

GEOMETRIC POLISHING



# CONTACTS



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# 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.



# TABLE OF CONTENTS

TOOLS

## **EQUIPMENT**

	Upgradeable micromotor controllers M.M. 880, M.M.885 and M.M.886	6-7
	Diaphragm compressor	7
	Rotary micromotors	8
	Alternating micromotors	9
MICROMOTORS	Replacement carbon brushes for micromotors	9
MICROMOTORS	Jaws for micromotors	10
	Ultrasonic micromotor	10
	Jaws for ultrasonic micromotor	10
	Turbomotors	11
	Maintenance and repairs	11

## **TOOLS**

Disc and rectangular holders, self-adhesive abrasive and polishing discs	12
Self-adhesive polishing squares series 400 and 4400	13
CAMEO® Platinium prepolishing discs	13
Diamond grinding points 6800 and 7400	14-15
Abrasive caps	15
Pink corundum, ruby sapphire and silicon carbide grinding points	16-17
Carbide end mills	18
Rotary polishing felts	19
Wooden rotary accessories	20
Diamond files and kit	21
Specific diamond files	21
Rubberised abrasive grinders	22-23
Felt polishing rings, discs and pads	24
Felt lapping rods	25
Polishing grinding brushes and jet brushes	26
Abrasive finishing grinders	27
Wooden lapping rods	27
Rectangular rubber rods	27
Ceramic brushes and stones	28-29
Sulphur stones 570	29
Graphite stones 560	29
Abrasive stones 510, 520 and 530	30-31
DEGUSSIT® stones	31
Honing oil	31
Stone-holders	31
Abrasive stone kits N°1, N°2 and N°4	32

## **CONSUMABLES**

	Bio DIAMANT® Pulmatic liquids series 310 and 320P	33
DIAMANT	Bio DIAMANT® Gels series M.M.530, 540 and 30/40	34
ABRASIVES	Bio DIAMANT® Pastes series 210, 100, 205S, Polilam MS and Diatool® BX	35-37
	Selection of a BIO DIAMANT® abrasive paste	38
LUBRICATING FLUIDS	Lubricating fluids series M.M.705 and M.M.712	39
	General terms and conditions of sales	40

# 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)
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
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
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			
Туре	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

#### 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			
Туре	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

## 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	#





## 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
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  $\emptyset$  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
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

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
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

Туре	Rotary micromotor	Voltage output	DC3-30 V - 0,2 à 0,4 A
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

Туре	Rotary micromotor	Voltage output	DC3-30 V - 0,2 à 0,4 A
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			
Туре	Scanning alternating micromotor	Voltage output	DC3-30 V - 0,2 à 0,4 A
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				
Туре	Linear alternating micromotor	Voltage output	DC3-30 V - 0,2 à 0,4 A	
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

Туре	Ref.
Straight red rotary device	10 1070 82
Straight red rotary device with reinforced head	10 1070 82
Grey filing device	10 1070 84
"Super light" rotary device	10 1070 83
Green bent 90° rotary device	10 1070 82
Green bent 120° rotary device	10 1070 82
M.M.886	10 1070 66



## laws for micromotors

1 piece

2 pieces

	Characteristics	Compatibility	Ref.
Ø 2,35 mm	Ø 2,35 mm	<ul> <li>Straight red rotary device</li> <li>Green bent 90° rotary device</li> <li>Green bent 120° rotary device</li> <li>"Super light" rotary device</li> <li>M.M.886</li> </ul>	10 1090 13
Ø 3,0 mm	Ø 3,0 mm	<ul> <li>Straight red rotary device</li> <li>Green bent 90° rotary device</li> <li>Green bent 120° rotary device</li> <li>"Super light" rotary device</li> <li>M.M.886</li> </ul>	10 1090 07
Ø 3,175 mm	Ø 3,175 mm	<ul> <li>Straight red rotary device</li> <li>Green bent 90° rotary device</li> <li>Green bent 120° rotary device</li> <li>"Super light" rotary device</li> <li>M.M.886</li> </ul>	10 1090 11
Ø 6,0 mm	Ø 6,0 mm	- Straight red rotary device with reinforced head	10 1090 07
Ø 3,0 mm	Ø 3,0 mm	- Straight red rotary device with reinforced head	10 1072 51

## Ultrasonic micromotor





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

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			
Туре	Ultrasonic micromotor	Voltage	AC 6-60 V 22,6 KHz
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







Туре	mm	Grain	Ref.	
Ø d 1 12,5 M 6X1	Ø 2 Ø 3	_	40 US005 00 40 US006 00	
t 1 M 6X1	t = 0,5 t = 0,8 t = 1 t = 2 t = 3	-	40 US015 00 40 US016 00 40 US018 00 40 US007 00 40 US008 00	

#### **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:**  $1 \times 1.50 \text{ m}$  hose with clamps,  $1 \times 1.50 \text{ m}$  hose holder,  $1 \times 1.50 \text{ m}$  key,  $1 \times 1.50 \text{ m}$  key

M.M.888.4 Data sheet			
Туре	Linear alternating micromotor	Air consumption	46 NL/min.
Frequency	0 à 22 000 coups/min.	Power supply	Compressor 60 COM00 00 or compressed air
Pressure	6 bars	Power Supply	network 6 Bar flow rate higher than 70 NL/min.
Course	0,7 mm	Dimensions	Ø max. 28 mm, 218 mm
Connector	PT 1/4	Weight	180 gr
		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:**  $1 \times 1.50 \text{ m}$  hose with clamps,  $1 \times 1.50 \text{ m}$  hose holder, tools,  $1 \times 1.50 \text{ m}$  mm grinding wheel and  $1 \times 1.50 \text{ m}$  jaw.



