MAXIMA®

ONLY FOR REAL PROFESSIONALS

SCANMAX 180 EVO
Use and maintenance booklet

SERIAL NUMBER M

USE AND MAINTENANCE MANUAL

SCANMAX 180 EVO

INDEX

DECLARATION OF CONFORMITY

MAXIMA SPA declares that the diamond disc grooving machine model

SCANMAX 180 EVO

was constructed in accordance with the following standards :

DIRECTIVE 2006/95/EC
DIRECTIVE 2004/108/EC

and in accordance with the following harmonised standards:

EN 55014
EN 60745 - 1
EN 60745 - 2 - 3

The noise level is :

Lp	(noise)	dB(A)	**97,5**
Lw	(sound power)	dB(A)	**< 135**

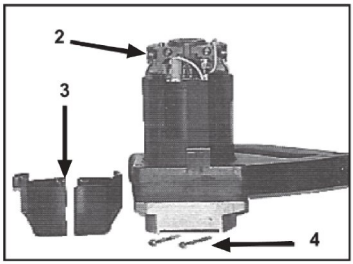
The weighted root mean square acceleration value is : **< 2.5**$^{m/s2}$

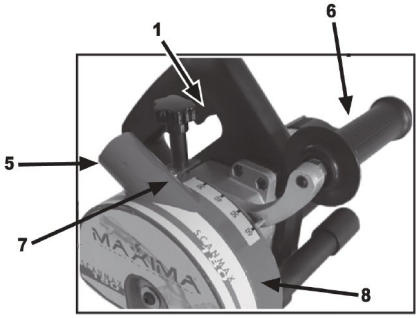
Take appropriate protective measures for the auditory system.

The employer must ensure that employees are informed and trained in the use of the most appropriate protective measures.

Released in Poviglio, January 2011

MAXIMA SPA
The Management
CEO
i.t. Mirco Dall'Olio





Direction of advancement

Subject to modifications

SCANMAX 180 EVO	
1	Switch
2	Brush seat
3	Double cap
4	Cap screws
5	Suction coupling
6	Additional grip
7	Track depth adjustment
8	Protective hood

Technical features

Supply voltage	Volt	**230**
Frequency	Hz	**50/60**
Rated power	Watt	**1,800**
Idle rpm	rpm	**4,900**
0 max. disc	mm.	**180 x 22.2**
Track depth	mm.	**30 - 60**
Track width	mm.	**2 - 60**
Weight	Kg.	**6.0**

Equipment

N°	Metal box
2	Service Keys
	Use and maintenance booklet - Warranty coupon

Read the instructions in this booklet carefully before using the machine.

Keep it for further reference.

GENERAL SAFETY STANDARDS

Caution!
When using electric tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following.
Read all these instructions before attempting to operate this product.

It is recommended that appropriate measures be taken to protect the hearing if ambient noise exceeds the 85 dB threshold.

Keep the work area clean.
Cluttered areas and benches invite injuries.

Consider work area environment.
Don't expose power tools to rain. Don't use power tools in damp or wet locations. Don't use power tools in presence of flammable liquids or gases.

Guard against electric shock.
Avoid body contact with grounded surfaces (e. g. pipes, radiators, refrigerators).

Keep children away.
All visitors should be kept away from work area.
Do not let visitors touch the tools and extension cables.

Store idle tools.
When not in use, tools should be stored in dry, high, or locked-up place, out of the reach of children.

Don't force tools.
It will do the job better and safer at the rate for which It was designed.

Use right tool.
Don't force small tools or attachments to do the job of a heavy duty tool. Don't use tools for purposes not intended.

Dress properly.
Do not wear loose clothing or jewellery. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.

Use safety glasses.
Also use face or dust mask if cutting operation is dusty, especially if you do not equip your tool with a dust extractor.

Don't abuse cable.
Never carry tool by cable or yank it to disconnect it from socket. Keep cable from heat, oil and sharp edges.

