



LAPMASTER®
WOLTERS

METALLOGRAPHIC
EQUIPMENT & SUPPLIES
CATALOG

2016-2017



Welcome to the worldwide headquarters of [LAPMASTER-WOLTERS](#) in Mount Prospect, IL. This is home to our Metallographic Products Division.



Visit our new metallographic demo laboratory featuring abrasive cutters, precision saws, mounting presses, grinder/polishers, microscopes/imaging software and hardness testers.



ORDERING & CONTACT INFORMATION

TO PLACE AN ORDER

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SALES POLICY

Prices are subject to change without notice.

Minimum order \$50.00.

Standard terms Net 30.

All major credit cards accepted.

30 day return policy for supplies. Subject to inspection. May be subject to a restocking fee.

ISO 9001:2008 CERTIFIED

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DIAMOND SAWS

TECHNICAL SPECIFICATIONS

MICROMET EVOLUTION

Available with manual sample advance via an external lever or semiautomatic with a counterbalanced sliding weight system.

Maximum cutting diameter	1.57" with 5.00" cutoff wheel
Maximum cutting diameter	1.18" with 4.00" cutoff wheel
Motor power	1/8 HP (95W)
Spindle speed	0-2100 RPM
Coolant recirculating system	0.075 gallon
Dimensions of cutoff wheel zone	4.30" L x 6.30" W x 7.75" H
Weight	33 pounds
Dimensions	12.00" W x 11.75" L x 11.75" H
Power supply	115V/60 Hz/1 phase



MICROMET

Available with manual sample advance via an external lever or semiautomatic with a counterbalanced sliding weight system.

Max cutting diameter	2.36" with 8.00" cutoff wheel
Spindle speed	0 - 3000 RPM
Motor power	1/3 HP (250W)
Coolant recirculating system	1.1 Gallon
Weight	83 pounds
Dimensions	19.75" W x 18.00" D x 15.00" H
Power supply	115V/60 Hz/1 phase



MICROMET PCB TABLE CUTTER



MICROMET AUTOMATIC

Automatic electro hydraulic sample advance system

Max cutting diameter

Max cutting diameter

Spindle speed

Motor power

Coolant recirculating system

Weight

Dimensions

Power supply

1.18" with 4.00" cutoff wheel

1.77" with 6.00" cutoff wheel

0-3000 RPM

1/3 HP (250W)

1.5 gallon

99 pounds

19.75" W x 23.75" D x 16.50" H

115V/60 Hz/1 phase

CLAMPING DEVICES

Sample holder type A for irregular shaped samples

Sample holder type B, vacuum type, to hold glass slides

Sample holder type C, for gluing glass slides

Vice type D, for glass slides

Sample holder type E, with "V" groove for bars and tubes

Sample holder type F for cylindrical samples with max diameter 1.25"

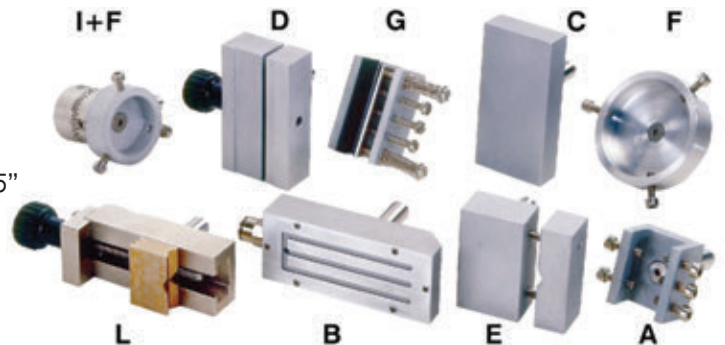
Sample holder type G for thin samples

Goniometric sample holder with 360° rotation, type I

Micro vice, type L

90° support for small vice and sample holders, type M

Vacuum sample holder type P for petrographic glass slides



SECOTRON 3-AXIS DIAMOND CUTTERS

SECOTRON 200

Maximum cutoff wheel diameter

Spindle speed

Motor power

Coolant recirculating system

Available with fully automatic PLC controls

Weight

Dimensions

Power supply

8.00"

0 - 3000 RPM

1 HP

3.16 gallons

143 pounds (65 kg)

24.50" W x 23.50" D

x 17.75" H

115V/60 Hz/1 phase

SECOTRON 300

Maximum cutoff wheel diameter

Spindle speed

Motor power

Coolant recirculating system

Available with fully automatic PLC controls

Weight

Dimensions

Power supply

10.00"

0 - 3000 RPM

5 HP

20 gal

330 pounds

24.50" W x 23.50" D

x 17.75" H

460V/60 Hz/3 phase

EVOLUTION ABRASIVE CUTTERS

TECHNICAL SPECIFICATIONS

TR80 EVOLUTION

Max cutting diameter	3.14" (80mm)
Cut-off wheel diameter	10.00" (250 mm)
Cut-off wheel speed	2800 RPM
Distance between spindle and work table	9.00" (230 mm)
Motor power	1.75 HP (1.3 kW)
Pump motor power	1/4 HP (0.18 kW)
Coolant recirculating system	4.75 gallons (18 liters)
Weight	176 pounds (80 kg)
Dimensions	24.50" W x 28.75" D x 21.50" H
Power Supply	460V/60 Hz/3 phase

Other voltages available upon request.



TR100 EVOLUTION

Max cutting diameter	4.00" (100mm)
Cut-off wheel diameter	12.00" (300 mm)
Cut-off wheel speed	2800 RPM
Distance between spindle and work table	9.50" (240 mm)
Motor power	3 HP (2.2 kW)
Pump motor power	1/4 HP (0.18 kW)
Coolant recirculating system	5.20 gallons (20 liters)
Weight	220 pounds (100 kg)
Dimensions	27.50" W x 29.50" D x 22.50" H
Power Supply	460V/60 Hz/3 phase

*Other voltages available upon request.
Inquire about DEMO Models Available for sale.*

TR SERIES ABRASIVE CUTTERS

TECHNICAL SPECIFICATIONS



TR80

Max cutting diameter	3.14" (80 mm)
Cut-off wheel diameter	10.00" (250 mm)
Spindle speed	2,800 RPM
Distance between spindle and work table	11.00" (280 mm)
Motor power	3 HP (2,2 kW)
Pump motor power	1/4 HP (0.18 kW)
Available auto cut options	PLC / Table Feed / Blade feed
Coolant recirculating system	6.6 gallons (25 liters)
Weight	286 pounds (130 kg)
Dimensions	33.50" W x 40.50" D x 25.00" H
Power supply	460V/60 Hz/3 phase

Other voltages available upon request.

TR80 FLOOR MODEL

Meets the same specifications as the bench top including:	
Available auto cut options	PLC / Table Feed / Blade feed
Coolant recirculating system	10.5 gallons (40 liters)
Weight	352 pounds (160 kg)
Dimensions	33.50" W x 40.50" D x 59.00" H
Power supply	460V/60 Hz/3 phase

Other voltages available upon request.



TR100

Maximum cutting diameter	4.00" to 4.75" (100mm to 120mm)
Cutoff wheel diameter	12.00" or 14.00" (300 or 350mm)
Cutoff wheel speed	2500 RPM
Distance between spindle and work table	12.00" (300 mm)
Motor power	4 HP/5 HP (3 kW / 3.7 kW)
Coolant Pump	1/4 HP (0.18 kW)
Available auto cut options	PLC / Table Feed / Blade feed
Coolant recirculating system	6.6 gallons (25 liters)
Weight	385 pounds (175kg)
Dimensions	36.00" W x 40.50" D x 27.00" H
Power supply	460V/60 Hz/3 phase

Other voltages available upon request.

TR100 FLOOR MODEL

Meets the same specifications as the bench top including:

Available auto cut options	PLC / Table Feed / Blade feed
Coolant recirculating system	10.5 gallons (40 liters)
Weight	385 pounds (175 kg)
Dimensions	35.50" W x 40.50" D x 60.00" H
Power supply	460V/60 Hz/3 phase

Other voltages available upon request.

TR100-PLC COMPUTER CONTROLLED OR MANUAL CUTTING ACTION

Includes PLC Computer Controls and auto feeding table:

Maximum cutting diameter	4.00" to 4.75" (100mm to 120mm)
Maximum cutting length	10.00" (250mm)
Cutoff wheel diameter	12.00" or 14.00" (300 or 350mm)
Cutoff wheel speed	2500 RPM
Distance between spindle and work table	12.00" (300 mm)
Motor power	4 HP/5 HP (3 kW / 3.7 kW)
Coolant Pump	1/4 HP (0.18 kW)
Coolant recirculating system	10 gallons (40 liters)
Weight	385 pounds (175kg)
Dimensions	W 36.00" x D 41.00" x H 61.00"

*Other voltages available upon request.
Inquire about DEMO Models Available for sale.*





TR100L

Maximum cutting diameter	4.75" (120 mm)
Maximum cutting length	21.50" (550 mm)
Cutoff wheel diameter	14.00" or 16.00" (350 or 400mm)
Spindle speed	2,500 RPM
Distance between spindle and work table	12.50" (320 mm)
Motor power	5 HP (3.7 kW)
Pump motor power	1/4 HP (0.18 kW)
Available auto cut options	Table Feed / Blade feed
Coolant recirculating system	26 gallons (100 liters)
Weight	550 pounds (250 kg)
Dimensions	35.50" W x 54.00" D x 58.00" H
Power supply	460V/60 Hz/3 phase

Other voltages available upon request.

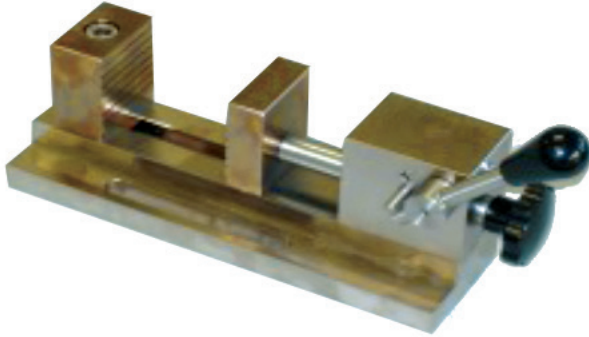
TR100S

Maximum cutting diameter	4.00" to 4.75" (100mm to 120mm)
Maximum cutting length with optional longitudinal-feed work table	15.75" (400 mm)
Cutoff wheel diameter	12.00" or 14.00" (300 or 350mm)
Spindle speed	2,500 RPM
Distance between spindle & work table	16.50" (420 mm)
Distance between spindle & optional longitudinal-feed work table	11.75" (300 mm)
Motor power	4 HP/5 HP (3 kW/ 3.7 kW)
Pump motor power	1/4 HP (0.18 kW)
Available auto cut options	Table Feed / Blade feed
Coolant recirculating system	10 gallons (40 liters)
Weight standard machine	385 pounds (175 kg)
Weight machine with optional longitudinal-feed work table	462 pounds (210 kg)
Standard machine dimensions	23.50 W x 33.00" D x 71.00" H
Dimensions of the machine with optional longitudinal-feed work table	23.50" W x 45.50" D x 71.50" H
Power supply	460V/60 Hz/3 phase

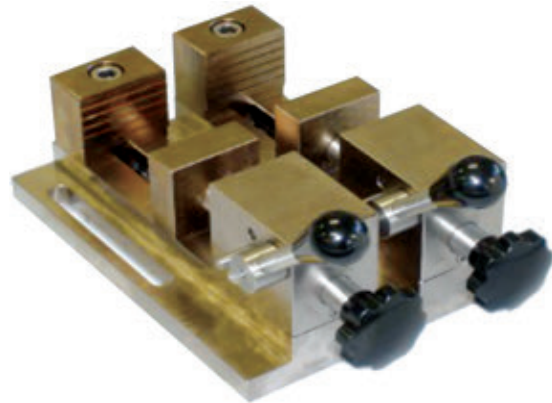
Other voltages available upon request.



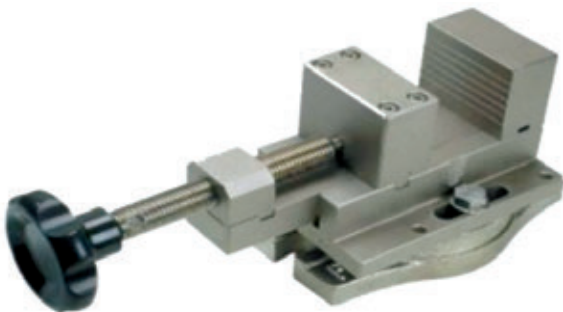
CLAMPING SYSTEMS FOR TR-SERIES



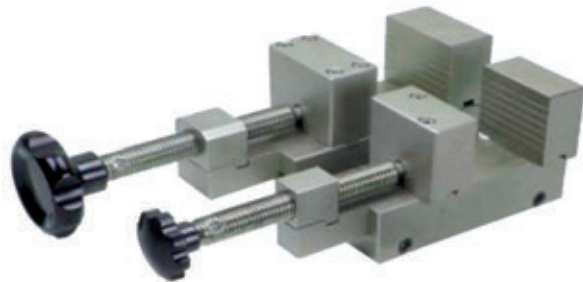
Single Jaw Quick Cam Vises



Double Jaw Quick Cam Vises



Single Jaw Screw Type Vises



Double Jaw Screw Type Vises



Compound Vises



Vertical clamping Devices

SECOMET 3-AXIS CUTTERS

TECHNICAL SPECIFICATIONS



	400 CUTTER	500 CUTTER	600 CUTTER
Wheel Diameter	20.00" (500 mm)	20.00" (500 mm)	24.00" (600mm)
Cutting Capacity	6.70" x 15.75"	6.70" x 19.6"	8.00" x 19.60"
Motor Power	15 HP	15 HP	15 HP
T Slot Work Table	22.00" x 20.00"	22.00" x 20.00"	22.00" x 20.00"
Available auto cut opt.	PLC/Table/Blade	PLC/Table/Blade	PLC/Table/Blade
Coolant Tank Capacity	66 gal	66 gal	66 gal
Weight	2640 pounds	3080 pounds	3146 pounds
Dimensions	44.00"w x 76.00"D x 68.00"H	44.00"w x 79.00"D x 68.00"H	44.00"w x 79.00"D x 68.00"H
Power supply	460V/60 Hz/3 phase	460V/60 Hz/3 phase	460V/60 Hz/3 phase

MOUNTING PRESSES

TECHNICAL SPECIFICATIONS

EVOLUTION AUTOMATIC, PNEUMATIC MOUNTING PRESSES

IPA 30 EVOLUTION

Mounts	1.25"(30 mm.)
Power	600 W
Maximum heating temperature	400F (200 °C)
Maximum heating time	60 minutes
Adjustable cooling temperature	
Weight	71 pounds (32 Kg)
Dimensions	9.00" W x 19.00" D x 26.50" H
Power supply	115V/60 Hz/1 phase
<i>Other voltages available upon request.</i>	

IPA 40 EVOLUTION

Mounts	1.50" (40 mm.)
Power	600 W
Maximum heating temperature	400F (200 °C)
Maximum heating time	60 minutes
Adjustable cooling temperature	
Weight	71 pounds (32 Kg)
Dimensions	9.00" W x 19.00" D x 26.50" H
Power supply	115V/60 Hz/1 phase
<i>Other voltages available upon request.</i>	

IPA E T I EVOLUTION

With Interchangeable Mold Assembly

Mounts	1.00" - 1.50" (25 - 40 mm)
Power	650 W
Maximum heating temperature	400F (200 °C)
Maximum heating time	60 min
Adjustable cooling temperature	
Weight:	75 pounds (34 Kg)
Dimensions	9.00" W x 19.00" D x 26.50" H
Power supply	115V/60 Hz/1 phase
<i>Other voltages available upon request.</i>	

Inquire about DEMO Models Available for sale.



IPA ELECTRO HYDRAULIC MOUNTING PRESS IPAID 50

With Interchangeable Mold Assembly

Mounts	From 1.00" - 2.00" (25mm to 50 mm)
Power	600 W to 700 W
Maximum heating temperature	400F (200°C)
Maximum heating time	99 minutes
Adjustable cooling temperature	
Weight	120 pounds (45 kg)
Dimensions	16.00" W x 20.00" D x 20.50" H
Power supply	115V/60 Hz/1 phase
<i>Other voltages available upon request.</i>	



IPA SERIES AUTOMATIC, PNEUMATIC MOUNTING PRESSES

IPA 30

Mounts
Power
Maximum heating temperature
Maximum heating time
Adjustable cooling temperature
Weight
Dimensions
Power supply
Other voltages available upon request.

1.25" (30mm)
600 W
400F (200°C)
99 min
93 pounds (42 kg)
15.75" W x 15.75" D x 20.00" H
115V/60 Hz/1 phase



IPA 40

Mounts
Power
Maximum heating temperature
Maximum heating time
Adjustable cooling temperature
Weight
Dimensions
Power supply
Other voltages available upon request.

1.50" (40mm)
600 W
400F (200°C)
99 min
93 pounds (42 kg)
15.75" W x 15.75" D x 20.00" H
115V/60 Hz/1 phase

IPA TI

With Interchangeable Mold Assembly
Mounts
Power
Maximum heating temperature
Maximum heating time
Adjustable cooling temperature
Weight
Dimensions
Power supply
Other voltages available upon request.

From 1.00" - 2.50" (25mm to 65 mm)
600 W to 700 W
400F (200°C)
99 minutes
99 pounds (45 kg)
15.75" W x 15.75" D x 20.00" H
115V/60 Hz/1 phase

ASK ABOUT OUR FULL-SIZED DUPLEX MOUNTING OPTIONS.



COMPUPRES MICROPROCESSOR CONTROLLED FULLY AUTOMATIC ELECTRO HYDRAULIC MOUNTING PRESS

With Interchangeable Mold Assembly
Stores up to 100 mounting processes

Mounts
Power
Maximum heating temperature
Maximum heating time
Adjustable cooling temperature
Weight
Dimensions
Power supply
Other voltages available upon request.

From 1.00" - 2.00" (25mm to 50 mm)
1000 - 1500 W
400F (200°C)
99 minutes
120 pounds (45 kg)
20.50" W x 24.00" D x 21.00" H
115V/60 Hz/1 phase

GRINDERS & POLISHERS

TECHNICAL SPECIFICATIONS



COMPUPLAN COARSE GRINDING MACHINE

Dimension of grinding wheel	14.00" x 1.75" (356xH50 mm)
Power of wheel motor	4 HP
Grinding wheel max speed	1500 RPM
Diameter of sample holder	8.00" (200 mm)
Motor power of sample holder	1/3 HP
Speed of sample holder	150 RPM
Compressed Air	6 bar
Weight	551 pounds (250 kg)
Dimensions	D 24.00" x W 31.00" x H 57.00"
Power supply	460V/60 Hz/3 phase

Additional electrical configurations available.

Inquire about DEMO Models Available for sale.

DS300 SERIES HIGH SPEED ROTARY GRINDERS

Floor standing or bench top manual grinding machine for use with 12" (300mm) abrasive discs. This machine can accept PSA abrasive discs or Plain Backed discs with a 0.375" center hole. The frame is painted steel with anti-corrosion varnish and is equipped with a safety cover for operator protection, and an auto brake motor. Available in single wheel, double wheel and single wheel bench-top models. For dry grinding only.



	DS300-1 SINGLE WHEEL	DS300-2 DOUBLE WHEEL	DS300-1T TABLE TOP
Wheel diameter:	12.00" (300 mm)	12.00" (300 mm)	12.00" (300 mm)
Speed	Single speed 1500 RPM	Single speed 1500 RPM	Single speed 1500 RPM
Dimensions	18.00" W x 16.00" D x 30.00" H	37.00" W x 16.00" D x 30.00" H	18.00" W x 16.00" D x 15.00" H
Weight:	132 Pounds	242 Pounds	66 Pounds
Power Supply	115V/60Hz/1 Phase	115V/60Hz/1 Phase	115V/60Hz/1 Phase

Other voltages available upon request.

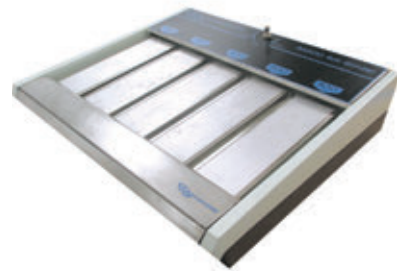


BG100 BELT GRINDER

BG100 is a wet or dry belt grinder for coarse grinding using standard 4" x 36" abrasive belts. The BG100 also features an attachment to hold the specimen mounts perpendicular while grinding.

RG500 ROLL GRINDER

The RG500 5-station hand grinder offers the small lab the ability to prepare samples for macro viewing within minutes. This hand grinder offers 5 stations for coarse to fine grinding. With the addition of the 5th station a near polished specimen can be obtained using a 800 grit SiC paper. The RG500 has an easy to advance system for providing fresh abrasive for consistent and rapid grinding. The RG500 also has an adjustable flow valve for wet grinding. The RG500 is a stationary grinder using 3-7/16 x 60-ft rolls set up for 240, 320, 400, 600 and 800 grit abrasive.



VP200 VIBRATORY POLISHER

VP200 is a 12-inch metallurgical vibratory polisher. The VP200 is designed to prepare even the most difficult to polish materials with a very gentle polishing action. Polishing is accomplished by setting the default frequency so that the sample begins to vibrate and then changing the voltage in order to adjust the rotational speed. The VP200 features an interchangeable polishing bowl and a variety of specimen holders and weight (quoted separately), FRP hood, heavy duty aluminum casting base, acrylic cover and durable plastic bowl. The VP200 vibratory polisher has a built-in transformer so it can be operated at either 110V or 220V (part no. VP200).



SINGLE STATION MANUAL POLISHERS

	LS1 8"	LS2 8"	LS250 10"
Plate diameter	8.00" (200 mm)	8.00" (200 mm)	10.00" (250 mm)
Speed	Single Speed 300 RPM	Variable Speed 0-300 RPM	Variable Speed 0-300 RPM
Weight	69 pounds (31 Kg)	69 pounds (31 Kg)	71 pounds (32 Kg)
Dimensions	14.50" W x 19.75" D x 11.75" H	14.50" W x 19.75" D x 11.75" H	14.50" W x 19.75" D x 12.00" H
Power supply	115V/60 Hz/1 phase <i>Other voltages available upon request.</i>	115V/60 Hz/1 phase	115V/60 Hz/1 phase

	LS3 12"	LS3V 12"
Plate diameter	12.00" (300 mm)"	12.00" (300 mm)
Speed	Two Speed 150/300 RPM	Variable Speed 0-300 RPM
Weight	88 pounds (40 Kg)	93 pounds (42 Kg)
Dimensions	18.00" W x 24.75" D x 15.00" H	18.00" W x 24.75" D x 15.00" H
Power supply	115V/60 Hz/1 phase <i>Other voltages available upon request.</i>	115V/60 Hz/1 phase



Inquire about DEMO Models Available for sale.

DUAL STATION MANUAL POLISHERS

	LS1/LS2 8"	LS250TWIN 10"	LS3TWIN 12"
Plate diameter	8.00" (200 mm)	10.00" (250 mm)	12.00" (300 mm)
Speed	Single /Var. Speed 300 RPM	Variable Speed 0-300 RPM	Variable Speed 0-300 RPM
Weight	69 pounds (31 Kg)	132 pounds (60 Kg)	183 pounds (83 Kg)
Dimensions	14.50" W x 19.75" D x 11.75" H	28.50" W x 19.75" D x 12.00" H	35.50" W x 24.75" D x 15.00" H
Power supply	115V/60 Hz/1 phase <i>Other voltages available upon request.</i>	115V/60 Hz/1 phase	115V/60 Hz/1 phase



AUTOMATIC POLISHING HEADS CAN BE INSTALLED ON ANY OF OUR MANUAL POLISHERS CHOOSE FROM CENTRAL PRESSURE OR INDIVIDUAL PRESSURE

	HEAD FOR 8"	HEAD FOR 10"	HEAD FOR 12"
Sample Pressure	2 to 4 bar (29-58 PSI)	2 to 4 bar (29-58 PSI)	2 to 4 bar (29-58 PSI)
Timer	1 to 99 minutes	1 to 99 minutes	1 to 99 minutes
Speed	40 RPM	40 RPM	40 RPM
Weight	55 pounds (25 Kg)	55 pounds (25 Kg)	55 pounds (25 Kg)
Dimensions	10.50" W x 15.75" D x 17.00" H	10.50" W x 15.75" D x 17.00" H	10.502" W x 15.75" D x 17.00" H
Power supply	115V/60 Hz/1 phase <i>Other voltages available upon request.</i>	115V/60 Hz/1 phase	115V/60 Hz/1 phase

Inquire about DEMO Models Available for sale.



Inquire about DEMO Models Available for sale.

