

MODEL G9956 HEAVY DUTY DOUBLE AIR FILTER

OWNER'S MANUAL

(For models manufactured since 8/15)



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This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.

Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.

The owner of this machine/tool is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, cutting/sanding/grinding tool integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.



Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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INTRODUCTION

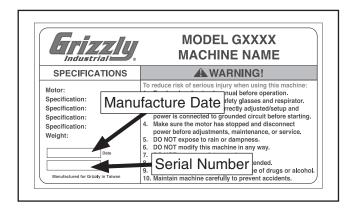
Manual Accuracy

We are proud to provide a high-quality owner's manual with your new machine!

We made every effort to be exact with the instructions, specifications, drawings, and photographs in this manual. Sometimes we make mistakes, but our policy of continuous improvement also means that sometimes the machine you receive is slightly different than shown in the manual.

If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at www.grizzly.com.

Alternatively, you can call our Technical Support for help. Before calling, make sure you write down the **Manufacture Date** and **Serial Number** from the machine ID label (see below). This information is required for us to provide proper tech support, and it helps us determine if updated documentation is available for your machine.



Contact Info

We stand behind our machines! If you have questions or need help, contact us with the information below. Before contacting, make sure you get the serial number and manufacture date from the machine ID label. This will help us help you faster.

Grizzly Technical Support 1815 W. Battlefield Springfield, MO 65807 Phone: (570) 546-9663 Email: techsupport@grizzly.com

We want your feedback on this manual. What did you like about it? Where could it be improved? Please take a few minutes to give us feedback.

Grizzly Documentation Manager P.O. Box 2069 Bellingham, WA 98227-2069 Email: manuals@grizzly.com

Machine Description

This machine is designed to capture dust from ambient air in a woodworking shop for a short time after cutting or sanding operations. The air is drawn in through the filter by a centrifugal fan or "squirrel cage" impeller and filtered before it returns to the workspace.

Depending on the size of the shop and layout of the air filter in relation to the woodworking machinery, the air filter may be used in conjunction with others.



Identification

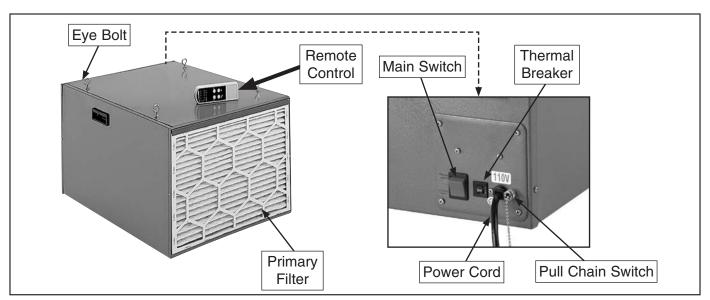
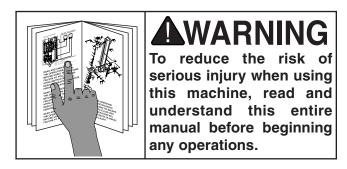


Figure 1. Front and rear view of G9956 air filter.



Accessories

AWARNING

Some aftermarket accessories can be installed on this machine that could cause it to function improperly, increasing the risk of serious personal injury. To minimize this risk, only install accessories recommended for this machine by Grizzly.

NOTICE

Refer to the newest copy of the Grizzly Catalog for other accessories available for this machine.

Gall 1-300-523-4777 To Order

H2451—1-Micron Washable Secondary Filter 1 micron bag for the Model G9956.

H2452—5-Micron Disposable Primary Filter Disposable primary filter for the Model G9956.





MACHINE DATA SHEET

Customer Service #: (570) 546-9663 • To Order Call: (800) 523-4777 • Fax #: (800) 438-5901

MODEL G9956 REMOTE-CONTROLLED HEAVY-DUTY DOUBLE AIR FILTER

Product Dimensions:
Weight
Shipping Dimensions:
Type Cardboard Content Machine Weight 74 lbs Length/Width/Height 33" x 23" x 20"
Electrical:
Switch
Fan
Type



Main Specifications:

Operation Information

Impeller Type	
Filter Information	
Primary Filter Micron	
	Filter Net
	/Thickness)
	3-Pocket Woven Fabric
	dth/Thickness)
Construction Information	
Impeller	Pre-Formed Steel Steel Powder Coated
Other Specifications:	
Country Of Origin Warranty Serial Number Location	

Features:

Programmable Remote Control 2-Stage Filtration



SECTION 1: SAFETY

For Your Own Safety, Read Instruction **Manual Before Operating This Machine**

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures. Always use common sense and good judgment.



Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.

AWARNING Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

▲CAUTION

Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

This symbol is used to alert the user to useful information about proper operation of the machine.

Safety Instructions for Machinery

AWARNING

OWNER'S MANUAL. Read and understand this owner's manual BEFORE using machine.

TRAINED OPERATORS ONLY. Untrained operators have a higher risk of being hurt or killed. Only allow trained/supervised people to use this machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make your workshop kid proof!

DANGEROUS ENVIRONMENTS. Do not use machinery in areas that are wet, cluttered, or have poor lighting. Operating machinery in these areas greatly increases the risk of accidents and injury.

