OPTI-TECH SCIENTIFIC

BUEHLER
Official Distributor Canada

GRINDING & POLISHING

The Grinding and Polishing step is a key focus area for realizing a lab's improvement goals. Whether a lab is looking to reduce steps, reduce rework, improve surface finish, or simplify effort for the technician, Buehler has a solution.

A Grinder-Polisher Solution for Any Lab

Buehler offers a full line of easy-to-use machines. Choose between the EcoMet 30 and AutoMet grinder polishers to provide the perfect solution for your lab.

EcoMet® 30 Manual
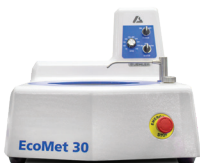
EcoMet 30 Manual is a cost effective grinder-polisher with the essential functions. It has quick clean features to save time and effort, and is made from a durable metal casting for robustness and stability. It has an ergonomic splash ring for comfortable manual use. Available with single or twin platens

EcoMet® 30 Semi-Auto

EcoMet 30 Semi-Auto is an entry level grinder-polisher with an emphasis on simplicity. All functions are quickly accessible on the easy to use touch screen interface. The EcoMet 30 is compatible with a dispensing system to go hands-free during the polishing process and improve repeatability.

AutoMet® 250

AutoMet 250 is an advanced grinder-polisher with more power to accommodate a greater capacity for high volume environments. The easy to use controls remove complexity from the grinding and polishing process.

AutoMet® 250 Pro

AutoMet 250 Pro has additional premium features. The enhanced programmability is highly intuitive with easy method storage. Improve repeatability with the automated dispensing system. The machine has Z axis removal capabilities for grinding and polishing by depth.

AutoMet® 300 Pro

AutoMet 300 Pro is similar to the AutoMet 250 Pro, with an enhanced motor and larger platen size to accommodate larger samples. It's also compatible with accessories such as PC-Met and PWB Met for PCB grinding and polishing.

If you need further assistance in selecting the best Grinder-Polisher for your application, please reach out to your local Buehler Sales Engineer or visit www.buehler.com

	EcoMet 30 Manual	EcoMet 30 Semi-Auto	AutoMet 250	AutoMet 250 Pro	AutoMet 300 Pro
Style	Manual	Semi-Auto	Semi-Auto	Semi-Auto	Semi-Auto
Platen Count	Single or Twin	Single or Twin	Single	Single	Single
Platen Sizes	8", 10", or 12"	8", 10", or 12"	8" or 10"	8" or 10"	10" or 12"
Controls	Knobs	Touch screen	Membrane	Touch screen	Touch screen
Dispensing Capability	Dispensing (3 max)			Dispensing (5 Max)	Dispensing (5 max)
Storage	Steps			Methods	Methods
Removal by Depth				Z axis removal	Z axis removal
Rinse & Spin	X			X	X
Single Force Max Capacity	4		6	6	6
Central Force Max Capacity	12		12	12	12
Specimen Max Size	40mm		40mm	40mm	50mm

Designed for Demanding Production Lab Environments

Easily accommodate many applications with this versatile line of Grinder-Polishers. All products have durable construction for reliability in high use environments, unique quick cleaning features, and plenty of enhancements for user friendly operation.

AutoMet®

The AutoMet grinder-polisher is a high performance machine, designed for reliability, flexibility, and ease of use. Upgrade to a Pro model for intelligent programming with easy to use advanced features that create highly reproducible results.

AutoMet Features

- Built tough for high volume use.
- Save time with quick clean features including a retractable water hose, disposable bowl liner and integrated 360 degree bowl rinse.
- AutoMet 300 12" platen size provides a larger working area for faster grinding or to accommodate large samples.
- AutoMet 250 8" and 10" platen size choice optimizes the cost of paper and diamond when a larger unit isn't required.

AutoMet Pro Features

- Color touch screen controls add functionality needed for advanced methods, such as method creation/storage and Z-axis material removal by depth.
- Improve productivity and consistency by integrating with a Burst Dispensing System (see page 40).

| Model	Part Number	Voltage/Frequency
AutoMet 250	49-7257	100 - 240VAC, 50-60Hz
AutoMet 250 Pro	49-7258	100 - 240VAC, 50-60Hz
AutoMet 300 Pro	49-7268	170-240VAC, 50-60Hz

AutoMet 250

AutoMet 300

AutoMet 250 & 250 Pro:
Dimensions: 27.5in H x 24.4" D x 20in W [699mm H x 620mm D x 508mm W]
Weight: 170lbs [77kg]

AutoMet 300 Pro:
Dimensions: 28.5in H x 28.6in D x 23in W [724mm H x 726mm D x 584mm W]
Weight: 219lbs [99kg]

Accessories

AutoMet 250 & 250 Pro

40-4061	8in [203mm] Aluminum Platen
40-0500	10in [254mm] Aluminum Platen
60-9080	Disposable Bowl Liner (Qty 5)
49-1250	Splash Guard Kit for AutoMet 250
49-2250	Lid for AutoMet 250

AutoMet 300

40-0500	10in [254mm] Aluminum Platen
49-1777	12in [305mm] Aluminum Platen
60-9081	Disposable Bowl Liners (Qty 5)
4961-300	Splash guard for AutoMet 300
49-1300	Lid for AutoMet 300
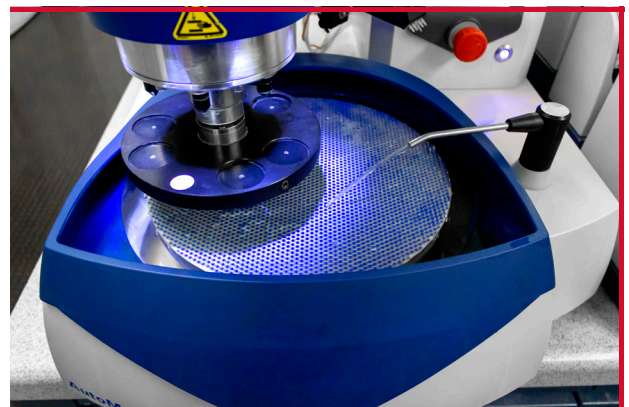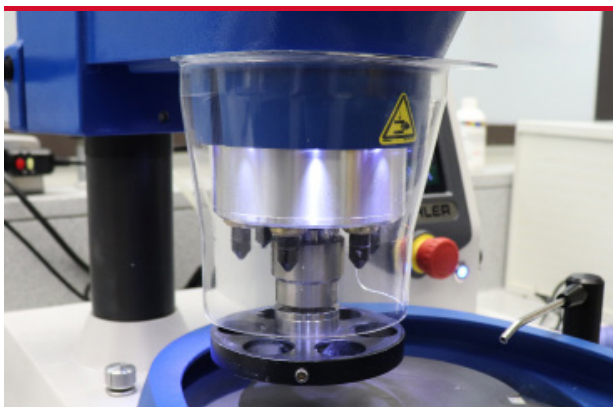
Grinding & Polishing Made Simple

The EcoMet 30 is an entry level grinder-polisher and an excellent choice for any lab that values simplicity. Best suited for low variety environments or those with a dedicated machine for each grinding-polishing step.

EcoMet® 30 Semi-Automatic

The EcoMet 30 Semi-Automatic provides simple operation for routine grinding and polishing. The user-friendly touchscreen interface puts all regularly used functions on the front screen with no complicated menus that can add time to the process. Ideal for users who have a dedicated machine for each step in their process, the EcoMet 30 also helps to save time with advanced cleaning features. Durability tested over 2500 hours and compatible with 8in [203mm], 10in [254mm] and 12in [305mm] platens.

