

# Lismar

sistemas de sombreamento | mobiliário para hotelaria

## SISTEMA **PROTAL**

[www.lismar.pt](http://www.lismar.pt)

DESDE  
since  
**1994**





**Protal**  
The all-metal external venetian blind

### PROTAL: the all-metal external venetian blind

The PROTAL all-metal external venetian blind combines the advantages of solar protection and the characteristics of a shutter. Very popular for modern building designs, the PROTAL can considerably improve a building's energy efficiency. PROTAL external venetian blinds are recommended for modern façades, administrative and commercial buildings, schools, hospitals and private houses. The PROTAL is equipped with a triple security, ensuring you peace of mind every day.

Designed to provide you with a panoramic view between the slats, PROTAL does not have lifting tape nor tilting braid. The slat traction and tilting mechanisms, respectively chains and pantographs, are integrated into the guide rails. The specific shape of the 96 mm stove enameled aluminium slats allows optimal control and regulation of light. PROTAL offers a very good protection against glares and reverberations while allowing maximum vision. When closed, the slats overlap, thus providing with their sealed synthetic lip excellent darkening. The extruded aluminium guide rails are fitted with a guiding lip to guarantee ease of use as well as noise reduction in windy condition.



Lowering panel



Closed panel



Raising panel

PROTAL's all-metal construction, with components made from stainless steel, ensures long service life, even in strong winds.

For your peace of mind, PROTAL combines robust design with triple safety. Our security concept key point is undoubtedly the locking system. It automatically prevents slats from being raised at any position, thus making unwanted intrusion difficult.

The automatic disengaging system within the lifting mechanism prevents damages caused by contact with objects in the panel's way.

The end rail auto-protection system prevents damages caused by contact while tilting.



### Get the best from your installation

Complement our PROTAL product line, a large selection of automation systems. Wired or wireless systems, individual or group controls, in the home or office environment, we have a solution for each one of your needs.

Automation systems will give you the optimum benefits of sun rays.

Preprogrammed scenarios control and regulate lighting and thermal intakes in order to have the best inside environment.

Additionally, you won't have to worry anymore about your blind integrity as we offer solutions that will protect them in case of adverse weather conditions.



Triple security: anti-raising, automatic disengaging system, and end rail auto-protection.



### Detailed characteristics

- \_The self-supporting and strongly profiled 96 mm stove enameled aluminium slats provide optimal light control and regulation.
- \_The slats have a sealed polyethylene lip for an excellent darkening and silent closure.
- \_The slats are lowered and raised in the open position to allow maximum vision and avoid sharp contrasts between light and darkness.
- \_They can be tilted as desired in the lowered position, providing excellent light regulation and optimal ventilation.
- \_The high quality materials used guarantee a long life for your blind: the guide rails are made from extruded aluminium, natural anodised or stove enameled, the traction chain from nickel-plated steel, and the slat brackets and the pantographs form stainless steel.
- \_The traction and orientation mechanisms of the blind are integrated into the guide rails.
- \_Our pantograph and chain system provides the mechanism with a watchmaker precision operation.
- \_PROTAL "all-metal" blinds operate without lifting tape nor tilting braids, offering a panoramic view between the slats and giving it a neat appearance and an easy slat maintenance.
- \_The guide rails are fitted with synthetic sealed lips for a silent operation and a better guidance.
- \_The locking system works at any position. Consequently, PROTAL is always protected from unwanted raising of the panel.
- \_An anti-crushing system prevents damages due to contact with objects in the panel path.
- \_The end rail disengaging system prevents damages when it encounters an object during slat tilting.
- \_Operation is done by a crank handle or more easily by an electrical motor.
- \_Colours from our standard range.



PROTAL's all-metal construction guarantees a long life for your installation. The integrated traction and tilting mechanisms in the guide rails are ideally protected from weather influences.

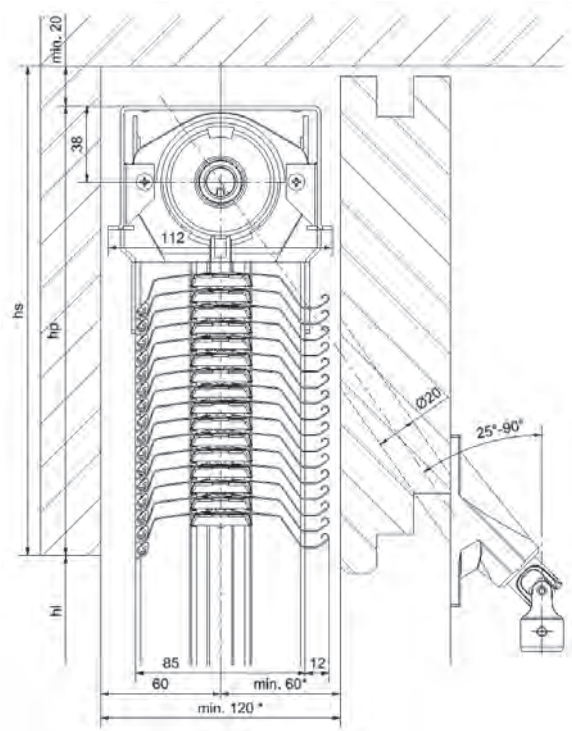
### Options

- \_Specific slats and guide rails colours.
- \_Additional stop with the panel in the lowered position with open slats.
- \_Automation systems designed to your needs.
- \_Wireless control.
- \_Head box or pelmet.
- \_Specific cutting of the bottom part of the guide rails.
- \_Guide rail extensions.

## Recess height

All dimensions in mm)

Opening height (hl)	Recess height (hs) min.
500 – 1450	280
1460 – 1620	290
1630 – 1700	305
1710 – 1870	315
1880 – 2040	330
2050 – 2130	340
2140 – 2300	355
2310 – 2380	370
2390 – 2550	380
2560 – 2720	395
2730 – 2800	405
2810 – 2970	420
2980 – 3050	430
3060 – 3220	445
3230 – 3390	455
3400 – 3480	470
3490 – 3650	480
3660 – 3820	495
3830 – 3910	505
3920 – 4000	520



The lintel height (hs) includes a 20 mm play to compensate for unevenness in the walls and to ease fitting/removal of the guide rails. When fixing with a head box, add 20 mm. When the manual gear box is within the slats field, lintel height needs to be changed in order to provide enough space to drill the handle exit hole.

## Size limits

	Single		Coupled			
	Manual	Motor	Manual	Coupled	Motor	Coupled
Construction width min.	500	650	500	500	700	500
Construction width max.	2800	2800	2800	2800	2800	2800
Opening height min.	500	500	500	500	500	500
Opening height max.	4000	4000	4000	4000	4000	4000
Maximum frontal area	-	-	8400		8400	
Maximum number of blinds	-	-	3		3	
Maximum area in m <sup>2</sup>	4,5	7,5	4*		18*	

\* Notice: For installation with coupled blinds, the maximum area must be reduced by 5 % for each blind.



# WWW.LISMARCA.PT

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