



## Dust Collector with Dual Bag Filter DCF 2



### Instruction Manual

The company reserves the right to change equipment specifications and models without notice. Pictures are representative and may not be part of the standard equipment.

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# Foreword

Dust collector system is designed and manufactured in accordance with proper airflow and good dust collection to ensure not only removal of dust from the Tyre surface but also keep clean the machine and moving parts.

It consists of various components like Cabinet steel Structure and profile, Centrifugal fan with motor, Bag filter, Steel pipe to convey dust particles, support structure etc.

The machine is designed and manufactured for accurate and trouble free performance and can be operated by persons with little training. This instruction manual details installation, commissioning, operation and preventive maintenance procedures of dust collector system.

# Contents

01 Description .....	4
02 Specifications .....	5
03 Assembly and Commissioning Tools .....	6
04 Installation and Commissioning .....	7
05 Pre-Operation Checks .....	8
06 Operation .....	9
07 Do's and Don'ts .....	10
08 Troubleshooting - Electrical .....	11
09 Preventive Maintenance .....	12
10 Electrical Drawings .....	13
11 Parts List .....	14

# 01 Description

The Dust collector consists of the following major components.

## Main frame

The main frame is a fabricated with steel structure which houses all the main components such as steel cabin with filter bags, dust collecting bins, Inlet and Out let pipes, Electrical motor and controls.

## Steel Cabin with Filter Bags

We are offering a special vacuum proof steel cabin which has Efficient filter bags too. This systems are airtight and guarantees for leak and thus a clean dust collection is ensured. Air exhausted to atmosphere to reduce noise.

## Dust Collecting Bins

Dust collecting bins are made up of reinforced metal plate with appropriate discharge port for easy handling of filled dust and ensure sufficient sealing and avoid leakage. It has storage capacity suitable for each application.

## Electrical Cabin and Controls

Electrical cabinet are with dust-proof, and electrical control components are well protected and safe to operate.

Three-phase electric motor, totally enclosed fan cooled (TEFC) with external ventilation provided with adequate protection.

## 02 Specifications

Model	DCF 2
Catalogue Number	MD45 1 - <b>X</b> *
* <b>X</b> in Cat. No. denotes power supply specifications (V / Hz / ph)	<b>R</b> - 220 / 60 / 3 <b>O</b> - 380 / 50 / 3 <b>S</b> - 380 / 60 / 3 <b>P</b> - 415 / 50 / 3 <b>U</b> - 440 / 60 / 3
RPM	3000
Capacity (L)	50
Dimensions (L x W x H) (mm)	1500 x 720 x 3660
Weight / empty (kg)	~195

# 03 Assembly and Commissioning Tools

## Accessories

Standard	Main frame with steel cabins, filter bags, dust collecting bins, electrical motor and control panels
Optional	Delivery pipes to individual machines, pipe supports and steel structure

## Tools

Spanners	Double end 6 – 7
	Double end 8 - 9
	Double end 10 -11
	Double end 12 -13
	Double end 16 - 17
	Double end 18 - 19
	Double end 20 - 22
Allen key	Allen key 3mm
	Allen key 4mm
	Allen key 5mm
	Allen key 6mm
	Allen key 7mm
	Allen key 8mm
Screw driver	Screw driver star end
	Screw driver minus end
Cir-clip plier	A Type Circlip Plier

## Materials

In coming cables up to machine
Multi purpose grease

## 04 Installation and Commissioning

- The floor should be level at the bottom of the base of the equipment.
- Place the equipment in the place indicated in lay-out or according to your need and fix using the bed plate foundation holes.
- The levelling of the machine is essential so that there are no unnecessary mechanical stresses, compromising the life of the parts and loss of warranty.
- Provide electrical incoming supply and verify that the three-phase voltage of the mains supply is the same voltage as the one attached to the control panel door.
- Check the control panel if the main switch is turned to “OFF” and the internal components (circuit breakers and motor circuit breaker) are “OFF”.
- Follow the electrical installation diagram, then activate the circuit-breakers and the general switch, turn it to the “ON” indication, a white led light on the control panel door will illuminate, indicating that the equipment is energized.
- Tests by pressing the green “ON”, red “OFF” buttons (Turn on and stop the motor), Check emergency button is working (OFF switch).
- If the tests applied were satisfactory, the equipment is ready for use.
- Do not apply other forms of installation, this may cause damage to the electrical components, burnout of the motor and other parts and loss of warranty.
- Use the Gaskets between the flanges to ensure a good seal.
- Ensure the filter bags are fitted inside the cabinet as shown in exploded view.

