



## External Blinds - Lamisol Reflect®



**Lamisol Reflect®** is based on the proven technology of the external blind Lamisol and allows—thanks to the different louver positions—indirect room illumination. It protects against any undesired glaring effect when working at the computer screen. The blind curtain is divided into 3 (Lamisol 90 Reflect) or 2 (Lamisol 70 Reflect) zones respectively, which have different louver positions. The top zone diverts the light into the interior of the rooms, thus ensuring a pleasant room feeling. The middle zone provides diffuse pleasant daylight. The bottom zone is completely closed and protects monitor workstations near windows from undesirable reflections and glare. Perforated louvers are optionally available through which it is possible to look outside.

- **Two louver widths**
- **Two or three louver positions**
- **Perforated louvers (option)**
- **Lamisol Fix (option)**



min. 510mm, manual  
min. 590mm, motorised  
max. 4000mm



min. 400mm  
max. 4250mm



max. 8m<sup>2</sup>, individual blind system  
max. 24m<sup>2</sup>, connected blind system  
motorised



## TECHNICAL SPECIFICATIONS & FEATURES



### The convincing technology in detail

1. Yellow Kevlar fibres ensure low stretching and shrinkage – the louver closure remains at an optimum for many years.
2. Sealing lip for good darkening dampens wind noises.
3. The ingenious shape of the guide nipples reduces wind noises in the closed position.
4. Connection hooks made of stainless steel.
5. Low wear of the lifting bands thanks to the flanging of the punched-out openings.

#### *Lamisol® 90 Reflect*

The 92mm wide louver corresponds to today's installation standard in new buildings.

#### *Lamisol® 70 Reflect*

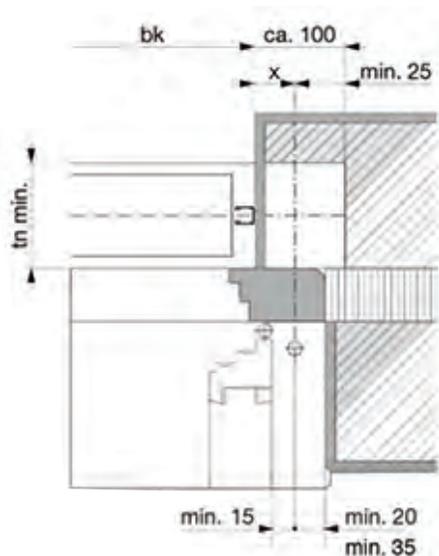
The 69mm wide louver is pre-orientated to the narrow installation conditions during renovations and conversions.

#### Horizontal section for manual operation

With recess (white) for gearing (not necessary for motor drive).

$x$  = dimension from rear edge guide rails to middle of drive; depending on window design – no specification. With gearing in louver area:  $hs + 20$ .

With the height of lintel a contraction tolerance of  $\pm 5\text{mm}$  must be taken into account.



### Dimensions and observations

#### *bk* – rear edge guide rails

Minimum	
- manual	510
- motorised	590
Maximum	4000

In structures and high-rise buildings exposed to strong winds this maximum value must be reduced as required.

#### *hl* – opening height

Minimum	400
Maximum	4250

#### *bk x hl* – maximum permissible surface area

Individual blind system	
- manual	8m <sup>2</sup>
- motorised	8m <sup>2</sup>

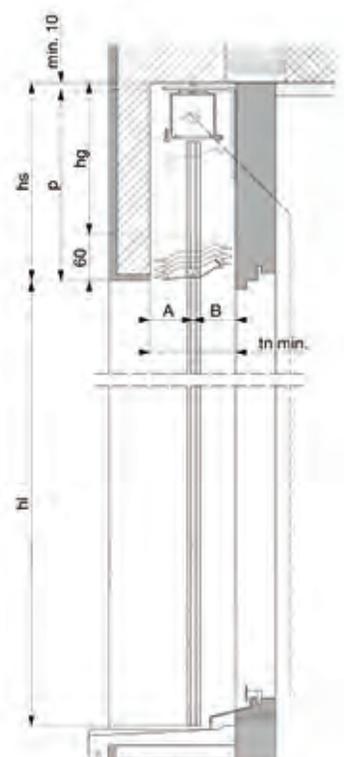
Connected blind systems (the maximum system width must not exceed 10m)

- manual	8m <sup>2</sup>
(maximum 4 blind systems)	

A maximum of 2 blind systems can be connected on each side of the gearing.

