

AVANI Large Cartridge Collector



| | |
|---------------------------|------------|
| Customer: | |
| Customer PO#: | |
| AVANI SO#: | Tested By: |
| Serial #: | |
| Ship Date / Install Date: | |

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

avani
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SMT-20110721



AVANI Large Cartridge Collector

General Safety Information

MACHINE WARNING SIGNS



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



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



Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

Used without the safety alert symbol (▲) indicates potentially hazardous situation which, if not avoided, may result in property damage.



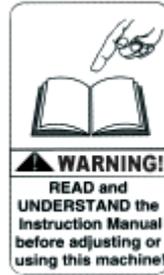
Warning of electric shock



Do not expose the equipment to rain or use in damp locations.



Do not use the equipment around flammable products, if not avoided, sparks can ignite vapors from flammable products. Read and understand all warnings and operating instructions before using this equipment. Failure to follow all instructions may result in electric shock, fire, and/or serious personal injury or property damage.



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Specifications

| | |
|---|------------------------------------|
| Motor | 25 HP x 2pcs |
| | 480V / 60Hz / 3Ph |
| Air Volume (C.F.M.) | 20000 Ft ³ /Min @ 8" SP |
| Inlet Size | 2000 x 330 mm (78.8" x 13") |
| UL Individual Control Boxes for Cartridge Collector and Blowers | |

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Cartridge Filter: Ø325mm x 1320mm x 40pcs (Ø12.8" x 52" x 40pcs)

Material: Polyester with TEFLON coating.

Filter Area: 19m² x 40 = 760m² (8177.6 ft²)

Pleat Depth: 48mm

Horizontal Positioned Filters,
Continuous Welded Seams,
Gasket and Latched Doors,
Powder Coated Paint and
Reverse Jet Pulse Cleaning

Include:

- Drum & Jack Lifting Tool
- Filter Chamber
- Hopper
- Inlet Square Pipe (need dimensions)
- Double fan/motor combinations

No. of Valves: 10

Compressed Air Requirement: 90 PSI

Compressed Air Reservoir: 39.5 gallon

Inlet Air: 3/4"

Construction: 13 Gauge for panel; 11 Gauge Steel Cabinet

Max. Operating Temp.: 120°C

Custom Paint Color: Dark Bronze – incl. exterior ductwork (customer to supply a metal paint sample to match).

Dimension (L x W x H) ... 206.6" x 68.5" x 219.6" (5244 x 1738.5 x 5573.08mm)

*****pulse control box run off of 120V, 1-phase, no transformer inside pulse box.**

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General Safety Information

(Continued)

⚠ WARNING

Use this product carefully to

effectively avoid any possible danger. Observe the following safety regulations to avoid bodily injury due to electrocution during use.

Read this Manual carefully before operating the product and preserve the Operation Manual properly.

1. Keep work area clean and organized.
 - A disorderly working environment will cause inconvenience and danger during operation.
2. Check if the working environment is suitable for using the product.
 - Do not use the product in a humid environment.
 - Use the product in a good working environment to reduce risks.
 - Do not use the product in a flammable gas or liquid environment to avoid danger.
3. Keep other persons away from the

product, except for the operator, to avoid danger.

- Do not let children get close to the product. All wires used by the product shall be in a safe location to prevent children from touching them.
4. All tools shall be safely stored.
 - When the tools are not used, please store them in a dry place safely beyond the reach and access of children.
 5. If the machine breaks down, contact a service technician. Do not attempt to repair and possibly damage the machine.
 6. When using the product, be sure to put on a suit and mask.
 7. Use the electrical wires correctly.
 - During use, do not drag the electrical wires forcefully. Do not use these wires if fraying or current leakage occurs to avoid injury to the operator.
 8. Before replacing parts, shut off power to the machine.
 - Check that the switch is in "on" or "off" position. Do not attempt the replacement when the machine is

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running. To replace parts or filter material, make certain that the switch is "off".

9. Use the power cord correctly. The total length of power cord shall not exceed 10 feet to avoid low power due to a drop in voltage and to prevent a possible hazard.

▲ WARNING

When connecting the product, always follow the instructions in the Operation Manual to avoid injuries.

10. Care and Maintenance:

- Confirm that the parts/accessories have been fully assembled and will not adversely affect the machine operation.
- Check if the machine is operated properly.
- Replace damaged parts or accessories according to the instructions of the Manual. If the said instructions are not specified in the Manual, have a professional technician carry out the maintenance or replacement.
- Check that the electrical specifications of this machine meet safety requirements, and that the maintenance is carried out by a

professional technician. Use original manufacturer's parts and accessories to avoid injury.

- If a problem occurs, contact your dealer immediately.

ADDITIONAL CARTRIDGE COLLECTOR SAFETY RULES

The Cartridge Collector can be dangerous if it is operated incorrectly. Therefore, the product must be used cautiously to avoid causing a hazard or damage. Unnecessary injuries may occur by failing to follow the instructions of the Safety Rules Manual. Be sure to put on protection equipment or suit that can protect your body, such as helmet and eye mask to avoid injuries from occurring. If any doubts or any unfitness occurs during use, be sure to stop the operation immediately. Keep in mind that the user shall be liable for using according to the specified safety rules and for operating the machine correctly.

1. Read this Manual carefully before operating the product.
2. Be sure to follow local electrical and safety regulations and observe the electrical safety standards practiced in the relevant area. All electrical wire

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connections and installation shall be carried out by a professional technician.

3. Do not operate the product near flammable materials, as sparks may ignite these materials and cause an explosion. Please confirm there aren't any flammables near the working site to avoid hazard.
4. This product is suitable for collecting smoke and oil gas. Do not use it in collecting iron chips and dust at the same time to avoid producing sparks.
5. Before replacement of parts or filter materials, be certain that the switch is disconnected.
6. Do not kink the power cord and keep it away from oil, chemicals or flammables.
7. Check that the voltage, phase count and grounding wire match the machine requirements.
8. When the fan blades are operated at high speed, do not reach hand near these blades to prevent finger from breaking or clothes/necktie from getting caught. Do not put the hand or foreign matter into the air inlet to avoid getting caught in the high-speed rotation of fan blades.

9. When not in use, all air inlets of Cartridge Collector shall be covered.

Assembly

Do not connect the Cartridge Collector

▲WARNING ***before the assembly is finished and you have read and understood all of the precautions stated in the Manual.***

NOTE: For correct assembly, refer to the Assembly Procedure on pages 11-18.

Installation

MOVING AND TRANSPORTATION

The weight of this machine is about 14175 lbs. It CANNOT be handled and transported without the help of lifting tools. For your safety, read all instructions carefully.

Do not move without the help of others

▲WARNING ***to avoid causing danger.***

ELECTRICAL INSTALLATION

POWER CONNECTION

1. Confirm that the power is properly connected under normal power supply condition. It is recommended to provide manual shutdown device before connecting power.

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- It is recommended to protect the control equipment with suitable grade of fuse, and the length of fuse and power cord shall not be over 10 feet.

SHUTDOWN

- Disconnect power by manual method.
- When stopping operation, check if the switch is under off status.

EARTHING WIRE

Connect yellow/green wires to the earthing wire power jack. Confirm that the earthing wire has been properly connected before connecting main power cord to the machine at all times.

⚠ WARNING

Do not disconnect the wiring jack

before cutting off power!

POWER INSTALLATION AND STORAGE

The electrical power is configured as following. If conditions are beyond the scope stated below, then it is required to ensure that the power is well arranged and safe.

- Ambient temperature: Between 41°F and 131°F. If the time is over 24 hours, then the ambient average temperature shall not be over 122°F.
- Humidity: Between 30% and 95%
- Altitude: 3,280 feet

- Moving and Storing: -13°F to 131°F. For short-time storage (less than 24 hours), the storage temperature can be up to 158°F.

Operation

PRIOR TO START UP

Purpose: The Cartridge Collector is specially suitable for treating the smoke generated during ordinary processing work, which can effectively collect and screen the smoke resulting from the work in maintaining the air quality of the working environment.

- Before starting the machine, be sure to read this Manual carefully.
- Before starting the machine, check if relevant safety protection measures have been taken according to the Manual.
- Before starting the machine, watch the motor turning direction according to the instruction of arrow direction.

START UP

- To ensure satisfactory performance for the Cartridge Collector, please confirm the air volume, power and the matching table of the Cartridge Collector.
- Connect power according to electrical

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installation procedure after installing the Cartridge Collector and the blower.

Disconnect power according to electrical installation procedure when the machine is not used.

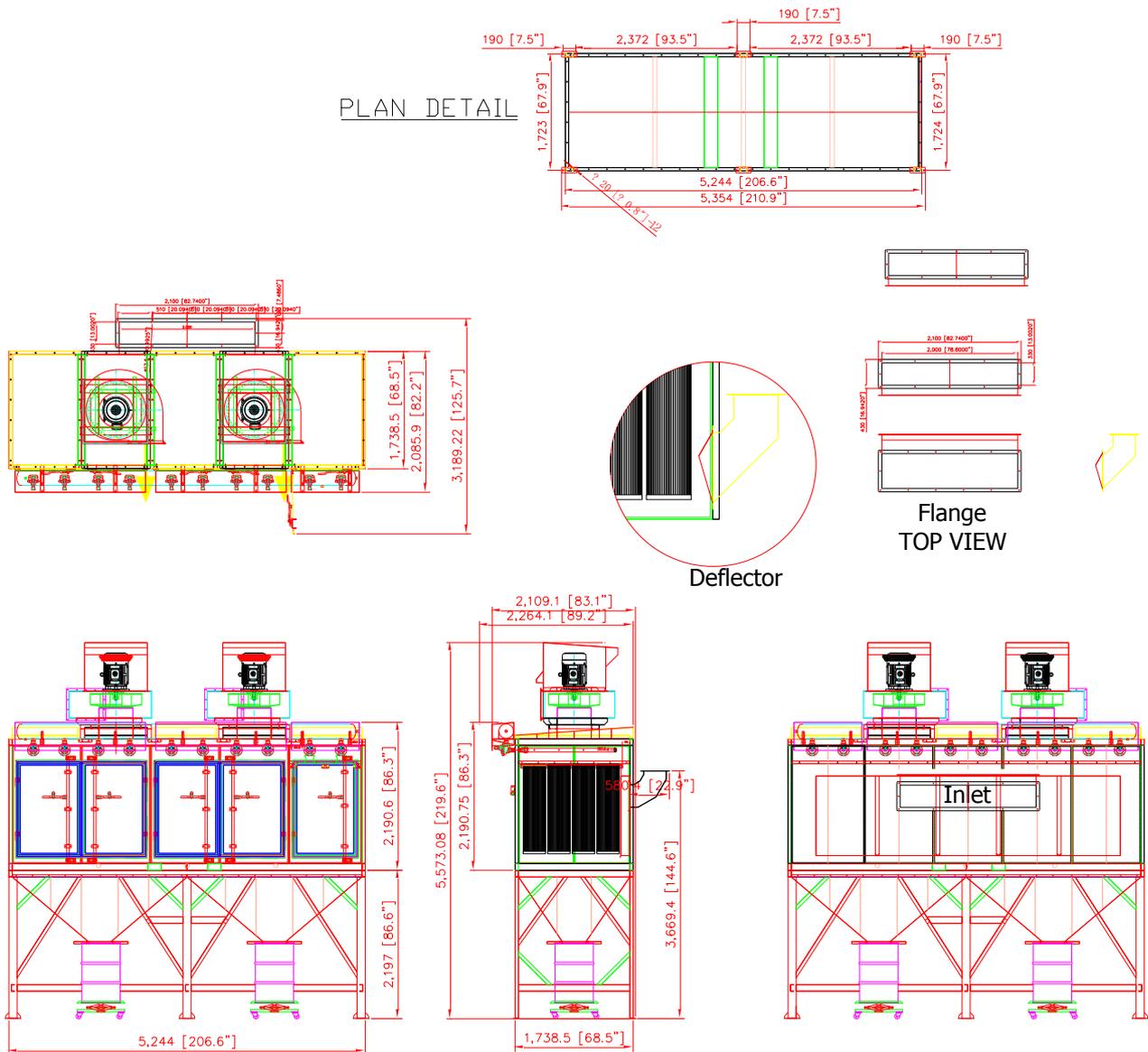
3. The Cartridge Collector shall be turned on and off by pushing I/O button. Under normal operation status, use such I/O button.