Secure work.
Use clamps or a vice to hold work. It's safer than using your hand and it frees both hands to operate tool.

Don't overreach.
Keep proper footing and balance at all times.

Maintain tools with care.
Keep tools sharp and clean for better and safer performance.
Follow instructions for lubricating and changing accessories.
Inspect tool cable periodically and, if damaged, have it repaired by authorised service facility. Keep handles dry, clean and free from oil and grease.

Disconnect tools.
When not in use, before servicing, and when changing accessories such as blades, bits and cutters.

Remove adjusting keys and wrenches.
Form the habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

Avoid unintentional starting.
Don't carry plugged-in tool with finger on switch. Be sure switch is off when plugging in.

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Outdoor use extension cords.
When tool is used outdoors, use only extension cords intended for use outdoors and so marked.

Stay alert.
Watch what you are doing. Use common sense.
Do not operate tool when you are tired.

Check damaged parts.
Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other condition that may affect its operation

Warning!
The use of any other accessory or attachment other than recommended in this operating instruction or the catalogue may present a risk of personal injury.

Tool repairing by expert only.
This electric tool is in accordance with the relevant safety rules.
Repairing of electric tools may be carried out only by experts, otherwise it may cause considerable danger for the user.

TECHNICAL STANDARDS

Double insulation
Your tool is completely insulated. This means that two independent isolation barriers protect you from the contact of metal parts and provide additional protection against the possibility of electric shock.

Electrical safety
Make sure that the voltage of the mains that you connect to is the same as that of the tool.

Extension cords
Should it become necessary to use an extension cable to supply the tool, check that the conductor cross-section is sufficient in relation to the supply current to minimise voltage drop.
The table below shows the required diameter in relation to the cable length.

Conductor size	Cable capacity
0.75 mmq	6 A
1.00 mmq	10 A
1.50 mmq	15 A
2.50 mmq	20 A
4.00 mmq	25 A

Voltage	Amperes	Extension length (metres)					
		7.5	15	25	30	45	60
Number plate data		Cable capacity (Ampere					
Volt 115	0 – 2.0	6	6	6	6	6	10
“	2.1 – 3.4	6	6	6	6	15	15
“	3.5 – 5.0	6	6	10	15	20	20
“	5.1 – 7.0	10	10	15	20	20	25
“	7.1 – 12.0	15	15	20	25	25	
“	12.1 – 20.0	20	20	25			
Volt 240	0 – 2.0	6	6	6	6	6	6
“	2.1 – 3.4	6	6	6	6	6	6
“	3.5 – 5.0	6	6	6	6	10	15
“	5.1 – 7.0	10	10	10	10	15	15
“	7.1 – 12.0	15	15	15	15	20	20

Disc protection casing
The diamond disc grooving machine is equipped with a new mobile stainless steel guard that guarantees optimum dust extraction whatever the set cutting depth. To release the movable protection and thus change the discs, it is only necessary to unscrew the knob on the back of the fixed protection hood, then open the protection completely and, after replacement, return everything to its original position.

- Do not use cables with a smaller diameter than recommended
- Periodically use both cables and plugs with two polarities
- Connect to waterproof external sockets
- Connect the male plug only to the tool cable, while the female plug should only be connected to the extension cable.

TOOL MAINTENANCE.

Keep the disc guard, cooling slots and motor housing clean of dust and dirt with a clean cloth and air jet . Always use an industrial vacuum coupled to the tool. Excessive accumulation of metal dusts or oils can lead to deterioration of the internal insulation and cause possible electric shocks.

Do not overload the tool for long periods. Overloading generates a considerable reduction in speed and efficiency, and the machine overheats. In this case, run the tool for a minute or two at no load, so that the fan can bring the motor temperature back to normal.

Switching the machine on and off while it is under load considerably reduces the life of the switch.

Lubrication of your tool is carried out during construction and, under normal conditions of use, no additional is required. Since the life of a tool is highly dependent on proper lubrication, the machine itself must be taken to an Authorised Service Centre at regular intervals for periodic maintenance.

