CB 311

OPERATING INSTRUCTIONS

Translation of the original instructions

NORTON
SAINT-GOBAIN
clipper®

SAINT-GOBAIN

CE Declaration of conformity

The undersigned manufacturer:

SAINT - GOBAIN ABRASIVES S.A.
190, BD. J. F. KENNEDY
L-4930 BASCHARAGE

Declares that this product:
Band sawing machine: (Code)
CB 311 230V **70184602677**

is in conformity with the following Directives :

- **"MACHINES" 2006/42/CE**
- **"LOW VOLTAGE" 2014/35/UE**
- **"ELECTROMAGNETIC COMPATIBILITY " 2014/30/UE**
- **"NOISE" 2000/14/CE**

Valid for machines as of serial number: **1801XXXXX**

Storage site for the technical documents:
Saint-Gobain Abrasives 190, Bd. J. F. Kennedy 4930 BASCHARAGE, LUXEMBOURG

This declaration of conformity loses its validity when the product is converted or modified without agreement.

Bascharage, Luxembourg, 2017.11.22:

François Chianese , Executive Officer

CB 311 : OPERATING INSTRUCTIONS
TABLE OF CONTENTS

1 – BASIC SAFETY INSTRUCTIONS

DESCRIPTION DU PRODUIT:

The CB 311 is exclusively intended for the cut of concrete blocks cellular and similar using its blade NORTON, mainly on building site.
Uses other than the manufacturer's instructions shall be considered as contravening the regulations. The manufacturer shall not be held responsible for any resulting damage. Any risk shall be borne entirely by the user. Observing the operating instructions and compliance with inspection and servicing requirements shall also be considered as included under use in accordance with the regulations.

CAUTION:
We recommend, for the safety of the purchaser and his employees who may use the machine, to read the instructions in this operating manual with care before starting the machine.

CAUTION:
Only persons who can reliably perform their job can work on and with this machine. The machine operator must make sure that unauthorized persons are kept at a proper distance from the machine.

1.1 Symbols

Name plates and captions applied to the machine must not be removed and must be kept in good condition without impairing to their legibility. In case of damage they must be replaced.

DANGER! Information

It is compulsory, before using the machine, to read the complete operating manual and understand its contents! All moving parts constitute hazards for the operator.

GENERAL DANGER!

The machine is marked with this pictogram for all parts that are hazardous for the operator.

CAUTION!

Machine use is prohibited for persons who are under the influence of alcohol, drugs, medicines or who lack the lucidity necessary for their safety.

COMPULSORY!
It is compulsory to use earmuffs when using the machine.

COMPULSORY!
It is compulsory to wear safety shoes when using the machine to protect against pieces from falling onto your feet.

COMPULSORY!
It is compulsory to wear work gloves to protect yourself against chips and splinters.

COMPULSORY!
It is compulsory to wear work goggles or protective visor when working to protect against chips and splinters.

PROHIBITED!
It is prohibited to perform maintenance or make adjustments when the machine is on.

PROHIBITED!
Users are prohibited from smoking while working.

CAUTION! LIVE CURRENT
Check that the voltage is correct as indicated on the motor name-plate 230V.

FOR MACHINES WITH ELECTRIC MOTOR
Make sure that the motor rotates in the direction indicated by the arrow.

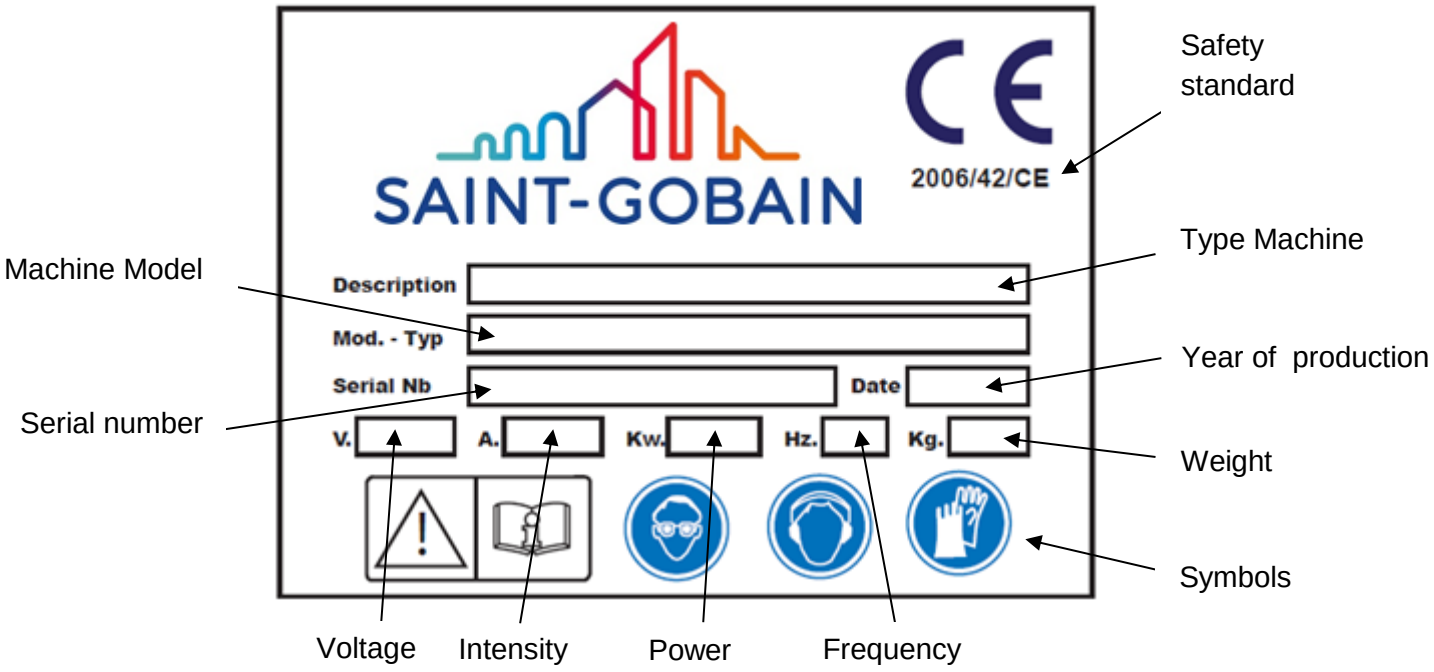
DANGER!
Rotating blade: be careful for your hands

DANGER!
Moving mechanical parts

ATTENTION!
A single operator

1.2 Machine plate

Important data can be found on the following plate located on the machine:



1.3 Safety instructions for particular operating phases

The machine has residual risks that cannot realistically be eliminated by the manufacturer. Guards cannot prevent access to the blade when cutting, not even if pushers or other safety tools are used. Machine users must consequently keep in mind that sawing machines are among the most dangerous of machines.

The machine must always be used with intelligence and good sense, adopting all the precautions contained in this booklet.

CAUTION !!! RESIDUAL RISKS

In band saws access to the blade is always possible, even if the vertical blade guard is properly adjusted and clamped in place 5mm above the piece to be cut. The band blade is protected against accidental contacts during its entire length except for the section that is strictly necessary to make the cut.

Therefore it is absolutely necessary:

- When making cuts keep your hands away from the blade.
- Always use a pusher to finish the cut.
- Use special tools when pieces to be cut have uneven shapes:

(For example: for pieces which do not have a good support surface create supports that house the piece to be cut).

- Totally lower the blade guard at the end of work.

If the band breaks, even if the stop control is engaged, the upper flywheel is not braked.
To avoid all risks always wait until the flywheel is completely stopped.

It is always recommended to properly put the machine in place to increase its solidity and prevent useless and damaging vibrations, even though the machine is rigid and massive and offers the utmost guarantee in terms of solidity and sturdiness. The manufacturer is released from all responsibility for any damage caused by negligence.

1.4 Safety regulations

1) Before connecting to electric mains make sure there is adequate protection upstream on the line complete with circuit breaker, earth-leakage switch and a ground conductor.
2) Check that the voltage and frequency indicated on the name-plate correspond to mains voltage and frequency.
3) Do not use non-standard or defective cables, extensions or plugs.
4) Make sure work is always done in safe conditions.
5) Always start to work with the machine firmly positioned.
6) Wear protective gloves, heavy-duty or safety shoes, work goggles and personal protection devices to protect hearing.
7) Do not use the tool in the rain or expose it to the rain.
8) Correctly position the cable during work. Make sure it is distant from the work area and is long enough to permit work to be done properly.
9) Always cut off from the mains connection when performing maintenance.
10) The machine must only be used by adult and qualified persons.
11) Comply scrupulously with the instructions affixed on the machine when working.
12) The machines we produce are manufactured with all required technical and safety measures. Therefore, customers are warned to comply scrupulously with the instructions and standards described in this booklet.

