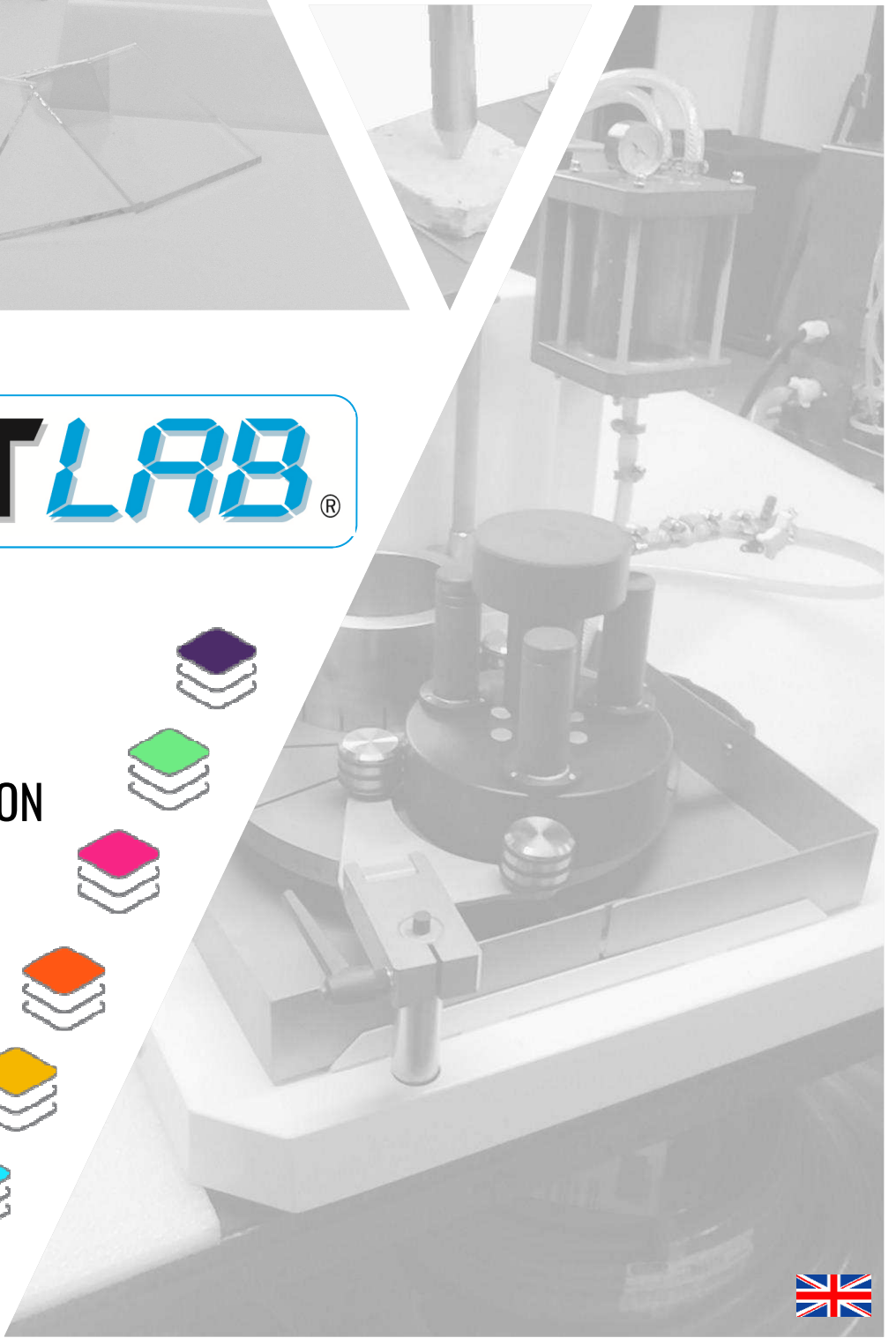


BROT LAB®

PREPARATION
GEOLOGICAL
SAMPLES



EQUIPMENT FOR THE PREPARATION OF GEOLOGICAL SAMPLES

For more than 60 years, **BROT Technologies Group** has been designing and manufacturing a complete range of equipment for the preparation of geological samples.