M.M.888.3 Data sheet			
Туре	Rotary micromotor	Air consumption	120 NL/min.
Speed	65 000 tr/min.	Power supply	Compressed air network 6 Bar flow rate higher
Pressure	6 bars	rower supply	than 150 NL/min.
Course	0,7 mm	Dimensions	Ø max. 22,50mm, 218 mm
Connection	PT 1/4	Weight	78 gr
		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



TOOLS

#### Disc holders series 9904

Holders for self-adhesive discs, used in rotation.

_		
5	nıa	ces

	Shaft: Ø 3 mm
Ø in mm	Ref.
18	99 04018 00
30	99 04030 00



## Rectangular holders

Active zone: 10 x 20 mm.

1 piece

	Shaft: Ø 3 L: 60 mm
Туре	Ref.
Articulated	99 09905 20
Rigid	99 09905 10

## Self-adhesive abrasive discs

For small surface rough polishing, used in rotation.



50 pieces

	Ø 18 mm	Ø 30 mm
Grain	Ref.	Ref.
80	99 05080 10	99 05080 30
120	99 05120 10	99 05120 30
180	99 05 180 10	99 05180 30
240	99 05240 10	99 05240 30
320	99 05320 10	99 05320 30
400	99 05400 10	99 05400 30
600	99 05600 10	99 05600 30
1200	99 51200 10	99 51200 30



## Self-adhesive polishing discs

**SERIES 9914** 

50 pieces

Туре	Ø in mm	Ref.
1450 woven	18	99 01450 10
1431 felt	18	99 01431 10
1450 woven	30	99 01450 30
1431 felt	30	99 01431 30



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					
Туре	mm	Ref.			
437 brown felt	150 x 150	04 C0437 10			
	200 x 200	04 C0437 20			
431 red felt	150 x 150	04 C0431 10			
43 I red felt	200 x 200	04 C0431 20			



SERIES 4400 10 pieces

Polishing cloths for contour work					
Туре	mm	Ref.			
4450 13	150 x 150	04 C4450 10			
4450 white woven	200 x 200	04 C4450 20			



## **Prepolishing discs**

CAMEO® PLATINIUM

10 pieces

		10 pieces
	Self-adhesive discs for large surfa	ce pre-polishing, used in rotation
Designation	mm	Ref.
Platinium 0	Ø 18	09 CA130200
Platinium 1	Ø 18	09 CA140200
Platinium 2	Ø 18	09 CA150200
Platinium 3	Ø 18	09 CA160200
Platinium 0	Ø 30	09 CA130300
Platinium 1	Ø 30	09 CA140300
Platinium 2	Ø 30	09 CA150300
Platinium 3	Ø 30	09 CA160300





## 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

SERIES 680	)0					1 piece
		Shaft: Ø 3 mm - Leng		n: 120		
Туре	mm	Ref.	Туре	mm	Ref.	
	2,1 x 2,1	46 21210 00		3,1 x 9	46 30850 00	
	3,5 x 3,5	46 35350 00		5 x 13	46 48130 00	
	1,6 x 1,6	46 16160 00		8,0 x 13	46 80130 00	
	1,8 x 1,6	46 18160 00	- 000-	3,1 x 9	46 30900 00	
	2,7 x 2,5	46 27250 00		5 x 13	46 48131 00	
	3,7 x 3	46 37300 00		2,7 x 8,5	46 27850 00	
	4,7 x 3	46 47300 00		3,1 x 9	46 31851 00	
	2,9 x 6	46 30600 00		2,1 x 7	46 21701 00	
	4,7 x 1,5	46 47150 00		3,1 x 8,5	46 31852 00	
	8,0 x 2,5	46 80220 00		1,6 x 6,5	46 16651 00	
	16 x 3	46 16270 00		3,1 x 8,5	46 31853 00	
	22 x 3	46 22270 00		3,1 x 8,5	46 31854 00	
	8,0 x 0,6	46 80050 00		5 x 10	46 48100 00	
	4,7 x 1	46 47100 00		5 x 8	46 48800 00	
- Commission	2,7 x 9	46 27800 00		5 x 13	46 48132 00	
	3,1 x 8,5	46 31850 00		5 x 13	46 48133 00	
	5,0 x 13	46 50130 00		8,0 x 13	46 80131 00	
	1,6 x 6,5	46 16650 00		8,0 x 3,5	46 80300 00	
	2,1 x 7	46 21700 00			46 22100 00	
	2,7 x 8	46 27801 00			46 22200 00 46 22300 00	

HOME

SERIES 7400 1 piece

							i piec
		Shaft: Ø 3 mm	- Lengt	:h: 38 mm - Grai	n: 170		
Туре	mm	Ref.		Туре	mm	Ref.	
	2,3 x 7,5	47 23700 00			3,1 x 9	47 31900 00	
	2,7 x 9	47 27800 00			5 x 13	47 48134 00	
	5,0 x 13	47 50130 00			2,7 x 8,5	47 27802 00	
	1,6 x 6,5	47 16650 00			2,1 x 7	47 21701 00	
	2,1 x 7	47 21700 00			3,1 x 9	47 31850 00	
	2,7 x 8	47 27801 00			5,0 x 13	47 50132 00	
	5,0 x 13	47 50131 00					

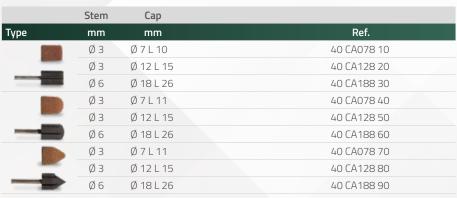


## **Abrasive caps**

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









## Grinding points Pink corundum

Maximum speed: 45m/sec. Hardness: N.

