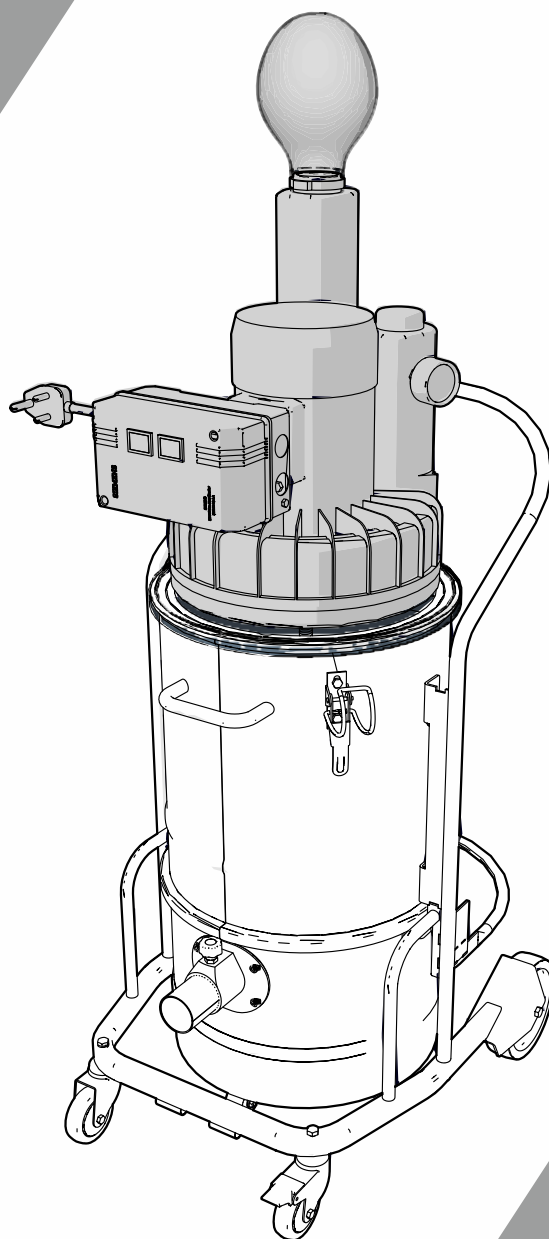


# Mistral 202

*Industrial Vacuum Cleaner - Dry  
Electric*

**ROOTS**



230V/50Hz  
440V/50Hz

## Operator's Manual

Read this manual completely and understand the instructions before operating the machine.  
"English Version"



# TABLE OF CONTENTS



3	Machine Data
4	Technical Specifications
5	Introduction
6	Support
7	Safety Instructions
11	Machine Operation
14	Maintenance
15	Troubleshooting

## **IMPORTANT NOTE:**

Roots Multiclean Ltd. (RMCL) is not liable for any legal claims that may arise as a direct or indirect result of the contents of this manual.

Roots Multiclean Ltd.  
R.K.G. Industrial Estate, Ganapathy,  
Coimbatore - 641 006, India.

**P/N: 557410053-00, Rev: F, Date: 05/2019**

*Prepared by: KM-NPM TD Dept.*

## **MACHINE DATA**

*Please fill at the time of installation for future reference:*

*Model No.* - \_\_\_\_\_

*Serial No.* - \_\_\_\_\_

*Accessories* - \_\_\_\_\_

*Installation Date* - \_\_\_\_\_



Mistral - 202 - Standard Version					
Parameter	Unit	Standard model	HEPA model	3 Phase model	HEPA 3 Phase model
Phase	Ø	Single phase	Single phase	Three phase	Three phase
Height	mm	1290	1415	1290	1415
Weight	Kg	55	59	55	55
Dimensions	mm	550 X 480	550 X 480	550 X 480	550 X 480
Suction Inlet	Dia mm	60 - 38	60 - 38	60 - 38	60 - 38
Capacity	L	20	20	20	20
Filter Type	Material	Catridge - Teflon	Catridge - Teflon	Catridge - Teflon	Catridge - Teflon
Filter Surface	cm <sup>2</sup>	30000	30000	30000	30000
Filter Efficiency	CAT (BIA) / micron	M <1	M <1	M <1	M <1
Voltage	V / Hz	230 / 50	230 / 50	400 / 50	400 / 50
Power	Kw	1.8	1.8	1.8	1.8
Vaccum Pressure (min)	mm of H <sub>2</sub> O	1700	1700	1700	1700
Air Flow (max)	m <sup>3</sup> / h	255	255	255	255
Protection (Blower)	IP	55	55	55	55

