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USER MANUAL AIR FILTER SYSTEM

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Chapter 01

W E L C O M E

We are delighted that you have opted for a Mr Beam Air Filter System!

Please read this manual thoroughly, even if you are already familiar with some of the functions.

USING THIS USER MANUAL

Note: Before starting up and using the **Mr Beam Air Filter System** for the first time, you must read this manual carefully and follow it precisely. Not complying with any of the points listed in this manual can lead to personal injury and/or damage to property!

Mr Beam Lasers GmbH are not liable for any damage and/or malfunctions which result from not complying with this manual.

No part of this manual may be reproduced, edited or otherwise changed in any way without prior written permission from Mr Beam Lasers GmbH. All rights to any form of reproduction, particularly electronic, print or other media are reserved.

Mr Beam Lasers GmbH reserves the right to change the specifications of the hardware and software described in this manual at any time without notice.

The following symbols are used to make it easier to understand this manual:

Note: This area represents a particular danger to the user or personnel responsible for maintenance if the manual is not complied with!



Accessories must be compatible with the basic unit (for further inquiries, please consult Mr Beam support: mr-beam.org/support).

Please make sure that you have the latest version of the air filter system manual. The latest version of the manual can be found at: mr-beam.org/downloads

Please keep the manual for reference later.

This is a translation of the original German manual.

Issue date of this manual:
3rd February 2020

ABOUT THE MR BEAM AIR FILTER SYSTEM

The Mr Beam Air Filter System (from this point simply called **Air Filter System**) enables you to operate a Mr Beam laser cutter in closed areas without exhaust air extraction to the outside. It ensures that no unfiltered exhaust air can escape and that the user is never in danger.

The Air Filter System can also extract and filter exhaust air from other laser cutters and 3D printers.

The exhaust air is extracted via the exhaust hose air. Vapours, particles and odours are then filtered via a three-stage filter for the interior.

The Air Filter System automatically regulates the exhaust flow rate when Mr Beam is in use. When used without Mr Beam, the exhaust flow rate can be adjusted manually via the optional rotary switch.

Manufacturer

Mr Beam Lasers GmbH
Gollierstr. 70
80339 Munich
Germany

SAFETY & CONFORMITY

Please note that this section is particularly important. Your Air Filter System can only work safely if you comply with all aspects for it to do so.

It is therefore crucially important that you read and understand this section thoroughly before putting your Air Filter System into operation!

PRECAUTIONARY MEASURES

Working with the Air Filter System in a safety-conscious manner

Every person who sets up, start-up, uses, maintains and/or repairs the Air Filter System must read and understand the entire manual, particularly Section 2 "Safety and conformity".

If several persons are working with the Air Filter System, the owner or, if necessary, other proprietor or other person who is responsible for access to the equipment, is responsible for making sure that all the users are familiar with the safety regulations.

Persons who are under age are only permitted to use the Air Filter System under the supervision of an adult.

The equipment must be switched off and isolated from the mains before carrying out any work relating to the setting up, starting up, preparation, changes to the operating conditions or modes of operation, maintenance, inspection or repair.

Operating the Air Filter System is only permitted with the devices and spare parts included in the scope of supply and/or approved by Mr Beam Lasers GmbH.

PRECAUTIONARY MEASURES

Every user must comply with all the safety instructions specified in the following:

- Any mode of operation which jeopardises the safety of the air filter system must be avoided.
- It is the responsibility of the user to rule out any possibility of an unauthorised person starting the Air Filter System (e.g. precautions against unauthorised use).
- The plug socket must be easily accessible and must be in the direct proximity of the device. It must be possible to pull the plug from the mains in an emergency.
- The user must ensure that the Air Filter System is only operated when it is in perfect condition.
- It is the responsibility of the user to inspect the Air Filter System for outwardly recognisable defects, damage or anomalies each time before starting to use the device. Any changes or unusual operational behaviours which are detected must be eliminated immediately. Further use of the Air Filter System must be ruled out until the defect has been fully repaired.
- Cleanliness and freedom from obstruction to and around the work area of the Air Filter System must be ensured.
- It is forbidden to put the safety devices out of operation and/or disassemble them at any time.
- The work specified in the following must only be carried out when the equipment is electrically dead (cables to Mr Beam or current supply unplugged) and only by trained personnel: Preparation, modification, maintenance and inspection activities.
- If the safety devices have to be dismantled for repair or maintenance work, the person carrying out the work is responsible for re-installing the devices immediately and checking them to make sure they work properly before starting up the next time.
- For reasons of safety, it is forbidden to carry out any conversions, modifications or changes to the Air Filter System under any circumstances.

INTENDED USE

Your Air Filter System was developed to extract and filter exhaust air from other laser cutters and 3D printers. Air is extracted from a closed work area via a hose. Vapours, particles and odours are then safely filtered via a three-stage filter for the interior.

It is only permitted to operate the Air Filter System when it is in perfect condition. The manufacturer is not liable for any personal injury and/or damage to property resulting from improper or irregular use of the Air Filter System. The electronic components of the Air Filter System may only be repaired or maintained by appropriately trained persons who are familiar with the intended use of the Air Filter System and the dangers.



