**DUST EXTRACTOR CV 270 230V WD** 

# OPERATING INSTRUCTIONS Translation of the original instructions







VERS. 2023.02.28

CV 270 230V WD\_MAN\_EN\_V1



The undersigned manufacturer:

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

Declares that this product:

DUST EXTRACTOR CV 270 230V WD Code: 70184632731 Vacuum:

is in conformity with the following Directives:

- "Machines" 2006/42/CE •
- "Electromagnetic compatibility" 2014/30/UE •
- "Restriction of the use of hazardous substances in electrical and electronic • equipment" 2011/65/UE

and European standard:

- EN 60335-1
- EN 60335-2-69
- EN 50581

Valid for machines as of serial number: 0000000000000

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, 28.02.2023.

François Chianese, executive officer and responsible for the technical file. Bascharage, Luxembourg

VERS. 2023.02.28

CV 270 230V WD\_MAN\_EN\_V1

# CV270 OPERATING INSTRUCTIONS TABLE OF CONTENTS

<u>1</u>	BASIC SAFETY ADVICE
1.1	INTRODUCTION
1.2	GENERAL WARNINGS
1.3	•••••
1.4	
1.5	REFERENCE LEGISLATIONS8
<u>2</u>	MACHINE PLATE9
3	TECHNICAL DATA
4	TYPE OF USE
5	PREPARING THE APPLIANCE12
_ 5.1	Vacuum cleaner
5.2	
5.3	
	•
<u>6</u>	USE OF THE APPLIANCE
<u>6</u> 6.1	USE OF THE APPLIANCE
<u>6</u>	USE OF THE APPLIANCE
<u>6</u> 6.1	USE OF THE APPLIANCE
<u>6</u> 6.1 6.2	USE OF THE APPLIANCE
<u>6</u> 6.1 6.2 <u>7</u>	USE OF THE APPLIANCE 20   Starting the appliance as a dust suction or liquid suction device 20   Switching off the appliance 20   CLEANING AND MAINTENANCE 26   Fleece filter bag removing and replace (if present) 26
<u>6</u> 6.1 6.2 <u>7</u> 7.1	USE OF THE APPLIANCE 20   Starting the appliance as a dust suction or liquid suction device 20   Switching off the appliance 20   Switching off the appliance 24   CLEANING AND MAINTENANCE 26   Fleece filter bag removing and replace (if present) 26   Waste container emptying 27   Daily cleaning 28
<u>6</u> 6.1 6.2 <u>7</u> 7.1 7.2	USE OF THE APPLIANCE 20   Starting the appliance as a dust suction or liquid suction device 20   Switching off the appliance 20   CLEANING AND MAINTENANCE 26   Fleece filter bag removing and replace (if present) 26   Waste container emptying 27   Daily cleaning 28
<u>6</u> 6.1 6.2 <u>7</u> 7.1 7.2 7.3	USE OF THE APPLIANCE 20   Starting the appliance as a dust suction or liquid suction device 20   Switching off the appliance 20   Switching off the appliance 24   CLEANING AND MAINTENANCE 26   Fleece filter bag removing and replace (if present) 26   Waste container emptying 27   Daily cleaning 28
<u>6</u> 6.1 6.2 <u>7</u> 7.1 7.2 7.3 7.4	USE OF THE APPLIANCE20Starting the appliance as a dust suction or liquid suction device20Switching off the appliance24CLEANING AND MAINTENANCE26Fleece filter bag removing and replace (if present)26Waste container emptying27Daily cleaning28Periodic checks29
<u>6</u> 6.1 6.2 7 7.1 7.2 7.3 7.4 <u>8</u>	USE OF THE APPLIANCE20Starting the appliance as a dust suction or liquid suction device20Switching off the appliance24CLEANING AND MAINTENANCE26Fleece filter bag removing and replace (if present)26Waste container emptying27Daily cleaning28Periodic checks29FAULTS: CAUSES AND CURES31Troubleshooting31

