

Kemet Diamond Polishing products are manufactured from the finest materials and to the highest standard .

PURITY

The abrasive powder in all Diamond products is **pure** diamond, no reclaimed diamond particles are permitted.

GRADING

The standard of grading of diamond particles is guaranteed to comply with the special tolerances established by us, which are equal, if not superior, to the general British, American and German grading standards of diamond powder.

PARTICLE SHAPE

The shape of the particles is 'blocky' multifaceted crystals, between cube and sphere. Irregular shapes such, as splinters, defined by having three times or more the maximum dimension at right angles to it, do not exceed 5% of the total count. Flakes exhibiting such transparency that the thickness is less than one quarter of the shortest dimension viewed do not exceed 5% of the total count.

COMPOSITION

All diamond products have the diamond particles uniformly dispersed and permanently suspended in the chemical carrier in which there are no other solid particles. When applied as instructed, the diamond products give a uniform film, free of lumps, and homogeneous.

DIAMOND CONCENTRATION

The amount of diamond powder established for each declared concentration of the various micron grades is guaranteed not to vary from batch to batch. Each concentration has a code number and this is identified on the container label.

Each micron size is available in different diamond concentrations, which are shown in the order lowest to highest, e.g. 3-KD-C4 has a *higher* diamond concentration than 3-KD-C3 and 3-L-C2 has a *higher* diamond concentration than 3-L-C1.

COMPOUND COLOUR AND DESIGNATION

The colour, which identifies each micron size, allows the operator to clearly identify the micron size of every grade of compound used. Minor variation in colour shade may occur.

Type KD Diamond Compound

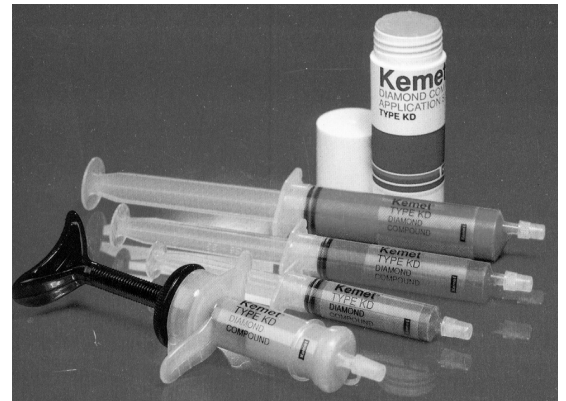
Available in 5g AppliKators, 20g Syringes and Stick..

Universal Diamond compound for rapid stock removal, and superfine surface finish soluble **both** in Oil and Water based fluids.

The uniform suspension of Diamond Powders in a specially formulated high purity cosmetic quality chemical carrier, ensures that the diamond cuts and polishes with maximum effectiveness.

20g Syringe products are only available to order

	Product		Micron Size	Grade	Colour
	5g	20g			
FINAL POLISHING	P108-C1	P108/1-C1	1/10	1/10-KD-C1	Grey
	P108-C2	P108/1-C2		1/10-KD-C2	
	P107-C1	P107/1-C1	1/4	1/4-KD-C1	Grey
	P107-C2	P107/1-C2		1/4-KD-C2	
	P072-C1	P072/1-C1	1	1-KD-C1	Blue
	P072-C2	P072/1-C2		1-KD-C2	
	P072-C3	P072/1-C3		1-KD-C3	
	P073-C1	P073/1-C1	3	3-KD-C1	Green
	P073-C2	P073/1-C2		3-KD-C2	
	P073-C3	P073/1-C3		3-KD-C3	
LAPPING & PRE- POLISHING	P073-C4	P073/1-C4		3-KD-C4	
	P074-C1	P074/1-C1	6	6-KD-C1	Yellow
	P074-C2	P074/1-C2		6-KD-C2	
	P074-C3	P074/1-C3		6-KD-C3	
	P109-C1	P109/1-C1	8	8-KD-C1	Red
	P109-C2	P109/1-C2		8-KD-C2	
	P109-C3	P109/1-C3		8-KD-C3	
	P109-C4	P109/1-C4		8-KD-C4	
	P075-C1	P075/1-C1	14	14-KD-C1	Brown
	P075-C2	P075/1-C2		14-KD-C2	
RAPID STOCK REMOVAL	P075-C3	P075/1-C3		14-KD-C3	
	P411-C1	P411/1-C1	25	25-KD-C1	Mahogany
	P411-C2	P411/1-C2		25-KD-C2	
	P411-C3	P411/1-C3		25-KD-C3	
	P412-C1	P412/1-C1	45	45-KD-C1	Purple
	P412-C2	P412/1-C2		45-KD-C2	
	P412-C3	P412/1-C3		45-KD-C3	



Kemet KD Diamond Compound application Stick

Product	Micron Size	Grade	Colour
10g/Stick			
P108/S	1/10	KD	Grey
P107/S	1/4	KD	Grey
P072/S	1	KD	Blue
P073/S	3	KD	Green
P074/S	6	KD	Yellow
P109/S	8	KD	Red
P075/S	14	KD	Brown

**For Technovit cold curing resins
see pages 22.9 and 22.18**

Type L Diamond Compound

Available in 5g AppliKators and 20g Syringes

Oil soluble Diamond compound specially developed for use on hard materials such as Tungsten Carbide, Hardened Steels and Ceramics for precise and superfine surface finishes.

The uniform suspension of Diamond Powders in a specially formulated cosmetic quality chemical carrier ensures that the diamond cuts and polishes with maximum effectiveness.

High thermal stability of the chemical carrier ensures that the Diamond carrier remains stable, and keeps its suspension properties under operating conditions.

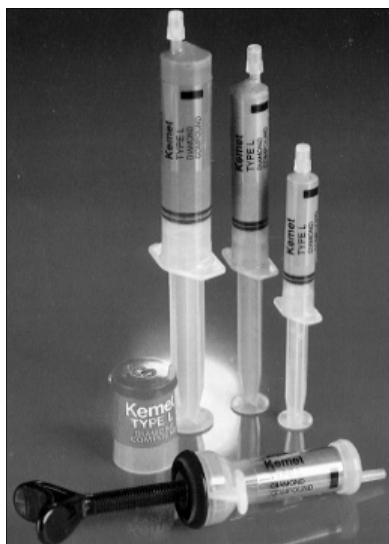


	Product		Micron Size	Grade	Colour
	5g	20g			
FINAL POLISHING	P413-C1	P413/1-C1	1	1-L-C1	Blue
	P413-C2	P413/1-C2		1-L-C2	
	P414-C1	P414/1-C1	3	3-L-C1	Green
	P414-C2	P414/1-C2		3-L-C2	
LAPPING & PRE- POLISHING	P415-C1	P415/1-C1	6	6-L-C1	Yellow
	P415-C2	P415/1-C2		6-L-C2	
	P416-C1	P416/1-C1	8	8-L-C1	Red
	P416-C2	P416/1-C2		8-L-C2	
	P417-C1	P417/1-C1	14	14-L-C1	Brown
	P417-C2	P417/1-C2		14-L-C2	
RAPID STOCK REMOVAL	P418-C1	P418/1-C1	25	25-L-C1	Mahogany
	P418-C2	P418/1-C2		25-L-C2	
	P419-C1	P419/1-C1	45	45-L-C1	Purple
	P419-C2	P419/1-C2		45-L-C2	
	P419-C3	P419/1-C3		45-L-C3	

Types W & OS Diamond Compound

Available in 5g AppliKators or 20g Syringes.