Routine Grinding and Polishing Made Easy

• Intuitive touchscreen interface
• No complicated menus
• Focus on everyday use features
• Stored steps for quick setting recall

Easy to Clean

• User selectable rinse and spin function
• Easy to remove platens
• Large straight path draining system

Burst Dispensing

• The EcoMet 30 Semi-Automatic units can be connected to the Burst Dispensing System for increased throughput in the lab
• The Burst will automatically dispense during the cycle allowing a user to operate other machines during the polishing process

Thoughtful Design Elements

• Touchscreen location and angle is easy to see and easy to reach for users of various heights
• All cast aluminum design adds stability and durability

Model	Part Number	Voltage/Frequency
Single	49-10075	85-264VAC, 50/60Hz
Twin	49-10076	85-264VAC, 50/60Hz

* Platen Kit not included

EcoMet 30 Semi Automatic Single
Dimensions: 19.7" L x 25.6" D x 25.6" H [500 mm L x 650 mm D x 650 mm H]
Weight: 165lbs [75kg]

EcoMet 30 Semi Automatic Twin
Dimensions: 37.4" L x 26" D x 25.6" H [950 mm L x 660 mm D x 650 mm H]
Weight: 232lbs [105kg]
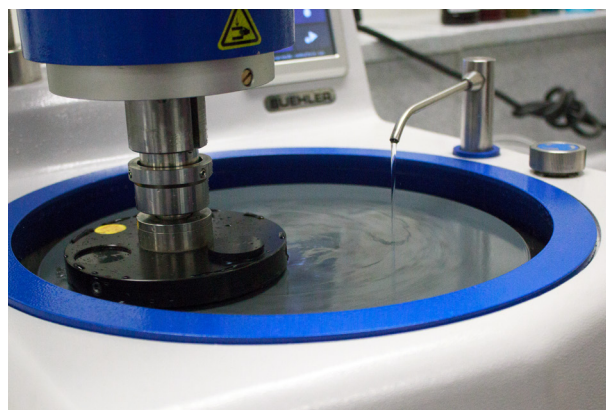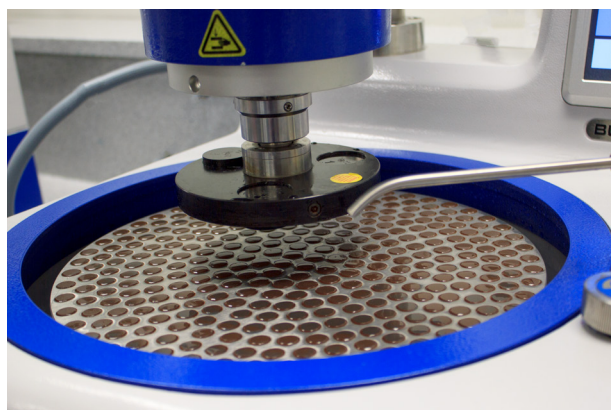
EcoMet® 30 Grinder - Polisher

Grinding & Polishing Made Simple

The EcoMet 30 is an entry level grinder-polisher and an excellent choice for any lab that values simplicity. Best suited for low variety environments or those with a dedicated machine for each grinding-polishing step.

EcoMet® 30 Manual

The EcoMet 30 provides simple operation for manual grinding and polishing. The comfortable splash guard design allows for excellent control while holding a part. Easy to use and easy to clean. Durability tested over 2500 hours and compatible with 8in [203mm], 10in [254mm] and 12in [305mm] platens.

Ergonomic Manual Polish

- Large flat work space and ergonomic bowl height provides better control and more comfort
- Additional control improves sample quality and reduces grinding time

Easy to Clean

- Easy to remove platens allows for fast deep cleaning
- Large straight path draining system

Model	Part Number	Voltage/Frequency
Single	49-10070	85-264VAC, 50/60Hz
Twin	49-10072	85-264VAC, 50/60Hz

EcoMet 30

EcoMet 30 Single:
Dimensions: 19.7in [500mm] L x 25.6in [650mm] D x 17.7in [450mm] H
Weight: 102lbs [46kg]
EcoMet 30 Twin:
Dimensions: 37.4in [950mm] L x 26in [660mm] D x 17.7in [450mm] H
Weight: 154lbs [70kg]

Accessories

Platen Kit *(Required)*
Each Kit includes a platen, splash ring and cover

49-1008	8in [203mm] Aluminum Platen
49-1010	10in [254mm] Aluminum Platen
49-1012	12in [305mm] Auminum Platen

Replacement Bowl Liners
All EcoMet 30's include one bowl liner per bowl. Remove and wash the liner for quick bowl cleaning.

49-1005	Qty 5

Burst Dispensing System

The Burst Dispensing System is a flexible, easy to operate dispensing system for all diamond and final polishing suspensions. This product improves both productivity and consistency by dispensing suspensions at fixed intervals and configurable rates.

Choose from two different Burst Configurations

Fully Integrated

The Grinder-Polisher controls the start/stop function and the volume rate.

(AutoMet 250 Pro shown with 5 burst modules and a stadium seating module.)

Compatible with EcoMet 30, AutoMet 250 Pro, AutoMet 300 Pro

How to configure the fully integrated Burst system for AutoMet 250 and AutoMet 250 Pro:

Choose up to 5 Burst modules (Part Number 40-10005)

includes a stir bar and 16oz bottle

- Add stadium seating module (Part Number 40-10004)

- Add dispensing arm (Part Number 40-10006)

- Add additional stir bar (Part Number 00-10100)

How to configure the fully integrated burst system with EcoMet 30:

Choose up to 3 Burst modules (Part Number 40-10005)

- Add cable to control start/stop function (Part Number 40-2704)

- Add additional stir bar (Part Number 00-10100)

Accessories

40-10004	**Stadium Seating Module** A compact and efficient method to hold up to 5 burst modules
40-10006	**Dispensing Arm for AutoMet® 250/300** The dispensing arm attaches the AutoMet Pro Grinder-Polisher to the burst dispensing system. Outlet tubing from the burst system is secured neatly into the arm. Outlet nozzles dispense suspension on to the platen.
00-10100	**Stir Bar** Magnetically driven stir bars prevent settling of suspension. Use one for each module.

Independent

The Burst Module Control Panel is used to control dispensing stop/start and volume rate.

Compatible with all Grinder-Polishers

How to configure independent Burst modules:

Choose Burst module (Part Number 40-10005)

- Up to 5 modules can be connected to one electrical power source; requires cable for connecting module to module (Part Number 40-2832)

- Add additional stir bar (Part Number 00-10100)

- Add optional hand switch (Part Number 40-2823)

Accessories

40-2832	**Cable for connecting module to module** For connecting more than 1 burst module in the independent configuration. Up to 5 modules can be connected together. Requires one cable for each module added to the first module.
40-2823	**Hand Switch** Used to control the start/stop function.
00-10100	**Stir Bar** Magnetically driven stir bars prevent settling of suspension. Use one for each module.
40-2704	**Cable to Control Start/Stop Function** For controlling start/stop function of Burst from the AutoMet 250/300 & EcoMet 30

Grinder Polisher Accessories

Sample holders are designed for use with Buehler's grinder-polishers to facilitate process automation and optimization. Many options for different sample sizes and shapes are available depending on the shapes, sizes, and capacities required.

Single Force Specimen Holders

◯ *Round/Barrel* ▭ *Rectangle* ⬠ *Slides*

EcoMet 30 Power Head — *For use with 60-9005 Drive Adapter*

Part Number	Style	Size	Capacity	Additional Accessories
60-10060	◯	1in	4	63-1022 Retaining Rings (Qty 6pk)
60-10061	◯	1.25in	4	63-1023 Retaining Rings (Qty 6pk)
60-10062	◯⬠	1.5in	4	63-1024 Retaining Rings (Qty 3pk) 60-9150 27 x 46 mm Glass Slide Holder
60-10063	◯	25mm	4	63-1022 Retaining Rings (Qty 6pk)
60-10064	◯	30mm	4	63-1023 Retaining Rings (Qty 6pk)
60-10065	◯	40mm	4	63-1024 Retaining Rings (Qty 3pk)

AutoMet® 250 Power Head — *For use with 60-9005 Drive Adapter.*

Part Number	Style	Size	Capacity	Additional Accessories	
60-9010	◯⬠	1in	6	63-1022 Retaining Rings (Qty 6pk) 60-9120 1 x 3in Glass Slide Holder 60-9130 2 x 3in Glass Slide Holder	60-9100 27 x 46mm Glass Slide Holder 60-9140 28 x 48mm Glass Slide Holder
60-9011	◯	1.25in	6	63-1023 Retaining Rings (Qty 6pk)	
60-9012	◯	1.5in	6	63-1024 Retaining Rings (Qty 3pk)	
60-9020	◯	25mm	6	63-1022 Retaining Rings (Qty 6pk)	
60-9021	◯	30mm	6	63-1023 Retaining Rings (Qty 6pk)	
60-9022	◯	40mm	6	63-1024 Retaining Rings (Qty 3pk)	

