SISTEM·AIR
SINCE 1993
CENTRAL VACUUM SYSTEMS
ByTecnoplus s.r.l.

www.sistemair.com

TECHNICAL MANUAL

Industrial Clean

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

CE
line
Industrial Clean

INSTRUCTION MANUAL
- Type: professional central vacuum cleaner
- Model: Industrial Clean
- Revision 2.0.0

INDEX

INDEX

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.

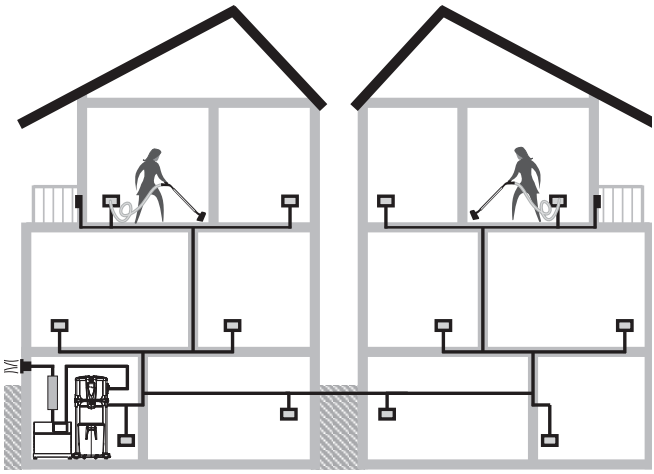
TECNOPLUS s.r.l . reserves the right to upgrade or modify this manual or the vacuum cleaner itself at anytime without giving any prior notice to third parties.

2. DESCRIPTION OF THE VACUUM CLEANER

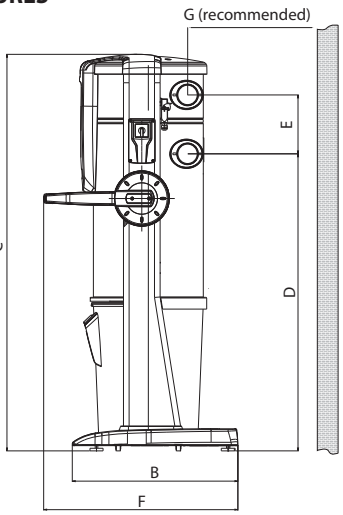
Constant research applied to central vacuum cleaners and advanced electronic technology have allowed TECNOPLUS S.r.l. to create the new dust separator Industrial Clean.

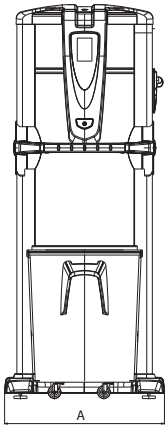
The central vacuum cleaner, suitable for any type of residential building (private houses, offices, hotels, service sector), consists of a network of PVC trace pipes, housed in walls or in false ceilings running through the various rooms; at the end of the pipes are positioned the suction sockets.
The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

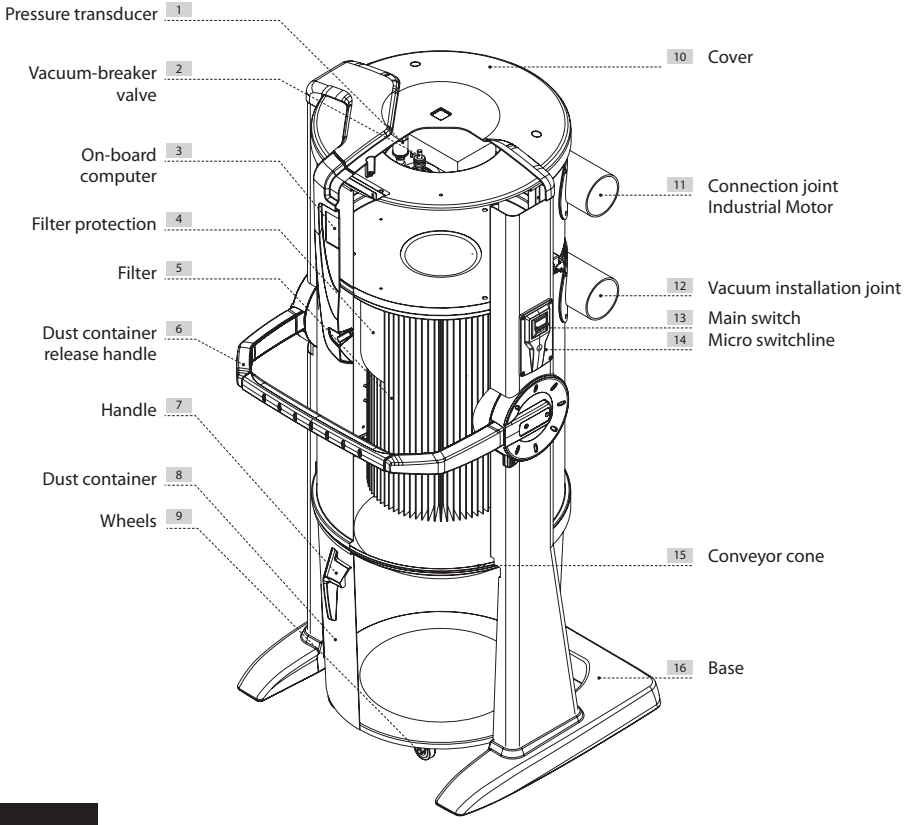
The Industrial Clean dust separators features innovative characteristics which make it more suitable for professional applications (small hotels, offices, sports centers, beauty shops) with reduced encumbrance.
It is run by a second generation electronic system
that Sistem Air applies to its vacuum cleaners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



3- TECHNICAL FEATURES







		Industrial Clean	
Model		Industrial Clean Small	Industrial Clean Big
Article		**3403.0**	**3403.1**
Maintenance computer		YES	YES
Safety vacuum-breaker valve		YES	YES
Protection degree	IP	20	20
Supply	V ac	220/240	220/240
Frequency	Hz	50/60	50/60
Max air flow (motor)	m^3/h	700	1200
Filtering surface	cm^2	24000	43400
Dust container capacity	l	62	106
Weight	kg	53	67
Measurement A	mm	615	750
Measurement B	mm	633	633
Measurement C	mm	1515	1616
Measurement D	mm	1135	1148
Measurement E	mm	281	281
Measurement F	mm	745	745
Measurement G	mm	500	500
Measurement M (air inlet)	mm	80	100
Measurement N (air outlet)	mm	80	100

4 - CONSTRUCTION FEATURES

The Industrial Clean Small e Industrial Clean Big dust separators can be used in different contexts, thanks to their versatility and combination possibilities with the other components of the industrial central vacuum system.
The dust containers are available in two versions with different capacity and can be used in both big or small industrial contexts.
The choice must be made depending on the total air flow of the motors they are combined with and on the number of users.
Since the industrial dust separators are a component of the installation, it is recommended to make a definitive choice only after carefully evaluating the project globally, considering the needs of use and the type of installation, but also the other necessary components in order to obtain the most complete vacuum system.

Motor air flow	MODEL	ARTICLE	Recommended number of users Ø 32	Recommended number of users Ø 40	Computer maintenance	Dust container capacity l	Filtering surface cm^2	Supply V ac
Fino a 700 m^3/h	Industrial Clean Small	**3400.0**	4	3	YES	62	24000	220/240
Fino a 1200 m^3/h	Industrial Clean Big	**3400.1**	8	4	YES	106	43400	220/240

The Industrial Clean dust separators 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:
- Epoxy-powder coated cylindrical body made of metal
- Base coated with shockproof material to protect the unit.
- Metal bin for dust collection (62/106 l capacity) equipped with wheels for a more comfortable handling.
- Dust bag and bag-stretcher for dust collection, to ensure quick and hygienic disposal operations of the material collected
- Left or right connection possibility both to input pipes (suction) and to exit pipes (motor groups).
- Vacuum-breaker valve to prevent that the motor works in critical conditions.
- Vacuum inlets supply with 12 V dc voltage.
- Polyester filter cartridge with M-class certificate, washable in water.
- Metallic filter protection to prevent accidental breaks.
- On-board computer for controlling the maintenance cycles which warns the user in the following case: the dust container is full, the filter cartridge must be cleaned, the machine must be maintained.
- Possibility to connect the machine to a remote auxiliary signal alerting the maintenance (optional).
- Liquid suction by using the optional accessory.
- Electrostatic material suction, once the grounded metallic pipe network has been carried out.
- Possibility to combine the Autocleaner filter self-cleaning system even afterwards.
- Pressure transducer
- Exclusive automatic suction power regulation system by Sistem Air (use on the motors named “Matic”).

An innovative maintenance and control system, integrated in the electronics installed on the unit, allows the user to interact with the machine more easily and quickly. The maintenance management can be programmed as the user wants and he receives on the graphic display the messages about the state of the machine, together with the indications about the operation that must be carried out in case of anomalies.

5 - SAFETY FEATURES

It is recommended to read carefully all the installation, use and maintenance instructions detailed in this manual.
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 psychic, sensory or mental capacities or by persons with no experience or knowledge of the system, unless under the 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.
- 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 fi lter cartridge.
- **Do not vacuum any material which may cause electrostatic charges in the piping system, if not previously communicated to the constructor.**

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.

IP20

5.2 Electric insulation degree

CLASSE 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 fi x 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 carried out by the Customer.

