

DOL SHING TECHNOLOGY

GLOBAL CATALOG



55 YEARS OF PASSION

FOR INNOVATION
DEDICATED TO OUR CUSTOMERS



LAM PLAN S.A. was awarded the TALENT INPI trophy
by the National Institute of Industrial Property.

This distinction is awarded to SME-SMI companies
that innovate and include industrial property
in their development strategy and growth plans.



CONTACTS



POLISHING TECHNOLOGY®

Located in Gaillard, LAM PLAN specializes in industrial lapping and polishing solutions.

For 60 years, LAM PLAN teams have been designing and providing equipment and preparations guaranteeing its customers performance, quality and productivity.



SDS

Safety data sheets

Download all the safety data sheets in PDF format LAM PLAN according to the REACH and CLP regulations: (Classification Labelling Packaging).



www.fdsen.lamplan.com

CATALOGS

The 4 catalogues in English

Download in PDF format LAM PLAN the LAM PLAN catalogs and find all the polishing technologies.



www.caten.lamplan.com

MANUALS

Instructions for use

Download in PDF format the operating instructions and manuals of the different LAM PLAN machines and products.



www.manen.lamplan.com



LAM PLAN SA

7 rue des Jardins
BP 15
74240 Gaillard - France

Tel. +33 (0)4 50 43 96 30
Fax: +33 (0)4 50 87 01 60
email: mmsystem@lamplan.fr

www.lamplan.com



VIDEOS

Machine and product films

Watch the videos of our different machines by scanning the QRcode located on the «machine» pages of this catalog using your smartphone and find all of our videos.



www.viden.lamplan.com

Contact our technical team

email: biodiamant@lamplan.fr

For all questions

Tel. +33 (0)4 50 43 96 30

Social networks

Follow our news and events ...



Copyright © 2022 LAM PLAN. All Rights Reserved.

LAM PLAN, SERVICES



TESTING LABORATORY

Attentive to your need, we assist you regarding the process of defining and interpreting your expectations. The fine expertise of your demand combined to our best know-how enable us to shape a tailor made solution for you.



Take a virtual tour of our test centre on
www.360en.lamplan.com



From the formal request to the detailed test report our CUSTOMER TEST CENTRE is at your disposal.



Always gather the best of your investments

By choosing LAM PLAN 's equipment, you will benefit the service and monitoring of our technicians. As a machinery and consumable manufacturer, we provide our entire experience and resources for your satisfaction.



Commissioning and Training

Our aim is for you to become immediately efficient and productive. We will train you in the use of the material and in the implementation of the included consumables.

Preventive Maintenance

LAM PLAN offers you punctual preventive maintenance tasks or annual contracts designed for each machine. We provide regular monitoring of your machines profiting an optimised management of maintenance costs, minimising the frequencies of failures.

The curative maintenance

In case of a failure which would cause the cessation of your production, the rapidity of reaction is preeminent. It mostly lays on the quality of the diagnosis and the availability of replacement parts. These curative maintenances are operated for all LAM PLAN's machinery.

The Retrofit

Retrofit maintenances include the upgrade of old equipment in order to prolong their use or to comply with new standards.

We also assure you the installation of optional equipment to improve your material and adjust it to your requirements.

FROM INNOVATION TO DESIGN AND MANUFACTURING

Your requirements are a constant source of innovation. The LAM PLAN technical team addresses all challenges and attempts to respond to specific issues in a simple way, that remains safe and comfortable to handle.

Our constant renewed ability to improve our machines, supports and products, combined with our original know-how, enable us to respond to all demands.

Lapping, polishing, metallography: mastering these 3 lines of business empowers us to respond the most varied customer demands. Our know-how is spread into each distinct sector, through an overview of the volume of solutions.



Supports

Plates, rods, abrasive discs, polishing pads, we develop a full range of supports making it possible to reach any surfaces and remove the required matter.



Abrasive solutions

Preparations in the form of pastes and liquids, conventional and diamond abrasives, we develop formulations that respect the health of users and preserve the environment without compromising efficiency.



Machines

Whether your needs go for lapping, polishing or metallography, our range of machines and peripheral devices offer you a complete equipment to treat all type of parts.

Quality assurance

The ISO 9001 certification constitutes the base of our approach to perpetual enhancement and concern about customer's needs, which enables us to respond to it properly. This certification of quality management within our organisation guarantees a permanent monitoring of our system's performance, quality of our products and services. Our goal: The customers' satisfaction.

COMPANY CERTIFIED
ISO 9001

PROMOTES THE CERTIFICATION
ISO 14000





ENVIRONMENT

ECO-COMMITMENT

CHARTER

LAM PLAN is pursuing and maintaining its research and development efforts in favour of the technique and the environment.

Our innovations contribute to the improvement of our products and technologies by rendering them more effective, while reducing their impact on the environment and limiting the risks to user health. This responsible and intentional approach is an integral part of our continuous improvement policy.

This choice allows our customers today to anticipate international regulations in terms of occupational safety and ecology.

Thanks to our developments, we are committed to offering you innovative products which allow reconciling performance, quality, safety and respect of future generations.

By way of our values, we assert our commitment to responsible and sustainable business practices.

ECO-COMMITMENT CHARTER

The Eco-commitment approach aims to promote the preservation of the environment and the health of users through the integration of biotechnologies into our product ranges.

ENVIRONMENTAL APPROACH



The Eco Engagement approach aims to promote the preservation of the environment and the health of users through the integration of biotechnologies into our product ranges.

A real strategic industrial and societal issue, the environmental concern is a fact now present at all stages of the design and production of our solutions.

First in line with the Eco Commitment initiative, the Bio DIAMANT® and No-VOC labels sign off on the success of our research and development teams.



Biotechnology-derived, BioDIAMANT® branded super-fine diamond abrasives meet demanding criteria for the protection of the environment and users:

// Biodegradable and safe for the environment

// Not dangerous, toxic, harmful or irritating to users

// More effective than traditional diamond products

// In accordance with the European directives in force.



Anxious to protect the environment, the label «Without VOC*» is the guarantee of a work done safely for the operators.

Pioneering in the implementation of formulations of this type, LAM PLAN intends to continue its efforts to make all of its preparations ever safer, without changing anything to their effectiveness. The commitment of the «No VOC» label:

// Respect the user and the environment

// Promote the ISO 14000 approach at our customers

// Meet the legal requirements on VOC emissions.

** Volatile organic compounds*

METALLOGRAPHY



TABLE OF CONTENTS	6
CUTTING	8
MOUNTING	28
PREPOLISHING & POLISHING	40
LITHOPREPARATION	74

LAPPING / POLISHING



TABLE OF CONTENTS	76
EQUIPMENT	80
SUPPORTS	106
CONSUMABLES	128

GEOMETRIC POLISHING



TABLE OF CONTENTS	147
EQUIPMENT	148
TOOLS	154
CONSUMABLES	175

GLOBAL INDEX	182
CONDITIONS OF SALE	184

TABLE OF CONTENTS METALLOGRAPHY

CUTTING

CUTTING MACHINES	CUTLAM®micro 1.1		8
	CUTLAM®micro 2.0		9
	CUTLAM®micro 3.0		10 > 11
	CUTLAM®1.1		12-13
	Support cabinet		13
	CUTLAM®3.1		14 > 15
	CUTLAM®4.0		16 > 17
	CUTLAM®5.0		18 > 19
	Vices, clamping and accessories		20 > 21
	Oil mist extraction device A1	NEW	22
CUT-OFF WHEELS	Filters, refractometer and cutting fluid 723	NEW	23
	Excellence, Precision and Precision Diamant cutting wheels	NEW	24 > 27
	Adaptor rings		27

MOUNTING

MOUNTING MACHINES	PRESSLAM®1,1		28 > 29
	Mounting devices M.M.808 and M.M.818	NEW	30
HOT MOUNTING RESINS	PHENOFREE resins		31
	Unmoulding agent SOLILUB		31
	Epoxy resins 633 & 634		32
	Acrylic resins 616 & 616.2		32
	Copper resin 604.3		32
	Graphite resin 617		33
COLD MOUNTING RESINS	Acrylic resin 601.2		34
	Transparent Epoxy resins 603 & 603.2		34
	Polyester resins 605 & 607		35
	Transparent Methyl methacrylate resins 609 & 609 Plastichrome		35
	Methyl Methacrylate resin 655	NEW	36
ACCESSORIES	Polymerisation lamp M.M.866		37
	ISOFORCE	NEW	37
	Cold mounting moulds and universal sample-holder moulds 610		37-38
	Cups and spatulas, micro engraver M.M.886		38
	Charge element for resin mould, Epochrome powder and removal agent	NEW	39
	Blade-holders and holding clips		39

PREPOLISHING & POLISHING

PREPOLISHING MACHINE	RECTILAM® 2.0		40 > 41
POLISHING MACHINES	SMARTLAM® 2.0		42
	SMARTLAM® 3.0		43
	MASTERLAM® 1.0		44
	MASTERLAM® 3.0		45
	MASTERLAM® 1.1		46
	Dosing unit DISTRILAM® & transparent protective housing		47
	Plates, sample holders, clamping rings		48
	Diaphragm compressor and filter kit		49
	Universal sample-holder mould		49

FIXING ACCESSORIES	FAS®2 discs, FMS, FIX LAM®, XLAM 4 and XLAM 4-M discs and plates	NEW	50 > 51
CLEANING & STORAGE ACCESSORIES	BOX LAM® and accessories		52
	COVER LAM®		53
	Ultrasonic tanks M.M.80 and 275, detergent 742, technical wipings		53
GRINDING & PREPOLISHING DISCS	SiC abrasive papers		54 > 56
	Grinding wheels		56
GRINDING & PREPOLISHING DISCS CAMEO®DISK	CAMEO®DISK Platinum		57 > 58
	CAMEO®DISK Silver, Gold & Rhodium	NEW	59
	Abrasive stones & Diamond dressing tool		58-59
POLISHING SUPPORTS	TOUCHLAM® cloths: Ø 200 to 400 mm		60 > 63
DIAMOND ABRASIVE SUSPENSION	Bio DIAMANT® liquids NEODIA®M, NEODIA®P, NEODIA®F		64 > 66
	Bio DIAMANT® M.M.140		66
	Manual distributors to be filled		66
	Pulmatic Bio DIAMANT® 310 & 320P		67
	Finishing liquids SUPERFINISH, FINAL, L1, L2 and ALPLAN		68
	Bio DIAMANT® sticks - Series 122 and 123P		69
	Bio DIAMANT® pastes - Series 100		70
LUBRICANTS	Lubricants M.M.702 & 704		71
	Booster for CAMEO®DISK Platinum		71
REAGENTS	Metallographic reagents		72-73

LITHOPREPARATION

IMPREGNATION	Vacuum impregnator device M.M.818 and precision sample holder PE128	NEW	74
ROUGHING & POLISHING	M.M.8400 with PE128, MASTERLAM® 3.0 with thin slide holder	NEW	75
GLOBAL INDEX	Search by keywords		182 > 183
COS	Conditions of sale		184 > 185



CUTTING



CUTTING MACHINES

CUTLAM®micro 1.1

MADE IN FRANCE

The CUTLAM®micro 1.1 is a LAM PLAN laboratory micro-cutting machine. Easy to use and economical. It is designed for precision cuts of the most sensitive materials.

The CUTLAM®micro 1.1 allows you to include a versatile and robust machine in your laboratory at a reasonable budget. Its speed range and cutting chamber capacity will enable you to use it for many applications with a variety of cutting wheels (diamond, Al_2O_3 , etc.) up to 150 mm diameter.

The work piece is held by a vice-holding, the knob, located outside of the cutting chamber, which permits a micro metric movement of the Z-axis.

The cutting feed is controlled with a sliding weight system, allowing you to fine-tune the load applied for delicate and slow cuts.

Equipped with an independent decanting/ recirculation tank, you can easily make slow cuts in optimum conditions of cooling.

Based on a robust aluminium frame with a painted metal body, the CUTLAM®micro 1.1 is stable and vibration free. The hinged transparent hood avoids any spraying outside the machine and allows easy access for clamping vices on the arm. The hood is fitted with a safety device which stop immediately the cutting wheel motor in case of an opening.



CUTLAM®micro 1.1

Laboratory micro cutting machine
Ø 150 mm



Recirculation coolant system, 10 litres

Included Equipment

- Recirculation coolant system, 10 litres
- Cylindrical sample holder with clamping screw: Ø 12 to 50 mm maxi
- Set of flanges Ø 50 mm for cut-off wheels Ø 125 to 150 mm

Accessories

- | | |
|---|-------------|
| Set of flanges Ø 35 mm for cut-off wheels Ø 75 to 100 mm | 60 CTM01 10 |
| Sample holder with multi screw clamping for irregular parts | 60 CTM03 50 |
| Sample holder vice with clamping screw: Ø 12 mm maxi | 60 CTM03 30 |
| V sample holder with clamping screw: Ø 24 mm maxi | 60 CTM03 20 |
| Sample holder double vice with clamping screw: Ø 12 mm maxi | 60 CTM03 40 |
| Cylindrical sample holder with clamping screw: Ø 12 mm to 50 mm | 60 CTM03 10 |
| Small vice with clamping screw: Ø 12 mm | 60 CTM02 10 |

Technical data	CUTLAM®micro 1.1
Wheel Ø	75 to 150 mm
Shaft Ø	12,7 mm
Standard flanges Ø	50 mm
Lateral arm displacement	Stroke 25 mm (accuracy 0,02 mm)
Preload weight	1 x 200 g
Vertical movement	Manual
Lubrication/Cooling	Recirculation system, 10 litres, 800 L/ hour pump driven by the machine
Motor power	0,18 kW
Rotational speed	Variable, from 50 to 1500 rpm
Body	Steel coated with epoxy paint
Protection	Transparent cover with locking system
Voltage	230 V - 50 Hz single phase
Dim. W x H x D	390 x 390 x 340 mm (H cover open: 630 mm)
Weight	25 kg
Reference	60 CTM10 00

Faced with the constant evolution of the materials and the quality standards, LAM PLAN is a reference partner for the preparation of the samples for the metallographic analysis.

Our technical solutions and our customised methods will ensure you reliable and reproducible results. We are fully committed to the quality of the samples.

CUTTING MACHINES

CUTLAM®micro 2.0

MADE IN FRANCE

The CUTLAM®micro 2.0 is a compact laboratory micro-cutting machine intended for the most sensitive materials. The speed range and cutting chamber capacity make this machine incredibly versatile.

The sample is held in position using a vice-tightened holding arm and the wheel located outside the cutting chamber enables a micrometric movement along the Z axis; the movement can be tracked directly on the screen (accurate to 0,02 mm) Thanks to the zeroing system, very accurate parallel cuts can be performed.

A wide range of vices is available, enabling you to clamp any type of component or material. The cutting progress is either controlled manually or with a counterweight system specially adapted to delicate cuts. A rocker arm balances the implement weight, and another one permits to adjust the applied load with precision.

Fitted with a large-capacity (10 litres, large for the machine's size), independent filtration/decanting/recirculation tank, it is easy to perform long cuts under ideal cooling conditions. The CUTLAM®micro 2.0 has been designed to simplify maintenance and cleaning operations, the base of the cutting chamber is equipped with an inlet filter to prevent the loss of small parts and components. A 100 µm fabric filter at the decanter inlet filters out the largest particles, and the remainder of the filtration is accomplished by decanting into a compartmented tank.

Built upon a robust, mechanically welded chassis sheathed with a painted sheet-steel body, the CUTLAM®micro 2.0 is particularly stable and is not prone to vibration, saving you valuable laboratory work space.



CUTLAM®micro 2.0

Laboratory precision
micro cutting machine



Included Equipment

Recirculation system, 10 litres,
2 compartment decantation tank, 100 µ fabric filter, recirculation pumps
800 L/hour driven by the machine

Cylindrical sample holder with clamping screw: Ø 12 to 50 mm

Set of flanges: Ø 50 mm for cut-off wheel: Ø 125 to 150 mm

Options

Slow speed 50 to 1000 rpm	60 CTM 20 20
Vacuum system for holding thin sections	60 CTM 03 80

Accessories

Set of flanges Ø 35 mm for cut-off wheels Ø 75 to 100 mm	60 CTM01 10
Set of flanges Ø 75 mm cut-off wheels until Ø 200 mm	60 CTM01 30
Sample holder with multi screw clamping for irregular parts	60 CTM03 50
Sample holder double vice with clamping screw: Ø 12 mm max	60 CTM03 30
V sample holder with clamping screw: Ø 24 mm maxi	60 CTM03 20
Sample holder double vice with clamping screw: Ø 12 mm max	60 CTM03 40
Cylindrical sample holder with clamping screw: Ø 12 mm to 50 mm	60 CTM03 10
Small vice with clamping screw: Ø 12 mm	60 CTM02 10
Medium vice with clamping screw: Ø 24 mm	60 CTM02 10

Technical data	CUTLAM®micro 2.0
Wheel Ø	75 to 200 mm
Shaft Ø	12,7 mm
Standard flanges Ø	50 mm
Lateral arm displacement	Stroke 80 mm (accuracy 0,02 mm)
Preload weight	2 x 200 g
Vertical movement	Manual
Motor power	0,6 kW
Rotational speed	Variable, from 200 to 4000 rpm
Protection	Transparent cover with locking system
Touch screen 3,5"	Intuitive and graphic interface
Voltage	230 V - 50 Hz single phase
Dim. W x H x D	430 x 300 x 450 mm (H cover open: 644 mm)
Weight	40 kg
Reference	60 CTM20 00



CUTLAM® micro 3.0

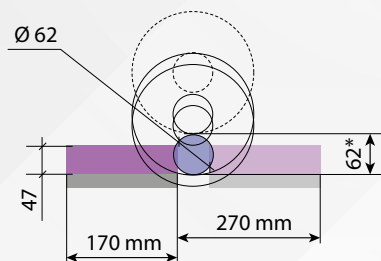
High-precision automatic 2 axes*
cutting machine

*optional 3rd (X)



300 programs can be stored in the built-in memory, including: start position, feed speed, rotational speed, cutting mode.

Theoretical cutting capacity - Ø 200 mm *space under wheel



CUTLAM® micro 3.0

MADE IN FRANCE

The CUTLAM®Micro 3.0 is designed for laboratories looking for an automatic machine adapted to high precision, long and difficult cuts.

This benchtop designed cutting machine offers astonishing capacities. Thanks to the multiple motion table, the cutting wheel, and the feed speed control system according to the cutting torque, this machine will overcome any difficult task.

Large capacity compact cutting machine

It is fitted with a large: 320 x 540 mm chamber, and equipped with a grooved aluminium table, sized 210 x 210 mm, and stainless steel interchangeable pallets.

The large capacity of the CUTLAM®micro 3.0 relies on the use of 200 mm cut-off wheel, combined with a vertical movement range of 100 mm (Z axis) and a longitudinal range of 270 mm (Y axis).

Precision

The positioning of the axes, which can be seen on the screen is 0,01 mm accurate and feed speed while cutting can be set from 0,1 to 20 mm/sec or 0,1 to 10 mm/sec.

The use of the "smart motion" (read the following page about this device) will automatically reduce the moving of the axes in order to obtain a minimum value of 0,02 mm/sec.

User-friendly interface

A large touch-screen allows you to select the different functions using an easy to use, intuitive interface. All the positioning and cutting parameters can continuously be visible on the screen. The use of a joystick allows a fast positioning of the cut-off wheel; while in automatic and semi-automatic modes, an estimation of the remaining cutting time appears.

Three cutting modes are available: manual, semi-automatic and automatic.



CUTTING MACHINES

Efficiency: 5 key points for higher productivity

1. Powerful motor of 1,1 kW.
2. Sequential cutting mode for a maximum cooling.
3. Ingenious feed speed control:
 - The feed speed is pre-set, and will be automatically reduced if the load on the cutting wheel increases. The pre-set speed returns when the load on the wheel decreases.
 - It improves the quality of the cut by limiting the heat damages on the samples.
 - Suitable for irregular samples and/or materials with heterogeneous hardness.
 - It prevents the wheel from breaking in case of overload.
 - It allows you to always work at maximum speed without any risk of damage.
4. Optional cross-feed table (X axis) manual or motorised for repetitive parallel cuts.
5. Independent lubrication/cooling system, composed of a 100 µ washable filter, and a 30 litres sedimentation tank with multi-point nozzle, insures excellent cooling of the sample and the cutting wheel even during intensive use.

Options

Manual cross-feed table (X axis) to cut parallel sections stroke 55 mm accurate to 0,01 mm	60 CTM31 00
Motorised cross feed table (X axis) to cut parallel sections stroke 50 mm, accurate to 0,01 mm	60 CTM34 00
Positioning laser	60 CTM35 00

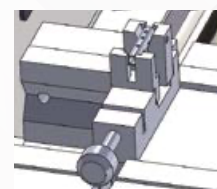
Technical Data	CUTLAM®micro 3.0
Wheel Ø	75 to 200 mm
Shaft Ø	12,7 mm
Standard flanges Ø	75 mm
Passage under the wheel	62 mm (with a Ø 200 mm wheel)
Max cutting capacity	Ø 62 mm (with a Ø 200 mm wheel)
Vertical movement	Z axis 100 mm automatic
Longitudinal movement	Y axis 270 mm automatic
Transversal movement	X axis 55 mm manual or 50 mm motorised (optional)
Cooling/ Lubrication	Decantation tank, 2 chambers, Input 100 µm filter, Pump 800 L/hour driven by the machine.
Motor power	1,1 kW
Rotational speed	Variable, from 1000 to 4000 rpm.
Cutting modes	Manual, semi-automatic, automatic
Feed speed control	0,1 to 20 mm/sec. programmable Automatic control of speed / power continuous or sequential
Lightening	LED
Protection	Transparent cover with locking system
Voltage	230 V - 50 Hz simple phase
Dim. W x H x D	620 x 470 x 750 mm (H cover open 812 mm)
Weight	80 kg
Reference	60 CTM30 00

**Tool for axial cutting of Ø 4 mm parts.**

This device, used in conjunction with quick release clamps, enables manual positioning following the X axis, ensuring cutting precision and repeatability.

NEW

60 CTM03 93



60 CTM35 00



60 CTM31 00



60 CTM34 00



60 CTM01 10/20/30



60 CT200 40



60 CTM36 00



60 CTM32 00



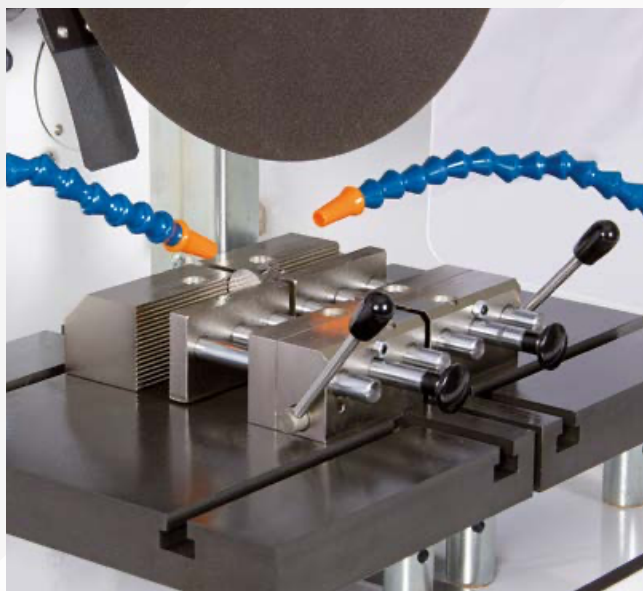
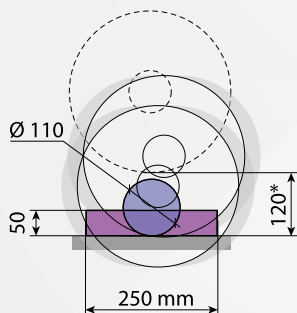
60 CTM33 00



60 M0100 00

Accessories

Set of flanges Ø 35 mm for cut-off wheels Ø 75 to 100 mm	60 CTM01 10
Set of flanges Ø 50 mm for cut-off wheels Ø 125 to 150 mm	60 CTM01 20
Set of flanges Ø 75 mm for cut-off wheels until Ø 230 mm	60 CTM01 30
Independent double vice (right and left) screw tightening	60 CT200 40
Right vice with fast tightening, small model	60 CTM32 00
Left vice with fast tightening, small model	60 CTM33 00
Buckle fastener Kopal 54	60 CTM36 00
Cabinet: 1 drawer, 1 storage in the door + integration of the recirculation tank	60 M0100 00


CUTLAM® 1.1
**Manual cutting machine
vertical motion**
Theoretical cutting capacity - Ø 305 mm
**space under wheel*


CUTLAM® 1.1

MADE IN FRANCE

The CUTLAM® 1.1 is a bench-mounted cutting machine for a wide range of applications. Robust and easy to use, with a deported motor design, this machine has a very large cutting capacity. It allows you to equip your laboratory with a simple, versatile and reasonably-priced machine made from high-quality components.

This machine offers a spacious cutting table, made of treated anti corrosive cast iron. It is also easy to handle with a fully opening cover and remote motor. The 4 perpendicular grooves enable you to clamp components of thicknesses up to 120 mm. The CUTLAM® 1.1 can be equipped with Ø 250 to 305 mm cut-off wheels.

Fitted with a speed adjuster and a powerful 3.8 Kw motor particularly adapted to Ø 305 mm wheels, the CUTLAM® 1.1 is perfect for intensive use.

The high-capacity recirculation system with pre-filter and decanter compartments ensures optimum lubrication and cooling by a multi-point spray.

The cutting chamber is illuminated by a strong and trendy aluminium projector.

The protection cover is made of two parts: a large glass area, giving a complete visibility on the cutting chamber, and a lacquered metallic belt offering a high resistance to this protection core. Furthermore, thanks to an interlocking system, this cover locks itself when the wheel is in rotation.

This machine is offering 2 lateral openings, giving the possibility of cutting bars which have a 60 mm diameter.

An external shower head combined with a tilted cutting chamber base makes cleaning easy, and an inlet filter ensures that your samples do not fall down the large-diameter outlet pipe.

Technical Data	CUTLAM® 1.1
Wheel Ø	250-305 mm
Shaft Ø	25,4 mm
Standard flanges Ø	80 mm
Max cutting capacity	Ø 110 mm (Ø 305 mm wheel)
Passage under the wheel	120 mm (Ø 305 mm wheel)
Vertical movement	Manual
Lubrication	Recirculation system, 60 litres, on casters, integrated cleaning system, with shower head located outside the cutting chamber
Motor power	3,8 kW
Rotational speed	Variable, from 1000 to 4000 rpm
Table	Groove treated stainless steel, 400 x 300 mm
Type of groove	T groove 12 mm (2 longitudinals, 2 transversals)
Lightening	LED
Protection	Transparent cover with locking system
Body	Epoxy painted coated steel
Voltage	400 Volts - 50 Hz (three-phase)
Dim. W x H x D	630 x 650 x 820 mm - H opened cover: 820 mm
Weight	125 kg
Reference	60 CT110 00

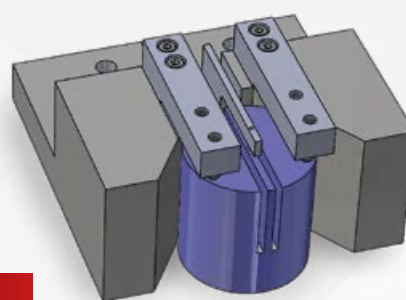
CUTTING MACHINES

Example of application: cutting of a sphere

One of the recurrent issues remaining in the cutting processes is the clamping of spherical parts. The implementation of this kind of vice on the CUTLAM®1.1 enables to cut spheres having a diameter going from 30 mm to 60 mm.

**Example of application: cutting of a glass cylinder with double wheel**

Tooling allowing the removal of a 3 mm slice from a glass cylinder Ø 50 mm, height 50 mm. This article includes the supply and installation of a specific clamp and a double grinding wheel on a CUTLAM® 1.1 machine.



NEW

Accessories

Fast tightening double vice system	60 CT200 20
Screw tightening double vice system	60 CT200 40
Universal clamping vice KOPAL 61	60 081282 20
Clamping flange adjustment	60 081282 40
Long shaft for clamping flange KOPAL	60 00285 90
Cabinet: 1 drawer, 1 storage + integration of the recirculation tank	60 M0100 00
Universal table (X axis) for parallel cuttings	60 CT205 20
Stainless steel table in option	60 CT211 200
Aspiration/filtration set (see specific page)	60 CT204 00



60 081282 40



60 00285 90



60 081282 20



60 CT206 20



60 CTC20 520



Recirculation system 60 L



60 CT200 40



60 CT200 20



Interlocking

CUTLAM® support cabinet

Solid painted-steel piece of furniture specially designed for CUTLAM® products.

It contains a storage door for tools and cut-off wheels, a drawer on top and a space for the recirculation tank. This piece of furniture is stable and has adjustable feet.

For CUTLAM®micro 3.0 and CUTLAM® 1.1

Dimensions W x H x D: 630 x 800 x 835 mm.

Reference: 60 M0100 00

For CUTLAM® 3.1

Dimensions W x H x D: 700 x 800 x 1050 mm.

Reference: 60 M0310 00





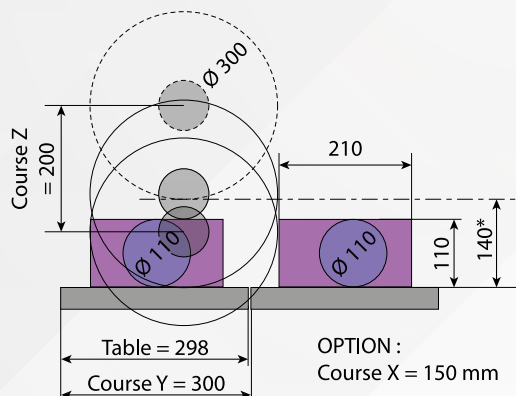
CUTLAM[®] 3.1

Automatic and programmable cutting machine with 2 or 3 motorised axes*, equipped with a 300 mm \varnothing cut-off wheel

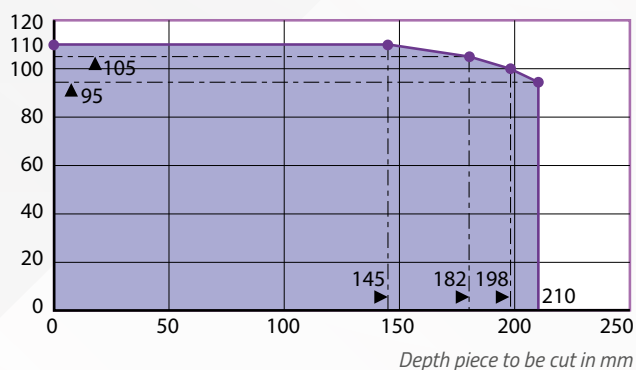
*Optional motorised 3rd Axis (X)

Theoretical cutting capacity - \varnothing 300 mm

*space under wheel



Height cut piece
to be cut in mm



CUTLAM[®] 3.1

MADE IN FRANCE

The CUTLAM[®] 3.1 is the ultimate development of LAM PLAN and is the most advanced automatic \varnothing 300 mm cut-off machine in its market sector.

Largest cut-off area on the market of \varnothing 300 mm cut-off machines

The CUTLAM[®] 3.1 offers an unprecedented cutting capacity, the machine table can move forward and backward automatically over a distance of 300 mm. New, the cut-off wheel has an automatic and linear top-to-bottom movement. With this linear movement, this new-generation of cutting machine offers a 140 mm space under the cutting wheel. The CUTLAM[®] 3.1 has a cover which includes opening side to cut bars.

Easy to use

The CUTLAM[®] 3.1 is extremely simple to operate with its large touch screen (5.7 inches) and intuitive interface. The 2 motorised axes of CUTLAM[®] 3.1 (optional 3rd axis) can be controlled manually by two joysticks located near the control screen. The internal memory allow to save over 300 cutting programs, which can also be imported or exported via a USB port.

A great variety of possible setting configuration

The rotation speed of the cutting wheel and the feed speed of the axes can be programmed so as to prevent any deterioration or deformation of the samples. 3 cutting modes are possible: manual (via joysticks), semi-automatic and automatic. The movements of the axes can be continuous or sequenced.

The CUTLAM[®] 3.1 is also equipped with the smart motion function: the definition of an acceptable torque for the cutting wheel, with the touch screen will automatically regulate the feed speed of the axes.

This option makes it possible to cut materials with different hardnesses (e.g. steel with an HVOF coating) without having to modify the feed speed. This option allows to avoid long testing campaigns to define the correct feed speed.



CUTTING MACHINES

Many cutting possibilities are offered

This automatic cut-off machine makes it possible to cut vertically (along axis Z), over a maximum stroke of 200 mm, or to cut horizontally along axis Y, over a maximum stroke of 300 mm.

It is also possible to combine the two Z and Y movements. Thus, your machine will be able to perform cutting passes with a pass number and depth, which can be programmed.

This machine can optionally be equipped with a manual or automatic X axis for cutting parallel sections.

**Your safety, our priority**

An interlocking device maintains the cover in its closed position when the cutting wheel is rotating. When the cover is open, any axes movement (controlled by the joysticks) is only possible when the technician presses the "man present" button.

Technical Data	CUTLAM®3.1
Wheel Ø	250 to 305 mm
Shaft Ø	25,4 mm
Max cutting capacity	Ø 110 mm
Space between the cutting wheel and the table (with wheel Ø 300 mm)	140 mm
Table	Stainless steel 574 x 298 mm
Longitudinal movement - table	300 mm
Vertical movement - wheel	200 mm
Transversal movement	150 mm (optional)
Motor power wheel	3,8 kW
Cooling/Lubrication	Recirculation system, 60 litres decantation tank, 2 chambers, Input 100 µm filter, 800 L/hour pump driven by the machine
Wheel rotation speed	From 1000 to 4000 rpm
Cutting mode	Manual, semi-automatic, automatic
Feed speed control	From 0.1 to 20 mm/s, continuous or sequenced. Intelligent motion: automatic check of the feed motion according to the resulting torque on the cutting wheel motor
Lighting	LED strip
Protection	Cover secured by interlocking Man present button for operating the axes when the cover is open
Voltage	400 Volts - 50 Hz (three-phase + ground)
Dim. W x H x D	900 x 700 x 1000 (H. cover open 1100 mm)
Weight	210 kg
Reference	60CT30100



Support cabinet with integrated cooling system (60 litres).

Options

Manual X axis-table, stroke: 150 mm	60 CT31A20
Automatic X axis-table, stroke: 150 mm	60 CT31A30
Laser positioning device	60 CT31A10



60 CT31A30



60 CT31A20



60 CT31A10

Accessories

Double independent vice (left and right) with a screw-type tightening system	60 CT200 40
Double independent vice (left and right) with a fast tightening system	60 CT200 20
Cabinet for CUTLAM®3.1	60 M0310 00
Aspiration/filtration set (see specific page)	60 CT204 00



60 CT200 40



60 CT200 20



60 M0310 00



Quick positioning with joysticks. Touch screen with graphical interface.



Positioning laser.



CUTLAM®4.0

MADE IN FRANCE

The CUTLAM®4.0 is designed especially for manufacturing companies with high standards who are looking for high-quality and reliable equipment for heavy-duty use with a great cutting capacity.

The CUTLAM®4.0 is a pedestal-mounted single-block machine with an integrated recirculation/decanter tank. The wheel's vertical descent can be controlled automatically (oleo pneumatic) or manually using the joystick. The maximum cutting descent is 240 mm.

Adapted for intensive use on heavy components, the CUTLAM®4.0 is fitted with a powerful 5.5 kW motor.

The wheel's speed is adjustable from 1000 to 4000 rpm, the feed speed is adjustable. 2 cutting modes are available: sequential automatic with adjustable frequency or continuous.

An end of cycle sensor shuts off the machine and automatically raises the wheel after each operation.

The controls are easy to use and intuitive: they are centralized on the 5.7" arm-mounted touch-screen.

The cover opening clears 3 sides, guaranteeing easy loading of heavy or bulky parts. Removable gates to the left and right enable you to cut long bars.

The wide cast-iron clamp bench has 6 T-longitudinal grooves and 5 transversal grooves, and as an optional extra may be made mobile along the X and the A axes.

The multi-point hose over the wheel and part ensures optimum cooling for high-quality cuts and consistent results.

In the standard configuration, the work area is illuminated by a adjustable spotlight, and an external shower head is provided for cleaning the cutting area.

In order to optimise your equipment according to your needs, a variety of accessories and optional extras are available.

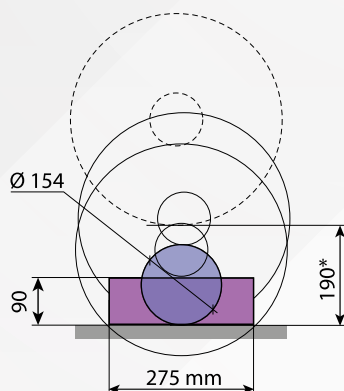


CUTLAM®4.0

Thigh-capacity automatic cutting machine

Theoretical cutting capacity - Ø 400 mm

**space under wheel*



CUTTING MACHINES



Transversal table X axis 120 mm stroke

Technical Data	CUTLAM®4.0
Wheel Ø	300 to 400 mm
Shaft Ø	25,4 mm
Standard flanges Ø	100 mm
Max cutting capacity	Ø 154 mm or 145 x 160 mm or 90 x 275 mm (with a Ø 400 mm wheel) + right and left opening for long parts)
Passage under the wheel	190 mm (with a Ø 400 mm wheel)
Vertical movement	Manual
Lubrication	Recirculation system, 140 litres, on casters Cleaning system integrated, with a shower head outside of the cutting chamber
Motor power	5,5 kW
Rotational speed	Variable, from 1000 to 4000 rpm
Arm speed advance	5 to 200 mm/min during cutting
Table	Double grooved treated cast iron, 400 x 400 mm
Type of groove	T groove 12 mm (6 longitudinal, 5 transversal)
Lightening	LED
Protection	Cover with locking system
Body	Steel coated with epoxy paint
Pneumatic feeding compressed air	6 bars filtered 5 µ
Electrical power	6 kW cumulative
Electrical consumption	24 Ah
Voltage	400 Volts - 50 Hz (three-phase)
Dim. W x H x D	818 (+ 300 mm with control panel) x 1802 x 1280 mm
Weight	650 kg
Reference	60 CT40A 00



Option

Positioning laser

60 CT403 00



Accessories

Universal clamping KOPAL 61	60 081282 20
Lift for KOPAL 61	60 081282 40
Long cam for KOPAL 61	60 00285 90
Independent double vice (right and left) with fast tightening system	60 CT400 20
Double vice with fast tightening system (left and right side of the wheel)	60 CT200 20
Double vice with screw tightening system (left and right side of the wheel)	60 CT200 40



60 081282 40



60 00285 90



60 081282 20



60 CT400 20



60 CT200 20



60 CT200 40

Machine variations

Table with manual transversal displacement (X axis) of a 120 mm stroke	60 CT40A 10
Table with manual longitudinal displacement (Y axis) of a 180 mm stroke	60 CT40A 20

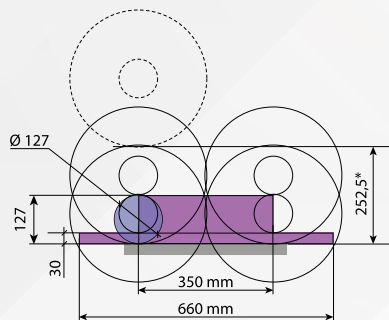


CUTLAM[®] 5.0

High-capacity 2 or 3 axes
programmable automatic
cutting machine

Theoretical cutting capacity - Ø 355 mm

**space under wheel*



A spacious cutting chamber: W 408 x D 422 mm
with openings on both right and left sides for the cutting of long samples.

CUTLAM[®] 5.0

MADE IN FRANCE

The CUTLAM[®] 5.0 is a pedestal-mounted machine with an integrated recirculation/decanter tank. It represents the ultimate equipment in terms of high-capacity programmable automatic cutting machines. Power and advanced control of the cutting steps will guarantee first class efficiency and productivity.

Wheel and table movements

Fitted in standard with a Ø 355 mm wheel, which produces an automatic vertical and longitudinal movement.

The automatic transverse movement is carried out by an optional cross-feed table.

Controls

Programming is performed via a large touch screen with a graphical interface that ensures you an intuitive use. Cutting parameters are continuously visible on the screen. Fast positioning of the cutting point is provided by the use of a joystick.

The internal memory allows you to store 300 programs that can be transferred via USB.

Easy programming

Depending on the location of the sample on the table, and on its dimensions, the screen will indicate the various necessary and possible moves in order to complete the cut. This data can then be saved.

All cutting modes are possible

- Automatic or manual cutting.
- Continuous automatic cutting with ingenious feed speed control:

The feed speed is pre-set, and will be automatically reduced if the load on the cutting wheel increases. The pre-set speed returns when the load on the screen decreases.

It improves the quality of the cut by limiting the thermal damages over the samples.

It is suitable for irregular samples and/or material with heterogeneous hardness.

It prevents the wheel from breaking in case of overload.

It allows you to work at maximum speed without any risk of damage.

- Automatic sequential cutting for maximum cooling.
- Plunge cutting, horizontal feed cutting and oscillating cutting.
- Repetitive parallel cutting.



Work area lit
by LED strip

CUTTING MACHINES

Equipments

A high-capacity, independent cooling/recirculation system (140 litres) is located under the machine. The multipoint nozzles insure excellent cooling of the sample and the cutting wheel even during intensive use.



Fast cleaning is made possible thanks to an exterior shower head and a carefully designed cutting chamber.

The wide cutting table: W 408 x D 422 mm is composed of two independent parts. 4 longitudinal grooves and 6 transversal grooves that allow to fix all kind of clamping systems available as options or on the market.

Technical Data	CUTLAM*5.0
Wheel Ø	355 mm (400 mm optional)
Shaft Ø	25,4 mm
Standard flanges Ø	100 mm
Max cutting capacity	Ø 127 mm (with Ø 355 mm wheel) + opening on left and right hand side for long parts
Passage under the wheel	252,5 mm (Ø 355 mm wheel)
Vertical movement	Z axis stroke 350 mm, speed from 0,1 to 25 mm/sec, speed advanced 50 mm/sec
Longitudinal movement	Y axis stroke 350 mm speed from 0,1 to 25 mm/sec advanced speed 50 mm/sec
Transversal movement	X axis stroke 120 mm (optional)
Lubrication	Recirculation system, 140 litres, on casters Cleaning system integrated, with a shower head outside of the cutting chamber
Motor power	5,5 kW
Rotational speed	Variable, from 1000 to 4000 rpm
Table	Treated aluminium and interchangeable stainless steel plate, W 408 x D 422 mm
Type of groove	T-slots 12 mm (4 longitudinal, 6 transversal)
Lightening	LED strip
Protection	Cover with locking system
Body	Steel coated with epoxy paint
Pneumatic feeding	6 bars filtered 5 µ
Electrical power	12 kW combined
Electrical consumption	32 Ah
Voltage	400 Volts - 50 Hz (three-phase + ground)
Dim. W x H x D	877 (+ 600 mm with control panel) x 1727 x 1800 mm (H. cover open 2272 mm)
Weight	750 kg
Reference	60 CT50A 00



Options

Machine for cut-off wheel Ø 400 mm	60 CT503 00
Positioning laser	60 CT506 00



60 CT506 00



60 CT503 00

Accessories

Universal clamping KOPAL 61	60 081282 20
Lift for KOPAL 61	60 081282 40
Long cam for KOPAL 61	60 00285 90
Independent double vice (right and left) with fast tightening system	60 CT400 20
Double vice with fast tightening system (left and right side of the wheel)	60 CT200 20
Double vice with screw tightening system (left and right side of the wheel)	60 CT200 40



60 081282 40



60 00285 90



60 081282 20



60 CT400 20



60 CT200 20

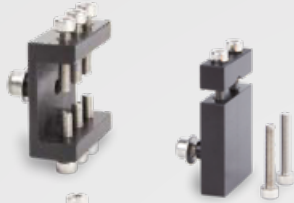
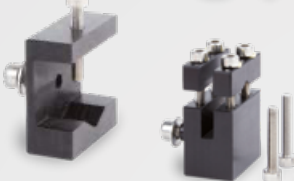






60 CT200 40

Machine variations

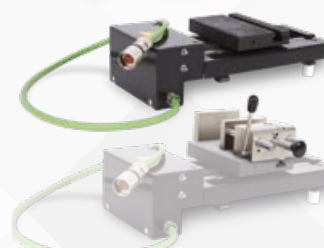
Motorised cross-feed table (X axis) stroke 120 mm, accuracy 0,05 mm	60 CT50A 10
Motorised cross-feed table (X axis) stroke 380 mm, accuracy 0,05 mm	60 CT50A100

Vices, clamping and accessories

Designation	Ref.	CUTLAM®Micro			CUTLAM®			
		1.1	2.0	3.0	1.1	3.1	4.0	5.0
 Multi-screw sample holder for irregular parts	60 CTM03 50	✓	✓					
 Screw vice holder: max Ø 12 mm	60 CTM03 30	✓	✓					
 Screw V-shape sample holder: max Ø 24 mm	60 CTM03 20	✓	✓					
 Screw double vice sample holder: Ø 12 mm maxi	60 CTM03 40	✓	✓					
 Screw cylindrical sample holder: Ø 12 mm to 50 mm	60 CTM03 10	✓	✓					
 Small vice with screw tightening system: Ø 12 mm	60 CTM02 10	✓	✓					
 Medium vice with screw tightening system: Ø 24 mm	60 CTM02110		✓					
 Double vice with fast tightening system (left and right side of the wheel) 2 x 2 elements vice, without sole, to obtain maximal length clamping Jaw width 80 mm Jaw height 45 mm T-slot 12 mm screw included Lever (left and right)	60 CT200 20				✓	✓	✓	✓
 Double vice with screw tightening system (left and right side of the wheel) 2 x 2 element vice, without sole, to obtain maximal length clamping Jaws width 80 mm, Jaws height 45 mm T-slot 12 mm screw included Left and right levers	60 CT200 40				✓	✓	✓	✓
 Universal clamping KOPAL 61	60 081282 20				✓	✓	✓	✓
 Lift for KOPAL 61	60 081282 40				✓	✓	✓	✓
 Long cam for KOPAL 61	60 00285 90				✓	✓	✓	✓
 Universal clamping KOPAL 54	60 CTM36 00			✓				

ACCESSORIES FOR CUTTING MACHINES

Designation	Ref.	CUTLAM®Micro			CUTLAM®			
		1.1	2.0	3.0	1.1	3.1	4.0	5.0
Double vice with fast tightening system (left and right side of the wheel) 2 x 2 element vice, without sole, to obtain maximal length clamping Jaws width 80 mm Jaws height 70 mm T-slot 12 mm screw included Lever (left and right)	60 CT400 20						✓	✓
Transversal table (X movement) to perform parallel cuts. Manual movement with roller, stroke 100 mm, Display accuracy: 0,01 mm Can receive the right vice reference 60 CT200 20 or 60 CT200 40.	60 CT205 20				✓			
Double vice with fast tightening system for transversal table 60 CT205 20, right lever	60 CT206 20				✓			
Transversal table (X movement) manual movement with roller, stroke 150 mm, Display accuracy: 0,01 mm Can receive right vice reference 60 CT200 20 or 60 CT200 40	60 CT31A 20					✓		
Automatic transversal table (X movement), stroke 150 mm	60 CT31A 30					✓		
Specific vice with fast tightening system for transversal table 60 CT31A 20 and 60 CT31A 30, left lever	60 CT306 20					✓		
Transversal table (X movement) to execute parallel cuts. Manual movement with a roller, stroke 55 mm, precision 0,01 mm. Can receive right vice reference 60CT200 20 or 60 CT200 40.	60 CTM31 00			✓				
Automatic transversal table (X movement), stroke 50 mm, precision 0,01 mm	60 CTM34 00			✓				
Small right vice with fast tightening system stroke 53 mm	60 CTM32 00			✓				
Small left vice with fast tightening system stroke 53 mm	60 CTM33 00			✓				
Steel adaptor rings (by 5) Ø 22 x 12,7 mm	60 00608 90			✓				
PVC adaptor rings (by 5) Ø 22 x 12,7 mm	60 00609 90			✓				
Steel adaptor rings (by 5) Ø 25,4 x 12,7 mm	60 00369 90		✓	✓				
PVC adaptor rings (by 5) Ø 25,4 x 12,7 mm	60 00370 90		✓	✓				
Steel adaptor rings (by 5) Ø 25,4 x 22 mm	60 00372 90							
PVC adaptor rings (by 5) Ø 25,4 x 22 mm	60 00371 90							
Steel adaptor rings (by 5) Ø 32 x 25,4 mm	60 00373 90				✓	✓	✓	✓
PVC adaptor rings (by 5) Ø 32 x 25,4 mm	60 00374 90				✓	✓	✓	✓



Oil mist extraction device

NEW

A1

The LAM PLAN vaccuming system extracts the "polluted" air inside the cutting chamber of your cutting machine.

A special multilayer filter will stop the smallest polluting particles, thus preventing their dispersion into the atmosphere. The cutting fluid, in the liquid state, is returned to the cutting machine recirculation tank to be reused. (An evacuation is provided for this purpose on the vacuuming system).

A cartridge post-filter, located above the suction system, ensures a high filtration level, up to 99.97%.

An adapter part (LAM PLAN code 60CT20820) is provided to adapt the suction hose to the canopy of the LAM PLAN cutting machine.

The vacuuming system is mounted on a trolley with wheels, allowing an easy positioning.

A drain valve, located in the trolley, collects the condensate.



Technical features	Oil mist extraction device A1
Max flow air	245 m ³ /hour
Noise level	61 dBa
Rotation	2810 rpm
Height	1180 mm
Dimensions on floor	460 mm x 460 mm
Supplied with	2 meters of hose Ø 80 mm
Power supply	400V 3 phases - 50 Hz
Weight of the system	33 kg

Designation	Qty.	Ref.	€
A1	1	60 CT204 00	4987,50



CUTLAM® 1.1



CUTLAM® 3.1



CUTLAM® 4.0



CUTLAM® 5.0

ACCESSORIES FOR CUTTING MACHINES

Filters

Characteristic	Qty.	Ref.	€
100 µm fabric filter for decantation tank CUTLAM Micro®2.0	1	60 00574 90	84,00
100 µm fabric filter for decantation tank CUTLAM®1.1 - 2.0 - 3.0 - Micro 3.0	1	60 00141 90	79,00
100 µm fabric filter for decantation tank CUTLAM®4.0 and 5.0	1	60 00576 90	128,00



Refractometer

The refractometer is a measuring instrument which allows you to control the cutting fluid concentration in the machine to assure the quality of the cuts, to avoid the corrosion on the cut parts, the table and vices. It also controls heating during cuts (no smokes) and prevent from microbial and smells in the machine. The measured values are in BRIX degrees.

Designation	Qty.	Ref.	€
Refractometer	1	60 CT900 10	299,00



Cutting fluid series 723

NEW

Lubricating the cutting action

LAM PLAN cutting fluid 723 is a synthetic water-miscible coolant that has been approved for sectioning non-ferrous metals. This fluid provides excellent lubrication and optimal cooling so that the material's microstructures are not damaged during the cutting process. The cooling efficiency of cutting fluid 723 avoids overheating while lubricating the cutting action. It also has an optimum viscosity enabling it to flow freely.

Thanks to this fluid the cut parts and the materials will be protected from corrosion.

It does not lather. For an optimal use, we advise you to dilute 5 % of the solution in water or 3.6° BRIX to be measured with a refractometer. In order to maintain the efficiency of this fluid, we recommend you to check regularly its concentration with a refractometer.

Cutting fluid 723 is recommended for cutting titanium alloys and inconels. The properties of cutting fluid 723 also make it suitable for cutting non-ferrous alloys and carbides.

Properties	Type	Qty.	Ref.	€
Specialized cutting fluid : recommended for cutting titanium alloys and inconels.	723	5 litres	07 50723 50	169,00



Cut-off wheels Serie H EXCELLENCE

The new Excellence cut-off wheels offer faster cuttings without heating.

These wheels can be used at high speed and assure an excellent quality without causing any damages on the material structure.

The quality of their function guarantees a greater life expectancy and limit the vibrations while cutting.

Available in three versions, the cut-off wheels H1, H2 and H4 will enable you to cut any metallic materials. In order to know what wheel is adequate to your need.



EXCELLENCE H1 (AL₂O₃)

Type	Dim. (mm)	Qty.	Ref.	€
Soft/ semi-hard metals	250 x 32 x 1,5	10	05 83011 40	183,80
	300 x 32 x 2	10	05 83011 50	238,40
	350 x 32 x 2,5	10	05 83011 60	392,70
	400 x 32 x 3	10	05 83011 70	462,00



EXCELLENCE H2 (AL₂O₃)

Type	Dim. (mm)	Qty.	Ref.	€
Treated metals/special metals	250 x 32 x 1,5	10	05 83021 40	183,80
	300 x 32 x 2	10	05 83021 50	238,40
	350 x 32 x 2,5	10	05 83021 60	392,70
	400 x 32 x 3	10	05 83021 70	462,00



EXCELLENCE H3 (AL₂O₃)

NEW

Type	Dim. (mm)	Qty.	Ref.	€
Inconel	250 x 32 x 1,5	10	05 84041 40	189,00
	300 x 32 x 2	10	05 84041 50	249,90
	350 x 32 x 2,5	10	05 84041 60	#
	400 x 32 x 3	10	05 84041 70	#

Prix sur demande / Prices on request / Preise auf Anfrage / Prezzi su richiesta

CUT-OFF WHEELS

EXCELLENCE H4 (SIC)

Type	Dim. (mm)	Qty.	Ref.	€
Non ferrous materials Casting	250 x 32 x 1,5	10	05 85041 40	189,00
	300 x 32 x 2	10	05 85041 50	249,90
	350 x 32 x 2,5	10	05 85041 60	409,50
	400 x 32 x 3	10	05 85041 70	514,50

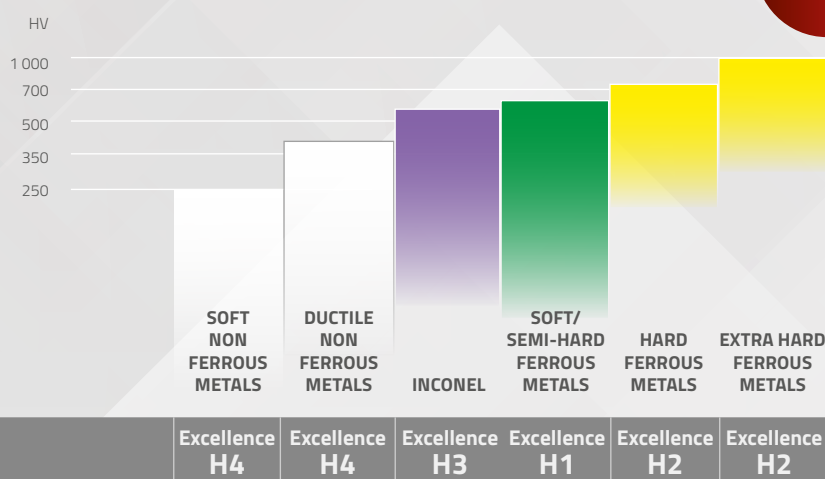
-12% for a quantity of ≥ 50 wheels of the same reference

Please contact us for a diameter superior to 400 mm.



SERIE H EXCELLENCE

The chart below indicates the adequate wheels to choose according to the different materials to be cut.



Adaptor rings

Designation	Ø mm	Qty.	Ref.	€
Adaptor ring - PVC For cut-off wheels	22 / 12,7	5	60 00609 90	34,00
	25,4 / 12,7	5	60 00370 90	34,00
	25,4 / 22	5	60 00372 90	34,00
	32 / 25,4	5	60 00374 90	34,00
Adaptor ring - Steel For cut-off wheels	22 / 12,7	5	60 00608 90	34,00
	25,4 / 12,7	5	60 00369 90	34,00
	25,4 / 22	5	60 00371 90	34,00
	32 / 25,4	5	60 00373 90	34,00



Cut-off wheels PRECISION

Combine performance and versatility

Elaborated according to a very rigorous specification, these cut-off wheels offer the user a precision cutting thanks to the characteristics of its binder and the quality of its abrasives.

Usable on all cutting machines, these wheels give cut-off quality which allows reducing the duration of the downstream operations.

LAM PLAN precision cut-off wheels are available in 6 versions according to their hardness and the abrasive used in their composition. The visual colour code facilitates memory.



