



# MANUAL

## dreamcut & dreamcut [S] & [X]

Translation of the original German manual

© 2022 Mr Beam Lasers GmbH | Munich, 23 May 2023 | Revision 2.0



# Manual

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## Welcome to the creative Mr Beam Community

Finally, the time has come: In front of you is your Mr Beam laser cutter, ready to help you realise your creativity. We have worked hard for this moment for several years and put a lot of heart and soul into development and production.

You can find us on many social media using the hashtag [#madewithmrbeam](#) such as Instagram, Twitter or Facebook, with inspiration from other members of the Mr Beam community. Naturally, we would also be happy if you share your works there and tell your friends about it. We are curious to see how you use your Mr Beam and what you will create with it!

**We'd love to hear your feedback, either in images or text.**

If something doesn't work out so well, please contact us at any time:  
[www.mr-beam.org/ticket](http://www.mr-beam.org/ticket)

**Have fun with your Mr Beam!**  
The entire Mr Beam team

## Section 01

# WELCOME

We are delighted that you have chosen a Mr Beam!  
Please read this manual thoroughly, even if you are already familiar with some of the functions.



Knowledge base  
[www.mr-beam.org/support](http://www.mr-beam.org/support)



Digital manual  
[www.mr-beam.org/downloads](http://www.mr-beam.org/downloads)

## 1.1 Using the manual

**Note:** Before starting up and using Mr Beam 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!  
The manual is to be regarded as part of the product.  
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.

Accessories must be compatible with the basic unit.

For further inquiries, please consult Mr Beam support: [www.mr-beam.org/ticket](http://www.mr-beam.org/ticket).

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



**Note/Attention:** In these areas, there is a risk of material damage if the instructions of the manual are not observed!



**Caution:** These areas represent a particular danger to the user or personnel responsible for maintenance if the manual is not complied with!



**Caution:** In these areas, pay special attention to the possible dangers of the laser beam!

Please make sure that you have the latest version of the Mr Beam manual.

The latest version of the manual can be found at:  
[www.mr-beam.org/downloads/](http://www.mr-beam.org/downloads/)

Please keep the manual for subsequent reference. The manual must be passed on to any new owner or user of the product.

This is a translation of the original German manual. If your national language is not included in the manual, you can download it at  
[www.mr-beam.org/downloads/](http://www.mr-beam.org/downloads/)

Issue date of this manual:  
23 May 2023

## 1.2 About Mr Beam

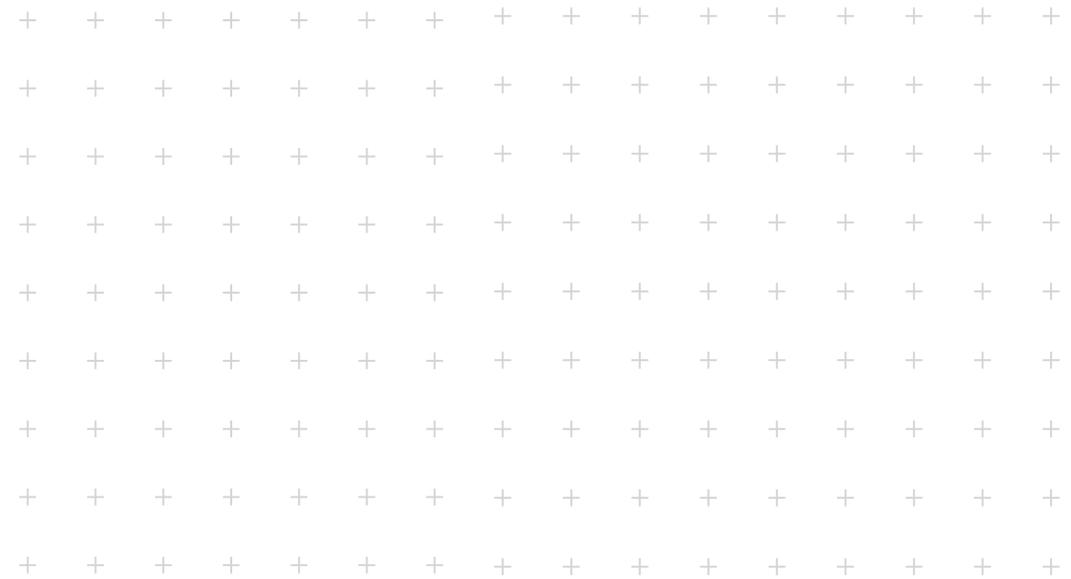
Your Mr Beam is designed for contactless cutting and engraving of a variety of materials. With the help of a laser beam, heat is generated selectively so that material evaporates, burns or melts in a targeted manner. This thermal process can be used to make cuts and engravings on flat materials. Due to its high precision, the process is suitable for cutting out complex shapes and engraving filigree motifs.

The user can connect to a computer via a router or directly via Wi-Fi to Mr Beam. With the exception of the Google Chrome browser, no additional software is required to operate Mr Beam. Your Mr Beam is already equipped with all the necessary software and is operated by the user via the web interface of BeamOS.

After files in common file formats have been loaded into the design library, the user can select settings for the material. The laser process is prepared by the computer or tablet and started by pressing the button. A camera gives a preview of the work surface, which allows an accurate<sup>1</sup> placement of the design on the workpiece.

### Manufacturer

Mr Beam Lasers GmbH  
Gollierstr. 70  
80339 Munich  
Germany

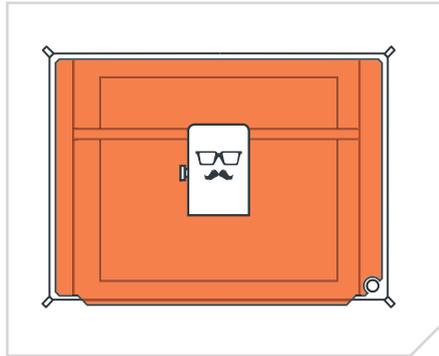


## Section 02

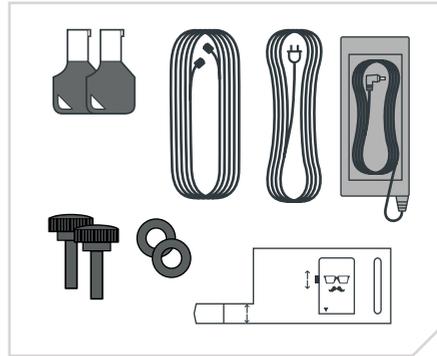
# OVERVIEW OF COMPONENTS

The following sections provide an overview of the different components and connections to your Mr Beam.

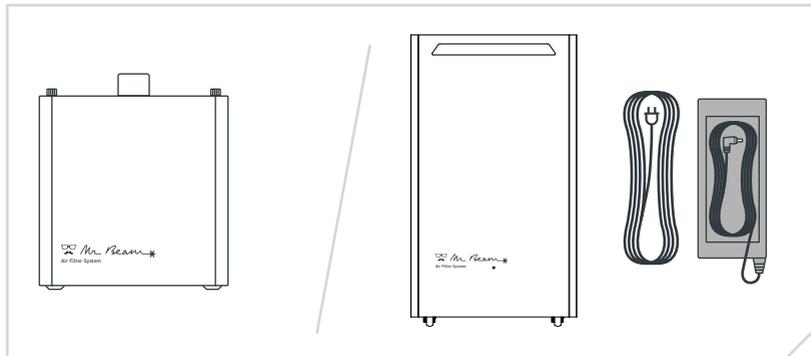
## 2.1 Scope of supply of Mr Beam with Air Filter System



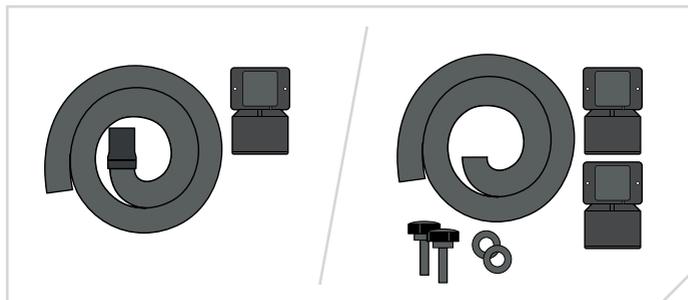
Laser head and Mr Beam housing



2 keys, focus tool, 2 screws, 2 washers cable  
Mr Beam Air Filter System, power cable and  
power supply

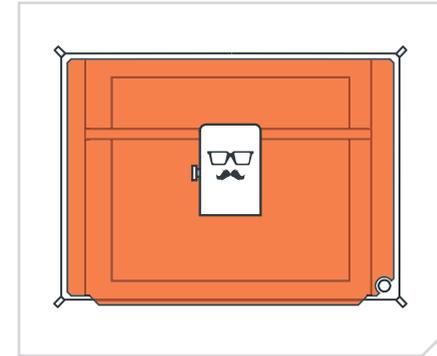


Air Filter System (Air Filter II)    Air Filter System (Air Filter III), power cable and power supply

