



EXTRUSION

V570

 Use and Maintenance Manual



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1 Importance of the manual

This Manual must be considered as an integral part of the Machine:

- it must be kept during the entire life-span of the Machine,
- it must accompany the Machine if sold,
- besides containing all the useful information for the operators, it also contains the electrical, pneumatic and hydraulic layouts (in specific chapters) which will help during maintenance and repairs.

2 Purpose / aim of manual

This manual is an integral part of the machine and has been totally implemented by the Manufacturer to supply the information required for those authorised to interact with it.

The publication describes the state of the product at the moment of publication itself. In no way can it reflect the future and non-standard product.

The content of this manual has been checked to make sure it is correct and complies with the equipment described. However, it is impossible to ensure the absence of eventual differences.

No part of this manual can be reproduced or transmitted to third parties in any electronic or mechanical form or means for any type of use, without the prior written consent of the MANUFACTURER.

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3 Addressees


The present instruction manual, delivered with the machine in one copy, is supplied as an integral part of the machine. It is intended both for the operators and technicians qualified for installation, use and maintenance of the machine.


The department managers where this machine will be installed are obliged, in compliance with standards in force, to attentively read the content of the document and to have it read by operators and maintenance technicians for the parts which concern them.


The time spent for this purpose will be greatly repaid by the correct operating of the machine and its use in safe conditions.

4 Meaning of symbols

The following clearly specifies the meaning of the symbols and the definitions used in this document.

	ABSOLUTE PROHIBITION Pericolo imminente che potrebbe causare ferite gravi irreversibili, anche mortali.
--	---

	ATTENTION DANGER Pericolo che potrebbe causare ferite gravi, anche mortali.
---	---

	COMPULSORY PRESCRIPTION Pericolo che potrebbe causare ferite leggere o danni materiali.
---	---

5 Standard use and reasonably foreseeable forbidden and incorrect use


Use of the exhauster is subject to national standards in force.

Besides the instructions and the standards in force in the country where the machine is used, for the prevention of accidents it is also necessary to comply with the technical regulations for safe and correct work (Legislation relative to safety at the workplace Community Directive 89/391/EC and subsequent amendments, in Italy D. Lgs. 81/2008).

Do not perform any type of work which can jeopardise the safety of persons, objects or the environment.

Comply with the safety information and prescriptions contained in this instructions manual.

5.1 Standard permette use

	COMPULSORY PRESCRIPTION Respect the information indicated in these pages in order to safeguard one's health.
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The machine described in this manual is intended to be run by 1 operator trained and acquainted with the residual risks, but, as far as safety is concerned, having the skills of the maintenance technicians.

The SWARF EXHAUSTER, from here on called "machine", has been designed and built for the suction and storage of bulk products (swarf and/or liquids) in vessels.

The vessel is loaded at the side through 2 independent entrances to which the flexible piping is attached. The swarf is loaded into the vessel by means of a suction air flow.

After the bottom vessel has been removed, discharge is performed by lifting the said vessel and dumping the content inside of appropriate collection systems arranged by the user.

The suctioned bulk product, namely the swarf and/or liquids, consists in solid products generated from the machining of products such as aluminium, steel or wood.

Before starting the exhauster, connect the suction tube to the collector and connect the accessory suitable for the type of machining to be performed to the end of the tube or else connect this part to the outlet on the machinery to be used.

Before activating the equipment, read these instructions for use and keep them on hand to be able to consult them when needed.

Use of the swarf exhauster is reserved for persons who know how it works and have been expressly commissioned and trained.

Before using the machine, operators must be informed, instructed and trained as to the use of the equipment and concerning the substances for which it must be used, including the safe method for removing and eliminating the material collected.

The exhausters can be used only if you are sure they do not intake active ignition sources.

5.2 Suck of fluids



ATTENTION DANGER

Respect the information indicated in these pages to protect the health of the operator and for proper functioning of the vacuum cleaner.

The suction devices described in these instructions are intended for industrial use to suck liquids **but they are not fitted with an automatic level control**. Therefore there is a risk of damage to equipment due to overload, or damages due to leakage of the sucked liquid.

About the mentioned vacuum cleaners:

- never suck more than 20 l in a single suction
- switch-off suction device and empty the vessel at every suction

5.3 Reasonably foreseeable forbidden and incorrect use



ABSOLUTE PROHIBITION

Respect the information indicated in these pages to protect the health of the operator and for proper functioning of the vacuum cleaner.

The exhausters described in these instructions are intended for industrial use and their standard version is **not suitable** for suctioning dangerous and combustible/explosive powders.

It is forbidden to suction the following materials:

- **burning materials (cinders, hot ashes, lit cigarette, etc.);**
- **flammable liquids, aggressive fuels (such as petrol, solvents, acids, alkaline solutions, etc.).**
- **It is forbidden to suction the following materials: explosive materials and those with compression ignition (such as magnesium or aluminium powder, etc.).**
- **The exhausters are not suited to suction explosive substances or the likes in compliance with legislation on explosive substances, in particular: combustible liquids and mixtures of flammable powders and liquids.**

The exhausters must never be used or stored outdoors or in the presence of humidity.

Do not suction if the filtering element is torn.

Never spray water on the exhauster: this is dangerous for persons and there is danger of creating short circuits in the power supply

During operation:

- **Do not trample, crush, pull or damage the connection cable to the electrical mains.**
- **Disconnect the cable from the mains only by pulling the plug (do not pull the cable).**

Do not clean the filter elements with machine running. It could damage the elements.

5.4 Filters classification and powders emission in the environment

The allocation of hazardous powders to health and related suction devices is regulated by IEC 60335-2-69 worldwide and by EN 60335-2-69 at European level.

- Category of powders **L** (moderate). Powders with MPC values (Maximum permitted concentration in the work place) > 1 mg/m³, fall within this category.
At least 99% of sucked particles are withheld.
The sucked material is disposed of by attempting to lift little powder.
- Category of powders **M** (medium). Powders with MPC values (Maximum permitted concentration in the work place) > 0,1 mg/m³ and wood powders, fall within this category. At least 99,9% of sucked particles are withheld.
The sucked material is disposed of by attempting to lift little powder.
- Category of powders **H** (high). Powders with MPC values (Maximum permitted concentration in the work place) < 0,1 mg/m³, including carcinogenic and pathogenic dust, fall within this category.
At least 99,995% of sucked particles are withheld.
The sucked material is disposed of without lifting powders.

Check the dangerousness class of the permitted powder from the suction device's label.

6 Tasks of operator and maintenance technician

6.1 General personnel requisites



COMPULSORY PRESCRIPTION

Respect the information indicated in these pages in order to safeguard one's health.

Personnel who interact with the machine must:

- a. have read and understood all of the safety prescriptions included in the Instruction Manual;
- b. have normal mental-physical conditions;
- c. have been previously informed and trained concerning:
 - c.1. the risk of wounds or other harm that could be caused through direct or indirect contact;
 - c.2. the dangers caused by overtemperature, electric arcs or radiation produced and/or emitted by the electrical equipment included;
 - c.3. as experience teaches us, dangers of a non-electric nature can derive from electrical material which could be present;
 - c.4. the dangers of wounds or other harm deriving from the residual risks reported in this instruction manual;
- d. therefore possess (or acquire through proper formation and training) the following requisites:
 - d.1. a sufficient level of general and technical culture in order to understand this instruction manual and to correctly interpret the wiring diagram attached and all the technical drawings;
 - d.2. knowledge of the principle hygienic, safety and technological standards;
 - d.3. overall knowledge of the machine and of the electrical equipment present;
 - d.4. know what to do in case of an emergency;
 - d.5. know where to find the personal protective equipment and how to use it correctly if the indications of the Manufacturer prescribe it or if the collective protective devices are insufficient;
- e. he must also:
 - e.1. immediately report to the employer deficiencies in safety and protective devices, as well as eventual dangerous conditions that they become aware of, acting directly, in the event of an emergency and within their range of skills and possibility, in order to eliminate or reduce those deficiencies or dangers;
 - e.2. not remove or modify devices and other means for safety and protection without authorisation;
 - e.3. not perform on his own initiative operations or manoeuvres which are not within his skills and that could jeopardise his own safety and that of others;
 - e.4. not wear rings, wristwatches, jewellery, torn clothing, scarves, ties or any other hanging apparel or accessories that could be a source of risk; wrap sleeves tightly around wrists and keep hair gathered;
- f. be of age;
- g. be physically and mentally suitable to carry out especially difficult technical work;
- h. have been appropriately instructed as to the use and maintenance of the machine;
- i. have been deemed suitable by the employer to perform the task assigned;
- j. be capable of understanding and interpreting the operator manual and safety prescriptions;
- k. know the emergency procedures and their implementation;
- l. have the ability of operating the specific type of equipment;
- m. be familiar with required standards;
- n. have understood the operative procedures laid down by the machine Manufacturer.

Unless otherwise specified, personnel who perform installation, connections, maintenance, re-installation and re-use, troubleshooting, cleaning and disinfection, demolition and scrapping must be trained and expert as to safety and acquainted with the residual risks, and have the skills of the maintenance technicians as far as safety is concerned.

6.2 Operator



COMPULSORY PRESCRIPTION

Respect the information indicated in these pages in order to safeguard one's health.

The machine is designed to be run by one or more trained operators, acquainted with the residual risks, but, as far as safety is concerned, having the skills of the maintenance technicians. They are engaged in programming, command and control of the machine.

The normal work area of the operator is the area surrounding the machine to control automatic loading and around the control panel, in normal automatic mode conditions with fixed guards closed and locked and further protective devices active.

The tasks of the operator and the normal work areas are:

- a. controlling automatic loading (suction) of swarf inside the vessel when the machine is stably connected to the machines producing the swarf, in automatic mode conditions, with fixed guards closed and locked and further protective devices active
- b. manual load (suction) of the swarf into the vessel through rigid pipes moved by hand and connected to the machine through flexible hoses, when the machine is not stably connected to the machine producing the swarf but is used manually, in automatic mode conditions, with fixed guards closed and locked and further protective devices active
- c. manual discharge of swarf from the vessel into the company collection systems of the user, in manual mode conditions, with fixed guards closed and locked, with movements with power cut and at a standstill to ensure safety
- d. adjustments, setup, replacing filter, etc..., in manual mode conditions, with fixed guards closed and locked, with movements with power cut and at a standstill to ensure safety. It is not possible to activate the movement of dangerous mobile parts in enhanced safety conditions (low speed)
- e. inspection operations; these manoeuvres are easy, performed in safe conditions and clearly described in the instruction manual
- f. normal running of the machine, namely to start and stop the machine in standard conditions and to stop it in emergency conditions.

- g. general monitoring of machine operations; if needed, he must not intervene but must only activate the maintenance service
- h. cleaning outside and inside parts of the machine and any part needing cleaning, with movements with power cut and at a standstill to ensure safety (cleaning the inner parts of the machine entailing disassembling the fixed guards is entrusted to the maintenance technician).

The setup area includes area surrounding the control panel and the setup area within the danger zone, with fixed guards closed and locked, with movements with power cut and at a standstill to ensure safety. It is not possible to activate the movement of dangerous mobile parts in enhanced safety conditions (low speed).

In these conditions, it is allowed for the operator and maintenance technician to access the dangerous work zone of the machine.

The main dangerous work areas of the machine which can entail risks for the operator are:

- a. the loading and unloading area
- b. the surrounding and internal areas of the machine during movement of mobile parts;
- c. the internal area of the machine during adjustments, setup and cleaning
- d.

In the event of:

- **breakage of the filter;**
- **fire;**
- **short circuit;**
- **motor blockage;**
- **electrical shock;**
- **etc.;**

turn the exhauster off, pull out the plug and request the intervention of specialised personnel.

6.3 Maintenance technician



COMPULSORY PRESCRIPTION

Respect the information indicated in these pages to protect the health of the operator and for proper functioning of the vacuum cleaner.

Maintenance must be entrusted to **a maintenance technician**, he also trained and acquainted with the residual risks, but, as far as safety is concerned, having the skills of those in charge of maintenance.

He must perform all the maintenance work inside of the dangerous zones of the machine with guards open and with movements with power cut and at a standstill to ensure safety.

The maintenance technician can also access the electrical control board in the presence of live equipment.

The maintenance technician has the task of:

- a. perform setup, calibration, adjustments, cleaning inner parts of the machine (even disassembling), maintenance, service assistance, troubleshooting, replacing worn or deteriorated parts or structural parts (e.g. seal), eventually working within the dangerous area of the machine, with the fixed guards closed and locked and all mobile parts at a standstill due to power being cut from the actuators and/or with the external power isolation devices open and locked or with movements at a standstill in safe conditions, of the parts foreseen and carried in the instruction manual. In no event can the mobile parts be moved with manual controls and/or at low safety speed;
- b. perform cleaning of inner parts of the machine (even disassembling), maintenance, lubrication, service assistance, troubleshooting, replacing worn or deteriorated parts or structural parts, within the dangerous area of the machine, with the fixed guards closed and all mobile parts at a standstill due to power being cut from the actuators and/or with the external power isolation devices open and locked or with movements at a standstill in safe conditions, of the parts foreseen and carried in the instruction manual. In no event can the mobile parts be moved with manual controls and/or at low safety speed;
- c. to perform the interventions referred to in the previous points and as prescribed in the instruction manual, also removing the fixed guards.

