

# **POWERMATIC®**

## **Operating Instructions and Parts Manual 5HP Mobile Cyclone Dust Collector Model PM2205**



for serial no. 21110007 and higher.

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**Document No. M-1792205HK**  
Edition 3 5/2022  
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## 1.0 IMPORTANT SAFETY INSTRUCTIONS

When using an electrical appliance, basic precautions should always be followed, including the following:


READ ALL INSTRUCTIONS BEFORE USING THIS DUST COLLECTOR.


### **WARNING – To reduce the risk of fire, electric shock, or injury:**

1. Read and understand entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual.
3. Replace warning labels if they become obscured or removed.
4. This dust collector is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a dust collector, do not use until proper training and knowledge have been obtained.
5. Do not use this dust collector for other than its intended use. If used for other purposes, Powermatic disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear protective eye wear when operating machinery. Eye wear shall be impact resistant, protective safety glasses with side shields which comply with ANSI Z87.1 specifications. Use of eye wear which does not comply with ANSI Z87.1 specifications could result in severe injury from breakage of eye protection. (Everyday eyeglasses only have impact resistant lenses; they are NOT safety glasses.)
7. Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.
8. Wear hearing protection (plugs or muffs) if noise exceeds safe levels.
9. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
10. Make certain the switch is in the **OFF** position before connecting the machine to the power supply. Turn off all controls before unplugging.
11. Make certain the machine is properly grounded. Connect to a properly grounded outlet only. See Grounding Instructions.
12. Make all machine adjustments or maintenance with the machine unplugged from the power source.
13. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
14. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately after maintenance is complete.
15. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
16. Provide for adequate space surrounding work area and non-glare, overhead lighting.
17. Keep the floor around the machine clean and free of scrap material, oil and grease.
18. Keep visitors a safe distance from the work area. **Keep children away.**
19. Make your workshop child proof with padlocks, master switches or by removing starter keys.
20. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
21. The dust collector is intended for indoor use. To reduce the risk of electric shock, do not use outdoors or on wet surfaces.
22. Do not use this dust collector for anything except wood dust. Materials such as liquids, metal shavings, metal dust, screws, glass, plastic or rock can cause sparks and/or damage when coming into contact with any part of the dust collector.
23. Do not use to pick up anything that is burning or smoking, such as cigarettes, matches or hot ashes.
24. Do not use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.
25. Do not pull or carry by cord, use cord as a handle, close a door on cord, or pull cord around sharp edges or corners. Do not run dust

collector over cord. Keep cord away from heated surfaces.


26. Do not use this dust collector with a damaged cord or plug. If the unit is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.
27. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
28. Do not use without dust bag and/or filters in place.
29. Do not handle plug or machine with wet hands.
30. Do not put any objects into the openings. Do not use with any opening blocked; keep free of dust, lint, hair, and anything that may reduce air flow.
31. Do not operate without hose connected to the inlet. Place cap on unused inlet port. Hazardous moving parts inside. Unplug before removing or connecting inlet or inlet guard.
32. Use recommended accessories; improper accessories may be hazardous.
33. Maintain tools with care. Follow instructions for lubricating and changing accessories.
34. Turn off machine and disconnect from power before cleaning. Use a brush or compressed air to remove chips or debris; do not use bare hands.
35. Do not leave the machine when it is plugged in. Unplug from outlet when not in use and before servicing.
36. Do not stand on the machine. Serious injury could occur if the machine tips over.
37. Use proper extension cord. Make sure your extension cord is in good condition. When using an extension cord, use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Sect. 6.2, Table 2 shows correct size to use depending upon cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
38. The dust collector is intended for household use.


 **WARNING:** This product can expose you to chemicals including lead which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to **Error! Hyperlink reference not valid..**

 **WARNING:** Drilling, sawing, sanding or machining wood products generates wood dust and other substances known to the State of California to cause cancer. Avoid inhaling dust generated from wood products or use a dust mask or other safeguards for personal protection.

Wood products emit chemicals known to the State of California to cause birth defects or other reproductive harm. For more information go to <http://www.p65warnings.ca.gov/wood>.

**Familiarize yourself with the following safety notices used in this manual:**

 **CAUTION** This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.

 **WARNING** This means that if precautions are not heeded, it may result in serious, or possibly even fatal, injury.

**SAVE THESE INSTRUCTIONS**

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## 3.0 About this manual

This manual is provided by Powermatic, covering the safe operation and maintenance procedures for a Powermatic Model PM2205 Cyclone Dust Collector. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. Your machine has been designed and constructed to provide consistent, long-term operation if used in accordance with the instructions as set forth in this document.

This manual is not intended to be an exhaustive guide to dust removal strategies, installation of shop duct work, or the use of optional dust collection accessories. Additional knowledge may be obtained from experienced users or trade articles. Whatever accepted methods are used, always make personal safety a priority.

If there are questions or comments about this product, please contact your local supplier or Powermatic. Powermatic can also be reached at our web site: [www.powermatic.com](http://www.powermatic.com).

Retain this manual for future reference. If the machine transfers ownership, the manual should accompany it.

Register your product using the mail-in card provided, or register online: <http://www.powermatic.com>

## 4.0 Specifications for PM2205 Cyclone Dust Collector

Table 1

Model number	<b>PM2205</b>	
Stock numbers	Complete kit with HEPA filter	1792205HK
	Main unit (without filter)	1792205B
	HEPA canister filter	1792205H
<b>Motor and electrical</b>		
Motor type	totally enclosed fan cooled, induction, capacitor start	
Horsepower	5HP (3.7kW)	
Phase	Single	
Voltage	230 V	
Cycle	60 Hz	
Listed FLA (full load amps)	20 A	
Starting amps	108 A	
Running amps (no load)	19 A	
Start capacitor	800MFD 250VAC	
Run capacitor	100 $\mu$ F 250VAC	
On/off switch	Magnetic contactor with overload protection	
Motor speed	3450 RPM	
Power cord	12AWG x 3C, SJT, 6 ft.	
Recommended minimum circuit size <sup>1</sup>	20 A	
Sound emission <sup>2</sup>	95 dB at 9.84 ft (3m)	
Remote control system	Radio frequency (FCC approved); range up to 50 ft. (15m)	
RC transmitter battery	2 x AA, 1.5V	
Timer setting	2,4,6,8 hours	
<b>Capacities</b>		
Inlet diameter	8 in. (203.2 mm)	
Inlet adaptors, number of	3	
Inlet adaptors, diameter of	4 in. (100 mm)	
Air Flow with filters <sup>3</sup>	1708 CFM (48.4 m <sup>3</sup> /min)	
Air Velocity <sup>3</sup>	4,464 FPM (24.8 m/s)	
Static pressure loss (WC) <sup>3</sup>	2.4 inH <sub>2</sub> O (60 mmH <sub>2</sub> O)	
Maximum static pressure loss (WC) <sup>3</sup>	9.8 inH <sub>2</sub> O (248 mmH <sub>2</sub> O)	
<b>Impeller</b>		
Diameter	16.6 in. (422 mm)	
Fin thickness	0.25 in. (6.35 mm)	
Type	radial fin	
Material	Aluminum	
<b>Canister filter</b>		
Filter type	cartridge and spunbond polyester	
Canister filter diameter	19.7 in. (500 mm)	
Canister filter length	39.4 in. (1000 mm)	
Filter surface area	90.4 sq. ft. (8.4 m <sup>2</sup> )	
HEPA Filter efficiency rating	99.97% of 0.3 micron particles	
Cleaning system	Automatic when stop button is pushed	
<b>Collection bags</b>		
Bag material	polyethylene	
Drum collection bag size (Dia. x L)	24.6 x 47-1/4 in. (625 x 1200 mm)	
Canister collection bag size (Dia. x L)	19.6 x 40.5. (500 x 1030 mm)	

