



# MAKSIWA<sup>®</sup>

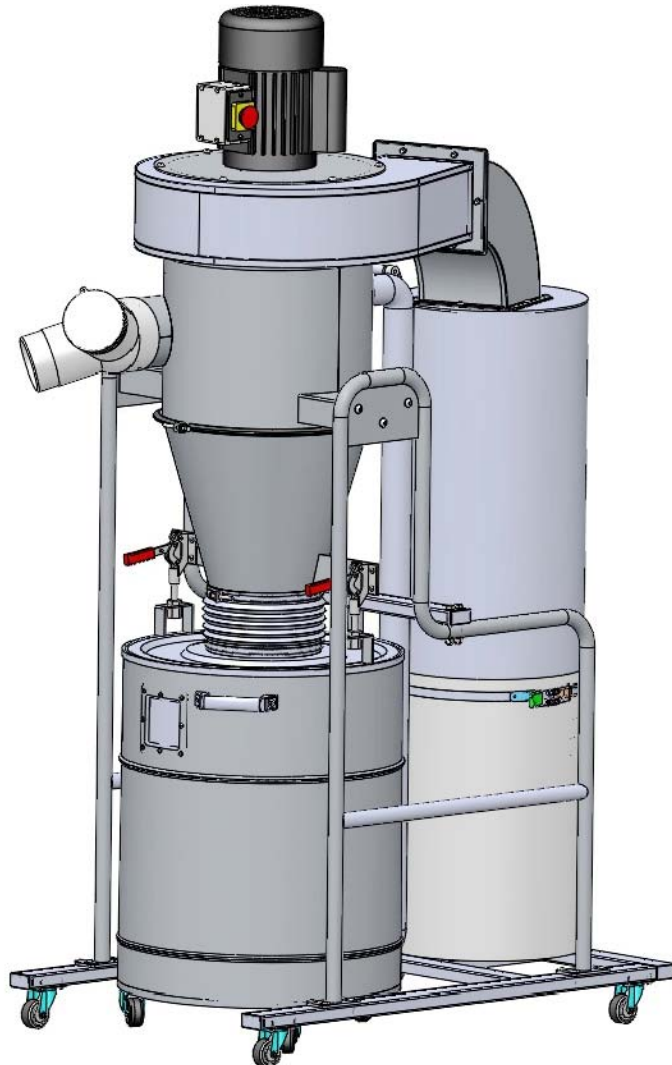
## CYCLONE 3HP DUST COLLECTOR

**FM350CA**

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### INSTRUCTION MANUAL

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**CAREFULLY READ THE INSTRUCTION MANUAL BEFORE USE THE MACHINE  
KEEP THIS INSTRUCTION MANUAL FOR FUTURE REFERENCE.**

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## 1. Safety

This operating instructions

▲explains the meaning and use of the warning notes included in the operating instructions

▲points out the dangers that might arise for you or others if these instructions are not observed.

▲informs you how to avoid dangers.

In addition to these operation instructions, please observe

▲the applicable laws and regulations

▲the statutory provisions for accident prevention

▲the prohibition, warning and mandatory signs as well as the warning notes on the machine.

If required, the relevant measures to comply with the country-specific regulations must be taken before commissioning the machine.

Always keep this documentation close to the machine.

### 1.1 Safety instructions for general machinery






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.






Some dust created by power sanding, sawing, grinding, drilling, and other construction activities may contain chemicals, including lead, birth defects, or other reproductive harm. Wash hands after handling. 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 with approved safety equipment such as dust masks specially designed to filter out microscopic particles.

	For your own safety, read instruction manual before operating the machine. Learn the machine's application and limitations as well as the specific hazards peculiar.
	Always wear 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.
	Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material, and always wear an approved respirator to reduce your risk.
	Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.
	Keep hands and clothing away from moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips which could cause a loss of workpiece control.

### 1.11 Personal protective equipment

protective suit	safety shoes	protective gloves	protective glasses
			



Dirty or contaminated personal protective equipment can cause illness. Clean your personal protective equipment after each use and once a week.

### 1.2 Safety instructions for dust collector



Long-term respiratory damage can occur from using dust collectors without proper use of a respirator. Fire or explosions can result in smoke inhalation, serious burns, or death—if machine is used to collect incorrect materials, is operated near potential explosion sources, or ducting is improperly grounded. Entanglement, amputation, or death can occur if hair, clothing, or fingers are pulled into the inlet. To reduce the risk of these hazards, operator and bystanders **MUST** completely heed the hazards and warnings below.

<b>INTENDED USE</b>	This dust collector is only intended for collecting wood dust and chips from woodworking machines. Do not use this dust collector to collect metal, dirt, pebbles, drywall, asbestos, lead paint, silica, liquids, aerosols, or any flammable, combustible, or hazardous materials.
<b>HAZARDOUS DUST</b>	Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each work piece material, and always wear a NIOSH-approved respirator to reduce your risk.
<b>DUST ALLERGIES</b>	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 there is a possibility of an allergic reaction.
<b>WEAR RESPIRATOR</b>	Fine dust that is too small to be caught in the filter will be blown into the 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.
<b>EMPTYING DUST</b>	When emptying dust from the collection container, wear a respirator and safety glasses. Empty dust away from ignition sources and into an approved container.
<b>DISCONNECTING POWER SUPPLY</b>	Turn the switch off, disconnect the dust collector from the power supply, and allow the impeller to come to a complete stop before leaving the machine unattended or doing any service, cleaning, maintenance, or adjustments.
<b>SUSPENDED DUST PARTICLES AND IGNITION SOURCES</b>	Do not operate the dust collector in areas where explosion risks are high. Areas of high risk include, but are not limited to, areas near pilot lights, open flames, or other ignition sources.
<b>FIRE SUPPRESSION</b>	Only operate the dust collector in locations that contain a fire suppression system or have a fire extinguisher nearby.
<b>IMPELLER HAZARDS</b>	Do not place your hands or tools near the open inlet during operation for any reason. The powerful suction could easily cause accidental contact with the impeller, which will cause serious personal injury or damage to the machine. Always keep small animals and children away from open dust collection inlets.
<b>AVOIDING SPARKS</b>	Do not allow steel or rocks to strike the impeller—this may produce sparks. Sparks can smolder in wood dust for a long time before a fire is detected. If you accidentally cut into wood containing tramp metal (nails, staples, spikes, etc.), immediately turn off the dust collector, disconnect it from power, and wait for the impeller to stop—then empty the collection container into an approved airtight metal container.
<b>OPERATING LOCATION</b>	To reduce respiratory exposure to fine dust, locate permanently installed dust collectors away from the working area, or in another room that is equipped with a smoke detector. Do not operate the dust collector in rainy or wet locations—exposure to water may create a shock hazard or decrease the life of the machine.

<b>STATIC ELECTRICITY</b>	Plastic dust lines generate high amounts of static electricity as dust chips pass through them. Although rare, sparks caused by static electricity can cause explosions or fire. To reduce this risk, make sure all dust lines are thoroughly grounded by Using a grounding wire.
<b>REGULAR CLEANING</b>	Regularly check/empty the collection bags or drum to avoid the buildup of fine dust that can increase the risk of fire. Make sure to regularly clean the surrounding area where the machine is operated—excessive dust buildup on overhead lights, heaters, electrical panels, or other heat sources will increase the risk of fire.



No list of safety guidelines can be complete. Every shop environment is different. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to lessen the possibility of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.



**FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY. FOR YOUR OWN SAFETY, READ AND UNDERSTAND THE INSTRUCTION MANUAL BEFORE OPERATING THE MACHINE.**



**KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.  
**DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use this unit in damp or wet locations, or expose it to rain. Keep work area well-lighted.

**KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance from work area.

**DISCONNECT UNIT** before servicing.

**CHECK DAMAGED PARTS.** Before further use of the unit, properly repair or replace any part that is damaged.

## 2. Technical Specification



The following information represents the detailed data and dimension for reference.

