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*Equipment classification: Industrial vacuum cleaner*

*Machine complying with the ATEX/IECEx DIRECTIVE, intended for potentially explosive dust vacuuming*



DM3ELACD



*Operator's and maintenance manual  
Original and official manual  
Rev.04/2024*

*This manual is supplied with the vacuum as integrating part of the machine.  
Carefully read this manual and the documentation enclosed.  
Understanding and following the herein instructions is essential to correctly operate the vacuum and  
execute maintenance operations in safety conditions.*

**AZIENDA CON SISTEMA  
DI GESTIONE QUALITÀ  
CERTIFICATO DA DNV  
= ISO 9001 =**



This manual provides all the information needed to use and service your vacuum cleaner. Good operation and durability depend on proper maintenance and careful use.

Before leaving the factory, this particular model has undergone stringent tests to ensure utmost reliability. Always check however to make sure the vacuum cleaner has not been damaged during transport in such a way as to affect operation and safety.

This manual should be considered an integral part of the vacuum cleaner and must be kept together with the unit until this is scrapped. In case of loss of or damage to the manual, ask **DELFIN** for a new copy.

The technical details contained in this manual are the property of **DELFIN** and should be deemed of a confidential nature.

Even partial reproduction of the graphic project, the text and the illustrations is legally forbidden.

Some details shown in the illustrations in this manual may be different from those of your vacuum cleaner. Some component parts may have been removed for greater clarity.

For easier reference, this manual is split into sections, identifiable by specific graphic symbols.

The subjects dealt with in this manual are those expressly required by "**Machine Directive 2006/42/CE**" and the technical details shown are those provided by the manufacturer at the time of compilation. For ATEX Vacuums, the reference directive is the 2014/34/EU.

This manual must be kept in a place accessible to all the personnel charged with operating and servicing the vacuum cleaner.

In case of any doubts, always immediately phone the **After-Sales Service**.

The competent Law Court for all disputes is that of TURIN (Italy).

### TECHNICAL SERVICE

*Our engineers are available to help you in case any problem occurs.*

*Please call +39 011. 8005500*

**The manual must be kept with the vacuum cleaner in case of resale!**



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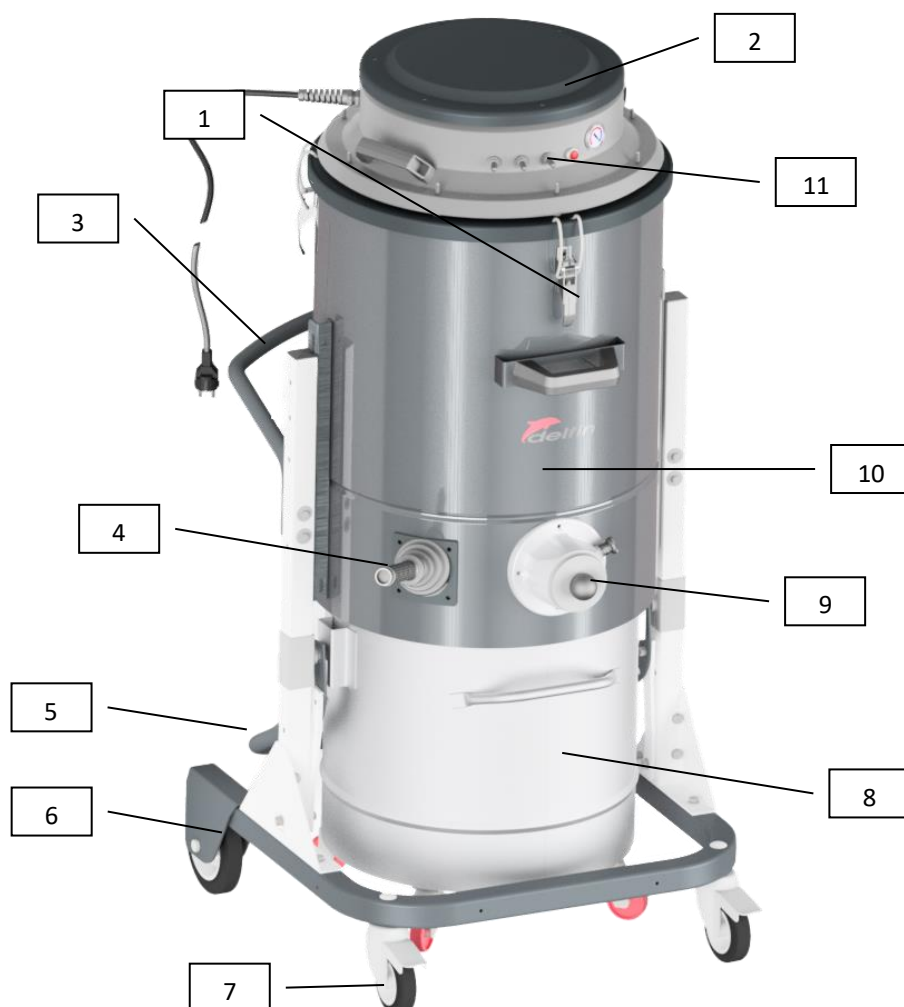
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## 1.1 Identification of main parts



