

Nederman

Instruction manual

Low vacuum units WeldFilter EC10/EC20



Original instruction manual
INSTRUCTION MANUAL

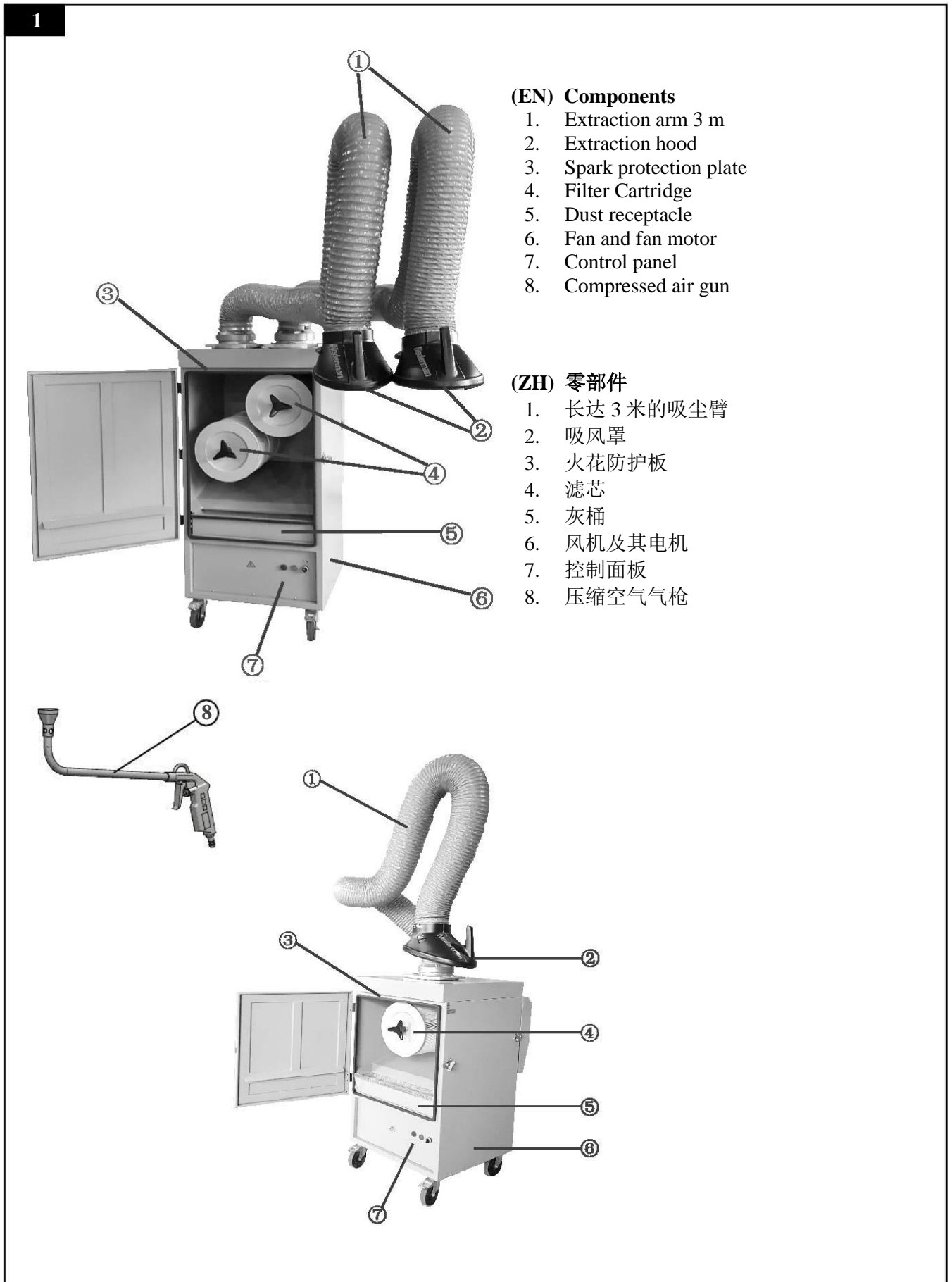
EN

Translation of original instruction manual
操作维护手册

ZH

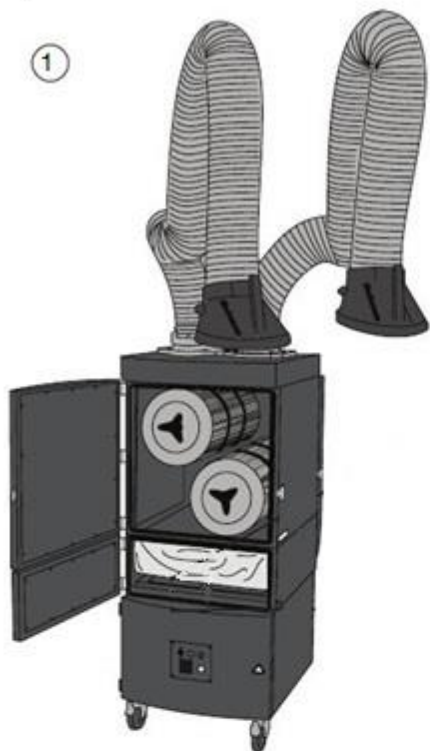
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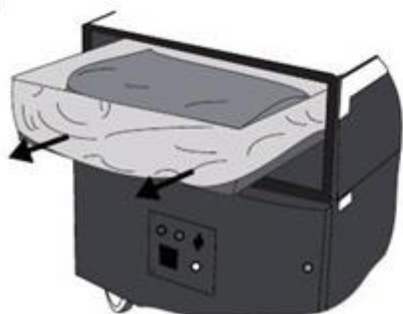


