





ROLLER SHUTTERS



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ROLLER SHUTTERS

Version 3.7 - 2019

For further information on this catalogue, digit

www.persax.com, call

+34 965 272 444 or contact your sales representative.



ALIKA SYSTEM

Alika is an aluminium roller shutter system with adjustable slats. It can be operated going up and down, as a usual roller shutter. In its down position, Alika allows a progressive orientation of the slats, to adapt light and air levels inside the room.

It has an easy and quiet operation. With Alika it is possible to create your own spaces, with a maximum comfort, without sacrificing privacy.

The use of Alika is easy and achievable for anyone. It can be operated with electric motors available in the market (with a push button or a remote control). Alika can be integrated in domotic systems, and helps to save energy and to increase the passive security of the house.

Adjustable system

The adjustable system allows to gradually adapt all the slats from 0° until 90°, to move from darkness light to a progressive adaptation of light and air. The slats special design facilitates, in case of rain, the draining of the water outwards, still in the maximum opening position.

COMFORT AND PRIVACY

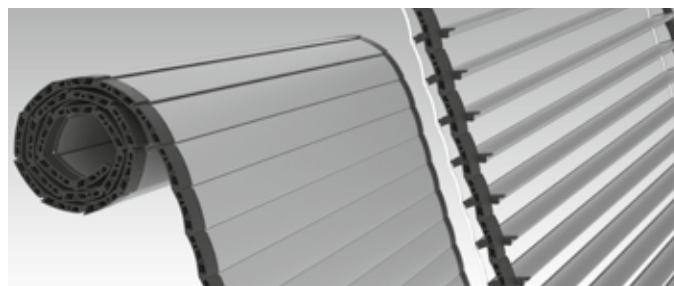
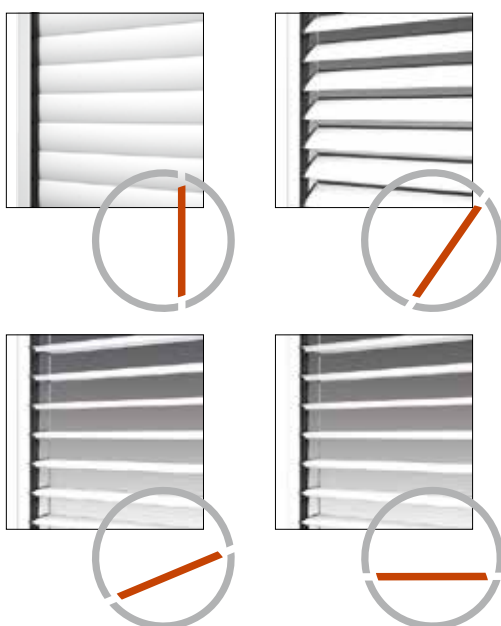
The slats adjustable system guarantee a maximum comfort and, at the same time, a maximum privacy.

RELIABLE AND WITHOUT NOISES

Alika does not use a complex mechanism, the slats are adjustable in a natural and automatic way, thanks to its own inertial force. The operating of Alika is soft and without any noise.

AWARD WINNING DESIGN

Alika won the "Archiproducts Design Awards 2017" which recognizes its excellence in the design field.



TECNICAL FEATURES



10,5 Kg/m²

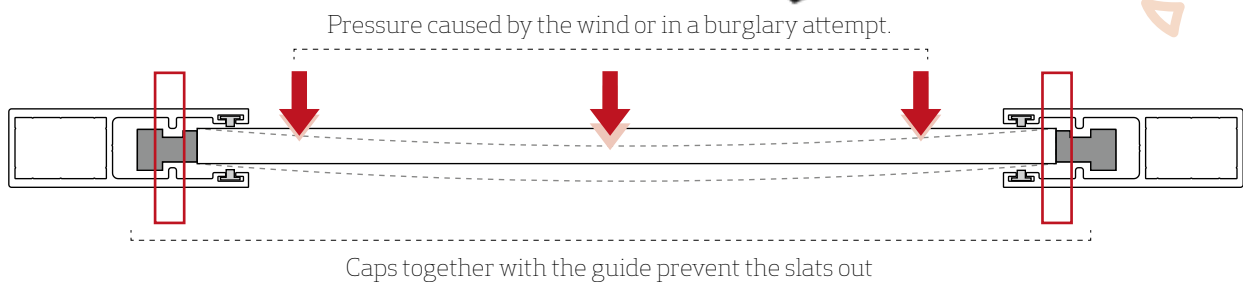
← WIDTH MAX → 2,00 m
↑ HEIGHT MAX ↓ 2,80 m

It is a roller shutter with side holds, that's why Persax does not guarantee the complete darkness when the shutter is lowered.




EXTREME SYSTEM

This new system compatible with **VS-150 Block 60** and **Segur EC-60** consists of a **special cap** and **guide** that provide an extra security and resistance to any door or window. The system provides:

- **Extreme security**, VS-150 Block 60 system is also selfblocking.
- Resistance to strong winds of over **300 km/h**.
- **High resistance** to corrosion.
- **Important reduction** in home insurance bill.
- **Solar protection**.
- A **careful design** and an extensive range of finishes that suits any façade style.



TECHNICAL FEATURES

	11,80 Kg/m ² (VS-150 Block 60)
	8,00 Kg/m ² (Segur EC-60)
	4,50 m (VS-150 Block 60)
	4,00 m (EC-60)
	4,00 m

RESISTANCE TO WIND LOADS
UNE EN 13241-1:2004+A1:2011

CLASS 5

CLASS OBTAINED FOR BOTH MODELS

VS-150 BLOCK-60 EXTREME



160270	SET OF CAPS EXTREME SLAT VS-150 BLOCK 60
313002	AL SLAT VS-150 BLOCK 60
313003	AL SLAT VS-150 BLOCK 60 MILL FINISH

SEGUR EC-60 EXTREME



160001	SET OF CAPS EXTREME SLAT SEGUR EC-60
313094	AL SLAT SEGUR EC-60
313095	AL SLAT SEGUR EC-60 MILL FINISH

WHY ARE ROLLER SHUTTERS SO NECESSARY IN DWELLINGS?

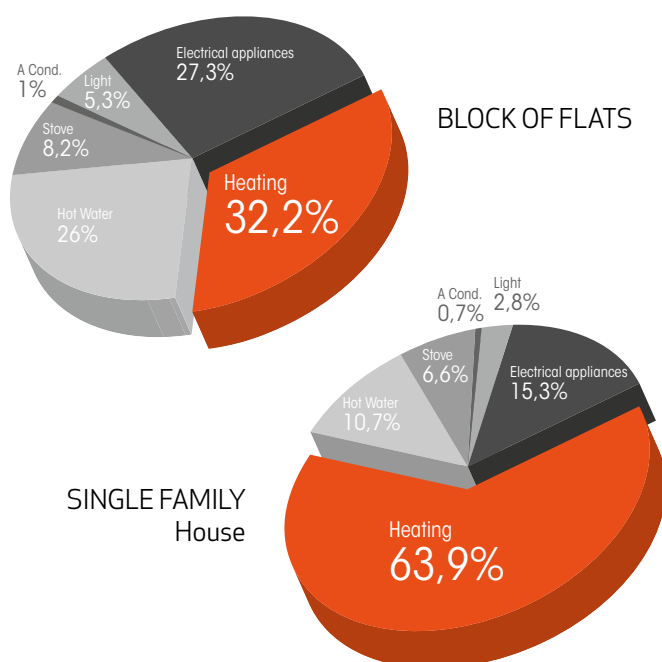
Roller shutters become an important element in any house, not only as a protection element but also as a distinguishing factor that helps create energy efficient buildings for a more responsible consumption.

1. ENERGY EFFICIENCY

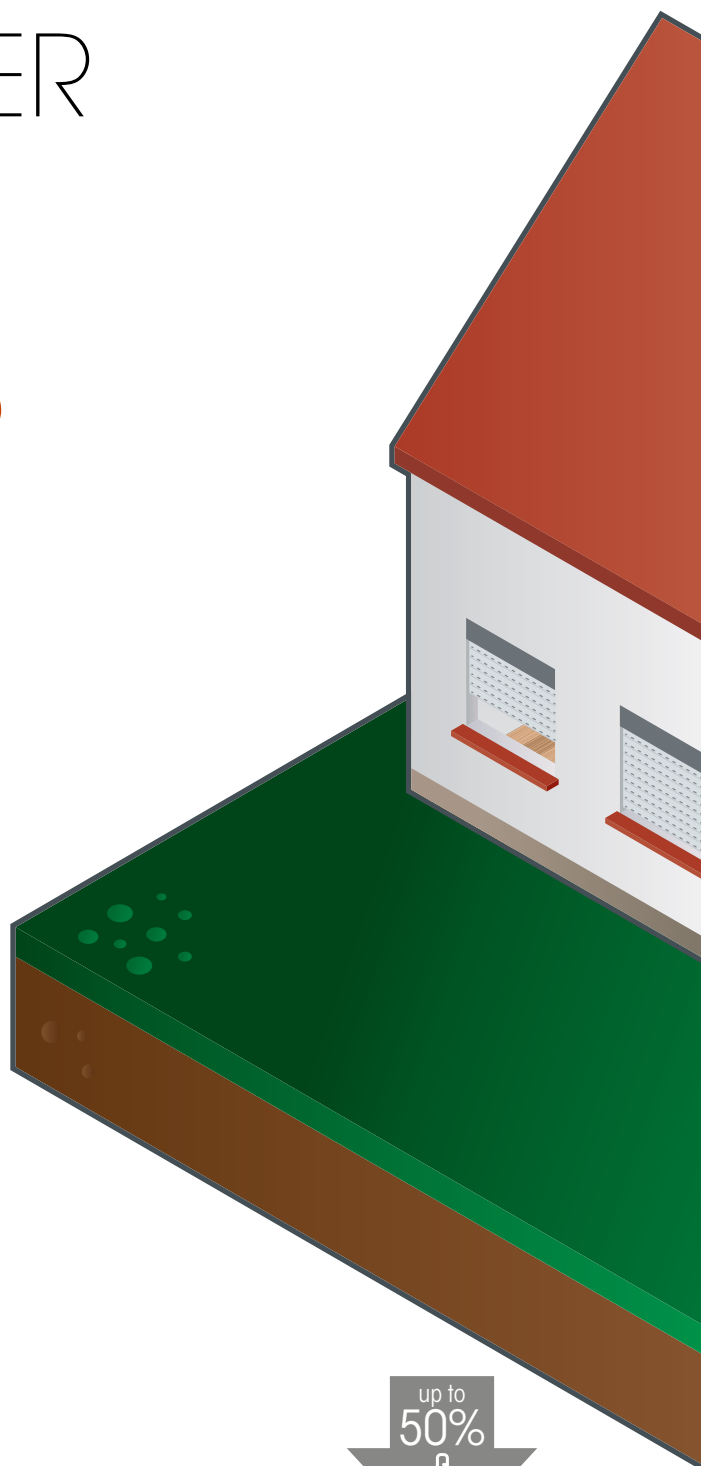
Access to energy nowadays is becoming more and more difficult and expensive. Thus, our habits are changing and we must think about energy efficiency in our everyday lives.

Therefore, the building envelope becomes one of the most important elements for energy saving, and even so, many people are not aware of this. How many times do the consumers wonder if their shutters have a good isolating head box or are properly insulated? The IDAE (Institute of Diversification and Energy saving in Spain) specifies some measures to save energy costs: measures related to the building envelope and construction elements, and other measures related to systems.

ENERGY CONSUMPTION ACCORDING TO HOUSE TYPES

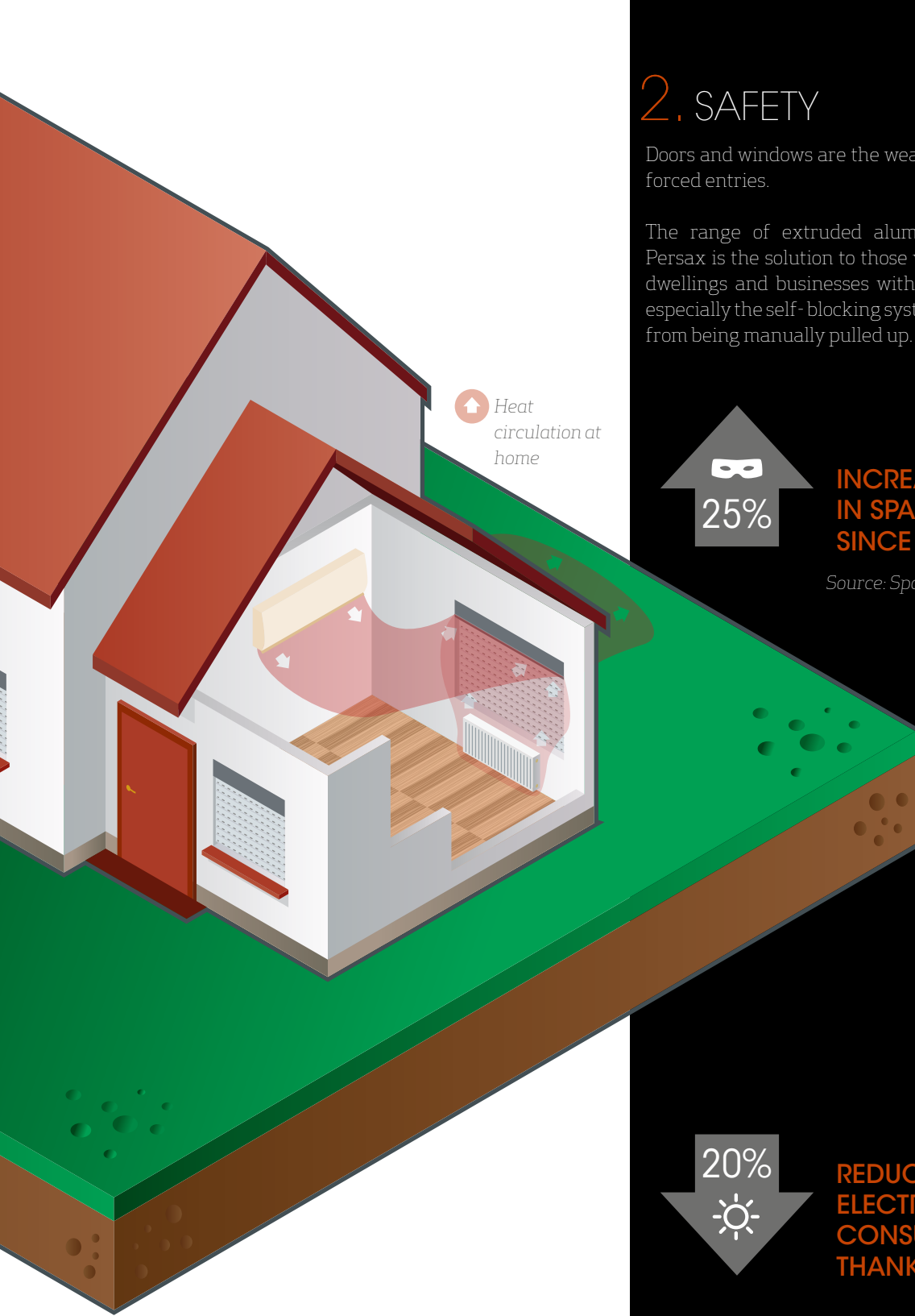


Source: IDAE report (2013)



In fact, the majority of the energy waste happens due to the building envelope, be that through windows, roller shutters and their boxes, facades, roofing or others. These are the most vulnerable points, since they usually allow air flows, the heating of window panes and the increase of humidity if good insulation systems are not in place.

Implementing measures to improve thermal insulation in buildings can result into significant energetic and cost savings and a reduction of up to 30% in carbon dioxide emissions.



2. SAFETY

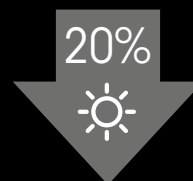
Doors and windows are the weakest points in buildings against forced entries.

The range of extruded aluminium products presented by Persax is the solution to those vulnerable points. They provide dwellings and businesses with extra security and protection, especially the self-blocking systems that prevent roller shutters from being manually pulled up.



**INCREASE OF BURGLARIES
IN SPAIN
SINCE 2012**

Source: Spanish Ministry of Domestic Affairs



**REDUCTION IN
ELECTRICITY
CONSUMPTION
THANKS TO SUNLIGHT**

The proper use of roller shutters as sun control solutions allows to reduce energy consumption and the use of cooling systems at home. Moreover, according to Minnesota University Sustainable Research Center, they allow for a 30-50% reduction in home cooling costs.

A simple gesture, like opening or closing the roller shutters can mean the reduction of temperature by several degrees and provide a better acoustic insulation as it softens the perception of outdoor noises.

3. SUNLIGHT CONTROL

In many countries, privacy and control of sunlight are approached only with the installation of a rolling screen. However, this is a decorative solution that is not able to comply with the roller shutters functions to accomplish these goals.

Roller shutters offer complete privacy against undesired peeks from strangers and allow for light control, from a pitch black atmosphere, to a more intimate and warm ambiance that can be achieved thanks to the perforation in the Aluminium and PVC slats.

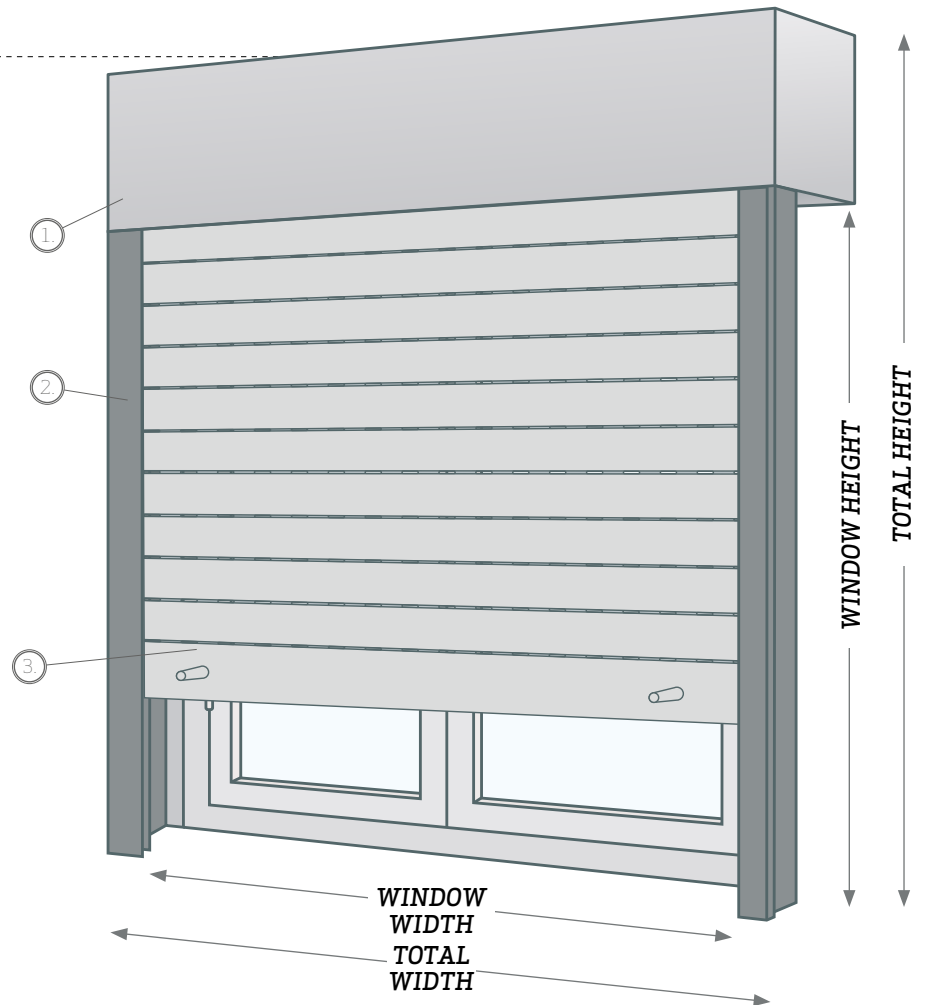
INTRODUCTION

PARTS OF A ROLLER SHUTTER

1.	Box
2.	Guides
3.	Shutter surface
4.	Operating mechanism



Detail from inside



Outside view

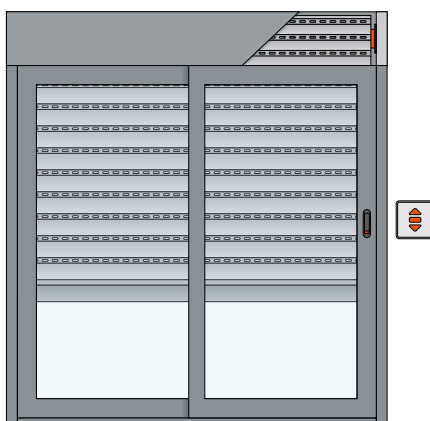
Window measures: measuring from the outside of the window structure (height x width)

Total measurement: it measuring the window structure together with the shutter box (height) and guides (width)

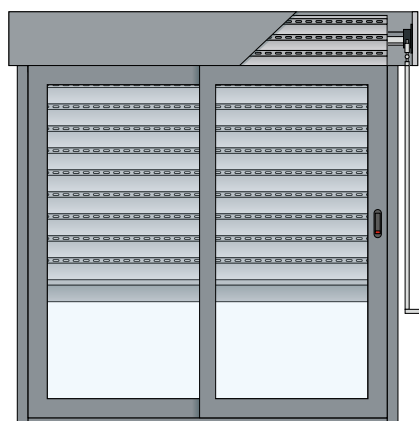
ACTIVATION SYSTEMS

There are three different activation systems available in the market. The motor that automatically raises and lowers the roller shutter. The gear mechanism that makes use of a handle to pull the shutter and, finally, the coiler.

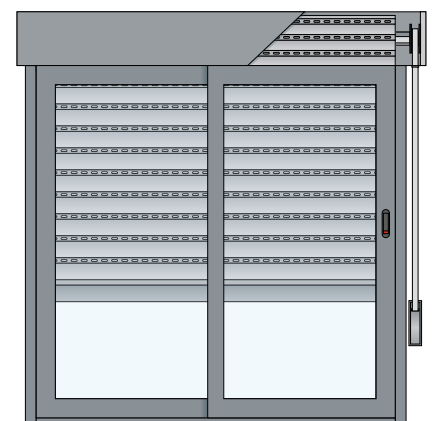
MOTOR



GEAR

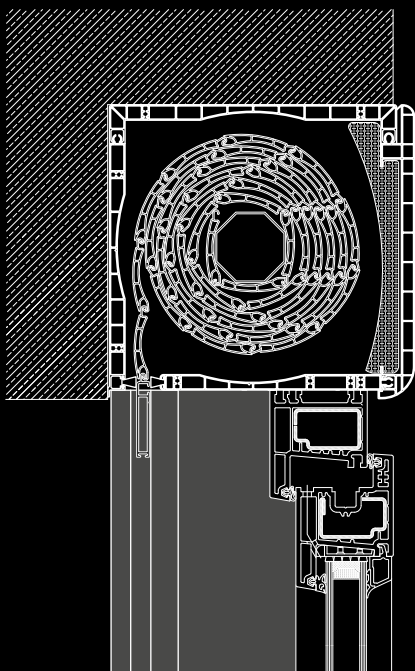


COILER



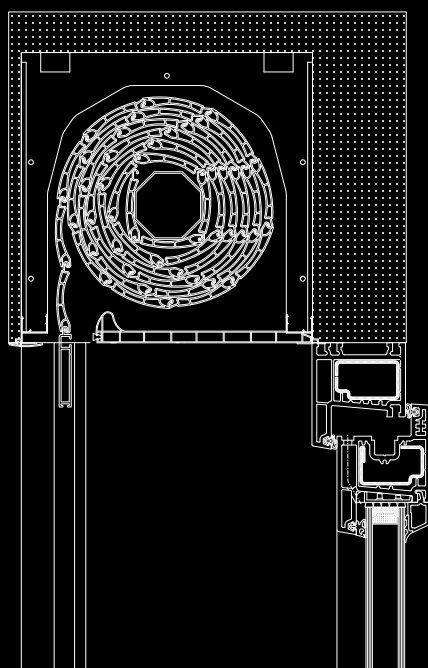
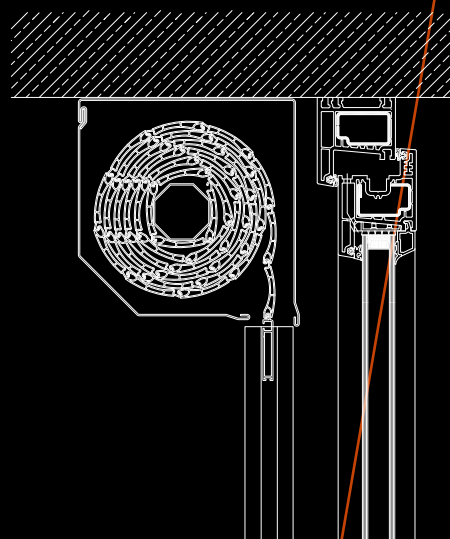
INTRODUCTION

DIFFERENT WAYS OF INSTALLATION



THE COMPACT SYSTEM is the most popular in the market. The shutter head box is placed just above the window, creating a compact block that simplifies installation. Moreover, it facilitates the access to inside mechanisms for maintenance and repairs. It rolls the shutter "internally".

MINI SYSTEM or renovation system is designed to allow the installation of a shutter over a previously existing window without a shutter or to avoid the need to carry out brick works, or even just to avoid removing the existing window. The head box is not placed above the window fitting, but is installed on the outside, in front of the window or on the façade, simply and with hardly any brick works. It rolls the "outer" shutter.



TUNNEL SYSTEM / BUILT-IN SYSTEM, It is designed to remain completely hidden in the building. Once the installation is finished nothing can be seen inside or outside the building. It allows obtaining high levels of both thermal and acoustic insulation. Depending on the way of installation the shutter rolls inside or outside.

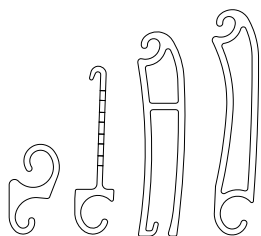
ROLLER SHUTTER SLATS

The slats are the main component of a roller shutter. They are joined together to different profiles to form the surface of the roller shutter.

It can be manufactured in different materials depending on the user preferences or necessities.

