

GYRO AIR™

G-800 Dust Processor

Operation Manual

Revision A (2018-08-25)



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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 0.1mg/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	9. Operation Panel
2.Separator	10. Disconnect Switch
3.Dust Bin	11.Fan Motor
4. Inlet	12. Power Cable
5. Dust Box	13. Oil Water Separator
6. Swivel Wheel	14. Gas storage tank
7.Foot	15. Electrical box
8.Filter	16. Directional wheel

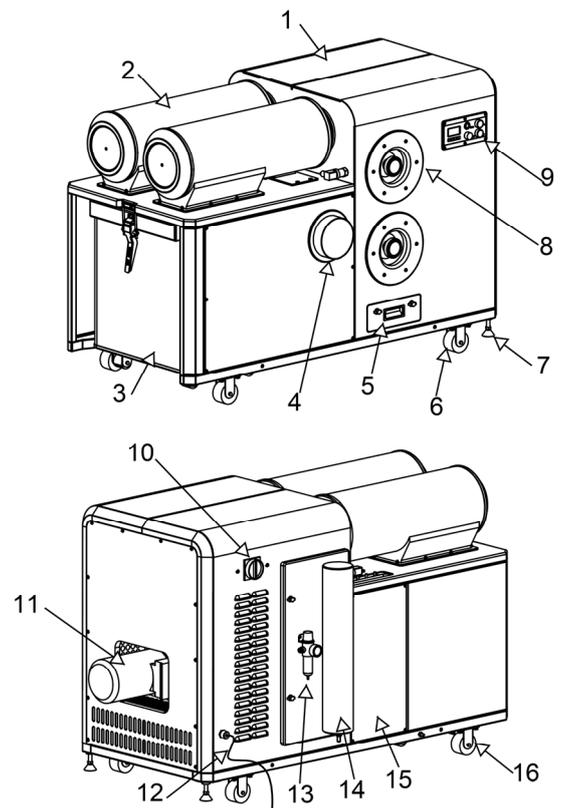


Fig. 1

2.2 Specification

Specification	G-800	
Electrical	Metric	Imperial
Power Source	200-240V 50Hz 1PH	200-240V 60Hz 1PH
Main motor	2.2KW	3HP
Frequency Converter	Siemens V20	
Dimensions & Weights		
Overall Dimension	1655x880x1100mm	65-1/8X34-5/8X43-1/2 in.
Packing Size	1800x1000x1310 mm	70-7/8X39-1/2X51-1/2 in.
Net Weight/Gross Weight	275 / 310 Kg	605/685 lbs
Performance		
Inlet Size	Φ150mm and Φ125mm	6"
Max. Air Flow	2200m ³ /h	1300CFM
Max. Static Pressure	5200Pa	21 inch water
Vacuum@22m/s	2500Pa@ Φ125mm	/
Blower Speed	2400-4200rpm	2400-4200rpm
Impeller Size	Φ320mm	12.6"
Filter Efficiency	99.95%@0.3μm	99.95%@0.3μm
Emission	0.05mg/m ³	0.05mg/m ³
Filter Area	8 m ²	86SF
Number of Filters	2	2
Noise Level	61-72dB(A)	61-72dB(A)
Dustbin Capacity	140L	37Gal
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)	YES	YES
Dust Bag (DB-800)	YES	YES

2.3 Electrical Power Requirement

Power requirement: AC220V, 1-phase

Breaker Size: 20A

The machine needs no further electrical installation.

For the **North American** market, the equipment comes with 1.8 meters of cable with a plug (6-20P).

For the **European** market, the machine is equipped with an industrial socket.

The input power supply of the machine is 1-phase, AC220V. 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 2.5mm² (14 AWG)