**COMPUMET SERIES PLC CONTROLLED AUTO POLISHERS
PLC CONTROLLED FOR PROGRAMMING PROCESS**

NEW MOTORIZED OSCILLATING HEAD OPTION, FOR OPTIMAL PERFORMANCE

	COMPUMET200	COMPUMET250	COMPUMET300
LCD readout	7.00" Touch Screen	7.00" Touch Screen	7.00" Touch Screen
Plate Diameter	8.00"(200mm)	10.00" (250mm)	12.00" (300 mm)
Speed	Variable speed 0 - 300 RPM	Variable speed 0 - 300 RPM	Variable speed 0 - 300 RPM
Weight	147 Pounds (67 Kg)	154 Pounds (70 Kg)	183 Pounds (83 Kg)
Dimensions	18.00" W x 24.75" D x 32.00" H	18.00" W x 24.75" D x 32.00" H	18.00" W x 24.75" D x 32.00" H
Power supply	115V/60 Hz/1 phase	115V/60 Hz/1 phase	115V/60 Hz/1 phase

Other voltages available upon request.



**ROBOMET COMPUTERIZED AUTOMATIC POLISHER
WITH COARSE STONE GRINDER AND 6 GRINDING STATIONS**

Plate Diameters	8.00"	10.00"
Speed	Variable 0-300 RPM	Variable 0-300 RPM
Motor Power	3-1/3 HP	3-1/3 HP
Weight	770 pounds (350 kg)	880 pounds (400 kg)
Dimensions	50.00" W x 43.00" D x 59.00" H	50.00" W x 43.00" D x 59.00" H
Power Supply	460V/60 Hz/3 phase	460V/60 Hz/3 phase

Other voltages available upon request.



MINIMO 90 DEGREE PORTABLE POLISHER

Disc Diameter 1.25" (32mm)
 Speed 1400 - 14,200 RPM
 Handle power Low Voltage
 Power Supply 115V/60 Hz/1 phase
Other voltages available upon request.

PULITROL ELECTROLYTIC POLISHER

Polishing 0 - 120 V @ 0-10 amps
 Etchant 0 - 20 V @ 0 - 5 amp
 Timer 0 - 60 min.
 Max Wattage: 1200 W
 Weight 66 pounds (30 kg)
 Dimensions 20.00" W x 12.00" D x 8.00" H
 Power Supply 115V/60 Hz/1 phase
Other voltages available upon request.



PETROGRAPHIC EQUIPMENT



PETROGRAPHIC CUT-OFF MACHINES

In petrographic sample preparation, cutting is the first operation to reduce their dimensions allowing the following processing steps. During this step it is also possible to isolate structures for specific observations and analyses. Cutting by diamond wheels can induce a thin deformed layer which has to be removed during the subsequent operations of pre-grinding and lapping, that also better planarity and reduced roughness of the surfaces. For this reason and because samples are frequently very delicate, the cut-off machines must perform accurate cuts, avoiding any surface alteration.

Our large range of cut-off machines allows the cutting of any petrographic sample, from chunk of rocks and large pebbles processed to small fragments of minerals cut to thin parallelized sections using precision saws.

All cut-off machines can cut slices thanks to a translating table, with a 100 mm run, that is operated by an external hand-wheel. The translating table is electroless nickel and corrosion proof. Two adjustable nozzles attached to the cutting wheel guard and directly connected to the water supply, provide adequate cooling during sectioning.

THIN SECTIONING PRECISION SAWS

Our precision saws are ideal tools for reproducible precision cuts and thinning, with a minimum material loss and without inducing alterations (micro cracks, etc.) in mineralogical samples. We offer various capacity sizes and manual, semi-automatic and fully automatic designs.

The continuously adjustable cutting wheel speed (0-3000 rpm) and the micrometric controlled transversal translation of the sample holding arm allows cutting and thinning any type of material. Great attention has been paid to avoid wearing and corrosion problems:

- the machine body and all the main components are stainless steel
- and the internal components are electroless nickel coated steel or in anti-corrosion aluminum alloy.



THIN SECTION GRINDING & RE-SECTIONING

PRECISION SAW GRINDING ATTACHMENT

The grinding attachment is connected to the precision saw and allows the thinning operation of the glass slide and sample with micrometric precision using a diamond cup-wheel of fine grain size. The slide is held by a vacuum sample holder. This holder has been studied to hold all kind of glass slides, including the circular ones with 1" diameter. The structural characteristics of this machine allow thinning without vibrations and the preparation of flat parallel-faced samples. The preparation of thin sections is simple and fast and with reproducible results.



THIN SECTIONING VACUUM SAMPLE HOLDER

The sample cemented to a glass slide, after proper cleaning from exceeding resin and marking, has to be re-sectioned to remove excess material. Such operation may be performed with a petrographic cut-off machine or precision saw fitted with the glass slide vacuum sample holder. Thanks to the micrometric movement of the sample holder, it is possible to position the slide in relation to the cutting wheel to obtain specimens of the desired thickness.

MOUNTING/CEMENTING/MEASURING SAMPLES

THIN SECTION CEMENTING DEVICE

Having obtained one flat surface in the sample, it is possible cementing it on a glass slide. The slides may be of the polished type, if properly calibrated, or prepared to the desired thickness with a precision saw equipped with a grinding unit or with our thinning system operating with micrometric adjusting ring. The cementing must be very accurate and the air-bubbles must be totally eliminated to guarantee the proper contact between sample and glass slide. The choice of the proper resin is extremely important for a good adhesion. The device for cementing petrographic samples is built with a robust structure having four pressing springs with plastic pressure discs. Using this equipment it is possible to get cementing specimens with parallel surfaces and therefore minimal and constant quantity of resin.

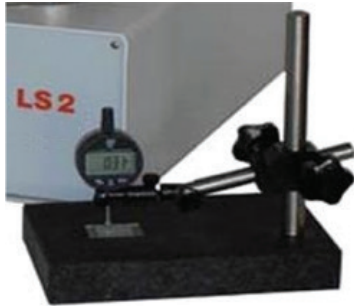


HOT PLATE

A hot plate with adjustable temperature may accelerate the bonding process when used in conjunction with Thin Section Cementing Device.

VACUUM IMPREGNATION SYSTEM

Friable and porous samples, without the structural characteristics to allow the cut or not enough solid to allow the preparation of the cementing surface, must be embedded in cold resins using the proper molds. The vacuum impregnation equipment allows the embedding of sand-like samples and the impregnation of delicate and fragile samples. Thanks to a translatable and rotatable crucible, it is possible the separate deaeration of the sample and of the resin. Once the proper vacuum has been achieved, the resin can be poured on the sample. This procedure allows the preparation of compact and bubble free samples.



THICKNESS MEASUREMENT COMPARATOR

Diabase control plane with comparator (1/100mm or 1/1000mm) to measure thicknesses and verify parallelism of samples. It also allows the initial eference of the thinning device.

THIN SECTION GRINDER/POLISHERS

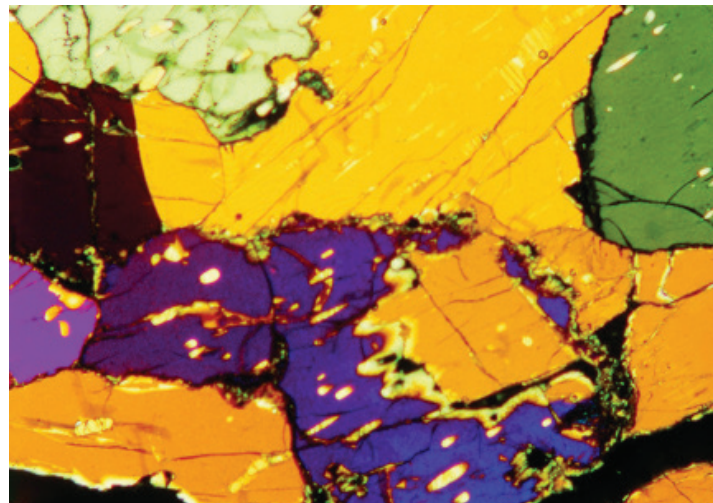
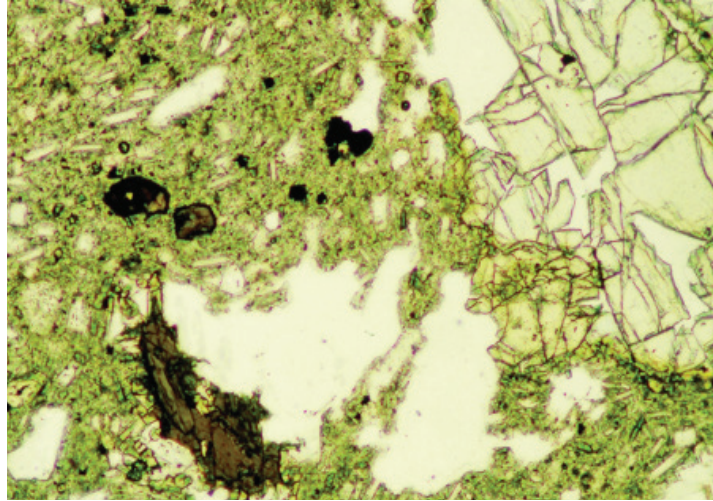
Before cementing the sample to the glass slide, all the deformations induced during the cut must be removed obtaining a uniform, planar and polished surface. Our polishers allow the preparation of planar surfaces either manually or automatically, thanks to the proper sample holders. Using the polishers with diamond discs (having different grain size), it is possible to carry out the desired pre-grinding and final polishing operations. This operation is also performed on cast iron discs or polishing cloths charged with abrasive powders or diamond pastes.

Our petrographic polishers perform grinding and polishing operations with perfect planarity in a short time due to the special design and the large availability of accessories for manual and automatic operations. Great attention has been paid to the choice of the components and of the construction materials: the steel body of the machine is oven painted, the drainage bowl and the splash-guard ring are made of stainless steel, the transmission gearbox guarantees a perfect operation also in case of heavy loads, the working discs are interchangeable with rapid coupling, a flush jet keeps clean the drainage bowl removing the grinding residues, the push-buttons is supplied with low tension (24V), while the variable speed working disc allows slow rotation for grinding and polishing fragile and delicate samples. Our polishers are available with 8", 10" or 12" working discs and can be equipped with automatic devices for polishing and for lapping.



FINAL FINISHING

Once obtained the thin section with the desired thickness, it is possible to cover the sample with a cover glass or to perform the polishing. The cover glass is bonded with Canada balsam or with a cementing epoxy resin. Samples prepared for Microanalyses measures and observation with the SEM must be polished with very fine grain size abrasive ($< 1 \mu\text{m}$) to produce a perfectly scratch-free surface.



GRINDER/POLISHER FOR ROCK CORE SAMPLES

Our rock core sample polishers can accommodate a wide variety of rock core samples. They include a variable speed grinder/polisher base and rock core sample holder attachment with containment cylinder and cylinder inner core guide.

ULTRASONIC CLEANING SYSTEMS

TECHNICAL SPECIFICATIONS



ULTRASONIC CLEANERS

Economical but powerful ultrasonic cleaning system.

Small footprint makes these units ideal for bench-top cleaning of metallographic samples.

Units operate at standard 120V single phase power.

Digital LCD controls for ultrasonic and heater functions, control cycle times and temperature settings up to 175°F (80°C).

304 Stainless steel tank and lid.

Optional stainless steel parts baskets available.

MODEL	CAPACITY	ULTRASONIC POWER	HEATER POWER	LENGTH	WIDTH	HEIGHT
BTV-020	0.50 gal	70W/140W Peak	50W	5.88"	5.25"	3.88"
BTV-032	0.80 gal	120W/240W Peak	100W	9.38"	5.25"	3.88"
BTV-065	1.70 gal	180W/360W Peak	200W	11.88"	5.88"	5.88"
BTV-150	4.00 gal	360W/720W Peak	300W	13.00"	1.88"	5.88"
BTV-300	7.90 gal	600W/ 200W Peak	500W	19.75"	11.88"	7.88"



MODELS 1210 — 8210

	1210	2210	3210	5210	8210
Tank Size	5.50" x 6.00" x 4.00"	9.50"x5.50" x 4.00"	11.50"x6.00" x 6.00"	11.50"x9.50" x 6.00"	19.50"x11.00" x 6.00"
Tank Capacity	0.50 Gallon	0.75 Gallon	1.50 Gallon	2.50 Gallon	5.50 Gallon
Overall Dimensions	11.60"x10.00" x 12.00"	11.60"x13.30" x 12.00"	14.60"x15.70" x 12.50"	14.60"x15.70" x 15.80"	14.80"x23.60" x 18.40"
Frequency	47 kHz	47 kHz	47 kHz	47 kHz	47 kHz
Available Options	Mechanical Timer, Heater, Digital Timer, Degas				

HARDNESS TESTERS

TECHNICAL SPECIFICATIONS



MICROHARDNESS TESTERS 900-390/391 SERIES

Microhardness Tester for Vickers or Knoop testing System comes complete with microhardness tester with 10x eyepiece, 10x & 40x objectives, single indenter (Vickers or Knoop), camera, adapter, measurement software & two vises. 900-391 Series comes equipped with auto turret. Can be equipped with or without auto turret and manual or automatic/manual measurement capability.

Testing Range	1HV~2967HV
Test Forces	0.098N(10g), 0.246N (25g), 0.49N (50g), 0.98N (100g), 1.96N (200g),4.90N (500g), 9.80N (1000g)
Max Height of the Specimen	70 mm
Max Distance from the Indenter Center to the Instrument Panel	95 mm
Lens/indenters with	With Hand Turret
Carriage Control	Automatic (loading /holding-up of the load/unloading)
Amplification of the microscope	100 × 400×
Dwell Time of the Test Force	(5-60)S
Min.Graduation Value of the Testing Drum Wheel	0.25um
Dimension of the XY Table	100 ×100 mm
Movement Field of the XY Table	25 × 25 mm
Light source/Power Supply	110/220V,60/50Hz/Cold Light Source
Weight/Gross Weight	41.5kg Net Weight: 35kg
Package Dimensions	425 × 245 × 490 mm

MICROHARDNESS TESTERS 900-392 SERIES

System comes complete with microhardness tester and auto turret, 10x eyepiece, 10x, 20x & 40x objectives, dual indenter (for Vickers & Knoop testing), camera, adapter and two vises. Can be equipped with manual or automatic/manual measurement software.



Testing Range	1HV~2967HV
Test Forces	0.098N(10g), 0.246N (25g), 0.49N (50g), 0.98N (100g), 1.96N (200g),4.90N (500g), 9.80N (1000g)
Max Height of the Specimen	70 mm
Max Distance from the Indenter Center to the Instrument Panel	95 mm
Lens/indenters with	With Hand Turret
Carriage Control	Automatic (loading /holding-up of the load/unloading)
Amplification of the microscope	100 × 400×
Dwell Time of the Test Force	(5-60)S
Min.Graduation Value of the Testing Drum Wheel	0.25um
Dimension of the XY Table	100 ×100 mm
Movement Field of the XY Table	25 × 25 mm
Light source/Power Supply	110/220V,60/50Hz/Cold Light Source
Weight/Gross Weight	41.5kg Net Weight: 35kg
Package Dimensions	425 × 245 × 490 mm



MACRO VICKERS HARDNESS TESTER 398 SERIES

Test Forces	9.807, 19.61, 24.52, 29.42, 49.03, 98.07, 196.1, 249.2, 490.3 N 1, 2, 2.5, 3, 5, 10, 20, 30, 50 kgf
Carriage Control	Automatic loading / holding-up of the load /unloading)
Amplification of the Microscope	100 ×, 200 ×
Dwell Time of the Test Force	(0-60)s
Min. Graduation Value of the Testing Drum Wheel	0.125um
Testing Field	1HV—2967HV
Lens Indentor Switch	With Motorized Turret
Output	Built-in Mini Printer RS-232
Max. height of the specimen	170 mm
Max. width of the specimen	130 mm
Objective	10x, 20x, 40x selectable
Light source	cold light source
Power Supply	110V/220V,60/50Hz
Dimension	535 X 225 X 580mm

ROCKWELL & SUPERFICIAL HARDNESS TESTERS

900-385 DIGITAL ROCKWELL/SUPERFICIAL HARDNESS TESTER

Minor Load	3 Kgf, 10 Kgf
Major Load	5 Kgf 60 Kgf, 30 Kgf 100 Kgf, 45 Kgf 150 Kgf
Test Force Application	Dead Weight
Test Force Control	Motorized
Display	Hi-Def. Digital Readout
Display Resolution	0.1HR
Vertical Capacity	10.2 in.
Throat Depth	5.900 in.
Power Supply	Single phase, AC, 1100V (can be changed as 220V, the original power supply is 110V), 50~60Hz, 4A; Prior to ship, please advise power setting needed.
Weight	265lbs Net (Shipping weigh = 300 lbs)
Dimensions	720mm × 240mm × 825mm



900-375 DIAL ROCKWELL/SUPERFICIAL HARDNESS TESTER

Minor Load	3 Kgf 10 Kgf
Major Load	15Kgf 60 Kgf, 30 Kgf 100 Kgf, 45 Kgf 150 Kgf
Test Force Application	Dead Weight
Test Force Control	Manual
Results Display	Dual Scale Dial
Vertical Capacity	6.00 in.
Throat Depth	5.50 in.
Height	26.00 in.
Width	18.20 in.
Depth	9.40 in.
Shipping Weight	250 lbs.
Hardness Scales	HRA B,C,D,E,F,G,H,K , L, M (superficial) HR15N, HR15T, HR30N, HR30T, HR45N, HR45T



900-365 DIGITAL ROCKWELL HARDNESS TESTER

Minor Load	10 Kgf
Major Load	60 Kgf, 100 Kgf, 150 KGF
Test Force Application	Dead Weight
Test Force Control	Motorized
Results Display	Hi-Def. LCD Digital Readout
Resolution	0.1HR
Memory/Output	500 Tests/USB
Vertical Capacity	7.87 in.
Throat Depth	6.50 in.
Height	28.34 in.
Width	7.87 in.
Depth	21.60 in.

900-366 TALL FRAME DIGITAL ROCKWELL HARDNESS TESTER

Minor Load	10 Kgf
Major Load	60 Kgf, 100 Kgf, 150 KGF
Test Force Application	Dead Weight
Test Force Control	Motorized
Results Display	Hi-Def. LCD Digital Readout
Resolution	0.1HR
Memory/Output	500 Tests/USB
Vertical Capacity	16.50 in.
Throat Depth	6.50 in.
Height	28.34 in.
Width	7.87in.
Depth	21.60in.



900-332 TALL FRAME DIAL ROCKWELL HARDNESS TESTER

Minor Load	10 Kgf
Major Load	60 Kgf, 100 Kgf, 150 KGF
Test Force Application	Dead Weight
Test Force Control	Hydraulic Dashpot System
Results Display	Analog Dial Gage
Vertical Capacity	15.75 in.
Throat Depth	5.50 in.
Height	33.00 in.
Width	18.00 in.
Depth	70.00 in.
Shipping Weight	200 lbs.



900-331D DIGITAL ROCKWELL HARDNESS TESTER

Minor Load	10 Kgf
Major Load	60 Kgf, 100 Kgf, 150 KGF
Test Force Application	Dead Weight
Test Force Control	Hydraulic Dashpot System
Results Display	Digital LCD
Vertical Capacity	6.7 in.
Throat Depth	6.6 in.
Height	30.0 in.
Width	8.50 in.
Depth	20.0 in.
Shipping Weight	242 lbs.

900-331 DIAL ROCKWELL HARDNESS TESTER

Minor Load	10 Kgf
Major Load	60Kgf, 100Kgf, 150Kgf
Test Force Application	Dead Weight
Test Force Control	Hydraulic Dashpot System
Results Display	Analog Dial Gage
Vertical Capacity	6.70 in.
Throat Depth	6.60 in.
Height	30.00 in.
Width	8.50 in.
Depth	20.00 in.
Shipping Weight	242 lbs.



900-345 DIAL SUPERFICIAL ROCKWELL SCALE HARDNESS TESTER

Minor Load	3 Kgf
Major Load	15 Kgf, 30 Kgf, 45 Kgf
Test Force Application	Dead Weight
Test Force Control	Manual
Results Display	Analog Dial Gage
Vertical Capacity	6.70 in.
Throat Depth	6.60 in.
Height	28 in.
Width	8.90 in.
Depth	19.60 in.
Shipping Weight	190 lbs.



BRINELL HARDNESS TESTERS

900-355 DIGITAL BRINELL HARDNESS TESTER

Loads 3000kgf (29400N), 1500Kgf (14700N), 1000Kgf (9800N), 750Kgf(7355N), 500Kgf (4900N), 250Kgf (2452N), 187.5Kgf (1839N), 125Kgf (1226N), 100Kgf (980N), 62.5Kgf(612.9N)

Load dwell duration 2s~99s, can be set and stored

Tungsten Carbide Ball indenter 10 mm, 5 mm, 2.5 mm

Measuring range 8-650HBW

Magnification of the microscope 20X

Resolution capability of the microscope 0.005mm

Accuracy of Brinell Hardness Value

Hardness Range(HBW)	Error (%)	Repeatability(%)
≤ 125	± 3.0	≤ 3.0
125 < HBW ≤ 225	± 2.5	≤ 2.5
> 225	± 2.0	≤ 2.0

Max measurable height 230 mm

Max measurable depth 140 mm

Dimensions 530 mm × 260 mm × 750 mm

Power supply 220/110 V, 50/60 Hz, 4A

Prior to ship, please advise power setting needed.

Weight 110kg

PHT-5000 OPTICAL BRINELL READER

Optical Brinell Hardness Video Measurement System

Friendly User Interface: Automatic measurement with a key stroke or a click of a button.

Test results can be manually generated or corrected with a single mouse drag move.

High reliability: Advanced image processing and analysis technologies in automatic measurement. Field proven under severe sample surface conditions.

Single camera with four magnifications:

1.3M pixel CMOS USB camera with two camera tubes with each tube height having two magnifications.

Full measurement range is covered with four magnifications for better measurement accuracy.

Specifically, tube 1 magnification #1 is suitable for indentation diameters 3-6mm, magnification #2 for 0.8-1.6mm, while tube 2 magnification #3 for 2-4mm, and magnification #4 for 1-2mm.



ACCESSORIES

900331-STAND

The Phase II hardness tester stand is designed to fit all standard Rockwell hardness testers, Brinell hardness testers and Vickers hardness testers. A 3" diameter hole is machined to allow for spindle travel on Rockwell hardness testers.

Depth 23.75"

Width 17.75"

Height 26.75"

Shipping weight 103 lbs.

PORTABLE HARDNESS TESTERS

PHT-6000 SERIES PORTABLE HARDNESS TESTER FOR UCI (ULTRASONIC CONTACT IMPEDANCE & DYNAMIC IMPACT (LEEB)) HARDNESS TESTING

MEASURING METHOD UCI & Leeb

There are two basic methods of portable hardness testing that is accepted in the field today.

“Ultrasonic Contact Impedance” is based on a 136 degree diamond at the end of a vibrating rod being depressed into the test surface at a fixed load. The difference in Ultrasonic vibration frequency is then calculated into a hardness value.

The UCI test procedure is slower than the Dynamic Impact style, however the “UCI” method of hardness testing is portable, easy and accurate. It also has its own advantages when utilized for certain testing applications.

UCI testers are not restricted to large mass items like dynamic type testers. These units can test metals as thin as 1mm and at a hardness value as low as 20HRC

(75HB). They also excel at performing hardness tests on larger, harder metals as well.

Another reason for the rise in popularity is due to the fact that the UCI method is categorized as “Non-Destructive”. That translates into less scrap parts/ lower mfg. costs due to necessary inspections.

“Dynamic Impact” is based on the Leeb principle of hardness, developed by Dietmar Leeb in the 1970's. A spring loaded impact body is thrust to the test surface, effecting rebound. The speed of both the initial thrust and the rebound is measured in a non-contact mode. This is calculated as a Leeb hardness value and then automatically converted to Rockwell C, B, Brinell, Vickers and Shore Values. It has effectually brought easy, fast and accurate results to portable hardness testing.



