

CDM 354

USER MANUAL

Translation of the original instructions



SAINT-GOBAIN





The undersigned builder:

SAINT-GOBAIN ABRASIVES SA
190, comics. JF KENNEDY
L-4930 BASCHARAGE

Declares that the new equipment designated below:

Core drilling motor : **CDM 354 230V 70184631871**

Complies with the provisions of the Directives:

- **"MACHINERY" 2006/42/EC**
- **" ELECTROMAGNETIC COMPATIBILITY " 2014/30/EU**

And to the European standard:

- **EN 62841-1:2015**
- **EN55014-1:2021**
- **EN 61000-3-2:2019**
- **EN 61000-3-3:2013**

Valid for machines with serial number from: 4503391636001

Storage location of technical documents:

Saint-Gobain Abrasives 190, Bd. JF Kennedy 4930 BASCHARAGE, LUXEMBOURG

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

Bascharage, Luxembourg, on 03/09/2023.

Fabrice Genuardi
Quality Manager
Responsible for the technical file

A handwritten signature in black ink, appearing to read 'Genuardi', is written over a faint, larger version of the same signature.



Declaration of conformity

The undersigned manufacturer:

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

Declares that this product:

Masonry Saw: **CDM 354 230V 70184631871**

is in conformity with the following standard:

- ***Supply of Machinery (Safety) Regulations 2008***
- ***Electromagnetic Compatibility Regulations 2016***
- ***Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001***

and European standard:

- ***EN 62841-1:2015***
- ***EN55014-1:2021***
- ***EN 61000-3-2:2019***
- ***EN 61000-3-3:2013***

Valid for machines with a serial number greater than: 4503391636001

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Bascharage, Luxembourg, on 03/09/2023.

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1 INTRODUCTION

Foreword

This manual is written for users of CDM354 core drilling motors . The manual contains information on the installation, use and maintenance of the CDM354 motor. This manual only applies to CDM354 coring motors. The type of motor is indicated on the nameplate placed on the machine.

2 BASIC SAFETY INSTRUCTION

2.1 Pictograms

Advice and warnings are represented by pictograms on the machine. You will find the following symbols on CLIPPER machines. Here is their explanation:



Reading the user manual mandatory before using the machine



Mandatory hearing protection



Mandatory hand protection



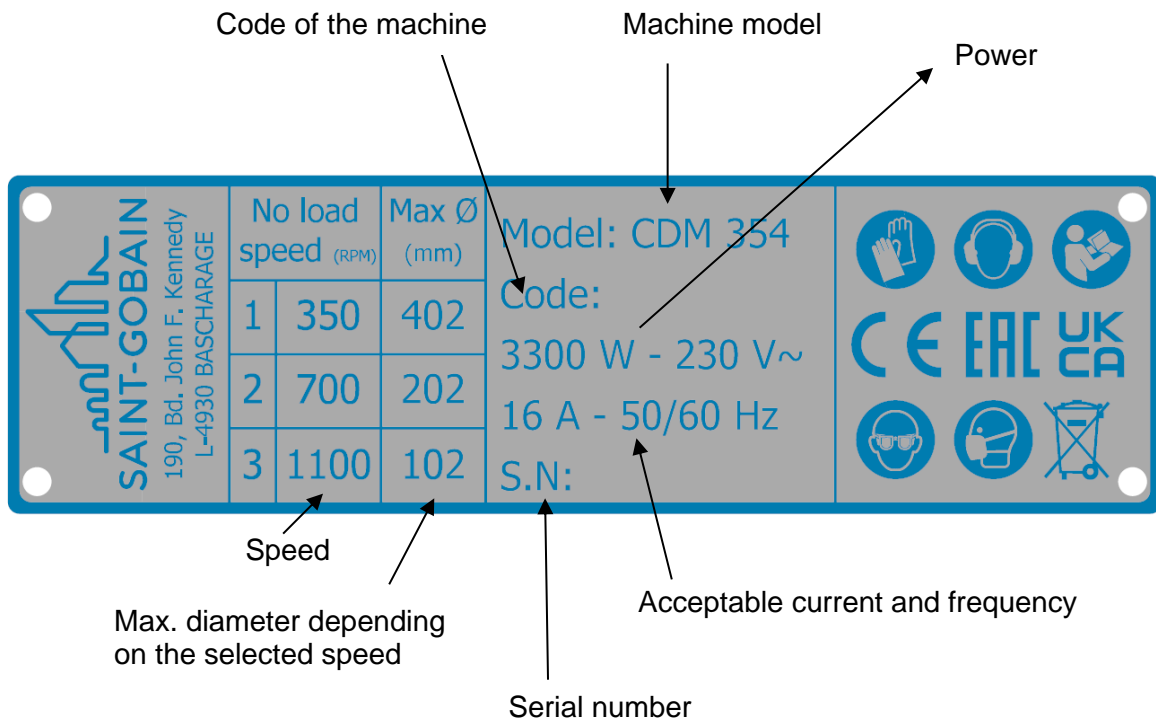
Obligatory eye protection



Mandatory dust mask

2.2 Machine plate

You can find important information on the following plate attached to your machine:



2.3 Safety instructions for particular operating phases

When using the machine, always respect the following safety instructions to avoid the risk of shock, injury and fire. Carefully read the information provided and heed the advice before using the machine.

