

## Product catalog for Positioning Lasers

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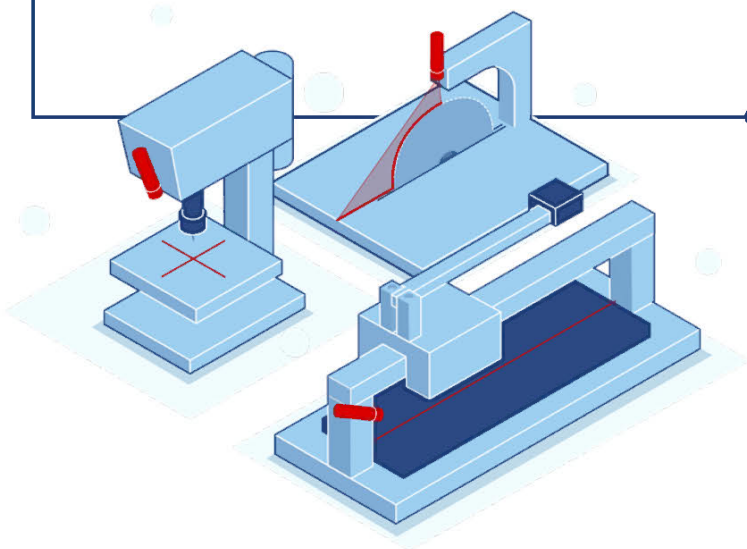
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# Applications

## Positioning lasers light the way

Positioning laser – the term has caught on over the years and it's what everyone is talking about when it comes to the innovative aid for positioning material in manual or semi-automated manufacturing processes.



### Ideal for your field of work

**Line lasers** visualize the cutting path in all cutting processes across all industries.

**Cross lasers** make it easier to position labels or mark where holes need to be drilled.

**Dot lasers** show where to sew on a button or help to align machine parts over long distances.

### Work more quickly and efficiently

These are just a few examples – there are no limits to possible uses. Positioning lasers help you to achieve optimum results by saving time and material. Positioning lasers don't do the work for you but they allow you to **see better, decide faster and act more precisely**.

The following pages give you several examples of applications from different sectors.



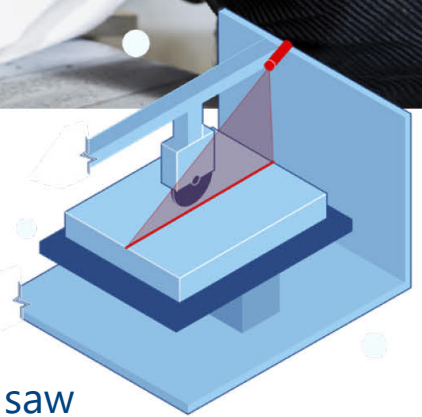




# Lasers for the stone industry

Heavy, valuable, and sensitive materials such as natural stone need to be processed with the utmost care. Cutting mistakes cause significant additional costs.

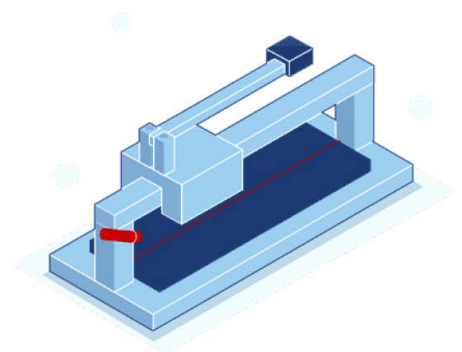
The modern stonemasonry business would be unimaginable today without line lasers as positioning aids.



## Bridge saw & masonry saw

The laser line marks the cutting edge of the diamond disc. The cut can be optimally aligned on the cutting table with this line. The laser can be fitted either on the bridge or on the support.

In this way it either moves with the bridge in the y-direction or tilts with the support, e.g. for mitre cuts.



## Tile cutter

Mobile tile cutters are generally used for natural stone or ceramic tiles – with a battery-operated line laser, of course (see page 16).

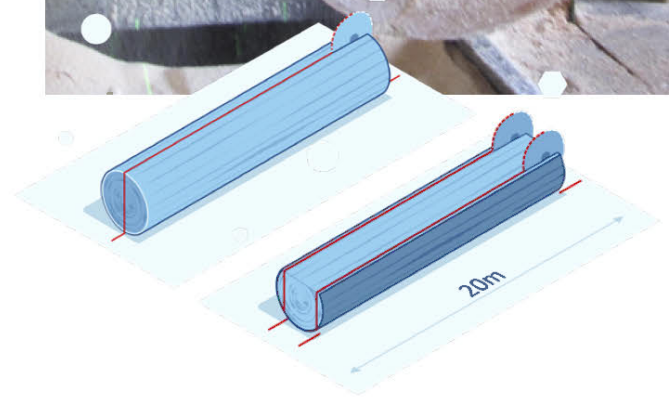
# Lasers for the wood industry

Wood has been the most popular and versatile building material since time immemorial. Machine processing makes it much easier to handle this valuable natural material. Ensure less waste and better product quality with our positioning lasers!



## Gang saw / saw mill

Our line lasers point the way into the saw gate right from the very first processing step, sawing the trunks.



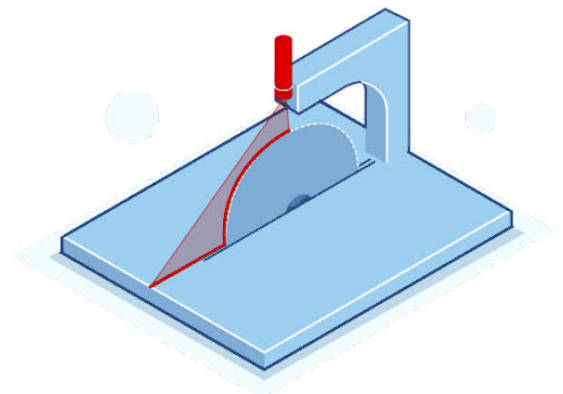
## Edging saw

An effective aid for optimum material use: Using the red or green lines projected onto the board, the operator can set the edging saw to achieve the optimum result for edging and cutting. This saves time and material!



## Panel saw / circular table saw

Indispensable in any workshop – a positioning laser transforms your saw into a universal tool for edging and cutting solid wood or panel material to size.







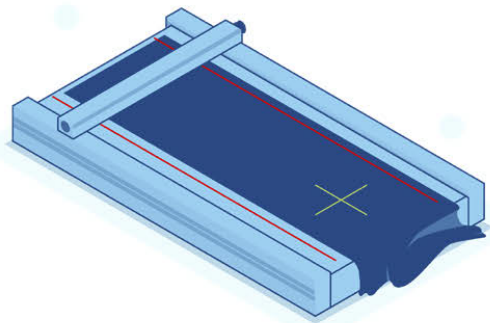
## Lasers for the textile industry

Laser marks in the form of lines or crosses are used when sewing or embroidering, cutting or textile printing.

They replace conventional alignment aids like templates, speeding up the entire manufacturing process. The result is impressive!

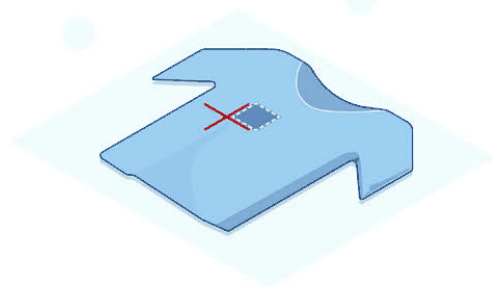
### Cutting room

Use our line lasers as an alignment aid on your lay table. This minimizes waste and ensures pattern consistency. An additional ZRX cross laser helps to position chequered fabrics.



### Textile finishing & printing

Whether you print, embroider, or patch – use our positioning lasers with line, line-dot, cross or dot optics to perfectly align your textiles or finishing materials.



# Lasers for the metal industry

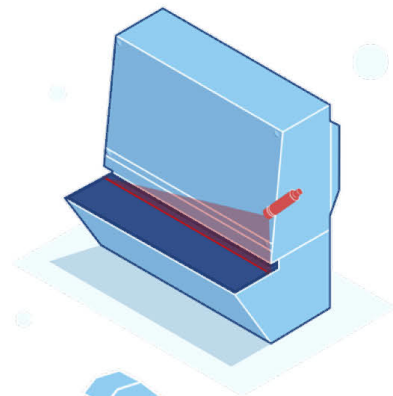
Positioning lasers are a versatile aid for optimizing workflows in the metal processing industry. Whether you're aligning blocks or sawing pipes, cutting or bending sheets – a line laser ensures the right orientation.



