

TR 250 H DF

OPERATING INSTRUCTIONS





Declaration of conformity

The undersigned manufacturer:

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

Declares that this product:

Tile saw (Code):

TR 250 H DF 230V (70184640816)

TR 250 H DF 230V UK (70184640817)

is in conformity with the following Directives:

- ***European Machinery Directive 2006/42/CE***
- ***"LOW VOLTAGE" 2006/95/CE***
- ***Electromagnetic Compatibility Directive 2004/108/CE***

and European standard:

- ***EN 12418 – Masonry and stone cutting-off machines for job site – Safety***

A handwritten signature in black ink, appearing to read "Olivier Plenert", with a long horizontal flourish extending to the right.

Olivier Plenert
Machine Design Manager

TR 250 H DF

OPERATING INSTRUCTIONS

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1 Basic Safety Instructions

The **TR 250 H DF** is exclusively designed for the dry-cutting of tiles and abrasive materials with NORTON diamond disks mainly on construction sites.

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.

1.1 Symbols

Important warnings and pieces of advice are indicated on the machine using symbols. The following symbols are used on the machine:



Read operator's instructions



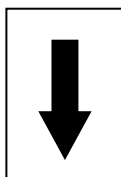
Ear protection must be worn



Hand protection must be worn



Eye protection shall be worn



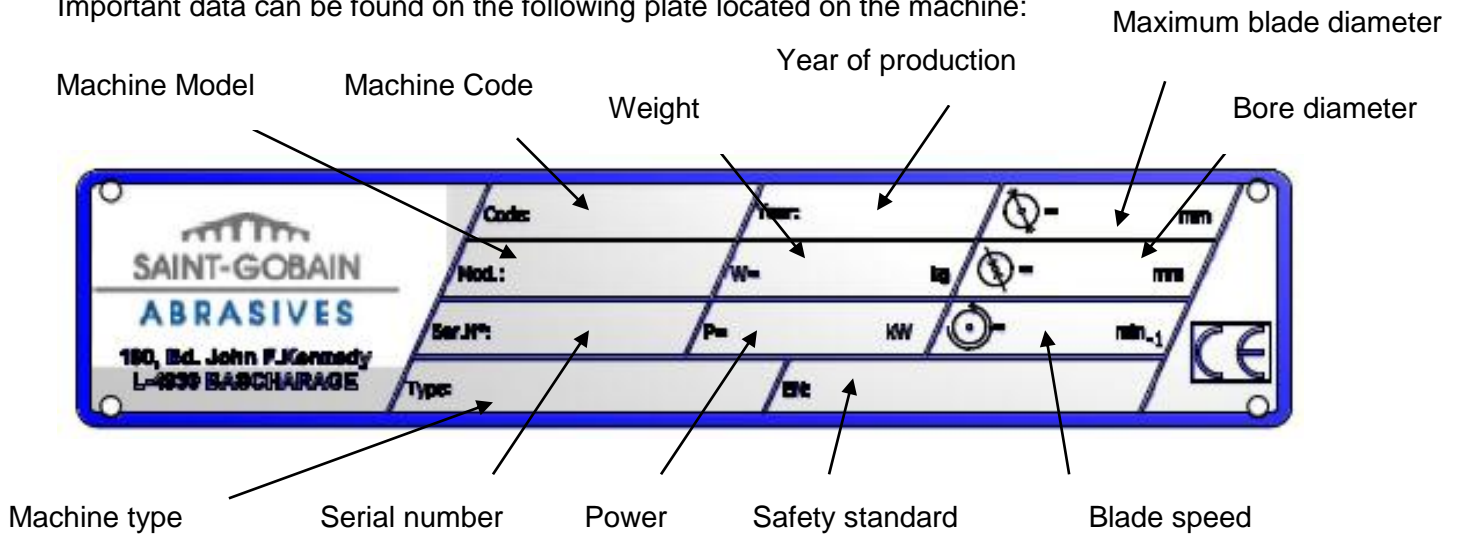
Rotation direction of the blade



Danger: risk of cut

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

Before commencing work

- Before commencing work, make yourself familiar with the working environment at the place of use. The working environment includes: obstacles in the area of work and manoeuvre, the firmness of the floor, necessary protection at the site relating to public thoroughfares and the availability of help in the event of accidents.
- Site the machine on an even, firm and stable base!
- Check for correct mounting of the blade regularly.
- Immediately remove damaged or badly worn blades, as they endanger the operator whilst rotating.
- The material to be cut must be held securely in place on the table to allow no unexpected movement during cutting operation.
- Always cut with the blade guard in position.
- Only fit NORTON diamond blades with continuous rim to the machine! The use of other tools can damage the machine!
- Read the blades' specifications carefully to choose the correct tool for your application.
- Attention is drawn to the use of BS2092 safety goggles in conformity with specified Processes No.8 of the Protection of Eyes Regulation 1974, Regulation 2(2) Part 1.

