

# Kemet

**Precision** Lapping | Polishing | Cleaning | Materialography

## PETROGRAPHY & GEOLOGICAL SAMPLE PREPARATION



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# Kemet Petrography Products

Since 1938, Kemet has been at the forefront of precision polishing technology, producing quality diamond pastes, slurries and composite lapping/polishing materials in our purpose built facilities.

For geological and petrographic sample preparation, Kemet offer a complete range of instruments to enable a piece of rock to be processed to a 20 micron thin section specimen. Our equipment offers the latest in technology and functional design to provide high levels of performance in preparation of mineralogical samples for microscopic examination.

## Contents

### PETROGRAPHY

1-13

Cutting Machines & Accessories	1-3
Mounting Samples	3-4
Cutting & Grinding Machine	5
Thin Section Lapping	6
Workholding	7
Thin Section Polishing	7-8
Peristaltic Dispenser	8
Vibratory Polisher	9
Diamond Grinding Discs	9
Polishing Pads	9
Magnetic Pad System	10
Abrasive Lapping Powders	10
Liquid Diamond	10
Diamond Suspension	11
Lubricating Fluid	11
Polishing Abrasives	11
Ultrasonic Cleaning & Fluids	12
Polarising Microscopes	13
Technical Support	13

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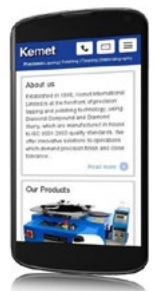
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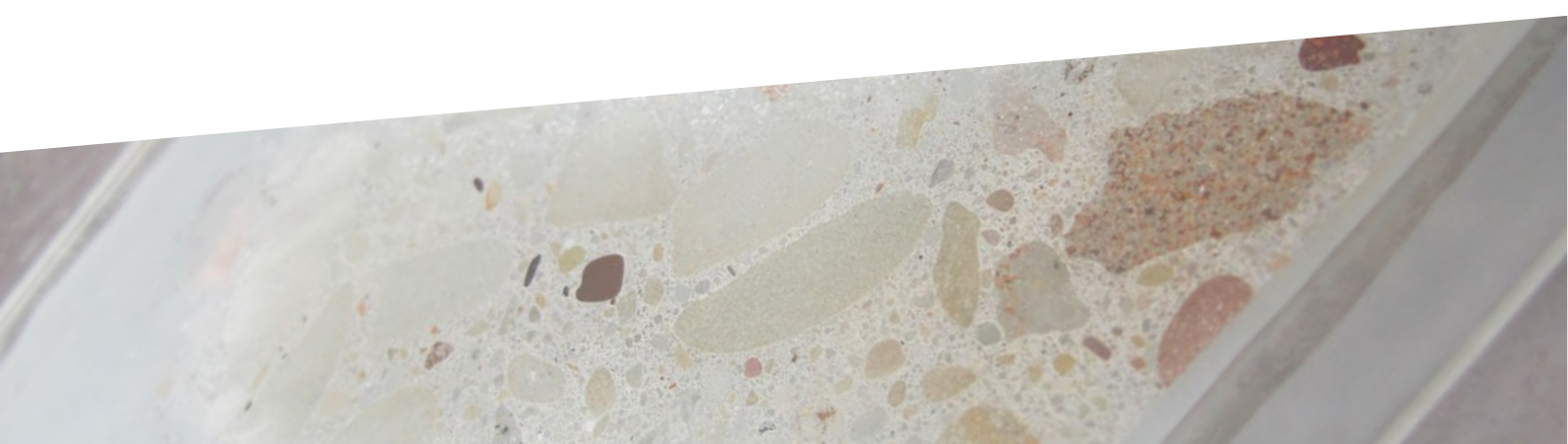
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Catalogue version: 2207



# Geocut - Cutter for Geological Specimens

A geological cutting machine, for sectioning rock, ceramics, minerals, glass, concrete etc.

- Z-axis cutting wheel positioning and table-feed cutting system
- Manual positioning of the specimen in X and Y axis
- X-Y table bed and cross feed table for cutting of plane parallel sections
- Mechanical display of cutting thickness
- Cutting capacity: up to  $\varnothing 85\text{mm}$  solid stock from  $\varnothing 250\text{mm}$  diamond wheels. Up to  $\varnothing 110\text{mm}$  solid stock from  $\varnothing 300\text{mm}$  diamond wheels
- Electronic brake system
- Interlocking safety switch for hood
- Various clamping systems available



Model	Geocut
Chop Cutting, Z Axis	Manual
Table Feed Cutting, Y Axis	Manual
Parallel Cutting, X Axis	Manual
Max. Wheel Diameter (mm)	$\varnothing 300$
Max. Cutting Capacity (mm)	$\varnothing 110$
	(HxD) 70 x 200
Y, X, Z Axis Travel (mm)	(Y) 220, (X) 95, (Z) 125
T-Slot table dimension, WxD (mm)	(395+95) x 275
T-Slot dimension (mm)	12
Cutting Power kW (S1)	4
Wheel Speed (rpm)	2800
Size, WxDxH (cm)	90 x 94 x 66.5
Weight (kg)	250
Cooling Unit (l)	55
Voltage	400V-3phase-50Hz
Product Code	345280

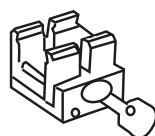
The Geocut has a cast aluminium base on which the motor and working space are secured in two separate housings. A large window and a sealed, 12V lamp in the cutting chamber allow safe observation of the cutting process.

The large feed table and generous work area can accommodate a variety of different clamping devices and has a long travel depth making the Geocut ideal for cutting long or deep samples in a single pass. An X-Y Cross table is standard for parallel and serial cutting. A cool water recirculating system is an option with two water jets located on each side of the cut-off wheel.



