



# Busy Bee Tools

## Cyclone Dust Collectors



**BBCY1.5**

**BBCY2**

**BBCY3**

**BBCY5**

**1.5 HP CYCLONE**

**2 HP CYCLONE**

**3 HP CYCLONE**

**5 HP CYCLONE**



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## Introduction

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These machines have been specially designed to provide many years of trouble-free service. Our thorough quality control program ensures a reliable safe machine that will provide years of safe operation. Our intention is to provide you with this manual to describe the basic information for safety, setup, operation, and maintenance of your new machine. We at Busy Bee Tools are committed and pride ourselves in customer satisfaction.

We stand behind our products! In the event that questions arise about your machine, please contact Busy Bee Tools Customer Service at (905) 738-5115 or 1-800-461-2879 or send e-mail to: [cs@busybeetools.com](mailto:cs@busybeetools.com).

Our knowledgeable staff will help you to troubleshoot problems and process warranty claims when required.

We cannot stress enough how important your health and safety are. This manual has been designed with the assembly, proper use, and care as the focal point. Therefore, we have introduced many warning signs throughout the manual to emphasize your safety. So please read and adhere to these simple and important warnings.

We welcome you to the Busy Bee Tools family of quality woodworking machinery.

## General Safety Instructions for Machines

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**Extreme caution should be used when operating all power tools. Know your power. tool, be familiar with its operation, read through the owner's manual and practice safe usage procedures at all times. For your own safety, please read the instruction manual before operating this machine.**

The purpose of safety symbols is to attract your attention to possible hazards. In this manual we use a series of symbols and signs to convey the level of importance of the safety messages. Please read below to understand the level of importance for each of the signs. Remember that the messages themselves do not eliminate the danger and are not a substitute for proper accident prevention measures. Always use common sense and your good judgment.



**Danger:** Indicates an immediate hazardous situation which, if not avoided, WILL result in death or serious injury.

**Warning:** Indicates a potential hazardous situation which if not avoided COULD result in death or serious injury.

**Caution:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

**Notice:** Alerts the user to useful information about proper operation of the machine to avoid machine damage.

- CONNECT** your machine ONLY to the matched and specific power source.
- ALWAYS** wear safety glasses, respirators, hearing protection and safety shoes, when operating your machine.
- DO NOT** wear loose clothing or jewelry when operating your machine.
- GROUND ALL TOOLS** if tool is equipped with three-prong plug, it

should be plugged into a matching receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter plug must be attached to a known ground. Never remove the third prong.

**A SAFE ENVIRONMENT** is important. Keep the area free of dust, dirt and other debris in the immediate vicinity of your machine.

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

□ **NEVER** leave a tool unattended while it is in operation.

□ **DON'T OVERREACH.** Keep proper footing and balance at all times.

□ **DISCONNECT** the power source when changing drill bits, hollow chisels, router bits, shaper heads, blades, knives or making other adjustments or repairs.

□ **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and frees both hands to operate tool.

□ **BE ALERT! DO NOT** use prescription or other drugs that may affect your ability or judgment to safely use your machine.

□ **MAINTAIN TOOLS IN TOP CONDITION.** Keep the blades sharp and aligned. Follow instructions for lubricating and changing accessories.

□ **DISCONNECT TOOLS** before servicing and when changing accessories such as blades, bits, cutters, etc.

□ **ALWAYS** keep all safety guards in place and ensure their proper function.

□ **WARNING:** The dust generated by certain woods and wood products can be injurious to your health. **ALWAYS** operate machinery in well ventilated areas and provide for proper dust removal. Use wood dust collection systems whenever possible.

## Specific Safety Instructions

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**Read and understand the instruction manual before operating the dust collector. Basic precautions listed below should always be followed when using your dust collector to reduce the risk of injury, electrical shock, or fire**

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- **DO NOT** leave the dust cyclone plugged into the electrical outlet. Unplug dust cyclone from outlet when not in use and before servicing, changing canister, unclogging and cleaning.
- **ALWAYS** turn the power switch “OFF” before unplugging the dust cyclone.
- **ALL** electrical connections and wiring should be made by qualified personnel only.
- **DO NOT** pull the dust cyclone by the power cord. NEVER allow the power cord to come in contact with sharp edges, hot surfaces, oil, or grease.
- **REPLACE** a damaged cord immediately. DO NOT use a damaged cord or plug. If the dust cyclone is not operating properly, or has been damaged, left outdoors or has been in contact with water, return it to an Authorized Service Center for service.
- **ALWAYS** be sure that the collection bags and canister filter are securely fastened to the collector body.
- **PERIODICALLY INSPECT** dust bag and Canister filter for any cuts, rips or tears.
- **Disconnect** the machine from the power source before servicing.
- **TO REDUCE** the risk of electrical shock, do not use the dust collector to pick up flammable or combustible liquids, such as gasoline.
- **NEVER** use the dust cyclone to dissipate fumes or smoke. Never pickup anything that is burning or smoking, such as cigarettes, matches or hot ashes.
- **DO NOT** use the dust cyclone as a toy. Keep children away from the dust collector.
- **ALWAYS** Keep hair, loose clothing, fingers, and all body parts away from openings and moving parts of the dust cyclone.
- **DO NOT** use the dust cyclone without a canister filter and dust collection bag in place and properly secured.
- **DO NOT** operate the dust cyclone with unused dust intake ports uncapped. ALWAYS cover exposed dust intake ports.
- **CONNECT** dust collector to a properly grounded outlet only. See Grounding Instructions.
- **NEVER** attempt to use this dust cyclone to collect metal materials such as screws, nails, or other metal parts.

## BBCY CYCLONE DUST COLLECTORS

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### Technical Data

#### BBCY1.5HP

Ⓢ Motor.....	1.5HP, 110-Volts, 60-Hz, Single Phase
Ⓢ Amp .....	15 Amps
Ⓢ Minimum Circuit Size.....	20 Amps
Ⓢ Motor Speed .....	3450 RPM
Ⓢ Suction Capacity.....	868 CFM
Ⓢ Static Pressure.....	9.7" H2O
Ⓢ Impeller Size.....	12-3/4"
Ⓢ Sound Rating .....	78dB
Ⓢ Switch .....	Magnetic Switch
Ⓢ Inlet Size .....	6" (with 4" Y-Inlet)
Ⓢ Made In.....	Taiwan
Ⓢ Warrant.....	2 Years

#### BBCY2HP

Ⓢ Motor.....	2 HP, 220-Volts, 60-Hz, Single Phase
Ⓢ Amp .....	9.5 Amps
Ⓢ Minimum Circuit Size.....	15 Amps
Ⓢ Motor Speed .....	3450 RPM
Ⓢ Suction Capacity.....	1720 / 1150 CFM
Ⓢ Static Pressure.....	11" H2O
Ⓢ Impeller Size.....	12-3/4"
Ⓢ Sound Rating .....	78dB
Ⓢ Switch .....	Magnetic Switch
Ⓢ Inlet Size .....	8" (with 4" Y-Inlet)
Ⓢ Made In.....	Taiwan
Ⓢ Warrant.....	2 Years

#### BBCY3HP

Ⓢ Motor.....	3 HP, 220-Volts, 60-Hz, Single Phase
Ⓢ Amp.....	15 Amps
Ⓢ Minimum Circuit Size.....	30 Amps
Ⓢ Motor Speed .....	3450 RPM
Ⓢ Suction Capacity.....	2900 / 2280 CFM
Ⓢ Static Pressure.....	12.5" H2O
Ⓢ Impeller Size .....	15"



- Ⓢ Sound Rating .....79 dB
- Ⓢ Switch ..... Magnetic Switch
- Ⓢ Inlet Size.....8" (with 4" Y-Inlet)
- Ⓢ Country of Origin.....Made in Taiwan
- Ⓢ Warranty .....2 Years

BBCY5HP

- Ⓢ Motor.....5 HP, 240-Volts, 60-Hz, Single Phase
- Ⓢ Amp .....30 Amps
- Ⓢ Minimum Circuit Size.....60Amps
- Ⓢ Motor Speed .....3450 RPM
- Ⓢ Suction Capacity.....4350 / .2450 CFM
- Ⓢ Static Pressure.....13.5" H2O
- Ⓢ Sound Rating.....78 dB
- Ⓢ Impeller Size.....16"
- Ⓢ Switch ..... Magnetic Switch
- Ⓢ Inlet Size .....8" (with 4" Y-Inlet)
- Ⓢ Country of Origin .....Made in Taiwan
- Ⓢ Warranty .....2 Years

# BBCY 1.5 HP and 2HPCYCLONE DUST COLLECTOR

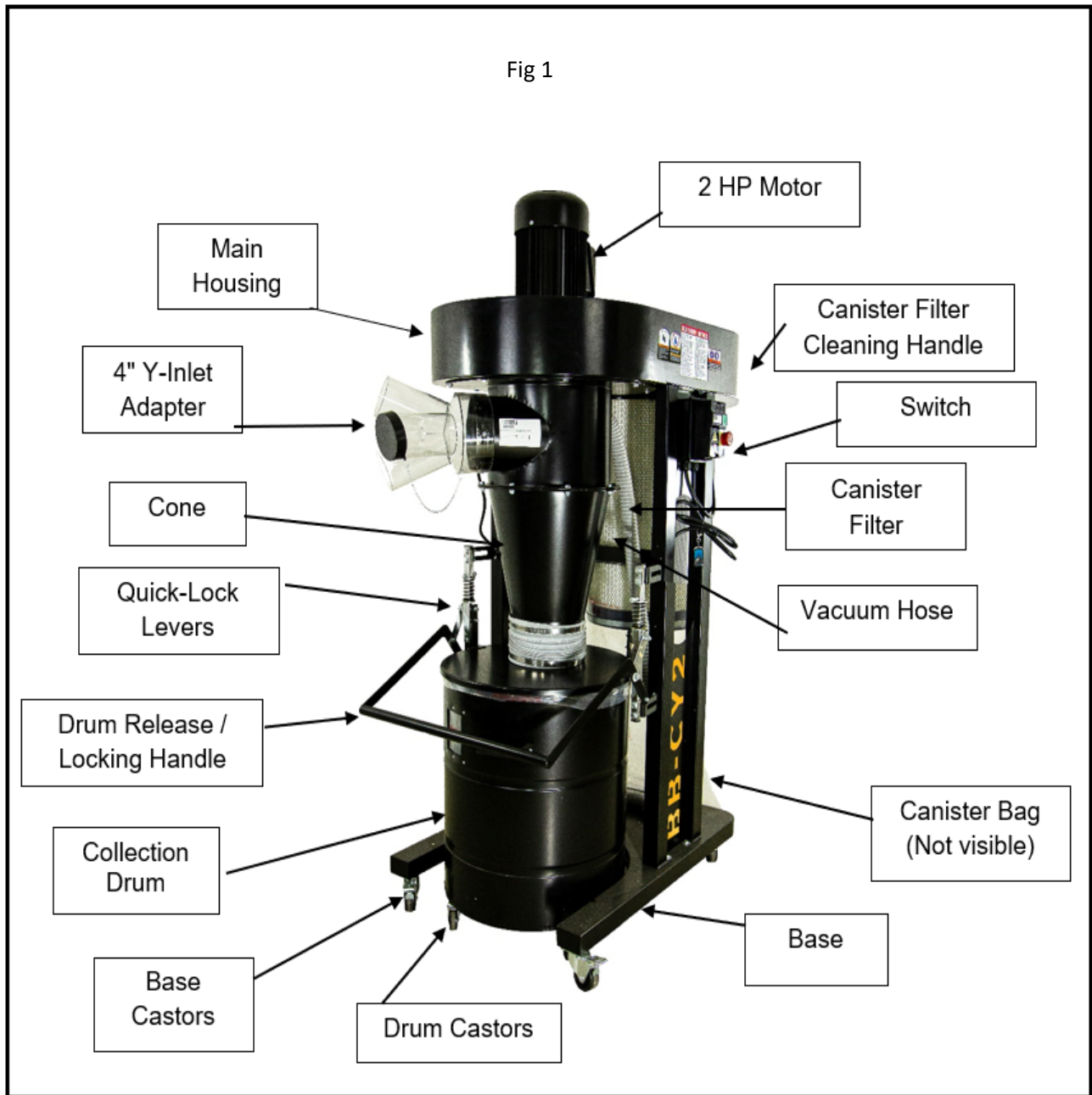


Figure 1: BBCY1.5HP and 2HP cyclone Major Components.

## BBCY 3 HP CYCLONE DUST COLLECTOR

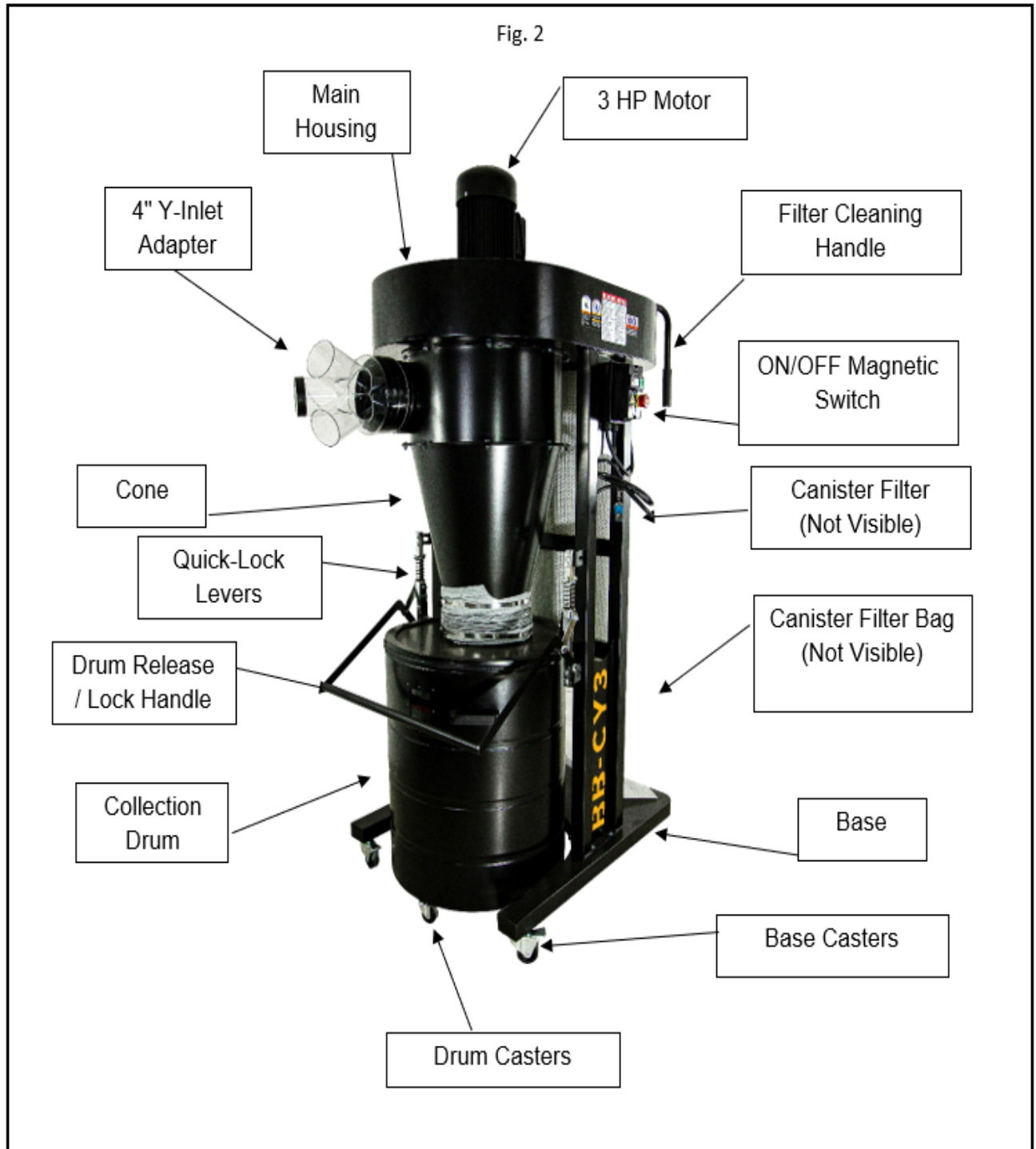


Figure 2: BBCY3HP Major Components.

