

- I
- GB
- F
- E
- D



MANUALE TECNICO

per centrali aspiranti civile avanzato



SISTEM-AIR

ASPIRAPOLVERI CENTRALIZZATI

INDEX

1 General Information	
1.1 - The user guide	38
1.2 - Safety and security precautions.....	38
1.3 - Identification plate	39
1.4 - Technical Service Provider	39
2 Unpacking	
2.1 - Handling and unpacking.....	40
2.2 - Control of the accessories	42
3 Description of the Central Suction Unit	
3.1 - Operating Principles	43
3.2 - Allowed and improper use	44
3.3 - Compliance with the requirements and the relevant provisions of the EEC Directives in force.....	44
3.4 - Construction features	45
3.5 - Technical features.....	47
4 Installation	
4.1 - Place of installation.....	49
4.2 - Installation of the central suction unit	49
4.3 - Switch from DX (Right) to SX (Left) model	50
4.4 - How to connect the pipe network.....	54
4.5 - Electric system	55
4.6 - Proof of correct motor's rotation way.....	57
4.7 - Input formulation for motor speed.....	57
5 How to use the central suction unit	
5.1 - Starting of the suction unit.....	58
5.2 - Use of the suction unit	58
6 Maintenance	
6.1 - Programmed maintenance	59
6.2 - Unloading of the dust container.....	60
6.3 - Replacement of the filter cartridge	64
6.4 - Reconditioning of the filter cartridge	67
6.5 - Suction unit external cleaning	67
7 Automatic cleaning system	
7.1 - Automatic cleaning system's operation	68
7.2 - Conformity with Public Directives	68
7.3 - Automatic cleaning cycles regulation	69
7.4 - Automatic cleaning system's maintenance.....	69
8 Servicing	
8.1 - Servicing criteria	70
9 Recommended Spare Parts	
9.1 - Spare parts list.....	70
10 Dismantling	
10.1 - General instructions	70
11 Technical Problems	
11.1 - Troubleshooting	71

English

1 - GENERAL INFORMATION

1.1 The User Guide

The user guide is a fundamental document written by the builder, to be considered an integral part of the central suction unit. In case of resale, offering or lease to third parties, the user guide must be handed over to the new user or to the new owner. The builder must be informed about any ownership change. We recommend storing and keeping the user guide throughout the whole operating life of the suction unit.

The main purpose of the user guide is to provide a correct knowledge of the user mode in order to exploit the best performance and to maintain the central suction unit at its best working and security conditions.

It is absolutely forbidden to duplicate, copy or release totally or part of this user guide without previous written authorization by TECNOPLUS Srl, owner of the trademark SISTEM-AIR.

1.2 Safety and security precautions

Read carefully any information written in this user guide regarding installation, use and maintenance of the central suction unit.

Make sure the central suction unit has been correctly grounded.

Never use inappropriately the central suction unit.

Never let the children get near the central suction unit when it is working and never let the children play with the suction inlets or with the suction unit.

Unplug the central suction unit when:

- The power supply cable is worn out or damaged
- The central suction unit has been exposed to the inclemency of the weather or to excessive moisture.
- The central suction unit has been damaged by an impact or the external container has been damaged
- The central suction unit requires any repairing or overhauling.

Always wear protection gloves and mask when carrying out any maintenance operation, and when unloading the dust container or replacing/cleaning the filter.

Use only SISTEM-AIR original spare parts.

Never use the suction unit to remove textile stuff, big-size bits and pieces of any material, burning coals or ashes.

Never vacuum liquids.

Use the suction unit only with the special filter cartridge correctly assembled.

Never block the air exhaust pipes and the cooling inlets of the motor.

Never touch the suction accessories with any part of the body.

Use only one inlet at a time.

If you are not going to use the central suction unit for a short time, it is advisable to switch it off. If you are not going to use the central suction unit for an extended period of time, it is advisable to cut it off from the mains power supply.

1.3 Identification plate



English

1.4 Technical Service Provider

Call the Builder Technical Service or contact SISTEM AIR authorized centers for any information you may need. Always specify the technical data indicated on the identification plate and the serial number of the central suction unit.

Technical Service Provider
and After-Sales Service

Authorized Technical
Assistance Center

2 - UNPACKING

- ATTENTION -

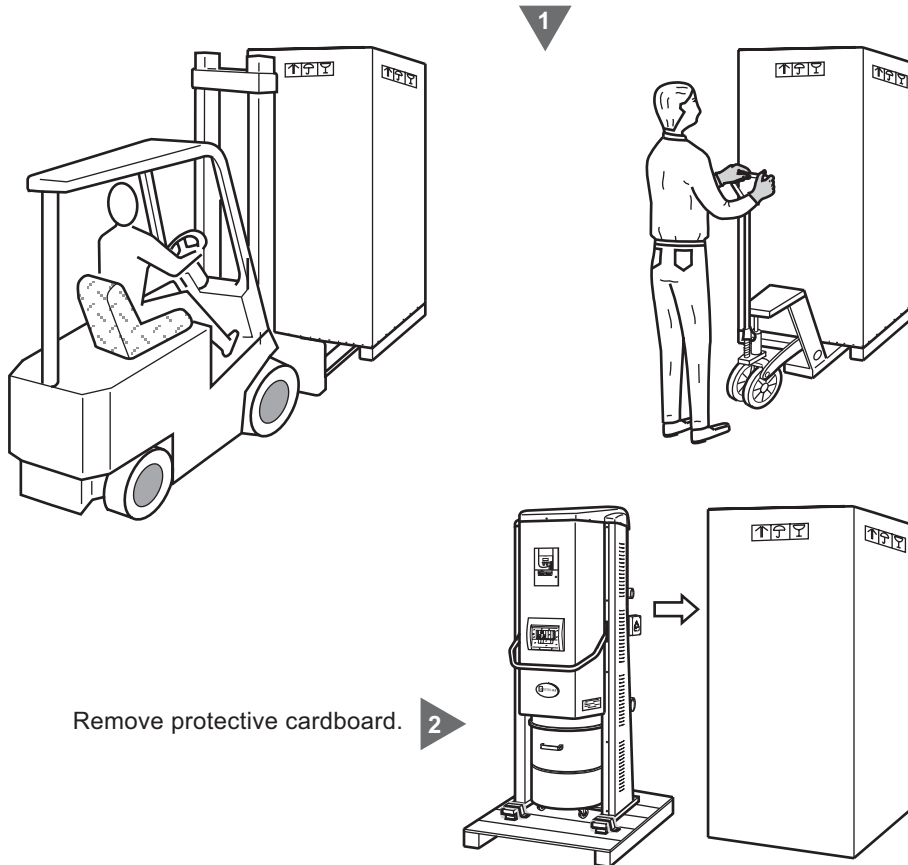
**ONLY AUTHORIZED STAFF CAN DO THESE
OPERATIONS ALWAYS WEAR
PROTECTIVE SHOES AND GLOVES**

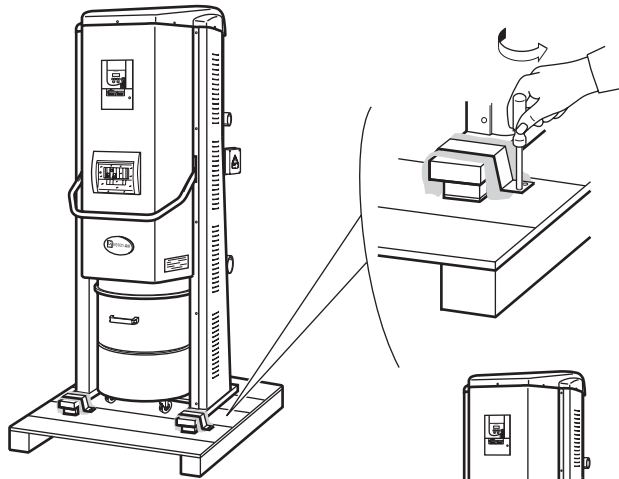


English

2.1 Handling and unpacking

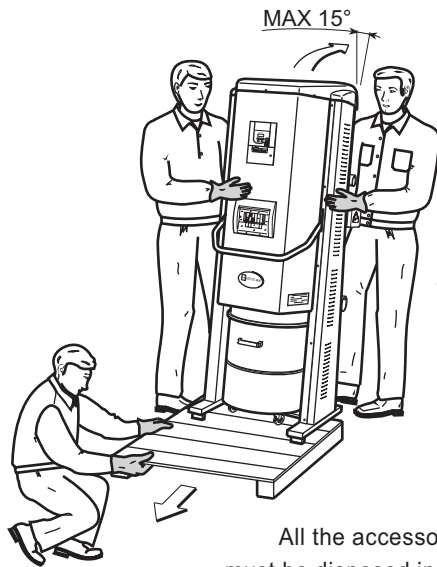
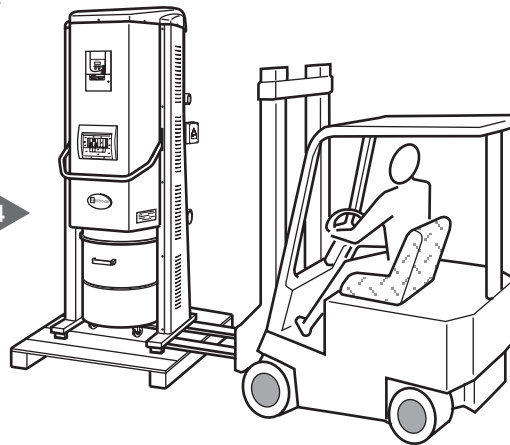
Follow the instructions printed on the cardboard box to move the suction unit to the location selected for the installation.





3 The stirrups fixing central suction unit to the bed must be removed.

4 Remove the central suction unit from the bed.



If you haven't got appropriate forked means, it's possible to remove manually central suction unit from the bed (see figure).

In this case at least two strong persons make slide the central suction unit and a third person has to remove the bed.

