anwis

Part of WAREMA GROUP

External Venetian Blind Systems

C-65 | C-80 | S-70 | Z-90

catalogue of system solutions

the model of the window on this page: System Brügmann bluEvolution: 82 AD

Contents

External venetian blind system components

Masking cover

Made of 1,5 or 2 mm thick aluminium, covered with weatherproof varnish. The max length of the cover (without joining) is 4000 mm. When wall-mounted, its sides can be covered with side covers.

Product specification

Material: aluminium

Ladder and cloth tape

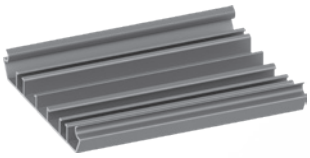
A 6 or 8 mm wide strap made of special fabrics which are durable, wearproof and colourfast.

Polyester ladder with spacing adjusted to the width of the slat.

Weatherproof ladder and cloth tape are available in grey and black.

Product specification

Material: polyester fibres

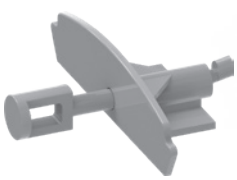


Bottom rail

Extruded aluminium profile – slat-adjusted width, powder-coated with high-quality, weatherproof varnish. Comes with end-caps made of plastic.

Product specification

Material: aluminium



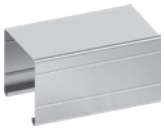
Bottom rail end cap

Made of plastic, bottom rail side end cap is available in black and grey. Fitted with a pin which guides bottom rail.

Product specification

Material: plastic

Head rail



58 x 56 mm cold-rolled, U-shaped profile, made of 0,6 or 0,75 thick hot-dip galvanized steel sheet. Open bottom head rail is especially convenient for mounting the blind and its service.

Product specification

Material: zinc-plated

Mounting set

A set for mounting the blind: blind bracket (2 types) and rail bracket (3 types).

Product specification

Material: zinc-plated

Control

2 types of control:

- manually-operated (crank) – raising and lowering the blind a well as adjusting the slat angle.

- automatic control with a motor (voltage – 230V / 50Hz; 90 – 210 W motor power).

Slats

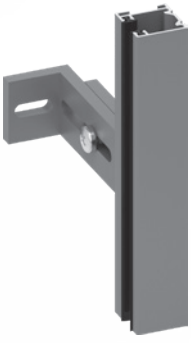
Horizontal aluminium slat (rolled):
- approx. 0,4 mm thick,
- 65, 70, 80, 90 mm wide.

Aluminium tape covered with high-quality, weatherproof varnish. Available in a wide range of colours within Anwis colour range.

Product specification

Material: aluminium

Side guide



2 types of side guide available:
- cable guide with side wires (stainless steel wires covered with protective layer of plastic)
- with guide channels (guide channels made of extruded aluminium, covered with high-quality varnish)

Product specification

Material: aluminium

Functionality and modern design

Elegant and modern external venetian blinds are mounted on outside surfaces of buildings. Their light and simple structure will add the perfect finishing touch to the look of any modern architectural object, especially one with large glass surfaces.

Anwis external venetian blinds protect the interior of the building against excessive sunlight as well as greatly enhance its look. Mounted on large glass surfaces, they act as an insulator controlling air temperature inside the building, supporting the air-conditioning system without overloading it. The air between the glass surface and the slats forms a thermal barrier which slows down the exchange of heat. As a result, at 35°C outside, the temperature in the building can be lowered by about 10 degrees.

The slats may be raised, lowered or tilted, which allows control over the amount of light and heat entering the room. The height of the packet of raised slats depends on the type of blind and its height. The size of the packet is an important factor for the architect who in order to accommodate the packet needs to design a suitable space over the window.

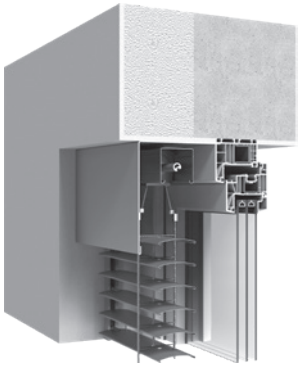
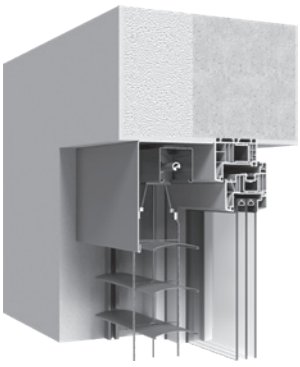
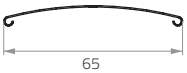
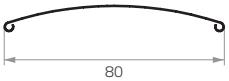
The upper part of the blind is often hidden behind the facade or mounted under the cover box – so called blend. The colour of the side cover can be matched with the cover box (in accordance with the RAL colour chart).

The wide colour range on offer makes it easy to match the blinds with both modern and old buildings.

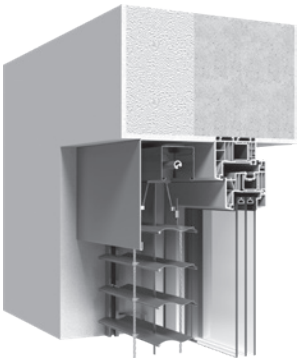
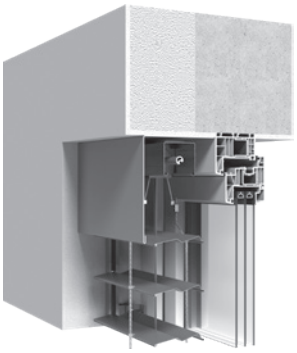
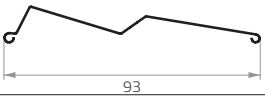
Characteristic Features of external venetian blinds

- effective protection against sunlight and noise
- smooth adjustment of the amount of light entering the room.
- exceptional durability and weather resistance
- wide range of design solutions
- wide variety of colours
- highly decorative element of the facade
- light and simple aluminium structure which does not overload the structure of the building
- smooth operation – manual or automatic
- automatic control of the blind using weather sensors

System specification

		C-65	C-80
			
	SLAT WIDTH		
MAX.DIMENSIONS OF THE BLIND	WIDTH	wire: 3500 mm guide channel: 4300 mm	wire/guide channel: 4000 mm self-supporting system: 2800 mm
	HEIGHT	5000 mm	5000 mm
	SURFACE	16 m^2	wire/guide channel: 16 m^2 self-supporting system: 5-8 m^2
SLAT TYPE	FOLDED EDGES	✓	✓
	FLAT		
SIDE GUIDE	CABLE GUIDE SYSTEM	✓	✓ (no supporting system)
	GUIDE CHANNEL	✓	✓
	ANTI-WIND WIRE ADDED	✓	✓
OPERATION	MANUAL (CRANK MECHANISM)	✓	✓
	MOTORISED (ELECTRIC MOTOR)	✓	✓
SLAT ROTATION	90°	✓	✓
	180°	✓	✓
TYPE OF PIN	PVC	✓	✓
	ALU	✓	✓
POSITIONING OF PINS	EVERY OTHER SLAT	✓	✓
	EVERY THIRD SLAT		
	MIN. DEPTH OF RECESS	120 mm	120 mm

System specification

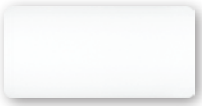
		S-70	Z-90
			
	SLAT WIDTH	 70,4	 93
MAX.DIMENSIONS OF THE BLIND	WIDTH	guide channel: 4500 mm	4500 mm
	HEIGHT	5000 mm	5000 mm
	SURFACE	16 m²	16 m²
SLAT TYPE	FOLDED EDGES	✓	✓
	FLAT		
SIDE GUIDE	CABLE GUIDE SYSTEM		
	GUIDE CHANNEL	✓	✓
	ANTI-WIND WIRE ADDED		
OPERATION	MANUAL (CRANK MECHANISM)	✓	✓
	MOTORISED (ELECTRIC MOTOR)	✓	✓
SLAT ROTATION	90°	✓	✓
	180°		
TYPE OF PIN	PVC		✓
	ALU	✓	✓
POSITIONING OF PINS	EVERY OTHER SLAT	✓	✓
	EVERY THIRD SLAT		
	MIN. DEPTH OF RECESS	130 mm	130 mm

Wide range of colours

The impressive colour range enchances the blind's versatility making it a perfect match for modern and traditional buildings alike.

C-65 Slat

WHITE
(RAL 9016)

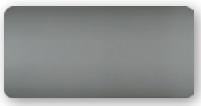


RAL 9016
(standard)

SILVER
(RAL 9006)

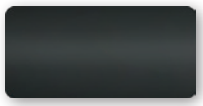
RAL 9006
(standard)

SILVER (GREY)
(RAL 9007)



RAL 9007
(standard)

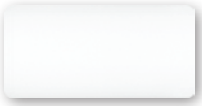
ANTHRACITE
(RAL 7016)



RAL 7016
(standard)

C-80 Slat

WHITE
(RAL 9016)



RAL 9016
(standard)

LIGHT IVORY
(N 0502-Y)

RAL 1013
extra colour (extra charge)

LIGHT GREY
(RAL 7035)

RAL 7035
extra colour (extra charge)

GREY
(N 3000)

RAL 7038
extra colour (extra charge)

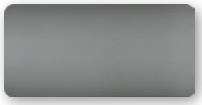
DUSTY GREY
(RAL 7037)

RAL 7037
extra colour (extra charge)

SILVER
(RAL 9006)

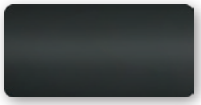
RAL 9006
(standard)

SILVER (GREY)
(RAL 9007)



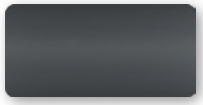
RAL 9007
(standard)

ANTHRACITE
(RAL 7016)



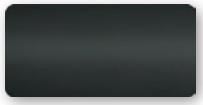
RAL 7016
(standard)

ANTHRACITE STRUCTURE
(DB 703)



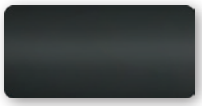
DB 703
(standard)

ANTHRACITE MATT
(RAL 7016)



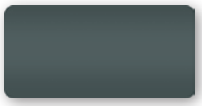
RAL 7016 MATT
(standard)

ANTHRACITE STRUCTURE MATT
(RAL 7016)



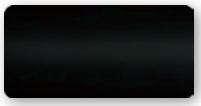
RAL 7016 STRUCTURE MATT
(standard)

BASALT GREY
(RAL 7012)



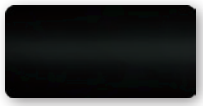
RAL 7012
(standard)

BLACK
(RAL 9005)



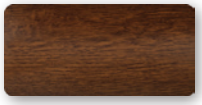
RAL 9005
(standard)

BLACK MATT
(RAL 9005)



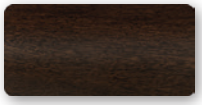
RAL 9005 MAT
(standard)

GOLDEN OAK
(extra colour extra charge)



RAL 8007
extra colour (extra charge)

WALNUT
(extra colour extra charge)



RAL 8014
extra colour (extra charge)

Colour of blinds – standardisation

S-70 Slat

WHITE
(RAL 9016)
RAL 9016
(standard)

SILVER
(RAL 9006)
RAL 9006
(standard)

SILVER (GREY)
(RAL 9007)
RAL 9007
(standard)

ANTHRACITE
(RAL 7016)
RAL 7016
(standard)

ANTHRACITE STRUCTURE
(DB 703)
DB 703
(standard)

Z-90 Slat

WHITE
(RAL 9016)
RAL 9016
(standard)

SILVER
(RAL 9006)
RAL 9006
(standard)

SILVER (GREY)
(RAL 9007)
RAL 9007
(standard)

BASALT GREY
(RAL 7012)
RAL 7012
(standard)

ANTHRACITE
(RAL 7016)
RAL 7016
(standard)

ANTHRACITE MATT
(RAL 7016)
RAL 7016 MATT
(standard)

ANTHRACITE STRUCTURE
(DB 703)
DB 703
(standard)

ANTHRACITE STRUCTURE MATT
(RAL 7016)
RAL 7016 STRUCTURE MATT
(standard)

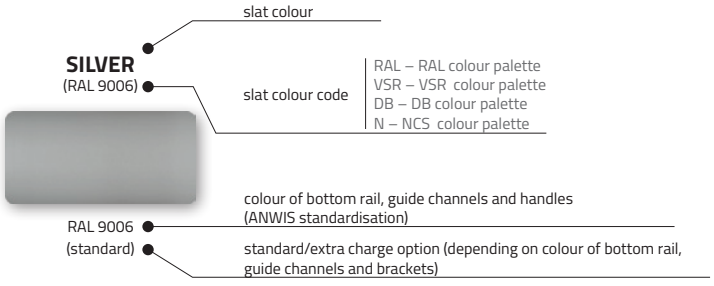
BLACK
(RAL 9005)
RAL 9005
(standard)

BLACK MATT
(RAL 9005)
RAL 9005 MAT
(standard)

The blinds can also be supplied in another colour from the RAL range (except pearly, metallic or fluorescent colours), in which case the price and completion date are fixed individually.

Guide to colour code

Example:



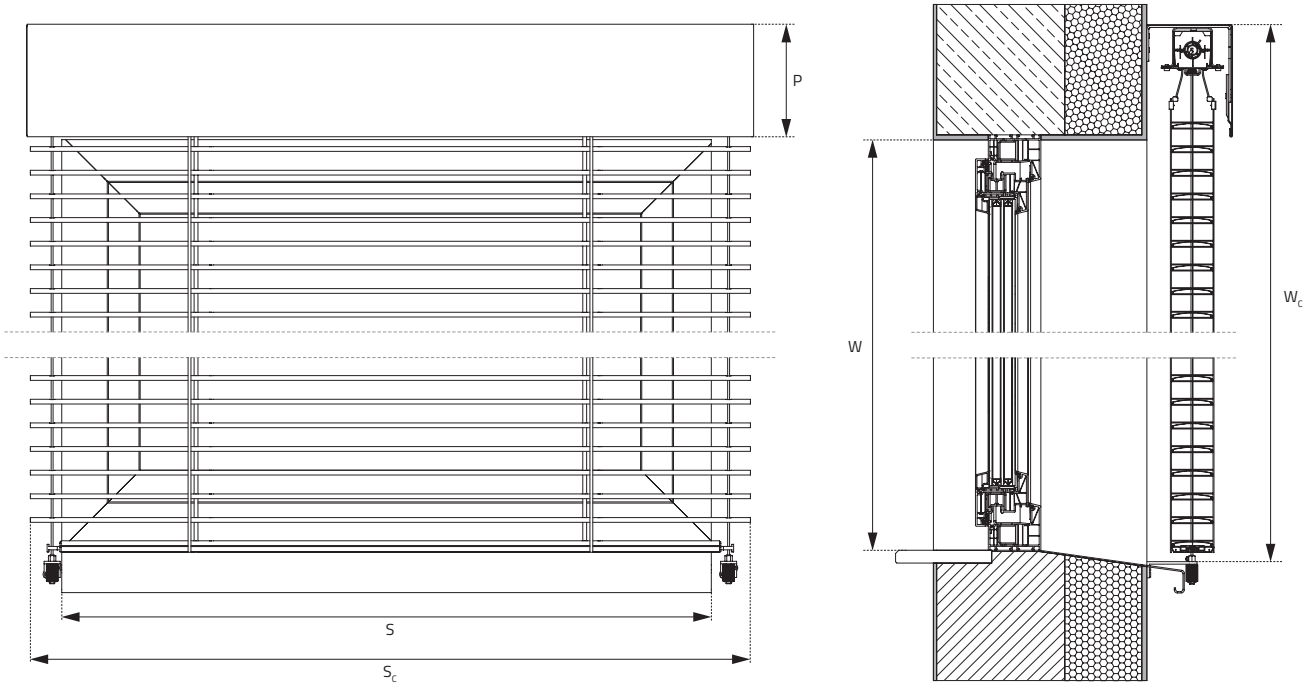
Masking covers are available in RAL colours at no extra charge (except pearly, metallic or fluorescent ones)

Due to different coating techniques, the shade of the colour of the blind's slats may differ slightly from the colour of its casing (bottom rail, guide channels, guide channel brackets and masking cover).

