

# Laser safety curtains, slats and roller blinds



Different applications require different solutions with a wide range of protection levels. laservision offers laser safety curtains tested/certified in accordance with DIN EN 12254 (shielding of laser working spaces) and/or DIN EN 60825-4 (safety of laser products) in various designs. This means that the flexible and safe shielding of laser working spaces is guaranteed – no matter what the application is.

The modular design of the BC1, BC3 and BC6 curtains with the F1P01 fabric allows large areas to be covered using a combination of smaller standard curtain panels.

The new BC4 laser safety curtain with F1P02 fabric meanwhile enables very large areas to be protected using a single laser safety curtain.

The new roller blind systems (BC2) and vertical slats (BC5) are ideal for shielding windows and viewing panels.

## Information on the applicable standards:

### DIN EN 12254

- Standard for shielding of working spaces
- Limited to 100 W power and 30 J pulse energy
- Not applicable to machine enclosures
- Protective effect indicated by AB protection levels
- Or wavelength spectrums and laser operating modes (DIRM) indicated
- Laser safety curtains and roll-ups, roller blinds and slats tested and certified
- Certificates valid for 5 years

### DIN EN 60825-4

- Standard for machine enclosures, cabins and working spaces
- CE certification of laser safety materials based on standard DIN EN 60825-4 of the Machinery Directive
- The standard defines the requirements for the safety walls of laser cabins
- Protective exposure limit (PEL) as protective measure
- Testing performed in three test classes (T1, T2, T3)
- No specific test specification – comparable only when considering all parameters

**Laser safety curtains,  
slats and roller blinds**  
These are available on our  
website:



# Light- and High-Power curtain material F1P01

## SHELTER-NG BC1.F1P01

- Certified in accordance with DIN EN 60825-4
- Protection levels tested in accordance with DIN EN 12254
- Laser protection from both sides

Certified in accordance with DIN EN 60825-4

1070nm | 3.85MW/m² | T2 | tmax = 200s



## SHELTER-CR BC6.F1P01

- Anti-static ESD sleeve
- Easy cleaning and disinfection

Certified in accordance with DIN EN 207

| Wavelength (nm) | OD | Operating mode/tested level of protection |
|-----------------|----|-------------------------------------------|
| 180–315         | -  | D AB8 + IR AB3 + M AB6Y                   |
| >315–1050       | -  | D AB7 + I AB8 + R AB7Y + M AB8Y           |
| >1050–1400      | -  | D AB6 + R AB7Y + M AB8Y                   |
| >1400–20000     | -  | DI AB4 + R AB3Y + M AB4                   |



## Laser safety curtain material F1P01 as Light and High-Power versions

The curtain material F1P01 is based on a coated silicate fabric and has been protecting our customers for years. The curtains are certified in accordance with DIN EN 60825-4 or DIN EN 12254.

The laser safety material F1P01 can be used for light weight laser safety curtains (BC3) as well as for High-Power laser safety curtains (BC1). The BC6 variant has an anti-static cover. Single elements can be connected via velcro. In case of a laser hit only the affected element needs to be replaced.

- Coated silicate fabric
- Protection levels tested in accordance with DIN EN 12254
- Customer-specific dimensions possible
- Modular construction, standard width approx. 900 mm
- Can be connected using velcro/hook-and-loop tape or silicon arrow/groove tape
- Max. dimensions 2700 × 3500 mm (W × H)
- Short delivery times for standard segments
- Customer-specific solutions on request



| Description                                 | Art. number |
|---------------------------------------------|-------------|
| SHELTER-NG available in 8 standard sizes    | BC1.F1P01.x |
| SHELTER-Light available in 8 standard sizes | BC3.F1P01.x |
| SHELTER-CR available in 8 standard sizes    | BC6.F1P01.x |



| Wavelength (nm) | OD | Operating mode/tested level of protection |
|-----------------|----|-------------------------------------------|
| 180–315         | 5+ | D AB5 + IR AB3 + M AB5Y                   |
| >315–1050       | 5+ | DIRM AB5                                  |
| >1050–1400      | 5+ | DIRM AB5                                  |
| >1400–20000     | 5+ | DI AB3 + R AB3Y + M AB4                   |