BIOCLIM

Bioclim 45

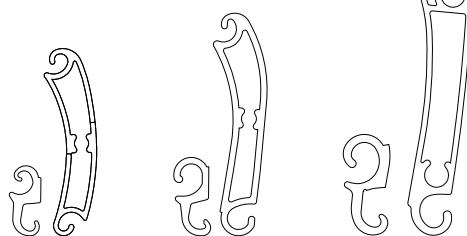


SELFBLOCKING EXTRUDED ALUMINIUM

Blockalum 39

Blockalum 45

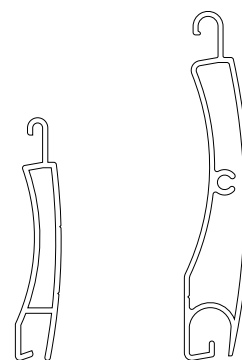
VS-150 Block 60



EXTRUDED ALUMINIUM

Minisegur 40

Segur EC-60



FOAM FILLED ALUMINIUM

Micalum 39

Minisax 40

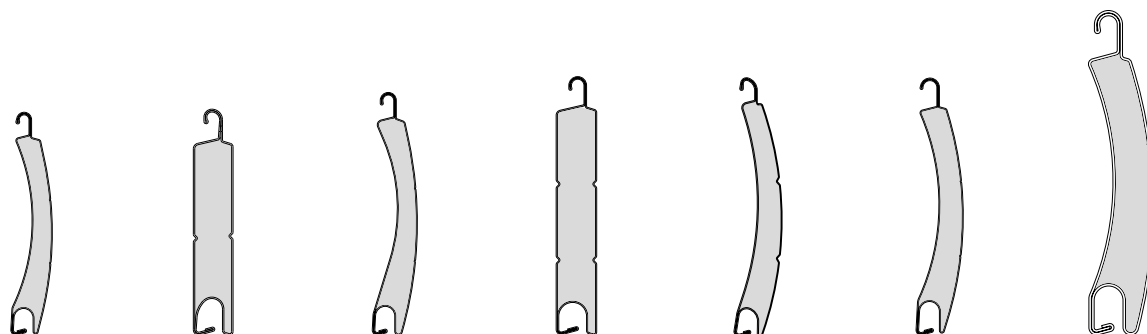
Minicur 43

Termisax 45

Termilum 45

Termicur 45

Termicur 55



PVC

L-37

C-42

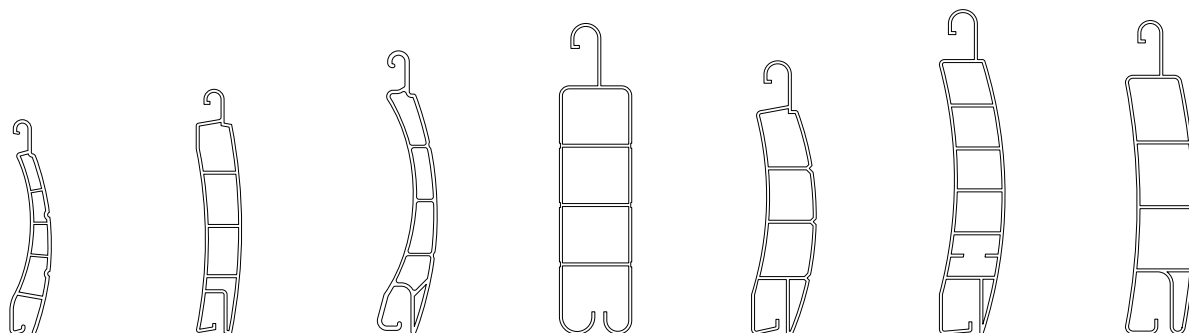
L-50

Berna

Aragón

París

Sevilla



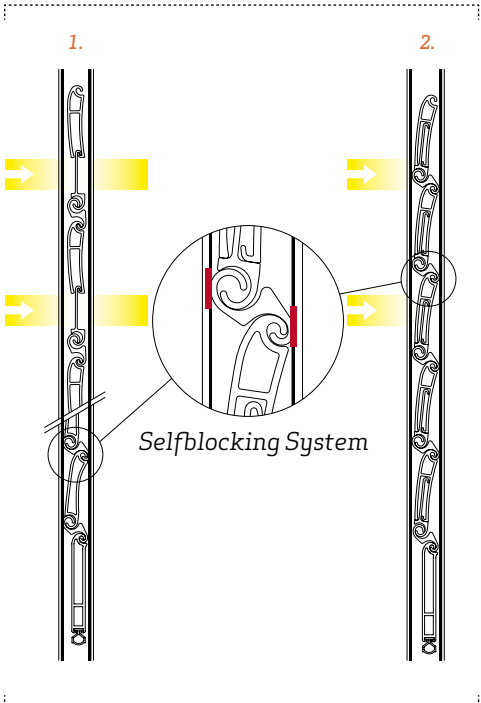
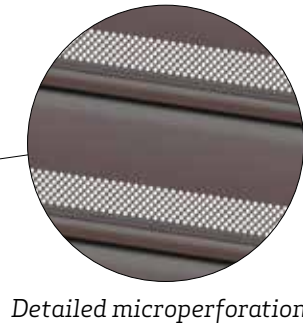
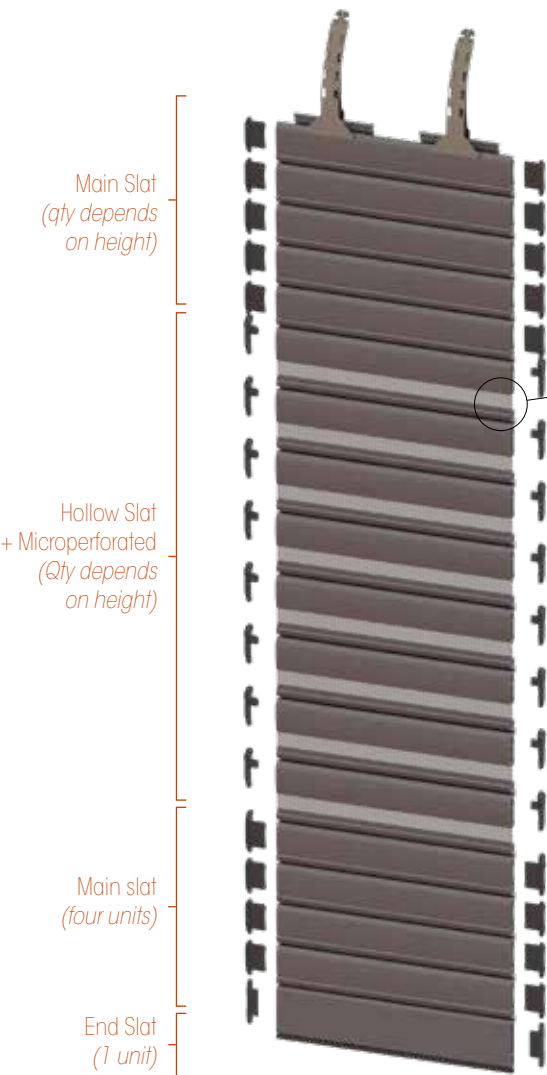
Confort combined with safety

One of the main characteristics of the new Bioclim system is that it allows the sunlight to come in when the shutter is set to an "intermediate position".

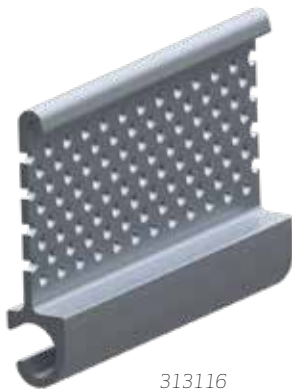
At the same time, it allows proper air flow inside the room without fully opening the shutter.

As a mosquito net, it prevents the entrance of insects thanks to its microperforated slats.





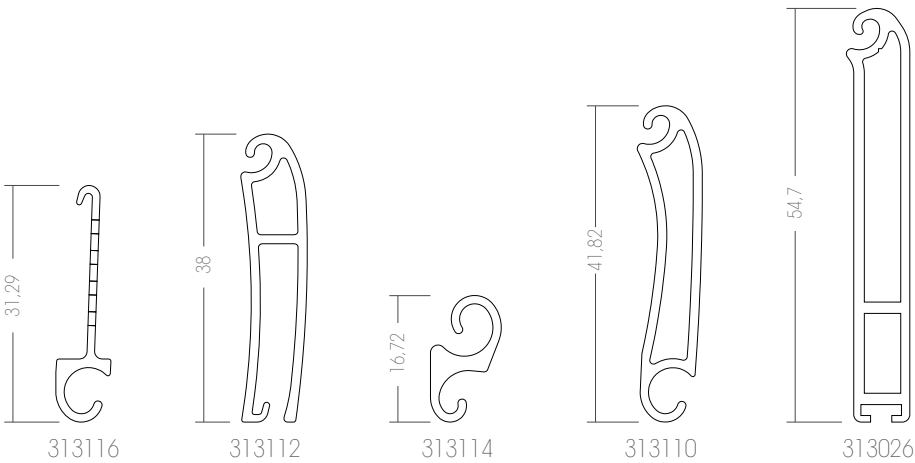
Recommended activation system :
motor with "favourite" position.



HOLLOW SLAT MICROPERFORATED PROFILE MAIN SLAT + INTER. SLAT

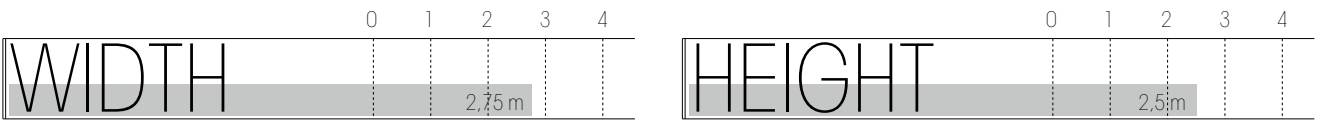
Maximum width: 2.75 meters

BIOCLIM 45 / TECHNICAL FEATURES



MODEL	MICROPERFORATED PROF.	HOLLOW SLAT	SECURITY INTER. SLAT	MAIN SLAT	END SLAT
MATERIAL	ALUMINIUM 6063-T5	ALUMINIUM 6063-T5	ALUMINIUM 6063-T5	ALUMINIUM 6063-T5	ALUMINIUM 6063-T5
WEIGHT	135,30 g/m	297 g/m	138,50 g/m	305 g/m	448,2 gr/m
TOTAL PERIMETER	88,95 mm	177,50 mm	69,70 mm	181,50 mm	249 mm

MAXIMUM DIMENSIONS



TOTAL HEIGHT (ESTIMATED)

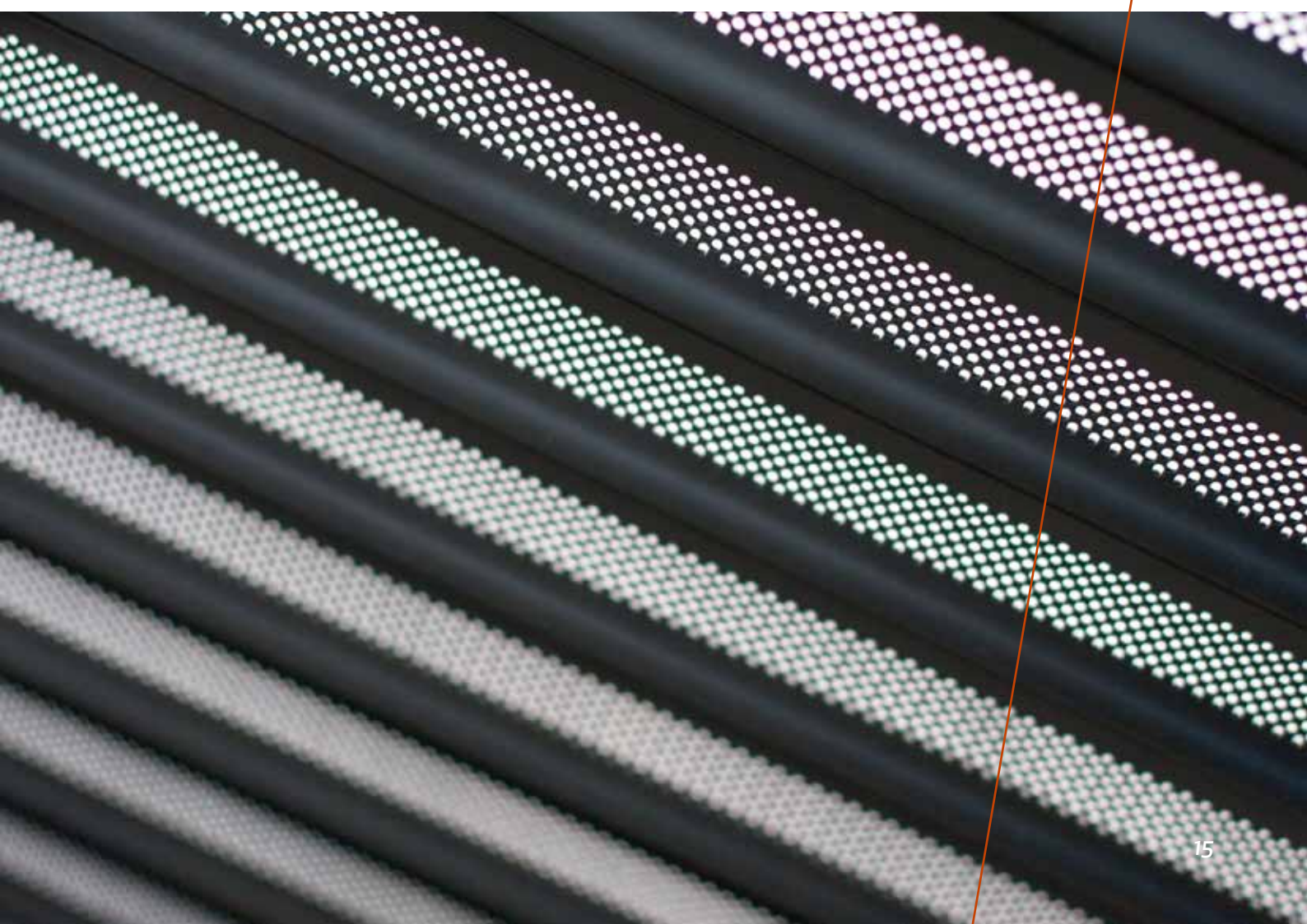


11,63 Kg/m²
BIOCLIM 45

MINIMUM SHAFT



S 60
BIOCLIM 45



SELFBLOCKING / ROLLER SHUTTERS

Elegance and security at home

Blockalum system is the perfect solution when a high level of security is required; this is the case with jewelleries, Banks and ground floor dwellings.

It provides a high security level thanks to its system of intermediate slats that exert pressure on the guides.

This system makes it impossible to force the shutter open, thus preventing any unwanted and unauthorised access from outside.



SELFLOCKING SYSTEM



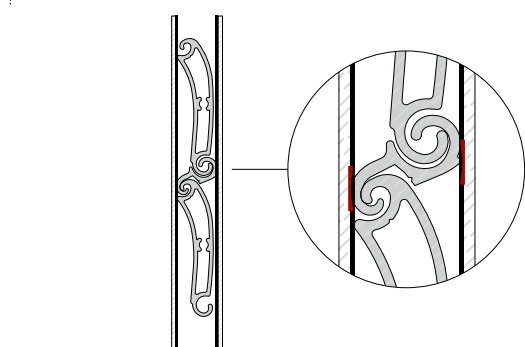
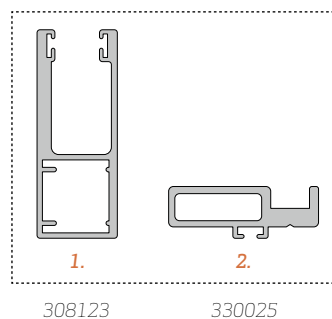
The Selflocking System consists of a joint or blocking profile placed between the slats that causes friction with both sides of the guide when it turns, thus preventing the forced rising of the shutter from the outside.

The following pictures and diagrams show the mechanisms that come into action to make this work.



The **Blockalum** system can be completed with:

1. HB Security Guide.
2. Security end slat.



When the blind is down the joint or blocking profile exerts pressure on the guide, thus preventing the roller shutter to be pulled up from the bottom.



313078 - 313080

BLOCKALUM 39

Maximum width: 3,00 meters



313042 - 313000

BLOCKALUM 45

Maximum width: 3,50 meters

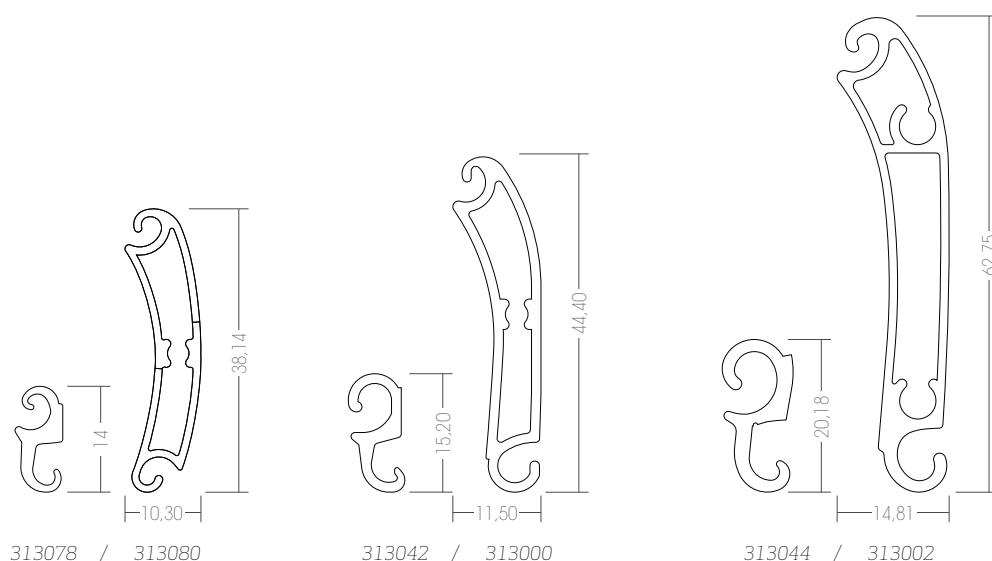


312044 - 313002

VS-150 Block 60

Maximum width: 4,50 meters





MODEL	BLOCKALUM 39	BLOCKALUM 45	VS-150 BLOCK-60
MATERIAL	ALUMINIUM 6063-T5	ALUMINIUM 6063-T5	ALUMINIUM 6063-T5
WEIGHT	0,124 Kg/m - 0,273 Kg/m	0,113 Kg/m - 0,351 Kg/m	0,194 Kg/m - 0,594 Kg/m
WEIGHT M ²	10,17 Kg/m ²	10,40 Kg/m ²	11,50 kg/m ²
PACKAGING	60 m	60 m	36 m
COVERING LENGTH	41,30 mm	52,10 mm	72,90 mm
NOMINAL THICKNESS	10,30 mm	11,50 mm	14,10 mm
NECESSARY SLATS/HEIGHT METER	23 slats	20 slats	13,7 slats
MINIMUM ROLLER SHAFT*	S60	S60	S70
MAXIMUM WIDTH*	3,00 m	3,50 m	4,50 m
MAXIMUM HEIGHT *	3,00 m	3,50 m	3,50 m
TOTAL PERIMETER	60 mm - 174 mm	65 mm - 200 mm	73,5 mm - 300 mm

*RECOMMENDED

WIND PRESSURE RESISTANCE

BLOCKALUM 39

UNE-EN 13659:2004 + A1:2008 (ROLLER SHUTTERS)
test done with a 3 m width x 2.4 m height sample

CLASS 6

BLOCKALUM 45

UNE-EN 13659:2004 + A1:2008 (ROLLER SHUTTERS)
test done with a 2.86 m width x 2.2 m height sample

CLASS 6

**Go to page 88. Glossary and essay explanations.

EXTRUDED ALUMINIUM / ROLLER SHUTTERS

Elegance and security at home

The first thing we take into account when buying a house or a commercial property is the interior space; however, the security of access to that inner space should be one of our main concerns, paying attention to doors, gates, windows and shutters.

The first advice for prevention is to secure and lock all doors and windows. An access point protected by extruded aluminium slats guarantees a safe access.

Made in aluminium, Persax extruded roller shutters offer extra security against forced entries.

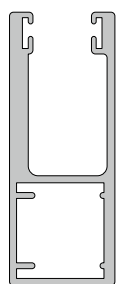


MODELS

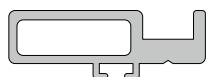
HIGH DENSITY ALUMINIUM

In case of an attempt to pull open the roller shutter by exerting horizontal pressure, Persax extruded aluminium slats manage to stand firm as a whole, thus preventing burglaries and forced entries both in businesses and houses.

Apart from the slat, the option Persax offers to achieve a higher degree of security is the combination of both extruded aluminium slats and the HB Security Guide with the Security End Slat.



1.



2.

1. HB Security Guide.
308123

2. Security End Slat
330025

(Look at page 34 "correspondence slats - end slats" and page 78 "correspondence slats- guides")



313022

MINISEGUR 40

Maximum width: 3,00 meters

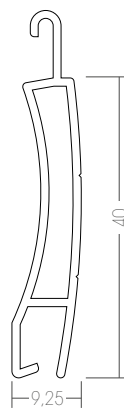


313094

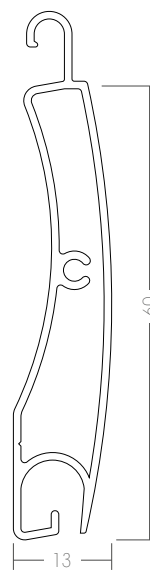
SEGUR EC-60

Maximum width: 4,00 meters





313022



313094

MODEL	MINISEGUR 40	SEGUR EC-60
MATERIAL	ALUMINIUM 6063-T5	ALUMINIUM 6063-T5
WEIGHT	0,312 Kg/m	0.475 kg/m
WEIGHT M ²	7,90 Kg/m ²	8,00 Kg/m ²
NOMINAL THICKNESS	9,25 mm	13 mm
NECESSARY SLATS/HEIGHT METER	24 slats	16,6 slats
MINIMUM ROLLER SHAFT*	S60	S60
MAXIMUM WIDTH*	3,00 m	4,00 m
MAXIMUM HEIGHT *	3,00 m	3,50 m
COVERING LENGTH	40 mm	59,60 mm
TOTAL PERIMETER	211,60 mm	340 mm

*RECOMMENDED

WIND PRESSURE RESISTANCE

MINISEGUR 40

UNE-EN 13659:2004 + A1:2008 (ROLLER SHUTTER)
test done with a 2.86 m width x 2.2 m height sample

CLASS 6

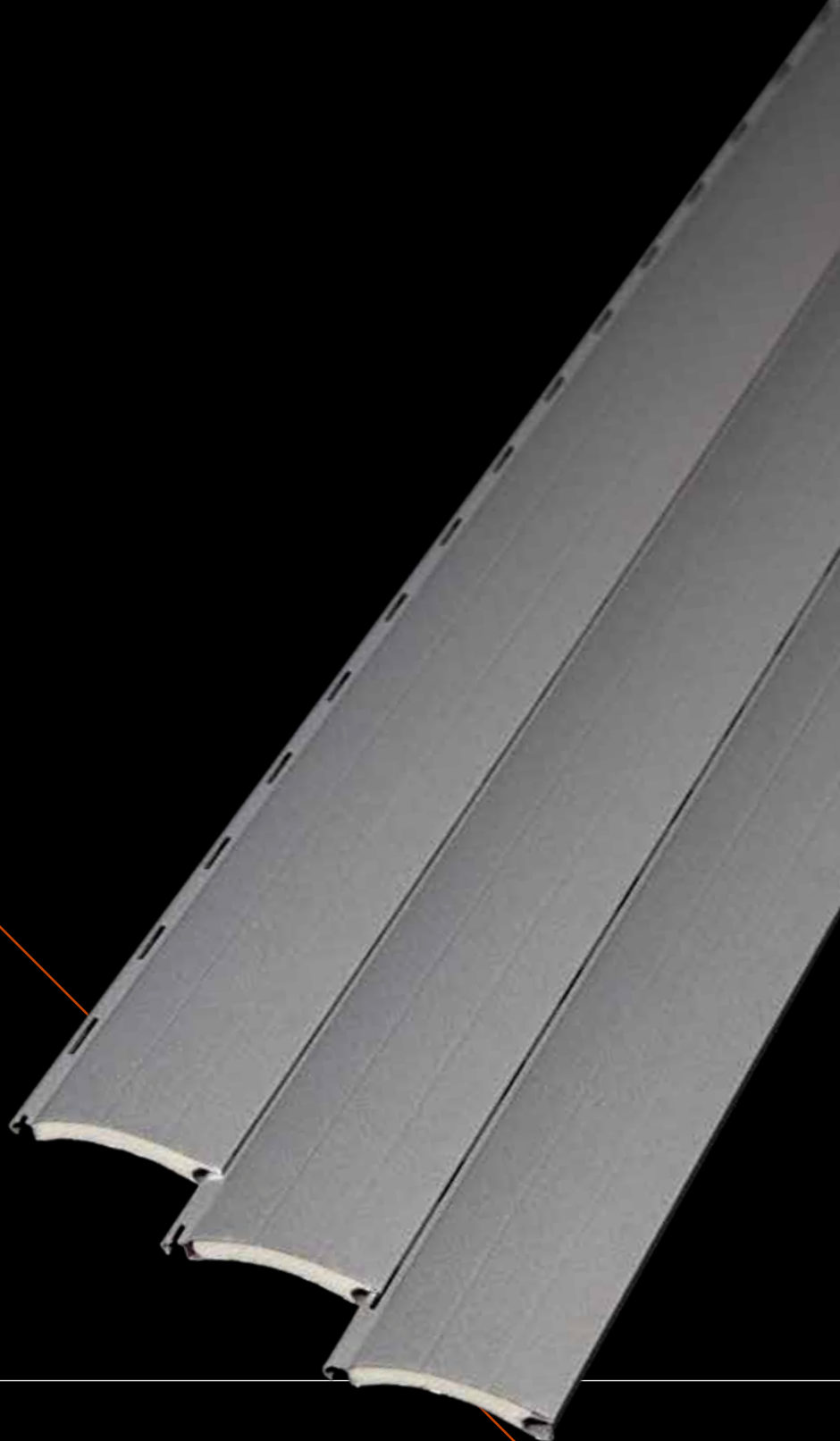
FOAM FILLED ALUMINIUM / ROLLER SHUTTERS

***The standard range in the market
with numerous possibilities***

Foam filled aluminium roller shutters have become a standard in the market due to their lightness, thermal and acoustic insulation and especially the wide range of colours and finishes they can offer.

Made in high quality aluminium sheets filled in with polyurethane to achieve better insulation results, foam filled aluminium roller shutters are always a good option for any situation.

Moreover, most of our models are also available in a high density version with expanded polystyrene that provides the shutter with higher acoustic insulation and resistance against deformations.



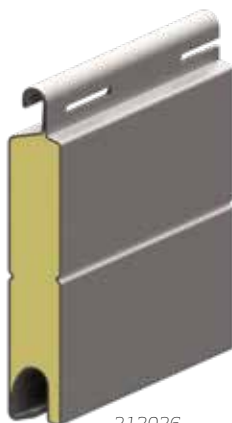
MODELS



312001

MICRALUM 39

Recommended width: 2,30 m



312036

MINISAX 40

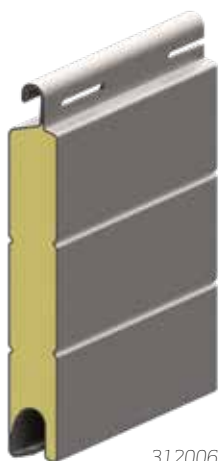
Recommended width: 2,00 m



312002

MINICUR 43

Recommended width: 2,50 m
Recommended width in HD: 2,90 m



312006

TERMISAX 45

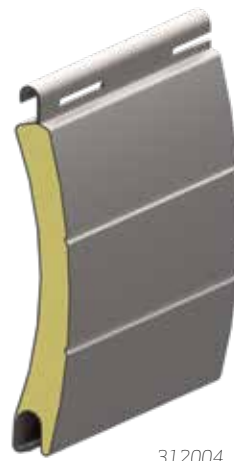
Recommended width: 3,00 m



312048

TERMILUM 45

Recommended width: 2,20 m



312004

TERMICUR 45

Recommended width: 2,80 m
Recommended width in HD: 3,00 m



312005

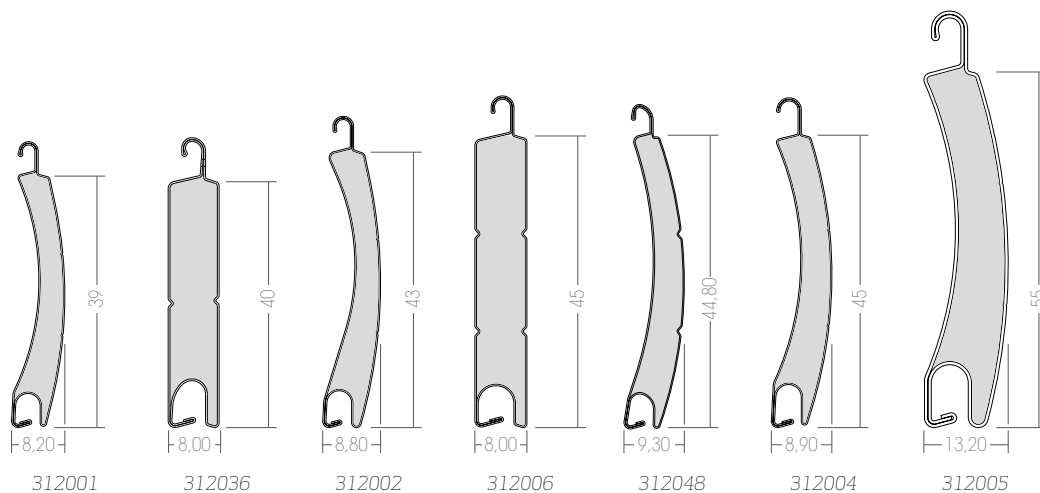
TERMICUR 55

Recommended width: 4,50 m

Recommended width calculated for a standard roller shutter of 1.50 height and whose wind resistance is « V3 » equivalent to 56 km/h. For other sizes and wind categories, see the technical sheet.



FOAM FILLED ALUMINIUM / TECHNICAL FEATURES



MODEL	MICRALUM 39	MINISAX 40	MINICUR 43	TERMISSAX 45	TERMILUM 45	TERMICUR 45	TERMICUR 55
MATERIAL	AL + PUR	AL + PUR	AL + PUR	AL + PUR	AL + PUR	AL + PUR	AL + PUR
WEIGHT	0,085 Kg/m	0,104 Kg/m	0,104 Kg/m	0,120 Kg/m	0,094 Kg/m	0,115 Kg/m	0,192 Kg/m
WEIGHT HD	0,104 Kg/m	-	0,121 Kg/m	-	-	0,138 Kg/m	-
WEIGHT M ²	2,2 Kg/m ²	2,6 Kg/m ²	2,43 Kg/m ²	2,7 Kg/m ²	2,09 Kg/m ²	2,6 Kg/m ²	3,40 Kg/m ²
WEIGHT M ² HD	-	-	3,83 Kg/m ²	-	-	3,1 Kg/m ²	-
MINIMUM ROLLER SHAFT*	E40	E40	E40	E60	E40	E40	E60
NECESSARY SLATS PER METER	25,6 slats	25 slats	23,2 slats	22,2 slats	22,3 slats	22,2 slats	18,2 slats
POLYURETHANE DENSITY	90 Kg/m ³	90 Kg/m ³	90 Kg/m ³	90 Kg/m ³	90 Kg/m ³	90 Kg/m ³	90 Kg/m ³
POLYURETHANE DENSITY HD	-	-	180 Kg/m ³	-	-	180 Kg/m ³	-
COVERING LENGTH	39 mm	40 mm	42,7 mm	45 mm	44,8 mm	45 mm	55 mm

*RECOMMENDED

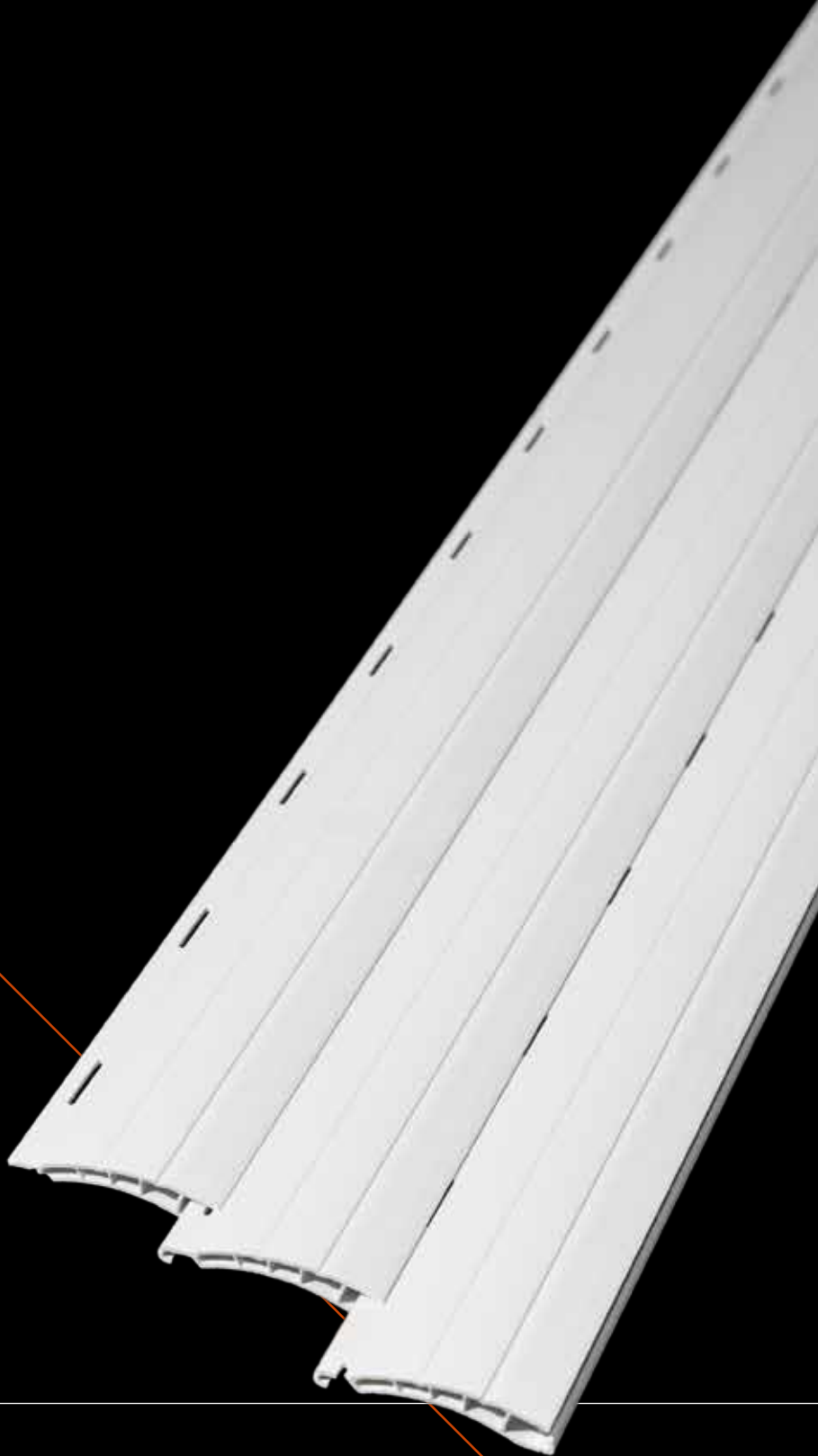
PVC / ROLLER SHUTTERS

The *inexpensive traditional* option

Persax PVC roller shutters are the result of the combination of economy and lightness in the same product.