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

2.3.3 Electrical diagram (Fig. 2)

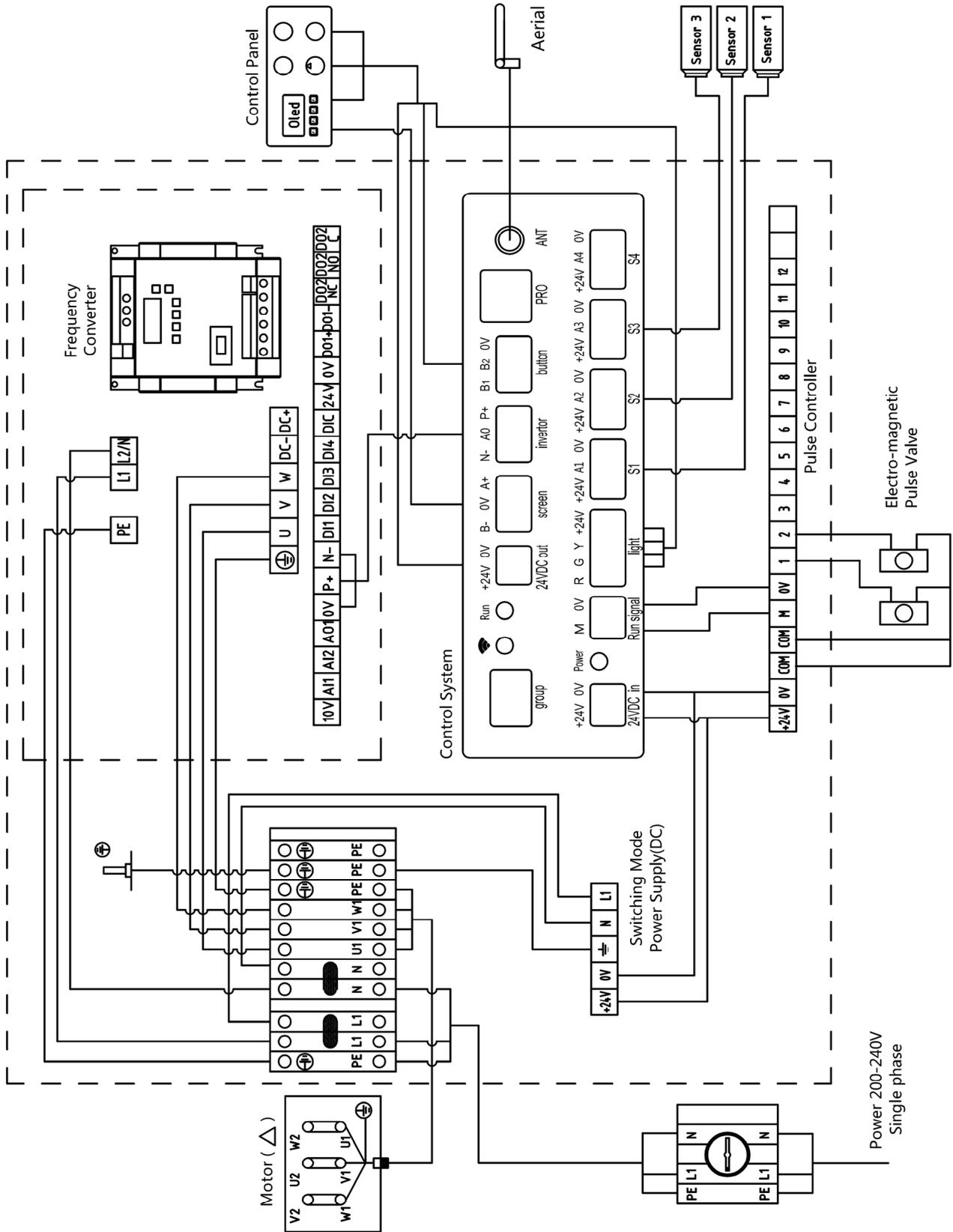


Fig. 2

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 more 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 $-25\sim 55^{\circ}\text{C}$ ($-77\sim 131^{\circ}\text{F}$) 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

This 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)

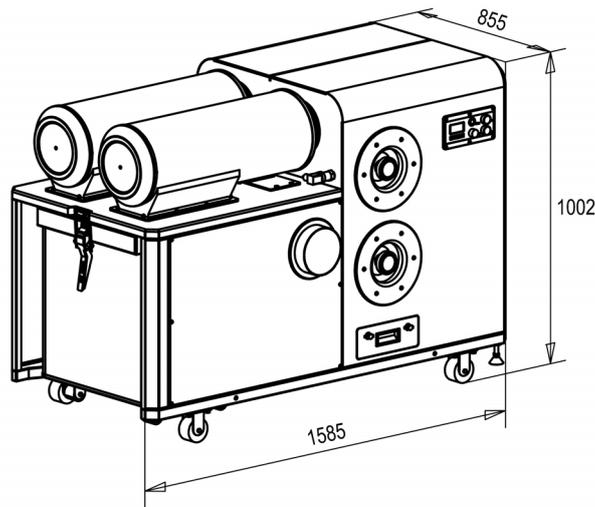


Fig. 4

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 it's 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).

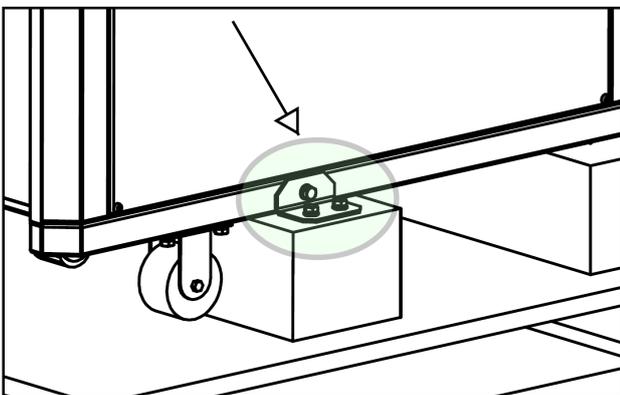


Fig. 5

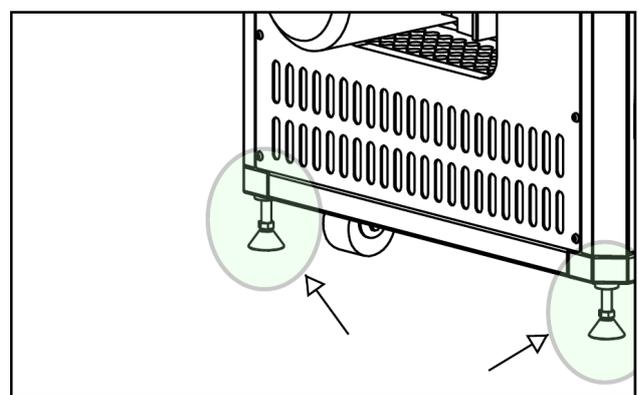


Fig. 6

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.