Mistral - 202 - Stainless Steel Version					
Parameter	Unit	SS model	SS HEPA model	SS 3 Phase model	SS HEPA 3 Phase model
Phase	Ø	Single phase	Single phase	Three phase	Three phase
Height	mm	1290	1415	1415	1415
Weight	Kg	59	59	55	55
Dimensions	mm	550 X 480	550 X 480	550 X 480	550 X 480
Suction Inlet	Dia mm	60 - 38	60 - 38	60 - 38	60 - 38
Capacity	L	20	20	20	20
Filter Type	Material	Catridge - Teflon	Catridge - Teflon	Catridge - Teflon	Catridge - Teflon
Filter Surface	cm <sup>2</sup>	30000	30000	30000	30000
Filter Efficiency	CAT (BIA) / micron	M <1	M <1	M <1	M <1
Voltage	V / Hz	230 / 50	230 / 50	400 / 50	440 / 50
Power	Kw	1.8	1.8	1.8	1.8
Vaccum Pressure (min)	mm of H <sub>2</sub> O	1700	1700	1700	1700
Air Flow (max)	m <sup>3</sup> / h	255	255	255	255
Protection	IP	55	55	55	55



## PREFACE

*Dear Customer,*

We are pleased with your having chosen the **Mistral 202** machine for your vacuum cleaning requirements. Backed by our industry expertise that spans across decades, we assure you that the machine comes with our Roots promise of quality, efficiency and performance.

We advise you to carefully read through the instructions prior to the operation of the machine. This manual contains detailed instructions for the proper operation of the machine, along with important information regarding its handling, care, maintenance and service needs.

We are sure that you will find the machine and its performance to your utmost satisfaction. Once again, we thank you for choosing Roots Multiclean Ltd. (RMCL) as a trusted partner for your cleaning requirements and solutions.

## USAGE, HANDLING AND MODIFICATIONS

Use of the product beyond the specified scope of functioning is deemed improper and the manufacturer cannot be held liable for any damages which may arise due to this.

This machine may be used only by persons who are trained or are familiar with the machine and are aware of the possible hazards involved. The appropriate Accident Prevention Regulations as well as applicable general regulations pertaining to Safety and Health at the work place must be adhered to by the user.

Modifications made to machine without the manufacturer's consent will relieve the manufacturer of responsibility and any possible liability for consequential damage.

## NOTES ON DOMESTIC WARRANTY

Please refer to the **Limited Warranty card supplied along with the machine** for additional information. This Warranty Policy is applicable only for the product sold within India.

If the product requires repair or maintenance work to be performed, please ensure that you get the machine serviced from an authorised service center or dealer of RMCL to ensure that the warranty is not void.

## ACCEPTANCE OF THE MACHINE

On arrival of the machine at the shipping address, please check for any damage that may have occurred as a result of transit. In the event of any such damage, the purchaser is bound by responsibility to send a claim letter to the concerned authorized branch/dealer with a copy of the invoice. The letter should be sent within 24 hours of receipt of the machine.

## THE MANUAL

All information contained is without obligation. RMCL particularly reserves the right to modify any equipment, technical specifications, colours, shapes, materials and the like so as to adapt them to local conditions all without previous announcement and without giving reasons. RMCL may stop manufacturing certain models without previous notice.

The Operator's Manual corresponds to the latest information available for this machine at the time it was printed. Minor deviations resulting from enhancements of the design cannot be entirely represented.

The Operator's Manual is an integral part of the machine and must not be misplaced.

RMCL reserves the right to change the product or contents of this manual without prior information.

For Battery, Motors, Engines and other OEM components related kindly refer to their manufacturers manual supplied along with the machine for instructions regarding usage, maintenance and service.

**NOTE:** Illustrations shown in this manual are for representative purpose only. Actual product may vary.

- We have specified the Model No./Type. in some contents/instructions.
- If Model No./Type has not been specified, the instruction will be applicable to all models.