Many petrographic cutting applications require the sectioning of a specimen from an irregular shaped sample, creating positioning and clamping difficulties for the operator. Kemet offers a number of special clamping devices to overcome these difficulties

Clamping Devices	Type	For
Quick Clamping Device for round petrographic specimens	GR1811	GEOCUT
Universal vise for large specimens, rocks, etc.	GR1812	GEOCUT
Vertical Clamping Device with clamping shoe	1505	GEOCUT GEOFORM
Quick Clamping Device	GR0548	GEOFORM



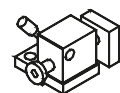
GR1811



GR1812



1505



GR0548



# Servocut - Thin Section Cutting Machine

The Servocut 402 has a large window and a sealed LED lamp in the cutting chamber allow safe observation of the cutting process. The large, T-slotted feed table and generous work area can accommodate a variety of different clamping devices. The feed table also has a long travel depth making the Servocut ideal for cutting long or deep samples in a single pass. A side access port makes it possible to make transverse sections on long core samples and a stainless steel tray catches small specimens. The precision cutting of this machine can eliminate the need for grinding action before lapping the specimen.



Servocut Models	402-AA
Max. Wheel Diameter (mm)	Ø400
Max. Cutting Capacity (mm)	Ø150 (HxD) 85 x 350
Y, X, Z Axis Travel (mm)	(Y) 300, (X) 150*, (Z) 225
T-Table Dimension, (mm)	550 x 484
T-Slot Dimension, (mm)	12
Cutting Motor Power (S1)	7.5 kW
Wheel Speed, (rpm)	600 - 2400
Cutting Feedrate, (µm/s)	20-5000
HMI Touch Screen	7 inch
Chop Cutting, Z-Axis	Auto
Table Feed Cutting, Y-Axis	Auto
Table Oscillating Cutting	Standard
Rapid Pulse Cutting	Standard
Smart Feed Control	Standard
Step Cut; Segment Cut; Diagonal Cut **	Optional
Automatic Cleaning System	Optional
Size WxDxH, (cm)	114 x 112 x 169
Weight (kg)	600
Recirculation Cooling Unit (l)	135
Voltage	400V-3phase-50Hz

\* X-axis Parallel Cutting (optional) with machine model 402-AA-AX

\*\* Optional cutting methods for heavy-duty cutting applications.

**Segment Cut:** For difficult and complex shaped materials.

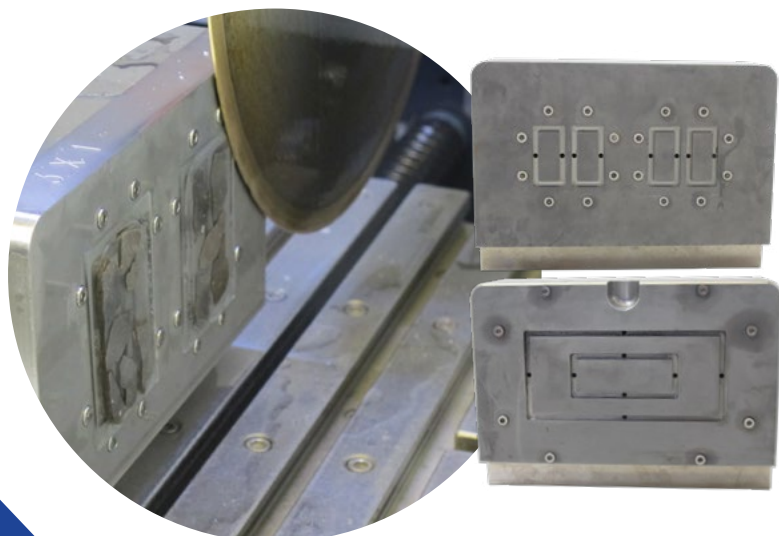
**Diagonal Cut:** For increased cutting capacity.

**Step Cut:** For extra hard materials.

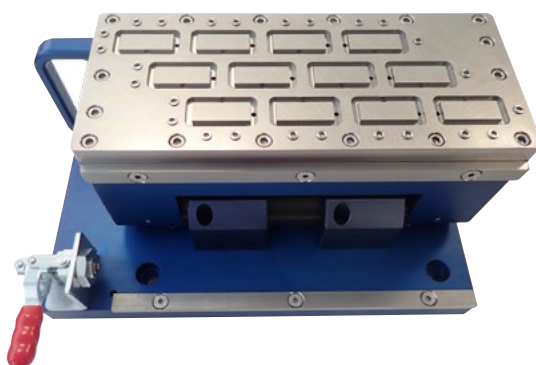
The Servocut 402-AA has X-Y-Z triple axes cutting capability:

- Z-axis Chop cutting: The specimen is clamped and the cut-off wheel approaches the specimen
- Y-axis Table-feed cutting: Feeds clamped specimen into a rotating cut-off wheel using the T-slotted feed table
- X-axis Parallel Cutting (optional): Parallel serial sectioning in the x-axis with optional movable x-bed

Optional integrated vacuum pump allows cutting of not only large rock samples, but also slide mounted sections. A standard 80 mm diameter outlet for fume extraction is at the back of the hood. Self cleaning option available.



Kemet offer a range of vacuum fixtures which give the Servocut potential for cutting either multiple standard slide mounted specimens or custom vacuum fixtures for special slide sizes.



Custom slide mounts available on request

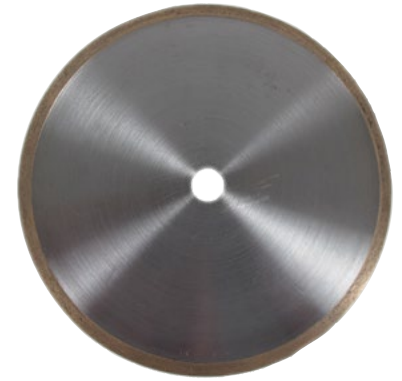
All of our cutting machines can be modified to provide cutting requirements on most materials. Other versions available, see our metallography catalogue or website for details

# Diamond Cut-off Wheels

Continuous rim, diamond coated cut off wheels for Petrographic sample preparation.