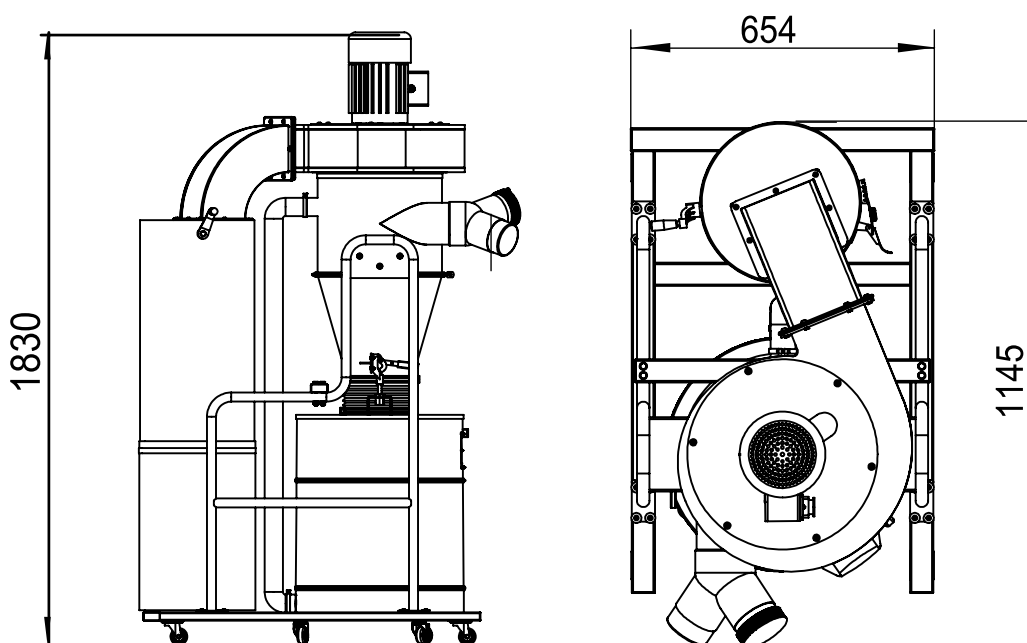
### 2.1 Specification

<b>MODEL NO.</b>	<b>FM300CA</b>	<b>FM350CA</b>
Motor Power	1500W	2200W
Fan diameter	305mm	356mm
Inlet diameter	125mm	150mm
Number of intake holes	2x100mm	3x100mm
Air Flow	1150 m <sup>3</sup> /h	1350 m <sup>3</sup> /h
Cartridge Filter size	Φ340mm×600mm	Φ340mm×800mm

Cartridge Filter rate	99% at 1 micro	99% at 1 micro
Collection drum size	Φ500mm×600mm	Φ500mm×600mm
Collection drum volume	0.118m <sup>3</sup>	0.118m <sup>3</sup>
Collection bag size	Φ500mm×1100mm Φ370mm×750mm	Φ500x1100mm Φ370x750mm
Overall size	1136x654x1810mm	1145x654x1830mm
Packing size	1080X650X1044mm; 1150X715X140mm; 650×430×430mm	1160X650X1044mm; 1150X715X140mm; 650×430×430mm
Net weight	72.8KG	82.3KG

## 2.2 Dimensions

FM350CA-  
1900H



### 3. Assembly

The cyclone dust collector is not pre-assembled. After unpacking, the machine must be installed.



Transport the dust collector in its packing crate to a place near its final installation site before unpacking it. If the packaging shows signs of possible transport damage, take the necessary precautions not to damage the machine when unpacking. If any damage is discovered, the carrier and/or shipper must be notified of this fact immediately to

establish any claim which might arise.

#### 3.1 Grounding instructions

The appliance must be grounded, if it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having equipment-ground conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

**For grounded, cord-connected appliances:** Make sure that the appliance is connected to an outlet having the same configuration as the plug. No adaptor should be used with this appliance. If the appliance must be reconnected for use on a different type of electric circuit, qualified service personnel should make the reconnection.

**For a permanently connected appliance:** This appliance must be connected to a grounded metal, permanent wiring system; or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the appliance.

Inspect the machine completely and carefully, making sure that all materials, such as shipping documents, instructions and accessories supplied with the machine have been received.

#### 3.2 Placement location

Consider anticipated workpiece sizes and additional space needed for auxiliary stands, work tables, or other machinery when establishing a location for this machine in the shop. See 2.2 Dimensions for reference.

#### 3.3 Unpacking

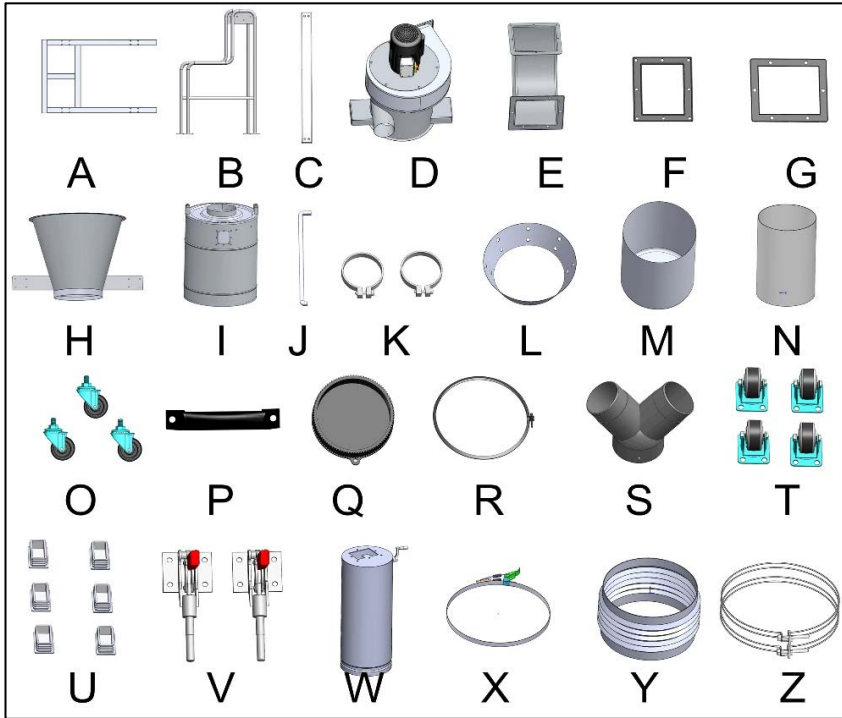
The machine is packed in three packages (One plywood cases and two cartons.)The following is a list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

A. Base	J. Vacuum hose	S. Adapter
B. Bracket	K. Hose clamp	T. Casters for base
C. Connecting rod	L. Vacuum ring	U. End cap
D. Impeller housing	M. Dust bag for drum	V. Quick-locking clamp
E. Elbow	N. Dust bag for filter	W. Canister filter
F. Rubber gasket	O. Casters for drum	X. Bag clamp
G. Rubber gasket	P. Drum handle	Y. Flexible hose
H. Cyclone funnel	Q. Cap for Y adapter	Z. Hose clamps
I. Dust collection drum	R. Steel clamp	