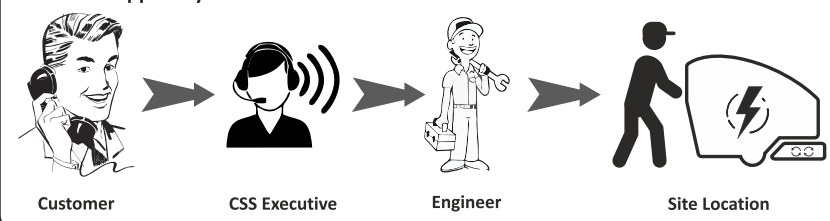
# CUSTOMER SUPPORT SYSTEM



## CUSTOMER SUPPORT SYSTEM (CSS)

RMCL has a dedicated CSS Team to ensure prompt after sales service support. One call solution for all your complaints/concerns. Register your complaint or concern through the below toll free number for hassle free support. The customer support executive registers your complaint/concern and will keep you updated on the progress ensuring prompt closure.

### Customer Support System Process



Toll Free Number:

**1800 41 99 77 9**

Our timings (Monday to Saturday):

**8:00 am to 7:00 pm**

# ANNUAL MAINTENANCE CONTRACT

**AMC**

AMC or Annual Maintenance Contract is a professional and timely maintenance cover offered by RMCL to its customers. AMC takes care of scheduled and preventive maintenance services. Equipment under AMC qualifies for agreed scheduled visits during the contract.

### Advantages of AMC:

- ✓ **Pan India network presence.**
- ✓ **Maximum equipment uptime.**
- ✓ **Focus on your business while we take care of your equipment.**
- ✓ **Well trained engineers to take care of the equipment.**
- ✓ **System driven scheduled periodic maintenance.**
- ✓ **Genuine spare parts.**
- ✓ **Toll free number assistance for breakdown.**
- ✓ **Ensures extended life of the machine.**

# USER MANUAL



ROOTS philosophy is to continually improve all of its products. For this reason we may modify the design, appearance and engineering of our products periodically.

Therefore, some changes, modifications and improvements may not be covered in this manual.

For the latest Operator's Manual, visit:

**[www.rootsmulticlean.com/user-manual/](http://www.rootsmulticlean.com/user-manual/)**

# SAFETY INSTRUCTIONS



## SAFETY & WARNING SYMBOLS

All paragraphs in this manual referring to you personal safety, the safety of your machine and the environmental protection are attributed one of the following warning symbols:

### Safety Provisions (persons and goods)



*Safety provisions in dangerous situation caused by misuse inaccurate adherence of instruction or prescribed work routine.*

### Caution (the machine)



*Important information on handling the machine in order to maintain operability.*

### Ecological Hazard (the environment)



*Due to use of substances representing an inherent danger to health of environment.*

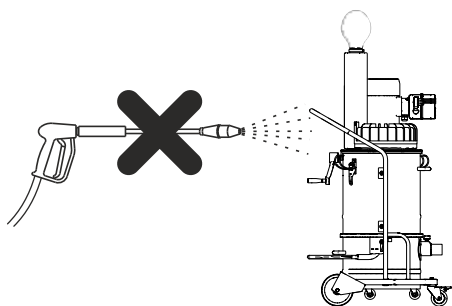
### Read Manual



*Prior to first operation, read the manual carefully and strictly comply with the instructions contained.*



**DO NOT CLEAN THE MACHINE WITH A WATER HOSE OR HIGH-PRESSURE WATER JET (DANGER OF SHORT CIRCUITS OR DAMAGE TO MACHINE).**



## General Guidelines

- In addition to the information contained in this manual, generally applicable legal provisions for Safety and Prevention of accidents must be adhered to.
- Please go through the manual and the instructions contained herein carefully, even if you possess prior experience in operating similar vacuum cleaning equipment.
- Schedule some time for the careful and thorough perusal of the manual contents.
- The responsibility of all persons in the working area fall upon the operator of the machine.
- No persons, children included, should be allowed within the zone of danger.
- The warning and instruction plates attached to the machine carry important advice on safe operation of the machine.
- Lost or illegible stickers must be replaced at the earliest.
- Prior to operation of the machine, the operator must ensure that the machine and its working implements are in proper and safe operating condition.
- Machines with identified and known defects must not be used.
- It is important that operators and all persons likely to use the machine familiarize themselves with all accessories and controls, as well as their functions, before commencing operation.
- Adherence to the above general instructions will help avoid the operator from having to read the manual while operating the machine.

### Safety during machine operation

- The machine is applicable for **DRY** vacuuming only.
- The machine may be used only by the authorized personal.
- The machine may be used for cleaning such surfaces approved by the owner or this authorized representatives.
- When transporting machine, shut down the motor. The operator must use the machine in accordance to its intended fields of application.
- During operation, the operator must take account of local conditions (stairs, obstacles) and of other persons, particularly children.
- Turn off the machine before any passage over dormers.
- The following indications are, by themselves, not enough to fully protect against all the hazards that could arise during machine 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.
- 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.



