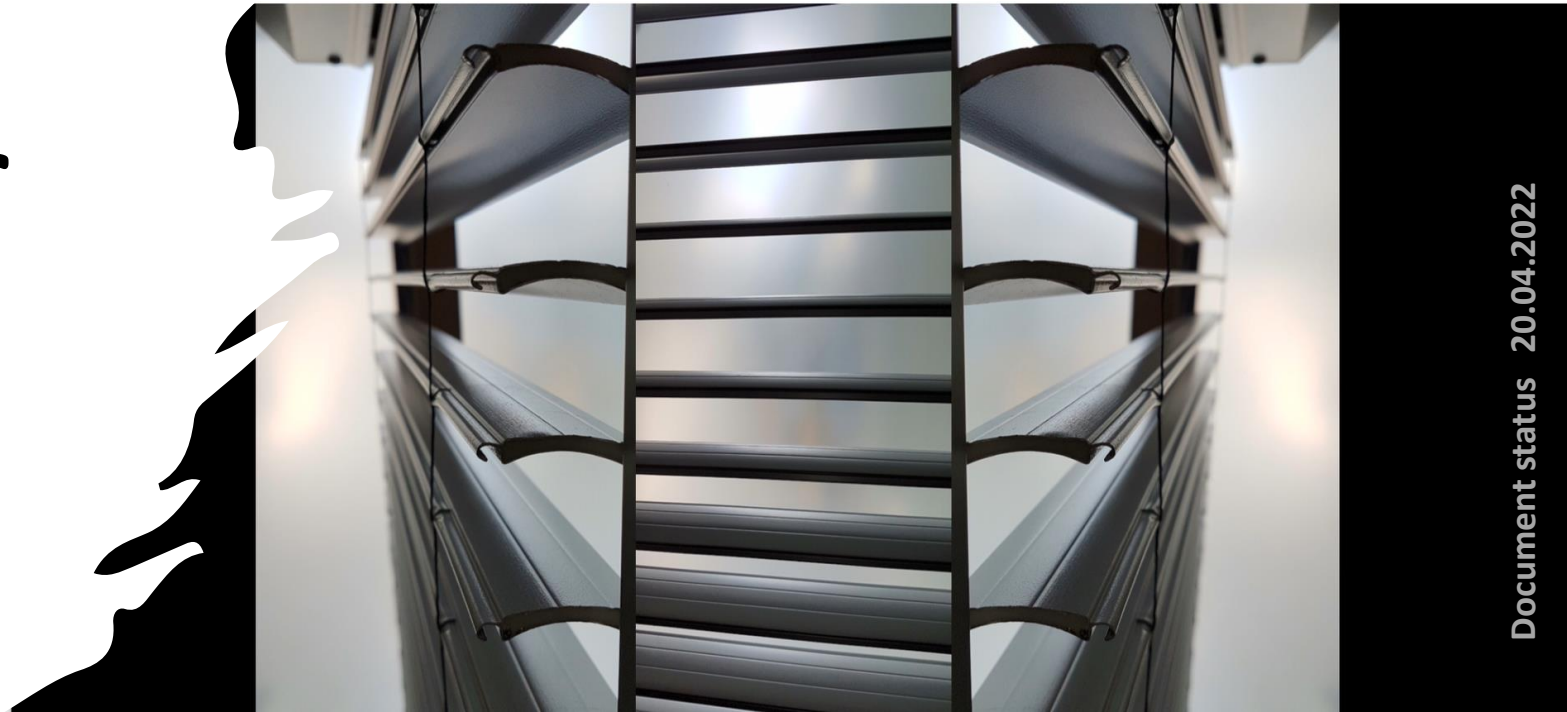


The louvre-type roller shutter

Roller shutter whit tilting slats

Rollija®



Please ask yourself the following question:

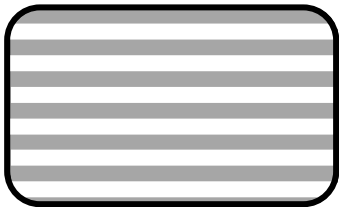
How much additional market share could your company fetch, if you had a product product that would possibilities of the following slides and was protected by a patent?