5.6 Control room

This product has a control room from which it is possible to set up the operation of the device, by using a simple user interface display.
From the control room (display), it is possible to control and set up the ordinary maintenance operations.
The workstation, on the contrary, is relocated in the various rooms, thanks to the pipe network.
Therefore, the operator doesn't come into contact with the machine while it is working, except to the putting into service operations and the use of the vacuum unit.

6 - AUTHORIZED USE

The Industrial Clean dust separator has been designed exclusively to vacuum clean dust, very small size solids and dry materials.
The use of the dust separator is authorized in industrial contexts through connection to a wall-traced pipe network and to a standard home electrical wiring.
The Industrial Clean Small e Big dust separators have to be used combined with one or more blowing motors in installations planned to support an air flow up to 700 m3/h for the Small version and up to 1200 m3/h for the Big version.
These components are used in installations presenting the following characteristics
- Mounting column measuring 63/80 mm (for the Small version), or 63/80/100 mm (for the Big version), based on the configuration chosen.
- Dust inlet measuring 80 mm (Small) or 100 mm (Big).
- Monophasic supply 220/240 V..
- Possibility for up to 4 contemporary users to use the installation for the Small model, or up to 8 contemporary users for the Big model.

MODEL	OPERATOR Ø flexible hose 32	OPERATOR Ø flexible hose 40
Industrial Clean SMALL		
Industrial Clean Big		

7 - UNAUTHORIZED USE

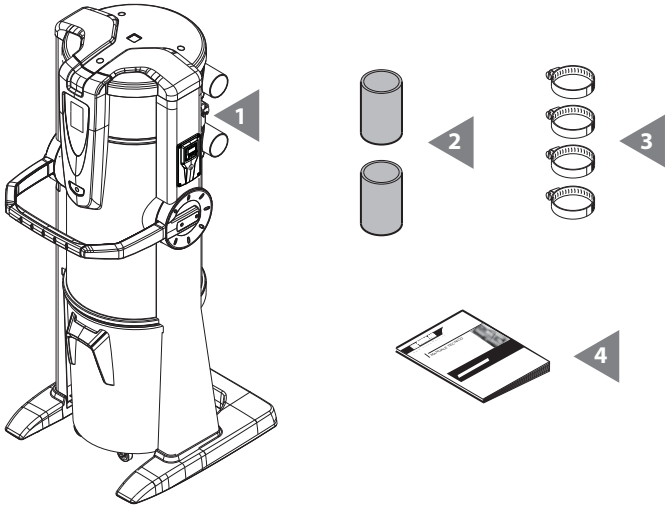
It is extremely important NOT to use the appliance in the following circumstances which are considered to be inappropriate and dangerous:
• The system must not be used to vacuum clean fabrics, heavy or hot/burning materials.
• The system must not be used to vacuum clean liquids.

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 use of the appliance other than those specified above is forbidden.
Any change or modification made to the system in order to vacuum 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 for 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 machine also includes a series of accessories as detailed below:

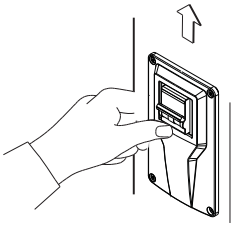
1) N°1 Industrial Clean dust separator
2) N°2 rubber sleeves for the connection to the suction pipe network
3) N°4 metal clamps to fix the sleeves
4) N°1 installation, use and maintenance manual



9 HOW TO USE THE VACUUM CLEANER

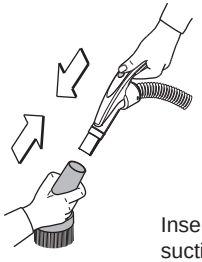
Once the **Industrial Clean**, dust separator, has been connected to the power supply, it can be started every time a flexible hose is plugged into any of the suction sockets installed in the different rooms.
The vacuum cleaning is started thanks to an electrical contact assembled directly in the socket which, once activated, allows the start of the suction motor of the vacuum cleaning unit.
The specifically-designed electronics applied to Industrial clean dust separators is based on a 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 to be emptied and the filter cartridge to be regularly cleaned.

9.1 Switching the vacuum unit on



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

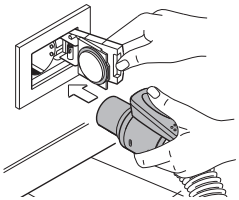
9.2 Using the vacuum unit



1 Fix the cleaning accessory most suitable for the desired task to the grip handle of the flexible hose. Select the accessories according to the required use, to 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.

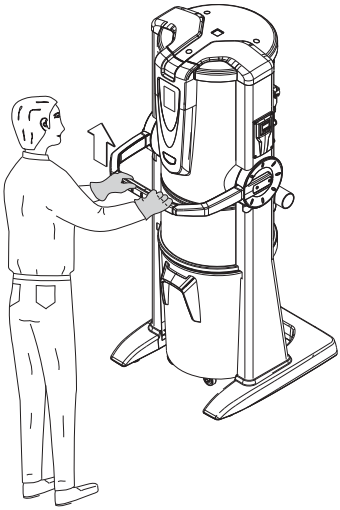
2

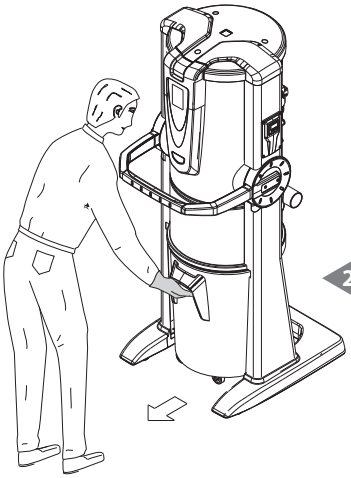


Once you have carried out the cleaning operations, remove the flexible hose from the suction socket by gently accompanying the closing flap until it reaches its housing. If the flap is left to
close by itself, it will violently hit the suction socket because the suction system is still working and the vacuum will pull the flap powerfully against the suction frame.
The unit is programmed to take a few seconds before switching off to ensure that the suction action has been completed throughout the piping network.

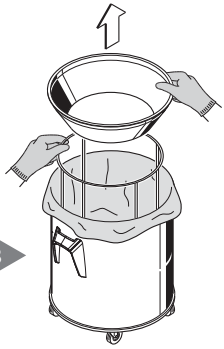
10 EMPTYING THE DUST CONTAINER

Use both hands to raise the release handle **1**

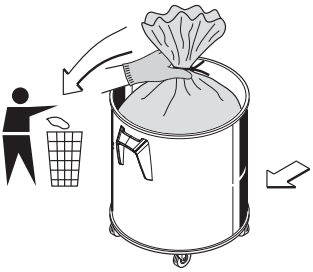




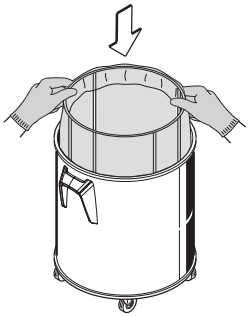
2 Remove the dust container



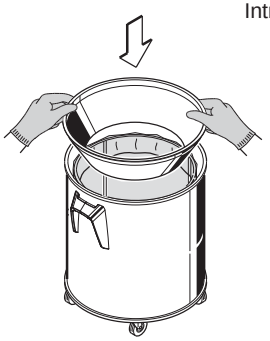
Remove the conveyor cone and the bag-stretcher **3**



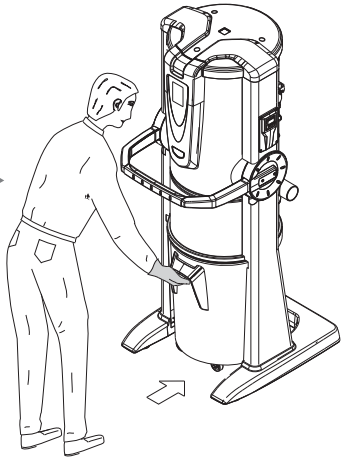
4 Tie up the dust bag and remove it from the container



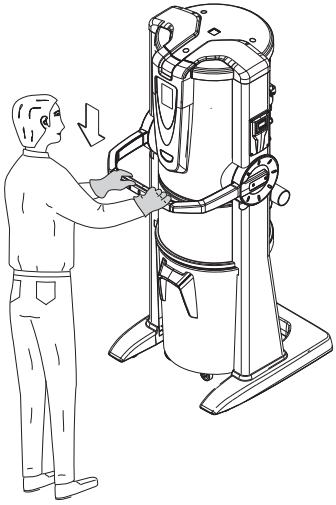
Introduce a new dust bag and the bag-stretcher 5



6 Assemble the conveyor cone



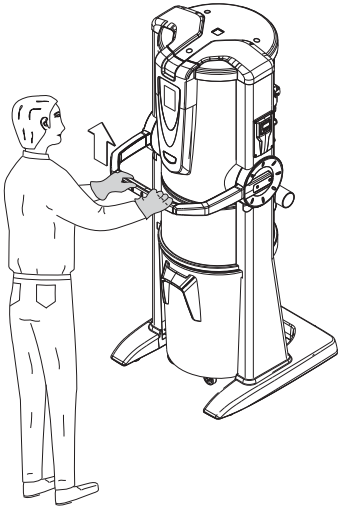
Put the dust container back in its position 7

