

ACT Dust Collectors
Installation and Operation Manual
All models



Volume 3
March 2011

CAUTION!!!

Accidents happen, be careful and always follow all local and federal regulations!

- Fires and explosions do occur in dust collectors. Many items in a dust form become very flammable. It is very important when installing a dust collector to check with and abide by all local and federal regulations. Precautions such as spark traps and spark detectors are always recommended when sparks or danger is present. Never throw any burning objects into the duct work or dust collector. There is no way to guarantee 100% prevention of fires. The methods mentioned above will greatly reduce your risk. Air Cleaning Technology, Inc. will not be responsible in any way for any loss or damage associated with fires in your dust collector.
- If your dust collector came with explosion vents or if explosive dusts are present, it is the owner/operators responsibility to for full compliance with all authorities having jurisdiction. It is recommended that the NFPA codes be studied and applied, including but not limited to 68, 69 and 654. Included in the NFPA standards is the issue of isolating your dust collector. Please contact us or an expert in the area regarding isolation of your dust collector in the event of an explosion. Unless a Kst test was performed, and we were provided with the results, the size of the explosion vents may be inaccurate and you may not be in compliance. It is the owner/operators responsibility to verify the Kst and Pmax values. We recommend that your process be evaluated regularly to make sure that you remain in compliance and the vent area is sufficient. Air Cleaning Technology, Inc. will not be responsible for ANY loss whatsoever resulting from an explosion associated with an ACT dust collector.
- Dust collectors are tall and top heavy. Always be careful when handling them. Make sure your equipment is capable of making the lifts and moves you are trying to make. Be sure the foundation for the dust collector is proper and secure.
- All plumbing and electrical should be performed by a certified professionals and meet all codes and regulations.
- Never open any doors or access panels while the machine is in operation.
- Always shut down the unit prior to service and lock out all disconnects.
- Always wear proper safety equipment when working on or around your dust collector and follow all local and federal codes.

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Welcome

We would like to thank you for buying an Air Cleaning Technology dust collector. Our goal is to provide you a combination of the best quality, service and pricing in the industry. Your dust collector was built with a lot of forethought. The operation and maintenance of this unit is designed to be second to none.

As service is what we strive to achieve, please feel free to contact us with any questions or comments at any time. We hope your experience with your new A.C.T. dust collector is a great one and that you will consider us for all your future dust collection needs.

Introduction

Please familiarize yourself with your new dust collector and its parts before installing it. Below is a list of standard items that should have shipped with your dust collector. If you did not receive any of the items below please contact us or your local dealer immediately.

Standard items:

- Support legs and cross beams
- Hopper/s
- Dust collector body
- All-in-one pulse control timer board and pressure gage
- Cartridge filters
- Nuts, bolts, washers and lock washers
- Hose between solenoid housing and diaphragms
- Drum lid

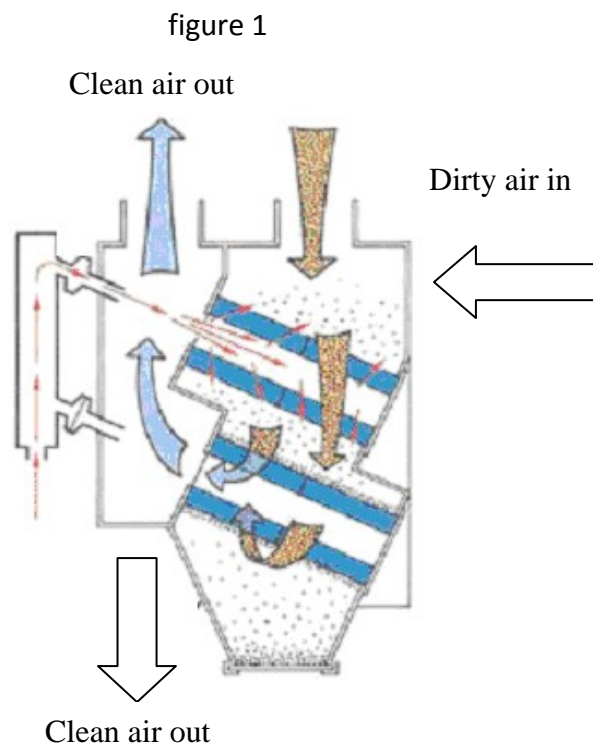
Some of you may have ordered some additional items. If you did not receive them please contact your sales rep.

