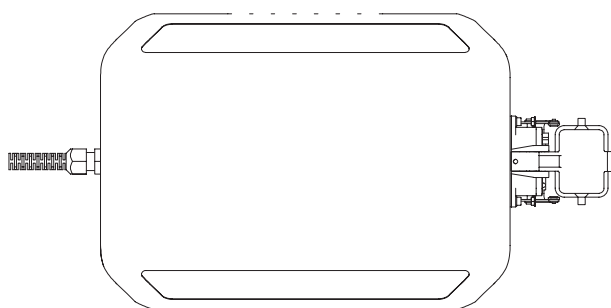
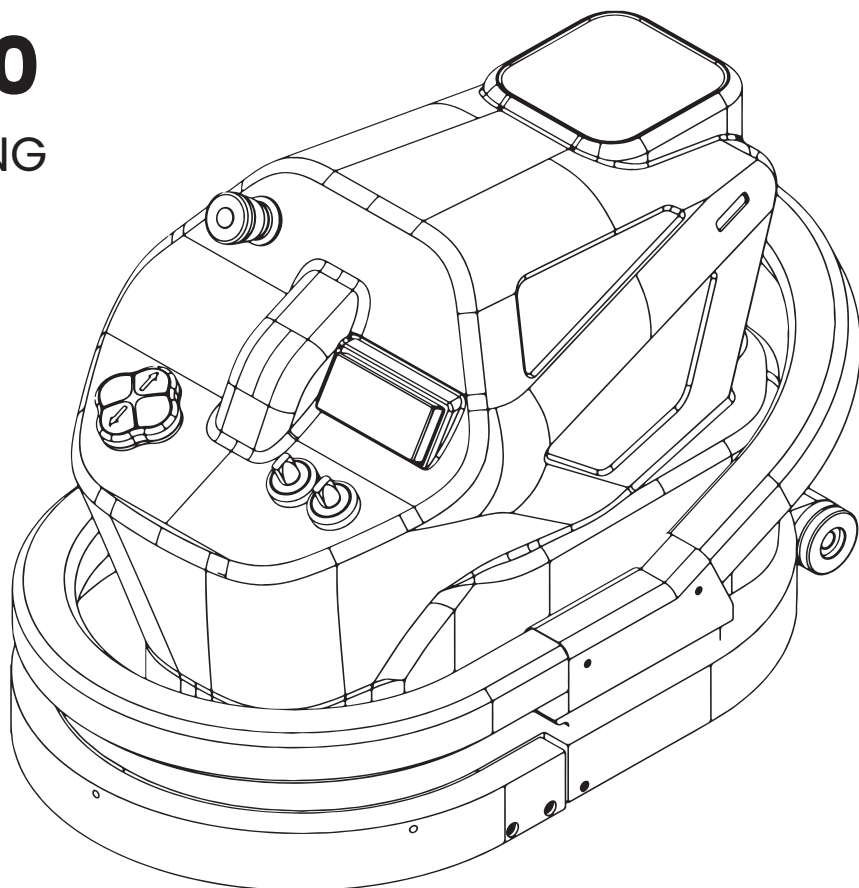


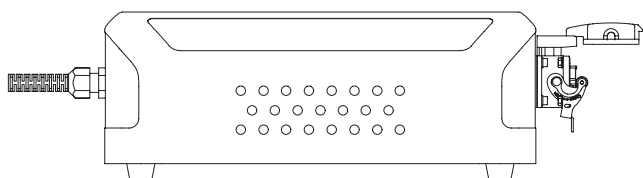
MASTER 5000

PORTABLE CONTOURING
MACHINE



MEM 5000

SAFETY ELECTRICAL
CONVERSION UNIT



INSTRUCTIONS FOR USE AND MANTEINANCE

Dear Customer,

Thank you very much for the trust you have shown in us by buying our MASTER 5000
We would like to provide you
with some information as well as some advice about your new machine. All our machines,
electrical conversion unit, etc, are designed and built according to EC norms and regulations,
they are made to function perfectly and to last without causing you any problems;
the quality is unsurpassable and all checks and controls are carried out with the utmost
care. MASTER 5000 is the result of both years of experience and technological innovations
resulting in the creation of this highly professional product. This machine can achieve a
high degree of productivity and quality which are up to the same standard as that of larger
machines. Please use the instruction leaflet carefully and accurately to ensure excellent
results. However, if for any reason you encounter difficulties, both our sales office and our
technical assistance force is at your complete disposal; we can provide you with speedy
repair services and we would like you to know that we are with you all the way. We would
like to remind you also that all our machines are accompanied by an "CE" declaration of
conformity which testifies that the machine conforms to required safety standards. Every
machine must be accompanied by this declaration of conformity.

We would like to warn you that it is very important to keep this document in a safe place
because the machine must always be accompanied by this document even if it is resold.
Thank you very much for taking the time to read this welcome message and we would like
to remind you once again that we are at your complete disposal for any further information.

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INTRODUCTION

The **SAFETY ELECTRICAL CONVERSION UNIT MEM 5000** transforms input voltage at 48 volts. It is manufactured in accordance with international safety norms. It can be used with Master 5000.

DOCUMENTS:

Instructions for use and maintenance, electrical scheme, guaranty and EEC conformity declaration are the documents sent with each machine.

MANUFACTURER'S DETAILS:

MARMOELETTROMECCANICA S.r.l.
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The information provided in this manual has been carefully compiled and controlled in order to be as precise as possible, but MARMOELETTROMECCANICA S.r.l. reserves the right to make changes or modifications as necessary when improvements have been made to the products themselves.

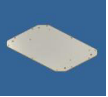
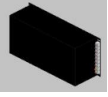


















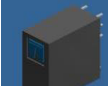
TECHNICAL DATA

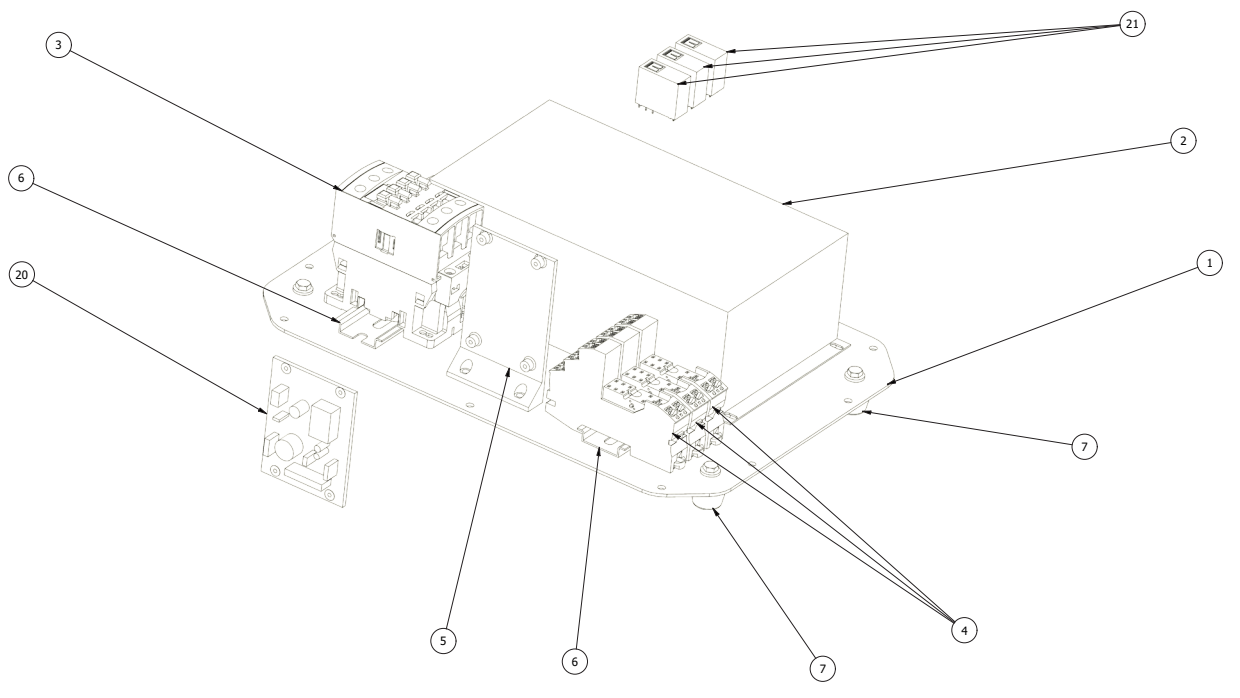
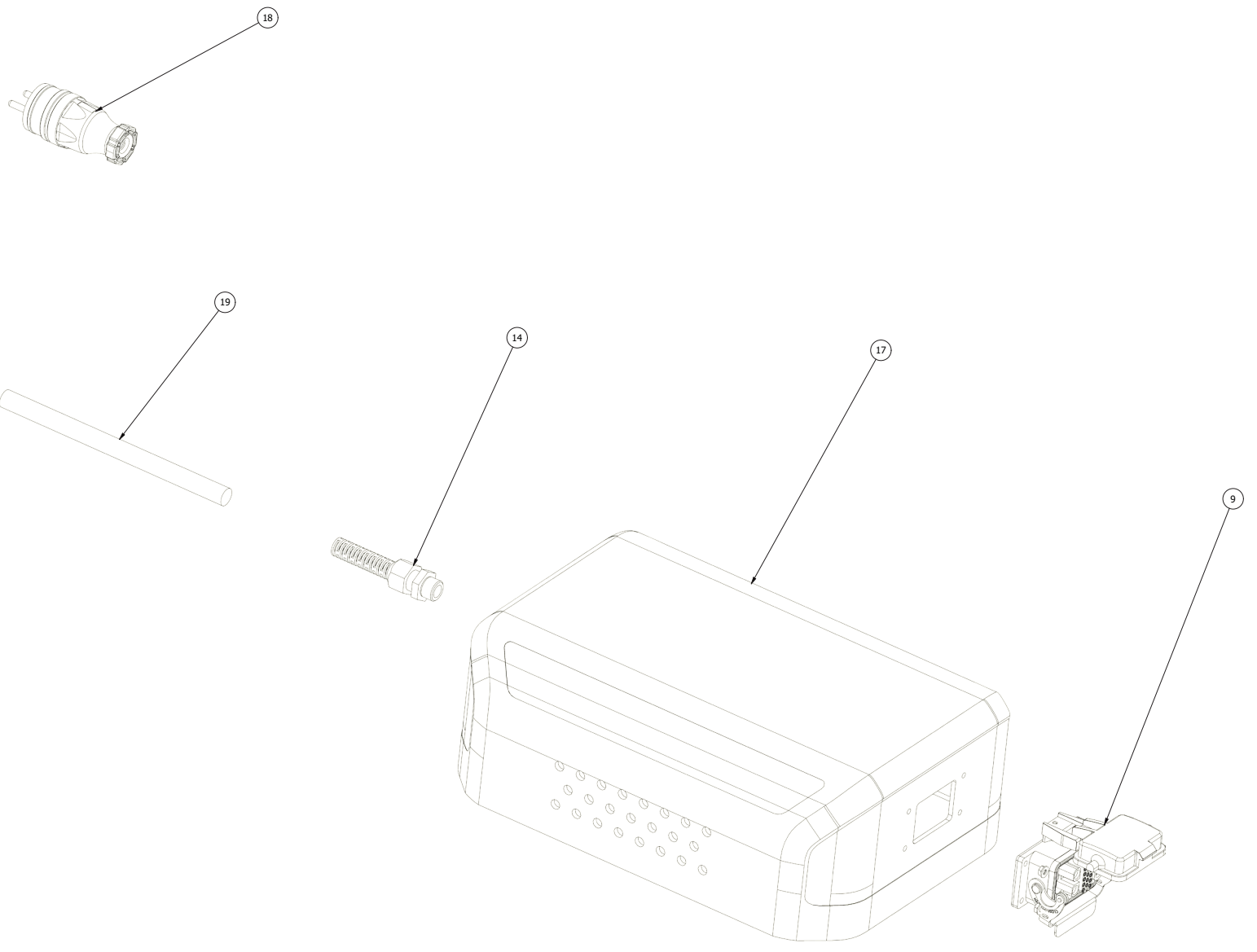
SAFETY ELECTRICAL CONVERSION UNIT 3000 W OR 3 KW

- Input: 100-240V 50/60Hz
- Output: 48 volt
- In compliance with international safety regulations for the prevention of industrial accident
- Mark provided
- International safety regulations:
- Dimensional standards: UNEL 13113-71; UNEL 13117 / 13118-71
- Electrical standards: CEI 2-3/88
- Mechanical protection: CEI 2-16/88
- Structural shape: CEI 2-4/85
- Mechanical vibrations: ISO 2372
- Cooling method: CEI 2-7978

SAFETY ELECTRICAL CONVERSION UNIT MEM 5000

SPARE PARTS AND DETAILED LIST

Element	Code	Description	Element	Code	Description		
	1	PM001-0034	Power supply box plate				
	2	MEM000089	Power supply				
	3	MEM000041	Contactor				
	4	MEM000048	Push-in relay base				
	5	PM001-0028	Electronic board holder				
	6	MEM000064	DIN rail for contactor				
	7	MEM000025	Vibration damping elements				
	8	ISO 7089-6	Flat washers				
	9	PM001-0036	Multipole socket connector				
	10	ISO 7089-4	Flat washers				
	11	ISO 4762 - M4X16	Hex socket screw				
	12	ISO 4762 - M4	Hexagonal nuts		17	PM001-2001-R03	Power supply
	13	ISO 4762 - M4X12	Hex socket screw		18	MEM000326	Rubber plug
	14	MEM000383	Cable gland		19	MEM000376	Neoprene cable
	15	DIN 933 - M6X12	Hex head screw		20	MEM000096	Motor speed regulator
	16	DIN 933 - M5X12	Hex head screw		21	MEM000043	Printed circuit board relay



INTRODUCTION

The **MASTER 5000** is an electrical contouring machine used to work on marble and granite. The electrical supply is very low tension for safety reasons (SELV of 48V efficient value of alternate current) and is supplied via the use of a safety electrical conversion unit which complies with the norm CEI EN 60742.