Solution - so far



or

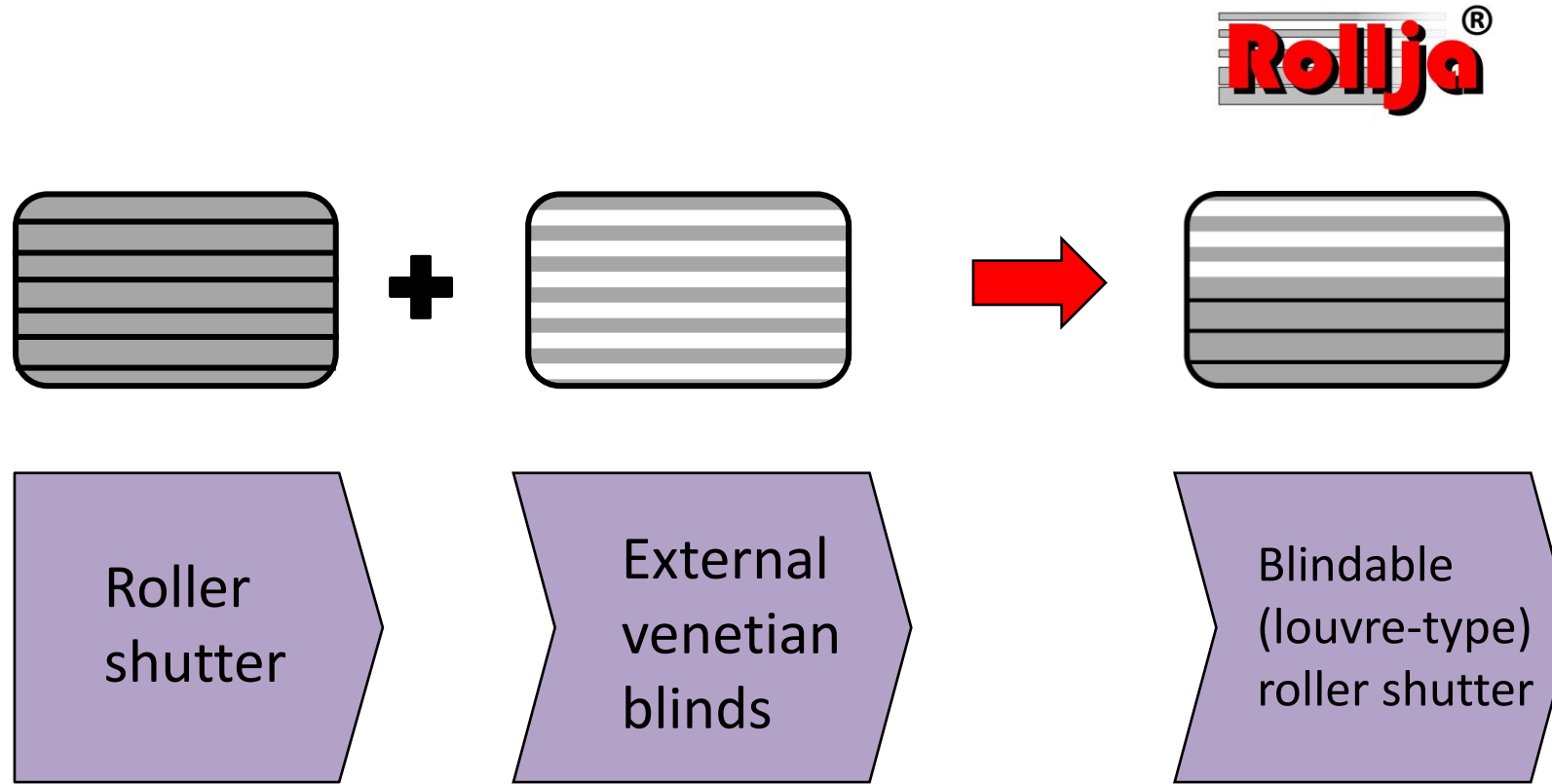


Roller
shutter

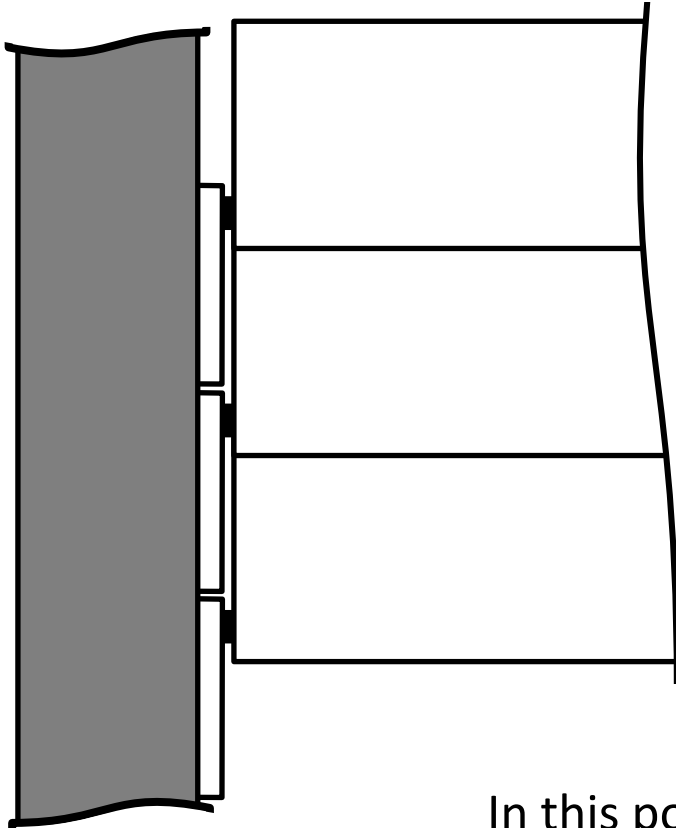
External
venetian
blinds



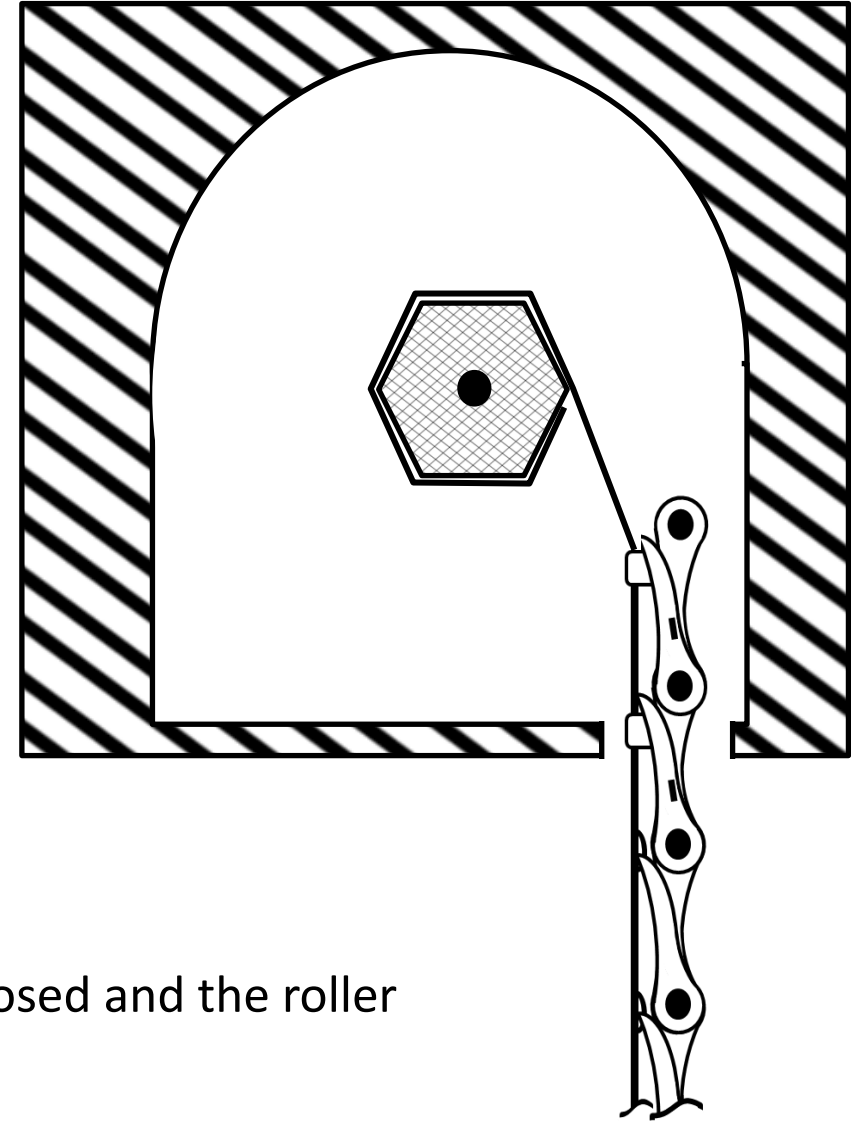
Solution - New



