NOVATEK™ CORPORATION

...IN IT FOR THE LONG HAUL

Novair 700

Negative Air Machine

Operations & Maintenance

F0700
F0705

www.Novatekco.com

BUILT IN USA
FROM GLOBAL MATERIALS

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Specifications subject to changes without notice!

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OPERATION AND MAINTENANCE MANUAL FOR

F0700 & F0705

NOTICE

FOR PROFESSIONAL USE ONLY

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 us 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 Novatek Corp.
- Whenever applicable, wear safety shoes, hard hat, safety goggles, gloves, dust mask and any other appropriate protective clothing in the work area.
- Do no 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 clean machine 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.

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NOVATEK CORPORATION

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SECTION I

INTRODUCTION

This operation and maintenance manual is furnished with each **NOVAIR 700**. 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.

If after reading this manual you still have questions, contact a **NOVATEK** authorized distributor or **NOVATEK** directly by dialing 1-866-563-7800.

SECTION II

GENERAL DESCRIPTION

The **NOVAIR 700** is a portable, electrically powered Air Filtration machine, designed and manufactured by Novatek Corp. The machines function is to filter air and remove suspended airborne particulates.

This unit has a three stage filtering system. The Pre-Filter (two-ply ring) stage captures the bulk of the dust and debris. The second Pleated Filter stage captures any dust and dirt able to penetrate the Pre-Filter. The final stage is the 99.99% - 0.3 micron HEPA Filter utilized in areas where an extremely high level of filtration is desired.

The **NOVAIR 700** requires a 115V - 3 Amp / 230v-2 Amp single phase power source.

Model	Part No.	Weight	Dimensions	Air Volume	Power Requirements	Filtration
Novair 700 c/w HEPA 110v	F0700	45 lbs	22" x 22" x 21" 55cm x 55cm x 52cm	200-700 cfm	115 Volt 3 amp, 50/60 Hz	HEPA, MERV 8 Box Ring Filter
Novair 700 c/w HEPA 220v	F0705	45 lbs	22" x 22" x 21" 55cm x 55cm x 52cm	200-700 cfm	230 Volt 1.7 amp, 50/60Hz	HEPA, MERV 8 Box Ring Filter

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 panel's Controls to insure proper operation.
C. Filters should be checked hourly/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 the power cord connection for breaks, scorching, melting, oxidation, or signs of wear. If cord shows **ANY** of these signs, it needs to be replaced.

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. **Circuit Breaker Switch**
   The green circuit breaker switch is used to show power is going to Novair and protect the controls of the machine. This adds power to the GFCI outlets to allow daisy chaining of equipment and will trip if maximum amperage is exceeded.

2. **Variable Speed Dial**
   The variable speed dial can be set from 200 -700cfm depending on the desired vacuum flow. The maximum setting is shown to the left as the dial is first turned to the "ON" position.

3. **Auxiliary "GFCI" protected Outlet -115v**
   The auxiliary GFCI outlet can be used to daisy chain "**No More**" the 3 units together. The maximum of 12 Amps when the unit is in the "**OFF**" position and 9 Amps when the unit is in the "**ON**" position. You can attach other pieces of equipment to this but are limited to the maximum amp draw. When the outlet is working properly the green light is lit on circuit breaker.

   Auxiliary Outlet -230v (Not Shown)
   The auxiliary 230voutlet can be used to daisy chain "**No More**" the 3 units together. The maximum of 6 Amps when the unit is in the "**OFF**" position and 4 Amps when the unit is in the "**ON**" position. You can attach other pieces of equipment to this but are limited to the maximum amp draw. When the outlet is working properly the green light is lit on circuit breaker.

   CAUTION: If the GFCI trips "UN-PLUG" the unit from the power source and check for any potential hazards (damaged power cord, moisture, too many units plugged, etc.) causing a power surge. Once unit is evaluated plug the unit into a new power source and push the reset button. If unit operates as normal: continue use, if unit trips again contact Novatek at 866-563-7800.

4. **Filter change indicator**
   The indicator light will alert the operator when filters are loaded or when air flow is greatly decreased. The light will come on once the pressure reaches approximately 3" of water column. Filters should be inspected and replaced. Once filters are replaced the light will go off. If light stays on contact Novatek at 866-563-7800.