## Sheet metal cutter or bending machine

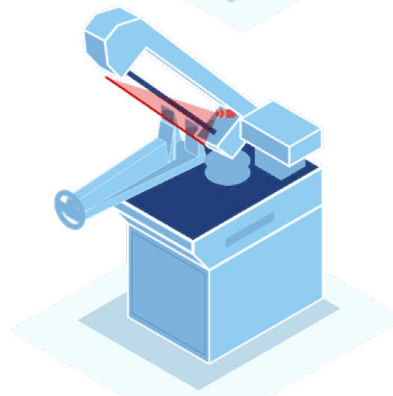
Simulate the cutting path of your cutter on the sheet with a red or green laser line – you'll generate less waste!

Where the punch and die interlock to give your sheet metal the desired shape, a red or green laser line provides orientation.



## Band saw & hacksaw

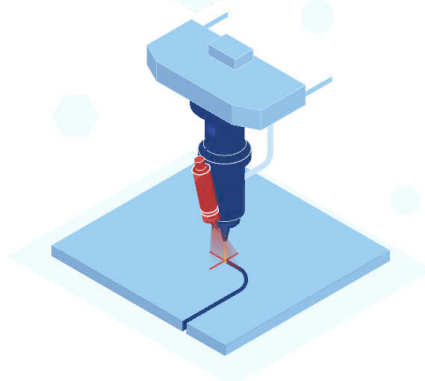
This saw is used in every metalworking shop to quickly cut small workpieces, or to cut bar stock to length - a line laser can also be used here for clamping.



## Flame or waterjet cutter

A positioning laser simplifies the setting of the machine zero point on flame and waterjet cutting systems.

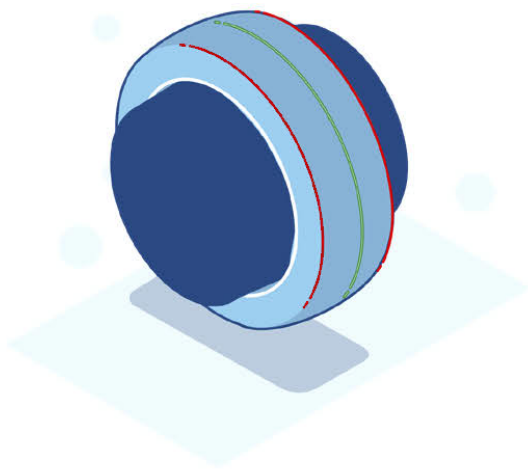
The laser indicates the position at which the machine starts the cut. This enables the operator to position the material precisely. You achieve a significantly faster machine setup time and - less scrap





## Lasers for the tire industry

Car tires in all sizes and variants are by far the most heavily used parts of a vehicle. Maximum precision is of great importance in production, which still requires a lot of manual work. This is the only way to ensure a permanently stable and safe product.



### Tire building machine

The production process involves placing rubber layers of different thicknesses and widths onto a vulcanizing drum. Line lasers show the right position of the individual layer here. Typically, three lasers are used:

One line laser shows the precise middle line; another two parallel lines, which are moved in opposite directions depending on the required tire width, show the intended positions of the individual layers. Green laser lines offer the advantage of considerably better visibility, particularly on black rubber.



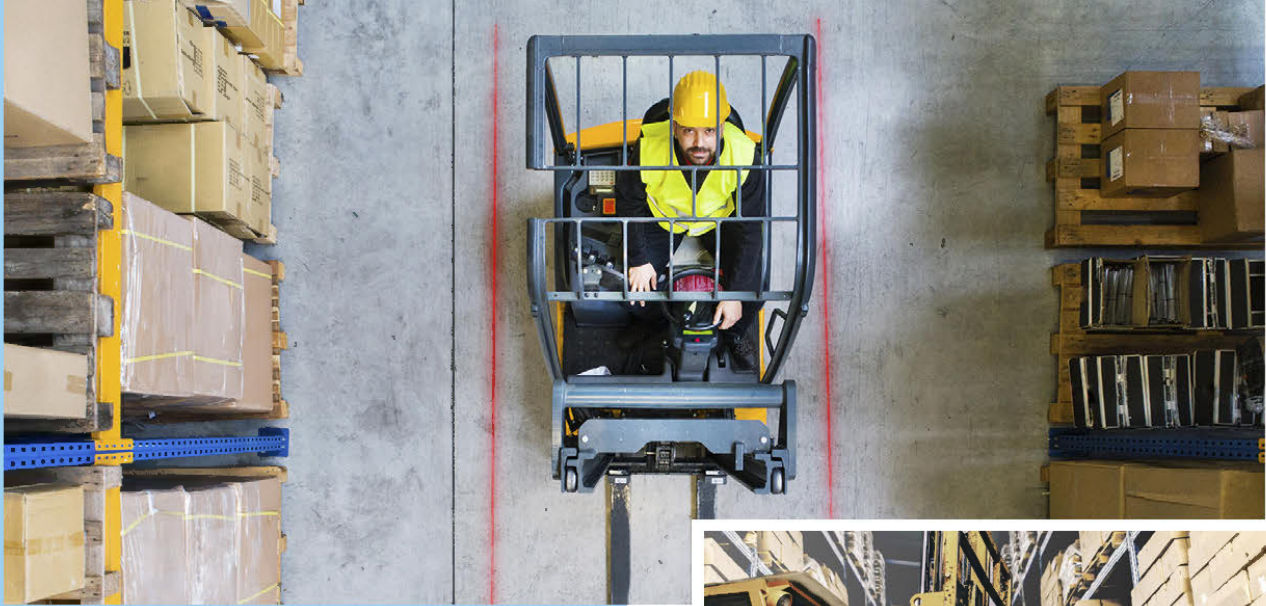
The exact alignment of a laser (projection) is particularly important. We recommend the precision supports developed by Z-LASER in cooperation with leading tire manufacturers for this.

Find more information on this on page 26.



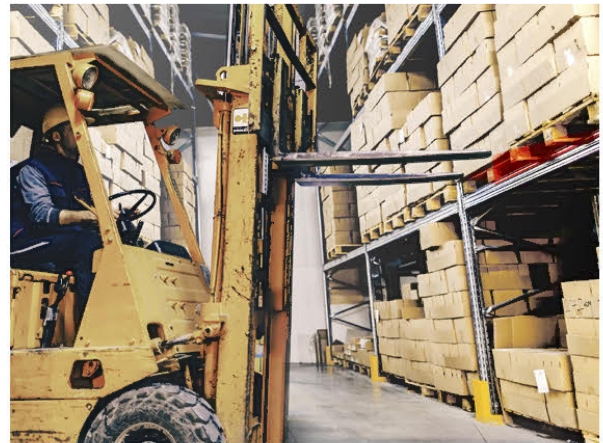
Precision supports | 26





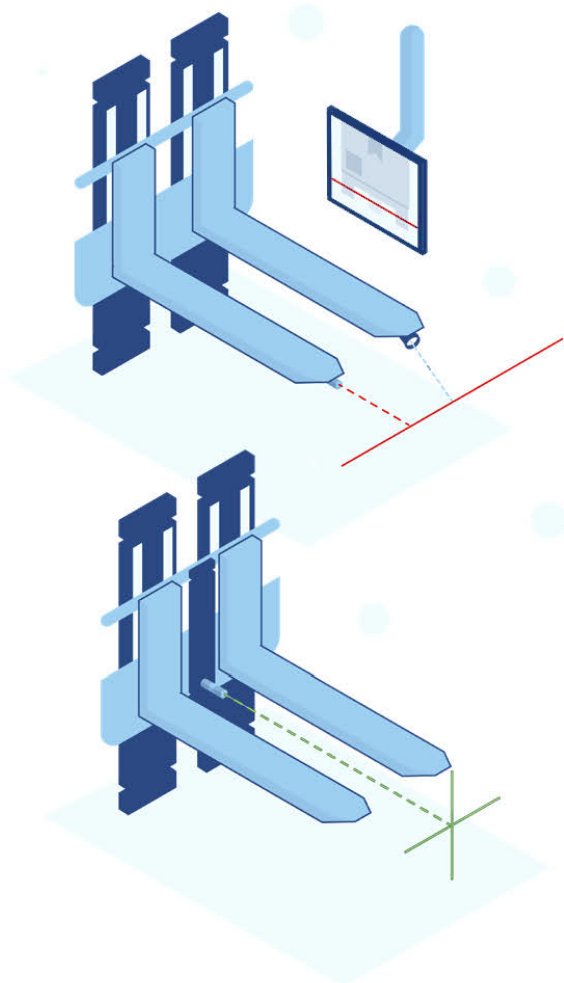
# Lasers for industrial trucks

Placing Euro-pallets in the top bays of high-rack warehouses is a real challenge for any forklift driver. Line or cross lasers provide highly visible orientation for positioning the forks, allowing precise and safe stacking.