UCI HARDNESS TESTER W/MANUAL PROBE

- PHT-6001 UCI Hardness Tester w/1kgf Probe For use on polished surfaces. Below Ra 125µin
- PHT-6002 UCI Hardness Tester w/2kgf Probe For use on smooth surfaces. Below Ra 200µin
- PHT-6005 UCI Hardness Tester w/5kgf Probe For use on machined surfaces. Below Ra 400µin
- PHT-6010 UCI Hardness Tester w/10kgf Probe For use on rough surfaces. Below Ra 600µin

UCI HARDNESS TESTER W/MOTORIZED PROBE

- PHT-6030 UCI Hardness Tester w/.30kgf Probe Best for checking coating layer hardness; Finished thin parts
- PHT-6080 UCI Hardness Tester w/.80kgf Probe Best for smooth bearing type surfaces
- PHT-6100 UCI Hardness Tester w/1kgf Probe Best for machined surfaces



FEATURES

Non-Destructive hand held hardness tester

Combines UCI and Leeb hardness testing in one state of the art device

Test steel with min thickness of .08" and unlimited max thickness

Blazing fast test results

Rockwell, Brinell Vickers conversions shown on display

Large Memory w/USB Output

Choice of manual UCI probes: 1kg, 2kg, 5kg & 10kg

Optional Motorized Probes: .30kg, .80kg, & 1kgf

Available Impact Devices(Leeb) D, DC, D+15, G & DL

SPECIFICATIONS

Hardness Range	HRC: 20.3- 68; HRB: 61-85.6 ; HV: 80-1599; HB: 76-618
Scale Selection	Rockwell C (HRC); Rockwell B (HRB); Rockwell A (HRA); Brinell (HB); Vickers (HV); Leeb (HLD)
Tolerance	+/- 3.0% deviation of average from the reference value of the test block with a minimum of 5 tests
Display Type	LCD Color Screen w/Backlight, adjustable brightness
Language Selection	English, German, Chinese, Spanish, etc.
Data Logger	Letters, Numerals
Data Memory	2000 groups of measured data ; 20 groups of calibration data
Statistical Software	Supplied-can be saved in Word or Excel
Data Output	USB – cable supplied
Power Supply	Rechargeable Lithium Battery: Voltage-4.2V, 4800mAh
Auto Power Off	5 minutes
Recharging Time	Approx. 8 hours
Battery Usage	Approx. 6 hours (no backlight)
Net Weight(base unit)	2lbs (w/probe)
Gross Weight	12 lbs
Unit Dimensions	7.0 x 3.1 x 1.1" (160x80x30mm)
Gross Dimensions	13.7 x 17.7 x 5.9" (350x450x150mm)

PHT-3500 PORTABLE HARDNESS TESTER

State of the art, digital tester is designed to test the hardness of large hard metal parts. Loaded with useful functions and a built in mini-printer the PHT-3500 is clearly the industry leader for fast accurate hardness testing with advanced USB output and thermal printing capabilities. **The PHT-3500 can perform tests that easily convert to the most popular hardness scales, including Rockwell, Brinell, Vickers, Shore, etc.** It is designed to test large hard parts; Example: Tool steel should be close to 1" thick of solid material.



SPECIFICATIONS

Accuracy	+/- 0.5% (referred to L=800,
Repeatability accuracy	+/- 4L units) L=Leeb
Measuring range	200-960 HL
Material	steel & cast steel, alloy tool steel, stainless steel, grey cast iron, spheroidal iron, cast aluminum, brass, bronze, wrought copper alloy.
Battery type	AA alkaline (4)
Operating temperature	5-104 degrees F
Dimensions	150 x 74 x 32mm
Weight	245 grams

PHT-2500 PORTABLE HARDNESS TESTER

State of the art, digital Hardness Tester is a menu driven, multi-functional unit with extended memory and RS 232 output capabilities. This unit can perform Hardness tests that easily convert to every popular Hardness scale, including Rockwell, Brinell, Vickers, Shore, etc. Protective leather wrist strap included!
Simply put, it's the most versatile, accurate, portable Hardness Tester on the market today!



STANDARD ACCESSORIES

- Base instrument
- Impact device D
- Calibrated test block
- Custom carry case
- Cleaning brush
- Operation manual

SPECIFICATIONS

Accuracy	+/- 0.5% (referred to L=800, repeated accuracy: +/- 4L units)
Measuring range	200-960 HL
Materials	steel & cast steel, alloy tool steel, stainless steel, grey cast iron, spheroidal iron, cast aluminum, brass, bronze, wrought copper alloy.
Battery type	AAA alkaline (2)
Operating temperature	5-104 degrees F
Dimensions	108 x 62 x 25mm
Weight	230 grams

PHT-1900 SERIES PORTABLE HARDNESS TESTER, WITH COLOR SCREEN

State of the art, digital portable hardness tester is designed to test the hardness of large hard metal parts. Clean crisp display shows the incredible functions that can only be found on this new portable hardness tester such as auto-probe detection, auto direction detector, single and multi-point calibration make the new 1900 the most versatile portable hardness tester in the industry. Blazing fast test speeds coupled with memory and output, this unit is a must have for virtually any work shop. **The PHT-1900 portable hardness tester can perform tests that easily convert to the most popular hardness scales, including Rockwell, Brinell, Vickers, Shore, etc.**



SPECIFICATIONS

Accuracy	+/- 0.5% (referred to L=800
Repeatability accuracy	+/- 4L units) L=Leeb
Measuring range	200-960 HL
Materials	steel & cast steel, alloy tool steel, stainless steel, grey cast iron, spheroidal iron, cast aluminum, brass, bronze, wrought copper alloy.
Battery type	AA alkaline (4)
Operating temperature	5-104 degrees F
Dimensions	150 x 74 x 32mm
Weight	245 grams

PHT-1800 SERIES PORTABLE HARDNESS TESTER

State of the art, digital portable hardness tester is designed to test the hardness of large hard metal parts. Loaded with useful functions only found on high priced models the PHT-1800 portable hardness tester is clearly setting a new industry standard by being the most accurate, economically priced portable hardness tester on the market today. Fast test speeds coupled with memory and output, this unit is a hand's down winner whether you are out in the field or in the QC shop. **The PHT-1900 portable hardness tester can perform tests that easily convert to the most popular hardness scales, including Rockwell, Brinell, Vickers, Shore, etc.**



SPECIFICATIONS

Accuracy	+/- 0.5% (referred to L=800
Repeatability accuracy	+/- 4L units) L=Leeb
Measuring range	200-960 HL
Materials	steel & cast steel, alloy tool steel, stainless steel, grey cast iron, spheroidal iron, cast aluminum, brass, bronze, wrought copper alloy.
Battery type	AA alkaline (4)
Operating temperature	5-104 degrees F
Dimensions	150 x 74 x 32mm
Weight	245 grams

PHT-1840 GEAR TEETH PORTABLE HARDNESS TESTER

This dedicated unit is designed to test gear teeth and other difficult to access applications. The 1840 is loaded with the same features found on the base 1800 version which includes memory, USB output and software for downloading to your PC. The 1840 hardness tester is capable of measuring the surface hardness of a broad variety of metals on flat and round surfaces. This instrument comes complete with a dedicated DL impact device, calibrated test block and rugged carrying case. Designed to test large hard parts: Example: Tool steel should be close to 1" thick of solid material



PHT-1850 PORTABLE HARDNESS TESTER FOR CAST/ROUGH PARTS

State of the art, digital portable hardness tester is designed to test the hardness of cast, and large hard metal parts with rough surfaces. Loaded with useful functions only found on high priced models the PHT-1850 portable hardness tester is clearly setting a new industry standard by being the most accurate, economically priced portable hardness tester on the market today. Fast test speeds coupled with memory and output, this unit is a hand's down winner whether you are out in the field or in the QC shop. **The PHT-1850 portable hardness tester can perform tests that easily convert to the most popular hardness scales, including Rockwell, Brinell, Vickers, Shore, etc.** Designed to test hardness on large cast parts and those with a rough surface: Example: Mass of part should be equivalent to approximately 1" thick of solid steel where testing.



PHT-1700 SERIES PORTABLE HARDNESS TESTER

Loaded with features, this economically priced hardness tester is capable of measuring the surface hardness of a broad variety of metals on flat and round surfaces. This instrument comes complete with the universal D impact device, calibrated test block and rugged carry case. Designed to test large hard parts: Example: Tool steel should be close to 1" thick of solid material



SPECIFICATIONS

Accuracy	+/- 0.5% (referred to L=800)
Repeatability accuracy	+/- 4L units) L=Leeb
Measuring range	200-960 HL
Materials	steel & cast steel, alloy tool steel, stainless steel, grey cast iron, spheroidal iron, cast aluminum, brass, bronze, wrought copper alloy.
Battery type	AAA alkaline (2)
Operating temperature	5-104 degrees F
Dimensions	108 x 62 x 25mm
Weight	230 grams

ACCESSORIES FOR PORTABLE HARDNESS TESTERS

D - PROBE

Universal standard unit. Will handle the majority of hardness testing applications. Weight: 75g

Model No. PHT1800-100

D + 15 - PROBE

Very narrow contact area with a set back measurement coil.

This device is used to measure hardness in grooves and recessed surfaces. Weight: 80g

Model No. PHT1800-110

DL - PROBE

This model features a needle front section with a diameter of 4mm and a length of 50mm. It is suitable for testing in extremely confined spaces, the base of grooves and on special components such as gear wheels. For use on steel and cast steel only!

Model No. PHT1800-115

DC - PROBE

Very short impact device for those confined areas, i.e. inside bores for internal measurements. Conforms to the D measuring range. Weight: 50g

Model No. PHT1800-120

G - PROBE

This device has an enlarged test tip, and an increased impact energy range (approx. 9 times the D, 72 ft-lb.). Can be used on lower quality finishes for measuring hardness in the Brinell range only (max. 650 HB). Designed to be used with heavy components such as heavy castings and forgings.

Weight: 250g

Model No. PHT1800-125

C - PROBE

A reduced impact energy impact device (approximately 1/4 of the D Type 2 ft-lb.) for measuring the hardness of surface hardened components, coatings, thin wall or impact sensitive components. Applies a small superficial indentation.

Weight: 75g

Model No. PHT1800-130

TECHNICAL DATA FOR PORTABLE HARDNESS TESTER IMPACT DEVICES

Note: Impact device D is standard device on all models except PHT-6000 Series.

Impact Devices	D/DC/DL	D +15	C	G
Impact Energy	11Nmm	11Nmm	3Nmm	90Nmm
Mass of the Impact Body	5. 5g	7. 8g	3. 0g	20g
	DL: 7.3g			
Test tip				
Hardness	1600HV	1600HV	1600HV	1600HV
Diameter	3mm	3mm	3mm	3mm
Material		Tungsten	Tungsten	
		Carbide	Carbide	
Impact device				
Diameter	20mm	20mm	20mm	30mm
Length	147/86mm	162mm	141mm	254mm
Weight	75/50g	80g	75g	250g
Max. hardness of sample	940HV	940HV	1000HV	650HB
Preparation of surface				
Roughness class ISO	N7	N7	N5	N9
Mx. roughness depth Rt	10 μ m	10 μ m	2.5 μ m	30 μ m
Average roughness Ra	2 μ m	2 μ m	0.4 μ m	7 μ m
Min. weight of sample				
Of compact shape	5kg	5kg	1.5kg	15kg
On solid support	2kg	2kg	0.5kg	5kg
Coupled on plate	0.1kg	0. 1kg	0.02kg	0.5kg
Min. thickness of sample				
Coupled	3mm	3mm	1mm	10mm
Min. thickness of layers	0. 8mm	0. 8mm	0. 2mm	—
Indentation of test tip				
With 300 HV				
Diameter	0. 54mm	0. 54mm	0. 38mm	1. 03mm
Depth	24 μ m	24 μ m	12 μ m	53 μ m
With 600 HV				
Diameter	0. 45mm	0. 45mm	0. 32mm	0. 90mm
Depth	17 μ m	17 μ m	8 μ m	41 μ m
With 800 HV				
Diameter	0. 35mm	0. 35mm	0. 30mm	—
Depth	10 μ m	10 μ m	7 μ m	—



PHT1500-300 12PC UNIVERSAL SUPPORT RING SET FOR PORTABLE HARDNESS TESTERS

This set is designed to let the user confidently test on round (Concave or Convex) parts. Simple threaded design for quick change in the shop or out in the field. Set Consist of: 1pc Universal Stand plus the following:

CONCAVE SUPPORT RINGS

11-13mm round	12.5-17mm round	16.5-30mm round
11-13mm square	12.5-17mm square	16.5-30mm square

CONVEX SUPPORT RINGS

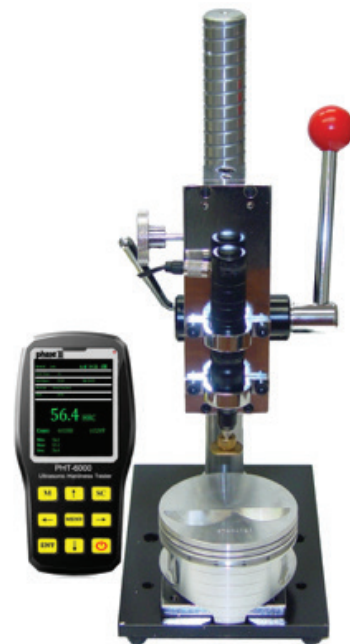
10-15mm round	14.5-30mm round	
10-15mm square	14.5-30mm square	25-50mm square



Small & Big cylinder Support Rings



Big Cylinder Support Ring



MET-1000 Probe Support Stand

CALIBRATED LEEB TEST BLOCKS

HLD Test Block (for use with all "D" type Impact Devices) Range: 750-800 (50's HRC)
Model No. PHT1300-01, Model No. PHT130001-CERT: NIST Certified (HRC)

HLD Test Block (for use with all "D" type Impact Devices) Range: 590-670 (40's HRC)
Model No. PHT1300-02, Model No. PHT130002-CERT: NIST Certified (HRC)

HLD Test Block (for use with all "D" type Impact Devices) Range: 490-570 (20's HRC)
Model No. PHT1300-03, Model No. PHT130003-CERT: NIST Certified(HRC)

HLD Test Block Double Sided (for use with all "D" type Impact Devices) Range: 750-800 (60's HRC)
Model No. PHT1300-05

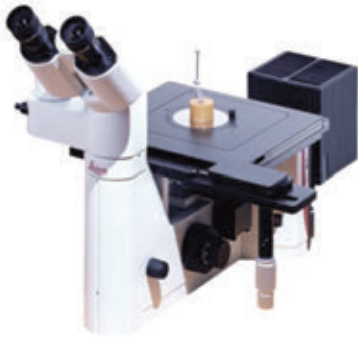


MICROSCOPES

INVERTED MICROSCOPES

DM18 METALLOGRAPH

Being ahead of the competition is what drives your business. No matter if you work in metallography, medical device manufacturing or materials research, speed is essential. Tailor this highly modular inverted microscope to your needs. Combine Leica optical quality, a wide range of contrast modes, and intuitive software in one system to help you speed up your workflow. The Leica DMi8 features LED illumination for bright white illumination!



DM ILM INVERTED MICROSCOPE

All industrial inspection and measurement tasks are performed quickly and efficiently with the modular Leica DM ILM inverted microscope. High-performance optics provide crisp, clear image resolution and contrast in incident light, brightfield, polarization contrast, and fluorescence. The Leica DM ILM is designed to handle large samples and objects and save time when performing serial inspection and tests of large sample quantities.

XJL-20 INVERTED MICROSCOPE

The XJL-20 is quite possibly the best inverted metallurgical microscope value today! It can be configured for Brightfield, Brightfield/DIC, Brightfield/Darkfield/Polarization or Brightfield/Darkfield/DIC/Polarization observation. XJL-20 Inverted metallurgical microscope is equipped excellent UIS optical system and modularization function design so that update system expediently and achieved polarization, dark field observation. Compact and steady main frame body is embodiment for the shock resistance. The ideal ergonomic design is adopted in this unit and has easier operation and wider space. This is ideal optical instrument for micro observation in metallographic structure and surface morphology. It is suitable for research in metallography, mineralogy, precision engineering, etc.





IM7500 SERIES INVERTED MICROSCOPE

The Meiji Techno IM7500 Series Inverted Brightfield/Darkfield and simple Polarizing 12V/ 50W Metallurgical Microscope have an ergonomic slim triangular shaped design that saves bench space to maximize efficiency and offers ultimate stability with its cast aluminum alloy frame. This is the most rugged Inverted Microscope from Japan. Infinity Corrected Plan Semi Apo BD 5X, 10X, 20X and LWD 50X objectives are standard in all units. All of our IM7500 Series controls are ergonomically positioned to provide comfort and extended ease of use for the operator. An integrated Incident High power 12V/50W vertical Koehler Halogen illuminator with variable intensity control and automatic voltage sensing power supply provides excellent specimen illumination and contrast. The 50W illuminator affords a brighter image as of a competitive 12V 100W system, reducing power consumption by almost 50 percent. The IM7500 Series is designed to meet your most diverse needs for materials research. Meiji's IM Series is well suited for examination of mounted metallurgical specimens or for routine quality inspections such as, microstructural observation, and analysis and evaluation of a variety of metallurgical metals ceramics, polymers and various materials testing, QA and QC examination and photomicrography. The IM7500 Series offers crisp, distortion-free, high resolution images in multiple modes of operation the built in photo port on the front of the body makes image documentation quick and easy.

XDS-3MET INVERTED MICROSCOPE

The Optika Trinocular Inverted metallurgical microscope with IOS LWD MET Objectives, a 5-place nosepiece and 12V/50W illuminator. Available in bright-field illumination only.



UPRIGHT MICROSCOPES

DM4 M & DM6 M

Do you need to image, measure, and analyze similar features across many samples and materials science and analysis? The Leica DM4 M and Leica DM6 M are the Industrial Microscopes for you, whether microscopy novice or professional.

Use the Leica DM4 M for manual routine inspection.

Use the Leica DM6 M for fully automated materials analysis.

You can easily recall previous microscope settings and instantly reproduce imaging parameters with the unique Store and Recall software functions.

For every sample type.

One-button Intelligent Automation makes your repetitive work easy. Reduce training time, improve your workflow, and get brilliant imaging results every time with the microscopes that don't forget.



DM750 M UPRIGHT MICROSCOPE

The Leica DM750 M is the ideal microscope for basic materials applications in an Industrial Lab or Material Science course. Its versatile stage and reflected light system work in combination to deliver high quality images of the most demanding specimens.

The mechanical stage can be used for both transmitted and reflected light. It can be equipped with various specimen holders to accommodate mounted specimens of different diameters.

The unique Reflected light LED illuminator provides brightfield, polarized light, and oblique illumination. This allows you to work with many different specimens with the same microscope configuration.



MT7500 SERIES UPRIGHT MICROSCOPE

Meiji Techno's new upright Brightfield/Darkfield incident light metallurgical microscope line is the new and cost-effective MT7500 Series. The MT7500 Series employs all new and improved Plan Episcopic optical system. Meiji Techno's ICOS™ (Infinity Corrected Optical System) makes the observation and evaluation of metallurgical specimens fast and easy while delivering an excellent cost-to-performance ratio.

XJL-302 UPRIGHT MICROSCOPE

The XJL-302 is equipped with excellent UIS optics and modular design. Available with brightfield or brightfield/darkfield observation. Compact and steady main frame body is shock resistant and ergonomic design allows for easy operation. This is an ideal microscope for metallographic research, mineralogy, precision engineering, electronics, etc.



B-1000MET UPRIGHT MICROSCOPE

The Optika B-1000MET is a laboratory microscope for routine and research applications. Dye-cast frame, with high stability and ergonomics, for transmitted and incident light observation. Version for material analysis (with brightfield and darkfield epi-illumination).

XPL-3230 UPRIGHT POLARIZING MICROSCOPE

XPL-3230 transmitted & reflected polarizing microscope is utilized polarizing light to observe and research the matter which have double refraction features, the user can make single polarizing observation, orthogonal observation, conoscope observation. It is applied in geology, chemicals, physic and leechdom fields, widely used to observe the crystal of liquid macromolecule polymer, biomedical polymer and liquid crystal. It is the ideal instrument for scientific research and universities teaching demo.



MC SERIES TOOL MAKERS/MEASURING MICROSCOPE

Meiji Techno's MC Series Brightfield/Darkfield Precision Measuring Systems are capable of brightfield, darkfield, and simple polarization observation modes. They are composed of high quality metallurgical microscope components, precision X-Y stages and durable heavy duty stands. Meiji Techno measuring microscopes are available with 2-axis and 3-axis electronic digital readouts in inches and metric. These systems can be configured for use with 35mm photomicrography, analog CCD video, digital CCD video, digital CMOS video and consumer-grade digital still camera systems. Operators can perform visual inspection and measurement of small items or components without complicated system setup. Mitutoyo Digimatic Micrometer heads have serial output for SPC applications. MC Series Systems are available in 110 or 220 volt, incident or transmitted, binocular or trinocular configurations.



STEREO MICROSCOPES

M205 A RESEARCH AUTOMATED STEREO MICROSCOPE

Automated research stereo microscopes and macrosopes from Leica Microsystems are flexible, motorized solutions for life science, industrial and materials science applications. When combined with Leica digital microscope cameras and easy-to-use Leica Application Suite software, these systems provide the detailed documentation, measurement and evaluation you need.



M205 C RESEARCH MANUAL STEREO MICROSCOPE

Leica Microsystems overcomes the inherent limitations of traditional stereo microscopy with a revolutionary optical concept. By incorporating the FusionOptics optical concept, the Leica M205 C is the world's first stereo microscope with 20.5:1 zoom to achieve an optical resolution of 0.952 μm .

But what does "FusionOptics optical technology" mean? The right channel delivers an image with the highest possible resolution; the left channel provides an image with maximum depth of field. The human brain does the rest: Drawing the best information from both images, it creates a three-dimensional image, now you can visualize even the finest details of your specimen.

The Leica M205 C is an encoded microscope, i.e., the magnification and the iris diaphragm position are transmitted to the software in real time. A scale bar can be displayed with the live image and updated when the magnification changes. When an image is stored, the parameters are saved with the image and can be recalled whenever needed.





M125 RESEARCH MANUAL STEREO MICROSCOPE

Do you need an overview of your samples, but also need to identify fine structures? With its 12.5:1 zoom and 8x to 100x magnification (with the 1.0x PlanApo objective), the Leica M125 has the flexibility to meet these needs, achieving a resolution of down to 1.15 μm .

Due to the full apochromatic correction of the optics, images are rich in contrast and natural colors, and free of chromatic aberrations.

This makes the Leica M125 an ideal tool for jobs in materials testing such as plastics analysis or circuit board inspection, as well as life science research applications, and can be customized with a comprehensive range of ergonomic accessories, various LED illuminators, and a wide selection of digital cameras.

M80 MANUAL RESEARCH MICROSCOPE

The ergonomic and modular Leica M80 routine stereo microscope with ESD design, large field of view, increased depth of focus and improved resolution easily replicates measurements, photography or inspections of samples such as circuit boards, hairs and fibers, and organ and plant tissues.

8:1 zoom range with standard magnification of 7.5x-60x provides a wide sample overview and detailed imaging.



S8 APO MANUAL RESEARCH STEREO MICROSCOPE

The Greenough stereo microscope, Leica S8 APO with apochromatic 8:1 zoom and 75mm working distance allows easy access to specimen even at high magnification up to 80x which is ideal for quality control, cell sorting and microinjection applications. Ergonomic 38° viewing angle provides comfort, which helps increase productivity, reduce fatigue related inspection errors and acquire precise positioning while working with incident or transmitted light. Adjustable zoom stops allow fast, easy, repeatable measurements and inspections.

The Integrated Documentation port allows to connect digital cameras.



S6 D MANUAL STEREO MICROSCOPE

The Leica S6 D Greenough stereo microscope with 6.3:1 zoom and integrated video/photo port allows easy, fast documentation for assembly, quality control, OEM and research applications. Adjustable zoom stops allow fast, easy, repeatable measurements and inspections.

The large field of view up to 36.5 mm and high depth of field, reduces sample handling and improves inspection times. Ergonomic 38° viewing angle provides comfort, which helps increase productivity, reduce fatigue related inspection errors and acquire precise positioning while working with incident or transmitted light. The integrated documentation port allows to connect digital cameras.





SZN-6 STEREO MICROSCOPE

Optika SZN-6 Trinocular zoom stereo microscope 6.7x - 45x, stand with X-LED incident (2 arms) and LED transmitted light base.



SZN-10 STEREO MICROSCOPE

Optika SZN-10 Trinocular zoom stereo microscope 6.7x - 45x with boom stand.



XTL-201 STEREO MICROSCOPE

Economical trinocular stereo microscope, 7x – 63x.



EMZ-13 SERIES STEREO MICROSCOPE

Meiji Techno stereo microscope, 10x – 70x

MACROSCOPES



DMS 1000 DIGITAL MACROSCOPE

Digital microscope system for digital inspection, observation and measurement. From tiniest detail to an overview, the optics ensures magnification of up to 300x. The built-in HDMI microscope camera provides full high definition live images of up to 30fps and a resolution of 5Mpixels.

Take a fresh look at your samples on a monitor without the need of eyepieces. High-quality, full color still images as well as Full-HD movies are possible. The Leica DMS1000 with coded zoom optics can be used as stand-alone or connected to a computer offering accurate 2D-measurements by using Leica Application Suite (LAS) software.

For special diagnostics requirements, there is the Leica DMS1000 B, a version certified for in-vitro-applications like in-vitro-fertilization (IVF).



DMS 300 DIGITAL MACROSCOPE SYSTEM

The Leica DMS300 is a complete digital microscope system that utilizes a HDMI-monitor instead of eyepieces. Leica's high quality 8:1 zoom optics are combined with a 2.5MP camera to provide a full high-definition live image with up to 30fps. The Leica DMS300 produces high-quality, full-color still images as well as Full-HD movies as a standalone system.

All primary functions of the DMS300 are controlled with a wireless remote control. Additionally, it can be connected to a computer offering full compatibility with Leica software LAS EZ. The dual live video stream allows for simultaneous output to a PC and a second imaging device with HDMI-interface such as a HD-monitors or HD-projector.

Z16 APO MANUAL MACROSCOPE

The Leica Z16 APO is a fully apochromatic zoom system for high contrast, high-resolution, detailed analysis. The single beam path provides 2D images and ensures parallax-free imaging. Together with the Leica DFC cameras and the Leica Applications Suite, this is ideal for digital imaging. The modular design allows an optimized configuration for the individual applications. The direct attachment of a digital camera results in highest brightness levels. Visual inspection tasks are done with a binocular tube from the stereo microscope line.