AutoMet® 300 Power Head — *For use with 60-9005 Drive Adapter.*

Part Number	Style	Size	Capacity	Additional Accessories	
60-9060	◯⬠	1in	6	63-1022 Retaining Rings (Qty 6pk) 60-9120 1 x 3in Glass Slide Holder 60-9130 2 x 3in Glass Slide Holder	60-9100 27 x 46mm Glass Slide Holder 60-9140 28 x 48mm Glass Slide Holder
60-9061	◯	1.25in	6	63-1023 Retaining Rings (Qty 6pk)	
60-9062	◯	1.5in	6	63-1024 Retaining Rings (Qty 3pk)	
60-9063	◯	2in	6		
60-9070	◯	25mm	6	63-1022 Retaining Rings	
60-9071	◯	30mm	6	63-1023 Retaining Rings	
60-9072	◯	40mm	6	63-1024 Retaining Rings	
60-9073	◯	50mm	6		

Central Force Specimen Holders

◯ *Round/Barrel*   ▢ *Rectangle*   ⬭ *Teardrop*

AutoMet 300 Power Head

For use with 60-9000 Drive Adapter.
Uses Loading Plates 60-2412 or 60-2413
181mm diameter for 12" platens

Part Number	Style	Size	Capacity
60-5281	◯	1in	10
60-5282	◯	1.25in	10
60-5252	⬭	1.25in or 30mm	9
60-5287	◯	30mm	10
60-5283	◯	1.5in	6
60-5253	⬭	1.5in or 40mm	6
60-5288	◯	40mm	6
60-5299	◯	2in	5
60-5296	⬭	2in or 50mm	5
60-5297	▢	55 x 30mm	5
60-5298	▢	70 x 40mm	3

AutoMet 250 and EcoMet 30 Power Heads

For use with 60-9000 Drive Adapters
Uses Loading Plates 60-2411 or 60-2413
130mm diameter for 8", 10" or 12" platens

Part Number	Style	Size	Capacity
60-2482	◯	1in	6
60-2483	◯	1.25in	6
60-2422	⬭	1.25in [32mm]	6
60-2485	◯	1.5in	3
60-2486	◯	30mm	6
60-2487	◯	40mm	3
60-2409	▢	1 x 1.25in [25.4 x 31.75mm]	4
Uses loading plates 60-2411 or 60-2412 157mm diameter for 10" or 12" platens			
60-8240	⬭	18 - 51mm	5
60-8210	⬭	12 - 40mm	6
60-8262	⬭	10 - 25mm	12
60-8254	▢	55 x 30mm	5
60-8255	▢	70 x 40mm	3

Accessories for Specimen Holders

Loading Fixtures and Plates

Used for loading Central Force Specimen Holders to ensure planar samples.

Part Number	Description
60-2410	Loading Fixture
60-2411	Loading Plate for 5.1in [130mm] and 6.1in [157mm]
60-2412	Loading Plate for 6.1in [157mm] and 7.1in [181mm]
60-2413	Loading Plate for 5.1in [130mm] and 7.1in [181mm]

Drive Adapters

Pairs specimen holders to the chuck of the automatic head

Part Number		Compatible With
60-9000	Central Force	AutoMet 250/300 PlanarMet 300, EcoMet 30
60-9005	Single Force	AutoMet 250/300, EcoMet 30

Target Holders

Designed for precise material removal to specified depths. Includes one ceramic and one steel stop ring.

Part Number	Description
60-8100	For 28 x 48mm glass slide (histologic holder)
60-8101	For 1in [25mm] mounted specimens
60-8102	For 1.25in [32mm] mounted specimens
60-8113	For 40mm mounted specimens

Blank Specimen Holders For use with 60-9000 Drive Adapter.

Part Number	Diameter	Power Head
60-2408	5.12in [130mm] for 8", 10" or 12" platens	AutoMet® 250 AutoMet® 300 EcoMet® 30
60-5254	7.12in [181mm] for 12" platens only	AutoMet 300 EcoMet® 30

Slide Holders & Glass Slides

Glass Slide Size	Slide Holder	Single Force Specimen Holder	Glass Slides
1 x 3in	60-9120 (max 3 per specimen holder)	60-9010 for AutoMet 250 60-9060 for AutoMet 300	
2 x 3in	60-9130 (max 2 per specimen holder)	60-9060 for AutoMet 300	
27 x 46mm	60-9100 (max 3 per specimen holder)	60-9010 for AutoMet 250 60-9060 for AutoMet 300	40-8000-001 (Qty 144) 40-8000-010 (Qty 1440)
27 x 46mm	30-8005 hand-held holder		40-8000-001 (Qty 144) 40-8000-010 (Qty 1440)
28 x 48mm	60-9140 (max 3 per specimen holder)	60-9010 for AutoMet 250 60-9060 for AutoMet 300	

PC-Met™ Precision High Volume Printed Wiring Board Accessory

- High volume printed wiring board preparation system
- Prepares up to 36 coupons simultaneously
- Prepares reproducible cross-sections of through-holes down to 0.008in
- For use with AutoMet 300

Part Number	Contents
60-5090	Indexing pins, carbide and diamond stops, pin loader, dial indicator, gauge blocks and wooden case

Accessories

60-5053	Coupon Pins 1.0625in [27mm] long (Qty 1000)	60-5055	Dial Indicator
60-5067	Cup, Extended Upper Mold Plate, 0.8in (Qty 6)	60-5095	Holder with diamond and carbide
60-9000	Central Force Drive Adapter for AutoMet® 250/300	60-5091	Carbide stops (Qty 3)
60-5061	Upper cup	60-5092	Diamond stops (Qty 3)
60-5062	Lower cup		

PWB Met™ Small Hole Accessory

- Higher precision PWB preparation system
- Prepares up to 18 coupons simultaneously
- Prepares reproducible cross-sections of through-holes down to 0.004in
- For use with AutoMet 300

Part Number	Contents
60-5175	Indexing pins, polycrystalline diamond stops, Pin loader, dial indicator calibration gauge, silicone mold release spray, gauge blocks, sample extractor and wooden case

Accessories

|	
60-5186	PWB Met Short Pin Loader 0.375in [10mm] long
60-5084	PWB Met Pins 0.375in [10mm] long (Qty 3000)
60-5091	Long stop assembly
60-5094	Short stop assembly with polycrystalline diamond
60-5097	Holder with polycrystalline stops

MiniMet® 1000

A low volume, single specimen machine capable of preparing a wide variety of materials. Space saving design employs geometric action, increasing specimen consistency.

Easy to use
• Simple operations ideal for low volume applications

Save space and lower costs
• Designed to use 2.875in [73mm] abrasive paper and polishing cloths

Part Number	Voltage/Frequency
69-1100	85-264VAC, 50/60Hz
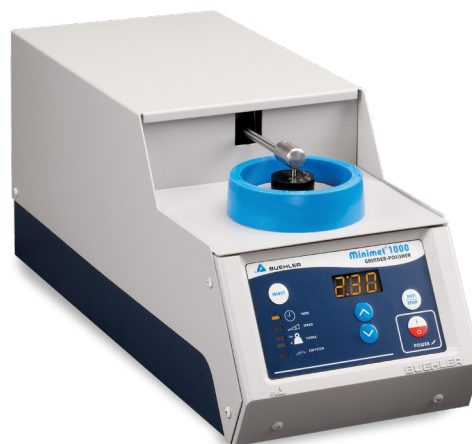
Dimensions: 7in [180mm]W x 16in [400mm]D x 8in [200mm]H
Weight: 25 lbs [11 kg]

Accessories

69-1111	Caged Specimen Holder, for 1in [25mm] or 1.25in [32mm] Mounted Specimens	69-1581	Thin Section Bowls, 4.75in [121mm] (1 each Black, White, Blue)
69-1112	Caged Specimen Holder, for 1.5in [38mm] Mounted Specimens	69-1582	Thin Section Glass Platens, 4in [100mm] (Qty 3) (replacement)
69-1500	Polishing Bowls, 4in [100mm] Diameter (1 each Black, White, Blue)	69-1583	MiniMet Thin Section Slide Holder, 46 x 27mm
69-1562	Glass Circular Slides, 0.5in [13mm] Diameter (Qty 50)	69-1590	MiniMet Wafer Polishing Attachment
69-1566	MiniMet 1000 Precision Thinning Attachment	69-1502	Storage Caddie for MiniMet Bowls (Qty 3)
69-1567	Glass Disc, 2.145in [55mm] Diameter (Qty 5)	69-1510	Glass Platen (Qty of 3)
69-1580	MiniMet Thin Section Attachment (includes 3 bowls, glass and section holder)	69-1550	MiniMet Alignment Fixture with 3 Drill Bits
		69-1552	Set of 3 Drill Bits (replacement)