#### **GRAIN 80/120**

10 pieces

ditAlly 007		Shaft∙ Ø 3 mm	- Length: 35 mm		To piece
Туре	mm	Ref.	Туре	mm	Ref.
	9 x 2,2	40 CR901 00		7 x 4	40 CR720 00
	9 x 3	40 CR902 00	<b>—</b>	8 x 4	40 CR821 00
	8,5 x 2,2	40 CR853 00		2,5 x 6	40 CR252 20
	4 x 1,2	40 CR404 00		5 x 6	40 CR523 00
	5,5 x 3	40 CR555 00		6 x 6	40 CR624 00
	7/3,5 x 6	40 CR706 00	×	5 x 2	40 CR525 00
	5/2 x 2,7	40 CR507 00		6 x 2,3	40 CR626 00
<b>=</b>	6,5/2 x 3	40 CR658 00		3,5/2 x 10	40 CR352 70
	8/3,5 x 4	40 CR809 00	<b>&gt;(</b> ((())	5,5/3,5 x 10	40 CR552 80
	3/2 x 4	40 CR310 00	-400	3,3/2,2 x 6,2	40 CR332 90
	5/3 x 5	40 CR511 00		3/4,6 x 10	40 CR330 00
-	7/5 x 6	40 CR712 00		5 x 3,2	40 CR531 00
	3 x 6	40 CR313 00		5 x 7	40 CR532 00
	4 x 6	40 CR414 00		6 x 8	40 CR633 00
_	5 x 6	40 CR515 00	-	4,3 x 7	40 CR433 40
	3 x 6	40 CR316 00		6,2 x 10	40 CR623 50
	4 x 4	40 CR417 00		6,3 x 10	40 CR633 60
	6 x 8	40 CR618 00	A MENTE	Kit 36	/.0 CD262 70
>	3 x 2	40 CR319 00	3,113	pieces	40 CR363 70

TOOLS

## Grinding points Ruby sapphire

Maximum speed: 45 m/sec. Hardness: N.

**GRAIN 100** 

10 pieces





**GRAIN 120** 

10 pieces

	Shaft: Ø 3 mm - Length: 40 mm	
Ø in mm		Ref.
2 x 5		40 CB205 00
3 x 6		40 CB306 00
4 x 8		40 CB408 00
5 x 10		40 CB510 00
8 x 10		40 CB810 00
10 x10		40 CB8101 00





## Carbide end mills

1 piece

	Shaft: Ø 3 r	nm - Length: 38	mm
Туре	*Kit	mm	Ref.
SHOWE		3,0 x 14	40 FC301 00
	~	2,5 x 11	40 FC252 00
SIMM	~	1,5 x 6	40 FC153 00
⊕		ØЗ	40 FC304 00
168666	~	3 x 14	40 FC305 00
MINNE	~	2,5 x 11	40 FC306 00
	~	3 x 12	40 FC257 00
1850		3 x 6	40 FC308 00
		3 x 12	40 FC309 00
	~	3 x 10	40 FC310 00
		3 x 6	40 FC311 00
	~	3 x 6	40 FC312 00
	~	ØЗ	40 FC313 00
-		Ø 2,5	40 FC251 40
		3 x 16 x 7	40 FC315 00
	~	3 x 11 x 14	40 FC316 00
		3 x 9 x 12	40 FC317 00
		3 x 12 x 8	40 FC318 00
		3 x 9 x 8	40 FC319 00
<b>&gt;</b>		3 x 9	40 FC320 00
-		3 x 6	40 FC321 00
		3 x 6	40 FC322 00
		3 x 5 x 10	40 FC323 00
		3 x 5 x 10 2,5 x 3 x 10	40 FC323 00 40 FC252 40
* Kit included 9	pieces		
			40 FC252 40 40 FC120 00
		2,5 x 3 x 10	40 FC252 40 40 FC120 00
		2,5 x 3 x 10 nm - Length: 45	40 FC252 40 40 FC120 00 mm
		2,5 x 3 x 10  nm - Length: 45  0,9 x 0,75	40 FC252 40  40 FC120 00  mm  40 FC409 00
		2,5 x 3 x 10  nm - Length: 45  0,9 x 0,75  1 x 0,8	40 FC252 40  40 FC120 00  mm  40 FC409 00  40 FC410 00

TOOLS

## Rotary polishing felts

For use with BioDIAMANT® gels and pastes: finishing, geometric polishing.

10	pieces

				10 pieces
Sh	naft: Ø 3 mm - Len	gth: 38 mm		
Туре	*Kit	Ø x L (mm)	Ref.	
CASSION .	~	Ø 6 x L 10	40 FR060 10	
	V	Ø8xL12	40 FR080 20	
	~	Ø 6 x L 10	40 FR060 30	
	~	Ø8xL12	40 FR080 40	
	~	Ø 6 x L 10	40 FR060 50	
	V	Ø8xL12	40 FR080 60	
	~	Ø 6 x L 10	40 FR060 70	
and the second	V	Ø8xL10	40 FR080 80	
	~	Ø 10 x L 10	40 FR100 90	
	~	Ø 6 x L 10	40 FR061 20	
	~	Ø8xL12	40 FR081 30	
	~	Ø 10 x L 18	40 FR101 00	
	~	Ø 9/6 x 15	40 FR096 10	
The same of the sa	~	Ø 15/10 x L 15	40 FR151 10	
	~	*Kit 14 pieces	40 FR130 00	

		Shaft: Ø 6 mm	- Length: 40 mm		
Туре	mm	Ref.	Туре	mm	Ref.
	15 x 20 20 x 20 25 x 30	40 FR102 00 40 FR152 10 40 FR202 20 40 FR252 30 40 FR303 70	=	15 x 20	40 FR152 50
	20 x 30	40 FR202 40		30 x 20	40 FR302 60
Shaft: Ø 2	2,35 mm -	Length: 35 mm	Shaft: Ø	2,35 mm -	Length: 40 mm
Туре	mm	Ref.	Туре	mm	Ref.
	7 x 15	40 FR715 00	-	22 x 0,5	40 FR225 10
-	12/8 x 12	40 FR120 10		22 x 5	40 FR225 00