# BBCY 5 HP CYCLONE DUST COLLECTOR

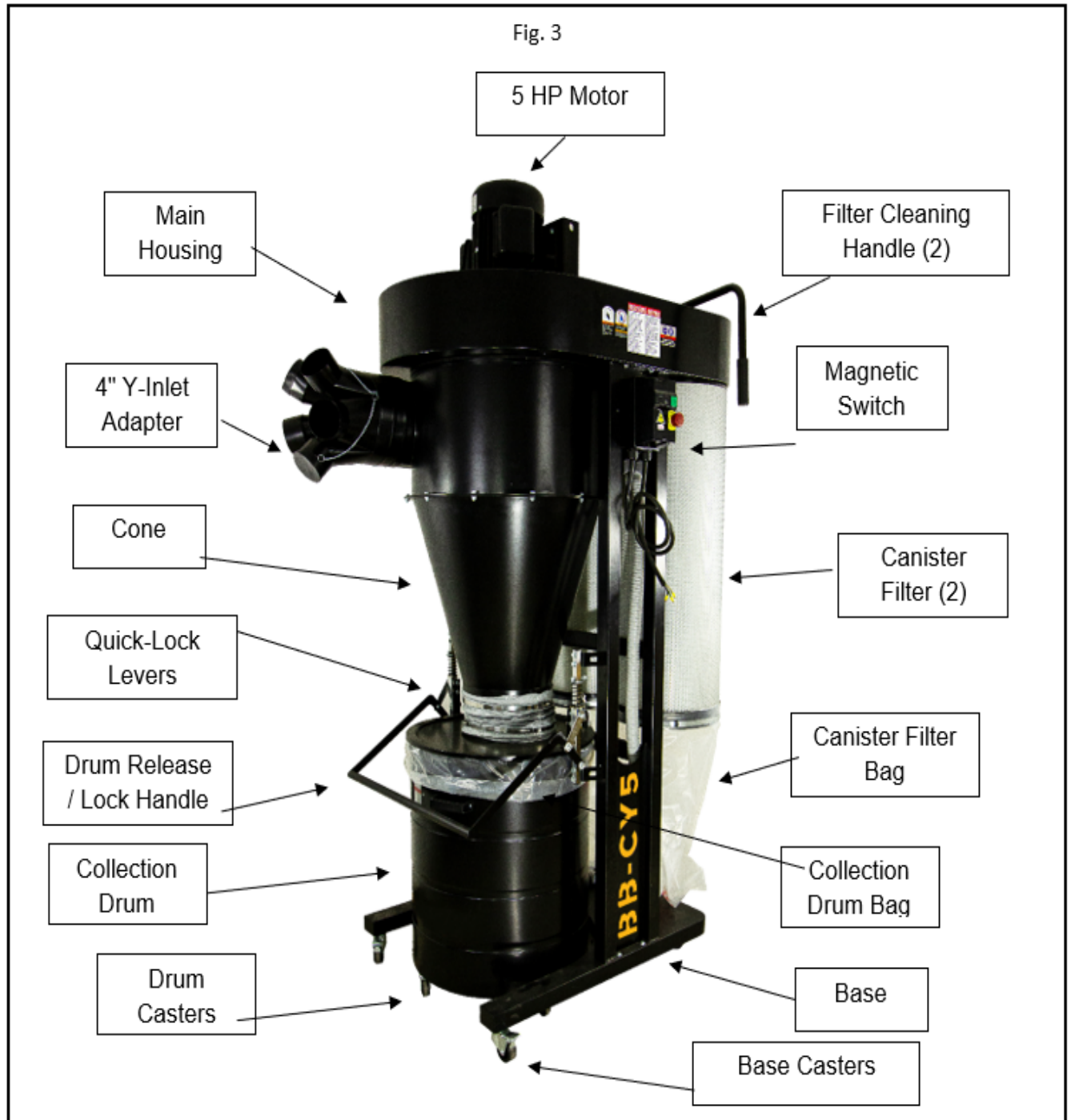


Figure 3: BBCY5HP Major Components.

## Dust Collection Requirements

### Determine the Required CFMs:

Calculating the necessary CFMs (Cubic Feet per Minute) for effective dust collection is a critical step to ensure optimal performance in your woodworking shop. Each machine in your workshop generates a varying amount of sawdust, making it essential to tailor your dust collection system accordingly. For example, a planer typically produces more sawdust than a table saw, so understanding the specific CFM requirements for each machine is key to selecting the appropriate duct size.

To assist you in determining the required CFM for your machines, please refer to the diagram in the figure. This diagram provides a close estimate of the airflow needed for various woodworking machines. It's essential to note that machines that generate a higher volume of sawdust should be positioned in proximity to the dust collector for more efficient dust removal. Additionally, if a machine features multiple dust ports, calculate the total CFM required by summing the CFM for all the ports.

By accurately gauging your machine's CFM needs and tailoring your dust collection system accordingly, you can create a cleaner and safer woodworking environment. This ensures that your shop remains efficient, and your tools perform at their best.

### Determine Main Line Size:

Determining the appropriate main line duct size and branch line duct size in your dust collection system is crucial to ensure efficient airflow and effective dust removal. Here are some guidelines to help you make these determinations:

The primary goal is to maintain a minimum airflow velocity of 3500 FPM (Feet per Minute) in the main duct. This ensures that the system has sufficient velocity to transport sawdust and debris effectively.

- For smaller to medium-sized workshops, a practical approach is to use the inlet size of the dust collector as the main line duct size. This often helps maintain the required airflow velocity.

- By using the dust collector's inlet size as the main line duct size, you can typically keep multiple branch lines open simultaneously, depending on your system's design and capacity.

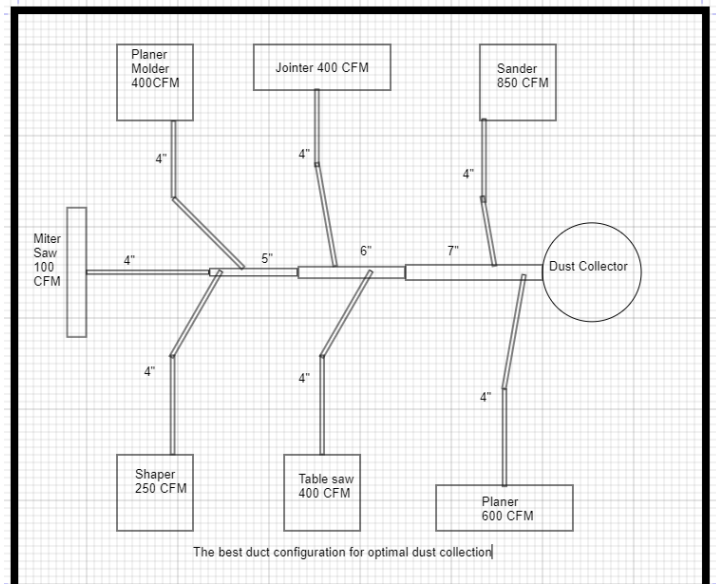


Figure 4: the correct dust collection system configuration.

### Branch Line Duct Size:

- For small to medium-sized workshops, using the inlet size of the dust collector as the main line duct size often maintains an airflow velocity above 3500 FPM. This allows for the simultaneous operation of multiple branch lines.

- The general rule of thumb for a branch line duct is to maintain airflow velocity at or above 4000 FPM.

- In most cases, using the dust port size provided on each machine as the branch line duct size achieves the required airflow velocity. However, if the dust port on a machine is smaller than 4", it's advisable to use a 4" branch line and then reduce it down right before connecting to the smaller dust port.

- Systems with powerful dust collectors may perform optimally when multiple blast gates are left open, allowing for the simultaneous use of two machines. Experiment with different combinations of open and closed blast gates to find the best setup for your system.

**Sizing Chart for Multiple Machines on the Same Branch Line:**

CFM Per Machine	Recommended Duct Size
400	4"
500	4"
600	5"
700	5"
800	6"
900	6"
1000	6"

- If you plan to connect two machines to the same branch line, and both will operate simultaneously, add the required CFM for each machine together. Refer to the sizing chart below to determine the correct branch size based on the total CFM required.

**Note:** If the two machines will not run simultaneously, reference the machine with the largest dust port size in the table and add blast gates after the Y-branch to control the airflow to each machine independently.

By following these guidelines and considering the specific dust port sizes of your woodworking machines, you can design a branch line duct system that ensures adequate airflow velocity for efficient dust collection in your workshop.



Figure 5: Incorrect system configuration.

**Planning Dropdowns:**

When planning the dropdowns and ductwork layout for each machine in your dust collection system, it's essential to consider several factors to optimize airflow and minimize static pressure loss. Here are some key points to keep in mind:

- 1- **Use Blast Gates for Control:** Incorporate blast gates wherever possible in your ductwork layout. Blast gates allow you to control the airflow to individual machines, ensuring that only the necessary machines are connected and active at any given time.
- 2- **Minimize Airflow Resistance:** Every component added to a duct line, such as ductwork, elbows, branches, and other fittings, introduces airflow resistance, leading to static pressure loss. To minimize resistance, consider the following:

- **Use rigid ducts:** Smooth, rigid ducts offer lower resistance compared to flexible ducts.

- **Gradual curves:** Implement gradual curves instead of sharp 90° elbows to reduce resistance.

- 3- **Efficiency Analogy:** Think of your ductwork system like riding a bicycle in a tunnel. If the inside of the tunnel is bumpy (representing flexible duct) and filled with sharp turns (90° elbows), it would require more effort to travel from one end to the other. Similarly, minimizing turbulence in your ductwork makes airflow more efficient.
- 4- **Resistance Calculation:** Calculate the resistance of your ductwork to determine if it meets the required CFM (Cubic Feet per Minute) for each machine. Maintaining low resistance ensures that your dust collection system can effectively capture dust and debris from the machines.

To assist in your planning and calculate resistance, you can use tables or formulas specifically designed for this purpose. These tables or formulas consider various factors, including the length and diameter of ducts, the number of fittings, and their types.

By carefully planning your ductwork layout, using blast gates for control, and minimizing airflow resistance, you can design an efficient and effective dust collection system tailored to the needs of your workshop.

When designing your dust collection system, especially in small to medium-sized shops, you can simplify the process by calculating the static pressure for the line with the longest duct length or the most fittings. This approach assumes that if the line with the highest resistance works well, the others will perform adequately.

Here are the steps to calculate the static pressure for a given duct line in your system:

#### 1- List Duct Sizes and Lengths:

- Make a list of each duct size used in the line.

- Include the length of each section of duct in the line.

#### 2- Multiply by Static Pressure Values:

- For each duct size, multiply its length by the static pressure value associated with that size in the provided table. This value represents the resistance or pressure drop for that duct size and length.

#### 3- Consider Elbows and Branches:

- List each type of elbow or branch used in the line.
- Multiply the quantity of each type (if there is more than one) by the static pressure loss value given in the provided table.

#### 4- Sum the Results:

- Sum up all the values obtained from steps 2 and 3. This sum represents the total static pressure for that specific duct line.

By following these steps, you can determine the static pressure for the line with the highest resistance. This information will help you assess whether the airflow in that line meets the required CFM (Cubic Feet per Minute) for your dust collection system. If this line performs well, it is likely that the other lines in your system will also function effectively.

Keep in mind that maintaining low static pressure is crucial to ensure efficient dust collection and proper dust capture from your machines.

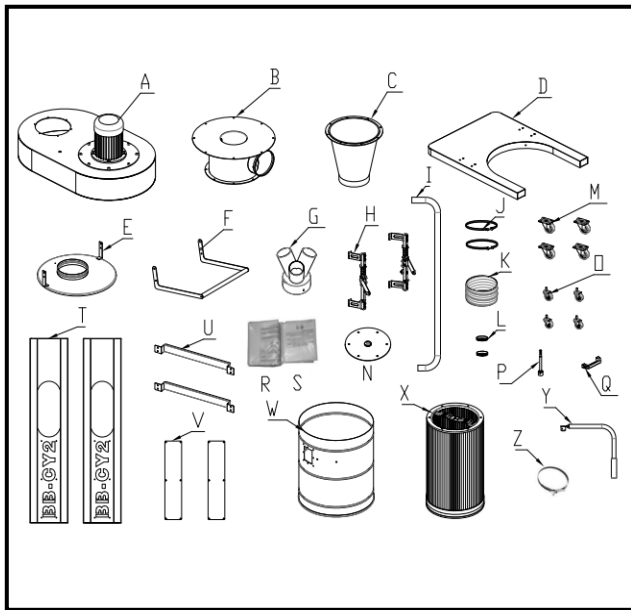


## Unpacking & Inventory

### 1.5HP, 2HP and 3HP Cyclone Dust Collectors

Your Cyclone dust collector was properly packaged and shipped complete in cartons for safe transportation. When unpacking, carefully inspect the carton and ensure that nothing has been damaged during transit.

Figure 6: Machine Inventory.



The following unpacking and inventory section will cover both the 2 and 3 hp models of the cyclone dust collectors.

#### List of Contents

<b>A.</b>	Impeller Housing.....	1
<b>B.</b>	Intake Barrel .....	1
<b>C.</b>	Cyclone Funnel .....	1
<b>D.</b>	Base .....	1
<b>E.</b>	Collection Drum Lid .....	1
<b>F.</b>	Drum Lock Handle .....	1
<b>G.</b>	Inlet Adapter.....	1
<b>H.</b>	Lock Handle Guides.....	2
<b>I.</b>	Vacuum Hose.....	1
<b>J.</b>	Flexible Hose Clamps .....	2
<b>K.</b>	Flexible Collection Drum Hose.....	1
<b>L.</b>	Hose Clamps 1-3/4".....	2

<b>M.</b>	Locking Swivel Casters 2-1/2".....	4
<b>N.</b>	Filter Paddle Cover.....	1
<b>O.</b>	Swivel Casters 2" .....	4
<b>P.</b>	Filter Handle Spindle.....	1
<b>Q.</b>	Collection Drum Handle .....	1
<b>R.</b>	Collection Drum Dust Bag.....	1
<b>S.</b>	Filter Dust Bag.....	1
<b>T.</b>	Support Legs.....	2
<b>U.</b>	Reinforcement Plates.....	2
<b>V.</b>	Lining Plate.....	2
<b>W.</b>	Dust Collection Drum .....	1
<b>X.</b>	Canister Filter .....	1
<b>Y.</b>	Filter Cleaning Handle.....	1
<b>Z.</b>	Filter Dust Bag Clamp.....	1

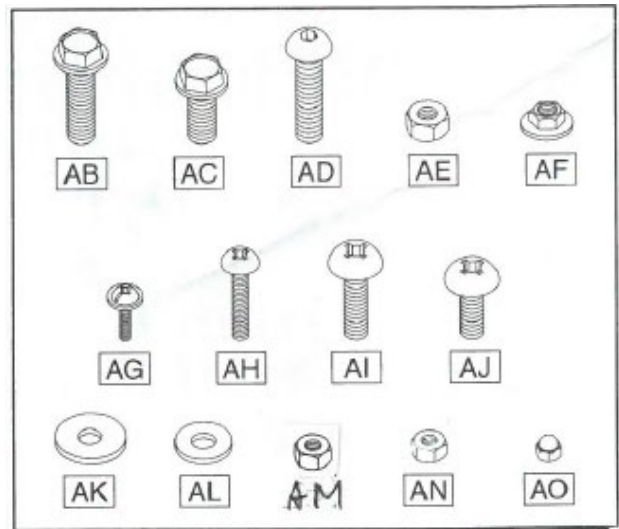


Figure 7: Hardware Inventory.

Fig. 5

#### List of Contents

AB-Flange Bolt 5/16"-18 x 3/4".....	28
AC-Flange Bolt 5/16"-18 x 1/2".....	16
AD-Button Head Cap Screws 5/16"-18 x 3/4".....	16
AE-Hex Nuts 5/16"-18.....	4
AF-Flange Nuts 5/16"-18.....	12
AG-Flange Screw 3/16"-24x3/8" .....	1
AH-Phillips Head Screws 3/16"-24x3/4".....	2
AI-Phillips Head Screws 1/4"-20x5/8".....	2
AJ-Button Head Cap Screws 1/4"-20x1/2".....	28
AK-Fender Washers 5/16" x Ø23mm.....	16
AL-Flat Washers 5/16" x Ø16mm.....	4
AM-Nut 1/4"-20.....	12
AN-Hex Nuts 3/16"-24.....	2
AO-Acorn Nuts 1/4"-20.....	2



## 5HP Cyclone Dust Collectors

Your Cyclone dust collector was properly packaged and shipped complete in cartons for safe transportation. When unpacking, carefully inspect the carton and ensure that nothing has been damaged during transit.

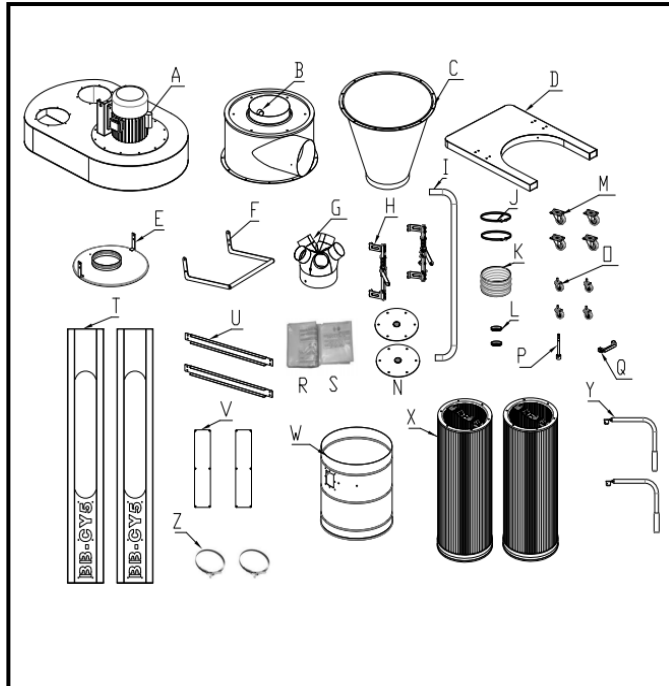


Figure 8: BBCY5HP Machine inventory.