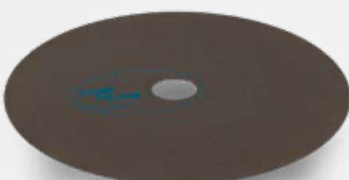
RED (AL₂O₃)

Type	Dim. (mm)	Qty.	Ref.	€
Soft – semi-hard steel	125 x 12,7 x 0,45	5	05 80016 90	95,20
	150 x 12,7 x 0,45	5	05 80016 10	134,90



T1 (AL₂O₃)

Type	Dim. (mm)	Qty.	Ref.	€
Soft – semi-hard steel	200 x 25,4 x 0,8	10	05 911P02000	238,80
	250 x 32 x 1,2	10	05 911P42500	231,00
	300 x 32 x 1,5	10	05 911P43000	258,50



BLUE (AL₂O₃)

Type	Dim. (mm)	Qty.	Ref.	€
Treated metals- special steel	125 X 12,7 X 0,45	5	05 80013 90	95,20
	150 x 12,7 x 0,45	5	05 80013 10	134,90
	203 x 25,4 x 1	10	05 80013 20	183,70



T2 (AL₂O₃)

Type	Dim. (mm)	Qty.	Ref.	€
Treated metals- special steel	250 x 32 x 1,2	10	05 921P42500	231,00
	300 x 32 x 1,5	10	05 921P43000	258,50



WHITE (SiC)

Type	Dim. (mm)	Qty.	Ref.	€
Non ductile material Cast iron Stainless steel	125 x 12,7 x 0,45	5	05 80025 90	105,40
	150 x 12,7 x 0,45	5	05 80025 10	149,60
	203 x 25,4 x 1	10	05 80025 20	183,70
	250 x 32 x 1,5	10	05 80025 40	228,00
	305 x 32 x 1,5	10	05 80025 50	255,80

CUT-OFF WHEELS

Cut-off wheels PRECISION DIAMANT

Type	Dim. (mm)	Qty.	Ref.	€
	101,6 x 12,7 x 0,30	1	05 82129 10	380,60
All sintered materials	125 x 12,7 x 0,38	1	05 82129 20	465,50
Ceramic	152 x 12,7 x 0,5	1	05 82129 30	454,10
Cermet	203 x 32 x 0,8	1	05 82130 30	537,60
Carbide W and Sic	254 x 32 x 1	1	05 82335 40	633,90
Glass, silica, quartz	305 x 32 x 1,3	1	05 82335 50	782,40
High metal content materials				



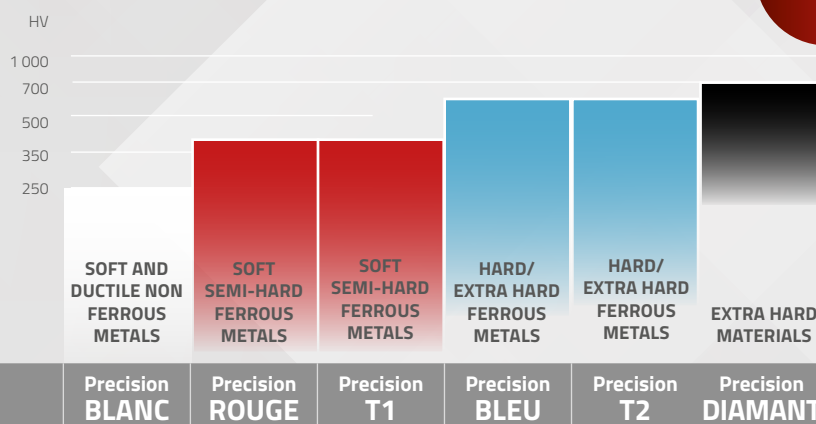
Cut-off wheels PRECISION CBN

Type	Dim. (mm)	Qty.	Ref.	€
Heterogeneous hardness materials ex. : carbide coating on, steel substrate	152 x 12,7 x 0,38	1	05 82129130	480,60

-12% for a quantity of ≥ 50 wheels of the same reference

PRECISION

The table below will help you determine the right cut-off wheel choice for the material to be cut.



GUIDANCE

Adaptor rings

Type	Dim. (mm)	Qty.	Ref.	€
	22 / 12,7	5	60 00609 90	34,00
Adaptor ring - PVC	25,4 / 12,7	5	60 00370 90	34,00
For cut-off wheels	25,4 / 22	5	60 00372 90	34,00
	32 / 25,4	5	60 00374 90	34,00
	22 / 12,7	5	60 00608 90	34,00
Adaptor ring - Steel	25,4 / 12,7	5	60 00369 90	34,00
For cut-off wheels	25,4 / 22	5	60 00371 90	34,00
	32 / 25,4	5	60 00373 90	34,00



MOUNTING



MOUNTING MACHINES

PRESSLAM® 1.1

MADE IN FRANCE

The PRESSLAM® 1.1 is a multi-purpose, easy-to-use, automatic hot mounting press that will allow you to achieve high production levels. All parameters are accessible via a 5.7" colour touch screen. The graphic interface guides you intuitively through the different settings, which you can then store and reuse at will. It is also possible to transfer predefined hot mounting parameters via the machine's USB port. All phases are visible on the screen during the hot mounting cycle and can be modified at any time.

Each function can be adjusted separately and 4 pressurisation modes are available, along with a function reducing the amount of water used for cooling.


PRESSLAM® 1.1

Easy-to-use, productive,
automatic hot mounting press



Technical Data	PRESSLAM® 1.1
Capacity	Ø 25,4 to Ø 50 mm
Heating system	4 x 600 W around mould
Temperature range	20 to 200 °C
Heating cycle	0 to 30 min
Cooling cycle	0 to 30 min
Pressure	0 to 1,600 daN
Double mounting	yes – all diameters
Program back-up	300 with USB connexion
Pressurisation modes	4 different modes
Chamber closing	half turned cover with a safety chamber
Mould changing	Quick, without connectors- electric or hydraulic
Pre-heating mode	Yes (cleared after 6 min without manipulation)
Water saving	yes (up to 25%)
Voltage	230 V – 50 Hz single-phase
Pneumatic feed	6 to 10 bars
Dimensions W x H x D	250 x 680 x 470 mm
Weight	72 kg (depending on mould size)
Reference	60 PL110 00

Once put in service the PRESSLAM® 1.1 runs a pre-heating cycle that is cleared after 6 minutes without user intervention.

Access to mould is wide open for a sample positioning and filling facility. Quick and effortless, the locking/unlocking is realised by a cover and a ¼ turn locking lever.

Exclusive safety device

The expulsion of the sample after the mounting cycle is only possible when the safety cover is located in its intermediary position. This device creates a safety chamber in which the sample is protected in case of an eventual sticking situation.



Closed

Safe position
for sample recovery

Open

Embedding allows limiting edge stresses during the polishing step.

This operation will also allow you:

- In manual polishing: to facilitate the holding of the sample
- In automatic polishing: to place several samples together in a sample holder under optimum tightening conditions

MOUNTING MACHINES

The PRESSLAM®1.1 is equipped with a main heating unit which contains the removable cylinder. The standard heating unit covers diameters from 25,4 to 40 mm and a specific element is available for a 50 mm diameter.

The mounting chamber can be changed without any tools, nor electric or hydraulic connections.

It only takes a few minutes to change the complete heating unit.

The PRESSLAM®1.1 is the ideal link in your mounted sample production line. It is a compact machine that is both easy to use and easy to maintain and will allow you to increase your productivity while maintaining unrivalled flexibility.



Heating unit for mould assembly Ø 25,4 mm (1"), 30 mm, 40 mm, 1 1/4" and 1 1/2", 50 mm and 2"



Spacer for double mounting

Independent cooling unit to use the PRESSLAM® 1.1 without water supply

Accessories

Heating unit for Ø 25.4 mm (1"), 30, 40 mm, 1 1/4" and 1 1/2"	60 PL2H1 00
Heating unit for Ø 50 mm and 2"	60 PL2H2 00
Assembly mould Ø 25,4 mm or 1"	60 PL1C1 00
Assembly mould Ø 30 mm	60 PL1C2 00
Assembly mould Ø 40 mm	60 PL1C4 00
Assembly mould Ø 50 mm	60 PL1C5 00
Assembly mould Ø 1 1/4"	60 PL1C2 10
Assembly mould Ø 1 1/2"	60 PL1C4 10
Assembly mould Ø 2"	60 PL1C5 10
Spacer Ø 25,4 mm or 1" for double mounting	60 PL2I1 10
Spacer Ø 30 mm for double mounting	60 PL2I2 00
Spacer Ø 40 mm for double mounting	60 PL2I4 00
Spacer Ø 50 mm for double mounting	60 PL2I5 00
Spacer Ø 1 1/4" for double mounting	60 PL2I2 10
Spacer Ø 1 1/2" for double mounting	60 PL2I4 10
Spacer Ø 2" for double mounting	60 PL2I5 10
Compressed air filtration kit	60 00375 90
Cooling unit	60 PL090 00

Parameters recapitulation PRESSLAM®1.1 with LAM PLAN hot mounting resins.

Resine	Heating time (min)				Cooling time (min)				Pressure (daN)				Temperature (°C)				Pressure mode
	Ø 25	Ø 30	Ø 40	Ø 50	Ø 25	Ø 30	Ø 40	Ø 50	Ø 25	Ø 30	Ø 40	Ø 50	Ø 25	Ø 30	Ø 40	Ø 50	
Phenolic (602, 622, 632, 642)	3.5	3.5	4	5,5	3	3	3	3.5	800	1000	1200	1400	170	170	170	170	
Epoxy (633, 634) Use the SOLILUB	4	5	5	6.5	4	4	4	4.5	800	1000	1200	1400	180	180	180	180	
Acrylic (616, 2 and 616)	4.5	5	5.5	6.5	4	4	4	4.5	800	1000	1200	1400	170	170	170	170	
Copper (604.3)	3	3	3,5	5,5	3	3	3	3.5	800	1000	1200	1400	170	170	170	170	
Phenofree Use the SOLILUB	3	3	4	5.5	3	3	3,5	3.5	1000	1000	1200	1400	175	175	175	175	
Graphite (617)	3	3	3.5	4.5	3	3	3	3.5	800	1000	1200	1400	170	170	170	170	

GUIDANCE



M.M. 808

For cold mounting metallographic samples under pressure



M.M. 818

Vacuum impregnation device

M.M.808

NEW

MADE IN FRANCE

M.M.808 creates a pressurized environment for polymerization to avoid bubbles in the mount without affecting the physical characteristics of the resin.

While M.M.808 can be used with all cold mounting resins, it is highly recommended to be used with transparent EPOXY RESINS 603 / 603.2 and ACRYLIC RESIN 609.

Avantage

By avoiding entrapped bubbles in transparent mounts, the visibility of the sample can be improved.

In all cold mounting resins, avoiding bubbles improve edge retention while grinding and polishing metallographic samples.

By avoiding entrapment of abrasives in bubbles, M.M.808 helps improve the polishing quality after mounting.

Additionally, using the M.M.808 unit for cold mounting eliminates the odors typical of cold mounting resins.

Technical Data	M.M.808
Pressure connection	3 to 10 bar
Nominal pressure	2 bar
Max. operating pressure	2,8 bar
Dimensions W x H x D	300 x 305 x 400 mm
Weight	8,6 kg
Inner diameter of lid opening	210 mm
Inner diameter base	225 mm
Pressure pot height to cover edge	190 mm
Reference	08 00808 20

M.M.818

NEW

Compact vacuum mounting unit for impregnation of porous materials and bubble-free mounting with epoxy resins type 603. The M.M.818 has a large capacity vacuum chamber of 160 mm diameter and is equipped with a resin distribution system. A vacuum gauge on the front panel allows the vacuum level to be monitored and the various vacuum cycles to be controlled manually.

Technical Data	M.M.818
Vacuum level	- 650 mm-Hg
Inner diameter base	160 mm
Useful height of vacuum tank	160 mm
Dimensions W x H x D	480 x 400 x 400 mm
Vacuum pump dimensions (W x H x D)	140 x 210 x 240 mm
Power supply	230 V - 50 Hz single phase
Weight	10,10 kg
Weight vacuum pump	7,25 kg
Reference	08 00818 00

HOT MOUNTING RESINS

PHENOFREE hot moulding resin

New phenol-free and formaldehyde-free thermosetting mounting resin

In line with its ecological commitment, LAM PLAN proposes on the market the first effective alternative to phenol metallographic mounting resins which are liable to release phenol (and/or formaldehyde) during baking.

The PHENOFREE mounting is intended for the technical mounting of all types of materials for material examinations or edge examinations. It smartly replaces the traditional phenol mounting resins with the same hardness and less shrinkage than a phenol mounting resins.

The range of PHENOFREE resins includes 3 coloured resins (grey, white and red) to make the identification of your metallographic samples easier. They are particularly adapted for the polishing of hard materials. The white Phenofree resin may prove to be in some cases a good alternative to the use of epoxy resins.

Characteristics	Qty. in kg	Ref.	€
PHENOFREE 1			
Grey composite powder Polyvalent, hard	2,5	06 PF010 20	40,30
	10	06 PF010 10	142,80
	25	06 PF010 50	338,20
PHENOFREE 2			
Red composite powder Polyvalent, very hard	2,5	06 PF020 20	40,30
	10	06 PF020 10	142,80
	25	06 PF020 50	338,20
PHENOFREE 3			
White composite powder Polyvalent, extra hard	2,5	06 PF030 20	40,30
	10	06 PF030 10	142,80
	25	06 PF030 50	338,20

Require the unmoulding agent SOLILUB.



Phenol-free
Formaldehyde-free

Unmoulding agent

Recommended for PHENOFREE, 633 and 634 resins.

SOLILUB

Characteristics	Qty.	Ref.	€
Anti-stick powder for hot mounting process	Pot de 50 g	06 00683 00	25,80



Hot mounting resins

To respond to all metallographic control and research situations, LAM PLAN developed and tested a range of hot mounting resins. Each resin is characterised by a very specific physical and chemical properties.

EPOXY RESINS 633 AND 634

The black epoxy mounting resin is filled with glass fibres with high mineral loads. It is ideal for mountings intended for edge examinations of hard to extra hard materials thanks to its resistance to abrasion, important hardness and absence of shrinkage. The 634 is a fine powder epoxy resin, used for examination of edged samples.

Characteristics	Qty.	Ref.	€
633			
Black epoxy powder, loaded with glass fibres	2,5 kg	06 00633 20	121,80
Edges examinations	10 kg	06 00633 10	398,60
Extra hardness - No shrinkage			
634			
Black epoxy powder, fine grains	2,5 kg	06 00634 20	157,50
Edge examinations on complex samples			
High hardness - No shrinkage			

ACRYLIC RESINS 616 AND 616.2

The acrylic resin 616 is perfectly transparent and adapted to most materials. Mainly used to view the evolution of the grinding of the sample.

Perfectly transparent with no cotton effect, the acrylic resin 616.2 is resistant to alcohol, and therefore ideal for work with alcohol-based polishing products or requiring a cleaning phase with ethanol, isopropyl alcohol or other.

Characteristics	Qty.	Ref.	€
616			
Transparent acrylic powder.	2,5 kg	06 00616 20	118,30
Visualising the sample during and after the polishing. All materials.	10 kg	06 00616 10	389,70
616.2			
Transparent acrylic powder.	2,5 kg	06 06162 20	149,50
Visualising the sample during and after the polishing. Alcohol resistant.	10 kg	06 06162 10	487,60

COPPER MOUNTING RESIN 604.3

Conductive mounting resin for examinations with SEM or electrolytic etching device. A pure copper based resin of very homogeneous consistency, the conductivity of your mountings is optimised. The use of ultra-pure materials eliminates the risk of an analysis error.

Characteristics	Qty.	Ref.	€
Resinoid copper powder	2 kg	06 00604 30	97,10
For electrolytic polishing.			



HOT MOUNTING RESINS

GRAPHITE MOUNTING RESIN 617

Conductive phenolic mounting resin loaded with graphite (without copper and without metals or alloys) for SEM and TEM examinations.

Characteristics	Qty.	Ref.	€
Conductive black phenolic powder (graphite) For SEM examination	1,5 kg	06 00617 00	155,90



GUIDANCE

Advice on the use of LAM PLAN hot mounting resins

Material	Resin	Characteristics	Volumetric shrinkage	Color	Polymerisation time*
Composite	PHENOFREE 1 PHENOFREE 2 PHENOFREE 3	Phenol & formaldehyde Free	Low	Grey Red White	10 to 15 min
Epoxy	633	Extra hard	Very low	Black	5 to 10 min
Epoxy	634	Extra hard (fine grain)	Very low	Black	5 to 10 min
Acrylic	616	Excellent transparency	Low	Transparent	5 to 10 min
Acrylic	616.2	Transparent and alcohol resist	Low	Transparent	5 to 10 min
Copper	604.3	High conductivity	Low	Coppered	10 min
Graphite	617	Conductable	Low	Black	5 to 10 min

* Depending of the machines' characteristics

Diagnosis and guidance for hot mounting resins

Before to begin any mounting process, the grease needs to be removed from the samples in order for the resin to adhere to the contours of the parts. Check if any burrs were committed in the cutting process. If necessary, deburr the sample's edges with an abrasive paper.

Noticed faults	Cause	Solution
Primer cracks on the sample's edges	Oversized Coated part according to the chosen mounting mould	Reduce the size of the sample or increase the size of the mounting mould
Shrinkage	Inadequate mounting resins	Choose a resin offering less shrinkage
	Insufficient heating time	Increase the temperature during the heating time
	Inadequate pressure mode and insufficient pressure	- Use the machine mode adjusting the temperature curve - Increase the mounting pressure
Resins grains visible on the faces of the sample	Insufficient pressure	Increase the pressure during the mounting cycle
	Insufficient heating time	Increase the heating time
"Smoke" visible in a transparent mounting	Wrong pressure choice	Choose a pressurisation only during the cooling cycle
	Too much resin according to the size of the sample	Limit the quantity of resin inserted in the mould or reduce the size of the mould
	Insufficient heating time	Increase the heating time
Mounting stuck in the mould	Insufficient "solilub" powder	Drop a sufficient amount of "solilub" on the machine's superior and inferior pistons
	Insufficient heating time	Increase the heating time
Bulge on top of the mounting	Insufficient cooling time	Increase the cooling time

Cold mounting resins

Mainly intended for the metallography research sector, the LAM PLAN range of cold mounting resins offers many technical and economic advantages.

The cold mounting resins are the solution for samples which do not withstand high pressure or temperature. In addition, they allow responding in a simple and efficient way to timely needs by circumventing the investment of a hot mounting press. You can achieve a large quantity of samples simultaneously while adjusting precisely the volume of mounting material and shape of the moulds.

ACRYLIC RESIN 601.2

The fluidity of this transparent mounting resin and its very low shrinkage ensure a maximum penetration ratio in cavities. It is ideal for microelectronics, optics and microsystem applications. Compatible for conventional scanning electron microscopy (SEM) examinations.

Mono-component resin easy to dose and manipulate (no loss). Polymerisation with low temperature rise in 20 minutes in the blue light device M.M.866 + 10 minutes for the surface varnish. With no disturbing odour, it is resistant to alcohol and acids..



Characteristics	Qty.	Ref.	€
Transparent Acrylic Monocomponent	Resin 1000 ml + varnish 100 ml set	06 00601 00	221,10
Maximum exothermic temperature: 95°	Resin 1000 ml	06 01601 00	190,90
	Varnish 100 ml	06 01602 00	49,70



Without shrinkage

EPOXY RESIN 603

The Resin 603 is a two-component epoxy resin without CMR substance used to achieve high quality technical metallographic mountings at room temperature. This resin is the best choice when the transparency of the coating is a requirement. The resin has zero shrinkage, excellent adhesion to all kinds of materials and a very good chemical resistance.

With an ideally adjusted viscosity, the resin 603 is used to mount metallographic specimens with complex shapes, porosities, or delicate technical coatings.

Characteristics	Qty.	Ref.	€
Transparent Epoxy 2 liquid components	Liquid 1000 ml + hardener 500 ml set	06 00603 00	112,00
Maximum exothermic temperature: 105°	Liquid 1000 ml	06 01603 00	82,00
	Hardener 500 ml	06 02603 00	50,20

EPOXY RESIN 603.2

The Resin 603.2 is a fast-curing two-component epoxy resin without CMR substance used to make technical metallographic mountings. It must be used on materials that withstand temperatures of 140°C.

This transparent resin has zero shrinkage, excellent adhesion to all kinds of materials and very good chemical resistance.



Fast hardening

Characteristics	Qty.	Ref.	€
Transparent Epoxy 2 liquid components	Liquid 1000 ml + hardener 500 ml set	06 00603 20	126,50
Maximum exothermic temperature: 140°	Liquid 1000 ml	06 01603 20	82,50
	Hardener 500 ml	06 02603 20	52,80

COLD MOUNTING RESINS

METHYL-METHACRYLATE RESIN 605

Versatile, it is adapted to the majority of common materials for the fast mounting standard sample. It is possible to change the viscosity by modifying the proportion of the mixture: liquid + powder. Resistant to the principal acids used in laboratories.

Solvent free and CMR-free (no Carcinogenic, Mutagenic, toxic to Reproduction suspences).

Characteristics	Qty.	Ref.	€
Green Methyl-methacrylate 2 components (powder and liquid) Maximum exothermic temperature: 108°	Powder 1 kg + catalyst 500 ml set	06 00605 00	206,00
	Catalyst 500 ml	06 00615 00	80,50
	Powder kit (10 kg) + catalyst (5 litres)	06 00605 10	1733,40
	Catalyst (5 litres: pack. 2 x 2.5 litres)*	06 00615 10	593,80



CMR-free

POLYESTER RESIN 607

The Resin 607 is a three-component resin based on modified polyester.

This fast curing resin adheres perfectly to metal surfaces and its mechanical characteristics make it particularly effective on very hard materials.

Its very low shrinkage allows edge examinations on metallographic samples.

It is resistant to the main acids and bases used in laboratories.

Characteristics	Qty.	Ref.	€
Modified white polyester 3 components Maximum exothermic temperature: 122°	Resin kit: catalyst 500 ml + hardener 250 ml + powder 750 g	06 00607 00	138,60
	Catalyst 500 ml	06 00607 10	67,10
	Hardener 250 ml	06 00607 20	36,30
	Powder 750 g	06 00607 30	68,20

**METHYL-METHACRYLATE RESIN 609**

A perfectly transparent resin used for precision parts, notably those of the electrical or electronics industry. It renders the sample perfectly visible, which allows analysing precise points. It must be used with the pneumatic device M.M.808 to obtain an optimum transparency.

The methyl-methacrylate resin 609 is available in the Plastichrome version – 5 transparent colours to simplify the classification of samples.

Solvent free and CMR-free (no Carcinogenic, Mutagenic, toxic to Reproduction suspences).

609

Characteristics	Qty.	Ref.	€
Methyl-methacrylate Transparent 2 components (powder + liquid) Maximum exothermic temperature: 99°	Powder 1 kg + catalyst 500 ml set	06 00609 00	200,00
	Catalyst 500 ml	06 00619 00	80,50
	Powder 1 kg	06 00609 20	121,00
	Powder 10 kg + catalyst 5000 ml set	06 00609 10	1656,40
	Catalyst 5000 ml (pack. 2 x 2500 ml)*	06 00619 10	554,10

609 PLASTICHROME

Characteristics	Qty.	Color	Ref.	€
Methyl-methacrylate Transparent coloured 2 components (powder + liquid) Maximum exothermic temperature: 99°	Powder 1 kg + Catalyst 500 ml set	BLUE	06 0071B 00	219,90
		YELLOW	06 0071J 00	219,90
		ORANGE	06 0071O 00	219,90
		RED	06 0071R 00	219,90
		GREEN	06 0071V 00	219,90

* Packaging related to transport restrictions



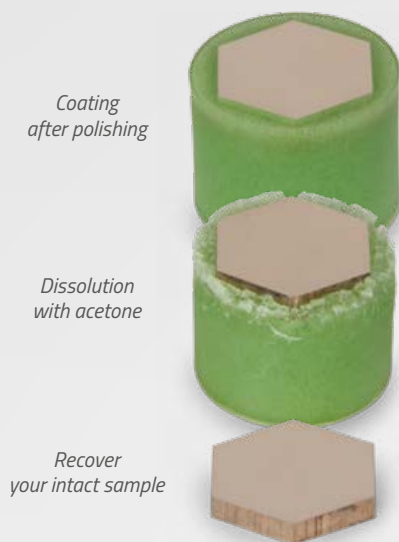
METHYL-METHACRYLATE RESIN 665

NEW

Cold setting resin for sample recovery.

Mounting is a step in metallographic sample preparation which enables samples to be ground and polished more ergonomically. Embedding the sample in a resin is usually irreversible and recovering the sample (if necessary) after embedding proves almost impossible.

Resin 665 is a cold mounting resin that has the unique ability to dissolve in acetone. This ability is transformed into a sustainable functionality to recover metallographic specimens after mounting. After metallographic processing of costly materials such as noble metals, it is often important from an economic and technical perspective to recover the samples from the mounting resin.



Characteristics	Qty.	Ref.	€
Modified green polyester 2 components (Powder + Liquid)	Powder 1 kg + catalyst 500 ml set	06 00665 00	211,20
Maximum exothermic temperature: 112°	Catalyst 500 ml	06 02665 00	82,50
	Powder 1 kg	06 01665 00	145,20

Advice on the use of LAM PLAN cold resins

Material	Resin	Characteristics	Volumetrical shrinkage	T°*	Color	Polymerisation
Acrylic	601.2	Liquid monocomponent Low heating	Very low	95°C	Transparent	Curing < 20 min in the blue lightening device +10 min for the varnish
Epoxy	603	Without shrinkage	Non-existent if used with pressure device M.M.808	105°C	Transparent	Curing 10 hours
	603.2	Fast curing excellent adhesion	Non-existent	140°C	Transparent	Curing 2 hours
Methyl methacrylate	605	Versatility	1 %	108°C	Green	Fast Curing < 10 min
Modified polyester	607	Hardness	Very Low (<0,2%)	122°C	Beige	Fast Curing < 15 min
Methyl methacrylate	609	Excellent transparency if used with pressure device M.M.808	1 %	99°C	Transparent = colourless + 5 colours (series Plastichrome)	Fast Curing < 10 min
Methyl methacrylate	665	Soluble resin	Correct	112°C	Green	Fast Curing < 15 min

* Peak exothermic temperatures during polymerisation for a 40 g sample of resin at 20°C

GUIDANCE

Procedure for cold mounting

Keep the thin samples on the slice. Mix the resin components in the indicated proportions. Mix gently to avoid creating air bubbles. Pour the resin into the mould to the desired level and allow to cure in the open air or in an M.M.808 pressure vessel to remove any bubbles or pores. To limit heating and shrinkage, fill the mould in successive layers.

Resin	Blending proportions
601.2	1 liquid + 1 varnish. Apply the varnish on top of the coating 20 minutes after polymerisation in the M.M.866 device
603	2 volumns of powder for 1 volume of liquid
603.2	2 volumns of powder for 1 volume of liquid
605	2 volumns of powder for 2 volumns of liquid 1 and 1 volume of liquid 2
607	3 volumns of powder for 2 volume of liquid
609	2 volumns of powder for 1 volume of liquid
665	2 volumns of powder for 1 volume of liquid

GUIDANCE

ACCESSORIES

Polymerisation lamp M.M.866

The blue light polymerisation device enables you to speed up the polymerisation process of the 601.2 resin. (20 minutes)

Designation	Characteristics	Ref.	€
Blue light mounting device	Solar energy collector for light-curing resins. Equipped with a timer (3 positions): 5 min. 10 min. and continual.	08 00866 10	897,30



ISOFORCE

NEW

The ISOFORCE device allows flattening of embedded samples in a central pressure sample holder. Homogeneous pressure is applied to each sample via a pneumatic cylinder. The operation is carried out in complete safety thanks to the dual control system.

Designation	Characteristics	Ref.	€
ISOFORCE	Ø 210 mm	60 MLISI 210	#
	Ø 160 mm	60 MLISI 160	#

Prix sur demande / Prices on request / Preise auf Anfrage / Prezzi su richiesta



Moulds with removal bottom

Mainly used with the transparent mounting resins (601.2, 609, 603 & 603.2).

Type	Qty.	Dim. (mm)	Ref.	€
681	5	25	06 00681 10	93,80
	5	30	06 00681 20	102,60
	5	32	06 00681 30	114,30
	5	40	06 00681 40	138,30



Flexible rectangular cold mounting moulds

Specifically, for cold mounting resin, adapted to complex and nonstandard shapes, many dimensions available, made of a flexible material to facilitate mould removal (Not recommended for EPOXY resins).

Type	Qty.	Dim. (mm)	Ref.	€
Flexible 670	5	70 x 30 x 40	06 00670 10	257,80
	5	100 x 42 x 30	06 00670 20	294,90
	5	120 x 50 x 30	06 00670 30	333,00
	5	100 x 70 x 30	06 00670 40	339,00
Flexible 670 4 pieces set	1	70 x 30 x 40	06 00670 00	242,60
	1	100 x 42 x 30		
	1	120 x 50 x 30		
	1	100 x 70 x 30		



Any other dimensions on request.



Flexible cylindrical cold mounting moulds

Available in all standard diameters for central and individual pressure sample holders, made of a flexible material to facilitate mould removal.
(For an intensive use of the EPOXY 603 resin, it is preferable to use moulds with removable bottoms).

Type	Qty.	Dim. (mm)	Ref.	€
Flexible 625	5	Ø 25	06 00625 00	51,70
Flexible 630	5	Ø 30	06 00630 00	51,70
Flexible 632	5	Ø 32	06 00632 00	51,70
Flexible 640	5	Ø 40	06 00640 00	51,70
Flexible 650	5	Ø 50	06 00650 00	86,10
Flexible 660	5	Ø 60	06 00660 00	97,70



Universal sample-holder mould Series 610

The LAM PLAN universal sample-holder is a smart and economical system which combines the functions of both mould and sample-holder for cold mounting processes using any kind of cold liquid resin.

See details page **ACCESSORIES FOR POLISHING MACHINES**.



Cups and spatulas

Paper cups and wooden spatulas to mix cold mounting resins.

Characteristics	Qty.	Capacity	Ref.	€
Paper cups	200	200 ml	06 00696 00	66,50
Set: cups and spatulas	400 cups 400 spatulas		06 00698 00	122,10

Micro engraver

To mark and identify samples.

M.M.886

Characteristics	Ref.	€
Speed 0-20 000 rpm Clamping jaw: Ø 1,58 mm - Ø 2,35 mm - Ø 3,175 mm	10 88630 00	884,00



ACCESSORIES

Charge element for resin

The Voluma spheres are ceramic balls used as sole or base. They allow increasing the hardness of the mounting resins and decrease their shrinkage in order to reduce fallen edge effects. They are adapted to all types of hot and cold mounting resins; available in various colours to personalize samples..

VOLUMA SPHERES

Characteristics	Qty.	Ref.	€
3-colour set	3 bottles of 250 cc	06 007SV 00	82,10
Blue	250 cc	06 007SV 20	34,30
Ivory	250 cc	06 007SV 30	34,30
Red	250 cc	06 007SV 10	34,30



Dye

EPOCHROME POWDER

NEW

Fluorescent contrast dye to be mixed with clear mounting resins, highlights porosity and micro-cracks. Requires the use of filters on the microscope for optimal results. The wavelength at maximum absorbance is 438-440 nm.

Mainly used with LAM PLAN 603 and 603.2 epoxy resins.

Characteristics	Qty.	Ref.	€
EPOCHROME powder dye	20 g pot	06 0EPCH 00	33,00



Unmoulding agent

SOLILUB

Recommended for PHENOFREE, 633 and 634 resins.

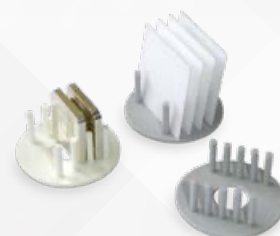
Characteristics	Qty.	Ref.	€
Anti-stick powder for hot mounting process	50 g pot	06 00683 00	25,80



Blade-holders

For the vertical positioning of thin sections, to use of could mounting resin.

Type	Qty.	Thickness in mm	Ref.	€
Blade-holder series 690	100	1	06 00690 10	91,50
Blade-holder series 691	100	2	06 00690 20	91,50
Blade-holder series 692	100	3	06 00690 30	91,50



Holding clips

Characteristics	Qty.	Ref.	€
-----------------	------	------	---

CLIPS TYPE 3

Holding plastic, raised clips to use with cold mounting resin.	100	06 00694 00	88,70
--	-----	-------------	-------

CLIPS TYPE 5

Holding clips type 5 metal clips to use with hot mounting resin.	100	06 00693 00	106,80
--	-----	-------------	--------



PREPOLISHING & POLISHING



PREPOLISHING MACHINE

RECTILAM® 2.0

MADE IN FRANCE

When the prepolishing phase demands a high level of effectiveness and precision the RECTILAM® 2.0 is the answer. This machine is particularly productive in the preparation of coated or raw samples by high speed prepolishing. Several parts can be installed on the central pressure sample holder. Large parts can also be treated individually.

The principle of high speed prepolishing on stone enables significant material removal and unrivalled flatness without rounding the edges.

The single block design and rigidity of the RECTILAM® 2.0 avoids vibration which is detrimental to the surface condition. In order to ensure significant and even removal of material, a reconditioning system automatically follows each stage of polishing.

The prepolishing system and the sample holder are connected to the same mechanical arm which guarantees precision.

The RECTILAM® 2.0 is supplied with an integral security hood. The assembly includes a closed-circuit lubricating filtration system integrated into the machine as well as a spray-tap for cleaning.

**RECTILAM® 2.0****Automatic flat
prepolishing machine***Prepolishing of large raw samples.**Prepolishing of coated samples,
mounted on a central pressure sample holder.*

Grinding and prepolishing are crucial steps in the preparation of a metallographic sample. It is the quality of these steps which will condition and optimise the rest of the process.

At the end of the prepolishing step, the sample's aspect must be uniform and regular without any alteration of the inherent flatness or the material.

PREPOLISHING MACHINE

The RECTILAM®2.0's unique feature is its 2 axis principle.

The Z axis deals with the motorised rise and fall of the reconditioning tool and the pressurisation of the sample carrier.

The R axis enables precise positioning of the sample holder in relation to the grinding wheel in order to make most of the available abrasion surface.

During the start cycle the starting point of the sample/grinding wheel is automatic. The stock removal is continuously managed. The real-time display shows the operator if the rectification settings entered are appropriate.

All parameters are managed and clearly shown on the 5.7" touchscreen with graphic display.



Technical data	RECTILAM®2.0
Grinding wheel diameter	Ø 356 mm
Control	By 5.7 inch touchscreen and joystick
Grinding wheel speed	1000 to 3000 tr/min.
Sample holder speed	20 to 150 tr/min.
Applied force	10 to 550 N
Sample holder size	Ø 210 mm max
Conditioning wheel specifications	Configurable pass depth and diamond feed rate
In cycle reconditioning mode	Automatic - customisable frequencies
Stock removal range	0,1 mm to 1 mm
Measurement precision	0,02 mm
Work zone lighting	Enclosed LED
Body	Powder-coated steel
Grinding wheel motor power	3,8 kW
Sample holder motor power	0,25 kW
Noise level	70 dB
Tension	400 V-50 Hz three-phase + neutral
Dimensions W x H x D	900 x 1620 x 1000 mm (H. cover open : 1850 mm)
Weight	450 kg
Reference	60 RL200 00

Accessories

Grinding wheel Al_2O_3 - GRAIN 60 - Ø 355 mm 05 M0060 80

Grinding wheel SiC - GRAIN 150 - Ø 355 mm 05 M0150 80



05 M0060 80



05 M0150 80

The 5.7 inch touch screen

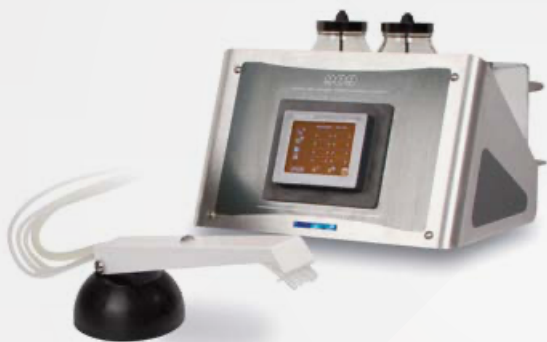




SMARTLAM^{2.0}

The most versatile manual polishing machine

909 M DOSING UNIT



M.M. 909 M dosing unit technical data

Distribution system	Distribution of 3 different liquids
Controls	Touch screen
Pumps	3 peristaltic pumps, with 1 outlet to drive an external pump
Electrical power supply	230 v single-phase 50 Hz
Dosing / machine communication	1 x 24 V input for machine servoing
Option	Replacement of a standard peristaltic pump by a high flow rate pump for high-viscosity products
Reference	08 00799 10

Easy cleaning: spinning function, removable water input, easy tank removal



SMARTLAM^{2.0}

MADE IN FRANCE

The SMARTLAM^{2.0} is a compact, single plate polishing machine that gives you a wide range of possibilities both in manual and semi-automatic polishing. Ergonomic and easy-to-use, the SMARTLAM^{2.0} is entirely controlled by a colour touch screen equipped with an intuitive interface. The internal memory can store 9 programs that can be exported via the USB port.

The power of the bidirectional rotation, variable-speed, constant-torque motor and the possibility to use plates with a diameter from 200 to 300 mm are exclusive assets that will allow you to face up to all situations encountered in metallographic research polishing.

Evolutive

Thanks to the mechanical pressure head option SPRINGLAM[®] and the central-pressure holders but also use of the M.M. 909 M programmable dosing unit slaved to the machine, you will have a very efficient, semi-automatic polishing system.

Options: SPRINGLAM[®] pressure head to use the SMARTLAM[®] as a semi-automatic polisher

Variable pressure thanks to the 0- 250 N spring

Attachment system for central pressure sample-holder

Sample-holder Ø 119 mm 6 alveolus water drops for Ø 20 to 32 mm



Technical data	SMARTLAM ^{2.0}
Plate Capacity	Ø 200 to 300 mm
Body	Steel, coated with epoxy paint
Bowl	Removable resin basin for easy cleaning
Controls	3,5" touch screen to control the machine: start/stop, timer, speed and direction of plate, water solenoid valve
Plate rotation speed	Variable from 20 to 650 rpm
Rotation	Clockwise / counter-clockwise
Programming	Loads 9 programs
Connection	Slave connector for dosing unit
Water inlet	Removable pipe with flow-rate adjustment and safety solenoid valve
Power max	0,75 kW
Voltage	230 V - 50 Hz single-phase
Dimensions W x H x D	450 x 300 x 650 mm
Weight	30 kg
Reference	60 SL200 00

POLISHING MACHINES

SMARTLAM®3.0

With the SMARTLAM®3.0, LAM PLAN proposes an economic solution in terms of automatic pre-polishing and polishing of metallographic samples.

The SMARTLAM®3.0 is equipped with a new specific motorised head, composed with a 3 cells sample-holder and an individual pneumatic pressure system.

The moto reducer group has a high torque, the speed and the rotation can be set. The individual pneumatic pressure system handled by the electronic proportional valve, assures a great polishing regularity. The pressure applied per sample goes from 5 to 60 N.

The SMARTLAM®3.0 uses the reliable and proven base of the SMARTLAM®2.0 from which it conserves all the assets for a manual use (activation/deactivation of the sample holder head with the touch screen). The plate's speed and rotation can be set from 20 to 650 rpm.

For more efficiency, you can connect the M.M. 909 M automatic dosing unit to your SMARTLAM® 3.0 and benefit of a very economic and competitive set.

The automatic motorised head compactness is due to its strategically placed power supply on the side of the machine. The head rotates to free the workspace and allows the easy change of the polishing support and the cleaning of the plate and bowl.

All the functions accomplished by the machine or the head are controlled by the screen. The programs can be stored in the intern memory.

NEW : motorised head guidance to facilitate up/down manoeuvres and increase rigidity for better sample flatness.

Retrofit kit available: Réf. 60 SL220 20

Technical data	SMARTLAM®3.0
Plate Capacity	Ø 200 to 300 mm
Body	Steel coated with epoxy paint
Bowl	Removable resin basin for easy cleaning
Controls	3,5" touch screen to control the machine: start/stop, timer, speed and direction of plate, water solenoid valve
Plate rotation speed	Variable from 20 to 650 rpm
Rotation	Clockwise / counter-clockwise
Programming	Loads 9 programs
Connection	Slave connector for dosing unit
Water inlet	Removable pipe with flow-rate adjustment and safety solenoid valve
Power max	0,75 kW
Voltage	230 V - 50 Hz single-phase
Pneumatic feed	6 bars, filtered 50 µm
Dimensions W x H x D	580 x 570 x 670 mm
Weight	65 kg
Reference	60 SL220 00



Friendly interface
with large 3,5 " touch screen

SMARTLAM®3.0

Individual pressure semi-automatic
polishing machine



Technical data of the head

Capacity	3 samples Ø 25,4 to 50 mm (on Ø 200 mm plate 3 samples Ø 30 mm max.)
Body	Steel coated with epoxy paint
Controls	Colour touch screen (3"): controls the machine and the head
Sample holder rotation speed	Variable from 10 to 150 rpm
Rotation	Clockwise / counter-clockwise
Pressure	Individual, pneumatic, variable from 5 to 60 N
Programming	Loads 9 programs
Power max	Moto reducer with high torque
Positioning	Manual, with indexable handle
Positioning and locking in height	Manual, raising/lowering of the head with a lever, locking with knob





MASTERLAM[®] 1.0

Automatic polishing machine with central pressure, oscillating head* and stock removal control*

* Optional equipment available



Options

Dosing unit DISTRILAM (4 circuits)	60 MLD00 00
Oscillation function	
Stock removal control system	60 ML10S C0
Transparent secured housing for MASTERLAM [®]	60 MLEP0 00
Filtering / sedimentation 60 L tank, recirculation pump	60 A0029 00
Filtering / decantation 60 L tank	60 A0029 90

Accessories (See next page)



MASTERLAM[®] 1.0

MADE IN FRANCE

Automatic, single-plate Ø 250 to 300 mm polishing machine with bidirectional rotation and variable speed. Touch screen controls, intuitive and user friendly interface, MASTERLAM[®] machines are equipped with the best programming, parameter storage and export technologies. Control of the 4-circuit DISTRILAM[®] dosing unit directly integrated.

The MASTERLAM[®] 1.0 is equipped with a powerful central-pressure head, bidirectional rotation, variable speed and pressure. The distinctive feature of this polishing head is the oscillation function with oscillation configurable both for amplitude and frequency.

The use of the oscillating head will allow you to achieve unrivalled levels of performance and versatility: it improves the quality of flatness, increases the stock removable and the service life of polishing supports (uniform wear due to the use of the entire surface of the plate.)

La MASTERLAM[®] 1.0 with the oscillation option, is particularly efficient for polishing large-sized samples and for superfinishing of mechanical components, prototypes or micro-series.

A stock removal control system with an automatic "stop at measurement" function is also available (accurate to 0,02 mm).

The MASTERLAM[®] 1.0 is a high-performance machine intended for intensive use such as in-production inspections.

Technical data	MASTERLAM [®] 1.0
Plate Capacity	Ø 250 to 300 mm
Body	Steel coated with epoxy paint
Bowl	Removable, in resin, to ease cleaning
Controls	Touch screen (5,7")
Plate rotation speed	Variable from 20 to 650 rpm Bidirectional rotation
Head's speed	Variable from 10 to 150 rpm bidirectional rotation
Applicable load	5 to 400 N central pressure
Capacity	Sample size in central pressure 6 x Ø 40 mm
Head oscillation function	Adjustable speed and amplitude (optional)
Stock removal control function	Stock removal measuring system with automatic stop, accurate to 0.02 mm (optional)
Workspace lightening	LED
Water inlet	Removable pipe, with flow rate adjustment and safety solenoid valve
Programming	60 storable programs, USB connector to backup programs and Ethernet port for networking
Cumulative machine power	1.1 kW
Voltage	230 V - 50 Hz single phase
Pneumatic feed	6 bars
Dimensions W x H x D	550 x 670 x 670 mm
Weight	80 kg
Reference	60 ML100 00

POLISHING MACHINES

MASTERLAM® 3.0

MADE IN FRANCE

Automatic, single plate Ø 250 to 300 mm polishing machine, bidirectional rotation and variable speed.

This machine has all the functions that make the MASTERLAM® range outstand and on this model a specific new combo-head. The MASTERLAM® 3.0 is the metallographic polishing machine without concession. Polishing can be carried out with central pressure or individual pressure and can be equipped with a stock removal measuring system.

The MASTERLAM® 3.0 is based on the same technology as the MASTERLAM® 1.0 with, in this configuration, a powerful central and individual pressure head equipped with 6 pistons.

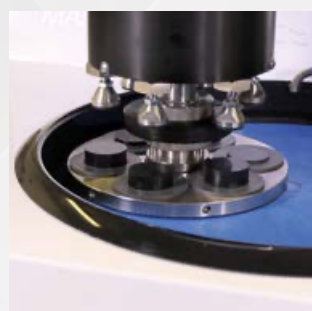
Changing sample holders is quick and the pressure mode is controlled directly on the screen without having to touch the head, thus, you can switch from one pressure mode to another in a few seconds.



CUTTING

MOUNTING

POLISHING



Central pressure mode



Individual pressure mode

MASTERLAM® 3.0

Automatic polishing machine with central and individual pressure



Options

Dosing unit DISTRILAM (4 circuits)	60 MLD00 00
Stock removal control system	60 ML305 C0
Transparent secured housing for MASTERLAM®	60 MLEP0 00
Filtering / sedimentation 60 L tank, recirculation pump	60 A0029 00
Filtering / decantation 60 L tank	60 A0029 90



60 MLD00 00



60 MLEP0 00



60 A0029 00

Technical data	MASTERLAM® 3.0
Plate Capacity	Ø 250 to 300 mm
Body	Steel coated with epoxy paint
Bowl	Removable resin bowl for easy cleaning
Controls	Touch screen (5,7")
Plate rotation speed	Variable from 20 to 650 rpm Bidirectional rotation
Head's speed	Variable from 10 to 150 rpm bidirectional rotation
Applicable load	5 to 400 N central pressure 5 to 100 N individual pressure
Capacity	Sample size 6 X Ø 40 mm Sample size 1 - 6 X Ø 50 mm
Workspace lightening	LED
Water inlet	Removable pipe, with flow rate adjustment and safety solenoid valve
Programming	60 storable programs, USB connector to backup programs and Ethernet port for networking
Cumulative machine power	1.1 kW
Voltage	230 V - 50 Hz single phase
Pneumatic feed	6 bars
Dimensions W x H x D	550 x 670 x 670 mm
Weight	85 kg
Reference	60 ML300 00

Accessories for MASTERLAM® 1.0 and 3.0

Aluminium removable plate Ø 250 mm
Aluminium removable plate Ø 300 mm
Sample-holder: CP (central pressure) and IP (Individual pressure)



Aluminium plate



IP sample-holder



CP sample-holder

Ø 160 mm central pressure sample holder for eccentric restriction of non-embedded complex geometric parts.

06 MLC60 00

NEW





MASTERLAM[®] 1.1

Large diameter, automatic polishing machine with central pressure and motorised oscillating head

MASTERLAM[®] 1.1

MADE IN FRANCE

Automatic single-plate Ø 350 to 400 mm polishing machine, bidirectional rotation and variable speed.

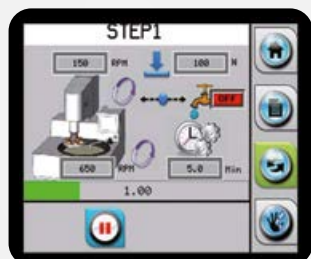
The MASTERLAM[®] 1.1 is a central pressure machine. It is equipped with a 2,2 Kw main motor, a 250 W head motor and applicable pressure may reach 450 N.

Using the oscillating head allows you to make use the entire surface of the 350 or 400 mm diameter plate: the quality of flatness is improved, stock removal is increased and the service life of polishing supports is increased (uniform wear due to use of the entire surface of the plate.)

The specific capacities of the MASTERLAM[®] 1.1 allow it to cope with most difficult applications, particularly in terms of large polishing surfaces where the torque and required pressure exceed the capabilities of standard equipment.



DISTRILAM dosing unit programming integrated to the machine's commands in the full range of MASTERLAM[®] machines.



Possibility of changing parameters while the machine is working: pressure, speed, time and dosage (except the rotation.)

Options

Dosing unit DISTRILAM [®]	60 MLD00 00
Filtering / sedimentation 60 L tank, recirculation pump	60 A0029 00
Filtering / decantation 60 L tank	60 A0029 90
Transparent secured housing for the MASTERLAM [®] 1.1	60 MLEP1 00



60 MLD00 00



60 MLEP1 00



60 A0029 00

Technical data	MASTERLAM [®] 1.1
Plates Capacity	Ø 350 to 400 mm
Body	Steel coated with epoxy paint
Bowl	Removable, in resin, to ease cleaning
Controls	Touch screen (5,7")
Plate rotation speed	Variable from 20 to 650 rpm Bidirectional rotation
Head's speed	Variable from 10 to 150 rpm bidirectional rotation
Applicable load	5 to 450 N central pressure
Capacity	Sample size 6 X Ø 60 mm
Oscillating head (option)	Adjustable speed and amplitude
Workspace lightening	LED
Water inlet	Removable pipe, with flow rate adjustment and safety solenoid valve
Programming	60 storable programs, USB connector to backup programs and Ethernet port for networking
Motor power	2.2 kW
Head motor power	250 W
Voltage	230 V - 50 Hz single phase (25A)
Pneumatic feed	6 bars
Dimensions W x H x D	800 x 597 x 712 mm
Weight	110 kg
Reference	60 ML110 00

POLISHING MACHINES

Dosing unit DISTRILAM®

MADE IN FRANCE

The automatic dosing unit DISTRILAM® is directly controlled via the touch screen on the machine through a RS 232 connector. It is instantly recognised by all the MASTERLAM® polishing devices as the control program is already programmed in the machines. It is equipped with 4 circuits composed of 3 standard peristaltic pumps for an accurate dosage of diamond liquids, and 1 high flow rate peristaltic pump for the dosage of the lubricant or the colloidal silica abrasive. It works without compressed air nor electric wiring.

The automatic dosing unit DISTRILAM® is an indispensable accessory for an automatic use of the MASTERLAM®.

This device is the guarantee of a reproducible process and an economic use of the fluids.

It contains: a dosing unit, a machine connection, a 4 ways distribution nozzle on magnetic leg and 4 plastic bottles.

Technical data	DISTRILAM®
Dimensions L x H x P	170 x 205 x 200 mm
Reference	60 MLD00 00

Transparent protective housing

The secured housing is a totally transparent protection compatible with the full range of MASTERLAM®.

Its opening stops all movements of the machine*, it offers an integral protection complying with the 2006/42/ CE and 2004/108/CE standards. The housing's design preserves the accessibility of the plate and does not clutter the workspace.

The touch screen is located outside of the secured zone; therefore, the commands are permanently accessible.

For the MASTERLAM®1.0 and 3.0 the touch screen control panel is located on the right, a 195 mm space needs to be foreseen in addition to the machine width.

**However, the transparent secured housing authorises the plate rotation in the manual mode.*



Technical data	Housing for MASTERLAM® 1.0 et 3.0
Required space	Width 770 mm - Height 910 mm
Reference	60 MLEPO 00
Technical data	Housing for MASTERLAM® 1.1
Required space	Width 880 mm - Height 910 mm
Reference	60 MLEP1 00

DISTRILAM®



3 standard pumps and
1 high flow rate pump



CUTTING

MOUNTING

POLISHING

Accessories for polishing machines

		SMARTLAM®		MASTERLAM®		
Designation	Ref.	2.0	3.0	1.0	3.0	1.1
PLATES AND SUPPORTS						
Aluminium plate Ø 200 mm	08 8270100	✓	✓			
Aluminium plate Ø 230 mm	08 8270200	✓	✓			
Aluminium plate Ø 250 mm	08 8270300	✓	✓	✓	✓	
Aluminium plate Ø 300 mm	08 8270400	✓	✓	✓	✓	
Aluminium plate Ø 400 mm	08 8270600					✓
Metal clamping ring for Ø 200 mm plate	60 SL00290	✓	✓			
Metal clamping ring for Ø 230 mm plate	60 SL00190	✓	✓			
Metal clamping ring for Ø 250 mm plate	60 SL00490	✓	✓	✓	✓	
Metal clamping ring for Ø 300 mm plate	60 SL00690	✓	✓	✓	✓	
Metal clamping ring for Ø 305 mm plate	60 SL00790	✓	✓	✓	✓	
Tank reducer SMARTLAM® for Ø 200 mm plate	60 ML08090	✓	✓			
Tank reducer SMARTLAM® for Ø 230 mm plate	60 ML08290	✓	✓			
Tank reducer SMARTLAM® for Ø 250 mm plate	60 ML08190	✓	✓	✓	✓	
Anti-splash ring pour MASTERLAM® & SMARTLAM® 2.0	60 ML08091	✓		✓	✓	

SAMPLE HOLDERS AND ACCESSORIES

CP sample holder Ø 119 mm with 6 x Ø 20 to 32 mm water drop cells	06MLP0200	✓*				
CP sample holder Ø 160 mm with 6 x Ø 20 to 40 mm water drop cells	06MLC1000	✓*		✓	✓	
CP sample holder Ø 160 mm 9 x Ø 30 mm	06MLC3000	✓*		✓	✓	
CP sample holder Ø 160 mm 6 x Ø 40 mm	06MLC4000	✓*		✓	✓	
CP sample holder Ø 160 mm 5 x Ø 50 mm	06MLC5000	✓*		✓	✓	
CP sample holder Ø 160 mm with 3 x rectangular 40 x 70 mm	06MLC1200	✓*		✓	✓	
CP sample holder Ø 160 mm with 6 x rectangular 25 x 34 mm	06MLC1400	✓*		✓	✓	
CP sample holder Ø 210 mm without cavity	06MLC0100					✓
IP sample holder Ø 160 mm 6 x Ø 50 mm	06MLI1000				✓	
Sample holder Ø 160 mm for irregular parts	06MLC6000			✓	✓	✓
Kit 6 x Ø 40 mm reducer rings	06MLIK500				✓	
Kit 6 x Ø 30 mm reducer rings	06MLIK200				✓	
Kit 6 x Ø 25,4 mm reducer rings	06MLIK110				✓	
Kit 6 x 1-1/4" reducer rings	06MLIK310				✓	
Kit 6 x 1-1/2" reducer rings	06MLIK410				✓	
Kit 3 x Ø 40 mm reducer rings	06SLIK500		✓			
Kit 3 x Ø 30 mm reducer rings	06SLIK200		✓			
Kit 3 x Ø 25,4 mm reducer rings	06SLIK110		✓			
Kit 3 x 1-1/4" reducer rings	06SLIK310		✓			
Kit 3 x 1-1/2" reducer rings	06SLIK410		✓			
Levelling plate for CP sample holder Ø 160 mm - 3 mm depth	06MLP0100				✓	✓
Levelling plate for CP sample holder Ø 119 mm - 3 mm depth	06MLP0200	✓*	✓			

DISTRIBUTORS

Automatic dosing unit DISTRIAM® for MASTERLAM®	60 MLD00 00			✓	✓	✓
Automatic dosing unit M.M. 909 M for SMARTLAM®	080079910	✓*	✓			

* SMARTLAM® 2.0 equipped with the SPRINGLAM®



ACCESSORIES FOR POLISHING MACHINES

Diaphragm compressor

Diaphragm compressor for laboratories that are not equipped with a compressed air network. Silent operating.

Flow	Pressure	Dim. W x H x P	Ref.
50 l/min	8 bar	330 x 500 x 330 mm	60 COM00 00

Pressure regulator filter kit for compressed air

Indispensable to preserve the machines from impurities. Compatible with: CUTLAM®4.0 and CUTLAM®5.0, PRESSLAM®1.1, SMARTLAM®3.0, MASTERLAM®1.0/1.1/3.0.

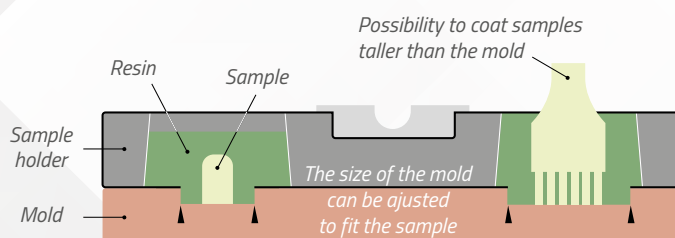
Ref. : 60 00375 90

Universal sample-holder mould

The LAM PLAN universal sample-holder mould is a smart and economical system which combines the functions of both mounting mould and sample-holder for cold mounting processes using any kind of liquid resin. This system has been developed as two removable parts: the metallic universal sample-holder with non-stick coating and a special silicon based flexible mould to embed your cold mounting samples.

Use

The 610 sample holder can be used on both automatic and semi-automatic machines. It is directly compatible with the SMARTLAM®2.0 fitted with the SPRINGLAM® pressure arm. An adaptor kit is available for use with an automatic machine with motorised head.



SERIE 610

Designation	Ref.	SMARTLAM® option SPRINGLAM®	MASTERLAM®
		2.0	1.0 and 3.0
Ø 110 mm with 6 x Ø 28 mm cells	06 00612 20	Ø 200 mm	
Ø 145 mm 3 moulds 6 included cells 6 x Ø 40, 6 x Ø 35 and 6 x Ø 32 mm	06 00614 10	Ø 250 - 300 mm	Ø 250 - 300 mm
Ø 145 mm with 3 moulds 6 included cells 6 x Ø 30, 6 x Ø 25 and 6 x Ø 20 mm	06 00614 20	Ø 250 - 300 mm	Ø 250 - 300 mm
Ø 145 mm with moulds 3 x Ø 50 mm cells	06 00614 30	Ø 250 - 300 mm	Ø 250 - 300 mm
Ø 145 mm with 2 moulds 3 included rectangular cells 3 x 30 x 55 mm and 3 x 18 x 55 mm	06 00614 40	Ø 250 - 300 mm	Ø 250 - 300 mm
Ø 160 mm with mould 6 x Ø 36 mm cells	06 00612 40	Ø 250 - 300 mm	Ø 250 - 300 mm
Ø 160 mm with mould 10 x Ø 28 mm cells	06 00612 50	Ø 300 mm	Ø 300 mm
Universal sample holder ADAPTOR KIT for MASTERLAM®1.0 and 3.0	06 K0010 00		✓

In order to use the universal sample-holders with the SMARTLAM®2.0, the machine must be fitted with a SPRINGLAM® pressure arm. The universal sample-holders are not compatible with the individual pressure.