## Cylindrical rotary accessories

SERIES 9908 10 pieces

Shaft: Ø 3 mm						
mm	Туре	Ref.	mm	Туре	Ref.	
<u> </u>	Hard wood	99 08410 01		Hard wood	99 08416 01	
Ø 20 L 30	Soft wood	99 08411 01	Ø 10 L 20	Soft wood	99 08417 01	
230	Felt	99 08412 01	220	Felt	99 08418 01	
,	Hard wood	99 08413 01		Hard wood	99 08419 01	
Ø 15 L 25	Soft wood	99 08414 01	Ø 6 L 15	Soft wood	99 08420 01	
	Felt	99 08415 01	2.3	Felt	99 08421 01	



## Pointed rotary accessories

SERIES 9908 10 pieces

Shaft: Ø 3 mm							
mm	Туре	Ref.		mm	Туре	Ref.	
	Hard wood	99 08428 01			Hard wood	99 08434 01	
Ø 20 L 30	Soft wood	99 08429 01		Ø 13 L 20	Soft wood	99 08435 01	
	Felt	99 08430 01			Felt	99 08436 01	
	Hard wood	99 08431 01			Hard wood	99 08437 01	
Ø 10 L 30	Soft wood	99 08432 01		Ø 9 L 15	Soft wood	99 08438 01	
230	Felt	99 08433 01			Felt	99 08439 01	



## Spherical rotary accessories

SERIES 9908 10 pieces

		Shaft:	Ø 3 mm		
mm	Туре	Ref.	mm	Туре	Ref.
	Hard wood	99 08422 01		Hard wood	99 08425 01
Ø 15	Soft wood	99 08423 01	Ø 10	Soft wood	99 08426 01
	Felt	99 08424 01		Felt	99 08427 01

TOOLS

## Felt lapping rods

1 piece

	Shaft: Ø 3 mm
Dim. (mm)	Ref.
6 x 6 L 25/30	99 08478 10
8 x 8 L 25/30	99 08478 20
10 x 10 L 22/30	99 08478 30
12 x 12 L 35/45	99 08478 40
18 x 18 L 15/30	99 08478 50



## 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 piece	25
----------	----

	Shaft: Ø 2,35 mm	- Length: 40 mm		10 pieces
Туре	mm	Material	Ref.	
	Ø 21 x 2	Brass	40 BR210 00	
	Ø 21 x 1	Black silk	40 BR211 00	
<b>—</b> (*)	Ø 21 x 1	White silk	40 BR212 00	
	Ø 19 x 2	Brass	40 BR190 00	
	Ø 19 x 1	Black silk	40 BR191 00	
	Ø 19 x 1	White silk	40 BR192 00	
	Ø 12 x 6	Brass	40 BR123 00	
-	Ø 12 x 6	Black silk	40 BR121 00	
	Ø 12 x 6	White silk	40 BR122 00	
===	Ø 5,5 x 11 Ø 5,5 x 11	Brass White silk	40 BR052 00 40 BR051 00	



## Jet brushes

1 piece

Brass wire bottlebrush jet brushes						
Ø in mm	Ref.					
4	40 BR504 00					
5	40 BR505 00					
6	40 BR506 00					
8	40 BR508 00					
10	40 BR510 00					





## 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.

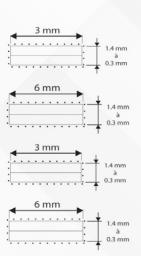
Chaft	Ø 3 mm				1 piece
Type	mm s mm	Grain	Unit	Ref.	
Туре	1,5	GIAIII	Offic	Nei.	
	5	60		44 LD211 00	
	1,5	60		44 LD212 00	
	3	60		44 LD213 00	
	5	60		44 LD214 00	
	1,5	60	Mesh	44 LD215 00	
	1,5	60 140		44 LD311 00 44 LD411 00	
	5	60 140		44 LD314 00 44 LD414 00	
	3	60 140		44 LD316 00 44 LD416 00	
	Ø 3	60 140		44 LD317 00 44 LD417 00	
	4	60 140		44 LD313 00 44 LD413 00	
	0,4	D76	Fepa	44 LD418 00	
on that	0,6	D76	Fepa	44 LD419 00	
	0,8	D76	Fepa	44 LD420 00	
and the second	12	D76	Fepa	44 LD421 00	
	5 20	D126	Fepa	44 LD422 00	

TOOLS

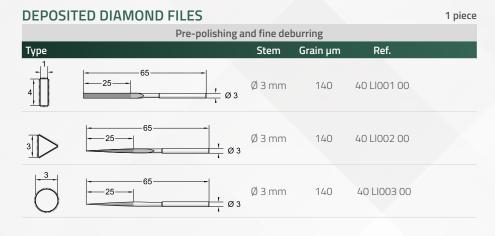
				Υ Υ	1 piece
Grain	Dim. (mm)	Stem	Ø in mm	Ref.	
320	X=175 - Y=40	Ø 3 mm	1	49 LD330 20	
500	X=175 - Y=40	Ø 3 mm	1	49 LD330 30	
220	X=175 - Y=50	Ø 3 mm	2,2	49 LD330 70	
220	X=175 - Y=50	Ø 3 mm	3	49 LD331 20	
140	X=1110 - Y=60	Ø 3 mm	3,5	49 LD331 60	
220	X=1110 - Y=60	Ø3 mm	3,5	49 LD311 20	
320	X=1110 - Y=60	Ø 3 mm	3,5	49 LD311 30	
220	X=200 - Y=70	Ø 3 mm	4	49 LD332 20	