Unpacking

The machine should be unpacked carefully. Check if the machine and components are consistent with those indicated in the Parts List. If any doubt arises or when the components are incomplete, contact your dealer.

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Dimensions (in mm/inches)

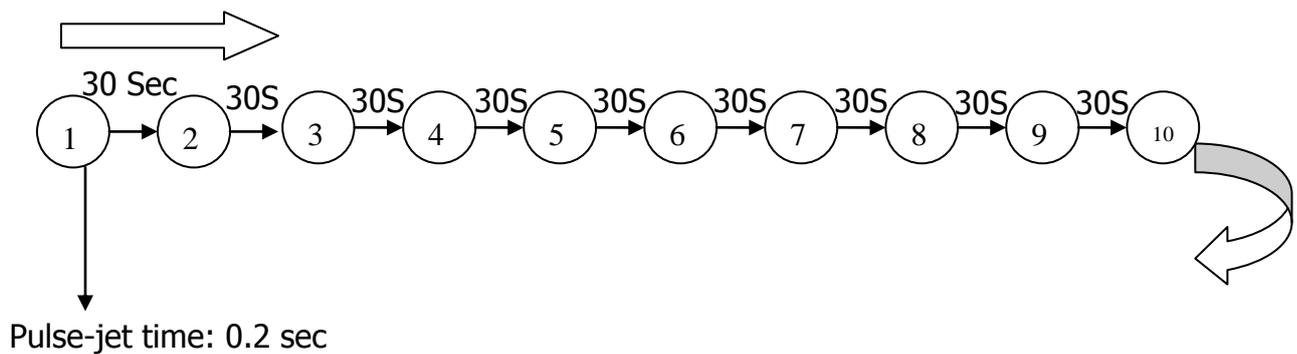


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Control Panel

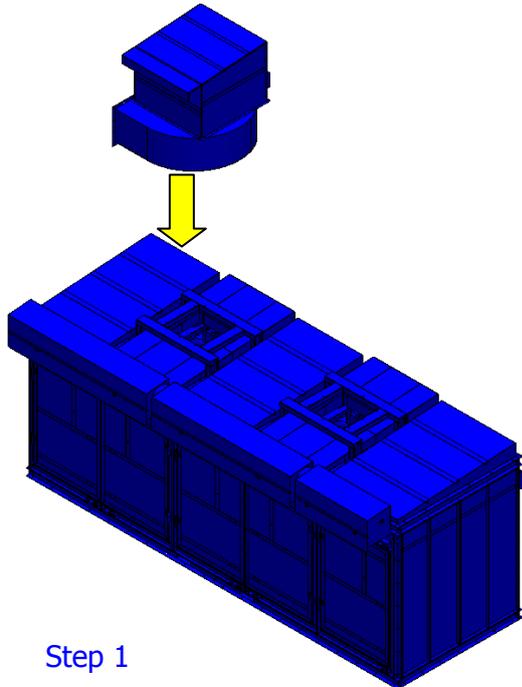
Time Setting for Valve (Pulse-Jet):

1. No. of Valves: 10 (circulation)
2. Pulse-jet Time for each Valve: 0.2 sec
3. Valve Interval: 30 seconds (pulse-jets first cycle when turning on the power and circulate in every thirty seconds).
4. Turn off ONLY the motor power and leave the main power on for approximately 1 hour until ALL cartridges are pulse-jet cleaned. This ensures the cartridge cleaning efficiency when you turn on the power next time.

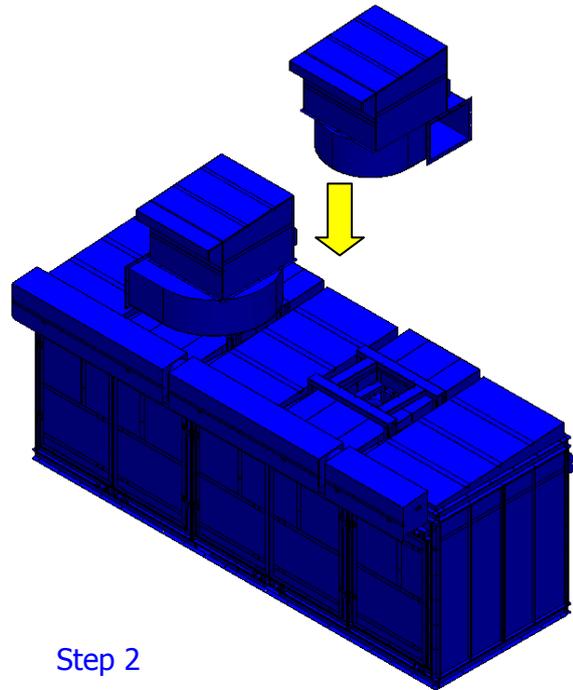


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Assembly Procedure



Step 1



Step 2

Step 1 & 2

Assemble the Blowers using:

| Parts Name | Specification | Q'ty |
|-------------|---------------|------|
| Hex Screw | 1/2"*3/4" | 24 |
| Flat Washer | 1/2"*OD34*3T | 24 |
| Lock Washer | 1/2" | 24 |

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Step 3

Step 3

Assemble the Collector Stand Supports using:

| Parts Name | Specification | Q'ty |
|-------------|---------------|------|
| Hex Screw | 1/2"*3/4" | 12 |
| Flat Washer | 1/2"*OD34*3T | 24 |
| Hex Nut | 1/2" | 12 |

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Step 4

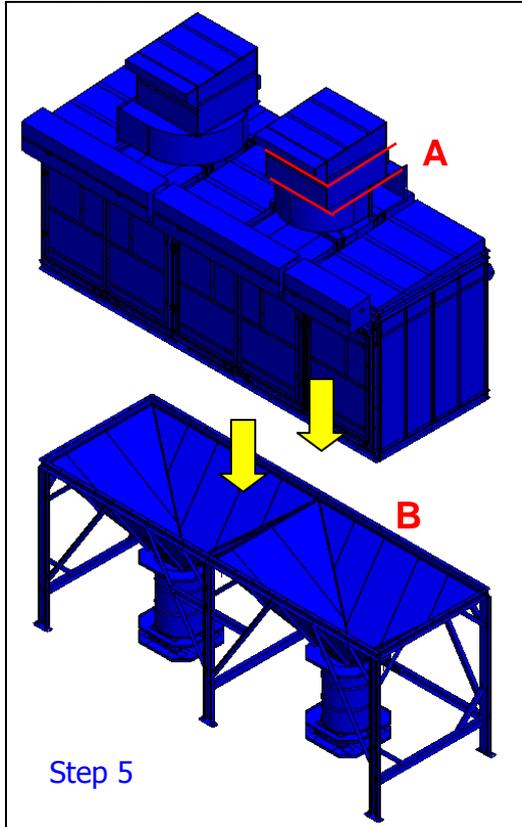
Step 4

Assemble the Lower Hopper to Upper Hopper using:

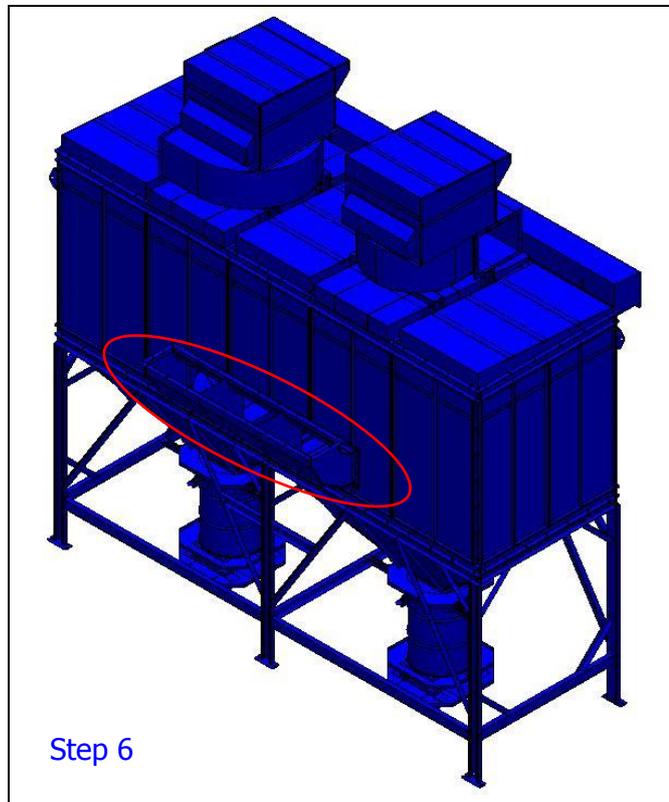
| Parts Name | Specification | Q'ty |
|-------------|---------------|------|
| Hex Screw | 3/8"*1" | 58 |
| Flat Washer | 3/8"*OD28*2T | 116 |
| Hex Nut | 3/8" | 58 |

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Front View



Back View



Step 5

Assemble **A** - Blower & Blower Cover using:

| Parts Name | Specification | Q'ty |
|-------------|---------------|------|
| Hex Screw | 5/16"*3/4" | 18 |
| Flat Washer | 5/16"*OD23*2T | 18 |

Assemble **B** – Upper Section & Lower Section using:

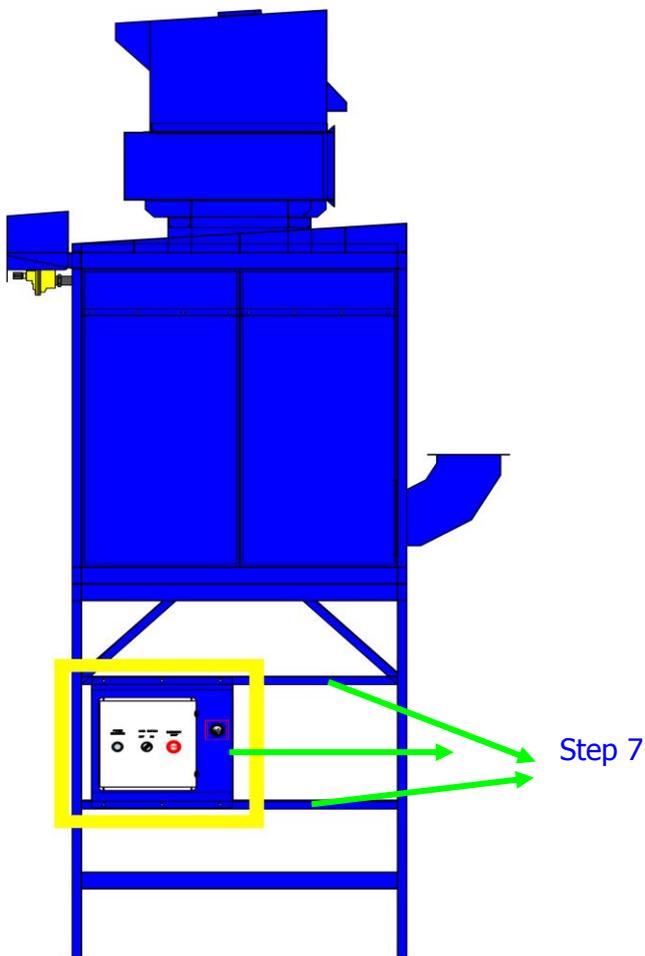
| Parts Name | Specification | Q'ty |
|-------------|---------------|------|
| Hex Screw | 3/8"*3/4" | 80 |
| Flat Washer | 3/8"*OD28*2T | 160 |
| Lock Washer | 3/8" | 80 |
| Hex Nut | 3/8" | 80 |

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STEP 6

Assemble the Inlet using:

| Parts Name | Specification | Q'ty |
|-------------|---------------|------|
| Flat Washer | 3/8"*OD28*2T | 26 |
| Lock Washer | 3/8" | 26 |
| Hex Nut | 3/8" | 26 |

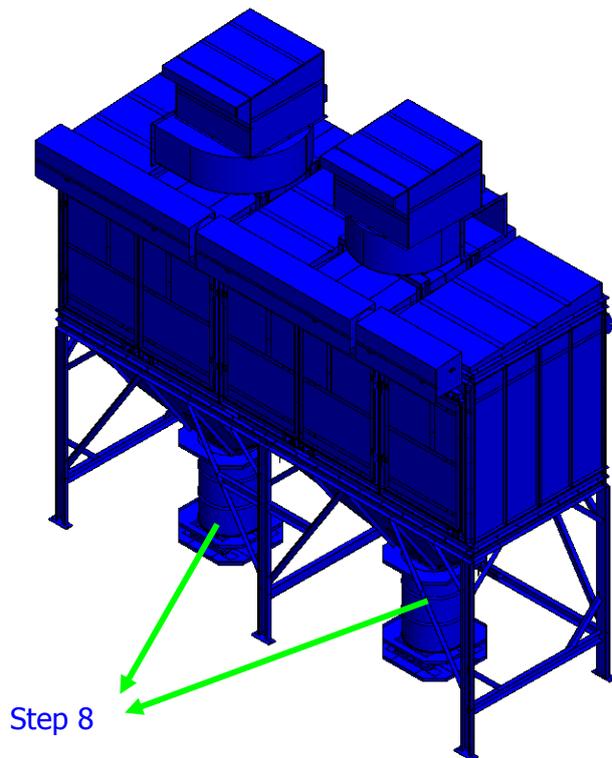


Step 7

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Assemble the Cartridge Collector Pulse Control Box Base, Supports and Cover using:

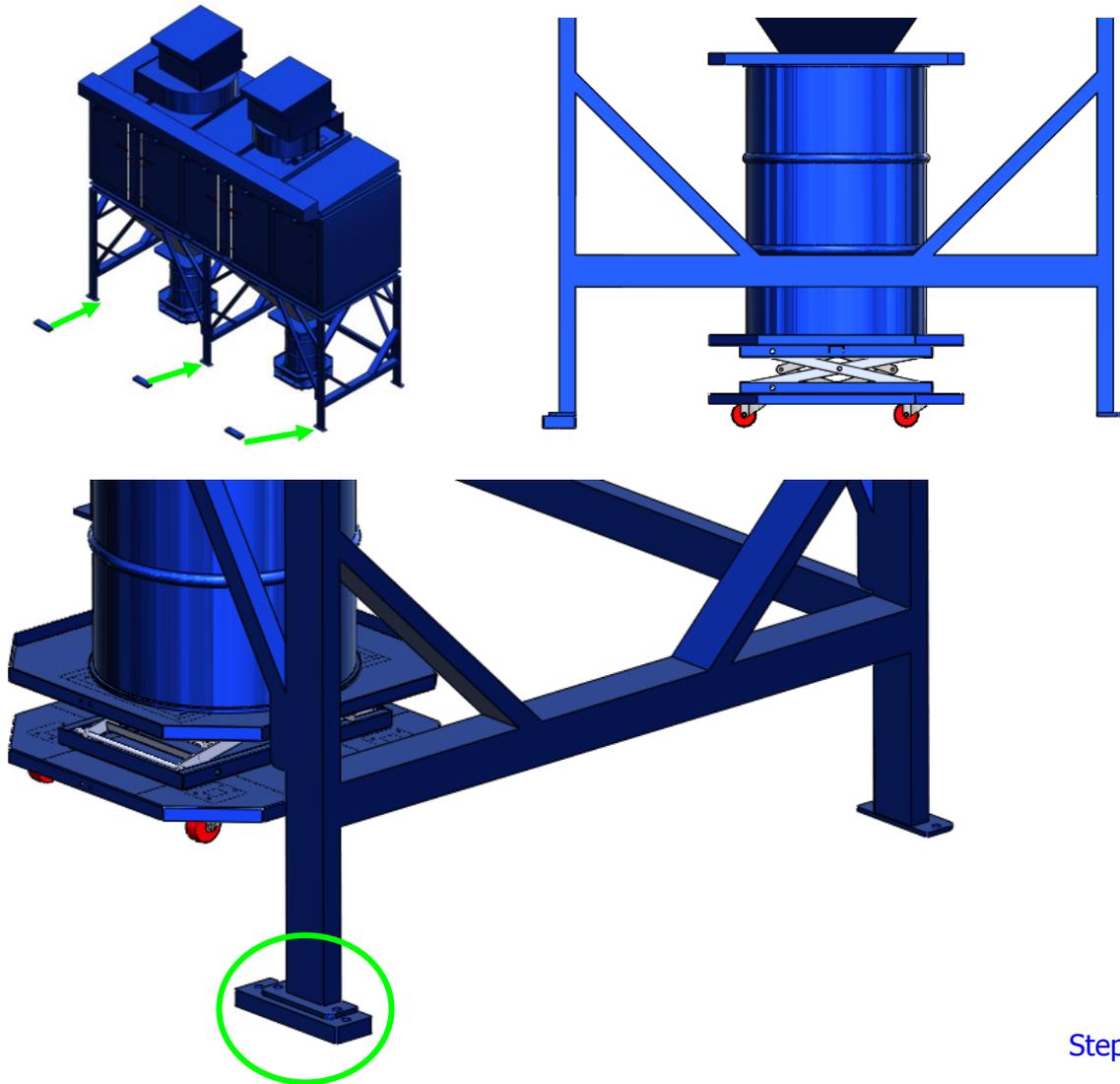
| Parts Name | Specification | Q'ty |
|-------------|---------------|------|
| Hex Screw | 3/8"*3/4" | 6 |
| Flat Washer | 3/8"*OD28*2T | 12 |
| Hex Nut | 3/8" | 6 |



Step 8

Secure the drums below the hoppers.

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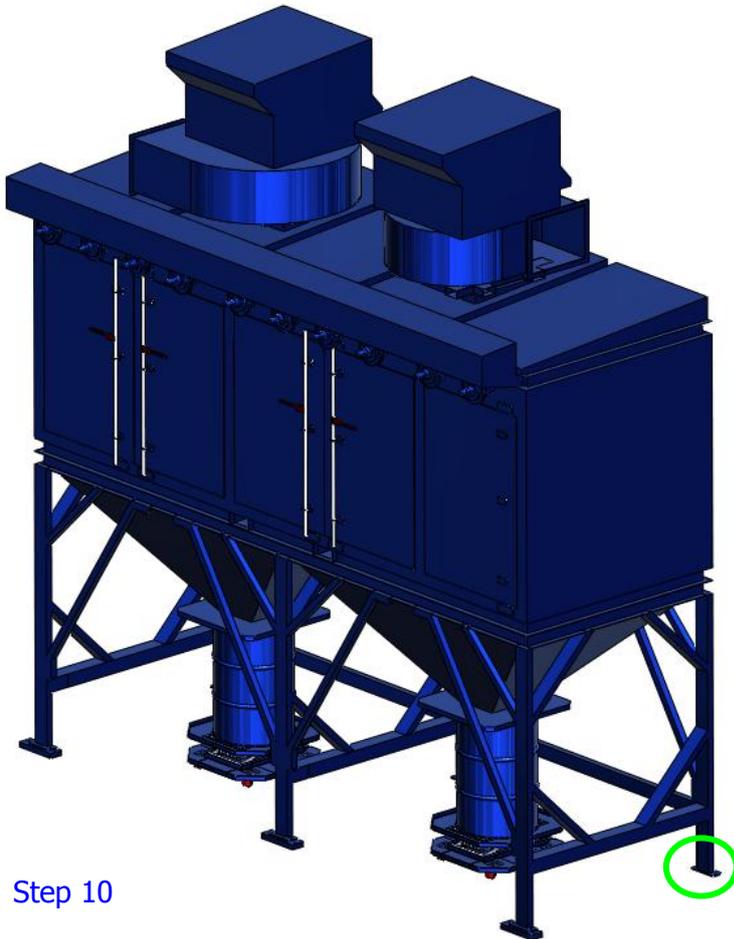
Step 9

Step 9

Place the pad under each front foot as green arrowed. Fasten the sleeve anchors for front legs (1.43" longer than back legs) to field bolted.

| Parts Name | Specification | Q'ty |
|----------------|---------------|------|
| Sleeve Anchors | 3/4" *6" | 12 |

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Step 10

Step 10

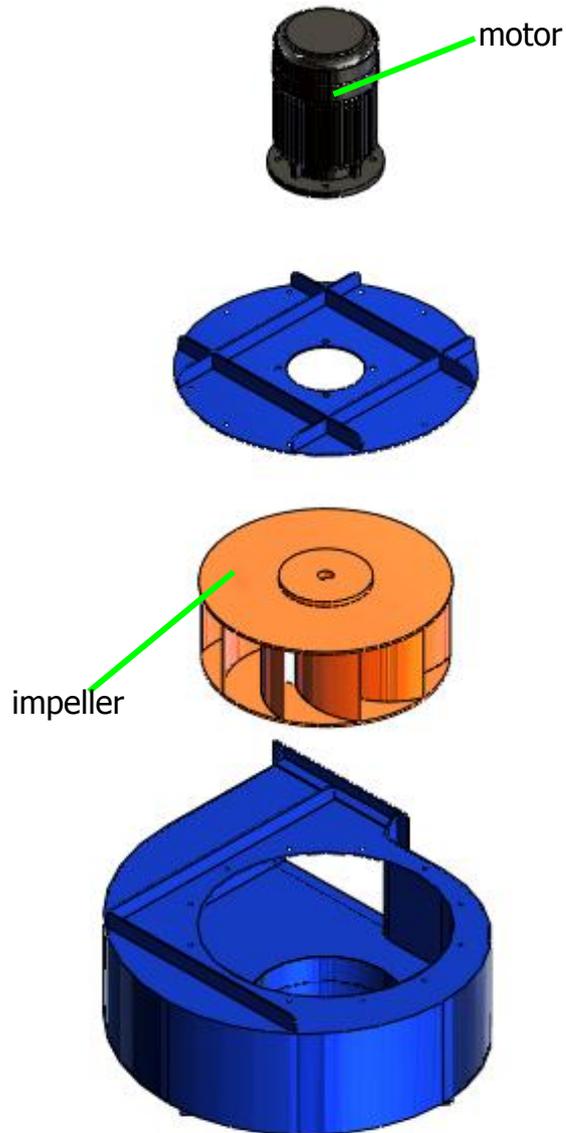
Fasten sleeve anchors for back legs to field bolted if needed.

| Parts Name | Specification | Q'ty |
|----------------|---------------|------|
| Sleeve Anchors | 3/4" *4" | 6 |

Assembly completed.

