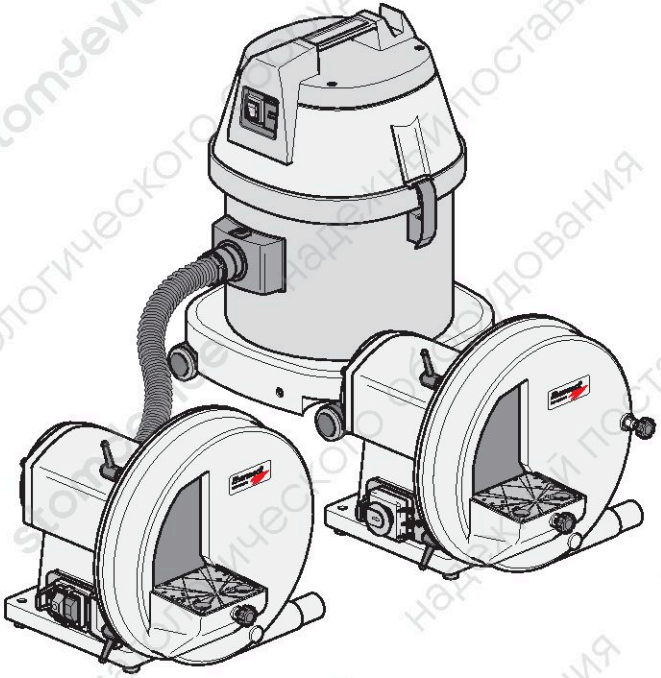
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SQM 25



User Manual

Model Trimmers & Aspirator (SAB 1000 G)

IT FR DE EN ES

Zhermack TECHNICAL

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The data given in this manual may be modified without prior notice.

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CHAPTER 1: INTRODUCTION

HOW TO READ AND USE THE MANUAL 1.1

This Use and Maintenance Manual provides information on the utilisation, installation and maintenance of the ***SQM 25 model trimmers*** (***SQM 25 N*** and ***SQM 25 SN***) and the ***SAB 1000 G aspirator***, manufactured by ***Zhermack S.p.A.***

• The model trimmer and aspirator must be only be used as described in this Manual: it is therefore recommended that you read it carefully prior to installation and start-up. Make sure that you read the entire manual and pay particular attention to messages written in bold type or items highlighted by boxes and/or symbols: the symbols are designed to highlight situations involving danger or requiring caution (see paragraph 1.2).

• Observance of standards and regulations shown in this manual will ensure that the machine is used properly and that maintenance work is carried out safely.

• This Use and Maintenance Manual is an integral part of the machine: it should therefore be kept together with the machine so that it can be consulted as and when necessary (keep the booklet in a secure dry place away from sunlight, atmospheric agents, etc.). It must be available for consultation throughout the working life of the machine even when the machine is sold or finally dismantled.

• It is recommended that you keep this manual constantly updated by integrating any amendments, additions or modifications made by the Manufacturer. Any notes or comments should be made on the blank pages at the rear of the booklet (see Appendices: Notes).

• Use the manual properly so that it is not damaged in any way.

• Do not remove, tear or write on any part of the pages.

• If the manual is lost or damaged and its contents become illegible you can request a replacement copy from the Manufacturer.

The purpose of this Use and Maintenance Manual is to provide users with information on how to operate the machine properly. The manual contains all the information needed to use the device as intended: in particular the manual includes instructions and information on the following:

• correct installation of the machine;
• Detailed description of how the machine works and its components;
• Initial start-up;
• Scheduled maintenance;
• Basic Safety and Accident Prevention info.

This manual contains nine chapters each of which covers a specific argument.
The appendices at the rear of the manual are a useful complement to these chapters.

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1.2 TERMINOLOGY AND SYMBOLS

It is important that you understand the following symbols and their significance as they highlight important information such as critical situations, practical advice, or straightforward information.
If you have any doubts as to the significance of a symbol always consult this page.

• Tasks for which failure to observe instructions or tampering with machine parts may put personnel in serious danger are highlighted by the symbol:



DANGER!
This symbol refers to safety standards which must be observed at all times in order to protect both workers and machine.

• Critical situations concerning dangerous areas or tasks in which failure to observe the instructions may render the warranty null and void, or cause damage to machine, connected components or the surrounding area, are highlighted by the symbol:



WARNING!
This symbol refers to safety standards which must be observed carefully in order to guarantee your safety, other people's safety and prevent damage to the machine.

• Any work that fails to comply with instructions in this manual, or any tampering which might automatically render the warranty null and void, is highlighted by the following symbol:



FORBIDDEN!
This symbol refers to actions which must never be carried out (i.e. forbidden actions).

• Any general information and/or advice which may be useful at any time is highlighted by the following symbol:



NOTE!
This symbol highlights information and/or useful advice.

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CHAPTER 2: GENERAL INFORMATIONS

RESPONSABILITY 2.1

Failure to observe the instructions in this Use and Maintenance Manual exonerates the Manufacturer from any liability whatsoever.
For any matters not covered by this manual or about which you have any doubts please contact the Manufacturer directly:

Zhermack S.p.A.
Via Bovazecchino, 100
45021 Badia Polesine • RO • Italy
Tel. +39 0425 597 611 • Fax +39 0425 53 596
http://www.zhermack.com e-mail: info@zhermack.com

If machine maintenance work fails to comply with instructions or is done in such a way as to compromise machine integrity or modify its characteristics ***Zhermack S.p.A.*** shall be exonerated from any liability as regards worker safety and/or machine performance.

WARRANTY: GENERAL INSTRUCTION 2.2

Included in the Appendices to this Use and Maintenance Manual you will find the Warranty certificate and the ID Form which must be filled out in full.
In general the Warranty is rendered null and void by the following:
• Improper machine use.
• Incorrect installation.
• Serious negligence of maintenance schedules.
• Modifications to or work on the machine which has not been authorised by the Manufacturer (especially on safety devices).
• Use of non-original spare parts.

Zhermack S.p.A. **cannot, as of this moment, be held liable if the machine is modified or tampered with without prior written consent from the Manufacturer. Consequently, any repairs made by unauthorised personnel, use of non-original spare parts or failure to comply with the installation standards specified in this manual shall immediately render the Warranty null and void.**



AUTHORIZED PERSONNEL 2.3

Personnel may be divided into the following categories:
• ***Operator-user:***
Person trained to use the machines. He/she may carry out all the tasks needed to operate this machines: these tasks include starting/stopping the machine, carrying out routine inspections and any other tasks linked to everyday machine use.

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The operator-user must only use the machine when it is fully assembled and the safety devices are working properly as described in this manual.

Before using this machine or carrying out any work on it, the operator must read the entire contents of this manual. This manual has been drawn up to provide the user with essential information on rational, safe utilisation of the machine. The user must comply with the information given at all times.
Furthermore, the user must use the work sheets enclosed with this manual so as to keep a record of maintenance/component replacement work as well as make notes on any machine malfunctions.

• ***Zhermack S.p.A. authorised maintenance technician:***
Person authorised to carry out work on the machine under all operating conditions and all safety levels. He/she is also authorised to carry out any mechanical or electrical repairs/adjustments, scheduled maintenance and any component replacement work.