Prevent Electric Shock

A grounded electric motor with water cooling should only be used if the supply system and the equipment are fully grounded and connected to the mains via a protective grounding in good condition. operating mode (PRCD or differential circuit breaker). The residual current of the protective ground must not exceed 10 mA. Test ground protection before use!

Prevent water-electricity contact

Prevent disconnection or leakage of the water supply hose. When drilling overhead, always consider cooling water. When drilling overhead, always use a water collector. For work on walls, the use of a water collector is recommended (available as an accessory). Always dispose of water safely, for example with a wet vacuum cleaner. Cords, plugs and electricity must not come into contact with water.

Stay constantly vigilant

Always concentrate on the work, use your common sense and do not operate the machine if you are not concentrating. Make sure that you are always able to stop the engine quickly.

Wear appropriate work clothes

Do not wear loose jewelry or clothing. They may get caught in moving parts. For outdoor work, rubber gloves and shoes with profiled soles are recommended. If you have long hair, wear a net.

Use means of personal protection

Use hard hat for protection against falling elements, gloves for protection against sharp elements, safety glasses for protection against stone chips and/or sparks. Wear a dust mask when performing dusty work. Wearing noise canceling headphones is recommended if the sound level is above 80 dB(A). Wearing such a helmet is compulsory above 90 dB(A).

Use appropriate equipment and do not overload it

Only use the machine for the purpose for which it was designed. Only use tools with the diameter that is recommended for the different speeds.

Prevent unexpected machine start-up

Remove the plug from the socket (eg during maintenance and replacement of parts). Before connecting the machine to the electrical network, check that the switch is in the off position.

Maintain tools carefully

To work better and more safely, keep tools clean. Observe the care instructions. Keep the handles dry and free of grease and oil.

Check the good condition of the machine

Check that the moving parts are working correctly: that they are not jamming, that no part is broken, that they are correctly fitted, that all the conditions that could influence the correct operation of the machine are met. Any damaged part should be replaced or repaired by a licensed professional.

Use of accessories and auxiliary devices

Only use accessories or auxiliary devices mentioned in the manual or in the catalogue. The use of accessories or auxiliary devices other than those mentioned may lead to a risk of injury.

Extension cord / cord

Use only an extension cord in perfect condition, suitable for outdoor use and having a core of a large enough diameter. Fully unwind the reel. Do not carry the machine by the cord and do not pull the cord to remove the plug from the socket. Protect the cable against heat, oil and contact with sharp edges.

Repair of power tools

Power tools must comply with the prescribed safety instructions. Repairs must therefore only be carried out by an approved professional electrician, under risk of accident for the user.

Keep the work area tidy

Any mess in the work area can lead to accidents. Prohibit access to the devices and the work area to unauthorized persons (children) and animals. When drilling, be sure to receive the cut piece (especially when drilling into the floor or ceiling). After use, store the machine in a safe, dry and closed place, out of the reach of children.

Consider environmental influences

Make sure the work area is well lit. Pay attention to the location of cables, pipes and rebar in the work area. Do not use power tools in a humid environment (rain) or near flammable materials.

Ensure the safety of the work area

Secure tools and work pieces securely so they do not come loose. Before starting the machine, make sure that all keys and other auxiliary tools are removed. Do not work in the wrong position and make sure you are well balanced.

The noise level depends on various factors such as: material, mounting, environment, tool diameter and type, speed, feed, column or time of use. In the workplace, the noise level exceeds 80 dB(A).



WEAR NOISE-CANCELLING HEADPHONES

3 MACHINE DESCRIPTION

CDM 354 drill motors can only be used in combination with a drill stand. The motors are equipped with a starting current limiter which ensures that when switching on the motor does not overload the network and starts smoothly. The purpose of the inside slipper clutch is to protect the operator and the machine.

3.1 Function

- To be used only with diamond drill bits for drilling holes in concrete and stony materials.
- Use reserved only for people who have received training for this purpose. Always remain well concentrated during use. The tool can crash at any time.
- To be used (class 1) in combination with plugs with earth connection and differential circuit breaker (PRCD) with an undervoltage release and leakage current <10 mA or isolation transformer (FI-Box) <10 mA and special sheet.
- For overhead work, always use a water trap.
- Cannot operate for more than one minute without water supply (max. 3 bar). Otherwise, the wear of the seals in the machine will increase considerably.

