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PLASTIC 	SUPERFICIAL COATINGS 	RESTORATION
ELECTRONIC 	GLASS 	BIOLOGY



SOLIDOGRAPHY

MICRO CUT-OFF MACHINES FOR RESEARCH

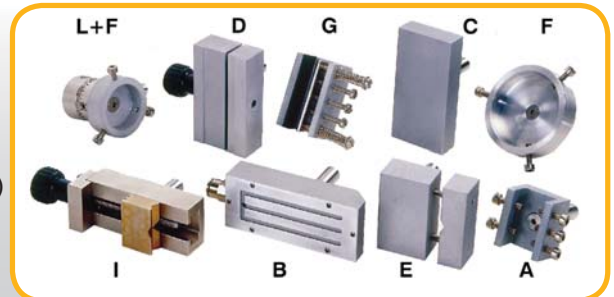
Micromet EVOLUTION, MANUAL, SEMI-AUTOMATIC and AUTOMATIC

The Micromet series Cut-Off Machines are available in AUTOMATIC, SEMI-AUTOMATIC, MANUAL and EVOLUTION versions. These machines are ideal for precision cutting of delicate samples. These machines have: variable speed blades, variable working load, accurate micrometric positioning, stainless steel bases and a large transparent cutting hood made of shock resistant plexiglass.



Sample Holders

- A For irregular shaped samples
- B Vacuum type
- C Flat for samples to be glued
- D Mechanical type for glass slides
- E With "V" groove for bars and tubes
- F For cylindrical samples (d.max 40 mm)
- G For thin samples
- I Goniometric holder, rotation 360°
- L Micro vice



Technical Specifications	MICROMET Evolution M/SA	MICROMET Manual	MICROMET Semi-automatic	MICROMET Automatic
Max cut-off wheel diameter (mm)	125	200	200	150
Max cup wheel diameter (mm)	/		150	
Max cutting diameter (mm)	35	60	60	50
Motor power (W)	95		200	
Cut-off wheel speed (rpm)	0÷2.100		0÷3.000	
Pump output (litre/min)			8	
Tank capacity (litres)	2,6	4	4	5,5
Max working load (kg)	0,5	Manual	1	3,5
Cross arm travel (mm)			25	
Weight (kg)	15	36	38	40
Power supply			220V 1-phase	
Dimensions (mm):				
W	310		500	500
D	300		460	600
H	300		380	420

MICRO CUT-OFF MACHINES FOR RESEARCH

SECOTRON 200 - 300

The Secotron is a 3 axis high precision cut-off machine. Cutting is performed with a longitudinal feeding work table with controlled feed rate and cutting pressure. The height of the cut-off wheel and the "X" position of the sample can be adjusted to obtain extremely accurate cuts. Available PLC controls make this cut-off machine suitable for high precision applications of cutting.

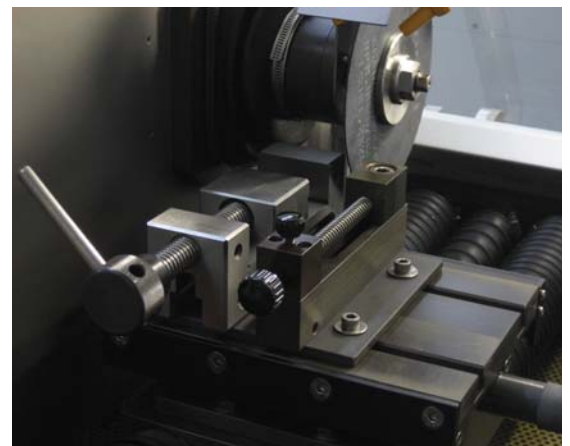
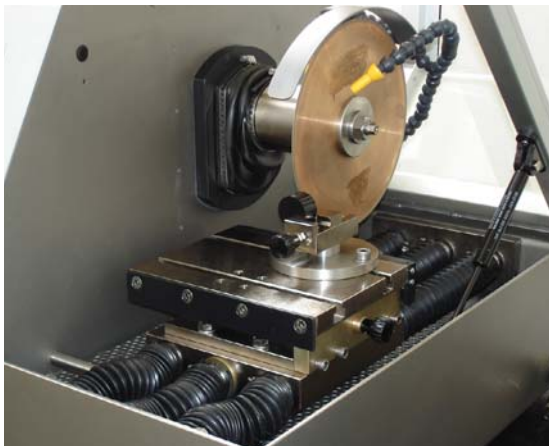
Technical Specifications	SECOTRON 200	SECOTRON 300
Max cut-off wheel diameter (mm)	200	300
Motor power (W)	800	4.000
Cut-off wheel speed (rpm)	0 ÷ 3.000	
Pump output (litre/min.)	11	20
Tank capacity (litres)	10	80
Table longitudinal travel (mm)	250	400
Table speed (mm/sec.)	0,02 ÷ 2	
Table cross-feed travel (mm)	50	100
Cut-off wheel vertical travel (mm)	50	200
Weight (kg)	75	150
Power supply	220V 1-phase	380V 3-phase
Dimensions (mm):		
W	620	700
D	600	750
H	450	550