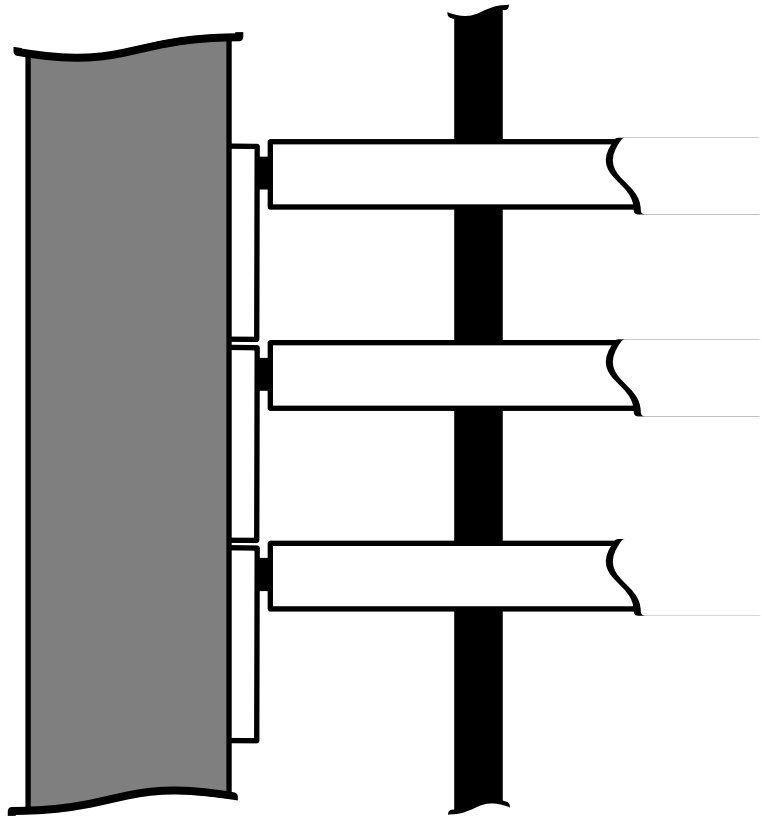
Solution with closed slats



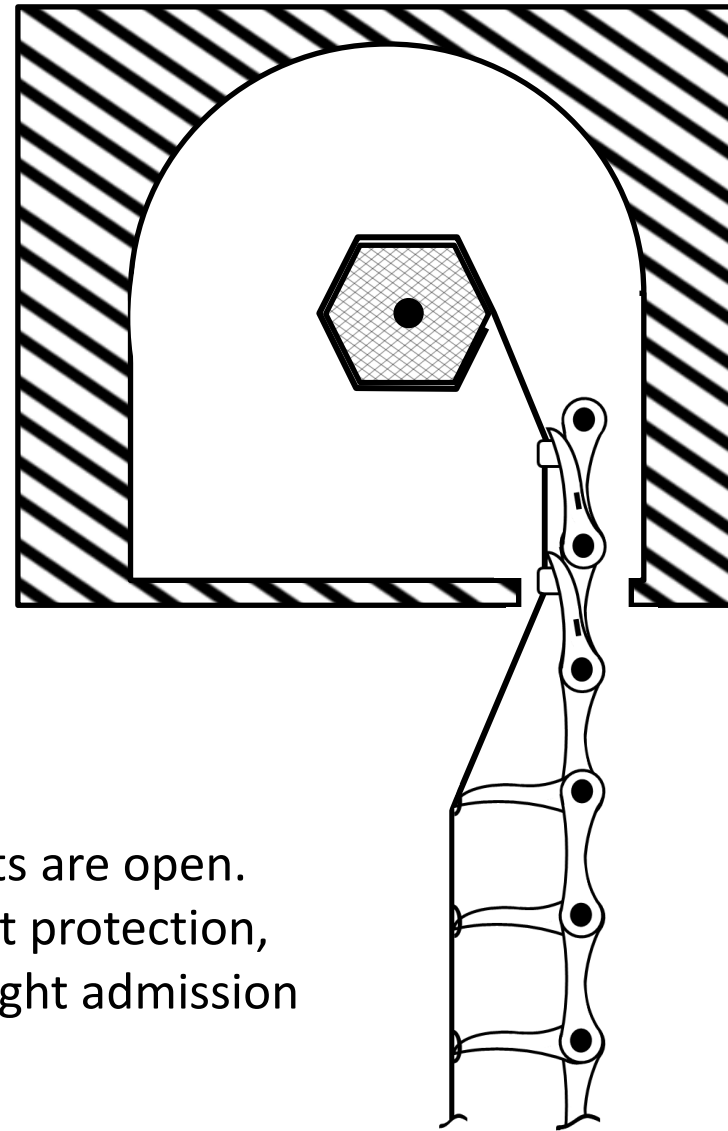
In this position, the slats are fully closed and the roller shutter curtain can also be raised