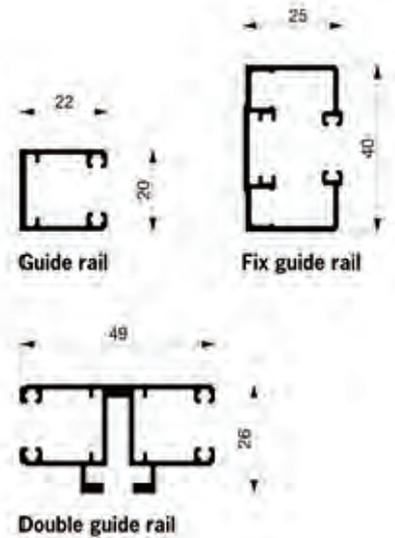
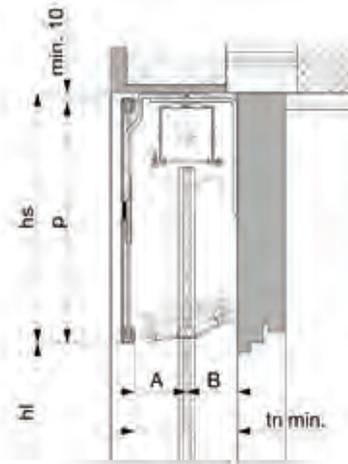
- motorised	
2 blind systems	16m <sup>2</sup>
3-4 blind systems	24m <sup>2</sup>
With 3 or 4 blind systems the motor must preferably be positioned in the centre.	

#### Vertical section: Example lintel



**Lintel measurements**

hl - opening height	hs - height of lintel	
	Lamisol® Reflect	
	90	70
mm	mm	mm
400-1750	230	240
1751-2000	240	255
2001-2250	255	270
2251-2500	265	290
2501-2750	280	305
2751-3000	295	320
3001-3250	310	335
3251-3500	325	355
3501-3750	335	370
3751-4000	355	390
4001-4250	365	405



tn - depth of niche

	tn	A	B
Lamisol®90	min.130*	65	65
Lamisol®70	min.100*	50	50

\*+ any allowance for protruding weather legs or door handles

**Legend**

- bk = rear edge guide rails
- hl = opening height
- p = height of pack of louvers
- hs = height of lintel (p + min.10)
- hg = height of gearing recess (hs - 60)
- tn = depth of niche

Lintel dimensions are approximate values that may deviate in the minus or plus ranges due to the technical circumstances.

All dimensions in mm.

**Optimised daylight utilization**

Modern monitor workstations must satisfy the requirements in terms of heat protection, daylight utilization, glare protection and visual contact with the outside. Lamisol® Reflect with different louver positions and the option of perforated louvers in the lower area offers an optimum solution in this regard. Decisive is the correct division of the blind hanging into the zones glare protection, daylight utilization and visual contact with the outside.

The two graphics show the recommended division for window with sills. On windows of storey height clarification is required as shown by the example below.

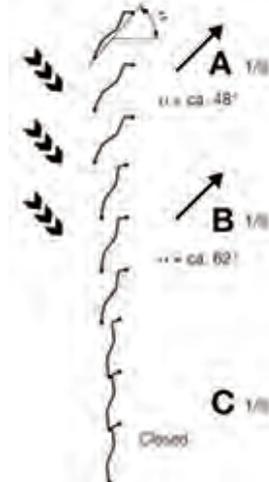
*Example window with sill*

Window with hl	2100mm
Sill	800mm
Zone C (1/3)	700mm
Glare protection height	
Sill plus zone C	1500mm

*Example window of storey height*

Window with hl	2700mm
No sill	
Zone C (1/3)	900mm
Glare protection height (only zone C)	900mm