This equipment is used in geology laboratories across a wide spectrum of sectors: mining, oil and gas and research centres...

*Machines developed by **BROT Technologies / BROT LAB** are also used in many universities throughout the world, as reference equipment.*

*The various members of the range consist of core drills, saws, lapping machines, grinding machines, polishers, bonding presses and other equipment used in the preparation of **thin sections** for geology, mineralogy, soil science, petrology and archaeology.*

BROT LAB also offer a range of consumables and accessories for its machines: diamond tools, diamond paste, abrasives, adhesives, coating resins...

SUMMARY

Lapping and grinding process for thin sections	6/7
Lapping process for thin section	8/9
The mini laboratory	10
Laboratory configuration for plugs	11

CUTTING / CORING

12

1.02.02.1D	Bench cutting machine	12
1.02.02.2D	Two-disc cutting machine	12
1.02.03	Two-disc cutting machine	12
1.02.04	Cutting & slabbing saw	13
1.02.05	Bench cutting machine	13
1.02.08	Core slabbing machine	13
1.02.15	Slicing machine	13
1.02.23	Compact slicing machine	14
1.02.24	Compact cutting machine	14
1.23.03	Cutting & Slicing machine Rectilame	14
1.22.10	Floor standing plugging machine	15
1.22.11	Floor standing plugging machine	15

EMBEDDING

16

1.04.05	Vacuum embedding and impregnation machine	16
1.04.06	Impregnation tank for Pedology	16
1.04.09	Vacuum & pressure embedding machine	16

BONDING

17

1.04.00	Bonding set	17
1.04.02	Heating bonding press	17
1.04.04	Bonding press for Pedology	17

SUMMARY (CONTINUED)

GRINDING 18

1.03.12G	Multiplate grinder for thin sections	18
1.03.12P	Multiplate grinder for thin sections	18
1.03.13	Grinding machine for thin sections	18
1.03.23	Compact grinding machine for thin sections	18
1.03.27	Compact Grinding machine for plugs	19
1.23.01	Cutting & grinding machine Rectilame	19
1.23.02	Slicing & grinding machine Rectilame	19

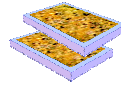
LAPPING 20

1.03.16	Lapping machine for thin sections	20
1.03.26	Bench lapping machine for thin sections	20

POLISHING 21

1.03.06	Multi turnable polishing machine	21
1.03.17	Automatic polishing machine	21
1.03.20	Bench polishing machine	21
	Consumables & Accessories	22
	Notes	23

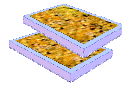
LAPPING & GRINDING PROCESS FOR THIN SECTIONS



1		Cutting of sample	<i>Cutting saw</i>	1.02.04
2		Resin impregnation of sample, if necessary	<i>Embedding machine</i>	1.04.05 / 1.04.09
3		Trimming of sample	<i>Polishing machine</i>	1.03.06 / 1.03.20
4		Lapping of sample	<i>Lapping machine</i>	1.03.16
5		Flat thinning and lapping of glass sample holder	<i>Lapping machine</i>	1.03.16
6		Bonding of sample on glass sample-holder	<i>Bonding set</i>	1.04.00
7		Slicing at 100 - 500 μ	<i>Slicing machine</i>	1.02.15 / 1.02.23
8		Grinding at 30 - 35 μ	<i>Grinding machine</i>	1.03.12
9		Final polishing	<i>Polishing machine</i>	1.03.17 / 1.03.20

LABORATORY FOR THE PRODUCTION OF THIN SECTIONS BY LAPPING & GRINDING

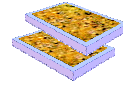
The most productive configuration for the making of thin sections of the highest quality


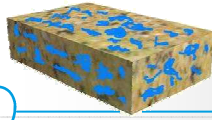
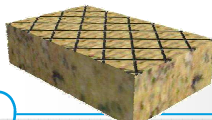