		<b>PM2205</b>
<b>Collection drum</b>		
Capacity	63 gal. (75.7 L)	
Diameter	24-1/2 in. (622 mm)	
Height	32-1/2 in. (825 mm)	
Material	steel	
<b>Body construction</b>		
Frame	steel tubing, sheet metal	
Body/housing	sheet metal	
Paint finish	powder coat	
<b>Dimensions</b>		
Footprint/base dimensions (LxW)	63 x 28-15/16 in. (1600 x 735 mm)	
Overall dimensions, assembled (LxWxH)	63 x 28-15/16 x 97-7/8 in. (1600 x 735 x 2485 mm)	
Shipping dimensions (LxWxH)	Box #1 base machine	58.5 x 37.8 x 50.2 in. (1485 x 960 x 1275 mm)
	Box #2 canister filter	26 x 26 x 53.3 in. (680 x 665 x 1170 mm)
<b>Weights</b>		
Net weight, full kit assembled	487 lbs. (221 kg)	
Box #1, main unit only	Net weight	465 lbs. (211 kg)
	Shipping weight	560 lbs. (254 kg)
Box #2, HEPA filter only	Net weight	30.8 lbs. (14 kg)
	Shipping weight	52.9 lbs. (24 kg)

<sup>1</sup> Subject to local/national electrical codes. Recommendation based upon dedicated circuit.

<sup>2</sup> The specified values are emission levels and are not necessarily to be seen as safe operating levels. As workplace conditions vary, this information is intended to allow the user to make a better estimation of the hazards and risks involved only.

<sup>3</sup> Test condition: 8-in. inlet with standard canister filter installed.

*L = length, W = width, H = height*

*n/a = not applicable*

The specifications in this manual were current at time of publication, but because of our policy of continuous improvement, JET reserves the right to change specifications at any time and without prior notice, without incurring obligations.

**⚠WARNING** Read and understand the entire contents of this manual before attempting assembly or operation. Failure to comply may cause serious injury.

## 5.0 Setup and assembly

### 5.1 Unpacking and cleanup

Remove all items from the pallet and inspect for damage. If any is discovered, contact your distributor. NOTE: Remove 2 screws holding the drum to the pallet. There may be additional fasteners securing items to the pallet.

Remove all items from their separate boxes/packages and compare to the contents list in this manual. If any part shortages are identified, contact your distributor. Do not discard boxes or packing material until dust collector is assembled and running satisfactorily.

The letter designations below are used throughout the assembly instructions.

### 5.2 Shipping contents

Box #1 and box #2 (see Figure 5-1)

- 1 Main housing assembly, with motor and negative pressure gauge – A
- 1 Base – B
- 1 Upper drum – C
- 1 Lower drum – D
- 1 Drum lid – E
- 1 Inlet adaptor – F
- 1 Connecting frame – G
- 1 Right stand panel (with wiring box) – H
- 1 Left stand panel – I
- 1 Hose – J
- 2 Hose 2in. – K
- 2 Hose clamps – L
- 1 Cone clamp – M
- 1 Canister bag clamp – N
- 1 Drum handle – O
- 1 Reducing cone – P
- 1 Quick lever – Q
- 2 Fixed casters  $\varnothing 3 \times 1-1/4$  – R
- 2 Swivel casters  $\varnothing 3 \times 1-1/4$  – S
- 4 Drum casters – T
- 1 PE bag, large (for drum) – U
- 1 Drum clamp – V
- 1 Roll foam tape,  $3/4 \times 50L$  (20x1590mm) – W
- 2 Rolls foam tape, 1x38L in. (30x970mm) – FT-138
- 2 Handles – Y
- 2 Quick connectors – A1
- 4 Hose clamps 2" dia. – B1
- 1 PE bag, small (for canister) – C1
- 1 Canister filter – D1
- 1 Remote control (with 2 AA batteries) – RC
- 4 Angle supports – E1
- 1 Roll foam tape, 1x25L in. (30x635mm) – FT125

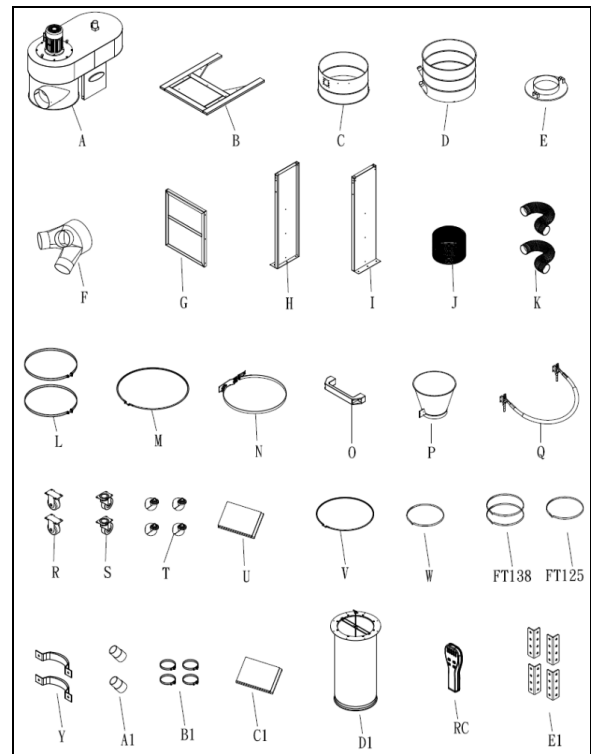


Figure 5-1: contents (not to scale)

### Hardware package, #PM2205 (see Figure 5-2)

- 16 Hex flange head screws, 5/16x1/2 – HP1
- 63 Button head screws, 5/16x3/4 – HP2
- 63 Flat washers, 5/16 – HP3
- 2 Phillips pan head screws, 1/4x1/2 – HP4
- 8 Button head screws, M5x10 – HP5
- 1 Open end wrench, 10/12mm – HP6
- 2 Hex keys, 4mm and 5mm – HP7

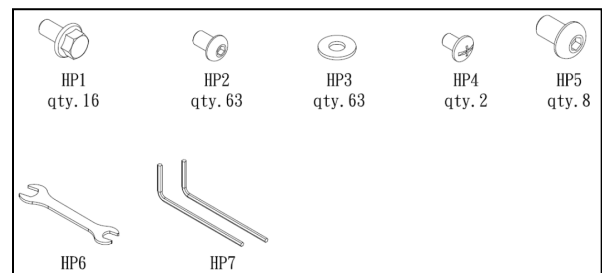


Figure 5-2: # **PM2205-HP** hardware package contents (not to scale)



### 5.3 Tools required for assembly

12mm wrench (provided)  
4mm, 5mm hex keys (provided)  
Cross-point (Phillips) screwdriver

Note: A ratcheting socket wrench, and hand drill with cross-point bit, will speed assembly time.