5. **Power Cord**

   Firmly insert the female end of the power cord into a grounded power source. Visually inspect the cord for any damage before installation into power source.

   CAUTION: A loose, corroded, ill fitted or damaged cord or plug can cause injury. If cord has any of these issues should be re-placed immediately.

Novair 700 Control Panel

SECTION IV

PRIOR TO USE

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

CAUTION: Insure power cord is securely attached to control panel and in good condition.

OPERATION

A. When utilized in containment, the Novair 700 should be positioned a minimum distance away from the entrance and located towards the center of the containment.
B. When working with contaminants, insure the HEPA filter is correctly installed and sealed.
C. Install the pre-filter and pleated filters into unit.
D. Insert the female end of the power cord, into the grounded 115v outlet.
E. To begin operation, depress the green circuit breaker switch to the on position. The green light will be lit on the breaker if working properly. This must be in the on position to use GFCI outlet.
F. Turn the variable speed dial to operate the fan from 200 -700CFM from high to low.
G. A total of three units can be connected together to create a negative pressure in different parts of the containment area.

SECTION V

REPLACEMENT OF FILTERS

The work atmosphere will impact the frequency of filter replacements. Once the filters load and the pressure reaches approximately 3" the visual alarm will light.

CAUTION: Always wear approved respirators and 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 variable speed and circuit breaker power switches to the off position. Disconnect power supply.
B. Remove inlet panel to expose the pre and pleated filters.
C. Reach in and remove the pre-filter and dispose of pre-filter accordingly.
D. Replace the discarded pre-filter with a new pre-filter**.**
E. Reinsert the inlet panel.
F. Plug in power cord to 115v grounded outlet and turn the circuit breaker to the "ON" position. Turn the variable speed controller to the "High" position. If the visual alarm light is still on the pleated filter should be inspected.

PLEATED FILTER REPLACEMENT

A. Follow steps **A-D** listed above referencing Pre-Filter replacement.
B. Reach in and remove the pleated filter and dispose of pleated filter accordingly.
C. Replace the discarded pleated filter with a new unused pleated filter.
D. Reinstall the pre-filter.
E. Reinsert the inlet panel.
F. Plug in power cord to 115v grounded outlet and turn the circuit breaker to the "ON" position. Turn the variable speed controller to the "High" position. If the visual alarm light is still on the HEPA filter should be inspected.

HEPA FILTER

A. Follow steps **A-D** listed above for pre-filter replacement.
B. Locate and remove the (8) hex flange filter screws on the housing filter frame exposing the HEPA filter.
C. Firmly grasp the HEPA filter and dispose of HEPA filter accordingly.