OPTIKA XZ-2 MACROSCOPE SYSTEM

Measuring monozoom videomicroscope 7x...45x, with 8" LCD screen, incident ring Led illumination

MICROSCOPE ACCESSORIES



LEICA SPECIMEN
LEVELING PRESS
METSOPT11563036



SPECIMEN
LEVELING PRESS
METSOPTYP190

PLASTICINE CLAY
PLASTICINE CLAY

1 lb. (453.59 grams)
0.22 lb. (100 grams)

METSPLACLAY001
METSOPTJZJX0911



OPTIKA RING RING LIGHT LED ILLUMINATOR
METSOPTCL15.1

Optical Power: 220 lumen luminous flux and 30000 lux illuminance at 4" distance

Power supply: 110V50Hz/1-phase with brightness control and Quadrant, half-circle or full circle illumination

RING LIGHT LED ILLUMINATOR
METSOPT72LEDS

Intensity Adjustment, Good Variable Control Permit Gradual Increase in Brightness with Four-zone Lighting Control Separately
Low Power Consumption, Super Brightness
Metal Shell, ESD and insulativity
Reasonable Design, Uniformity Light, Non-flicker & Shadow
72 LED chips, light control box, DC12V power supply



OPTIKA FLEXIBLE ARMS LED ILLUMINATOR
METSOPTCL-41

Light sources	LED (x2); With 3,6W high efficiency X-LED
Chromaticity coordinates (x,y)	0.320, 0.320)
Luminous flux	400 lm each arm
Emission angle	25°
Power supply	2Vdc, 1500 mA;
With brightness control.	



**Abrasive
Cut-Off Wheels**

Abrasive cutting has proven to be one of the most effective methods for sectioning materials for Metallographic sample preparation. The key to achieving quality sections is to select the proper abrasive Cut-Off Wheel for your application. Choosing the correct wheel not only ensures ease of cutting, but also reduces the amount of damage introduced to the sample in the sectioning process. This greatly reduces time spent in subsequent grinding and polishing steps.

Lapmaster offers a wide variety of abrasive Cut-Off Wheels engineered for a variety of materials and applications; however, by combining different abrasive types, sizes and bonds Lapmaster Cut-Off Wheels can be developed for virtually any application.

To further assist you in choosing the Lapmaster Cut-Off Wheel for your application please contact your Lapmaster representative.

ABRASIVE CUT-OFF WHEELS

DESCRIPTION	BOND	PART#	PRICE
With 1.25" (32mm) Arbor Hole	RR = Rubber resin bond R = Rubber bond Res = Resin bond		
4"x.025"x.5" Silicon Carbide - Medium Non-Ferrous (Pack of 10)	RR	METSACUT004MNFT	70.00
5"x.025"x.5" Silicon Carbide - Medium Non-Ferrous (Pack of 10)	RR	METSACUT005MNFT	77.00
6"x.020"x.5" ALOX Cutoff Wheel For Soft Steel RC30 (Pack Of 10)	RR	METSACUT006SS30	85.00
6"x.020"x.5" ALOX Cutoff Wheel For Med Steel RC45 (Pack Of 10)	RR	METSACUT006MS45	85.00
6"x.020"x.5" ALOX Cutoff Wheel For Hard Steel RC60 (Pack Of 10)	RR	METSACUT006HS60	85.00
6"x.020"x.5" SiC Cutoff Wheel For Soft Non-Ferrous RC30 (Pack Of 10)	RR	METSACUT006SNFT	85.00
6"x.020"x.5" SiC Cutoff Wheel For Medium Non-Ferrous RC45 (Pack Of 10)	RR	METSACUT006MNFT	85.00
6"x.020"x.5" SiC Cutoff Wheel For Hard Non-Ferrous RC60 (Pack Of 10)	RR	METSACUT006HNFT	85.00
7"x.030"x.5" ALOX Cutoff Wheel For Soft Steel RC30 (Pack Of 10)	RR	METSACUT007SS30	99.00
7"x.030"x.5" ALOX Cutoff Wheel For Medium Steel RC45 (Pack Of 10)	RR	METSACUT007MS45	99.00
7"x.030"x.5" ALOX Cutoff Wheel For Hard Steel RC60 (Pack Of 10)	RR	METSACUT007HS60	99.00
7"x.025"x.5" SiC Cutoff Wheel For Soft Non-Ferrous RC30 (Pack Of 10)	RR	METSACUT007SNFT	99.00
7"x.025"x.5" SiC Cutoff Wheel For Medium Non-Ferrous RC45 (Pack Of 10)	RR	METSACUT007MNFT	99.00
7"x.035"x.5" SiC Cutoff Wheel For Hard Non-Ferrous RC60 (Pack Of 10)	RR	METSACUT007HNFT	99.00
7"x.040"x1.25" Aluminum Oxide - Medium Steel RC45 (10 Pack)	RR	METSACUT007THIN	99.00
8"x.032"x1.25 Reinforced Aluminum Oxide - (10 Pack)	Res	METSACUT008REIN	116.00
9"x.062"x1.25" Aluminum Oxide - Hard Steel RC60 (Pack of 10)	RR	METSACUT009HS60	127.00
9"x.062"x1.25" Aluminum Oxide - Medium Steel RC45 (Pack of 10)	RR	METSACUT009MS45	127.00
9"x.062"x1.25" Aluminum Oxide - Soft Steel RC30 (Pack of 10)	RR	METSACUT009SS30	127.00
9"x.045"x1.25" Aluminum Oxide - General Purpose (Pack of 25)	RR	METSACUT009RB45	279.00
9"x.032"x1.25" Aluminum Oxide - Thin Wheel Applications (Pack of 10)	RR	METSACUT009THIN	127.00
9"x.062"x1.25" Silicon Carbide - Hard Non-Ferrous (Pack of 10)	RR	METSACUT009HNFT	127.00
9"x.062"x1.25" Silicon Carbide - Medium Non-Ferrous (Pack of 10)	RR	METSACUT009MNFT	127.00
9"x.062"x1.25" Silicon Carbide - Soft Non-Ferrous (Pack of 10)	RR	METSACUT009SNFT	127.00
9"x.032"x1.25" Silicon Carbide - Soft Non-Ferrous (Pack of 10)	RR	METSACUTSC9THIN	127.00
9"x.032"x1.25" Silicon Carbide - Medium Non-Ferrous (Pack of 10)	RR	METSACUT009MNTH	127.00
9"x.032"x1.25" Silicon Carbide - Hard Non-Ferrous (Pack of 10)	RR	METSACUT009HNTH	127.00
9"x.062"x1.25" SiC/AIOx - For Cast Iron (Pack of 10)	Res	METSACUT009CAST	132.00
10"x.062"x1.25" Aluminum Oxide - Hard Steel RC60 (Pack of 10)	RR	METSACUT010HS60	140.00
10"x.062"x1.25" Aluminum Oxide - Medium Steel RC45 (Pack of 10)	RR	METSACUT010MS45	140.00
10"x.062"x1.25" Aluminum Oxide - Soft Steel RC30 (Pack of 10)	RR	METSACUT010SS30	140.00
10"x.045"x1.25" Aluminum Oxide - General Purpose (Pack of 10)	Res	METSACUT010RB45	140.00
10"x.094"x.625" Reinforced Aluminum Oxide General Purpose - (10 pack)	Res	METSACUT010REIN	140.00
10"x.062"x1.25" Aluminum Oxide - Medium Hard Steel (10 pack)	Res	METSACUTR10HS60	140.00
10"x.062"x1.25" Silicon Carbide - Hard Non-Ferrous (Pack of 10)	RR	METSACUT010HNFT	140.00
10"x.062"x1.25" Silicon Carbide - Medium Non-Ferrous (Pack of 10)	RR	METSACUT010MNFT	140.00
10"x.062"x1.25" Silicon Carbide - Soft Non-Ferrous (Pack of 10)	RR	METSACUT010SNFT	140.00
10"x.032"x1.25" Thin Silicone Carbide - Med. Non-Ferrous (Pack Of 10)	RR	METSACUTS10THIN	140.00
10"x.062"x1.25" SiC/AIOx - For Cast Iron (Pack of 10)	Res	METSACUT010CAST	148.00
12"x.062"x1.25" Aluminum Oxide - Hard Steel RC60 (Pack of 10)	RR	METSACUT012HS60	161.00
12"x.100"x1.25" Aluminum Oxide - Medium Steel RC45 (Pack of 10)	RR	METSACUT012MS45	161.00
12"x.100"x1.25" Aluminum Oxide - Soft Steel RC30 (Pack of 10)	RR	METSACUT012SS30	161.00
12"x.094"x1.0" Reinforced Aluminum Oxide - (10 Pack)	Res	METSACUT012REIN	281.00
12"x.045"x1.25" Aluminum Oxide - General Purpose (Pack of 25)	Res	METSACUT012RB45	281.00

Additional sizes available upon request.



Abrasive
Cut-Off Wheels

ABRASIVE CUT-OFF WHEELS

DESCRIPTION	BOND	PART#	PRICE
With 1.25" (32mm) Arbor Hole	RR = Rubber resin bond R = Rubber bond Res = Resin bond		
12"x.062"x1.25" Silicon Carbide - Hard Non-Ferrous (Pack of 10)	RR	METSACUT012HNFT	161.00
12"x.062"x1.25" Silicon Carbide - Medium Non-Ferrous (Pack of 10)	RR	METSACUT012MNFT	161.00
12"x.045"x1.25" Thin Silicon Carbide - Medium Non-Ferrous (Pack of 10)	RR	METSACUTT12MN45	161.00
12"x.062"x1.25" Silicon Carbide - Soft Non-Ferrous (Pack of 10)	RR	METSACUT012SNFT	161.00
14"x.085"x1.25" Aluminum Oxide - Hard Steel RC60 (Pack of 10)	RR	METSACUT014HS60	184.00
14"x.085"x1.25" Aluminum Oxide - Medium Steel RC45 (Pack of 10)	RR	METSACUT014MS45	184.00
14"x.115"x1.25" Aluminum Oxide - Soft Steel RC30 (Pack of 10)	RR	METSACUT014SS30	184.00
14"x.080"x1.25" Silicon Carbide - Hard Non-Ferrous (Pack of 10)	RR	METSACUT014HNFT	184.00
14"x.090"x1.25" Silicon Carbide - Medium Non-Ferrous (Pack of 10)	RR	METSACUT014MNFT	184.00
14"x.080"x1.25" Silicon Carbide - Soft Non-Ferrous/Alum (Pack of 10)	RR	METSACUT014SNFT	184.00
14"x.125"x1.25" Reinforced Aluminum Oxide - General Purpose	R	METSACUT014REIN	242.00
16"x.100"x1.25 Aluminum Oxide - Hard Steel RC60 (Pack of 10)	RR	METSACUT016HS60	224.00
16"x.100"x1.25 Aluminum Oxide - Medium Steel RC45 (Pack of 10)	RR	METSACUT016MS45	224.00
16"x.100"x1.25 Aluminum Oxide - Soft Steel RC30 (Pack of 10)	RR	METSACUT016SS30	224.00
16"x.100"x1.25 Silicon Carbide - Hard Non-Ferrous (Pack of 10)	RR	METSACUT016HNFT	224.00
16"x.100"x1.25 Silicon Carbide - Medium Non-Ferrous (Pack of 10)	RR	METSACUT016MNFT	224.00
16"x.100"x1.25 Silicon Carbide - Soft Non-Ferrous (Pack of 10)	RR	METSACUT016SNFT	224.00
20"x.125x1.25" - Aluminum Oxide - Hard Steel RC60 (Pack of 10)	RR	METSACUT020HS60	540.00
20"x.125x1.25" - Aluminum Oxide - Hard Steel RC45 (Pack of 10)	RR	METSACUT020MS45	540.00
20"x.125x1.25" - Aluminum Oxide - Hard Steel RC30 (Pack of 10)	RR	METSACUT020SS30	540.00
20"x.125x1.25" - Silicon Carbide - Hard Non-Ferrous (Pack of 10)	RR	METSACUT020HNFT	540.00
20"x.125x1.25" - Silicon Carbide - Medium Non-Ferrous (Pack of 10)	RR	METSACUT020MNFT	540.00
20"x.125x1.25" - Silicon Carbide - Soft Non-Ferrous (Pack of 10)	RR	METSACUT020SNFT	540.00
24"x.125x1.25" - Aluminum Oxide - Hard Steel RC60 (Pack of 10)	RR	METSACUT024HS60	720.00
24"x.125x1.25" - Aluminum Oxide - Hard Steel RC45 (Pack of 10)	RR	METSACUT024MS45	720.00
24"x.125x1.25" - Aluminum Oxide - Hard Steel RC30 (Pack of 10)	RR	METSACUT024SS30	720.00
24"x.125x1.25" - Silicon Carbide - Hard Non-Ferrous (Pack of 10)	RR	METSACUT024HNFT	720.00
24"x.125x1.25" - Silicon Carbide - Medium Non-Ferrous (Pack of 10)	RR	METSACUT024MNFT	720.00
24"x.125x1.25" - Silicon Carbide - Soft Non-Ferrous (Pack of 10)	RR	METSACUT024SNFT	720.00

Additional sizes available upon request.

SECTIONING



Diamond Wafering Blades

For applications which require greater precision and thin sectioning capability, Lapmaster recommends Diamond Wafering Blades. Diamond Wafering Blades should be used with a precision low speed wafering saw.

Low concentration blades are suggested for hard brittle materials and ceramics, while high concentration blades are used with metallics.

To further assist you in choosing the Lapmaster Wafering Blade for your application please contact your Lapmaster representative.

DIAMOND WAFERING BLADES

DESCRIPTION	PART NUMBER	PRICE
3"x.006"x.5" High Concentration Wafering Blade Ferrous Material	METSDCUTW03H006	218.00
3"x.006"x.5" Low Concentration Wafering Blade Non-Ferrous Material	METSDCUTW03L006	218.00
4"x.012"x.5" High Concentration Wafering Blade Ferrous Material	METSDCUTW04H012	234.00
4"x.012"x.5" Low Concentration Wafering Blade Non-Ferrous Material	METSDCUTW04L012	234.00
4"x.015"x.5" High Concentration Wafering Blade Ferrous Material	METSDCUTW04H015	234.00
4"x.015"x.5" Low Concentration Wafering Blade Non-Ferrous Material	METSDCUTW04L015	234.00
5"x.015"x.5" High Concentration Wafering Blade Ferrous Material	METSDCUTW05H015	285.00
5"x.015"x.5" Low Concentration Wafering Blade Non-Ferrous Material	METSDCUTW05L015	285.00
6"x.020"x.5" High Concentration Wafering Blade Ferrous Material	METSDCUTW06H020	333.00
6"x.020"x.5" Low Concentration Wafering Blade Non-Ferrous Material	METSDCUTW06L020	333.00
7"x.025"x.5" High Concentration Wafering Blade Ferrous Material	METSDCUTW07H025	435.00
7"x.025"x.5" Low Concentration Wafering Blade Non-Ferrous Material	METSDCUTW07L025	435.00
8"x.035"x.5" High Concentration Wafering Blade Ferrous Material	METSDCUTW08H035	502.00
8"x.035"x.5" Low Concentration Wafering Blade Non-Ferrous Material	METSDCUTW08L035	502.00

DIAMOND BLADES FOR CARBIDE & CERAMICS

DESCRIPTION	PART NUMBER	PRICE
8" x .050 x 1.25" Resin Bond Diamond Blade	METSDCUTRES0008	350.00
10" x .050 x 1.25" Resin Bond Diamond Blade	METSDCUTRES0010	400.00
12" x .050 x 1.25" Resin Bond Diamond Blade	METSDCUTRES0012	450.00
12" x .060 x 1.25" Resin Bond Diamond Blade	METSDCUTRES6012	450.00

CBN BLADES RESIN BONDED FOR HARD FERROUS MATERIAL

DESCRIPTION	PART NUMBER	PRICE
5" x.030" x 1.25" (32mm) CBN Cutoff Blade for Hard Steel	METSDCBNW050220	265.00
6" x.050" x 1.25" (32mm) CBN Cutoff Blade for Hard Steel	METSDCBN006HS60	295.00
7" x .050" x 1.25" (32mm) CBN Cutoff Blade for Hard Steel	METSDCBN007HS60	325.00
8" x .050" x 1.25" (32mm) CBN Cutoff Blade for Hard Steel	METSDCBN008HS60	350.00
10" x .050" x 1.25" (32mm) CBN Cutoff Blade for Hard Steel	METSDCBN010HS60	400.00
12" x .060" x 1.25" (32mm) CBN Cutoff Blade for Hard Steel	METSDCBN012HS60	450.00



Sectioning Accessories

SECTIONING ACCESSORIES

DESCRIPTION	PART NUMBER	PRICE
Water Soluble Cutting Fluid-Gallon (20:1 mix ratio)	METSACUTFLGALL	45.00
Blue Soluble Cutting Fluid-Gallon (20:1 mix ratio)	METSACUTBFLGALL	54.00
Cool Cut Lubricating Fluid for Slow Speed Saws - 1 Quart	METSCOOLCUT0032	37.00
Dressing Stick For Wafering Blade (1 each)	METSDRESSTK0001	10.00



Compression Mounting

Mounting of specimens is generally required for providing a convenient way to hold a specimen while it is being ground and polished, or for preserving and edge for examination. Mounting materials fall into one of two categories:

1. Compression Mounting Materials
2. Cold Mount Mounting Materials

Compression mounting requires the use of heat and pressure in a mounting press to prepare a mounted specimen. Cold mounting is performed at room temperature using a two part castable system.

COMPRESSION MOUNTING

PHENOLICS

Lapmaster offers phenolic material in three different colors: black, green and red. Phenolic material is economical, easy to use and cures quickly. Packaged in convenient 5 Lbs. Containers, phenolic materials may also be purchased in larger bulk containers as well.

ULTRA FINE EPOXY MOUNTING POWDER

A fine epoxy mounting powder that offers superior flow characteristics, high hardness and excellent edge retention. Color: Black

EPOXY MOUNTING COMPOUND

Epoxy mounting powder that offers high hardness with excellent edge retention. Color: Black

DIALLYL PHTHALATE

Another high hardness, minimum edge separation compression mounting material. Lapmaster's product is glass filled. Color: Blue

LUCITE

Lucite is a transparent compression mount material which allows viewing into the specimen. Lucite is packaged in 5 Lbs. Containers.

DESCRIPTION	PART NUMBER	PRICE
Red Phenolic - 5 lb. Container	METSBAKERED0005	29.00
Black Phenolic - 5 lb. Container	METSBAKEBLK0005	20.00
Green Phenolic - 5 lb. Container	METSBAKEGRN0005	29.00
Red Phenolic - 25 lb Container	METSBAKERED0025	108.00
Black Phenolic - 25 lb Container	METSBAKEBLK0025	77.00
Green Phenolic - 25 lb Container	METSBAKEGRN0025	108.00
Ultra Fine Epoxy Mounting Powder- Glass Filled - 5 lb Container	METSFINEPOW0005	75.00
Epoxy Mounting Compound, 4 pounds	METSEDGEMNT0004	64.00
Epoxy Mounting Compound, 25 pounds	METSEDGEMNT0025	372.00
Diallyl Phthalate - Glass Filled - 5 lb. Container	METSDIALPOW0005	80.00
Diallyl Phthalate - Glass Filled - 25 lb. Container	METSDIALPOW0025	383.00
Lucite - 5 lb. Container	METSLUCE0000005	64.00
Lucite - 25 lb. Container	METSLUCE0000025	284.00
Conductive Mount (graphite flakes) - 1 lb Container	METSCONDMNTGF01	37.00
Conductive Mount (graphite powder) - 1 lb Container	METSCONDMNTGP01	37.00
Conductive Mount (copper) - 1 lb Container	METSCONDMNTCM01	54.00

NEW

PHENOLIC PREMOLDS (PACKAGES OF 100)

Green 1.00"	METSPREMGRN0001	56.00
Green 1.25 "	METSPREMGRN11/4	72.00
Green 1.50"	METSPREMGRN11/2	105.00
Red 1.00"	METSPREMRED0001	56.00
Red 1.25"	METSPREMRED11/4	72.00
Red 1.50"	METSPREMRED11/2	105.00
Black 1.00"	METSPREMBLK0001	34.00
Black 1.25"	METSPREMBLK11/4	50.00
Black 1.50"	METSPREMBLK11/2	61.00



Cold Mounting

COLD MOUNTING

SLOW CURE EPOXY

2 Part "low" viscosity epoxy system offering a hard, low shrinkage mount. The low viscosity of this product offers superior flow properties. Cure time is 8 hours.

FAST CURE EPOXY

Lapmaster features an epoxy mounting system which offers excellent edge retention, good abrasion resistance, and fast cure time – approximately 30 minutes.

HEAT CURE EPOXY

Ultra low viscosity for excellent penetration of small parts, voids, cracks and other fine features. Extremely hard with low shrinkage and excellent edge retention. 90min cure time in oven at 131F (55C). Can mix large amounts in one batch and pour over a 4 hour time period (if left at room temp).

FAST CURE ACRYLIC

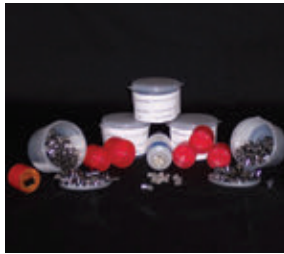
A two part acrylic mounting system which cures in approximately 15 minutes. It has good flow characteristics and good penetration into holes and recess.

HIGH PERFORMANCE MOUNTING COMPOUND

A two part acrylic mounting system which cures in approximately 15minutes. It has excellent flow characteristics due to its low viscosity. It produces mounts of higher hardness and density than standard acrylics, with superior abrasion resistance and edge retention.

NEW

DESCRIPTION	PART NUMBER	PRICE
Slow Cure Epoxy (8 hour) - Resin - 32 oz.	METSEPOXRESS032	77.00
Slow Cure Epoxy (8 hour) - Resin - Gallon	METSEPOXRESS128	195.00
Slow Cure Epoxy (8 hour) - Hardener - 16 oz.	METSEPOXHARS016	44.00
Slow Cure Epoxy (8 hour) - Hardener - 32 oz.	METSEPOXHARS032	86.00
Fast Cure Epoxy (30 min Cure)- Resin - 32 oz.	METSEPOXRES0032	78.00
Fast Cure Epoxy (30 min Cure)- Resin - Gallon.	METSEPOXRES0128	195.00
Fast Cure Epoxy (30 min Cure)- Hardener - 16 oz.	METSEPOXHAR0016	53.00
Fast Cure Epoxy (30 min Cure)- Hardener - 32 oz.	METSEPOXHAR0032	87.00
Heat Cure Epoxy (90 min Cure) - Resin 32oz	METSEPOXRESHC32	99.00
Heat Cure Epoxy (90 min Cure) - Hardener 16oz	METSEPOXHARHC16	79.00
Fast Cure Acrylic Liquid (15min Cure)- 12 oz.	METSACRYLIQ0012	18.00
Fast Cure Acrylic Liquid (15min Cure)- 64 oz.	METSACRYLIQ0064	61.00
Fast Cure Acrylic Liquid (15min Cure)- 2-1/2 gal.	METSACRYLIQ0320	268.00
Fast Cure Acrylic Powder (15min Cure)- 1 lb.	METSACRYPOW0001	49.00
Fast Cure Acrylic Powder (15min Cure)- 5 lb.	METSACRYPOW0005	181.00
Fast Cure Acrylic Powder (15min Cure)- 25 lb	METSACRYPOW0025	758.00
High Performance Acrylic Mounting Liquid - 12 oz.	METSHIGHLIQ0012	19.00
High Performance Acrylic Mounting Liquid - 64 oz.	METSHIGHLIQ0064	65.00
High Performance Acrylic Mounting Powder - 1 lb.	METSHIGHPOW0001	55.00
High Performance Acrylic Mounting Powder - 5 lb.	METSHIGHPOW0005	213.00



Mounting Accessories

MOUNTING ACCESSORIES

MOLD CUPS

Designed for casting mounts with cold mounting materials from 1" - 1.5" diameters.

SPECIMEN CLIPS

Specimen clips are used to support specimens while the mounting material cures. Lapmaster offers both plastic and stainless steel support clips which are packaged in 100 piece containers.

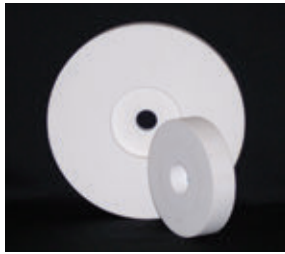
MOLD RELEASE

NEW

Mold release is used to help eject the specimen from either the mounting press or mold. Lapmaster offers mold release for hot and cold mounting applications. It is available in aerosol spray, alcohol based liquid or a Non-Hazmat silicone liquid form.