### 1 BASIC SAFETY ADVICE

#### 1.1 INTRODUCTION

- The employer must inform, educate and train the user following what is prescribed by the current laws.
- Before working with this machine, prepare and train by carefully reading this manual. Not authorized and not trained people cannot use this machine.
- It is forbidden to aspirate toxic sub- stances, unless the machine is equipped with the special filters necessary for the specific type of dust which must be expressly requested by you scrupulously observing the current national standards.
- Before using the appliance, the operator must be informed and trained to use the machine and about the sub- stances for which the appliance will be used, including the removal and disposal of aspirated material.
- For maintenance, the machine must be disassembled, cleaned and repaired, as far as possible, without causing risks for the maintenance personnel and for others. The precautions include decontamination before dismantling, the correct ventilation in the rooms in case of the machine disassembling, the maintenance zone cleaning and an appropriate protection of the personnel.
- When performing maintenance or repairs, all contaminated parts that cannot be adequately cleaned must be eliminated; these parts must be placed in impermeable bags according to current regulations on that type of waste.
- The manufacturer, or an educated person, should inspect the appliance at least once a year checking if, for example, the filtering system is in- tact, if the air flux is correct and if the machine control system works correctly.
- The machine outside will have to be decontaminated using an aspirator, a cloth or be treated with a sealant before taking the machine outside the danger area. All the machines will be considered decontaminated once they have exited from the danger zones and once every action necessary to avoid that the dust is dispersed has been performed.
- The machine must be thoroughly cleaned before leaving the contaminated zone and transported.
- It is necessary to guarantee an appropriate exchange of air in the room where the machine is used. Please refer to the national standards.

#### 1.2 GENERAL WARNINGS

- Plastic bags, polystyrene, paper clips, etc. must not be left within the reach of children, as these are potential sources of danger.
- Ensure that the voltage matches that indicated on the data plate before turning the appliance on.
- To unplug the appliance from the socket, pull the plug itself and NOT the cable.
- Unwind the entire power cable when using the appliance.
- Solely approved extension cables can be used. These must be adequate for the power of the appliance and must also be in good condition.
- Do not use the appliance if either the plug or power cable is not in good condition.
- If the power cable is damaged, this can only be replaced by a technical support center that is authorized by the manufacturer.
- Do not slide the power cable on sharp edges.
- Do not pinch or crush the power cable.
- Do not use the appliance with wet or damp hands.
- Do not leave the appliance exposed to the elements.
- Operating temperature between 5°C and 40°C; humidity between 20% and 60%; atmospheric pressure be- tween 990 hPa and 1040 hPa.
- Do not use the appliance if its operation is faulty. Take this to an authorized technical support center.
- Should an anomaly arise, contact an authorized technical support center and always request original spare parts.
- The plug must be removed from the socket before any maintenance or cleaning procedures are implemented.
- Do not wash the appliance with jets of water.
- Do not immerse the appliance into water or other liquids.
- Clean the appliance with a cloth dampened with water; do not use abrasive detergents, trichloroethene or solvents.
- When depositing the unusable appliance at appropriate collection points, the power cord must be removed in order to ensure it is not used.
- This appliance is not intended for use by person (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.
- Children should be supervised to ensure that they do not play with the appliance.
- This vacuum cleaner is suitable for collective use: for example, in hotels, schools, factories, shops, etc.

#### 1.3 UNPACKING

After removing the package as indicated in the instructions shown on the package itself, check the integrity of the appliance and all components supplied.

If any evident damage is noticed, con- tact the retailer or an authorized technical support center.

#### 1.4 DISPOSING OF THE APPLIANCE

Proceed in accordance with local legislation in order to protect the environment. When the appliance is unusable and cannot be repaired, the components are to be disposed of accordingly and separately.

In accordance with the implementation of Directives 2012/19/EU - 2011/65/EU, 2002/95/EC, 2002/96/EC and 2003/108/EC on the restriction of the use of dangerous substances in electric and electronic equipment and the disposal of waste materials, electrical equipment cannot be disposed of as urban waste but separate collection and proper disposal must be observed. electrical de- vices cannot be disposed of as urban waste, but separate collection and proper disposal must be ensured.



