

# GYR AIR™

G-1000 Dust Processor

## Operation Manual

Revision A 2018-08-25



# Index of Contents

<b>1. Foreword</b>	2
<b>2. Machine Description</b>	3
2.1 Feature Identification	3
2.2 Specification	4
2.3 Electrical Power Requirement	5
<b>3. Safety Regulations</b>	7
3.1 General Safety Instructions	7
3.2 Specific Safety Instructions for the Dust Processor	8
<b>4. Installation of the Machine</b>	9
4.1 Transportation of Machine	9
4.2 Positioning the Machine	10
4.3 Assembly	10
4.3.1 Unpacking	10
4.3.2 Removing the Pallet	10
4.3.3 Connection	11
4.3.4 Power Supply	11
4.3.5 Air Supply	12
<b>5. Function and Operation</b>	13
5.1 Control Panel and Operation Instruction	13
5.1.1 Touch Screen Operation Instruction	14
5.1.2 Supplementary Instruction for Dust Cleaning	18
5.2 Instructions for Remote Control	18
5.3 Instructions for Synchronous Control	18
5.4 Pulse Controller Use and Control	19
5.5 Use of Dust Bin	20
5.6 Use of Dust Box	20
<b>6. Maintenance</b>	21
6.1 Cleaning Dust Bin	21
6.2 Cleaning Dust Box	21
6.3 Cleaning or Changing the Filters	21
6.4 Full Dust Bin or Pressure Drop Alarm	22
6.5 Converter Error and Alarm	22

## 1. Foreword

This original instruction was developed as an integral part of this machine. It contains basic information for qualified operating staff. It also contains all necessary information for the correct and safe operation of this machine. These regulations, however, cannot cover all safety aspects. The operator must peruse and make sense of this manual before starting to use the machine.

This manual should be put in a convenient place. If you lose this manual, please contact your distributor for a new one.

We maintain the right to modify specifications, designs, operation and maintenance instructions without advance notice.

We offer a two-year warranty based on the purchase date. Defective parts will be repaired or replaced by Harvey at no charge.

We do not offer the warranty service for the following reasons:

- Misuse
- Lack of proper maintenance;
- Not using genuine Harvey parts;
- Consumable parts;
- Force majeure, fire or explosion

## ***NOTICE***

**Every machine we produce is fitted with a name plate with its serial number. The number is also punched on the machine.**

**An exact description of the machine model and serial number will facilitate rapid and effective replies from our after-sales service.**

## 2. Machine Description

This product uses the Gyro Air dust processing technology, which effectively separates the dust from the air flow before the filter. This machine has the following features:

### **Reduces filter clogging:**

The Gyro Air technology efficiently separates 99.7% of the dust from the air flow BEFORE the filter, providing the benefit of a lower capacity load on the filter and a longer filter life. The air flow levels are also maintained for a longer time during normal operation.

### **Clean emission:**

Emission concentration  $< 0.05 \text{ mg/m}^3$ , better than the CE standard of  $0.1 \text{ mg/m}^3$ .

### **Intelligent control:**

Real time monitoring of dust levels in the dust bin, filter clogging, convertor and motor status for auto-dust cleaning; auto-start; remote-start; delayed dust cleaning.

### **Flow Cruise:**

Intelligent speed control which maintains consistent air flow speed in the flow cruise mode.

### **Remarkable designs:**

Heavy duty casters for easy positioning at the dust source; no need for specially designed pipeline; easy connection; low cost for building dust collection system.

### **Easy maintenance:**

Easily-to-change tool-less filters; exhaust air by internal circulation, low maintenance cost.;

### **Safety Standards:**

CE (CONFORMITE EUROPEENNE).

This product is suitable for dry dust process, and can be used in the field of metal grinding, metal cutting, wood machining, plastic machining, graphite machining, fiberglass machining, stone cutting and surface polishing.

### 2.1 Feature Identification (Fig.1)

- |                    |                         |
|--------------------|-------------------------|
| 1. Cabinet         | 10. Filter              |
| 2. Flow Duct       | 11. Oil Water Separator |
| 3. Separator       | 12. Disconnect switch   |
| 4. Inlet           | 13. Fan Motor           |
| 5. Dust bin        | 14. Power Cable         |
| 6. Operation Panel | 15. Gas storage tank    |
| 7. Dust Box        | 16. Directional wheel   |
| 8. Swivel Wheel    | 17. Electrical box      |
| 9. Feet            |                         |

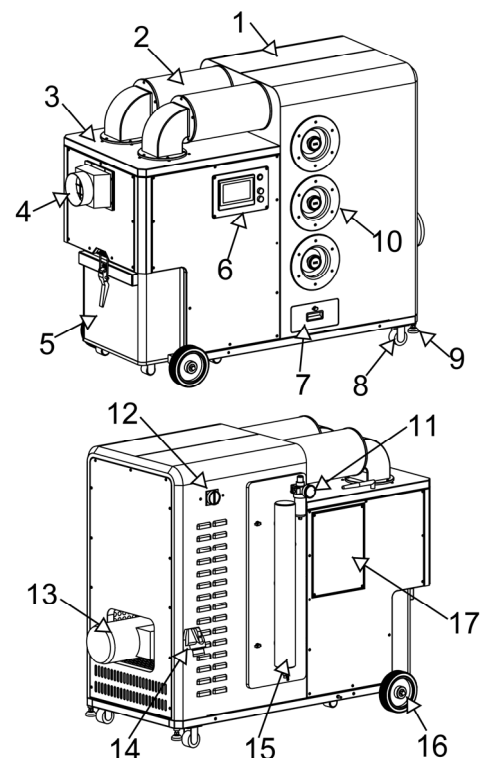


Fig.1

## 2.2 Specification

Specification	G-1000	
Electrical	Metric	Imperial
Power Source	380-480V 50Hz 3-phase	380-480V 60Hz 3-phase
Main motor	3KW	4HP
Frequency Converter	Siemens V20	
Dimensions & Weights		
Overall Dimension	1870x 940 x 1500 mm	73-3/5X37X59 in.
Packing Size	2140x1100x1730mm	84-1/4X43-1/4X68-1/8 in.
Net Weight/Gross Weight	445/545 Kg	980/1200 lbs
Performance		
Inlet Size	Φ 160mm and Φ140mm	6“
Max. Air Flow	2700m³ /h	1600CFM
Max. Static Pressure	6200Pa	25 inch water
Vacuum@22m/s	2200Pa @ Φ140mm	/
Blower Speed	2400-4200rpm	2400-4200rpm
Impeller Size	Φ360mm	14-1/8”
Filter Efficiency	99.95%@0.3μm	99.95%@0.3μm
Emission	0.05mg/m³	0.05mg/m³
Filter Area	12.6 m²	136SF
Number of Filters	3	3
Noise Level	61-72dB(A)	61-72dB(A)
Dustbin Capacity	150L	40Gal
Features		
Smart Jet-Pulse Filter Cleaning	Standard	Standard
Dust Full Monitor	Standard	Standard
Filter Monitor	Standard	Standard
Flow Cruise	Standard	Standard
Wireless Remote Control	Standard	Standard
Wireless Synchronized Control	Standard	Standard
Optional Accessories		
Remote Control （RC-800/1000）	YES	YES
Synchronized Control （SC-800/1000）	YES	YES
Y-Adapter （YA-150-2x100）	NO	YES
Dust Bag （DB-1000）	YES	YES