## The line laser drives with you

The solution is realized by mounting a line laser in a fork: a horizontal red or green line is projected forward onto the pallet. A camera is installed in the second fork which conveys the line onto a monitor in the driver's cab. This is particularly helpful with high loads that block the view of the forks.



## Visualization via cross laser

An alternative technical solution is to install a cross laser, preferably green, between the forks near the adjusting gear. The additional vertical line makes it easier to aim for the middle of a pallet.



## Lasers for medicine

Today's world of medicine operates at a level that can justifiably be described as high-tech medicine. Whether in diagnostic measures or curative treatments directly on the patient – we all benefit from the accomplishments of modern medical science and technology.

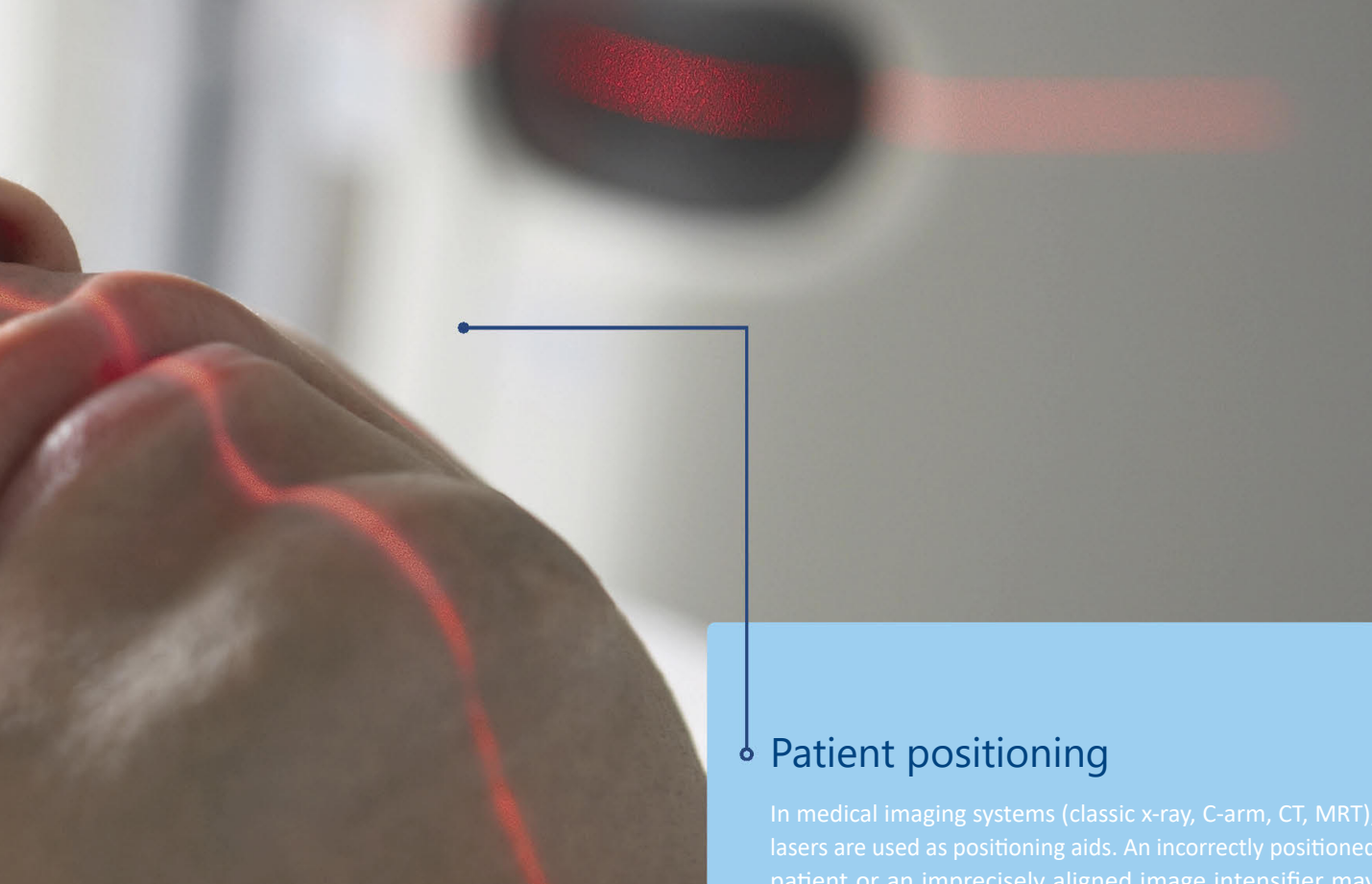
The central focus is on the individual, their health and safety. In many medical engineering applications today, lasers are also used; reliability, precision, and the highest quality of the individual components are key here. Z-LASER has been developing and producing laser modules for reputable manufacturers and different applications for over 35 years – here are some examples:

### Pilot laser in the laser scalpel

Laser scalpels are used for many kinds of surgical procedures today. They make it possible to operate in difficult-to-access areas, without causing excessive tissue damage. However, these precision instruments work with a laser in the invisible IR (= infrared) spectrum. To enable the surgeons to see where they are cutting, pilot lasers are used. This is a laser that is coupled into the beam path of the laser scalpel and marks the target with a bright red dot.







## ○ Patient positioning

In medical imaging systems (classic x-ray, C-arm, CT, MRT), lasers are used as positioning aids. An incorrectly positioned patient or an imprecisely aligned image intensifier may lead to blurred imaging and will not provide the necessary diagnostic results. Laser lines or crosses as optical support help to prevent such errors.

## ○ Radiation therapy

Modern radiation therapy now belongs to the standard repertoire of treatment methods for tumor diseases. In order to irradiate as exactly and gently as possible, laser-assisted positioning of the beam source is an invaluable aid.





# Products



## Lasers

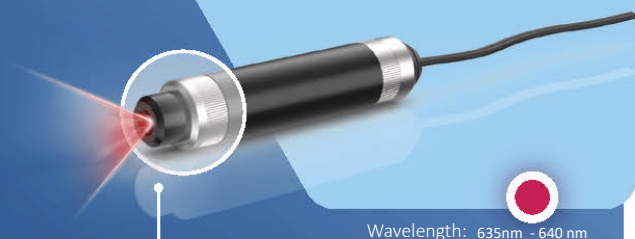
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# ZT

## Laser module for the textile industry

The laser modules of the ZT series have been developed especially for the textile industry but are often used for leather cutting or similar applications, too. The adjustable intensity means that the lasers can be matched to a wide range of fabric colors. This allows to achieve the best possible visibility while ensuring that the activity is easy on the eyes.

- Universally deployable red laser
- Selected optics (dot, line, line-dot, small and large cross)
- Adjustable intensity
- Optical power output of 1 to 5 mW
- Wavelength 635 nm to 640 nm (red)



Wavelength: 635nm - 640 nm

### INFORMATION: (AUGUST 2021)

The front silver lock nut of the optical head will be fixed and glued. Therefore optics can't be changed anymore.

## System specifications

Wavelength	nm
Power output	mW
Operating mode	

635 - 645
1 - 5
APC with current limitation, externally adjustable intensity control

## Electrical specifications

Supply voltage
Protection
Electrical isolation
Connection

3.5 to 5.5 VDC
Polarity protection
Potential-free housing
2 m cable with Texas plug, Option: cable up to 2 m with cable-end sleeve

## Optical specifications

Lines
Dot
DOE
Adjustable focus

Gaussian line 90°, Gaussian line 90° with dot
Elliptical
Crosses 5°, 30°, 60°
No

## Environmental conditions

Ambient temperature	°C
---------------------	----

-10 °C to +40 °C
------------------

## Mechanical specifications

Length	mm
Head diameter Ø	mm
Material	
Protection class	

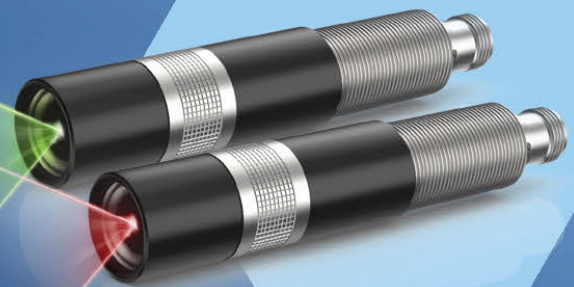
69
14
Brass, black chrome-plated
IP40

# ZM18 product range

## The perfect allrounder

The products of the ZM18 series set the standard for modern laser modules for industrial use. You can select the right laser for your positioning application from more than 1,000 different variants.

The compact, sensor-like design enables easy integration into existing machines or systems. Easy-to-operate focussing optics complete the product. It's the perfect allrounder!



