

TECHNICAL MANUAL



revo bloch
professional

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- Type: industrial vacuum cleaner
- Model: Revo Block Professional
- Revision 2.0.0

INTRODUCTION

Dear Customer,

TECNOPLUS S.r.l., owner of the SISTEM AIR Trademark would first of all like to thank you for having chosen to buy the new vacuum cleaner of the TECNO Star Dual Power Line. We are sure that the characteristics described in this manual will satisfy your needs.

Revo Block Professional has been designed and produced in strict compliance with the Machinery Directive 2006/42/CE (transposed into Italian Legislation by Decree Law 17/10), Low Tension Directive 2006/95/ CE, and Electromagnetic Compatibility Directive 2004/108/CE. The system has been manufactured with top quality materials and with particular care paid to reducing the risk of injury as much as possible.

We have therefore written this manual in order to provide adequate instructions for the correct use and maintenance of the system, which are crucial to ensure the user's safety, the correct functioning and the long working life of the vacuum cleaning unit.

Read the entire manual carefully, follow the instructions precisely, and above all, for safety reasons, do not intervene in any way if not specifically indicated.

For the best results, we suggest using SISTEM AIR original accessories and materials. The SISTEM AIR Trademark is a registered trademark and is property of TECNOPLUS S.r.l.

GENERAL INFORMATION

1. HOW TO USE THE MANUAL

The instruction manual has been written by the manufacturer and is an integral part of the vacuum cleaner. If the system is resold, given or hired out to others, the manual must be handed over to the new user or owner.

We recommend using and storing it carefully for the entire working life of the vacuum cleaner.

This manual explains how to use the equipment correctly in order to obtain the best performance while maintaining optimal working and safety conditions.

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2. DESCRIPTION OF THE VACUUM CLEANER

Constant research applied to central vacuum cleaners and advanced electronic technology have allowed TECNOPLUS S.r.l. to create Revo Block Professional.

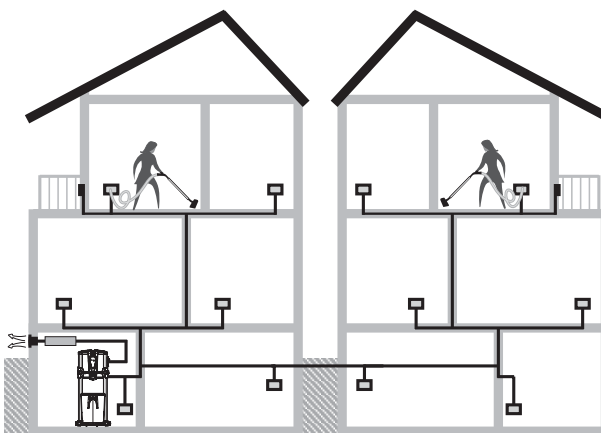
The central vacuum cleaner, suitable for any type of residential building (private houses, offices, hotels, service sector), consists of a network of PVC trace pipes, housed in walls or in false ceilings running through the various rooms; at the end of the pipes are positioned the suction sockets.

The SISTEM AIR vacuum cleaner is usually placed in a utility room, garage or other storeroom and connected to the suction pipes network.

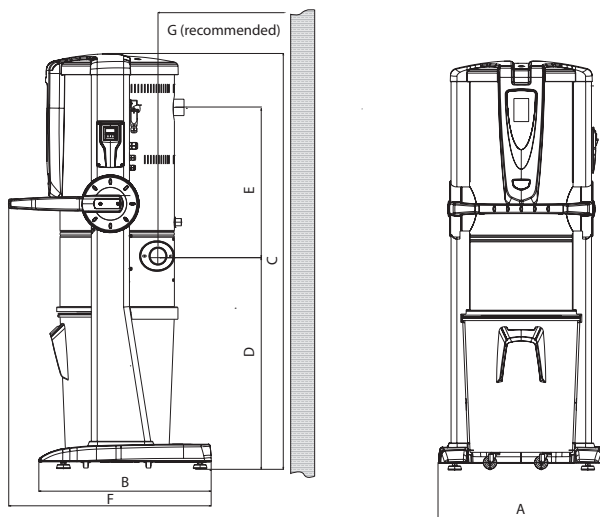
The system is switched on by inserting the sleeve coupling of the flexible vacuum cleaning hose in any of the suction sockets.

If the piping network doesn't feature any electrical power supply, the system can be switched on and off by means of a remote control device (optional accessory).

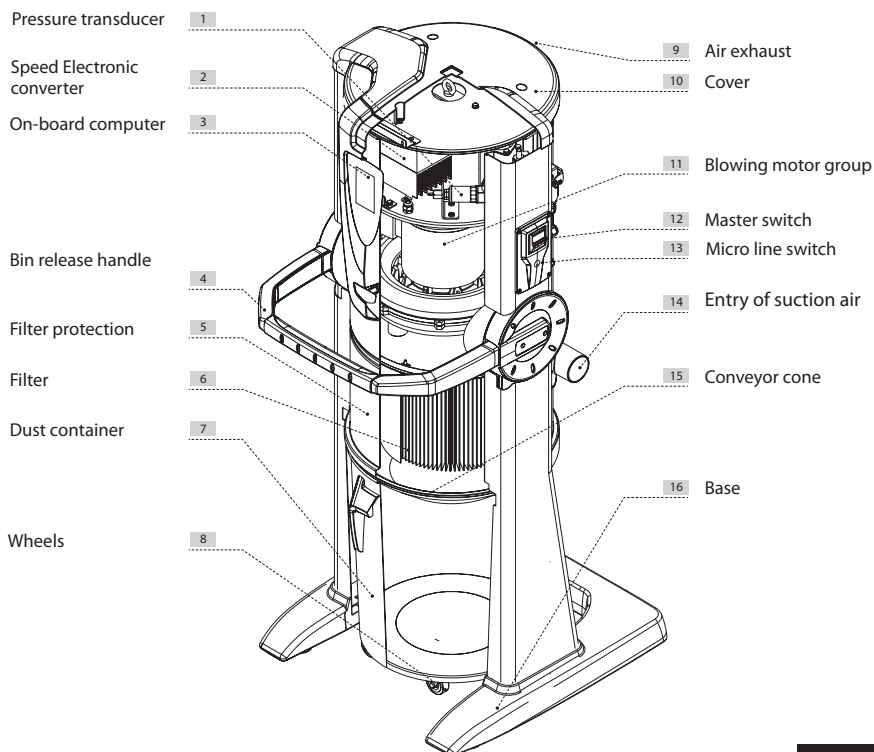
The Revo Block Professional vacuum cleaner features innovative characteristics, which make it more suitable for professional applications (small hotels, offices, sports centres, beauty shops) with reduced encumbrance. The Revo Block Professional vacuum cleaner is run by a second-generation electronic system that Sistem Air applies to its vacuum cleaners to allow a simplified management of the cleaning unit.



3- TECHNICAL FEATURES



Revo Block Professional Model



Revo Block Professional							
Model Article		Revo Block 500	Revo Block 700 Plus	Revo Block 1000	Revo Block 1200	Revo Block 1500	Revo Block 1800
		3203.1B	3213.2B	3203.3B	3203.4B	3203.5B	3203.6B
		YES	YES	YES	YES	YES	YES
Maintenance Computer		YES	YES	YES	YES	YES	YES
Suction connection	Ø mm	63	63	63	63	63	80
Air exhaust	Ø mm	63	63	63	63	63	80
Protection degree	IP	20	20	20	20	20	20
Power supply	V ac	220/240	400	220/240	400	400	400
Frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60
Motor power	kW	1,5	3,0	2,2	2,2	4	4
Absorption	A	5,6	6,3*	7,9	4,6	8,1	8,1
Socket power supply	V dc	12	12	12	12	12	12
Electronic speed converter		YES	NO	YES	YES	YES	YES
Maximum air flow	m³/h	265	400	366	366	471	570
Filtering surface	cm²	17000	17800	17800	17800	17800	17800
Dust bin capacity	l	62	106	106	106	106	106
Air exhaust		YES	YES	YES	YES	YES	YES
Air exhaust silencer		YES	YES	YES	YES	YES	YES
Weight	kg	75	95	95	95	105	115
A Size	mm	615	750	750	750	750	750
B Size	mm	633	633	633	633	633	633
C Size	mm	1515	1616	1616	1616	1616	1616
D Size	mm	773	773	773	773	773	773
E Size	mm	542	642	642	642	642	642
F Size	mm	750	750	750	750	750	750
G Size	mm	500	500	500	500	500	500
Motor sound level	dB(A)	60÷80					

*With power supply frequency 50 Hz

N.B.: Nominal noise values. The values can vary relative the the speed of use, the working environment and the type of installation.

4 - CONSTRUCTION FEATURES

The vacuum cleaners belonging the Revo Block Professional line feature a motor group / side channel pump with intervention modes depending on the use of the electronics installed, based on the number of users using the vacuum system. Thanks to these electronics, installation is very simple: it is sufficient to set the vacuum value. The suction unit regulates all the parameters automatically while working, thanks to the pressure transducer in order to obtain the vacuum performance set. This way testing becomes just as simple as on a domestic vacuum cleaner.

Maximum surface	MODEL	Article	Maximum users number	Self-cleaning pre-arrangement	Motor power kW	Phase power Supply-Volt ac	Speed electronic converter	Maximum air flow m ³ /h	Filtering surface cm ²	Container capacity l
Max 500 m ²	Revo Block Professional 500	3201.1B	1	YES	1,5	2-220/240	YES	265	17000	62
Max 700 m ²	Revo Block Professional 700	3213.2B	2	YES	3,0	3-400	NO	400	17800	106
Max 1000 m ²	Revo Block Professional 1000	3201.3B	2	YES	2,2	2-220/240	YES	366	17800	106
Max 1200 m ²	Revo Block Professional 1200	3201.4B	2	YES	2,2	3-400	YES	366	17800	106
Max 1500 m ²	Revo Block Professional 1500	3201.5B	2	YES	4	3-400	YES	471	17800	106
Max 1800 m ²	Revo Block Professional 1800	3201.6B	3	YES	4	3-400	YES	570	17800	106

Revo Block Professional vacuum cleaners are designed and manufactured in compliance with all the criteria imposed by the current regulations and European directives while carefully paying attention to crucial elements like performance, power and operating capacity.