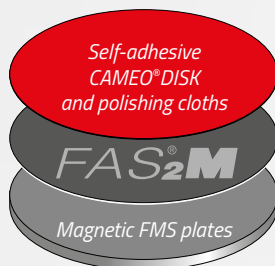
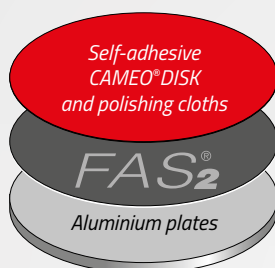


SPRINGLAM® pressure arm for SMARTLAM®2.0

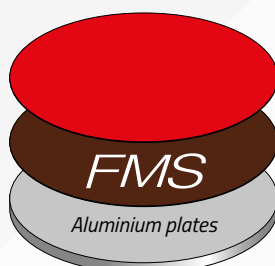




Adhesive disc on FAS² support



Magnetic CAMEO DISK



Fixing accessories

The discs and plates FAS², FMS®, X LAM®, FIX LAM® and XLAM 4 allow you to easily fix all your discs whether self-adhesive or not, for simplified manipulation.

FAS² DISCS

The solution for adhesive fixing

The FAS² facilitates the sticking and unsticking of all self-adhesive supports (abrasive papers, grinding and polishing discs). It avoids the time consuming cleaning of plates dirtied by glue remains whenever a self-adhesive disc is removed.

The patented material comprising the FAS² system allows combining the softness and regularity of the abrasion of a flexible coating with the inherent flatness obtained with a metal support.

Available in 2 versions:

- **FAS²**: rigid self-adhesive, fixed to your machine's plate, available in all diameters, its low thickness (1 mm) guarantees the initial inherent flatness of the master plate.
- **FAS²-M**: suitable for machines equipped with magnetic base plates or when the LAM PLAN FMS disc is used. The FAS²-M has 2 usable sides, it is therefore reversible, when one side is damaged the other can be used.

Characteristics	Qty.	Ø in mm	Ref.	€
Self-adhesive backside	1	200	05 FAS20 20	71,50
	1	250	05 FAS20 40	81,80
	1	300	05 FAS20 50	93,90
	1	400	05 FAS20 80	218,90

FAS²-M

Magnetic backside	1	200	05 FAS2M 20	93,50
	1	250	05 FAS2M 40	105,60
	1	300	05 FAS2M 50	120,80
	1	400	05 FAS2M 80	174,70

FMS® PLATES AND DISCS

The fixing system by magnetic attachment.

The FMS® magnetic disc sticks to all type of support plates. It is also available in an FMS plate and adapts to all existing machines.

Characteristics	Qty.	Ø in mm	Ref.	€
Self-adhesive backside	1	200	08 82801 10	73,70
	1	230	08 82802 10	81,20
	1	250	08 82803 10	96,30
	1	300	08 82804 10	112,50
	1	400	08 82807 10	166,90

FMS® PLATES

Aluminium plate equipped with a FMS® adaptable disc on polishing machine	1	200	08 82801 00	217,30
	1	230	08 82802 00	220,00
	1	250	08 82803 00	326,30
	1	300	08 82804 00	343,40
	1	400	08 82807 00	550,00

FIXING ACCESSORIES

FIX LAM® DISCS AND PLATES

The repositionable adhesive system.

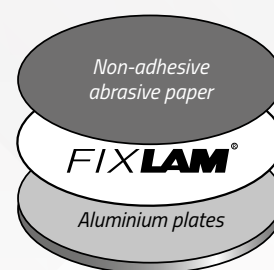
The FIX LAM® allows you to maintain non-adhesive abrasive papers thanks to a repositionable adhesive surface.

- **FIX LAM®**: adhesive backside.
- **FIX LAM®-M**: magnetic backside.

Characteristics	Qty.	Ø in mm	Ref.	€
Adhesive backside	5	200	05 40000 20	24,70
	5	230	05 40000 30	31,70
	5	250	05 40000 40	36,40
	5	300	05 40000 60	49,40

FIX LAM®-M DISCS

Magnetic backside	5	200	05 4000M 20	89,10
	5	230	05 4000M 30	100,80
	5	250	05 4000M 40	111,40
	5	300	05 4000M 60	120,20

XLAM 4 **NEW**

New fixing for polishing discs Serie X.

The XLAM 4 is an innovative product for fixing non-self adhesive polishing discs on metallographic polishing machines by contact. The XLAM 4 is a thin disc to be fixed on the machine plate. Its special surface enables the adherence of XLAM series discs without self adhesive, so polishing supports are quickly and effortlessly interchangeable. Polishing discs can easily be stored and reused.

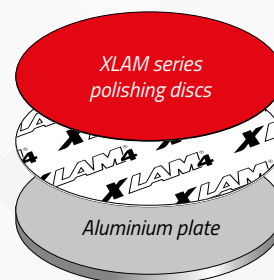
The XLAM 4 enables easy transition between the different polishing steps and so reduces the time needed for sample preparation.

Characteristics	Qty.	Ø in mm	Ref.	€
Adhesive backside	1	200	04 XLAM4 20	18,70
	1	250	04 XLAM4 40	24,20
	1	300	04 XLAM4 50	44,00
	1	400	04 XLAM4 80	74,80

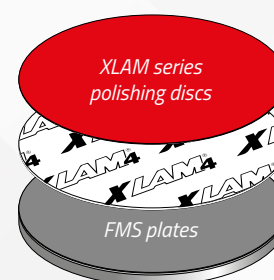
XLAM 4-M

Magnetic backside	1	200	04 XLAM4M20	23,10
	1	250	04 XLAM4M40	30,80
	1	300	04 XLAM4M50	55,00
	1	400	04 XLAM4M80	86,90

Examples of implementation adhesive version



Examples of implementation magnetic version



Applications table

Your machine is equipped with		Compatible supports
Aluminium plate	Magnetic plate	
FIX LAM®	FIX LAM®-M	Non-adhesive abrasive paper
FAS®2	FAS®2-M	Self-adhesive CAMEO DISK® - Self-adhesive abrasive paper - Self-adhesive polishing cloth
FMS®	-	Magnetic CAMEO DISK® - Magnetic polishing cloth
XLAM 4	-	Magnetic CAMEO DISK®
XLAM 4	XLAM 4-M	Polishing disc XLAM series

GUIDANCE

Extend the service life of your discs thanks to the discs and plates storage system.

BOX LAM® 300

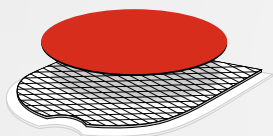
The BOX LAM® 300 allows storing discs and plates, up to Ø 300mm. Delivered with 10 sliding aluminium shelves, which may be equipped, among others, with a foam template to store your samples. The large transparent cover and the shelf arrangement allow an optimum visibility of the stored products.



Characteristics	Qty.	Dim. (mm)	Ref.	€
Storage for 10 discs or plate up to Ø 300 mm and storage for samples (according to options)	1	W 400 x H 470 x D 490	08 BL300 00	759,70

BOX LAM® 300 accessories

Characteristics	Qty.	Dim. (mm)	Ref.	€
FOAM TEMPLATE				
Storage template for samples, self-adhesive foam	2	W 320 x H 10 x D 330	08 BL300 20	24,30



"DIAMOND" PLEXIGLAS SHELF

Self-adhesive diamond tip plexiglas shelf specially studied for the storage of adhesive discs	2	W 320 x H 2 x D 330	08 BL300 40	37,40
---	---	---------------------	-------------	-------

PVC PROTECTION

Self-adhesive protection sheet made of smooth white PVC	10	W 320 x D 330	08 BL300 60	30,70
---	----	---------------	-------------	-------

BOX LAM®

The BOX LAM® is an economic unit to arrange and store in a dust-free space grinding and polishing discs, specially for self-adhesive cloths up to Ø 300 mm.

The BOX LAM® is equipped with a transparent closing flap, 6 shelves and a storage drawer.



Characteristics	Qty.	Dim. (mm)	Ref.	€
Economic model with 6 shelves	1	W 340 x H 450 x D 340	08 BL100 00	446,10

CLEANING AND STORAGE ACCESSORIES

COVER LAM®

The COVER LAM® is a self-adhesive protection disc which is applied on clean and polished samples to efficiently preserve their surface condition and protect it from ambient environment attacks. The COVER LAM® does not require any cleaning of the polished sample after its has been removed.

Characteristics	Qty.	Ø in mm	Ref.	€
Disc for the protection of metallographic samples after polishing	100	50	08 COV00 00	61,70



Ultrasonic cleaning

The efficiency of ultrasonic cleaning

The ultrasonic process is the most used to clean parts because it guarantees a rapid and efficient result, while avoiding the deterioration of the material. 2 tank capacities are available: 0.8 and 2.75 litres.

The tank consisting of a container and a basket made of stainless steel is equipped with a timer from 0 to 30 minutes.

Characteristics	Qty.	Capacities	Ref.	€
ULTRASONIC TANK M.M.80				
Stainless steel container with stainless steel basket Timer from 0 to 30 minutes	1	0,8 L	60 US100 00	558,50

ULTRASONIC TANK M.M.275

Stainless steel container with stainless steel basket Timer from 0 to 30 minutes	1	2,75 L	60 US200 00	980,70
---	---	--------	-------------	--------



Detergent

Characteristics	Qty.	Ref.	€
DETERGENT 742			
Detergent for ultrasonic cleaning tank (dilution < 10 % in water)	5 litres	08 01742 10	196,70
	1 litre	08 01742 00	43,70



Technical wipings

Technical wiping of samples without micro-scratches

The LAM® 15 cloth allows you to eliminate and wipe off easily the halos left by cleaning liquids or water.

Characteristics	Qty.	Ref.	€
LAM 15			
Cloths 320 x 400 mm	2 x 24 cloths	08 LAM15 00	44,90
Cloths Ø 80	400 cloths	08 LAM15 20	44,90



Abrasive papers SiC STANDARD

Available from P80 to P4000 from Ø 200 to 400 mm.

The LAM PLAN® abrasive papers respond to very strict quality standards. The calibration of the silicon carbide grains is guaranteed for the European standards FEPA regardless of their size (P80 to P4000).

The resistance of the resins used to maintain the abrasive grains gives to the LAM PLAN® abrasive papers a high resistance to heat and moisture. The orientation of the grains is obtained by an electrostatic process. The choice of the support paper (thickness and basis weight) is adapted to the grain's thickness in order to reduce the wear of the abrasive papers. The paper is made impermeable in its mass and on the surface.

Ø 200 mm

Ø 230 mm

100 pieces box

Grains FEPA	Self-adhesive		Non-adhesive		Self-adhesive		Non-adhesive	
	Ref.	€	Ref.	€	Ref.	€	Ref.	€
P80	05 60080 20	103,60	05 50080 20	62,90	05 60080 30	123,40	05 50080 30	81,40
P120	05 60120 20	85,70	05 50120 20	57,80	05 60120 30	118,00	05 50120 30	74,90
P180	05 60180 20	81,80	05 50180 20	52,80	05 60180 30	112,70	05 50180 30	68,40
P240	05 60240 20	81,80	05 50240 20	52,80	05 60240 30	112,70	05 50240 30	68,40
P320	05 60320 20	81,80	05 50320 20	52,80	05 60320 30	112,70	05 50320 30	68,40
P400	05 60400 20	81,80	05 50400 20	52,80	05 60400 30	112,70	05 50400 30	68,40
P600	05 60600 20	81,80	05 50600 20	52,80	05 60600 30	112,70	05 50600 30	68,40
P800	05 60800 20	81,80	05 50800 20	52,80	05 60800 30	112,70	05 50800 30	68,40
P1000	05 61000 20	81,80	05 51000 20	52,80	05 61000 30	112,70	05 51000 30	68,40
P1200	05 61200 20	81,80	05 51200 20	52,80	05 61200 30	112,70	05 51200 30	68,40
P2400	05 62400 20	243,40	05 52400 20	173,90	05 62400 30	317,10	05 52400 30	210,20
P4000	05 64000 20	250,00	05 54000 20	208,70	05 64000 30	317,10	05 54000 30	222,60

Ø 250 mm

Ø 300 mm

100 pieces box

Grains FEPA	Self-adhesive		Non-adhesive		Self-adhesive		Non-adhesive	
	Ref.	€	Ref.	€	Ref.	€	Ref.	€
P80	05 60080 40	147,90	05 50080 40	97,40	05 60080 50	186,80	05 50080 50	134,40
P120	05 60120 40	129,30	05 50120 40	89,60	05 60120 50	171,80	05 50120 50	123,60
P180	05 60180 40	113,70	05 50180 40	81,80	05 60180 50	156,90	05 50180 50	112,90
P240	05 60240 40	113,70	05 50240 40	81,80	05 60240 50	156,90	05 50240 50	112,90
P320	05 60320 40	113,70	05 50320 40	81,80	05 60320 50	156,90	05 50320 50	112,90
P400	05 60400 40	113,70	05 50400 40	81,80	05 60400 50	156,90	05 50400 50	112,90
P600	05 60600 40	113,70	05 50600 40	81,80	05 60600 50	156,90	05 50600 50	112,90
P800	05 60800 40	113,70	05 50800 40	81,80	05 60800 50	156,90	05 50800 50	112,90
P1000	05 61000 40	113,70	05 51000 40	81,80	05 61000 50	156,90	05 51000 50	112,90
P1200	05 61200 40	113,70	05 51200 40	81,80	05 61200 50	156,90	05 51200 50	112,90
P2400	05 62400 40	327,10	05 52400 40	298,30	05 62400 50	492,10	05 52400 50	425,90
P4000	05 64000 40	327,10	05 54000 40	298,30	05 64000 50	492,10	05 54000 50	425,90

GRINDING AND PREPOLISHING DISCS

Ø 305 mm

Ø 400 mm

100 pieces box

Self-adhesive			Non-adhesive			Self-adhesive			Non-adhesive		
Grains FEPA	Ref.	€	Ref.	€		Ref.	€		Ref.	€	
P80	05 60080 70	204,40	05 50080 70	141,10		05 60080 80	378,40		05 50080 80	286,60	
P120	05 60120 70	178,90	05 50120 70	129,80		05 60120 80	348,10		05 50120 80	263,70	
P180	05 60180 70	163,40	05 50180 70	118,50		05 60180 80	333,00		05 50180 80	252,20	
P240	05 60240 70	163,40	05 50240 70	118,50		05 60240 80	333,00		05 50240 80	252,20	
P320	05 60320 70	163,40	05 50320 70	118,50		05 60320 80	333,00		05 50320 80	252,20	
P400	05 60400 70	163,40	05 50400 70	118,50		05 60400 80	333,00		05 50400 80	252,20	
P600	05 60600 70	163,40	05 50600 70	118,50		05 60600 80	333,00		05 50600 80	252,20	
P800	05 60800 70	163,40	05 50800 70	118,50		05 60800 80	333,00		05 50800 80	252,20	
P1000	05 61000 70	163,40	05 51000 70	118,50		05 61000 80	333,00		05 51000 80	252,20	
P1200	05 61200 70	163,40	05 51200 70	118,50		05 61200 80	333,00		05 51200 80	252,20	
P2400	-		05 52400 70	425,90							
P4000	-		05 54000 70	425,90							



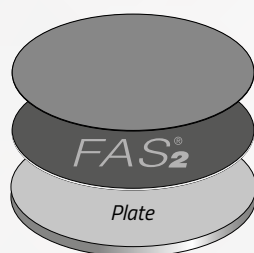
Grain sizes													
FEPA standard	80	120	180	240	320	400	600	800	1000	1200	2400	4000	
Grains Ø (microns)	201	125	82	59	46	35	26	22	18	15	10	5	

GUIDANCE

The patented FAS[®]2 system is the indispensable accessory when using self-adhesive discs. The FAS[®]2 is a support disc which allows easy positioning and unsticking of self-adhesive abrasive papers on all machines.

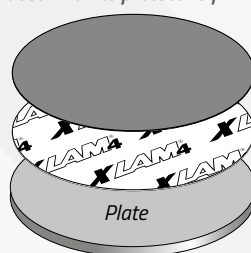
See all our fastening systems pages FIXING ACCESSORIES

Abrasive paper
SELF-ADHESIVE



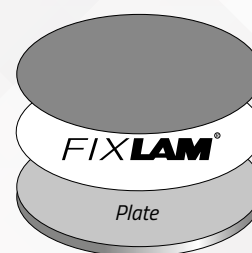
FAS[®]2 non-stick backing
for paper and self-adhesive discs

Abrasive paper
SELF-ADHESIVE
used with its protective film



XLAM[®]4 adhesive backing
for paper and discs
non-adhesive

Abrasive paper
NON-ADHESIVE



FIXLAM[®] adhesive backing
for paper and discs
non-adhesive

CUTTING

MOUNTING

POLISHING



Abrasive papers SiC EXCELLENCE

Available from P80 to P1200 from Ø 200 to 300 mm

The standard checks of abrasive papers generally manufactured in large quantities are sometimes insufficient to avoid that complete series of discs are outside the standard required by our Metallography laboratory.

LAM PLAN creates the Excellence Range and its double guarantee, every single paper is individually checked before packing.

Ø 200 mm

Self-adhesive			Non-adhesive			Self-adhesive			Non-adhesive		
Grains FEPA	Ref.	€	Ref.	€		Ref.	€		Ref.	€	
P80	05 10080 20	141,30	05 00080 20	53,00		05 10080 30	165,50		05 00080 30	58,30	
P120	05 10120 20	135,20	05 00120 20	50,70		05 10120 30	158,30		05 00120 30	55,80	
P180	05 10180 20	135,20	05 00180 20	48,40		05 10180 30	158,30		05 00180 30	53,20	
P240	05 10240 20	135,20	05 00240 20	48,40		05 10240 30	158,30		05 00240 30	53,20	
P320	05 10320 20	135,20	05 00320 20	48,40		05 10320 30	158,30		05 00320 30	53,20	
P400	05 10400 20	135,20	05 00400 20	48,40		05 10400 30	158,30		05 00400 30	53,20	
P600	05 10600 20	135,20	05 00600 20	48,40		05 10600 30	158,30		05 00600 30	53,20	
P1200	05 11200 20	135,20	05 01200 20	48,40		05 11200 30	158,30		05 01200 30	53,20	

Ø 250 mm

Self-adhesive			Non-adhesive			Self-adhesive			Non-adhesive		
Grains FEPA	Ref.	€	Ref.	€		Ref.	€		Ref.	€	
P80	05 10080 40	179,50	05 00080 40	65,80		05 10080 50	210,60		05 00080 50	82,80	
P120	05 10120 40	171,70	05 00120 40	62,90		05 10120 50	201,40		05 00120 50	79,20	
P180	05 10180 40	171,70	05 00180 40	60,10		05 10180 50	201,40		05 00180 50	75,60	
P240	05 10240 40	171,70	05 00240 40	60,10		05 10240 50	201,40		05 00240 50	75,60	
P320	05 10320 40	171,70	05 00320 40	60,10		05 10320 50	201,40		05 00320 50	75,60	
P400	05 10400 40	171,70	05 00400 40	60,10		05 10400 50	201,40		05 00400 50	75,60	
P600	05 10600 40	171,70	05 00600 40	60,10		05 10600 50	201,40		05 00600 50	75,60	
P1200	05 11200 40	171,70	05 01200 40	60,10		05 11200 50	201,40		05 01200 50	75,60	

Ø 300 mm

50 pieces box

Grinding wheels

LAM PLAN grinding wheels are used to dress samples in high speed automatic prepolishing machines. Two types available: Al_2O_3 grain 60 and SiC grain 150.



Al_2O_3 - GRAIN 60

Application	Lubricant	Ø in mm	Ref.	€
For grinding of soft, ductile materials <HV200	Water	355	05 M0060 80	554,80

SIC - GRAIN 150

Application	Lubricant	Ø in mm	Ref.	€
For grinding of all materials >HV200	Water	355	05 M0150 80	492,60

GRINDING AND PREPOLISHING DISCS CAMEO®DISK

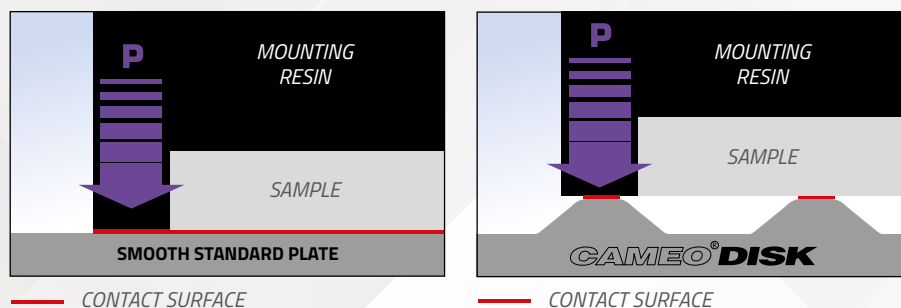
CAMEO®DISK

Grinding and polishing are key steps in the preparation of a metallographic sample. It is the quality of these steps which will condition and optimise the rest of the process.

At the end of the grinding step, the sample's aspect must be uniform and regular without altering the inherent flatness and the material. The CAMEO®DISK's performances in terms of stock removal reduce the work time on the part, thereby guaranteeing the sample's inherent flatness, an indispensable condition to succeed with your metallographic analysis.

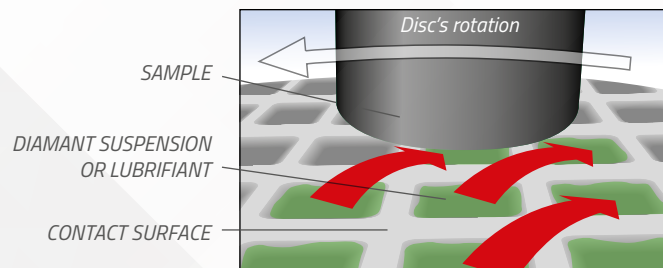
Stock removal

The CAMEO®DISK honeycomb cell structure allows decreasing the surface in contact with the sample to be polished. The pressure required to grind the sample is much less than that generally applied during the use of a solid disc. The equipment is less stressed and the risks of tearing out the grinding disc are significantly reduced.



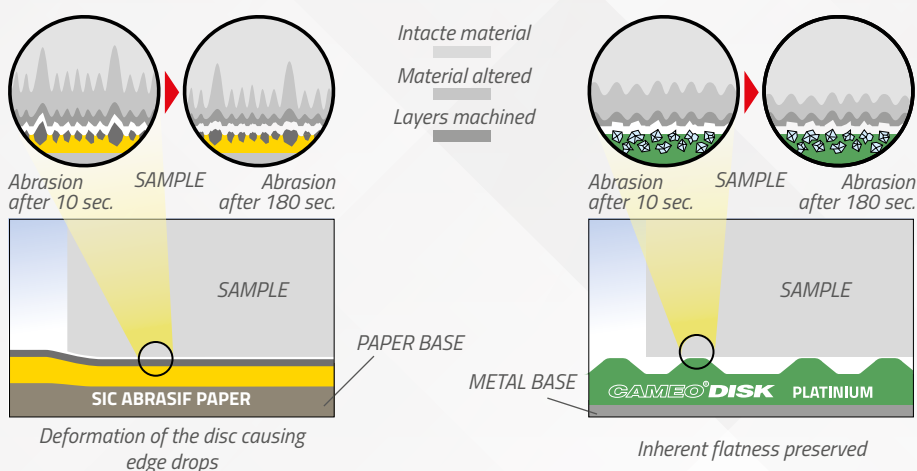
Reproducibility

The profile of the honeycomb cells was specially designed to optimise the circulation of the lubricant from one cavity to another. The abrasion residues are evacuated, guaranteeing a constant abrasive power and therefore a regularity of the result throughout the grinding and polishing steps.

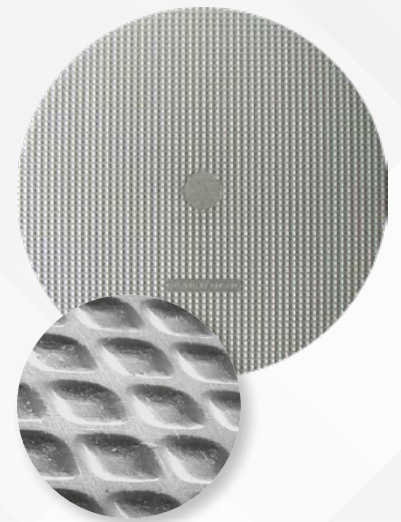


Preparation quality

For a process usually performed with several SiC abrasive papers, LAM PLAN proposes you a single, reusable disc: the CAMEO®DISK. Contrary to SiC abrasive papers, CAMEO®DISK constant abrasion prevents the formation of deep disturbed layers during the first few seconds of grinding.



CAMEO®DISK



A patented honeycomb cell structure

CUTTING

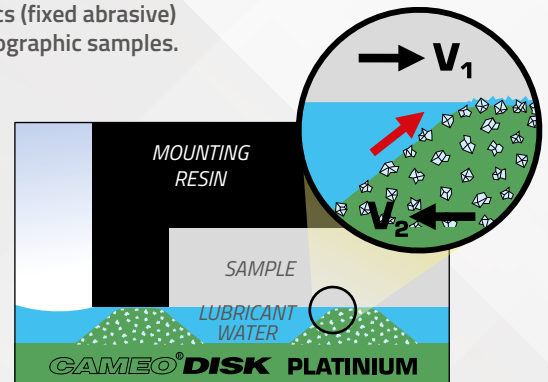
MOUNTING

POLISHING

CAMEO®DISK**CAMEO®DISK Platinum**

The CAMEO®DISK Platinum are diamond discs (fixed abrasive) which are ideal for a rapid grinding of metallographic samples.

The use of diamond integrated in the CAMEO®DISK Platinum honeycomb cell structure allows preserving a constant stock removal throughout the operation, which prevents the appearance of edge drops, including on samples of heterogeneous hardnesses.

**PLATINIUM 0 BROWN**

Ø in mm	Self-adhesive		Magnetic	
	Ref.	€	Ref.	€
200	09 CA170 20	48,70	09 CA570 20	53,10
230	09 CA170 30	60,20	09 CA570 30	64,60
250	09 CA170 40	66,50	09 CA570 40	70,80
300	09 CA170 50	95,50	09 CA570 50	100,10

Boxes of 1 piece
+ 1 dressing stone

PLATINIUM 1 BLUE

Ø in mm	Self-adhesive		Magnetic	
	Ref.	€	Ref.	€
200	09 CA140 20	48,70	09 CA540 20	53,10
230	09 CA140 30	60,20	09 CA540 30	64,60
250	09 CA140 40	66,50	09 CA540 40	70,80
300	09 CA140 50	95,50	09 CA540 50	100,10

PLATINIUM 2 GREEN

Ø in mm	Self-adhesive		Magnetic	
	Ref.	€	Ref.	€
200	09 CA150 20	48,70	09 CA550 20	53,10
230	09 CA150 30	60,20	09 CA550 30	64,60
250	09 CA150 40	66,50	09 CA550 40	70,80
300	09 CA150 50	95,50	09 CA550 50	100,10

PLATINIUM 3 YELLOW

Ø in mm	Self-adhesive		Magnetic	
	Ref.	€	Ref.	€
200	09 CA160 20	48,70	09 CA560 20	53,10
230	09 CA160 30	60,20	09 CA560 30	64,60
250	09 CA160 40	66,50	09 CA560 40	70,80
300	09 CA160 50	95,50	09 CA560 50	100,10

PLATINIUM 4 RED

Ø in mm	Self-adhesive		Magnetic	
	Ref.	€	Ref.	€
200	09 CA180 20	48,70	09 CA580 20	53,10
230	09 CA180 30	60,20	09 CA580 30	64,60
250	09 CA180 40	66,50	09 CA580 40	70,80
300	09 CA180 50	95,50	09 CA580 50	100,10

ABRASIVE STONES FOR PLATINIUM

Type	Characteristics	Qty.	Ref.	€
Grain 120 for platinum 0 & 1	6 x 13 x 100 mm	2	98 59121 00	10,90
Grain 400 for platinum 2	6 x 13 x 100 mm	2	98 59401 00	10,90
Grain 600 for platinum 3 & 4	6 x 13 x 100 mm	2	98 59601 00	10,90

Application Table

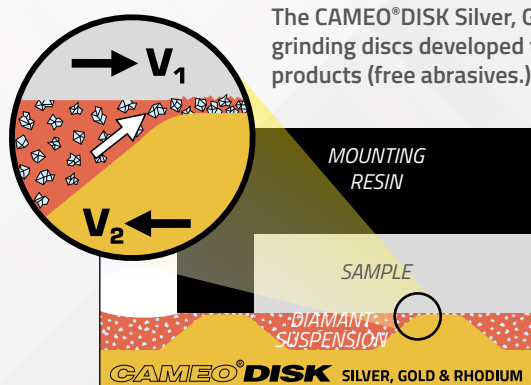
CAMEO®DISK	Equivalences	Application	Fluid/Liquid
Platinum 0 Brown Platinum 1 Blue Platinum 2 Green Platinum 3 Yellow Platinum 4 Red	Sic Paper P80 Sic Paper P120 Sic Paper P240 Sic Paper P600 Sic Paper P1200	Grinding hard material (≥ 120 HV)	Water

GUIDANCE

In order to guarantee constant results, the CAMEO®DISK have to be periodically dressed by adequate abrasive stones.

GRINDING AND PREPOLISHING DISCS CAMEO®DISK

CAMEO®DISK Silver, Gold & Rhodium



The CAMEO®DISK Silver, Gold & Rhodium discs are non-diamond grinding discs developed to be used with Bio DIAMANT® abrasive products (free abrasives.)

Combined with the latest products of the Bio DIAMANT® range, the NEODIA® diamond abrasives will allow treating all types of materials.

The patented CAMEO®DISK honeycomb structure allows the uniform distribution of the periodically pulverised diamond abrasive suspension. The use of the abrasive suspension is optimised, thereby reducing the diamond product's consumption.

There are three variants of CAMEO®DISK designed with differing hardness suited for different types of material prepolished.

CAMEO®DISK SILVER

Boxes of 2 pieces + 1 dressing tool

Self-adhesive			Magnetic	
Ø in mm	Ref.	€	Ref.	€
200	09 CA120 20	109,50	09 CA520 20	113,90
230	09 CA120 30	124,30	09 CA520 30	130,60
250	09 CA120 40	134,90	09 CA520 40	145,50
300	09 CA120 50	164,40	09 CA520 50	172,70

CAMEO®DISK GOLD

Boxes of 2 pieces + 1 dressing tool

Self-adhesive			Magnetic	
Ø in mm	Ref.	€	Ref.	€
200	09 CA130 20	109,50	09 CA530 20	113,90
230	09 CA130 30	124,30	09 CA530 30	130,60
250	09 CA130 40	134,90	09 CA530 40	145,50
300	09 CA130 50	164,40	09 CA530 50	172,70

CAMEO®DISK RHODIUM

NEW

Boxes of 2 pieces + 1 dressing tool

Self-adhesive			Magnetic	
Ø in mm	Ref.	€	Ref.	€
200	09 CA100 20	109,50	09 CA500 20	113,90
230	09 CA100 30	124,30	09 CA500 30	130,60
250	09 CA100 40	134,90	09 CA500 40	145,50
300	09 CA100 50	164,40	09 CA500 50	172,70

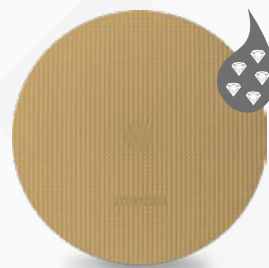
DIAMOND DRESSING TOOL FOR SILVER, GOLD & RHODIUM

Characteristics	Qty.	Ref.	€
100 x 15 x 5 mm	1	98 BD001 00	13,20

Application Table

CAMEO®DISK	Application	Fluid/Liquid
Silver	Medium to very hard ferrous alloys	6 to 15 µm diamond abrasives NEODIA® M, P or F
Gold	Soft non ferrous alloys	3 to 6 µm diamond abrasives NEODIA® M, P or F
Rhodium	Ceramics and Cermets	1 to 3 µm diamond abrasives NEODIA® M, P or F

CAMEO®DISK



GUIDANCE

In order to guarantee constant results, the CAMEO®DISK have to be periodically dressed by appropriate abrasive dressing tool.

CUTTING

MOUNTING

POLISHING

TOUCHLAM®

TOUCHLAM® polishing cloths & pads

LAM PLAN proposes a range of exclusive TOUCHLAM® polishing cloths and pads.

We conceive and produce all our TOUCHLAM® products, favouring quality of results through the selection of materials and treatments.

Quality of results

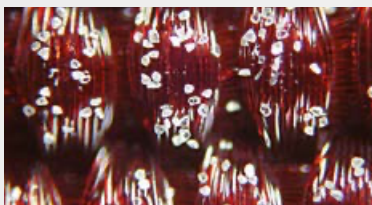
The structure and the composition of a polishing support have a direct impact on the properties of the associated free abrasive during a polishing process. LAM PLAN has designed a range of polishing cloths & pads according to their capacity of optimising the abrasive functions in order to obtain an optimum quality of results.

LAM PLAN guides you in your cloths and pads selection according to your results expectations

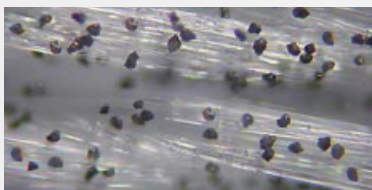
Application	TOUCHLAM® cloths	Characteristics			
		SR*	Flatness	Finishing	Super Finishing
Fine grinding of soft materials Polishing of hard to extra hard material	2FC1	✓	✓		
Rough polishing on ductile material	2TT1	✓	✓		
Rough polishing on ductile material	2TT2	✓	✓		
Fine polishing (intermediary) on all materials Final polishing on hard materials	2TS3		✓	✓	
Fine polishing (intermediary) on all materials	2TS4		✓	✓	
Fine polishing (intermediary) on soft materials	3SE2		✓	✓	
Fine polishing (intermediary) on soft materials	3SA4		✓	✓	
Medium to fine polishing on semi-hard to hard (uncoated)	3TL1			✓	
Final polishing on semi-hard materials	3FV1				✓
Final polishing on soft to semi-hard materials	4FV3				✓
Final polishing (chemical/mechanical) on varied materials	4MP1				✓
Final polishing (chemical/mechanical) on varied materials	4MP2				✓

*Stoke Removal

Example of a diamond abrasive, spread over different disc structures



Taffeta woven synthetic fibres



Satin woven natural fibres



Flocked viscose fibres

Simplified use

The TOUCHLAM® cloths & pads are available in all standard diameters in two fixation modes: self-adhesive and magnetic.

The marking allows an easy identification. A tab is now integrated on the discs to facilitate the removal of the protective foil of self-adhesive cloths.

See all our fastening systems pages **FIXING ACCESSORIES**.



Disc identification marking

Self-adhesive cloth on FAS® 2 support



Magnetic cloth FMS® support



Tab



POLISHING SUPPORTS

TOUCLAM® 2FC1

Impregnated non-woven fibres.
Stoke removal, finishing on extra hard materials.
Usable with diamond abrasives from 3 to 9 µm.

Self-adhesive				Magnetic		X-LAM	
Ø mm	Qty.	Ref.	€	Ref.	€	Ref.	€
200	5 units	2FC10A02005	80,10	2FC10M02005	93,50	2FC10X02005	78,00
230	5 units	2FC10A02305	101,80	2FC10M02305	122,10	2FC10X02305	101,80
250	5 units	2FC10A02505	108,10	2FC10M02505	129,70	2FC10X02505	108,10
300	5 units	2FC10A03005	152,60	2FC10M03005	181,60	2FC10X03005	152,60
400	5 units	2FC10A04005	270,10				

TOUCLAM® 2TT1

Taffeta woven synthetic fibres.
Stock removal and inherent flatness on difficult materials.
Usable with diamond abrasives from 6 to 15 µm.

Self-adhesive				Magnetic		X-LAM	
Ø mm	Qty.	Ref.	€	Ref.	€	Ref.	€
200	5 units	2TT10A02005	67,60	2TT10M02005	84,90	2TT10X02005	67,60
230	5 units	2TT10A02305	79,40	2TT10M02305	100,00	2TT10X02305	79,40
250	5 units	2TT10A02505	87,30	2TT10M02505	109,70	2TT10X02505	87,50
300	5 units	2TT10A03005	117,80	2TT10M03005	148,00	2TT10X03005	117,80
400	5 units	2TT10A04005	219,00				

TOUCLAM® 2TT2

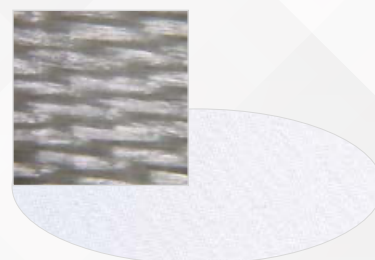
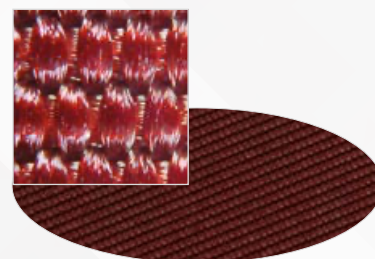
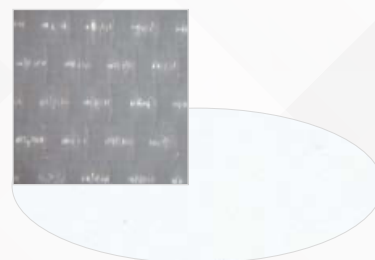
Taffeta woven synthetic fibres.
Stock removal and inherent flatness on difficult materials.
High durability.
Usable with diamond abrasives from 6 to 15 µm.

Self-adhesive				Magnetic		X-LAM	
Ø mm	Qty.	Ref.	€	Ref.	€	Ref.	€
200	5 units	2TT20A02005	77,70	2TT20M02005	93,40	2TT20X02005	78,00
230	5 units	2TT20A02305	91,40	2TT20M02305	109,90	2TT20X02305	91,40
250	5 units	2TT20A02505	100,90	2TT20M02505	120,70	2TT20X02505	100,90
300	5 units	2TT20A03005	135,40	2TT20M03005	162,81	2TT20X03005	135,60
400	5 units	2TT20A04005	252,10				

TOUCLAM® 2TS3

Extra-thin satin woven natural fibres.
Excellent inherent flatness and finishing, preservation of inclusions and edges, on all materials. Usable with diamond abrasives from 2 to 9 µm.

Self-adhesive				Magnetic		X-LAM	
Ø mm	Qty.	Ref.	€	Ref.	€	Ref.	€
200	5 units	2TS30A02005	49,60	2TS30M02005	59,50	2TS30X02005	49,60
230	5 units	2TS30A02305	59,10	2TS30M02305	70,80	2TS30X02305	59,10
250	5 units	2TS30A02505	62,20	2TS30M02505	74,50	2TS30X02505	62,20
300	5 units	2TS30A03005	83,70	2TS30M03005	100,40	2TS30X03005	83,70
400	5 units	2TS30A04005	146,20				



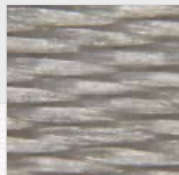
TOUCLAM® 2TS4

Satin woven natural fibres.

Excellent finishing and flatness, preservation of edges, especially on sample composed of materials of various hardness or with coating.

High durability.

Usable with diamond abrasives from 1 to 6 µm.



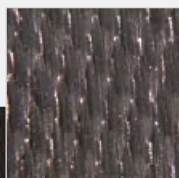
Self-adhesive				Magnetic		X-LAM	
Ø mm	Qty.	Ref.	€	Ref.	€	Ref.	€
200	5 units	2TS40A02005	71,40	2TS40M02005	85,70	2TS40X02005	71,40
230	5 units	2TS40A02305	83,30	2TS40M02305	100,20	2TS40X02305	83,30
250	5 units	2TS40A02505	91,40	2TS40M02505	109,70	2TS40X02505	91,60
300	5 units	2TS40A03005	123,40	2TS40M03005	148,00	2TS40X03005	123,30
400	5 units	2TS40A04005	229,50				

TOUCLAM® 3SE2

Woven synthetic silk fibres.

Finishing and flatness on soft materials.

Usable with diamond abrasives from 1 to 3 µm.



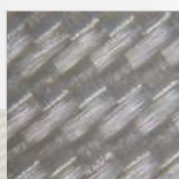
Self-adhesive				Magnetic		X-LAM	
Ø mm	Qty.	Ref.	€	Ref.	€	Ref.	€
200	5 units	3SE20A02005	40,10	3SE20M02005	48,00	3SE20X02005	40,10
230	5 units	3SE20A02305	57,30	3SE20M02305	68,80	3SE20X02305	53,30
250	5 units	3SE20A02505	65,20	3SE20M02505	78,20	3SE20X02505	65,20
300	5 units	3SE20A03005	80,10	3SE20M03005	96,30	3SE20X03005	80,10
400	5 units	3SE20A04005	138,00				

TOUCLAM® 3SA4

Soft composite synthetic fibres

Finishing on soft materials.

Usable with diamond abrasives from 0,25 to 3 µm.



Self-adhesive				Magnetic		X-LAM	
Ø mm	Qty.	Ref.	€	Ref.	€	Ref.	€
200	5 units	3SA40A02005	38,90	3SA40M02005	46,60	3SA40X02005	38,90
230	5 units	3SA40A02305	55,80	3SA40M02305	66,90	3SA40X02305	55,80
250	5 units	3SA40A02505	63,40	3SA40M02505	75,90	3SA40X02505	63,40
300	5 units	3SA40A03005	77,70	3SA40M03005	93,50	3SA40X03005	77,90
400	5 units	3SA40A04005	134,10				

TOUCLAM® 3TL1

High resistant woven wool fibres.

Adapted for the finishing of non-mounted samples

High durability.

Usable with diamond abrasives from 3 to 6 µm.



Self-adhesive				Magnetic		X-LAM	
Ø mm	Qty.	Ref.	€	Ref.	€	Ref.	€
200	5 units	3TL10A02005	62,00	3TL10M02005	78,10	3TL10X02005	62,00
230	5 units	3TL10A02305	76,90	3TL10M02305	96,80	3TL10X02305	76,90
250	5 units	3TL10A02505	87,00	3TL10M02505	109,50	3TL10X02505	87,00
300	5 units	3TL10A03005	103,80	3TL10M03005	130,50	3TL10X03005	103,80
400	5 units	3SA40A04005	215,30				

POLISHING SUPPORTS

TOUCLAM® 3FV1

Semi-hard flocked short viscose fibres.

Super finishing, preservation of the inherent flatness on mounted hard materials.

Usable with diamond abrasives from 1 to 3 µm.

Self-adhesive				Magnetic		X-LAM	
Ø mm	Qty.	Ref.	€	Ref.	€	Ref.	€
200	5 units	3FV10A02005	30,50	3FV10M02005	37,90	3FV10X02005	30,50
230	5 units	3FV10A02305	36,60	3FV10M02305	45,80	3FV10X02305	36,60
250	5 units	3FV10A02505	40,70	3FV10M02505	51,00	3FV10X02505	40,70
300	5 units	3FV10A03005	53,70	3FV10M03005	67,00	3FV10X03005	53,70
400	5 units	3FV10A04005	102,80				

TOUCLAM® 4FV3

Soft flocked long viscose fibres.

Super finishing on large variety of materials, including very soft materials.

Principally used with diamond abrasives from 0,25 to 3 µm but also with alumina suspension and colloidal silica.

Self-adhesive				Magnetic		X-LAM	
Ø mm	Qty.	Ref.	€	Ref.	€	Ref.	€
200	5 units	4FV30A02005	24,70	4FV30M02005	29,70	4FV30X02005	24,90
230	5 units	4FV30A02305	29,90	4FV30M02305	36,00	4FV30X02305	30,10
250	5 units	4FV30A02505	33,50	4FV30M02505	40,10	4FV30X02505	33,60
300	5 units	4FV30A03005	45,50	4FV30M03005	54,80	4FV30X03005	45,40
400	5 units	4FV30A04005	103,70				

TOUCLAM® 4MP1

Microporous polyurethane foam.

Adapted to sensitive samples requiring an extreme super finish with chemical abrasives.

Usable with oxides or colloidal silica.

Self-adhesive				Magnetic		X-LAM	
Ø mm	Qty.	Ref.	€	Ref.	€	Ref.	€
200	5 units	4MP10A02005	124,40	4MP10M02005	149,30	4MP10X02005	124,40
230	5 units	4MP10A02305	161,30	4MP10M02305	193,50	4MP10X02305	161,30
250	5 units	4MP10A02505	168,80	4MP10M02505	202,40	4MP10X02505	168,80
300	5 units	4MP10A03005	206,80	4MP10M03005	248,20	4MP10X03005	206,80
400	5 units	4MP10A04005	351,30				

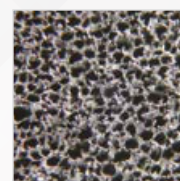
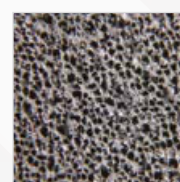
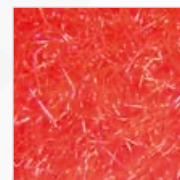
TOUCLAM® 4MP2

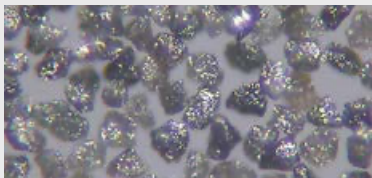
Microporous polyurethane foam.

High thickness. High durability, usable in production process.

Usable with oxides or colloidal silica.

Self-adhesive				Magnetic		X-LAM	
Ø mm	Qty.	Ref.	€	Ref.	€	Ref.	€
200	5 units	4MP20A02005	121,10	4MP20M02005	145,30	4MP20X02005	121,10
230	5 units	4MP20A02305	157,00	4MP20M02305	188,40	4MP20X02305	157,00
250	5 units	4MP20A02505	170,60	4MP20M02505	196,60	4MP20X02505	170,60
300	5 units	4MP20A03005	243,00	4MP20M03005	250,00	4MP20X03005	243,00
400	5 units	4MP20A04005	383,60				



*Monocrystalline diamond**Polycrystalline diamond**Polycrystalline diamond on cloth*

Bio DIAMANT®
NEODia®
 LIQUIDE DIAMANT
 DIAMOND LIQUID

BIO DIAMANT® abrasive suspension

For many years, the LAM PLAN R&D department has been committed to develop advanced products which are more user oriented and aimed to preserve the environment without compromising effectiveness.

Secured supply and total traceability.

Conformity to the REACH regulation.

LAM PLAN sets up all the arrangements needed for its application in order to guarantee the quality and availability of all its products over the long term. All the substances contained in our preparations comply with the REACH regulation's specifications. To facilitate your administrative formalities, all the Safety Data Sheets (SDS) of our products conform to the legislation in force it can be downloaded on www.fds.lamplan.com



BIO DIAMANT® ABRASIVE SUSPENSION NEODIA®

In direct line with our famous Bio DIAMANT® range, the NEODIA® diamond abrasive suspension goes even further in terms of performance, efficiency and user comfort. The NEODIA® diamond suspension is a top-of-the-range product featuring exceptional performances.

Enhance roughness

The quality of the abrasive used, the tight criteria of calibration and concentration, as well as the use of a new generation of water-based binders allow better roughness results while preserving a high stock removal. The binder consistency allows the cutting action to start at the first seconds of usage.

Free of VOCs

The NEODIA® diamond suspensions are composed of a specific new generation binder; this liquid is free of Volatile Organic Compound (VOCs). The NEODIA® diamond suspensions is of course biodegradable at more than 70 % in accordance with the criteria of our Bio DIAMANT® label. Non-toxic and harmless, they are neutral, the user's work conditions are thus respected.

Biodegradable packaging: reduction of your activity's environmental impact

For the first time in the polishing industry a diamond suspension is packaged in a plastic bottle of vegetal origin which is 100% biodegradable and compostable according to the standard NF EN 13 432 (for 200 and 400 ml packaging).



DIAMOND SUSPENSION

BIO DIAMANT® ABRASIVE SUSPENSION NEODIA®M

High performance suspension, high concentration of monocrystalline diamonds, biodegradable with no decantation.

200 ml with vaporiser				Refill 400 ml (sold without spray)	
Type	µm	Ref.	€	Ref.	€
1/4 M	1/4	02 97460 80	38,20	02 97460 60	70,70
1 M	1	02 01460 80	34,70	02 01460 60	63,60
2 M	2	02 02460 80	34,70	02 02460 60	63,60
3 M	3	02 03460 80	39,00	02 03460 60	71,70
6 M	6	02 06460 80	42,50	02 06460 60	78,00
9 M	9	02 09460 80	42,50	02 09460 60	78,00
14 M	14	02 14460 80	42,50	02 14460 60	78,00

Refill 1 l (sold without spray)				Refill 2,5 l (sold without spray)	
Type	µm	Ref.	€	Ref.	€
1/4 M	1/4	02 97460 20	159,30	02 97460 30	358,50
1 M	1	02 01460 20	144,50	02 01460 30	325,20
2 M	2	02 02460 20	144,50	02 02460 30	325,20
3 M	3	02 03460 20	162,80	02 03460 30	366,40
6 M	6	02 06460 20	177,20	02 06460 30	398,60
9 M	9	02 09460 20	177,20	02 09460 30	398,60
14 M	14	02 14460 20	177,20	02 14460 30	398,60

-3% off for the purchase of 3 products of the same reference

BIO DIAMANT® ABRASIVE SUSPENSION NEODIA®P

High performance suspension, high concentration of polycrystalline diamonds, biodegradable with no decantation.

200 ml with vaporiser				Refill 400 ml (sold without spray)	
Type	µm	Ref.	€	Ref.	€
1/4 P	1/4	02 97469 80	44,10	02 97469 60	80,90
1 P	1	02 01469 80	40,00	02 01469 60	73,20
2 P	2	02 02469 80	40,00	02 02469 60	73,20
3 P	3	02 03469 80	45,20	02 03469 60	82,80
6 P	6	02 06469 80	47,30	02 06469 60	86,70
9 P	9	02 09469 80	47,30	02 09469 60	86,70
14 P	14	02 14469 80	47,30	02 14469 60	86,70

Refill 1 l (sold without spray)				Refill 2,5 l (sold without spray)	
Type	µm	Ref.	€	Ref.	€
1/4 P	1/4	02 97469 20	183,90	02 97469 30	413,60
1 P	1	02 01469 20	166,30	02 01469 30	374,30
2 P	2	02 02469 20	166,30	02 02469 30	374,30
3 P	3	02 03469 20	188,30	02 03469 30	423,60
6 P	6	02 06469 20	197,00	02 06469 30	443,30
9 P	9	02 09469 20	197,00	02 09469 30	443,30
14 P	14	02 14469 20	197,00	02 14469 30	443,30

-3% off for the purchase of 3 products of the same reference





BIO DIAMANT® NEODIA® F LIQUID

New generation of ready-to-use abrasive suspensions containing polycrystalline diamonds. The NEODIA® F is optimised for automatic dosage by spray (Venturi system). Its formulation and its price make it useful for intensive usage.

400 ml				1 l		2,5 l	
Type	µm	Ref.	€	Ref.	€	Ref.	€
1 F	1	02 01470 60	54,40	02 01470 20	123,60	02 01470 30	278,10
3 F	3	02 03470 60	54,40	02 03470 20	123,60	02 03470 30	278,10
6 F	6	02 06470 60	54,40	02 06470 20	123,60	02 06470 30	278,10
9 F	9	02 09470 60	58,90	02 09470 20	133,90	02 09470 30	301,30
14 F	14	02 14470 60	58,90	02 14470 20	133,90	02 14470 30	301,30

-3% off for the purchase of 3 products of the same reference



BIO DIAMANT® M.M.140 FINISHING LIQUID

High yield emulsion for the finishing of all materials.

High concentration. Cleaning with solvent or detergent 742.

Characteristics	Type	Conditioning	Ref.	€
Diamond emulsion. Does not crystallize.	M.M.140	250 gr	02 MM140 00	120,20

**Diamond emulsion
Does not crystallize**

Manual distributors to be filled



200 ml

400 ml

500 ml

Designation	Qty.	Ref.	€
200 ml biodegradable bottle + White vaporiser	1	08 00514 00	5,50
400 ml biodegradable bottle + Green spray	1	08 00513 00	5,50
Green spray	1	08 00503 00	3,20
500 ml PET bottle + white and red spray	1	08 00502 00	12,20

-5% off for the purchase of 3 products of the same reference





















DIAMOND SUSPENSION

BIO DIAMANT® ABRASIVE SUSPENSION PULMATIC 310 AND 320P

For large surface polishing and material sensitive to corrosion.

The Pulmatics are proposed in a practical packaging for a very good distribution of the product over the work surface. They are free of any propeller gas. Pulmatic 310 is a alcohol based monocrystalline diamond liquid of a medium concentration. The Pulmatic 320P is a alcohol based polycrystalline diamond liquid of a strong concentration.

SERIE 310

Characteristics	Concentration	Type	µm	Ref.	€
Conditioning : Pulmatic					
75 g Monocrystalline diamond Optimum distribution of the abrasive on the polishing support Alcohol base (free of water)	Medium	 025 313	1/4	03 97313 00	36,90
		 1 313	1	03 01313 00	36,90
		 2 313	2	03 02313 00	36,90
		 3 313	3	03 03313 00	36,90
		 6 313	6	03 06313 00	48,30
		 8 313	8	03 08313 00	48,30
		 10 313	10	03 10313 00	48,30
		 14 313	14	03 14313 00	55,10
		 25 313	25	03 25313 00	55,10
		 40 313	40	03 40313 00	55,10
Conditioning : 1 Litre can					
1 litre Monocrystalline diamond Alcohol base	Medium	 025 313	1/4	03 97313 20	163,80
		 1 313	1	03 01313 20	163,80
		 2 313	2	03 02313 20	163,80
		 3 313	3	03 03313 20	163,80
		 6 313	6	03 06313 20	214,40
		 8 313	8	03 08313 20	214,40
		 10 313	10	03 10313 20	214,40
		 14 313	14	03 14313 20	244,60
		 25 313	25	03 25313 20	244,60
		 40 313	40	03 40313 20	244,60

**SERIE 320P**

Characteristics	Concentration	Type	µm	Ref.	€
75 g Polycrystalline diamond Optimum distribution of the abrasive on the polishing support Alcohol base (free of water)	Strong	025 323P	1/4	03 97323 00	42,20
		1 323P	1	03 01323 00	42,20
		2 323P	2	03 02323 00	42,20
		3 323P	3	03 03323 00	42,20
		6 323P	6	03 06323 00	55,50
		8 323P	8	03 08323 00	55,50
		10 323P	10	03 10323 00	55,50
		14 323P	14	03 14323 00	63,20
		25 323P	25	03 25323 00	63,20



-5% off for the purchase of 3 products of the same reference

Products subject to shipping restrictions.



Does not crystallize

Finishing liquids SUPERFINISH

FINAL FINISHING LIQUID

Aqueous suspension of non-agglomerated nanometric silica stabilised in an alkaline medium. Used to carry out super finishing, to obtain ultra-low roughness. Very easy-to-use and applicable on all types of materials. Does not crystallize.

Usage recommendation: dilute 10 to 20% in water.

Characteristics	Type	Conditioning	Ref.	€
Final polishing on polishing cloth.	Final liquid	500g	05 NL008 00	41,50
All materials.	Final liquid	5 litres	05 NL008 40	168,90



L1 FINISHING LIQUID

Final polishing suspension specially formulated for mechano-chemical polishing. During usage, the active substances of the solution embrittle the surface to be polished, thereby optimising the efficiency of the abrasive grains. Allows combining performance (stock removal) and polishing quality. Recommended for titanium and its alloys.

Usage recommendation: ready-to-use preparation.

Characteristics	Type	Conditioning	Ref.	€
Final polishing on polishing cloth.	L1 liquid Titanium	1 litre	05 NL011 00	31,50
All materials.				



L2 FINISHING LIQUID

Composite solution of ceramic oxides and silica. Ideal to prepare your surface before the super finishing step. Recommended for the polishing of aluminium and its alloys.

Usage recommendation: ready-to-use preparation.

Characteristics	Type	Conditioning	Ref.	€
Final polishing on polishing cloth.	L2 liquid Aluminium	1 litre	05 NL012 00	31,50
All materials.				



ALPLAN LIQUIDS

New final polishing solutions composed of aluminium oxides of a very high purity. These alumina preparations are subjected to a pushed de-agglomeration treatment; which result excellent polishing quality. Easy-to-use, ALPLAN solutions are usable on all types of materials.

Usage recommendation: use pure or diluted up to 50% with water.

Characteristics	Grain sizes	Conditioning	Ref.	€
ALPLAN is used pure or diluted up to 50% with water	0,05 µm	1 litre	05 AP005 00	68,50
	0,25 µm	1 litre	05 AP025 00	68,50
	1 µm	1 litre	05 AP100 00	49,60
	3 µm	1 litre	05 AP300 00	49,60

DIAMOND SUSPENSION

Bio DIAMANT® Stick Series 122 and 123P

For manual use and control of consumption

The diamond paste is distributed according to a precise dosage thanks to a drum graduated every 0.2 g. The diamond paste is repetitively loaded on the polishing cloth without any contact with fingers. The pastes and sticks are used with 702 and 704 type lubricants. The product's colour marking facilitates its identification.

The dosing sticks series 122:

are composed of a monocrystalline diamond paste of a strong concentration.

The dosing stick series 123P:

are composed of a polycrystalline diamond paste of a strong concentration.