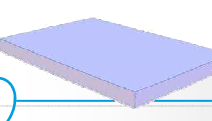
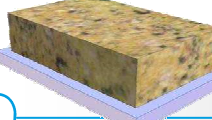
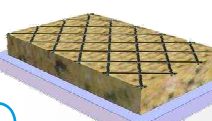
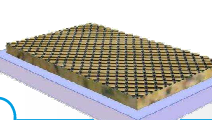
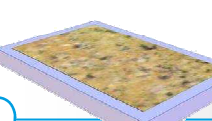


OPERATION	MACHINE	DESCRIPTION	REF..
Cutting	Cutting saw	Cutting saw for the cutting of rock samples.	1.02.04
Consolidation	Embedding machine	Vacuum / vacuum & pressure embedding machine	1.04.05/ 1.04.09
Trimming	Polishing turntable	Two-stand turntable with variable speed	1.03.06
Lapping	Lapping machine	Machine for the lapping of samples and glass sample holders, and for the final levelling of thin sections.	1.03.16
Bonding	Bonding set	Full bonding set for the bonding of samples on glass sample holders.	1.04.00
Levelling	Slicing machine	Slicing at 100 μ of samples bonded on their glass sample holders.	1.02.15
Grinding	Multiplate grinding machine	Grinding machine for the simultaneous work of up to 20 sections.	1.03.12
Final polishing	Polishing machine	Polishing machine for thin and polished sections	1.03.17

This laboratory can produce large quantities of thin sections per day with the highest standard of quality.

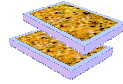
LAPPING PROCESS FOR THIN SECTIONS



1		Cutting of sample	<i>Cutting saw</i>	1.02.04
2		Resin impregnation of sample, if necessary	<i>Embedding machine</i>	1.04.05 / 1.04.09
3		Trimming of sample	<i>Polishing machine</i>	1.03.06 / 1.03.20
4		Lapping of sample	<i>Lapping machine</i>	1.03.16
5		Flat thinning of glass sample holder	<i>Lapping machine</i>	1.03.16
6		Bonding of sample on glass sample holder	<i>Bonding set</i>	1.04.00
7		Slicing or precise slicing	<i>Slicing machine</i>	1.02.15 / 1.02.23
8		Lapping at 30 μ	<i>Lapping machine</i>	1.03.16
9		Final polishing	<i>Polishing machine</i>	1.03.17

LABORATORY FOR THE PRODUCTION OF THIN SECTIONS BY LAPPING

Standard configuration

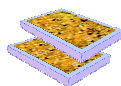


OPERATION	MACHINE	DESCRIPTION	REF.
Cutting	Cutting saw	Cutting saw for the cutting of rock samples	1.02.04
Impregnation	Embedding machine	Vacuum / vacuum & pressure embedding machine	1.04.05/ 1.04.09
Trimming	Polishing turntable	Two-stand turntable with variable speed	1.03.06
Lapping	Lapping machine	Machine for the lapping of samples and glass sample holders, and for the final leveling of thin sections.	1.03.16
Bonding	Bonding set	Full bonding set for the bonding of samples on glass sample holders.	1.04.00
Slicing	Slicing machine	Cutting machine allowing the precise levelling at 100 μ of samples bonded on their glass sample holders.	1.02.15
Final polishing	Polishing machine	Polishing machine for thin and polished sections,	1.03.17

This laboratory can produce medium quantities of thin sections per day with excellent quality.

MINI LABORATORY FOR THE PRODUCTION OF THIN SECTIONS

Perfect configuration for small run productions



OPERATION	MACHINE	DESCRIPTION	REF.
Cutting	Compact cutting machine	Bench cutting machine, specially designed for the cutting of plugs and small samples.	1.02.24
Resin impregnation	Embedding machine	Embedding machine with heating plate and vacuum pump.	1.04.05
Trimming	Bench polishing machine	Variable speed machine for the trimming of samples.	1.03.20
Bonding	Bonding set	Full bonding set for the bonding of samples on glass sample holders.	1.04.00
Slicing and grinding	Slicing-grinding machine Rectilame	Two-station (slicing and grinding) compact machine for the preparation of thin sections in small quantities.	1.23.02
Grinding	Compact grinding machine	Compact bench machine for the grinding of thin sections.	1.03.23

Light laboratory for the unitary production of thin sections can become mobile when installed in an appropriate vehicle.