With an extensive range of products to cater for every necessity, Persax PVC slats are manufactured under the most rigorous quality standards.

Available in different colours to match any woodwork and metalwork.



MODELS



314023

L-37

Maximum width: 1,50 meters



314029

L-50

Maximum width: 2 meters



314003

C-42

Maximum width: 1,70 meters



314001

ARAGÓN

Maximum width: 1,8 meters



314002

BERNA

Maximum width: 2 meters



314011

SEVILLA

Maximum width: 1,8 meters



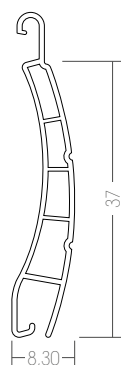
314010

PARÍS

Maximum width: 2 meters

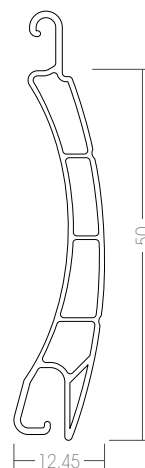


PVC / TECHNICAL FEATURES



314023

L-37



314029

L-50

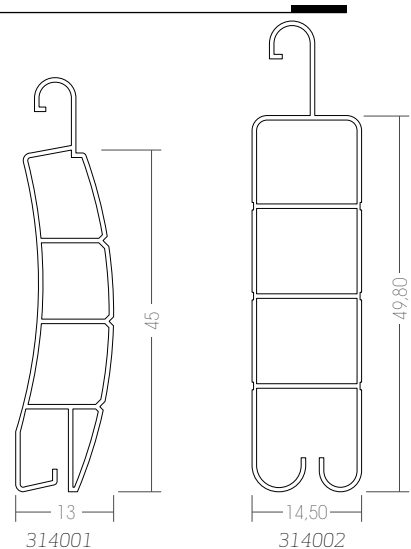


314003

C-42

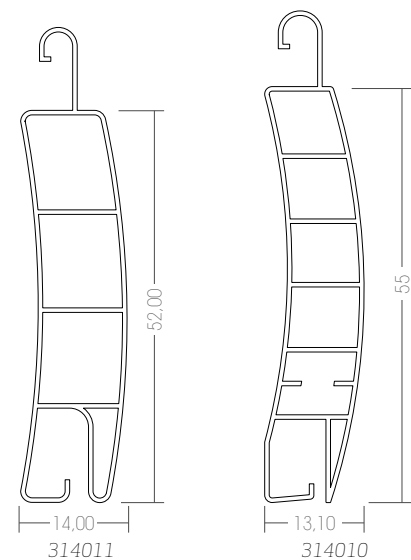
MODEL	L-37	L-50	C-42
MATERIAL	PVC RIGID	PVC RIGID	PVC RIGID
WEIGHT	0,123 Kg/m	0,177 Kg/m	0,128 Kg/m
WEIGHT M ²	3,30 Kg/m ²	3,54 Kg/m ²	3,07 Kg/m ²
COVERING LENGTH	37 mm	50 mm	42 mm
NOMINAL THICKNESS	8,3 mm	12,45 mm	9 mm
NECESSARY SLATS/HEIGHT METER	27 slats	20 slats	23,8 slats
MAXIMUM WIDTH*	1,5 m	2 m	1,7 m
MAXIMUM HEIGHT*	2,5 m	2,5 m	2,2 m

*RECOMMENDED



MODEL	ARAGÓN	BERNA
MATERIAL	PVC RIGID	PVC RIGID
WEIGHT	0,150 Kg/m	0,175 Kg/m
WEIGHT M ²	3,45 Kg/m ²	3,50 Kg/m ²
COVERING LENGTH	45 mm	50 mm
NOMINAL THICKNESS	13 mm	14,5 mm
NECESSARY SLATS/HEIGHT METER	22,2 slats	20 slats
MAXIMUM WIDTH*	1,8 m	2 m
MAXIMUM HEIGHT*	2,2 m	2,3

*RECOMMENDED



MODEL	SEVILLA	PARIS
MATERIAL	PVC RIGID	PVC RIGID
WEIGHT	0,175 Kg/m	0,193 Kg/m
WEIGHT M ²	3,325 Kg/m ²	3,474 Kg/m ²
COVERING LENGTH	52 mm	55 mm
NOMINAL THICKNESS	14,1 mm	13,1 mm
NECESSARY SLATS/HEIGHT METER	19,2 slats	18,2 slats
MAXIMUM WIDTH*	1,8 m	2 m
MAXIMUM HEIGHT*	2,3 m	2,3 m

*RECOMMENDED

END SLATS / ROLLER SHUTTERS

The end slat is the element that allows proper closing of roller shutters.

Furthermore, when it is manually operated, stoppers can be incorporated so as to avoid perforation of slats.

They are available in both PVC and extruded aluminium, thus catering for any need and preferences.





314012

MINI PVC



314013

REGULAR PVC



330025

AL SECURITY END SLAT



313032

DOUBLE ALU



313034

INTERIOR ALU



313039

SMALL INTERIOR ALU



313066

AL TERMICUR 55/EC-60



313026

AL BLOCKALUM 39/45



313028

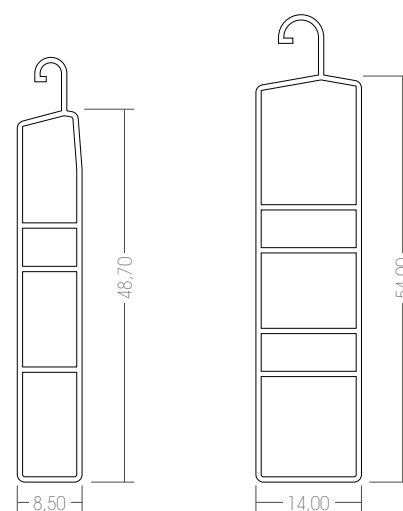
AL VS-150 BLOCK 60

MODELS

CORRESPONDENCE SLATS – END SLATS

		Aluminium							PVC	
	SLAT / END SLAT	AL Double	AL Interior	AL Small	AL T-55/EC-60	Block 39/45	Block 60	AL Security	PVC Mini	PVC Normal
FOAM FILLED AL	Micalum 39	●	●	●				●		
	Minicur 43	●	●	●				●		
	Termulim 45	●	●	●				●		
	Minisax 40	●	●	●				●		
	Termisax 45	●	●	●				●		
	Termicur 45	●	●	●				●		
	Termicur 55				●					
EXTRUDED AL	Minisegur 40	●	●	●				●		
	Segur EC-60				●					
	Blockalum 39					●		●		
	Blockalum 45					●		●		
	VS150 Block-60						●			
	Bioclim 45					●		●		
PVC	L-37	●	●	●					●	
	L-50	●	●	●					●	
	C-42	●	●	●					●	
	Aragón				●					●
	Berna				●					●
	París				●					●
	Sevilla				●					●

PVC AND ALU END SLATS / TECHNICAL FEATURES



MODEL

314012
PVC MINI

314013
PVC REGULAR

MATERIAL

PVC RIGID

PVC RIGID

WEIGHT

0,157 Kg/m

0,216 kg/m

COVERING LENGTH

48 mm

54 mm

NOMINAL THICKNESS

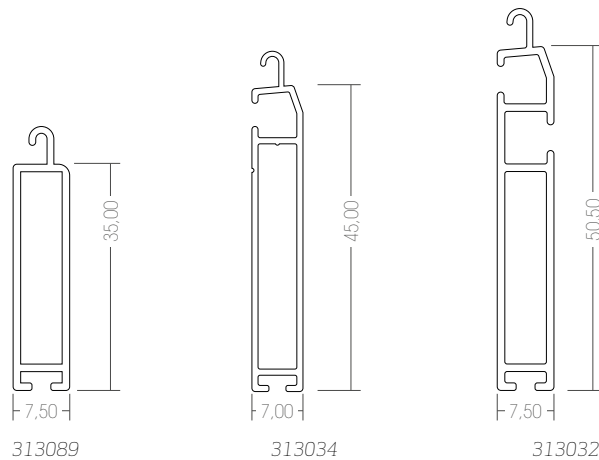
8,50 mm

14,00 mm

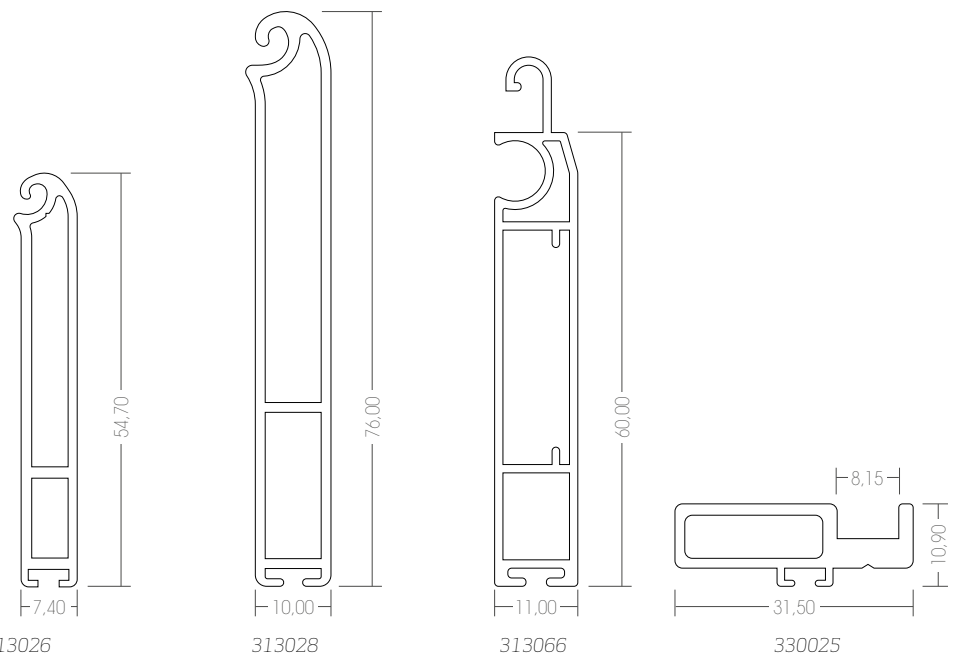
TOTAL PERIMETER

-

-



MODEL	313089	313034	313032
	AL INTERIOR SMALL	AL INTERIOR	AL DOUBLE
MATERIAL	ALUMINIUM	ALUMINIUM	ALUMINIUM
WEIGHT	0,218 Kg/m	0,273 kg/m	0,305 kg/m
COVERING LENGTH	35 mm	45 mm	50 mm
NOMINAL THICKNESS	7,50 mm	7,00 mm	7,50 mm
TOTAL PERIMETER	162,00 mm	223,80 mm	226 mm



MODEL	313026	313028	313066	330025
	AL BLOCKALUM 39/45	AI VS-150 BLOCK-60	AL TERMICUR 55 / EC-60	AL SECURITY END SLAT
MATERIAL	ALUMINIUM	ALUMINIUM	ALUMINIUM	ALUMINIUM
WEIGHT	0,448 Kg/m	0,643 kg/m	0,564 kg/m	0,357 Kg/m
COVERING LENGTH	55 mm	76 mm	60 mm	10 mm
NOMINAL THICKNESS	7,40 mm	10,95 mm	11,00 mm	31,50 mm
TOTAL PERIMETER	249 mm	353 mm	364 mm	147,4 mm

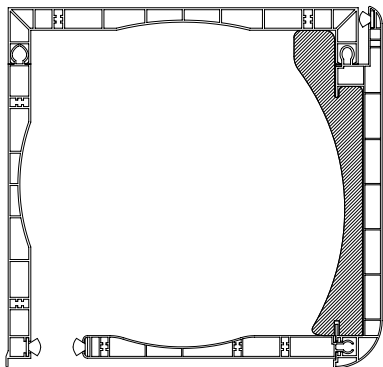
SHUTTER BOXES

The box has become a decisive and distinguishing element in the whole shutter system.

Its thermal and acoustic insulation make this an essential element in restoration and new buildings.

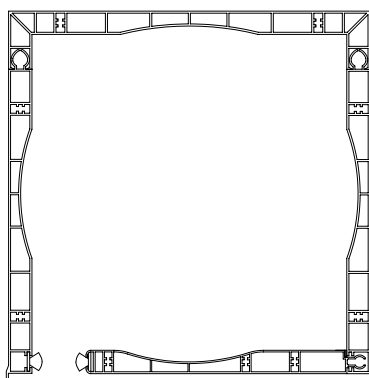
ENERGY

155 - 185 - 200



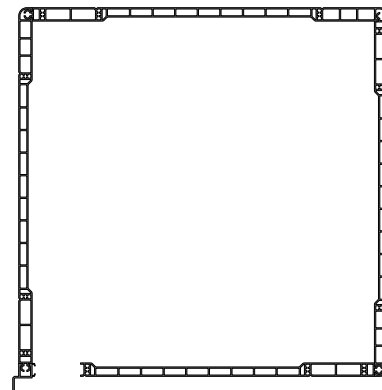
STANDARD

155 - 185 - 200 - 225



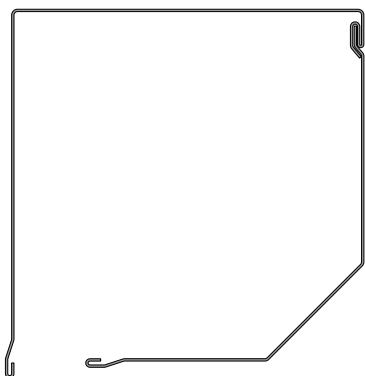
MAX

275 - 305



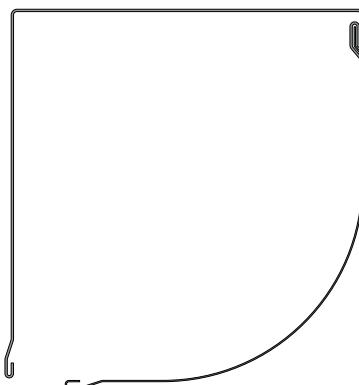
AL 2P 45°

137 - 165 - 180 - 205 - 250 - 300



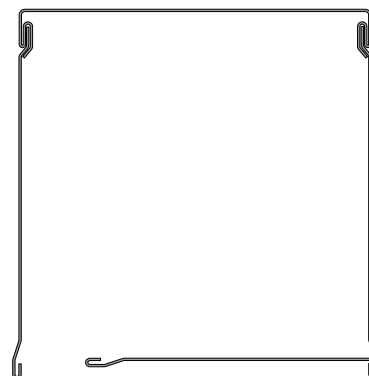
AL 2P CURVED

137 - 165 - 180 - 205



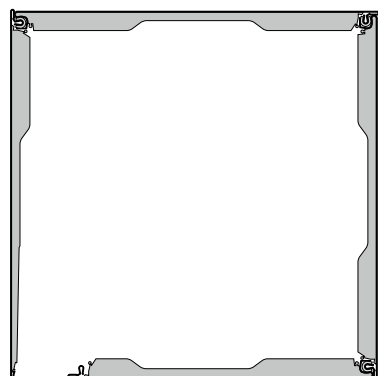
AL 4P 90°

137 - 165 - 180 - 205



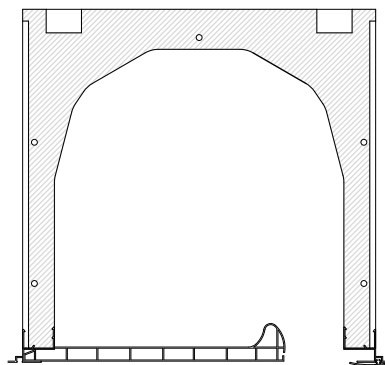
POLIBOX

155 - 185 - 200



TUNNEL

250 - 280 - 300



ENERGY / BOXES

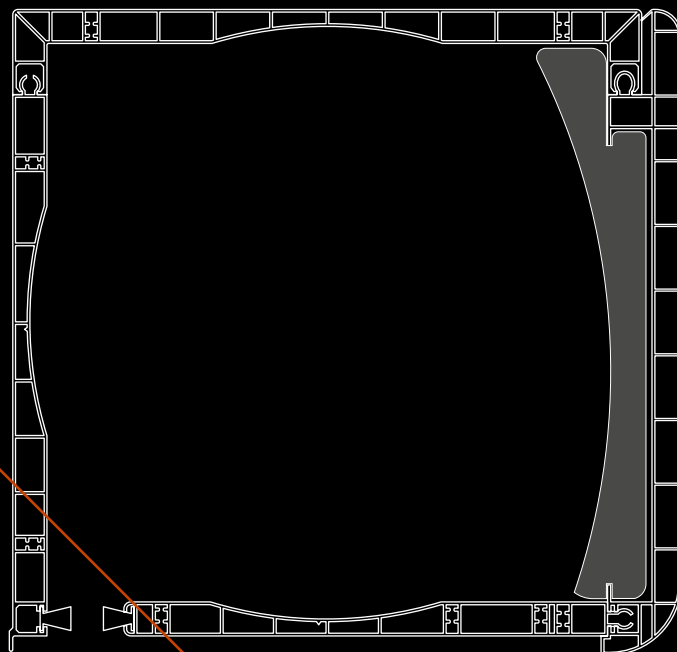
Greater efficiency and energy saving

The new solutions launched by PERSAX are proof of our commitment to a more sustainable future.

The new Energy box allows maximum comfort and a greater energetic efficiency with a reduction in energy costs.

Its U heat transfer coefficient= 1,2 W/m²k is one of the best insulation values in the current market and it prevents cool and hot air leaks at home.

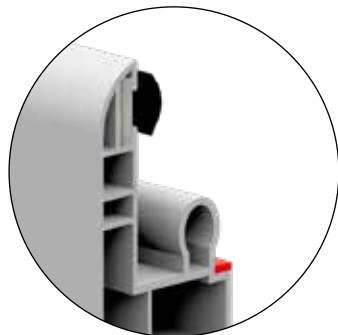
Its Class 4 Permeability to air and 3000Pa wind pressure resistance provide insulation in strong air conditions.



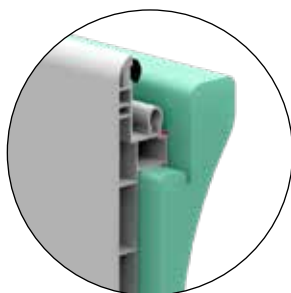
GENERAL OVERVIEW



1. Removable System (Premium accessories)



2. Insulation flap (sealing to water coextrusion)

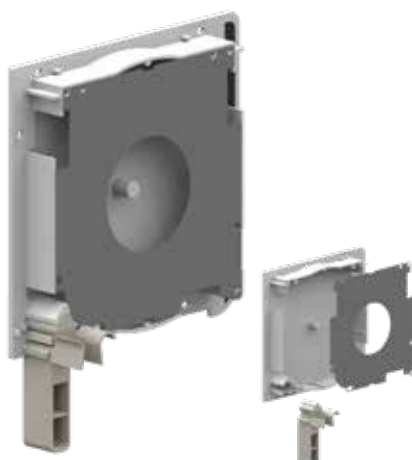


3. Expanded polystyrene insulating



ENERGY PREMIUM

Available sizes
155 - 185 - 200



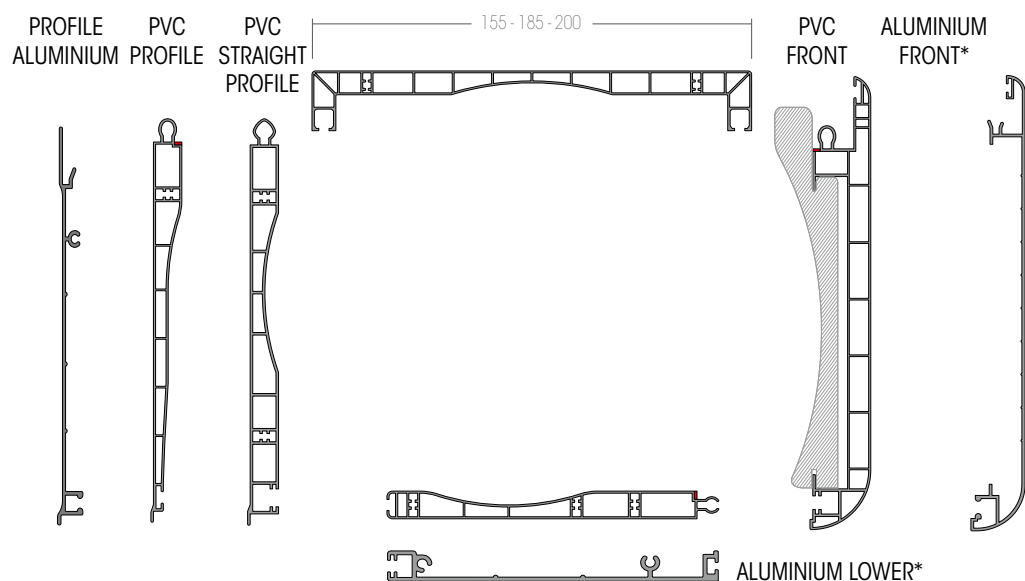
ENERGY UNIVERSAL (ABS)

Available sizes
155 - 185



ENERGY AL

Available sizes
155 - 185



* Not available in 155

TESTS



1,07 W/m²K
185
1,10 W/m²K
200

HEAT TRANSFER COEFFICIENT



CLASS E1200
185
CLASS E1200
200

SEALING TO WATER



185
CLASS 4
200

PERMEABILITY TO AIR

35 (-1;-4) dB Rw
51 (-1;-4) dB Dn,e,w



185
34 (-1;-4) dB Rw
50 (-1;-4) dB Dn,e,w
200

ACOUSTIC INSULATION Rw



P₃ = 3.000 Pa
185
P₃ = 3.000 Pa
200

WIND-CHARGE RESISTANCE

35,3 dBA Ra
51,1 dBA Dn,e,A



185
34,1 dBA Ra
49,6 dBA Dn,e,A
200

ACOUSTIC INSULATION Ra

Test Characteristics:

- ABS accessories
- All profiles are in PVC

- Polystyrene front profile support and polystyrene triangular support
- Motorized (no manual opening mechanism such as strap-guide)

HEIGHT (box included) The dimensions recommended by Persax are indicated in the technical features

		L-37	C-42	L-50			
155	S40	1,865	1,375	1,250			
	S60	1,605	1,205	1,200			
185	S40	2,745	2,075	2,080			
	S60	2,485	1,865	1,930			
200	S40	2,870	2,090	2,245			
	S60	2,685	2,135	2,245			
		MICRALUM 39	MINISAX 40	MINICUR 43	TERMILUM 45	TERMISSAX 45	TERMICUR 45
155	S40	1,795	1,360	1,895	2,000	-	1,550
	S60	1,600	1,160	1,780	1,925	1,100	1,370
185	S40	2,765	2,070	2,767	2,930	-	2,345
	S60	2,530	1,910	2,595	2,790	1,580	2,165
200	S40	3,245	2,085	2,840	3,090	-	2,630
	S60	2,935	2045	2,625	2,905	1,820	2,450
		MINISEGUR 40	BLOCKALUM 39	BLOCKALUM 45	BIOCLIM 45		
155	S40	-	-	-	-		
	S60	1,020	1,530	1,130	-		
185	S40	-	-	-	-		
	S60	1,805	2,150	1,905	-		
200	S40	-	-	-	-		
	S60	2 165	2 525	2 130	-		

*ONLY AVAILABLE WITH ALUMINIUM ACCESSORIES

ENERGY BOX

ENERGY WITH PREMIUM ACCESSORIES

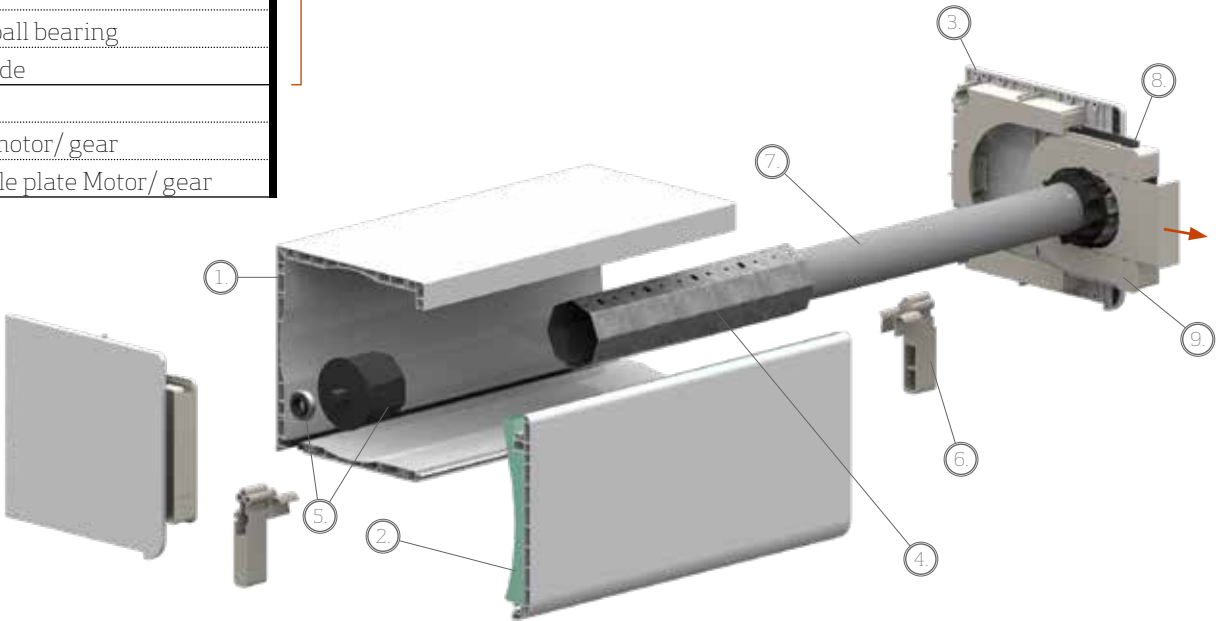
The best possible combination in the new Energy model.
The Premium features that increase accessibility and make maintenance

easier are combined with the best insulation and energetic efficiency levels

Motor Accessories

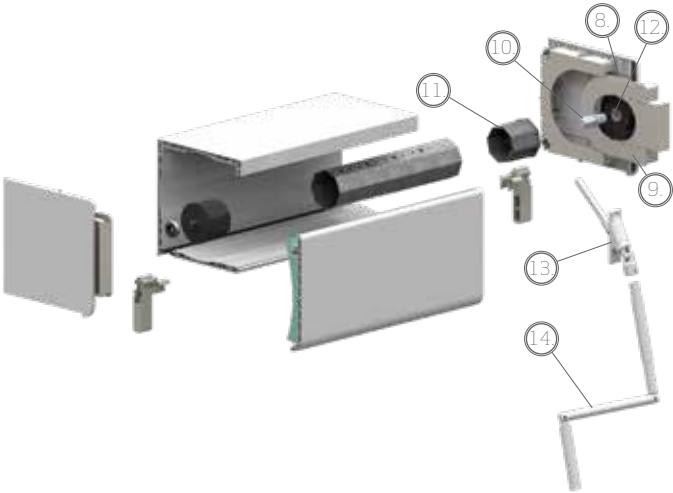
1.	Energy Profiles
2.	Expanded Polystyrene
3.	Energy Premium End Cap
4.	Shaft
5.	Cap and ball bearing
6.	Entry Guide
7.	Motor
8.	Support motor/ gear
9.	Removable plate Motor/ gear

Common Accessories



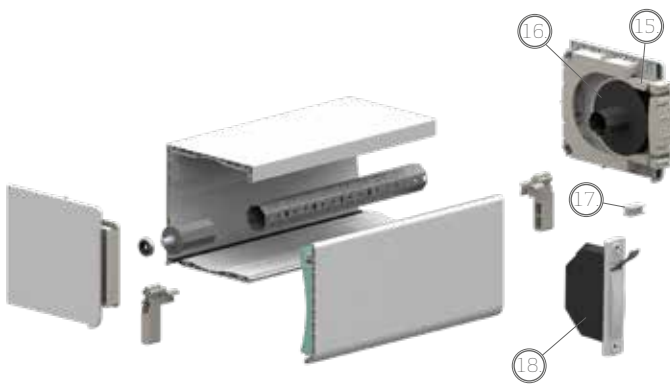
Gear Accessories

8.	Plate support motor/ gear
9.	Removable plate motor / gear
10.	Zamak pivot
11.	Zamak Cap
12.	Gear mechanism
13.	Joint
14.	Hand Crank



Coiler / strap Accessories

15.	Pulley side Removable plate
16.	Pulley
17.	Strap Guide
18.	Coiler



ENERGY BOX

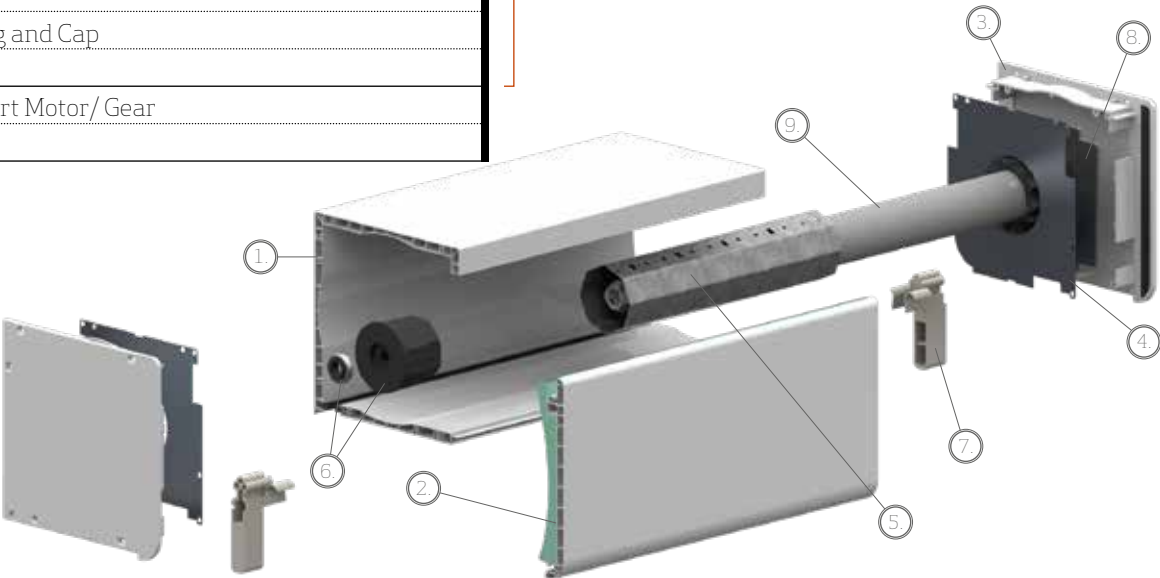
ENERGY WITH UNIVERSAL ACCESSORIES (ABS)

The Energy system also adapts to the different needs of the market with universal accessories designed to fit all types of materials.