13) Keep the machine in its original condition and maintain the validity of its certification by using genuine Saint-Gobain Abrasives spare parts.

CAUTION !
The operator shall have sole responsibility for all damages caused by a non-compliant use of the machine.

The machine may be dangerous. If used improperly it may cause severe and even mortal injuries. It is absolutely necessary that all work procedures be performed by a single operator and not by several persons.

Do not use the machine without having read the instruction manual and understood its contents. Everything described in this manual regards your safety.

- The machine should only be used by adult and competent persons (a training course is recommended for those who have never used the machine).
- Work procedures are safe when the following instructions are complied with.
- This booklet must be delivered to the operator and properly preserved.
- Responsibility lies with the owner of the machine. The machine operator is also responsible.
- Maintenance must be done with the power off and be performed by qualified personnel.
- It is prohibited to remove or tamper with guards!
- Always use: protective helmet, earmuffs, goggles or protective visor, heavy duty or safety shoes and work gloves. Do not work with loose garments.

2 MACHINE DESCRIPTION

Any modification, which could lead to a change in the original characteristics of the machine, may be done only by Saint-Gobain Abrasives who shall confirm that the machine is still in conformity with the safety regulations.

2.1 Short description

The band saw is a robust and powerful machine allowing precise cuts in a large variety of light materials of construction. It can be used on building site but also in industrial environment.

2.2 Purpose of use

The machine is designed for the light concrete cut poroton, gasbeton. It is designed for no other use.

2.3 Layout

Sliding table (1)

Allows you to place the material to be cut in a stable manner (within the dimensional limits). It is brought into contact with the blade by manually pushing the table when cutting after unlocking the safety control.

Therefore, the machine can be used by only one person who takes control of the safety control system so as to be able to actuate the starting and stopping of the machine.

Blade (2)

It is a blade of dimensions 27x2950mm mm allowing the cut of concrete blocks cellular and comparable.

The structure (3) is out of welded electro sheet steel and the **frame (4)** carrying is built out of steel tube, painted with synthetic enamel RAL 2004.

The materials employed are not harmful to the machine operator nor to the environment.

The machine is equipped with a safety switch (5), located on the cover (6), which cuts off the supply when the machine is under operation.

The wheels (7)

There are two of them. They make it possible to easily move the machine with the handle (8).

CAUTION:

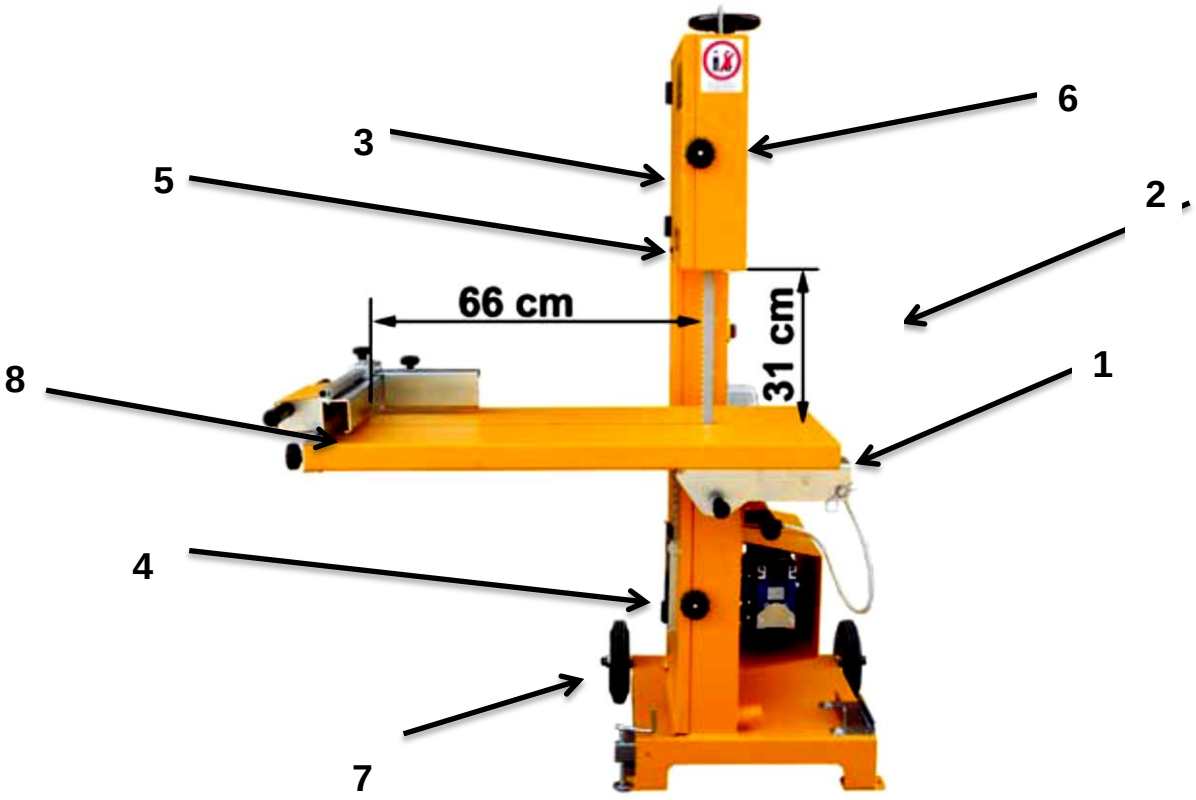
The blade braking system is not operational if the power supply is cut off. Always wait until the blade is totally stopped before performing any work on the machine.

If the blade breaks the upper flywheel is not braked even if the emergency device is actuated. Always wait until the upper flywheel is totally stopped before performing any work on the machine.

Safety control system (8)

Electric motor

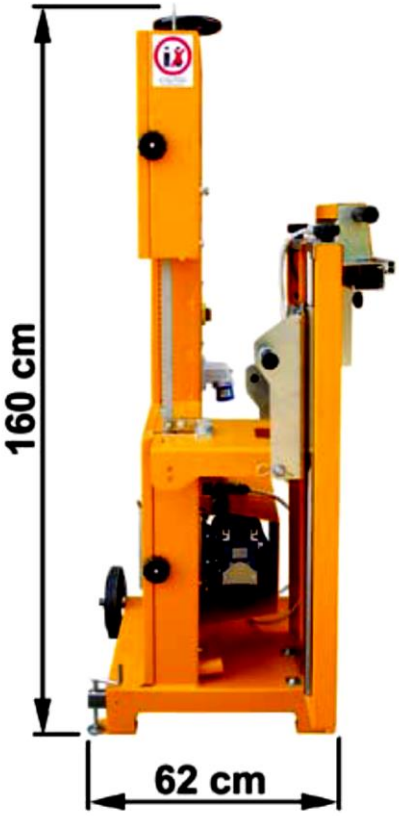
Motor of 1.1kW.



2.4 Technical data

CHARACTERISTICS

cod. CB.311
Useful cut - height 31 cm
Useful cut - width 34 cm
Useful cut - length 66 cm
Sliding table 50x100cm
Flywheel diameter: 350 mm
Norton Clipper blade 27x2950 mm
Wheels Ø200 mm
Weight 132Kg.
Single-phase 230V 1.1 Kw



2.5 Statement regarding the vibration emission

Declared value of vibration emission following **EN 12096.**

Machine Model / code	**Measured value of vibration emission at m/s²**	**Uncertainty K m/s²**	**Tool used Model / code**
CB 311 230V 70184602677	<2.5	0.5	Original Band Saw

- The vibration value is lower and does not exceed 2.5 m / s.

- The measurements are made with new machines. Actual values may vary with site conditions, in terms of:
  - Materials worked
  - Wear Machine
  - Lack of maintenance
  - Inappropriate tool for application
  - Tool in poor condition
  - Unskilled operator
  - Etc…

- The exposure time to vibration is based on the performance of work (related to the adequacy Machine / Tool / worked material / operator)

When evaluating risks due to hand-arm vibration, you need to take into account effective usage at rated power of machine during a full day of work; quite often you will realise that effective utilisation time represents around 50% of overall duration of work. You have to consider, of course, breaks, water feeding, preparation of work, time to move the machine, disk mounting…

2.6 Statement regarding noise emission

Declared value of noise emission following **EN ISO 11201** and **NF EN ISO 3744.**

Machine Model / code	**Sound Pressure level L_{Peq} EN ISO 11201**	**Uncertainty K (Sound Pressure level L_{Peq} EN ISO 11201)**	**Sound power level L_{Weq} NF EN ISO 3744**	**Uncertainty K (Sound power level L_{Weq} NF EN ISO 3744)**
CB 311 230V 70184694702	80 dB(A)	2.5 dB(A)	93 dB(A)	4 dB(A)

- The measurements are made with new machines. Actual values may vary with site conditions, in terms of:
  - Wear Machine
  - Lack of maintenance
  - Inappropriate tool for application
  - Tool in poor condition
  - Unskilled operator
  - Etc…

- Measured values relate to an operator in normal use, as described in the manual position.