(EN) Emptying the receptacle

(ZH) 清空灰桶



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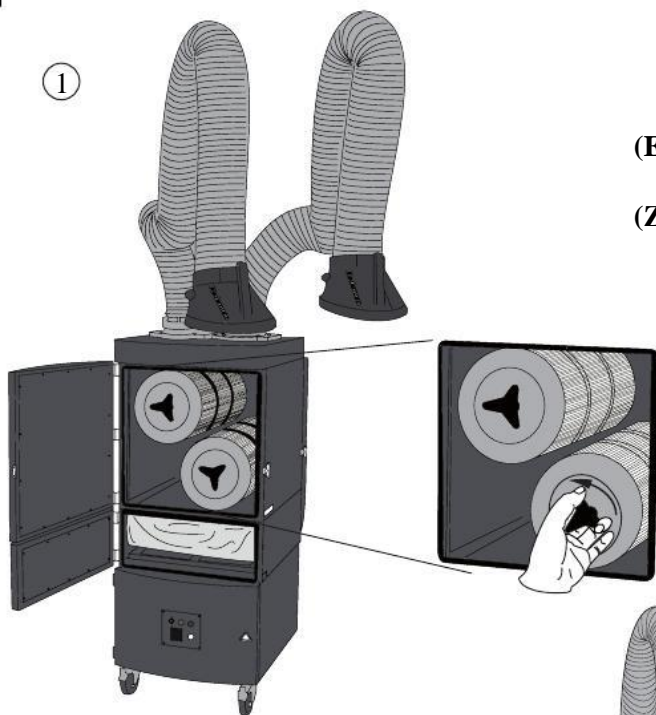


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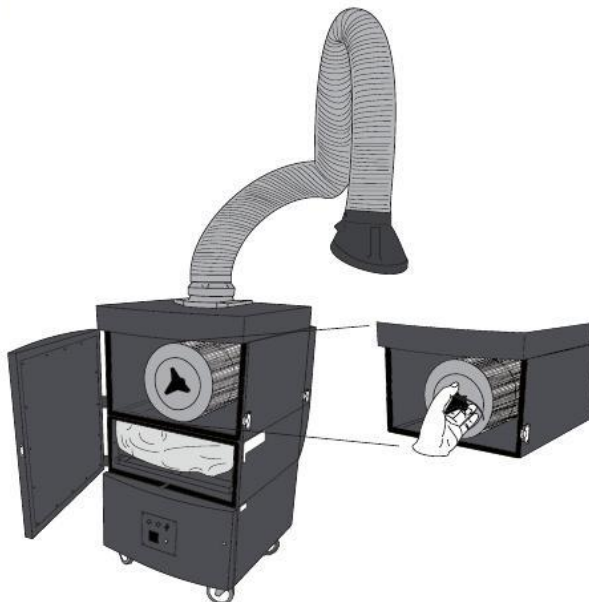
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(EN) Replacing the filter cartridge