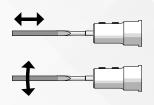
## Diamond files kit

				1 piec
omposition	Stem	Ref.		
2 pieces	Ø 3 mm	44 LD500 00		
Kit composit	ion	Detail	Grain µm	Qty.
/ <del>-</del>			200	1
• /	/ <del></del> T		400	1
Ø 3,0		<b>L</b> 72	600	1
		Т	200	1
		15	400	1
		<b>L</b> 72	600	1
		Т	200	1
		15	400	1
		<b>L</b> 56	600	1
		T	200	1
		15 	400	1
		<b>L</b> 56	600	1



## Diamond files for micromotors







## Diamond files

1 piece

		Grain 150 / Shaft	Ø 3 mm	
Туре	Form	Dim. (mm)	Lenght (mm)	Ref.
		6 x 1,5 x 30	110	49 LD422 00
		5 x 2 x 30	110	49 LD423 00
		Ø 3 x 30	110	49 LD424 00
		2,5 x 2,5 x 30	110	49 LD425 00
		3,5 x 30	110	49 LD426 00
\$		6 x 1 x 20	120	49 LD427 00
		2 x 2 x 20	120	49 LD428 00
		3 x 1,5 x 20	120	49 LD429 00
		3 x 20	120	49 LD430 00
Samuel Constitution of the		5 x 2 x 20	120	49 LD431 00
and the second		4 x 1,5 x 20	120	49 LD432 00
		4 x 2,5 x 20	120	49 LD433 00
		Ø 2 x 20	120	49 LD434 00
		5 x 5 x 1,5 x 20	120	49 LD435 00
		Ø 2,5 x 20	120	49 LD436 00
		Grain 200 / Shaft	Ø 3 mm	
		5,8 x 1,2 x 20	40	49 LD437 00
		3,2 x 1,4 x 20	40	49 LD438 00
		5 x 2 x 22	40	49 LD439 00
- Contract C		3,2 x 1,4 x 24	40	49 LD440 00
$\overline{}$		Ø 3 x 20	40	49 LD441 00
		Ø 3 x 30	40	49 LD442 00
	$\triangle$	2,5 x 25	40	49 LD443 00
		3,2 x 1,4 x 25	40	49 LD444 00
		3,2 x 1,4 x 25	40	49 LD445 00
		4 x 2 x 20	40	49 LD446 00
		4 x 1,2 x 28	55	49 LD447 00
		5 x 2 x 28	55	49 LD448 00
		Ø 3 x 34	55	49 LD449 00
		2,5 x 2,5 x 34	55	49 LD450 00

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.

BROWN

**GREEN** 

RED



		Grain 120	Grain 220	Grain 280
				10 pieces
		Shaft: Ø 3 mm - Leng	gth: 30 mm	
Туре	mm	Ref.	Ref.	Ref.
	Ø4L8	40 MC011 20	40 MC012 20	40 MC012 80
	Ø 6 L 10	40 MC021 20	40 MC022 20	40 MC022 80
	Ø 10 L 10	40 MC031 20	40 MC032 20	40 MC032 80
	Ø 12 L 16	40 MC041 20	40 MC042 20	40 MC042 80
		Shaft: Ø 6 mm - Leng	gth: 40 mm	
	Ø8L15	40 MC051 20	40 MC052 20	40 MC052 80
	Ø 12 L 20	40 MC061 20	40 MC062 20	40 MC062 80
	Ø 15 L 30	40 MC071 20	40 MC072 20	40 MC072 80
	Ø 20 L 20	40 MC081 20	40 MC082 20	40 MC082 80



## Felt polishing rings

10 pieces

Thickness: 4,5 mm				
Dimension	Réf.			
Ø 18	40 FR180 10			
Ø 30	40 FR300 10			
Ø 45	40 FR450 10			

## Felt polishing discs

#### **SELF-ADHESIVE - SERIES 99014**

10 pieces



#### **NON-ADHESIVE - SERIES 99114**

Thickness: 5 mm						
Туре	Ref.		Ø	Туре	Ref.	
med-hard	99 11423 10		33 mm	hard	99 11424 40	
hard	99 11424 10		F0	med-hard	99 11423 60	
med-hard	99 11423 20		50 111111	hard	99 11424 60	
hard	99 11424 20		6E mm	med-hard	99 11423 70	
med-hard	99 11423 30		05 111111	hard	99 11424 70	
hard	99 11424 30		70 mm	med-hard	99 11423 80	
med-hard	99 11423 40		/0111111	hard	99 11424 80	
	med-hard hard med-hard hard med-hard	med-hard 99 11423 10 hard 99 11424 10 med-hard 99 11423 20 hard 99 11424 20 med-hard 99 11423 30	Type         Ref.           med-hard         99 11423 10           hard         99 11424 10           med-hard         99 11423 20           hard         99 11424 20           med-hard         99 11423 30           hard         99 11424 30	Type         Ref.         Ø           med-hard         99 11423 10         33 mm           hard         99 11424 10         50 mm           med-hard         99 11423 20         65 mm           med-hard         99 11423 30         65 mm           hard         99 11424 30         78 mm	Type         Ref.         Ø         Type           med-hard         99 11423 10         33 mm         hard           hard         99 11424 10         50 mm         med-hard           med-hard         99 11423 20         hard         hard           med-hard         99 11424 20         65 mm         med-hard           hard         99 11423 30         med-hard         hard           hard         99 11424 30         78 mm         med-hard	

