

NILFISK COMBUSTIBLE DUST SOLUTIONS

Safely collect combustible dust



NILFISK

Safe collection of combustible dust

For a compliant and efficient environment

The threat of an explosion in your facility is very real. That is why OSHA recommends, and sometimes requires, manufacturers to use properly-equipped industrial vacuums as part of a regular plant maintenance program to collect hazardous dust.

Nilfisk offers a full line of industrial vacuum cleaners to meet NFPA 660 housekeeping requirements for collecting combustible dust in Class I, Group D and Class II and non-classified environments.

Expert support

We support you with a highly-trained direct sales team. Dedicated to solving your combustible dust challenges, our team analyzes your processes and recommends the best vacuums and features for your particular application.

Locate your sales rep at:

<https://www.nilfisk.com/en-ca/pages/find-a-sales-rep/>

Call customer and technical support:

1-800-668-8400



Dedicated engineering department



Dedicated sales team



Worldwide technical assistance

Nilfisk solutions

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Legend

Available features

Accessory kit



HEPA filter



ULPA filter



Stainless steel construction standard



Meets NFPA 660 safe housekeeping requirements*



*Some modifications may be required. The NFPA does not endorse or approve specific products. The NFPA has laid out product design recommendations in Standard 660, which Nilfisk interprets in order to design compliant vacuums.

Get to know NFPA & OSHA standards

Select compliant, safe equipment for housekeeping

Steps to safely collect combustible dust in any environment

Step 1: Understand your facility and your responsibilities

It is ultimately your and your company's responsibility to select safe equipment. You can be held accountable by multiple authorities having jurisdiction (AHJ), including your insurance company, local officials and OSHA.

Step 2: Get to know the regulations, standards and recommendations

Stay up-to-date on the current state of NFPA and OSHA regulations, standards and recommendations so you make informed decisions.

Step 3: Select the safest industrial vacuum for your application

Select equipment that will help you become safe, and stay safe—meeting all requirements set forth by your facility, AHJ, insurance company, NFPA, OSHA and, most importantly, your users.

NFPA 660: Must-know facts

- Applies to **all facilities and operations** that manufacture, process, blend, convey, repackage, generate, or handle combustible dusts or combustible particulate solid (1.3.2)
- **Dust tests must be conducted** to determine combustibility or explosibility. Documentation of these tests must be available for review by the Authority Having Jurisdiction (AHJ).
- **A Dust Hazard Analysis (DHA)** is required if your dust has a Kst value greater than 0 (indicating explosibility). This analysis is an essential part of safety compliance and must be completed for all relevant operations.
- Vacuuming is the preferred method of cleaning
- Blow-down is only permitted when other methods have already been used
- **Housekeeping procedures must** be documented
- Vacuum cleaners must meet the requirements laid out in Section 8.4.2.2.1

OSHA recommendations for decreasing risk of combustible dust fires and explosions:

- 1 Utilize properly-equipped vacuums for source capture and as portable suction device to prevent fugitive dust from accumulating
- 2 Make housekeeping as easy and ergonomic as possible by using lightweight, adjustable tools, flexible hoses and overhead cleaning accessories
- 3 Keep dust levels below 1/32" by cleaning with an industrial vacuum cleaner that meets the requirements for explosion hazard locations and/or materials
- 4 Inspect all equipment (especially older) for possible ignition sources and for needed deflagration venting upgrades






ACD (Appliance for Combustible Dust) Vacuums

Carefully adapted to meet or exceed requirements

Meets NFPA safe housekeeping requirements for combustible dust collection in non-hazardous areas.
 UL 60335-2-69 and CSA C22.2 No. 60335-2-69 – These are the standards harmonized with IEC 60335-2-69.



Technical specifications

Description	Unit	VHS010 HC ACD	VHS011 LC ACD	VHB120 LC ACD
Voltage	V	120	120	36
Frequency	Hz	60	60	-
Rated power	kW	0.9	0.9	1.6
Max airflow	cfm	85	85	138
Waterlift, max.	in. H ₂ O	80	80	55
Sound pressure level	dB(A)	70	70	70
Container capacity	gallons (L)	2.5	4	37
Dimensions (L x W x H)	in	16.1 x 16.5 x 30.3	16.1 x 16.5 x 30.3	30 x 26 x 39
Approvals	-			



Technical specifications

Description	Unit	VHS010 HC CIID2	VHS011 LC CIID2	VHS210 N1 CIID2
Voltage	V	120	120	120
Frequency	Hz	60	60	60
Rated power	kW	0.95	0.95	1.45
Max airflow	cfm	91	91	150
Waterlift, max.	in. H ₂ O	84	84	92
Sound pressure level	dB(A)	72	72	67
Container capacity	gallons (L)	2.5	4	50
Dimensions (L x W x H)	in	16.1 x 16.9 x 32.7	16.1 x 16.9 x 32.7	34 x 24 x 61
Approvals				