LABORATORY CONFIGURATION FOR PLUGS



Option 1

Cutting of core samples and making of plugs with pre-determined lengths

OPERATION	MACHINE	DESCRIPTION	REF.
Cutting	Cutting saw	Machine for the perpendicular or longitudinal cutting of rock samples.	1.02.04
Plugging	Plugging machine	Machine for the coring of plugs from 1 to 4 inches in diameter, perpendicularly or longitudinally, in up to 1m long core samples.	1.22.10
Cutting	Cutting saw	Two-disc machine for the cutting of plugs with parallel sides.	1.02.02

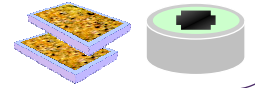
Option 2

Cutting of core samples and making of plugs with variable lengths

OPERATION	MACHINE	DESCRIPTION	REF.
Cutting	Cutting saw	Machine for the perpendicular or longitudinal cutting of rock samples.	1.02.04
Plugging	Plugging machine	Machine for the coring of plugs from 1 to 4 inches in diameter, perpendicularly or longitudinally, in up to 1m long core samples.	1.22.10
Cutting	Cutting saw	Machine for the cutting of plugs and rock samples.	1.02.24
Grinding	Grinding machine for plugs	Bench machine for the grinding of the two faces of small cylindrical samples (plugs).	1.03.27



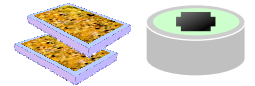
1.02.02.1D



Bench cutting machine

Single disc, bench model cutting machine for the cutting of samples.
Maximum blade size 305 mm.
Ref. 1.02.02.1D: Manual feed. (picture 1)
Ref. 1.02.02.1D1: Automatic feed through main water pressure. (picture 1)
Ref. 1.02.02.1D2: Machine on base cabinet, automatic feed with hydraulic unit, cooling by recycling. (picture 2)

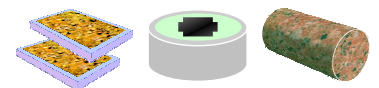
1.02.02.2D



Two disc cutting machine

Two-disc cutting machine for the cutting of samples.
Simultaneous cutting of two perfectly parallel sides.
Ref. 1.02.02.2D: Manual feed. (picture 1).
Ref. 1.02.02.2D1: Automatic feed through main water pressure. (picture 1)
Ref. 1.02.02.2D2: Machine on base cabinet, automatic feed with hydraulic unit, cooling by recycling. (picture 2)

1.02.03



Two disc cutting machine

Two-disc cutting machine for the dry cutting of samples $\varnothing 40$ lg80mm
Simultaneous cutting of two perfectly parallel sides.
Ref. 1.02.03.2D: Manual feed. (picture 1).
Ref. 1.02.03.2D1: Automatic feed through main water pressure. (picture 1)

Equipment used in metal-
lography

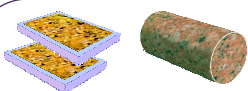
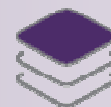


Equipment for the production of thin
sections



Equipment for plugs

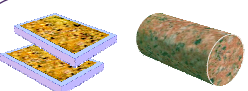
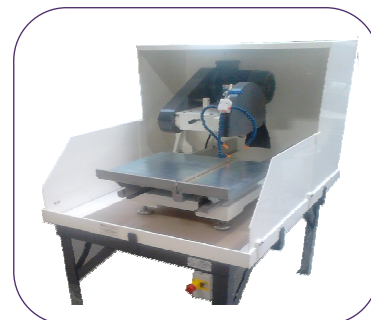




1.02.04

Cutting & slabbing saw

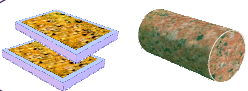
On stand machine.
For all materials (rocks, core,...).
Uses diamond blades Ø 300 to 500 mm.



1.02.05

Bench cutting machine

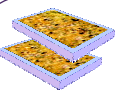
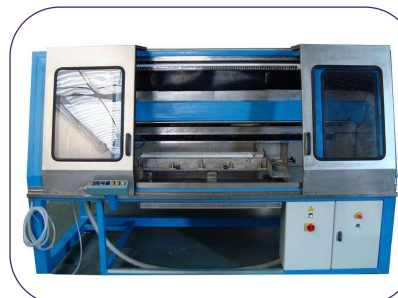
Bench machine.
For all materials (rocks, core,...).
Uses diamond blades Ø 200 mm.