Operation and Assembly

Operation:

The operation of your dust collector is designed to be efficient and flexible. There will be a variety of ways to bring air into and exhaust air from your dust collector. Please see the drawing below for a demonstration of the air-flow pattern.

Drawing



Assembly:

Step 1 - Bolting legs to dust collector body:

- Raise the dust collector body allowing clearance to attach the legs. When raising the dust collector always use proper lift equipment. When raising the dust collector from above, always use the lifting lugs located at the top of the dust collector. (Do not lift using compressed air manifold)
- Bolt the legs to the corners of the dust collector with the supplied hardware. (Larger units will have more legs). Do not fully tighten the bolts at this time.
- Attach all cross braces using supplied hardware. Do not fully tighten the bolts at this time
- Lower the dust collector onto its permanent foundation but do unhook it from the crane or lifting device yet. Be sure the dust collector is level and the legs are square. Once this is achieved you should tighten all hardware.
- Secure the legs to the foundation before unhooking it from the crane or lifting device.

Drawings of leg packs and bolt, nut and washer configuration figure 2

Step 2 – Attaching the hopper:

- Apply sealant to the mating flange on the hopper inside the bolt hole pattern.
- Lift the hopper into place using a proper lifting device and secure with the provided hardware

Step 3 – Drum lid:

- Secure the drum lid to the hopper outlet using supplied flex hose and hose clamps. A drum must be in place to ensure proper operation.

Step 4 – Installing the top mount fan

- Using crane or proper lifting device, raise the motor/blower assembly to the top of the dust collector.
- Apply a bead of sealant inside the bolt hole pattern on the clean-air-outlet on the top of the dust collector. (see figure 3)

