

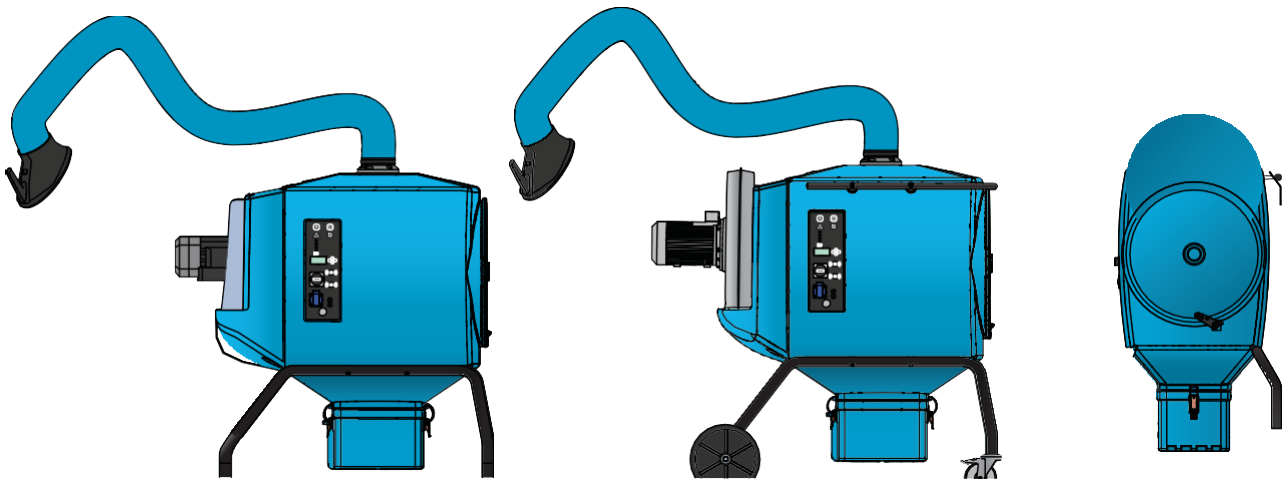
## Instruction and Operation Manual

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### Portable, Mobile & Compact Extraction Units

## FilterBox

10M+ 10A+ 12A 12A+ Twin



*A = Automated cleaning*

*M = Manual cleaning*

*+ = Advanced filter control system*

Trace back information:  
Workspace Main version a139  
Checked in 2023-11-22  
Skribenta version 5.6.013

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# Declaration of Conformity

## Declaration of Conformity

We, AB Ph. Nederman & Co., declare under our sole responsibility that the Nederman product: FilterBox (Part No. \*\*, and stated versions of \*\*) to which this declaration relates, is in conformity with all the relevant provisions of the following directives and standards:

### Directives

2014/30/EU, 2006/42/EC, 2011/65/EU

### Standards

EN ISO 12100:2010, EN 60204-1:2018, EN 61000-6-2:2019, EN 61000-6-4:2019, EN 61000-3-3:2013, EN ISO 20607:2019, EN ISO 21904-1:2020

W3: (IFA) Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung.

The name and signature at the end of this document is the person responsible for both the declaration of conformity and the technical file.



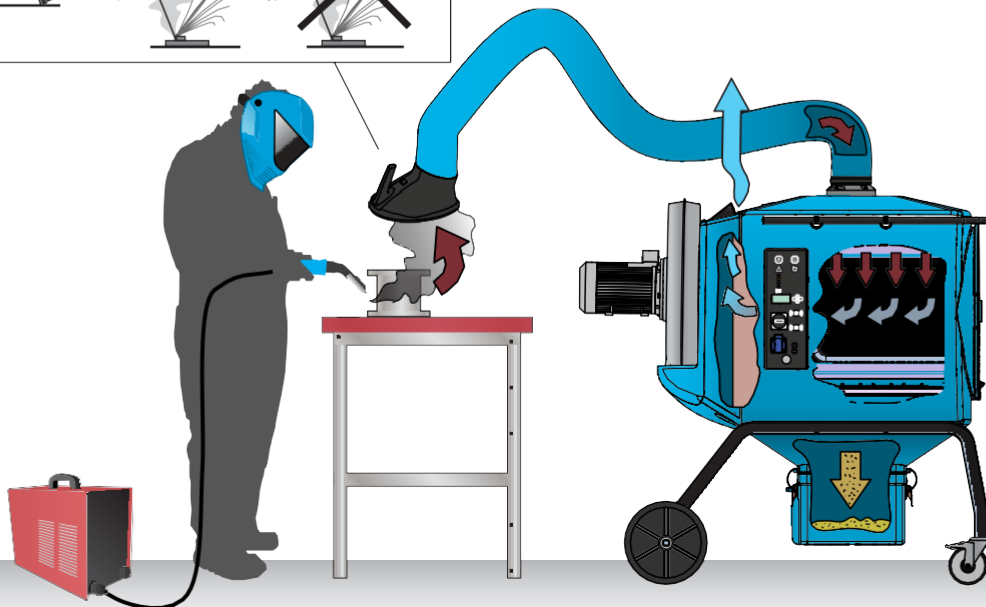
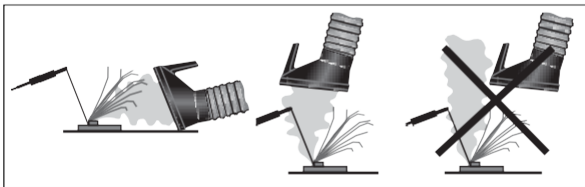
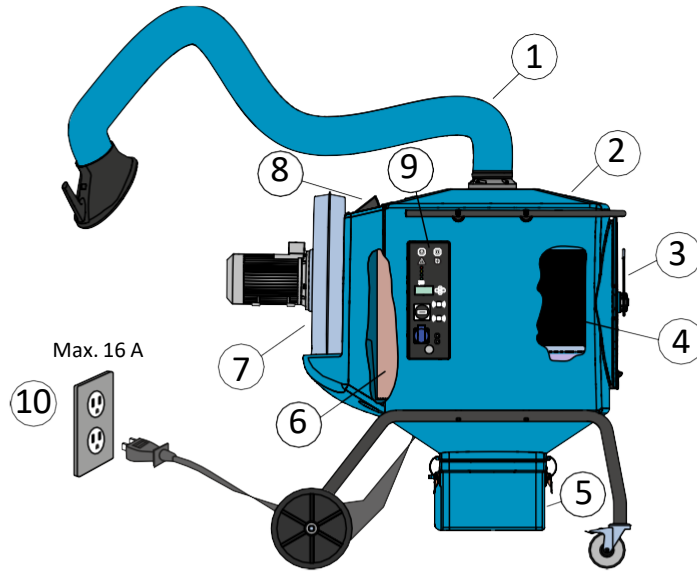
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P.O. Box 602  
SE-251 06 Helsingborg  
Sweden

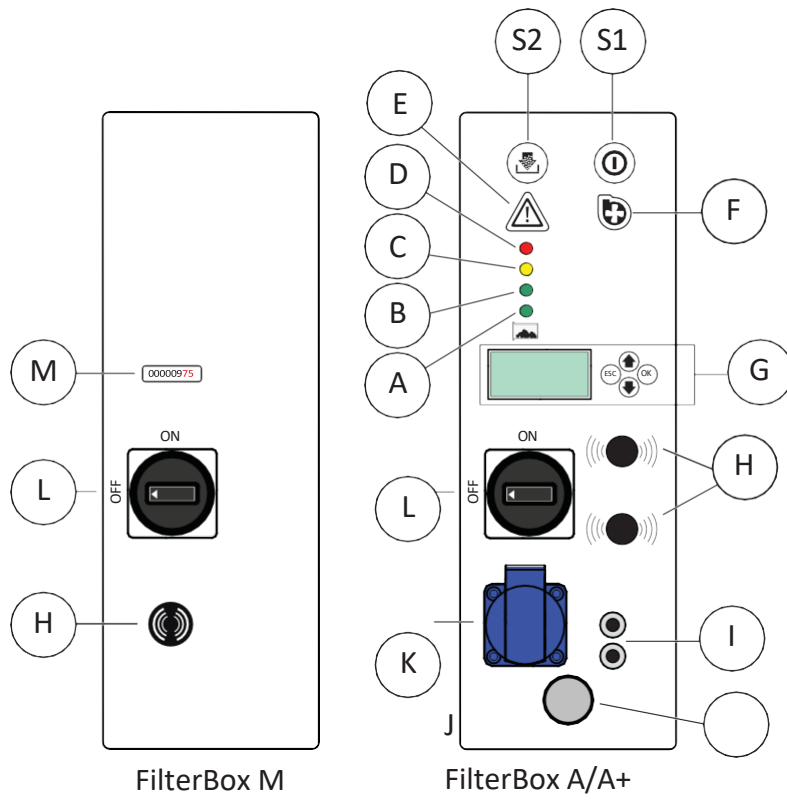
Anna Cederlund  
Product Center Manager  
Technical Product Management  
2023-11-22