SECOTRON 200



SECOTRON 300



EVOLUTION Series

The Evolution Series abrasive cut-off machines are compact and cost effective bench top cutters with stainless steel components, plexiglass hood, tubular aluminum frame and electroless nickel plated vise support. The ergonomic controls are located on the handle. Removable side port allow for the sectioning of long work pieces. The machines weight and design provide excellent stability.



TR 80/100 E



TR 100 E Automatic

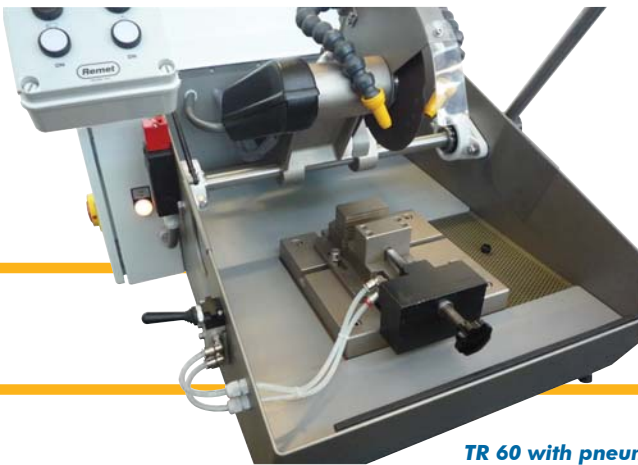
Technical Specifications		TR 80 E	TR 100 E
Max cutting diameter (mm)		80	100
Cutting wheel diameter (mm)		250	300
Distance cut-off wheel spindle/work table (mm)		230	240
Motor power (kW)		1,3	2,2
Coolant tank capacity (litres)		18	20
Power supply		380V or 220V 3-phase (others on request)	
Weight (Kg)		80	100
Dimensions (mm):		625	
W		730	
D		550	
H			

CUT-OFF MACHINES FOR LABORATORY

TR Series

Available in Bench top and floor standing models this series of Metallographic Cutters have large work areas and powerful motors with Poly-V belt drives. The stainless steel body, strong plexiglass hood with anodized aluminum frame and electroless nickel plated components are highly corrosion resistant. The bench top models come with integrated coolant recirculating systems while the floor models have external coolant recirculating systems. We offer many custom features such as power feed systems, table feed systems and other modifications to meet your specific needs.

Technical Specifications	TR 60	TR 70	TR 80 bench top	TR 80 floor model	TR 100 bench top	TR 100 floor model
Max cutting diameter (mm)	60	70	80	80	100	100
Cut-off wheel diameter (mm)	200	230	250	250	300/350	300/350
Distance cut-off wheel spindle/work table (mm)	220	230	280	280	300	300
Motor power (kW)	1,1	1,3	2,2	2,2	3/3,7	3/3,7
Tank capacity (litres)	20	20	25	40	25	40
Power supply	380V 3-phase (others on request)					
Weight (kg)	100	105	130	160	145	175
Dimensions (mm):						
W	800	800	850	850	900	900
D	910	910	1030	1030	1030	1030
H	590	590	640	1490	680	1530