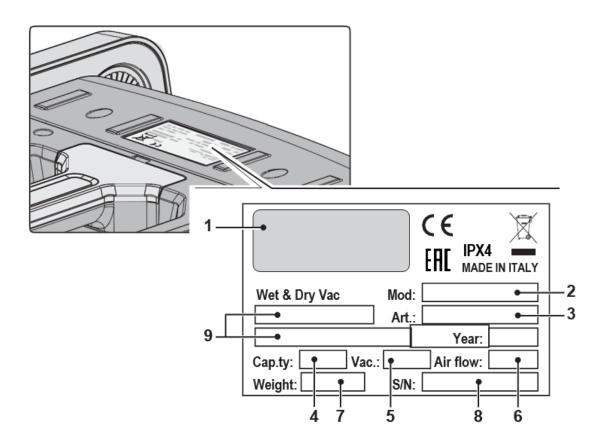
Electrical equipment has a symbol bearing a crossed out wheeled bin. The symbol indicates that the apparatus was introduced on the market after 13th August 2005 and must be disposed of separately.

Improper or illegal disposal of such equipment or using it incorrectly, can be hazardous to persons and the environment due to the substances and materials contained. Administrative and criminal penalties will be imposed for non-compliance with standards pertaining to the disposal of electrical waste.

#### 1.5 REFERENCE LEGISLATIONS

The appliance has been manufactured in compliance with the Machinery Directive in force and in accordance with the standards indicated in the "CE" Declaration of Conformity.

## 2 MACHINE PLATE



1	Manufacturer
2	Model
3	Article
4	Container capacity
5	Vacuum
6	Air flow
7	Machine weight
8	Serial N°
9	Electrical characteristics

## **3 TECHNICAL DATA**

	CV270	
Dust suction device		
Liquid suction device		
Voltage - Frequency	220 - 240 V~ 50/60 Hz	
Maximum power (suction)	1350 W	
Nominal power (suction)	1100 W	
Power load electrical socket	2400 W [1700 W (UK)]	
Total power Σ	3500 W [2800 W (UK)]	
Sound pressure (LpA)	73,4 dB(A)	
Uncertainty (KpA)	2,5 dB(A)	
Vibration level	< 2,5 m/s <sup>2</sup>	
IP code	IPX4	
Filtering surface of the main filter	0,5 m²	
Air flow	273,6 m³/h	
Suction	250 hPa	
Container capacity	41 I	
Useful capacity	26 I	
Useful capacity fleece bag	201	
Supply cable length	7 m	
Dimensions (Length x Width x Height)	625 x 385 x 545 mm	
Weight (without accessories)	21 kg	
Suction hose diameter	ø33 mm	
Suction tube diameters	ø21 - ø29 - ø33 - ø36 - ø38 mm	



**Class M** - Label present on a machine suitable for vacuuming hazardous dusts with Medium Risk to separate the dust with an exposure limit value depending on the occupied volume  $\ge 0.1 \text{ mg/m}^3$ .

## 4 TYPE OF USE

This appliance has been designed to vacuum liquids or solids or both, according to the technical data table from the introduction to this manual.

Uses different from those listed above are not allowed.

Any use different from the one for which the appliance has been built represents an anomalous condition which could harm the appliance and constitute a serious hazard for the user.

The manufacturer cannot be held responsible for any damage due to improper or incorrect use. Any other use releases the manufacturer from liability for harm to persons and/or property and invalidates any warranty condition.

Always use dedicated filters depending on the type of dusts or debris to be vacuumed.

Do not use the unit for:

- Vacuum hot substances.
- Don't pick up flammable, incandescent, explosive or toxic dust/blends.
- This machine is not suitable for picking up dangerous dust (unless other- wise indicated).
- Do not use the equipment in hazardous environments.
- Do not use the appliance in liquid suction mode to suction powder and vice versa.

Do not use outdoors.

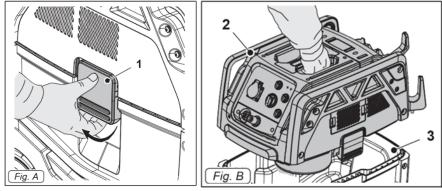
This appliance must be stored, taking its weight into consideration, on a solid, steady, safe and not sloping plane, in- door and in a dry area.