NOTICE

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

4.3.4 Power Supply

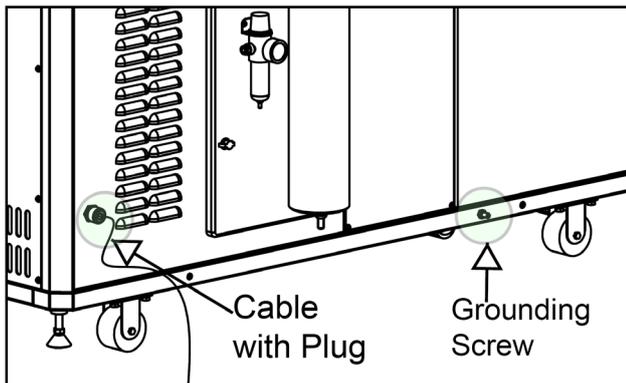


Fig. 7

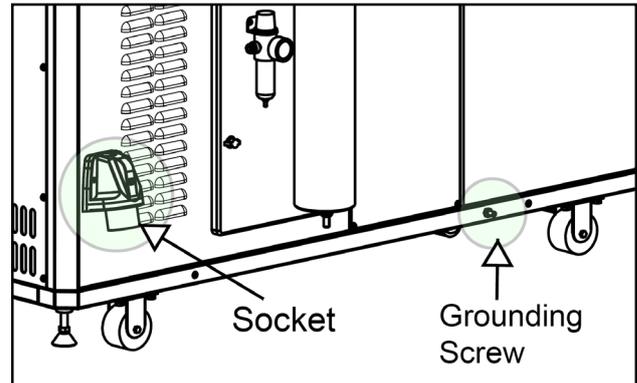


Fig. 7-1

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 1.8 meters of cable with a plug (6-20P) as Fig.7.

For the **European** market, the machine is equipped with industrial socket as Fig.7-1.

Grounding

As shown in Fig. 7 or Fig.7-1, 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.

⚠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.

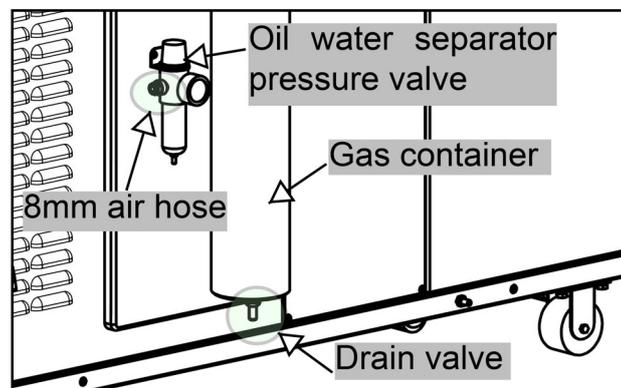


Fig. 8

Congratulations!

You have completed assembly of this machine.

5. Function and Operation.

5.1 Control Panel and Operation Instruction (Fig. 9)

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

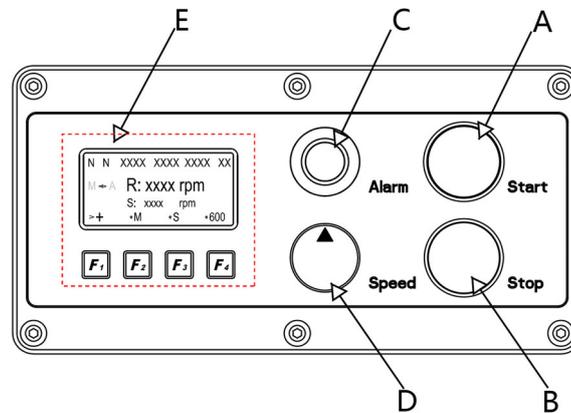


Fig. 9

A: **Start Button**: Starts the machine.

B: **Stop Button**: Stops the machine.

C: **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.

D: **Speed Adjustment Knob**: controls the motor speed.

E: **OLED Display and Function Buttons**: See chapter 5.1.1 & 5.1.2 for details.

5.1.1 OLED Display: (Fig. 10)

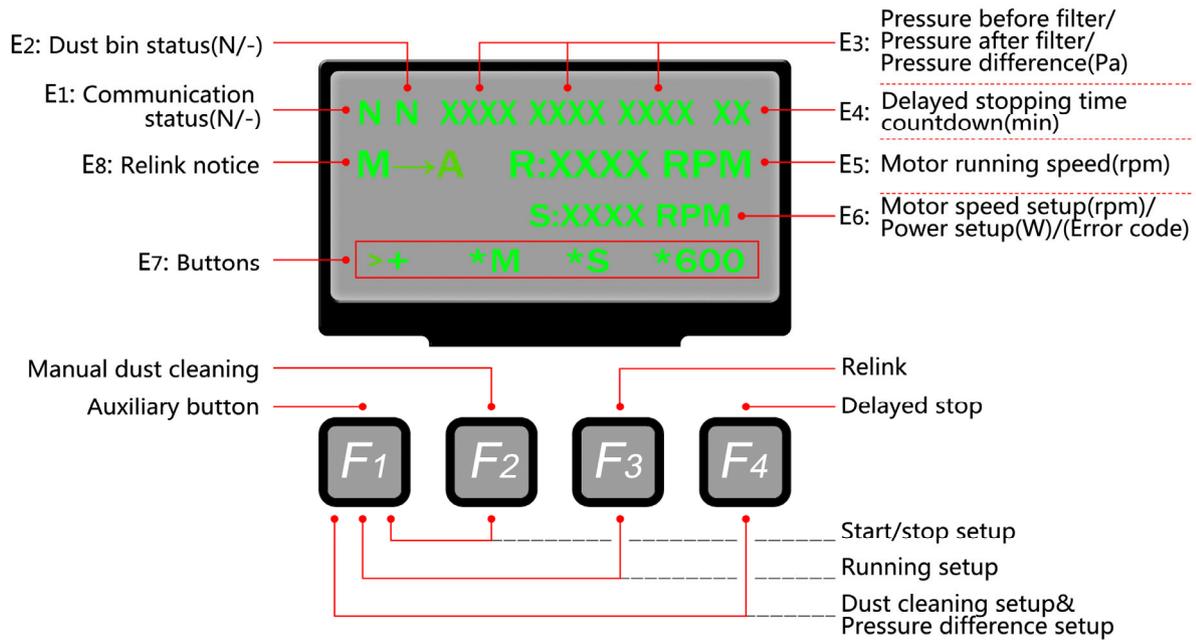


Fig. 10

E1: Communications status between inverter and controller

“N” = Normal operation

“-” = No communication. Please contact technical service.