Electrical powered machine

- Always turn off the machine and separate it from the main source of electricity before any work on the machine is done.
- Make all electrical connections securely to eliminate contact of live wires with spray water or dampness
- It is IMPERATIVE that you earth the machine properly. Let a qualified electrician check in case of doubt.
- Press the red button on the switch to stop the machine in case of emergency.
- In the event of the machine breaking down or stopping for no apparent reason, switch off the main electricity supply. Only a qualified electrician is allowed to investigate the trouble and remedy the fault.

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 S.A. who shall confirm that the machine is still in conformity with the safety regulations.

2.1 Short description

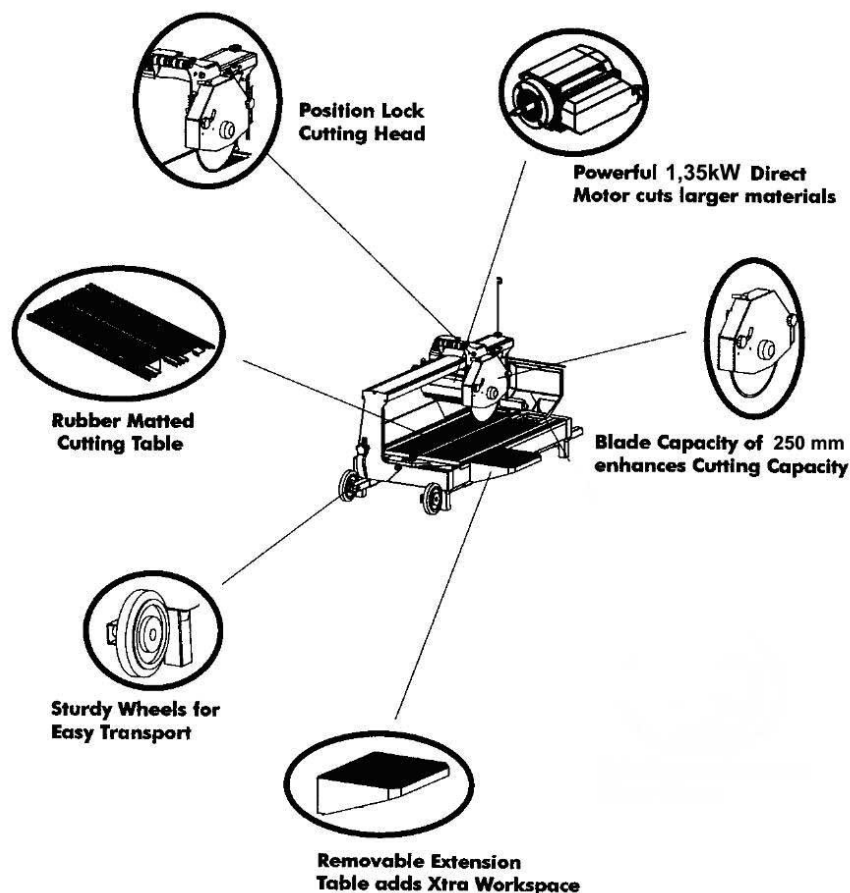
The **TR 250 H DF** Saw is designed for durability and high performance for onsite wet cutting operations of a wide range of tiles and masonry products.

As with all other NORTON CLIPPER products, the operator will immediately appreciate the attention given to detail and quality of materials used in construction. The machine and its component parts are assembled to high standards assuring long life and minimum maintenance.

2.2 Purpose of use

The machine is mainly designed for dry cutting of tiles or a large range of building and refractory materials. It is not designed for cutting wood or metals.

2.3 Layout



2.4 Technical Data

Electric motor	1,3kW
Voltage	230V, 50Hz
Protection rating	IP 54
Max. blade diameter	250 mm
Bore	25.4 mm
Rotation speed of the blade	2800 min ⁻¹
Flange diameter	90 mm
Cutting depth mm	22 mm
Cutting length mm	900 mm
Sound pressure level	73 dB (A) (ISO EN 11201)
Sound energy level	87 dB (A) (ISO EN 3744)
Table dimension (LxW)	1110x490 mm
Machine dimensions (LxWxH)	1400x670x1460 mm
Weight Machine cpl.	70 kg

2.5 Recommended technical Data of the vacuum cleaner

The vacuum cleaner is not included with the machine.