The main technical characteristics are the following:

- Cylindrical body made of metal coated with epoxy powder;
- Base coated with shockproof material to protect the unit;
- Metal bin for dust collection (62/106 litres capacity) equipped with wheels for handling;
- Dust bag and bag-stretcher for dust collection, to ensure rapid and healthy disposal operations of the material collected;
- Possibility to connect pipes both on the left and on the right;
- Motor group pump with side channel;
- Vacuum breaker valve to ensure the motor is not operating in critical conditions;
- Electronic converter (inverter) to reduce electrical absorption;
- Suction sockets supplied with 12V dc voltage;
- Polyester filter cartridge with L-class certificate, washable in water (filtering surface: 16600 cm²);
- Metal filter protection to prevent accidental breakage;
- Onboard computer to control the maintenance cycles with warnings for full dust bag replacement, filter cartridge cleaning, motor maintenance;
- Pre-arrangement of a connection to an auxiliary remote signal for maintenance notice (optional);
- Liquids suction through optional accessory;
- Electrostatic material suction after prior grounding of the metal piping net installation;
- Possibility to to combine the Autocleaner filter self-cleaning system even at a later date.
- Pressure transducer.
- Exclusive automatic suction power regulation system by Sistem Air.

- High performing professional motor group with side-channel blow made of light alloy, no maintenance needs, compliant with CE regulations, IP55 class, provided with integrated silencer.
- Motor noise dB(A): from 60 db (50 Hz), to 72 db (60 Hz).

The machine adopts an innovative control and routine maintenance system based on an electronic control board with microchip, connected to pressure sensors and programmed to interact easily and immediately with the user. Maintenance can be individually programmed by the user who will receive messages about the machine status directly on a user-friendly graphic display, as well as suggestions about actions to be taken in case of malfunctioning.

Moreover Sistem Air produced software, which displays all the information about system functioning, once it is installed on a personal computer through the connection of an ethernet net cable and its interface board (on request).

5 - SAFETY FEATURES

It is recommended to read all the installation, use and maintenance instructions detailed in this manual carefully.

Furthermore, the following WARNINGS should always be observed:

- Never use the machine for unauthorized purposes;
- Keep children away from the vacuum cleaner when functioning. Children should not play with the machine nor with the suction sockets;
- This equipment should not be used by persons (including children) with reduced sensory or mental capacities, or by persons with no experience or knowledge of the system, unless under guidance, or instructed to use the machine by persons responsible for their safety;
- Children must always be supervised to ensure they do not play with the machine;
- Immediately disconnect from power supply if:
 - the electric cable is damaged or worn;
 - the vacuum cleaner has been exposed to rain or excessive humidity;
 - the vacuum cleaner has been knocked, or the outer body has been in any way damaged;
 - you think the system requires maintenance or repair;
- Wear protective gloves and mask to carry out maintenance, to empty the dust bin or replace and clean the filter;
- Only use original spare parts and accessories;
- Do not suction clean fabrics, heavy materials, ashes or hot embers;
- Never suction clean liquids;
- Do not use the system without a filter cartridge;
- Do not block the exhaust air pipes or the motor cooling intakes;
- No part of the body should come into contact with the suction accessories;
- Use only one suction socket at a time;
- Do not leave the system switched on when not using it and disconnect it from power supply when the system is not to be used for a long period of time;
- **Do not suction clean building materials (concrete, lime wastes, plaster dust, etc.) once the installation is completed. This will quickly clog the filter cartridge.**

Finally, remind that pictograms, or danger and warning signals can be found on those parts of the equipment where, if not strictly followed, potential risky situations may occur.

WARNING: TECNOPLUS S.R.L. declines any form of responsibility or guarantee if the purchaser, or anyone in his stead, makes even the slightest modification or adjustment to the purchased product. The unit has been designed to satisfy at best the present needs of the domestic central vacuum cleaners market, both in terms of quality and operating capacity.

All materials and components used to manufacture this product comply with CE safety regulations. All relevant certifications are held at TECNOPLUS S.R.L. headquarters.

5.1 IP Protection Degree

IP 20: The appliance features a protection against solid objects having a size exceeding 12 mm. The appliance is not protected against water penetration.



5.2 Electric insulation degree

CLASS I: the appliance features basic electrical insulation. It must be connected to the grounding circuit through the main electric wiring.



5.3 Declaration of absence of dangerous substances

TECNOPLUS S.r.l. declares that its products and appliances have been manufactured with materials which comply with the restrictions established by the health and environment protection regulations in force and do not contain SVHC-classified substances (Substance of Very High Concern) in compliance with CE regulation 1907/2006 (REACH: i.e. Registration, Evaluation, Authorization and Restriction of Chemical Substances).

Although these substances have not been used during the processing cycles of raw materials and during the manufacturing cycles of our products, their presence in p.p.m. (parts per million) cannot be completely excluded due to micro-pollution of raw materials.

5.4 Fixed closure safety guards

The access to the electric parts is protected by a cover which can only be removed by unscrewing the Torsen screws used to fix the soundproofing dome of the housing where the suction motors are assembled.

Every intervention on the control board and on the motors must be carried out by qualified personnel only after disconnecting the electrical power supply and by removing the electric plug from the electric inlet.

5.5 Movable closure safety guards

There are no movable closure guards assembled on the appliance. Every guard assembled is considered a fixed guard and is fastened with special screws.

TECNOPLUS s.r.l. reminds you that it is absolutely forbidden to replace the screws used to design and manufacture the appliances with screws that feature different characteristics.

TECNOPLUS s.r.l. will immediately suspend the product guarantee in case of machine tampering on the part of the Customer.

5.6 Postazione di comando

The Revo Block Professional centralized vacuum system has control settings by which the apparatus functioning can be configured by means of a simple operator interface display.

Through the control settings, it is possible to set and check the ordinary maintenance operations. Whereas the work settings are located in the various rooms, thanks to the tube network. Therefore, the operator does not come into contact with the machine during its use, apart from starting and use of the centralized system.

6 - CORRECT USE OF THE VACUUM CLEANER

The Revo Block Professional vacuum cleaner has been designed exclusively to vacuum clean dust, very small-size solids and dry materials

The intended use of the centralized system is related to domestic and civil environments, connected to a tubing network and supplied by a normal electric network.

The vacuum cleaner can be installed in large domestic dwellings and large installations of the tertiary sector, or installations requiring a continual and heavy use with the following characteristics:

- maximum recommended surface to be cleaned 1800 m².
- piping network set up with pipes with 63/80 diameter and Ø 63/80 mm inlet coupling to the vacuum cleaner.
- 220/240 V ac and 400 V ac single-phase power supply.
- air exhaust conveyed to the outside.
- the system can be used simultaneously by 3 operators (only if it has been suitably dimensioned).

7 - INCORRECT USE OF THE VACUUM CLEANER

It is extremely important NOT to use the system in the following circumstances which are considered to be inappropriate and dangerous:

- The system must not be used to vacuum clean fabrics, heavy or hot/burning materials.
- The system must not be used to vacuum clean liquids.

Furthermore, the system has not been designed for use in environments with risk of explosion, and therefore:

- it is forbidden to suction clean materials with high explosion risk (gunpowder) or materials which are individually inert but that, once collected and mixed in the dust bin, could provoke dangerous chemical reactions.
- It is absolutely forbidden to use the vacuum cleaner in explosive atmosphere or outside the standard temperature, pressure and humidity levels.
- **Do not vacuum any material which may cause electrostatic charges in the piping system, if not previously communicated to the constructor.**

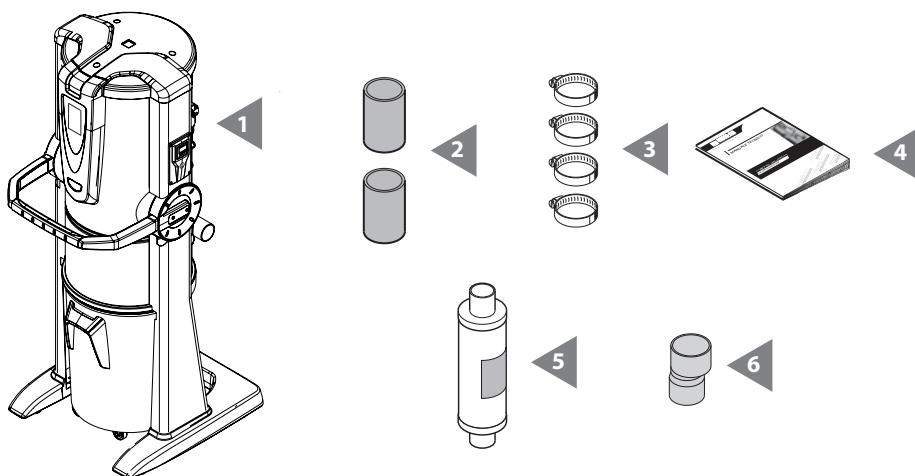
Any change or modification made to the system in order to suction clean a particular type of material must obtain the prior written approval of the manufacturer.

The use of the system for purposes other than those which it was manufactured, represents an irregular condition which can cause damage to the product and seriously compromise the operator's safety.

8 - EQUIPMENT AND ACCESSORIES

The packaging of the vacuum cleaner also includes a series of accessories as detailed below:

- 1) N°1 Revo Block Professional vacuum cleaner
- 2) N°2 rubber sleeves for the connection to the suction piping network
- 3) N°4 metal clamps to fix the sleeves
- 4) N°1 installation, use and maintenance manual
- 5) N°1 silencer
- 6) N°1 eccentric extension 80/63



9 USE OF THE VACUUM CLEANER

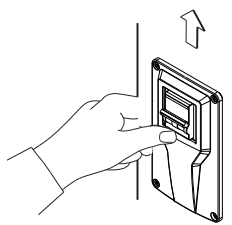
Once the **Revo Block Professional**, vacuum cleaner has been connected to the power supply, it can be started every time a flexible hose is plugged into any of the suction sockets installed in the different rooms.

The vacuum cleaning is started thanks to an electrical contact assembled directly in the socket, which once activated, allows the start of the suction motor of the vacuum cleaning unit.

The specifically-designed electronics applied to Revo Block Professional vacuum cleaners is based on sophisticated software designed exclusively for Sistem Air, which alerts the operator, by means of a dedicated messaging package, when routine maintenance should be carried out.

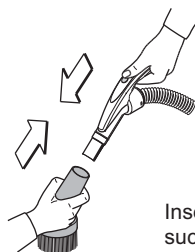
Such maintenance involves the dust bin being emptied and the filter cartridge being regularly cleaned.