**Lamisol®90 Reflect with 3 zones**



*Glare protection*

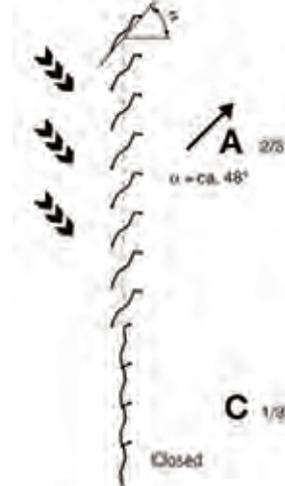
The glare protection is accomplished through closed louvers in the lower zone. This reduces the luminance difference in the field of vision to the recommended value (field of vision/monitor maximum 3/1).

The glare protection height is clearly too low. Clarification is required for the optimum glare protection zone.

*Daylight utilization*

The upper zone with open louvers serves for daylight utilization.

**Lamisol®70 Reflect with 2 zones**



*Visual contact with the outside*

The visual contact with the outside is achieved with perforated louvers (average light transmission of 4%) in the lower zone.



Optimum daylight on the monitor workstation with Lamisol® Reflect, divided into three zones.

## Design description

### External blind system

Composite technology with direct attachment of each individual louver to the adjusting bands. Connection hooks made of stainless steel. Adjusting bands (grey) with Kevlar reinforcement (against shrinkage and stretching). Lifting bands (grey) with edge and UV protection. Louvers function: pivoting at any level.

### Louvers

Sturdy profile with rolled-in noise-insulating plastic sealing lip – good darkening. Alternate guide nipples made of polyamide (noise-insulating shape) Louvers flanged on both sides, 92mm or 69mm wide, aluminium stoved enamel finish. End rail extruded aluminium, plain anodised (stoved enamel finish at extra charge).

## Options

### Lamisol® Fix

The self-supporting blind design protects the insulation in the lintel and reduces service costs. Up to a width of 2000mm the system does not require attachment of the support channel – the insulation remains intact and noise transmission is reduced. The study guide rails (40x25) are furnished with service opening.

### Perforated louvers

The transparency of perforated louvers brings with it the advantage of visual contact with the outside – despite lowered blinds. We recommend using these louvers in the lower zone.



**Option perforated louvers with the advantage of visual contact with the outside.**

### Open louvers lowering position (working position)

The darkening when lowering the blind often has a disturbing effect – especially at the workplace. The louver lowering position of roughly 48° prevents these dark phases when lowering the blind.

### Lateral guide rails

Extruded aluminium 20x22mm (Lamisol® Fix 40x25mm), with weather-resistant noise insulating insets, plain anodised (stoved enamel finish at extra charge).

### Support channel

Made of galvanised steel plate, open at the bottom, with wind-stable lifting and adjusting mechanism.

## Colors

### GriColors

In the standard range GriColors you will find 100 shades of color in the four collections glass and stone, sun and fire, water and moss as well as earth and wood for an attractive unit price – from cool white to sunny red, natural blue or earthy brown.

### Grisser Colors

For unlimited request we have a total of 1000 colors available for selection (at extra charge).

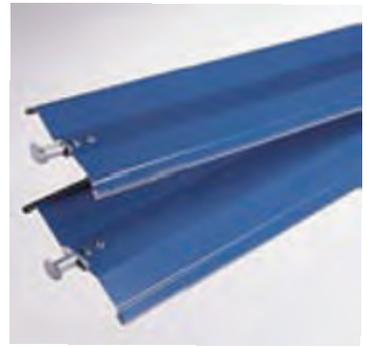
### Option BiColors

Louvers blinds are given new color accents: when colorful dominated on the outside a neutral bright is able to optimise the blind function on the inside (at the extra charge).

The guides and the end rail are plain anodised (one-color stoved enamel finish at extra charge).

## Operating instructions

- In windy weather the external blind systems must be timely retracted
- If there is a risk of icing-up the blind systems must not be operated
- The blind systems must be accessible for maintenance operations



**Two louver widths: Lamisol® 90mm and Lamisol® 70mm**



**Open louver lowering position, preventing dark phases when lowering the blind**

More information on our services and products as well as planning instruction can be found at [www.griessergroup.com](http://www.griessergroup.com)