The work areas which can present risks for the maintenance technician of the machine are:

- a. the area relative to setup, calibration, adjustments, repairs, lubrication, troubleshooting and replacement of worn or deteriorated parts foreseen and carried in the instruction manual;
- b. the surrounding and internal areas of the machine during movement of mobile parts;
- c. the areas surrounding the electrical covers, electrical cables and the pneumatic pipelines;
- d. the maintenance area around the motors and the relative kinematic transmission chains;
- e. the areas around the fixed guards;
- f. the routine and extraordinary maintenance areas;
- g. the electrical equipment maintenance areas.

7 Description of safety functions

Since failures or problems with the electrical equipment can cause dangerous situations or damage the machine or production, appropriate measures have been taken to reduce the probability that these faults or problems occur.

Hereafter is carried the degree of measure adoption, the application level of which depends on the risk level relative to the respective application.

The guards and safety devices of the machine must not be removed except by the maintenance technician for work purposes. Should they be removed, measures must be taken immediately capable of highlighting the danger and of reducing it to a minimum. The guard or safety device must be put back into place as soon as the reasons which required them to be removed temporarily no longer exist.

Each functional unit is protected by covers, also implemented by means of fixed guards, which do not allow access to any dangerous part (cfr. figures attached).

8 Warnings concernig residual risks

The employer, in compliance with Directive 89/391/EEC and subsequent amendments and updates, regarding the implementation of measures aimed at promoting the safety and health of workers during work, must take care of eliminating or reducing the residual risks as foreseen in the manual.

The employer must instruct personnel concerning risks of accidents, safety devices and general accident-prevention rules foreseen by Community Directives and by legislation in the country where the machine is installed.
The user is in charge of this requirement and to make sure the instructions given have been adequately received.

The employer is responsible for instructing the operators and maintenance technicians by giving training courses, eventually in collaboration with the manufacturer of the machine, so that they may be appropriately instructed as to risks in general and the residual risks indicated in this manual.

It is therefore necessary that **use, maintenance performed by the user and cleaning** be entrusted to trained and skilled personnel.

The employer is responsible for making sure that the instructions given have been received adequately.

For safety purposes, during machining, no one but the operator may be present in the area around the machine.
As an exception to this prescription, the presence of the maintenance technician expressly authorised by the production manager is allowed.

When required, **the user is also responsible for:**
activating a formation/training course, eventually in collaboration with the manufacturer of the machine, so that **operators and maintenance technicians** may be appropriately instructed as to risks in general and the residual risks indicated in this manual.
using personal protective equipment in compliance with that indicated in directive 2009/104/EC and subsequent amendments and updates.



ATTENTION DANGER

Respect the information indicated in these pages to protect the health of the operator and for proper functioning of the vacuum cleaner.

USE OF THE MACHINE

The machine must be used exclusively for the purpose for which it is expressly intended, as specified in this manual.
Use of the machine is reserved to personnel who have followed a specific course concerning use and safety and have carefully read this instruction manual.

The operator, besides being sufficiently instructed and trained to operate the machine with care and to pay attention to the signs carried on the machine, must always have the utmost attention during normal use of the machine and respect the intended way of use.



ATTENTION DANGER

Respect the information indicated in these pages in order to safeguard one's health.

RESIDUAL RISK DUE TO NOISE

As experimental tests have shown, the machine produces an A-weighted equivalent continuous noise pressure level of (please see technical data table).

To protect ears from being harmed due to lacerating or insistent noise, the operator and maintenance technician, besides being properly instructed and trained, during machine operation and maintenance, must always use the appropriate protective equipment for the ears, such as earmuffs, protective caps or similar personal ear protections.



ATTENTION DANGER

Respect the information indicated in these pages in order to safeguard one's health.

RESIDUAL RISKS DUE TO MALFUNCTIONING IN PLANT LIGHTING.

In the work areas of the operator and maintenance technician, the lighting in the plant **must not be less than 500 lux**.
If the lights in the plants are faulty, during normal work or cleaning operations and during adjustments/setup and maintenance in general, there is a residual risk for the operator and maintenance technician who would be forced to work with insufficient light.

In this case, **work must be interrupted immediately and the maintenance technicians of the plant must be informed in order to replace the faulty light bulb/s**.

The operator or maintenance technician can continue work only after proper lighting has been restored.



ATTENTION DANGER

Respect the information indicated in these pages in order to safeguard one's health.

RESIDUAL RISKS DUE TO LIFTING OPERATIONS AND INTERVENTIONS REQUIRING MANUAL OPERATIONS

Operations relating to lifting and transporting the machine and its parts, setup or handling, loading and unloading products and handling parts in general, though performed in compliance with the indications given by this manual, are manual operations which

Cod. N0000043 rel-0/2016

entail a residual risk **mainly due to blows, crushing, dragging, scraping or abrasions.**

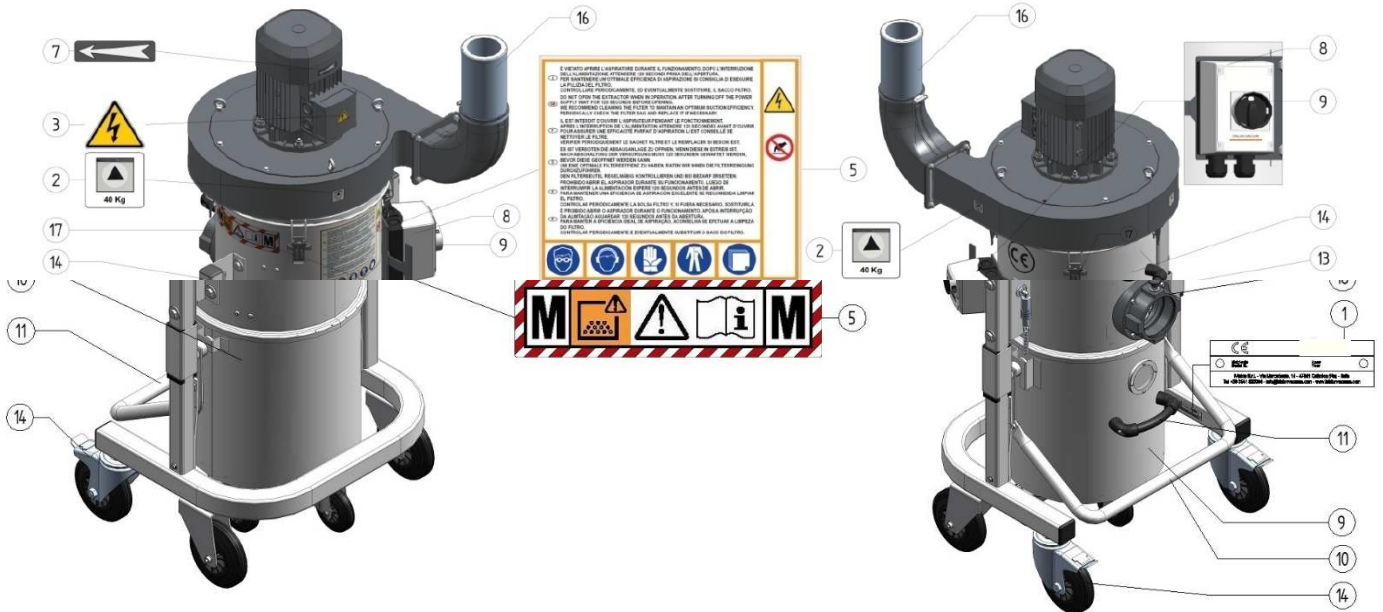
These operations require a considerable degree of attention by workers; the person in charge of these operations must adequately inform personnel about these residual risks.

Moreover there is a residual risk of blows, abrasions, cuts, puncturing and scraping for the operator and maintenance technician during **setup, maintenance, cleaning and other manual operations which entail parts or components falling from on high,** since they must perform manual interventions on the machine.

9 Description of swarf exhauster

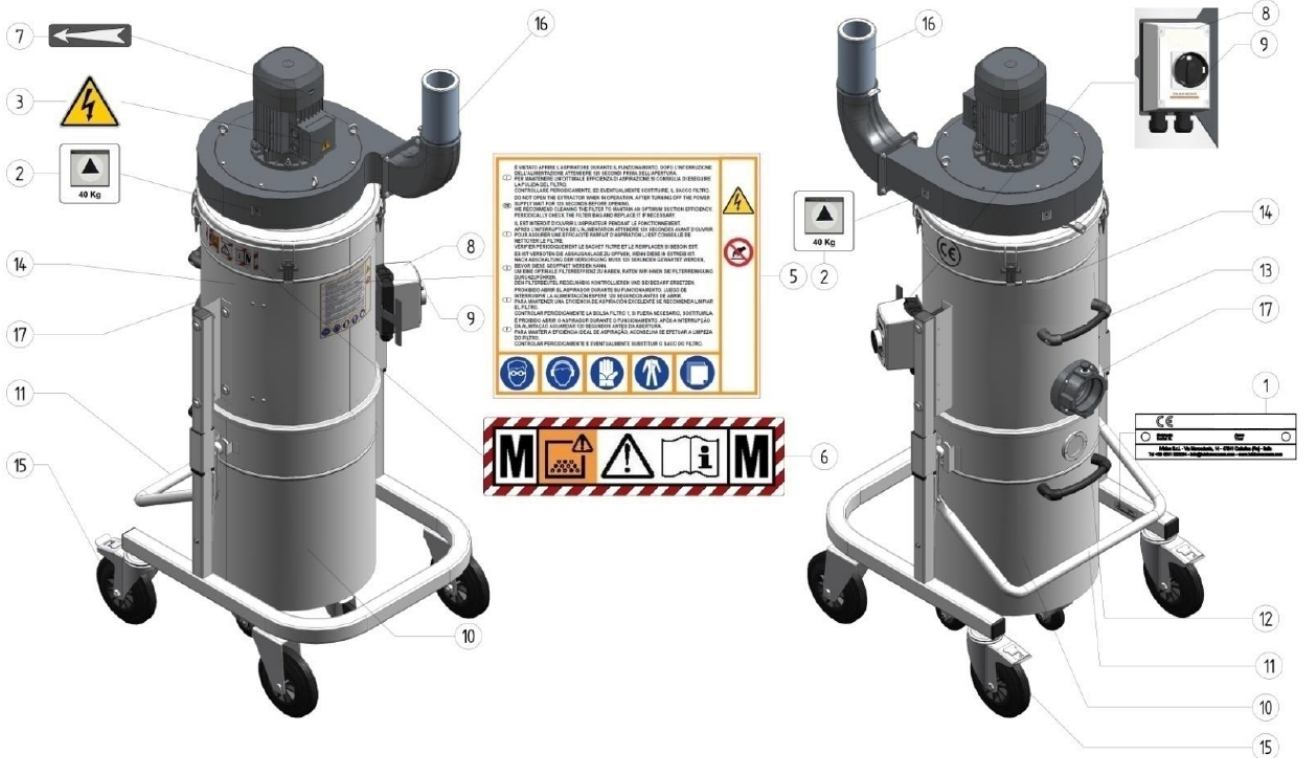
9.1 Lables, controls, indicators and connections