## **5 PREPARING THE APPLIANCE**

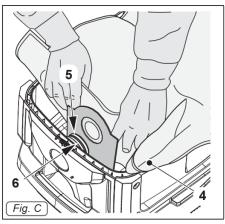
#### 5.1 Vacuum cleaner

For appliances equipped with suitable accessories:

• Release the levers (1 Fig. A) and remove the entire head unit (2 Fig. B).

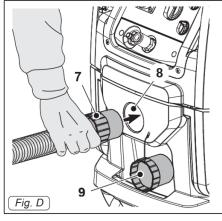


• Check that the fleece filter bag (4 Fig. C) is inserted in the waste container (3 Fig. C).

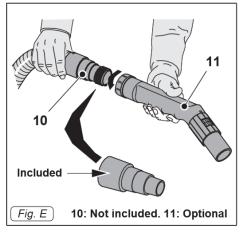


- If the fleece filter bag is not present, insert it as follows:
  - $_{\odot}$  Slot the fleece filter bag onto the nozzle (5 Fig. C) over the neck (6 Fig. C).
  - o Arrange the fleece filter bag carefully in- side the waste container (3 Fig. B).
- Reassemble the entire head unit (2 Fig. B) and secure it with the levers (1 Fig. A).

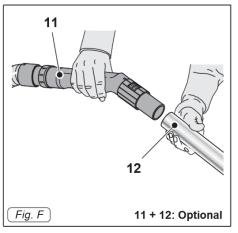
• Insert the sleeve (7 Fig. D) of the suction hose into the nozzle (8 Fig. D) on the waste container.



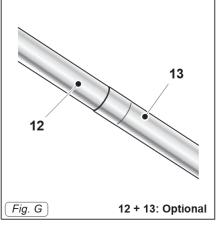
- To release the sleeve (7 Fig. D), turn it slightly and pull it outwards. When the nozzle (8 Fig. D) is not in use, close it with the cap (9 Fig. D) provided.
- Screw on the ergonomic handle (11 Fig. E) to connect it to the flexible tube (10 Fig. E).



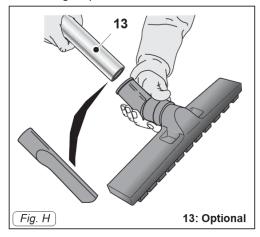
• Connect the extension (12 Fig. F) to the ergonomic handle (11 Fig. F).



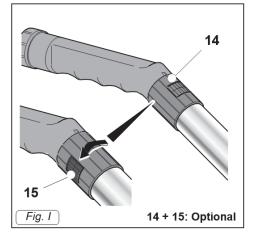
• Join the two rigid extensions (12-13 Fig. G).



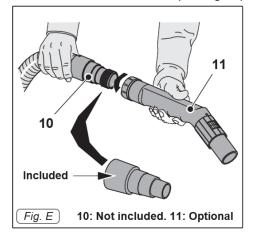
• Attach the chosen accessory to the rigid extension (13 Fig. H) (suction nozzle, brush attachment, crevice tool, etc., Fig. H).



The suction force can be adjusted on the grip, by turning the handle (14 Fig. I). Rotate the handgrip over the little window (15 Fig. I) to decrease the suction.

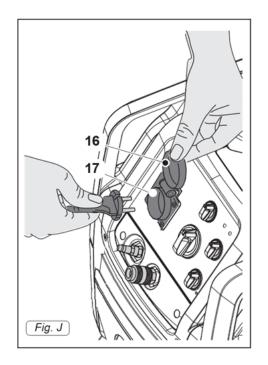


The reduction sleeve can be installed on the flexible tube (10 Fig. E).



### 5.2 Tools connection

Lift the cover (16 Fig. J) and connect the power tool plug to the outlet (17 Fig. J) present on the head of the vacuum cleaner [maximum power allowed 2400 W - 1700 W (UK)).



#### 5.3 Liquid suction

Risk of electric shock!