Approximate assembly time: 2 to 3 hours

### 5.4 Assembly

**WARNING** Do not connect dust collector to power until it is assembled. Failure to comply may cause serious injury.

1. Turn base upside-down (on cardboard or cloth to prevent scratching) and install fixed (R) and swivel (S) casters. Note: Swivel casters mount below the platform. Tighten all screws securely, and turn base upright.

*In steps 2 through 4, tighten screws only enough to secure the structure; do not fully tighten.*

2. Position left stand panel (I) and insert screws (HP2). Semi-tighten screws.
3. Install support frame (G) to left panel, and position right panel (H). Semi-tighten all screws.
4. Install angle supports (E1) with button head screws and washers (HP2/3). Semi-tighten. Half of angle support should protrude upward.
5. Assemble handles (Y) and fully tighten.

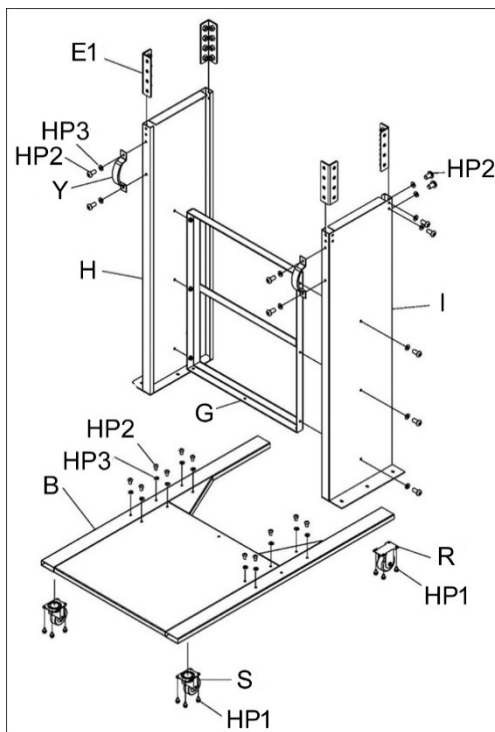


Figure 5-3

**WARNING** Use hoist or forklift with hooks through the eyebolts near the motor, to raise housing assembly. Lifting equipment must be properly rated for the load.

If neither is available, use at least 4 persons to lift housing and set it upon the stand. Failure to comply may cause serious injury and property damage.

6. Lower main housing (A, Figure 5-4) onto angle supports and down onto stand panels. Secure with button head screws and washers (HP2/3). Tighten all securely.
7. Fully tighten all screws on stand assembly.

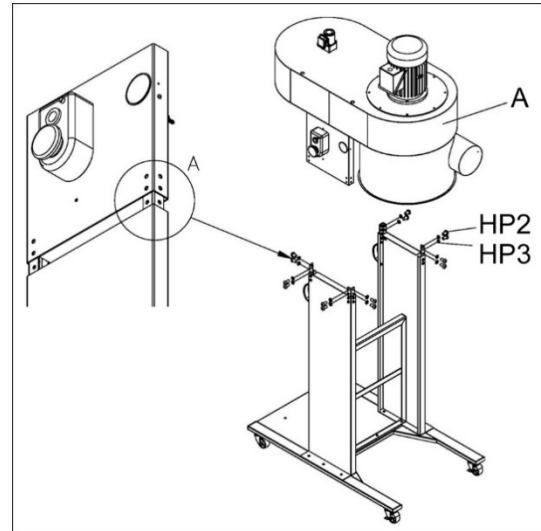


Figure 5-4

8. Place 2-inch hose (K) on main housing and tighten with hose clamp (B1). See Figure 5-5.

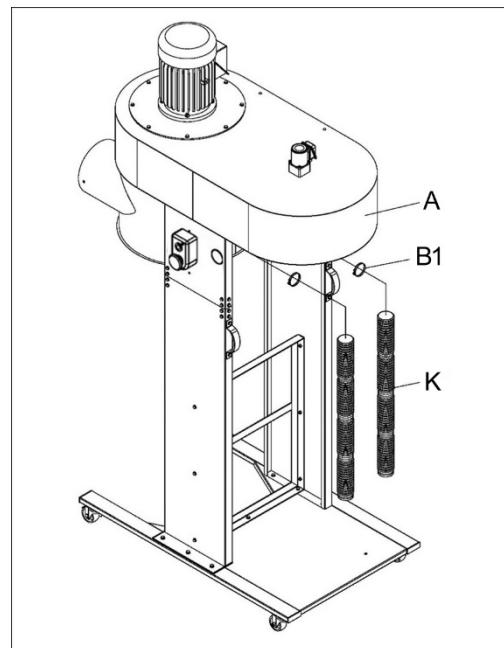


Figure 5-5

9. Turn cone upside down. See Figure 5-6.
10. Paste 1Wx38L inch foam tape (FT138) around bottom lip of cone. Trim excess.
11. Work the hose (J) onto the cone, and secure with clamp (P).

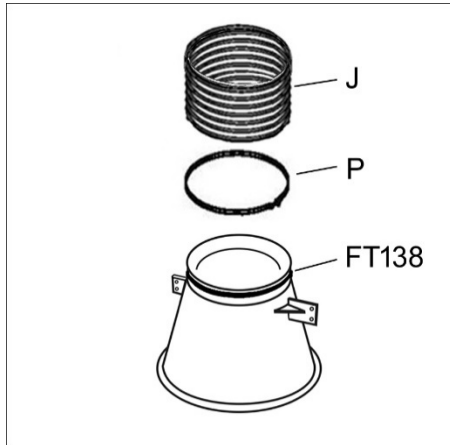


Figure 5-6

12. Before installing the canister, remove the junction box cover. Make sure the green grounding wire is secured to the screw, and the cable going up to the switch is secured against the panel by the cable clip. See Figure 5-7
13. Leave cover off for later wiring to power source (see sect. 6.0).

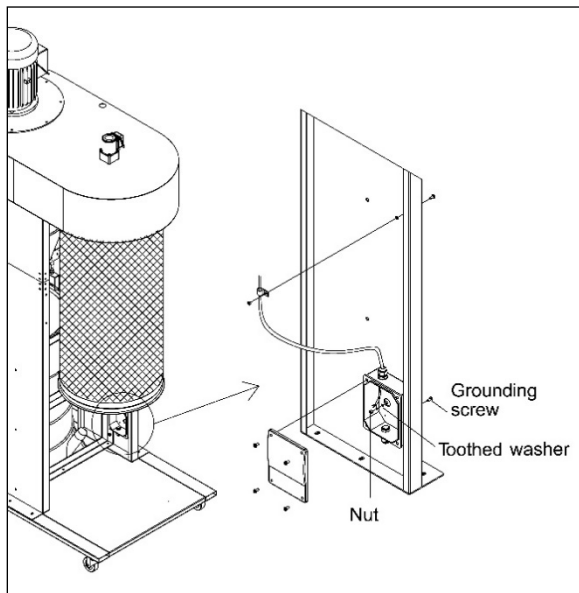


Figure 5-7

14. Install canister filter (D1) to housing, with 8 button head screws and washers (HP2/3). Tighten screws.
15. Assemble cone (P) to housing with clamp (M). See Figure 5-8. Position cone so that flanges face forward and are parallel to stand. Tighten screw on clamp.

