

# V-TUF<sup>®</sup>



## MIGHTY HSV 110 & 240

### M-CLASS INDUSTRIAL VACUUM CLEANER

### OPERATOR MANUAL



Please read this manual before using the MIGHTY HSV

1.



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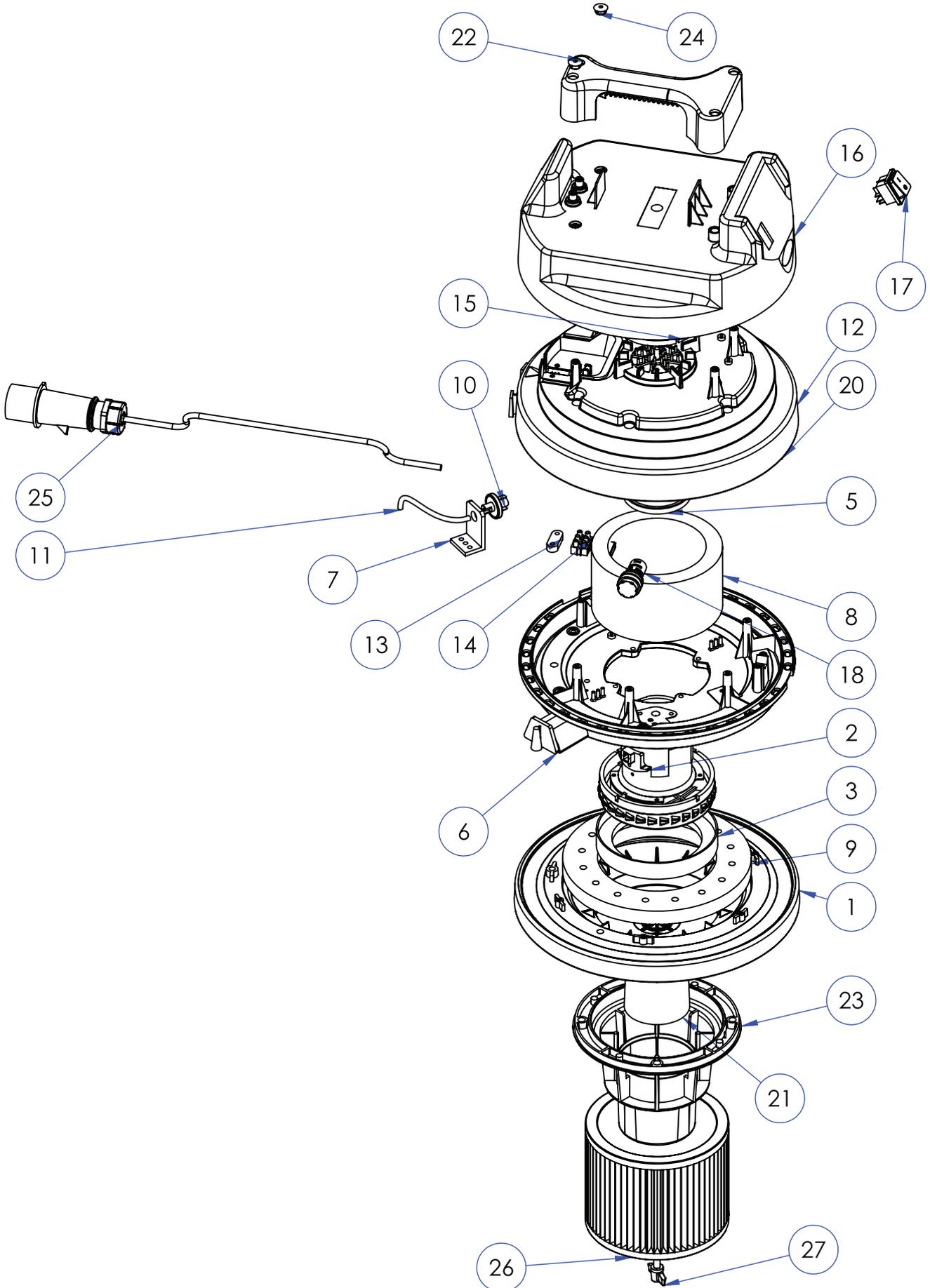
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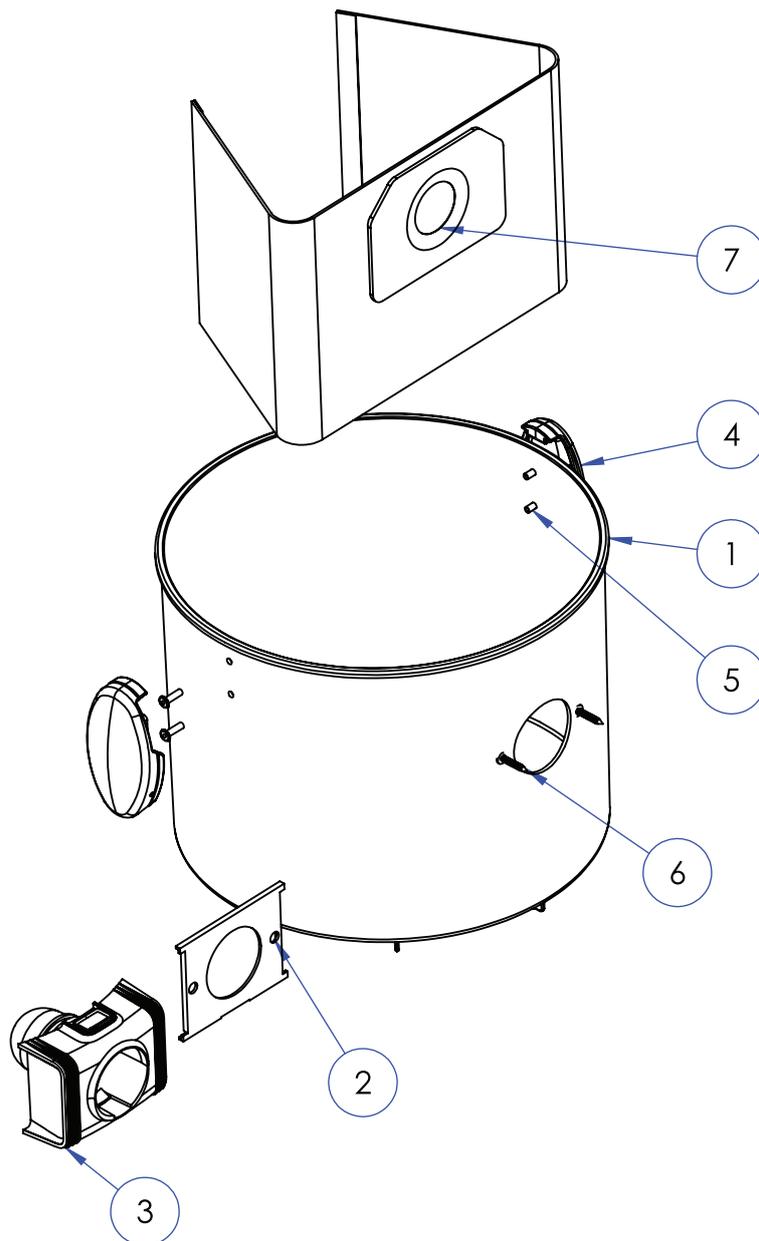
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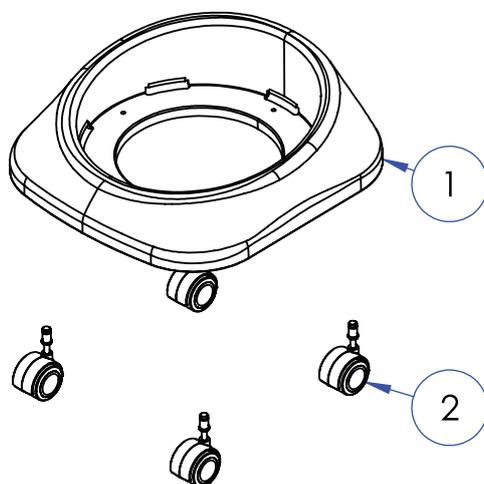
Parts No		Pos
VTVS7023	HOSE - 3M 32mm Yellow Vacuum Hose With End To Fit WND/1 - for NEW MIGHTY, NEW MIDI	1
BIO324WD	FLOOR HEAD - 420MM WIDE Wet & Dry WITH WHEELS V-TUF 32 MM	2
WND/1	V-TUF PROFESSIONAL TUBE SET - 32MM STAINLESS STEEL 3 PIECE WAND SET	3
VLX13	UPHOLSTERY TOOL WITH BRUSH - 32 MM for V-TUF VACUUM CLEANER	4
VLX15	CREVICE TOOL - 200MM LONG V-TUF 32MM	5
VTM103	V-TUF Universal Power tool Adaptor For MINI, MIDI, MIDI SYNCRO	6
VLX10	ROUND BRUSH - WITH HORSE HAIR 32 MM for V-TUF VACUUM CLEANER	7
VTVS7021M	Cartridge M-Class Filter - for MIGHTY Vacs	8
VTVS7007	DUST BAGS - for M & H CLASS (Pack of 10) - FSC Certified	9