DESCRIPTION	PART NUMBER	PRICE
1.00" Disposable Mold Cups (Pack of 50)	METSMOLDCUP1.00	28.00
1.25" Disposable Mold Cups (Pack of 50)	METSMOLDCUP1.25	31.00
1.5" Disposable Mold Cups (Pack of 50)	METSMOLDCUP1.50	36.00
2 Part Reusable Plastic Mounting Cup, 1.00", Box of 12	METSPLASCUP1.00	65.00
2 Part Reusable Plastic Mounting Cup, 1.25", Box of 12	METSPLASCUP1.25	72.00
2 Part Reusable Plastic Mounting Cup, 1.50", Box of 12	METSPLASCUP1.50	82.00
Rubber Mounting Cup, 1.00", Box of 5	METSRUBBCUP1.00	103.00
Rubber Mounting Cup, 1.25", Box of 5	METSRUBBCUP1.25	109.00
Rubber Mounting Cup, 1.50", Box of 5	METSRUBBCUP1.50	135.00
Phenolic Ring Forms, 1.00" OD. Box of 10	METSFORM0101.00	14.00
Phenolic Ring Forms, 1.25" OD. Box of 11	METSFORM0101.25	15.00
Phenolic Ring Forms, 1.50" OD. Box of 12	METSFORM0101.50	17.00
Wooden Stirring Sticks, Box of 1000	METSSTIRSTK1000	34.00
Graduated Paper Mixing Cups, Box of 100	METSCUPSMIX0100	24.00
Stainless Steel Support Clips (Pack of 100)	METSCLIP100METL	42.00
Plastic Support Clips (Pack of 100)	METSCLIP100PLAS	42.00
Dry Powder Mold Release Spray - 15oz Aerosol Spray	METSMOLDRELOHOT	26.00
Alcohol Based Liquid Mold Release 2oz (Non Aerosol)	METSMOLDRELLIQ2	16.00
Silicone Liquid Mold Release NON-HAZ 2oz (Non Aerosol)	METSMOLDRESSIL2	16.00

GRINDING & POLISHING



Grinding Wheels

GRINDING WHEELS

DESCRIPTION	PART NUMBER	PRICE
Grinding Wheel, Aluminum Oxide, 8" X 1.75" X 1.5", 150 Grit	METSGRNDAL80150	157.00
Grinding Wheel, Aluminum Oxide, 14" X 1.75" X 1.5", 150 Grit	METSGRNDALX0150	380.00
Grinding Wheel, Silicon Carbide, 14" X 1.75" X 1.5", 150 Grit	METSGRNDSIC0150	418.00



Abrasive Rolls & Strips

ABRASIVE ROLLS & STRIPS

Our Abrasive Rolls and Strips are manufactured using the same high quality material as the Abrasive Discs. Our Abrasive Rolls and Strips are also available in a variety of sizes, grits and grit types.

DESCRIPTION	PART NUMBER	PRICE
3" x 75' Silicon Carbide Roll - 120 grit	METSROLL3750120	43.00
3" x 75' Silicon Carbide Roll - 240 grit	METSROLL3750240	38.00
3" x 75' Silicon Carbide Roll - 320 grit	METSROLL3750320	38.00
3" x 75' Silicon Carbide Roll - 400 grit	METSROLL3750400	38.00
3" x 75' Silicon Carbide Roll - 600 grit	METSROLL3750600	38.00
3 7/16" X 60' Silicon Carbide Roll - 240 grit	METSROLL7600240	43.00
3 7/16" X 60' Silicon Carbide Roll - 320 grit	METSROLL7600320	43.00
3 7/16" X 60' Silicon Carbide Roll - 400 grit	METSROLL7600400	43.00
3 7/16" X 60' Silicon Carbide Roll - 600 grit	METSROLL7600600	43.00
3 7/16" x 60' Silicone Carbide Roll - 800 grit	METSROLL7600800	50.00
3 7/16" x 60' Silicone Carbide Roll - 1200 grit	METSROLL7601200	50.00
3" X 11" PSA Backed Silicon Carbide Strips - 240 grit 100/pk	METSPAPR3110240	49.00
3" X 11" PSA Backed Silicon Carbide Strips - 320 grit 100/pk	METSPAPR3110320	49.00
3" X 11" PSA Backed Silicon Carbide Strips - 400 grit 100/pk	METSPAPR3110400	49.00
3" X 11" PSA Backed Silicon Carbide Strips - 600 grit 100/pk	METSPAPR3110600	49.00



Abrasive Belts

ABRASIVE BELTS

SILICON CARBIDE BELTS SOLD IN PACKS OF 10

Our Abrasive Belts feature premium graded silicon carbide abrasive bonded to an "X" weight cotton backing. These Belts can be used both in wet or dry applications and are available in a variety of sizes and grits.

DESCRIPTION	PART NUMBER	PRICE
4" x 36" Silicon Carbide Belt - 50 Grit (Pack of 10)	METSBELT4360050	72.00
4" x 36" Silicon Carbide Belt - 60 Grit (Pack of 10)	METSBELT4360060	72.00
4" x 36" Silicon Carbide Belt - 80 Grit (Pack of 10)	METSBELT4360080	67.00
4" x 36" Silicon Carbide Belt - 120 Grit (Pack of 10)	METSBELT4360120	63.00
4" x 36" Silicon Carbide Belt - 180 Grit (Pack of 10)	METSBELT4360180	63.00
4" x 36" Silicon Carbide Belt - 240 Grit (Pack of 10)	METSBELT4360240	63.00
4" x 36" Silicon Carbide Belt - 320 Grit (Pack of 10)	METSBELT4360320	63.00
4" x 36" Silicon Carbide Belt - 400 Grit (Pack of 10)	METSBELT4360400	63.00
4" x 36" Silicon Carbide Belt - 600 Grit (Pack of 10)	METSBELT4360600	63.00



Abrasive Belts

Our Abrasive Belts are also available in Aluminum Oxide (ALOX) and Zirconia Alumina (ZA) for additional applications.

ABRASIVE BELTS

ALUMINUM OXIDE BELTS SOLD IN PACKS OF 10

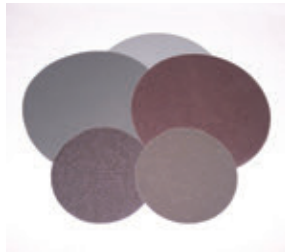
DESCRIPTION	PART NUMBER	PRICE
4" x 36" Aluminum Oxide Belt - 60 Grit (Pack of 10)	METSBELT436AL60	78.00
4" x 36" Aluminum Oxide Belt - 80 Grit (Pack of 10)	METSBELT436AL80	60.00
4" x 36" Aluminum Oxide Belt - 100 Grit (Pack of 10)	METSBELT436A100	60.00
4" x 36" Aluminum Oxide Belt - 120 Grit (Pack of 10)	METSBELT436A120	60.00
4" x 36" Aluminum Oxide Belt - 180 Grit (Pack of 10)	METSBELT436A180	60.00
4" x 36" Aluminum Oxide Belt - 240 Grit (Pack of 10)	METSBELT436A240	60.00
6" x 48" Aluminum Oxide Belt - 50 Grit (Pack of 10)	METSBELT648AL50	98.00
6" x 48" Aluminum Oxide Belt - 60 Grit (Pack of 10)	METSBELT648EC60	93.00
6" x 48" Aluminum Oxide Belt - 80 Grit (Pack of 10)	METSBELT648AL80	89.00
6" x 48" Aluminum Oxide Belt - 100 Grit (Pack of 10)	METSBELT648A100	87.00
6" x 48" Aluminum Oxide Belt - 120 Grit (Pack of 10)	METSBELT648A120	87.00
6" x 48" Aluminum Oxide Belt - 180 Grit (Pack of 10)	METSBELT648A180	87.00
6" x 48" Aluminum Oxide Belt - 240 Grit (Pack of 10)	METSBELT648A240	87.00

ZIRCONIA ALUMINA BELTS SOLD IN PACKS OF 10

DESCRIPTION	PART NUMBER	PRICE
4" x 36" Zirconia Alumina Belt - 60 Grit (Pack of 10)	METSBELT436ZA60	92.00
4" x 36" Zirconia Alumina Belt - 80 Grit (Pack of 10)	METSBELT436ZA80	92.00
4" x 36" Zirconia Alumina Belt - 100 Grit (Pack of 10)	METSBELT436Z100	92.00
4" x 36" Zirconia Alumina Belt - 120 Grit (Pack of 10)	METSBELT43SZ120	80.00
6" x 48" Zirconia Alumina Belt - 60 Grit (Pack of 10)	METSBELT648ZA60	115.00
6" x 48" Zirconia Alumina Belt - 80 Grit (Pack of 10)	METSBELT648ZA80	113.00
6" x 48" Zirconia Alumina Belt - 100 Grit (Pack of 10)	METSBELT648Z100	109.00
6" x 48" Zirconia Alumina Belt - 120 Grit (Pack of 10)	METSBELT648Z120	109.00

Additional sizes and grits are available upon request.

GRINDING & POLISHING



Abrasive Discs

Lapmaster offers a complete line of Abrasive Discs for your Metallographic sample preparation needs. These products are excellent for coarse and fine grinding of Metallographic specimens.

Our Discs feature premium graded silicon carbide bonded to a sturdy "C" weight backing. The premium graded silicon carbide allows high cutting rates, yet produces consistent and uniform finishes. The high performance resin bonding system permits wet or dry operation allowing for longer paper life.

These Discs are available in Plain Back and Water Resistant pressure-sensitive adhesive backings.

Our Abrasive discs are also available in Aluminum Oxide (ALOX) and Zirconia Alumina (ZA) for additional applications.

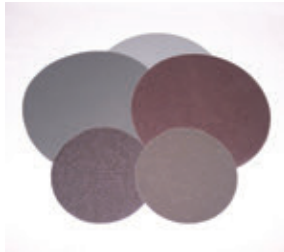
ABRASIVE DISCS

SILICON CARBIDE ABRASIVE PAPER DISCS

SOLD IN 100 DISC PACKS

DESCRIPTION	PART NUMBER	PRICE
1" PSA Backed Silicon Carbide Abrasive Paper Discs - 180 Grit	METSPAPRA010180	22.00
1" PSA Backed Silicon Carbide Abrasive Paper Discs - 240 Grit	METSPAPRA010240	22.00
1" PSA Backed Silicon Carbide Abrasive Paper Discs - 320 Grit	METSPAPRA010320	22.00
1" PSA Backed Silicon Carbide Abrasive Paper Discs - 400 Grit	METSPAPRA010400	22.00
1" PSA Backed Silicon Carbide Abrasive Paper Discs - 600 Grit	METSPAPRA010600	22.00
2-7/8" PSA Backed Silicon Carbide Abrasive Paper Discs - 180 Grit	METSPAPR2780180	49.00
2-7/8" PSA Backed Silicon Carbide Abrasive Paper Discs - 240 Grit	METSPAPR2780240	49.00
2-7/8" PSA Backed Silicon Carbide Abrasive Paper Discs - 320 Grit	METSPAPR2780320	49.00
2-7/8" PSA Backed Silicon Carbide Abrasive Paper Discs - 400 Grit	METSPAPR2780400	49.00
2-7/8" PSA Backed Silicon Carbide Abrasive Paper Discs - 600 Grit	METSPAPR2780600	49.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs - 60 Grit	METSPAPRP080060	79.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs - 80 Grit	METSPAPRP080080	72.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs - 120 Grit	METSPAPRP080120	65.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs - 180 Grit	METSPAPRP080180	58.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs - 240 Grit	METSPAPRP080240	58.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs - 320 Grit	METSPAPRP080320	58.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs - 400 Grit	METSPAPRP080400	58.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs - 600 Grit	METSPAPRP080600	58.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs - 800 Grit	METSPAPRP080800	120.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs - 1200 Grit	METSPAPRP081200	120.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs-1/2" hole-60 Grit	METSPAPRC/20060	79.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs-1/2" hole-80 Grit	METSPAPRC/20080	72.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs-1/2" hole-120 Grit	METSPAPRC/20120	65.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs-1/2" hole-180 Grit	METSPAPRC/20180	58.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs-1/2" hole-240 Grit	METSPAPRC/20240	58.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs-1/2" hole-320 Grit	METSPAPRC/20320	58.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs-1/2" hole-400 Grit	METSPAPRC/20400	58.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs-1/2" hole-600 Grit	METSPAPRC/20600	58.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs-1/2" hole-800 Grit	METSPAPRC/20800	120.00
8" Plain Backed Silicon Carbide Abrasive Paper Discs-1/2" hole-1200 Grit	METSPAPRC/21200	120.00
8" PSA Backed Silicon Carbide Abrasive Paper Discs - 60 Grit	METSPAPRA080060	142.00
8" PSA Backed Silicon Carbide Abrasive Paper Discs - 80 Grit	METSPAPRA080080	117.00
8" PSA Backed Silicon Carbide Abrasive Paper Discs - 120 Grit	METSPAPRA080120	125.00
8" PSA Backed Silicon Carbide Abrasive Paper Discs - 180 Grit	METSPAPRA080180	109.00
8" PSA Backed Silicon Carbide Abrasive Paper Discs - 240 Grit	METSPAPRA080240	109.00
8" PSA Backed Silicon Carbide Abrasive Paper Discs - 320 Grit	METSPAPRA080320	109.00
8" PSA Backed Silicon Carbide Abrasive Paper Discs - 400 Grit	METSPAPRA080400	109.00
8" PSA Backed Silicon Carbide Abrasive Paper Discs - 600 Grit	METSPAPRA080600	109.00
8" PSA Backed Silicon Carbide Abrasive Paper Discs - 800 Grit	METSPAPRA080800	190.00
8" PSA Backed Silicon Carbide Abrasive Paper Discs - 1000 Grit	METSPAPRA081000	190.00
8" PSA Backed Silicon Carbide Abrasive Paper Discs - 1200 Grit	METSPAPRA081200	190.00

Additional sizes and grits are available upon request.



Abrasive Discs

ABRASIVE DISCS

SILICON CARBIDE ABRASIVE PAPER DISCS

SOLD IN 100 DISC PACKS

DESCRIPTION	PART NUMBER	PRICE
200mm Plain Backed Silicon Carbide Abrasive Paper Discs - 60 Grit	METSPAPR2000060	79.00
200mm Plain Backed Silicon Carbide Abrasive Paper Discs - 80 Grit	METSPAPR2000080	72.00
200mm Plain Backed Silicon Carbide Abrasive Paper Discs - 120 Grit	METSPAPR2000120	65.00
200mm Plain Backed Silicon Carbide Abrasive Paper Discs - 180 Grit	METSPAPR2000180	58.00
200mm Plain Backed Silicon Carbide Abrasive Paper Discs - 240 Grit	METSPAPR2000240	58.00
200mm Plain Backed Silicon Carbide Abrasive Paper Discs - 320 Grit	METSPAPR2000320	58.00
200mm Plain Backed Silicon Carbide Abrasive Paper Discs - 400 Grit	METSPAPR2000400	58.00
200mm Plain Backed Silicon Carbide Abrasive Paper Discs - 600 Grit	METSPAPR2000600	58.00
200mm Plain Backed Silicon Carbide Abrasive Paper Discs - 800 Grit	METSPAPR2000800	120.00
200mm Plain Backed Silicon Carbide Abrasive Paper Discs - 1200 Grit	METSPAPR2001200	120.00
10" Plain Backed Silicon Carbide Abrasive Paper Discs - 60 Grit	METSPAPRP100060	134.00
10" Plain Backed Silicon Carbide Abrasive Paper Discs - 80 Grit	METSPAPRP100080	121.00
10" Plain Backed Silicon Carbide Abrasive Paper Discs - 120 Grit	METSPAPRP100120	95.00
10" Plain Backed Silicon Carbide Abrasive Paper Discs - 180 Grit	METSPAPRP100180	93.00
10" Plain Backed Silicon Carbide Abrasive Paper Discs - 240 Grit	METSPAPRP100240	93.00
10" Plain Backed Silicon Carbide Abrasive Paper Discs - 320 Grit	METSPAPRP100320	93.00
10" Plain Backed Silicon Carbide Abrasive Paper Discs - 400 Grit	METSPAPRP100400	93.00
10" Plain Backed Silicon Carbide Abrasive Paper Discs - 600 Grit	METSPAPRP100600	93.00
10" Plain Backed Silicon Carbide Abrasive Paper Discs - 800 Grit	METSPAPRP100800	152.00
10" Plain Backed Silicon Carbide Abrasive Paper Discs - 1200 Grit	METSPAPRP101200	152.00
10" PSA Backed Silicon Carbide Abrasive Paper Discs - 60 Grit	METSPAPRA100060	197.00
10" PSA Backed Silicon Carbide Abrasive Paper Discs - 80 Grit	METSPAPRA100080	178.00
10" PSA Backed Silicon Carbide Abrasive Paper Discs - 120 Grit	METSPAPRA100120	164.00
10" PSA Backed Silicon Carbide Abrasive Paper Discs - 180 Grit	METSPAPRA100180	162.00
10" PSA Backed Silicon Carbide Abrasive Paper Discs - 240 Grit	METSPAPRA100240	162.00
10" PSA Backed Silicon Carbide Abrasive Paper Discs - 320 Grit	METSPAPRA100320	162.00
10" PSA Backed Silicon Carbide Abrasive Paper Discs - 400 Grit	METSPAPRA100400	162.00
10" PSA Backed Silicon Carbide Abrasive Paper Discs - 600 Grit	METSPAPRA100600	162.00
10" PSA Backed Silicon Carbide Abrasive Paper Discs - 800 Grit	METSPAPRA100800	238.00
10" PSA Backed Silicon Carbide Abrasive Paper Discs - 1200 Grit	METSPAPRA101200	238.00
250mm Plain Backed Silicon Carbide Abrasive Paper Discs - 60 Grit	METSPAPR2500060	134.00
250mm Plain Backed Silicon Carbide Abrasive Paper Discs - 80 Grit	METSPAPR2500080	121.00
250mm Plain Backed Silicon Carbide Abrasive Paper Discs - 120 Grit	METSPAPR2500120	95.00
250mm Plain Backed Silicon Carbide Abrasive Paper Discs - 180 Grit	METSPAPR2500180	93.00
250mm Plain Backed Silicon Carbide Abrasive Paper Discs - 240 Grit	METSPAPR2500240	93.00
250mm Plain Backed Silicon Carbide Abrasive Paper Discs - 320 Grit	METSPAPR2500320	93.00
250mm Plain Backed Silicon Carbide Abrasive Paper Discs - 400 Grit	METSPAPR2500400	93.00
250mm Plain Backed Silicon Carbide Abrasive Paper Discs - 600 Grit	METSPAPR2500600	93.00
250mm Plain Backed Silicon Carbide Abrasive Paper Discs - 800 Grit	METSPAPR2500800	152.00
250mm Plain Backed Silicon Carbide Abrasive Paper Discs - 1200 Grit	METSPAPR2501200	152.00

Additional sizes and grits are available upon request.



Abrasive Discs

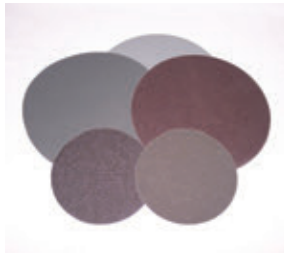
ABRASIVE DISCS

SILICON CARBIDE ABRASIVE PAPER DISCS

SOLD IN 100 DISC PACKS

DESCRIPTION	PART NUMBER	PRICE
12" Plain Backed Silicon Carbide Abrasive Paper Discs - 60 Grit	METSPAPRP120060	186.00
12" Plain Backed Silicon Carbide Abrasive Paper Discs - 80 Grit	METSPAPRP120080	189.00
12" Plain Backed Silicon Carbide Abrasive Paper Discs - 120 Grit	METSPAPRP120120	148.00
12" Plain Backed Silicon Carbide Abrasive Paper Discs - 180 Grit	METSPAPRP120180	117.00
12" Plain Backed Silicon Carbide Abrasive Paper Discs - 240 Grit	METSPAPRP120240	117.00
12" Plain Backed Silicon Carbide Abrasive Paper Discs - 320 Grit	METSPAPRP120320	117.00
12" Plain Backed Silicon Carbide Abrasive Paper Discs - 400 Grit	METSPAPRP120400	117.00
12" Plain Backed Silicon Carbide Abrasive Paper Discs - 600 Grit	METSPAPRP120600	117.00
12" Plain Backed Silicon Carbide Abrasive Paper Discs - 800 Grit	METSPAPRP120800	183.00
12" Plain Backed Silicon Carbide Abrasive Paper Discs - 1200 Grit	METSPAPRP121200	183.00
12" PSA Backed Silicon Carbide Abrasive Paper Discs - 60 Grit	METSPAPRA120060	299.00
12" PSA Backed Silicon Carbide Abrasive Paper Discs - 80 Grit	METSPAPRA120080	269.00
12" PSA Backed Silicon Carbide Abrasive Paper Discs - 120 Grit	METSPAPRA120120	238.00
12" PSA Backed Silicon Carbide Abrasive Paper Discs - 180 Grit	METSPAPRA120180	217.00
12" PSA Backed Silicon Carbide Abrasive Paper Discs - 240 Grit	METSPAPRA120240	217.00
12" PSA Backed Silicon Carbide Abrasive Paper Discs - 320 Grit	METSPAPRA120320	217.00
12" PSA Backed Silicon Carbide Abrasive Paper Discs - 400 Grit	METSPAPRA120400	217.00
12" PSA Backed Silicon Carbide Abrasive Paper Discs - 600 Grit	METSPAPRA120600	217.00
12" PSA Backed Silicon Carbide Abrasive Paper Discs - 800 Grit	METSPAPRA120800	320.00
12" PSA Backed Silicon Carbide Abrasive Paper Discs - 1200 Grit	METSPAPRA121200	320.00
300mm Plain Backed Silicon Carbide Abrasive Paper Discs - 60 Grit	METSPAPR3000060	186.00
300mm Plain Backed Silicon Carbide Abrasive Paper Discs - 80 Grit	METSPAPR3000080	189.00
300mm Plain Backed Silicon Carbide Abrasive Paper Discs - 120 Grit	METSPAPR3000120	148.00
300mm Plain Backed Silicon Carbide Abrasive Paper Discs - 180 Grit	METSPAPR3000180	117.00
300mm Plain Backed Silicon Carbide Abrasive Paper Discs - 240 Grit	METSPAPR3000240	117.00
300mm Plain Backed Silicon Carbide Abrasive Paper Discs - 320 Grit	METSPAPR3000320	117.00
300mm Plain Backed Silicon Carbide Abrasive Paper Discs - 400 Grit	METSPAPR3000400	117.00
300mm Plain Backed Silicon Carbide Abrasive Paper Discs - 600 Grit	METSPAPR3000600	117.00
300mm Plain Backed Silicon Carbide Abrasive Paper Discs - 800 Grit	METSPAPR3000800	183.00
300mm Plain Backed Silicon Carbide Abrasive Paper Discs - 1200 Grit	METSPAPR3001200	183.00
15" Plain Backed Silicon Carbide Abrasive Paper Discs - 60 Grit	METSPAPRP150060	242.00
15" Plain Backed Silicon Carbide Abrasive Paper Discs - 80 Grit	METSPAPRP150080	217.00
15" Plain Backed Silicon Carbide Abrasive Paper Discs - 120 Grit	METSPAPRP150120	191.00
15" Plain Backed Silicon Carbide Abrasive Paper Discs - 180 Grit	METSPAPRP150180	174.00
15" Plain Backed Silicon Carbide Abrasive Paper Discs - 240 Grit	METSPAPRP150240	174.00
15" Plain Backed Silicon Carbide Abrasive Paper Discs - 320 Grit	METSPAPRP150320	174.00
15" Plain Backed Silicon Carbide Abrasive Paper Discs - 400 Grit	METSPAPRP150400	174.00
15" Plain Backed Silicon Carbide Abrasive Paper Discs - 600 Grit	METSPAPRP150600	174.00
15" Plain Backed Silicon Carbide Abrasive Paper Discs - 800 Grit	METSPAPRP150800	246.00
15" Plain Backed Silicon Carbide Abrasive Paper Discs - 1200 Grit	METSPAPRP151200	246.00

Additional sizes and grits are available upon request.