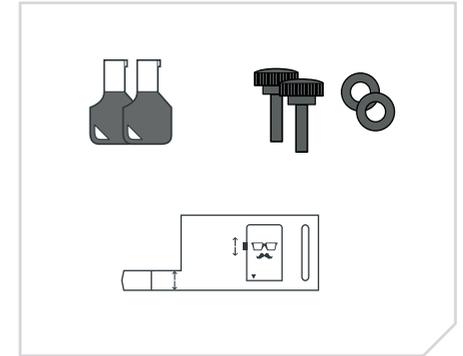


Exhaust air hose, 50 mm  
suction nozzle and Mr Beam  
suction nozzle (Air Filter II)    Exhaust air hose, 2 Mr Beam  
suction nozzle, 2 screws and  
2 washers (Air Filter III)

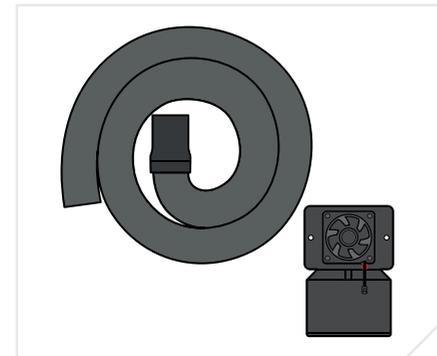
## 2.2 Scope of supply of Mr Beam without Air Filter System



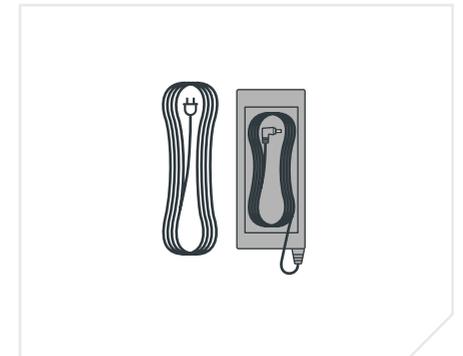
Laser head and Mr Beam housing



2 keys, focus tool, power cable and power supply



Exhaust air hose, 50 mm suction nozzle,  
Mr Beam suction nozzle and fan



power cable and power supply

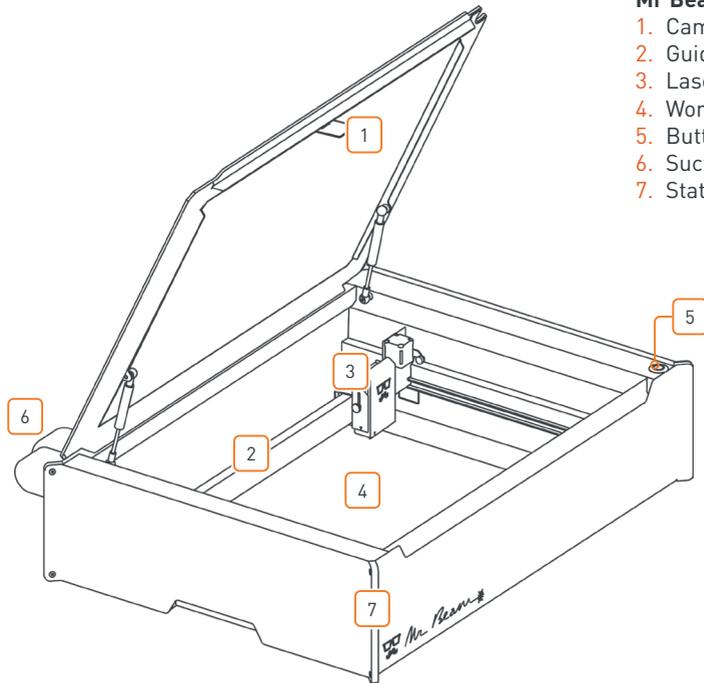


For indoor use we recommend  
the Mr Beam Air Filter System.  
If you do not have one yet, order  
it now from our store at  
[www.mr-beam.org/products](http://www.mr-beam.org/products)

## 2.3 Overview of Mr Beam

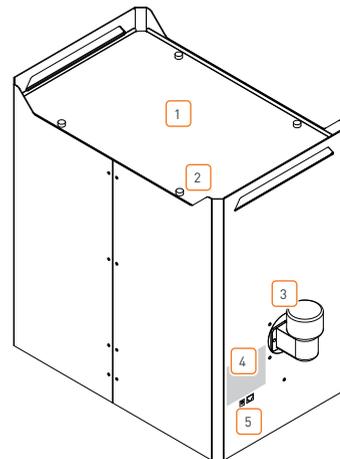
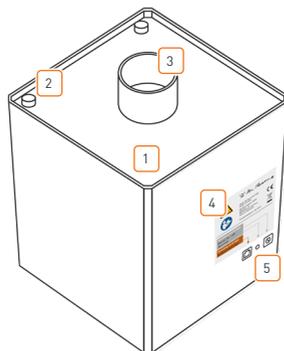
### Mr Beam laser cutter:

1. Camera
2. Guide rail
3. Laser head
4. Working area
5. Button
6. Suction nozzle
7. Status Light

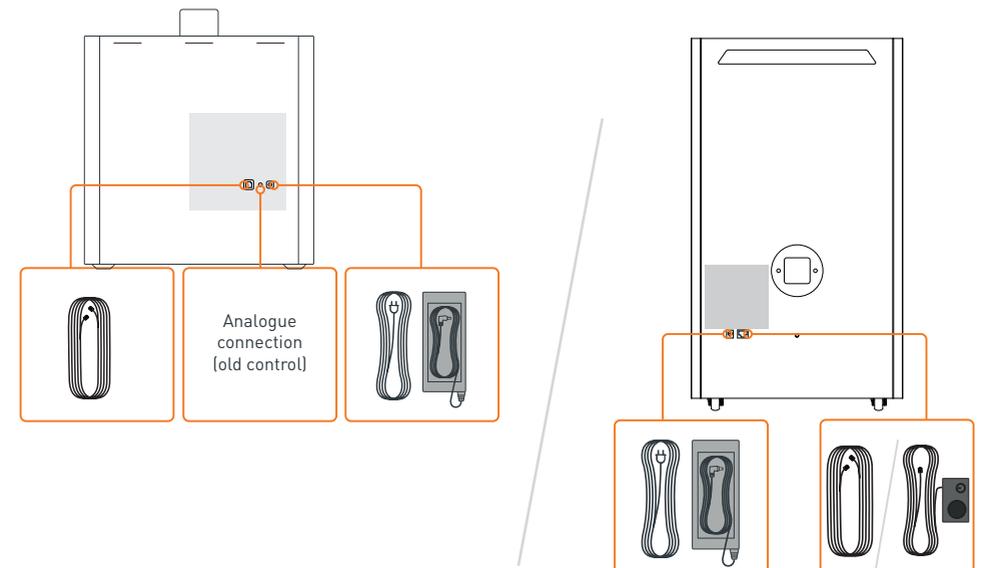
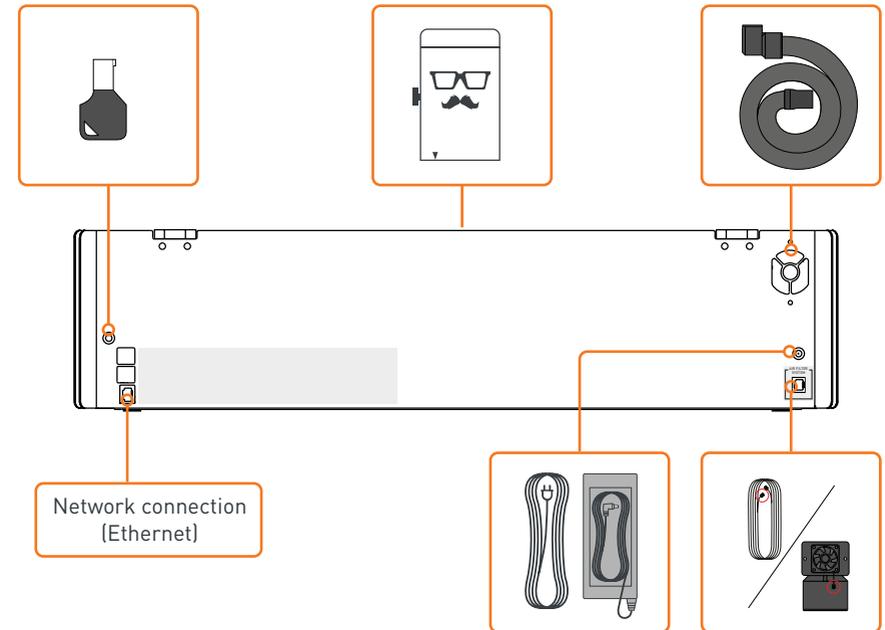