## 05 Pre-Operation Checks

- The floor must be levelled, where the equipment is installed
- Ensure the steel structures are grouting properly and no shake while in operation.
- All the nuts mentioned in the parts list are to be tightened properly.
- Safety grounding of main supply voltage, where ever applicable.
- After installing the tubing and connecting the power cord, turn the main switch
- Fan rotation must be checked visually to ensure that it is rotating in the clockwise direction.
- Unlock the “emergency” button in sidewall cleaner
- Press the “ON” button in sidewall cleaner to start the exhaust rotor.
- Press the “OFF” button in sidewall cleaner to stop the exhaust rotor.
- Press the “emergency” in sidewall cleaner button when performing some maintenance on the suction system.
- Check air leaks in suction and delivery lines.



## 06 Operation

- Basically the dust collecting system is connected to Tyre cleaning, skiving station and Tyre buffing station and connected to the respective machine.
- All the electrical connections in the dust collector are inter linked with the basic machine or if it is independent station, we must switch on the power supply and ensure it start working before the Tyre cleaner, skiving or buffing operation starts.
- Dust will be sucked automatically from the removal point and carry to the dust collecting bags, bins as appropriate.
- The dust collection drum(s), bin, or hopper should be checked regularly to establish a pattern that will provide for it being emptied when it becomes approximately 2/3 full of collected material.
- Allowing the dust collect drum(s), bin, or hopper to overfill can result in a plugged cyclone and a reduction in separating efficiency.
- Under no circumstances should flammable materials be mixed with dust being collected from the ferrous metal grinding operations, due to the potential fire hazard of sparks entering the dust collection system.
- Collected dust should be disposed of properly especially in cases where the dust being collected is rated as being either hazardous or toxic. In such cases, established governmental disposal regulations should be strictly obeyed.
- Shake the ropes which are connected with filter bags daily in order to ensure dust particles settle at drum.

## 07 Do's and Don'ts

### Do's

- Use the machine only for Tyre dust collecting purpose.
- With daily use of the equipment there is a need to clean the filter bag piping and prevent clogging of dust and maintain properly after the last operation
- Use personal protective equipment (boots, gloves, ear protectors and safety goggles).
- The operator must not stand between the pick-up lever of the waste bucket.
- The operator must not open the inspection door while the hood is running.
- The operator must not remove the guard from the motor while it is in motion.
- The operator must not open the control panel door while the main switch is switched on or the operating light is on.
- Shake the filter bags at least daily or when dust accumulated, for efficient filtering / suction.

### Don'ts

- Do not use the equipment if the rotor is vibrating or presenting any noise.
- Do not use the equipment if there are breaks in the welds or in the structure.
- Do not use the equipment if it fails the electrical system (push buttons and control panel).
- Do not use the equipment if leaks are present on the filter elements.

## 08 Troubleshooting - Electrical

Symptoms / Problems	Possible Causes	Remedies
<p>The motor does not work</p>	<p>Power supply is not reaching the device</p>	<ul style="list-style-type: none"> <li>• Check that the machine is properly connected</li> <li>• Check that the main switch is switched on</li> <li>• Check that the power supply (v) is correct</li> <li>• Check that motor circuit breakers are connected</li> </ul>
<p>The electrical circuit is in order; the 24v power does not reach the motor and control buttons at side wall cleaning machine</p>	<p>Electrical wire rupture or not properly fixed to fastening terminal</p>	<ul style="list-style-type: none"> <li>• Check and identify the damaged wire or to re-tighten the clamping terminals</li> </ul>
<p>The motor circuit breaker is disconnected</p>	<p>Short circuit or amperage setting not correct</p>	<ul style="list-style-type: none"> <li>• Check and reset the motor circuit breaker amperage rating as specified on the electric motor rating name plate</li> </ul>
<p>The electrical circuit is in order, but the contactors do not operate</p>	<p>The contactor is not assembled or wires poorly coupled to the clamping terminal</p>	<ul style="list-style-type: none"> <li>• Check the add-on block terminal connection and re-tighten the clamping terminals and contactor control supply</li> </ul>

## 09 Preventive Maintenance

### Daily maintenance

- Check the filter elements.
- Use the hand blower to eliminate residuals trapped in the filter element.