### List of Contents

<b>A.</b>	Impeller Housing.....	1
<b>B.</b>	Intake Barrel .....	1
<b>C.</b>	Cyclone Funnel.....	1
<b>D.</b>	Base .....	1
<b>E.</b>	Collection Drum Lid.....	1
<b>F.</b>	Drum Lock Handle .....	1
<b>G.</b>	Inlet Adapter.....	1
<b>H.</b>	Lock Handle Guides.....	2
<b>I.</b>	Vacuum Hose.....	1
<b>J.</b>	Flexible Hose Clamps .....	2
<b>K.</b>	Flexible Collection Drum Hose.....	1
<b>L.</b>	Hose Clamps 1-3/4".....	2
<b>M.</b>	Locking Swivel Casters 2-1/2".....	4
<b>N.</b>	Filter Paddle Cover.....	2
<b>O.</b>	Swivel Casters 2" .....	4

<b>P.</b>	Filter Handle Spindle.....	2
<b>Q.</b>	Collection Drum Handle .....	1
<b>R.</b>	Collection Drum Dust Bag.....	1
<b>S.</b>	Filter Dust Bag.....	2
<b>T.</b>	Support Legs.....	2
<b>U.</b>	Reinforcement Plates.....	2
<b>V.</b>	Lining Plate.....	2
<b>W.</b>	Dust Collection Drum .....	1
<b>X.</b>	Canister Filter .....	2
<b>Y.</b>	Filter Cleaning Handle.....	2
<b>Z.</b>	Filter Dust Bag Clamp.....	2

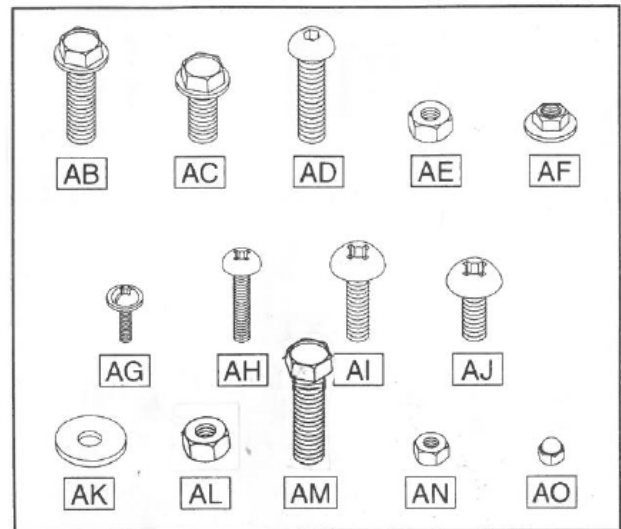


Figure 9: BBCY5HP hardware inventory.

### List of Contents

AB-Flange Bolt 5/16"-18 x 3/4".....	36
AC-Flange Bolt 5/16"-18 x 1/2".....	16
AD-Button Head Cap Screws 5/16"-18x3/4".....	16
AE-Hex Nuts 5/16"-18.....	4
AF-Flange Nuts 5/16"-18.....	16
AG-Flange Screw 3/16"-24 x 3/8".....	1
AH-Phillips Head Screws 3/16"-24x3/4".....	2
AI-Phillips Head Screws 1/4"-20x5/8".....	2
AJ-Button Head Cap Screw 1/4"-20x1/2".....	28
AK-Fender Washers 5/16".....	22
AL-Nut 1/4"-20.....	12
AM-Hex Bolt Screws 5/16"-18x1 1/4".....	6
AN-Hex Nuts 3/4"-24.....	2
AO-Acorn Nuts 1/4"-20.....	2

# Electrical Safety

## Circuit Requirements

This machine must be connected to the correct size and type of power supply circuit, or fire or electrical damage may occur. Read through this section to determine if an adequate power supply circuit is available. If a correct circuit is not available, a qualified electrician MUST install one before you can connect the machine to power.

A power supply circuit includes all electrical equipment between the breaker box or fuse panel in the building and the machine. The power supply circuit used for this machine must be sized to safely handle the full load current drawn from the machine for an extended period. (If this machine is connected to a circuit protected by fuses, use a time delay fuse marked D.)

## Full-Load Current Rating

The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

*BBCY1.5HP Full-Load Current Rating at:*  
120V..... 15 Amps  
Circuit Size.....20 Amps

*BBCY2HP Full load current rating at:*  
220V.....10 Amps  
Circuit Size.....15 Amps

*BBCY3HP Full-Load Current Rating at:*  
220V.....15 Amps  
Circuit Size.....30 Amps

*BBCY5HP Full-Load Current Rating at:*  
240V.....30 Amps  
Circuit Size.....60 Amps

## Circuit Requirements for 120V (Prewired):

This machine is prewired to operate on a power supply circuit that has a verified ground and meets the following requirements:

Circuit Type.....10V/120V, 60 Hz, Single-Phase

## Circuit Requirements for 240V

This machine can be converted to operate on a power supply circuit that has a verified ground and meets the requirements listed below. (Refer to Voltage Conversion instructions for details on page 18 and 19).

Circuit



Type.....  
.....220V/240V, 60 Hz, Single-Phase  
Circuit  
Size..... 15 Amps  
Plug/Receptacle.....  
..... NEMA 6-15



The machine must be properly set up before it is safe to

operate. DO NOT connect this machine to the power source until instructed to do so later in this manual.

Incorrectly wiring or grounding this machine can cause electrocution, fire, or machine damage. To reduce this risk, only electrician or qualified service personnel should do any Required electrical work on this machine.

The circuit requirements listed in this manual apply to a dedicated circuit where only one machine will be running at a time. If this



machine will be connected to a shared circuit. Where

multiple machines will be running at the same time, consult with an electrician to ensure that the circuit is properly sized for safe operation.

### Grounding Requirements

This machine **MUST** be grounded. In the event of certain types of malfunctions or breakdowns, grounding provides a path of least resistance for electric current to travel—to reduce the risk of electric shock.

Improper connection of the equipment-grounding wire will increase the risk of electric shock. The wire with green insulation (with/without yellow stripes) is the equipment grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment grounding wire to a live (current carrying) terminal.

Check with qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.



**The machine must be**

**properly setup prior to operation. DO NOT connect this machine to the power source until instructed to do so later in the manual.**

### ASSEMBLY

**Note:** The following assembly instructions are for the BBCY2 and BBCY3 Cyclone Dust Collector. The BBCY5 is also mostly the same assembly except for the dual cannister filters. Please see the section at the end of the assembly instructions for the 5 HP assembly.

**Step 1** Attach (4) 2 1/2" locking swivel casters to bottom of base and secure each caster with (4) 5/16"-18 x 1/2" flange bolts. See **fig 9**.

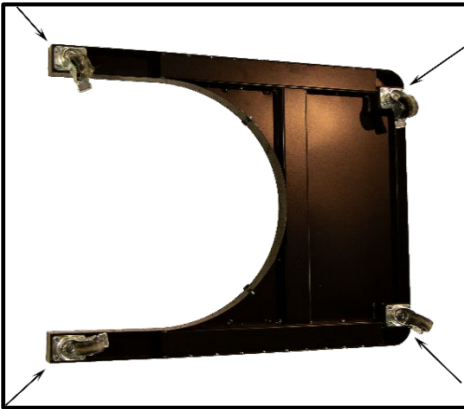


Figure 10: machine's base.

2. Attach each support leg to base, and finger-tighten with 5/16"-18 x 3/4" button head socket screw and 5/16"-18 fender washers. See **fig 10**.



Figure 11



Figure 12

3. Attach reinforcing plate to each support leg with 1/4"-20 x 1/2" button head socket screw. See **fig 12**.



Figure 13



Figure 14



Figure 16



Figure 15

4. With help of two assistants, lift impeller housing onto support legs, Secure impeller housing to support legs with (8) 5/16"-18 x 1/2" button head screws and (8) 5/16" fender washers, fully tighten all fasteners installed in Steps 2-4. See fig 15.

**NOTE:** Orientation of the main housing. Ensure the motor is sitting over the front cut out of the base where the collection drum will be positioned. If main housing cannot be lifted with helpers a forklift might be necessary to ensure the operation can be done safely.



Figure 17



Figure 18

5. Loosen (2) Phillips head screws and remove magnetic switch cover, Install magnetic switch on right support leg. See fig 16.

**NOTE:** the mounting screws will go into the existing holes for the screws that secure the cover to the base of the magnetic switch.



Figure 19

6. Look for pre-drilled mounting holes and secure with (2) 3/16"-24 X 3/4" Phillips head screws and (2) 3/16"-24 hex nuts. See fig 18 and 19.



Figure 20



Figure 21

7. Then replace magnetic switch cover and tighten (2) Phillips head screws See fig 20.



8. With the help of 2 assistants attach intake barrel to impeller housing with (8) 5/16"-18 x 3/4" flange bolts.



Figure 22



Figure 23

9. Attach cyclone funnel to intake barrel, using 5/16"-18 x 3/4" flange bolts and 5/16" flange nuts. See **fig 23**.



Figure 24

10. Secure lock handle guides to support legs.

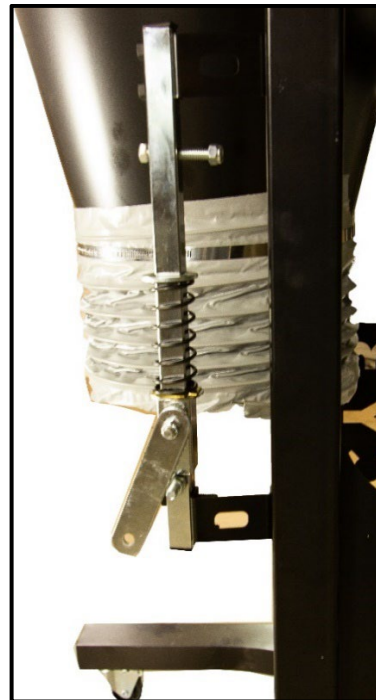


Figure 25



Figure 26

11. Using fasteners attached to spring bracket, place upper end of drum lock handle over outer stud on spring bracket. Then attach lock handle link to lower hole on lock handle.

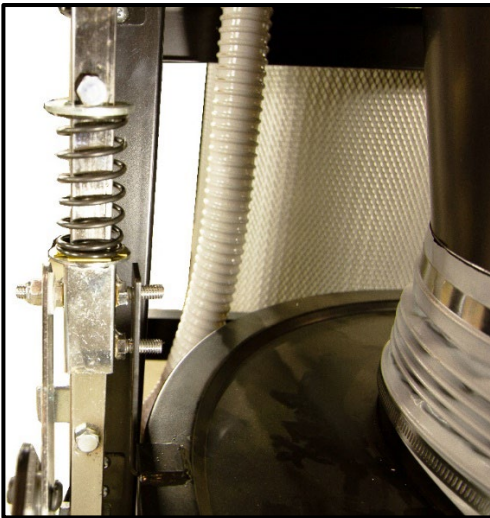


Figure 27

Figure 29



12. Attach 2 " swivel casters to collection drum, using (1) 5/

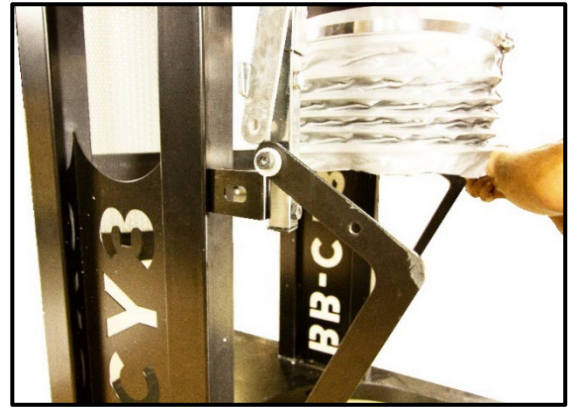


Figure 28

16" -18 hex nut on each. Adjust pre-installed flange nut and hex nut until drum rolls evenly without rocking or wobbling, then tighten both nuts to secure caster in place.



Figure 30





Figure 31

13. With collection drum lid mounting brackets in the up position. Orient lid so dust port, flexible hose, and spring brackets align.



Figure 32

NOTE: The hole on the drum cover is extended it is located closer to the rear end of the lid.



Figure 33

14. Attach flexible 8" hose to cyclone funnel and cyclone funnel then secure with hose clamp.



Figure 34



Figure 35



Figure 38

16. Place 1 1/2" hose clamps on each end of 1 1/2" x 67" vacuum hose, then connect hose to ports on cyclone funnel and collection drum.



Figure 36

15. Secure the handle to the drum then insert large plastic dust bag inside collection drum, and fold excess length of bag over top of collection drum.



Figure 39



Figure 37



Figure 40

17. While assistant holds canister filter under main housing, reach into impeller housing and attach canister filter to impeller housing with 5/16" -18 x 3/4" flange bolts.

**Note: for the 5HP assembly instructions go to page 28**



Figure 41



Figure 42

18. Insert filter handle spindle so one of two M6-1.0 x 16 cap screw tips aligns with flat side of filter paddle spindle, then tighten both cap screws to secure spindle.



Figure 43

19. Slide filter paddle cover over filter handle spindle, then secure with (6) 5/16"-18 x 3/4" flange bolts.





Figure 44



Figure 45



Figure 46

20. Install filter cleaning handle on spindle so that M6-1.0 x 16 hex bolt tip aligns with spindle flat, then tighten hex bolt.



Figure 47



Figure 48

21. Attach plastic filter bag to canister filter and secure with bag clamp



Figure 49

22. Install inlet adapter on intake port and secure with 3/16" -24 x 3/8" flange screw



Figure 50

## 5HP Canister Assembly



Figure 51

Attach filter canisters to the main housing as described page 25.

## Service

---

### General

This section covers the most common service adjustments or procedures that may need to be made during the life of your machine. If you require additional machine service not included in this section, please 905 738 5115 x 6506 or send e-mail to: Customer Service at [cs@busybeetools.com](mailto:cs@busybeetools.com)

### Emptying/ Replacing Drum Collection Bag

Item(s). Needed.	Qty
An Assistant .....	1
Wrench or Socket, 12mm .....	1
Wrench or Socket, 10mm .....	1
Hex Wrench, 5mm .....	1
Shop Vac .....	1
Canister Filter.....	1
Canister Filter .....	1
Filter Bag.....	1

### To remove and replace filter bag and canister filter follow these steps:

1. **DISCONNECT MACHINE FROM POWER!**
2. Release bag clamp, then remove filter bag. Tie bag closed. If the canister filter is clogged or dirty and cleaning it does not improve dust-collection performance, the canister filter must be replaced.
3. Loosen M6-1.0 x 16 hex bolt on filter cleaning handle, then remove handle.

4. Remove (6) 5/16"-18 x 3/4" flange bolts securing filter paddle cover to impeller housing, then lift cover over spindle.
5. Loosen (2) M6-1.0 x 16 cap screws on paddle handle spindle to remove it from the shaft.
6. With assistant holding canister filter from below, loosen and remove (6) 5/16"-18 x 3/4" flange bolts securing canister filter assembly to impeller housing.
7. Vacuum loose dust inside impeller housing and on machine.
8. Reverse Steps.2—6 to re-assemble.

### Maintenance

#### CANISTER FILTER

For best performance, it is recommended on a regular basis to dislodge dust from the inside of the canister filter, this is done by turning the canister filter handle.

#### MOTOR

Excessive dust in the motor could cause excessive heat. Every effort should be made to prevent foreign material from entering the motor.

A visual inspection should be made at frequent intervals.

Accumulations of dry dust can usually be blown out to prevent the interference with normal motor ventilation. To remove dust, blow off motor with a low pressure air hose.

The operator performing this duty should wear safety glasses and a filter mask.

If any servicing (other than the above cleaning) becomes necessary, it should be performed by an authorized service center.

**CAUTION: WEARING A PARTICLE MASK/RESPIRATOR FOR PROTECTION AGAINST FINE DUST PARTICLES DURING CLEANING IS HIGHLY RECOMMENDED.**

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:

Check for:

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

#### Monthly

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

#### Emptying/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.

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

dust will be sucked into the intake barrel and passed through to the canister filter and filter bag. Avoid allowing this to happen, as it may reduce filter life. Check the drum window regularly to prevent excessive dust buildup in the collection drum.

To remove / replace collection drum bag follows these steps:

#### **1. DISCONNECT MACHINE FROM POWER!**

2. Lift drum lock handle to lower collection drum onto casters.
3. Release both latches on sides of drum, then roll drum clear of drum lid.
4. Lift bag out of drum and dispose of contents.

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

5. Place new dust bag inside collection drum, and fold excess bag length over top of drum.
6. Move collection drum under lid and latch it closed.
7. Press drum lock handle down to lift collection drum off casters for operation.

#### Cleaning Canister Filter

This dust collector uses a handle and internal paddles to remove excess dust and debris from the filter pleats. Move the handle back and forth through its

range of motion to knock dust into the filter bag. Dispose of the bag when dust fills it about 1/2 full. After extended use, the filter should be replaced, or thoroughly

cleaned by hand.

To clean canister filter, follow these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove bag clamp, filter bag, and canister filter.
3. Rinse filter with water in an appropriate outdoor location.

**IMPORTANT:** DO NOT use compressed air to clean or dry the filter, as this can spread fine dust into the air and damage filter fibers.