(ZH) 更换滤芯



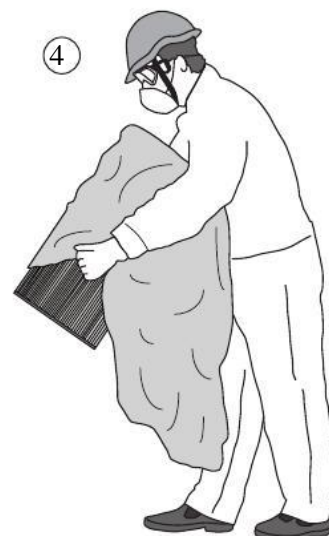
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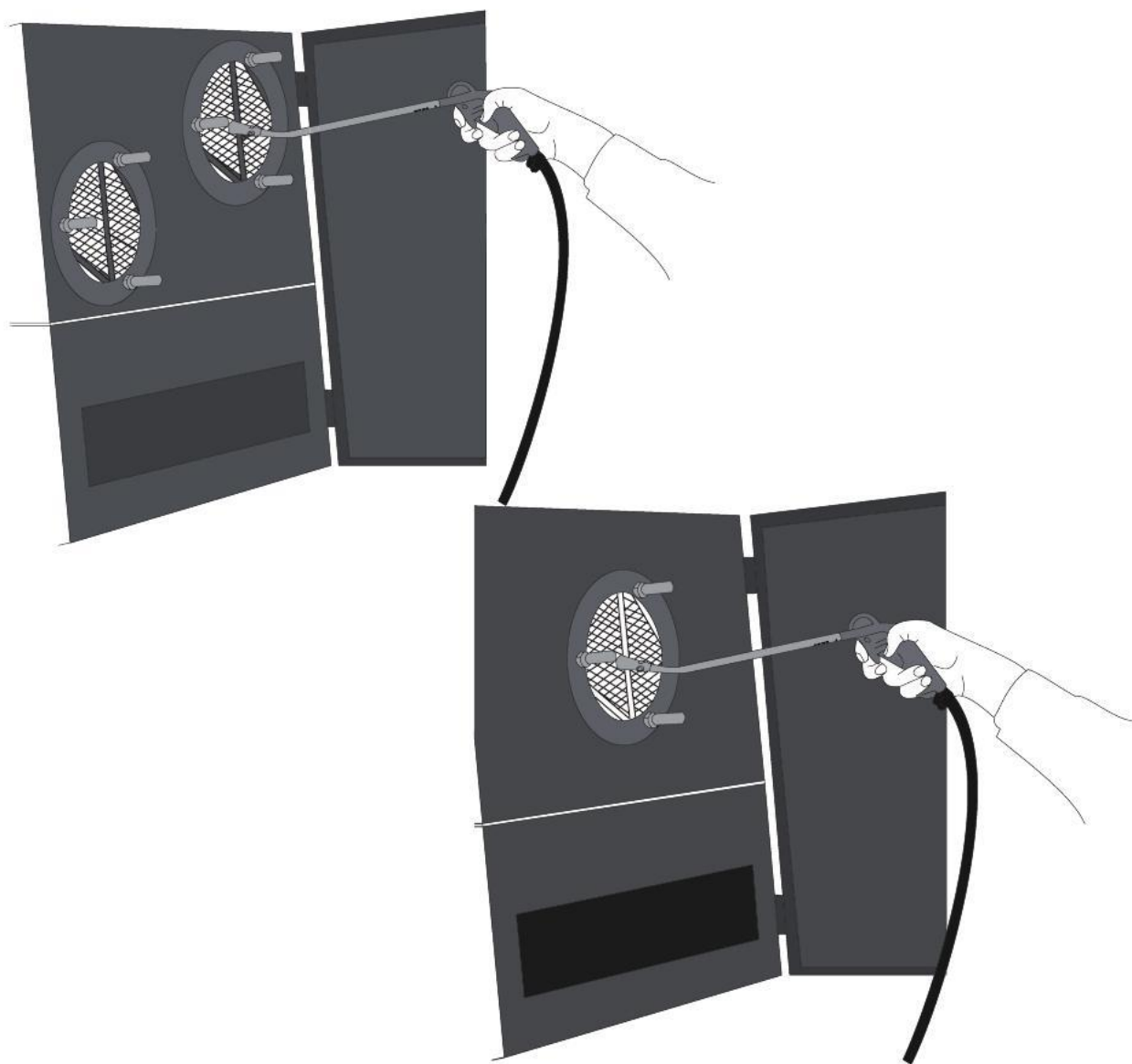
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4

(EN) Cleaning the filter with a compressed air gun

(ZH) 用压缩空气气枪清洁过滤器



5

(EN) Opening the back door

(ZH) 打开过滤器的后门



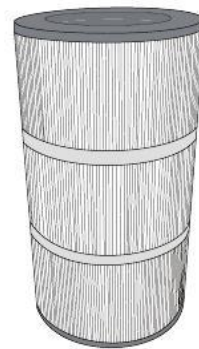
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(EN) Spare parts

(ZH) 备件

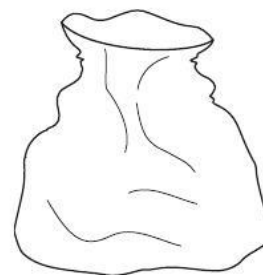
(EN) Filter cartridge

(ZH) 滤芯



(EN) Plastic bag (x10)

(ZH) 塑料袋 (x10)