Type / Materials	Diameter	Thickness	Arbor	Code
Low concentration metal bond for ceramics, glass and geological samples.	100 mm	0.3 mm	12.7 mm	600033
	125 mm	0.4 mm	12.7 mm	600034
	150 mm	0.5 mm	12.7 mm	600035
	175 mm	0.6 mm	12.7 mm	600036
	200 mm	0.8 mm	12.7 mm	600037
Continuous rim diamond cut off wheels for petrography.	100 mm	0.4 mm	12.7 mm	600038
	150 mm	1.0 mm	12.7 mm	600044
	200 mm	1.35 mm	12.7 mm	600048
	250 mm	1.6 mm	12.7 mm	600383
	250 mm	1.35 mm	32 mm	600049
	300 mm	1.6 mm	32 mm	600059
	350 mm	2.4 mm	32 mm	600075

Other sizes are available on request.



## Kemet Dressing Stick

Used for cleaning resin and dirt particles from the diamond cut off wheels. Dimensions 25 x 25 x 150 mm

Product	Code
Dressing Stick	362240



## Cutting & Coolant Fluid & Anti Rust Agent

Kemet Cutting and Coolant Fluid is a mineral oil-free, water-miscible cutting fluid that provides excellent corrosion protection and is completely free on nitrate, chlorine and zinc.

The Anti Rust Agent is for use with cut off wheels and lapping slurries to avoid corrosion or oxidation of machines and specimens.

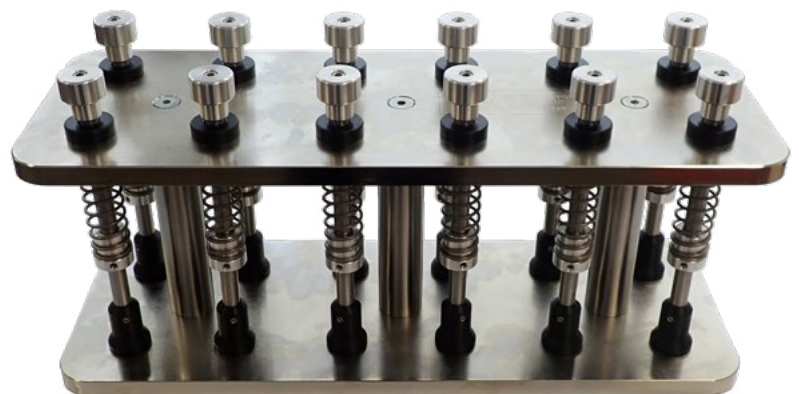
Product	Size	Code
Cutting and Coolant Fluid	5 Litre	600096
Anti Rust Agent	5 Litre	600116



## Geofix - Mounting Fixture for Thin Sections

The Geofix is a fixture for mounting specimens to glass slides for thin sectioning. Its spring activated loading system provides a uniform thickness of bonding material between the specimen and the glass slide.

Product	Code
8 slides up to 76 x 51 mm	345286
12 slides up to 76 x 51 mm	363084
2 slides up to 152 x 102 mm	-





## Mounting Moulds and Accessories

A wide range of mounting moulds which can be used in conjunction with all Kemet cold mounting resins.

- KM Acrylic Resin Mould - detachable aluminium base (non-reusable)
- Teflon Mould - reusable with detachable base
- Rubber Mould - one piece (reusable)

Moulds	Size (mm)	Quantity	Code	Moulds	Size (mm)	Quantity	Code
Rubber Moulds	55 x 30	Pk 5	600727	Teflon Moulds	200	Pk 5	600723
	70 x 40	Pk 5	600728		250	Pk 5	600724
	100 x 50	Pk 5	600729		300	Pk 5	600710
	250	Pk 5	600062		400	Pk 5	600725
	300	Pk 5	600063		500	Pk 5	600726
	400	Pk 5	600064				
KM Acrylic Moulds (Acrylic with aluminium base)	250	Pk 50	600066	<b>Accessories</b>		<b>Quantity</b>	<b>Code</b>
	300	Pk 50	600753	Cups and stirrers	Pk 100	600058	
				250ml measuring cup & stirrer	Pk 5	600730	
				Stainless steel clips	Pk 100	600050	
				Plastic clips	Pk 100	600053	
				Silicon mould release spray	500ml	600158	



## Cold Mounting Resins

The Kemet range of cold mounting resins includes acrylic and epoxy solutions. Cold mounting systems are particularly useful for delicate specimens that will not withstand the heat and pressure from a hot mounting press. They are also a good way of producing high volumes of mounted samples, one mix producing many samples.

Type	Application	Cure Time	Shrinkage	Hardness	Colour	Mix Ratios	Contents	Code
KEP Epoxy	General purpose epoxy with very low shrinkage	10h at 25°C	Low	75 Shore D	Clear	2:1 by weight	1kg Resin & 500g Hardener	600410
KEPT Epoxy	Porous materials, coatings and electronic components	10h at 25°C	Low	75 Shore D	Clear	2:1 by weight	1kg Resin & 500g Hardener	600411
Kemet Transparent Dye	For creating a 'see-through' coloured finish	-	-	-	Blue	Dye added to achieve the required depth of colour	20g	600415
			-	-	Yellow			600416
			-	-	Green			600417



## Vacuum Impregnation Units

Most mineralogical specimen have porosities, cavities and cracks and therefore need to be embedded under vacuum. Designed for embedding and impregnation of porous materials, these units remove the trapped air from the mounting material and eliminate any gaps between the specimen and resin.

