User's manual	Manual del usuario	Manuel de l'utilisateur
Customer Service US:1-800-645-2986	Servicio de atención al Cliente US: 1-800-645-2986	Service à la clientèle Canada: 888-645-2986

Commercial Air Scrubber & Negative Air Machine w/HEPA Filter, 2000 CFM, 115V

Model 604216



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Specifications subject to changes without notice!

If you have any questions, please contact us:
Global Industrial
USA
www.globalindustrial.com

OPERATION AND MAINTENANCE MANUAL FOR

604216

NOTICE

Global Industrial - Commercial Air Scrubber & Negative Air Machines are designed for the removal of airborne dust and contaminates.

WARNING

IMPORTANT SAFETY INFORMATION ENCLOSED.
READ AND UNDERSTAND THIS MANUAL BEFORE OPERATING THIS PRODUCT.

IT IS YOUR RESPONSIBILITY TO MAKE THIS SAFETY INFORMATION AVAILABLE TO OTHERS THAT WILL OPERATE THIS PRODUCT.

FAILURE TO OBSERVE THE FOLLOWING WARNING COULD RESULT IN INJURY.

PLACING MACHINE IN SERVICE

- **Always install, operate, inspect and maintain this product in accordance with all applicable standards and regulations (local, state, country, federal, etc.).**
- **Always use proper gauge cord with correct connections.**
- **Be sure all cords are securely connected to the recessed male plug.**
- **Ensure an accessible emergency shutoff when your machine is connected to power. Make others aware of its location.**
- **Do not use damaged, frayed, or deteriorated electrical cords or connections.**
- **Do not leave machines in operation unattended for over 4 hours without inspection.**
- **Keep all electrical connections clear of water or other liquid hazards.**
- **Always turn off and unplug your machine before performing any maintenance.**
- **Do not operate the machine while flammable or volatile liquids such as gasoline, diesel or jet fuel are present. Failure to do so can result in explosion.**
- **Keep work area clean, uncluttered and illuminated.**
- **Do not remove any labels. Replace any damaged labels.**

USING THE MACHINE

- **Always wear protection when operating or performing maintenance.**
- **Always use Personal Protective Equipment appropriate to the work being performed. This may include dust mask or other breathing apparatus, safety glasses, ear plugs, gloves, apron, safety shoes, hard hat and other equipment,**
- **If applicable, prevent exposure and breathing of harmful dust and particles:**
  - **Some dust created by power sanding, sawing, and grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:**
    - **Lead from lead based paints,**
    - **Crystalline silica from bricks and cement and other masonry products, and**
    - **Arsenic and chromium from chemically treated lumber**
  - **Your risk from these exposures varies, depending on how often you do this type of work.**
- **Keep others a safe distance from your work area, or ensure they use appropriate Personal Protective Equipment.**
- **This machine is not designed for working in explosive environments, including those caused by fumes and dust, or near flammable materials.**
- **Keep hands, loose clothing, long hair and jewelry away from the machines blower assembly and "Air Intake."**
- **To avoid accidental starting – ensure machine in "off" position before connecting to power.**
- **Do not carry or drag the machine by the cord.**
- **Do not operate or maintain the machine under the influence of medication, drugs, or alcohol.**
- **Never use a damaged or malfunctioning machines,**
- **Do not modify the machine, safety devices, or accessories.**
- **Do not use this machine for purposed other than those recommended.**
- **Only use accessories recommended by Global Industrial.**
- **Whenever applicable, wear safety shoes, hard hat, safety goggles, gloves, dust mask and any other appropriate protective clothing in the work area.**
- **Do not indulge in horseplay. Distraction can cause accidents.**
- **Use only proper cleaning solvents to clean parts. Use only cleaning solvents which meet current safety and health standards. Use cleaning solvents in a well-ventilated area.**
- **Do not clean machine or any parts with diesel fuel or any other petroleum distillates.**
- **Do not operate the tool with broken or damaged parts.**
- **This tool is not designed for working in explosive atmospheres.**

For additional information, please contact Global Industrial.