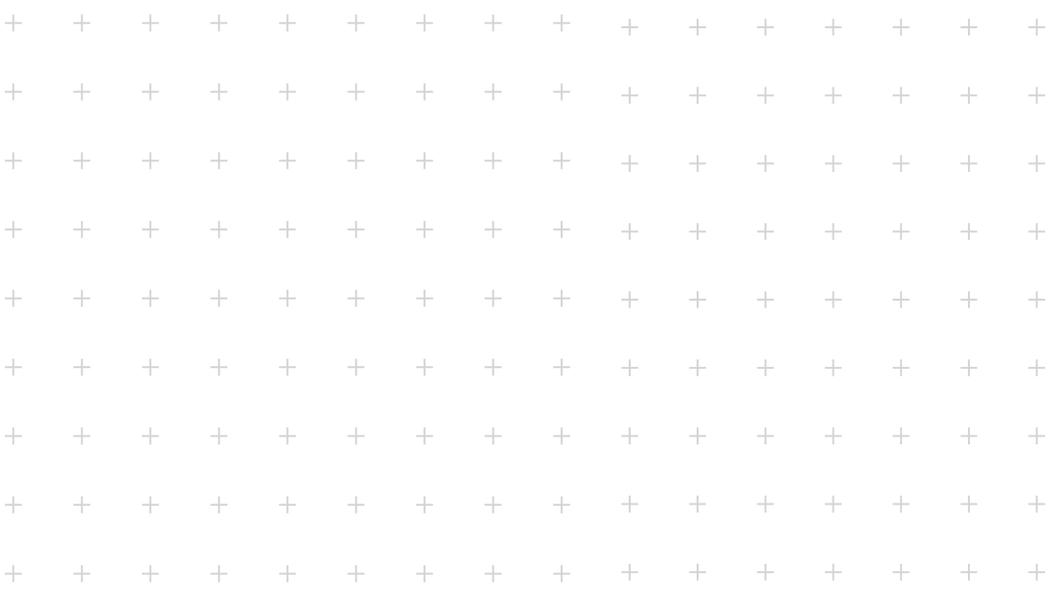
### Mr Beam Air Filter System:

1. Cover
2. Locking screws
3. Exhaust air hose connection
4. Safety sign
5. Connections



## 2.4 Connections





## Section 03

# SAFETY AND CONFORMITY

Please note that this section is particularly important. Your Mr Beam 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 Mr Beam into operation!

## 3.1 Intended use

### Mr Beam

Your Mr Beam has been developed for contactless cutting and engraving of a variety of materials. These include, but are not limited to, wood, acrylic, cardboard, paper, leather, selected plastics, anodised aluminium, etc. For a list of approved and tested materials and thicknesses, please refer to the following webpage: [www.mr-beam.org/collections/materialien](http://www.mr-beam.org/collections/materialien) For safety reasons, only materials approved by Mr Beam Lasers GmbH are approved for processing with your Mr Beam.

### It is only permitted to operate Mr Beam 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 Mr Beam.

Conversion and disassembly of the Mr Beam and its laser/laser unit will result in the loss of laser class 1 and may cause personal injury and/or damage to property. The manufacturer accepts no liability for these.

Repair or maintenance of Mr Beam may only be carried out by persons who are familiar with the intended area of application and the dangers of Mr Beam. The case may only be opened after approval by support. Failure to do so will void the warranty.

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.



**Note:** The warranty does not apply to damage or defects caused by non-compliance with the manual.

The technical specifications for the operator according to the Occupational Health and Safety Ordinance on Artificial Optical Radiation (Arbeitsschutzverordnung zu künstlicher optischer Strahlung – OStrV) and EC/2006/25 can be found in the technical specifications (see [Section 7.1 "Technical Specifications - Mr Beam"](#)).

### Air Filter System

Your Air Filter System was developed to extract and filter exhaust air from laser cutters and 3D printers. Air is extracted from a closed work area via a hose. Vapours, particles and odours are then safely removed from the interior via a three-stage filter. If you do not use the Air Filter System with Mr Beam, the additional purchase of a power supply and manual control is required.

It is only permitted to operate the Air Filter System when it is in perfect condition. In addition, the Air Filter System is also subject to the rules regarding any improper or unintended use of Mr Beam.

## 3.2 Basic safety instructions

### Use the device only in original condition

The use of a device that has recognizable defects or that has adaptations that have not been approved by Mr Beam Lasers GmbH is not permitted and can lead to damage to property or bodily injury.

- » Before each use, you are obliged to inspect Mr Beam for outwardly recognisable defects, damage or anomalies. Possible defects include damage to the exhaust hose and protective cover, as well as bent parts on the housing. Any changes or unusual operational behaviour which are detected must be eliminated immediately. Further use of Mr Beam is impermissible until the defect has been fully repaired.
- » To avoid improper adjustments and thus uncontrolled emission of the laser beam, adjustment of the laser optics takes place before delivery and may only be carried out by specially trained personnel with measuring equipment.
- » Only operate Mr Beam with the devices and spare parts that are included in the scope of supply and/or approved by Mr Beam Lasers GmbH.
- » Do not under any circumstances rebuild or disassemble your Mr Beam or its laser or laser unit. This excludes the care and maintenance procedures as described in Section 6 "Servicing and Maintenance". Do not operate any device that has been modified or disassembled!
- » To assess the potential hazard posed by laser systems, they are divided into eight safety classes: 1, 1C, 1M, 2, 2M, 3R, 3B and 4. Mr Beam is a class 1 laser. This is ensured by its sealed protective housing and its safety devices.

### Avoid bodily injury due to improper use

A laser source is contained in the protective housing of Mr Beam, which emits an intense and visible laser beam. Failure to follow safety measures can cause retinal burns, loss of sight, and burns to the skin and clothing. Without protective devices, this direct light or diffusely reflected light poses a danger to people and objects.

- » To ensure safety class 1, refrain from any operation that compromises the safety of Mr Beam.
- » To avoid injury to third parties, you are obliged to ensure that Mr Beam is set up only by authorised persons (e.g., take precautions against unauthorised use and/or remove the key).
- » Decommissioning and/or disassembly of safety devices and any conversion or modification of Mr Beam is at all times prohibited. Failure to follow this rule may result in serious injury.
- » Never bypass the safety circuit (interlock).

### Avoid leakage of harmful fumes

During the laser process, the processed material is vaporised by Mr Beam. The operation therefore produces burning odours and vapours that under certain circumstances can be harmful to health.

- » Do not open the protective cover of Mr Beam during operation. If necessary, pause the work process by pressing the button. Then wait a short time for the suction system to remove vapours. Now you can open the protective cover. If possible, we recommend that you do not interrupt the work process in order to avoid an incomplete work result.
- » Make sure that your Mr Beam is operated exclusively with the appropriate extraction/filter system.
- » Process only suitable materials. (for details, see "Notes on how to avoid damaging property– avoid the use of unsuitable materials")

### Avoid fire

Flammable materials can be ignited by the laser beam and lead to burn injuries.

- » There is a risk of fire and damage to property when operating the laser. You are obliged to be present during operation of the laser.
- » You are obliged to remove all workpiece residues after each operation. Do not use the inside or immediate surroundings of Mr Beam to store combustible materials.

## 3.3 Safety features of the Mr Beam

### Safety metal housing

- » The housing construction of the Mr Beam is made entirely of aluminum with no line of sight into the interior to ensure that no laser light escapes.

### Safety protective glass

- » The protective cover made of 3.5 mm thick, impact-resistant Makrolon absorbs all blue laser radiation with wavelengths of 440 - 460 nm (OD 6+) thanks to its special colour mixture.
- » The service life of an undamaged cover corresponds to the machine service life of at least 10 years.

### Safety switch

- » The sensors and actuators have multiple versions and their function is monitored during operation. If errors are detected, the Mr Beam is stopped with an error message and its function is blocked. This happens before the safety system is impaired in its function by the failure of several components. (According to DIN EN 60825-1, performance level D in class 3 is required for class 1 laser housings)

### Fire detection

- » The Mr Beam has temperature-dependent fire detection. Depending on the temperature rise, the laser job is cancelled or paused.

### Monitoring of the exhaust air system

- » During the laser process, the exhaust air contamination is constantly measured so that the speed of the exhaust air system can be intelligently adjusted.
- » At the same time, the fan speed is monitored to ensure that it is not clogged or excessively dirty.

### 3.4 Notes on avoiding damage to property

#### Avoid using unsuitable materials

The processing of certain materials can damage Mr Beam and thus lead to operational failures.

- » A complete list of all suitable materials and their tested material thicknesses can be found in our knowledge base at [www.mr-beam.org/materialien](http://www.mr-beam.org/materialien).
- » 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). The processing of conductive materials will void the warranty.
- » Materials which contain chlorine, such as PVC, release corrosive vapours during processing which are detrimental to health and can damage the structural components. Processing materials containing chlorine will void the warranty.
- » Many metals, especially uncoated aluminium, copper, silver and gold, must not be processed with the laser due to the low absorption, as these materials reflect most of the laser beam. Under no circumstances should these metals and/or other reflective materials be placed in the beam path of the laser, as directional reflections may damage and/or destroy the protective cover.
- » The engraving of a commercially available mirror may only be done on the non-reflective back, as the front reflects the light in a directional manner and can damage and/or destroy the protective cover.

- » Before using the device, ascertain whether harmful substances can be produced by the processing of materials that can harm Mr Beam itself, the Air Filter System, the environment and/or people. If the resulting harmful substances cannot be filtered by the Mr Beam Air Filter System, it is not permitted to use these materials. Note that it is the responsibility of the user to stay within the national and regional limits for dust, smoke and gases.

### 3.5 Qualification of the user

- » If several persons are working with Mr Beam, 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 sufficiently qualified and familiar with the safety regulations.
- » Persons who are under age are only permitted to use Mr Beam under the supervision of an adult.
- » Adjustment of the laser optics may only be carried out by self-trained personnel using measuring equipment.