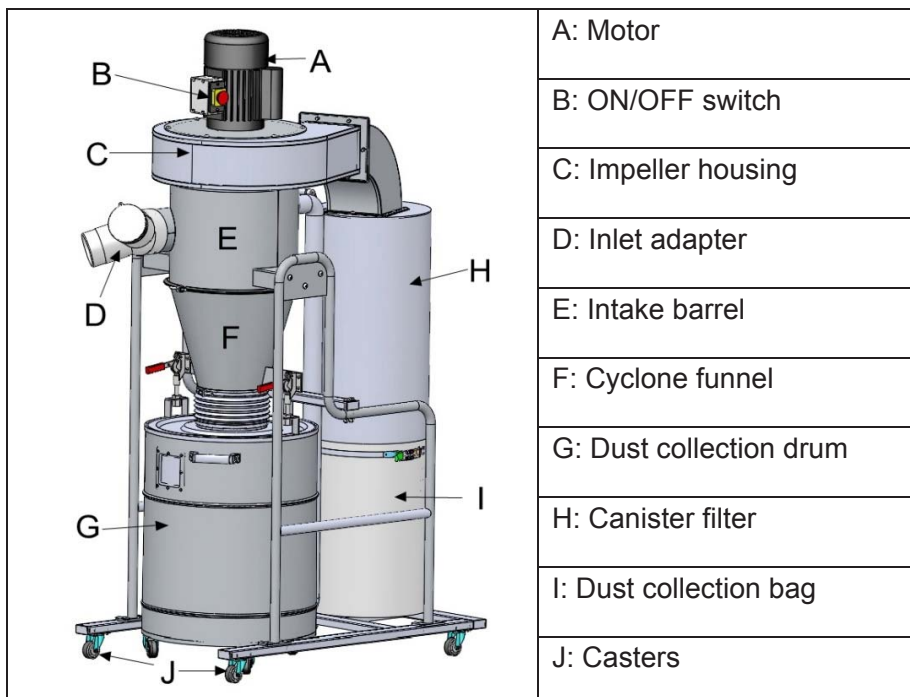
If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packaging materials while unpacking or they are pre-installed at the factory.



### 3.4 Assembly

The machine must be fully assembled before it can be operated. Before beginning the assembly process, gather all listed items. To ensure the assembly process goes smoothly, first clean any parts that are covered or coated in heavy-duty rust preventative (if applicable).

#### 3.4.1 Know your cyclone dust collector



### 3.4.2 To assemble machine

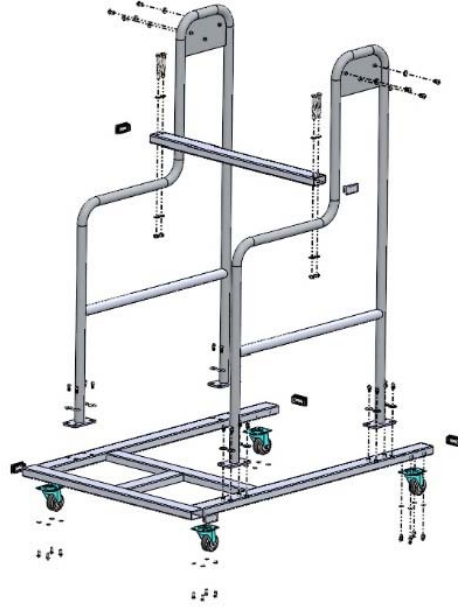


The machine is heavy.

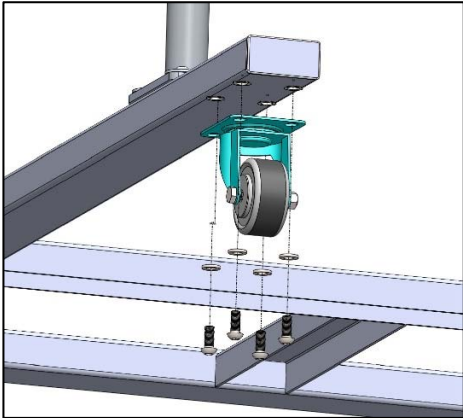
**DO NOT** over-exert yourself while assemble the machine. 2-3 manpower required to safely assemble it.

**STEP-1** Install the main bracket.

Please refer to the diagram and step 1.1-1.4 for detail diagram.



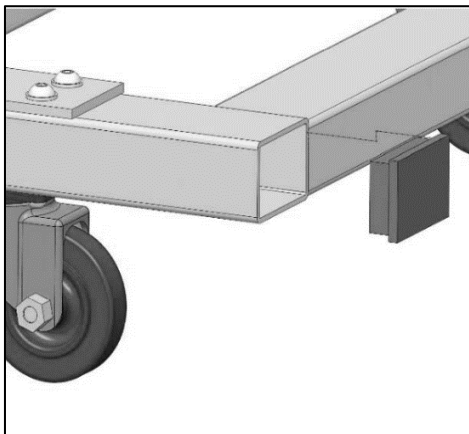
1.1 Fix the casters on the base by hexagon socket flat head bolts and flat washers.



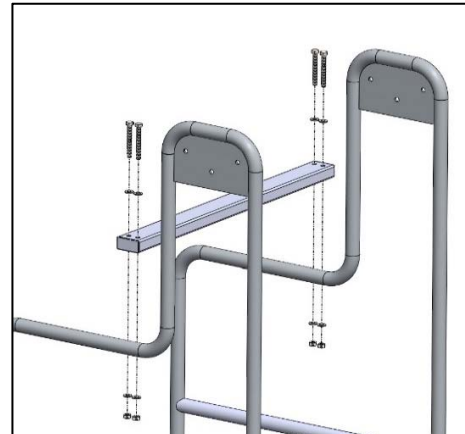
1.2 Fix the bracket on the base by hexagon socket flat head bolts and washers.



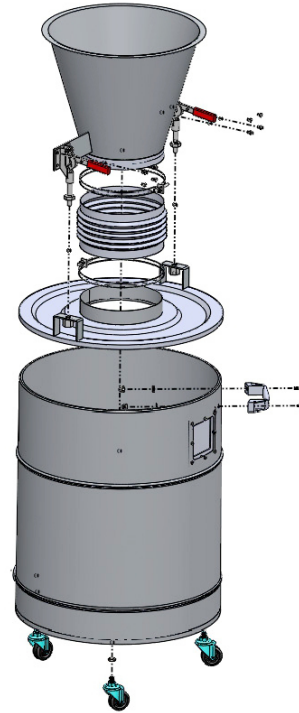
1.3 Insert the end cap into the four sides of the base.



1.4 Fix the connecting rod to the bracket by long bolts, flat washers and nuts.



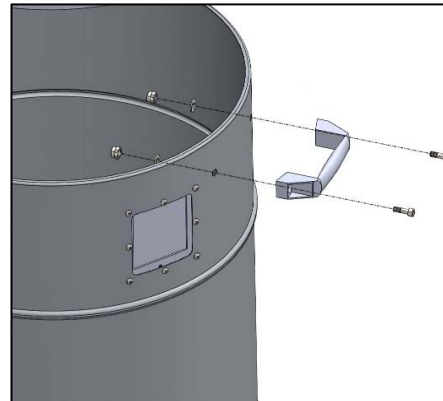
**STEP-2 Install the dust collection drum, cyclone funnel assembly. Please refer to the diagram and Step 2.1-2.4 for detail diagram.**



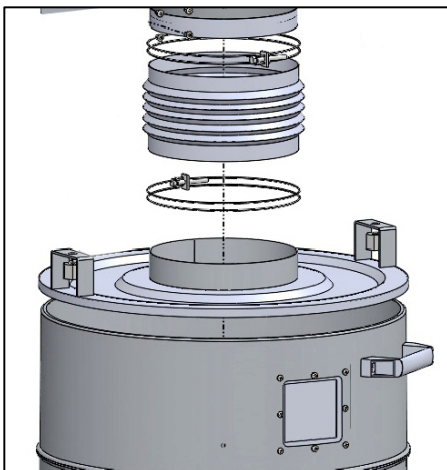
2.1 Install the 2 inch casters on the bottom of the dust collection drum.