GLOBAL INDUSTRIAL

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SECTION I

INTRODUCTION

This operation and maintenance manual is furnished with each **Global-Air Scrubber 2000** It outlines the general use and maintenance requirements for efficient and safe operation.

READ ALL INSTRUCTIONS AND DATA IN THIS OPERATION AND MAINTENANCE MANUAL PRIOR TO OPERATION OF THIS EQUIPMENT.

These instructions are for your protection and convenience. Please read them carefully. Failure to follow these precautions could result in injury or death. Whenever using electric powered equipment, basic safety precautions should be followed.

SECTION II

GENERAL DESCRIPTION

The **Global-Air Scrubber 2000** is a portable, electrically powered Air Filtration machine, designed and manufactured by Global Industrial. The machine's function is to filter air and remove suspended airborne particulates from the surrounding area the unit is placed.

This unit has a three stage filtering system. The Pre-Filter stage captures the bulk of the dust and debris. The second stage utilizes a two-ply Ring Filter that captures any dust and dirt able to penetrate the Pre-Filter. The final stage is the 99.97% - 0.3 micron HEPA Filter or the 5 micron general purpose filter. The HEPA filter is utilized in abatement work or areas where an extremely high level of filtration is desired. The general purpose filter is utilized when trying to reduce visible air born particulates that are deemed non-hazardous.

The **Global-Air Scrubber 2000** requires a 110/115V - 15 Amp, single phase power source.

WARNING
Do not use circuits exceeding specified voltage. Higher voltage will damage controls and could cause shock or fire hazard.

SECTION III

ROUTINE MAINTENANCE

Inspect the unit for any loose or damaged parts prior to use.

CAUTION: Be sure power supply is in the OFF position prior to inspection!

A. Clean the surfaces of the unit to remove accumulated dust or dirt. Do not use petroleum distillates, solvents, or thinners as cleaning agents. Remove any accumulated dust and dirt from control panel.
B. Periodic checks should be made of the filter brackets to ensure thumbscrews and knobs are secure.
C. Filters should be checked daily and replaced if needed. This will help ensure proper air flow and extend motor life.
D. Inspect ALL power connection. Be sure that the recessed plug is secure to the panel. If recessed plug is not secured, electrical shock or shortage may occur.
E. Inspect your power cords connections for breaks, scorched areas, melting, oxidation, or signs of wear. If cord shows ANY of these signs, replace.

CAUTION: Do not tamper with or modify the blower housing, control panel, drive motor, or wiring scheme. Tampering or modifications could result in premature wear or failure and will void factory warranty.

CONTROL DESCRIPTIONS

1. **Power Switch**

   Switch used to turn on your Global-Air Scrubber 2000. Select Low (1) or High (2) settings depending on the desired volume of air to be filtered.

2. **Circuit Breaker**

   This is attached to the units main power supply to assist in protecting the blower motor from power surges. The circuit breaker also helps protect the operator against electrical shock or hazards.

3. **Differential Pressure Gauge**

   This is used to determine filter efficiency. The DPG measures negative pressure on the clean side of the filters. As the Filters load with dust and debris, the negative pressure will increase and move the needle of the DPG. A new filter will register 1.0-2.0" of water column. A fully loaded filter will register approximately 3.0-3.5" of water column.