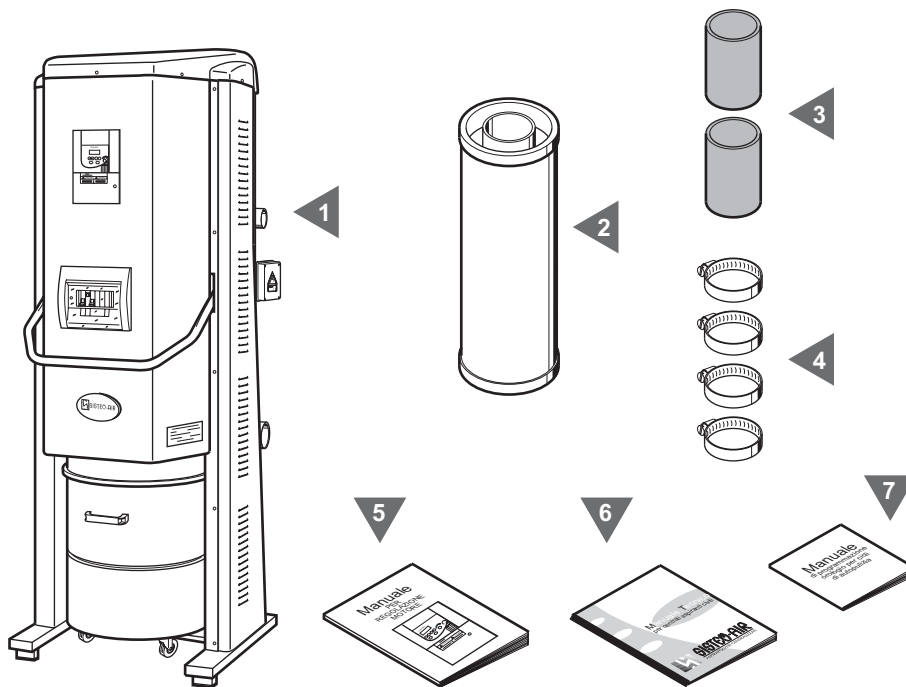
ATTENTION: the central suction unit can't be inclined more than 15° because, having an high barycentre, the central suction unit should have dangerous unbalancing.

6 All the accessories must be extracted and the package must be disposed in compliance with the Directives in force.

2.2 Control of the accessories

Check what you have received (the accessories vary according to the model you have ordered):

- 1 - One monobloc central suction unit
- 2 - One exhaust silencer made of plastic
- 3 - Two couplings made of plastic for central suction unit art. 3115.....
or one coupling made of plastic for central suction unit art. 3200.....
- 4 - Four metal clamps for central suction unit art. 3115.....
or three metal clamps for central suction unit art. 3200.....
- 5 - One user guide for electric panel of motor speed adjustment
(Only for models equipped with this device)
- 6 - One user guide for correct installation, use and maintenance
- 7 - One user guide for clock planning of automatic cleaning cycles
(Only for models equipped with this device)



Check that the suction unit and the relevant accessories correspond to what you have ordered.

Make sure that the suction unit and the accessories have not been damaged during the handling. If this is the case, do not hesitate to contact the builder.

3 - DESCRIPTION OF THE CENTRAL SUCTION UNIT

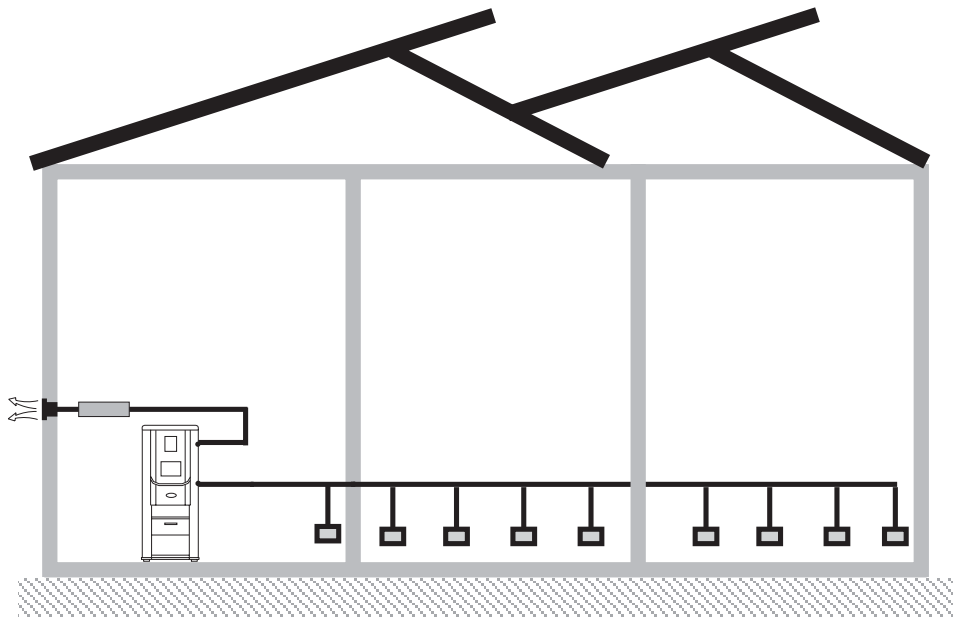
3.1 Operating principles

The central suction system, suitable for any kind of residential building (house, office, hotels, service building) consists of a net of PVC pipes spreading out in every room and perfectly chased in walls and false ceilings. The suction pipe network is equipped with suction inlets where the user fits the suction hose. The SISTEM-AIR central suction unit must be installed in a separated room (for example in a storage room, in a garage or in another service room) and is connected to the suction pipes network.

The user starts the suction unit by simply inserting the fitting of the suction hose into the suction pipe inlet.

If the pipe network is not equipped with an electric system, it is possible to install remotely controlled starting and stop functions, controlled by means of a remote-control device (supplied upon request).

English



3.2 Allowed and improper use

The SISTEM-AIR central suction unit model SA..., has been designed to remove the dust, small-size solid bits and pieces and dry materials.

It is forbidden to use the suction system to remove textile stuff, big-size bits and pieces, burning and hot materials.

Always use the special accessory to remove liquids.

It is strictly forbidden to remove highly explosive materials (gun powder) or inert materials, which can trigger dangerous chemical reactions if removed separately and then mixed up in the dust container.

It is strictly forbidden to use the central suction unit in explosion hazard places or in places where temperature, pressure and moisture are out-of-range.

Any different use is strictly forbidden.

The builder, by means of written authorization, must approve any alteration or modification of the suction unit to remove a specific material.

Any use different from the original is to be considered improper and health risk for the user and damage to the suction unit cannot be excluded.



3.3 Compliance with the requirements and the relevant provisions of the EEC Directives in force

The suction units model SA..., which are the object of this user guide, fully comply with the requirements and the relevant provisions of the EEC Directives detailed hereunder:

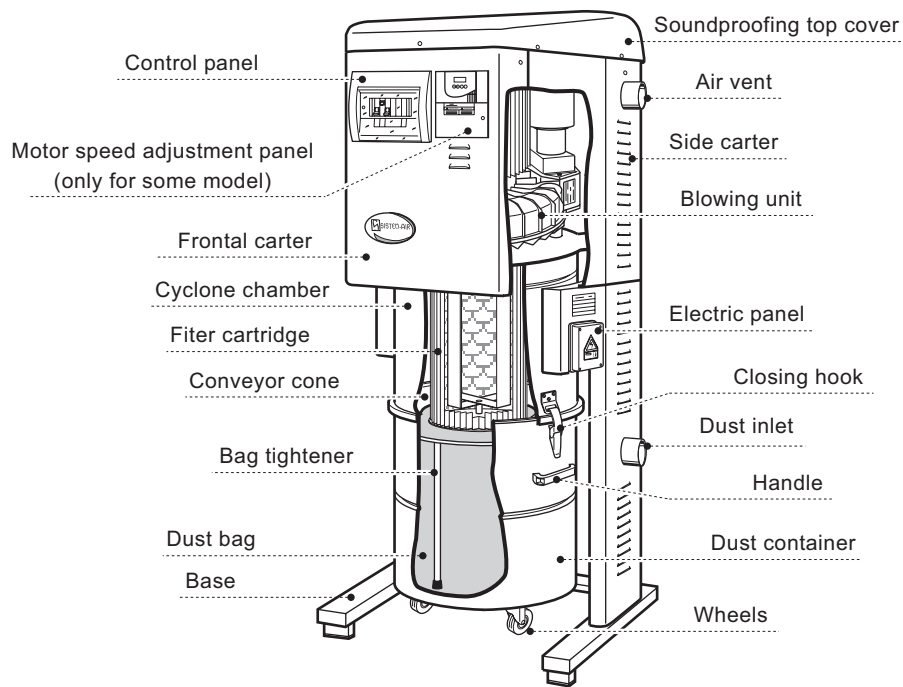
98/37/EEC - Machines Directive (ex 89/392/EEC) and following modifications

74/23/EEC - Low tension Directive (and following modifications)

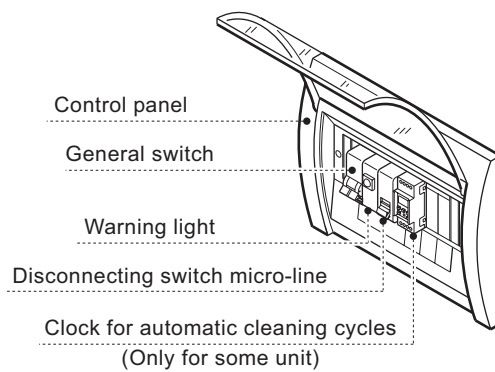
89/336/EEC - Electromagnetic Compatibility Directive (and following modifications)