3 ASSEMBLY AND COMMISSIONING

The machine is delivered fully equipped (although without diamond blade). It is ready for operation when you mount the diamond blade, the handles and the conveyor cart and after you connect to the appropriate power supply.

3.1 Commissioning

3.1.1 Loosen the two star grips and lower the table supporting it with your hands.

Fig.1

3.1.2 After straightening the table, immediately lock the 2 star grips.

3.1.3 Then press the green START button. Check that the light (Fig. 3) is on: this indicates that the machine is ready for operation.

Fig.2

Fig.3

3.2 Tool assembly

The machine is sold ready to use with a blade already set and adapted to the machine.
For any intervention, follow the instructions given in the part “MAINTENANCE”.

3.3 Electrical connections

Check that:

- The voltage/phase supply corresponds to the information indicated on the motor plate.
- Available power supply must have ground connection in conformity with safety regulations.
- The connecting cables should have at least a 4 mm^2 - section per phase.

3.4 Start-up and stoppage

Press the green push button to turn the blade on

After each cut, press the green push button again.

To stop the machine directly, press the red button or the emergency stop button if a problem occurs.

The machine is equipped with a safety switch under the flywheel housing.

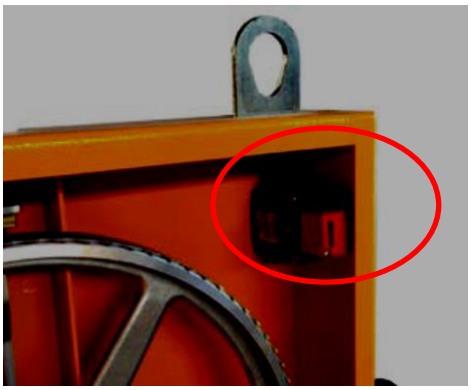


Fig.3

It is also equipped with an ON-OFF control system for the movement of the blade: “Safety control system”. The blade moves only if the operation buttons are in ON mode.

3.5 Command Safety system

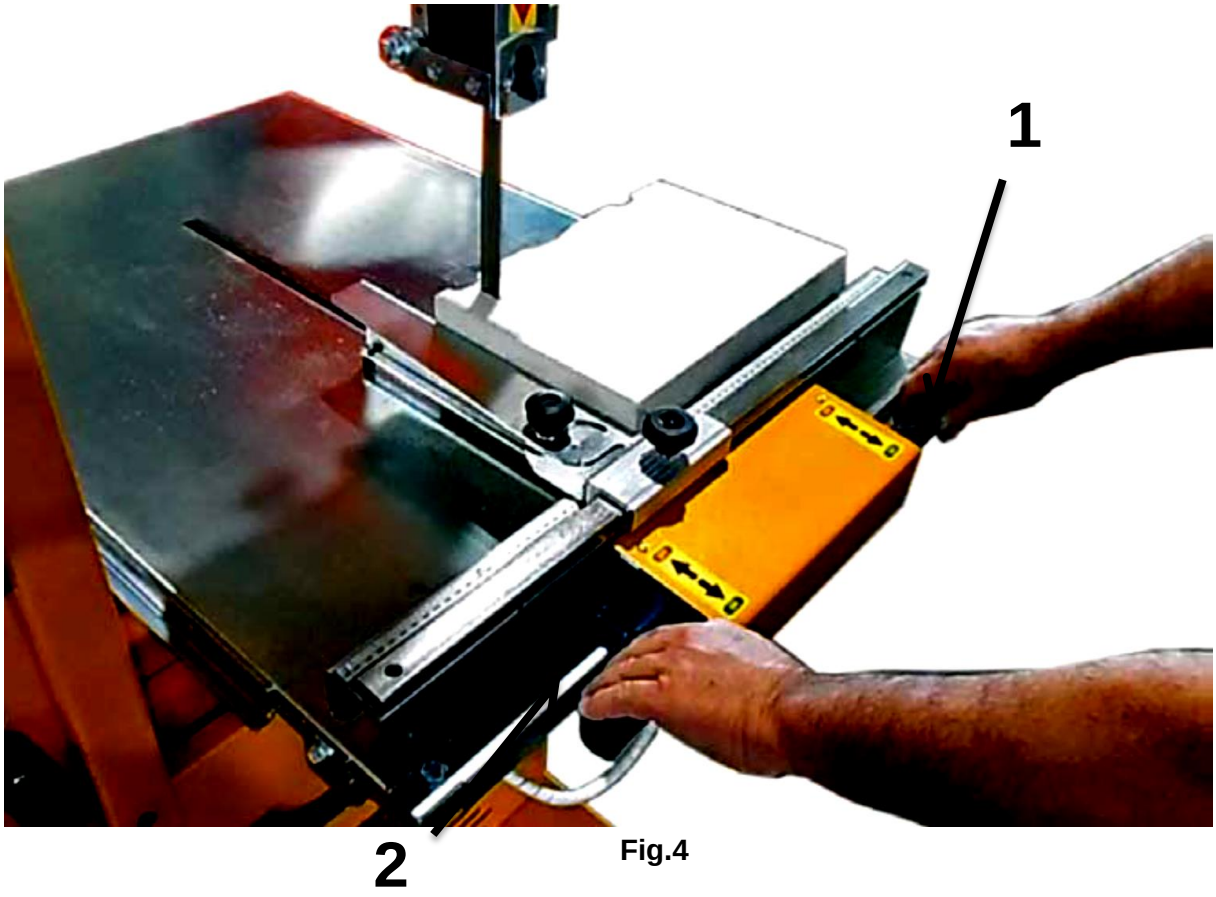


Fig.4

The start and stop of the blade movement are controlled by the command handles (see figure above). When the user has both hands on the handles, the blade can advance safely.

The same handles are used for pushing the sliding bench by hand to cut and to return the bench to the initial position.

After positioning the block to be cut on the bench, grasp the ON-OFF buttons, 1 and 2 above, and turn both of them to the ON position to turn on the blade.

During the cutting phase the handles must be maintained in the ON position during the cutting operation.

When one or both handles are released in the OFF position, the blade movement stops.

Caution: Do not use your hands to clean the work platform during work. Use a brush with a handle or a cut of wood.

Caution: Use sturdy gloves to handle the blade during maintenance.

Caution: If the machine is out of order due to fault or maintenance, always mark it with a signboard.

4 TRANSPORT

4.1 Security

The machine, given its exceptionally sturdy, can be easily shipped without requiring any disassembly operation: however it is important to keep to the following precautions:

- Make sure that hoisting or anchor cables do not rest on fragile parts, on protective covers or on tubes that protect the electrical system;
- For fixing the machine with strap or rope use exclusively through the appropriate place on the frame (Fig.5);
- Avoid sudden blows or jolts both during hoisting and when setting the structure back down;
- During long trips on roads which are not particularly straight it is very important to firmly anchor the structure to the transport vehicle to prevent accidents caused by speed during curves, bumps or slopes;
- All machines have special holes or hooks for hoisting. Please use these insofar as possible to avoid the problems specified above.

4.2 Hoisting

- The machine can be hoisted using a special hoisting hook. Use a standard market hoisting hook connected to a chain or cable with a minimum hoisting capacity of 300 Kg. (fig.5).
- The machine can also be hoisted by a lift truck, introducing the forks below the base of the machine (fig. 6).

4.3 Moving small movements

Pull the drawbar all the way out (Fig. 9), lift the machine slightly and position it on a wooden pallet before putting it into the vehicle.

Fig. 5

Fig.6

Fig.7

Fig.8

You can use the pull handle to push the machine in the desired direction.

Fig.9

The machine can be moved horizontally thanks to a second pair of front wheels that are available optionally on the machine.