Wavelength: 520 nm 532 nm 638 - 685 nm

- Optical power output of up to 120 mW
- Wavelengths of 520 to 685 nm
- Large selection of optics (dots, lines, crosses, special optics)
- Manual focus possible
- Protection class IP67

## System specifications

Wavelength	nm
Wavelength tolerance	nm (typical)
Wavelength drift	nm / K (typical)
Power output	mW
Electronics variants	
Pointing stability	μrad / °C
Performance stability	(24 h)

### Electrical specifications

Supply voltage	
Operating current	(max. at 25 °C)
Protection	
Electrical isolation	
Connection	

Power input

### Optical specifications

Fan angle <sup>(1)</sup>	Angle
Line straightness <sup>(2)</sup>	% (of line length)
Line homogeneity <sup>(3)</sup>	% (typical)
Dot	
DOE	
Focus range	mm

520	532	635-685
-5 +10	±1	±10
0.06	0.06	0.25
≤40	≤40	≤120
B3	B	B, S3

<15

±3 % across the entire temperature range

5 - 30 VDC	5 - 30 VDC	5 - 30 VDC
<300 mA	<300 mA	<400 mA

Overtemperature protection and LED fault display, polarity and transient protection (ESD, burst & surge)

Potential-free housing

4-pin M12 plug

<2.7 W	<2.7 W	<2 W
--------	--------	------

10°, 20°, 30°, 45°, 60°, 75°, 90° (homogeneous line profile)  
5°, 10°, 15°, 20°, 30°, 90° (Gaussian line profile)  
20°, 30°, 110° (raster lens for homogeneous line profile)

<0.05 %

<25 %

Elliptical

Multilines, crosses, grids, etc.

100 mm up to 10,000 mm (or available customer-specifically with fixed focus); ZM18-B-532 >200 mm



# ZM12B

## The compact allrounder

If you want to benefit from the advantages of a modular high-performance laser even with limited space, we offer you the ZM12B. The compact, freely focusable allrounder is available with 635 or 640 nm (red light) and power outputs up to 30 mW as well as the most common optics for positioning applications.



Wavelength: 635 - 640 nm

- Optical power output of up to 30 mW
- Wavelengths of 635 to 640 nm (red)
- Selected optics (dots, lines, crosses, special optics)
- Manual focus possible
- Protection class IP67

## System specifications

Wavelength	nm
Wavelength tolerance	nm (typical)
Wavelength drift	nm / K (typical)
Power output	mW
Electronics variants	
Pointing stability	μrad / °C
Performance stability	(24 h)
Start duration	ms.
Operating mode	

635-640
±10
0.25 nm
1-30
B
<15
±3 % across the entire temperature range
<300
APC with current limitation

## Electrical specifications

Supply voltage	
Operating current	(max. at 25 °C)
Protection	
Electrical isolation	
Connection	
Power input	

5 - 30 VDC
<400 mA
Polarity and transient protection / ESD, overheating protection and LED fault display
Potential-free housing
4-pin M12 plug
<2 W

## Optical specifications

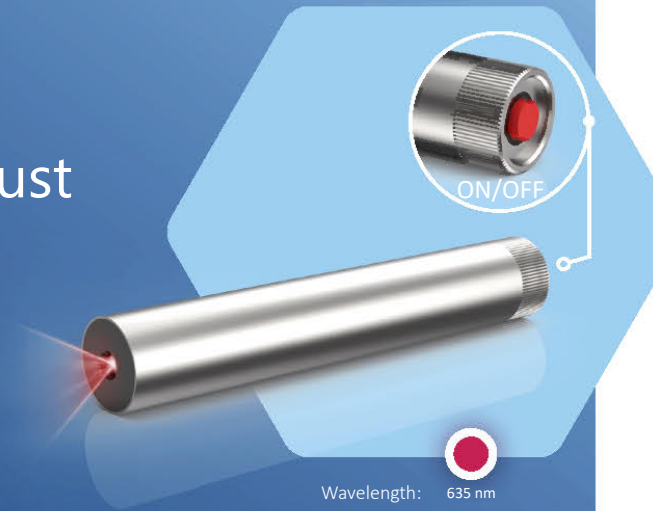
Beam width <sup>(1)</sup>	Angle
Line straightness <sup>(2)</sup>	% (of line length)
Line homogeneity <sup>(3)</sup>	% (typical)
Dot	
DOE	
Focus range	mm

10°, 20°, 30°, 45°, 60°, 75° (homogeneous line profile)
5°, 20°, 30°, 90° (Gaussian line profile)
<0.05
<±25 %
Elliptical
Crosses
100 mm to 10,000 mm

# ZAT

## Autonomous – flexible – robust

The laser is housed in a stable metal casing; the power source, a standard AA battery, is directly beneath the screw cap. The device is operated with a small button at the end of the housing. The laser is especially suitable for mobile use in the wood, stone, and metal industries.



- Battery or rechargeable battery operation with polarity protection
- On/off switch
- Optical power outputs of 1 to 5 mW
- Wavelength 635 nm (red)
- Selected optics (dot, line, cross)
- Protection class IP40

## System specifications

Wavelength	nm
Power output	mW

635
1 - 5

### Electrical specifications

Supply voltage
ZAT button

1.5 VDC battery AA or 1.2 VDC rechargeable
On/off switch at the end of the housing

### Optical specifications

Line	
Dot	
DOE	
Adjustable focus	mm
Laser class	

Gaussian line with 90° fan angle
Elliptical
Cross
Up to 2,000 mm fixed focus
1M, 2, 2M

### Environmental conditions

Ambient temperature	°C
Storage temperature	°C

-10 °C to +40 °C
-10 °C to +50°C

### Mechanical specifications

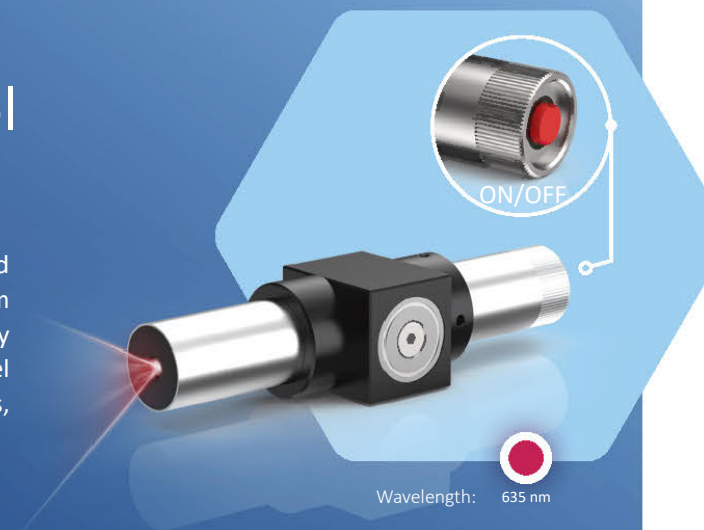
Length	mm
Diameter Ø	mm
Weight	g
Material	
Protection class	

124
20
162
Nickel-plated brass
IP40

# Z5A Belt Aligner

## Laser-based alignment tool for belt drives

The Belt Aligner is a tool that has proven its worth a thousand times over for aligning drive wheels. It is based on a line laser from the ZAT series. It sits neatly and perfectly aligned in a specially designed mounting block. The red laser line runs exactly parallel to the magnetic contact surface. With the help of target markers, drive wheels and impellers can be safely aligned in an idle state.



- Battery or rechargeable battery operation with polarity protection
- On/off switch
- Exactly calibrated red line
- 5 mW power output
- Strong magnetic mount (100 N)
- Protection class IP40
- FDA approval and CE certificate

## System specifications

Wavelength	nm
Power output	mW
Laser class	(typical)
Projection type	
Line width	(in focus at 2,000 mm)
Line height	(above reference surface)
Focus	
Boresight error	

635
5 mW
1M (EN60825-1)
Standard line, 90° fan angle
1 mm
19 mm
Fixed focus at 2,000 mm
0.5 mrad

## Electrical specifications

Supply voltage
Connection
Modulation

1.5 VDC battery AA or 1.2 VDC rechargeable
Battery operated, service time: 15 to 20 h
No

## Technical specifications

Dimensions of laser module	(L x Ø)
Dimensions of magnetic mount	(L x W x H)
Material of housing / magnetic mount	
Diameter of magnetic surface	
Weight	
Protection class	

124 mm x 20 mm
49 mm x 27 mm x 32.5 mm
Nickel-plated brass / aluminum, black anodized
20 mm
With magnetic mount approx. 250 g
IP40

## Environmental conditions

Ambient temperature	(passive cooling)
Storage temperature	
Humidity (max.)	