3.4 Construction features

3.4.1 Central suction unit art. 3115.....

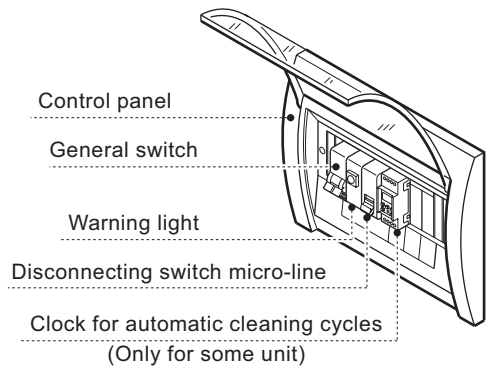
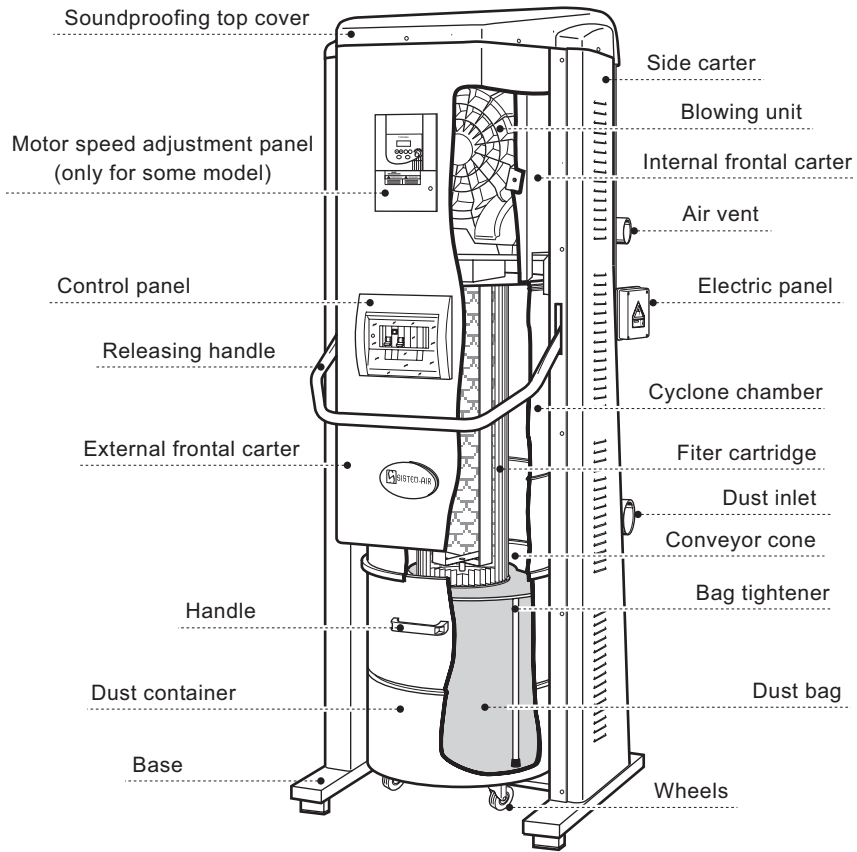


English

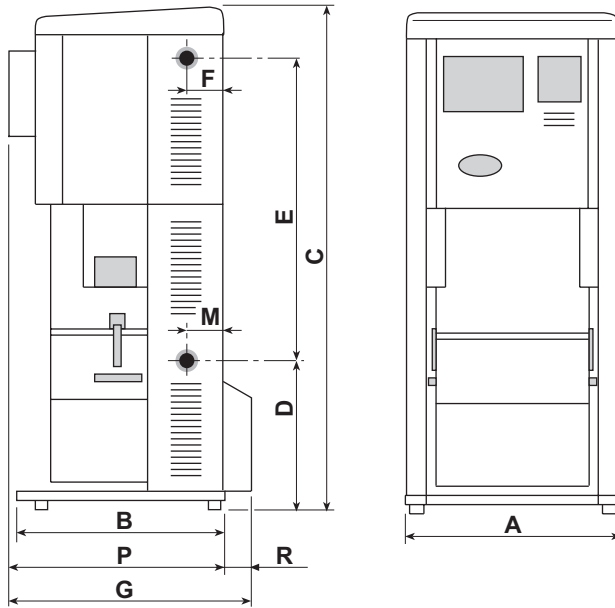


3.4.2 Central suction unit art. 3200.....

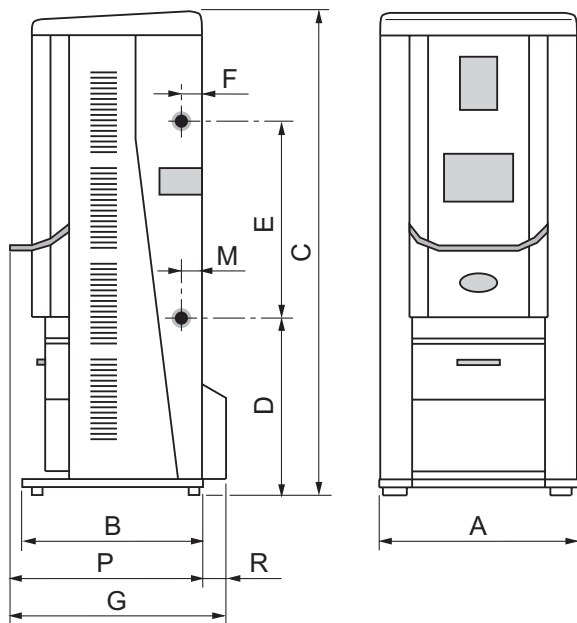
English



3.5 Technical features (See picture and table)



art. 3115....



art. 3200....

English

Technical features	art. 3115.1MB	art. 3115.2MB	art. 3200.1MB	art. 3200.2MB	art. 3200.4MB	art. 3200.5MB	art. 3200.0MB	art. 3200.3MB	art. 3200.6MB	art. 3200.7MB	art. 3200.8MB	art. 3200.9MB
Central suction unit equipped by automatic cleaning system	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES
IP Protection degree	20	20	20	20	20	20	20	20	20	20	20	20
Feeding phases/Volts	220/240	220/240	220/240	220/240	3/380	3/380	3/380	3/380	3/380	3/380	3/380	3/380
Frequency	50	50	50	50	50	50	50/60	50/60	50	50	50	50
Power	1,5	1,5	2,2	2,2	2,2	2,2	2,2	2,2	4	4	4	4
Absorption Ampere	6.9	6.9	10	10	5.8	5.8	5.8	5.8	10.5	10.5	10.5	10.5
Inlet power supply Volts	Vdc	12	12	12	12	12	12	12	12	12	12	12
Max air volume	m ³ /h	200/270	200/270	210/340	210/360	210/360	300	300	250/450	250/450	250/530	250/530
Filtration surface	mm ²	17800	17800	24000	24000	24000	24000	24000	24000	24000	24000	24000
Dust container capacity	lt	45	45	60	60	60	60	60	60	60	60	60
Weight	Kg	110	134	162	186	162	160	184	169	193	209	230
Size A mm		560	560	620	620	620	620	620	620	620	620	620
Size B mm		500	500	550	550	550	550	550	550	550	550	550
Size C mm		1.500	1.500	1.780	1.780	1.780	1.780	1.780	1.780	1.780	1.780	1.780
Size D mm		427	427	630	630	630	630	630	630	630	630	630
Size E mm		900	900	670	670	670	670	670	670	670	920	920
Size F mm		115	115	75	75	75	75	75	75	75	100	100
Size G mm		---	670	---	800	---	---	800	---	800	---	870
Size M mm		115	115	75	75	75	75	75	75	75	78	78
Size P mm		550	550	700	700	700	700	700	700	700	700	700
Size R mm		---	120	---	100	---	---	100	---	100	---	170
Suction attack Ø mm		63	63	63	63	63	63	63	63	63	80	80
Max. Noise Level	dB(A)	65 - 85										

4 - INSTALLATION



**- ATTENTION -
THE UNDER MENTIONED OPERATIONS MUST
BE CARRIED OUT BY QUALIFIED STAFF**



English

4.1 Place of installation

Before installing the central suction system, a suction pipes network must be installed by qualified staff. The qualified operators must also spot the best location to install the suction unit.

Suggestions for a correct installation are detailed hereinafter.

If the central suction system has to be installed in a multi-storey building, the suction unit must be located at the lowest level of the building. The suction unit can be installed in a service room (for example in a garage or in a storage room), sheltered from atmospheric agents and protected from moisture and temperature changes.

Choose a space far from heat sources (burners or radiators).

Leave free and well-lit space all around the suction unit (700 mm about) to allow trouble-free maintenance and repair operations and, at the same time, to support air recycling for motor's cooling.

For any question do not hesitate to contact the Builder's Technical Assistance Service.

4.2 Installation of the central suction unit

Central suction unit don't need particular anchors.

You must pay attention to the supporting surface, where the unit will be placed; it must observe next characteristics:

- It must be solid
- It must be perfectly horizontal
- It must be vibrationless
- It must not present incoherence which should make the unit unsteady

4.3 Switch from DX (right) to SX (left) model

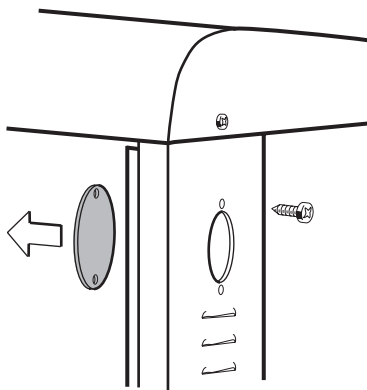
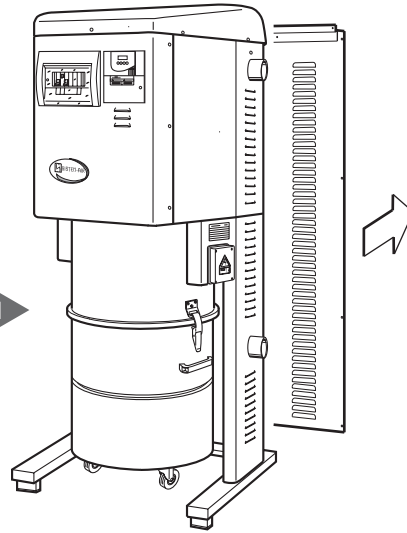
4.3.1 Central suction unit art. 3115.....