The **W** grade is a water based product, designed for environments where oil based products are not permitted. The **OS** grade is an oil soluble product, but does not hold together as well as Type L for harder samples but does have a larger selection of concentrations for each grade.

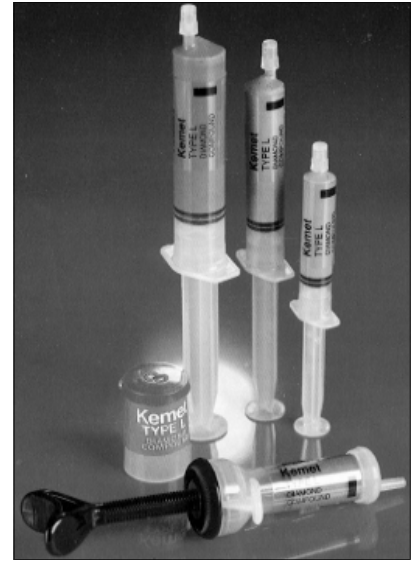


Type W

	Product		Micron Size	Grade	Colour
	5g	20g			
FINAL POLISHING	P420-C1	P420/1-C1	1/10	1/10-W-C1	Grey
	P420-C2	P420/1-C2		1/10-W-C2	
	P421-C1	P421/1-C1	1/4	1/4-W-C1	Grey
	P421-C2	P421/1-C2		1/4-W-C2	
	P422-C1	P422/1-C1	1	1-W-C1	Blue
	P422-C2	P422/1-C2		1-W-C2	
	P422-C3	P422/1-C3		1-W-C3	
	P423-C1	P423/1-C1	3	3-W-C1	Green
	P423-C2	P423/1-C2		3-W-C2	
	P423-C3	P423/1-C3		3-W-C3	
	P423-C4	P423/1-C4		3-W-C4	

Type W - Continued

	Product		Micron Size	Grade Water Soluble	Colour
	5g	20g			
LAPPING & PRE-POLISHING	P424-C1	P424/1-C1	6	6-W-C1	Yellow
	P424-C2	P424/1-C2		6-W-C2	
	P424-C3	P424/1-C3		6-W-C3	
	P425-C1	P425/1-C1	8	8-W-C1	Red
	P425-C2	P425/1-C2		8-W-C2	
	P425-C3	P425/1-C3		8-W-C3	
	P425-C4	P425/1-C4		8-W-C4	
	P426-C1	P426/1-C1	14	14-W-C1	Brown
	P426-C2	P426/1-C2		14-W-C2	
	P426-C3	P426/1-C3		14-W-C3	
RAPID STOCK REMOVAL	P427-C1	P427/1-C1	25	25-W-C1	Mahogany
	P427-C2	P427/1-C2		25-W-C2	
	P427-C3	P427/1-C3		25-W-C3	
	P428-C1	P428/1-C1	45	45-W-C1	Purple
	P428-C2	P428/1-C2		45-W-C2	
	P428-C3	P428/1-C3		45-W-C3	



Type OS

	Product		Micron Size	Grade Oil Soluble	Colour
	5g	20g			
FINAL POLISHING	P429-C1	P429/1-C1	1/10	1/10-OS-C1	Grey
	P429-C2	P429/1-C2		1/10-OS-C2	
	P430-C1	P430/1-C1	1/4	1/4-OS-C1	Grey
	P430-C2	P430/1-C2		1/4-OS-C2	
	P431-C1	P431/1-C1	1	1-OS-C1	Blue
	P431-C2	P431/1-C2		1-OS-C2	
	P431-C3	P431/1-C3		1-OS-C3	
	P432-C1	P432/1-C1	3	3-OS-C1	Green
	P432-C2	P432/1-C2		3-OS-C2	
	P432-C3	P432/1-C3		3-OS-C3	
	P432-C4	P432/1-C4		3-OS-C4	
LAPPING & PRE-POLISHING	P433-C1	P433/1-C1	6	6-OS-C1	Yellow
	P433-C2	P433/1-C2		6-OS-C2	
	P433-C3	P433/1-C3		6-OS-C3	
	P434-C1	P434/1-C1	8	8-OS-C1	Red
	P434-C2	P434/1-C2		8-OS-C2	
	P434-C3	P434/1-C3		8-OS-C3	
	P434-C4	P434/1-C4		8-OS-C4	
	P435-C1	P435/1-C1	14	14-OS-C1	Brown
	P435-C2	P435/1-C2		14-OS-C2	
	P435-C3	P435/1-C3		14-OS-C3	
RAPID STOCK REMOVAL	P436-C1	P436/1-C1	25	25-OS-C1	Mahogany
	P436-C2	P436/1-C2		25-OS-C2	
	P436-C3	P436/1-C3		25-OS-C3	
	P437-C1	P437/1-C1	45	45-OS-C1	Purple
	P437-C2	P437/1-C2		45-OS-C2	
	P437-C3	P437/1-C3		45-OS-C3	

Kemet Standard and Premier Grade Products

Available in Compound ,Suspension , Spray and Stick

Oil soluble Diamond compound specially developed for use on hard materials such as Tungsten Carbide, Hardened Steels and Ceramics for precise and superfine surface finishes.

The uniform suspension of Diamond Powders in a specially formulated cosmetic quality chemical carrier ensures that the diamond cuts and polishes with maximum effectiveness.

High thermal stability of the chemical carrier ensures that the Diamond carrier remains stable, and keeps its suspension properties under operating conditions.