Pos.	Cod.	Q.ty	Description
1	VTVS7471	1	Black Single stage base motor
2	a. VTVS7615 - 240v motor b. VTVS7616 - 110v motor	1	Motor Mono By-Pass PC25 Slim
3	VTVS7452	1	"L" Gasket h=10 mm
5	VTVS7482	1	Motor Plastic Spacer H=27
6	VTVS7486	1	Black Motor Holder
7	VTVS7432	1	Pump Bracket
8	VTVS7445	1	Filter MTP30 D160x120x88
9	VTVS7449	1	Filter MTP30 D230x145x20+16F
10	VTVS7431	1	Pressure switch
11	VTVS7504	1	Crystal Hose
12	VTVS7484	1	Black Motor Cover
13	VTVS7483	1	Cable jaw
14	VTVS7421	1	electrical terminal
15	VTVS7163	1	Gasket MTP 30/AU waved 10+10
16	VTVS7478	1	E.2 Black Cover Ø40
17	VTVS7422	1	Red light switch 2P B4 -IP65
18	VTVS7438	1	indicator light
20	VTVS7490	1	Plastic Grid
21	VTVS7494F	1	Float
22	VTVS7492	1	Handle E.2
23	VTVS7494	1	Float Support
24	VTVS7515	2	CAP 14,0X18.0X7.0
25	a. I10.1505C = 110v Cable b. I10.1605C = 240v Cable	1	electric plug
26	VTVS7021M	1	Polyester Cartridge Filter D175 H140
27	VTVS7506	1	Filter Wing Nut



Pos.	Cod.	Q.ty	Description
1	VTVS7473	1	Black Plastic Barrel H=250
2	VTVS7164	1	Gasket Inlet Ø48
3	VTVS7165M	1	Inlet Ø48
4	VTVS7491	2	Barrel Hook
5	VTVS7514	4	Blind Rivet 4,8x17
6	VTVS7512	2	Self tapping screw 5x25 ZN
7	VTVS7007	1	Polyester Bag 21 l



Pos.	Cod.	Q.ty	Description
1	VTVS7474	1	black trolley 400x420
2	VTVS7496	1	Pivot wheel Ø50

## INTRODUCTION

Thank you for purchasing a product from the V-TUF Industrial Cleaning Equipment range. V-TUF is focused on research and development to make sure you are fully satisfied with your purchase. Please read this manual carefully and follow the instructions to ensure you get the best performance from this machine. Congratulations on your choice and we trust you will obtain satisfaction from using it.

## GENERAL INFORMATION

1. This manual has been included as an integral part of the appliance and should be carefully read through before using the machine.
2. Take the appliance out of its packaging and make sure it is in perfect condition, including accessories and any optional extras you have purchased from the V-TUF range.
3. Make sure that the electrical data of the appliance, shown on the label, corresponds to those of the mains supply.
4. The appliance must only be used with V-TUF accessories and spare parts as these ensure safe and perfect operation.
5. The manufacturer disclaims all liability for injury to persons and animals and damage to things due to the irresponsible use of the appliance and to the use of non-original accessories and spare parts.
6. The repair and/or replacement of the various component parts, especially electrical parts, must be done by skilled personnel.
7. The appliance is suitable for use in a range of applications: (hotels, schools, factories, shops, etc...)