**Connection Diagram  
BBCY1.5 and BBCY2  
1.5HP & 2HP  
Dust Collectors**

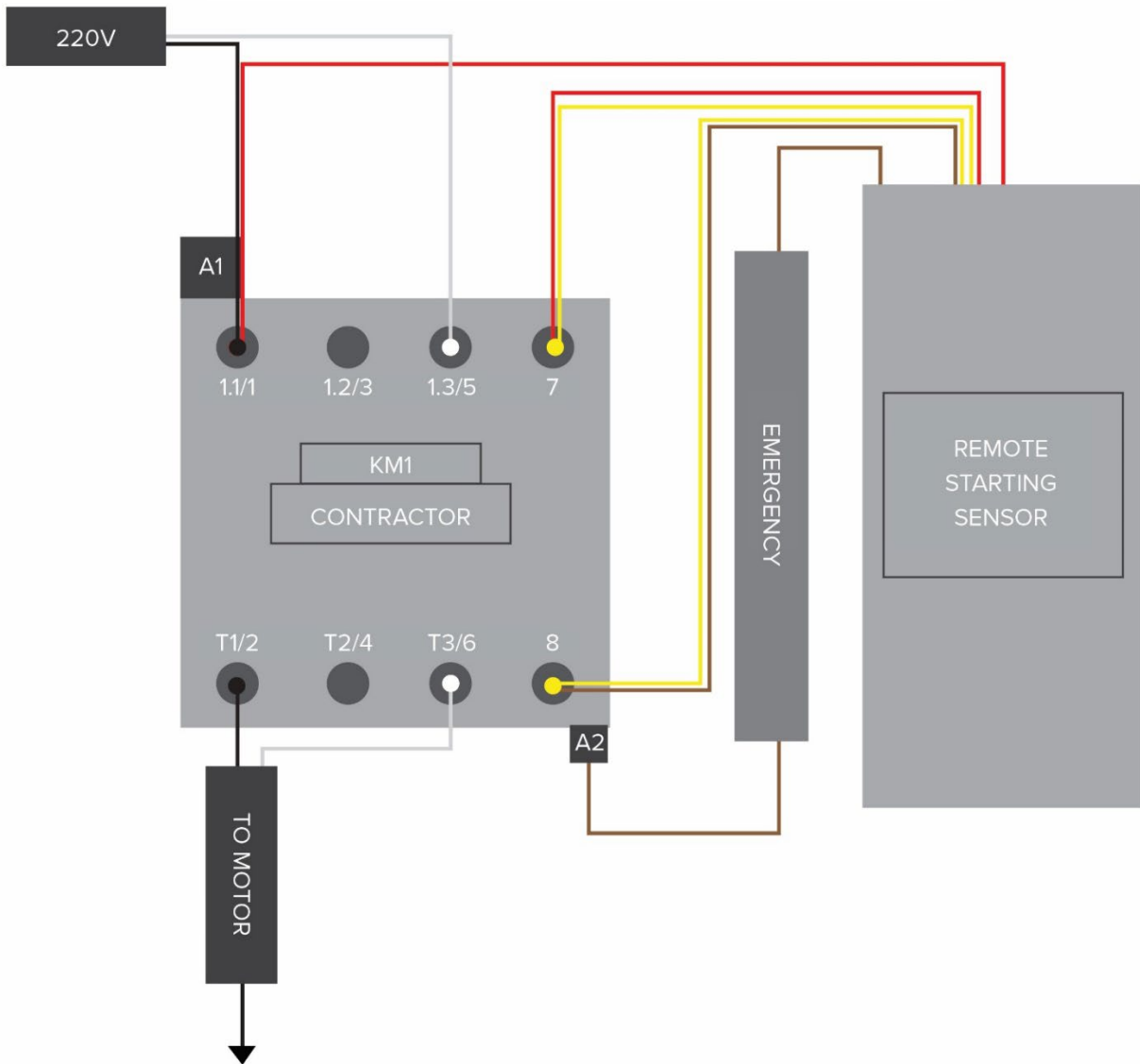


Figure 52

**Please note that BBCY1.5HP and BBCY2HP have an identical electrical circuit.**

# CONNECTION DIAGRAM

# BBCY3

## 3HP DUST COLLECTOR

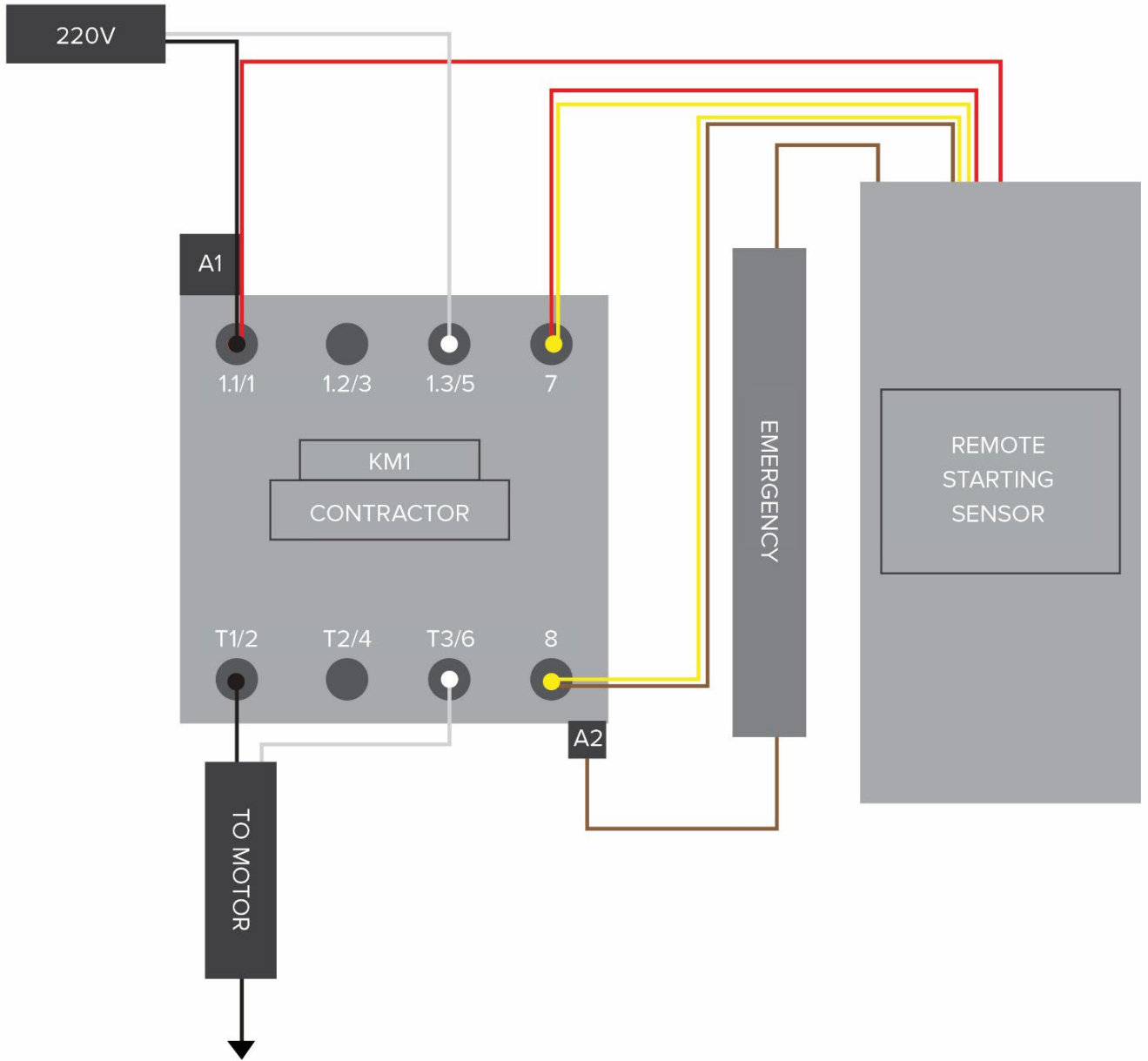


Figure 53

# CONNECTION DIAGRAM

# BBCY5

## 5HP DUST COLLECTOR

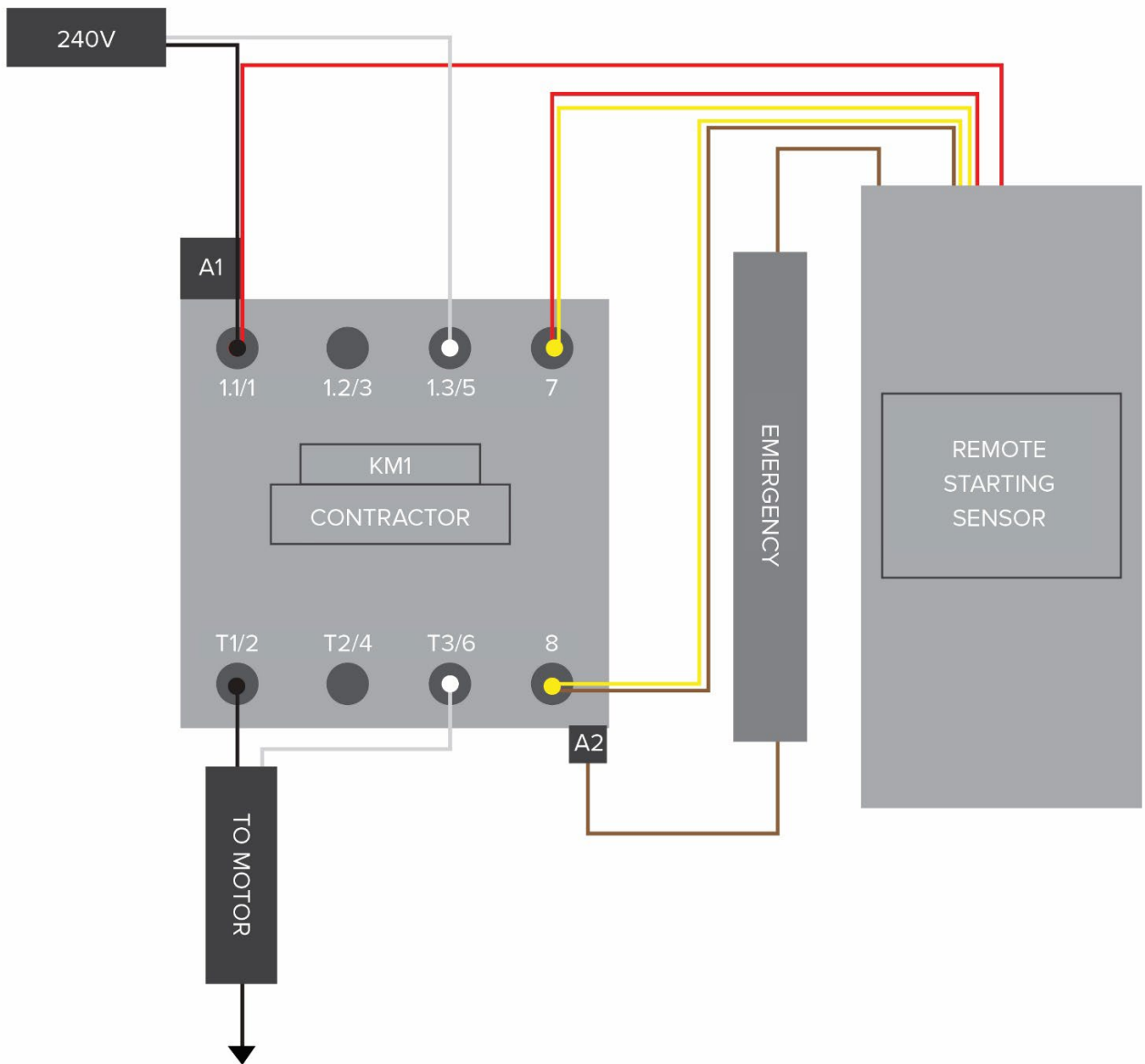


Figure 54

# Parts Lists and Assembly Drawings

BBCY1.5HP

Main Body Diagram

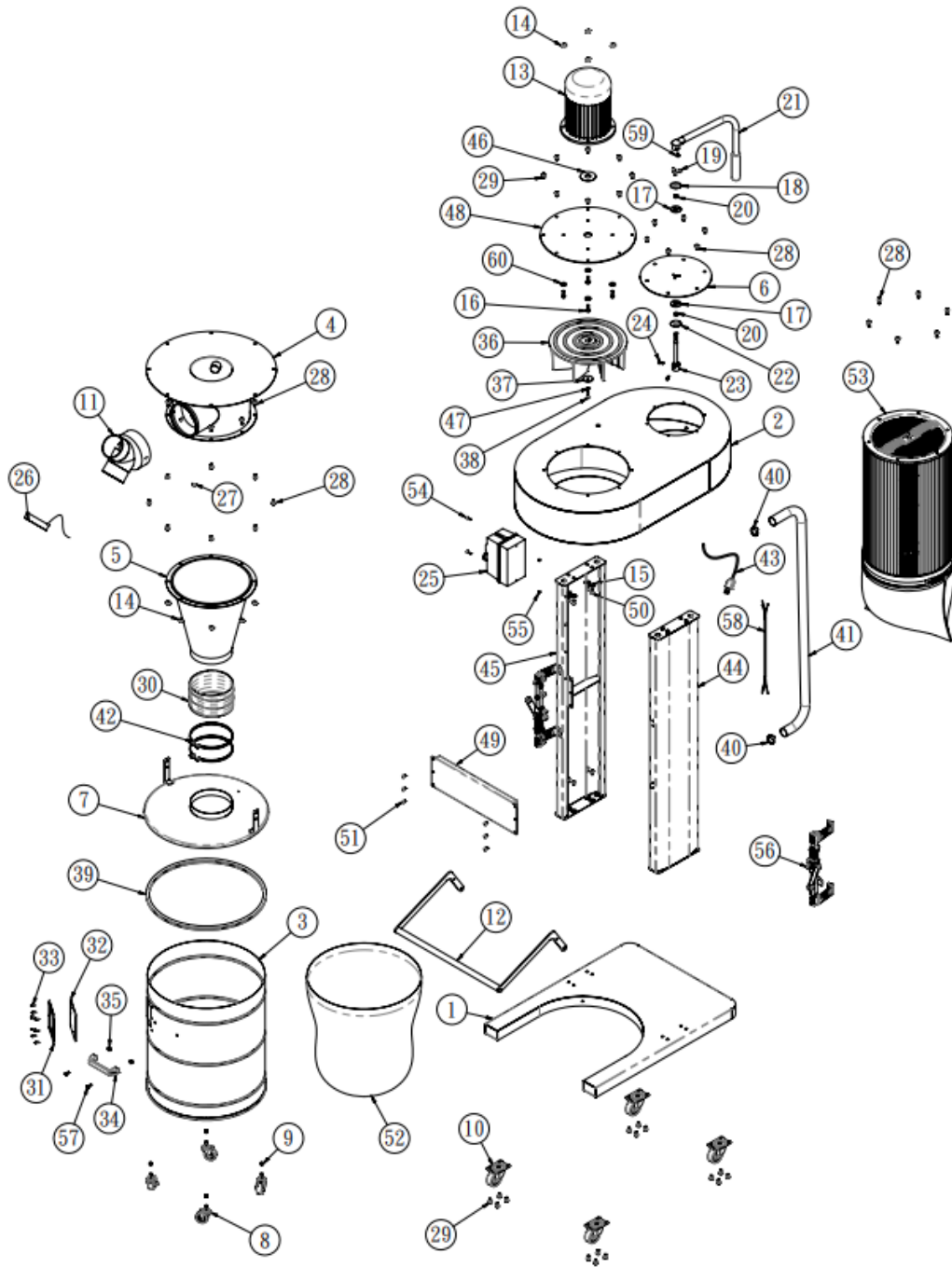


Figure 55

Quick Release and Canister Assembly

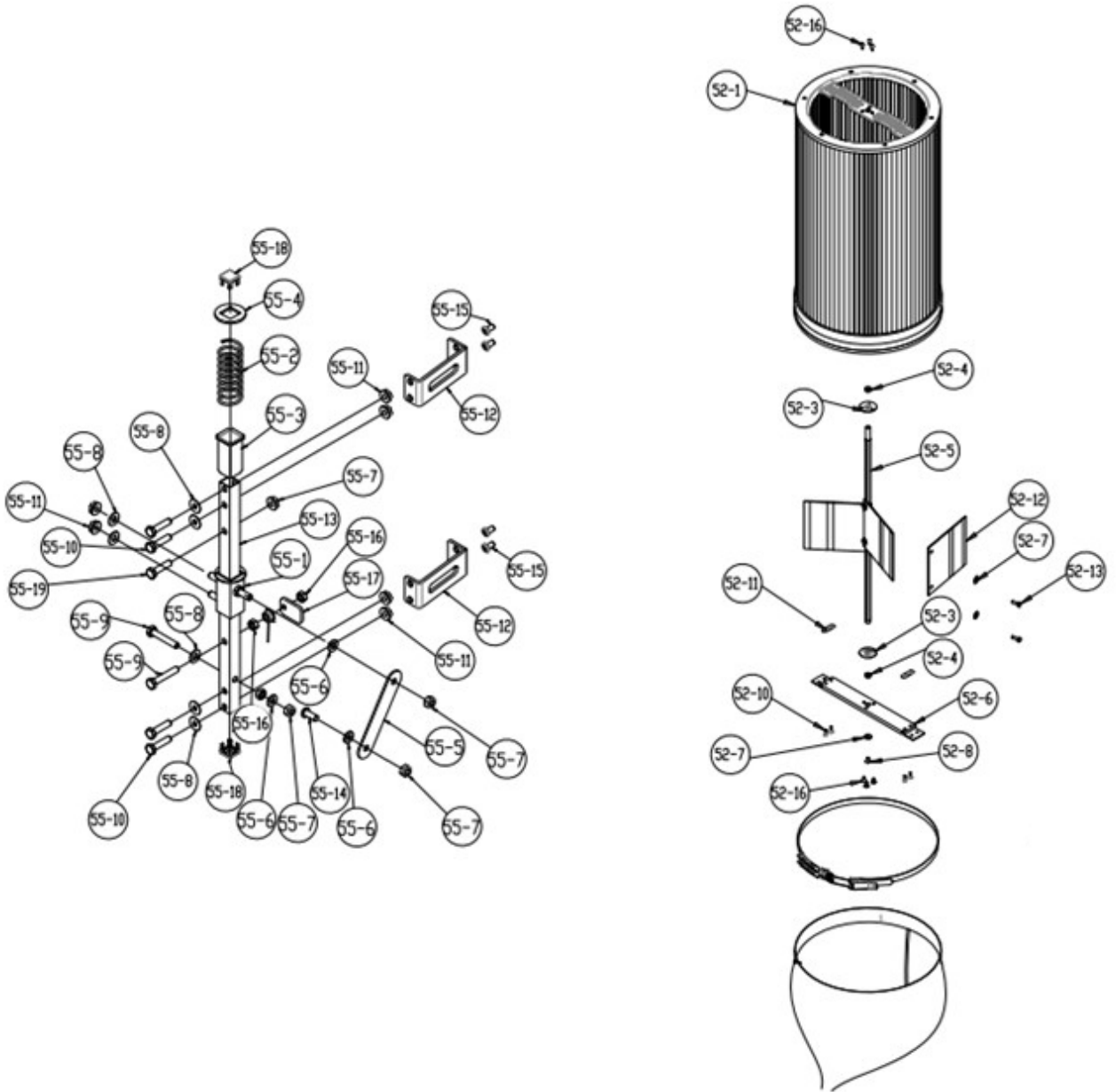


Figure 56

Parts List

Index #	Item	Description
1	PBBCY1501	BASE
2	PBBCY1502	IMPELLER HOUSING
3	PBBCY1503	COLLECTION DRUM
4	PBBCY1504	INTAKE BARREL
5	PBBCY1505	CYCLONE FUNNEL
6	PBBCY1506	FILTER COVER PLATE
7	PBBCY1507	COLLECTION DRUM LID
8	PBBCY1508	CASTER 2" DRUM
9	PBBCY1509	NUT - HEX 5/16"-18
10	PBBCY1510	CASTER 2-1/2", LOCKING SWIVEL
11	PBBCY1511	INLET ADAPTER 7" X 4" X 3
12	PBBCY1512	DRUM LOCK HANDLE
13	PBBCY1513	MOTOR 2HP 220V 1-PH
14	PBBCY1514	NUT - HEX 5/16"-18
15	PBBCY1515	WASHER - FENDER 5/16" X 23mm
16	PBBCY1516	BOLT - HEX 5/16"-18 X 1
17	PBBCY1517	RUBBER GASKET
18	PBBCY1518	BEARING RETAINER, UPPER
19	PBBCY1519	SCREW - PH HD M5-0.8 X 10mm
20	PBBCY1520	SLEEVE BEARING 12 X 14 X 6mm
21	PBBCY1521	FILTER PADDLE HANDLE
22	PBBCY1522	BEARING RETAINER, LOWER
23	PBBCY1523	PADDLE HANDLE SPINDLE
24	PBBCY1524	BOLT - HEX M6-1 X 16mm
25	PBBCY1525	MAG SWITCH WITH REMOTE CONTROL
26	PBBCY1526	INLET ADAPTER CAP 4"
27	PBBCY1527	SCREW - PH HD. 10-24 X 3/8
28	PBBCY1528	BOLT - HEX FLANGE 5/16-18 X 3/4"
29	PBBCY1529	BOLT - FLANGE 5/16-18 X 1/2"
30	PBBCY1530	FLEX HOSE 7"
31	PBBCY1531	FOAM GASKET 120 X 140MM
32	PBBCY1532	DRUM WINDOW 120 X 140MM ACRYLIC
33	PBBCY1533	RIVET 2 X 4MM ALUMINUM
34	PBBCY1534	COLLECTION DRUM HANDLE
35	PBBCY1535	NUT - ACORN 1/4-20
36	PBBCY1536	IMPELLER 12-3/4"
37	PBBCY1537	IMPELLER WASHER 6 X 38 X 4MM
38	PBBCY1538	SCREW- CAP M6-1 X 30 LH

39	PBBCY1539	COLLECTION DRUM GASKET
40	PBBCY1540	HOSE CLAMP 1-3/4"
41	PBBCY1541	VACUUM HOSE 1-1/2" X 67"
42	PBBCY1542	HOSE CLAMP 7-1/2"
43	PBBCY1543	POWER CORD 14AWG 72" 6-15P
44R	PBBCY1544R	SUPPORT LEG (Right)
45L	PBBCY1545L	SUPPORT LEG (LEFT)
46	PBBCY1546	RUBBER GASKET
47	PBBCY1547	WASHER - LOCK 6MM
48	PBBCY1548	MOTOR COVER PLATE
49	PBBCY1549	SUPPORTING BOARD
50	PBBCY1550	SCREW - CAP 5/16"-18 X 3/4"
51	PBBCY1551	SCREW - CAP 1/4"-20 X 1/2
52	PBBCY1552	COLLECTION DRUM BAG 30" X 41"
53	PBBCY1553	CANISTER FILTER ASSY 14 1/2 X 24
53-1	PBBCY1553-1	CANISTER FILTER
53-2	PBBCY1553-2	BEARING RETAINER
53-3	PBBCY1553-3	SLEEVE BEARING 12 X 14 X 6MM
53-4	PBBCY1553-4	FILTER PADDLE SPINDLE
53-5	PBBCY1553-5	PADDLE SPINDLE BRACKET
53-6	PBBCY1553-6	WASHER - FLAT 1/4
53-7	PBBCY1553-7	SCREW - PH. HD. M6-1 X 10