Technical specifications





Description	Unit	VHS110	CTS26	T48	T63
Collection type	-	Dry	Dry	Dry	Dry
Type of power	-	1-phase	3-Phase	3-Phase	3-Phase
Voltage @ 60 Hz	V	120	220 / 460 / 575	220 / 460 / 575	220 / 460 / 575
Power @ 60 Hz	HP (W)	1.34 (1000)	3.42 (2550)	6.43 (4800)	8.45 (6300)
Waterlift, max.	in. (mm) H ₂ O	82.4 (2093)	76 (1930)	141 (3569)	83 (2100)
Airflow, blower max.	CFM (L/min)	103 (2900)	222 (6286)	222 (6286)	354 (9769)
Current, max.	amps	11.5	10.7 / 5.6 / 4.3	16.8 / 9.7 / 7.1	23.4 / 12.4 / 9.7
Container capacity	gallons (L)	9.8 (37)	13 (50)	26 (100)	26 (100)
Dimensions (L x W x H)	in.	22 x 22 x 49	44.5 x 23.8 x 49.2	60 x 47.6 x 24.8	60 x 47.6 x 24.8
Sound pressure level	dB(A)	76	71	74	74
Available features	-				
Approvals	-				

Nilfisk VHW series

The VHW series portable vacuums make daily cleaning in production areas and process manufacturing fast and hassle-free. Conical cartridge filters on VHW321 and larger models provide more surface area, extend filter life and resist clogging.











Technical specifications

Description	Unit	VHW311	VHW321
Collection type	-	Dry	Dry
Type of power	-	3-Phase	3-Phase
Voltage @ 60 Hz	V	220 / 460 / 575	220 / 460 / 575
Power @ 60 Hz	HP (W)	2.75 (2050)	2.75 (2050)
Waterlift, max.	in. (mm) H ₂ O	88 (2235)	88 (2235)
Airflow, blower max.	CFM (L/min)	150 (4248)	150 (4248)
Current, max.	amps	8.8 / 4.4 / 2.95	8.8 / 4.4 / 2.95
Container capacity	gallons (L)	6.6 (25)	6.6 (25)
Dimensions (L x W x H)	in.	50.2 x 28.1 x 18.3	63.0 x 28.9 x 16.0
Sound pressure level	dB(A)	64	64
Available features	-		
Approvals	-		



Technical specifications

Description	Unit	VHW420	VHW421	VHW440	VHW441
Collection type	-	Dry	Dry	Dry	Dry
Type of power	-	3-Phase	3-Phase	3-Phase	3-Phase
Voltage @ 60 Hz	V	220 / 460 / 575	220 / 460 / 575	220 / 460 / 575	220 / 460 / 575
Power @ 60 Hz	HP (W)	3.42 (2550)	3.42 (2550)	6.17 (4600)	6.17 (4600)
Waterlift, max.	in. (mm) H ₂ O	76 (1930)	76 (1930)	104 (2651)	104 (2651)
Airflow, blower max.	CFM (L/min)	222 (6286)	222 (6286)	294 (8333)	294 (8333)
Current, max.	amps	10.7 / 5.6 / 4.3	10.7 / 5.6 / 4.3	16.0 / 8.0 / 7.1	16.0 / 8.0 / 7.1
Container capacity	gallons (L)	12.2 (46)	12.2 (46)	12.2 (46)	12.2 (46)
Dimensions (L x W x H)	in.	58.0 x 37.8 x 22.5	71.6 x 35.8 x 22.6	58.0 x 37.8 x 22.5	71.6 x 35.8 x 22.6
Sound pressure level	dB(A)	66	68	70	70
Available features	-				
Approvals	-				

Hazardous location, pneumatic vacuums

For use when electricity is unavailable or undesirable

Although there is no North American certifying body for air-operated vacuums, Nilfisk pneumatic vacuums are built to meet the same design standards as ATEX (Ex) hazardous location equipment. The vacuums are designed to meet the requirements for safe use in Class I, Group D, and Class II, Groups E*, F & G environments. Air-operated Models offer the same level of performance as electric Nilfisk models while maintaining the same features and low noise level.