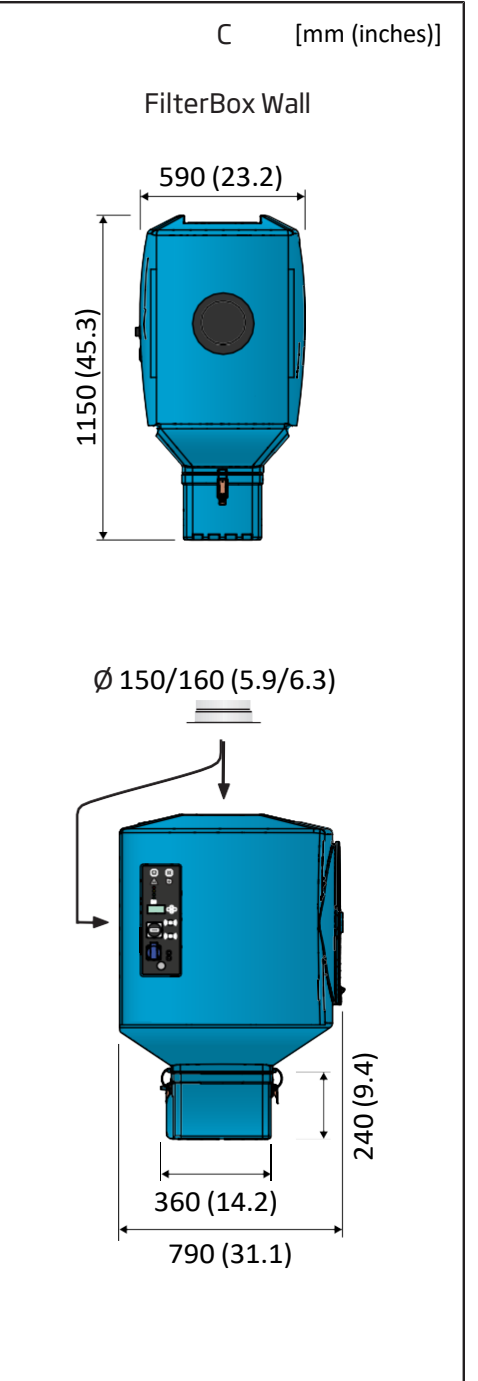
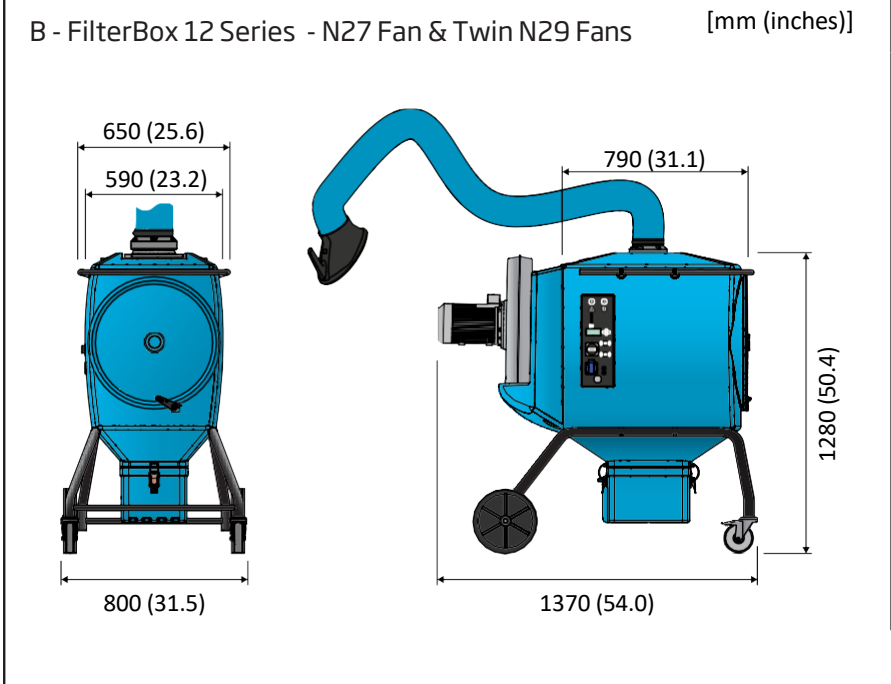
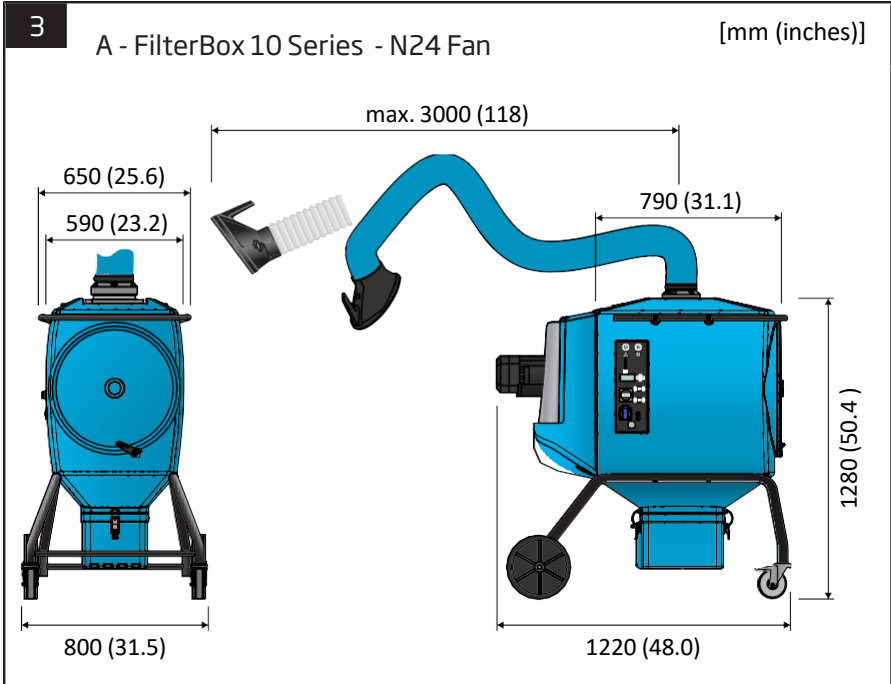