## 2.3 Electrical Power Requirement

**Power requirement:** AC380-480V 3-phase

**Breaker Size:** 20A

The machine needs no further electrical installation.

For the **North American** market, the equipment comes with a cable (4 cords).

For the **European** market, the machine is equipped with an industrial socket (5 cords).

The input power supply of the machine is 3-phase, AC380-480V. The steady-state AC power supply is 0.9-1.1 times of the rated value.

### 2.3.1 Equipment grounding

This machine must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for the electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local building codes and ordinances.

### WARNING

**WARNING** – Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded.

### 2.3.2 Cable Inspection and Extension

Before using, you need to check the cable to see if there is any damage. If any, it should be immediately repaired or replaced.

Extension cables cause a voltage drop, which may damage electrical components and shorten the motor life. Voltage drop increases as the extension cable size gets longer and the cable size gets smaller.

**Minimum Gauge Size ..... 2.5mm<sup>2</sup> (14 AWG)**

**Maximum Length (Shorter is Better).....15m (50 ft).**

2.3.3 Electrical diagram(Fig.2)

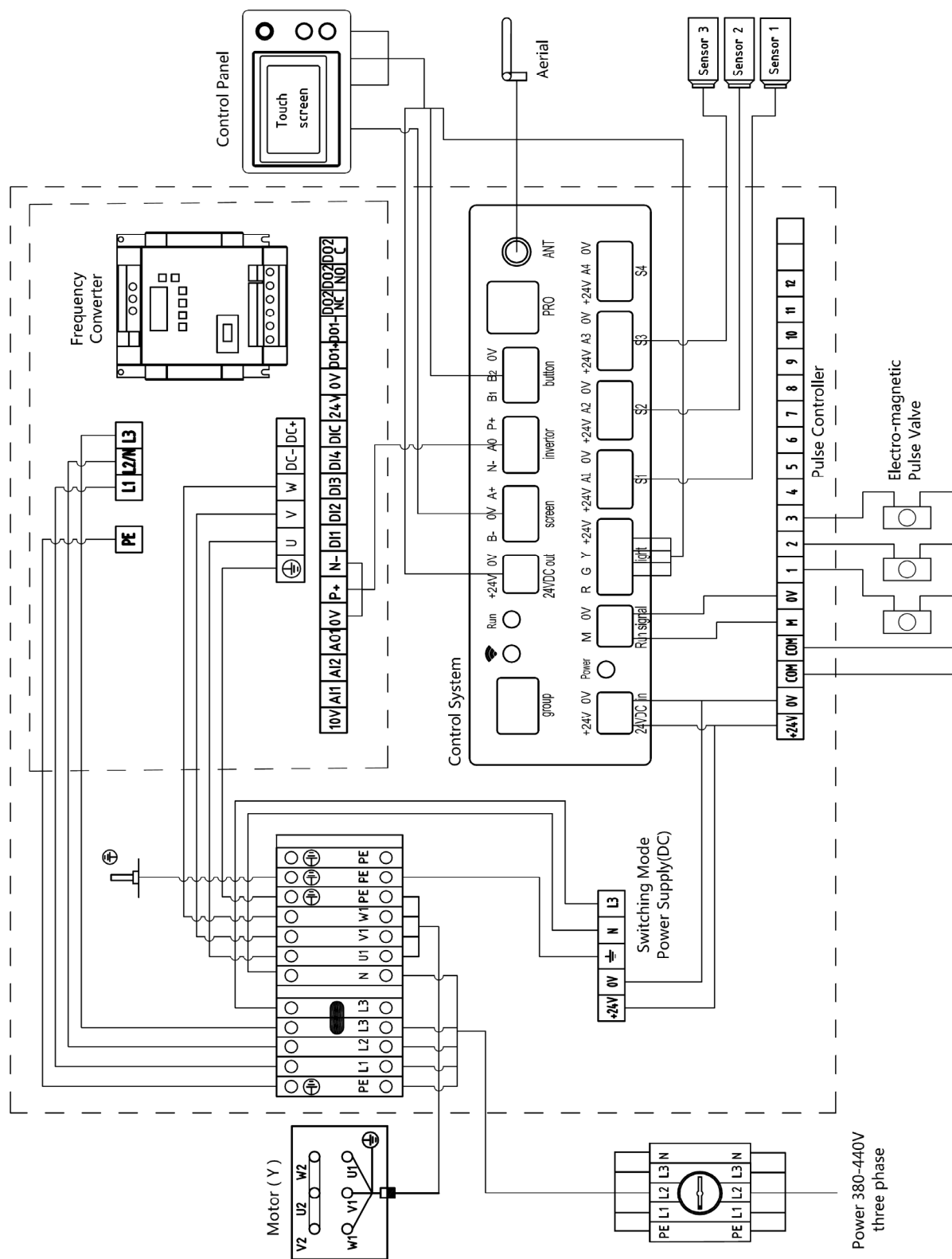


Fig.2

## 3. Safety Regulations

### 3.1 General Safety Instructions

#### **WARNING**

1. Read and understand the owner's manual and labels affixed to the machine. Learn its application and limitations as well as its specific potential hazards.
2. The power supply socket or terminals need reliable grounding.
3. Keep the machine in good working order, properly adjusted and aligned. Cluttered areas and benches may invite accidents. Make sure the floor is clean and not slippery due to wax and sawdust build-up.
4. **WARNING!** – To reduce the risk of electric shock:
  - Do not expose the machine to water or moisture.
  - Operators shall be adequately instructed on the use of these machines.
5. **CAUTION!** – This machine is for indoor use only.
  - This machine shall be stored indoors only.
6. Do not use this machine within the designated safety areas of flammable liquid– storage or in areas where there may be volatile gasses. Keep the work area clean, dry, and well-lit.
7. Keep children away from this machine.
8. Don't force the machine or the attachment to do a job for which it was not designed.
9. Do not wear loose clothing, gloves, neckties or jewelry (rings, watch) because they could get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair. Roll up long sleeves above the elbows.
10. Do not use this machine if you are tired, your attention is wandering or you are distracted.
11. If the work operation appears to be excessively noisy, it's advisable to wear ear protection.
12. Always wear safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are not approved safety glasses.
13. **WARNING!** – To reduce the risk of electric shock:
  - Always unplug the machine during servicing.
14. **WARNING!** – To reduce the risk of injury from moving parts:
  - Always unplug the machine before servicing.
15. Make sure the power switch is in the "OFF" position before plugging it into an electrical outlet.
16. When turning the power "OFF", do not leave the machine unattended until it comes to a complete stop.
17. Regularly inspect the machine for damaged parts, loose bolts or any other conditions that may effect safe operation. Always repair or replace damaged parts before operating machine.
18. Keep the machine clean. This will enable you to easily see any damage that may have occurred. If need be, clean the machine with a damp soapy cloth. Do not use any solvents or cleaners as these may cause damage to any plastic parts or to the electrical components.



## 3.2 Specific Safety Instructions for Dust Processor

### **WARNING**

#### **1. CLEAN ENVIRONMENT**

Once you are ready to commence work, remove any tools, objects or items that could inadvertently get 'sucked up' by the machine and place them safely out of the way.