Top of dust collector

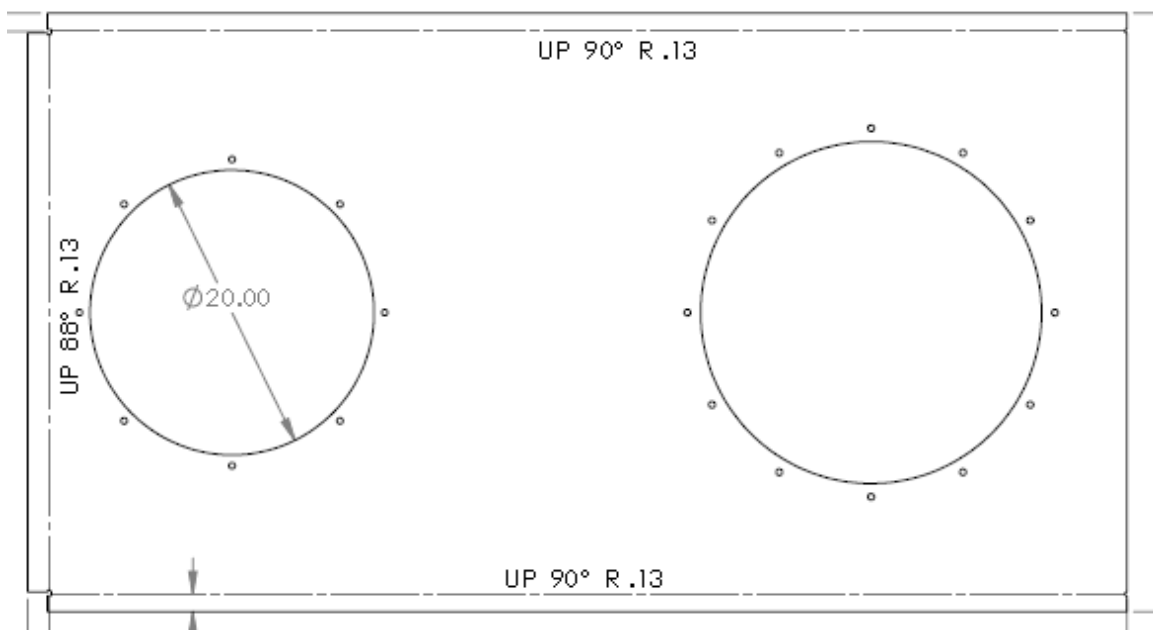


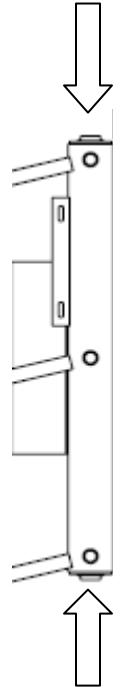
figure 3

- Place the motor/blower assembly onto the top of the dust collector, exhausting in desired direction, and secure with supplied hardware.
- All silencers require additional support in the field.

Step 5 – Supplying compressed air to dust collector:

- Compressed air must be supplied to the bottom or top of the air manifold located at the rear of the dust collector (see figure 4) for proper operation of the filter cleaning system. 1" air line is recommended for ample air supply. The thread size for the air line is 1" NPT .

Compressed air in here



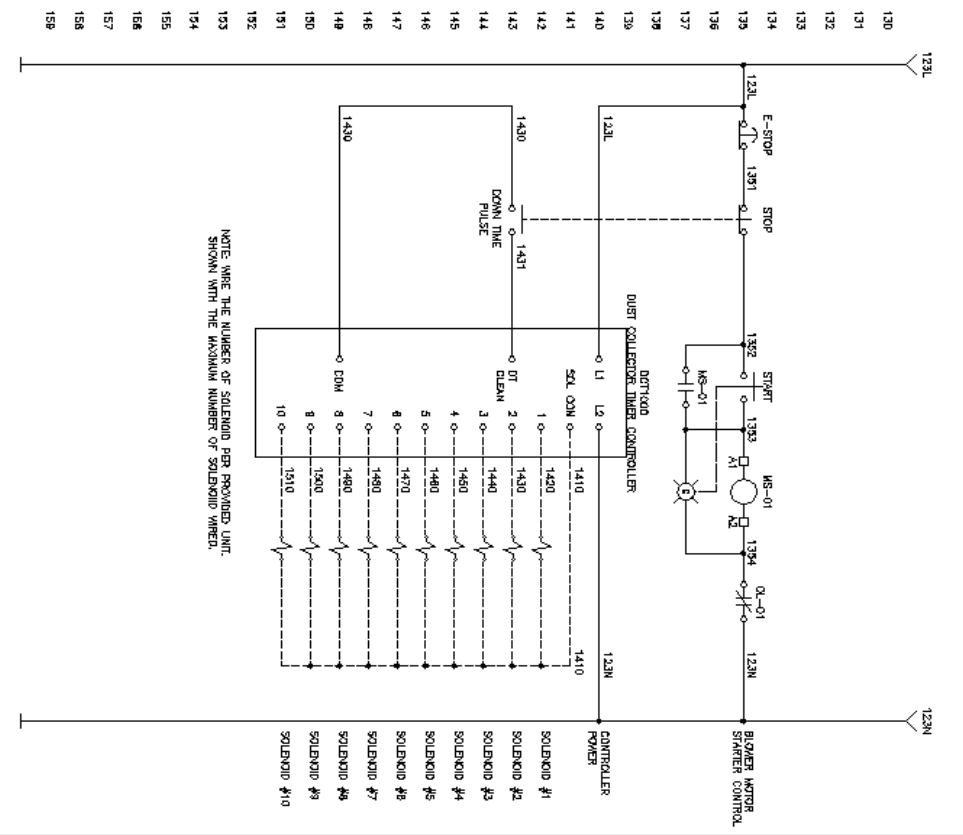
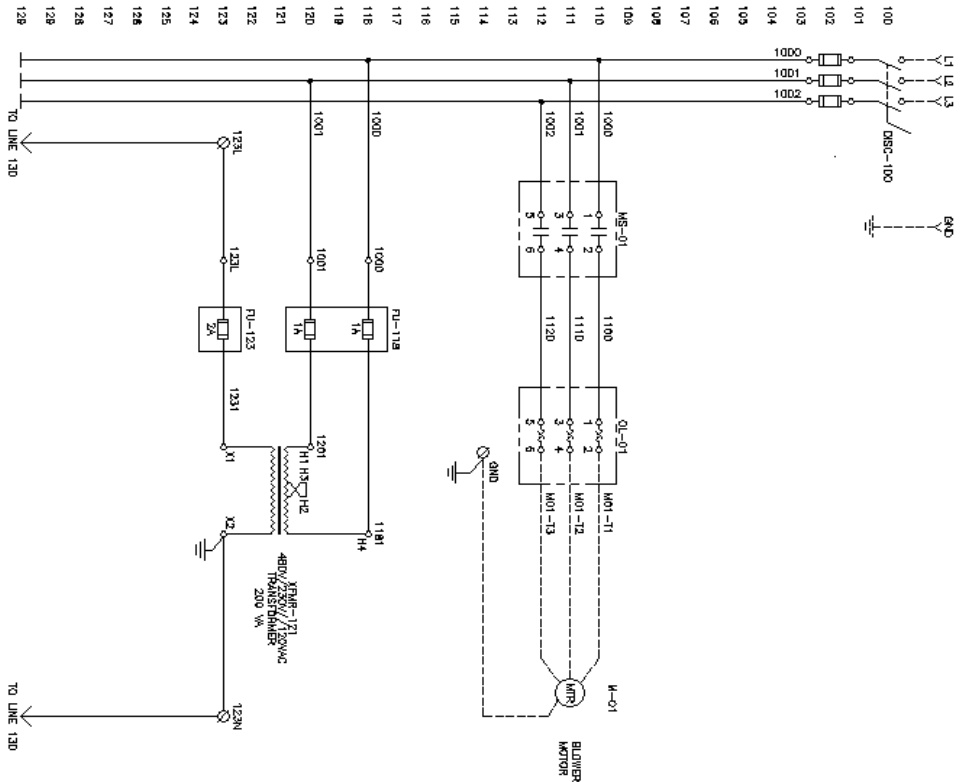
Drip-Tee with ball valve is recommended here