Characteristics	Concentration	Type	µm	Ref.	€
-----------------	---------------	------	----	------	---

SERIE 122

10 g Monocrystalline diamond Consumption control Easy distribution Coloration by grain size Water or alcohol cleaning	Strong	025 122	1/4	01 97122 00	33,40
		1 122	1	01 01122 00	39,60
		3 122	3	01 03122 00	48,40
		6 122	6	01 06122 00	48,80
		9 122	9	01 09122 00	52,70
		15 122	15	01 15122 00	53,40

SERIE 123P

10 g Polycrystalline diamond Consumption control Easy distribution Water or alcohol cleaning	Strong	025 123P	1/4	01 97123 00	37,40
		1 123P	1	01 01123 00	43,30
		3 123P	3	01 03123 00	53,40
		6 123P	6	01 06123 00	56,20
		9 123P	9	01 09123 00	60,60
		15 123P	15	01 15123 00	61,40

-5% off for the purchase of 3 products of the same reference

GUIDANCE

Indicative quantities necessary to load a new cloth

Cloth Ø mm	150	200	250	300	400
Woven	0,2 g	0,2 g	0,4 g	0,4 g	0,6 g
Flocked	0,3 g	0,4 g	0,5 g	0,6 g	0,7 g



Bio DIAMANT® pastes Serie 100

Unique abrasive compounds

Designed for all grinding and polishing work, the Bio DIAMANT® Pastes contain a diamond powder free of any impurity, guaranteeing its cutting power. The perfectly calibrated grains are uniformly suspended in chemically pure ingredients.

A formulation which provides a more uniform and more fluid abrasive film which allows an immediate abrasion of the part to be polished.

The concentration of the pastes has a direct effect on the polishing's execution rate: a high concentration is the guarantee of a high yield.



Characteristics	Concentration	Type	µm	Ref.	€
10 g. Monocrystalline diamond For all materials Cleaning with water or alcohol Coloration by grain size	Strong	010 103	1/10	01 99103 00	140,70
		025 103	1/4	01 97103 00	124,70
		1 103	1	01 01103 00	82,70
		2 103	2	01 02103 00	148,00
		3 103	3	01 03103 00	137,10
		6 103	6	01 06103 00	176,70
		8 103	8	01 08103 00	224,00
		14 103	14	01 14103 00	261,30

-5% off for the purchase of 3 products of the same reference

Characteristics	Concentration	Type	µm	Ref.	€
10g. Monocrystalline diamond For all materials Cleaning with water or alcohol Coloration by grain size	Very strong	1 105	1	01 01105 00	113,30
		2 105	2	01 02105 00	176,70
		3 105	3	01 03105 00	188,40
		6 105	6	01 06105 00	224,00
		8 105	8	01 08105 00	261,30
		14 105	14	01 14105 00	333,10

-5% off for the purchase of 3 products of the same reference

Reading the type

Exemple:	Paste type:	6 103
	Grain size:	6 microns
	Series:	100
	Concentration:	3 (strong) 5 (very strong)

GUIDANCE

LUBRICANTS

Lubricant M.M.702

Lubricant to be used to optimise polishing with Bio DIAMANT® diamond pastes series 100 and sticks series 122 & 123P. Ready-to-use, it ensures an excellent dispersion of the abrasive and prevents the risks of heating the material during polishing.

This lubricant is easily cleaned with water, alcohol or aqueous detergents (detergent 742).

Characteristics	Conditioning	Ref.	€
Recommended as an addition to LAM PLAN diamond pastes and sticks	1 litre	07 MM702 30	9,90
Water base	5 litres	07 MM702 40	44,00



Lubricant M.M.704

Alcohol-based lubricant perfectly suitable to polish samples which are sensitive to corrosion. Ready-to-use, it ensures a strong cooling during the work.

This lubricant is particularly recommended for the polishing of ductile materials.

For cleaning, it is recommended to use the detergent 742 or alcohols like isopropyl alcohol.

Characteristics	Conditioning	Ref.	€
Recommended as an addition to LAM PLAN diamond pastes and Pulmatic Alcohol base diamond liquid	1 litre	07 00704 30	16,80
	5 x 1 litre*	07 00704 40	73,20

*Packaging related to transport restrictions



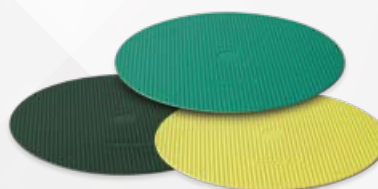
Booster for CAMEO® DISK Platinum

Booster fluid is a new lubricant especially developed to be applied on the CAMEO®DISK Platinum during the polishing step. Its specific formulation facilitates the use of the CAMEO®DISK Platinum 0, 1, 2, 3 and 4.

Ready-to-use, this new lubricant maintains the efficiency of the CAMEO®DISK constant in time and avoids the use of abrasive stone to regenerate the disc.

The main advantages are:

- Improves the efficiency of the CAMEO®DISK
- Keeps the efficiency constant in time
- Reduces water consumption
- Universal use, can be used on all kind of material
- Ready to use.



Characteristics	Conditioning	Ref.	€
Ready to use lubricant fluid	5 litres	07 BP030 40	58,00

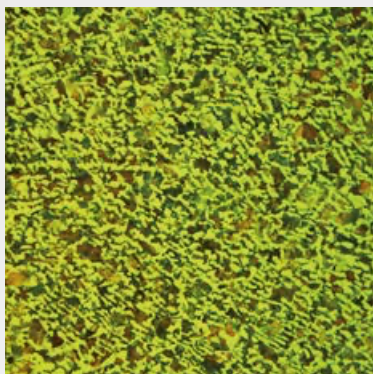




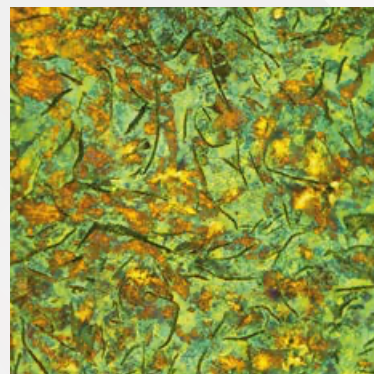
Metallographic reagents

Etching reagents are used to examine the structure of metallic materials. The objective of the micrographic analysis is to highlight the structure of the material (inclusions, grain boundaries, phases, ...) using an optical microscope.

These reagents act either by preferential chemical attack, or by coloration of certain constituents compared to others.



Steel etching nital 5 %



Lamellar cast iron nital attack 5 %

Packaging: 1 liter

Recommendations	Highlighting	Ref.	€
NITAL 5% REAGENT			
Room temperature, a few seconds - Iron and ferrous alloys (cast iron and steel) - Magnesium and its alloys - Tin and its alloys - Pure titanium - Cadmium and its alloys	- Welding of steels - Ferrite grain boundaries and constituents - Segregation and case hardening zones	08 RN050 20	57,20
NITRIC ACID 10% REAGENT			
Room temperature - Steels	- Phases on ferritic welds in steels	08 RR090 20	60,50
MURAKAMI REAGENT			
Room temperature or hot, 60 seconds - Iron and ferrous alloys (cast iron and steel) - Tungsten alloys	- Carbide highlighting: to blacken carbides, Use at 80°C to boiling under fume hood. - Weakly revealed Σ (sigma) phase after 3 min at room temperature.	08 RR030 20	108,90
KALLING N° 1 REAGENT			
Room temperature - Martensitic stainless steels	- To color in black the martensite of stainless steels. - To color the ferrite - To highlight segregations and austenite grain boundaries.	08 RR040 20	74,80
OBERHOFFER REAGENT			
Room temperature, 20 seconds - Non-alloyed steels - Low-alloyed steels	- Primary structures (fiber layer) - Make phosphorus accumulations visible	08 RR050 20	77,00

METALLOGRAPHIC REAGENTS

Packaging: 1 liter			
Recommendations	Highlighting	Ref.	€
KELLER REAGENT			
Room temperature - Aluminium and its alloys, - Titanium alloys	- Highlighting of the phases	08 RR060 20	88,00
KROLL'S REAGENT			
Room temperature - Aluminium and its alloys - Titanium alloys (mainly Ti-Al-V(-Sn))	- Highlighting of the phases	08 RR070 20	72,60
MARBLE REAGENT			
Room temperature, 10 seconds - Austenitic steels - High temperature steels - Cobalt superalloys	- Highlighting of the austenitic phase nuances - Attack of the Σ phase (sigma) - Highlighting of the grain structures	08 RR080 20	104,50
PICRAL-2 REAGENT			
Room temperature, few seconds - Iron and ferrous alloys (cast iron and steel)	- Structures composed of ferrite - Reveal carbides. - Reveal fine microstructures. - Revealing the grain boundaries	08 RR020 20	93,50
KLEMM I REAGENT			
Room temperature - Non-alloy and low-alloy steels - Cast iron - Manganese and zinc steels - Brass and bronze - Low alloyed zinc	Staining Reagent: - On steels: 40 to 100 sec to color the ferrite, blue and brown depending on the orientation of the grain. Carbides, cementite and phosphides are not colored and remain white - On brass and bronze: 3 min to color β phase, 10 to 60min for α phase - On zinc alloys: 30 sec	08 RR010 10	115,00
KLEMM II REAGENT			
Room temperature - Manganese alloys - Copper and its alloys (brass and bronze) - Tin and its alloys	To reveal the austenitic phase of manganese alloys. Reagent for staining and analyzing soft solder: Brass: 6 min for α phase Tin and alloys : 60 to 90 sec	08 RR010 20	121,00
10% SODA SOLUTION			
Room temperature or 5 sec. at 70°C For all aluminum and its wrought alloys.	Aluminium welding Phase identification	08 R5100 20	58,80

Products subject to shipping restrictions.

LITHOPREPARATION



IMPREGNATION

NEW

M.M.818 vacuum impregnator device

Compact vacuum mounting unit for impregnation of porous materials and bubble-free mounting with epoxy resins type 603. The M.M.818 has a large capacity vacuum chamber of 160 mm diameter and is equipped with a resin distribution system. A vacuum gauge on the front panel allows the vacuum level to be monitored and the various vacuum cycles to be controlled manually.



Technical Data	M.M.818
Vacuum level	- 650 mm-Hg
Inner diameter base	160 mm
Useful height of vacuum tank	160 mm
Dimensions W x H x D	480 x 400 x 400 mm
Vacuum pump dimensions (W x H x D)	140 x 210 x 240 mm
Power supply	230 V - 50 Hz single phase
Weight	10,10 kg
Weight vacuum pump	7,25 kg
Reference	08 00818 00

PE128 precision sample holder for thin slides

The LAM PLAN PE128 specimen holder is used to hold several thin slides by vacuum suction during a lapping operation. This sample holder guarantees a high level of parallelism.

The precision and robustness of this device allow it to meet the specific demands of research laboratories as well as the constraints of production laboratories.

- Adjustable thickness of the thin blades and automatic parallelism.
- The set includes 1 micrometer ruler, 1 vacuum pump and 1 sample holder Ø 120 mm.
- Compatible thin blades : 6x 30x45 ou 6x 28x48 - 1x 120x45 + 2x 28x48 (or 2x 30x45) 1x 120x90 - 1x 60x80 + 2x 28x48 (or 2x30x45) - 2x 60x80 - 4x 24x27 - 4x Ø1 inch.

NEW



Technical Data	PE128
Accuracy of the adjustment ring	200 µm per rotation
Useful internal diameter	128 mm
Dimensions (H x Ø)	210 x 144 mm
Weight	6,27 kg

LAM PLAN presents you its new developments resulting from the collaboration of our TEST CENTRE with reference LITHO-PREPARATORS.

An offer composed of equipment and consumables dedicated to the preparation of geological substrates and in particular the realization of thin sections.

ROUGHING AND POLISHING

M.M.8400 with PE128

Grinding and thickness adjustment

The LAM PLAN M.M.8400 grinding machine combined with the PE128 mounting is the ideal equipment for making reference faces or for precise thicknessing. Combined with the AQUA LAM® range of Sic abrasives from roughing to grinding it is a reliable and versatile solution for preparing your mineral samples.



MASTERLAM® 3.0 with thin slide holder

Finishing polish

The MASTERLAM® 3.0 automatic polisher with the new thin blade holders will allow you to achieve the final polishing of your samples.

To achieve your goals we offer TOUCHLAM® polishing mounts, NEODIA® BioDIAMANT® abrasives and SUPERFINISH superfinishing liquids.



MASTERLAM® 3.0 GEOLOGICAL POLISHING
Reference 60 ML30M 00

NEW



Sample holder
3 x 45x60 mm

NEW



Sample holder
6 x 30x45 mm



TABLE OF CONTENTS LAPPING / POLISHING

EQUIPMENT

LAPPING & POLISHING MACHINES	Machine capacities		80
	M.M.8400	NEW	81
	M.M.8600		82
	M.M.9480 and M.M. 9380 S	NEW	83
	M.M.9700	NEW	84 > 85
	M.M.9100	NEW	86 > 87
	M.M.9120 and M.M.9150	NEW	87
	MASTERLAM® EVOLUTION		88
	M.M.2380		89

ACCESSORIES	Dosing units dedicated to LAM PLAN machines: type 709, 710, 719	NEW	90
	Autonomous dosing units: M.M.909, M.M.909 HV and M.M.809B		91
	Adaptable automatic dosing units 910 and 910.2	NEW	92
	Mixing and distribution systems: type 8017, 8003 and 8007	NEW	92 > 93
	Table of characteristics, recommendations and compatibility of dosing units		93 > 94
	Consumables for dosing units		95
	Cast iron conditioning rings		96
	Ceramic conditioning rings with SPYLAP®		96
	Plastic rings		96
	Protection discs series 881 and 883		97
	Holder discs series 885		97
	FAS® system		98
	FIXING® discs		98
	Carriers for single and double-side machines		99
	FIXPAD® system		100
	Micrometric gauges, monochromatic lamp and optical gauges		101
	Diabloc system: black, purple, blue and green		102
	Refills for Diabloc system: black, purple, blue and green		103
	AUTOPLAN system		104
	Washing tanks		105
Protective film		105	
Cleaning products: STANOL barrel and detergent 742 and 743		105	

SUPPORTS

LAPPING SUPPORTS	Cast iron plates		106
	NEW LAM® M'M' plates		107 > 108
	EVOLAM composite plates	NEW	109
	Series 2000 mono-component plates		110
	Manual lapping plates : LAMBLOCK and TRI-BLOCS NEW LAM® M'M'	NEW	111
	Temperature control system P803 regulator		112
	Lapping rods M.M.®		113 > 116
	Expandable cylindric rods		117 > 118
POLISHING SUPPORTS	Alumina abrasive films		119
	Diamond HC abrasive films and abrasive films in rolls		120
	DIALAM diamond discs		121
	BOOSTER Lubricant		121
	ABRABLOC dressing rings		121
	TOUCHLAM® polishing cloths	NEW	122 > 126
	Structured cloths		127

CONSUMABLES

DIAMOND SLURRIES	Bio DIAMANT® NEOLAP®	128 > 130
	Diamond slurries 241 series	131
	ECO® abrasive slurries	132
	Bio DIAMANT® sticks : M.M. 140 A, M.M. 130, M.M. 140, serie 122	133 > 134
	Bio DIAMANT® pastes: serie 210	135
	Diadoseurs Bio DIAMANT® gels series 400	135
LUBRICATING FLUIDS	NEOFLUID, M.M.712, 705, M.M.990-140, 950-140	136
	Manual distributor	136
COMPOSITE ABRASIVES	CLASSICAL composite abrasive	137
	BIOLAM® composite abrasive	138 > 139
	AQUA LAM® colloidal silica: S.W. 30-36, NOVAL S finishing and NOVAL concentrated	140
	Abrasive compounds BIOLAP®: L and Cr L series	141 > 142
	Abrasive compounds CLASSIC	143
	AQUA LAM® powders: Al ₂ O ₃ , SiC, CeO ₂	144 > 145
	Additif 716	145
ADDITIFS, LUBRIFICANTS, OILS	Lapping oil 708 and lubricant for cylindrical lapping AQUASUN	146
	Granulometry: correspondences between different standards	146
GLOBAL INDEX	Search by keywords	182 > 183
COS	Conditions of sale	184 > 185



MASTERING LAPPING & POLISHING IN PRODUCTION AND MAINTENANCE

SINGLE AND DOUBLE PLATE LAPPING POLISHING

The guarantee of repeatable lapping and polishing operations requires the use of modular or customized machines. The equipment, accessories and options can be selected upstream by the customer's R&D team or be subject to adjustments or recommendations by the LAM PLAN team.



Integrated modem
for remote maintenance



Wireless stock removal
measuring system

Production data acquisition
and integration into
the **INDUSTRY 4.0**
environment



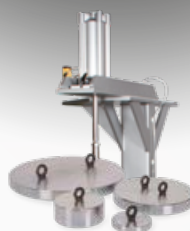
Dosing and dispensing units:
//Diamond //Conventional abrasive



Carriers



Conditioning rings:
//Cast iron //Ceramic //PVC



Pressure systems:
//Weight //Pneumatic
//Weight compensation



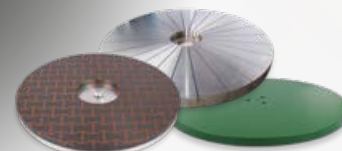
Maintaining the plate's geometry
and surfacing: //Autoplan //Diabloc //Flatness gauge



Temperature
control system



Customized Pads
and FAS® coating



Plates: //Cast iron and composite
//FAS and magnetic



Safety devices



Special machines
custom development
multi-step set

AN OFFER COVERING ALL MARKET NEEDS

LAPPING

The lapping process consists in obtaining a flatness and/or a specific roughness for the finishing of parts for production or maintenance work.

The surface finish obtained on a cast iron plate with conventional abrasives is in the range of $0.4 \mu\text{m Ra}$ with a matt aspect.

With a composite plate and a diamond abrasive, a Ra of $0.07 \mu\text{m}$ and a shiny aspect can be achieved.

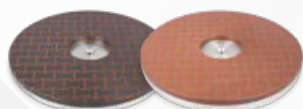
Diamond plates
DIALAM®



Cast iron plates



Patented New Lam M'M®
and EVOLAM® composites
plates



Expandable rods



New Lam M'M®
composite rods



NEOLAP® diamond
liquids and
BioDIAMANT® pastes



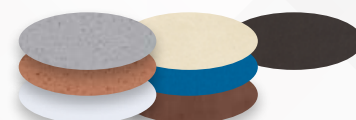
LAQUA LAM® abrasive
liquids and pastes
(SiC , Al_2O_3 , B_4C , CeO_2)



POLISHING SUPER FINISHING

The polishing and surface finishing operations need to meet technical, dimensional and aesthetic requirements. The surface finish obtained is characterized by a low roughness $0.01 \mu\text{m Ra}$, a brightness which is subjected to visual and/or microscopic control. Due to the diversity of the materials encountered, the surface finish of the raw parts and the result to be sought, the superfinishing requires extremely varied preparation techniques which make use of the full range of LAM PLAN know-how.

TOUCHLAM®
polishing pads:
polyurethane, woven,
non-woven, flocked,
compressed



Diamond abrasive films
Alumine abrasive films



Abrasive preparations
ECO® , NEODIA®,
NEOLAP®, BioDIAMANT®
M.M. Series



Colloidal silicas



Super finishing liquids
ALPLAN, L1, L2
and FINAL



EQUIPMENT

LAPPING & POLISHING MACHINES

Machine capacities

LAM PLAN lapping and polishing machines have been developed and perfected with LAM PLAN M'M' patented technology. They respond to all market requirements which require the obtention of high quality polished surfaces or flatnesses under one micron.

The wide range of the machine versions in this catalogue, will enable you to treat pieces from micro-mechanic up to a seal part measuring several decimetres. Linked to our consumables range, you will be assured of repeatable results on all industrial materials.

SIMPLE FACE LAPPING MACHINE CAPACITIES

Number of parts per ring.

Part Ø (mm)	Number of parts							
	M.M.8400	M.M.9480 S	M.M.8600	M.M.9700 E/S/SHP	M.M.9100 E/S	M.M.9100 EC	M.M.9120 E/S	M.M.9150 E/S
Ø 5	170	230	320	362				
Ø 10	67	95	150	160	225	225		
Ø 20	20	30	53	67	105	105	175	263
Ø 30	8	19	25	32	63	63	97	145
Ø 40	6	11	18	23	42	42	60	90
Ø 50	4	6	10	16	26	26	33	54
Ø 70	1	3	6	7	16	16	24	29
Ø 100	1	1	3	4	7	7	14	18
Ø 130	1	1	1	2	5	5	7	10
Ø 160		1	1	1	3	3	5	7
Ø 210			1	1	1	1	3	4
Ø 290					1	1	1	2
Ø 350					1	1	1	1
Ø 450							1	1
Ø 480								1
Ø 580								1

DOUBLE-SIDE LAPPING MACHINE CAPACITIES

Number of parts per satellite.

Part Ø (mm)	Number of parts	
	M.M.2380	Masterlam EVOLUTION
Ø 5	180	46
Ø 10	70	18
Ø 15	30	8
Ø 20	20	4

LAM PLAN lapping and polishing machines have been developed and perfected with LAM PLAN M'M' patented technology. They respond to all market requirements which require the obtention of high quality polished surfaces or flatnesses under one micron.

The wide range of the versions of machines in this catalogue, will enable you to treat pieces from micro-mechanic up to a seal part measuring several decimetres.

LAPPING & POLISHING MACHINES

M.M.8400

NEW

The M.M.8400 and M.M.8600 machines are both lapping and polishing equipment which enable you to integrate a means of flat surface finishing into your workshop, at a reasonable price.

Their compact size and ergonomic controls facilitate their installation and use. The simple tried and tested design, equipped with medium dimension plates, enables you to cost effectively produce small runs.

Equipped with either a cast iron plate, DIALAM®, LAM PLAN M'M' or FAS®, this range of machines lets you achieve any type of surface finish defined by your specification (e.g. lapping, stock removal, grinding, polishing etc.)

Lapping machines M.M.8400 and M.M.8600 are also perfectly suited to your maintenance operations on all seal parts (e.g. safety valves or small mechanical parts lapping).

The process is controlled via a touchscreen, which ensures good ergonomic and intuitive use. This range of machines also gives you the possibility of saving programmes, assuring repeatability of lapping/polishing processes implemented in your workshops.

This range of machines is compatible with the new LAM PLAN 709, 710, and 719 distribution systems managed directly from the machine's control panel.



M.M. 8400

Variable production of small parts:
Ø 5 to 130 mm



M.M.8400 equipped with the dosing unit M.M.709

Options

Support cabinet height 73 cm, 1 door and 2 compartments	10 M8400 00
MESUREO Stock removal measurement	10 84003 00

Technical data	M.M.8400
Plate Ø	381 mm
Inner ring Ø	138 mm
Capacity per ring	1 part Ø130 mm or 170 parts Ø 5 mm
Number of rings	3
Electric power supply	230 V single-phase
Motor Power	0.37 kW
Control	Touch screen 3,5 inches
Plate rotation speed	From 30 to 90 rpm
Dimensions (W x D x H)	625 x 725 x 450 mm
Weight (without plate)	70 kg
Abrasive distribution system	Included - Type depending on the plate
Reference	10 08400 00



Support cabinet

Available equipment

These machines can be equipped with all LAM PLAN plates.

The various accessories offered (distribution unit, FAS® plates, polishing cloths, etc) enable adaption of the basic machine for any specific operations (micro-mechanic, watchmaking, electronic, etc).



MESUREO

Measurement of removal of material: ref. 10 84003 00

A system enabling obtention of flat surfaces at less than one micron, combined with a parallelism of quality between the lapped face and a reference.

The MESUREO is comprised of a perfectly flat pressure disc, which is able to transpose on a vertical axis, therefore producing pressure on the opposite face of the surface to be lapped.

The pressure plate is guided by a high precision ball bearing socket. Also, at the end of the polishing cycle, the parts contained by this tool will have a parallelism inferior to 5 microns.

The pressure surface is ceramic, assuring a long life, with no risk of metallic contamination.

Finally, this tool is equipped with a wireless sensor, allowing visualisation of material removal in real time on a PC placed next to the lapping machine to which this device is connected. The target dimension can be programmed. Therefore, the operator, via an intuitive colour range on the monitor, can instantly visualise whether or not the parts are within the defined thickness tolerance.

Example of applications for M.M.8400: lapping of impressions for stamping



Mixing plate



Watch parts polishing, mounted on a bracket



Lapping of impressions for stamping

M.M.8600

The M.M.8600 is a very competitive machine which is suitable for maintenance procedures or for one-off or reduced production runs.

Its Ø 600mm plate enables you to obtain any level in terms of geometry or surfacing.

The M.M.8600 is compatible with all lapping and polishing supports as well as all LAM PLAN distributions systems.



M.M. 8600

Moderate production of parts:
Ø 5 to 210 mm

Technical data	M.M.8600
Plate Ø	610 mm
Inner ring Ø	248 mm
Capacity per ring	1 part Ø210 mm or 320 parts Ø 5 mm
Number of rings	3
Electric power supply	230 V single-phase
Motor Power	2.2 kW
Control	Touch screen 3,5 inches
Plate rotation speed	From 30 to 90 rpm
Dimensions (W x D x H)	1150 x 1150 x 1000 mm
Weight (without plate)	400 kg
Abrasive distribution system	Included - Type depending on the plate
Reference	10 08601 00

LAPPING & POLISHING MACHINES

M.M.9480**NEW****M.M.9480 S VERSION**

The M.M.9480 S is the new 9000 series small diameter flat lapping machine.

This Ø 480 mm lapping machine has all the technical solutions of the large capacity models. Therefore, it is particularly robust and stable.

The support plate rests on a trust ball bearing, providing strong stability. The gear motor is protected even in high pressure conditions.

Fully equipped in its standard version, it has an electronically controlled 3 cylinder arm.

The machine's smaller size makes it easier for the operator to manipulate all the accessories, such as changing the plate or loading and unloading the rings.

All basic functions of this lapping machine built for production are integrated in the 5.7" touchscreen in an intuitive interface based on icons. This allows you to control all distributing units of the LAM PLAN range and to save 12 programmes. A modem is integrated in the machine in order to carry out remote maintenance.



Technical data	M.M.9480 S version
Plate Ø	480 mm
Inner ring Ø	182 mm
Capacity per ring	1 part Ø 160 mm or 95 parts Ø 10 mm
Number of rings	3
Electric power supply	230 V monophasé
Motor Power	1.5 kW
Pressure application system	3 pneumatic cylinders
Pressure	10 to 600 N
Control	Touch screen 5,7 inches
Plate rotation speed	From 15 to 90 tr/min
Dimensions (W x H x D)	1160 x 860 x 1620 mm
Weight (without plate)	300 kg
Abrasive distribution system	Included - See specific table
Reference	10 94805 00

Options for M.M.9480 S

Flatness gauge for checking the flatness of the lapping plate	08 00899 00
Level sensors for diamond liquid and lubricating fluid	08 90001 00

**M.M. 9480**

**Intensive production of parts :
Ø 5 to 160 mm**



Particularly suitable for maintenance workshops, production of small parts and finishing process on high end watchmaking parts.

It is a compact piece of equipment of the highest quality, which responds to the highest finishing requirements as well as intensive production.

The M.M.9480 S is also compatible with the AUTOPLAN system for plate flatness reconditioning.

AUTOPLAN system: flatness reconditioning and grooving of the plate.

The AUTOPLAN system enables effective management of plate flatness and grooving. It is positioned and dismantled in a few minutes thanks to the dedicated fixation points integrated in the machine.

VERSION M.M.9380 S

Also available with a Ø 380 mm plate - M.M.9380 S

10 93805 00



M.M.9700

NEW

In order to respond to the most demanding specifications in terms of surface flatness and process repeatability, LAM PLAN has developed a new series of M.M.9000 machines, of which the M.M.9700 is the mid-range machine.

Fitted with a Ø 700 mm lapping plate, this machine has a new, highly intuitive touchscreen, enabling the user to quickly grasp the operation of the machine.

From a mechanical viewpoint, a large dimension thrust ball bearing is inserted under the machine's basic plate. This mechanism guarantees plate stability, even under a heavy load. This new concept also enables reduced demand on the gear motor group, assuring greater longevity of the equipment. Machine safety has also been improved with anti-pinch devices connected to the retaining arm castors of the conditioning rings.

Finally, the machine's new electrical design, allows easy development of machine functions and in response to your future needs, with, for example, later integration of the AUTOPLAN system, or different types of LAM PLAN distribution systems.

Therefore, this machine is intended for use in all high production workshops.



M.M. 9700

**Intensive production for parts:
Ø 5 to 210 mm**

AUTOPLAN system: flatness reconditioning and grooving of the plate.



AUTOPLAN system enables to manage efficiently the flatness and the grooving of the plate. It is installable and removable in a few minutes thanks to fixation points integrated to the machine.



Technical data	M.M.9700 E version
Plate Ø	700 mm
Inner ring Ø	274 mm
Capacity per ring	1 part Ø 210 mm or 160 parts Ø 10 mm
Number of rings	3
Electric power supply	400 V - 50 Hz - 3 phases + earth + neutral
Motor Power	2.2 kW
Pressure application system	3 weights of 13 kg included
Control	Touch screen 5,7 inches
Plate rotation speed	From 30 to 90 rpm
Dimensions (W x H x D)	1500 x 1300 x 1450 mm
Weight (without plate)	800 kg
Abrasive distribution system	Included - See specific table
Reference	10 9700E 00

Options for M.M.9700 E

Level sensors for diamond liquid and lubricating fluid	08 90001 00
Flatness gauge for checking the flatness of the lapping plate	08 00894 00

LAPPING & POLISHING MACHINES

M.M.9700 S VERSION**NEW**

The M.M.9700 S version of the machine integrates a pneumatic pressure system which is controlled from the general interface.

Comprising three double effect cylinders and three ball mounted aluminium discs, this device negates handling weights. Loading and unloading times are optimised and handling effort is reduced.

Pressure can be adjusted between 0 and 700 N.



What changes	M.M.9700 S version
Pressure application system	3 double effect cylinders
Pressure	45 to 1000 N
Dimensions (W x H x D)	1500 x 1500 x 1900 mm
Weight (without plate)	1 000 kg
Reference	10 9700S 00

Options for M.M.9700 S

Level sensors for diamond liquid and lubricating fluid	08 90001 00
Refrigeration and heating unit P803, for lapping plate	10 80003 90
Flatness gauge for checking the flatness of the lapping plate	08 00894 00

EQUIPMENT

All M.M.9000 series machines are fitted with an integrated modem as standard in order to carry out remote maintenance operations.

They are compatible with dedicated LAM PLAN distribution systems and can be optionally fitted with an abrasive and lubricant level sensor.

Production data collection in the form of CSV files is possible via the USB interface.

M.M.9700 S HP VERSION (HIGH POWER)**NEW**

A machine specially developed to answer polishing needs in production of parts requiring high pressure, associated with high speed plate rotation and use of specific abrasives.

The pressure system and motorisation have been adapted to the specific requirements of heavy loads and high torque.

The use of stainless steel in the machine's production, is generalised to resist certain relatively aggressive abrasive types. The machine is equipped with protective casing around the work zone, to avoid high speed projection of abrasives. It is removable and motorised.

The M.M.9700 S HP can be fitted with distribution systems suited to the required abrasives, for example high flow peristaltic pumps.



What changes	M.M.9700 S HP version (high power)
Motor Power	7,5 kW
Pressure application system	3 double effect cylinders
Pressure	100 to 2500 N
Plate rotation speed	From 15 to 125 tr/mn
Dimensions (W x H x D)	1540 x 1200 x 1800 mm
Weight (without plate)	980 kg
Reference	10 9700SP 00

Options M.M.9700 S HP version

Refrigeration and heating unit P803, for lapping plate	10 80003 90
Flatness gauge for checking the flatness of the lapping plate	08 00894 00





M.M.9100

NEW

Lapping techniques with heavy loads and intensive use require a suitably durable material. This is offered by the LAM PLAN mid and large diameter range of machines.

The rigidity of their structures and the gear motor group torque are especially suited to the high abrasion of LAM PLAN lapping plates.

The number of peripheral devices available make the machines particularly versatile and effective. Specific equipment can be made available according to requirements.



M.M. 9100

Intensive production for parts:
Ø 10 à 350 mm

AUTOPLAN system: flatness reconditioning and grooving of the plate.



AUTOPLAN system enables to manage efficiently the flatness and the grooving of the plate. It is installable and removable in a few minutes thanks to fixation points integrated to the machine.

M.M.9100 S VERSION

NEW

Version with pneumatic pressure comprising three double effect cylinders mounted on a fixed arm.



Technical data	M.M.9100 E version
Plate Ø	1 000 mm
Inner ring Ø	406 mm
Capacity per ring	1 part Ø 350 mm or 225 pièces Ø 10 mm
Number of rings	3
Electric power supply	400 V - 50 Hz - 3 phases + earth + neutral
Motor Power	5,5 kW
Pressure application system	3 weights of 28 kg included
Control	Touch screen 5,7 inches
Plate rotation speed	From 15 to 50 tr/min
Dimensions (W x H x D)	1900 x 1800 x 1500 mm
Weight (without plate)	1 000 kg
Abrasive distribution system	Included - see specific table
Reference	109100E 00

What changes	M.M.9100 S version
Pressure application system	3 double effect cylinders
Pressure	10 to 2500 N
Dimensions (W x H x D)	1900 x 1800 x 2300 mm
Weight (without plate)	1 400 kg
Reference	109100S 00

Options for M.M.9100 S

Level sensors for diamond liquid and lubricating fluid	08 90001 00
Refrigeration and heating unit P803, for lapping plate	10 80003 90
Flatness gauge for checking the flatness of the lapping plate	08 00893 00

LAPPING & POLISHING MACHINES

M.M.9100 SR VERSION**NEW**

The S, S HP and EC type lapping machines are equipped with pneumatic pressure systems of different powers. The cylinders are installed on fixed or mobile arms. On the SR version the arm turns around its 180° axis thanks to a motorised crown and is controlled by the man/machine interface. This facilitates access to the work zone, plate changing and allows passage of a robotised loading/unloading arm.

**What changes** **M.M.9100 SR version**

Pressure application system	3 pneumatic cylinders, rotating arm motorized
Dimensions (W x H x D)	1900 x 1900 x 2300 mm
Weight (without plate)	1 500 kg
Reference	10 9100SR 00

Options for M.M.9100 SR and EC

Level sensors for diamond liquid and lubricating fluid	08 90001 00
Refrigeration and heating unit P803, for lapping plate	10 80003 90
Flatness gauge for checking the flatness of the lapping plate	08 00893 00

M.M.9100 EC VERSION**NEW**

If the part which has to be worked is too heavy regarding the pressure prescription required for a lapping operation, lapping machine EC will have to be used. This machine's version is equipped with a pneumatic bracket which will unballast the lapping plate of the workpart weight, and provide an optimal pressure for the lapping process.

**What changes** **M.M.9100 EC version**

Load compensation system	1 pneumatic cylinder, rotating arm motorized
Compensation applicable	10 to 2500 N
Dimensions (W x H x D)	1900 x 1900 x 2300 mm
Weight (without plate)	1450 kg
Reference	10 9100EC 00

EQUIPMENT

All M.M.9000 series machines are fitted with an integrated modem as standard in order to carry out remote maintenance operations.

They are compatible with dedicated LAM PLAN distribution systems and can be optionally fitted with an abrasive and lubricant level sensor.

Production data collection in the form of CSV files is possible via the USB interface.

M.M.9120 et M.M.9150

Based on the M.M.9000 series technology, we offer versions of our machines with plates between Ø 1200 mm and 1500 mm for maintenance operations on large parts or for production applications. A technical study and specifications will be provided on demand.

Available versions:

M.M.9120 E	Ø 1200 mm, without pressure system
M.M.9120 S	Ø 1200 mm, 3 pneumatic pressure cylinders
M.M.9120 SR	Ø 1200 mm, 3 pneumatic pressure cylinders on a motorized rotating arm
M.M.9120 S4R	Ø 1200 mm, 4 rings et 4 pneumatic pressure cylinders on a motorized rotating arm
M.M.9150 E	Ø 1500 mm, without pressure system
M.M.9150 S	Ø 1500 mm, 3 pneumatic pressure cylinders

Referent in the domain of production lapping/polishing and material finishing, LAM PLAN has also been manufacturing and selling consumables dedicated to double-side polishing applications with the range of ECOA® liquids and TOUCHLAM® supports. In continuity of our approach in proposing complete process: products/machines/methods to our customers, we have developed a double-side range of machines to make you benefit from LAM PLAN's experience obtained over the past 60 years.



MASTERLAM®

Small series & double-side prototyping for parts: Ø 5 to 20 mm

A security housing is proposed in option. This entirely transparent cover assures a protection of the moving parts without distorting the surveillance of the operator during the cycle. Once open, the work space becomes perfectly accessible.



The MASTERLAM® Evolution can be equipped with the MASTERLAM® series secured transparent housing.

Lifting and lowering of the superior plate with pneumatic cylinder



MASTERLAM® Evolution

In order to answer to double-side polishing issues in small series or development phase, LAM PLAN proposes the MASTERLAM® Evolution, an original and innovating approach for double-side polishing.

The MASTERLAM® Evolution is a compact and economical solution for double-side polishing, to realise high quality polishing on any kind of small parts. This equipment is particularly well-adjusted for the finishing of watch components in small series, pre-series or prototyping.

Description

The MASTERLAM® Evolution is based on a simple kinematic proposing 2 movements: clock-wise or anti-clockwise rotation of the superior plate and the main cogwheel with speed programming. These 2 movements will allow you to respond to most of your needs in terms of polishing of small series of all types of materials.

Touch screen control panel

The 5.7 inches' touch screen in this machine will enable you to manage all the settings: cycle time, rotational speed, rotation movement, pressure during cycle and abrasives distribution sequences. This intuitive screen is also offering you the possibility to save more than 300 operating ranges. A water rinse phase is also possible at the end of the cycle.

A well-equipped and safe machine

The MASTERLAM® Evolution outer ring gear is made of 316 L stainless steel, assuring a durability of the moving parts. The machine is also equipped with two FAS® plates facilitating the setting up of the polishing cloths.

Technical data	MASTERLAM® Evolution
Plate Capacity	7 carriers track Ø 250 mm ext. Ø 130 mm int.
Useful capacity	7 satellites Ø 65 mm
Superior plate rotational speed	20 to 150 rpm; Bidirectional rotation
Cogwheel rotational speed	20 to 150 rpm; Bidirectional rotation
Cogwheel motor power	0.75 kW
Superior plate motor power	0.2 kW
Pressure	5 to 400 N
Required energies	230 V-50 Hz single-phase Compressed air 6 bars filtered 10 µm
Dimensions (WxHxD)	550 x 670 x 670 mm
Total power	2.5 kW
Noise level	< 80 db at 1 metre away
Weight	95 kg
Reference	60ML1EVO00

LAPPING & POLISHING MACHINES

M.M.2380

Developed on well-known and proven technological bases, this equipment will perfectly respond to your needs in terms of double-side lapping and polishing of parts with a diameter between 5 and 30 mm.

Capable of integrating LAM PLAN lapping plates, this machine will be the solution when obtaining a geometry and ratings dimensions are key factors. In parallel, the possibility of associating the M.M.2380 to polishing supports will enable you to answer your needs when the quality of the polished surface is the decisive criteria.

Description

The M.M.2380 is built on a welded and bolted steel frame to guarantee stable and repeatable results. The plates (inferior and superior) and the central cog drive is assured by "brushless" motors, allowing to regulate the speed and to choose the rotational direction. The plates have a 380 mm exterior diameter and allow the use of 5 carriers with a usefull capacity of Ø 125 mm.

Touch screen control panel

All the machine settings are controlled through a large 10.5 inches touch screen. The design of the Man-machine interface assures an efficient equipment handling. This screen will show the pressure applied on the parts and the motor torque in real time. The M.M.2380 can also be endowed with a "stock removal measurement" system. Apart from the cycle time, the machine automatically stops its cycle when the target thickness of the parts is reached.

User-friendly device

The M.M.2380 can be equipped with a system enabling a rapid setting of the carriers. A "rack" system enables to store many satellites filled by the operator in masked time. The ring gear has a removable part to facilitate loading and unloading the carriers. The operator can proceed to a transfer of carriers by sliding them on a thin magnetic slab.

This device can be fitted with a ring gear or a pin ring permitting the use of carriers you would already have for similar applications.

Finally, a series of associated accessories has been developed by LAM PLAN for this machine. The FIXPAD® system associated with the FAS® will facilitate the shift of polishing pads. Moreover, LAM PLAN proposes its range of TOUCHLAM® discs, specially adapted to the superior and inferior plates of the machine.



M.M. 2380

Double-side production for parts:
Ø 5 to 30 mm



Technical data	M.M.2380
Plate Capacity	5 carriers track Ø 380 mm ext. / Ø 153 mm int.
Useful capacity	5 carriers Ø 125 mm
Superior plate rotational speed	0 to 160 rpm; Bidirectional rotation
Gearwheel rotational speed	0 to 80 rpm; Bidirectional rotation
Motors power (plates and gearwheel)	0.75 kW for each motor
Required energies	400 V-50 Hz three-phase + neutral. Compressed air 6 bars filtered 10 µm
Dimensions W x H x D	960 x 2030 x 780 mm Working table height 1040 mm
Total power	2.5 kW
Noise level	<80 dB at 1 meter away
Weight	650 kg
Reference	10 23800 00

Automatic distribution system

The automatic distribution system ensures precise and regular distribution of products. It's the solution for abrasive film control and lubrication. The yield of removed material and temperature control depend directly on the quality and constancy of the abrasive film.

The various adjustments, distribution intervals, spraying times, head positioning, enable homogeneous and reproduceable polishing results, as well as economising on consumables.

The 719 and MM 809B distribution systems are venturi type systems which allow product to be sprayed when the 709, 710 and MM909 systems are equipped with peristaltic pumps which deliver products drop by drop or flowing.

The venturi system is reserved for low viscosity and high decanting products, for instance, certain oil-based products. The peristaltic system is more versatile and has the advantage of not generating mist.

The high volume 8000 series distribution systems are those based on vortex pump systems for the 8003 and 8007 models and peristaltic high flow for the 8017 model, suitable for high volume products generally used in production applications. They are primarily reserved for SiC abrasives which have a high tendency to settle.



Dosing unit dedicated to LAM PLAN machines

DOSING UNIT TYPE 709

NEW

Peristaltic model for WATER-BASED abrasives.

Reference	08 01709 00
Capacity	2 x 500 cc including 1 with agitator
Electric power supply	220V single phase + 24 V input for control
Pump flow rate	0,5 ml/sec.
Distribution system	Nozzles not included, see machine recommendation.

DOSING UNIT TYPE 710

NEW

Peristaltic model for OIL-BASED abrasives.

Reference	08 01710 00
Capacity	2 x 500 cc including 1 with agitator
Electric power supply	220V single phase + 24 V input for control
Pump flow rate	0,5 ml/sec.
Distribution system	Nozzles not included, see machine recommendation.

DOSING UNIT TYPE 719

NEW

Venturi model for OIL-BASED abrasives with settling tendency.

Reference	08 01719 00
Capacity	2 x 500 cc including 1 with agitator
Electric power supply	220V single phase + 24 V input for control
Pump flow rate	N.C.
Distribution system	Nozzles not included, see machine recommendation.

OPTIONAL LEVEL SENSORS

Set of 2 level sensors for diamond liquid and lubricant.

Reference	08 90001 00
-----------	-------------

ACCESSORIES

Autonomous dosing unit

The 909 and 809 independent distribution systems enable you to easily equip any type of machine with an efficient distribution system. It's the ideal solution to retrofit or improve your equipment.

DOSING UNIT M.M.909 - PERISTALTIC

Distribution system	3 standard peristaltic pumps With an outlet to drive an external pump
Control	Touch screen
Electrical power supply	220 V single-phase - 50 Hz
Dosing machine communication	1 x 24 V input for machine servoing

Designation	Qty.		Ref.	€
DOSING UNIT M.M.909 ADAPTABLE VERSION With a manual start/stop button	1	with 3 glass bottles 500 cc	08 03799 00	2660,20
Stirrer	1	for glass bottle 500 cc	08 02816 00	288,00



DOSING UNIT M.M.909 HV - PERISTALTIC

Distribution system	2 standard peristaltic pumps, 1 large flow pump for high viscosity liquids and an outlet to drive an external pump
Control	Touch screen
Electrical power supply	220 V single-phase - 50 Hz
Dosing machine communication	1 x 24 V input for machine servoing

Designation	Qty.		Ref.	€
DOSING UNIT M.M.909 HV	1	with 3 glass bottles 500 cc	08 00799200	2673,10
Stirrer	1	for glass bottle 500 cc	08 02816 00	288,00



Touch screen interface

DOSING UNIT M.M.809B - VENTURI

Distribution system	- Distribution of 2 different liquids by Venturi system - 1 liquid compartment with an agitator
Control	By analog buttons and timers
Compressed air feed system	2 bars
Electrical power supply	220 V single-phase - 50 Hz
Dosing machine communication	1 x 220 V input for machine servoing

Designation	Qty.		Ref.	€
Dosing unit M.M.809B	1	with 2 glass bottles 500 cc	08 01809 10	2403,10



M.M.809B dosing unit

Adaptable automated dosing

With the DOSER 910 and 910.2 you can equip all types of machines with a programmable and autonomous dosing system compatible with oil-based products and all types of lubricating fluids.

DOSING UNIT TYPE 910

NEW

Capacity	2 x 500 cc, 1 with agitator 2 peristaltic pumps
Electric power supply	220V single-phase
Distribution system	Nozzles not included

Designation	Qty.	Ref.	€
For machines from Ø 380 to 700 mm	1	08 00799 30	2 535,00

DOSING UNIT TYPE 910.2

NEW

Capacity	4 x 500 cc bottles with 2 stirrers 4 peristaltic pumps
Electric power supply	220V single-phase
Distribution system	Nozzles not included

Designation	Qty.	Ref.	€
For machines from Ø 380 to 700 mm	1	08 00799 40	4 004,00

Mixing and distribution systems

These distribution systems are suitable for any type of abrasive immersed in liquid whatever its composition. They enable the resolution of settling problems and guarantee regular and repetitive results.

Contact us if you would like to connect our mixing distributor to your lapping machine.

DOSING PUMP TYPE 8017

Controlled by the machine interface or by integrated sequencer for the autonomous version.

Pump type	1 peristaltic pump + mixing system
Bowl	Useful volume 7 litres
Electrical power supply	220V single-phase
Pump flow rate	3,5 ml/second
Dimensions	H 430 mm X Ø ground 250 mm
Distribution system	Nozzle 813 on mobile stand sold separately

Designation	Qty.	Capacity	Ref.	€
Dosing pump type 8017 for LAM PLAN machine	1	7 litres	08 08017 00	1 393,60
Independent dosing pump type 8017	1	7 litres	08 18017 00	1 456,90



ACCESSORIES

DOSING PUMP TYPE 8003

Controlled by the machine interface or by integrated sequencer for the autonomous version.

Pump type	1 vortex pump + mixing system
Bowl	Useful volume of 50 litres, on casters, drain valve
Electrical power supply	220V single-phase
Pump flow rate	50 litres/minute
Dimensions	H 870 mm X Ø ground 600 mm
Distribution system	3 swivelling outputs. Solenoid valve 3 tracks

Designation	Qty.	Capacity	Ref.	€
Dosing pump type 8003 for LAM PLAN machine	1	50 litres	W000 08003	3 544,20
Indepedent dosing pump type 8003	1	50 litres	W001 08003	3 544,20
Optional low abrasive warning system for 9000 series machines	1	-	08 90002 00	294,00

DOSING PUMP TYPE 8007

Controlled by the machine interface or by integrated sequencer for the autonomous version.

Pump type	1 vortex pump
Bowl	Useful volume 7 litres
Electrical power supply	220V single-phase
Pump flow rate	25 litres/minute
Dimensions	H 420 mm X Ø ground 250 mm
Distribution system	3 swivelling outputs. Solenoid valve 3 tracks

Designation	Qty.	Capacity	Ref.	€
Dosing pump type 8007 for LAM PLAN machine	1	7 litres	W000 08007	2 189,00
Indepedent dosing pump type 8007	1	7 litres	W001 08007	2 519,00

RANGE OF LAM PLAN DOSING UNITS

DOSING UNIT Designation	Pump type	Distribution system	Number of pumps	Capacities	Continuous flow per pump	Compatible products	Agitating	Dedicated LAM PLAN Version	Autonomous version
709	Peristaltic	Drip	2	2 x 500 cc	0,5 ml/sec.	Water base	Yes / 1 bottle	080170900	n.c.**
710	Peristaltic	Drip	2	2 x 500 cc	0,5 ml/sec.	Oil base	Yes / 1 bottle	080171000	n.c.
719	Venturi	Spray	2	2 x 500 cc	n.c.	Oil base + decantation	Yes / 1 bottle	080171900	n.c.
M.M.909	Peristaltic	Drip	3	3 x 500 cc	0,5 ml/sec.	Water base	Option	n.c.	08 03799 00
M.M.909 HV	Peristaltic	Drip	2 standards 1 large flow	3 x 500 cc	0,5 ml/sec. 3,5 ml/sec.	Water base + high viscosity	Option	n.c.	08 00799200
M.M.809 B	Venturi	Spray	2	2 x 500 cc	n.c.	All	Yes / 1 bottle	n.c.	08 01809 10
8017	Peristaltic	By casting	1	7 L	3,5 ml/sec.	All	Yes / pale	080801700	08 18017 00
8003	Vortex	By casting	1	50 L	50 L/min.	All	Yes / pale	W00008003	W001 08003
8007	Vortex	By casting	1	7 L	25 L/min.	All	No	W00008007	W001 08007
M.M.910	Peristaltic	Drip	2	2 x 500 cc	0,5 ml/sec.	Oil base	Yes / 1 bottle	n.c.	08 00799 30
M.M.910.2	Peristaltic	Drip	4	4 x 500 cc	0,5 ml/sec.	Oil base	Yes / 2 bottles	n.c.	08 00799 40

*depends on the viscosity of the liquid used

**non compatible



DOSING UNITS, RECOMMENDATIONS

PRODUCTS	LAPPING MACHINES	DOSING UNIT for LAM PLAN machines	DOSING UNIT for other machines	Pump type	NOZZLES	Ref NOZZLES
WATER BASE	Ø 381 to 700 mm	709		Peristaltic	Nozzle 813 on movable foot	08 00813 00
			M.M.909	Peristaltic	Nozzle 811 on movable foot	08 00811 00
		719	M.M.809B	Venturi	Nozzle 815 on movable foot	08 00815 20
	Ø 910 to 1000 mm	2 x 709	M.M.909	Peristaltic	2 x nozzle 811 L on movable foot	08 00811 10
		2 x 719	M.M.809B	Venturi	2 x nozzle 815 L on movable foot	08 00815 40
	Ø 1200 to 1500 mm	2 x 709	M.M.909	Peristaltic	2 x nozzle 811 L on movable foot	08 00811 10
		2 x 719	2 x M.M.809B	Venturi	2 x nozzle 815 XL on movable foot	08 00815 60
OIL BASE AND EMULSION	Ø 381 to 700 mm	710	M.M.910	Peristaltic	Nozzle 813 H on movable foot	08 00813 20
		719	M.M.809B	Venturi	Nozzle 815 on movable foot	08 00815 20
	Ø 910 to 1000 mm	2 x 710	M.M.910.2	Peristaltic	2 x nozzle 811 HL on movable foot	08 00811 20
		2 x 719	2 x M.M.809B	Venturi	2 x nozzle 815 L on movable foot	08 00815 40
	Ø 1200 to 1500 mm	2 x 710	M.M.910.2	Peristaltic	2 x nozzle 811 HL on movable foot	08 00811 20
		2 x 719	2 x M.M.809B	Ventury	2 x nozzle 815 XL on movable foot	08 00815 60
AQUALAM COMPOSITE ABRASIVES	Ø 381 to 480 mm	M.M.8017	M.M.8017 autonomous	Peristaltic	Nozzle 813 on movable foot	08 00813 00
		M.M.8007	M.M.8007 autonomous	Vortex	Associated distribution system	System supplied with dosing unit
	Ø 600 to 1500 mm	M.M.8003	M.M.8003 autonomous	Vortex	Associated distribution system	System supplied with dosing unit
LAPPING OIL + POWDER	Ø 381 to 480 mm	M.M.8007	M.M.8007 autonomous	Vortex	Associated distribution system	System supplied with dosing unit
	Ø 600 to 1500 mm	M.M.8003	M.M.8003 autonomous	Vortex	Associated distribution system	System supplied with dosing unit



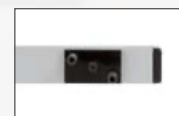
Nozzle 813 and 813H



Nozzle 811, 811 L and 811 HL



Nozzle 815, 815 L and 815 XL with anti-fog system



Distribution system for dosing unit type 8003 and 8007

ACCESSORIES

Consumables for dosing units

CONSUMABLES FOR M.M.709

Designation	Ref.	€
Versitec silicone hose Ø5-3 per metre - Water base	60 00271 90	5,00
Peristaltic pump body standard model	60 00667 90	25,00
Stirring paddle for dosing unit	08 00124 90	63,60

CONSUMABLES FOR M.M.710

Designation	Ref.	€
Hose D3.2 Yellow for - Oil base - Emulsion base	08 1050 10	9,80
Peristaltic Pump Oil Base	08 1050 07	170,00
Stirring paddle for dosing unit	08 00124 90	63,60

CONSUMABLES FOR M.M.719

Designation	Ref.	€
Flexible Crystal Hose Ø6 (venturi) per Meter - Oil and water base	60 00270 90	5,00
Stirring paddle for dosing unit	08 00124 90	63,60

CONSUMABLES FOR M.M.909

Designation	Ref.	€
Versitec silicone hose Ø5-3 per metre - Water base	60 00271 90	5,00
Peristaltic pump body standard model	60 00667 90	25,00
HV peristaltic pump body	60 00893 90	30,00
Versitec silicone hose Ø7-4 per metre	60 00272 90	5,00
Stirring paddle for dosing unit	08 00124 90	63,60

CONSUMABLES FOR M.M.809

Designation	Ref.	€
Tuyau Cristal Souple Ø6 (venturi) au Mètre - Base huile et eau	60 00270 90	5,00
Stirring paddle for dosing unit	08 00124 90	63,60

CONSUMABLES FOR M.M.8017

Designation	Ref.	€
HV peristaltic pump body - Water base	60 00893 90	30,00
Versitec silicone hose Ø7-4 per metre	60 00272 90	5,00

NOZZLES & GLASS BOTTLE

Designation	Qty.		Ref.	€
813	1	For peristaltic dosing units	08 00813 00	245,70
813 L	1		08 00813 10	295,30
813 H	1		08 00813 20	256,20
811 L	1		08 00811 10	295,30
811 HL	1		08 00811 20	311,90
815	1	For venturi dosing units	08 00815 20	289,50
815 L	1		08 00815 40	329,40
815 XL	1		08 00815 60	357,80
Glass bottle	2	500 cc	08 02804 00	15,20
Glass bottle / cap / hose	3	For 909 and 909 HV	08 01804 00	63,80

Cast iron conditioning rings

We carefully select special high quality cast iron for optimum, durable results. Suitable for all lapping machines, whatever the brand or size. Available from stock or produced to order.



Compatible machines	Ø rings	Ø in mm		Height mm	Weight kg	Ref.	€
		Ext.	Int.				1 piece
	14"	166	130	45,5	2,28	U166 A0355	#
MM 8400 (Ø 381 mm)	15"	178	140	45,5	2,97	U178 A0381	#
MM 9480 S (Ø 480 mm)	19"	218	182	45,5	4,20	U218 A0480	#
MM 8600 (Ø 610 mm)	24"	286	248	70	7,84	U286 A0610	#
MM 9700 (Ø 700 mm)	27"	315	275	70	9,24	U315 A0711	#
	36"	419	368	100	20,8	U419 A0914	#
MM 9100 (Ø 1000 mm)	40"	457	406	100	24	U457 A1000	#
MM 9120 (Ø 1200 mm)	48"	545	480	100	36,6	U545 A1219	#
MM 9120 (Ø 1200 mm)	(4x) 48"	510	432	125	41	U510 A1219	#
MM 9150 (Ø 1500 mm)	59"	685	605	125	55	U685 A1500	#

Prix sur demande / Prices on request / Preise auf Anfrage / Prezzi su richiesta

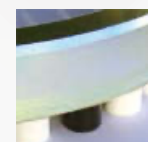
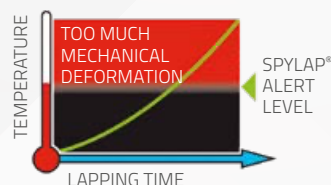
SPYLAP®



Ceramic conditioning rings with SPYLAP®

Prevent mechanical distortion problems. The ceramic rings enable you to preserve the flatness of the plate, to manage its heating, as well as limiting contamination thanks to the absence of graphite. The SPYLAP® sensor enables the user to visually prevent a significant mechanical distortion of the lapping (or polishing) support and of the part to be lapped. The SPYLAP® permanently monitors the temperature of the support and changes from black to red at a precisely predefined temperature.

