

Safely Collect Combustible Dust

- Certified Explosion-Proof and NFPA-Compliant Vacuums



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 652 housekeeping requirements for collecting combustible dust in Class I 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:
www.NilfiskIndustrialVacuums.com/FindARep.aspx.

Learn more about Explosion-Proof Vacuums:
www.explosion-proofvacuum.com

Vist the Nilfisk Industrial Vacuums site:
www.NilfiskIndustrialVacuums.com

Watch how-to videos and customer case stories:
www.youtube.com/NilfiskVacuums

Call customer and technical support:
1-800-NILFISK



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 652 Safe Housekeeping Requirements*



Approvals

ATEX Certified



CSA Certified



ETL Listed



UL Listed



**Some modifications may be required. The NFPA does not endorse or approve specific products. The NFPA has laid out product design recommendations in Standard 652, 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 652: 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 are REQUIRED.** They must be documented and made available to your authority having jurisdiction.
- **Dust Hazard Analysis are REQUIRED** if your dust is a Kst value above 0.
- The above must be complete **by SEPTEMBER 2018.**
- 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.

Visit ComDust-Myths.com to download complete guides to the standards and best housekeeping practices.

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

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:

- National Electric Code (NEC) Article 500
- Canadian Electric Code (CEC) Section 18
- OSHA Combustible Dust National Emphasis Program
- National Fire Protection Association (NFPA)
 - » NFPA 652 - Fundamentals of Combustible Dust
 - » NFPA 61 - Agricultural & Food Processing
 - » NFPA 484 - Combustible Metals
 - » NFPA 654 - Other Industries (Plastics, Pharma)
 - » NFPA 655 - Sulfur



Technical Specifications

Description	Unit	VHS110	118 EXP	118/50 EXP	118 EXPW
Collection Type	-	Dry	Dry	Dry	Wet/Dry
Type of Power	-	1-phase	1-phase	1-phase	1-phase
Voltage @ 60 Hz	V	120	120	120	120
Power @ 60 Hz	HP (W)	1.34 (1000)	1.61 (1200)	1.61 (1200)	1.61 (1200)
Waterlift, max.	in. (mm) H ₂ O	82.4 (2093)	69 (1752)	69 (1752)	69 (1752)
Airflow, blower max.	CFM (L/min)	103 (2900)	130 (3681)	130 (3681)	130 (3681)
Current, max.	amps	11.5	10	10	10
Container Capacity	gallons (L)	9.8 (37)	6.6 (25)	13.2 (25)	13.2 (25)
Dimensions (L x W x H)	in. (mm)	22.0 x 22.0 x 49.0 (560 x 560 x 1240)	20.0 x 24.0 x 45.0 (508 x 610 x 1143)	20.0 x 24.0 x 50.0 (508 x 610 x 1270)	20.0 x 24.0 x 45.0 (508 x 610 x 1143)
Sound Pressure Level	dB(A)	76	78	78	78
Available Features	-				
Approvals	-				

Nilfisk's line of explosion-proof/dust ignition-proof vacuums are CSA-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 VHS110 — Certified Class II, Division 2

The VHS110 is CSA-certified for use in Class II, Division 2, Groups F & G environments and ensures compliance with NFPA 652 housekeeping recommendations for the safe collection of combustible dust. Featuring a brushless motor, PullClean filter cleaning technology, and HEPA filtration, the VHS110 offers the highest performance and safety for long product life and flexible, easy use—from overhead cleaning to confined areas around equipment.

Nilfisk 118 EXP, 118/50 EXP and 118 EXPW — Certified Class I & Class II

The 118 EXP vacuum line is CSA-certified for use in Class I, Group D, and Class II, Groups E*, F & G environments. The vacuums are constructed of 304 stainless steel and feature downstream HEPA filtration. An external filter shaker on the dry-only units guarantees high filtration efficiency and prevents premature clogging. The 118 EXP is available in various capacities and with wet collection options.












Nilfisk VHT437EXP and VHT456EXP — Certified Class I & Class II

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 process-integrated and central system applications. The VHT437EXP and VHT456EXP meet the requirements for use in Class I, Group D, and Class II, Groups 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. (mm)	50.8 x 23.6 x 60.6 (1290 x 600 x 1540)	50.8 x 23.6 x 60.6 (1290 x 600 x 1540)
Sound Pressure Level	dB(A)	72	77
Available Features	-	    	   
Approvals	-		

Hazardous Location, Pneumatic Vacuums

- for use when electricity is unavailable or undesirable

















When electricity is unavailable or undesirable, pneumatic hazardous location vacuums are good alternatives to electric models—while remaining safe and compliant.