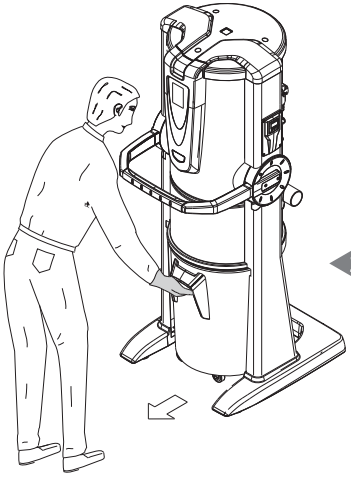


8 Use both hands to lower the clip handle

11 REPLACING THE FILTER CARTRIDGE

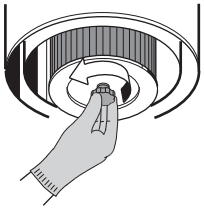
Lift the release handle using both hands **1**

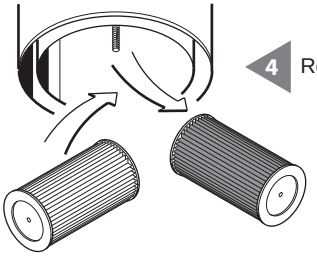




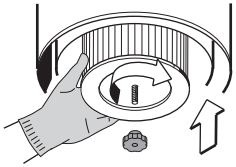
2 Remove the dust container

Unscrew the blocking knob **3**



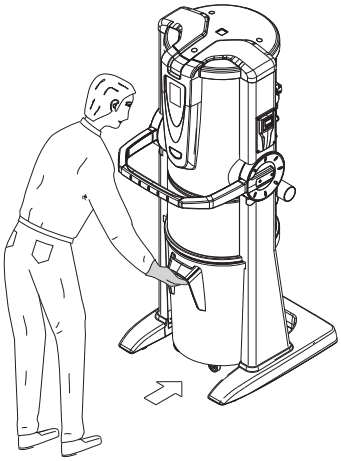


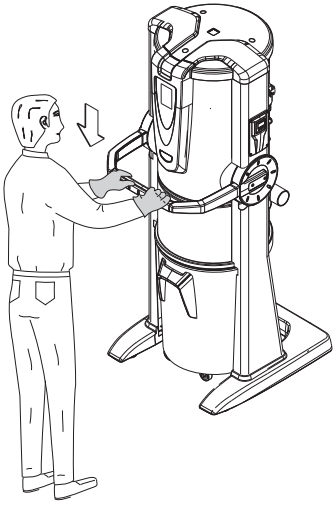
4 Replace the filter cartridge



5 Screw the blocking knob

Reassemble the dust container in its position 6





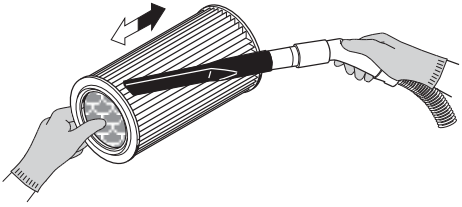
7 Use both hands to lower the clip handle

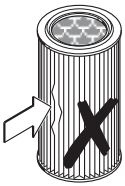
11.1 Regeneration of the filter cartridge

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

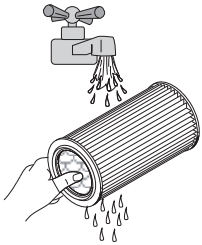
The filter cartridge can be regenerated more times by vacuum cleaning the dirt on the filtering surface; use the vacuum cleaner and the straight nozzle.

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
WARNING: 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 Filter cartridge	1610.2 1610.4	Industrial Clean Small Industrial Clean Big	
Dustbag for dust collection in the bin	1614.2 1614.3	Industrial Clean Small Industrial Clean Big	

12.3 Putting the vacuum unit 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.
You can get information about spaces and/or persons duly authorized 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 reducing 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 wave 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 Industrial Clean dust separator combined with one or more blowing motors must be connected to an exhaust air pipe, crucial for discharging outside the micropowders that the filter cartridge cannot retain. The vacuum cleaner must be installed in service rooms (e.g. garage, store room etc) protected from bad weather, dampness and excessive temperature variations (working environment temperature “-5 ÷ 45°C”, relative humidity 20 ÷ 85% without moisture or freezing). 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 to always carefully check 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 the 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 you to install the unit on the lowest available floor..

16.2 Positioning of the unit

For a 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).

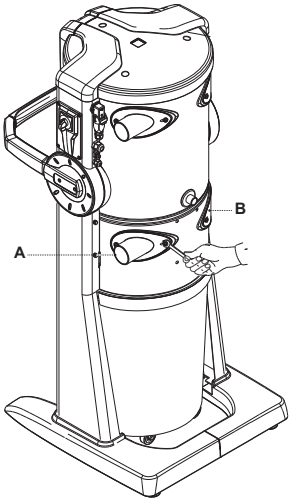
16.3 Fixing the unit

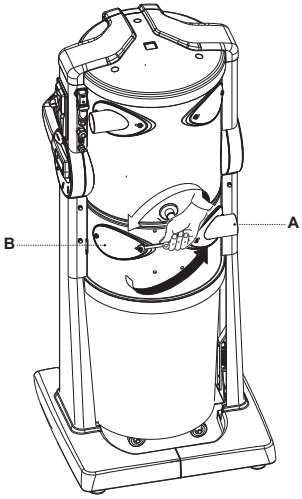
The unit does not need any special fixing device. For a correct and safe positioning, it is however necessary to check that the location selected for installing the unit features the following min. requirements:
- a solid, perfectly flat and horizontal bearing surface;
- the surface must not vibrate. 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)

The units 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

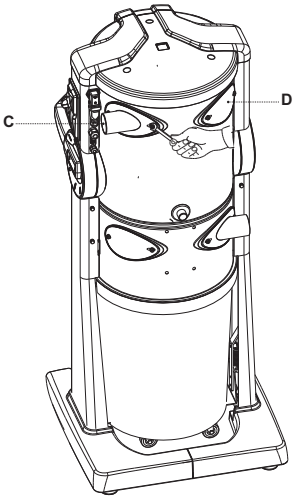


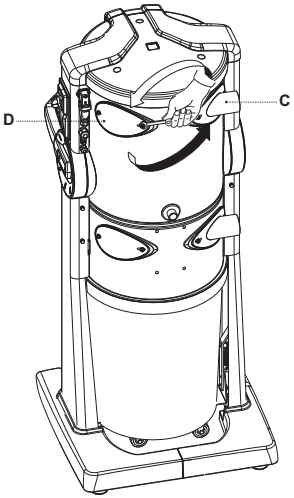


2 After exchanging their housings, reassemble the intake of the “A” suction pipe and the “B” closing plate by fastening the screws.
Now rotate by 180° the intake of the suction pipe as shown in the picture.

Disassemble the intake of the “C” suction pipe and the “D” closing plate by removing the screws.

3





4

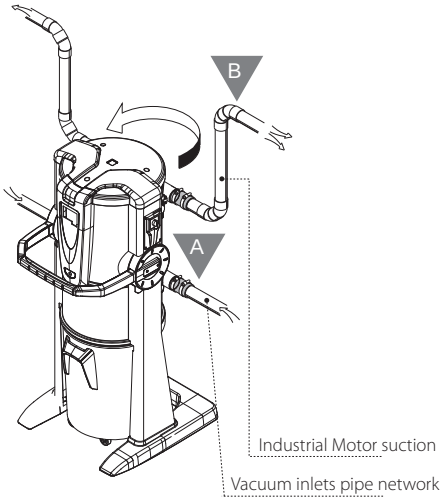
After exchanging their housings, reassemble the intake of the “C” suction pipe and the “D” closing plate by fastening the screws.
Now rotate by 180° the intake of the suction pipe as shown in the picture.

16.5 Connection to the pipe network (see figure)

Gli imbocchi per il collegamento alla rete tubiera e alla tubazione di sfiato dell'aria all'esterno possono essere posizionati sia sul lato destro che sul lato sinistro della centrale.

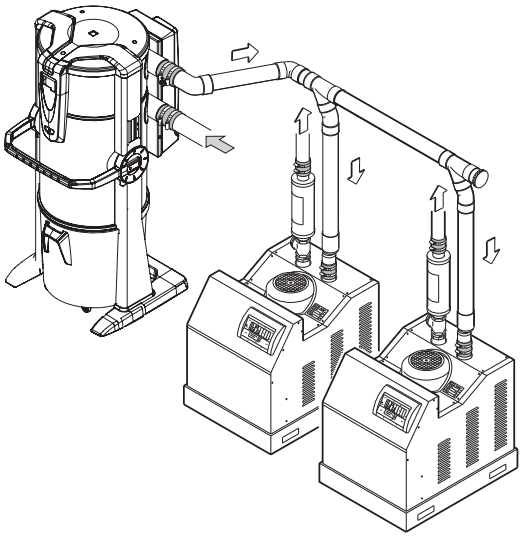
A The intakes for the connection to the suction pipes of the network and to the pipes exhausting the air outside can be assembled either on the right or left side of the unit.

B Using the sleeve and the metal clamps delivered with the unit, connect the unit to the air suction pipe. Using the sleeve and the metal clamps delivered with the unit, connect the unit to the suction pipe of the blower motor.



N.B. It is recommended to collocate as close as possible the dust separator to the Industrial Motor to prevent the pressure drop caused by the pipe network length and by the use of joint elbows and derivations.