Compatible machines	Ø rings	Ø in mm		Height mm	Weight kg	Ref.	€
		Ext.	Int.				1 piece
	12"	140	106	41	0,83	08 83062 10	259,60
MM 8400 (Ø 381 mm)	15"	182	140	41	2,42	08 83562 10	324,00
MM 9480 S (Ø 480 mm)	19"	224	182	43,5	3,20	08 94803 00	348,60
MM 8600 (Ø 610 mm)	24"	290	248	46	4,75	08 86562 10	359,20
MM 9700 (Ø 700 mm)	27"	317	275	51	5,83	08 87562 10	442,20
MM 9100 (Ø 1000 mm)	40"	450	406	81	15,60	08 81062 10	970,70
MM 9120 (Ø 1200 mm)	48"	544	480	81	24,31	08 81262 10	1 167,30



Standby



Alert

Plastic rings



Compatible machines	Ø rings	Ø in mm		Height mm	Weight kg	Ref.	€
		Ext.	Int.				1 piece
	12"	140	106	41	0,73	08 83012 00	273,00
MM 8400 (Ø 381 mm)	15"	182	140	41	2,13	08 83512 00	331,60
MM 9480 S (Ø 480 mm)	19"	224	183	43,5	2,84	09 94803 20	362,90
MM 8600 (Ø 610 mm)	24"	290	248	46	4,26	08 86512 00	397,80
MM 9700 (Ø 700 mm)	27"	317	275	51	5,32	08 87512 00	460,60
MM 9100 (Ø 1000 mm)	40"	450	406	81	14,75	08 87012 00	991,20
MM 9120 (Ø 1200 mm)	48"	544	480	81	22	08 87262 00	1 111,60

ACCESSORIES

Protection discs 881 and 883 series

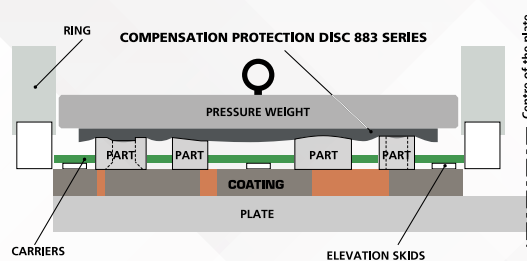
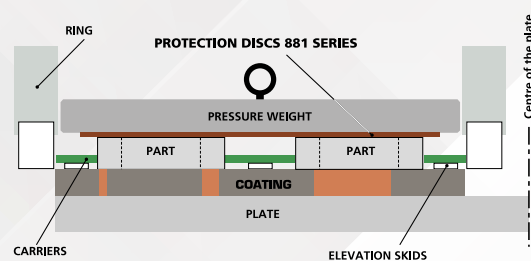
Designation	Qty.	Dim. (mm)	Ref.	€
Protection discs 881 series Thickness: 1.4 mm	10	138	08 83501 00	28,70
	10	180	08 94801 00	39,00
	10	245	08 86001 00	46,60
	10	275	08 87501 00	63,80
	10	406	08 81001 00	111,90
	10	480	08 81201 00	143,40
Compensation discs 883 series	3	138	08 83503 00	32,40
	3	180	08 94803 10	60,50
	3	245	08 86003 00	87,90
	3	275	08 87503 00	112,40
	3	406	08 81003 00	150,70
	3	480	08 81203 00	158,70



881 series



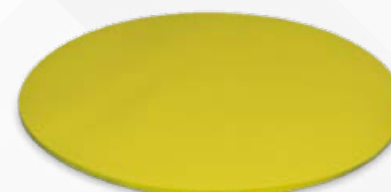
883 series



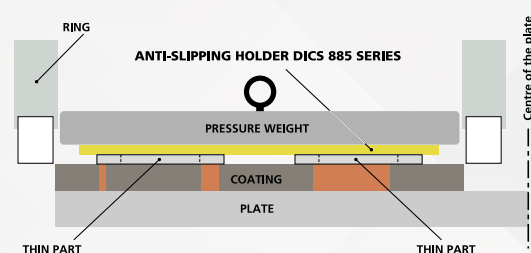
Holder discs 885 series

Anti-slipping holder disc for parts with a small, thickness 4 mm.

Designation	Qty.	Dim. (mm)	Ref.	€
Holder discs	3	138	08 83505 00	131,60
	3	180	08 94805 00	209,00
	3	245	08 86005 00	266,70
	3	275	08 87505 00	324,00
	3	406	08 81005 00	379,30
	3	480	08 81205 00	478,30

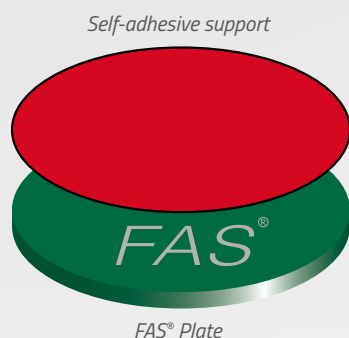


885 series



FAS[®] system

PLATES WITH ANTI-ADHESION COATING FOR SELF-ADHESIVE SUPPORT



Designation	Qty.	Ø in mm	Ref.	€
FAS [®] plate	1	381	09 FAS00 40	848,40
	1	400	09 FAS00 80	890,80
	1	480	09 FAS00 30	1 167,00
	1	610	09 FAS00 60	1 591,00
	1	700	09 FAS00 70	1 788,50

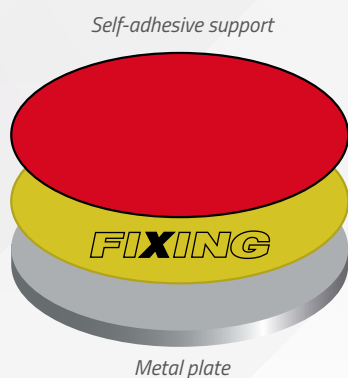
TREATMENT OF YOUR PLATES WITH THE FAS[®] COATING

Designation	Qty.	Ø in mm	Ref.	€
FAS [®] plate coating	1	80	09 FASOR 02	121,00
	1	220	09 FASOR 05	275,00
	1	250	09 FASOR 10	308,00
	1	300	09 FASOR 50	374,00
	1	381	09 FASOR 40	407,00
	1	400	09 FASOR 80	429,00
	1	480	09 FASOR 30	401,50
	1	500	09 FASOR 51	594,00
	1	520	09 FASOR 52	616,00
	1	610	09 FASOR 60	770,40
	1	700	09 FASOR 70	858,00
	1	910	09 FASOR 90	1 001,00
	1	1000	09 FASOR 100	1 094,50

Other diameters on request

FIXING[®] discs

Semi-flexible support disc: 1 self-adhesive side. Allow easy sticking and unsticking of large self-adhesive polishing supports.



Designation	Qty.	Ø in mm	Ref.	€
FIXING [®] discs	5	381	TFIX 603 80	332,60
	5	400	TFIX 604 00	348,80
	1	480	TFIX 604 80	101,90
	1	550	TFIX 605 50	135,30
	1	610	TFIX 606 10	159,60
	1	700	TFIX 607 00	187,00
	1	914	TFIX 609 14	236,60

ACCESSORIES

Specific carriers

CARRIERS SERIES 884 FOR SINGLE SIDE MACHINES

Easily usable plastic disc holding your parts during the lapping process. 3mm thick.
On demand, PMMA carriers are delivered with honeycomb cells according to the dimension of your parts.

Designation	Qty.	Dim. (mm)	Ref.	€
PVC carriers for the production of holding grids	3	138	08 83504 00	68,60
	3	180	08 94804 00	75,10
	3	245	08 86004 00	86,20
	3	275	08 87504 00	96,20
	3	406	08 81004 00	149,90
	3	480	08 81204 00	184,30
Skids	600	Ø 12	UPAT 012AC	69,10



CARRIERS FOR DOUBLE-SIDE MACHINES

The carriers are used to maintain the parts on the double-side machine. Their conception is realised according to the geometry of your parts or according to your drawings. Our carriers are available in a wide range of thickness, from a few millimetres to 200 µm.

Depending on your application and the nature of your parts, we propose our carriers in a large range of materials, such as stainless steel, blue steel (hardened until 600 Hv), glass fibre, aramid, PVC, epoxy,... For any double-side machine brand.

Designation	€
Epoxy carrier	#
PVC carrier	#
Metallic carrier	#

Prix sur demande / Prices on request / Preise auf Anfrage / Prezzi su richiesta

Avantages

- Excellent flatness and parallelism
- Quality of cuts
- Very low thickness dispersal
- Cuts atypical forms.

Exemples of application domain

- Optical
- Watchmaking
- Mechanic industry
- LED and semi-conductors.

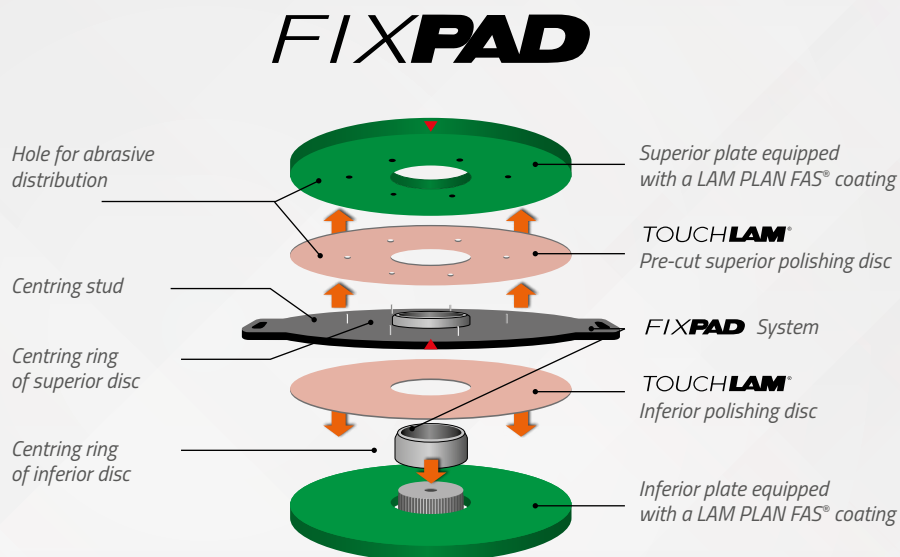


Fixpad® system

FIXPAD® is a tool that allows simple and fast positioning of polishing discs on the plates of double-side machines.

Developed by LAM PLAN, FIXPAD® allows you to stick the discs to the plate without trapping air bubbles and without folds. Due to its design and thanks to the pre-cut TOUCHLAM® discs, the installation of discs on the upper plates is carried out in just seconds. The FIXPAD® pins guide the positioning of the pad when inserted in the distribution holes of the upper plate. This tool will simplify the installation of polishing pads and will limit machine stoppage time.

Designation	Ref.	€
FIXPAD® System for double-side machine	970203300	1 113,90



ACCESSORIES

Micrometric gauges

For a fast and precise check of your lapping plates, with a direct reading of the measurements. Precision: 1 µm. Each set includes:

- 1 marble, accuracy : 0,8 µm.
- 1 gauge made of stabilised aluminium or stainless steel for machines Ø 200 to 600 mm.
- 1 micron comparator.
- 1 transport and storage case.
- 1 user guide with charts and mapping formulas.

Designation	Qty.	Ref.	€
For machine Ø 200 to 400 mm	1	08 00898 00	1 285,00
For machine Ø 400 to 600 mm	1	08 00899 10	1 719,90
For machine Ø 610 mm	1	08 00892 00	1 960,10
For machine Ø 700 mm	1	08 00894 00	2 312,60
For our machine Ø 1000 mm	1	08 00893 00	3 995,00
For machine Ø 1200 mm	1	08 00895 00	3 995,00
For machine Ø 1500 mm	1	08 00897 00	5 501,50



Micrometric gauge
for Ø 200 to 600 mm machines

Monochromatic lamp

The use of a monochromatic lamp and an optical flatness gauge allow a simple reading of the geometry of your parts for their flatness check. The light from the low pressure sodium vapour bulb has a specific wavelength compatible with LAM PLAN's optical gauge.

Control capacity	Gauge with a 150 mm Ø maximum
L x P x D	280 x 330 x 390 mm
Equipment	Mirror delivered as standard to check deformable parts

Designation	Qty.	Ref.	€
Monochromatic lamp	1	08 00801 00	1 457,00
Spare bulb	1	08 00801 90	136,50



Monochromatic lamp and optical gauges



Removable,
also usable
in its support

Optical gauges

Our new range of quartz optical gauge is also available on demand with boring or in a rectangular shape..

Ø in mm	Thickness in mm	Number of faces	Accuracy	Ref.	€
50	10	1	Lambda/10	08 01805 00	228,80
75	15	1	Lambda/10	08 01807 00	334,40
100	17	1	Lambda/10	08 01810 00	440,00
125	20	1	Lambda/10	08 01812 00	668,80
150	25	1	Lambda/10	08 01814 00	898,70
200	30	1	Lambda/10	08 01820 00	1 745,70
250	35	1	Lambda/10	08 01825 00	2 314,40
300	40	1	Lambda/10	08 01830 00	3 877,50
50	10	2	Lambda/10	08 00805 00	281,60
75	15	2	Lambda/10	08 00807 00	387,20
100	17	2	Lambda/10	08 00810 00	528,00
125	20	2	Lambda/10	08 00812 00	844,80
150	25	2	Lambda/10	08 00814 00	1 177,00
200	30	2	Lambda/10	08 00820 00	1 859,00
250	35	2	Lambda/10	08 00825 00	2 795,10
300	40	2	Lambda/10	08 02830 00	4 942,30



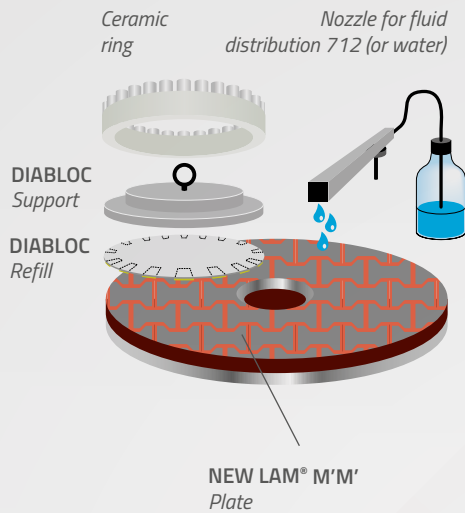


Plate maintenance and integrated reconditioning and grooving system


DIABLOC SYSTEM

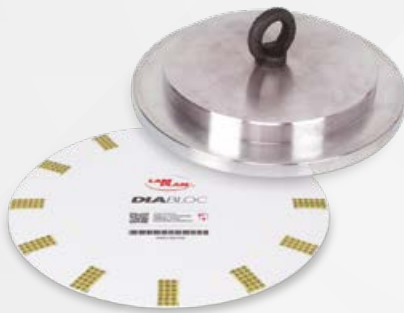
The reconditioning of composite plates can be carried out in different ways.

The DIABLOC is a self-adhesive disc which has a series of diamond pellets. It is stuck onto a stable and lapped aluminium support. It allows the reconditioning of NEW LAM® M'M', EVOLAM ULTIMATE and 2000 series plates. It corrects distortion and surface faults (glazing, scratching) of your plates. The new VIOLET and BLACK DIABLOCS are more aggressive, enabling you to accelerate the reconditioning phase notably on large diameter plates.

DIABLOCS

1 holder + 1 disc

Designation	For plate Ø	Ø in mm	Ref.	€
	Ø 381 mm	178	08 00907 60	404,80
DIABLOC BLACK	Ø 480 mm	224	08 00907 64	554,40
Super aggressive.	Ø 610 mm	286	08 00907 70	675,50
	Ø 700 mm	315	08 00907 90	824,90
For COMPOSITE rough lapping plates in great diameter.	Ø 914 mm	419	08 00907 80	1 401,80
	Ø 1000 mm	451	08 00907 180	1 401,80
	Ø 1200 mm 4 rings	500	08 00907 500	1 516,20
	Ø 1200 mm	545	08 00907 00	1 630,70
	Ø 381 mm	178	08 00906 60	399,50
DIABLOC PURPLE	Ø 480 mm	224	08 00906 64	546,00
Aggressive.	Ø 610 mm	286	08 00906 70	670,20
	Ø 700 mm	315	08 00906 90	817,50
	Ø 914 mm	419	08 00906 80	1 394,40
For COMPOSITE rough lapping plates.	Ø 1000 mm	451	08 00906 180	1 394,40
	Ø 1200 mm 4 rings	500	08 00906 500	1 504,70
	Ø 1200 mm	545	08 00906 00	1 625,40
	Ø 1500 mm	available on request		
	Ø 381 mm	178	08 00900 60	383,80
DIABLOC BLUE	Ø 480 mm	224	08 00900 64	519,80
	Ø 610 mm	286	08 00900 70	649,20
For fine and super finish COMPOSITE lapping plates	Ø 700 mm	315	08 00900 90	791,30
lapping plates in great diameter.	Ø 914 mm	419	08 00900 80	1 362,90
	Ø 1000 mm	451	08 00900 180	1 362,90
	Ø 1200 mm 4 rings	500	08 00900 500	1 459,50
	Ø 1200 mm	545	08 00900 00	1 585,50
	Ø 381 mm	178	08 00901 60	383,80
DIABLOC GREEN	Ø 480 mm	224	08 00901 64	519,80
	Ø 610 mm	286	08 00901 70	649,20
	Ø 700 mm	315	08 00901 90	791,30
	Ø 914 mm	419	08 00901 80	1 362,90
For fine and super finish COMPOSITE lapping plates.	Ø 1000 mm	451	08 00901 180	1 362,90
	Ø 1200 mm 4 rings	500	08 00901 500	1 459,50
	Ø 1200 mm	545	08 00901 00	1 585,50
	Ø 1500 mm	available on request		



ACCESSORIES

Mains plate Ø	EVOLAM	NEW LAM M'M'			
	Ultimate	Blue	Green	Yellow	
381 mm (15")					
480 mm					
610 mm (24")					
700 mm					
914 mm (36")					
1000 mm					
1200 mm (48")					

GUIDANCE





Depending on the plate to be reconditioned, the right DIABLOC can be chosen

There are four variants designed with different degrees of aggressiveness:

	Black - super aggressive
	Purple - aggressive
	Blue DIABLOC - for finishing plate great diameter
	Green DIABLOC - for finishing plate

REFILLS FOR DIABLOCS

1 piece

Designation	For plate Ø	Ø in mm	Ref.	€
 REFILLS DIABLOC BLACK Super aggressive. For COMPOSITE rough lapping plates in great diameter.	Ø 381 mm	178	08 01907 60	172,80
	Ø 480 mm	224	08 01907 64	228,90
	Ø 610 mm	286	08 01907 70	296,90
	Ø 700 mm	315	08 01907 90	351,20
	Ø 914 mm	419	08 01907 80	607,70
	Ø 1000 mm	451	08 01907 180	607,70
	Ø 1200 mm 4 rings	500	08 01907 500	645,80
	Ø 1200 mm	545	08 01907 00	782,80
 REFILLS DIABLOC PURPLE Aggressive. For COMPOSITE rough lapping plates.	Ø 381 mm	178	08 01906 60	167,60
	Ø 480 mm	224	08 01906 64	219,50
	Ø 610 mm	286	08 01906 70	291,70
	Ø 700 mm	315	08 01906 90	343,90
	Ø 914 mm	419	08 01906 80	600,40
	Ø 1000 mm	451	08 01906 180	600,40
	Ø 1200 mm 4 rings	500	08 01906 500	640,50
	Ø 1200 mm	545	08 01906 00	777,50
 REFILLS DIABLOC BLUE For fine and super finish COMPOSITE lapping plates in great diameter.	Ø 381 mm	178	08 01900 60	151,80
	Ø 480 mm	224	08 01900 64	199,50
	Ø 610 mm	286	08 01900 70	270,70
	Ø 700 mm	315	08 01900 90	317,60
	Ø 914 mm	419	08 01900 80	568,90
	Ø 1000 mm	451	08 01900 180	568,90
	Ø 1200 mm 4 rings	500	08 01901 500	614,30
	Ø 1200 mm	545	08 01900 00	737,60
 REFILLS DIABLOC GREEN For fine and super finish COMPOSITE lapping plates.	Ø 381 mm	178	08 01901 60	151,80
	Ø 480 mm	224	08 01901 64	199,50
	Ø 610 mm	286	08 01901 70	270,70
	Ø 700 mm	315	08 01901 90	317,60
	Ø 914 mm	419	08 01901 80	568,90
	Ø 1000 mm	451	08 01901 180	568,90
	Ø 1200 mm 4 rings	500	08 01901 500	614,30
	Ø 1200 mm	545	08 01901 00	737,60
	Ø 1500 mm		available on request	



AUTOPLAN system

The AUTOPLAN system enables efficient plate flatness and grooving in order to create structures which modify its properties. The principle lies in plate machining with a moving cutting tool. The AUTOPLAN is positioned and mounted in a few minutes thanks to the dedicated fixation points integrated in our machines.



Dedicated to series 9000 machines

At present, the automatic AUTOPLAN system can be integrated in LAM PLAN machines up to model M.M.9100. It is installed on dedicated points on the machine structure. Driven directly by the control interface, you can manage forward speed in order to carry out flattening or grooving operations. The AUTOPLAN produces spiral grooving. This system is faster and more precise than the DIABLOC. It is also easier to manage and to reproduce the required support geometry (flat, concave or convex).

Production stoppage for plate reconditioning is reduced and productivity is increased.



AUTOPLAN FOR LAPPING MACHINES M.M.9000 SERIES

Designation	Ref.
AUTOPLAN for M.M.9100 version E, S, SR and EC with SUPPORT TROLLEY.	10 9100AP 00
AUTOPLAN for M.M.9700 version E, S and S HP with SUPPORT TROLLEY.	10 9700AP 00
AUTOPLAN for M.M.9480 version S with SUPPORT TROLLEY.	10 9480AP 00



ACCESSORIES

Washing stand

M.M.8057

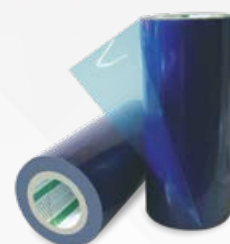
Designation	Qty.	Ref.	€
Compact and economical washing stand - 15 L	1	08 00570 00	378,50



Protective film

Technical film with adhesive on one face.
Protects surfaces after polishing or treating processes.

Designation	Dim.	Qty.	Ref.	€
Protective film	30 cm x 100 m	1	Z000 G7BL1	392,00



Cleaning products

STANOL BARREL

Solvent for washing stand.

Designation	Qty.	Ref.	€
Stanol barrel	60 litres	08 00614 00	348,70

DETERGENT 742

Concentrated detergent in aqueous phase used to degrease and clean parts after lapping or polishing cycles. This detergent with a high anticorrosion power is an excellent alternative to conventional cleaning solvents. Non inflammable, it is ideal for cleaning all types of materials (steels, cast irons, aluminium, etc.). Dilute 2 to 5% with water for use in ultrasonic cleaning tanks (40 to 55 °C) or 7 to 20% with water for fountain based cleanings.

Designation	Qty.	Ref.	€
Detergent 742	5 litres	08 01742 10	196,70
	30 litres	08 01742 30	957,30

DETERGENT 743

Aqueous detergent specifically adapted for the cleaning of ceramics, refractory materials and glasses. Dilute 1 volume of detergent in 9 volumes of water.

Designation	Qty.	Ref.	€
Detergent 743	5 litres	08 01743 10	103,20



SUPPORTS

LAPPING SUPPORTS



Cast iron plates

As a manufacturer and designer of cast iron plates and rings, we select specific high quality cast iron for optimum and long lasting results. AQUA LAM® plates and rings are suitable for all lapping machines of any brand or size. Available from stock or made to order within the shortest deadlines, AQUA LAM® cast iron plates and rings offer exceptional value for money.

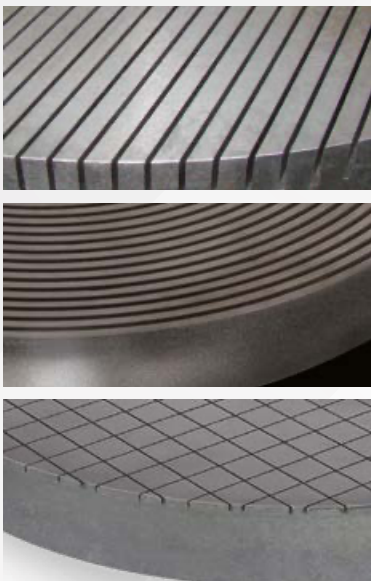
Radial grooved cast iron plate with LAM PLAN adaptation system, other machine adaptations on request.

Dimension Ø	Thickness (according to lapping machine types)	Ref.	€
14" 355 mm	25 - 40 mm	V014RASTD	#
15" 381 mm	25 - 40 mm	V015RASTD	#
19" 480 mm	25 - 40 mm	V019RASTD	#
24" 610 mm	35 - 40 mm	V024RASTD	#
28" 700 mm	55 mm	V028RASTD	#
36" 914 mm	57 - 58 mm	V036RASTD	#
39" 1000 mm	57 - 60 mm	V040RASTD	#
1200 mm	70 mm	V047RASTD	#
48" 1219 mm	70 mm	V048RASTD	#
59" 1500 mm	80 - 100 mm	V059RASTD	#

Prix sur demande / Prices on request / Preise auf Anfrage / Prezzi su richiesta



Lapping cast iron plates with radial grooving by default, available on request in full or with all types of grooves, Concentric, Helical and Linear.



LAM PLAN, designer and manufacturer of a full range of lapping and polishing supports to cover all your requirements in terms of material removal, surface finish and flatness.

LAPPING SUPPORTS

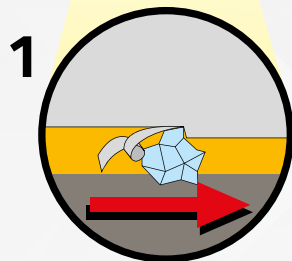
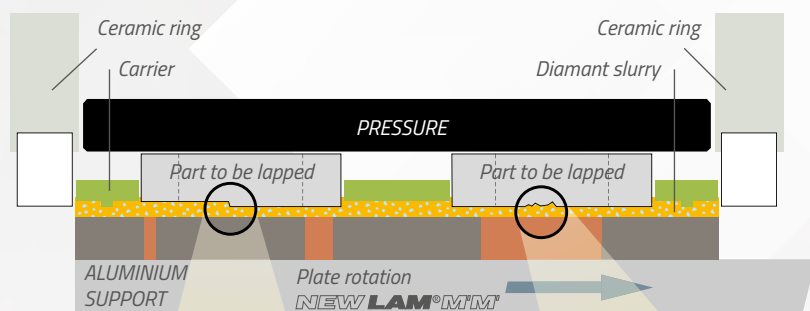
NEW LAM® M'M' plates

25 years ago, LAM PLAN designed the patented NEW LAM® M'M' poli-lapping system. Since then LAM PLAN has constantly made its process evolve to respond to the technical requirements of its customers. The system patented and established in production plants throughout the world is today a must in the lapping polishing process.

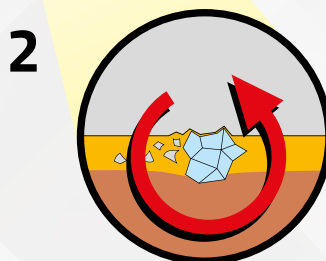
The NEW LAM® M'M' plate, uses free diamond abrasives for its operation. As soon as the plate starts rotating, under the effect of the initial weight of the parts and the load applied by the machine's jacks, the diamond grains move and fix on the surface of the plate producing a unique abrasive action on the side of the parts to be lapped.

The patent

The disposition and the shape of the two components of the plate permit an optimum alternation between the hard areas and the soft areas. The cut angle of the diamond grains is permanently changed, which ensures a large stock removal and a perfect inherent flatness.

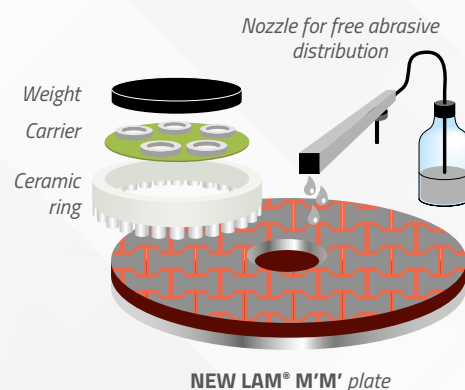


The free diamond contained in the abrasive film is momentarily fixed in the plate's hard material; when they are solid with each other, they produce a cut off effect which favours the stock removal.



In contact with the plate's soft material, the free diamond is driven in, while remaining mobile, and removes the material by impact; it is the stock effect which contributes to the quality of the surface condition.

NEW LAM® M'M'



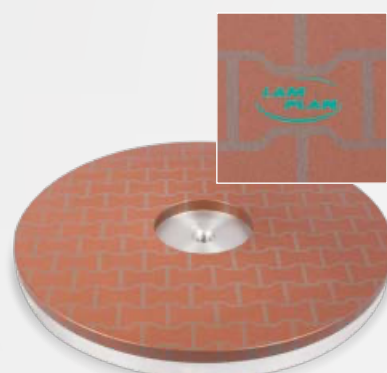
NEW LAM® M'M' patented plates

BLUE - ROUGH LAPPING



Standard					Incorporated cooling circuit	
Ø	Thickness	Ø central bore	Ref.	€	Ref.	€
14" 355 mm	13 mm		09 NL103 20	1 703,80		
15" 381 mm	13 mm	100 mm	09 NL103 30	1 918,90	09 NL203 30	3 679,00
16" 406 mm	13 mm	100 mm	09 NL103 40	2 458,10		
19" 480 mm	13 mm	100 mm	09 NL103 55	2 678,40		
24" 610 mm	15 mm	115 mm	09 NL103 60	3 373,70	09 NL203 60	7 839,60
27" 700 mm	15 mm	150 mm	09 NL103 70	4 580,40	09 NL203 70	9 352,00
30" 762 mm	15 mm	152 mm	09 NL103 80	#		
36" 914 mm	15 mm	175 mm	09 NL103 90	#		
1000 mm	15 mm	188 mm	09 NL103 00	#	09 NL203 00	#
1200 mm	15 mm	240 mm	09 NL103 50	#	09 NL203 50	#
1500 mm	15 mm	300 mm	09 NL103 10	#	09 NL203 10	#

GREEN - FINE LAPPING/POLISHING



Standard					Incorporated cooling circuit	
Ø	Thickness	Ø central bore	Ref.	€	Ref.	€
14" 355 mm	13 mm		09 NL106 20	1 766,90		
15" 381 mm	13 mm	100 mm	09 NL106 30	1 990,00	09 NL206 30	3 815,30
16" 406 mm	13 mm	100 mm	09 NL106 40	2 549,10		
19" 480 mm	13 mm	100 mm	09 NL106 55	2 777,60		
24" 610 mm	15 mm	115 mm	09 NL106 60	3 498,70	09 NL206 60	8 130,00
27" 700 mm	15 mm	150 mm	09 NL106 70	4 788,60	09 NL206 70	9 777,10
30" 762 mm	15 mm	152 mm	09 NL106 80	#		
36" 914 mm	15 mm	175 mm	09 NL106 90	#		
1000 mm	15 mm	188 mm	09 NL106 00	#	09 NL206 00	#
1200 mm	15 mm	240 mm	09 NL106 50	#	09 NL206 50	#
1500 mm	15 mm	300 mm	09 NL106 10	#	09 NL206 10	#

YELLOW - SUPER FINISHING POLISHING



Standard					Incorporated cooling circuit	
Ø	Thickness	Ø central bore	Ref.	€	Ref.	€
14" 355 mm	13 mm		09 NL105 20	1 844,60		
15" 381 mm	13 mm	100 mm	09 NL105 30	2 042,00	09 NL205 30	3 922,90
16" 406 mm	13 mm	100 mm	09 NL105 40	2 647,80		
19" 480 mm	13 mm	100 mm	09 NL105 55	2 654,20		
24" 610 mm	15 mm	115 mm	09 NL105 60	3 764,70	09 NL205 60	8 376,50
27" 700 mm	15 mm	150 mm	09 NL105 70	5 433,30	09 NL205 70	10 070,20
30" 762 mm	15 mm	152 mm	09 NL105 80	#		
36" 914 mm	15 mm	175 mm	09 NL105 90	#		
1000 mm	15 mm	188 mm	09 NL105 00	#	09 NL205 00	#
1200 mm	15 mm	240 mm	09 NL105 50	#	09 NL205 50	#
1500 mm	15 mm	300 mm	09 NL105 10	#	09 NL205 10	#

Prix sur demande / Prices on request / Preise auf Anfrage / Prezzi su richiesta

LAPPING SUPPORTS

EVOLAM® composite plates

A plate for 3 steps

The new EVOLAM® ULTIMATE and EVOLAM® lapping plates have been specially developed for hard materials such as sapphire and technical ceramics. The specific composition of these plates gives them an excellent stock removal combined with a low roughness. A poly-lapping operation with our EVOLAM® plates allows to obtain the superfinishing stage in only one step.

A C or H groove is generally made on EVOLAM® plates to increase their performance.

EVOLAM®

NEW

Ø	Type	Thickness	Ref.	€
15" 381 mm	ULTIMATE	8 mm	09 EL154 30	2 194,10
19" 480 mm	ULTIMATE		09 EL154 55	3 055,40
24" 610 mm	ULTIMATE		09 EL154 60	3 857,30
700 mm	ULTIMATE		09 EL154 70	5 279,70
30" 762 mm	CLASSIC	13 mm	09 EL104 80	#
36" 914 mm	CLASSIC		09 EL104 90	#
1000 mm	CLASSIC		09 EL104 00	#
1200 mm	CLASSIC		09 EL104 50	#
1500 mm	CLASSIC		09 EL104 10	#

Prix sur demande / Prices on request / Preise auf Anfrage / Prezzi su richiesta



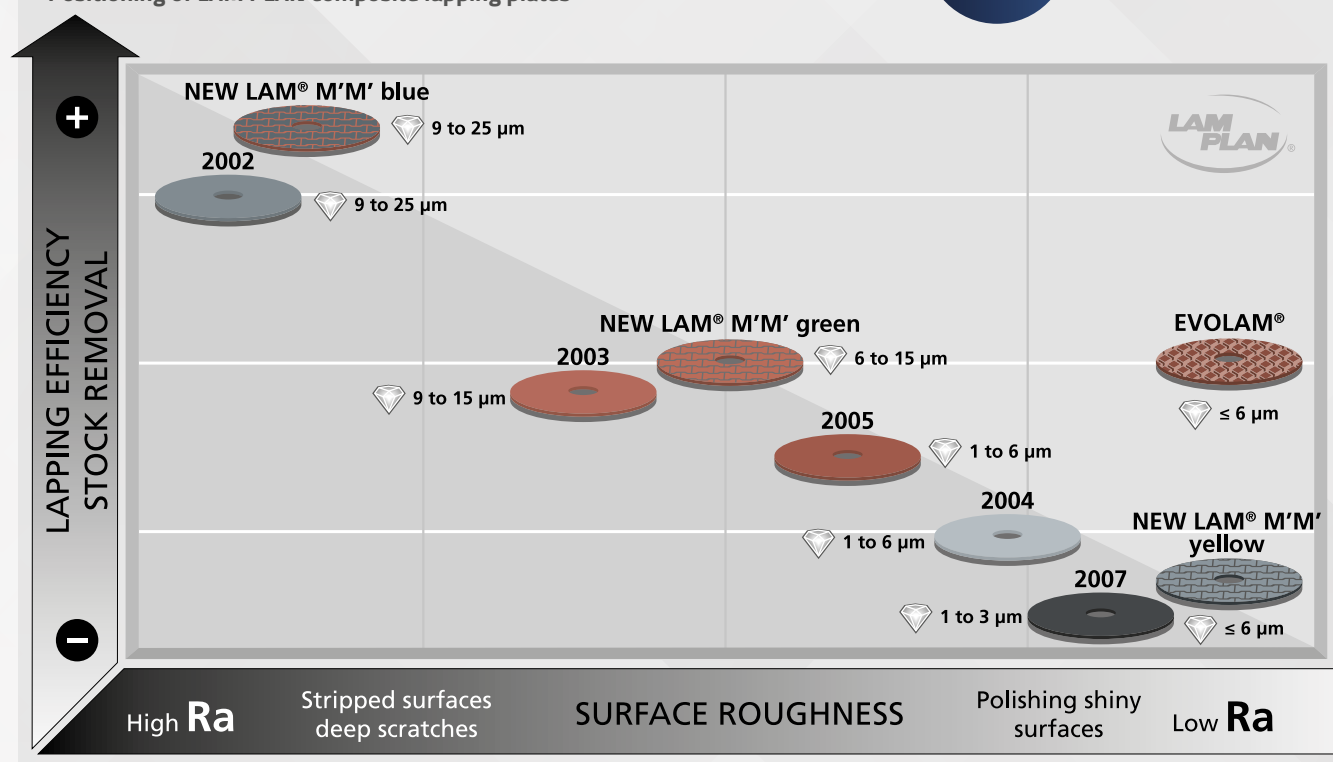
EVOLAM® ULTIMATE



EVOLAM® classic

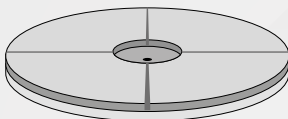
GUIDANCE

Positioning of LAM PLAN composite lapping plates

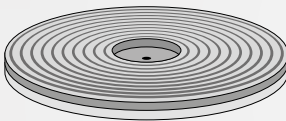




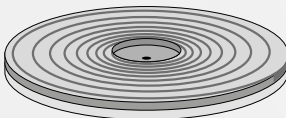
Different kinds of grooves



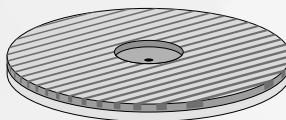
Radial (R)



Concentric (C)



Spiral (S)



Linear (L)

Series 2000 mono-component plates

Primarily used during pre-polishing phases these plates allow a surface condition which facilitates the finishing step on polishing cloths to be obtained.

Available in solid version or to order with radial, concentric, spiral or linear grooving.

2006 - MIDDLE & FINE LAPPING POLISHING - ALL MATERIALS

For abrasive 6 µm to 1 µm			
Ø	Thickness	Ref.	€
15" 381 mm	13 mm	09 P2006 30	1 735,90
19" 480 mm		09 P2006 55	2 526,60
24" 610 mm		09 P2006 60	3 200,20
700 mm		09 P2006 70	4 618,10
1000 mm		09 P2006 00	9 163,80

2001 - FINE LAPPING - HARD MATERIAL

For abrasive 15 µm to 1 µm			
15" 381 mm	6 mm	09 P2001 30	1 692,20
19" 480 mm		09 P2001 55	2 361,00
24" 610 mm		09 P2001 60	2 973,70
700 mm		09 P2001 70	4 070,80
1000 mm		09 P2001 00	8 044,50

2002 - ROUGH LAPPING - ALL MATERIALS

For abrasive 30 µm to 15 µm			
15" 381 mm	13 mm	09 P2002 30	1 631,80
19" 480 mm		09 P2002 55	2 179,40
24" 610 mm		09 P2002 60	2 867,50
700 mm		09 P2002 70	3 893,80
1000 mm		09 P2002 00	7 694,70

2003 - FINE LAPPING - ALL MATERIALS

For abrasive 9 µm to 3 µm			
15" 381 mm	13 mm	09 P2003 30	1 692,20
19" 480 mm		09 P2003 55	2 260,20
24" 610 mm		09 P2003 60	2 973,70
700 mm		09 P2003 70	4 070,80
1000 mm		09 P2003 00	8 044,50

2005 - SUPER FINISHING POLISHING - ALL MATERIALS

For abrasive 3 µm to 1 µm			
15" 381 mm	13 mm	09 P2005 30	1 735,90
19" 480 mm		09 P2005 55	2 526,60
24" 610 mm		09 P2005 60	3 200,20
700 mm		09 P2005 70	4 618,10
1000 mm		09 P2005 00	9 163,80

2007 - SUPER FINISH POLISHING - ALL MATERIALS

For abrasive 2 µm to 1 µm			
15" 381 mm	13 mm	09 P2007 30	1 735,90
19" 480 mm		09 P2007 55	2 526,60
24" 610 mm		09 P2007 60	3 200,20
700 mm		09 P2007 70	4 618,10
1000 mm		09 P2007 00	9 163,80

LAPPING SUPPORTS

Manual lapping & polishing plates

Extend the usage of your sealing parts.

LAMBLOCK are simple, inexpensive and easy to use tools that will allow preventive maintenance of sealing parts on industrial sites at a lower cost. Your maintenance department carries out manual lapping/polishing operations to recondition worn sealing parts.

BI-LAMBLOCK

2 Operations: Lapping and Polishing for the servicing of sealing part up to Ø 40 mm.

Designation	Ø in mm	Ref.	€
- 1 ergonomic double plate			
- Grey lapping / Copper polishing	300	09 04LB9 00	678,90
- 2 diadosers Bio DIAMANT® 400 series of 30 g			

LAMBLOCK NEW LAM®M'M' PLATE

Lapping with the guarantee of a perfect flatness for parts with a Ø 40 mm max and rings with a Ø 70 mm max.

Designation	Ø in mm	Ref.	€
- 1 NEW LAM M'M' plate			
- LAMBLOCK Blue - Lapping	300	09 04LB0 00	561,50
- 1 Dosing-stick Bio DIAMANT® 10 g			
- LAMBLOCK Green - finishing	300	09 04LB1 00	582,30
- 1 fluid bottle lubricant M.M.712			
- LAMBLOCK Yellow - Super finishing	300	09 04LB2 00	599,90

LAMBLOCK FAS®

NEW

Portable plate with non-stick LAM PLAN FAS® coating for use with the range of self-adhesive TOUCHLAM® discs. Combined with LAM PLAN abrasives, it is an economical solution for finishing and super-finishing steps on all materials.

Designation	Ø in mm	Ref.	€
- 1 plate with FAS® coating			
- 2 diadosers Bio DIAMANT® 400 series 30 g 3 and 6µ	300	09 04LB3 00	547,00

TRI-BLOCS NEW LAM®M'M' CASE

3 operations: lapping, polishing and superfinishing, for the servicing of your sealing rings up to Ø 40 mm.

Designation	Ø in mm	Ref.	€
- 3 NEW LAM® M'M'plates			
- 3 dosing sticks Bio DIAMANT® 10 g			
- 1 bottle of fluid lubricant M.M.712			
- 1 Diabloc for reconditioning	140	09 03NLO 00	1 319,00
Blue Diabloc for TRI-BLOCS		08 00900 10	231,30
Blue Diabloc refill		08 01900 10	93,90



Temperature control system

Flat lapping is based on the laws of mechanics and physics where a constant temperature is essential.

Temperature variations of a lapping plate, whether inherent in the lapping process or dependent on external conditions, can be detrimental to the quality of the desired result. To avoid such damage, the use of our plates at high yield NEW LAM M'M' requires the use of a temperature control system.

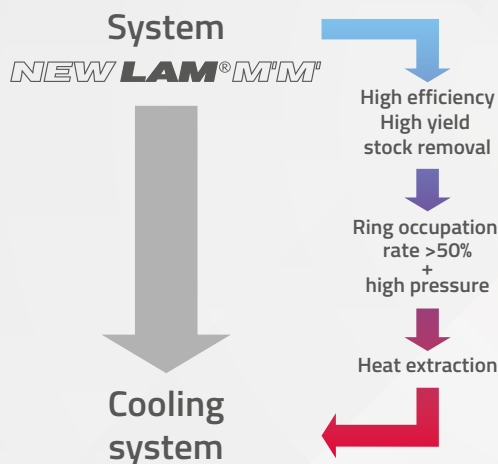
COMPOSITE LAM PLAN plates with an integrated cooling system ensure temperature fluctuation control during series production. This option enables avoidance of plate distortion and consequently, distortion of your pieces.

To control the flatness of the trays, the temperature must be controlled

P803 Regulator

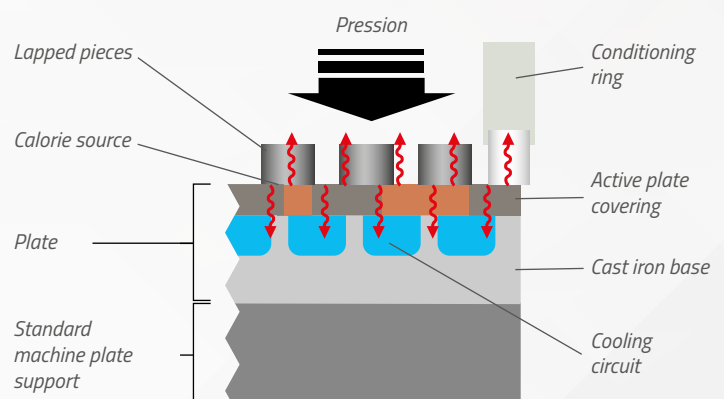
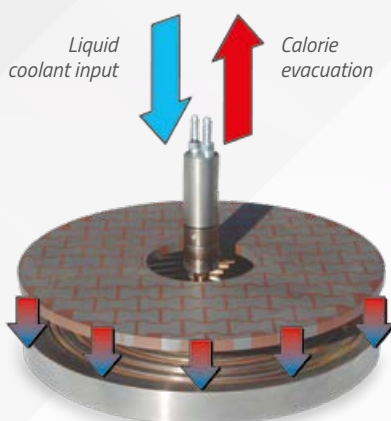
To control plate flatness, temperature must be regulated. The LAM PLAN P803 temperature regulation unit is reversible. It can also raise the plate temperature before use. This enables lapping to start in optimum geometric conditions in any work environment.

The P803 regulator is designed to maintain the temperature between 2 set values. It is an autonomous machine which has its own command interface.



NEW LAM M'M' plate with temperature control system

The LAM PLAN cooling system captures calories directly under the active plate surface. It is adaptable for all machines.



LAPPING SUPPORTS

Lapping rods M.M.®

Immediately shape your rods in all form, from patented M.M.® preliminary shape containing no abrasive.



Applications

For internal and external lapping, and super finishing of spherical, conical and cylindrical parts and many other shapes.

The solution

LAM PLAN offers an original, functional and adapted solution; it responds to the requirements of surface conditions difficult to attain with tools or grinding wheels. LAM PLAN delivers its rods in preliminary shape condition. The user finalises the form of his choice. A fast machining using common tools (never a grinding wheel) allows adapting the rods to the shape of the parts to be lapped. This technique is possible thanks to the LAM PLAN M.M.® system which combines rods and free diamond abrasives.

The technique

The LAM PLAN M.M.® rods consists of two different materials in terms of mechanical, physical and resistance characteristics. The composition and arrangement of the two components associated with the usage of specific diamond abrasive is the base of the patented LAM PLAN M.M.® system and its effectiveness.

The advantages of the LAM PLAN M.M.® system associated with Bio DIAMANT®

The LAM PLAN M.M.® system uses special abrasives. A chemical binder allows homogeneous, stable distribution of calibrated diamond grains, while preventing any settling phenomenon. As soon as the rod starts rotating under the effect of the applied pressure and the passage on the two different materials, the diamond grains move and fix alternatively. This causes a phenomenon of significant acceleration of these particles ensuring a high stock removal. Penetrating very low and for a very short time in the rod's metal mass, each diamond particle always presents an edge opposite to the part to be machined.

All the cutting edges work under an over speed. The abrasive's efficiency is therefore better and more sustainable.

In addition, thanks to the use of diamond, the rod coating does practically not wear out (good behaviour in terms of shape or inherent flatness).

The LAM PLAN type M.M.® lubricant vaporised in a very small quantity allows cleaning the diamond's cutting edges loaded with metal waste and operates cooling action.

The small quantity of lubricant significantly reduces the "machining sludge" volume. The work is cleaner and produces less waste.

Qualities

In order to obtain surface conditions varying from 0.2 to 0.01 micron/Ra, LAM PLAN proposes various types of rods. The distribution of the 2 materials which make up the patented bi-component rods type M.M.® remains constant, regardless of the shape given to them. The rods type 2000 are mono-components. They benefit from the quality of bi-component materials, but their efficiency is lower and their wear more rapid.

GUIDANCE

Shapes	Preliminary shapes	A cylindrical
		B flat
		C rectangular
Types	Patented M.M. Rods Bi-components	M.M.® 980 lapping
		M.M.® 991 finishing
		M.M.® 992 superfinishing
	Economic range Mono-component	2002 lapping
		2003 polishing



RODS M.M.® SHAPE A

Cylindrical preliminary shape intended to be machined by turning with a dry carbide tool in order to adapt to the parts to be treated.

Implementation example				
Lapped part	Material	Rod	Abrasive	Result
Cupule for thigh prosthesis	Chromium cobalt	Shape A Type 992	Stick M.M.143	Sphericity 3 µm

LAPPING SUPPORTS

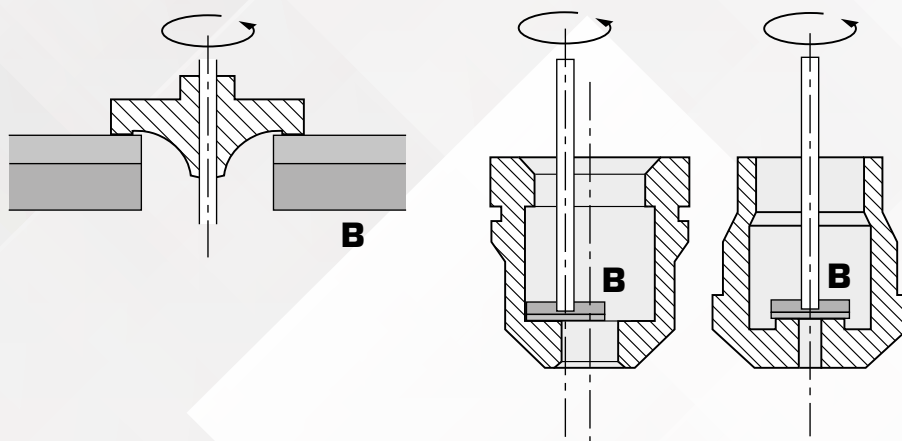
RODS M.M.[®] SHAPE B

Our Shape B rods are composed of a 5mm active part fixed to a steel* ensuring great rigidity. Please contact us for dimensions above 200 mm. To machine the rods and use them, the shapes A or B must be tightened in a mandrel one turn mounted on a metal rod (by tapping or gluing).

NOT: The tapping must always remain below the steel* thickness in the case of shapes B. In any case (shapes A or B), the centre of the coating has to be cleared to avoid the dead point. During shaping, it is recommended to recover the chips and dusts to reduce the cleaning time.

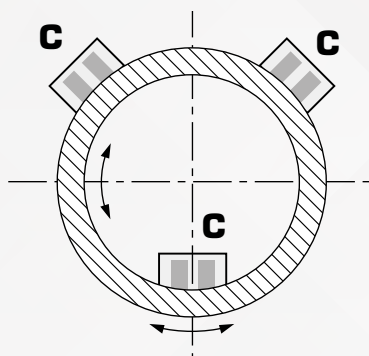
*aluminium base on demand

Implementation example				
Lapped part	Material	Rod	Abrasive	Result
Safety valve	Satellite	Shape B Type 991	Stick M.M.141	Tightness

LAPIDARY M.M.[®] SHAPE C

Intended to prepare the rods for the machine of special shaped parts.

Implementation example				
Lapped part	Material	Rod	Abrasive	Result
Rolling machine cylinder	Cast iron	Shape C Type 980	Stick M.M.133	Roughness Ra 0,08



RODS SHAPE A

Type	Ø in mm	Ref.	€
991	25 x 100	09 09991 28	91,80
992	25 x 100	09 09992 28	106,10
2002	25 x 100	09 20022 20	75,80
2003	25 x 100	09 20032 20	79,20
980	50 x 50	09 09980 10	86,00
991	50 x 50	09 09991 10	89,90
992	50 x 50	09 09992 10	103,70
2002	50 x 50	09 20021 10	74,30
2003	50 x 50	09 20031 10	77,60
2002	50 x 100	09 20022 10	100,20
2003	50 x 100	09 20032 10	104,80
2002	50 x 150	09 20023 10	111,30
2003	50 x 150	09 20033 10	116,40
980	75 x 50	09 09980 80	111,90
991	75 x 50	09 09991 80	117,00
992	75 x 50	09 09992 80	140,00
2002	75 x 50	09 20021 80	105,40
2003	75 x 50	09 20031 80	110,20
2002	75 x 100	09 20022 80	159,10
2003	75 x 100	09 20032 80	166,30
2002	75 x 150	09 20023 80	220,70
2003	75 x 150	09 20033 80	230,70
2002	100 x 50	09 20021 90	151,60
2003	100 x 50	09 20031 90	158,50
2002	100 x 100	09 20022 90	259,90
2003	100 x 100	09 20032 90	271,70
2002	100 x 150	09 20023 90	347,10
2003	100 x 150	09 20033 90	362,80

RODS SHAPE B

Type	Ø in mm	Ref.	€
980	50 x 15	09 09980 30	86,40
991	50 x 15	09 09991 30	90,30
992	50 x 15	09 09992 30	94,20
2002	50 x 15	09 02002 30	74,50
2003	50 x 15	09 02003 30	77,90
980	100 x 15	09 09980 40	202,20
991	100 x 15	09 09991 40	211,40
992	100 x 15	09 09992 40	220,60
2002	100 x 15	09 02002 40	174,20
2003	100 x 15	09 02003 40	182,20
980	150 x 15	09 09980 50	327,40
991	150 x 15	09 09991 50	342,20
992	150 x 15	09 09992 50	357,10
2002	150 x 15	09 02002 50	248,70
2003	150 x 15	09 02003 50	260,00
980	200 x 15	09 09980 60	373,80
991	200 x 15	09 09991 60	390,80
992	200 x 15	09 09992 60	407,80
2002	200 x 15	09 02002 60	283,70
2003	200 x 15	09 02003 60	296,60

RODS SHAPE C

3 pieces

Type	Ø in mm	Ref.	€
980	10 x 20 x 560	09 08445 30	403,20
991	10 x 20 x 560	09 08446 30	421,50
992	10 x 20 x 560	09 08449 30	476,40

CUSTOM MACHINING PACKAGE

NEW

Designation	Qty.	Ref.	€
Custom machining package	1	99 SAV0F 00	95,00

GUIDANCE

Example of implementation

Type	Rods	Sticks	Gels	Treated steel		Tungsten carbide		Stellite	
				Surface condition µm Ra	Stock removal	Surface condition µm Ra	Stock removal	Surface condition µm Ra	Stock removal
Rough	M.M.980	M.M.131	M.M.31	0,3	6 µm/min	0,1	2,4 µm/min	0,15	4 µm/min
	M.M.980	M.M.132	M.M.32	0,2	3 µm/min	0,07	1,5 µm/min	0,09	2 µm/min
Finishing	M.M.991	M.M.133	M.M.33	0,09	1,6 µm/min	0,03	0,7 µm/min	0,05	1,2 µm/min
	M.M.991	M.M.141	M.M.41	0,06	1,3 µm/min	0,02	0,5 µm/min	0,03	0,6 µm/min
Super finishing	M.M.992	M.M.142	M.M.42	0,05	1 µm/min	0,01	0,4 µm/min	0,02	0,5 µm/min
	M.M.992	M.M.143	M.M.43	0,03	0,6 µm/min	0,005	0,3 µm/min	0,01	0,4 µm/min

The Sticks and gels used for an everyday usage are put in bold letters.

LAPPING SUPPORTS

Expandable cylindric rods

The formula for the accuracy of borings. The set is composed of:

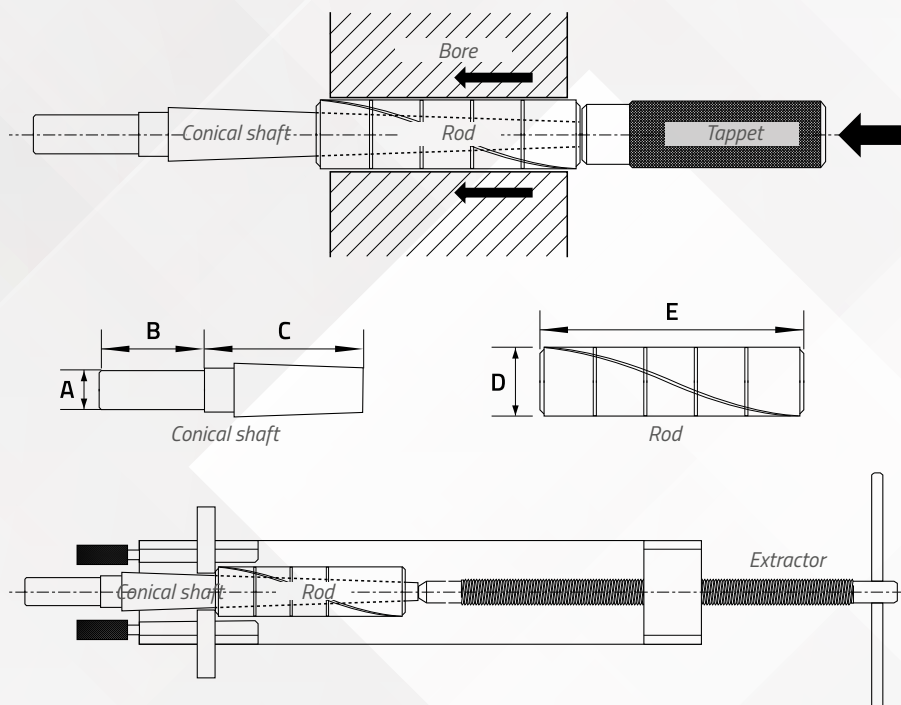
- A conical shaft to be mounted on the mandrel.
- A cast iron rod with pinched structure. A helical slot allows the expansion while maintaining its geometric shape. The rod's interior is conical in order to receive the shaft.
- A tube-shaped pushrod is here allows driving the rod on the shaft.

Procedure

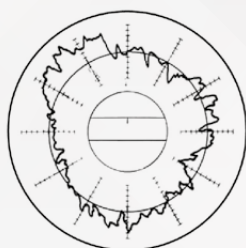
The abrasive to be used with the rods is selected according to their tasks:

- Important stock removal: diamond dosing stick M.M.132
 - Super-finishing: diamond dosing stick M.M.142 or 144.
- Lubrication thanks to the M.M.712 fluid.