## INSTALLATION

1. Check the position of the filter and the clips that fasten the head to the tank. Incorrect filter positioning can cause serious damage to the machine.
2. Fit the hose to the vacuum connector; fit the required accessory to the end of the hose. In the case of extractor models fit the pipe on the connector provided on the head and fit the required accessory to the end of the pipe.
3. Connect the power cable of the appliance to the power socket with switches on "0" (OFF POSITION).
4. To vacuum liquids, empty the dust from the container, remove dust bag and ensure the cloth filter is fitted. After the vacuum has been used for wet use ensure the tank and cartridge filter is dry before vacuuming dry material.
5. Important: only refit the cloth filter to vacuum dust, so as not to cause problems to the appliance.
6. The noise level is below 85 dB(A)

## OPERATION INSTRUCTIONS

1. Ensure that there is sufficient ventilation for the machine and the operator
2. Make sure the machine is on a sound and stable surface.
3. Ensure the machine is switched to the off position, connect to the correct and sufficient power source, switch machine on, use according to the guidelines and turn machine off after operation.

## IMPORTANT

1. The wet and dry machines feature a floating valve that interrupts the vacuum when the tank is full of liquid. When this occurs, turn the machine off and empty the entire contents of the tank.
2. Do not use your machine if it is not functioning correctly. Regularly inspect electrical leads and connections, filters and listen for unusual noises. If in doubt, contact your nearest service centre for advice.

## MAINTENANCE

1. The filter element can be blown clean, washed with water. Ensure that it is completely dry before the operation.
2. Replace the vacuum filter if it acquires holes, torn or damaged. Holes and/or cuts on the sides of the filter could allow transit of dust / materials and become the cause of serious damage to the user and surrounding people, and the appliance.
3. Check and free the blocked parts (vacuum pipes, connector, brushes, etc.) from any deposited materials.

4. If necessary, clean the tank and in any case, never leave dust or liquid residues in the tank for long periods of time.

**IMPORTANT INFORMATION**

Never use the machine if you are unsure, or become uncertain due to any faults of any kind, including those not mentioned in this manual.

**Technical Information**

<b>Model</b>	<b>MIGHTY HSV</b>
Capacity	21 Litres
Working Voltage	110 & 240 Volts
Motor Power	1250 Watts
Function	Wet & Dry Vacuuming
Air Flow Rate	215 M3/H
Cooling Mode	250mm
Tank Diameter	335mm
Height	250mm
Accessories	Ø32mm Accessories Kit
Power Cable	3m

**Safety Instructions**

These instructions are for the user's safety, and all users of the V-TUF cleaning equipment should ensure to have read this literature before using the machine.

- Do not use with a damaged cable.
- Do not run over the cable.
- Should be inaccessible for children and pets.
- Do not use in the presence of flammable gasses.
- Do not clean up any hot material, e.g. ash.
- Always turn off the machine, and then unplug it, before you service the machine.
- Do NOT use this machine without the filters, as this is a health hazard and motor damage will also come as a result.

All repairs on V-TUF products should be done by a V-TUF service representative.

- If the machine shuts down, be sure to turn off the machine and unplug it before troubleshooting.
- For safety, the machine contains an electronic overload protection.
- Always turn off and unplug the machine when it is not in use.
- If any part of the appliance becomes damaged or fractured, it must be replaced by a V-TUF engineer.

## SAFETY PRECAUTIONS

### Caution: what to do

1. All power conduction parts must be protected against water. SHORT-CIRCUIT RISK.  
2. All services or maintenance performed on the appliance must always be done with the plug disconnected from the power supply.  
3. Operation with a residual current circuit breaker provides extra protection for the operator ( $I_n=30$  mA).
4. Only ever use the appliance for the purposes for which it has been designed and manufactured. ACCIDENT RISK. 
5. If vacuum exhaust starts emitting water or foam, turn off immediately and waste level and ensure all correct filtration is present.

### Caution: what not to do

1. Do not leave the machine running and unguarded nor within reach of children, animals or persons that are not responsible for their own actions.

ACCIDENT RISK. 

2. Do not vacuum inflammable combustion substance (e.g.: hot ashes), explosive and toxic substances, electrostatic or substances that are dangerous for health. EXPLOSION OR

POISONING HAZARD   

3. Do not rest the vacuum inlet on or move this close to delicate parts of the body (eyes, ears, mouth, etc.). ACCIDENT RISK.  