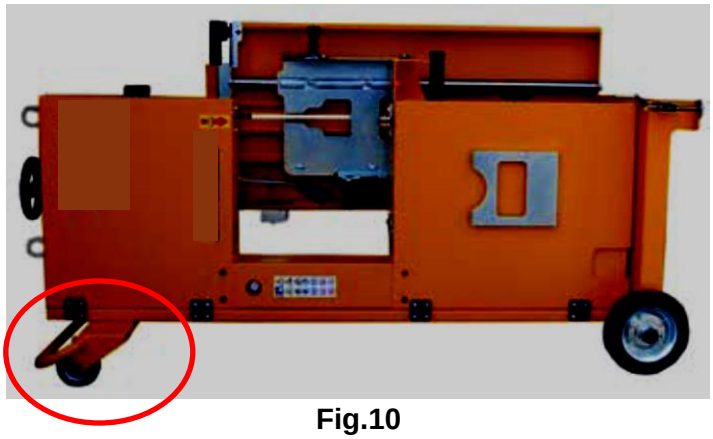


Fig.10

You can dismantle the bench for easy transport:

1. Check that the machine is unplugged
2. Remove the chain Fig.12.
3. Place the connector in the compartment provided Fig.13
4. Remove the pin Fig. 14
5. Extract the pivot by supporting the bench with one hand
6. Lift and remove the bench Fig. 15

To reassemble the bench, perform the procedure backwards.

Fig. 11

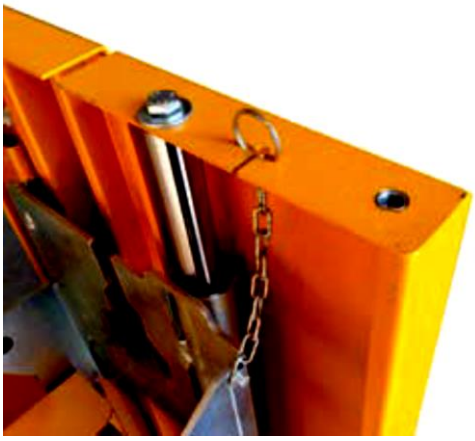


Fig.12

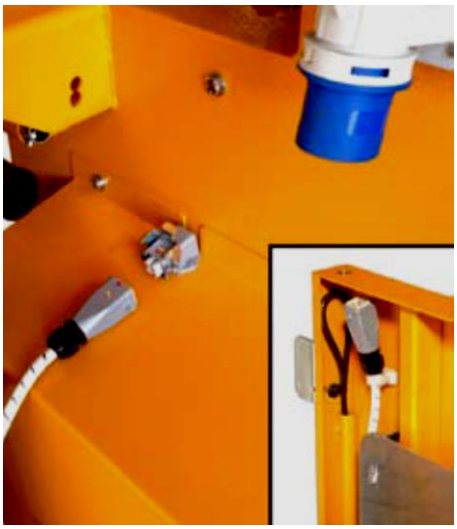


Fig.13

Fig. 14

Fig.15

4.4 Stockage

The storage site must be clean, dry and at a constant temperature.
If the machine is not going to be used for a long period, please take the following measures:

- Completely clean the machine
- Incline the plate

In order to reduce the overall dimensions, in principle, the machine is delivered with the table tilted. To put the table in the working position, loosen the hexagon head screw under the table (Fig.15), then lower the table and tighten the screw. To release the longitudinal displacement, you should first use the star grips placed under the table.

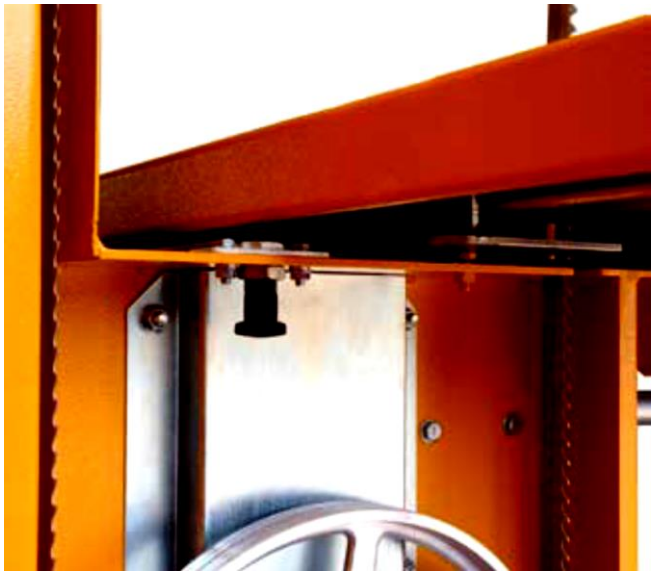


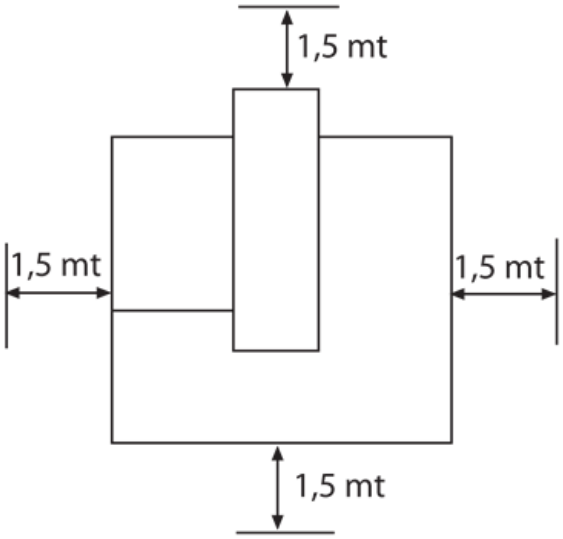
Fig.15

Machine storage environment conditions are for temperatures between -15° and + 45°C. Avoid corrosive environments (brine or acid).

5 OPERATING THE MACHINE

5.1 Positioning the machine

An at least 1.5 meter space must be left around the machine for passage of persons and property without the danger of blows and to permit normal maintenance procedures.
Any area inside and/or in the vicinity of a machine where the presence of an exposed person is a risk for his health and safety is to be considered a dangerous area.
Any person who is located totally or partly inside a dangerous area is to be considered an exposed person.
The person(s) charged with installing, operating, adjusting, maintaining, cleaning, repairing and transporting a machine is to be considered an operator.



Before positioning the machine check that the floor is perfectly flat without slopes or impediments that could jeopardize the perfect stability of the machine.
Also check that the load-bearing capacity of the floor is compatible with the weight of the machine.

5.2 Illumination

Machines are not equipped with illumination systems and consequently must be used in adequately illuminated work sites. It is prohibited to use the machine when the operator does not have a perfect view of the cutting line.

5.3 Start-up and stoppage

5.3.1 Preliminary checks

It is prohibited to use the machine if any guards or safety devices are missing or inactive

CAUTION:
Before starting the blade make sure that no other operators or various objects are in the vicinity of the machine.

Make sure the machine is unplugged from the power outlet during transport, repair, maintenance and inspections.
Before plugging in the plug:

- Position the machine on a stable and level surface that can provide optimum support;
- Press the feet onto the floor using the pedal provided for this purpose Fig. 16.
- Position the bench horizontally, place the wedges and fix the table with the 2 star grips. Fig. 16,17 and 18
- Check that the blade is sharp. The blade must have no cracks or fissures, all the teeth must be the same length, be perfectly sharpened and set (set on track);
- Before starting the machine, check that the blade is taut (Fig. 21 and 22);
- Make sure that the power outlet has the same phase characteristics as the electric motor and that the power supply line is equipped with a differential circuit-breaker and a magneto-thermal protection or a fuse for short-circuits (15 A max). Perform additional grounding if necessary.
- Insert the connector to the plug attached to the bench
- After these preliminary operations, the electrical connection can be made.

Fig.16

Fig.17

Fig.18

Fig.19

Fig.20

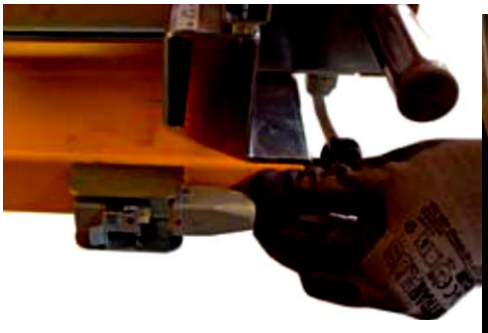


Fig.21

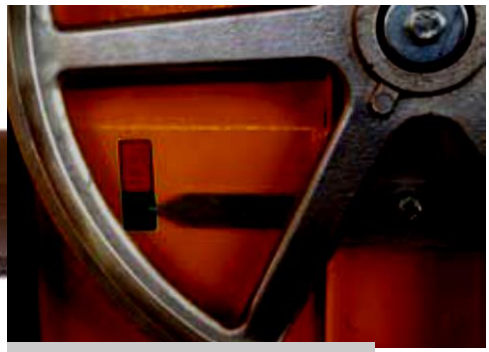
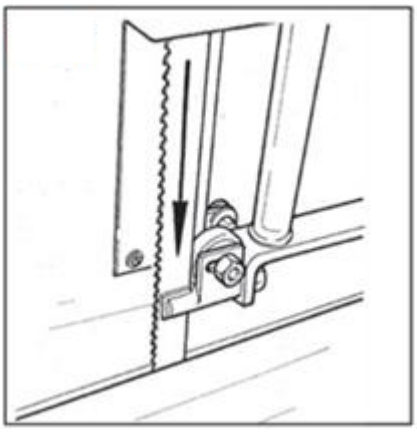


Fig.22

5.3.2 Starting and stopping the machine

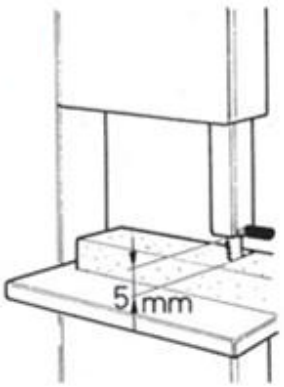
Properly plug in the EEC Standard electric plug. The switch is located in a comfortable position, accessible from the operator's workplace. The switch is an overload cutout type with circuit breaker and power failure release coil.
After making all preliminary checks insert the plug into the outlet on the machine.
Press the switch's green START push-button to start blade motion. Press the switch red STOP push-button to stop the machine . Check that the direction of rotation is correct and that the blade teeth face downwards.



