



# Laser safety

- Enclosures
- Laser safety curtain
- Laser safety screens
- Laser safety tents
- Laser safety eyewear

# Laser safety

Spetec is your partner of choice if you are looking to combine laser safety materials with mechanical systems. The enclosure for the laser must be designed in such a way that no dangerous laser radiation escapes under any foreseeable circumstances. We plan, design and build laser safety equipment according to your specific requirements.

We manufacture laser safety curtains together with the associated fixtures, enclosures, laser safety screens and laser safety tents.

To do this, we use

- laser safety material – non-flammable
- laser safety glass for different wavelengths
- laser safety panels from a range of materials

and deliver a tailored solution that meets your needs exactly.



# Laser safety curtain LP12

The Spetec LP12 laser safety curtain is manufactured using a sandwich technique. Two identical covering layers are applied to a non-elastic substrate fabric so that either side can be used as the laser side. The edges are hemmed. The curtain is made up of widths of material sewn together, allowing us to offer any size you need. The curtain is fixed to a rail on a laser safety enclosure or to a track secured to the wall or to an existing fitting. We offer a number of different hanging systems for this purpose. (See below.)

The material used has been tested and certified by DIN Certco in accordance with DIN EN 12254. This standard specifically relates to the screening of laser workplaces by means of laser safety curtains or laser safety screens and comprises a range of laser stress tests to be carried out on the material being tested. This results in a number of different protection classes as shown in the table below in relation to the relevant wavelength ranges.

| Wavelength range    | Protection class      |            |
|---------------------|-----------------------|------------|
| 180 – 315 nm        | D AB 8, IR AB4, M AB6 | DIN tested |
| > 315 – 1050 nm     | DIR AB5, M AB7        | DIN tested |
| > 1050 – 1,400 nm   | D AB5, IR AB9, M AB8  | DIN tested |
| > 1,400 – 11,000 nm | DI AB3                | DIN tested |

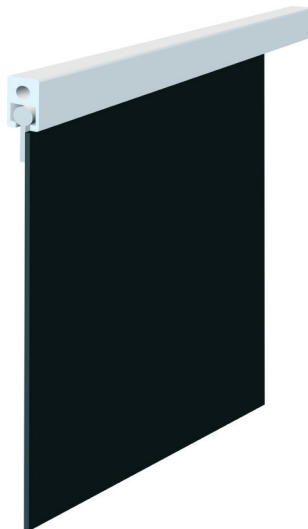
#### Technical data:

|                  |
|------------------|
| Thickness 1.2 mm |
| DIN 12254        |

## Hanging systems

### Keder system

This system allows quick and easy installation and can be manufactured in any size. The fact that the curtain is drawn into the Keder track results in a tight fit that offers a high level of safety.



### Sliding system

With the sliding system, the curtain runs in the rail by means of a retaining system. It can be moved in either direction. Stoppers can be used to restrict the opening size or to permit opening on one side only.



### Velcro tape system



### Hook system (stainless steel)



# Laser enclosure

The enclosure is designed and built to your precise requirements. It is constructed from aluminum section and can be fitted with folding, sliding or double doors. Curtains, laser safety glass or screens are fitted wherever you need laser protection.

If required, a laminar flow module (FFU) can be fitted in the top of the enclosure to provide clean room conditions within the enclosure.