1.02.08

Core slabbing machine

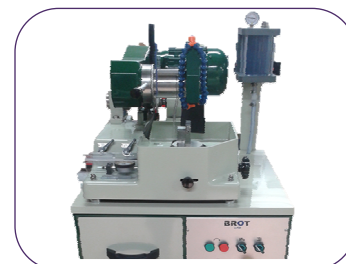
Machine enabling either longitudinal or perpendicular cutting
of core samples, up to 1m in length and Ø 134 mm.
Excellent surface finish.



1.02.15

Slicing machine

For the precise slicing of samples (down to 100 µ)
on their sample holder, before lapping.



Equipment used in met-
tallography



Equipment for the production of thin
sections

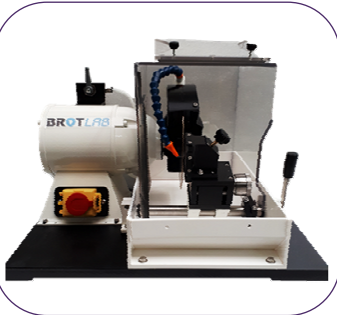
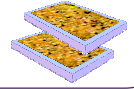


Equipment for plugs





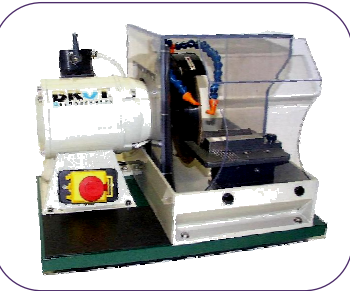
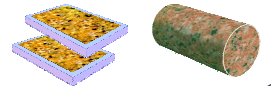
1.02.23



Compact slicing machine

Bench machine for the cutting of samples bonded on their glass sample holder. Levelling down to 150 μ approx.

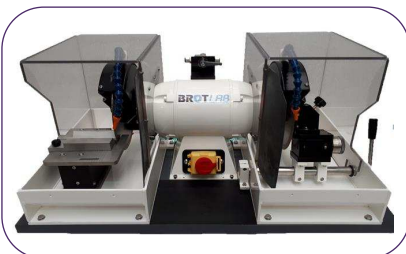
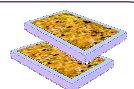
1.02.24



Compact cutting machine

Bench cutting machine, specially designed for the cutting of plugs, small samples and chips for thin sections.

1.23.03



Cutting & Slicing machine Rectilame

Two-station compact machine for the preparation of mineralogical samples. The two stations (cutting and levelling) are equipped with diamond tools.

Equipment used in metallography

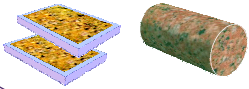


Equipment for the production of thin sections



Equipment for plugs

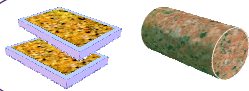




1.22.10

Floor standing plugging machine

Machine for the plugging of samples from Ø 1 to 4 inches, perpendicularly or longitudinally, in up to 1m long core samples.



1.22.11

Floor standing plugging ma-

Machine for the plugging of samples from Ø 4 to 100mm, in blocks of 300x300x300mm.



... and the Rectilames 1.23.01 and 1.23.02 (see p19)

Equipment used in metallography



Equipment for the production of thin sections

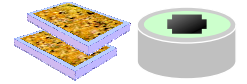


Equipment for plugs





1.04.05

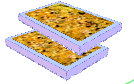


Vacuum coating and embedding machine



Machine equipped with a vacuum pump, designed for the impregnation of important quantities of resin.
Vacuum proof tank for the simultaneous impregnation of a minimum of two samples of 600 x 200 x 250 mm.

1.04.06

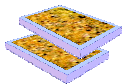


Embedding tank for Pedology



Machine equipped with a vacuum pump, designed for the impregnation of important quantities of resin.
Vacuum proof tank for the simultaneous impregnation of a minimum of two samples of 600 x 200 x 250 mm.