E2: Dust Bin Status

“N” = Dust bin not full

“W” = Dust bin is full (warning light will flash yellow).

E3: Air Pressure reading in Pascals (Pa)

Display will monitor air pressure for the following:

- Air pressure before filter
- Air pressure after filter
- The difference between the 2 pressure readings

E4: Delayed stop timer

This displays the amount of time (shown in minutes) that the Gyro Air will continue to operate on a timer before stopping. This is used to provide general air cleaning. **See section 5.1.2 for further details on F4 Function – Delayed Stop Setting.**

E5: Displays motor running speed

If E5 shows “----”, then communications between the main controller and the inverter is abnormal. Please contact technical service.

E6: Displays the set speed (RPM) or 2000 watts (W) when in FLOW CRUISE mode. (See section 5.1.2 for details on F1+F3 Running Mode Set Up)

NOTE: E6 will also display error codes (or alarm code) if the machine encounters a fault. Display can show a maximum of 4 error codes and 1 alarm code. The newest error code is shown on the left side, the rest of the codes shown beside the newest one are historical non-eliminated error codes. (See section 6.5 Converter Error and Alarm for more details)

E7: Display Area for Button Functions & Parameters.

This area (E7) displays the functions for buttons F1 through F4. Essentially there are 6 possible button setting combinations as shown below. See Section 5.1.2 for further details on each button setting.

- **F2:** Manual Dust Cleaning Button
- **F3:** Relink Button
- **F4:** Delayed Stop Timer Setting
- **F1+F2:** Synchronize Start/Stop Setting
- **F1+F3:** Motor Running Mode Setting
- **F1+F4:** Dust Cleaning Mode & Pressure Difference Setup

List of All Possible Values shown on E7

	Display	Description
General	*	Selector - Indicates the value currently being set to.
	>	Cursor - Indicates that the button is being pressed/activate.
F1 Button	+	Only shows in F1 area, indicates that it's the function extending button (Refer to 5.2 <i>Button operation and instruction</i>)
F2 Button	C	Manual dust cleaning.
F3 Button	R	Indicates that the Synchronous Start/Stop link needs to be reset.
	-	Indicates that linkage mode is engaged and F3 button is inactive.
F4 Button	- - -	Motor delayed stop is canceled.
	D5	Motor delayed to stop in 5mins.
	D10	Motor delayed to stop in 10mins.
	D30	Motor delayed to stop in 30mins
	D60	Motor delayed to stop in 60mins
	D90	Motor delayed to stop in 90mins
F1+F2 Button	M	Manual start/stop mode.
	A	Synchronous start/stop linkage mode.
F1+F3 Button	S	Speed adjustment mode.
	P	Flow cruise mode.
F1+F4 Button	ON	Dust cleaning by pressure difference
	ALL	Sustained dust cleaning
	OFF	Off-line dust cleaning.
	300	Pressure difference of the filter is set up to 300Pa.
	600	Pressure difference of the filter is set up to 600Pa. (Default Value)
	900	Pressure difference of the filter is set up to 900Pa.

E8: Relink Notice for the Synchronous Start

When the manual start/stop button (or the remote control stop button) is pressed, "M→A" will be displayed indicating that the Synchronous Start link needs to be reset.

5.1.2 Button operation and instruction: (Fig. 10)

While operating the buttons, the symbol “>” will flash in the front of the corresponding display area (E7), showing the current operation. When the “>” is flashing, the user can only operate the button corresponding to the flashing symbol. The flashing time is 6 seconds and the operation will terminate if the flashing stops. F1 is an auxiliary button, and F2、F3、and F4 are the functional buttons.

NOTICE

For clarity, the certain parameters are drawn in red in below figures, the actual color is as same as the other parameters on the OLED.



Auxiliary Button - only used in conjunction with F2-F4

F1 is an auxiliary button and it extends the function of F2, F3 and F4. The display shows “+”. When the user presses the F1 button, the symbol “>” will flash in front of the “+”, then the corresponding display areas of F2, F3, and F4 will show the corresponding parameters and their current status of the extended function button, as shown in Fig. 10-1.

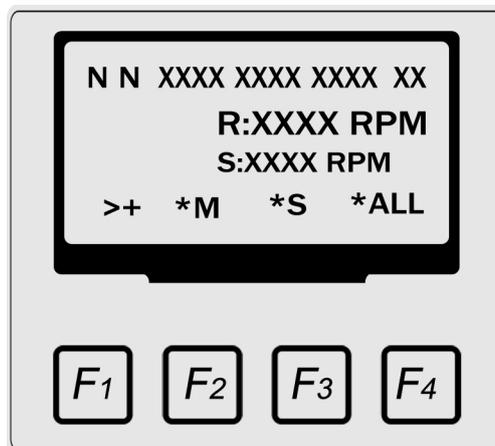


Fig. 10-1



Manual Dust Cleaning Controls

The F2 display area indicates “C” as shown in Fig. 10-2 in normal status. When pressing the F2 button, the symbol “>” will flash in front of the the “C” as shown in Fig. 10-3, and the machine will clean the dust one time. The manual dust cleaning will only work when the dust cleaning mode is set to “ON” as shown in Fig.10-4.