3.2 Mains voltage

Check whether the mains voltage corresponds to the voltage indicated on the nameplate. Before connecting the machine to the electrical network, check that it is in the off position.



**CONNECT THE MACHINE IN COMBINATION WITH:
DIFFERENTIAL CIRCUIT BREAKER (PRCD) WITH AN UNDERVOLTAGE RELEASE AND 10
MA LEAKAGE CURRENT OR
ISOLATION TRANSFORMER (FI-Box) 10 MA AND SPECIAL PLUG.**

Use of the differential circuit breaker (PRCD) 10 mA

- The differential circuit breaker is a safety device which trips in the event of a leakage current of maximum 10 mA.
 - The under voltage release trips in the event of under voltage below 110 V
 - (So also when the plug is pulled out of the socket)
 - Switch on the circuit breaker (PRCD) by connecting the plug to the electrical network and pressing the green button (the red indicator lights up)
 - Test the GFCI before each use by pressing the test button.
- Using the isolation transformer (FI-BOX) 10 mA**
- The differential circuit breaker is a safety device which trips in the event of a leakage current of maximum 10 mA. Test the differential circuit breaker before each use by pressing the test button (at least once a month).
 - When the circuit breaker has tripped, solve the problem and close the cover tightly.

3.3 Mounting on a drilling column

The quick-change motor plate will be mounted using the 4 M8 screws supplied with the column, as well as the 10 mm key, on the motor mounting brackets. In addition, the frame must be firmly fixed with a quick screw and dowel or with a suction plate. For drilling under watering the machine must be connected to a water point using the quick coupling (use clean water).

3.4 Gearbox

The CDM354 is fitted with a 3-speed gearbox. Change gears only when the machine is completely stopped. Turn the shift knob only by hand, without using pliers etc. To make it easier to engage the gears, you can turn the spindle by hand.

3.5 Training

Use of the machine is reserved only for people who have received special training for this purpose. Always remain well concentrated during use. Practice has shown that the tool can crash at any time.

3.6 Electronic protection

If the core drilling machine draws too much current from the general power supply, the electronic protection automatically disconnects the machine from the general power supply. Please note that the electronic protection does not provide 100% overload protection, but only acts as a safety.

3.7 Friction clutch

The inside friction clutch protects the operator, machine and tool from mechanical overload and activates when the tool jams. If the slip clutch has activated, the machine must be stopped immediately. If the friction clutch is active for more than 2-3 seconds, wear and production heat loss will increase significantly.

3.8 Overload protection

The CDM354 motor is equipped with 2 LEDs. When the motor is used overloaded, the orange LED lights up to warn the operator that the motor is overloaded. The operator must immediately lower the load.

If the red LED lights up the motor stops immediately. Before restarting the engine, a general inspection must be carried out.

The CDM354 motor is also equipped with 4 power level lamps. The operator can adjust the pressure applied depending on the number of lit LEDs.

1 or 2 LEDs on, the charge is correct.

3 or 4 LEDs on, load is high.

The CDM354 is also equipped with an LCD screen, it indicates in real time the amperage, the voltage, the internal temperature, the power and the number of hours of use.

It also indicates ALARM when the motor is overloaded.

3.9 Statement regarding vibration emissions

Declared vibration emission value according to **EN 12096**.

Machine	Emission measured value vibration am/s^2	Uncertainty K
Model		m/s^2
CDM354	4.2	1.5

- Values determined according to the procedure described in standard **EN 60745-1; EN 55014; EN 61000**
- The measurements are made with new machines. Actual values on site may vary with operating conditions, depending on:
 - Materials worked
 - Machine wear
 - Lack of maintenance
 - Tool not appropriate for the application
 - Tool in poor condition
 - Non-specialized operator
 - Etc...
- The time of exposure to vibrations is also a function of work performance (linked to the adequacy of machine / tool / material worked / operator)

- In assessing the risks due to hand-arm vibrations, it is also necessary to take into account, over a working day, the time of effective use of the machine at full speed; it is not uncommon to find that this effective use time is limited to 50% of the total working time, taking into account all the stops (breaks, fuel and water supplies, work preparation, movement of the machine , tool mounting, etc.).

3.10 Noise Emission Statement

Declared noise emission value according to **EN ISO 11201** and **NF EN ISO 3744**.

Machine Model	Sound pressure level L_{Peq} EN ISO 11201	Uncertainty K (Sound pressure level L_{Peq} EN ISO 11201) Uncertainty K	Sound power level L_{Weq} EN ISO 3744	Uncertainty K (Sound power level L_{Weq} EN ISO 3744)
CDM354	87.8dB	4.3dB	94.5dB	2.5dB

- Values determined according to the procedure described in standard **EN 60745-1; EN 55014; EN 61000**
- The measurements are made with new machines. Actual values on site may vary with operating conditions, depending on:
 - Machine wear
 - Lack of maintenance
 - Tool not appropriate for the application
 - Tool in poor condition
 - Non-specialized operator
 - Etc...
- The values measured relate to an operator, in the normal position of use, as described in this manual.