We recommend using CLIPPER CV 324 vacuum cleaners for best durability and high performance:

Vacuum cleaner	CV 324
Article number	00310325226
Power	1,6kW
Performance	324 m ³ /h
Filter	Teflon fabric filter

2.6 Aspiration performance

Analyses of levels of dust have been made to evaluate the performance of aspiration:

Measurement type	Alveolar dust mg/m ³	Breathable dust mg/m ³
on the operator	0.00	1.9
at 2.5m of the machine	0.00	1.0

Limit values according to German standard TRGS 900 ("MAK-Wert-Liste"):

- 3 mg/m³ for Alveolar dust
- 10 mg/m³ for breathable dust

So the results are then extremely inferior to the limit values.

3 Assembly and commissioning

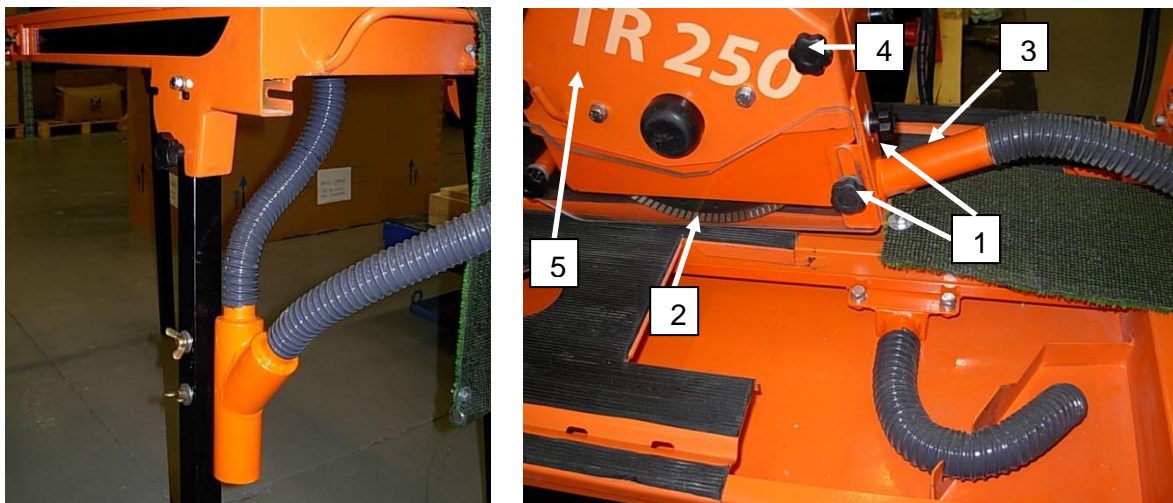
The machine is delivered fully equipped. It is ready for operation after assembly the diamond blade and after connection to the appropriate power supply.

3.1 Assembly of the legs

Unfold the legs on one side of the machine and tighten them with the grip knobs. Unfold the legs on the other side of the machine and tighten them as well.

3.2 Assembly of the Aspiration

Mount the Tee 45° on the rear left leg of the machine with two wing screw. Plug the hose of the vacuum cleaner on the Tee 45°. Make sure that the hoses are well connected to each dust collector of the machine.



3.3 Tool assembly

Only NORTON blades with a maximum diameter of 250 mm can be used with the **TR 250 H DF**. All tools used must be selected with regard to their maximum permitted cutting speed for the machine's maximum permitted rotation speed.

Before mounting a new blade into the machine, switch off the machine and isolate it from the main source of electricity.

To assemble a new blade, follow these steps:

- Loosen the nuts (1) to remove the Plexiglas side shields (2) and the dust collector (3).
- Loosen the nuts (4) to the blade guard (5).
- Loosen the hexagonal nut (left threaded) on the blade shaft with the 30mm wrench, which holds the removable outer flange.
- Remove the outer flange.
- Clean the flanges and blade shaft and inspect for wear.
- Mount the blade on the shaft ensuring that direction of rotation is correct (check with the arrow on the blade guard). Wrong direction of rotation blunts the blade quickly.
- Replace outer blade flange.
- Tighten hexagonal nut.
- Retighten the nuts maintaining the outer cover the blade shaft and put the Plexiglas side shields and the dust collector back in place.