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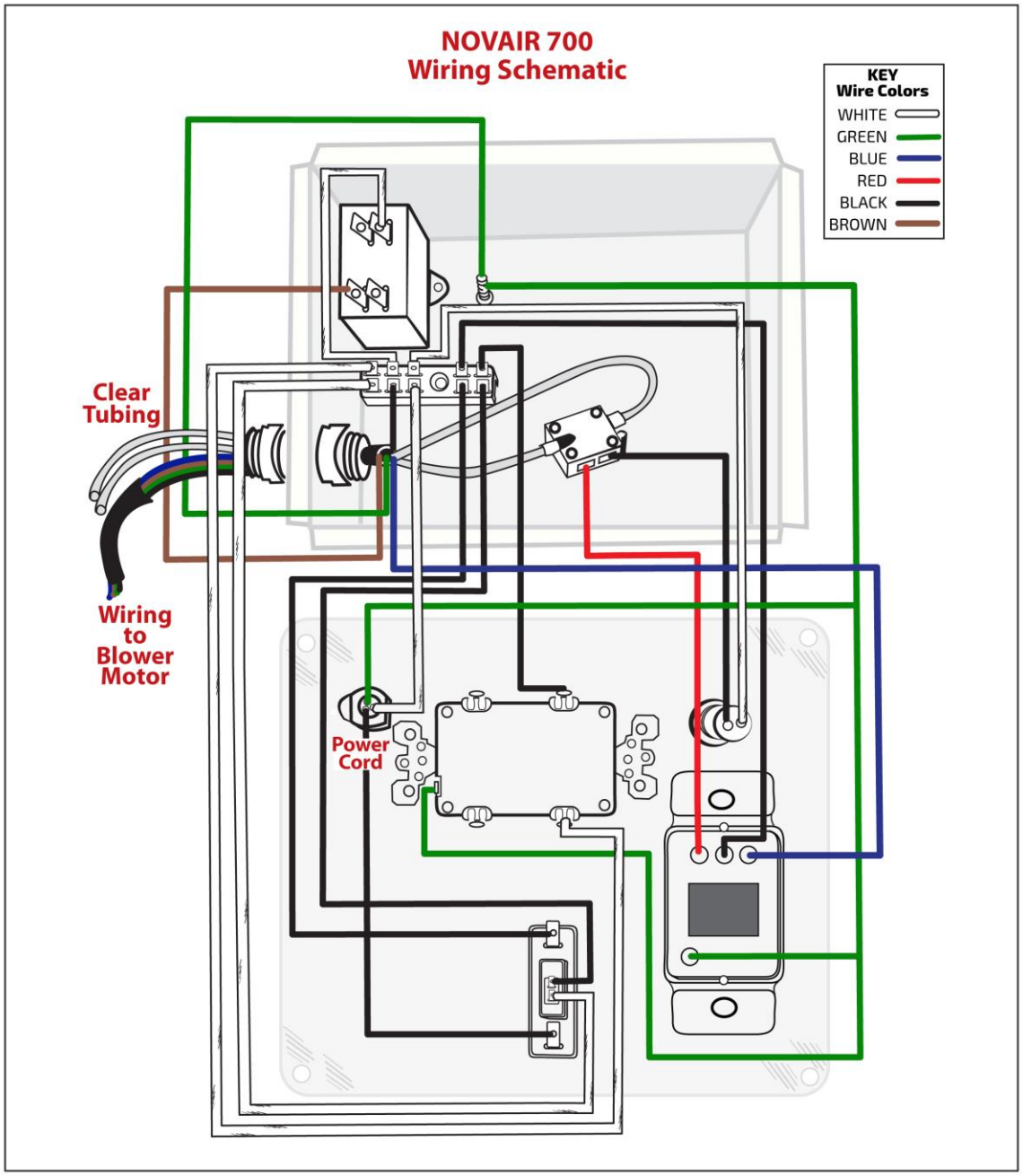
D. Carefully Inspect the new HEPA filters gasket for cracks, gaps or defects. Any defective gaskets must be replaced.
E. The HEPA filter has two sides. One side has a gasket, the other does not. Insert the side with the gasket of the HEPA filter first and press firmly against the housings internal rib.
F. Install the housing filter frame and reinstall the (8) hex flange filter screws. Tighten the screws to properly seal and secure the HEPA filter in place.
G. Reinstall pre -filter and pleated-filter. (Reference Pre-Filter and Pleated Filter Replacement).
H. Insert the housing inlet panel.