CAUTION: Before starting the machine make sure that the blade is well taut, using the guidelines affixed on the machine.

IMPORTANT: Do not be distracted when working, keep your hands away from the cutting area. When cutting small pieces use special pushers with handles: make these yourself depending on the job being done.

CAUTION: The lowering blade guard must be correctly adjusted and clamped 5 mm above the piece to be cut before starting to work.
It is absolutely necessary that all work procedures be performed by a single operator and not by several persons.



During work: do not use your hands to clean the work surface, use a brush with a handle or a piece of wood.

Caution ! The machine must only be used by skilled persons who have been adequately qualified and trained.

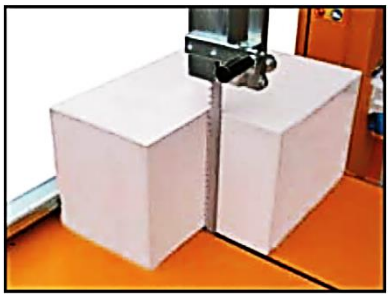
Be careful about persons who improvise operating the sawing machine without any kind of information about it.

During the cutting operations after placing the block, hands should be kept on the appropriate handle.

After cutting, make sure that the blade has stopped before removing the cut piece:
(always push the mobile table fully to the end, so that the blade stops automatically).

5.4 Sequences for cutting GASBETON

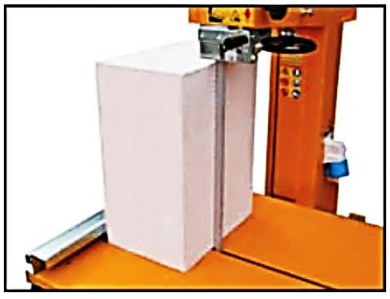
START UP – CUTTING PHASE
Pressing the green push-button starts the blade moving. The blade stops by itself at the end of the table's travel.
The green push-button must be reset after each cut.



WARNINGS FOR INTERMEDIATE CUTS
The blade does not stop by itself when an intermediate cut is made on a piece.
The operator must use the stop push-button to first stop the blade and then remove the pieces.

TABLE FORWARD FEED
Important: always make cuts with moderation.
(give the blade enough time to work).

WARNINGS WHEN MAKING VERTICAL CUTS ON BLOCKS
Make sure the piece is stable and resting on a good support surface. Proceed with very moderate forward speeds. Avoid making vertical cuts on pieces with insufficient support surface.
This procedure must be performed by a capable and experienced machine operator.



MOTOR
Turn the motor off immediately if the blade seizes. (red button)

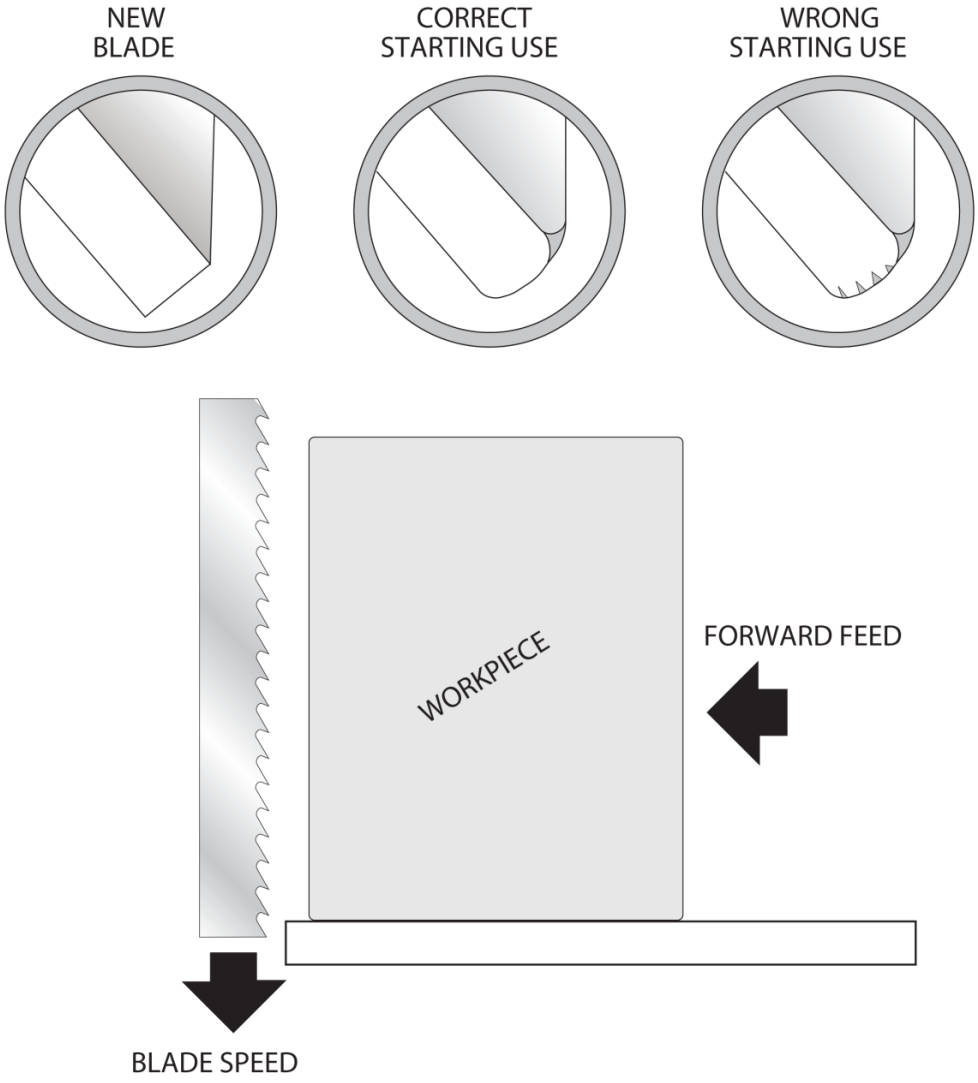
WARNINGS

Absolutely avoid putting your hands in the cutting area when the blade is moving!
Do not operate the machine when breakdowns or defects occur: wait until they have been removed.

When cutting use low thrust pressures and “slow” even forward feed speeds make sure the blade is stopped when handling the block before and after the cutting phase.
Absolutely do not put your hands in the cutting area when the blade is moving.

IT IS FORBIDDEN TO CUT:
Stone, rocks, marble, granite, ceramics, concrete blocks, iron, etc.

IMPORTANT
For maximum machine durability and cutting precision always make the first cuts with very low pressure levels, increasing pressure slowly until you reach the optimum level based on the type of material to be cut.



5.5 Operating requirements

Maximum piece dimensions are:

- Height31 cm, length 66 cm, useful cutting width 34 cm.

The machine must not be used in the following environment conditions:

- In enclosed places;
- Temperatures lower than -15° ;
- Temperatures higher than +40° (especially for single-phase machines);
- Maximum altitude 1000 m (above sea level) :
- Power supply voltage 5% lower or greater than rated voltage;
- Electric frequency 2% lower or greater than rated frequency;
- Corrosive environments (brine or acid) ;
- During rainy or excessively damp weather conditions.

5.6 Safety devices when working in enclosed quarters

The machine has a dust outlet opening for working in enclosed quarters: the user must connect this outlet to an exhaust system (**fig.23**).