Abrasive Discs

ABRASIVE DISCS

SILICON CARBIDE ABRASIVE PAPER DISCS

SOLD IN 100 DISC PACKS

DESCRIPTION	PART NUMBER	PRICE
15" PSA Backed Silicon Carbide Abrasive Paper Discs - 60 Grit	METSPAPRA150060	483.00
15" PSA Backed Silicon Carbide Abrasive Paper Discs - 80 Grit	METSPAPRA150080	433.00
15" PSA Backed Silicon Carbide Abrasive Paper Discs - 120 Grit	METSPAPRA150120	415.00
15" PSA Backed Silicon Carbide Abrasive Paper Discs - 180 Grit	METSPAPRA150180	348.00
15" PSA Backed Silicon Carbide Abrasive Paper Discs - 240 Grit	METSPAPRA150240	358.00
15" PSA Backed Silicon Carbide Abrasive Paper Discs - 320 Grit	METSPAPRA150320	358.00
15" PSA Backed Silicon Carbide Abrasive Paper Discs - 400 Grit	METSPAPRA150400	358.00
15" PSA Backed Silicon Carbide Abrasive Paper Discs - 600 Grit	METSPAPRA150600	358.00
15" PSA Backed Silicon Carbide Abrasive Paper Discs - 800 Grit	METSPAPRA150800	445.00
15" PSA Backed Silicon Carbide Abrasive Paper Discs - 1200 Grit	METSPAPRA151200	445.00

ALUMINUM OXIDE ABRASIVE DISCS-PSA BACKED

DESCRIPTION	PART NUMBER	PRICE
12" Aluminum Oxide Abrasive Cloth Disc - 60 Grit Pack of 25	METSPAPRA12AL60	144.00
12" Aluminum Oxide Abrasive Cloth Disc - 80 Grit Pack of 50	METSPAPRA12AL80	211.00
12" Aluminum Oxide Abrasive Cloth Disc - 100 Grit Pack of 50	METSPAPRA12A100	201.00
12" Aluminum Oxide Abrasive Cloth Disc - 120 Grit Pack of 50	METSPAPRA12A120	201.00
12" Aluminum Oxide Abrasive Cloth Disc - 180 Grit Pack of 50	METSPAPRA12A180	201.00
12" Aluminum Oxide Abrasive Cloth Disc - 220 Grit Pack of 50	METSPAPRA12A220	201.00
12" Aluminum Oxide Abrasive Cloth Disc - 240 Grit Pack of 50	METSPAPRA12A240	201.00

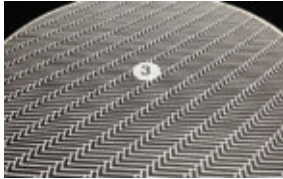
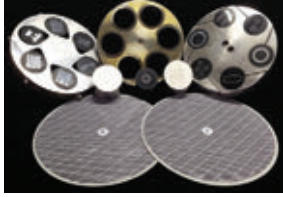
ZIRCONIA ALUMINA ABRASIVE DISCS-PSA BACKED

SOLD IN PACKS OF 25

DESCRIPTION	PART NUMBER	PRICE
8" Zirconia Alumina Abrasive Cloth Disc - 60 Grit	METSPAPRA08ZA60	155.00
12" Zirconia Alumina Abrasive Cloth Disc - 60 Grit	METSPAPRA12ZA60	205.00
12" Zirconia Alumina Abrasive Cloth Disc - 120 Grit	METSPAPRA12Z120	196.00
12" Zirconia Alumina Abrasive Cloth Disc - 180 Grit	METSPAPRA12Z180	196.00
12" Zirconia Alumina Abrasive Cloth Disc - 220 Grit	METSPAPRA12Z220	196.00

Additional sizes and grits are available upon request.

GRINDING & POLISHING



"LMDG" Diamond Discs

The LAPMASTER "LMDG" is an innovative diamond grinding disc that extends fine grinding to single-micron grit sizes! It replaces conventional polishing processes, achieving superior results in terms of material removal rate, surface quality, planarity of the sample and life of the consumable. Lapmaster "LMDG" provides for an easy, clean and efficient fine grinding process.

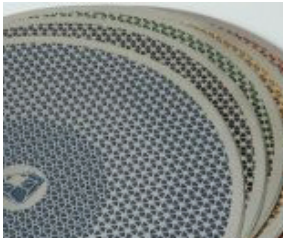
Uses only water for lubrication (NO SLURRY OR OIL)

Metal backing for use with a magnetic system.

NEW DIAMOND GRINDING DISCS

LAPMASTER "LMDG" FIXED DIAMOND FINE GRINDING/POLISHING DISCS

DESCRIPTION	PART NUMBER	PRICE
8", 125 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0080125	220.00
8", 75 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0080075	183.00
8", 60 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0080060	183.00
8", 54 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0080054	183.00
8", 30 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0080030	183.00
8", 18 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0080018	183.00
8", 15 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0080015	183.00
8", 9 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0080009	183.00
8", 6 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0080006	183.00
8", 3 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0080003	183.00
8", 2 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0080002	183.00
8", 1 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0080001	183.00
10", 125 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0100125	265.00
10", 75 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0100075	220.00
10", 60 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0100060	220.00
10", 54 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0100054	220.00
10", 30 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0100030	220.00
10", 18 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0100018	220.00
10", 15 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0100015	220.00
10", 9 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0100009	220.00
10", 6 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0100006	220.00
10", 3 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0100003	220.00
10", 2 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0100002	220.00
10", 1 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0100001	220.00
12", 125 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0120125	310.00
12", 75 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0120075	256.00
12", 60 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0120060	256.00
12", 54 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0120054	256.00
12", 30 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0120030	256.00
12", 18 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0120018	256.00
12", 15 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0120015	256.00
12", 9 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0120009	256.00
12", 6 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0120006	256.00
12", 3 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0120003	256.00
12", 2 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0120002	256.00
12", 1 micron Lapmaster "LMDG" Diamond Disc	METSLMDG0120001	256.00

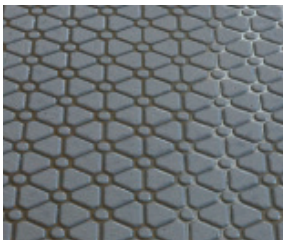


A special resin bonded diamond grinding disc which offers significant improvements over other disc systems on the market today. These diamond discs are designed to replace over 200 sheets of the equivalent SiC grinding discs. With a more evenly distributed abrasive grain size you will achieve a uniform grind and perfect edge retention on a wide range of materials. With a steel backing to be used with a magnetic system.

DIAMOND GRINDING DISCS

PIATTO DIAMOND GRINDING DISCS

DESCRIPTION	PART NUMBER	PRICE
Diamond Abrasive Disc. 8" Piatto 80 grit	METSPIAT0080080	161.00
Diamond Abrasive Disc. 8" Piatto 120 grit	METSPIAT0080120	131.00
Diamond Abrasive Disc. 8" Piatto 240 grit (220P)	METSPIAT0080220	117.00
Diamond Abrasive Disc. 8" Piatto 360 grit (600P)	METSPIAT0080600	117.00
Diamond Abrasive Disc. 8" Piatto 600 grit (1200P)	METSPIAT0081200	117.00
Diamond Abrasive Disc. 10" Piatto 80 grit	METSPIAT0100080	177.00
Diamond Abrasive Disc. 10" Piatto 120 grit	METSPIAT0100120	151.00
Diamond Abrasive Disc. 10" Piatto 240 grit (220P)	METSPIAT0100220	134.00
Diamond Abrasive Disc. 10" Piatto 360 grit (600P)	METSPIAT0100600	134.00
Diamond Abrasive Disc. 10" Piatto 600 grit (1200P)	METSPIAT0101200	134.00
Diamond Abrasive Disc. 12" Piatto 80 grit	METSPIAT0120080	276.00
Diamond Abrasive Disc. 12" Piatto 120 grit	METSPIAT0120120	220.00
Diamond Abrasive Disc. 12" Piatto 240 grit (220P)	METSPIAT0120220	196.00
Diamond Abrasive Disc. 12" Piatto 360 grit (600P)	METSPIAT0120600	196.00
Diamond Abrasive Disc. 12" Piatto 600 grit (1200P)	METSPIAT0121200	196.00



Fine grinding discs are designed to be used with diamond suspensions (1 μm thru 15 μm) for the fine grinding step of materials above HV150. Low deformation fine grinding makes it possible to go directly to a polishing cloth after this step. Metal backed discs to work directly on a magnetic system.

ALLEGAN FINE GRINDING DIAMOND DISCS

DESCRIPTION	PART NUMBER	PRICE
Diamond Polishing Disc. 8" #1 Allegan for up to 1 μm .	METSALEG0080001	84.00
Diamond Polishing Disc. 8" #3 Allegan for 3 to 6 μm .	METSALEG0080003	84.00
Diamond Polishing Disc. 8" #9 Allegan for 6 to 15 μm .	METSALEG0080009	84.00
Diamond Polishing Disc. 10" #1 Allegan for up to 1 μm	METSALEG0100001	90.00
Diamond Polishing Disc. 10" #3 Allegan for 3 to 6 μm .	METSALEG0100003	90.00
Diamond Polishing Disc. 10" #9 Allegan for 6 to 15 μm .	METSALEG0100009	90.00
Diamond Polishing Disc. 12" #1 Allegan for up to 1 μm .	METSALEG0120001	102.00
Diamond Polishing Disc. 12" #3 Allegan for 3 to 6 μm .	METSALEG0120003	102.00
Diamond Polishing Disc. 12" #9 Allegan for 6 to 15 μm .	METSALEG0120009	102.00
Dressing Stick For Diamond Discs	METS DresSSTK0001	9.00



Lapping Films

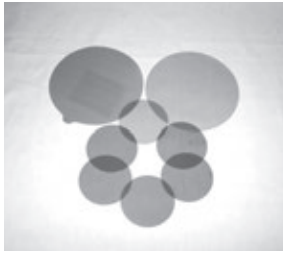
DIAMOND FILMS

Diamond films consist of a 3 mil polyester backing coated with a layer of precision graded diamond. These films are ideal for applications where flatness, and edge retention are critical such as electronic components or with samples composed of multiple materials of various hardness. Available in micron sizes ranging from 0.25 to 30 microns.

LAPPING FILMS

DIAMOND LAPPING FILM

DESCRIPTION	PART NUMBER	PRICE
4" PSA Diamond Lapping Film - 1/2 Micron 10 Per Pack	METSFILMA0401/2	79.00
4" PSA Diamond Lapping Film - 1 Micron 10 Per Pack	METSFILMA040001	79.00
4" PSA Diamond Lapping Film - 3 Micron 10 Per Pack	METSFILMA040003	79.00
4" PSA Diamond Lapping Film - 6 Micron 10 Per Pack	METSFILMA040006	79.00
4" PSA Diamond Lapping Film - 9 Micron 10 Per Pack	METSFILMA040009	79.00
4" PSA Diamond Lapping Film - 15 Micron 10 Per Pack	METSFILMA040015	79.00
4" PSA Diamond Lapping Film - 30 Micron 10 Per Pack	METSFILMA040030	104.00
8" Plain Backed Diamond Lapping Film - 1/2 Micron	METSFILMP0801/2	27.00
8" Plain Backed Diamond Lapping Film - 1 Micron	METSFILMP080001	27.00
8" Plain Backed Diamond Lapping Film - 3 Micron	METSFILMP080003	27.00
8" Plain Backed Diamond Lapping Film - 6 Micron	METSFILMP080006	27.00
8" Plain Backed Diamond Lapping Film - 9 Micron	METSFILMP080009	27.00
8" Plain Backed Diamond Lapping Film - 15 Micron	METSFILMP080015	27.00
8" Plain Backed Diamond Lapping Film - 30 Micron	METSFILMP080030	35.00
8" PSA Backed Diamond Lapping Film - 1/2 Micron	METSFILMA0801/2	33.00
8" PSA Backed Diamond Lapping Film - 1 Micron	METSFILMA080001	33.00
8" PSA Backed Diamond Lapping Film - 3 Micron	METSFILMA080003	33.00
8" PSA Backed Diamond Lapping Film - 6 Micron	METSFILMA080006	33.00
8" PSA Backed Diamond Lapping Film - 9 Micron	METSFILMA080009	33.00
8" PSA Backed Diamond Lapping Film - 15 Micron	METSFILMA080015	33.00
8" PSA Backed Diamond Lapping Film - 30 Micron	METSFILMA080030	39.00
12" Plain Backed Diamond Lapping Film - 1/2 Micron	METSFILMP1201/2	62.00
12" Plain Backed Diamond Lapping Film - 1 Micron	METSFILMP120001	62.00
12" Plain Backed Diamond Lapping Film - 3 Micron	METSFILMP120003	62.00
12" Plain Backed Diamond Lapping Film - 6 Micron	METSFILMP120006	62.00
12" Plain Backed Diamond Lapping Film - 9 Micron	METSFILMP120009	62.00
12" Plain Backed Diamond Lapping Film - 15 Micron	METSFILMP120015	62.00
12" Plain Backed Diamond Lapping Film - 30 Micron	METSFILMP120030	68.00
12" PSA Backed Diamond Lapping Film - 1/2 Micron	METSFILMA1201/2	68.00
12" PSA Backed Diamond Lapping Film - 1 Micron	METSFILMA120001	68.00
12" PSA Backed Diamond Lapping Film - 3 Micron	METSFILMA120003	68.00
12" PSA Backed Diamond Lapping Film - 6 Micron	METSFILMA120006	68.00
12" PSA Backed Diamond Lapping Film - 9 Micron	METSFILMA120009	68.00
12" PSA Backed Diamond Lapping Film - 15 Micron	METSFILMA120015	68.00
12" PSA Backed Diamond Lapping Film - 30 Micron	METSFILMA120030	75.00



Lapping Films

LAPPING FILMS

ALUMINUM OXIDE & SILICON CARBIDE LAPPING FILM

DESCRIPTION	PART NUMBER	PRICE
4" PSA Backed Alum Oxide Lapping Film - .3 Micron 50/box	METSAOFMA0400.3	35.00
4" PSA Backed Alum Oxide Lapping Film - 1 micron 50/box	METSAOFMA040001	35.00
4" PSA Backed Alum Oxide Lapping Film - 3 Micron 50/box	METSAOFMA040003	35.00
4" PSA Backed Alum Oxide Lapping Film - 9 Micron 50/box	METSAOFMA040009	35.00
4" PSA Backed Alum Oxide Lapping Film - 15 Micron 50/box	METSAOFMA040015	35.00
4" PSA Backed Alum Oxide Lapping Film - 30 Micron 50/box	METSAOFMA040030	35.00
4" PSA Backed Silicon Carbide Lapping Film - 15 Micron 50/box	METSSCFMA040015	34.00
4" PSA Backed Silicon Carbide Lapping Film - 30 Micron 50/box	METSSCFMA040030	35.00
8" PSA Backed Alum Oxide Lapping Film - 0.3 Micron 50/box	METSAOFMA0800.3	88.00
8" PSA Backed Alum Oxide Lapping Film - 1 Micron 50/box	METSAOFMA080001	88.00
8" PSA Backed Alum Oxide Lapping Film - 3 Micron 50/box	METSAOFMA080003	88.00
8" PSA Backed Alum Oxide Lapping Film - 9 Micron 50/box	METSAOFMA080009	88.00
8" PSA Backed Alum Oxide Lapping Film - 15 Micron 50/box	METSAOFMA080015	88.00
8" PSA Backed Alum Oxide Lapping Film - 30 Micron 50/box	METSAOFMA080030	88.00
8" PSA Backed Silicon Carbide Lapping Film - 15 Micron 50/box	METSSCFMA080015	88.00
8" PSA Backed Silicon Carbide Lapping Film - 30 Micron 50/box	METSSCFMA080030	88.00
12" PSA Backed Alum Oxide Lapping Film - 0.3 Micron 50/box	METSAOFMA1200.3	231.00
12" PSA Backed Alum Oxide Lapping Film - 1 Micron 50/box	METSAOFMA120001	231.00
12" PSA Backed Alum Oxide Lapping Film - 3 Micron 50/box	METSAOFMA120003	231.00
12" PSA Backed Alum Oxide Lapping Film - 9 Micron 50/box	METSAOFMA120009	231.00
12" PSA Backed Alum Oxide Lapping Film - 15 Micron 50/box	METSAOFMA120015	231.00
12" PSA Backed Silicon Carbide Lapping Film - 15 Micron 50/box	METSSCFMA120015	231.00
12" PSA Backed Silicon Carbide Lapping Film - 30 Micron 50/box	METSSCFMA120030	231.00
9"x11" Plain Backed Alum Oxide Lapping Film - 3 micron 100/box	METSAOFM9110003	98.00
9"x11" Plain Backed Alum Oxide Lapping Film - 9 micron 100/box	METSAOFM9110009	98.00
9"x11" Plain Backed Alum Oxide Lapping Film - 15 micron 100/box	METSAOFM9110015	98.00
9"x11" Plain Backed Alum Oxide Lapping Film - 30 micron 100/box	METSAOFM9110030	98.00
9"x11" Plain Backed Alum Oxide Lapping Film - 60 micron 100/box	METSAOFM9110060	98.00

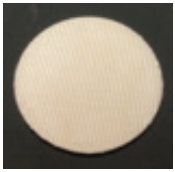
GRINDING & POLISHING

NEW

LMB SERIES POLISHING CLOTHS & PADS WITH STAINLESS STEEL METAL BACKING, FOR MAGNETIC SYSTEMS

MADE IN THE USA WITH THE HIGHEST QUALITY MATERIALS!

Available in all popular pad types and sizes for easy conversion to the LAPMASTER LMB Ssystem!



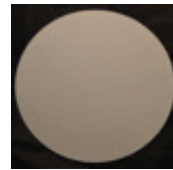
LMB-HGN Hard woven cloth pad used to replace some rough grinding steps when used with polycrystalline diamond.
Use with diamond 6 micron and up.
Most effective with 15 micron and up.



LMB-PLUS Synthetic nap polishing cloth specifically designed for sintered carbides and steels.
For use with all micron sizes.



LMB-PANW Napless, non-woven textile. Excellent for flatness and edge retention on a wide range of materials; ferrous and non-ferrous metals, ceramics, PCB, minerals among others.
Use with diamond 15 - 1 micron.



LMB-FWL A special woven 100% wool polishing pad. Used to polish ferrous metals, non-ferrous metals and polymers.
Use with diamond 9 - 1 micron.



LMB-GLD Woven acetate polishing pad. Used for fine grinding and polishing of ferrous metals, non-ferrous metals, plastics and coatings.
Used with diamond 9 - 3 micron.



LMB-FNL A final polishing cloth with a medium rayon nap. Excellent for final polishing on all materials with diamond or alumina.
Use with diamond or alumina 5 - 0.02 micron.



LMB-ASFL Silk style polishing cloth used to produce mirror surfaces on ferrous and non-ferrous, and microelectronics. Best results obtained with 3-micron diamond and finer.
Use diamond 9 - 1 micron.



LMB-DBN A final polishing cloth with a short synthetic nap. Excellent for final polishing on all materials with diamond or alumina.
Use with diamond or alumina 5 - 0.02 micron.



LMB-RED Woven wool felt polishing pad. For polishing ferrous metals with aluminas less than 9 micron particle size.



LMB-SUPREME A long life, chemical resistant (CHEM), polyurethane polishing pad. Excellent for final polishing with alumina or colloidal silica. Most effective during chemicalmechanical polishing of soft non-ferrous materials.
Use with alumina or colloidal silica, 1 - 0.02 micron.

GRINDING & POLISHING

POLISHING CLOTHS & PADS FOR MAGNETIC SYSTEMS

DESCRIPTION	PART NUMBER	PRICE
8" LMB-HGN SS Metal Backed Polishing Pad - 5 Pack	METSPADSHGNM008	60.00
10" LMB-HGN SS Metal Backed Polishing Pad - 5 Pack	METSPADSHGNM010	96.00
12" LMB-HGN SS Metal Backed Polishing Pad - 5 Pack	METSPADSHGNM012	120.00
8" LMB-PANW SS Metal Backed Polishing Pad - 5 Pack	METSPADSPANM008	60.00
10" LMB-PANW SS Metal Backed Polishing Pad - 5 Pack	METSPADSPANM010	96.00
12" LMB-PANW SS Metal Backed Polishing Pad - 5 Pack	METSPADSPANM012	109.00
8" LMB-GLD SS Metal Backed Polishing Pad - 5 Pack	METSPADSGLDM008	60.00
10" LMB-GLD SS Metal Backed Polishing Pad - 5 Pack	METSPADSGLDM010	96.00
12" LMB-GLD SS Metal Backed Polishing Pad - 5 Pack	METSPADSGLDM012	120.00
8" LMB-ASFL SS Metal Backed Polishing Pad - 5 Pack	METSPADSBLSM008	58.00
10" LMB-ASFL SS Metal Backed Polishing Pad - 5 Pack	METSPADSBLSM010	78.00
12" LMB-ASFL SS Metal Backed Polishing Pad - 5 Pack	METSPADSBLSM012	88.00
8" LMB-RED SS Metal Backed Polishing Pad - 5 Pack	METSPADSREDM008	70.00
10" LMB-RED SS Metal Backed Polishing Pad - 5 Pack	METSPADSREDM010	112.00
12" LMB-RED SS Metal Backed Polishing Pad - 5 Pack	METSPADSREDM012	140.00
8" LMB-PLUS SS Metal Backed Polishing Pad - 5 Pack	METSPADSPLSM008	60.00
10" LMB-PLUS SS Metal Backed Polishing Pad - 5 Pack	METSPADSPLSM010	96.00
12" LMB-PLUS SS Metal Backed Polishing Pad - 5 Pack	METSPADSPLSM012	120.00
8" LMB-FWL SS Metal Backed Polishing Pad - 5 Pack	METSPADSFWLM008	64.00
10" LMB-FWL SS Metal Backed Polishing Pad - 5 Pack	METSPADSFWLM010	96.00
12" LMB-FWL SS Metal Backed Polishing Pad - 5 Pack	METSPADSFWLM012	128.00
8" LMB-FNL SS Metal Backed Polishing Pad - 5 Pack	METSPADSFNLM008	60.00
10" LMB-FNL SS Metal Backed Polishing Pad - 5 Pack	METSPADSFNLM010	96.00
12" LMB-FNL SS Metal Backed Polishing Pad - 5 Pack	METSPADSFNLM012	110.00
8" LMB-DBN SS Metal Backed Polishing Pad - 5 Pack	METSPADSDBNM008	60.00
10" LMB-DBN SS Metal Backed Polishing Pad - 5 Pack	METSPADSDBNM010	96.00
12" LMB-DBN SS Metal Backed Polishing Pad - 5 Pack	METSPADSDBNM012	120.00
8" LMB-SUPREME SS Metal Backed Polishing Pad, Chem. Resistant - 5 Pack	METSPADSSUPM008	142.00
10" LMB-SUPREME SS Metal Backed Polishing Pad, Chem. Resistant - 5 Pack	METSPADSSUPM010	195.00
12" LMB-SUPREME SS Metal Backed Polishing Pad, Chem. Resistant - 5 Pack	METSPADSSUPM012	255.00

GRINDING & POLISHING

NEW

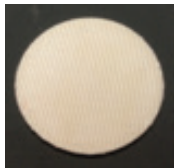
LMR SERIES POLISHING CLOTHS & PADS WITH METALIZED RUBBER BACKING, FOR MAGNETIC SYSTEMS

MADE IN THE USA WITH THE HIGHEST QUALITY MATERIALS!

This is a more cost effective option than stainless steel metal backing

The metal impregnated rubber backing works equally as well at a lower cost to manufacture.

Available in all popular pad types and sizes for easy conversion to the LAPMASTER LMR Ssystem!



LMR-HGN Hard woven cloth pad used to replace some rough grinding steps when used with polycrystalline diamond.
Use with diamond 6 micron and up.
Most effective with 15 micron and up.



LMR-PLUS Synthetic nap polishing cloth specifically designed for sintered carbides and steels. For use with all micron sizes.



LMR-PANW Napless, non-woven textile. Excellent for flatness and edge retention on a wide range of materials; ferrous and non-ferrous metals, ceramics, PCB, minerals among others.
Use with diamond 15 - 1 micron.



LMR-FWL A special woven 100% wool polishing pad. Used to polish ferrous metals, non-ferrous metals and polymers.
Use with diamond 9 - 1 micron.



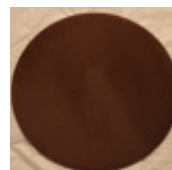
LMR-GLD Woven acetate polishing pad. Used for fine grinding and polishing of ferrous metals, non-ferrous metals, plastics and coatings.
Used with diamond 9 - 3 micron.



LMR-FNL A final polishing cloth with a medium rayon nap. Excellent for final polishing on all materials with diamond or alumina.
Use with diamond or alumina 5 - 0.02 micron.



LMR-ASFL Silk style polishing cloth used to produce mirror surfaces on ferrous and non-ferrous, and microelectronics. Best results obtained with 3-micron diamond and finer.
Use diamond 9 - 1 micron.



LMR-DBN A final polishing cloth with a short synthetic nap. Excellent for final polishing on all materials with diamond or alumina.
Use with diamond or alumina 5 - 0.02 micron.



LMR-RED Woven wool felt polishing pad. For polishing ferrous metals with aluminas less than 9 micron particle size.



LMR-SUPREME A long life, chemical resistant (CHEM), polyurethane polishing pad. Excellent for final polishing with alumina or colloidal silica. Most effective during chemicalmechanical polishing of soft non-ferrous materials.
Use with alumina or colloidal silica ,1 - 0.02 micron.