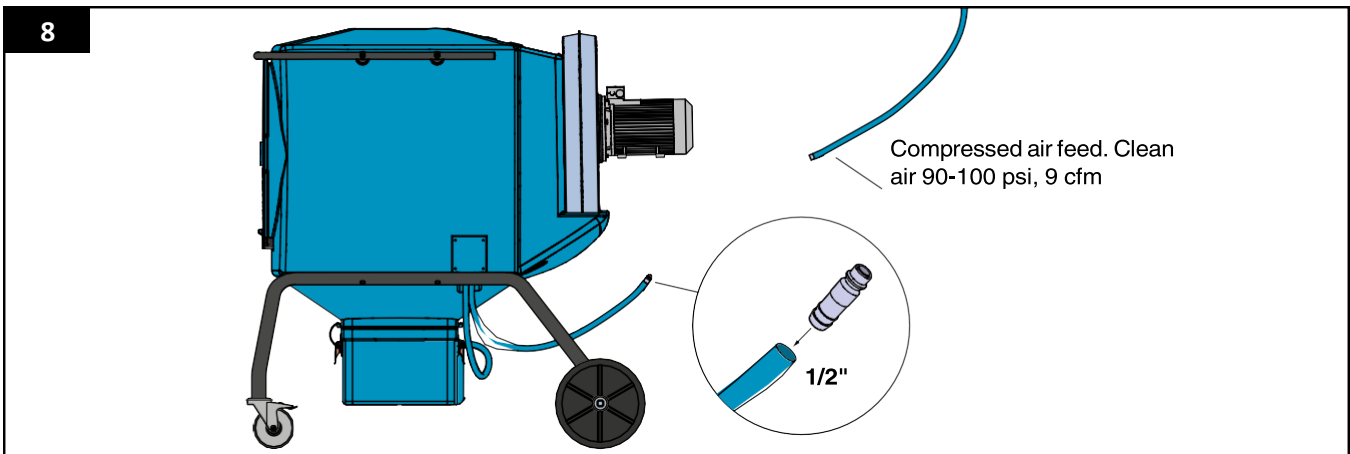
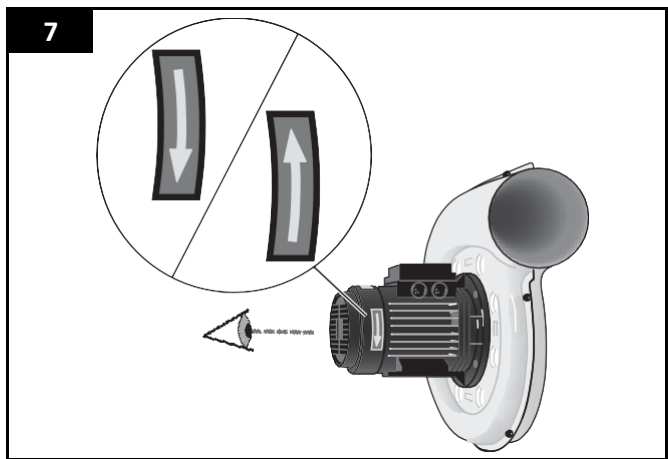
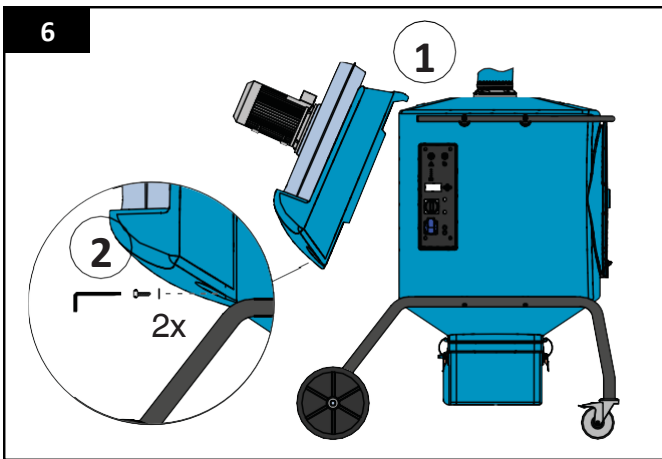
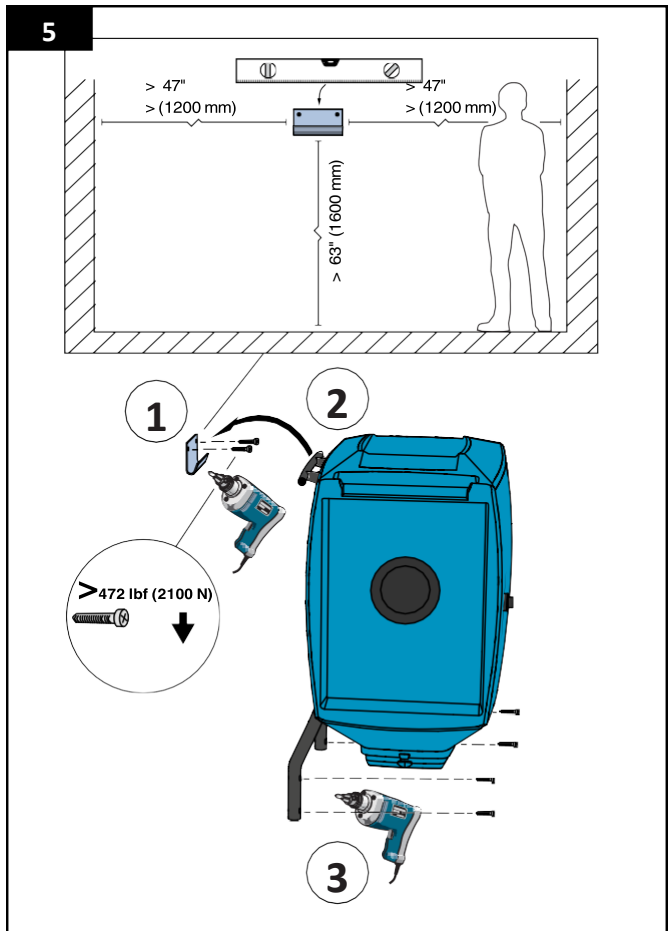
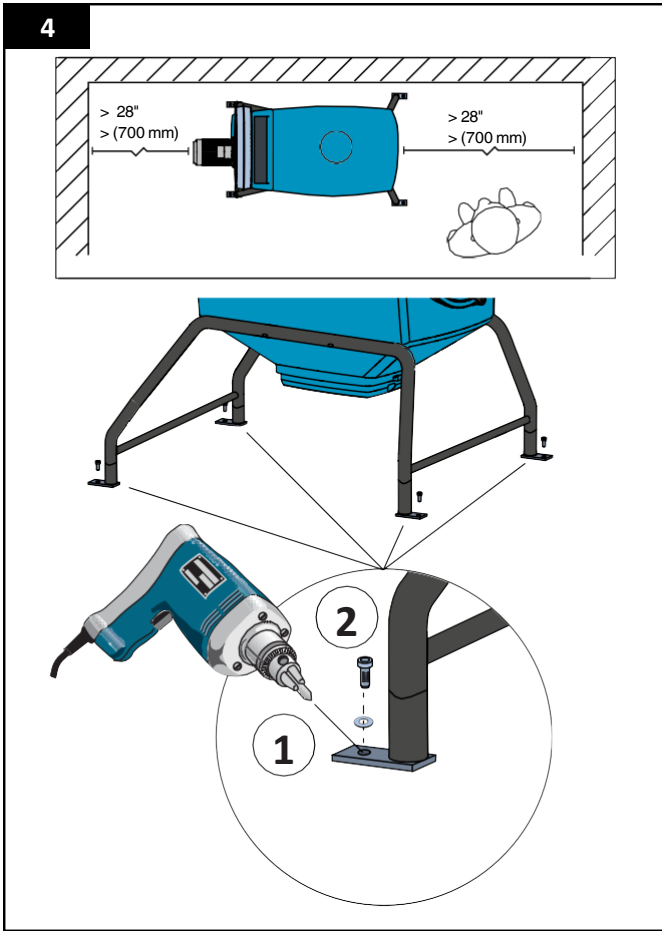
# Figures

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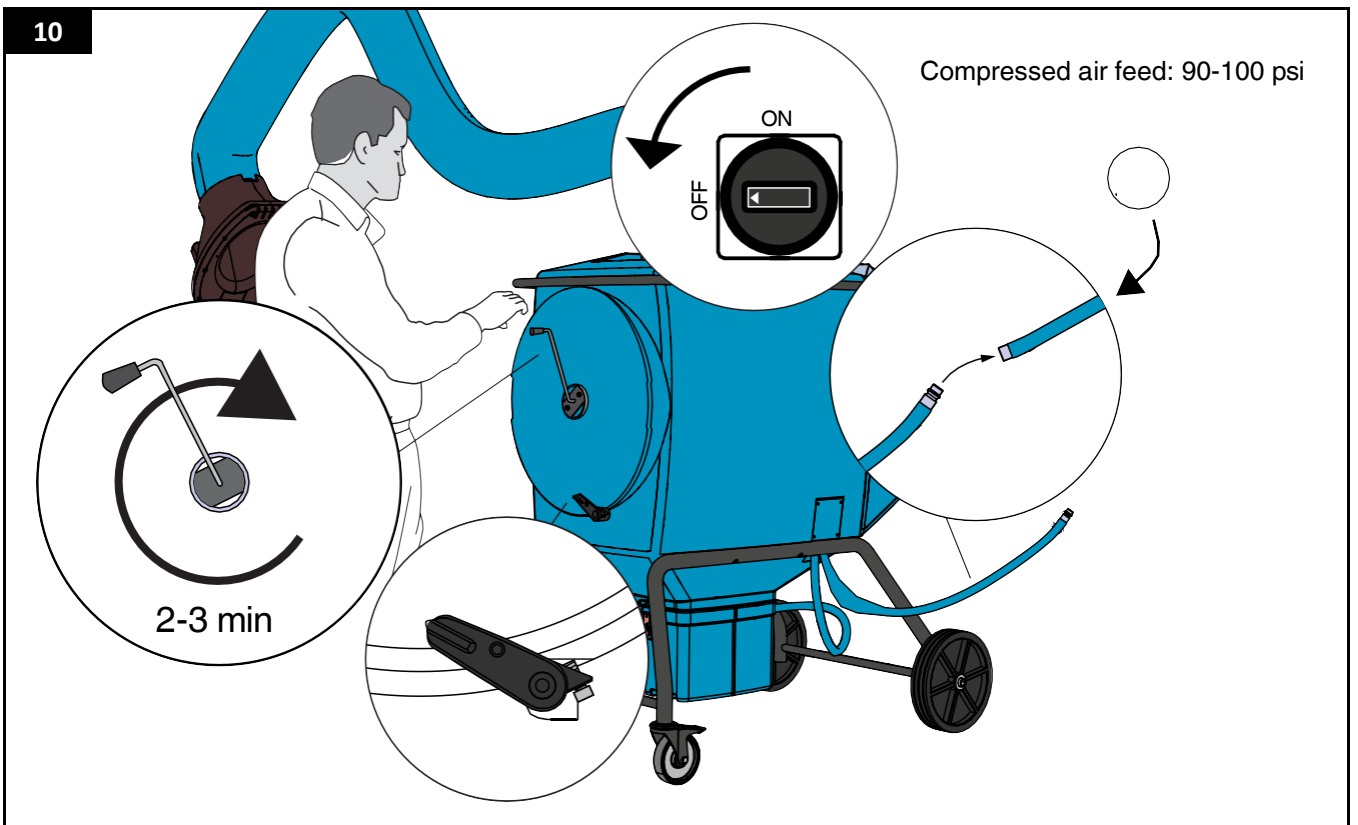
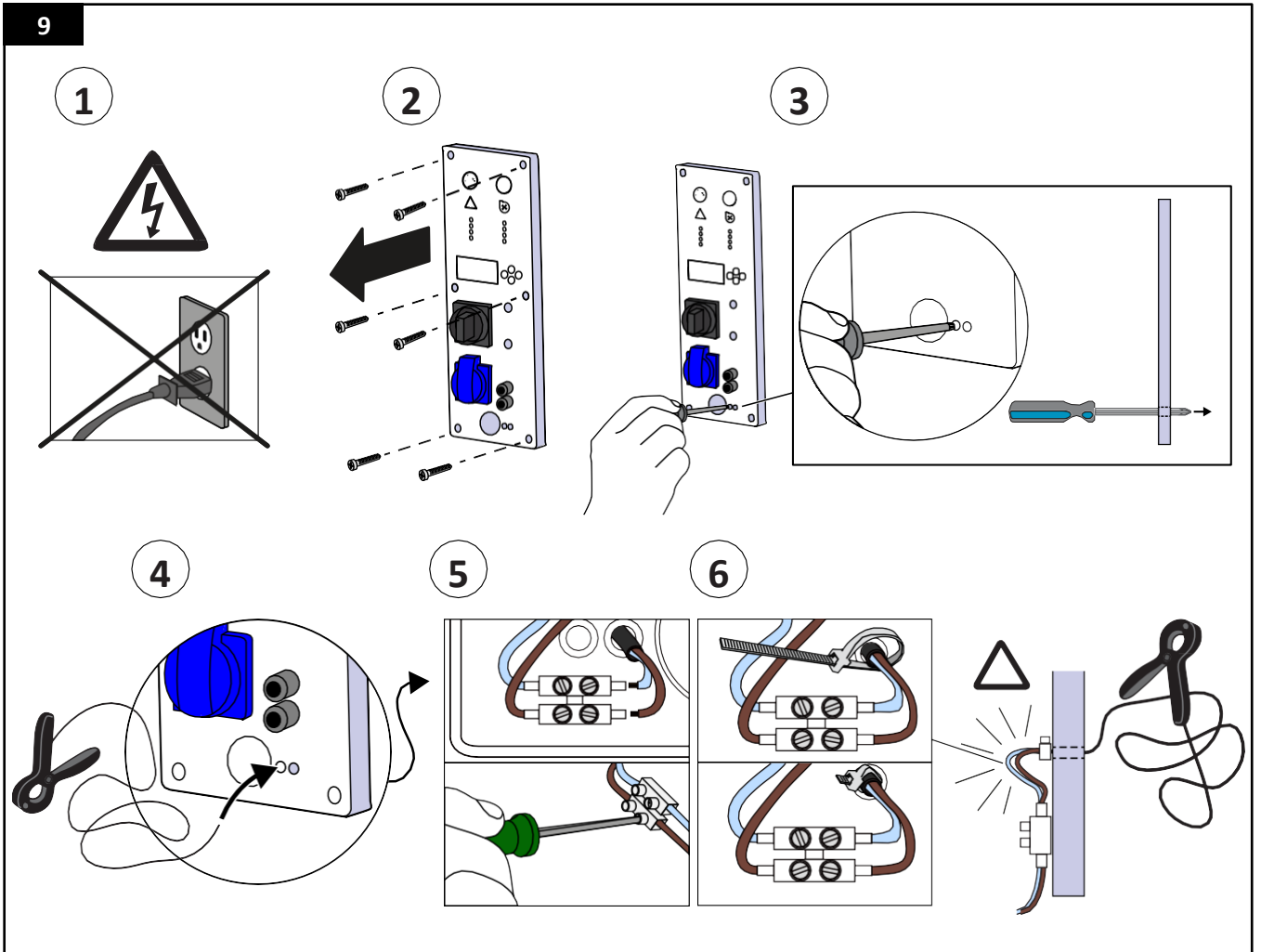