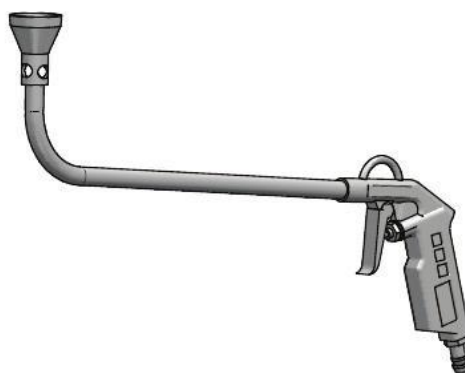
(EN) Fan motor

(ZH) 风机电机



(EN) Compressed air gun

(ZH) 压缩空气气枪

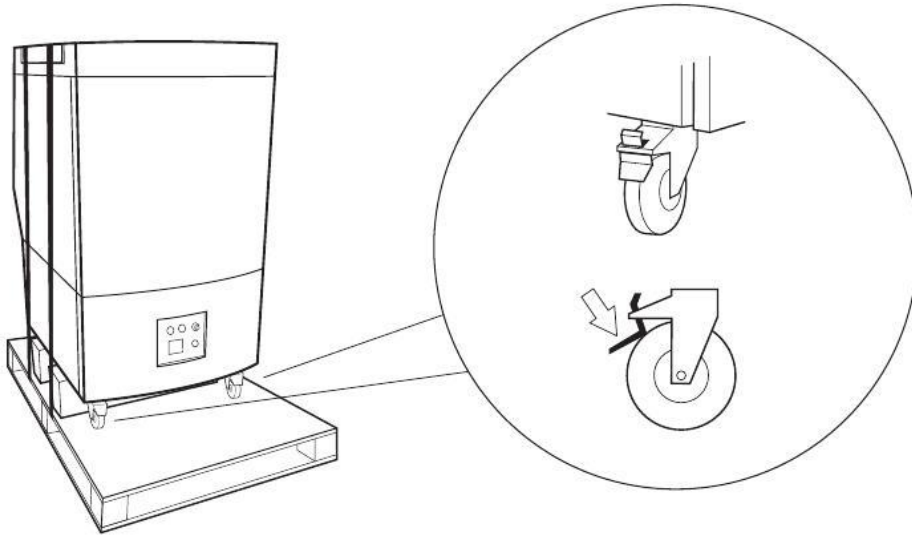


(EN) Spare part numbers: www.nederman.com

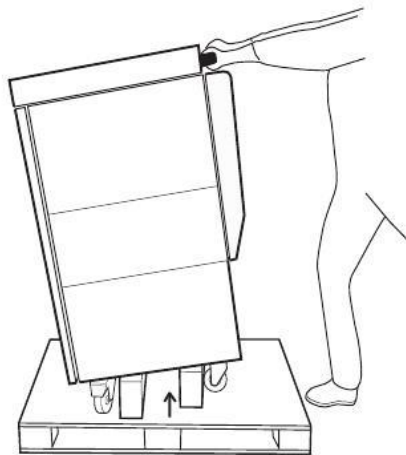
(ZH) 备件号请查询: www.nederman.com

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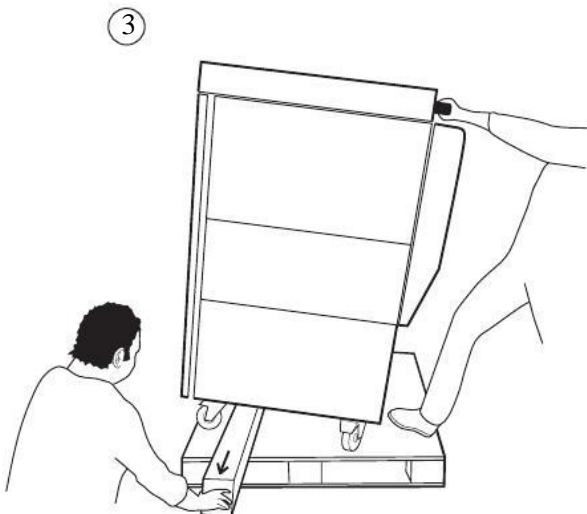
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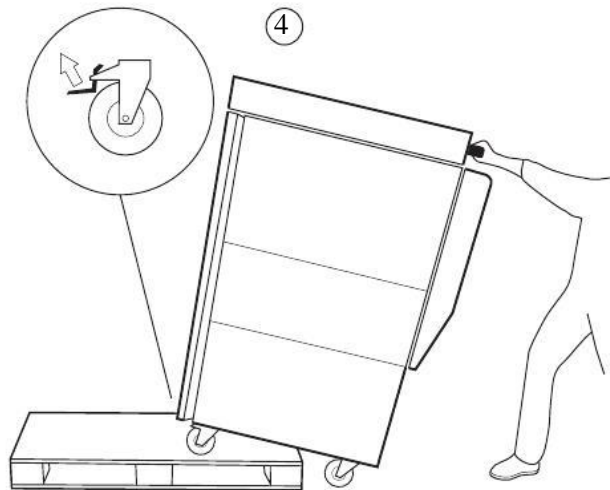
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English
Instruction manual
Low vacuum units
WeldFilter EC10/EC20

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1 Declaration of conformity

We, AB Ph. Nederman & Co., declare under our sole responsibility that the Nederman product:

WeldFilter EC10/EC20 and its accessories to which this declaration relates, is in conformity with the following:

Directives

2006/42/EC, 2014/35/EC

Standards (EC10/EC20)

EN 60204-1, EN ISO 12100:2010

The product manager is responsible for the technical documentation.

Nederman (Shanghai) Co., Ltd.
Bld.4, No.98, Tian Ying Rd., Qingpu Industry Zone
201712 Shanghai
China



James Pan

James Pan
Product Centre Manager

2 Foreword

This manual is a guide for the correct installation, use and maintenance of this product. Study it carefully before starting to use the product or before carrying out any maintenance. Keep the manual where it is always close at hand. Replace it immediately if lost.

The product has been designed to meet the requirements of the relevant EC directives. To maintain this status, all installation, repair and maintenance work is to be carried out by qualified personnel using only original Nederman spare parts. Contact your nearest authorized distributor or Nederman for advice on technical service or if you require help with spare parts.

Many hours have been spent on the design and production of this product in order to make it as efficient and safe as possible. Accidents that occur despite this are usually caused by individuals. A safety-conscious person and a well-maintained product make a safe and effective combination.

We continuously improve our products and their efficiency through the introduction of design modifications. We reserve the right to do this without introducing these improvements on previously supplied products. We also reserve the right, without previous notice, to modify data and equipment, as well as operating and maintenance instructions.

3 Hazard notices

This document contains hazard information which must be read by all users. The hazard information is presented as a warning, caution or note as follows:



WARNING! Type of injury.

Warnings indicate a potential hazard to the health and safety of users. They clearly state the nature of the hazard and how to avoid it. They appear at their points of application in this document. They look like this notice, but with different texts.

CAUTION! Type of risk.

Cautions indicate a potential hazard to the physical integrity of the equipment, but not a danger to personnel. They clearly state the nature of the hazard and how to avoid it. They appear at their points of application in this document. They look like this notice, but with different texts.

NOTE! Notes contain other information which the user should be especially aware of.