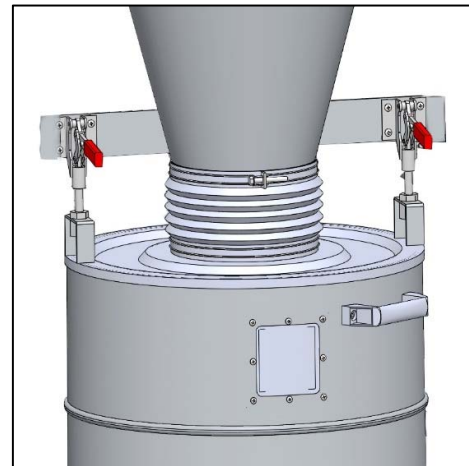
2.2 Install the handle on the drum by hexagon socket head bolts, flat washers and self-locking nuts.



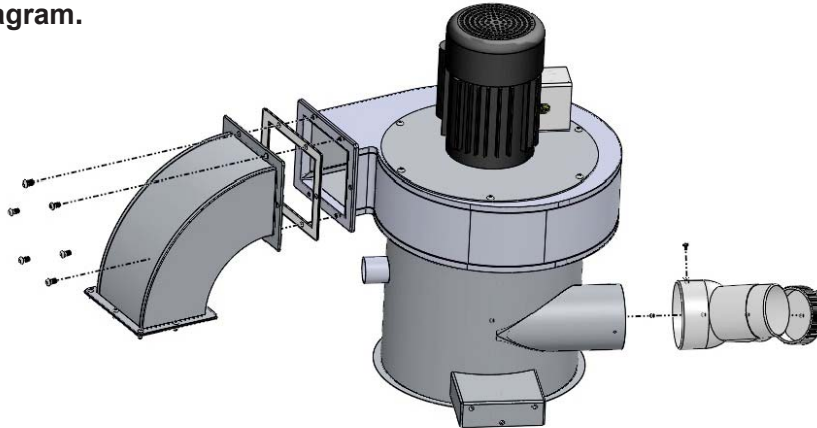
2.3 Connect the cyclone funnel and the drum cover by steel clamps and flexible hose.



2.4 Install the quick-locking handle, then lock the drum cover onto the cyclone funnel by the quick-locking handle.

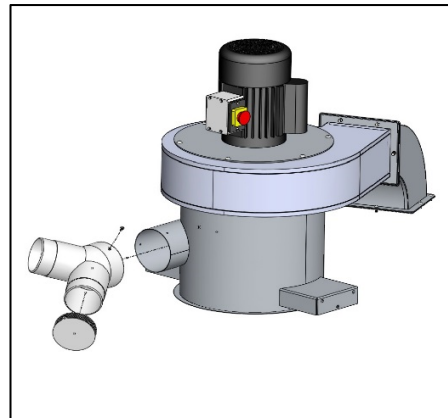
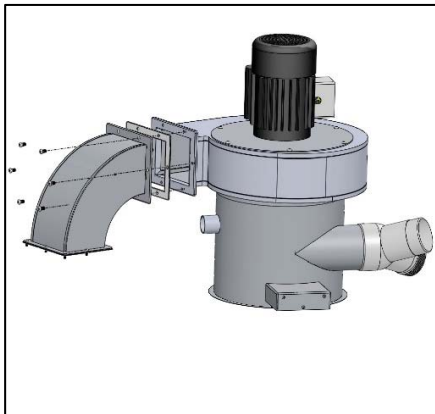


**STEP-3** Install the relevant components on the impeller housing assembly. Please refer to the following diagram.

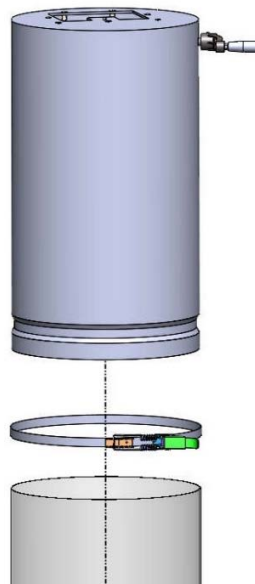


3.1 Connect the elbow, rubber gasket and impeller housing by hexagon socket pan head screws together.

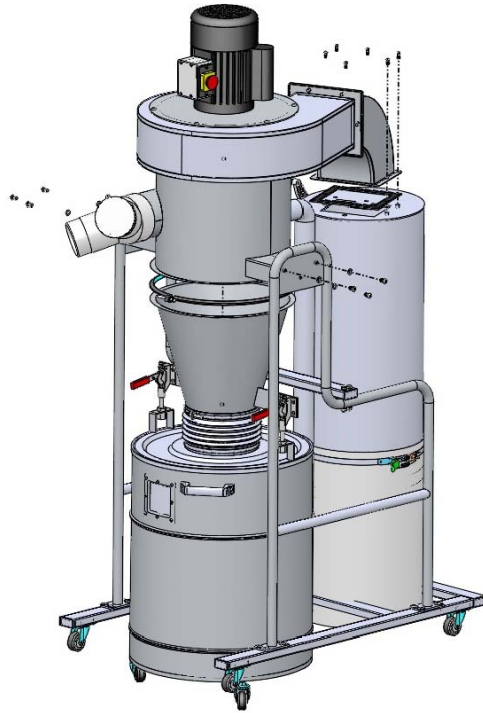
3.2 Install the connector on the intake barrel by three screws and then buckle the cap on the connector.



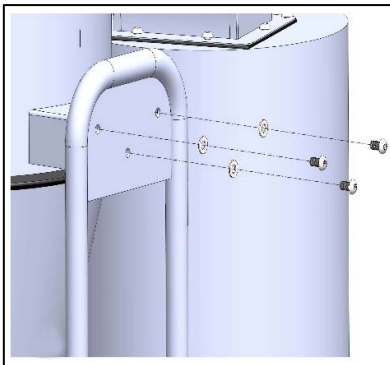
**STEP-4** Install the dust collection bag on the air filter by bag clamp.



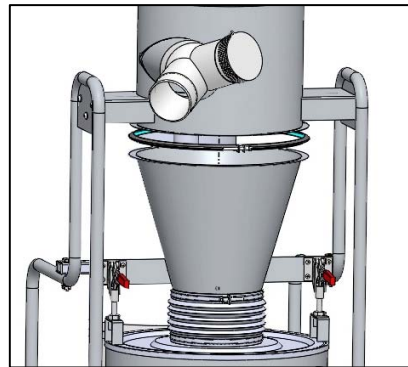
**STEP-5 Combine the bracket, cyclone funnel, impeller housing, cartridge filter together. Please refer to the diagram and step 5.1-5.4 for detail diagram.**



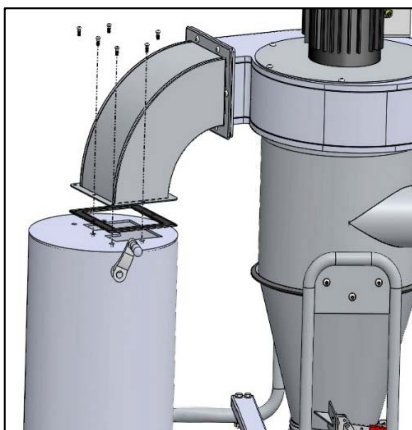
**5.1 Fix the intake barrel and impeller housing assembly on the bracket by hexagon socket flat head screws and flat washers.**



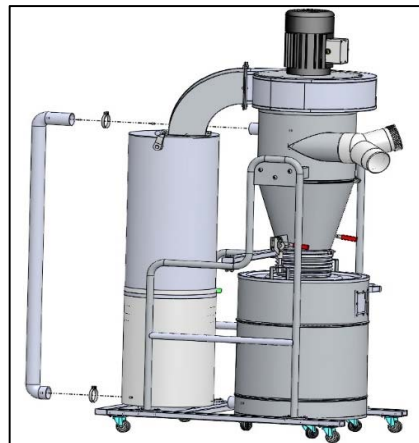
**5.2 Connect the intake barrel and cyclone funnel together by the steel hoop.**