External venetian blinds – dimensions **(cable guide)**

Wall mounting

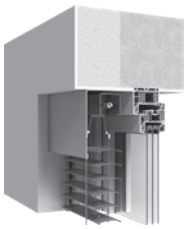
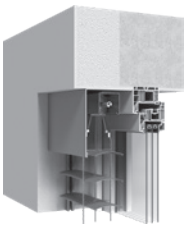
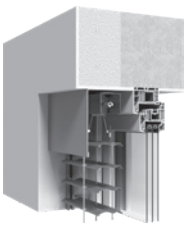
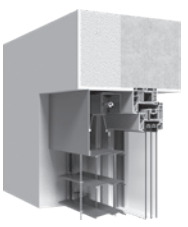
Measurements should be taken and mounting should be carried out by fully trained personnel only.



S - width of the opening
S_C - width as ordered
W - height of the opening
W_C - height as ordered
P - height of packet of slats

dimension as ordered

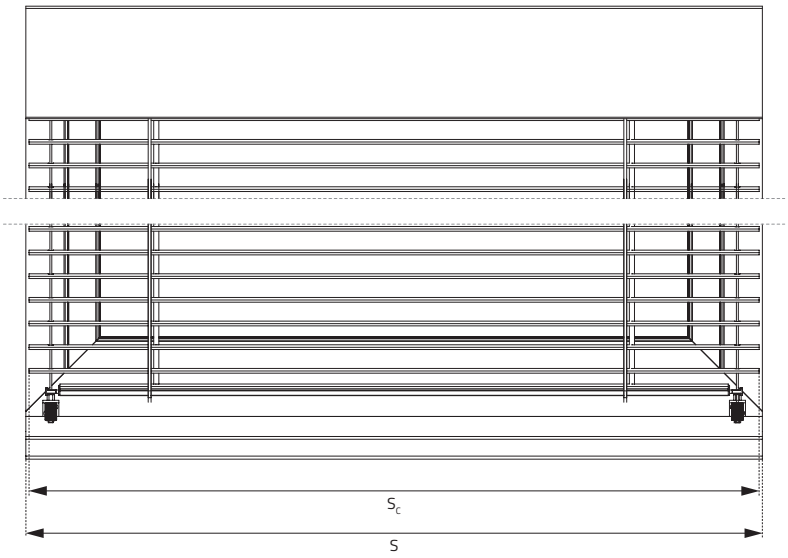
$S_C = S$ + slat overlap on the facade
$W_C = W + P$

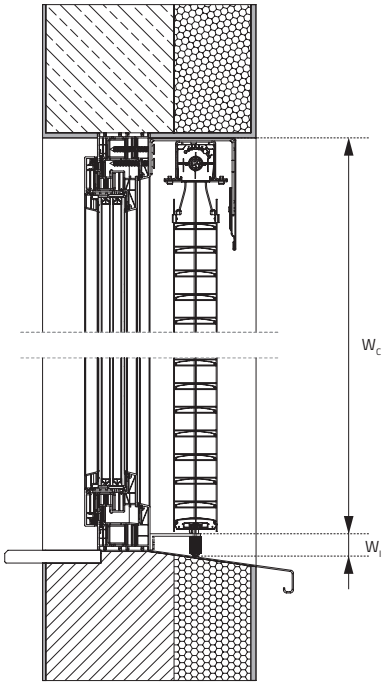
		C-65	C-80	S-70	Z-90
					
SIDE GUIDE	cable guide system	✓	✓		
	side channels	✓	✓	✓	✓

The width and height of the opening is measured at 3 points at least (the top, middle and the bottom of the opening).
The dimension ordered should equal the lowest of the 3 measurements taken.
Measurements should be taken when the window and the sill are already built into the wall.
Overall dimensions of the blind refer to the blind in closed position.

External venetian blinds – dimensions **(cable guide)**

Mounting **in a recess**

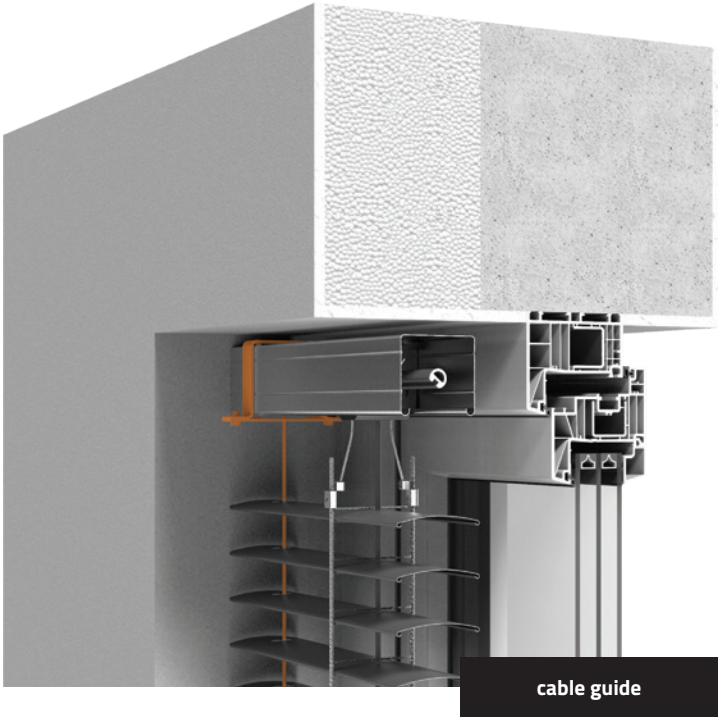




S - width of the opening
S_C - width as ordered
W - height of the opening
W_C - height as ordered
W_I - height of side guide
- bracket A – 41 mm
- bracket B – 35 mm

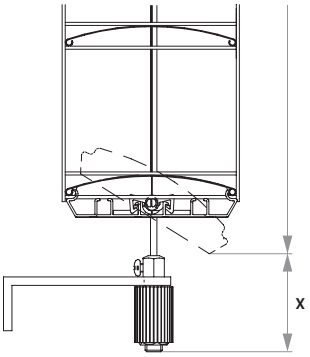
dimension as ordered

$S_C = S – clearance$
$W_C = W – W_I$



cable guide

Lower measurement point in a blind with cable guide system

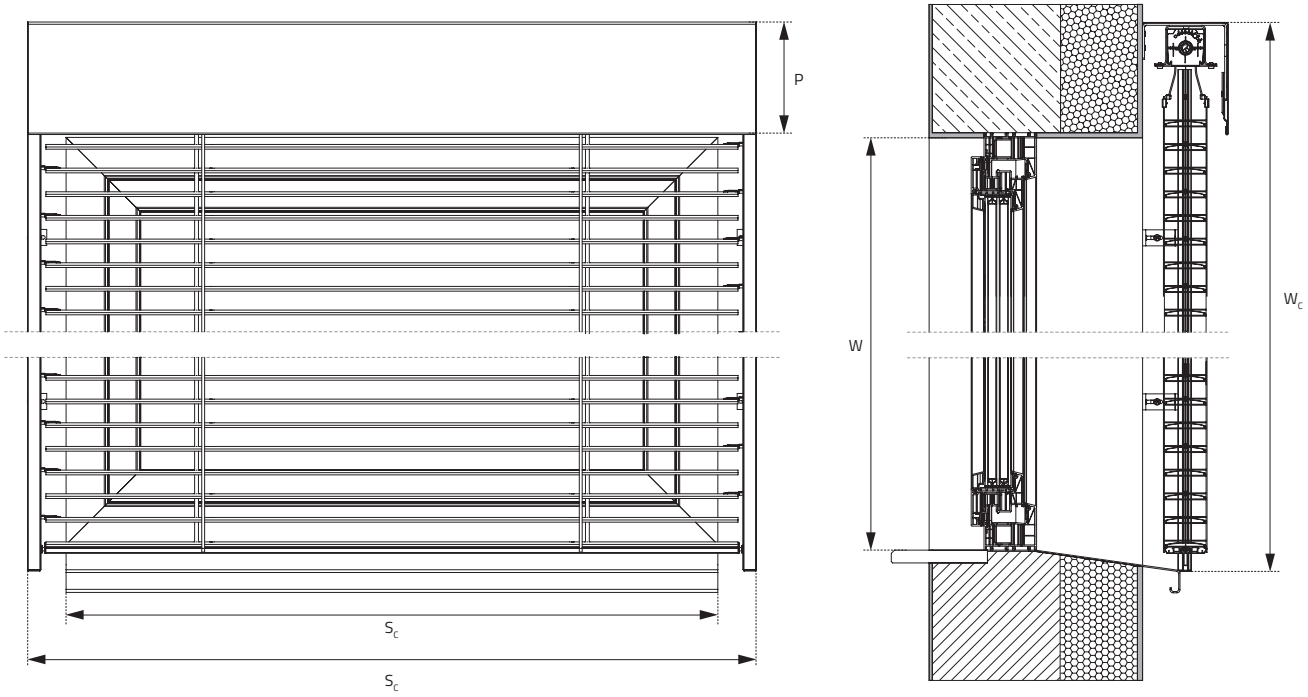


Below the lower measurement point there should be a space left for wire fastening at the bottom – dimension X (depending on the type of fastening).

External venetian blinds – dimensions **(guide channels)**

Wall mounting

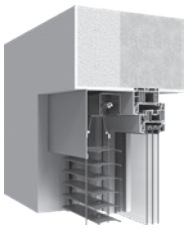
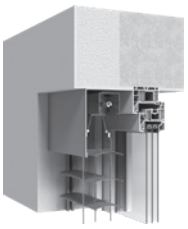
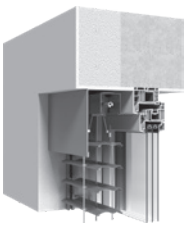
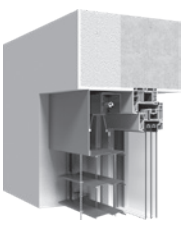
Measurements should be taken and mounting should be carried out by fully trained personnel only.



S - width of the opening
S_c - width as ordered
W - height of the opening
W_c - height as ordered
P - height of the packet of slats

dimension as ordered

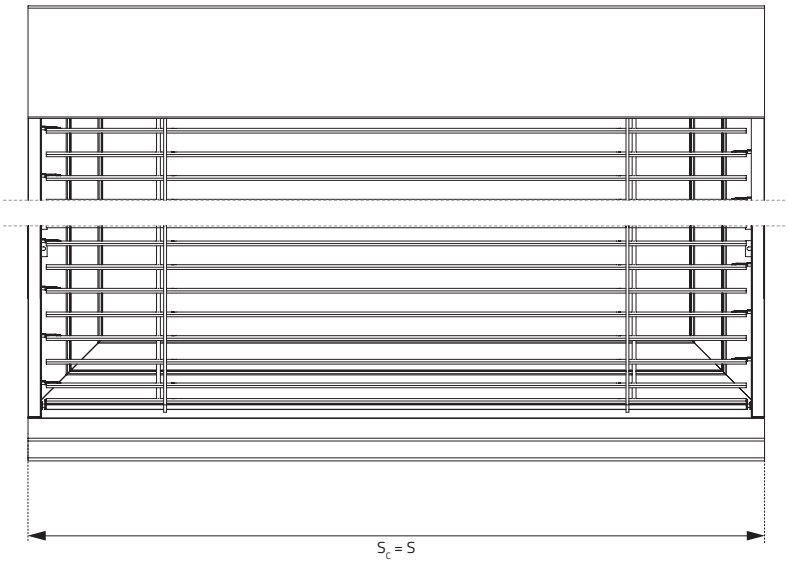
S_c = S + slat/side channel overlap on the facade
W_c = W + P

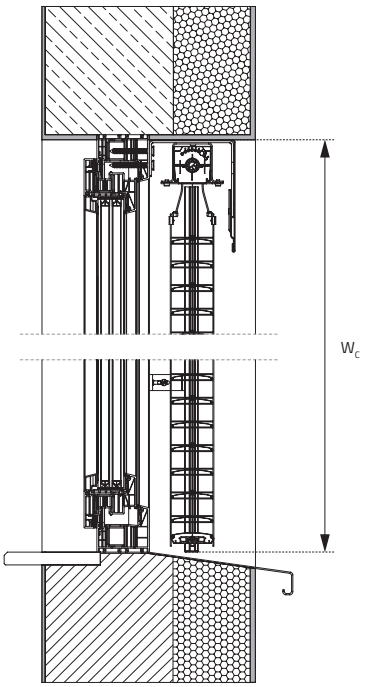
		C-65	C-80	S-70	Z-90
					
SIDE GUIDE	cable guide system	✓	✓		
	guide channels	✓	✓	✓	✓

The width and height of the opening is measured at 3 points at least (the top, middle and the bottom of the opening).
The dimension ordered should equal the lowest of the 3 measurements taken.
Measurements should be taken when the window and the sill are already built into the wall.
Overall dimensions of the blind refer to the blind in closed position.