2.4 GENERAL SAFETY REGULATIONS

The operator must read the advice and warnings given below and comply with such regulations at all times: doing so will ensure safe, long-lasting machine performance.
• Do not allow untrained personnel to use this machine.
• Ensure that the work area is properly prepared: it must be free from obstacles, clean and properly illuminated.
• Take measures to ensure that you are not distracted when using the machine.
• In the event of a malfunction follow the advice given in this manual: if you have any doubts shut down the machine and contact your Authorised Service Centre immediately.
• Never use a malfunctioning machine and always inform the Maintenance Manager of any faults.
• Do not open compartments containing electrical parts.
• Do not replace the power lead or tamper with the supplied plug.
• It is forbidden to use the machine on items other than those for which it has been specifically designed.
• Before doing any cleaning, routine and/or unscheduled maintenance work make sure that the machine has been unplugged from the mains socket.
• Make sure that there are no foreign objects inside the work area as these could damage the machine and/or injure personnel.
• Do not use petrol or flammable solvents as detergents; use only non-flammable, non-corrosive, and non-toxic substances (see paragraph 8.1).
• Do not used compressed air to clean small pieces; if you do so you should protect your eyes with goggles that provide lateral protection and limit air pressure to a maximum of 2 bar.

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Zhermack S.p.A. cannot be held liable for any damage to persons or objects caused by incorrect maintenance carried out by unqualified personnel or maintenance work that does not comply with the instructions in this manual.
Zhermack S.p.A. is, as of this moment, exonerated from any liability concerning injury to persons or damage to objects that may result from using this machine in a way other than that described in this manual.



This machine has electrical parts: therefore, in the event of a fire, no matter how small, use only powder-type extinguishers. Never attempt to put out an electrical fire with water.



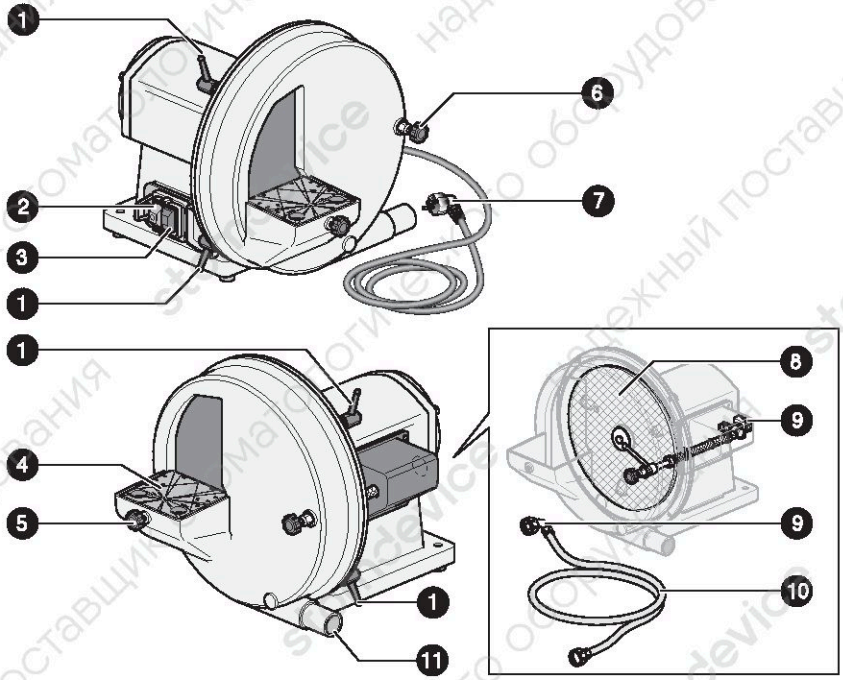
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CHAPTER 3: DESCRIPTION OF THE MACHINE

3.1 GENERAL DESCRIPTION OF THE MACHINE

The machines described in this manual are the:
- model trimmer designed to grind and clean odontotechny models.
- aspirator designed to clean the model trimmer.

3.2 TABLE OF THE COMPONENTS *SQM 25 N*

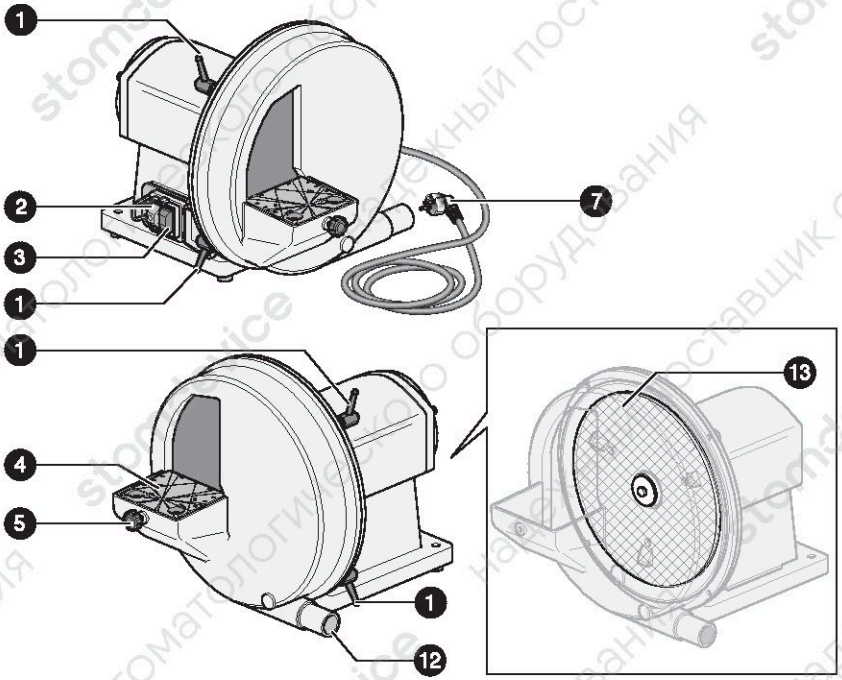


3.2.1 Description of the components *SQM 25 N*

1. Cover-tightening knobs
2. Red STOP button
3. Green START button
4. Model support top
5. Model support top adjuster knob
6. Water flow adjuster knob
7. Plug
8. Grinding wheel
9. Water infeed connector
10. Water infeed hose
11. Water discharge hose connector

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TABLE OF THE COMPONENTS *SQM 25 SN* 3.3