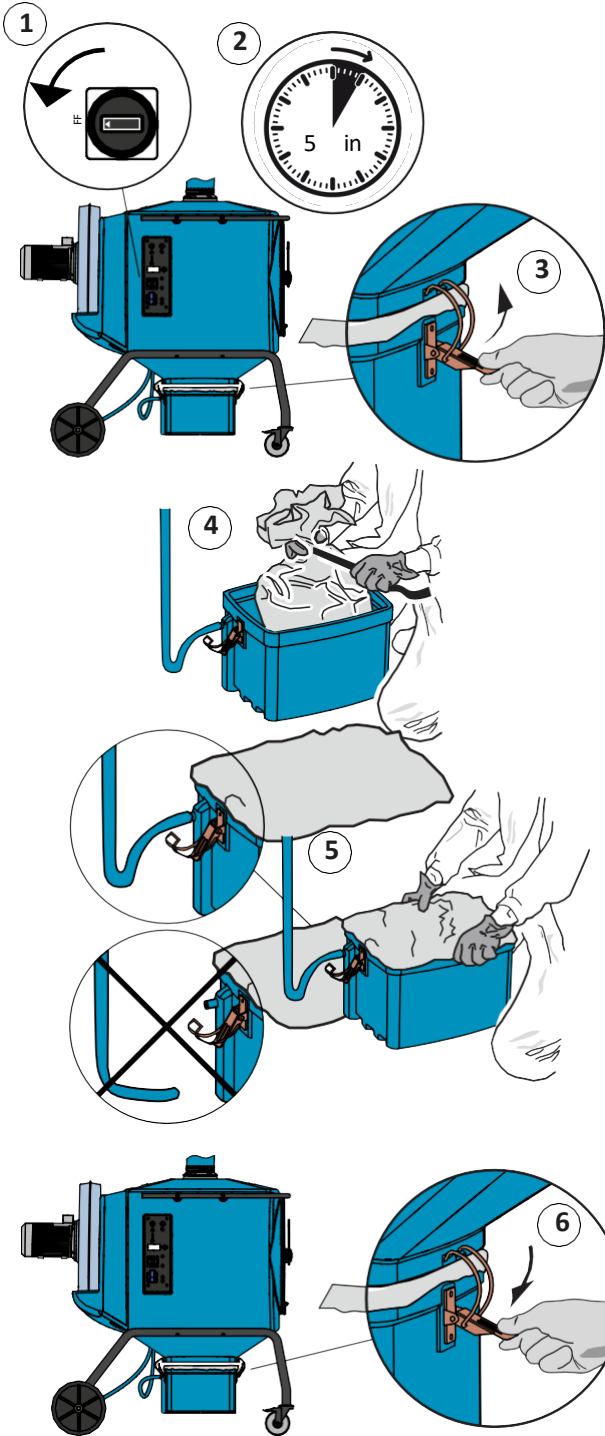




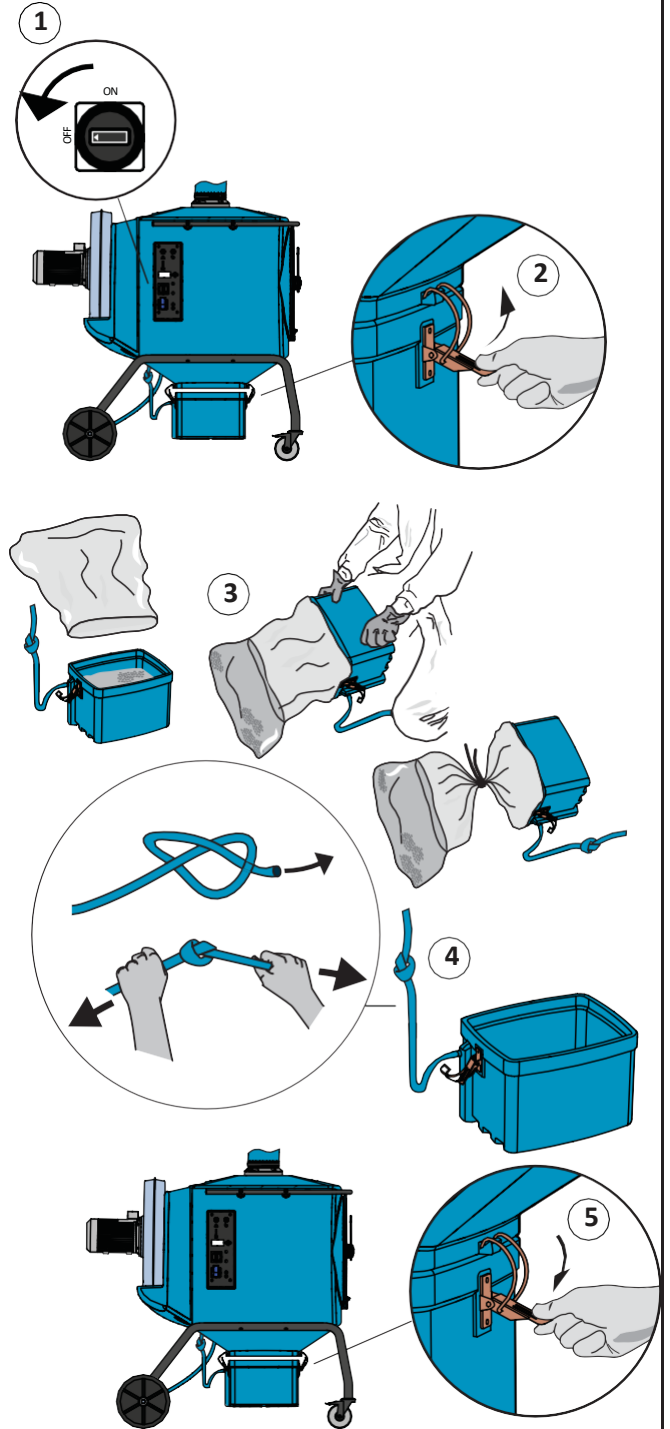


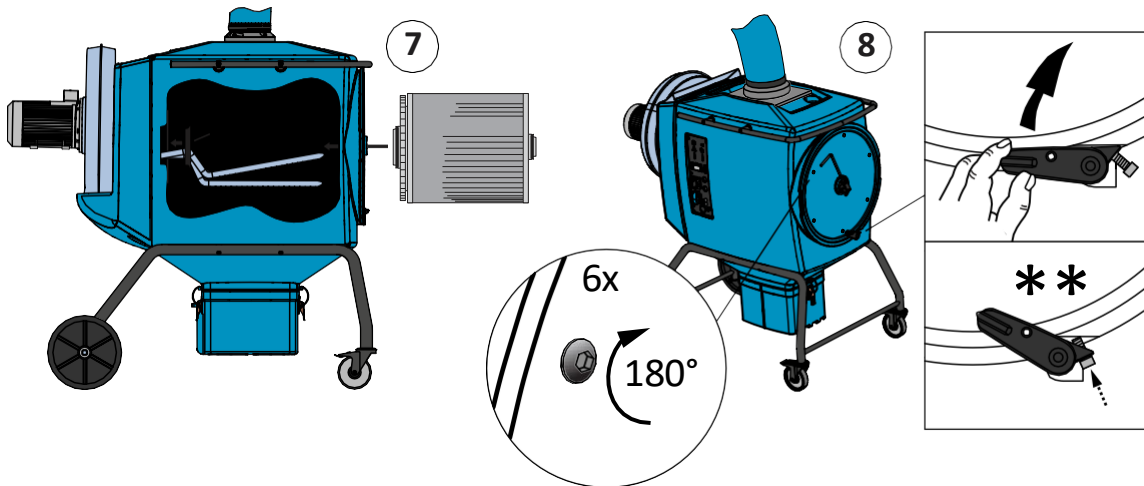
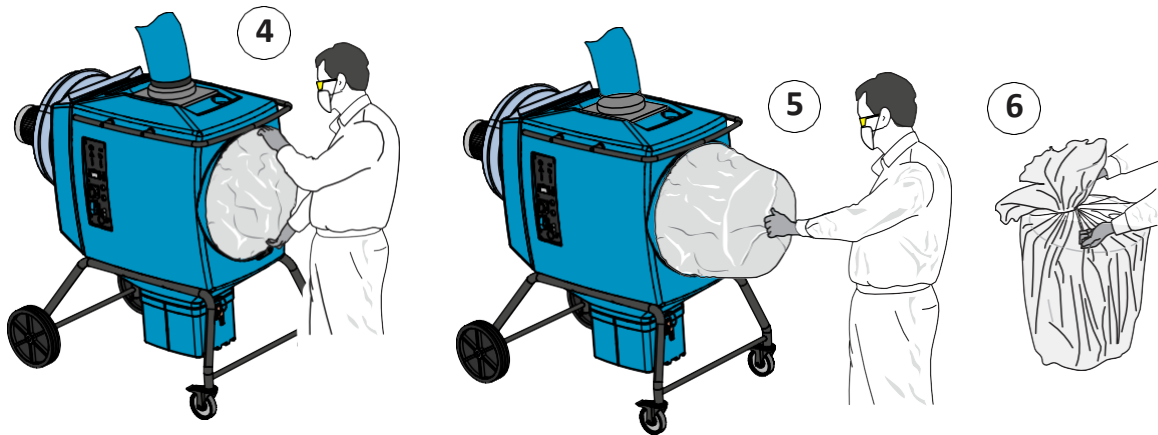
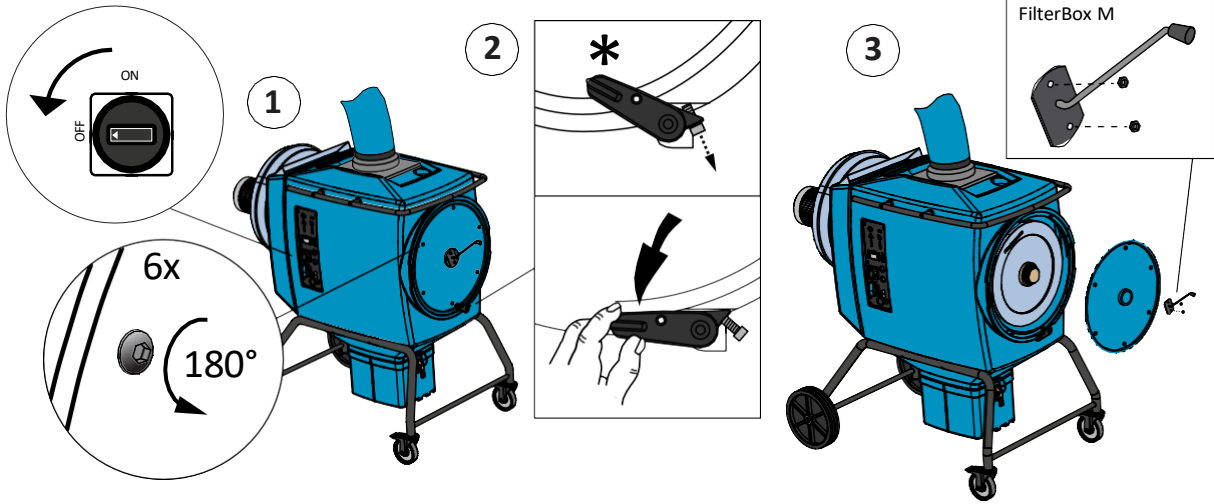