-10 °C to +40 °C
-10 °C to +50 °C
<80 %, non-condensing

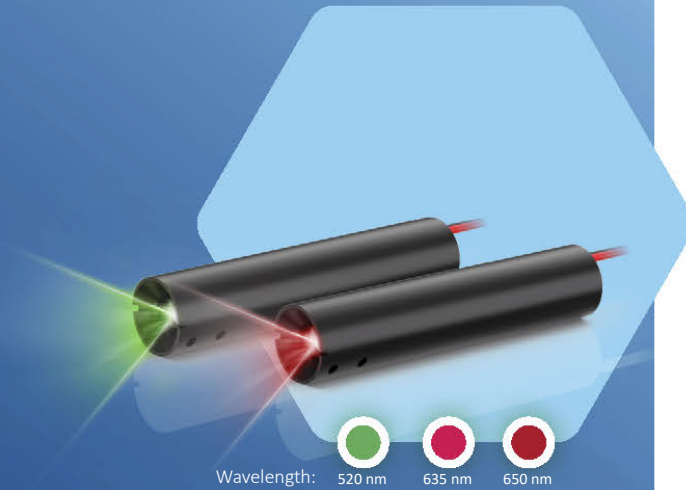


# ZD

## Universal mini laser module

### With outstanding visibility

The proven small laser modules of the ZD series have been used as positioning lasers in the wood, stone, textile or metal industry for over 20 years. With a diameter of just 11 mm, it fits almost anywhere and offers outstanding optical performance – with a power output of up to 15 mW (red), or even 40 mW (green)! It's a mini-laser with real power.



- Universal mini laser module with line, dot or cross projection
- Optical power output of up to 40 mW
- Wavelength 650 nm (red), 635 nm (red), or 520 nm (green)
- Electrically isolated housing
- 3-6 VDC, 24 VDC or 5-24 VDC supply voltage with polarity protection

## System specifications

Wavelength	nm
Power output	mW
Operating mode	

### Electrical specifications

Supply voltage
Protection
Electrical isolation
Connection

### Optical specifications

Lines
Dot
DOE
Adjustable focus

### Environmental conditions

Ambient temperature	°C
Storage temperature	°C
Humidity	%

### Mechanical specifications

Weight	g
Length	mm
Head diameter Ø	mm
Material	
Protection class	

520	635	650
1-40	1-15	1-5
APC with current limitation		

5-24 VDC	3-6 VDC or 24 VDC	3-6 VDC
Polarity and transient protection (ESD, burst)		
Potential-free housing		
2 m cable with Texas plug, Option: Cable up to 2 m with open stranded wires		

Gaussian line 90° (alternatively homogeneous 30°)
Elliptical, circular
Crosses, multilines, grids, etc.
No

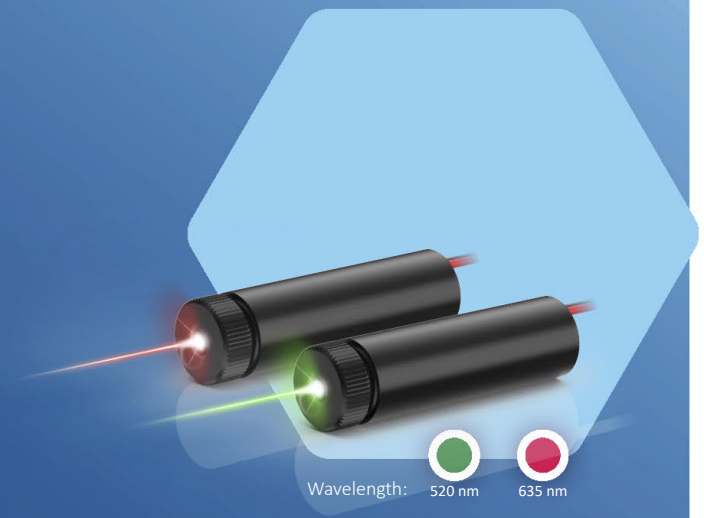
-10 °C to +40 °C
-20 °C to +70 °C
<90 %, non-condensing

35
51
11 mm
Brass, black chrome-plated
IP40 IP30 for dot laser

# ZF-pe-F

## Small focusable dot laser

This mini-dot laser with a diameter of just 11 mm is perfect for all positioning applications where you want a bright, smaller, or larger laser spot – the focusing optic makes it possible!



- Wavelength 635 nm (red) or 520 nm (green)
- Optical power output of 1 mW to 5 mW
- Electrically isolated housing
- Universally applicable mini-pointer
- Manual focusing optic
- 3-6 VDC or 5-24 VDC supply voltage with polarity protection

## System specifications

Wavelength	nm
Power output	mW
Operating mode	

520	635
1-5	1-5
APC with current limitation	

## Electrical specifications

Supply voltage
Protection
Electrical isolation
Connection

5-24 VDC	3-6 VDC
Polarity and transient protection (ESD, burst)	
Potential-free housing	
2 m cable with Texas plug, Option: Cable up to 2 m with open stranded wires	

## Optical specifications

Dot
Adjustable focus

Elliptical
Yes

## Environmental conditions

Ambient temperature	°C
Storage temperature	°C
Humidity	%

-10 °C to +50 °C
-20 °C to +70 °C
<90 %, non-condensing

## Mechanical specifications

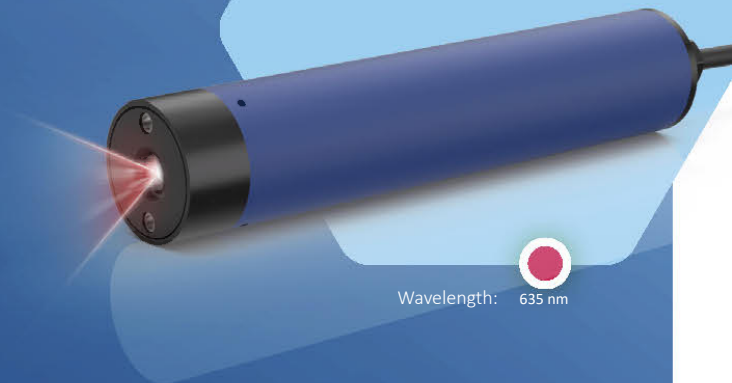
Weight	g
Length	mm
Head diameter Ø	mm
Material	
Protection class	

31
40
11
Brass, black chrome-plated, plastic cap
IP40

# ZR

## Robust entry-level model for rough working conditions

The ZR red line laser is perfect for carpentry or stonemasonry companies: Where there's dust, it's in its element! Thanks to the integrated heavy-duty power supply, it maintains great performance even when heavy machinery starts up nearby causing huge voltage spikes in the network. The line performance is impressive – it's a real hit.



- Red laser for long lines and best visibility
- Integrated heavy-duty power supply with high immunity
- Optical power output up to 40 mW
- Wavelength 635 nm (red)

## System specifications

Wavelength	nm
Power output	mW
Operating mode	

### Electrical specifications

Supply voltage
Protection
Electrical isolation
Connection

### Optical specifications

Lines
Adjustable focus
Laser class

### Environmental conditions

Operating temperature	°C / °F
-----------------------	---------

### Mechanical specifications

Dimensions	mm
Material	

635
up to 40
APC with current limitation

90 - 265 VAC
IP65
Potential-free housing
Mains plug (available with standard, US or EU plug)

Line
No
1M, 2M

-10 °C to +50 °C
------------------

200 x 40 Ø
Aluminum, powder-coated
Optic head: anodized aluminum (black)



# ZRX

## large & precise cross projection

The lasers of the ZRX series are each fitted with two red or green diode laser modules. Each module independently generates a line with a 90° fan angle. Depending on the power output of the modules, crosses can be projected with dimensions of up to 5 x 5 m.

The ZRX – the right choice when you need a cross laser for large-scale positioning tasks.