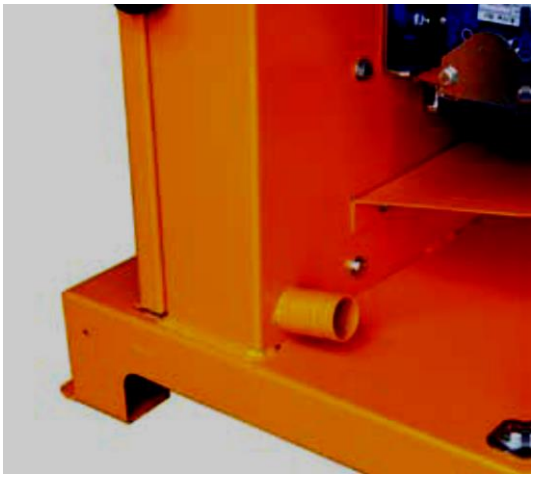


Fig.23

Minimum exhaust capacity: 450 m3/h
Exhaust speed is 20 m/s - Minimum depression = 1500 PA

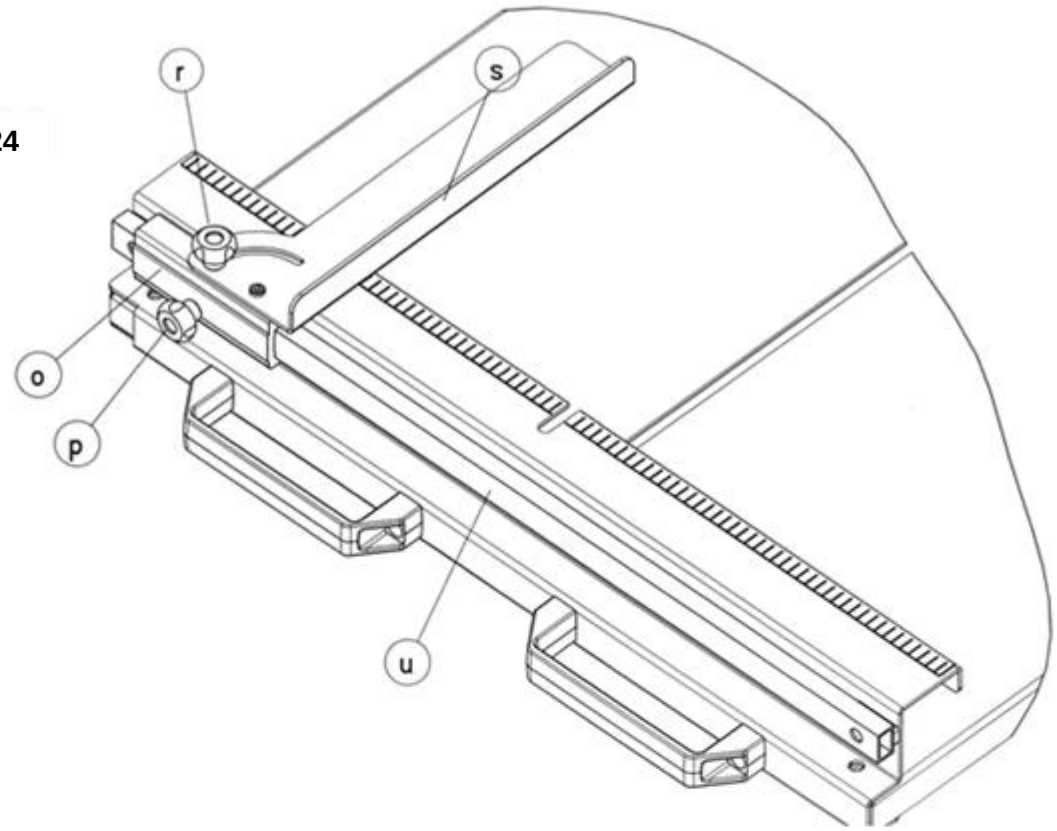
Turn the exhaust system on before starting the machine.
Wear a facemask to avoid exposure to dust.

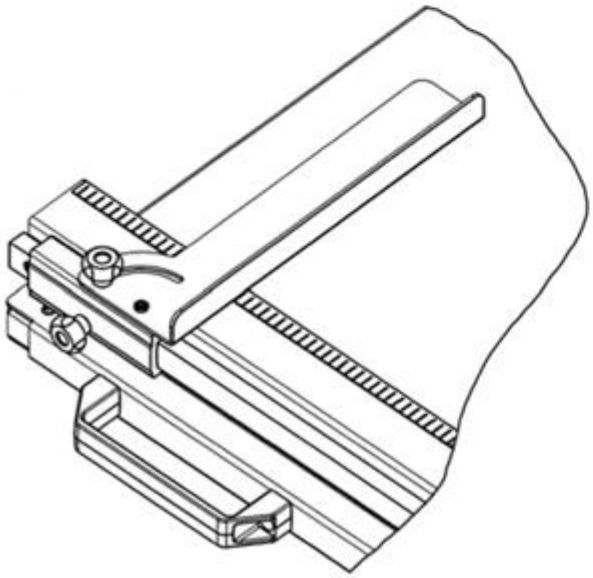
It is compulsory to protect your respiratory track

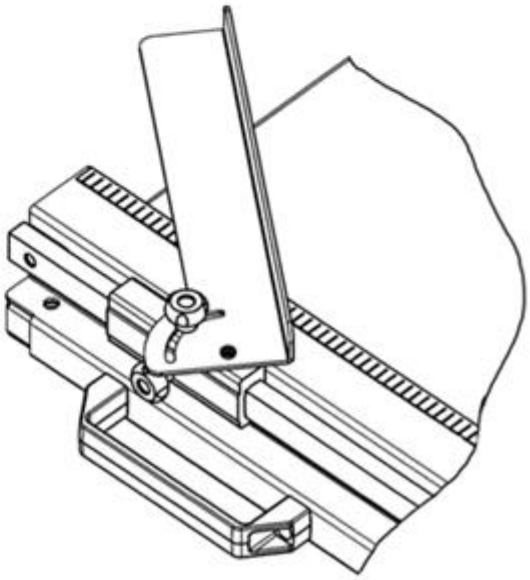
5.7 Square for angle cuts (Fig.24)

This square can be placed either to the right or to the left of the blade with a simple procedure. Just loosen knob (p), pull out aluminum support (o) and thread it onto the cross guide tube (u) to the right of the blade. Then clamp aluminum support (o) in the desired position using knob (p). To angle the square (s) use knob (r).

Fig 24







6 - MAINTENANCE

CAUTION ! All adjustment and maintenance procedures must be done with the machine stopped, the motor off and the power supply cut off! It is prohibited to tamper with or remove guards.

Pay attention to your hands: rotating blade !
It is prohibited to remove residual materials and dust while the blade is moving.
It is prohibited to clean the blade while it is moving.

During maintenance: use sturdy gloves to handle the blade. Be careful of the spring effect. Always post a sign to indicate when a machine is out of use due to operating problems.

DO NOT WASH THE MACHINE WITH WATER
Use a vacuum-cleaner or a small compressor to clean the machine.
Do not grease: use only atomized oil in spray can.

6.1 Blade adjustment and replacement

These operations must be performed, when the plug is unplugged. To mount the blade, do not disassemble any of the protections. To remove the blade, disconnect the plug attached to the bench (Fig. 25). Remove the handles after unscrewing the star grips (Fig. 26), open the shutters, lower the protection to the level of the table and turn it to the right. Loosen the blade by moving the blade-adjusting flywheel (Fig. 27)
After that, mount the blade and check that it is properly seated in the blade guides (Fig. 28) The blade should be made taut using the flywheel (Fig. 29) until the tip of the arrow (Fig. 30) is near the notch on the green.