Note: Processing conductive materials (including carbon fibres) releases dust, particles and smoke which can lead to lasting damage to the structural components and/or electronics, causing problems such as short-circuits). Using the Air Filter System when processing conductive materials will void the warranty.

Materials which contain chlorine, such as PVC, vinyl and ABS release corrosive vapours during processing which are detrimental to health and can damage the structural components. Using the Air Filter System when processing materials which contain chlorine will void the

warranty. The Air Filter System is not suitable for extracting liquids.

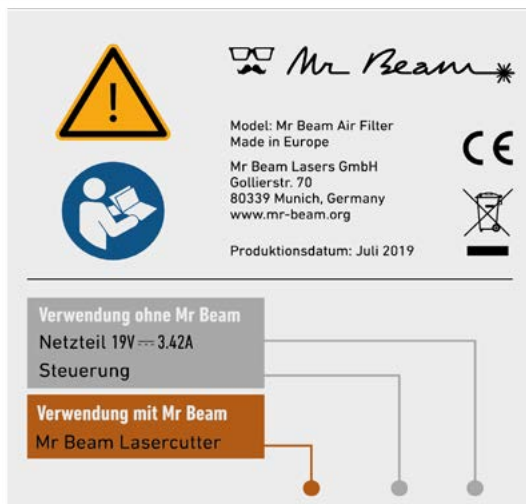
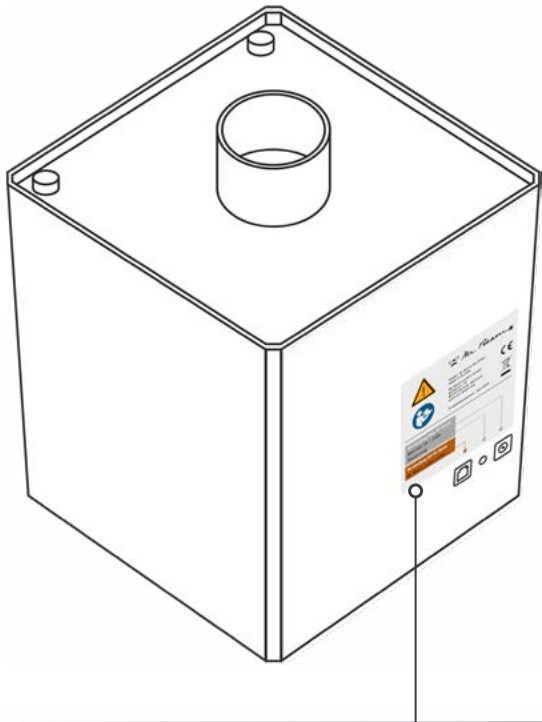
Before starting up the Air Filter System, the user must clarify whether harmful substances can be produced by processing the materials used. If these can injure persons or damage your Air Filter System, these materials cannot be processed. If the Air Filter System cannot filter out the harmful substances produced, then these materials cannot be used. Note that it is the responsibility of the user to stay within the national and regional threshold limits for dust, smokes and gases.

Not complying with the operating, maintenance and servicing rules presented in this manual will rule out any liability on the part of Mr Beam Lasers GmbH in all cases.

If you still have any questions concerning safety before starting work, please contact the Mr Beam Support at:
mr-beam.org/support.

WARNING SIGNS

All warning and information signs attached to your Air Filter System are located in places that may be a source of danger before and/or during operation. Damaged or lost warning and information signs must be replaced immediately.

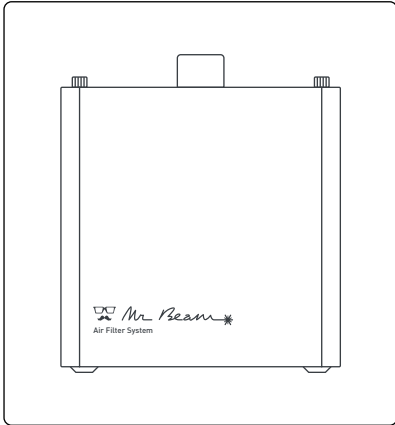


EU DECLARATION OF CONFORMITY (GERMAN)

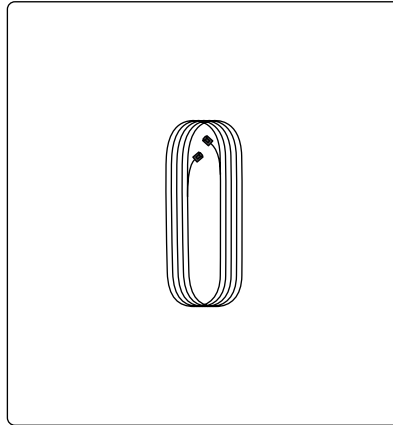
COMPONENTS OVERVIEW

The following sections provide an overview of the different components and connections to your Air Filter System...