9.1 Switching the vacuum cleaner on



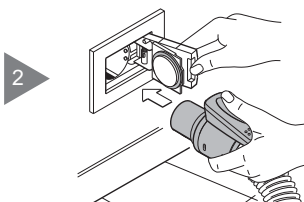
- 1 Position the main switch assembled on the right side of the appliance to «I-ON» position. The display will switch on to indicate the unit is connected to the power supply.

9.2 Using the vacuum cleaner



- 1 Fix the most suitable cleaning accessory for the desired task to the grip handle of the flexible hose. Select the accessories according to the required use, the type of dirt and area to be cleaned etc.

Insert the other end of the flexible hose in the suction socket on the wall. This will switch on the system suction motors by activating the electric signal in the suction socket.



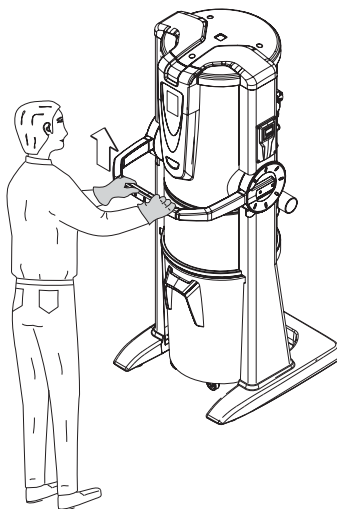
Once you have carried out the cleaning operations, remove the flexible hose from the suction socket by gently accompanying the closing flap until it reaches its housing. If the flap is left to close by itself, it will violently hit the suction socket because the suction system is still working and the vacuum will pull the flap powerfully against the suction frame.

The vacuum cleaner is programmed to take a few seconds before switching off to ensure that the suction action has been completed throughout the pipe network.

10 EMPTYING THE DUST BIN

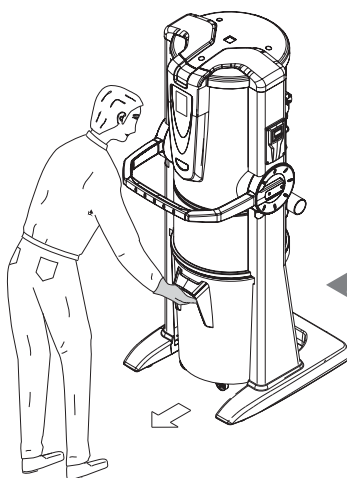
Use both hands to raise the
release handle

1



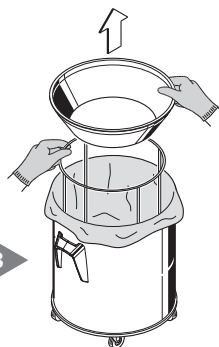
2

Remove the dust container



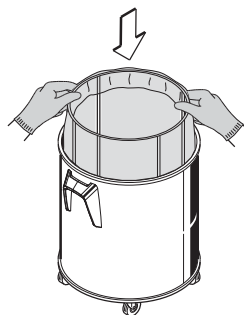
Remove the conveyor cone and
the bag-stretcher

3



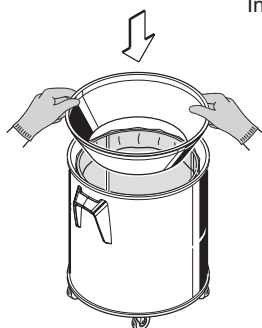


4 Tie up the dust bag and remove it from the container



Introduce a new dust bag and the bag-stretcher

5

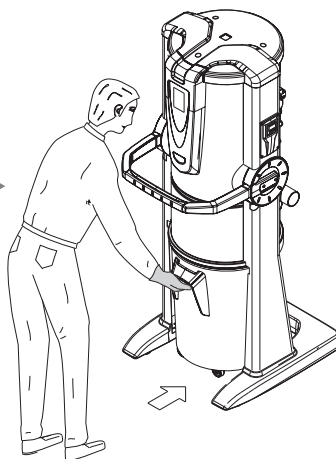
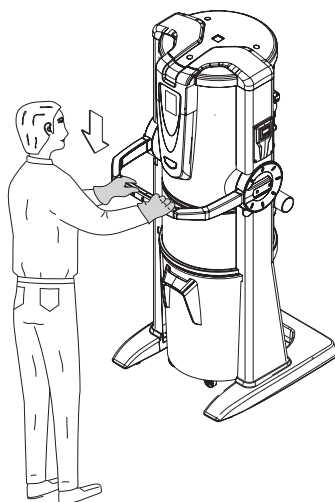


6

Assemble the conveyor cone

Put the dust container back in its position

7



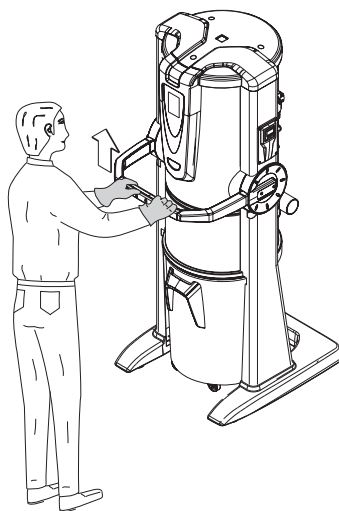
8

Use both hands to lower the clip handle

11 REPLACING THE FILTER CARTRIDGE

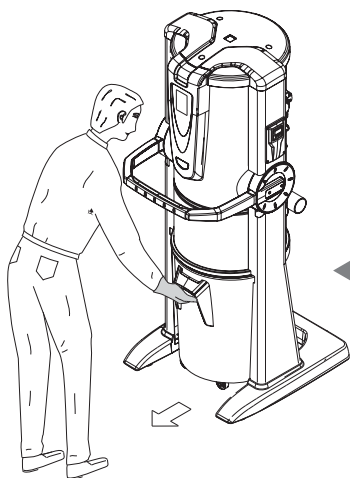
Lift the release handle using both hands

1



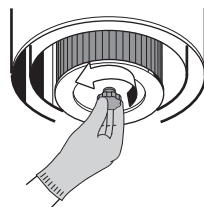
2

Remove the dust container



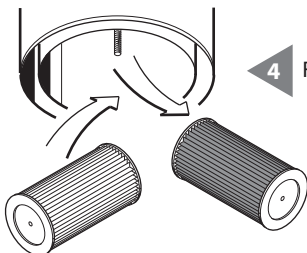
Unscrew the blocking knob

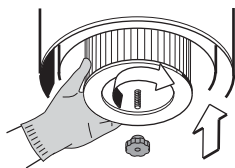
3



4

Replace the filter cartridge

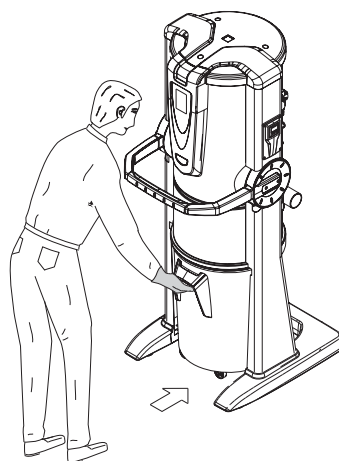




5 Screw the blocking knob

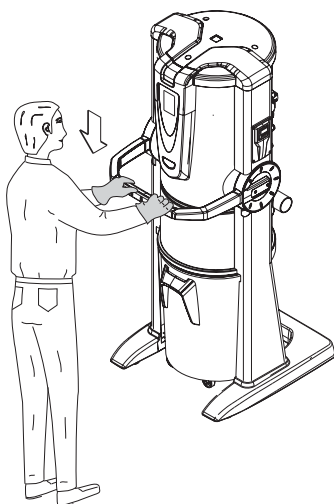
Reassemble the dust container in its position

6



7

Use both hands to lower the clip handle



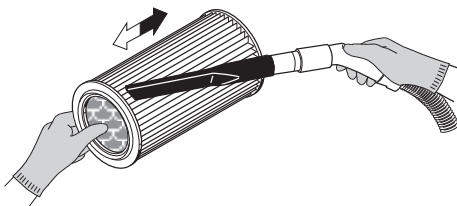
11.1 Regeneration of the filter cartridge



WARNING
DO NOT USE THE VACUUM CLEANER WITHOUT THE FILTER CARTRIDGE.
ENSURE YOU HAVE REPLACED A SPARE FILTER CARTRIDGE BEFORE
CARRYING OUT THIS OPERATION.

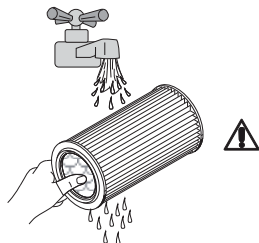
The filter cartridge can be regenerated more times by vacuum cleaning the dirt on the filtering surface; use the vacuum cleaner and the straight nozzle.

1



2

Check the filter surface is not cut. If this is the case, the cartridge should not be used again.



3

The filter cartridge can be washed under running water
ATTENTION: Ensure the filter cartridge has completely dried before reassembling it.

12 - REPAIRS AND SPARE PARTS

12.1 Intervention Criteria



Any intervention on the vacuum cleaner for repairs and/or maintenance which are not expressly authorized in this manual is absolutely forbidden.

Any repair for breakage or malfunctioning must be carried out by qualified Technical Assistance personnel. Any intervention of non-authorized personnel will result in the invalidation of any guarantee of the product and the manufacturer will not be held responsible for any eventual damage to persons and/or objects due to such interventions.

12.2 Recommended spare parts

It is advisable to order in time those spare parts which need to be replaced most often.

In order to guarantee the optimal and long working life of the vacuum cleaner, it is recommended to use only original SISTEM-AIR spare parts, as detailed below.

DESCRIPTION	SPARE PART	VACUUM CLEANER MODEL	
Filter cartridge	1610.7	Revo 500	
Filter cartridge	1610.7R	Revo 700/1000/ 1200/1500/1800	
Dustbag for dust collection in the bin	1614.2	Revo 500	
	1614.3	Revo 700/1000 1200/1500/1800	

12.3 Putting the vacuum cleaner out of service (general rules)

Should you decide to put the suction system out of service, this should be done with the utmost attention to everyone's health and environment in which we live.

You can get information about spaces and/or persons duly authorised for the collection and disposal of this product.

The disposal and/or recycling of any part of the system must be carried out in strict compliance with the regulations in force.

13 - SOUND EMISSION

A sound level measurement has been gauged by measuring the acoustic pressure and the sound level of the vacuum cleaner.