### 3.6 Description of the workplace



- » The electrical socket must be easily accessible and must be in direct proximity to the device. In an emergency, you must be able to unplug the power plug and the key.
- » Adequately secure the electrical circuit of the outlet.
- » Make sure that cleanliness and freedom from obstruction to and around the Mr Beam work area is ensured.
- » Make sure that a fire extinguisher and fire blanket are in close proximity at all times.
- » The ambient temperature must be between 5°C and 25°C. Avoid large fluctuations in temperature
- » Use Mr Beam indoors only to avoid contact with moisture. Non-observance may result in damage to individual parts. (Air humidity between 30% and 60% and no condensation)
- » Use Mr Beam only in dust-free environments.
- » Avoid strong sunlight falling on Mr Beam.
- » Avoid strong mechanical shocks acting on Mr Beam.
- » Provide sufficient air circulation in the room so that possible harmful substances do not accumulate.
- » To avoid vibrations from other machines, place Mr Beam on a stable, flat and horizontal work surface that is used exclusively for it.





Mr Beam Lasers GmbH  
 Gollierstr. 70  
 80339 Munich, Germany  
 www.mr-beam.org

Laser cutting and engraving machine  
 Model: Mr Beam  
 Weight: 9,8 Kg  
 Made in Germany



serial number  
 production date

Maintenance

Switch off device and remove power plug before any cleaning or maintenance.

This device can produce toxic exhaust gases during operation, which must be filtered.

**Class 1 Laser**  
 Consumer Laser Product  
 Class 1 DIN EN 50689

Network

Maintenance and inspection activities are only to be conducted by trained personal and the device must be switched off.

Caution - visible laser radiation, when open and safety interlocks defeated avoid eye or skin exposure to direct or scattered radiation.



Pmax = 10W cw  
 λ = 450nm

Hereby, Mr Beam Lasers GmbH declares that the radio equipment type "Mr Beam" is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.mr-beam.org/conformity

Frequency 2.4 GHz: Frequency range: 2400 - 2483.5 MHz max. transmission power: 100 mW  
 Frequency 5GHz: Frequency range: 5150 - 5250 MHz / 5250 - 5350 MHz / 5470 - 5725 MHz max. Transmission power: 200mW / 100mW / 500mW

This device incorporates a RF module. The RF module is already certified under the FCC ID:2ABCB-RP132 and IC ID: 20953-RP132.

Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.

EN

**laser class 1**

Caution - visible laser radiation, when opened and safety interlocks defeated avoid eye or skin exposure to direct or scattered radiation.



Warning symbols and laser specifications:

- $P_o = 10W\ cw$   
 $\lambda = 450nm$
- $P_o = 5W\ cw$   
 $\lambda = 450nm$

Power 19V --- 4.7A

Mr Beam Air Filter System

Mr Beam AF3  
 Model: AF3  
 Made in Europe  
 Weight: 19 kg  
 Type of device: Exhaust air filter

Mr Beam Lasers GmbH  
 Gollierstr. 70  
 80339 Munich, Germany  
 www.mr-beam.org

WEEE - DE17853778

UK CA CE

Mr Beam AF2  
 Model: AF2  
 Made in Europe  
 Weight: 5,8 kg  
 Type of device: Exhaust air filter

Mr Beam Lasers GmbH  
 Gollierstr. 70  
 80339 Munich, Germany  
 www.mr-beam.org

WEEE - DE17853778

UK CA CE

# Chapter 04

## SETUP

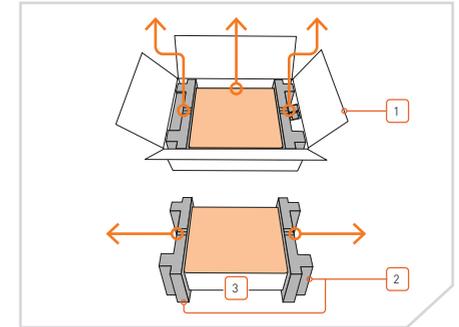
In the following chapter, we will guide you from unpacking Mr Beam to setting up the network connection.

When setting up your Mr Beam, 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.

### 4.1 Unpacking

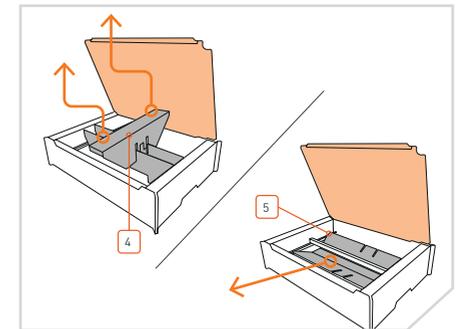
#### Open the box and remove it from the box

1. Place the box [1] on a flat surface.
2. Open the box [1]. Do not use sharp objects that could damage the protective cover.
3. Remove all the accessories [2].
4. Remove Mr Beam [3] from the box and remove the transport protection on both sides.



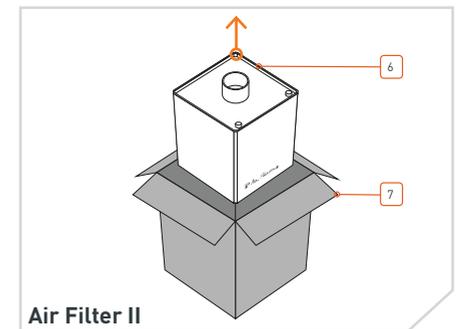
#### Remove the transport lock

1. Remove the vertical transport lock [4].
2. Carefully pull out the horizontal transport lock [5] from under the guide rail.



#### Unpack the Air Filter System (when purchased as a bundle - Mr Beam and Air Filter System)

1. Place the box [7] on a flat surface.
2. Open the box [7]. Do not use sharp objects that could damage the surface.
3. Pull out the upper transport-protective packing.
4. Remove the Air Filter System [6] and the box with accessories from the box



Air Filter II

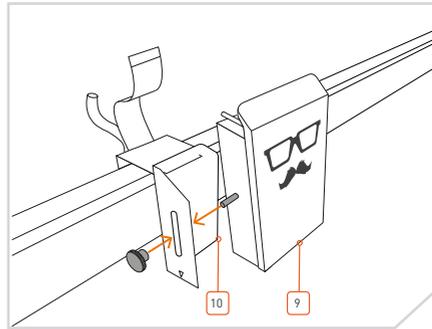
## 4.2 Connect the laser head

### Hook the laser head

The laser head can be mounted at different heights, see also

Section 5.6 "Focusing".

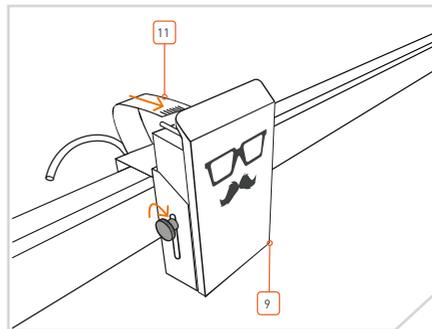
1. First, hook the laser head [9] in any position at the bottom
2. Then squeeze the carriage [10] slightly and snap the laser head into place at the top.



### Plug in the ribbon cable

1. Plug the ribbon cables [11] into the socket on the back of the laser head [9]. If necessary, extend the black bracket beforehand.

**i** **Note:** The ribbon cable may only be plugged in and unplugged when Mr Beam is shut down and switched off! Failure to do so will make Mr Beam inoperable.

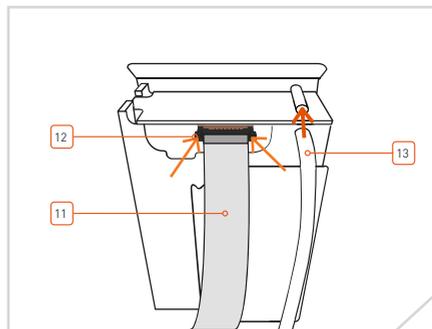


### Locking the bracket

1. Lock the ribbon cable [11] with the bracket [12].

**i** **Note:** First, loosen the bracket if you want to remove the ribbon cable.

2. Then plug in the hose [13] (only in the "dreamcut", "dreamcut [S] and dreamcut [X] models").

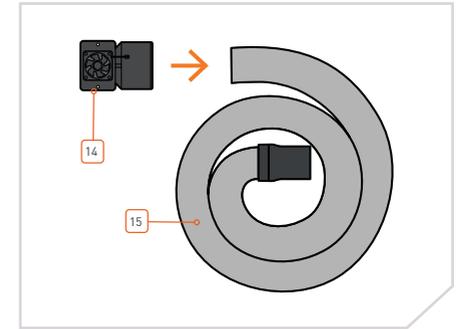


## 4.3 Connecting the Suction/Air Filter System

### Connect the suction nozzle

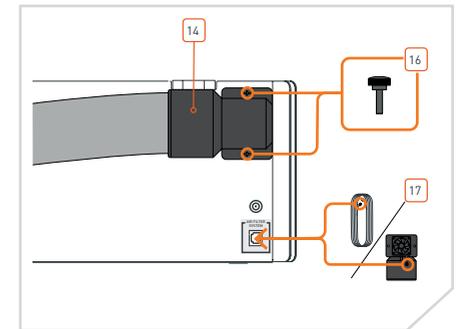
1. Connect the suction nozzle [14] to the free end of the ventilation hose [15].