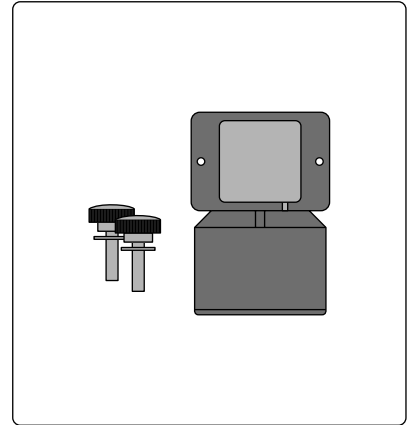
SCOPE OF SUPPLY OF THE AIR FILTER SYSTEM



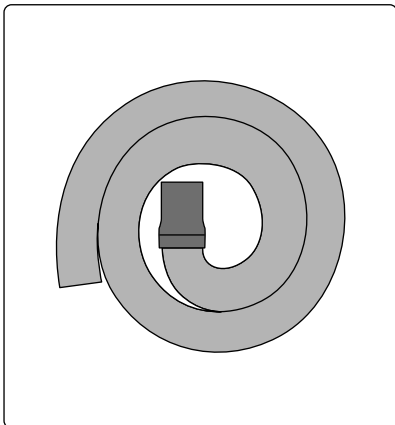
Mr Beam Air Filter System



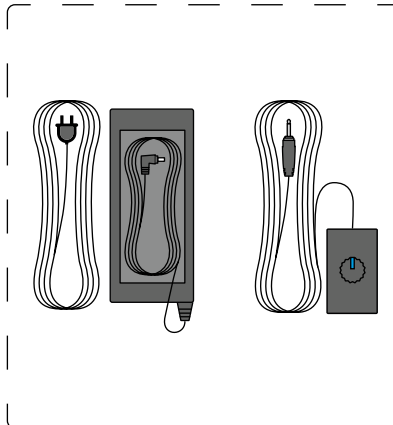
LAN cable
(For use with Mr Beam)