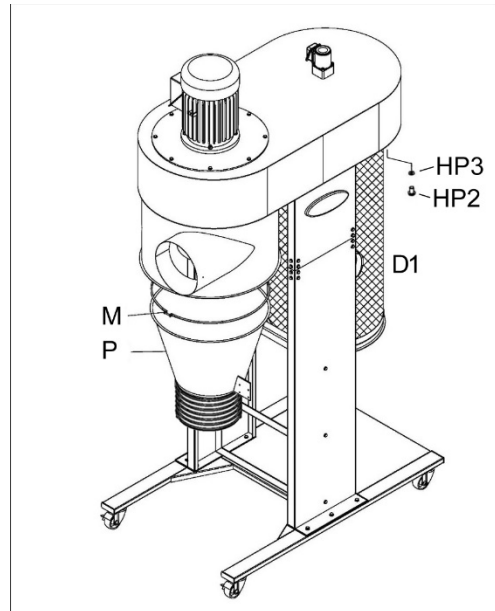


Figure 5-8

16. The upper drum is nested within the lower drum. Remove clamp, and lift out upper drum.
17. Assemble upper drum (C, Figure 5-9) to lower drum (D) and secure with drum clamp (V) by tightening screw (V<sub>1</sub>).
18. Install handle (O) with screws (HP4). Handle should be opposite side from lower ports.
19. Turn drum over and install casters (T) into threaded holes beneath drum. Use the provided wrench to tighten.

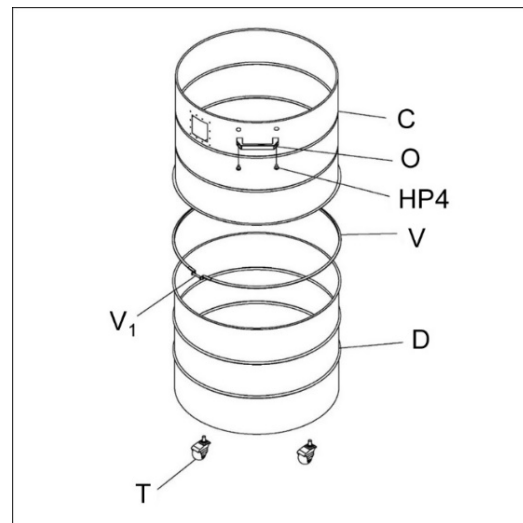


Figure 5-9

20. Paste 1Wx25L inch foam tape (FT125) around the inlet port at its edge. Trim excess. See Figure 5-10.
21. Push inlet adaptor (F) onto housing inlet and tighten with screw.
22. Paste 1Wx38L inch foam tape (FT138) around flange of drum lid (E).

23. Roll drum beneath cone and work hose on to drum lid. Secure with hose clamp (L).
24. Install quick lever (Q) to flanges of cone with button head screws (HP5, see inset). Then connect bottom of handle to drum lid with hex nut on top and lock nut underneath.
25. Push quick connectors (A1) into the 2-inch hoses, tighten with hose clamps, and place connectors onto ports at back of drum (B1).

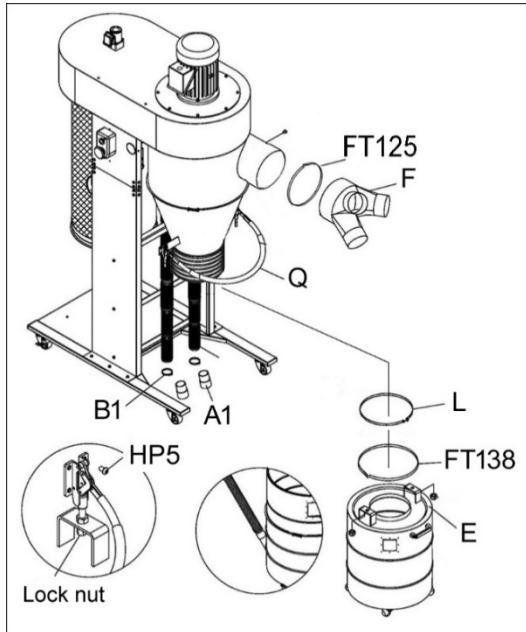


Figure 5-10

26. Apply 3/4Wx50L inch foam tape (W, Figure 5-11) to lower groove of canister filter, just above the lip.
27. Install canister collection bag (C1) beneath canister filter and secure with bag clamp (N).
28. The dust collector is now assembled and ready for operation.

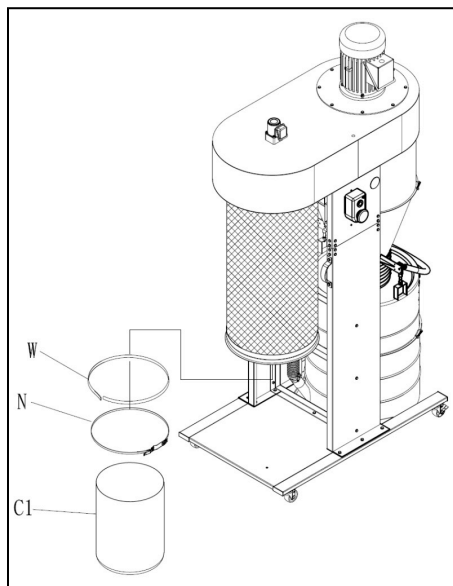


Figure 5-11

## 6.0 Electrical connections

**▲WARNING** All electrical connections must be done by a qualified electrician in compliance with all local codes and ordinances. Failure to comply may result in serious injury.

The PM2205 Dust Collector is rated at single-phase, 230-volt power only.

A power cable must be supplied by the user, inserted through the lower strain relief, and properly connected inside the machine's junction box. A proper UL/CSA listed plug may be used, or the machine may be "hardwired" to a circuit panel.

Confirm that power available at the machine's location matches that for which the machine is wired. It is recommended that the dust collector be connected to a dedicated minimum 20 amp circuit with circuit breaker or fuse. If connected to a circuit protected by fuse, use time delay fuse marked "D". **Local codes take precedence over recommendations.**

Keep in mind that a circuit being used by other machines, tools, lights, heaters, etc. at the same time will add to the electrical load. A dedicated circuit to the dust collector will offer best results since dust collectors are generally used while other tools are running.

Before connecting to power source, be sure switch is in *off* position.

### 6.1 GROUNDING INSTRUCTIONS

This 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.

If a plug is used, it must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Permanently connected tools: This tool should be connected to a grounded metal permanent wiring system; or to a system having an equipment-grounding conductor. Make sure a disconnect is available for the operator. During hard-wiring of the machine, make sure the fuses have been removed or the breakers have been tripped in the circuit to which the band saw will be connected. **ALWAYS FOLLOW PROPER LOCK-OUT, TAG-OUT PROCEDURES.**

**▲WARNING** Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded.

The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor.