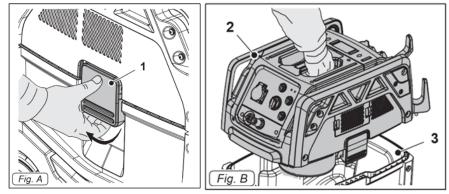
In the event of foam or liquid leakage,

switch off the apparatus immediately. Empty the recovery tank and clean the filters as described in the relevant paragraphs.

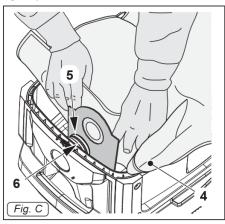
Clean the water level sensors regularly and check the state of wear as described in the relevant paragraph.

For appliances equipped with suitable accessories:

• Release the levers (1 Fig. A) and remove the entire head unit (2 Fig. B).

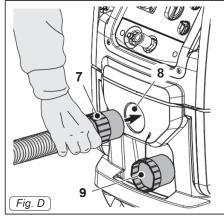


• Remove the fleece bag (4 Fig. C) if present.

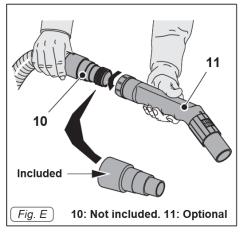


• Reassemble the entire head unit (2 Fig. B) and secure it with the levers (1 Fig. A).

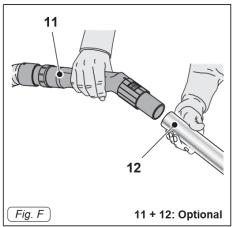
• Insert the sleeve (7 Fig. D) of the suction hose into the nozzle (8 Fig. D) on the waste container. To release the sleeve (7 Fig. D), turn it slightly and pull it outwards.



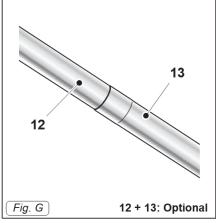
• Connect the ergonomic handle by screw- ing it on (11 Fig. E) to the flexible tube (10 Fig. E).



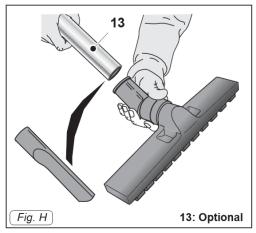
• Join the ergonomic handle (11 Fig. F) to the extension (12 Fig. F).



• Join the two rigid extensions (12-13 Fig.G).

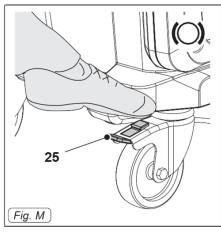


• Attach the chosen accessory to the rigid extension (13 Fig. H) (suction nozzle, floor tool, etc. Fig. H).



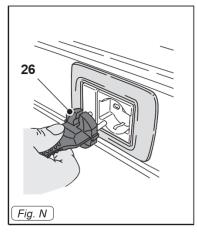
# 6 USE OF THE APPLIANCE

To block the device, use the brake control (25 Fig. M) on the castor wheels.

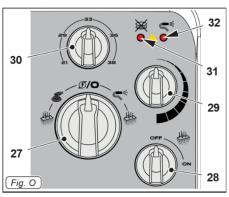


#### 6.1 Starting the appliance as a dust suction or liquid suction device

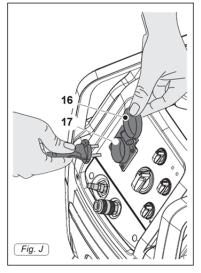
Insert the main plug (26 Fig. N) into the electrical socket.



6.1.1 Main power switch (27 Fig. O)

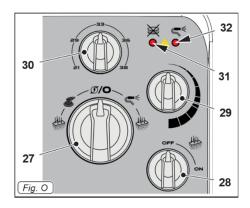


Turned to " **D**/**O**": The socket for the electrical tool (17 Fig. J) is undercurrent and the suction unit is switched off.



- Turned to "The suction unit is always started.
- Turned to "": The suction unit is started when the tool connected is started.
- ": When combined with the automated filter cleaning switch (28 Fig. O) on Turned to "ON", the intensive filter cleaning is started (3 blasts and maximum suction power).

