



HafcoVac Compressed Air Industrial Vacuum Product Line



**OPERATING INSTRUCTIONS
& SAFETY MANUAL**

Thank you for your purchase of a HafcoVac product.

HafcoVac is a division of Hafco Foundry and Machine Company, Inc.

Please follow these assembly and operating instructions for your new industrial vacuum cleaner to ensure optimal operating performance. For your safety, observe all warnings contained herein.

Please keep this instruction manual in a safe place for future reference. Should you misplace this manual, you can download a copy from the HafcoVac website.

If you encounter difficulties operating the vacuum, do not hesitate to contact us.



301 Greenwood Avenue
Midland Park, NJ 07432

Phone: (201) 447-0433


Fax: (201) 447-1065

Info@HafcoVac.com

www.HafcoVac.com



TABLE OF CONTENTS

Certification	4
Unpacking Instructions	4
Choosing the Right Vacuum	5
Operating Instructions	6
Stainless Steel and Certified 	7
Filter Maintenance	8
Grounding Information	7
▶ Air Supply Grounding	7
▶ Operating Surface Grounding	8
▶ Wire/Jumper Grounding	8
Bonding	8
Troubleshooting	10
Lifetime Warranty	10
Certificate of Conformity	11
S'HUSH Silencer Installation	12
Jack Tool Holder Installation	13
HafcoVac Filter Bundles	14
Recommended Accessories	15

CERTIFICATION

Hafco Combustible Dust Certified Pneumatic Vacuums are certified and meet the stringent requirements of the NFPA (National Fire Protection Association) and NRTL (OSHA's Nationally Recognized Testing Laboratory).

The NFPA publishes an all-encompassing standard on how to design a safe dust collection system. Depending on the nature and severity of the hazard, it will guide you more specific standards for explosion venting and deflagration protection.

HafcoVac Vacuums have undergone a comprehensive evaluation by Technology International, a U.K. based technology group dedicated to providing specialist, regulatory compliance and approvals support worldwide. Technology International has been appointed by the UK Department for Business, Innovation & Skills (BIS) as a Notified Body for the European EMC Directive, Low Voltage Directive, Machinery Directive and the Radio & Telecommunication Terminal Equipment Directive (R&TTE).

The term ATEX is used for the European Union's (EU) 94/9/EC directive addressing equipment and instrumentation intended for use in potentially explosive atmospheres. The directive was purposed to help trade within the EU through alignment of laws governing the member states and went into effect on July 1, 2003. ATEX covers a broad array of safety equipment and instrumentation - including gas detectors.

OSHA's Nationally Recognized Testing Laboratory (NRTL) Program

The National Recognized Testing Laboratory (NRTL) ensures that products made by private companies meet the requirements of both the construction and general industry OSHA electrical standards. After a product is tested and certified, the manufacturer is authorized to apply a registered certification mark on the product. HafcoVac displays the ATEX Certification label on our Certified Vacuums which shows compliance with the requirements of the appropriate product safety standards it meets.

UNPACKING

HafcoVac vacuum heads are shipped fully assembled and ready to use. If you ordered a vacuum head with a tool kit, or individual tools or hoses, they are generally included in the same box, so please check carefully to avoid discarding them with the packaging. If you ordered a liquid shut off assembly (HV-7031), it is installed inside the standard filter for shipping purposes, though it is advised that you use **only** the liquid shut off **or** the filter at any given time, depending upon your application.

Complete units ship fully assembled, with the exception of the caster base (dolly). See the subsequent section for assembly instructions.

National Fire Protection Association (NFPA)

Requirements for managing combustible dust across industries are set by the National Fire Protection Association. These standards apply to all facilities and operations that contend with combustible dust within their environments and set safety measures for the management of processes and dust types.



NFPA 652 Standard on the Fundamentals of Combustible Dust

Applies to all facilities and operations that deal with combustible dust. It requires facility operators to conduct a dust hazard analysis to identify threats, create a plan to manage fire and explosion dangers and provide training for workers.

NFPA 654 Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing and Handling of Combustible Particulate Solids

An all-encompassing standard on how to design a safe dust collection system. Depending on the nature and severity of the hazard, it will guide you more specific standards for explosion venting and deflagration protection.