Principal characteristics:

- Versatile when working with different kinds of profiles.
- Simple to operate and to use.
- Safe to use.
- Easy to transport.
- Robust.

The MASTER 5000 has been designed and built in accordance with the machinery directive 89/392/EEC and the subsequent variations 91/368, 93/44 and 93/68.

DOCUMENTS:

The instructions booklet, the electrical layout, the guarantee and the declaration of CE conformity must accompany the machinery at all times. Compliance with the suggestions and warnings mentioned in this booklet is important in order to ensure that the machine works properly and in order to ensure that there is no need to request assistance under guarantee. Safety measures must be strictly observed in order to avoid any accidents.

MANUFACTURER'S DETAILS:

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TECHNICAL DATA

MODEL: MASTER 5000 CE
ELECTRICAL TENSION: 48V
ELECTRICAL SUPPLY: 3~
NOMINAL POWER: 1500W O 1,5KW
MINIMUM NUMBER OF NOMINAL REVS: 0 min-1/rpm
MAXIMUM NUMBER OF NOMINAL REVS: 6000 min-1/rpm
WEIGHT WITHOUT TOOL: 30 kg
MAXIMUM DIAMETER OF TOOL: 140 mm

STANDARD ACCESSORIES SUPPLIED WITH MACHINE:

- 50 MESH 1/2 MF Filter (Only for Master 3500 with Water System).
- Water Guard.
- Apron for operator.
- T-handle for attachment of 5mm wheels.

TRANSPORT AND STORAGE:

In order to avoid any risk of deterioration, the machine must be transported and stored in its original box and stored in a dry place. If stored as indicated, the machine will remain in perfect working order for a long time. When storing the machine or when moving the machine in its original box (weight KG 35), all manual operations must be carried out in such a way as to avoid and reduce any risk of damage to the operator's back (see section 1 - manual movement of machine).

1.1 GENERAL INFORMATION

It is advisable that all users of the **MASTER 5000** read all of this booklet carefully before using the machine. This instruction manual provides advice regarding safety in the workplace which is very important in order to avoid any danger to the health of the operator. There are several plates on the machine which indicate the tension, correct rotating direction of the parts and general warnings; the instructions on these plates must be carefully observed and respected.

Before using the machine, you must check very carefully that the shaft has been placed in the correct direction of movement with respect to the cover of the machine. Otherwise, the tool might become loose from the hitting while working and will consequently stick out.

If the machine should break down or if it does not work properly, turn it off and do not tamper with it. If it has to be repaired, please contact our assistance centre.

The **MASTER 5000** is a portable electrical contouring machine to be used exclusively when processing and grinding marble and granite. MARMOELETTRROMECCANICA S.r.l. will not be held responsible for damage caused by improper or unreasonable use.



WARNING!!! The MASTER 5000 works on alternate three phase 48 volts electricity supply, therefore it must not, by any means, be connected directly to the mains electrical supply; it only needs to be connected to the MEM 5000 central conversion unit that transforms the input voltage to 48 volts DC.

Before turning the machine on, it is important to:

- Carefully check that the safety devices are in perfect running order. Never use the machine if the ON/OFF buttons or the speed button do not work perfectly.
- Check that the mobile parts work perfectly, that they are not blocked or that they are not damaged.
- Check and remove spanners and assembling tools from mobile parts.
- Check that all of the components have been mounted correctly and ensure that everything is in perfect working order for the machine.

Furthermore, during use of the MASTER 5000, you must:

- Avoid using the machine near lammable liquids or in dangerously explosive environments.
- Prevent other people from standing near the place of operation.
- Avoid wearing wide garments or jewellery which might be caught up in the parts in movement. If you have long hair, it is advisable to wear a suitable hairnet or to tie it up.
- Use suitable blockage devices in order to prevent the piece of material you are working on from moving; use for example the **H50 BI-SUCTION CUPS** which are produced by us. In this way you will be able to work more safely and you have both hands free to work with.
- Ensure that there is adequate light in the workplace.
- Stand in a safe and balanced position.
- Avoid moving or lifting the machine in such a way that you might damage your back; set up your workplace and organise it in such a way as to reduce the need to have to strain your back; use the **WORKING TABLE** equipment (see paragraph 1.4).
- Abide by and always follow the instructions for the changing of the tools which are subject to wear.
- Do not use utensils on the machine to do jobs which this machine is not designed to do.
- Avoid lifting the machine and holding it by the electricity cable which would cause the cable to be unplugged from the mains electricity supply.
- The electricity cable must not come into contact with surfaces which are extremely hot, with oil or sharp edges or corners.
- Use outside or outdoors by attaching the correct type of extension lead
- Turn the machine off before transporting it in order to avoid any accidents
- Take care and concentrate while working avoiding unreasonable behaviour or improper use of the machine.

Finally, it is important to:

- Keep the machine in a dry, safe environment where it must be kept out of the reach of children.
- Make sure you clean the tools very well after use in order to guarantee efficient, safe work and ensure that the tools are cleaned following the specific guidelines for their maintenance.
- Check the electricity cable and the plug periodically and if there should be any damage, contact qualified technicians only for their replacement.
- Check the electricity extension lead of the central conversion unit and change it when it is damaged.

SECTION 1: SAFETY

1.2 REGULAR SAFETY CHECK UP

This machine has been designed and built in accordance with the principle of integration of safety measures with that of technical requirements. This machine can be dangerous if used by incompetent workers or if it is used for jobs that it was not designed for.

Therefore it may:

- be dangerous for the operator;
- cause damage to the machine or any other inconvenience;
- cause the machine to break down.

In order to ensure perfect functioning and safety of the machine, always make sure that the machine is repaired exclusively by qualified personnel and that original spare parts or tools are used to replace old ones. Any spare parts, accessories or tools that are not supplied by the producer of the machine have not been tested or approved by the same. The attachment or use of such products may create technical difficulties to the machine and therefore make it less safe.

1.3 USE OF PERSONAL PROTECTION MEASURES

Even though the **MASTER 5000** has been designed and built very carefully and special attention has been given to ensuring that there is no danger, it is advisable for the operator to wear (DPI) individual protective devices such as : goggles, gloves, protective shoes and earphones if there is any danger of damage to your hearing. These measures are necessary so that the health and safety regulations prescribed by the specific law are observed.



1.4 MANUAL MOVEMENT OF THE MACHINE

By manual load movement, we mean the operations of transport and lifting of a load by one or more operators, including the picking up, setting down, pulling, pushing and moving of one load that might cause back problems.

The use of the **MASTER 5000** entails moving loads especially when putting the machine on the slab at the beginning or when the tool has to be changed.

Under these circumstances, it is important to carry out these operations by taking the necessary precautions while moving the machine thus avoiding:

- lifting from the ground or placing above the shoulders (do not put the machine on the ground or on shelves that are too high or too low). In fact, it is preferable to move the machine within the area of the shoulder and the knuckles (hand in its position held along the sides),
- lifting and moving the machine by rotating the bust just once,
- keeping the machine too far from the body while carrying it or moving it,
- placing it on worktops which are too high causing you to arch your back too much,
- lifting it from the ground with a bent back,
- moving the machine by hand for long trips or upstairs,
- moving the machine with only one hand
- picking the machine up too quickly.

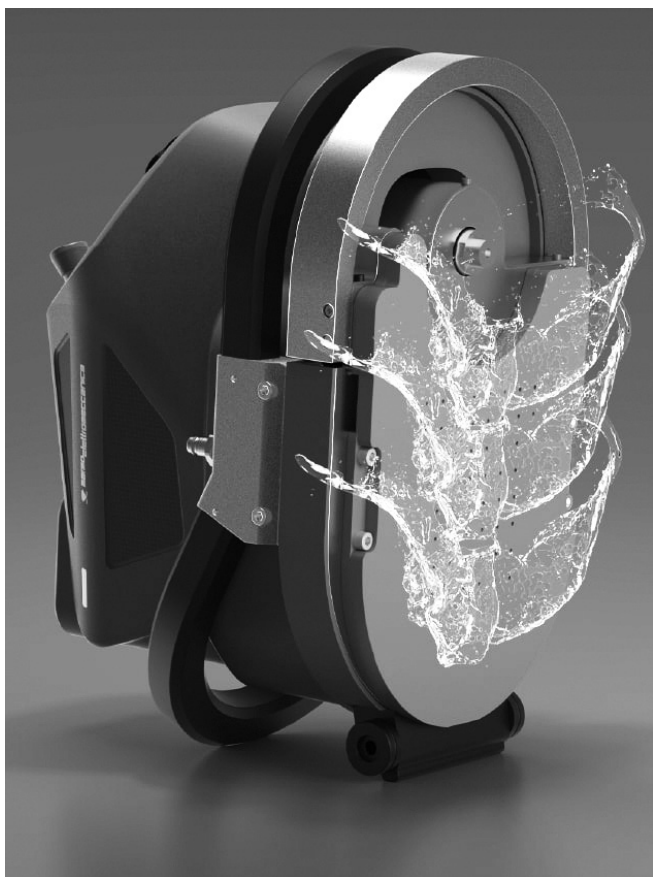
SECTION 2: DESCRIPTION OF THE MACHINE

2.1 WATER SYSTEM BASE PLATE

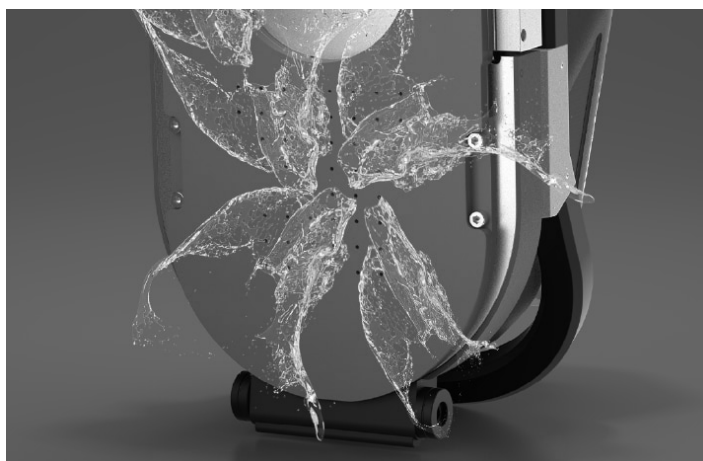
Your MASTER 5000 is equipped with the WATER SYSTEM which is a new gliding base plate. This revolutionary gliding system is patented by MARMOELETTROMECCANICA S.r.l. and it allows the machine to glide with a rather clever film of water flowing between the slab and the machine. The WATER SYSTEM PLATE permits you to work on narrow strips of up to 10 cm. too and at practically no maintenance costs and very quickly too.



WARNING!!! Make sure that there is water before starting to work with the MASTER 5000 on the marble or granite slab - this avoids causing any damage to the WATER SYSTEM plate and scratching of the surface of the slab.

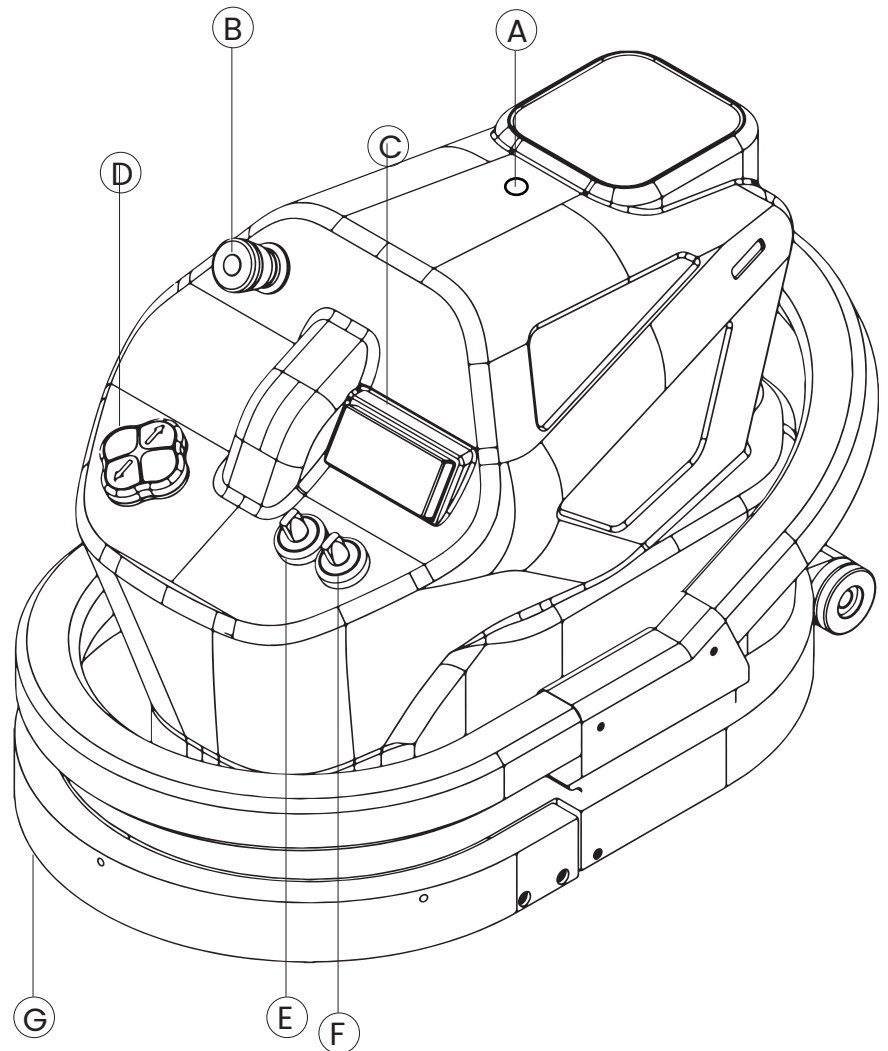


The Water System Plate is designed to enhance performance by allowing it to glide over a thin film of water. This unique feature ensures exceptionally smooth operation, preventing scratches on the surfaces of the materials being processed.