Kemet Diamond Compound

Supplied in 5g AppliKators or 20g Syringes

A water soluble diamond compound available in two types:

Type CM: Standard grade containing Monocrystalline Diamond Powder

Type CP: Premier grade containing Polycrystalline Diamond Powder



Type CM - Standard

Product		Micron Size	Grade-CM	Colour
5g	20g		Standard	
P438	P438/1	1/10	1/10-CM	Grey
P439	P439/1	1/4	1/4-CM	Grey
P440	P440/1	1	1-CM	Blue
P441	P441/1	3	3-CM	Green
P442	P442/1	6	6-CM	Yellow
P443	P443/1	9	9-CM	Red
P444	P444/1	15	15-CM	Brown
P445	P445/1	25	25-CM	Mahogany
P446	P446/1	45	45-CM	Purple

Type CP - Premier

Product		Micron Size	Grade-CP	Colour
5g	20g		Premier	
P438/P	P438/P1	1/10	1/10-CP	Grey
P439/P	P439/P1	1/4	1/4-CP	Grey
P440/P	P440/P1	1	1-CP	Blue
P441/P	P441/P1	3	3-CP	Green
P442/P	P442/P1	6	6-CP	Yellow
P443/P	P443/P1	9	9-CP	Red
P444/P	P444/P1	15	15-CP	Brown
P445/P	P445/P1	25	25-CP	Mahogany
P446/P	P446/P1	45	45-CP	Purple

Kemet Diamond Suspension

Supplied in 400g bottles with trigger spray

A low viscosity, water soluble suspension:

Uniform suspension of diamond particles.

No agitation required.

Suitable for dispensing by the Kemet Electronic System or alternative dispensing systems.

Available in two types:

Type WM: Standard grade containing Monocrystalline Diamond Powder.

Type WP: Premier grade containing Polycrystalline Diamond Powder.



Type WM

Product	Micron	Grade-WM	Colour
400g	Size	Standard	
P449	1/10	1/10-WM	Grey
P450	1/4	1/4-WM	Grey
P451	1	1-WM	Blue
P452	3	3-WM	Green
P453	6	6-WM	Yellow
P454	9	9-WM	Red
P455	15	15-WM	Brown
P456	25	25-WM	Mahogany
P457	45	45-WM	Purple

Type W P

Product	Micron	Grade-WP	Colour
400g	Size	Premier	
P449/P	1/10	1/10-WP	Grey
P450/P	1/4	1/4-WP	Grey
P451/P	1	1-WP	Blue
P452/P	3	3-WP	Green
P453/P	6	6-WP	Yellow
P454/P	9	9-WP	Red
P455/P	15	15-WP	Brown
P456/P	25	25-WP	Mahogany
P457/P	45	45-WP	Purple

Kemet Diamond Compound Type W Application Stick

Supplied in 10g metering stick

Water soluble, stick diamond compound manufactured with Monocrystalline Diamond Powder. Allows easy application of diamond compound to lapping and polishing discs eliminating the need for spatulas or manual application

Product	Micron	Grade	Colour
10g/Stick	Size		
P420/S	1/10	1/10-W	Grey
P421/S	1/4	1/4-W	Grey
P422/S	1	1-W	Blue
P423/S	3	3-W	Green
P424/S	6	6-W	Yellow
P425/S	9	9-W	Red
P426/S	15	15-W	Brown

Kemet Diamond Spray

Supplied in 100g Pump-up spray dispenser.

Water soluble spray manufactured with monocrystalline Diamond Powder. Recommended for use on polishing cloths.

Product	Micron	Colour
100g/Spray	Size	
P167	1/10	Grey
P168	1/4	Grey
P449	1/2	Natural
P169	1	Blue
P170	3	Green
P171	6	Yellow
P172	9	Red
P173	15	Brown

Kemet Liquid Diamond

A range of **Liquid Diamond** products specially formulated for use on Kemet Lapping Plates and Polishing Cloths, available as universal oil/water emulsion, oil soluble and water-soluble types to suit all Lapping and polishing applications. Available in an extensive range of different micron sizes, containing only virgin Diamond Powder, graded to very close tolerances giving fast stock removal, with the ability to produce superfine surface finishes. Suitable for dispensing with the Kemet Electronic Dispensing System thus eliminating wastage and reducing lapping costs.

Supplied in 400g or 2000g bottles.

TYPE K: An excellent, general purpose, low viscosity oil/water emulsion suitable for most applications.

Available in Standard concentration, also on request in Strong and Extra Strong concentrations

TYPE WA: Water soluble Liquid Diamond, recommended where lapping/polishing must be carried out in the absence of oil based materials.

TYPE O: Low viscosity, oil soluble, Liquid Diamond with enhance cleaning properties. Recommended Lubricating fluids are Type K, a mineral oil based lubricant, and Type W, a water based lubricant.



TYPE K

	Product		Micron	Grade
Standard	Strong	Extra Strong	Size	
400g	400g	400g		
P174	P174-S	P174-XS	1/10	1/10-K
P175	P175-S	P175-XS	1/4	1/4-K
P176	P176-S	P176-XS	1	1-K
P177	P177-S	P177-XS	3	3-K
P178	P178-S	P178-XS	6	6-K
P179	P179-S	P179-XS	8	8-K
P180	P180-S	P180-XS	14	14-K
P447	P447-S	P447-XS	25	25-K

TYPE WA

Product	Micron	Grade-WA
400g	Size	Standard
P458	1/10	1/10-WA
P459	1/4	1/4-WA
P460	1	1-WA
P461	3	3-WA
P462	6	6-WA
P463	8	8-WA
P464	14	14-WA
P465	25	25-WA
P466	45	45-WA

TYPE O

Product	Micron	Grade-O
400g	Size	Standard
P467	1/10	1/10-O
P468	1/4	1/4-O
P469	1	1-O
P470	3	3-O
P471	6	6-O
P472	8	8-O
P473	14	14-O
P474	25	25-O
P475	45	45-O



Kemet Lubricating Fluid

To ensure that Kemet Diamond Product cut and polish with maximum efficiency, five standard fluids are available, two are water based and three oil based. All are available in 2.5 litre containers, with types **W**, **W2**, **OS** and **LS** also available in 450ml bottles complete with trigger spray.

Product		Solubility	Type	Colour	Description
450ml	2.5litre				
L081	L081/1	Water	W	Clear	A low viscosity water based fluid developed for use with types KD and W Kemet Diamond Compound. Recommended for use on all Kemet Polishing Cloths as it helps to extend their life
L149	L149/1	Water	W2	Yellow	A low viscosity water based fluid developed for use with types WM, WP and WX Kemet Diamond Suspensions, particularly when be used on Kemet Plates for metallurgical applications.
L082	L082/1	Oil	OS	Blue	A low viscosity oil based lubricant primarily for use with Kemet Diamond Compounds such as types KD and L . Recommended when polishing specimens.
L150	L151/1	Oil	LS	Blue	A low viscosity fluid soluble in oil and emulsifiable in water. For use with Kemet Diamond Compounds and Liquid Diamond particularly where specimens need to undergo a water based cleaning operation after lapping.
L152	L152/1	Oil	K	Clear	For use with Kemet Liquid Diamond on Kemet Flat Lapping Systems. Assists smooth running of the lapping operation and helps to ensure a cleaner process.