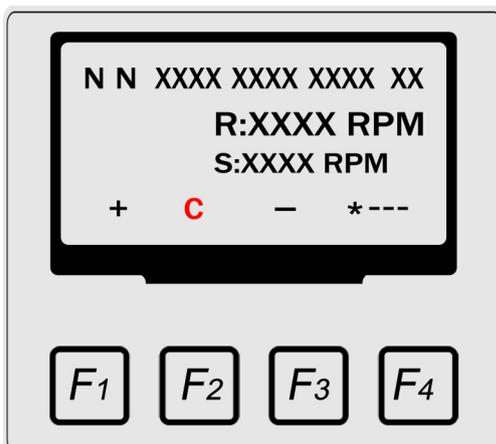


Fig. 10-2

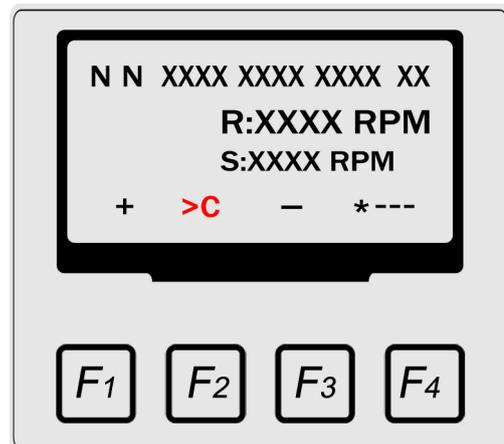


Fig. 10-3

With the dust cleaning mode set to “ON”, if the manual dust cleaning doesn’t work after you press the F2 button, it means the machine is in the pulse cycle. There is a 300 second delay in the pulse cycle. Once this period finishes, press F2 again.

Should you want to switch the dust cleaning mode, please refer to *F1+F4 Section:Dust Cleaning and Pressure Difference set up.*

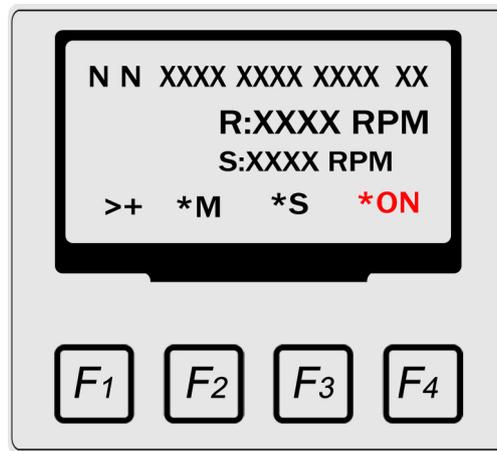


Fig. 10-4



Relink Button - for resetting Synchronous Start/Stop

When the start/stop mode of the machine is set up to the linkage mode, the F3 display area shows “-” as seen in Fig. 10-5. If you Start or Stop the machine manually (including the remote control), the mode will be changed into Manual Start/Stop mode and the E8 area will show a flashing M→A and the F3 display area will show “R” as shown in Fig. 10-6 indicating that the Synchronous Start/Stop link needs be reset. When you press the F3 button now, the F3 display area will resume to “-” and the flashing M→A disappears as shown in Fig. 10-5 indicating that the machine is relinked and set up to linkage mode again. In this mode, the F3 button is no longer functional.

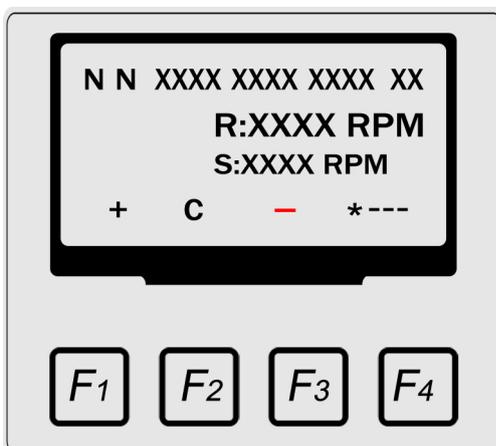


Fig. 10-5

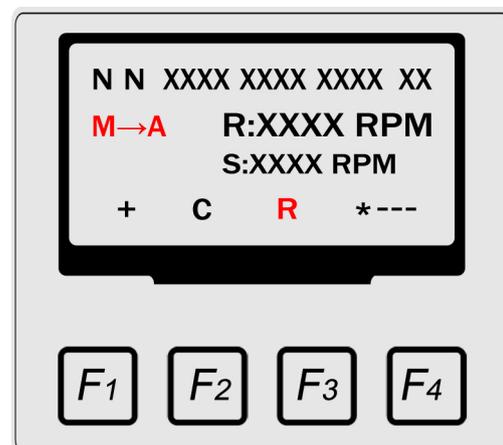


Fig. 10-6



Delayed Stop Setting

When the dust collection operation is finished, the motor can be set up to “delayed stop” to provide general air cleaning within the workspace. The delayed stop timer can be set up by the user.

The delayed stop can only be operated by pressing the F4 button while the machine is running. After pressing the F4 button, the display area may show the following codes as shown in Fig. 10-7 (as illustrated in this example with "D5"):

--- : cancel delayed stop.

D5: motor delayed to stop in 5mins.

D10: motor delayed to stop in 10mins.

D30: motor delayed to stop in 30mins.

D60: motor delayed to stop in 60mins.

D90: motor delayed to stop in 90mins.

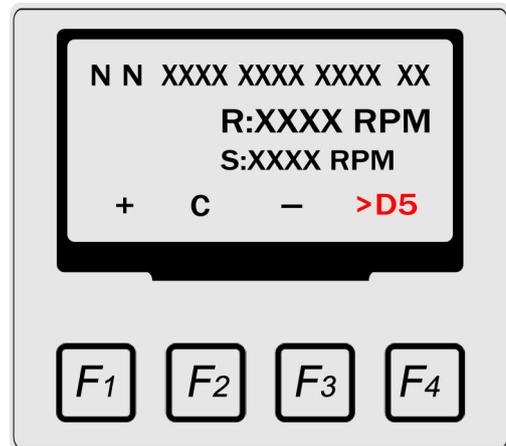


Fig. 10-7

Press the F4 button continually to select the desired time within the above options. By holding down the F4 button, the delayed stopping time can be set into the main controller and it will indicate in the E4 area as shown in Fig. 10-8 (as illustrated in this example with "D5"). The machine will stop automatically in a set period of time.