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Assembly Procedure for Fan/Motor Assembly



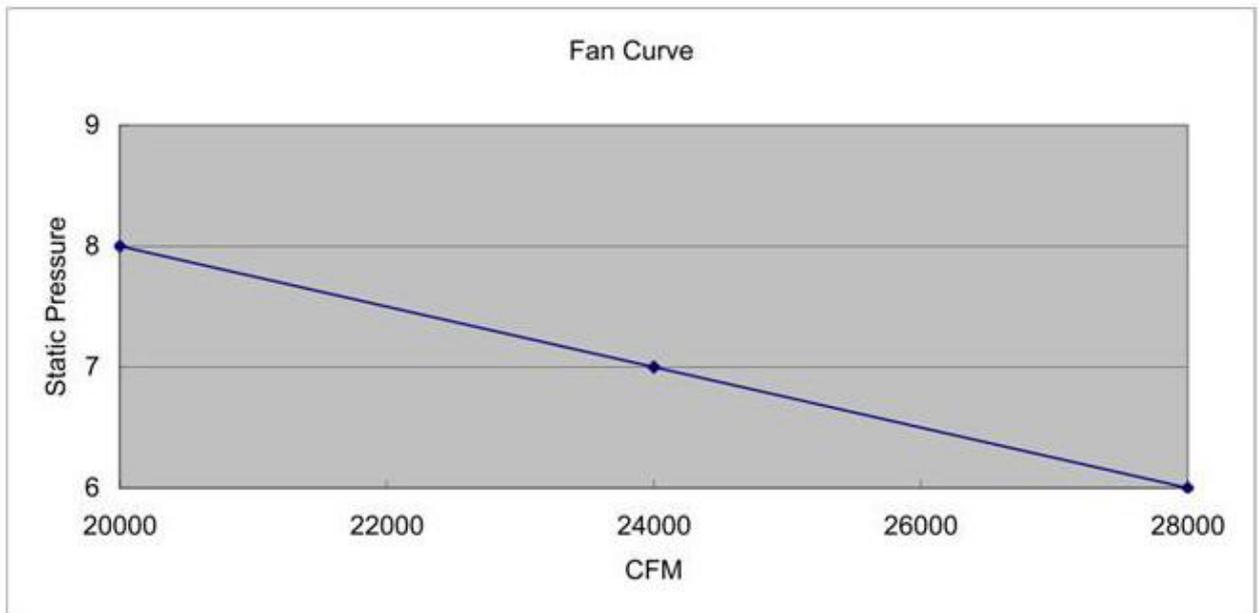
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Blower Curves

SDC-25x2-40 DUST COLLECTOR

| Model | Max static pressure (inch/H2O) | Max CFM | Hp | Volts | Hz | Impeller | Inlet |
|----------------------------|--------------------------------|---------|--------------|-------|----|----------|-------|
| SDC-25x2-40 DUST COLLECTOR | 8" | 20000 | 25HP x 2 pcs | 480V | 60 | | |

| SDC-25x2-40 | Static pressure (Inch/H2O) | 8 | 7 | 6 | 5 |
|-------------|----------------------------|-------|-------|-------|---|
| | CFM | 20000 | 24000 | 28000 | |



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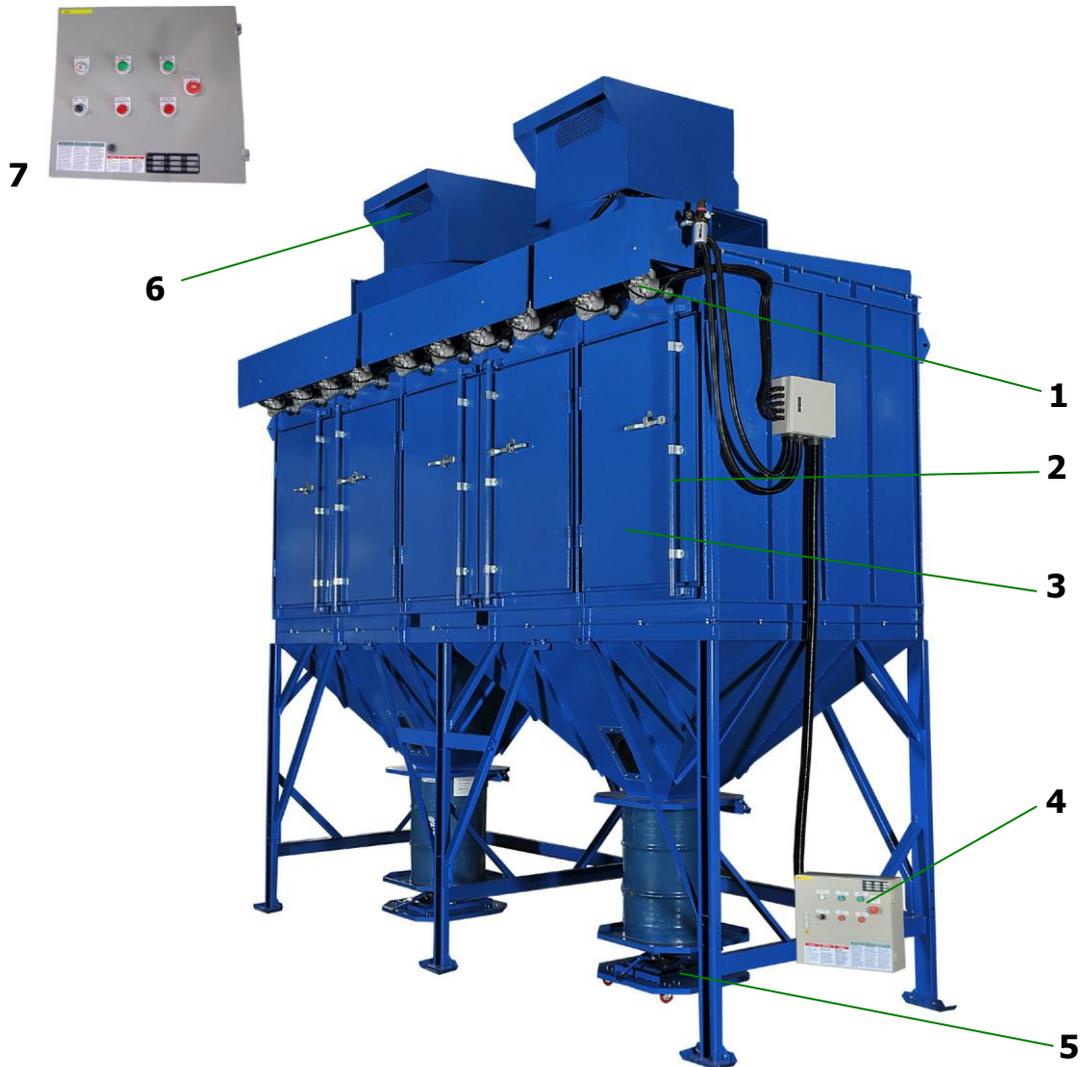
Repair Parts Illustration

For Repair Parts, call +1-919-570-2862

24 hours a day – 365 days a year

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list



AVANI Large Cartridge Collector

Repair Parts List

Repair Parts List for Dust Collector

| Reference Number | Description | Part Number | Quantity |
|------------------|--|------------------------|----------|
| 1 | Solenoid Valve | OE01-01-SV-25x2-40-1 | 10 |
| 2 | Door Locker | OE01-01-SV-25x2-40-2 | 5 |
| 2-1 | Door Locker Kit | OE01-01-SV-25x2-40-2-1 | 2 |
| 2-2 | Door Locker Kit | OE01-01-SV-25x2-40-2-2 | 1 |
| 2-3 | Door Locker Kit | OE01-01-SV-25x2-40-2-3 | 2 |
| 2-4 | Door Locker Kit | OE01-01-SV-25x2-40-2-4 | 2 |
| 2-5 | Door Locker Kit | OE01-01-SV-25x2-40-2-5 | 1 |
| 2-6 | Door Locker Kit | OE01-01-SV-25x2-40-2-6 | 1 |
| 2-7 | Door Locker Kit | OE01-01-SV-25x2-40-2-7 | 1 |
| 3 | Cartridge Filter | OE01-01-SV-25x2-40-3 | 40 |
| 3-1 | Filter Handle (left) | OE01-01-SV-25x2-40-3-1 | 1 |
| 3-2 | Filter Handle (right) | OE01-01-SV-25x2-40-3-2 | 1 |
| 4 | Control Box for Air Pulse Solenoid Valves of the Large Cartridge Collector | OE01-01-SV-25x2-40-4 | 1 |
| 5 | Trolley | OE01-01-SV-25x2-40-5 | 2 |
| 5-1 | Trolley Kit | OE01-01-SV-25x2-40-5-1 | 1 |
| 5-2 | Trolley Kit | OE01-01-SV-25x2-40-5-2 | 1 |
| 5-3 | Trolley Kit | OE01-01-SV-25x2-40-5-3 | 1 |
| 5-4 | Trolley Kit | OE01-01-SV-25x2-40-5-4 | 1 |
| 5-5 | Trolley Kit | OE01-01-SV-25x2-40-5-5 | 1 |
| 5-6 | Trolley Kit | OE01-01-SV-25x2-40-5-6 | 1 |
| 5-7 | Trolley Kit | OE01-01-SV-25x2-40-5-7 | 1 |
| 5-8 | Trolley Kit | OE01-01-SV-25x2-40-5-8 | 1 |