The suction unit are usually delivered with suction and exhaust pipes connections assembled on the right side (DX Model).

When necessary it's possible to transform it by assembling the inlets of the pipes on the left side (SX Model).

Follow the instructions:

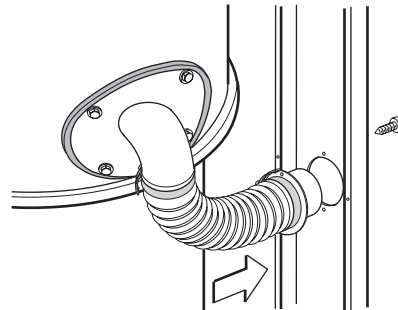
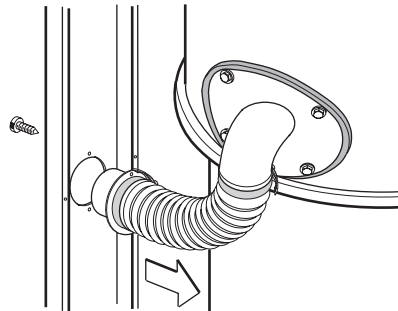
Loosen the screws and remove the rear carter. **1**



2 On the left side loosen the screws and remove closing disks from the passages for the inlets of the pipes.

Loosen the screws and unthread the inlets of suction and exhaust pipe, then reassemble them on the opposite side.

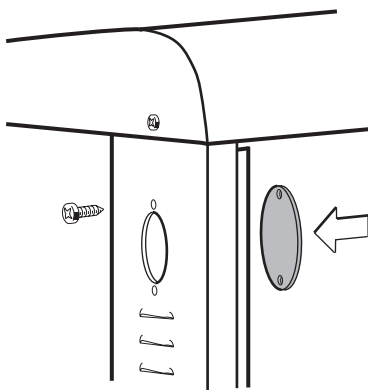
3



English

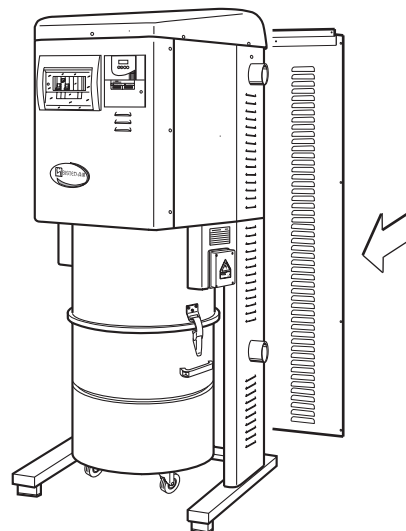
4

Close free inlets passages remaining using apposite disks.



Reassemble the rear carter.

5

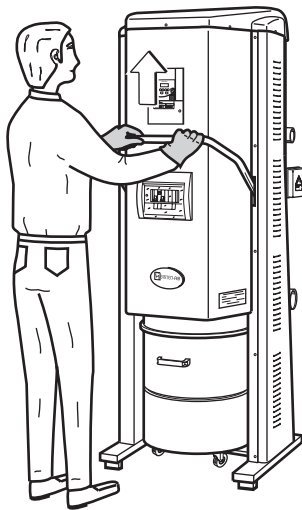
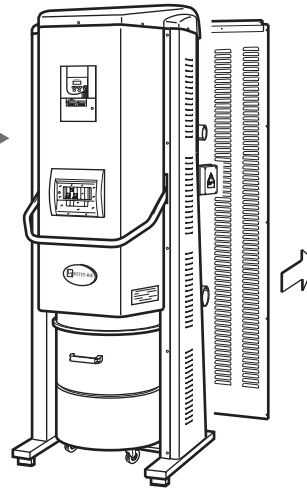


4.3.2 Central suction unit art. 3200.....

The suction units are usually delivered with suction and exhaust pipes connections assembled on the right side of the unit (DX Model). When necessary, it's possible to transform the suction units switching the inlet of the suction pipe on the left (SX Model), whereas the inlet of the exhaust pipe can't be changed.

Follow the instructions:

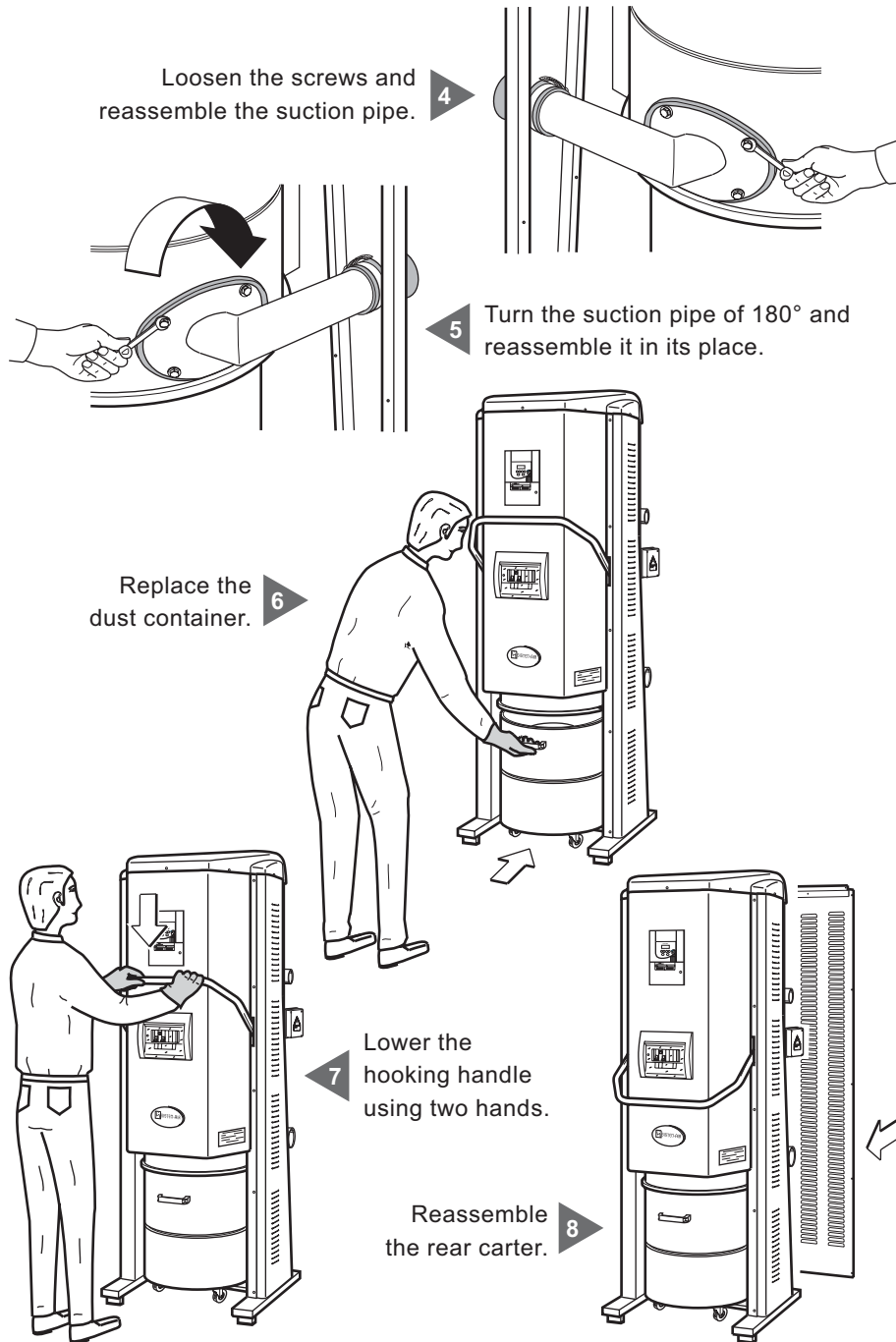
Loosen the screws and remove the rear carter. **1**



2 Lift the releasing handle using two hands.

Extract the dust container. **3**



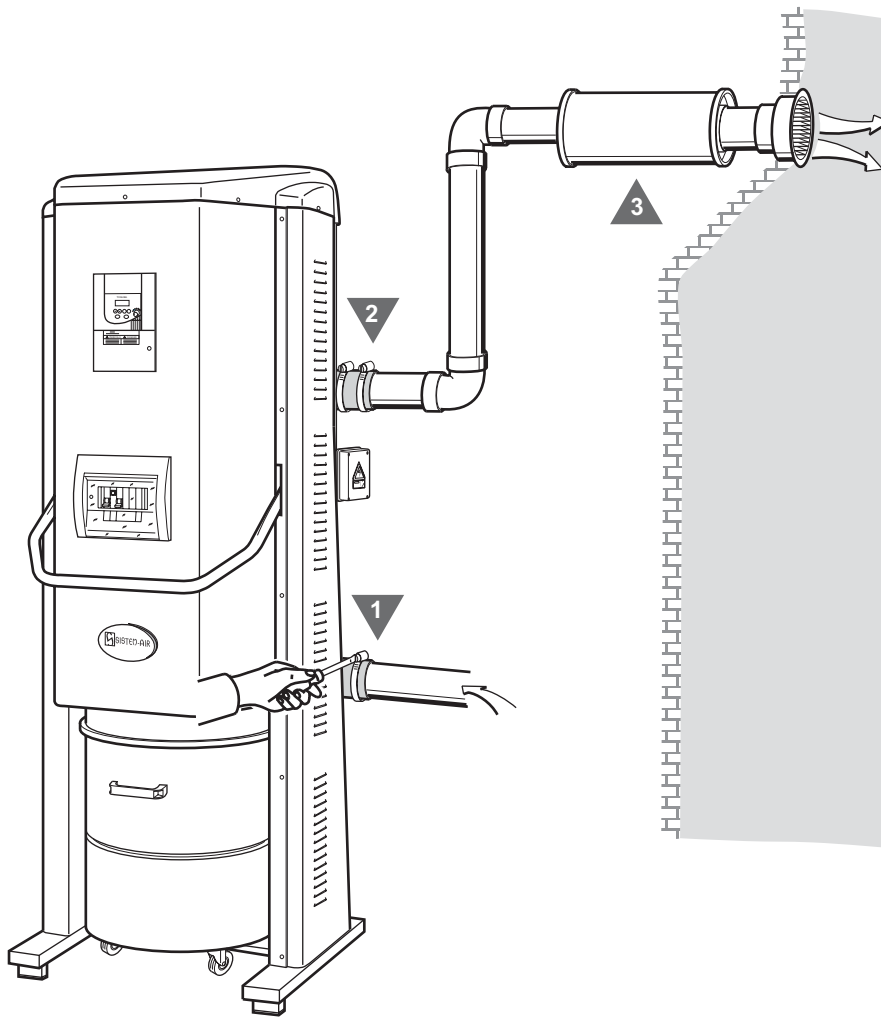


English

4.4 How to connect the pipe network (see picture)

- 1 - Connect the suction unit to the suction hose
- 2 - Connect the suction unit to the air exhaust pipe
- 3 - Stick the silencer on the exhaust pipe near the exhaust grid

English



4.5 Electric system

Before plugging in the suction unit, make sure that the mains power supply corresponds to the central suction unit power supply (please refer to data indicated on the identification plate). Check also if the ground cable has been correctly installed, in compliance with the directives in force.