MENTAL ALERTNESS REQUIRED. Full mental alertness is required for safe operation of machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

ELECTRICAL EQUIPMENT INJURY RISKS. You can be shocked, burned, or killed by touching live electrical components or improperly grounded machinery. To reduce this risk, only allow qualified service personnel to do electrical installation or repair work, and always disconnect power before accessing or exposing electrical equipment.

DISCONNECT POWER FIRST. Always disconnect machine from power supply BEFORE making adjustments, changing tooling, or servicing machine. This prevents an injury risk from unintended startup or contact with live electrical components.

EYE PROTECTION. Always wear ANSI-approved 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.



AWARNING

WEARING PROPER APPAREL. Do not wear clothing, apparel or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to reduce risk of slipping and losing control or accidentally contacting cutting tool or moving parts.

HAZARDOUS DUST. Dust created by machinery operations may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material. Always wear a NIOSH-approved respirator to reduce your risk.

HEARING PROTECTION. Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

REMOVE ADJUSTING TOOLS. Tools left on machinery can become dangerous projectiles upon startup. Never leave chuck keys, wrenches, or any other tools on machine. Always verify removal before starting!

USE CORRECT TOOL FOR THE JOB. Only use this tool for its intended purpose—do not force it or an attachment to do a job for which it was not designed. Never make unapproved modifications—modifying tool or using it differently than intended may result in malfunction or mechanical failure that can lead to personal injury or death!

AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

CHILDREN & BYSTANDERS. Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.

GUARDS & COVERS. Guards and covers reduce accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly BEFORE operating machine.

FORCING MACHINERY. Do not force machine. It will do the job safer and better at the rate for which it was designed.

NEVER STAND ON MACHINE. Serious injury may occur if machine is tipped or if the cutting tool is unintentionally contacted.

STABLE MACHINE. Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify machine is stable and mobile base (if used) is locked.

USE RECOMMENDED ACCESSORIES. Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase the risk of serious injury.

UNATTENDED OPERATION. To reduce the risk of accidental injury, turn machine *OFF* and ensure all moving parts completely stop before walking away. Never leave machine running while unattended.

MAINTAIN WITH CARE. Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. A machine that is improperly maintained could malfunction, leading to serious personal injury or death.

DAMAGED PARTS. Regularly inspect machine for damaged, loose, or mis-adjusted parts—or any condition that could affect safe operation. Immediately repair/replace BEFORE operating machine. For your own safety, DO NOT operate machine with damaged parts!

MAINTAIN POWER CORDS. When disconnecting cord-connected machines from power, grab and pull the plug—NOT the cord. Pulling the cord may damage the wires inside. Do not handle cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet/damp locations.

EXPERIENCING DIFFICULTIES. If at any time you experience difficulties performing the intended operation, stop using the machine! Contact our Technical Support at (570) 546-9663.



Additional Safety for Air Filters

AWARNING

Long-term respiratory damage can occur from using this filter to capture hazardous dust without proper use of a respirator. Collecting flammable or combustible liquids, vapors, or explosive dusts can cause fire or explosions, resulting in smoke inhalation, serious burns, or death. An improperly secured air filter can fall, causing head injuries. To reduce the risk of these hazards, operator and bystanders MUST completely heed hazards and warnings below.

LUNG PROTECTION. Fine dust that is too small to be caught in filter will be blown into ambient air during operation. Always wear a NIOSH-approved respirator during operation and for a short time after to reduce your risk of permanent respiratory damage.

INTENDED USE. Using this filter regularly to collect prohibited materials can result in serious health problems. It is only designed to capture dust from ambient air in a woodworking shop for a short time after cutting or sanding operations. DO NOT use to collect particles of silica, polyure-thane, metal, lead paint, asbestos, or hazardous bacterium. DO NOT allow filter to collect explosive dusts, flammable, or combustible liquids or fumes, burning or smoking material, or toxic fumes. DO NOT connect directly to air filtration system. Only operate with filters installed.

HAZARDOUS DUST. Dust exposure 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.

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 of an allergic reaction.

POWER DISCONNECT. Turn switch *OFF*, disconnect air filter from power supply, and allow impeller to come to a complete stop before doing any cleaning, maintenance, or service.

OPERATING LOCATION. DO NOT operate the air filter in rainy or wet locations—exposure to water may create a shock hazard or decrease the life of the machine.

REGULAR CLEANING. To reduce risk of starting fire, regularly clean surrounding area where machine is operated. Excessive fine dust buildup on overhead lights, heaters, electrical panels, or other heat sources can increase risk of fire. Regularly check/clean/change filters to avoid fine dust buildup.

EMPTYING DUST. To reduce exposure to wood dust when removing dust from filters, which may increase risk of allergic reactions or respiratory problems, always turn switch *OFF*, disconnect power, and wear a respirator and safety glasses. To reduce fire and explosion risk, empty dust away from ignition sources and into an approved container.

SUSPENDED DUST PARTICLES AND IGNITION SOURCES. To reduce risk of death or injury caused by explosions or fires, DO NOT operate filter in areas where these risks are high, including, but not limited to, spaces near pilot lights, open flames, or other ignition sources.

MOUNTING. To reduce risk of injuries due to filter falling, secure it to load-bearing joists or wall studs that can support its weight. Do not mount unit only to sheet rock, pressboard, paneling, or honeycomb ceiling panels with expansion-type fasteners, which can easily tear out.