4 Technical data

	EC10	EC20
Filtration efficiency	≥ 99%*	≥ 99%*
Filter area	12 m ²	2 x 12 m ²
Dimensions	785 x 665 x 1200 mm	785 x 665 x 1450 mm
Weight (approx.)	150 kg**	210 kg**
Maximum airflow	900 m ³ /h***	2x900 m ³ /h***
Compressed air for air cleaning	3-4 bar****	3-4 bar****
Voltage/phase/frequency/ amperage	See type label	See type label
Ambient temperature	max. +40 °C min. -10 °C	max. +40 °C min. -10 °C
Fume temperature	max. +60 °C	max. +60 °C
Material recycling	95% per weight*****	95% per weight*****
Noise level	72 dB(A)*****	72 dB(A)*****
Hose dimension (air gun)	3/8"	3/8"
Application	Welding fume	Welding fume

* For welding fume

** Without extraction arms.

*** Max 1,100 m³/h (EC10)/2,200 m³/h (EC20) without extraction arms.

**** Dry and without oil.

***** Without filter cartridge.

***** According to ISO 11203.

5 In case of fire

Disconnect the main power cable from net. Use a fire extinguisher, minimum class AB.

6 Directions for use

The WeldFilter EC10/EC20 is designed for the extraction and filtration of welding fumes.

Gases are not separated.

The WeldFilter EC10/EC20 is not intended for use outdoors. Always keep the product in a dry environment.

Use the handle when moving and maneuvering the machine. Do not move the machine by pulling the extraction arm.

If the WeldFilter EC10/EC20 is moved between different sockets or if a new extension cable is used, the rotation direction of the fan must be checked (see Chapter '10 – Initial operations').

NOTE! Only valid for 3-phase versions.

Check the phase sequence in all sockets and extension cables.

NOTE! Use ear protectors.



WARNING! Risk of personal injury.

The impurities on the filter cartridge and the dust receptacle can cause injuries and must be handled with care.



WARNING! Risk of personal injury.

The purified air may in some countries not be recycled inside the workshop.



WARNING! Risk of fire and explosion.

Do not use the WeldFilter for exhaust gases or inflammable or explosive dust/gases.



WARNING! Risk of personal injury.

Never place hands, arms or any other parts of the body near any moving parts.

NOTE! For welding applications generating high amount of sparks, a spark protection (accessory) must be mounted in the hood to reduce the risk of fire.

7 Unloading instructions

For safe unloading of the machine from the pallet, see Figure 7.

8 Mounting instructions

For mounting instructions for the arm, see *144079 Instruction Manual Extraction Arm Original*.

9 Electrical installation

NOTE! Only applicable for 3-phase. This operation must be carried out by a qualified electrician.

The machine is delivered without an electrical plug. Install a proper male electrical plug (max.16A).

Check that the mains voltage is the same as on the type label of the WeldFilter EC10/EC20, then connect the unit to the mains.

Check fan impeller rotation direction in the following way:

- Open the back door (see Figure 5).
- Start the WeldFilter EC10/EC20.
- Stop the WeldFilter EC10/EC20.
- Check the fan impeller rotates in the right direction. Compare with the arrow on the label. If the impeller rotates in the wrong direction, the fan only gives 40% of its possible air volume.

Contact a qualified electrician if the impeller rotation must be reversed.

10 Initial operations

Make sure that the outlet of the cleaned air is not blocked.

Do not start the WeldFilter EC10/EC20 unless a filter cartridge is installed.



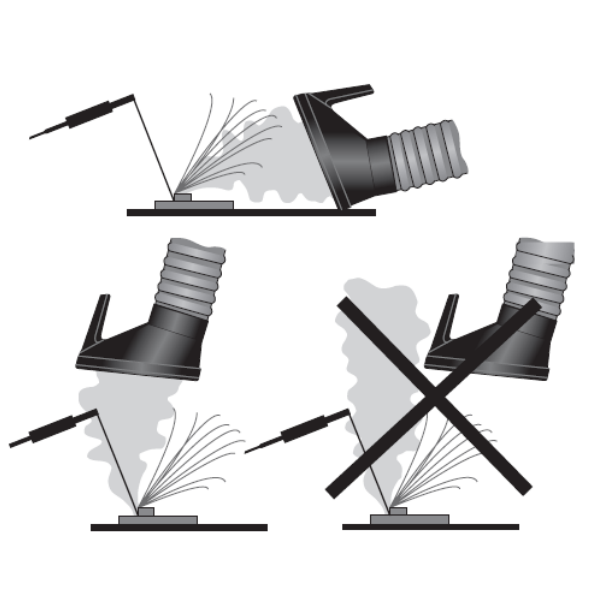
Switch on the product by turning the start-stop switch to 1. The green light will then be turned on.

Switch off the product by turning the start-stop switch to 0.

If the visual alarm (red light) is turned on, there is a signal show motor overload.

The product is equipped with a motor overload protector, which means that the power supply automatically will be broken if the fan motor is overload. The fan motor then resets automatically.

10.1 Hood positioning



11 Service and maintenance

CAUTION!

Before starting any maintenance or repair work:
Disconnect the WeldFilter EC10/EC20 from the mains. The regular service intervals must be determined by the operator on the basis of the local conditions of use and the frequency of use.

- Make sure that every person in the surrounding is well protected.
- Check the spark trap/arm on a regular basis to make sure it is not blocked.
- EC10: Use a proper mobile filter when cleaning.
- EC20: Use a proper industrial vacuum cleaner when cleaning.
- Clean the ventilated area carefully.
- Clean all surfaces in the maintenance area.