1.04.09



Vacuum & pressure embedding machine



Specially designed for the simultaneous embedding of several porous samples.
Compact machine including vacuum pump.
Work in hot environment (80°C).
Vacuum value: 10^{-2} bar.
Pressure value: 20 bar.
Maximum capacity: 1.5L of resin.

Equipment used in metallography

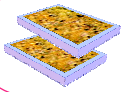


Equipment for the production of thin sections



Equipment for plugs

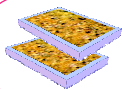




1.04.00

Bonding set

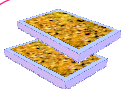
Full set for the bonding of thin sections, including the bonding press (1.04.02), one ultrasonic cleaner, one pre-heating plate, one lighting magnifier, one thickness measuring set, one precision electronic scale, and the first run of consumable products.



1.04.02

Heating bonding press

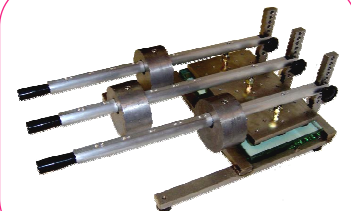
Perfect bonding of samples on their glass, thanks to a constant pressure and a precise temperature of polymerisation.



1.04.04

Bonding press for Pedology

Simultaneous bonding of three samples of 140 x 68 mm. Understressing bonding, with a regular load distribution of 100 to 300 gr/cm²



Equipment used in metallography



Equipment for the production of thin sections

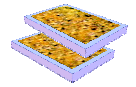


Equipment for plugs





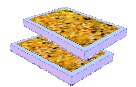
1.03.12G



Multiplate grinder for thin sections

Automatic preparation of 1 to 20 thin sections simultaneously, with a very fine surface finish, due to new generation of grinding wheels.
Specially designed for [geology](#).
Recycling tank with pump for water or oil included.

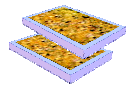
1.03.12P



Multiplate grinder for thin sections

Automatic preparation of 1 to 3 thin sections 140x68 simultaneously, with a very fine surface finish, due to new generation of grinding wheels.
Specially designed for [pedology](#).
Lubrication system with special lubricant included (non aqueous).

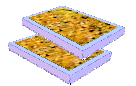
1.03.13



Grinding machine for thin sections

Machine for the preparation of thin sections (1 by 1).
Manual feed and permanent control of the thickness by a reflex device with polarised light (option).

1.03.23



Compact grinding machine for thin sections

Compact bench machine for the grinding of thin sections.
Sample holder for samples of 30x45 and 45x60 mm.
Adjustment by micrometer.

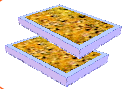
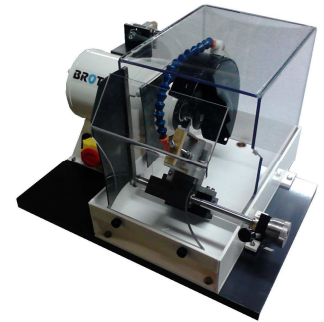




1.03.27

Compact grinding machine for plugs

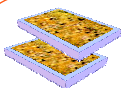
Compact bench machine for the grinding of the two faces of plugs.
Sample holder for cylindrical samples.
Adjustment by micrometer.



1.23.01

Cutting & grinding machine Rectilame

Two-station compact machine for the preparation of thin sections in small quantities.
The two stations (cutting and grinding) are equipped with diamond tools.



1.23.02

Slicing & grinding machine Rectilame

Two-station compact machine for the preparation of mineralogical samples.
The two stations (levelling and grinding) are equipped with diamond tools



Equipment used in metallography



Equipment for the production of thin sections

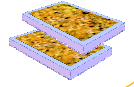


Equipment for plugs





1.03.16

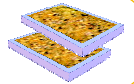


Lapping machine for thin sections



Machine for the lapping of samples and glass sample holders, and for the final lapping of thin sections. Comes with a sample holder for up to 12 sections, a control device, an automatic straightening system for the plate, a thickness measuring set and a first run set of consumables.
20 years of guarantee for the lapping plate.
 The best value for money in its range, for an equipment combining simplicity and efficiency.