- 1)Release fastening
- 2)Motor head
- 3)Push handle
- 4)Filter shaking lever
- 5)Container release lever
- 6)Fixed wheels
- 7)Castors
- 8)Removable vacuumed material container
- 9)Suction point
- 10)Filter chamber
- 11)Switches



## 1.2 Accessories provided



*FI.0063.0000 - 20 POCKETS POLYESTER "C" ANT. FILTER Ø500 H400  
(ONLY SPARE PART)*



*FI.0003.0000 - H14 D430X92H ABSOLUTE FILTER  
(ONLY SPARE PART)*

**Remark:** these filters must be checked every six months. In case they are worn it will be necessary to replace them with new ones, to be requested as spare parts to **DELFIN S.r.l.**

**DELFIN S.r.l.** will accept no responsibility in case of use of **NON-ORIGINAL** filters.

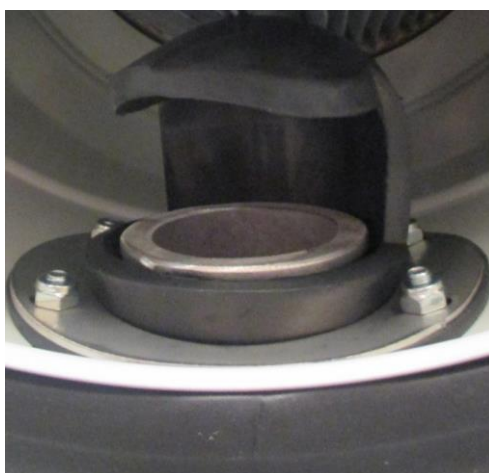


### **NON-SPARKING DEFLECTOR**

The vacuum cleaner is provided with a rubber non-sparking deflector that avoids potential ignition sources within the container and allows working with safety in case of Zone 20 generation inside the container.



Check every month the deflector conditions.





### 1.3 Identification details of manufacturer

#### Delfin S.r.l.

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10036 Settimo Torinese (TO) Italy  
Tel. +39 011-8005500  
Fax +39 011-8005506  
[www.delfinvacuums.it](http://www.delfinvacuums.it)  
[delfin@delfinvacuums.it](mailto:delfin@delfinvacuums.it)

### 1.4 Marking plate

In compliance with the **Machine Directive 2006/42/CE** on vacuum cleaners, the machine is fitted with **CE** plates.

When contacting the manufacturer or dealer, always quote the details shown on the vacuum cleaner plate.



Sede legale: Via Goffredo Casalis, 35  
10143 Torino (TO) – ITALY  
Sede operativa: Strada della Merla, 49/a  
10036 Settimo Torinese (TO) – ITALY  
Ph. +39 011 800 55 00  
F. +39 011 800 55 06  
[delfin@delfinvacuums.it](mailto:delfin@delfinvacuums.it)  
[www.delfinvacuums.it](http://www.delfinvacuums.it)



MOD.	<input type="text"/>	S/N	<input type="text"/>
DESC.	DM3EL BP ACD 60L DT DS X H KIT 50		YEAR <input type="text" value="2024"/>
	II 1-D Ex h IIIC T80°C (internal) Da/- <input type="text"/>		AMB T° <input type="text" value="-5/+40"/>
	<input type="text"/>		
	IMQ 24.ATEX.003X IECEX IMQ 23.0007X		

[www.delfinvacuums.it](http://www.delfinvacuums.it)



Made in Italy

MOD.  S/N

50 Hz  FILTER   
60 Hz



## 1.5 Intended uses

These specific vacuum cleaner models have been designed, built and protected for vacuuming dusts and solid materials only, using special filters.

The ACD classification applies to equipment for the vacuuming of combustible dust

The ACD classification was introduced with the new international product standard IEC 60335-2-69, published in 2021

This classification is designed to increase the safety level in **non-ATEX** areas, i.e. non-classified areas where however there is a need to collect combustible dust.

In the case of ACD machines the work area is to be considered without the possibility of generating an explosive atmosphere and therefore not ATEX classified

### **Warning!**

**Always use specific filters for the type of dust or materials to be vacuumed.**

Any other use is considered **IMPROPER**.

The vacuum cleaner is in any case intended for professional industrial use.

## 1.6 Allowed environmental conditions

To ensure the correct operation of the vacuum cleaner, this must be positioned protected against atmospheric agents (rain, hail, snow, fog, dusts in suspension, etc.) with an environmental running temperature between 5°C and 45°C and relative humidity not above 70%.

The work environment must be clean and well-enough lit.

## 1.7 Storage

Remove the filter and clean it, empty the container (in case of Longopac vacuums: replace the bag) and store the vacuum cleaner in a place protected against atmospheric agents with a temperature between 0°C and 40°C. Cover with a nylon sheet to prevent accumulation of dust.

## 1.8 Scrapping

In case of scrapping, all the component parts of the vacuum cleaner will have to be disposed of through adequate disposal channels in accordance with applicable legislation.