## Felt polishing pads

#### SQUARE 150 mm

3 pieces

	Self-adhesive		Non-adhesive			
Туре	Thickness	Ref.	Туре	Thickness	Ref.	
med-hard	1 mm	99 15434 60	med-hard	1 mm	99 15434 10	
med-hard	5 mm	99 15423 60	med-hard	5 mm	99 15423 10	
hard	5 mm	99 15424 60	hard	5 mm	99 15424 10	

#### SQUARE 200 mm

Self-adhesive				Non-	adhesive	
Туре	Thickness	Ref.		Туре	Thickness	Ref.
med-hard	1 mm	99 20434 60		med-hard	1 mm	99 20434 10
med-hard	5 mm	99 20423 60		med-hard	5 mm	99 20423 10
hard	5 mm	99 20424 60		hard	5 mm	99 20424 10







## 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		
Green	320	40 MF032 00		
Orange	400	40 MF040 00		
Pink	600	40 MF060 00		
Ochre	800	40 MF080 00		
Brown	1000	40 MF100 00		
Blue	1500	40 MF150 00		



## 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			
Brown	Coarse	40 MF303 00			
Brown	Medium	40 MF305 00			
Brown	Fine	40 MF307 00			
Green	No grain	40 MF300 00			



## Wooden lapping rods hard/soft

SERIES 9908 10 pieces

		·
	Hard	Soft
mm	Ref.	Ref.
3 x 3 x 150	99 08510 00	99 08610 00
4,5 x 4,5 x 150	99 08511 00	99 08611 00
6,5 x 6,5 x 150	99 08512 00	99 08612 00
3 x 7 x 150	99 08513 00	99 08613 00
8 x 12,5 x 150	99 08514 00	99 08614 00
8 x 19 x 150	99 08515 00	99 08615 00
Ø 3 x 150	99 08530 00	99 08630 00
Ø 4,5 x 150	99 08531 00	99 08631 00
Ø 6,5 x 150	99 08532 00	99 08632 00



## Rectangular rubber rods

1 piece

Grain	Dim. (mm)	Ref.
40	25 x 9,5 x 150	98 61041 00
90	25 x 9,5 x 150	98 61091 00
120	25 x 9,5 x 150	98 61121 00
240	25 x 9,5 x 150	98 61241 00





## Ceramic stones

1 piece

Dim (mm)	G	Colo	Standard	High resistance
Dim. (mm)	Grain 220	Color Dark brown	Ref.	Ref.
	300	Light brown	40 US361 00	
		0	40 US362 00	
0.5 v / v 100	400	Orange Black	40 US363 00	
0,5 x 4 x 100	600		40 US364 00	
	800	Blue	40 US365 00	
	1000	White	40 US366 00	
	1200	Red	40 US367 00	1011511100
	220	Dark brown	40 US311 00	40 US411 00
	300	Light brown	40 US312 00	
	400	Orange	40 US313 00	
1 x 4 x 100	600	Black	40 US314 00	
	800	Blue	40 US315 00	40 US415 00
	1000	White	40 US316 00	
	1200	Red	40 US317 00	40 US417 00
	220	Dark brown	40 US321 00	40 US421 00
1 x 6 x 100	300	Light brown	40 US322 00	
	400	Orange	40 US323 00	
	600	Black	40 US324 00	
	800	Blue	40 US325 00	40 US425 00
	1000	White	40 US326 00	
	1200	Red	40 US327 00	40 US427 00
	220	Dark brown	40 US331 00	40 US431 00
	300	Light brown	40 US332 00	
	400	Orange	40 US333 00	
1 x 10 x 100	600	Black	40 US334 00	
	800	Blue	40 US335 00	40 US435 00
	1 000	White	40 US336 00	
	1 200	Red	40 US337 00	40 US437 00
	220	Grey	40 US341 00	
	300	Light brown	40 US342 00	
	400	Orange	40 US343 00	
Ø 3 x 50	600	Black	40 US344 00	
	800	Blue	40 US345 00	
	1000	White	40 US346 00	
	1200	Red	40 US347 00	
	220	Grey	40 US351 00	
	300	Light brown	40 US352 00	
Ø 2 v 100	400	Orange	40 US353 00	
Ø 3 x 100	600	Black	40 US354 00	
	800	Blue	40 US355 00	
	1000	White	40 US356 00	

## Ceramic brushes

Enable careful removal of errors without damage to reaming.

Shaft: Ø 3 mm					
Туре	Dim. (mm)	Ref.			
Cross-Hole	Ø 3,5 x 50 x 120	40 BR030 00			
Cross-Hole	Ø 5 x 50 x 120	40 BR057 00			
White grain 1000	Ø 5 x 20	40 BR055 00			
Red grain 1000	Ø 5 x 20	40 BR056 00			



## Sulphur stones

#### **SERIES 570**

JEINIES 570			12 pieces
Dim. (mm)	Grain	Ref.	
	120	98 57121 00	
	150	98 57151 00	
	180	98 57181 00	
6 x 6 x 150	220	98 57221 00	
	320	98 57321 00	
	400	98 57401 00	
	600	98 57601 00	
	120	98 57122 00	
	150	98 57152 00	
	180	98 57182 00	
10 x 10 x 150	220	98 57222 00	
	320	98 57322 00	
	400	98 57402 00	
	600	98 57602 00	
	180	98 57183 00	
	220	98 57223 00	
13 x 13 x 150	320	98 57323 00	
	400	98 57403 00	



SERIES 560

-					
•	n	ρ	۲	ρ	5

Dim. (mm)	Grain	Ref.	
	600	98 56601 00	
6 x 6 x 150	800	98 56801 00	
	1 000	98 56001 00	
	600	98 56602 00	
10 x 10 x 150	800	98 56802 00	
	1 000	98 56002 00	
	600	98 56603 00	
13 x 13 x 150	800	98 56803 00	
	1 000	98 56003 00	





#### **Abrasive stones**

#### SERIES 510 - SIC

Abrasive stones with silicon carbide based soft bonding material, for finishing treated steel tools.