#### **2. INTENDED USE**

Do not use this machine as a vacuum cleaner. Avoid stones, nails, etc., as it may produce a spark and cause a fire or an explosion. This machine is not suitable for picking up hazardous dust.

#### **3. FIRE SUPPRESSION**

Only operate the dust collector in locations that contain a fire suppression system or have a fire extinguisher nearby.

#### **4. REGULAR CLEANING**

Regularly check/empty the collection bags to avoid the buildup of fine dust that can increase the risk of fire. Make sure to regularly clean the surrounding area where the machine is operated --excessive dust buildup on overhead lights, heaters, electrical panes, or other heat sources will increase the risk of fire.

#### **5. STATIC ELECTRICITY**

Plastic dust lines generate high amounts of static electricity as dust chips pass through them. Although rare, sparks caused by static electricity can cause explosions or fire. To reduce this risk, make sure all dust lines are thoroughly grounded by using a grounding wire.

#### **6. HAZARDOUS DUST**

Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material, and always wear a NIOSH-approved respirator to reduce your risk.

#### **7. DUST ALLERGIES**

Dust from certain woods may cause an allergic reaction in people and animals. Make sure you know what type of wood dust you will be exposed to in case there is a possibility of an allergic reaction.

#### **8. IMPELLER HAZARDS**

Do not place your hands or tools near the open inlet during operation for any reason. The powerful suction could easily cause accidental contact with the impeller which will cause serious personal injury or damage to the machine. Always keep small animals and children away from open dust collection inlets.

## 4. Installation of the machine

This machine needs little-to-no assembly. It can almost be used directly out of the box.

### 4.1 Transportation of machine

#### 4.1.1 Transportation and storage

The machine should be transported and stored in -25~55°C (-77~131°F) ambient temperature. Take care not to allow the machine to be exposed to rain or damage to the packing during transportation and storage.

### **⚠WARNING**

- While transporting or handling the machine, be careful and let the activity be done by qualified personnel especially trained for this kind of activity!
- While the machine is being loaded or unloaded, make sure that no person is too close to be subject to injury.
- Select the proper transportation device according to the weight of the machine.
- Make sure the lifting capacity of the transportation device is capable for the weight of the machine.

### **⚠WARNING**

*The machine is very heavy therefore serious personal injury can happen if safe moving methods are not followed! To be safe, you will need assistance and power equipment when moving the shipping crate and removing the machine from the pallet!*

#### 4.1.2 Transportation before unpacking

As standard, the machine is packed in a robust wooden box.

**Fig. 3** shows the method which can be used to transport the machine..



Fig.3

#### 4.1.3 Confirmation after unpacking

When opening the packing box, please pay attention to the following items. If you have any questions, please contact your after sales department.

- 1) Has the machine been damaged in transportation?
- 2) All accessories and documents are included with the machine.
- 3) The product is consistent with the contract.
- 4) The specifications on the machine label are consistent with the contract.

#### 4.1.4 Transportation after unpacking

When transporting the machine with a forklift, first find the center of gravity of the machine, insert the fork below the machine and then lift carefully.

## 4.2 Positioning the machine

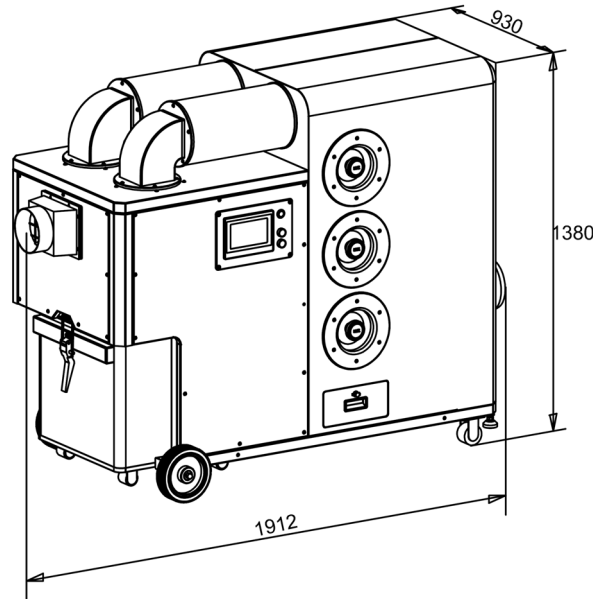


Fig.4

The machine should be placed at least 50cm (18 inches) away from the wall to ensure that the motor heat dissipation is adequate.

## 4.3 Assembly

### 4.3.1 Unpacking

Open shipping container and check for shipping damage. Report any damage immediately to your distributor and shipping agent.