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



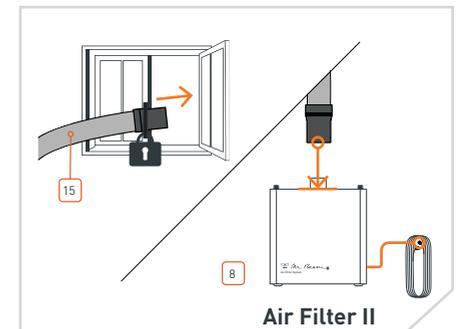
### Connecting it to Mr Beam

1. Install the suction nozzle [14] on your Mr Beam. To do this, use the supplied knurled screws and washers [16]. Tighten them moderately.
2. Then connect the cable [17] from the exhaust system to your Mr Beam.



### Exhaust air

1. If you have a Mr Beam with simple suction, make sure that the exhaust hose [15] is fixed and that the exhaust air can be discharged from the working area.
2. If you have a Mr Beam with Air Filter System [8], connect the exhaust air hose to the air filter system. Then connect the cable from the air filter system to your Mr Beam.



## 4.4 Suction/Air Filter System



**Caution:** Risk of suffocation. During the laser process, the processed material is vaporised by Mr Beam and burning odours and fumes are produced.

- » Only operate your Mr Beam with a functional suction system.

In the following section, the extraction system is described in two versions: the extraction system (sucks out exhaust gases into the open air) and the Mr Beam Air Filter System. In both versions, the suction power is regulated according to the presence of exhaust gases. This will be accompanied by 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.

Note that it is the responsibility of the user to stay within the national and regional threshold limits for dust, smoke and gases when choosing the filter and exhaust air extraction system.

### Extraction system (without air filter)

The extraction system must not be used in enclosed spaces. It must be possible to discharge the exhaust air out of the working area at all times (e.g., outside).



**Caution:** Risk of suffocation. Any backflow of exhaust gases can lead to suffocation.

- » Fix the end of the hose so that no exhaust air can enter the operating room.
- » Make sure that the hose opening is guided far enough into the open air.
- » If smoke collects in the device or strong odours form, stop work immediately and check the exhaust air duct.

### Mr Beam Air Filter System (with air filter)

The Mr Beam Air Filter System enables you to operate your Mr Beam in enclosed 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.

It is necessary to replace the air filter of the Mr Beam Air Filter System regularly, depending on the degree of contamination. The Air Filter System must be placed on a flat surface and stand freely.

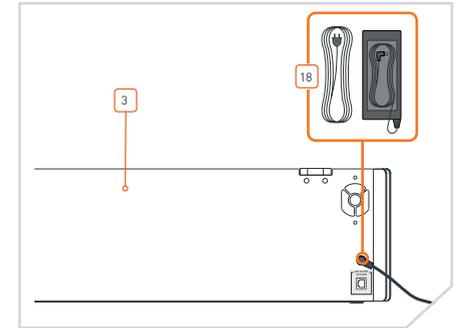
With the optional manual control and an external power supply, the Air Filter System can also be used on third-party devices. In contrast to the automatic regulation used with Mr Beam, when used with third-party devices, the exhaust air flow rate is controlled manually.

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

## 4.5 Switching on the electrical power supply

### Plug in the power cable

1. To avoid static charges that could damage your computer and/or your Mr Beam, please first connect the power supply [18] to your Mr Beam [3] and only then connect the power supply to a power outlet (100-240 V ~, 1.5 A 50-60 Hz).



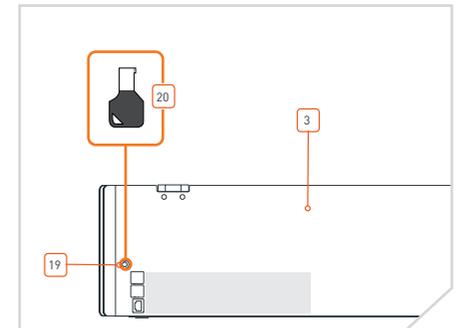
### Inserting the key

To prevent your Mr Beam [3] from being switched on by unauthorised third parties, it is switched on/off with the help of a key switch [19].

1. Insert the key [20] into the key switch (key horizontal with "nose" facing upwards).



**Note:** The key can only be inserted into the switch in one position.

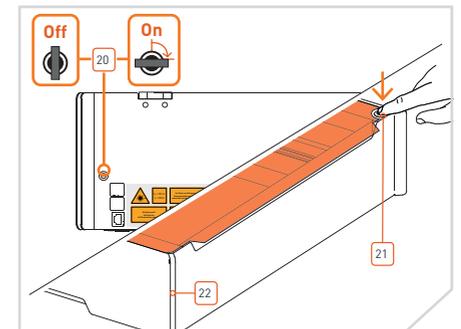


### Turn the key and press the button

1. Turn the key [20] clockwise to activate the power supply of your Mr Beam.
2. To switch on the device, briefly press the button [21] for approx. 2 seconds (for more detailed information, see [Section 5.3 "Button"](#)). The control light of the laser head comes on immediately and after 10 seconds the status lights [22] are come on.



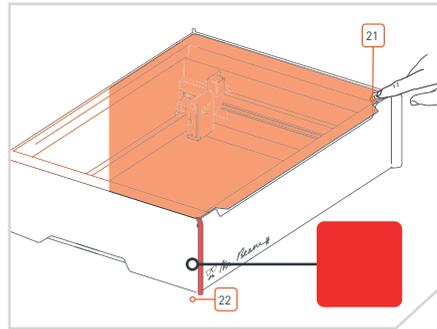
**Note:** When switched on, the key cannot be removed and is in the horizontal position.



## 4.6 Switching off the electrical power supply

### Shutdown

To properly turn off your Mr Beam after finishing work, please shut it down first. You can shut down your Mr Beam via BeamOS (⏻ → System) or by pressing and holding the button [21] for five seconds. The status lights [22] immediately turn red and after 15 seconds the whole system shuts down.

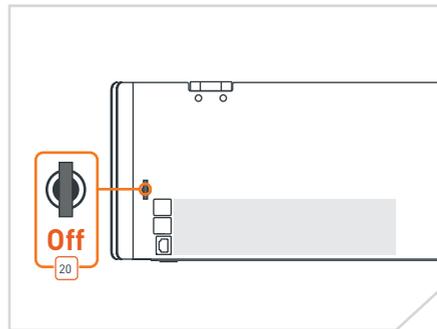


### Switching off

1. To switch off your Mr Beam, turn the key [20] counter-clockwise.
2. Pull out the key to exclude any misuse of your Mr Beam.



**Note:** Please keep the key in a place that unauthorised users (e.g., children) do not know about and/or cannot access.



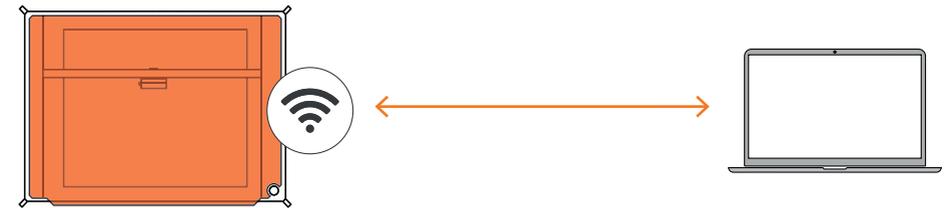
## 4.7 Connecting to a computer

### Connection options with Mr Beam

There are three ways to establish a connection between Mr Beam and your computer or tablet. The choice of the most suitable option depends on your personal usage preference and the network available at Mr Beam's place of use.

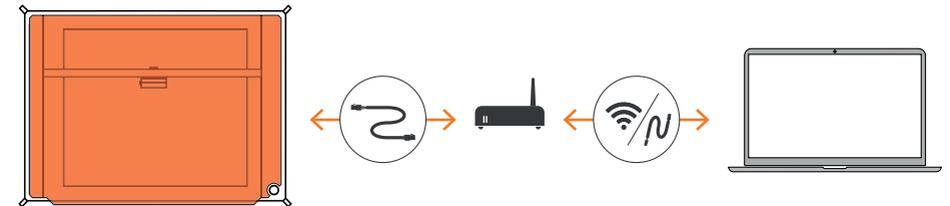
#### Option A: WLAN direct connection

Connect your computer directly to the WLAN of your Mr Beam. (see page 30)



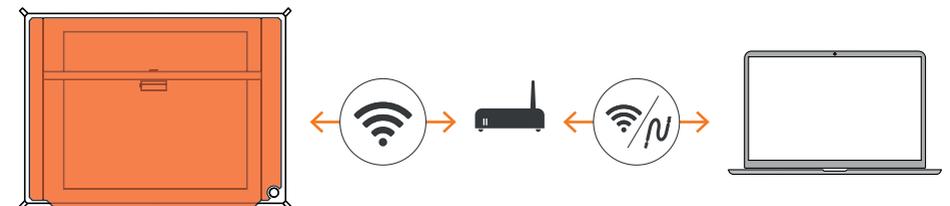
#### Option B: Connection via network cable (Ethernet) and router

Connect Mr Beam to the network router by cable. (see page 31).