- Self contained vacuum impregnation unit with gauge
- Incorporated vacuum pump and control circuit
- Compact and simple to use
- Efficient Impregnation
- Multi-specimen application
- Vacuum gauge



Sample impregnated with KEPT using KemVac

Model	Type	Code
KemVac	No compressed air supply required, Electrical: 220V-1phase-50Hz	345827
Vacumet	Compressed air supply required	345173

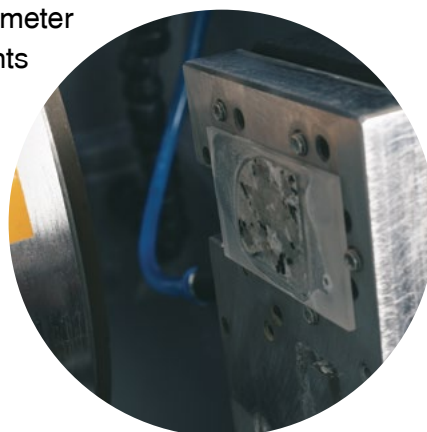


# Geoform - Thin Section Cutting & Grinding



A precision thin section cutting and grinding machine, for fast and precise material removal on petrographic thin sections, the Geoform performs both the cutting and grinding processes. On the cutting module, the slide mounted specimen is fixed on a holder with vacuum and sectioned up to a thickness of 0.5mm. Water cooling during cutting avoids deformation and heat degradation. On the grinding module, a built-in digital micrometer ensures high precision, and the specimen is ground to a high standard of accuracy ready for examination or to maintain further lapping and polishing.

- The diamond cutting disc and grinding wheels share the same precisely aligned spindle, to maintain accuracy of finished samples.
- A dual, in-line filtering unit removes the moisture from the vacuum line and drains into the cutting chamber when the vacuum pump is turned off.
- Diamond cutting wheels up to 250 mm diameter
- Separate cutting and grinding compartments
- Micrometer for precise grinding of material
- Vacuum pump with gauge and filter
- Vacuum chuck to hold 25 x 50mm slides
- Accessory kits available for larger slide sizes



Model	Geoform
Cutting Wheel & Grinding Stone Speed (rpm)	500 - 2000
Cutting Wheel Dia. (mm)	250
Grinding Wheel Dia. (mm)	175
Recirculating Tank (Optional) (l)	40
Glass Slide Dimensions (mm)	51 x 26
	76 x 26
	76 x 51
Digital Micrometer	Yes
Motor Power (HP)	550 W
Dimensions, WxDxH (cm)	84 x 78 x 45
Weight (kg)	100
Voltage	230V-1phase 50/60 Hz
Product Code	345198

Slide Accessory Kits	For slide sizes	Code
Includes sample holder and set of flanges ø73 mm	76 x 26 mm	345718
	76 x 51 mm	345719

## Diamond Cup Wheels

Range of diamond cup grinding wheels for petrography, for use with the Geoform. Other grit sizes available on request.

Size	Micron	Code
Ø 175 mm	65	345965

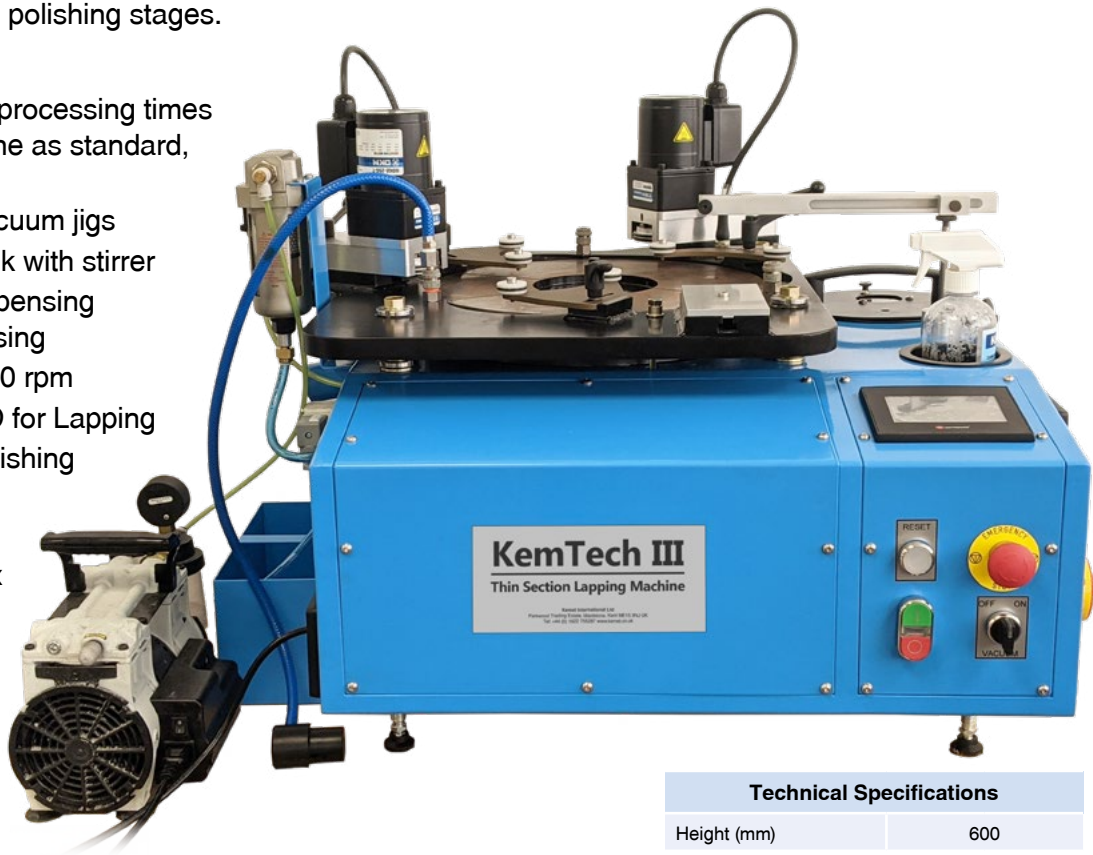


# KemTech III Thin Section Lapping Machine

The KemTech III Thin Section Lapping Machine is able to accurately lap and polish thin sections mounted on glass slides down to 30 microns. Metered dosing of conventional and/or diamond abrasives is applied to the lapping plate using the integrated peristaltic dispenser. The Kemet Lift Off Disc system allows quick transitions between the lapping and polishing stages.