Grinding & Polishing Consumables for MiniMet 1000

Silicon Carbide Paper, PSA Backed, 2.875in [73mm] (Qty 100)

CarbiMet®

Grit Size - ANSI [FEPA]	Micron	Part Number
120 [P120]	127	36-02-0120
180 [P180]	78	36-02-0180
240 [P280]	52	36-02-0240
320 [P400]	35	36-02-0320
400 [P800]	22	36-02-0400
600 [P1200]	15	36-02-0600

MicroCut®

Grit Size - ANSI [FEPA]	Micron	Part Number
800 [P1500]	13	36-02-0800
1200 [P2500]	8	36-02-1200

Premium Polishing Cloths, PSA Backed, 2.875in [73mm] (Qty 20)

Cloth	Stage	Part Number
UltraPol™	Coarse	40-7442
Nylon	Intermediate	40-7052
TexMet® C	Intermediate	40-1102
TriDent™	Intermediate	40-7502

Cloth	Stage	Part Number
MicroCloth®	Fine	40-7212
MasterTex®	Fine	40-7702
ChemoMet®	Fine	40-7902

# Grinder Polisher Specialty & Support Equipment

VibroMet® 2

VibroMet 2 Vibratory Polisher is designed to prepare high quality polished surfaces on a wide variety of materials, including EBSD applications. The 7200 cycles per minute horizontal motion produces a very effective polishing action, providing superior results, exceptional flatness and less deformation.

Safe and Effective Results

- Vibratory polisher removes minor deformation remaining after mechanical preparation, revealing the stress-free surface without need for the hazardous electrolytes required by electro-polishers.

High Quality Surface Finish

- Combine the VibroMet 2 with MasterMet® Colloidal Silica to chemomechanically polish a specimen to a surface finish suitable for electron-backscatter diffraction (EBSD).
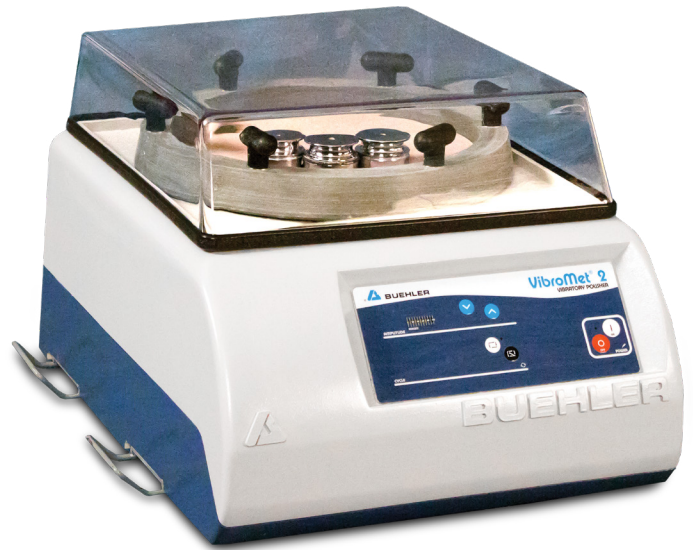
Dimensions: 21.5in [546mm]W x 23in [584mm]D x 14.5in [368mm]H
Weight: 175lbs [80kg]

Part Number	Voltage/Frequency
67-1635-160	115VAC, 60Hz
67-1635-250	220VAC, 50Hz

Accessories

67-1525	Specimen Holder, 2in [50mm] (Qty 3)
67-1526	Specimen Holder, 1in [25mm] (Qty 3)
67-1527	Specimen Holder, 1.25in [32mm] (Qty 3)
67-1528	Specimen Holder, 1.5in [38mm] (Qty 3)
67-1529	Specimen Weights (Qty 9)
67-1530	Polishing Bowl Accessory
67-1541	Loading Fixture, 2in and 50mm
67-1540	Loading Fixture, 1in [25mm], 1.25in [32mm], 1.5in [38mm]

⬡ EnvironMet® System

Ideal for laboratories concerned with water regulation and conservation requirements and/or environmental issues. Designed for use with manual and semi-automatic grinder-polishers, the EnvironMet® Filter System uses fresh water for each step in preparation. The filtration rate allows up to two grinder-polishers to operate off of one system. The 49-2500 EnvironMet® System is designed to filter up to 1µm and then recirculate the water. The 49-2501 EnvironMet® System is designed to filter water up to 100µm and uses fresh water. Both EnvironMet® Systems are powered by compressed air and require no electrical connections. *Requires compressed air*
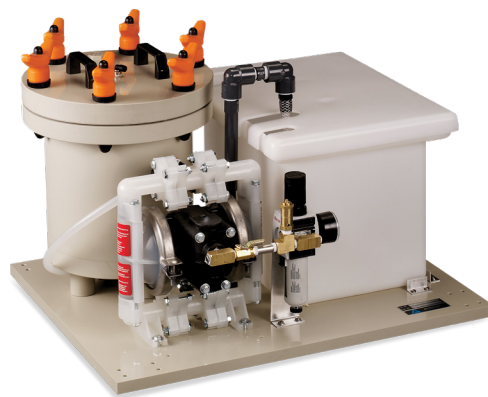
Dimensions: 25.5in [648mm]W x 20.5in [521mm]D x 16.8in [425mm]H

Part Number
49-2500 Recirculating Filter System (1µm Filter)
49-2501 Filter System (100µm Filter)

Accessories	
49-2510	Replacement 1µm Filter Paper (Qty 100)
49-2520	Replacement 100 µm Swarf Bag
49-2530	Castor Kit

Electropolishing & Etching Systems

The ElectroMet 4 and PoliMat 2 systems provide both electropolishing and etching capabilities to enable efficient sample preparation.

⬡ ElectroMet® 4

ElectroMet 4 includes ElectroMet 4 Power Source, Polishing Cell and Etching Cell. *Products not available in Europe*

Part Number	Voltage/Frequency
70-1830-115	115VAC, 60Hz
70-1830-220	220-240VAC, 50Hz

Accessories	
70-1832	ElectroMet 4 Polishing Cell
70-2015	Masks (Qty 5)
70-2100	Stainless Steel Cathodes
70-2105	Copper Cathode
70-3100	Etching Cell

Power Source

Polishing Cell

Etching Cell

Masks

Etching Cell

Dimensions: 13.125in [333mm]W x 18.5in [470mm]D x 9in [229mm]H

⬡ PoliMat® 2

Includes controller, complete polishing cell and 4 masks
Product only available in Europe

Part Number	Voltage/Frequency
511000	230VAC, 50/60Hz

Accessories	
510010	Complete polishing cell
510100	Set of masks
	(1cm^2, 2cm^2, 10cm^2, and without hole)

Dimensions: 19.7in [500mm]W x 11.8in [300mm]D x 9.8in [250mm]H

Grinding & Polishing
Consumables

OPTI·TECH
SCIENTIFIC

Platen Systems

The choice of platen system depends on the goals of the lab and the products being used in the preparation process. The magnetic system can be adapted for use with nearly all products while the Apex S system provides the fastest solution for changing between grinding papers.

Magnetic System

- Versatile system that allows easy removal and storage of grinding and polishing consumables
- First, adhere a PSA backed magnet to the aluminum platen.
- Directly apply magnetic backed surfaces or utilize a carrier plate for PSA backed surfaces.

