



DuctMaster III

(Optional: Available in 220/240 Volt, 50/60 Hz Power)

OPERATING INSTRUCTIONS & PARTS MANUAL



Part Number: FG0090

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Unpacking Instructions

Remove the outer box and inspect for damage. Report all damage immediately to your carrier. If special set-up instructions are required, they will be taped to the outside of the equipment or in the "Operating" section of this manual.

Inspect all of the packing material for small parts before discarding packaging material. Report all damage to Air-Care immediately. Any attempt at repairing suspected damages may void warranty.

Check that all parts are present (See Page 13-15)

Air-Care DuctMaster

Air-Care DuctMaster III
Dryer Exhaust Flap Clip
3" x 4" x 3" "Y" Adapter
Hose, 3" x 12.5' W/Cuffs
Dual Stage 20 Gal. Bag Filter (5/pkg.)
3rd Stage 13" x 15" x 1" Electra Gold
4th Stage HEPA, 14" x 18" x 3"
Inlet Plug, 3" Red (Dust Cap for Vacuum)
Adapter, 3" to 1 ½" or 3" to 2" Hose Cuff
Brush, 24" Lint
Kit, 1 ½" Tool

- o Mesh Carrying Bag
- o Extension (2 pcs)
- o Crevice Tool
- o Floor Tool (14")
- o Bulk Pickup Tool
- o Upholstery Tool
- o Elbow
- o Hose, 1.5" X 15'
- o Enlarger, 1.5"-2"

Hose, 1 ½" X 35' Brush and Motor Assembly. Includes 12" Pancake-Style Brush
Drill Powered Dryer Duct Cable (20 ft) with 4" Brush
Remote Control

Safety Precautions

Always use safe and common sense precautions when working with Air-Care equipment. Do not block walkways with equipment, and remove delicate and breakable articles from the immediate work area. The following are precautions that should be reviewed by all persons who will be involved in the cleaning activity.

Other than the 3 filters and the brush there are no user serviceable components in Air-Care TurboJets and Air-Care DuctMaster. Only trained technicians should attempt to make internal repairs on this equipment.

Always unplug both power cords before removing the covers or working on the wiring.

Inspect AC power plugs to be sure the ground pins are in place.

Never connect power to Air-Care equipment unless all covers and safety shields are in place. Mechanical and electrical parts could activate and cause injury.

Never allow anyone but a properly trained technician to use the equipment or cleaning products.

All Air-Care equipment is designed for US standard 115 volt, 60 Hz AC. The Air-Care DuctMaster is optionally available in 220/240 Volt, 50/60 Hz Power. Always check the specifications on the equipment before connecting electrical power to Air-Care Equipment.

If you have questions about the safe use of any Air-Care product, call 702-454-5515.

Equipment specifications and part numbers are subject to change without notice.

Operating Instructions

Set-Up and Testing

The Air-Care DuctMaster combines the high powered vacuum with a hose and brush assembly to both agitate and collect debris at the same time. Once completely set up, with the vacuum motors running, the brush end can then be inserted into each duct and the brush motor started for thorough cleaning.

The Air-Care DuctMaster has significantly MORE static pressure than Air-Care TurboJet Negative Air Machines and will be able to pull heavy, moist or sandy construction debris out of dryer vents, commercial ducts, chimneys, and restoration areas. It is NOT meant to be a wet vacuum for liquids.

To test an Air-Care DuctMaster, plug one of the power cords into a suitable 120-volt outlet. Line #1 will supply power to VAC1 and VAC2 and the Brush Motor, while Line #2 will provide power to VAC3 and VAC4. If all 4 VAC Motors are to be used at one time, Line 1 and Line 2 must be plugged into 2 independent power outlets rated at 15 Amps each or more. If you are not sure if 2 outlets are independent, press the center "test" button; the green power light will only light up if the 2 power cords are in independent power outlets. In some areas there may be independent lines, but the green light may not light up – This is true in Canada.

The optional 220/240 Volt Air-Care DuctMaster also requires 2 independent electrical outlets; each must be 7.5 to 10 amps. This version does not come with a "test" button and green power light.

WARNING: DO NOT TURN ON MORE THAN 2 VAC MOTORS BEFORE PERFORMING THE 'TEST', WHICH WILL INDICATE A GREEN LIGHT IF PLUGGED INTO TWO INDEPENDENT OUTLETS. IF THE EQUIPMENT IS NOT PLUGGED INTO INDEPENDENT OUTLETS BEFORE TURNING ON MORE THAN 2 VAC MOTORS, A POWER SURGE MAY OCCUR AND TRIP A CIRCUIT BREAKER IN THE BUILDING.

Because of a unique full flow check valve system, any combination of motors can be used. Any one motor can be used by itself or any 2 or 3 can be used with the same airflow and static pressure (water lift). The Remote and the Power Brush operate from Power Cord #1, so even if you are only using Vac Motor #3 or #4 that use Power Cord #2, both power cords must be plugged in for the brush to operate.

One motor will provide more airflow than most single motor shop or HEPA vacuums, and two motors will usually be more than adequate for most vacuuming needs. In those cases where extra power is required, simply plug in the 2nd power cord and turn on the 3rd or 4th motor as required.

How to Connect the Air-Care DuctMaster

The Air-Care DuctMaster is an extremely powerful and versatile tool. The 3" vacuum hose is ideal for collecting construction debris without clogging and can be directly inserted into a 4" air or dryer duct. It can also be used with the "Y" adapter paired up with an agitation tool, such as the Air Whisk or 20' drill driven cable to be inserted at the same location. When connecting to a dryer duct, it is important to clip the outside flap open for proper cleaning.

For collecting debris in a variety of situations, a set of 1 ½" diameter tools is supplied. See pages 3 and 13 for a list of these tools.

The Air-Care DuctMaster's high volume and high static "water lift" make it even more effective at removing debris from smaller diameter air ducts than many other standard duct vacuums.

Air-Care has self-study and classroom and field training on how to clean all types of air systems, call 800-322-9919 for details.

Duct Cleaning with the Air-Care DuctMaster

The Air-Care DuctMaster has a unique dual function. The rotating brush of the hose assembly agitates the dust and debris in the air duct, while the vacuum motors function as the debris collector. This method of cleaning only requires that the supply and return grills be removed and the air system turned off.

After connecting the Air-Care DuctMaster power cords to 2 separate power outlets (different circuits), connect the 1 ½" X 35' brush and motor hose assembly or the optional 2" X 35' brush and motor hose assembly to the 3" to 2" hose adapter that you placed in the inlet of the Air-Care DuctMaster.

Use the vacuum motor switches on the panel to select the motors you want to use to vacuum the ducts: 1 to 4 motors can be used. The motors can be turned on and off with these switches. This arrangement allows the technician to run the motors even if the remote is lost or broken.

The Remote uses an Infrared Light beam similar to a Television Remote. The operator must be in sight of the front of the DuctMaster where the Remote Receivers are located for it to operate. The operator can be across the room or up on a ladder and the remote will function as long as there are no obstructions between the operator and the sensor on the DuctMaster Panel. The remote will NOT work between rooms.

Once the technician inserts the brush into the duct, use the wireless remote control to turn on the brush motors (top button).



Cleaning Floor Ducts



Cleaning Ceiling Vents

When the technician cannot push the vacuum hose in any farther, press the FWD/REV button (bottom button) on the wireless remote to "reverse" the brush rotation to allow it to go deeper into the ducts. Repeat this process for every supply and return duct.

Where you have long ducts, such as main trunk lines without access doors, you will have to make "cut-ins", so that you can access the entire length of the duct. The larger "main duct" can also be cleaned with the Air-Care DuctMaster.

After cleaning each duct, each opening should then be decontaminated with our EPA registered sanitizer, Soot Set sealer and Liquid Odor Kill deodorizer.

Dryer Duct Cleaning with the Air-Care DuctMaster

YOU WILL NEED: Air-Care DuctMaster and the drill powered dryer duct cable with 4" dryer duct brush (Included with DuctMaster).

Dryer exhaust ducts vary in construction, materials and configuration from city to city. The general procedure for using the drill powered dryer duct cable described here may need to be modified to safely and effectively clean these ducts in your area. An alternate tool to the drill powered cable is the Forward and Reverse Air Whisk, which requires an air compressor.

CAUTION: Cleaning the exhaust duct on a clothes dryer will improve performance and reduce future lint build up, but the dryer itself must also be cleaned and lint removed from its fan, heating area and other interior components to reduce the risk of fire.

1. With the dryer running, clip the outside flap "OPEN" and check the airflow at the exhaust with a flow meter. Write down the reading for comparison after cleaning.
Caution: If you cannot locate where the air exhausts outside then you cannot guarantee your work and probably should not try to clean it. Refer the customer to their contractor.
2. Turn off the dryer, remove power, then move it away from the wall and disconnect the exhaust tubing. If it is a gas dryer, be careful to not damage or break the gas line.
3. Attach the 3" diameter DuctMaster vacuum hose to the end of the exhaust duct (inside or outside, depending on configuration).
4. Use 20' drill powered dryer duct cable with 4" dryer duct brush.
5. Insert the drive end of the cable into the chuck of your Electric Drill. A low speed (300-500RPM), 3/8": chuck is best suited.
6. Place the drill in the Air-Care drill holder and secure with the included straps. Plug the drill into the foot pedal switch and plug the pedal cord into the wall. The pedal leaves both hands free.
7. Turn on the vacuum motors in the Air-Care DuctMaster then insert the 4" brush into the dryer vent. Start the drill using the foot pedal only **AFTER** the brush has been inserted into the duct.
8. If you experience resistance to the brush, the cable may "Twist Up" on you. If so, **STOP** the drill. Try reversing the rotation and go slowly until you get past the restriction.
9. A slow steady insertion is ideal, but you may need to pull the cable out a few inches and push it rapidly back to get around some obstructions and elbows.
10. If the cable cannot be pushed all the way to the end of the duct, it may be necessary to also insert the cable and brush from the other end of the duct.
11. If there is visible lint clog or bird nest, the Nest Claw tool may be needed to break it up. Attach the nest claw tool to the cable with a setscrew, which is the same way the 4" dryer duct brush attaches. **CAUTION:** The Nest Claw can be very aggressive and may damage flexible ducts.
12. If you only have access to one end of the exhaust duct, use the "Y" adapter to allow the vacuum and the cable to be inserted from the same end of the exhaust duct.



13. Once the duct has been cleaned, the dryer should also be cleaned.
14. Remove the back cover of the dryer and clean out the lint on the internal components. Usually 4-8 screws are used to mount the back cover. Access to the interior of the dryer will vary with model, be careful to not damage it.
15. Once the duct and dryer are clean, connect the dryer to the wall opening with aluminum hose. (The Consumer Product Safety Commission does NOT recommend plastic connector hoses, nor does any major dryer manufacturer).
16. Turn the dryer on and again check the airflow outside. Typically over 1000 fpm (feet per minute) (1000 fpm = 5 mps [meters per second]) is good, and less than 1000 fpm is not. Continue cleaning until you have reached airflow over 1000 fpm. If 1,000 fpm cannot be obtained, the duct may be damaged and require a contractor to correct the problem
17. Clean up any lint around the outside of the dryer, clean the exterior of the dryer and if you have a sticker or magnet, date it for a follow-up cleaning in 12 months.

Using Air-Care DuctMaster to Clean Dryer Duct



Maintenance

The Air-Care DuctMaster requires a minimum amount of maintenance, normally limited to cleaning or replacing filters as they become filled with dirt and debris. It is always beneficial to keep the exterior and interior of the machine clean. A qualified technician should perform all electrical or mechanical repairs. The brush head motor should be wiped off and metal particles captured by the magnets in the motor should be removed with compressed air or a brush. The Batteries in the Remote should be changed annually.

Filter Removal & Replacement

1. Turn off all the VAC motors, and unplug the Air-Care DuctMaster.
2. Open the front door and remove the bag from its 3" tube at the rear of the door.
3. Carefully remove the bag filter through the door and dispose of it properly in accordance with any local state or federal regulations applicable.
4. If there is noticeable debris build up on the electrostatic pre-filter above the HEPA filter, push it to the rear and lift it off and clean it. It can be rinsed with water or sprayed with Dynamite cleaner and rinsed, but it must be DRY before reinstalling it onto the HEPA canister filter.
5. To remove the HEPA, release the top latch and both side latches and lift the vacuum tank off the base.
6. Lift the HEPA out and inspect it for damage or clogging. Inspect the gasket under the HEPA.
7. Install a new HEPA filter, by placing it into the base with the airflow arrow pointing down.
8. Install a new dual stage bag filter following the instructions on the bag. It collects heavy debris in the bottom section of the bag and lighter debris in the top section.

Brush Motor Replacement Kit for DuctMaster and TruckMaster Updated Coaxial Spring Mount



This new version of the Brush Motor and Mount retains all the advantages of the original and includes some improvements to reliability, durability, and Debris Collection.

This motor and Hose mount will replace all previous motors and mounts.

KEEP THE NEW MOTOR FULLY ASSEMBLED!

First remove the OLD motor and mount from your hose:

1. Remove the screws holding the metal collar on the end of the hose and save the screws and nuts to mount the new motor and mount.
2. Cut the 3 wires for the motor leaving enough cord to crimp (or solder) the wires to the new motor wires. All 3 wires will need to be the same length for this new Motor Connection.
3. You will no longer need any of the parts in the original motor assembly unless you are returning it to Air-Care with an RMA for warranty evaluation.

Installing the NEW Motor Assembly.

1. Be sure you have all the parts for the installation.
 - a. Your original Screws, 10-32 x 5/8" long machine screws,
 - b. 10-32 Hex Nuts with built in Lock Washers.
2. Remove the outer insulation from the black power cord in the hose to expose the 3 insulated motor wires about 2 inches long.
3. Strip the insulation off of all 3 wires about 1/2" back from the ends.
4. Slide the black Shrink Tubing over the cable. It will be slid over the new connections after the wires are connected.
5. Slide the 3 pieces of shrink tubing over each of the motor wires. The connections can be made by Crimping the new connectors or soldering them. If you are planning to solder the connections, be sure the blue shrink tubing is far enough away from the heated ends to prevent it from shrinking prematurely.
6. The wires may be different colors from the Motor than the ones from the hose cable. The order is not important, the brush will operate with any combination of wires, but it may turn in the opposite direction in some cases, but will still reverse as before.
7. Each of the 3 wires from the hose can now be inserted into the Crimp connectors on the new motor. Try to twist the wires tight enough so that all of the strands go into the silver

8. Slide the Blue shrink tubing over the metal connector; Heat the tubing to shrink it in place. A hair dryer, heat gun or even a cigarette lighter can be used. Be careful to not burn yourself, the plastic hose or heat the other shrink tubing at this time.
9. Connect the other 2 wires following the same procedure.
10. When all 3 wires are connected and insulated, slide the black shrink tubing over them and as far towards the motor as possible. Heat this shrink tubing to shrink it on to the wires.
11. Next, slip the Nylon Loop Strap over the wires. This will guide the wires. The Loop Strap will be held in place with one of the 10-32 x 5/8" screws used to hold the black nozzle on the hose.
12. Insert the screws into the mounting holes in the Nozzle and thread the screws into the original holes in the hose if possible. If this is difficult, you may need to drill new holes in the hose using the 2 holes in the Black Nozzle as a guide. Use a 3/16" diameter drill.
13. When the screws are in place, place the loop strap hole over one of the screws and install one of the nuts then tighten the screw with a screwdriver. It may be necessary to use a screw driver to thread the screws through the loop strap.
14. If your hose has a metal stiffener, install its loop over the other screw, install the nut and tighten it. If there is no stiffener, just install the nut and tighten the screws.
15. Your repair and upgrade is now complete and ready to test. If you have any questions, please call Air-Care Tech Support, 800-322-9919.

Included Parts and Accessories for Air-Care DuctMaster

See Pictures on Following 2 Pages

Ref #	Description	Part #
1	Dryer Exhaust Flap Clip	COM0196
2	3" x 4" x 3" "Y" Adapter	SADM0055
4	Hose, 3" x 12.5' w/ Cuffs	SADM0046
5	Dual Stage 20 Gal. Bag Filter (5/pkg.)	SADM0021
6	3 rd Stage 13 x 15 x 1 Electra Silver	SADM0024
7	4 th Stage HEPA, 14 x 18 x 3	F0048
8	Inlet Plug, 3" (Dust Cap for Vacuum)	COM0223
9	Adapter, 3" to 1 ½" or 3" to 2" Vacuum Hose	ACC0012
10	Brush, 24" Lint	COM0202
11	Kit, 1.5" Tool (11a through 11i)	SADM0057
	A. Mesh Carrying Bag	FG0101
	B. Floor Tool, 14" wide	ACC0161
	C. Bulk Pickup Tool	ACC0160
	D. Upholstery Brush	ACC0162
	E. Elbow	ACC0163
	F. Crevice Tool	ACC0159
	G. Extension (2 pcs)	ACC0158
	H. 15 Foot Hose	ACC0152
	I. Enlarger – 1.5" to 2"	COMP0303
12	Hand Held IR Remote Controller	SADM0028
13	Hose (Red), 1 ½" X 35' DuctMaster Brush and Motor Assembly. Includes: 12" DuctMaster Brush, .021" Bristles	FG0074
14	Cable, 20' Drill Powered Dryer Duct with 4" Dryer Brush	FG0090
Not Shown	Air-Care DuctMaster Training DVD	SAO0040
Not Shown	Air-Care DuctMaster Dryer Duct Cleaning DVD	SAO0039

Included Parts and Accessories for Air-Care DuctMaster

(Ref#) Listed on Previous Page

(Ref #1) Vent Flap Clip



(Ref #2) 3" x 4" x 3" Y Adapter



(Ref #4) Hose, 3" x 12.5' with Cuffs



(Ref #6) 3rd Stage Silver, Electrostatic Air Filter



(Ref # 10) Brush, 24" Lint



(Ref #5) Dual Stage 20 Gal. Bag Filter (5/pkg.)



(Ref #8) 3" Inlet Plug



(Ref #7) 4th Stage HEPA, 14 x 18 x 3



(Ref #9) Adapter, 3" to 1 1/2" or 3" to 2" Hose Cuff



Included Parts and Accessories for Air-Care DuctMaster (Continued)

(Ref #11) Kit, 1.5" Tool (11a through 11i)



(Ref #14) Cable, 20' Drill Powered Dryer Duct
W/4" Brush
(Ref #25) 4" Dryer Duct Brush



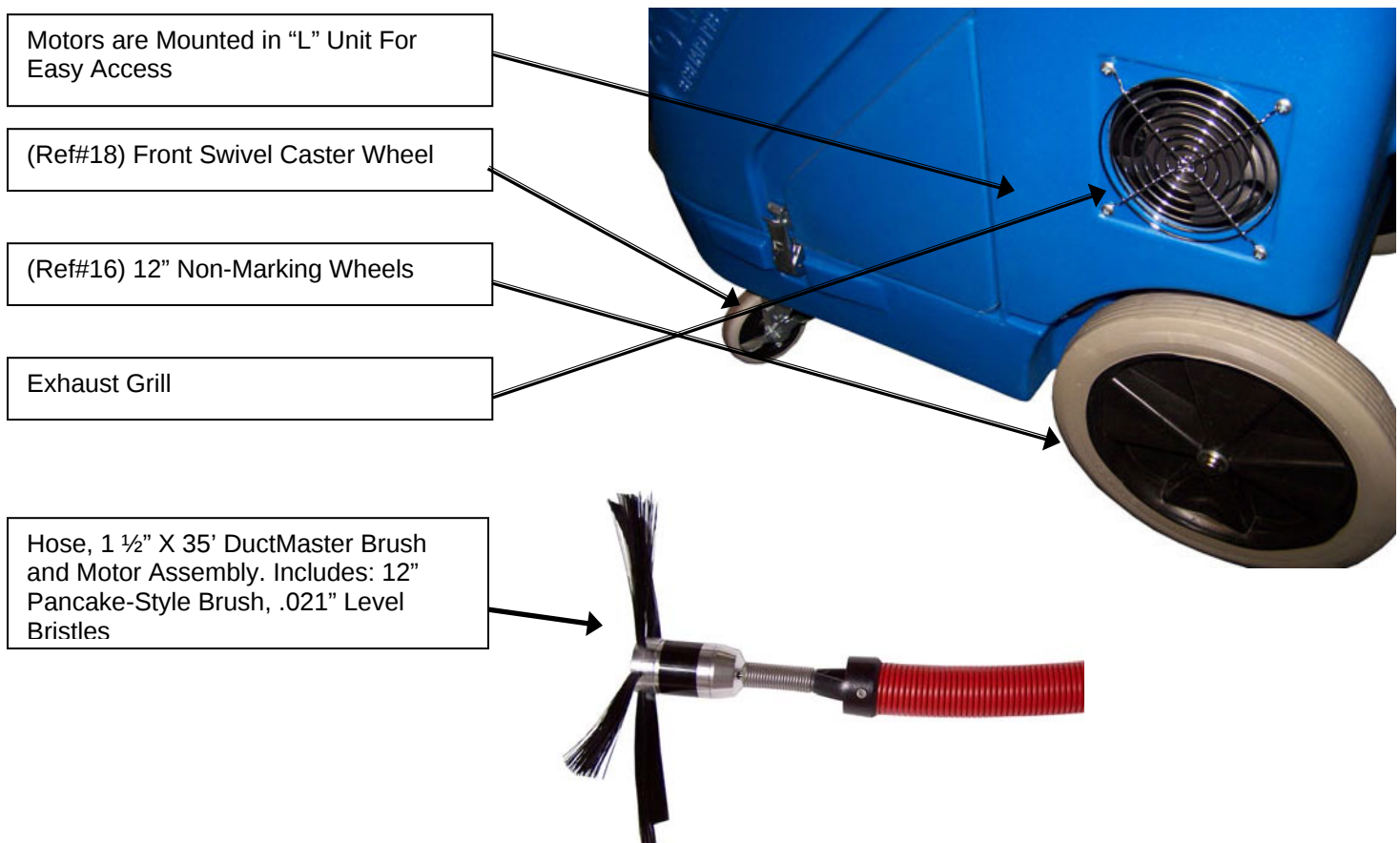
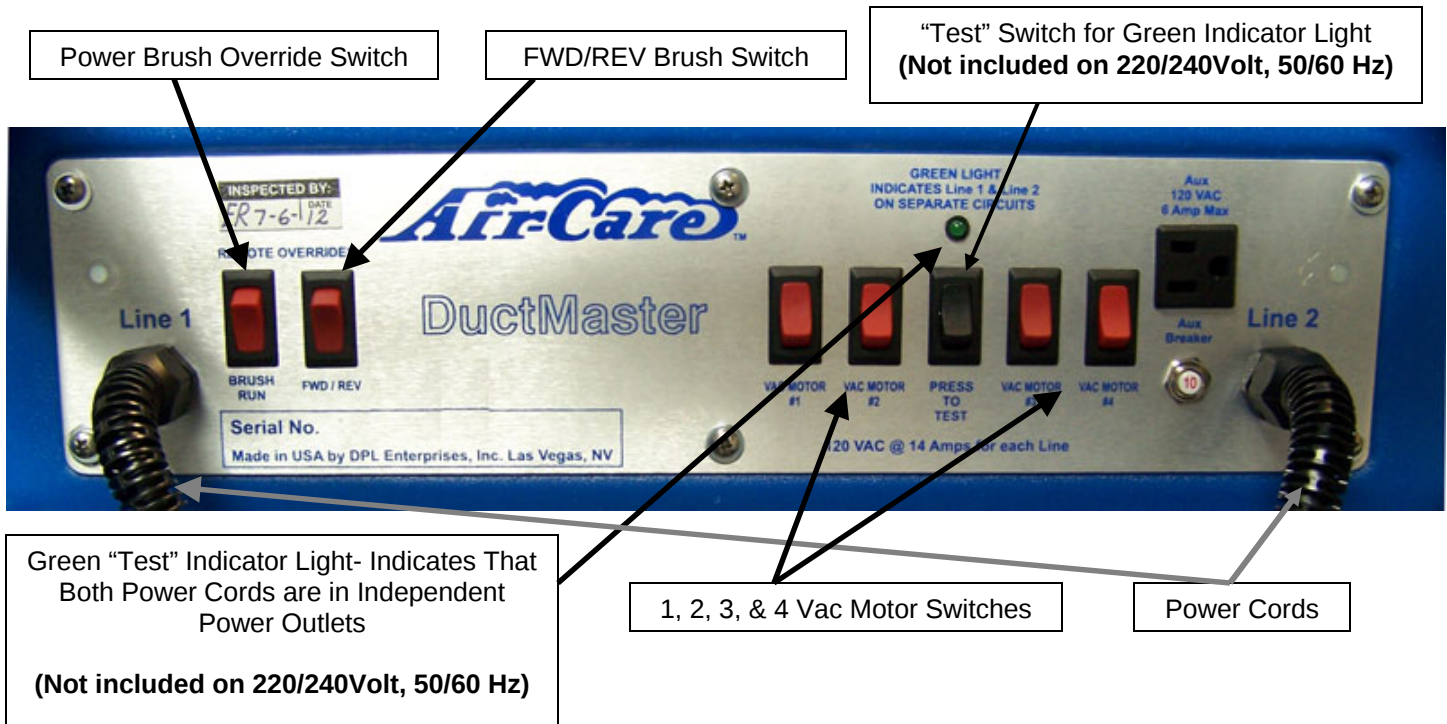
(Ref #13) Hose (Red), 1 1/2" x 35' DuctMaster Brush
and Motor Assembly. Includes Brush Below.
(Ref #26) Brush. 12" DuctMaster. 021" BLK Bristles



(Ref #12) Handheld IR Remote



Air-Care DuctMaster Control Panel



Optional/Replacement Parts and Accessories

(Ref #21) Air Care Fogger
Model 2600



(Ref #24) Hose, 2" X 35' DuctMaster Brush and
Motor Assembly: Includes: 18" Pancake Brush

(Ref #27) Brush, 18" DuctMaster, .032" BLK
Bristles



(Ref #19) Coupler, 3" Hose to 3"
Hose, Black (Hose not included)



Ref #	Description	Part #
	Air-Care DuctMaster, Complete Assembly	FG0090
	Air-Care DuctMaster, 220/240 Volt, 50/60 Hz, Complete Assembly	FG0099
16	Wheels, 12" Non-Marking	ACC0006
Not Shown	Vacuum Motors (4), 120 Volt, 7 AMP High Volume Vacuum Motors (4) 220/240 Volt 50/60 Hz, 3.5 AMP High Volume	SADM0017 SADM0018
18	Wheel, Front Swivel Caster	COM0096
19	Coupler, 3" Hose to 3" Hose	ACC0009
21	Air-Care Fogger 1.2M Hose	FG0008
24	Hose (Blue), 2" X 35' DuctMaster Brush and Motor Assembly. Includes 18" DuctMaster Brush, .032" Bristles	FG0075
25	4" Dryer Duct Brush	FG0072
26	Brush, 12" Pancake-Style, .021" Level Bristles	SAO0307
27	Brush, 18" DuctMaster, .032" Level Bristles, BLK	SADM0013
Not Shown	Bristles, 12" Pancake-Style, .021" Level Bristles set (3 bundles for 1 change), BLK	SAO0310
Not Shown	Bristles, 18" DuctMaster, .032" Level, BLK	BA0003
Not Shown	Connector Housing for Brush Motor	COM0163
Not Shown	Connector Pins, Female for Brush Motor (3 Required)	EC0046
Not Shown	Kit, Power and Control Modules (Call for individual part information as built into the Air-Care DuctMaster version)	SADM0056

Specifications

Specification	Description
Size	21" W x 36" D x 40" H
Weight	94 lbs
Power requirements:	115 Volt AC, 60Hz, 14 AMPS x 2 (Optional: 220/240 Volt, 50/60 Hz, 8 AMPS x 2) Power Brush draws 2 AMPS for 115 Volt and 1 AMP for 220/240 Volt
Power Cords (qty 2)	Attached
Filtration	4 stages HEPA
1 st and 2 nd Stage	20 Gallon Dual Stage Bag
3 rd Stage	13" x 15" x 1" Electra Silver
4 th Stage	14" x 18" x 3" HEPA Filter
Hose Attachments	Hose, 1 ½" X 35' DuctMaster Brush and Motor Assembly. Includes: 12" Pancake-Style Brush, .021" BLK Bristles Power Brush RPM is 2,000 max. with 1500 Watt Brushless DC Motor 3" x 12.5' Hose with Cuffs
Operating Environment	25 to 125 Deg F (-4 to 50Deg C)
Construction	Rotation Molded Poly Body
Operating Controls, DuctMaster	4 Individual VAC Motor Switches "Independent Circuit" Indicator Light (Not included with 220/240 Volt, 20/50 Hz version) ON/OFF Brush Switch Fwd/Rev Brush Switch IR Remote Control
Air Flow	120-500 CFM
Static Pressure	75 Inches W.G.
Motors	7 AMP Integrated Motor for each Blower (4) (4 AMP @ 240 Volts on 220/240 Volt, 50/60 Hz version)
Blowers	Single Stage, Tapered Blade, Low Noise, High Efficiency Vacuum Wheels (4)
Wheels	12" Fixed Rear and 4" Front Swivel Non-Marking Wheels

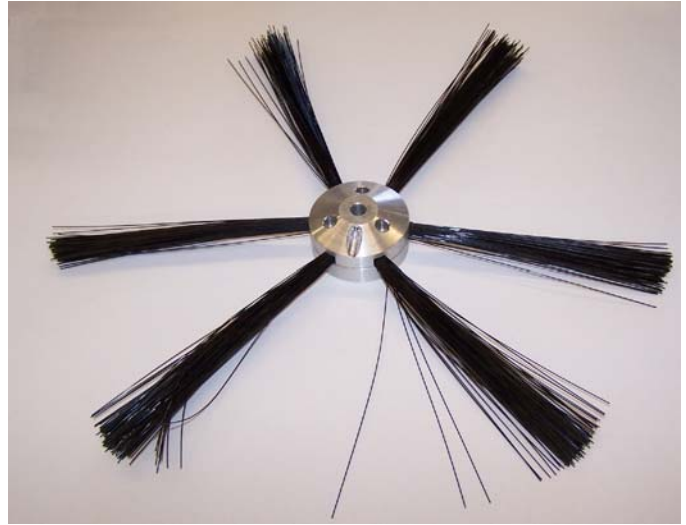
All Prices and Specifications are subject to change without notice

Pancake-Style Brush P/N SAO0307

12" Bristle Replacement Instructions

Updated: 9/10/12

The configuration of the 12" brush (0.021 Dia Bristles) for the TruckMaster and DuctMaster 1.5" vacuum hose and Motor has been changed to a Shorter, "Pancake-Style" hub that allows it to negotiate sharp turns in smaller air ducts than the previous type hub. This 12" Brush directly replaces the original 12" Brush asm.



The 2" Vacuum Hose and motor still use the 18" brush with 0.032" dia Bristles in the traditional, longer hub.

This 12" Brush will work on the 2" hose.

While the 18" Brush will fit on the 1.5" hose, there are some situations where the 18" brush may not start properly (Due to the brush being held HIGHER by the 2" hose, so the thicker bristles are easier for the motor to turn it).

Description	P/N	Quantity
Hub, Pancake-Style, Top	SAO0287	1
Hub, Pancake-Style Cover (Bottom)	SAO0288	1
Screws, 6-32 x 3/8" L Flat Head Phillips SS	NBS0045	3
Set Screw, 8-32 x 1/2"	NBS0152	1
Bristle bundle, 12" Long, 0.021" dia, Level	SAO0306	.03 Hank (.3 to .4 oz)
Bristle Replacement set (3 Bundles)	SAO0310	3
Bristles, Master Hank	CB0001	1 Hank
Shrink Tubing, 1/4"	SHOP0011	1.4 Inch (0.12 Ft)
Rubber Band (#19)	COM0328	1
Allen Key (Wrench) 5/64" L Shape		Not Included
Instructions to Change Bristles	COM0327	1

The new Pancake-Style Brush hub bristles are replaceable, but the process is different and the replacement bristles are pre-assembled into 3 bundles that are retained with 1/4" shrink tubing that is bent to match the shape of the grooves in the Pancake-Style Hub.

Each of these bundles should weigh between 0.3 ounces and 0.4 ounces and contain between 115 and 124 individual bristles that are 0.021" diameter by 12 inches long. The Bristles will be slipped into a piece of 1/4" heat-shrink Tubing (Before it is heated) P/N SHOP0011.

Installing Bristles into the Pancake-Style Brush (SAO0307)

1. Be sure all parts are available to assemble the 12" Pancake-Style brush. See List at top.

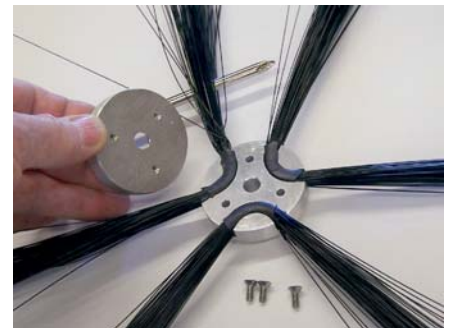


2. Layout the Pancake-Style Brush Hub "TOP" piece with the 3 deep grooves facing up.

3. Install the pre-formed bundle of bristles (SAO0306) into one of the grooves as shown. It must be centered with the Shrink Tubing NOT extending out of the groove.



4. Install the Second and third bundles of bristles and push them deep into the groove. None of the bristles can be allowed to be out of the groove when the assembly is complete.

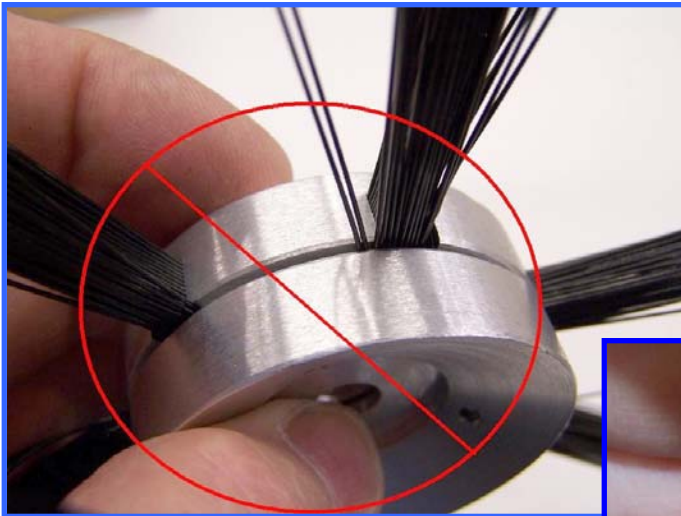
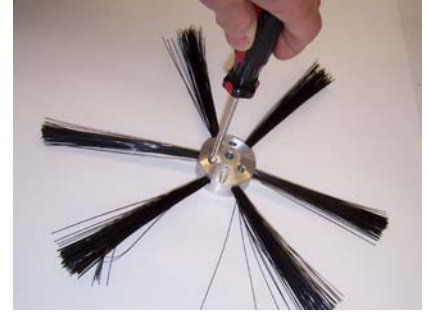


5. Place the Bottom of the Pancake-Style Hub over the bristles in the Grooves of the top of the Hub, and turn it over so the 3 screws can be installed.



6. Line up the screw into one of the holes, and screw it in a short way – DO NOT TIGHTEN ANY SCREWS until ALL 3 SCREWS are in place.

7. This is the time to slowly tighten each of the 3 screws to be SNUG. At this point, be sure that there are no bristles outside of the grooves. If a bristle is between the Top and Bottom of the Hub, it must be pushed back into the groove before final tightening.



WRONG



CORRECT

8. Tighten all 3 screws to be secure. Inspect the brush one more time, and it is ready to install on the TruckMaster or DuctMaster 1.5" Vacuum Hose with Motor.

Air-Care DuctMaster Troubleshooting Guide

Prior to troubleshooting, check the following:

1. Be sure the power cords are plugged into 2 separate, dedicated power sources and verify that the wall outlet where the power cord is plugged into is working. (Plug in a lamp or other device and be sure it works properly).
2. Check that the dual stage, 20-gallon vacuum bag is not full, and that the 3rd stage electrostatic air filter and 4th stage HEPA filters are not clogged.
3. Use the "test" button on the power panel to verify there are 2 independent power outlets being used.

Symptom	Possible Causes	Suggested Action
Low or no vacuum suction.	1. Filters are clogged. 2. Gaskets leaking. 3. One or more motors are not running. 4. The hose is clogged.	Replace the dual stage, 20-gallon vacuum bag filter. Clean the 3rd stage Gold pre-filter. Clean or replace the 4th stage HEPA filter. Inspect the door gaskets and base of the HEPA for leaks Run one motor at a time to determine which one is not running. Remove the hose and check for vacuum then reverse the hose to suck out clogged debris if vacuum is ok. If there is still no vacuum, call Air-Care.
Circuit breaker in building trips.	1. Both power cords are plugged into the same circuit.	Check test light on panel, if it does not light, only use 2 motors. Find a second independent electrical circuit for the second power cord.
Excessive noise.	1. White check valve located in the Air-Care DuctMaster cabinet is installed upside down (air flow arrow should point up). 2. One or more motor is bad.	Remove check valve and install in proper direction. Turn on one motor at a time to determine which one is bad, and then call Air-Care for a new motor.

Air-Care DuctMaster

Troubleshooting Guide (Continued)

Symptom	Possible Causes	Suggested Action
Remote does not operate Brush	1. Be sure Handheld Remote is pointed at the Remote Receiver sensor on the top of the case. 2. Check that the Red indicator on the Handheld remote flashes (Once) when either button is pressed 3. Is Power Cord #1 Plugged in to a good power outlet?	Locate the DuctMaster so the remote has an unobstructed view of the sensors. If the red LED does not flash, replace the battery. The remote module is powered by Power Cord #1, plug it into a known good outlet
Brush & hose cannot be inserted far enough into duct.	1. Duct is too small for hose (Less than 2" wide opening). 2. Duct makes two 90 turns in less than 12 inches.	▪ Be sure you are using the 1 ½" X 35' Hose, Brush and Motor Assembly Try to access the duct from another opening.
Brush Motor does not turn.	1. The Brush Switch on the Panel was "ON" when the power cord was plugged in 2. Electronic Torque control shut down brush motor power. 3. There was a power loss in the building or a power surge. 4. Motor Connectors have come loose.	Be sure the Brush Switch on the Panel is OFF. Unplug Power Cords for 30 seconds, and then plug in Power Cords again Be sure the Brush Switch on the Panel is OFF. Try using remote again. Be sure Brush Power Cable is fully inserted into the Panel Connector
There are holes in the red vacuum hose.	1. The "crush proof" hose is very durable, but if it is pulled excessively hard, it can separate at the grooves.	Call Air-Care for an RMA to have the cable housing repaired or replaced.
		Call Air-Care 800-322-9919 or 702-454-5515 info@air-care.com

Glossary & Acronyms

1. ACGIH—American Conference of Government Industrial Hygienists
2. ASHRAE—American Society of Heating, Refrigerating, and Air Conditioning Engineers
3. Air Handler/ AHU—The Furnace or air conditioner that heats, cools and moves the air.
4. Antimicrobial—Agent that kills Bacteria, Molds and viruses. See "Sanitizer
5. Arrestance – An ASHRAE standard procedure to measure air filter efficiency (52.1)
6. Bioaerosols— Molds and bacteria that are found floating in the air.
7. Biological Contaminants— Bacterial, Mold/Fungus, viruses and their waste, byproducts and decomposition materials that can be inhaled and cause many types of health effects.
8. Building Related Illness—Diagnosable illness whose symptoms can be identified and whose cause can be directly attributed to airborne building pollutants (e.g., Legionnaire's disease, and hypersensitivity Pneumonitis).
9. CFM—Cubic Feet per Minute, a measure of how much air is flowing in an air system.
10. CO—Carbon Monoxide, an odorless, toxic gas produced during combustion.
11. CO₂—Carbon Dioxide an odorless, non-toxic gas produced during combustion and exhaled by people.
12. Ceiling Plenum – The area above a suspended ceiling that may be used as a return path to the Air Handler.
13. Conditioned Air – The air that has been filtered, heated or cooled by the air handler.
14. Dampers – Flaps or valves in the air duct that control the amount of airflow in the duct.
15. Diffusers & Grilles & Registers – The covers at the end of supply and return ducts that control the amount and direction of the air-conditioned air entering or leaving a room.
16. Electrostatic Filter – A High Efficiency (95% Arrestance) Air filter that generate static electricity from the air movement through the air handler and captures dust from the air while the clean air move freely through it.
17. EPA—Environmental Protection Agency
18. Duct – A metal, plastic or fiberglass tube that transports air to and from the Air Handler. They can be round, square or rectangular.
19. Duct Board – Compressed fiberglass material used to make air ducts, particularly in the southern U.S.
20. Fiberglass Filter – A disposable, very low efficiency filter (approx. 10% arrestance).
21. Flex duct – Plastic fabric duct with a spiral wire support. It is used extensively in the Western U.S.
22. HEPA—High Efficiency Particulate Air
23. HVAC—Heating, ventilation and air-conditioning
24. IAQ—Indoor Air Quality
25. MSDS—Material Safety Data Sheet
26. Make-up Air – Fresh "outside" air that is brought into a Commercial building.
27. NADCA-National Air Duct Cleaners Association
28. NAFA – National Air Filter Association
29. NIOSH—National Institute for Occupational Safety and Health
30. Negative building pressure – A condition that allows air to flow into a building when a door is opened.
31. NSC -- Nevada Safety Counsel
32. NSF International – An independent testing laboratory for Air filters
33. OSHA—Occupational Safety and Health Administration
34. Positive building Pressure – A condition when air will come out of a building when a door is opened.
35. Re-entrainment – The flow of dust and debris removed from an air system back into the same building
36. Return/Return Duct
37. Sanitizer – A material designed to kill mold, bacteria, and viruses.
38. Sick Building Syndrome – A group of symptoms such as headache and watery eyes that disappear after the sufferer leaves the building for a few hours.
39. Supply/ Supply Duct—The opening and related ductwork that delivers conditioned air to a room.
40. VAV—Variable air volume system – A system that varies the amount of flow of air to regulate temperature.
41. VOC's—See "Volatile Organic Compounds"
42. Volatile Organic Compounds (VOC's)—Chemicals that release gasses into the air such as solvents.



LIMITED WARRANTY

DUCTMASTER

Air-Care warrants this product to be free from defects in materials and workmanship to the original purchaser for a period of Three (3) years from the date of purchase. Components listed below are excluded from this Three year period and are covered for periods described below:

Vacuum Motors	1 Years
Circuit Board & Remote	1 Years
Speed Controller	1 Years
Hose & Motor Assembly	90 Days
Brushes, Wheels, & Filter	No Warranty

Warranty covers both parts and labor (labor is to be performed at Air-Care's facility located at 3868 E. Post Road; Las Vegas, Nevada).

Warranty is extended to the original purchaser and is **not** transferrable.

This warranty does not extend to any damage to a product caused by or attributable to freight damage, abuse, misuse, improper or abnormal usage. Warranty is also void if the product has been modified or altered in any way.

The purchaser is responsible for the cost of shipping the equipment to Air-Care's facility for evaluation. If found to be defective and covered by the terms of this warranty, Air-Care will pay FedEx ground shipping charges on the repaired or replaced item back to the purchaser's location. Any additional expedited service charges for quicker shipping shall be born by the purchaser. If the product or component is not found to be a warranty issue, the purchaser will be responsible for return shipping charges.

Air-Care is not responsible or liable for indirect, special, or consequential damages arising out of or in connection with the use of performance of the product; damages with respect to any economic loss, loss of property, loss of revenues or profits, loss of use, or other incidental or consequential damages of whatsoever nature.

The warranty extended hereunder is in lieu of any and all other warranties, and any implied warranties of any type.

This warranty gives you specific rights. These rights and others vary from state to state.

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