External venetian blinds – dimensions **(guide channels)**

Mounting **in a recess**

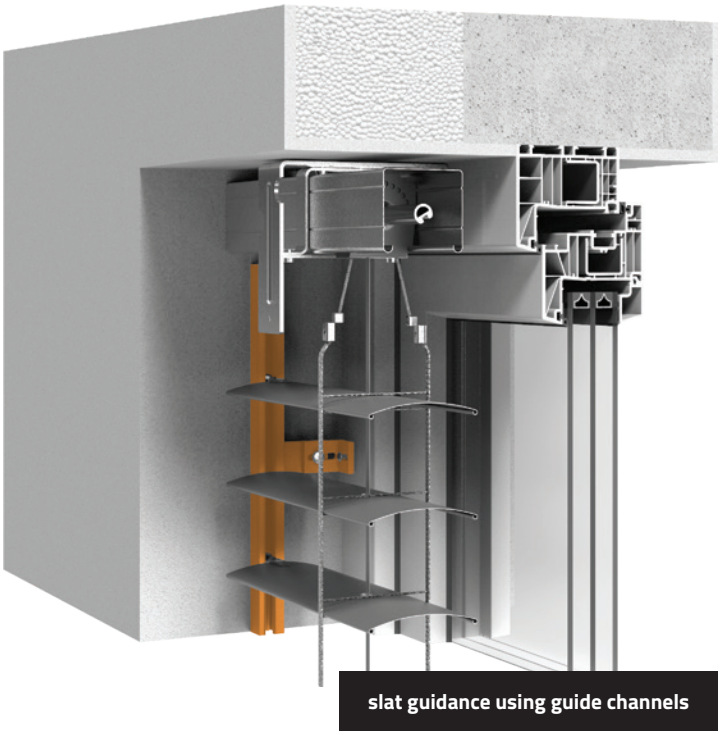




S - width of the opening
S_C - width as ordered
W - height of the opening
W_C - height as ordered

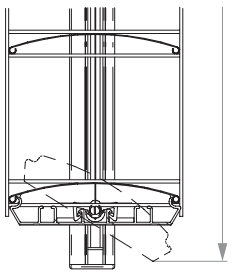
dimension as ordered

$S_C = S$ (the narrowest dimension)
$W_C = W$



slat guidance using guide channels

Lower measurement point in a blind with guide channels



External venetian blinds – care and maintenance

Making the best use of your blind

- Rotate the slats and raise/lower the blind using a crank or a motor, depending on type of operation.
- The blind should be raised or lowered only until you feel a slight resistance (crank operation); otherwise there is a risk of damaging the mechanism or the gear.
- The blind should be used only when there are no obstacles within the operating range of slats and control mechanism.
- The covering of the blind should enable access to the cover and head rail, where the control unit/motor is located so adjustment, care and maintenance and repair works can be carried out in a manner that does not interfere with the movement of slats.
- The safety of the C 65, C 80, S 70, Z 90 motorised blinds must be confirmed by an authorised person before the first use; later on the procedure should be repeated at least once a year.
- To prevent the risk of electric shock, the motors and any electrical components must comply with the current safety standards.
- Should the blinds malfunction, please notify the manufacturer of the fact.
- During strong wind gusts the blind should be left in the raised position.

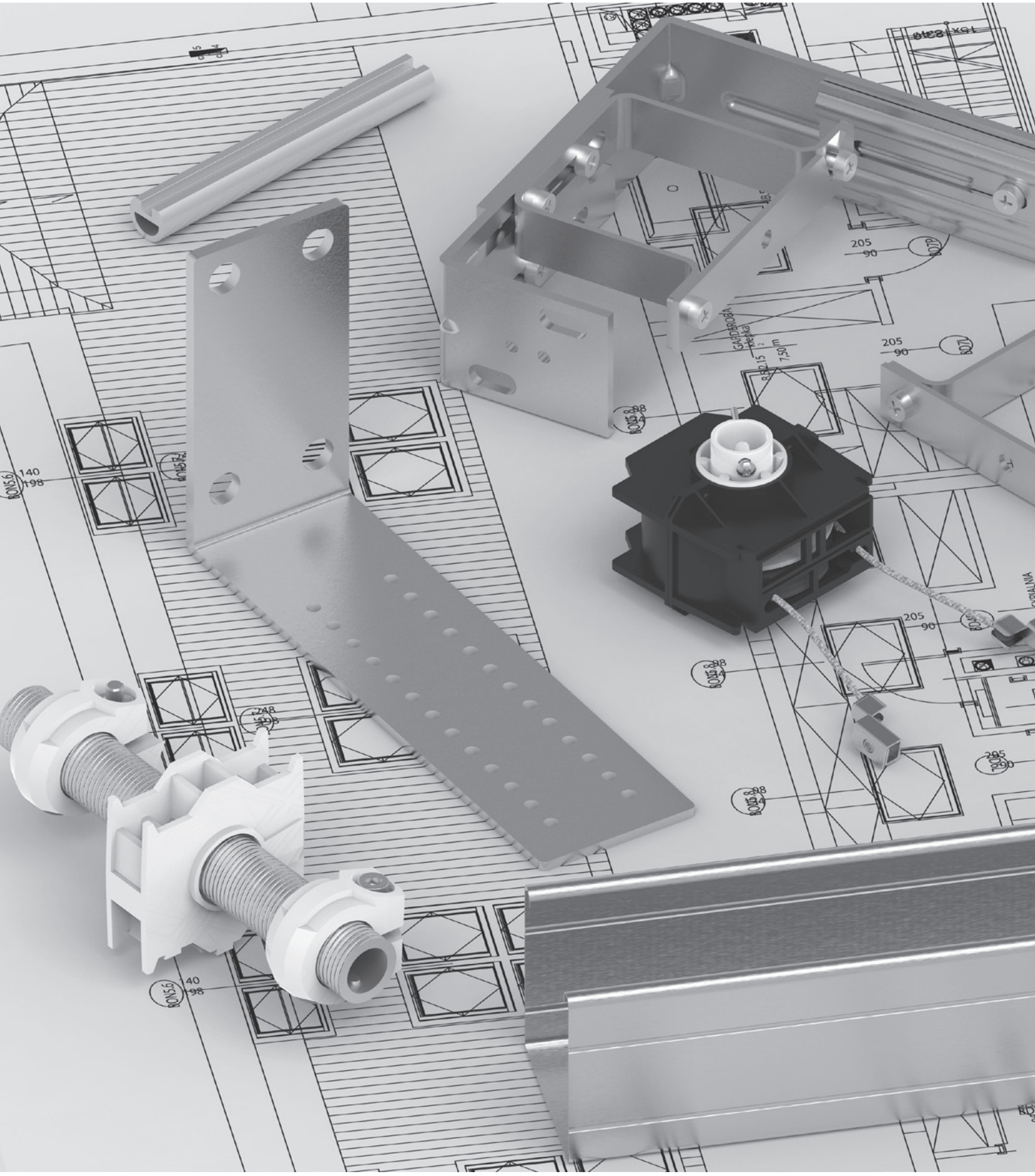
Cleaning the blind

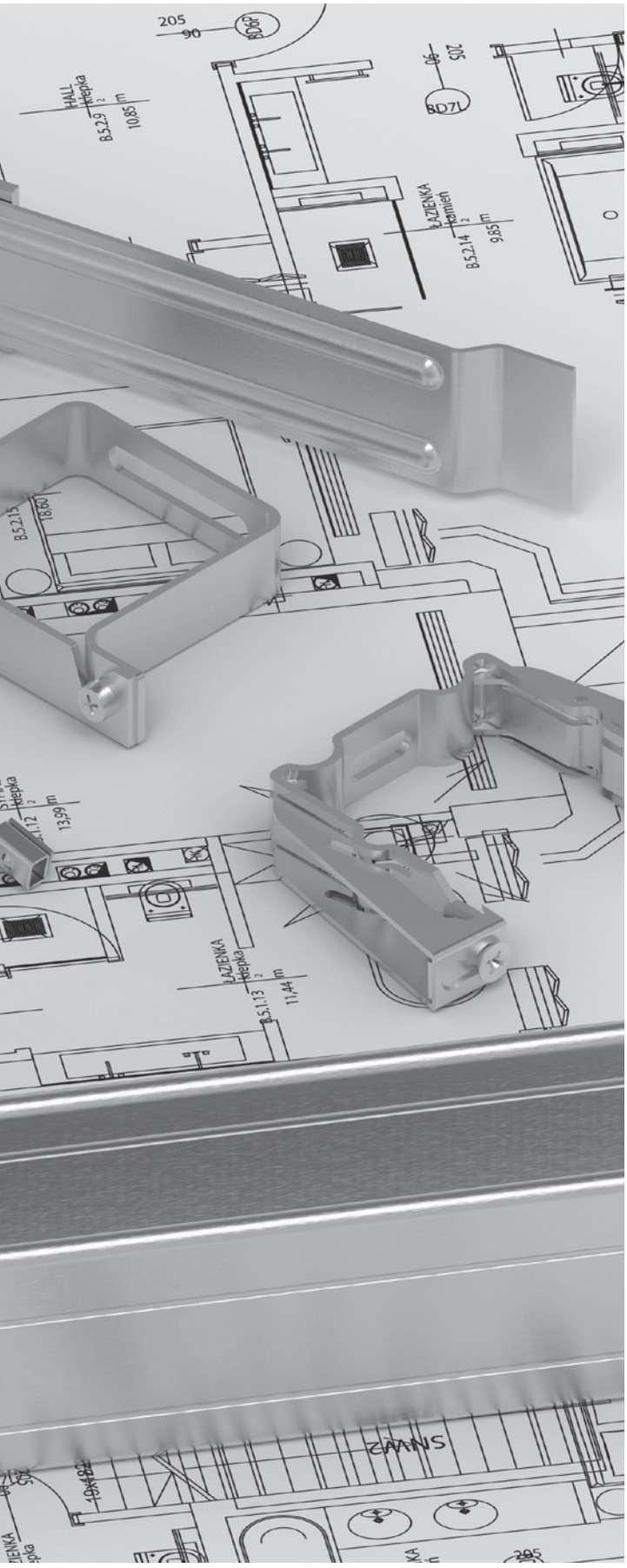
The slats can be cleaned using a soft cloth lightly moistened with a mild soap solution with addition of some degreasing agent. Do not use solvent-based cleaners or tamper with textile components while cleaning the blind; should they get damaged or change their position, the blind will not function properly and the warranty will be lost.

External venetian blinds – disclaimer

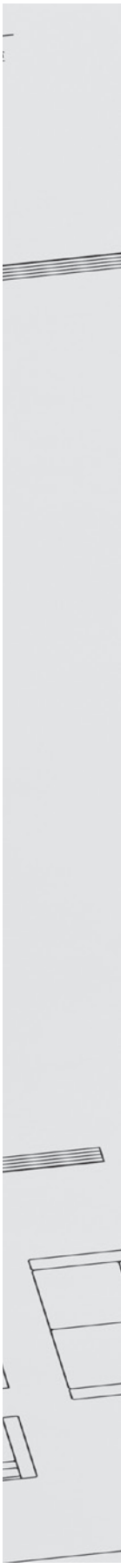
The manufacturer is not responsible for:

- The crank and ladder coming off due to improper use
- Product damage resulting from alterations, modifications or repairs made by the client
- Mechanical damage and damage resulting from misuse, improper storage or overload.
- Damage caused by chance events eg. lightning strike etc.
- Damage resulting from not following manufacturer's assembly instructions
- Mechanical damage resulting from adverse weather conditions (eg. frost, freezing rain etc.)
- Mechanical damage due to strong wind (in absence of automatic wind control or as a result of selecting a wrong wind resistance class)
- Damage resulting from irregular folding of ladder between the slats while the blind is pulled up (so called uneven package)
- Malfunctioning of a blind of width less than 700 mm



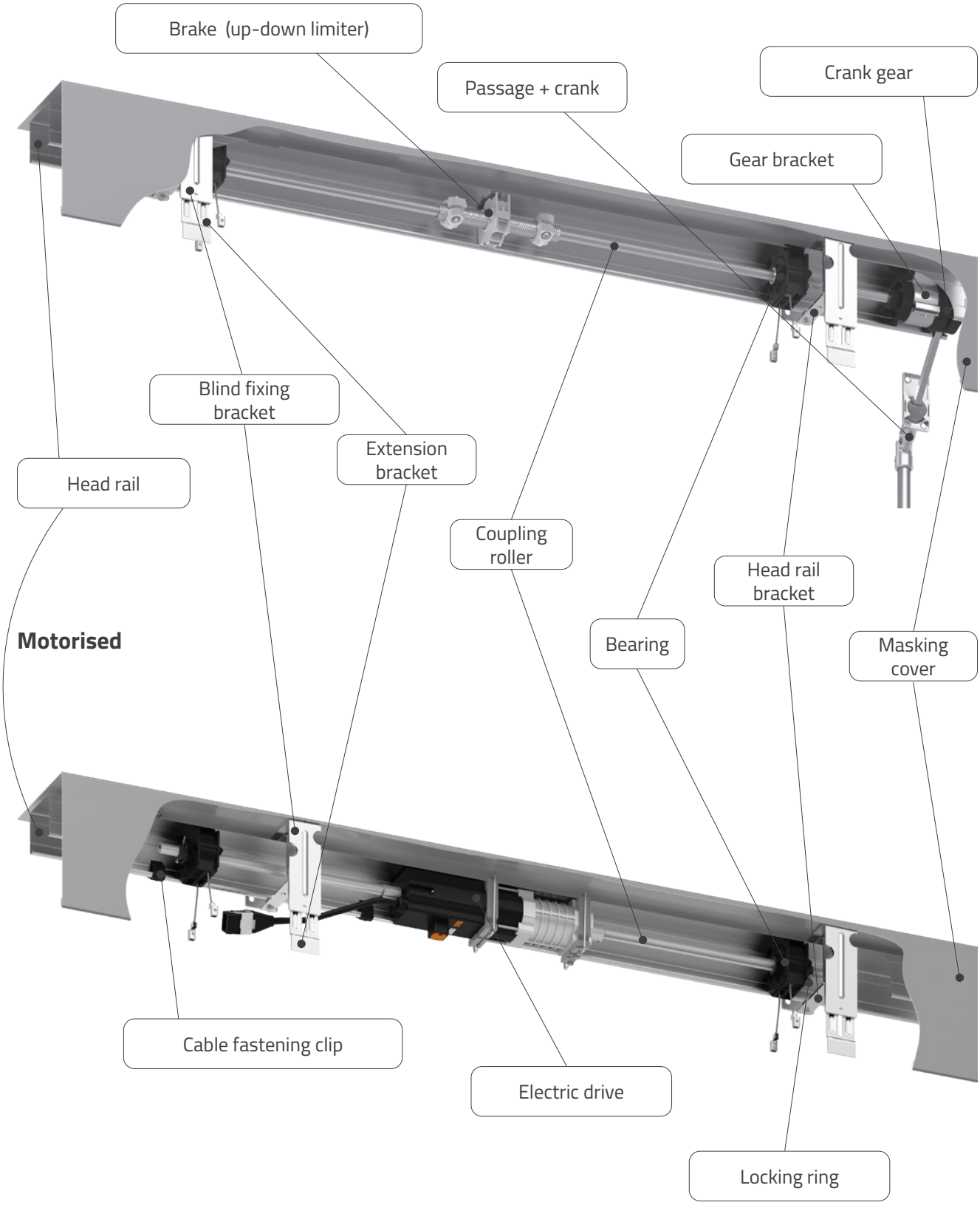


HEAD RAIL MASKING COVER

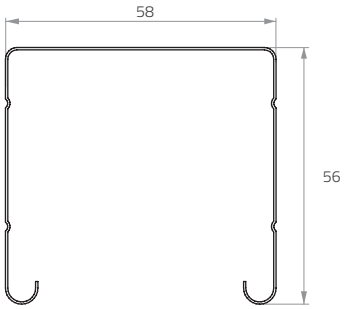


Head rail components

Manual control



58 x 56 Head rail



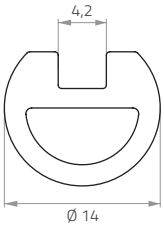
Specification

– steel rail, galvanised, manufactured by roll-forming
– thickness:
standard rail – 0,6 mm
reinforced rail – 0,75 mm*