SECTION 2: DESCRIPTION OF THE MACHINE

2.2 DETAILED DESCRIPTION



A- Electrical cable. the 48 volt current has to travel 6 metres long; the cable must always be connected to the central conversion unit by a special plug.

B- Stop button. Red stop switch is marked with "OFF" gives you the possibility to quickly turn off the machine even in an emergency.

C - Monitoring display. The positioning of the Z-axis is shown on the screen, providing real-time feedback and high precision.

D - Adjustment buttons. The height of the Z-axis is controlled and adjusted through the dedicated buttons.

E- Speed Regulator. The dedicated knob allows for complete control of the grinding wheel speed.

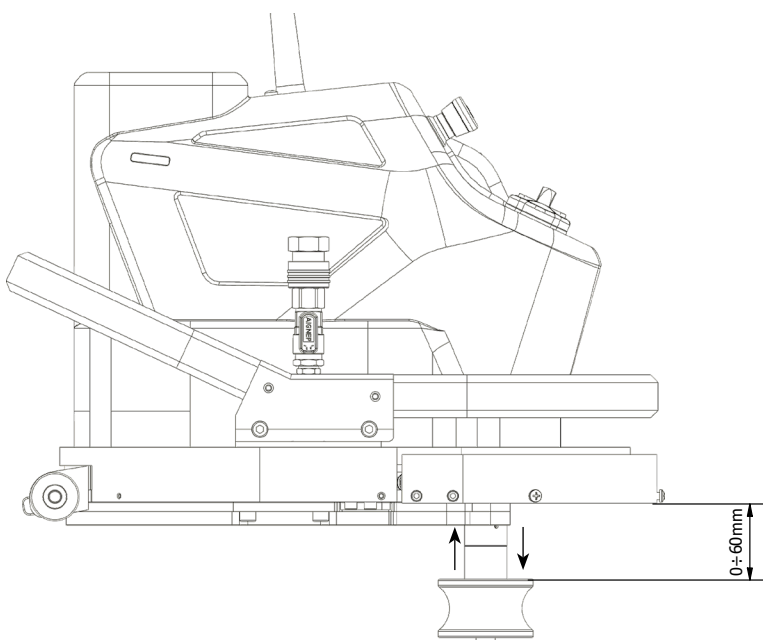
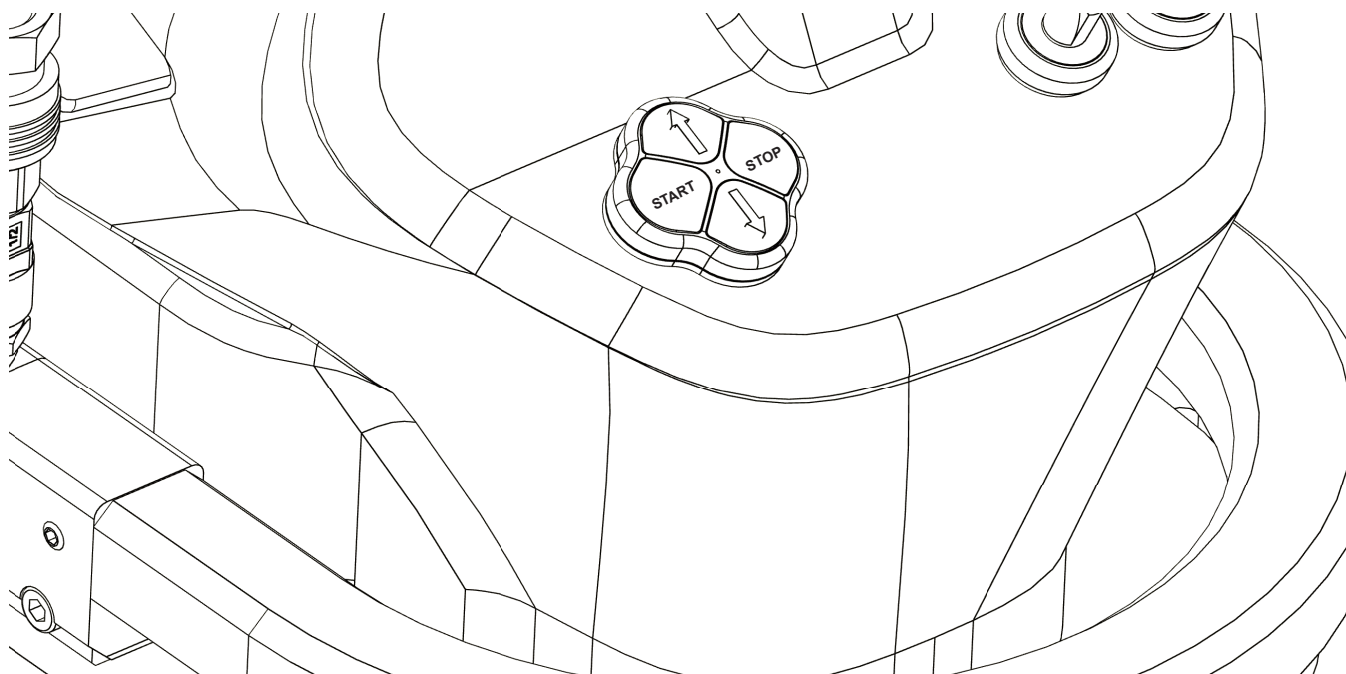
F- Spindle Descent Speed Regulator. The dedicated knob allows for precise control of the Z-axis adjustment.

G- Water spray system. The machine is equipped with 4 adjustable water jets and a system for washing the surface which ensures that the bits cool down and that dust does not build up.

SECTION 2: DESCRIPTION OF THE MACHINE

2.3 MOVEMENT OF THE Z-AXIS

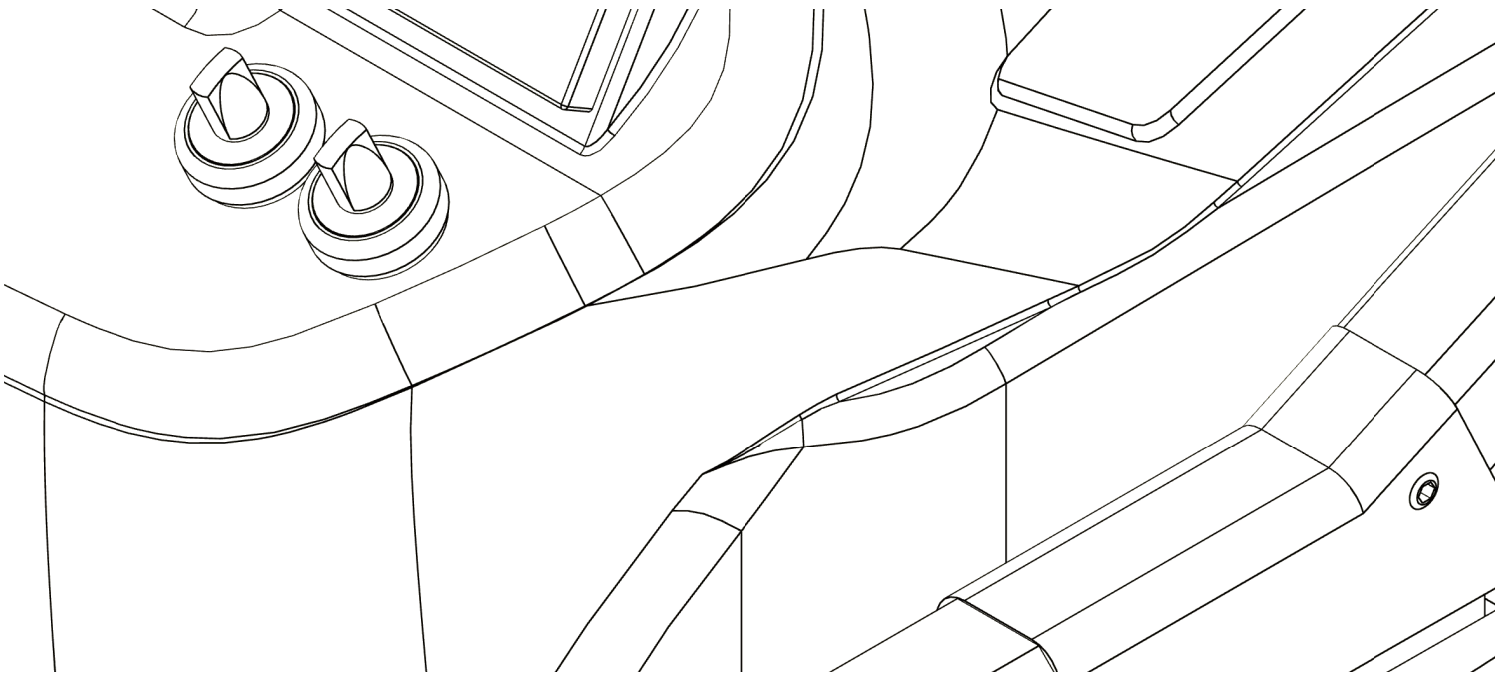
The motorized movement of the Z-axis simplifies and speeds up the adjustment of the grinding wheel's height. This feature enhances the usability and efficiency of the Master 5000. Additionally, the Z-axis positioning is displayed on the screen, providing real-time feedback and high precision. This allows the operator to easily set a specific measurement, simply moving to the desired position for the execution of the task. This integrated system ensures accurate and efficient processing, reducing setup times and increasing productivity.



SECTION 2: DESCRIPTION OF THE MACHINE

2.4 CONTROLLERS FOR THE Z-AXIS

The speed controllers for the Z-axis and rotation speed are crucial components for maximizing flexibility and efficiency in processing various materials. The Z-axis speed controller allows for precise control during delicate operations such as drilling, adapting to the specific needs of each material and process. This ensures optimal results without compromising quality. Similarly, the rotation speed controller is essential for setting the optimal speeds for each type of tool, whether it's a drill bit, a cutting mill, diamond grinding wheels, or polishing wheels. This flexibility in settings not only ensures maximum cutting and polishing effectiveness but also protects the tools from premature wear, significantly extending their useful life.

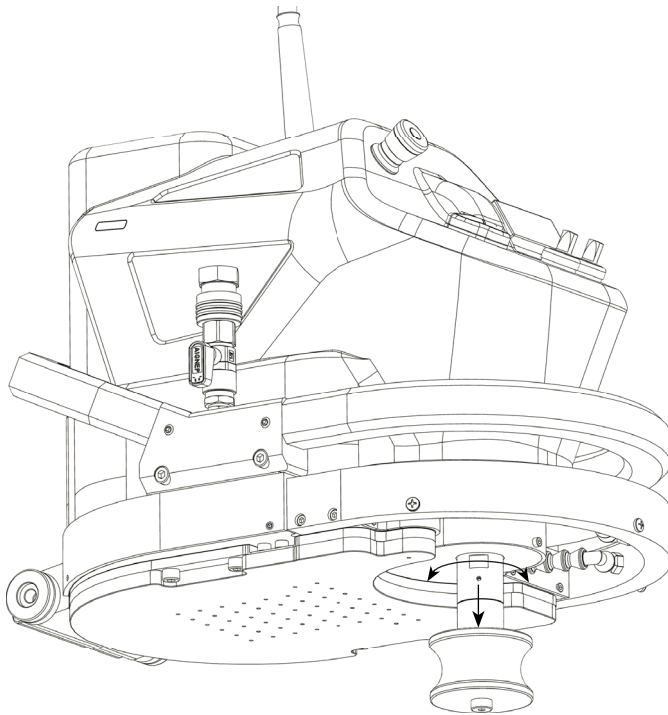


SECTION 2: DESCRIPTION OF THE MACHINE

2.5 QUICK-CONNECT TOOL

The master 5000 is equipped with a quick-release system for the grinding wheel which allows the grinding wheel to be replaced with a simple rotation.

The quick-release grinding cone is ideal for those seeking efficiency and speed. This component is designed to facilitate a quick and safe replacement of the grinding wheel, optimizing work times and increasing productivity in the workshop.



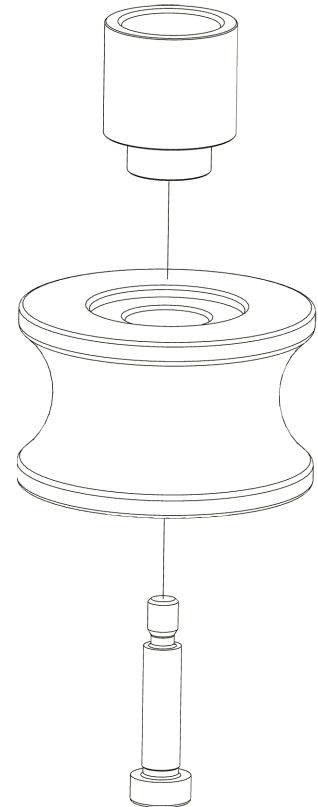
Quick Release

Thanks to the quick-release attachment system, the grinding wheel can be changed in just a few seconds. This feature is essential for minimizing interruptions during tool changes.



Stainless Steel

The attachment is made from stainless steel, known for its exceptional resistance to corrosion and rust. The use of this material ensures greater durability and maintains the structural integrity of the grinding cone over time.