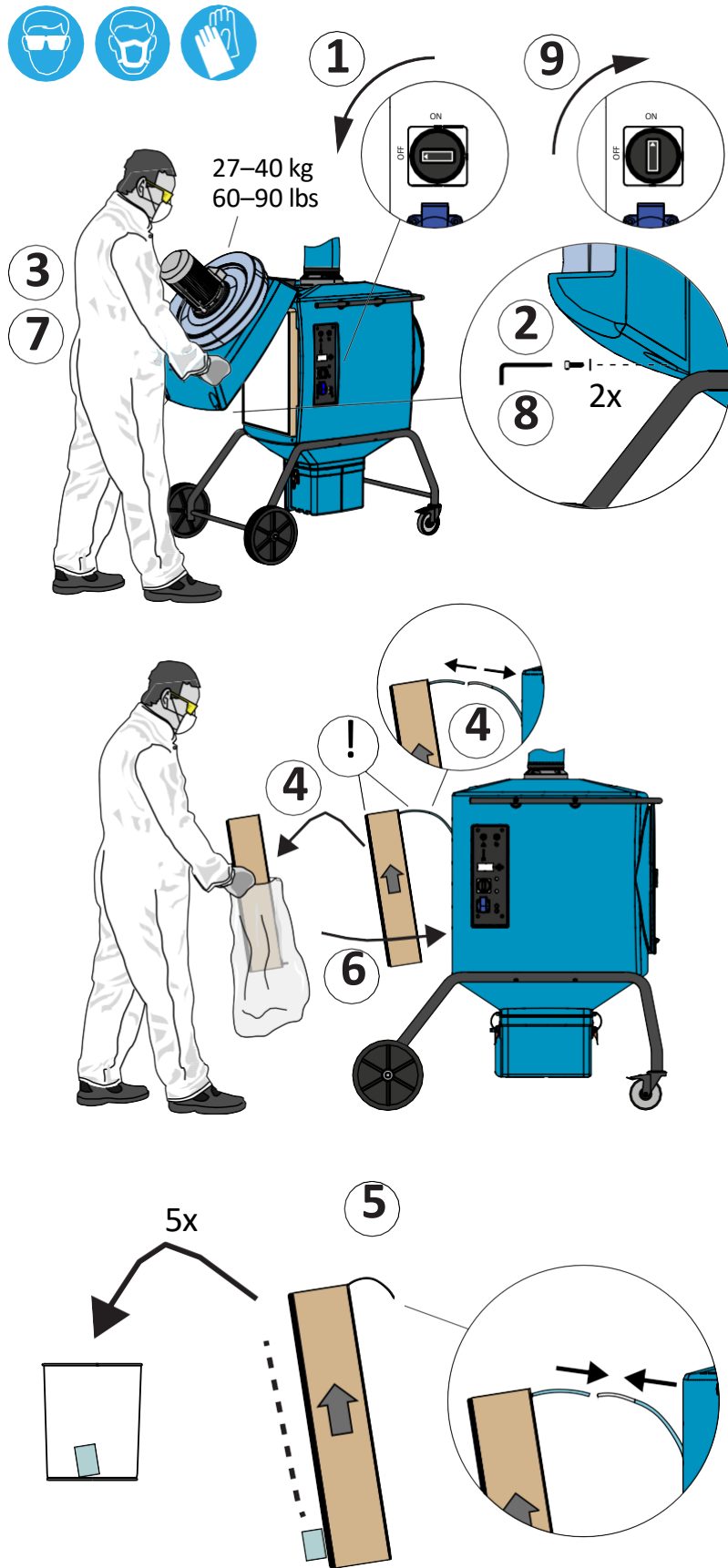
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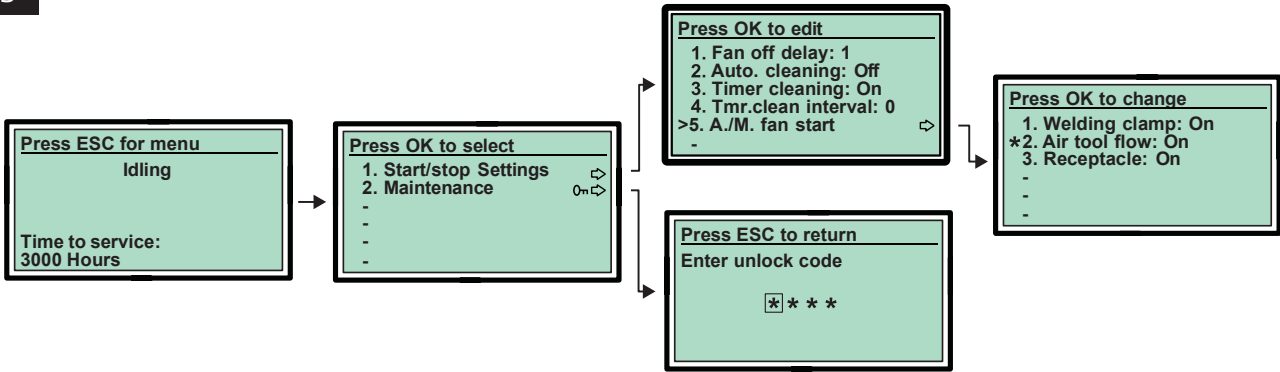
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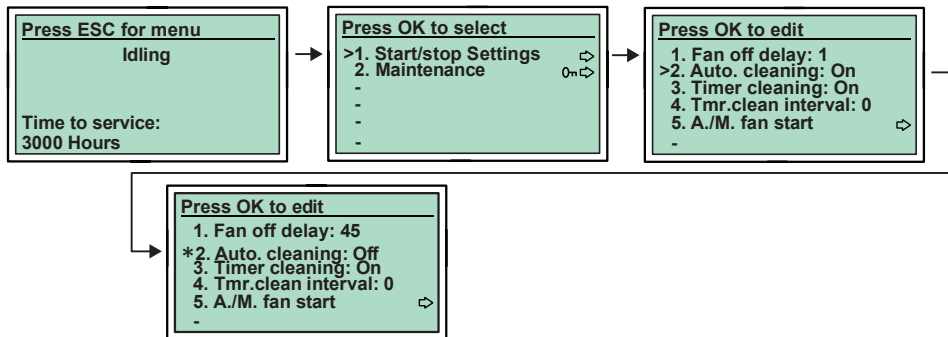