Kemox

Aluminium Oxide or Silicon Carbide

Kemox is an Oil or Water based formulation containing a suspension-treated abrasive for use on lapping or polishing operations.

Kemox abrasives remain suspended in their carrier for long periods, thus giving a uniform particle distribution whilst preventing clogging and sedimentation. All are supplied in several grit sizes.

Supplied in 5 litre and 25 litre containers.

Aluminium Oxide Abrasive

Product				Approx Micron Size
Oil Based		Water Based		
5Ltr	25Ltr	5Ltr	25Ltr	
P476/O	P476/O1	P476/W	P476/W1	6
P477/O	P477/O1	P477/W	P477/W1	13
P478/O	P478/O1	P478/W	P478/W1	23

Silicon Carbide Abrasive

Product					Approx
Oil Based		Water Based			Micron
5Ltr	25Ltr	5Ltr	25Ltr		Size
P479/O	P479/O1	P479/W	P479/W1		5
P480/O	P480/O1	P480/W	P480/W1		17
P481/O	P481/O1	P481/W	P481/W1		62

The abrasive/carrier ratio is predetermined, but can be adjusted for special applications. Aluminium Oxide or Silicon Carbide are the usual abrasives in the suspension, although **Boron Carbide** is also available to special order. Typical applications include use in the abrasive systems of conventional lapping machines and for special purpose lapping machines where two parts are to be lapped together. Kemox is suitable for use on twin wheel lapping machines where it is important for the abrasive to remain in suspension.

Kemet Diaflex Discs

Kemet Diaflex Flexible material combines the long life and aggressive cutting action of diamond with the flexibility of cloth, suitable for initial grinding of metallurgical specimens and the smoothing prior to polishing.

Diaflex is available in a wide range of grit sizes, and can be supplied with **plain** or **self-adhesive** backing. For optimum results, water is recommended as the lubricant.

In addition to quoted disc sizes, Diaflex is available to special order in other disc diameters and also in square format.

Supplied in unit of 1 disc

Product			Grit Size	Colour	Backing	Material
203mm Diam	254mm Diam	305mm Diam	Micron			Spec.
P482/8/SA	P482/10/SA	P482/12/SA	250	Green	S/Adhesive	N
P482/8/P	P482/10/P	P482/12/P			Plain	N
P483/8/SA	P483/10/SA	P483/12/SA	125	Black	S/Adhesive	N
P483/8/P	P483/10/P	P483/12/P			Plain	N
P484/8/SA	P484/10/SA	P484/12/SA	74	Red	S/Adhesive	N
P484/8/P	P484/10/P	P484/12/P			Plain	N
P485/8/SA	P485/10/SA	P485/12/SA	20 to 30	Yellow	S/Adhesive	N
P485/8/P	P485/10/P	P485/12/P			Plain	N
P486/8/SA	P486/10/SA	P486/12/SA	6 to 12	White	S/Adhesive	N
P486/8/P	P486/10/P	P486/12/P			Plain	N
P487/8/SA	P487/10/SA	P487/12/SA	20 to 30	Yellow/White	S/Adhesive	R
P487/8/P	P487/10/P	P487/12/P			Plain	R
P488/8/SA	P488/10/SA	P488/12/SA	6 to 12	Blue	S/Adhesive	R
P488/8/P	P488/10/P	P488/12/P			Plain	R
P489/8/SA	P489/10/SA	P489/12/SA	1 to 3	Orange	S/Adhesive	R
P489/8/P	P489/10/P	P489/12/P			Plain	R



Diaflex Disc

Material Specification and Recommended Dressing Stones.

(N) Denotes Nickel/Diamond:

(Reinforced with fine stainless steel wire mesh for a longer life).

This material can be dressed/conditioned using a Gesswein 150 Grit DF Stone.

Suggested stone size 6 x 3 x 150mm

S351 Gesswein stone 6 x 3 x 150mm, 150 grit each

(R) Denotes Resin/Diamond:

This material can be dressed/conditioned using a Gesswein 320 Grit DF Stone.

Suggested stone size 6 x 3 x 150mm

S352 Gesswein stone 6 x 3 x 150mm, 320 grit each

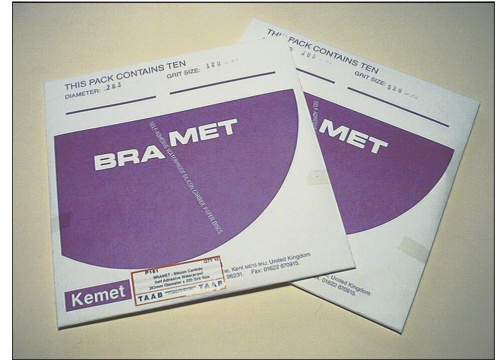


Gesswein Stone

Bramet Silicon Carbide S/A Discs

Bramet self adhesive, pressure sensitive, waterproof silicon carbide discs are recommended for use prior to Kemet Diamond compounds. Bramet self adhesive abrasive discs are suitable for most wet and dry grinding, and prepolishing operations on hard and soft materials including the preparation of geological, mineralogical and metallurgical specimens prior to polishing with Kemet Diamond compounds. The technique is extremely fast and the finish obtained will be found suitable for the most exacting examination.

Product			Grit Size	Pack
200mm Diam	250mm Diam	300mm Diam	Micron	Size
P149/8/SA	P149/10/SA	P149/12/SA	180	100
P150/8/SA	P150/10/SA	P150/12/SA	240	100
P151/8/SA	P151/10/SA	P151/12/SA	320	100
P152/8/SA	P152/10/SA	P152/12/SA	400	100
P153/8/SA	P153/10/SA	P153/12/SA	600	100
P490/8/SA	P490/10/SA	P490/12/SA	800	100
P166/8/SA	P166/10/SA	P166/12/SA	1200	100



Kemet Polishing Cloths

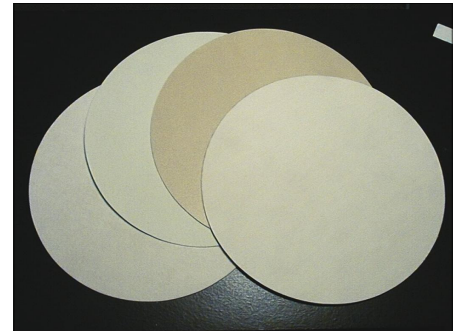
KEMET Chemo-Textile Cloths

Kemet PSU Cloths are manufactured to the highest standards and have accurately controlled uniform thickness. They are available as **self-adhesive** discs in soft, medium, hard or ultra hard.