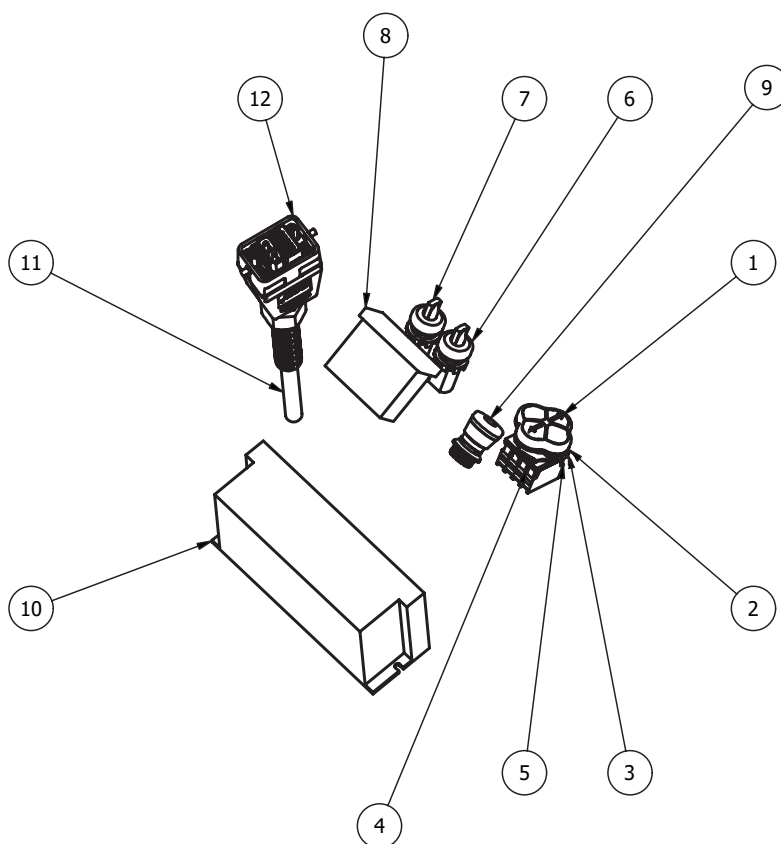











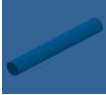


Robust Design

The design of the cone has been developed to ensure maximum stability and safety during use. The stainless steel contributes to the robustness of the cone, ensuring that it remains reliable under stress.

SECTION 2: DESCRIPTION OF THE MACHINE

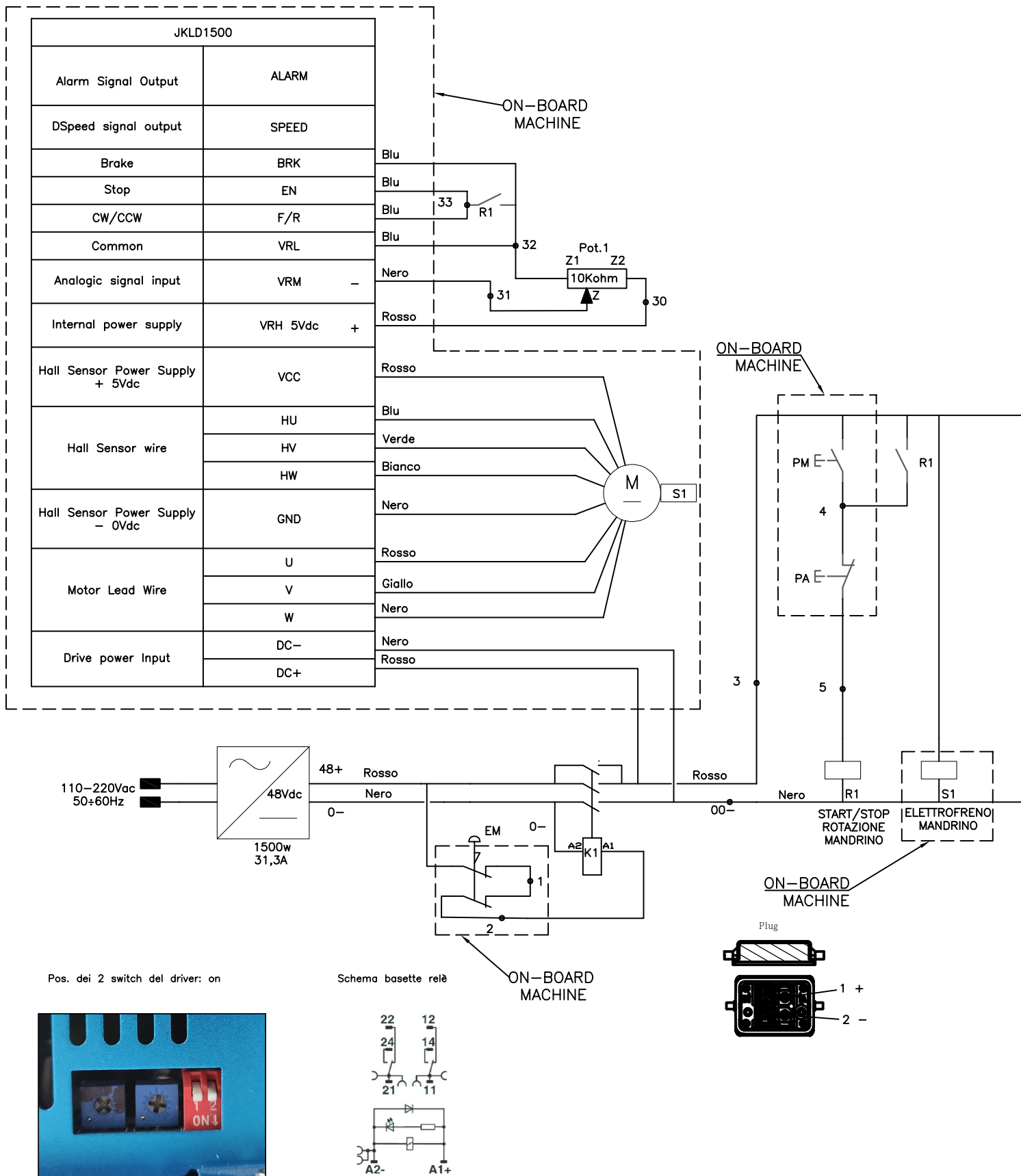
2.6 ELECTRICAL SYSTEM OF THE MACHINE



Element	Code	Description	Element	Code	Description		
	1	MEM000029	Quadruple button		7	MEM000038	Potentiometer
	2	MEM000030	Shaped ring		8	MEM000088	Double regulator
	3	MEM000031	Mounting base		9	MEM000091+92+93	Stop-Reset Button
	4	MEM000032	Panel contact unit		10	MEM000095	BLDC Driver
	5	MEM000033	Panel contact unit		11	MEM000111	Multipole cable
	6	MEM000037	Potentiometer		12	PM001-0035	Multipole plug connector

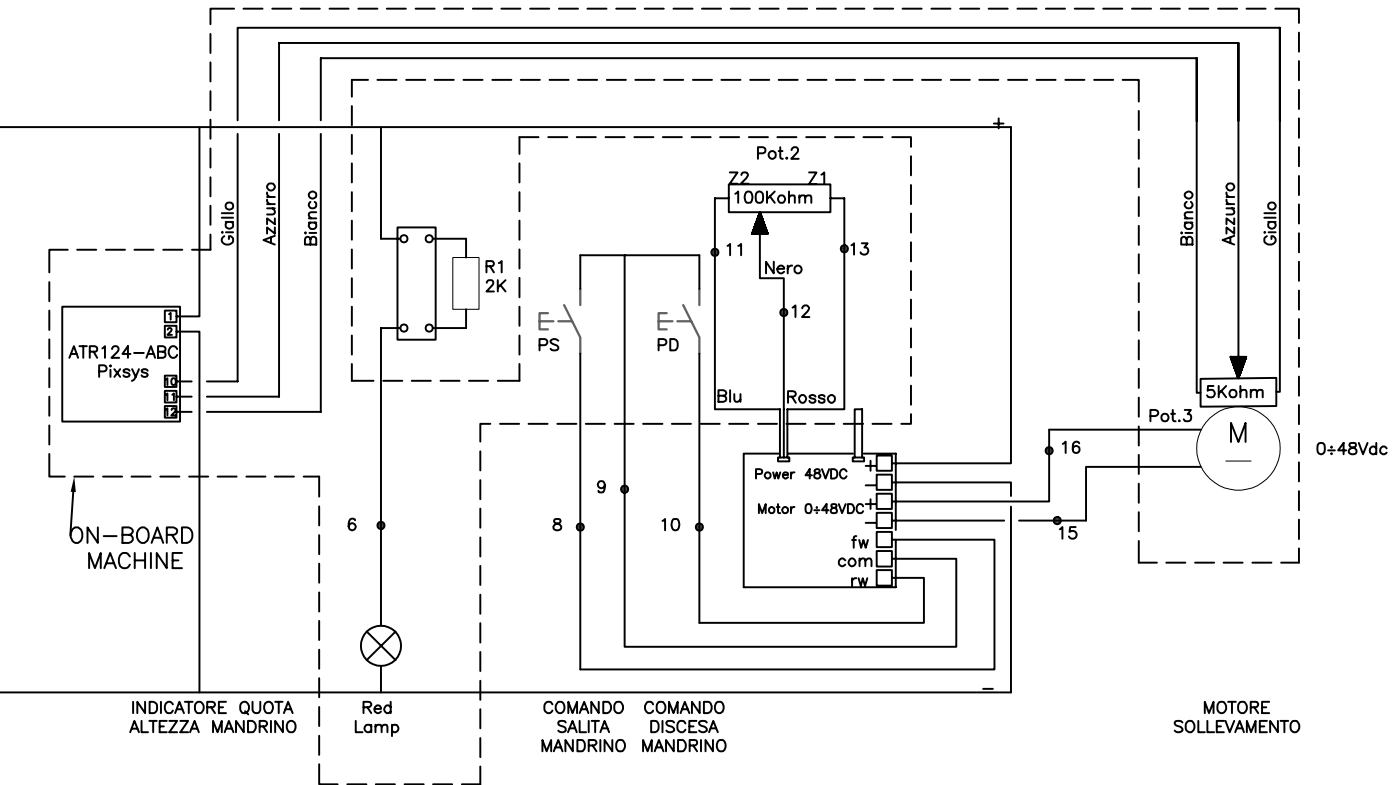
SECTION 2: DESCRIPTION OF THE MACHINE

2.7 ELECTRICAL DIAGRAM



Electrical connections 3x5x0,50 + 2x6,00mm ²			
Cable conductor number	Action	Number	Section
1	Emergency	48+	0,5 mm ²
2		2	0,5 mm ²
ROSSO	Power	3	6 mm ²
NERO		00-	6 mm ²
3	Start Stop Rotation	4	0,5 mm ²
4		5	0,5 mm ²
5	Command Up	8	0,5 mm ²
6	Down Command	10	0,5 mm ²
7	Potentiometer up/down	11	0,5 mm ²
8		12	0,5 mm ²
9		13	0,5 mm ²
10	Actuator power supply	15	0,5 mm ²
11		16	0,5 mm ²
12	Driver Commands	32	0,5 mm ²
13		33	0,5 mm ²
14	LED power supply	6	0,5 mm ²
15	Common Command Actuator	9	0,5 mm ²

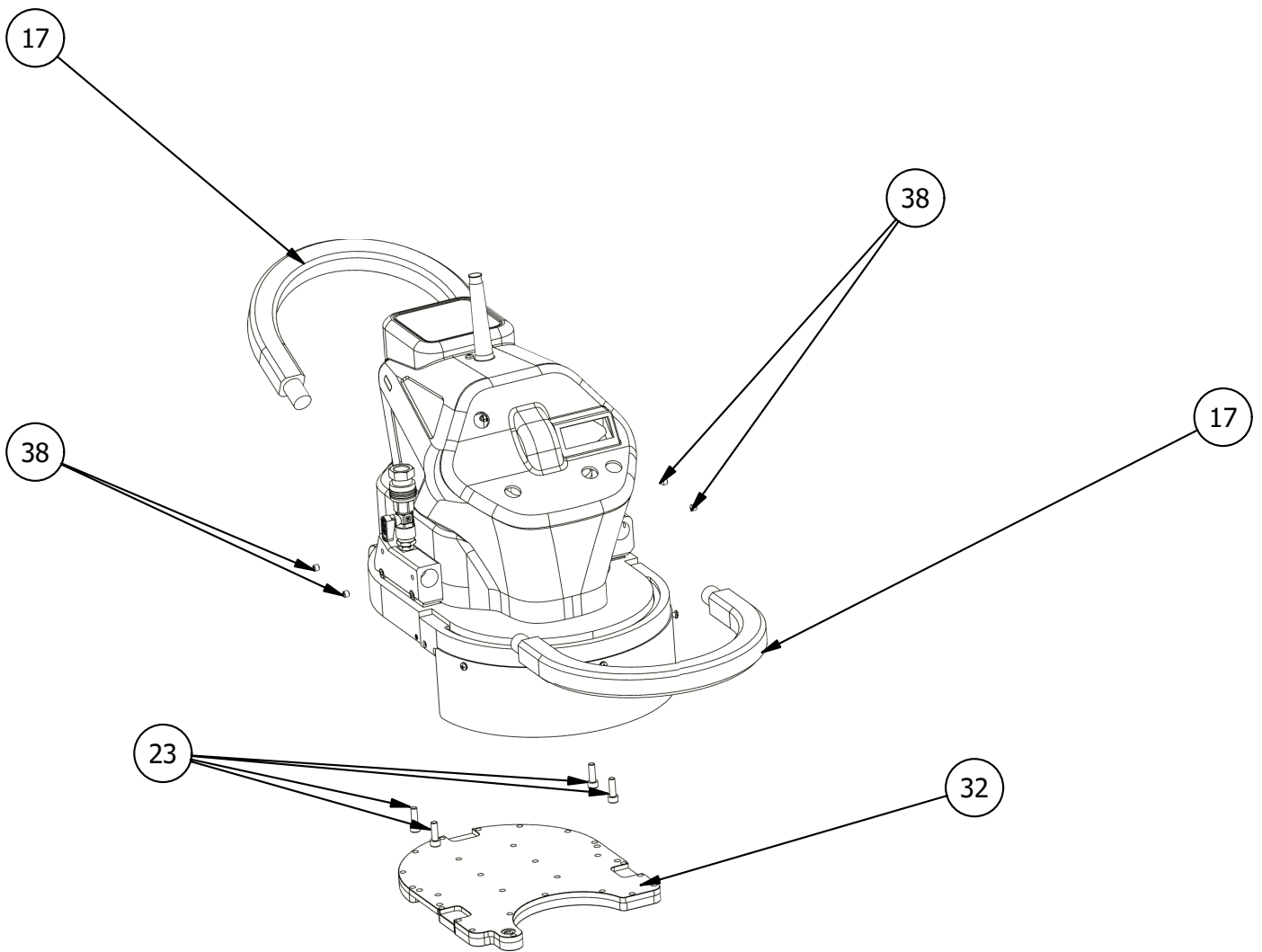
Pot.1 Spindle rotation speed adjustment
 Pot.2 Spindle up/down speed adjustment
 Pot.3 Spindle height indication