SECTION 2: POWER SUPPLY

Availability

Before installing the machine, consider the availability and proximity of the required power supply circuit. If an existing circuit does not meet the requirements for this machine, a new circuit must be installed. To minimize the risk of electrocution, fire, or equipment damage, installation work and electrical wiring must be done by an electrician or qualified service personnel in accordance with all applicable codes and standards.



AWARNING

Electrocution, fire, shock, or equipment damage may occur if machine is not properly grounded and connected to power supply.

Full-Load Current Rating

The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

Full-Load Current Rating at 120V 3 Amps

The full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating.

If the machine is overloaded for a sufficient length of time, damage, overheating, or fire may result—especially if connected to an undersized circuit. To reduce the risk of these hazards, avoid overloading the machine during operation and make sure it is connected to a power supply circuit that meets the specified circuit requirements.

AWARNING

Serious injury could occur if you connect machine to power before completing setup process. DO NOT connect to power until instructed later in this manual.

Circuit Requirements

This machine is prewired to operate on a power supply circuit that has a verified ground and meets the following requirements:

Nominal Voltage	120V
Cycle	
Phase	Single-Phase
Power Supply Circuit	15 Amps

A power supply circuit includes all electrical equipment between the breaker box or fuse panel in the building and the machine. The power supply circuit used for this machine must be sized to safely handle the full-load current drawn from the machine for an extended period of time. (If this machine is connected to a circuit protected by fuses, use a time delay fuse marked D.)

ACAUTION

For your own safety and protection of property, consult an electrician if you are unsure about wiring practices or electrical codes in your area.

Note: Circuit requirements in this manual apply to a dedicated circuit—where only one machine will be running on the circuit at a time. If machine will be connected to a shared circuit where multiple machines may be running at the same time, consult an electrician or qualified service personnel to ensure circuit is properly sized for safe operation.



Grounding & Plug Requirements

This machine MUST be grounded. In the event of certain malfunctions or breakdowns, grounding reduces the risk of electric shock by providing a path of least resistance for electric current.

This machine is equipped with a power cord that has an equipment-grounding wire and a grounding plug. Only insert plug into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances. DO NOT modify the provided plug!

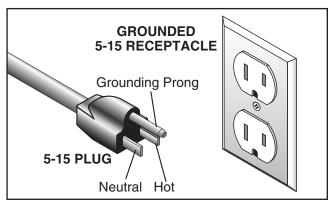
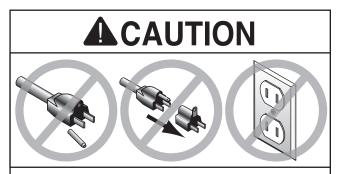


Figure 2. Typical 5-15 plug and receptacle.



SHOCK HAZARD!

Two-prong outlets do not meet the grounding requirements for this machine. Do not modify or use an adapter on the plug provided—if it will not fit the outlet, have a qualified electrician install the proper outlet with a verified ground.

Improper connection of the equipment-grounding wire can result in a risk of electric shock. The wire with green insulation (with or without yellow stripes) is the equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

Extension Cords

We do not recommend using an extension cord with this machine. If you must use an extension cord, only use it if absolutely necessary and only on a temporary basis.

Extension cords cause voltage drop, which can damage electrical components and shorten motor life. Voltage drop increases as the extension cord size gets longer and the gauge size gets smaller (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must be in good condition and contain a ground wire and matching plug/receptacle. Additionally, it must meet the following size requirements:

Minimum Gauge Size16 AWG Maximum Length (Shorter is Better)......50 ft.



SECTION 3: SETUP

Needed for Setup

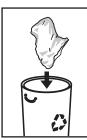
The following are needed to complete the setup process, but are not included with your machine.

De	scription	Qty
•	Additional People	1–2
•	Safety Glasses Per Person	1
•	Drill	1
•	Drill Bit 1/8"	1
•	Ladders	2
•	Wrench 12mm	1
•	Chain, Rated 150 lbs. or Higher	Varies
•	S-Hooks	8
•	Lag Eye Bolts 5/16" x 3" or 4"	4

Unpacking

This machine was carefully packaged for safe transport. When unpacking, separate all enclosed items from packaging materials and inspect them for shipping damage. *If items are damaged, please call us immediately at (570) 546-9663.*

IMPORTANT: Save all packaging materials until you are completely satisfied with the machine and have resolved any issues between Grizzly or the shipping agent. You MUST have the original packaging to file a freight claim. It is also extremely helpful if you need to return your machine later.



AWARNING

SUFFOCATION HAZARD! Keep children and pets away from plastic bags or packing materials shipped with this machine. Discard immediately.

Inventory

The following is a list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

If any non-proprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

Box	x 1: (Figure 3)	Qty
Α.	Double Air Filter Unit	1
B.	Remote Control w/9V Battery	1
C.	Hardware Bag	1
	—Hex Nuts 1/4"-20	4
	—Eye Bolts	4

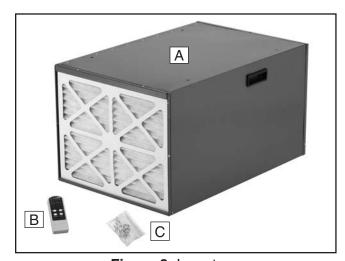


Figure 3. Inventory.