## SHELTER-Light BC3.F1P01

- Certified in accordance with DIN EN 12254
- Also certified in the light version for 180–11000 nm incl. M protection levels
- Laser preferential direction
- Lightweight design, e.g. for doors



# Laser safety Roll-Up and accessories for constructing laser safety curtains



## Roll-Up BC3.F1P01.x based on BC3 (SHELTER-Light)



- Free-standing laser safety curtain
- Quick and easy assembly, easy to transport
- Join multiple modules using velcro/hook-and-loop tape
- Roll-Up set consisting of 3× roll-ups and 2× connectors incl. bag is the ideal service companion

| BC3 Roll-Up variants                                               | Dimensions            | Art. number    |
|--------------------------------------------------------------------|-----------------------|----------------|
| Roll-Up, stand-alone                                               | 900 × 2000 mm (W × H) | BC3.F1P01.1RU1 |
| Roll-Up connector                                                  | 450 × 2000 mm (W × H) | BC3.F1P01.1274 |
| Roll-Up set, consisting of 3× Roll-Ups and 2× connectors incl. bag |                       | VBP999307      |

## Standard frames and rail systems

093 – 097 & 110

- Easy setup
- 4 heavy-duty swivel castors
- 6 different configurations
- Swivel arms in 2 different lengths (700 mm and 1100 mm)

| Description                                                    | Art. number |
|----------------------------------------------------------------|-------------|
| Basic frame 2100 × 2100 mm + 2 swivel arms (1100 mm width)     | 093         |
| Basic frame 2100 × 2100 mm + 1 swivel arm (1100 mm width)      | 094         |
| Basic frame 2100 × 2100 mm + 1 swivel arm (700 mm width)       | 095         |
| Basic frame 2100 × 2100 mm + 2 swivel arms (700 mm width)      | 096         |
| Basic frame 2100 × 2100 mm without swivel arms                 | 097         |
| Basic frame 2100 × 2100 mm + 1 swivel arm (1100 mm and 700 mm) | 110         |



## Customer-specific rail systems

- Based on E40 aluminium profile series
- Different sliders and rollers depending on application
- For ceiling, wall or floor installation



# Medium-power curtain material F1P02

## Laser safety curtain material F1P02 as medium-power version

The new medium-power curtain material F1P02 is based on a silicon/fibreglass fabric and offers levels of protection tested in accordance with DIN EN 12254. This material can be used to make classic laser safety curtains (BC4), as well as laser safety roller blinds (BC2) and vertical blinds (BC5).

- Wipeable and disinfectable silicon/fibreglass fabric
- Protection levels tested in accordance with DIN EN 12254
- Customer-specific dimensions possible
- Laser protection from both sides

## Vertical blinds BC5.F1P02

- Straightforward management of laser protection and daylight regulation
- Professional, clean appearance for laboratories, medical centres and showrooms
- Standard height up to 2.5 m

### Protection levels tested in accordance with DIN EN 12254

| Wavelength (nm) | Operating mode/levels of protection |
|-----------------|-------------------------------------|
| 180–315         | D AB9 + I AB4 + M AB3               |
| >315–1050       | D AB6 + IM AB8 + R AB7              |
| >1050–1400      | D AB5 + IM AB8 + R AB7              |
| >1400–10600     | D AB3 + I AB4 + R AB3               |



## Roller blind BC2.F1P02

- Restricted side guidance against derailing
- The rough side is the visible side
- Standard dimensions up to 2.5 × 2.5 m
- Motorised
- Top mounting (recommended)
- Sub-mounting on customer request



## SHELTER-MP BC4.F1P02

- Standard height up to 4 m
- One piece large laser safety curtains possible
- Fastened via eyelets (16 mm)



| Description                                                        | Art. number   |
|--------------------------------------------------------------------|---------------|
| Laser safety vertical blinds F1P02 – available in 8 standard sizes | BC5.F1P02.10X |
| Laser safety roller blinds F1P02 – available in 8 standard sizes   | BC2.F1P02.10X |
| Laser safety curtains F1P02 – available in 6 standard sizes        | BC4.F1P02.10X |