Motor Accessories

1.	Energy Profiles
2.	Expanded Polystyrene
3.	Universal Energy Lat End Cap
4.	Metallic safety plate
5.	Shaft
6.	Ball Bearing and Cap
7.	Entry Guide
8.	Plate Support Motor/ Gear
9.	Motor

Common Accessories

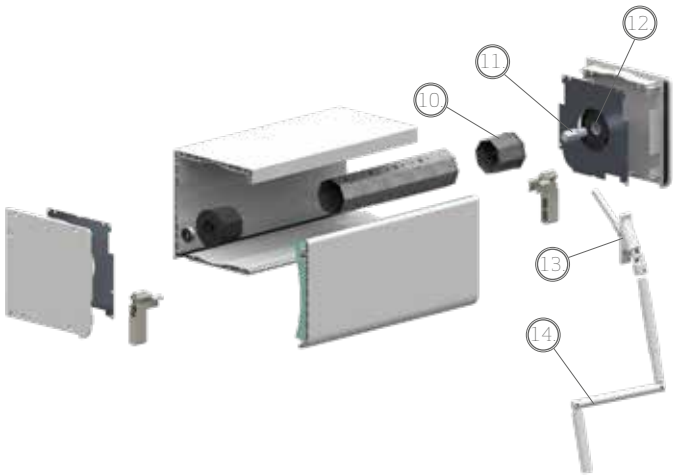


Gear Accessories

10.	Zamak Cap
11.	Zamak Pivot
12.	Gear Mechanism
13.	Joint
14.	Hand crank

Coiler / strap Accessories

15.	Pulley
16.	Strap Guide
17.	Coiler



ENERGY BOX

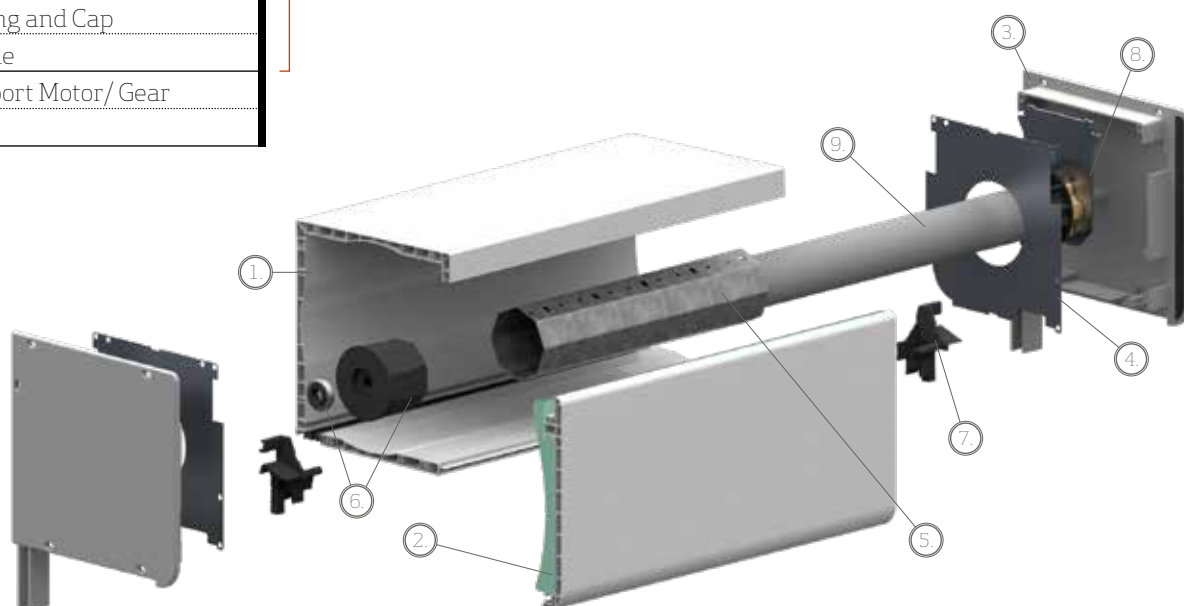
ENERGY WITH ALUMINIUM ACCESSORIES

The most traditional option within the Energy range with aluminium lateral end caps that completely integrate any wood or metal work system.

Motor Accessories

1.	Energy Profiles
2.	Expanded Polystyrene
3.	Alu Lateral Energy EndCap
4.	Metallic safety plate
5.	Shaft
6.	Ball Bearing and Cap
7.	Entry Guide
8.	Plate Support Motor/ Gear
9.	Motor

Common Accessories

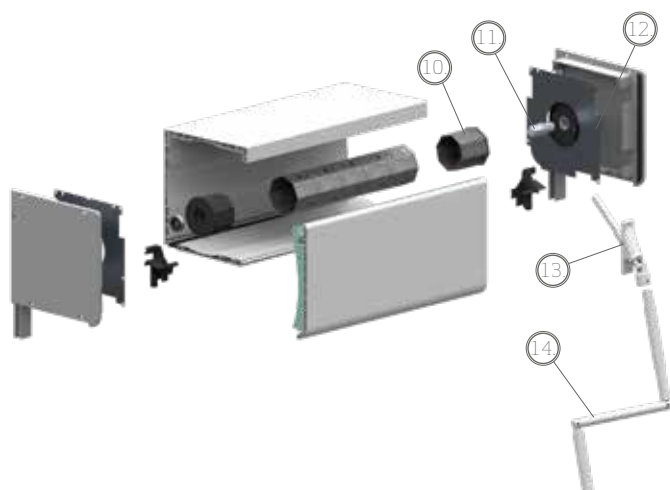


Gear Accessories

10.	Zamak Cap
11.	Zamak Pivot
12.	Gear Mechanism
13.	Joint
14.	Hand crank

Coiler / strap Accessories

15.	Pulley
16.	Strap Guide
17.	Coiler



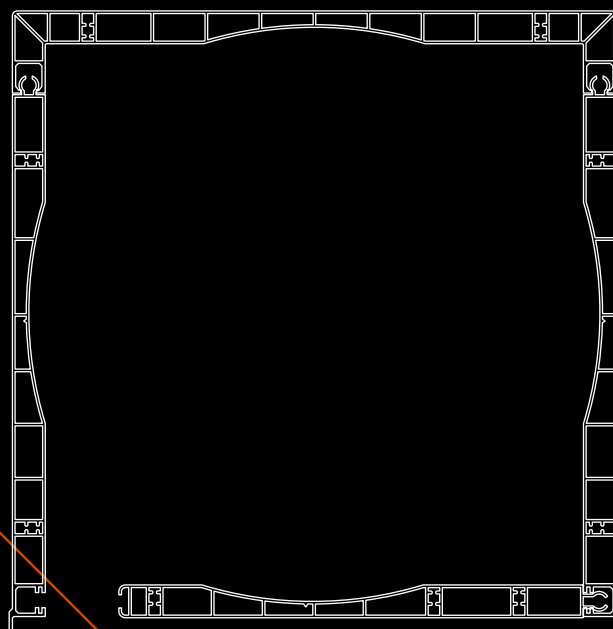
PVC STANDARD / BOXES

**The traditional solution, versatile
and quick to install**

Persax Standard box meets the need of a box compatible with most of the metal works systems in the market.

The quality of PVC used in the manufacturing process is well recognized by our customers, and so is the thickness of the profiles, all of which provides the window with a better thermal and acoustic insulation.

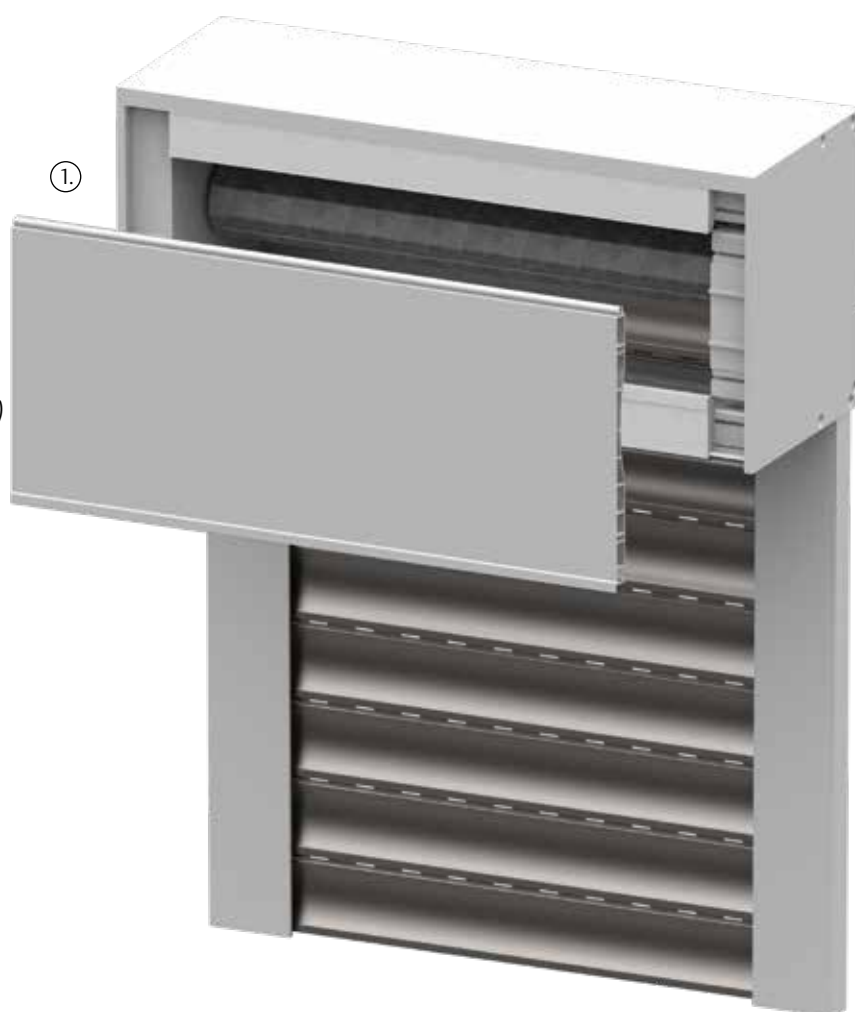
Furthermore, the Standard Box is also available in a Premium version that makes use of removable plates to facilitate access to the inside in a quick and comfortable way.



GENERAL OVERVIEW



1. Removable System (Premium accessories)



PREMIUM STANDARD

Available sizes
155 - 185 - 200



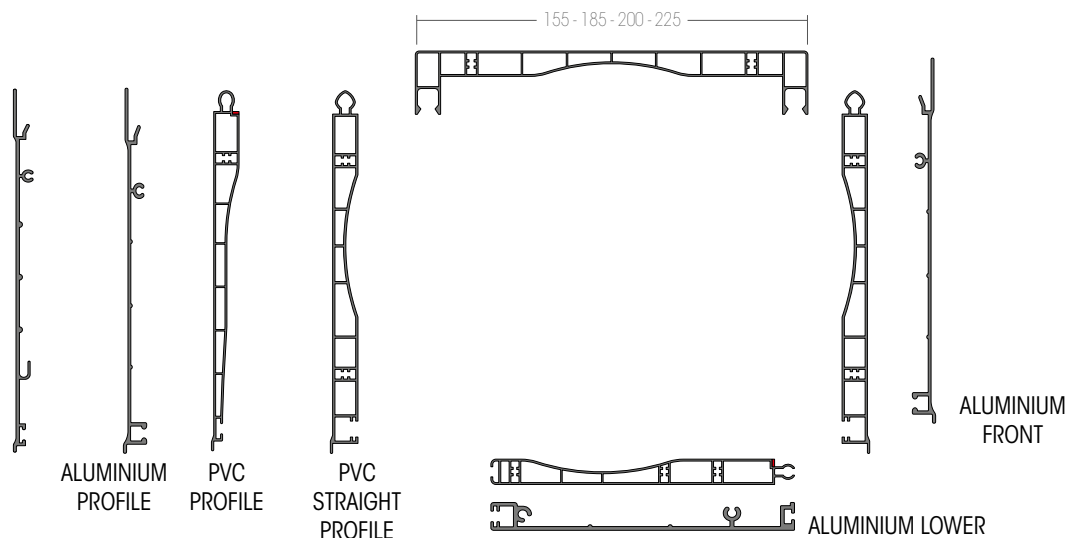
UNIVERSAL STANDARD (ABS)

Available sizes
155 - 185

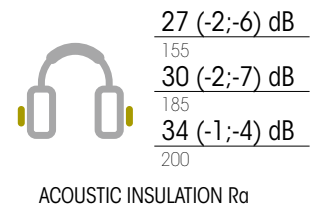
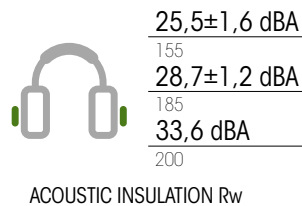
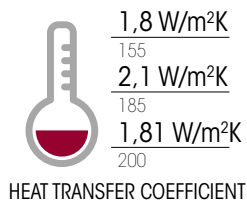


ALUMINIUM STANDARD

Available sizes
155 - 185 - 200 - 225 (only str. profile)



TESTS



Test Characteristics:

- ABS accessories
- All profiles are in PVC

- Polystyrene front profile support and polystyrene triangular support
- Motorized (no manual opening mechanism such as strap-guide)

HEIGHT (box included) *The dimensions recommended by Persax are indicated in the technical features*

		L-37	C-42	L-50			
155	S40	1,865	1,375	1,250			
	S60	1,605	1,205	1,200			
185	S40	2,745	2,075	2,080			
	S60	2,485	1,865	1,930			
200	S40	2,870	2,090	2,245			
	S60	2,685	2,135	2,245			
225	S40	4,155	3,500	3,320			
	S60	4,040	3,335	3,220			
		MICRALUM 39	MINISAX 40	MINICUR 43	TERMILUM 45	TERMISSAX 45	TERMICUR 45
155	S40	1,795	1,360	1,895	2,000	-	1,550
	S60	1,600	1,160	1,780	1,925	1,100	1,370
185	S40	2,765	2,070	2,767	2,930	-	2,345
	S60	2,530	1,910	2,595	2,790	1,580	2,165
200	S40	3,245	2,085	2,840	3,090	-	2,630
	S60	2,935	2,045	2,625	2,905	1,820	2,450
225	S40	4,405	2,910	4,315	4,340	2,760	3,845
	S60	4,295	2,705	4,110	4,170	2,550	3,540
		MINISEGUR 40	BLOCKALUM 39	BLOCKALUM 45	BIOCLIM 45		
155	S40	-	-	-	-		
	S60	1,020	1,530	1,130	-		
185	S40	-	-	-	-		
	S60	1,805	2,150	1,905	-		
200	S40	-	-	-	-		
	S60	2,165	2,525	2,130	1,685*		
225	S40	-	-	-	-		
	S60	3,190	3,665	3,190	2,430*		

*ONLY AVAILABLE WITH ALUMINIUM ACCESSORIES

STANDARD BOX

STANDARD WITH PREMIUM ACCESSORIES

The evolution of PVC standard system. The traditional profiles with our system of Premium removable plates.

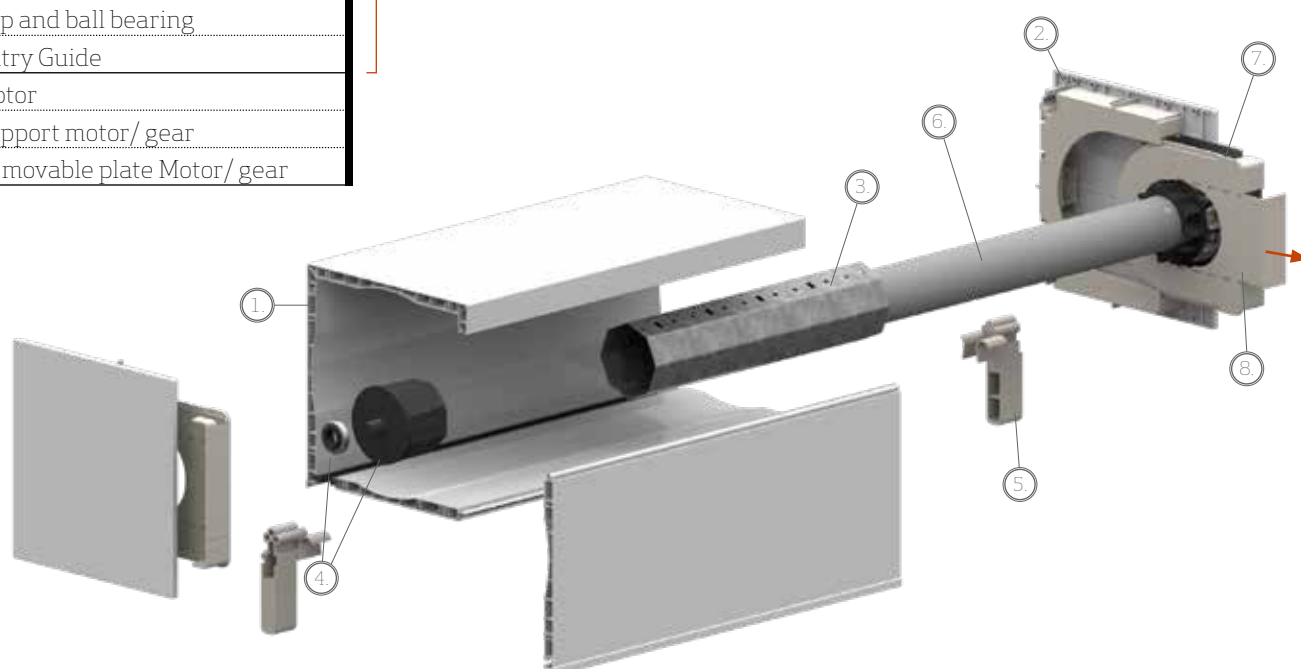
It allows a quick and easy access to the inside of the box.

Motor Accessories

1.	PVC Standard Profiles
2.	PRM Lateral End Cap
3.	Shaft
4.	Cap and ball bearing
5.	Entry Guide
6.	Motor
7.	Support motor/ gear
8.	Removable plate Motor/ gear

Common Accessories

→ The removal of this element allows an easy access to regulate the beginning / end of stroke.

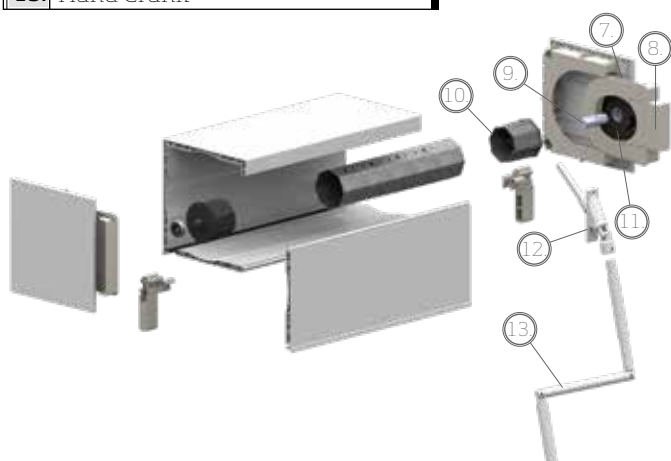


Gear Accessories

7.	Plate support motor/ gear
8.	Removable plate motor / gear
9.	Zamak pivot
10.	Zamak Cap
11.	Gear mechanism
12.	Joint
13.	Hand Crank

Coiler / strap Accessories

14.	Pulley
15.	Strap Guide
16.	Coiler



STANDARD BOX

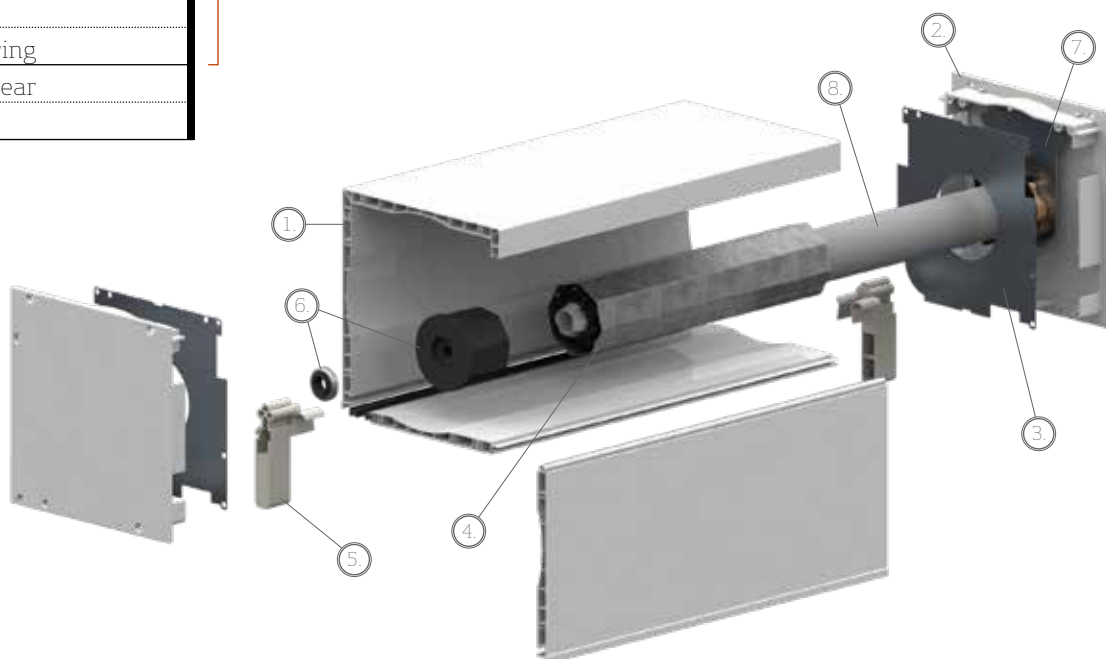
STANDARD WITH UNIVERSAL ACCESSORIES (ABS)

One of the advantages of the UNIVERSAL accessories system is that they are compatible with all the entry guides available in Persax extensive catalogue.

Motor Accessories

1.	Standard Box Profiles
2.	Universal Lat End cap
3.	Metallic Safety Plate
4.	Shaft
5.	Entry Guide
6.	Cap and ball bearing
7.	Support motor/ gear
8.	Motor

Common Accessories

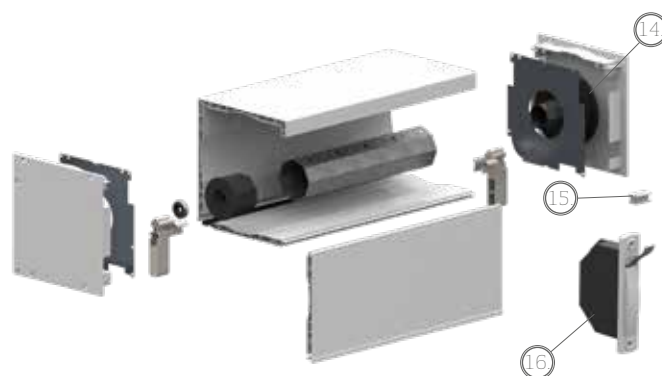
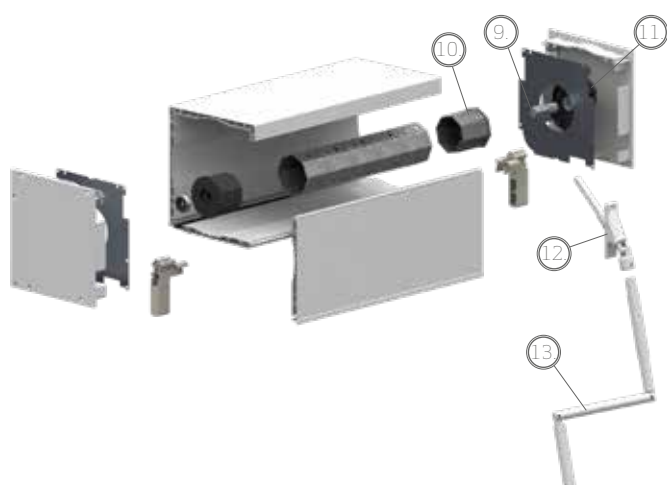


Gear Accessories

9.	Zamak pivot
10.	Zamak Cap
11.	Gear mechanism
12.	Joint
13.	Hand Crank

Coiler / strap Accessories

14.	Pulley
15.	Strap Guide
16.	Coiler



STANDARD BOX

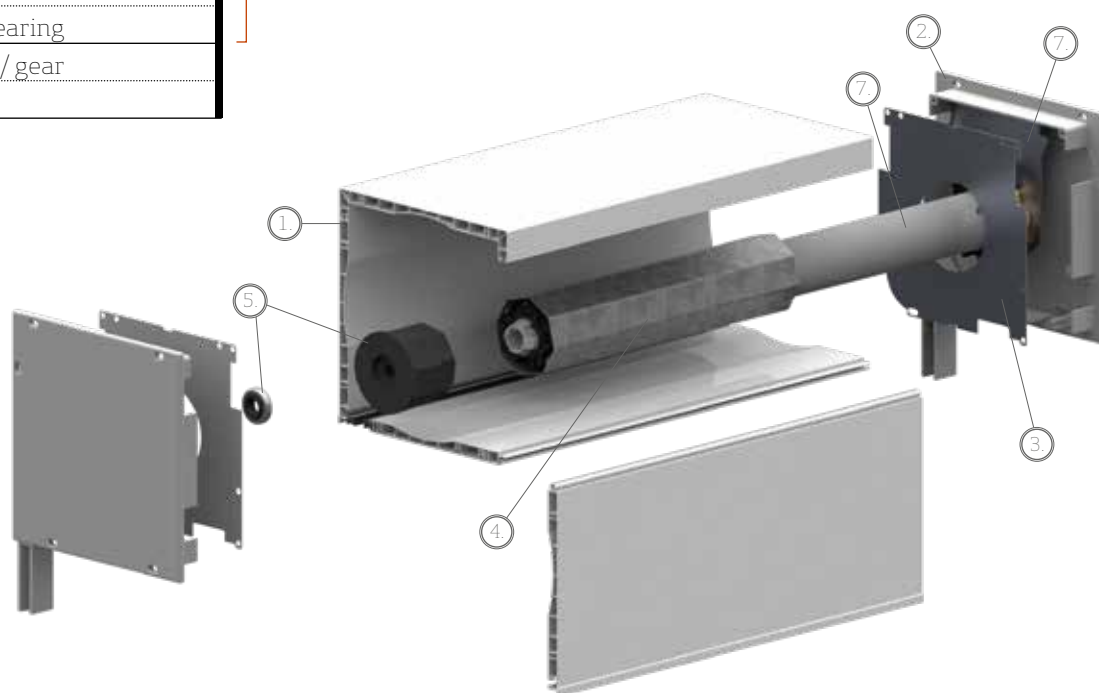
STANDARD WITH ALUMINIUM ACCESSORIES

The advantages of the PVC box together with the high resistance of aluminium accessories make this a great choice for your window.