**5.3 Connect the canister filter, rubber gasket and elbow together by the screws.**



**5.4 Place hose clamps on each end of vacuum hose, then connect hose to ports on cyclone funnel and collection drum.**

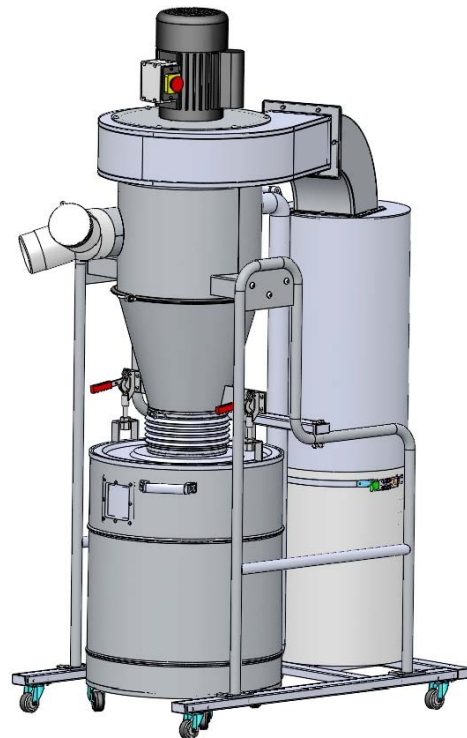
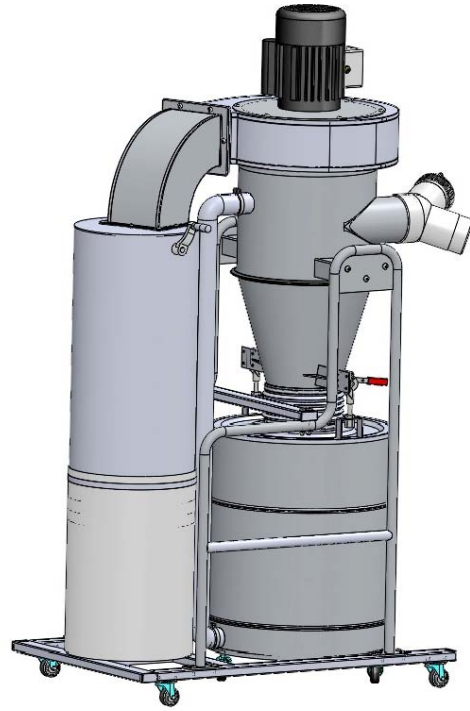




The machine is installed well as the following picture.

Attention: Before use the machine, please check all the screws and bolts are tightened.

M350CA-1900H:



### 3.5 Initial commissioning

Once assembly is complete, test run the machine to ensure it is properly connected to power and safety components are functioning correctly.

If you find an unusual problem during the test run, immediately stop the machine, disconnect it from power, and fix the problem BEFORE operating the machine again.



**DO NOT start machine until all preceding setup instructions have been performed.**

Operating an improperly set up machine may result in malfunction or unexpected results that can lead to serious injury, death, or machine/property damage.

#### To test run machine:

1. Clear all setup tools away from machine.
2. Lock all swivel casters on base stand and dust collection drum.
3. Connect machine to the cyclone dust collector or place covers over inlet adapter ports.



**DO NOT operate the machine without first connecting it to a dust-collection system or covering an inlet adapter port. Otherwise, the lack of airflow resistance will cause the motor to operate at full amperage load, which could trip your circuit breaker or blow a fuse.**

4. Connect machine to power.
5. Standing away from intake port, press button "ON" to turn machine on.
6. Verify motor starts up and runs smoothly without any problems or unusual noises.
7. Press "OFF" button to turn machine OFF.

### 3.6 Optional accessories for dust collector



Blast gate



Elbow



Adaptor



Connector



Connector



Canister filter



Flexible hose



Hose clamp



Bag clamp



Dust bag

## 4. Operation

The purpose of this overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, so the machine controls/components discussed later in this manual are easier to understand. Due to the generic nature of this overview, it is not intended to be an instructional guide. To learn more about specific operations, read this entire manual, seek additional training from experienced machine operators, and do additional research outside of this manual by reading "how-to" books, trade magazines, or websites.



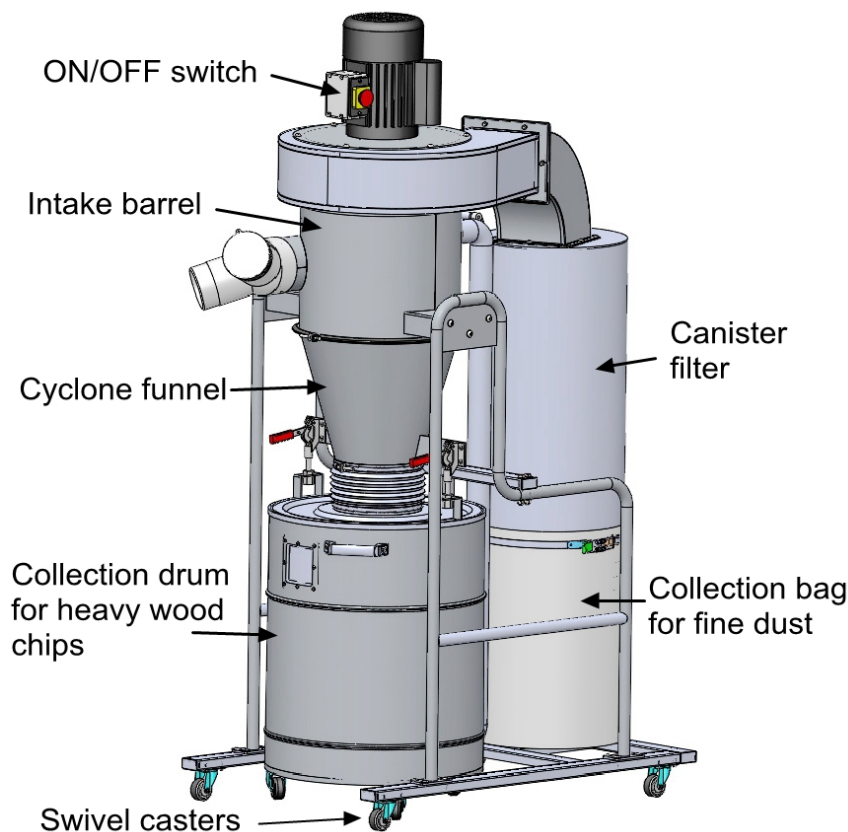
**If you are not experienced with this type of machine, WE STRONGLY RECOMMEND that you seek additional training outside of this manual. Read books/magazines or get formal training before beginning any projects.**

This cyclone dust collector creates a vortex of incoming air that extracts heavy wood chips and large dust particles, and then drops them into the collection drum.

The remaining fine dust travels past the impeller and is then caught by a canister filter and deposited in the plastic collection bag below. The spun-bond polyester filters are pleated to provide maximum surface area for efficient air flow.

To maintain CFM during heavy dust-collection operations, turn the filter cleaning handle to knock caked-on dust into the plastic collection bag.

Always lock the swivel casters before operation.





#### 4.1 Tips for optimum performance

- ▲ Avoid using more than 10' of flexible hose on any ducting line. The ridges inside flexible hose greatly increase static pressure loss, which reduces suction performance.
- ▲ Keep ducts between the dust collector and machines as short as possible.
- ▲ Keep ducting directional changes to a minimum. The more curved fittings you use, the greater the loss of suction at the dust-producing machine.
- ▲ Gradual directional changes are more efficient than sudden directional changes (i.e. use 45° elbows in place of 90° elbows whenever possible).
- ▲ The simpler the system, the more efficient and less costly it will be.

#### 4.2 Required CFMs

Since each machine produces a different amount of sawdust, the requirements for the minimum amount of CFM to move that sawdust is unique to the machine (for example, a planer produces more sawdust than a table saw). Knowing this required CFM is important to gauging which size of duct to use.