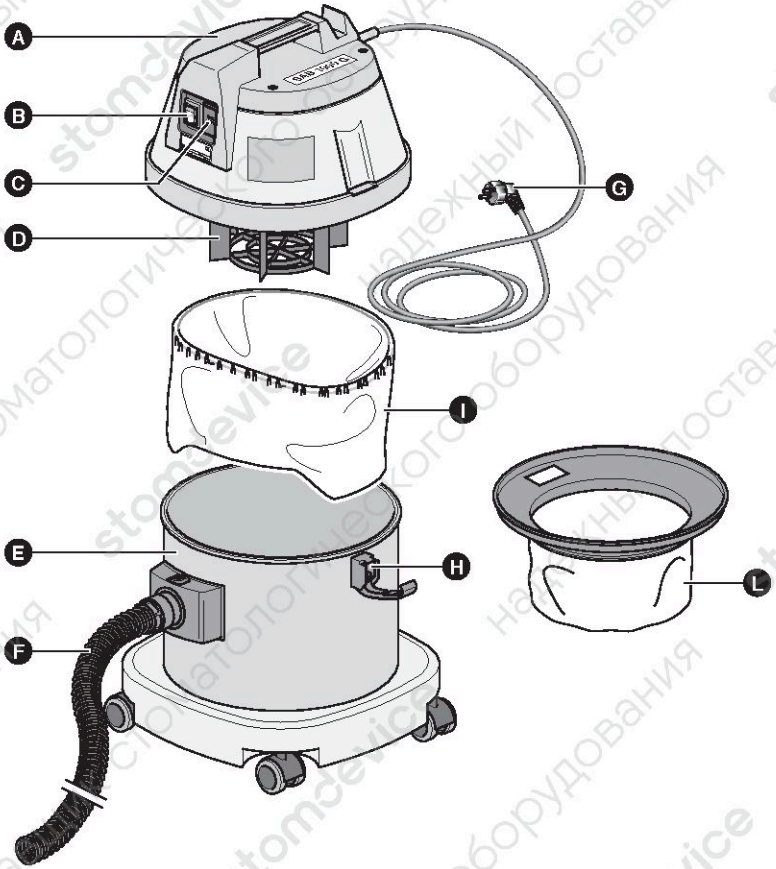


Description of the components *SQM 25 SN* 3.3.1

1.	Cover-tightening knobs	**5.**	Model support top adjuster knob
2.	Red STOP button	**7.**	Plug
3.	Green START button	**12.**	Aspirator hose connector
4.	Model support top	**13.**	Diamond-tipped disc

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3.4 TABLE AND DESCRIPTION OF THE COMPONENTS *SAB 1000 G*

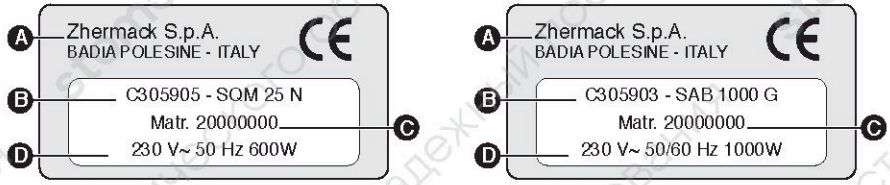


A. Motor unit	**F.** Suction hose
B. Main switch	**G.** Model trimmer or mains connection plug
C. Aspirator intake	**H.** Aspirator lock catches
D. Motor cage	**I.** Nylon filter bag
E. Aspirator body	**L.** Felt motor protection filter

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IDENTIFICATION DATA 3.5

The machines described in this manual are fitted with an ID plate providing information on both the machine itself and the Manufacturer (the examples refer to the ***SQM 25 N*** and ***SAB 1000 G***):



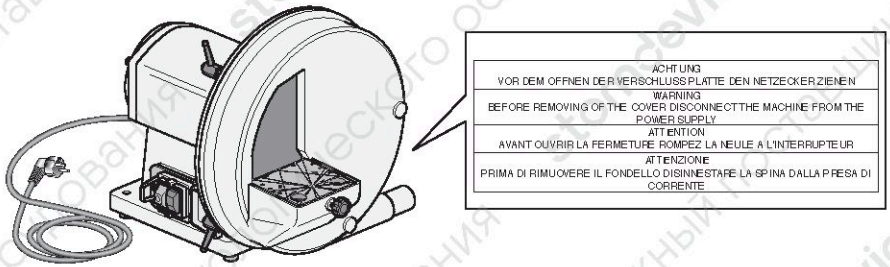
A. Name and address of manufacturer
B. Machine code and model
C. Serial number
D. Power supply information

The machines have been constructed as per the information provided in the enclosed "EC Declaration of Conformity". When requesting spare parts, information or assistance from your Authorised Servicing Centre always quote the data on the ID plate.
Should the ID plate deteriorate and become illegible, even partially, order a replacement plate from the manufacturer: remember to quote the relevant data.

Do not remove and/or damage the plate as you must be able to read the data at all times.

On-machine labels and symbols 3.5.1

The following symbols are applied on the machine:



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CHAPTER 4: TECHNICAL CHARACTERISTICS

4.1 TECHNICAL CHARACTERISTICS AND OPERATING START

Zhermack S.p.A. designs and manufactures work instruments that provide cutting-edge technology and first-rate quality. They are specially designed to provide made-to-measure solutions that offer long-lasting performance every single day of their working life.
In making these products ***Zhermack S.p.A.*** makes use of the latest design tools, thus ensuring that all finished machine is as functional as possible. Use of only top-quality materials and thorough testing aimed at providing maximum user safety are an ***Zhermack S.p.A.*** constant, making our products safe and internationally competitive.

The ***SQM 25 N*** and ***SQM 25 SN*** model trimmers have been designed to grind and trim odontotechny products. The ***SQM 25 N*** features an innovative water cooling and washing system which is always on and automatically controlled by a solenoid valve; the grinder disc allows the user to carry out precision trimming, thus allowing the technician to machine the piece exactly as required.
The ***SQM 25 SN***, instead, is equipped with a diamond-tipped disc which allows dry (waterless) use of plaster models. The long-lasting diamond-tipped disc is especially suitable for hard plasters, linings and resins. Both model trimmer versions have a Start and Stop button and can be fixed to the work top.
The ***SAB 1000 G*** plaster dust aspirator is designed for use with the ***SQM 25 SN*** version only. Offering high performance and reliability, the aspirator has a protective casing to provide maximum safety. The aspirator also has a by-pass motor, a supplementary switch and comes complete with a special filter for filtration (up to 0.3 mm) and collection of plaster (or other powdery residues).

4.2 TECHNICAL DATA

Technical data concerning the ***SQM 25 N - SQM 25 SN***:

• Power supply	230V~ ± 10% 50/60Hz single phase
• Rated power	600 Watt
• RPM during mixing	2800 RPM
• Worktop height	150 mm
• Protection rating IP	IPX0

Technical data concerning the ***SAB 1000 G***:

• Power supply	230V~ ± 10% 50/60Hz
• Rated power	1000 Watt
• Vacuum	190/210 m/bar
• Air flow rate	118/171 m^3/h
• Tank capacity	10 l
• Safety class	II
• Lead length	m 10
• Aspirator tube length	m 2.5

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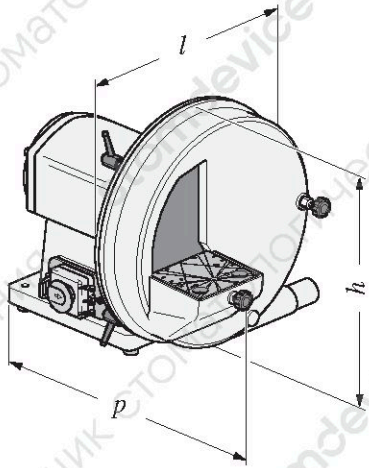
Standard accessories and accessories available on request 4.2.1

In addition to this Use and Maintenance Manual the machine comes complete with:

COMPONENTS	ORD. CODE*
SQM diamond-tipped disc	XR0090000
Grinding disc	XR0091100
Orthodontic support	XR0090100
Fixed orthodontic support	XR0090140
Worktop for *SQM 25*	XR0090036
Nylon bag filter for *SAB 1000 G*	XI0990220

* Please quote the order code when ordering a spare part. You may order parts from your local Authorised Servicing Centre.