GRINDING & POLISHING

POLISHING CLOTHS & PADS FOR MAGNETIC SYSTEMS

DESCRIPTION	PART NUMBER	PRICE
8" LMR-HGN Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSHGNMR08	33.00
10" LMR-HGN Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSHGNMR10	54.00
12" LMR-HGN Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSHGNMR12	70.00
8" LMR-PANW Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSPANMR08	33.00
10" LMR-PANW Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSPANMR10	54.00
12" LMR-PANW Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSPANMR12	70.00
8" LMR-GLD Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSGLDMR08	33.00
10" LMR-GLD Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSGLDMR10	54.00
12" LMR-GLD Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSGLDMR12	70.00
8" LMR-ASFL Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSASLMR08	33.00
10" LMR-ASFL Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSASLMR10	54.00
12" LMR-ASFL Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSASLMR12	70.00
8" LMR-RED Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSREDMR08	43.00
10" LMR-RED Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSREDMR10	70.00
12" LMR-RED Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSREDMR12	92.00
8" LMR-PLUS Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSPLSMR08	33.00
10" LMR-PLUS Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSPLSMR10	54.00
12" LMR-PLUS Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSPLSMR12	70.00
8" LMR-FWL Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSFWLMR08	37.00
10" LMR-FWL Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSFWLMR10	60.00
12" LMR-FWL Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSFWLMR12	79.00
8" LMR-FNL Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSFNLMR08	29.00
10" LMR-FNL Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSFNLMR10	47.00
12" LMR-FNL Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSFNLMR12	61.00
8" LMR-DBN Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSDBNMR08	33.00
10" LMR-DBN Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSDBNMR10	54.00
12" LMR-DBN Metalized Rubber Backed Polishing Pad - 5 Pack	METSPADSDBNMR12	70.00
8" LMR-SUPREME Metalized Rubber Backed Polishing Pad, Chem. Resistant-5 Pack	METSPADSSUPMR08	123.00
10" LMR-SUPREME Metalized Rubber Backed Polishing Pad, Chem. Resistant-5 Pack	METSPADSSUPMR10	215.00
12" LMR-SUPREME Metalized Rubber Backed Polishing Pad, Chem. Resistant-5 Pack	METSPADSSUPMR12	245.00

GRINDING & POLISHING

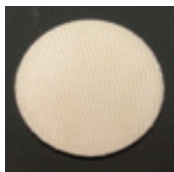
NEW

LMA SERIES POLISHING CLOTHS & PADS WITH PSA BACKING

MADE IN THE USA WITH THE HIGHEST QUALITY MATERIALS!

Made with the same pad materials as the LMB & LMR series pads, but with PSA backing.

Available in all popular pad types and sizes for easy conversion to the LAPMASTER LMA Ssystem!



LMA-HGN Hard woven cloth pad used to replace some rough grinding steps when used with polycrystalline diamond.
Use with diamond 6 micron and up.
Most effective with 15 micron and up.



LMA-PLUS Synthetic nap polishing cloth specifically designed for sintered carbides and steels. For use with all micron sizes.



LMA-PANW Napless, non-woven textile. Excellent for flatness and edge retention on a wide range of materials; ferrous and non-ferrous metals, ceramics, PCB, minerals among others.
Use with diamond 15 - 1 micron.



LMA-FWL A special woven 100% wool polishing pad. Used to polish ferrous metals, non-ferrous metals and polymers.
Use with diamond 9 - 1 micron.



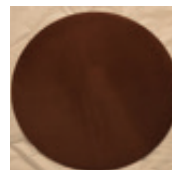
LMA-GLD Woven acetate polishing pad. Used for fine grinding and polishing of ferrous metals, non-ferrous metals, plastics and coatings.
Used with diamond 9 - 3 micron.



LMA-FNL A final polishing cloth with a medium rayon nap. Excellent for final polishing on all materials with diamond or alumina.
Use with diamond or alumina 5 - 0.02 micron.



LMA-ASFL Silk style polishing cloth used to produce mirror surfaces on ferrous and non-ferrous, and microelectronics. Best results obtained with 3-micron diamond and finer.
Use diamond 9 - 1 micron.



LMA-DBN A final polishing cloth with a short synthetic nap. Excellent for final polishing on all materials with diamond or alumina.
Use with diamond or alumina 5 - 0.02 micron.



LMA-RED Woven wool felt polishing pad. For polishing ferrous metals with aluminas less than 9 micron particle size.



LMA-SUPREME A long life, chemical resistant (CHEM), polyurethane polishing pad. Excellent for final polishing with alumina or colloidal silica. Most effective during chemicalmechanical polishing of soft non-ferrous materials.
Use with alumina or colloidal silica ,1 - 0.02 micron.

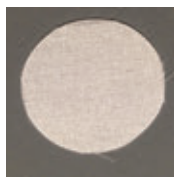
POLISHING CLOTHS & PADS WITH PSA BACKING

DESCRIPTION	PART NUMBER	PRICE
8" LMA-HGN PSA Backed Polishing Pad - 10 Pack	METSPADSHNYA008	69.00
10" LMA-HGN PSA Backed Polishing Pad - 10 Pack	METSPADSHNYA010	93.00
12" LMA-HGN PSA Backed Polishing Pad - 10 Pack	METSPADSHNYA012	115.00
8" LMA-PANW PSA Backed Polishing Pad - 10 Pack	METSPADSPANAA008	45.00
10" LMA-PANW PSA Backed Polishing Pad - 10 Pack	METSPADSPANAA010	66.00
12" LMA-PANW PSA Backed Polishing Pad - 10 Pack	METSPADSPANAA012	79.00
8" LMA-GLD PSA Backed Polishing Pad - 10 Pack	METSPADSGLDA008	66.00
10" LMA-GLD PSA Backed Polishing Pad - 10 Pack	METSPADSGLDA010	99.00
12" LMA-GLD PSA Backed Polishing Pad - 10 Pack	METSPADSGLDA012	139.00
8" LMA-ASFL PSA Backed Polishing Pad - 10 Pack	METSPADSASLA008	79.00
10" LMA-ASFL PSA Backed Polishing Pad - 10 Pack	METSPADSASLA010	110.00
12" LMA-ASFL PSA Backed Polishing Pad - 10 Pack	METSPADSASLA012	159.00
8" LMA-RED PSA Backed Polishing Pad - 10 Pack	METSPADSBILRA008	45.00
10" LMA-RED PSA Backed Polishing Pad - 10 Pack	METSPADSBILRA010	75.00
12" LMA-RED PSA Backed Polishing Pad - 10 Pack	METSPADSBILRA012	105.00
8" LMA-PLUS PSA Backed Polishing Pad - 10 Pack	METSPADSPLSA008	45.00
10" LMA-PLUS PSA Backed Polishing Pad - 10 Pack	METSPADSPLSA010	75.00
12" LMA-PLUS PSA Backed Polishing Pad - 10 Pack	METSPADSPLSA012	100.00
8" LMA-FWL PSA Backed Polishing Pad - 10 Pack	METSPADSFWLA008	84.00
10" LMA-FWL PSA Backed Polishing Pad - 10 Pack	METSPADSFWLA010	126.00
12" LMA-FWL PSA Backed Polishing Pad - 10 Pack	METSPADSFWLA012	174.00
8" LMA-FNL PSA Backed Polishing Pad - 10 Pack	METSPADSBRNA008	39.00
10" LMA-FNL PSA Backed Polishing Pad - 10 Pack	METSPADSBRNA010	62.00
12" LMA-FNL PSA Backed Polishing Pad - 10 Pack	METSPADSBRNA012	83.00
8" LMA-DBN PSA Backed Polishing Pad - 10 Pack	METSPADSDBNA008	45.00
10" LMA-DBN PSA Backed Polishing Pad - 10 Pack	METSPADSDBNA010	75.00
12" LMA-DBN PSA Backed Polishing Pad - 10 Pack	METSPADSDBNA012	100.00
8" LMA-SUPREME PSA Backed Polishing Pad, Chem. Resistant - 10 Pack	METSPADSCHMA008	140.00
10" LMA-SUPREME PSA Backed Polishing Pad, Chem. Resistant- 10 Pack	METSPADSCHMA010	220.00
12" LMA-SUPREME PSA Backed Polishing Pad, Chem. Resistant- 10 Pack	METSPADSCHMA012	336.00

GRINDING & POLISHING

POLISHING CLOTHS & PADS

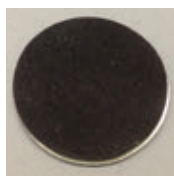
Lapmaster Polishing Pads are offered in a wide range of sizes and are made from different types of materials to accommodate any polishing application, including Metallographic, petrographic, fiber optics, and many more.



SILK Recommended for rough polishing with diamond. Excellent for friable materials such as coal and petrographic samples. Available with plain backing only.



NTR A soft napped final polishing cloth best used with 6-micron diamond and finer. Available with PSA backing only.



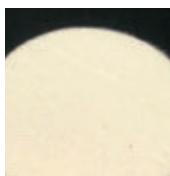
LAPMASTER SUPREME A long life, chemical resistant, polyurethane polishing pad. Excellent for final polishing with alumina or colloidal silica. Available with PSA backing only.



MICRO LP 100% pure wool. Recommended for intermediate and final polishing stages with diamond or alumina. Available with PSA backing only.



ASR Synthetic silk mounted on a rigid backing. Best results obtained with diamond. Available with PSA backing only.



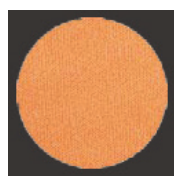
NYLON Napless nylon weave provides excellent finish on most materials. Excellent for flatness and edge retention. Available with plain and PSA backing.



PAN-W Napless, non-woven textile. Excellent for flatness and edge retention. Available with PSA backing only.



ASFL Silk style polishing cloth used to produce mirror surfaces. Best results obtained with 3-micron diamond and finer. Available with PSA backing only.



GOLD CLOTH Extremely durable, uniquely woven nylon, for use with diamond, 15-3 micron. Produces excellent flatness and provides a very high material removal rate on a wide variety of materials.



VELPOL A short nap synthetic velvet. Recommended for final polishing with diamond, alumina or colloidal silica. Available with PSA backing only.



ASF Similar to ASFL, but with a thicker, softer backing. Available with PSA backing only.



COTTON Recommended for rough polishing with diamond compound. Available with plain backing only.



FINAL POLISHING CLOTH A medium nap rayon cloth. Excellent for final polishing with diamond or alumina. Available with plain and PSA backing



SELVYT Medium nap cotton cloth. Excellent for intermediate or final polishing with diamond. Available with plain backing only.

GRINDING & POLISHING

POLISHING CLOTHS & PADS



BILLIARD 100% virgin wool fabric with uniform sheared pile for general rough polishing with Aluminum Oxide powders and suspensions for steels and other ferrous based materials. Available with PSA backing only.



NYLON FINAL A Fine, short napped high density synthetic cloth. Excellent for final polishing with diamond and colloidal silica.



RED FELT 100% wool. Used on a wide variety of materials. Recommended for intermediate or final polishing with diamond.



IMPERIAL Final polish cloth recommended for softer materials. Excellent with colloidal silica and aluminas.



HEAVY NYLON Hard woven cloth pad used to replace some rough grinding steps when used with polycrystalline diamond.



FINE WOOL 100% wool cloth. Finer weave for final polishing with diamond.



SATIN Durable, synthetic silk style cloth used with diamond for intermediate and final polishing.



BROWN FINAL Durable, short nap synthetic used for final polishing with diamond or alumina.



STAINLESS STEEL DISC Re-usable Stainless metallic plate used with magnet discs or magnetic platens for convenient application and removal any PSA grinding or polishing consumable.



PSA MAGNET DISC Flexible, long lasting magnet disc with PSA backing to adhere to conventional platens.

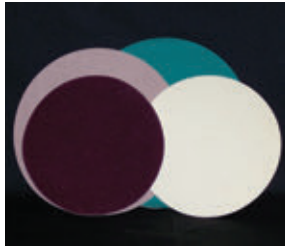
PSA Grinding/Polishing Pad

Re-usable Steel Plate

Flexible PSA Magnet

Polisher Platen

GRINDING & POLISHING



Polishing Pads

POLISHING CLOTHS & PADS

DESCRIPTION	PART NUMBER	PRICE
1" PAN-W PSA Backed Polishing Cloths - 100 Pack	METSPADSPANA001	39.00
2-7/8" PAN-W PSA Backed Polishing Cloths - 100 Pack	METSPADSPANA278	127.00
8" PAN-W PSA Backed Polishing Cloths	METSPADSPANA008	46.00
10" PAN-W PSA Backed Polishing Cloths	METSPADSPANA010	68.00
12" PAN-W PSA Backed Polishing Cloths	METSPADSPANA012	81.00
15" PAN-W PSA Backed Polishing Cloths	METSPADSPANA015	161.00
16" PAN-W PSA Backed Polishing Cloths	METSPADSPANA016	169.00
12" PAN-W Plain Backed Polishing Cloths	METSPADSPANP012	77.00
1" VELPOL PSA Backed Polishing Cloths - 100 Pack	METSPADSVELA001	43.00
2-7/8" VELPOL PSA Backed Polishing Cloths - 100 Pack	METSPADSVELA278	148.00
8" VELPOL PSA Backed Polishing Cloths	METSPADSVELA008	43.00
10" VELPOL PSA Backed Polishing Cloths	METSPADSVELA010	67.00
12" VELPOL PSA Backed Polishing Cloths	METSPADSVELA012	69.00
15" VELPOL PSA Backed Polishing Cloths	METSPADSVELA015	180.00
16" VELPOL PSA Backed Polishing Cloths	METSPADSVELA016	187.00
8" ASR PSA Backed Polishing Cloths	METSPADSASRA008	199.00
10" ASR PSA Backed Polishing Cloths	METSPADSASRA010	263.00
12" ASR PSA Backed Polishing Cloths	METSPADSASRA012	305.00
8" ASFL PSA Backed Polishing Cloths	METSPADSASLA008	81.00
10" ASFL PSA Backed Polishing Cloths	METSPADSASLA010	118.00
12" ASFL PSA Backed Polishing Cloths	METSPADSASLA012	163.00
15" ASFL PSA Backed Polishing Cloths	METSPADSASLA015	214.00
8" ASF PSA Backed Polishing Cloths	METSPADSASFA008	134.00
12" ASF PSA Backed Polishing Cloths	METSPADSASFA012	258.00
15" ASF PSA Backed Polishing Cloths	METSPADSASFA015	323.00
8" NTR PSA Backed Polishing Cloths	METSPADSNTRA008	71.00
10" NTR PSA Backed Polishing Cloths	METSPADSNTRA010	95.00
12" NTR PSA Backed Polishing Cloths	METSPADSNTRA012	133.00
15" NTR PSA Backed Polishing Cloths	METSPADSNTRA015	253.00
10" Silk Plain Backed Polishing Cloths - For an 8" polisher	METSPADSSLKP010	60.00
12" Silk Plain Backed Polishing Cloths - For a 10" Polisher	METSPADSSLKP012	83.00
14" Silk Plain Backed Polishing Cloths - For a 12" Polisher	METSPADSSLKP014	108.00
8" Satin PSA Backed Polishing Cloths	METSPADSSATA008	54.00
10" Satin PSA Backed Polishing Cloths	METSPADSSATA010	86.00
12" Satin PSA Backed Polishing Cloths	METSPADSSATA012	101.00
2-7/8" Nylon PSA Backed Polishing Cloths - 100 Pack	METSPADSNYLA278	87.00
8" Nylon PSA Backed Polishing Cloths	METSPADSNYLA008	57.00
10" Nylon PSA Backed Polishing Cloths	METSPADSNYLA010	82.00
12" Nylon PSA Backed Polishing Cloths	METSPADSNYLA012	127.00
15" Nylon PSA Backed Polishing Cloths	METSPADSNYLA015	168.00
16" Nylon PSA Backed Polishing Cloths	METSPADSNYLA016	186.00
10" Nylon Plain Backed Polishing Cloths	METSPADSNYLP010	59.00
14" Nylon Plain Backed Polishing Cloths	METSPADSNYLP014	100.00

Additional sizes and materials are available upon request.

GRINDING & POLISHING



Polishing Pads

POLISHING CLOTHS & PADS

POLISHING CLOTHS SOLD IN PACKS OF 10

DESCRIPTION	PART NUMBER	PRICE
8" Heavy Nylon PSA Backed Polishing Cloths	METSPADSHNYA008	71.00
10" Heavy Nylon PSA Backed Polishing Cloths	METSPADSHNYA010	95.00
12" Heavy Nylon PSA Backed Polishing Cloths	METSPADSHNYA012	118.00
8" Gold Cloth PSA Backed Polishing Cloths	METSPADSGLDA008	68.00
10" Gold Cloth PSA Backed Polishing Cloths	METSPADSGLDA010	84.00
12" Gold Cloth PSA Backed Polishing Cloths	METSPADSGLDA012	101.00
1" Final Polish Cloth Medium Nap Rayon PSA Backed - 100 Pack	METSPADSFNLA001	39.00
2-7/8" Final Polish Cloth Medium Nap Rayon PSA Backed - 100 Pack	METSPADSFNLA278	141.00
8" Final Polish Cloth Medium Nap Rayon PSA Backed - 10 Pack	METSPADSFNLA008	43.00
10" Final Polish Cloth Medium Nap Rayon PSA Backed - 10 Pack	METSPADSFNLA010	65.00
12" Final Polish Cloth Medium Nap Rayon PSA Backed - 10 Pack	METSPADSFNLA012	98.00
15" Final Polish Cloth Medium Nap Rayon PSA Backed - 10 Pack	METSPADSFNLA015	149.00
16" Final Polish Cloth Medium Nap Rayon PSA Backed - 10 Pack	METSPADSFNLA016	160.00
10" Final Polish Cloth Medium Nap Rayon Plain Backed - 10 Pack	METSPADSFNLP010	49.00
14" Final Polish Cloth Medium Nap Rayon Plain Backed - 10 Pack	METSPADSFNLP014	81.00
8" Brown Final Polish Cloth Short Nap Rayon PSA Backed - 10 Pack	METSPADSBRNA008	40.00
10" Brown Final Polish Cloth Short Nap Rayon PSA Backed - 10 Pack	METSPADSBRNA010	64.00
12" Brown Final Polish Cloth Short Nap Rayon PSA Backed - 10 Pack	METSPADSBRNA012	85.00
15" Brown Final Polish Cloth Short Nap Rayon PSA Backed - 10 Pack	METSPADSBRNA015	145.00
10" Brown Final Polish Cloth Short Nap Rayon Plain Backed - 10 Pack	METSPADSBRNP010	49.00
14" Brown Final Polish Cloth Short Nap Rayon PSA Backed - 10 Pack	METSPADSBRNP014	81.00
8" Nylon Fiber Final Polish PSA Polishing Cloths	METSPADSBLUA008	49.00
10" Nylon Fiber Final Polish PSA Polishing Cloths	METSPADSBLUA010	69.00
12" Nylon Fiber Final Polish PSA Polishing Cloths	METSPADSBLUA012	97.00
8" Red Felt PSA Polishing Cloths	METSPADSREDA008	127.00
10" Red Felt PSA Polishing Cloths	METSPADSREDA010	172.00
12" Red Felt PSA Polishing Cloths	METSPADSREDA012	243.00
10" Red Felt Plain Backed Polishing Cloths	METSPADSREDP010	144.00
14" Red Felt Plain Backed Polishing Cloths	METSPADSREDP014	243.00
10" Selvyt Plain Backed Polishing Cloths	METSPADSSELP010	64.00
14" Selvyt Plain Backed Polishing Cloths	METSPADSSELP014	122.00
8" Lapmaster Supreme PSA Backed Polishing Cloths- Chemical Resistant	METSPADSSUPA008	140.00
10" Lapmaster Supreme PSA Backed Polishing Cloths- Chemical Resistant	METSPADSSUPA010	206.00
12" Lapmaster Supreme PSA Backed Polishing Cloths- Chemical Resistant	METSPADSSUPA012	318.00
15" Lapmaster Supreme PSA Backed Polishing Cloths- Chemical Resistant	METSPADSSUPA015	697.00
10" Cotton Plain Backed Polishing Cloths	METSPADSCOTP010	48.00
14" Cotton Plain Backed Polishing Cloths	METSPADSCOTP014	84.00
8" Billiard PSA Backed Polishing Cloths	METSPADSBILA008	73.00
10" Billiard PSA Backed Polishing Cloths	METSPADSBILA010	115.00
12" Billiard PSA Backed Polishing Cloths	METSPADSBILA012	149.00
15" Billiard PSA Backed Polishing Cloths	METSPADSBILA015	298.00

Additional sizes and materials are available upon request.

GRINDING & POLISHING



Polishing Pads

POLISHING CLOTHS & PADS

POLISHING CLOTHS SOLD IN PACKS OF 10

DESCRIPTION	PART NUMBER	PRICE
10" Billiard Plain Backed Polishing Cloths	METSPADSBILP010	73.00
14" Billiard Plain Backed Polishing Cloths	METSPADSBILP014	125.00
8" Micro LP PSA Backed Polishing Cloths	METSPADSMICA008	57.00
12" Micro LP PSA Backed Polishing Cloths	METSPADSMICA012	146.00
15" Micro LP PSA Backed Polishing Cloths	METSPADSMICA015	219.00
8" Imperial PSA Backed Polishing Cloths	METSPADSIMPA008	41.00
10" Imperial PSA Backed Polishing Cloths	METSPADSIMPA010	58.00
12" Imperial PSA Backed Polishing Cloths	METSPADSIMPA012	79.00
10" Imperial Plain Backed Polishing Cloths	METSPADSIMPP010	48.00
8" Fine Wool PSA Backed Polishing Cloths	METSPADSFWLA008	86.00
10" Fine Wool PSA Backed Polishing Cloths	METSPADSFWLA010	129.00
12" Fine Wool PSA Backed Polishing Cloths	METSPADSFWLA012	178.00
15" Fine Wool PSA Backed Polishing Cloths	METSPADSFWLA015	295.00
10" Fine Wool Plain Backed Polishing Cloths	METSPADSFWLP010	91.00
14" Fine Wool Plain Backed Polishing Cloths	METSPADSFWLP014	171.00

Additional sizes and materials are available upon request.



Magnetic Mounting

STAINLESS STEEL DISC

A stainless, metallic plate for use with our magnetic discs or a magnetic platen for quick and convenient application and removal of any PSA consumable.

FLEXIBLE MAGNETIC

DISCS

These flexible, long lasting magnet discs have a PSA backing and are used to convert a conventional platen to a magnetic platen for use with our stainless steel disc.

GRIT GRABBERS

Grit Grabbers are a reusable PSA backing used to affix plain backed Abrasive Discs and Polishing Cloths to our magnetic mounting system or your existing platen.

MAGNETIC MOUNTING SYSTEMS

REUSABLE SS BACKING DISC

DESCRIPTION	PART NUMBER	PRICE
8" PSA Magnetic Disc To Covert A Standard Polishing Plate To Magnetic	METSMAGSA080000	28.00
10" PSA Magnetic Disc To Covert A Standard Polishing Plate To Magnetic	METSMAGSA100000	41.00
12" PSA Magnetic Disc To Covert A Standard Polishing Plate To Magnetic	METSMAGSA120000	52.00
8" SS Disc for Mounting Polishing Cloths & Abrasive Discs	METSSTSTMAG0008	59.00
10" SS Disc for Mounting Polishing Cloths & Abrasive Discs	METSSTSTMAG0010	65.00
12" SS Disc for Mounting Polishing Cloths & Abrasive Discs	METSSTSTMAG0012	72.00
8" Teflon Coated SS Disc for Mounting Polishing Cloths & Abrasive Discs	METSSTSTTEF0008	80.00
10" Teflon Coated SS Disc for Mounting Polishing Cloths & Abrasive Discs	METSSTSTTEF0010	90.00
12" Teflon Coated SS Disc for Mounting Polishing Cloths & Abrasive Discs	METSSTSTTEF0012	100.00

GRIT GRABBERS (REPLACEABLE PSA BACKING)

SOLD IN PACKS OF 10

DESCRIPTION	PART NUMBER	PRICE
8" Double Sided PSA Disc For Attaching Plain Back Abrasive Discs	METSGRAB0080000	40.00
10" Double Sided PSA Disc For Attaching Plain Back Abrasive Discs	METSGRAB0100000	68.00
12" Double Sided PSA Disc For Attaching Plain Back Abrasive Discs	METSGRAB0120000	80.00

PSA Grinding/Polishing Pad

Re-usable Steel Plate

Flexible PSA Magnet

Polisher Platen

GRINDING & POLISHING



Diamond Pastes

Lapmaster's diamond compounds are formulated from the highest quality diamond. The tight tolerance particle size distribution guarantees consistent results. The water/oil soluble paste not only cleans easily, but also works well with most lubricants. Packaged in easy to use 5 and 18 gram syringes.