SECTION VI

WIRING DIAGRAM -115v



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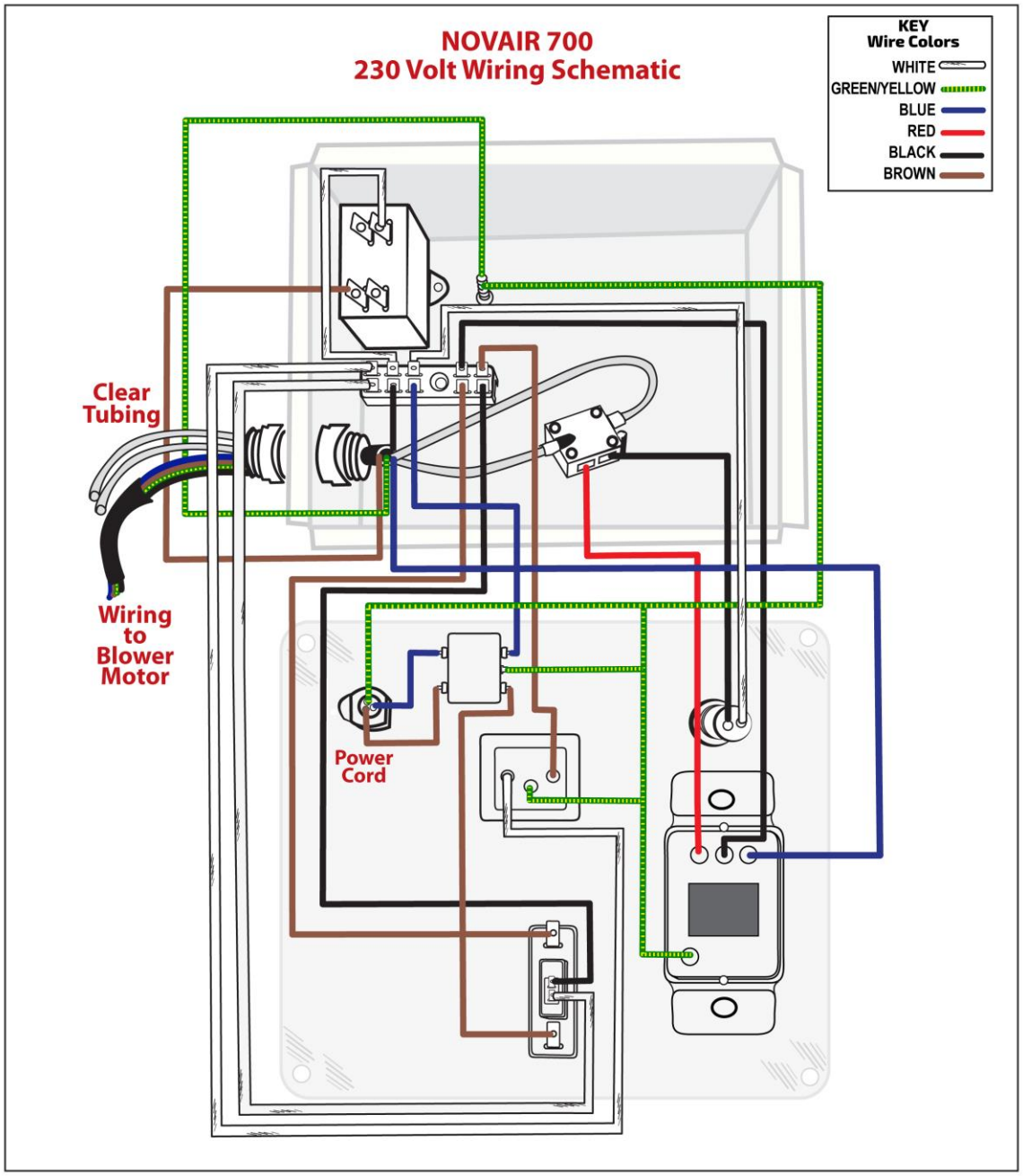
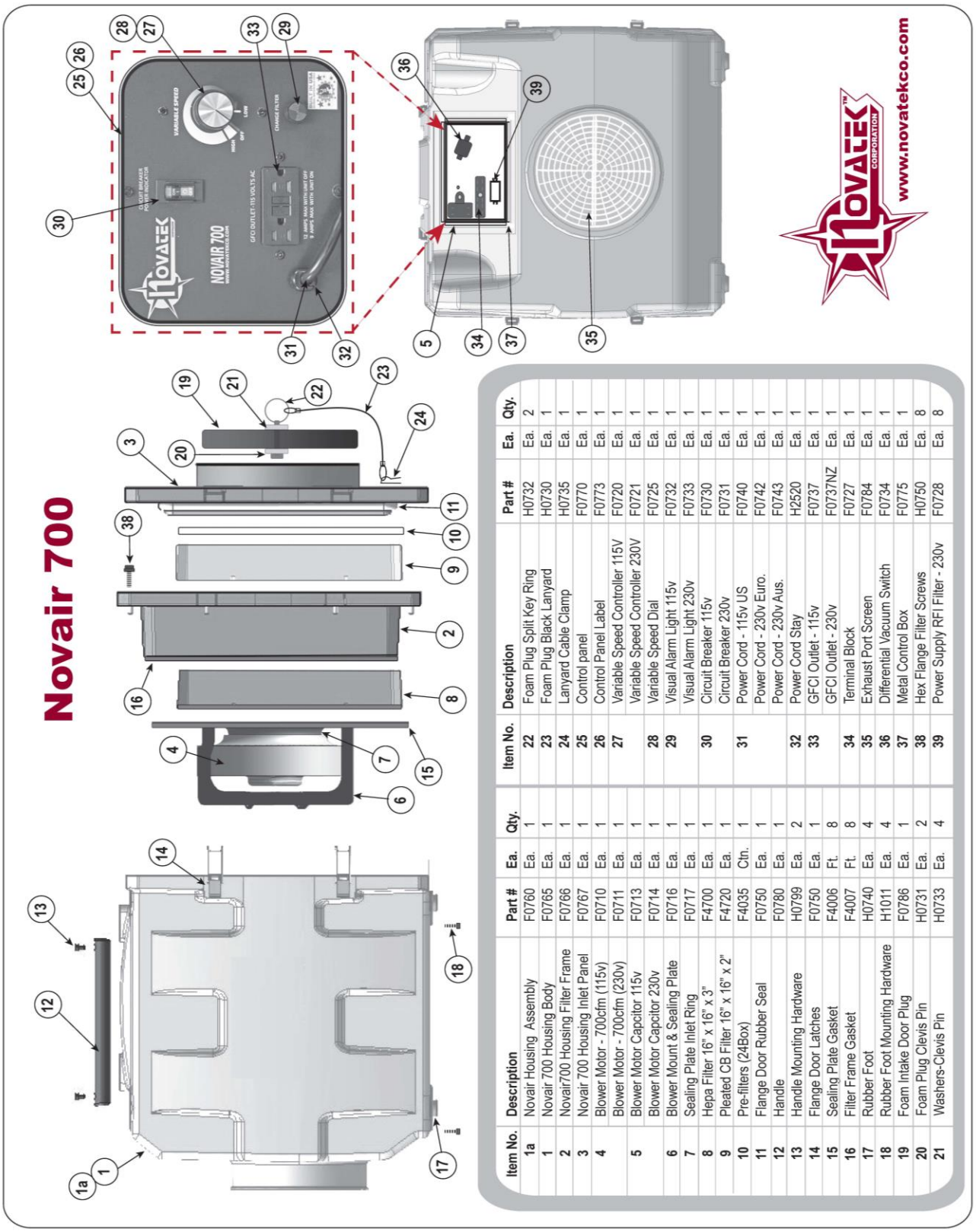
WIRING DIAGRAM -230v