1.03.26



Bench lapping machine for thin sections



Bench machine for the lapping of samples and glass sample holders, and for the final lapping of thin sections. Comes with a sample holder for up to 6 sections, a control device, an automatic straightening system for the plate. The best value for money in its range, for an equipment combining simplicity and efficiency.

Equipment used in metallography

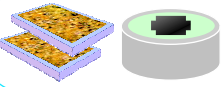


Equipment for the production of thin sections



Equipment for plugs

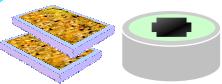




1.03.06

Multi turntable polishing machine

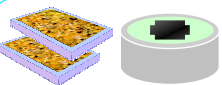
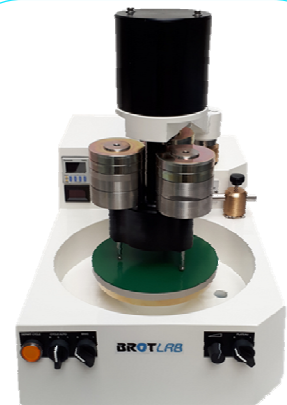
Two-stand turntable, with variable speed, one or two motors.
Plate Ø 200 to 350 mm.
Can be single-stand.



1.03.17

Automatic polishing machine

Three or five sample holders, for the polishing of one to five samples simultaneously.
Very high quality polishing and perfect flatness.
Comes in standard with its plate and a set of consumables.



1.03.20

Bench polishing machine

Simple and robust turntable for manual polishing.
Variable speed.
Plate up to Ø 250 mm.



Equipment used in metallography

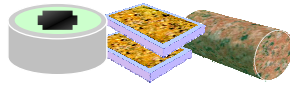


Equipment for the production of thin sections



Equipment for plugs





Cutting

Diamond blades for miscellaneous rocks
Diamond blades for hard rocks
Boron nitride blades

Grinding

Diamond wheels
Temporary cements / adhesives
Additives
Lubricants
Degreasing products

Embedding & Impregnation

Cold process embedding resins
Glass sample holders for pedology
Temporary bonding products
Permanent bonding products

Thin sections

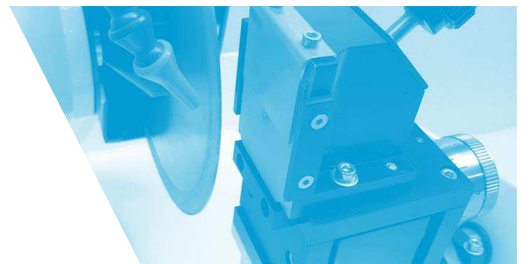
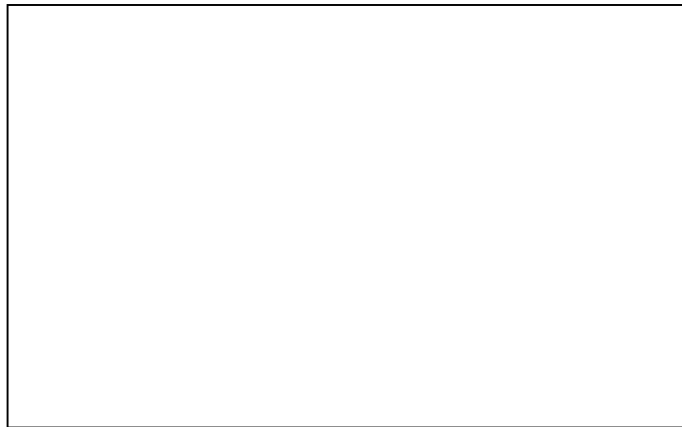
Glass sample holders for geology
Glass sample holders for pedology
Temporary bonding products
Permanent bonding products

Polishing

Adhesive discs
Non-adhesive discs
Non-adhesive sheets
Micro-abrasives
Diamond polishing discs
Polishing cloths
Diamond pastes
Diamond spray
Sprays and gels
Lubricants
Free abrasives
Polishing plates
Rubber discs...
Electronic scale, ultrasonic cleaner, magnifying light,
pre-heating plate, vacuum pump, thickness measuring
set, recycling tank, cutting guide, vice, adjustable
clamping device, bracket,...

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