WARRANTY

After-sales service.

All products are scrupulously tested before leaving the factory.

If your tool does not fully comply with its operating characteristics or shows defects in workmanship or material defects, within 12 months from the date of purchase, we will replace the defective parts free of charge, excluding the cost of labour and consumable parts, provided that :

- the product is returned to the Service Centre with proof of the date of purchase;
- the product has not been abused and the defect is not caused by neglect;
- the product has not been subjected to repair attempts by persons who are not part of our service staff or, outside , our distribution staff

This warranty is an additional benefit to your rights under law.

Replacement of the machine is strictly excluded from the warranty.

INSTRUCTIONS FOR USE

Additional grip.

For safety reasons , it is essential to always use the additional grip.
In the grooving machine model purchased, the additional handle is already mounted in the correct position and ready for use.
The position of the grip has been designed and constructed for an optimal and secure grip of the tool.

Track width adjustment.

To adjust the cutting width, please proceed as follows :
Make sure the tool is not connected to the mains .

- Using the spanner supplied , unlock the screw holding the upper ring nut of the disc lock.
- Then insert the two discs in the desired position to form the required cutting width; pay particular attention to the direction of rotation of the diamond discs.
- Put the upper ring nut back in place and tighten the entire assembly with the screw.

Before starting work, check that the tool turns freely and that the two discs are parallel to each other .

Track depth adjustment.

To adjust the depth of the cut, proceed as described below :

- Make sure the tool is not connected to the mains .
- Loosen the plastic knob located between the motor and the protective hood.
- Rotate it until the desired depth is obtained (indicated by the pin on the scale), then tighten the knob again .

The grooving machine traces from 30 mm up to a maximum width of mm.

Groove execution with a self-starting vacuum cleaner

Before starting any operation, it is recommended that you carefully read the operating instructions of the vacuum cleaner used;
this can also be of the manual type and in this case it is sufficient to use the switch on it .
It is recommended to use only industrial vacuum cleaners equipped with a cartridge filter system; a model for domestic

use with a paper bag is to be absolutely excluded as, given the particular fineness and composition of the dust produced, it would clog after only a few minutes of operation.

- Make sure that the vacuum cleaner is not connected to the mains and insert the groove pin into place on the vacuum cleaner head.
- Set the vacuum cleaner selector switch to the 'A' position of automatic and turn on the vacuum cleaner switch.
- Place the grooving tool on the wall to be cut and, after the discs have penetrated completely, start pushing with even pressure.
- The direction of advancement must always be as indicated by the arrow on the guard.
- For vertical grooves, it is advisable to proceed from top to bottom by turning the machine upside down: in this way, it is the weight of the tool itself that determines the advancement and no additional pressure needs to be applied.
- For horizontal grooves, from right to left, only exert the pressure necessary for advancement: too much pressure can cause an overload on the motor in particularly hard and compact materials, which can be felt by a noticeable decrease in speed and overheating of the tool.
- When grooving is finished, release the switch completely, wait until the tool has come to a complete stop, then remove the machine from the material and carefully put it away, taking care not to hit the diamond discs on the ground.
- The automatic vacuum cleaner will start operating at the same time as the power tool and will switch off with a delay of about six seconds after the groover switch has been released; this is to be able to completely remove the dust residue left inside the tube.

Replacing and checking brushes

After about 300 hours of actual work, the wear condition of the brushes must be checked. To carry out this check proceed as follows:

- Pull the plug out of the socket.
- Unscrew the two screws **(4)** and remove the two pieces that make up the double cap (3).
- Lift the brush retaining spring to the upper edge of the brush holder and remove the worn brush, replacing it with the new one after removing the end of the connecting braid.
- Repeat the operation for the second brush and close the cover again, taking care to check the correct positioning of the various conductors.
- Connect the tool to the power socket and run the tool idle for about 5 minutes before starting work.