2 screws
2 washers
Suction nozzle



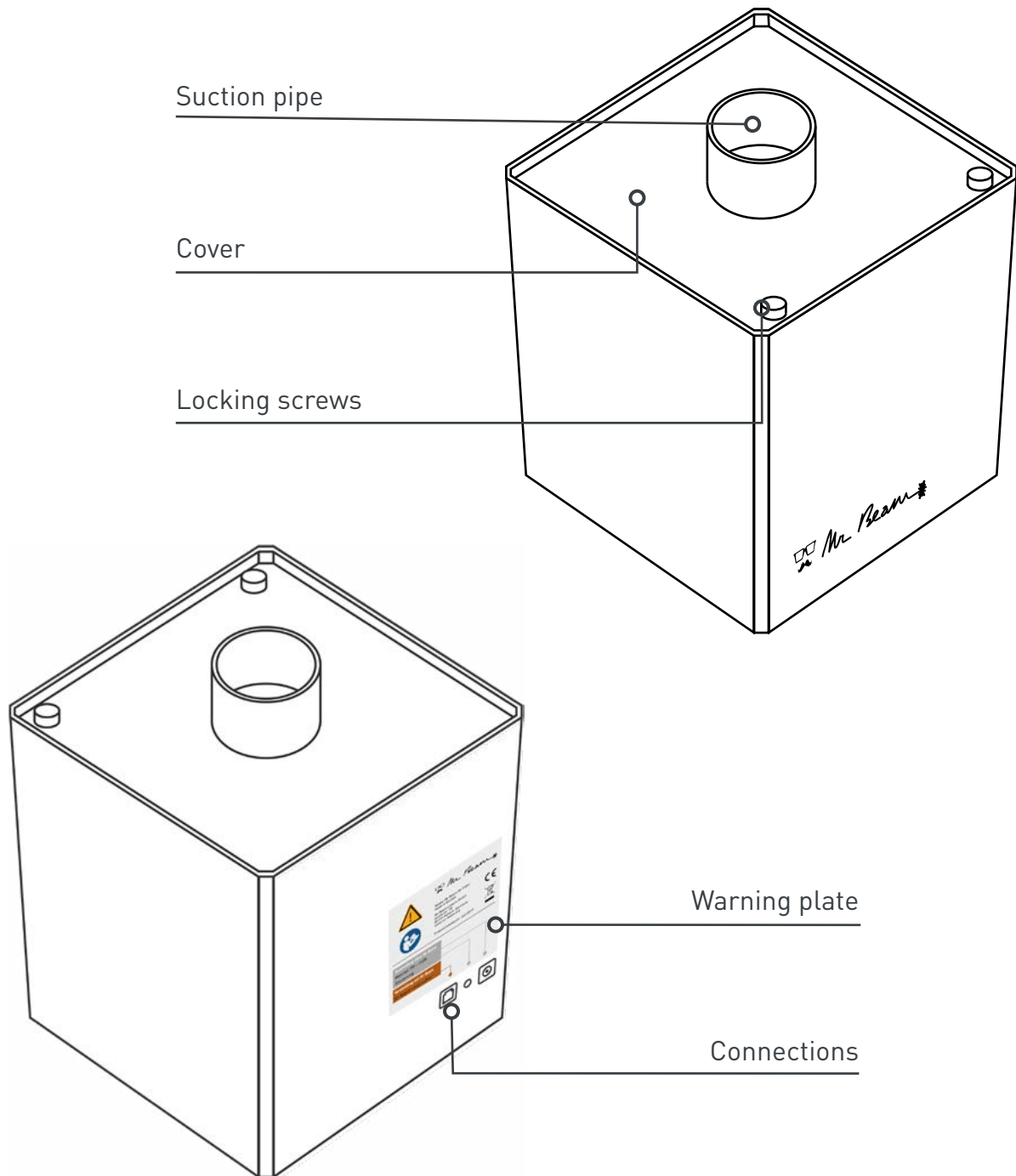
Exhaust air hose



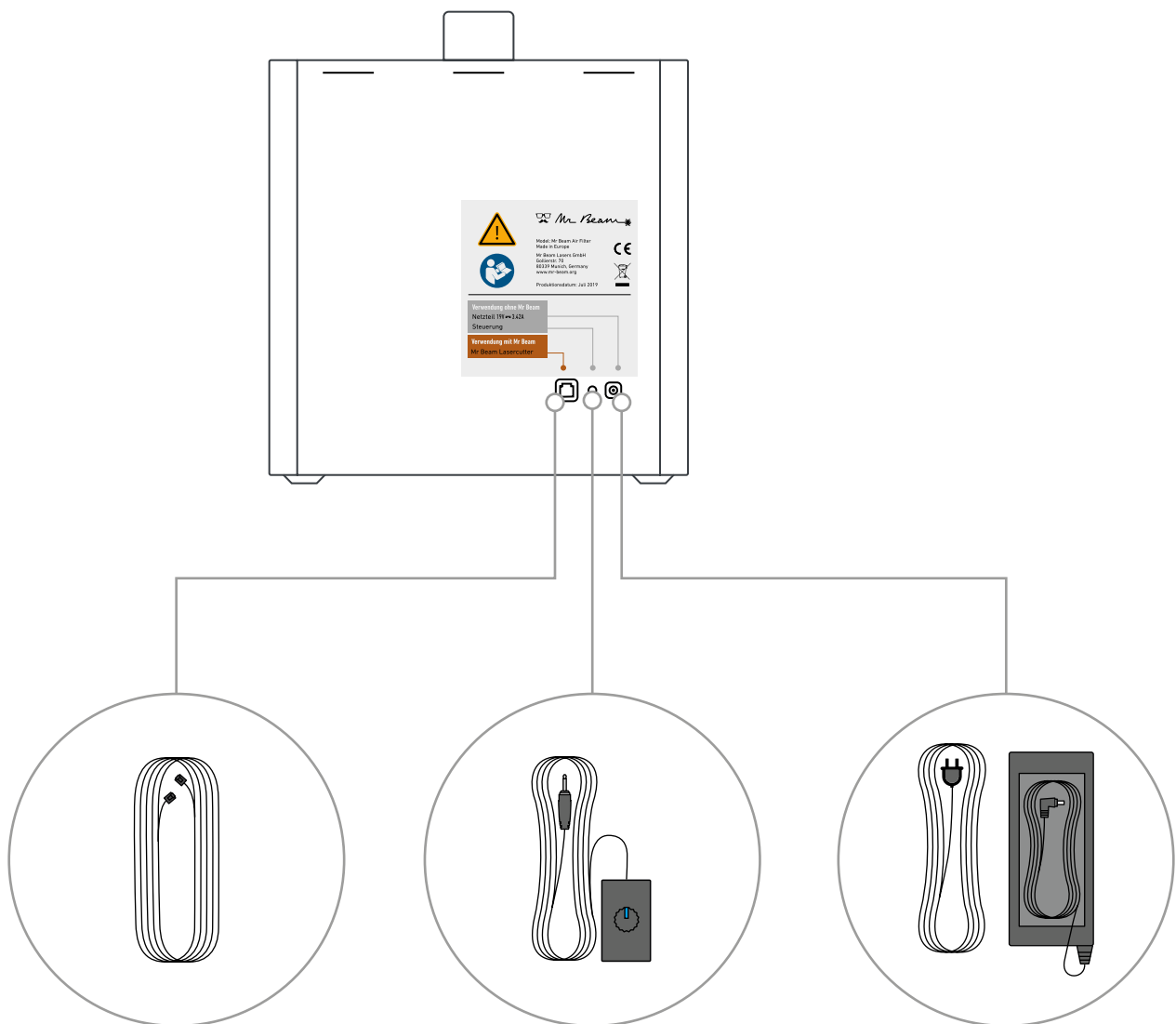
Power cable, manual control unit
(optional)

We offer a manual control unit and power cable for operating with third-party devices. Order it now at: store.mr-beam.org

OVERVIEW OF THE AIR FILTER SYSTEM



CONNECTIONS



Chapter 04

COMMISSIONING

When setting up your Air Filter System, bear in mind that we have assembled and packed the equipment with great care. Please take time to unpack it and set it up just as carefully.