NOTICE

If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packaging materials while unpacking or they are pre-installed at the factory.

Power Connection

To avoid unexpected startups or property damage, use the following steps whenever connecting or disconnecting the machine.

Connecting Power

- 1. Set the main switch to "Remote Control."
- 2. Insert the power cord plug into a matching power supply receptacle. The machine is now connected to the power source.

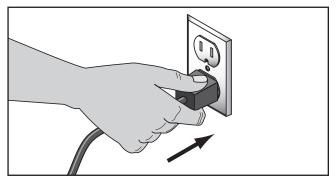


Figure 4. Connecting power.

Disconnecting Power

- 1. Turn the switch to "Remote Control."
- Grasp the molded plug and pull it completely out of the receptacle. Do not pull by the cord as this may damage the wires inside.

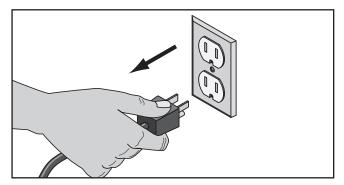


Figure 5. Disconnecting power.

Remote Control

Install the included 9V battery in the remote control. Refer to **Page 21** for additional information.

Test Run

Before you install the model G9956, bench-test the unit to make sure it runs properly.

Note: Do not be alarmed if you notice a small amount of vibration during the Test Run. It is normal for all air filters to produce a small amount of vibration during operation. This vibration is much more noticeable when operating on a hard surface, such as a workbench, compared to when operating in a suspended position, as designed.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, disconnect it from power, then review the **Troubleshooting** on **Page 20**.

If you still cannot remedy a problem, contact our Tech Support at (570) 546-9663 for assistance.

To test run the machine:

- Place the air filter unit on the floor or a sturdy workbench.
- **2.** Push the main switch to "Remote Control." This will ensure the air filter is *OFF*.
- **3.** Connect the unit to the power source.
- Push the main switch to "No Remote Control," then pull the switch chain to turn the fan ON.
- 7. Listen to and watch for abnormal noises or actions. The machine should run smoothly without rubbing noises.
- 8. Pull the switch chain to turn the fan *OFF*.
- Set the main switch to "Remote Control."
- Push the ON/HR button on the remote control to turn the air filter ON, then push OFF to turn the filter OFF.



Site Planning

Site planning is an important step to maximize the effectiveness of the hanging air filter. Air circulation must be thought out and all obstructions to the air path considered.

Think of air circulation in terms of the circular motion of the air before and after the air filter. The air exiting the filter is exhausted at a higher velocity than that entering it. Consequently, exhaust being vented inside a building can have an effect on the pattern of air circulation.

Air circulation patterns will vary depending upon which method is used and according to your specific shop setup. You can direct the flow of circulation on the air filter with the vents on the rear of the machine. These can optimize good layout and circulation, as shown in the **Figure** below.

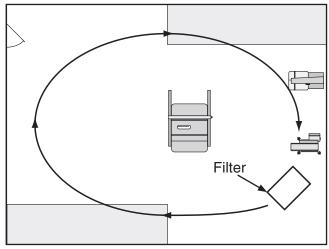


Figure 6. Good air circulation. The air filter placement promotes circular air motion.

The directional vents will have little effect if the air filter is placed too close to obstructions, resulting in poor air circulation, as shown in the **Figure** below. In this situation, the velocity of the air is lost and circulation is diminished.

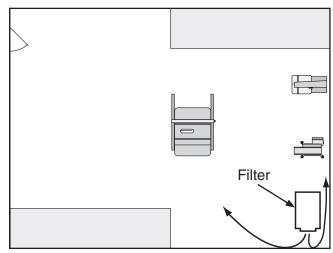


Figure 7. Poor air circulation. Placed too close to the wall, the air circulation short cycles, leaving much of the room unfiltered.

Below is a list of things to keep in mind when selecting a location to hang the air filter:

- Study your shop layout to determine the best location for the hanging air filter. The air filter must have at least 12" of clearance all the way around or the airflow will short-cycle.
- The air filter works most effectively when hung in front of sanders or areas where sanding is being done with hand-held equipment.
- Do not hang the air filter where garage doors will pass closely by or where it may impede transport or movement of any other object.
- Hang the air filter where it can be accessed easily for operation and cleaning.

It is very important that the hanging air filter be supported properly. Please follow these guidelines when planning where to mount the unit:

- Where the eye bolts attach is the top of the unit. The hanging air filter can only be secured by the eye bolts on its top.
- Make sure that an electrical outlet with a properly grounded receptacle is available at the location you choose.
- The air filter must be supported by joists or studs capable of supporting at least 150 lbs when mounting the unit with eye bolts. DO NOT attach the hanging air filter to sheet rock, press board or paneling. These materials cannot support the filter, and it may fall.
- Avoid hitting your head on the hanging air filter. Make sure there is enough clearance between the unit and the ground, especially important in a basement. If possible, position the air filter in an area that has little foot traffic, but still offers easy access to the switch and filters.

Mounting

ACAUTION

ONLY mount the air filter unit to joists, wall studs, or table that can hold at least 150 lbs. DO NOT mount the unit only to sheet rock, pressboard, paneling, or honeycomb wall panels with expansion-type fasteners. The fasteners can tear out and the air filter can fall. Ignoring this caution can result in injury or property damage.