SECTION VII

Schematic



Item No.	Description	Part #	Ea.	Qty.
1a	Novair Housing Assembly	F0760	Ea.	1
1	Novair 700 Housing Body	F0765	Ea.	1
2	Novair700 Housing Filter Frame	F0766	Ea.	1
3	Novair 700 Housing Inlet Panel	F0767	Ea.	1
4	Blower Motor - 700cfm (115v)	F0710	Ea.	1
	Blower Motor - 700cfm (230v)	F0711	Ea.	1
5	Blower Motor Capcitor 115v	F0713	Ea.	1
	Blower Motor Capcitor 230v	F0714	Ea.	1
6	Blower Mount & Sealing Plate	F0716	Ea.	1
7	Sealing Plate Inlet Ring	F0717	Ea.	1
8	Hepa Filter 16" x 16" x 3"	F4700	Ea.	1
9	Pleated CB Filter 16" x 16" x 2"	F4720	Ea.	1
10	Pre-filters (24Box)	F4035	Ctn.	1
11	Flange Door Rubber Seal	F0750	Ea.	1
12	Handle	F0780	Ea.	1
13	Handle Mounting Hardware	H0799	Ea.	2
14	Flange Door Latches	F0750	Ea.	1
15	Sealing Plate Gasket	F4006	Ft.	8
16	Filter Frame Gasket	F4007	Ft.	8
17	Rubber Foot	H0740	Ea.	4
18	Rubber Foot Mounting Hardware	H1011	Ea.	4
19	Foam Intake Door Plug	F0786	Ea.	1
20	Foam Plug Clevis Pin	H0731	Ea.	2
21	Washers-Clevis Pin	H0733	Ea.	4
22	Foam Plug Split Key Ring	H0732	Ea.	2
23	Foam Plug Black Lanyard	H0730	Ea.	1
24	Lanyard Cable Clamp	H0735	Ea.	1
25	Control panel	F0770	Ea.	1
26	Control Panel Label	F0773	Ea.	1
27	Variable Speed Controller 115V	F0720	Ea.	1
	Variable Speed Controller 230V	F0721	Ea.	1
28	Variable Speed Dial	F0725	Ea.	1
29	Visual Alarm Light 115v	F0732	Ea.	1
	Visual Alarm Light 230v	F0733	Ea.	1
30	Circuit Breaker 115v	F0730	Ea.	1
	Circuit Breaker 230v	F0731	Ea.	1
31	Power Cord - 115v US	F0740	Ea.	1
	Power Cord - 230v Euro.	F0742	Ea.	1
	Power Cord - 230v Aus.	F0743	Ea.	1
32	Power Cord Stay	H2520	Ea.	1
33	GFCI Outlet - 115v	F0737	Ea.	1
	GFCI Outlet - 230v	F0737NZ	Ea.	1
34	Terminal Block	F0727	Ea.	1
35	Exhaust Port Screen	F0784	Ea.	1
36	Differential Vacuum Switch	F0734	Ea.	1
37	Metal Control Box	F0775	Ea.	1
38	Hex Flange Filter Screws	H0750	Ea.	8
39	Power Supply RFI Filter - 230v	F0728	Ea.	8