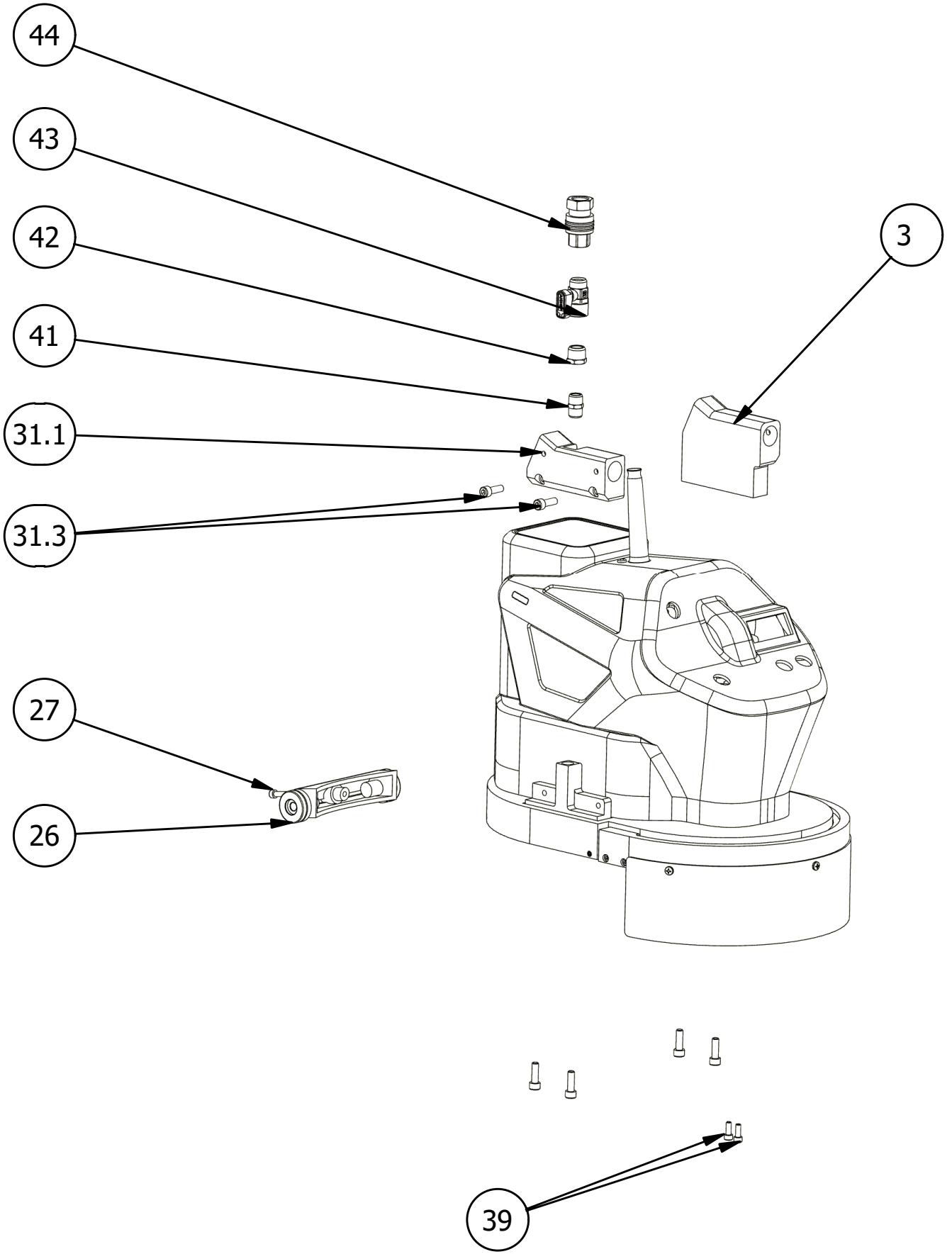


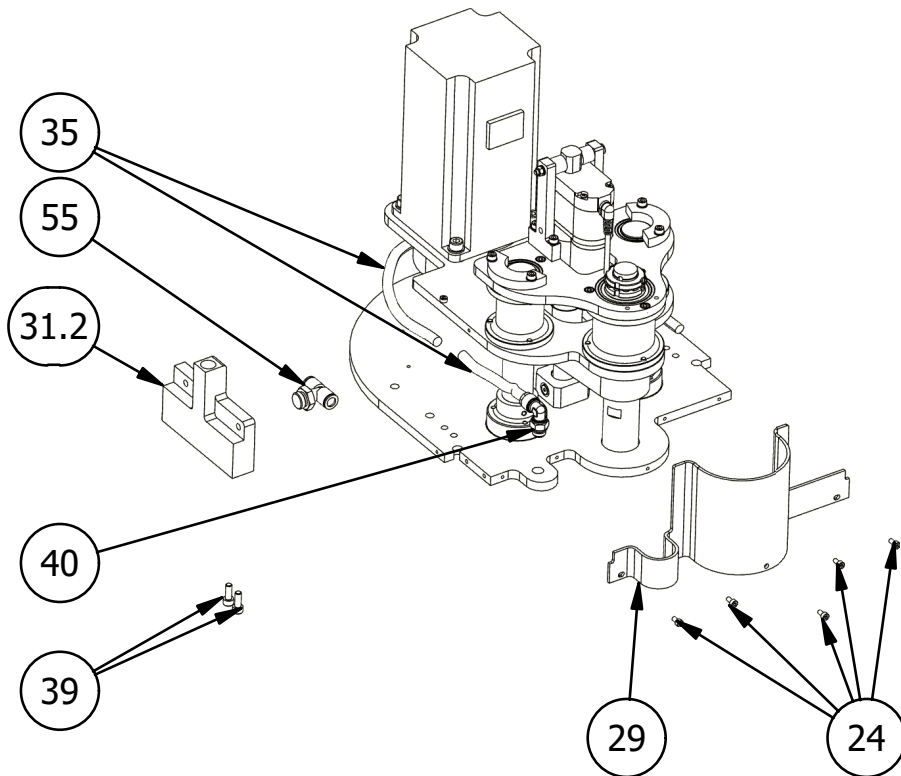
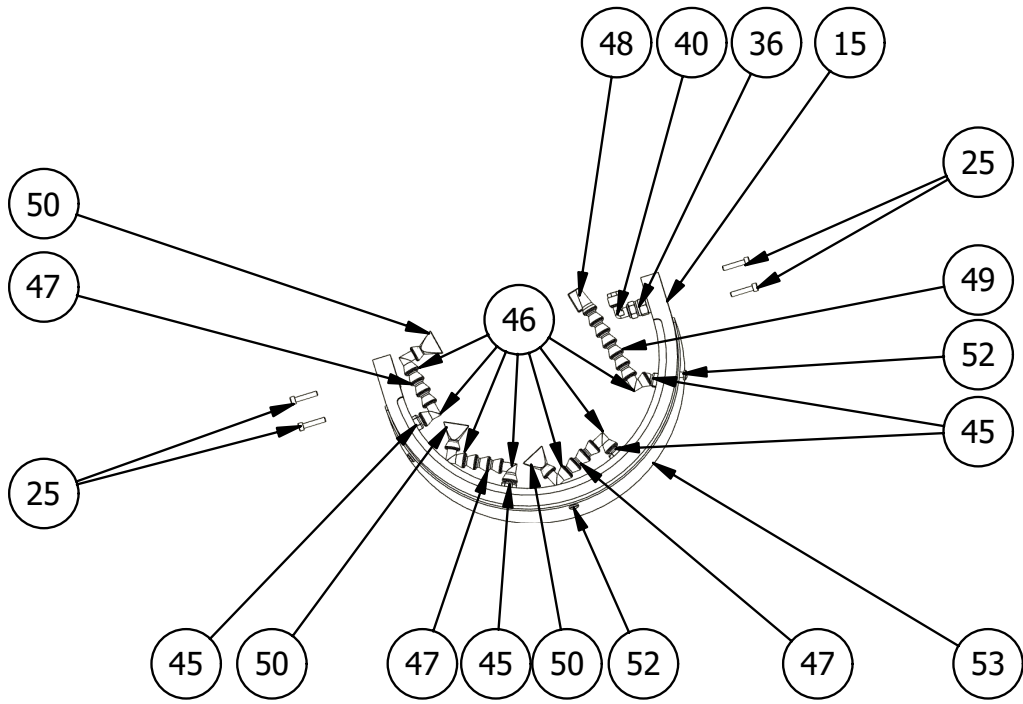
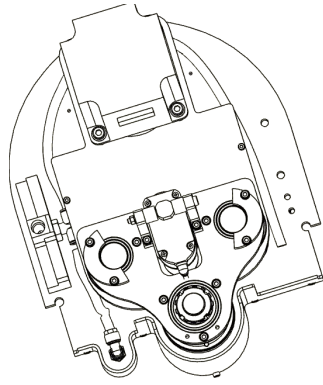
Valid from the serial number 533 onwards