## • Safety during machine operation

- Before using the machine, prepare and train yourself by reading this manual carefully. Use of the machine by untrained and unauthorized persons is forbidden.
- Using the machine to vacuum toxic substances is forbidden unless this has been equipped with special filters required for the specific type of dusts.
- Do not vacuum flammable materials or substances or which could cause explosions (fuels, solvents etc.) To Vacuum such materials, the machine must be built with Anti - explosion Motor and Electric system and this must be requested by you explicitly.
- Do not vacuum corrosive substances unless the machine is equipped with containers suitable for this purpose.
- Use of the machine without the supplied filters is not recommended. If the filters are correctly fitted, the machine will not eject any objects.
- 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 machine casing containing moving parts must not be removed by the user.
- Use the machine cautiously on slopes and ramps. Do not change direction on gradients.
- Make sure the parked machine remains stable by operating the brake 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.
- Periodically check the main 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.
- Motor brushes and burnt-out fuses must be replaced by Roots or authorized dealers. Always use original spare parts.
- The user is responsible for disposing of vacuumed substances in accordance with applicable laws.
- The machine must not be operated in a corrosive or explosive environment.
- Always make sure the machine 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 vapors. Avoid close to open flames or sources of heat.
- Never use the machine without the filter.
- Do not vacuum lit cigarette ends. The filter could be damaged.
- 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 machine. Do not open the vacuum container when the machine is 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 Roots 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.
- 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, button 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 main 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 machine operation safety conditions are restored, especially the safety devices and the protective guards.
- Only adult persons should use the machine.
- During vacuuming operations, always brake the machine using the special revolving wheel lock.
- To ensure the correct operation of the machine, this must be positioned, protected against atmospheric agents (rain, hail, snow, fog, dusts in suspension etc.) With an environmental running temperature between 5°C to 45°C and relative humidity not above 70%.
- 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.
- 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.

# SAFETY INSTRUCTIONS



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



- This machine splash-water proof.
- Use of the machine in areas prone to explosion hazards is strictly forbidden.



Turn the motors off to protect the machine against unintended movements, before leaving it unattended.



Never collect explosive fluids, undiluted acids and solvents. This includes e.g. gasoline paint thinners or fuel oil, which-when combined with air, may form explosive vapors or mixtures. Acetone, undiluted acids and solvents can be aggressive to the material used for the machine components.



- Do not clean the machine by means of vapour jet or high pressure cleaning equipment. Do not allow water to penetrate the electrical parts.
- Do not USE the machine on steps.

## Safety Plate and Symbols

- Plates are affixed to the machine showing safety symbols and/or messages.



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



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 Roots.

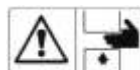
- Read the operator's and maintenance manual carefully before using the cleaner or doing any maintenance jobs.



Shake the filter handle only when the machine is turned off.



Do not breathe in inflammable and/or explosive liquids or powders.



- Risk of crushing upper limbs while fitting and locking the material container on the machine.
- Never place hands between the materials container and machine while locking.
- Do not place hands on sides of container near the guide pins while locking.
- Perform the container locking operation by means of the lever located on the side **using both hands**.

## Outstanding risks associated with the machine could be:

- **Electrical maintenance risks caused by the need to work under power.**
- Only trained personnel should work on the machine with the power supply connected and this must have double earth insulation.
- **Risk of improper use in the presence of explosive and flammable substances.**
- The machine must not be used in environments containing substances in the form of liquids that could vaporize at room temperature and flammable dusts and gas.
- **Risks 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.



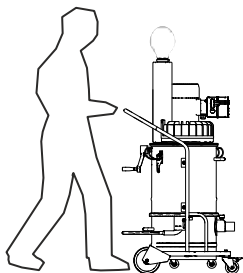
- Removing the safety plates on the machine is strictly forbidden.
- The manufacturer declines all liability in relation to machine safety in the event of failure to comply with the above indications.