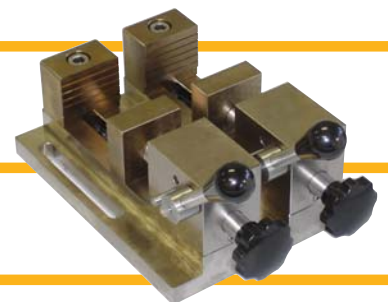
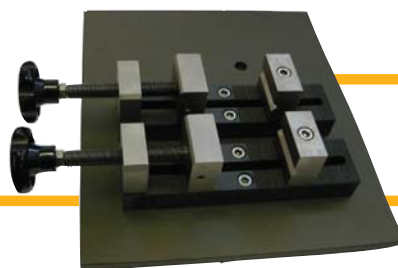
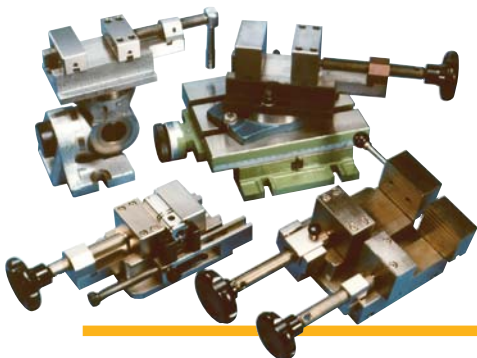


TR 60 with pneumatic clamping system



TR 60 with Double clamping system

Clamping systems



CUT-OFF MACHINES FOR LABORATORY

TR Series



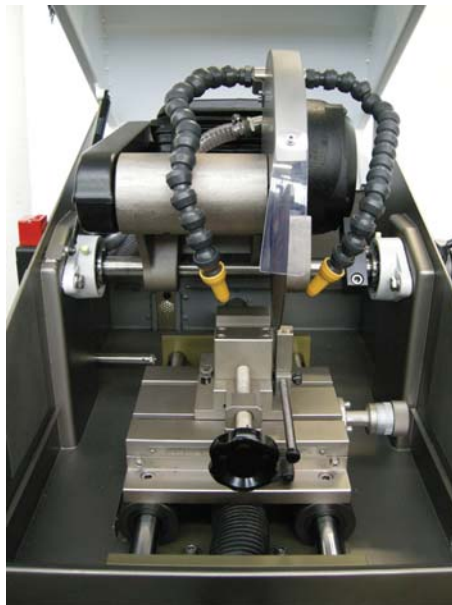
TR 80 with longitudinal table and PLC controlled



TR 100 with 100 litres stainless steel tank with support frame



TR 100 Automatic with cabinet and wheeled tank



TR 100 with longitudinal work table



TR 100 with cross feed table



TR 80 with longitudinal table and PLC controlled

CUT-OFF MACHINES FOR LARGE CUTS

TR 100 S and TR 100 L

These robust and powerful cut-off machines are designed to cut large irregular shaped samples. The stainless steel body, strong plexiglass hood with anodized aluminum frame and electroless nickel plated components are highly corrosion resistant.

These floor model machines come with large capacity external coolant recirculating systems and supporting machine stands/cabinets.

We offer many custom features such as power feed systems, table feed systems and other modifications to meet your specific needs.



TR 100 S



TR 100 L

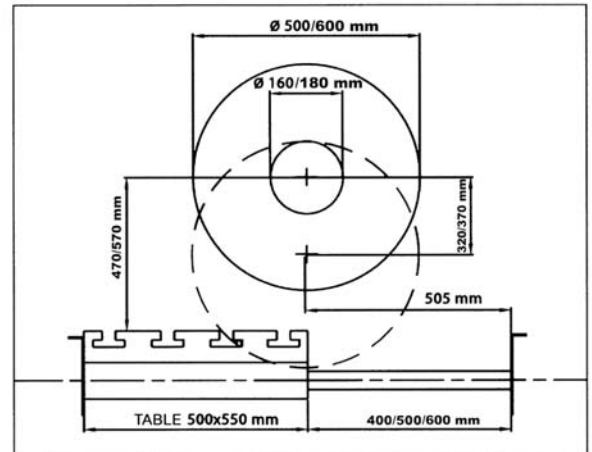
Technical Specifications		TR 100 S floor model	TR 100 S longitudinal work table	TR 100 L floor model
Max cutting section (mm)		100/120	100 x 400	120 x 550
Cut-off wheel diameter (mm)		300/350	300/350	350/400
Distance cut-off wheel spindle/work table (mm)		420	300	320
Motor power (kW)		3/3,7	3/3,7	3,7
Tank capacity (litres)		50	50	100
Power supply		380V 3-phase (others on request)		
Weight (kg)		210	240	280
Dimensions (mm):	W	800	800	900
	D	840	1150	1370
	H	1800	1800	1465

CUT-OFF MACHINES FOR LARGE CUTS

SECOMET Series

A large and powerful cut-off machine for cutting very large and irregular shaped work pieces. 3-axis, X-Y-Z movement capabilities. Smooth hydraulic downward movement of the cut-off wheel, with longitudinal and cross-feed movement of the work table.