NFPA 484 Standard for Combustible Metals

Covers all metals and alloys in a form that is capable of combustion or explosion. It also applies to processing or finishing operations that produce combustible metal powder or dust such as machining, sawing, grinding, buffing and polishing.



After removing your unit from the shipping box, check for parts that may have been placed inside the vertical pieces of cardboard in the box corners.

CHOOSING THE RIGHT VACUUM

A general guide to choosing a HafcoVac Vacuum is by determining the available airflow (CFM). Using this simple formula it is easy to see what your facility has available to select the right vacuum.

$$\text{Compressor Horsepower} \times 4 = \text{CFM}$$

AIR SUPPLY / COMPRESSOR REQUIREMENTS

Follow the guidelines below to ensure that your unit will perform up to specifications. The recommended PSI for HafcoVac vacuums is between 80 to 120 PSI.

COMPRESSOR REQUIREMENT (AIRFLOW)						
AIR REQUIREMENTS	MODEL NUMBER	SUCTION GENERATED (SCFM)	HOSE LENGTH (feet)	H ₂ O LIFT (inches)	Hg (inches)	AVAILABLE OPTIONS/INFO
18 CFM	HV-30-1520*	40	12'	160"	12"	
48 CFM	HV-30-1560* HV-55-1560*	110	25'	204"	15"	Overhead Tool Kit
85 CFM	HV-30-1510* HV-30-2010* HV-55-1510* HV-55-2010*	140	50'	231"	17"	Ideal for Overhead Cleaning
170 CFM	HV-30-15185 HV-30-20185 HV-55-15185 HV-55-20185	280	100'	231"	17"	Long Range, High Volume, Dense Material

- ▶ 1.5" diameter/25' length hose supplied for models ending in 1510 and 1560.
 - ▶ 2" diameter/15' length hose supplied for models ending 2010.
 - ▶ All hoses and fittings from the compressor to the vacuum must be a minimum of ½" inner diameter. HafcoVacs are sold with a ¾" Chicago fitting. Alternatively, if you wish to use your own connection you can use a Quick Disconnect connection.
 - ▶ ¾" hose is recommended. Be sure to verify the inner diameter of the hose, not just the outer.
- *All units available as Standard, Anti-Static, or ATEX Certified.



OPERATING INSTRUCTIONS

To operate the vacuum, you must connect the airline between the vacuum and your air supply. The Chicago, or Universal fittings connect and disconnect by pushing in and twisting. Be sure to connect them securely by twisting them until they stop and the safety clip pins are aligned. Use the supplied safety clips at all times.

If your application does not require full suction, simply open the ball valve to the vacuum head only partially. Lower airflow results in a correspondingly lower suction, but with less of a demand on your compressed air.

When picking up liquids, uninstall the filter by removing the retaining springs and separate the head and the filter. Use of a Liquid Shut-Off Valve (HV-7031) is highly recommended when picking up liquids to prevent overflow and possible damage to the exhaust silencer. The liquid shut-off valve installs using the same retaining springs as those used for the filter.



Note: When using the vacuum to pick up combustible liquids or material, be sure to use a properly equipped "EX" Anti-Static unit, which will protect you from static electricity buildup. If your vacuum is not Anti-Static equipped a kit is available to purchase and install easily.



All operators of HafcoVac Anti-Static Vacuums should be trained and fully understand the topics discussed in this section. Failure to inspect the integrity of safeguards, circumventing safeguard systems or substitutions with components from other systems could lead to potentially dangerous situations. Proper training will lead to the safe operation of the vacuum.



To safely disconnect an air supply line, it must first be depressurized. Turn the air supply off at the nearest supply valve, then open the valve on the vacuum to release residual pressure before disconnection.

Should you need to pick up combustible materials, or if you operate a unit in a hazardous environment, you should only use a properly equipped Anti-Static model, designated with an "X" or "EX" model number suffix.