If repair or replacement of the electric cord or is necessary, do not connect the equipment-grounding conductor to a live terminal.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles.

Repair or replace damaged or worn cord immediately.

## 6.2 Extension cords

The use of extension cords is discouraged; try to position machines near the power source. If an extension cord is necessary, make sure it is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 2 shows correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Amp Rating		Volts	Total length of cord in feet			
More Than	Not More Than	240	50	100	200	300
		AWG				
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

Table 2: Extension cord recommendations

## 7.0 Operations

### 7.1 Start/stop

**Power Indicator Light** – The start switch has a power indicator lamp which is on *whenever there is power connected* to the collector, not just when the machine is running. Do not assume that no light means there is no power to the machine. If the bulb is bad, there will be no indication. Always check before use.

**⚠ WARNING** Do not rely that no light means no power to the machine. Always check for power first. Failure to comply may cause serious injury!

Refer to Figure 16:

**Start (A)** – Press the green start switch.

When power is connected to the machine, the green light is always on regardless of whether the collector is running or not.

**Stop (B)** – Press the red switch to stop.

**Reset** – If the dust collector stops without pressing the stop button, as the result of a tripped fuse or circuit breaker:

1. Press red button (C) to reset.
2. Press green button (A) to restart machine.

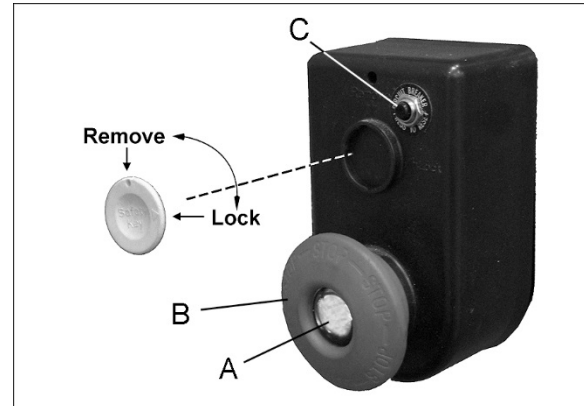


Figure 7-1

### 7.2 Safety Key

The start/stop switch comes equipped with a magnetic safety key. See Figure 16. When in place on the switch, the magnetic safety key trips a relay which allows the machine to start and stop when the respective switches are pressed. Being magnetic, the safety key can be removed to make the machine inoperable.

When using the machine, place the key on the switch cover lining up the arrow on the key with the REMOVE arrow on the cover. Then rotate the key so the arrow lines up with the LOCK arrow. This prevents the safety key from vibrating loose when the machine is operating.

### 7.3 Remote controller

The RF (radio frequency) remote controller operates on 2 AAA batteries (included). The batteries will need replacing periodically. The remote controller has an effective range up to approximately 50 feet (15 meters).

Press the + or – button to select desired timer setting: 2, 4, 6 or 8 hours. The dust collector will stop automatically at end of selected period. For continuous operation (no timer) select infinity (4) position.



Figure 7-2

### 7.3.1 Remote controller reset

If the remote controller begins to function improperly, it should be cleared and reset.

To clear the remote controller, press and hold reset button (D, Figure 7-3) for 3 seconds until receiver “beeps” 3 times.

To reset the controller:

1. Press reset button for 1 second until receiver “beeps” once.
2. Press and hold “ON” button on the remote controller until receiver “beeps” twice. (If you are using multiple remotes, perform step 2 on each remote before proceeding.)
3. Press and hold reset button (D) for 3 seconds until receiver “beeps” 3 times.

The remote controller is now ready.

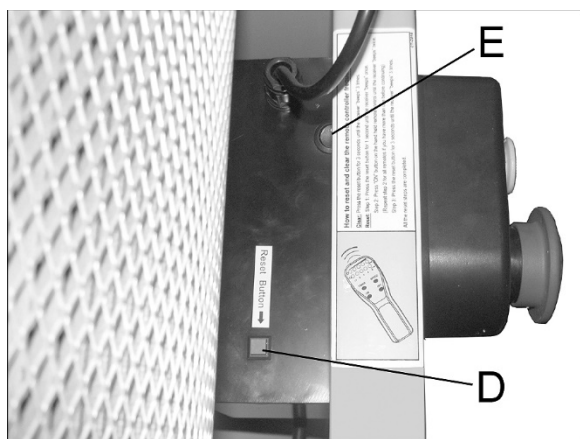


Figure 7-3

### 7.4 Dust hose connection

Use proper type hose to connect dust collector to machine(s) being operated. *Dryer vent hose is not acceptable for this purpose.* Secure hose at both ends with proper clamps.

**If an inlet port is not being used, it should remain capped.** An open port will diminish the machine’s efficiency, and may create a safety hazard.

Contact your nearest Powermatic distributor for a line of Dust Collector hoses and accessories. You can customize your installation and obtain maximum performance with dust hoods, hoses, clamps, fittings, and blast gates.

### 7.5 Filter auto clean

Canister filter cleaning is automatic. When the dust collector is shut off, the cleaning baffles will rotate one direction for 5 seconds, then the opposite direction for 5 seconds.

The auto clean feature can be turned on or off, using the toggle switch on the side of the control box (E, Figure 7-3).

### 7.6 Negative pressure gauge

A differential, or “negative”, pressure gauge is located near the start switch. See Figure 7-4. The gauge measures internal pressure, or vacuum, relative to atmospheric pressure, which is considered to be “zero”. Thus, the gauge reading should be preceded by a minus sign.

Gauge reading will vary based upon airflow and quantity of dust being moved. The gauge will generally show about 2.25~2.5 kPa during normal operation with no wood dust blockage.

A gauge reading of about 2~2.1 kPa may indicate dust build-up, requiring filter cleaning. Keep filter cleaning on auto mode so that it activates each time the machine is shut off.

A gauge reading under 1.8 kPa may indicate full blockage of the filter. If filter is cleaned several times but gauge continues to read in low range, the filter may need replacing.



Figure 7-4

## 8.0 User-maintenance

**⚠WARNING** Turn OFF dust collector and remove plug from power source before performing any adjustments or maintenance. Failure to comply may result in serious injury.

### 8.1 Thermal overload reset

The switch box contains overload protection to help prevent damage to the motor. The relay will open the circuit (shut off dust collector) if motor is drawing excessive current during extended periods of operation.

If the overload is tripped, allow machine to cool down for several minutes. Then press breaker reset button (C, Figure 7-1) and restart dust collector.

### 8.2 Cleaning and bag inspection

Empty or replace canister and drum collection bags when full.

### 8.3 Motor inspection

Make frequent inspections of motor fan, and blow out (with low pressure air hose) or vacuum any accumulation of foreign material to maintain normal motor ventilation.

### 8.4 Additional servicing

Any other servicing should be performed by an authorized service representative.