Weight and overall dimensions 4.2.2



DIMENSIONS *SQM 25 N / SQM 25 SN*	WITHOUT PACKING	WITH PACKING
Height (*h*)	cm 35	cm 53
Length (*l*)	cm 30	cm 39
Depth (*p*)	cm 40	cm 55
Weight	kg 17	kg 20

DIMENSIONS *SAB 1000 G*	WITHOUT PACKING	WITH PACKING
Height	cm 56	cm 63
Length	cm 42	cm 43
Depth	cm 42	cm 44
Weight	kg 9	kg 12

Noise levels 4.2.3

Under routine working conditions the ***SQM 25*** model trimmer emits a sound pressure, at the operator workstation, of less than 70 dB (A).

Airing 4.2.4

The ***SQM 25 SN*** model trimmer requires proper ventilation when in use.

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CHAPTER 5: TRANSPORT AND MOUNTING

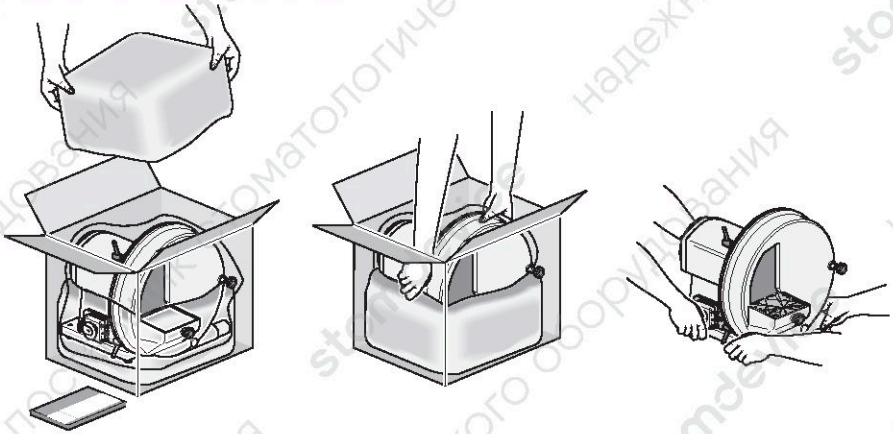
5.1 WARNING

To prevent any injury to persons or damage to things always proceed with the utmost care and attention when mounting the machine. Observe all the precautions and instructions contained in the following paragraphs.

5.2 PACKING AND UNPACKING

All the material is thoroughly checked by the Manufacturer prior to shipment. When you receive the goods make sure they have not been damaged during transit and that no-one has tampered with the packaging and removed any of the parts contained therein.
Should you note any damage or missing parts please inform your Dealer and the shipping carrier immediately: take photographs and send them on to both dealer and carrier.

The packaging (in the example in figure ***SQM S25 N***), consisting of a cardboard box with internal expanded plastic padding, contains:
• the model trimmer and/or aspirator and any components;
• this Use and Maintenance Manual.



It is recommended that you keep the original packaging so that, if necessary, it can be re-utilised; doing so ensures that you do not use unsuitable packaging materials during transport and mounting which might lead to accidental damage (see section 5.3).

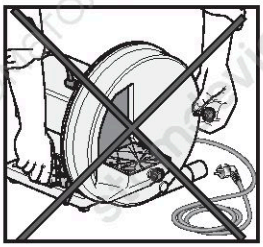
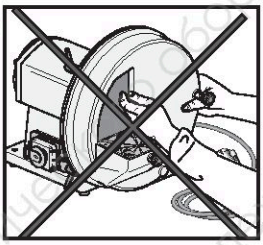
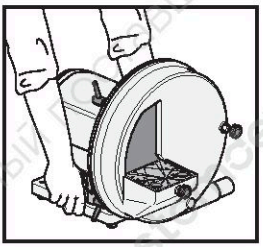
If the unit is to be transported by courier, the postal service or rail it is recommended such shipments be insured.

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TRANSPORT AND MOUNTING 5.3

If it is necessary to move the model trimmer and/or aspirator you must:
1. disconnect the machine from the mains power supply;
2. for the model trimmer: after cleaning the machine thoroughly (see Chap. 8) detach the aspirator connector and close the main switch flap.
2a. for the aspirator ***SAB 1000 G***: empty the residue from the bag (see Chap. 8) and detach the model trimmer connection hose.
3. gather all its accessories together.
4. grasp the machine by its base and make sure it is always kept in vertical position.
To this end always bear in mind the weight and dimensions of the unit being handled (see section 4.2.2) to prevent any damage caused by inobservance of these measurements.
5. Pack the machine in its original box or, if this is not possible, take all the necessary precautions to protect the machine against knocks or drops, in that the goods are transported at the owner's risk.

Failure to observe the above exonerates the Manufacturer from any liability concerning machine malfunction and consequently renders the Warranty null and void.

When shipping/delivering the machine to your Authorised Servicing Centre always enclose a copy of the purchase document and a copy of the properly compiled ID form.

ELIMINATION / DISMANTLING 5.4

When disposing of the ***packaging materials*** the user must comply with the standards in force in his/her country regarding the following materials:
• Wood/paper: non-polluting materials, but must be recycled properly.
• Polystyrene/plastic: pollutants which must not be burnt (toxic fumes) nor dispersed into the environment, but disposed of in compliance with the standards in force in the country of use.
If the machine is to be ***dismantled*** the user must, in compliance with EC directives and the laws in force in the country of use, effect elimination and recycling of the following materials:
• Plastic and glass parts, insulated electrical wiring, rubber parts.
• There are no toxic or corrosive parts.

This product must not be disposed of as household waste but rather, when no longer used, must be collected separately according to EC Directive 2002/96.

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CHAPTER 6: INSTALLATION AND FIRST-TIME USE

6.1 WARNINGS AND PRECAUTIONS

Before proceeding with installation make sure that all relevant safety conditions prevail and follow the instructions below carefully.

So as to provide greater clarity the numbers given in the diagrams in this chapter correspond exactly to the numbering in the Components Table (Ch. 3).

6.2 PERMITTED AMBIENT CONDITIONS

Unless stated otherwise at the time of order the machine will be configured to operate properly under the following ambient conditions:

Place of Use	Indoors
Altitude	Up to 2000 m
Working temperature	From 5°C to 40°C
Humidity	Max 80%

Ambient conditions other than those listed above may cause malfunctions or sudden breakdowns. Lighting in the installation area must be sufficient to provide good visibility at every single point on the machine.
More specifically, luminosity must not be less than 200 lux, lighting must be as uniform as possible and there must be no reflected light as this could dazzle the operator.