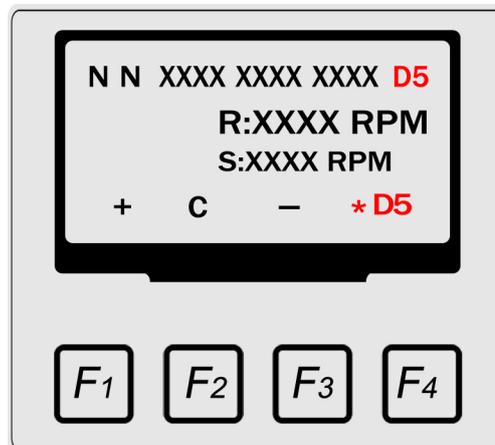


Fig. 10-8



Start/Stop Set Up

There are two start/stop modes of the machine:

- Manual start/stop mode.
- Intelligent linkage start/stop mode. In this mode, the dust source equipment should be connected to the Synchronous Control. (See 5.3 Operation Instructions of the Synchronous Control).

Set up the start/stop mode by pressing the F1+F2 buttons .

After pressing the F1 button, the current start/stop mode code will be shown in the F2 display area as shown in Fig. 10-9 or Fig. 10-10. The code “*A” indicates that the current mode of system is the linkage mode. The code “*M” indicates that the current mode of system is the manual mode. After pressing the F1 button, press the F2 button continuously to select the desired start /stop mode. Once the selection is completed, press and hold the F2 button to complete the setup until the “*” appears in front of the code that indicates your desired start/stop mode.

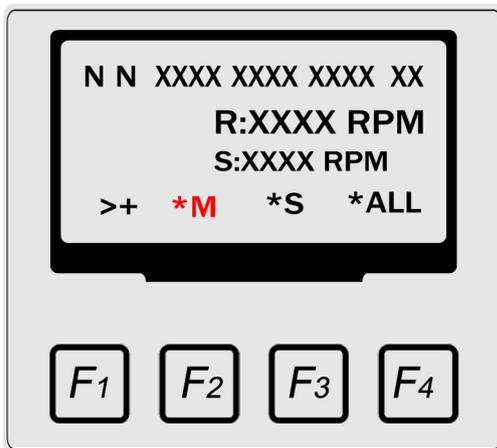


Fig. 10-9

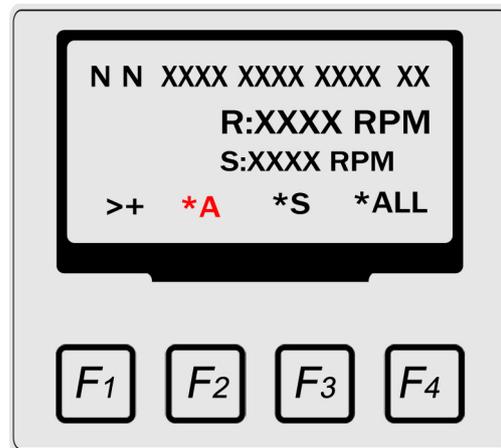


Fig. 10-10



Running Mode Set Up

By pressing the F1 and the F3 buttons, the machine can run in Speed Adjustment mode or Flow Cruise mode.

After pressing the F1 button, the current running mode code will be shown in the F3 display area as shown in Fig.10-11 or Fig. 10-12. The code “*S” indicates that the current running mode is speed adjustment mode and the code “*P” indicates that the current running mode is flow cruise mode). Press the F3 button continuously to select the desired running mode. Once the selection is completed, press and hold the F3 button to complete the setup until the “*” appears in front of the code that indicates your desired Running mode.

When the running mode is in the speed adjustment mode “S”, the E6 display area will show the current motor speed set by the speed knob, as shown as Fig. 10-13.

When the running mode is in the constant power mode “P”, the E6 display area will show 2000W, which means that the machine will run in 2000W constantly, as shown in Fig. 10-14.

