number	Specimen Size
60-2106	1"
60-2102	30mm
60-2103	1¼"
60-2104	1½"
60-2105	40mm

Specimen Holders

FOR CENTRAL SAMPLE FORCE OPERATION:

Catalog Number	Holder Type	Sample Size	Sample Quantity
60-5281	Universal	1" (25mm)	10
60-5282	Universal	1¼" (32mm)	10
60-5283	Universal	1½" (38mm)	6
60-5287	Universal	30mm	10
60-5288	Universal	40mm	6
60-5289	Universal	2" (50mm)	3
60-5270	Rectangular	3" x 1.375"	3
60-5274	Blank		

Other specimen holders for special applications available on request.

For a complete listing of BUEHLER consumable supplies for use with the PHOENIX 4000 Systems, please refer to our Consumables Buyer's Guide. Buehler continuously makes product improvements; therefore, technical specifications are subject to change without notice.



BUEHLER

BUEHLER LTD. – Worldwide Headquarters
41 Waukegan Road • P.O. Box 1
Lake Bluff, Illinois 60044-1699 USA
Tel: 847/295-6500 • Fax: 847/295-7979
Sales: 1/800/BUEHLER • 1/800/283-4537
Web Site: <http://www.buehler.com>

WIRTZ-BUEHLER GMBH
In der Steele 2 • 40599 Düsseldorf
Postfach 16 03 55 • 40566 Düsseldorf
Telefon: (+49) 0211/974100 • Telefax: (+49) 0211/9741079
Web Site: <http://www.wirtz-buehler.de>

KRAUTKRAMER FRANCE – BUEHLER Division
68, Chemin des Ormeaux
69760 Limonest
Téléphone: (+33) 04/72/17/92/50 • Télécopie: (+33) 04/78/47/56/98

BUEHLER KRAUTKRAMER
Milburn Hill Road • University of Warwick Science Park
Coventry CV4 7HS United Kingdom
Tel: (+44) 01203/692242 • Fax: (+44) 01203/693032