PSU-M A general purpose cloth for smoothing and polishing operations. Commonly used with Kemet Diamond Compounds finer than 14 micron.

PSU-H A hard cloth for use where a little extra cutting action is required. Best results are obtained using Kemet Diamond Compounds 14 micron or finer.

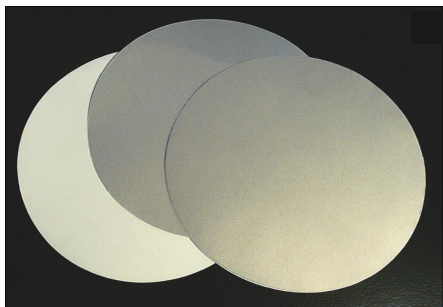
PAD-K An ultra-hard PSU where fast cutting is needed for use with Kemet Diamond compounds 25 micron and finer.



Product			Cloth	Pack
200mm Diam	250mm Diam	300mm Diam	Type	Size
P193/8/M	P193/10/M	P193/12/M	PSU-M	10
P193/8/H	P193/10/H	P193/12/H	PSU-H	10
P194/8/K	P194/10/K	P194/12/K	PAD-K	10

KEMET Silk Cloths

The Kemet range of silk cloths has been developed for the mirror polishing and finishing of specimens. Available as **self-adhesive** discs.



MSFL-WA When mounted on a flat plate, this cloth will polish flat mirror surfaces on many materials. Best results are obtained when used with 3 micron and finer Kemet Liquid Diamond or compound. The adhesive on this cloth is water-resistant. Oil resistant versions are available on request.

MSF-WA Similar to the ASFL-WA, but with a thicker, softer self-adhesive backing. This cloth has a plastic barrier which makes it more resistant to slurries and fluids. Mirror surfaces can be produced when used with Kemet Liquid Diamond or compounds 6 micron or finer.

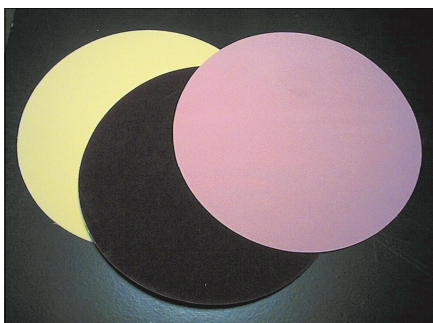
MSR-A Similar to ASFL-WA but with rigid plastic backing.

MST An extra hard silk type cloth on a rigid backing. Used for increased cutting action and good general flatness control.

Product		Cloth	Pack
200mm Diam	300mm Diam	Type	Size
C277/8/SA	C277/12/SA	MSFL-WA	10
C193/8/SA	C193/12/SA	MSF-WA	10
C189/8/SA	C189/12/SA	MSR-A	10
C278/8/SA	C278/12/SA	MST	10

KEMET Nap Type Cloths

The Kemet Nap Type Cloths are flock sprayed with a range of softness and nap length. Their softness gives them a more gentle polishing action. The overall flatness produced by nap cloths is not as good as the PSU or Silk type, but the surface finish can be better, particularly on soft specimens.



NFC Synthetic flock sprayed on a cotton cloth carrier. Used with 3 micron and finer Kemet Diamond compound after a smoothing operation on ASF with 6 micron compound. Colour is green.

NFW Synthetic flock sprayed on a flexible waterproof carrier. A more heavy duty cloth for use with 6 micron and finer Kemet Diamond compound. Colour is mahogany.

MBR A short nap cloth used for metallographic polishing operations. Commonly used with 3 micron and finer Kemet Diamond compound. Colour is pink.

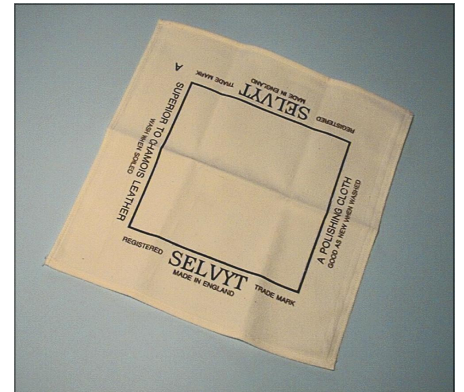
NLH A longer and stiffer nap cloth. Used for metallographic polishing operations. Commonly used with 6 micron or finer Kemet Diamond compound after a lapping operation. Colour is cream.

C191/8/SA	C191/10/SA	C191/12/SA	NFC	10	
C192/8/SA	C192/10/SA	C192/12/SA	NFW	10	
C279/8/SA	C279/10/SA	C279/12/SA	MBR	10	
C280/8/SA	C280/10/SA	C280/12/SA	NLH	10	

Selvyt Cloths

A lint free cotton cloth of medium nap with single pile, recommended for general polishing for use with Kemet Diamond compounds.

C104	Selvyt cloth - 25cm x 25cm	each
C104/1	Selvyt cloth - 25cm x 25cm	per 10
C178	Selvyt cloth - 200mm diameter	per 10
C179	Selvyt cloth - 525mm x 500mm (21" x 20")	each
C180	Selvyt cloth - 53.3cm wide (21")	per metre

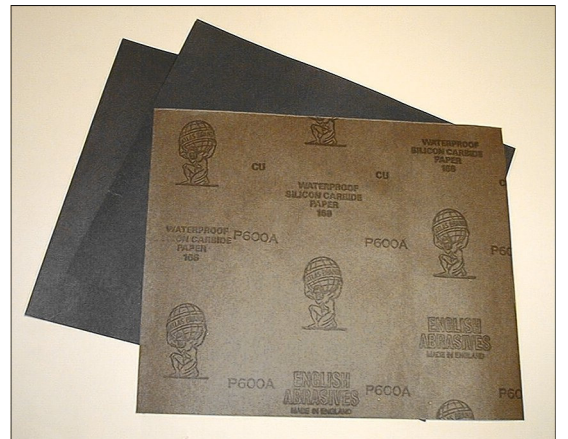


Metallurgical Papers

Water proof silicon carbide paper (non-adhesive), available in sheet or disc in various grit sizes