Components and Hardware Needed Eye Bolts	-
Hex Nuts 1/4"-20	4
Chain, Rated 150 lbs. or Higher S-Hooks Rated for 150 lbs. or Higher	
Lag Eye Bolts 5/16" x 3" or 4"	
Tools Needed	Qty
Wrench 12mm	1
Wrench 12mm	1 1
Wrench 12mm	1 1

To make the unit operate at the optimum height of 7' from the floor, we recommend installing the air filter unit in your shop by hanging it with lag eye bolts, chain, and S-hooks.



Attaching Eye Bolts

- 1. If the 1/4"-20 hex nuts are not already on the eye bolts, thread one onto each eye.
- Thread one eye bolt into each hole on the top
 of the double air filter, as shown in Figure 8,
 using as much of the available thread as possible.

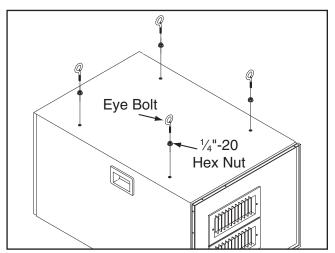


Figure 8. Location to install eye bolts.

Tighten the hex nut on each eye bolt until the eyes will not move by hand. DO NOT over tighten.

Installing Air Filter

- Locate the applicable load bearing studs or joists—or if the ceiling has sheet rock or some other covering, locate the joists with a stud finder and mark their centers.
- 2. Pre-drill ¹/₄" pilot holes into the marks on the joists. This will make threading the lag eye bolts much easier and reduce the risk of splitting the joists.

3. Thread the lag eye bolts into the pilot holes, as shown in **Figure 9**. Be sure to thread the bolts at least 11/2" into the joists.

Note: DO NOT use hooks in place of lag eye bolts. If the double air filter is bumped it could fall.

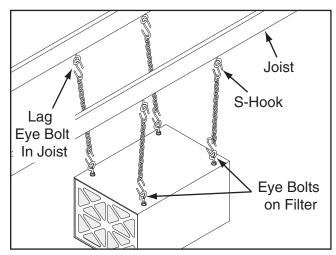


Figure 9. Model G9956 hanging from joists.

- 4. Measure the desired length of your chains from the eye bolts. Remember to account for the S-hooks and eye bolts on the double air filter.
- **5.** Cut the chain to equal lengths and attach an S-hook to each end.
- **6.** Secure a length of chain to each mounting eye.
- 7. GET SOME HELP! With at least one other person supporting the weight of the double air filter, connect the chains to the lag eye bolts. Optimally, the unit should hang 7' off the floor when finished.

SECTION 4: OPERATIONS

WARNING

Damage to your eyes and lungs could result from using this machine without proper protective gear. Always wear safety glasses and a respirator when operating this machine.





Operation Controls

The Model G9956 Double Air Filter can be operated at the machine or with the remote control.

At Machine

- 1. Connect power to the air filter.
- 2. Set the main (red) switch (see Figure 10) to "No Remote Control."

Note: The remote control will not work when the main switch is in this position.

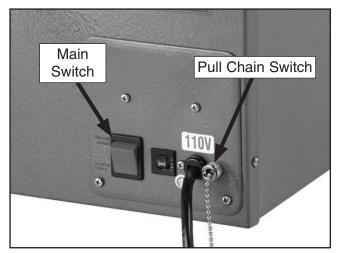


Figure 10. Air filter control panel.

Pull the switch chain to turn the fan ON and OFF.

Remote Control

- 1. Connect power to the air filter.
- 2. Set the main switch to "Remote Control."
- Push the ON/HR button on the remote control to turn the air filter ON. Push OFF to turn it OFF.

Note: The remote control communicates with the air filter using infrared (IR) and must be pointed directly at the control panel.



Fan Speeds & Timer

You can adjust the fan speed and the length of time the air filter operates by programming it with the included remote control. The ON/HR button allows you to toggle between fan speed and timer control functions.

The five speed lights correspond to the five fan speeds. The following table shows the correlation between the number of lights illuminated on the remote and the fan speed.

No. of Lights	Fan Speed
1	800
2	900
3	1000
4	1100
5	1200

Setting Fan Speed

- Press the ON/HR button (see Figure 11) once to start the fan. The fan should start to run.
 - —If one or more of the lower lights comes on, press ON/HR again.

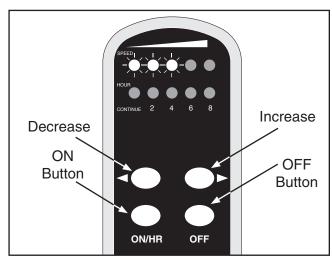


Figure 11. Example of fan speed set at 3.

- **2.** Increase the fan speed by pressing the increase button (the right hand pointer).
 - —Each time this button is pressed, the fan speed increases. The light for the selected fan speed illuminates on the remote control.
- **3.** Decrease fan speed by pressing the decrease button designated by the left hand pointer.

Setting Fan Timer

- After setting the fan speed, press the ON/HR button.
 - —If some or all of the lights in the upper row come on, press the ON/HR button once more.
- 2. Press the increase button to increase the amount of time the fan runs before automatically shutting off.
 - —Each time this button is pressed, the amount of time increases by two hours, up to a maximum 8 hour cycle. The light for the selected time illuminates on the remote control (see Figure 12).