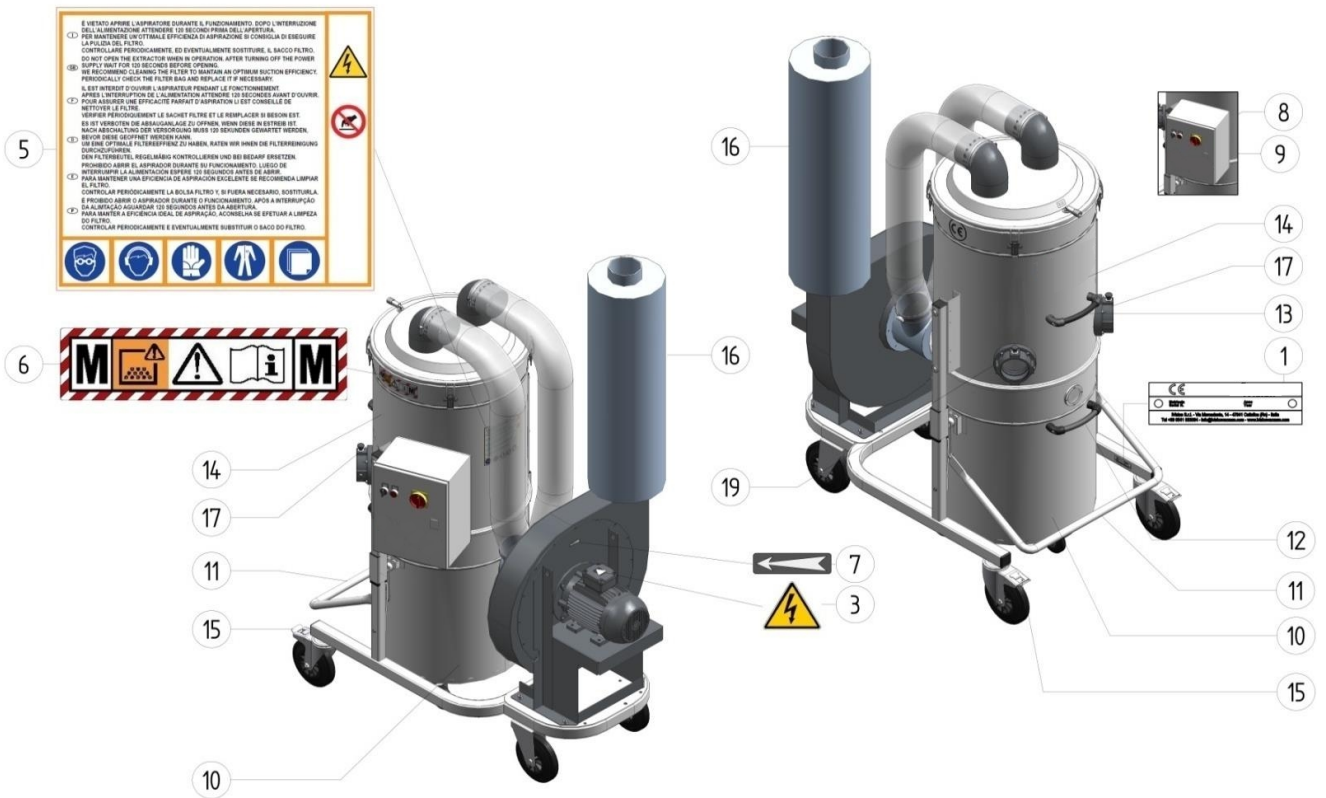
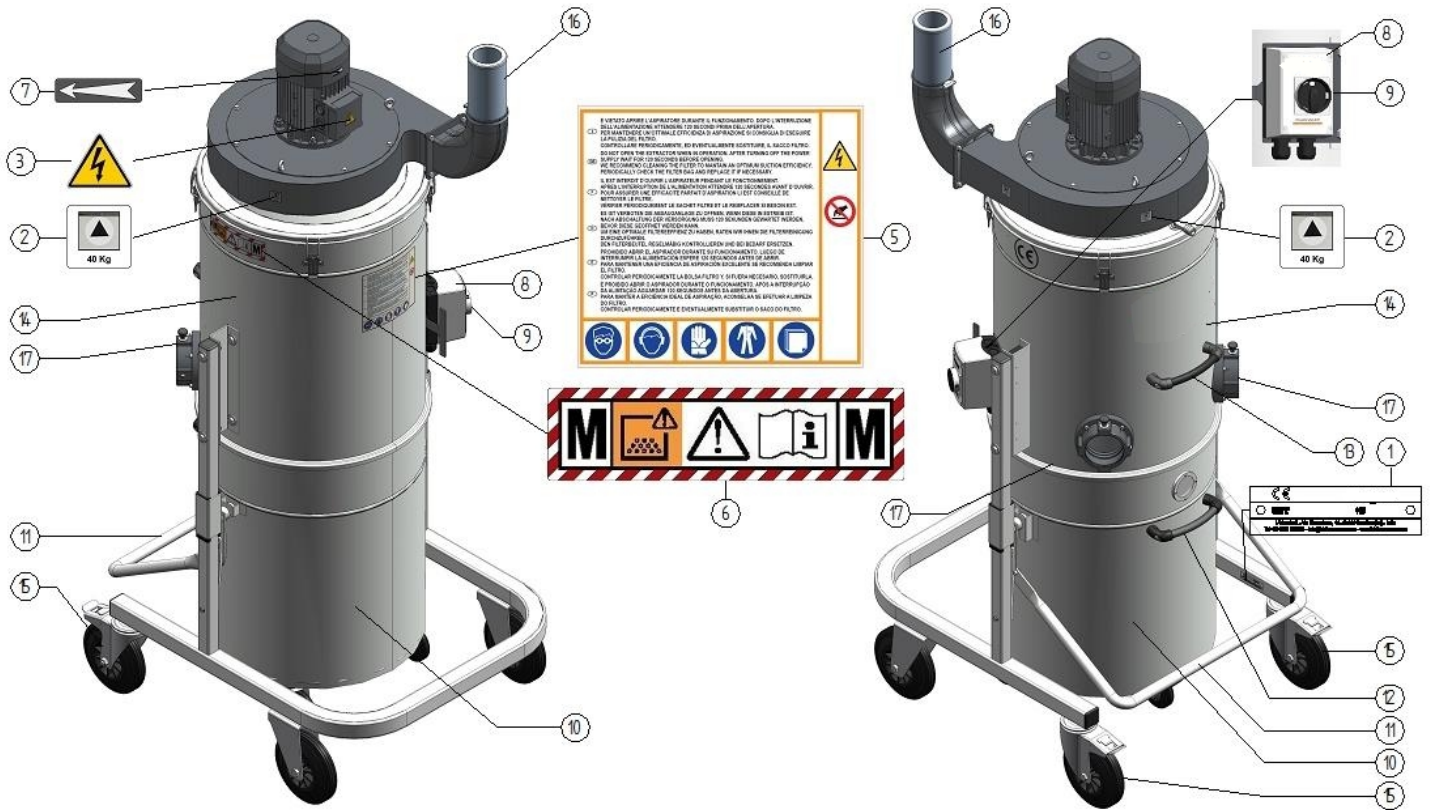
IV1-1,5-38-1200
IV1-2,4-10-706



IV2-1,5-100-1200
IV2-2,4-26-706

IV2-2,2-100-1400
IV2-3,5-26-824





- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Identification plate 2. Plate indicating the weight of the upper exhauster unit (V570-2,2-1400) 3. Plate indicating danger due to electricity 4. List of PPE for use and maintenance of the machine
Warning plate (for L, M version models) 5. Arrow indicating the direction the motor rotates 6. Control panel 7. Start / Stop switch | <ol style="list-style-type: none"> 8. Collection vessel 9. Collection vessel unlatching lever 10. Collection vessel movement handle 11. Suction device movement handle 12. Filter chamber 13. Wheels brakes 14. Discharge outlet Silenced 15. Suction collector 16. Safety valve |
|--|---|

This exhauster generates a strong air flow which is suctioned by the suction collector (17) and exits through the discharge outlet (16); after having positioned the tube and accessories, make sure the motor rotates in the right direction. This suction device has been manufactured so that drainage (16) can be ducted with a pipe with diameter:

Dimensions								
Parametro	U.M.	IV1-1,5-38-1200	IV2-1,5-100-1200	IV2-2,2-100-1400	IV3-2,2-160-1400	IV3-3-160-1500	IV3-3-160-2500	IV3-3-160-3500
		IV1-2,4-10-706	IV2-2,4-26-706	IV2-3,5-26-824	IV3-3,5-42-824	IV3-4,8-42-883	IV3-4,8-42-1471	IV3-4,8-42-2060
Diametro tubo	mm							
Parametro	U.M.	IV3-4-160-2200	IV3-5,5-160-2500	IV3-7,5-160-3200	IV3-9,2-160-3500	IV3-11-160-3800	IV3-22-160-4400	-
		IV3-6,4-42-1295	IV3-8,8-42-1471	IV3-12-42-1883	IV3-15-42-2060	IV3-18-42-2236	IV3-35-42-2589	-
Diametro tubo	mm						200	-

This mode must be used every time the air discharge creates dangerous situations to the environment where it is installed. Direct discharges must be avoided:

- in environments with dust presence
- towards operators
- in environments with controlled atmospheres

The exhauster is supplied with an internal baffle which, providing a circular centrifugal motion to the suctioned substances, favours their dropping into the vessel. The exhauster is equipped with a filter which allows it to work with most applications.

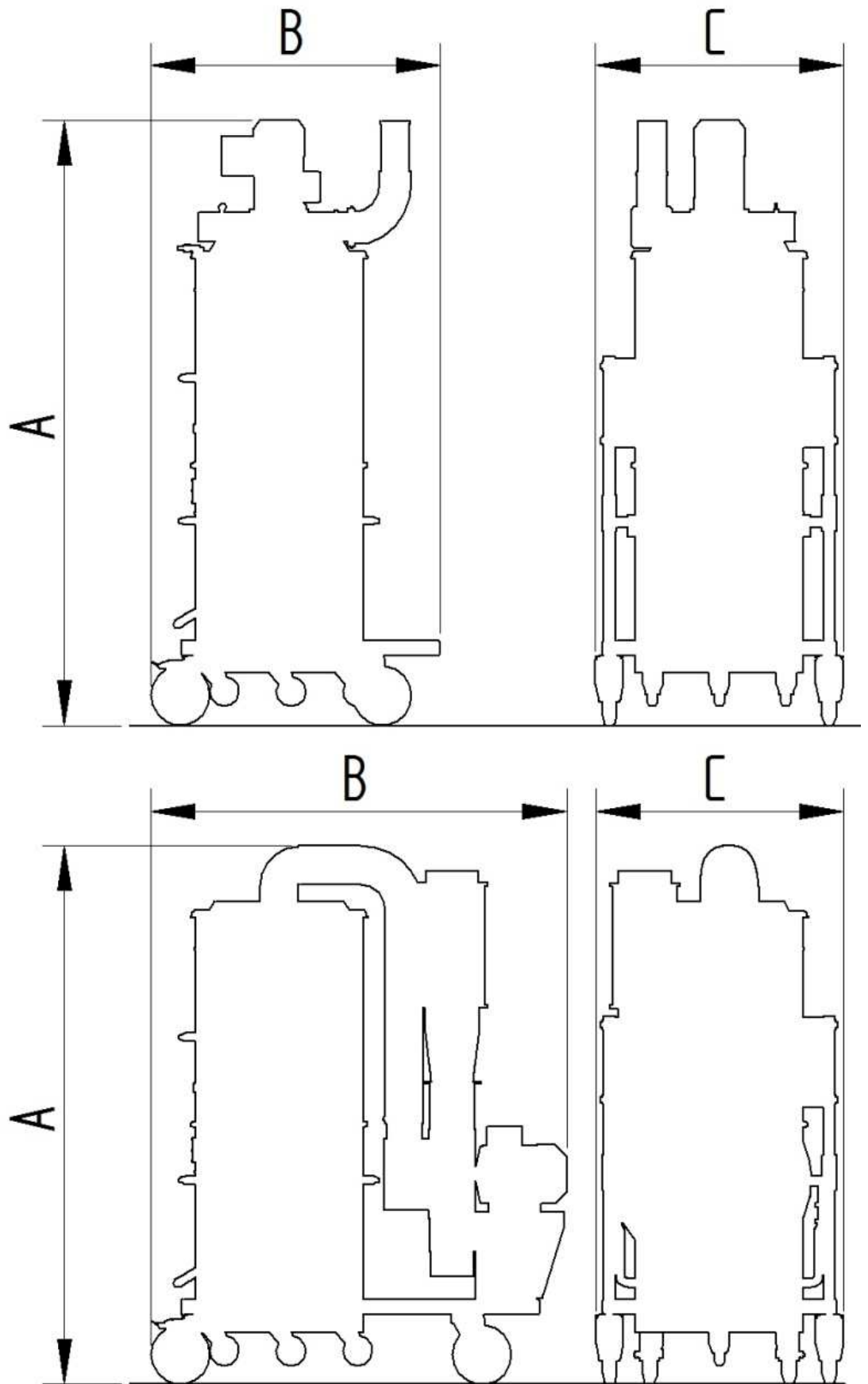


ABSOLUTE PROHIBITION

Respect the information indicated in these pages to protect the health of the operator and for proper functioning of the vacuum cleaner.

In case of dust, smoke or aspired material leakage from the drain (16) IMMEDIATELY SWITCH OFF THE VACUUM CLEANER AND PLEASE CONTACT OUR COSTUMER SERVICE TEAM.