4 IMPORTANT INSTRUCTION

- The coring column must be fixed firmly and without play on the material to be worked.
- For drilling above you with water cooling, always use a water collector. Otherwise water may enter the electric circuit of the core drilling machine and constitute a danger for man and machine. (The machine must always be connected via an earthed protection).
- Use only diamond tools suitable for the material to be worked (do not use concrete drill bits for wood, metal, etc.). Diamond drill bits that are not perfectly round cause extra load on bearings and gears.
- Work with care and concentration. Always avoid overloading.
- Do not carry/carry the core drill by the power cord.
- In the event of damage to the switch, cable, plug or housing, stop the machine immediately.
- Only put the machine into operation if the diamond drill can turn freely.
- When replacing the diamond drill, always use a counter wrench (SW 32) for the core drill head. Never use a hammer, because of the risk of damaging the sprockets.
- Do not operate the machine for more than one minute without water supply. Otherwise, the wear of the seals in the machine will increase considerably.

5 MAINTENANCE AND TROUBLESHOOTING

**REMOVE THE PLUG FROM THE SOCKET BEFORE CARRYING OUT MAINTENANCE
OR CONTROL.**

Regularly clean the cooling grooves with compressed air. After 250 hours of operation, replace the oil in the gearbox (80W90 max. 450 ml) and check the wear of the brushes of the electric motor. If necessary, adjust the friction torque of the inner friction clutch (adjustment torque see technical data). The above-mentioned interventions, as well as all other electrotechnical repairs, are only reserved for a licensed professional (electrician). For repairs/replacements, only use original Saint-Gobain Abrasives SA parts. The electrical part must be checked regularly by a licensed professional electrician (about twice a year).

In the event of an oil or grease leak, take the machine out of service immediately. Oil or grease leaks lead to a considerable increase in gear wear. The machine must be checked by an authorized professional.

If water leaks from the spindle, take the machine out of service immediately. Leaking water may enter the electrical circuit of the core drilling machine and pose a danger to man and machine. The leak indicates poor condition of the seals. Have these gaskets replaced by a licensed professional.

6 GUARANTEE

The warranty period for the CDM354 core drilling machine is 24 months from the date of delivery, if no other conditions have been set at the time of purchase. The warranty rights must be established on presentation of the purchase invoice.

The warranty includes the repair of defects, attributable to material or manufacturing defects.

The guarantee will not be granted in the following cases:

- Defects or damage, due to misuse or incorrect connection.
- Machine overload.
- Improper maintenance or maintenance error.
- Wear parts identified as such in the spare parts list
- Non-compliance with the information mentioned in the manual.
- Use of the machine by unauthorized persons.
- Use of the machine for work for which it was not designed.
- Machine repair with non-original parts.
- Modification or removal of machine code.
- Defects due to fire and/or damage during transport.

If necessary, please return the machine to us. The transport and travel costs incurred for this purpose are your responsibility. When sending, please indicate the nature of the complaints. Make sure the machine is well packaged to avoid damage.

7 TECHNICAL DATA

MODEL	UNIT	CDM 354
TENSION	V	230
AMPERAGE	AT	16
FREQUENCY	HZ	50 – 60
POWER	W	3300
SPEED	RPM	350/700/1100
CONCRETE CORER	–MM	100 /160 / 400
TOOL CONNECTION	G	1-1/4" UNC
TIGHTENING TORQUE CLUTCH	NM	60
OIL QUANTITY (80W90)	ML	450ML _
WEIGHT	KG	13.7

8 AFTER SALES SERVICE

In order to consult the lists of spare parts, we invite you to visit the Norton Clipper after-sales website using the following address:

<https://spareparts.nortonabrasives.com>

For quick access, you can also use the QR Code below using your mobile phone:



This electronic catalog provides exploded views and spare parts lists for various machines designed by Norton Clipper so you can find the part numbers you need.

When ordering spare parts, please mention:

- The serial number.
- The part code.
- The exact denomination.
- The number of parts needed.
- The delivery address.
- Please clearly indicate the means of transport required such as "express" or "by air". Without specific instructions, we will route parts by whatever means we deem appropriate---but not always the fastest way.

Clear instructions will avoid problems and faulty deliveries.

If you are unsure, please send us the defective part. In the event of a warranty claim, the part must always be returned for evaluation. Spare parts for the engine can be ordered from the engine manufacturer or their dealer, which is often quicker and cheaper.

This machine was manufactured by :

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You can get technical help, spare parts and diamond drill bits from our local distributors.

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