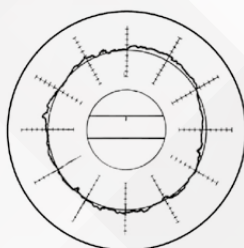
Use



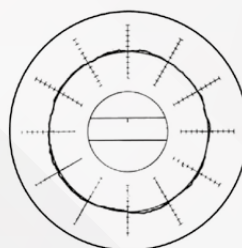
Results



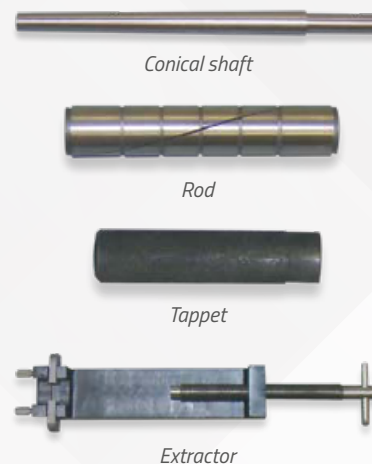
A 15,9 mm diameter has been drilled on a 38 mm length. After checking, an ovalisation of 4/100th mm has been revealed and a surface condition of 0.5-micron Ra.



First operation
With rod and diamond dosing stick M.M.132: ovalisation reduced to 4/10th micron, surface condition of 0.12-micron Ra.



Second operation
With rod and diamond dosing stick M.M.144: limited ovalisation to 1/10th micron. Surface condition to 0.03-micron Ra.



RODS

CONICAL SHAFTS

TAPPETS

Ø (mm)	Lenght E (mm)	Expansion D (mm)	Ref.	€	N°	Ø A (mm)	Lenght. B (mm)	Lenght C (mm)	Ref.	€	N°	Ref.	€
1,19	12,70	1,168 à 1,397	99 91011 90	88,10	4/0	3,17	19,05	38,10	99 92004 00	149,40	4/0	99 93004 00	27,40
1,59	15,85	1,574 à 1,930	99 91015 90	49,00	3/0	3,17	19,05	39,10	99 92003 00	149,40	3/0	99 93003 00	27,40
1,98	15,85	1,956 à 2,311	99 91019 80	49,00	3/0	3,17	19,05	39,10	99 92003 00	149,40	3/0	99 93003 00	27,40
2,38	19,05	2,362 à 2,743	99 91023 80	42,10	2/0	3,17	19,05	41,25	99 92002 00	137,10	2/0	99 93002 00	27,40
2,78	19,05	2,743 à 3,099	99 91027 80	42,10	2/0	3,17	19,05	41,25	99 92002 00	137,10	2/0	99 93002 00	27,40
3,17	22,19	3,149 à 3,479	99 91031 70	35,00	0	3,17	19,05	44,45	99 92000 00	124,20	0	99 93000 00	27,40
3,57	22,19	3,530 à 3,886	99 91035 70	35,00	0	3,17	19,05	44,45	99 92000 00	124,20	0	99 93000 00	27,40
3,97	22,19	3,937 à 4,318	99 91039 70	35,00	0	3,17	19,05	44,45	99 92000 00	124,20	0	99 93000 00	27,40
4,37	22,19	4,318 à 4,673	99 91043 70	35,00	0	3,17	19,05	44,45	99 92000 00	124,20	0	99 93000 00	27,40
4,76	34,91	4,724 à 5,105	99 91047 60	41,40	1	4,74	25,40	69,85	99 92000 10	107,60	1	99 93000 10	32,70
5,16	34,91	5,130 à 5,461	99 91051 60	41,40	1	4,74	25,40	69,85	99 92000 10	107,60	1	99 93000 10	32,70
5,56	44,45	5,537 à 5,918	99 91055 60	45,40	2	4,76	25,40	76,20	99 92000 20	107,60	2	99 93000 20	32,70
5,95	44,45	5,918 à 6,248	99 91059 50	45,40	2	4,76	25,40	76,20	99 92000 20	107,60	2	99 93000 20	32,70
6,35	50,80	6,324 à 6,705	99 91063 50	48,60	3	4,76	25,40	101,60	99 92000 30	117,80	3	99 93000 30	32,70
6,75	50,80	6,731 à 7,010	99 91067 50	48,60	3	4,76	25,40	101,60	99 92000 30	117,80	3	99 93000 30	32,70
7,14	50,80	7,112 à 7,340	99 91071 40	48,60	3	4,76	25,40	101,60	99 92000 30	117,80	3	99 93000 30	32,70
7,54	50,80	7,518 à 7,670	99 91075 40	48,60	3	4,76	25,40	101,60	99 92000 30	117,80	3	99 93000 30	32,70
7,94	50,80	7,924 à 8,305	99 91079 40	48,60	4	5,53	25,40	101,60	99 92000 40	117,80	4	99 93000 40	32,70
8,33	50,80	8,305 à 8,610	99 91083 30	48,60	4	5,53	25,40	101,60	99 92000 40	117,80	4	99 93000 40	32,70
8,73	50,80	8,712 à 8,915	99 91087 30	48,60	4	5,53	25,40	101,60	99 92000 40	117,80	4	99 93000 40	32,70
9,13	50,80	9,093 à 9,245	99 91091 30	48,60	4	5,53	25,40	101,60	99 92000 40	117,80	4	99 93000 40	32,70
9,53	63,50	9,499 à 9,855	99 91095 30	54,80	5	9,79	38,10	101,60	99 92000 50	129,60	5	99 93000 50	32,70
9,92	63,50	9,906 à 10,185	99 91099 20	54,80	5	9,79	38,10	127,00	99 92000 50	129,60	5	99 93000 50	32,70
10,32	63,50	10,287 à 10,515	99 91103 20	54,80	5	9,79	38,10	127,00	99 92000 50	129,60	5	99 93000 50	32,70
10,72	63,50	10,693 à 10,845	99 91107 20	54,80	5	9,79	38,10	127,00	99 92000 50	129,60	5	99 93000 50	32,70
11,11	63,50	11,074 à 11,430	99 91111 10	61,80	6	7,90	38,10	127,00	99 92000 60	129,60	6	99 93000 60	33,60
11,51	63,50	11,480 à 11,785	99 91115 10	61,80	6	7,90	38,10	127,00	99 92000 60	129,60	6	99 93000 60	33,60
11,91	63,50	11,861 à 12,090	99 91119 10	61,80	6	7,90	38,10	127,00	99 92000 60	129,60	6	99 93000 60	33,60
12,30	63,50	12,268 à 12,420	99 91123 00	61,80	6	7,90	38,10	127,00	99 92000 60	129,60	6	99 93000 60	33,60
12,70	82,55	12,674 à 13,081	99 91127 00	73,00	7	9,51	38,10	152,40	99 92000 70	159,10	7	99 93000 70	43,50
13,49	82,55	13,462 à 13,868	99 91134 90	73,00	7	9,51	38,10	152,40	99 92000 70	159,10	7	99 93000 70	43,50
14,29	82,55	14,249 à 14,579	99 91142 90	73,00	7	9,51	38,10	152,40	99 92000 70	159,10	7	99 93000 70	43,50
15,08	82,55	15,062 à 15,290	99 91150 80	73,00	7	9,51	38,10	152,40	99 92000 70	159,10	7	99 93000 70	43,50
15,88	82,55	15,849 à 16,256	99 91158 80	85,40	8	10,27	38,10	152,40	99 92000 80	159,10	8	99 93000 80	49,00
16,67	82,55	16,637 à 16,941	99 91166 70	85,40	8	10,27	38,10	152,40	99 92000 80	159,10	8	99 93000 80	49,00
17,46	82,55	17,424 à 17,627	99 91174 60	85,40	8	10,27	38,10	152,40	99 92000 80	159,10	8	99 93000 80	49,00
18,26	82,55	18,237 à 18,415	99 91182 60	85,40	8	10,27	38,10	152,40	99 92000 80	159,10	8	99 93000 80	49,00
19,05	88,90	19,024 à 19,380	99 91190 50	99,60	9	12,70	50,80	177,80	99 92000 90	200,30	9	99 93000 90	55,60
19,84	88,90	19,812 à 20,116	99 91198 40	99,60	9	12,70	50,80	177,80	99 92000 90	200,30	9	99 93000 90	55,60
20,64	88,90	20,599 à 20,853	99 91206 40	99,60	9	12,70	50,80	177,80	99 92000 90	200,30	9	99 93000 90	55,60
21,43	88,90	21,412 à 21,615	99 91214 30	99,60	9	12,70	50,80	177,80	99 92000 90	200,30	9	99 93000 90	55,60
22,23	88,90	22,199 à 22,580	99 91222 30	112,70	10	12,70	50,80	177,80	99 92001 00	200,30	10	99 93001 00	65,50
23,02	88,90	22,987 à 23,342	99 91230 20	112,70	10	12,70	50,80	177,80	99 92001 00	200,30	10	99 93001 00	65,50
23,81	88,90	23,774 à 24,079	99 91238 10	112,70	10	12,70	50,80	177,80	99 92001 00	200,30	10	99 93001 00	65,50
24,61	88,90	24,587 à 24,790	99 91246 10	112,70	10	12,70	50,80	177,80	99 92001 00	200,30	10	99 93001 00	65,50

EXTRACTORS

Characteristics	Ref.	€
For rods Ø 1,19 to 4,37 mm	99 94000 10	345,80
For rods Ø 4,76 to 15,48 mm	99 94000 20	428,50
For rods Ø 15,88 to 31,75 mm	99 94000 30	825,20

Any other dimension,
on demand.

POLISHING SUPPORTS

Alumina abrasive films

High concentration abrasive films. Available in different grains from 0.3 μm to 40 μm , they generate excellent flatness and finishing results. The uniformity of the abrasive layer ensures exceptional regularity of the polishing process and prolonged durability of the disc. Easy to use, high stock removal and polishing quality enables you to significantly reduce your sample polishing time. They can be used with all material types.

Recommended lubricants: FLUIDE 712 water-based or FLUIDE 705 oil-based.

ALUMINA

100 pieces

Self-adhesive							
\varnothing mm	μm	Ref.	€	\varnothing mm	μm	Ref.	€
200	0,3	05A98A0200C	252,00	300	0,3	05A98A0300C	918,00
200	0,5	05A95A0200C	252,00	300	0,5	05A95A0300C	918,00
200	1	05A01A0200C	252,00	300	1	05A01A0300C	918,00
200	2	05A02A0200C	252,00	300	2	05A02A0300C	918,00
200	3	05A03A0200C	252,00	300	3	05A03A0300C	918,00
200	5	05A05A0200C	252,00	300	5	05A05A0300C	918,00
200	9	05A09A0200C	252,00	300	9	05A09A0300C	918,00
200	12	05A12A0200C	252,00	300	12	05A12A0300C	918,00
200	15	05A15A0200C	252,00	300	15	05A15A0300C	918,00
200	30	05A30A0200C	252,00	300	30	05A30A0300C	918,00
200	40	05A40A0200C	252,00	300	40	05A40A0300C	918,00
250	0,3	05A98A0250C	574,00	400	0,3	05A98A0400C	1 145,00
250	0,5	05A95A0250C	574,00	400	0,5	05A95A0400C	1 145,00
250	1	05A01A0250C	574,00	400	1	05A01A0400C	1 145,00
250	2	05A02A0250C	574,00	400	2	05A02A0400C	1 145,00
250	3	05A03A0250C	574,00	400	3	05A03A0400C	1 145,00
250	5	05A05A0250C	574,00	400	5	05A05A0400C	1 145,00
250	9	05A09A0250C	574,00	400	9	05A09A0400C	1 145,00
250	12	05A12A0250C	574,00	400	12	05A12A0400C	1 145,00
250	15	05A15A0250C	574,00	400	15	05A15A0400C	1 145,00
250	30	05A30A0250C	574,00	400	30	05A30A0400C	1 145,00
250	40	05A40A0250C	574,00	400	40	05A40A0400C	1 145,00



Alumina



ABRASIVE FILMS IN ROLLS

Films of all types available in rolls with choice of mandrel diameter, width from 1.2 to 100 mm, max length 200 meters.

Diamond abrasive films

High concentration abrasive films. Available in different grains from 0.5 μm to 45 μm , they generate excellent flatness and finishing results. The uniformity of the abrasive layer ensures great regularity of the polishing process and prolonged durability of the disc. Easy to use, the strong stock removal and polishing quality enables you to significantly reduce your sample polishing time. They can be used with all material types.

Recommended lubricants: FLUIDE 712 water-based or FLUIDE 705 oil-based.



Diamond

DIAMOND HC

5 pieces

Self-adhesive					Non adhesive	
\varnothing mm	Color	μm	Ref.	€	Ref.	€
200		45	05D45A02005	159,10	05D45N02005	127,30
200		30	05D30A02005	159,10	05D30N02005	127,30
200		15	05D15A02005	159,10	05D15N02005	127,30
200		9	05D09A02005	159,10	05D09N02005	127,30
200		6	05D06A02005	159,10	05D06N02005	127,30
200		3	05D03A02005	159,10	05D03N02005	127,30
200		1	05D01A02005	159,10	05D01N02005	127,30
200		0,5	05D95A02005	159,10	05D95N02005	127,30
250		45	05D45A02505	244,00	05D45N02505	209,00
250		30	05D30A02505	244,00	05D30N02505	209,00
250		15	05D15A02505	244,00	05D15N02505	209,00
250		9	05D09A02505	244,00	05D09N02505	209,00
250		6	05D06A02505	244,00	05D06N02505	209,00
250		3	05D03A02505	244,00	05D03N02505	209,00
250		1	05D01A02505	244,00	05D01N02505	209,00
250		0,5	05D95A02505	244,00	05D95N02505	209,00
300		45	05D45A03005	334,20	05D45N03005	281,20
300		30	05D30A03005	334,20	05D30N03005	281,20
300		15	05D15A03005	334,20	05D15N03005	281,20
300		9	05D09A03005	334,20	05D09N03005	281,20
300		6	05D06A03005	334,20	05D06N03005	281,20
300		3	05D03A03005	334,20	05D03N03005	281,20
300		1	05D01A03005	334,20	05D01N03005	281,20
300		0,5	05D95A03005	334,20	05D95N03005	281,20
400		45	05D45A04005	445,60	05D45N04005	403,10
400		30	05D30A04005	445,60	05D30N04005	403,10
400		15	05D15A04005	445,60	05D15N04005	403,10
400		9	05D09A04005	445,60	05D09N04005	403,10
400		6	05D06A04005	445,60	05D06N04005	403,10
400		3	05D03A04005	445,60	05D03N04005	403,10
400		1	05D01A04005	445,60	05D01N04005	403,10
400		0,5	05D95A04005	445,60	05D95N04005	403,10

POLISHING SUPPORTS

DIALAM diamond discs

The DIALAM supports are diamond composite supports with a high cutting capacity. Usable on single and double-side machines, they are recommended for pre-polishing processes requiring a high level of stock removal on all types of materials.

The DIALAM discs are particularly efficient for the stock removal on very hard materials as sapphires and ceramics.

Type	Characteristics	Ø (mm)	Qty.	Ref.	€
------	-----------------	--------	------	------	---

PLATE (coating stuck on a stainless steel)

DIALAM Blue (plate)	High roughness Thickness 3,5 mm	15"/381	1	09 DL140 30	930,20
DIALAM Green (plate)	Medium roughness Thickness 3,5 mm	15"/381	1	09 DL150 30	930,20

MAGNETIC DISCS (associated with FMS® fixing system)

DIALAM Blue (magnetic)	High roughness Thickness 3,5 mm	15"/381	1	09 DL141 30	638,30
DIALAM Green (magnetic)	Medium roughness Thickness 3,5 mm	15"/381	1	09 DL151 30	638,30

BOOSTER Lubricant

The Booster Lubricant has been specially developed to optimise the DIALAM's yield. It is distributed (drop by drop) during pre-polishing cycles and allows regenerating the DIALAM disc guaranteeing a regularity of the stock removal cycle after cycle.

Type	Packaging	Qty.	Ref.	€
Booster Fluid	5 litres	1	07 BP030 40	58,00

ABRABLOC Dressing ring

ABRABLOC dressing rings are intended for the dressing the DIALAM disc. They replace advantageously standard abrasive stones usually applied. The Abrablocs correct the plate geometry and brighten the cutting effect of DIALAM discs.

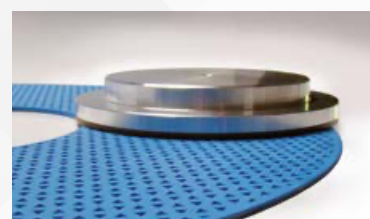
Type	Characteristics	Ø (mm)	Qty.	Ref.	€
------	-----------------	--------	------	------	---

ABRABLOC

ABRABLOC Brown	For DIALAM Blue	178 ext./ 158 int.	1	08 00200 60	161,00
ABRABLOC Ivory	For DIALAM Green	178 ext./ 158 int.	1	08 00201 60	161,00

ABRABLOC REFILLS (to stick on lapped aluminium support)

ABRABLOC Refill Brown	For DIALAM Blue	178 ext./ 158 int.	2	08 01200 50	48,10
ABRABLOC Refill Ivory	For DIALAM Green	178 ext./ 158 int.	2	08 01201 50	48,10



TOUCLAM®

TOUCLAM® polishing cloths

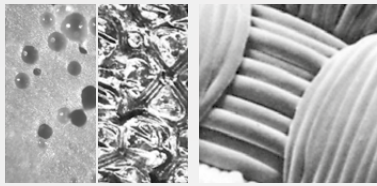
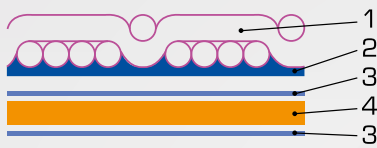
LAM PLAN proposes a new generation of TOUCLAM® polishing cloths. High technological products realised from exclusive materials, these cloths are intended to satisfy high precision demand concerning surfaces and geometry. The TOUCLAM® range is dedicated to aspect polishing and for all other kinds of accurate high quality polishing. Oriented towards industrial applications and research, these cloths integrate new materials and treatments in their manufacturing to facilitate their use and guarantee high quality results. Self-adhesive, their implementation is fast and easy. Available in all diameters.

Composition of TOUCLAM® polishing cloths

A polishing cloth is a complex gathering of various coats of materials, each one having their specific function:

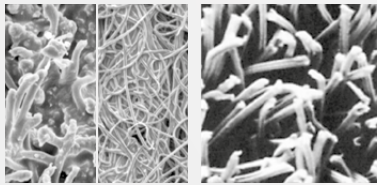
- The active and visible part (1) of a cloth is the primary criteria. It gathers 4 classes, all with different characteristics.
- A coating (2) which defines the cloth's impermeability
- An adhesive film (3) having varying thickness and power of adhesion
- A support (4) defining the rigidity or the softness of the cloth.

TOUCLAM® polishing cloths gathers 4 major classes:



Polyurethanes
and Foams

Woven



Non-woven
and compressed

Flocked

GUIDANCE

Summary table

TOUCLAM® polishing cloth	Characteristics			
	SR*	Flatness	Finishing	Super finishing
1PU1	X	X		
1PU2	X	X		
1PU3	X	X		
1PU4	X	X	X	
1PC1		X	X	
1PC2		X	X	
1NT2	X			
2NT1	X		X	
2PC1		X	X	X
2PC2		X	X	X
2TT2	X	X		
2TS1		X	X	
2TS2			X	
2FL1			X	
2FL2			X	
2MS1			X	
3FP1				X
3SE2		X	X	X
3SA2		X	X	X
3SA4		X	X	X
3FV1				X
3FV2				X
4FV3				X
4MP2				X

*Stock removal



In order to facilitate the removal of the protection film, the self-adhesive TOUCLAM® cloths are equipped with a tab.

POLISHING SUPPORTS

1PU1

Box of 5 pieces

Characteristics	Ø in mm	Ref.	€
Polyurethane loaded with cerium oxide - Extra hard. From rough polishing to polishing of all materials. Inherent flatness and long life service. Commonly used with ECOA® abrasive slurries.	381	1PU10A03815	760,50
	400	1PU10A04005	796,80
	480	1PU10A04805	1 060,80
	610	1PU10A06105	1 593,40
	700	1PU10A07005	#



1PU2

Characteristics	Ø in mm	Ref.	€
Polyurethane loaded with zirconium oxide - Hard. From rough polishing to polishing of all materials. Inherent flatness and long life service. Commonly used with ECOA® abrasive slurries.	381	1PU20A03815	720,50
	400	1PU20A04005	962,20
	480	1PU20A04805	1 039,50



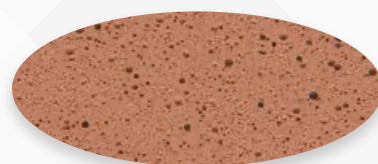
1PU3

Characteristics	Ø in mm	Ref.	€
Polyurethane not loaded - Hard. From rough polishing to polishing of all materials. Inherent flatness and long life service. Commonly used with ECOA® abrasive slurries. Available with grooves.	381	1PU30A03815	481,40
	400	1PU30A04005	642,00
	480	1PU30A04805	813,70
	610	1PU30A06105	#
	700	1PU30A07005	#



1PU4

Characteristics	Ø in mm	Ref.	€
Polyurethane loaded with cerium oxide - Medium-hard. From rough polishing to polishing of all materials. Inherent flatness and long life service. Commonly used with ECOA® abrasive slurries. Available with grooves.	381	1PU40A03815	331,00
	400	1PU40A04005	346,10
	480	1PU40A04805	484,20
	610	1PU40A06105	#
	700	1PU40A07005	#



1PC1

Characteristics	Ø in mm	Ref.	€
Polyurethane compressed impregnated fibres. Extra hard. Excellent flatness, high durability. Can be used with all types of abrasives.	381	1PC10A03815	1 184,50
	400	1PC10A04005	1 223,10
	480	1PC10A04805	2 437,50
	610	1PC10A06105	#
	700	1PC10A07005	#
	914	1PC10A09145	#
	1000	1PC10A10005	#



1PC2

Characteristics	Ø in mm	Ref.	€
Polyurethane compressed impregnated fibres. Very hard. Excellent flatness, high durability. Can be used with all types of abrasives.	381	1PC20A03815	1 006,80
	400	1PC20A04005	1 036,50
	480	1PC20A04805	1 759,50
	610	1PC20A06105	#
	700	1PC20A07005	#
	914	1PC20A09145	#
	1000	1PC20A10005	#



1NT2

Box of 5 pieces

Characteristics	Ø in mm	Ref.	€
Non woven polyester - Fine. From rough polishing to the polishing of non ferrous materials. Commonly used with ECOA® and NEOLAP® abrasive slurries.	381	1NT20A03815	138,00
	400	1NT20A04005	144,20
	480	1NT20A04805	198,00
	610	1NT20A06105	283,30
	700	1NT20A07005	339,90
	914	1NT20A09145	556,20
	1000	1NT20A10005	612,90

2NT1

NEW

Characteristics	Ø in mm	Ref.	€
Non-woven polyester/polypropylene composite. High durability. Multi-purpose disc, can be used for rough or finish polishing. Commonly used with BioDIAMANT® NEOLAP® and ECOA abrasive slurries.	381	2NT10A03815	205,00
	400	2NT10A04005	224,10
	480	2NT10A04805	304,00
	610	2NT10A06105	493,40
	700	2NT10A07005	587,20
	914	2NT10A09145	940,30
	1000	2NT10A10005	998,70

2PC1

Characteristics	Ø in mm	Ref.	€
Polyurethane compressed impregnated polyester fibres - Hard. Excellent flatness and high durability. Can be used with diamond slurries or colloidal silicas. Available in various patterns.	381	2PC10A03815	463,50
	400	2PC10A04005	482,00
	480	2PC10A04805	696,00
	610	2PC10A06105	1 019,80
	700	2PC10A07005	1 223,60

2PC2

Characteristics	Ø in mm	Ref.	€
Polyurethane compressed impregnated with polyester fibres - Medium-dur. Excellent flatness and high durability. Commonly used with diamond slurries or colloidal silicon. Available in various patterns.	381	2PC20A03815	426,40
	400	2PC20A04005	462,00
	480	2PC20A04805	696,00
	610	2PC20A06105	977,30
	700	2PC20A07005	1 172,70

2TT2

Characteristics	Ø in mm	Ref.	€
Taffeta woven synthetic fibres. High stock removal and inherent flatness on all materials. High durability. Commonly used with NEOLAP® diamond slurries.	381	2TT20A03815	235,60
	400	2TT20A04005	252,10
	480	2TT20A04805	335,50
	610	2TT20A06105	440,20
	700	2TT20A07005	527,50

2TS1

Characteristics	Ø in mm	Ref.	€
Satin woven natural fibres. Excellent finishing of all materials. Good inherent flatness. Commonly used with NEOLAP® diamond slurries.	381	2TS10A03815	109,30
	400	2TS10A04005	114,40
	480	2TS10A04805	159,50
	610	2TS10A06105	204,40
	700	2TS10A07005	288,10
	914	2TS10A09145	402,80
	1000	2TS10A10005	441,90

POLISHING SUPPORTS

2TS2

Box of 5 pieces

Characteristics	Ø in mm	Ref.	€
Satin woven natural fibres on flexible support . Excellent finishing of all materials. Good durability. Commonly used with NEOLAP® diamond slurries.	381	2TS20A03815	93,00
	400	2TS20A04005	98,60
	480	2TS20A04805	140,80
	610	2TS20A06105	210,10
	700	2TS20A07005	252,10
	914	2TS20A09145	383,20
	1000	2TS20A10005	420,20

2FL1

Characteristics	Ø in mm	Ref.	€
Compressed wool felt. Finishing of plastics and glasses. High durability. Commonly used with AQUA LAM® cerium oxide.	381	2FL10A03815	489,60
	400	2FL10A04005	504,60
	480	2FL10A04805	556,50
	610	2FL10A06105	754,00
	700	2FL10A07005	1 144,70
	914	2FL10A09145	1 466,30
	1000	2FL10A10005	1 604,10

2FL2

Characteristics	Ø in mm	Ref.	€
Wool felt, extra flexible. Finishing of plastics and glasses. High durability. Commonly used with AQUA LAM® cerium oxide.	381	2FL20A03815	332,80
	400	2FL20A04005	373,20
	480	2FL20A04805	494,50
	610	2FL20A06105	698,90
	700	2FL20A07005	841,00
	914	2FL20A09145	1 268,60
	1000	2FL20A10005	1 492,50

2MS1

Characteristics	Ø in mm	Ref.	€
Foam. Finishing, on soft and medium-hard materials. Moulds to the shape of the part to be polished. Commonly used with ECOA® abrasive slurries.	381	2MS10A03815	108,20
	400	2MS10A04005	113,30
	480	2MS10A04805	158,00
	610	2MS10A06105	276,90
	700	2MS10A07005	334,80
	914	2MS10A09145	489,30
	1000	2MS10A10005	540,80

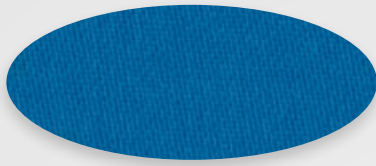
3FP1

Characteristics	Ø in mm	Ref.	€
Flocked polyester fibres. Finishing of organic and mineral glasses. Very resistant. Commonly used with AQUA LAM® oxides.	381	3FP10A03815	215,30
	400	3FP10A04005	232,90
	480	3FP10A04805	304,50
	610	3FP10A06105	557,20
	700	3FP10A07005	1 150,90
	914	3FP10A09145	1 855,90
	1000	3FP10A10005	1 892,60

3SE2

Characteristics	Ø in mm	Ref.	€
High-resistance synthetic silk fibres. Superfinishing of medium hard and soft materials. Excellent inherent flatness. Commonly used with NEOLAP® diamond slurries.	381	3SE20A03815	131,00
	400	3SE20A04005	138,00
	480	3SE20A04805	192,20
	610	3SE20A06105	267,60
	700	3SE20A07005	319,10
	914	3SE20A09145	448,20
	1000	3SE20A10005	475,90



**3SA2**

Box of 5 pieces

Characteristics	Ø in mm	Ref.	€
Synthetic silk fibres. Superfinishing of all types of materials. Excellent inherent flatness. Commonly used with NEOLAP® diamond slurries.	381	3SA20A03815	128,60
	400	3SA20A04005	135,40
	480	3SA20A04805	193,60
	610	3SA20A06105	286,60
	700	3SA20A07005	341,80
	914	3SA20A09145	474,20
	1000	3SA20A10005	552,10

**3SA4**

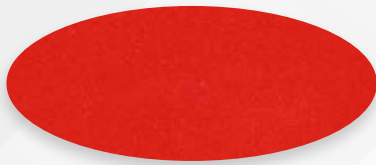
Characteristics	Ø in mm	Ref.	€
Composite synthetic fibres. Super finishing of soft materials . Good inherent flatness. Commonly used with NEOLAP® diamond slurries.	381	3SA40A03815	127,40
	400	3SA40A04005	134,10
	480	3SA40A04805	191,40
	610	3SA40A06105	260,00
	700	3SA40A07005	310,00
	914	3SA40A09145	397,20
	1000	3SA40A10005	462,20

**3FV1**

Characteristics	Ø in mm	Ref.	€
Semi-hard flocked short viscose fibres. Super finishing of hard materials. Commonly used with NEOLAP® diamond slurries.	381	3FV10A03815	97,80
	400	3FV10A04005	102,80
	480	3FV10A04805	148,80
	610	3FV10A06105	236,60
	700	3FV10A07005	296,10
	914	3FV10A09145	567,80
	1000	3FV10A10005	635,40

**3FV2**

Characteristics	Ø in mm	Ref.	€
Flocked short viscose fibres. Super finishing of all materials. Resistant to aggressive abrasive . Commonly used with NEOLAP® diamond slurries and AQUA LAM® oxides.	381	3FV20A03815	95,80
	400	3FV20A04005	102,10
	480	3FV20A04805	135,70
	610	3FV20A06105	232,10
	700	3FV20A07005	295,40
	914	3FV20A09145	484,50
	1000	3FV20A10005	533,50

**4FV3**

Characteristics	Ø in mm	Ref.	€
Soft flocked long viscose fibres. Super finishing of all materials, even very soft. Used with NEOLAP® diamond slurries and AQUA LAM® oxides.	381	4FV30A03815	98,50
	400	4FV30A04005	103,70
	480	4FV30A04805	145,80
	610	4FV30A06105	226,70
	700	4FV30A07005	325,30
	914	4FV30A09145	535,80
	1000	4FV30A10005	598,00

**4MP2**

Characteristics	Ø in mm	Ref.	€
Microporous polyurethane foam. Extreme super finishing of all materials (chemical polishing). High durability. Commonly used with colloidal silica AQUA LAM® oxides, and ECOA® abrasive slurries.	381	4MP20A03815	376,30
	400	4MP20A04005	383,60
	480	4MP20A04805	786,50
	610	4MP20A06105	1 365,00
	700	4MP20A07005	1 470,00
	914	4MP20A09145	#
	1000	4MP20A10005	#

POLISHING SUPPORTS

Structured cloths

The polishing cloths **TOUCLAM® 1PU3** and **1PU4** are available with grooves on their surface in order to improve their performances. Dimensions: 10 x 10 mm and 30 x 30 mm, depth of the grooves: 1 mm.

The polishing cloths **TOUCLAM® 2PC1** and **2PC2** are available with various structures: embossed and quartered (dimensions of the grooves 4,3 x 4,3 mm and 18,4 x 18,4 mm). The action of the abrasive slurry is optimised on the entire surface of the parts.

The principal benefits are:

- Higher stock removal
- Excellent flatness control
- Limitation of the suction effect
- Modulation of the stock removal and surface condition.

Available structures for 1PU3 and 1PU4 with grooved matrix.

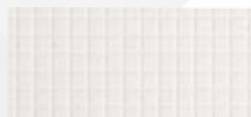


1PU4 grooved 10 x 10 mm



1PU4 grooved 30 x 30 mm

Available structure for 2PC1 and 2PC2 with grooved, and embossed matrix.



Grooved 4,3 x 4,3 mm



Grooved 18,4 x 18,4 mm



Embossed

Tailor-made cutting

LAM PLAN masters the production of its polishing cloths. In order to facilitate the use and the application of polishing cloths on your supports, we are capable of providing our discs, already cut to your needs. The geometry of the polishing cloth or pad will correspond perfectly to your fixation support. The cutting quality will be perfect which will guarantee a high durability of your polishing cloth.

We can provide all geometric shapes as the petals illustrated just below.

For double-side machines, we make the bore and the holes for the distribution of the abrasive on the superior plate.



CONSUMABLES



DIAMOND SLURRIES

Bio DIAMANT® NEOLAP® abrasive slurries

All the experience of LAM PLAN in a diamond abrasive with incomparable performances. In direct line with our famous Bio DIAMANT® range, the NEOLAP® diamond abrasive slurries go even further in terms of efficiency and user comfort. The NEOLAP® diamond slurry is a top-of-the-range product featuring exceptional performances.

VOC-free products - Respect of users and environment

The products of our Bio DIAMANT® range are biodegradable by more than 70%. Non-toxic and harmless, they are neutral; the user's working conditions are thus respected. Anticipation of new regulations in terms of Volatile Organic Compounds (VOCs). Consolidation of your ISO 14001 and ISO 26000 approach.

Biodegradable packaging - Reduction of your activity's environmental impact

For the first time in the polishing industry, a diamond slurry is packed in a plastic bottle of vegetal origin which is 100% compostable according to standard 13432 (for 400 ml packagings).

High yield - Reduced consumption

After many years of development, LAM PLAN formulated a new range of diamond slurries whose performances are clearly better than those of the old generation of Bio DIAMANT® products.

The comparative tests conducted by LAM PLAN prove it. The results in terms of stock removal are systematically better, which places NEOLAP® at the front of the diamond abrasive market in terms of polishing efficiency and speed.

The wettability of these diamond slurries is specially designed and optimised for NEW LAM® M'M' plates. The ease with which the diamond slurry is spread out over the plate's surface allows obtaining rapidly an excellent abrasive film, which favours an immediate lapping.



NEOLAP®

DIAMOND ABRASIVE LIQUIDS

DIAMOND SLURRIES

Flatness

Contains specific additives to facilitate the mixing of the diamond slurry with the NEOFLUID lubricating fluid and improves the dissipation of heat from the plate during lapping.

Improved roughness

This new generation of diamond abrasive allows obtaining better roughness results while preserving a strong stock removal.

Easy cleaning

With water for NEOLAP® series 300 and 400.

Quality, procurement guarantee and total traceability

Conformity to the REACH regulation

LAM PLAN set up all the arrangements needed for its application in order to guarantee the quality and availability of all its products over the long term. All the substances contained in our preparations comply with the REACH regulation's specifications. To facilitate your administrative formalities, all the Safety Data Sheets (SDSs) of our products conform to the legislation in force can be downloaded from www.lamplan.fr/fds.

Availability in monocrystalline and polycrystalline forms

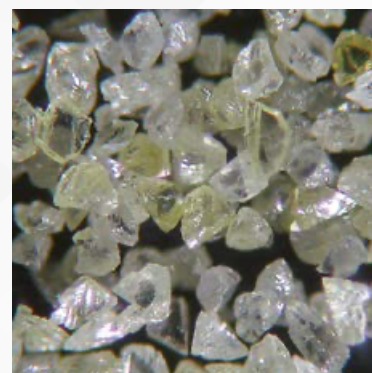
Series 100 emulsion - monocrystalline.

Series 300 water base - monocrystalline.

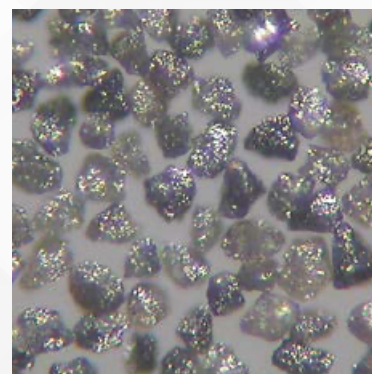
Series 400 water base - polycrystalline.

Bio DIAMANT® NEOLAP® slurries, key points

Use	Top-of-the-range diamond abrasive specific for lapping polishing applications	
Positioning	Ready-to-use, decantation-free, to be sprayed or dosed drop by drop. It is indicated for all your lapping work on NEW LAM® M'M' plates and polishing work on our range of polishing cloths	
Range	Monocrystalline, polycrystalline - grains from 1/4 to 45 µm	
Bases	Water and emulsion	
Packagings	400 ml - 2 L	
Lubricants	water base	712 or NEOFLUID
	emulsion base	712 or NEOFLUID



Monocrystalline diamond



Polycrystalline diamond

Reference reading:

106 Grain in µm

Bases

- 1 = emulsion - monocrystalline
- 3 = water - monocrystalline
- 4 = water - polycrystalline

GUIDANCE

NEOLAP®



Diamond slurry
Single face
lapping polishing
VOC free, biodegradable
Aqueous detergent

Diamond slurries Bio DIAMANT® NEOLAP®

SERIES 100 - MONOCRYSTALLINE EMULSION

400 ml packaging				2 litres packaging	
Type	µm	Ref.	€	Ref.	€
197	0,25	02 NO197 60	128,20	02 NO197 70	610,20
195	0,75	02 NO195 60	128,20	02 NO195 70	610,20
101	1	02 NO101 60	128,20	02 NO101 70	610,20
102	2	02 NO102 60	132,30	02 NO102 70	629,00
103	3	02 NO103 60	132,30	02 NO103 70	629,00
106	6	02 NO106 60	132,30	02 NO106 70	629,00
109	9	02 NO109 60	138,90	02 NO109 70	660,40
112	12	02 NO112 60	174,50	02 NO112 70	829,80
115	15	02 NO115 60	174,50	02 NO115 70	829,80
125	25	02 NO125 60	174,50	02 NO125 70	829,80
145	45	02 NO145 60	183,20	02 NO145 70	871,30

SERIES 300 - MONOCRYSTALLINE WATER BASE

400 ml packaging				2 litres packaging	
Type	µm	Ref.	€	Ref.	€
397	0,25	02 NO397 60	128,20	02 NO397 70	610,20
395	0,75	02 NO395 60	128,20	02 NO395 70	610,20
301	1	02 NO301 60	128,20	02 NO301 70	610,20
302	2	02 NO302 60	132,30	02 NO302 70	629,00
303	3	02 NO303 60	132,30	02 NO303 70	629,00
306	6	02 NO306 60	132,30	02 NO306 70	629,00
309	9	02 NO309 60	138,90	02 NO309 70	660,40
312	12	02 NO312 60	174,50	02 NO312 70	829,80
315	15	02 NO315 60	174,50	02 NO315 70	829,80
325	25	02 NO325 60	174,50	02 NO325 70	829,80
345	45	02 NO345 60	183,20	02 NO345 70	871,30

SERIES 400 - POLYCRYSTALLINE WATER BASE

400 ml packaging				2 litres packaging	
Type	µm	Ref.	€	Ref.	€
497	0,25	02 NO497 60	147,50	02 NO497 70	701,70
495	0,75	02 NO495 60	147,50	02 NO495 70	701,70
401	1	02 NO401 60	147,50	02 NO401 70	701,70
402	2	02 NO402 60	152,10	02 NO402 70	723,40
403	3	02 NO403 60	152,10	02 NO403 70	723,40
406	6	02 NO406 60	152,10	02 NO406 70	723,40
409	9	02 NO409 60	159,70	02 NO409 70	759,50
412	12	02 NO412 60	200,70	02 NO412 70	954,30
415	15	02 NO415 60	200,70	02 NO415 70	954,30
425	25	02 NO425 60	200,70	02 NO425 70	954,30



DIAMOND SLURRIES

Diamond slurries 241 series

High performance, oil-based polycrystalline diamond abrasives.

The high lapping performances of these products allow obtaining excellent results in terms of brightness and roughness on very hard materials, such as ceramics or silicon carbide.

Containing additives which limit the diamond's settling out, the suspension of these abrasives is thus facilitated and very rapid, which guarantees a perfect homogenisation of the product before usage.

These ready-to-use- products can be used with the lubricating fluid MM990-140 or MM950-140.

The formulation of these diamond slurries is particularly adapted to materials sensitive to water.

Parts are cleaned with Stanol or detergent 742.



SERIES 241 - MONOCRYSTALLINE

Type	µm	500 ml packaging		5 litres packaging	
		Ref.	€	Ref.	€
99 241	0,1	02 99241 00	99,00	02 99241 40	693,00
97 241	0,25	02 97241 00	99,00	02 97241 40	693,00
01 241	1	02 01241 00	99,00	02 01241 40	693,00
02 241	2	02 02241 00	99,00	02 02241 40	693,00
03 241	3	02 03241 00	99,00	02 03241 40	693,00
06 241	6	02 06241 00	99,00	02 06241 40	693,00
09 241	9	02 09241 00	99,00	02 09241 40	693,00
14 241	14	02 14241 00	99,00	02 14241 40	693,00
25 241	25	02 25241 00	99,00	02 25241 40	693,00

SERIES 241P - POLYCRYSTALLINE

Type	µm	500 ml packaging		5 litres packaging	
		Ref.	€	Ref.	€
99 241P	0,1	02 99241P 00	140,60	02 99241P 40	984,00
97 241P	0,25	02 97241P 00	140,60	02 97241P 40	984,00
01 241P	1	02 01241P 00	140,60	02 01241P 40	984,00
02 241P	2	02 02241P 00	140,60	02 02241P 40	984,00
03 241P	3	02 03241P 00	140,60	02 03241P 40	984,00
06 241P	6	02 06241P 00	140,60	02 06241P 40	984,00
09 241P	9	02 09241P 00	140,60	02 09241P 40	984,00
14 241P	14	02 14241P 00	140,60	02 14241P 40	984,00
25 241P	25	02 25241P 00	140,60	02 25241P 40	984,00

Diamond slurry

Single face
lapping polishing

0% of water

No decantation

ECOa®



Multi abrasives
Double side polishing
Custom-made formulas
Packaging 5 L

Conform to the REACH regulation

LAM PLAN established solutions to guarantee quality and availability of all its products on the long run. All the substances present in our preparations respond to the specifications of the REACH regulations. In order to facilitate your administrative process, all the safety data sheet (SDS) of our products are in compliance with the current legislation.

ECOa® abrasive slurries

New ranges of liquid slurries for double plate machines. The ECOa® range is carrying all LAM PLAN's knowledge in terms of classic and diamond slurries applied for polishing and super-finishing on double plate machines. It is the guarantee of an efficient response to various materials.

Ready-to-use high quality industrial products

The manufacturing and the packaging are adapted to the constraints and consummation encountered in industrial production polishing.

Control your VOC emission

For many years, the LAM PLAN R&D department has been committed to develop new products respecting the user's health but also the environment without compromising the efficiency. Composed with a specific new generation binder, this slurry is VOC free (Volatile Organic Compounds).

Improved technical performances

The abrasive film, specially elaborated for double side lapping polishing assures a good distribution of the slurry on the polishing supports. The new generation formulations reduce heating during the polishing process and keep the abrasive film wet.

Improved roughness

The varied ECOa® range guarantees the best results with a high stock removal on all materials.

Easy cleaning

Specially conceived to limit and distribute the polishing residues, the ECOa® liquids can be washed easily with water or with aqueous detergents.

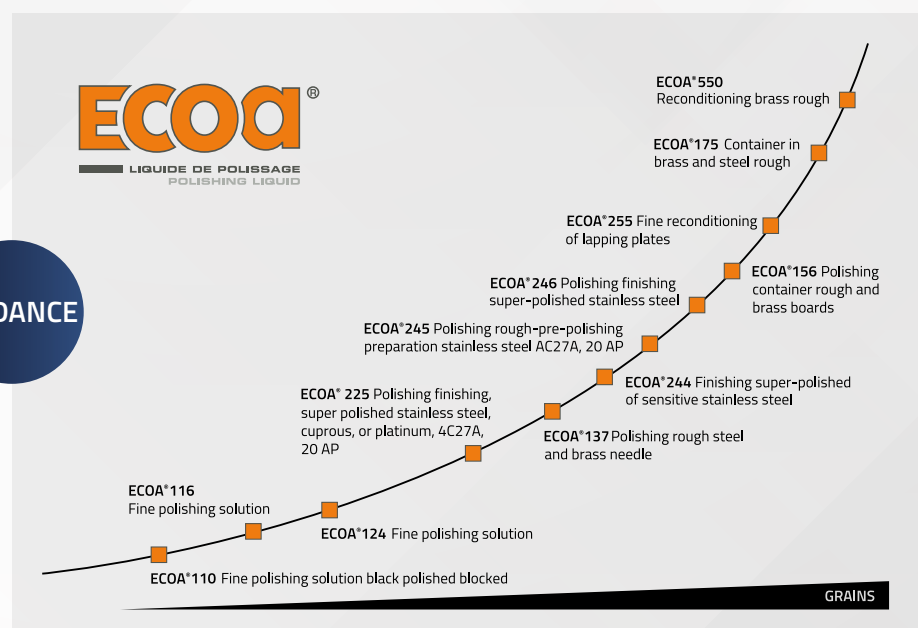
Respect the users and the environment

The products of the ECOa® range are biodegradable by more than 70%. Nontoxic and harmless, the users' working condition are thus respected. Also anticipating the new regulations concerning greenhouse gas emission. Consolidation of your ISO 14001 and ISO 26000 approach.

Supply guarantee and total traceability

Prices on demand - Available range (non exhaustive list)

GUIDANCE



DIAMOND SLURRIES

Stick Bio DIAMANT® M.M.140 A

Diamond pastes dosing stick for the finishing of watch parts.

Characteristics

The Bio DIAMANT® M.M.140 A stick is constituted of a solid chemical binder, soluble in water and oil. The Bio DIAMANT® M.M.140 A stick can be used with the M.M.712 fluid (water base) or with the M.M.705 fluid (oil base).

Applications

Particularly recommended for the watch parts. Easy to use, its yield and its abrasive quality allows obtaining exceptional results well known in this branch of industry. Its pairing with TOUCHLAM® polishing cloths authorises the final polishing of various materials and principally the ones used in the watchmaking field (brass, silver, stainless steel, stavax, coating, etc.). It is often used in restoring terminated parts, to remove micro-scratches, it can also be integrated in a complete production polishing process.

Use and presentation

This stick is intended for manual use. The accurate dosing of the paste distribution is insured by a graduated drum. Each division represents 0.2 gram.

This system allows loading any new polishing cloth with a perfectly repetitive material without direct contact with the product.

BIO DIAMANT®



Diamond paste
Manual polishing
Proven results
High efficiency
High abrasive capacity

Characteristics	Packaging	Type	µm	Ref.	€
Monocrystalline diamond High concentration	10 g	M.M.140 A	<1	01 MM149 00	124,10

These are the necessary quantities to load a new polishing cloth:

Nature of cloth	Ø 150 mm	Ø 200 mm	Ø 250 mm	Ø 300 mm	Ø 400 mm
Woven	0,2 g	0,2 g	0,4 g	0,4 g	0,6 g
Flocked	0,3 g	0,4 g	0,5 g	0,6 g	0,7 g

Please adjust each operation according to the surface of the samples.

GUIDANCE

BIO DIAMANT®



Manual use on
lapping and polishing plates
and blocks

High efficiency
High abrasive capacity

Bio DIAMANT® Sticks

The sticks allow controlling the dosage in manual usage on lapping plates.

The diamond paste is distributed according to an accurate dosage, thanks to a drum, graduated every 0.2 g. The loading of the paste on the plate is insured to be repetitive and without finger contact.

SERIES M.M.130-140

Extra concentrated in monocrystalline diamond, these high performance sticks allow a high and fast stock removal on all types of materials. Their high concentration facilitates also the rapid acquisition of flat and shiny surfaces. The cleaning is done with water or detergent 742.

The M.M. 130 series sticks are used for ROUGH operations.

The M.M. 140 series sticks are used for FINISHING operations.

Characteristics	Type	µm	Ref.	€
10 g Finishing	MM 140 A	0,75	01 MM149 00	124,10
	MM 145	1	01 MM145 00	134,80
	MM 144	2	01 MM144 00	134,80
	MM 143	3	01 MM143 00	148,60
	MM 142	6	01 MM142 00	156,60
10 g Rough	MM 141	9	01 MM141 00	180,20
	MM 133	12	01 MM133 00	221,90
	MM 132	14	01 MM132 00	221,90
	MM 131	25	01 MM131 00	221,90

8% discount from 3 products of the same reference

SERIE 122

High concentration monocrystalline diamond sticks, for all rough and finishing operations. The identification of grains of these sticks are colour coded in order to limit the risks of committing mistakes during the use. The cleaning can be done with water, alcohol or detergent 742.

Characteristics	Type	µm	Ref.	€
10 g Finishing on polishing support	025 122	1/4	01 97122 00	33,40
	1 122	1	01 01122 00	39,60
	3 122	3	01 03122 00	48,40
	6 122	6	01 06122 00	48,80
	9 122	9	01 09122 00	52,70
	15 122	15	01 15122 00	53,40

8% discount from 3 products of the same reference

Diamond abrasive
Manual lapping
For composite rods

DIAMOND SLURRIES

Bio DIAMANT® pastes

Oil soluble pastes, with high diamond concentration, insuring an important productivity on hard and extra hard materials.

Use with lubricant type M.M.705. These pastes are available in 1 to 90 µm grains. The cleaning of your parts can be done with water or alcohol.

SERIE 210

Characteristics	Type	µm	Ref.	€
10 g High yield abrasive Hard and extra-hard materials	1 213	1	01 01213 00	81,90
	3 213	3	01 03213 00	143,40
	6 213	6	01 06213 00	183,00
	8 213	8	01 08213 00	217,60
	14 213	14	01 14213 00	224,00
	25 213	25	01 25213 00	305,00
	40 213	40	01 40213 00	317,00
	60 213	60	01 60213 00	327,00
	90 213	90	01 90213 00	329,40

5% discount from 3 products of the same reference



Diamond abrasive

Lapping bore

0% of water

Lubrification
anti-heating

Diadoseurs Bio DIAMANT®

BIO DIAMANT® GELS SERIES 400

Characteristics	Type	µm	Ref.	€
30 g Diadoseur precision Finishing on rods	01 400	1	010140030	58,40
	03 400	3	010340030	78,50
	06 400	6	010640030	78,50
	08 400	8	010840030	78,50
	14 400	14	011440030	111,40
	25 400	25	012540030	124,10



Concentrated
diamond abrasive

Ultra precise
distribution

Repeatability
of the distribution

GUIDANCE

These are the necessary quantities to load a new polishing cloth:

Nature of cloth	Ø 150 mm	Ø 200 mm	Ø 250 mm	Ø 300 mm	Ø 400 mm
Woven	0,2 g	0,2 g	0,4 g	0,4 g	0,6 g
Flocked	0,3 g	0,4 g	0,5 g	0,6 g	0,7 g

Please adjust each operation according to the surface of the samples.

**Lubricant**

**Dedicated to materials
sensitive to corrosion**

**Lubricant**

**Lapping
in high production**

Use with a dosing distributor

Lubricant

0 % of water

Dedicated for manual use

Lubricant

0 % of water

Use with a dosing distributor

Fluids

NEOFLUID

Lubricating fluid recommended for Bio DIAMANT® NEOLAP® slurries. Formulation without volatile organic compounds (VOCs) and without dangerous substances, this biodegradable fluid is adapted for the lapping and polishing of most materials. It allows controlling perfectly the heating of the lapping plates during production cycles, thereby guaranteeing excellent flatness. Its association with the Bio DIAMANT® NEOLAP® slurries guarantees a stable, uniform abrasive film during the various work processes. Its active principles protect materials sensitive to corrosion.

Packaging	Ref.	€
1 litre	07 NEF10 30	15,30
5 litres	07 NEF10 40	69,00

M.M.712

Aqueous lubricating fluid recommended with the Bio DIAMANT® series 122 and M.M.130-140, and liquid series M.M.330-340. It is compatible with the new Bio DIAMANT® NEOLAP® slurries series 300 and 400. Ready to use, its specific formula prevents the support from heating and facilitates the cleaning of parts with water or by adding the detergent 742.

Packaging	Ref.	€
1 litre	07 MM712 30	13,90
5 litres	07 MM712 40	64,60
Pulmatic 350 cc	07 MM712 50	24,30

M.M.705

Lubricating fluid to be used with the diamond compounds series 210. Ready-to-use, it ensures an excellent dispersion of the compound and optimises its lapping power. Cleans easily with the detergent 742 or Stanol.

Packaging	Ref.	€
1 litre	07 MM705 30	12,90
Pulmatic 350 cc	07 MM705 50	26,70

M.M.990-140

This lubricant fluid is recommended for usages with the diamond slurries series 241P. Ready-to-use, its low viscosity creates a very fine abrasive film during the work process, which ensures a high lapping efficiency. It is compatible with the new Bio DIAMANT® NEOLAP® series 100 and M.M. 130-140. Use the detergent 742, Stanol or apply solvents to clean the parts.

Packaging	Ref.	€
1 litre	07 MM711 30	21,90
5 litres	07 MM711 40	104,50

M.M.950-140

Oil-based lubricating fluid. Due to its low evaporation rate, it is recommended for large lapping or polishing support. This fluid is not subjected to the regulation on the transport of dangerous materials (ADR, IMDG, IATA).

Packaging	Ref.	€
1 litre	07 MM950 30	20,00
5 litres	07 MM950 40	98,70

MANUAL DISTRIBUTOR

Characteristics	Packaging	Réf.	€
Bottle to be filled	Pulmatic 350 cc - 2 units	08 00802 00	40,80

COMPOSITE ABRASIVES

CLASSICAL composite abrasive

A high-performance product which has proven its adaptability to all usage, especially for large tanks and intensive usage. According to the concentration intended, 1 litre of abrasive solution allows obtaining between 5 and 10 litres of abrasive.

Advantages

- Increasing working speed.
 - Easy resuspension of the mixture.
 - Soft abrasive film, efficient and balanced.
 - Very low smell.
 - Low running costs.
 - Easy cleaning. Detergent 711-103.
 - Ingenious packaging: packs 2 x 2 litres stackable and 4 x 2 litres (reduced handling).
- Concentrated abrasive slurry, easy-to-use and easy cleaning.

1 pack of 2 x 2 litres = 20 to 30 litres of solution. These products allow working with abrasive concentration adjustable to usage. Requiring a brewing while using it. Easy resuspension. Compatible with the additive 716.



Conventional abrasives
Lapping on cast iron plates

ALUMINIUM OXYDE (Al₂O₃)

2 x 2 litres pack				4 x 2 litres pack	
FEPA	µm	Ref.	€	Ref.	€
180	74	A074 S12L2	182,60	A074 S12L4	277,00
220	62	A062 S12L2	182,60	A062 S12L4	278,10
240	45	A045 S12L2	182,60	A045 S12L4	278,10
280	37	A037 S12L2	182,60	A037 S12L4	278,10
320	29	A029 S12L2	182,60	A029 S12L4	278,10
360	23	A023 S12L2	182,60	A023 S12L4	278,10
400	17	A017 S12L2	182,60	A017 S12L4	278,10
500	13	A013 S12L2	182,60	A013 S12L4	278,10
600	9	A009 S12L2	182,60	A009 S12L4	278,10
800	7	A007 S12L2	202,90	A007 S12L4	307,30
1000	5	A005 S12L2	221,10	A005 S12L4	337,80
1200	3	A003 S12L2	244,30	A003 S12L4	368,50
1500	1	A001 S12L2	264,40	A001 S12L4	399,50

SILICON CARBIDE (SiC)

2 x 2 litres pack				4 x 2 litres pack	
FEPA	µm	Ref.	€	Ref.	€
180	74	E074 S12L2	193,40	E074 S12L4	301,00
220	62	E062 S12L2	193,40	E062 S12L4	301,00
240	45	E045 S12L2	193,40	E045 S12L4	301,00
280	37	E037 S12L2	193,40	E037 S12L4	301,00
320	29	E029 S12L2	193,40	E029 S12L4	301,00
360	23	E023 S12L2	193,40	E023 S12L4	301,00
400	17	E017 S12L2	233,30	E017 S12L4	318,10
500	13	E013 S12L2	233,30	E013 S12L4	318,10
600	9	E009 S12L2	268,80	E009 S12L4	356,30
800	7	E007 S12L2	311,70	E007 S12L4	414,70
1000	5	E005 S12L2	345,50	E005 S12L4	473,10
1200	3	E003 S12L2	382,40	E003 S12L4	508,40

The CLASSICAL composite abrasive is also available in Boron carbide (B₄C) and cerium oxide (CeO₂). Other grains on demand.



Conventional abrasive
Lapping on cast
iron plate
Biodegradable

BIOLAM® composite abrasive

A new generation of biodegradable abrasive slurries developed by our Research and Development services. Very useful for the lapping machine equipped with a medium size tank.

Advantages

- Easy to use and to put in work.
- Low decantation of the abrasive, regularity of results.
- Consistent and ready abrasive film.
- No dangerous substances.
- Low running costs.
- Very low smell.
- Simple and easy cleaning (ex: water or water + ordinary detergent).
- Compact packaging: 2 and 20 litres jerrycans other packaging on demand.

BIOLAM® PLUS TO DILUTE AND BIOLAM S READY-TO-USE

Plus: Smooth abrasive slurry, no smell, biodegradable, easy to clean. Limited decantation, no additive needed. dilute 1 to 5 times in water.

S: Biodegradable and no smell liquid slurry, non-toxic. Easy to clean. Simple usage: to put directly in the abrasive tank of the machine, limited decantation. Depending of the use can be used pure or can be diluted up to 2 times in water.