11.1 Cleaning the filter cartridge

CAUTION!

Use protection goggles, ear protection, breathing protection and gloves when cleaning the filter cartridge.

CAUTION!

Use a proper cleaning nozzle and correct air pressure to avoid poor cleaning or filter damage.

After a period of use the filter cartridge has to be cleaned.

Follow the steps below to clean the filter cartridge:

1. Disconnect the WeldFilter EC10/EC20 from the mains.
2. Close the damper on the extraction hood.
3. Open the maintenance door. (see Figure 4)
4. Make sure the filter cartridge is not damaged.
5. Use the airgun supplied with the WeldFilter EC10/EC20 and blow compressed air (dry, oil free 3-4bar) from the inside of the filter cartridge all over the surface (see Figure 4). The cleaning process normally takes 5-10 minutes.
6. Close the maintenance door.
7. Reconnect the WeldFilter EC10/EC20 to the mains.

11.2 Emptying of the dust receptacle

CAUTION!

Empty the receptacle when it is approximately 75% full. Do not let it overflow. Overfilling the receptacle may cause poor filter performance and an extensive cleanup work due to overflow of dust when removing the receptacle.

Use protection goggles, ear protection, breathing protection and gloves when emptying the dust receptacle.

Empty the receptacle in the following way (see Figure 2 and 3):

1. Disconnect the WeldFilter EC10/EC20 from the mains.
2. Open the front door.
3. Pull out the receptacle.
4. Seal the plastic bag and tie it with a string.
5. Insert the receptacle.
6. Close the front door.
7. Reconnect the WeldFilter EC10/EC20 to the mains.

NOTE! The WeldFilter must not be started unless the receptacle is in place.

11.3 Replacing the filter cartridge

CAUTION!

Use protection goggles, ear protection, breathing protection and gloves when cleaning the filter cartridge

The filter cartridge may be replaced. It should be replaced if the outer surface is damaged or if the air flow through the WeldFilter EC10/EC20 is insufficient due to saturation of the filter element, despite repeated cleaning.

Replacing the filter cartridge in the following way (see Figure 2 and 3):

1. Disconnect the WeldFilter EC10/EC20 from the mains.
2. Open the front door.
3. Turn the central knob to loosen the filter cartridge.
4. Take out the filter cartridge. For hygienic handling, the cartridge should be enclosed in a plastic bag. Clean the cartridge support inside of the WeldFilter EC10/EC20.

5. Handle the new filter cartridge carefully to avoid damage by sharp objects. Insert the new filter cartridge. Remount the knob tightly to ensure good cleaning. Tighten the knob properly.

CAUTION!

- Do not run over the power cable.
- Do not inhale while cleaning the filter on the filthy side or while the door to the filthy side is opened.
- Do not put fingers or any other body parts in the moving parts of the machine.
- Do not use a damaged dust receptacle.
- Do not aim the hood at other persons.
- Do not put burning objects such as cigarettes into the arm.
- Be careful when moving the WeldFilter EC10/EC20, since it is very heavy.

11.4 Spare parts

Installation, repair and maintenance work must be carried out by qualified personnel using only original Nederman spare parts. Contact your nearest authorized distributor or AB Ph. Nederman & Co. for advice on technical service or if you require spare parts. See also www.nederman.com.

Ordering spare parts

See www.nederman.com.

When ordering spare parts always state the following:

- Part- and control number (see the product identification plate).
- Detail number and name of the spare part (see www.nederman.com).
- Quantity of the parts required.

12 Recycling

The product has been designed so that component materials can 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.

Carry out the work in a carefully ventilated room with filtered exhaust air. After finished work, the working area must be cleaned.

13 Troubleshooting

The following operations must be carried out by a qualified electrician.

Possible failure	Actions
The fan does not start	<ul style="list-style-type: none"> • Check the power connection. • Check possible phase loss. • Check that the electric wiring of the fan is correct.
The air flow is insufficient	<ul style="list-style-type: none"> • Adjust the damper in the hood. • Check that the fan impeller rotation is in the right direction. Compare with the arrow on the label. If the impeller rotates in the wrong direction, the fan only gives 40% of its possible air volume. Contact a qualified electrician if the impeller rotation must be reversed. • Replace the filter cartridge. • Check the hose of the extraction arm for holes. • Check the fan for a blocked outlet/inlet or other damages.
Very low suction performance	<ul style="list-style-type: none"> • Check the cartridge and manual cleaning.
Impurity leakage	<ul style="list-style-type: none"> • Make sure the receptacle is fitted in a proper way. • Check the filter cartridge for damage.

中文

操作维护手册

Low vacuum units**WeldFilter EC10/EC20**

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1 符合性声明

我们瑞典尼的曼公司郑重声明：

产品 WeldFilter EC10/EC20 及其附件符合以下指令和标准：

指令

2006/42/EC, 2014/35/EC

标准 (EC10/EC20)

EN 60204-1, EN ISO 12100:2010

产品经理负责相关技术文件。

尼的曼空气净化设备(上海)有限公司
上海青浦工业园天盈路 98 号 4 号厂房
邮编：201712



James Pan

James Pan
Product Centre Manager

2 前言

本手册旨在为正确地安装、操作和维护提供指导。在操作或维护之前，请仔细阅读本手册。请将本手册放在便于取阅之处。一旦丢失，请立即索取。

本产品的设计符合相关 EC 指令的要求。为保证符合这些要求，所有的安装、维修和保养工作都必须由具备资质的人员进行，且只能使用尼的曼原厂备件。您可就近联系授权经销商或尼的曼，以寻求技术服务支持和获取备件。