## 9.0 Consumable parts replacement

Part no.	Description
PM2205-041	Canister Collection Bag (pkg. of 5)
717531	Drum Collection Bag (pkg. of 5)

Table 3

## 10.0 Troubleshooting PM2205 Cyclone Dust Collector

**WARNING:** Some corrections may require a qualified electrician.

### 10.1 Electrical and motor problems (PM2205)

Symptom	Possible Cause	Correction
Motor will not start.	No incoming current.	Check connections at plug or circuit panel.
	Safety key missing from switch.	Install safety key.
	Motor overheated, relay tripped.	Allow machine to cool, then press reset button and restart.
	Low voltage.	Check power line for proper voltage.
	Open circuit in motor or loose connection.	Inspect all connections to switch box and motor for loose or open connections.
	Faulty start switch.	Inspect and replace switch if needed.
	Faulty start capacitor.	Replace capacitor.
	Faulty motor.	Inspect and replace motor if needed.
Motor will not start: fuse blows or circuit breaker trips.	Too many machines on shared circuit.	Connect dust collector to dedicated circuit.
	Short circuit in line cord or plug.	Inspect cord or plug for damaged insulation and shorted wires.
	Short circuit in motor or loose connections.	Inspect all connections on motor for loose or shorted terminals or worn insulation.
	Incorrect fuse or circuit breaker in power line.	Install correct fuse or circuit breaker at power source.
Motor overheats.	Motor overloaded.	Reduce load on motor.
	Air circulation through motor is restricted.	Clean motor fan to restore normal air circulation.
Motor stalls, resulting in blown fuses or tripped circuit.	Motor overloaded.	Reduce load on motor.
	Short circuit in motor or loose connections.	Inspect connections on motor for loose or shorted terminals or worn insulation.
	Low voltage.	Correct low voltage conditions.
	Incorrect fuse or circuit breaker in power line.	Install correct fuse or circuit breaker.
Loud noise or vibrations coming from machine.	Loose fasteners.	Inspect machine and tighten all fasteners.
	Motor fan is hitting the cover.	Tighten fan or shim cover. Replace fan cover if damaged.
	Impeller is damaged.	Replace impeller.
Remote controller fails to activate machine.	Stop button still engaged.	Disengage stop button.
	Batteries drained.	Replace batteries.
	Remote needs resetting.	Follow instructions for clearing and resetting.

Table 4

## 10.2 Performance problems (PM2205)

Symptom	Possible Cause	Correction
Poor performance; lack of suction.	Hose improperly secured at dust origination point.	Inspect and remedy.
	Inlet port is open.	Cap unused inlet ports.
	Collection bag is full.	Empty bag (check sight window).
	Collection drum not sealed properly.	Inspect drum for leaks, make sure lid is tight.
	Canister filter is dirty.	Clean filter.
	Wood has excess moisture content.	Use lumber with lower moisture content.
	Obstruction in dust hose or inlet port.	Inspect and clear obstruction.
	Dust hose too long.	Move collector closer to dust source and use shorter hose.
Excess dust or large chips backing up into canister filter.	Collection drum not sealed properly.	Inspect drum for leaks, make sure lid is tight.
	Canister collection bag full.	Empty bag.

Table 5

## 11.0 Replacement Parts

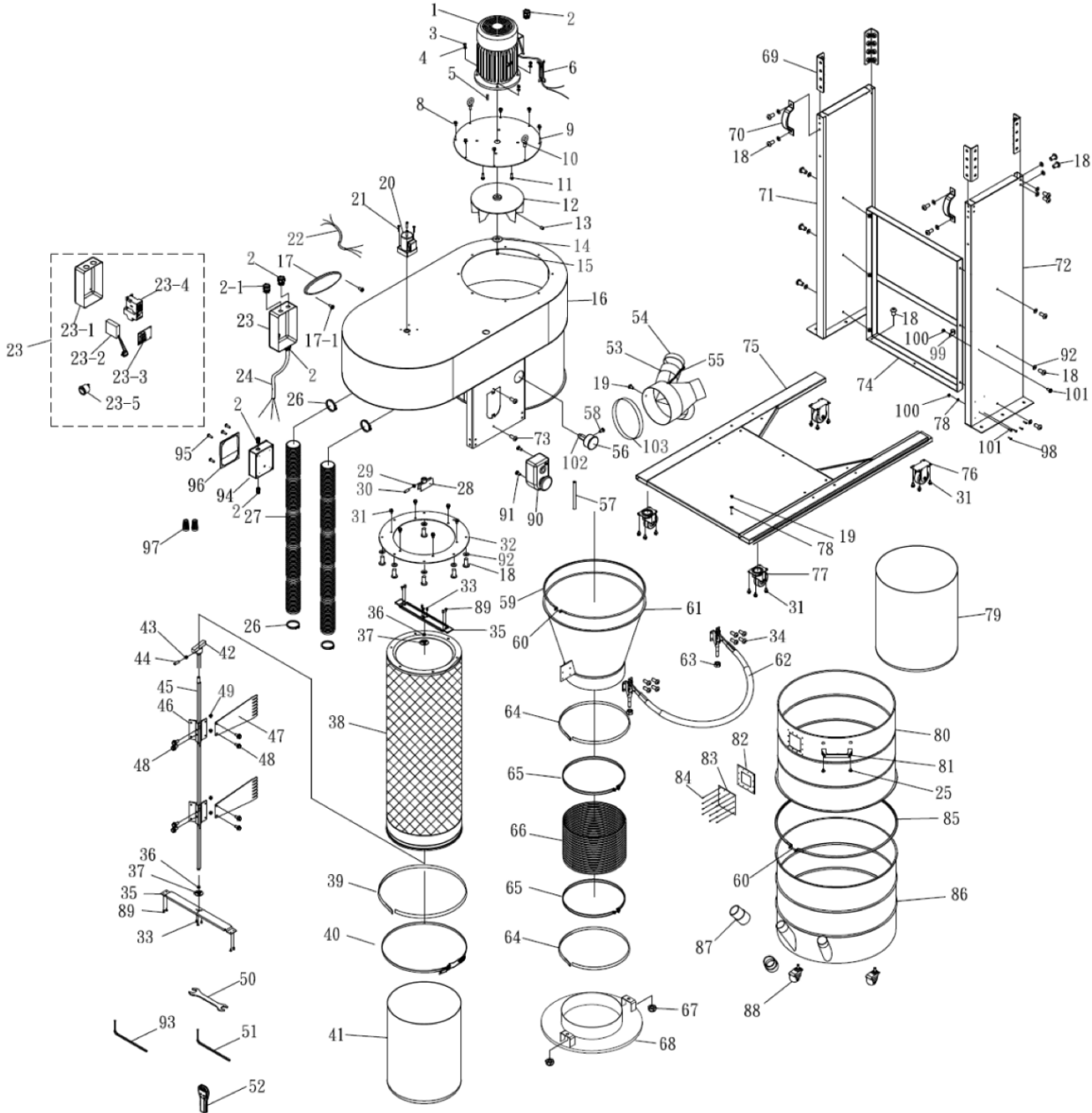
Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848 Monday through Friday, 8:00 a.m. to 5:00 p.m. CST. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

Non-proprietary parts, such as fasteners, can be found at local hardware stores, or may be ordered from Powermatic.

Some parts are shown for reference only and may not be available individually.