* Reinforced head rail made of 0,75 mm thick galvanised steel tape comes with:
– blinds wider than 2500 mm
– a set of blinds (max width 5000 mm)
– self-supporting blinds

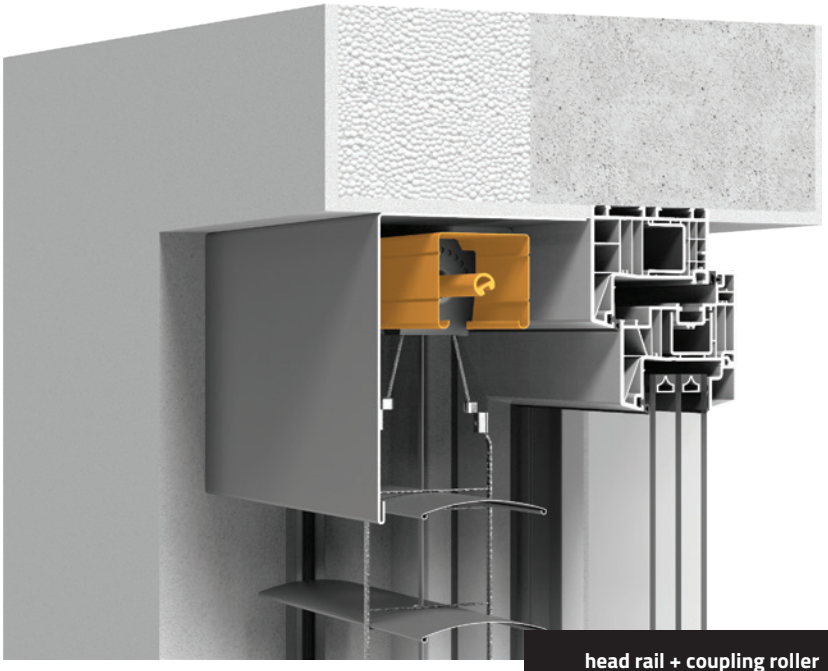
Standard width of head rail:
– **cable guide:** width of blind minus 5 mm
– **guide channels:** width of blind minus 50 mm

Coupling roller



Specification

– aluminium coupling roller
– manufactured using extrusion process



head rail + coupling roller

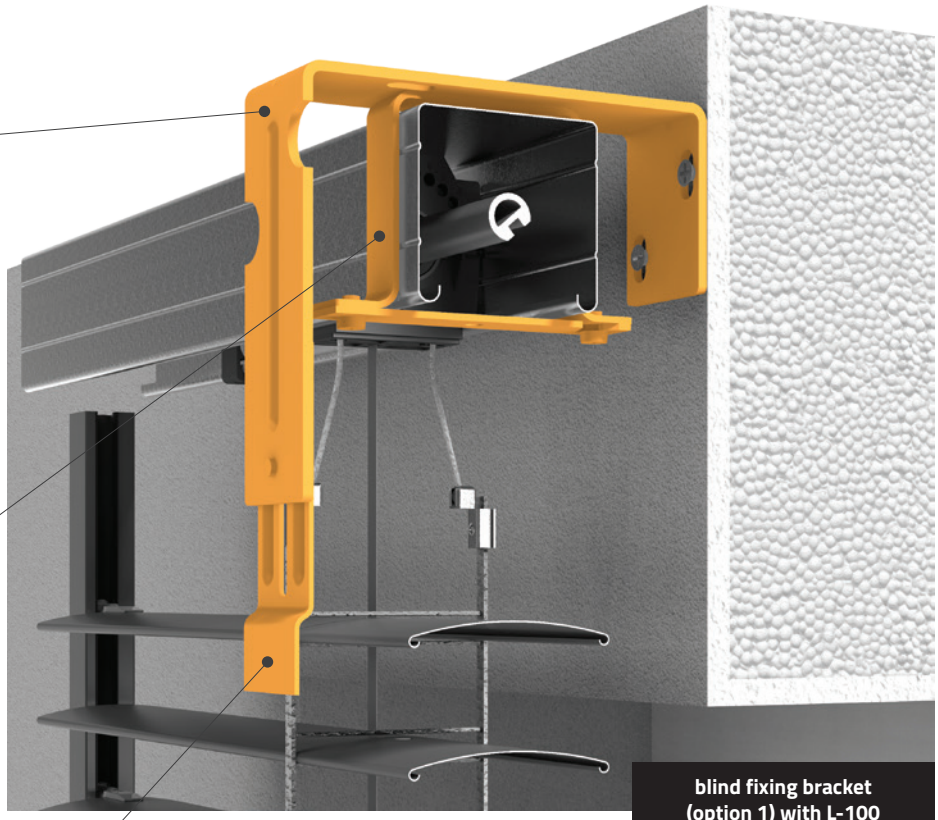
Blind fixing set

Blind bracket

Options available:
- standard
- adjustable

Rail bracket

Options available:
- standard
- automatic
- special



blind fixing bracket (option 1) with L-100 extension bracket

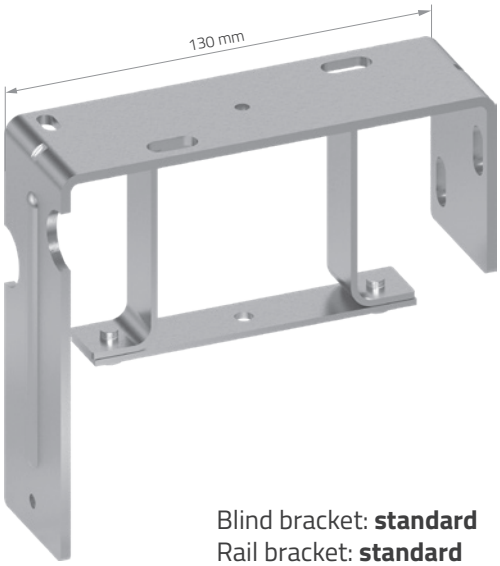
Extension bracket

Comes with external venetian blinds with masking covers.

	width of the blind			
	400 – 1500 mm	1501 – 2500 mm	2501 – 3500 mm	3501 – 4500 mm
number of sets	2 pc	3 pc	4 pc	5 pc

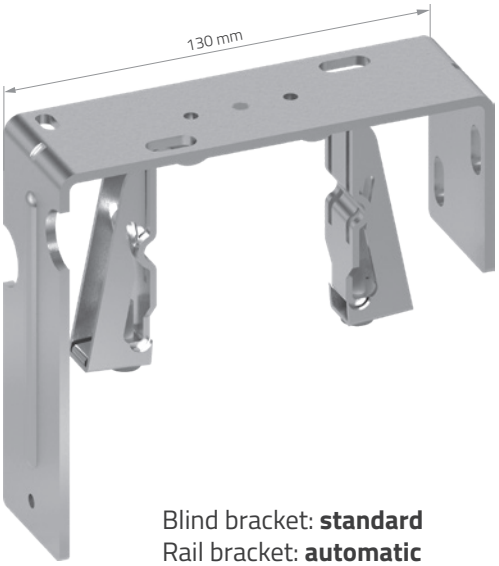
Blind fixing brackets (set)

Option 1



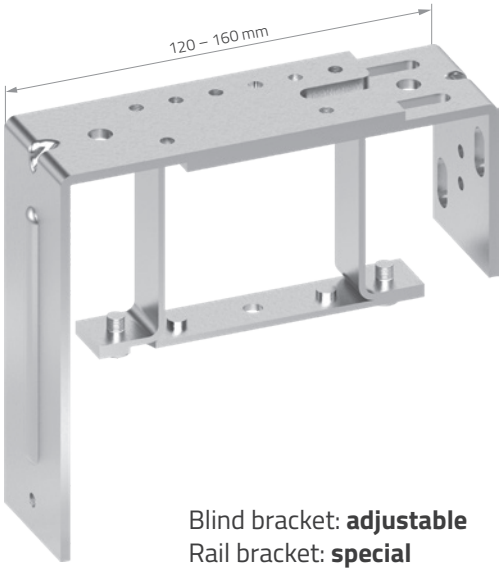
Blind bracket: **standard**
Rail bracket: **standard**

Option 2



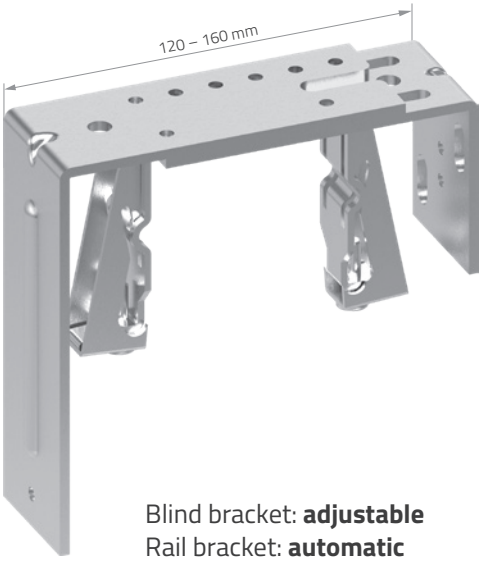
Blind bracket: **standard**
Rail bracket: **automatic**

Option 3



Blind bracket: **adjustable**
Rail bracket: **special**

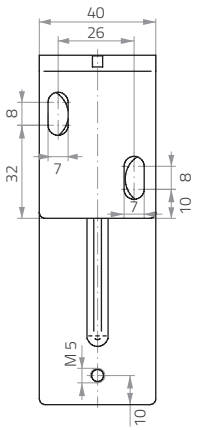
Option 4

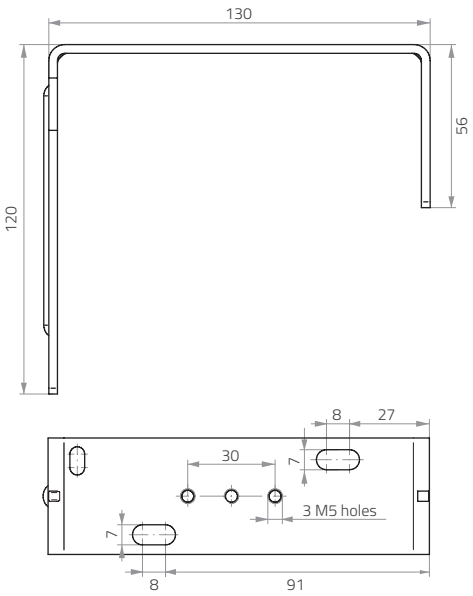


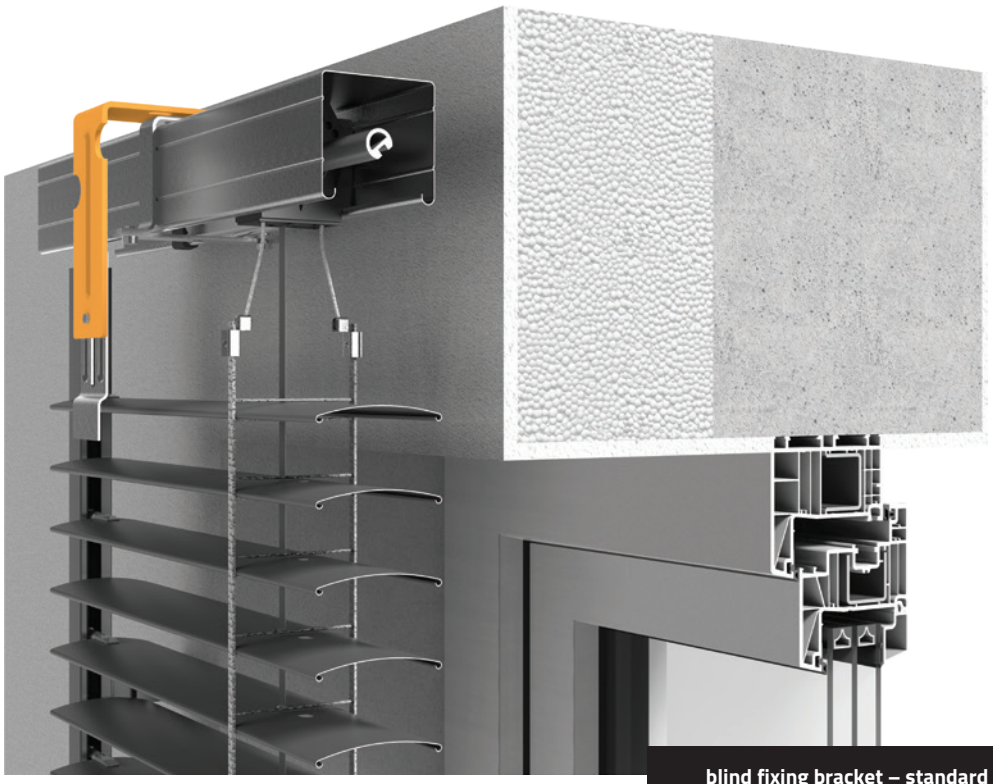
Blind bracket: **adjustable**
Rail bracket: **automatic**

		type of slat			
		C-65	**S-70**	**C-80**	**Z-90**
Installation depth	**minimum**	120 mm	125 mm	120 mm	130 mm
	recommended	130 mm	135 mm	130 mm	140 mm