When released, the main power switch returns to "" or "" ".



#### 6.1.2 "NONSTOPVAC!" filter cleaning switch (28 Fig. O)

The machine features a filter cleaning sys- tem called "NONSTOPVAC!". When started, an automated cleaning cycle is run when operating to ensure the best suction and filtering performance.

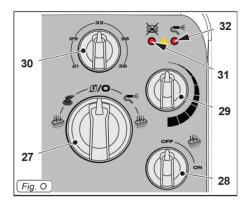
- When turned to "ON" and combined with the main power switch (27 Fig. O) on " "", the automated filter cleaning system starts (3 blasts at the start, then 1 blast every 12 sec.).
- When turned on "OFF", the function is disabled.

When the device is used as a wet vac- uum cleaner, keep the filter cleaning switch (28 Fig. O) on "OFF".

#### 6.1.3 Suction power adjustment switch (29 Fig. O)

Turn the switch to increase or decrease the suction power.

#### 6.1.4 Suction tube diameter switch (30 Fig. O)



To ensure the correct air suction speed, turn the switch to the same value as the diameter of the flexible tube used.

21	ø21	
29	ø29	
33	ø33	
36	ø36	
38	ø38	

When the bag or the waste container is full, there is an increase in noise and the appliance no longer sucks.

In case of use as a wet vacuum cleaner, when the container is full, the vacuum motor stops. Then turn off the appliance and empty the container as described in the relevant paragraph.

6.1.5 Suction unit LED warning light (32 Fig. O)

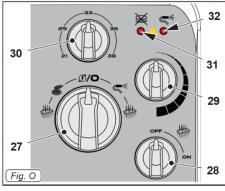
- If the LED " $\blacksquare$  flashes, it means that the air speed in the tube is  $\leq$  20 m/s.
- For safety reasons, an acoustic warning signal sounds if the air speed in the suction hose falls below 20 m/s.
- The table on the mobile dust extractor explains this connection for the minimum required extraction volume of the respective hose diameter. If this extraction volume is not reached, a warning signal sounds.

Max ø (mm)	Flow min (m <sup>3</sup> /h)	
21	25	
29	48	
33	62	
36	73	
38	100	

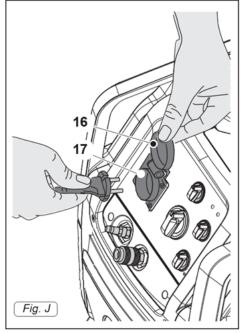
• Refer also to the "Troubleshooting" chapter to identify and solve the problems.

### 6.2 Switching off the appliance

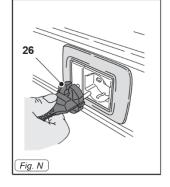
• Turn the main power switch (27 Fig. O) to " **D**/**O**" to switch the device off.



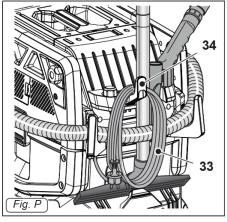
• (If used) disconnect the plug of the electrical tool socket (17 Fig. J).



• Disconnect the main plug (26 Fig. N) from the power socket.



• Roll up the cable (33 Fig. P) and store it on the hook (34 Fig. P).



• Dismantle the accessories (extensions, brushes, etc.) and store them in the special slots on the rear side as shown in Fig. P.

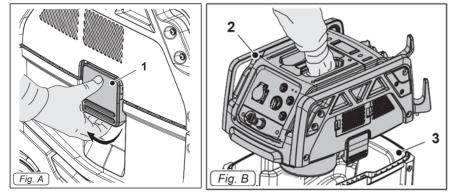
### 7 CLEANING AND MAINTENANCE

Before performing any maintenance operation, unplug the appliance from the electrical socket.

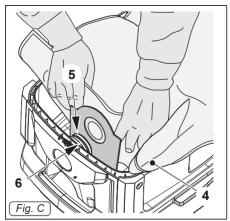
These operations can be performed, in accordance with the current laws, only by specialized and trained personnel, while wearing the necessary safety clothing. In any case, always refer to the current national standards and laws.