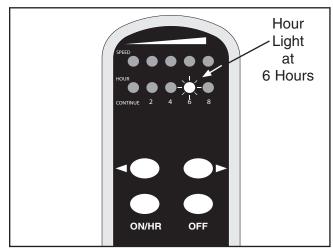


Figure 12. Example of time set for 6 hours of operation.

3. Decrease the amount of time the fan runs before automatically shutting off by pressing the decrease button.

Note: If the automatic shutoff feature will not be used, press the decrease button until the continue light is illuminated.



Filtering Performance

The Model G9956 will recirculate the volume of air in a 20' x 20' x 8' room approximately 26 times in one hour.

We recommend that the volume of air in your room be recirculated at least 6-8 times every hour. Therefore, rooms with a larger volume will require two or more air filters to achieve proper filtering.

To calculate the recirculating rate for your shop space:

Step 1: Use the formula below to calculate how long it takes to circulate all the volume of air in a room with the double air filter; where W = Width, L = Length and H = Height of your room, in feet. The maximum rate of air movement for the air filter is 1400 CFM.

$$\frac{W' \times L' \times H'}{CFM}$$
 = Minutes for circulating 1 time

Example:
$$\frac{20' \times 20' \times 8'}{1400} = \frac{3200}{1400} = 2.29 \text{ Minutes}$$

Step 2: Calculate how many times per hour the volume is recirculated through the double air filter by dividing 60 minutes by the circulating time from **Step 1.** The result is listed as times per hour.

Example:
$$\frac{60}{2.29}$$
 = 26.2 Times per Hour

Machine Storage

When the air filter is not in use, unplug the power cord from the power source. Place the cord away from potential damage sources, such as high traffic areas, sharp objects, heat sources, harsh chemicals, water, damp areas, etc.

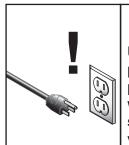


SECTION 5: MAINTENANCE

Cleaning Filters

The frequency of use directly affects how often the filters must be cleaned or serviced.

To maintain optimal operation, check the filters approximately every 40 hours of use in light or moderately dusty environments. In very dusty environments, check the filters every eight hours of use. Always wear a respirator when checking, changing, or servicing the filters.



AWARNING

Unplug air filter before performing all maintenance procedures. Ignoring this warning may result in serious personal injury to you or others!



AWARNING

Always wear a respirator and safety glasses when cleaning the filters. Sawdust may cause allergic reactions or respiratory problems.

To change and service the filters:

1. DISCONNECT MACHINE FROM POWER!

NOTICE

DO NOT use compressed air to blow out the primary or secondary filters in the following steps. If you do, you will damage the filters and reduce filtering quality.

 Lift the primary filter so it clears the retaining rim (see Figure 13), remove it, and examine it. Place the filter in a trash bag and shake it gently to remove the bulk of the dust.

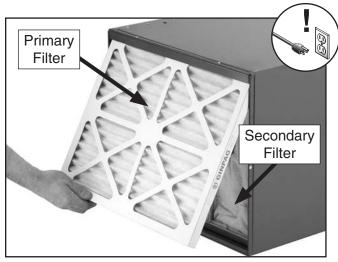


Figure 13. Filters exposed for cleaning.

Remove the secondary filter, place it inside a trash bag, and gently shake the dust from the inside of the filter.

Optional: Wash the secondary filter with water to remove the remaining dust, then let it dry completely.

- **4.** Vacuum out the inside of the air filter housing.
- 5. Re-install both filters.

Note: The filters can be cleaned several times before replacement becomes necessary. To determine whether the filters need to be replaced, hold them up to the sunlight and visually inspect them after cleaning. If you can see a lot of light through them, the filters do not need to be replaced. If you cannot see a lot of light through them after cleaning, replace the filters.



SECTION 6: SERVICE

Review the troubleshooting and procedures in this section if a problem develops with your machine. If you need replacement parts or additional help with a procedure, call our Technical Support at (570) 546-9663. **Note:** *Please gather the serial number and manufacture date of your machine before calling.*

To reduce the risk of serious personal injury or damage to the machine, any repairs not covered in this manual should only be performed by or with the assistance of qualified service personnel.

Troubleshooting

Motor & Electrical

Symptom	Possible Cause Possible Solution		
Machine does	Dead battery or out of range.	1. Replace battery (Page 21); stay in signal range.	
not start or a 2. Power supply switched OFF or is at fault. 2. Ensure		2. Ensure power supply is <i>ON</i> /has correct voltage.	
breaker trips.	3. Wall circuit breaker tripped.	3. Ensure circuit size is correct/replace weak breaker.	
	4. Circuit breaker on air filter tripped.	4. Reset air filter circuit breaker.	
	5. Wiring is open/has high resistance.	5. Check/fix broken, disconnected, or corroded wires.	
	6. Receiver at fault.	6. Inspect/replace if faulty.	
	7. Main switch or pull chain switch is at fault.	7. Replace faulty switch.	
	8. Motor at fault.	8. Test/repair/replace.	
Machine stalls	Run capacitor at fault.	Test/repair/replace.	
or is underpowered.	2. Motor wired incorrectly.	2. Wire motor correctly.	
	3. Plug/receptacle at fault.	3. Test for good contacts/correct wiring.	
	4. Motor bearings at fault.	4. Test/repair/replace.	
	5. Motor overheated.	5. Clean filters to reduce load on motor.	
	6. Motor at fault.	6. Test/repair/replace.	
Machine has	Motor or component loose.	1. Inspect/replace damaged bolts/nuts, and	
vibration or		re-tighten with thread locking fluid.	
noisy operation.	2. Motor fan rubbing on fan cover.	2. Fix/replace fan cover; replace loose/damaged fan.	
	3. Motor bearings at fault.	3. Test by rotating shaft; rotational grinding/loose	
		shaft requires bearing replacement.	