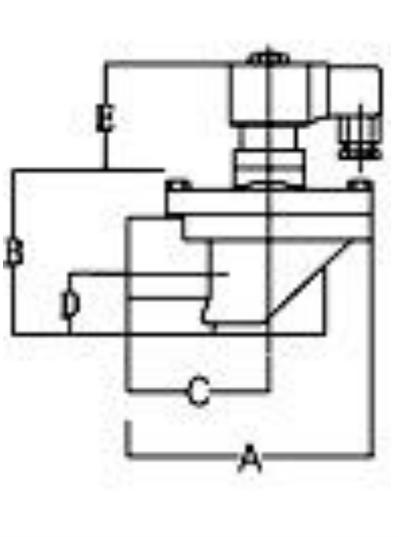
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| Reference Number | Description | Part Number | Quantity |
|------------------|----------------------------------|-------------------------|----------|
| 5-9 | Trolley Kit | OE01-01-SV-25x2-40-5-9 | 1 |
| 5-10 | Trolley Kit - Caster | OE01-01-SV-25x2-40-5-10 | 4 |
| 6 | Blower and Motor | OE01-01-SV-25x2-40-6 | 2 |
| 7 | Control Box for Blower and Motor | OE01-01-SV-25x2-40-7 | 1 |

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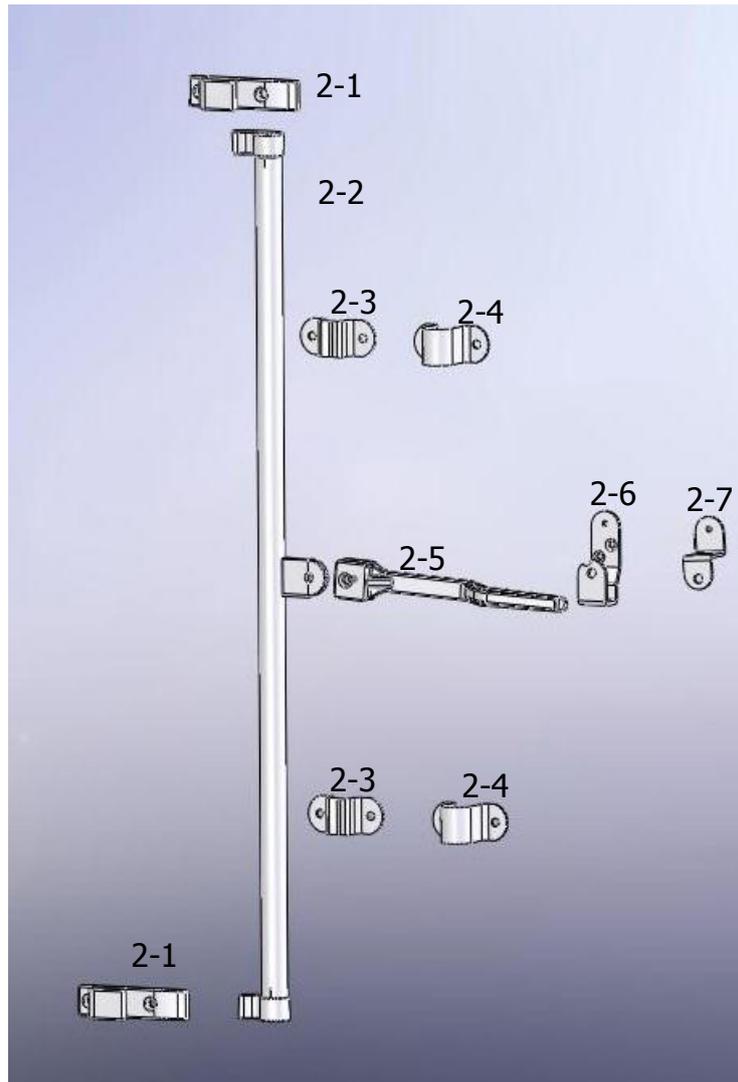
Technical Data for Repair Parts

| Reference Number | Description | Part Number | Quantity |
|------------------|----------------|----------------------|----------|
| 1 | Solenoid Valve | OE01-01-SV-25x2-40-1 | 10 |

| | | | |
|--|---|---|--|
|  | |  | |
| Model | | LPDA50C | |
| INCHES | | 2" | |
| ORIFICE | A | 186 | |
| | B | 145 | |
| | C | 103 | |
| | D | 46 | |
| | E | 73 | |

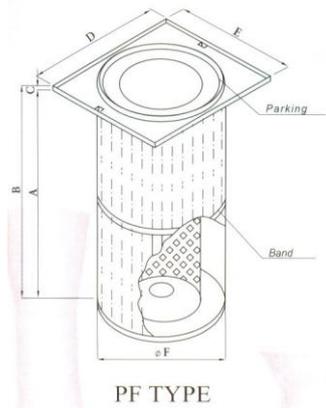
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| Reference Number | Description | Part Number | Quantity |
|------------------|-------------|----------------------|----------|
| 2 | Door Locker | OE01-01-SV-25x2-40-2 | 5 |



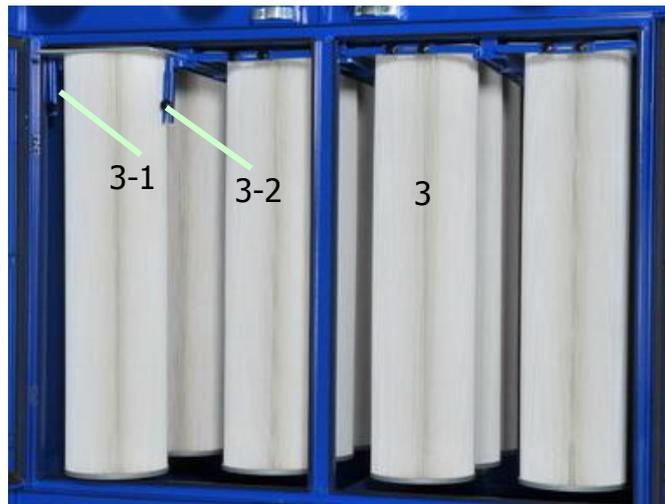
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| Reference Number | Description | Part Number | Quantity |
|------------------|------------------|----------------------|----------|
| 3 | Cartridge Filter | OE01-01-SV-25x2-40-3 | 40 |



PF TYPE (Measurement m/m)

| Diameter | Fold Depth | A | B | C | D | E | F | Weight kg | Filtering Area M ² |
|----------|------------|------|------|----|-----|-----|-----|-----------|-------------------------------|
| 325 | 48 | 1307 | 1320 | 13 | 406 | 357 | 324 | 17 | 19 |

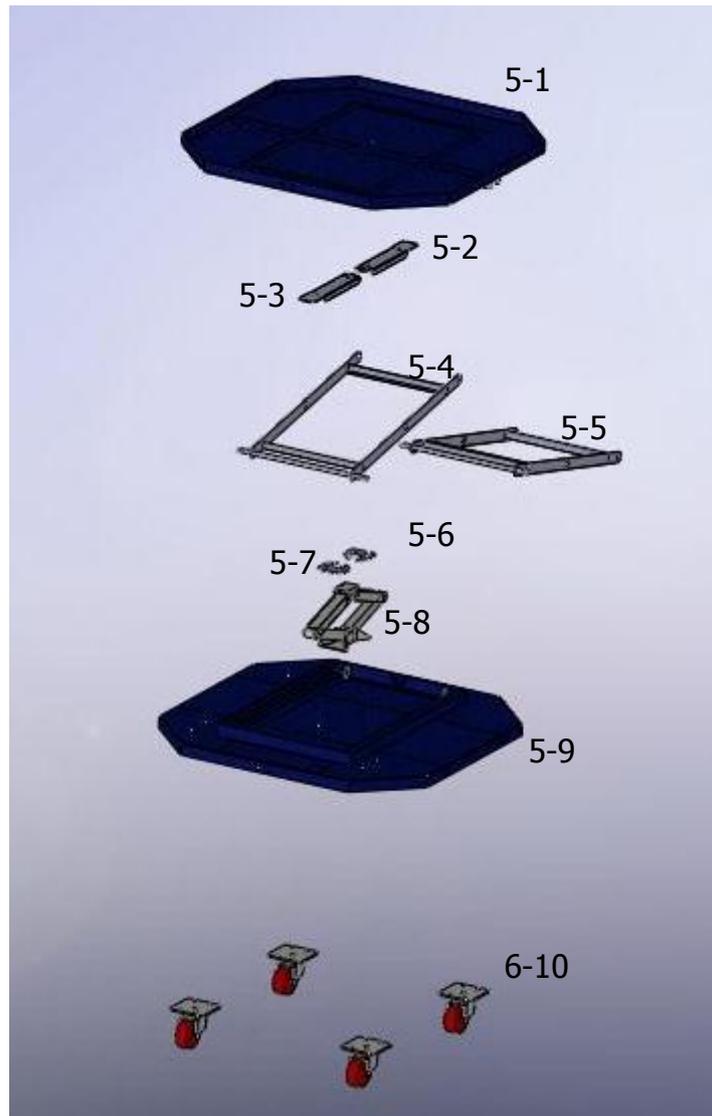


| Reference Number | Description | Part Number | Quantity |
|------------------|--|----------------------|----------|
| 4 | Control Box for Air Pulse Solenoid Valves of the Large Cartridge Collector | OE01-01-SV-25x2-40-4 | 1 |

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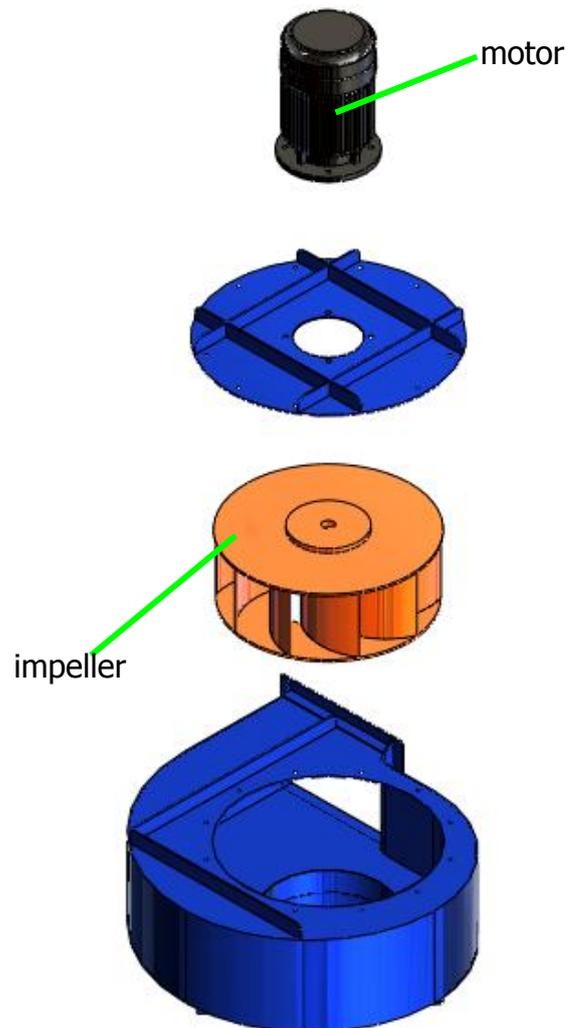
See appendix for wiring diagram.