#### 7.1 Fleece filter bag removing and replace (if present)

• Release the levers (1 Fig. A) and remove the entire head unit (2 Fig. B).



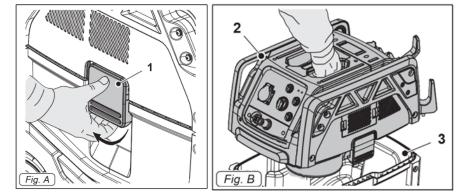
• Remove the fleece filter bag (4 Fig. C) and dispose of it in compliance with the provisions of the law.



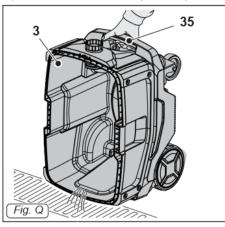
- Replace the fleece filter bag as indicated above.
- Reassemble all parts in reverse order of disassembly.

### 7.2 Waste container emptying

• Release the levers (1 Fig. A) and remove the entire head unit (2 Fig. B).



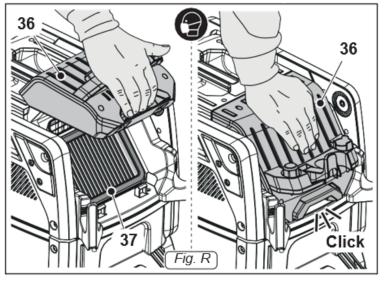
• Place the vacuum cleaner over a drain and then lift the waste container (3 Fig. Q) using the handle provided (35 Fig. Q) until it is completely empty.



- Clean the waste container inside (3 Fig. Q) with clean water and dry with a clean cloth.
- Reassemble all parts in reverse order of disassembly.

#### 7.3 Daily cleaning

- 7.3.1 Main filter checking and clean
  - Raise the rear door (36 Fig. R) using the lever.
  - Remove the main filter (37 Fig. R).
  - Clean the filter (37 Fig. R) with a jet of air from the inside outwards; the filter can be washed with warm water and reassembled only when completely dry. Replace it if it is very dirty and worn.
  - Put the filter back (37 Fig. R) in its slot.
  - Close the rear door (36 Fig. R).

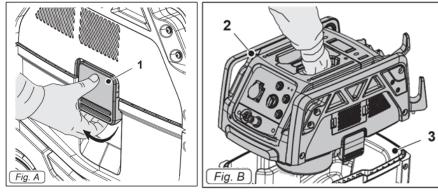


- 7.3.2 Appliance cleaning
  - Clean the unit body with a cloth dampened with water or a mild detergent.
  - Remove the complete head unit and clean the waste container with running water and then empty it, as indicated above.
  - Reassemble everything in reverse order of disassembly.

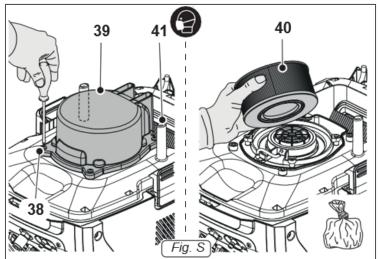
Do not wash the appliance using jets of water.

#### 7.4 Periodic checks

- 7.4.1 Water level sensors cleaning
  - Release the levers (1 Fig. A) and remove the entire head unit (2 Fig. B).



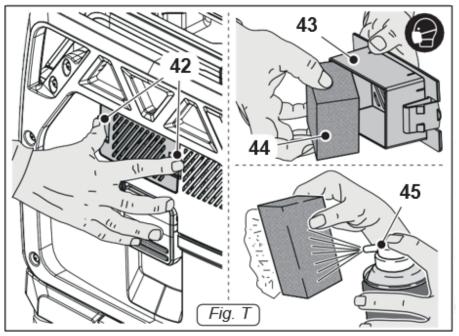
- Turn the entire head unit upside down.
- Clean the water level sensors (41 Fig. S) and check the state of wear.



• Reassemble all parts in reverse order of disassembly.