Before scrapping, all plastic and rubber parts will have to be separated from the electrical material. Parts made of plastic, aluminium and steel only may be recycled if collected by special centres.





## 1.9 Technical details

<i>Model</i>		DM3ELACD
<i>Power</i>	<i>kW</i>	3,45
<i>Voltage</i>	<i>Volts</i>	230
<i>Frequency</i>	<i>Hz</i>	50/60
<i>Max. vacuums rate</i>	<i>mm H<sub>2</sub>O</i>	2500
<i>Max. air flow rate</i>	<i>m<sup>3</sup>/h</i>	540
<i>Noise level (*)</i>	<i>dB (A)</i>	76
<i>Filter type</i>		Polyester ANT. M
<i>Filter surface</i>	<i>cm<sup>2</sup></i>	30.000
<i>Capacity</i>	<i>l</i>	60
<i>Suction inlet</i>	<i>Ø</i>	80
<i>Dimensions</i>	<i>cm.</i>	66x70x135



**(\*) Noise level**

Noise level readings were taken in accordance with the provisions of *Machine Directive 2006/42/CE* standards.

Sound tests performed on this specific vacuum cleaner model have been taken from a distance of 1 meter and from a height of 1,60 meters, showing an acoustic pressure no higher than the one indicates in the table.

The vibrations transmitted by the machine are lower than 2,5 m<sup>2</sup>/s.

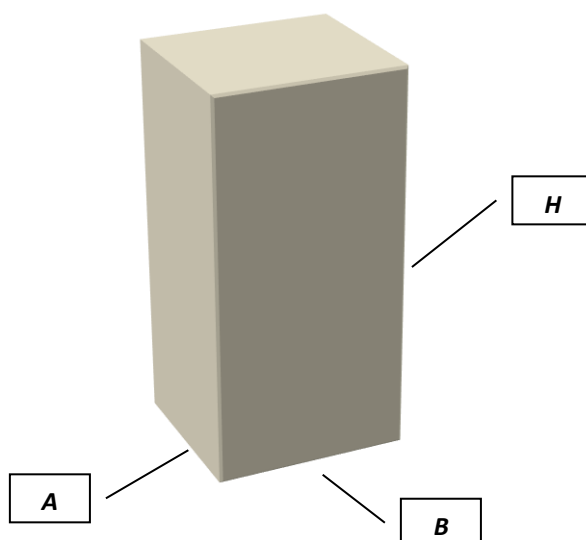
**Attention!**

*Pursuant to articles L.D. 81/08, workers exposed to sound pressure levels above 85 dB (A) must be protected by special individual protection devices.*

*It is therefore necessary, if such working conditions exist, to provide workers with such approved individual protection devices and to inform them of the risks relating to noise exposure.*



## 1.10 Handling



	<i>A</i> (cm)	<i>B</i> (cm)	<i>H</i> (cm)	<i>Weight</i> (package included ) Kg
<b>DM3ELACD</b>	73	86	180	80

The machine is supplied in a strong cardboard box secured with straps.

Transport the package using a fork-lift truck of adequate lifting capacity and make sure it is stable and that weight is properly distributed on the forks.

Before starting to move, make sure the transit area is free and that there are no moving objects on the packaging.

During movement, keep the load low for greater stability and safety.

When starting up the vacuum cleaner, move this by means of the wheels supplied.

The appliance must never be moved using fork-lift trucks or other equipment that lifts it off the floor.

If for any reason the need arises to lift and transport the vacuum cleaner, this operation must be performed under the responsibility of the user. The user is therefore invited to secure the load as he best thinks fit to ensure the operation is performed in total safety.



## 1.11 Warranty

**DELFIN** guarantees this vacuum cleaner model for a period of 24 months from the date of purchase indicated on the tax document at the time of delivery of the vacuum cleaner by the seller.

The warranty shall be invalidated in the event of the vacuum cleaner having been repaired by unauthorised third parties or of equipment or accessories being used that have not been supplied by **DELFIN** or which have not been recommended or approved by **DELFIN** or whose serial number has been removed or altered during the warranty period.

**DELFIN** undertakes to repair or replace, free of charge, those parts which, during the warranty period show manufacturing faults. Repairs shall be made in the **DELFIN** facilities only or in a **Technical Assistance Centre** indicated by us and machines shall be sent to us carriage free (transport costs to be paid by the user, unless otherwise agreed).

The warranty does not cover any cleaning of working parts.

Faults not directly attributable to materials or manufacture shall be examined only in our facility or in a **Technical Assistance Centre** indicated by us. If claims appear unjustified, all the costs relating to repair and/or replacement of parts shall be charged to the buyer.

The purchase tax document shall be shown to the technical personnel making the repairs and must accompany the vacuum cleaner dispatched for repair.

The warranty does not cover: accidental damage, caused by transport or carelessness or inadequate treatment, or improper use not in compliance with the instructions in the instruction manual, or in any case by occurrences not dependent on normal operation or use of the vacuum cleaner. **DELFIN** declines all responsibility for any damage to persons or things caused by bad or improper use of the vacuum cleaner.