STAINLESS STEEL & CERTIFIED VACUUMS

HafcoVac Certified Explosion-Proof Stainless Steel Industrial Vacuums are the perfect solution for demanding environments. Using naturally strong stainless steel drums mean they are highly resistant to water, acids, alkaline solutions and chlorine resulting in a long-life and a lower cost of ownership. They are excellent for use with high temperatures and are also fire resistant.

HOUSEKEEPING COMPLIANCE MADE SIMPLE.

Ready to work on the biggest clean-up jobs right from the box, all you supply is the air. HafcoVac units are designed and factory assembled with a number of features to ensure static electricity is safely dissipated. Static electricity can pose a risk if allowed to build up and be unintentionally discharged when the vacuum is used in hazardous environments or with combustible substances.

Static electricity should be continuously dissipated by ensuring the unit is properly grounded, and that all components of the vacuum maintain their electrical bonding.



FILTER MAINTENANCE

HafcoVac recommends checking the filter of your unit frequently to ensure operational consistency and efficiency. The types of material being recovered will establish how frequently you need to change the filter and/or filter bags. A noticeable drop in performance is usually due to a full or clogged filter bag and/or filter. By performing this routine you will extend the life of your filters.

*Depending on the type of dust and/or debris being recovered you may be able to simply shake out the filter bag and reuse.

GROUNDING

HafcoVac units offer multiple options for grounding, depending upon the environment you will be using your vacuum in. You **must be certain** that **one or more** path to ground is present any time the vacuum is in operation. It is highly recommended that you verify any assumptions made about the presence of electrical ground in your facility.

► Air Supply Grounding

HafcoVac anti-static vacuums are supplied with electrically conductive air supply lines. Most air supply systems utilize steel black pipe for delivery, which is typically grounded. Grounding the vacuum may be achieved by correcting the conductive hose to a grounded air supply system. However, if your air supply system uses PVC pipes or rubber hoses, or if you extend your air supply hose with a non conductive hose, grounding through your air supply may not be a viable option.

HafcoVac ships static conductive air supply lines with an extra length of wire that protrudes where the hose meets the coupler at each end. It is not necessary to connect this wire to anything for the hose and couplers to be conductive. However, the wire should be left to serve as a confirmation that it is a conductive supply line, so as to not confuse it with non conductive lines which you may also have in your facility. Never extend a conductive supply line with a non conductive supply line, as the path to ground through your air supply system will break. Additionally, the wire can serve as an extra grounding option should you have any doubts about grounding through your air supply system.



For your safety, extend or replace the air supply line only with a conductive air supply line.

► Operating Surface Grounding

The drum dolly (or vacuum drum without dolly) sitting on a grounded surface is generally a suitable ground for the purpose of dissipating static electricity. Not all surfaces, however, are grounded.

Unpainted concrete slabs typically provide good ground conductivity, particularly if your facility was constructed to code requiring Concrete Encased Electrode or grounding.

Many surfaces aren't suitable to make assumptions about presence of a good ground, such as painted concrete, carpet, rubber mats, dirt, on a vehicle, etc.

► Wire/Jumper Grounding

If you have any doubt about the presence of ground through either the air supply line or the operating surface, it is highly recommended that you use a grounding wire and clamp. HafcoVac provides a wire with clamp for this purpose, although you can employ other solutions should the provided cable and clamps not be suitable in length or for the surface you are trying to ground the vacuum to.

To use the provided clamps (or your own solution) attach the end of the cable with the wire connector to the post on the vacuum, located near the inlet. The green grounding sticker (pictured below) designates the grounding point of the vacuum. If you use an alternate grounding solution, ensure you are not clamping to a painted surface, as the paint will act as an insulator of static buildup, rather than a conductor. Connect the other end of the wire to a reliable ground. Examples could include a grounding

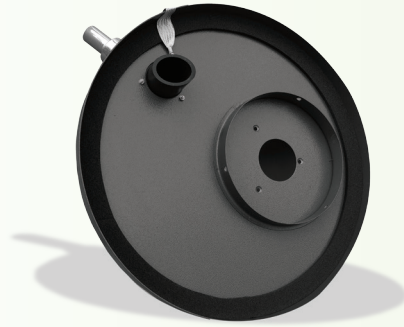
post, metal electrical conduits or junction boxes, unpainted building structural components, etc. If you have any doubts, it is recommended that you contact an electrician to provide you a verified ground connection to use.