7.4.2 Vacuum motor filter checking and clean

- Release the two catches (42 Fig. T) and remove the cover (43 Fig. T).
- Remove the sponge filter (44 Fig. T)
- Clean the sponge with a jet of air (45 Fig. T).
- The sponge filter can be washed in warm water and must only be replaced once they are completely dry; if too dirty, replace it with new one.
- Reassemble everything in reverse order of disassembly.



# 8 FAULTS: CAUSES AND CURES

### 8.1 Troubleshooting

PROBLEM	CAUSE	SOLUTION
The suction motor does not	Plug not inserted.	Insert the plug into the electrical socket.
start and does not work.	No current.	Check the power supply line.
The filter "☆ " and suction " , LEDs are off.	Suction motor overheated.	Check that the motor is working correctly.
	Suction motor damaged.	Replace the motor. (*)
	Suction tube diameter switch not combined with the flexible tube used.	Turn the switch to the correct diameter of the flexible tube used.
	Waste container full.	Empty container.
Suction is poor. The suction LED " <del>‴</del> ,≦"	Fleece bag full.	Replace the dust bag.
flashes and the acoustic warning is sounded; Air speed in the tube ≤ 20 m/s.	Filter elements clogged.	Clean the filter components. Clean or replace the cartridge filter.
	Accessories or tubes clogged.	Check and clean the flexible
	Damaged vacuum motor.	Replace the motor. (*)
	Suction nozzle squeegee worn or damaged.	Check and replace the squeegee.
The suction motor stops.		Wait a few minutes for the suction motor to cool down.
The filter "♀♀" and suction " ☞ <sup>⇐</sup> " LEDs are turned on and the acoustic warning is	Use as dry vacuum cleaner: Suction motor overheated.	Check and clean all the parts that could compromise correct suction.
sounding.		Checks the ventilation grilles for suction motor cooling.
The suction motor stops. The filter "़ू<" and suction " ஜ" LEDs flash simultaneously and the acoustic warning is sounded.	Use as wet vacuum cleaner: Waste container full.	Empty container.

(\*) Maintenance by an authorized service center.

#### 8.2 Customer service

When ordering spare parts, please mention:

- The serial number (7 digits).
- 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

#### 8.3 Spare parts

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

#### https://spareparts.nortonabrasives.com

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



This electronic catalogue provides exploded views and spare parts lists for different machines designed by Norton Clipper so you can find references you need.

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

VERS. 2023.02.28

SAINT-GOBAIN ABRASIVES INDUSTRIEWEG 21 9420 ERPE-MERE BELGIUM TEL: +32(0) 2 267 21 00

SAINT-GOBAIN CONSTRUCTION PRODUCTS CZ A.S DIVIZE ABRASIVES SMRČKOVA 2485/4 180 00 PRAHA 8 TEL: +420 255 719 326 FAX: +420 255 719 321

SAINT-GOBAIN ABRASIVES A/S DYBENDALSVÆNGET 2, DK-2630 TAASTRUP 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 703-0 FAX: +49 (0) 2236 703-730

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: +331 83 717 792 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 KARIHAUGVEIEN, 89 0186 OSLO NORWAY TEL: +47 63 87 06 00 FAX: +47 63 87 06 01

SAINT-GOBAIN HPM POLSKA SP. Z 0.0. UL. NORTON 1, 62-600 KOŁO 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

CV 270 230V WD\_MAN\_EN\_V1

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 30

SAINT-GOBAIN INOVATIF MALZEMELER VE ASINDIRICI SAN. TIC. AS. ALTAYÇEŞME MAH. ÇAMLI SOK. NO:21 ESAS OFISPARK KAT:9 34843 MALTEPE, İSTANBUL • TURKEY TEL: 0090-216-217 12 50 FAX: 0090-216-442 40 74

SAINT-GOBAIN ABRASIVES LTD. UNICORN HOUSE UNIT 1, AMISON CLOSE REDHILL BUSINESS PARK STAFFORD ST161WB UNITED KINGDOM TEL: +44 1785 279 553 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 4011 Fax: +331 83 717 792 no. vert (France) 0800 906 903 www.nortonabrasives.com/fr-fr