The test report is held at TECNOPLUS S.r.l. headquarters

14 - IDEAL LOCATION OF THE VACUUM CLEANER TO REDUCE SOUND EMISSION

The following suggestions and measures will help reduce the sound emissions of the vacuum cleaner:

- You can use sound-absorbing materials on the two side walls if these are very close to each other; this will interrupt the sound waves and avoid resonance phenomena between the two waves which could reflect on the two opposite walls.
- You can possibly soundproof the ceiling.

15 - VIBRATIONS

There is no contact between the hand, arm or body of the operator and the machine when vacuum cleaning using the flexible hose.

For this reason there is no risk related to vibrations.

16 - INSTALLATION



- WARNING -
THESE PROCEDURES MUST BE CARRIED
OUT BY QUALIFIED STAFF

16.1 Recommended installation

The Revo Block Professional vacuum cleaner must be connected to an exhaust air pipe, crucial for outside discharging of micropowders that the filter cartridge cannot retain. The vacuum cleaner must be installed in service rooms (e.g. garage, storeroom etc) protected from bad weather, dampness and excessive temperature variations. Install the unit in a place far from heat sources such as stoves and radiators. (N.B: the unit features IP 20 protection degree).

During the set up phase, we suggest always carefully checking that the unit is positioned in the most suitable location selected for the system. Check also that sufficient space has been allowed for installation, use and maintenance purposes and for an optimal recirculation of air around the vacuum cleaner.

Construction features allow the vacuum cleaners to be connected to the pipe system with pipes coming either from right or left sides. In case of multi-storey vacuum cleaning system, we suggest that you install the unit on the lowest available floor.

16.2 Positioning of the vacuum cleaner

For correct use and to facilitate maintenance it is advisable to keep a minimum distance of 60 cm on three sides around the appliance (excluding the side on which it is fixed to the wall).

16.3 Fixing the vacuum cleaner

The unit does not need any special fixing device. For correct and safe positioning, it is however necessary to check that the location selected for installing the unit features the following min. requirements:

- a solid, perfectly flat and horizontal bearing surface;
- the surface must not vibrate. Furthermore it is of utmost importance to avoid any unevenness of the bearing surface that could make the unit unstable.

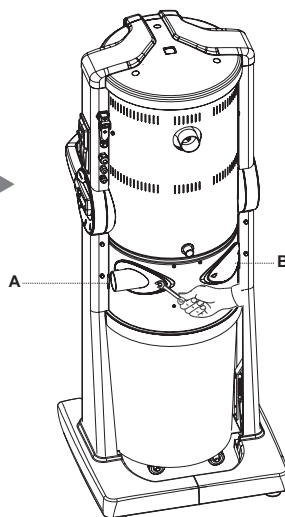
16.4 Transforming DX version (outlet pipes fitted on the right) into SX version (outlet pipes fitted on the left)

Vacuum cleaners are generally supplied with suction and exhaust pipes on the right side (RIGHT version). If needed, the system can be transformed so to have both suction and exhaust pipe connections on the left side (LEFT version).

To do this:

Disassemble the intake of the "A" suction pipe and the "B" closing plate by removing the screws.

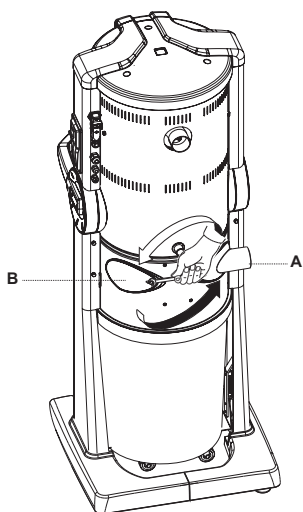
1



2

After exchanging their housings, reassemble the intake of the "A" suction pipe and the "B" closing plate by fastening the screws.

Now rotate by 180° the intake of the suction pipe as shown in the picture.



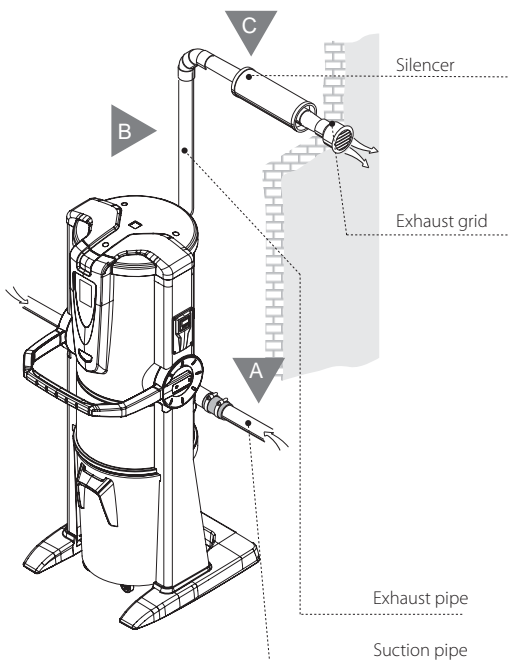
16.5 Connection to the pipe network (see picture)

The intakes for the connection to the suction pipes network and to the pipes exhausting the air outside can be assembled either on the right or left side of the unit.

A Using the eccentric extension 80/63, the sleeve and the metal clamps delivered with the vacuum cleaner, connect the unit to the air suction pipe.

B Using the sleeve and the metal clamps delivered with vacuum cleaner, connect the unit to the exhaust pipe.

C Assemble a silencer on the exhaust pipe; position the silencer near the exhaust grid.



Using the sleeve to connect the junction of the central air vent, identified with the letter (B), the area of air exhaust hose

N.B.	Diameter of exhaust pipe for lengths up to 6m:	63 mm
	Diameter of exhaust pipe for lengths from 6m to 8m:	80 mm
	Diameter of the exhaust pipe for lengths from 8m to 10m:	100 mm

It is not recommended to use an exhaust pipe with a length of over 10m, because it could prove damaging the central vacuum cleaner.

16.6 Electrical connection



**WARNING: the electrical connection must be carried out
ONLY by qualified personnel**

Before connecting the system to the electrical power supply check that the supply voltage corresponds to that required by the vacuum cleaner (see the identification plate).

The manufacturer declines any responsibility for damages to persons and/or objects due to a connection to a non-complying electric wiring.

The central unit, equipped with frequency control system (inverter), must be earthed in compliance with the regulations concerning high leakage currents (over 3.5 mA).

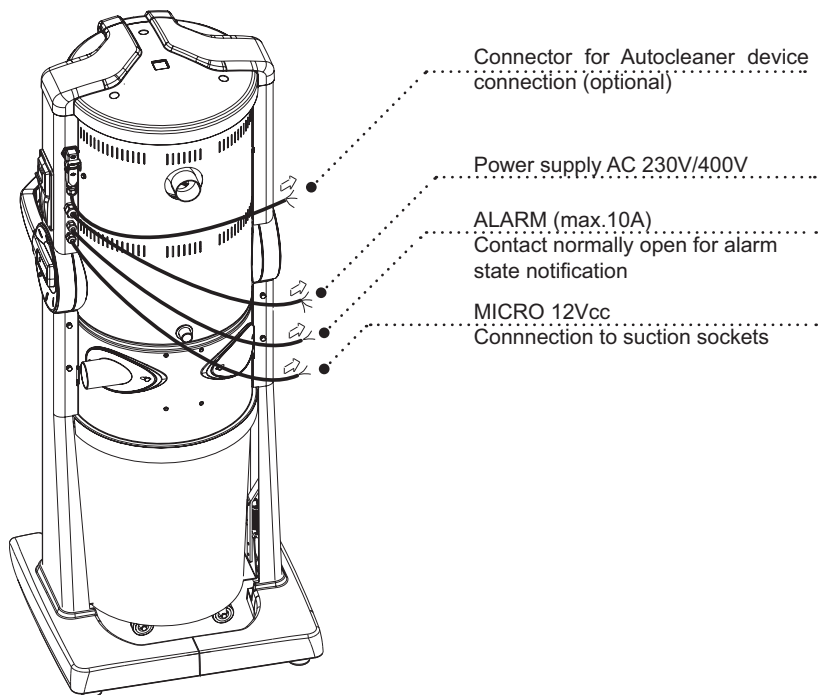
If local or national regulations requiring their upstream protection by means of circuit breakers, use a type A device for single-phase power supplies, and a type B device for three-phase electrical supply, as defined in the IEC Standard 60755.

Choose a suitable model that has:

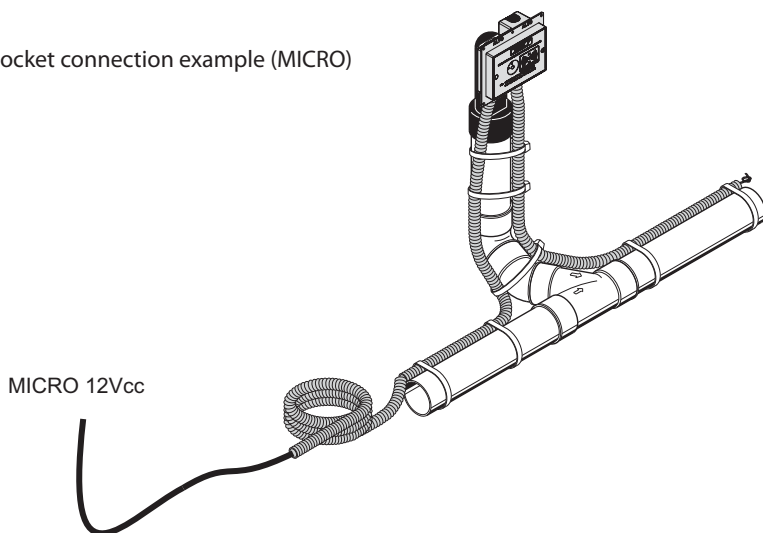
- High frequency current filtering,
- Devices immune to disengagement due to the presence of disturbances

Follow the instructions (see picture) detailed below to carry out the operation:

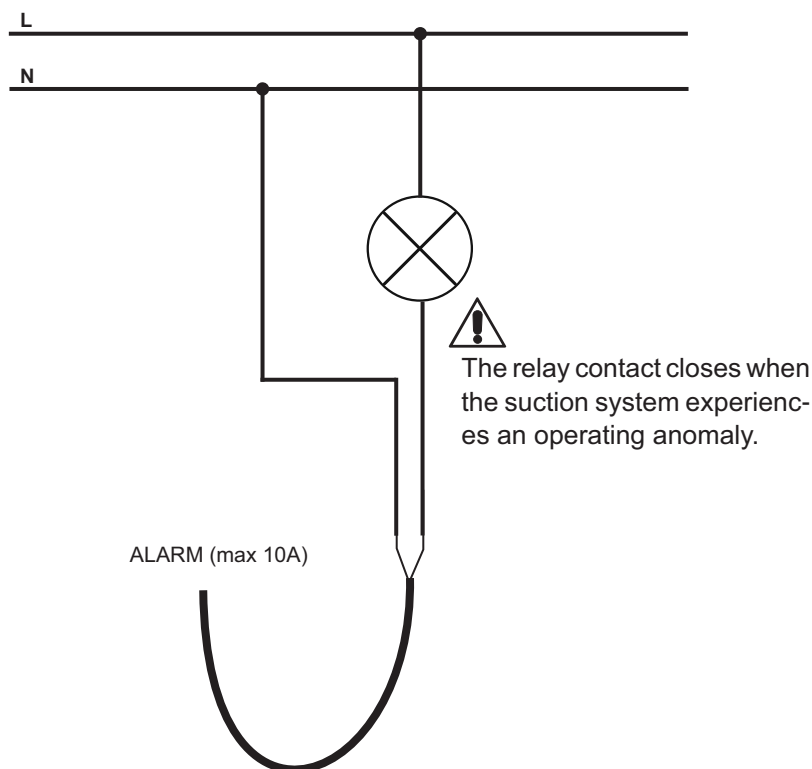
- Connect the signal input cable (MICRO LINE) to the suction socket;
N.B. The electrical wiring of the suction sockets must be separated from the power cables
- Connect the power cord of the central unit to the electrical distribution network
- Check that the electric installation is made according to the electric regulations in force
- It is not recommended to supply the vacuum unit with tension coming from temporary power panels (for example building sites' power panels) in order to avoid possible damages of electronic parts.



Suction line socket connection example (MICRO)



Generic example of connection contact alarm notification (ALARM)



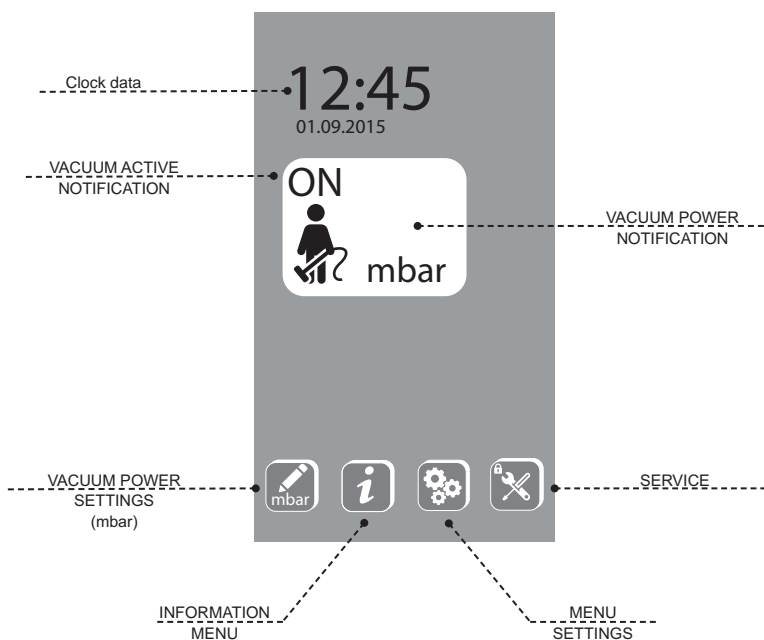
16.7 Correct motor rotation direction check for Revo 700 model

For the central Revo Block Professional 700, check on the first use, if there is a suction effect at the nozzle. If not, this indicates the motor is rotating in the wrong direction. To correct the error, the two central suction supply cables must be swapped.

17 ONBOARD COMPUTER PROGRAMMING

By means of the touch display, it is possible to send commands from the central unit to the management computer, to make operating choices, to program ordinary maintenance and insert personal data of the installer.

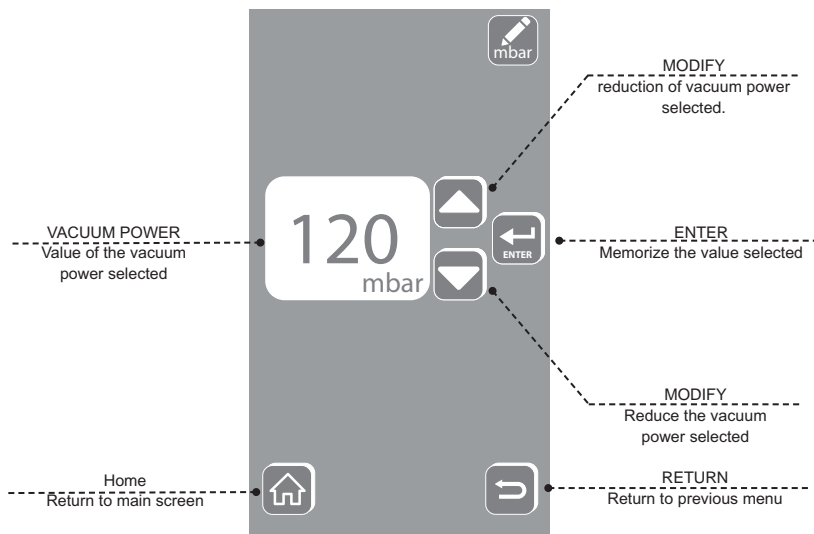
17.1 Main screen





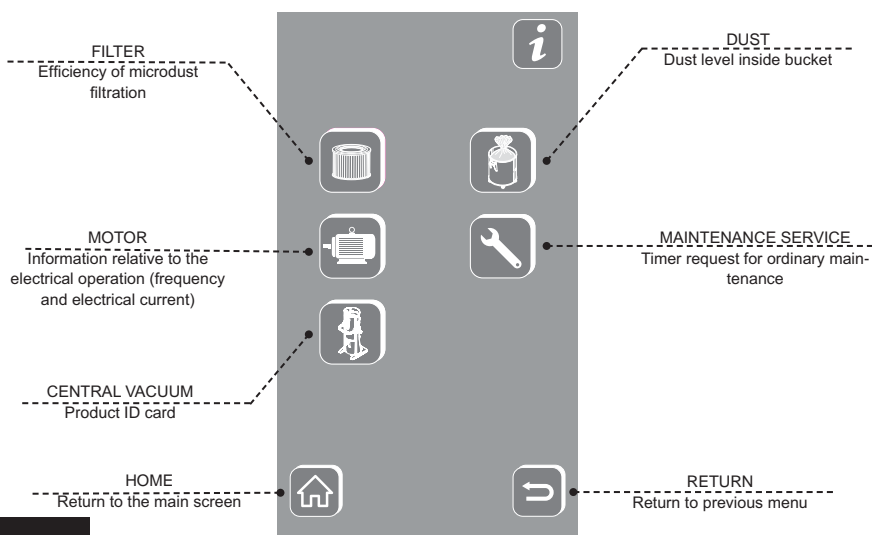
17.2 VACUUM POWER

Using this function, it is possible to modify the vacuum power according to individual needs. Press ENTER to accept the data set.



17.3 INFORMATION Menu

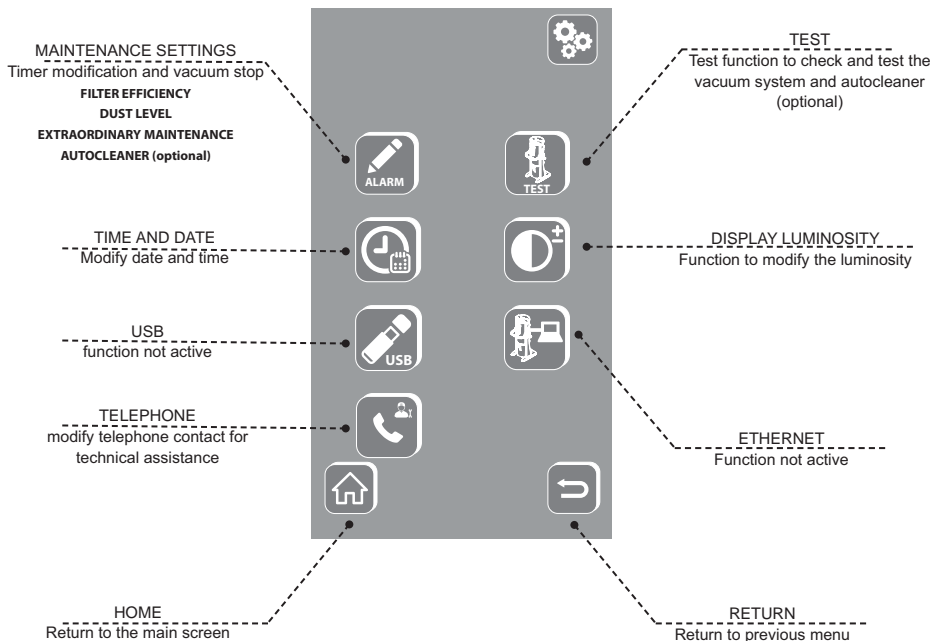
Using this function, it is possible to check the operation of the central vacuum





17.4 SETTINGS menu

Using this function, it is possible to modify the basic system control settings and test the vacuum system operation



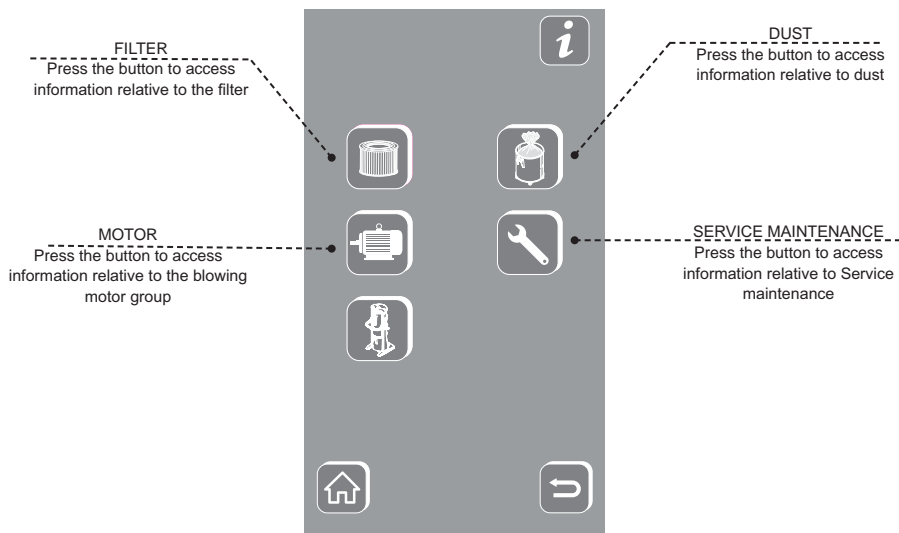
17.5 SERVICE menu

Function protected by password reserved for SERVICE (authorized help center technical assistance).