Blind fixing brackets – standard

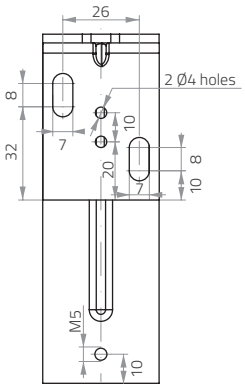


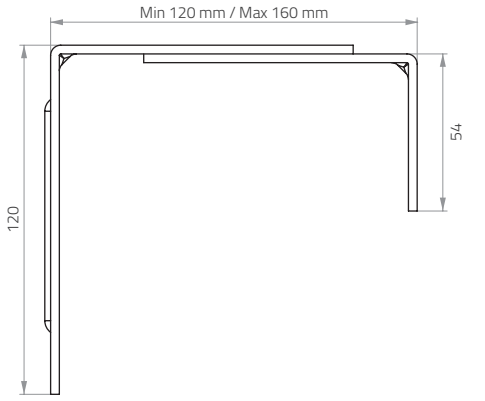


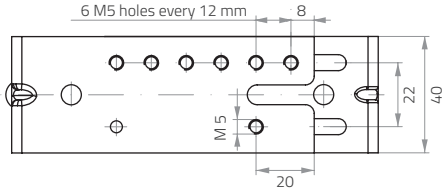


blind fixing bracket – standard

Blind fixing brackets – adjustable



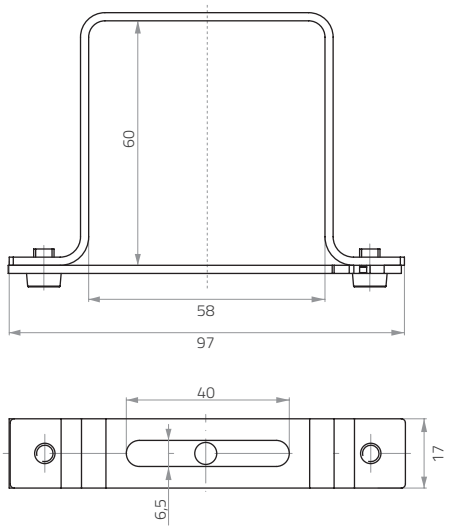




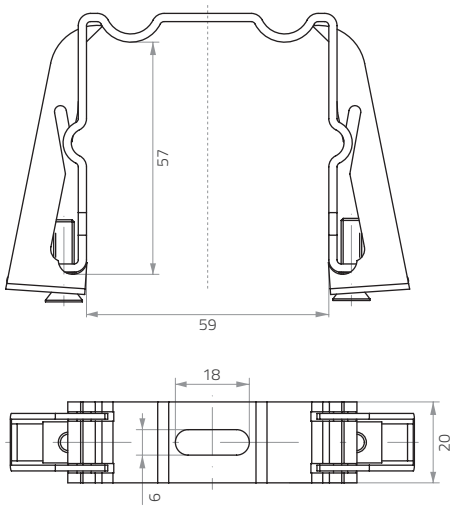
blind fixing bracket – adjustable

Head rail fixing brackets

Head rail bracket **standard**



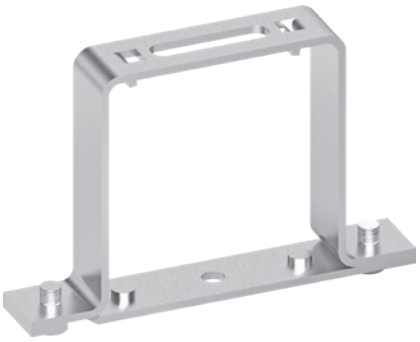
Head rail bracket **automatic**

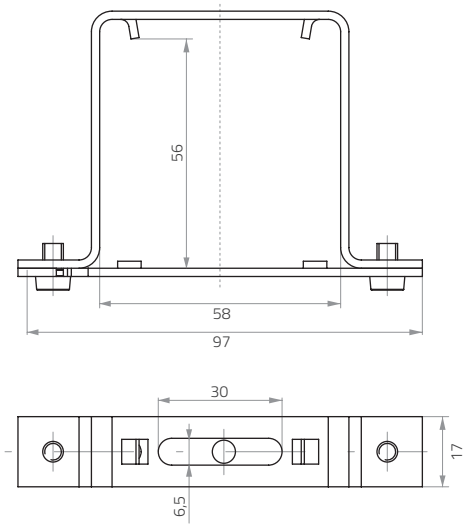


	width of the blind			
	400 – 1500 mm	1501 – 2500 mm	2501 – 3500 mm	3501 – 4500 mm
number of brackets	2 pc	3 pc	4 pc	5 pc

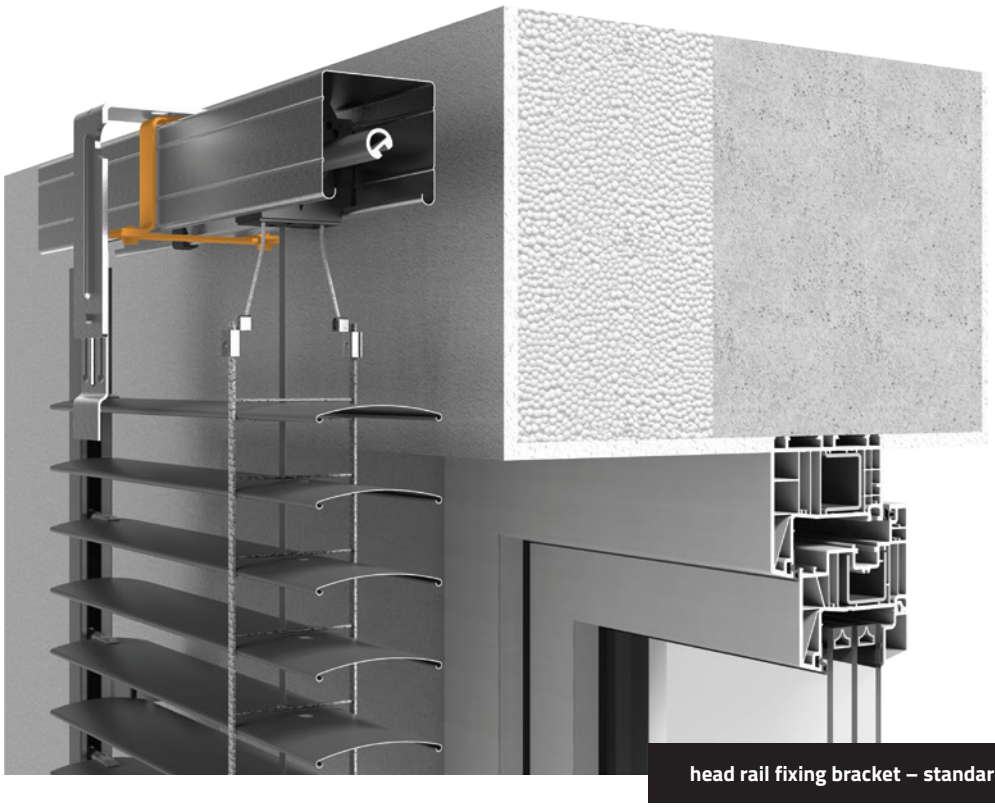
Head rail fixing brackets

Head rail bracket **special**





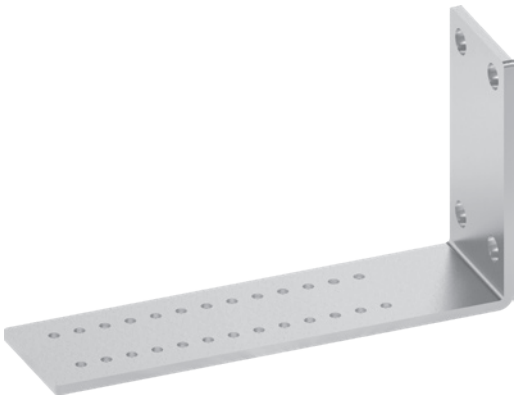
Used with adjustable blind bracket and as a component of cable guide mechanism in head rail.

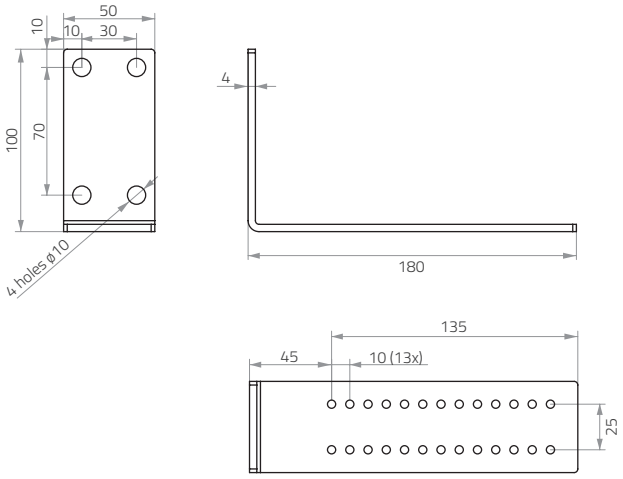


head rail fixing bracket – standard

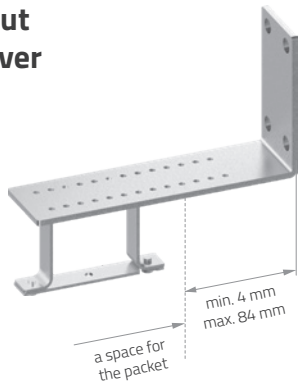
Head rail brackets special

Extended top bracket (under insulation)

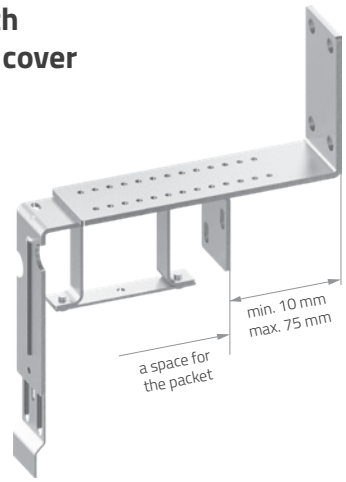


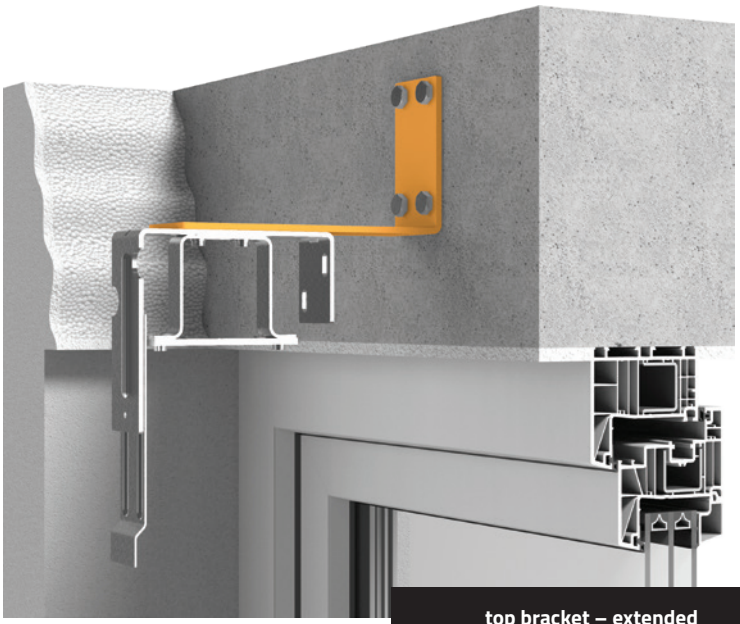


Blind without masking cover



Blind with masking cover

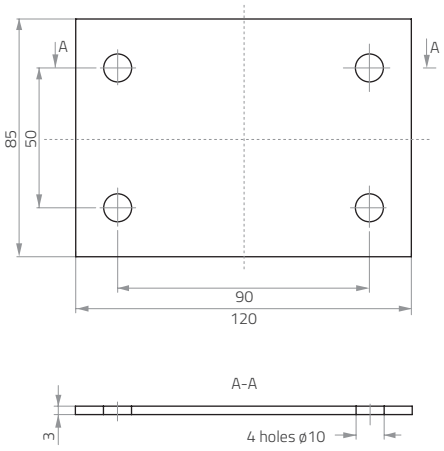




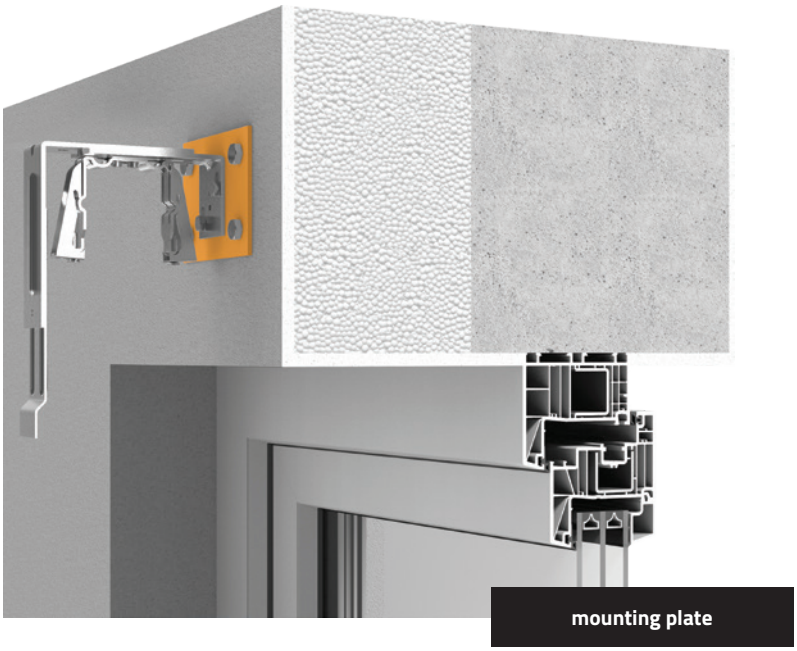
top bracket – extended

Head rail brackets special

Mounting plate for blind bracket

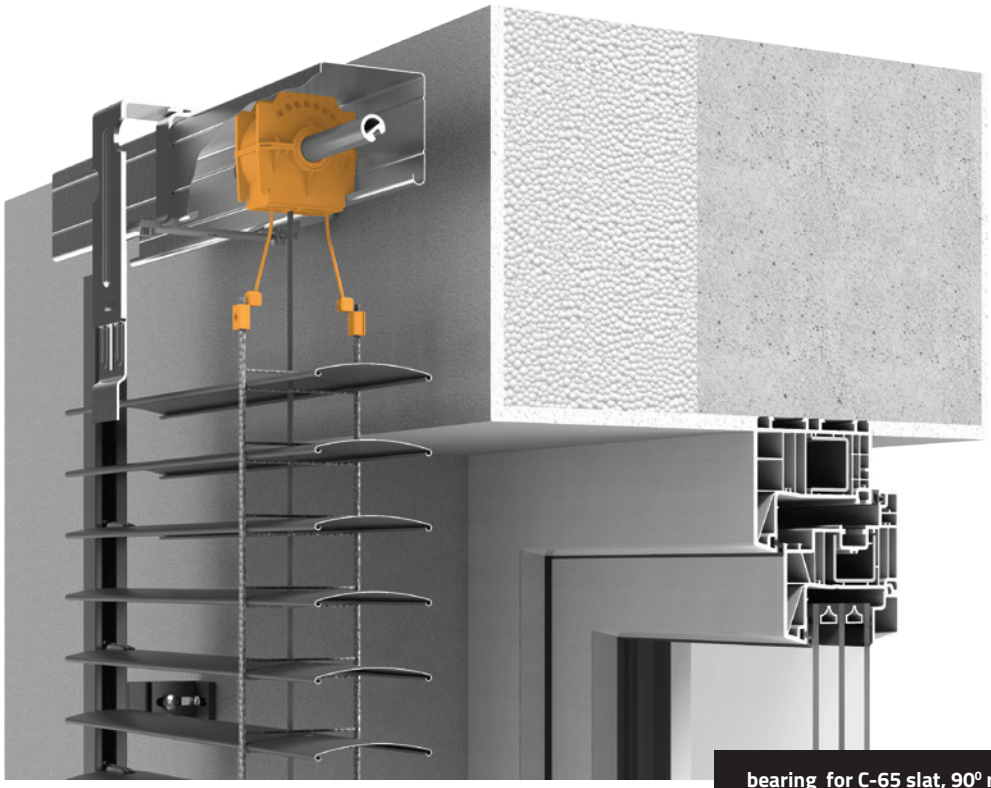


Note: there are no holes for screw-fastening the mounting bracket



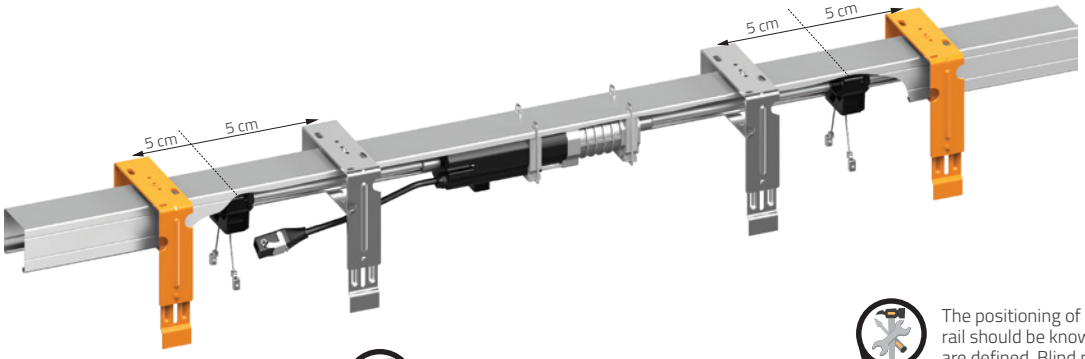
mounting plate

Control bearings



bearing for C-65 slat, 90⁰ rotation

Blind bracket mounting position in relation to bearings



If the blind is fitted with 2 bearings, blind brackets should be mounted closer to the ends of the head rail.