## Features & Benefits:

- Driven rings, for faster processing times (2 included with machine as standard, 3rd an optional extra)
- Capacity for up to 3 vacuum jigs
- Integrated abrasive tank with stirrer
- Accurate peristaltic dispensing system for metered dosing
- Variable Speed up to 70 rpm
- Cast Iron serrated LOD for Lapping
- Aluminium LOD for Polishing
- 4.3" HMI Touchscreen
- Sealed, maintenance free, reduction gearbox
- Water trap and filter
- Stand-alone vacuum pump
- Connectors to suit Kemet vacuum jigs, which are available as an optional extra



Also available in 20" with guarding (example machine below)



Vacuum jigs for slides up to 152 x 102 mm are available

Technical Specifications	
Height (mm)	600
Working Height (mm)	410
Width (mm)	670
Depth (mm)	630
Nett Weight (kg)	215
No of jig stations	3
Main Motor (kW)	0.37
Voltage	230V 110V 1ph - 50/60hz
Product code	359842 359842A

Recommended Consumables		Code
Diamond Suspension (Water based mono diamond)	9 Micron AQUAPOL-M	219442
	6 Micron AQUAPOL-M	219448
	3 Micron AQUAPOL-M	219440
	1 Micron AQUAPOL-M	219450
	Green Silicon Carbide Powder F600 1Kg	361513
	380 mm PSU-M Chemo-Textile Cloth	341011
	380 mm MRE Short Napped Final Polishing Pad	341715
Recommended Accessories		Code
	Set of 3 Cast Iron Serrated Conditioning Rings	360203
	Set of 3 Plastic Faced Conditioning Rings	361521
	380 mm Cast Iron Serrated Lift Off Plate	362433
	380 mm Aluminium Lift Off Disc	361001
	380 mm Aluminium Drive Plate	361002
	380 mm Thin Metal Disc (For use with magnetic system)	342563
	380 mm Magnetic Disc	345773



# Kemet 300 LVAC2 - Polishing Machine

The Kemet 300LVAC2 Special purpose polishing machine is designed to work alongside the Kemtech III Geological lapping machine for polishing geological mounted samples.

The basic machine has a 300mm diameter polishing plate. All drive elements are mounted on a heavy duty aluminium alloy casting, giving vibration free operation and silent running. Water inlet with control valve are standard features. The control panel has a process timer, variable speed control and forward / reverse control switch and its own vacuum pump and connectors to suit Kemet vacuum jigs (not supplied with the machine).

- 300mm diameter plate
  - Vacuum Pump
  - High Torque Motor (1 HP)
  - Variable speed ranges 50 - 600rpm
  - Digital Timer 0 - 99 mins
  - Dimensions 450 x 800 x 400mm
  - Weight 42 Kg
  - Electrical requirements;
  - 230V-1Ph-50Hz (Code - 346039)
- or
- 110V-1Ph-50Hz (Code - 346039A)



## Precision Workholding and Sizing Fixture - Vacuum Jigs

Kemet Vacuum Jigs are precision workholding and sizing fixtures, suitable for accurately sizing geological thin sections, wafers, crystals and any precision parts where parallelism and a precision finish are required.

Any components and specimens can be held which can be located inside a diameter of 110mm and are under 6mm in thickness. Special versions for larger sizes are available on application.

The jigs are supplied in protective wooden cases complete with rotary union and tubing suitable for a vacuum pump and have diamond faced stoppers.

The setting jig with dial indicator enables accurate size setting to a few microns.

A range of face plates are available making the jigs suitable for holding all popular glass slide sizes. Special holding profiles can be supplied to accommodate wafers crystals and precision parts.



Vacuum Jigs (to suit slides)	Code	Vacuum Jigs Accessories	
4 x (76 x 26 mm) or 2 x (76 x 51 mm)	362072A	Rotaid rotation assist post	362895
6 x (52 x 26 mm)	362072B	Setting stand	361986
1 x (100 x 100 mm)	362072C	Cast iron setting test block (127 mm diameter)	361773
6 x (48 x 28 mm)	362072D		
3 x (45 x 60 mm)	362072E		
1 x (152 x 102 mm)	362072F		

# Forcipol/Forcimat TS - Polishing and Grinding Machine



The Forcipol Series of grinding and polishing machines offer practical and economical solutions to your sample preparation needs. Available as single wheel and dual wheel units (200/250/300 mm wheel size) with variable rotating speeds and a digital display enabling the setting of the optimum speed for each individual preparation process.

- Electronically controlled smooth speed variation
- Drive elements on heavy duty aluminium alloy cast base
- Wheels mounted on ball bearings for quiet/vibration free operation and the application of high pressures to prepare even large specimens
- Variable speed between 50-600 rpm
- Single wheel, 0.75 kW motor with overload protection
- Water inlet and flexible water outlets with control valves for wet grinding

Automatic Disc Cleaning & Drying function can be activated with a single button to obtain perfectly cleaned disc surfaces in seconds.

The Dosimat (option) is an adjustable and exchangeable drip lubricator, the dosing level carried out through an adjustable flow valve.

The Forcimat-TS is a microprocessor controlled sample mover designed to be used with the Forcipol-TS. It is an automatic head with low speed for thin section and petrographic sample preparation. The pneumatic force is individually applied and adjustable between 5 N (1.1 lb.) and 60 N (13.5 lb.) from the front panel and displayed on a gauge.



Models	Forcipol TS	Forcipol 202	Model	Forcimat-TS
No. Of Stations	1	2	Motor Power, Watt	100
Motor Power (HP)	1	1	Head Speed (rpm)	50 - 150
Disc Speed (rpm)	50 - 600	50 - 600	Sample Capacity	1 - 6
Disk Diameter (mm)	Ø200/250/300	Ø200/250/300	Force (N)	5 - 60
Dimensions (mm)	450 x 740 x 340	870 x 740 x 340	Compressed Air	6 bar
Weight (kg)	50	55	Dimensions, mm	230 x 430 x 250
Product Code		345100	Weight, kg	16
Voltage	230V-1phase-50Hz		Voltage	230V-1phase-50Hz
			Product Code	345285

Geological Samples Holders	Code	Geological Samples Holders	Code
FORCIMAT specimen mover, 3 x Ø 60 mm	345411	LAP-TS special specimen holder with Boron Carbide stops for lapping of thin sections, Ø 60 mm.	345808
FORCIMAT specimen mover, 6 x Ø 40 mm	345127		
Set of insert rings for 30 mm	345128		
Set of insert rings for 25 mm	345279	POL-TS special specimen holder for polishing of thin sections, Ø 60 mm.	345287

## aKu-Disp - Peristaltic Dispenser

The aKu-Disp is designed to work in conjunction with the Forcipol and Kemtech machines. It links to the machine's main timer system and the stirrer function operates as soon as power to the unit is turned on. It has manually operated variable speed controls for both the pump and stirrer.