It is recommended to always use original spare parts or, if you are not able to perform this task correctly yourself, to contact an authorised service centre.

CHARACTERISTICS OF DIAMOND DISCS

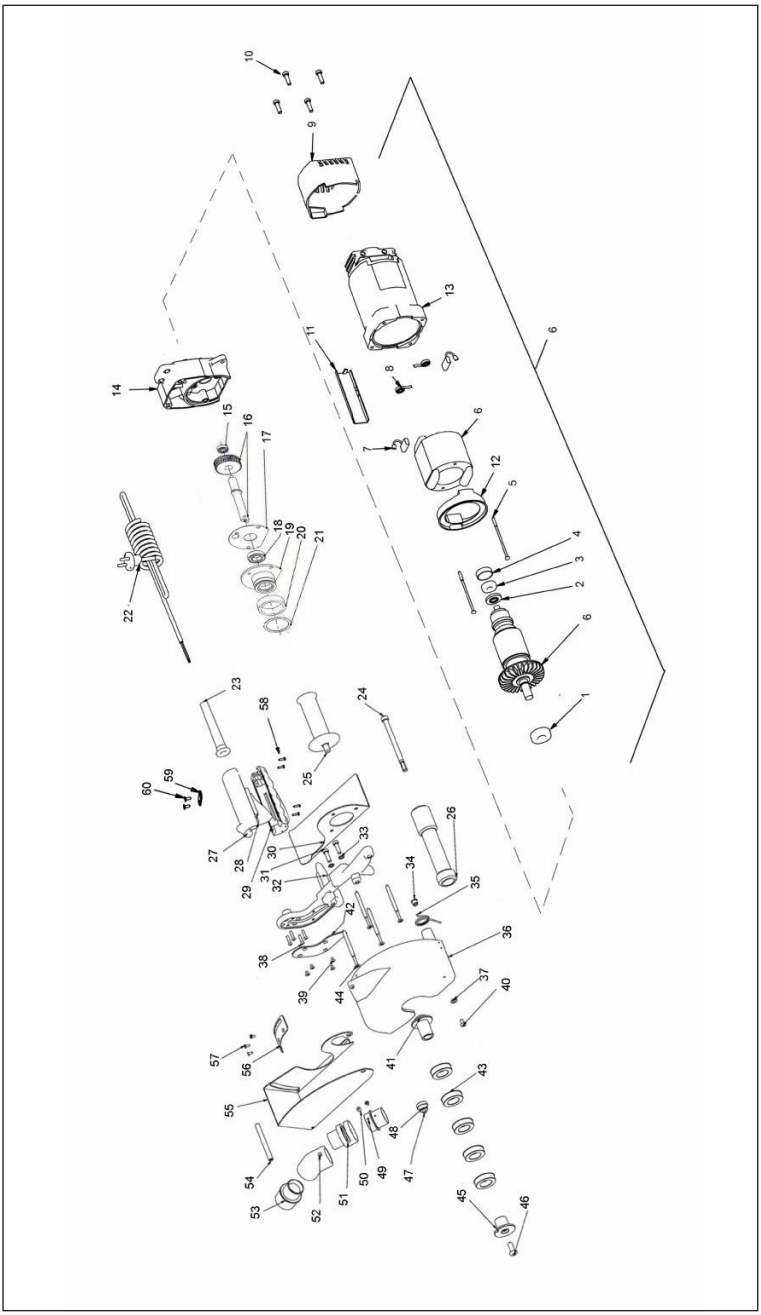
Determining the direction of rotation.

In new discs , the correct direction of rotation is generally identified by an arrow With used discs , the arrow may not be visible due to wear and to determine the correct rotation , the diamond grains must therefore be carefully observed : **the exact direction is in fact that in which the grain precedes its own trail.**
An incorrectly mounted diamond blade causes pronounced overheating, abnormal wear and, most importantly, does not allow the machine to advance

Dressing.
If, during the cutting phase, you notice a slowdown in advancement, it is advisable to dress the diamond of the discs by performing
this simple operation:

- Press the switch on the tool.
- Place the diamond dressing stone on the discs and make 2 or 3 cuts ; you will immediately notice a new lustre in the diamond sectors .