All disputes shall be referred to the Law Court of Turin (Italy).

The manufacturer declines all liability in the following cases:

- *Failure to send the warranty Certificate*
- *Failure to follow the instructions*
- *Use of non-original spare parts*
- *Failure to service the machine properly*



## 2.1 Safety details

The person in charge of safety shall be responsible for informing workers about the risks associated with vacuum cleaner operation.

The obligation also exists of training workers so they are able to protect themselves and others.

Failure to observe basic safety regulations and Warnings could cause accidents during vacuum cleaner operation, maintenance and repair. Accidents can often be avoided by recognising potentially dangerous situations before these occur. Operators should be aware of potential hazards and be trained and skilled enough. They should also have the tools necessary to perform these duties properly.

**DELFIN** shall under no circumstances be deemed liable for accidents or damage caused by use of the vacuum cleaner by personnel not properly trained or who use it in an improper manner, as well as by even partial failure to comply with the safety regulations and intervention procedures indicated in this manual.

The safety Warnings and warning notices are indicated in this manual and on the product.

Unless these hazard messages are heeded, the operator could become involved in accidents with serious consequences for him/herself and for other people.

The safety messages are highlighted by the following symbols:

**Attention!**

*Unless these messages are heeded, operator injuries could occur.*

**Warning!**

*Unless these messages are heeded, vacuum cleaner damage could occur.*

**DELFIN** cannot foresee all possible circumstances capable of representing a potential hazard. The warnings in this manual and on the products should not therefore be deemed exhaustive. In the event of tools, procedures, work or machining methods being used that are not explicitly recommended by **DELFIN**, make sure no hazards exist for operators and others.

**Only ever use original DELFIN spare parts.**

**DELFIN** declines all liability in the event of non-original spare parts being used.



## 2.2 Safety warnings

### **Attention!**

*The following indications are, by themselves, not enough to fully protect against all the hazards that could arise during vacuum cleaner operation. These will have to be integrated with common sense and the experience of the operator, both of which are crucial factors for preventing accidents. Each section of this manual lists further specific safety warnings for the various operations.*

*Maintenance jobs must always be performed with the power plug detached from the power point.*

The employer must inform and train the user according to the provisions of applicable laws.

Before using the machine, prepare and train yourself by reading this manual carefully. Use of the machine by untrained and unauthorised persons is forbidden.

The unit must always be monitored during use

Using the machine to vacuum toxic substances is forbidden unless this has been equipped with special filters required for the specific type of dusts. Such filters must be explicitly requested by you.

If the machine is used to vacuum toxic-harmful substances, the container must be emptied and the filters cleaned using adequate individual protection devices, selected according to the type of substances to be vacuumed.

The use of the machine in the presence of flammable liquids and hybrid mixtures is prohibited.

The use of the machine to collect dust that could spontaneously combust and/or have exothermic reactions is prohibited.

Do not vacuum flammable materials or substances or which could cause explosions (fuels, solvents, etc.).

Do not vacuum corrosive substances unless the machine is equipped with containers suitable for this purpose (***Stainless-steel AISI 304***).

Do not operate in ATEX zone

Use of the machine without the supplied filters is not recommended.

If the filters are correctly fitted, the machine will not eject any objects.

Never rest miscellaneous materials on the horizontal protection guard.

The machine casing containing moving parts must not be removed by the user.

When using the machine, mind other people, especially children.

Use the machine cautiously on slopes and ramps.

Do not change direction on gradients.



Make sure the parked machine remains stable by operating the braked wheel.

During cleaning operations, maintenance jobs or when changing parts, the starter switch must be off and the machine must be disconnected from the power mains by removing the cable from the socket.

Only skilled persons should carry out repairs.

During use, mind the power supply cables and avoid crushing or pulling these.

Periodically check the mains power cable to ensure this is not damaged.

In the event of the cable being damaged, the machine must not be used.

In the event of the cable, plugs or couplings being replaced, make sure these are protected against water spray and check mechanical strength.

Never pull the machine by means of the power cable and the vacuum pipe.

Motor brushes and burnt-out fuses must be replaced by **DELFIN** or authorised dealers. Always use original spare parts.

The user is responsible for disposing of vacuumed substances in accordance with applicable laws.

After 10 years of use, we recommend sending the machine for a complete overhaul to **DELFIN S.r.l.**

The machine is supplied with: instruction manual, Exploded Spare Parts drawing\*, Warranty Slip\*ATEX certificate\* (\*on request),

In the event of Customers fitting a tool to the machine not supplied by **DELFIN**, make sure the safety conditions required by **Machine Directive 2006/42/CE** are complied with and in any event, **DELFIN** is unable to accept liability for any problems arising from use of such tool.

The vacuum cleaner must not be operated in a corrosive or explosive environment.

Always make sure the vacuum cleaner is free of all foreign materials such as debris, oil, equipment and other objects that could affect operation and cause injury to persons.

Avoid using flammable or toxic solvents such as petrol, benzene, ether and alcohol for cleaning.

Avoid prolonged contact with solvents and inhaling their vapours. Avoid use close to open flames or sources of heat.