53-8	PBBCY1553-8	SCREW - PH. HD M5-0.8 X 15
53-9	PBBCY1553-9	PADDLE SPINDLE BRACKET RETAINER
53-10	PBBCY1553-10	FILTER PADDLE
53-11	PBBCY1553-11	BOLT - HEX M6-1 X 12
53-12	PBBCY1553-12	SCREW - PH.HD. M5-.8 X 10
54	PBBCY1554	SCREW - PH.HD. 3/16 - 24 X 3/4"
55	PBBCY1555	NUT - HEX 10-24
56	PBBCY1556	LOCK HANDLE GUIDE ASSY
56-1	PBBCY1556-1	SLIDING BRACKET
56-2	PBBCY1556-2	COMPRESSION SPRING
56-3	PBBCY1556-3	COPPER PLATE
56-4	PBBCY1556-4	SPRING RETAINER
56-5	PBBCY1556-5	LOCK HANDLE LINK
56-6	PBBCY1556-6	WASHER - FLAT 3/8 PLASTIC
56-7	PBBCY1556-7	NUT - LOCK 5/16-18
56-8	PBBCY1556-8	WASHER - FLAT 5/16"
56-9	PBBCY1556-9	BOLT - HEX 5/16-18 X 1-3/4
56-10	PBBCY1556-10	BOLT - HEX 5/16-18 X 1-1/4
56-11	PBBCY1556-11	NUT - HEX FLANGE 5/16-18

56-12	PBBCY1556-12	LOCK HANDLE GUIDE FIXING PIECE
56-13	PBBCY1556-13	LOCK HANDLE GUIDE
56-14	PBBCY1556-14	SCREW - BTN HD. CAP 5/16-18 X 3/4
56-15	PBBCY1556-15	SCREW - BTN HD. CAP 1/4-20 X 1/2
56-16	PBBCY1556-16	NUT - HEX 5/16-18
56-17	PBBCY1556-17	LOCK HANDLE STOP
56-18	PBBCY1556-18	END CAP
56-19	PBBCY1556-19	BOLT - HEX 5/16-18 X 2"
57	PBBCY1557	NUT- HEX 1/4"
58	PBBCY1558	MOTOR CORD 14G 3W
59	PBBCY1559	HEX SCREW
60	pbbcy1560	WASHER 5/16" x18



BBCY2HP  
Main Body Diagram

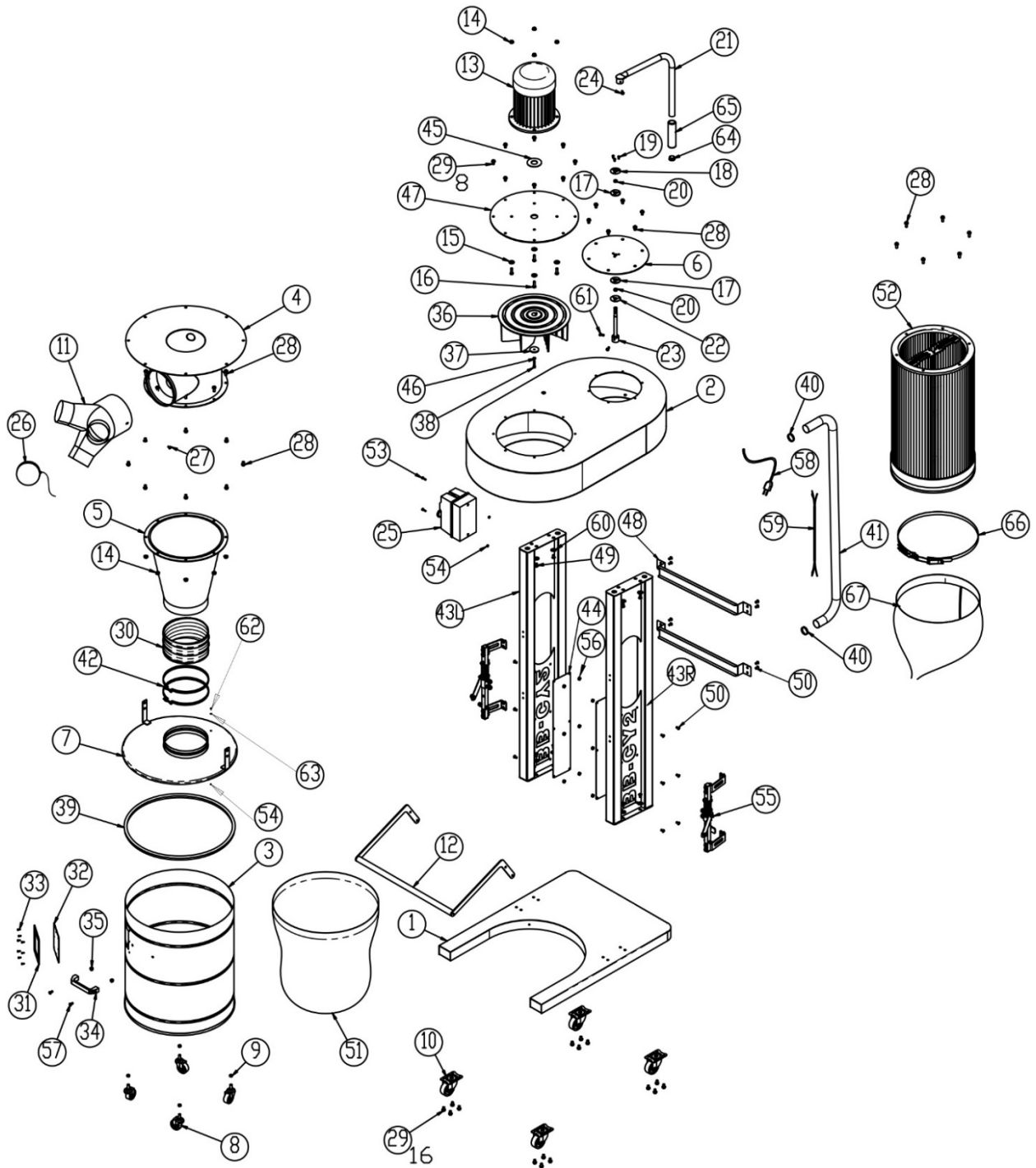


Figure 57

Quick release and Canister Assembly

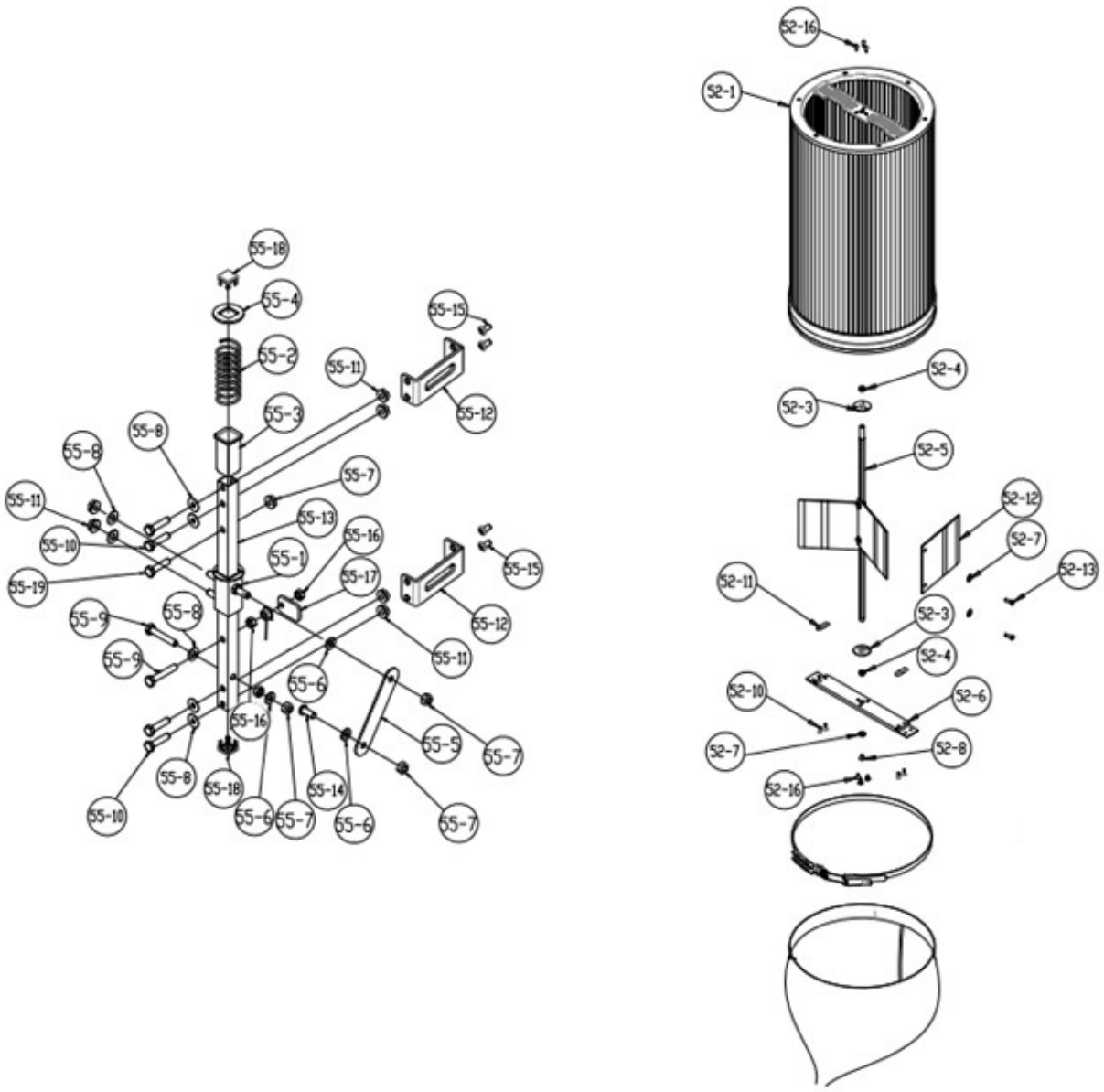


Figure 58

Parts List

Number	Part Number	Description	Qty
1	PBBCY201	BASE	1
2	PBBCY202	IMPELLER HOUSING	1
3	PBBCY203	COLLECTION DRUM	1
4	PBBCY204	INTAKE BARREL	1
5	PBBCY205	CYCLONE FUNNEL	1
6	PBBCY206	FILTER COVER PLATE	1
7	PBBCY207	COLLECTION DRUM LID	1
8	PBBCY208	CASTER 2" DRUM	4
9	PBBCY209	NUT - HEX 5/16"-18	4
10	PBBCY210	CASTER 2-1/2", LOCKING SWIVEL	4
11	PBBCY211	INLET ADAPTER 7" X 4" X 3	1
12	PBBCY212	DRUM LOCK HANDLE	1
13	PBBCY213	MOTOR 2HP 220V 1-PH	1
14	PBBCY214	NUT - HEX 5/16"-18	12
15	PBBCY215	WASHER - FENDER 5/16" X 23mm	4
16	PBBCY216	BOLT - HEX 5/16"-18 X 1	4
17	PBBCY217	RUBBER GASKET	2
18	PBBCY218	BEARING RETAINER, UPPER	1
19	PBBCY219	SCREW - PH HD M5-0.8 X 10mm	3
20	PBBCY220	SLEEVE BEARING 12 X 14 X 6mm	2
21	PBBCY221	FILTER PADDLE HANDLE	1
22	PBBCY222	BEARING RETAINER, LOWER	1
23	PBBCY223	PADDLE HANDLE SPINDLE	1
24	PBBCY224	BOLT - HEX M6-1 X 16mm	1
25	PBBCY225	MAG SWITCH WITH REMOTE CONTROL	1
26	PBBCY226	INLET ADAPTER CAP 4"	1
27	PBBCY227	SCREW - PH HD. 10-24 X 3/8	1
28	PBBCY228	BOLT - HEX FLANGE 5/16-18 X 3/4"	28
29	PBBCY229	BOLT - FLANGE 5/16-18 X 1/2"	24
30	PBBCY230	FLEX HOSE 8"	1
31	PBBCY231	FOAM GASKET 120 X 140MM	1
32	PBBCY232	DRUM WINDOW 120 X 140MM ACRYLIC	1
33	PBBCY233	RIVET 2 X 4MM ALUMINUM	8
34	PBBCY234	COLLECTION DRUM HANDLE	1
35	PBBCY235	NUT - ACORN 1/4-20	2
36	PBBCY236	IMPELLER 12-3/4"	1
37	PBBCY237	IMPELLER WASHER 6 X 38 X 4MM	1
38	PBBCY238	SCREW- CAP M6-1 X 30LH	1