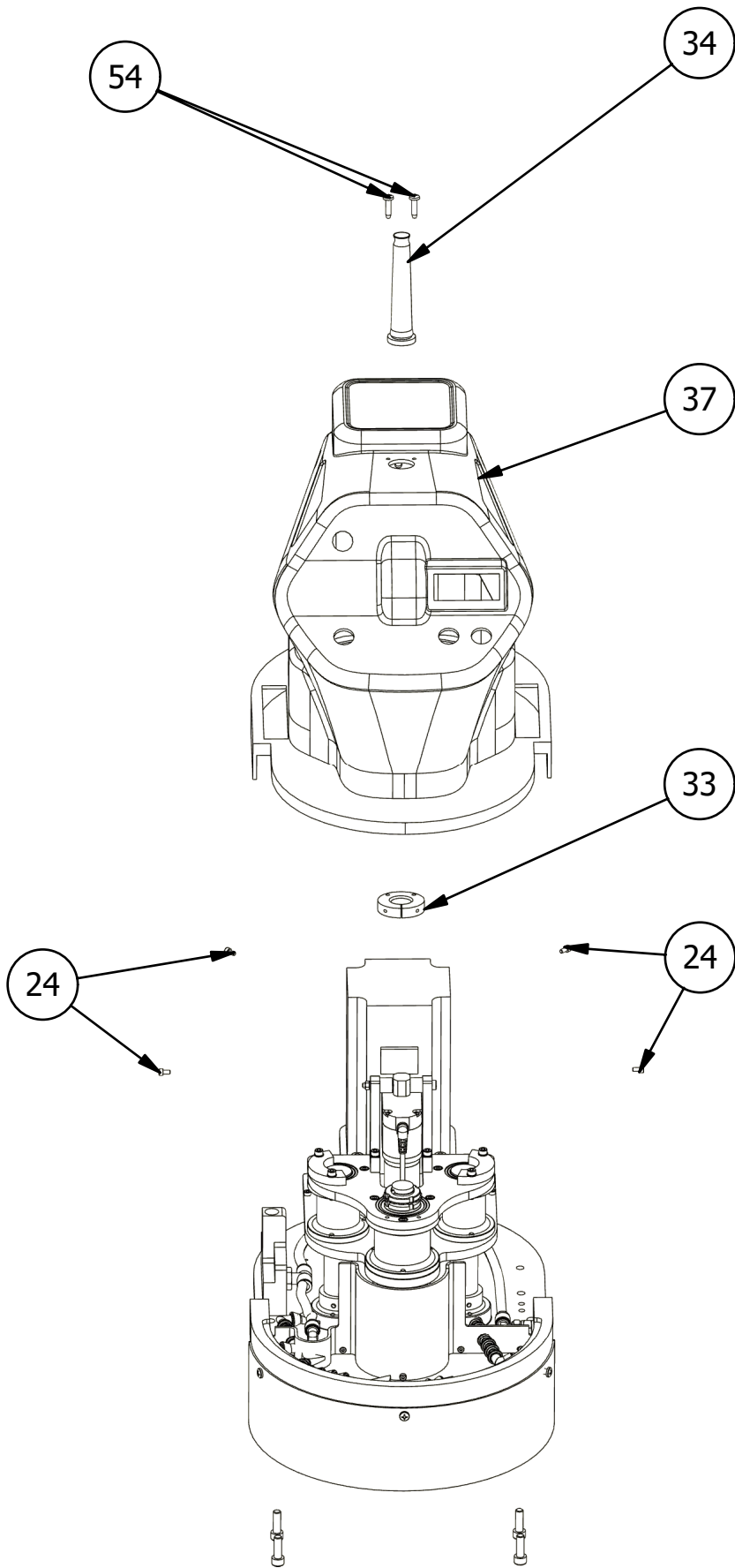
SECTION 2: DESCRIPTION OF THE MACHINE

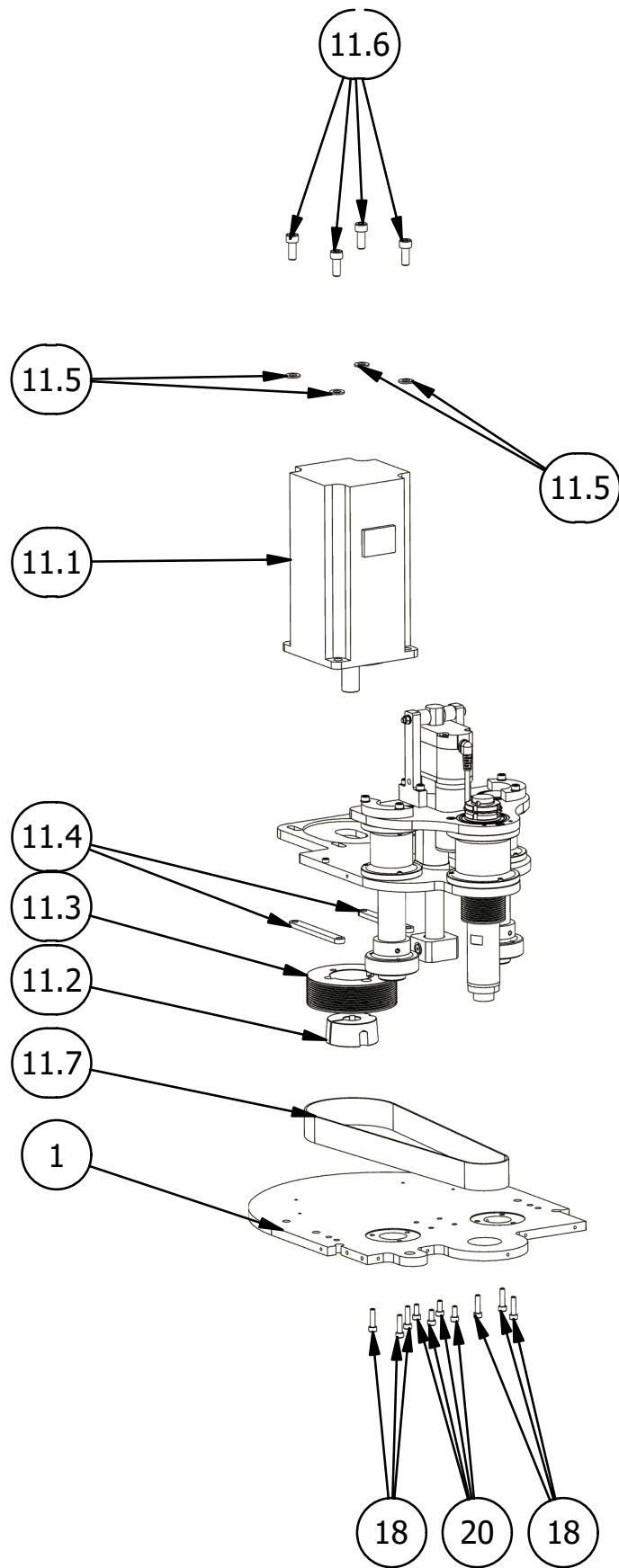
2.8 DETAILED DIAGRAM OF THE MASTER 5000

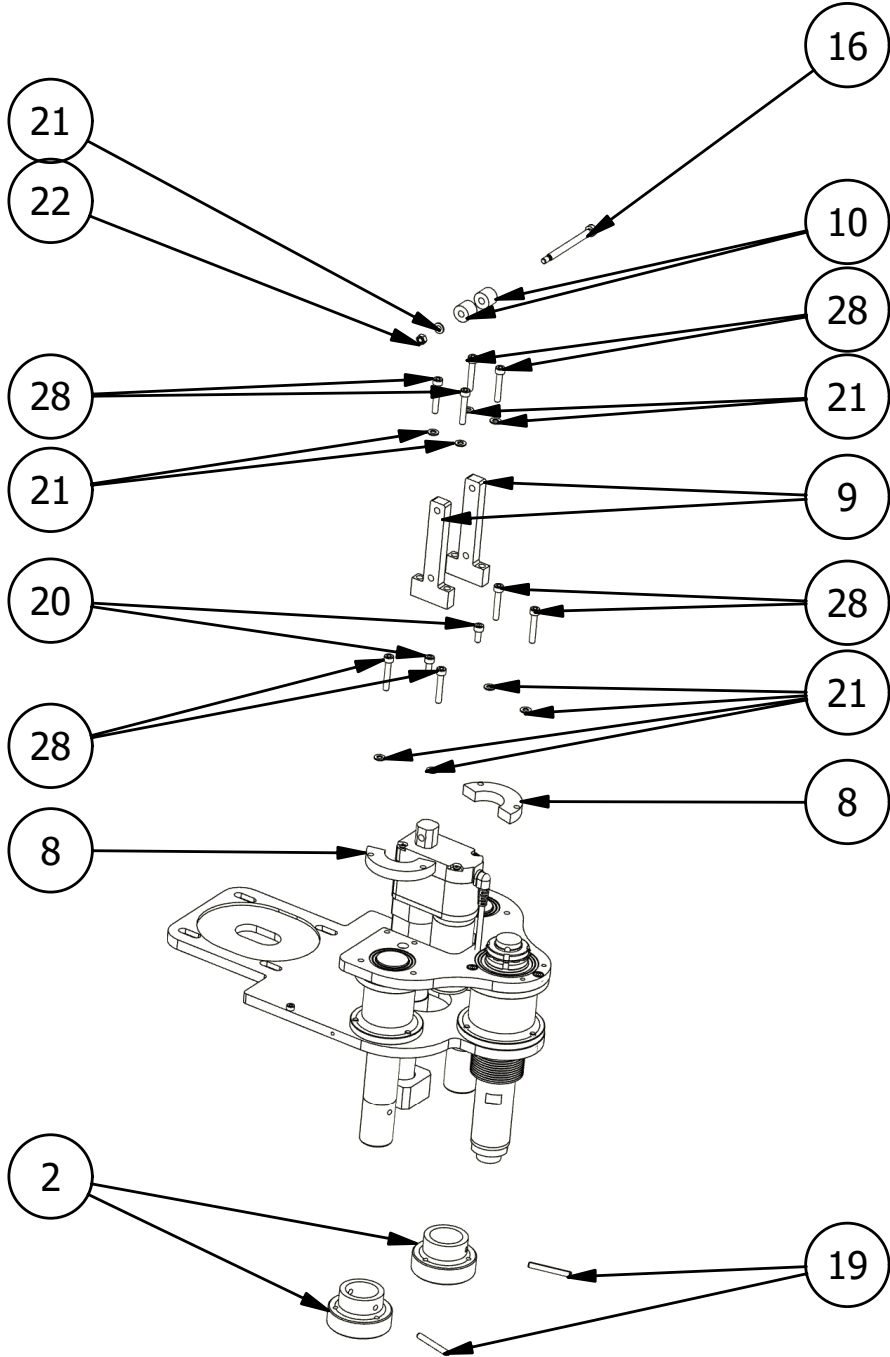


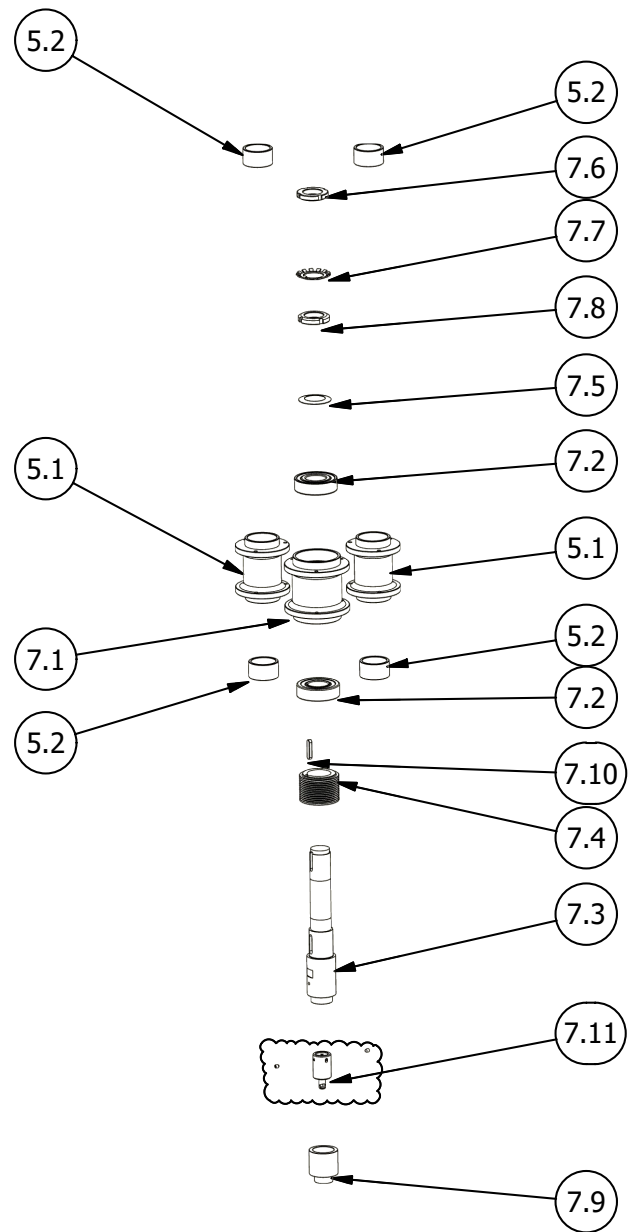
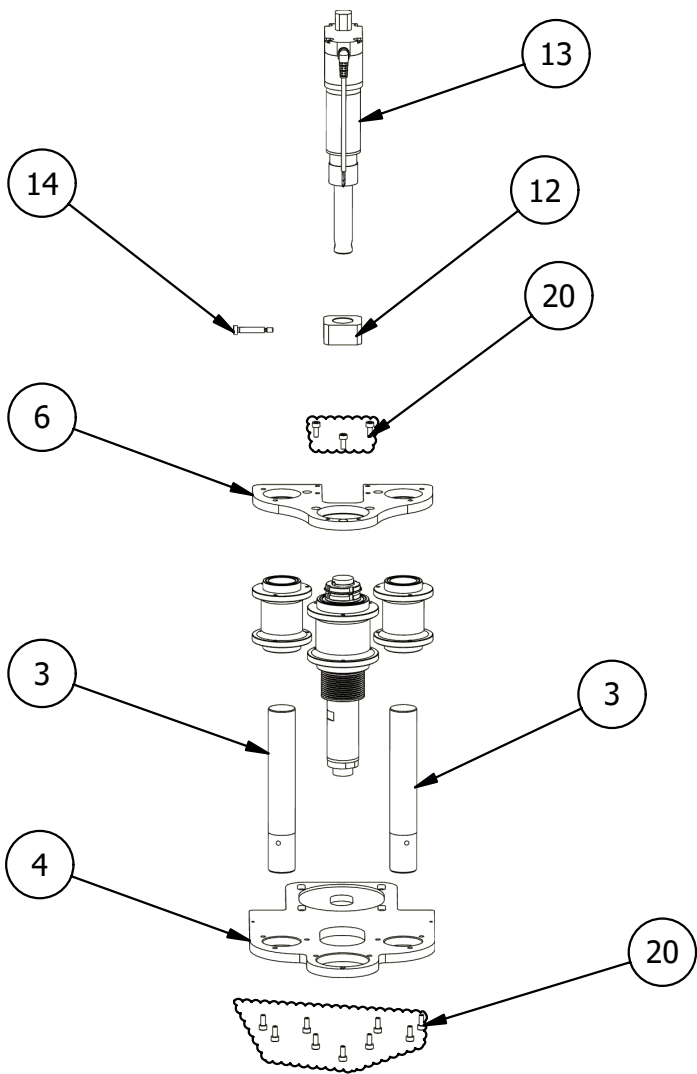


































































SECTION 2: DESCRIPTION OF THE MACHINE

2.9 LIST OF CODES ON DETAILED DIAGRAMS

Element	Code	Description	Element	Code	Description		
	1	PM001-0001	Base plate		7.8	MEM000054	Self-locking nut
	2	PM001-0002	Column base		7.9	PM001-0017	Wheel mounting assembly
	3	PM001-0003	Stainless steel shaft (Ø30)		7.9.1	MEM000397	Locking receptacle
	4	PM001-0005	Motor support plate		7.9.2	PM001-0018	Wheel mounting for locking receptacle
	5	PM001-0006	Sliding spacer assembly		7.10	ISO 2491	Thin parallel keys
	5.1	PM001-0007	Sliding spacer		7.11	MEM000396	Shaft coupling clamp
	5.2	PM001-0008	Bushing for sliding spacer		8	PM001-0013	Locking rest
	6	PM001-0004	Upper plate		9	PM001-0014	Linear actuator body support
	7	PM001-0009	Spindle assembly		10	PM001-0015	Actuator body spacer Ø6
	7.1	PM001-0010	Spindle housing bushing		11	PM001-0020	Self-braking motorization unit
	7.2	MEM000049	Angular contact bearing		11.1	MEM000071	Motor with brake
	7.3	PM001-0011	Spindle shaft		11.2	MEM000073	Expandable sleeve
	7.4	PM001-0012	Machined driven pulley		11.3	MEM000074	Pulley J12
	7.4.1	MEM000050	J12 grooved pulley		11.4	PM001-0021	Engine block plate
	7.5	MEM000051	Cup spring		11.5	ISO 7089-8	Flat washers
	7.6	MEM000052	ISO 2982-2 locknut		11.6	ISO 4762-M8X20	Hex socket screw
	7.7	MEM000053	ISO 2982-2 locknut washer		11.7	MEM000075	Poly-v belt