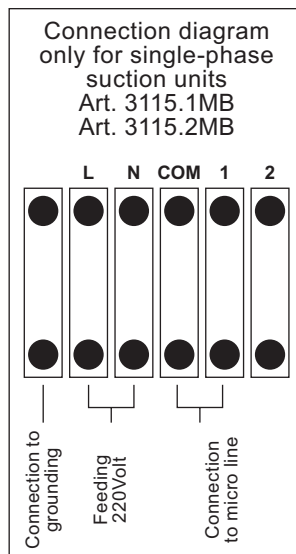
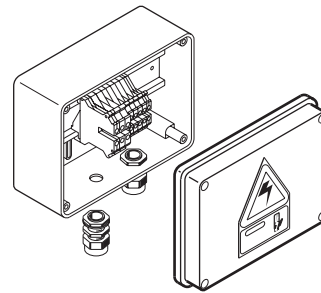
Cables of the feeding line must be superior to a 4 mm² section.

The unit can't be connected to an electric system subject to big voltage variations (ideal voltage = local voltage ± 10%).

It's recommended to protect principal feeding line from occasional current overload protecting it by thermic switches.

The builder decline all responsibility for damages to person or objects due to an electric system not in compliance with the regulations in force. Follow the instructions to carry out this operation correctly:

Remove the electric panel's lid and insert two fairleads in the apposite foreseen holes. **1**



2 Connect to the terminal board following the diagram and the options written inside the panel.

Connection options

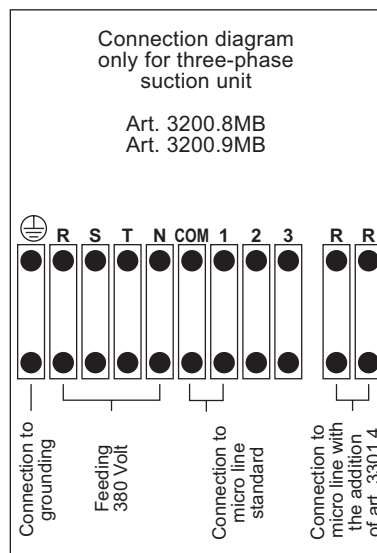
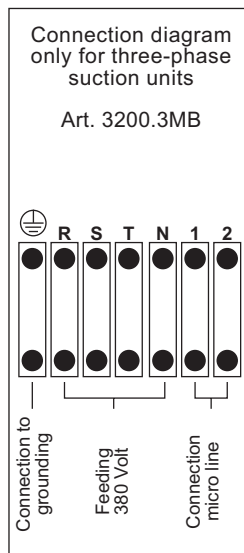
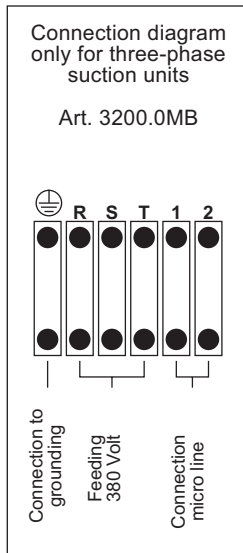
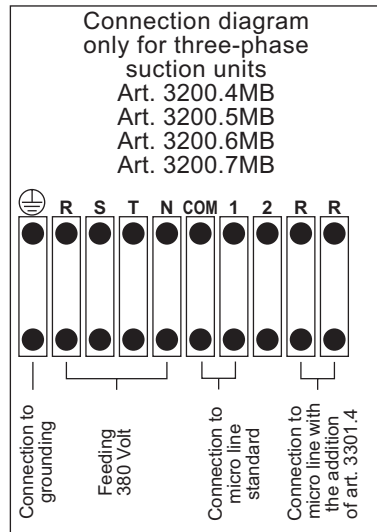
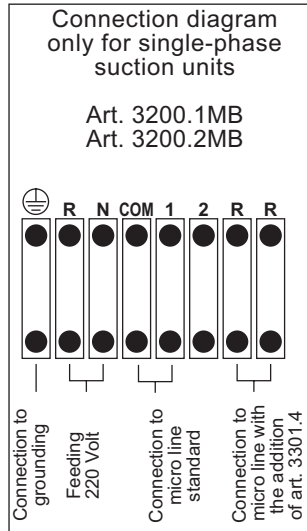
- 1 - If the micro line, arriving from the inlets, is connected to the terminal Com + 1, suction motor is going to start at speed 1.
- 2 - If the micro line, arriving from the inlets, is connected to the terminal Com + 1 stapled on 2, suction motor is going to start at speed 2.

English

Connect to the terminal board following the diagram and the options written inside the panel.

2

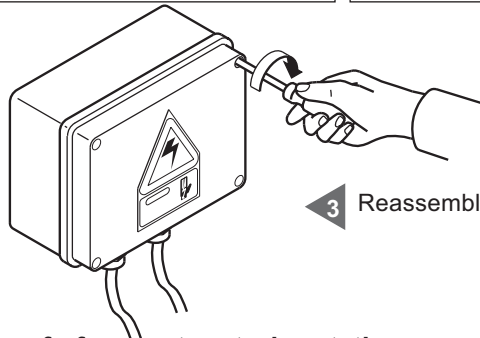
English



Connection options only for single-phase suction unit:

<p>Art. 3200.1MB Art. 3200.2MB Art. 3200.4MB Art. 3200.5MB Art. 3200.6MB Art. 3200.7MB</p> <p>Connection options</p> <ul style="list-style-type: none">• 1 - If the micro line, arriving from the inlets, is connected to the terminal Com + 1, suction motor is going to start at speed 1.• 2 - If the micro line arriving from the inlets, is connected to the Terminal Com + 1 stapled on 2, suction motor is going to start at speed 2.• 3 - If the micro line, arriving from the inlets, is connected to the terminal R+R, suction motor is going to start at speed 1, and it's possible, with the help of voltage divider, (art.3301.4) to modulate motor speed and proportionally performances and consumptions.	<p>Art. 3200.8MB Art. 3200.9MB</p> <p>Connection options</p> <ul style="list-style-type: none">• 1 - If the micro line, arriving from the inlets, is connected to the terminal Com + 1, suction motor is going to start at speed 1.• 2 - If the micro line arriving from the inlets, is connected to the Terminal Com + 1 stapled on 2, suction motor is going to start at speed 2.• 3 - If the micro line arriving from the inlets, is connected to the Terminal Com + 1 stapled on 2 and 3, suction motor is going to start at speed 3.• 4 - If the micro line, arriving from the inlets, is connected to the terminal R+R, suction motor is going to start at speed 1, and it's possible, with the help of voltage divider, (art.3301.4) to modulate motor speed and proportionally performances and consumptions.
---	--

English



3 Reassemble the electric panel's lid.

4.6 Proof of correct motor's rotation way

Central suction unit supplied with single-phase motor don't need this check. About the other units, with three-phases motors, you have to verify at the first ignition if there is a suction effect in the inlets, if it's not so the motor is turning in the wrong way.

In this case it's necessary to invert the position of two feeding's cable on the terminal board in the electric panel.

4.7 Input formulation for motor speed

(Only for unit equipped with speed regulation's panel)

The Builder provides to the planning of these parameters.

Only an expert equipped with password can intervene and change these parameters.

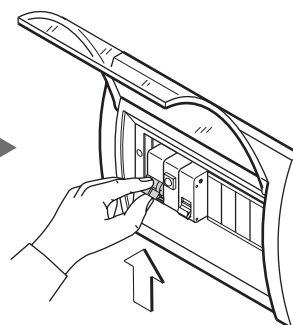
5 - HOW TO USE THE CENTRAL SUCTION UNIT

5.1 Starting of the suction unit

English

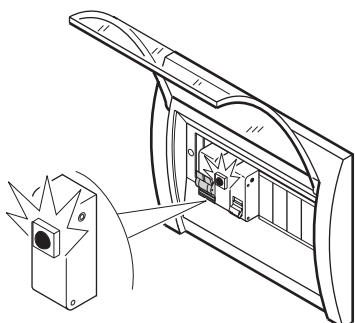
Active the general switch on the control panel moving it in position «I-ON».

1



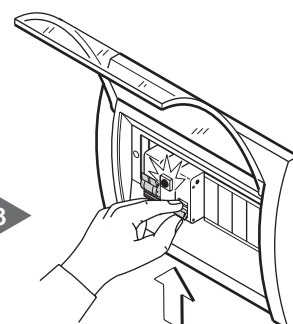
2

Verify the warning light is on.

