



INNOVATECH PRODUCTS & EQUIPMENT, 4701 Allmond Ave, Louisville, KY 40209, USA
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Dust Extractors

HD Vacuum Series

COMPLETE MANUAL



BARTELLGLOBAL.COM

1. About This Manual



This Manual contains the information and procedures to assist you to operate and maintain the HD Dust Vacuum machine safely and correctly. Read this Manual before you operate or service the equipment. If you need additional information or assistance, please get in touch with our Customer Service Department:

Innovatech Products & Equipment Co.
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Fax (425) 402-8547
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Please take note:

- These instructions are for the single phase, 2-stage HD1/2/3 Dust Extractors only.
- The machines are designed to clean construction area and can be connected to powered hand tools, small/medium size grinders etc.
- Please pay attention to the safety regulations.
- Read the complete operating manual prior to using the machines.
- All repairs must be performed by a qualified service person. Use only the replacement parts supplied or specified by Innovatech.
- Innovatech shall, under no circumstances, be deemed liable for any accidents or damage caused if the machine is used for other applications or been used in a way other than those required in the operating manual.

SAFETY PRECAUTIONS

 <p>WARNING Mask REQUIRED</p>	<p>WARNING DUST HAZARD Wear dust mask when using this equipment</p>
 <p>CAUTION Safety glasses required</p>	<p>CAUTION DUST HAZARD Do not operate without wearing safety glasses</p>
 <p>WARNING Hearing protection required.</p>	<p>WARNING HIGH NOISE RISK Hear protection must be worn when open operating this equipment</p>
	<p>DANGER ELECTRIC SHOCK RISK Disconnect power cord from electrical outlet before starting any service</p>
	<p>ATTENTION READ OWNER'S MANUAL Read and understand owner's manual before using this machine. Failure to follow operating instructions could result in serious injury or death.</p>

2. Important Safety Instructions

General Precautions

- The employer must inform and train the user according to the provisions of applicable laws. Use of the machine by untrained and unauthorized persons is strictly forbidden.
- Read the complete instruction manual before operating your dust extractor. Pay particular attention to the safety regulations. Failure to observe the safety regulations could cause serious accidents and injuries.
- This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.
- Make sure the assembly area is firm, so the machine does not tip over. Risk of personal and material injury.
- Pay extra attentions when cleaning on slopes, ramps, or stairs.
- Make sure the parked machine remains stable by operating the braked wheel.
- Risk of pinching when handling the toggle fasteners.
- Keep children and unauthorized persons away from machine when in use. Close attention is necessary when operated closed to children.
- Keep hair, loose clothing, fingers and all parts of body away from openings and moving parts (accept during a filter cleaning procedure).
- Make sure all the guards and protection devices are in place and that all the safety devices are in place and working properly.
- Do not open the vacuum container with the machine running.
- Do not wear loose or hanging clothing such as ties, scarves or torn garments that could become trapped and be sucked up by the cleaner.
- Do not use without dust bag and/or filters in place. Replace collection system and/or filters as described in manual.
- Do not modify machine from its original design.
- All repairs must be performed by a qualified service person. Use only manufacturer supplied or specified replacement parts.
- Innovatech shall, under no circumstances, be deemed liable for any accidents or damage caused if the machine is used for other applications or in a way other than those required in the operating manual.

Electrical Safety

- Improper connection of the equipment-grounding conductor can result in a risk of electrical shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded.
- Do not modify the plug provided with the machine. If it will not fit the outlet, have a proper outlet installed by a qualified electrician.
- Before using the machine, make sure that the power & voltage corresponds with the voltage shown on the machines rating plate.
- Do not leave machine when plugged in. Unplug cord from outlet when not in use and before cleaning or servicing machine.
- Cables damaged through crushing or splitting can be dangerous if used and should be replaced immediately. Risk of personal injury.
- Do not use with damaged cord or plug. If the machine is not working as it should, has been dropped, damaged, left outdoors or dropped in water. Make sure it is repaired by a qualified person.
- Do not pull or carry by cord, use cord as handle, close a door on cord, or pull cord around sharp edges or corners. Do not run the machine 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 machine with wet hands.
- Regularly inspect cord and plug for damage. If cord is damaged, it must be replaced by a qualified person in order to avoid hazard.
- Turn off all controls before unplugging.
- If using an extension cord make sure the cord rating is suitable for this machine.
- Connect to a properly grounded outlet only. See grounding instructions.