Never use the vacuum cleaner without the filter.

Do not vacuum lit cigarette ends. The filter could be damaged.

Do not vacuum petrol or flammable liquids in general.

Make sure all the guards and protection devices are in place and that all the safety devices are in place and working properly.



Do not wear loose or hanging clothing such as ties, scarves or torn garments that could become trapped and be sucked up by the cleaner.

Do not open the vacuum container with the machine running.

The manual should always be kept handy for reference so the operating cycle can be checked every time there are doubts. In the event of this manual being lost or damaged, ask **DELFIN** for a new copy.

Structural damage and improper alterations or repairs could change the protection capacity of the vacuum

cleaner and therefore cancel this certification.

Any alterations to the appliance must only be made by **DELFIN** engineers.

During maintenance jobs, affix a notice to the appliance indicating **"MACHINE BEING SERVICED, DO NOT START"**.

Climbing on the cleaner is forbidden.

Never touch electric wires, switches, buttons, etc. with wet hands.

Before connecting to the power mains, make sure the power voltage and frequency are those shown on the machine plate.

Make power connections to a mains supply with efficient earth system.

In the event of an extension being used, make sure this is in perfect condition, marked **CE** and that the cross section of the cable is suitable for the vacuum cleaner power input.

When restoring original working conditions, the appointed personnel should make sure that at the end of the operating procedure, proper vacuum cleaner operation safety conditions are restored, especially the safety devices and the protective guards.

Only adult persons should use the vacuum cleaner.

During vacuuming operations, always brake the vacuum cleaner using the special revolving wheel lock.

In case of vacuums with grounding system, connect the grounding clamp with a conductive surface connected with the earth.

Connect the grounding clamp with a conductive surface connected with the earth.

All maintenance operations must be executed in non-classified atmosphere.

Do not vacuum incandescent or burning material.

The operator must always wear antistatic cloths and shoes. The floor of the area to be vacuumed must be antistatic.





The opening of the dust collection container must be executed in non-classified atmosphere area, after having disconnected and unplugged the machine and only after 10 minutes from unplugging.

Do not vacuum flammable or explosive substances gases or liquids (fuels, solvents etc.).

Do not suck lighted cigarettes, cigarette stubs or incandescent materials.

Do not vacuum sources of ignition.

The machine must operate in **NON CLASSIFIED** atmosphere, or rather in a safety place.



## 2.3 Safety plates and symbols

Plates are affixed to the vacuum cleaner showing safety symbols and/or messages.

### **Attention!**

*Make sure all the safety messages are legible.*

*Clean these with a cloth, soap and water. Do not use solvents, diesel fuel or petrol.*

*Replace the damaged plates with new ones supplied by DELFIN.*

*If a plate is affixed to a replaced part, make sure a new plate is affixed to the new part.*

### **Attention!**

*Read the operator's and maintenance manual carefully before using the cleaner or doing any maintenance jobs.*

#### ATTENZIONE! WARNING! ATTENTION! ACHTUNG! ¡ATENCIÓN! ATTENTIE!

- SCUOTERE IL FILTRO SOLO A MACCHINA SPENTA
- ONLY SHAKE THE FILTER WHEN THE MACHINE IS TURNED OFF
- NE SECQUER LE FILTRE QU'APRES AVOIR ETEINT LA MACHINE
- RÜTTELN SIE DEN FILTER NUR BEI AUSGESCHALTETER MASCHINE
- SACUDIR EL FILTRO SÓLO CON LA MÁQUINA APAGADA
- FILTER SCHUDDEN BIJUITESCHAKELDE MACHINE

#### IMPORTANT

**DO NOT BREATHE IN INFLAMMABLE AND/OR  
EXPLOSIVE LIQUIDS**

### **Warning!**

*Risk of crushing upper limbs while fitting and locking the material container (or material Longopac® container) on the vacuum cleaner.*

*Never place hands between the material container (or the material Longopac® container) and vacuum cleaner while locking.*

*Do not place hands on sides of container (or Longopac® container) near the guide pins while locking.*

*Perform the container (Longopac® container) locking operation by means of the levers located on the side, USING BOTH HANDS!*

### **Caution!**

*Do not vacuum sources of ignition*



*Specific sign of conformity with the ATEX 2014/34/UE DIRECTIVE.*

<b>M</b>	CAUTION: this machine contains harmful vacuumed dust. Emptying operations, including the removal of the collection container after due waiting time must only be executed by qualified operators wearing the appropriate safety devices. Do not use the vacuum without filtering systems.	<b>M</b>
This plate is applied to the vacuum when the machine is equipped with a M CLASS anti-static filter (max. efficiency: 1 micron)		

<b>H</b>	CAUTION: this machine contains harmful vacuumed dust. Emptying operations, including the removal of the collection container after due waiting time must only be executed by qualified operators wearing the appropriate safety devices. Do not use the vacuum without filtering systems.	<b>H</b>
This plate is applied to the vacuum when the machine is equipped with a C CLASS anti-static filter and the absolute (HEPA) filter (99,995%. efficiency)		





## 2.4 Outstanding risks

Careful analysis of risks performed by the manufacturer and stored in the technical file has made it possible to eliminate most of the risks associated with vacuum cleaner operation.