Example of connection to the pipe network



16.6 Electrical connection

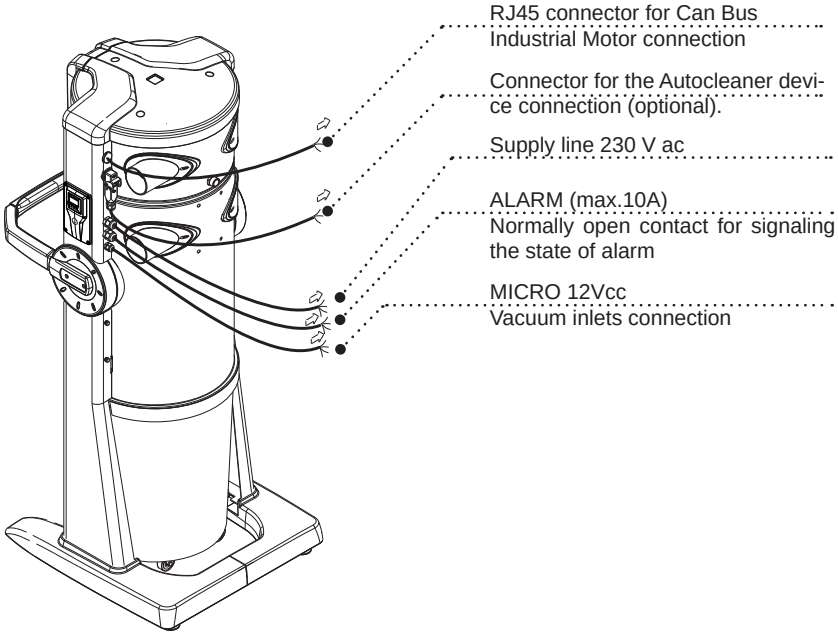
WARNING: The electrical connection must be carried out ONLY by qualified personnel.

Before connecting the system to the electrical power supply check that the supply voltage corresponds to that required by the appliance (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.

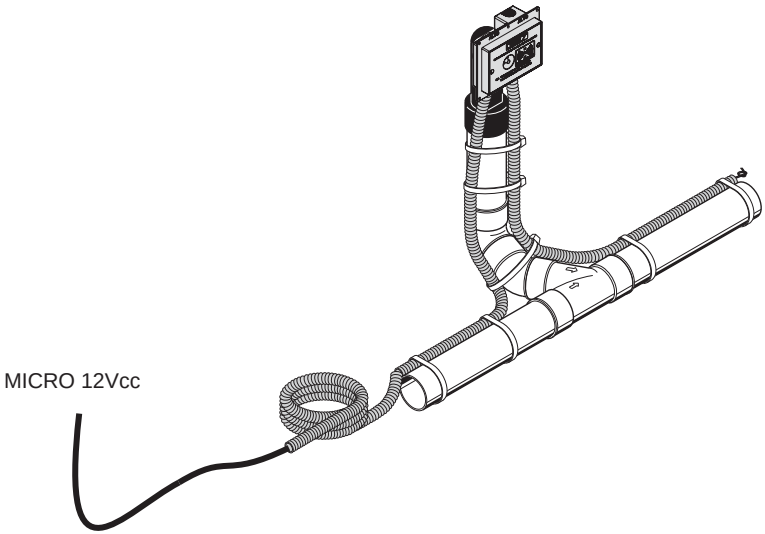
Follow the instructions (see picture) detailed below to carry out the operation:

- Connect the input signal cable (MICRO LINE 1) to the suction inlets
  N.B. The electrical wirings of the vacuum inlets must be separated from the supply cables
- Connect the supply cable of the vacuum unit to the electricity 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.

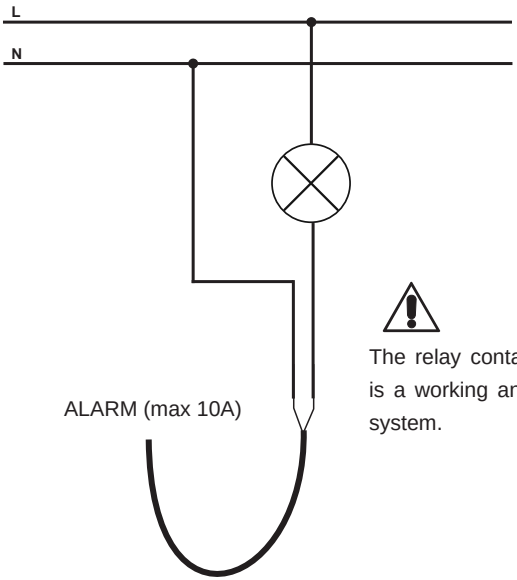
N.B. The cable of the Can Bus network, which connects the separator to the Industrial Motors, must never be longer than 90 m.



Example of vacuum inlets line connection (MICRO)

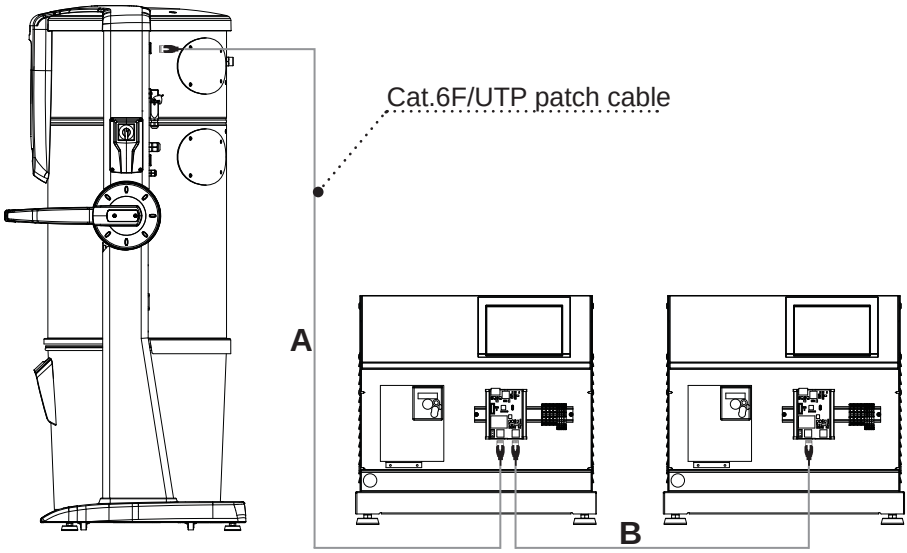


Example of general alarm signal contact connection (ALARM)



The relay contact closes when there is a working anomaly in the vacuum system.

Example of Can Bus connection with Industrial Motor

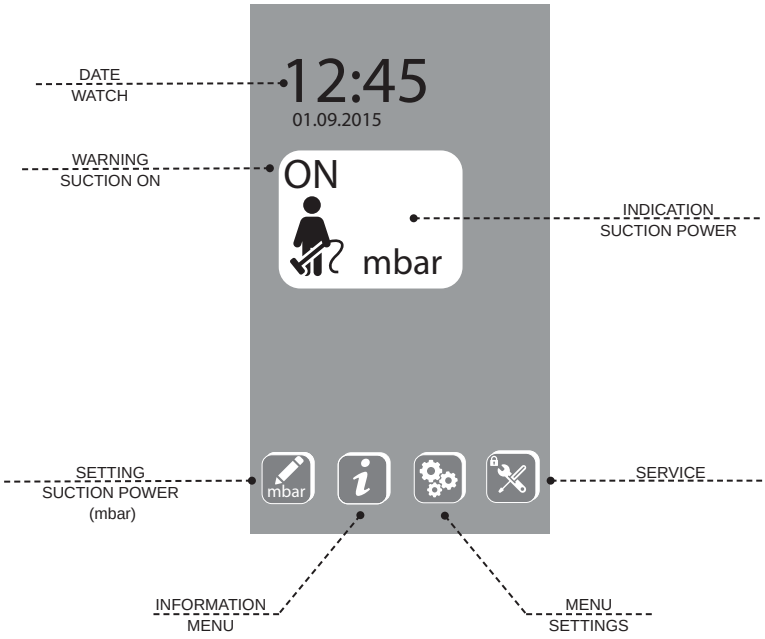


A + B + ... = max 90 m

17 ON-BOARD COMPUTER PROGRAMMING

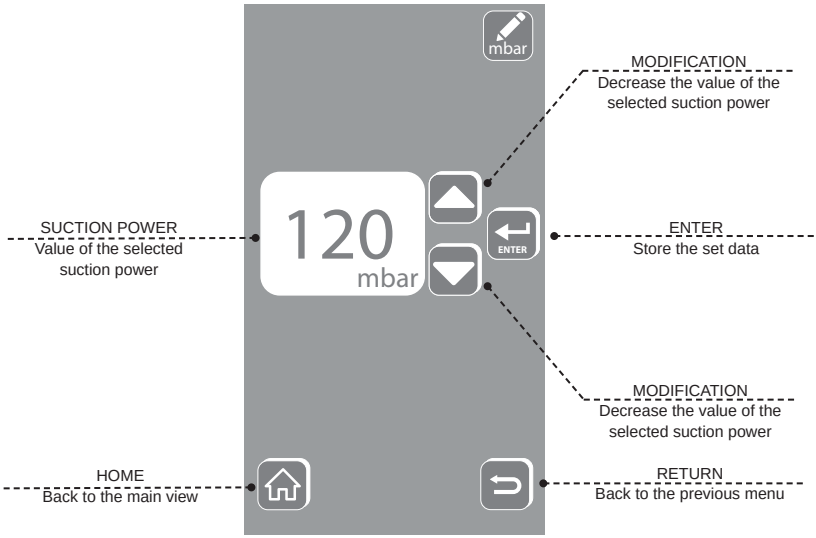
With the display touch, it is possible to send controls to the unit management computer, make working choices, program the ordinary maintenance and introduce the installer personal data.