#### Option C: Connection via WLAN and router

Connect Mr Beam to your network via WLAN. (see page 32).



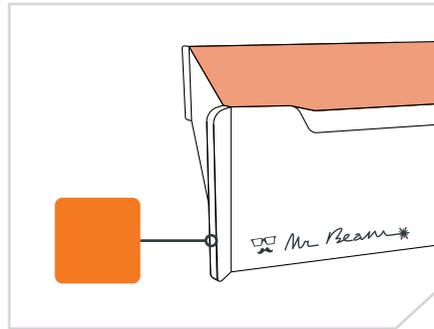
## 4.7 Connecting to a computer

### Status Lights

Whether it's during the first setup or if you've connected to your Mr Beam many times before, the Mr Beam status lights show you how to connect to Mr Beam right now by pulsating slowly.

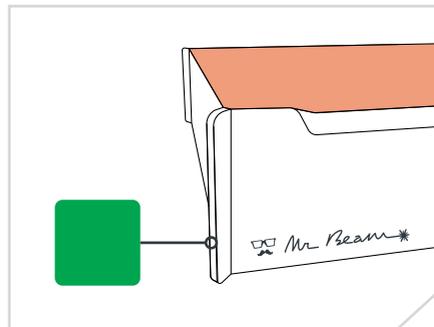
### Orange pulsating

Access your Mr Beam via [find.mr-beam.org](http://find.mr-beam.org). Mr Beam is connected to your router, has an active Internet connection and can be accessed in your browser via [find.mr-beam.org](http://find.mr-beam.org).



### Green pulsating

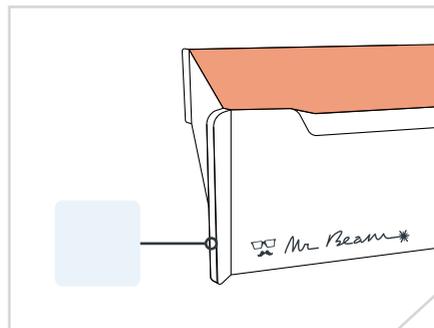
Connect directly to the WLAN of your Mr Beam. In the WLAN settings on your computer, select the WLAN with the name "MrBeam-XXXX" (password: mrbeamsetup). Once your computer is connected to Mr Beam, open the Google Chrome browser and type the following in the address bar: [10.250.250.1](http://10.250.250.1)



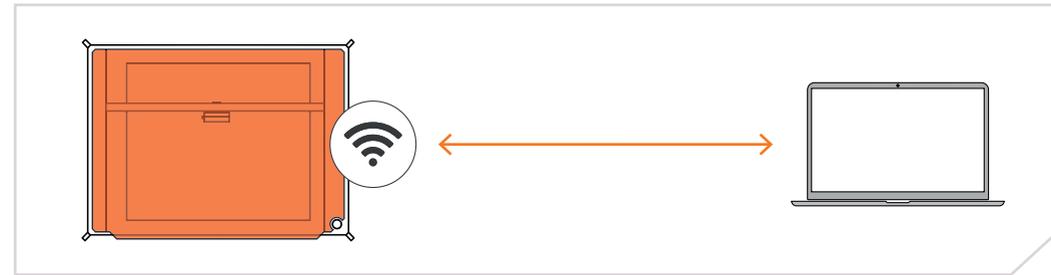
### White pulsating

Mr Beam is connected to your local network, but **does not have an active Internet connection**. Visit our Online Knowledge Base to find possible solutions.

With green and white pulsating lights, both connection options are available (Wi-Fi and local network).



## 4.8 Option A - Wi-Fi direct connection



Name: MrBeam-XXXX  
S/N: 000000XXXXXXXX-2X

1. On your computer, select the Wi-Fi network with the name of your Mr Beam: "MrBeam-XXXX".



**Note:** XXXX stands for your specific device name, which can be found on the back of your Mr Beam.

Name: MrBeam-XXXX

Password: mrbeamsetup

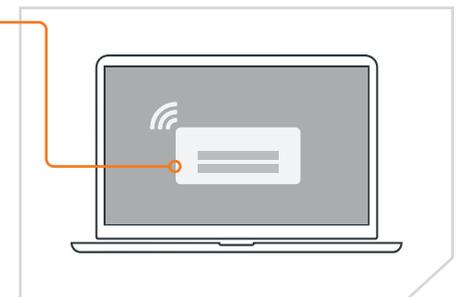
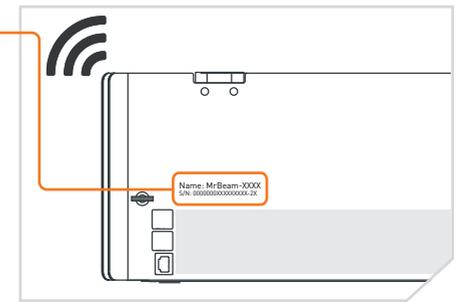
The password for the WLAN connection is: [mrbeamsetup](#).

[10.250.250.1](http://10.250.250.1)

2. Enter the following IP address in the search bar of your Google Chrome browser to load the web app: [10.250.250.1](http://10.250.250.1)



**Note:** During the initial setup, your Mr Beam will guide you through the **Mr Beam Welcome Dialogue**. There, if desired, you can set up Wi-Fi connections with the router.





## 4.10 Option C - Wi-Fi and router

### Further procedure

If you have chosen Option A for the initial setup and are connected directly to Mr Beam via Wi-Fi, your Mr Beam will disconnect the Wi-Fi connection to your computer to connect to your Wi-Fi router. If successful, your Mr Beam will soon pulsate orange and you will be able to connect to the [find.mr-beam.org](https://find.mr-beam.org) service.



**Note:** If this does not succeed, e.g., because an incorrect password has been entered, you will not receive an error message because you are no longer connected to your Mr Beam. In this case, you will have to repeat the connection process of Option A from the beginning.

If you have selected Option B with the cable for the initial setup, your Mr Beam will indicate whether the Wi-Fi connection to your router was successful or not. If successful, you can now unplug the network cable, use the Wi-Fi connection and use the [find.mr-beam.org](https://find.mr-beam.org) service.

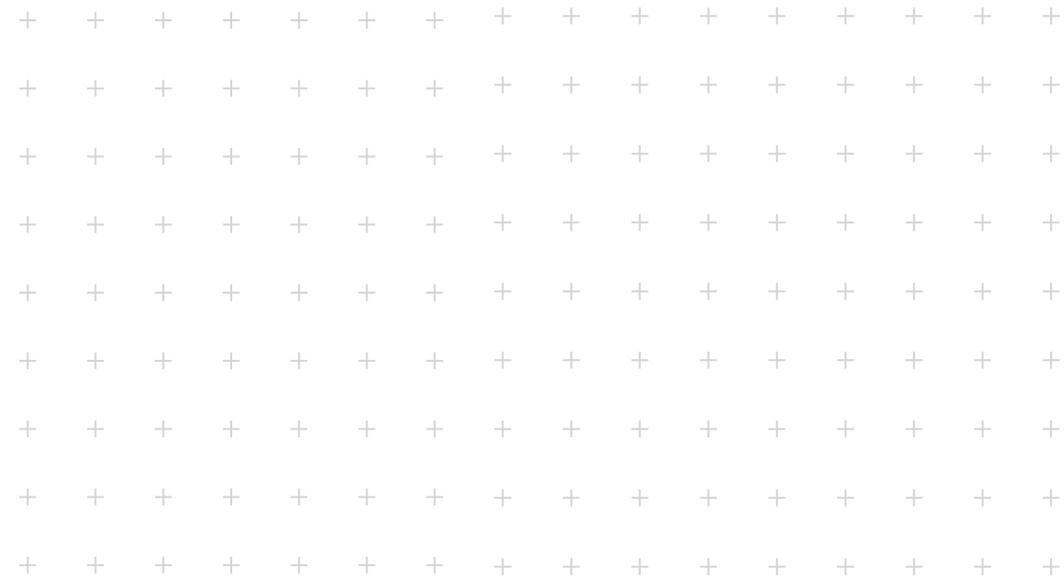
### Slow connection

If you experience a slow connection while using your Mr Beam (e.g. pictures from the camera do not load or load slowly), this may be due to a poor Wi-Fi connection. The range of the Wi-Fi connection can be reduced by walls, ceilings and furnishings. Other devices that also work with high-frequency signals can interfere with the Wi-Fi connection.



**Note:** Keep the distance between your Mr Beam and Wi-Fi router as small as possible to ensure a good connection. If necessary, amplify the signal with commercially available WLAN repeaters.

If you still cannot improve the connection, try option B (network cable and router) in this case.



## Section 05

# WORKING WITH YOUR MR BEAM

After the introduction to Mr Beam, the first steps of working with your device follow. Time for the first laser job!

## 5.1 BeamOS



### Legend:

1. Laser: Proceed to the laser job parameters
2. Working area: When the cover of Mr Beam is fully open, a picture is taken every 5 seconds and displayed on the work surface. Double-click anywhere to move the laser head to the desired position.
3. Design library: Upload designs here and select designs that have already been uploaded.
4. Design store: Choose from a wide selection of pre-made designs.
5. Support and settings

### Software update:

A software update is carried out with an active internet connection or offline via USB stick. You can find more detailed information at: [www.mr-beam.org/offlineupdate](http://www.mr-beam.org/offlineupdate)

When a software update is available, a notice appears in the BeamOS in the upper right corner.