The manufacturer advises carefully following the instructions, procedures and advice contained in this manual as well as applicable safety regulations, including the use of the envisaged protection devices, both those integrated in the cleaner and individual.

Outstanding risks associated with the vacuum cleaner could be:

### ***Risk of improper use in the presence of explosive and flammable substances.***

The vacuum cleaner must not be used in environments containing substances in the form of liquids that could vaporise at room temperature and flammable dusts and gas.

### ***Risks of operation in humid environments.***

Keep to the limits shown in this manual at chap. 1.6 Allowed environmental conditions.

### ***Risk of erroneous interpretation of the safety pictograms.***

Having identified the various outstanding risks, the manufacturer has affixed to the cleaner a number of hazard labels in compliance with regulations relating to the graphic symbols to be used. The user must immediately replace any safety plates that become illegible due to wear or damage.

#### ***Attention!***

***Removing the safety plates on the vacuum cleaner is strictly forbidden. The manufacturer declines all liability in relation to vacuum cleaner safety in the event of failure to comply with the above indications.***

## 2.5 Applied directives

The following directives apply to the vacuum cleaner described in this manual:

- ***2006/42/CE Machine Directive***
- ***2014/30/EU Electromagnetic compatibility directive (\*\*)***
- ***2014/35/EU Low-voltage directive (\*\*)***
- ***For ATEX Vacuums: 2014/34/EU ATEX Directive***

***(\*\*) For Air Series Vacuums, do not refer to this Directive.***



### 3.1 Installation

**Warning!**

*Before installing the vacuum cleaner, carefully make a sight check to pinpoint any damage suffered during transport.*

In the event of any component parts being damaged, do not proceed with installation. Notify the manufacturer and reach an agreement on how to proceed.

The vacuum cleaner already features a suction filter.

Fit the accessory required for the type of vacuuming operation on the opposite end of the hose.

**Note:** No standard accessories (reducers, hoses, nozzles) are included with the vacuum; accessories must be specified and ordered separately.

Contact your dealer for information relating to the different types of **optional accessories** available for this specific vacuum cleaner model.

Fit the supplied pipe in the connector.

Fit the supplied pipe on the pipe union.





Make sure the power supply corresponds to the voltage and frequency indicated on the vacuum cleaner plate. For AIR SERIE vacuums, please check the vacuum's operating values

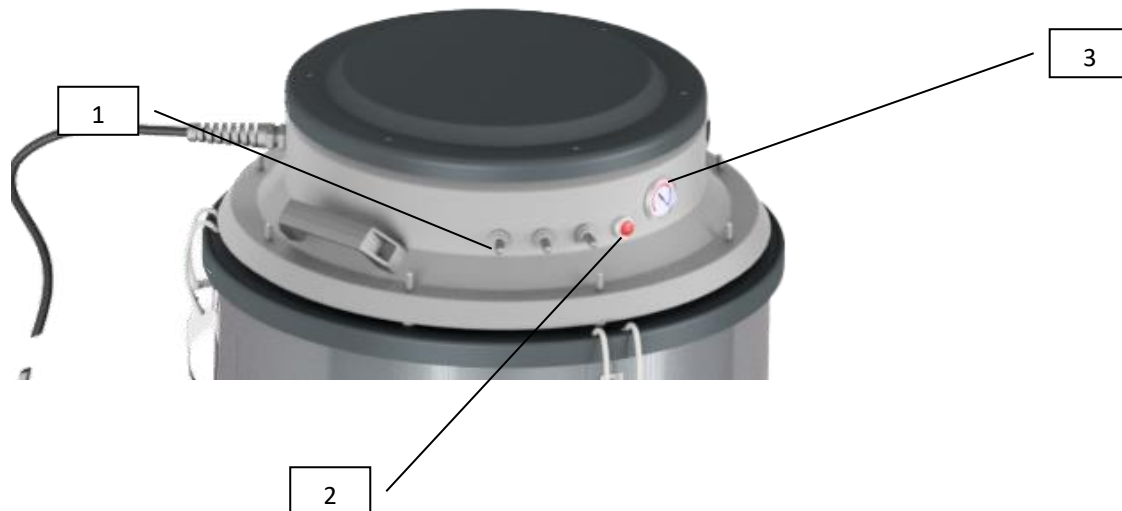
***Warning!***

***Do not fit the plug in the power socket with wet hands.***

In the event of an extension being used, make sure this is in perfect condition, in compliance with **CE** standards and with cable cross section suitable for the power input of the vacuum cleaner.



### 3.2 Description of controls



- 1) **START/STOP** button
- 2) Clogged filter indicator
- 3) Vacuum meter



### 3.3 Work cycle

**Caution!**

Ensure that power supply meets the voltage and frequency specifications as indicated on the vacuum marking plate and control panel.

**Caution!**

Operations permitted in NO CLASSIFIED areas, with potentially explosive atmosphere.