Figure 4

- The air must be clean, dry and regulated to 90-100 psi for best results.
- Each diaphragm uses approximately 2 CFM per pulse.
- A drip tee should be added to the bottom of this tank to allow water build-up to be drained.
- All plumbing should be done according to all local and federal codes.

Step 6 – Wiring the fan:

- All wiring should be done by a certified electrician and in accordance with all local and federal codes.
- **IMPORTANT:** It is very important to verify proper motor/blower rotation. Simply recognizing that the fan is moving air is not enough. The blower will move air even if it is rotating backwards but it will only move a fraction of its designed airflow.



NOTE: WIRE THE NUMBER OF SOLENOID PER PROVIDED LIMIT. SHOWN WITH THE MAXIMUM NUMBER OF SOLENOID WIRE.

DUST COLLECTOR TIMER CONTROLLER			
REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	AS SHOWN	7/20/08	...
2
3
4
5
6
7
8
9
10

Step 7 – Wiring the timer board and pressure gage:

- All wiring should be done by a certified electrician and in accordance with all local and federal codes.
- Locate the timer board as close to the dust collector as possible. It is recommended that the timer board not be mounted to the dust collector itself as the vibrations may cause the timer board and pressure gage to malfunction.
- To wire the timer board, please refer to the wiring diagram located inside the timer board enclosure.
- Once the timer board has been installed the pressure gage must be hooked up to the dust collector using customer supplied $\frac{1}{4}$ " tubing (see figure 5 for low and high pressure ports). If the dust collector is installed outside, the tubing should UV protected.
- **IMPORTANT:** be sure that the timer board is wired for the down time pulse cleaning. This is the most effective time to clean your filters and will greatly increase your filter life.