The positioning of bearings in the head rail should be known before fixing points are defined. Blind mounting bracket should be positioned 5 cm away from the bearing.

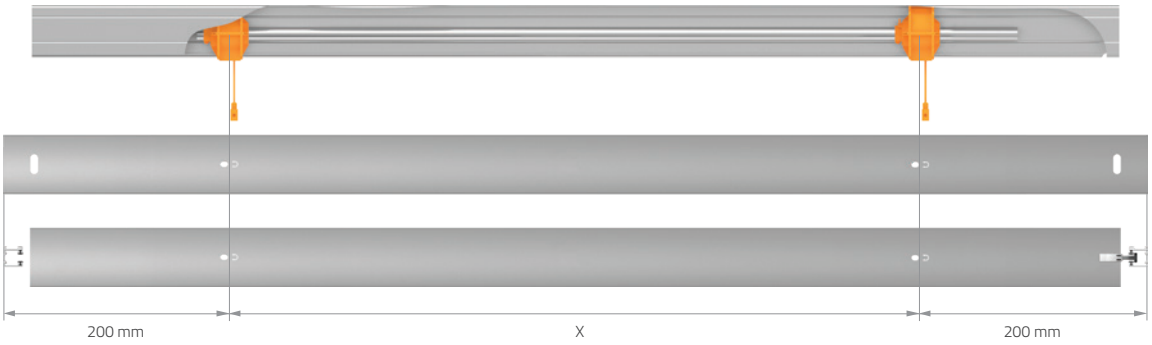
Number of bearings in blinds of different dimensions

	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500
500-2500	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4
2501-3000	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4
3001-4000	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4
4001-5000	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4

Control bearings

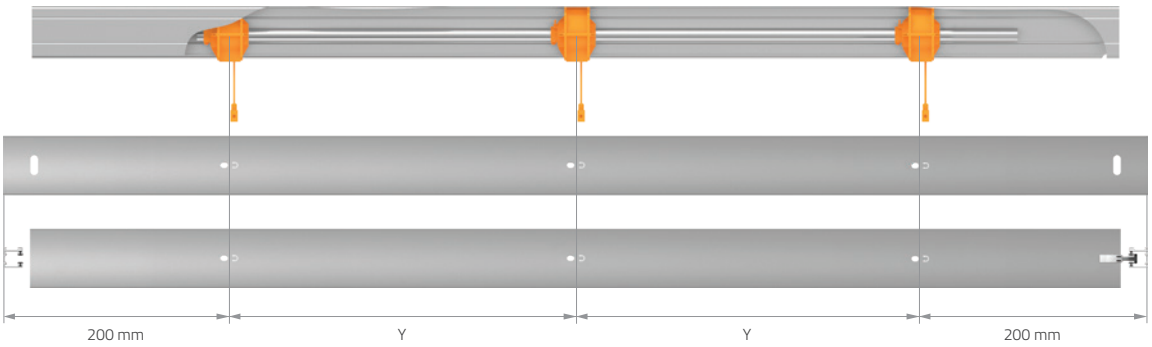
Spacing of bearings in the head rail in blinds of different dimensions

Number of bearings: 2 pc



X = blind width – 400 mm

Number of bearings: 3 ≥ pc



$$Y = \frac{\text{blind width} - 400\ \text{mm}}{\text{number of bearings as in the table} - 1}$$

Example:

C-80 external venetian blind with guide channels, dimensions: 2960 x 3100 mm.
Number of bearings as in the table: 5 pc.

$$Y = \frac{2960 - 400\ \text{mm}}{5 - 1} = 640\ \text{mm}$$

In external venetian blinds < 800 mm the spacing of bearings is adjusted individually.

Rotation range of different types of slats

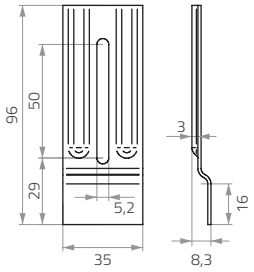
		type of slat			
		C-65	S-70	C-80	Z-90
rotation range	90°	✓	✓	✓	✓
	180°	✓		✓	

Blinds < 800 mm are manufactured with slat rotation range 90° only.

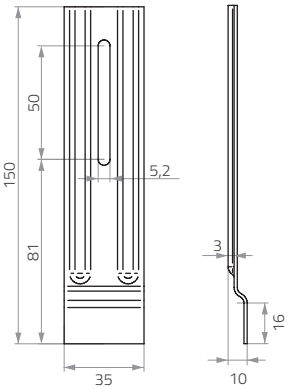
2600	2700	2800	2900	3000	3100	3200	3300	3400	3500	3600	3700	3800	3900	4000	4100	4200	4300	4400	4500
4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	6
4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	6	6	6	6	6
4	4	4	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	
5	5	5	5	5	5	5	6	6	6	6	6	6	6						

Types of extension brackets

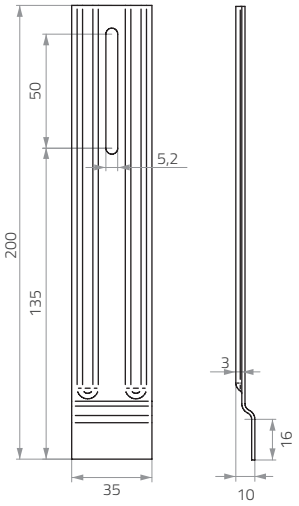
L=100



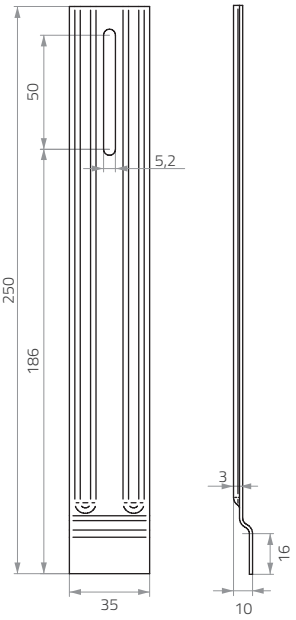
L=150



L=200



L=250

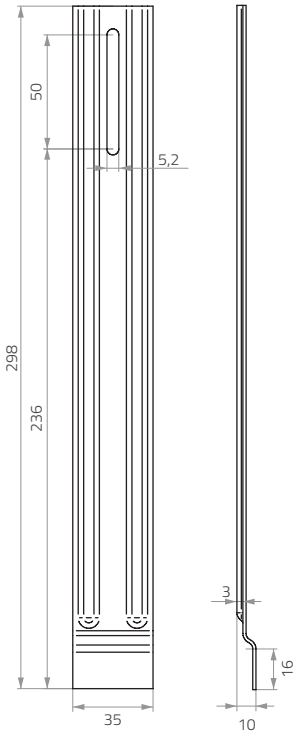


Extension brackets are fitted in blinds with masking covers only.
Matching extension brackets are selected during the production process.
Number of extension brackets equals the number of sets for mounting the blind (see p. 20).

L-100 extension bracket

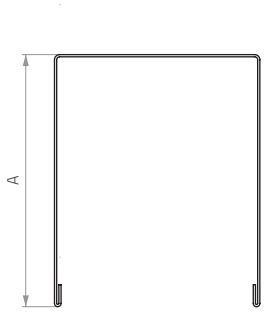
Extension brackets

L=300

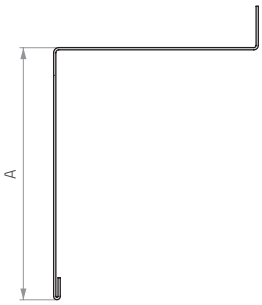


Extension bracket combined

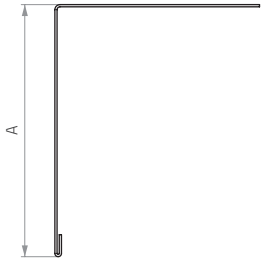
type A cover



type B cover



type C cover



type D cover

	dimension A (packet height)					
	≤ 190 mm	191 - 240 mm	241 - 290 mm	291 - 340 mm	341 - 390 mm	≥ 391 mm
type of extension bracket	L=100	L=150	L=200	L=250	L=300	extension bracket combined

Masking cover

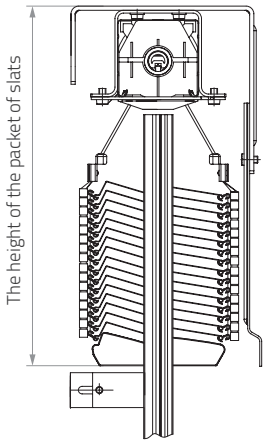
Masking cover

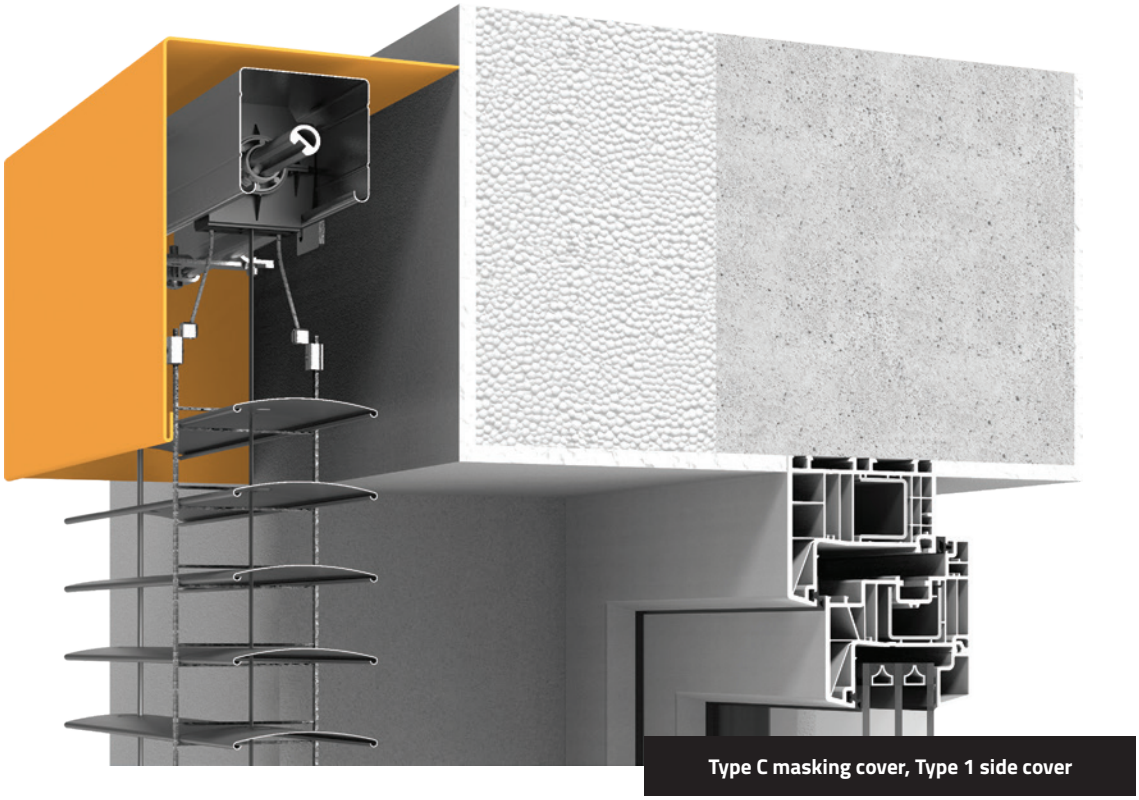
made of 1,5 mm or 2,0 mm thick aluminium sheet, manufactured by bending. May be ordered unvarnished (raw aluminium) or painted in any RAL colour (except pearly, metallic or fluorescent shades). The max. length of cover in one piece (without welding) is 4000 mm – except in Type A cover (A/C height more than 300 mm) whose max. length is 2500 mm. When mounting on the wall, side covers are recommended for aesthetic reasons.

Side cover – available metal sheet thicknesses

It is recommended that Type D masking cover fitted in external self-supporting venetian blind is made of 2 mm thick metal sheet.