The blade bore must correspond exactly to the diameter of the blade shaft. Cracked or damaged

bore is dangerous for the operator and for the machine.

3.4 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 2.5mm²-section per phase.

The vacuum cleaner can be connected to the auxiliary plug of the machine. It enables to command simultaneously the start and stop of both machine and vacuum cleaner.

3.5 Starting the machine

Connect the machine to the electrical supply. You can start it by pressing the green button of the switch. To stop the machine, press red button of the switch. Red button is also the emergency stop.

4 Transport and storing

4.1 *Securing for transport*

Before transporting the machine, always remove the blade and empty the pan. Secure the cutting head on the rail by using the knob.

ATTENTION : No part of the machine is designed for transport by crane.

4.2 *Long period of inactivity*

If the machine is not going to be used for a long period, please take the following measures:

- Completely clean the machine
- The storage site must be clean, dry and at a constant temperature.

5 Operating the machine

5.1 Site of work

5.1.1 Siting the machine

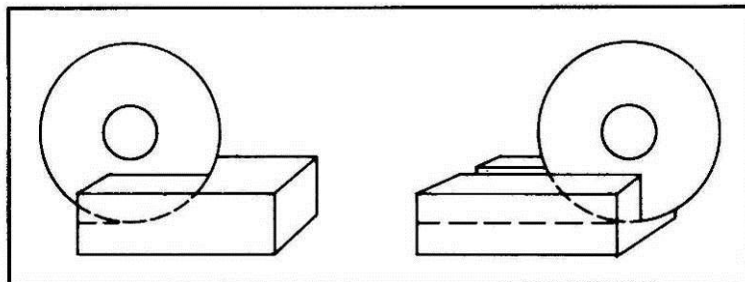
- Remove from the site anything, which might hinder the working procedure!
- Make sure the site is sufficiently well lit!
- Observe manufacturer's conditions for connecting to power supplies!
- Place electric cables in such a way that damage by the device is excluded!
- Make sure you have a continual adequate view of the working area so you can intervene in the working process at any time!
- Keep other staff out of the area, so you can work securely.
- **Do not dry cut without the vacuum cleaner turned on.**

5.1.2 Space required for operation and maintenance

Leave 2 m in front of the machine and 1,5 m around it for usage and maintenance of the **TR250 DF**.

5.2 Cutting method

To use the machine correctly, you must face it with one hand on the cutting head, and one on the material to be cut to maintain it against the material stops. Always keep your hands away from the moving blade.



In fixed cutting, the cutting head is locked in a fixed depth pushed into the material as shown. It has been well set at the factory for a Ø250mm blade. No adjustment should normally be made.



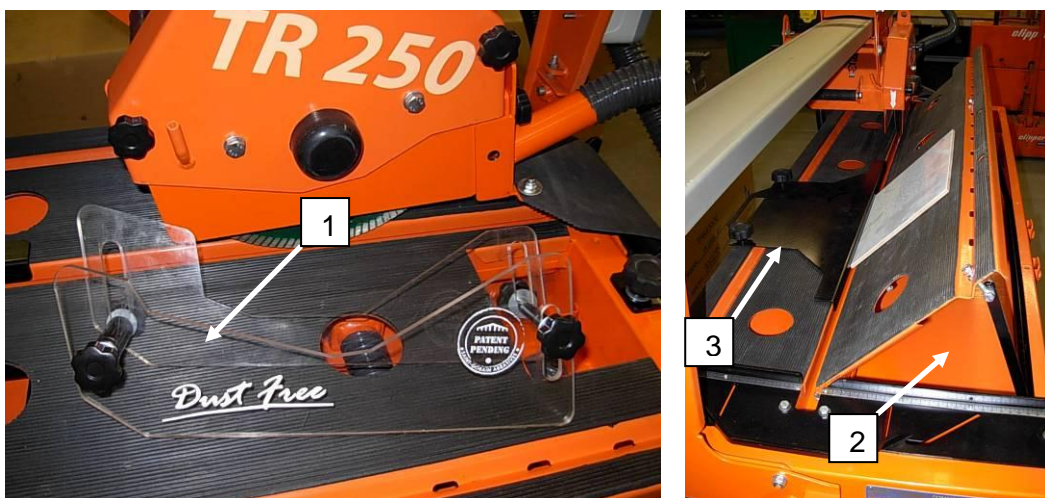
Set the height of the dust guard as close as possible to the material in order to evacuate a maximum of dust with the vacuum.