fig.25

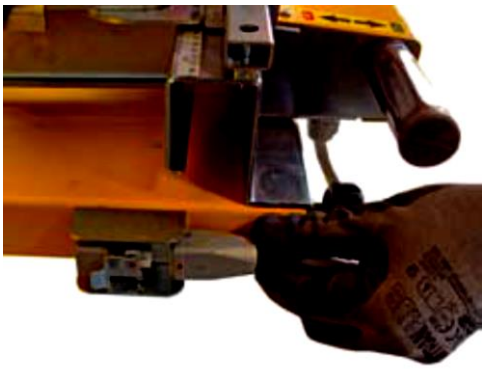


Fig.26

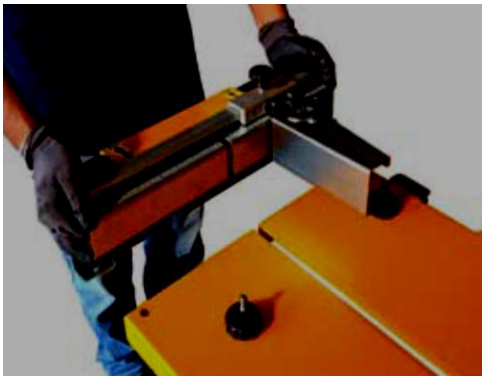


Fig.27

Fig 28

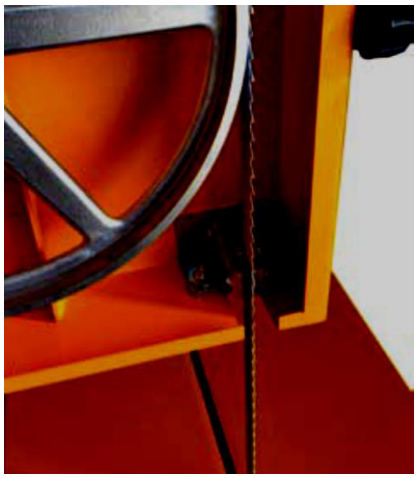


Fig.29

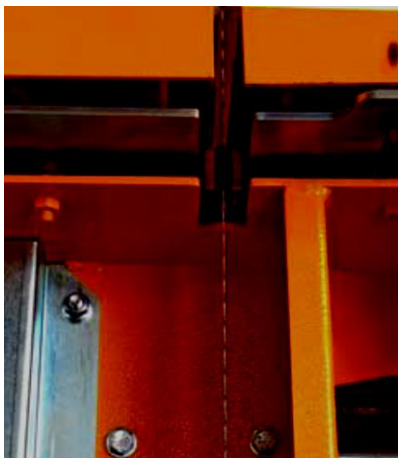
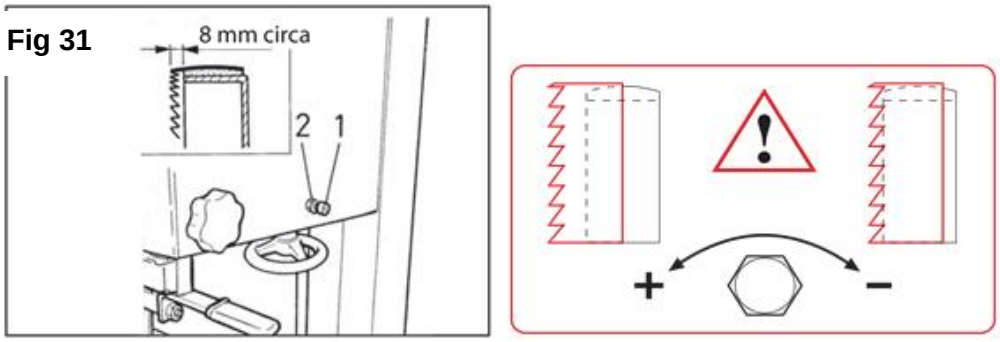


Fig.30

6.2 Blade alignment

If the blade is not correctly positioned during rotation it must be adjusted using screw (Fig 31) after loosening lock nut (Fig 31). Turning it counterclockwise increases tooth protrusion. Turning it clockwise decreases tooth protrusion. It is not necessary to loosen the blade after use.

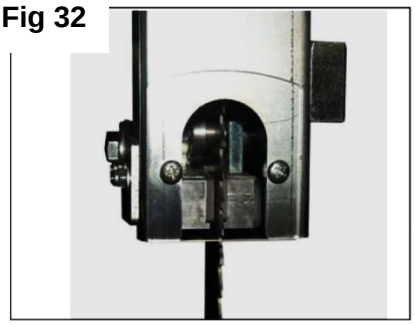
Fig 31



6.3 Blade guide

The two blade guides are equipped with widia inserts (Fig. 32 . 33) The inserts beside the blade act as blade guides while the bearing positioned on the back of the blade acts to support the thrust. Make sure these widia inserts always permit the blade to slide. Clean the blade guides with compressed air to prevent friction. Replace the bearings when they are worn.

Fig 32



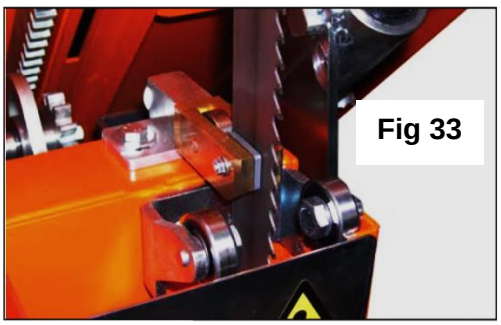


Fig 33

When the bearing on the back of the blade has a very deep furrow it must be replaced:
Bearing for upper blade guide: cod.62200.2rs = D30-D10-14
Bearing for lower blade guide: cod.6200.2rs = D30-D10-9

Example:
bearing to replace

6.4 Cleaning and lubrication

Caution ! All adjustment and maintenance procedures must be performed with the machine off and power disconnected! It is prohibited to remove or tamper with the guards. It is prohibited to clean the blade while it is moving.

Periodically clean the machine and remove deposits from the work table, lubricate the upper flywheel stretching guide, lubricate the blade-guide rod and all joints to prevent rust from forming. Remove any deposits on the flywheels to prevent vibrations and blade breakage. Always blow out the blade guides.

6.5 Checking safety devices

Periodic check :

To check that safety devices operate properly keep to the following instructions:

CHECKING ELECTRICAL COMPONENTS (switch)
1) start up the machine;
2) press the switch's stop push-button (the machine should stop);
3) start up the machine again and press the emergency stop push-button (the machine should stop).

CHECKING ELECTRICAL COMPONENTS (limit switches):
1) start up the machine;
2) open the flywheel guards (the machine should stop);
3) start up the machine again and push the table to its travel limit towards the blade (the machine should stop);
4) the machine has a safety limit switch that prevents it from being started up if the table is inclined in its transportation position.

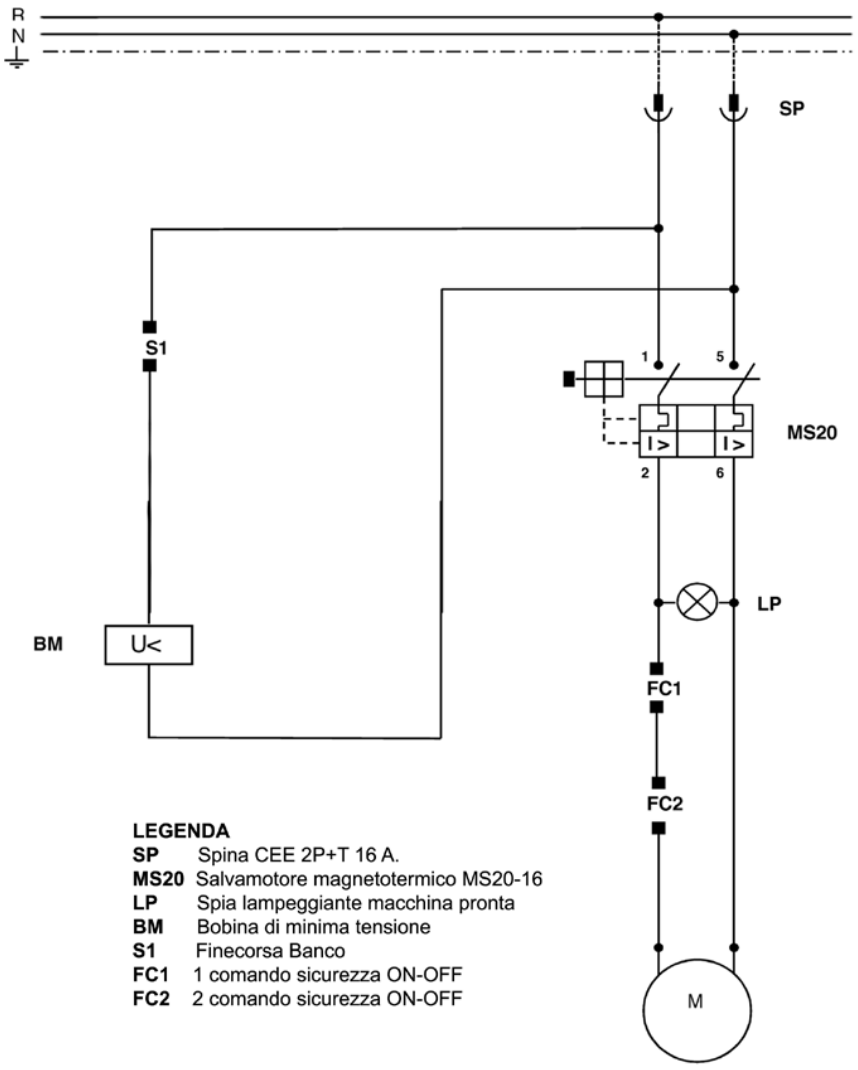
CAUTION: Periodically clean the limit switches to prevent formation of deposits that prevent them from operating. Make sure that the piston goes CLICK ! (the machine will not operate if the limit switch piston remains in)

7 – MOTOR

7.1 Electric motor

Engine of a power of 1.1 kW.
The machine is equipped with a thermal protection which turn off the engine in the event of overload and this in two different situations:
a) Stop little time after the interlocking
The connection is not made correctly or a phase is not under tension.
To put the switch on the off position (red button) and respectively to check the connection and/or the voltage phase.
b) Stop during the cut
The engine was overloaded.
Switch ON-OFF is also used as emergency stop key.