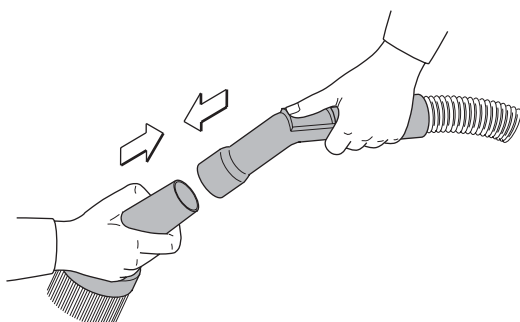


Now active the selection switch for micro line moving it in position «I».

3



5.2 Use of the suction unit



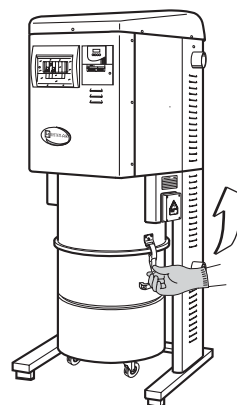
1

Fit the accessory suitable for the cleaning operations you want to carry out in the hose.

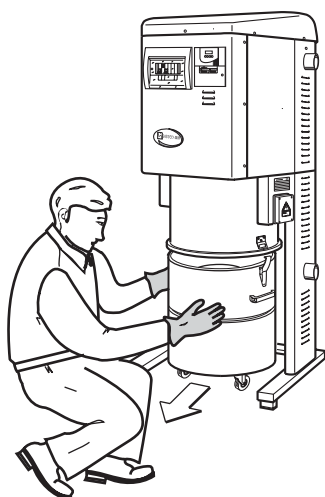
6.2 Unloading of the dust container

6.2.1 Central suction unit art. 3115.....

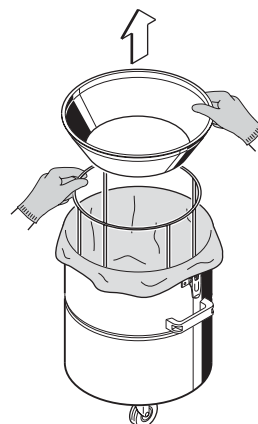
Open the closing hooks. 1



2 Extract the dust container.



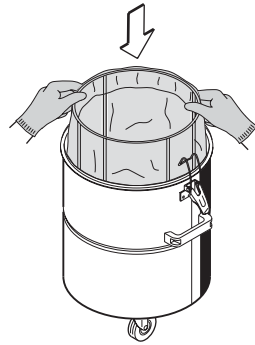
Remove the conveyor cone and the bag tightener. 3



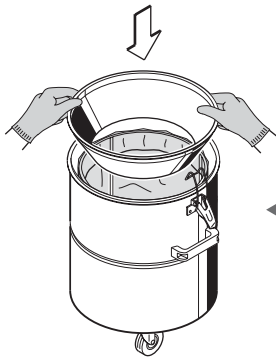
4 Tie the dust bag and remove it from the dust container.



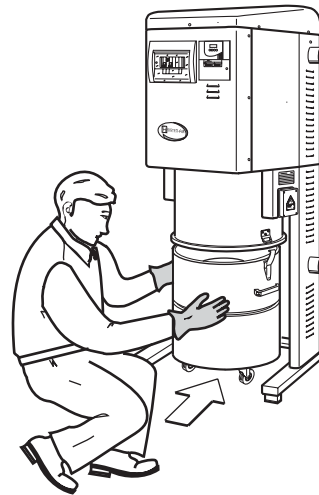
Insert the new bag and the bagtightener. 5



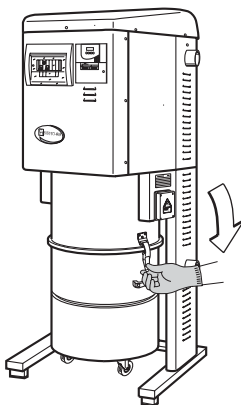
6 Insert the conveyor cone.



Replaced the dust container. 7

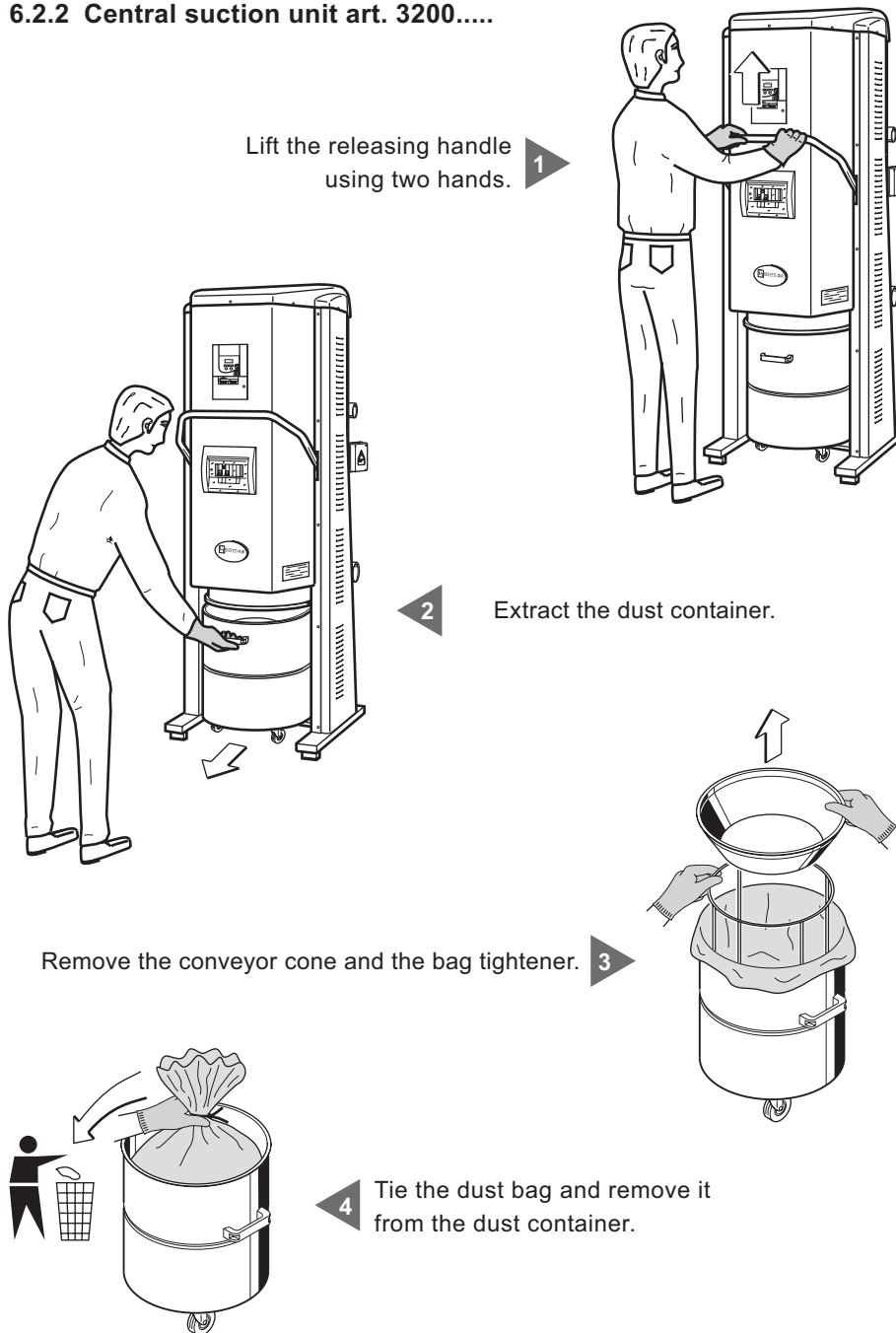


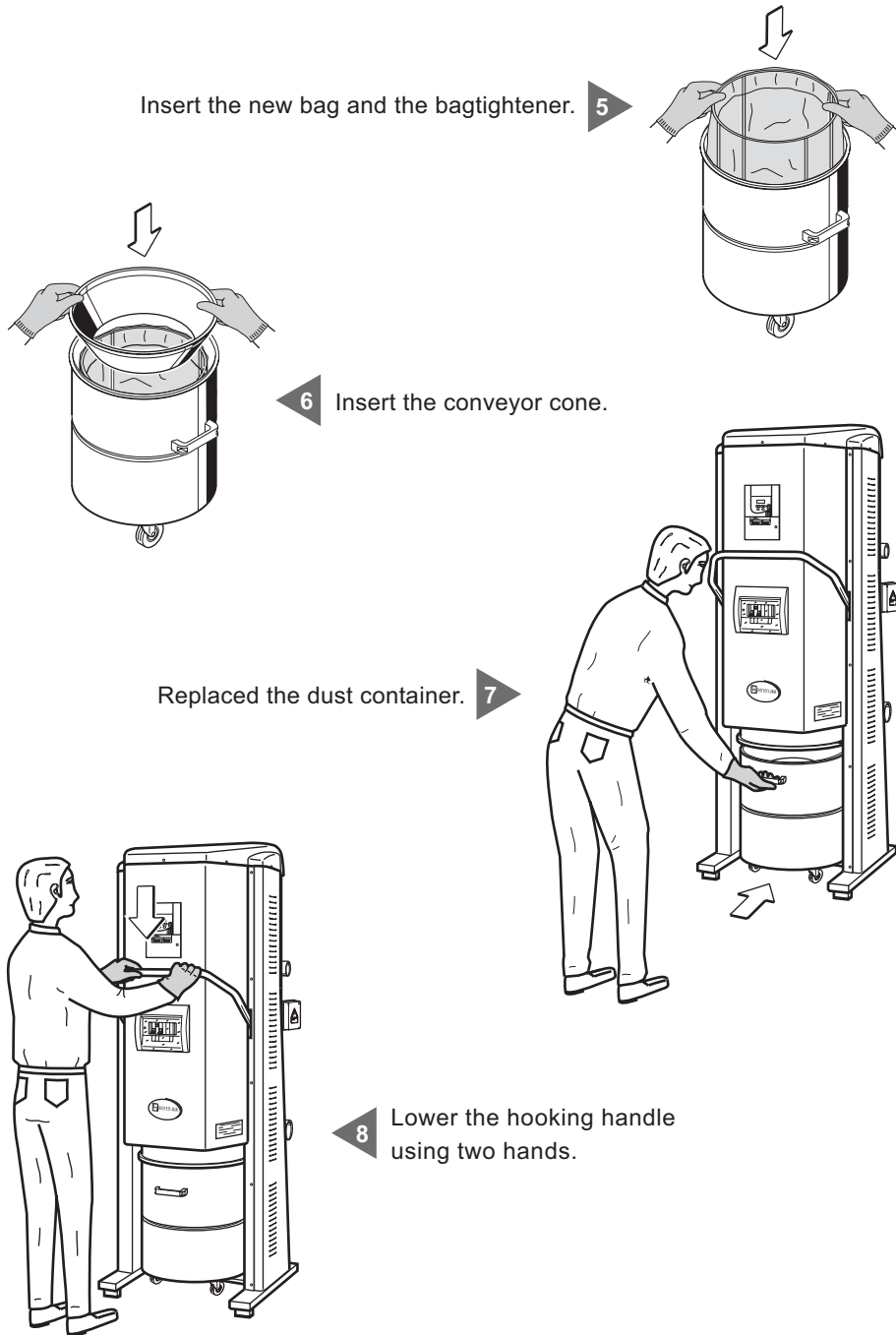
8 Block the closing hook.