All movements can be automated. Very sturdy structure with stainless steel interior, strong plexiglass hood with anodized aluminum frame and electroless nickel plated worktable. Liquid coolant is pumped from the stainless steel wheeled tank with a separate container for collecting cutting swarf.



**Fully Automatic SECOMET 500
with magnetic filter and filter mat**

Technical Specifications	SECOMET 400	SECOMET 500	SECOMET 600
Max cutting capacity (mm)	170 x 400	170 x 500	200 x 600
Cut-off wheel diameter (mm)	400	500	600
Distance cut-off wheel spindle/work table (mm)	470	470	570
Motor power (kW)	11	11	11
Coolant tank capacity (litres)	250	250	250
Power supply	380V 3-phase (others on request)		
Weight (kg)	1200	1400	1500
Dimensions (mm):			
W	1100	1100	1100
D	1900	2000	2100
H	1700	1700	1800

Bars Cutting Series

Bars cutter allows fast cutting, rigorously cold and without deformation of any type of material. The body of the machine is constructed entirely of stainless steel AISI 304 bead-blasted, the cover is made with aluminium frame and with large plexiglass window, while the internal components of the machine are made of cast iron castings, stainless steel or protected by electroless nickel plated. The gripping system consists of a double auto-centering clamping vise, with the command from the outside by means of handwheel; The machine is made in full compliance with the most stringent safety standards; push buttons are to low voltage (24 V), etc ...



TG 250 M



TG 300 A

Technical Specifications	TG 250 M	TG 250 A	TG 300 M	TG 300 A
Max cutting capacity (mm)	80	80	100/120	100/120
Cut-off wheel diameter (mm)	250	250	300/350	300/350
Motor power (kW)	2,2	2,2	3/4	3/4
Coolant tank capacity (litres)	40	40	50	50
Power supply	380V 3-phase			
Weight (kg)	165	165	180	180
Dimensions (mm):				
W	850	1050	900	1100
D	1200	1200	1200	1200
H	1490	1490	1530	1530

AUTOMATIC MOUNTING PRESSES WITH INTERCHANGEABLE MOLD ASSEMBLY

EVOLUTION Series

The Evo series mounting presses have a compact design and they are perfect for the labs that are using phenolic and epoxy mounting resins. These automatic presses are microprocessor controlled, they have heavy duty metal housing and are capable of making mounts from 25 mm to 40 mm in diameter.

Technical Specifications	IPA 30 E	IPA 40 E	IPA E TI
Mounting diameter (mm)	30	40	25 ÷ 40
Max heating temperature (°C)	200		
Max mounting time (min)	99		
Power (kW)	0,6	0,65	0,7
Power supply	220V 1-phase		
Weight (kg)	25		
Dimensions (mm):	W	225	
	D	480	
	H	680	



IPA Series

These mounting presses quickly produce high quality embedded metallographic samples with every type of mounting resin.

The mounting cycle is controlled by a microprocessor with a user-friendly touch panel. These mounting presses can meet the needs of any metallurgical laboratory.

AUTOMATIC PRESSES
Operated by compressed air. The only tasks are positioning the specimens and pouring the resin.

SEMI-AUTOMATIC PRESSES

Equipped with a hand operated hydraulic cylinder.

Automatically restores the operating pressure to compensate for the decrease in pressure due to the melting of the resin during the mounting process.

INTERCHANGEABLE MOLDING UNITS

Both automatic and semiautomatic presses have a full range of mounts with different diameters that can easily be changed to produce your desired mount diameter.

Technical Specifications	IPA 30	IPA 40	IPA TI	IPA SA 30	IPA SA 40	IPA SA TI
Mounting diameter (mm)	30	40	20 ÷ 65	30	40	20 ÷ 65
Max heating temperature (°C)	200 (250)					
Max mounting time (min)	99					
Power (kW)	0,6	0,65	0,7	0,6	0,65	0,7
Power supply	220V 1-phase					
Weight (kg)	40	42	43	35	36	38
Dimensions (mm):	W	400			225	
	D	400			480	
	H	510			680	

AUTOMATIC MOUNTING PRESSES WITH INTERCHANGEABLE MOLD ASSEMBLY

COMPUPRES

The automatic hydraulic mounting press enables the user to mount metallographic samples with every kind of hot mounting resin.