SITE OF INSTALLATION

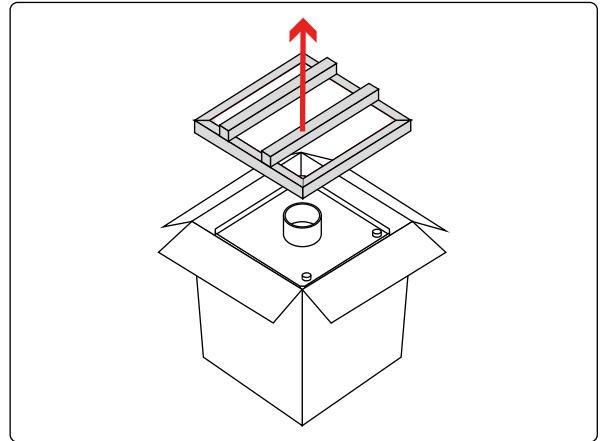
Please keep to the following guidelines when choosing the site of installation before setting up your Air Filter System:

- Operating temperature between 15°C and 25°C
- No large fluctuations in temperature
- Must only be used indoors - exposure to damp must be avoided at all costs
- Air humidity between 30% and 60% and no condensation
- Dust-free environment
- Must not be exposed to strong sunlight (measures to protect from sun)
- Must not be exposed to mechanical vibrations
- Sufficient air circulation
- Place the device on a flat, level surface to ensure that the air can be discharged from the bottom.
- Do not cover the Air Filter System
- The plug socket must be easily accessible and in direct proximity to the device. You must be able to pull out the plug from the mains socket in an emergency.
- Fire extinguisher and dousing blanket in the immediate vicinity

UNPACKING

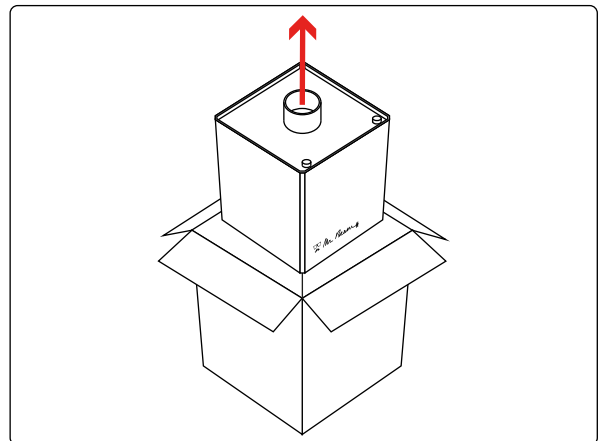
1. Opening the box

Place the box on a flat surface. Please do not use a sharp implement to open the box. Then pull out the upper transport-protective packing.



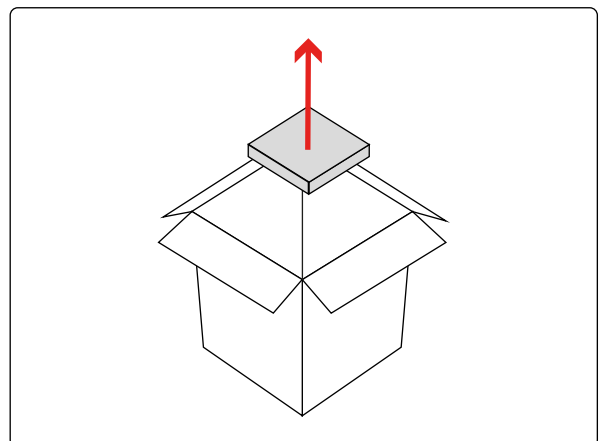
2. Removing from the box

Remove the Air Filter System from the box.



3. Removing the accessories

Pull out the box with the accessories from the lower transport-protective packing.



USE WITH MR BEAM

The Air Filter System enables you to operate your Mr Beam in closed areas without exhaust air extraction to the outside. This ensures that unfiltered exhaust air cannot escape from your Mr Beam and that the user is never put in danger.

Before starting up the Air Filter System, the user must clarify whether harmful substances can be produced by processing the materials used. If these materials can injure persons or damage your Air Filter System, they cannot be processed. If the Air Filter System cannot filter out the harmful substances produced, these materials cannot be used. Note that it is the responsibility of the user to stay within the national and regional threshold limits for dust, smokes and gases.

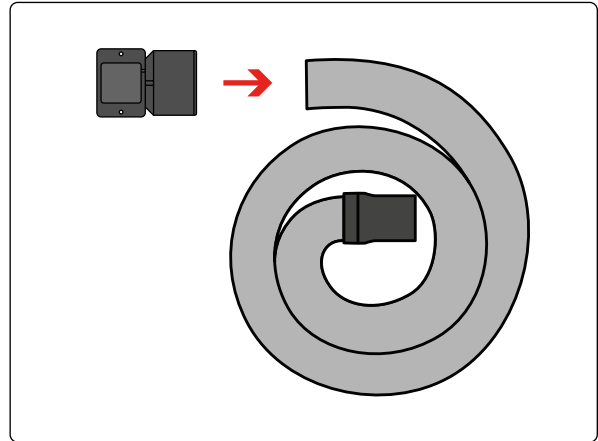
The suction power is regulated automatically according to the presence of exhaust gases. If a large quantity of exhaust gas is produced during processing, e.g. when engraving wood, suction power increases. This will be accompanied by higher or fluctuating noise levels from the corresponding exhaust. The smoke concentration is determined by an optical sensor. If the sensor malfunctions, suction power increases to the maximum for safety reasons.