Thermal Protection

The dust extractor is equipped with a safety thermal protector to prevent motor from overheating. Should thermal protector activate, turn off machine, unplug power cord and check for full dust bag, vacuum hose clog or filter blockage. It may take up to 45 minutes for the thermal protector to reset.

Grounding Instructions

The dust extractor must be grounded. If a dust extractor malfunctions or breakdowns, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. The dust extractor is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be inserted into an appropriate

- Proper personnel protective equipment must be used while replacing the pre-filter or the HEPA filter. If possible, use a special suitable room.
- All parts which are contaminated after service must be properly disposed of in plastic bags according to all regulations.
- If the machine has to be used for other purposes, it is extremely important that the machine is cleaned, to avoid the spread of hazardous dust.
- Do not puncture the HEPA filter. Risk of dust dispersion.

6. Operating Instructions

Vacuuming

Before starting a vacuuming process,

- make sure the machine is properly connected to a grinder or a floor tool via the provided hose and fittings.
- check the power cable and the plugs are in a good condition.
- make sure the power voltage corresponds to that on the rating plate and connect correctly the power plug to a power socket

Turn on the **power switch** to start a vacuuming process.

During the vacuuming process, dust-laden air is sucked through the flexible hose and inlet valve at a high speed. The air is then slowed down by the cyclone, and coarse dust particles are separated out partly by centrifugal force and partly by gravity. Air and finer particles pass through the pre-filter at the first and the HEPA filter at the final stage where separation is made.

outlet that is properly installed and grounded in accordance with all local codes and ordinances.

3. Unpacking

When unpacking the machine, make sure that the following accessories are included:

- A hose with end fittings
- Metal wands
- Floor tools and its spare parts

If any of the above-mentioned parts are missing, please contact your local distributor or our sales representative.

4. Intended Use

The machine is designed for vacuuming and separating dry, non-combustible dust with an explosion limit value of 0.1mg/m³.

- Do not use the machine outdoors or on wet surface, this machine is designed for indoor and dry use only.
- Do not expose machine to rain or moisture, store indoors only.
- Do not use to pick up any type of liquids.
- Do not use to pick up any flammable or combustible substances, or the substances which could cause explosions (fuels, solvents, etc.), don't use in an area where they may be present.
- Do not use to pick up any substances that is burning or smoking substances, such as cigarettes and matches, or hot ashes.
- Innovatech shall, under no circumstances, be deemed liable for any accidents or damage caused if the machine is used for other applications.

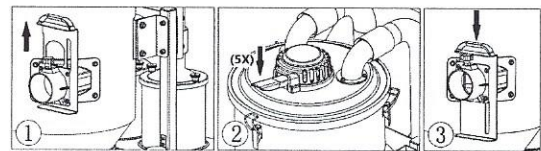
5. Servicing

- When cleaning and servicing the machine, you must switch off the machine and remove the plug from the outlet.
- Don't clean the machine with a high pressure cleaner. If necessary, do not direct at the openings on the machine, especially the opening for cooling air.
- Before moving the machine from the work area, the machine must be cleaned.

Filter Cleaning

The machine is designed for filter cleaning by reverse air "jet-pulse".

The filter must be cleaned from time to time. This must be done before changing the bag collection system and should also be done when work is completed or whenever there is a poor suction.



Filter cleaning procedure:

- 1) Cover the inlet by lifting up the inlet valve and let the machine build up vacuum for 4 to 5 seconds,
- 2) Quickly push down the filter cleaning handle and release it. Repeat the procedure five times. It is important to let the machine rebuild the vacuum in between every repetition,
- 3) Open the inlet again by pushing down the inlet valve.
If suction remains poor, the conical pre-filter needs to be replaced. If suction still remains poor afterwards, the HEPA filters need to be replaced. See instructions in the next chapter.

Dust storage and release

The separated dust accumulates in the conic bottom during the vacuuming process, and it drops through the bottom flap into the plastic bag when the machine is switched off. In some extreme cases the adhesive ability of the dust must be broken manually. This can be done by hitting the dust through the bag or tapping the tank using i.e. a rubber hammer.