Air Filter Operations

Symptom	Possible Cause	Possible Solution
Loud, repetitious noise, or excessive	Air filter is not mounted properly and wobbles.	Stabilize the air filter.
vibration coming from air filter.	 The motor mounting is loose. Impeller is loose on the motor shaft, damaged or unbalanced. Motor fan housing is dented, causing the motor fan blade to hit the housing while spinning. 	 Make sure all fasteners on the air filter are tight. Unplug air filter, and inspect the impeller for dents, bends, loose fins. Replace the motor and impeller as a set if the motor shaft and the impeller hub is damaged. Replace motor fan housing.
Air filter does	The primary or secondary filter are dirty.	Clean or replace the filters.
not adequately collect dust; poor performance.		



Remote Control Battery Replacement

The remote control uses one 9V battery. To replace it, remove the battery compartment cover (see **Figure 14**), install a new battery, and replace the cover.

Tip: If you use the air filter infrequently, remove the battery when the unit is not used. This will reduce battery drainage from the remote control.

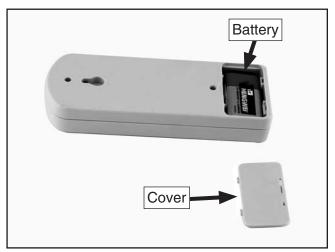


Figure 14. Remote control battery compartment cover removed.

SECTION 7: WIRING

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Compare the manufacture date of your machine to the one stated in this manual, and study this section carefully.

If there are differences between your machine and what is shown in this section, call Technical Support at (570) 546-9663 for assistance BEFORE making any changes to the wiring on your machine. An updated wiring diagram may be available. **Note:** Please gather the serial number and manufacture date of your machine before calling. This information can be found on the main machine label.

▲WARNING Wiring Safety Instructions

SHOCK HAZARD. Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!

MODIFICATIONS. Modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire. This includes the installation of unapproved aftermarket parts.

WIRE CONNECTIONS. All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.

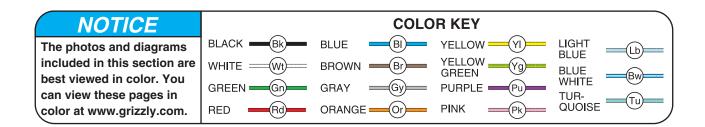
CIRCUIT REQUIREMENTS. You MUST follow the requirements at the beginning of this manual when connecting your machine to a power source.

WIRE/COMPONENT DAMAGE. Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components.

MOTOR WIRING. The motor wiring shown in these diagrams is current at the time of printing but may not match your machine. If you find this to be the case, use the wiring diagram inside the motor junction box.

CAPACITORS/INVERTERS. Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

EXPERIENCING DIFFICULTIES. If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (570) 546-9663.



Electrical Components

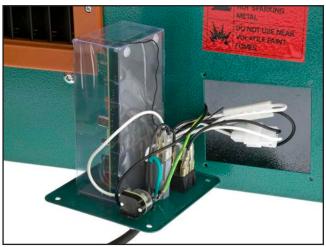


Figure 15. Remote unit exterior view.

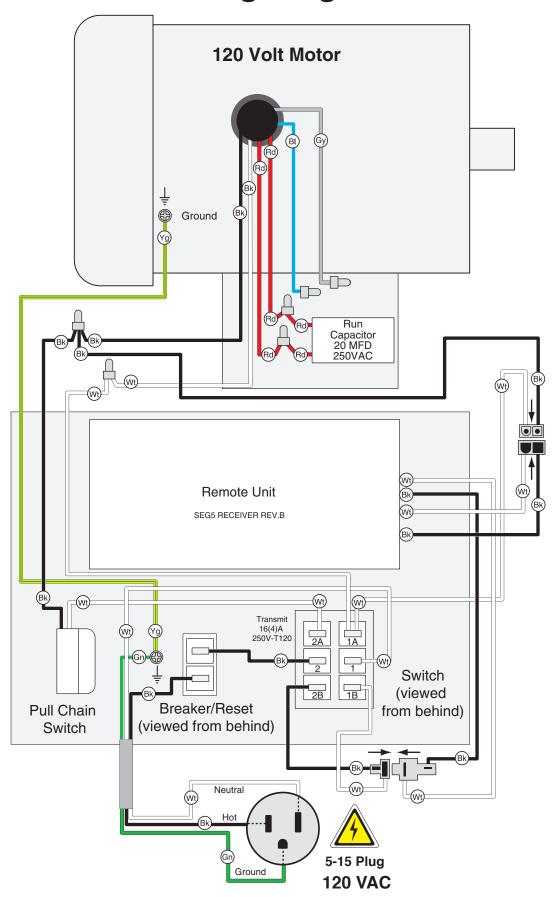


Figure 17. Remote wiring inside view.