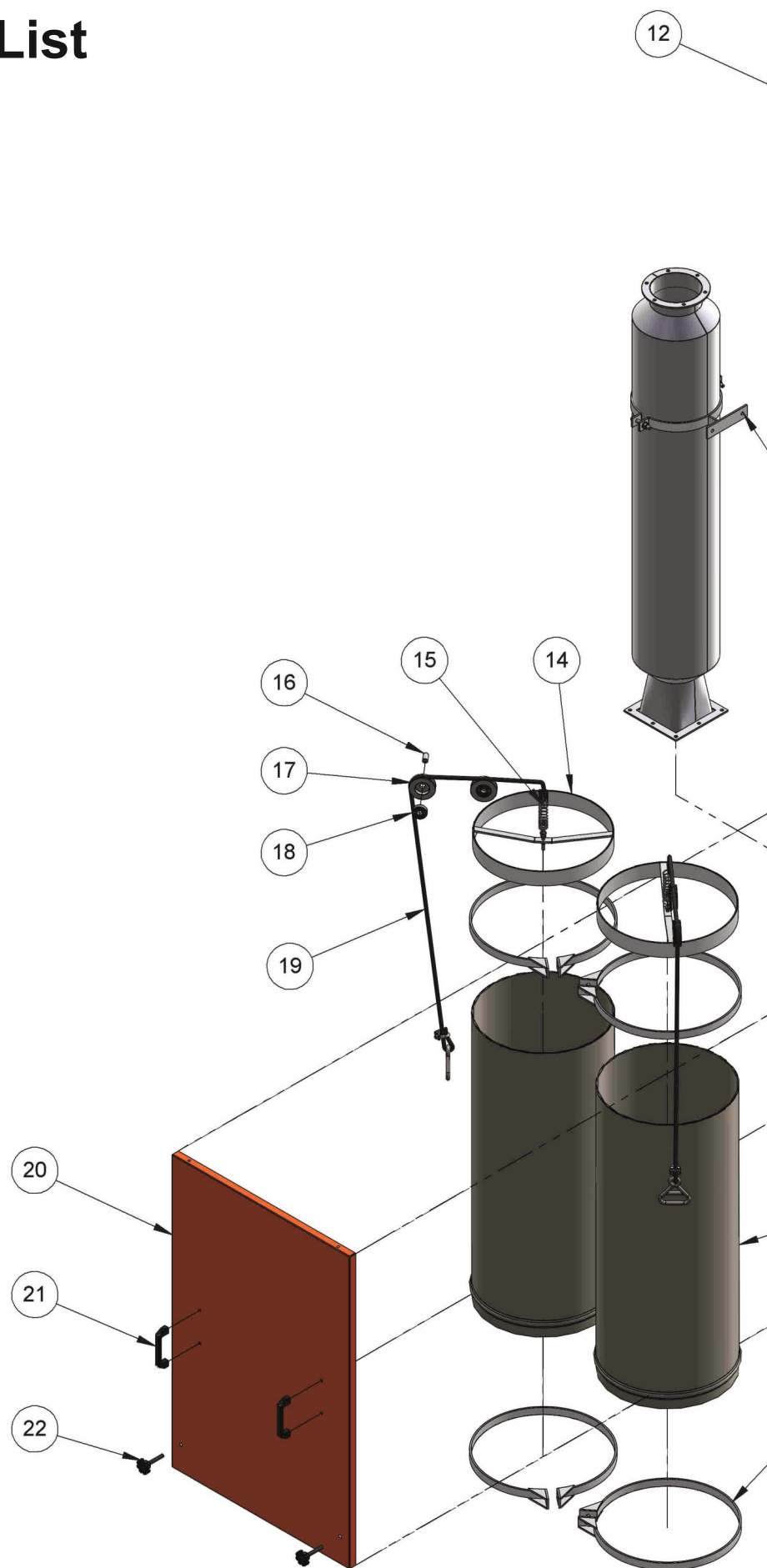
### Weekly maintenance

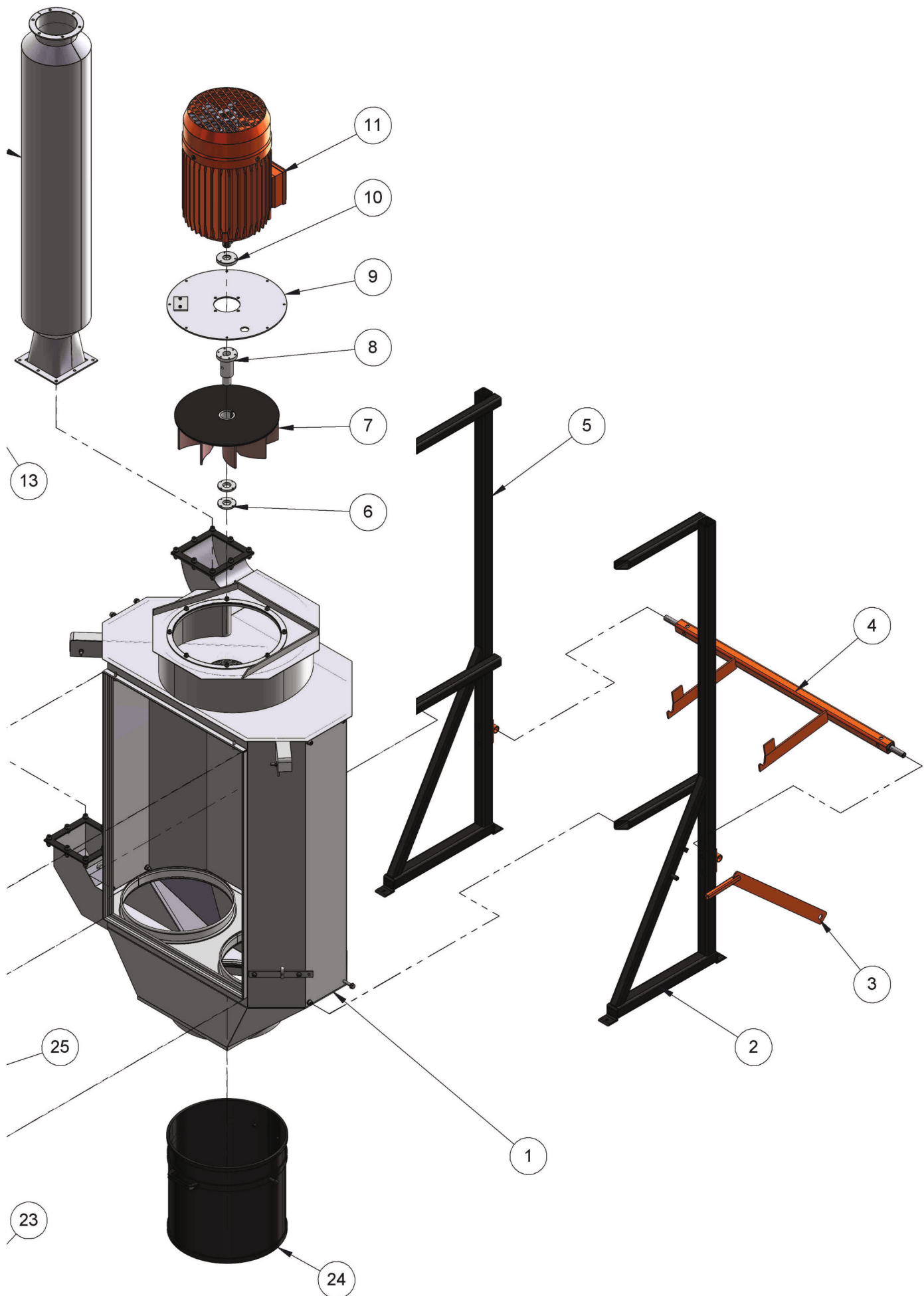
- Clean the equipment by removing dust residues.
- Check the general condition of the rotor / motor assembly.
- Check the general condition of the electrical assembly.
- Lubricate the moving parts.
- Check that the screws are tight.

## 10 Electrical Drawings

Refer Catalogue Number **MA01 63 - X\***  
Page No 17 Electrical Drawings from  
Tyre Sidewall Cleaner TC 6-3.

# 11 Parts List





## Parts List - BOM

S. No.	Order Code	Description	UOM	Qty.
1	MD451/1	EXHAUST DOUBLE MAIN ASSEMBLY	Nos	1
2	MD451/2	EXHAUST FRAME ASSEMBLY RH DOUBLE	Nos	1
3	MD451/3	OPERATING HAND ASSEMBLY	Nos	1
4	MD451/4	DUST COLLECTER FRAME ASSEMBLY	Nos	1