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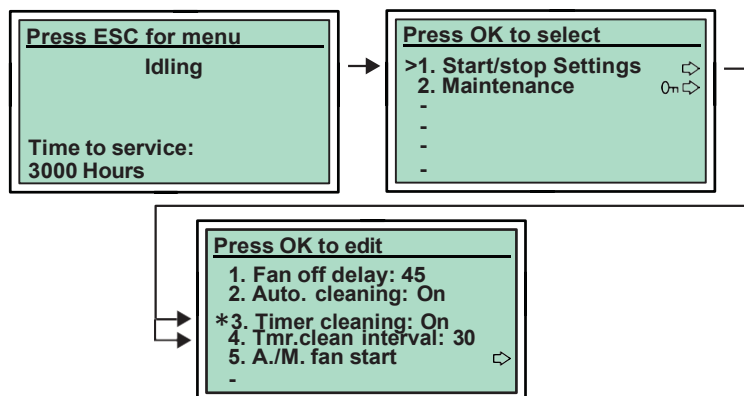


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2. Auto. cleaning: [ON/OFF]

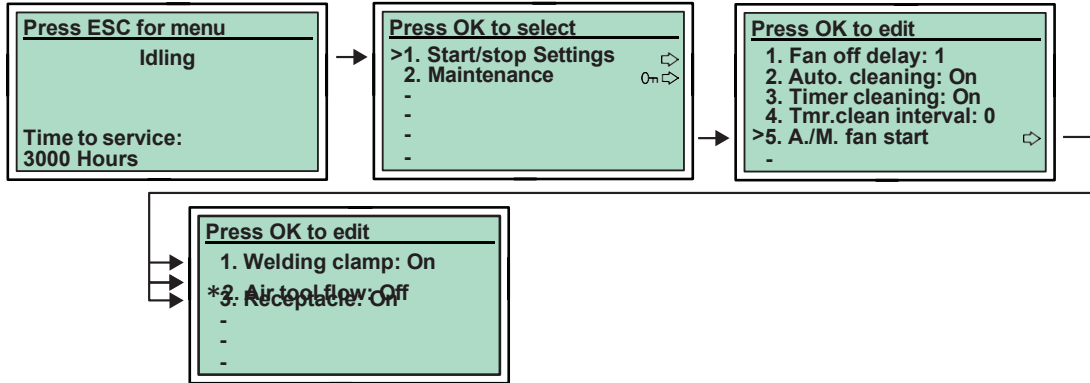
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3. Timer cleaning: [ON/OFF]

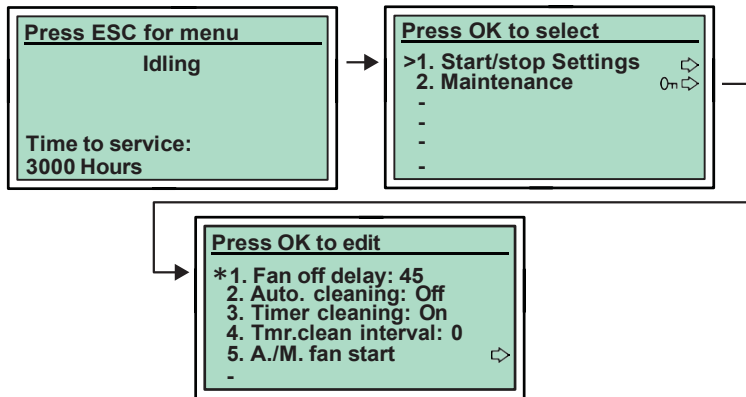
4. Tmr.clean interval: [10-60 min]

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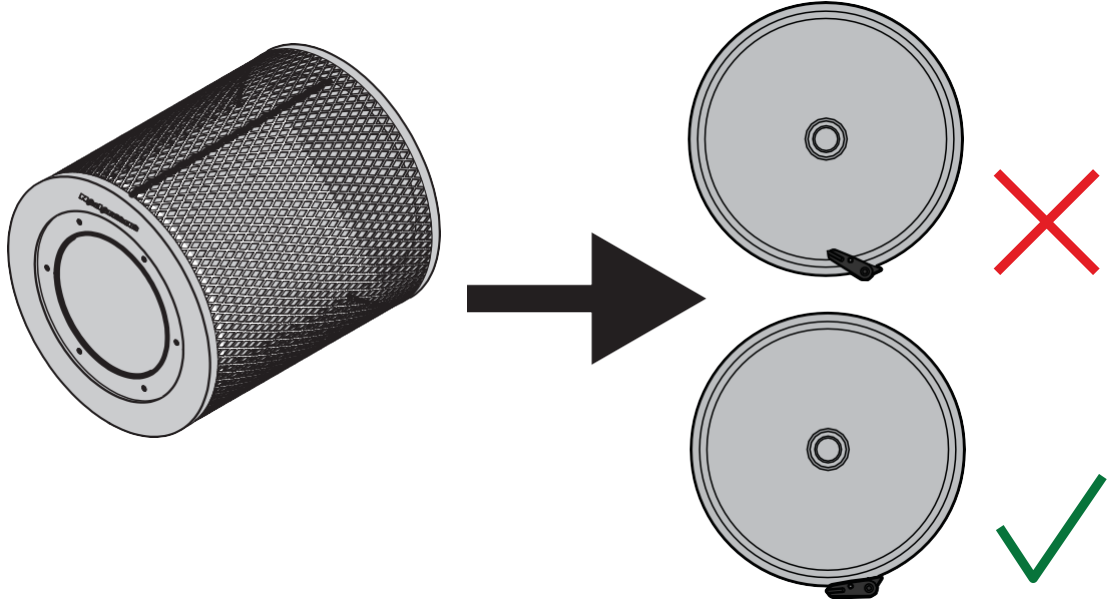
- 1. Welding clamp: [ON/OFF]
- 2. Air tool flow: [ON/OFF]
- 3. Receptacle: [ON/OFF]

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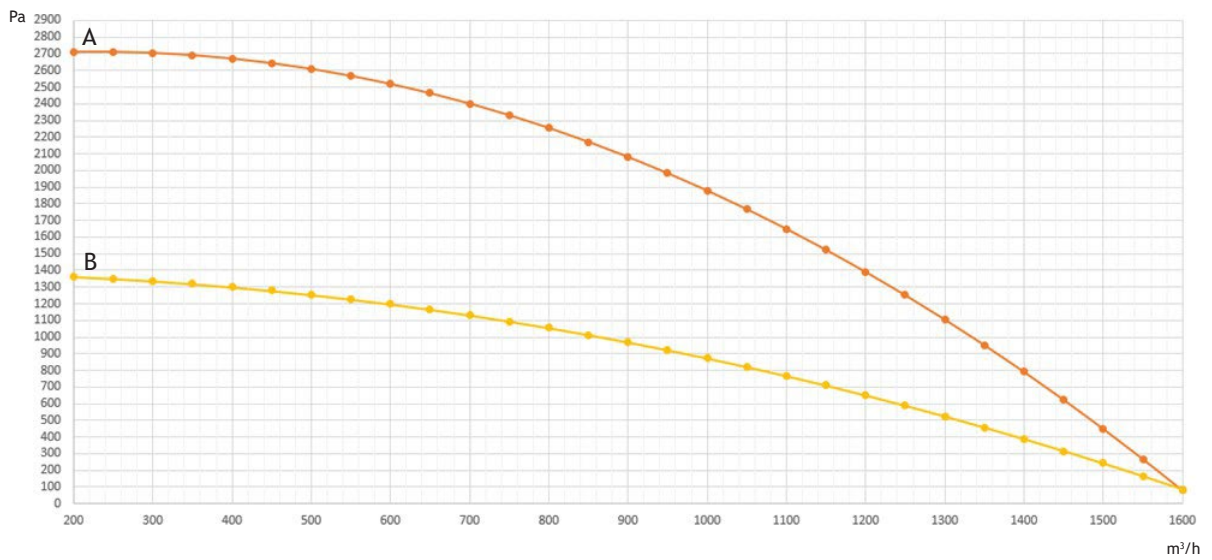