BIOLAM® Oxyde d'aluminium (Al₂O₃)

BIOLAM® PLUS to dilute

BIOLAM® S ready-to-use

		Container of 2 litres		Container of 20 litres		Container of 2 litres		Container of 20 litres	
FEPA	µm	Ref.	€	Ref.	€	Ref.	€	Ref.	€
100	125	A125 V92L1	31,90	A125 V9020	227,70				
120	105	A105 V92L1	31,90	A105 V9020	227,70				
150	88	A088 V92L1	31,90	A088 V9020	227,70	A088 V62L1	17,30	A088 V6020	162,20
180	74	A074 V92L1	31,90	A074 V9020	227,70	A074 V62L1	17,30	A074 V6020	162,20
220	62	A062 V92L1	33,40	A062 V9020	226,30	A062 V62L1	17,30	A062 V6020	162,20
240	45	A045 V92L1	36,70	A045 V9020	261,90	A045 V62L1	18,20	A045 V6020	171,70
280	37	A037 V92L1	41,70	A037 V9020	307,30	A037 V62L1	20,40	A037 V6020	194,60
320	29	A029 V92L1	43,80	A029 V9020	312,70	A029 V62L1	21,90	A029 V6020	206,80
360	23	A023 V92L1	45,40	A023 V9020	323,60	A023 V62L1	22,50	A023 V6020	212,20
400	17	A017 V92L1	45,50	A017 V9020	320,90	A017 V62L1	22,70	A017 V6020	212,20
500	13	A013 V92L1	48,60	A013 V9020	348,20	A013 V62L1	23,90	A013 V6020	227,10
600	9	A009 V92L1	48,80	A009 V9020	348,20	A009 V62L1	24,00	A009 V6020	228,40
800	7	A007 V92L1	57,70	A007 V9020	412,90	A007 V62L1	28,40	A007 V6020	270,50
1000	5	A005 V92L1	78,10	A005 V9020	561,00	A005 V62L1	38,90	A005 V6020	366,30
1200	3	A003 V92L1	82,60	A003 V9020	589,60	A003 V62L1	40,80	A003 V6020	385,40
1400	2	A002 V92L1	82,60	A002 V9020	589,80				
1500	1	A001 V92L1	82,70	A001 V9020	589,80	A001 V62L1	41,30	A001 V6020	386,50
1800	0,7	CP70 V92L1	109,90	#	#	CP70 V62L1	54,30	CP70 V6020	510,80
2000	0,4	CP40 V92L1	136,00	#	#	CP40 V62L1	66,90	CP40 V6020	631,20
2200	0,2	CP20 V92L1	372,60	#	#	CP20 V62L1	183,80	CP20 V6020	1 727,30
4500	0,05	CP05 V92L1	286,80	#	#	CP05 V62L1	141,50	CP05 V6020	1 330,00

Prix sur demande / Prices on request / Preise auf Anfrage / Prezzi su richiesta

COMPOSITE ABRASIVES

BIOLAM® Silicon carbide (SiC)

BIOLAM®PLUS to dilute

Container of 2 litres				Container of 20 litres		Container of 2 litres		Container of 20 litres	
FEPA	µm	Ref.	€	Ref.	€	Ref.	€	Ref.	€
80	177	E177 V92L1	44,00	E177 V9020	356,50	E177 V62L1	22,40	E177 V6020	175,80
100	125	E125 V92L1	44,00	E125 V9020	356,50	E125 V62L1	22,40	E125 V6020	175,80
120	105	E105 V92L1	44,00	E105 V9020	356,50	E105 V62L1	22,40	E105 V6020	175,80
150	88					E088 V62L1	22,40	E088 V6020	175,80
180	74	E074 V92L1	44,00	E074 V9020	356,50	E074 V62L1	22,40	E074 V6020	175,80
220	62	E062 V92L1	54,10	E062 V9020	356,50	E062 V62L1	22,40	E062 V6020	175,80
240	45	E045 V92L1	54,10	E045 V9020	356,50	E045 V62L1	23,50	E045 V6020	186,40
280	37	E037 V92L1	54,10	E037 V9020	356,50	E037 V62L1	26,60	E037 V6020	202,90
320	29	E029 V92L1	57,50	E029 V9020	460,70	E029 V62L1	27,10	E029 V6020	206,80
360	23	E023 V92L1	57,50	E023 V9020	460,70	E023 V62L1	27,90	E023 V6020	217,50
400	17	E017 V92L1	59,80	E017 V9020	478,50	E017 V62L1	29,30	E017 V6020	227,10
500	13	E013 V92L1	59,80	E013 V9020	478,50	E013 V62L1	30,40	E013 V6020	229,80
600	9	E009 V92L1	59,80	E009 V9020	478,50	E009 V62L1	31,90	E009 V6020	242,00
800	7	E007 V92L1	64,90	E007 V9020	519,80	E007 V62L1	36,90	E007 V6020	292,00
1000	5	E005 V92L1	76,90	E005 V9020	617,00	E005 V62L1	47,40	E005 V6020	362,40
1200	3	E003 V92L1	78,00	E003 V9020	625,10	E003 V62L1	50,10	E003 V6020	382,50
1360	1,5					F1P5 V62L1	62,10	F1P5 V6020	477,30
1500	1					F001 V62L1	65,30	F001 V6020	502,80
1800	0,7					FP70 V62L1	75,20	FP70 V6020	578,70

BIOLAM® Cerium oxyde (CeO₂) liquid

Finishing Liquid for the finishing on glass, sapphire and plastic. Dilute 2 to 5 times in water. 2 litres tin.

BIOLAM®PLUS to dilute

Container of 2 litres			
FEPA	µm	Ref.	€
1200	3	I003 V92L1	226,20
1300	2	I002 V92L1	226,20
1400	1	I001 V92L1	226,20

The composite abrasives BIOLAM® are also available in boron carbide (B₄C) and cerium oxide (CeO₂).

Other grains on demand.



Dilution of AQUALAM® CLASSIC and BIOLAM®PLUS solutions

- 1 part concentrated abrasive product
- 2 parts ADDITIVE 716
- 4 parts tap water

ADDITIVE 716 optimises the abrasive film and protects the parts and the cast iron plate from corrosion.

GUIDANCE



Super-finishing
Polishing on cloth discs
Simplified cleaning

AQUA LAM® colloidal silica

The colloidal silicas are stabilised suspensions with fine non-agglomerated spherical particles. This aqueous solution contains a high concentration of nanoscale silica.

During usage, colloidal silicas are generally diluted in water to proportions between 10 and 50%. We advise a 20% dilution in water for an optimum use.

These products are always used for super-finishing.

S.W. 30

Chemical-mechanical abrasive for compatible material
 Super-finishing standard liquid to use pure or diluted up to 50%
 Silica concentration: 30%
 Size of particles: 30 nm
 pH = 10

Packaging	Ref.	€
5 litres tin	Z000 A25L1	109,50
10 litres tin	Z000 A2010	216,30

S.W. 36

Silica concentration : 50%
 Size of particles : 50 nm
 pH = 9

Packaging	Ref.	€
5 litres tin	Z000 C55L1	81,00
10 litres tin	Z000 C5610	161,80

NOVAL S FINISHING

Super-finishing liquid. Obtaining ultra-low roughness
 Contains an additive "anti-crystallisation" which facilitate the cleaning of the parts and the machines. Silica concentration : 30%
 Size of particles: 30 nm
 pH = 10

Packaging	Ref.	€
5 litres tin	Z000 F75L1	117,40
10 litres tin	Z000 F7010	234,80
20 litres tin	Z000 F7020	398,00

NOVAL CONCENTRATED

Formulated to be added to pure colloidal silica
 Additive that cancels crystallisation and decantation of the pure colloidal silica pure
 Increases the stock removal, powers the roughness
 Silica concentration: 35%
 Size of particles: 30 nm
 pH = 9

Packaging	Ref.	€
10 litres tin	Z000 F8010	188,50
20 litres tin	Z000 F8020	357,70

COMPOSITE ABRASIVES

Abrasive compounds BIOLAP®

Concentrated fluid abrasive pastes. Oil base, auto-lubricants, intended for the lapping of parts between them and/or cylindrical lapping.

Biodegradables, no smell, no dangerous substances.

Advantages

- VOC free
- No water spots
- Alumina base, silicon carbide or boron carbide
- Grains from 0,05 to 125 microns
- Biodegradable products
- Low viscosity
- Packaging: in 50 and 250 cm³ pots



BIOLAP® L SERIES

Conventional abrasives
Complex parts Lapping polishing
Fluid texture



BIOLAP® Cr L SERIES

Conventional abrasives
and chromium oxide
Lapping polishing
Operations under high constraints
Resistant to friction and heating

BIOLAP® Aluminium oxide (Al₂O₃)

BIOLAP® L SERIES

Pot of 50 cm ³				Pot of 250 cm ³			
FEPA	µm	Ref.	€	Ref.	€		
100	125	A125 O3P05	19,30	A125 O3P25	43,50		
120	105	A105 O3P05	19,30	A105 O3P25	42,10		
150	88	A088 O3P05	19,30	A088 O3P25	42,10		
180	74	A074 O3P05	19,30	A074 O3P25	42,10		
220	62	A062 O3P05	19,60	A062 O3P25	42,80		
240	45	A045 O3P05	19,60	A045 O3P25	42,80		
280	37	A037 O3P05	19,70	A037 O3P25	44,20		
320	29	A029 O3P05	20,00	A029 O3P25	44,50		
360	23	A023 O3P05	20,10	A023 O3P25	44,70		
400	17	A017 O3P05	20,20	A017 O3P25	44,80		
500	13	A013 O3P05	20,30	A013 O3P25	45,20		
600	9	A009 O3P05	20,40	A009 O3P25	45,30		
800	7	A007 O3P05	20,90	A007 O3P25	47,20		
1000	5	A005 O3P05	22,80	A005 O3P25	51,30		
1200	3	A003 O3P05	23,80	A003 O3P25	52,90		
1500	1	A001 O3P05	23,90	A001 O3P25	53,10		
1800	0,7	CP70 O3P05	25,80	CP70 O3P25	58,30		
2000	0,4	CP40 O3P05	28,10	CP40 O3P25	63,00		
2200	0,2	CP20 O3P05	50,40	CP20 O3P25	113,30		
4500	0,05	CP05 O3P05	42,20	CP05 O3P25	95,50		

BIOLAP® Cr L SERIES

Pot of 50 cm³		Pot of 250 cm³	
Ref.	€	Ref.	€
A125 O5P05	23,20	A125 O5P25	48,20
A105 O5P05	23,20	A105 O5P25	48,20
A088 O5P05	23,20	A088 O5P25	48,20
A074 O5P05	23,20	A074 O5P25	48,20
A062 O5P05	23,80	A062 O5P25	49,00
A045 O5P05	23,80	A045 O5P25	49,00
A037 O5P05	24,20	A037 O5P25	50,40
A029 O5P05	24,30	A029 O5P25	50,60
A023 O5P05	24,70	A023 O5P25	50,90
A017 O5P05	24,80	A017 O5P25	51,20
A013 O5P05	24,90	A013 O5P25	51,60
A009 O5P05	25,00	A009 O5P25	51,80
A007 O5P05	26,10	A007 O5P25	54,10
A005 O5P05	26,30	A005 O5P25	54,30
A003 O5P05	29,60	A003 O5P25	61,40
A001 O5P05	29,70	A001 O5P25	61,70
CP70 O5P05	31,90	CP70 O5P25	66,40
CP40 O5P05	35,10	CP40 O5P25	73,20
CP20 O5P05	63,20	CP20 O5P25	131,60
CP05 O5P05	52,50	CP05 O5P25	190,40

BIOLAP® Silicon carbide (SiC)

BIOLAP® L SERIES

Pot of 50 cm ³				Pot of 250 cm ³				Pot of 50 cm ³				Pot of 250 cm ³			
FEPA	µm	Ref.	€	Ref.	€	Ref.	€	Ref.	€	Ref.	€	Ref.	€	Ref.	€
80	177	E177 O3P05	21,80	E177 O3P25	49,40	E177 O5P05	22,20	E177 O5P25	49,10						
100	125	E125 O3P05	21,80	E125 O3P25	49,40	E125 O5P05	22,20	E125 O5P25	49,10						
120	105	E105 O3P05	21,80	E105 O3P25	49,40	E105 O5P05	22,20	E105 O5P25	49,10						
150	88	E088 O3P05	21,80	E088 O3P25	49,40	E088 O5P05	22,20	E088 O5P25	49,10						
180	74	E074 O3P05	21,80	E074 O3P25	49,40	E074 O5P05	22,20	E074 O5P25	49,10						
220	62	E062 O3P05	22,60	E062 O3P25	51,30	E062 O5P05	23,20	E062 O5P25	51,10						
240	45	E045 O3P05	23,80	E045 O3P25	53,70	E045 O5P05	24,30	E045 O5P25	53,30						
280	37	E037 O3P05	24,10	E037 O3P25	54,10	E037 O5P05	24,40	E037 O5P25	53,80						
320	29	E029 O3P05	24,30	E029 O3P25	54,40	E029 O5P05	24,60	E029 O5P25	54,10						
360	23	E023 O3P05	24,60	E023 O3P25	55,10	E023 O5P05	24,80	E023 O5P25	54,70						
400	17	E017 O3P05	24,70	E017 O3P25	55,40	E017 O5P05	25,00	E017 O5P25	55,10						
500	13	E013 O3P05	24,80	E013 O3P25	55,60	E013 O5P05	21,00	E013 O5P25	46,40						
600	9	E009 O3P05	24,90	E009 O3P25	55,90	E009 O5P05	25,20	E009 O5P25	55,60						
800	7	E007 O3P05	25,80	E007 O3P25	58,10	E007 O5P05	26,10	E007 O5P25	57,20						
1000	5	E005 O3P05	25,90	E005 O3P25	58,30	E005 O5P05	26,40	E005 O5P25	57,90						
1200	3	E003 O3P05	32,00	E003 O3P25	37,60	E003 O5P05	35,10	E003 O5P25	77,20						

For personalised formulation please contact us (free estimate).

GUIDANCE

Dilution of AQUALAM® CLASSIC and BIOLAM®PLUS solutions

1 part concentrated abrasive product

2 parts ADDITIVE 716

4 parts tap water

ADDITIVE 716 optimises the abrasive film and protects the parts and the cast iron plate from corrosion.

COMPOSITE ABRASIVES

Abrasive compounds CLASSIC

High concentration abrasive compound. Optimises the texture of the abrasive film in order to obtain a rapid, maximal and extended abrasion. Non greasy, miscible to water and to the additive 716.

ALUMINIUM OXIDE (Al₂O₃)

Pot of 1 kg				Bucket of 10 kg	
FEPA	µm	Ref.	€	Ref.	€
100	125	A125 R101K	25,30	A125 R110K	161,40
120	105	A105 R101K	25,30	A105 R110K	161,40
150	88	A088 R101K	25,30	A088 R110K	161,40
180	74	A074 R101K	25,30	A074 R110K	161,40
220	62	A062 R101K	25,30	A062 R110K	161,40
240	45	A045 R101K	25,30	A045 R110K	161,40
280	37	A037 R101K	29,40	A037 R110K	161,40
320	29	A029 R101K	31,00	A029 R110K	196,20
360	23	A023 R101K	33,80	A023 R110K	197,50
400	17	A017 R101K	36,30	A017 R110K	210,40
500	13	A013 R101K	36,30	A013 R110K	210,40
600	9	A009 R101K	36,30	A009 R110K	210,40
800	7	A007 R101K	42,10	A007 R110K	270,70
1000	5	A005 R101K	52,20	A005 R110K	339,30
1200	3	A003 R101K	53,20	A003 R110K	340,90



Abrasifs conventionnels
High purity

SILICON CARBIDE (SiC)

Pot of 1 kg				Bucket of 10 kg	
FEPA	µm	Ref.	€	Ref.	€
120 ébauche	105	E105 R101K	35,10	E105 R110K	223,00
180 moyen	74	E074 R101K	35,10	E074 R110K	223,00
240 fine	45	E045 R101K	43,40	E045 R110K	277,80
320	29	E029 R101K	43,40	E029 R110K	277,80
400	17	E017 R101K	46,20	E017 R110K	290,40
500	13	E013 R101K	46,20	E013 R110K	290,40
600	9	E009 R101K	57,40	E009 R110K	365,90
1000	5	E005 R101K	73,00	E005 R110K	461,50
1200	3	E003 R101K	84,10	E003 R110K	537,00

For personalised formulations, please contact us (free estimate).



Standard abrasive
High purity

AQUA LAM® Al₂O₃ powder

ALUMINIUM OXIDE

Commonly called "polishing alumina", chemical symbol Al₂O₃. They are composed of various family: purified aluminas, melted aluminas, calcinated aluminas, submicron aluminas. Their choice is defined according to result criterias and economical expectancies. Grains included between 0,03 micron and 200 microns.

Bucket of 5 kg				Bucket of 5 kg	
FEPA	µm	Ref.	€	Ref.	€
100	125	A125 P105K	50,40	A125 P125K	203,00
120	105	A105 P105K	50,40	A105 P125K	203,00
150	88	A088 P105K	50,40	A088 P125K	203,00
180	74	A074 P105K	50,40	A074 P125K	203,00
220	62	A062 P105K	50,40	A062 P125K	203,00
240	45	A045 P105K	50,40	A045 P125K	203,00
280	37	A037 P105K	62,10	A037 P125K	285,40
320	29	A029 P105K	71,40	A029 P125K	290,40
360	23	A023 P105K	87,00	A023 P125K	350,50
400	17	A017 P105K	75,60	A017 P125K	345,00
500	13	A013 P105K	87,00	A013 P125K	350,50
600	9	A009 P105K	96,80	A009 P125K	386,90
800	7	A007 P105K	120,60	A007 P125K	482,40
1000	5	A005 P105K	163,50	A005 P125K	657,30
1200	3	A003 P105K	169,70	A003 P125K	678,80
1500	1	A001 P105K	238,10	A001 P125K	959,90



Standard abrasive
High purity

AQUA LAM® SiC powder

SILICON CARBIDE

The silicon carbide is a pure chemical corps, chemical symbol SiC. The grains are grey, green or black. The grain F1500 used for specific super-finishing is grey.

The silicon carbide AQUA LAM® endures a special treatment and a separation under a high magnetic intensity to insure a dusting and a maximal cleaning. AQUA LAM® proposes all the grains FEPA F useful in lapping, from F60 (250 microns) to F1200 (3 microns).

Bucket of 5 kg				Bucket of 25 kg	
FEPA	µm	Ref.	€	Ref.	€
60	250	E250 P105K	94,10	E250 P125K	369,10
80	177	E177 P105K	94,10	E177 P125K	369,10
100	125	E125 P105K	101,40	E125 P125K	379,00
120	105	E105 P105K	101,40	E105 P125K	379,00
150	88	E088 P105K	101,40	E088 P125K	379,00
180	74	E074 P105K	101,40	E074 P125K	379,00
220	62	E062 P105K	101,40	E062 P125K	379,00
240	45	E045 P105K	101,40	E045 P125K	379,00
280	37	E037 P105K	111,70	E037 P125K	399,60
320	29	E029 P105K	123,40	E029 P125K	474,40
360	23	E023 P105K	130,70	E023 P125K	493,80
400	17	E017 P105K	147,00	E017 P125K	550,70
500	13	E013 P105K	173,40	E013 P125K	655,20
600	9	E009 P105K	173,40	E009 P125K	691,80
800	7	E007 P105K	227,70		
1000	5	E005 P105K	227,70		
1200	3	E003 P105K	312,70		

COMPOSITE ABRASIVES

AQUA LAM® CeO₂ powder**CERIUM OXIDE**

Chemical symbol CeO₂. Used in super finishing mostly for the polishing of glass (example BK7, 520 knoops) the cerium oxide reduces the roughness by a chemical and mechanical actions. Selected according to its maximum polishing action, the cerium oxide AQUA LAM® has grains from 3 to 0,5 microns (other grains dimensions on demand).

Pot of 1 kg				Pot of 500 g	
FEPA	µm	Ref.	€	Ref.	€
1200	3	I003 P101K	90,40	I003 P1P5K	45,30
1300	2	I002 P101K	90,40	I002 P1P5K	45,30
1400	1	I001 P101K	90,40	I001 P1P5K	45,30
1500	0,7	JP70 P101K	207,70	JP70 P1P5K	113,40
1600	0,5	JP50 P101K	317,10	JP50 P1P5K	174,40

**Additive**

Additive for liquid preparations CLASSIQUES and BIOLAM®PLUS allowing an optimisation of the abrasive film (more resistant) without reducing the lapping power. Can be used in the preparation of the abrasive solution in addition to water.

Preserves the parts and the cast iron tray from corrosion.

ADDITIF 716

Packaging	Ref.	€
Can of 5 litres	Z000 F25L1	64,50
Can of 10 litres	Z000 F2010	154,50
Can of 20 litres	Z000 F2020	199,00
Keg of 200 litres	Z000 F2200	1 990,00



Lapping oil

Classic lapping oil to use with the abrasive powder.

OIL 708

Packaging	Ref.
Can of 5 litres	Z000 A35L1
Can of 10 litres	Z000 A3010
Can of 20 litres	Z000 A3020
Keg of 60 litres	Z000 A3060



Lubricant for cylindrical lapping

AQUASUN OIL

Packaging	Ref.
Can of 10 litres	Z000 A4010

GUIDANCE



Correspondences between different standards

MICRON µm	MESH	FEPA F Abratif libre	W (grain)	GRIT ASTM
3	1200	F1200	W14	1200
5	1000	F1000	W10	-
7	800	F800	W9	-
9	600	F600	W7/8	800
13	500	F500	W5/6	600
18	400	F400	W4	500
23	360	F360	W2	400
29	320	F320	W0	360
37	280	F280	W350	280
45	240	F240	W340	240
58	220	F220	W240	220

TABLE OF CONTENTS GEOMETRIC POLISHING

EQUIPMENT

MICROMOTORS	Upgradeable micromotor controllers M.M. 880, M.M.885 and M.M.886	148 > 149
	Diaphragm compressor	149
	Rotary micromotors	150 > 151
	Alternating micromotors	151
	Replacement carbon brushes for micromotors	151
	Jaws for micromotors	152
	Ultrasonic micromotor	152
	Jaws for ultrasonic micromotor	152
	Turbomotors	153
	Maintenance and repairs	153

TOOLS

TOOLS	Disc and rectangular holders, self-adhesive abrasive and polishing discs	154
	Self-adhesive polishing squares series 400 and 4400	155
	CAMEO® Platinum prepolishing discs	155
	Diamond grinding points 6800 and 7400	156 > 157
	Abrasive caps	157
	Pink corundum, ruby sapphire and silicon carbide grinding points	158 > 159
	Carbide end mills	160
	Rotary polishing felts	161
	Wooden rotary accessories	162
	Diamond files and kit	162
	Specific diamond files	163 > 164
	Rubberised abrasive grinders	165
	Felt polishing rings, discs and pads	166
	Felt lapping rods	167
	Polishing grinding brushes and jet brushes	168
	Abrasive finishing grinders	169
	Wooden lapping rods	169
	Rectangular rubber rods	169
	Ceramic brushes and stones	170 > 171
	Sulphur stones 570	171
	Graphite stones 560	171
	Abrasive stones 510, 520 and 530	172 > 173
	DEGUSSIT® stones	173
	Honing oil	173
	Stone-holders	173
	Abrasive stone kits N°1, N°2 and N°4	174

CONSUMABLES

DIAMANT ABRASIVES	Bio DIAMANT® Pulmatic liquids series 310 and 320P	175
	Bio DIAMANT® Gels series M.M.530, 540 and 30/40	176
	Bio DIAMANT® Pastes series 210, 100, 205S, Polilam MS and Diatool® BX	177 > 179
	Selection of a BIO DIAMANT® abrasive paste	180
LUBRICATING FLUIDS	Lubricating fluids series M.M.705 and M.M.712	181
GLOBAL INDEX	Search by keywords	182 > 183
COS	Conditions of sale	184 > 185

EQUIPMENT

MICROMOTORS



Upgradeable micromotor controllers

M.M.880 CONTROLLER for micromotors with foot pedal regulator

Powerful controller for micromotors, suitable for intensive use in all types of deburring and polishing tasks. The M.M.880 is equipped with 2 outputs, which can be used alternatively. Variable speed controlled manually or by the supplied foot pedal controller. Dual direction of rotation with automatic overload protection. A torque management function guarantees a constant speed of rotation of the polishing tool, regardless of the pressure applied by the operator. Quick stop of the rotation when switched off.

Supplied accessories: foot pedal regulator, 2 handpiece holders.

Compatibility: all micromotors, except M.M.886, ultrasonic head and turbo engines.

M.M.880 CONTROLLER Data sheet

€

Type	for rotary and alternative engines	Voltage output	DC3-30 V (2 outputs)	731,70
Dimmer switch	manual on controller and pedal	Dimensions W x H x D	170 x 110 x 195 mm	
Direction of rotation	2	Weight	2,1 kg	
Voltage supply	AC 230 V - 50/60 Hz - 30 VA	Reference	10 88030 00	

**M.M.885 CONTROLLER for micromotors and ultrasound**

Powerful controller for ultrasonic micromotors and handpieces, suitable for heavy duty use in all types of deburring and polishing tasks. An automatic feed system is incorporated to adjust the frequency to suit the ultrasonic tool being used. Variable speed for the micromotors, controlled manually or by foot pedal controller (optional). Dual direction of rotation with automatic overload protection. A torque management function guarantees a constant rotation speed of the polishing tool, regardless of the pressure applied by the operator. Quick stop of the rotation when switched off.

Accessories supplied: 2 handpiece holders.

Compatibility: all micromotors and ultrasonics except M.M.886 and turbo engines.

M.M.885 CONTROLLER Data sheet

€

Type	for rotary, alternative and ultrasonic engines	Voltage output	DC3-30 V 0,3 A - Ultrasonic AC 6-60 V 22,6 KHz	1989,40
Dimmer switch	manual on controller and pedal (in option)	Dimensions W x H x D	170 x 110 x 195 mm	
Direction of rotation	2	Weight	2,6 kg	
Voltage supply	AC 230 V - 50 Hz - 30 VA	Reference	10 88530 00	

FOOT PEDAL REGULATOR FOR M.M.880 AND 885

In combination with the M.M.880 and M.M.885 controllers, the pedal regulator provides on/off and foot speed control functions.

**FOOT PEDAL REGULATOR Data sheet**

€

Fonctions	Start/stop and dimmer	141,40
Dimensions W x H x D	90 x 75 x 190 mm	
Cable	L 1,85 m	
Weight	490 gr	
Reference	10 88034 00	

Our know-how in the design of diamond abrasives associated with a wide range of supports and toolings allows us to respond to all requests concerning the polishing of components with complex geometries.

MICROMOTORS

M.M.886 CONTROLLER AND MICROMOTOR PACKAGE

Complete set including 1 M.M.886 CONTROLLER and its compatible rotary MICROMOTOR. Variable speed controller with two directions of rotation and automatic protection in case of overload. A torque management function guarantees a constant speed of rotation of the polishing tool, regardless of the pressure applied by the operator.

Supplied accessories: spare fuse (UF-1A), other accessories see M.M.886 micromotor description.

Compatibility: M.M.886 micromotor only. Controller not compatible with foot pedal controller.



M.M.886 CONTROLLER Data sheet

Type	for M.M.886 rotary engine	Voltage output	DC3-30 V - 0,2 à 0,4 A
Dimmer switch	3 000 to 20 000 tr/min.	Dimensions W x H x D	130 x 85 x 162 mm
Direction of rotation	2	Weight	1,5 kg
Voltage supply	AC 230 V - 50/60 Hz - 23 VA	Reference	10 88630 00

884,00

MICROMOTOR (only) FOR M.M.886 CONTROLLER

Handpiece specific to the M.M.886 CONTROLLER, monobloc micromotor type with stainless steel body. Lightweight and well-balanced, its variable speed of rotation from 3000 to 20,000 rpm is suitable for all common deburring and polishing situations. Supplied with 3 interchangeable quick-clamping jaws compatible with all types of rotary tooling.

Accessories supplied: 1 support for micromotor, tools for changing jaws and maintenance, 1 set of replacement carbons, 3 jaws Ø 2.35 - 3.00 - 3.175 mm.

Compatibility: only with M.M.886 controller.



M.M.886 MICROMOTOR Data sheet

Type	Rotary micromotor for M.M.886	Voltage output	DC3-30 V - 0,2 à 0,4 A
Speed	3 000 to 20 000 tr/min.	Dimensions	Ø max. 24 mm, L 128 mm
Torque	n.c.	Weight (without cable)	180 gr
		Reference	10 88630 20

779,00

Diaphragm compressor

Diaphragm compressor for laboratories which are not equipped with a compressed air network. Silent operation.

Output	Pressure	Dim. W x H x D	Ref.	€
50 l/min	8 bar	330 x 500 x 330 mm	60 COM00 00	#

Prix sur demande / Prices on request / Preise auf Anfrage / Prezzi su richiesta



Rotary micromotors

STRAIGHT RED ROTARY MICROMOTOR



Rotary motion handpiece with standard head. Lightweight and well balanced, its variable speed of rotation from 3000 to 30,000 rpm is suitable for deburring and polishing situations.

Accessories supplied: 1 support for micromotor, tools for changing jaws and maintenance, 1 set of replacement carbons and 2 interchangeable quick-clamping jaws compatible with all types of rotary tools Ø 2.35 - 3.00 mm.

Compatibility: M.M.880 and M.M.885 controllers

STRAIGHT RED ROTARY MICROMOTOR Data sheet

€

Type	Rotary micromotor	Voltage output	DC3-30 V - 0,2 à 0,4 A	846,50
Speed	3 000 to 30 000 tr/min.	Dimensions	Ø max. 31,6 mm, L 170 mm	
Torque	6,5 Ncm	Weight (without cable)	295 gr	
Compatible jaws Ø	3,175 mm	Reference	10 88040 00	

STRAIGHT RED ROTARY MICROMOTOR WITH REINFORCED HEAD



Rotary handpiece with reinforced head, modular micromotor type. For difficult milling operations with high vibration and pressure loads.

Accessories supplied: 1 micromotor support, tools for changing jaws and maintenance, 1 set of replacement carbons and 2 interchangeable quick-change jaws Ø 6.00 - 3.00 mm.

Compatibility: M.M.880 and M.M.885 controllers

STRAIGHT RED ROTARY MICROMOTOR WITH REINFORCED HEAD Data sheet

€

Type	Rotary micromotor	Voltage output	DC3-30 V - 0,2 à 0,4 A	1079,00
Speed	3 000 to 30 000 tr/min.	Dimensions	Ø max. 31,6 mm, L 175 mm	
Torque	6,5 Ncm	Weight (without cable)	360 gr	
Compatible jaws Ø	3,175 mm	Reference	10 88041 00	

«SUPER LIGHT» ROTARY MICROMOTOR



Lightweight, one-piece micromotor type handpiece. For finishing operations, polishing, deburring, engraving, grinding, limiting operator fatigue.

Accessories supplied: 1 support for micromotor, tools for changing jaws and maintenance, 1 set of replacement carbons and 2 interchangeable quick-clamping jaws Ø 2.35 - 3.00 mm.

Compatibility: M.M.880 and M.M.885 controllers

«SUPER LIGHT» ROTARY MICROMOTOR Data sheet

€

Type	Rotary micromotor	Voltage output	DC3-30 V - 0,2 à 0,4 A	720,30
Speed	2 000 to 20 000 tr/min.	Dimensions	Ø max. 27,5 mm, L 145 mm	
Torque	6,5 Ncm	Weight (without cable)	200 gr	
Compatible jaws Ø	3,175 mm	Reference	10 88042 00	

GREEN BENT 90° ROTARY MICROMOTOR



Handpiece, modular micromotor type with reinforced head with 90° angle transmission. For finishing operations, generally used with polishing discs.

Accessories supplied: 1 support for micromotor, tools for changing jaws and maintenance, 1 set of replacement carbons and 2 interchangeable quick-clamping jaws Ø 2.35 - 3.00 mm.

Compatibility: M.M.880 and M.M.885 controllers.

GREEN BENT 90° ROTARY MICROMOTOR Data sheet

€

Type	Rotary micromotor	Voltage output	DC3-30 V - 0,2 à 0,4 A	932,90
Speed	1 500 to 15 000 tr/min.	Dimensions	Ø max. 31,6 mm, 45 x 160,5 mm	
Torque	8,8 Ncm	Weight (without cable)	380 gr	
Compatible jaws Ø	3,175 mm	Reference	10 88046 00	

MICROMOTORS

GREEN BENT 120° ROTARY MICROMOTOR

Handpiece, micromotor type with reinforced head with 120° angle transmission, for finishing operations, generally used with polishing discs.

Accessories supplied: 1 micromotor holder, tool for changing jaws and maintenance, 1 set of replacement brushes, 2 interchangeable quick-release jaws Ø 2.35 - 3.00 mm.

Compatibility: M.M.880 and M.M.885 controllers



GREEN BENT 120° ROTARY MICROMOTOR Data sheet

Type	Rotary micromotor	Voltage output	DC3-30 V - 0,2 à 0,4 A	1092,10 €
Speed	1 500 to 15 000 tr/min.	Dimensions	Ø max. 31,6 mm, 47 x 169 mm	
Torque	8,8 Ncm	Weight (without cable)	385 gr	
Compatible jaws Ø	3,175 mm	Reference	10 88047 00	

Alternating micromotors

BLACK FILING MICROMOTOR

Handpiece, modular micromotor type with straight head with angular movement (sweeping). For finishing operations, generally used with diamond stones and files.

Accessories supplied: 1 support for micromotor, tools for changing jaws and maintenance, 1 set of replacement carbons and 1 jaw Ø 2.00 to 4.7 mm.

Compatibility: M.M.880 and M.M.885 controllers



BLACK FILING MICROMOTOR Data sheet

Type	Scanning alternating micromotor	Voltage output	DC3-30 V - 0,2 à 0,4 A	1217,00 €
Speed	800 to 8 000 osc./min.	Dimensions	Ø max. 31,6 mm, 182 mm	
Torque	6,5 Ncm	Weight (without cable)	316 gr	
Compatible jaws Ø	1,6 mm	Reference	10 88045 00	

GREY FILING MICROMOTOR

One-piece motor type handpiece with longitudinal pistol grip for finishing operations, generally used with wood or felt lapidaries.

Accessories supplied: 1 support for micromotor, tools for changing jaws and maintenance, 1 set of replacement carbons and 1 jaw Ø 2.00 to 6.35 mm.

Compatibility: M.M.880 and M.M.885 controllers



GREY FILING MICROMOTOR Data sheet

Type	Linear alternating micromotor	Voltage output	DC3-30 V - 0,2 à 0,4 A	1330,80 €
Speed	700 to 7 000 osc./min	Dimensions W x H x D	40 x 128 x 140 mm	
Torque	n.c.	Weight (without cable)	675 gr	
Course	0 to 6 mm	Reference	10 88043 00	

Replacement carbon brushes for micromotors

Type	Ref.	€
Straight red rotary device	10 1070 82	15,50
Straight red rotary device with reinforced head	10 1070 82	15,50
Grey filing device	10 1070 84	15,50
"Super light" rotary device	10 1070 83	15,50
Green bent 90° rotary device	10 1070 82	15,50
Green bent 120° rotary device	10 1070 82	15,50
M.M.886	10 1070 66	15,50



Jaws for micromotors

1 piece



Ø 2,35 mm

- Straight red rotary device
- Green bent 90° rotary device
- Green bent 120° rotary device
- "Super light" rotary device
- M.M.886

10 1090 13

45,30



Ø 3,0 mm

- Straight red rotary device
- Green bent 90° rotary device
- Green bent 120° rotary device
- "Super light" rotary device
- M.M.886

10 1090 07

44,00



Ø 3,175 mm

- Straight red rotary device
- Green bent 90° rotary device
- Green bent 120° rotary device
- "Super light" rotary device
- M.M.886

10 1090 11

44,00

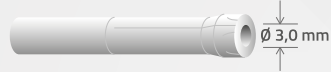


Ø 6,0 mm

- Straight red rotary device with reinforced head

10 1090 07

50,50



Ø 3,0 mm

- Straight red rotary device with reinforced head

10 1072 51

49,00

Ultrasonic micromotor

ULTRASONIC HEAD



Handpiece, one-piece ultrasonic micromotor type. Compact and lightweight, ergonomically designed to improve efficiency. Applications include finishing of plastic moulds, die castings, ceramics, non-ferrous and precious metals. Ideal for deburring, polishing and removing EDM burrs.

Accessories supplied: 1 micromotor support, tools for changing jaws and maintenance, 1 diamond file, 1 interchangeable Ø 3 mm quick-clamping jaws and 2 collets, thickness 0.5 and 1 mm.

Compatibility: M.M.885 controller

ULTRASONIC HEAD Data sheet

€

Type	Ultrasonic micromotor	Voltage	AC 6-60 V 22,6 KHz	1852,30
Frequency	800 to 8 000 osc./min.	Dimensions	Ø max. 29 mm, 140 mm	
Course	45 µm	Weight (without cable)	196 gr	
		Reference	10 88540 00	

Jaws for ultrasonic micromotor

JAWS

2 pieces



Type	mm	Grain	Ref.	€
	Ø 2	-	40 US005 00	54,40
	Ø 3	-	40 US006 00	54,40
	t = 0,5	-	40 US015 00	76,50
	t = 0,8	-	40 US016 00	76,50
	t = 1	-	40 US018 00	76,50
	t = 2	-	40 US007 00	76,50
	t = 3	-	40 US008 00	76,50

MICROMOTORS

Turbomotors

M.M.888.4 LINEAR TURBOMOTOR

Turbomotor providing high torque and speed. With a stroke of 0.7 mm and a movement frequency of 350 strokes/sec. Mainly made of lightweight composite materials, this turbo motor allows easy working for a long time without fatigue or overheating. Integrated on/off control ring.

Supplied accessories: 1 x 1.50 m hose with clamps, 1 x hose holder, 1 x key, 1 x ceramic stone and 1 x multi-purpose jaw for Ø 3 and 3 x 10 mm max.



M.M.888.4 Data sheet

Type	Linear alternating micromotor	Air consumption	46 NL/min.	1256,50
Frequency	0 à 22 000 coups/min.	Power supply	Compressor 60 COM00 00 or compressed air network 6 Bar flow rate higher than 70 NL/min.	
Pressure	6 bars	Dimensions	Ø max. 28 mm, 218 mm	
Course	0,7 mm	Weight	180 gr	
Connector	PT 1/4	Reference	10 88840 00	

M.M.888.3 ROTARY TURBOMOTOR

Turbomotor is made of composite materials and is particularly thin and light, allowing easy working for a long time without fatigue or overheating. Integrated on/off control ring.

Supplied accessories: 1 x 1.50 m hose with clamps, 1 x hose holder, tools, 1 x Ø 10 mm grinding wheel and 1 x Ø 3 mm jaw.



M.M.888.3 Data sheet

Type	Rotary micromotor	Air consumption	120 NL/min.	651,10
Speed	65 000 tr/min.	Power supply	Compressed air network 6 Bar flow rate higher than 150 NL/min.	
Pressure	6 bars	Dimensions	Ø max. 22,50mm, 218 mm	
Course	0,7 mm	Weight	78 gr	
Connection	PT 1/4	Reference	10 88830 00	

Maintenance and repairs

In order to always get the best and to prolong the life of your equipment, LAM PLAN offers you preventive and curative maintenance services on all its range of shape polishing equipment.

Do not hesitate to contact your usual contact person, after taking charge of your project in our workshops, we will draw up a personalised estimate.



TOOLS



Disc holders series 9904

Holders for self-adhesive discs, used in rotation.

5 pieces

Shaft: Ø 3 mm		
Ø in mm	Ref.	€
18	99 04018 00	32,50
30	99 04030 00	41,70



Rectangular holders

Active zone: 10 x 20 mm.

1 piece

Shaft : Ø 3 L : 60 mm		
Type	Ref.	€
Articulated	99 09905 20	43,10
Rigid	99 09905 10	26,30



Self-adhesive abrasive discs

For small surface rough polishing, used in rotation.

SERIES 9950

50 pieces

Ø 18 mm			Ø 30 mm	
Grain	Ref.	€	Ref.	€
80	99 05080 10	25,90	99 05080 30	31,90
120	99 05120 10	25,90	99 05120 30	31,90
180	99 05180 10	25,90	99 05180 30	31,90
240	99 05240 10	25,90	99 05240 30	31,90
320	99 05320 10	25,90	99 05320 30	31,90
400	99 05400 10	25,90	99 05400 30	31,90
600	99 05600 10	25,90	99 05600 30	31,90
1200	99 51200 10	25,90	99 51200 30	31,90



Self-adhesive polishing discs

SERIES 9914

50 pieces

Type	Ø in mm	Ref.	€
1450 woven	18	99 01450 10	25,10
1431 felt	18	99 01431 10	26,30
1450 woven	30	99 01450 30	31,90
1431 felt	30	99 01431 30	33,40

Tools on sticks, diamond rasps, lapping rods, polishing supports and abrasive stones.

TOOLS

Self-adhesive polishing squares

SERIES 400

10 pieces

Polishing cloths for contour work			
Type	mm	Ref.	€
437 brown felt	150 x 150	04 C0437 10	35,50
	200 x 200	04 C0437 20	46,30
431 red felt	150 x 150	04 C0431 10	38,20
	200 x 200	04 C0431 20	52,00



SERIES 4400

10 pieces

Polishing cloths for contour work			
Type	mm	Ref.	€
4450 white woven	150 x 150	04 C4450 10	64,70
	200 x 200	04 C4450 20	75,20



Prepolishing discs

CAMEO® PLATINIUM

10 pieces

Self-adhesive discs for large surface pre-polishing, used in rotation			
Designation	mm	Ref.	€
Platinum 0	Ø 18	09 CA130200	11,00
Platinum 1	Ø 18	09 CA140200	10,40
Platinum 2	Ø 18	09 CA150200	10,40
Platinum 3	Ø 18	09 CA160200	10,40
Platinum 0	Ø 30	09 CA130300	25,00
Platinum 1	Ø 30	09 CA140300	22,50
Platinum 2	Ø 30	09 CA150300	22,50
Platinum 3	Ø 30	09 CA160300	22,50





Diamond grinding points

Accurate grinding, deburring, levelling, etching.

Advantages in comparison with corundum grinders: better surface finish and low wear and tear with small diameters or points. High durability.

SERIES 6800

1 piece

Shaft: Ø 3 mm - Length: 38 mm - Grain: 120							
Type	mm	Ref.	€	Type	mm	Ref.	€
	2,1 x 2,1	46 21210 00	49,90		3,1 x 9	46 30850 00	49,90
	3,5 x 3,5	46 35350 00	49,90		5 x 13	46 48130 00	94,90
	1,6 x 1,6	46 16160 00	33,90		8,0 x 13	46 80130 00	139,70
	1,8 x 1,6	46 18160 00	33,90		3,1 x 9	46 30900 00	49,90
	2,7 x 2,5	46 27250 00	49,90		5 x 13	46 48131 00	94,90
	3,7 x 3	46 37300 00	33,90		2,7 x 8,5	46 27850 00	49,90
	4,7 x 3	46 47300 00	49,90		3,1 x 9	46 31851 00	49,90
	2,9 x 6	46 30600 00	49,90		2,1 x 7	46 21701 00	49,90
	4,7 x 1,5	46 47150 00	49,90		3,1 x 8,5	46 31852 00	49,90
	8,0 x 2,5	46 80220 00	49,90		1,6 x 6,5	46 16651 00	33,90
	16 x 3	46 16270 00	94,90		3,1 x 8,5	46 31853 00	49,90
	22 x 3	46 22270 00	139,70		3,1 x 8,5	46 31854 00	49,90
	8,0 x 0,6	46 80050 00	49,90		5 x 10	46 48100 00	81,20
	4,7 x 1	46 47100 00	79,90		5 x 8	46 48800 00	66,80
	2,7 x 9	46 27800 00	49,90		5 x 13	46 48132 00	94,90
	3,1 x 8,5	46 31850 00	49,90		5 x 13	46 48133 00	94,90
	5,0 x 13	46 50130 00	92,90		8,0 x 13	46 80131 00	139,70
	1,6 x 6,5	46 16650 00	33,90		8,0 x 3,5	46 80300 00	49,90
	2,1 x 7	46 21700 00	49,90		22 x 0,3	46 22100 00	49,90
	2,7 x 8	46 27801 00	49,90		22 x 0,4	46 22200 00	49,90
					22 x 0,5	46 22300 00	49,90

HOME

SERIES 7400

1 piece

Shaft: Ø 3 mm - Length: 38 mm - Grain: 170							
Type	mm	Ref.	€	Type	mm	Ref.	€
	2,3 x 7,5	47 23700 00	49,90		3,1 x 9	47 31900 00	49,90
	2,7 x 9	47 27800 00	49,90		5 x 13	47 48134 00	88,70
	5,0 x 13	47 50130 00	95,00		2,7 x 8,5	47 27802 00	49,90
	1,6 x 6,5	47 16650 00	33,40		2,1 x 7	47 21701 00	49,90
	2,1 x 7	47 21700 00	49,90		3,1 x 9	47 31850 00	49,90
	2,7 x 8	47 27801 00	49,90		5,0 x 13	47 50132 00	88,70
	5,0 x 13	47 50131 00	88,70				



Abrasive caps

Abrasive caps are used to deburr metallic parts and also for medium polishing. Their shape makes them suitable for parts with a rounded base.

GRAIN 80

1 support + 100 caps

Type	Stem mm	Cap mm	Ref.	€
	Ø 3	Ø 7 L 10	40 CA078 10	113,30
	Ø 3	Ø 12 L 15	40 CA128 20	128,20
	Ø 6	Ø 18 L 26	40 CA188 30	174,90
	Ø 3	Ø 7 L 11	40 CA078 40	113,30
	Ø 3	Ø 12 L 15	40 CA128 50	128,20
	Ø 6	Ø 18 L 26	40 CA188 60	174,90
	Ø 3	Ø 7 L 11	40 CA078 70	113,30
	Ø 3	Ø 12 L 15	40 CA128 80	128,20
	Ø 6	Ø 18 L 26	40 CA188 90	174,90



GRAIN 150

GRAIN 320

Type	Stem mm	Cap mm	Ref.	€	Ref.	€
	Ø 3	Ø 7 L 10	40 CA071 10	113,30	40 CA073 10	113,30
	Ø 3	Ø 12 L 15	40 CA121 20	128,20	40 CA123 20	128,20
	Ø 6	Ø 18 L 26	40 CA181 30	174,90	40 CA183 30	174,90
	Ø 3	Ø 7 L 11	40 CA071 40	113,30	40 CA073 40	113,30
	Ø 3	Ø 12 L 15	40 CA121 50	128,20	40 CA123 50	128,20
	Ø 6	Ø 18 L 26	40 CA181 60	174,90	40 CA183 60	174,90
	Ø 3	Ø 7 L 11	40 CA071 70	113,30	40 CA073 70	113,30
	Ø 3	Ø 12 L 15	40 CA121 80	128,20	40 CA123 80	128,20
	Ø 6	Ø 18 L 26	40 CA181 90	174,90	40 CA183 90	174,90



Grinding points Pink corundum

Maximum speed: 45m/sec. Hardness: N.

GRAIN 80/120

10 pieces

Shaft: Ø 3 mm - Length: 35 mm							
Type	mm	Ref.	€	Type	mm	Ref.	€
	9 x 2,2	40 CR901 00	38,10		7 x 4	40 CR720 00	32,90
	9 x 3	40 CR902 00	38,10		8 x 4	40 CR821 00	38,10
	8,5 x 2,2	40 CR853 00	38,10		2,5 x 6	40 CR252 20	32,90
	4 x 1,2	40 CR404 00	38,10		5 x 6	40 CR523 00	32,90
	5,5 x 3	40 CR555 00	41,20		6 x 6	40 CR624 00	32,90
	7/3,5 x 6	40 CR706 00	32,90		5 x 2	40 CR525 00	41,20
	5/2 x 2,7	40 CR507 00	32,90		6 x 2,3	40 CR626 00	41,20
	6,5/2 x 3	40 CR658 00	32,90		3,5/2 x 10	40 CR352 70	38,10
	8/3,5 x 4	40 CR809 00	32,90		5,5/3,5 x 10	40 CR552 80	32,90
	3/2 x 4	40 CR310 00	32,90		3,3/2,2 x 6,2	40 CR332 90	32,90
	5/3 x 5	40 CR511 00	32,90		3/4,6 x 10	40 CR330 00	32,90
	7/5 x 6	40 CR712 00	32,90		5 x 3,2	40 CR531 00	38,10
	3 x 6	40 CR313 00	38,10		5 x 7	40 CR532 00	38,10
	4 x 6	40 CR414 00	38,10		6 x 8	40 CR633 00	38,10
	5 x 6	40 CR515 00	38,10		4,3 x 7	40 CR433 40	38,10
	3 x 6	40 CR316 00	38,10		6,2 x 10	40 CR623 50	41,20
	4 x 4	40 CR417 00	38,10		6,3 x 10	40 CR633 60	38,10
	6 x 8	40 CR618 00	38,10		Kit 36 pieces	40 CR363 70	142,60
	3 x 2	40 CR319 00	41,20				








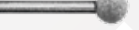
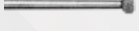



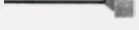

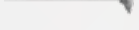

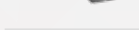
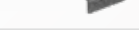
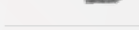
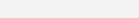
TOOLS

Grinding points Ruby sapphire

Maximum speed: 45 m/sec. Hardness: N.

GRAIN 100

10 pieces

Shaft: Ø 3 mm - Length: 40 mm							
Type	mm	Ref.	€	Type	mm	Ref.	€
	2 x 6	40 RS020 10	45,50		6 x 12	40 RS061 20	32,30
	4 x 8	40 RS040 20	32,30		8 x 10	40 RS081 30	45,50
	5 x 10	40 RS050 30	37,40		Ø 5	40 RS051 40	40,50
	8 x 10	40 RS080 40	40,50		Ø 8	40 RS081 50	45,50
	5 x 2	40 RS050 50	40,50		Ø 10	40 RS101 60	45,50
	10 x 2	40 RS100 60	37,40		3 x 6	40 RS031 70	45,50
	10 x 5	40 RS100 70	40,50		4 x 8	40 RS041 80	37,40
	10 x 2	40 RS100 80	45,50		8 x 8	40 RS081 90	45,50
	5 x 10	40 RS050 90	40,50		10 x 10	40 RS102 00	45,50
	7 x 12	40 RS071 00	45,50	Kit 20 pieces	40 RS122 10	78,20	
	6 x 10	40 RS061 10	45,50				



Grinding points Silicon carbide

GRAIN 120

10 pieces

Shaft: Ø 3 mm - Length: 40 mm		
Ø in mm	Ref.	€
2 x 5	40 CB205 00	34,00
3 x 6	40 CB306 00	34,00
4 x 8	40 CB408 00	34,00
5 x 10	40 CB510 00	34,00
8 x 10	40 CB810 00	34,00
10 x 10	40 CB8101 00	34,00





Carbide end mills

1 piece



Shaft: Ø 3 mm - Length: 38 mm				
Type	*Kit	mm	Ref.	€
		3,0 x 14	40 FC301 00	24,80
	✓	2,5 x 11	40 FC252 00	24,80
	✓	1,5 x 6	40 FC153 00	24,80
		Ø 3	40 FC304 00	24,80
	✓	3 x 14	40 FC305 00	24,80
	✓	2,5 x 11	40 FC306 00	24,80
	✓	3 x 12	40 FC257 00	24,80
		3 x 6	40 FC308 00	24,80
		3 x 12	40 FC309 00	24,80
	✓	3 x 10	40 FC310 00	24,80
		3 x 6	40 FC311 00	24,80
	✓	3 x 6	40 FC312 00	24,80
	✓	Ø 3	40 FC313 00	24,80
		Ø 2,5	40 FC251 40	24,80
		3 x 16 x 7	40 FC315 00	24,80
	✓	3 x 11 x 14	40 FC316 00	24,80
		3 x 9 x 12	40 FC317 00	24,80
		3 x 12 x 8	40 FC318 00	24,80
		3 x 9 x 8	40 FC319 00	24,80
		3 x 9	40 FC320 00	24,80
		3 x 6	40 FC321 00	24,80
		3 x 6	40 FC322 00	24,80
		3 x 5 x 10	40 FC323 00	24,80
		2,5 x 3 x 10	40 FC252 40	24,80
* Kit included 9 pieces			40 FC120 00	176,80
Shaft: Ø 3 mm - Length: 45 mm				
		0,9 x 0,75	40 FC409 00	23,50
		1 x 0,8	40 FC410 00	23,50
		1,2 x 1	40 FC412 00	23,50
		1,4 x 1,2	40 FC414 00	23,50
		1,6 x 1,4	40 FC416 00	23,50









TOOLS

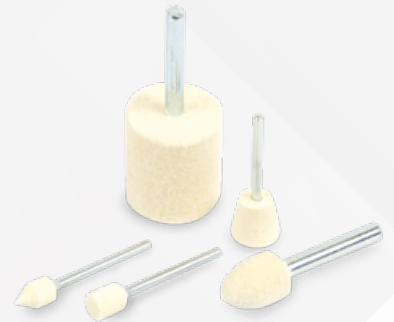
Rotary polishing felts

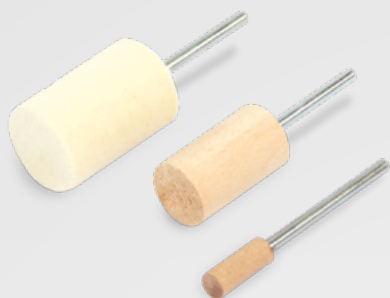
For use with BioDIAMANT® gels and pastes: finishing, geometric polishing.

10 pieces

Shaft: Ø 3 mm - Length: 38 mm				
Type	*Kit	Ø x L (mm)	Ref.	€
	✓	Ø 6 x L 10	40 FR060 10	18,00
	✓	Ø 8 x L 12	40 FR080 20	18,00
	✓	Ø 6 x L 10	40 FR060 30	18,00
	✓	Ø 8 x L 12	40 FR080 40	18,00
	✓	Ø 6 x L 10	40 FR060 50	18,00
	✓	Ø 8 x L 12	40 FR080 60	18,00
	✓	Ø 6 x L 10	40 FR060 70	18,00
	✓	Ø 8 x L 10	40 FR080 80	18,00
	✓	Ø 10 x L 10	40 FR100 90	20,20
	✓	Ø 6 x L 10	40 FR061 20	18,00
	✓	Ø 8 x L 12	40 FR081 30	18,00
	✓	Ø 10 x L 18	40 FR101 00	24,10
	✓	Ø 9/6 x 15	40 FR096 10	22,00
	✓	Ø 15/10 x L 15	40 FR151 10	18,80
	✓	*Kit 14 pieces	40 FR130 00	20,40

Shaft: Ø 6 mm - Length: 40 mm							
Type	mm	Ref.	€	Type	mm	Ref.	€
	10 x 12	40 FR102 00	20,70		15 x 20	40 FR152 50	32,80
	15 x 20	40 FR152 10	26,70				
	20 x 20	40 FR202 20	31,20				
	25 x 30	40 FR252 30	39,70				
	30 x 35	40 FR303 70	43,50				
	20 x 30	40 FR202 40	40,70		30 x 20	40 FR302 60	47,60
Shaft: Ø 2,35 mm - Length: 35 mm				Shaft: Ø 2,35 mm - Length: 40 mm			
Type	mm	Ref.	€	Type	mm	Ref.	€
	7 x 15	40 FR715 00	18,80		22 x 0,5	40 FR225 10	34,40
	12/8 x 12	40 FR120 10	21,70		22 x 5	40 FR225 00	20,80





Cylindrical rotary accessories

SERIES 9908

10 pieces

Shaft: Ø 3 mm							
mm	Type	Ref.	€	mm	Type	Ref.	€
Ø 20 L 30	Hard wood	99 08410 01	30,20	Ø 10 L 20	Hard wood	99 08416 01	30,20
	Soft wood	99 08411 01	30,20		Soft wood	99 08417 01	30,20
	Felt	99 08412 01	30,20		Felt	99 08418 01	30,20
Ø 15 L 25	Hard wood	99 08413 01	30,20	Ø 6 L 15	Hard wood	99 08419 01	30,20
	Soft wood	99 08414 01	30,20		Soft wood	99 08420 01	30,20
	Felt	99 08415 01	30,20		Felt	99 08421 01	30,20



Pointed rotary accessories

SERIES 9908

10 pieces

Shaft: Ø 3 mm							
mm	Type	Ref.	€	mm	Type	Ref.	€
Ø 20 L 30	Hard wood	99 08428 01	30,20	Ø 13 L 20	Hard wood	99 08434 01	30,20
	Soft wood	99 08429 01	30,20		Soft wood	99 08435 01	30,20
	Felt	99 08430 01	33,10		Felt	99 08436 01	30,20
Ø 10 L 30	Hard wood	99 08431 01	30,20	Ø 9 L 15	Hard wood	99 08437 01	30,20
	Soft wood	99 08432 01	30,20		Soft wood	99 08438 01	30,20
	Felt	99 08433 01	30,20		Felt	99 08439 01	30,20



Spherical rotary accessories

SERIES 9908

10 pieces

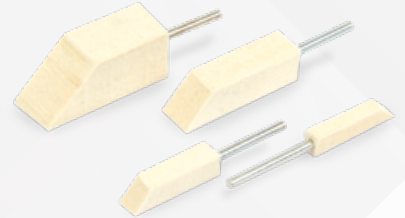
Shaft: Ø 3 mm							
mm	Type	Ref.	€	mm	Type	Ref.	€
Ø 15	Hard wood	99 08422 01	30,20	Ø 10	Hard wood	99 08425 01	30,20
	Soft wood	99 08423 01	30,20		Soft wood	99 08426 01	30,20
	Felt	99 08424 01	30,20		Felt	99 08427 01	30,20

TOOLS

Felt lapping rods

1 piece

Shaft: Ø 3 mm		
Dim. (mm)	Ref.	€
6 x 6 L 25/30	99 08478 10	20,80
8 x 8 L 25/30	99 08478 20	23,00
10 x 10 L 22/30	99 08478 30	25,60
12 x 12 L 35/45	99 08478 40	28,90
18 x 18 L 15/30	99 08478 50	44,30



Polishing grinding brushes

For use with BioDIAMANT® gels and pastes: geometric polishing and cavities.
Brass: pre-polishing. - **Black silk:** polishing. - **White silk:** super-finishing.