Product	Code
aKu-Disp unit	362820
Integration kit for Kemtech III 110V	362823
Integration kit for Kemtech III 230V	362822



# Vibratory Polisher

The Vibrapol is an automatic vibratory polisher designed to prepare high quality polished surfaces on a wide variety of materials, such as; electron-backscatter diffraction (EBSD) applications, AFM (atomic force microscope), SEM (scanning electron microscopy) analysis and Nano indentation or micro- hardness testing. The high frequency vibration in horizontal motion produces a very effective polishing action to remove minor deformation remaining after mechanical preparation and reveal the stress-free surface. Ideal for EBSD specimens preparation, surface polishing on soft and ductile materials.

- Low power consumption and noise design with piezoelectric vibratory plate, light weight but stable in operation
- Easily replacement design on disc, convenient to change and clean
- 7" LCD touch screen
- Save up to 20 customised programs
- Automatically adjust frequency setting
- Ideal for all materials

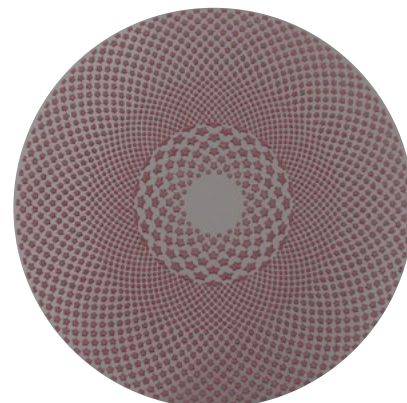


## Diamond Grinding Discs

The diamond grinding discs are resin bonded.

- High and consistent stock removal while achieving perfect flatness
- Maintain flatness while providing excellent surface finish
- Suitable for magnetic mounting

Diamond Grinding Discs			Ø Disc (mm)		
Grit	Micron	Colour	200	250	300
120	107	Yellow	343801	343808	343815
220	76	Green	343802	343809	343816
600	30	Blue/Black	343803	343810	343817

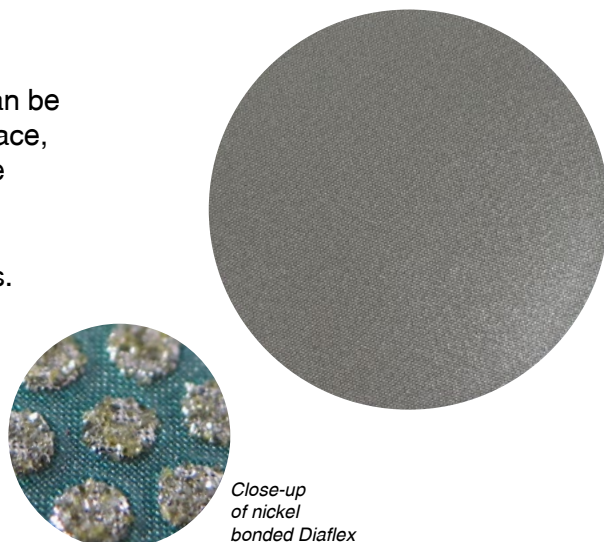


## Diamond Grinding - Diaflex

Diaflex self-adhesive nickel bond diamond discs or sheets can be used after slab sawing of rock samples to produce a flat surface, removing cutting marks quickly, leaving a surface that can be bonded or lapped. A typical process would be 125µ Diaflex followed by 36µ Diaflex. The Diaflex combines long life and aggressive cutting action to maximise productivity of sections.

Grade	Grit	Micron	Diameter Size (mm)		
			200	250	300
Black (N)	120	125	342002	342026	342027
Red (N)	200	74	342005	342028	342029
Yellow (N)	400	40-50	342007	342030	342031
White (N)	800	20-30	342008	342033	342034

Can be supplied as plain backed.







Close-up of nickel bonded Diaflex



# Kemet Polishing Pads & Magnetic System

Polishing pads enable flat polished surfaces to be produced on many softer materials. Kemet offer a wide range of self-adhesive and metallic backed polishing pads.

Name	Type	Description	Use with Recommended Diamond Micron size	Diameter (mm)			Colour	
				200	250	300		
PSU-M	Magnetic	<b>Chemo-textile</b> These are manufactured to the highest standards with accurately controlled uniform thickness. Non woven pads manufactured specially for polishing processes.	For smoothing and polishing operations	15 micron and finer	341008	341009	341010	
PSU-MM					341811	341812	341813	
PAD-K					341017	341028	341039	
PAD-K	Perforated	Used where fast cutting is needed	15 micron and finer		341058	341029	341030	
LIL-Plus	Magnetic	<b>Nap Cloths</b> For final polishing stages of preparation. They give a more gentle polish, and are ideal for softer specimens and components. All cloths are self-adhesive unless marked 'plain'.	A long nap synthetic cloth	3 micron and finer	341611	341610	341609	
LIL Plus-M					341289	341290	341291	
MRE					341712	341716	341714	
MRE-M	Magnetic	Synthetic flock on a flexible waterproof carrier. A more heavy duty cloth	6 micron and finer		341815	341816	341817	

All Polishing Pads supplied in packs of 10. Other sizes available on request.

The Kemet magnetic disc system is suitable for Kemet's range of magnetic polishing pads, diamond grinding and fine grinding discs, and any magnetic consumable from other suppliers.