English

6.2.2 Central suction unit art. 3200.....



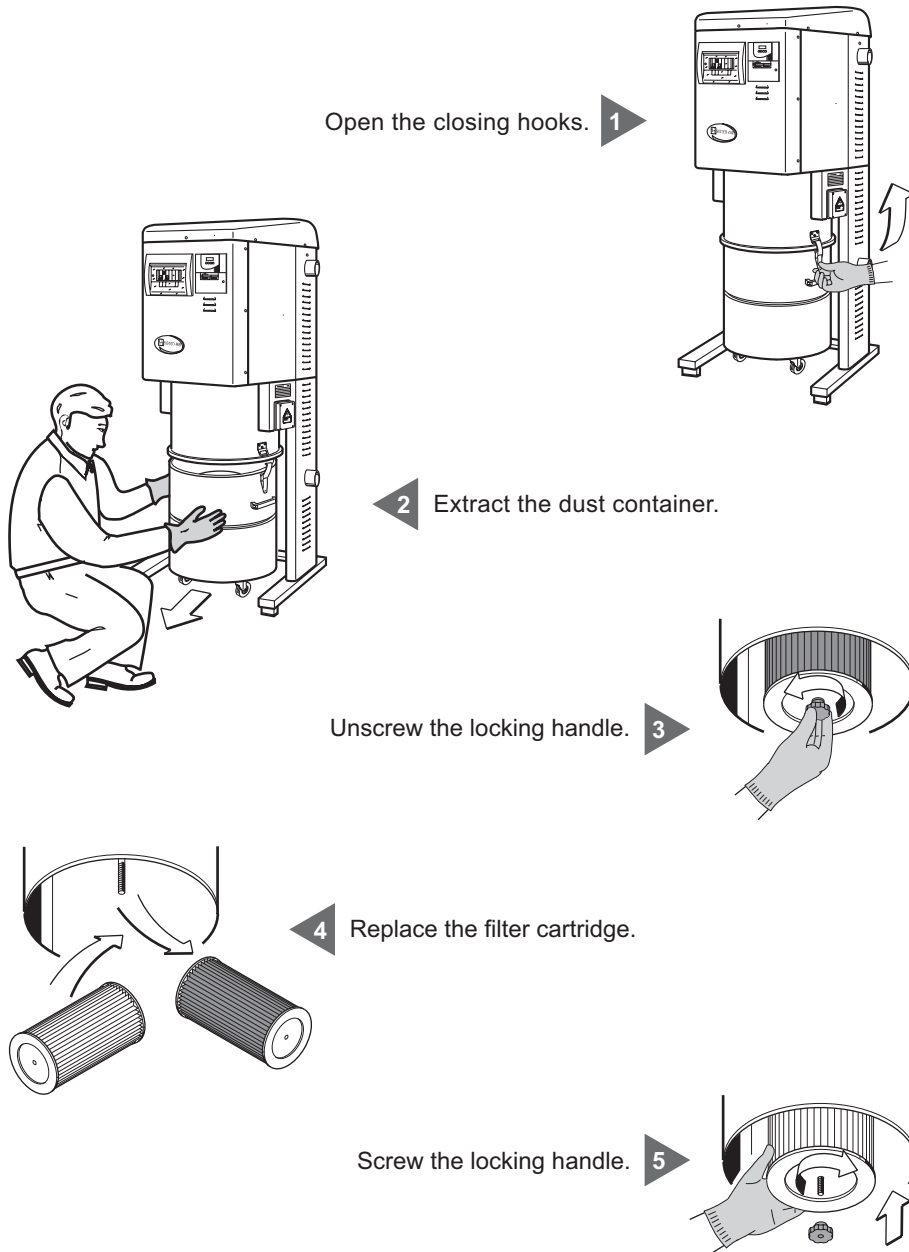


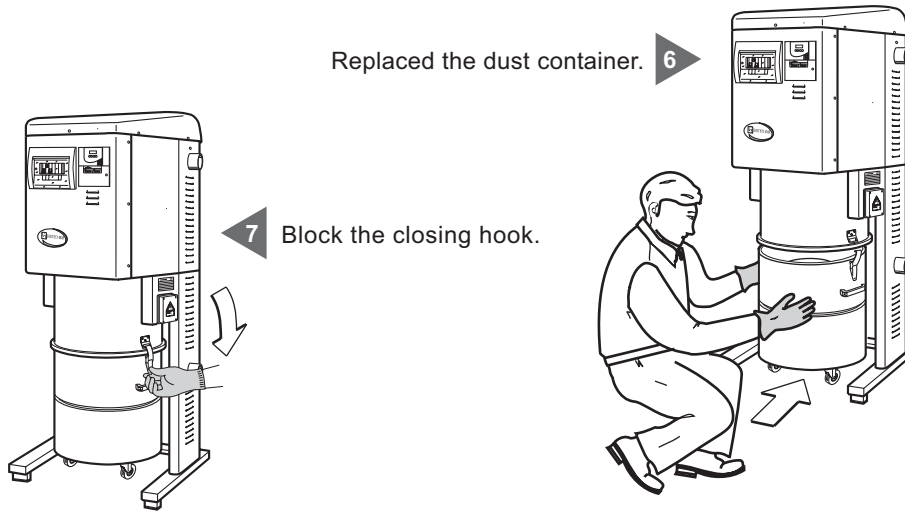
English

6.3 Replacement of the filter cartridge

6.3.1 Central suction unit art. 3115.....

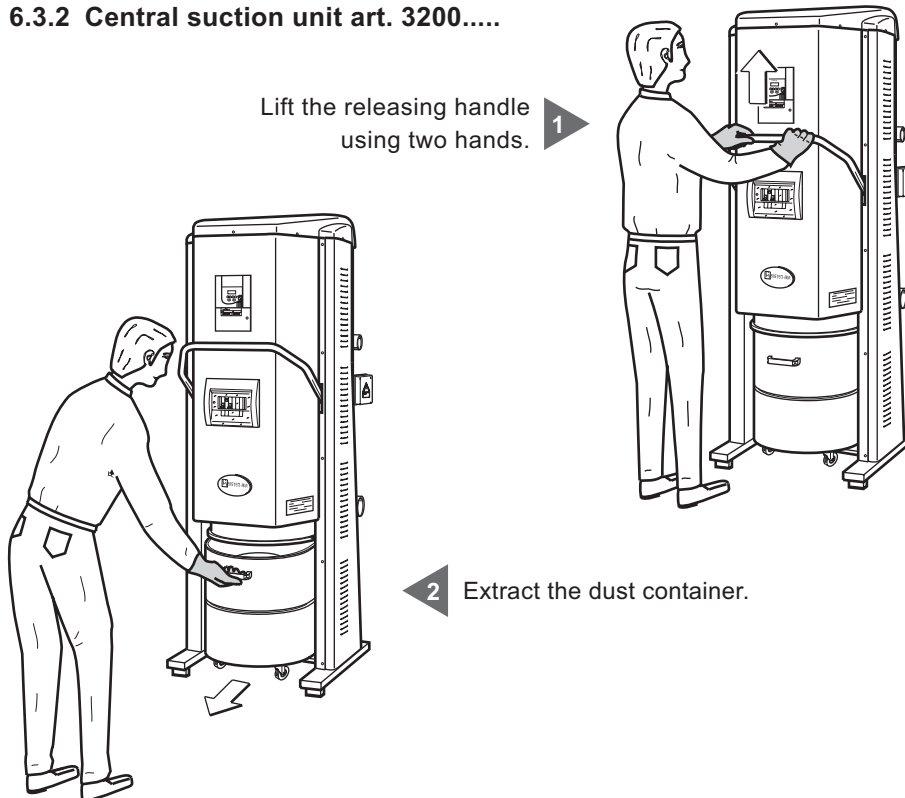
English





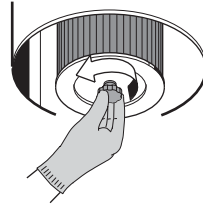
English

6.3.2 Central suction unit art. 3200.....

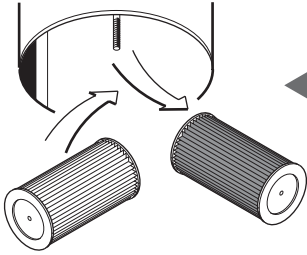


English

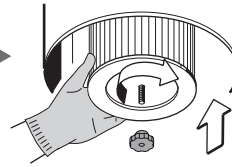
Unscrew the locking handle. 3



4 Replace the filter cartridge.



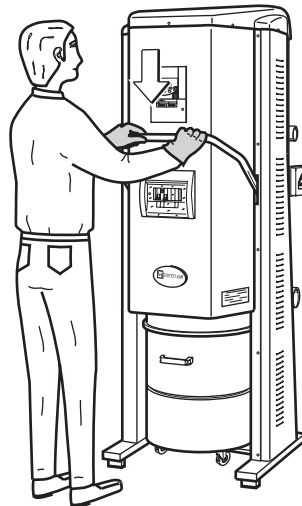
Screw the locking handle. 5



6 Replaced the dust container.



Lower the hooking handle using two hands. 7



6.4 Reconditioning of the filter cartridge

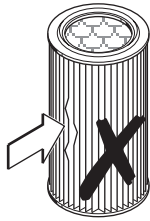
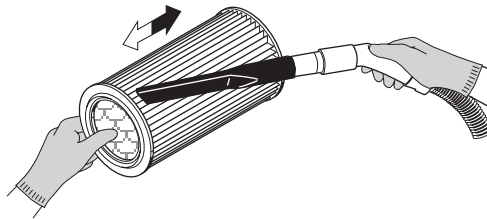
- ATTENTION -

**NEVER USE THE SUCTION UNIT WITHOUT THE FILTER.
BEFORE CARRYING OUT THE OPERATION DESCRIBED
HEREUNDER, ALWAYS ASSEMBLE A NEW CARTRIDGE.**



The filter cartridge can be reconditioned many times; use the corner nozzle of your suction unit to clean the filtering surface of the cartridge.