- Best visibility and perfectly aligned lines
- Optical power output of 2 x 5 to 2 x 20 mW

- Wavelength 635 nm (red) or 520 nm (green)
- Integrated heavy-duty power supply with high immunity

## System specifications

Wavelength	nm
Power output	mW
Operating mode	

### Electrical specifications

Supply voltage
Protection
Electrical isolation
Connection

### Optical specifications

Cross
Adjustable focus
Laser class

### Environmental conditions

Operating temperature	°C
-----------------------	----

### Mechanical specifications

Weight	g
Length	mm
Head diameter Ø	mm
Material	
Protection class	

520	635
up to 2 x 20	up to 2 x 15
APC with current limitation	

90 - 265 VAC
IP65
Potential-free housing
Mains plug (available with standard, US or EU plug)

(2x) Gaussian line 90°
No
2M

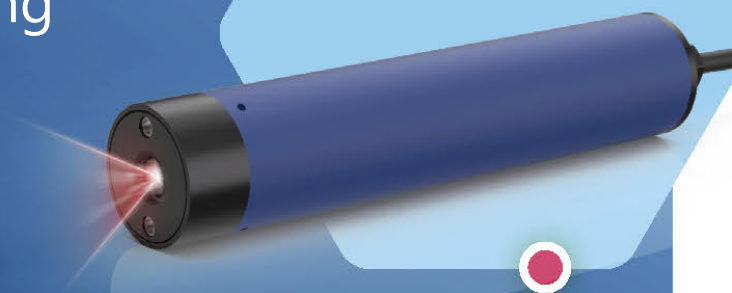
-10 °C to +40 °C
------------------

590
201
40
Aluminum, powder-coated
Optic head: Aluminum, anodized black
IP65

# ZPT-F

## The only positioning laser in the world with Peltier cooling

This is high-end laser technology that has long proven its value: a compact, freely focusable line or dot laser with integrated heavy-duty power supply. The Peltier element protects the heat-sensitive laser source and ensures long service life. There's nothing else like it in the world. It can't be beaten.



Wavelength: 635 nm

- Temperature-stabilised laser source
- Red laser for long lines and best visibility
- Adjustable focus
- Integrated heavy-duty power supply with high immunity
- Optical power output of up to 80 mW (nominal)
- Wavelengths 635-642 nm

## System specifications

Wavelength	nm
Output power	mW
Operating mode	

635-642
up to 80
APC with current limitation

## Electrical specifications

Supply voltage
Protection
Connection
Electrical isolation

90 - 265 VAC
IP65
Mains plug (available with standard, US or EU plug)
Potential-free housing

## Optical specifications

Line
Adjustable focus
Laser class

Line, elliptical dot
Yes
1M, 2M

## Environmental conditions

Operating temperature	°C / °F
-----------------------	---------

-10 °C to +50 °C
------------------

## Mechanical specifications

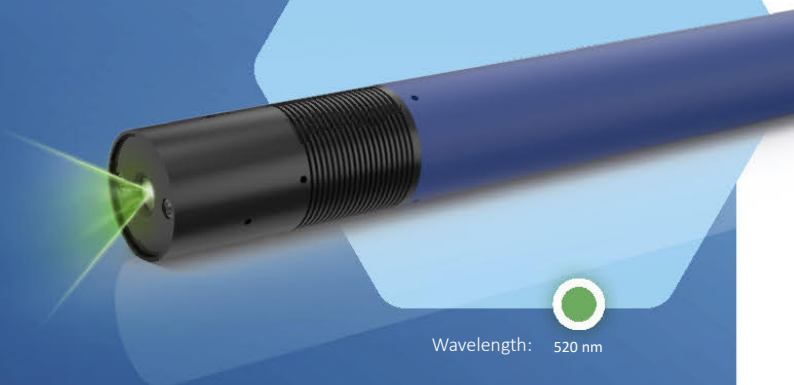
Dimensions	mm
Material	

280 x 40 Ø
Aluminum, powder-coated Optic head: anodized aluminum (black)

# ZRG-F

## As bright as it gets!

The ZRG-F is a diode-pumped solid-state laser (DPSS) that emits green light at a wavelength of 532 nm. It remains unbeaten as a line laser when it comes to generating bright green lines, such as in sawmills or for the textile lay table. Its robust design makes it popular in the field of natural stone, too. Thanks to the integrated power supply, it is ready to connect and can easily be operated on the usual mains voltage.



Wavelength: 520 nm

- Green DPSS laser for long lines and best visibility
- Adjustable focus
- Integrated heavy-duty power supply with high immunity
- Optical power output of up to 40 mW
- Wavelength 532 nm
- Optimum heat dissipation via cooling fins on the laser head

## System specifications

Wavelength	nm
Power output	mW
Operating mode	

532
up to 40
APC with current limitation

## Electrical specifications

Supply voltage	
Protection	
Connection	
Electrical isolation	

90 - 265 VAC
IP65
Mains plug
Potential-free housing

## Optical specifications

Optics	
Focus range	mm
Laser class	

Line, circular dot
Focusable
2M

## Environmental conditions

Housing temperature	°C / °F
---------------------	---------

0 °C to +35 °C
----------------

## Mechanical specifications

Dimensions	mm
Housing	

329 x 40 Ø
Aluminum, powder-coated
Optic head: anodized aluminum (black)

# ZKV

## Now it's time to rock a'round!

The ZKV uses a rotating mirror to generate perfectly visible red or green circles on a corresponding work surface. The required diameter is set via a wired remote control using a joystick.

With e.g. an installation height of 1.000 mm you can project a circle with a diameter from 270 mm to 1.400 mm. The ZKV is mainly used for barrel construction or for producing wooden cable drums. It does away with the need for templates.



Wavelength: 515 nm 635 nm

- Circle projection, freely scalable diameter
- Simple installation above the work surface
- Maintenance-free
- Wired remote control
- Power supply with EU or US plug

## System specifications

Wavelength	nm
Power output	mW

515	635
15	15

### Electrical specifications

Supply voltage
----------------

100 - 230 VAC $\pm 10\%$ ; 50 - 60 Hz
---------------------------------------

### Optical specifications

Projections available
Fan angle

Circle: Rotating dot laser with circle projection
15° to 70° (variable)

### Environmental conditions

Housing temperature	°C
---------------------	----

0 °C to +40 °C
----------------

### Mechanical specifications

Dimensions
Housing
Connection
Protection class
Standardisation

Ø 150 x 345 mm
Aluminum
AC/DC adapter, European plug or US plug
IP65
2M (EN 60825-1)
EMC standard class 4

### Circle diameter

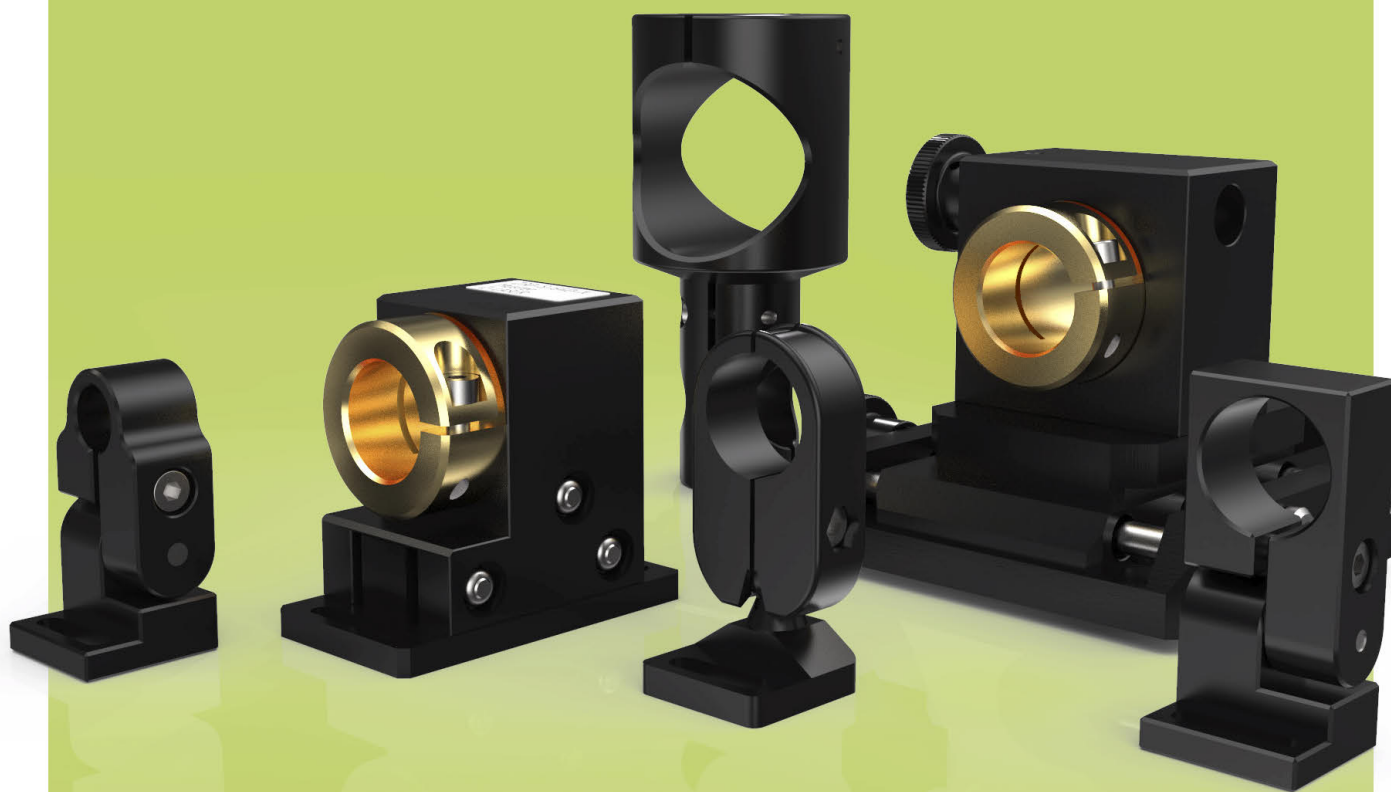
Distance*
500 mm
1000 mm
2000 mm
3000 mm
4000 mm