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SECTION VIII

SAFETY

Novatek 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 NOVATEK 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. Basic issues listed below. For any further problems not listed, call your local distributor or Novatek at 866-563-7800.

Problem	Cause	Solution
Unit will not operate	• **No power to unit** • **Variable speed controller not on** • **GFCI green light off (115v)** • **Circuit breaker green light not on** • **Building circuit breaker tripped** • **Defective power cord**	• **Check power at outlet** • **Turn dial switch on** • **Push reset on GFCI outlet** • **Turn on Breaker switch** • **Reset panel breaker** • **Check power cord connections**
Fan Wheel not turning	• **Obstruction block fan** • **Variable speed controller not on** • **No power to Unit**	• **Remove Obstruction** • **Turn dial switch on** • **Check power at outlet**
Circuit breaker on unit or building panel trips	• **Overloaded circuit on control panel** • **Overloaded circuit at panel box**	• **Unplug any equipment from GFCI** • **Unplug any additional equipment from outlet**
Filter change light illuminated	• **Filters are full/loaded** • **Inlet panel restricted**	• **Change filters; refer to section V in manual** • **Check ducting; eliminate bends**

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NOVATEK CORPORATION LIMITED WARRANTY

ELECTRICAL COMPONENTS utilized in the **NOVAIR** product line are warranted to be free from defects in material and workmanship for a period of **180 DAYS** from date of purchase from **Novatek**. The remaining materials in the **NOVAIR** are warranted to be free from defects in material and workmanship for a period of **1 YEAR from the date of purchase from Novatek**. This warranty does not extend to accessories.

This warranty applies only to **UNITS** purchased from the **NOVATEK CORPORATION or authorized retailers**. This warranty does not apply to any **UNIT** which has been abused, misused, modified or repaired by someone other than the **NOVATEK CORPORATION** or its authorized repair center.

If a **UNIT** proves defective in materials or workmanship within one year of purchase, it should be returned to **NOVATEK CORPORATION** via pre-paid transportation. The return must be accompanied by a **RETURN MERCHANDISE AUTHORIZATION NUMBER (R.M.A. #)** obtained from **NOVATEK CORPORATION**. The Return authorization number must be clearly marked on the outside of the package being returned. Any returned merchandise that does not have a return merchandise authorization number clearly marked on the outside of the package will be refused and returned to sender.

Warranty claims will only be considered upon proof of purchase date. **NOVATEK CORPORATION** will, at its discretion, **REPAIR or REPLACE DEFECTIVE PARTS**. Repairs or replacements parts are warranted as above for the remainder of the original warranty period. The sole liability of **NOVATEK CORPORATION** and the user's exclusive remedy under this warranty is limited to the repair or replacement of the defective product.

THERE ARE NO OTHER WARRANTIES EXPRESSED OR IMPLIED AND **NOVATEK CORPORATION** SHALL NOT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OR ANY OTHER EXPENSES OR REPAIR OR REPLACEMENT AS DESCRIBED ABOVE.

All warranty claims should be forwarded to:

NOVATEK CORPORATION
254 Welsh Pool Rd
Exton, PA 19341

ATTENTION: CLAIM AND SERVICE DEPARTMENT
R.M.A. # _____

CALL Toll Free at 1-866-563-7800 for your RMA number PRIOR TO SHIPPING.

Also include a brief description of the problem as well as a phone number, contact name and return address in case **NOVATEK CORPORATION** service personnel has to get in contact with you.