- Easy to change and cloths last longer
- No adhesive breakdown problems
- Faster and cleaner cloth changes
- No metal disc involved so safe to use

Magnetic Disc	Code
Ø 200 mm	345770
Ø 250 mm	345771
Ø 300 mm	345772

## Abrasive Lapping Powders

Abrasive lapping powders and pastes suited for lapping.



Silicon Carbide Powder		
For lapping of Petrographic Material		
Grit	1kg	5kg
180	361540S	361541
220	362320S	361531
320	361533S	361617
400	361673S	361512
600	361513S	361563
800	362264S	362161
1000	361671S	361535
1200	361652S	361537

Aluminium Oxide Powder	
For smoothing operations	
Micron	5kg
3	361607
5	361618
9	361555
12.8	361510
17	361619
23	361554
29	361620

Water soluble pastes are also available.



## Liquid Diamond

- Precision graded diamond particles in a fluid carrier
- General purpose, low viscosity, water based slurry for general purpose lapping where oils and emulsions can not be used
- Alcohol based slurry available - ideal for polishing specimens which must not come into contact with water
- Chemical composition of the carrier fluids is carefully controlled to ensure that they are compatible both with the Kemet composite lapping plate and the components being lapped
- Fast stock removal and superfine surface finishes
- Suitable for dispensing by Kemet aKu-Disp and most other dispensing systems

# Diamond Suspension

Aquapol is the next generation of **water based** diamond suspensions for sample preparation. Available in monocrystalline (Aquapol-M) and polycrystalline (Aquapol-P). Aquapol is easy to clean and non-foaming.

- Uniform suspension of diamond particles
- No agitation required
- **ZERO** Volatile Organic Compounds (VOC\*)

Micron	AQUAPOL-M Water Based Monocrystalline		AQUAPOL-P Water Based Polycrystalline	
	400g	1 Litre	400g	1 Litre
1/10	219471	219490	219472	219484
1/4	219459	219491	219461	219485
1/2	219457	219492	219463	219486
1	219450	219493	219452	219487
3	219440	219494	219453	219488
6	219448	219495	219454	219482
9	219442	219496	219455	219483
15	219444	219497	219456	219489
25	219446	219498	-	-



# Lubricating Fluids

- Assists Kemet Diamond Products to cut and polish more effectively by absorbing frictional heat and diluting the lapping residue
- Lubricant performance remains stable even when under high pressure
- Manufactured from high purity chemicals
- Oil based is available for processes where water based is unsuitable

Type	Description	Soluble in	Colour	450ml Trigger spray	1 Litre	2.5 Litres	5 Litres
Blue	Alcohol based. Improves cutting and polishing performance.	Water	Blue	301200	301158	301156	301159
GW2	For use with Kemet Diamond Suspension.	Water	Light green	301514	301105	301108	301107
R OS2	For use where water is not permitted.	Oil	Red	301513	301511	301512	301141
W9	For use with Aquapol suspensions	Water	Clear	-	301528	301527	301529



# Polishing Abrasives

Kemet manufacture a wide range of conventional and CMP polishing suspensions.

Polishing Suspensions for special applications				
Description	Micron	Use	Size	Code
Col-K NC Non crystallising Colloidal Silica Suspension	0.06	Final Polishing Stage	5 litres	600199
	0.06		20 litres	600202
Col-K (std) Colloidal Silica Suspension	0.06	Final Polishing Stage	5 litres	600212
	0.06		20 litres	600204
Alumina Suspension No.1	0 - 1	Steel & Hard metals	1 litre	600711
Alumina Suspension No.2	0 - 0.7	Semi-hard metals	1 litre	600712
Alumina Suspension No.3	0 - 0.3	Soft metals	1 litre	600713
Alumina Suspension	0.05	Soft metals	1 litre	343591

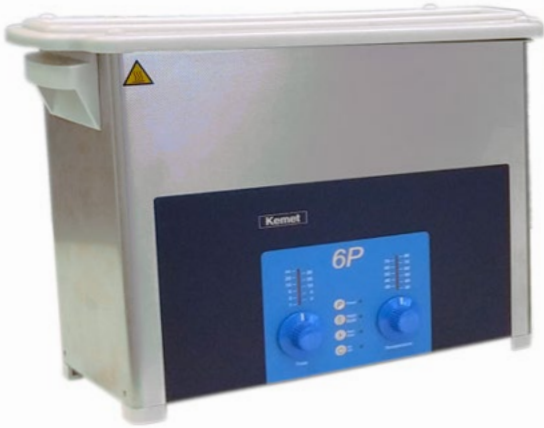
Polishing Alumina for polishing most materials (Powder)			
Micron	Use	Size	Code
Gamma 0.04	Super finishing of soft metals such as copper, lead, aluminium	1kg	600251
Alpha 0.3	Final polishing of copper alloys, nickel, brass, bronze, aluminium	1kg	600252
Alpha 1.0	Fine pre-polishing of all metals	1kg	600253



\* ZERO Volatile Organic Compounds (VOC) - not classified as an atmospheric pollutant and offer health and safety benefits. VOCs are organic chemicals that have a high vapour pressure at ordinary room temperature, some of which can be dangerous to human health and/or cause harm to the environment.

# Kemet Ultrasonic Cleaners

Kemet ultrasonic units feature a top of the range digital generator driving piezo-ceramic transducer elements to provide optimal cleaning. The Booster function, for extra power, can be used for the most difficult cleaning tasks. Distribution of the ultrasonic energy is achieved by the frequency sweep to give precision cleaning throughout the tank. All models are equipped with thermostatically controlled heating to ensure optimum cleaning temperature.



Manufactured from DIN 304 stainless steel, both internally and externally, they are easy to keep clean. A drip protector guides any unwanted water droplets away from the operating panel and the internal control circuitry is protected against fluid splashes.