5	MD451/5	EXHAUST FRAME ASSEMBLY LH DOUBLE	Nos	1
6	MD451/6	LOCK NUT	Nos	2
7	MD451/7	ROTOR ASSEMBLY	Nos	1
8	MD451/8	MOTOR ADAPTOR	Nos	1
9	MD451/9	TOP MOTOR COVER	Nos	1
10	MD451/10	ADAPTOR CAP	Nos	1
11	MD451/11	MOTOR	Nos	1
12	MD451/12	EXHAUST SILENCER ASSEMBLY	Nos	2
13	MD451/13	SILENCER CLAMP ASSEMBLY	Nos	1
14	MD451/14	DUST BAG HANGING ASSEMBLY	Nos	2
15	MD451/15	SPRING	Nos	2
16	MD451/16	ROLLER BUSH	Nos	4
17	MD451/17	ROPE ROLLER	Nos	4
18	MD451/18	BEARING - 6302	Nos	4
19	MD451/19	ROPE	Mtr	3
20	MD451/20	DOOR – EXHAUST DOUBLE	Nos	1
21	MD451/21	HANDLE	Nos	2
22	MD451/22	HANDLE KNOB SCREW	Nos	2
23	MD451/23	LOCK RING ASSEMBLY - EXHAUST DOUBLE	Nos	4
24	MD451/24	DUST COLLECTING BIN - EXHAUST DOUBLE	Nos	1
25	MD451/25	DUST BAG-DOUBLE	Nos	2