4. Do not touch the plug and/or socket with wet hands. ELECTRIC SHOCK RISK.   



5. Do not soak the appliance or spray it with liquid substances. SHORT-CIRCUIT.

6. In the case of extractor models, only use detergents compatible with vacuum and pipe covering materials.

ACCIDENT RISK. 

7. Do not pull or lift the appliance using the power cable. SHORT-CIRCUIT RISK.  

## VACUUM CLEANER – CLASS M



### SAFETY INDICATIONS

#### Operator safety

This manual is to be considered as an integral part of the general user manual and provides the necessary instructions for the special class M dust vacuum cleaners.

Therefore the supplied general instruction booklet must be read beforehand.

In addition to the user instructions and the current regulations in the country of use, the sector's recognised technical regulations for the safe and appropriate use of this equipment must also be followed.

The UNI 10720 standard (Guidelines for selection and use of respiratory protective devices) establishes the guidelines for the criteria of selection, use and maintenance of respiratory protective devices

#### Transport and handling

##### ATTENTION

Be sure to close all of the dirt container's locking hooks before transport.

Do not turn the device upside down.

#### Possible uses for the vacuum cleaner

The vacuum appliances to which these user instructions refer are suitable for professional use and, in particular, for the control of dusts with an exposure limit value as per the class rating of the Vacuum cleaner. This is stated on the side of the tank. H CLASS

The collection of the following materials are forbidden:

- Incandescent materials;

- liquids;

- flammable and explosive dusts (for example, magnesium dusts, aluminium dusts, etc.);

The use of this device for the elimination of dusts must be performed in rooms or environments which are sufficiently ventilated whenever the device's exhaust returns into the environment itself. The user must respect the current national regulations in the country in which the device is being employed.

The equipment's end user must be read and understood for its use before beginning any work activities, taking note of the safe usage regulations. The user must also receive instruction regarding the dangers deriving from the aspirated materials and the methods for their safe disposal.

## **Maintenance, cleaning and repair**

Only perform the maintenance work described in this booklet on the equipment. In case of uncertainty, contact the dealer or an authorized service centre.

Before performing any cleaning or maintenance operations upon the device, remove both the electrical and compressed air power supply cables. Treat the device in a responsible manner so as to avoid creating situations which could be dangerous to both yourself, as well as to others.

A filtered, forced air ventilation system must be employed during maintenance activities. The user must wear any appropriate safety accessories during such operations, especially respiratory protection.

The environment in which maintenance activities are to be performed must be decontaminated in order to prevent the dispersion of hazardous substances into the surroundings.

When transporting the device away from or within an area that is contaminated with hazardous substances, the external portion of the device must be vacuumed and wiped down with a cloth before sealing it in an air-tight container.

Any parts which cannot be cleaned must be packaged in air-tight bags and/or disposed of in compliance with the current regulations for the disposal of hazardous substances in the country of use.

The manufacturer requires that the vacuum be subjected to an annual technical inspection.

This inspection may be performed by an authorised distributor's technician and must include the examination of the aspiration filters, the air-tight seals, as well as the signalling components/indicators. ==

## **DESCRIPTIVE INFORMATION**

### **Detailed use of the machine**

ATTENTION The vacuum cleaner is suitable for extracting dry non-flammable dusts, wood dusts and any hazardous dusts with MaK values  $0.1 \text{ mg/m}^3$  ( category M dust ). Based on the hazards presented by the dusts to be aspirated, the vacuum must be equipped with appropriate filters: see the following sections.

### **For the Pneumatic System:**

The device is designed to function at pressures ranging from a minimum of 4 bar to a maximum of 15 bar. Below 4 bar, the device's automatic start-up function is not guaranteed.

**Never exceed the 15 bar pressure limit.**

## **BEFORE FIRST USE**

### **Vacuum assembly and testing**

Before using the device, check that:

No foreign elements are present within the container.

Ensure that the head is fastened down with the head clips. This guarantees an air-tight seal.

The relevant filters and bag have been installed. The bag is equipped with a membrane seal which must be fitted over the internal slot of the tank intake. It also has a complete orifice seal tag which must be applied once the used bag is removed from the tank intake for safe disposal. This is important to ensure that the contained dust does not escape.