Element	Code	Description	Element	Code	Description		
	12	PM001-0022	Linear actuator rod support		31	PM001-0030	Left handle support assembly
	13	MEM000076	Linear actuator		31.1	PM001-0032	Upper right handle support
	14	MEM000077	Collar screw		31.2	PM001-0031	Lower right handle support
	15	PM001-0026	Curved water support		31.3	ISO 4762 - M8X25	Hex socket screw
	16	MEM000055	Collar screw		32	MS35PIASTRAWS	Water system plate
	17	MANICOANTE	Front handle		33	MSI096	Cable clamp
	18	ISO 4762 - M5X20	Hex socket screw		34	PM001-0033	Black cable grommet
	19	ISO 13337 - 5X40	Slotted spring pins		35	TUBORILSA10	Rilsan Hose
	20	ISO 4762 - M5X12	Hex socket screw		36	MEM000171	Cylindrical extension
	21	ISO 7089	Flat washers		37	PM001-1000	MDF cover
	22	ISO 4032	Hex nuts		38	ISO 4027 - M8X8	Hex socket set screw with conical tip
	23	ISO 4762 - M8X25	Hex socket screw		39	DIN 912 - M6X16	Cylindrical head screw
	24	ISO 4762 - M4X8	Hex socket screw		40	MS35GOMITO1/4	Compression elbow
	25	ISO 4762 - M5X25	Hex socket screw		41	NIPPL03/8	Reducer
	26	PM001-0027	Wheel assembly		42	RIDUCFILETTA12-38	Conical reducer
	27	ISO 4762 - M6X25	Hex socket screw		43	GTRUBMIGNI08	Faucet
	28	ISO 4762 - M5X30	Hex socket screw		44	RACCORDTUB215	Complete hose connector
	29	PM001-0025	Splash shield		45	ATTACFIP69/22	Threaded connection
	30	PM001-0029	Left handle support		46	CURVETTIP6919	Elbow Mf

Element	Code	Description
	47	MS35TUBOLUBRIP Locline lubrification hose
	48	CURVPETIP6916 Curve spray
	49	TUBOLUBRIP6910 Locline lubrification hose
	50	UGELLOIP6920 Spatula nozzle
	51	MS35TAPPOSC14 Recessed hexagon
	52	POMELNEIP69/5 Thread knob
	53	MASCHERAIP693 Splashproff fabric with eyelets
	54	JIS B 1122 Pan head screw
	55	MEM000097 KQ2T10-G03A

SECTION 3: INSTRUCTION FOR SETTING UP MACHINE

3.1 ELECTRICITY SUPPLY

Under no circumstances should the **MASTER 5000** be connected directly to the electricity supply. You must connect it to the very low-tension electrical conversion unit **MEM 5000** (SELV - Safety extra low voltage) manufactured by us. Before connecting the unit to the electricity supply, please ensure that the rating on the plate affixed to the machine corresponds to the rating of the mains power supply and that the electrical charge of the socket, which should be the interlock type, (CEI 23-12), is suitable for the power of the machine.

ANY PROBLEMS ARISING FROM AN INCORRECT VOLTAGE IS NOT COVERED BY OUR GUARANTEE.

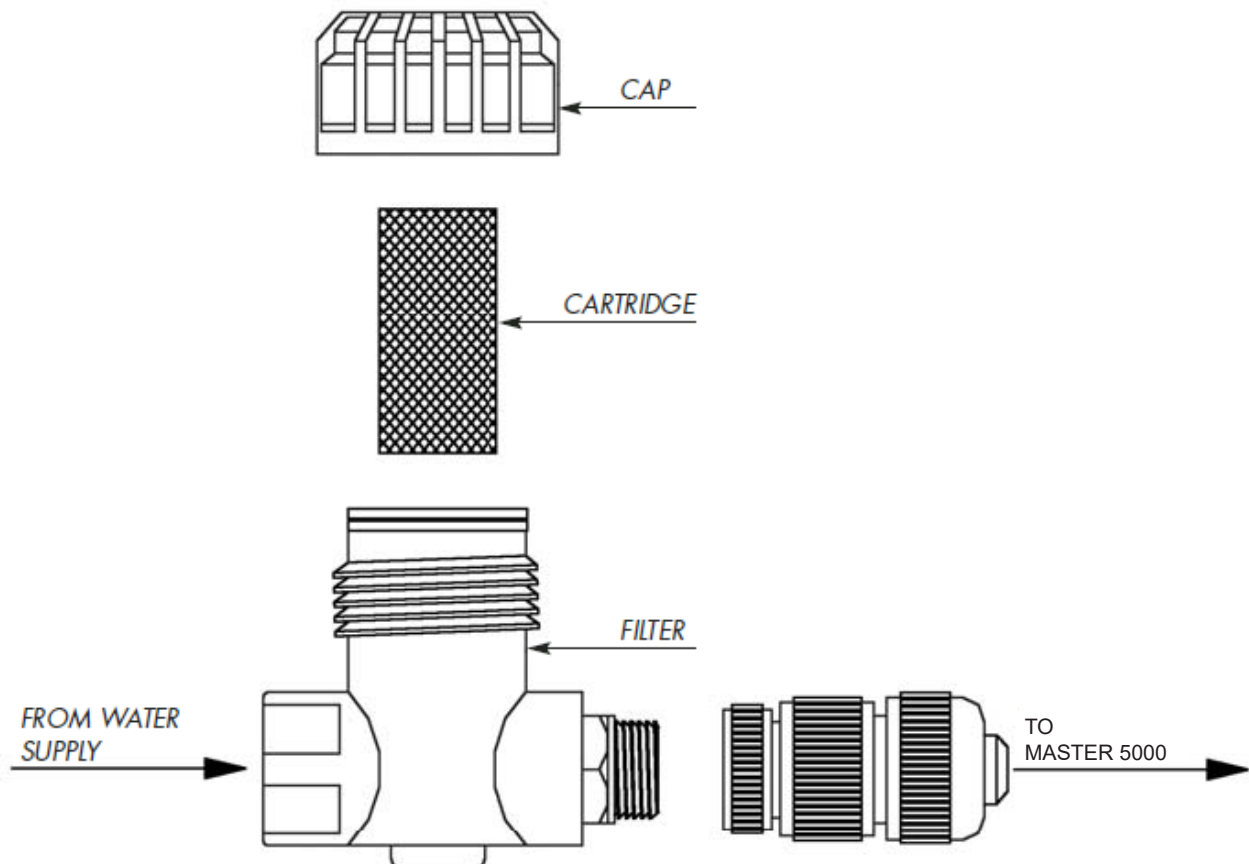
The electrical connection should be made exclusively with cables, plugs and sockets that comply with the EC Norms and in accordance with the EC directives of low tension 73/23 and subsequent modifications; in particular it is necessary to use cables with no interruptions and the cable section of the plug should be adaptable to the absorption power of the machine.

It is forbidden to use multiple adaptors and plugs; MARMOELETTROMECCANICA S.r.l. CAN NOT BE CONSIDERED RESPONSIBLE for incorrect installation that might cause damage to people and things.

3.2 WATER SUPPLY

In order to avoid that the holes of the **WATER SYSTEM** plate get clogged up with foreign bodies present in the water supply of the **MASTER 5000**, we advise you to use the 50 MESH _ MF filter. The filter should be placed between the water supply and the water tap of the **MASTER 5000**.

MESH 1/2 MF FILTER 50



SECTION 4: USE AND MAINTENANCE

4.1 USE

Before starting to work with your machine, observe the following instructions carefully:

- connect cable to electrical conversion unit, after making sure that the data on the plate correspond to that of your electrical supply;
- check position of multi-lubrication system nozzles making sure that water pressure is at least 3 ATM.
- Carefully clean the marble slab surface and the gliding plate of the MASTER 5000 in order to avoid any damage caused by foreign bodies;
- position the wheel correctly according to the thickness of the slab using the adjustment bottoms up-down;
- in order to change the wheels, push the emergency button and unlock the quick connect pin, turning counterclockwise; (when the emergency button is pushed the brake of motor is activated)
- to avoid dangerous overheating we recommend that you unwind the cable from end to end;
- do not leave the machine plugged in while not in operation, switch it off at the mains;
- ensure that the suction grates used for cooling do not get clogged up.

4.2 MAINTENANCE

- Before cleaning or carrying out maintenance, disconnect the machine from the electricity mains. It is advisable to grease the spring handles periodically; make sure they are blocked during operation.
- To ensure the correct functioning of MESH 1/2 MF FILTER 50, it is advisable to clean the filter cartridge periodically. To do this, unscrew the cap to remove the cartridge; clean it with water under pressure or compressed air.
- In order to avoid that the small holes of the WATER SYSTEM get clogged up, use an air pistol periodically to blow air on them.

4.3 ENVIRONMENTAL PROTECTION WARNINGS

When using your machine, it is important to follow current legislation when disposing of waste by products in order to respect and protect the environment. Make sure you send any waste packaging, the machine itself at the end of its life cycle (scrap) and the worn out tools to an ecological recycling centre, via a waste disposal group which is as homogenous as possible to the original type of material. Furthermore, we would advise you to recycle or treat the used water before disposing of it in waterways or in sewage disposal units.

SECTION 5: AERIAL NOISE AND VIBRATIONS OF THE MACHINE

5.1 AERIAL NOISE

The **MASTER 5000** machine, made to rectify, shaping and polishing stone materials, has made phonometric measurements by the production premises, in order to ascertain noise values. Measurements were made with a phonometer of class 1 (norm IEC 651 group 1) put at 1,5 m. The pondered level of acoustic pressure A made by the machine motor is $L_{eq}=70,4$ dB (A).

5.2 VIBRATIONS

The **MASTER 5000** machine, after the valuation tests for the HAV vibrations according to D. Law. 187/05, showed not to exceed the following limits established by the norms:

Daily levels and limit exposure to vibration transmitted to the hand-arm system and to all body.

Vibrations transmitted to the hand-arm system

Daily exposure level: $A(8) = 2,5$ m/s²

Daily exposure limit value: $A(8) = 5$ m/s²

Vibrations transmitted to all body

Daily exposure level: $A(8) = 0,5$ m/s²

Daily exposure limit value: $A(8) = 1,15$ m/s²

6.1 INSTRUCTION FOR USE OF TOOLS ON THE MASTER 5000, FROM GRINDING TOOLS TO POLISHING TOOLS ON TOROIDAL PROFILES OF GRANITE

The **MASTER 5000** machine, made to rectify, shaping and polishing stone materials, has made phonometric measurements by the production premises, in order to ascertain noise values. Measurements were made with a phonometer of class 1 (norm IEC 651 group 1) put at 1,5 m. The pondered level of acoustic pressure A made by the machine motor is $Leq=70,4$ dB (A).



WARNING!!! The operator must not change the position of the spindle between one sequence and the next once the spindle has been positioned correctly for the POS. 1 tool; this would deform the **ONGLIFE** wheels (polishing wheels). If this is done, **MARMOELETTROMECCANICA**, will not cover any damages. Finally, we would like to remind you that the **ONGLIFE** polishing wheels need to be run in for a short period; for this it is advisable to use a metre of waste material before starting.



WARNING!!! IT IS FORBIDDEN to use dirty water with the **ONGLIFE** tools. Before starting work, check that the water supply has a filter which will keep the water clean.

POSITION 1 - **ZENITH/CROMOLINE/SALDOBRASA**

Blue Diamond grinding wheel with ROTATING TOUCHER

Set the RPM switch at 6000 (maximum speed). Move the machine towards the slab and press against it slightly. Move the machine a few centimetres both to the left and then to the right until the wheel itself idles: this means that the rotating toucher has touched the slab and at that stage, the first phase

POSITION 2 - **ZENITH/CROMOLINE**

Gold Diamond grinding wheel with ROTATING TOUCHER

Continue by using the same care as for the Position number 1; this phase of operation is terminated when the rotating toucher touches the slab and the wheel is idle; after using Position 2 you will be able to see that the waves or irregularities left over from the Position 1 have disappeared and that the profile is homogenous.

POSITION 3 - **BIPOWER**

The Pos. 3 **BIPOWER** wheel will both rectify the profile and prepare it for the polishing phase. It is used by moving it from left to right and vice versa a minimum of 2/6 times at 6000 rpm (maximum speed), depending on the thickness of the slab and on how detailed the profile shape is. We recommend that you make quick, constant passes giving a little push but avoiding any breaks in the operation so that there are no undulations.

N.B.: When Pos. 3 Bi-power has already been used to complete quite a number of **??????**

POSITION 4 (4 extra) - **ONGLIFE**

Pass this wheel at 3000 rpm (around the middle of **SPEED**)– make from minimum 4 passes to a maximum of 6 passes from left to right and vice versa pushing a little. Avoid any breaks during the operation in order to avoid any undulations.

POSITION 5 (5 extra) - **ONGLIFE**

Pass this wheel at 3000 rpm (around the middle of **SPEED**)– make from a minimum of 6 passes to a maximum of 8 passes from left to right and vice versa pushing a little.

POSITION 6 (6 extra) - **ONGLIFE**

Pass this wheel at 3000 rpm (around the middle of **SPEED**)– make from a minimum of 8 passes to a maximum of 12 passes from left to right and vice versa pushing a little.

N.B.: THE NUMBER OF PASSES THAT ARE REQUIRED MAY DEPEND ON THE MATERIAL, THE CLIENT'S REQUIREMENTS AND THE STATE OF WEAR OF THE WHEEL ITSELF.

The correct Speed **MAY DEPEND ON THE MATERIAL, THE CLIENT'S REQUIREMENTS AND THE STATE OF WEAR OF THE WHEEL ITSELF**, so it is possible variable the speed to find the exact parameters.

POLYPASTE BOTTLE

POLYPASTE is a highly-concentrated solution (type of wax) of chemical polishing components, which easily remove the opaque layer left by atmospheric agents. It is particularly indicated to be used after the traditional polishing systems. Put **POLYPASTE** on a wool cloth, polish the slab till complete drying of the paste.