DIAMOND COMPOUNDS

MONOCRYSTALLINE DIAMOND COMPOUND

DESCRIPTION	PART NUMBER	PRICE
5 Gram Syringe - 1/10 Micron Diamond Compound	METSDIAPS05K/10	14.00
5 Gram Syringe - 1/4 Micron Diamond Compound	METSDIAPS05K1/4	14.00
5 Gram Syringe - 1/2 Micron Diamond Compound	METSDIAPS05K1/2	14.00
5 Gram Syringe - 1 Micron Diamond Compound	METSDIAPS05K001	9.00
5 Gram Syringe - 3 Micron Diamond Compound	METSDIAPS05K003	18.00
5 Gram Syringe - 6 Micron Diamond Compound	METSDIAPS05K006	19.00
5 Gram Syringe - 9 Micron Diamond Compound	METSDIAPS05K009	23.00
5 Gram Syringe - 15 Micron Diamond Compound	METSDIAPS05K015	21.00
5 Gram Syringe - 30 Micron Diamond Compound	METSDIAPS05K030	21.00
5 Gram Syringe - 45 Micron Diamond Compound	METSDIAPS05K045	20.00
18 Gram Syringe - 1/10 Micron Diamond Compound	METSDIAPS18K/10	35.00
18 Gram Syringe - 1/4 Micron Diamond Compound	METSDIAPS18K1/4	37.00
18 Gram Syringe - 1/2 Micron Diamond Compound	METSDIAPS18K1/2	45.00
18 Gram Syringe - 1 Micron Diamond Compound	METSDIAPS18K001	23.00
18 Gram Syringe - 3 Micron Diamond Compound	METSDIAPS18K003	62.00
18 Gram Syringe - 6 Micron Diamond Compound	METSDIAPS18K006	68.00
18 Gram Syringe - 9 Micron Diamond Compound	METSDIAPS18K009	78.00
18 Gram Syringe - 15 Micron Diamond Compound	METSDIAPS18K015	75.00
18 Gram Syringe - 30 Micron Diamond Compound	METSDIAPS18K030	77.00
18 Gram Syringe - 45 Micron Diamond Compound	METSDIAPS18K045	77.00

POLYCRYSTALLINE DIAMOND COMPOUND

DESCRIPTION	PART NUMBER	PRICE
5 Gram Syringe - 1/10 Micron Diamond Compound	METSDPCDS05K/10	24.00
5 Gram Syringe - 1/4 Micron Diamond Compound	METSDPCDS05K1/4	24.00
5 Gram Syringe - 1/2 Micron Diamond Compound	METSDPCDS05K1/2	24.00
5 Gram Syringe - 1 Micron Diamond Compound	METSDPCDS05K001	24.00
5 Gram Syringe - 3 Micron Diamond Compound	METSDPCDS05K003	40.00
5 Gram Syringe - 6 Micron Diamond Compound	METSDPCDS05K006	46.00
5 Gram Syringe - 9 Micron Diamond Compound	METSDPCDS05K009	51.00
5 Gram Syringe - 15 Micron Diamond Compound	METSDPCDS05K015	51.00
5 Gram Syringe - 30 Micron Diamond Compound	METSDPCDS05K030	51.00
18 Gram Syringe - 1 Micron Diamond Compound	METSDPCDS18KD01	74.00
18 Gram Syringe - 3 Micron Diamond Compound	METSDPCDS18KD03	126.00
18 Gram Syringe - 6 Micron Diamond Compound	METSDPCDS18KD06	130.00
18 Gram Syringe - 9 Micron Diamond Compound	METSDPCDS18KD09	158.00
18 Gram Syringe - 15 Micron Diamond Compound	METSDPCDS18KD15	158.00

GRINDING & POLISHING



Diamond Lubricants

DIAMOND LUBRICANTS & EXTENDERS

BLUE LUBE

Low viscosity, alcohol based diamond lubricant. Used to accommodate diamond to cut aggressively and when water based products cannot be used. Popular with our Diamond Aerosol Sprays. Packaged in pint and gallon containers.

RED LUBE

High viscosity, glycol based diamond lubricant. The high viscosity will reduce the aggressiveness of the diamond cutting to accommodate more delicate materials. Packaged in pint and gallon containers.

WATER BASED LUBRICANT

Clear, low viscosity, glycol based diamond lubricant. Aggressive diamond cutting and easy cleaning. Packaged in quart and gallon containers.

OIL BASED LUBRICANT

Purple, medium viscosity, petroleum and glycol based diamond lubricant. A product of our Lapping/Polishing production machine division. Offers a more reflective finish when used with diamond. Packaged in 500ml, 2.5 liter and 5 liter containers.

DESCRIPTION	PART NUMBER	PRICE
Blue Lube - 16 oz. (alcohol-based)	METSLUBEFLUPINT	16.00
Blue Lube - 1 gallon (alcohol-based)	METSLUBEFLUGALL	47.00
Red Lube - 16 oz. (Glycol-based)	METSLUBEREDPINT	16.00
Red Lube - 1 gallon (Glycol-based)	METSLUBEREDGALL	47.00
Water Based lubricant - 32 oz.	METSLUBEWAT0032	19.00
Water Based lubricant - 1 gallon	METSLUBEWAT0128	37.00
Oil Based Lubricant - 500ml	LAP5LUBP5000002	13.00
Oil Based Lubricant - 2.5 litre	LAP5LUBP2.50001	25.00
Oil Based Lubricant - 5.0 litre	LAP5LUBP5.00003	45.00



Diamond Aerosols

DIAMOND AEROSOL SPRAY 5oz. CAN

DIAMOND SPRAY

The diamond aerosol spray consists of high performance polycrystalline diamond in a quick evaporating carrier. The propellant is ozone safe and an inverted spray top makes dispensing to the cloth easy.

DESCRIPTION	PART NUMBER	PRICE
1/4 Micron Diamond Aerosol Spray - Polycrystalline	METS DSPY00001/4	80.00
1 Micron Diamond Aerosol Spray - Polycrystalline	METS DSPY0000001	80.00
3 Micron Diamond Aerosol Spray - Polycrystalline	METS DSPY0000003	80.00
6 Micron Diamond Aerosol Spray - Polycrystalline	METS DSPY0000006	101.00
9 Micron Diamond Aerosol Spray - Polycrystalline	METS DSPY0000009	101.00
15 Micron Diamond Aerosol Spray - Polycrystalline	METS DSPY0000015	107.00
30 Micron Diamond Aerosol Spray - Polycrystalline	METS DSPY0000030	107.00

GRINDING & POLISHING



Diamond Suspensions

Lapmaster's diamond suspensions are low viscosity suspensions designed for high stock removal rates and precision finishes. They are water soluble, clean easily, and will not clog dispensing lines.

Diamond suspensions are available with either polycrystalline or monocrystalline diamond. Polycrystalline diamond has up to 300% more surface area than monocrystalline diamond resulting in much higher stock removal rates and finer scratch patterns. Polycrystalline diamond is recommended for hard materials, brittle coatings, or sample composed of mixed hardness.

DIAMOND SUSPENSIONS

POLYCRYSTALLINE DIAMOND SUSPENSION

DESCRIPTION	PART NUMBER	PRICE
1/10 Micron Polycrystalline Suspension - 8 oz.W/ Pump Sprayer	METSUSUSPCD1/10	41.00
1/4 Micron Polycrystalline Suspension - 8 oz.W/ Pump Sprayer	METSUSUSPCD01/4	41.00
1/2 Micron Polycrystalline Suspension - 8 oz. W/ Pump Sprayer	METSUSUSPCD01/2	41.00
1 Micron Polycrystalline Suspension - 8 oz.W/ Pump Sprayer	METSUSUSPCD0001	39.00
3 Micron Polycrystalline Suspension - 8 oz.W/ Pump Sprayer	METSUSUSPCD0003	56.00
6 Micron Polycrystalline Suspension - 8 oz.W/ Pump Sprayer	METSUSUSPCD0006	62.00
9 Micron Polycrystalline Suspension - 8 oz.W/ Pump Sprayer	METSUSUSPCD0009	64.00
15 Micron Polycrystalline Suspension - 8 oz.W/ Pump Sprayer	METSUSUSPCD0015	64.00
1/20 Micron Polycrystalline Suspension - 16 oz	METSUSUSPCDP/20	147.00
1/10 Micron Polycrystalline Suspension - 16 oz	METSUSUSPCDP/10	72.00
1/4 Micron Polycrystalline Suspension - 16 oz	METSUSUSPCDP1/4	68.00
1/2 Micron Polycrystalline Suspension - 16 oz	METSUSUSPCDP1/2	68.00
1 Micron Polycrystalline Suspension - 16 oz	METSUSUSPCDP001	68.00
3 Micron Polycrystalline Suspension - 16 oz	METSUSUSPCDP003	92.00
6 Micron Polycrystalline Suspension - 16 oz	METSUSUSPCDP006	111.00
9 Micron Polycrystalline Suspension - 16 oz	METSUSUSPCDP009	115.00
15 Micron Polycrystalline Suspension - 16 oz	METSUSUSPCDP015	115.00
1 Micron Polycrystalline Suspension - 1gallon	METSUSUSPCDGL01	325.00
3 Micron Polycrystalline Suspension - 1gallon	METSUSUSPCDGL03	599.00
6 Micron Polycrystalline Suspension - 1gallon	METSUSUSPCDGL06	770.00
9 Micron Polycrystalline Suspension - 1gallon	METSUSUSPCDGL09	799.00
15 Micron Polycrystalline Suspension - 1gallon	METSUSUSPCDGL15	799.00

MONOCRYSTALLINE DIAMOND SUSPENSION

DESCRIPTION	PART NUMBER	PRICE
1/4 Micron Monocrystalline Suspension - 8 oz. With Pump Sprayer	METSUSUSMNO01/4	25.00
1/2 Micron Monocrystalline Suspension - 8 oz. With Pump Sprayer	METSUSUSMNO01/2	25.00
1 Micron Monocrystalline Suspension - 8 oz. With Pump Sprayer	METSUSUSMNO0001	23.00
3 Micron Monocrystalline Suspension - 8 oz. With Pump Sprayer	METSUSUSMNO0003	34.00
6 Micron Monocrystalline Suspension - 8 oz. With Pump Sprayer	METSUSUSMNO0006	37.00
9 Micron Monocrystalline Suspension - 8 oz. With Pump Sprayer	METSUSUSMNO0009	39.00
15 Micron Monocrystalline Suspension - 8 oz. With Pump Sprayer	METSUSUSMNO0015	45.00
1/4 Micron Monocrystalline Suspension - 16 oz	METSUSUSMNO P1/4	45.00
1/2 Micron Monocrystalline Suspension - 16 oz	METSUSUSMNO P1/2	45.00
1 Micron Monocrystalline Suspension - 16 oz	METSUSUSMNO P001	45.00
3 Micron Monocrystalline Suspension - 16 oz	METSUSUSMNO P003	62.00
6 Micron Monocrystalline Suspension - 16 oz	METSUSUSMNO P006	70.00
9 Micron Monocrystalline Suspension - 16 oz	METSUSUSMNO P009	75.00
15 Micron Monocrystalline Suspension - 16 oz	METSUSUSMNO P015	75.00
1 Micron Monocrystalline Suspension - 1gallon	METSUSUSMNO GL01	239.00
3 Micron Monocrystalline Suspension - 1gallon	METSUSUSMNO GL03	355.00
6 Micron Monocrystalline Suspension - 1gallon	METSUSUSMNO GL06	440.00
9 Micron Monocrystalline Suspension - 1gallon	METSUSUSMNO GL09	470.00
15 Micron Monocrystalline Suspension - 1gallon	METSUSUSMNO GL15	470.00



Abrasive
Powders & Slurries

ABRASIVE POWDERS & SLURRIES

ALUMINA POWDER

Lapmaster's alumina powders are high purity, polishing powders designed for final polishing of most metallographic specimens. They are available in two different versions – standard and deagglomerated. The standard version is suggested for most applications. The deagglomerated version goes through an extra milling procedure to breakdown agglomerates, and is recommended for final polishing of more critical applications. Both versions are available in three micron sizes: 0.05, 0.3 and 1.0 micron.

DESCRIPTION	PART NUMBER	PRICE
0.05 Micron Alumina Powder - 1 lb.	METSALPD.0501LB	75.00
0.3 Micron Alumina Powder - 1 lb.	METSALPD0.301LB	86.00
1.0 Micron Alumina Powder - 1 lb.	METSALPD1.001LB	80.00
0.05 Micron Alumina Powder - 5 lb.	METSALPD.0505LB	277.00
0.3 Micron Alumina Powder - 5 lb.	METSALPD0.305LB	326.00
1.0 Micron Alumina Powder - 5 lb.	METSALPD1.005LB	339.00
0.05 Micron Deagglomerated Alumina Powder - 1 lb.	METSALPD.05D1LB	84.00
0.3 Micron Deagglomerated Alumina Powder - 1 lb.	METSALPD0.3D1LB	84.00
1.0 Micron Deagglomerated Alumina Powder - 1 lb.	METSALPD1.0D1LB	84.00
0.05 Micron Deagglomerated Alumina Powder - 5 lb.	METSALPD.05D5LB	354.00
0.3 Micron Deagglomerated Alumina Powder - 5 lb.	METSALPD0.3D5LB	347.00
1.0 Micron Deagglomerated Alumina Powder - 5lb	METSALPD1.0D5LB	337.00

ALUMINA SLURRY

Lapmaster' alumina slurry is formulated from the same high purity alumina used in our powders. These ready made slurries are not only easy to use, but guarantee consistent performance from lot to lot. Available in 0.05, 0.3 and 1.0 micron sizes, they are packaged in convenient to use 6 oz. Bottles or gallon containers.

DESCRIPTION	PART NUMBER	PRICE
0.05 Micron Alumina Slurry - 6 oz.	METSALSY.0506OZ	23.00
0.3 Micron Alumina Slurry - 6 oz.	METSALSY0.306OZ	23.00
1.0 Micron Alumina Slurry - 6 oz.	METSALSY1.006OZ	23.00
0.05 Micron Alumina Slurry - 1 Gallon	METSALSY.050GAL	240.00
0.3 Micron Alumina Slurry - 1 Gallon	METSALSY0.30GAL	240.00
1.0 Micron Alumina Slurry - 1 Gallon	METSALSY1.00GAL	240.00
5.0 Micron Alumina Slurry - 1 Gallon	METSALSY5.00GAL	277.00



Abrasive
Powders & Slurries

ABRASIVE POWDERS & SLURRIES

POLISHING SUSPENSIONS

COLLOIDAL SILICA

Colloidal silica is an excellent polishing solution for producing scratch-free specimens. It employs a chemical/mechanical action which delivers perfect finishes on many materials. To achieve these fine finishes, the surface of the material being polished is chemically altered while very fine silica particles ranging from 0.02 – 0.06 micron remove the altered layer. Lapmaster's colloidal silica is non-freezing and non-drying thus eliminating many of the problems associated with other colloidal silica. The non-freezing characteristic allows the material to be shipped in cold weather without fear of the silica particles falling out of suspension. The non-drying characteristic allows a polishing cloth to be reused after drying out preventing the dried silica particles from re-crystallizing and forming large scratch producing agglomerates.

COLLOIDAL ALUMINA

Colloidal alumina is an acidic dispersion which uses a chemical/mechanical action to produce superior surfaces. Outstanding results have been achieved on pure metals such as copper, nickel, tungsten, and beryllium, as well as steel and aluminum. Lapmaster's colloidal alumina is offered in 0.10 micron size.

DESCRIPTION	PART NUMBER	PRICE
Colloidal Silica - 6 oz.	METSCOLLSIL0006	18.00
Colloidal Silica - 32 oz.	METSCOLLSIL0032	56.00
Colloidal Silica - 1 gallon	METSCOLLSIL0128	156.00
Colloidal Silica - 5 gallon	METSCOLLSIL0640	590.00
Colloidal Alumina - 6 oz.	METSCOLLALM0006	33.00
Colloidal Alumina - 32 oz.	METSCOLLALM0032	79.00
Colloidal Alumina - 1 gallon	METSCOLLALMGALL	231.00
Colloidal Alumina - 1 gallon	METSCOLLALM05GA	277.00

HARDNESS TEST BLOCKS



ROCKWELL HARDNESS TEST BLOCKS

COMPLIANT WITH ASTM E-18-CURRENT*

DESCRIPTION	PART NUMBER	PRICE
HRC Low-Range Test Block 20-30	METSHDNSBLK0001	71.00
HRC Mid-Range Test Block 35-55	METSHDNSBLK0002	71.00
HRC High-Range Test Block 59-65	METSHDNSBLK0003	71.00
HRBW Test Block 40-59	METSHDNSBLK0004	71.00
HRBW Test Block 60-79	METSHDNSBLK0005	71.00
HRBW Test Block 80-100	METSHDNSBLK0006	71.00
HR30N Low-Range Test Block 40-50	METSHDNSBLK0007	71.00
HR30N Mid-Range Test Block 55-73	METSHDNSBLK0008	71.00
HR30N High-Range Test Block 75-80	METSHDNSBLK0009	71.00
HR30TW Test Block 43-56	METSHDNSBLK0010	71.00
HR30TW Test Block 57-70	METSHDNSBLK0011	71.00
HR30TW Test Block 70.1 - 82	METSHDNSBLK0012	71.00

*Other test blocks are available; consult your LAPMASTER representative.
Part numbers, specifications, and prices are subject to change.

COMPLIANT WITH ASTM E-18-05*

DESCRIPTION	PART NUMBER	PRICE
HRC Low-Range Test Block 20-30	METSHDNSBLK0013	71.00
HRC Mid-Range Test Block 35-55	METSHDNSBLK0014	71.00
HRC High-Range Test Block 59-65	METSHDNSBLK0015	71.00
HRB Low-Range Test Block 40-59	METSHDNSBLK0016	71.00
HRB Mid-Range Test Block 60-79	METSHDNSBLK0017	71.00
HRB High-Range Test Block 80-100	METSHDNSBLK0018	71.00
HR30N Low-Range Test Block 40-50	METSHDNSBLK0019	71.00
HR30N Mid-Range Test Block 55-73	METSHDNSBLK0020	71.00
HR30N High-Range Test Block 75-80	METSHDNSBLK0021	71.00
HR30T Low-Range Test Block 43-56	METSHDNSBLK0022	71.00
HR30T Mid-Range Test Block 57-70	METSHDNSBLK0023	71.00
HR30T High-Range Test Block 70-82	METSHDNSBLK0024	71.00

*Other test blocks are available; consult your LAPMASTER representative.
Part numbers, specifications, and prices are subject to change.

MICROHARDNESS TEST BLOCKS

DESCRIPTION	PART NUMBER	PRICE
Test Block, Vickers (500 gf, 700 HV range)	METSHDNSBLK0025	525.00
Test Block, Knoop (500 gf, 700 HK range)	METSHDNSBLK0026	525.00
Test Block, Vickers (300 gf, 700 HV range)	METSHDNSBLK0027	525.00
Test Block, Knoop (300 gf, 700 HK range)	METSHDNSBLK0028	525.00
Test Block, Vickers (500 gf, 500 HV range)	METSHDNSBLK0029	525.00
Test Block, Knoop (500 gf, 500 HK range)	METSHDNSBLK0030	525.00

*Other test blocks are available; consult your LAPMASTER representative.
**Part numbers, specifications, and prices are subject to change.

ULTRASONIC CLEANING SOLUTIONS

FORMULATED CLEANING CONCENTRATES & SOLUTIONS

DESCRIPTION	PART NUMBER	PRICE
OC- Optical Cleaner (1 Gallon)	LAP5UCSOC000001	38.00
OC- Optical Cleaner (5 Gallon Pail)	LAP5UCSOC000005	202.00
BC- Buffing Compound Remover (1 Gallon)	LAP5UCSBC000001	35.00
BC- Buffing Compound Remover (5 Gallon Pail)	LAP5UCSBC000005	139.00
OR - Oxide Remover (1 Gallon)	LAP5UCSOR000001	36.00
EC - Electronic Cleaner (1 Gallon)	LAP5UCSEC000001	30.00
EC - Electronic Cleaner (5 Gallon Pail)	LAP5UCSEC000005	121.00
GP- General Purpose Cleaner (1 Gallon)	LAP5UCSGP000001	30.00
IS- Industrial Strength Cleaner (1 Gallon)	LAP5UCSIS000001	31.00
IS- Industrial Strength Cleaner (5 Gallon Pail)	LAP5UCSIS000005	140.00
MC1- Metal Cleaner (1 Gallon)	LAP5UCSMC100001	30.00
MC1- Metal Cleaner (5 Gallon Pail)	LAP5UCSMC100005	154.00
MC2- Metal Cleaner (1 Gallon)	LAP5UCSMC200001	30.00
MC2- Metal Cleaner (5 Gallon Pail)	LAP5UCSMC200005	154.00
MC3- Metal Cleaner (1 Gallon)	LAP5UCSMC300001	30.00
MC3- Metal Cleaner (5 Gallon Pail)	LAP5UCSMC300005	154.00
RS- Rust Stripper (35 lb Pail)	LAP5UCSRS000035	106.00
RS- Rust Stripper (175 lb Drum)	LAP5UCSRS000175	406.00
RS- Rust Stripper (485 lb Drum)	LAP5UCSRS000485	1,062.00

GRIT CONVERSION CHART

DEFINITIONS

ANSI

American National Standards Institute.

FEPA

Federation of European Producers of Abrasives. The FEPA distinguishes between grain for sanding paper (FEPA P) and grain for sharpening stones or wheels (FEPA F). The decisive factor for comparison is FEPA F. FEPA P is only used for sanding paper.

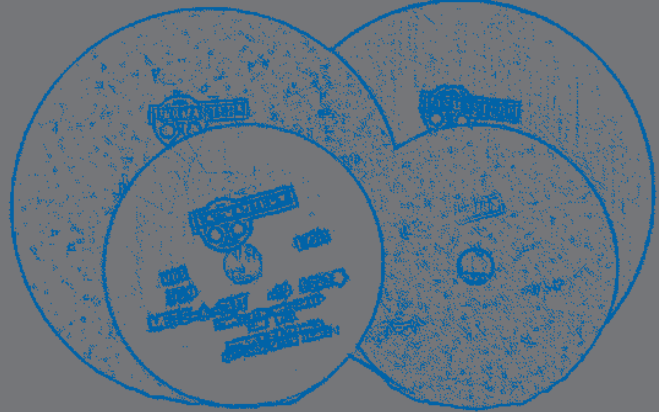
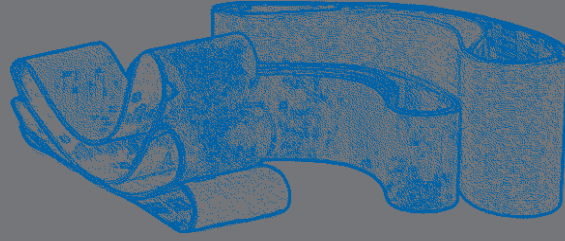
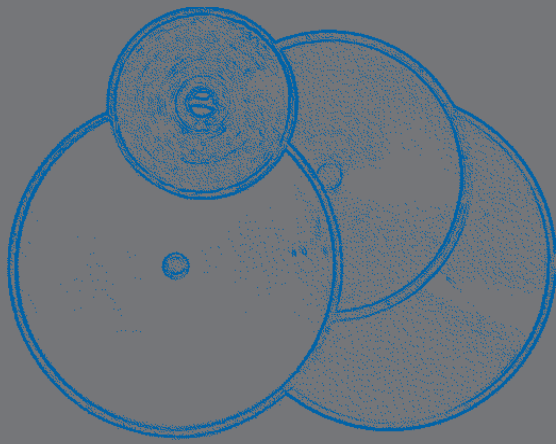
MICRON

As measuring unit it describes 1 thousandth of a millimeter ($1 \mu = 0.001 \text{ mm}$).

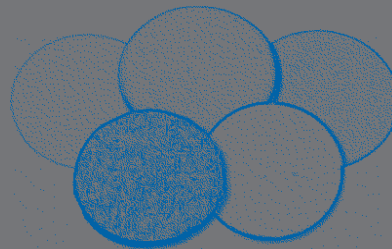
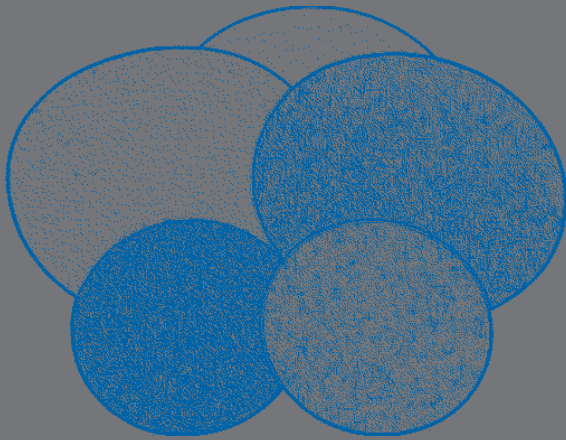
MM

Micro-mesh grit in comparison to other standards.

ANSI US Grit	FEPA P - Paper	Micron μm	FEPA F-Grain	JIS R6001 Japan 1973	MM
60	P60	269	F60	J60	
			F70		
80	P80	201	F80		
			F90		
			F100		
120	P120	125	F100	J100	
			F120		
150	P150	100			
180	P180	82	F150	J150	
220	P220	68	F180	J180	
			F220	J220	
				J240	
				J280	
	P240	58.5 ± 2		J320	
240	P280	52.2 ± 2	F230		
				J360	
	P320	46.2 ± 1.5	F240		
280	P360	40.5 ± 1.5		J400	
320	P400	35.0 ± 1.5	F280		
				J500	
360	P500	30.2 ± 1.5	F320	J600	
	P600	25.8 ± 1			
400	P800	21.8 ± 1	F360	J700	1500
	P1000	18.3 ± 1		J800	
500			F400	J1000	
600	P1200	15.3 ± 1			1800
	P1500	12.6 ± 1	F500	J1200	2400
800	P2000	10.3 ± 0.8			3200
			F600	J1500	
1000	P2500	8.4 ± 0.5		J2000	
	P3000	7			
1200	P4000				
	P5000	5			
			F800		
			F1000	J3000	4000
					6000
			F1200	J4000	8000
			F1500	J6000	12000
			F2000	J8000	



www.lapmaster-wolters.com



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WOLTERS

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