**Caution!**

The operator using the vacuum must always wear anti-static cloths and antistatic shoes.  
The working environment and the floor must comply with antistatic standards.

- Ensure that the supply cable tap is correctly plug in the current outlet having the voltage required and indicated on the vacuum control panel.
- Ensure that the flexible hose is duly fitted and locked in the specific suction plug.
- Ensure that the supply cable (cord) and the eventual extension are in perfect conditions.
- Set on the wheels brake to ensure that the machine is stable.



- Grip one end of the flexible hose complete with selected accessory.
- Press the **Start** button and start vacuuming.
- To stop the vacuum cleaner, press the **Stop** button





**Warning!**

*Before switching the vacuum cleaner back on, make sure the motors have come to a complete halt.*

- After finishing work, disconnect the vacuum cleaner from the power socket.

**Caution!**

*Do not vacuum flammable or incandescent substances.*

- Once work cycle has been completed, disconnect and unplug the machine.
- To move the vacuum cleaner, use the large handle.



**Caution!**

*The vacuum can be shifted manually on flat grounds only.*

*The vacuum heavy weight may not allow the operator to shift it safely on slopes as it would be difficult to handle and control the machine avoiding dangerous collision which may cause damages and injury.*

**Warning!**

*During vacuuming, avoid rolling up or bending the flexible hose.*



### 3.4 Releasing and removing the removable container

Stop the vacuum motors by pressing the relevant **STOP** buttons.

**Warning!**

*Disconnect the plug from the power socket.*

**Caution!**

*Collection container release and withdrawal must only be executed in non-classified atmosphere, which means in an area with non potentially explosive atmosphere.*

- Lift the container release lever to release and remove the container.



- Remove the container.



Empty the contents of the container into a special waste disposal container in accordance with laws applicable in the country where the vacuum cleaner is used.

**Warning!**

*While performing these operations, it is best to wear a dust protection mask.*

To prevent having to use a dust protection mask and for greater convenience, before starting vacuuming operations, it is best to fit a nylon bag inside the container and to fasten this in place with the special accessory available on request.

**Warning!**

*Perform the container release operation by means of the levers located on the sides or on the handle with **BOTH HANDS!***

*Danger of crushing upper limbs when fitting and locking the container on the vacuum cleaner.*



### 3.5 Using the filter shaking system

This operation must only be performed with the machine switched off once the motor has come to a complete halt. The filter shaking system is best operated every time before use and after prolonged operation.



**Warning!**

*During vacuuming, avoid rolling up or twisting the flexible hose*

On the front of the vacuum cleaner is a vacuum meter indicating the degree of vacuum inside the vacuum cleaner. If, with the vacuum cleaner working and the vacuum inlet free, the vacuum meter lever indicates an irregular depression level, the filter will have to be shaken by means of the special lever. If the indicator light remains on, clean and replace the filter.

**Warning!**

*Never use the machine with the filter blocked.*

**Warning!**

*If the arrow of the vacuum meter stays in the red area even after cleaning the filter, the hose or suction accessory could be blocked. In this case, clean and remove the blockage.*



## 4.1 Informative notes

This section describes the control and special maintenance operations crucial for keeping the vacuum cleaner in perfect working condition.

### **Attention!**

**All the transport and handling's operations described in this section must be done in NOT CLASSIFIED zone, which means in an area with non potentially explosive atmosphere.**

Any other jobs which might be necessary to eliminate operating faults must be expressly authorised by the manufacturer. In such cases, always notify the identification details of the cleaner.

In the case of major repairs, it is best to contact an authorised dealer, whose skilled personnel, backed by all the technological experience relating to the original factory construction methods, are always available and ready to promptly intervene.

## 4.2 General safety warnings

Maintenance jobs must always be performed by skilled technicians, trained to carry out their specific jobs. In the case of this machine, these are:

- Mechanical maintenance
- Electrical maintenance (\*\*\*)

The Safety Manager has the precise duty of determining the professional capacities and skills of such persons.

Before doing any maintenance job, the safety manager must:

- Make sure there are no unauthorised persons in the work area.
- Make sure the necessary tools are on hand and that these are in good condition.
- Make sure that lighting is adequate and, if necessary, provide 24-V portable lamps.
- Make sure the maintenance engineer is equipped with all approved individual protection devices needed for the specific operation (gloves, eyewear, shoes, etc.).
- Make sure the maintenance engineer has carefully read the instructions contained in this manual and knows how the vacuum cleaner works.

Before carrying out a maintenance job, the maintenance engineer must:

- Disconnect the plug from the power socket. (\*\*\*)
- Execute such operation in **NON CLASSIFIED** atmosphere, which means in an area with non potentially explosive atmosphere.



Work done on motors or other electrical component parts must only be performed by a specifically trained electrician, authorised by the Safety Manager.

Always use tools that are in perfect condition and specifically made for the operation to be done. The use of unsuitable tools or tools not in good condition could cause serious damage.