Fully automatic mounting process is controlled by a PLC inside and touch screen operator panel, which allows samples to be completed economically and safely.

The sturdy body is oven painted steel and all machine controls (power switch, cycle start/stop, piston operations) are centrally located to comply with all CE standards.

Mounting pressure is supplied by an electro-hydraulic system: it's 100 bar maximum pressure is controlled by a built in pressure gauge.

The mold assembly is made with special lapped hardened steel. The machine is supplied with a mold assembly for d. 50 mm mounts, but it is possible to quickly change the mold assembly to produce mounted samples from d. 25 mm to d. 50 mm. The screw closure system of the mold assembly is safe and easy to use.

The electric resistance heating system is digitally controlled. Cooling of the unit is achieved by a water circuit; which is connected to a water supply, it is automatically opened at the end of the heating process. Both heating and cooling temperatures can be preset. An audio signal informs the operator when the cycle is completed.



Technical Specifications	COMPUPRES	IPA Hydraulic
Mounting diameter (mm)	25 ÷ 50	
Max. heating temperature (°C)	200 (250)	
Max. mounting time (min)	99	
Pressure (bar)	100	
Power (kw)	0,7	
Power supply	220V 1-phase	
Weight (kg)	50	55
Dimensions (mm):	W	400
	D	500
	H	510

IPA Hydraulic

This fully automatic hydraulic press is controlled by a microprocessor with a user-friendly touch panel.

This machine is recommended when high molding pressures are needed. This press is extremely quiet, due to the electronic pressure control that stops the hydraulic system when the programmed working load has been reached.

A full range of mounts with different diameters can be produced simply by changing the mold assembly with a very fast system.



MANUAL POLISHERS

LS Series

Heavy duty and corrosion resistant; our polishing machines have chemical resistant oven painted steel bodies, stainless steel drainers and powerful noise free gear driven motors. The manual polishers are available with wheel diameter of 200, 250, 300, 400 or 600 mm, with fixed or variable speed, single or double wheel configuration.



LS2



LS1/LS2 Twin



LS3V



LS400

Technical Specifications	LS1	LS2	LS1/LS2 Twin	LS250	LS250 Twin	LS3V	LS3V/LS3V Twin	LS400	LS600
Plate diameter (mm)	200	200	200	250	250	300	300	400	600
Speed (rpm)	300	0 ÷ 300	300 0 ÷ 300	0 ÷ 300	0 ÷ 300	0 ÷ 300	0 ÷ 300	0 ÷ 300	0 ÷ 120
Power (W)	180	250	180/250	250	250	380	380	380	400
Power supply	220V 1-phase								
Weight (kg)	31	32	62	38	75	44	83	60	85
Dimension (mm):									
W	370		730	370	730	460	900	600	800
D	500		500	500	500	630	630	675	850
H	300		300	300	300	380	380	400	420

LSA Device and COMPUMET Series

The automatic polishing system LSA can be installed on every polisher machine. It is pneumatically controlled and it is the ideal device for dramatically reducing the metallographic sample preparation costs and increasing process repeatability.

The automatic system LSA is available in two versions: Central Pressure or Single + Central Pressure. Central PRESSURE type: Force is applied to the center of the sample holder.

Single + central PRESSURE type: The operator can choice if force has to be applied directly to each sample individually (Single Pressure) or to center of the sample holder.



LS2A

**LS Twin
Rotating Head**



**LS DIGITAL
Single Sample
Rotating Head**



**LS DIGITAL
Single Sample
Sliding Head**



Technical Specifications	LS2A	LS3VA	LS Twin Rotating Head	LS DIGITAL	COMPUMET
Plate diameter (mm)	200	300	200/250	250/300	250/300
Speed (rpm)	0 ÷ 300	0 ÷ 300	0 ÷ 300 (0 ÷ 500)	0 ÷ 300 (0 ÷ 500)	0 ÷ 300 (0 ÷ 500)
Power (W)	250/90	380/90	800	500	380/90
Power supply	220V 1-phase				
Weight (kg)	50	70	100	70	70
Dimension (mm):					
W	370	460	730	415	460
D	500	630	500	680	630
H	650	820	900	640	820

COMPUMET

The Compumet 300 is a PLC controlled machine, and touch screen with programmable preparation procedures and data storage for a completely repeatable process.