10 pieces

Shaft: Ø 2,35 mm - Length: 40 mm				
Type	mm	Material	Ref.	€
	Ø 21 x 2	Brass	40 BR210 00	30,50
	Ø 21 x 1	Black silk	40 BR211 00	27,10
	Ø 21 x 1	White silk	40 BR212 00	27,10
	Ø 19 x 2	Brass	40 BR190 00	30,50
	Ø 19 x 1	Black silk	40 BR191 00	27,10
	Ø 19 x 1	White silk	40 BR192 00	27,10
	Ø 12 x 6	Brass	40 BR123 00	35,00
	Ø 12 x 6	Black silk	40 BR121 00	27,10
	Ø 12 x 6	White silk	40 BR122 00	27,10
	Ø 5,5 x 11	Brass	40 BR052 00	33,00
	Ø 5,5 x 11	White silk	40 BR051 00	30,90



Jet brushes

1 piece

Brass wire bottlebrush jet brushes		
Ø in mm	Ref.	€
4	40 BR504 00	22,10
5	40 BR505 00	22,10
6	40 BR506 00	17,00
8	40 BR508 00	17,00
10	40 BR510 00	16,40



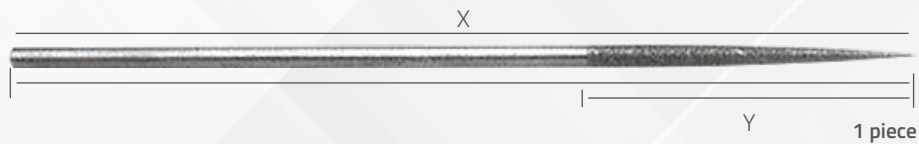
Diamond files

Diamond files are electroplated, the quality of the coated diamond guarantees even stock removal. The manufacturing process results in long durability. These tools are mainly used for manual work, pre-polishing or fine deburring. They can also be mounted in filing or ultrasonic devices. Their length can be reduced simply by cutting with a diamond disc.



Shaft: Ø 3 mm						1 piece
Type	mm	Grain	Unit	Ref.	€	
	1,5 5	60		44 LD211 00	30,20	
	1,5 5	60		44 LD212 00	30,20	
	3	60		44 LD213 00	30,20	
	5	60		44 LD214 00	30,20	
	1,5 5	60	Mesh	44 LD215 00	30,20	
	1,5 5	60	Mesh	44 LD311 00	30,20	
	5	140	Mesh	44 LD411 00	30,20	
	5	60	Mesh	44 LD314 00	30,20	
	5	140	Mesh	44 LD414 00	30,20	
	3	60	Mesh	44 LD316 00	30,20	
	3	140	Mesh	44 LD416 00	30,20	
	Ø 3	60	Mesh	44 LD317 00	30,20	
	Ø 3	140	Mesh	44 LD417 00	30,20	
	4	60	Mesh	44 LD313 00	30,20	
	4	140	Mesh	44 LD413 00	30,20	
	0,4 12	D76	Fepa	44 LD418 00	102,60	
	0,6 12	D76	Fepa	44 LD419 00	102,60	
	0,8 12	D76	Fepa	44 LD420 00	102,60	
	1 12	D76	Fepa	44 LD421 00	102,60	
	5 20	D126	Fepa	44 LD422 00	191,60	


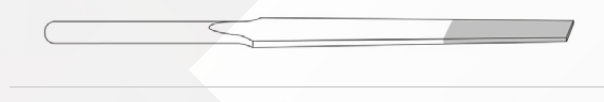

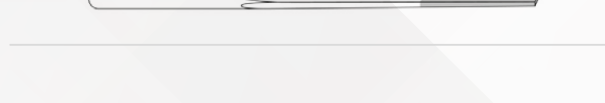
TOOLS

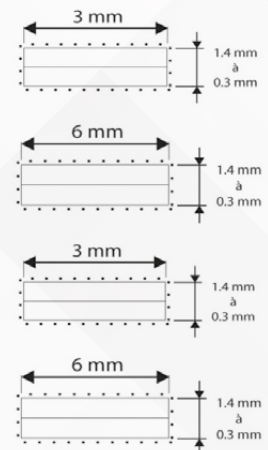


Grain	Dim. (mm)	Stem	Ø in mm	Ref.	€
320	X=175 - Y=40	Ø 3 mm	1	49 LD330 20	40,20
500	X=175 - Y=40	Ø 3 mm	1	49 LD330 30	40,20
220	X=175 - Y=50	Ø 3 mm	2,2	49 LD330 70	40,20
220	X=175 - Y=50	Ø 3 mm	3	49 LD331 20	35,10
140	X=1110 - Y=60	Ø 3 mm	3,5	49 LD331 60	42,80
220	X=1110 - Y=60	Ø 3 mm	3,5	49 LD311 20	42,80
320	X=1110 - Y=60	Ø 3 mm	3,5	49 LD311 30	42,80
220	X=200 - Y=70	Ø 3 mm	4	49 LD332 20	48,20

Diamond files kit

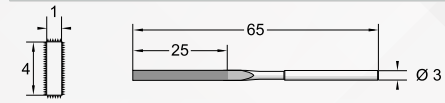
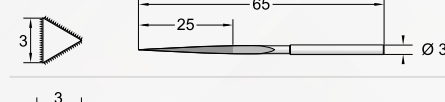
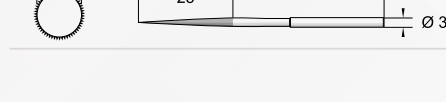
Composition	Stem	Ref.	€
12 pieces	Ø 3 mm	44 LD500 00	162,90

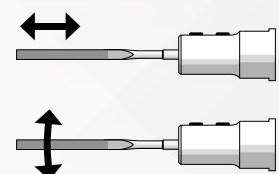
Kit composition	Detail	Grain µm	Qty.
	T	200	1
	15	400	1
	L	72	1
	T	200	1
	15	400	1
	L	72	1
	T	200	1
	15	400	1
	L	56	1
	T	200	1
	15	400	1
	L	56	1



Diamond files for micromotors

DEPOSITED DIAMOND FILES

Type	Stem	Grain µm	Ref.	€
	Ø 3 mm	140	40 LI001 00	51,90
	Ø 3 mm	140	40 LI002 00	51,90
	Ø 3 mm	140	40 LI003 00	51,90





Diamond files

1 piece

Grain 150 / Shaft Ø 3 mm					
Type	Form	Dim. (mm)	Lenght (mm)	Ref.	€
		6 x 1,5 x 30	110	49 LD422 00	13,30
		5 x 2 x 30	110	49 LD423 00	13,30
		Ø 3 x 30	110	49 LD424 00	13,30
		2,5 x 2,5 x 30	110	49 LD425 00	13,30
		3,5 x 30	110	49 LD426 00	13,30
		6 x 1 x 20	120	49 LD427 00	13,30
		2 x 2 x 20	120	49 LD428 00	13,30
		3 x 1,5 x 20	120	49 LD429 00	13,30
		3 x 20	120	49 LD430 00	13,30
		5 x 2 x 20	120	49 LD431 00	13,30
		4 x 1,5 x 20	120	49 LD432 00	13,30
		4 x 2,5 x 20	120	49 LD433 00	13,30
		Ø 2 x 20	120	49 LD434 00	13,30
		5 x 5 x 1,5 x 20	120	49 LD435 00	13,30
		Ø 2,5 x 20	120	49 LD436 00	13,30
Grain 200 / Shaft Ø 3 mm					
		5,8 x 1,2 x 20	40	49 LD437 00	14,30
		3,2 x 1,4 x 20	40	49 LD438 00	14,30
		5 x 2 x 22	40	49 LD439 00	14,30
		3,2 x 1,4 x 24	40	49 LD440 00	14,30
		Ø 3 x 20	40	49 LD441 00	14,30
		Ø 3 x 30	40	49 LD442 00	14,30
		2,5 x 25	40	49 LD443 00	14,30
		3,2 x 1,4 x 25	40	49 LD444 00	14,30
		3,2 x 1,4 x 25	40	49 LD445 00	14,30
		4 x 2 x 20	40	49 LD446 00	14,30
		4 x 1,2 x 28	55	49 LD447 00	14,30
		5 x 2 x 28	55	49 LD448 00	14,30
		Ø 3 x 34	55	49 LD449 00	14,30
		2,5 x 2,5 x 34	55	49 LD450 00	14,30

TOOLS

Rubberised abrasive grinders

Prepolishing. Rubberised abrasive grinders easily adapt to the of the surface being worked and are used to polish complex shapes (for example: angles, thread, depths). They are also used for fine deburring.



		RED Grain 120	BROWN Grain 220	GREEN Grain 280			
10 pieces							
Shaft: Ø 3 mm - Length: 30 mm							
Type	mm	Ref.	€	Ref.	€	Ref.	€
	Ø 4 L 8	40 MC011 20	61,00	40 MC012 20	61,00	40 MC012 80	61,00
	Ø 6 L 10	40 MC021 20	61,00	40 MC022 20	61,00	40 MC022 80	61,00
	Ø 10 L 10	40 MC031 20	61,00	40 MC032 20	61,00	40 MC032 80	61,00
	Ø 12 L 16	40 MC041 20	61,00	40 MC042 20	61,00	40 MC042 80	61,00
Shaft: Ø 6 mm - Length: 40 mm							
	Ø 8 L 15	40 MC051 20	61,00	40 MC052 20	61,00	40 MC052 80	61,00
	Ø 12 L 20	40 MC061 20	61,00	40 MC062 20	61,00	40 MC062 80	61,00
	Ø 15 L 30	40 MC071 20	79,00	40 MC072 20	79,00	40 MC072 80	79,00
	Ø 20 L 20	40 MC081 20	71,00	40 MC082 20	71,00	40 MC082 80	77,70



Felt polishing rings

10 pieces

Thickness: 4,5 mm		
Dimension	Réf.	€
Ø 18	40 FR180 10	5,60
Ø 30	40 FR300 10	11,80
Ø 45	40 FR450 10	18,00



Felt polishing discs

SELF-ADHESIVE - SERIES 99014

10 pieces

Thickness: 5 mm							
Ø	Type	Ref.	€	Ø	Type	Ref.	€
12 mm	med-hard	99 01423 10	12,10	33 mm	hard	99 01424 40	23,60
	hard	99 01424 10	14,80		med-hard	99 01423 60	33,80
20 mm	med-hard	99 01423 20	12,90	50 mm	hard	99 01424 60	41,10
	hard	99 01424 20	16,50		med-hard	99 01423 70	40,70
25 mm	med-hard	99 01423 30	13,50	65 mm	hard	99 01424 70	50,00
	hard	99 01424 30	17,30		med-hard	99 01423 80	44,30
33 mm	med-hard	99 01423 40	18,60	78 mm	hard	99 01424 80	55,90

NON-ADHESIVE - SERIES 99114

Thickness: 5 mm							
Ø	Type	Ref.	€	Ø	Type	Ref.	€
12 mm	med-hard	99 11423 10	11,10	33 mm	hard	99 11424 40	21,10
	hard	99 11424 10	13,30		med-hard	99 11423 60	30,50
20 mm	med-hard	99 11423 20	11,70	50 mm	hard	99 11424 60	37,10
	hard	99 11424 20	14,30		med-hard	99 11423 70	37,10
25 mm	med-hard	99 11423 30	12,20	65 mm	hard	99 11424 70	45,30
	hard	99 11424 30	15,80		med-hard	99 11423 80	41,90
33 mm	med-hard	99 11423 40	16,90	78 mm	hard	99 11424 80	47,50



Felt polishing pads

SQUARE 150 mm

3 pieces

Self-adhesive				Non-adhesive			
Type	Thickness	Ref.	€	Type	Thickness	Ref.	€
med-hard	1 mm	99 15434 60	28,90	med-hard	1 mm	99 15434 10	25,10
med-hard	5 mm	99 15423 60	62,20	med-hard	5 mm	99 15423 10	57,40
hard	5 mm	99 15424 60	62,20	hard	5 mm	99 15424 10	57,40

SQUARE 200 mm

Self-adhesive				Non-adhesive			
Type	Thickness	Ref.	€	Type	Thickness	Ref.	€
med-hard	1 mm	99 20434 60	32,20	med-hard	1 mm	99 20434 10	28,90
med-hard	5 mm	99 20423 60	66,90	med-hard	5 mm	99 20423 10	62,20
hard	5 mm	99 20424 60	66,90	hard	5 mm	99 20424 10	62,20

TOOLS

Cylindrical abrasive finishing grinders

14 pieces

Shaft: Ø 3 mm - Length: 30 mm - Ø 13 L 14 mm			
Color	Grain	Ref.	€
Yellow	240	40 MF024 00	65,60
Green	320	40 MF032 00	65,60
Orange	400	40 MF040 00	65,60
Pink	600	40 MF060 00	65,60
Ochre	800	40 MF080 00	65,60
Brown	1000	40 MF100 00	65,60
Blue	1500	40 MF150 00	65,60



Spherical abrasive finishing grinders

10 pieces

Shaft: Ø 3 mm - Length: 40 mm - Ø 30 L 17 mm			
Color	Grain	Ref.	€
Brown	Extra Coarse	40 MF302 00	64,60
Brown	Coarse	40 MF303 00	64,60
Brown	Medium	40 MF305 00	64,60
Brown	Fine	40 MF307 00	64,60
Green	No grain	40 MF300 00	64,60



Wooden lapping rods hard/soft

SERIES 9908

10 pieces

Hard			Soft	
mm	Ref.	€	Ref.	€
3 x 3 x 150	99 08510 00	18,30	99 08610 00	18,30
4,5 x 4,5 x 150	99 08511 00	20,20	99 08611 00	20,20
6,5 x 6,5 x 150	99 08512 00	28,10	99 08612 00	28,10
3 x 7 x 150	99 08513 00	23,20	99 08613 00	23,20
8 x 12,5 x 150	99 08514 00	39,80	99 08614 00	39,80
8 x 19 x 150	99 08515 00	47,90	99 08615 00	47,90
Ø 3 x 150	99 08530 00	20,20	99 08630 00	20,20
Ø 4,5 x 150	99 08531 00	28,10	99 08631 00	28,10
Ø 6,5 x 150	99 08532 00	34,80	99 08632 00	34,80



Rectangular rubber rods

1 piece

Grain	Dim. (mm)	Ref.	€
40	25 x 9,5 x 150	98 61041 00	33,20
90	25 x 9,5 x 150	98 61091 00	33,20
120	25 x 9,5 x 150	98 61121 00	33,20
240	25 x 9,5 x 150	98 61241 00	33,20





1 piece

Standard					High resistance	
Dim. (mm)	Grain	Color	Ref.	€	Ref.	€
0,5 x 4 x 100	220	Dark brown	40 US361 00	22,80		
	300	Light brown	40 US362 00	22,80		
	400	Orange	40 US363 00	22,80		
	600	Black	40 US364 00	22,80		
	800	Blue	40 US365 00	22,80		
	1000	White	40 US366 00	22,80		
	1200	Red	40 US367 00	22,80		
1 x 4 x 100	220	Dark brown	40 US311 00	17,40	40 US411 00	21,10
	300	Light brown	40 US312 00	17,40		
	400	Orange	40 US313 00	17,40		
	600	Black	40 US314 00	17,40		
	800	Blue	40 US315 00	17,40	40 US415 00	21,10
	1000	White	40 US316 00	17,40		
	1200	Red	40 US317 00	17,40	40 US417 00	21,10
1 x 6 x 100	220	Dark brown	40 US321 00	26,80	40 US421 00	32,30
	300	Light brown	40 US322 00	26,80		
	400	Orange	40 US323 00	26,80		
	600	Black	40 US324 00	26,80		
	800	Blue	40 US325 00	26,80	40 US425 00	32,30
	1000	White	40 US326 00	26,80		
	1200	Red	40 US327 00	26,80	40 US427 00	32,30
1 x 10 x 100	220	Dark brown	40 US331 00	35,00	40 US431 00	42,10
	300	Light brown	40 US332 00	35,00		
	400	Orange	40 US333 00	35,00		
	600	Black	40 US334 00	35,00		
	800	Blue	40 US335 00	35,00	40 US435 00	42,10
	1 000	White	40 US336 00	35,00		
	1 200	Red	40 US337 00	35,00	40 US437 00	42,10
Ø 3 x 50	220	Grey	40 US341 00	20,10		
	300	Light brown	40 US342 00	20,10		
	400	Orange	40 US343 00	20,10		
	600	Black	40 US344 00	20,10		
	800	Blue	40 US345 00	20,10		
	1000	White	40 US346 00	20,10		
	1200	Red	40 US347 00	20,10		
Ø 3 x 100	220	Grey	40 US351 00	37,20		
	300	Light brown	40 US352 00	37,20		
	400	Orange	40 US353 00	37,20		
	600	Black	40 US354 00	37,20		
	800	Blue	40 US355 00	37,20		
	1000	White	40 US356 00	37,20		
	1200	Red	40 US357 00	37,20		

TOOLS

Ceramic brushes

Enable careful removal of errors without damage to reaming.

1 piece

Shaft: Ø 3 mm			
Type	Dim. (mm)	Ref.	€
Cross-Hole	Ø 3,5 x 50 x 120	40 BR030 00	75,90
Cross-Hole	Ø 5 x 50 x 120	40 BR057 00	75,90
White grain 1000	Ø 5 x 20	40 BR055 00	48,30
Red grain 1000	Ø 5 x 20	40 BR056 00	48,30

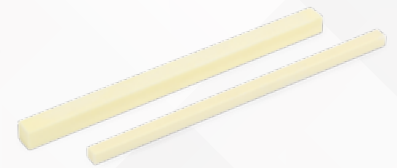


Sulphur stones

SERIES 570

12 pieces

Dim. (mm)	Grain	Ref.	€
6 x 6 x 150	120	98 57121 00	63,10
	150	98 57151 00	63,10
	180	98 57181 00	63,10
	220	98 57221 00	63,10
	320	98 57321 00	69,20
	400	98 57401 00	75,20
10 x 10 x 150	600	98 57601 00	96,30
	120	98 57122 00	81,40
	150	98 57152 00	81,40
	180	98 57182 00	81,40
	220	98 57222 00	81,40
	320	98 57322 00	81,40
13 x 13 x 150	400	98 57402 00	96,30
	600	98 57602 00	119,70
	180	98 57183 00	96,30
	220	98 57223 00	96,30
	320	98 57323 00	105,40
	400	98 57403 00	123,50



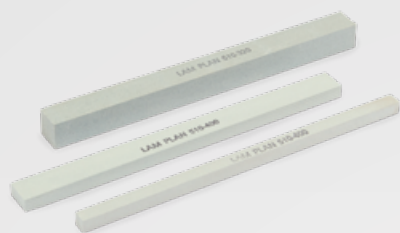
Graphite stones

SERIES 560

5 pieces

Dim. (mm)	Grain	Ref.	€
6 x 6 x 150	600	98 56601 00	61,80
	800	98 56801 00	70,00
	1 000	98 56001 00	78,00
10 x 10 x 150	600	98 56602 00	70,00
	800	98 56802 00	78,00
	1 000	98 56002 00	84,50
13 x 13 x 150	600	98 56603 00	94,80
	800	98 56803 00	109,40
	1 000	98 56003 00	121,00





Abrasive stones

SERIES 510 - SIC

Abrasive stones with silicon carbide based soft bonding material, for finishing treated steel tools.

			12 pieces
Dim. (mm)	Grain	Ref.	€
6 x 6 x 150	240	98 51241 00	66,00
	320	98 51321 00	81,00
	400	98 51401 00	81,00
	600	98 51601 00	106,70
3 x 13 x 150	240	98 51243 00	70,20
	320	98 51323 00	81,00
	400	98 51403 00	81,00
	600	98 51603 00	104,00
6 x 13 x 150	240	98 51242 00	89,30
	320	98 51322 00	106,70
	400	98 51402 00	106,70
	600	98 51602 00	123,30
13 x 13 x 150	240	98 51244 00	119,20
	320	98 51324 00	147,00
	400	98 51404 00	147,00
	600	98 51604 00	208,60



SERIES 520 - AL₂O₃

Resin and aluminium oxide based abrasive stones, recommended for machining and finishing regular and irregular shaped tools following electro-erosion.

			12 pieces
Dim. (mm)	Grain	Ref.	€
3 x 6 x 150	120	98 52121 00	57,40
	180	98 52181 00	57,40
	320	98 52321 00	70,20
	400	98 52401 00	66,90
	600	98 52601 00	66,90
3 x 13 x 150	120	98 52125 00	67,80
	180	98 52185 00	67,80
	320	98 52325 00	78,80
	400	98 52405 00	75,00
	600	98 52605 00	75,00
6 x 6 x 150	120	98 52122 00	66,00
	180	98 52182 00	66,00
	320	98 52322 00	81,00
	400	98 52402 00	77,00
	600	98 52602 00	77,00
6 x 13 x 150	120	98 52123 00	89,30
	180	98 52183 00	89,30
	320	98 52323 00	104,00
	400	98 52403 00	99,10
	600	98 52603 00	99,10
10 x 10 x 150	120	98 52124 00	104,00
	180	98 52184 00	104,00
	320	98 52324 00	112,80
	400	98 52404 00	107,50
	600	98 52604 00	107,50

TOOLS

Abrasive stones

SERIES 530 - Al_2O_3

Resin and aluminium oxide based abrasive stones, recommended for soft and medium-hard materials.

12 pieces

Dim. (mm)	Grain	Ref.	€
6 x 6 x 150	220	98 53221 00	42,20
	320	98 53321 00	45,40
	400	98 53401 00	45,20
	600	98 53601 00	53,70
10 x 10 x 150	220	98 53222 00	63,00
	320	98 53322 00	66,80
	400	98 53402 00	66,80
	600	98 53602 00	84,20
3 x 13 x 150	220	98 53223 00	46,70
	320	98 53323 00	51,60
	400	98 53403 00	51,60
	600	98 53603 00	59,50
6 x 13 x 150	220	98 53224 00	52,50
	320	98 53324 00	60,80
	400	98 53404 00	60,80
	600	98 53604 00	74,80
4 x 4 x 100	220	98 53225 00	29,10
	320	98 53325 00	29,10
	400	98 53405 00	29,10
	600	98 53605 00	36,30



DEGUSSIT® stones

1 piece

Dim. (mm)	Shape	Grain	Ref.	€
100 x 10	△	Medium	98 D1015 00	153,60
100 x 10	□	Medium	98 D1025 00	170,80
100 x 8 x 6	▭	Fine	98 D1032 00	134,40
100 x 10	◐	Big	98 D1047 00	95,50
100 x 6	○	Medium	98 D1055 00	124,20
Kit 5 pieces (1 piece of each ref. above)			98 D1000 00	503,80



Honing oil

1 piece

Qty.	Ref.	€
500 cc.	98 70000 00	62,80



Stone-holders

1 piece

Dim. (mm)	Qty.	Ref.	€
1 x 4	1	40 U5099 00	9,10
1 x 6	1	40 U5098 00	9,10
1 x 10	1	40 U5097 00	9,10
Ø 3 mm	1	40 U5096 00	15,40
Lot of 3 pieces (1 x 4, 1 x 6, 1 x 10)	3 pieces	40 U5090 00	24,00



Abrasive stone kit n° 1

SERIES 510

Composition	Ref.	€
14 pieces	98 11000 00	111,50

KIT COMPONENTS

Dim. (mm)	Type	Grain	Qty.	Ref.
6 x 6 x 150	510	240	2	98 51241 00
	510	320	2	98 51321 00
	510	400	2	98 51401 00
6 x 13 x 150	510	240	2	98 51242 00
	510	320	2	98 51322 00
	510	400	2	98 51402 00
	510	600	1	98 51602 00
	540	800	1	98 54803 00

Abrasive stone kit n° 2

SERIES 530

Composition	Ref.	€
14 pieces	98 21000 00	132,40

KIT COMPONENTS

Dim. (mm)	Type	Grain	Qty.	Ref.
6 x 6 x 150	530	220	2	98 53221 00
	530	320	2	98 53321 00
	530	400	2	98 53401 00
6 x 13 x 150	530	220	2	98 53224 00
	530	320	2	98 53324 00
	530	400	2	98 53404 00
	530	600	2	98 53604 00

Abrasive stone kit n° 4

SERIES 520-550

Composition	Ref.	€
12 pieces	98 41000 00	89,00

KIT COMPONENTS

Dim. (mm)	Type	Grain	Qty.	Ref.
6 x 6 x 150	550	90	1	98 55091 00
	520	120	1	98 52122 00
	520	180	1	98 52182 00
	550	220	1	98 55221 00
	520	320	1	98 55321 00
	550	600	1	98 55601 00
3 x 6 x 150	550	90	1	98 55093 00
	520	120	1	98 52121 00
	520	180	1	98 52181 00
	550	220	1	98 55223 00
	520	320	1	98 52321 00
	550	600	1	98 55603 00

CONSUMABLES

Diamond abrasives, paste, liquid and gel abrasive preparations.
Lubricating fluids for oil or water base.

DIAMOND ABRASIVES

DIAMOND ABRASIVES

Bio DIAMANT® Pulmatic liquids

Used to obtain good distribution of diamond abrasive when polishing large surfaces.
Rechargeable pack, non-aerosol.

SERIES 310 - 75 g

1 piece

Alcohol based monocrystalline			
Type	µm	Ref.	€
025 313	1/4	03 97313 00	36,90
1 313	1	03 01313 00	36,90
2 313	2	03 02313 00	36,90
3 313	3	03 03313 00	36,90
6 313	6	03 06313 00	48,30
8 313	8	03 08313 00	48,30
10 313	10	03 10313 00	48,30
14 313	14	03 14313 00	55,10
25 313	25	03 25313 00	55,10
40 313	40	03 40313 00	55,10



SERIES 320 P - 75 g

1 piece

Alcohol based polycrystalline			
Type	µm	Ref.	€
025 323P	1/4	03 97323 00	42,20
1 323P	1	03 01323 00	42,20
2 323P	2	03 02323 00	42,20
3 323P	3	03 03323 00	42,20
6 323P	6	03 06323 00	55,50
8 323P	8	03 08323 00	55,50
10 323P	10	03 10323 00	55,50
14 323P	14	03 14323 00	63,20
25 323P	25	03 25323 00	63,20



5% discount from 3 products of the same reference

Bio DIAMANT® Gels

The Bio DIAMANT® formula ensures even distribution of abrasive film, as well as excellent adhesion to the item being polished.

Ready to use, this gel is ideal for maintenance polishing and produces an excellent shine. Very fast diamond action.



SERIES M.M.530/540 - 20 g

1 piece

Type	µm	Ref.	€
M.M.540	1/10	02 MM548 10	76,60
M.M.540	1/4	02 MM547 10	76,60
M.M.540	3/4	02 MM546 10	76,60
M.M.540	1	02 MM545 10	76,60
M.M.540	2	02 MM544 10	76,60
M.M.540	3	02 MM543 10	76,60
M.M.540	6	02 MM542 10	108,20
M.M.540	9	02 MM541 10	108,20
M.M.530	10	02 MM533 10	123,90
M.M.530	15	02 MM532 10	123,90
M.M.530	30	02 MM531 10	123,90
M.M.530	45	02 MM530 10	123,90

SERIES M.M.30/40 - 100 g

1 piece

Suitable for polishing large areas			
Type	µm	Ref.	€
M.M.40	3/4	02 MM046 00	149,50
M.M.40	1	02 MM045 00	149,50
M.M.40	2	02 MM044 00	149,50
M.M.40	3	02 MM043 00	175,60
M.M.40	6	02 MM042 00	175,60
M.M.40	9	02 MM041 00	175,60
M.M.30	10	02 MM033 00	208,90
M.M.30	15	02 MM032 00	208,90
M.M.30	30	02 MM031 00	208,90
M.M.30	45	02 MM030 00	208,90

5% discount from 3 products of the same reference

DIAMOND ABRASIVES

Bio DIAMANT® Pastes

Bio DIAMANT® products present no risk of toxicity or noxiousness to the user's health.

During the development of Bio DIAMANT® products, chemical components are selected exclusively from substances classed as non-dangerous complying with REACH regulations (relating to the packaging and labelling of dangerous substances and preparations causing skin irritation).

Environmental compliance

Our Bio DIAMANT® products are biodegradable.

Safety data is available for all products complying with REACH regulations

Identification

You can identify the series and therefore the solubility, Grit texture and concentration of each Bio DIAMANT® paste according to the type (e.g. 6 103).

Series 100 water soluble.

Series 210 oil soluble.

Example of type identification

Paste type	Grit texture	Series	Concentration
6 103	6 microns	100	3



BIO DIAMANT® pastes SERIES 210 - 10 g

Very high performance diamond paste for polishing hard and extra hard materials.

Available in a wide range of grain sizes from 1 to 90 µm. Does not contain water, protects polished surfaces from corrosion. Cleaning is done with water + 742 detergent or with a solvent such as Stanol.

1 piece

High yielding abrasives for polishing hard and extra-hard materials. Fluidity enables use without lubricating fluid.			
Type	µm	Ref.	€
1 213	1	01 01213 00	81,90
3 213	3	01 03213 00	143,40
6 213	6	01 06213 00	183,00
8 213	8	01 08213 00	217,60
14 213	14	01 14213 00	224,00
25 213	25	01 25213 00	305,00
40 213	40	01 40213 00	317,00
60 213	60	01 60213 00	327,00
90 213	90	01 90213 00	329,40

5% discount from 3 products of the same reference



**High performance
Oil soluble**



Extreme polish
Water soluble
Available in different concentrations

BIO DIAMANT® pastes SERIES 100 - 10 g

Diamond paste for finish polishing of all materials.

Suitable for polishing stages up to optical polishing on soft substrates.

BIO DIAMANT® SERIES 100 paste is available in a wide range of grit sizes down to very small ones and requires the use of M.M.712 - WS water based fluid. Cleaning is done with water + lye 742 or alcohol.

All stages up to optical polishing possible.			
Type	µm	Ref.	€
010 103	1/10	01 99103 00	140,70
025 102	1/4	01 97102 00	67,30
025 103	1/4	01 97103 00	118,80
1 103	1	01 01103 00	82,70
1 105	1	01 01105 00	113,30
2 103	2	01 02103 00	148,00
2 105	2	01 02105 00	176,70
3 102	3	01 03102 00	106,00
3 103	3	01 03103 00	137,10
3 105	3	01 03105 00	188,40
6 101	6	01 06101 00	113,30
6 102	6	01 06102 00	137,10
6 103	6	01 06103 00	176,70
6 105	6	01 06105 00	224,00
8 102	8	01 08102 00	188,40
8 103	8	01 08103 00	224,00
8 105	8	01 08105 00	261,30
14 101	14	01 14101 00	137,10
14 102	14	01 14102 00	197,80
14 103	14	01 14103 00	261,30
14 105	14	01 14105 00	333,10

5% discount from 3 products of the same reference

BIO DIAMANT® pastes 205S - 20 g

High performance diamond paste for mould polishing.

Excellent adhesion to material surfaces, very good temperature resistance, can be used on hot surfaces up to 170°C.

Due to its lubricating properties, no lubricant is required. Does not contain water, protects polished surfaces from corrosion. Cleaning is done with water + 742 detergent or with a solvent such as Stanol.



**Can be used
on hot surfaces
up to 170°C**

Can be used at high temperature			
Type	µm	Ref.	€
1.205S	1	01 01205S 00	119,00
3.205S	3	01 03205S 00	181,20
6.205S	6	01 06205S 00	235,30
8.205S	8	01 08205S 00	274,40
14.205S	14	01 14205S 00	349,80

5% discount from 3 products of the same reference

1 piece

DIAMOND ABRASIVES

BIO DIAMANT® pastes POLILAM MS - 10 g

Universal diamond paste for lapping and polishing of metal parts.

Bio DIAMANT® POLILAM MS abrasive paste is made from high purity, narrow-gauge single crystal diamond. The concentration of abrasive is of the standard type, and the thick, creamy consistency of the abrasive ensures good bonding to the work surface.

Its fatty bond allows it to be used pure or with M.M.705 - OS oil-based fluid. contains no water, protects polished surfaces from corrosion.

Cleaning is done with water + 742 detergent or with a solvent such as Stanol.



**Economical
and versatile**

1 piece

Universal bonding paste.			
Type	µm	Ref.	€
1 MS	1	01 010MS 00	41,90
3 MS	3	01 030MS 00	41,90
6 MS	6	01 060MS 00	53,60
8 MS	8	01 080MS 00	58,10
14 MS	14	01 140MS 00	67,80
25 MS	25	01 250MS 00	76,00
45 MS	45	01 450MS 00	76,00
60 MS	60	01 600MS 00	76,00
90 MS	90	01 900MS 00	80,10

5% discount from 3 products of the same reference

BIO DIAMANT® pastes DIATOOL® BX

Diamond paste for roughing, polishing on hard steels and cermet.

Used for high pressure applications, prevents seizing, requires the use of M.M.705 - OS oil-based fluid, contains no water, protects polished surfaces from corrosion. Cleaning is done with water + detergent 742 or with a solvent like Stanol.



**High pressure
Available in 10
and 20 g**

1 piece

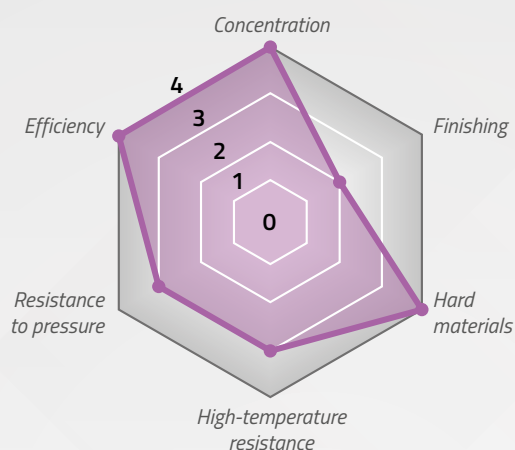
10 g				20 g	
Type	µm	Ref.	€	Ref.	€
DIATOOL® BX1	1	01 01DBX 00	44,40	01 01DBX 20	80,70
DIATOOL® BX3	3	01 03DBX 00	67,10	01 03DBX 20	121,50
DIATOOL® BX6	6	01 06DBX 00	80,70	01 06DBX 20	146,60
DIATOOL® BX8	8	01 08DBX 00	93,10	01 08DBX 20	168,20
DIATOOL® BX14	14	01 14DBX 00	103,40	01 14DBX 20	187,50
DIATOOL® BX25	25	01 25DBX 00	103,40	01 25DBX 20	187,50
DIATOOL® BX40	40	01 40DBX 00	112,50	01 40DBX 20	203,40
DIATOOL® BX60	60	01 60DBX 00	112,50	01 60DBX 20	203,40

5% discount from 3 products of the same reference

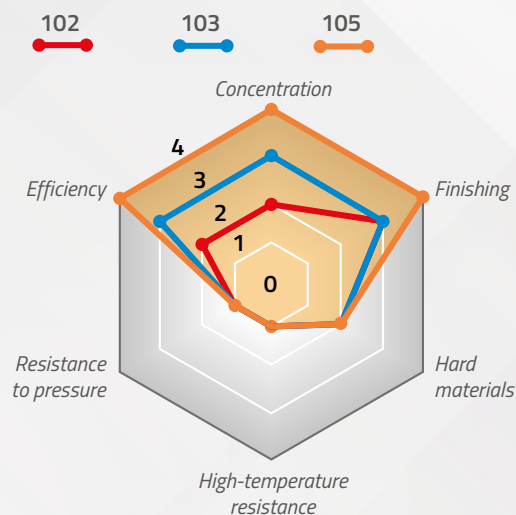
Selection of a BIO DIAMANT® abrasive paste

Depending on your criteria, the diagrams below will help you to choose the most suitable diamond paste.

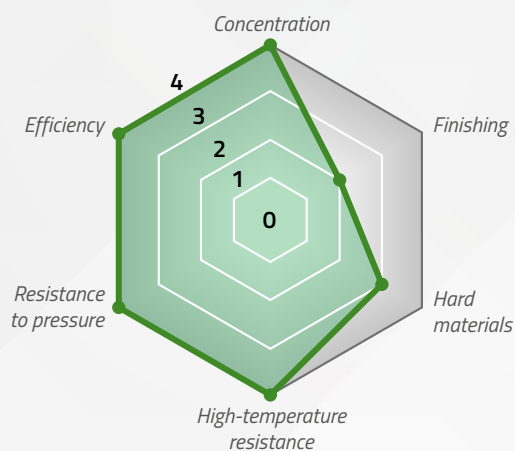
BIO DIAMANT® PASTES SERIE 210



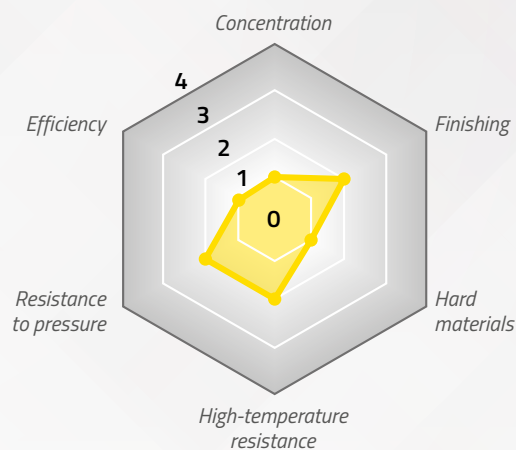
BIO DIAMANT® PASTES SERIE 100



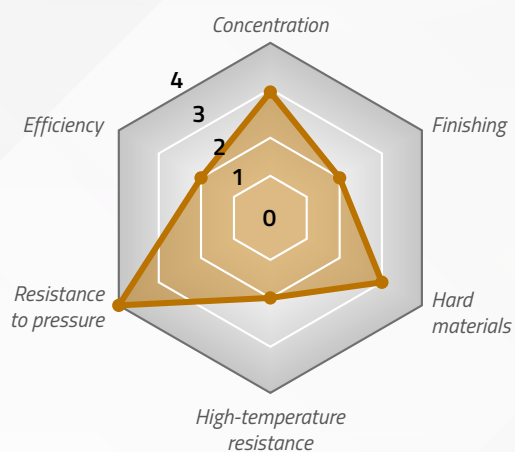
BIO DIAMANT® PASTES 205S



BIO DIAMANT® PASTES POLILAM MS



BIO DIAMANT® PASTES DIATool® BX



LUBRICATING FLUIDS

Lubricating fluids M.M.

SERIES M.M.705 - OS (Oil Soluble)

Lubricating fluid for use with series 210, MS and Diatool® diamond pastes. Ready to use it ensures excellent paste dispersion and optimises cutting power. Easily cleanable with 742 detergent or Stanol.

1 piece

Type	Packaging	Ref.	€
M.M.705	1 litre	07 MM705 30	12,90
M.M.705	Pulmatic 350 cc	07 MM705 50	26,70

SERIES M.M.712 - WS (Water Soluble)

Aqueous lubricating fluid for polishing applications. This fluid is recommended for use with Bio DIAMANT® 100 series pastes. Ready to use, its specific formula limits the heating of the supports and facilitates the cleaning of the parts after each cycle of work. Easily cleanable with 742 detergent.

1 piece

Type	Packaging	Ref.	€
M.M.712	1 litre	07 MM712 30	13,90
M.M.712	Pulmatic 350 cc	07 MM712 50	24,30



GLOBAL INDEX

A	Abrasive caps	157
	Abrasive discs Ø 18 and 30 mm	154
	Abrasive papers Ø 200 to 400 mm	54 > 55
	Abrasive papers: SiC Ø 200 and 400 mm	54 > 55
	Abrasive papers: SiC self-adhesive Ø 18 and 30 mm	154
	Abrasive powders: Al2O3	144
	Abrasive powders: B4C	145
	Abrasive powders: CeO2	145
	Abrasive powders: CLASSIC: AQUA LAM®	143
	Abrasive slurries ECOA®	132
	Abrasive slurries for lapping	137 > 142
	Abrasive slurries for polishing	128 > 131
	Abrasive stone kits	174
	Abrasive stones 510, 520 and 530	174
	Abrasives pastes: Bio DIAMANT®	177 > 180
	Abrasives pastes: Bio DIAMANT® series 100	70
	Abrasives pastes: Bio DIAMANT® series 210	135
	Abrasives pastes: BIOLAP®	141 > 142
	Accessoires for polishing machines Ø 200 to 300 mm	48 > 49
	Accessories for lapping machines Ø 381 mm and more	96 > 105
	Adaptor rings for cut-off wheels	25
	Additive 716	145
	ALPLAN finishing liquids	68
	Alumina abrasive films	119
	Aluminium plates Ø 200 to 300 mm	48
	Anti-splash rings pour polishing machines	48
	AQUA LAM® CLASSICAL composite abrasive	143
	AQUA LAM® SiC powder	144
	AQUASUN oil	146
	AUTOPLAN	104
B	BI-LAMBLOCK	111
	Bio DIAMANT® abrasive suspension NEODIA®	64 > 66
	Bio DIAMANT® finishing liquid M.M.140	66
	Bio DIAMANT® Gels series M.M.530/540 and 30/40	176
	Bio DIAMANT® NEOLAP® abrasive slurries	130 > 131
	Bio DIAMANT® Pulmatic liquids	175
		67
	BIOLAM®	138 > 139
	BIOLAM® composite abrasives	138
	BIOLAP®	141 > 142
	Blade-holders	39
	BOOSTER for CAMEO®DISK Platinum	71
	BOX LAM®	52
C	CAMEO®DISK Platinum	58
	CAMEO®DISK Silver, Gold and Rhodium	59
	Carbide end mills	160
	Carriers series 884	99
	Cast iron conditioning rings	96
	Cast iron plates NEW LAM® M'M'	107
	Ceramic brushes	171
	Ceramic conditioning rings	96
	Charge element for resin	39
	CLASSICAL composite abrasive	137
	Cold resins	34 > 36
	Composite abrasive: BIOLAM®	138 > 139
	Cooler	112
	COVER LAM®	53

	Cups and spatulas	38
	Cutting fluids	23
	Cut-off wheels	24 > 25
	CUTLAM®	8 > 19
	Cutting machines CUTLAM®	8 > 19
D	DEGUSSIT® stones	173
	Detergents	105
	Diabloes and refills	102 > 103
	Diamond abrasive films	120
	Diamond dressing tools	58 > 59
	Diamond files	165
	Diamond slurries 241 series	131
	Diamond slurries for lapping	128 > 135
	Diamond slurries for metallography	64 > 70
	Diamond slurries for polishing	128 > 135
		49
	Diaphragm compressor	149
	Disc holders	154
	Discs and plates storage system	52
	Dosing units for lapping machines	90 > 93
	Dosing units for polishing machines	47
	Dressing stones	58 > 59
E	EOCA®	132
	Expandable cylindric rods	117 > 118
F	FAS® system	98
	Felt polishing discs	167
	Felt polishing rings	167
	Felt polishing pads 150 and 200 mm	167
	Felt lapping rods	162
	Filters for CUTLAM®	23
	FINAL finishing liquids L1 et L2	68
	FIX LAM® discs and plates	50
	FIXING® discs	98
	Flexible cylindrical cold mounting moulds	37
	Fluids lubricant NEOFLUID	136
	FMS® discs and plates	50
G	Grinders: rubber abrasive	166
	Grinding and polishing CAMEO®DISK	57 > 59
	Grinding brushes	162
	Grinding points: diamond	156
	Grinding points: pink corundum	158
	Grinding points: ruby sapphire	159
	Grinding points: silicon carbide	159
	Grinding wheels	56
H	Hand-held devices	148 > 149
	Heads for hand-held devices	150 > 152
	Holder discs 885 series	97
	Holding clips	39
	Hot mounting press PRESSLAM®	28 > 29
	Hot resins	31 > 33
	Hot resins PHENOFREE	31
I	ISOFORCE	37
J	Jaws for ultrasonic motors M.M.885	152
	Jet brushes	162
L	LAM®15	53
	LAMBLOCK	111
	Lapping machines	80 > 89

Lapping oil 708	146		
Lapping plates series 2000	110		
Lapping rods M.M.*	113 > 118		
Levelling plates	48		
Lithopreparation	74		
Lubricating fluids for geometric polishing	181		
Lubricating fluids for lapping	136		
Lubricating fluids for metallography	71		
Lubricating fluids M.M.702 and 704	71		
Lubricating fluids M.M.712 and 705	136		
Lubricating fluids M.M.990-140 and 950-140	181		
Lubricating fluids M.M.990-140 and 950-140	136		
M M.M.* Tools	154 > 174		
Machines for lapping and polishing	80 > 89		
Machines for metallography	8 > 19		
Manual distributors to be filled	66		
Manual glazing blocks	111		
MASTERLAM*	88		
	44 > 46		
Metallographic reagents	72		
Micro engraver M.M.886	38		
Micromotor controllers	148		
Micromotor sets	149		
Micromotors	148 > 153		
Micrometric gauges	101		
Mixing and distribution systems for lapping machines	92		
Monochromatic lamp	101		
Moulds with removal bottom	37		
Mounting machine PRESSLAM*	28 > 29		
N NEODIA*	64 > 66		
NEOLAP*	128 > 130		
NEW LAM* M'M'	107 > 108		
NOVAL S	140		
O Oil mist extraction device A1	22		
Optical gauges	101		
P PHENOFREE hot resins	31		
Plastic rings	96		
Plates: cast-iron	96		
Plates: FAS Ø 381 mm and more	98		
Polishing cloths TOUCHLAM* Ø 200 to 400 mm	60 > 63		
Polishing cloths TOUCHLAM* Ø 381 mm and more	122 > 127		
Polishing felts	161		
Polishing machines Ø 200 to 400 mm	42 > 45		
Polishing machines Ø 381 mm and more	80 > 89		
Polishing pads TOUCHLAM* Ø 200 to 400 mm	60 > 63		
Polishing pads TOUCHLAM* Ø 381 mm and more	122 > 127		
Polymerisation lamp M.M.866	37		
Prepolishing machine	40 > 41		
PRESSLAM*	28 > 29		
Pressurised mounting device M.M.808	30		
Protection discs 881 and 883 series	97		
Protection of samples COVER LAM*	53		
Protective film	105		
Pulmatic Bio DIAMANT* series 310 and 320P	175		
	67		
R Rectangular holders	154		
Reducer rings	48		
Refractometer	23		
Rods M.M.*	113 > 116		
Rotating accessories: wood and felt	168		
Rubber rods	169		
S S.W. 30 et S.W. 36	140		
Sample holders	48		
Self-adhesive abrasive discs Ø 18 to 30 mm	154		
SMARTLAM*	42 > 43		
SOLILUB unmoulding agent	31 / 39		
Specific carriers	99		
SPRINGLAM*	42		
Stick: Bio DIAMANT* M.M.140A	133		
Sticks: Bio DIAMANT* 122 and 123P	69		
Sticks: Bio DIAMANT* series 122 and 130-140	134		
Stone-holders	173		
Stones: ceramic	170		
Stones: graphite	171		
Stones: sulphur	171		
Storage system for plates Ø 200 to 300 mm	52		
Structured cloths	127		
Support cabinet for CUTLAM*	13		
T Temperature control system	112		
Tools for filing micromotors	152		
Tools for ultrasonic micromotors M.M.885	152		
TOUCHLAM* polishing cloths & pads Ø 200 to 400 mm	60 > 63		
TOUCHLAM* polishing cloths Ø 381 mm and more	122 > 127		
Transversal tables	21		
TRI-BLOCS	111		
Turbomotors M.M.888.4 and M.M.888.3	153		
U Ultrasonic cleaning tank (small capacity)	53		
Universal sample-holder mould Series 610	38 / 49		
Unmoulding agent SOLILUB	31 / 39		
V Vices and clamping	20 > 21		
Voluma sheres	39		
W Washing stands (big capacity)	105		
Washing stands (small capacity)	53		
Wheels for cutting machines	24 > 27		
Wooden lapping rods	169		

GENERAL TERMS AND CONDITIONS OF SALE

1. Application of General Terms & Conditions of Sale

All orders placed with Lam Plan imply acceptance by the client, without any reservation, of all the General Terms and Conditions of Sale as set forth here below.

Client orders shall be registered by Lam Plan only in accordance with these General Terms and Conditions of Sale, regardless of contrary provisions, if any, that may be contained in the purchase order or in the general terms and conditions of purchase of the client, unless they have been expressly accepted in writing by Lam Plan.

The waiver by Lam Plan of one or more provisions of these General Terms and Conditions of Sale does not imply the waiver of any other provisions thereof which shall remain effective and binding upon the client.

The present General Terms and Conditions of Sale may be amended at any time without prior notice by Lam Plan, with the amendments thereafter being applicable to all subsequent orders.

The Client acknowledges being fully aware that their agreement with respect to the contents of these General Terms and Conditions of Sale does not require their signing of this document.

2. Orders

The sale shall be deemed to have been completed only upon acceptance of the order from the client by Lam Plan.

The products shall be supplied and invoiced at the relevant price rates in effect at the time of placing of the order or, where applicable, in accordance with the specific commercial proposal addressed to the client and accepted by them.

Any eventual amendments to the order subsequently made by the client shall be taken into account, only within the limits of the possible options available and at the sole discretion of Lam Plan, and provided that they have been notified in writing to Lam Plan at least fifteen days prior to the date scheduled for delivery, accompanied with the issuance of a new specific purchase order duly signed by the client, including, where appropriate, a price adjustment.

3. Prices

The prices indicated in the Lam Plan catalogues are provided for illustrative purposes only and are not binding upon Lam Plan.

Appropriate invoices shall be issued in accordance with the price rates in force on the date of the order.

Unless otherwise specified in writing, all rates and prices are expressed in Euro and quoted net, ex works, exclusive of taxes and packaging.

As a consequence, the client shall bear all costs related to VAT at the applicable rate, transportation costs, fees and duties as well as any expenses associated with insurance.

Special pricing terms and conditions may be applicable depending upon the specifications requested by the client, particularly concerning the specific modalities, terms and timelines of delivery, timing and terms and conditions of payment.

In this event a special commercial offer shall be prepared and sent to the client by Lam Plan.

4. Payment

The quoted price shall be payable in full in one single payment within a period of thirty days from the date of issue of the invoice, end of the month.

In case of late payment, Lam Plan may suspend any pending orders without prejudice to the application of late payment penalty fees that will be due as of the day following the settlement date as indicated on the invoice, applicable on the full amount/s due, calculated at three times the interest rate in effect on the date of implementation of this provision and applied by the European Central Bank.

Moreover, and in accordance with Article L 441-6 of the Code de Commerce (French Commercial Code), in addition to late payment penalties, the client shall be required to pay a lump sum amount of 40 Euros for recovery costs, with Lam Plan however, reserving the right to seek additional compensation on upon presentation of supporting documentation, corresponding to the recovery costs incurred, in excess of the lump sum amount.

5. Retention of Ownership Title

Lam Plan retains the right to reserve ownership title of the goods delivered to the client until payment has been made in full, inclusive of principal, interest and ancillary costs.

However, the risks relating to the goods shall be transferred to the client immediately upon delivery and, for the entire period of time corresponding to the Retention of Ownership Title by Lam Plan.

Client shall agree, therefore, to take out appropriate insurance policies to provide adequate coverage against the risk of loss, theft or destruction of the goods prior to full payment being made.

Without prejudice to any subsequent action or claim for compensation for damages, Lam Plan may terminate the sale, with the aforementioned goods being subject to repossession in totality by Lam Plan without prior notice provided thereof, in the event of non payment of any invoices that become due.

The client shall refrain from pledging as collateral or assigning ownership of the said goods until such time as they have fully settled the payment corresponding to the price thereof.

In the event of the client becoming the subject of bankruptcy proceedings or getting involved in any other event making it impossible to pay for the goods delivered by Lam Plan and where the goods were to be sold in part or whole by the client to a subsequent purchaser, without the subsequent purchaser being discharged from the liability of paying the sale price, with respect to the client, the client shall agree to promptly provide Lam Plan with all information necessary for Lam Plan to make any eventual claim on the goods, against the corresponding claim related to the sale price still owed by the subsequent purchaser.

6. Delivery

Delivery dates and time lines are purely indicative, provided only for informative purposes and as such, are in no way guaranteed.

In this regard, Lam Plan's obligation is an obligation in terms of means and not an obligation in terms of result.

As a consequence, possible delays in delivery therefore may not be considered grounds for the cancellation of the order, refusal of the goods, the allocation of penalties or any claim for compensatory damages.

Lam Plan shall therefore not be held responsible for any delays in or suspension of delivery, errors, disruptions attributable to their service providers, contractors and / or subcontractors, or due to any unforeseeable fortuitous circumstances or force majeure events, as recognised by the French courts.

The Lam Plan warehouses shall constitute the place of delivery.

This rule shall not be subject to any derogation whatsoever on account of the management, in whole or in part, of the transportation of goods by Lam Plan.

In such a case, Lam Plan shall act in the capacity of a mere agent of the client, with the transportation risks being entirely borne by the client.

Unless otherwise stipulated in relevant provisions, the goods shall be transported at the sole risk and expense of the client, by carrier, and shall be delivered to the address indicated by them in the purchase order.

The client shall be responsible for checking and verifying the condition of the goods upon receipt.

In the event of goods that are missing or that have been damaged in transit, the client shall undertake to express all the necessary reservations on the delivery note or transportation waybill, upon receipt of the said goods.

In addition, these reservations must be confirmed to the carrier in accordance with Article L 133-3 of the French Commercial Code, in writing, within three days following the receipt of goods, by registered letter with acknowledgment of receipt.

It shall be up to the client to exercise their rights in respect of any eventual claims against the carrier or carriers.

6bis. Return

Returns of goods for other reasons than non-conformity may be made within 15 days from the date of receipt of the delivery, subject to prior written notification by the customer.

The shipping or return costs are at the customer's expense. The return of the product(s) must be made in its original packaging and in good condition. All damaged, spoiled, incomplete or soiled products will not be refunded. LAM PLAN reserves the right to decide whether or not to issue a refund after quality control.

7. Limited warranty

New materials and equipment sold by LAM PLAN are guaranteed against any manufacturing risk for a period of one year from the date of invoice of the delivered material.

The purchaser is obliged to check the condition of the materials and equipment immediately after receipt and must notify LAM PLAN within 10 days after receipt if any defects are discovered.

LAM PLAN then undertakes, at its own discretion, to remedy any malfunction during the warranty period, either by repairing the product, replacing the product or refunding the purchase price, provided that the materials and equipment have been used in normal conditions, with LAM PLAN brand products and with regular maintenance.

The warranty does not cover repairs due to:

- the use of materials supplied by the customer or of a design imposed by him;

- incidents due to fortuitous events or force majeure, normal wear and tear of the product, negligence of the customer, lack of supervision or maintenance, or non-conforming, inappropriate or improper use;

- storage or packaging conditions that do not comply with professional rules and practices or with the specificities of the product;

- defects in assembly or implementation by the customer, or the actions of a third party;

- modifications or repair work carried out by the customer or a third party without the prior written authorization of LAM PLAN.

Furthermore, LAM PLAN does not grant any warranty regarding:

- the actual performance of the Products, other than their ability to meet the specifications set by LAM PLAN;

- the electronic components of the Products or their associated accessories, including but not limited to printed circuit boards and integrated circuits.

The customer is obliged to give LAM PLAN the necessary time and means to carry out the necessary repairs and/or replacements, failing which LAM PLAN's warranty will no longer be due to the customer.

LAM PLAN's warranty is, therefore, strictly limited as indicated above.

By express agreement, all damages of any nature whatsoever resulting from damage inherent in the defects of the goods are excluded from the guarantee.

9. Copyright

Ownership of copyrights for all documents in all classes is retained by Seller. Buyer is granted a license to make, without further approval by Seller, a limited number of copies, in whole or in part, of a document, so long as the copied portion includes the applicable copyright and trademark statements found on the original document.

The reproduction for promotional purposes of all or part of texts, images and graphic elements is strictly prohibited without the express permission of LAM PLAN.

10. Applicable Law

All provisions of these General Terms and Conditions of Sale are exclusively subject to French law with respect to the interpretation and enforcement thereof.

11. Assignment of Jurisdiction

Any dispute arising from the interpretation and / or enforcement of these General Terms and Conditions of Sale shall be subject to a process of discussion and consultation with a view to achieving an amiable settlement.

Failing such a settlement being obtained within a period of two months from the date the dispute was notified and acknowledged, the dispute shall be brought before the Tribunal de Commerce de Paris (Commercial Court of Paris) who will have sole jurisdiction in the matter.

This clause shall be applicable, including in the event of summary proceedings, fixed date petition hearings and proceedings, incidental claims, plurality of defendants or third parties, and without the possibility of any hindrance thereto arising from the jurisdiction assignment clauses contained in the client's documents.



POLISHING TECHNOLOGY®

BY YOUR SIDE
EVERYWHERE IN THE WORLD



Algeria
Australia
Austria
Belgium
China
Czech Republic
France
Germany
Greece

Hungary
India
Indonesia
Israel
Italy
Japan
Korea
Malaysia
Norway

Poland
Portugal
Russia
Saudi Arabia
Singapore
Spain
Sweden
Switzerland
Taiwan

Thailand
The Netherlands
Turkey
United Arab Emirates
United Kingdom
United States

Distributed by



LAM PLAN SA
7 rue des Jardins - BP15
74240 GAILLARD - France
Tel. +33 (0)4 50 43 96 30

www.lamplan.com