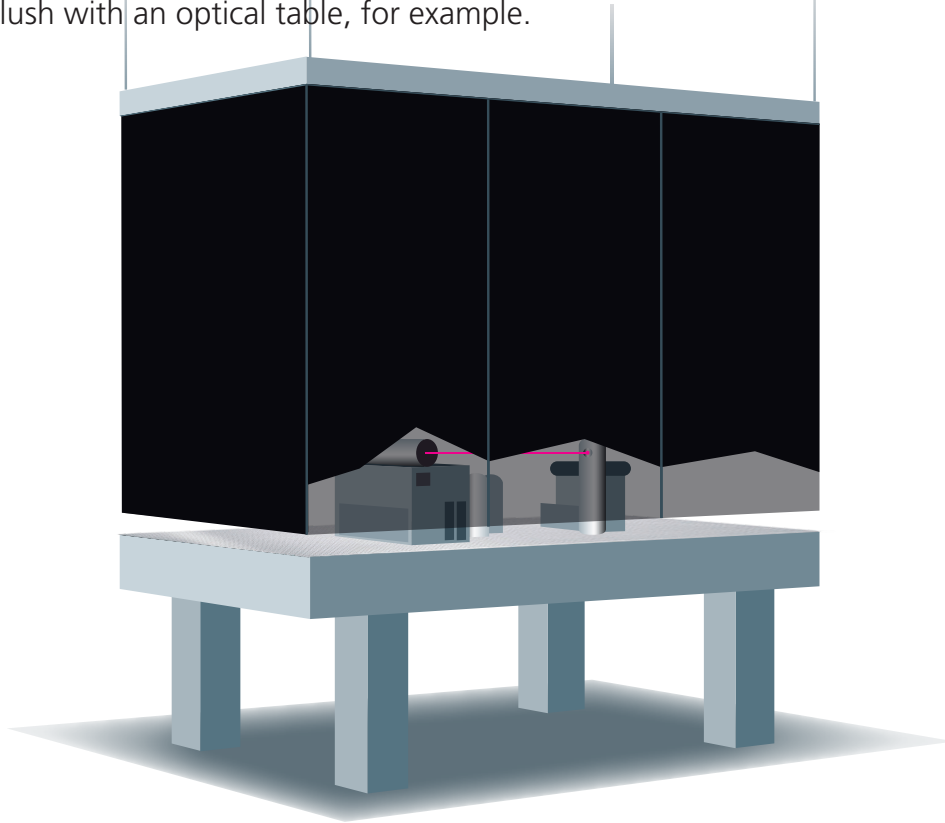


Enclosure for an optical table  
or machine enclosure

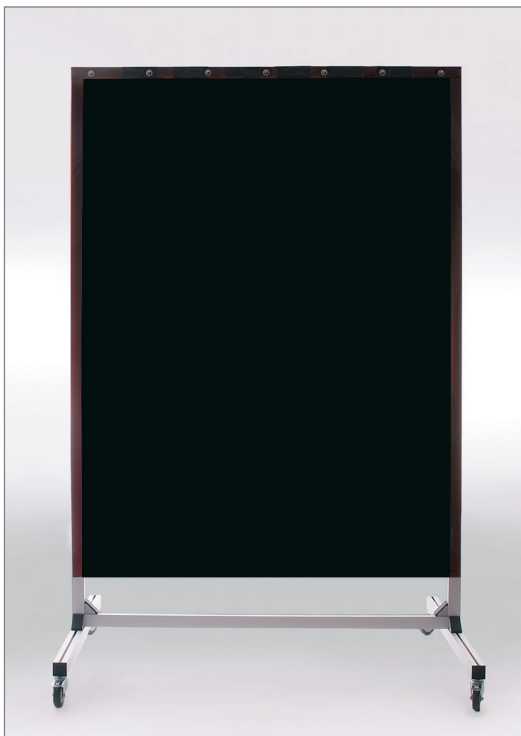
## Laser safety tent

## Laser safety screens

The Spetec laser safety tent, like the enclosure, is custom designed and built to your requirements. Generally, the laser safety curtain is attached to a metal frame. The metal frame is in turn secured to the ceiling. The laser safety curtain is cut to length so that it is flush with an optical table, for example.



Single, mobile laser safety screen in a metal frame – fitted with laser safety curtain, solid metal sheet or laser safety glass.



# Laser safety eyewear

The human eye can be permanently damaged by direct or indirect exposure to laser radiation. Damage to the retina generally occurs in the 400–1400 nm range, whereas corneal and lens damage is associated with the UV range (190–400 nm).

This means that laser safety glasses that protect eyesight are indispensable for all those who work with lasers. A distinction is made between full-protective laser eyewear and laser adjustment eyewear. Fully-protective eyewear protects the eye in the ultraviolet, visible and infrared ranges by reflecting or absorbing the beam. Laser adjustment eyewear, on the other hand, is only used in the visible range. The strength of the laser beam is reduced sufficiently to render short exposure times harmless, thus allowing adjustment tasks to be carried out on the laser equipment.

Laser safety eyewear and the filters that are used are designed to absorb the specific energy of the laser. This means that the protective eyewear must be chosen specifically for the required range of wavelengths, the peak radiation power and the necessary optical density. Of course, visible light transmission, field of view and comfort of the frame are also of great significance.

Spetec is able to offer a wide selection of laser safety eyewear. Request our catalog. You can choose from several different frame types and filters for a wide range of applications! All laser safety eyewear is certified compliant with DIN EN 207/208 and bears the CE mark.



## Frames laser safety eyewear:

### Frame #31

- comfortable over rx frames or alone
- soft touch nylon frame
- full field of view



### Frame #39

- modern fitover style (X-large)
- soft touch nylon frame
- full field of view



### Frame #35/#32

- sleek, low profile fit
- adjustable Temples and hinges



#### **Frame #36/#38**

- comfortable over rx frames or alone
- soft touch nylon frame
- full field of view
- adjustable temples
- available in black or white



#### **Frame #33/#37**

- reinforced material
- comfortable over rx frames or alone



#### **Frame #34**

- detachable rx insert
- comfort nosepieces
- bendable temples



#### **Frame #700/#900**

- comfortable over rx frames or alone
- full field of view



#### **Frame #60**

- universal fit
- fits over rx frames
- wide field of view

**For further details please request  
our pricelist "laser safety eyewear"!  
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