PSA Backed Surface
Magnetic Backed Surface
Carrier Plate
Magnet
Platen
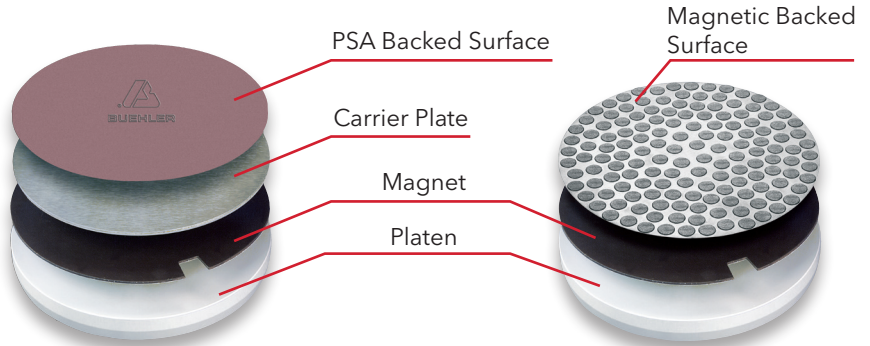
Magnet Selection - to convert a standard platen to a magnetic platen

Type	Description	8in [203mm]	10in [254mm]	12in [305mm]
Apex® M Magnet PSA Backed (Qty 1)	Contains tabs for easier plate removal	41-2739-608-001	41-2739-610-001	41-2739-612-001
MagnoFix Magnet PSA Backed (Qty 1)	Standard magnet	16-2070	16-2570	16-3070

Carrier Plate Selection

Type	Description	8in [203mm]	10in [254mm]	12in [305mm]
MagnoPad Teflon Coated Carrier Plate (Qty 5)	For easier removal of PSA surfaces, ideal for polishing cloths	16-2073	16-2573	16-3073
MagnoMet Carrier Plate (Qty 5)	Standard stainless steel carrier plate, ideal for SiC paper	16-2072	16-2572	16-3072
Apex B Carrier Plate (Qty 1)	Bimetallic disc for cloth or SiC paper. Prevents adherence of magnetic particles via bimetallic plate	41-2739-208-001	41-2739-210-001	41-2739-212-001

Apex® S System

- High friction backing system that is the ideal choice to reduce changeover times between grinding paper steps
- Choose the PSA backed film for use directly on aluminum platen or the magnetic backed film for use with a magnetic system.

CarbiMet S or MicroCut S
Apex S Film Magnetic Backed
Magnet
Platen
Apex S Film PSA Backed
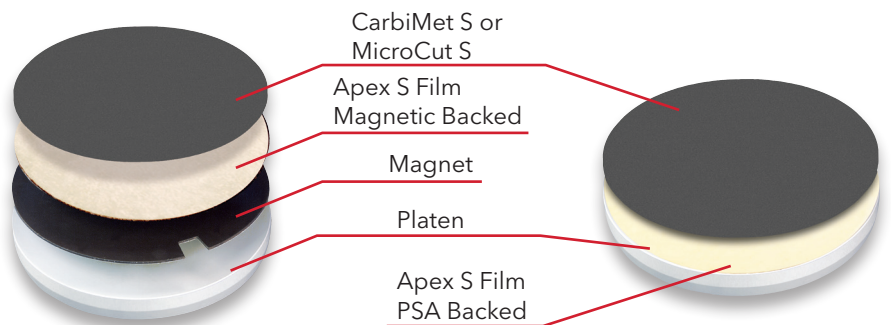
Type	Description	8in [203mm]	10in [254mm]	12in [305mm]
Apex S Film PSA backed (Qty 2)	For application directly to platen	16-2075	16-2575	16-3075
Apex S Film Magnetic backed (Qty 2)	For use with magnetic system	16-2074	16-2574	16-3074

CarbiMet® & MicroCut® Silicon Carbide Grinding Papers

CarbiMet & MicroCut Silicon Carbide Grinding Papers are the premier line of grinding papers, offering efficient material removal and minimal surface damage. They are available in 3 different backing systems depending on the needs of a lab.

High Material Removal with Superior Surface Finish

CarbiMet offers quick grinding times with minimal surface damage during the grinding process. Since there is less damage to remove, the amount of subsequent processing may be reduced, saving valuable time in the preparation process.

Quick Change-Overs

Apex S backing allows for fast changeovers between CarbiMet steps. Simply remove the previous paper and apply the next stage without needing to remove any backings or liners.

Delicate Preparation

MicroCut papers provide gentle material removal with superior surface finish, which is ideal for processing delicate or sensitive materials.

Apex® S Backed

High friction backing allows for easy & fast changeovers between grinding steps. Use with Apex S carrier film. Qty 100

	Grit Size ANSI [FEPA]	Approx. Micron Size	8in [203mm]	10in [254mm]	12in [305mm]
CarbiMet	60 [P60]	260	16-08-0060*	16-10-0060*	16-12-0060*
	80 [P80]	188	16-08-0080	16-10-0080	16-12-0080
	120 [P120]	127	16-08-0120	16-10-0120	16-12-0120
	180 [P180]	78	16-08-0180	16-10-0180	16-12-0180
	220 [P240]	58	16-08-0220	16-10-0220	16-12-0220
	240 [P280]	52	16-08-0240	16-10-0240	16-12-0240
	280 [P320]	46	16-08-0280	16-10-0280	16-12-0280
	320 [P400]	35	16-08-0320	16-10-0320	16-12-0320
	360 [P600]	26	16-08-0360	16-10-0360	16-12-0360
	400 [P800]	22	16-08-0400	16-10-0400	16-12-0400
	500 [P1000]	18	16-08-0500	16-10-0500	16-12-0500
	600 [P1200]	15	16-08-0600	16-10-0600	16-12-0600
	1000 [P2500]	8.4	16-08-1000	16-10-1000	16-12-1000
MicroCut	800 [P1500]	13	16-08-0800	16-10-0800	16-12-0800
	1200 [P2500]	8	16-08-1200	16-10-1200	16-12-1200
	P4000	5	16-08-4000	16-10-4000	16-12-4000

Contains 50 pcs

CarbiMet and MicroCut Accessories

- Apex S film is applied to a platen for use with CarbiMet S or MicroCut S
- MetGrip liners are used with plain backed CarbiMet or MicroCut when paper holding bands are not used

Description	8in [203mm]	10in [254mm]	12in [305mm]
Apex S Carrier Film magnetic backed (Qty 2)	16-2074	16-2574	16-3074
Apex S Carrier Film PSA backed (Qty 2)	16-2075	16-2575	16-3075
MetGrip® Liners (Qty 10)	30-8508	30-8510	30-8512
Paper Holding Bands	30-2008	95-2825	46-2013

Grinding & Polishing
Consumables

PSA Backed

Pressure sensitive adhesive (PSA) backing for easy application directly to platen. Qty 100

	Grit Size - ANSI [FEPA]	Approx. Micron Size	8in [203mm]	10in [254mm]	12in [305mm]
CarbiMet	60 [P60]	260	36-08-0060*	36-10-0060*	36-12-0060*
	80 [P80]	188	36-08-0080	36-10-0080	36-12-0080
	120 [P120]	127	36-08-0120	36-10-0120	36-12-0120
	180 [P180]	78	36-08-0180	36-10-0180	36-12-0180
	220 [P240]	58	36-08-0220	36-10-0220	36-12-0220
	240 [P280]	52	36-08-0240	36-10-0240	36-12-0240
	280 [P320]	46	36-08-0280	36-10-0280	36-12-0280
	320 [P400]	35	36-08-0320	36-10-0320	36-12-0320
	360 [P600]	26	36-08-0360	36-10-0360	36-12-0360
	400 [P800]	22	36-08-0400	36-10-0400	36-12-0400
	500 [P1000]	18	36-08-0500	36-10-0500	36-12-0500
	600 [P1200]	15	36-08-0600	36-10-0600	36-12-0600
	1000 [P2500]	8.4	36-08-1000	36-10-1000	36-12-1000
MicroCut	800 [P1500]	13	36-08-0800	36-10-0800	36-12-0800
	1200 [P2500]	8	36-08-1200	36-10-1200	36-12-1200
	P4000	5	36-08-4000	36-10-4000	36-12-4000

*Contains 50 pcs

Plain Backed

Plain backing requires the use of an adhesive liner or holding band. Qty 100

	Grit Size - ANSI [FEPA]	Approx. Micron Size	8in [200mm]	10in [250mm]	12in [300mm]
CarbiMet	60 [P60]	260	30-08-0060*	30-10-0060*	30-12-0060*
	80 [P80]	188	30-08-0080	30-10-0080	30-12-0080
	120 [P120]	127	30-08-0120	30-10-0120	30-12-0120
	180 [P180]	78	30-08-0180	30-10-0180	30-12-0180
	220 [P240]	58	30-08-0220	30-10-0220	30-12-0220
	240 [P280]	52	30-08-0240	30-10-0240	30-12-0240
	280 [P320]	46	30-08-0280	30-10-0280	30-12-0280
	320 [P400]	35	30-08-0320	30-10-0320	30-12-0320
	360 [P600]	26	30-08-0360	30-10-0360	30-12-0360
	400 [P800]	22	30-08-0400	30-10-0400	30-12-0400
	500 [P1000]	18	30-08-0500	30-10-0500	30-12-0500
	600 [P1200]	15	30-08-0600	30-10-0600	30-12-0600
	1000 [P2500]	8.4	30-08-1000	30-10-1000	30-12-1000
MicroCut	800 [P1500]	13	30-08-0800	30-10-0800	30-12-0800
	1200 [P2500]	8	30-08-1200	30-10-1200	30-12-1200
	P4000	5	30-08-4000	30-10-4000	30-12-4000

*Contains 50 pcs

Diamond Grinding Discs

Diamond Grinding Discs are ideally used as a substitute for SiC paper or other grinding media. Long-life, fixed abrasive provides high removal rates with superb edge retention and flatness. This versatile system works on a wide range of materials such as hard materials, ferrous materials, aluminum, ceramics, glass, thermal spray coatings and more. The surface is durable enough for unmounted specimens. Like your Silicon Carbide papers, just use water for the preparation process (dressing is required with some materials).