*(\*\*\*) For Air Series Vacuums, do not consider.*

### **4.3 Maintenance operations**

**Attention!**

*All the described operations must be done with the plug disconnected from the power socket. Before starting any maintenance or cleaning job, always wear adequate protective clothing, eyewear and/or gloves according to the type of job to be done.*

To ensure the vacuum efficiency, it is recommended to check the machine on regular basis as follows:

**Every day**

- Check that the collection container is not full; it is recommended to empty the collection container when the collected material fills  $\frac{3}{4}$  of its maximum capacity.
- Check the conditions of the suction flexible hose and of the accessories to be used . Any hole, crack or fissure in the flexible hose will reduce suction power and disperse the vacuumed dust into the environment.

**Every week**

- Clean the vacuum regularly, removing dust deposits. The thickness of the deposited dust must not exceed 2mm.
- Remove any layers of dust on the wheels.

**Every 6 months**

- Check that the head basement sheath, the filter holding ring sheath and the collection container sheath are hermetic.
- The electrical units (plugs, switches, cables and so on) must have no faults or defects.
- Screws and nuts must always be tightened.
- Clean the deflector inside the suction hose on regular basis to prevent dust accumulation inside the suction unit.
- Remove the side carters protecting the turbine and vacuum any dust deposit within the suction unit.
- Check the filter conditions.
- The filter must not be too breathable.
- There must be no cuts and holes and the sewing must not be worn. Check that the filter holding ring is tightened. In the event any of the aforesaid circumstances occur, replace the filter as indicated in section 4.4.



*Every 12 months*

- Change the primary filter and the absolute filter

Check periodically sparking deflector condition. In case it's too worn, it's not guarantee the required protection.

***Warning!***

*To ensure the vacuum efficiency and safety, DELFIN Srl recommends an overhaul at the Manufacturer's technical service workshop every 24 months.*

***Warning!***

*In case of dust outflow from the engine, turn off the vacuum immediately and call the authorised service centre applying for assistance.*

***Warning!***

*Any maintenance and repair operation not included in the above mentioned ones must be executed by the Manufacturers technical service workshop or by DELFIN authorised service centres.*



#### 4.4 Replacing the primary filter

To replace the filters, proceed as follows:

- Turn off the vacuum cleaner by pressing the motor **STOP** buttons.
- Disconnect the vacuum cleaner plug from the power socket.

**Important!**  
**Wear individual protection devices.**

- Release the retainers that hold the motor head in place. Lift the motor head and rest this on a flat surface being careful not to damage the power cable or the absolute filter.



- Lift the container release lever to release and remove the container.





- Remove pin (A) and split-pin (B) that lock the filter on the shaking lever from under the vacuum cleaner.



- Lift the complete support filter.



- Loosen the clamp and remove the support ring with seal.



- Remove the knots and take out the pocket filter. Fit the new filter and put everything back in place, locking the cap.

**Important!**

*All the material trapped by the filter and the filter itself must be disposed of through authorised channels in the country where the vacuum cleaner is used.*





#### 4.5 Replacing the absolute filter

To replace the filter, proceed as follows:

- Turn off the vacuum cleaner by pressing the motor **STOP** buttons.
- Disconnect the vacuum cleaner plug from the power socket.

**Important!**  
**Wear individual protection devices.**

- Release the retainers that hold the motor head in place



- Lift the head (including the absolute filter) and place it on a flat surface. Note: Be careful not to damage the power cable or the absolute filter





- Unscrew the central screw that locks the absolute filter to the head and remove it



- Replace with a new filter with the same characteristics, checking the correct adherence of the gasket to the base

**Important!**

*All the material trapped by the filter and the filter itself must be disposed of through authorised channels in the country where the vacuum cleaner is used.*



## 4.6 Troubleshooting

<i>Fault found</i>	<i>Possible fault</i>	<i>Recommended remedy</i>
<i>The cleaner fails to start</i>	No power	Check the power mains supply Check the integrity of the plug and power cable
	Thermal magnetic switch tripped	Reset the thermal magnetic switch
<i>Dust is leaking out</i>	Perforated vacuum pipe	Replace the pipe
	Perforated filter	Replace the filter
	Filter unsuitable for type of job	Fit a suitable filter for the type of material to be vacuumed
<i>The vacuum cleaner does not work as it should</i>	Pipe perforated or blocked	Check the pipe and, if necessary, replace it
	Container full	Empty container
	Filter blocked	Clean the filter and if necessary change it.
	Seals worn	Check the seals and, if necessary, replace it
	Air leak	Check for any air leaks out of closing fasteners, tightening screws, container or filter chamber
<i>Motor very noisy.</i>	<i>Contact DELFIN after-sales</i>	

**Warning!**  
For any other problems, contact the DELFIN after-sales service.



## **5.1 Recommended spare parts**

<i>Code</i>	<i>Description</i>
<i>FI.0063.0000</i>	D500 H400 20 POCKETS ANT C FILTER
<i>FI.0003.0000</i>	H14 ABSOLUE FILTER D430X92H
<i>GI.0142.0000</i>	10X30 GASKET
<i>GI.0003.0000</i>	D500 FILTER GASKET
<i>SL.0475.0020</i>	D500 H70 FILTER RING
<i>SL.3375.0000</i>	RUBBER DEFLECTOR



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