4. **Barbed Fitting**

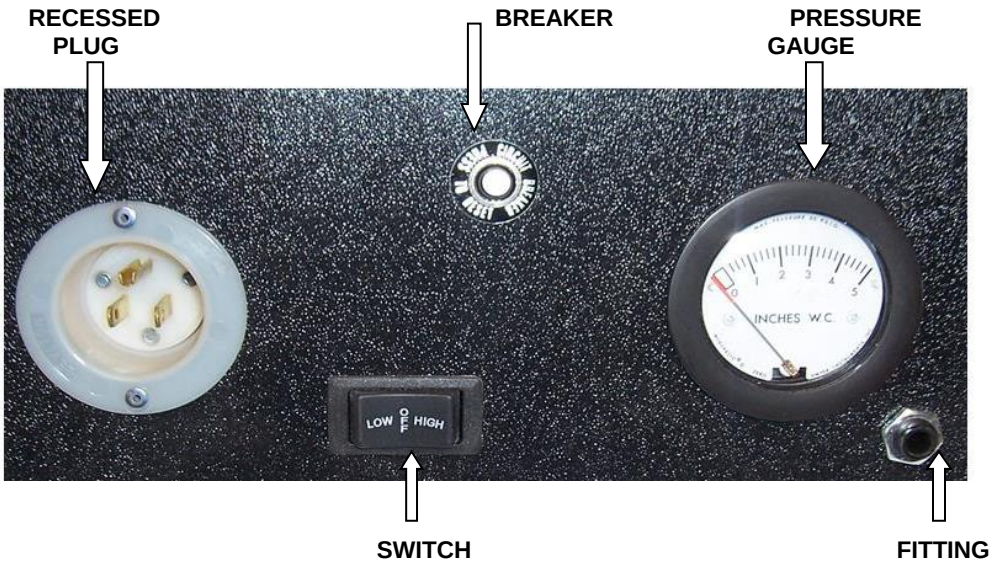
   Inlet used to measure pressure of surrounding ambient air.

5. **Power Cord**

   Firmly insert the female end of a proper gauge extension cord to power the machine.

   CAUTION: A loose, corroded, ill fitted or damaged extension cord can cause pre-mature failure and void your warranty.

Global Industrial - Air Scrubber 2000 Control Panel



SECTION IV

PRIOR TO USE

A. Remove any excess dust/dirt from exterior housing and control panel.
B. Be sure the HEPA Filter and Pre-Filters are installed properly with a positive seal.
C. Insure the unit is connected to a dedicated 15Amp, 110/115v circuit.
D. Make sure unit is safely positioned as not to impede any entrances or exits of the work area.
E. If applicable, check exhaust port connections for tight seal.

CAUTION: Insure your power cord is securely attached to the male recessed plug. If any movement or play is detected, change power cord immediately! If connection remains loose, immediately replace the male recessed plug.

OPERATION

A. When utilized in containment, the Global-Air Scrubber 2000 should be positioned a minimum distance away from the entrance and located towards the center of the containment.
B. When using a HEPA filter, insure the filter is correctly installed and sealed. Anchor and secure the filter utilizing the supplied retaining brackets.
C. Install the Ring Filter and Pre-Filter pad into unit.
D. Position the unit on a flat level surface and secure the casters using the lock feature.
E. Plug in male power cord into the proper dedicated circuit.
F. To begin operation, turn power switch to low (1) or high (2) position. Locate the differential pressure gauge located on the control panel. The gauge will register between 1.0" - 2.0" of water column. This is the initial reading when filters are new and unused. This reading will incrementally increase as filters become loaded with dust and debris. When the gauge reaches 3.0" - 3.5" of water column; either one or all of the filters are loaded and in need of replacement.
G. Pressing the power switch to the left will operate the unit in "Low" mode equivalent to 1000 CFM.
H. Pressing the power switch to the right will operate the unit in "High" mode equivalent to 2000 CFM

SECTION V

REPLACEMENT OF FILTERS

The work atmosphere will impact the frequency of filter replacements. As filters begin to load, the reading of the pressure gauge will increase incrementally. When the Pressure gauge reads 3.0" - 3.4" or when airflow is greatly reduced, check the condition of filters.

CAUTION: If applicable, wear personal protective equipment during filter replacement. Please observe all Federal, State, and Local regulations regarding the handling and disposal of hazardous materials.