- Put material on table and keep it firmly against the material stop.
- Start the vacuum Cleaner.
- Start the motor.

Push the cutting head slowly and without undue pressure towards the material and cut the material as shown on the picture.

5.3 45° cutting

It is possible to make 45° cuts with the machine **TR 250 H DF** :



- First remove the Plexiglas side shields (1).
- Tilt the left table and use the table support (2) in order to position the table at 45° (the tilting has been well set at the factory)
- Position the 45° material stops (3) and screw it thanks to the two grip knobs. Make sure the blade doesn't touch the material stop.
- Put the cutting material against the material stop (3) and hold it strongly with one hand.
- With the other hand, push the cutting head slowly and without undue pressure towards the material and cut the material.
- As soon as the material is entirely cut, remove the material before pushing the cutting head backwards.

NB: 45° cutting can generate more dust than normal cutting method because Plexiglas side shields are removed.

NB: 45° cutting can generate big residues that cannot be vacuumed and fall down in the vacuum rail. These residues could perturb good vacuum performances. It is recommended to clean the vacuum rail after few cuts.

5.4 General advice for the cutting

- Only materials with max. dimensions 1110x490x25mm and max. weight 10 kg can be cut with the machine.
- Before commencing work make sure tools are firmly seated!
- Select the right tools as recommended by the manufacturer depending on the material to be worked, the working procedure to be carried out and the required efficiency.
- Set the guide-a-cut to the desired width of cut, and to the desired angle using the two engraved measurements to align it correctly.

6 Maintenance and servicing

To ensure a long-term quality from the cutting with the TR 250, please follow the maintenance plan below:

		Begin of the day	During the changing of tool	End of the day or more often if required	After a fault	After a damage
Whole machine	Visual control (general aspect, watertightness)					
	Clean					
Flange and blade fixing devices	Clean					
Motor cooling fans	Clean					
Pan, vacuum rail	Clean					
Motor housing	Clean					
Reachable nuts and screws	Tighten up					

Maintenance of the machine

Always perform the maintenance of the machine with the machine isolated from the electrical supply.

Lubrication

The TR 250 uses life-lubricated bearings. Therefore, you don't need to lubricate the machine at all.

Cleaning of the machine

Your machine will last longer if you clean it thoroughly after each day of work, especially pan, motor and blade flange.

Cleaning of the vacuum cleaner

Your vacuum cleaner machine will last longer if you clean it thoroughly after each day of work, especially tray, filters and motors. Check cleaning instructions in the manual of the vacuum cleaner.