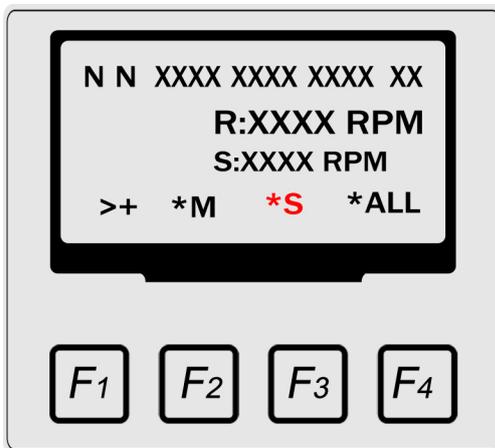


Fig.10-11

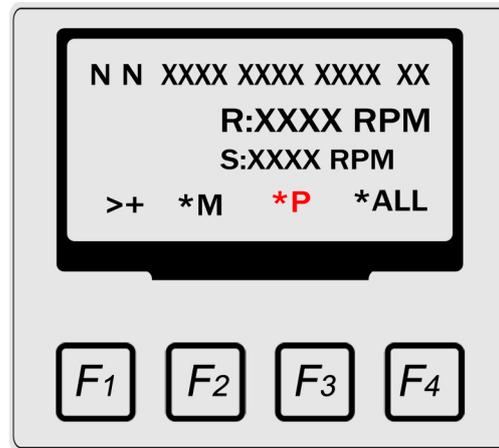


Fig. 10-12

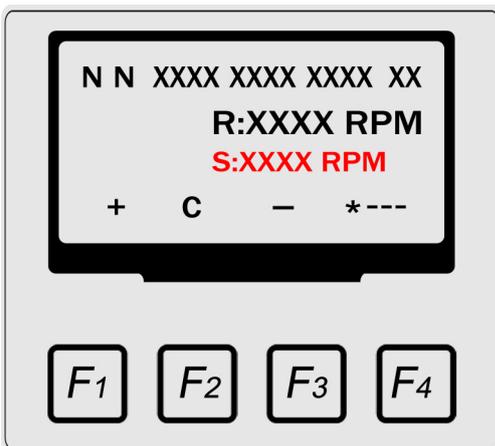


Fig. 10-13

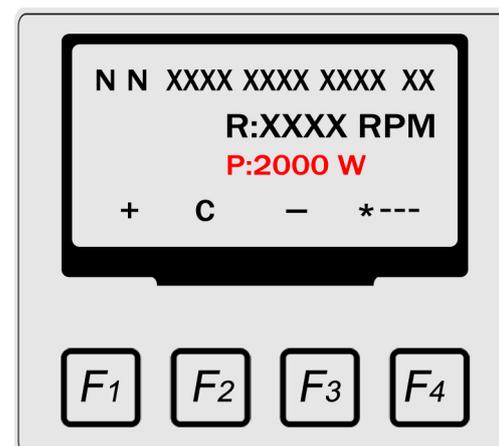


Fig. 10-14

NOTICE

After you complete the conversion of running mode, the new running mode will not work until you reconnect the power.



Dust Cleaning mode and Pressure Difference set up

Set up the dust cleaning mode or pressure difference by pressing the F1+F4 buttons. There are six parameters you may see in the F4 area as followings(a-f). After pressing the F1 button, the F4 display area will show the current Dust Cleaning mode which is highlighted with an asterisk “*” as shown in Fig. 10-15 . Continuously press the F4 button which allows you to see the currently set pressure difference which is highlighted with an asterisk “*” as shown in Fig. 10-16. Now, you can select the desired dust cleaning mode or pressure difference. Once the selection is completed, press and hold the F4 button to complete the setup until the “*” appears in front of the code that indicates your desired Dust Cleaning mode and pressure difference.

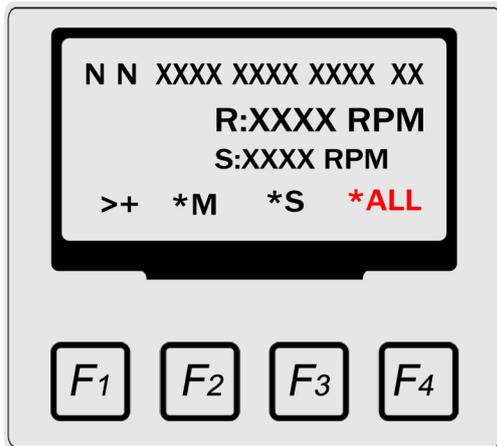


Fig. 10-15

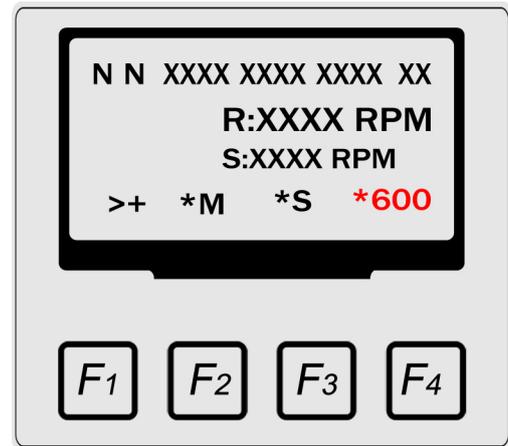


Fig. 10-16

The machine has three dust cleaning modes:

a) “ON” (dust cleaning by pressure difference):

This mode allows dust cleaning while the unit 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”(off-line dust cleaning):

This mode allows dust cleaning after stopping the machine with the power connected. (The default dust cleaning time is 30 minutes and cannot be adjusted).

REMARK:

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

c) “ALL”(sustained dust cleaning):

Once the machine is connected to power, the dust cleaning works constantly.

The machine has three set values of pressure difference:

d) “300”: Pressure difference of the filter is set up to 300Pa.

e) “600”: Pressure difference of the filter is set up to 600Pa. (default value is 600Pa.)

f) “900”: Pressure difference of the filter is set up to 900Pa.

5.1.3 Supplementary Instruction for Dust Cleaning

Except for pressing the F2 button for 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 the power connected), it will clean the dust automatically by one period.

5.2 Instructions for Remote Control

A **Remote Control** can be used to start and stop the dust processor. The remote control connects to the main controller of the dust processor through WIFI, and 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.

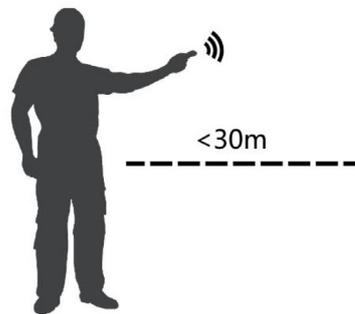


Fig. 11

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

5.3 Instructions for Synchronous Control

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.