CONNECTING MR BEAM

1. Connecting the suction nozzle

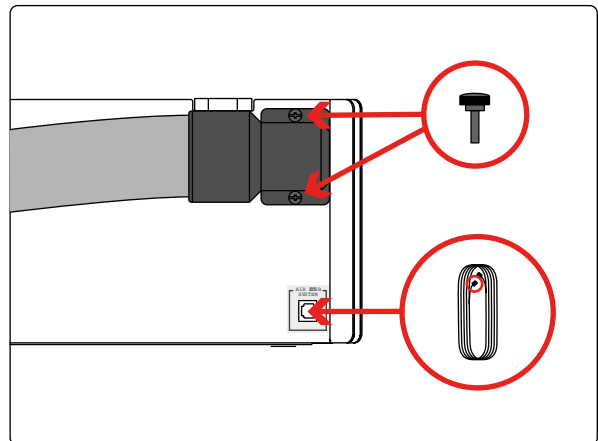
Connect the suction nozzle to the free end of the exhaust air hose.

Note: The exhaust air hose is fitted with a left-hand thread.



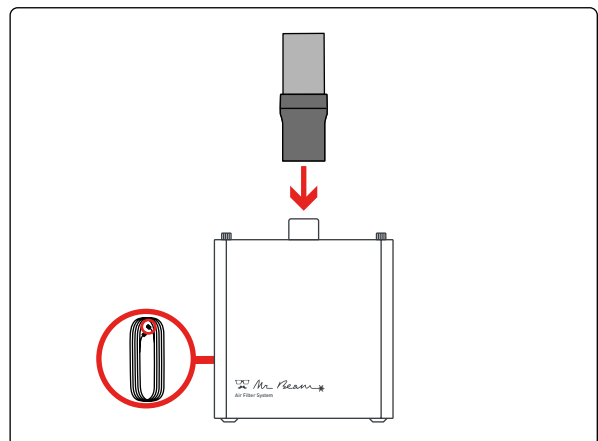
2. Connecting to Mr Beam

Fit the suction nozzle to your Mr Beam with the two screws and washers provided. Then connect the cable from the exhaust system to your Mr Beam.



3. Exhaust air discharge

Connect the exhaust air hose to the Air Filter System. Then connect the cable from the Air Filter System to your Mr Beam.



USE WITH THIRD-PARTY DEVICES

With the optional manual control unit, the Air Filter System can also be used on third-party devices. In contrast to the automatic regulation used with the Mr Beam, when used with third-party devices, the exhaust air flow rate is controlled manually.

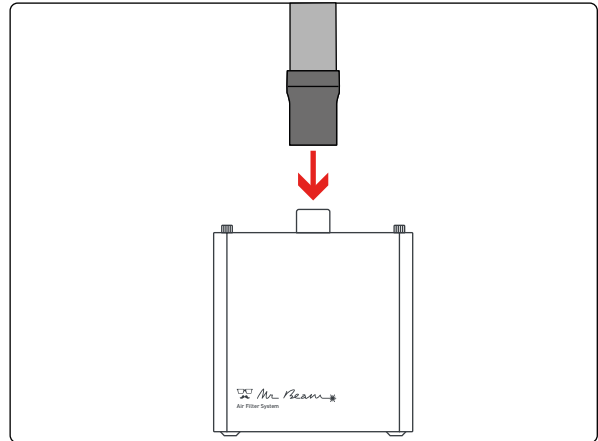
Before starting up the Air Filter System, the user must clarify whether harmful substances can be produced from processing the materials used. If these materials can injure persons or damage your Air Filter System, they cannot be processed. If the Air Filter System cannot filter out the harmful substances produced, then these materials cannot be used. Note that it is the responsibility of the user to stay within the national and regional threshold limits for dust, smokes and gases.

The user must ensure that the suction power of the Air Filter System is sufficient for the intended use.

CONNECTION TO THIRD-PARTY DEVICES

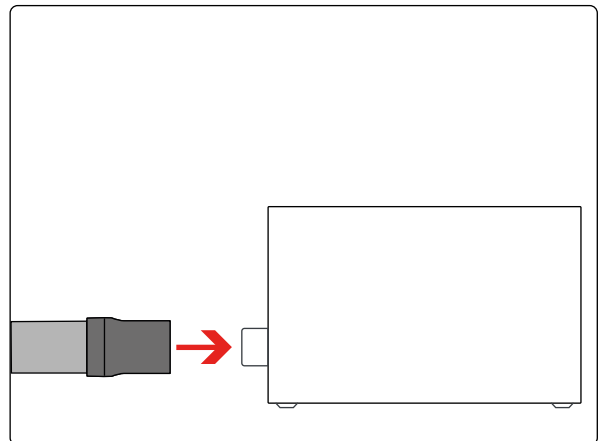
1. Connecting the suction nozzle

Connect the exhaust air hose to the Air Filter System.