7.2 230V Single-phase wiring diagram



8 – FAULTS : CAUSES AND CURES

8.1 Fault-finding procedures

Should any fault occur during the use of the machine, turn it off, and isolate it from the electrical supply. Any works dealing with the electrical system or supply of the machine can only be carried out by a qualified electrician.

8.2 Trouble-shooting guide

Panne	Source possible	Résolution
Motor is not running	No electricity	Check the electrical supply (fuse for example)
	Connection cable section too small	Change connection cable
	Defective connection cable	Change connection cable
	Defective switch	CAUTION : can only be solved by a qualified electrician
	Defective motor	Change motor or contact motor manufacturer
Motor stops during the cutting, but can be restarted after a short period	Cutting advance too quick	Cut slowly
	Defective blade	Change blade

8.3 Warranty

Warranty coverage is excluded on parts which are due to natural wear, thermal stresses, weather or breakdowns caused by incorrect connections, installation, operation or lubrication or caused by forceful interventions. Warranty coverage is excluded on electrical and electronic apparatus in case of damages caused by inappropriate voltage (insufficient or excess voltages).
In addition no warranty coverage shall be recognized for damages caused by improper use or misuse of the machine such as unsuitable modifications or repairs made by the owner or by third parties under their own responsibility and also in case of intentional overloads of the machine.
Parts subject to wear (for example cutting blades, drive belts or drive chains, blade guides, bearings, thrust bearings, condenser) as well as performance of all adjustment and calibration works are totally excluded from the warranty.

8.4 Customer service

When ordering spare parts, please mention:

- The serial number
- The code of the part.
- The exact denomination.
- The number of parts required.
- The delivery address.
- Please indicate clearly the means of transportation required such as "express" or "by air". Without specific instructions, we will forward the parts through the means which seem appropriate to us --- but which is not always the quickest way.

Clear instructions will avoid problems and faulty deliveries.
If not sure, please send us the defective part.
In the case of a warranty claim, the part must always be returned for evaluation.
Spare parts for the motor can be ordered with the manufacturer of the motor or with their dealer, which is often quicker and cheaper.

This machine has been manufactured by: Saint-Gobain Abrasives S.A.
190, Bd. J. F. Kennedy
L- 4930 BASCHARAGE
Grand-duché de Luxembourg.
Tel.: 00352-50 401-1
Fax: 00352- 50 16 33
http://www.construction.norton.eu
e-mail: sales.nlx@saint-gobain.com

Guarantee can be claimed and technical support obtained from your local distributor where machines, spare parts and consumables can be ordered as well:

SAINT-GOBAIN ABRASIVES NV/SA
INDUSTRIELAAN 129
1070 ANDERLECHT: BRUSSEL
BELGIUM
TEL: +32 2 267 21 00
FAX: +32 2 267 84 24

SAINT-GOBAIN ABRASIVES, S.R.O.
VINOHRADSKÁ 184
130 52 PRAHA 3
CZECH REPUBLIC
TEL: +420 267 132 026
+420 267 132 029
FAX: +420 267 132 021-2

SAINT-GOBAIN ABRASIVES A/S
ROBERT JACOBSENS VEJ 62A
2300 KØBENHAVN S
DENMARK
TEL: +45 4675 5244

PO BOX 643706
FORTUNE TOWER OFFICE 2106
JLT BLOCK C
(NEXT TO METRO STATION)
JUMEIRA LAKE TOWER, DUBAI
UNITED ARAB EMIRATES
TEL: +971 4 431 5154
FAX: +971 4 431 5434

SAINT-GOBAIN ABRASIFS
RUE DE L'AMBASSADEUR - B.P.8
78 702 CONFLANS CEDEX
FRANCE
TEL: +33 (0)1 34 90 40 00
FAX: +33 (0)1 39 19 89 56

SAINT-GOBAIN ABRASIVES GMBH
BIRKENSTRASSE 45-49
D-50389 WESSELING
GERMANY
TEL: +49 (0) 2236 703-1
+49 (0) 2236 8996-0
+49 (0) 2236 8911-0
FAX: +49 (0) 2236 703-367
+49 (0) 2236 8996-10
+49 (0) 2236 8911-30
FÜR DEN FACHHANDEL ÖSTERREICH
TEL: +43 (00) 662 430 076

SAINT-GOBAIN ABRASIVES KFT.
1225 BUDAPEST
BÁNYALÉG U. 60/B.
HUNGARY
TEL: +36 1 371 22 50
FAX: +36 1 371 22 55

SAINT-GOBAIN ABRASIVI S.P.A
VIA PER CESANO BOSCONE 4
I-20094 CORSICO MILANO
ITALY
TEL: +39 02 44 851
FAX: +39 02 44 78 266

SAINT-GOBAIN ABRASIVES S.A.
190 RUE J.F. KENNEDY
L-4930 BASCHARAGE
GRAND DUCHE DE LUXEMBOURG
TEL: +352 50 401 1
FAX: +352 50 16 33
NO. VERT (FRANCE) 0800 906 903

SAINT-GOBAIN ABRASIFS, S.A.
2 ALLÉE DES FIGUIERS
AIN SEBAÂ - CASABLANCA
MOROCCO
TEL: +212 5 22 66 57 31
FAX: +212 5 22 35 09 65

SAINT-GOBAIN ABRASIVES BV
GROENLOSEWEG 28
7151 HW EIBERGEN
P.O. BOX 10
7150 AA EIBERGEN
THE NETHERLANDS
TEL: +31 545 466466
FAX: +31 545 474605

SAINT-GOBAIN ABRASIVES AS
POSTBOKS 11, ALNABRU,
0614 OSLO
BROBEKKVEIEN 84,
0582 OSLO
NORWAY
TEL: +47 63 87 06 00
FAX: +47 63 87 06 01

SAINT-GOBAIN HPM POLSKA SP. Z O.O.
UL. TORUŃSKA 239/241
62-600 KOŁO
POLAND
TEL: +48 63 26 17 100
FAX: +48 63 27 20 401

SAINT-GOBAIN ABRASIVOS, L. DA
ZONA INDUSTRIAL DA MAIA
I-SECTOR VIII, NO. 122
APARTADO 6050
4476 - 908 MAIA
PORTUGAL
TEL: +351 229 437 940
FAX: +351 229 437 949

SAINT-GOBAIN GLASS
BUSINESS UNIT ABRASIVI
PUNCT DE LUCRU: LOC.VETIS, JUD.
SATU MARE 447355
STR. CAREIULUI 11
PARC INDUSTRIAL RENOVATIO
ROMANIA
TEL: +40 261 839 709
FAX: +40 261 839 710

SG HPM RUS
58, F. ENGELS STR.
STROENIE 2
105082 MOSCOW
RUSSIA
TEL: +74 955 408 355
FAX: +74 959 373 224

SAINT-GOBAIN
ABRASIVES (PTY) LTD
2 MONTEER ROAD
ISANDO 1600
P.O. BOX 67
SOUTH AFRICA
TEL: +27 11 961 2000
FAX: +27 11 961 2184/5

SAINT-GOBAIN ABRASIVOS, S.A.
CTRA. DE GUIPÚZCOA, KM. 7,5
E-31195 BERRIOPLANO (NAVARRA)
SPAIN
TEL: +34 948 306 000
FAX: +34 948 306 042

SAINT GOBAIN ABRASIVES AB
GÅRDSFOGDEVÄGEN 18A
168 66 BROMMA • SVERIGE
SWEDEN
TEL: +46 8 580 881 00
FAX: +46 8 580 881 01

SAINT-GOBAIN ABRASIVES
MUEYYETZADE MAH.
GALIPDEDE CAD. NO:99, KAT:3
34425 BEYOGLU-ISTANBUL-TURKEY
TEL: 0090-212-245 85 21
FAX: 0090-212-245 85 27

SAINT-GOBAIN ABRASIVES LTD.
DOXEY RD
STAFFORD
ST16 1EA
UNITED KINGDOM
TEL: +44 1785 222 000
FAX: +44 1785 213 487

SAINT-GOBAIN

Saint-Gobain Abrasifs
190 Rue J.F. Kennedy
L-4930 Bascharage
Grand Duche de Luxembourg
Tel: +352 50 401 1
Fax: +352 50 16 33
no. vert (France) 0800 906 903

www.nortonabrasives.com/