### 11.1.1 PM2205 Cyclone Dust Collector – Exploded View



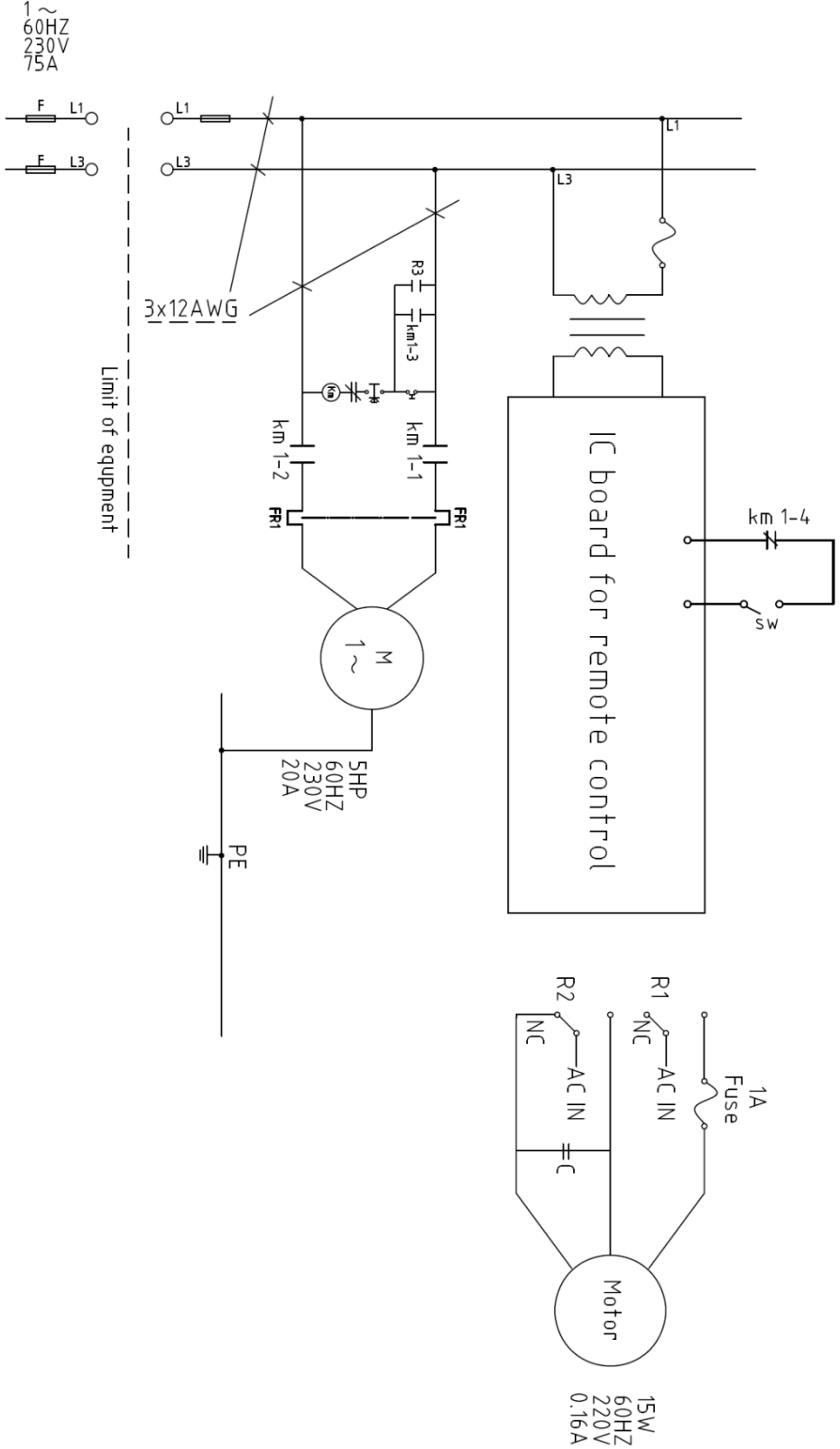
## 11.1.2 PM2205 Cyclone Dust Collector – Parts List

Index No	Part No	Description	Size	Qty
1	PM2205-001	Motor	5HP, 230V	1
	PM2205-01SC	Start Capacitor (not shown)	800MFD, 250VAC	1
	PM2205-01RC	Running Capacitor (not shown)	100µF, 250V	1
	PM2205-001FC	Fan Cover (not shown)		1
	PM2205-001CF	Cooling Fan (not shown)		1
	PM2205-001CS	Centrifugal Switch (not shown)		1
2	JCDC1.5-02	Strain Relief	M20-13B/PG20	5
2-1	PM2200-029	Strain Relief	MP-16	1
3	TS-0570031	Hex Nut	3/8"-16	4
4	TS-0720091	Lock Washer	3/8"	4
5	PM2205-005	Key	8x8x25 mm	1
6	PM2205-006	Motor Cord	12AWG 3Cx3.31mm <sup>2</sup>	1
8	TS-0081031	Hex Cap Screw	5/16"-18 x 3/4"	6
9	PM2205-009	Motor Plate		1
10	PM2205-010	Eye Bolt	5/16"X50mm	2
11	TS-0060071	Hex Cap Screw	3/8"-16 x 1 1/2"	4
12	PM2205-012	Impeller	Dia. 16.6"	1
13	TS-0271071	Socket Set Screw	3/8"-16 x 3/4"	1
14	PM2200-014	Impeller Washer		1
15	JCDC1.5-15	Socket Head Cap Screw (Left Thread)	M6x20	1
16	PM2205-016	Main Housing		1
17	3520B-140	Powermatic Logo		1
17-1	TS-081F032	Pan HD Phillips Machine Screw	1/4"-20 x 1/2"	2
18	F009714	Socket HD Button Screw *	5/16"-18 x 3/4"	63
19	TS-081C022	Pan HD Phillips Machine Screw	#10-24 x 3/8"	2
20	PM2200-019	Reducing Motor	15W, 230V	1
21	JBTS10MJS-620	Pan Head Screw	M4 x 60	4
22	PM2205-022	Reducing Motor Cord		1
23	PM2205-023	Control Box Assembly (#23-1 thru #23-5)		1
23-1	PM2205-023-1	Control Box Back Cover		1
23-2	JCDC2-21-4	Remote Control Transmitter		1
23-3	PM2200-031CB	Circuit Board		1
23-4	PM2205-023-4	Magnet Contactor with Overload Relay		1
23-5	PM2200-031-6	Reducing Motor Switch		1
24	PM2205-24	Power Cord	12AWG x 3C	1
25	TS-081F031	Flat Head Phillips Mach Screw *	1/4"-20 x 1/2"	2
26	PM2200-073	Hose Clamp	Dia. 2"	4
27	PM2200-074	Hose	Dia. 2"	2
28	PM2205-028	Rod Kits		1
29	TS-1540031	Hex Nut	M5	1
30	TS-1522051	Socket Set Screw	M5-0.8 x 16	1
31	F012439	Serrated Hex Flange Screw *	5/16"-18 x 1/2"	16
32	PM2205-032	Canister Fixing Plate		1
33	JCDC1.5-52	Socket HD Button Screw	M5-0.8 x 6	6
34	TS-2245102	Socket HD Button Screw *	M5-0.8 x 10	8
35	PM2205-035	Support Plate		1
36	JCDC1.5-62	Oil-retaining Bearing		2
37	JCDC1.5-63	Bearing Cover		2
38	PM2205-038	Canister Filter - HEPA		1
39	PM2205-039	Foam Tape	L1590 x W20 x T3/mm	1
40	PM2205-040	Clamp		1
41	PM2205-041	Canister Collection Bag		1
42	PM2200-083B	Rod		1
43	TS-1540031	Hex. Nut	M5	1
44	TS-1522041	Socket Set Screw	M5-0.8 x 12	1
45	PM2200-084B	Spindle		1
46	JCDC1.5-65	Fixing Block		2
47	JCDC1.5-66	Scraper		2