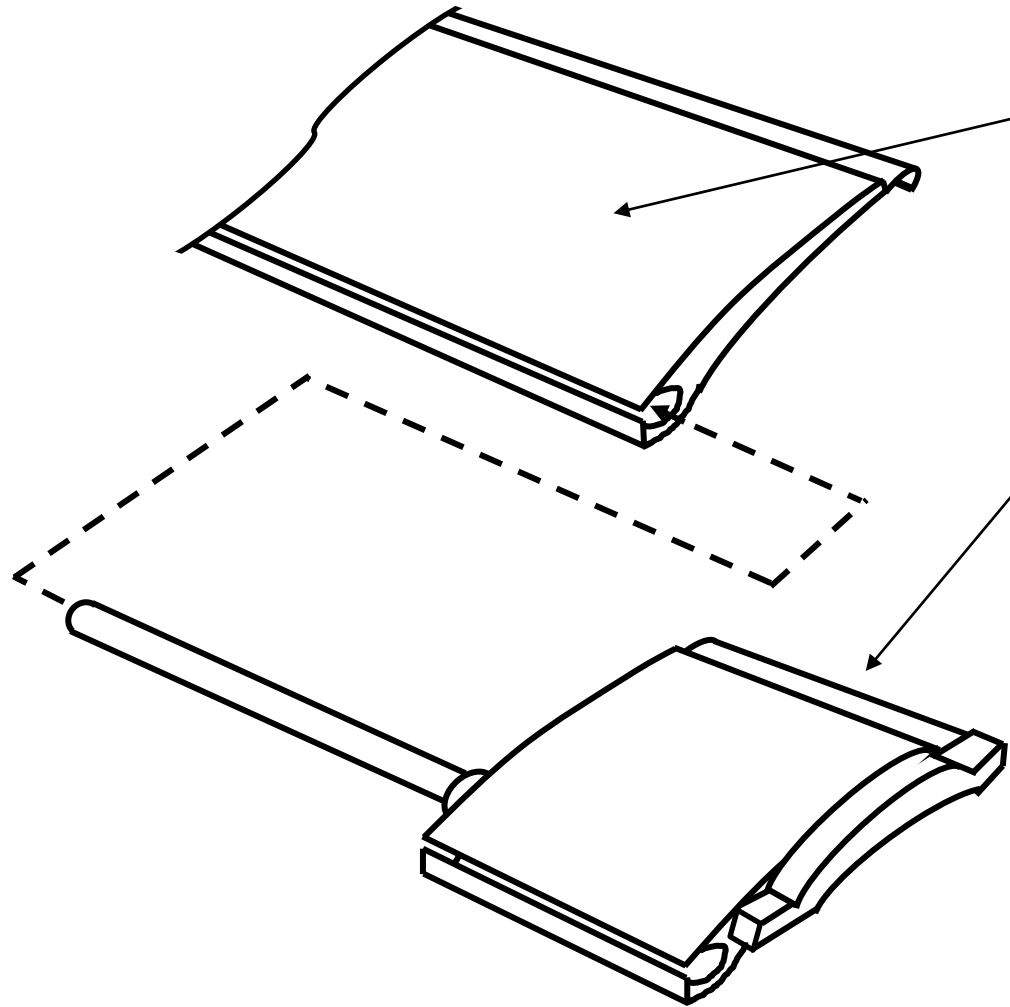
Solution with open slats



In this position, the slats are open.
In spite of summer heat protection,
a view out and a high light admission
is given.

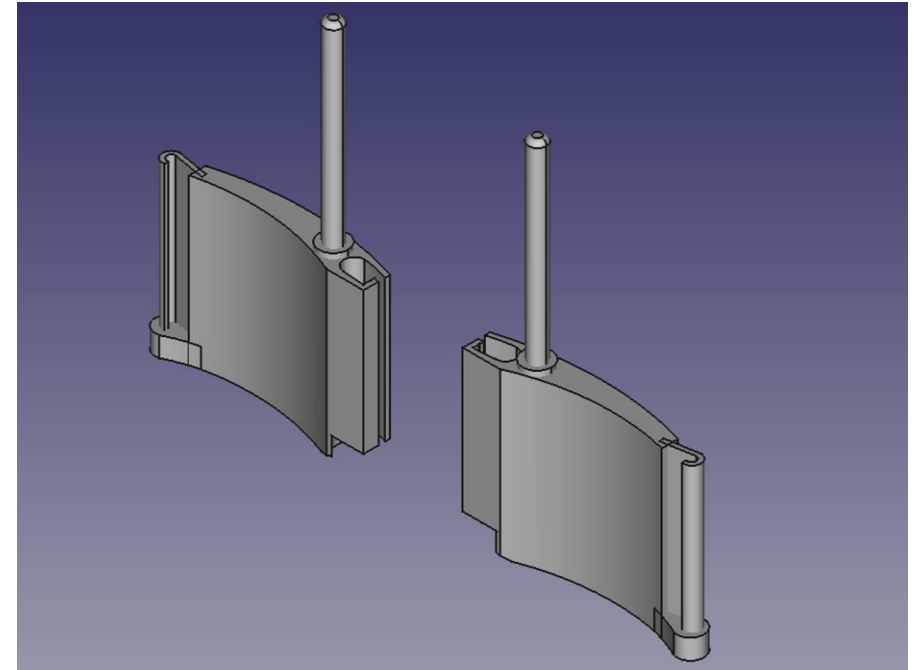


The core of the louvered roller shutter: The guide slat design



Normal foamed aluminium roller shutter slat

Guide slat running left and right in the roller shutter guide rails



Solution



Advantages:

- ❑ No high additional costs
- ❑ Can be installed in existing roller shutter systems
- ❑ Simple implementation
- ❑ Load transfer at each individual slat
- ❑ Foamed aluminium standard lamellas by the metre possible
- ❑ No special drive necessary
- ❑ Architecturally high scope
- ❑ Opened the look of an external blind
- ❑ Large widths possible
- ❑ Only a little more space required than with a conventional shutter curtain in the shutter box required

Solution



Additional advantages in closed state:

- ❑ can be fully darkened
- ❑ increased burglary protection (compared to external venetian blinds)
- ❑ full privacy protection
- ❑ Can remain closed during storms
- ❑ Energetic improvement
- ❑ full roller shutter



Solution



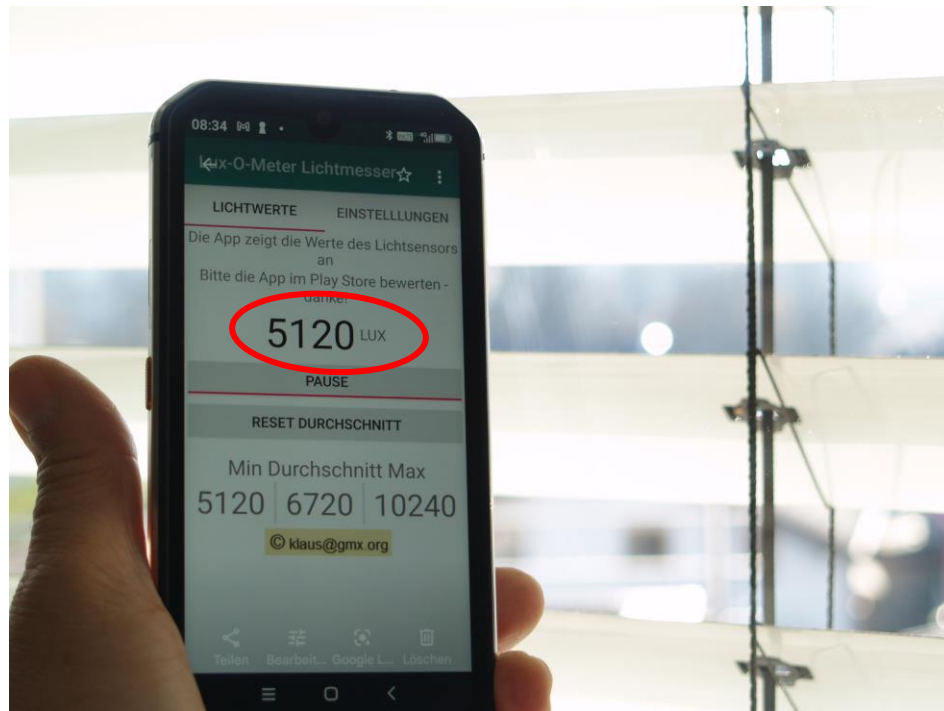
Additional advantages when the slats are set at an angle :

- ❑ Shading option with optimal light transmission
- ❑ Continuous inclination of the slats possible
- ❑ Despite a certain privacy protection
- ❑ can be seen out
- ❑ Feeling of openness, as with an external venetian blind