39	PBBCY239	COLLECTION DRUM GASKET	1
40	PBBCY240	HOSE CLAMP 1-3/4"	2
41	PBBCY241	VACUUM HOSE 1-1/2" X 60"	1
42	PBBCY242	HOSE CLAMP 8-1/2"	2
43R	PBBCY243R	SUPPORT LEG(RIGHT)	1
43L	PBBCY243L	SUPPORT LEG (LEFT)	1
44	PBBCY244	BACKING PLATE	2
45	PBBCY245	RUBBER GASKET	1
46	PBBCY246	WASHER - LOCK 6MM	1
47	PBBCY247	MOTOR PLATE	1
48	PBBCY248	SUPPORTING BOARD	1
49	PBBCY249	SCREW - CAP 5/16"-18 X 3/4"	16
50	PBBCY250	SCREW - CAP 1/4"-20 X 1/2	20
51	PBBCY251	COLLECTION DRUM BAG 30" X 41"	1
52-1	PBBCY252-1	CANISTER FILTER ASSY 14 1/2 X 24	1
52-2	PBBCY252-2	CANISTER FILTER	1
52-3	PBBCY252-3	BEARING RETAINER	2
52-4	PBBCY252-4	SLEEVE BEARING 12 X 14 X 6MM	2
52-5	PBBCY252-5	FILTER PADDLE SPINDLE	1
52-6	PBBCY252-6	PADDLE SPINDLE BRACKET	1
52-7	PBBCY252-7	WASHER - FLAT 1/4	7
52-8	PBBCY252-8	SCREW - PH. HD. M6-1 X 10	1
52-10	PBBCY252-10	SCREW - PH. HD M5-0.8 X 15	4
52-11	PBBCY252-11	PADDLE SPINDLE BRACKET RETAINER	2
52-12	PBBCY252-12	FILTER PADDLE	3
53-13	PBBCY252-13	BOLT - HEX M6-1 X 12	6
52-14	PBBCY252-14	SCREW - PH.HD. M5-.8 X 10	6
53	PBBCY253	SCREW - PH.HD. 3/16 - 24 X 3/4"	2
54	PBBCY254	NUT - HEX 10-24	3
55	PBBCY255	LOCK HANDLE GUIDE ASSY	2
55-1	PBBCY255-1	SLIDING BRACKET	2
55-2	PBBCY255-2	COMPRESSION SPRING	2
55-3	PBBCY255-3	COPPER PLATE	8
55-4	PBBCY255-4	SPRING RETAINER	2
55-5	PBBCY255-5	LOCK HANDLE LINK	2
55-6	PBBCY255-6	WASHER - FLAT 3/8 PLASTIC	6
55-7	PBBCY255-7	NUT - LOCK 5/16-18	8
55-8	PBBCY255-8	WASHER - FLAT 5/16"	14
55-9	PBBCY255-9	BOLT - HEX 5/16-18 X 1-3/4	3
55-10	PBBCY255-10	BOLT - HEX 5/16-18 X 1-1/4	8
55-11	PBBCY255-11	NUT - HEX FLANGE 5/16-18	13

55-12	PBBCY255-12	LOCK HANDLE GUIDE FIXING PIECE	4
55-13	PBBCY255-13	LOCK HANDLE GUIDE	2
55-14	PBBCY255-14	SCREW - BTN HD. CAP 5/16-18 X 3/4	2
55-15	PBBCY255-15	SCREW - BTN HD. CAP 1/4-20 X 1/2	8
55-16	PBBCY255-16	NUT - HEX 5/16-18	4
55-17	PBBCY255-17	LOCK HANDLE STOP	1
55-18	PBBCY255-18	END CAP	4
55-19	PBBCY255-19	BOLT - HEX 5/16-18 X 2"	2
56	PBBCY256	NUT- HEX 1/4"	12
57	PBBCY257	SCREW - PH. HD. 1/4-20 X5/8"	2
58	PBBCY258	POWER CORD 14AWG 72" 6-15P	1
59	PBBCY259	MOTOR CORD 14AWG 3W	1
60	PBBCY260	WASHER - FLAT 5/16" X18	16
61	PBBCY261	SCREW - CAP M6-1.0 X 16mm	2
62	PBBCY262	SCREW - PH.HD. 10-24 X 3/8"	1
63	PBBCY263	WASHER - EXT TOOTHED #10	1
64	PBBCY264	END CAP	1
65	PBBCY265	FOAM GRIP	1
66	PBBCY266	BAG CLAMP 15"	1
REMOTE	PBBCY2REMOTE	REMOTE CONTROL	1

BBCY3HP  
Main Body Diagram

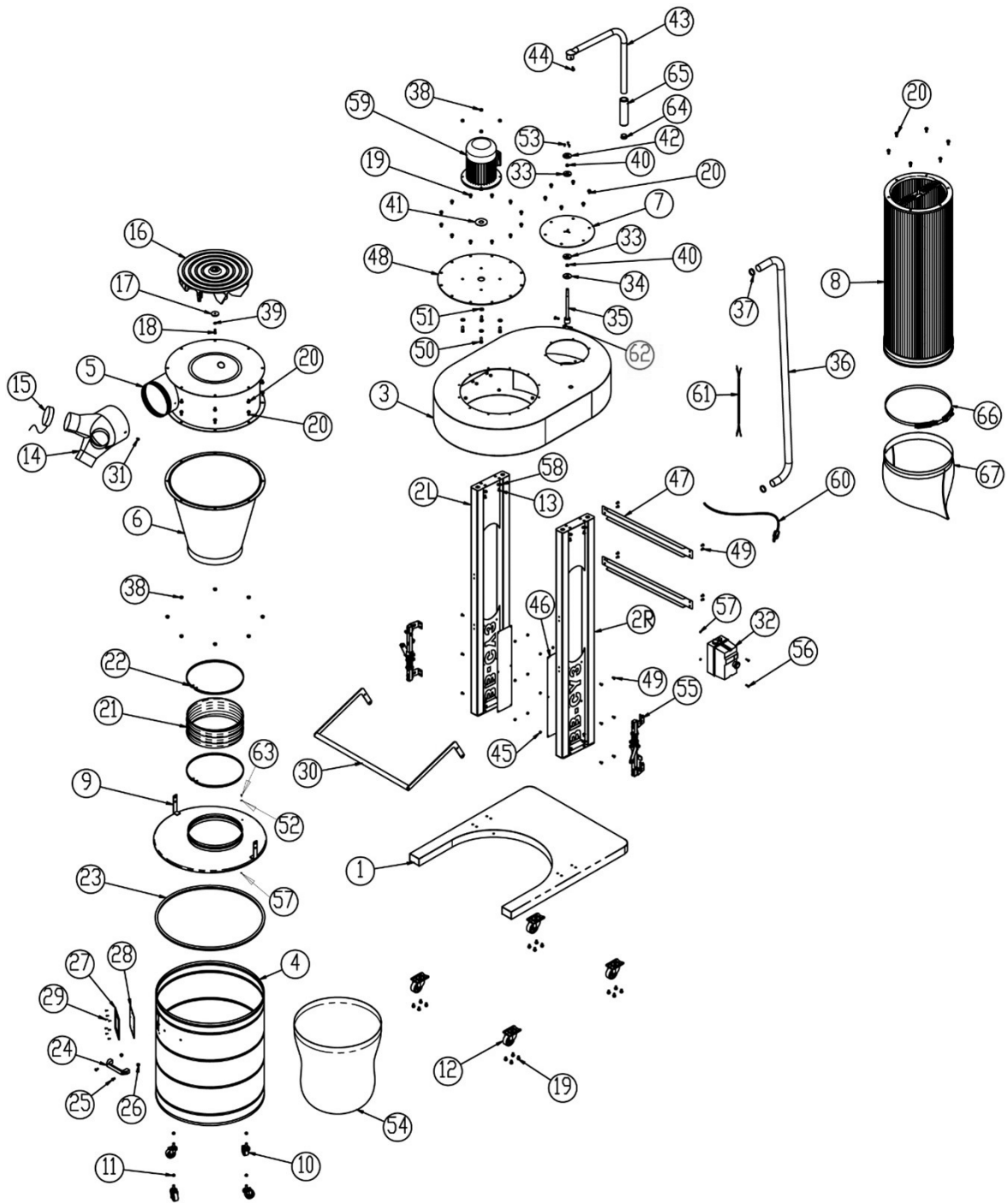


Figure 59

# Quick Release and Canister Assembly

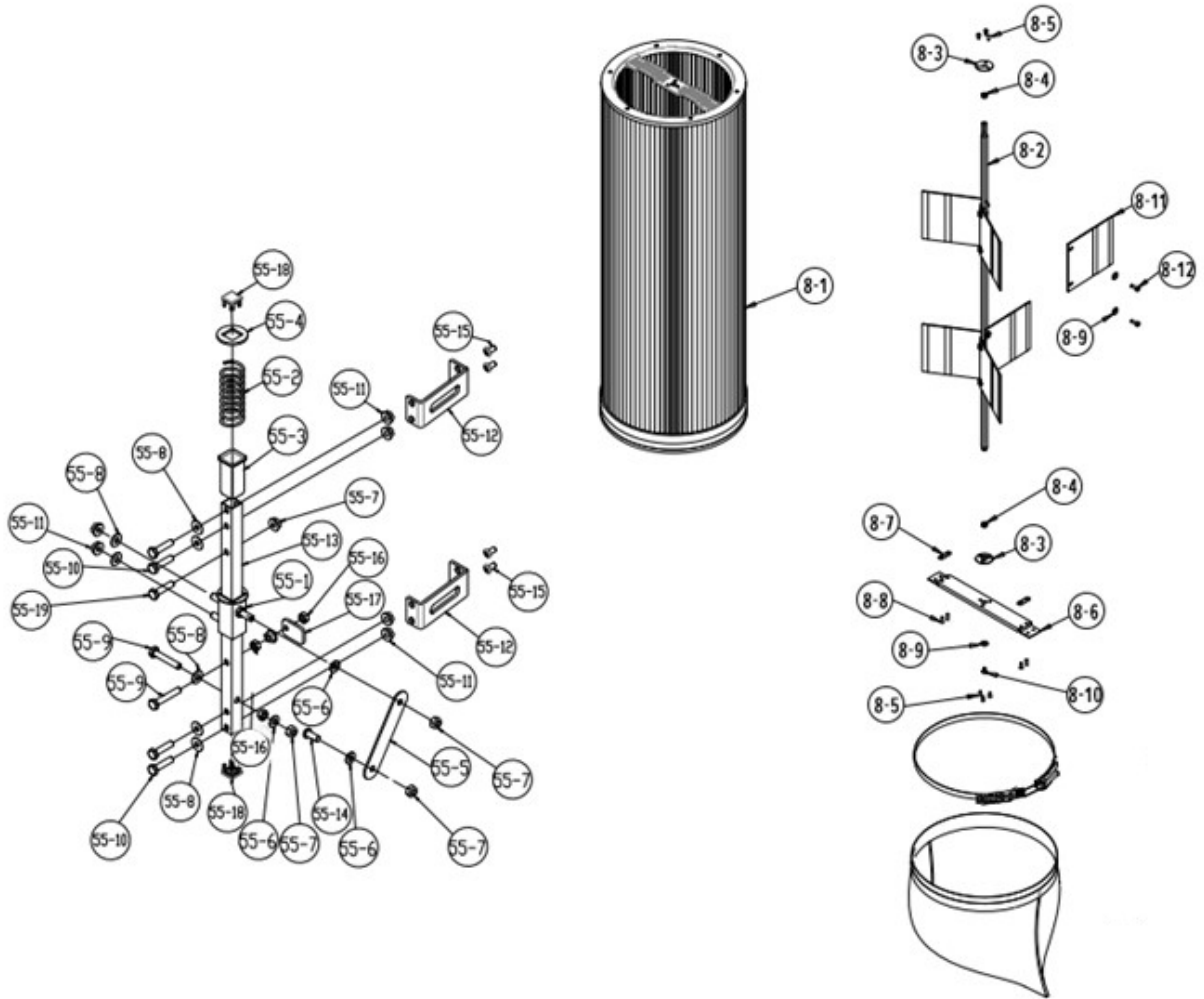


Figure 60



Parts List

Number	Part Number	Description	Qty
1	PBBCY301	BASE	1
2R	PBBCY302R	RIGHT SUPPORT LEG	1
2L	PBBCY302L	LEFT SUPPORT LEG	1
3	PBBCY303	IMPELLER HOUSING	1
4	PBBCY304	COLLECTION DRUM	1
5	PBBCY305	INTAKE BARREL	1
6	PBBCY306	CYCLONE FUNNEL	1
7	PBBCY307	FILTER COVER PLATE	1
8	PBBCY308	CANISTER FILTER ASSY	1
8-1	PBBCY38-1	CANISTER FILTER	1
8-2	PBBCY38-2	FILTER PADDLE SPINDLE	1
8-3	PBBCY38-3	BEARING RETAINER, LOWER	2
8-4	PBBCY38-4	SLEEVE BEARING 12 X 14 X 6MM	2
8-5	PBBCY38-5	PHLP HD SCR M5-0.8 X 10	6
8-6	PBBCY38-6	PADDLE SPINDLE BRACKET	1
8-7	PBBCY38-7	PADDLE SPINDLE BRACKET RETAINER	2
8-8	PBBCY38-8	PHLP HD SCR M5-0.8 X 15	4
8-9	PBBCY38-9	WASHER 1/4	7
8-10	PBBCY38-10	PHLP HD SCR M6-1 X 10	1
8-11	PBBCY38-11	FILTER PADDLE	6
8-12	PBBCY38-12	PHLP HD SCR M6-1 X 12	12
9	PBBCY39	COLLECTION DRUM LID	1
10	PBBCY310	CASTER 2"	4
11	PBBCY311	HEX NUT 5/16"-18	4
12	PBBCY312	CASTER 2-1/2", LOCKING SWIVEL	4
13	PBBCY313	BUTTON HD CAP SCR 5/16"-18 X 1/2	16
14	PBBCY314	INLET ADAPTER 8" X 4" X 3	1
15	PBBCY315	INLET ADAPTER CAP 4"	1
16	PBBCY316	IMPELLER 16"	1
17	PBBCY317	IMPELLER WASHER 6 X 38 X 4MM	1
18	PBBCY318	CAP SCREW M6-1 X 30 RH	1
19	PBBCY319	FLANGE BOLT 5/16-18 X 1/2"	28
20	PBBCY320	FLANGE BOLT 5/16-18 X 3/4"	28
21	PBBCY321	FLEX HOSE 12"	1
22	PBBCY322	HOSE CLAMP 12 - 1 / 2"	2
23	PBBCY323	COLLECTION DRUM GASKET	1
24	PBBCY324	COLLECTION DRUM HANDLE	1
25	PBBCY325	PHLP HD SCR 1/4"-20 X 5/8"	2
26	PBBCY326	ACORN NUT 1/4-20	2