9.2 Dati tecnici



Dimensions								
Parameter	U.M.	IV1-1,5-38-1200	IV2-1,5-100-1200	IV2-2,2-100-1400	IV3-2,2-160-1400	IV3-3-160-1500	IV3-3-160-2500	IV3-3-160-3500
		IV1-2,4-10-706	IV2-2,4-26-706	IV2-3,5-26-824	IV3-3,5-42-824	IV3-4,8-42-883	IV3-4,8-42-1471	IV3-4,8-42-2060
Height A	mm	1'370	1'810	1'810	2'030	1'800	2'070	1'880
Length B	mm	710	830	830	985	1'400	980	1'460
Width C	mm	640	740	740	845	870	845	845
Weight	Kg	75	95	100	125	210	125	180
Parameter	U.M.	IV3-4-160-2200	IV3-5,5-160-2500	IV3-7,5-160-3200	IV3-9,2-160-3500	IV3-11-160-3800	IV3-22-160-4400	-
		IV3-6,4-42-1295	IV3-8,8-42-1471	IV3-12-42-1883	IV3-15-42-2060	IV3-18-42-2236	IV3-35-42-2589	-
Height A	mm	2'070	-	-	2'160	2'050	2'970	-
Length B	mm	1'400	-	-	970	1'690	1'740	-
Width C	mm	900	-	-	1'610	1'170	1'300	-
Weight	Kg	210	-	-	280	380	445	-

Dati tecnici*								
Parameter	U.M.	IV1-1,5-38-1200	IV2-1,5-100-1200	IV2-2,2-100-1400	IV3-2,2-160-1400	IV3-3-160-1500	IV3-3-160-2500	IV3-3-160-3500
		IV1-2,4-10-706	IV2-2,4-26-706	IV2-3,5-26-824	IV3-3,5-42-824	IV3-4,8-42-883	IV3-4,8-42-1471	IV3-4,8-42-2060
Suction inlet	mm	1 x ø100			2 x ø100		2 x ø160	
Power	Kw	1,5	1,5	2,2	2,2	3	3	3
Noise	Hp	2,4	2,4	3,5	3,5	4,8	4,8	4,8
Protection	dB (A)	56	64	67	67	64	58	67
Isolation	IP	55						
Vessel capacity	Classe	F						
Max Depression	L - gal	38 - 10	100 - 26	100 - 26	160 - 42	160 - 42	160 - 42	160 - 42
Max Flow rate (without tube and reductions)	hPa - mbar	25 - 25	25 - 25	30 - 30	30 - 30	60 - 60	58	60 - 60
Filter surface	m ³ /h - CFM	1'200 - 706	1'200 - 706	1'400 - 824	1'400 - 824	1'500 - 883	2'500 - 1'471	3'500 - 2'060
Filter Class	m ²	0,5	0,72	0,72	1,2	1,2	8,0	8,0
Parameter	-	M						
Suction inlet Power	U.M.	IV3-4-160-2200	IV3-5,5-160-2500	IV3-7,5-160-3200	IV3-9,2-160-3500	IV3-11-160-3800	IV3-22-160-4400	-
		IV3-6,4-42-1295	IV3-8,8-42-1471	IV3-12-42-1883	IV3-15-42-2060	IV3-18-42-2236	IV3-35-42-2589	-
Noise	mm	2 x ø100	-	-	2 x ø160			-
Protection	Kw	4	5,5	7,5	9,2	11	22	-
Isolation	Hp	6,4	8,8	12	15	18	35	-
Vessel capacity	dB (A)	64	-	-	65	67	-	-
Max Depression	IP	55						
Max Flow rate (without tube and reductions)	Classe	F						
Filter surface	L - gal	160 - 42	160 - 42	160 - 42	160 - 42	160 - 42	160 - 42	-
Filter Class	hPa - mbar	28 - 28	-	-	80 - 80	90 - 90	-	-
Suction inlet	m ³ /h - CFM	2'200 - 1'295	2'500 - 1'471	3'200 - 1'883	3'500 - 2'060	3'800 - 2'236	4'400 - 2'589	-
Power	m ²	1,2	-	-	8,0	8,0	8,0	-
Noise	-	M						

The suction devices are supplied in standard version with Class M filter element. A different filter element may be installed on request, that might change class of pertinence of powers or even cancel it, making it unsuitable for dangerous powder suction (if so, the Class M emission and efficiency values are valid).

Check the dangerousness class of the permitted powder from the suction device's label.

Compressed air supply*		
Parameter	U.M.	Valori
Minimum air supply pressure	bar	3
Maximum air supply pressure	bar	6
Operating air pressure	bar	6
Dimensions of air supply connection outlet	-	Quick female connection 1/4"
Compressed air consumption - Average	L/min	18

* Version with filter pneumatic cleaning.


9.3 Service conditions

TYPE OF SERVICE CONDITION	LIMITS FOR USER
Electrical control board installation mode	inside
Installation mode of electrical equipment on board machine	inside
Type of installation	Built into the machine
Conditions of support ground	Flat and smooth: planarity and slope errors within 1 % (cfr. instruction manual)
Capacity of support ground	250 kg/ m ² (cfr. instruction manual)
Max ambient air temperature	+40°C
Minimum ambient air temperature	5°C (if the electrical equipment has at least IP54 protection degree)
Minimum ambient air temperature	0°C (if the electrical equipment has less than IP54 protection degree)
Working ambient temperature	+5 °C < T < +45 °C
Transportation and storage temperature	between -25°C and +55°C (when less than 24 h it can be kept up to +70°C)
Maximum altitude above sea level	1,000m
Minimum lighting required for operation	500 lux
100% relative humidity at +25°C (if the electrical equipment has at least IP54 protection degree)	
Relative humidity must not exceed 50% at +40°C or 90% at +20°C (if the electrical equipment has protection degree below IP54)	
Equipment for machine with inside installation	
Machine <u>inadequate</u> to operate in the presence of contaminating agents: such as powders, acids, corrosive gas, salt and the likes	
Machine <u>inadequate</u> to operate in potentially explosive atmospheres classified as zone 0, zone 1 or zone 2.	
Machine <u>inadequate</u> to operate in the presence of ionising and non-ionising radiation: such as microwaves, ultraviolet rays, lasers, X-rays and the likes	
Electrical equipment <u>inadequate</u> to equip machines or to operate in the presence of vibrations and blows: otherwise mount it far from the equipment and include vibration-dampening supports	
Pollution degrees for electrical equipment = 3 (THREE)	
Installation atmosphere = two (2)	
It must not be used in home, business or light industrial environments unless it complies with standard EN 61000-6-1	
Intended for direct/exclusive service of industrial processing machinery	

9.4 Storage conditions

Atmospheric temperature	-25 / +40°C (if the electrical material has at least IP54 protection degree) 0 / +40°C (if the electrical material has a protection degree less than IP54)	Do not store in places subject to sudden temperature drops which could cause condensation or freezing.
Storage temperature	-25 / +55°C (if the electrical material has at least IP54 protection degree) 0 / +55°C (if the electrical material has a protection degree less than IP54)	
Relative humidity	100% at +25°C (if the electrical material has at least IP54 protection degree) Less than 50% at +40°C Less than 90% at +20°C (if the electrical material has a protection degree less than IP54)	
Vibrations	5.9 m/s ² (0.6G) or greater	
Atmospheric pressure	900 mbar or greater	

9.5 Packing and unpacking

	ATTENTION DANGER Respect the given information in these pages.
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Dispose of the packaging material in compliance with legislation in force.

10 Connection to electrical mains



COMPULSORY PRESCRIPTION

Respect the information indicated in these pages to protect the health of the operator and for proper functioning of the vacuum cleaner.

Before activating, make sure that the exhauster is in perfect conditions.

- ***Before connecting the exhauster to the mains, make sure that the voltage indicated on the identification plate corresponds to that of the mains.***
- ***Place the plug of the connection cable in a socket with properly installed earthing contact/connection. Make sure that the exhauster is off.***
- ***Plugs and connectors of the connection cables to the mains must be protected against splashes of water.***
- ***Check the correct connection to the electrical mains and the plug.***
- ***Use only exhausters with cables in perfect conditions (if the cable is damaged there is the risk of electrical shocks!).***

Recommendation:

If you use an extension cord, make sure that the cross-section is suited to the absorbed current and to the protection degree of the exhauster.

Minimum cross-section of extension cords:

Cable Length	Section (mm ²)	
	< 16 A	< 25 A
Untill 20 m	1,5	2,5
From 20 to 50 m	2,5	4,0

The sockets, plugs, connectors and extension cord must be such to maintain the IP protection degree of the exhauster carried in the "Technical Data" table.

11 Checks before start-up

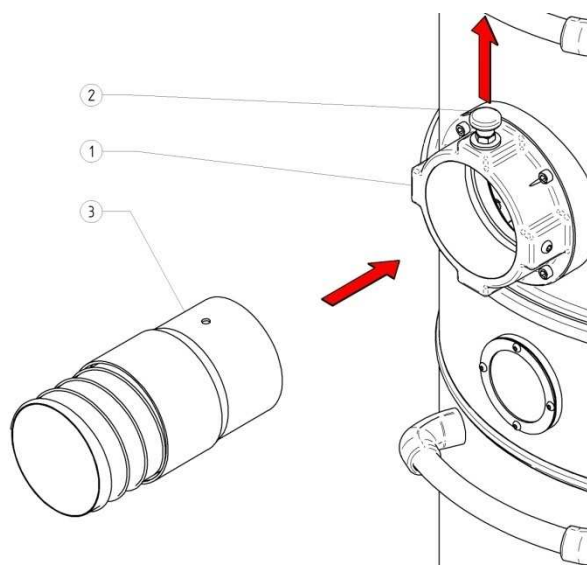
11.1 General checks

1. Suction collector
2. Tube Clamping Knob
3. Suction tube

Before turning the device on, check:

- that the filter is present.
- that the castor brakes are blocked.
- that the draw latches are blocked.
- that the suction tube (3) is correctly* inserted into the suction collector (1) and that the hole in the suction tube (3) is inserted into the tube clamping knob (2).

* To perform this operation properly, lift the tube clamping knob (2), and insert the suction tube (3) inside the suction collector (1) until the previously released tube clamping knob (2) fits into the hole in the suction tube (3).



11.2 Silencer Installation



ABSOLUTE PROHIBITION

Respect the information indicated in these pages to protect the health of the operator and for proper functioning of the vacuum cleaner.

Some models equipped with electric fans are shipped with a silencer uninstalled for space reasons. It's the task of the installer/utilizer to install the silencer before turning on the vacuum. The use of vacuum cleaners without a silencer installed makes the rotor accessible, thus putting at risk the safety of the person.



12 Avviamento



COMPULSORY PRESCRIPTION

Before using the vacuum, ensure that the motor's direction of rotation is correct by verifying it with respect to the indication arrow. In the case that this does not work, ask for the intervention of specialized personnel in order to correctly connect the phases.

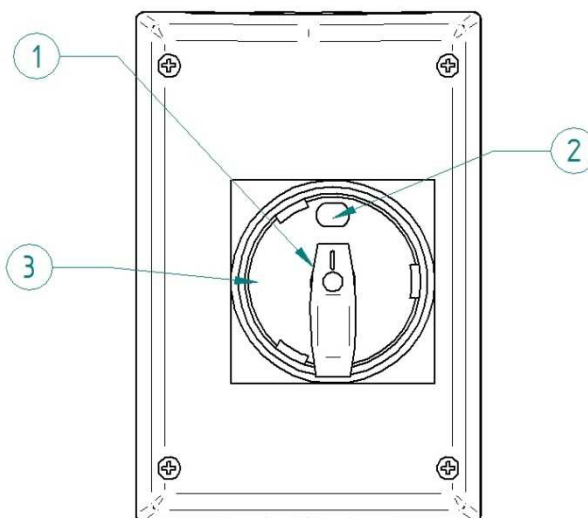
12.1 Aspiratore Standard

1. Selector
2. Position start
3. Position stop

Block the brakes of the castors before starting

Start/Stop vacuum cleaner

- Set the selector (1) in position (2) to start.
- Set the selector (1) in position (3) in order to power down.



12.2 Special Starts

Refer to the electrical diagram attached for all the activations not indicated in this manual.

13 Filter cleaning



COMPULSORY PRESCRIPTION

Respect the information indicated in these pages in order to safeguard one's health.

Stop the machine before cleaning the filter.

A dirty filter reduces the aspiration efficiency.

We strongly recommend a constant filter cleaning.

The medium filter average life is about 6 months, but it could reduce due to aspired material, Vacuum Cleaner using or cleaning frequency.

MG recommend filter substitution every 6 months or a bit often if is necessary.

[NOTE]

It is forbidden to wash the filters.