Long Life with Consistent Results

Fixed diamond particles provide consistent removal rates and extended lifetime with only an occasional dressing to maintain the surface.

Ideal Solution for Automation

Diamond Grinding Discs offer superb edge retention and excellent flatness making them the perfect choice for controlled material removal on automated systems.

Process a Variety of Materials

Grinding hard materials requires a different type of surface than grinding softer materials. Buehler's Diamond Grinding Discs offer customized solutions for different material types to ensure efficient and consistent grinding.

DGD Color

Our most versatile diamond grinding disc, the unique characteristics of the resin bond used provides long life and high removal rates on most materials, including softer materials such as brass and copper. Just add water and use

• Utilize a specially formulated resin bond for consistent material removal
• Ideal for most engineering metals
• Available with PSA or Magnetic backing

Color	Micron	8in [203mm]		10in [254mm]		12in [305mm]	
		PSA	Magnetic	PSA	Magnetic	PSA	Magnetic
● Green	240µm	41-3308	414308D	41-3310	414310D	41-3312	414312D
● Black	125µm	41-3408	414408D	41-3410	414410D	41-3412	414412D
● Red	75µm	41-3508	414508D	41-3510	414510D	41-3512	414512D
● Purple	55µm	41-3608	414608D	41-3610	414610D	41-3612	414612D
● Yellow	35µm	41-3708	414708D	41-3710	414710D	41-3712	414712D
○ White	15µm	41-3808	414808D	41-3810	414810D	41-3812	414812D
● Blue	8µm	41-3908	414908D	41-3910	414910D	41-3912	414912D
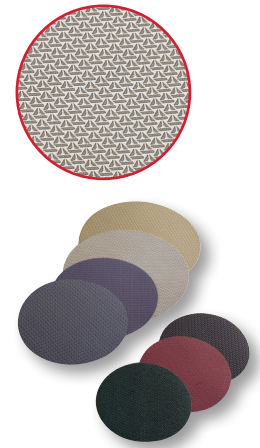
DGD Terra

Resin-bonded, fixed abrasive surfaces, excellent for hard materials, ceramic, glass, TSC. These discs provide superb edge retention and flatness. Just add water and use.

• Provides consistent material removal with excellent flatness
• Ideal for brittle and hard materials such as ceramics and glass
• Available with PSA or Magnetic backing

Micron	8in [203mm]		10in [254mm]		12in [305mm]	
	PSA	Magnetic	PSA	Magnetic	PSA	Magnetic
165µm	41-5008	416008D	41-5010	416010D	41-5012	416012D
125µm	41-5108	416108D	41-5110	416110D	41-5112	416112D
70µm	41-5208	416208D	41-5210	416210D	41-5212	416212D
45µm	41-5308	416308D	41-5310	416310D	41-5312	416312D
30µm	41-5408	416408D	41-5410	416410D	41-5412	416412D
15µm	41-5508	416508D	41-5510	416510D	41-5512	416512D
9µm	41-5608	416608D	41-5610	416610D	41-5612	416612D
6µm	41-5708	416708D	41-5710	416710D	41-5712	416712D
3µm	41-5808	416808D	41-5810	416810D	41-5812	416812D
0.5µm	41-5908	416908D	41-5910	416910D	41-5912	416912D

Grinding & Polishing
Consumables

DGD Ultra

• Designed for initial grinding steps of mixed hardness materials
• Available with PSA backing

Color		Micron	8in [203mm]	10in [254mm]	12in [305mm]
●	Black	125µm	15-6199	14-2581	15-6299
●	Red	70µm	15-6170	14-2582	15-6270
●	Yellow	45µm	15-6145	14-2583	15-6245
○	White	15µm	15-6115	14-2585	15-6215
●	Blue	9µm	15-6109		15-6209
●	Purple	6µm	15-6106		15-6206

DGD Mosaic®

• Combines high material removal rate with good recovery to reduce prep time
• Optimized for fastest material removal on ferrous materials
• Magnetic backing for fast & easy set up on machine

Grit Size ANSI [FEPA]	Approx. Micron Size	8in [203mm]	10in [254mm]	12in [305mm]
120 [P120]	125µm	41-708-0120	41-710-0120	41-712-0120
220 [P240]	60µm	41-708-0220	41-710-0220	41-712-0220
320 [P400]	40µm	41-708-0320	41-710-0320	41-712-0320
400 [P800]	30µm	41-708-0400	41-710-0400	41-712-0400
1000 [P2500]	10µm	41-708-1000	41-710-1000	41-712-1000

*All DGD Mosaic discs include dressing stick 11-1190 (Requires dressing before intial use)

Accessories

Dressing Stick for Diamond Grinding Discs
1 x 1 x 6in
15-6190

Dressing Stick for Diamond Grinding Discs
0.5 x 0.5 x 3 in
11-1190

Premium Polishing Cloths

Buehler's premium performance cloths are for all material applications and are engineered for long life & superior surface finish.

Easy to Use Magnetic Backing

Utilize the magnetic backing for an efficient and easy-to-use solution. The durable magnetic backed cloth provides consistent polishing results while reducing the change-over time between cloths.

A Cloth for Every Application

The type of cloth used depends heavily on the material being processed and the requirements for the final analysis. With a variety of fabrics, weaves and naps, there is a cloth to fit every application.

Reliable Preparation Results

Buehler's cloths are thoroughly tested and developed with MetaDi Diamond to provide a complete solution that delivers reliable results for each sample processed.

Polishing Cloth Selection Guide

	Cloth	Backing	Quantity	8in [203mm]	10in [254mm]	12in [305mm]	Description
COARSE	UltraPad®	PSA	10	40-7118	40-7120	40-7122	Hard woven, no nap
		Magnetic	5	42-3008	42-3010	42-3012	
	UltraPol®	PSA	10	40-7448	40-7450	40-7452	Hard woven, non-aggressive silk
	TexMet® P	PSA	5	40-7638	40-7640	40-7642	Hard non-woven, perforated
INTERMEDIATE	Nylon	PSA	10	40-7068	40-7070	40-7072	Medium hard woven, oil resistant, no nap
		Magnetic	5	42-3108	42-3110	42-3112	
	TexMet® C	PSA	10	40-1108	40-1110	40-1112	Non-woven, pressed
		Magnetic	5	42-3208	42-3210	42-3212	
	TriDent®	PSA	10	40-7518	40-7520	40-7522	Soft woven synthetic, no nap
		Magnetic	5	42-3308	42-3310	42-3312	
	VerduTex®	PSA	10	40-8018	40-8020	40-8022	Medium hard, synthetic silk
		Magnetic	5	42-3408	42-3410	42-3412	
	VelTex®	PSA	10	40-8218	40-8220	40-8222	Short nap, synthetic velvet
		Magnetic	5	42-3508	42-3510	42-3512	
	WhiteFelt™	PSA	5	16-2002	16-2502	16-3002	Soft, durable, matted wool
	PoliCloth™	PSA	10	40-8418	40-8420	40-8422	Medium hard, woven wool
		Magnetic	5	42-3608	42-3610	42-3612	
FINE	MicroCloth®	PSA	10	40-7218	40-7220	40-7222	Soft synthetic rayon, long nap
		Magnetic	5	42-3708	42-3710	42-3712	
	MicroFloc™	PSA	10	40-8318	40-8320	40-8322	Soft, long nap
		Magnetic	5	42-3808	42-3810	42-3812	
	MasterTex®	PSA	10	40-7738	40-7740	40-7742	Soft synthetic velvet, low nap
		Magnetic	5	42-3908	42-3910	42-3912	
	ChemoMet®	PSA	10	40-7918	40-7920	40-7922	Soft synthetic, porous, chemically resistant
		Magnetic	5	42-4008	42-4010	42-4012	