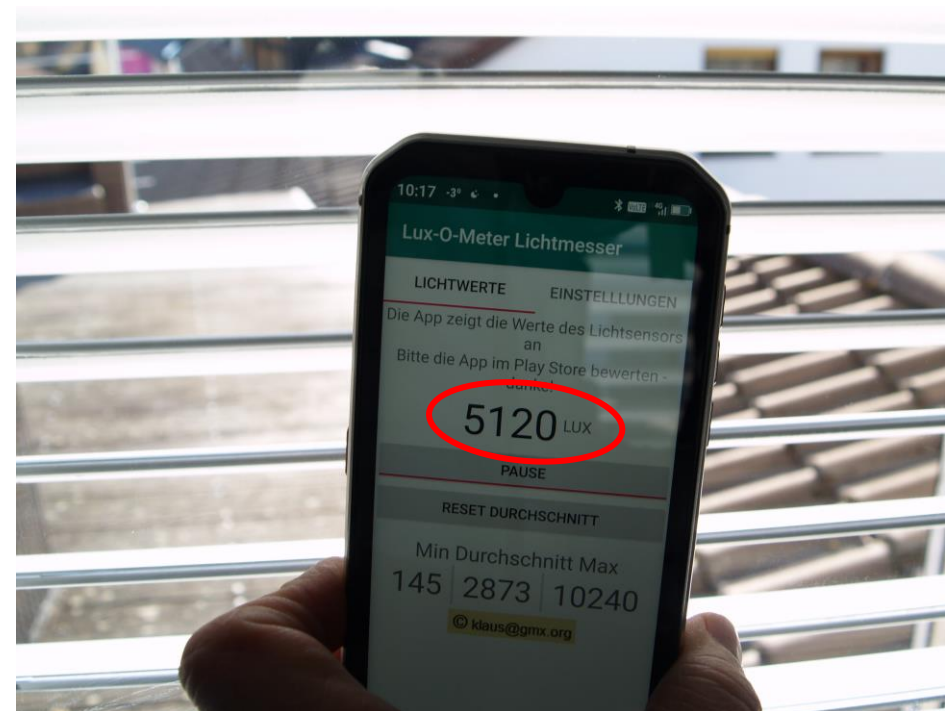


Light inlet comparison with full shading

External venetian blinds



Rollja[®] the louvre-type roller shutter

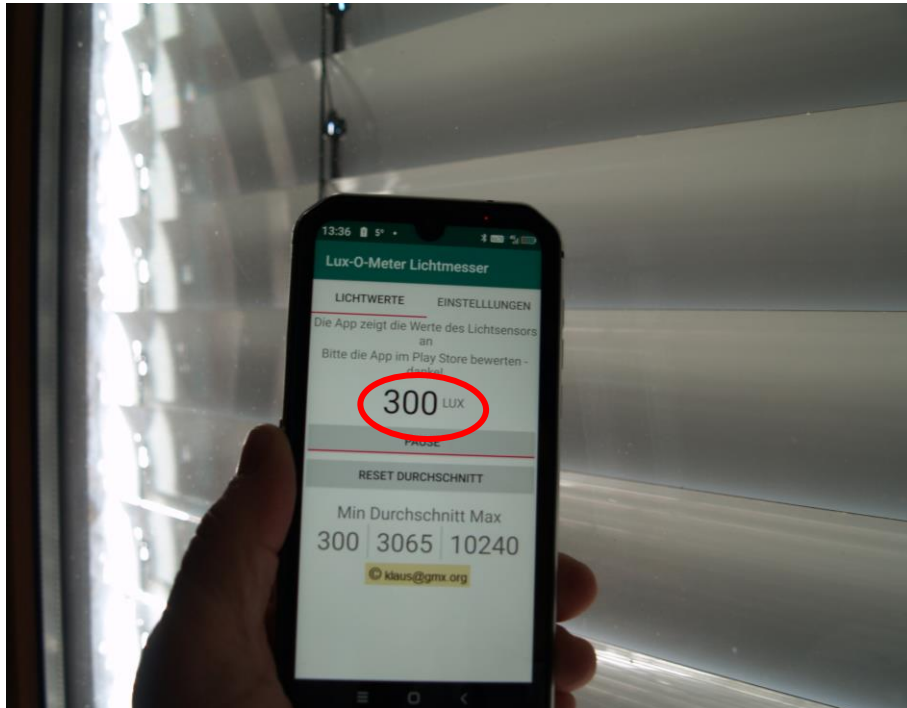


Equally good result with an external venetian blind and with the Rollja

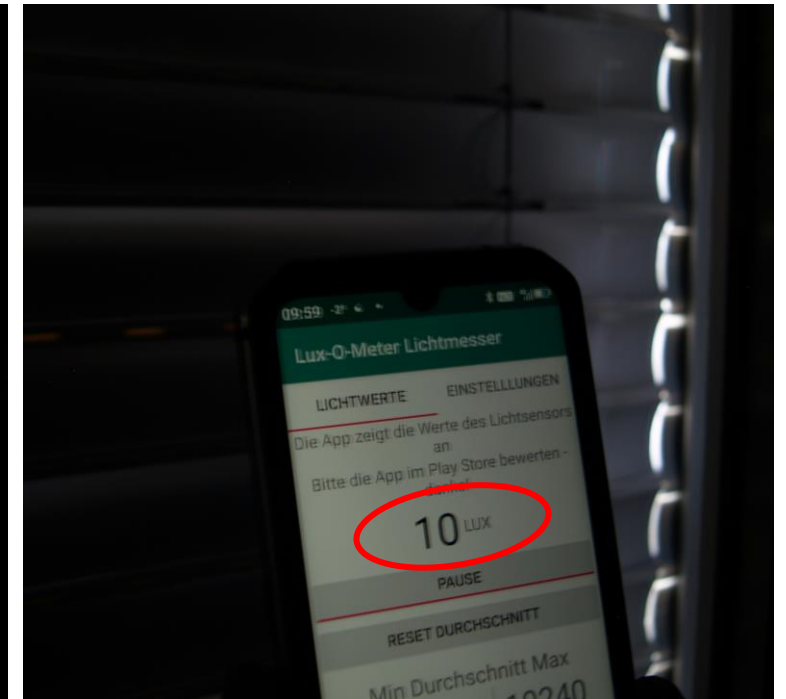


Comparison of the darkening

External venetian blinds



Rollja[®] the louvre-type roller shutter



The blindable roller shutter darkens much better than an external venetian blind.



Comparison of space requirements in the roller shutter box

Height of window cut-out: 1000 mm; total length of curtain (incl. end slat) 1100 mm
Slat type: Alu Mini 37 mm winding shaft 40 mm

Conventional roller shutter



Diameter
completely rolled up

118 mm

Diameter difference: 6 mm



The blindable roller shutter



124 mm

Only 5.1 % more space required



Overview of the different systems

	Indoor blind	External venetian blinds	Textile external venetian blind	Roller shutter	s_onro	Combined solution from Warema	Sun + Air	Air Light	Air Wing	Oriente Rollstore	Secur Flap	Roma CDL	Rollja®
complex technique	Green	Yellow	Green	Green	Green	Red	Green	Green	Yellow	Red	Green	Red	Green
Acquisition price	Green	Yellow	Yellow	Green	Yellow	Red	Yellow	Green	Yellow	Red	Red	Red	Yellow
Price / performance ratio	Yellow	Yellow	Yellow	Green	Yellow	Red	Yellow	Yellow	Yellow	Red	Yellow	Green	Green
Installation effort	Green	Yellow	Yellow	Green	Green	Red	Green	Green	Yellow	Red	Red	Yellow	Green
Can be retrofitted into existing roller shutter systems	Red	Red	Red	Green	Green	Red	Green	Green	Green	Yellow	Red	Red	Green
High light transmission with shading	Green	Green	Yellow	Red	Yellow	Green	Red	Red	Yellow	Yellow	Green	Green	Green
Privacy screen always possible	Green	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Complete darkening possible	Red	Red	Red	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Green
Sense of security / burglary protection	Red	Red	Red	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Green
Rattling noises with wind	Green	Red	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Continuous slat inclination possible	Red	Green	Red	Red	Red	Green	Red	Red	Red	Yellow	Green	Green	Green
Summer thermal insulation	Red	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Energetic improvement	Red	Red	Red	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Green
Full value roller shutter	Red	Red	Red	Green	Green	Green	Green	Green	Green	Green	Green	Red	Green
Architecturally good possibilities	Red	Yellow	Yellow	Yellow	Red	Green	Green	Green	Yellow	Yellow	Green	Green	Green
High slat length possible	Yellow	Green	Yellow	Green	Green	Green	Green	Green	Yellow	Yellow	Green	Green	Green
High durability	Green	Green	Yellow	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Surface of the blinds can be adapted to conditions	Green	Green	Red	Red	Red	Green	Red	Red	Yellow	Yellow	Red	Green	Green
Special profile required	White	White	White	Green	Red	Green	Green	Green	Red	Red	Red	Red	Green
Sound insulation improvement with closed system	Red	Red	Red	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Green
Drive types (B = Belt; C = Crank; E = Electric)	Cord	C, E	C, E	B, C, E	E	B, C, E	B, C, E	B, C, E	E	E	E	E	B, C, E
increased winding diameter	White	White	Green	Green	Green	Green	Red	Red	Red	Yellow	Red	White	Green
Can be installed without reinforcements or modifications to existing roller shutter boxes	Red	Red	Red	Green	Red	Red	Green	Green	Red	Red	Red	Red	Green



Some statements from customers about shading options :

Client - male: I prefer external venetian blinds because I have more brightness and still have shade, like with roller shutters. I also like the look and being able to see out!