	ıe	

			2 picces
Dim. (mm)	Grain	Ref.	
	240	98 51241 00	
6 x 6 x 150	320	98 51321 00	
0 X 0 X 130	400	98 51401 00	
	600	98 51601 00	
	240	98 51243 00	
3 v 13 v 1EO	320	98 51323 00	
3 x 13 x 150	400	98 51403 00	
	600	98 51603 00	
	240	98 51242 00	
6 x 13 x 150	320	98 51322 00	
0 X 13 X 130	400	98 51402 00	
	600	98 51602 00	
	240	98 51244 00	
13 x 13 x 150	320	98 51324 00	
טפו גפו גפו	400	98 51404 00	
	600	98 51604 00	

#### SERIES 520 - AL<sub>2</sub>O<sub>3</sub>

Resin and aluminium oxide based abrasive stones, recommended for machining and finishing regular and irregular shaped tools following electro-erosion.







TOOLS

### **Abrasive stones**

## SERIES 530 - AL<sub>2</sub>O<sub>3</sub>

Resin and aluminium oxide based abrasive stones, recommended for soft and medium-hard materials.

12 pieces

			12 pieces
Dim. (mm)	Grain	Ref.	
	220	98 53221 00	
6 x 6 x 150	320	98 53321 00	
0 X 0 X 150	400	98 53401 00	
	600	98 53601 00	
	220	98 53222 00	
10 x 10 x 150	320	98 53322 00	
10 x 10 x 150	400	98 53402 00	
	600	98 53602 00	
	220	98 53223 00	
3 x 13 x 150	320	98 53323 00	
3 1 1 3 1 1 3 0	400	98 53403 00	
	600	98 53603 00	
	220	98 53224 00	
6 x 13 x 150	320	98 53324 00	
0 x 13 x 130	400	98 53404 00	
	600	98 53604 00	
	220	98 53225 00	
4 x 4 x 100	320	98 53325 00	
4 7 4 7 100	400	98 53405 00	
	600	98 53605 00	



1 piece

Dim. (mm)	Shape	Grain	Ref.	
100 x 10	$\triangle$	Medium	98 D1015 00	
100 x 10		Medium	98 D1025 00	
100 x 8 x 6		Fine	98 D1032 00	
100 x 10		Big	98 D1047 00	
100 x 6		Medium	98 D1055 00	
Kit 5 pieces (1 piece of each ref. ab	ove)		98 D1000 00	

## Honing oil

1 piece

Qty.	Ref.
500 cc.	98 70000 00

## Stone-holders

1 piece

Dim. (mm)	Qty.	Ref.
1 x 4	1	40 US099 00
1 x 6	1	40 US098 00
1 x 10	1	40 US097 00
Ø 3 mm	1	40 US096 00
Lot of 3 pieces (1 x 4, 1 x 6, 1 x 10)	3 pieces	40 US090 00







## Abrasive stone kit n°1

#### SERIES 510

Composition		Re	f.	
14 pieces		98 110	00 00	
KIT COMPONENTS				
Dim. (mm)	Туре	Grain	Qty.	Ref.
	510	240	2	98 51241 00
6 x 6 x 150	510	320	2	98 51321 00
	510	400	2	98 51401 00
	510	240	2	98 51242 00
	510	320	2	98 51322 00
6 x 13 x 150	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		Re	f.	
14 pieces		98 210	00 00	
KIT COMPONENTS				
Dim. (mm)	Туре	Grain	Qty.	Ref.
	530	220	2	98 53221 00
6 x 6 x 150	530	320	2	98 53321 00
	530	400	2	98 53401 00
	530	220	2	98 53224 00
C v 12 v 150	530	320	2	98 53324 00
6 x 13 x 150	530	400	2	98 53404 00
	530	600	2	98 53604 00

## Abrasive stone kit n°4

#### **SERIES 520-550**

Composition		F	lef.	
12 pieces		98 41	000 00	
KIT COMPONENTS				
Dim. (mm)	Туре	Grain	Qty.	Ref.
	550	90	1	98 55091 00
	520	120	1	98 52122 00
6 x 6 x 150	520	180	1	98 52182 00
	550	220	1	98 55221 00
	520	320	1	98 55321 00
	550	600	1	98 55601 00
	550	90	1	98 55093 00
	520	120	1	98 52121 00
3 x 6 x 150	520	180	1	98 52181 00
0.0 1 0 0 7 0 7 0	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 monocrist	aline	
Туре	μm	Ref.	
025 313	1/4	03 97313 00	
1 313	1	03 01313 00	
2 313	2	03 02313 00	
3 313	3	03 03313 00	
6 3 1 3	6	03 06313 00	
8 3 1 3	8	03 08313 00	
10 313	10	03 10313 00	
14 313	14	03 14313 00	
25 313	25	03 25313 00	
40 313	40	03 40313 00	



#### SERIES 320 P - 75 g

1 piece

Alcohol based polycristaline			
Туре	μm	Ref.	
025 323P	1/4	03 97323 00	
1 323P	1	03 01323 00	
2 323P	2	03 02323 00	
3 323P	3	03 03323 00	
6 323P	6	03 06323 00	
8 323P	8	03 08323 00	
10 323P	10	03 10323 00	
14 323P	14	03 14323 00	
25 323P	25	03 25323 00	





## 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

Туре	μm	Ref.
M.M.540	1/10	02 MM548 10
M.M.540	1/4	02 MM547 10
M.M.540	3/4	02 MM546 10
M.M.540	1	02 MM545 10
M.M.540	2	02 MM544 10
M.M.540	3	02 MM543 10
M.M.540	6	02 MM542 10
M.M.540	9	02 MM541 10
M.M.530	10	02 MM533 10
M.M.530	15	02 MM532 10
M.M.530	30	02 MM531 10
M.M.530	45	02 MM530 10