To start the software update, click on "Update now". Your Mr Beam will perform the software update on its own. After a restart, it will reconnect to your computer on its own.



For more detailed information about BeamOS, please read the article on our website: [www.mr-beam.org/pages/das-beamos](http://www.mr-beam.org/pages/das-beamos)

## 5.2 Materials and maximum workpiece size

As already described in [Section 3.2 "Safety instructions"](#), dangerous fumes can be produced when lasering certain materials. Therefore, it is particularly important to only process materials that have been declared suitable by Mr Beam Lasers GmbH. An updated list of materials can be found online at the following link: [www.mr-beam.org/collections/materialien](http://www.mr-beam.org/collections/materialien)

### Maximum workpiece size

The maximum workpiece size is **500 x 390 x 38 mm** (length, width and height). Due to edge blurring of the camera, positioning in the middle of the work surface is recommended for smaller workpieces.

## 5.3 Button

The button is a push button on the top of Mr Beam. It is assigned several functions, which are explained below.

### Pause

1. Press the button.
2. Next, wait a moment for the suction to remove vapours. Open the protective cover
3. Close the protective cover and then continue the operation by pressing the button again.

### Switch on

1. Insert the key into the key switch.
2. Turn the key clockwise.
3. Press the button for approx. 2 seconds. The control light of the laser head is switched on immediately and after 10 seconds the status lights also come on.

### Start laser procedure

1. Prepare the laser process in BeamOS.
2. Start the job on your Mr Beam by pressing the button once.

### Shutdown

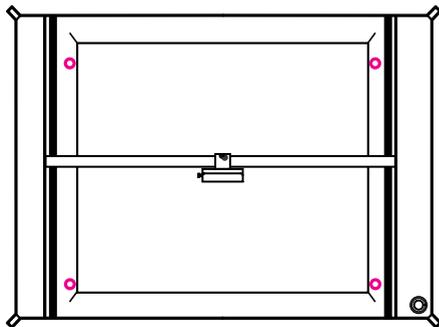
1. Press and hold the button for five seconds to shut down your Mr Beam properly. Your Mr Beam will shut down after about 15 seconds. Shutting down does not switch off your Mr Beam.
2. To switch it off, turn the key switch counter-clockwise and pull it out (see [Section 4.6 "Switching off the power supply"](#)).

## 5.4 Camera

There is a camera in the protective cover of your Mr Beam which supports you in positioning the motif on the workpiece.

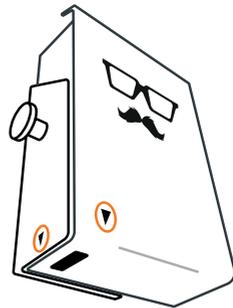
As soon as the protective cover is completely open, the camera automatically takes a picture of the work surface and the workpiece lying on it. This is then displayed in BeamOS after a delay of a few seconds. The camera's image shows the workpiece on the work surface, i.e., you can virtually place your selected motif directly on the workpiece and then edit it. For an optimal picture as well as precise positioning, make sure that the work surface is illuminated sufficiently and evenly.

For precise positioning, the 4 magenta-coloured round markers are relevant. If these come off, please contact Mr Beam Support: [www.mr-beam.org/ticket](http://www.mr-beam.org/ticket)



**Note:** If a marker has been replaced, calibration of the camera (Setting -> Camera Calibration) is necessary.

For exact positioning, the placement of the workpiece must be adjusted by moving the laser head. The triangles on the laser head provide a reference to the exact exit path of the laser beam.



### Camera application

In summary, the following instructions must be followed for the correct use of the camera:

1. Open the protective cover to the highest position.
2. Position the workpiece in the working area.
3. Wait a few seconds for the picture to transfer to your computer. If the picture is not optimal, please wait a few seconds again until the camera has created and transmitted another image.
4. Close the protective cover and proceed with further settings and work steps.

Live tracking of the laser by camera is not possible. The pictures are only saved for the corresponding editing and are then automatically deleted.

## 5.5 Meaning of the status lights

The status lights show different operating states of Mr Beam.

Note: The signals listed here are subject to change with software updates. If this is the case, it will be announced within the software.

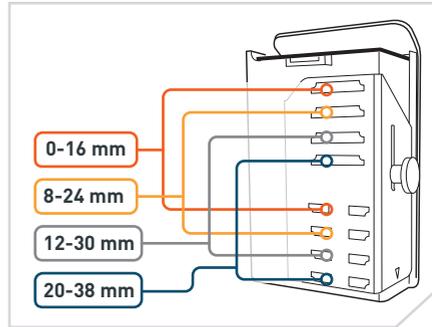
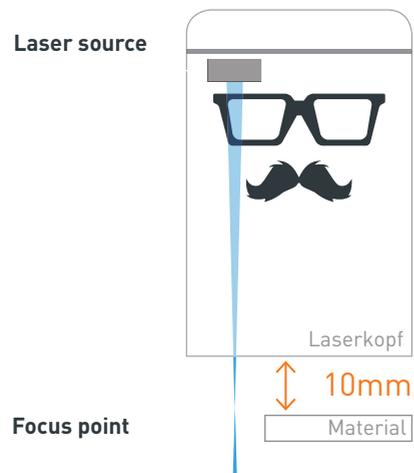
Orange pulsating	Connection to Mr Beam can be established via <a href="http://find.mr-beam.org">find.mr-beam.org</a>
Green pulsating	Connection to Mr Beam can be established via a Wi-Fi access point
White pulsating	Connection to Mr Beam can be established via common addresses/host names in the network
Dripping white on blue	Laser job is being prepared
Blue flashing	Waiting for confirmation for lasering by pressing the button
Dripping blue on white	Laser job is being carried out Note: The larger the white part, the more advanced the laser job.
Blue pulsating at the top, white at the bottom	Pause
Orange	Laser job is finished Note: It is recommended to wait for the suction.
Green	Laser job has been completed, protective cover can be opened
Red flashing	Button is held for shutdown
Red fast flashing	Error
Red	Shuts down
Red/white flashing	Button has been pressed, no resulting action

## 5.6 Focus

Focusing of the laser head is needed to achieve optimal work results with your Mr Beam.

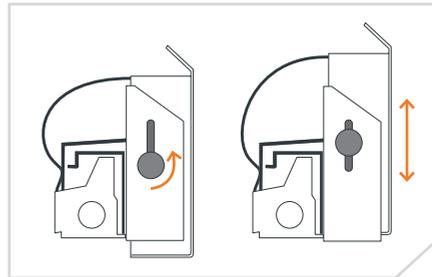
Since the laser beam leaves the laser head in a conical shape, there is only one point at which it is maximally bundled: the focus point. At this point, your Mr Beam has the maximum performance and highest precision. Therefore, the focus point should be at the level of the material to be processed. To do this, the laser head must be manually adjusted to the material height.

For optimal results, the distance between the lower edge of the laser head and the upper edge of the material to be processed must be 10 mm. Use the Mr Beam Focus Tool for this.



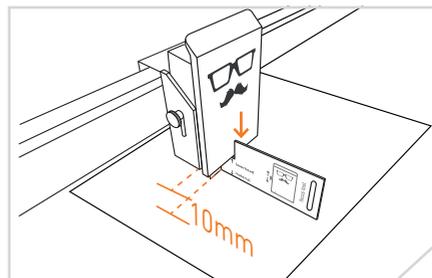
### 1. Rough focus

Attach the laser head to one of the four different positions.



### 2. Fine focus

Open the screw on the laser head to move it up and down. Then place the focus tool with the cross between the material and the laser head.



### 3. Position laser head

Place the laser head on the cross of the focus tool and then retighten the screw moderately.

## Section 06

# SERVICING AND MAINTENANCE

Regular servicing and maintenance is essential to ensure that your Mr Beam can operate continuously without malfunctioning. The following sections contain instructions for normal cleaning procedures.

## 6.1 Regular Servicing & Maintenance

Regular servicing and maintenance is necessary to ensure that you continue to obtain high-quality results from your Mr Beam. In addition, depending on the work and materials used, regular general cleaning is necessary. Before starting cleaning and maintenance work, always switch off the device and unplug it.

**Caution:** Fire hazard.

Due to insufficient cleaning and pieces remaining in the interior of Mr Beam, there is a risk of fire.

- » Keep your Mr Beam clean at all times.

### Regular Servicing & Maintenance

- » Clean your Mr Beam before each use. Only a regularly cleaned device can ensure the best work performance with optimal results.
- » To prevent dust from entering the interior of Mr Beam even when not in use, keep the protective cover closed as much as possible.
- » Do not use aggressive or chlorine-containing cleaning agents for cleaning.



**Note:** We recommend using a 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.

## 6.2 Cleaning base plate / Changing filter / Repairs



### Changing the filters

To be able to ensure that the exhaust air is cleaned by the Air Filter System, the filters must be changed according to the display in the software. Under Settings -> Maintenance, the percentage wear of the pre-filter and main filter can be checked at any time.