## ***Handling of line cords***

- During movement, keep the load low for greater stability and safety.
- Open the box from its bottom side and remove it by pulling upwards. After detaching the plastic wraps, you now can follow the below instructions.
- Remove the Accessories Kit which is tied with the machine.
- Take the machine out of the pallet carefully.
- Make sure that the line cords are not damaged by running over, squeezing, dragging, etc.
- The line cords must be checked regularly with regard to damage and aging.
- The machine must not be used unless the line cords are in proper condition.
- Use only original extension cables, with maximum admissible length of 25 m.
- When using or replacing line cords, it is necessary to adhere to as specified by the manufacturer.
- When replacing coupler plugs of line cords or connecting leads, splash-proof protection and mechanical strength must be guaranteed.
- During use, mind the power supply cables and avoid crushing or pulling these.
- Never pull the machine by means of the power cable and the vacuum pipe.

## ***Transport***



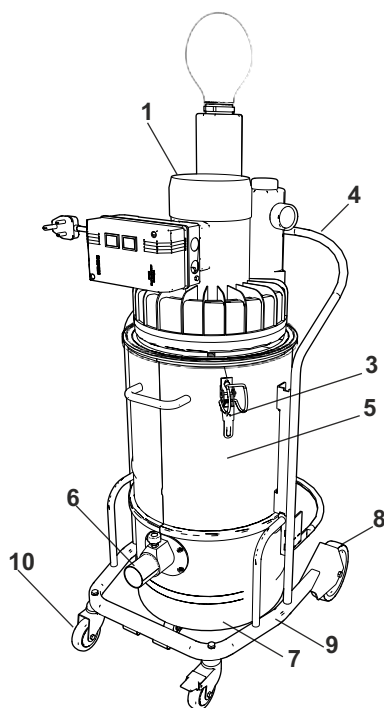
- For easy transportation, the machine is equipped with fixed and swivel castor wheels.
- The machine can be moved only on flat ground!
- If the machine is moved on inclined grounds, you can risk to lose the control, because of the weight and to damage persons or things.



## Unpacking & Handling

- 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.

## Identification of main parts



- |                    |  |
|--------------------|--|
| 1. Motor head      | 6. Suction pipe coupling point           |
| 2. On/off switches | 7. Removable vacuumed material container |
| 3. Latch assy      |  |
| 4. Push handle     | 8. Fixed castors                         |
| 5. Filter chamber  | 9. Chassis                               |
|                    | 10. Castors                              |

## Optional Accessories

Refer the Optional Accessories at the Spare parts section of this manual.

## Operational Principle

The material will be sucked through the hose and it will be moved to the suction container. The heavy particles will fall into the collection tank then the fine particles will be filtered by the filter. The blower outlet will dispose the air.

## Application Areas

The machine appeals to an array of users and applications, such as building and cleaning contractors, laboratories, workshops, vehicle cleaning, surface preparation, bakeries, food, wood and pharmaceutical industry.

## Installation



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: The hose with relevant couplings and vacuum accessories are supplied as STANDARD.

- Contact your dealer for information relating to the different types of OPTIONAL accessories available for this specific vacuum cleaner model.
- Fit the supplied connector on the pipe union.
- Make sure the power supply corresponds to the voltage and frequency indicated on the vacuum cleaner plate.
- In the event of an extension being used, make sure this is in perfect condition, in compliance with EC standards and with cable cross section suitable for the power input of the vacuum cleaner.



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

## Intended uses

- These specific vacuum cleaner models have been designed, built and protected for vacuuming dusts and solid materials only, using special filters.
- Any other use is considered *IMPROPER*.

# MACHINE OPERATION



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



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

## 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, well-enough lit and devoid of explosive atmosphere.

## Storage

Remove the filter and clean it, empty the container 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.

# MACHINE OPERATION

## Operating & Indicator Elements



## How to operate the machine



**Before fitting the plug, make sure the power voltage corresponds to that on the marking plate.**

- Make sure the power plug is correctly fitted in the power socket.
- Make sure the flexible hose is properly fitted and locked in the vacuum pipe union.
- Make sure the power cable and any extension used are integral and in perfect condition.
- Block the vacuum cleaner by means of the retainer provided.



- 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.
- To move the vacuum cleaner, use the large handle.



Before switching the vacuum cleaner back on, make sure the motor has come to a complete halt.

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



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



The vacuum can be moved only on flat ground ! If the vacuum is moved on inclined grounds, you can risk to lose the control, because of the weight and to damage persons or things.

## Releasing and removing the removable container

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



Turn the lever on the back side of the vacuum cleaner. 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.
- To prevent having to use a dust protection mask and for greater convenience, before starting vacuuming operations, its a nylon bag inside the container and to fasten this in place with the special accessory available on request.