UltraPad™

UltraPol™

TexMet® P

Nylon

TriDent™

TexMet® C

VerduTex®

Grinding Consumables
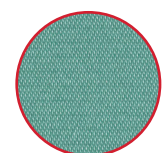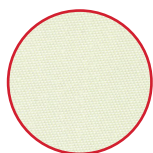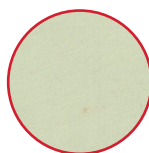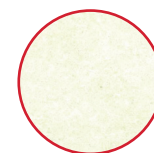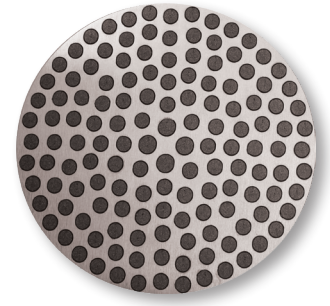
Apex® Hercules

- Magnetic backed resin surface that provides excellent flatness and edge retention
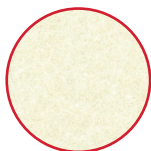- Use with MetaDi® Diamond Suspension

Type	8in [203mm]	10in [254mm]	12in [305mm]
Apex Hercules H Fine grinding disc for hard ferrous and non-ferrous material (> HRC 20/HV 236)	41-2740-308-001	41-2740-310-001	41-2740-312-001
Apex Hercules S Fine Grinding Disc for soft ferrous and non-ferrous material (<HRC 20/HV 236)	41-2740-408-001	41-2740-410-001	41-2740-412-001

| Recommended Micron Size	Abrasive Type	Applications
6µm & Up	Diamond	Ferrous materials and thermal spray coatings
6µm & Up	Diamond	Minerals, coals, ceramics, inclusion retention in steels, and refractory metals
6µm & Up	Diamond	Electronics, ceramics, carbides, petrographic, hard metals, glass, and metal matrix composites
6µm & Up	Diamond	Ferrous materials, sintered carbides and cast irons
15 - 0.02µm	Diamond, Al_2O_3, SiO_2	Ferrous and nonferrous metals, ceramics, electronics, PCB's, thermal spray coatings, cast irons, cermets, minerals, composites, plastics
15- 0.02µm	Diamond, Al_2O_3	Ferrous and nonferrous metals, microelectronics, polymer matrix composites, coatings
9 - 1µm	Diamond	Ferrous and nonferrous metals, microelectronics, coatings
9 - 1µm	Diamond	Soft metals
6 - 0.02µm	Diamond, Al_2O_3, SiO_2	Ferrous and nonferrous metals
6 - 1µm	Diamond	Cast iron, copper and aluminum alloys
5- 0.02µm	Diamond, Al_2O_3, SiO_2	Ferrous and nonferrous metals, ceramics, composites, PCBs, cast irons, cermets, plastics, electronics
3 - 0.02µm	Diamond, Al_2O_3, SiO_2	Ferrous and nonferrous materials
1 - 0.05µm	Al_2O_3, SiO_2	Soft nonferrous and microelectronics
1 - 0.02µm	Al_2O_3, SiO_2	Titanium, stainless steel, lead/tin, solders, electronics, soft nonferrous metals, plastics

VelTex™
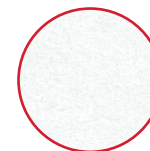
WhiteFelt™

PoliCloth™
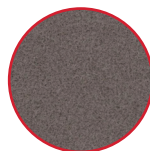
MicroCloth®
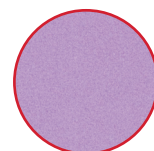
MicroFloc®

MasterTex®

ChemoMet®

Diamond Polishing Suspensions & Pastes

MetaDi Diamond Suspensions and Pastes are high-quality diamond polishing products that provide repeatable performance and deliver exceptional surface quality.

Repeatable Polishing Results

Buehler's MetaDi Diamond products are tightly controlled to prevent any deviations in particle size or concentrations. This ensures repeatable polishing results and a high quality surface finish for every sample processed.

Fast Preparation Time

MetaDi Supreme Suspension offers a high material removal rate and minimal deformation making it the product of choice for most materials. The high concentration of polycrystalline diamonds offers numerous sharp cutting faces to efficiently remove material and polish the surface.

Processing Unique Materials

Some materials are not compatible with water-based suspensions due to water-sensitivity or diamond embedding. The Oil-Based MetaDi Monocrystalline Suspension as well as MetaDi pastes offer multiple options when working with water-sensitive materials.

MetaDi® Diamond Suspensions

MetaDi Supreme Polycrystalline Suspension

Water-based, free of solvents, high diamond concentration, tight distribution of diamond grain size. Very high removal rate.

Color	Diamond Size	8oz [0.24L]*	32oz [0.95L]	1gal [3.8L]
● Charcoal	0.05µm	40-6627		
● Grey	0.25µm	40-6629		40-6629-128
● Blue	1µm	40-6630	40-6630-032	40-6630-128
● Blue	1µm Fine	40-6630F	40-6630F-032	40-6630F-128
● Green	3µm	40-6631	40-6631-032	40-6631-128
● Green	3µm Fine	40-6631F	40-6631F-032	40-6631F-128
● Yellow	6µm	40-6632	40-6632-032	40-6632-128
● Deep Red	9µm	40-6633	40-6633-032	40-6633-128
● Brown	15µm	40-6634	40-6634-032	40-6634-128
● Orange	30µm	40-6635	40-6635-032	40-6635-128
● Purple	45µm	40-6636		

MetaDi Monocrystalline Suspension

Monocrystalline suspension provides good material removal for most materials.

Color	Diamond Size	16oz [0.47L]*	32oz [0.95L]	1gal [3.8L]
● Blue	1µm	40-6530	40-6530-032	40-6530-128
● Green	3µm	40-6531	40-6531-032	40-6531-128
● Yellow	6µm	40-6532	40-6532-032	40-6532-128
● Deep Red	9µm	40-6533	40-6533-032	40-6533-128
● Brown	15µm	40-6534	40-6534-032	40-6534-128

Dye-Free MetaDi Supreme Polycrystalline Suspension

Ideal for materials that may absorb dye and affect image analysis.

Diamond Size	8oz [0.24L]*
1µm	40-6730
3µm	40-6731
6µm	40-6732
9µm	40-6733

MetaDi Monocrystalline Suspension Oil Based

Ideal for processing materials that are water-sensitive.

Color	Diamond Size	16oz* [0.47L]
● Blue	1µm	40-6540
● Green	3µm	40-6541
● Yellow	6µm	40-6542
● Deep Red	9µm	40-6543
● Brown	15µm	40-6544

MetaDi Combo, Suspension & Extender

Combination of monocrystalline suspension and extender fluid to maintain consistency when using automated dosing systems.

Color	Diamond Size	32oz [0.95L]
● Blue	1µm	40-5530-032
● Green	3µm	40-5531-032
● Yellow	6µm	40-5532-032
● Deep Red	9µm	40-5534-032

*8oz and 16oz are supplied with spray nozzle.

Grinding & Polishing
Consumables

OPTI·TECH
SCIENTIFIC

MetaDi® Diamond Pastes

For water free preparation. Polycrystalline for ductile materials, monocrystalline for hard, brittle materials and petrographic applications

MetaDi Ultra Polycrystalline Paste

Polycrystalline paste provides efficient material removal for soft materials that may be prone to diamond embedding. Use with MetaDi Fluid or AutoMet Oil.

Color		Diamond Size	20g
●	Blue	1µm	40-1-6301
●	Green	3µm	40-1-6303
●	Yellow	6µm	40-1-6305
●	Deep Red	9µm	40-1-6307
●	Brown	15µm	40-1-6309

This product is grey in color with color coded packaging

MetaDi Monocrystalline Paste

Natural monocrystalline diamond paste for materials that are prone to diamond embedding. Use with MetaDi Fluid or AutoMet Oil.

Color		Diamond Size	5g	20g
●	Grey	0.25µm	40-6112	40-6102
●	Blue	1µm	40-6138	40-6128
●	Green	3µm	40-6152	40-6142
●	Yellow	6µm	40-6172	40-6162
●	Deep Red	9µm	40-6192	40-6182
●	Brown	15µm	40-6212	40-6202

MetaDi II Monocrystalline Paste

Synthetic monocrystalline diamond paste for materials that are very prone to diamond embedding. Use with MetaDi Fluid or AutoMet Oil.