►Bonding

Each component of the HafcoVac Anti-Static vacuum unit is bonded to ensure that no component of the system is isolated from ground. The operator should verify, prior to each use the following bonding points:



The copper band pictured is essential to bond the vacuum hose to the head



The braided cable must be intact to ensure bonding of the head to the drum

You should also inspect the drum rim at top and bottom where it has been ground free of paint, exposing bare metal. If the rim has rusted, been coated with paint or otherwise fouled, the contact between the vacuum head and drum or the drum and dolly may be broken.



If you are using your own drum, ensure proper grounding directly from the vacuum head.

You should use only metal tools, do not use plastic. If you extend any supply line or vacuum hose, be certain to do so with another conductive part. Connect wires between multiple lengths of hose.

TROUBLESHOOTING

If your vacuum doesn't perform as expected, verify the following items:

- **Clean or replace filter** Compressed air can be used to clean filter media. When ordering replacement filters, be sure to differentiate between standard (HV-7037) and HEPA (HV-7063) models. HEPA filters will capture smaller particles, but also require more frequent cleaning / replacement.
- **If installed, wash outer filter bag** The use of a filter bag is highly recommended, particularly with HEPA filters to extend the life of the filter element. **Do not use filter bag if wet.**
- **Be sure air supply is adequate** Fittings with an inner diameter of less than 3/4" will restrict air supply.
- **Check for obstructions** Vacuum hose and elbow on vacuum head should be free of obstruction.
- **Vacuum head must make a good seal with the drum** Lip of drum should have no dents, and the drum should have no punctures. Check and replace gasket on bottom of vacuum head if needed (HV-30-11 or HV-55-11).
- **Check and replace gaskets** under the venturi (HV-7028) and the elbow (HV-7054) on the top of the vacuum head.
- **CFM must be supplied to vacuum installed** – HEPA Certified for .03 Micron

LIFETIME WARRANTY

HafcoVac takes pride in its product and values their customers. As such, HafcoVac offers a **Lifetime Warranty** to all original end-users of our products. This warranty applies to defects in material and workmanship when the product fails under normal conditions. Damage caused by conditions including, but not limited to the following are expressly excluded: modification to any component or assembly, solvents, corrosives, or harsh environmental conditions. Also excluded are all components considered consumables, such as gaskets, filters or exhaust silencers.

This warranty expressly excludes all claims of consequential or incidental damages which may arise as a result of product use or failure.

Consumable products including Filters, Filter Bags, Hoses, and Attachments, are excluded from the Lifetime Warranty.

PRICING

For current pricing information please download our printable Price List from our web site: hafcovac.com/price-list.pdf

CERTIFICATE OF CONFORMITY

The Nationally Recognized Testing Lab (NRTL) tested and approved the HafcoVac for use in hazardous environments based upon its intrinsically safe construction. The HafcoVac operates on compressed air eliminating any electrical power necessity. Its intrinsic safety qualifies it for NRTL approval as it poses zero electrical risk. The vacuums are also OSHA compliant with our noise reducing S'Hush Silencer and Jack Tool Organizer which meets all trip and fall standards. It is NFPA compliant and ATEX certified as well.



CONFORMING APPARATUS

ATEX Directive 2014/34/EU

SAFETY TECHNICAL FILE REFERENCE

ATFHV-552010X (ATEX EX Series)

SAFETY STANDARDS:

ATEX_{Ex} II 2DcT6X

Equivalent to National Fire Protection Association 70: NEC Rating:

Class I Division 1* Groups A, B, C, D T6

Class II Division 1* Groups E, F, G T6

Class III Division 1*

Certified for use in a Division 1 hazardous location, can be used in a Division 2 hazardous location, providing it is in the same Class and Group.