17.1 Main view



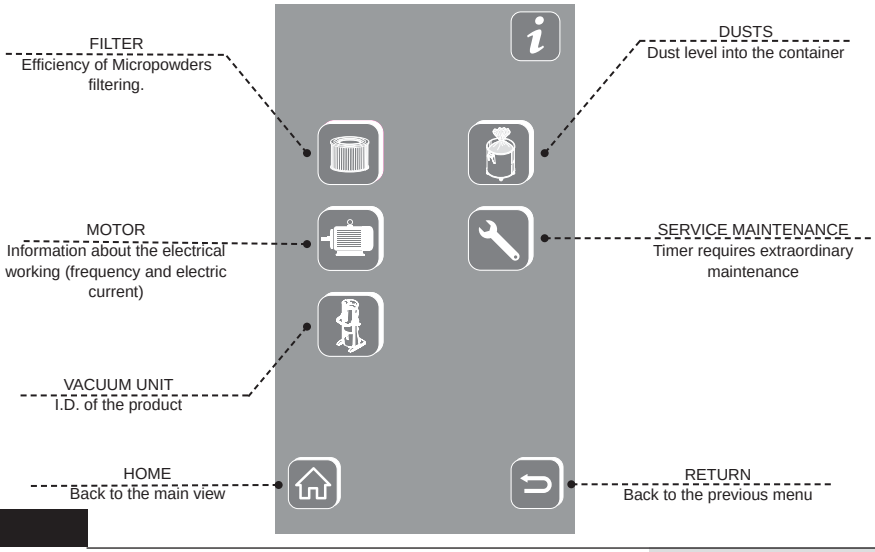
17.2 Setting the vacuum power up

By using this function, it is possible to modify the suction power according to your own needs. Press ENTER to accept the set data



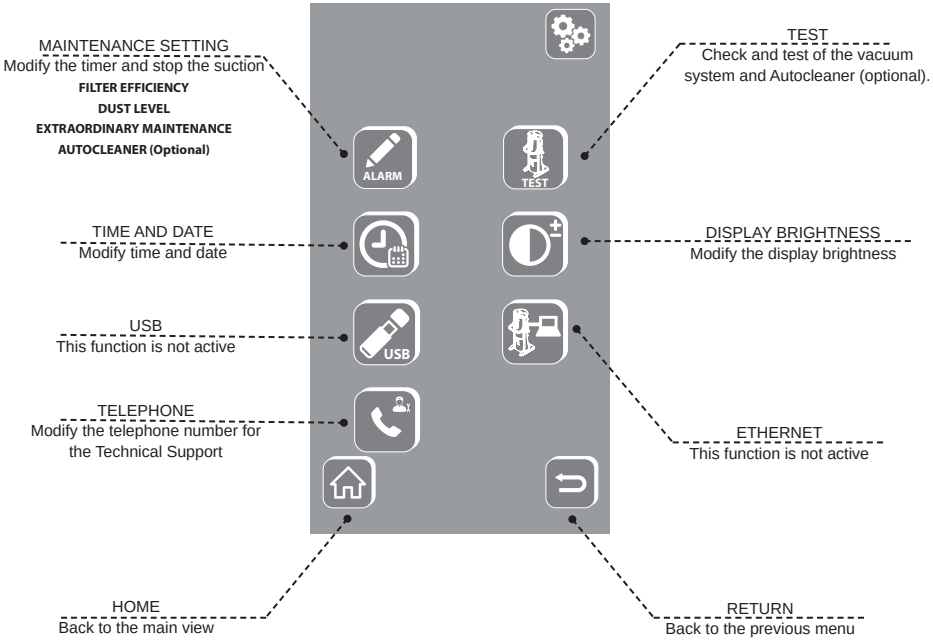
17.3 INFORMATION menu

By using this function, it is possible to check the features of the vacuum unit.



17.4 SETTING menu

By using this function, it is possible to modify the basic settings of the control system and carry out the working test of the vacuum system.

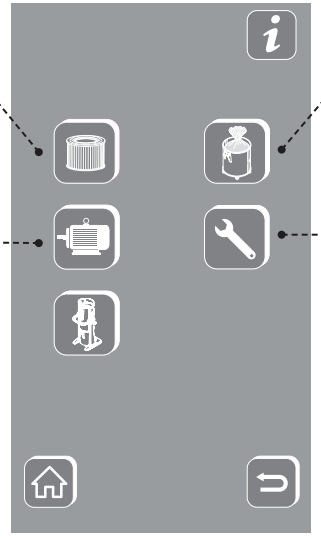


17.5 SERVICE menu

This function is protected by a password reserved to SERVICE (authorized Technical Support Center).

18 FILTER/DUST/MOTOR/SERVICE INFORMATION MENU

In the INFO menu, it is possible to display the information regarding the micropwders filtering degree, the powder level into the bin, the blower motor functioning and the Service maintenance request deadline.

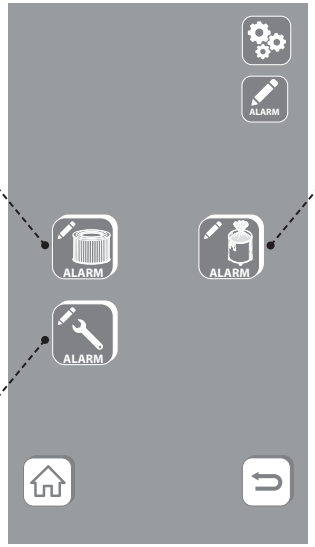


FILTER
Press the button to have access to the information about the filter.

DUSTS
Press the button to have access to the information about the dusts

MOTOR
Press the button to have access to the information about the blower motor

SERVICE MAINTENANCE
Press the button to have access to the information about the Service maintenance

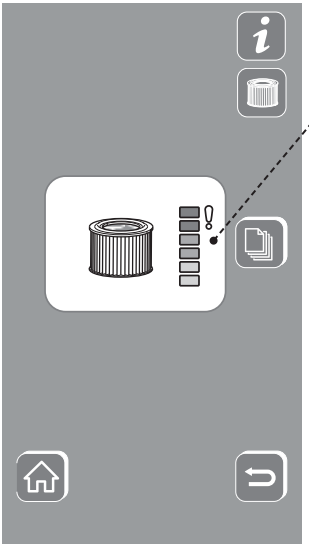


FILTER MAINTENANCE SETTING
Timer modification and vacuum stop for manual filter cleaning request.

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

SERVICE MAINTENANCE SETTING
Timer modification and vacuum stop for vacuum system check request (see chapter 12.3)

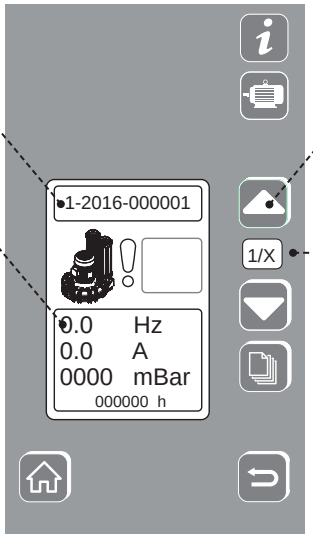
Example



MICRODUST FILTRATION COLUMN EFFICIENCY INDICATORS

GREEN :	Optimum filtration
YELLOW :	Sufficient filtration
RED:	Poor filtration, replace filter cartridge

Example



Motor assembly serial number information selected

Blowing motor group information window:

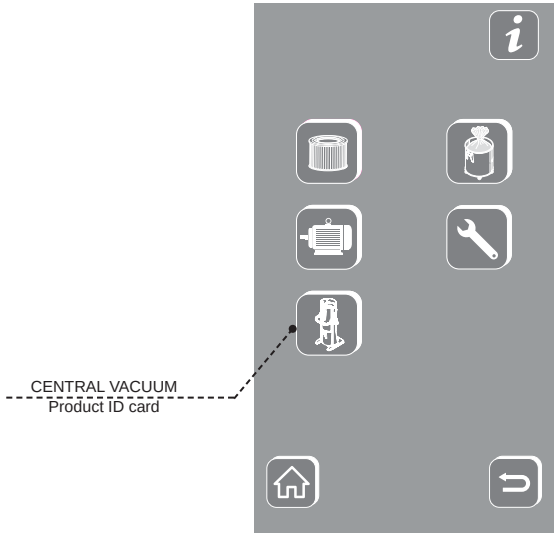
Hz:	refers to frequency reached by blowing motor group
A:	Electrical consumption reached by blowing motor group
mBar:	refers to depression reached by blowing motor group
h:	number of vacuum hours of blowing motor group

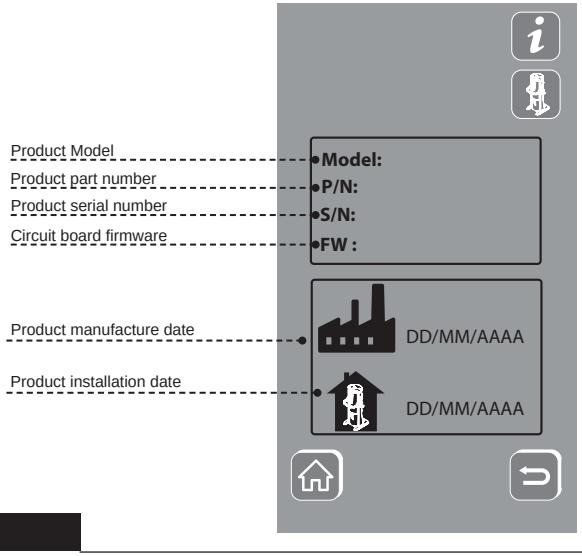
Pressing this button displays the blowing motor group for which information is required.