Min. diameter (15°)	Max. diameter (70°)
135 mm	700 mm
270 mm	1400 mm
540 mm	2800 mm
810 mm	4200 mm
1080 mm	5600 mm

\*Measured from the front edge of the laser



# Products



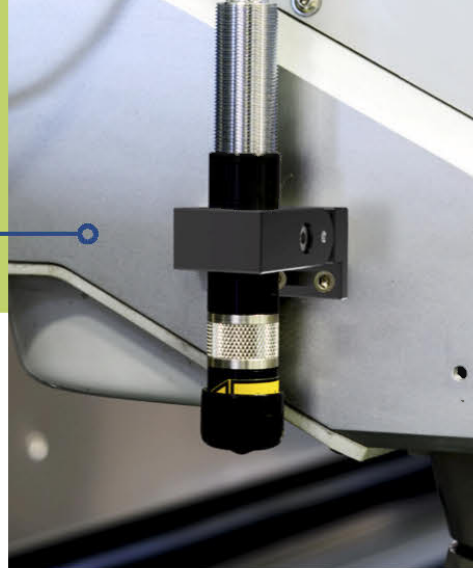
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# Mounts

## H0

Rotatable block mount for lasers with 40 (H0-40-20) or 20 mm housing diameter (H0-20-20) for fitting on  $\varnothing 20$  mm round material. The aluminum housing ensures optimum heat dissipation. The H0-20-20 can also be used with adapters for lasers with smaller diameters.



## H2

Tiltable aluminum mount with optimum heat dissipation for lasers with a housing diameter of 11 to 40 mm



## H6

Precision mount for lasers with a M12 thread or housing diameter of 20 mm for mounting on a level surface



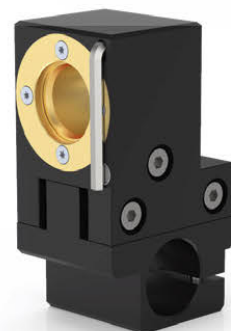
## H3

Flexibly adjustable ball joint mount made of PVC for lasers with a housing diameter of 11 to 20 mm



## H8

Precision mount for lasers with a housing diameter of 20 mm for mounting on  $\varnothing 20$  mm round material



## HX-11

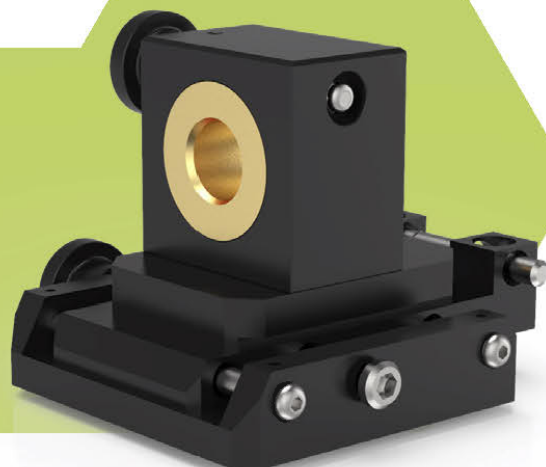
Precision disc-spring mount made of PVC for lasers with a housing diameter of 11 mm



# MXYZ

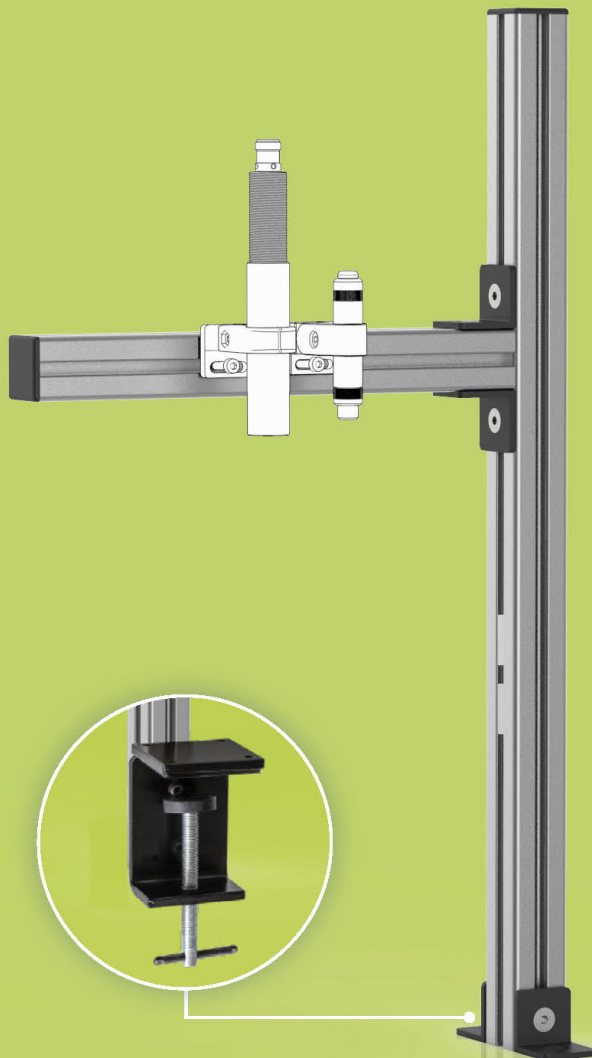
## Precision mount for lasers with a housing diameter of 20 mm or M18 thread

The MXYZ precision mounts made of aluminum have been developed specifically for use on machines that may require a quick change and precise repeat adjustment of the laser. The laser can be turned around its own axis with a self-locking action, parallelly shifted or pivoted. The mounts are maintenance-free.



# Mounting system BG

The mounting system BG is simple and flexible to install. The lasers can be mounted individually to the aluminum profiles in combination with the right mount. The set consists of two aluminum profiles (500 mm x 30 mm x 30 mm | 250 mm x 30 mm x 30 mm) and the fastening material. Installation takes place directly on the work table or on the wall.



## BG2 with table clamp

The table clamp allows the mounting system to be moved quickly and easily.



# Wall & ceiling mount BD

A typical example of how this solid ceiling mount is used is to install a positioning laser above the circular saw in a carpentry workshop. The flange made of cast aluminum is screwed onto the ceiling. A  $\varnothing 40$  mm aluminum tube combined with a stable cross joint and a horizontal stainless steel shaft allows the laser to be adjusted to the right height.

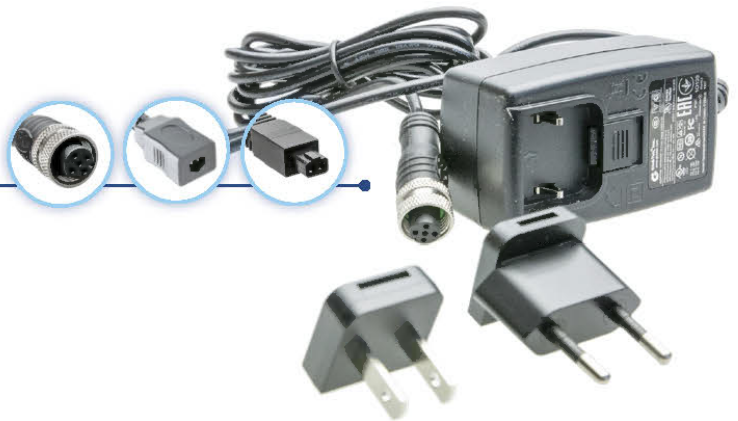


# An overview of further accessories

## WPS & WPSB power supplies

The right power supply for your laser, optionally with M12 socket (female), Texas plug or socket. The power supplies are available with 3.5 VDC, 5 VDC or 9 VDC. Exchangeable inserts allow operation in Europe as well as the US or Asia.

British and Australian plug adapters are optionally available.



## Distribution boxes

**VB4-M12:** convenient distribution box for operating up to four lasers of the M18 or M12B series on a WPS-5-M12 power supply. The outputs are separately switchable.

**VB4:** Simple switchable distribution box for up to 4 lasers of the ZD, ZF-pe-F or ZT series on a WPS-3.5 power supply.