Motor Accessories

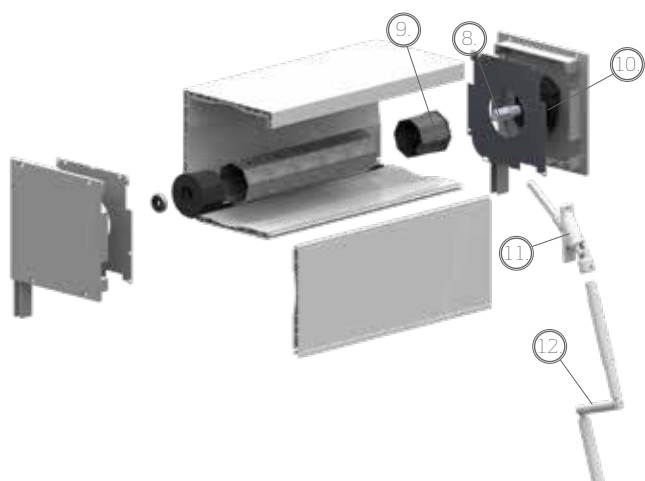
1.	Standard Box Profiles
2.	Aluminium Lat End cap
3.	Metallic Safety Plate
4.	Shaft
5.	Cap and ball bearing
6.	Support motor/ gear
7.	Motor

Common Accessories



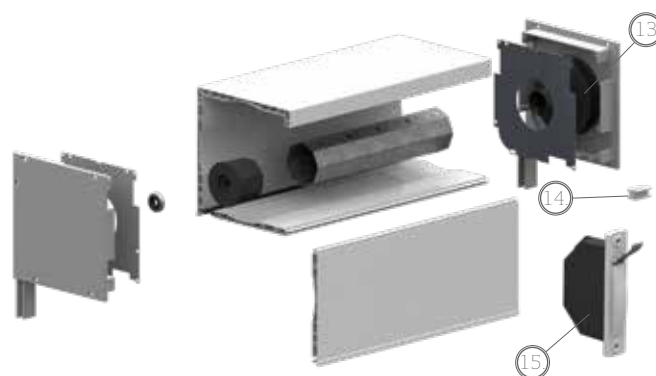
Gear Accessories

8.	Zamak pivot
9.	Zamak Cap
10.	Gear mechanism
11.	Joint
12.	Hand Crank



Coiler / strap Accessories

13.	Pulley
14.	Strap Guide
15.	Coiler



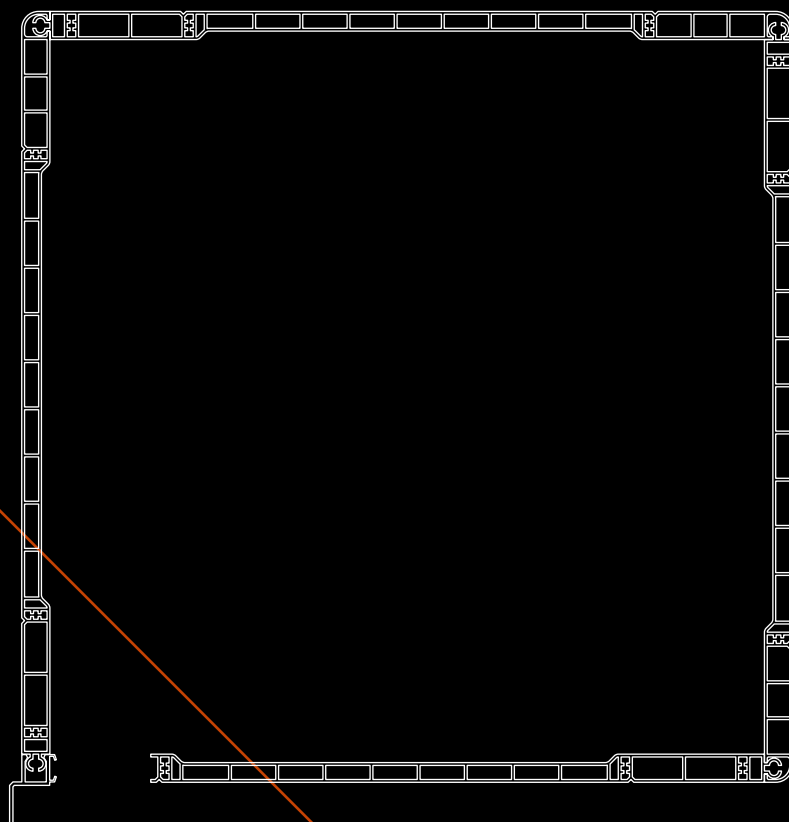
Great rolling capacity

The new Max shutter box, consisting of 4 PVC profiles, is the perfect solution for large roller shutters.

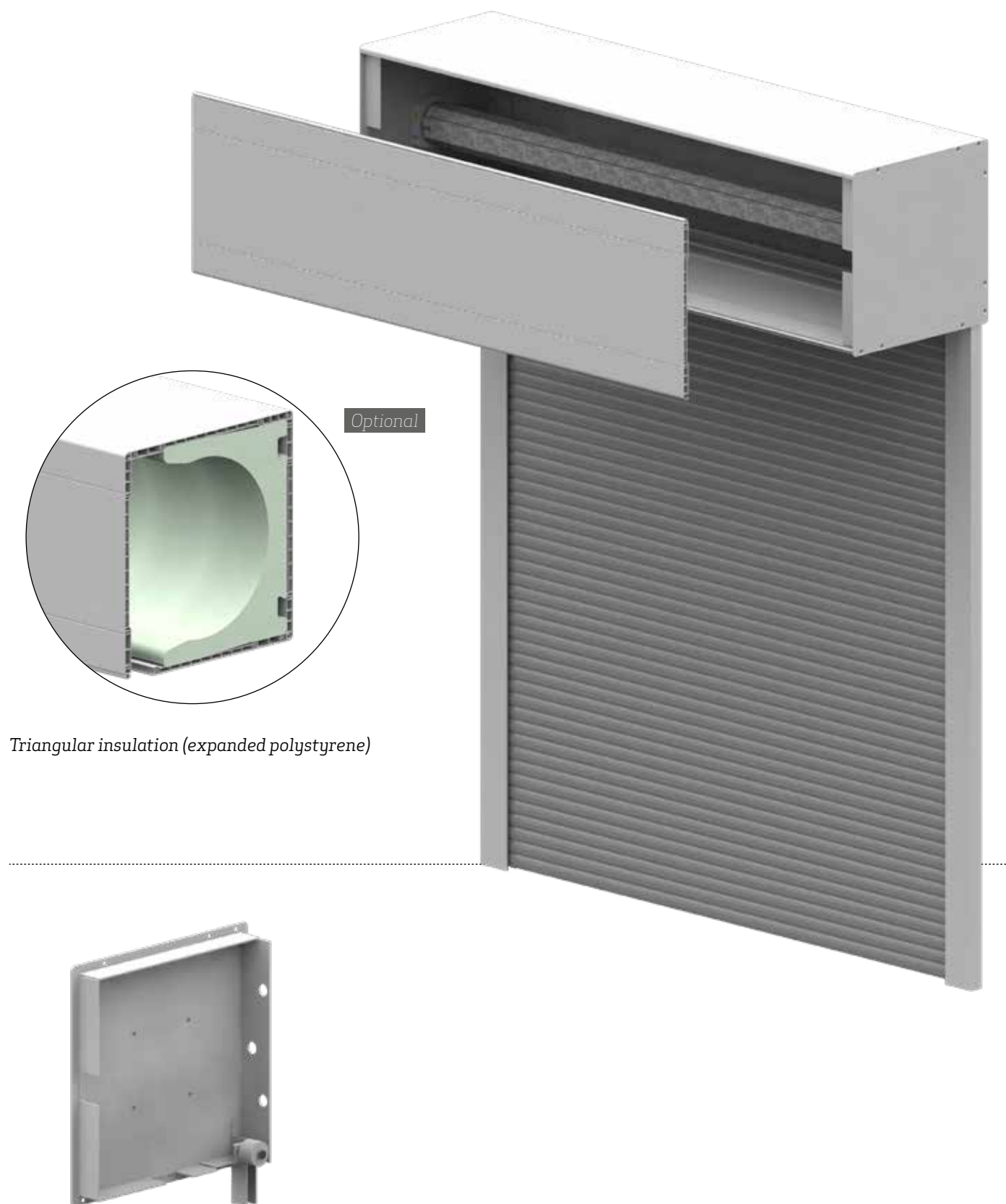
The two sizes in which it can be manufactured allow a tighter rolling of the slats, which is perfect for large spaces.

The option for lacquer enables excellent integration with any colour in the pre-existing metal work.

The possibility of including expanded polystyrene provides a better thermal and acoustic insulation.



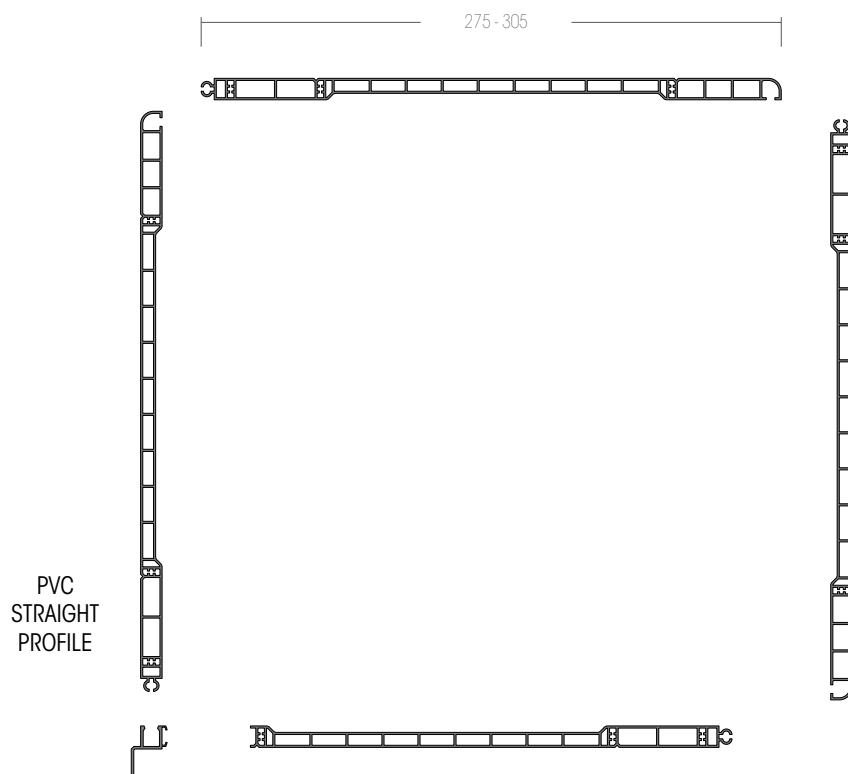
GENERAL OVERVIEW



Triangular insulation (expanded polystyrene)

LATERAL END CAP MAX

*Available sizes
275 - 305*



TESTS



0,657 W/m²K
275



0,775 W/m²K
305

HEAT TRANSFER COEFFICIENT

Values obtained from the simulation software of the heat transfer coefficient

HEIGHT (box included) *The dimensions recommended by Persax are indicated in the technical features*

		TERMICUR 55	EC-60	BIOCLIM 45
275	S60	2,810	2,855	3,295
	S70	2,920	3,035	3,230
	S100	-	2,735	-
305	S60	3,525	3,635	3,325
	S70	3,690	3,815	3,230
	S100	-	3,515	-

		MINISEGUR 40	BLOCKALUM 39	BLOCKALUM 45	VS-150 BLOCK 60
275	S60	4,400	4,955	4,275	3,146
	S70	-	4,665	3,850	2,561
	S100	-	-	-	2,171
305	S60	5,200	-	-	3,796
	S70	-	-	-	3,276
	S100	-	-	-	2,886

MAX BOX

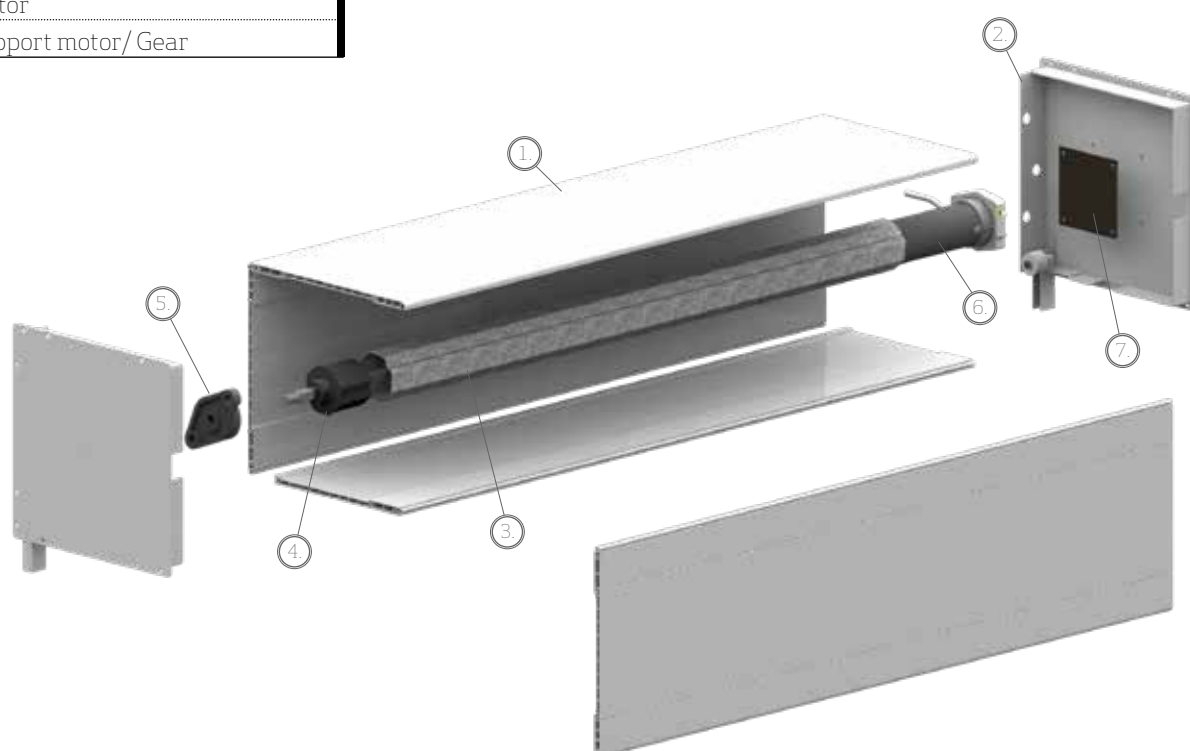
MAX BOX WITH IRON ACCESSORIES

The advantages of the PVC box together with the high resistance of iron accessories make this a great choice for your window.

Motor Accessories

1.	Max PVC Profiles
2.	Max Aluminium Lat End cap
3.	Shaft
4.	Cap
5.	Ball Bearing
6.	Motor
7.	Support motor/ Gear

Common Accessories



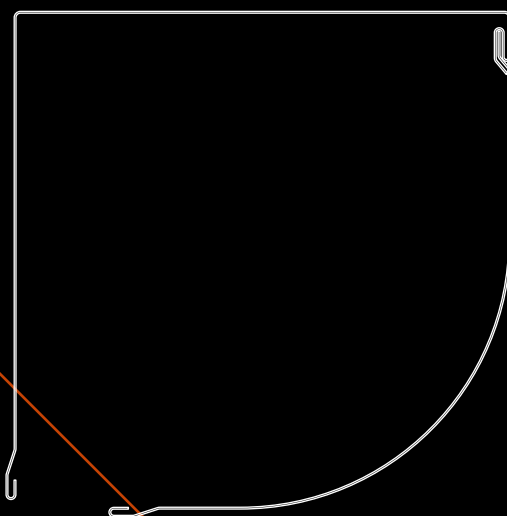
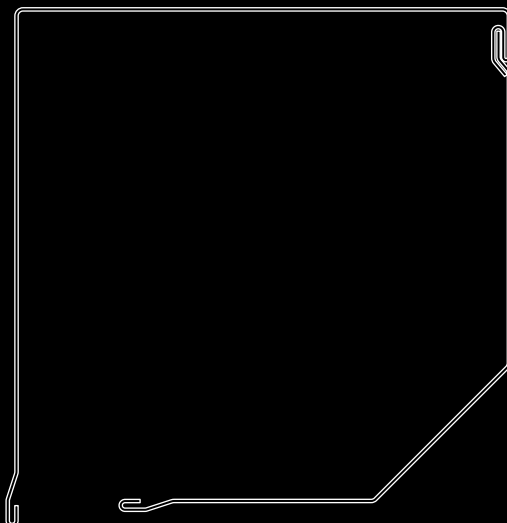
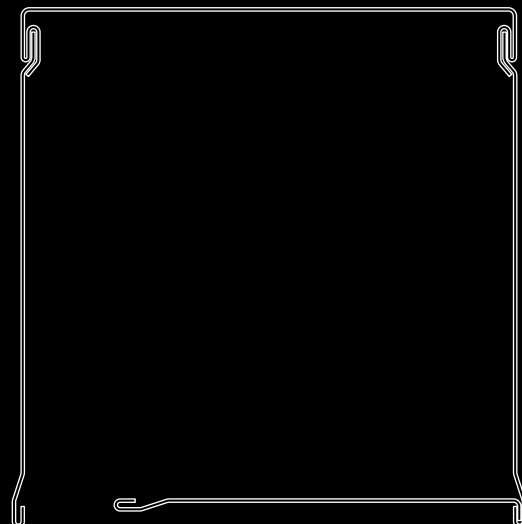
PROFILED ALUMINIUM / BOXES

Versatility and finish offered by aluminium

The 45° aluminium boxes are very easy to install. They do not require brick works and they are especially recommended for outdoors installations.

Aluminium boxes can be made in a wide of sizes adaptable to any necessities and they are also available in a comprehensive range of colours, allowing full integration with the existing metal work, thus allowing an integrating look in dwellings.

They are especially recommended in places with pre-existing metal work.



GENERAL OVERVIEW



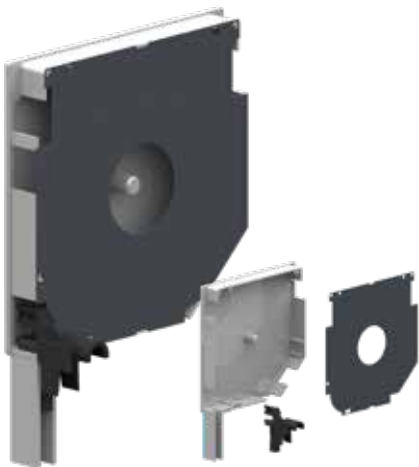
2 Parts 45°



4 Parts 90°



Curved 2 Parts



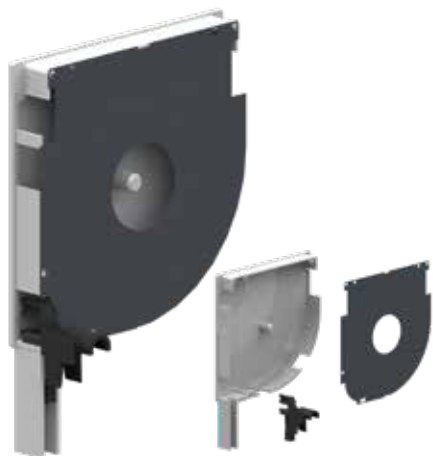
AL 2 PARTS 45°

Available sizes
137-165-180-205-250-300



AL 4 PARTS 90°

Available sizes
137-165-180-205



CURVED AL 2 PARTS

Available sizes
137-165-180-205



MINI SYSTEM

THE PERFECT CHOICE FOR ALREADY INSTALLED WINDOWS

When installing a box in a previously installed window, Mini system provides the following advantages:

- It does not require any work inside the home because all the mechanisms, except for the strap and the coiler, are placed outside
- Easy installation, since it is placed directly on top of the window
- No need for brick work
- Inexpensive system
- Possibility to add a rolling mosquito net inside (only available in 2P 45° aluminium box: 165 and 180)

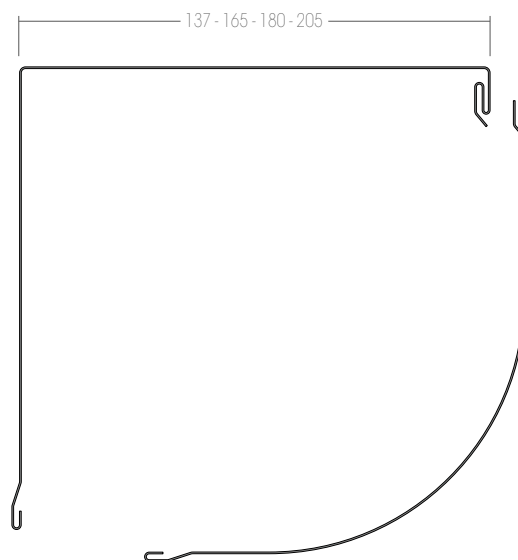
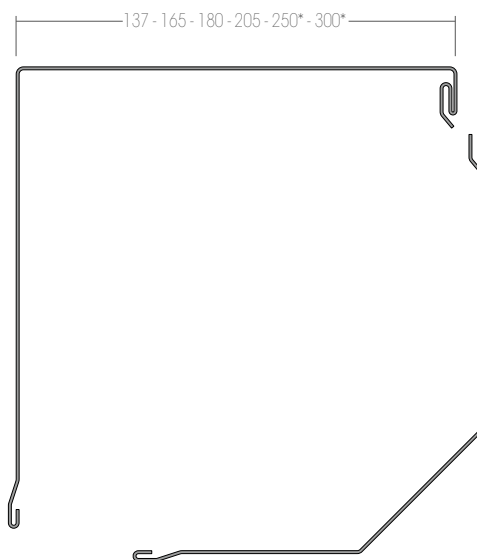


Outdoor view



Indoor view





*only compatible with Termicur 55, Segur EC-60 and VS-150 BLOCK 60

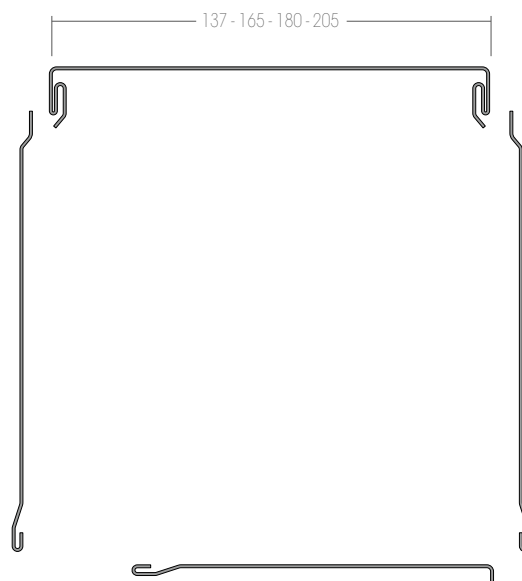
HEIGHT (box included) *The dimensions recommended by Persax are indicated in the technical features*

		L-37	C-42	L-50
137	S40	1,400	1,020	0,985
	S60	1,325	0,895	0,885
165	S40	2,315	1,760	1,760
	S60	2,245	1,595	1,560
180	S40	2,815	2,240	2,125
	S60	2,700	2,115	2,075
205	S40	3,725	2,935	3,050
	S60	3,540	2,935	2,950

		MICRALUM 39	MINISAX 40	MINICUR 43	TERMILUM 45	TERMISSAX 45	TERMICUR 45
137	S40	1,625	1,100	1,505	1,435	-	1,305
	S60	1,465	0,940	1,375	1,210	0,855	1,215
165	S40	2,625	1,890	2,555	2,490	-	2,235
	S60	2,470	1,770	2,385	2,270	1,560	2,100
180	S40	3,150	2,265	3,170	3,090	-	2,745
	S60	3,030	2,145	2,915	2,910	1,980	2,610
205	S40	4,305	3,050	4,390	4,010	-	3,580
	S60	4,150	2,890	4,175	3,830	2,725	3,445

		MINISEGUR 40	BLOCKALUM 39	BLOCKALUM 45	BIOCLIM 45
137	S40	-	-	-	-
	S60	0,980	1,180	0,940	-
165	S40	-	-	-	-
	S60	1,690	2,035	1,720	-
180	S40	-	-	-	-
	S60	2,145	2,460	2,110	1,520
205	S60	3,130	3,315	2,890	2,120
250	S70	-	-	2,605	-
	S60	-	5,010	4,485	-
	S70	-	4,930	4,250	-

		TERMICUR 55	SEGUR EC-60	VS-150 BLOCK 60	BIOCLIM 45
250	S60	2,565	2,230	-	3,555
	S70	2,290	2,350	2,405	3,460
	S100	-	2,770	2,015	-
300	S60	4,155	4,260	-	-
	S70	4,265	4,500	-	-
	S100	-	4,140	3,560	-



HEIGHT (box included) *The dimensions recommended by Persax are indicated in the technical features*

		L-37	C-42	L-50
137	S40	1,400	1,020	0,985
	S60	1,325	0,895	0,885
165	S40	2,315	1,760	1,760
	S60	2,245	1,595	1,560
180	S40	2,815	2,240	2,125
	S60	2,700	2,115	2,075
205	S40	3,725	2,935	3,050
	S60	3,540	2,935	2,950

		MICRALUM 39	MINISAX 40	MINICUR 43	TERMILUM 45	TERMISAX 45	TERMICUR 45
137	S40	1,625	1,100	1,505	1,435	-	1,305
	S60	1,465	0,940	1,375	1,210	0,855	1,215
165	S40	2,625	1,890	2,555	2,490	-	2,235
	S60	2,470	1,770	2,385	2,270	1,560	2,100
180	S40	3,150	2,265	3,170	3,090	-	2,745
	S60	3,030	2,145	2,915	2,910	1,980	2,610
205	S40	4,305	3,050	4,390	4,010	-	3,580
	S60	4,150	2,890	4,175	3,830	2,725	3,445

		MINISEGUR 40	BLOCKALUM 39	BLOCKALUM 45	BIOCLIM 45
137	S40	-	-	-	-
	S60	0,980	1,180	0,940	-
165	S40	-	-	-	-
	S60	1,690	2,035	1,720	-
180	S40	-	-	-	-
	S60	2,145	2,460	2,110	1,520
205	S60	3,130	3,315	2,890	2,120
	S70	-	-	2,605	-
250	S60	-	5,010	4,485	-
	S70	-	4,930	4,250	-

ALUMINIUM BOXES

ALUMINIUM 2 PARTS 45° AND CURVED

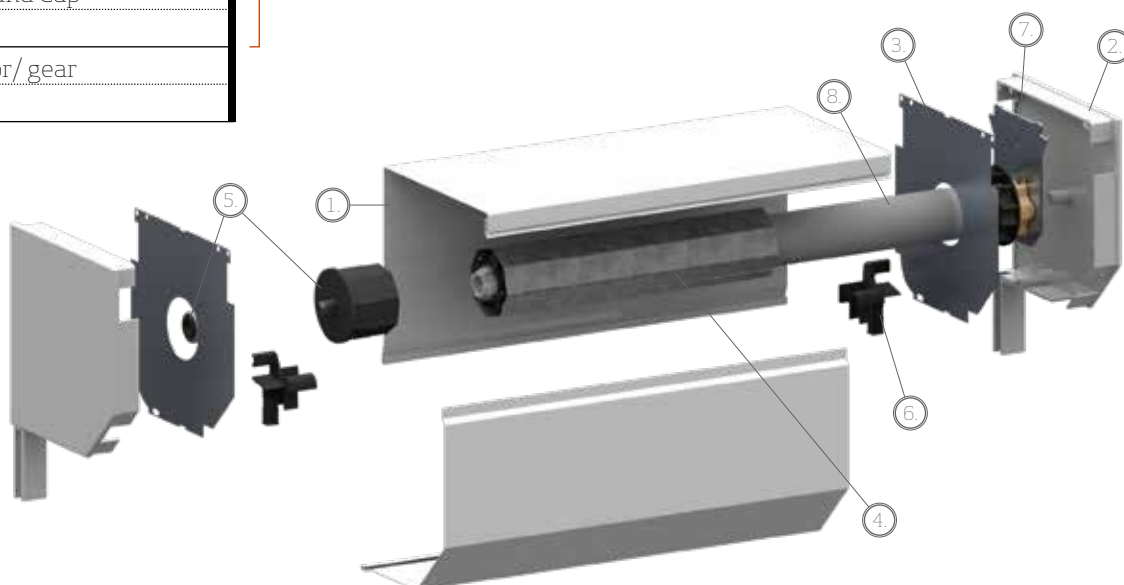
The most popular combination in the market. It combines easy installation with the versatility of aluminium accessories. It is especially recommended for

installations in which the existing window did not initially include a shutter.