COMPLIANCE: Pneumatic models are constructed of low-sparking materials and outfitted with ignition-proof parts and accessories. They meet the highest level of operational safety, as well as NFPA housekeeping recommendations for the safe collection of combustible dust.

EFFICIENT: Air-operated vacuums offer the same level of performance as electric industrial vacuum cleaners while maintaining a low noise level, powerful suction and the same user-friendly features as Nilfisk electric models.



Technical Specifications

Description	Unit	A15 DX	A15 EXP	A15/50 EXP
Collection Type	-	Dry	Dry	Dry
Air Consumption @ 90 psi	CFM (L/min)	56 (1580)	56 (1580)	56 (1580)
Waterlift, max.	in. (mm) H ₂ O	144 (3650)	144 (3650)	144 (3650)
Airflow, max.	CFM (L/min)	74 (2095)	74 (2095)	74 (2095)
Air Line Diameter	in. (mm)	0.5 (13)	0.5 (13)	0.5 (13)
Recommended Air Pressure	psi (bar)	90 (6)	90 (6)	90 (6)
Container Capacity	gallons (L)	13.2 (50)	6.6 (25)	13.2 (50)
Dimensions (L x W x H)	in. x in. x in. (mm x mm x mm)	20.0 x 24.0 x 48.0 (508 x 610 x 1219)	20.0 x 24.0 x 40.0 (508 x 610 x 1016)	20.0 x 24.0 x 51.0 (508 x 610 x 1295)
Sound Pressure Level	dB(A)	72	72	72
Available Features	-	  	    	    
Approvals	-			

Although there is not a certifying body for air-operated vacuums, Nilfisk pneumatic vacuums are built to meet the same design standards, and ATEX (Ex) European design requirements. The vacuums are designed to meet the requirements for safe use in Class I, Group D, and Class II, Groups E*, F & G environments.

Nilfisk A15 DX

The A15 DX is designed in accordance with the latest NFPA guidelines for collecting combustible dust. Constructed with non-combustible materials and fully bonded and grounded, the A15 DX is suitable for use in Class II, Division 2, Groups F and G, as well as non-hazardous (non-classified) environments.

Nilfisk A15 EXP and A15/50 EXP

The A15 EXP line of air-operated, hazardous location vacuums are constructed of all 304 stainless steel and include a grounding cable and clamp. They are sold with non-sparking, conductive accessories. HEPA or ULPA filtration is available. The vacuums meet the requirements for use in Class I, Group D, and Class II, Groups E*, F & G environments. The A15 EXP offers 6.6-gallon dry-only collection capacity, or 13.2-gallon dry-only capacity with the A15/50 EXP.

Nilfisk A15 EXPW

The A15 EXPW is an air-operated, hazardous location vacuum constructed of all 304 stainless steel and includes a grounding cable and clamp. It is designed for wet/dry material collection and sold with non-sparking, conductive accessories. HEPA or ULPA filtration is available.











Nilfisk VHC200 EXP

The VHC200 EXP is a stainless steel, pneumatic vacuum cleaner, ideal for a variety of general cleaning tasks, including heavy-duty applications involving denser types of debris. The VHC200 EXP can also be used in continuous-duty applications. 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	A15 EXPW	VHC200 EXP
Collection Type	-	Wet/Dry	Dry (Wet Option)
Air Consumption @ 90 psi	CFM (L/min)	56 (1580)	94 (1982)
Waterlift, max.	in. (mm) H ₂ O	144 (3650)	153 (3875)
Airflow, max.	CFM (L/min)	74 (2095)	184 (5200)
Air Line Diameter	in. (mm)	0.5 (13)	0.75 (19)
Recommended Air Pressure	psi (bar)	90 (6)	90 (6)
Container Capacity	gal. (L)	13.2 (50)	26 (100)
Dimensions (L x W x H)	in. x in. x in. (mm x mm x mm)	20.0 x 24.0 x 40.0 (508 x 610 x 1016)	31.5 x 23.6 x 62.6 (800 x 600 x 1590)
Sound Pressure Level	dB(A)	72	70
Available Features	-	    	  
Approvals	-		

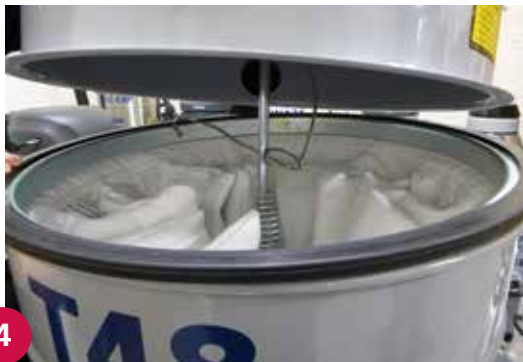
NFPA-Compliant Vacuums

- for use in unclassified environments

NFPA 652 requires all facilities handling combustible dust, even in NON-Classified environments, to use vacuum cleaners that meet very specific design requirements—as laid out in Section 8.4.2.2.