- While performing these operations, it is best to wear a dust protection mask.
- Never place the hands between the material container and the vacuum cleaner while locking.
- Risk of trapping upper limbs.

## 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.



- On the front of the vacuum cleaner is a vacuum meter indicating the degree of vacuum inside the vacuum cleaner.



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

Never use the machine with the filter blocked.

## Replacing the filters

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.



**Wear individual protection devices.**



Stop the machine, using the brakes.



Turn the lever that lock the removable container.



Remove the container.



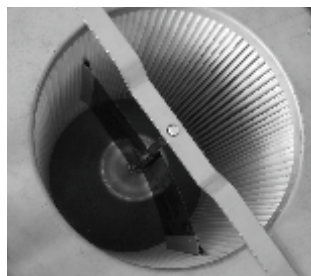
Release the stops that hold the head.



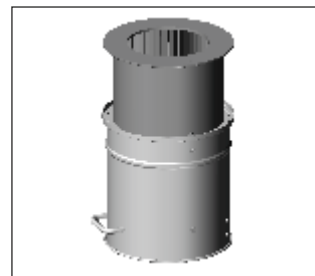
Lift the motor head and rest this on a flat surface being careful not to damage the power cable.



Loosen the screw and its nut, removing the spring.



Loosen the screws of the shaft's bar, remove the shaft and the filter's screws.



Remove the filter and loosen the shaft's bush.



**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.**



## Electrical System

The electrical equipment of this machine uses a mains voltage of 230V/50Hz.



If there should be repeated cases of failure, look for the reason.

Any work at the electrical system has to be carried out by specialized electricians only.

## Maintenance Work

Compliance with our recommendations concerning maintenance work will give you the certitude always having a machine at your disposal, which is ready to work and in good operating condition.

Please contact your local Roots Multiclean distributor; the people there will be glad to perform that work for you. There well trained personnel and genuine Roots spare parts are at your disposal.

- Well trained personnel and genuine Roots spare parts are at your disposal.
- In case of any inquiries or orders for spare parts, please always quote the machine's serial number mentioned on the nameplate.
- The name plate is fixed in the top side of the machine.
- When cleaning or servicing the machine, and when replacing any parts, shut off the machine and on principle disconnect the power plug from the power supply.
- For reasons of safety during cleaning and/or maintenance work in or on the tank, the tank lid - when lifted - must be secured so as to prevent accidental closing or tilting down.
- The machine may be taken into operation only if all guarding devices are fitted and in protective position. As far as possible, cleaning should not be done by hand, but using appropriate tools or equipment.
- Maintenance and repair work may be carried out only by means of suitable tools and by the people trained in the factory. - for reasons of safety, only genuine Roots spare parts may be used.

## Informative notes

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

## General safety precautions

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:

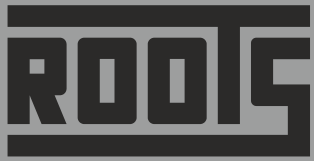
- Make sure there are no unauthorised persons in the work area.
- Make sure the maintenance engineer is equipped with all approved individual protection devices needed for the specific operation (gloves, eyewear, shoes, etc.).
- Make sure the maintenance engineer has carefully read the instructions contained 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.
- 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.



Fault found	Possible fault	Recommended remedy
<b>The cleaner fails to start</b>	No Power	Check the power mains supply. Check the integrity of the plug and power cable
	Indicator off and plug fitted: fuses burnt out	Replace the fuses
	Indicator on, plug fitted, switches working: worn motor brushes.	Replace the brushes
<b>Dust is leaking out</b>	Perforated filter	Replace the filter
	Filter unsuitable for type of job	Fit a suitable filter for the type of material to be vacuummed
<b>The vacuum cleaner does not work as it should</b>	Pipe perforated or blocked	Check the pipe and if necessary, replace.
	Container full	Empty container
	Filter blocked	Replace filter
	Seals worn	Replace seal
	Air leak	Check for any air leaks out of closing fasteners, tightening screws, container or filter chamber
<b>Motor very noisy</b>	Carbons worn or broken	Contact Roots after - sales



**Roots Multiclean Ltd.**

R.K.G. Industrial Estate, Ganapathy, Coimbatore - 641 006, India.

*Phone:* +91 (422) 4330 330, *E-mail:* [rmclsales@rootsemail.com](mailto:rmclsales@rootsemail.com)

*Web:* [rootsmulticlean.com](http://rootsmulticlean.com)

*Toll Free:* **1800 41 99 77 9**