## Battery pack 18 V

Ideal for mobile use of your ZM18 or ZM12B series laser. 18 VDC output voltage. Can be used with two 9 VDC block batteries or equivalent rechargeable batteries.

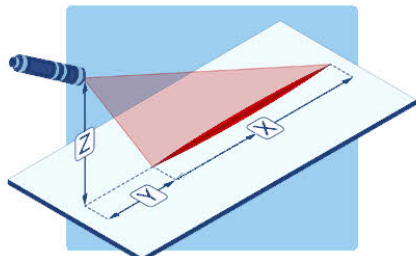




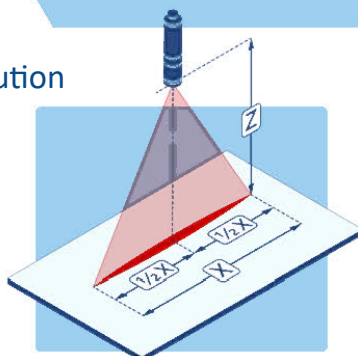
# Z-LASER application and installation options.

This page shows you the different options for employing and installing our positioning lasers. The examples are numbered. We can use the dimensions x, y and z to provide you with a more accurate offer for your special laser.

## 1. Line with Gaussian light distribution



(a) Standard installation situation (inclination 45°)



(b) Vertical installation (perpendicular 90°)

### Dimensions:

Installation height:



Required line length:

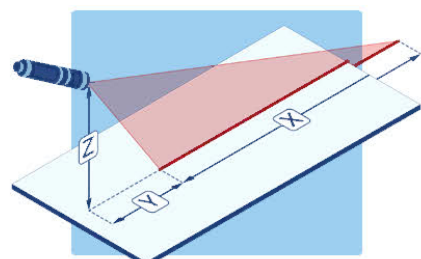


Offset from start of beam:

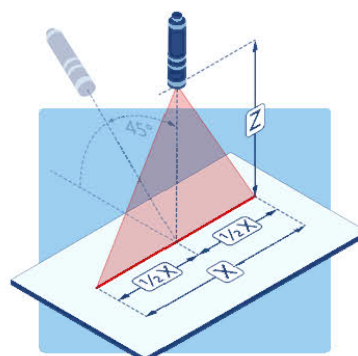


(results from different optical fan angles and the inclination of the laser)

## 2. Line with homogeneous light distribution



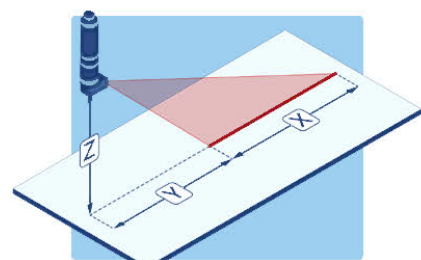
(a) Long homogeneous line (up to max. 1 m installation height)



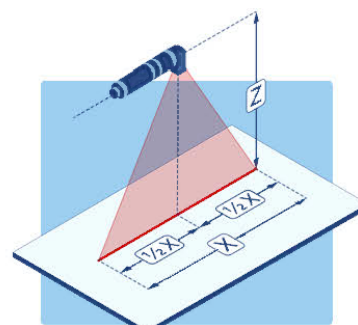
(b) Vertical installation (up to 45°)

### Optional

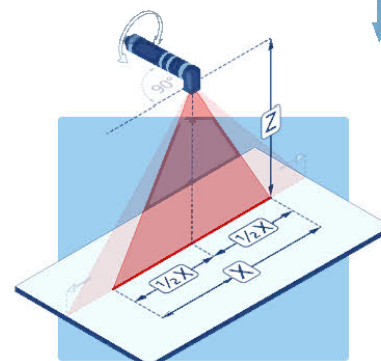
## I. Laser with angular optic head



(a) Vertical beam emitted downwards

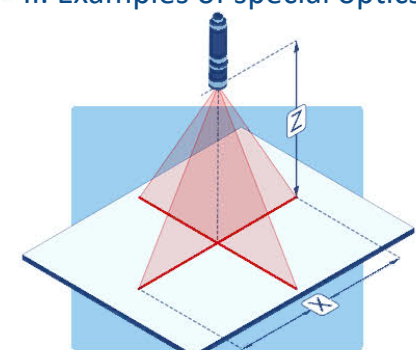


(b) Beam parallel to the housing

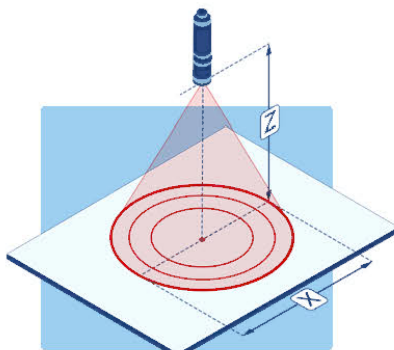


(c) Beam perpendicular to the housing (tiltable)

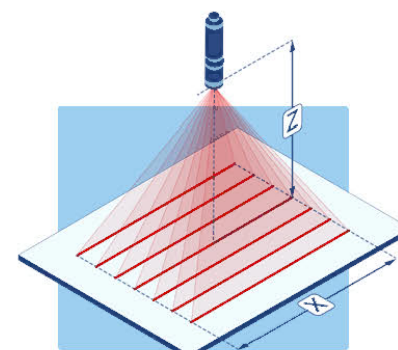
## II. Examples of special optics



(a) Cross



(b) Concentric circles

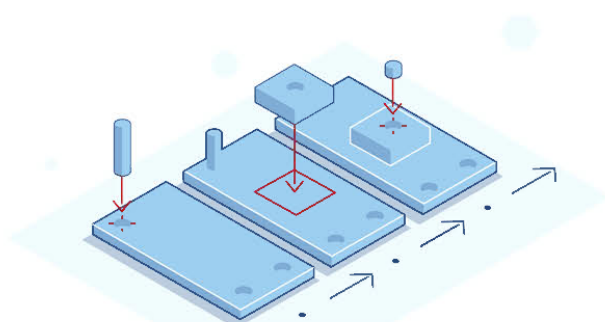


(c) Parallel lines

# About Z-LASER

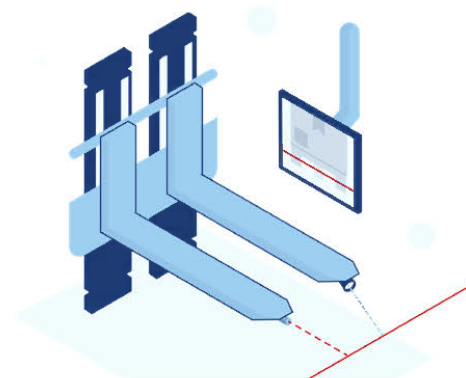
Z-LASER is THE German manufacturer of laser sources for innovative customer applications. In the last 35 years, we have successfully established ourselves in the following fields:

- Lasers as positioning aids (industry and trade)
- Lasers for image processing
- Laser projectors as positioning aids (industry and trade)
- Customer-specific lasers (OEM laser solutions)



## Intelligent technologies

Our intelligent systems – consisting of mechanics, electronics and optics – enable high coverage of all customer requirements and help to set us apart from competitors. Numerous patents and registered designs have been registered successfully over the past years.



## Innovations for the future

Today, the company is successful in many new innovative sectors where highly developed laser technologies and product designs are required.

‘Quality is when  
customers return to us  
– not lasers.’

- Kurt-Michael Zimmermann,  
founder of Z-LASER GmbH

## Quality policy & guiding principle

Quality begins when you start discussions with the customer. Their wishes, needs and expectations determine our business actions. We are constantly rethinking our activities. Misunderstandings should be avoided and the products and services should match the customer's quality requirements. With us, every employee from every area is responsible for quality in all activities.

## Supplier policies

Z-LASER is a socially responsible company that prioritizes the well-being of people and the environment. Observing ethical principles and legally binding regulations is self-evident for us.



We see it as our duty to conduct our business accordingly and also demand this from our suppliers. That is why we require REACH, RoHs compliance of all products and articles supplied to us, as well as avoiding conflict materials as far as possible.



Z-LASER generates a considerable portion of its energy requirements from its own solar system, actively contributing to climate protection.

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# Z-LASER

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„Quality is when customers return to us  
- not lasers.“

- Kurt-Michael Zimmermann,  
Founder Z-LASER GmbH

Our mission is to develop laser sources and laser projectors of the highest quality for our customers. Since founding Z-LASER in 1985 in Freiburg, we supply the industry with top functional and easy-to-use laser systems.

Z-LASER is a socially responsible company that cares about the well-being of people and its environment. A significant part of the energy requirement is gained through the in-house solar system. Furthermore, we only supply civil applications.

Laser technology  
from Freiburg  
made in Germany

**COMTRONIC**

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