PRE-FILTER REPLACEMENT

A. Set the power switch (diagram #20.1, item #3) to the off (0) position. Disconnect from power source.
B. Remove Black Filter Door (diagram #20.1, item #10) to expose the filters.
C. Reach in and remove the Pre-Filter (diagram #20.1, item #18). Dispose of Pre-Filter accordingly.
D. Replace the discarded Pre-Filter with a new Pre-Filter**.**
E. Reinsert the Black Filter Door.
F. Insert the power cord into outlet (diagram #20.1, item #1), and turn the power switch to the high (2) position. If the reading on the pressure gauge exceeds 3.0" - 3.4" of water column, the Ring Filter (diagram# 20.1, item #17) should be inspected and possibly replaced.

RING FILTER REPLACEMENT

A. Follow steps **A-D** listed above referencing Pre-Filter replacement.
B. Reach in and remove the Ring Filter (diagram# 20.1, item #17). Dispose of Ring Filter accordingly.
C. Replace the discarded filter with a new unused Ring Filter.
D. Reinstall the Pre-Filter.
E. Reinsert the Black Filter Door.

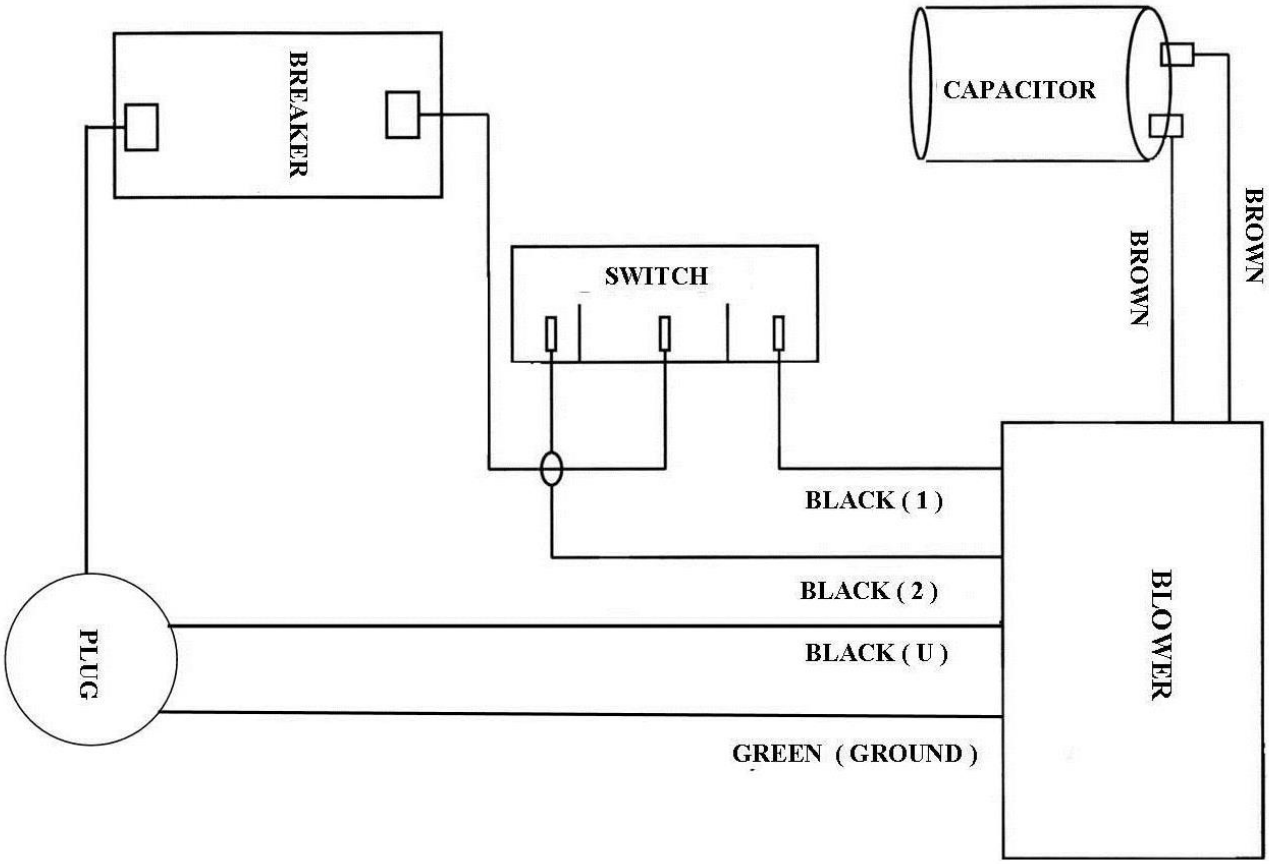
F. Insert the power cord into outlet (diagram #20.1, item #1), and set the power switch to the high (3) position. If the reading on the pressure gauge exceeds 3.0-3.4" of water column, the HEPA Filter should be inspected and possibly replaced.