### 4.3.2 Removing the Pallet

As shown in Fig. 5, the machine is mounted on a pallet by four (4) L shaped brackets. Remove the 4 brackets by loosening the bolts. Lift the machine by the forklift and remove the pallet

## ⚠WARNING

*The side of the machine where the motor is mounted is heavier therefore its important to keep the machine balanced while lifting it to avoid serious injury.*

*To avoid serious injury, engage the two rubber feet once the machine is in its final position to prevent unexpected movement (See Fig 6).*

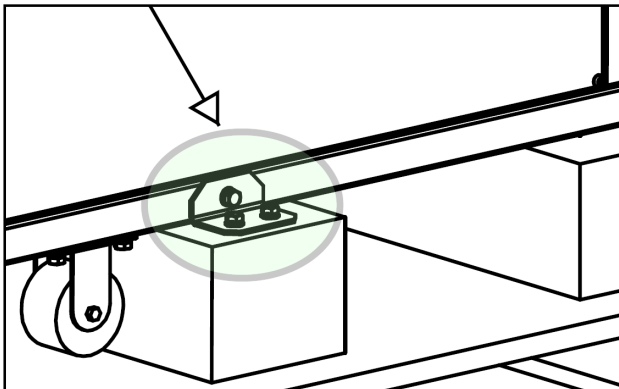


Fig.5

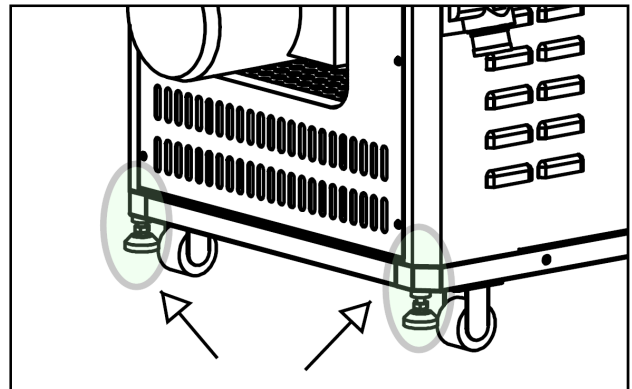


Fig. 6

### 4.3.3 Connection

Use flexible hose or solid pipe to connect the inlet with the dust source.

Plastic pipe, such as Polypropylene or Polyvinyl Chloride, can be used as long as it's been determined and confirmed that the dust is not an explosion hazard.

**NOTE:** *This machine does not contain dust collection hose(s) due to the dust source differences.*

### 4.3.4 Power Supply

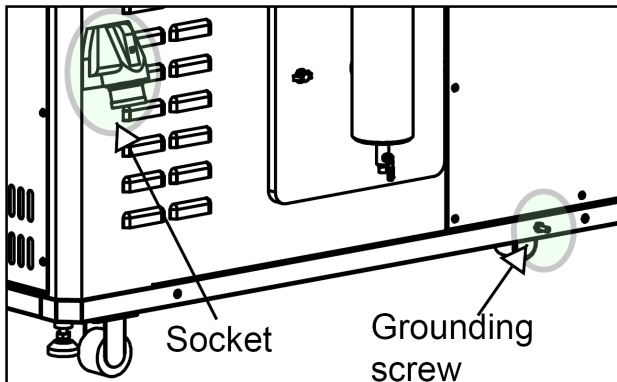


Fig.7

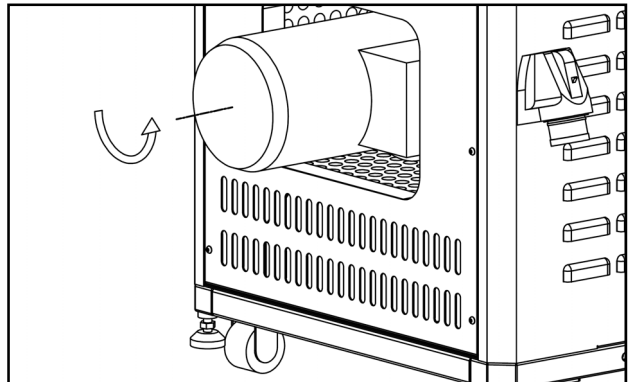


Fig.7-1

Wire the machine as indicated on the name plate. Refer to the electricity diagram as shown in Fig. 2 if needed.

For the **North American** market, the equipment comes with a cable (4 cords). (Not shown)

For the **European** market, the machine is equipped with a industrial socket (5 cords). (See Fig.7)

### Grounding

As shown in Fig. 7, there is a grounding screw on the back side of the machine. This machine should be connected to a permanent, grounded metal wiring system through this screw.

### Check motor rotation:

(As shown in Fig. 7-1). If not rotating in the proper manner, any two power supply cables L1, L2 and L3 should be switched. This operation should be completed by a professional electrician.

## ⚠WARNING

**Electrical connections must be made by a qualified electrician in compliance with all relevant building codes and ordinances.**

**Make sure the switch is in the “OFF” position before connecting to the power supply to avoid an unexpected start.**

**This machine must be properly grounded to help prevent electrical shock and possible fatal injury.**

**Repair or replace a damaged or worn cord immediately.**

**Using an extension or undersized cords will cause a drop in the line voltage and may result in loss of power and possible overheating.**

#### 4.3.5 Air Supply (compressed air)

### **⚠WARNING**

***Make sure the switch is in the “OFF” position before connecting to the compressor to avoid an unexpected start.***

***Air pressure requirement should be at least 0.8MPa (115psi).***

As shown in Fig. 8, follow the instruction below:

Inspect the oil water separator pressure valve. If it is not shown at 0.6MPa, please adjust it to 0.6MPa.

Close the drain valve under the gas container. (The handle is in the horizontal position).

Mount an 8mm air hose to the position pointed in Fig. 8.

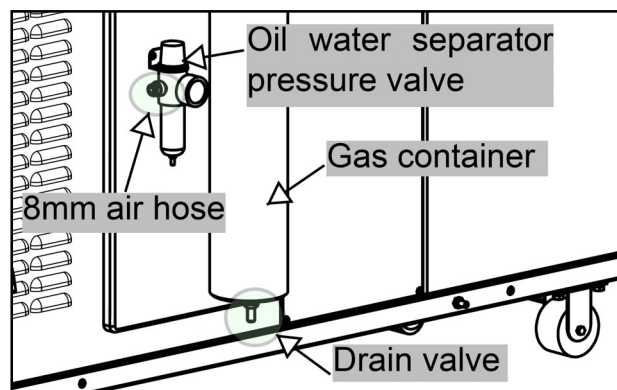


Fig.8

**Congratulations!**

**You have completed assembly of this machine.**

## 5. Function and Operation.

### 5.1 Control Panel and Operation Instruction

This machine has a built-in Intelligent Control System, providing live monitoring and functional control of the machine.