13.1 Manual Version (Standard)

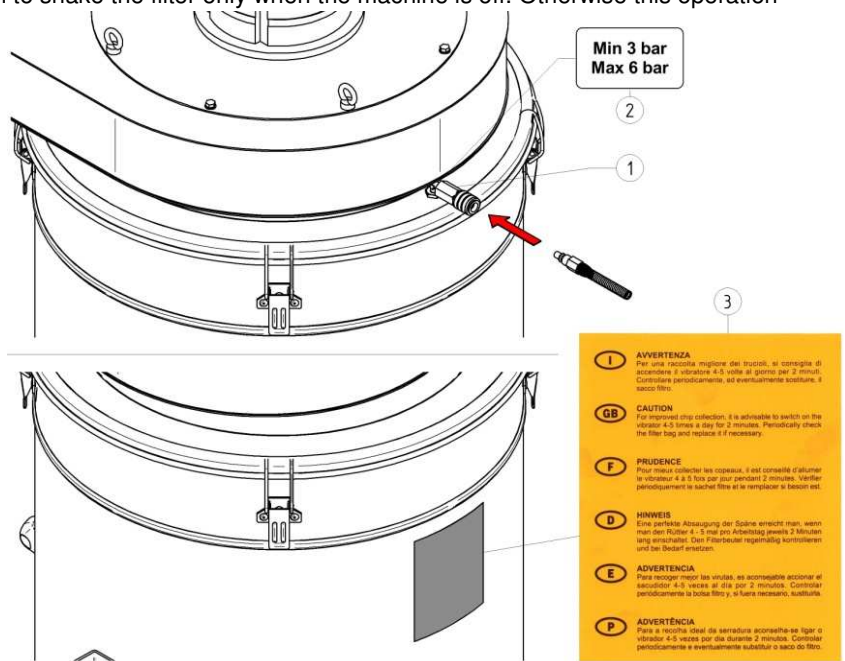
1. Compressed Air Connection
2. Plate indicating pressure limits for machine feeding
3. Warning plate

It recalls the operator's attention, warning him to shake the filter only when the machine is off. Otherwise this operation would be ineffective and risk damaging the filter

With regard to amount of sucked material, apply air to the connection (1) to clean the filter.
Check the "Warning plate" (3) to know how often it should be shaken.

[NOTE]

To increase suction efficiency and filter durability, we recommend running a cleaning cycle at the end of every work-shift.



13.2 Semi-automatic version with bag filter (Optional)

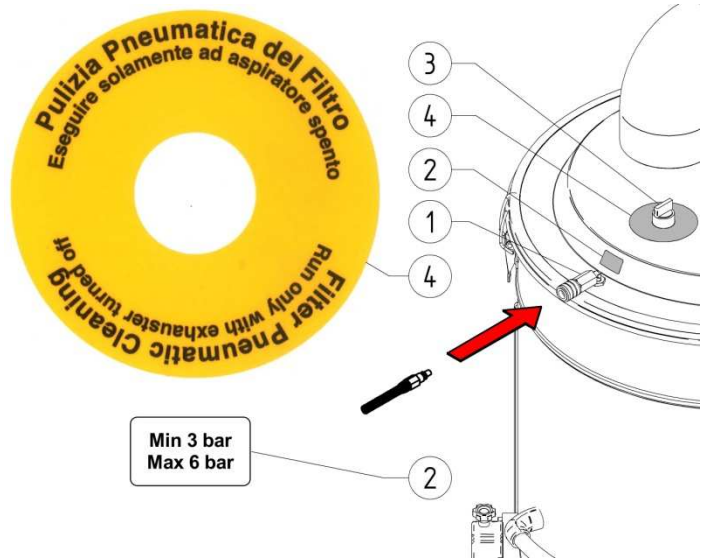
1. Compressed Air Connection
 2. Plate indicating pressure limits for machine feeding
 3. Selector Switch
 4. Warning plate
- It recalls the operator's attention, warning him to shake the filter only when the machine is off. Otherwise this operation would be ineffective and risk damaging the filter

With regard to amount of sucked material clean the filter.

- Provide air to coupling (1).
- Turn Selector Switch (3).

[NOTE]

To increase suction efficiency and filter durability, we recommend running a cleaning cycle at the end of every work-shift.
Coupling (1) can remain connected even during normal use of the suction device.

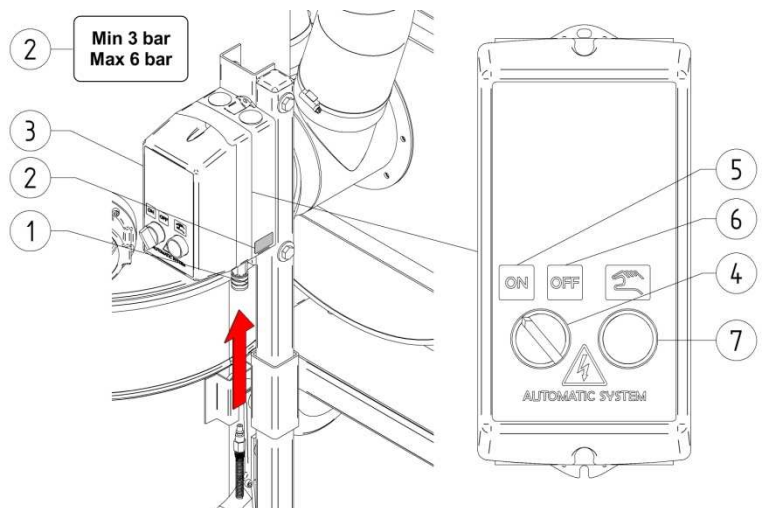


13.3 Automatic version with bag filter (Optional)

1. Compressed Air Connection
2. Plate indicating pressure limits for machine feeding
3. Electric Box
4. Selector Switch
5. ON" position
6. OFF" position
7. "Instantaneous Cleaning" button

This device runs automatic cleaning cycles at set time intervals.

- Provide air to coupling (1).
- To activate the option, set selector switch (4) to the "On" position (5).
- To deactivate the option, set selector switch (4) to the



“Off” position (6).

- The filter can be cleaned instantaneously by pressing button (7).

[NOTE]

To increase suction efficiency and filter durability, we recommend running a cleaning cycle at the end of every work-shift. Coupling (1) can remain connected even during normal use of the suction device.

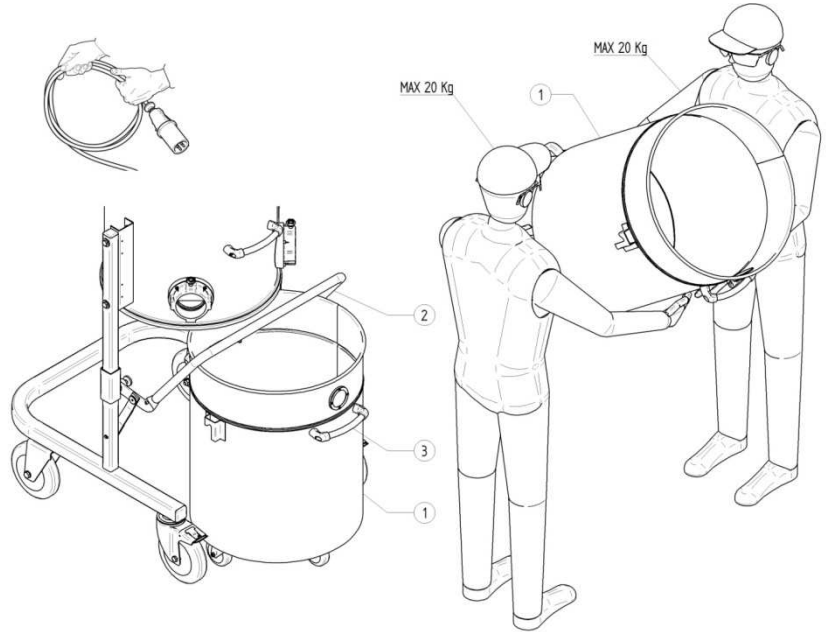
14 Emptying swarf vessel

	COMPULSORY PRESCRIPTION
	Respect the information indicated in these pages to protect the health of the operator and for proper functioning of the vacuum cleaner.

Turn the machine off and remove the plug before doing this work.
Roll up the connection cable.

Before emptying the vessel, clean the filter (see paragraph “Filter cleaning”).

1. Swarf vessel
2. Vessel unlatching lever
3. Swarf vessel movement handle



Unlatch the swarf vessel (1) lifting the unlatching lever (2) remove it using the movement handle (3).

- Empty the chipping container (1) by lifting it as indicated in the figure.

Every operator is enabled to lift max 20 kg; therefore, the maximum weight allowed for two operators to empty this container is **40 Kg**.

Use specific lifting devices (optional) in the event the container reaches a heavier weight than that indicated.

- Check the integrity and correct positioning of the seal (See paragraph “Checking seals”).
- Put the vessel back in place and latch it.

IT IS PROHIBITED to tie ropes, chains, or other lifting means to the Handle to handle the chipping container (3). This handle must be used only to move the container close to the emptying area.

[N.B.]

- The supplied filter must be installed correctly (see paragraph “Removing and replacing filter”).

15 Shutdown

	COMPULSORY PRESCRIPTION
	Respect the information indicated in these pages in order to safeguard one’s health.

- Turn the exhauster off and remove the plug from the socket.
- Roll up the connection cable.
- Empty the collection vessel following the instructions carried in paragraph “Emptying swarf vessel”.
- Clean the exhauster as described in paragraph “Maintenance and repairs” and paragraph “Waste disposal”.
- Store the appliance in a dry room, out of reach of authorised persons.

16 Emergency stop

	COMPULSORY PRESCRIPTION
	Respect the information indicated in these pages to protect the health of the operator and for proper functioning of the vacuum cleaner.

Press the stop button .

17 Maintenance and repairs

	COMPULSORY PRESCRIPTION
	Respect the information indicated in these pages to protect the health of the operator and for proper functioning of the vacuum cleaner.

Before performing cleaning or maintenance and while replacing spare parts or converting the appliance to other variants, disconnect it from its power source; the plug must be removed.

- Do only the maintenance work described in this manual.
- Do not modify the exhauster. If these conditions are not respected, your safety could be in jeopardy; moreover, the CE declaration of conformity issued with the machine would become void.

For maintenance not described in this manual and for repairs, contact the technical service of the manufacturer or our sales network.

The following precautions must apply during all maintenance operations, including cleaning and replacing the filter.

■ **When the user is performing maintenance, the appliance must be disassembled, cleaned and overhauled, as far as is reasonably applicable, without causing risks for maintenance technicians or third parties.**

The precautions taken include conditions for filtered ventilation of exhaust air from the room in which the appliance is disassembled, cleaning the maintenance area and suitable personal protection.

■ **Have a technical inspection performed at least once a year, for example: checking the filter looking for damage relative to air tightness of the appliance and the correct functioning of the electrical control board. A skilled person must perform this check.**

17.1 Removing and replacing filter



COMPULSORY PRESCRIPTION

Respect the information indicated in these pages to protect the health of the operator and for proper functioning of the vacuum cleaner.

Should the filter be broken, it must be replaced:

- Turn the machine off and remove the plug.
- Roll up the connection cable.
- Wear P2 or P3 mask, gloves and adequate protective clothing (PPE) depending on type of sucked material and conditions in the work place where said operations take place.
- Operate with care in order not to disperse swarf and/or suctioned material.
- Insert the removed or replaced filter in an impenetrable plastic bag.
- Seal the bag.
- Dispose of the filter in compliance with laws in force.
- Do not damage the filter during these operations.

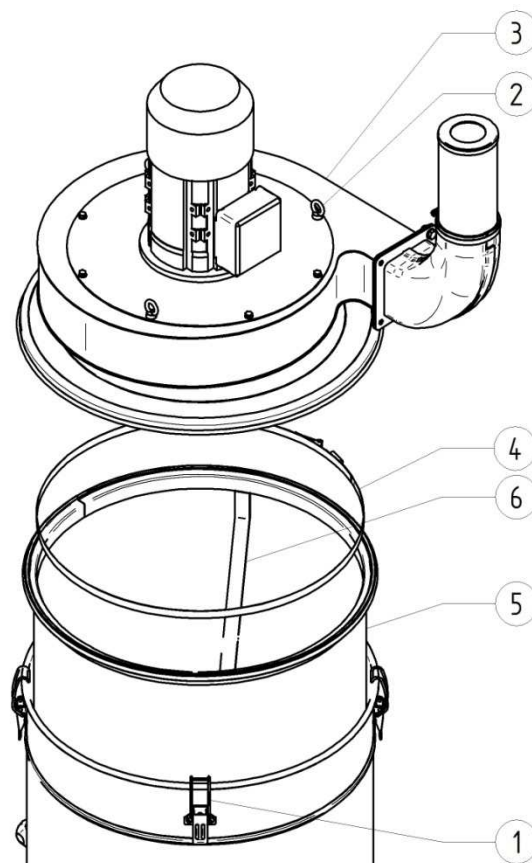
17.1.1 Manual version with bag filter (standard)

1. Draw latches
1. Lifting eyebolts (where present)
2. Top cover
3. Filter clamp
4. Filter
5. Filter holder frame

- Unhook the 4 draw latches (1).
- Lift the Top cover (3) by the specific Lifting Eyebolts (2) (where available) using suitable lifting and movement devices such as forklifts, hoists, A-frames, overhead crane, etc..., all approved and certified in compliance with legislation and regulations in force.
- Loosen the filter clamp (4).
- Remove the filter (5), placing it inside of a PVC bag.
- Assemble the new filter (5)* and block it to frame (6) with specific Clamp(4).
- Proceed in the opposite order as to that described previously to mount the cover/filter in the suction vessel.
- Dispose of the filter in compliance with legislation in force.