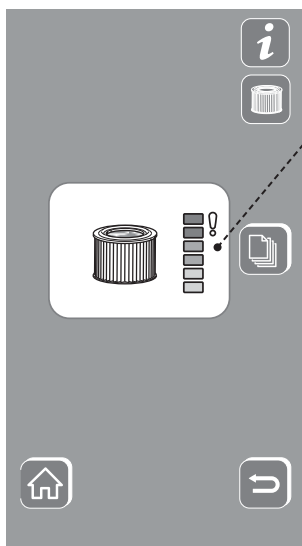


18 INFORMATION MENU FILTER/DUST/MOTOR/SERVICE

By means of the INFO menu, it is possible to see information relative to microdust filtration, the dust level inside the bucket, the operation of the blowing motor assembly and the expiry of maintenance service requests.



Example

COLUMN MICRODUST FILTRATION
EFFICIENCY NOTIFICATION

GREEN: optimum filtration
YELLOW: adequate filtration
RED: poor filtration, refresh filter cartridge

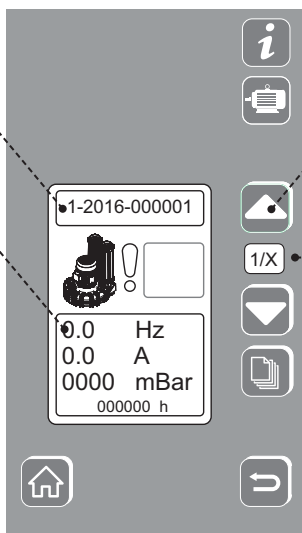
Example



Information relative to the serial number of the motor group selected

Information box
gruppo motore soffiante:

Hz: refers to the frequency reached by the blowing motor group
A: electrical consumption of the blowing motor group
mBar: refers to the depression reached by the blowing motor group
h: number of vacuum hours of the blowing motor group



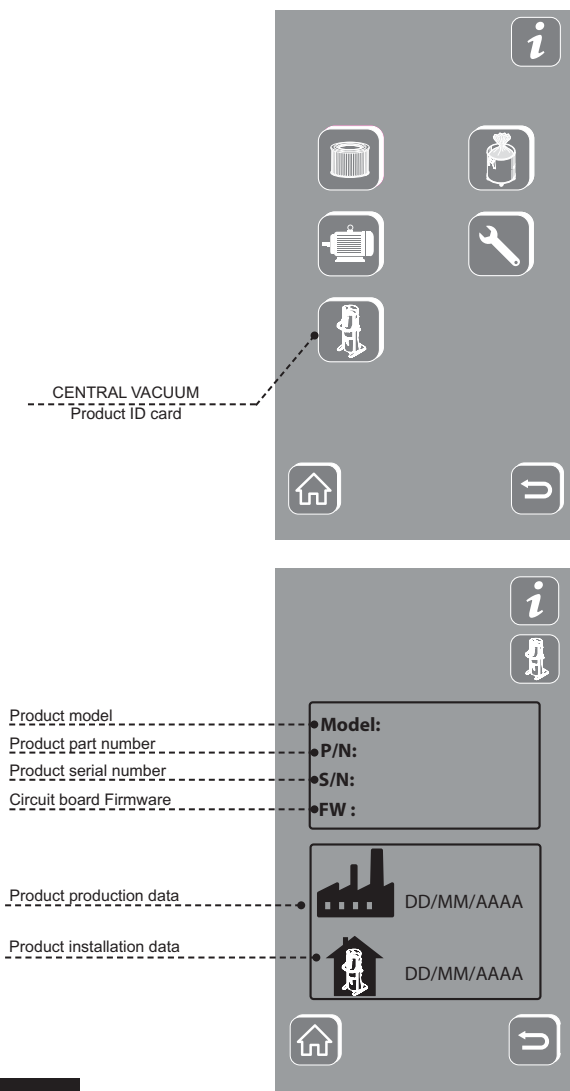
Pressing this button selects the blowing motor group for which information is required

The box displays the number of blowing motor groups identified on the CAN BUS network



19 PRODUCT ID CARD

By means of the INFO menu, it is possible to see information about the product, see the model, part number, serial number, circuit board firmware, production and installation data.





20 MAINTENANCE PROGRAMMING

By means of the computer, it is possible to modify the intervention times and set vacuum stop following the request for filter cleaning, dust container emptying and SERVICE maintenance.

MAINTENANCE SETTINGS
Timer modification and vacuum stop
FILTER EFFICIENCY
DUST LEVEL
EXTRAORDINARY MAINTENANCE
AUTOCLEANER (optional)

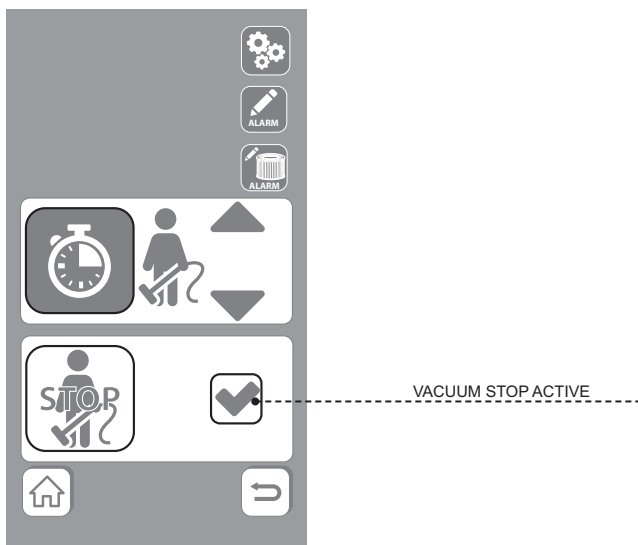
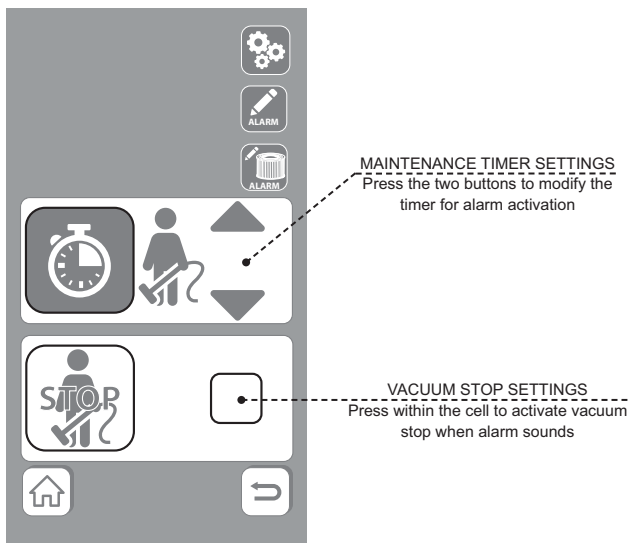


MAINTENANCE SETTINGS
FILTER
Timer modification and vacuum stop
for manual filter cleaning request



MAINTENANCE SETTINGS
DUST
Timer modification and vacuum stop for
dust container emptying request

MAINTENANCE SETTINGS
SERVICE
Timer modification and vacuum stop
for vacuum system check request





21 TEST

By means of the computer, it is possible to perform a first level diagnosis relative to any problems encountered.



TEST

Press the button to access the following tests:

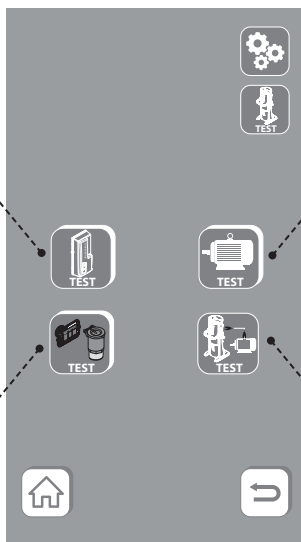
- AUTOCLEANER FUNCTIONALITY (optional)**
- VACUUM SYSTEM FUNCTIONALITY**
- VACUUM SOCKETS FUNCTIONALITY**
- CAN BUS CONNECTION CHECK**

AUTOCLEANER
Press the button to access the test function
Only follow this procedure in the presence of optional device (see device manual)

VACUUM SYSTEM
Press the button to access the test function
Follow this procedure to start the blowing motor group directly from the onboard computer at the minimum preset speed.

VACUUM SOCKETS
Press the button to access the test function.
Follow this procedure to check that the onboard computer receives the vacuum start signal on flexible tube insertion.

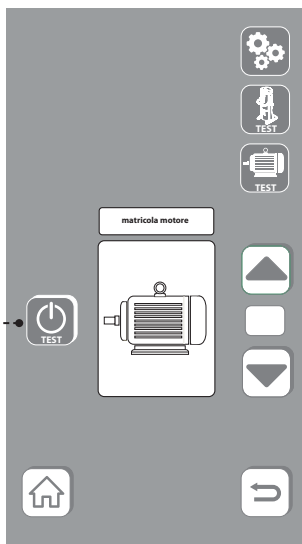
CAN – BUS CONNECTION
Press the button to access the test function
Follow this procedure to start A CAN BUS network connection check.



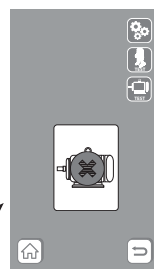
Example



TEST
Pressing this test carries out the selected test



Test failed



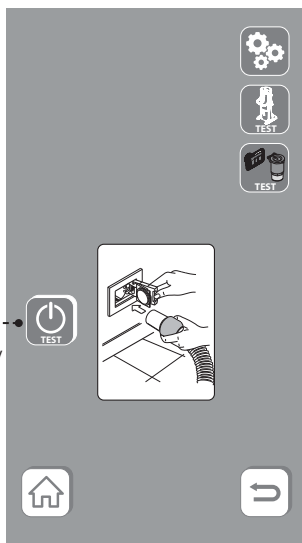
TEST OK



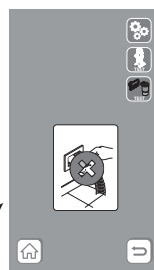
Example



TEST
After having inserted a flexible tube in a vacuum socket, pressing this key will carry out the selected test.