1



2

Check if the surface of the cartridge is torn; if this is the case, do not recondition the cartridge and do not use it again.

English

6.5 Suction unit external cleaning

It's necessary periodically to clean the external surface of the unit using a soft and wet cloth.

Attention: clean the unit only with water or water and soft soap. The utilization of other solvent or alcohol can produce damages. Wait the unit is completely dry before restart it.

7 - AUTOMATIC CLEANING SYSTEM

7.1 Automatic cleaning system's operation

The automatic cleaning system, only for some models, allow the optimal cleaning of the filter cartridge so that it can work with great effectiveness for long periods.

The cleaning system start automatically after fixed times planned by the clock in the control panel.

It's also possible to start it manually using the switch, placed on the programmer clock.

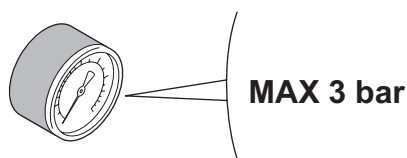
When the system is started, the compressor store up the air in its tank and, when the pre-established pressure is obtained, the air is discharged on the internal walls of the filter cartridge by an air valve, in a very short time, producing an air throw in counterpressure that cause the vibration of the filter cartridge's walls, and the detachment of dusts which fall into the nylon bag of the dust container.

When the automatic cleaning is finished, the air valve automatically open to discharge eventual left air, so that the tank remain completely empty when the automatic cleaning system is not in function.

ATTENTION

Don't use manually the automatic cleaning system when the central suction unit is operative.

Don't change adjustment values of manostat and of the security valve programmed from Sistem air. Maximum pressure values higher than 3 bar, are not included into the limits of standards.



7.2 Conformity with Public Directives

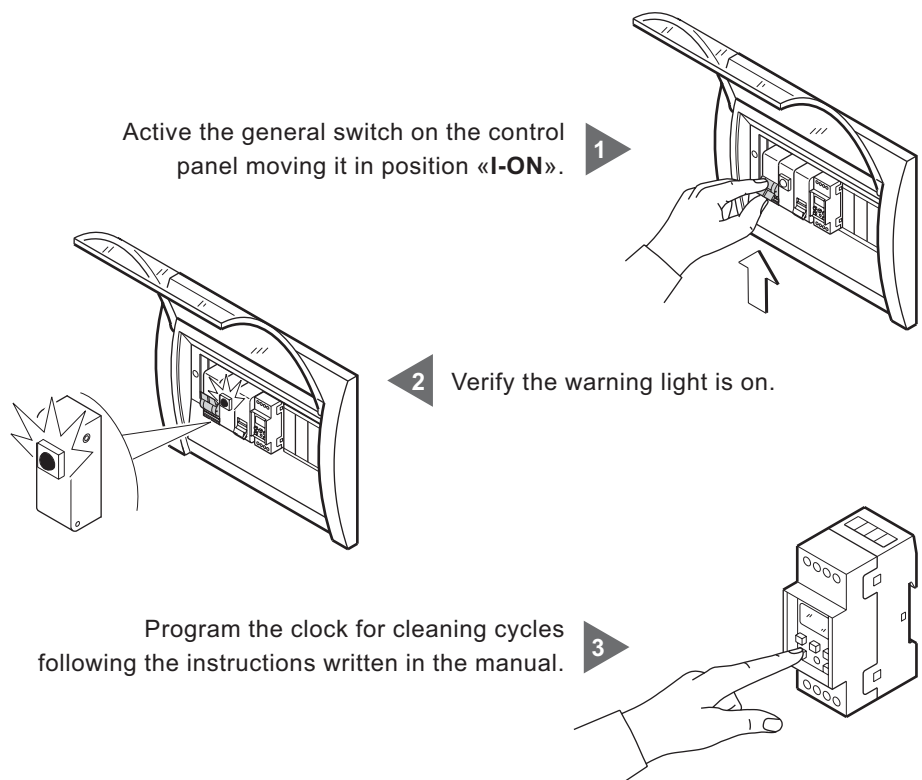
The technical characteristics of the tank for the automatic cleaning are included in the segment "B" considering simple pressure tank, in observance of regulation in force.

7.3 Automatic cleaning cycles regulation

Using the suction unit with normal frequency, is enough to program an automatic cleaning cycle in a day for a period of five minutes.

In case of frequently use of the unit, it's possible to program more than one cleaning cycle in a day.

To program cleaning cycles it's necessary:



English

7.4 Automatic cleaning system's maintenance

Verify the automatic cleaning system's functioning for each substitution of the dust bag, manually active procedure pressing the button placed on the programmer clock.

At the end of this passage program again the clock for the automatic functioning.

ATTENTION

The correct functioning of the automatic cleaning cycle must be tested only by qualified technician or by adequately prepared persons.

8 - SERVICING

8.1 Servicing criteria

It is strictly forbidden to operate on the central suction unit to carry out any maintenance or servicing not mentioned (and therefore not allowed) in the user manual.

Only qualified providers of the technical assistance service can carry out any maintenance or repair operations.

The guarantee will not apply in case of interventions carried out by not-authorized staff and the manufacturer cannot be considered responsible for possible injuries to persons and damages to things resulting from this kind of intervention.

9 - RECOMMENDED SPARE PARTS

9.1 Spare parts list

It is advisable to stock the spare parts more subject to wear. In order to grant the best performance of the central suction system, we suggest using only original SISTEM-AIR spare parts.

Please find below a list of spare parts.

Description	Quantity	Spare Part Code	Central Suction Unit Model
Filter Cartridge	1	1610.1	3115.....
Filter Cartridge	1	1610.2	3200.....

10 - DISMANTLING

10.1 General instructions

When dismantling the central suction system, dispose appropriately of used parts or material, which could endanger human health or well-being as well as the environment if handled improperly.

You must be acquainted with sites/companies authorized to collect and dispose of used parts and materials.

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

11 - TECHNICAL PROBLEMS

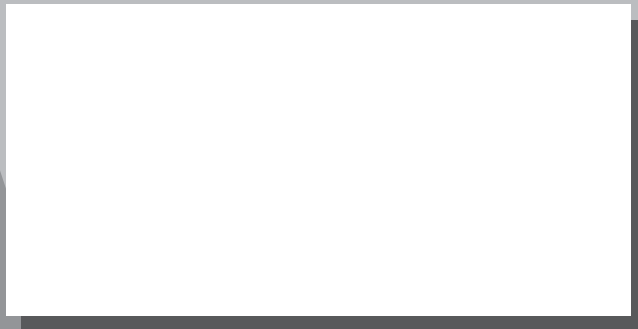
11.1 Troubleshooting

Problem	Possible causes	Possible corrective measures
No air suction in all air inlets	There is no electricity in the feeding line	Verify the cause of it
	The general switch of unit is off	Active the general's switch moving it in position «I-ON»
	The disconnecting switch of micro line is off	Active the micro line's switch moving it in position «I»
	The thermal relay of the motor does not work	Leave the motor some minutes for cooling down
No air suction in only one inlet	The power supply contacts are cut off or the microswitch of the inlet does not work	Contact the technical service provider
Weak air suction	Several suction inlets are used simultaneously	Use only one suction inlet at a time
	The hose or the cleaning accessories are broken/damaged	Check if the hose is integral and if the fitting is correctly inserted
	The filter cartridge is dirty	Contact the technical service provider
	The fitting of the dust container is damaged or incorrectly positioned	Check if the fitting is integral and correctly assembled
	The pipes of the suction system are obstructed	Contact the technical service provider
	The air exhaust is obstructed	Contact the technical service provider
The suction unit does not stop when the suction inlets are closed	The microswitch of a single inlet does not work	Contact the technical service provider

English

Problem	Possible causes	Possible corrective measures
The automatic cleaning system doesn't work	The clock is not programmed	Verify if the system is able to work manually by activation of the clock's starter and if it need to be reprogrammed
	The clock doesn't work	Contact the technical service provider
	There is no pressure	Verify the compressor is correctly connected to the tank
	The bit valve for condensate exhaust continuously discharge	The bit valve or the automatic valve for condensate exhaust is normally open for 4-5 seconds in consequence of the compressor's start. If the valve continue to discharge, check impurities are not come inside or check the compressor pressure of charge is enough; if it's not operative contact the technical service provider
	The security valve continue to discharge	Check the security valve don't discharge with lower pressure than 5 bar. If it's not so contact the service provider

SISTEM AIR - Via Cilavegna, 53
27020 Gravellona Lomellina (PV) ITALY
Tel. +39 0381 650082 Fax +39 0381 650120
www.sistemair.it - info@sistemair.it



F 0920014