Sheet

P154	MET Paper - 230mm x 280mm, 180 grit	per 10
P155	MET Paper - 230mm x 280mm, 240 grit	per 10
P156	MET Paper - 230mm x 280mm, 320 grit	per 10
P157	MET Paper - 230mm x 280mm, 400 grit	per 10
P158	MET Paper - 230mm x 280mm, 600 grit	per 10



Disc

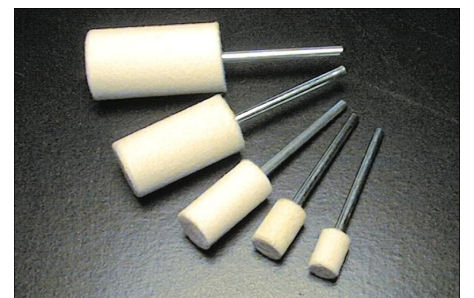
Product		Grit Size	Pack
200mm Diam	300mm Diam	Micron	Size
P159/8	P159/12	80	100
P160/8	P160/12	150	100
P161/8	P161/12	180	100
P162/8	P162/12	240	100
P163/8	P163/12	320	100
P164/8	P164/12	400	100
P165/8	P165/12	600	100
P491/8	P491/12	1200	100

Kemet Diamond Compound Accessories

FELT BOBS

Felt accessories are made of pure wool in a variety of sizes suitable for final polishing operations. Felt Bobs are available with 1/8" or 3mm Diameter spindle size, please specify spindle size when ordering.

B351	Felt Bob No1 20mm diam. x 38mm	each
B352	Felt Bob No2 16mm diam. x 34mm	each
B353	Felt Bob No3 12mm diam. x 25mm	each
B354	Felt Bob No4 9mm diam. x 14mm	each
B355	Felt Bob No5 7mm diam. x 11mm	each



Kemet Brushes



Made of natural stiff bristles for longer retention of Diamond compounds and resultant improved polishing operations. Kemet brushes all with 3/32" diameter spindles.

Type A: Cup Brushes

B356	Cup Brush 12mm diam.	each
B357	Cup Brush 9mm diam.	each
B358	Cup Brush 6mm diam.	each

Type B: Brush Wheels

B359	Brush Wheels 22mm diam.	each
B360	Brush Wheels 19mm diam.	each
B361	Brush Wheels 16mm diam.	each

Lapping and Polishing Lift-off Discs



Kemet composite lapping plates are manufactured from a homogenous mixture of synthetic resins, metal particles and other materials.

When used with Kemet Liquid Diamond, Kemet lapping plates have a number of unique features which make them ideal for today's advanced lapping technology.

- ◆ Holds diamond particles firmly. Ensuring both efficient stock removal and repetitive surface finish.
- ◆ It has ductile qualities, which cushion the diamond particles, preventing damage to the workpiece.
- ◆ Produced in varying hardness values so that even the softest material can, without impregnation, be safely lapped with diamond particles.
- ◆ Dissipates heat and prevents laminar flow of lapped surface.
- ◆ Easy control for optimum flatness

The Kemet Lift-off disc system is available for machines up to 380mm (15") diameter. Kemet Lift Off Discs are supplied mounted on an aluminium backing plate which locates on to an aluminium drive plate by means of three pegs. Lift Off discs can be easily changed and are recommended for light duty work where general flatness and precision finish are required.

Kemet Iron – The most commonly used plate. For general purpose stock removal and lapping applications.

Kemet XP – Gives improved flat polished surfaces on many materials. Mirror surfaces can often be produced on harder materials using this plate.

Kemet Copper – Used to lap softer materials where fine lapping and polishing are the primary requirements.

Kemet Tin – One of the softest Kemet plates used for mirror polishing with fine grades of Kemet Liquid Diamond.

Other Lift-off plates available are manufactured in Cast Iron and Aluminium for use with self adhesive cloths and Silicon carbide discs.

Type of Disc	With Central Recess		Without Central Recess	
	300mm	200mm	300mm	200mm
	Product No	Product No	Product No	Product No
Cast Iron	L101/R/300	L101/R/200	L101/300	L101/200
Kemet Iron	L156/R/300	L156/R/200	L156/300	L156/200
Kemet Copper	L157/R/300	L157/R/200	L157/300	L157/200
Kemet XP	L158/R/300	L158/R/200	L158/300	L158/200
Kemet Tin	L159/R/300	L159/R/200	L159/300	L159/200
Aluminium	L102/R/300	L102/R/200	L102/300	L102/200

Kemet Lapping & Polishing Machines

Preparation of Metallographic and Geological samples, Radial polishing and Match lapping.

All machines are quiet in operation. The powerful 290W motor offers infinitely variable speed, from 30 to 350 rpm, with electronic controlled time cycle from 0 to 99 minutes.

The Lift off Disc system ensures speedy replacement of Kemet Lapping Plates or Polishing Cloths. The standard plate diameter is 300mm (12"). As an option, the machines can be fitted with 250mm (10") or 200mm (8") plates. Common on all machines, a mains water inlet valve and drain connection are supplied, a control tap with flexible hose is positioned near the plate so that water can be directed to any part of the lapping plate during operation. Models 300VSA and 300VSL have the facility for connecting the Kemet Electronic Dispensing System.

Kemet 300VSA - Sweep Arm

The 300VSA bench mounted **Sweep Arm** lapping and polishing machine is the standard model in the range. The powerful drive mechanism is suspended in an aluminium chassis with its electric motor cradled in anti-vibration mountings. The control panel incorporates speed adjustment and time cycle settings. An LED display indicates cycle time. An independent electrically powered sweep arm incorporates infinitely variable pressure weight control from 0.35Kg to 2.25Kg. Sweep is fully adjustable from zero to maximum. All electrics and mechanics are within a rigid metal casing, the complete machine being CE Certified.

It is supplied with a standard 300mm (12") Kemet aluminium faced Lapping Plate, to accept all 300mm **self adhesive** polishing cloths and silicon carbide discs.

Weight: 46Kg. Dimensions: 495mmH x 445mmW x 780mmD

L153 Kemet 300VSA lapping machine – 230v

L153/1 Kemet 300VSA lapping machine – 110v



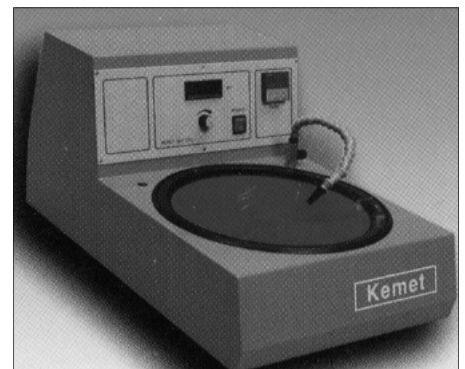
Kemet 300VSH - Hand

The Kemet 300VSH **Hand** Lapping machine has the same specification as the 300VSA but without the sweep arm and associated pressure weights, it is supplied with a standard 300mm (12") Kemet Iron faced lapping plate.