FULLY AUTOMATIC POLISHERS

INNOVATION R Twin

The INNOVATION R TWIN is a computerized grinder/polisher for preparation of metallographic samples based on completely automatic cycles managed by a microprocessor. The INNOVATION R TWIN polishers have two working stations and between them a washing and drying station. Samples are clamped in a sample holder, which is attached to the machine with a quick coupling system. The head moves the specimen holder from station to station, performing the preparation cycle following the selected program. Nozzles are connected to the head and they grant the chosen abrasive suspensions.

The running cycle can be interrupted and restarted at any time by pushing a stand-by key.

The working cycles can be programmed and stored inside with the machine switched off or even during the execution of a preparation cycle. The machine is equipped with a main power switch, an emergency stop push button and it complies with all CE standards. The work area is made in AISI 304 stainless steel.



Technical Specifications	Innovation 200 R Twin	Innovation 250 R Twin	Innovation 300 R Twin
Plate diameter (mm)	200	250	300
Speed (rpm)	0 ÷ 300		
Power (W)	650	700	910
Power supply	220V 1-phase		
Weight (kg)	120	150	210
Dimension (mm): W	880	960	1200
D	850	890	950
H	680	680	820

ROBOMET

Computerized Automatic Polisher with 6 working Stations

ROBOMET is a computerized grinding-polishing machine designed for the preparation of metallographic samples with completely automatic cycles. The Robomet is designed with the sample holder head surrounded by 5 working stations and one cleaning/drying station.

The samples are clamped in a specimen holder, which is attached to the machine with a quick coupling system in the automatic head. The head moves the specimen holder from station to station, performing the preparation cycle following the selected program. Nozzles for dispensing the abrasive suspension are located in the head and the grinding stone recirculating cooling unit tank is located inside the machine. The operator is protected from the work area by a plexiglass hood equipped with a safety micro-switch.

ROBOMET carries out the metallographic sample preparation according to the selected method. Every preparation program can be composed by a maximum number of 100 steps, divided into groups of 4 steps at a time. For each step it is possible to set up every parameter of the preparation process. The machine can store up to 60 different preparation methods in the CPU and it is also possible to record additional cycles on a removable smart card.

The running cycle can be interrupted and restarted at any time by pushing a stand-by key. The working methods can be programmed both while the machine is in process or off line. The machine is equipped with a main power switch, an emergency stop push button and it complies with all CE standards. The work area is made in AISI 304 stainless steel.



Technical Specifications	Robomet 200	Robomet 250
Plate diameter (mm)	200	250
Speed plate (rpm)	0 ÷ 300	
Speed grinding stone (rpm)	1400	
Power (W)	2500	
Power supply	380V 3-phase	
Weight (kg)	350	400
Dimension (mm): W	1270	
D	1100	
H	1500	

Complete System for Thin Sections

This system allows the preparation of very thin sections and allows the operator to section a specimen to a desired thickness.

It consists of:

- Variable low speed polisher LS2 or LS3V (0-150 rpm)
- Precision thinning device with micrometric thickness control and vacuum holder for specimens or glass slides.
- Vacuum impregnation apparatus (necessary for brittle and porous materials)
- Vacuum pump
- Black granite surface plate with dial gauge

Thanks to the micrometric thinning adjustment this system is useful for preparing flat plane-parallel specimens within a few micron tolerance and for thinning samples to a desired thickness for stratigraphic analysis.



HIGH SPEED GRINDING MACHINE

COMPUPLAN

Powerful and fast plane grinding machine for pre-grinding of metallographic and spectrographic samples by fine stone wheel. Using this machine, sample preparation time and cost can be remarkably decreased. It drastically reduces the subsequent grinding and polishing time and allows to save consumables.



Technical Specifications

Grinding stone dimensions (mm)	d.365 x H50
Abrasive belt (mm)	115
Power of grinding stone motor (kW)	3
Grinding speed (rpm)	1500
Grinding stop	Magnetic brake
Max. diameter sample holder (mm)	200
Sample holder speed (rpm)	150
Sample holder rotation	Bi-direcional
Power sample holder motor (kW)	250
Max. working pressure (bar)	6
Working force (N)	200 ÷ 700
Cooling system	Recirculation system
Power pump motor (kW)	0,12
Weight (kg)	250
Dimension (mm):	
W	500
D	300
H	200

PULITROL

This electrolytic polisher makes it easy to polish and etch even the most difficult specimens where traditional methods prove to be challenging.