Refer to the figure below for a close estimation of the airflow each machine requires. Keep in mind that machines that generate the most sawdust should be placed closest to the dust collector. If the machine has multiple dust ports, the total CFM required is the sum of all ports.

Machine dust port Size	2"	2.5"	3"	4"	5"	6"	7"	8"	9"	10"
Approximate Required CFM	100	150	250	400	600	850	1200	1600	2000	2500

## 5. Maintenance

### 5.1 Schedule

For optimum performance from this machine, this maintenance schedule must be strictly followed ongoing.

To maintain a low risk of injury and proper machine operation, if you ever observe any of the items below, shut down the machine immediately and fix the problem before continuing operations:

- ▲ Loose mounting bolts.
- ▲ Damaged filter canister, cleaning paddle components, or collection bags.
- ▲ Worn or damaged wires.
- ▲ Suction leaks.
- ▲ Any other unsafe condition.

### Monthly Check

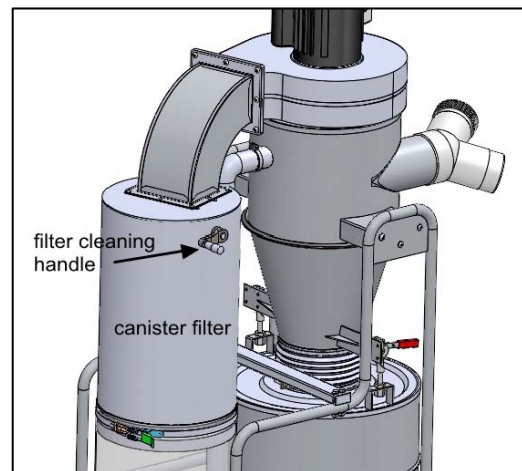
- ▲ Clean/vacuum dust buildup off machine body and motor.

### 5.2 Cleaning canister filter

This dust collector uses a handle and internal paddles to remove dust buildup and debris from the filter pleats. Turn the handle through its range of motion to clean the canister filter and knock dust cake into the filter bag.

For a more thorough cleaning every few months under heavy use, wash the filter by hand.

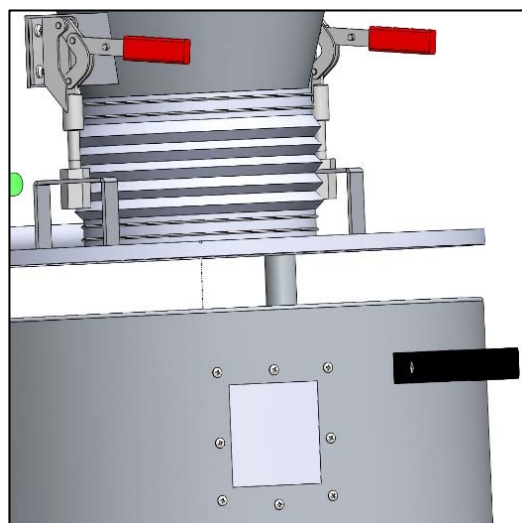
**IMPORTANT: To contain wood dust and minimize risk of exposure, firmly tie bag closed.**



### 5.3 Removing/Replacing collection drum bag

Dispose of the collection drum bag when dust fills it 3/4 full. Replace the bag if it develops a leak or becomes damaged.

1. DISCONNECT MACHINE FROM POWER!
2. Loose the two drum lock handles which tighten the drum cover to the collection drum
3. Take out the inner drum from the collection drum.
4. Clean or replace the bag.
5. Put the inner drum into the cleaned or new bag.
6. Tighten the drum cover to the collection drum by using the clamps.

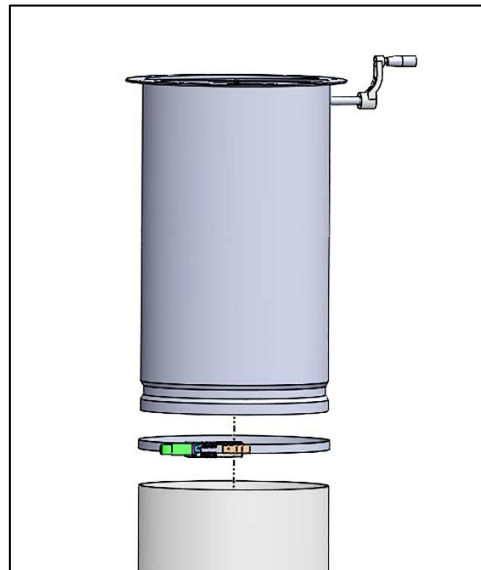


#### 5.4 Removing/Replacing filter bag

Remove and replace the filter bag when it is about 1/2 full.

To remove & replace filter bag or bags:

1. DISCONNECT MACHINE FROM POWER!
2. Release clamp around bottom of canister filter, then remove filter bag.
3. Attach new filter bag around bottom of canister filter and secure with clamp.

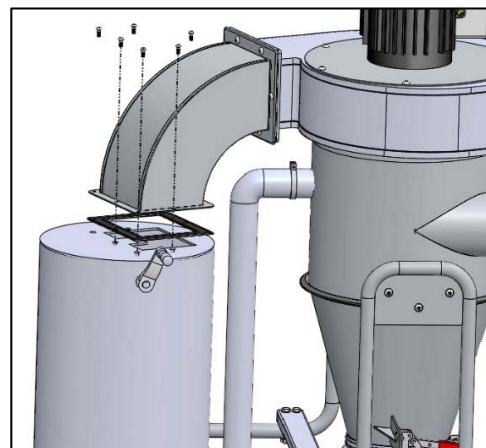


#### 5.5 Removing/Replacing canister filter

If the canister filter is clogged or dirty and cleaning it does not improve dust-collection performance, the canister filter must be replaced.

To remove and replace canister filter:

1. DISCONNECT MACHINE FROM POWER!
2. Loosen the screws which fixed the rubber gasket and canister filter to the elbow.
3. Install the rubber gasket and new canister filter to the elbow by the screws.



**Dust exposure created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Always wear goggles and a NIOSH approved respirator when working with the dust collection bags or canisters.**

## 6. Troubleshooting

Review the troubleshooting procedures in this section if a problem develops with your machine. If you need replacement parts or additional help with a procedure, please contact with us.

Note: Please gather the serial number and manufacture date of your machine before calling.