*** Ensure the new filter is of identical dimensions and features to that replaced.**

It is advised to use only original spare parts and filters.



17.1.2 Versione semi-automatica (Opzionale)

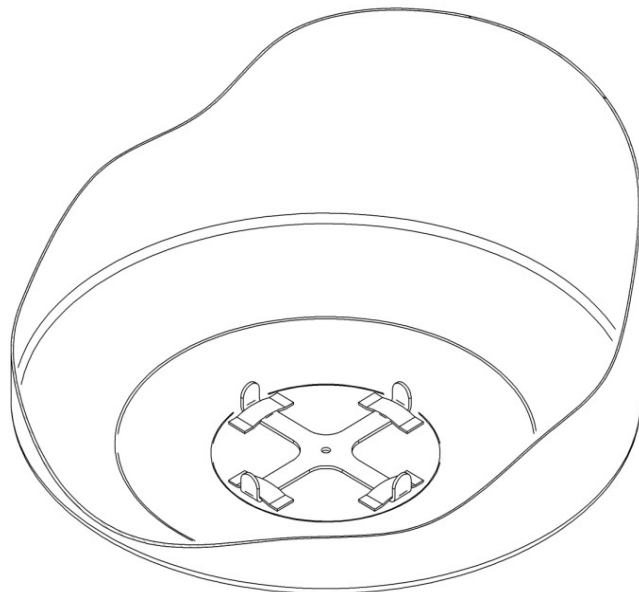
To replace the filter on the suction devices with this option, proceed as indicated in chap. "Manual version with bag filter (standard)".



COMPULSORY PRESCRIPTION

Respect the information indicated in these pages to protect the health of the operator and for proper functioning of the vacuum cleaner.

When reassembling, pay attention to insert the filter fixing element in the specific loops.

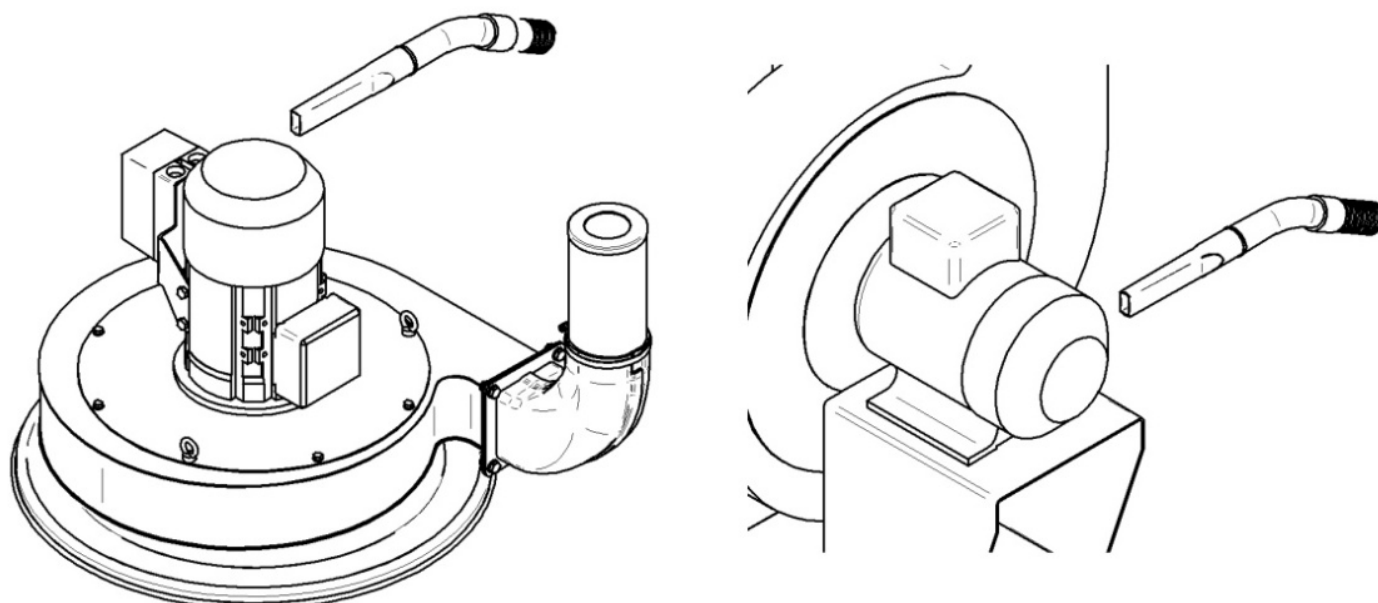


17.2 Checking and clearing the motor cooling fan



COMPULSORY PRESCRIPTION

Respect the information indicated in these pages in order to safeguard one's health.



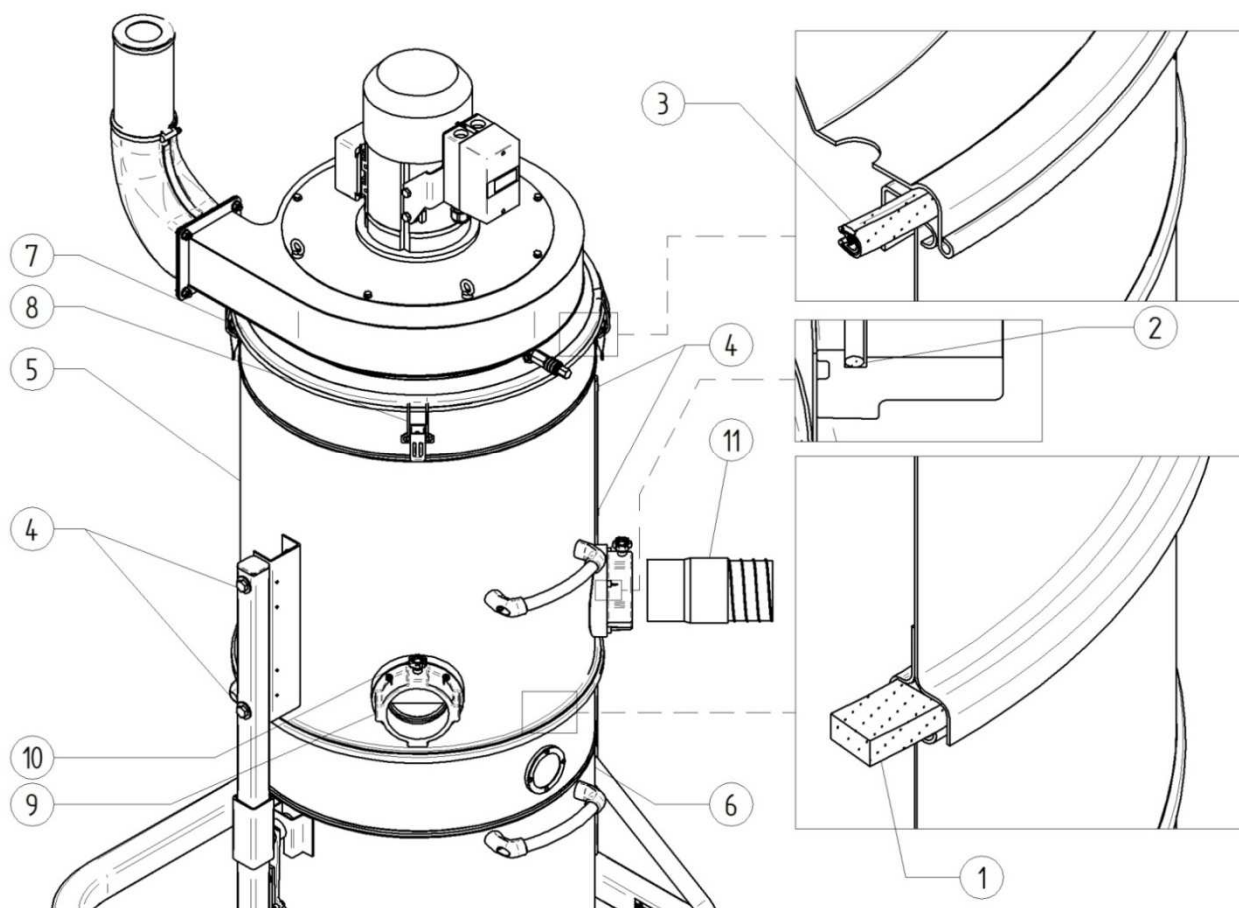
In order to keep the electric motor from overheating, clean the cooling fan of the motor **every month**, vacuuming the dust accumulated on the outer protective grid.

17.3 Checking seals



COMPULSORY PRESCRIPTION

Respect the information indicated in these pages in order to safeguard one's health.



1. Filtering chamber tightness gasket
2. Suction tube tightness gasket
3. Cover tightness gasket
4. Screws
5. Filtering chamber
6. Swarf vessel
7. Cover
8. Draw latches
9. Suction collector
10. Tube Tightening Knob
11. Suction Tube

17.3.1 Checking tightness of filtering chamber

If the filtering chamber seal gasket (1) between the swarf vessel (6) and the filtering chamber (5) does not guarantee tightness:

- Loosen the four screws (4) which fasten the filter chamber (5) to the structure of the exhauster.
- Pull the filter chamber (5) down by the slots and when the position is reached, fasten the screws (4).

Check if gasket (1) is torn, cracked, etc should excellent seal not be obtained yet.

If so, adjust the filtering chamber (5) position again or replace the gasket (1).

17.3.2 Cover tightness check

If the cover seal gasket (3) between the filtering chamber (5) and the cover (7) does not guarantee tightness:

- Unlatch the 4 draw latches (8).
- Using specific lifting eyebolts (where available), lift the cover (7) using suitable lifting and movement devices such as forklifts, hoists, A-frames, overhead crane, etc..., all approved and certified in compliance with legislation and regulations in force.
- Remove the filter holder frame to inspect and clean the cover tightness gasket (3).
- Reposition the filter holder frame and the cover (7) in their correct position.
- Latch the 4 draw latches (8).

Check if gasket (3) is torn, cracked, etc should excellent seal not be obtained yet.

If so, it must be replaced.

17.3.3 Cover tightness check

If the cover seal gasket (3) between the filtering chamber (5) and the cover (7) does not guarantee tightness:

- Unlatch the 4 draw latches (8).
- Using specific lifting eyebolts (where available), lift the cover (7) using suitable lifting and movement devices such as forklifts, hoists, A-frames, overhead crane, etc..., all approved and certified in compliance with legislation and regulations in force.
- Remove the filter holder frame to inspect and clean the cover tightness gasket (3).
- Reposition the filter holder frame and the cover (7) in their correct position.
- Latch the 4 draw latches (8).

Check if gasket (3) is torn, cracked, etc should excellent seal not be obtained yet.

If so, it must be replaced.

17.4 Interventions which operator can perform

FREQUENCY	CHECK	MODES AND VERIFICATION
Before each work shift	Check work area: it must be clear and without dust	The workplace and all the outer parts of the machine must be clean. Dust or other objects which could impair proper functioning and jeopardise the safety conditions originally present on the machine must be removed. Remove all swarf from the machine (preferably with clothes without filaments) + empty the swarf tray + check the seal, clean it and reposition it: if worn change it. Activate the maintenance service for any type of intervention or part replacement.
Before each work shift	Check the functionality: of safety control system parts; of interlocks; of safety devices of safety stop functions	All indicated devices and circuits must perform their intended function. Control the devices directly so that they perform the expected function (e.g. stop, etc...) When the first problem occurs, it must be resolved by performing a control procedure which verifies the perfect electrical and mechanical functioning of the devices. The actuators and all parts must however be replaced at the first signs of erosion or breakage. Activate the maintenance service for any type of intervention or part replacement. Replacements must be done with the manufacturer's original spare parts or at least equal in quality and safety features.
Before each work shift	Eye check of integrity: of fixed guards	All fixed guards must perform their intended function. Check the integrity of the inner and outer part of their surface and absence of signs or erosion or breakage. Activate the maintenance service for any type of intervention or part replacement.
Before each work shift	Eye check and functionality: absence of leakage/breakage in pneumatic circuit	The mobile elements must be moved by the pneumatic system with the maintained action control devices on the control panel to check for absence of leakage/breakage in the tubes or components of the systems. Any breakage with ensuing compressed air leakage can be detected by the strong noise which the air causes when it escapes from the broken points. When the first problem occurs, it must be resolved by performing a control procedure which verifies the perfect mechanical functioning, activating the maintenance service if needed. All parts must however be replaced at the first signs of erosion or breakage. Activate the maintenance service for any type of intervention or part replacement.
At least once a week	Eye check of integrity: of all plates	If they should become illegible, they can either be requested from the manufacturer or replaced by the user with others carrying the identical information, according to that indicated in chapter

Replacements must be done with the manufacturer's original spare parts or at least equal in quality and safety features. This manual does not carry replacement instructions. They must therefore be expressly requested of the manufacturer of the machine, who reserves the responsibility of replacement interventions.