Weight: 42Kg. Dimensions: 330mmH x 385mmW x 680mmD

L154 Kemet 300VSH lapping machine – 230v

L154/1 Kemet 300VSH lapping machine – 110v



Kemet 300VSL - Flat

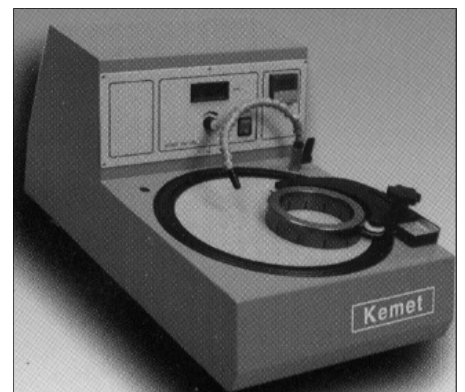
The Kemet 300VSL **Flat** Lapping machine has the same specification as the 300VSA, excluding the sweep arm and associated pressure weights, but includes the yoke assembly and single control ring enabling the machine to be used as a 300mm (12") Flat Lapping machine.

It is supplied with a standard 300mm (12") Kemet Iron faced lapping plate.

Weight: 42Kg. Dimensions: 330mmH x 385mmW x 680mmD

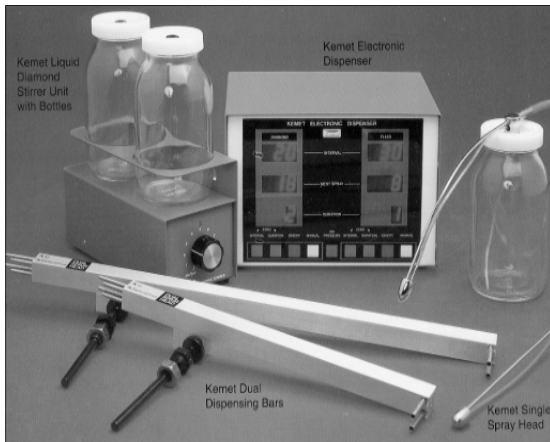
L155 Kemet 300VSL lapping machine – 230v

L155/1 Kemet 300VSL lapping machine – 110v



Kemet Electronic Diamond Dispensing System

Suitable for fitting to either the 300VSA or 300VSL



The Kemet Electronic Dispenser has fully automatic independent control of **both** Kemet Liquid Diamond and Lubricating Fluid by means of touch sensitive settings. The digital display is easy to read and shows dispensing intervals, duration's and air pressure at a glance. Dispensing is achieved to an accuracy of 0.2 gram eliminating wastage and also making costs simple to calculate.

The Kemet Liquid Diamond Stirrer Unit maintains a consistent distribution of diamond particles within the slurry by using a small non-contaminant plastic coated paddle magnet that is immersed in the Liquid Diamond. When the Stirrer Unit is in operation, the paddle rotates at a pre-selected rate ensuring even diamond suspension.

The Kemet Dual Dispensing Bar can be positioned to accurately dispense Liquid Diamond and Lubricating Fluid on to the plate without spray bounce.

Ordering Details:

The Unit is supplied as standard with the Kemet Electronic Dispenser, Liquid Diamond Stirrer Unit and the Standard Single Spray Head complete with bottle,

Kemet Electronic Dispenser

Description	Specification
Height x Width x Depth (mm)	150H x 230W x 150D
Nett Weight	3.74Kg
Air Requirements	1 Bar minimum - 5 Bar Max.
Air Pressure	Dual circuit
Air Pressure display	Bar or psi
Adjustable Duration of Spray	1 - 9 seconds
Adjustable intervals of Spray	1 - 999 seconds
Spray memory	Standard
Manual Override	Standard
Electricity supply	110v or 220-240v, 50 or 60Hz

Kemet Liquid Diamond Stirrer Unit

Description	Specification
Height x Width x Depth (mm)	120H x 90W x 215D
Electricity supply	110v or 220-240v, 50 or 60Hz

Accessories

Kemet Single Spray Head

The Kemet single spray head is supplied complete with bottle, cap and plastic tubing for special applications.

Description	Specification		
	Standard	Long	Extra-Long
Product	L156/SH/130	L156/SH/250	L156/SH/380
Length	130mm	250mm	380mm

Kemet Dual Dispensing Bar & Bottles

For use with the Kemet Electronic Dispenser supplied complete with 2 bottles and plastic tubing. The Head is fully adjustable for vertical and radial positioning.

Description	Specification	
	Standard	Long
Product	L157/DB/340	L157/DB/495
Length	340mm	495mm
Reach	260mm	415mm
Adjustable Height	100mm	100mm
Section of Head	20mm x 20mm	
Bottle Capacity	400ml	400ml

TEM Products

Spark Erosion Unit Mk3

A unit specifically designed for laboratory use, it operates on a work bench or desk top from a conventional 13amp power supply. All metallic samples may be drilled, trepanned, wire sliced or slotted. The Mk 3 includes **many new features** regarding sample adjustment, power, access and safety. The Spark Erosion Machine has X-Y micrometer positioning for the electrodes and servo control of the machining process. It is supplied as a "ready to use" system comprising water deioniser, dielectric pump, small sample mounting system, collet for 3mm tubular electrodes, pin chuck for small diameter rod, a set of 'G' clamps and a tubular electrode for trepanning 3mm discs. Accessories for wire cutting, thin sheet and foils and a microspark generator.

Further information on request

M534 Spark erosion unit Mk 2, 230v 50Hz



Dimple Grinder

The Gatan model 656 will reduce with minimal damage the central region of a typical 100µm thick 3mm Ø specimen blank to <3µm in times ranging from 20 mins for silicon to 100 mins for sapphire. This is sufficiently thin for examination in intermediate voltage TEMs. The system enables accurate dimpling to be performed without prior knowledge of the specimen thickness and resulting in an exceptionally smooth surface. This reduces the possibility of surface irregularities developing in the brief final thinning operation and increases the yield of electron transparent material.