2. Connection to a third-party device

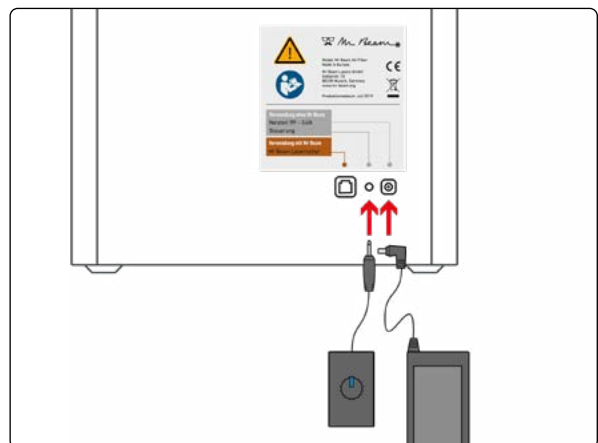
Connect the other end of the hose to the desired third-party device.



3. Manual control unit

Connect the manual control unit to the connection (centre) provided for it. Now connect the mains cable to the connection on the Air Filter System (right) and the plug socket.

The suction power of the Air Filter System can be controlled manually using the external control unit.



CHANGING AND CLEANING THE FILTER

Regular maintenance and servicing is essential to ensure that your Air Filter System can operate continuously without malfunctioning.

The following sections contain instructions for normal cleaning procedures.

FILTER CHANGE

The filter must be regularly changed to ensure that you continue to obtain high-quality results from your Air Filter System. Before starting to change the filter, disconnect all the connections from the device.

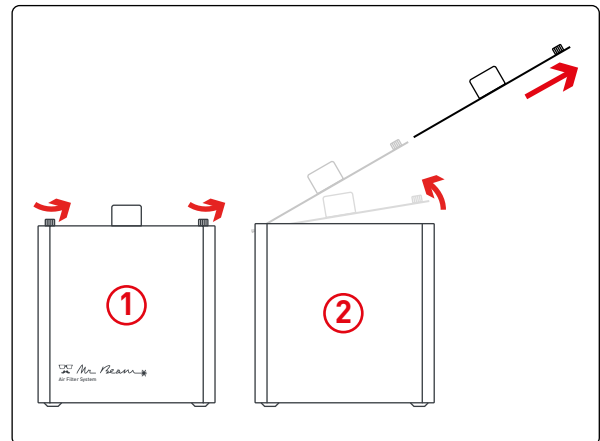
To ensure that the Air Filter System cleans the exhaust air in accordance with regulations, the pre-filter mat must be changed every 100 operating hours and

the filter unit every 400 operating hours. Help is provided under Settings -> Exhaust system.

The pre-filter mat and the filter unit is available from the Mr Beam online shop: store.mr-beam.org

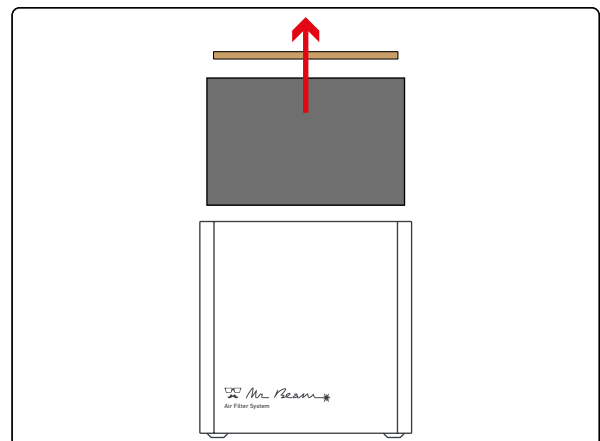
1. Removing the protective cover

Unscrew the locking screws (1) and remove the cover as shown (2).



2. Removing the filters

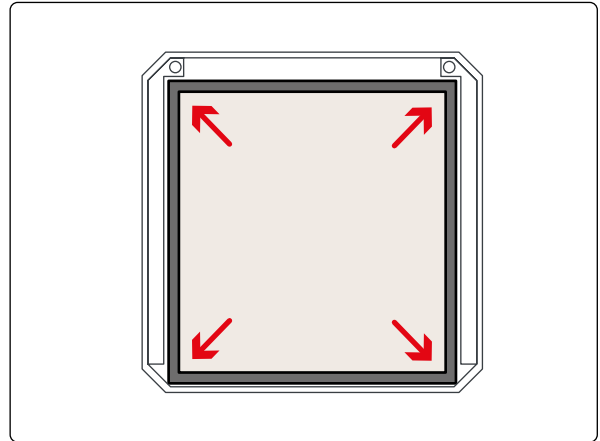
Remove the pre-filter (beige) and if necessary the filter (grey).