27	PBBCY327	FOAM GASKET 120 X 140MM	1
28	PBBCY328	DRUM WINDOW 120 X 140MM ACRYLIC	1
29	PBBCY329	RIVET 2 X 4MM ALUMINUM	8
30	PBBCY330	DRUM LOCK HANDLE	1
31	PBBCY331	PHLP HD SCR 3/16" - 24 X 3/8"	1
32	BBCY332	MAG SWITCH	1
33	PBBCY333	RUBBER GASKET	2
34	PBBCY334	BEARING RETAINER, LOWER	1
35	PBBCY335	PADDLE HANDLE SPINDLE	1
36	PBBCY336	VACUUM HOSE 1-1/2"	1
37	PBBCY337	HOSE CLAMP 1-3/4"	2
38	PBBCY338	FLANGE NUT 5/16"-18	12
39	PBBCY339	SPRING WASHER 1/4"	1
40	PBBCY340	SLEEVE BEARING 12 X 14 X 6mm	2
41	PBBCY341	RUBBER GASKET	1
42	PBBCY342	BEARING RETAINER, UPPER	1
43	PBBCY343	FILTER PADDLE HANDLE	1
44	PBBCY344	CAP SCREW M6-1 X 16mm	1
45	PBBCY345	HEX NUT 1/4"	12
46	PBBCY346	BACKING PLATE	2
47	PBBCY347	SUPPORING BOARD	2
48	PBBCY348	MOTOR COVER PLATE	1
49	PBBCY349	BUTTON HD CAP SCR 1/4"-20 X 1/2	20
50	PBBCY350	HEX BOLT 5/16" - 18 X 1"	4
51	PBBCY351	WASHER 5/16"	4
52	PBBCY352	EXT TOOTH WASHER #10	1
53	PBBCY353	PHLP HD SCR M5-0.8 X 15	3
54	PBBCY354	COLLECTION DRUM BAG	1
55	PBBCY355	LOCK HANDLE GUIDE ASSY	2
55-1	PBBCY355-1	SLIDING BRACKET	2
55-2	PBBCY355-2	COMPRESSION SPRING 3 X 33 X 70	2
55-3	PBBCY355-3	COPPER PLATE	8
55-4	PBBCY355-4	SPRING RETAINER	2
55-5	PBBCY355-5	LOCK HANDLE LINK	2
55-6	PBBCY355-6	FLAT WASHER 3/8 PLASTIC	6
55-7	PBBCY355-7	LOCK NUT 5/16-18	8
55-8	PBBCY355-8	WASHER 5/16"	14
55-9	PBBCY355-9	HEX BOLT 5/16-18 X 1-3/4	3
55-10	PBBCY355-10	HEX BOLT 5/16-18 X 1-1/2	8
55-11	PBBCY355-11	FLANGE NUT 5/16-18	13
55-12	PBBCY355-12	LOCK HANDLE GUIDE FIXING PIECE	4

55-13	PBBCY355-13	LOCK HANDLE GUIDE	2
55-14	PBBCY355-14	BUTTON HD CAP SCR 5/16-18 X 3/4	2
55-15	PBBCY355-15	BUTTON HD CAP SCR 1/4-20 X 1/2	8
55-16	PBBCY355-16	HEX NUT 5/16-18	4
55-17	PBBCY355-17	LOCK HANDLE STOP	1
55-18	PBBCY355-18	END CAP	4
55-19	PBBCY355-19	HEX BOLT 5/16" X 2"	2
56	PBBCY356	PHLP HD SCR 3/16" - 24 X 3/4"	2
57	PBBCY357	HEX NUT 3/16" - 24	3
58	PBBCY358	WASHER 5/16" X 23mm	16
59	PBBCY359	MOTOR	1
60	PBBCY360	POWER CORD 12G 3W 72" 6-20P	1
61	PBBCY361	MOTOR CORD 12G 3W	1
62	PBBCY362	CAP SCREW M6-1 X 16mm	2
63	PBBCY363	PHLP HD SCR 10-24 X 3/8	1
64	PBBCY364	END CAP	1
65	PBBCY365	Foam Grip	1
66	PBBCY366	BAG CLAMP 15"	1
67	PBBCY367	COLLECTION DRUM BAG 23" X 30"	1
REMOTE	PBBCY3REMOTE	REMOTE CONTROL	1

BBCY5HP  
Main Body Diagram

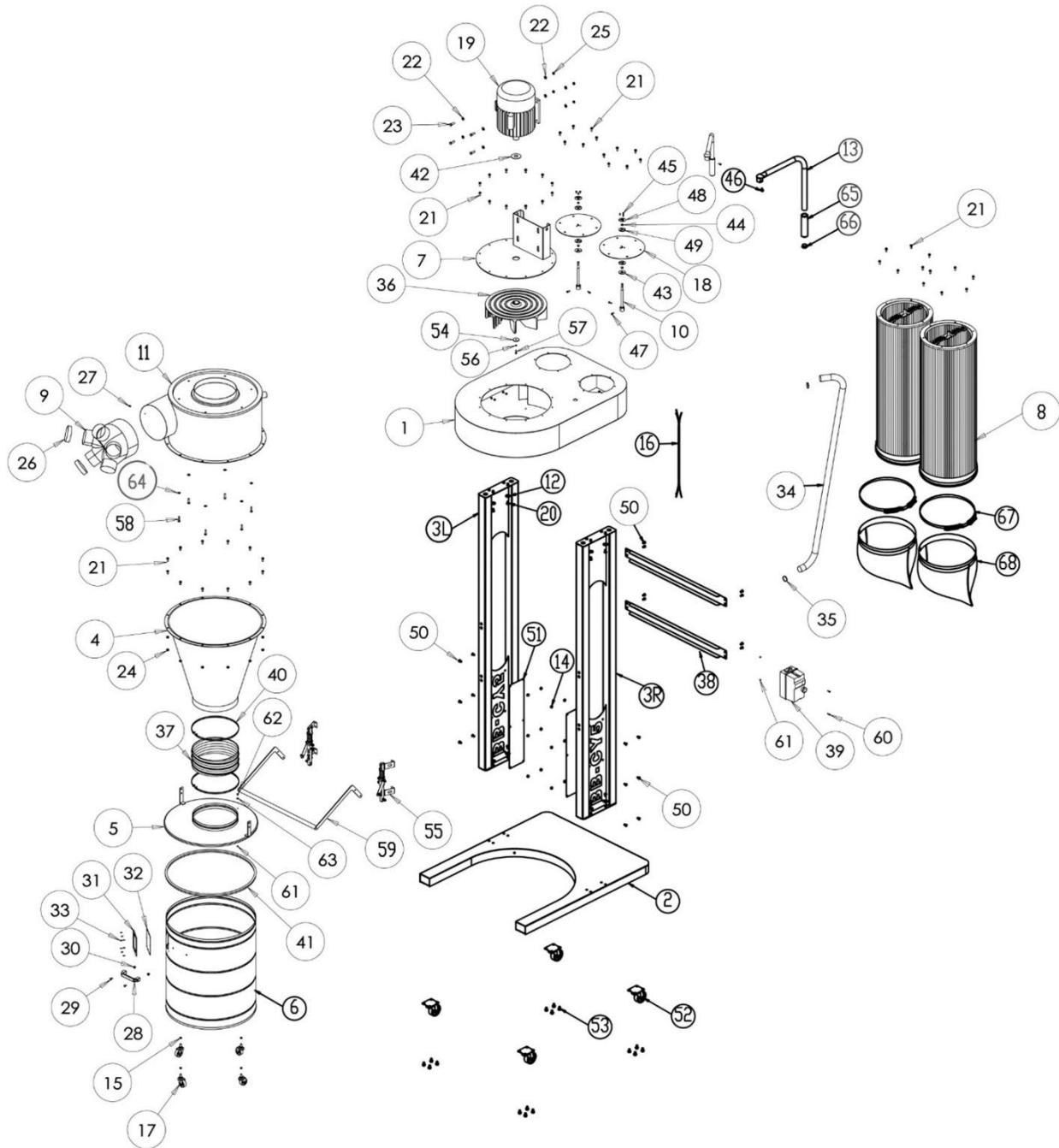


Figure 61

Quick release and Canister Assembly

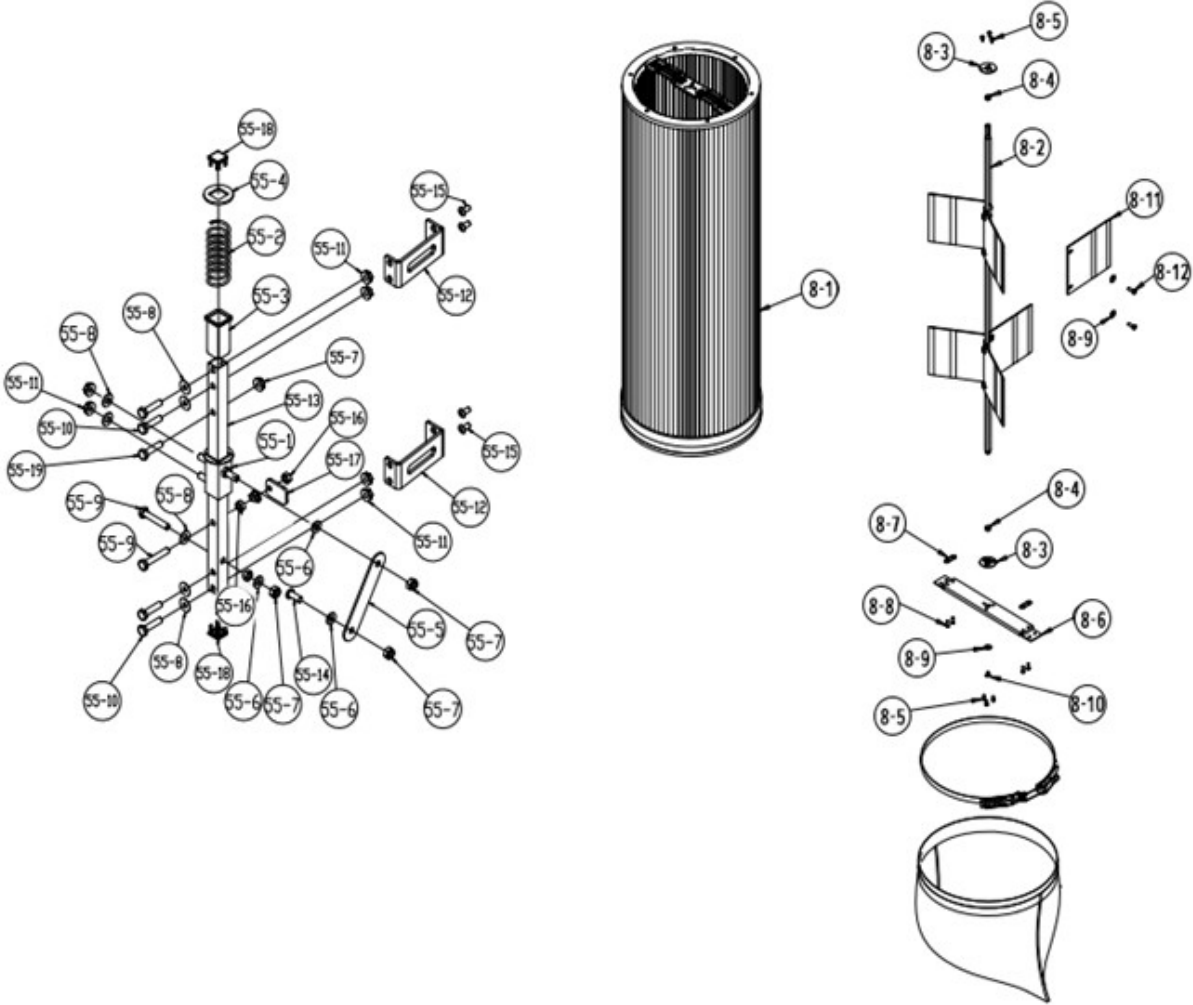


Figure 62

Parts List

Number	Part Number	Description	Qty
1	PBBCY501	IMPELLER HOUSING	1
2	PBBCY502	BASE	1
3R	PBBCY503L	RIGHT SUPPORT LEG	1
3L	PBBCY503R	LEFT SUPPORT LEG	1
4	PBBCY504	CYCLONE FUNNEL	1
5	PBBCY505	COLLECTION DRUM LID	1
6	PBBCY506	COLLECTION DRUM	1
7	PBBCY507	MOTOR COVER PLATE	2
8	PBBCY508	CANISTER FILTER ASSY	2
8-1	PBBCY58-1	CANISTER FILTER	2
8-2	PBBCY58-2	FILTER PADDLE SPINDLE	4
8-3	PBBCY58-3	BEARING RETAINER, LOWER	4
8-4	PBBCY58-4	SLEEVE BEARING 12 X 14 X 6MM	12
8-5	PBBCY58-5	PHLP HD SCR M5-0.8 X 10	2
8-6	PBBCY58-6	PADDLE SPINDLE BRACKET	4
8-7	PBBCY58-7	PADDLE SPINDLE BRACKET RETAINER	8
8-8	PBBCY58-8	PHLP HD SCR M5-0.8 X 15	26
8-9	PBBCY58-9	WASHER 1/4	2
8-10	PBBCY58-10	PHLP HD SCR M6-1 X 10	12
8-11	PBBCY58-11	FILTER PADDLE	24
8-12	PBBCY58-12	PHLP HD SCR M6-1 X 12	1
9	PBBCY59	INLET ADAPTER 10" X 4" X 5	2
10	PBBCY510	PADDLE HANDLE SPINDLE	1
11	PBBCY511	INTAKE BARREL	16
12	PBBCY512	FENDER WASHER 5/16"	2
13	PBBCY513	FILTER PADDLE HANDLE	12
14	PBBCY514	HEX NUT 1/4"-20	4
15	PBBCY515	HEX NUT 5/16"-18	1
16	PBBCY516	MOTOR CORD 10G 3W	4
17	PBBCY517	CASTER 2"	2
18	PBBCY518	FILTER COVER PLATE	1
19	PBBCY519	MOTOR	16
20	PBBCY520	BUTTON HD CAP SCR 5/16"-18 x 3/4"	48
21	PBBCY521	HEX BOLT 5/16"-18 X 3/4"	8
22	PBBCY522	FENDER WASHER 3/8"	4
23	PBBCY523	HEX BOLT 3/8"-16 X 1-1/4"	12
24	PBBCY524	HEX NUT 5/16"-18	4
25	PBBCY525	HEX NUT 3/8"-16	2
26	PBBCY526	INLET ADAPTER CAP 4"	1

27	PBBCY527	PHLP HD SCR 3/16" - 24 X 3/8"	1
28	PBBCY528	COLLECTION DRUM HANDLE	2
29	PBBCY529	PHLP HD SCR 1/4"-20 X 5/8"	2
30	PBBCY530	ACORN NUT 1/4-20	1
31	PBBCY531	FOAM GASKET 120 X 140MM	1
32	PBBCY532	DRUM WINDOW 120 X 140MM ACRYLIC	8
33	PBBCY533	RIVET 2 X 4MM ALUMINUM	1
34	PBBCY534	VACUUM HOSE 1-1/2" X 95"	2
35	PBBCY535	HOSE CLAMP 1-3/4"	1
36	PBBCY536	IMPELLER 16"	1
37	PBBCY537	FLEX HOSE 12"	1
38	PBBCY538	REINFORCEMENT BOARD	2
39	PBBCY539	MAG SWITCH	1
40	PBBCY540	HOSE CLAMP 12"	2
41	PBBCY541	COLLECTION DRUM GASKET	1
42	PBBCY542	RUBBER GASKET	1
43	PBBCY543	BEARING RETAINER, LOWER	2
44	PBBCY544	SLEEVE BEARING 12 X 14 X 6mm	4
45	PBBCY545	PHLP HD SCR M5-0.8 X 15mm	6
46	PBBCY546	HEX CAP SCREW M6-1 X 16mm	2
47	PBBCY547	CAP SCREW M6-1 X 16mm	4
48	PBBCY548	BEARING RETAINER, UPPER	2
49	PBBCY549	RUBBER GASKET	4
50	PBBCY550	BUTTON HD CAP SCR 1/4"-20 x 1/2"	20
51	PBBCY551	BACKING PLATE	2
52	PBBCY552	CASTER 2-1/2", LOCKING SWIVEL	4
53	PBBCY553	FLANGE BOLT 5/16-18 X 1/2"	16
54	PBBCY554	IMPELLER WASHER	1
55	PBBCY555	LOCK HANDLE GUIDE ASSY	2
55-1	PBBCY555-1	SLIDING BRACKET	2
55-2	PBBCY555-2	COMPRESSION SPRING 3 X 33 X 70	2
55-3	PBBCY555-3	COPPER PLATE	8
55-4	PBBCY555-4	SPRING RETAINER	2
55-5	PBBCY555-5	LOCK HANDLE LINK	2
55-6	PBBCY555-6	FLAT WASHER 3/8 PLASTIC	6
55-7	PBBCY555-7	LOCK NUT 5/16-18	8
55-8	PBBCY555-8	WASHER 5/16"	12
55-9	PBBCY555-9	HEX BOLT 5/16-18 X 1-3/4	3