Motor Accessories

1.	45° Alu Profiles
2.	Alu 45° Lat End cap
3.	Metallic Safety Plate
4.	Shaft
5.	Ball bearing and Cap
6.	Entry Guide
7.	Support motor/ gear
8.	Motor

Common Accessories

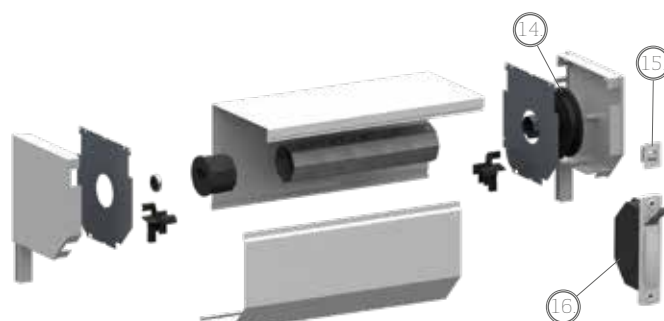
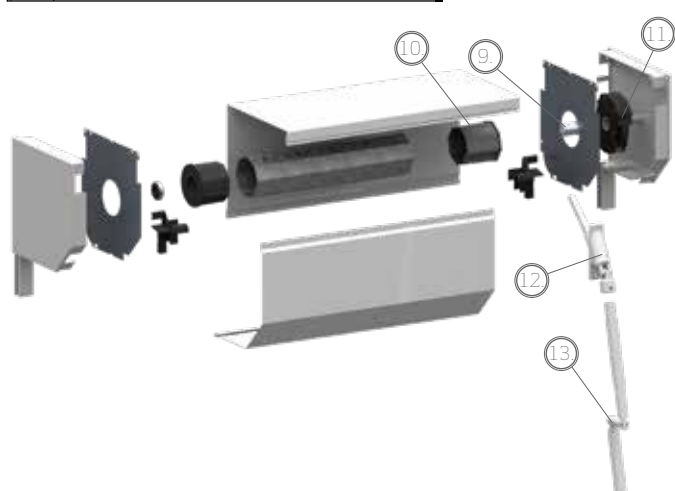


Gear Accessories

9.	Zamak pivot
10.	Zamak Cap
11.	Gear mechanism
12.	Joint
13.	Hand Crank

Coiler / strap Accessories

14.	Pulley
15.	Strap Guide
16.	Coiler



ALUMINIUM BOXES

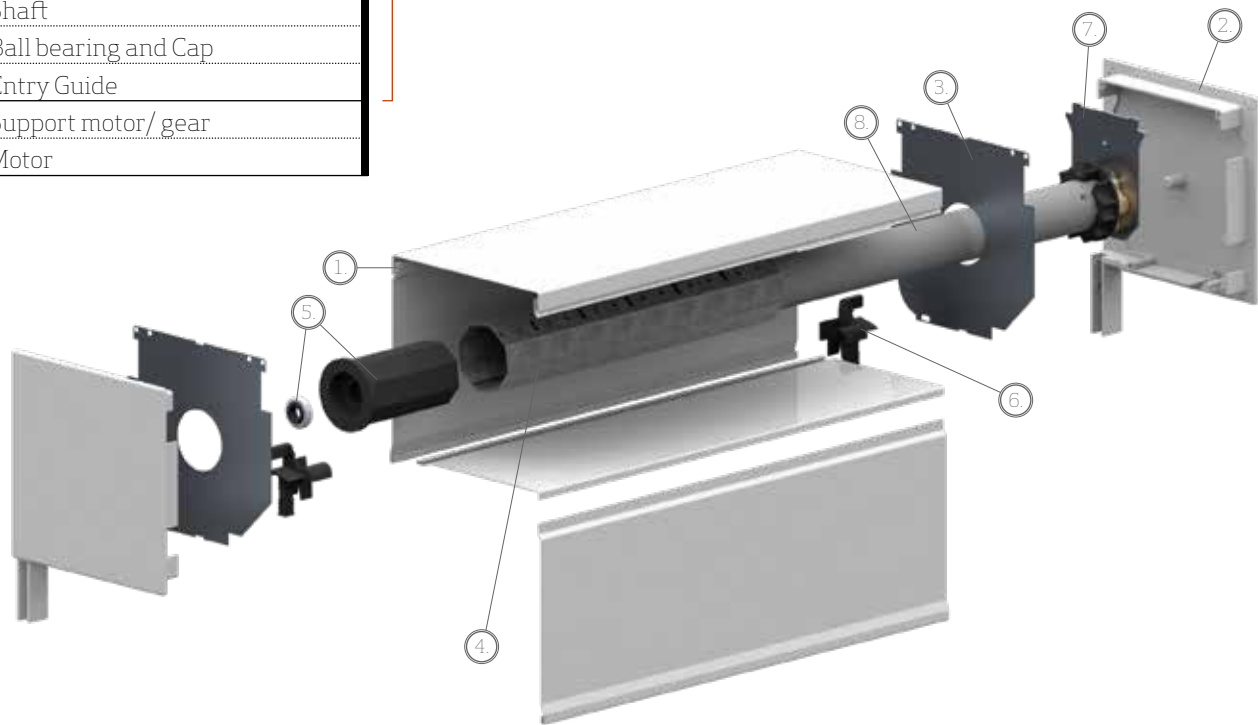
4 PARTS 90° ALUMINIUM

An equally effective option and one of the most popular in the existing market.

Motor Accessories

1.	90° Alu Profiles
2.	Alu 90° Lat End cap
3.	Metallic Safety Plate
4.	Shaft
5.	Ball bearing and Cap
6.	Entry Guide
7.	Support motor/ gear
8.	Motor

Common Accessories

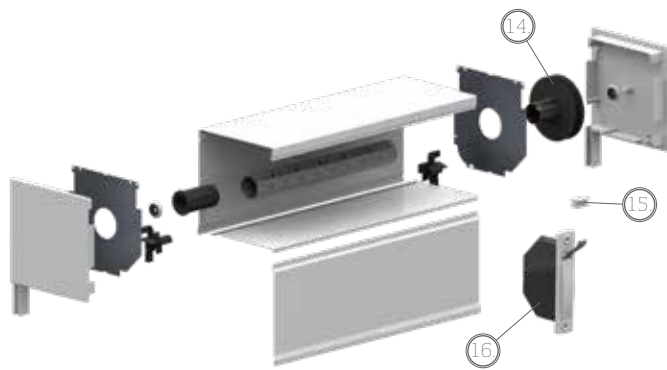
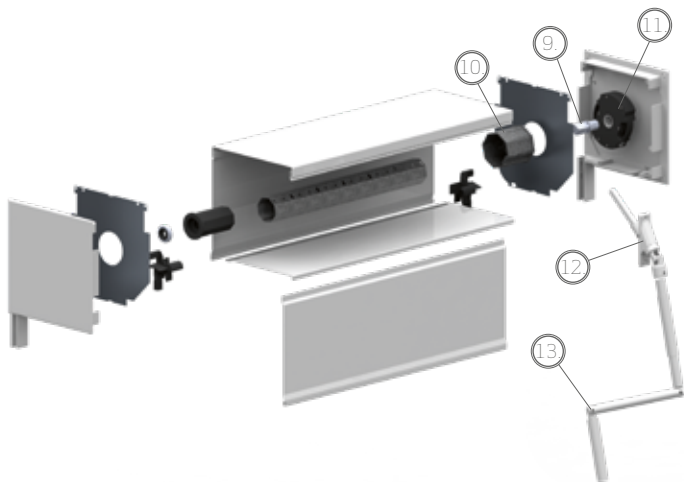


Gear Accessories

9.	Zamak pivot
10.	Zamak Cap
11.	Gear mechanism
12.	Joint
13.	Hand Crank

Coiler / strap Accessories

14.	Pulley
15.	Strap Guide
16.	Coiler



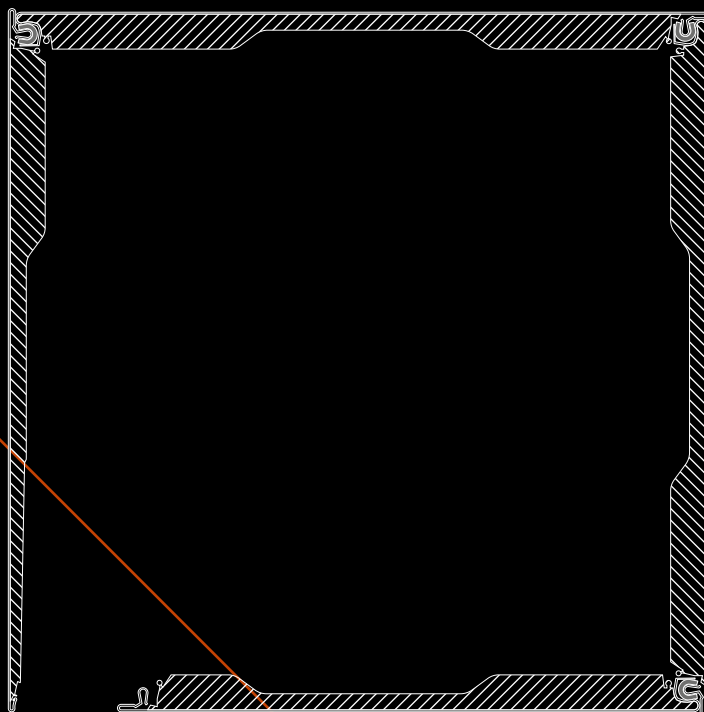
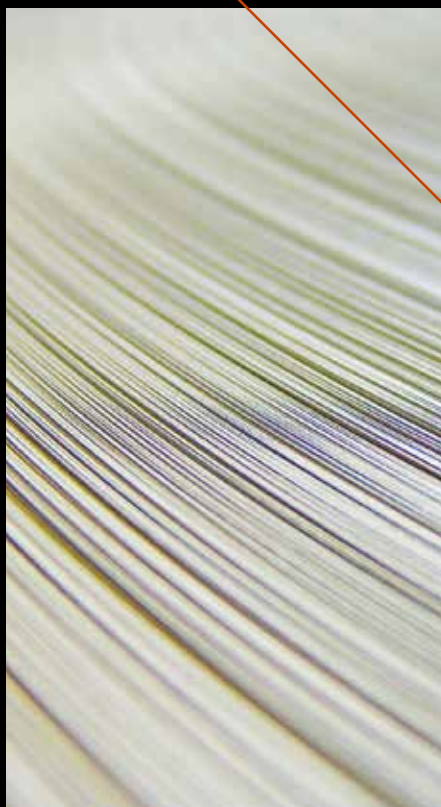
POLIBOX / BOXES

Insulation and range of finishes in one product

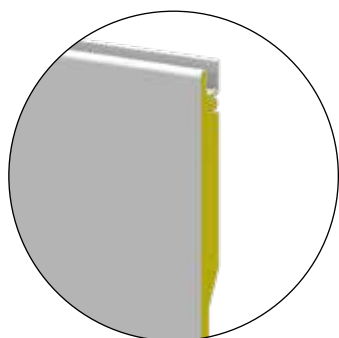
The Polibox provides a very good level of thermal and acoustic insulation thanks to its profiles filled in with polyurethane foam.

As a novelty, the Polibox system includes a PVC profile that limits the thermal transmission to other aluminium parts.

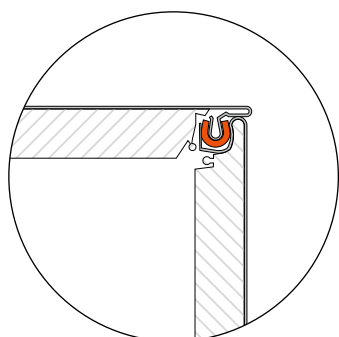
Moreover, it is available in a wide range of colours, thus allowing total integration with the pre-existing metal work and a balanced look in your home.



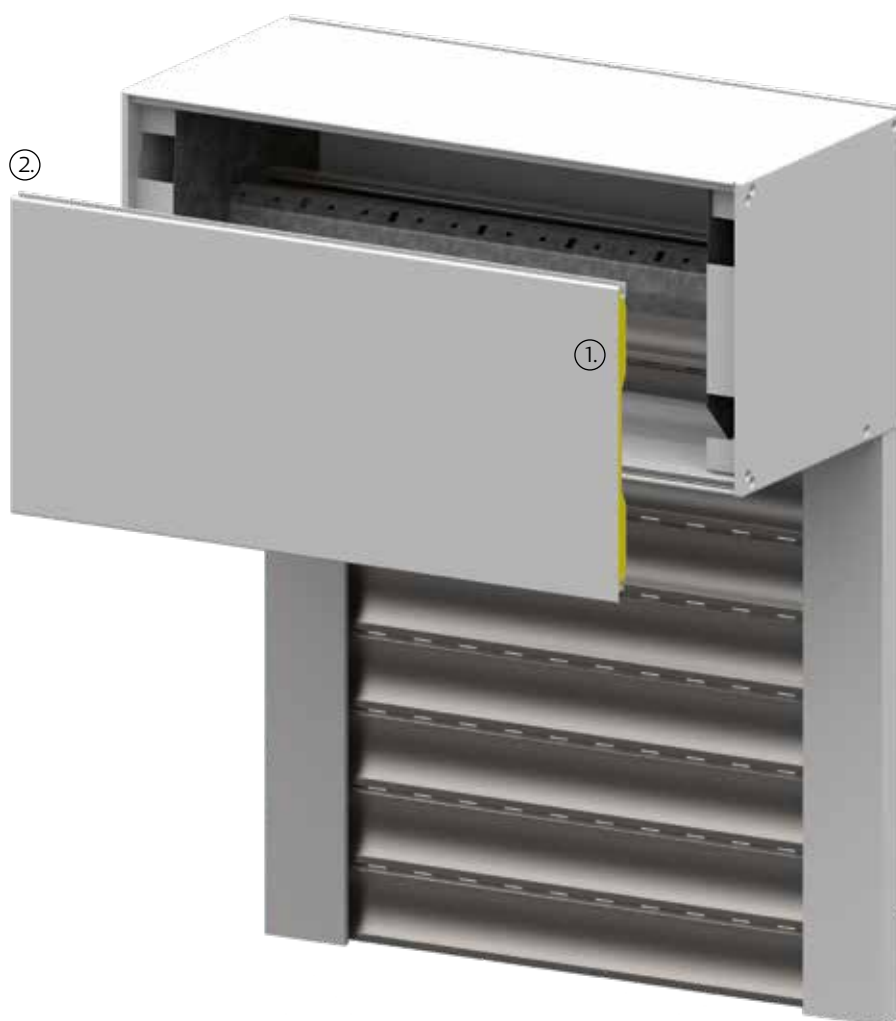
GENERAL OVERVIEW



1. The 4 profiles are filled in with polyurethane foam (insulating)

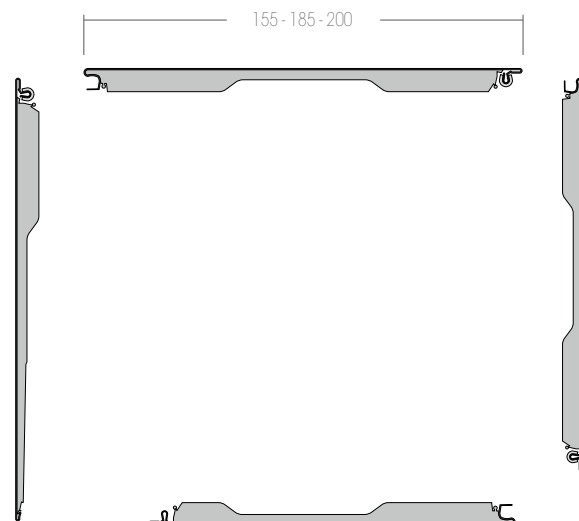


2. PVC Profile
(reduces the thermal transmission among profiles)

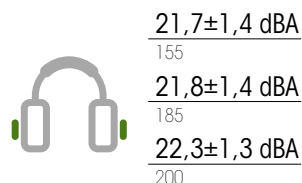
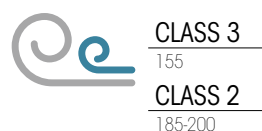
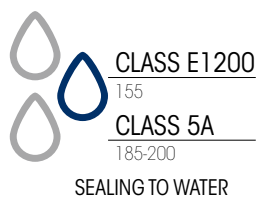
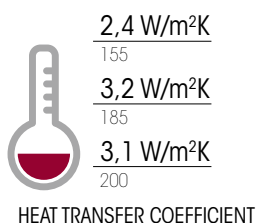
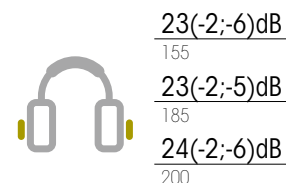
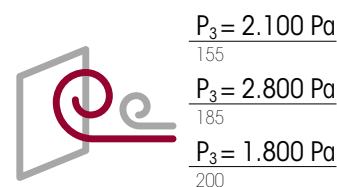


ALUMINIUM LATERAL

Available sizes
155 - 185 - 200



TESTS


ACOUSTIC INSULATION R_w

ACOUSTIC INSULATION R_a

HEIGHT (box included) *The dimensions recommended by Persax are indicated in the technical features*

		L-37	C-42	L-50
155	S40	1,865	1,375	1,250
	S60	1,605	1,205	1,200
185	S40	2,745	2,075	2,080
	S60	2,485	1,865	1,930
200	S40	3,315	2,720	2,495
	S60	3,090	2,470	2,445

		MICRALUM 39	MINISAX 40	MINICUR 43	TERMILUM 45	TERMISAX 45	TERMICUR 45
155	S40	2,030	1,165	1,915	1,945	1,230	1,220
	S60	1,855	1,010	1,705	1,810	1,175	1,090
185	S40	2,930	1,705	2,875	3,120	1,685	2,520
	S60	2,740	1,535	2,550	2,910	1,590	2,420
200	S40	3,430	2,175	3,495	3,755	2,145	3,050
	S60	3,240	2,025	3,055	3,545	2,070	2,915

		MINISEGUR 40	BLOCKALUM 39	BLOCKALUM 45	BIOCLIM 45
155	S40	-	-	-	-
	S60	1,240	1,445	1,145	-
185	S40	-	-	-	-
	S60	1,990	2,300	2,025	-
200	S40	-	-	-	-
	S60	2,485	2,855	2,365	1,635

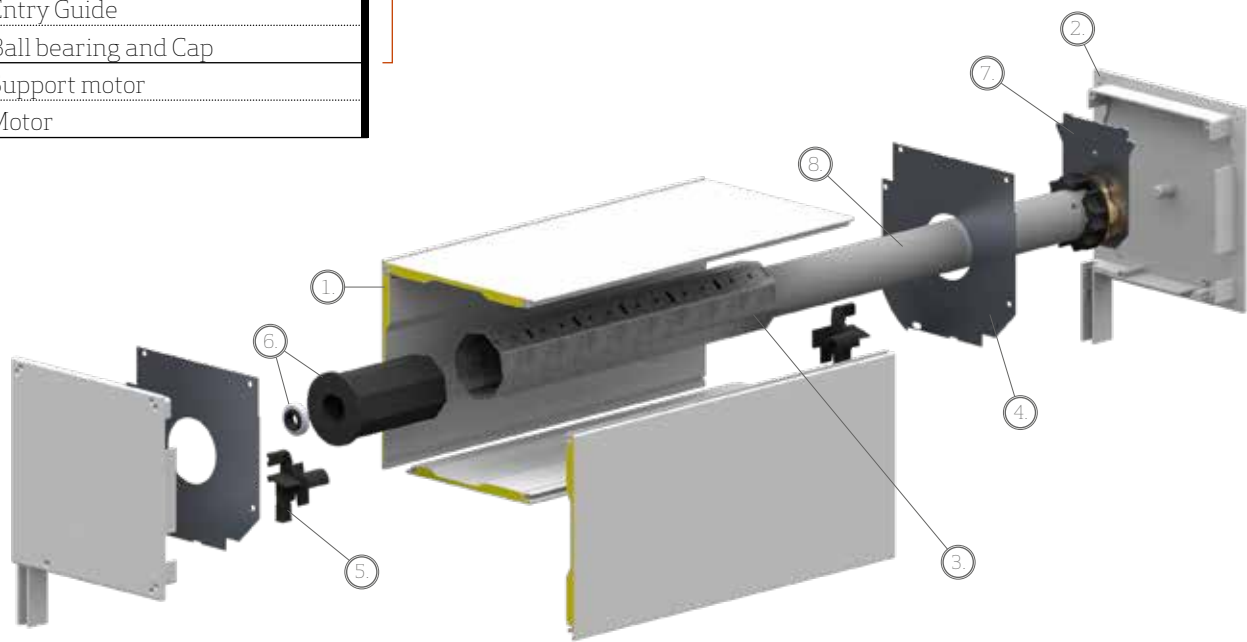
ALUMINIUM POLIBOX

Aluminium box filled with polyurethane foam that provides the system with better insulation.

Motor Accessories

1.	Polibox Box Profiles
2.	Polibox Lat End cap
3.	Shaft
4.	Metallic Safety Plate
5.	Entry Guide
6.	Ball bearing and Cap
7.	Support motor
8.	Motor

Common Accessories

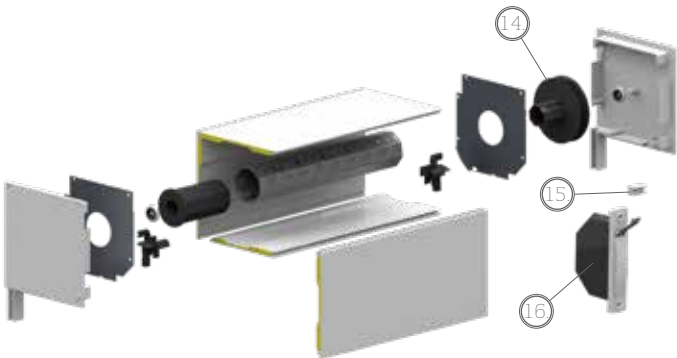
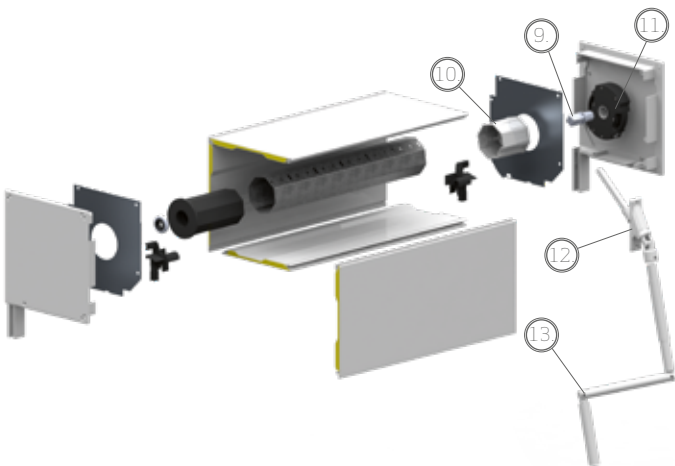


Gear Accessories

9.	Zamak pivot
10.	Zamak Cap
11.	Gear mechanism
12.	Joint
13.	Hand Crank

Coiler / strap Accessories

14.	Pulley
15.	Strap Guide
16.	Coiler



TUNNEL / BOXES

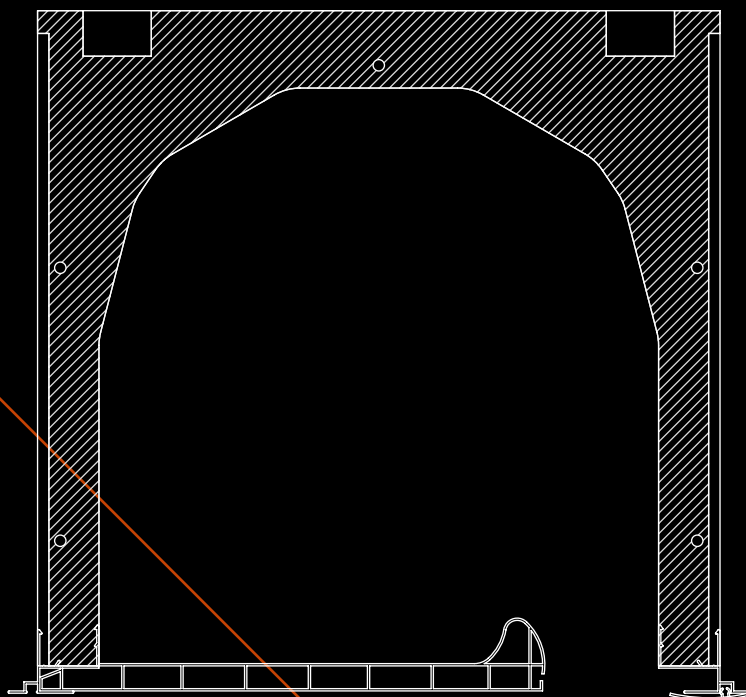
The evolution of the traditional built-in box

The new Tunnel box is the evolution of the traditional built-in box.

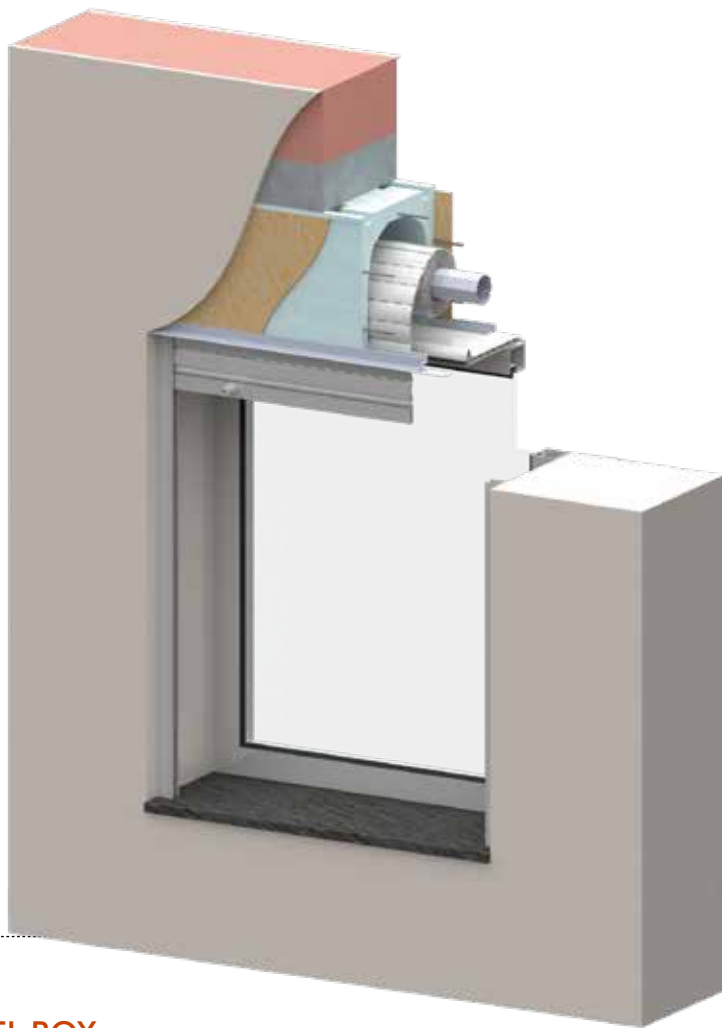
Thanks to the peculiarity of its expanded polystyrene structure, the Tunnel box provides excellent thermal and acoustic insulation.

Furthermore, its special structure embedded into the wall allows it to be hidden from view.

Another advantage is its roller up capacity, which makes it especially indicated for large shutters which are not normally compatible with traditional boxes.