Index No	Part No	Description	Size	Qty
48	TS-1481031	Hex Cap Screw	M5-0.8 x 12	8
49	PM2200-088	Flanged Hex Nut	M5-0.8	4
50	SWSS3-201	Open End Wrench *	10-12 mm	1
51	5629521	Allen Wrench *	M5	1
52	PM2200-037	Remote Control Transmitter		1
		Battery (not shown)	AAA, 1.5V	2
53	PM2200-022	Inlet Adaptor	8"→4"x3	1
54	JCDC1.5-20	Inlet Adaptor Cap	4"	2
55	JCDC1.5-19	Chain		2
56	PM2200-034	Negative Pressure Gauge		1
57	PM2205-057	Clear Hose	Dia. 6mm	1
58	TS-0267061	Pan HD Phillips Machine Screw	1/4"-20x2x5/8"	1
59	PM2205-059	Cone Clamp		1
60	TS-0050111	Hex Cap Screw	1/4"-20x 2-1/2"	2
61	PM2205-061	Cone		1
62	PM2200-050	Quick Lever Assembly		1
63	TS-1540071	Hex Nut	M10	2
64	JCDC2-39	Foam Tape	L970 x W30 x T1 /mm	2
65	JCDC2-40	Hose Clamp	12-1/2"	2
66	JCDC2-41	Hose	Dia. 12"	1
67	TS-1541041	Nylon Lock Hex Nut	M10	2
68	PM2200-068	Drum Lid		1
69	PM2200-093	Angle Support		4
70	PM2205-070	Handle		2
71	PM2205-071	Right Panel		1
72	PM2205-072	Left Panel		1
73	F009691	Socket HD Button Screw	1/4"-20 x 5/8"	2
74	PM2205-074	Support Frame		1
75	PM2205-075	Base		1
76	JCDC3-33	Swivel Caster	3"	2
77	JCDC3-33-1	Swivel Caster w/ Brake	3"	2
78	PM2200-098	Toothed Lock Washer	M5	2
79	717531	Drum Collection Bag (pkg. of 5)	980 x 1200 /mm	1
80	PM2200-057	Upper Collection Drum		1
81	JCDC1.5-42	Handle		1
82	JCDC1.5-44	Rubber Pad		1
83	JCDC1.5-45	PC Plate		1
84	PM2200-056	Rivet	4-3	12
85	PM2200-058	Drum Clamp		1
86	PM2200-059	Lower Collection Drum		1
87	PM2200-091	Quick Connector		2
88	JCDC2-49	Swivel Caster	2"	4
89	F009884	Socket HD Button Screw	M5-0.8 x 8	8
90	PM2200-041	ON-OFF Switch Assembly		1
	PM2000-298	Safety Key for Magnetic Switch (not shown)		1
91	5512797	Pan HD Phillips Machine Screw	M5-0.8 x 25	2
92	PM2200-094	Flat Washer *	5/16"x23x2t	63
93	5628781	Allen Wrench	M6	1
94	PM2205-94	Wiring Box		1
95	TS-1533062	Pan HD Phillips Machine Screw	M5-0.8 x 20	4
96	PM2205-096	Wiring Box Cover		1
97	PM2205-097	Screw-On Wire Connectors		2
98	PM2205-098	Tapping Screw	M4-0.7 x 20	4
99	PM2200-018	Cord Fixing Clip	UC4	1
100	TS-1540021	Hex Nut	M4	2
101	TS-1532042	Pan HD Phillips Machine Screw	M4-0.7 x 12	2
102	PM2200-035	Adaptor		1
103	PM2200-092	Foam Tape	L640 x W30xT1/mm	1

Asterisk (\*) indicates part is included in Hardware Package PM2205.

# 12.0 Electrical Connections for PM2205 Cyclone DC



## 13.0 Warranty and service

Powermatic® warrants every product it sells against manufacturers' defects. If one of our tools needs service or repair, please contact Technical Service by calling 1-800-274-6846, 8AM to 5PM CST, Monday through Friday.

### Warranty Period

The general warranty lasts for the time period specified in the literature included with your product or on the official Powermatic branded website.

- Powermatic products carry a limited warranty which varies in duration based upon the product. (See chart below)
- Accessories carry a limited warranty of one year from the date of receipt.
- Consumable items are defined as expendable parts or accessories expected to become inoperable within a reasonable amount of use and are covered by a 90 day limited warranty against manufacturer's defects.

### Who is Covered

This warranty covers only the initial purchaser of the product from the date of delivery.

### What is Covered

This warranty covers any defects in workmanship or materials subject to the limitations stated below. This warranty does not cover failures due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair, alterations or lack of maintenance. Powermatic woodworking machinery is designed to be used with Wood. Use of these machines in the processing of metal, plastics, or other materials outside recommended guidelines may void the warranty. The exceptions are acrylics and other natural items that are made specifically for wood turning.

### Warranty Limitations

Woodworking products with a Five Year Warranty that are used for commercial or industrial purposes default to a Two Year Warranty. Please contact Technical Service at 1-800-274-6846 for further clarification.

### How to Get Technical Support

Please contact Technical Service by calling 1-800-274-6846. **Please note that you will be asked to provide proof of initial purchase when calling.** If a product requires further inspection, the Technical Service representative will explain and assist with any additional action needed. Powermatic has Authorized Service Centers located throughout the United States. For the name of an Authorized Service Center in your area call 1-800-274-6846 or use the Service Center Locator on the Powermatic website.

### More Information

Powermatic is constantly adding new products. For complete, up-to-date product information, check with your local distributor or visit the Powermatic website.

### How State Law Applies

This warranty gives you specific legal rights, subject to applicable state law.

### Limitations on This Warranty

POWERMATIC LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. POWERMATIC SHALL IN NO EVENT BE LIABLE FOR DEATH, INJURIES TO PERSONS OR PROPERTY, OR FOR INCIDENTAL, CONTINGENT, SPECIAL, OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF OUR PRODUCTS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Powermatic sells through distributors only. The specifications listed in Powermatic printed materials and on the official Powermatic website are given as general information and are not binding. Powermatic reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever.

### Product Listing with Warranty Period

90 Days – Parts; Consumable items
1 Year – Motors, Machine Accessories
2 Year – Woodworking Machinery used for industrial or commercial purposes
5 Year – Woodworking Machinery

NOTE: Powermatic is a division of JPW Industries, Inc. References in this document to Powermatic also apply to JPW Industries, Inc., or any of its successors in interest to the Powermatic brand.

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