Test failed



TEST OK



22 MAINTENANCE NOTIFICATIONS

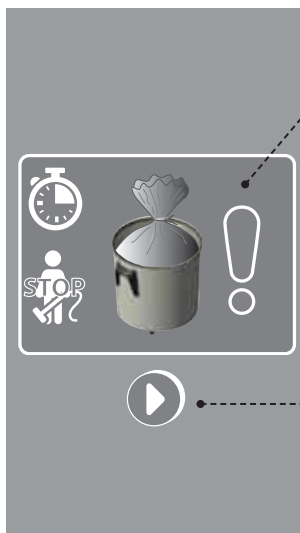
22.1 Filter maintenance notifications



FILTER CLEANING REQUEST
This screen indicates the filter cartridge cleaning request and results from the expiry of the preset timer

PLAY
Pressing this key starts an animated demonstration for filter cleaning.

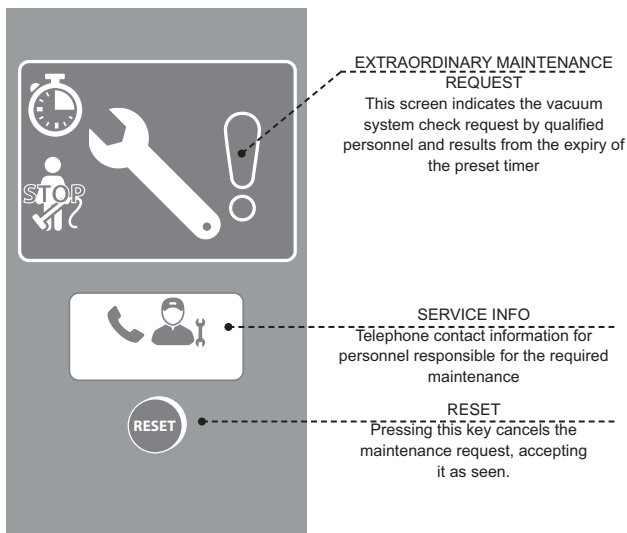
22.2 Dust maintenance notifications



DUST EMPTYING REQUEST
This screen indicates the dust container emptying request and results from the expiry of the preset timer

PLAY
Pressing this key starts an animated demonstration for emptying the dust container

22.3 Service maintenance notifications

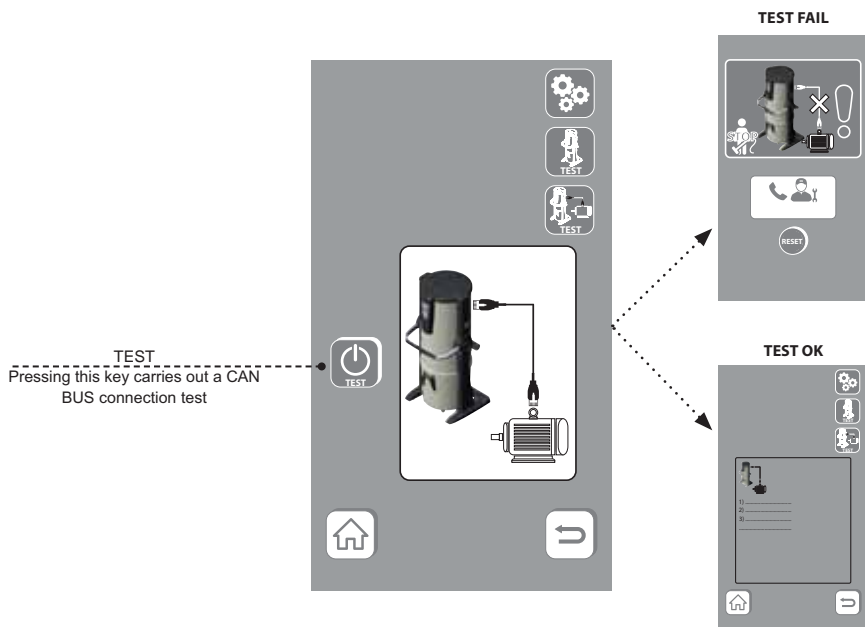
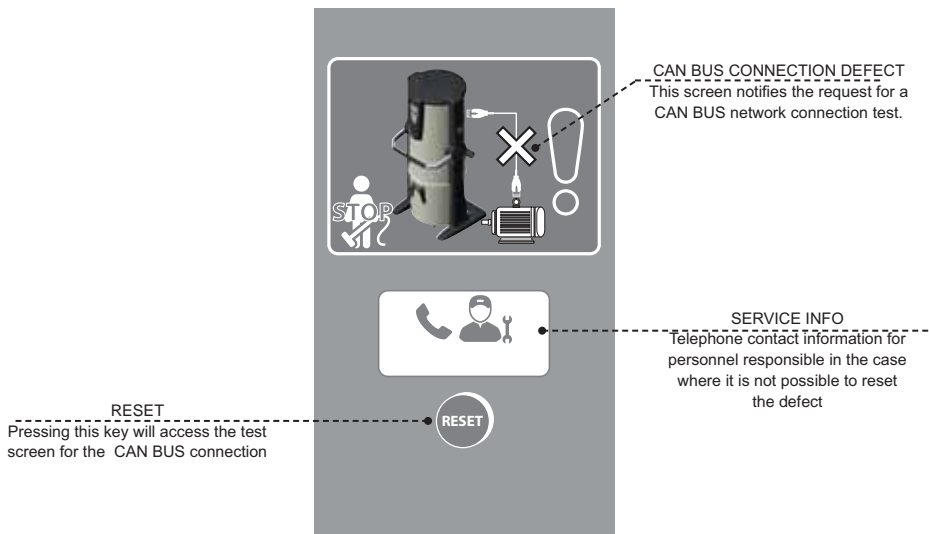


Maintenance request:

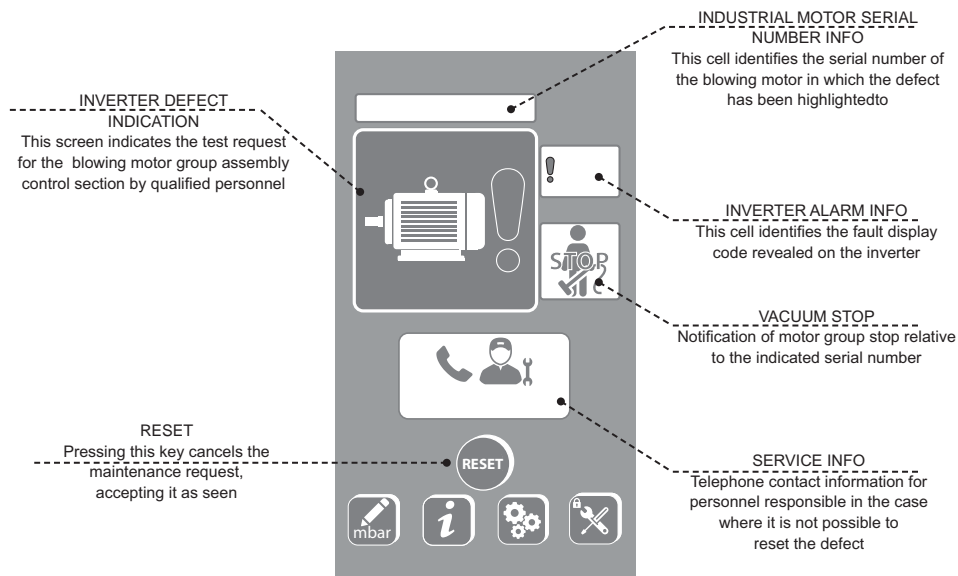
- **Filter cartridge use check and/or substitution**
- **Vent check for central vacuum system tubing**
- **Blowing motor group operation check**

23 ALARM NOTIFICATIONS

23.1 Can Bus connection alarm



23.2 Inverter Alarm



23.3 INVERTER ALARM code table and problem resolution

In case of anomalies during normal operation, check that the conditions regarding mounting, connection and environmental conditions as supplied have been observed.

The first defect will be displayed through the management and an intermittent display on the inverter.

ALARM codes which cannot be automatically reset from the management computer.

The cause of the defect must be remedied before the reset, switching the vacuum system on and off electrically.

Code	Defect name	Possible cause	Intervention procedure
C r F	PRELOAD	Fault in load relay controls, or load resistance damaged	Call the help centre and replace the inverter
E E F	EEPROM MEMORY	Internal memory fault	Call the help centre and replace the inverter
I F 1	INTERNAL COMPONENT	Unknown range	Call the help centre and replace the inverter
I F 2	INTERNAL COMPONENT	No inverter display	Call the help centre and replace the inverter

Code	Defect name	Possible cause	Intervention procedure
I F 3	INTERNAL COMPONENT	EEPROM MEMORY	Call the help centre and replace the inverter
I F 4	INTERNAL COMPONENT	Guasto EEPROM	Call the help centre and replace the inverter
O C F	EXCESS CURRENT	Mechanical block and/or blowing motor group overload	Check the blowing motor group condition and call the help centre
S C F	BLOWING MOTOR GROUP SHORT CIRCUIT	Short circuit, or current loss to earth	Check electrical connections and motor insulation and call the help centre

ALARM codes which can be automatically reset from the management computer.

The cause of the defect is automatically reset by the central vacuum computer following elimination of the cause.