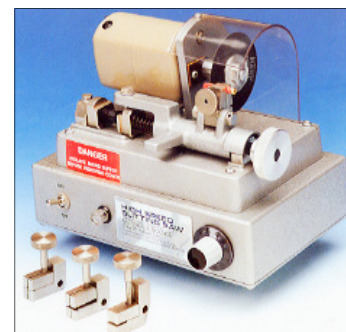
GXXX Dimple grinder 230v 50 Hz



High Speed Slitting Saw

A low cost, compact saw capable of being used in a radioactive cell environment and can eliminate the laborious and time consuming cutting processes involving the use of hand tools. The unit can section small rod (2.3 - 3.0mm) to produce disc samples and can handle rod or tubing up to 15mm diameter. The standard unit is supplied with inexpensive carborundum slitting wheels that are suitable for a wide range of materials but high speed slitting wheels are available in a range of diameters and types for special applications.

The saw is powered by a mains driven motor of conventional type giving long life and durability with a thyristor speed control unit allowing speeds between 1000 and 3000 rpm.

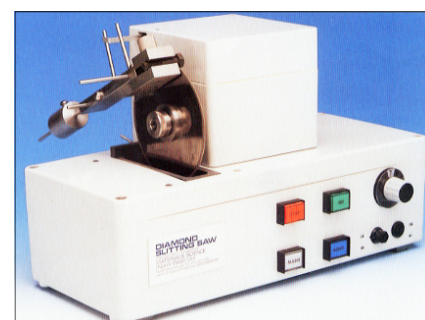


Diamond Slitting Saw

A versatile self-contained unit designed for cutting a wide range of materials with minimum deformation. The as-cut surface is smooth and requires little additional preparation for microscopic examination. The saw operates at low speed using a precision diamond wafering blade with 'immersion' lubrication. For safety, all low voltage circuitry is employed for switching and motor speed control which is continuously variable. The saw is supplied complete with clamp, arbor, diamond blade and weights.

M528 Diamond slitting saw 230v 50Hz

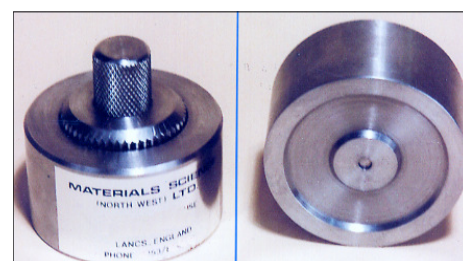
M528/W Replacement diamond blade



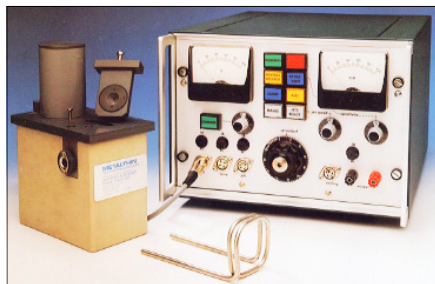
Graduated Grinding Jig

An easily used adjustable jig for accurate pre-grinding of TEM specimen discs to a predetermined thickness. Thinning time may be considerably reduced by initial grinding down of thick specimens to the order of 0.005"-0.010" (0.125-0.25mm). A graduated grinding jig can thus save valuable time and produce more accurate results. The Graduated Grinding Jig is made of stainless steel and has click stop graduations of 0.001" on the advance screw. Thus the thickness of a specimen can be reduced in calibrated steps of 0.001in (0.025mm).

M506 Graduated grinding jig for 3mm specimens



Metalthin Mk 3



A twin jet electropolishing unit for producing high quality thin foils. It is robust, compact easy, safe and economical to use.

The Mk 3 version incorporates the accumulated experience of many years of use in Nuclear, University and Industrial Research Centres.

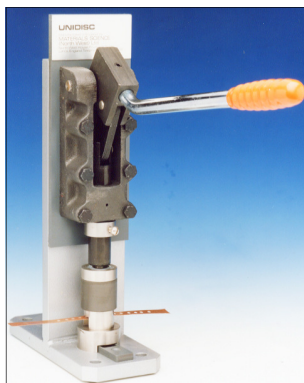
It comprises three separate modules:

- Thinning cell
- Unipump/Dewar
- Power supply unit

The minimum volume of electrolyte required to fill the jetting chamber and sustain twin jetting is 100ml but normal operation requires 200ml. There is an internal stainless steel cooling coil with an increased surface area for more efficient cooling. Typically perforation takes between one and five minutes before perforation is detected when the alarm (if set) and a change in state of the indicator lights. Thinning current is automatically interrupted and jetting stopped so that the operator may remove the sample for washing.

M501 Metalthin Mk 3 230V 50Hz

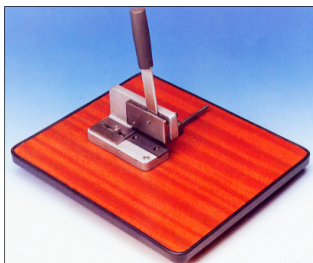
Unidisc Mk 2 - precision specimen disc cutter



A precision specimen disc press, simple to operate and produces flat disc TEM specimens from metallic strip samples with negligible deformation. Disc can be made from hard or soft metals. A microhardness survey of a 0.2mm (0.008") thick annealed copper disc showed no statistically significant variation in hardness between the centre and the region adjacent to the edge of the disc.

The punch pierces the tightly held sheet and ejects the resulting disc into the collection tray. Discs can be made from strip up to 12mm (0.47") wide and 0.1-1.0mm (0.004-0.04") thick.

Precision Shear



Laboratory hand operated sheet metal shear suitable for bench mounting. Produces accurate strips for production of discs with the Unidisc but can equally be used to cut small sections from rubber, plastics, fibreglass etc.

Dimensions:

Overall size 15cm x 15cm x 28cm high (6" x 6" x 11")

Weight 3.2Kg (7lb)

Maximum cut 6cm (2 1/4")

Cutting capacity 1mm (0.040") mild steel

M514 Precision shear

Precision Disc Grinder



Mechanically thins TEM samples prior to ion beam milling of electro-polishing. It produces *parallel* sided discs down to 50µm, displays specimen thickness in microns or thousands of an inch and accepts specimens up to 9mm diameter.

G104 Precision disc grinder

Ultrasonic Disc Cutter



Produces perfect sample discs from brittle samples such as ceramic and semiconductor materials. The Ultrasonic Disc Cutter cuts from wafers as thin as 50µm yet is powerful enough to cut 5mm long cylinders from bulk samples in a few minutes.

Features:

- produces perfect TEM discs from brittle materials
- cuts cylinders up to 5mm long from bulk samples
- cuts small holes, slots, depressions and other special shapes
- X-Y microscopes available for accurate specimen positioning
- compact bench top design

U050 Ultrasonic disc cutter

U050/M Microscope position table