



2024-2025 PRODUCT CATALOG

METALLOGRAPHIC EQUIPMENT AND CONSUMABLES

ABRASIVE & PRECISION CUTTING
COMPRESSION & CASTABLE MOUNTING
GRINDING & POLISHING
MICROSCOPY & ANALYSIS
HARDNESS TESTING
LAB FURNITURE

GRINDING & POLISHING

NEW

PENTA-5000A

Metallographic Hand Grinder

- 5-station hand grinder
- Wet or dry grinding
- Manual grinder
- Easy to change abrasive rolls
- Robust and durable design
- Easy to use
- User friendly
- Low cost
- Easy to service



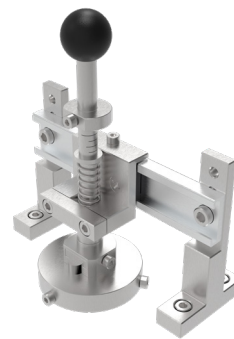
PENTA-5000A

NEW

PENTA-7500S

Metallographic Belt Grinder

- 4-inch x 36-inch belts
- Stainless steel belt adjustment mechanism
- Wet or dry grinding
- Manual grinder
- Features planarizing fixture
- Easy to change abrasive belts
- Robust and durable design
- Easy to use



PENTA-7500S Squaring and planarizing holder for metallographic mounts

PENTA-7500S

1-inch Holder



Catalog no. P75S-SH-100

1.25-inch Holder



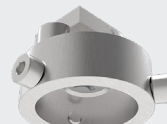
Catalog no. P75S-SH-125

1.5-inch Holder



Catalog no. P75S-SH-150

2-inch Holder



Catalog no. P75S-SH-200

25 mm Holder



Catalog no. P75S-SH-25

30 mm Holder



Catalog no. P75S-SH-30

40 mm Holder



Catalog no. P75S-SH-40

50 mm Holder



Catalog no. P75S-SH-50

METALLOGRAPHIC HAND GRINDERS

Manual Metallographic Hand Grinder

FEATURE	PENTA 5000A DESCRIPTION
Grinding stations	240, 360, 600, 800 and 1200 grit silicon carbide rolls
Roll sizes	3-7/16-inch width x 60 feet length with 1-inch core
Construction	<ul style="list-style-type: none"> • SMC molding and stainless steel • Hard coat anodized rollers and paper support plates
Cooling rinse system	Water
Dimensions (WxDxH)	22 x 24 x 9-inch (550 mm x 610 mm x 230 mm)
Weight	56 lbs (25 kg)
Catalog Number	PENTA-5000A

2 year warranty
Limited Warranty

Benefits:

- ◆ 5-grit grinding stations, including one for 800 (P2400) and 1200 (P4000) grit fine SiC abrasives
- ◆ Easy paper advance for maintaining sharp fresh abrasive
- ◆ Low maintenance
- ◆ Simple and easy to use
- ◆ Ideal for low and high volume labs

Planarizing Metallographic Belt Grinder

FEATURE	PENTA 7500S DESCRIPTION
Single belt	4 x 36-inch (102 x 914 mm)
Electrical Specification	110V / 220V 50/ 60 Hz
Motor power	550 W (0.75 hp)
Cooling / rinse system	Water
Construction	Heavy duty welded steel / fabricated metal / Stainless steel
Dimensions (WxDxH)	20 x 25 x 15-inch (510 x 630 x 380 mm)
Weight	120 lbs (53 kg)
Catalog Number	PENTA-7500S

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Benefits:

- ◆ High torque motor (110V or 220V)
- ◆ Heat treated wear surface plate
- ◆ Quick belt changing mechanism
- ◆ Fine adjustment tracking control
- ◆ Specimen square holding device for maintaining or for squaring mounted specimens
- ◆ Rinse sink
- ◆ Emergency Stop button
- ◆ Water-tight ON/OFF switch

PENTA-7500S Accessories	Catalog Number
1-inch sleeve for square holder (each)	P75-SH-100
1.25-inch sleeve for square holder (each)	P75-SH-125
1.5-inch sleeve for square holder (each)	P75-SH-150
2-inch sleeve for square holder (each)	P75-SH-200
25 mm sleeve for square holder (each)	P75-SH-25
30 mm sleeve for square holder (each)	P75-SH-30
40 mm sleeve for square holder (each)	P75-SH-40
50 mm sleeve for square holder (each)	P75-SH-50



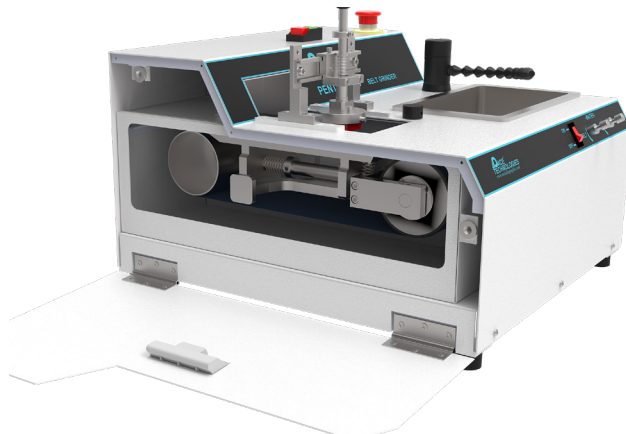
Machinery Directive 2006/42/EC
2014/35/ EU Low Voltage Directive
2014/30/EU Electromagnetic Compatibility Directive

ABRASIVE BELTS, POWDERS & ROLLS

Specimen Planar Grinding:

In general, it is better to cut as close to the areas to be investigated than to grind with very coarse abrasives such as 60, 80 and 120 grit grinding papers; however, if the specimen requires coarse abrasive grinding it is HIGHLY recommended that a belt grinder with a planar grinding / squaring fixture be used. The squaring fixture is important so that mounted specimens remain both square and flat.