17.5 Interventions which only maintenance technician can perform

FREQUENCY	CHECK	MODES AND VERIFICATION
At least monthly	Inside of covers - compartments of motor	All the internal parts of the covers, and machine compartments where the motors are installed, must be kept clean and dry. Use suitable and common objects (such as a vacuum cleaner and dry brush for dust and wet cloths for water parts) in order to keep these spaces of the machine adequate.
At least monthly	Check effectiveness: of mechanical connections	Use suitable devices to check the tightening of the terminals, screws, nuts, bolts and connections in general, both of parts of the equipment and of the machine.
At least every three months	Check the reliability and functionality: of motor contactors	Do an eye check to verify the state of the contacts of the relays, of the contactor power contacts, of the solenoid valves, of the micro switches and of the proximity switches, of the channels and conduits in and out of the covers. Should these, including the single-pole and/or multi-pole cables, not be in standard conditions, they must be replaced so as to ensure correct functionality. Check the suitable distances of the cams which drive the micro switches. Should they be missing or if they are no longer in their original position, suspend processing immediately and contact the manufacturer of the machine.
At least every three months	General checks electrical equipment	Check all the electrical equipment, on the control board and on board the machine for service and functioning continuity requirements. The efficiency of all the visual and acoustic warning devices of the safety functions and of the cycle functions of the equipment must be checked. Should they be struck by lightning, they must be replaced with those present or by the "spare material" placed inside of the electrical control board and delivered together with the electrical equipment, or with models completely the same as the ones removed. Check to make sure that the parts of the electrical equipment subject to wear, such as: cables and all control actuators driven by the operators, are intact and functional; otherwise they must be replaced. Any parts or all the electrical equipment supplied which is designed or enabled for use in dangerous environments must be the object of special attention in order to verify that maintenance preserves the original efficiency of the safety devices.
At least every three months	General checks: of machine pneumatic system	Check the pneumatic service for service, functioning and safety continuity requirements. The required inspections refer to: check for integrity and absence of cracks, bends or the likes in the pneumatic tubes. When the first signs of cracks appear, replace them with equivalent components; adequate air pressure level, at least 6 bar. Act on the pressure regulator to adjust pressure of the compressed air; the correct functioning of all pneumatic power control devices and relative machine actuators; the state of wear of the air tubes (checking for leaks) and pneumatic fittings use of compressed air with dewpoint temperature between +2°C and + 10°C; cleaning separate air filter, installed as close as possible to the point of use, and cleaning of the flexible hose with compressed air before connecting it; cleaning of air filter placed at the point of delivery/connection to the compressed air machine. One at least one of the components indicated is worn abnormally or has the first signs of cracks, erosion or breakage, it must be replaced. Replacements must be done with the manufacturer's original spare parts or at least equal in quality and safety features. Contact the manufacturer directly.
At least every six months	Check the effectiveness of the connections of the equipotential and protection circuit	Use suitable instruments to measure and control the resistance towards earth of the equipotential and protection system and of each connection, so that the measured values are within the acceptable limits defined by installation standards and according to provisions in force in the place of installation. Concerning the aforementioned prescriptions - indications, the correlated earthing system must fully comply with the applicable requisites for coordination with associated active devices, according to IEC364_5_54 / HD382_5_54 / CEI 64.8 (5_54) (latest editions).
At least every six months	Check the effectiveness of electrical isolation of motors	Use suitable instruments to measure and control the isolation resistance of the motors, so that the measured values are within the acceptable limits defined by installation standards and according to provisions in force in the place of installation.
At least every six months	Check instruments absorption of single phases of utilities and motors	Use suitable instruments to measure the absorption of each utility and motor power conductor. Should the values detected during standard operation of the machine not be within the range of 10% of the values indicated in the power supply and control electrical layouts, activate the maintenance service in order to check all the further features of the utility/motor since it could break shortly.
At least yearly	Check the effectiveness of electrical connections and components in and out of the covers	Make sure none are loose. If so, restore the connections in a durable fashion by tightening the connections with adequate torque, carried directly on the electrical components. Controls must also regard: the integrity of the derivation boxes, covers, push-button control panels and protective sheathes of the electrical cables; the functionality of all control and power actuators.

17.6 Extraordinary maintenance

For some of the interventions included in this chapter, it could be necessary to remove some fixed guards and protective devices from their position. Only the maintenance technician may remove them.

When the interventions are completed, these guards and protective devices must be put back and blocked in their original position,

with the fastening systems that were provided before the intervention.

For extraordinary maintenance and spare part replacement ensuing breakage, overhauls or mechanical or electrical failures, a request for intervention must be made directly to the manufacturer of the machine. He will inform you concerning the residual risks which could occur following the specific interventions.

Instructions relating to extraordinary maintenance do not appear in this manual and must therefore be expressly requested from the manufacturer of the machine.

18 Optional Accessories

Optionals can be requested already installed during ordering or can be subsequently installed.

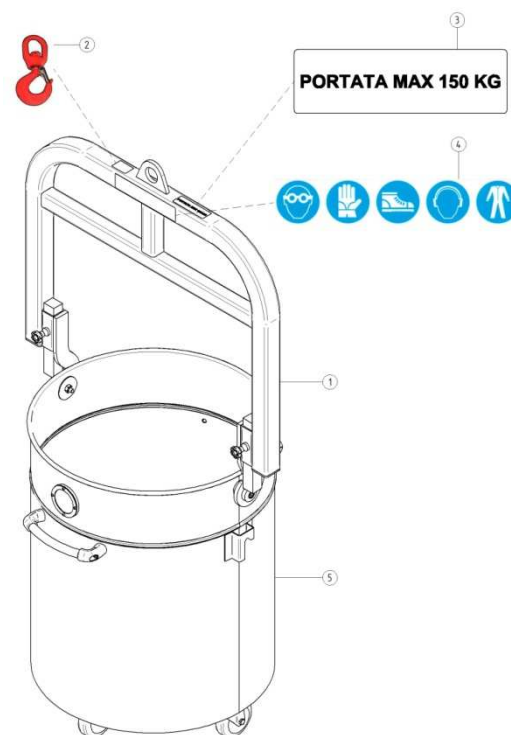
The optionals installation instructions are contained in the transformation kit.

18.1 Lifting kit for tanks

18.1.1 Labels

1. Equipment
2. Lifting hook data plate
3. Max capacity data plate
4. List of PPE for use and maintenance of the machine
5. Collection container

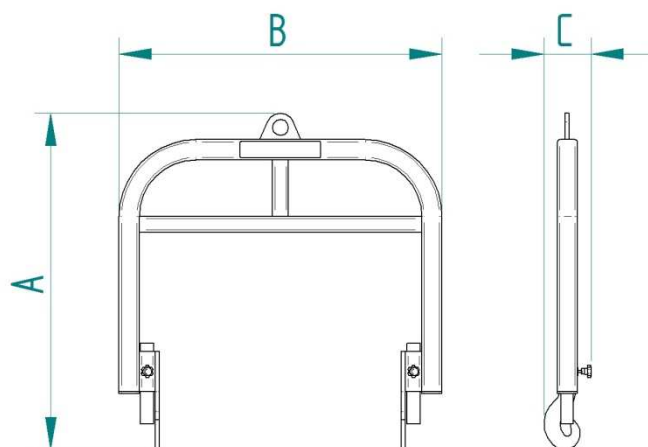
This equipment must be used to facilitate emptying of the shavings collection container (5) tipping its contents into specific collection systems available to the user.



18.1.2 Technical data

Dimensions of standard kit

		Tank ø570
A.	Height	840 mm
B.	Length	800 mm
C.	Width	120 mm
D.	Weight (empty)	15 Kg

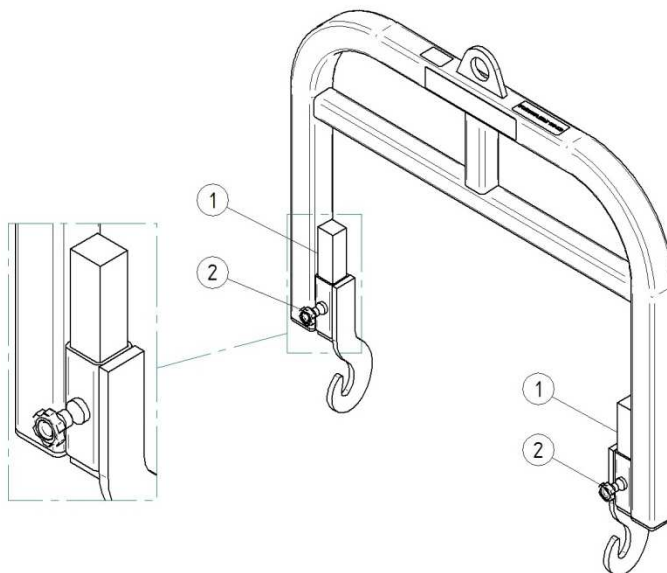


18.1.3 Controls before use

1. Safety stop
2. Tightening knob

Before use, check:

- that the safety stops (1) are present and in the high position
- that the tightening knobs (2) are clamped to keep the safety stops from dropping.



18.1.4 Use

1. Hook equipped with chain
2. Hooking eyelet
3. Equipment
4. Safety stop
5. Tightening knob
6. Hooking pin
7. Hook integrated to equipment
8. Collection container

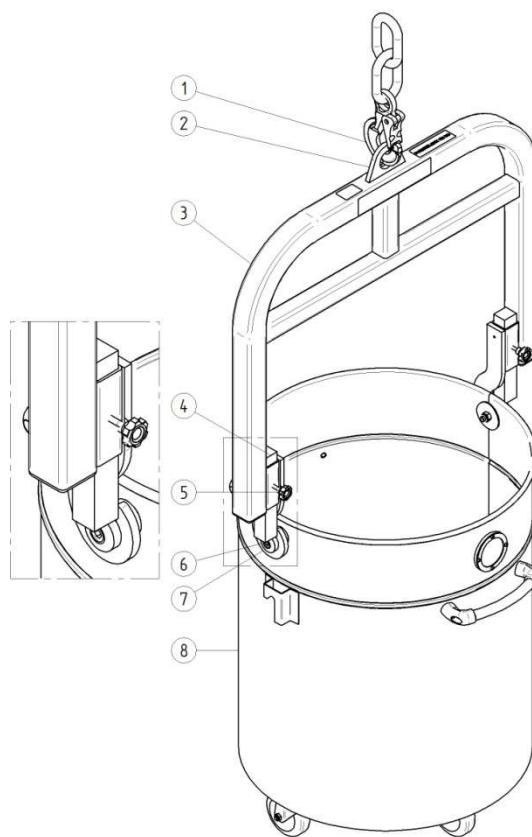
Hook the equipment in the hooking eyelet (1) by means of the hook equipped with chain (2) (not supplied).

Approach the equipment (3) to the collection container (8) and latch the hooking pins (6) to the hooks of the equipment (7).

Loosen the tightening knobs (5) and position the safety stops (4) in contact with the pins (6).

Tighten the knobs (5) and proceed handling/emptying the collection container (8).

To unhook the collection container (8) proceed in the opposite order, moving the safety stops (4) to the high position and tightening the knobs (5) to keep them from dropping.



ABSOLUTE PROHIBITION

Respect the information indicated in these pages to protect the health of the operator and for proper functioning of the vacuum cleaner.

Handle the chipping collection container (8) with specific equipment without putting the safety stops (4) in contact with the pins (6) and without tightening the knobs (5), as it may be dangerous.

18.2 Semi-automatic Filter Cleaning

The version with semi-automatic cleaning system is available as an alternative to the manual version for the filter cleaning (also see paragraph "Filter cleaning").

18.3 Automatic Filter Cleaning

The version with automatic cleaning system is available as an alternative to the manual version for the filter cleaning (also see paragraph "Filter cleaning").

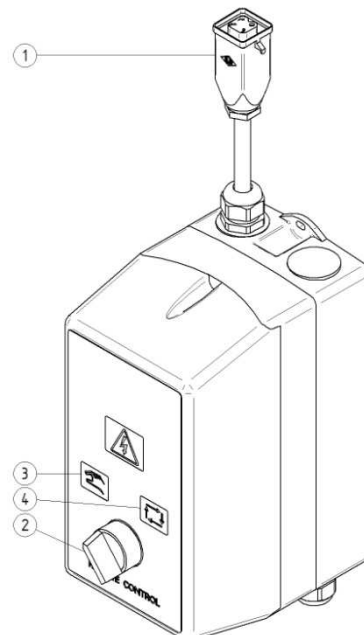
18.4 Remote Start-up Kit

1. Device connection socket
2. Selector
3. Operation in "Manual" mode
4. Operation in "Automatic" mode

This optional allows connecting the suction device to a device through connection socket (1) so the suction device switches on and off at the same time as it does.