Pulitrol is available in both a tabletop version and a portable version.

This machine consists of a power supply and programming unit that controls the polishing and etching of the specimen.

The control unit incorporates the programming/monitoring functions for polishing, etching, voltage, current, time and electrolyte flow. The machine is supplied with a set of fundamental electrolytes.

Technical Specifications	
Polishing	0-110V a 0-10A
Etchant	0-30V a 0-5A
Power supply	220V - 50 Hz
Power max. (W)	1200
Timer (sec.)	0-60
Weight (kg)	35
Dimension (mm):	
W	500
D	300
H	200



MINIMO

The MINIMO cleaner is a portable unit that allows an easy use in the most varied problems of metallographic preparation. The machine is constituted by a central low-voltage power (30V) with control functions predisposition and by a micromotor constructed totally with stainless steel, in which you can interchange the head port pad straight with that angled. Thanks to a built-in switch in the micro motor, is allowed to switch on and off immediately, without reach the control unit. Equipped with a high-performance micro motor and ring opening pliers, place in the end of the grinder, the pad work can be replaced without the use of any key. Ability to fine-tune the speed, up to 15,000 rev/min. through a knob on the control unit, manteaning also at low speeds a pair of significant amounts.



Technical Specifications	MINIMO
Disc diameter (mm)	32
Power supply	220V 1-phase
Handle	90°
Handle power supply	Low voltage
Handle speed (rpm)	1400 ÷ 15000
Weight (Kg)	4

Sample holders

A wide range of standard sample holders are available. It is also possible to manufacture special sample holders for specific needs or different shapes.



Automatic Dispenser

To automate totally the sample preparation is essential to assist cleaning machines with a suspended abrasive dispenser. It's a stand alone equipped with programmable timers for regulating the duration of the work cycle and phases of spraying/pause. It can control up to 3 or 4 dispensers selectable individually.

The dispenser is composed of three parts:

- Control unit;
- 3 or 4 bottles of 250 ml for polishing suspension;
- Stainless steel support for bottles and faucet.

The dispenser allows the full automation of the metallographic samples preparation cycle: the operator hasn't to put the abrasive on the working plate so there is ever a constant quantity of abrasive;

It allows to have also a completely repeatable cycle: in fact there is the chance to set both the time of the abrasive flow and the time break between one output and the next one.



Mechanical Automatic Systems

These simple automatic systems can be mounted on any polisher and allows the economic preparation of several metallographic specimens at the same time.

The force is supplied by a preloaded spring:

Force is supplied by an adjustable spring applying pressure to the sample holder.

These automatic systems can be used for preparing specimens of any shape, size and material.



Metallographic Consumables

Remet company mean also wide range of consumables for metallography as follow:

- Abrasive cut-off wheels AL_2O_3 type and SiC type
- Diamond cut-off wheels
- Oil for lubricant for metallographic machines
- Adesive and no-adesive abrasive paper
- Lapping clothes
- Diamond spray & suspension for lapping
- Suspensions of Alumina or of magnesium oxide or of silicon oxide
- Lapping oils
- Diamond wheels for grinding and for lapping
- Hot & Cold mounting resins
- Reagents for chemical attack
- Collections of metallographic samples with different materials
- Books and metallographic atlases



Technical Furniture



After years of study and experimentation, we believe we have given a clear and satisfactory answer to the demands of a furniture suitable for the metallurgical laboratory and technological testing in general. The furniture that we present allows to furnish entirely new laboratories and can also serve to complement existing furniture; in fact their neutral color (base light gray / pearl gray top) approaches easily to various environmental situations and the scientific instrumentation in general that will be placed on them.

The material used is of excellent quality with a consistent size, adequate for heavy instruments and delicate, also is totally fireproof, waterproof and scratch resistant. The modular measures, multiples of 45 cm, allow to satisfy any lay-out in addition to leaving the possibility of subsequent implementations.

JOMINY



Apparatus for the hardenability test, "The Jominy hardenability test consists in heating a cylindrical specimen of defined sizes, for a prescribed time and with special device, to hardening temperature of the steel in question and in subsequently cooling it at one end with a jet of water under controlled conditions.



MAC-QUAID FURNACES

Micro stationary or rotating ovens, which quickly and with very low energy consumption, allow the realization of precise thermal cycling of metallographic specimens.





Remet

From 1970 REMET has manufactured more than 15.000 metallography machines for more than 5.000 customers around the world.

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