Note: It is nearly impossible to maintain a square sample by hand on a belt grinder. Square specimen mounts are very important for subsequent specimen preparation on automated single specimen preparation machines. PACE Technologies is the only metallographic equipment manufacturer that offers a planar grinding fixture for its PENTA 7500S belt grinder.



PENTA 7500S Metallographic Belt Grinder

Abrasive Belts (4-inch x 36-inch)



Zirconia (blue), Alumina (red) & Silicon Carbide (black) Abrasive Grinding Belts

PACE Product Name	Catalog Number	Qty	Price (\$)
60 grit Zirconia Abrasive Belts	ZRO2-B060	5/pkg	80.00
120 grit Zirconia Abrasive Belts	ZRO2-B120	5/pkg	80.00
120 grit Alumina Abrasive Belts	ALO-B120	5/pkg	75.00
60 grit SiC Abrasive Belts	SIC-B060	10/pkg	125.00
80 grit SiC Abrasive Belts	SIC-B080	10/pkg	125.00
120 grit SiC Abrasive Belts	SIC-B120	10/pkg	125.00
180 grit SiC Abrasive Belts	SIC-B180	10/pkg	125.00
240 grit SiC Abrasive Belts	SIC-B240	10/pkg	125.00

ABRASIVE BELT TYPE

BENEFIT

Alumina

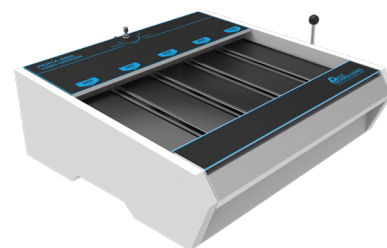
Hard and durable abrasive, not as sharp as SiC; however, alumina lasts longer than SiC

Silicon Carbide

Very hard and friable. Fast initial cutting, however SiC abrasive breaks down very fast so it is a "short-lived" abrasive

Zirconia

Very durable and hard abrasive. It is a longer lasting abrasive and is an excellent choice for belt grinders. The only drawback is that it requires higher grinding forces as compared to SiC and alumina abrasives

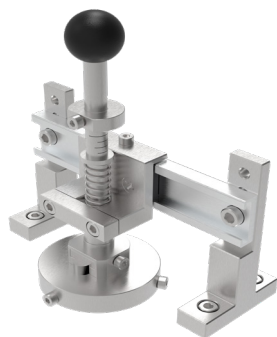


PENTA 5000A Metallographic Hand Grinder

Silicon Carbide (SiC) Abrasive Powders



SiC Abrasive Powders



PENTA-7500S Squaring and planarizing holder for metallographic mounts

PACE Product Name	Catalog Number	Qty	Price (\$)
120 grit (P120-grit) SiC Powder (1 lb)	SIC-120-P1	1 lb	28.50
120 grit (P120-grit) SiC Powder (5 lbs)	SIC-120-P5	5 lbs	115.00
240 grit (P280-grit) SiC Powder (1 lb)	SIC-240-P1	1 lb	27.50
240 grit (P280-grit) SiC Powder (5 lbs)	SIC-240-P5	5 lbs	110.00
320 grit (P400-grit) SiC Powder (1 lb)	SIC-320-P1	1 lb	27.50
320 grit (P400-grit) SiC Powder (5 lbs)	SIC-320-P5	5 lbs	110.00
400 grit (P800-grit) SiC Powder (1 lb)	SIC-400-P1	1 lb	27.50
400 grit (P800-grit) SiC Powder (5 lbs)	SIC-400-P5	5 lbs	110.00
600 grit (P1200-grit) SiC Powder (1 lb)	SIC-600-P1	1 lb	27.50
600 grit (P1200-grit) SiC Powder (5 lbs)	SIC-600-P5	5 lbs	110.00
800 grit (P2400-grit) SiC Powder (1 lb)	SIC-800-P1	1 lb	35.50
800 grit (P2400-grit) SiC Powder (5 lbs)	SIC-800-P5	5 lbs	145.00
1000 grit (P3000-grit) SiC Powder (1 lb)	SIC-1000-P1	1 lb	35.50
1000 grit (P3000-grit) SiC Powder (5 lbs)	SIC-1000-P5	5 lbs	145.00
1200 grit (P4000-grit) SiC Powder (1 lb)	SIC-1200-P1	1 lb	35.50
1200 grit (P4000-grit) SiC Powder (5 lbs)	SIC-1200-P5	5 lbs	145.00

Silicon Carbide Powders:

- ◆ The main application for grinding with silicon carbide particles is in conjunction with flat lapping on hard metal plates such as cast iron. For metallographic specimen preparation, silicon carbide powders are used for grinding petrographic thin section specimens.

Silicon Carbide (SiC) Abrasive Rolls (3-7/16-inch width, 60-foot length, 1-inch core)

PACE Product Name	Catalog Number	Qty	Price (\$)
120 grit SiC Abrasive Roll (each)	SIC-120R-60	each	88.00
240 grit SiC Abrasive Roll (each)	SIC-240R-60	each	62.00
320 grit SiC Abrasive Roll (each)	SIC-320R-60	each	62.00
360 grit SiC Abrasive Roll (each)	SIC-360R-60	each	62.00
400 grit SiC Abrasive Roll (each)	SIC-400R-60	each	62.00
600 grit SiC Abrasive Roll (each)	SIC-600R-60	each	62.00
800 grit SiC Abrasive Roll (each)	SIC-800R-60	each	90.00
1200 grit SiC Abrasive Roll (each)	SIC-1200R-60	each	90.00



SiC Abrasive Rolls