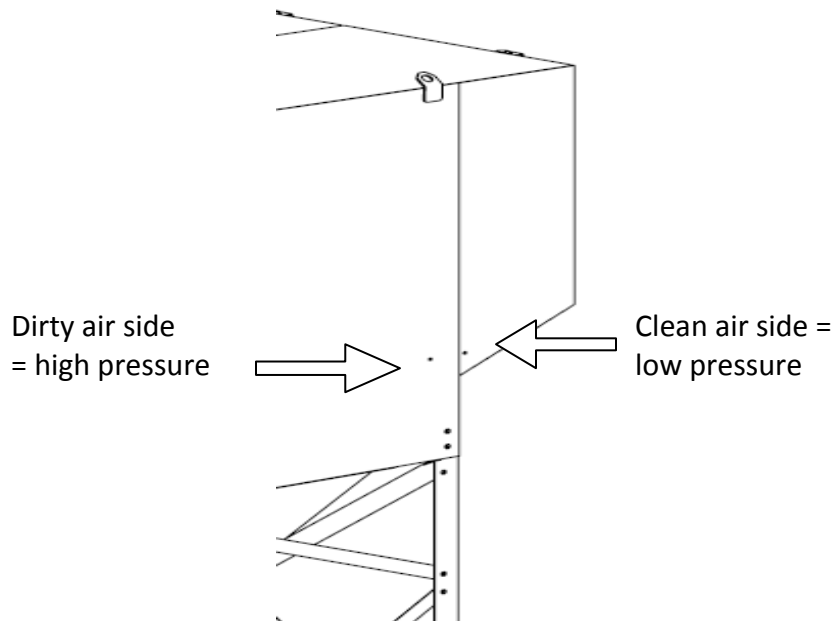
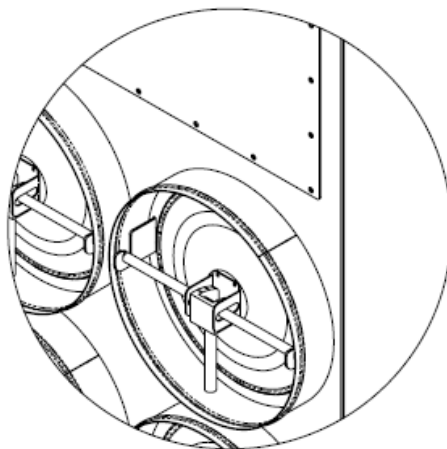


figure 5

Bag-in/bag-out collars

Bag-in/bag-out collars are used when dangerous dusts are present or simply to minimize exposure to any dust. The collars allow the operator to take the filter out of the dust collector or put a filter into a dust collector by using a bag strapped to the collar and minimizing the amount of dust the operator comes in contact with. Although this procedure does greatly reduce exposure to the dusts, it is hard to completely avoid any exposure. It is strongly recommended that the operator still use proper protective clothing, including respirators.

1. Remove the filter access cover and set it aside. If you would like, you can use a bag for this process to further minimize exposure. Starting at the top row of the dust collector will prevent dusts from falling on to new filters already installed in rows below.
2. Take a new bag and place it over the outside of the bag collar. Secure the bag with around the collar with the provided strap. Securely tighten the strap.
3. Grab the bottom of the bag, reach in and twist the filter to drop off any dust that may be in the pleats of the filter, and then pull the filter out into the bag.
4. Before removing the bag from the collar it is recommended that you twist the bag to prevent the dust from escaping and use a tie to seal off the bag.
5. Remove the bag from the collar.
6. If there are two filters in your filter access hole, repeat this process for the next filter. If your dust collector is only one filter deep, jump to the next step.
7. Place the new filter into the filter access hole. To further minimize exposure to dusts, this can be done by first loading the new filter into a bag.
8. Replace the filter access door and continue this process until all filters are the new filters are in the dust collector.



Recommended Settings For The Timer Board:

NOTE: before you run your dust collector or adjust your settings, MAKE SURE YOU HAVE PROPERLY WIRED THE DOWN TIME CLEAN FEATURE ON THIS DUST COLLECTOR. This feature will start a pulse cleaning cycle when you push the stop button and shut-down your dust collector at the end of the day. Without this feature properly functioning, you will have very short filter life.

- Process – this measures the pressure drop across the filters for which there is no setting.
- Last Output – the output terminal at the bottom of the timer board is numbered 1-22. You will have wires in some of these. The last number with a wire in it is what your setting should be.
- Time Off – set this to 10
- Time On – set this to 100
- High Limit – we recommend setting this at a starting point of 3
- Low Limit – we recommend setting this at a starting point of 2
- High Alarm – set this to 10
- Low Alarm – set this to 0
- Cycle Delay – set this to 0
- Down Time Cycles – set this to 10
- Auto Alarm Reset – Not Applicable in most installations. Leave at factory setting of 5

These settings may vary in some situations, please contact us with any questions regarding these settings.