**Additional equipment may be necessary to meet Group E requirements. Nilfisk reserves the right to evaluate on a case-by-case basis.*



Technical specifications

Description	Unit	VHC010 EXP SBS	VHC011 EXP AU
Air consumption	cfm	22	22
Feeding pressure	psi	87	87
Max airflow	cfm	71.8	71.8
Waterlift, max.	in. H ₂ O	135	135
Sound pressure level	dB(A)	70	70
Container capacity	gallons	8	4
Filter cleaning system	-	-	PullClean™
Dimensions (L x W x H)	in	17 x 17 x 33	17 x 17 x 33
Approvals			



Technical specifications

Description	Unit	VHC110 EXP	VHC120 EXP	VHC200 EXP
Collection type	-	Dry (Wet Option)	Dry (Wet Option)	Dry (Wet Option)
Air consumption @ 90 psi	CFM (L/min)	22 (623)	44.5 (1260)	94 (1982)
Waterlift, max.	in. (mm) H ₂ O	130 (3302)	130 (3302)	153 (3875)
Airflow, max.	CFM (L/min)	70 (1982)	119 (3370)	184 (5200)
Air line diameter	in. (mm)	0.5 (13)	0.75 (19)	0.75 (19)
Recommended air pressure	psi (bar)	101 (7)	101 (7)	90 (6)
Container capacity	gallons (L)	9.8 (37)	9.8 (37)	26 (100)
Dimensions (L x W x H)	in	22.5 x 22 x 49	22.5 x 22 x 49	31.5 x 23.6 x 62.6
Sound pressure level	dB(A)	71	72	70
Available features	-			
Approvals	-			

NRTL-certified explosion-proof vacuums

For use in classified (hazardous) environments

OSHA and NFPA recommend, and in some cases require, manufacturers with combustible materials to use certified explosion-proof/dust ignition-proof vacuums as part of a regular plant maintenance program.







Review the following standards for recommendations regarding your environment and application:

1. Electrical Standards:
 - National Electrical Code (NEC): Article 500 (Hazardous Locations).
 - Canadian Electrical Code (CEC): Section 18 (Hazardous Locations).
2. Regulatory Programs:
 - OSHA Combustible Dust National Emphasis Program: Provides enforcement guidance for recognizing and mitigating combustible dust hazards.
3. National Fire Protection Association (NFPA) Standards:
 - NFPA 660 – Comprehensive standard for the prevention of fire and dust explosions in industries handling combustible particulate solids.
 - NFPA 61 – Standard for the prevention of fire and dust explosions in agricultural and food processing facilities.
 - NFPA 484 – Standard for combustible metals and their dusts.
 - NFPA 654 – Standard for the prevention of fire and dust explosions in facilities handling combustible particulate solids (e.g., plastics, pharmaceuticals).
 - NFPA 655 – Standard for the prevention of sulfur fires and explosions.



Technical specifications

Description	Unit	VHS110EXP	VHS110EXPW
Collection type	-	Dry	Wet
Type of power	-	1-Phase	1-Phase
Voltage @ 60 Hz	V	120	120
Power @ 60 Hz	HP (W)	1.61 (1200)	1.61 (1200)
Waterlift, controlled	in. (mm) H ₂ O	65 (1654)	65 (1654)
Airflow, blower max.	CFM (L/min)	106 (3681)	106 (3681)
Current, max.	amps	10	10
Container capacity	gallons (L)	9.8 (37)	9.8 (37)
Dimensions (L x W x H)	in.	22 x 30 x 50	22 x 30 x 50
Sound pressure level	dB(A)	76	76
Available features	-		
Approvals	-		

Nilfisk's line of explosion-proof/dust ignition-proof vacuums are certified for use in hazardous environments, including Class I, Group D and Class II, Division 1 and 2, Groups E*, F, and G locations.

Nilfisk VHS110EXP – Certified Class I & Class II

The VHS110EXP vacuum line is QPS-certified for use in Class I, Group D and Class II, Groups E*, F & G environments. It features a brushless with Class I & II motor, PullClean™ filter cleaning technology and downstream HEPA filtration. Variants designed for liquids collection are also available.












Nilfisk VHT437EXP and VHT456EXP – Certified Class I, Group D & Class II, Groups E, F & G

The VHT437EXP and VHT456EXP are certified explosion-proof/dust ignition-proof vacuum cleaners with exceptional performance for continuous-duty needs in hazardous environments. They are ideal for use in portable or small central system applications. The VHT437EXP and VHT456EXP meet the requirements for use in Class I, Group D, and Class II, Groups E*, F & G environments. Smaller collection capacity is available upon request.