Color		Diamond Size	5g	20g
●	Grey	0.25µm	40-6241	40-6240
●	Blue	1µm	40-6244	40-6243
●	Green	3µm	40-6247	40-6246
●	Yellow	6µm	40-6250	40-6249
●	Deep Red	9µm	40-6253	40-6252
●	Brown	15µm	40-6256	40-6255

Polishing Lubricants

MetaDi Fluid is a water soluble lubricant for use with pastes and suspensions. AutoMet Oil is recommended for use with water sensitive materials.

Part Number	Description
40-6016	MetaDi Fluid, 16oz [0.47L]
40-6032	MetaDi Fluid, 16oz [0.47L]
40-6064-085	MetaDi Fluid, 16oz [0.47L]
60-3250-006	AutoMet® Oil, 6oz [0.18L]
60-3250-128	AutoMet® Oil, 6oz [0.18L]

Differences between Polycrystalline and Monocrystalline Diamonds
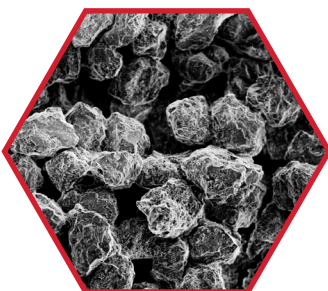
Angular, polycrystalline diamonds provide numerous cutting facets on the particle surface, resulting in less deformation. Recommended for use on most metals and ductile materials.
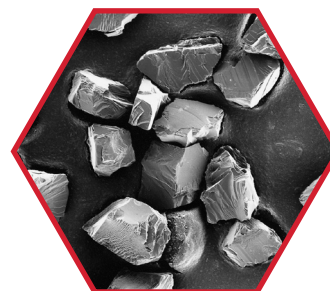
45micron diamond in SEM (450X)

Sharp edges of monocrystalline diamonds ensure clean and efficient cutting action. Recommended for harder materials, including minerals and ceramics.

45micron diamond in SEM (450X)

Final Polishing Suspensions

Final polishing suspensions are designed to remove the final layer of surface deformation and prepare a sample for analysis. A variety of products are offered to meet many different application needs.

Excellent Surface Finish

While the final layer of deformation is often invisible to the naked eye, it must be removed for some analysis techniques.

Application Specific Solutions

Alumina suspensions and powders along with colloidal silica suspensions offer a solution for the wide variety of materials being processed in today's world.

MasterPrep® Alumina

Sol-gel alumina suspension (0.05µm, ~8.5pH) is excellent for minerals, ferrous metals, carbides, precious metals, PWB's electronics and polymers.

63-6377-006	6oz [0.18L]
40-6377-032	32oz [0.95L]
40-6377-064	64oz [1.9L]

MasterMet® Colloidal Silica

Amorphous colloidal silica suspension (0.06µm, ~10pH) that provides chemo-mechanical polishing and is excellent for refractory metals, minerals and ceramics.

40-6370-006	6oz [0.18L]
40-6370-064	64oz [1.9L]
40-6370-128	128oz [3.8L]

MasterMet® 2 Colloidal Silica

Non-crystallizing amorphous colloidal silica suspension (0.02µm, ~10.5pH) that provides chemo-mechanical polishing action and is excellent for refractory metals, minerals, and ceramics.

40-6380-006	6oz [0.18L]
40-6380-064	64oz [1.9L]

MasterPolish® Final Polish

Blend of high purity alumina and colloidal silica (0.05µm, ~9pH) that contains minimal water and is optimal for water sensitive materials.

40-10084	32oz [0.95L]

MasterPolish® 2 Final Polish

Iron oxide suspension (0.06µm, ~10pH) that provides chemo-mechanical polishing and is excellent for sapphire, glass, alumina, silicon nitride and metal/ceramic composites.

40-6376-032	32oz [0.95L]

MicroPolish® Alumina Suspension

Agglomerated alumina suspensions offering high removal rates and suitable for use on pure and alloyed lead and magnesium.

40-10083	0.05µm	6oz [0.18L]
40-10082	0.3µm	6oz [0.18L]
40-10081	1µm	6oz [0.18L]

MicroPolish® Alumina Powder

Agglomerated alumina powders offering high removal rates and suitable for use on pure and alloyed lead and magnesium.

40-10075	0.05µm	1lb [0.45kg]
40-10076	0.05µm	5lb [2.3kg]
40-10077	0.3µm	1lb [0.45kg]
40-10078	0.3µm	5lb [2.3kg]
40-10079	1µm	1lb [0.45kg]
40-10080	1µm	5lb [2.3kg]

MicroPolish® II Alumina Powder

High quality deagglomerated alumina powders offering good surface finish and suitable for most minerals and metals.

40-6322-016	1µm	1lb [0.45kg]

MiroMet Polish®

MiroMet is a 1 µm cerium oxide water based suspension. It is mainly used as a universal polishing compound for glass, but is also suitable for a soft materials with very low melting points. Concentrate - dilute with distilled water before use.

406355006	1 µm	6oz [180 mL]

Grinding & Polishing
Consumables

FibrMet™ Abrasive Discs

FibrMet® Abrasive Disc are PSA (polyester backed) films, approx. 0.1 mm thick, coated with an aluminum oxide abrasive. These discs can be used wet or dry and are most suitable for fine grinding and polishing application, such as optical fiber and microelectronics where resultant surface flatness is essential. Qty 50

Micron	4in [102mm]	8in [203mm]	12in [305mm]
0.3µm	69-3104	69-3174	69-3124
1µm	69-3103	69-3173	69-3123
3µm	69-3102	69-3172	69-3122
9µm	69-3101	69-3171	69-3121
12µm	69-3100	69-3170	

UltraPrep™ Diamond Lapping Films

UltraPrep Diamond Lapping Films are designed for various material applications including microelectronic devices, wafers, ceramics, optical fibers, petrographic, and other metallographic materials. Ideal for preparation applications where surface flatness and minimal deformation are critical. Qty 5

Micron	8in [203mm] PSA Backed	8in [203mm] Plain Backed
0.1µm	15-6791	15-6792
0.5µm	15-6795	15-6796
1µm	15-6801	15-6802
3µm	15-6803	15-6804
6µm	15-6806	15-6807
9µm	15-6809	15-6810
15µm	15-6815	15-6816
30µm	15-6830	15-6831

BUEHLER

Shelf life is defined as the length of time listed products are considered best suitable for performance. This does not mean that a product will not perform beyond this time period, nor does it mean that the product will be usable continuously for this time frame. The shelf life is independent of the warranty* period as defined below. The shelf life depends on proper storage - i.e. Abrasive Cut-Off Wheels must be stored lying flat and in a dry location. Stored standing up or in a humid area breaks down the wheel composition.

Product Name	Shelf Life**
Abrasive Cut Off Wheels	2 years
CarbiMet Paper, PSA or S Backed	1 year
CarbiMet Paper, Plain Backed	2 years
Acrylic Systems	1 year
Aluminum Oxide Powder	2 years
Apex® Bimetallic Plate	1 year
Apex CGD and DGD	1 year
Apex Hercules Grinding Disc	1 year
Apex Magnetic Disc	1 year
Apex S Carrier Films	1 year
AutoMet® Lapping Oil	2 years
Cool 3 Fluid	2 years
Diallyl Phthalate Powder	2 years
Epoxy Systems	1 year
EpoMet® F & G Powder	1 year
FibrMet® Discs PSA Backed	2 years
Flat Edge Filler	2 years
IsoCut® Cutting Fluid	1 year
KonductoMet Powder	1 year
MasterMet® 2	3 years
MasterMet	2 years
MasterPolish®	1 year
MasterPrep	2 years
MetGrip® Liners	1 year
MetaDi® Fluid	2 years
MetaDi® Suspensions & Pastes	2 years
MicroPolish Alumina Suspension & Powder	1 year
PhenoCure® Powder & PreMolds	2 years
Pigments for Castable Mounts	1 year
Planar Grinding Stones	2 years
Polishing Cloths with PSA	1 year
Powdered Mold Release	2 years
ProbeMet® Powder	1 year
Release Agent	1 year
Silicon Carbide Powder	2 years
TransOptic Powder	1 year
UltraPrep® Diamond Lapping Film	1 year
Wafering Blades	1 year

*Warranty depends on Quality Assurance/Lab evaluation on an individual basis
**Shelf life starts when product is shipped
See Terms & Conditions for warranty information