Machine Design Elements to Ensure Compliance:

1. Stainless steel inlet housing and Niploy deflector are low-sparking materials bonded to filter chamber.
2. Conductive intake and exhaust blower hoses included on electric machines
3. Stainless steel collection container is a low-sparking material bonded to chassis when in place
4. Antistatic main filter discharges static charge from the filter to the ground
5. A variety of measures are in place to ensure bonding and grounding that is unique to each platform and ensures a low resistance bonding path
6. Only conductive or anti-static accessories are allowed
7. Antistatic wheels minimize static when the vacuum is in motion
8. Safety mesh (not pictured) is on the blower intake to block solid material that could create sparks inside the blower.



Nilfisk offers a complete line of NFPA-compliant vacuums for safe collection of hazardous materials and dust. Each vacuum is carefully adapted to meet every design requirement spelled out in NFPA 652.

Nilfisk VHW Series — Three-Phase, Continuous-Duty for Hygienic Food and Pharmaceutical Environments





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

Nilfisk T Series — Three-Phase, Continuous-Duty for Heavy Industrial Applications

T Series vacuums are equipped with motors from 2,600 up to 6,300 W, to fit a variety of air power and suction needs. With user-friendly features, daily cleaning in production areas and process manufacturing is fast and hassle-free.



Technical Specifications

Description	Unit	VHW321	VHW420	VHW421	VHW440
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)	2.75 (2050) [2.35 (1750) @ 575]	3.42 (2550)	3.42 (2550)	6.17 (4600)
Waterlift, controlled	in. (mm) H ₂ O	88 (2235)	76 (1930)	76 (1930)	104 (2651)
Airflow, blower max.	CFM (L/min)	150 (4248)	222 (6286)	222 (6286)	294 (8333)
Current, max.	amps	8.8 / 4.4 / 2.95	11.4 / 6.0 / 4.55	11.4 / 6.0 / 4.55	15.6 / 9 / 7.6
Container Capacity	gallons (L)	6.6 (25)	12.6 (48)	12.6 (48)	12.6 (48)
Dimensions (L x W x H)	in. (mm)	28.9 x 17.3 x 46.1 (735 x 440 x 1170)	38.1 x 21.2 x 54.8 (968 x 538 x 1392)	38.1 x 21.2 x 54.8 (968 x 538 x 1392)	38.1 x 21.2 x 54.8 (968 x 538 x 1392)
Sound Pressure Level	dB(A)	64	66	68	70
Available Features	-				



Technical Specifications

Description	Unit	T26	T48	T63
Type of Power	-	3-phase	3-phase	3-phase
Collection Type	-	Dry (Wet Option)	Dry (Wet Option)	Dry (Wet Option)
Voltage @ 60 Hz	V	220 / 460 / 575	220 / 460 / 575	220 / 460 / 575
Power @ 60 Hz	HP (W)	3.42 (2550)	6.43 (4800) [6.17 (4600) @ 575]	8.45 (6300)
Waterlift, controlled	in. (mm) H ₂ O	76 (1930)	140.5 (3569)	82.6 (2100)
Airflow, blower max.	CFM (L/min)	222 (6286)	222 (6286)	345 (9769)
Current, max.	amps	11.4 / 6 / 4.55	25 / 10.4 / 7.6	25 / 13.3 / 10.4
Container Capacity	gallons (L)	26 (100)	26 (100)	26 (100)
Dimensions (L x W x H)	in. (mm)	44.5 x 23.6 x 60.2 (1130 x 600 x 1530)	44.5 x 23.6 x 60.2 (1130 x 600 x 1530)	44.5 x 23.6 x 60.2 (1130 x 600 x 1530)
Sound Pressure Level	dB(A)	71	74	74



Available Features

Safely Collect Group E Metal Dust

- for explosion-proof/dust-ignition proof vacuums

Nilfisk's immersion separators for explosive dusts are 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 a water or oil bath.*

Features and Benefits:

- Complies with NFPA 484 for safe collection of metal dusts
- As part of Nilfisk's NRTL-certified Class II, Group E industrial vacuums or combustible dust safe pneumatic vacuums, the all-in-one design is easy to use and saves space in your work area.
- CSA-certified for Class I, Group D and Class II, Groups E, F and G as part of Nilfisk VHT437EXP and VHT456EXP vacuums
- Constructed of low-sparking 304 stainless steel
- Optimal dust capacity to keep weight manageable and ensure operator safety

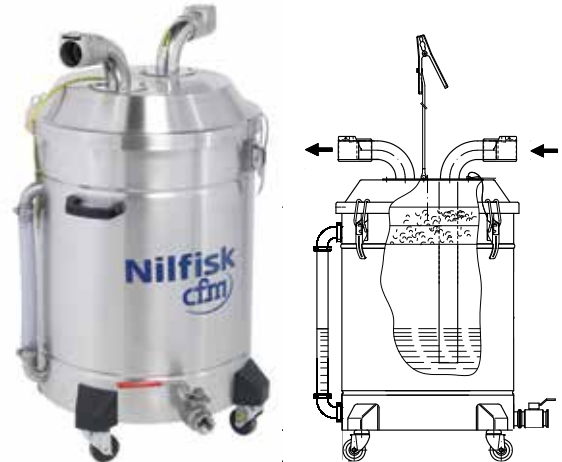


Integrated Immersion Separator

Integrated Immersion Separator sold with or available as retrofit to Nilfisk models:

- **VHT437EXP or VHT456EXP** (Electric-powered, CSA-certified for use in Group E environments)
- **VHC200EXP** (pneumatic-powered, suitable for use in Group E environments)
- Stand-alone option offered for use with other Nilfisk EXP models

Collection of commercial alloys is subject to individual approval by our application engineer. Technical specifications are subject to change.



Stand-Alone Immersion Separator

Technical Specifications

Description	Unit	Integrated Immersion Separator	Stand-Alone Immersion Separator
Separator Inlet Diameter	mm	70	50
Capacity	gallons (L)	1.58 (6) dust; 6.6 (25) fluid	2 (7.6) dust; 11 (41.6) fluid
Dimensions (Dia x H)	in. x in. (mm x mm)	18.1 x 27 (459.7 x 685.8)	18.1 x 33.9 (459.7 x 861.1)
Weight, separator only	lb. (kg)	51.5 (23.4)	47 (21)

Specifications and details are subject to change without prior notice.

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.

Explosion-Proof/Dust Ignition-Proof Accessories


Antistatic Hose & Cuffs	Description	Fitment Diameter (mm)	Bend Radius	Temp. Rating °F	Part #	Notes
	40mm Conductive ($\leq 10^4$ ohms) Polyurethane Hose (per meter)	40	3.48 in.	-22 / 195; intermittent to 260	7-24115	Spring steel wire with carbon-impregnated polyurethane coating; 10^4 ohms resistance; Max. order length: 15 meters.
	40mm Antistatic Hose Cuff				40000212	Use with 7-24115 hose
	50mm Conductive ($\leq 10^4$ ohms) Polyurethane Hose (per meter)	50	4.68 in.	-22 / 195; intermittent to 260	7-24116	Spring steel wire with carbon-impregnated polyurethane coating; 10^4 ohms resistance; Max. order length: 15 meters.
	50mm Antistatic Hose Cuff				7-20309F	Use with 7-24116 hose

Photo Ref.	Finishing Tools and Brushes for Hazardous Locations	Fitment Diameter (mm)	Principal Width (in.)	Construction Type		Part #	Notes
				Aluminum	Stainless Steel		
A	Wheeled Floor Nozzle	50	16		•	40000223	Includes (2) silicone squeegees, wheel adjuster screw, & (1) internal flange
B	Conductive Rubber Cone	40	-			40000214	Black nitrile rubber; oilproof
		50				40000221	
C	Conductive Rubber Nozzle	50	4.72			7-21080	Black nitrile rubber; oilproof; toothed profile
D	Crevice Nozzle	40	-			40000213	(1) external flange; 20" -length
		50				40000220	
E	Aluminum Crevice Nozzle	38	-	•		01768900	11" -length
F	Aluminum Dust Brush	38	3			01719401	With conductive bristles
		50				M50058	
		38				M50038	
G	EXP Pipe Brush	50	4			M50042	With black bristles
		38				M50039	
		50	M50043				
		38	M50040				
		50	M50044				
H	EXP Wall Brush	38	12			M50041	-
		50				M50045	



*Only the most typical accessories are represented. Contact us for additional diameters, materials and more.

Safe Choice Commitment

At Nilfisk Industrial Vacuums 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 nilfiskindustrialvacuums.com.