### Motor & Electrical

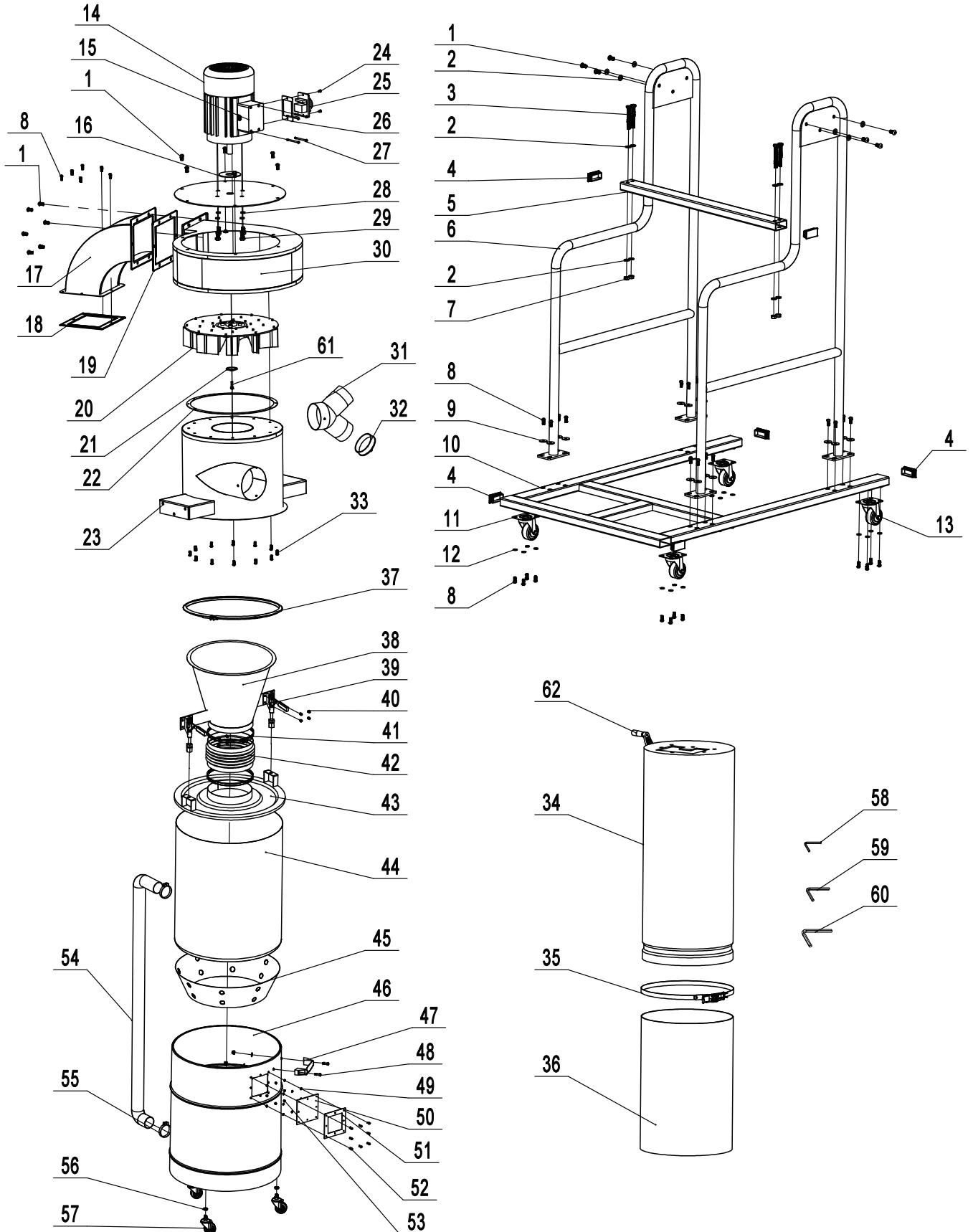
Symptom	Possible Cause	Possible Solution
<b>Machine does not start, or power supply fuse/breaker trips immediately after startup.</b>	<ol style="list-style-type: none"> <li>1. Cyclone dust collector not properly connected to ducting.</li> <li>2. Incorrect power supply voltage or circuit size.</li> <li>3. Power supply circuit breaker tripped or fuse blown.</li> <li>4. Motor overheated.</li> <li>5. Wiring open/has high resistance.</li> <li>6. Power switch at fault.</li> <li>7. Capacitor at fault.</li> <li>8. Motor at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect dust collector to ducting.</li> <li>2. Ensure correct power supply voltage and circuit size.</li> <li>3. Ensure circuit is sized correctly and free of shorts. Reset circuit breaker or replace fuse.</li> <li>4. Allow motor to cool, reset overload if necessary.</li> <li>5. Check/fix broken, disconnected, or corroded wires.</li> <li>6. Test/replace.</li> <li>7. Replace.</li> <li>8. Test/repair/replace.</li> </ol>
<b>Machine seems underpowered.</b>	<ol style="list-style-type: none"> <li>1. Motor overheated.</li> <li>2. Dust-collection ducting problem.</li> <li>3. Canister filter clogged/at fault.</li> <li>4. Dust collector too far from machine or undersized for dust-collection system.</li> <li>5. Capacitor at fault.</li> <li>6. Motor bearings at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Allow motor to cool, reset overload if necessary.</li> <li>2. Clear blockages, seal leaks, use smooth-wall duct, eliminate bends, close other branches.</li> <li>3. Clean canister filter; replace canister filter.</li> <li>4. Move closer to machine/redesign ducting layout/upgrade dust collector.</li> <li>5. Test/repair/replace.</li> <li>6. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.</li> </ol>
<b>Machine has vibration or noisy operation.</b>	<ol style="list-style-type: none"> <li>1. Motor or component loose.</li> <li>2. Motor fan rubbing on fan cover.</li> <li>3. Motor mount loose/broken.</li> <li>4. Impeller damaged, unbalanced, or loose.</li> <li>5. Motor bearings at fault.</li> <li>6. Motor shaft bent.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect/replace damaged bolts/nuts, and retighten with thread-locking fluid.</li> <li>2. Fix /replace fan cover; replace loose/damaged fan.</li> <li>3. Tighten/replace.</li> <li>4. Inspect/tighten/replace.</li> <li>5. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.</li> <li>6. Test with dial indicator. Replace motor if damaged.</li> </ol>

## Machine Operation

Symptom	Possible Cause	Possible Solution
<b>Dust collector does not adequately collect dust or chips; poor performance.</b>	<ol style="list-style-type: none"> <li>1. Collection bag full.</li> <li>2. Canister filter clogged/at fault.</li> <li>3. Ducting blocked/restricted.</li> <li>4. Dust collector too far away from point of suction; duct clamps not properly secured; too many sharp bends in ducting.</li> <li>5. Lumber is wet and dust is not flowing smoothly through ducting.</li> <li>6. Ducting has one or more leaks, or too many open ports.</li> <li>7. Not enough open branch lines at one time, causing velocity drop in main line.</li> <li>8. Ducting and ports are incorrectly sized.</li> <li>9. The machine dust-collection design inadequate.</li> <li>10. Dust collector undersized.</li> </ol>	<ol style="list-style-type: none"> <li>1. Empty collection bag.</li> <li>2. Clean canister filter; replace canister filter.</li> <li>3. Remove ducting from dust collector inlet and unblock restriction. A plumbing snake may be necessary.</li> <li>4. Relocate dust collector closer to point of suction; re-secure ducts; remove sharp bends.</li> <li>5. Only process lumber with less than 20% moisture content.</li> <li>6. Seal/eliminate all ducting leaks; close dust ports for lines not being used. Refer to Designing the System in manual.</li> <li>7. Open 1 or 2 more blast gates to different branch lines to increase main line velocity.</li> <li>8. Install correctly sized ducts and fittings</li> <li>9. Use dust-collection hood on stand.</li> <li>10. Install larger dust collector.</li> </ol>
<b>Dust collector blows sawdust into the air.</b>	<ol style="list-style-type: none"> <li>1. Duct clamps or filter bag(s) are not properly clamped and secured; ducting loose/ damaged.</li> <li>2. Cylinder or funnel seals are loose or damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Re-secure ducts and filter bag, making sure duct and bag clamp are tight; tighten/replace ducting.</li> <li>2. Retighten all mounting and sealing points; replace damaged seals/gaskets.</li> </ol>
<b>Loud, repetitious noise, or excessive vibration coming from dust collector (non-motor related).</b>	<ol style="list-style-type: none"> <li>1. Dust collector not on a flat surface and wobbles.</li> <li>2. Impeller damaged and unbalanced.</li> <li>3. Impeller loose on the motor shaft.</li> </ol>	<ol style="list-style-type: none"> <li>1. Stabilize dust collector; lock casters.</li> <li>2. Inspect/replace.</li> <li>3. Secure impeller; replace motor and impeller as a set if motor shaft and impeller hub are damaged.</li> </ol>