本产品在设计 and 制造上花费了大量精力和时间，以确保其高效和安全。尽管如此，人为导致的事故还是难以避免。所以，具备安全意识的人员加上维护良好的产品才能真正实现安全与高效的结合。

我们将不断改进产品设计，提高产品性能，并保留更改产品设计后对以前所提供产品不再另行通知的权利。我们也保留更改技术参数和设备以及相关操作维护手册的权利。

3 危险警告

本手册涵盖所有用户都必须阅读的危害风险方面的信息。警告、警示或注意事项的标识如下：



警告！危害类型。

警告标识表示有危及人员健康和安全的潜在伤害，明确了危害的性质以及避免的方法。它们在本手册中均有体现。它们外观上与注意标识类似，但呈现的内容不同。

警示！危险类型。

警示标识表示有危及设备物理性能的伤害，明确了危险的性质以及避免的方法。它们在本手册中均有体现。它们外观上与注意标识类似，但呈现的内容不同。

注意！ 注意包含用户应该特别警惕的其它信息。

4 技术参数

	EC10	EC20
过滤效率	≥ 99%*	≥ 99%*
过滤区域	12 m ²	2 x 12 m ²
尺寸	785 x 665 x 1200 mm	785 x 665 x 1450 mm
重量 (近似值)	150 kg**	210 kg**
最大风量	900 m ³ /h***	2x900 m ³ /h***
用于清灰的压缩空气	3-4 bar****	3-4 bar****
电压/相数/频率/电流	见铭牌	见铭牌
环境温度	最高 +40 °C 最低 -10 °C	最高 +40 °C 最低 -10 °C
烟雾温度	最高 +60 °C	最高 +60 °C
材料再生利用	95%的单位重量*****	95%的单位重量*****
噪音水平	72 dB(A)*****	72 dB(A)*****
软管尺寸 (气枪)	3/8"	3/8"
应用	焊接烟雾	焊接烟雾

* 针对焊接烟雾

** 不含吸尘臂

*** 不含吸尘臂时最大 1,100 m³/h (EC10) / 2,200 m³/h (EC20)

**** 干燥无油

***** 不含滤芯

***** 依据 ISO 11203

5 火灾事故

切断主电缆。最低使用 AB 类灭火器。

6 使用说明

WeldFilter EC10/EC20 用于抽排并过滤焊接烟雾。

不能过滤气体。

WeldFilter EC10/EC20 不适用于室外作业。请始终保证产品处于干燥环境中。

移动和操作机器时请使用手柄。不得通过拉拽吸尘臂来移动机器。

如果将 WeldFilter EC10/EC20 更换到其它插座或者使用新的延长电缆，必须检查风机的旋向（参看第 10 章节-初始操作）。

注意！仅适用于三相电。

检查所有插座和延长电缆的相序。

注意！佩戴防护耳罩。



警告！人身伤害的风险。

滤芯和灰桶上的杂质会导致伤害，必须小心取放。



警告！人身伤害的风险。

有些国家和地区可能禁止车间内循环净化空气。



警告！火灾和爆炸的风险。

不得使用 WeldFilter 来处理废气、易燃或易爆粉尘/气体。



警告！人身伤害的风险。

切勿将手、手臂或身体任何其他部位靠近任何正在运行的部件。

注意！对于产生大量火花的焊接应用，必须在吸风罩处安装火花防护装置（见附件），以降低火灾风险。

7 卸货说明

为了安全地从托盘上卸下机器，请参看图 7。

8 安装说明

有关吸尘臂的安装说明，请参看 *吸尘臂使用手册*。

9 电气安装

注意！仅适用于三相电。必须由具备资质的电工操作。

该机器不随机配置电源插头，请安装合适的插头（最大 16A）。

检查电源电压是否与 WeldFilter EC10/EC20 铭牌上的电压相符。

检查风机叶片旋向，步骤如下：

- 打开背部的门（见图 5）。
- 启动 WeldFilter EC10/EC20。
- 停止 WeldFilter EC10/EC20。
- 检查风机叶片旋向是否正确。可参照箭头指示方向。如果风机叶片旋向错误，则风机吸风量只能达到 40%。

纠正叶片旋向，请联系具备资质的电工操作。

10 初次运行

确保净气出风口未堵塞。

在没有安装滤芯的情况下，不得启动 WeldFilter EC10/EC20。



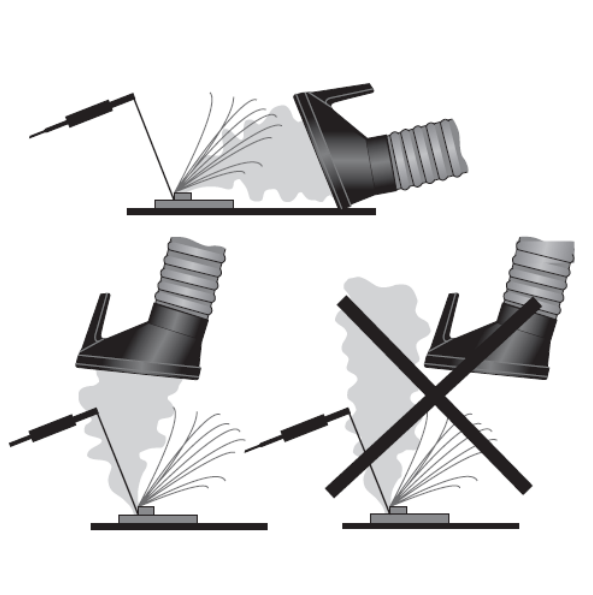
启动——将启动-停止开关旋钮旋至 1，绿灯随即亮起。

停机——将启动-停止开关旋钮旋至 0。

如果报警信号（红灯）亮起，表明电机过载。

WeldFilter EC10/EC20 配备有电机过载保护，这意味着如果风机电机过载，将自动切断电源。随后，风机电机将根据过载保护设置自动重启。

10.1 吸风罩位置



11 保养与维护

警示!