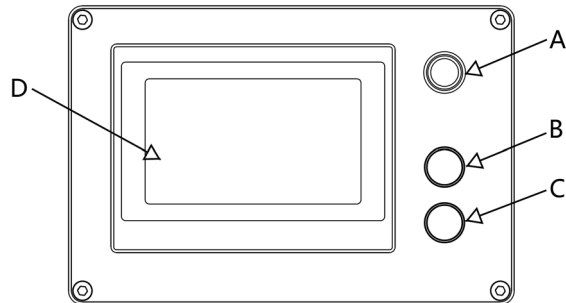


Fig.9

**A: Three-color indicator:**

Red: power on and the machine is not running.

Yellow: dust bin is full or filter clog alarm.

Green: the machine is running in normal status.

**B: Start Button:** Start the machine.

**C: Stop Button:** Stop the machine.

**D: Touch Screen:**

Shows the running information and setting information of the machine.

Sets up the mode and parameter of the machine.

### 5.1.1 Touch Screen Operation Instruction:

When the power is connected, the touch screen will light up and the main interface will display (as shown in Fig 10).

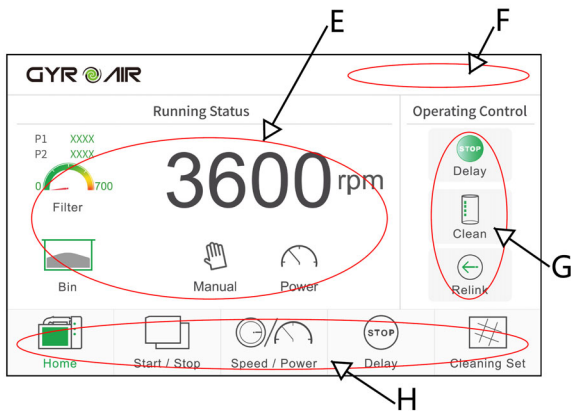


Fig.10

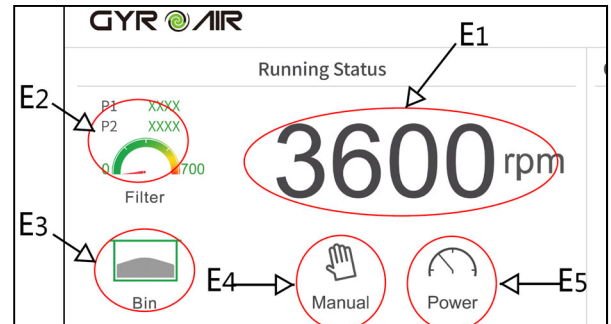


Fig.10-1

**The touch screen has four sections:**

- E:** Running status display area.
- F:** Alarm information display.  
The countdown of delayed stop.
- G:** Operation and control area.
- H:** Parameter set up area.

#### **E: Instructions of running status display (Fig.10-1)**

**E1:** Shows motor running speed or motor running power  
Shows the motor running speed (rpm) while in speed mode.  
Shows the motor running power (W) while in cruise mode.

**E2:** Shows the filter status  
P1 is the pressure front of the filter (Pa)  
P2 is the pressure back of the filter (Pa)

The green number on the right side of the pressure scale is the set pressure difference threshold value (pa); the red pointer of pressure scale indicates the current front and back pressure difference of filter.



**E3:** Shows dust bin status

 Dust bin full;  Dust bin not full.

**E5:** Shows the current start/stop mode

 Manual mode;  Linkage mode.

**E5:** Shows the current running mode

 Speed adjustment mode;  Cruise mode.

## F: Instructions of alarm information display (Fig.10-2)

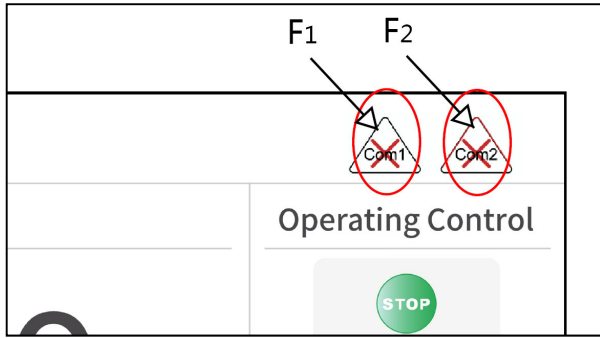


Fig.10-2

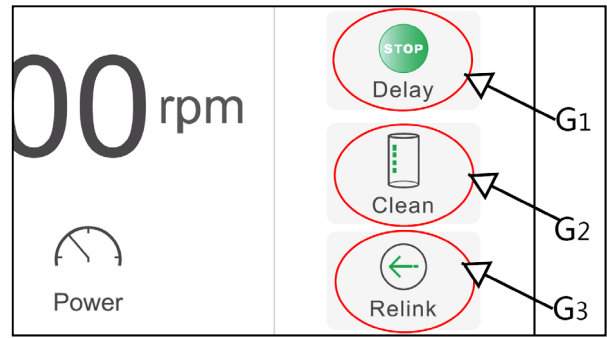


Fig.10-3

There is no display in normal status.

F1: Shows the communication failure between touch screen and main controller (in electric box).

F2: Shows the communication failure between main controller and convertor (in electric box).

**Note:** When the machine is not functional, the error code or alarm code will display in F1, which will show maximum 4 error codes and 1 alarm code. The newest error code shows on the left side; the others show the historical non-eliminated error codes. While the machine is delayed to stop, the countdown of delayed stop will show here (A unit is a second).

## G: Instructions of operation and control (Fig.10-3)

### G1: Delayed stop

Clicking on this button, the machine will be delayed to stop general cleaning of the indoor air near the workspace in a set time.

For setting the delayed stop, please see “**H4: set up of delayed stop**”.

The default time of delayed stop is 5 minutes.

### G2: Dust cleaning of filter

Clicking on this button, the machine will clean dust for a period of time.

Note: Under the mode of “off-line dust cleaning”, this button will not work while the machine is running (see **H5:dust cleaning mode and parameters set up**) .

### G3: Re-link

There is no display in normal status.

When the start/stop mode of the machine is set up to the linkage mode, the manual start/stop operation (including the remote control) will change the mode into manual mode on its own. Only the manual start/stop operation is permitted at this time. The G3 button will display in this area. By clicking on the G3 button, it will once again be re-linked.