| Reference Number | Description | Part Number | Quantity |
|------------------|-------------|----------------------|----------|
| 5 | Trolley | OE01-01-SV-25x2-40-5 | 2 |

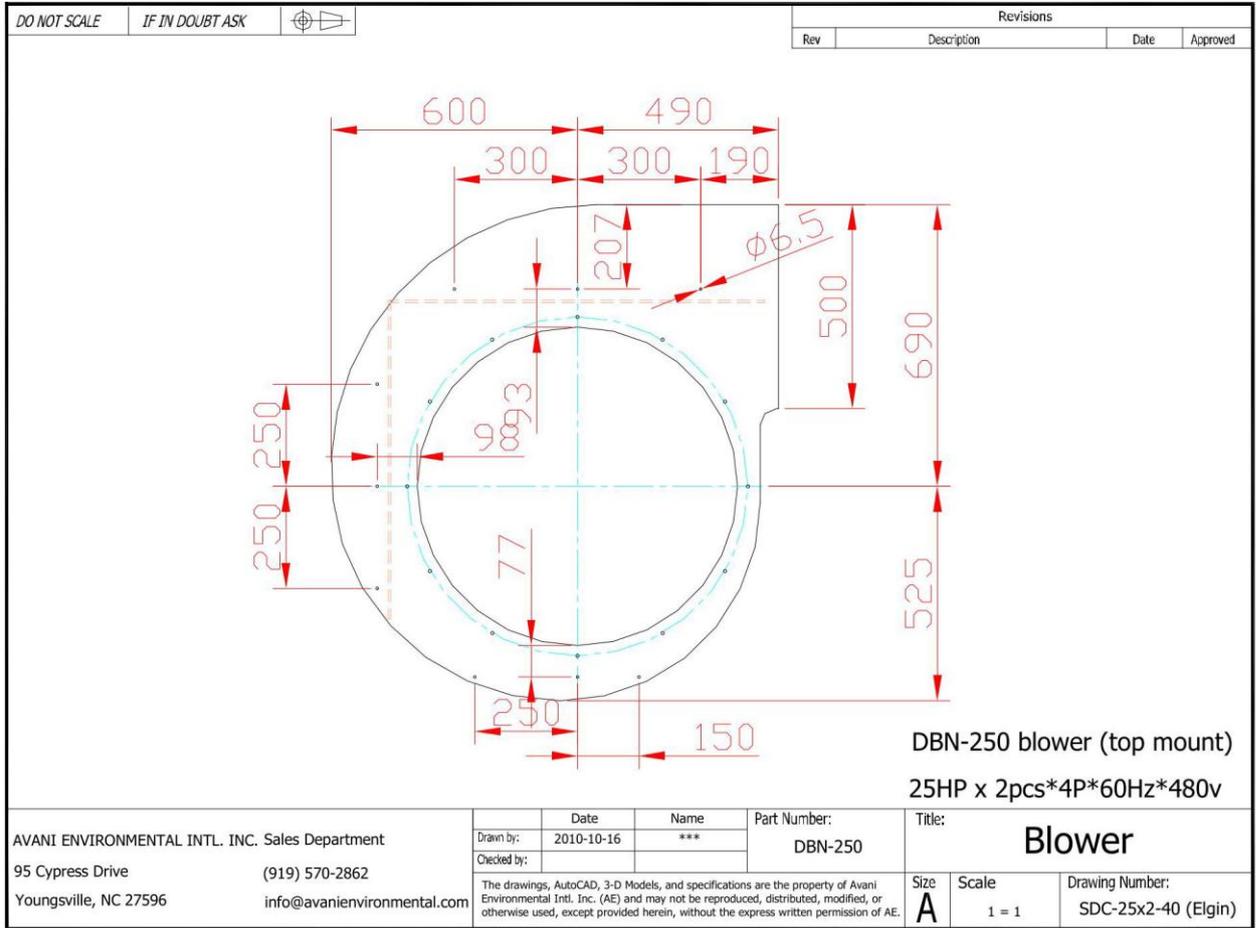


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| Reference Number | Description | Part Number | Quantity |
|------------------|------------------|----------------------|----------|
| 6 | Blower and Motor | OE01-01-SV-25x2-40-6 | 2 |



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| Reference Number | Description | Part Number | Quantity |
|------------------|----------------------------------|----------------------|----------|
| 7 | Control Box for Blower and Motor | OE01-01-SV-25x2-40-7 | 1 |

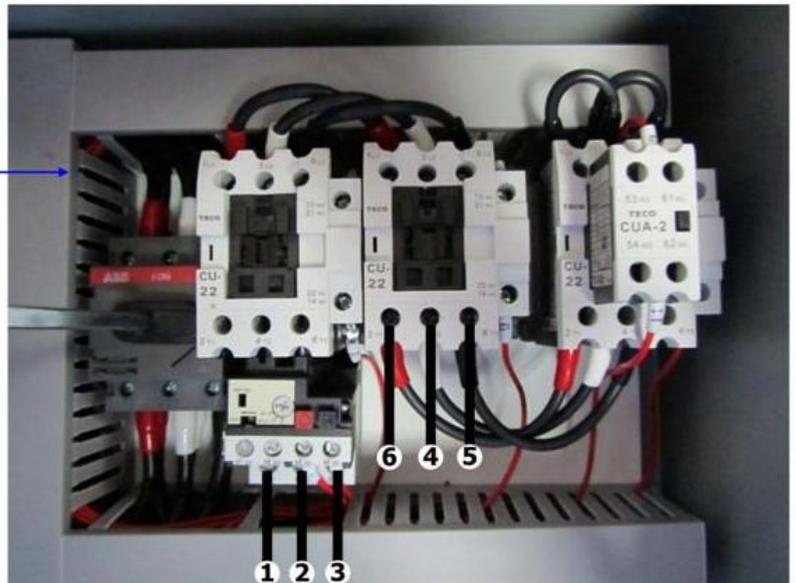
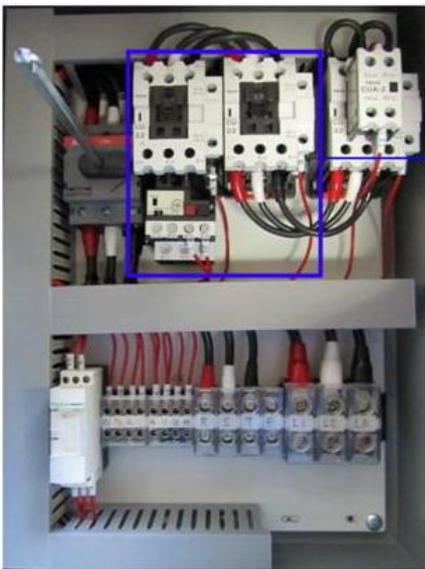
See appendix for wiring diagram.

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Appendix 1 - Electrical Circuit Diagram

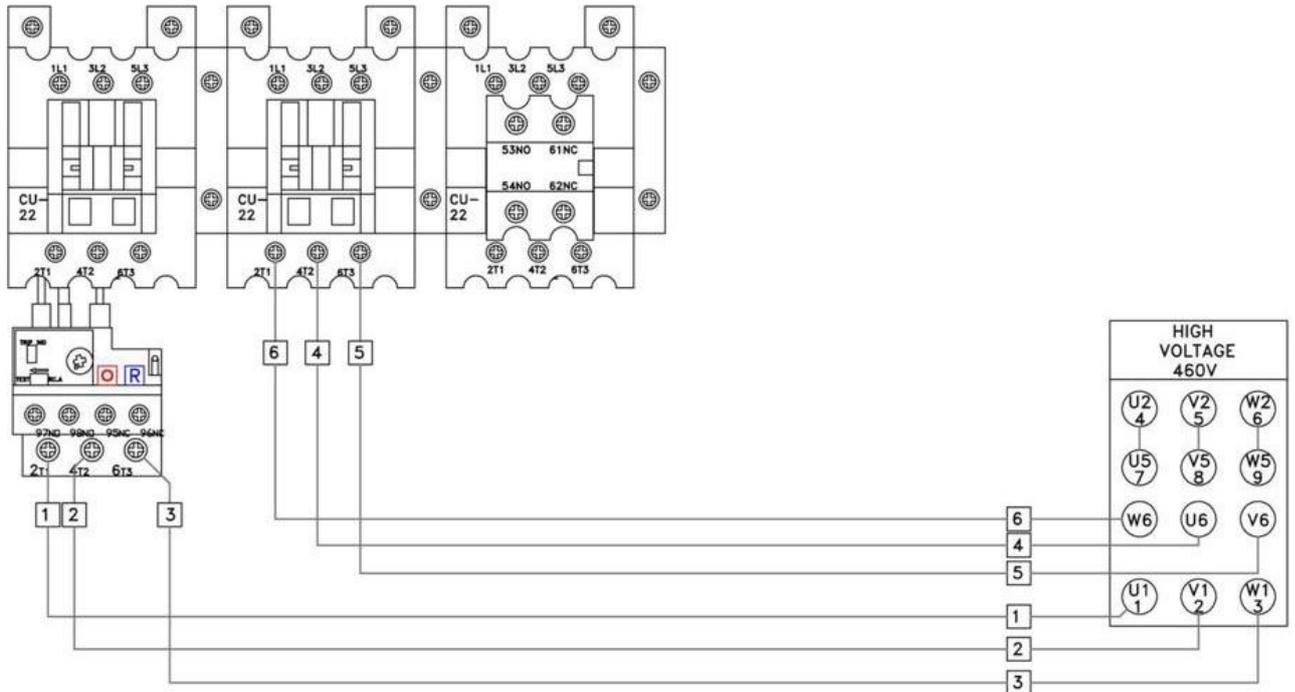
Main Electrical Wiring for SDC-25x2-40 Blower Control Box.

◆ Connection six wires on the motor of left blower.



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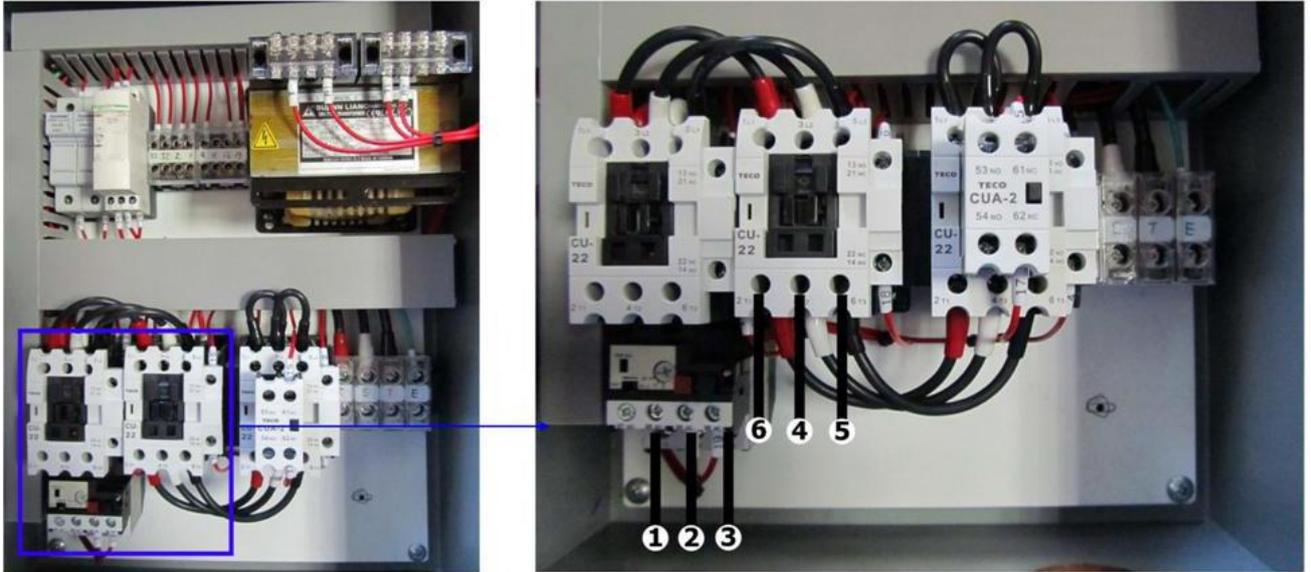
Main Electrical Wiring for SDC-25x2-40 Blower Control Box.