The window displays the total number of blowing motor groups identified on the CAN BUS network.

19 PRODUCT ID CARD

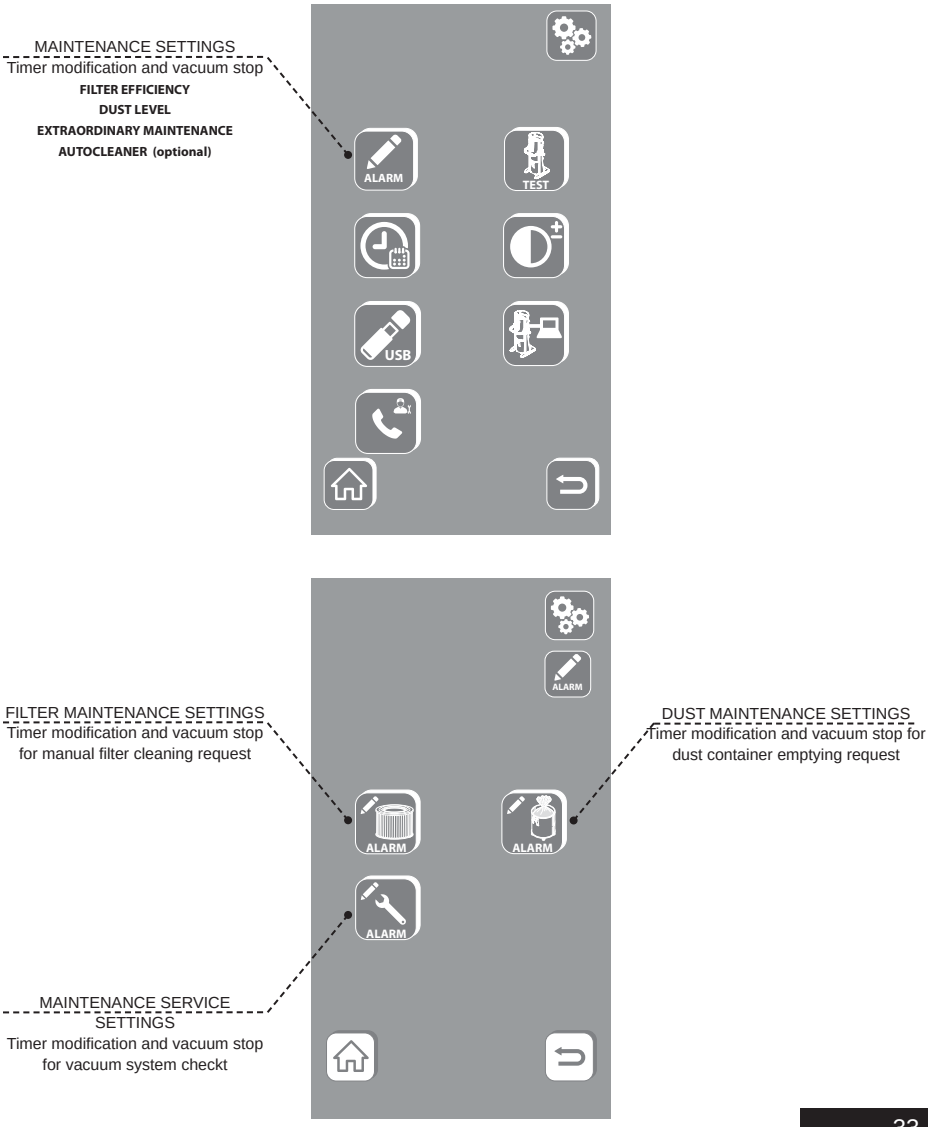
Using the INFO menu, it is possible to see information about the product, the model, part number, serial number, circuit board firmware, production and installation date.

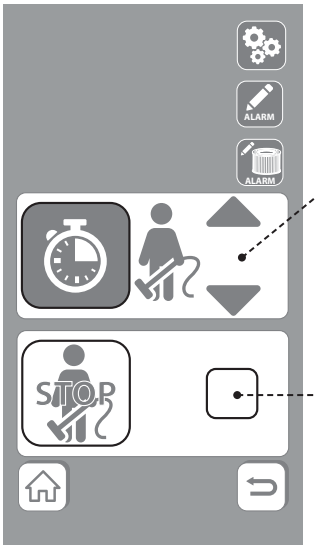




20 Maintenance programming

Using the computer, it is possible to modify the service intervals and set the vacuum stop following the filter cleaning, dust container emptying and maintenance SERVICE request





MAINTENANCE TIMER SETTINGS
Press the two buttons to modify the alarm activation timer

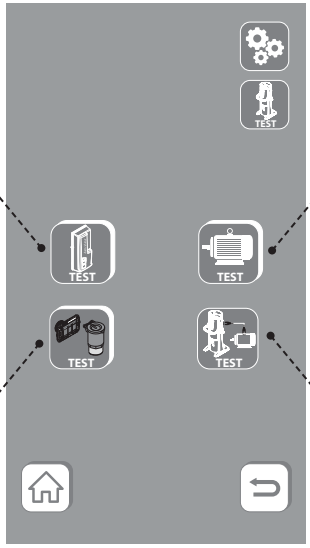
VACUUM STOP SETTINGS
Press inside the cell to activate the vacuum stop with alarm activated

VACUUM STOP ACTIVE

21 TEST

Using the computer, it is possible to carry out a first level diagnosis of any problems which may be encountered.

TEST
Press the button to access the following tests:
AUTOCLEANER FUNCTIONALITY (optional)
VACUUM SYSTEM FUNCTIONALITY
VACUUM SOCKETS FUNCTIONALITY
CAN BUS CONNECTION CHECK



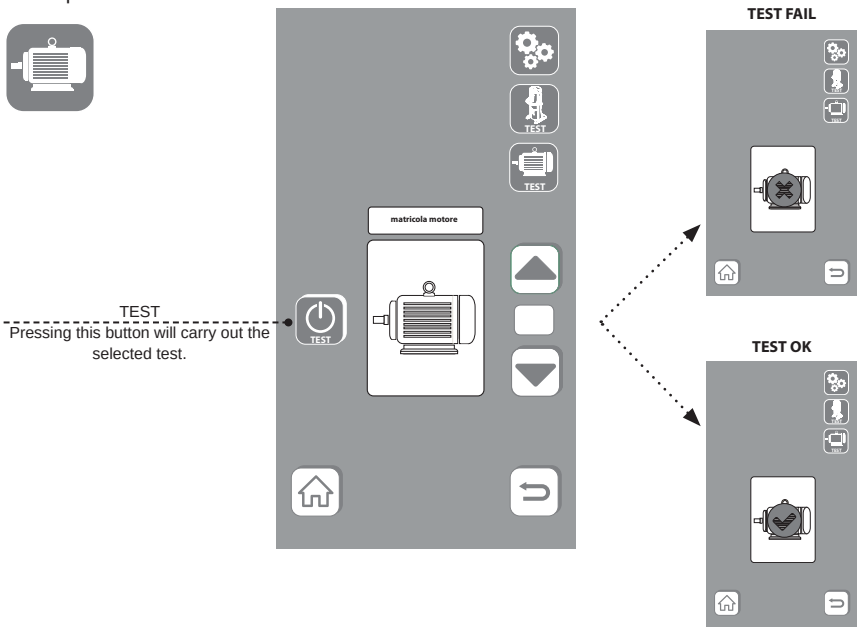
AUTOCLEANER
Press the button to access the test function.
Only follow this procedure when the optional device
Is present (see device manual)

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 start signal upon flexible tube insertion

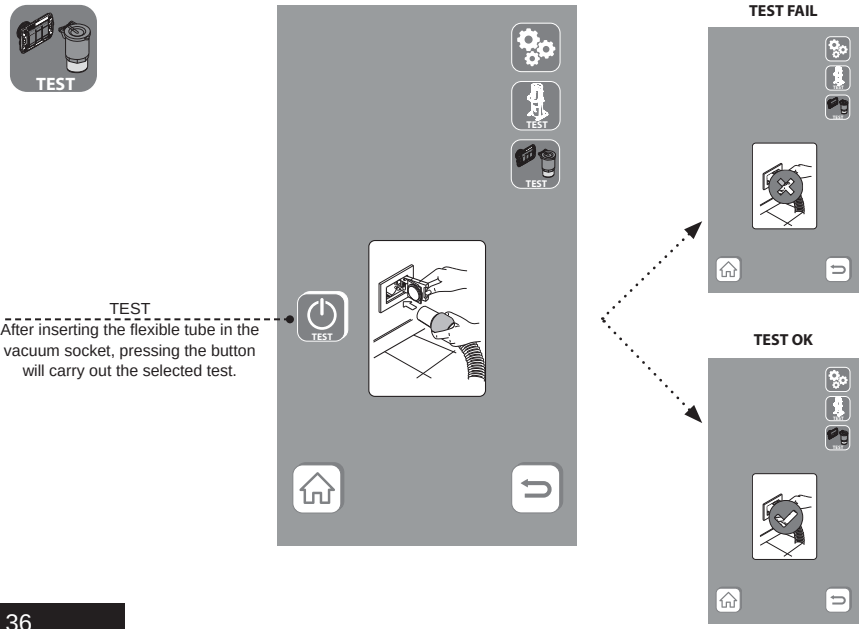
CAN BUS CONNECTION
Press the button to access the test function.
Follow this procedure to initiate the CAN BUS network connection check

Example



TEST
Pressing this button will carry out the selected test.