GENERAL OVERVIEW

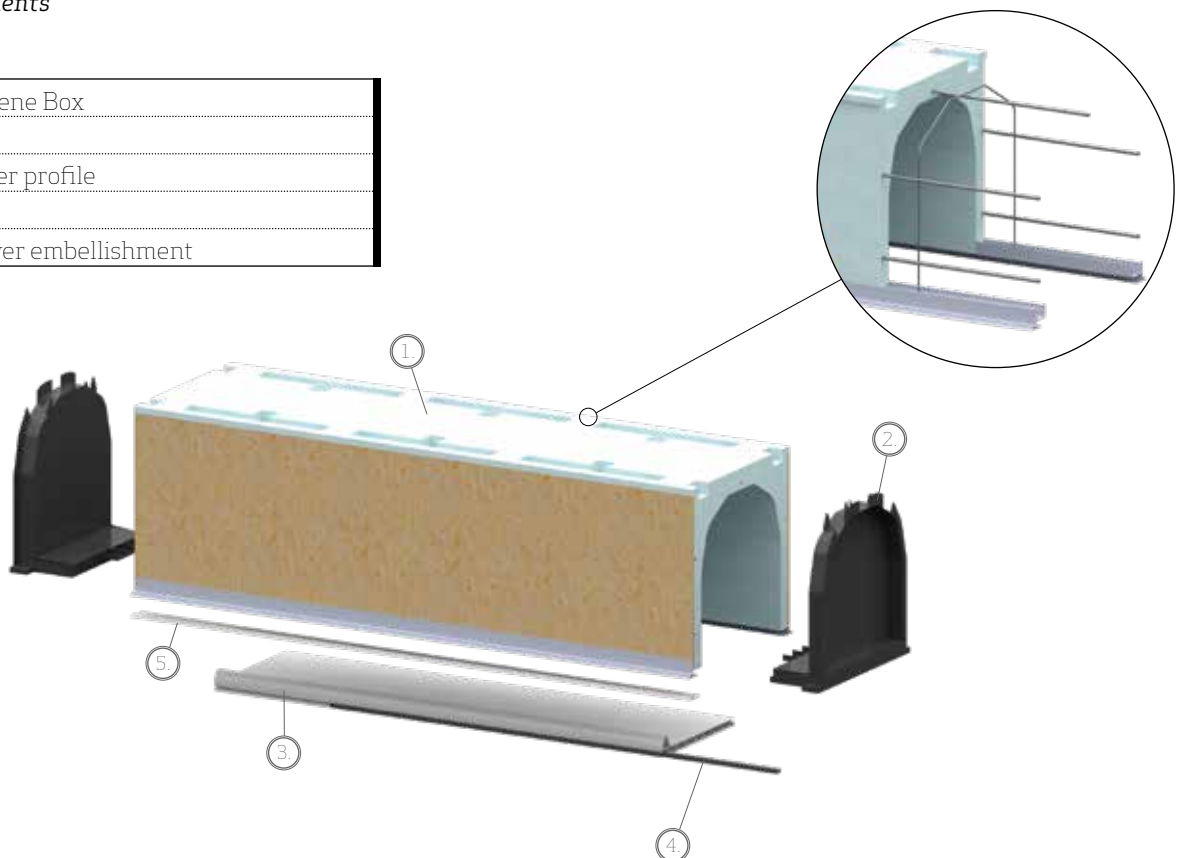


TUNNEL BOX

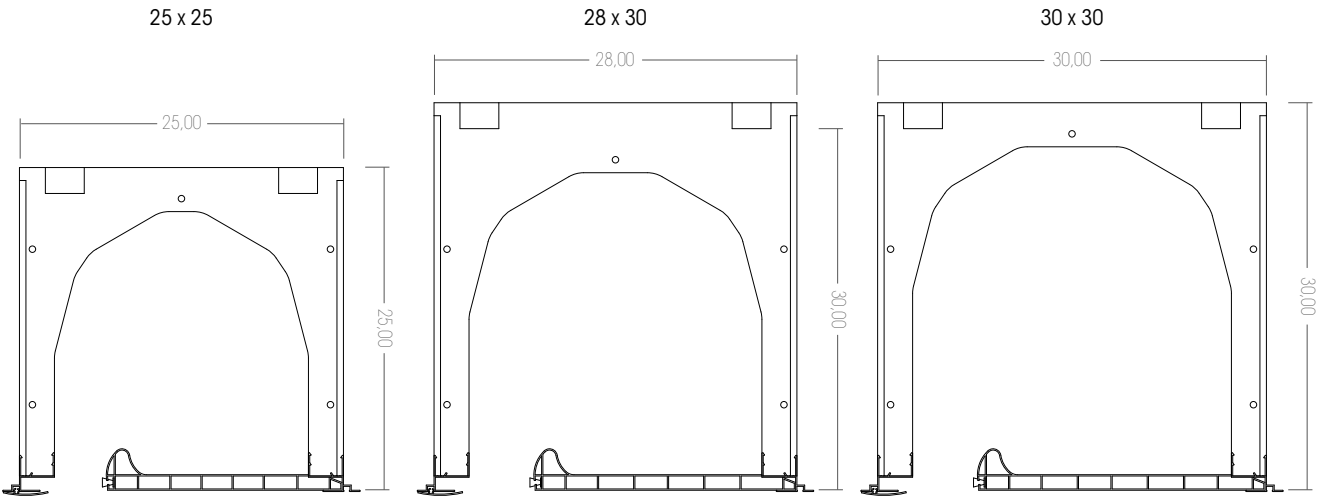
Main components

1.	Polystyrene Box
2.	Lateral
3.	PVC lower profile
4.	Brush
5.	PVC Lower embellishment

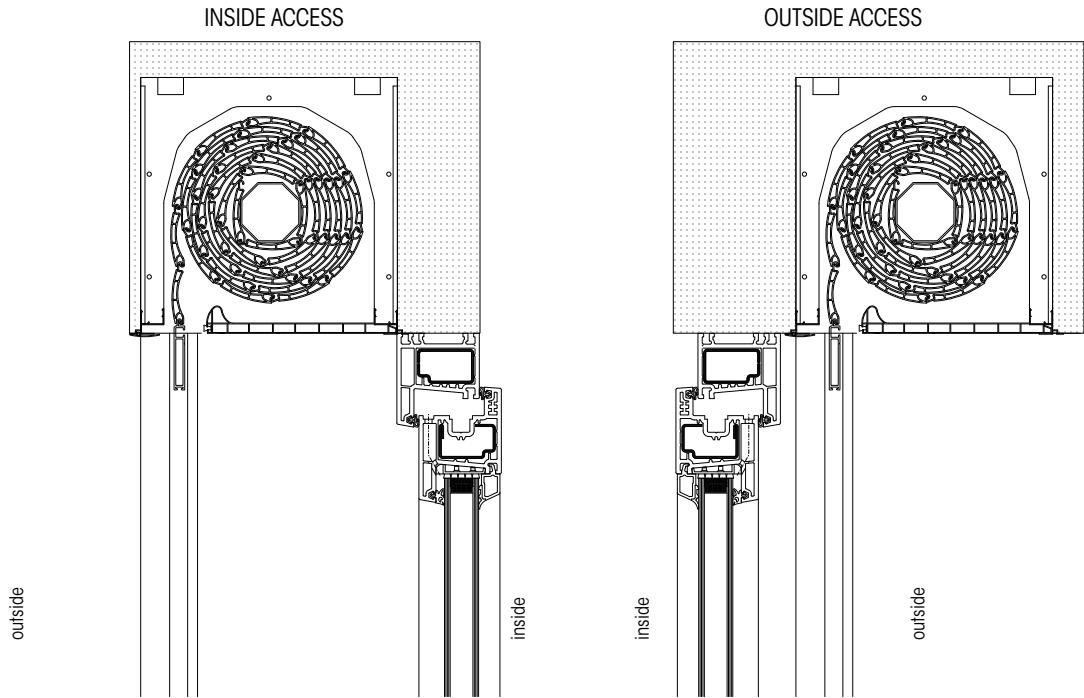
Inner reinforced structure



TUNNEL / TECHNICAL FEATURES



INSTALLATION TYPE



GUIDES - ENTRY GUIDES



H-25

111742	SET ENTRY GUIDES TRADI-TUNNEL L9
--------	----------------------------------



H-40

111742	SET ENTRY GUIDES TRADI-TUNNEL L9
--------	----------------------------------



S-46X22

111702	SET ENTRY GUIDES TRADI SHANK 11
111704	SHANK TRADI LEFT 19
111705	SHANK TRADI RIGHT 19



S-46X26

111703	SET ENTRY GUIDES TRADI ZEDER SLAT 16
111704	SHANK TRADI LEFT 19
111705	SHANK TRADI RIGHT 19

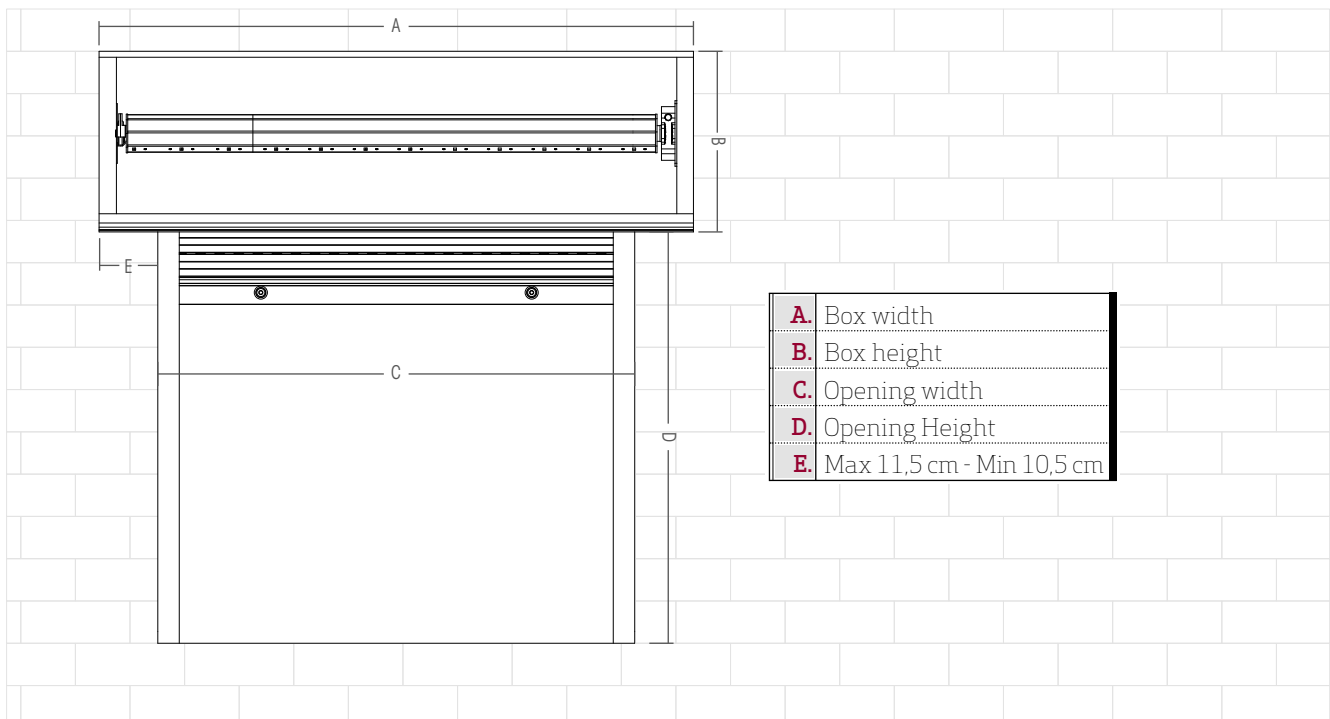
This model doesn't allowed central end cap

		L-37	C-42	L-50	EXPO	ARAGON	BERNA	SEVILLA	PARIS	MÁLAGA
25x25	S60	3,105	2,435	2,545	1,330	1,825	1,345	1,650	1,900	1,990
28x30	S60	3,930	2,945	3,045	1,740	2,190	1,495	1,910	2,225	2,520
30x30	S60	4,745	3,830	4,095	2,340	3,135	1,940	2,480	2,940	3,480

		MICRALUM 39	MINISAX 40	MINICUR 43	TERMISAX 45	TERMILUM 45	TERMICUR 45	TERMICUR 55
25x25	S60	3,450	2,335	3,240	2,095	3,340	2,950	1,685
28x30	S60	4,245	3,265	4,015	2,775	4,375	3,855	2,285
30x30	S60	5,415	3,865	5,425	3,675	5,270	4,620	2,890

		MINISEGUR 40	SEGUR SC-60	BLOCKALUM 39	BLOCKALUM 45	BIOCLIM 45
25x25	S60	2,655	1,690	2,780	2,465	1,590
28x30	S60	3,425	2,100	3,780	3,170	2,600
30x30	S60	4,105	2,520	4,360	3,690	3,080

SIZE GUIDE





ACCESSORIES

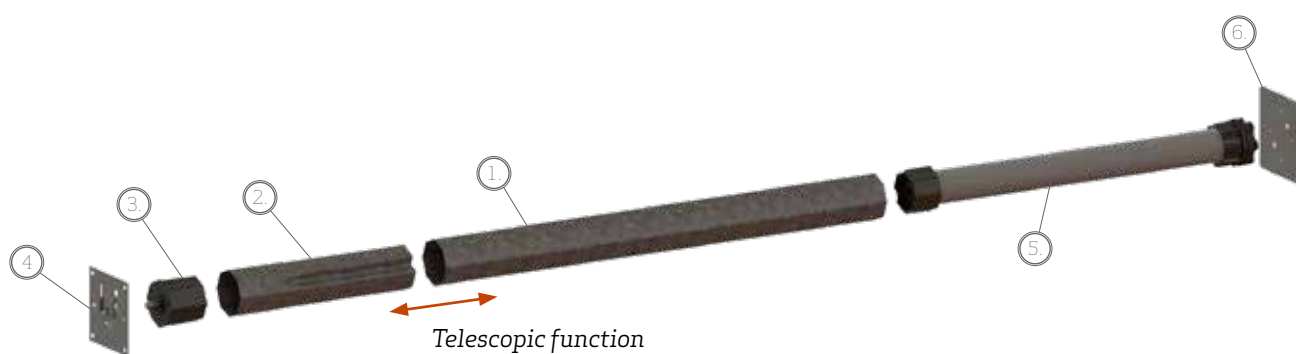
TUNNEL BOX

The tunnel Box is only available for the motor option.

Motor Accessories

1.	60 Shaft
2.	60 Telescopic Shaft
3.	Cap
4.	Ball bearing Plate support
5.	Motor
6.	Motor / gear Plate support

Common Accessories



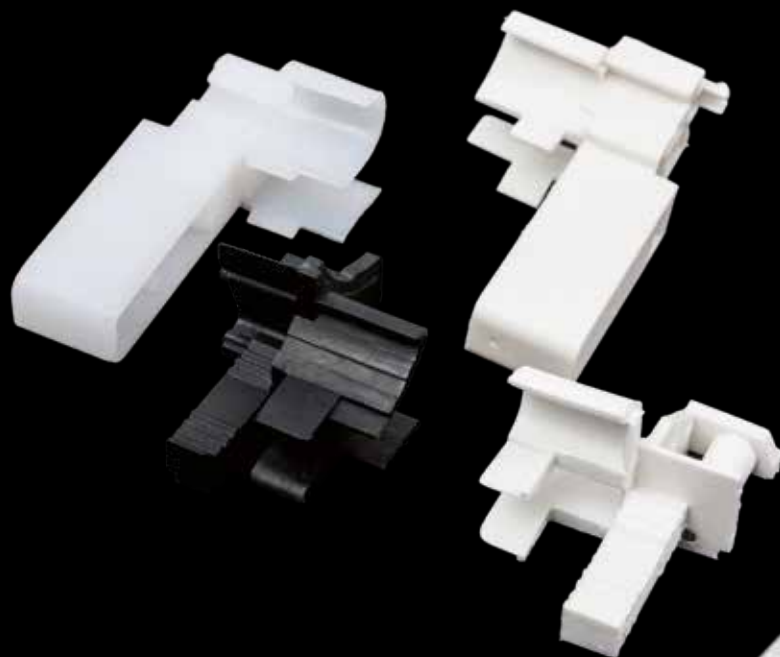
Only compatible with motor

CAPS AND ENTRY GUIDES / ACCESSORIES

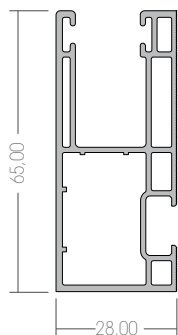
Adaptability to any material and situation

A roller shutter is not complete without the presence of the guides. They provide the shutter with stability and firmness as well as preventing it from sliding off the rails.

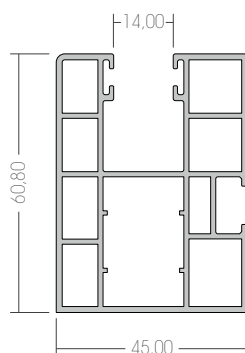
Made both in PVC and extruded aluminium, the guides manufactured by Persax can adapt to any situation.



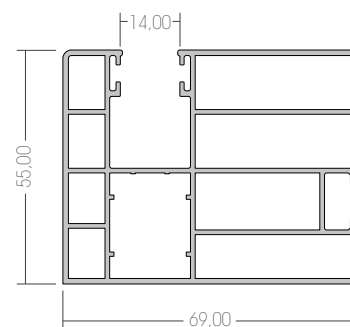
PVC 28x65



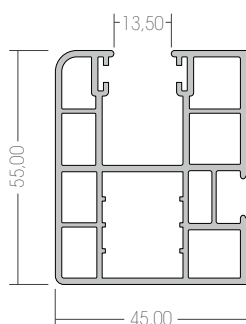
PVC 45x60



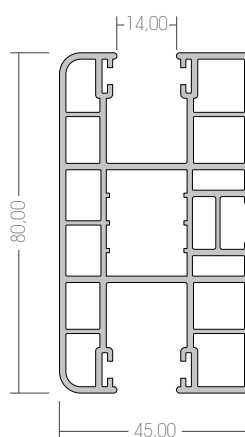
PVC 55x68



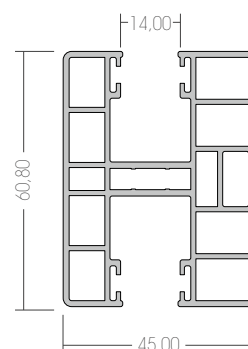
PVC 55x45 PX



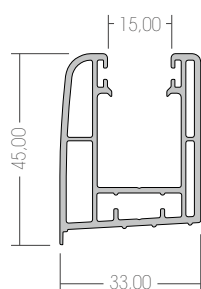
PVC 45 PX Double Compact



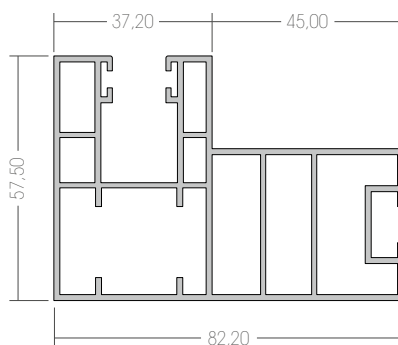
PVC 45x60 Double



PVC 33x45

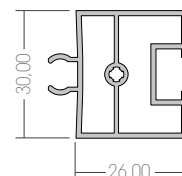


PVC A8

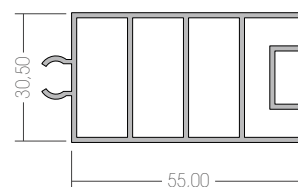


PVC Supplements

30x26*

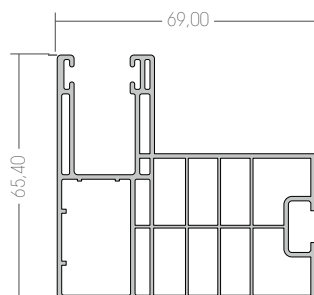


55x30*

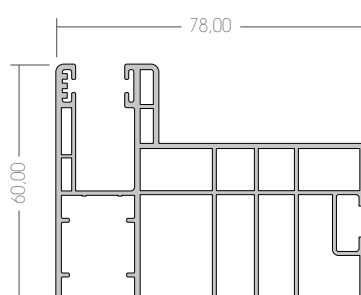


*Not compatible with PVC 30x60 guide

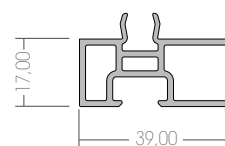
PVC A69



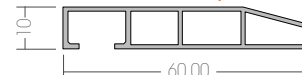
PVC 78x60



39x17



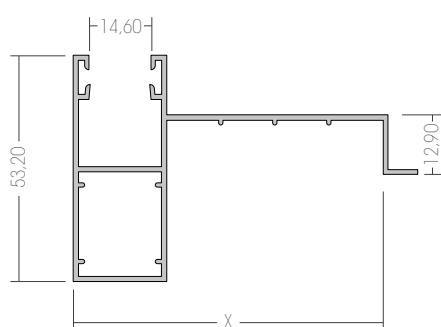
Batten strip



*These illustrations may suffer variations

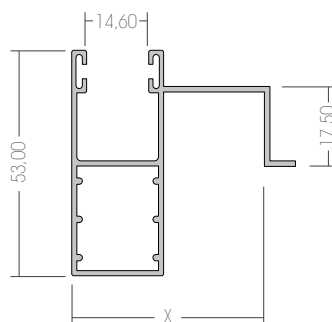
AL E

X: 7, 8, 10 y 12



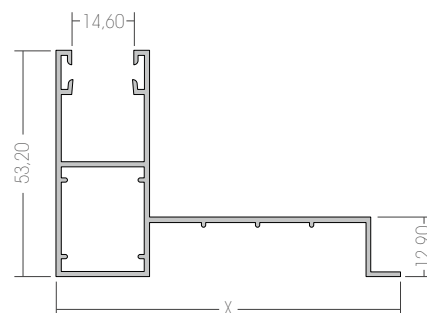
AL E PR

X: 5, 8, 10



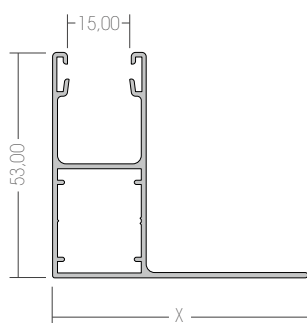
AL S

X: 5, 7, 8, 10, 12



AL HSL-25

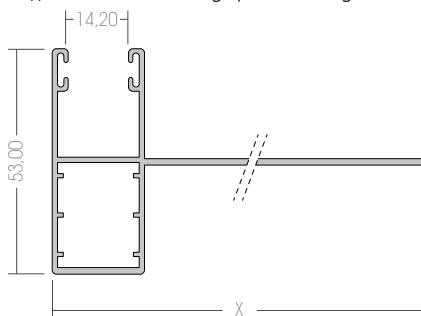
X: 4, 6, 9, 12, 16



AL HSLE-25

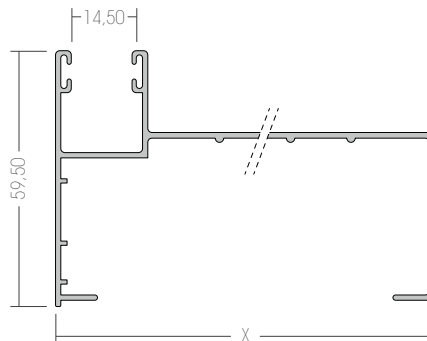
X: 9 y 12

The // means a shortening of the drawing



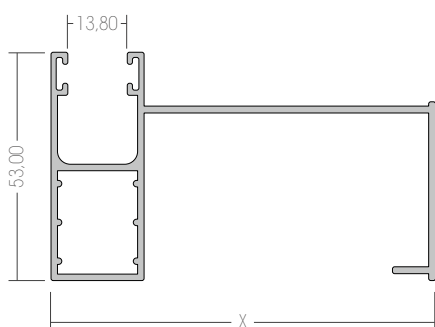
AL HSLA-25 P9,3/10

X: 9,3, 10



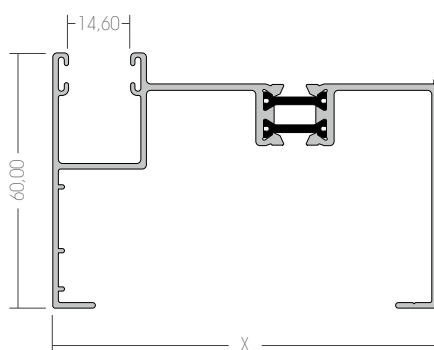
AL HSLA-25

X: 12, 13,5, 15,5, 18



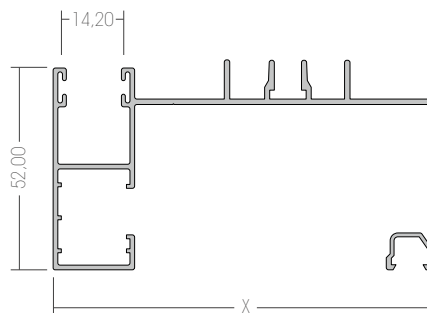
AL HSLA-25 with break

X: 10, 12, 14,5, 15,5, 17,5



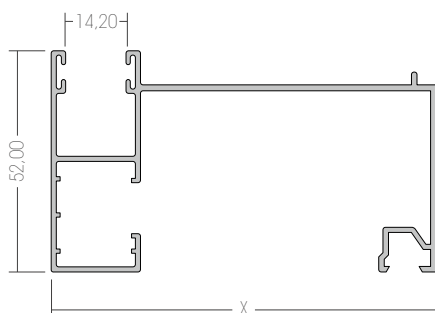
AL Marco Triana

X: 12, 13,5

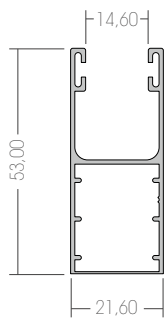


AL Triana

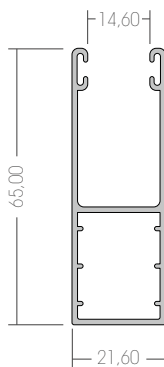
12, 13, 15,5



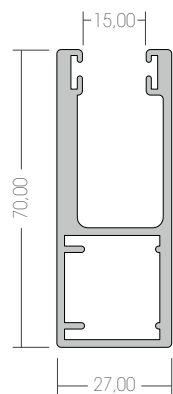
AL H-25



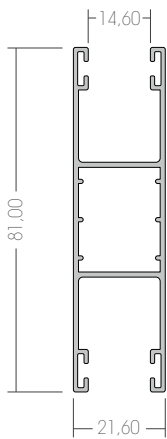
AL H-40



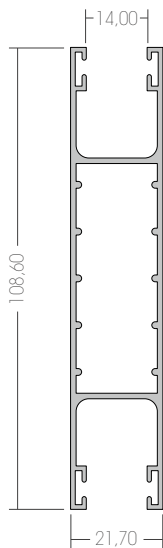
AL HB Security



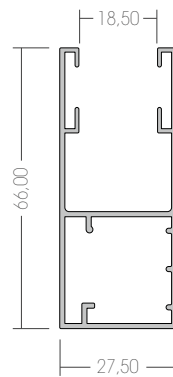
AL 1T DOUBLE



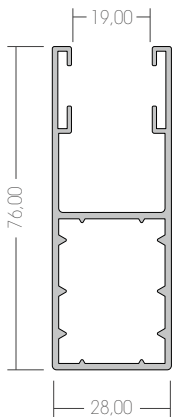
AL 2T DOUBLE



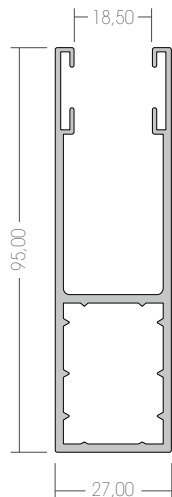
AL HC-66 / GA-66



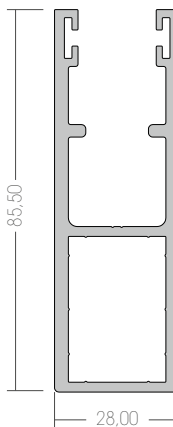
AL H-76 / GA-75



AL GA-95



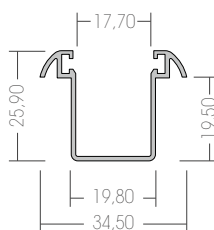
AL EXTREME



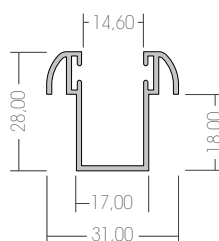
*These illustrations may suffer variations

BUILT- IN ALUMINIUM GUIDES

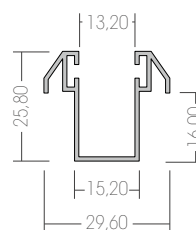
AL EX-A



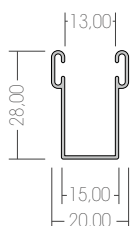
AL EX-B



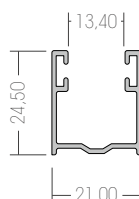
EX-N



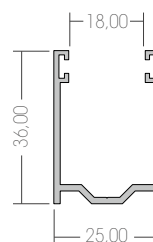
AL HF



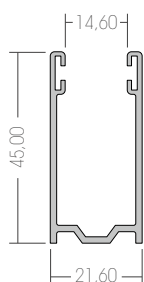
AL S-25



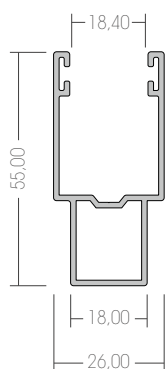
AL S-36



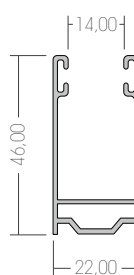
AL S-40



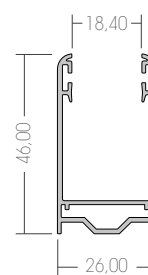
AL SE-55



AL S 46x22

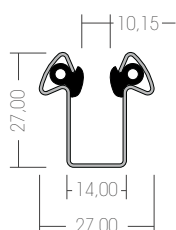


AL S 46x26

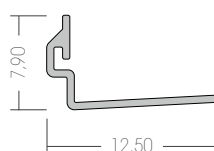


ALUMINIUM PROFILES

AL PF/N

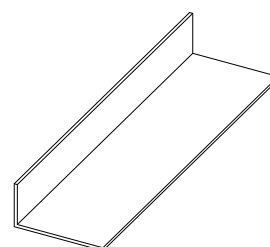


AL Angle PVC Box



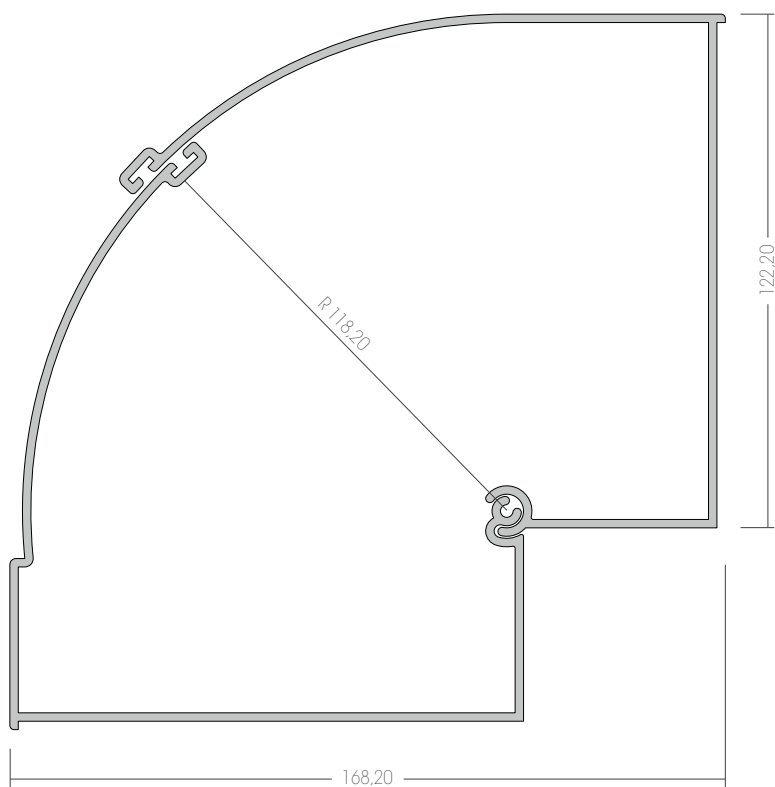
E 1:1

AL Angle 20x40



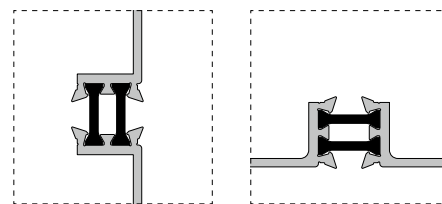
ALUMINIUM PROFILES

Adjustable ALU Corner

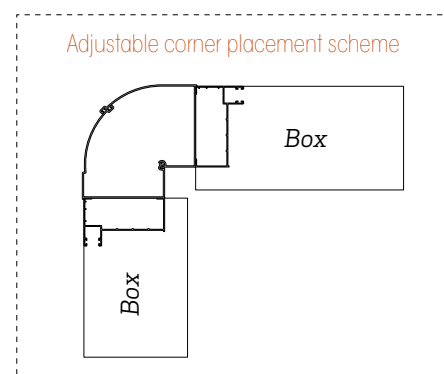


Adj. ALU Corner with Break

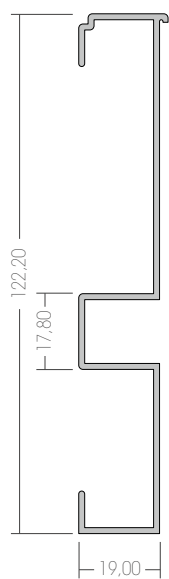
Available in the thermal bridge break version