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Main Electrical Wiring for SDC-25x2-40 Blower Control Box.

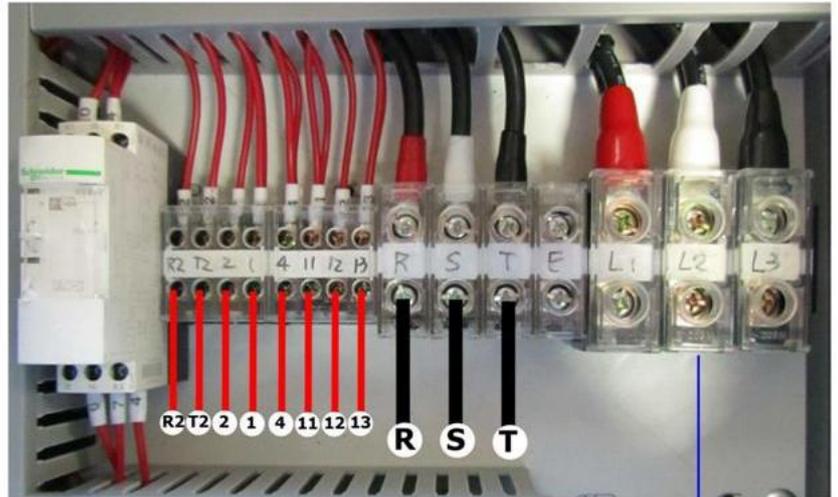
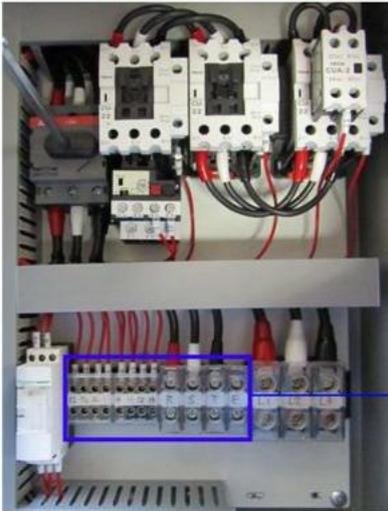
◆ Connection six wires on the motor of right blower.



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Main Electrical Wiring for SDC-25x2-40 Blower Control Box.

◆ Connection two control boxes.



Local main power supply for 480V.

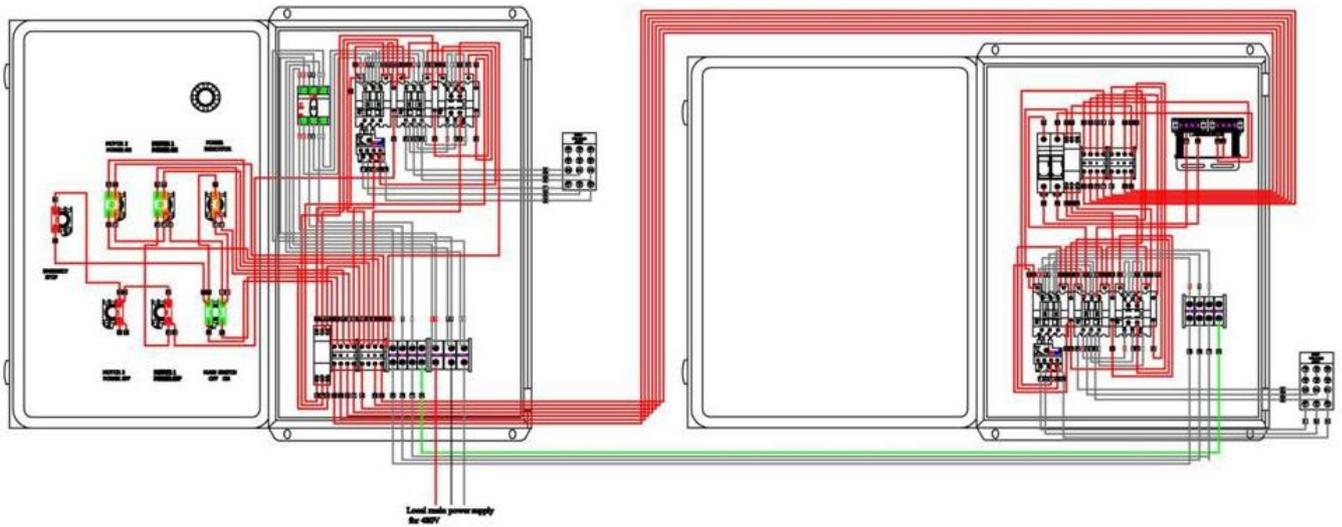
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Main Electrical Wiring for SDC-25x2-40 Blower Control Box.



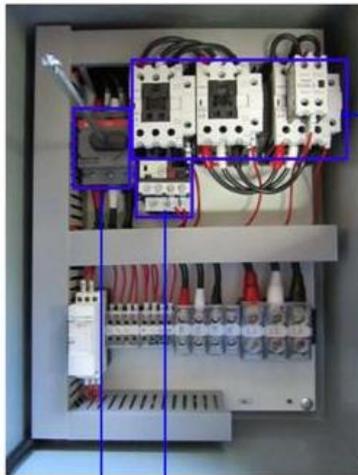
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Main Electrical Wiring for SDC-25x2-40 Blower Control Box



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Main Electrical Components for SDC-25x2-40 Blower Control Box



◆ Magnetic contactor.



◆ Panel disconnect switch.



◆ Thermal Relay for motor of 25HP.



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Main Electrical Components for SDC-25x2-40 Blower Control Box



◆ Part-D : Auxiliary Contact
 (Protection: two blowers can't be started at the same time.)



◆ Timer

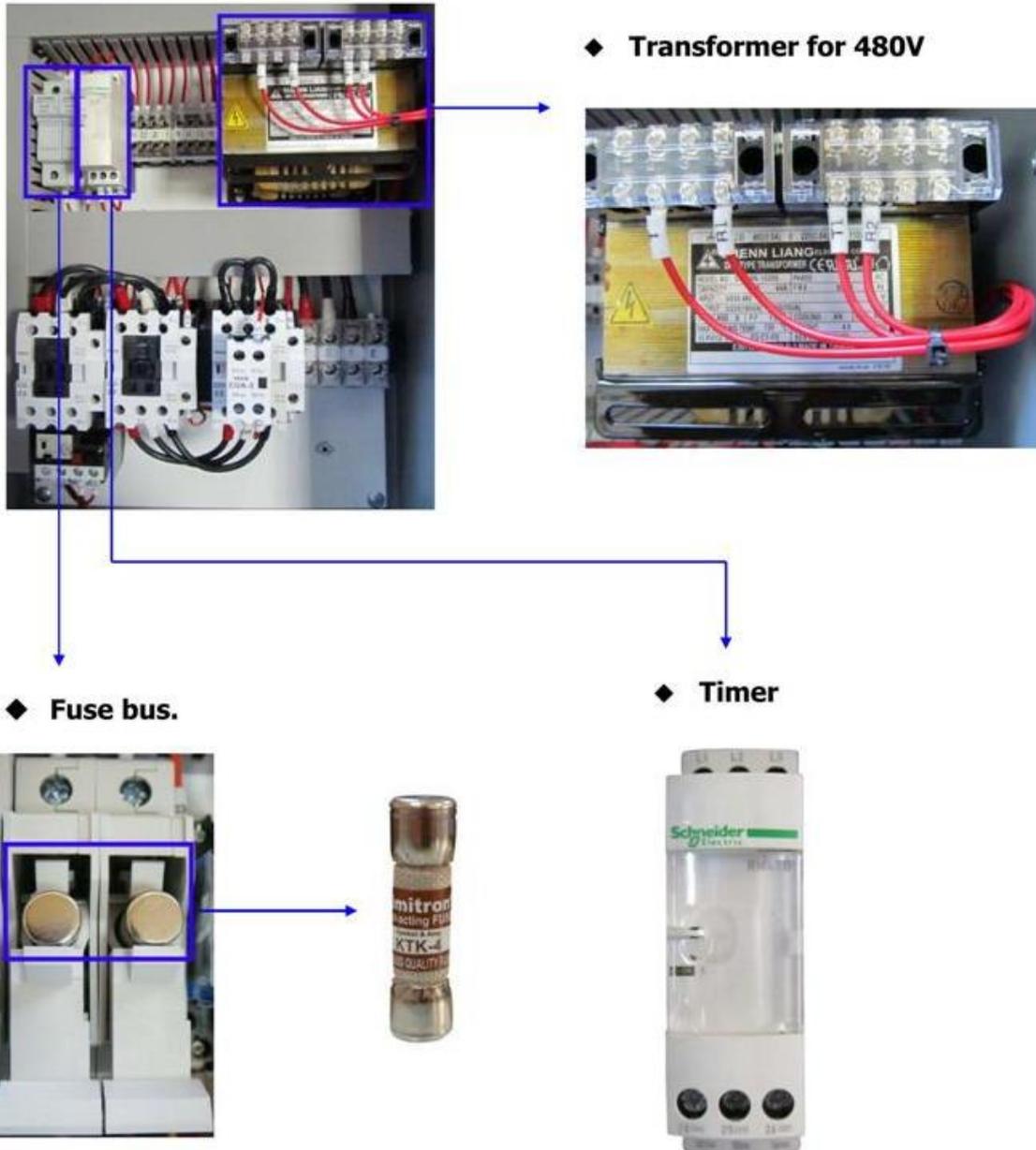


◆ Connection to the another blower control box



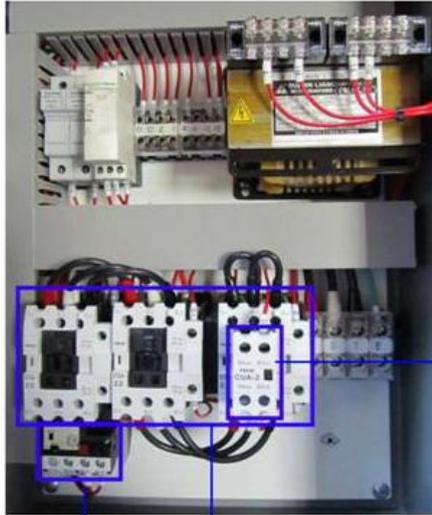
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Main Electrical Components for SDC-25x2-40 Blower Control Box



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Main Electrical Components for SDC-25x2-40 Blower Control Box



- ◆ Part-D : Auxiliary Contact
(Protection: two blowers can't be started at the same time.)