Dust collecting and bagging

The machine is equipped with a continuous fold bag system for an effective dust collecting and bagging. The supplied fold bag is a 22 m long plastic tube that will be divided into individual bags using the zip ties attached with the machine.

To assemble a new fold bag:

- 1) Release the belt holding the last bag and take off the bag holder.
- 2) Put in a new fold bag & pull out the inner end upwards.
- 3) Assemble the holder onto the machine and strap the opening facing upwards with

- the belt.
4) Pull down the outside end and close it using a zip tie.
Before changing a fold bag or a regular bag, make sure the filter cleaning cycle has been completed.

7. Filter Change

Unhealthy dust can be spread during filter change. Accordingly, the user should wear protective glasses, protective gloves, and a breathing mask conforming to protection class FFP3. Remember to switch off and unplug the machine before servicing.



Change of Main Filter

- Loosen the 3 hooks and remove the top cover. Take out a new filter from its bag. Lift out the used filter from its chamber and place it gently into the filter bag. This bag must be closed and disposed properly.
- Insert a new filter.
- Put back the top head and close the 3 hooks properly.

IMPORTANT! If you are removing the main filter in order to clean it. Hitting the filter with force or use of compressed air will destroy the filter. It can handle water, but high pressure water cleaning will destroy it.

Change of HEPA Filter

- Loosen the 2 nuts on each filter cover. Take out a new filter from its bag. Lift out the used HEPA filter from its chamber and place it gently into the filter bag. This bag must be closed and disposed properly.
- Insert a new filter to the filter chamber.
- Put back the filter cover and close the 2 nuts properly.

IMPORTANT! HEPA filters can't be cleaned, trying this might destroy it. When installing the replacement filter, make sure not touch the inside of the filter. Any kind of force/damage on the inside of filter media will destroy the new filter.

9. Troubleshooting

The machine is designed and manufactured for a specific severe environments and tasks. Its filter, seals, attachments, and fittings are customized or selected specifically for the applications. Please note that the machine must be protected from knocks and blows. The operator and service personnel must treat the machine with care for it to work correctly for an expected life span.

Problem	Cause	Solution
Motor fails to start	No power	Check power supply. Make sure power cable and plugs are in a good condition and properly connected, Check the power switch is in a good condition and properly connected.
Motor stops shortly after start	Wrong fuse	Connect to a correct fuse
	Shortcut in cable/machine	Order service
Motor runs but no suction	Hose not connected	Connect hose
	Hose clogged or blocked	Clean hose
	No dust collection bag	Fit dust collection system
Motor runs but with a poor suction	Hole in hose	Replace hose
	Filter clogged	Clean filter or replace filter
	Loose top cover	Make an adjustment of hooks or top cover
	Defective seals or gaskets	Replace defective seals or gaskets
Dust leaks out	Hole in hose	Replace the defective hose
	Damaged filter	Replace the damaged filter
	Poor assembled filters	Make an adjustment of the poorly assembled filters

8. Technical Specifications

data	unit	HD1	HD2	HD3
voltage (single phase)	V	120	120	230
max. power	W	1200	2400	3600
	HP	1.6	3.2	4.8
current	A	8	16	12
max. air flow	m ³ /h	200	400	600
	CFM	118	236	354
max. vacuum	mbar	240	240	220
	inch H ₂ O	100	100	90
main hose	mm	D38x5m	D51x7.5m	D51x7.5m
	inch	D1.5"x1.65'	D2.0"x24'	D2.0"x24'
inlet	mm	63	63	63
	inch	2.5"	2.5"	2.5"
pre-filter (EN779-F8)	%	>99.5% @1.0 um	>99.5% @1.0 um	>99.5% @1.0 um
pre-filter surface area	m ²	1.5	3.2	4.5
	ft ²	16	34	49
HEPA filter (EN1822-H13)	%	>99.99% @0.3 um	>99.99% @0.3 um	>99.99% @0.3 um
HEPA filter surface area	m ²	1.2x1	1.2x2	1.2x3
	ft ²	13x1	13x2	13x3
noise level	dB(A)	70	70	70
dimensions with carton	mm	650x420x1070	650x575x1260	780x590x1460
	inch	25.6x16.5x42.0	25.6x22.6x49.6	30.7x23.2x57.5
weight	kg	35	54	67.5
	lbs	77	119	149

Machine works noisy or works abnormal	various causes	Consult the technical support agent or order a service
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