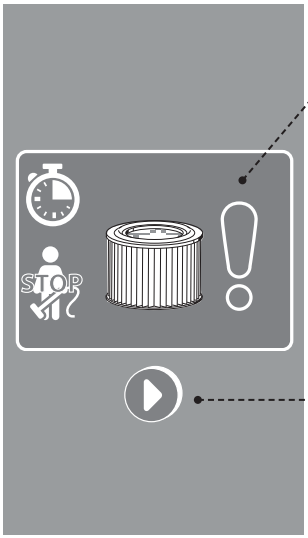
Example



TEST
After inserting the flexible tube in the vacuum socket, pressing the button will carry out the selected test.

22 MAINTENANCE ALERTS

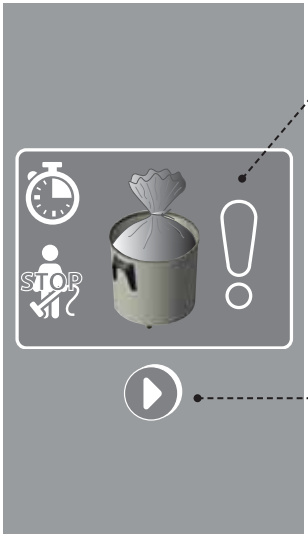
22.1 Filter maintenance signal



FILTER CLEAN REQUEST
This screen signals the filter cartridge cleaning request as a result of the preset timer expiry

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

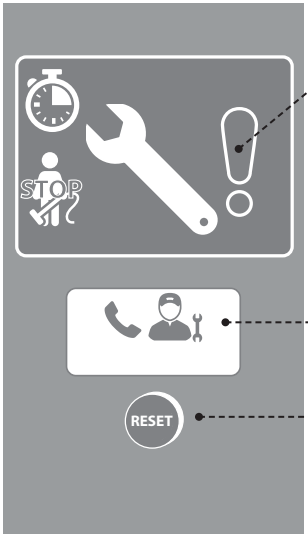
22.2 Dust maintenance signal



DUST EMPTYING REQUEST
This screen signals the request for emptying the dust from the bucket as a result of the preset timer expiry

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

22.3 Maintenance service signal



EXTRAORDINARY MAINTENANCE REQUEST
This screen signals the vacuum system check request, by a qualified operative, following the expiry of a preset timer.

SERVICE INFO
Telephone contact of person responsible for maintenance requests

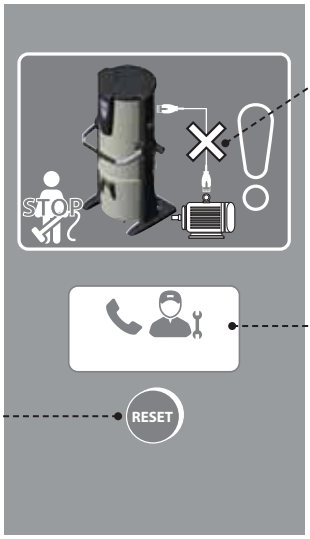
RESET
Pressing this key will cancel the maintenance request, accepting having seen it.

Maintenance requests:

- **Check filter cartridge use and/or replacement**
- **Check central blower tubing air vent**
- **Check operating condition of blowing motor group**

23 ALARM SIGNALS

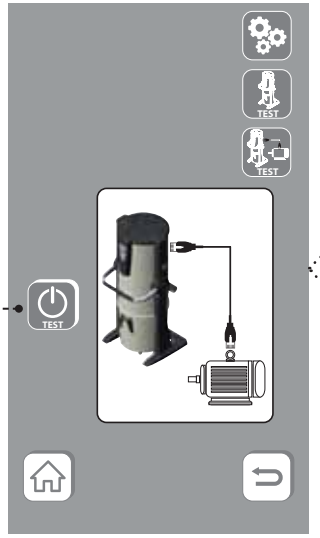
23.1CAN BUS alarm connection



CAN BUS CONNECTION DEFECT NOTIFICATION
This screen signals the request for a check on the CAN BUS network connection

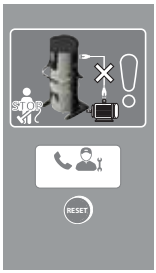
SERVICE INFO
Phone contact details of individual to contact in the case where it is not possible to remedy the defect.

RESET
Pressing this key reveals the screen for CAN BUS connection test

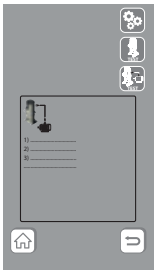


TEST
Pressing this key carries out the CAN BUS connection test

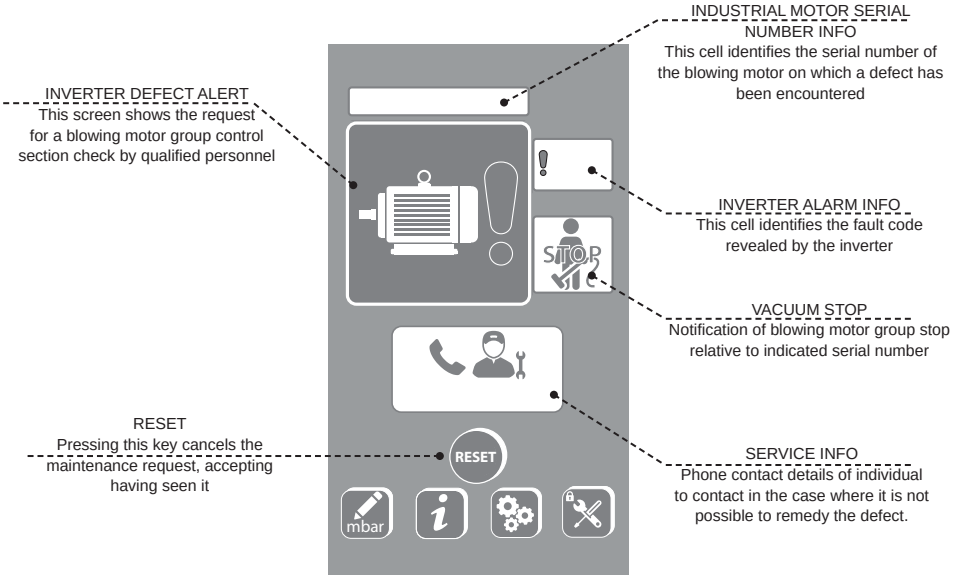
FAILED TEST



TEST OK



23.2 Alarm inverter



23.3 INVERTER ALARM code table and problem resolutions

In case of anomalies during start up, or normal use, check the directions supplied for environmental conditions, mounting and connection have been observed.
The first defect will be displayed by the management computer and intermittently on the inverter display.

ALARM codes which cannot be automatically reset by the management computer.
The cause of the defect must be eliminated before resetting, electrically switching the vacuum system on and off.

Code	Defect name	Possible cause	Intervention procedure
C r F	PRELOAD	Failure of the load control relay or charging resistor 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	Inverter display missing	Call the help centre and replace the inverter

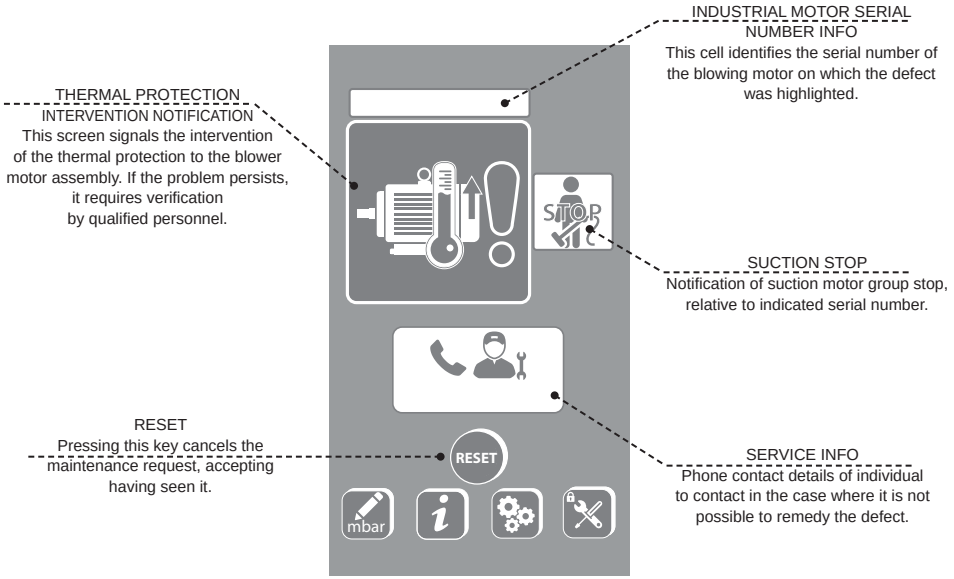
Code	Defect name	Possible cause	Intervention procedure
IF3	INTERNAL COMPONENT	EEPROM problem	Call the help centre and replace the inverter
IF4	INTERNAL COMPONENT	EEPROM fault	Call the help centre and replace the inverter
0CF	EXCESS CURRENT	Mechanical block and/or excess load on blowing motor assembly	Check blowing motor assembly condition and call the help centre.
SCF	BLOWING MOTOR ASSEMBLY SHORT CIRCUIT	Short circuit, or earth loss of current	Check electrical connections and motor insulation and call the help centre

Alarm codes which can be automatically reset by the management computer.
The cause of the defect is reset automatically by the management computer following the elimination of the cause.