HEPA FILTER

A. Follow steps **A-D** listed above for Ring Filter replacement.
B. Locate the bracket thumbscrews (diagram #20.1, item #12). Loosen the four bracket thumbscrews by turning them counter clockwise.
C. With all four thumbscrews loose, push the top of the filter brackets (diagram #20.1, item #11) inward towards each other, and remove from the front of the unit.
D. Firmly grasp the right and left sides of the HEPA Filter (diagram #20.1, item #16), and pull the filter directly towards you. Remove the used filter and dispose of accordingly
E. Carefully inspect the replacement HEPA Filter gaskets for cracks, gaps or defects. Any defective gaskets must be replaced.
F. The HEPA Filter has two sides; one side has a gasket, the other does not. Insert replacement HEPA Filter, gasket side first, into machine and press firmly against the housing's internal rib.
G. Reinstall the filter brackets. Once the brackets are installed, turn the thumbscrews clockwise until tight. This will secure the main filter.
H. Reinstall Ring Filter and Pre-Filter. (Reference Pre-Filter and Ring Filter Replacement).
I. Reinsert the Black Filter Door.

SECTION VI

WIRING DIAGRAM



SECTION VII

PARTS BREAKDOWN

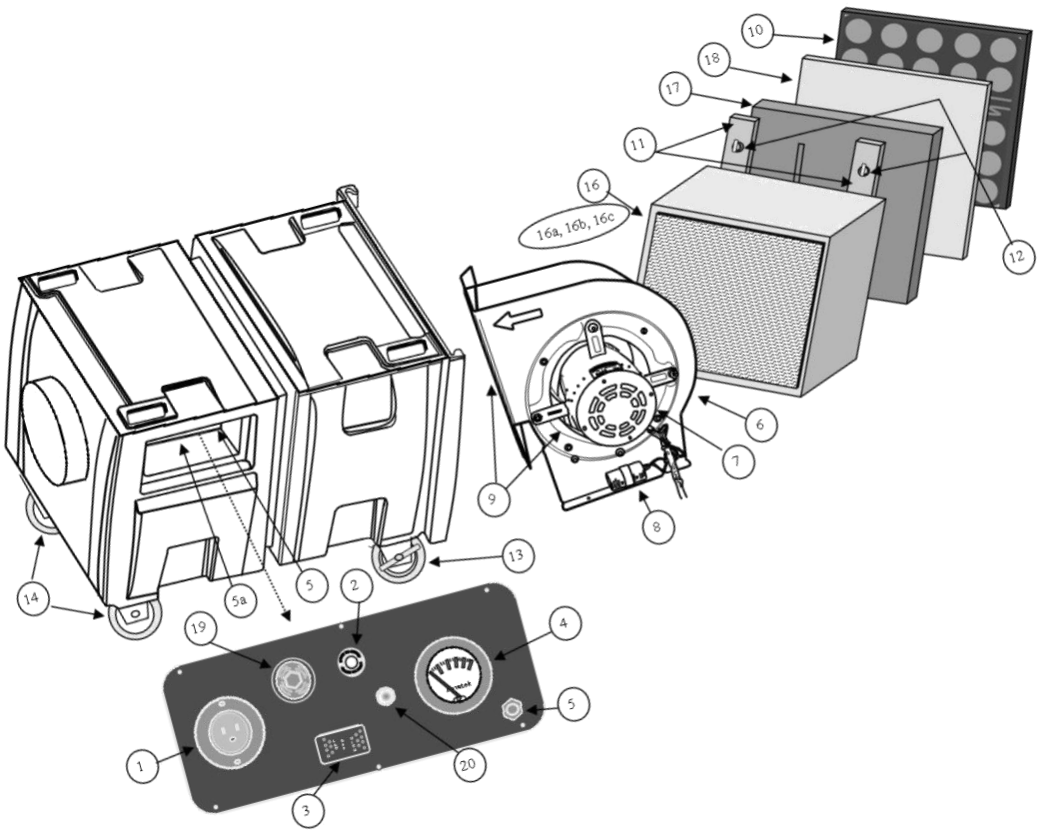
Ref.	Description
1	MALE RECESSED PLUG
2	BREAKER
3	POWER SWITCH
4	PRESSURE GAUGE
5	BARBED PRESSURE FITTING
5A	DOME WIRE NUT
6	BLOWER HOUSING & WHEEL
7	BLOWER MOTOR
8	CAPACITOR
9	BLOWER ASSEMBLY COMPLETE
10	BLACK POLY DOOR
11	FILTER BRACKETS
12	THUMBSCREWS
13	WHEELS-RIGID
14	WHEELS-SWIVEL
16	HEPA FILTER (2000CFM)
16A	GENERAL FILTER FRAME (Optional)