## Line Diagrams

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BBCY1.5HP and 2HP

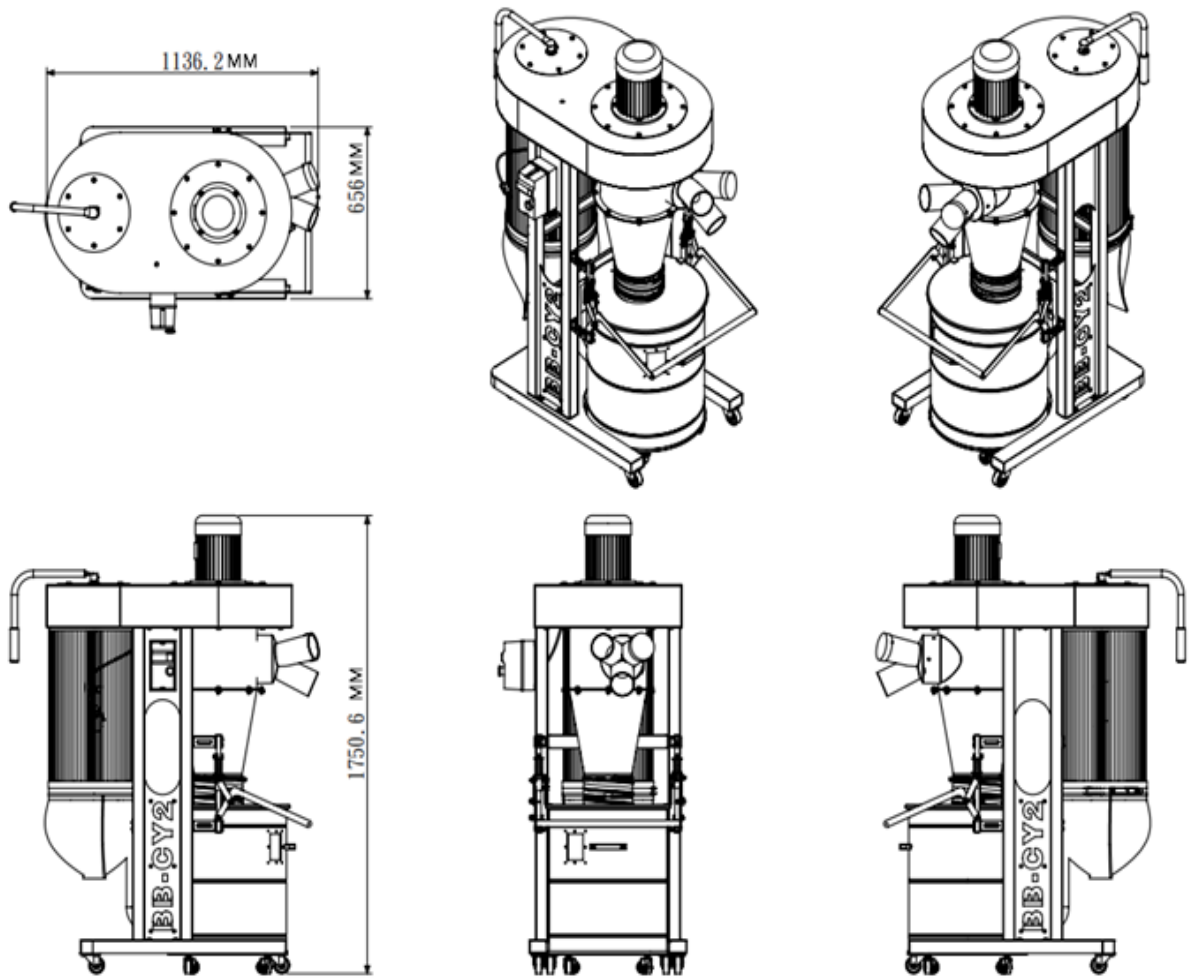


Figure 63

BBCY3HP

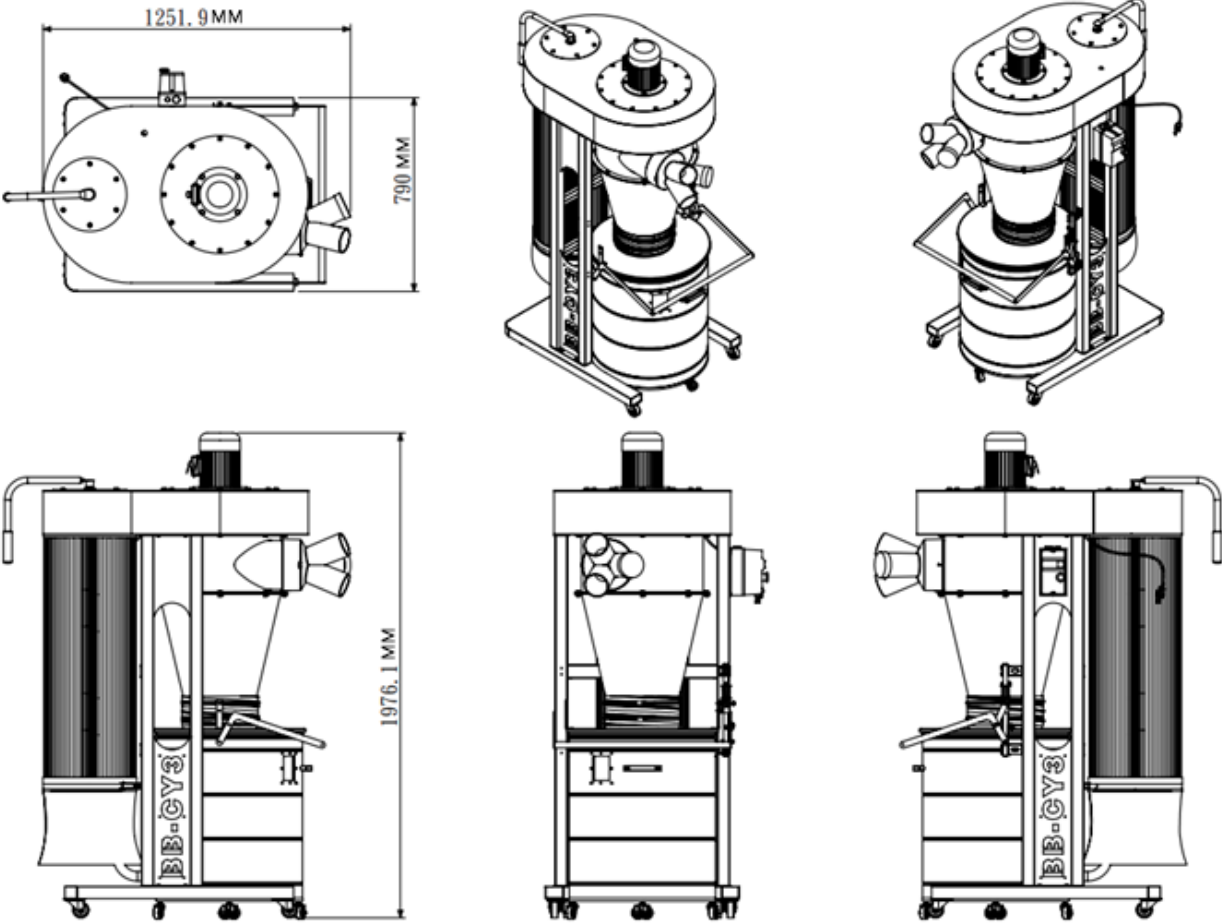


Figure 64

BBCY5HP

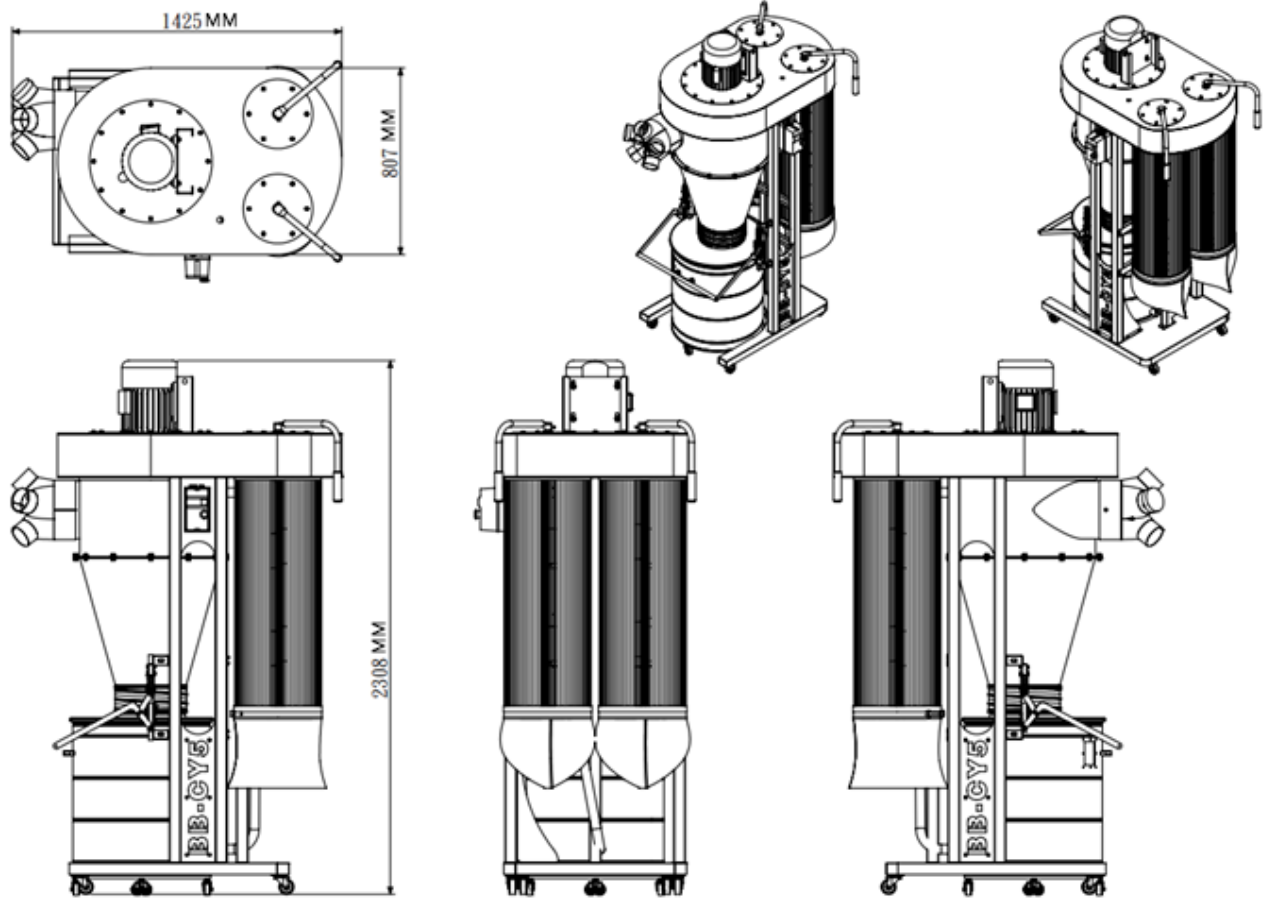


Figure 65

## Troubleshooting

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This troubleshooting guide covers common problems that may occur with this machine. If you need replacement parts or additional troubleshooting help, contact our Customer Service Department. **Note: Before You Call!** Locate the machine model, serial number, and manufacture date, and if available, your original purchase receipt.

<b>Machine does not start or a breaker trip immediately after start-up.</b>	1. E-Stop Button depressed/at fault.	1. Rotate E-Stop Button to reset. Replace if at fault.
	2. Incorrect power supply voltage or circuit size.	2. Ensure correct power supply voltage and circuit size.
	3. Power supply circuit breaker tripped or fuse blown.	3. Ensure circuit is sized correctly and free of shorts. Reset circuit breaker or replace fuse.
	4. Motor overheated.	4. Allow motor to cool, reset overload if necessary.
	5. Machine circuit breaker has tripped.	5. Reset circuit breaker on switch.
	6. Remote control not working.	6. Replace battery; stay in signal range.
	7. Wiring open/has high resistance.	7. Check/fix broken, disconnected, or corroded wires.
	8. Centrifugal switch/contact points at fault.	8. Adjust/replace centrifugal switch/contact points.
	9. Power switch/circuit breaker at fault.	9. Test/replace.
	10. Start capacitor at fault.	10. Test/replace.
	11. Remote receiver at fault.	11. Replace.
	12. Motor at fault.	12. Test/repair/replace.
<b>Machine stalls or seems underpowered.</b>	1. Motor overheated.	1. Allow motor to cool, reset overload if necessary.
	2. Dust-collection ducting problem.	2. Clear blockages, seal leaks, use smooth-wall duct, eliminate bends, close other branches
	3. Canister filter clogged/at fault.	3. Clean canister filter, replace canister filter
	4. Dust collector too far from machine or undersized for dust-collection system.	4. Move closer to machine/redesign ducting layout/upgrade dust collector.
	5. Run capacitor at fault.	5. Test/repair/replace.

	6. Centrifugal switch/contact points at fault.	6. Adjust/replace centrifugal switch/contact points if available.
	7. Motor bearings at fault.	7. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.
<b>Machine has vibration or noisy operation.</b>	1. Motor or component are loose.	1. Inspect/replace damaged bolts/nuts and retighten with thread-locking fluid.
	2. Motor fan rubbing on fan cover.	2. Remove motor fan cover, reposition fan on motor shaft and tighten. Replace if fan is damaged.
	3. Motor mount loose/broken.	3. Tighten/replace.
	4. Centrifugal switch is at fault.	4. Adjust/replace centrifugal switch.
	5. Impeller damaged or unbalanced.	5. Replace.
	6. Motor bearings at fault.	6. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.
	7. Motor shaft bent.	7. Test with dial indicator. Replace motor if damaged.
<b>Loud, repetitious noise, or excessive vibration coming from dust collector (non-motor related).</b>	1. Dust collector not on a flat surface and wobbles.	1. Stabilize dust collector; lock casters.
	2. Impeller damaged, unbalanced, or loose.	2. Disconnect dust collector from power. Inspect impeller for dents, bends, or loose fins. Replace impeller if damaged.
	3. Impeller loose on the motor shaft.	3. Secure impeller; replace motor and impeller as a set if motor shaft and impeller hub are damaged.

<b>Dust collector does not adequately collect dust or chips; poor performance.</b>	1. Dust Collector not properly connected to ducting	1. Connect dust collector properly
	2. Collection bag full.	2. Empty collection bag.
	3. Canister filter clogged/at fault.	3. Clean canister filter ; replace canister filter
	4. Ducting blocked/restricted.	4. Remove ducting from dust collector inlet and unblock restriction. A plumbing snake may be necessary.
	5. Dust collector too far away from point of suction; duct clamps not properly secured; too many sharp bends in ducting.	5. Relocate dust collector closer to point of suction; re-secure ducts; remove sharp bends.
	6. Lumber is wet and dust is not flowing smoothly through ducting.	6. Only process lumber with less than 20% moisture content.
	7. Ducting has one or more leaks, or too many open ports.	7. Seal/eliminate all ducting leaks; close dust ports for lines not being used.
	8. Not enough open branch lines at one time, causing velocity drop in main line.	8. Open 1 or 2 more blast gates to different branch lines to increase main line velocity.
	9. Ducting and ports are incorrectly sized.	9. Install correctly sized ducts and fittings
	10. The machine dust-collection design inadequate.	10. Use dust-collection hood on stand.
	11. Dust collector undersized.	11. Install larger dust collector.
<b>Dust collector blows sawdust into the air.</b>	1. Duct clamps or filter bag(s) are not properly clamped and secured; ducting loose/ damaged.	1. Re-secure ducts and filter bag, making sure duct and bag clamp are tight; tighten/replace ducting.
	2. Cylinder or funnel seals are loose or damaged.	2. Retighten all mounting and sealing points; replace damaged seals/gaskets.
<b>Remote control does not operate dust collector.</b>	1. Emergency Stop button is pressed in.	1. Rotate E-Stop button to reset.
	2. Machine is disconnected from power.	2. Verify machine is connected to power source.
	3. Remote control battery is weak or dead.	3. Replace battery.

4. A wall or barrier disrupts the radio frequency, or controller is too far away.	4. Move machine away from barrier; use remote within 75' of machine.
5. Remote control not paired with receiver.	5. Program receiver to accept remote control





## BUSY BEE TOOLS 2 YEARS LIMITED WARRANTY

Busy Bee Tools warrants every product to be free from defects in materials and agrees to correct such defects where applicable. This warranty covers **two years** for parts and 90 days for labor (unless specified otherwise), to the original purchaser from the date of purchase but does not apply to malfunctions arising directly or indirectly from misuse, abuse, improper installation or assembly, negligence, accidents, repairs or alterations or lack of maintenance.

*Proof of purchase is necessary.*

All warranty claims are subject to inspection of such products or part thereof and Busy Bee Tools reserves the right to inspect any returned item before a refund or replacement may be issued.

This warranty shall not apply to consumable products such as blades, bits, belts, cutters, chisels, punches etc.

Busy Bee Tools shall in no event be liable for injuries, accidental or otherwise, death to persons or damage to property or for incidental contingent, special or consequential damages arising from the use of our products.

### RETURNS, REPAIRS AND REPLACEMENTS

To return, repair, or replace a Busy Bee Tools product, you must visit the appropriate Busy Bee Tools showroom or call 1-800-461-BUSY.

For replacement parts directly from Busy Bee Tools, for this machine, please call 1-800-461-BUSY (2879), and have your model number and part number & payment option ready.

- All returned merchandise will be subject to a minimum charge of 15% for re-stocking and handling with the following qualifications.
- Returns must be pre-authorized by us in writing.
- We do not accept *collect* shipments.
- Items returned for warranty purposes must be insured and shipped pre-paid to the nearest warehouse .
- Returns must be accompanied with a copy of your original invoice as proof of purchase. Returns must be in an un-used condition and shipped in their original packaging a letter explaining your reason for the return. Incurred shipping and handling charges are not refundable.
- Busy Bee will repair or replace the item at our discretion and subject to our inspection.
- Repaired or replaced items will be returned to you pre-paid by our choice of carriers.
- Busy Bee reserves the right to refuse reimbursement or repairs or replacement if a third party without our prior authorization has carried out repairs to the item.
- Repairs made by Busy Bee Tools are warranted for 30 days on parts and labour.
- Any unforeseen repair charges will be reported to you for acceptance prior to making the repairs.
- The Busy Bee Parts & Service Departments are fully equipped to do repairs on all products purchased from us with the exception of some products that require the return to their authorized repair depots. A Busy Bee representative will provide you with the necessary information to have this done.

For faster service it is advisable to contact the nearest Busy Bee location for parts availability prior to bringing your product in for repairs.