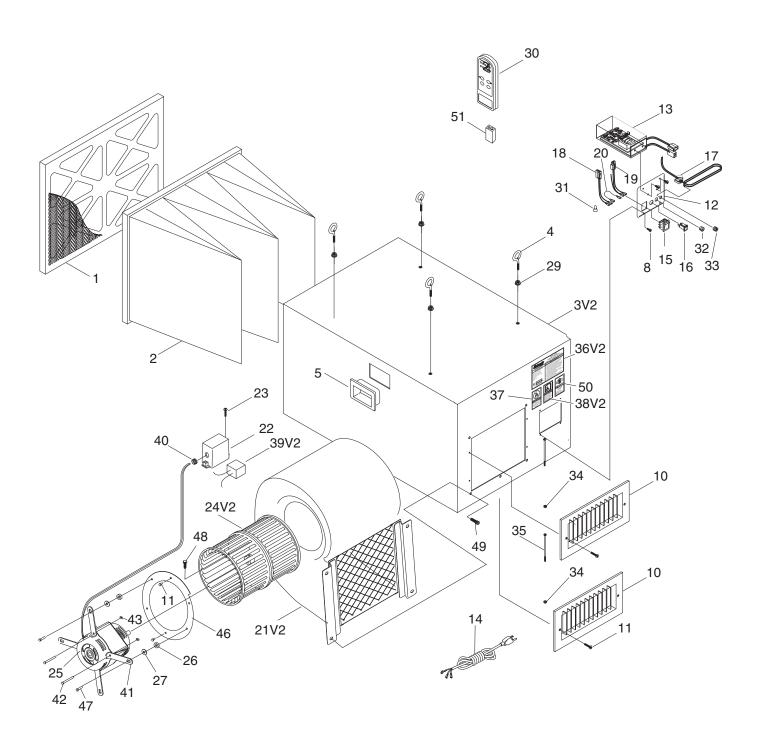
Figure 16. Motor and remote unit.

Wiring Diagram



SECTION 8: PARTS

Main Breakdown



Main Parts List

REF	PART#	DESCRIPTION
1	P9956001	5-MICRON PRIMARY FILTER
2	P9956002	1-MICRON SECONDARY FILTER
3V2	P9956003V2	BODY V2.03.12
4	P9956004	EYE BOLT 1/4-20 X 7/8
5	P9956005	HANDLE
8	P9956008	PHLP HD SCR M47 X 8
10	P9956010	OUTLET PORT
11	P9956011	PHLP HD SCR 10-24 X 1/2
12	P9956012	SWITCH COVER
13	P9956013	REMOTE RECEIVER
14	P9956014	PWR CORD 110V, LONG W/PLUG
15	P9956015	SWITCH
16	P9956016	CIRCUIT BREAKER 3AMP
17	P9956017	CHAIN SWITCH
18	P9956018	SWITCH CONNECTOR
19	P9956019	CIRCUIT BREAKER CONNECTOR
20	P9956020	JUMP CONNECTOR
21V2	P9956021V2	FAN HOUSING V2.12.09
22	P9956022	CAPACITOR COVER
23	P9956023	PHLP HD SCR 10-24 X 3/4
24V2	P9956024V2	PLASTIC FAN V2.12.09
25	P9956025	MOTOR 1/3HP 120V 1PH 60HZ
26	P9956026	RUBBER GROMMET

REF	PART #	DESCRIPTION	
27	P9956027	FLAT WASHER 1/4	
29	P9956029	FLANGE NUT 1/4-20	
30	P9956030	REMOTE CONTROL	
31	P9956031	CONNECTOR C4 16-24 GAUGE	
32	P9956032	STRAIN RELIEF	
33	P9956033	ROUND NUT M47 FOR CHAIN SWITCH	
34	P9956034	LOCK NUT M47	
35	P9956035	PHLP HD SCR M47 X 100	
36V2	P9956036V2	MACHINE ID LABEL CSA V2.09.11	
37	P9956037	EXPLOSION HAZARD LABEL	
38V2	P9956038V2	READ MANUAL 2W X 3.3H V2.09.11	
39V2	P9956039V2	CAPACITOR 20M 250V (SQ) V2.08.15	
40	P9956040	RUBBER GROMMET	
41	P9956041	MOTOR BRACKET	
42	P9956042	PHLP HD SCR M58 X 50	
43	P9956043	LOCK NUT M58	
46	P9956046	FAN HOUSING COVER	
47	P9956047	FLANGE SCREW 1/4-20 X 1/2	
48	P9956048	CAP SCREW 1/4-20 X 1/2	
49	P9956049	BUTTON HEAD SCREW 5/16-18 X 1/2	
50	P9956050	RESPIRATOR LABEL 3.8 X 2H	
51	P9956051	BATTERY 9V	



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3.	What is your annual househ \$20,000-\$29,000 \$50,000-\$59,000	old income?\$30,000-\$39,000\$60,000-\$69,000	\$40,000-\$49,000 \$70,000+
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5.	How long have you been a v		rears20+ Years
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The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.



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