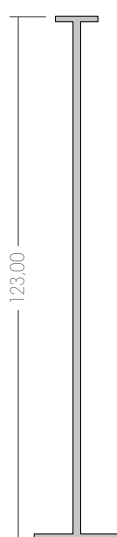
Adjustable corner placement scheme



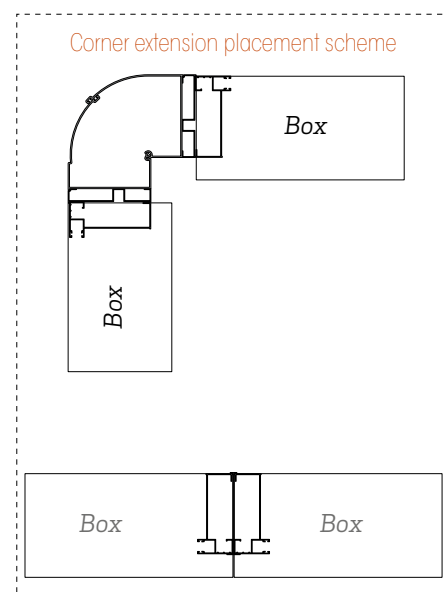
AL Corner Extension



AL Joint profile



Corner extension placement scheme



*These illustrations may suffer variations

CORRESPONDENCE SLATS-GUIDES

PVC Guides

		SLATS / GUIDES	28x50x65	45x60	55x68	55x45 PX	78x60	Doble 45x60	Double Comp. 45	A-69	Comp. A-8	33x45
FOAM FILLED AL		Micralum 39	•	•	•	•	•	•	•	•	•	•
		Minicur 43	•	•	•	•	•	•	•	•	•	•
		Termulim 45	•	•	•	•	•	•	•	•	•	•
		Minisax 40	•	•	•	•	•	•	•	•	•	•
		Termisax 45	•	•	•	•	•	•	•	•	•	•
		Termicur 45	•	•	•	•	•	•	•	•	•	•
		Termicur 55										
EXTRUDED AL		Minisegur 40	•	•	•	•	•	•	•	•	•	•
		Segur EC-60										
		Blockalum 39	•	•	•	•	•	•	•	•	•	•
		Blockalum 45	•	•	•	•	•	•	•	•	•	•
		VS150 Block-60										
PVC		Bioclim 45	•	•	•	•	•	•	•	•	•	•
		L-37	•	•	•	•	•	•	•	•	•	•
		L-50	•	•	•	•	•	•	•	•	•	•
		C-42	•	•	•	•	•	•	•	•	•	•









































Aluminium Guides

		SLATS / GUIDES	Double 1T	Double 2T	E	E-PR	H-25	H-40	HSLA-25 Break	HSLA-25	HSLE-25	HSL-25	Marco Triana	Triana	S	Security HB	Extreme
FOAM FILLED AL		Micralum 39	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		Minicur 43	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		Termulim 45	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		Minisax 40	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		Termisax 45	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		Termicur 45	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		Termicur 55															
EXTRUDED AL		Minisegur 40	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		Segur EC-60															•
		Blockalum 39	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		Blockalum 45	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		VS150 Block-60															•
PVC		Bioclim 45	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		L-37	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		L-50	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
		C-42	•	•	•	•	•	•	•	•	•	•	•	•	•	•	

Built-in Aluminium Guides

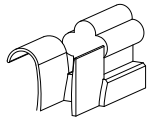
		SLATS / GUIDES	EX-A	EX-B	EX-N	HF	S-25	S-36	S-46x22	S-46x26	S-40	SE-55	PF-N
FOAM FILLED AL		Micralum 39		•	•	•	•		•		•		•
		Minicur 43		•	•	•	•		•		•		•
		Termulim 45		•	•	•	•		•		•		•
		Minisax 40		•	•	•	•		•		•		•
		Termisax 45		•	•	•	•		•		•		•
		Termicur 45		•	•	•	•		•		•		•
		Termicur 55	•					•		•		•	
EXTRUDED AL		Minisegur 40		•	•	•	•		•		•		•
		Segur EC-60	•					•		•		•	
		Blockalum 39		•					•		•		
		Blockalum 45		•					•		•		
		VS150 Block-60								•			
PVC		Bioclim 45		•					•		•		
		L-37		•	•	•	•		•		•		•
		L-50		•	•	•	•		•		•		•
		C-42		•	•	•	•		•		•		•

CORRESPONDENCE GUIDE - BRUSH - RUBBER

		FOAM FILLED ALUMINIUM			EXTRUDED ALUMINIUM				PVC
GUIDES / SLATS		Micalum 39 Minicur 43 Termulim 45	Minisax 40 Termisax 45 Termicur 45	Termicur 55	Minisegur 40	Segur EC-60	Blockalum 39 Blockalum 45 Bioclim 45	VS-150 Block-60	L-37 L-50 C-42
PVC GUIDES	28X65 45X60 55X68 55X45 PX 78X60 DOBLE 45X60 DOBLE 45 PX A-69 A-8	 311047			 311047		 311065		 311047
	33X45	 311026			 311026				 311026
ALUMINIUM GUIDES	DOBLE 1T DOBLE 2T E E PR H-25 H-40 HSLA-25 C/ROT HSLA-25 HSLE-25 HSL-25 MAR. TRIANA TRIANA S SIN ALETA SEGUR. HB	 311047			 311047		 311065		 311047
	EXTREME					 311065 311029		 311065 311029	
BUILT-IN ALUMINIUM GUIDES	EX-A			 311026		 311026			
	EX-B	 311047			 311047		 311065		 311047
	EX-N HF S-25	 311047			 311047				 311047
	S-36			 311032		 311032			
	S-46X22	 311047			 311047		 311065		 311047
	S-46X26	 311047		 311047	 311047	 311047		 311065	
	S-40	 311047			 311047		 311065		 311047
	SE-55	 311047		 311047		 311047			
	PF/N								

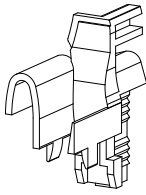
ENTRY GUIDES

The entry guide connects the box to the carpentry and ensures complete homogeneity and integration of the whole system.



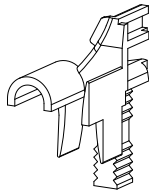
111125

**PRM-UNIV W/FLUSH
BOX FRANC**



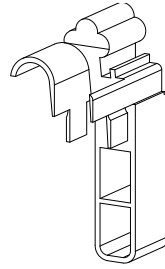
111166

**STD G/HSLA P-10
/ P-9.3**



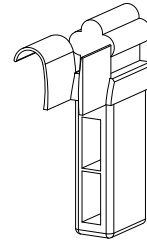
111170

**ALUMINIUM
BOX**



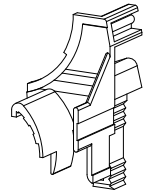
111171

**PRM-UNIV
WITH FLUSH**



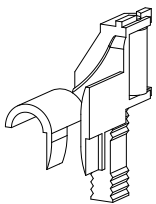
111172

**PRM-UNIV
WITHOUT FLUSH**



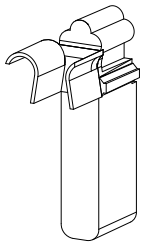
111176

**STANDARD
WITH FLUSH**



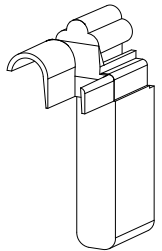
111550

**ALU BOX
WITH ROLLER**



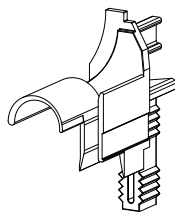
111563

**PRM-UNIV WITH
FLUSH 45X60**



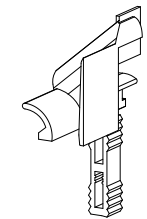
111564

**PRM-UNIV WITH
FLUSH 30X60**



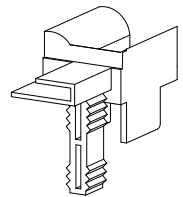
111642

**PBX P11
WITH FLUSH**



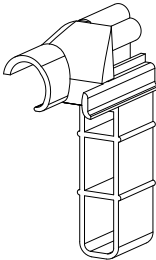
111116

**CURVED
ALU BOX**



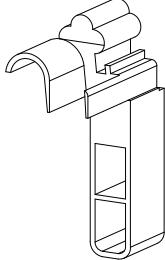
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**COMPACT AL
55 SLAT**



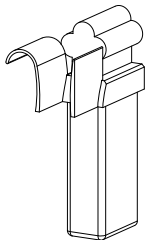
111806

**PRM-UNIV WITH
FLUSH A-70**



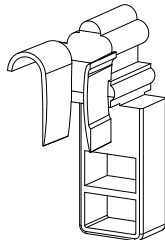
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**PRM-UNIV WITH
FLUSH 78X60**



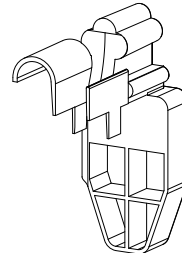
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**PRM-UNIV AURO-
PLAS**



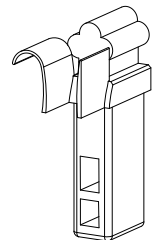
111173

**PRM-UNIV DECEU-
NINK**



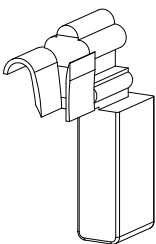
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KOMERLING



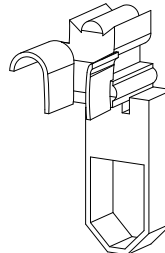
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PRM-UNIV REHAU



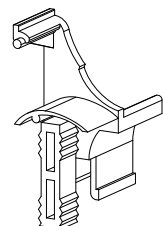
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PRM-UNIV GEALAN



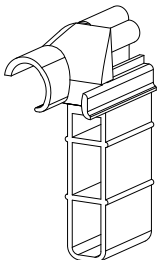
111584

**CURVED STD WT
FLUSH DECEUNINK**



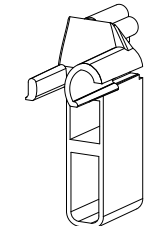
111503

**STD CUR WITHOUT
FLUSH G. 55X45**



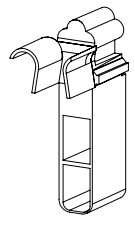
111147

**PRM-UNIV
VEKA 108x117**



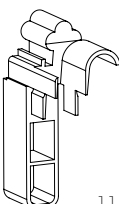
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**PRM-UNIV
PX CORTIZO**



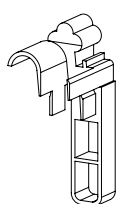
111828

**PRM-UNI
VEKA**



111869

1T PRM W/ FLUSH









































111868

1T PRM WITHOUT F

ENTRY GUIDES

CORRESPONDENCE ENTRY GUIDES - GUIDES

		ENERGY / STANDARD FLUSH			ENERGY / STANDARD STRAIGHT			2P / 4P ALUMINIUM	POLIBOX
GUIDES / BOXES		PREMIUM	UNIVERSAL	ALUMINIUM	PREMIUM	UNIVERSAL	ALUMINIUM	ALUMINIUM	ALUMINIUM
PVC GUIDES	28X65	 111564	 111564	 111166				 111166	
	45X60				 111563	 111563			
	55X68				 111172	 111172			
	55X45 PX			 111503	 111172	 111172			
	78X60	 111802	 111802	 111176					
	DOBLE 45X60								
	DOBLE 45 PX				 111869	 111869			
	A-69	 111171	 111171	 111176					
	A-8				 111172	 111172			
	33X45								
ALUMINIUM GUIDES	DOUBLE 1T	 111868	 111868						
	DOUBLE 2T E E PR H-25 H-40 HSLA-25 W/BREAK HSLA-25	 111171	 111171	 111176				 111170	 111642
	HSLA-25 P. DE 10/9,3	 111564	 111564	 111166				 111166	 111166
	HSLE-25 HSL-25 MARCO TRIANA TRIANA S SIN ALETA SECURITY HB	 111171	 111171	 111176				 111170	 111642
	EXTREME								

MOTORIZATION / ACCESSORIES

User-friendly and maximum efficiency for the whole sutter

The motorization is essential to achieve maximum levels of efficiency, since, on the one hand, the installation of the motor inside the box prevents the presence of holes or slots that may result in air leaks. On the other hand, and more importantly, it allows an efficient control of the elements that help protect our house against sunlight.

For example, in winter, lowering the closing systems at dusk to prevent heat losses through the windows and raising them during the day to take advantage of sun heat, and doing the opposite in summer can help us save up to 10% of heating costs in winter and a 9°C reduction of temperature at home in summer.

Automatically motorized window covering prevents mistakes and slips, giving full protection against any weather conditions.

In addition to energy saving, window motorization brings other important advantages:

Increase in security levels, since it increases resistance to lifting attempts from the outside by 20 (if combined with security springs).

It also allows an illusion of human presence, making prospective intruders believe that the house is indeed inhabited during the holidays. It also allows all the entry points of the house to be locked with a simple click.



MECHANICAL MOTORS

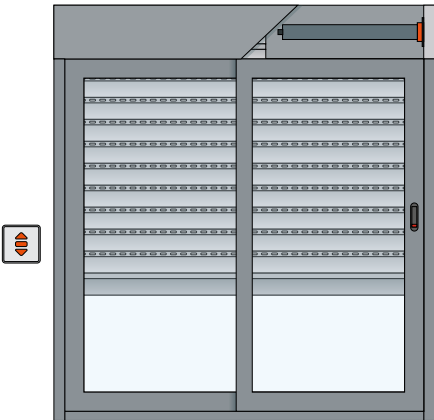
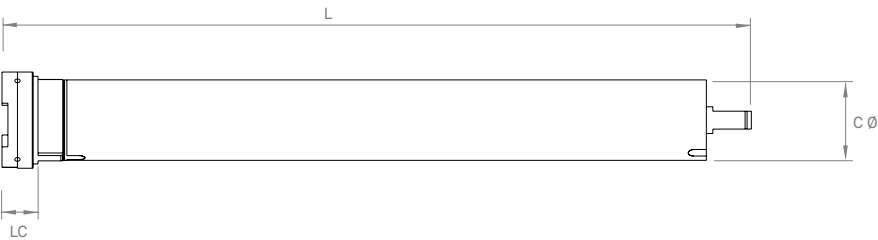


This is the first step in our offer of motors. Activation is made with a push button.



		Technical Data							
Mechanical motors		ID	Nm	Speed (rpm)	Max turns	L (mm)	LC (mm)	C (Ø)	Suitable Shaft (mm)
PERSAX SPX W	SERIE 35	124708	10	17	30	472	16,3	Ø 35	Ø 40
	SERIE 45	1241010	10	15	22	475	17,5	Ø 45	Ø 60
		1241011	20	15	22	485	17,5	Ø 45	Ø 60
		1241012	30	15	22	512	17,5	Ø 45	Ø 60
		1241013	50	12	22	523	17,5	Ø 45	Ø 60

Dimensions



MECHANICAL MOTORS WITH MANUAL ASSISTANCE

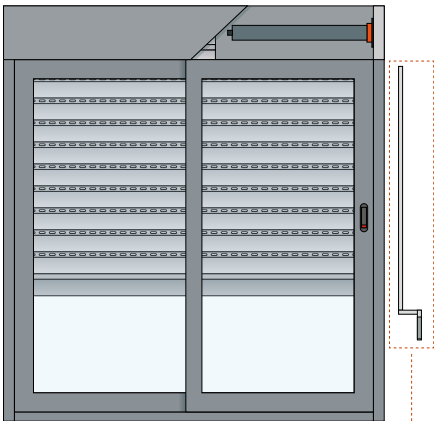
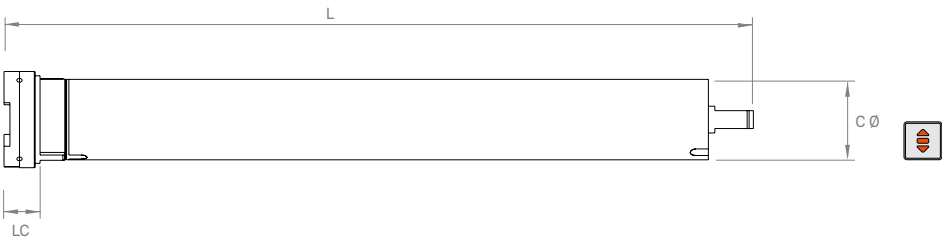


When there is a lack of electric power supply it allows the roller shutter to be manually raised.



		Technical Data							
MECHANICAL MOTORS WITH MANUAL ASSISTANCE		ID	Nm	Speed (Rpm)	Max turns	L (mm)	LC (mm)	C (Ø)	Suitable Shaft (mm)
PERSAX SPX MANUAL	SERIE 45	124256	20	15	22	607	22	Ø 45	Ø 60
		124937	30	15	22	607	22	Ø 45	Ø 60
		124257	50	12	19	544	19	Ø 45	Ø 60
	SERIE 59	1241107	80	15	22	650	29	Ø 59	Ø 70
		1241108	100	12	22	650	29	Ø 59	Ø 70
		1241109	120	9	22	650	29	Ø 59	Ø 70

Dimensions



The **Hand Crank** is only used in case of lack of electric power supply

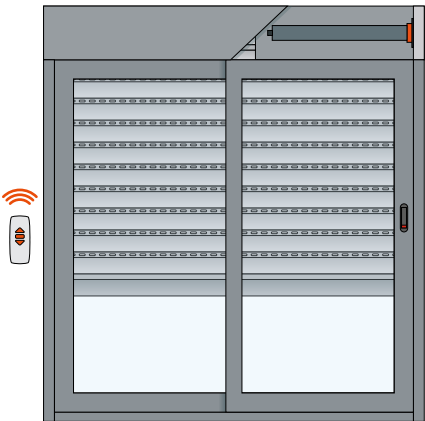
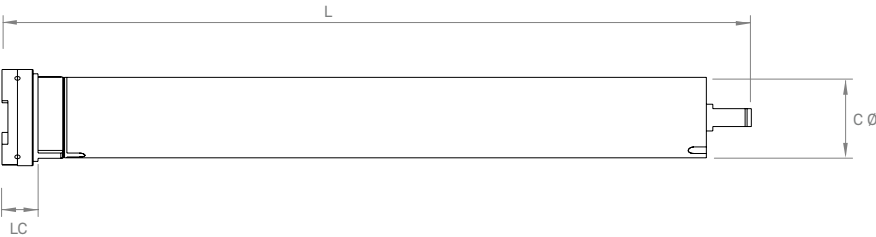
RADIO MOTOR

The operation consists of a wireless radio control that can be activated from different points in the room, offering great flexibility.



Technical Data								
Radio Motors	ID.	Nm	Speed (Rpm)	Max turns	L (mm)	LC (mm)	C (Ø)	Suitable Shaft (mm)
PERSAX SPX RADIO	124081	10	15	--	617	22	Ø 45	Ø 60
	124803	20	15	--	617	22	Ø 45	Ø 60
	124879	30	15	--	667	22	Ø 45	Ø 60
	124082	50	12	--	667	22	Ø 45	Ø 60

Dimensions



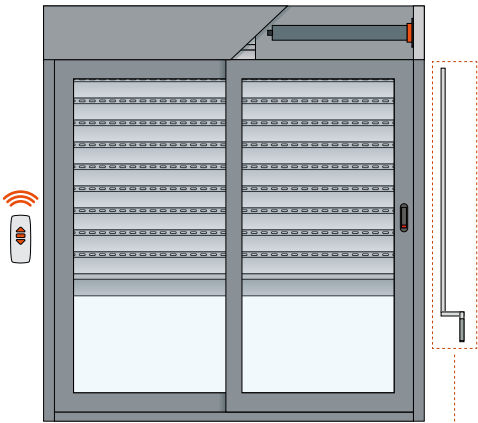
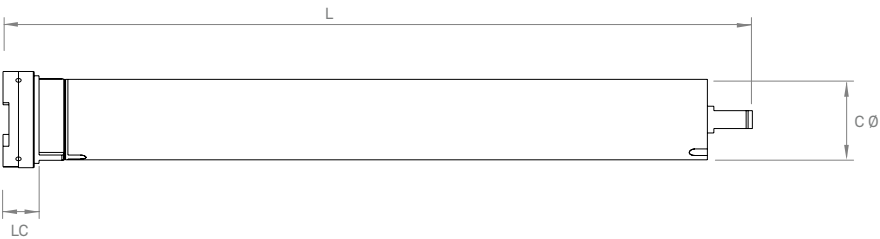
RADIO MOTOR WITH MANUAL ASSISTANCE

It is the most complete motor, adding the possibility of being manually activated in case of a lack of electric power supply to the flexibility of radio motor.



Technical Data								
Moteurs radio	ID.	Nm	Speed (Rpm)	Max turns	L (mm)	LC (mm)	C (Ø)	Suitable Shaft (mm)
PERSAX SPX RADIO MANUAL	124938	30	15	15	777	22	Ø 45	Ø 60
	124083	50	12	12	777	22	Ø 45	Ø 60

Dimensions



The **Hand Crank** is only used in case of lack of electric power supply

ACCESSORIES

SWITCHES



PUSHER



VIMAR SWITCH



VIMAR SWITCH

SPX REMOTES



SPX 1C Remote



SPX 5C Remote



15C Remote

SPX WALL-MOUNTED REMOTES



SPX DC 229 1C



SPX DC 448 5 0P

RECEIVERS



SPX Receiver

ADAPTATION RINGS AND DRIVE WHEELS



ø40



ø60



ø70 (Serie 45)



ø70 (Serie 59)



Adapt. ø100 (Serie 59)

SPX SUPPORT



SPX Motor support
(Radio and mechanical)



SPX Motor support
(mechanical and radio with
manual assistance)

CRANK



GLOSSARY

TESTS

RESISTANCE TO WIND PRESSURE

Its objective is the classification of roller shutter boxes depending on the resistance to wind charges.

$$\text{Wind Force (N/m}^2\text{)} = 1/2 \times r \times V^2$$

r = air density = 1,225 Kg/m³
 V = air speed in m/s

WIND VELOCITY TABLE

Type of wind	Wind Speed (Km/h)	Wind Force (N/m)
0,0 - 0,4	0 - 1,44	0,098
0,4 - 1,8	1,44 - 6,48	0,098 - 1,985
1,8 - 3,6	6,48 - 12,96	1,985 - 7,938
3,6 - 5,8	12,96 - 20,88	7,938 - 20,60
5,8 - 8,5	20,88 - 30,60	20,60 - 44,25
8,5 - 11	30,60 - 39,60	44,25 - 74,11
11 - 14	39,60 - 50,40	74,11 - 120,10
14 - 17	50,40 - 61,20	120,10 - 177,00
17 - 21	61,20 - 75,60	177,00 - 270,10
21 - 25	75,60 - 90,00	270,10 - 382,80
25 - 29	90,00 - 104,40	382,80 - 515,10
29 - 34	104,40 - 122,40	515,10 - 708,10
> 34	> 122,40	> 708,10

UNE EN 13659:2004 + A1:2008 ROLLER SHUTTER. PERFORMANCE REQUIREMENTS INCLUDING SAFETY

Class	0	1	2	3	4	5	6
Nominal Pressure P (N/m ²) ⁽¹⁾	<50	50	70	100	170	270	400
Nominal Pressure 1.5P (N/m ²) ⁽²⁾	<75	75	100	150	250	400	600
Wind Speed (Km/h) ⁽³⁾	-	39	45	56	72	91	112

(1) **After nominal pressure (suction and pressure)** the roller shutter should work properly. if it is manually operated, the manual operating force should be within the same class as the initial operating force. The roller shutter surface, the fixing and blocking devices as well as the guides should show no visible distortion or damage.

(2) **After security pressure (suction and pressure)**, it is not necessary for the roller shutter to work properly, distortions in guides and slats are accepted but not breaking and the slats cannot get out of the guides or blocking devices.

(3) **Approximate**

UNE EN 13241-1:2004 INDUSTRIAL, COMMERCIAL DOORS, PARKING AND BIG DOORS

Class	1	2	3	4
Charge Essay (N/m ²) ⁽¹⁾	330	495	770	1100
Break Limit Charge (N/m ²) ⁽²⁾	>415	>620	>965	>1375
Wind Speed (Km/h) (Km/h)	93	114	146	184

(1) **Test load.** Load applied when tested without permanent deformation.

(2) **Breaking load limit.** Load applied when tested with permanent deformation

ACOUSTIC INSULATION

The levels of airborne Sound Insulation measure the relationship between the power of the sound force on a test surface or material and the total acoustic power transmitted through such material.

Acoustic mitigation is the sound difference between two spaces divided by a box. It is expressed in Decibels (dB) and the higher the Rw is, the better the box.

Acoustic mitigation is the sound difference between two spaces divided by a box. It is expressed in pondered decibels (dBA) and the higher the RA is, the better the box



Ra (acoustic reduction level)



Rw (acoustic dumping level)

PERMEABILITY TO AIR

It classifies the box depending on the volume of air that flows through the material in closed position due to a differential of pressure.

The higher the value, the better the result obtained.

HEAT TRANSFER COEFFICIENT

The thermal transmittance (known as U-value), is the rate of transfer of heat (in watts) through a box in function of time, area and the difference of temperature. It is expressed in watts per square metre Kelvin, or W/m²K. The lower the thermal transmittance, the higher thermal insulation.





SEALING TO WATER

It classifies the boxes in function of the amount of time they remain hermetic as the wind force gradually increases and it is continuously sprayed out with water. The permeability is higher as the coefficient increases.

TERMINOLOGY

ROLLER SHUTTER BOX

It is an element mounted on top of the window frame which discreetly stores the cloth or surface of a roller shutter.

MAIN PROFILES

Lower Profile: It is a box profile placed on top of the window frame.

Front Profile: It is the profile inside the room, it allows easy inspection of the inside.

Upper Profile: It joins the inside and outside profiles together.

Back Profile: It remains subject to elements.

SLATS

It is a profile that is joined together with similar ones to form the surface of the roller shutter

SHUTTER SURFACE

Group of slats joined together.

GUIDES

Profile where slides the shutter.

ACCESSORIES

Plastic and/or metallic pieces necessary to the right assembly of the box and good working of the roller shutter.

END CAP OR LATERAL

It is a piece that assembles and closes the box on its sides.

PULLEY

It is a pulley the strap or wire rope rolls up when raising the shutter and unrolls when going down.

STRAP - ROPE - WIRE ROPE

Elements that allow activating the roller shutter.

COILER

Is a mechanism consisting of a shaft, a spring and a case where the strap or wire is rolled or unrolled.

ROPE WINCH

It is a device that makes use of a hand crank to raise the roller shutter by means of a strap or rope.

MOTOR

Electric device that makes use of a switch or remote control to activate the roller shutter.

GEAR

It is a gear mechanism that allows the activation of the roller shutter by means of a ball joint and a crank

SHAFT

Rounded or octagonal metallic profile placed between end caps, in which the first slat is fixed and the shutter rolled around it.

CAP

Piece placed at the end of the shaft used to connect it to the end cap.

BALL BEARING

Piece allowing the shaft to turn properly.

STRAP GUIDE

Piece used to guide the rope or strap.

HAND CRANK

Element which allow activating the gear.

JOINT

A device that transmits the movement from the "crank" to the "gear".

PLATE SUPPORT

Is a piece that prevents lateral movement of slates inside the box.

SECURITY SPRING

Is a piece used to hook the shutter to the shaft.

LATERAL CAP

Embellishment cap on the outside part of the end caps used to hide the screws.

For further information on our products please contact us at www.persax.com, call +34 965 817 520 or through your sales representative.

The illustrations on this catalogue may suffer variations with respect to the products offered. All Persax products are provided with a technical card that can be requested from our technical department.

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