## Features

- Tank made from stainless steel (DIN 304)
- High quality stainless steel mesh basket
- Boost, Sweep and Degassing function
- Easy setting of time, temperature and special functions
- Dry run heating protection and automatic switch off after 12 hours of operation
- Glass beaker system available for cleaning small samples

Technical information	Kemet 3P	Kemet 6P	Kemet 12P	Kemet 30P	Kemet 45T
Tank service volume (l)	1.9	4.3	9	20.6	45
Internal tank dimensions (mm)	240 x 137 x 100	300 x 150 x 150	300 x 240 x 200	505 x 300 x 200	500 x 300 x 300
Internal basket dimensions (mm)	198 x 106 x 50	255 x 115 x 75	250 x 190 x 115	455 x 250 x 115	455 x 270 x 194
External dimensions (mm)	300 x 179 x 214	365 x 186 x 264	365 x 278 x 321	568 x 340 x 321	615 x 370 x 467
Ultrasonic power nom/peak (W)	80/160	150/300	200/400	300/600	400
Ultrasonic frequency (kHz)	38	38	38	38	38
Heating power (W)	200	400	800	1200	1600
Voltage	230V-1phase-50Hz				
Product Code	359480P	359482P	359484P	359486P	359488T

# Kemet Cleaning Fluids



## Ultrasonic Cleaning Fluids

Kemet are a distributor of NGL with more than 300 high performance formulations providing a solution to most cleaning challenges. The finest in biodegradable cleaning fluids, these are specially formulated concentrated detergents available in neutral, alkaline and acid types.



## Dasty Industrial Degreaser

For hand cleaning, this product is extremely effective for thoroughly degreasing all parts as well as large surfaces and perfect for cleaning lapping residue. Thanks to its ultra-concentrated formula, Dasty easily removes grease, mineral oil, scale, etc. and is biodegradable, safe for shipping and contains no ozone depleting chemicals.

Size	Code
1 Litre	362936
Box of 12	362962



## CO - 42 Cleaning Fluid

Designed for cold use and applied by spray, brush, cloth or full immersion, CO42 is a highly efficient degreasing fluid similar in performance to 1.1.1 Trichloroethane, but without the ozone depleting properties. CO-42 is **NOT** approved for use at elevated temperatures or in ultrasonic cleaning machines.

Size	Container	Code
450ml	Trigger Spray	302103
5 Litres	Metal	302102
25 Litres	Metal	302101
200 Litres	Metal	302105



# Polarising Microscopes

Our range of polarising microscopes include; transmitted (bottom) light, incident (top) light and both dual illuminated. More advanced models have waveplate inserts and Bertrand Lenses for additional analysis such as conoscopy.

Type/Head	Eyepieces and Objectives	Model
Monocular Transmitted	10X FN18 Eyepiece, 4X, 10X, 40X DIN. Achromatic Objectives. Coaxial coarse/fine focus system minimum division of fine focusing: 2µm. 360° rotatable stage and rotatable polariser. Rotatable stage (Diameter 120mm).	GXM-JPL135
Binocular Transmitted	10X Widefield FN18 Eyepieces, 4X, 10X, 40X & 100X oil Achromatic Objectives. Optional Objectives: 20X & 40X. 6V 20W Adjustable Halogen. Binocular Head with interpupillary adjustment and diopter adjustment for the eyepiece tubes. Coarse/Fine focus mechanism, limit stopper and tension adjustment. 360° rotatable 30mm x 40mm travel, centerable.	GXM-JPL1350HBG
Trinocular Transmitted	10X Widefield FN20 Eyepieces, 4X, 10X, 20X & 40X Achromatic Objectives. Optional Objectives: 60X & 100X oil. 6V 20W Adjustable Halogen. Trinocular Head suitable for use with a camera (requires the appropriate adapter) with interpupillary adjustment and diopter adjustment for the eyepiece tubes. Coarse/Fine focus mechanism, limit stopper and tension adjustment. 360° rotatable 30mm x 40mm travel, centerable.	GXM-JPL1350HTG
	10X Widefield Eyepieces, 4X, 10X, 40X, 60X 4 Plan Achromatic, POL Objectives. Trinocular head with interpupillary distance adjustment. SMP ScopePad attaches via C-mount adapter to the trinocular photoport. Coaxial Coarse/Fine Focus Mechanism, Tension Adjustable, Limit Stopper	GXM-XPL1500DIG
	10X Widefield Eyepieces, 5X, 10X, 40X, 60X 4 Plan Achromatic Objectives. 30W halogen lamp with adjustable intensity. Substantial Stand, with coaxial Coarse/Fine Focus Mechanism, Tension Adjustable, Limit Stopper. 30 degree inclined eyepiece tubes, with interpupillary distance adjustment. SMP ScopePad attaches via C-mount adapter to the trinocular photoport	GXM-XPL3200DIG



INSPECTION EQUIPMENT & TECHNICAL SUPPORT

## Technical Support & Process Development

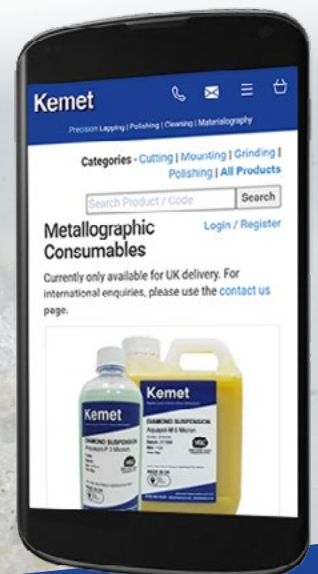
Our expertise is available to you through our in-house technical specialists, a team of technical representatives in the UK, and an extensive network of overseas subsidiary companies and distributors.

Kemet provide continuous technical support for both prospective and current customers, and to ensure that any problems are correctly and quickly resolved. Installation and full training is available both in the UK and overseas.

We regularly assist customers by developing new products and processes. Customers' samples are evaluated, free-of-charge and comprehensive reports are issued covering all aspects of the process.

# Use Aquapol, for the Perfect Sample

The next generation of water based diamond suspensions for sample preparation. Easy to clean and non-foaming. Manufactured to ISO 9001 Quality Assurance standards. ZERO Volatile Organic Compounds (VOC\*) and competitively priced.



sales@kemet.co.uk  
www.kemet.co.uk/metshop



# Kemet



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