The machine must not be used in workplaces having an atmosphere which is explosive and/or at risk of fire as it has not been designed for use in such areas. Nevertheless, should a fire accidentally break out follow the procedure described in paragraph 2.4.

Work area lighting is an important factor in both personnel safety and the ultimate quality of the work being done. In Italy lighting must comply with a Ministerial Decree Law that clearly defines minimum lighting requirements. In other countries lighting requirements form part of the accident prevention and workplace hygiene standards.

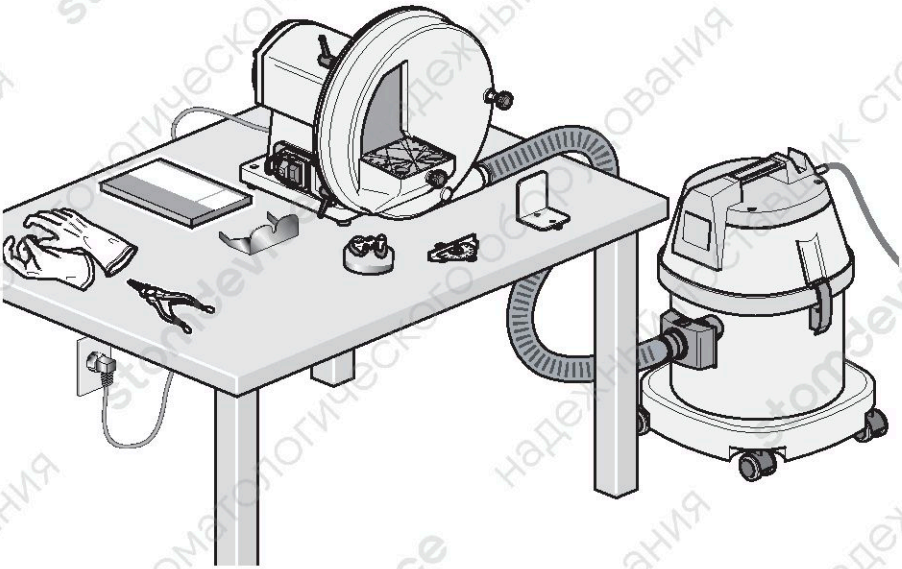
6.3 REQUIRED WORK SPACE

Choosing a good workplace with an appropriate amount of space available for machine installation is an essential factor in personnel safety, the quality of the work and proper maintenance. This zone must not only be spacious enough to allow for optimum machine operation but must also be well illuminated, aired, not dusty and not exposed to direct sunlight. Note also that the unit must be positioned so the connection plug can be handled/manipulated with ease.

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Worktops 6.3.1

The machine (in the illustration an ***SQM S25 SN***) has been designed to operate resting and/or fixed on a rigid, flat, level worktop.
Workshop furniture or modelling benches may be used for this purpose (with the former the worker is in a standing position and with the latter in a sitting position); check their stability beforehand. The ***SAB 1000 G*** aspirator has been designed for direct on-floor placement.



CONNECTING UP TO THE POWER SUPPLY 6.4

The user must provide a power connection with relative socket near the machine installation point. The user must also install an adequate electrical circuit breaker upstream from the socket as well as efficacious overload/indirect contact safety devices.
Connection is effected via the safety plug (16A, in compliance with European standards) at the end of the power lead: this must be inserted in the mains socket.
When connecting check:
• that mains voltage and frequency are as indicated on the identification plate (incorrect power supply voltage may damage the machine);
• that the mains supply has a proper, efficient earth connection.

It is forbidden to tamper with the power lead and its plug. When replacing them owing to damage and/or wear please contact an Authorised Service Centre.

A proper earth connection is compulsory. Should it temporarily be necessary to use an extension lead the latter must comply with the standards in force in the country of use.

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6.5 STARTING UP THE *SQM 25 N*

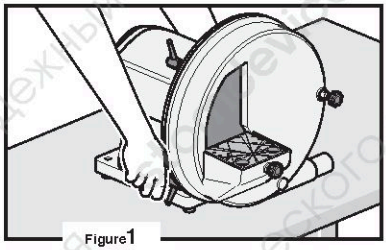


Figure 1

Fig. 1 : Position the machine correctly in the designated area, observing the instructions in section 6.3.1.

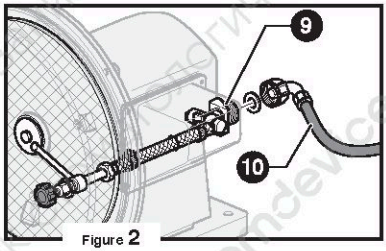


Figure 2

Fig. 2 : Connect the water inlet hose (**10**) to the connector on the rear of the model trimmer (**9**); insert the relative gaskets at the hose connection point (**10**).
Then connect the other end of the water feed hose (**10**) to a tap.

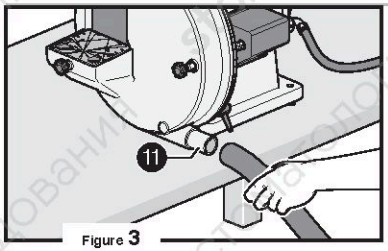


Figure 3

Fig. 3 : Connect the water discharge hose to the connector (**11**) on the right-hand side of the machine.
To ensure proper operation it is good practice to place the other end of the hose in a sink/basin or other recipient suitable for collection of the plaster residues.

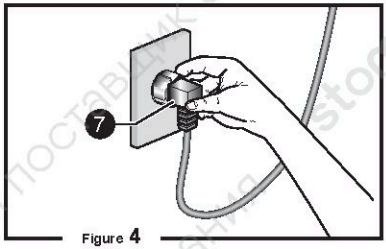


Figure 4

Fig. 4 : Insert the power lead plug (**7**) into a mains socket, observing the instructions in section 6.4.

Failure to observe any of the above machine installation instructions may lead to malfunctions and render the warranty null and void.

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STARTING UP THE *SQM 25 SN* 6.6

Fig. 5 : On the ***SQM 25 SN*** version, after placing the machine level on a workbench and inserting the plug in the mains socket, attach the ***SAB 1000 G*** aspirator tube to the connector (**12**) on the right-hand of the machine.

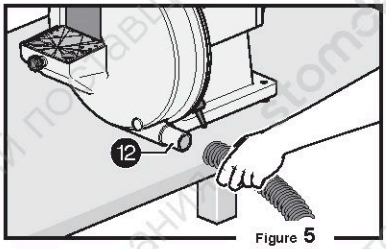
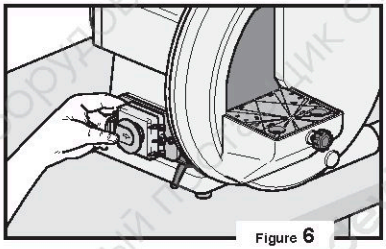


Figure 5

Fig. 6 : Open the main switch guard flap (also on the ***SQM 25 N*** version).


Figure 6

Failure to observe any of the above machine installation instructions may lead to malfunctions and render the warranty null and void.