Code	Defect name	Possible cause	Intervention procedure
CBF	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.
EEF	EEPROM MEMORY	Fault in internal memory	Call the help centre and replace the inverter
0bf	EXCESSIVE BRAKING	Blowing motor assembly stop too rapid.	Increase the deceleration time. Call the help centre
0hf	INVERTER OVERHEATING	Inverter temperature too high.	Check the inverter ventilation and environmental conditions. Call the help centre
0Lf	MOTOR OVERLOAD	The electric current absorbed by the motor is too high	Check for mechanical engine blocks. Call the help centre
0pf	MOTOR PHASE LOSS	Loss at motor output phase	Check connections between motor and inverter. Call the help centre
0Sf	ELECTRICAL NETWORK OVERLOAD	The electrical supply tension is too high.	Check the supply voltage. Call the help centre
PhF	NETWORK PHASE LOSS	Fault in a supply phase. Irregular electrical supply	Check electrical connection and any electrical protection mounted on the vacuum system.
SLF	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.
USf	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

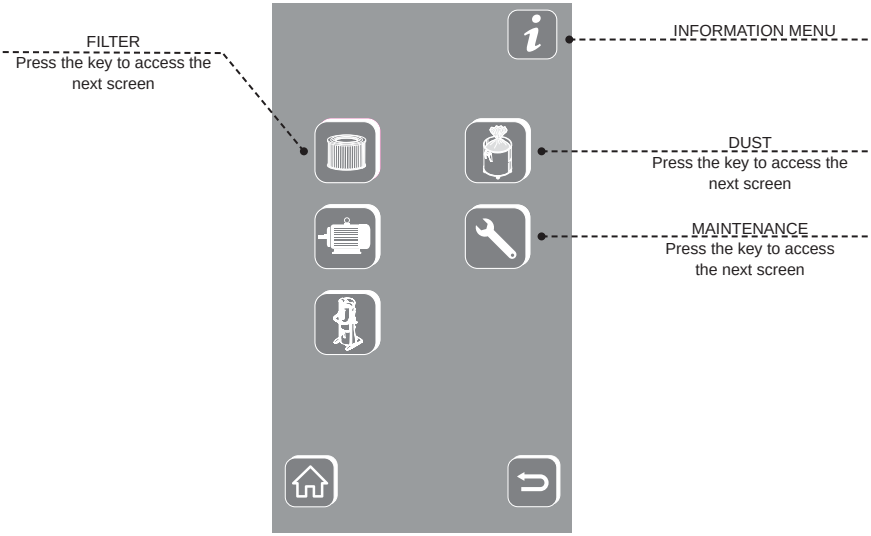
The blowing motor group is equipped with thermal protection, which in case of temperature recorded over 150°C, will send a notification to the computer.
Before stopping suction, the computer reduces blowing motor group speed reached by 20% for 5 minutes. At the end of this time period, if the temperature 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 additional time also runs out, the problem is still present, 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.



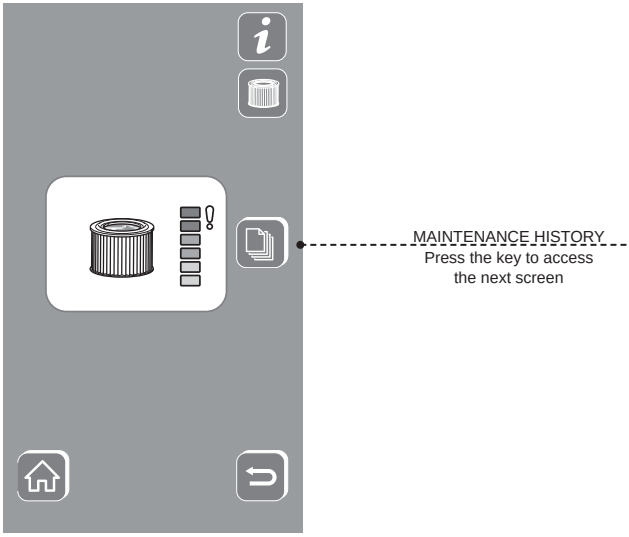
24 ALARM/MAINTENANCE HISTORY

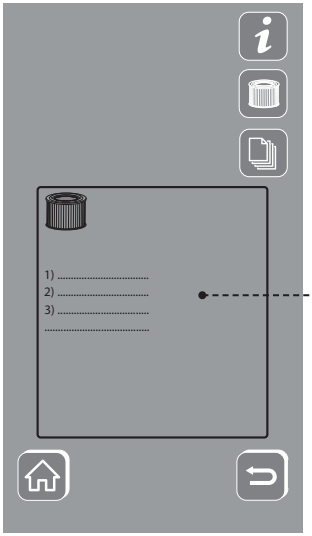
Using the onboard computer, it is possible to see the list of maintenance requests from the central suction and the list of alarms displayed.

24.1 Filter, dust, service maintenance history



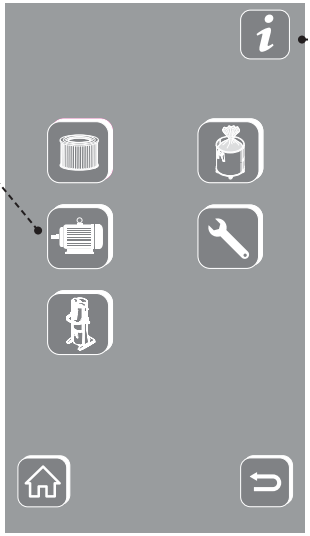
Example





MAINTENANCE HISTORY
Inside this box you will find the events, with dates and times, relating to maintenance requests.

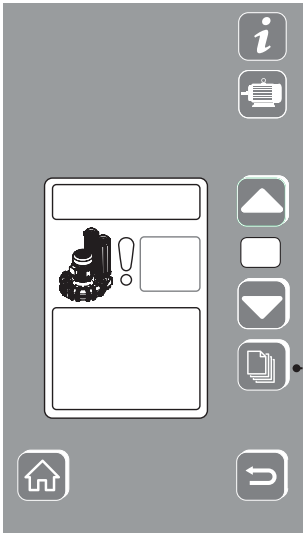
24.2 Alarm history



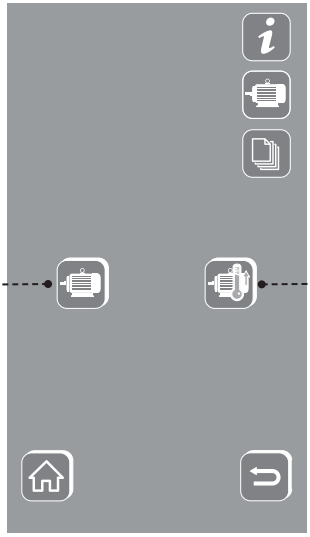
INFORMATION MENU

ALARMS
Press this key to access to the next screen

Example



ALARM HISTORY
Press this key to enable access to the next screen



INVERTER ALARM HISTORY
Inside this menu you will find the events, with dates and times.

ALARM HISTORY
TEMPERATURE
Inside this menu you will find the list of the events with their date and time

25 FAULT RESEARCH

PROBLEM	CAUSE	REMEDY
Suction does not start in all the outlets	Alarm on computer	Follow alarm RESET and relative maintenance required. Extract and insert the flexible tube to start the suction (Connect the power cord)
	The power cable is unplugged	Connect the power cable
	The micro line cord is disconnected/interrupted	Connect the (Micro) activation cable
Suction is not activated at a single socket	Electrical contacts interrupted or suction socket micro switch failure	Call the help centre
Air suction is low	Using multiple outlets simultaneously	Reduce the number of sockets used simultaneously
	Broken flexible hose or cleaning accessories	Verify the integrity of the flexible hose and accessories (and replace where necessary)
	Dirty filter cartridge	Clean the filter cartridge
	Dust container seal damaged	Check integrity
	Obstruction of tubing network suction pipes	Call the help centre
	Obstruction of the air outlet	Call Customer Service
	The dust container is full	Empty the dust container
The unit is working even if the inlets are closed	Circuit board anomaly	Call Customer Service

Industrial Clean

F0920509

27020 Gravellona Lomellina (PV) ITALIA - Via Cilavegna, 53 - GPS: N: 45° 19' 28" ; E: 8° 45' 32"
Tel. + 39 0381 650082 - Fax +39 0381 650120 - info@sistemair.com