SAFETY STANDARDS & OTHER REFERENCES

EN 1127-1	Explosive Atmospheres – Explosion prevention and protection – Part 1: Basic concepts and methodology
EN 13463-1	Non-electrical equipment for potentially explosive atmospheres – Part 1: Basic methods and requirements
EN 13463-5	Non-electrical equipment for potentially explosive atmospheres – Part 5: Protection by constructional safety 'c'

PROVISIONS WITH WHICH CONFORMITY IS DECLARED

Essential Health & Safety Requirements of Annex I of the Machinery Directive

AUTHORIZED REPRESENTATIVE AND RESPONSIBLE PERSON

Basil Fornaci

We hereby certify that the apparatus identified above conforms to the requirements of Council Directive 2014/30/EU on the approximation of the laws of the Member States relating to Electromagnetic Compatibility; and to the provisions of the Council Directive on the approximation of the laws of the Member States relating to Safety of Machinery.

Signed:

MANUFACTURER

301 Greenwood Avenue
Midland Park, NJ 07432

info@hafcovac.com
P: (201) 778-0200
F: (201) 447-1065

S'HUSH SILENCER

INSTALLATION



1 Loosen and remove bolt and nut from the S'HUSH Silencer and store in a safe place.



2 Loosen Anchor Screw and remove from Venturi head with 3/8" wrench. Slide S'HUSH onto the head.



3 Align center threaded bolt opening with threads on the venturi head.



4 Insert bolt and hand tighten.



5 Insert bolt on right and loosely tighten with included allen wrench.



6 Insert bolt on right side and loosely tighten with included allen wrench. Tighten all 3 anchor bolts.

INSTALLATION



1 Loosen THE JACK's main bolt.



2 Place The JACK lightly on top of the drum.



3 Attach the hooks for the vacuum hose and airline.



4 Position THE JACK sliding it down to just above the first rib of the drum. Thread the main bolt and hand-tighten using the included washer and nut.



5 Keeping THE JACK in position, tighten the main bolt.



6 Adjust both bolts making sure not to over-tighten and damage the drum.

SAVE ON HAFCOVAC FILTER BUNDLES



HEPA FILTER BUNDLE HV-7063-B		
3-pack	HEPA Filters	HV-7063-3
6-pack	Filter Bags	HV-7038-6
2	Foam Silencers	HV-7033
6	Springs, Set of 3	HV-7039

HEPA PREMIUM FILTER BUNDLE HV-7063-BX		
3-pack	HEPA Filters	HV-7063-3
3-pack	Premium Synthetic Filter Bags	HV-7038-X-3
2	Foam Silencers	HV-7033
6	Springs, Set of 3	HV-7039



STANDARD FILTER BUNDLE HV-7037-B		
6-pack	Standard Filters	HV-7037-6
6-pack	Filter Bags	HV-7038-6
2	Foam Silencers	HV-7033
6	Springs, Set of 3	HV-7039

OVERHEAD ATTACHMENT KIT

for Beams and Pipes

The HafcoVac has options that will certainly enhance the use of the Vacuum at your facility. The Overhead Extension Kit is ideal for cleaning pipes and beams keeping your facility compliant.



▶ RECOMMENDED ACCESSORIES

JACK
TOOL HOLDER

KEEP YOUR FACILITY COMPLIANT WITH THE NEW JACK TOOL HOLDER



Our JACK Tool Holder is the ultimate organizer for every HafcoVac. Easily hang airline and vacuum hoses on the RACK and protect them when on the move. Attachments will always be at hand and stored quickly and easily with the assortment of quick release clips. Two sturdy welded handles to easily push or pull your vacuum to each location.





Powerful Venturi
Available in 18 CFM, 48 CFM
85 CFM, and 185 CFM @ 91dB

25' Grounding Cable

Certified Anti-Static Hose

Static Conductive Air Hose

Grounded 55/30 Gallon Steel Container

Grounded Steel Wheel Caster Base

Floor Tool and Wand

ATEX^{Ex} II 2DcT6X

Equivalent to National Fire Protection Association 70: NEC Rating:

Class I Division 1* Groups A, B, C, D T6
Class II Division 1* Groups E, F, G T6
Class III Division 1*

Certified for use in a Division 1 hazardous location, can be used in a Division 2 hazardous location, providing it is in the same Class and Group