STARTING UP THE *SAB 1000 G* 6.7

Fig. 7 : Insert the power lead plug (**H**) into a mains socket, observing the instructions in section 6.4.

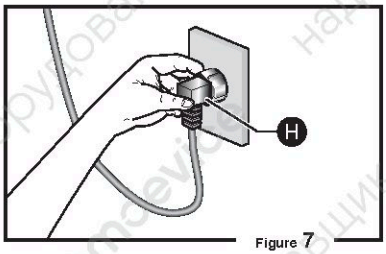


Figure 7

Fig. 8 : Connect the suction hose (**F**) to the right-hand side of the model trimmer (**12**).

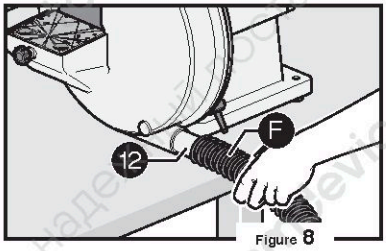


Figure 8

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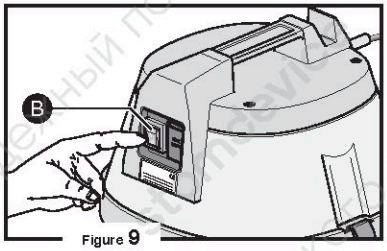


Figure 9

Fig. 9 : Switch on the aspirator via the main switch (**B**).
The aspirator operates independently of the model trimmer ***SQM 25 SN***.

Failure to observe any of the above equipment installation instructions may lead to malfunctions and render the warranty null and void.

6.8 PURPOSE OF THE MACHINE / IMPROPER AND FORBIDDEN USE

The ***SQM 25 N and SQM 25 SN*** model trimmers have been designed and built to grind and trim linings, odontotechny items in plaster and resin.

Using the machine for any purpose other than that described in this Manual shall be considered improper and thus forbidden.

Improper use renders the Warranty null and void and *Zhermack S.p.A.* shall not be liable for any damages to objects, workers or third parties.

The main reasons for which the Warranty may be rendered null and void are given in section 2.2 and in the "Warranty Certificate" enclosed with this Manual.

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CHAPTER 7: USING THE MACHINE

WARNINGS 7.1

The machine must not be used with any of its parts disassembled: before using the machine make sure that all its components are properly in place.

To ensure that work is done in absolute safety always make sure that you follow the described procedures with caution.

To provide greater clarity the numbers given in the diagrams in the following paragraphs correspond exactly to the numbering in Chapter 3 in the "Machine Description" section.

SAFETY SYSTEMS 7.2

In compliance with international accident prevention standards (EEC directive 89/392) the machine features several safety devices such as fixed and mobile guards to shield moving parts, thus guaranteeing worker safety when the machine is in use.

USING THE *SQM 25 N* 7.3

Fig. 10 : After installing the machine (see Chap.6), prepare the item to be worked and position it on the support top (**4**).

The support top has been designed so that trimming can be carried out with fixed and/or mobile orthodontic supports.

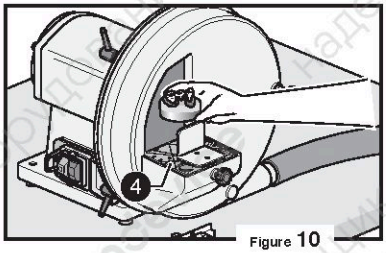


Figure 10

Fig. 11 : Adjust the orthodontic support (fixed and/or mobile) positioned on the top (**4**) via the adjuster knob (**5**).

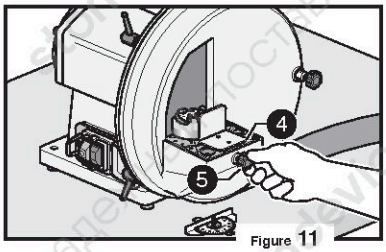


Figure 11

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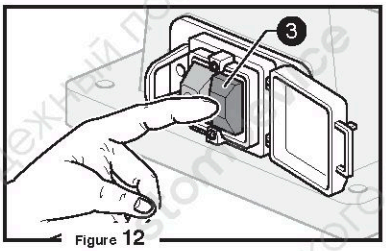


Figure 12

Fig. 12 : Press the green START (**3**) button on the main switch to start working.

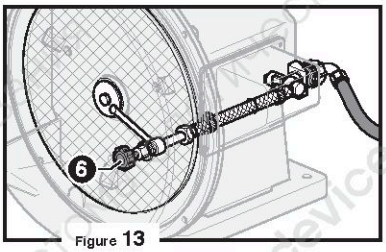


Figure 13

Fig. 13 : On model trimmer ***SQM 25 N***, open the tap to start feeding the water.
Water flow (which exits from a small tube at the centre of the emery disc) is regulated via an adjuster knob (**6**).

Because the machine has a water-fed cooling - washing system (always on and controlled automatically by a solenoid valve) the water infeed tap must always be open.

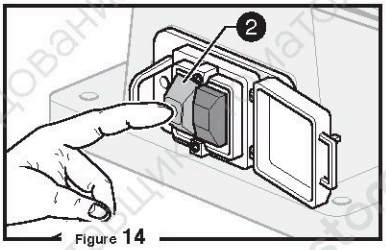


Figure 14

Fig. 14 : Press the red STOP button (**2**) on the main switch to stop work.

If, during work, the mains power suddenly goes off and then comes back on, the machine shuts down automatically. To restart just press the green START button (3).

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USING THE *SQM 25 SN* 7.4

The ***SQM 25 SN*** model trimmer does not have a water cooling system; it also differs from the ***SQM 25 N*** in that it has a diamond-tipped disc (as opposed to an emery one) to allow dry use of plaster models.

Fig. 15 : After carrying out machine installation (see Chap.6) and positioning the item to be worked on the support top (**4**) via the adjuster knob (**5**), press the green START button (**3**) on the main switch assembly to start working.

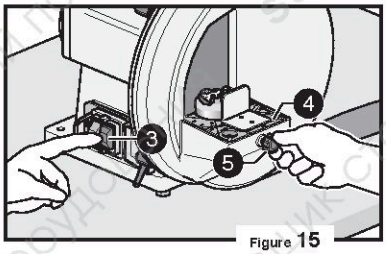


Figure 15

Fig. 16 : Switch on the aspirator by pressing the main switch button (**B**), unless, of course, it is already on.

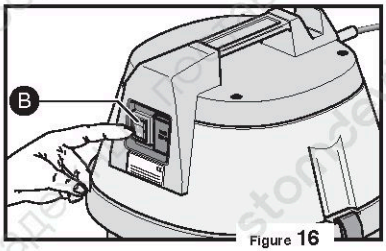


Figure 16

Fig. 17 : The long-lasting diamond-tipped disc (**13**) is particularly suitable for hard plasters, resins and linings.
All the plaster dust generated by the work cycle is aspirated and collected in the ***SAB 1000 G*** aspirator.