The data contained in this user manual may be changed at any time and without prior notice by the manufacturer of the product in question.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POSITION	PART NO.	DESCRIPTION
1	SMAX03.131015	BEARING
2	SMAX08.121000	DISTANCE
3	SMAX03.131000	BEARING
4	SMAX09.141000	BEARING SLEEVE
5	SMAX03.101000	SCREW
6	SMAX*05.101001	COMPLETE MOTOR SET
7	SMAX05.121006	BRUSH
8	SMAX05.121000	BRUSH BASE
9	SMAX08.101002	MOTOR COUPLER
10	SMAX03.101015	SCREW
11	SMAX08.101005	WIRE COVER
12	SMAX08.101027	BAFFLE
13	SMAX08.101008	MOTOR BODY
14	SMAX07.101007	GEARBOX
15	SMAX03.131009	BEARING
16	SMAX02.101003	SHAFT AND GEAR ASSEMBLY
17	SMAX09.131000	GASKET
18	SMAX03.131015	BEARING
19	SMAX07.131016	GEARBOX COVER
20	SMAX08.101004	COLLAR
21	SMAX03.171000	SPACER RING
22	SMAX06.131000	ELECTRICAL CABLE WITH PLUG
23	SMAX09.141002	CABLE PROTECTOR
24	SMAX03.101040	SCREW
25	SMAX08.121007	GRIP
26	SMAX08.101022	SLIDING ROLLER
27	SMAX08.101010	SWITCH HOLDER GRIP
28	SMAX06.121001	SWITCH
29	SMAX08.101010	SWITCH HOLDER GRIP
30	SMAX07.131072	SLIDE
31	SMAX03.101037	SCREW
32	SMAX02.101046	DOUBLE GRIP SUPPORT
33	SMAX03.121004	WASHER
34	SMAX07.131012	SPRING RETAINER BUSHING
35	SMAX11.121001	SPRING
36	SMAX02.101016	CASING
37	SMAX07.131010	CASING RETAINER BUSHING
38	SMAX13.101019	SCREW

39	SMAX03.101057	SCREW
40	SMAX03.100012	SCREW
41	SMAX07.131030	INTERNAL FLANGE
42	SMAX08.101006	CABLE COMPARTMENT COVER
43	SMAX02.101038	SPACER SERIES
44	SMAX03.101065	SCREW
45	SMAX07.131027	OUTER FLANGE
46	SMAX03.101041	SCREW
47	SMAX07.131011	THREADED BUSHING
48	SMAX03.171022	CASING LOCK PIN
49	SMAX07.131055	MALE SWIVEL SUCTION COUPLING
50	SMAX03.101027	SCREW
51	SMAX07.131054	SWIVEL SUCTION COUPLING
52	SMAX08.121003	SUCTION ELBOW
53	SMAX08.101013	CONICAL SUCTION CONNECTION
54	SMAX07.131058	PROTECTION SLIDING ROLLER
55	SMAX07.131053	MOBILE PROTECTION
56	SMAX07.131047	DEPTH ADJUSTMENT PLATE
57	SMAX03.101011	SCREW
58	SMAX03.101007	SCREW
59	SMAX03.171006	CABLE STOP PLATE
60	SMAX03.101011	SCREW
	SMAX03.171020	DEPTH ADJUSTMENT KNOB
	SMAX12.111004	GREY METAL CASE

"*05.101001 = The code for the COMPLETE MOTOR SET includes all parts between part 1 and 13, plus just the gear wheel at reference 40, without the disc holder shaft."

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Maxima SpA - Via Matteotti, 6 - 42028 Poviglio (Re) ITALY
tel 0039 0522 968011 - fax 0039 0522 967536
info@maxima-dia.com - www.maxima-dia.com