FILTER CHANGE

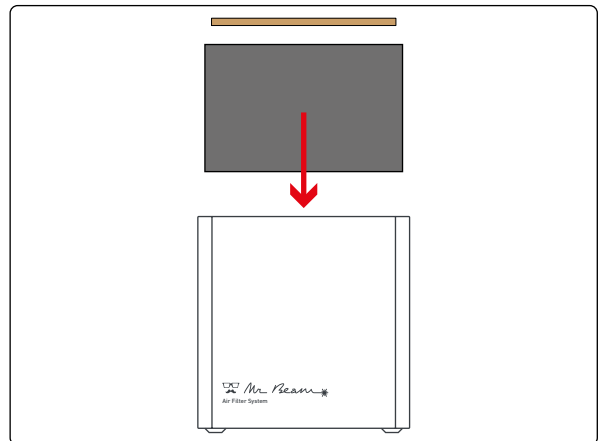
3. Checking the pre-filter

Make sure that the new pre-filter mat lies precisely in the filter cartridge and covers the entire surface.



4. Inserting the filters

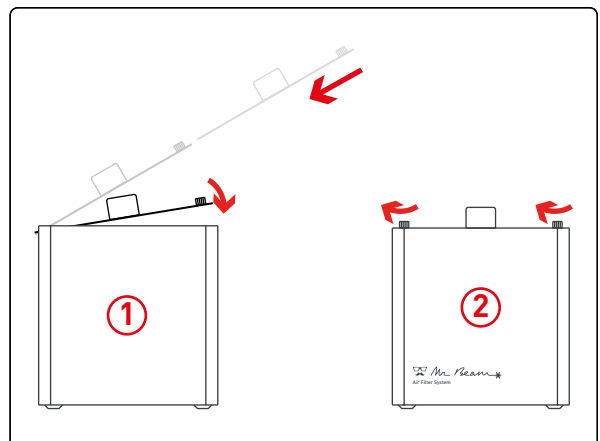
Insert the filter cartridge including the pre-filter.



5. Closing the housing

Place the cover as shown and close the housing with the two screws.

Make sure that the hose is properly reconnected to the Air Filter System after the filter change.



CLEANING AND REPAIR

Cleaning

Cleaning includes wiping the dust from all the visible parts and surfaces on your Air Filter System. Before starting to clean, disconnect all the connections from the device.

Do not use aggressive or chlorine-containing cleaning agents for cleaning. We recommend using mild soap solution or commercial detergents in low concentrations. Failing to handle chemicals properly can cause personal injury and material damage for which the user alone is responsible.

It is not necessary to use tools or to unscrew parts for regular cleaning.

Repair

The Air Filter System is not intended to be repaired by the user. To ensure that your air filter system can be quickly put into operation again when there is a defect, please contact customer service at:
mr-beam.org/support

Chapter 08

A D D I T I O N A L
I N F O R M A T I O N

TECHNICAL SPECIFICATIONES

Dimensions (approx.)

Width/depth/height	270 x 270 x 270 mm,
Weight	5.6 kg
Maximum sound level	56 dB(A)

Ambient conditions

Ambient temperature	15 - 25°C
Humidity	30% - 60%

Electrical power supply

Power consumption:	19V, 65 - 40 W
--------------------	----------------

Note: Subject to technical changes

STORAGE & TRANSPORT/SUPPORT

Storage & Transport

The guidelines from Section 4 “starting procedure” must be followed for each of the following subsections. The temperatures and humidities in particular must not be outside of the specified range.

Please retain the original packing and padding material.

- If your Air Filter System is not used for a brief period (such as a holiday), we recommend that you cover it to protect it from dust and other contaminants.
- To store your Air Filter System for a longer period, it must be packed in the original packing and must not be exposed to wide fluctuations in temperature or humidity.
- The Air Filter System must only be dispatched and transported in its original packing and padding material. The Air Filter System must not be thrown, pushed, shaken or subjected to other mechanical loads.

Mr Beam Support

If you need assistance to eliminate a problem, please consult Customer service at any time at:

mr-beam.org/support

Please read through the manual thoroughly first and install the latest software update before contacting Customer support.

DISPOSAL

Dismantling

The Air Filter System can be disposed of as a complete device. You therefore do not have to dismantle it before disposal. Simply hand over the cables and suction hoses to the old electronic equipment collecting point separately from your air filter system. Please follow the appropriate guidelines for your country. If you are required to dismantle the equipment, please consult Mr Beam Lasers GmbH. As described in Section 2 “Safety & conformity”, the Air Filter System is not intended to be disassembled by the user.

Disposal, environmental aspects

As directed by local laws and regulations, the Air Filter System must not be disposed of in the domestic refuse.



Your Air Filter System is electronic equipment and must be disposed of via the local collecting points for old electronic devices in compliance with the regulations of the country concerned for old electrical and electronic devices.

If you have any further questions, please contact Mr Beam Lasers GmbH.

WEEE Number: DE17853778

Chapter 09

GENERAL TERMS
AND CONDITIONS

GENERAL TERMS AND CONDITIONS

The applicable and latest general terms and conditions for Mr Beam Lasers GmbH can be found at:
mr-beam.org/agb

CONTACT ADDRESSES

Postal Adress	Mr Beam Lasers GmbH Gollierstr. 70 80339 München Germany
Mr Beam Support	mr-beam.org/support
Instagram	instagram.com/mrbeamlasers/
YouTube	youtube.com/channel/UC8CIMavXllp6S61JgEqSm4A
Facebook	facebook.com/mrbeamlasercutter/
Twitter	twitter.com/MrBeamLasers