Drum Lid Latch Ring

The drum lid latch ring is there to prevent the drum lid from coming up and leaking dust during the down time clean cycle. Please read the instructions below for proper installation of the drum lid latch ring.

1. Identify your 55 gallon drum, drum lid and drum lid latch ring using the photos below. Please note that the 55 gallon drum is not included with the dust collector unless you specifically ordered it. (Figure 6)
2. Place the drum lid on top of the 55 gallon drum. (Figure 7)
3. Place the drum lid latch ring on top of the drum lid which is now on top of the 55 gallon drum. (Figure 8)
4. Turn the knobs until the bolts are tight against the drum and the lid is securely fastened. (It is best to tighten the bolts evenly on each side a little at a time.)

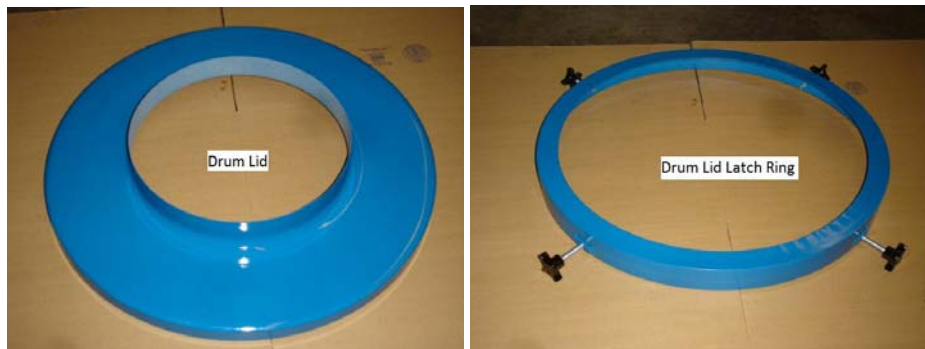


Figure 6



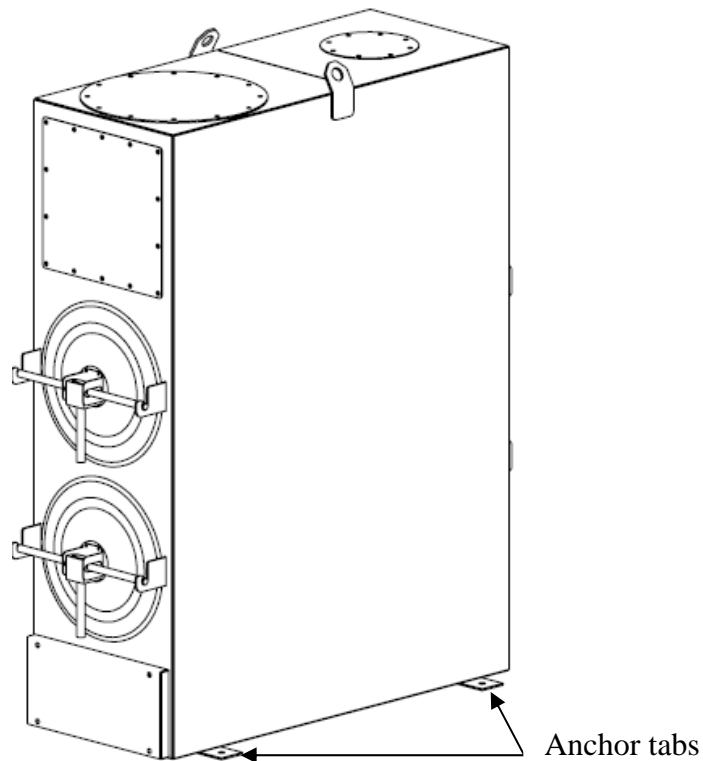
Figure 7

Figure 8

ACT 2-2

The primary function of the ACT 2-2 is the same as the larger models. Please read the list of additional recommendations below:

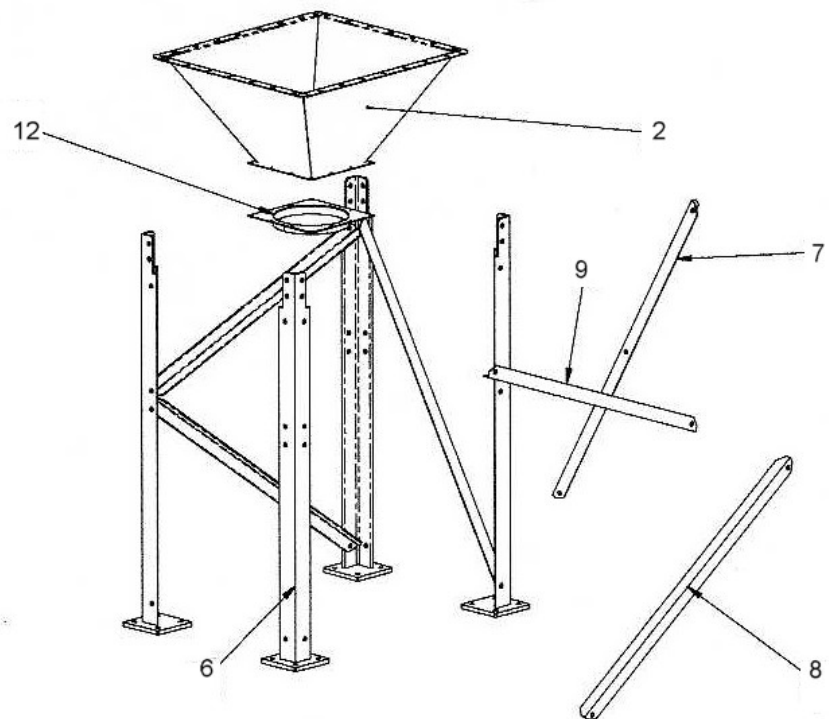
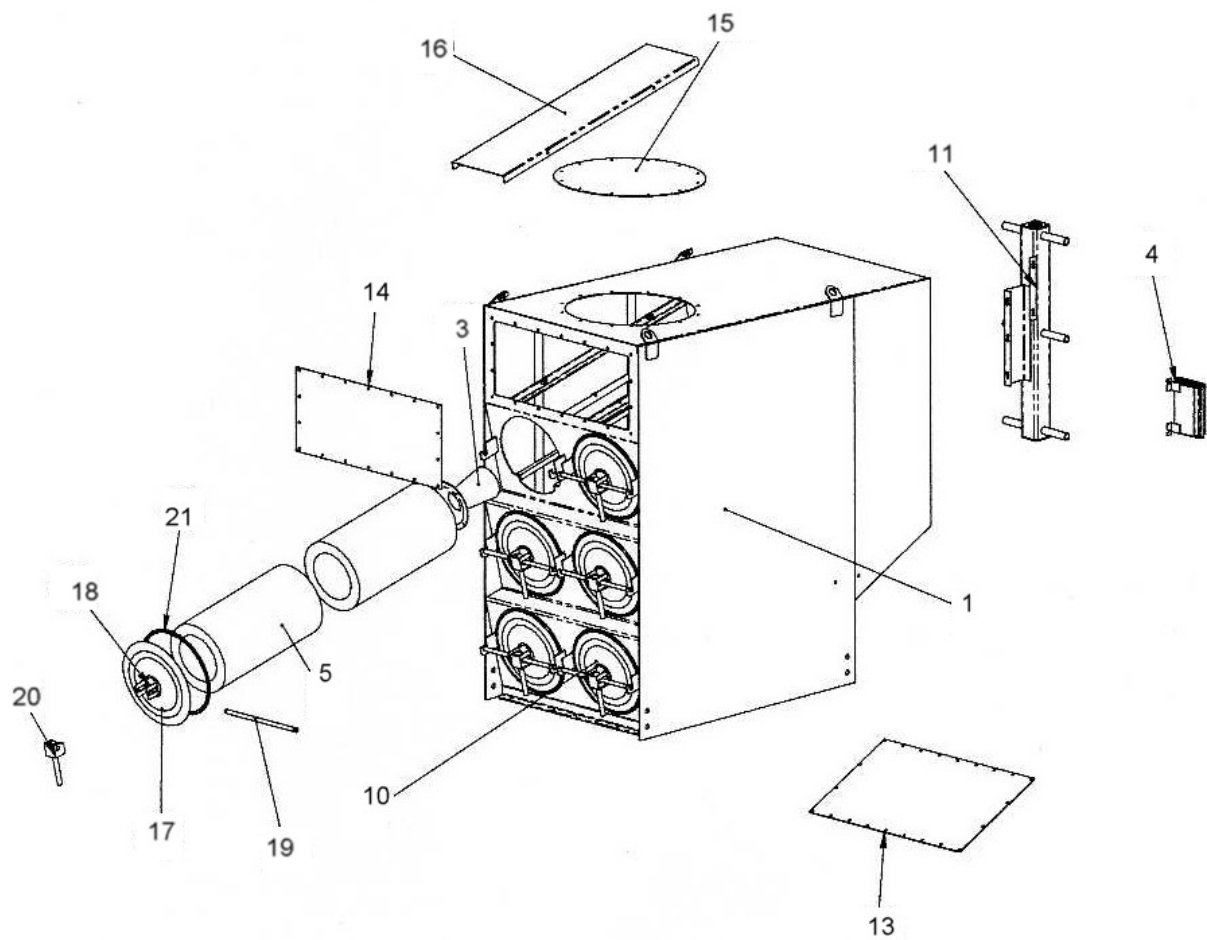
1. The ACT 2-2 has the dust drawer as opposed to a hopper and 55 gallon drum. Be sure to empty your dust drawer regularly.
2. Be sure to properly anchor your dust collector to the ground using 3/8" anchor bolts and the anchor tabs on the side of the machine.