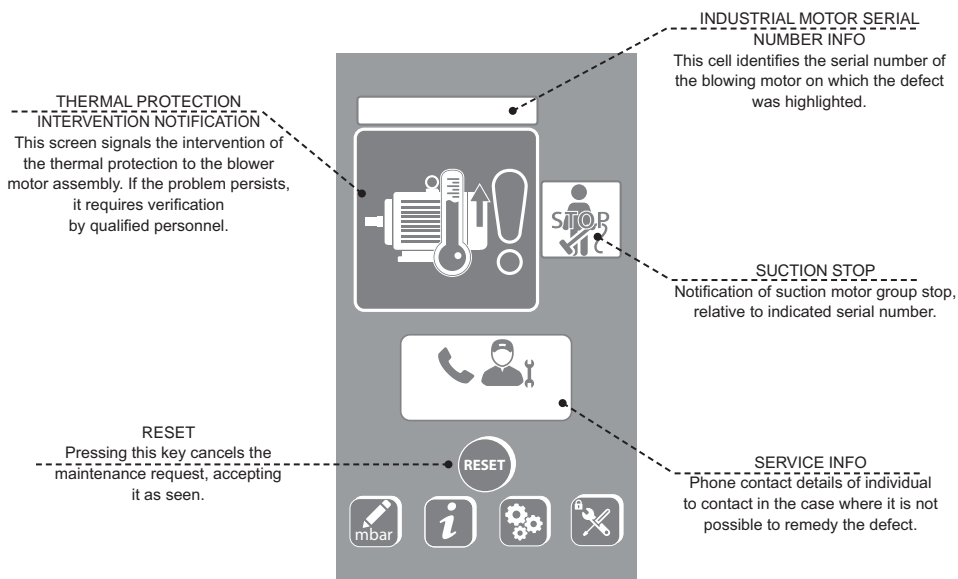
Code	Defect name	Possible cause	Intervention procedure
C B F	CAN BUS COMMUNICATION	Communication with the CAN BUS network interrupted	Check the electrical supply to the blowing motor assembly indicated in the serial number cell. Call the help centre.
E E F	EEPROM MEMORY	Fault in internal memory	Call the help centre and replace the inverter
O b f	EXCESSIVE BRAKING	Blowing motor assembly stop too rapid.	Increase the deceleration time. Call the help centre
o h f	INVERTER OVERHEATING	Inverter temperature too high.	Check the inverter ventilation and environmental conditions. Call the help centre
OL f	MOTOR OVERLOAD	The electric current absorbed by the motor is too high	Check for mechanical engine blocks. Call the help centre
O p f	MOTOR PHASE LOSS	Loss at motor output phase	Check connections between motor and inverter. Call the help centre
o S f	ELECTRICAL NETWORK OVERLOAD	The electrical supply tension is too high.	Check the supply voltage. Call the help centre
p h f	NETWORK PHASE LOSS	Fault in a supply phase. Irregular electrical supply	Check electrical connection and any electrical protection mounted on the vacuum system.
S L F	MODBUS COMMUNICATION	Communication with MOD BUS interrupted.	Check the connection between the interface board, located inside the industrial motor and the inverter. Call the help centre.
U S f	LOW TENSION	The electrical supply tension is too low. Damaged load resistor.	Load resistor damaged. Check the input voltage. Call the service center and replace the inverter

23.4 Blowing motor group temperature alarm

The blowing motor group is equipped with thermal protection, which in case of temperature recorded over 150°C, will send a notification to the computer.

Before stopping suction, the computer reduces blowing motor group speed reached by 20% for 5 minutes. At the end of this time period, if the temperature returns to below 35°C, the computer automatically restores motor operation, otherwise further decreases speed by a further 20% for another 5 minutes. If the problem is still present when the additional time also runs out, it stops the suction and activates the alarm message on the user interface.

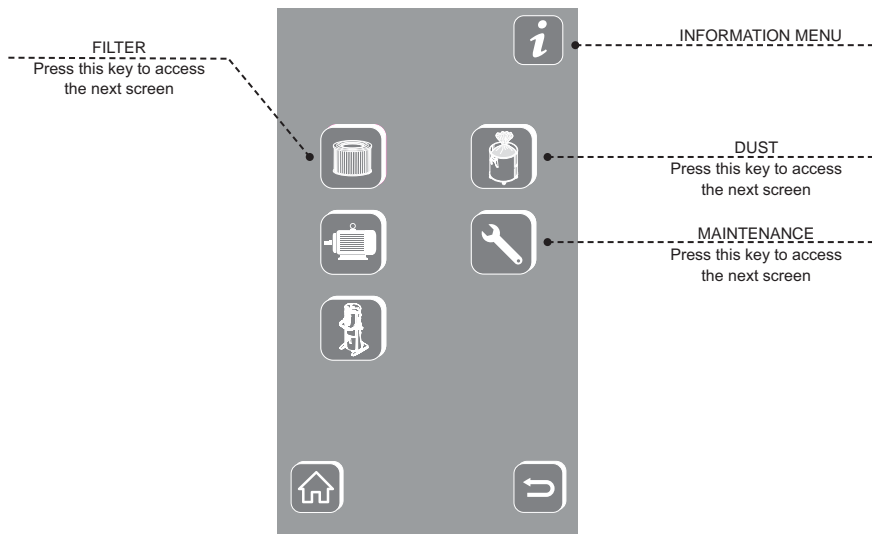
At this point, even in case of thermal protection reset, in order to restart the suction motor, the RESET button on the user interface must be pressed.



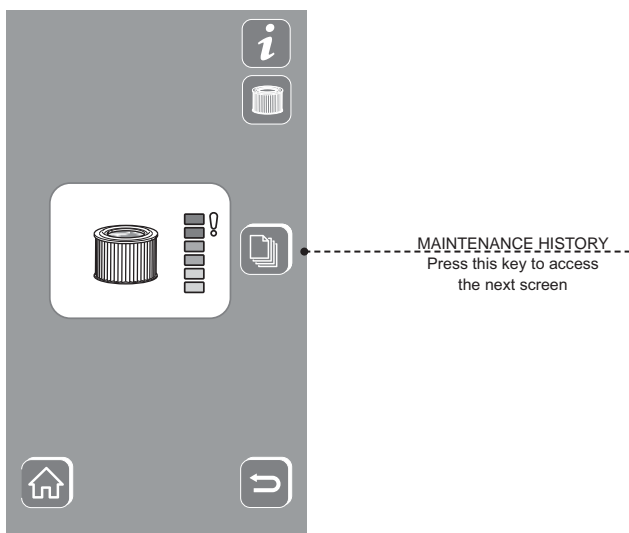
24 LARM/MAINTENANCE HISTORY

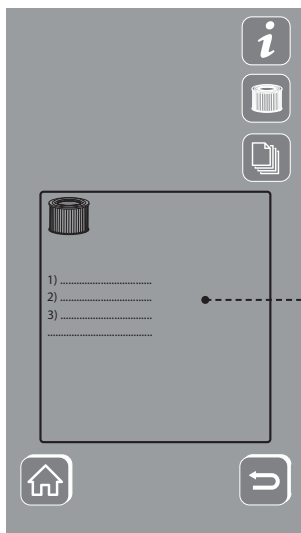
Using the onboard computer, it is possible to see the list of maintenance requests from the central suction and the list of alarms displayed.

24.1 Filter, dust, service maintenance history



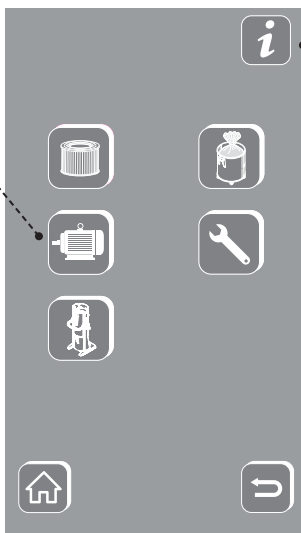
Example





MAINTENANCE HISTORY
Within this menu you will find the events with date and time notifications relative to maintenance requests

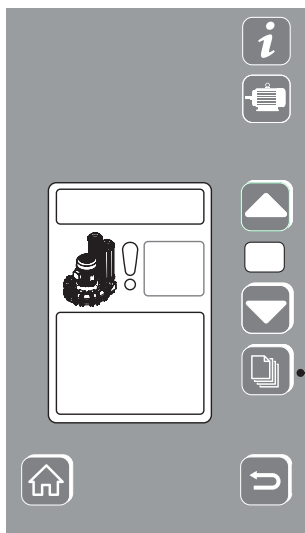
24.2 Alarm history



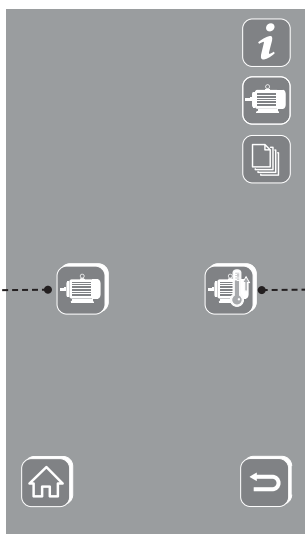
ALARMS
Press this key to access the next screen

INFORMATION MENU

Example



ALARM HISTORY
Press this key to access the next screen



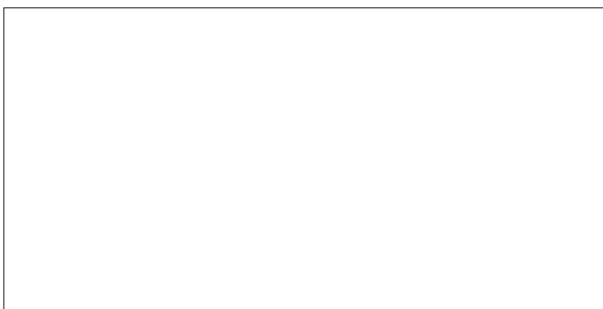
**ALARM HISTORY
INVERTER**
Within this menu you will find the events, with date and time notification.

**ALARM HISTORY
TEMPERATURE**
Within this menu you will find the events with date and time notification.

25 TROUBLESHOOTING

PROBLEM	CAUSE	REMEDY
Suction does not start at all outlets	Alarm on your computer	Perform RESET alarm and relevant maintenance required. Extract and insert the flexible tube to start the extraction (Connect the power cord)
	The power cable is unplugged	Connect the power cable
	The micro line cable is not connected	Connect the activation cable (sensor)
There is no air suction from just one suction socket	The electric contacts are interrupted or the suction socket micro switch is out of order	Call Technical Service
The air suction is weak	More than one socket is being used at the same time	Reduce the number of sockets used at the same time
	The flexible hose or the accessories are broken	Check the flexible hose and the accessory are not damaged (replace them if needed)
	Filter cartridge is dirty	Clean the filter cartridge
	The dust bin gasket is damaged	Check the integrity
	Check if the pipes of piping net are damaged or clogged	Call Technical Service
	The air exhaust is clogged	Call Technical Service
	Dust container is full	Empty dust container
The vacuum cleaner still works even if the suction inlets are closed	Malfunctioning of the electronic board	Call Technical Service





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