Place selector (2) in position (3) for operation in "Manual" mode.

Place selector (2) in position (4) for operation in "Automatic" mode.



18.5 Swarf/Liquids Separator Drum

1. Collection basket
2. Collection vessel
3. Lifting hook (not supplied)

This optional allows perfectly separating the sucked solid and liquid materials to facilitate its storage and/or disposal.

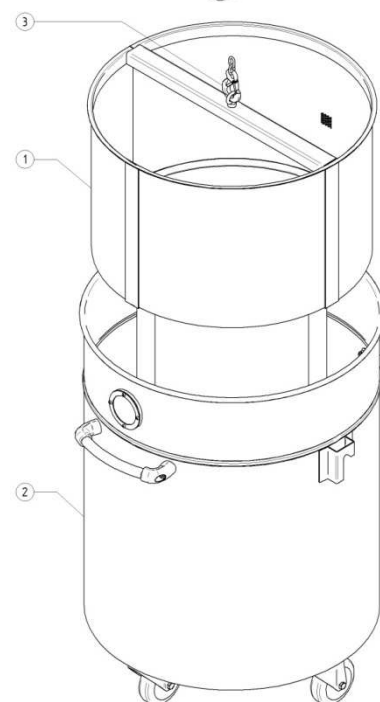
The collection drum (1) holds the solid material within allowing the liquid one to deposit on the bottom of the collection vessel (2).

Proceed as follows to empty the drum:

Remove the collection vessel (2) from the suction device (See paragraph 14 "Emptying sward vessel").

Extract the collection drum (1) from the collection vessel (2) using a lifting hook (3) and suitable lifting and movement devices such as forklifts, hoists, A-frames, overhead crane, etc..., all approved and certified in compliance with legislation and regulations in force.

Dispose of the sucked material in compliance with legislation in force.



18.6 Kit per Sacco Raccolta in PVC

1. Collection bag
2. Collection vessel
3. Depressor
4. Grid

This optional allows conveying the sucked material inside a collection bag to facilitate its storage and/or disposal.

The collection bag (1) is held in position by the depressor (3) and the grid (4).

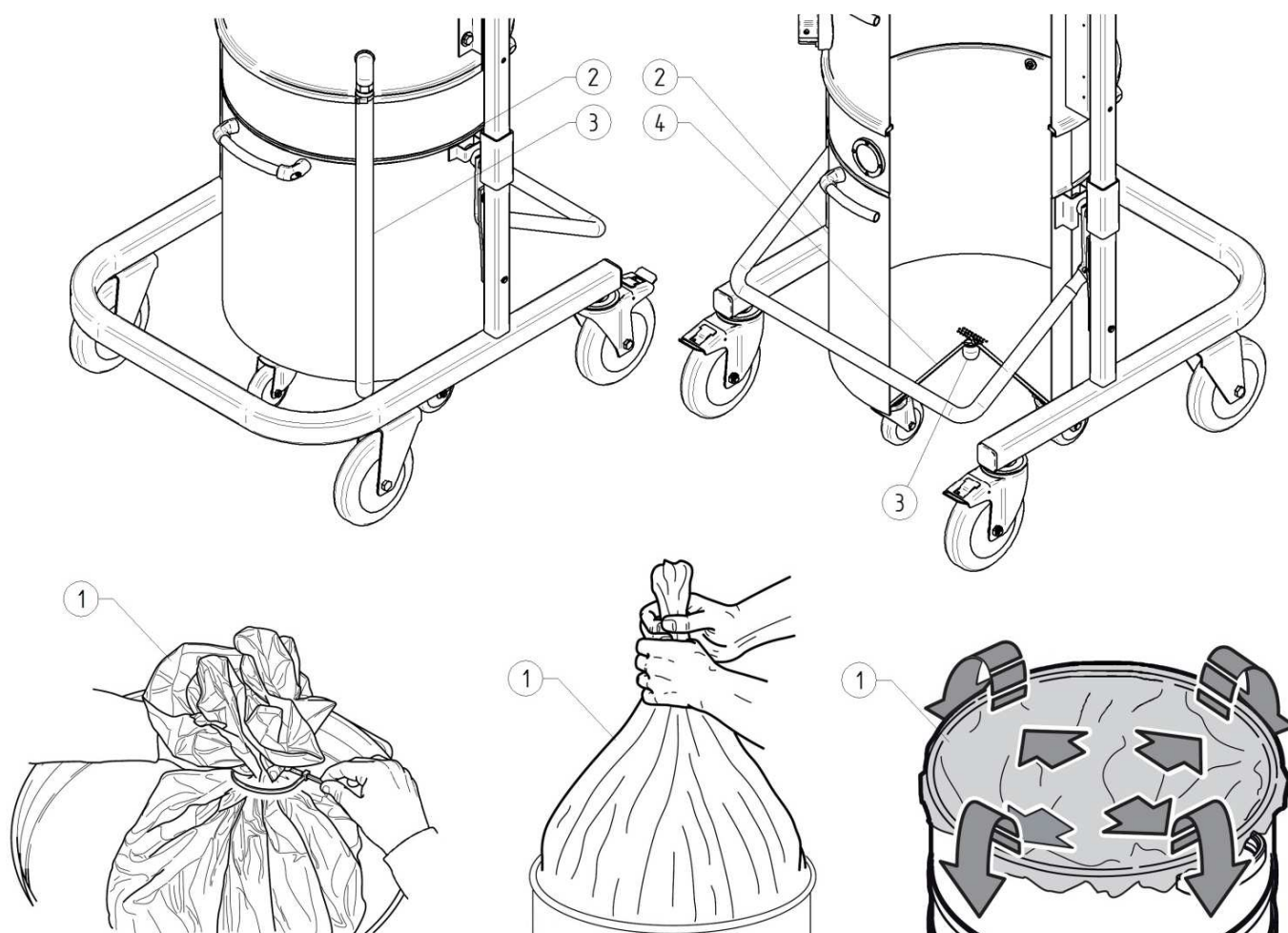
Proceed as follows to empty the bag:

Remove the collection vessel (2) from the suction device (See paragraph 14 "Emptying sward vessel").

Close the collection bag (1) and dispose of it in compliance with legislation in force.

Insert a new collection bag (1) before sucking again, ensuring to place its upper edge on the collection vessel (2) edge.

Latch the collection container (2) to the suction device.



19 Waste disposal



COMPULSORY PRESCRIPTION

Respect the information indicated in these pages in order to safeguard one's health.

Before performing waste disposal operations of the components making up the machine and the electrical equipment, consult the manufacturer of the machine who will indicate how to operate in compliance with safety and environmental protection principles.

The machine can be disposed of without needing to reduce it into small pieces; it is sufficient to disconnect the main units making it up and to place them in the transportation vehicle for scrapping.

This must obviously be done using suitable lifting and movement devices such as forklifts, hoists, A-frames, overhead crane, etc., all approved and certified in compliance with legislation and regulations in force.

Perform waste disposal in compliance with standards in force, contacting bodies and/or companies specialised in scrapping industrial machinery and/or in waste disposal, so that the plastic, metals and electrical components are all separated and sent to differentiated collection facilities.

The employer is obliged to know the current laws in question in his country and to operate in compliance with this legislation.

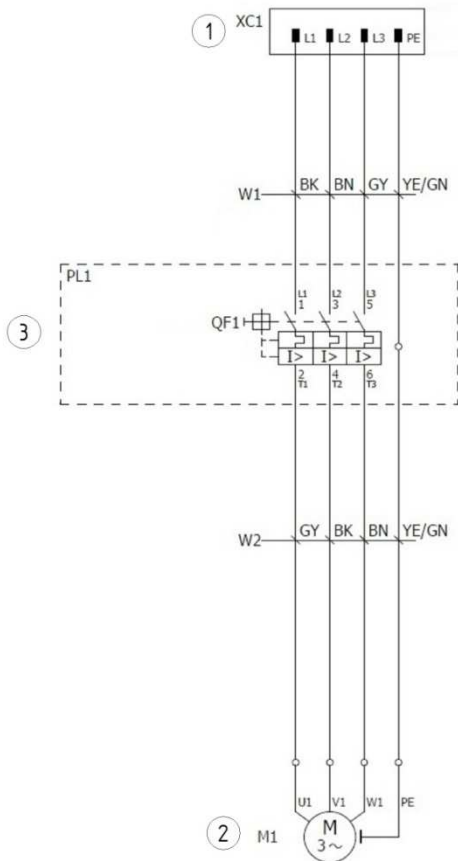
It is forbidden and subject to sanctions to abandon the machine and electrical equipment in the environment.

Dispose of the machine in compliance with legislation in force.

20 Electrical layouts

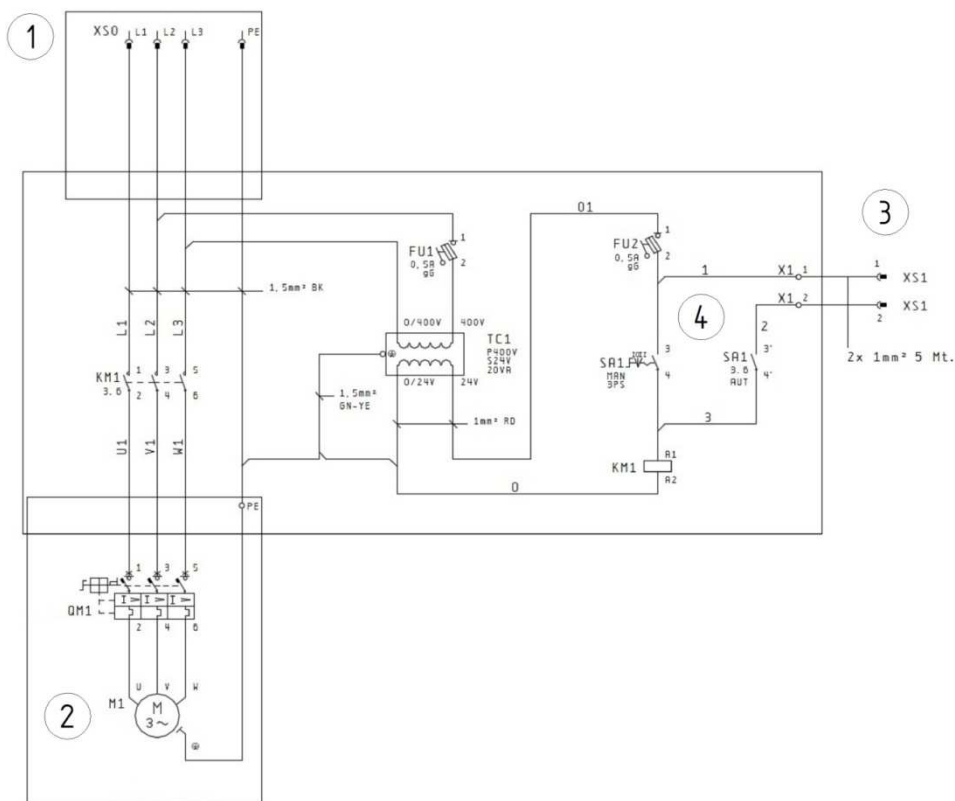
20.1 Standard Start

1. Plug
2. Exhauster
3. Automatic switch



20.2 Remote Start-up Kit (Optional)

1. Power supply
2. Suction device
3. Device connection socket
4. Selector



20.3 Special Starts

Refer to the electric diagram attached for all the activations not indicated in this manual.

21 Troubleshooting

Problem	Cause	Remedy
Suction device does not start	No current	<ul style="list-style-type: none"> ▪ Check current presence to socket. ▪ Check plug and cable are intact. ▪ Request assistance of enabled technician.
The exhauster stopped suddenly	Primary filter clogged	<ul style="list-style-type: none"> ▪ Clean the filter. ▪ If this does not suffice, replace it.
	Suction tube clogged	<ul style="list-style-type: none"> ▪ Do an eye check of the suction duct and clean it by removing obstacles.
	Overload cut-out tripped	<ul style="list-style-type: none"> ▪ Check absorption of the motor . ▪ Empty the vessel . ▪ Wait for the temperature to stabilize by leaving the suction device to cool-down for about 10 min. ▪ If needed, contact an authorized service centre.
Swarf leaking from exhauster	The filter is torn	<ul style="list-style-type: none"> ▪ Immediately switch off the vacuum cleaner and replace it with original spare part.
	One of the gaskets is worn	<ul style="list-style-type: none"> ▪ Replace it with original spare part.
Dust, smoke or aspired material leakage from the drain	The filter is torn	<ul style="list-style-type: none"> ▪ Immediately switch off the vacuum cleaner and replace it with original spare part.
Suction device blows instead of sucking	Incorrect connection to electrical mains	<ul style="list-style-type: none"> ▪ Request intervention of specialized personnel for correct connection to phases.