7 Faults: causes and cures

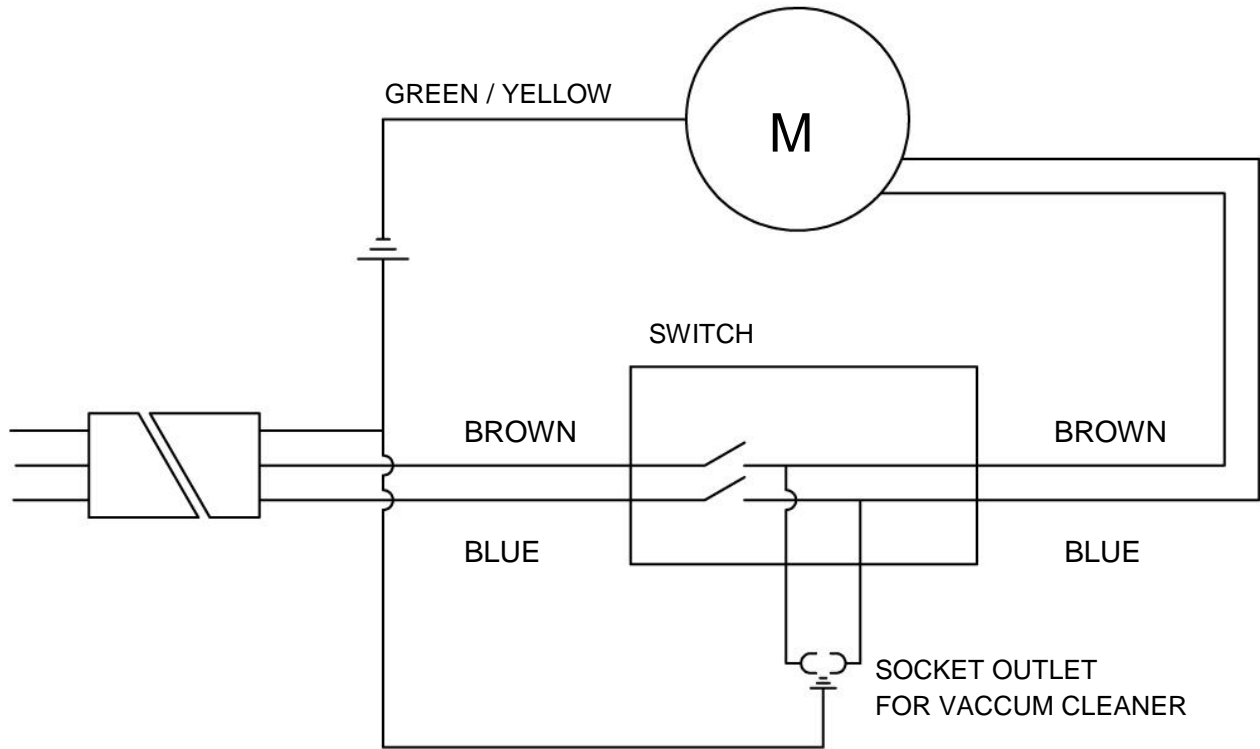
7.1 *Fault-finding procedures*

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.

7.2 *Trouble-shooting guide*

Trouble	Possible source	Resolution
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 qualified electrician
	Defective motor	Change motor or contact motor manufacturer
Motor stops during the cutting, but can be restarted after a short period (overload protection)	Cutting advance too quick	Cut slowly
	Blade is blunt or glazed	Sharpen the blade in calcareous stone
	Defective blade	Change blade
	Wrong blade specification for the application	Change blade

7.3 *Circuit diagram*



7.4 *Customer service*

When ordering spare parts, please mention:

- The serial number (7 digits).
- The code of the part or position on the exploded view.
- 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
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:

Benelux and France:

From Saint-Gobain Abrasives S.A.
Free telephone numbers:
Belgium : 0 800 18951
France: 0 800 90 69 03
Holland: 0 8000 22 02 70
e-mail: sales.nlx@saint-gobain.com

Czech Republic

Norton Diamantove Nastroje Sro
Vinohradska 184
CS-13000 PRAHA 3
Tel: 0042 0267 13 20 21
Fax : 0042 0267 13 20 21
e-mail : norton.diamonds@komerce.cz

Germany

Saint-Gobain Abrasives GmbH
Birkenweg 45-49,
D-50389 WESSELING
Tel : (02236) 8911 0
Fax : (02236) 8911 30
e-mail: sales.ngg@saint-gobain.com

Spain

Saint-Gobain Abrasivos S.A.
C/. Verneda del Congost s/n
Pol.Ind. El Pedregar
E-08160 MONTMELÓ (Barcelona)
Tel: 0034 935 68 68 70
Fax: 0034 935 68 67 14
e-mail: Comercial.sga-apa@saint-gobain.com

Italy

Saint-Gobain Abrasivi S.p.A.
Via per Cesano Boscone, 4
I-20094 CORSICO-MILANO
Tel: 0039 02 44 851
Fax : 0039 024 51 01 238
e-mail : Norton.edilizia@saint-gobain.com

United Kingdom

Saint-Gobain Abrasives Ltd.
Doxey Road
Stafford
ST16 1EA
Tel : 0845 602 6222
Free fax : 0800 622 385
e-mail : nortondiamonduk@saint-gobain.com

Austria

Saint-Gobain Abrasives GmbH
Telsenberggasse, 37
A-5020 SALZBURG
Tel : 0043 662 43 00 76 77
Fax : 0043 662 43 01 75
e-mail: office@sga.net

Hungary

Saint-Gobain Abrasives KFT.
Banyaleg Utca 60B
H-1225 BUDAPEST
Tel: ++36 1 371 2250
Fax: ++36 1 371 2255
e-mail: nortonbp@axelero.hu

Poland

Saint-Gobain Diamond Products Sp.zO.O.
AL. Krakowska 110/114
PL-00-971 WARSZAWA
Tel: 0048 22 868 29 36
Tel/Fax: 0048 22 868 29 27
e-mail: norton-diamond@wp.pl

www.construction.norton.eu

Saint-Gobain Abrasives

190, Bd. J. F. Kennedy
L-4930 BASCHARAGE
LUXEMBOURG

Tel: ++352 50401-1

Fax: ++352 501633

e-mail: sales.nlx@saint-gobain.com