- 1. Fan off delay: [1-60 min]

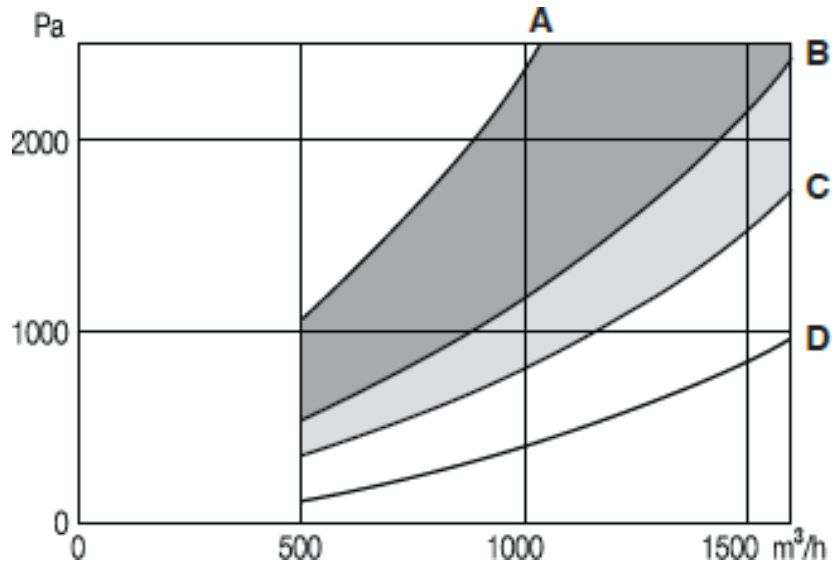
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# 1 Preface

Read this manual carefully before installation, use and service of this product. Replace the manual immediately if lost. Nederman reserves the right, without previous notice, to modify and improve its products including documentation.

All installation, maintenance and repair is to be completed by qualified personnel using only original spare parts. Contact the nearest authorized distributor or Nederman for advice on technical service and obtaining spare parts. If there are any damaged or missing parts when the product is delivered, notify the carrier and the local Nederman representative immediately.

## 2 Safety

### 2.1 Classification of Important Information



**WARNING!** Risk of personal injury Warnings indicate a potential hazard to the health and safety of personnel, and how that hazard may be avoided.



**CAUTION!** Risk of equipment damage Cautions indicate a potential hazard to the product but not to personnel, and how that hazard may be avoided.



**NOTE!** Notes contain other information that is important for personnel.

### 2.2 General safety instructions



**WARNING!** Risk of personal injury  
Only properly trained personnel are allowed to use this product.



**CAUTION!** Risk of clogged filter  
For PTFE filter cartridge, weld only dry metals with no oils.



**CAUTION!** Risk of equipment damage

- Do not install FilterBox close to heat sources.
- FilterBox is not intended for outdoor use.
- Store FilterBox indoors in a dry environment.



**WARNING!** Risk of fire and explosion

- Do not use the product for flammable or explosive dust and gases or in an environment where there is a danger of explosion or where there is dust or gases in explosive concentrations.
- *If the product has been used for dust applications, do not use it for welding fumes or grinding dust.*
- Do not use the product for extracting toxic substances (except welding fumes).
- Do not use the product without filter cartridge and casing.
- Only use the product in a well ventilated room.
- The air inlet and outlet must not be blocked or used with any channelling equipment.
- Check that no sparks or other objects that can cause fire are sucked into the arm. For welding applications generating a high amount of sparks, spark protection (accessory) must be mounted in the hood to reduce the risk of fire.
- In event of a fire, smoke from the product may contain hazardous substances such as burning polycarbonate, PVC, polyethylene, etc. Also, depending on the material being separated, hazardous smoke from the separated dust may occur.
- In case of fire, disconnect main power supply and use a fire extinguisher, min. class AB.

## 3 Description

### 3.1 Function

FilterBox filters out pollutants such as fumes and dust including welding fumes containing CMR (carcinogenic mutagenic reprotoxic) substances.

**i NOTE!** Gases are NOT filtered out.

FilterBox is a flexible, modular system that is available in different configurations. There are two levels of cleaning automation: FilterBox M (manual) and FilterBox A (automatic)

Models	Features
FilterBox M FilterBox 10M FilterBox 12M FilterBox Wall	Manual filter cleaning with mechanical crank Audible alarm when filter needs to be changed Hood light (optional)
FilterBox A FilterBox 10A FilterBox 12A FilterBox Twin FilterBox Wall	Automatic filter cleaning LCD display Ability to connect a power sensor clamp to automatically start the fan Light and ON/OFF fan switch in hood (optional)

Connection of a Nederman extraction arms is prepared. *The Wall model can be connected to a duct system.*

**i NOTE!**

- FilterBox does not have any connections for channeling of exhaust air
- Pressure drop for complete system shall be considered by the installation designer or the enduser

### 3.2 Maincomponents (see figure 1)

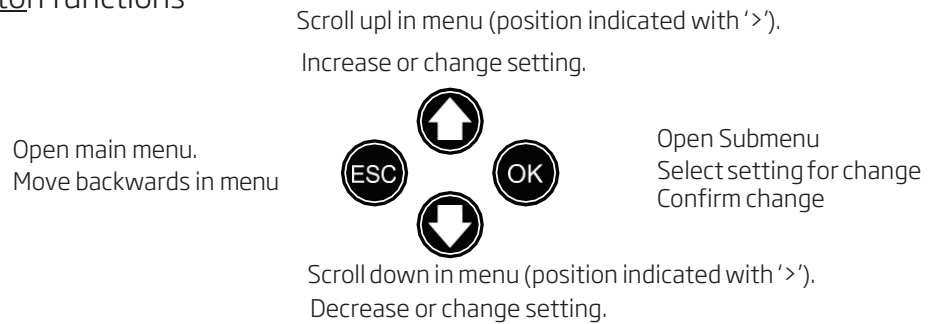
1. Extraction arm with hood
2. Enclosure
3. Cleaning crank (Filterbox M, manual)
4. Main filter
5. Collector bin (4 gal.)
6. HEPA Filter (Accessory)
7. Fan package including silencer
8. Air outler
9. Control box and panel
10. Power fuse (max 16A)

### 3.3 Control panel (see figure 2)

- A,B,C,D: Show how dirty the main filter is.
- E: Shows when there is a warning or alarm.
- F: Fan status.
- G: LCD and navigation buttons.
- H: Loud speaker for alarms.
- I: Fuses for the electrical outlet K.
- J: Outlet for pneumatic power tools.
- K: Outlet (1-phase) for electrical power tools.
- L: Main switch.
- M: Operation timer.
- S1: Button to start or stop the fan.
- S2: Start or stop filter cleaning.

### 3.4 LCD and navigation buttons

#### 3.4.1 Navigation button functions



#### 3.4.2 Menu structure (see figure 15)

### 3.5 Dimensions (see figure 3)

A=10 Series - N24 fan

B=12 Series - N27 fan and Twin - N29 fan

C =Wall mount

### 3.6 Pressure drop diagrams

#### 3.6.1 Menu structure (see figure 21)

A ) Filterbox with N29 fan

B ) Filterbox with N24 fan



**NOTE!**

These graphs are with clean filters. Pressure drop will increase during use until settings for automatic cleaning or alarm is reached.

#### 3.6.2 Filterbox wall mount (see figure 22)

A: Heavy load

B: Light load, welding

C: Light load, dust

D: Clean filter cartridge



**NOTE!**

The pressure drop across FilterBox varies with air flow and dust load. Maintaining a certain average air flow with increasing dust load requires a shorter interval between cleanings.

## 4 Installation

### 4.1 FilterBox can be mounted to a wall or use floor options



**WARNING!** Install FilterBox in a well ventilated room.



**CAUTION!** Do not install FilterBox close to heat sources  
FilterBox is not intended for outdoor use

**NOTE!** Be sure to provide enough working space around the unit for service such as filter cleaning and replacement.

Floor stand: see figure 4. Use appropriate bolts and plugs for the surface.

Wall: see figure 5

**NOTE!** Use appropriate bolts and plugs for the surface. The bolts must each stand a stress of at least 472 lbs (2100 N).

#### 4.2 Attach fan package (see figure 6)

Connect the cable from the motor to the fan

**NOTE!** On 3-phase fans, make sure the fan rotates in the direction of the arrow, see figure 7. If the fan rotates in the wrong direction, switch the connection for two of the cables.

#### 4.3 Attach collector bin

See figure 11. Nederman recommends the use of plastic bags in the collector bin for better dust disposal. When using a plastic bag, a pressure equalization tube must be connected to the collector bin, see figure 11, items 4 and 5.

NOTE! If no bag is used, tie a knot to seal the cable, see figure 12, item 4.

#### 4.4 Connect arm/s

See: 1. User manual: Original Series 535.

2. Mounting instruction: Extraction Arm Original Light Package

#### 4.5 Connect compressed air

See figure 8.