Client - female: I would rather have roller shutters, because then I feel safer! Burglary protection is also becoming increasingly important in Europe.

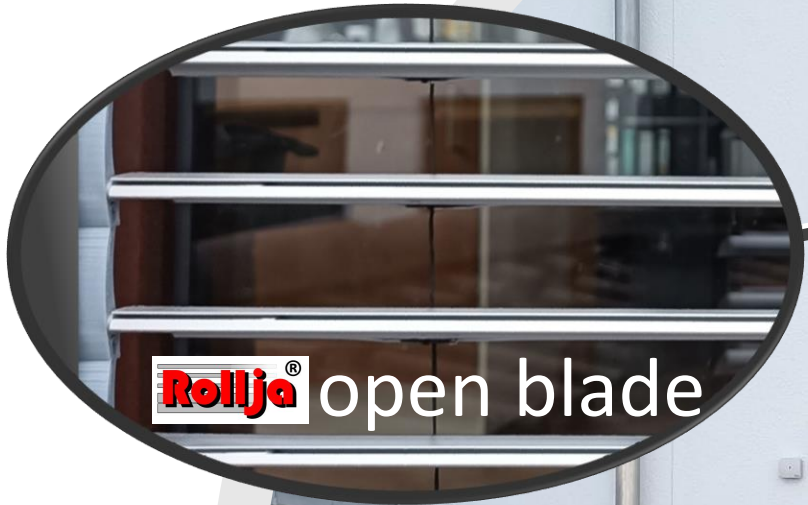
Child: Climate protection should come first. An external blind like that doesn't help in terms of energy, does it?

Architect: The house should have the same look on the outside, be of one piece!

Property developer: We want to offer our customers added value and be able to differentiate ourselves from the competition. Our goal is to achieve the highest possible return on investment.

**All these wishes can only be fulfilled by one product.
The roller shutter with blinds!**





Same appearance when closed



Opportunities for a property developer

A developer would be of higher quality with the alternative of also being able to offer the roller shutter with blinds.

The normal roller shutter would be the basis in the building specification.

For an additional charge, the buyer would be able to upgrade to the blindable roller shutter for the rooms in which he would like to have shaded brightness during the day.

Higher customer benefit and customer satisfaction

Upgrading of the property

Increased turnover and higher returns for the developer!



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So far:

9. Rollläden

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In den Wohngeschossen, mit Ausnahme der Treppenhäuser sind die Fenster- und Fenstertüren mit gedämmten Rollladenkästen und Kunststoffrollläden mit Lichtschlitzen und eingebauter Federsicherung gegen Hochschieben ausgestattet. Bedienung elektrisch, Schaltung an dem jeweiligen Fenster. Farbe Rollopanzer und Führungsschiene lichtgrau.

In den Dachgeschossen werden, soweit bautechnisch notwendig, Vorbau-Lamellen-Raffstores verwendet, ansonsten wie vor.



Die außenliegenden Sonnenschutz einrichtungen der Dachflächenfenster werden überwiegend elektrisch betrieben.



New:

9. Roller shutters

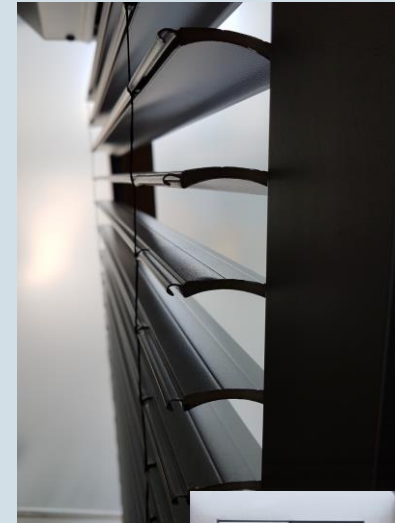
On the residential floors, with the exception of the staircases, the windows and French doors are equipped with insulated roller shutter boxes and high-quality foamed aluminium roller shutters with built-in light slots. Aluminium roller shutters have very good insulating properties, increased sound insulation and increased burglary protection. On request, the roller shutters can also be blinded.

(see example picture).

Electric operation, switching at the respective windows.

Colour of roller blinds and guide rails silver.

The external sun protection devices of the roof windows and the roller shutters are electrically operated.



Any drive is possible

Prototype with crank



Prototype with webbing



electric drive



Electric drive



A conventional tubular motor as well as an electric belt winder are possible.

With a conventional remote control, the following operations can be programmed:

1. Fully open - roller shutter moves to the upper end point
2. Maximum inclination - roller shutter moves to the lower end point
3. Roller shutter completely closed (light- and sight-proof) - Roller shutter moves to the programmed intermediate position
4. By briefly tapping the up or down button, it is possible to set the inclined position precisely.

Functionality of the louvered roller shutter

By using the link, you can see a video of a blindable roller shutter in action:

www.youtube.com/watch?v=izZqXwR1H_c



Patent

Bundesrepublik Deutschland

Urkunde

über die Erteilung des
Patents Nr. 10 2014 113 938

Bezeichnung:
Jalousierbarer Rollladenpanzer

IPC:
E06B 9/15

Inhaber/inhaberin:
Spindler, Bernhard, 85567 Grafing, DE

Erfinder/Erfinderin:
Erfinder gleich Anmelder

Tag der Anmeldung:
25.09.2014


Tag der Veröffentlichung der Patenterteilung:
21.01.2016

Die Präsidentin des Deutschen Patent- und Markenamts

Cornelia Rudloff-Schäffer
Cornelia Rudloff-Schäffer
München, 21.01.2016



Den aktuellen Rechtsstand und Schutzzumfang entnehmen Sie bitte dem DPMAregister unter www.dpma.de.