在开始维护或修理工作之前:

切断 WeldFilter EC10/EC20 电源。定期检修间隔必须由操作人员依据当地的使用状况和使用频率来决定。

- 确保周边人员防护得当。
- 定期检查火花罩/吸尘臂，确保没有堵塞。
- EC10: 清洁时，使用适合的移动吸尘器。
- EC20: 清洁时，使用适合的工业真空吸尘器。
- 仔细清洁通风区域。
- 清洁维护区域的所有表面。

11.1 清洁滤芯

警示!

清洁滤芯时，必须佩戴护目镜、护耳罩、呼吸防护装置和防护手套。

警示!

使用适合的清洁喷嘴、正确的气压，以免清灰不理想或设备受损。

设备在使用一段时间后，必须清洁滤芯。

清洁滤芯，步骤如下:

1. 切断设备电源。
2. 关闭吸风罩上的阀门。
3. 打开检修门（见图 4）。
4. 确保滤芯没有受损。
5. 使用设备附带的气枪，从滤芯内部向所有过滤面（见图 4）吹入压缩空气（干燥、无油、3-4 公斤）。清洁工作通常需要 5-10 分钟。
6. 关闭检修门。
7. 接通设备电源。

11.2 清空灰桶

警示!

在灰桶内的灰量接近 75%时要将其清空；不能满载，否则会导致过滤性能下降；与此同时，在取出灰桶时因灰尘溢出而导致清洁工作量过大。

清空灰桶时，必须佩戴护目镜、护耳罩、呼吸防护装置和防护手套。

清空灰桶，步骤如下（见图 2 和 3）：

1. 切断设备电源。
2. 打开前门。
3. 拉出灰桶。
4. 将盛满灰尘的塑料袋用绳子系上封口。
5. 将灰桶推入。
6. 关闭前门。
7. 接通设备电源。

注意! 灰桶未安装到位时，不得启动设备。

11.3 更换滤芯

警示!

更换滤芯时，必须佩戴护目镜、护耳罩、呼吸防护装置和防护手套。

滤芯可以更换。当滤芯外表面受损或滤芯饱和，经反复清洁后，通过设备的气流仍不能满足要求，即应更换滤芯。

更换滤芯，步骤如下（见图 2 和 3）：

1. 切断设备电源。
2. 打开前门。
3. 转动中央旋钮，松开滤芯。
4. 取出滤芯。应将滤芯装入塑料袋中。清洁设备内部的滤芯支架。
5. 小心取放新滤芯，避免被锐物所伤。插入新滤芯。将旋钮重新适当旋紧，确保清灰效果。

警示!

- 不得踩踏电缆。
- 当清洁设备脏气侧或通往脏气侧的检修门开启时，不要呼吸。
- 不得将手指或其它任何身体部位接触设备正在运转的部件。
- 不得使用破损的灰桶。
- 不得将吸风罩对着他人。
- 不得将香烟等易燃物混入吸尘臂。
- 由于设备较重，移动时要特别小心。

11.4 备件

所有的安装、维修和保养工作都必须由具备资质的人员进行，且只能使用尼的曼原厂备件。您可就近联系授权经销商或尼的曼，以寻求技术服务支持和获取备件。

订购备件

请参见 www.nederman.com。

订购备件时，请提供以下信息：

- 设备料号和控制号（见产品铭牌）。
- 备件的编号和名称（见 www.nederman.com）。
- 所需备件的数量。

12 回收再利用

该设备使用的材料是可以回收再利用的。应依据当地有关规定，对不同的材料类型进行相应的处置。如对产品的使用寿命到期进行报废处置时有任何疑问，请联系经销商或尼的曼。

应在通风良好的室内完成此项工作，排出的废气需过滤。结束后，必须清洁工作区。

13 故障处理

所有的故障处理和排查工作都只能由具备资质的人员进行。

可能的故障	措施
风机不启动	<ul style="list-style-type: none"> • 检查电源连接。 • 检查是否缺相。 • 检查风机的电气布线是否正确。
风量不足	<ul style="list-style-type: none"> • 调节吸风罩的阀门。 • 检查风机叶片的旋向是否正确。参照标识上箭头的指示方向。如果叶片旋向错误，风机的吸风量将只能达到 40%。纠正叶片旋向，请联系具备资质的电工。 • 更换滤芯。 • 检查吸尘臂软管上是否破损。 • 检查风机的出风口/进风口是否堵塞或受损
抽排性能降低	<ul style="list-style-type: none"> • 检查滤芯、手动清灰
杂质泄漏	<ul style="list-style-type: none"> • 确保灰桶安装正确。 • 检查滤芯是否受损。