#### **CAUTION!**

Use clean air 90-100 psi

#### 4.6 Automatic filter cleaning

Automatic filter cleaning occurs when the pressure drop across the filter reaches a standard preset value. FilterBox enters idle mode before the filter cleaning process begins.

**NOTE!** If the preset value is reached during use, the product enters idle mode and starts filter cleaning.

To setup automatic filter cleaning [ON/OFF], see figure 16..

#### 4.7 Filter cleaning with preset time interval

For certain applications, it may be preferable to use filter cleaning with a preset time interval. Filter cleaning starts when the unit is in idle mode and not being used, see figure 17.

#### 4.8 Connect tools to control panel

Compressed air and electrical tools can be connected to the outlets J (1-phase) and K, see figure 2. To connect welding clamp, see figure 9.

By default, the FilterBox fan automatically starts when a tool connected to one of these outlets is used. But, this feature can be disabled in item 5 'A/M fan start' in the menu. To prevent the fan from stopping during short pauses in work, a time delay can be set up in menu "1. Fan off delay".

Set up autostart of fan [ON/OFF], see figure 18.

Set up time delayed fan stop [1-60 min], see figure 19..

## 5 Operation



WARNING! Risk of fire and explosion. Read section 2.2 general safety instructions

**NOTE!** Position the extractor arm hood correctly, see figure 1.

### 5.1 Start FilterBox

See the control panel in figure 2.

1. Turn the main power switch L to ON.
2. Start FilterBox with the button S1, or switch on extractor arm hood.

### 5.2 Overloadprotector

FilterBox is equipped with an overload protector that automatically disconnects the power if the fan motor becomes overloaded. For a list of possible causes, see the FilterBox Installation and Service Manual.

#### 5.2.1 FilterBoxM

See figure 2. If the overload protector is activated, FilterBox goes into OFF mode. To reset the overload protector alarm, correct the problem, and turn the main switch L back to ON.

#### 5.2.2 FilterBox A

See figure 2, item F. LED F is red and indicates that the fan motor is overloaded.

The overload protector automatically resets after a few minutes. To manually reset the overload protector, turn main switch L to OFF and then turn it to ON.

### 5.3 Clean main filter

Depending on the FilterBox model used, the need to clean the main filter is indicated by either an audible alarm, or a combination of LEDs, information in the LCD display and an audible alarm.

**NOTE!** If the main filter is not properly clean after repeated cleaning, see the Installation and Service Manual.

#### 5.3.1 Manual cleaning (FilterBox M)

When the main filter in FilterBox M needs cleaned, an audible alarm sounds. See figure 10 and follow instructions.

**NOTE!** If compressed air must be connected if used to clean FilterBox

#### 5.3.2 Automatic filter cleaning-FilterBox A

See section 3.6. Automatic filter cleaning.

Filter cleaning can also be started via the control panel:

1. Press S1 to stop the fan, see figure 2.
2. Press S2 to start the filter cleaning, see figure 2.

### 5.3.3 Semi-automatic filter cleaning (FilterBox A)

An audible alarm and the LCD display indicates when the main filter needs to be cleaned. There are two ways to start semi-automatic filter cleaning:

1. Press the S2 to disable the alarm, see figure 2. The alarm can only be inactivated twice before filter cleaning starts automatically.
2. Or, press S2 twice quickly to start the filter cleaning, see figure 2.

### 5.3.4 Filter cleaning with preset timer - FilterBox A

See section 3.7. Filter cleaning with preset time interval.

## 5.4 Empty collector bin



WARNING! Risk for personal injury.  
Wear goggles, dust mask and gloves when emptying the collector bin



WARNING! Risk of personal injury.  
Disconnect all power to FilterBox before emptying the collector bin

If a plastic bag is used, see figure 11.

If a plastic bag is not used, see figure 12.

## 6 Maintenance



WARNING! Risk of personal injury

Disconnect all power to the product before any maintenance.

Wear goggles, dust mask and gloves.

Use proper equipment, such as a vacuum cleaner, to clean the product before taking it apart.

Take apart the product in a well-ventilated room.

Clean the area properly after work is complete.

Use only original Nederman spare parts. Please contact your nearest authorized dealer or Nederman for advice on technical services.

### 6.1 Changemain filter



WARNING! Risk for personal injury.

Wear goggles, dust mask and gloves when changing the filter cartridge

Replace the main filter if it's punctured or can not be sufficiently cleaned despite being repeatedly cleaned. See figure 13.

**NOTE!** See Figure 13, item 7. The new filter is supplied with a new plastic bearing (X), which can be substituted for the existing bearing if it is damaged.

## 6.2 Change HEPA filter



WARNING! Risk for personal injury.

Wear goggles, dust mask and gloves when changing the HEPA filter.

If FilterBox cannot filter out dust properly even with a new main filter, and after repeated cleaning, the HEPA filter may need to be changed.

The LCD display indicates when the HEPA filter needs to be replaced.

Replace the HEPA filter according to figure 14. Check that the air flow is sufficient.

## 7 Spareparts

Contact your nearest authorized distributor or Nederman for advice on technical service or if you require help with spare parts. See also [www.nederman.com](http://www.nederman.com).

### Ordering spare parts

When ordering spare parts always state the following:

Part number and control number (see the product identification plate).

Detail number and name of the spare part (see [www.nederman.com](http://www.nederman.com)).

Quantity of the parts required.

## 8 Recycling



WARNING! Risk of personal injury

Wear goggles, dust mask and gloves..







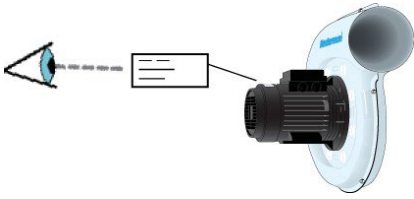

Use proper equipment, such as a vacuum cleaner, to clean the product before taking it apart.

Take apart the product in a well-ventilated room.

Clean the area properly after work is complete.

The product has been designed for component materials to be recycled. Its different material types must be handled according to relevant local regulations. Contact the distributor or Nederman if uncertainties arise when scrapping the product at the end of its service life.

## 9 Technical data

Technical Data			
 ISO 11201	Wall: 60 dB(A) N24 fan: 66 dB(A) N27 fan: 68 dB(A) N29 fan: 74 dB(A)		Main filters: <ul style="list-style-type: none"> <li>• 13 m<sup>2</sup> (140 ft<sup>2</sup>) Standard filter PW13*</li> <li>• 17 m<sup>2</sup> (184 ft<sup>2</sup>) Filter NANO-FB-17*</li> <li>• 13 m<sup>2</sup> (140 ft<sup>2</sup>) Filter PTFE-FB-13*</li> <li>• 15 m<sup>2</sup> (162 ft<sup>2</sup>) High efficiency filter PWHE15*</li> <li>• 15 m<sup>2</sup> (162 ft<sup>2</sup>) Antistatic high efficiency filter PWAHE15*</li> </ul> Secondary filter: <ul style="list-style-type: none"> <li>• 10 m<sup>2</sup> (108 ft<sup>2</sup>) HEPA filter: 99.95 % (H13)</li> </ul>
	< +40 °C (+104 °F)		Wall: <1300 m <sup>3</sup> /h (<750 CFM) 10M / A/A+ : 600 CFM 12 M / A/A+ : 700 CFM Twin: 2 x 500 CFM
	Wall: 54 kg (119 lbs) 10M/A: 102 kg (225lbs) 12M/A: 122 kg (269 lbs) Twin: 146 kg (322 lbs)		Hertz (H) Volt (V) Watt (W) 
	< +60 °C (+140 °F)	IP class	IP class = 54

\* Minimum Efficiency W3 (99%), EN ISO 21904-1:2020. See the filter cartridge information for more specific data.





# Nederman

The Nederman Group is one of the World's leading suppliers of products and solutions within the environmental technology sector focusing on industrial air filtration and recycling. These products and solutions reduce the environmental impact of industrial production and create safe and clean working environments while boosting production efficiency.

The group's offering covers the design stage through installation, commissioning and servicing with subsidiaries in 29 countries and agents and distributors in over 30 countries.

Nederman is ISO 9001 and 14001 certified and develops and produces in its own manufacturing and assembly facilities in Europe, North America and Asia.

## Nederman Service Capabilities

Nederman has certified service partners trained extensively in servicing our machinery. Make sure to choose a certified technician to service your Nederman equipment as they have the correct tools and knowledge to solve any machinery issues and improve its performance. Be sure to ask if your technician is certified by Nederman.

Our services for dust collection systems are customized to your particular needs. We work with you to understand your needs, then develop a program to meet your specific needs. Our services include: *(not all services available in all locations)*

- Bag & Filter Change-outs
- Filter Selection Recommendations
- Collector Re-builds
- Dye Testing for Leakage
- Electrical Tests - Current, Voltage
- Emergency Call-outs
- Filter Media Analysis
- Mechanical Survey and Repair
- Multi-year Contracts
- New Collector Start-up Service
- On-going Technical Support
- Preventative Maintenance Programs
- Repair and Replace  
Gauges/Timers/Valves
- Stack Emission Testing
- Training Programs
- Troubleshooting / Auditing
- Velocity, Pressure and Temperature Tests
- Written Service Report

## Customer Service and Technical Support

Nederman Corporation USA  
4404-A Chesapeake Drive  
Charlotte, NC 28216  
336-821-0800

[www.nederman.com](http://www.nederman.com)