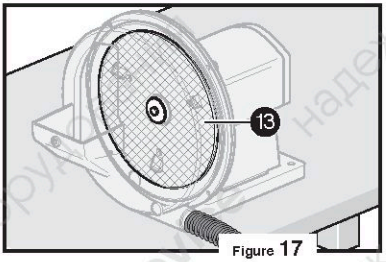


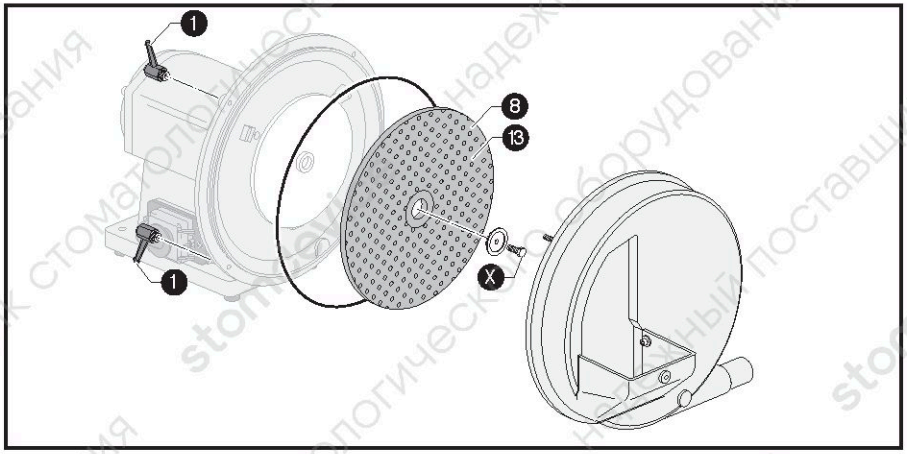
Figure 17

Failure to observe any of the above machine installation instructions may lead to malfunctions and render the warranty null and void.

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7.5 DISC REPLACEMENT

When it is necessary to change the disc the ***SQM 25 N*** and ***SQM 25 SN*** model trimmers are easily disassembled.
To change a disc (see figure) proceed as follows:
• undo the four lock knobs (**1**);
• remove the front cover;
• unscrew the disc fixing screw (**X**);
• replace the worn disc (**8 or 13**) with one of the same specifications.



It is advisable to change the *SQM 25 N* abrasive disc every 12 months.

7.6 RESIDUAL RISK

Residual risk is:
• a danger that cannot be completely eliminated through design and application of safety devices.
• a potential danger which cannot be highlighted.
The model trimmer generates dust as it works; hence the work itself involves the following residual risks:
• being hit by jets of dust generated during work;
• work carried out on the machine interior by unauthorised personnel;
• risk of damaging your hands.

Always wear protective goggles when using the machine.

To prevent accidents always observe the instructions in this manual. Should you have any doubts at all please contact the Manufacturer or your Authorised Servicing Centre.

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CHAPTER 8: MAINTENANCE

CLEANING 8.1

The machine exterior can normally be kept clean just by wiping it with a dry cloth. If necessary, wet the cloth just a little water or use a non-degreasing detergent.
The operator must ensure that the machine is kept clean and free from any foreign bodies such as dirt, water, non-conducting liquids etc.
The machine must be cleaned at the end of every work session to remove all residues. Cleaning must be done with the machine at standstill and positioned in a stable manner.

Before cleaning the machine exterior always turn the main switch to OFF. It is strictly forbidden to clean the machine while it is connected to the mains power supply.



Never use inflammable, corrosive, alkaline or toxic liquids when cleaning the machine.



Eye goggles and a face mask must be worn when using compressed air for cleaning purposes. Do not allow any persons near the machine as they could be hit by flying dust.



If the model trimmer is to remain idle for a prolonged period it is advisable to disconnect it so as to prevent the motor overheating.

Replacing the nylon filter bag on the *SAB 1000 G* 8.1.1

To change the nylon bag filter in the ***SAB 1000 G*** aspirator (usually done weekly) proceed as follows:
- switch off the aspirator via the main switch and disconnect it from the trimmer.
- undo the catches (**H**) to open the aspirator and remove the motor block (**A**).
- remove the felt filter (**L**) and detach the suction hose (**F**) from the connector.
- remove the filter (**I**).

When changing the filter make sure no powder gets inside the aspirator; if it does, clean thoroughly.
- insert new filter.
- reposition the felt motor protection filter (**L**) so that its edges rest on the aspirator body (**E**).
- place the motor block (**A**) on top of the aspirator body (**E**) and make sure the felt filter is positioned properly in the motor block.
- close the aspirator by locking the catches (**H**) back in place.
- re-attach the suction hose (**F**) to the connector.
- insert the plug (**G**) in a mains socket, then switch on via the main switch (**B**).

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8.2 ROUTINE MAINTENANCE

Once the machine has been cleaned (see section 8.1) the operator must check for worn, damaged or loose parts. If any such anomalies are discovered contact your Authorised Servicing Centre.

Should any of the above anomalies be discovered it is strictly forbidden to restart the machine before such faults have been set right.

More precisely, should the operator note any defects or problems of any kind whatsoever he/she must place a warning sign on the machine indicating that maintenance work is in progress and that using the machine is forbidden (EC-compliant signs can be purchased from the relevant suppliers).
Routine maintenance, cleaning and proper machine use are essential factors in guaranteeing long-lasting machine performance and safety.

Equipment safety devices/guards must never be removed except for repair and maintenance purposes.
Such items must be replaced as soon as the situation which led to their removal no longer exists and in any case before the machine is used again.

8.3 UNSCHEDULED MAINTENANCE

Unscheduled maintenance (to be carried out by qualified, authorised personnel only) includes repairs of accidental breakages and replacement of worn or faulty parts.

All electrical and mechanical work must only be carried out by an authorised *Zhermack S.p.A.* maintenance technician.

Modifications which alter the machine characteristics from a safety and risk prevention viewpoint may only be made by the Manufacturer who shall then issue a certificate stating that the machine conforms to safety standards. Therefore any modification or maintenance tasks not actually described in this manual are to be considered forbidden. If the machine is modified, tampered with or repaired by unauthorised personnel or non-original spare parts are used the manufacturer is relieved of all responsibility. If a maintenance task is required but is not described in this manual you must contact an Authorised Servicing Centre.

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RESTARTING AFTER A LONG PERIOD OF INACTIVITY 8.4

Should the machine be used after remaining idle for a long period proceed as described in Chap. 6 (start-up).
If there are any faults or malfunctions proceed as described in Chapter 9 (Troubleshooting). If the problem persists or is not covered by the information in this chapter contact your Authorised Servicing Centre immediately.

REQUESTING TECHNICAL ASSISTANCE 8.5

To obtain technical assistance choose one of the following options:
1. contact your Authorised Servicing Centre;
2. telephone the ***Zhermack S.p.A.*** Customer Assistance Service on the number **+39 0425.597.611** and proceed as follows: give personal data (e.g. address and telephone n.), state the information on the equipment ID plate (see paragraph 3.3) and explain the problem clearly;
3. fax all the above information and a properly filled out ID Form (see Appendix 2) to **+39 0425.53.596**.