#### SERIES M.M.30/40 - 100 g

1 piece

Suitable for polishing large areas		
Туре	μm	Ref.
M.M.40	3/4	02 MM046 00
M.M.40	1	02 MM045 00
M.M.40	2	02 MM044 00
M.M.40	3	02 MM043 00
M.M.40	6	02 MM042 00
M.M.40	9	02 MM041 00
M.M.30	10	02 MM033 00
M.M.30	15	02 MM032 00
M.M.30	30	02 MM031 00
M.M.30	45	02 MM030 00

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 the 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  $\mu$ m. Does not contain water, protects polished surfaces from corrosion. Cleaning is done with water + 742 detergent or with a solvent such as Stanol.

High vielding abrasives for polishing hard and extra-hard materials.

1 piece

Fluidity enables use without lubricating fluid.			
Туре	μm	Ref.	
1 213	1	01 01213 00	
3 213	3	01 03213 00	
6 213	6	01 06213 00	
8 213	8	01 08213 00	
14 213	14	01 14213 00	
25 213	25	01 25213 00	
40 213	40	01 40213 00	
60 213	60	01 60213 00	
90 213	90	01 90213 00	

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 polishir	ng possible.
Туре	μm	Ref.
010 103	1/10	01 99103 00
025 102	1/4	01 97102 00
025 103	1/4	01 97103 00
1 103	1	01 01103 00
1 105	1	01 01105 00
2 103	2	01 02103 00
2 105	2	01 02105 00
3 102	3	01 03102 00
3 103	3	01 03103 00
3 105	3	01 03105 00
6 101	6	01 06101 00
6 102	6	01 06102 00
6 103	6	01 06103 00
6 105	6	01 06105 00
8 102	8	01 08102 00
8 103	8	01 08103 00
8 105	8	01 08105 00
14 101	14	01 14101 00
14 102	14	01 14102 00
14 103	14	01 14103 00
14 105	14	01 14105 00

5% discount from 3 products of the same reference



#### Can be used on hot surfaces up to 170°C

#### 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.

1 piece

	Can be used at high tempera	ture	
Туре	μm	Ref.	
1.205S	1	01 01205S 00	
3.205S	3	01 032055 00	
6.205S	6	01 062055 00	
8.2055	8	01 082055 00	
14.205S	14	01 14205S 00	

5% discount from 3 products of the same reference

#### 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.



1 piece Economical and versatile

Universal bonding paste.			
Туре	μm	Ref.	
1 MS	1	01 010MS 00	
3 MS	3	01 030MS 00	
6 MS	6	01 060MS 00	
8 MS	8	01 080MS 00	
14 MS	14	01 140MS 00	
25 MS	25	01 250MS 00	
45 MS	45	01 450MS 00	
60 MS	60	01 600MS 00	
90 MS	90	01 900MS 00	

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 oilbased fluid, contains no water, protects polished surfaces from corrosion. Cleaning is done with water + detergent 742 or with a solvent like Stanol.

1 piece

		10 g	20 g
Туре	μm	Ref.	Ref.
DIATOOL® BX1	1	01 01DBX 00	01 01DBX 20
DIATOOL® BX3	3	01 03DBX 00	01 03DBX 20
DIATOOL® BX6	6	01 06DBX 00	01 06DBX 20
DIATOOL® BX8	8	01 08DBX 00	01 08DBX 20
DIATOOL® BX14	14	01 14DBX 00	01 14DBX 20
DIATOOL® BX25	25	01 25DBX 00	01 25DBX 20
DIATOOL® BX40	40	01 40DBX 00	01 40DBX 20
DIATOOL® BX60	60	01 60DBX 00	01 60DBX 20

5% discount from 3 products of the same reference



High pressure Available in 10 and 20 g

## Selection of a BIO DIAMANT® abrasive paste

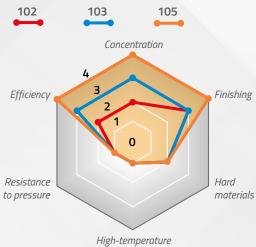
Depending on your criteria, the diagrams below will help you to choose the most suitable diamond paste.

#### **BIO DIAMANT® PASTES SERIE 210**

# Efficiency Resistance to pressure Concentration Finishing Hard materials

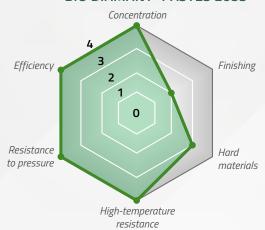
High-temperature resistance

#### **BIO DIAMANT® PASTES SERIE 100**

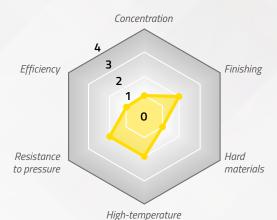


High-temperatu resistance

#### **BIO DIAMANT® PASTES 205S**

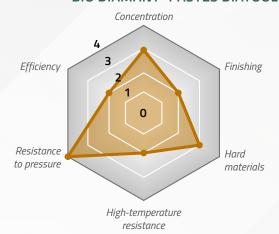


#### **BIO DIAMANT® PASTES POLILAM MS**



resistance

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

Туре	Packaging	Ref.	
M.M.705	1 litre	07 MM705 30	
M.M.705	Pulmatic 350 cc	07 MM705 50	

#### 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

Туре	Packaging	Ref.	
M.M.712	1 litre	07 MM712 30	
M.M.712	Pulmatic 350 cc	07 MM712 50	



# 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®

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