The hose is correctly connected to the tank.

the machine is connected to the correct electrical supply.

### **Initial working phase check**

Before beginning to vacuum dusts with MaK values, check that the filters fit properly within the device and that they are positioned correctly.

Once the vacuum has been activated, block the aspiration tube and check whether an acoustic signal sounds. The acoustic signal is activated when the speed of the air within the tube falls below 20m/sec. This must be calibrated.

In normal usage conditions, the acoustic signal turns on to signal a reduction in pressure / air flow. Once this sounds the filter must be cleaned and the bag must be replaced. The scientific health reason is that dangerous dust does not remain airborne once air velocity drops below 20m/sec.

## USE OF THE DEVICE

ATTENTION The aspiration of flammable dusts/substances is forbidden.

The sector's reference standard, EN 60335-2-69/A1:2004, lists the dusts which present a risk of explosion when brought into contact with ignition sources.

A filter bag must always be inserted into the container when the device is to be employed for vacuuming dry substances with MaK values.

For innocuous dusts, a lower-performance paper filter bag is also available.

## FILTER BAG REFERENCE TABLE:

CODE	DESCRIPTION	VACUUM MODEL
VTVS7021 M	M Class Cartridge Filter	MIGHTY
VTVS7007	Polyester Filter Bag	MIGHTY



ATTENTION

The dust collection bag must not be filled past  $\frac{3}{4}$  of their capacities. Check periodically during use. Do not vacuum liquids or particularly humid substances while the bag filters are installed.

## END OF WORK ACTIVITIES

After hazardous dusts have been vacuumed, the user must open the vacuum.

Disconnect the device's power supply by removing its electrical plug from the outlet.

Empty the container and clean the vacuum.

Store the vacuum in a safe place where it cannot be accessed by unauthorised personnel.

## MAINTENANCE: FILTER REMOVAL



ATTENTION

Be careful to not stir up dusts when performing cleaning operations, filter checks or filter replacements. Use a protective mask. Or a V-TUF filter cleaning box.

## Replacing the filter bag

Undo the head clips and remove the head.

Remove the used filter bag and close the inlet with the tag as shown below. Dispose of the bag in the correct manner.



Fit the new filter bag, making sure that the bag's membrane seal fits perfectly over the internal slot of the tank inlet and that the bag fits neatly around the edge of the tank internal. Refit the head ensuring that the clips are completely closed and there is no parts of the dust bag exposed.

### Emptying the dirt from the container



ATTENTION The container can only be emptied when the device has been employed for vacuuming innocuous dusts without the use of a filter bag.

Remove the device's cover, turn the container upside down and empty it.

The waste materials must always be disposed of in compliance with the current local laws.

### Replacing the filtering element

Open the closure hooks, lift the vacuum's cover from the container and set it down with the filtering system oriented upwards (use the container as a support surface if necessary).

Unlock the plastic anti-impact basket, by turning it counter clockwise, and extract it; unscrew the tightening knob; slowly remove the filter, placing it in a bag with an air-tight seal. Dispose of the used filter in compliance with the current local laws.



Clean the areas covered by the filter and insert a new filter by following the removal procedure above in the opposite order.



ATTENTION Never use the vacuum without a filter installed.

**TROUBLESHOOTING**

<b>PROBLEM</b>	<b>PROBABLE CAUSE</b>	<b>PROBABLE SOLUTION</b>
The machine does not start	No current.	Check main fuse, power cord, plug and outlet.
The machine suddenly stops	Because of overheating, the thermal protection turns the Machine off (feature only available on extraction machines).	After the machine has cooled down, you can turn the power on again and begin to use the appliance again.
Reduced suction power.	Filter, nozzle, hose or tube clogged.	Check and clean
Suction power suddenly drops	Tank full.	Stop the machine and empty the tank.
RED LIGHT/BEEPER SHOWING	Blocked hose, Blocked poles, Blocked floor tool. Full Bag, Blocked filter. Power tool has poor airflow allowance.	Shake item with the blockage to dislodge items causing the issue. Change bag. Clean filter.

**V-TUF<sup>®</sup>**

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