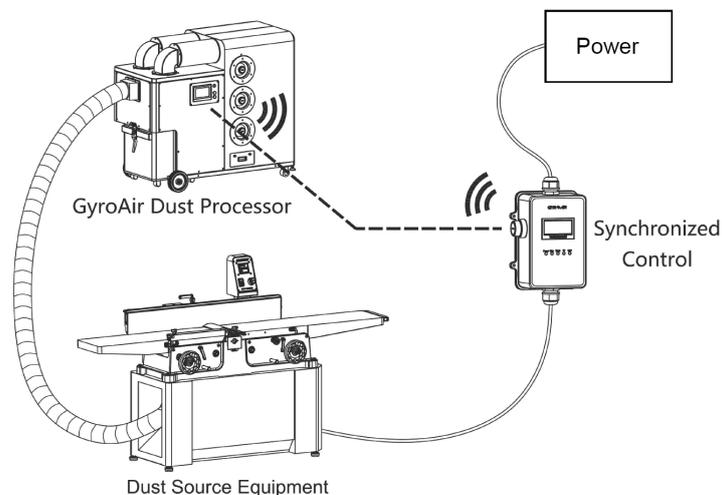


Fig. 12

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

5.4 Pulse Controller Use and Control

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:

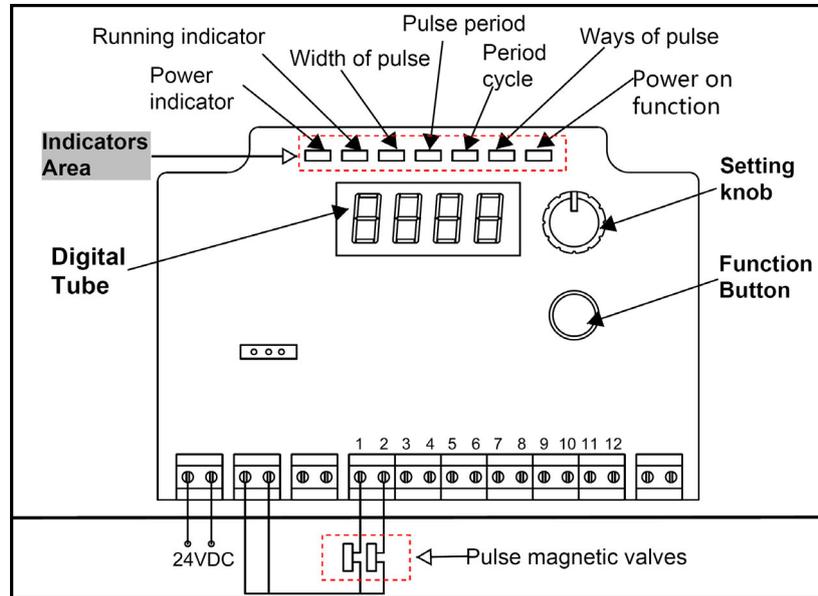


Fig. 13

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

- Power indicator: Shows if it is connected to the power supply.
- Running indicator: "Off" when setting the parameter, "on" when the setting is completed.
- 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.

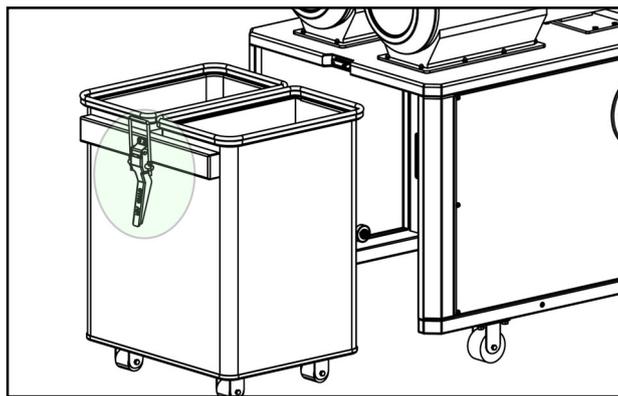


Fig. 14

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.

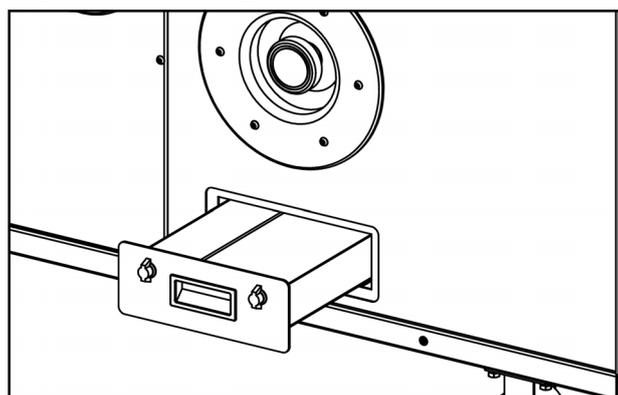


Fig. 15

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 5.1.3 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. 16, 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. 16, 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.

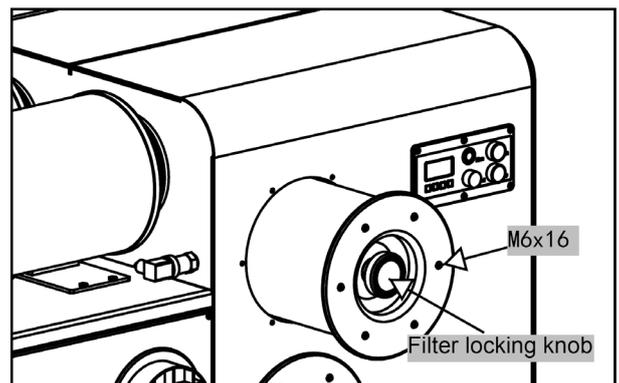


Fig. 16

NOTICE

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 Converter Error and Alarm.

The error and alarm code will show on the OLED display. 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.	

GYR  **AIR**™
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