- ◆ Thermal Relay for motor of 25HP.

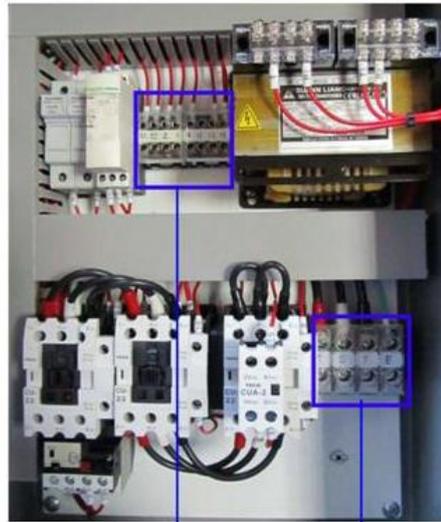


- ◆ Magnetic contactor.



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Main Electrical Components for SDC-25x2-40 Blower Control Box



◆ Connection to the another blower control box



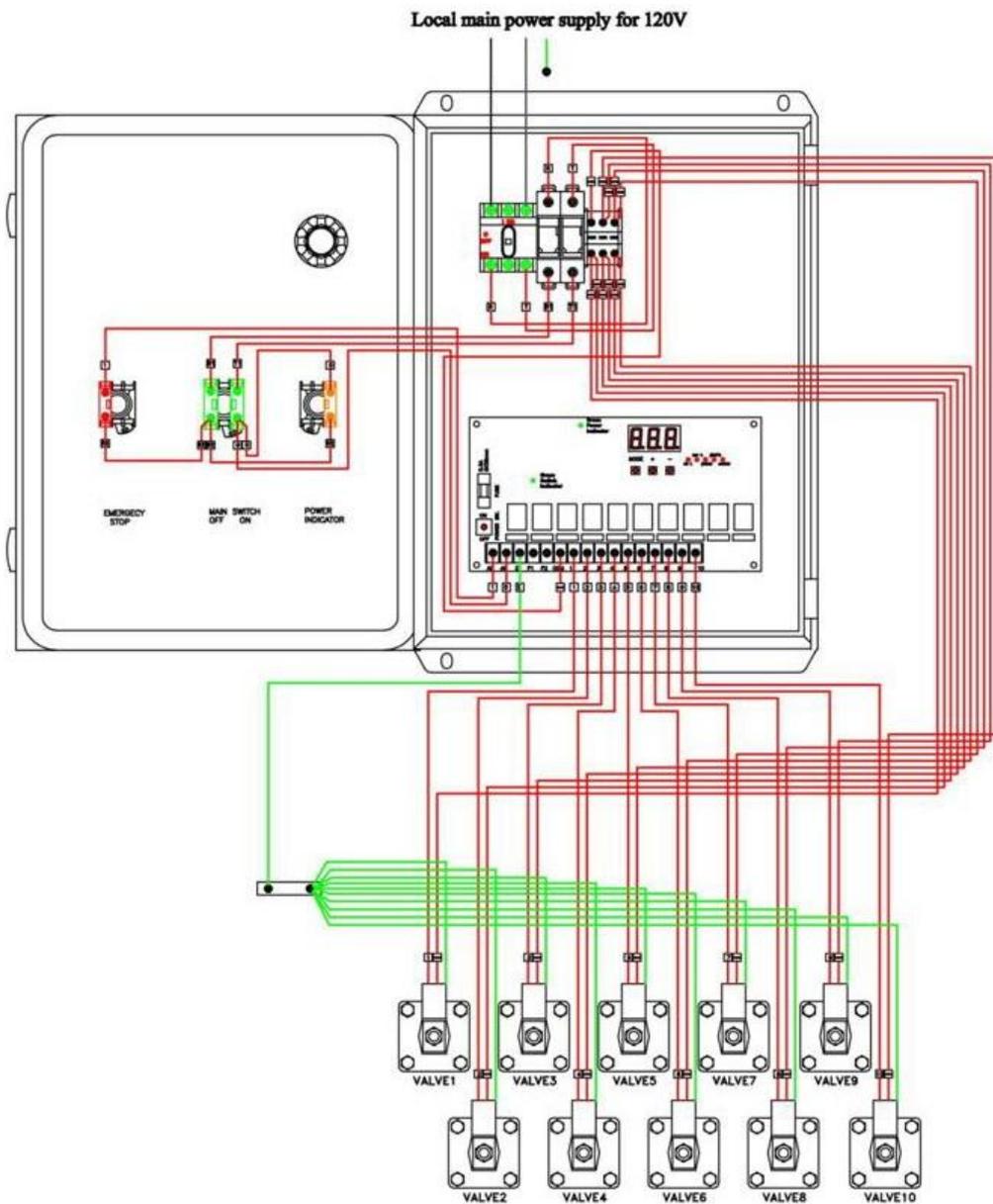
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Main Electrical Components for SDC-25x2-40 Pulse Control Box



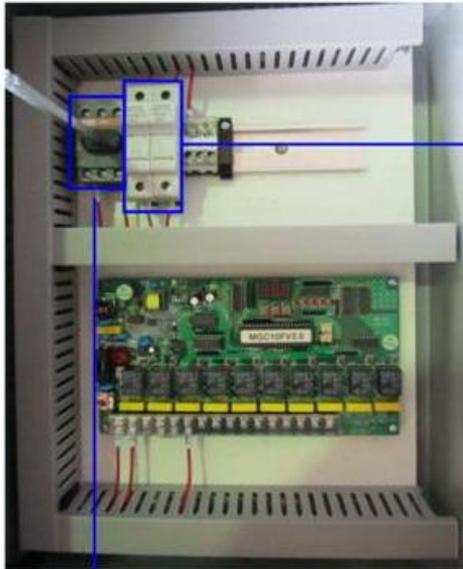
AVANI Large Cartridge Collector

Main Electrical Components for SDC-25x2-40 Pulse Control Box



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Main Electrical Components for SDC-25x2-40 Pulse Control Box



◆ Panel disconnect switch.



◆ Fuse bus.



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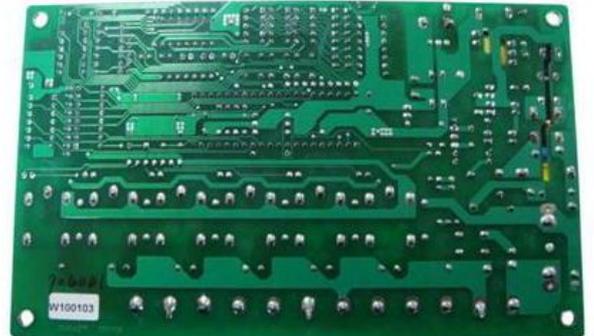
Main Electrical Components for SDC-25x2-40 Pulse Control Box



◆ Sequential Controller (Front).

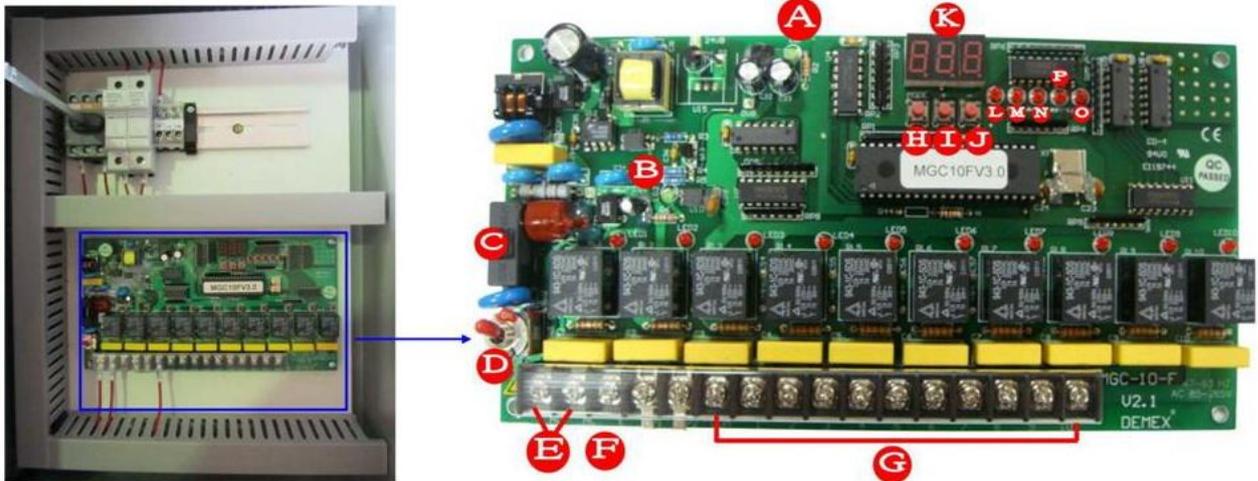


◆ Sequential Controller (Back).



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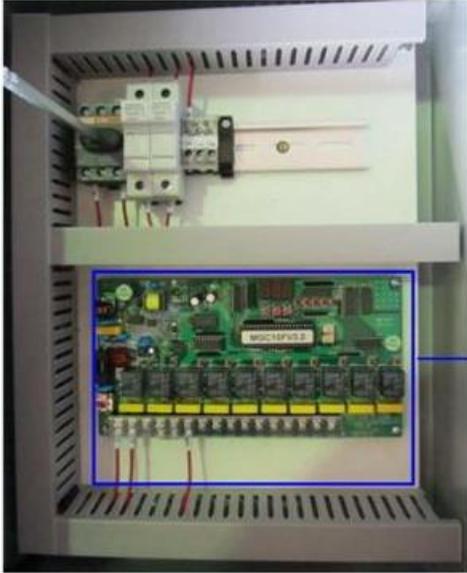
Main Electrical Components for SDC-25x2-40 Pulse Control Box



- ◆ A : Power Indicator.
- ◆ B : Power Indicator.
- ◆ C : Fuse.
- ◆ D: The main power.
- ◆ E : Power Terminal.
- ◆ F : Grounding.
- ◆ G : Valves.
- ◆ H : Mode
- ◆ I : Digits Adding Button.
- ◆ J : Digits Decreased Button.
- ◆ K : Digits shown.
- ◆ L : Air Pulse Jet Sprayed Length.
- ◆ M : Pulse Jet Intervals.
- ◆ N : Number of Valves.
- ◆ O : Settings completed.
- ◆ P : Air Pulse Jet
Cleanses Cartridges after Machine Stops Operation.(preserved function)

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Main Electrical Components for SDC-25x2-40 Pulse Control Box



◆ Valve.



AVANI Large Cartridge Collector

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