If materials such as particularly wood are processed, where a large amount of dust is released, it may be necessary to change the filters before reaching 100%.

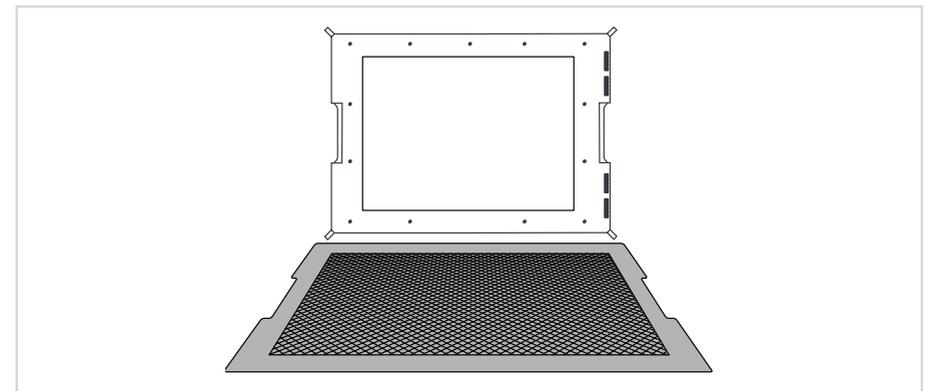
You can find a detailed explanation of how to change the filters in our knowledge base: [www.mr-beam.org/filterwechsel](http://www.mr-beam.org/filterwechsel)

Both filters are available from the Mr Beam online shop: [www.mr-beam.org/collections/lasercutter-zubehoer](http://www.mr-beam.org/collections/lasercutter-zubehoer)

### Repairs

Mr Beam is not intended to be repaired by the user. To ensure that your Mr Beam can be quickly put into operation again if there is a defect, please contact customer service:

[www.mr-beam.org/ticket](http://www.mr-beam.org/ticket)



## Section 07

# ADDITIONAL INFORMATION

## 7.1 Technical data - Mr Beam

Lasercutter	Mr Beam					
Modell	II	II + Air Filler	II dreamcut	II dreamcut + Air Filler	dreamcut (s) + Air Filler	dreamcut (X) + Air Filler
Variante / Verkaufsbezeichnung	4260625360019	4260625360033	4260625360156	4260625360163	4260625361030	4260625362143
verkaufte u.A. unter folgenden EAN-Nummern	MB DLC-###	MB DLCB-###	MB DC-###	MB DCB-###	901-###/ 900-00010	902-###/ 900-00011
Artikelnummer	725 x 538 x 170 mm / 270 x 270 x 310 mm	725 x 538 x 170 mm / 270 x 270 x 310 mm	725 x 538 x 170 mm / 270 x 270 x 310 mm	725 x 538 x 170 mm / 270 x 270 x 310 mm	725 x 538 x 170 mm / 270 x 270 x 310 mm	725 x 538 x 170 mm / 270 x 270 x 310 mm
Abmessungen (ca.)	9,8 kg + 0,0 kg	9,8 kg + 6,0kg	9,8 kg + 0,0 kg	9,8 kg + 6,0 kg	9,8 kg + 6,0 kg	9,8 kg + 0,0 kg
Breite x Tiefe x Höhe (Lasercutter / Air Filler)	9,8 kg + 0,0 kg	9,8 kg + 6,0kg	9,8 kg + 0,0 kg	9,8 kg + 6,0 kg	9,8 kg + 6,0 kg	9,8 kg + 0,0 kg
Gewicht (Lasercutter + optionaler Air Filler)						
Umgebungsbedingungen						
Umgebungstemperatur	0 - 25 °C					
Luftfeuchtigkeit	30% - 60%					
Mechanik						
Werkstückgröße maximal	500 x 390 mm					
Werkstückhöhe maximal	38 mm					
Gewicht Werkstück maximal	4kg					
Akustik						
Schallpegel maximal	70 db (A)					
Laser						
Laserklasse	1					
Wellenlänge	450 ± 5 nm					
Leistung	5W					
Stromversorgung						
Leistungsaufnahme 65 / 90 W (je nach Ausstattung)	< 65W					
Funkfrequenzen WLAN *	< 65W					
Frequenz 2,4 GHz:	< 90W					
Frequenzbereich						
max. Sendeleistung	2400 - 2483,5 MHz 100 mW					
Frequenz 5GHz:						
Frequenzbereich	5150 - 5250 MHz / 5260 - 5550 MHz / 5470 - 5725 MHz					
max. Sendeleistung	200 mW / 100 mW / 500 mW					

Hinweis: Technische Änderungen sind vorbehalten. \*Die verwendeten Frequenzen hängen vom jeweiligen Einsatzland ab.



## 7.2 Storage & Transport / Support

### Storage & Transport

The guidelines from [Section 4 "Setup"](#) must be followed for each of the following subsections. The temperatures and humidities in particular must not fall outside the specified range.



**Note:** Please retain the original packing and padding material in order to be able to ship Mr Beam in this case

- » If your Mr Beam is not used for a while (such as a holiday), we recommend that you cover it to protect it from dust and other dirt.
- » To store your Mr Beam for a longer period, it must be packed in the original packing and must not be exposed to wide fluctuations in temperature or humidity.
- » Mr Beam must only be dispatched and transported in its original packing and padding material. Mr Beam should 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:  
[www.mr-beam.org/ticket](http://www.mr-beam.org/ticket)

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

## 7.3 Disposal

### Dismantling, disassembling

Mr Beam 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 electronic equipment collecting point separately from your Mr Beam. 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 3 "Safety & conformity"](#), Mr Beam is not intended to be disassembled by the user.

### Disposal, environmental aspects

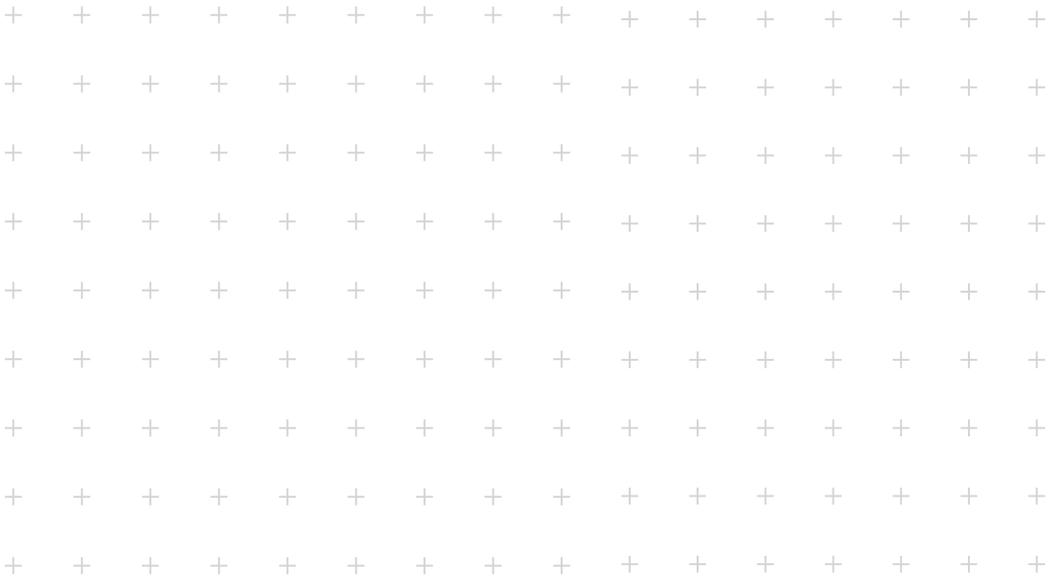
As directed by local laws and regulations, Mr Beam must not be disposed of in domestic refuse.



Your Mr Beam is an electronic device and must be disposed of via the local collecting points for electronic devices in compliance with the regulations of the country concerned for electrical and electronic devices.

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

WEEE Number: DE17853778



## Section 08

# GENERAL TERMS AND CONDITIONS

## 8.1 General Terms and Conditions

The latest applicable general terms and conditions, as well as the warranty conditions of Mr Beam Lasers GmbH, can be found at:

[www.mr-beam.org/policies/terms-of-service](http://www.mr-beam.org/policies/terms-of-service)

## 8.2 Contact addresses

Address:	Mr Beam Lasers GmbH Gollierstr. 70 80339 Munich Germany
Mr Beam Support	<a href="http://www.mr-beam.org/ticket">www.mr-beam.org/ticket</a>
Instagram	<a href="https://www.instagram.com/mrbeamlasers/">instagram.com/mrbeamlasers/</a>
YouTube	<a href="https://www.youtube.com/@MrBeamLasers">youtube.com/@MrBeamLasers</a>
Facebook	<a href="https://www.facebook.com/mrbeamlasercutter/">facebook.com/mrbeamlasercutter/</a>
Twitter	<a href="https://twitter.com/MrBeamLasers">twitter.com/MrBeamLasers</a>

Changes and errors excepted.





You can find us on many social media using the hashtag [#madewithmrbeam](#) such as Instagram, Twitter or Facebook, with inspiration from other members of the Mr Beam community. Naturally, we would also be happy if you share your works there and tell your friends about it. We are curious to see how you use your Mr Beam and what you will create with it!