(19)  Deutsches Patent- und Markenamt

(10) **DE 10 2014 113 938 B3** 2016.01.21

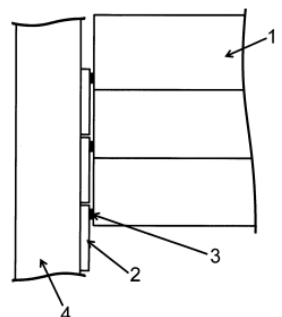
(12) **Patentschrift**

(21) Aktenzeichen: **10 2014 113 938.0** (51) Int Cl.: **E06B 9/15** (2006.01)
 (22) Anmeldetag: **25.09.2014**
 (43) Offenlegungstag: **-**
 (45) Veröffentlichungstag der Patenterteilung: **21.01.2016**

Innerhalb von neun Monaten nach Veröffentlichung der Patenterteilung kann nach § 59 Patentgesetz gegen das Patent Einspruch erhoben werden. Der Einspruch ist schriftlich zu erklären und zu begründen. Innerhalb der Einspruchsfrist ist eine Einspruchsgebühr in Höhe von 200 Euro zu entrichten (§ 6 Patentkostengesetz in Verbindung mit der Anlage zu § 2 Abs. 1 Patentkostengesetz).

(73) Patentinhaber: Spindler, Bernhard, 85567 Grafing, DE	(56) Ermittelte Stand der Technik: DE 40 16 511 A1 DE 10 2011 008 619 A1 DE 10 2012 007 141 A1 DE 18 59 969 U WO 2014/ 072 050 A1
(74) Vertreter: LS-MP von Puttkamer Berggruber Loth Spuhler Münich Patent Partnerschaft von Patent- und Rechtsanwälten mbB, 81373 München, DE	
(72) Erfinder: gleich Patentinhaber	

(54) Bezeichnung: **Jalousierbarer Rollladenpanzer**



(57) Zusammenfassung: Jalousierbarer Rollladenpanzer mit wenigstens einer in einem Winkel zur Laufrichtung des Rollladenpanzers verstellbaren Lamelle (1) und wenigstens einem Zugmittel (5). Mit dem Zugmittel (5) ist der Rollladenpanzer in Laufrichtung bewegbar und die wenigstens eine Lamelle (1) winkelverstellbar. Das Zugmittel (5) ermöglicht nach Erreichen der Laufrichtungsbegrenzung durch den Rollladenpanzer die Winkelverstellbarkeit der Lamelle (1).

URKUNDE CERTIFICATE CERTIFICAT

Es wird hiermit bescheinigt, dass für die in der Patentschrift beschriebene Erfindung ein europäisches Patent für die in der Patentschrift bezeichneten Vertragsstaaten erteilt worden ist.

It is hereby certified that a European patent has been granted in respect of the invention described in the patent specification for the Contracting States designated in the specification.







Il est certifié qu'un brevet européen a été délivré pour l'invention décrite dans le fascicule de brevet, pour les États contractants désignés dans le fascicule de brevet.

Europäisches Patent Nr.	European patent No.	Brevet européen n°
3000956		
Patentinhaber	Proprietor of the patent	Titulaire du brevet
Spindler, Bernhard Rosenheimer Str. 3 85567 Grafing/DE		

München, dem 20.12.17
Fall à Munich, le

Benoit Battistelli
Benoit Battistelli
Präsident des Europäischen Patentamts
President of the European Patent Office
Président de l'Office européen des brevets










Patent granted for :

-  Germany
-  Austria
-  Switzerland
-  France
-  Great Britain
-  Poland

Difference to the standard roller shutter - Advantages

- ❑ Except for a few parts, all existing components of an existing roller shutter system can still be used → Low costs and low effort for retrofitting
- ❑ With relatively little effort, despite perfect thermal insulation, brightness in the room → Very high cost / benefit factor
- ❑ Existing roller shutters could easily be retrofitted without dismantling the roller shutter box → Additional business and good advertising
- ❑ The roller shutter drive and the rails can be taken over unchanged → no additional effort
- ❑ Few structural changes to the current roller shutter programme necessary → Low costs compared to the added value
- ❑ Optimal adjustment mechanism → Visually very high quality and unique selling point

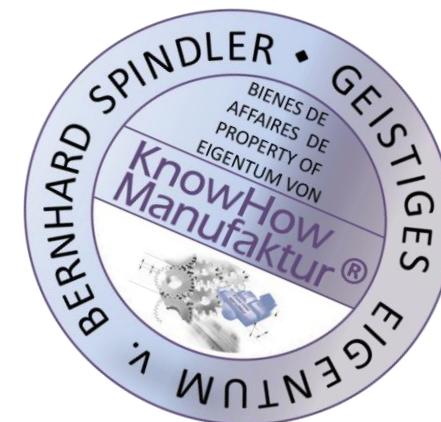
Added value / customer benefit

-  With blinded roller shutter Incidence of light despite shading  It becomes brighter and friendlier in the room than with a closed roller shutter. Electricity costs are also reduced by light that is not needed.
-  With a blinded roller shutter, warm air does not accumulate under the roller shutter curtain.
 The room heats up less as a result. The heating is even more significant when a normal roller shutter is not fully closed due to solar radiation.
-  With a louvred roller shutter, it is possible to see out through the slats, as with a venetian blind.
 Feeling of freedom and being connected to the outside world.
-  No additional drive technology required, as the roller shutter curtain is blinded with the original roller shutter drive.  Simple implementation
-  Optical upgrading

Opportunities

- ❑ Architects are always looking for something special / new → Chance to turn a complete construction / project with all products to the supplier of the light-inlet roller shutter
- ❑ Added value that helps to get into exhibitions at the specialised trade → Eyecatcher
- ❑ Further improving the image through an innovative solution
- ❑ By offering conversion sets (new curtains/hangings) for existing roller shutter systems, generate additional business and arouse desires for the current roller shutter programme
- ❑ One more point to help a builder choose a roller shutter manufacturer
→ Additional turnover
- ❑ Specialist articles in the press through new technologies → Marketing opportunities
- ❑ Unique selling proposition through patent protection

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