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CAPITOLO 9: TROUBLESHOOTING

9.1 WARNING

Should any of the anomalies described below occur try setting the situation right, as far as is permissible, by following the instructions contained in this handbook. Should the problem persist contact your Authorised Servicing Centre.

9.2 PROBLEMS, CAUSES AND REMEDIES

PROBLEM	CAUSE	REMEDY
The main switch is set to ON but model trimmer does not work. With the main switch set to ON the aspirator does not work.	**1.** The model trimmer power lead is not inserted properly in the mains socket or is faulty (bare wiring, damaged etc.). **2.** There has been a power surge. **3.** The aspirator plug is not inserted properly in the mains socket.	**1.** Replace the power lead. Contact an Authorised Service Centre. **2.** Check the mains power supply. **3.** Check that the plug is inserted properly.
Water does not exit properly from the model trimmer ***SQM 25 N***.	**1.** Water feed hose clogged **2.** Adjuster solenoid valve not working. **3.** Feed hose leaking.	**1.** Check for proper connection of water feed hoses. If the problem persists, contact an Authorised Service Centre. **2.** Replace solenoid valve: contact an Authorised Service Centre. **3.** Replace water feed hose: contact an Authorised Service Centre.
Dust starts exiting the aspirator.	**1.** The nylon bag filter is full.	**1.** Empty the nylon filter; replace with one of same specifications (contact an Authorised Service Centre).

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APPENDICES

CE DECLARATION OF CONFORMITY *SQM 25 N - SQM 25 SN* A.1

CE DECLARATION OF CONFORMITY *SAB 1000 G* A.2

WARRANTY CERTIFICATE AND IDENTIFICATION FORM A.3

MAINTENANCE AND REPAIR WORKSHEET A.4

AUTHORIZED SERVICE PARTNERS A.5

NOTES A.6

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A.1 DECLARATION OF CONFORMITY CE

The Manufacturer:

Zhermack S.p.A.
Via Bovazecchino, 100
45021 Badia Polesine • RO • Italy
Tel. +39 0425 597 611 • Fax +39 0425 53 596

Declares that the equipment described below:

SQM 25 N , SQM 25 SN

Conforms to the legislative dispositions established in the following laws:

· EC Directive 2004/108 EC (EMC Directive) and subsequent amendments.

· EC Directive 2006/95 (Low Voltage Directive) and subsequent amendments.

· EC Directive 2006/42 (Machinery Directive) and subsequent amendments.

Please note that manufacturer's liability for damages caused by a defective product expires 10 years from the date in which the manufacturer put such product on the market and that such liability is transferred to the user as stated in EC Directive 85/374.

Badia Polesine,

Tiziano Busin
Managing Director



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DECLARATION OF CONFORMITY CE A.2

The Manufacturer:

Zhermack S.p.A.
Via Bovazecchino, 100
45021 Badia Polesine • RO • Italy
Tel. +39 0425 597 611 • Fax +39 0425 53 596

Declares that the equipment described below:

SAB 1000 G

Conforms to the legislative dispositions established in the following laws:

· EC Directive 2004/108 EC (EMC Directive) and subsequent amendments.

· EC Directive 2006/95 (Low Voltage Directive) and subsequent amendments.

Please note that manufacturer's liability for damages caused by a defective product expires 10 years from the date in which the manufacturer put such product on the market and that such liability is transferred to the user as stated in EC Directive 85/374.

Badia Polesine,

Tiziano Busin
Managing Director



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A.3 WARRANTY CERTIFICATE AND IDENTIFICATION FORM

1. This document certifies that the Manufacturer has built the product correctly using only top quality materials, carried out all the necessary tests and that the product complies with EC directives. This product Warranty is valid for 12-months as from date of delivery to the customer. Proof of such date shall be provided by a purchase document or the completed identification form. These documents must be handed over together with the equipment to the Servicing Centre. Persons wishing to make use of warranty coverage must make the fault known within eight days of its discovery as per Italian civil code art. 1495. Warranty cover is limited to replacement or repair of individual components or pieces with manufacturing defects and does not cover costs related to transfer of technical personnel, transport, packing etc. Breakdowns, faults or damages which derive from poor maintenance, incorrect power supply, negligence, inexperience and other causes not imputable to the Manufacturer and parts subject to normal wear are not covered by the Warranty. The Warranty does not cover breakdowns caused by failure to carry out routine maintenance or customer negligence.
This Warranty does not provide for any awards for direct or indirect damages of any kind caused to persons or things by any equipment inefficiency.
2. The Warranty is instantly rendered null and void if the equipment is repaired, modified or tampered with by the purchaser or any unauthorised third parties.
Responsibility for damages caused by defective products expires 10 years after the Manufacturer puts them on the market: after such time damages are the user's responsibility, as stated in EC Directive 85/374.
3. To have work carried out under Warranty the purchaser must only contact the retailer, the Manufacturer-authorised servicing centres, or the Manufacturer.
The Warranty entitles the purchaser to free replacement of defective parts. It does not entitle the purchaser to replacement of the entire equipment.
4. In the event of disputes over application of the Warranty, the quality or condition of the equipment, the purchaser shall not suspend payment or delay payment of the price or price instalment.
5. The purchaser shall not be entitled to damages for any loss of production.
6. The Warranty is rendered null and void if:
- **a.** the equipment is damaged by a fall, exposed to fire, spilt liquids, lightning, natural disaster or any other cause not imputable to the Manufacturer.
- **b.** installation has not been carried out properly.
- **c.** power supply is incorrect (e.g. rated mains voltage incorrect). Erroneous mains connection (rated mains voltage incorrect), or failure to install proper protection devices.
- **d.** the serial number has been removed, cancelled out or altered.

7. Any components to be replaced under the terms of the Warranty shall be sent back to ***Zhermack S.p.A.*** which shall then send the appropriate spare parts. Should the changed part not be replaced it shall be charged to the person who ordered it.
8. The Manufacturer and the Dental Deposit are not required to provide replacement equipments while repairs are carried out.
9. Spare parts shall, for tax purposes, only be provided under warranty where the relevant limitations set out in the terms and conditions of the warranty are observed.
10. For any other eventuality not provided for by this Warranty Certificate and the regulations consult the Italian Civil Code.
11. Labour, travel and call-out invoices must be paid for on their receipt.
12. The manufacturer and the dealer shall comply with all data processing laws, including proper observance of data security standards in compliance with the specifications given in the data processing information sheet.

IDENTIFICATION FORM

EQUIPMENT MODEL:	EQUIPMENT SERIAL NUMBER:
.....	.....
PURCHASER:	ADDRESS:
.....	.....
TOWN / POSTCODE:	TEL:
.....	.....
TAX CODE / VAT NUMBER RETAILER:	RETAILER:
.....	.....
	PURCHASER'S SIGNATURE:
	.....

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MAINTENANCE AND REPAIR WORKSHEET A.4

DATE	DESCRIPTION OF WORK	SIGNATURE

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A.5 AUTHORIZED SERVICE PARTNERS

Please visit the page:

http://www.zhermack.com/Technical/Equipment/Authorized_service_partners.kl

to check all the updated telephone numbers and addresses of the Authorized service partners.

A.6 NOTES

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