## 7. Diagram and part list

### 7.1 Diagram FM350CA

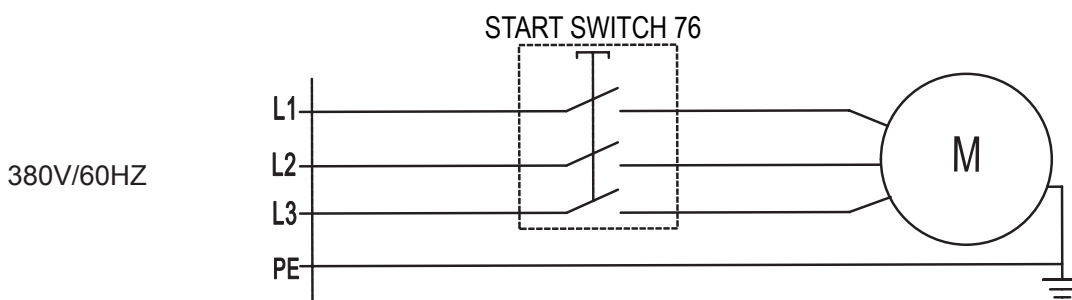
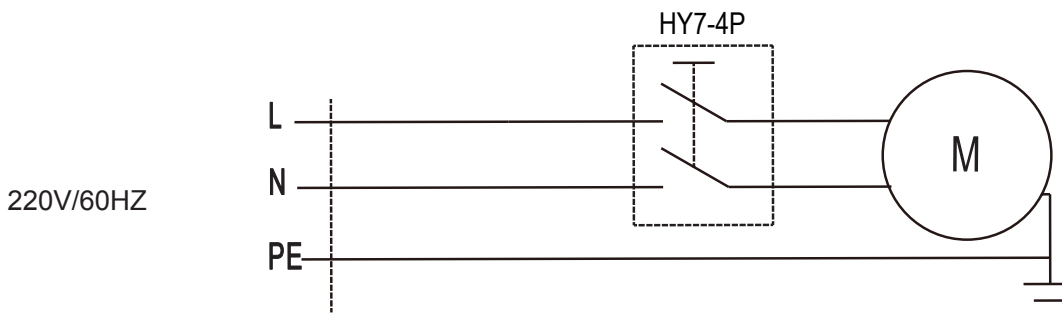
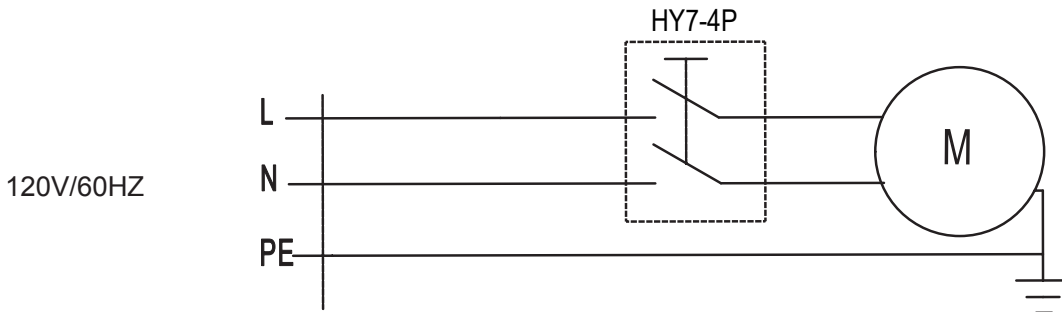
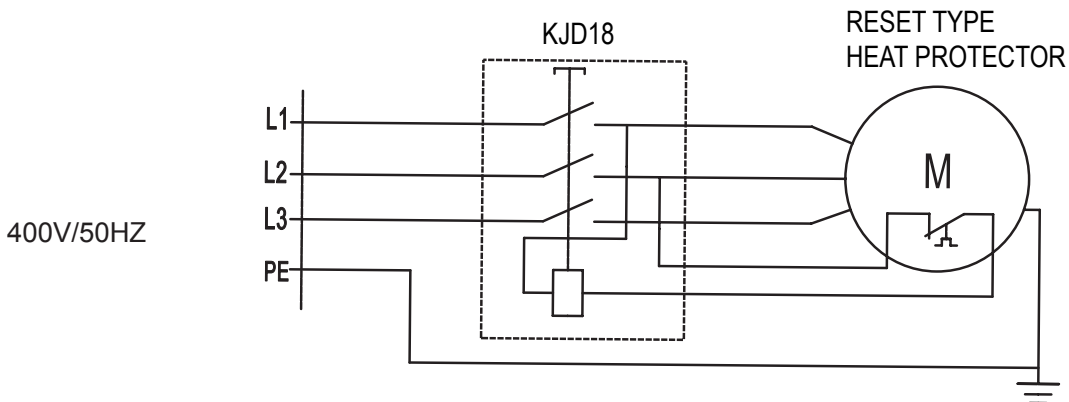
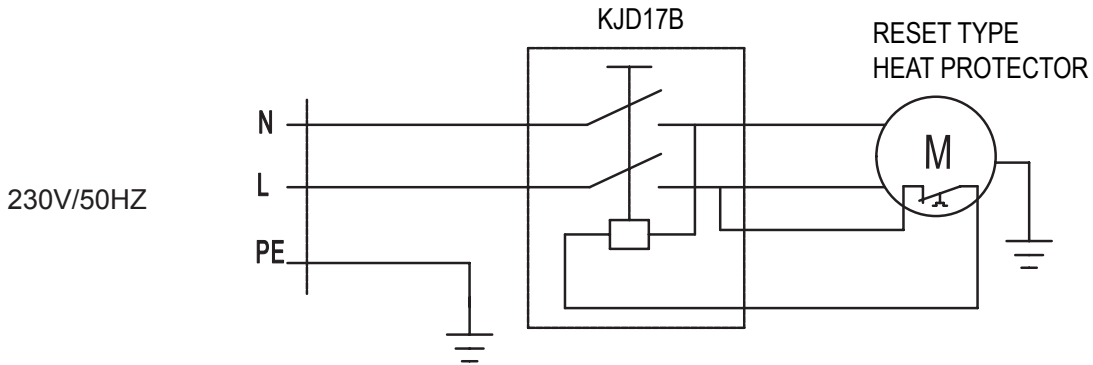


## 7.2 Part list for FM350CA

Part No.	Description	Qty
1	Hexagon socket screw M8x16	18
2	Flat washer 8	16
3	Hexagon socket screw M8x70	4
4	End cap	6
5	Connecting rod	1
6	Bracket	2
7	Hexagon nut M8	4
8	Countersunk nut M6X15	32
9	Washer	16
10	Base	1
11	Caster	2
12	Flat washer 6	23
13	Caster	2
14	Motor	1
15	Screw M4x60	4
16	Rubber gasket	1
17	Elbow	1
18	Rubber gasket	1
19	Rubber gasket	1
20	Impeller	1
21	Retaining ring	1
22	Rubber gasket	1
23	Dust tube	1
24	Screw M4x12	2
25	Switch	1
26	Switch board	1
27	Screw M4x60	4
28	Spring washer	4
29	Hexagon head bolt M10x20	4
30	Impeller housing	1
31	Inlet adapter	1

Part No.	Description	Qty
32	Cap	1
33	Hexagon socket screw M6x10	12
34	Cartridge filter	1
35	Hose clamp	1
36	Dust collection bag	1
37	Steel hoop	1
38	Cyclone funnel	1
39	Quick-locking clamp	2
40	Screw M5x8	8
41	Steel clamp	2
42	Flexible hose	1
43	Drum cover	1
44	Dust collection bag	1
45	Bracket	1
46	Dust collection drum	1
47	Handle	1
48	Hexagon socket screw M8x20	2
49	Flat washer	8
50	Plastic plate	1
51	Rubber gasket	1
52	Screw M4x12	8
53	Hexagon nut M4	8
54	Flexible hose $\Phi$ 50	1
55	Hose clamp	2
56	Hexagon thin nut M10	3
57	Caster	3
58	Allen wrench S4	1
59	Allen wrench S5	1
60	Allen wrench S6	1
61	Hexagon socket screw M6x20	1
62	Filter handle	1

7.3 Wiring diagram for FM350CA





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