## H: Instructions of parameter set up (Fig.10-4)

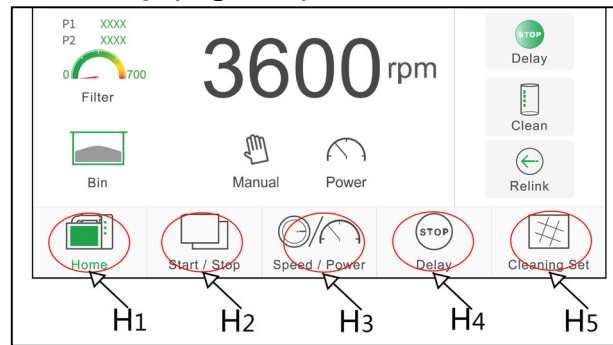


Fig.10-4

### H1: Back button

Press this button back to home page (main interface).

### H2: Start/stop set up

There are two start/stop modes of the machine:

- 1) Manual start /stop mode
- 2) Intelligent linkage start/stop mode (The dust source equipment should be connected to the Synchronous Control. See operation instructions of the Synchronous Control).

Select and confirm the desired “start/stop” mode by Clicking on button “start/stop” (Fig.10-5)



Fig.10-5

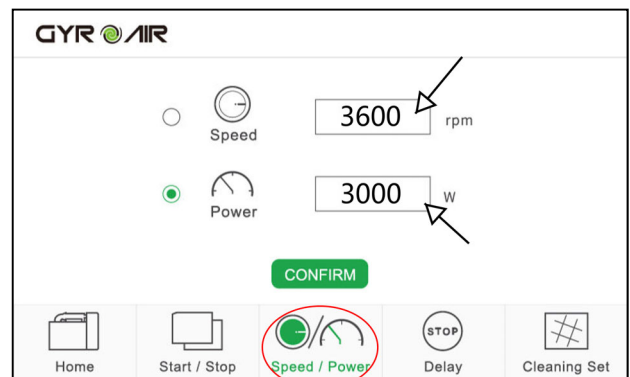


Fig10-6

### H3: Running mode set up

The machine can run in speed adjustment mode or flow cruise mode. Select the desired running mode by clicking on the button “mode setup” (Fig.10-6).

**NOTE: If selecting the speed adjustment mode, click on the data input area indicated by the arrow to enter the motor speed. The selected range of speed is 2400-4200rpm. The 2400 rpm is factory set.**

**If selecting the cruise mode, click on the data input area indicated by the arrow to enter the motor power. The selected range of power is 2000-3500W. The 2000W is factory set.**

### H4: Delayed stop set up

When dust collection is finished, the motor can be set up to delayed stop for general cleaning of the air near the workspace. The delayed stop timer can be set up by the user.

Click on the “delayed stop” button to enter the set up interface (Fig.10-7). Then click on the data input area indicated by the arrow to enter the desired time of delayed stop. The setting range of delayed time is 1-180 minutes and the default time is 5 minutes.

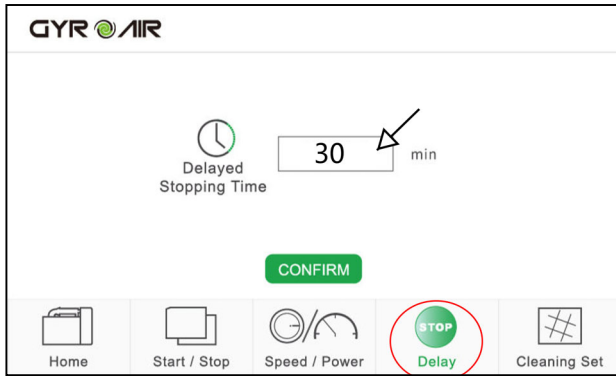


Fig.10-7

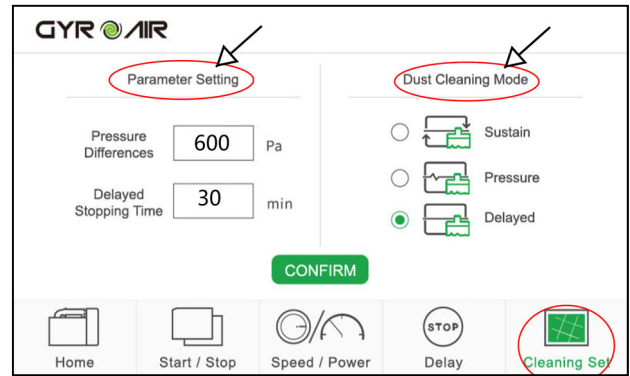


Fig10-8

## H5: Set up of the dust cleaning parameter and mode

Set up the dust cleaning parameter and select the dust cleaning mode by clicking on the “dust cleaning set up” button (Fig.10-8).

### Set up the dust cleaning parameter: (Fig.10-8)

1. Click on the input area of the filter pressure difference threshold value, to enter the set pressure difference threshold parameter (recommended input range: 300-900), then click on the OK button after entering the parameter. (The system default pressure threshold value is 600pa)
2. Click on the input area of the off-line time to enter a set time of off-line dust cleaning (recommended input range: 5-90), then click on the OK button after entering the parameter. (System default off-line dust cleaning time is 30 minutes.)

**Note:** The off-line dust cleaning time parameter is meaningful only when the dust cleaning mode is set to off-line dust cleaning mode, otherwise there is no need to set up the parameter.

### Set up the dust cleaning mode: (Fig.10-8)

#### a) Dust cleaning by pressure difference:

This mode allows dust cleaning while the machine is running. If the pressure difference is higher than the setting value, the dust cleaning system functions until the pressure difference is lower than the setting value.

#### b) Off-line dust cleaning

Dust cleaning after stopping the machine with the power connected.

#### c) Sustained dust cleaning

Once the machine is connected to the power, dust cleaning works constantly (default mode).

### 5.1.2 Supplementary Instruction for Dust Cleaning

In addition to manual dust cleaning, dust cleaning by pressure difference, off-line dust cleaning and sustained dust cleaning, the system also has the following dust cleaning functions:

- When the machine is connected to power, it will clean the dust automatically for 5 minutes.
- When the machine is stopped (with power connected), it will clean the dust automatically by one period.

**Note:** While the machine is set to off-line dust cleaning, starting the machine will stop the ongoing dust cleaning.

### 5.2 Instructions for Remote Control (Fig.11)

The **Remote Control** can be used to start and stop the dust processor. The remote control will connect the main controller of the dust processor through WIFI. The effective control distance is approximately 30 meters. When using the remote control, the operator does not need to aim the remote control to the dust processor.

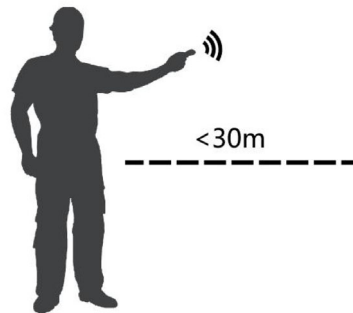


Fig. 11

For detailed operating instructions, please refer to the operation manual of the **Remote Control**.

### 5.3 Instructions for Synchronous Control (Fig.12)

The user can achieve the synchronous operation of the dust processors and the dust source equipment by using **Synchronized Control**. After a simple installation and setup, the start and stop of the dust processors will automatically associate the dust source equipment.

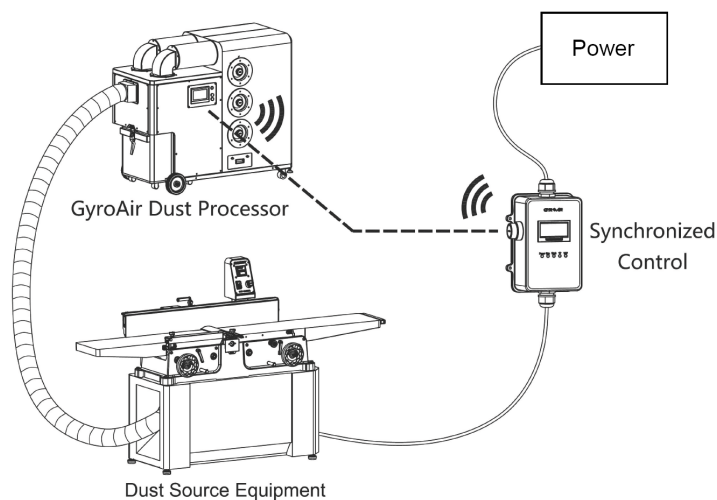


Fig. 12

For detailed operating instructions, please refer to the operation manual of the **Synchronized Control**.

## 5.4 Pulse Controller Use and Control (Fig.13)

Regardless of the selection of dust cleaning methods, both the pulse interval and periodic interval need to be set on the pulse controller.

The pulse dust cleaning is controlled by the pulse controller (Installed in the electrical box). The operation buttons and wiring terminals are shown below:

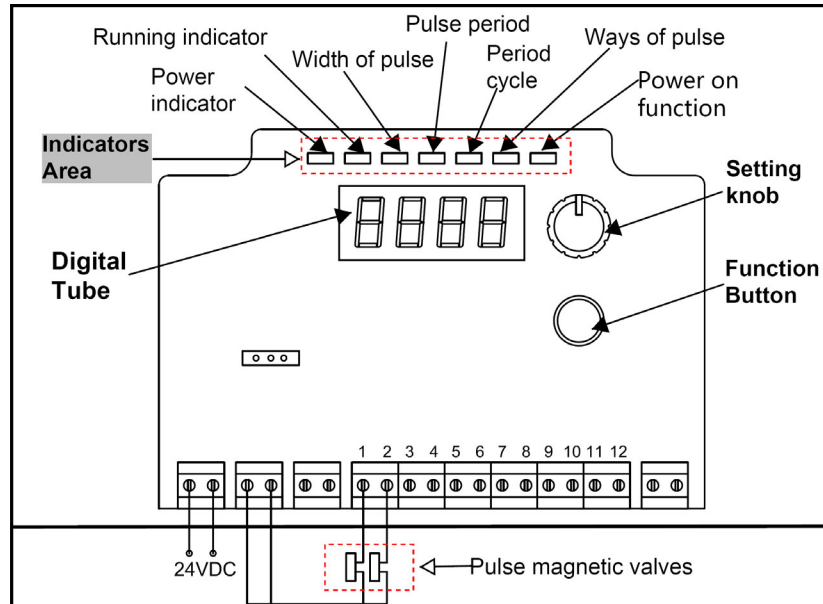


Fig.13

**Indicators area:** each indicator shows the present status of the controller.

- a. Power indicator: shows if it is connected to the power supply.
- b. Running indicator: "Off" when setting the parameter, "on" when the setting is completed.
- c. Other 4 indicators: "On" means setting the corresponding parameter.

**Digital display:** shows the setting parameters.

**Function buttons:** for choosing the setting functions. Pressing the button once will choose the function for set up.

**Set knob:** set up the parameters.

### Function and parameters set up list:

Function name	Initial parameter	Allowed range
Power on function	3	Pre-set at the factory
Number of pulses	2	Pre-set at the factory
Period cycle	300 seconds	60-600 seconds
Pulse period	10 seconds	10-20 seconds
Width of pulse	0.12 seconds	0.1-0.5 seconds

### Parameter description:

**Power on function:** not applicable for this machine.

**Number of pulses:** the number of pulse magnetic valves equipped on the machine.

**Period cycle:** refers to the time between the pulse magnetic valves opening and closing (Cycle 1 and Cycle 2).

**Pulse period:** the time between each magnetic valve opening is the pulse period, in one cycle.

**Width of pulse:** the open time of the magnetic valves.

## Parameter Setting Instructions:

Press the function button and the running indicator light will go off for the parameter setting. The digital display shows the parameters for setting up. Continually press the function button and the digital display flashes for setting up.

To adjust the parameters, turn the setting knob clockwise to increase the number and counterclockwise to reduce the number.

Press the function button again and the running indicator lights up, completing the set up and saving the value automatically.

## ⚠WARNING

***Keep your hands dry and clean when operating. Do not touch the terminals and wires as this may cause an electrical shock.***

***The function button is a micro-button, and needs to be pressed vertically. Do not over press or press in an indirect way, otherwise it may cause button failure***

## 5.5 Use of Dust Bin

As shown in Fig. 14, release the handle and pull out the dust bin. After emptying the bin, push the bin back into the end of the cabinet and lock the handle.

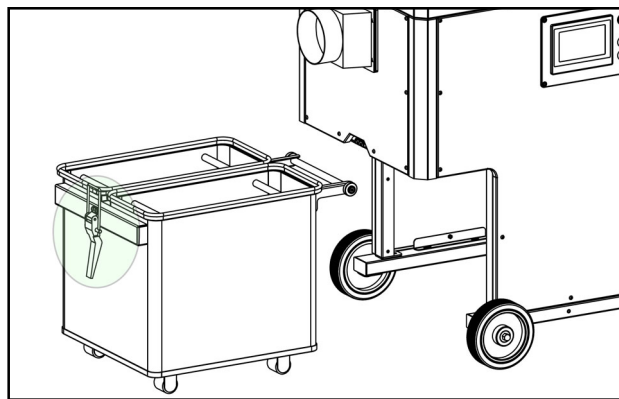


Fig.14

## 5.6 Use of Dust Box

As shown in Fig. 15, turn the locking knobs, and pull out the dust box to empty the dust.