The **ZENITH/CROMOLINE** POS.1 BLUE wheels with **ROTATING TOUCHER** can be transformed into the following different profiles by simply changing the **ROTATING TOUCHER (n.b.: pos. 2 cannot be transformed)**:



WARNING!!! Such transformations can be made only on the POSITION 1 grinding wheels, by simply ordering the relative **ROTATING TOUCHER** and using the code that you will find in the price list.

6.2 INSTRUCTION FOR USE OF TOOLS ON THE MASTER 5000, FROM GRINDING TOOLS TO POLISHING TOOLS ON TOROIDAL PROFILES OF MARBLE

Furthermore, the operator must not change the position of the spindle between one sequence and the next once the spindle has been positioned correctly for the POS. 1 tool; this would deform the **LONGLIFE** wheels (polishing wheels). If this is done, **MARMOELETTROMECCANICA**, will not cover any damages. Finally, we would like to remind you that the **LONGLIFE** polishing wheels need to be run in for a short period; for this it is advisable to use a metre of waste material to do this.



WARNING!!! IT IS FORBIDDEN to use dirty water with the **LONGLIFE** tools. Before starting work, check that the water supply has a filter which will keep the water clean.

POSITION 1 - **ELETTROLYTIC**

*GREEN DIAMOND GRINDING WHEEL WITH **ROTATING TOUCHER***

Set the RPM switch at 6000 (maximum speed) Move the machine towards the slab and press against it slightly. Move the machine a few centimetres both to the left and then to the right until the wheel itself idles: this means that the rotating toucher has touched the slab and at that stage, the first phase has been completed.

POSITION 2 - **ELETTROLYTIC**

*BRONZE DIAMOND GRINDING WHEEL WITH **ROTATING TOUCHER***

Continue at 6000 rpm (maximum speed) by using the same care as for the Position number 1; this phase of operation is terminated when the rotating toucher touches the slab and the wheel is idle; after using Position 2 you will be able to see that the waves or irregularities left over from the Position 1 have disappeared and that the profile is homogenous.

POSITION 3 – **BIPOWER**

The Pos. 3 BIPOWER wheel will both rectify the profile and prepare it for the polishing phase. It is used by moving it from left to right and vice versa a minimum of 2/6 times at 6000 rpm, (maximum speed). Depending on the thickness of the slab and on how detailed the profile shape is. We recommend that you make quick, constant passes giving a little push but avoiding any breaks in the operation so that there are no undulations.

N.B.: When Pos. 3 BIPOWER has already been used to complete quite a number of metres, it will be necessary to do a few extra passes in order to obtain a perfect profile.

POSITION 4 (4 extra) – **LONGLIFE**

Pass this wheel at 3000 rpm (around the middle of SPEED – make from minimum 4 passes to a maximum of 6 passes from left to right and vice versa pushing a little. Avoid any breaks during the operation.

POSITION 5 (5 extra) – **LONGLIFE**

Pass this wheel at 3000 rpm (around the middle of SPEED – make from a minimum of 6 passes to a maximum of 8 passes from left to right and vice versa pushing a little.

POSITION 6 (6 extra) – **LONGLIFE**

Pass this wheel at 3000 rpm (around the middle of SPEED – make from a minimum of 8 passes to a maximum of 12 passes from left to right and vice versa pushing a little.

NB: THE NUMBER OF PASSES THAT ARE REQUIRED MAY DEPEND ON THE MATERIAL, THE CLIENT'S REQUIREMENTS AND THE STATE OF WEAR OF THE WHEEL ITSELF.

The correct Speed **MAY DEPEND ON THE MATERIAL, THE CLIENT'S REQUIREMENTS AND THE STATE OF WEAR OF THE WHEEL ITSELF, So it is possible variable the speed to find the exact parameters.**

POLYPASTE BOTTLE

POLYPASTE is a highly-concentrated solution (type of wax) of chemical polishing components, which easily remove the opaque layer left by atmospheric agents. It is particularly indicated to be used after the traditional polishing systems. Put **POLYPASTE** on a wool cloth, polish the slab till complete drying of the paste.

The **ELECTROPLATED** POS.1 wheels with ROTATING TOUCHER can be transformed into the following different profiles by simply changing the ROTATING TOUCHER (n.b.: pos. 2 cannot be transformed):



WARNING!!! Such transformations can be made only on the POSITION 1 grinding wheels, by simply ordering the relative ROTATING TOUCHER and using the code that you will find in the price list.

SECTION 7: SAFETY

7.1 OIL WATER SYSTEM

1. IDENTIFICATION:

- BRAND NAME: **OIL WATER SYSTEM**
- FUNCTION: Protection for **WATER SYSTEM PLATE**
- SUPPLIER: **MARMOELETTROMECCANICA S.r.l.**
Via Flaminia Km 41,400
00068 Rignano Flaminio (Roma) - ITALY
Tel. +39 0761-50.51 - Fax +39 0761-50.83.88

2. COMPOSITION/INFORMATION ON INGREDIENTS:

Substances of dangerous content, as per DM dated 28.4.97 Aqueous emulsion of polydimethylsiloxane with aminoalchilic groups Non classified EEC product SYMBOL: Xi Irritant R-phrases R36 Irritating to eyes Concentration in product < 10% (Non scheduled symbol, non scheduled R-phrases)

3. IDENTIFICATION OF DANGER:

The following information refers to this product as it stands. Observe usual standard norms of good practice in industry to ensure safe use of product.

4. FIRST AID MEASURES:

SKIN CONTACT: wash with soap and water.

EYE CONTACT: wash immediately with running water for at least 15 minutes. If irritation should persist, consult your doctor. IF INGESTED: if the harmed party is conscious, make them vomit. Consult a doctor immediately.

IF INHALED: the product does not emit irritating or harmful vapours if used correctly.

5. FIREPROOFING MEASURES:

DANGER OF FIRE: the product is not flammable. In case of fire, cool down the containers exposed to it. EXTINGUISHING AGENTS: CO₂, foam, atomised/spray water.

DO NOT USE: -

PROTECTIVE EQUIPMENT: no specific protective measures required. COMBUSTION PRODUCTS: CO_x, SiO₂.

6. MEASURES TO BE TAKEN IN CASE OF INCIDENTAL RELEASE:

INDIVIDUAL PRECAUTIONS: no specific precautions required. ENVIRONMENTAL PRECAUTIONS: avoid discharge into waterways and drains.

CLEANING METHODS: absorb by using cloths, sand, fossil meal. Wash with abundant water.

7. MANIPULATION AND STOCKING:

MANIPULATION: while pouring avoid any bubbling which might cause incidental sprays/spillage. STOCKING: keep in hermetically sealed containers. Protect from frost.

8. EXPOSURE CONTROL/INDIVIDUAL PROTECTION:

PRECAUTIONS: none in particular

RESPIRATORY PROTECTION: not necessary.

EYE PROTECTION: use protective goggles while pouring.

SKIN PROTECTION: use normal working attire.

HAND PROTECTION: use rubber or PVC gloves.

9. PHYSICOCHEMICAL CHARACTERISTICS:

APPEARANCE AT 20 °C: milk white liquid

SMELL: odourless.

PH: 8.

PH sol. 1%: 7.5.
BOILING POINT: 100°C.
IGNITION POINT: fireproof.
AUTO IGNITION: –
EXPLOSIVE PROPERTIES: non-explosive.
VAPOUR PRESSURE: not available.
DENSITY AT 20° C: 1Kg/dm³
WATER SOLUBLE PROPERTIES: complete. FAT SOLUBLE PROPERTIES: insoluble.
VAPOUR DENSITY: not available

10. STABILITY AND REACTIVITY:

CONDITIONS TO AVOID: do not expose to temperatures lower than 0° C. for prolonged periods of time. SUBSTANCES TO AVOID: strong acids, strong oxidants.
PRODUCTS OF DANGEROUS DECOMPOSITION: measurements carried out at temperatures higher than 150° C show that small quantities of formaldehyde separate themselves via incomplete oxidating decomposition.

11. TOXICOLOGY INFORMATION:

EFFECTS ON MAN: none we are aware of. EFFECT ON EYES: may cause irritation.
EFFECT ON SKIN: if contact is repeated and prolonged, it may cause irritation to particularly hazardous subjects. EFFECT IF INGESTED: practically non-toxic LD 50 > 5000 mg/kg.
EXPOSURE PATHWAYS: cutaneous, ingestion.

12. ECOLOGICAL INFORMATION:

Use according to good practice; avoid dispersing the product in the environment, see points 3, 6 and 13.

13. WASTE DISPOSAL CONSIDERATIONS:

Dispose of any excesses, waste and empty containers according to all relevant local and national regulations.

14. REGULATION INFORMATION:

LABELLING AS PER DM 28.4.97
SYMBOL: not required.
R-phrases: not required.
S-phrases not required. DANGEROUS COMPONENTS: -----

15. OTHER INFORMATION:

Product to be used exclusively for professional purposes. This information should be made readily available to all workers who have to use this product for professional purposes.

The information and recommendations outlined here are based on the knowledge to date. They refer exclusively to the product in question and they do not constitute any form of guarantee of particular quality. The user must ensure suitability and completeness of such information in relation to the specific use that he must make of it.
This chart substitutes all previous editions.

SECTION 7: SAFETY

7.2 POLYPASTE

1. IDENTIFICATION:

- BRAND NAME: **POLYPASTE**
- FUNCTION: **POLISHING WAX FOR MARBLE AND GRANITE**
- SUPPLIER: **MARMOELETTROMECCANICA S.r.l.**
Via Flaminia Km 41,400
00068 Rignano Flaminio (Roma) - ITALY
Tel. +39 0761-50.51 - Fax +39 0761-50.83.88

2. COMPOSITION/INFORMATION ON INGREDIENTS:

Natural waxes. Solvents.

3. IDENTIFICATION OF DANGER:

The product is flammable if placed close to a source of ignition heat.

4. FIRST AID MEASURES:

SKIN CONTACT: wash with abundant soap and water.

EYE CONTACT: wash immediately with running water for at least 10 minutes and consult your doctor. IF INGESTED: visit the doctor and show him the safety card.

IF INHALED: the product does not emit irritating or harmful vapours if used correctly.

5. FIREPROOFING MEASURES:

This product may generate inflammable mixtures or burn only if heated to a temperature that is equal to or higher than inflammability.

RECOMMENDED EXTINGUISHING AGENTS: water, foam, chemical powders depending on the materials involved in the fire. Spray the fire with water.

FORBIDDEN EXTINGUISHING AGENTS: none in particular.

COMBUSTION RISK: avoid inhaling the fumes.

PROTECTIVE EQUIPMENT: use equipment to protect respiratory tract.

6. MEASURES TO BE TAKEN IN CASE OF INCIDENTAL RELEASE:

INDIVIDUAL PRECAUTIONS: no specific precautions required. ENVIRONMENTAL PRECAUTIONS: no specific precautions required. CLEANING METHODS: no specific precautions required.

7. HANDLING AND STOCKING:

HANDLING: avoid skin contact. While working do not eat or drink. STOCKING: keep containers well sealed, store in well aired environment

8. EXPOSURE CONTROL/INDIVIDUAL PROTECTION:

PRECAUTIONARY MEASURES: work in well-aired environment or where there is an adequate system of ventilation. RESPIRATORY PROTECTION: no particular precaution necessary when used in a normal way.

EYE PROTECTION: use protective goggles when product may be close to eyes. SKIN PROTECTION: use normal working attire.

HAND PROTECTION: use protective gloves.

9. PHYSICOCHEMICAL CHARACTERISTICS:

APPEARANCE: white and/or black solid SMELL: fragrant

IGNITION POINT: approx. 45° C AUTO IGNITION: > 200° C DENSITY AT 20° C: 12

WATER SOLUBLE PROPERTIES: insoluble

10. STABILITY AND REACTIVITY:

CONDITIONS TO AVOID: this product is stable when used under normal circumstances. SUBSTANCES TO AVOID: none in particular.

11. TOXICOLOGY INFORMATION:

EFFECT ON EYES: may cause irritation if it comes into contact with the eyes.

EFFECT ON SKIN: if contact is repeated and prolonged, it may cause irritation to the skin. EFFECT IF INHALED: high concentration of vapour may cause headaches.

EXPOSURE PATHWAYS: inhalatory and cutaneous.

12. ECOLOGICAL INFORMATION:

Use according to good practice; avoid dispersing the product in the environment.

13. WASTE DISPOSAL CONSIDERATIONS:

Dispose of any excesses, waste and empty containers according to all relevant local and national regulations.

14. TRANSPORT INFORMATION:

ROAD AND FERRY TRANSPORT (ADR/RID): class: 3 CLASSIFICATION CODE: f1

ONU ADR_NUMBER: 1299 ADR_PACKING_GROUP: II^o

SEA TRANSPORT (IMDG/IMO): 3.2

IMDG: onu_number: 1299 IMDG_PACKING_GROUP: II^o TRANSPORT EMERGENCY CARD: 30g35

15. REGULATION INFORMATION:

DM 28.1.92 (Classification and labelling)

SYMBOLS:

R-PHRASES: R 10 Flammable.

R 21 Harmful in contact with skin.

R 22 Harmful if swallowed.

S-PHRASES: S 15 Keep away from heat.

S 20 When using do not eat or drink.

S 44 If you feel unwell, seek medical advice immediately.

16. OTHER INFORMATION:

Product to be used exclusively for professional purposes. This information should be made readily available to all workers who have to use this product for professional purposes.

The information and recommendations outlined here are based on the knowledge to date. They refer exclusively to the product in question and they do not constitute any form of guarantee of particular quality. The user must ensure suitability and completeness of such information in relation to the specific use that he must make of it.

This chart substitutes all previous editions.



marmoelettro.com

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