**Additional equipment may be necessary to meet Group E requirements. Nilfisk reserves the right to evaluate on a case-by-case basis.*



Technical specifications

Description	Unit	VHT437EXP	VHT456EXP
Collection type	-	Dry (Wet option)	Dry (Wet option)
Type of power	-	3-phase	3-phase
Voltage @ 60 Hz	V	220 / 460 / 575	460 / 575
Power @ 60 Hz	HP (W)	5 (3700)	7.5 (5600)
Waterlift, controlled	in. (mm) H ₂ O	85 (2159)	72 (1820)
Airflow, blower max.	CFM (L/min)	218 (6167)	367 (10384)
Current, max.	amps	11.2 / 5.6 / 4.5	9.5 / 7.6
Container capacity	gallons (L)	26 (100)	26 (100)
Dimensions (L x W x H)	in.	50.8 x 23.6 x 60.6	50.8 x 23.6 x 60.6
Sound pressure level	dB(A)	72	77
Available features	-	    	   
Approvals	-		

Safely collect Group E metal dust

For explosion-proof/dust-ignition proof vacuums

Nilfisk immersion separators comply with NFPA 484 for the safe collection of explosive metal dusts and built to the same high standards associated with the Nilfisk explosion-proof/dust ignition proof vacuum line. Collect and render inert Group E metal dusts, such as aluminum, magnesium and other commercial alloys, in an inert fluid bath.*



Integrated immersion separator



Stand-alone immersion separator

Integrated immersion separator

All-in-one design is easy to use and saves space in your work area, sold with or available as retrofit to the following Nilfisk models:

- **VHS110EXP** (electric-powered, QPS-certified for use in Group E environments)
- **VHC200EXP** (pneumatic-powered, suitable for use in Group E environments)
- **VHT437EXP or VHT456EXP** (electric-powered, QPS-certified for use in Group E environments)
- **VHC110EXP or VHC120EXP** (pneumatic-powered, suitable for use in Group E environments)

Stand alone immersion separator

Constructed of low-sparking 304 stainless steel; offered for use with the following Nilfisk models:

- **VHS110EXP** (electric-powered, QPS-certified for use in Group E environments)
- **VHC200 EXP** (pneumatic-powered, suitable for use in Group E environments)
- **VHT437EXP or VHT456EXP** (electric-powered, QPS-certified for use in Group E environments)
- **VHC110EXP or VHC120EXP** (pneumatic-powered, suitable for use in Group E environments)

Technical specifications

Description	Unit	Stand-alone immersion separator	Integrated immersion separator (400 mm)	Integrated immersion separator (460 mm)
Separator inlet diameter	mm	50	50	70
Capacity	gallons (L)	2 (7.6) dust; 11 (41.6) fluid	1 (4) dust; 4 (15) fluid	1.58 (6) dust; 6.6 (25) fluid
Dimensions (Dia x H)	in. x in. (mm x mm)	18.1 x 33.9 (459.7 x 861.1)	16.5 x 14.4 (420 x 365)	18.1 x 27 (459.7 x 685.8)
Weight, separator only	lb. (kg)	47 (21)	16.5 (7.5)	51.5 (23.4)

Specifications and details are subject to change without prior notice.

Collection of commercial alloys is subject to individual approval by our application engineer. The fluid in the separator is not supplied by Nilfisk, Inc., Industrial Vacuum Division and should not be reactive to the metals/materials being collected. *A light mineral oil is recommended. 400 mm machines feature a low fluid shut off option.

Industrial high dusting cleaning kit

Industrial, Hazardous and Combustible Dust Applications

Achieve safe and efficient cleaning in both standard and Class II Division 2 environments with Nilfisk's premium carbon fiber high reach kits. Paired with Nilfisk Class II Div 2 vacuums, these lightweight poles allow you to tackle hazardous dust without the need for scissor lifts or ladders, ensuring compliance with regulatory standards.

These kits provide a versatile solution for cleaning inaccessible areas. The carbon fiber poles are lightweight, durable, and conductive, making them ideal for hazardous environments.

Key features:

- Five (5) interlocking sections: three 5' poles, one 2.5' pole, and a hose adapter tube
- Reaches heights up to 45 feet and 10 feet up and 10 feet over at 90 degree angle or 45 degree angles
- The entire pole assembly weighs under 3 pounds

Kit includes:

- Vacuum pole & extension pole 20.5 ft
- 2 Carbon fiber tool holders
- Assorted internal brush tools
- Accessory carrying bag
- Weight: Pole weighs less than 3 pounds



Individual pole



Straight brush



Pipe brush



Swivel neck brush



Hose adapter



Tool adapter



Pole bag



Hose bag



Round brush



Safe choice commitment

At Nilfisk, we understand that you face many risks each day, just by operating your business. That is why Nilfisk is dedicated to helping you make smart choices to keep your facility and your workers safe. Our team of experts is ready to tackle any cleaning challenge – because in a world full of risk, you have to make safe choices.

We are committed to being that safe choice. To learn more visit nilfisk.ca



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