Ref.	Description
16B	GENERAL PURPOSE FILTER (Optional)
16C	GENERAL PURPOSE CONVERSION KIT (Includes Parts 16A & 16B) (Optional)
17	RING FILTER (24PK) RING FILTER (12PK)
18	PRE-FILTER (40PK) PRE-FILTER (20PK)
19	AUDIBLE/VISUAL ALARM (Optional)
	NEG AIR HOUSING W/ DOOR

ITEMS NOT SHOWN

12" INTAKE BLACK POLY DOOR
FOAM SEALING STRIPS
DIFFERENTIAL PRESSURE SWITCH
TEE CONNECTOR TO DIFF. SWITCH
REDUCER FITTING TO DIFF. SWITCH

20.1 DIAGRAM OF UNIT AND CONTROL PANEL



SECTION VIII

SAFETY

Global Industrial - Negative Air Machines are highly efficient systems designed to reduce air borne particulates. To insure proper operation, the following safety precautions should be strictly adhered to:

A. Do not leave machine unattended when connected to a power source. Turn OFF electric supply and disconnect from power source when not in use and/or before servicing.
B. Do not operate with damaged or malfunctioning parts. If the unit is not working as intended, return to an Authorized Repair and Service Center.

   NOTE: Always replace worn or damaged components with genuine Global Industrial parts. Failure to comply could result in equipment failure and will void warranty.

C. Remove any loose clothing and adornments prior to operation.
D. Keep outer surfaces free of dirt and debris. Be sure all controls clean and functioning properly.
E. Turn off power prior to any filter inspection and replacement.
F. Do not operate unit with flammable or combustible liquids or gases present.
G. Do not operate the machine in wet conditions. Failure to do so could result in electrical shock or death.
H. Never operate the unit if there is any possibility of contact with the blower wheel.
I. It is the responsibility of the unit owner to ensure that all equipment is maintained in safe and efficient operating condition.
J. Stacking of machines is limited to three units. Do not house stacked machines in areas hotter than 100 degrees Fahrenheit. **(Failure to comply will void warranty.)**

TROUBLESHOOTING

A. **The unit is plugged in and turned on, but will not operate.**
   Inspect the circuit breaker located on the front control panel. If the center of the circuit breaker is extended, this indicates the circuit breaker requires re-setting. Reset the circuit breaker by depressing the center of the circuit breaker. If the center fails to remain depressed, replace the circuit breaker immediately

B. **If unit continues not to function.**
   Check the power supply in the work area. Be sure proper power is being supplied to the unit.

C. **If at this point, unit still will not operate**
   Contact your nearest authorized Global Industrial service center.