The height of the packet of slats





Type C masking cover, Type 1 side cover

Masking cover – packet height

Height of blind in raised position (height of the packet of slats)

overall height of the blind	type of slat							
	C-65		S-70		C-80		Z-90	
								
800	170	190	170	190	160	180	160	180
900								
1000								
1100			180	200	170	190		
1200	180	200	190	210				
1300			200	220	180	200	170	190
1400	190	210						
1500			210	230	190	210		
1600	200	220	220	240			180	200
1700	210	230	230	250	200	220		
1800							190	210
1900	220	240					200	220
2000			240	260				
2100	230	250	250	270	210	230	210	230
2200			270	290				
2300			280	300	220	240	220	240
2400	240	260	290	310			230	250
2500	250	270						
2600			300	320	230	250	240	260
2700	260	280						
2800	270	290	310	330			250	270
2900			330	350	240	260		
3000	280	300	340	360				
3100	290	310	350	370	250	270	260	280
3200							270	290
3300	300	320	360	380	260	280		
3400	310	330	370	390			280	300
3500			380	400	270	290		
3600			390	410			290	310
3700	320	340	400	420			300	320
3800					280	300		
3900	330	350	410	430			310	330
4000	340	360	420	440				
4100	350	370	430	450	290	310		
4200			440	460	300	320	320	340
4300	360	380	450	470				
4400	370	390			310	330	330	350
4500			460	480				
4600	380	400	480	500	320	340	340	360
4700	390	410					350	370
4800			490	510	330	350		
4900	400	420	510	530	350	370	360	380
5000	420	440						

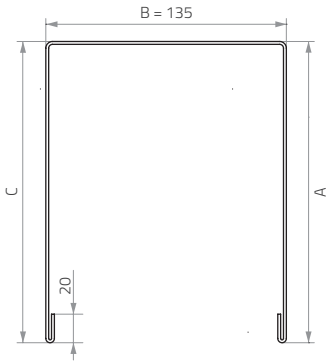
 manual operation (crank gear)

 motorised

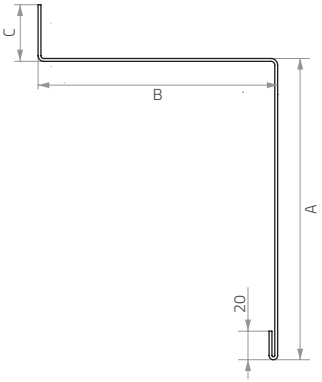
Masking cover – types

Standard masking cover types

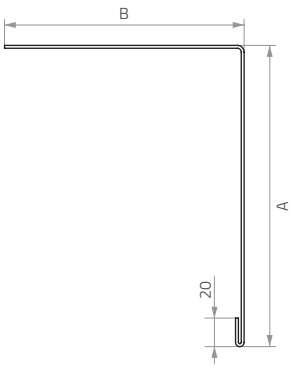
Type A



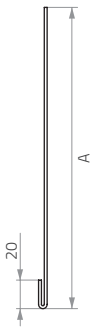
Type B



Type C



Type D

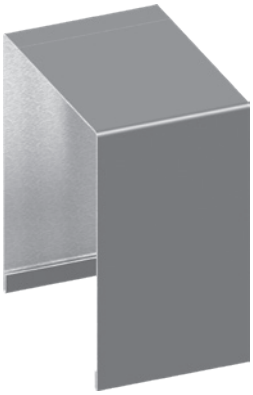


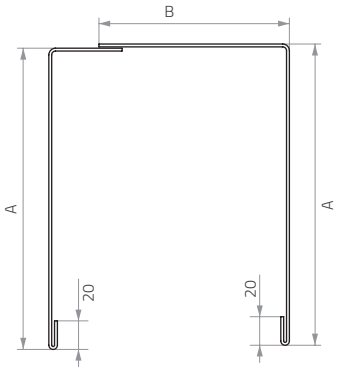
It is recommended that masking cover fitted in Type D blind is made of 2 mm thick metal sheet.

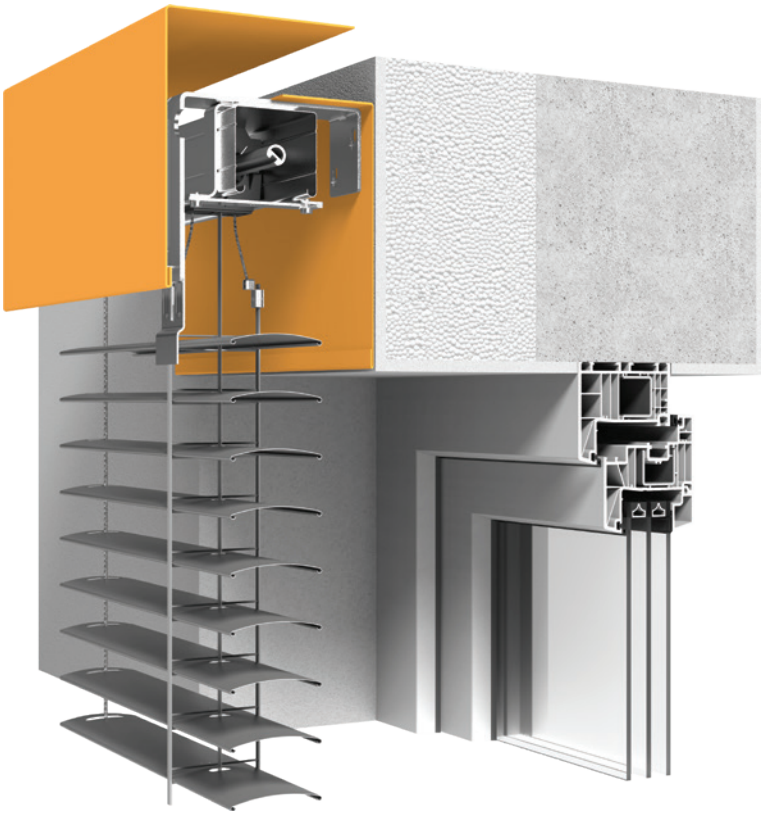
Masking cover – types / varnishing

Alternative solution for Type A masking cover (C+C cover)

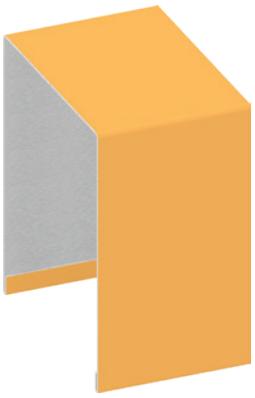
Due to limited installation space in Type A masking cover the manufacturer recommends using two Type C masking covers whose top parts overlap (wall mount).







Masking covers varnishing options



Coating on the outside

Coating on the inside

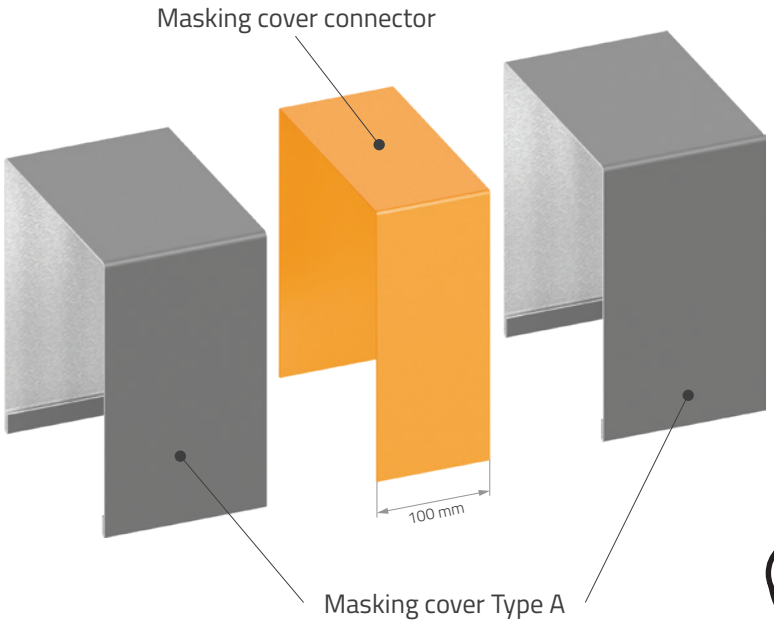
Overall coating

The cost of overall coating of the masking cover is calculated on an individual basis.

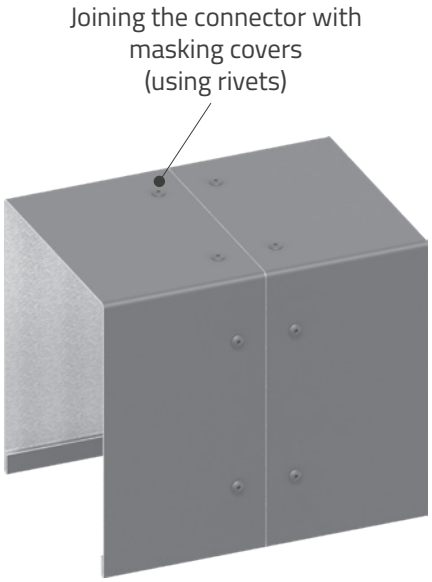
Masking cover – masking cover connector

Masking cover connector

Made of 1,5 mm thick aluminium sheet, formed by bending. Used with masking covers of max. length exceeding 4000 mm (in Type A cover, where A/C height is more than 300 mm, max. width of the cover is 2500 mm). Determined by the type of masking cover used, the shape of the connector is matched during manufacturing process.



The standard masking cover connector is varnished in the same colour as masking covers.

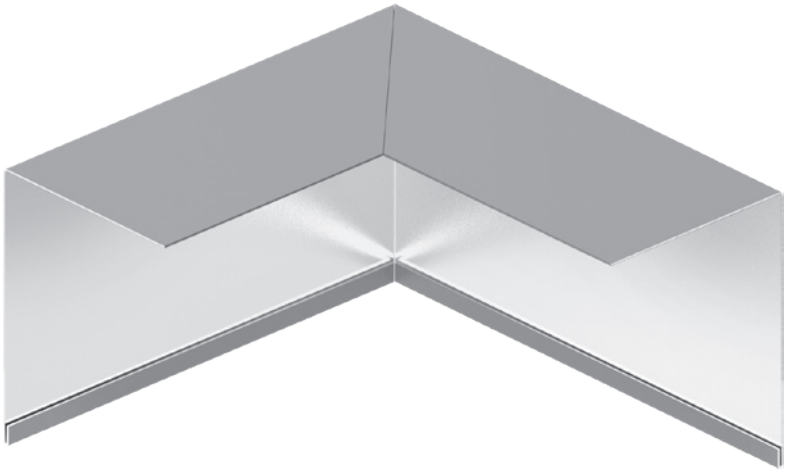


The min. expansion gap between the covers should be 5 mm.

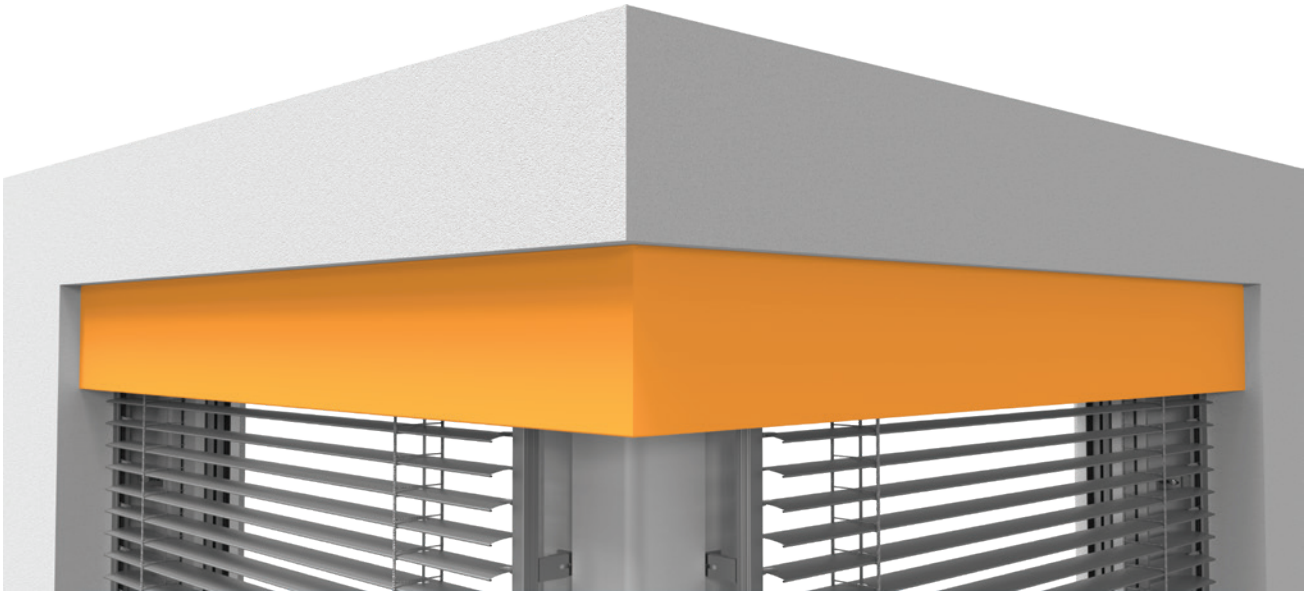
Masking cover – non-standard shape

Masking cover in a non-standard shape

Made of 1,5 mm or 2 mm thick aluminium sheet, formed by bending. May be ordered unvarnished (raw aluminium) or painted in any RAL colour (except pearly, metallic or fluorescent shades).



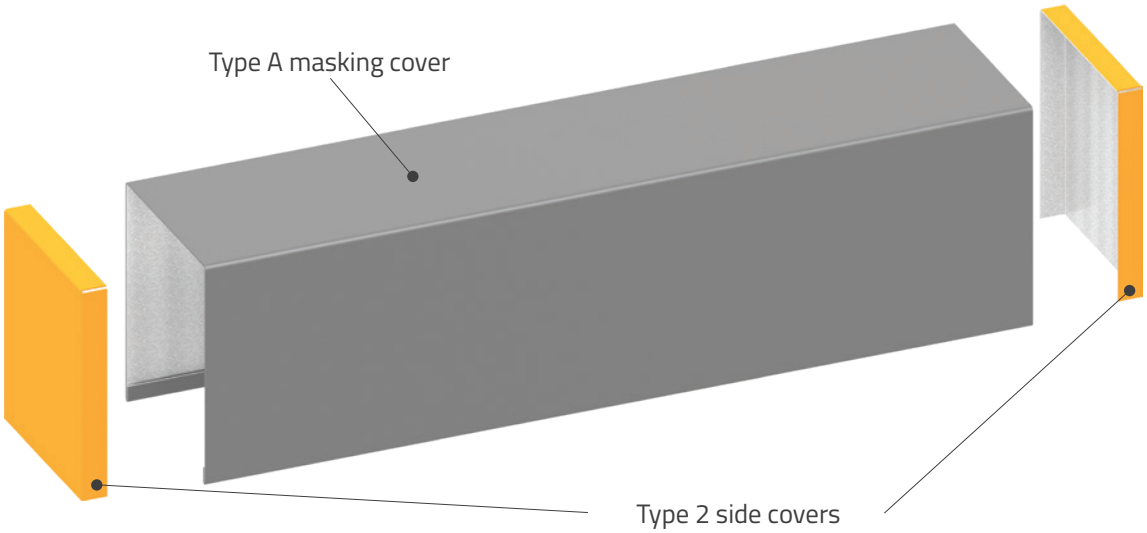
We also offer masking covers for bay or corner windows, in which case we recommend you contact the manufacturer in order to discuss technical specifications.



Masking cover – side covers

Side covers

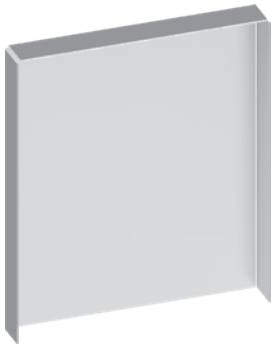
Made of 1,5 mm or 2 mm thick aluminium sheet, formed by bending. Used in wall-mounted blinds.
The side cover selected must be compatible with the masking cover.