Simply dump it out or use a vacuum dust collector to empty the box. Clean the spill over dust in the cabinet at the same time.

Caution: lock the knobs firmly after cleaning.

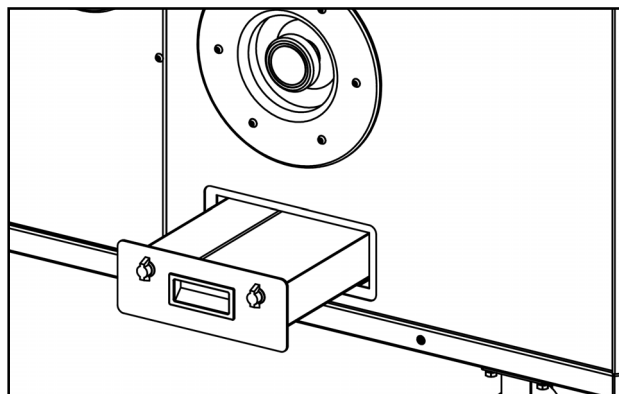


Fig.15

## 6. Maintenance

### **⚠WARNING**

***Power off the machine before cleaning. Do not clean, repair or maintain the machine until all moving parts have stopped to avoid serious injuries.***

***Disconnect the air supply before cleaning, repair or maintenance.***

#### **6.1 Cleaning Dust Bin (Fig. 14)**

The dust bin must be cleaned when the dust bin is 2/3 full for non-metal material. The dust bin should be cleaned when the dust bin is half full for metal material.

In actual usage, dust bin cleaning schedules can be set after using the unit for one week.

Clean the sealing strips with a cloth when cleaning the dust bin.

#### **6.2 Clean Dust Box (Fig. 15)**

Observe the dust box daily. The dust box must be cleaned when the dust box is 2/3 full for non-metal material. The dust box should be cleaned when the dust box is half full for metal material.

In actual usage, dust bin cleaning schedules can be set after using for one week. Basically, once the machine has been used for a while in a particular operation, the user can determine a regular schedule based on time or pieces processed for a bag emptying schedule.

#### **6.3 Cleaning or Changing the Filters (Fig. 16)**

When the pressure drop alarm sounds, the filter needs to be cleaned. Follow the instructions below:

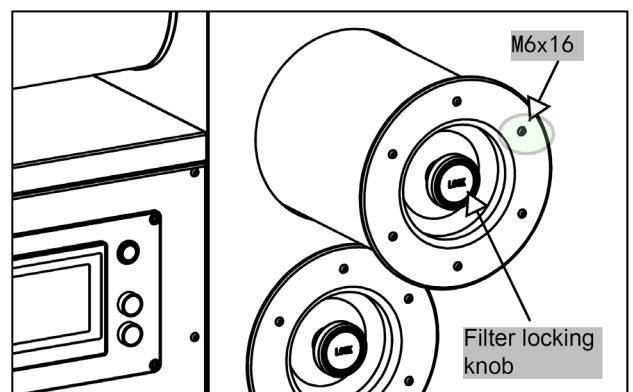
1. See chapter 5.1.2 to clean the filter. Using the delayed dust cleaning every day when finishing your job is the most efficient way to maintain the filter.
2. As shown in Fig. 14, turn the locking knob and pull out the filter. Use compressed air to clean the dust on the outside of the filter.
3. If method 1 and 2 cannot solve the pressure drop problem, this means the filter is failing and must be changed.

#### **Filter changing instruction**

As shown in Fig. 14, turn the filter locking knob and pull out the filter.

Unscrew the 6-M6x16 screws, take out the old filter and then put the new filter in.

As shown in Fig.16, mount the new filter, screw the 6- M6x16 screws back into place and turn and firmly lock the knob.



**Fig.16**

***NOTE: The same filter must be used as provided by the manufacturer.***

***The filter lifetime is approximately 1000-3000 hours depending on the conditions of the working environment including but not limited to: the amount of usage, type of dust material, type of dust density and the diameter of the particles. Dust collection results may vary. Filter changing will vary according to the actual dust collection activities and/or filter cleaning result.***

## 6.4 Full Dust Bin or Pressure Drop Alarm.

When a fault occurs, the indicator lights yellow, and the control panel will show the code: "Alarm". Except for the full dust bin alarm, the machine will continue to work.

If an "Error" occurs, the machine will stop.

**Dust full alarm:** Clean the dust bin.

**Pressure drop alarm:** Refer to chapter 6.3.

## 6.5 Convertor Error and Alarm.

The error and alarm code will show on the touch screen. In most situations, powering off the machine and restarting the machine after 5 minutes will eliminate the error codes.

For the most common error and alarm code information see the next table. If you are unable to solve the problem, please contact your distributor.

Code		Trouble description	Solution
Error code	F1	Current overage	Reduce the cord length to less than 15m.
			Check the motor cord and motor for a short circuit or incorrect grounding.
			Check if the motor is overloaded or stalled. Recommendation is to reduce the speed.
	F2	Voltage overage	Check the power supply voltage. The allowed voltage range is 220-240V.
	F3	Voltage shortage	Check the power supply voltage. The allowed voltage range is 220-240V
	F4	Convertor overheated	Check if the convertor fan is working.
			Check if the motor is overloaded or stalled. Recommendation is to reduce the speed.
	F11	Motor overheated	Check if the motor is overloaded or stalled, suggest reducing the speed.
Alarm code	A501	Reach the max. current size	Reduce the cord length. Make sure it is less than 15m.
			Check the motor cord and motor for a short circuit or incorrect grounding.
			Recommendation is to reduce the speed.

Code		Trouble description	Solution
Alarm code	A502	Reach the max. oversized voltage	Check the convertor input voltage.
	A503	Reach the min. voltage shortage value	Check the convertor input voltage.
	A504	Convertor overheat	Check if the convertor fan is working.
			Recommendation is to reduce the speed.
	A511	Motor overheat	Recommendation is to reduce the speed.



**Harvey Industries Co.,Ltd**

68-10 Suyuan Avenue, Jiangning District, Nanjing 211100, China  
[www.harvey.cn](http://www.harvey.cn) / [www.gyroair.cn](http://www.gyroair.cn)