3. Other questions that are not addressed in the above sections can be directed to Air Cleaning Technology, Inc. 800-422-1316

Parts

ITEM NO.	PART NO.	DESCRIPTION	QUANTITY
1	DC07506	Collector	1
2	DC07502	Hopper	1
3	DC06001	Venturi	1
4	SVE06WP61	Solenoid Valve Enclosure	1
5	22111/22211	Filter	2
6	DC07505	Leg Weldment	4
7	DC07015	Angle, Long	2
8	DC07014	Angle, Mid	2
9	DC07013	Angle, Short	2
10	DC06002	Filter Access Door Assembly	5
11	DC07504	Compressed air manifold	1
12	DC07503	14" drum lid transition	1
13	DC07029	Bottom clean air access cover	1
14	DC07030	front inlet cover	1
15	DC07031	top inlet cover	1
16	DC07507	deflector plate	1
17	DC07041	Filter Access Door	1
18	DC07017	door cam bracket	1
19	DC07018	Shaft, Lock	1
20	DC07019	quick lock cam	1
21	DC08073	Lid Gasket	1
22	DC08074	Filter Gasket	1
	Optional Parts or Configurations		
11	DC08602	Manifold, Blow Down 8 Valve	1
7	DC08060	Angle, Long 4 Filter Wide	2
	DC08064	Cover 180 Fan	
	DC08065	Cover 200 Fan	
	DC08604	Adaptor 6" Air Lock	
1	DC08601	Collector, C4-16	
1	DC08603	Collector, C-24	



Warranty

Air Cleaning Technology, Inc. warrants the equipment to be free from defects in materials and workmanship for a period of 5 years from the date of purchase. This warranty does not cover any damage due to normal wear and tear including, but not limited to, corrosion, abrasion, elements, and modifications. This warranty covers parts only. This warranty covers only the parts manufactured exclusively for Air Cleaning Technology, Inc. All other parts will be covered by individual manufacturer's warranty.

Product Data Sheet

Make/Model:

Serial Number:

Filters:

Ship Date:

Date of Manufacture:

Option/Accessories:

Fan/Blower Manufacturer:

Model Number:

Serial Number:

HP:

Voltage:

RPM:

CFM Rating:

Silencer:

Damper:

Pulse Control Timer Board Manufacturer:

Model:

Serial Number:

Diaphragm Mfg: