

IMPORTANT SAFETY INSTRUCTIONS
IMPORTANTES MESURES DE SECURITE
IMPORTANTE PARA SU SEGURIDAD

SAVE THESE INSTRUCTIONS
CONSERVER CES INSTRUCTIONS
GUARDAR ESTA INSTRUCCIONES

- Read the Owner's Manual completely before attempting to operate this unit.
- Always check the filters before each use.
- Connect to a properly grounded outlet. See grounding instructions.
- Don't change filters, clean the unit, or empty the canister until the plug has been disconnected from the electrical outlet. Always unplug unit when not in use and before servicing.

WARNING – To avoid risk of electrical shock, do not use out doors or on wet surfaces.

Avertissement – Pour reduire les risques de choc electrique, ne pas utiliser a l'exterieur et ne pas aspirer de matieres humides.

Advertencia – Para reducir el riesgo de un electrochoque, no usarlo afuerra o mojado.

WARNING – To reduce the risk of burns, fire, electric shock, or personal injury:

- Do not leave appliance unattended when plugged in. Unplug from outlet when not in use and before servicing.
- Do not use outdoors or on wet surfaces.
- Do not try to recover any liquid with this vacuum. This vacuum is for DRY RECOVERY only.
- Do not allow to be used as a toy. Close attention is necessary when used by or near children.
- Use only as described in this manual. Use only manufacturer's recommended attachments.
- Do not use with damaged cord or plug. If appliance is not working as it should, has been dropped, damaged, left outdoors or dropped into water, return it to a service center.
- 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 appliance over cord. Keep cord away from heated surfaces.
- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
- Do not handle plug or appliance with wet hands.
- Do not put any object into openings. Do not use with any blocked opening. Keep free of dust, lint, hair, or any thing that may reduce air flow.
- Keep hair, loose clothing, fingers and all parts of body away from openings and moving parts.
- Turn off all controls before unplugging.
- Use extra care when cleaning on stairs.
- Do not use to pick up flammable or combustible liquids, such as gasoline or use in areas where they may be present.
- Connect to a properly grounded outlet only. See grounding instructions.
- Do not pick up any objects that are burning or smoking, such as cigarettes, matches or hot ashes.
- Do not use without a dust bag and / or filters in place.
- Do not operate with wet hands.

WARNING Only use UL listed Extingtion cords 14 AWG or stronger.
The length of a cord set, including fittings, shall not be less than 6 ft.

Dustless
TECHNOLOGIES

Pro Series 600
HEPA Vacuum with 98% Efficient Air-Bender™ Cyclone System

Operating Manual



dustlesstools.com
800.568.3949

Dustless
TECHNOLOGIES

Table of Contents

- Technical Data** 3
 - Rating 3
 - Unit Specifications 3
 - Operative Range and Correct Usage 3
 - Stand-by Power Supply (Generator) 3
 - Advice for Operators of Grinding Machines 3
 - Machine Type Designation 3

- Safety Instructions** 4 - 7
 - Explanation of Warnings and Symbols 4
 - Organizational Measures 4
 - Personnel Selection and Qualification 5
 - Safety Precautions Applicable to Different Operating Conditions 5
 - Repair Work, Maintenance Activities, and Default Repair on the Job Site 6
 - Definition of the Safety-off Position 6
 - Dangerous Aspects of the Machine 6
 - Electrical Engineering Regulations 7
 - Special Instructions 7

- General Information** 8 - 9
 - Description of the Machine 8
 - Scope of Supply 8
 - Setup Instructions 8
 - Operating Instructions 9
 - Dust Collection Area 9

- Maintenance and Inspection** 10
 - Daily Maintenance 10
 - Maintenance and Inspection 10

- Troubleshooting / Diagnostics** 11-12



Please note: The following safety instructions must be followed as shown in this operating manual. Failure to do so may result in hazard to health or possible death.

Technical Data

Rating

Machine: Pro Series Model 600 Dust Collection System
Machine-Type: Model 600
Manufacturer: Dustless Technologies
(800) 568-3949
www.dustlesstools.com

Unit Specifications

Dimensions: Length 57 in 145 cm
Width 27 in 68 cm
Height 60 in 152 cm
Weight 284 lbs. 129 Kg

Connected loads of the electrical system: Power (2) 2.1 HP Motors

Electrical Connection 120/240V 50-60Hz Single Phase – (the above is a typical generator style wiring setup) note: see wiring diagram in this manual under Reference Guide and Procedures section of this manual.

The above connection creates two 120v connections that connect to each individual motor circuit. User may use 2 separate 120v circuits off house power as an option as opposed to wiring the 120/240V.

Operative Range and Correct Usage

The Dustless Systems Model 600 is designed to be used for the purpose of collecting nonvolatile, noncombustive and nonhazardous material. The machine cannot be used for other purposes. The manufacturer will not be liable for damages resulting from such incorrect usage. In case of wrong usage the user is responsible for all risks.



Stand-by Power Supply (Generator)

If the Dustless Systems Model 600 is operated using a generator, the generator must be operated in accordance with the current local electrical directives (this applies in special to the protective ground conductor) in order to ensure that all safety devices are functioning and to be able to eliminate possible damage to electrical components.



Advice for Operators of Dust Collection System

During the operation of the Dustless Systems Model 600 it may be possible to exceed the acceptable noise level of 85 dB(A). This is dependent on the different locations and the local circumstances. When the noise level is 85 dB(A) or more, the machine operator and the persons working near the machine must wear sound-insulating devices.



Machine Type Designation

Machine Type: Dustless Systems Model 600
Working Width: 30 in / 72 cm
Dust Capacity: 25 gallon to bottom of cyclone when in place
Dust Hose Connection: 3 in / 8 cm

Safety Instructions

The following safety instructions must be followed as shown here. Failure to do so may result in hazard to health or possible death.

Explanation of Warnings and Symbols

The following symbols are used in the operating instructions to highlight areas of particular importance:



Operational Safety – This symbol will be shown in these Operating Instructions next to all safety precautions that are to be taken in order to ensure prevention of injury. Follow these instructions and take special care in these circumstances. In addition to these instructions, the general safety precautions and the local accident prevention guidelines are also to be followed. Please check, whether there are special regulations for the particular job site.



Safety Goggles/ Ear Protection – Information, instructions, and restrictions with regards to possible risks to persons or extensive material damages.



Electrical Warning – Warning against dangerous voltages.

Organizational Measures

The Operating Instructions are to be kept near the location where the machine is located and must be reachable all the time!

In addition to the Operating Instructions general and legal regulations regarding accident prevention and environmental protection must be with and indicated every time! Such duties may for example relate to the handling of hazardous substances or to the provision and wearing of personal protection equipment as well as compliance with local traffic regulations.

The Operating Instructions must be supplemented by instructions including the duty to supervise and report relating to particular local working practices, for example work organization, work procedures, and personnel allocation. Personnel entrusted with working with the machine must have read the Operating Instructions before starting the work; in particular the chapter about Safety Instructions. These have to be read before starting any work with the machine. This particularly applies to incidental activities such as setting up the machine, carrying out maintenance work, or training staff to work with the machine.

From time to time the working practices of the staff are to be checked regarding awareness of safety and hazards.

Personnel must tie back long hair and not wear loose clothing or jewelry and rings. There is a risk of injury through getting stuck or being drawn into moving machinery.



Use personal protection equipment if necessary or required by regulations!

Take notice of all safety and hazard notices on the machine.

All safety and hazard notices on the machine must be kept complete and legible. If safety-critical changes occur to the machine or its performance, the machine must be shut down immediately! The cause of the fault has to be established immediately and has to be repaired before starting the work again.

Changes, add-ons, or conversions of the machine which might have an influence to the safety of the machine must not be undertaken without the permission of the manufacturer. This applies in particular to the fitting and adjustment of safety devices and to welding on major and load bearing parts.

Spare parts must always comply with the technical requirements and the specifications of the manufacturer. This is always guaranteed with original spare parts of the manufacturer.

Safety Instructions (con't)

Inspection intervals and intervals for recurring checks specified in these Operating Instructions must be complied with. At the same time it is necessary to meet the legal requirements.

To perform maintenance work correctly it is important to be equipped with proper tools for the task in question.

The location and the operation of fire extinguishers must be made known on each building site!

Take note of the facilities for fire reporting and fighting fires!

Personnel Selection and Qualification

Fundamental duties:

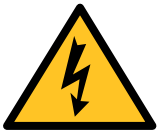
Only reliable personnel are allowed to work on the machine

Only trained personnel can be used to operate the machine. Note the statutory minimum age! Specify clearly the responsibilities of personnel for operation, setting up, servicing and maintenance work!

Make sure that only authorized personnel operate or work on the machine.

Select clearly the machine operator. Define his/her responsibilities also with regard to traffic safety regulations and empower him/her to decline instructions from third parties which are not complying with the safety requirements.

Personnel being trained or made acquainted with the equipment may only be deployed under constant supervision of an experienced person.



Work on the electrical parts of the equipment may only be undertaken by a skilled electrician or by a trained person under the guidance and supervision of a skilled electrician as well as in accordance with the electrical engineering regulations.

Safety Precautions Applicable to Different Operating Conditions

Avoid any method of working that impairs safety! All precautions have to be taken, that the machine will only be used in a safe and functional status.

The machine has to be checked visually at least once a day for any damage and defects.

In the event of operational malfunctions the machine must be shut down immediately and secured. The fault must be rectified before starting the machine again!



Secure the work area around the machine in public areas providing a safety distance of at least 10 feet around the machine.

Fault must be rectified immediately!

Start up and switch off operations and control devices have to be handled in accordance with the Operating Instructions.



All persons in the proximity of the machine must wear safety glasses with lateral protection. Ear protection may be required.

Use only extension cables for extending the main cable that are sized and marked in accordance with the overall power consumption of the machine and the valid local guidelines.

Safety Instructions (con't)

Repair Work, Maintenance Activities, and Default Repair on the Job Site

Please follow any special safety instructions in the various chapters on servicing the machine. (See chapter 7.)

Adjustments, servicing, and inspection work and inspection intervals specified in these Operating Instructions as well as any information on the replacement on parts and systems of the machine must be undertaken and / or complied with.

These activities can only be undertaken by qualified personnel.

Before starting any maintenance or repair work the operator of the machine has to be informed about it.

For the machine to be shut off completely for repair or maintenance work the plug has to be disconnected in order to prevent the machine from being switched on accidentally.

The dust bin of the dust collector has to be emptied before transportation. Please handle in accordance with the regulation how to dispose the dust and make sure that you meet the local regulations.

Do not use any aggressive cleaning materials! Use lint-free cleaning cloths.

Always tighten any screw connection that is undone during servicing and maintenance work. If safety devices need to be dismantled during setting up, servicing and repair work, these safety devices must be reinstalled and inspected immediately after completion of the servicing and repair work.

Make sure that process materials and replacement parts are disposed of safely and in an environmentally-friendly manner!



Work on the electrical parts of the equipment may only be undertaken by a skilled electrician or by a trained person under the guidance and supervision of a skilled electrician as well as in accordance with the electrical engineering regulations.

Make sure that electrical components used for replacement purpose comply with the original parts and are correctly adjusted if necessary.

Definition of the Safety-off Position

Definition: The safety off position is the position of the machine when it cannot generate any hazard.

Putting the machine in the safety-off position means:

- Switch off the dust collector.
- Pull out main plugs.
- Secure the machine against unintended start up.

Dangerous Aspects of the Machine



Every machine, if it is not used according to the regulations, may be hazardous for operating, setting-up and service personnel. The operating authority is responsible for compliance with the safety regulations during operation and maintenance of safety devices supplied with the machine as well as the provision of appropriate additional safety devices.

Safety Instructions (con't)

Electrical Engineering Regulations



Never start machine in the tilted position. The machine must only be started when machine is standing flat on work surface.



Work on the electrical parts of the equipment may only be undertaken by a skilled electrician or by a trained person under the guidance and supervision of a skilled electrician as well as in accordance with the electrical engineering regulations.



Use only extension cables for extending the main cable that are sized and marked in accordance with the overall power consumption of the machine and the valid VDE guidelines. In case there is any question ask the manufacturer or a skilled electrician.

If work on electrified parts is necessary, a second person must be deployed who can pull out the plug in an emergency. The working area must be sealed with a red and white safety chain and a danger sign. Use tools that are insulated against voltages.

Only start work, once you are familiar with the electrical engineering regulations that apply to your area.

Only use voltage testers that comply with the regulations when troubleshooting. From time to time check voltage tester to ensure that they are operationally efficient.

Special Instruction

Use only proper and default free tools for your work. Damaged tools have to be repaired immediately or to be replaced.

Use during your work for your own safety the required safety equipment and safety clothes (e.g. safety glasses, safety shoes, safety gloves).

Please instruct your operators and the repair personnel about the following points:

- Cleaning and repair work are only allowed if the machine is shut off (safely in the off position).
- During work on the machine, be certain that the machine cannot be started.
- Replace all safety covers and devices after cleaning, repair, and maintenance work.
- Before restarting machine, make sure all personnel are a safe distance away from the work area after initial start up.

General Information

Description of the Machine

The Dustless Model 600 is a dust collection system with two independent vacuum motors that run on 120 volts 50/60 HZ. They may be ran off of a 120/240 volt split power supply or off of two independent 120 volt 15 amp circuits.

There is an on board cyclone separator that collects most of the dust during operation. A small percentage of dust will then be collected in the reservoir that is located beneath the motor housings. Both of these reservoirs are designed to be used with a plastic trash bag in place for ease of disposal.

There are also two independent filter cleaning mechanisms that are built into the bottom of the motor housing.

Scope of Supply

Provided with machine:

- Dustless – Model 600
- Manual (1)
- 2.5" hose included, the 3" hose is optional

Setup Instructions



Install sample plastic collection bag (included) into main reservoir and filter reservoir with bag excess gathered and draping over edge of tank.

DO NOT RUN UNIT WITHOUT THE BAGS IN PLACE AS THIS WILL ALLOW DUST TO BE PULLED DIRECTLY INTO THE MOTOR AND WILL FLOW OUT OF THE EXHAUST THEREBY CONTAMINATE THE WORK ENVIRONMENT!

If bags are not available then remove the small 3/4" equalizer vacuum hoses from the sides of the reservoirs and tape off both the hose and the hose port on the connectors. This will allow for normal operation except that the operator will then have to dump the dust collected in the reservoirs.



USE ONLY HEAVY DUTY BAGS! Thin bags may pull into the cyclone during operation.



The red hose (inside of filter) and the black hose (outside of filter) are equipped with quick disconnect hose connections. In order to disconnect them simply push in metal collar and pull hose. To reconnect, simply push hose into

fitting. It will lock in place.



Attach small vac hose from to both reservoirs. If not using a bag remove the hose and block off both ports during operation.



Secure latches on reservoirs. The hook latches are adjustable. Occasionally adjust the tension on the latches to insure the seal is adequate on the tanks.

General Information (con't)

Operation Instructions



Plug into any two 120v 15 or 20 amp outlets. For 120v operation you MUST have two separate 120v 15 or 20 amp circuits in order to run both motors simultaneously. If using two 120v circuits to power the unit remove the 120v female

plugs that are a part of the unit and plug your power cords into the male flanged 120v plugs as shown.



Optional 120/240v – 4 wire connection. Check the enclosed external wiring diagram to insure the wiring is correct. If wiring is incorrect the voltage may be too high for the motors and will damage them and thereby void the

warranty. The 240 volt wiring splits off into two 120 volt circuits. This allows the motors to either run on the 240 volt setup or two 120 volt setups without any adaptation.



If running only one motor. operator must remove the hose connected to the inlet port that connects to the motor that is not running and utilize the 2.5" expandable port plug that is kept stored in the storage bracket . This plug

is to be placed in the unused inlet port on the filter reservoir lid. This prevents air flow through the unused motor during operation thereby creating a substantial vacuum leak and diminishing the effectiveness of the one motor that is running.



If running only one motor, operator must also insure that the small 3/4" vacuum hose that connects to the motor inlet on the bottom of each motor housing is on the motor that is running. If not then the bags will not have equalized

vacuum on the reservoirs and the bags will suck into the cyclone and on the filters. If using just one motor the front motor is the one that is set up to run without change. This can be changed at will.



This unit collects over 98% of dust in the cyclone reservoir during operation. Eventually the small amount of dust that get to the filter reservoir will begin to occlude the filter thereby create air flow resistance through the HEPA

filter. The unit is equipped with a Minihelic gauge(s) that measures the resistance of airflow of the filter(s). When the filter(s) reach approximately 20" h20 on the gauge, which is half way, the filter(s) should be cleaned with the use of the pulse valve(s). This typically happens no more frequently than once an hour, but varies with amount of dust being collected over a given period.



To clean the filter and remove the resistance of air flow from the filter simply pull the hose connected to the pulse valve back quickly and release. You will then notice the reading on the minihelic gauge will have dropped to zero. This indicates

that the filter has been cleaned and you are ready to continue operation.

Dust Collection Area

Dust collection reservoirs are 30 gallon capacity. The actual dust collection capacity should be based on whatever is an acceptable weight to handle. If the reservoir is filled to create an unmanageable weight for an individual to safely lift, operator is required to utilize a mechanical lifting device to dispose of dust in an approved receptacle. Consult local regulations regarding disposal of debris and follow these regulations

Maintenance and Inspection

Special attendance and regular maintenance of the machine and its parts are imperative for functioning and safety.

In order to prevent unnecessary downtimes it is recommended to keep original spare and wear parts on stock.

The following should be kept on hand and replaced at least every 1000 hrs of operation. Upon inspection, if damage noticed to filter, replace immediately.

Part # FRT155 HEPA Filter Cartridge (2 / unit)

Part # VMA120brushset Motor Brushes (2 sets / unit)



If machine is not collecting dust at an adequate level to meet all local regulations and job requirements shut down vacuum system and the machine it is hooked to immediately and perform repairs and maintenance procedures.

Daily Maintenance

The following maintenance should take place before and after every operation of machine:

1. Clean all surfaces with a dry, lint free cloth
2. Inspect all electrical cables for cuts and replace damaged chords
3. Check all electrical connections are secure and snug
4. Inspect filter for any visible damage
5. Inspect motor exhaust area to insure no dust has been blowing out

Maintenance and Inspection

Daily — Prior to Operation

- Check the electric connections for sediments of dirt or foreign bodies.
- Check the reservoirs to insure the bags have been changed.
- Check the filters for any physical damage and replace if necessary.

- Remove dust plastic bags from dust reservoirs.
- Check all electrical cables for cuts or damage.
- Check the hose connections for tightness and fixed seat.
- Check the hoses to the filter lid for damages.
- Make sure the lid seals are in good condition and the lids seat well.
- Check the latches on the lids and adjust accordingly.
- Check the casters for debris and make sure they are in good working condition.

Troubleshooting / Diagnostics

Prior to any repair work on the machine or drives, the machine must be secured against unintentional start-up. Put the machine in its Safety-off position.

Failure	Possible Reasons of Failure	Corrective Action
Too much dust getting to the filter compartment and bag gets sucked up into cyclone during operation	Suction leak in the cyclone reservoir lid	Adjust latches. Replace lid seal.
	Suction leak around one of the cyclone reservoir wheel stems	Check by running with a little bit of dust in the tank with no bag. If leaking you will notice a blown pattern in dust around the leaking wheel stem. Repair seal and tighten.
	Suction leak at the equalizer vacuum hose on the side of the reservoir.	Check the seal on the plate and insure the small hose cuff is glued on hose securely and not leaking air.
Too much dust getting to the filter compartment and bag is sucked tight to the side of cyclone reservoir during operation (which is normal)	Cyclone has debris stuck in it.	Inspect inside of cyclone and remove debris.
	Cyclone reservoir is not sealing properly.	Adjust latches. If problem persists Replace seal on cyclone lid assembly.
Not enough suction	Filter is clogged	The gauge should read zero after cleaning with pulse valve. If not, actuate pulse valve and change filter module plastic bag.
	A reservoir lid is not sealed properly.	Check lid seals and replace if necessary or adjust latches.
	Vac motor not pulling properly	Check input voltage to insure proper level. IReplace motor brushes or motor if necessary.
Dust is not being picked up but the vacuum seems to be working properly	Dust shroud on machine that the vacuum is hooked to is either damaged or is not down on the surface thereby allowing too large a gap for proper dust collection.	Repair shroud and make sure it is moved down to as close as possible to the surface.
Dust is blowing out of exhaust from motor housing at pulse valve.	Filter seal is compromised	Remove filter, inspect seal and replace on unit. If problem persists replace filter.
	Filter is damaged	Replace filter
	Bag is not in both reservoirs	Place bag in both reservoirs
	There is a hole in one of the bags.	Replace damaged bag.

Troubleshooting / Diagnostics (con't)

Failure	Possible Reasons of Failure	Corrective Action
When using the 125/250 volt power setup one motor runs and the other one doesn't but when the 120v inlet plugs are connected directly off of a 120 volt house connections they both work.	One leg of the 125/250 volt connection is loose.	Repair wiring connection on flanged 125/250 volt power connector.
When using the 125/250 volt power setup neither motors run but when the 120v inlet plugs are connected directly off of a 120 volt house connections they both work.	The neutral leg of 125/250 volt connection is loose	Repair wiring connection on flanged 125/250 volt power connector.
Motor is not running	Circuit breaker is blown	Reset breaker
	Switch is bad	Replace switch
	Getting no power from power connections	Check connections on all terminals
	Motor is bad	Replace motor
	Motor brushes need to be changed	Replace motor brushes

For more information or questions contact ProVac Systems: (615) 228-3404 provsystems.com