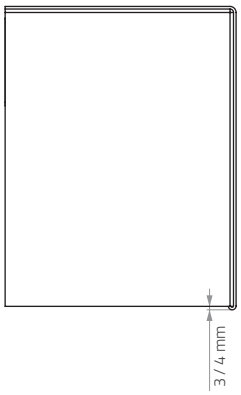


Standard side covers

Type 1

Type 2





Please note: once side covers have been mounted, the masking cover bottom fold may project beyond the side cover outline by:
- 3 mm (1,5 mm steel sheet masking cover)
- 4 mm (2 mm steel sheet masking cover)

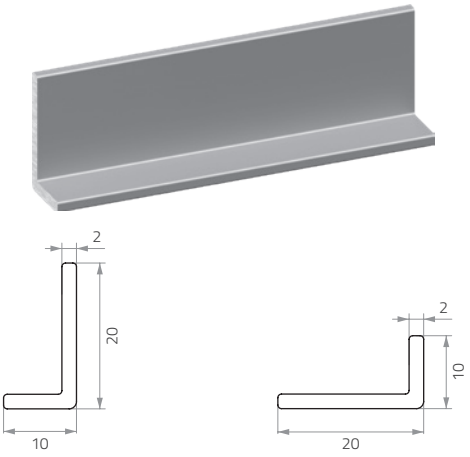
		type of masking cover			
		A	B	C	D
type of side cover	Type 1		✓	✓	✓
	Type 2	✓			

Masking cover – aluminium angle bracket

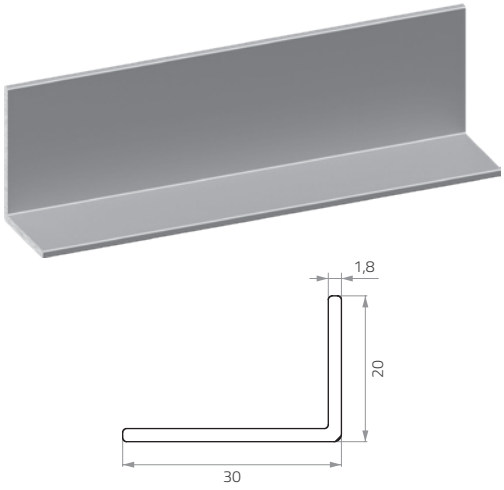
Aluminium angle bracket

It is manufactured using extrusion process. Offered in two sizes (10 x 20 or 10 x 30 mm), the bracket is available in 5 standard colours. It may also be painted in any RAL colour (except pearly, metallic or fluorescent shades).

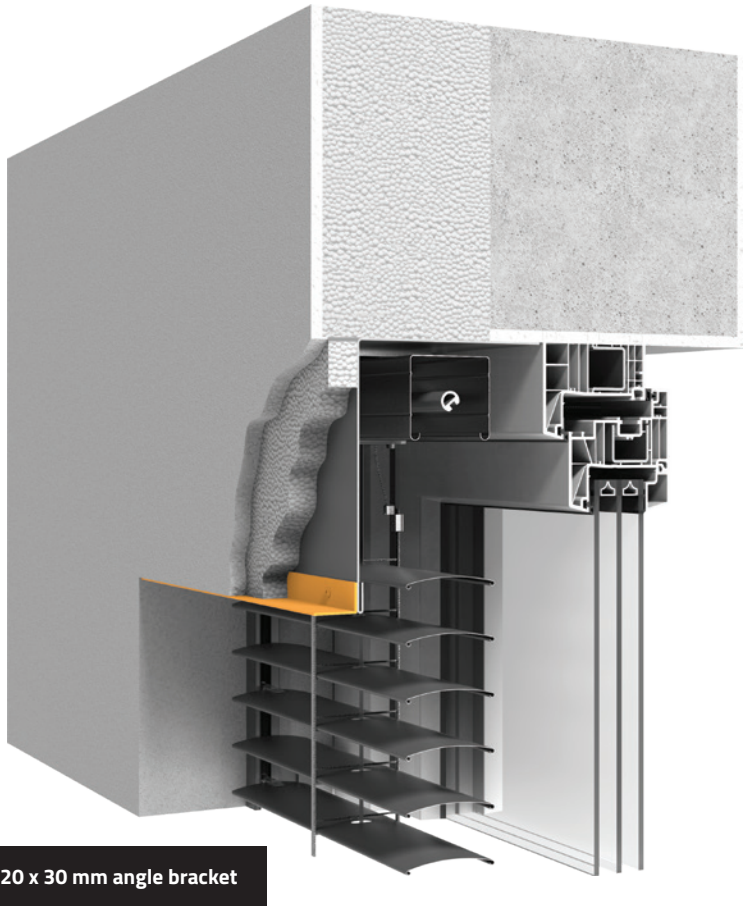
10 x 20 mm angle bracket



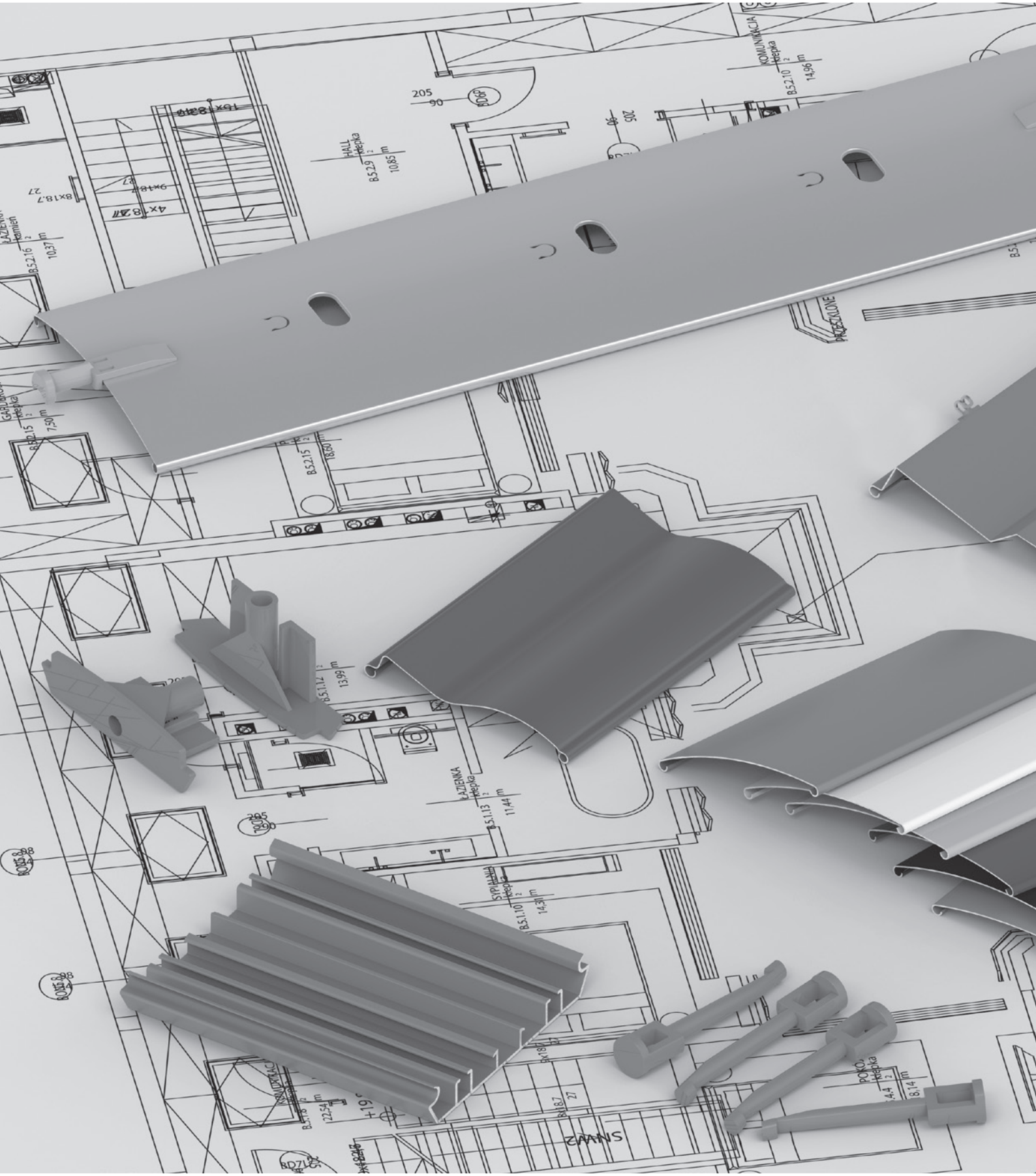
20 x 30 mm angle bracket



Basic colours available: white, brown, dark brown, grey, anthracite



Type C masking cover + 20 x 30 mm angle bracket



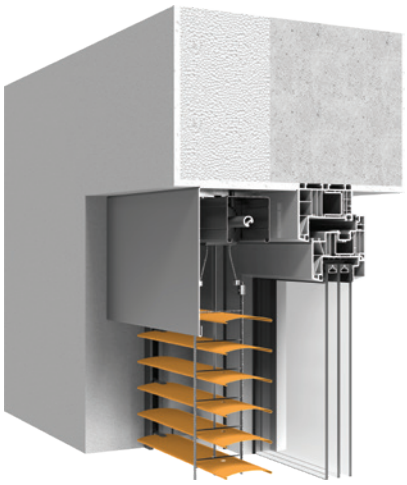
PACKET OF SLATS

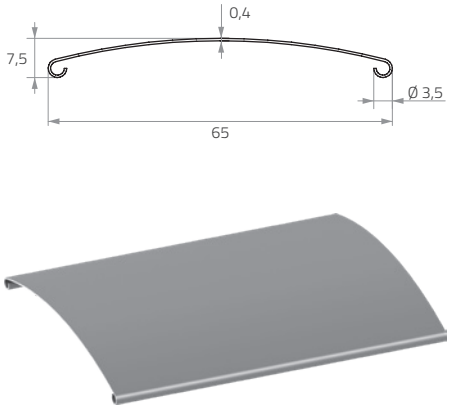
Types of slats

Aluminium slats

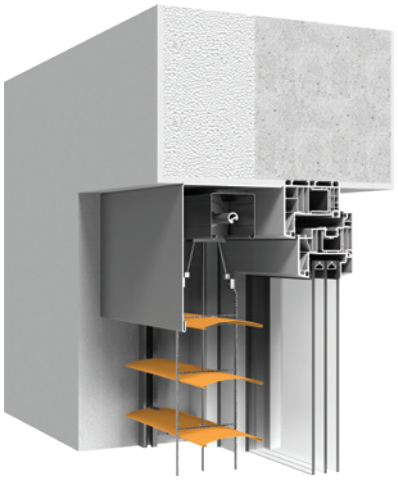
Differently shaped aluminium plates of width depending on the type of slat, ranging from 65 to 90 mm. Aluminium tape, of which 0,4 mm thick slats are made, is covered with weatherproof varnish.

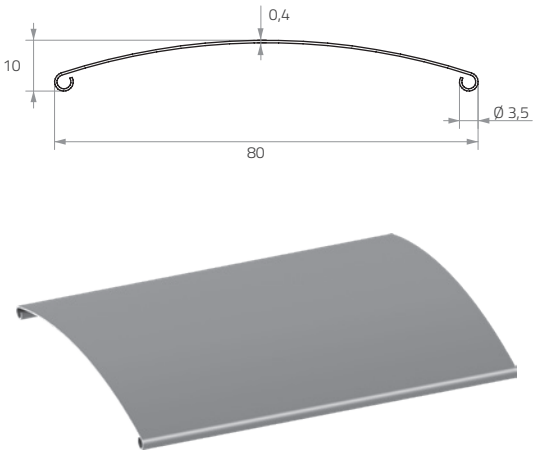
C-65 Slat





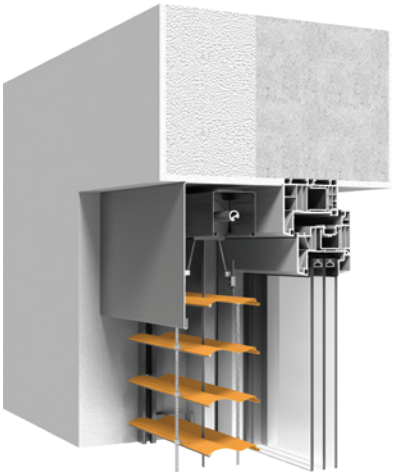
C-80 Slat

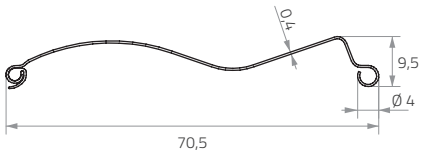


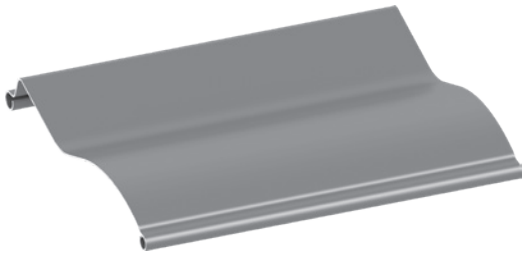


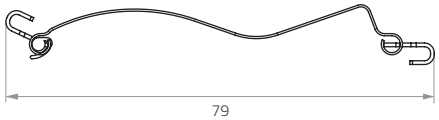
Types of slats

S-70 Slat



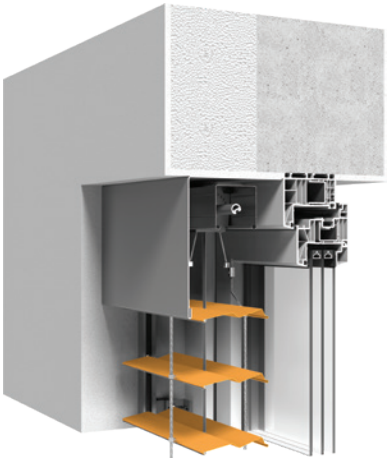


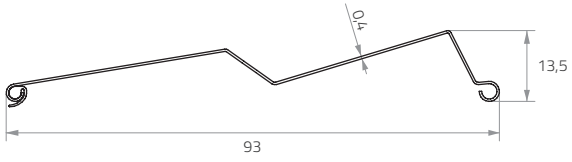


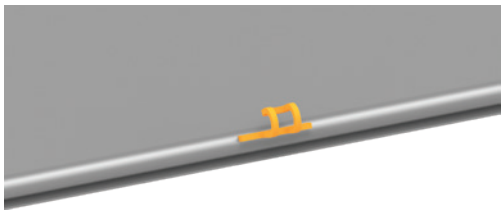


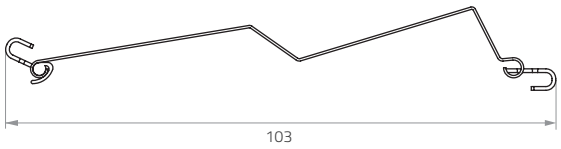
dimension includes ladder lock

Z-90 Slat









dimension includes ladder lock

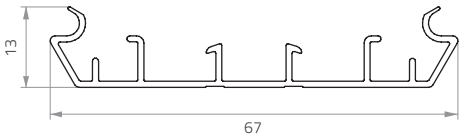
	C-65	C-80	S-70	Z-90
Slat thickness	0,4 mm	0,4 mm	0,4 mm	0,4 mm
Max. width	cable: 3500 mm guide channel: 4300 mm	4000 mm self-supporting system 2800 mm	4500 mm	4500 mm
Max. height	5000 mm	5000 mm	5000 mm	5000 mm
Max. surface area	16 m^2	16 m^2 self-supporting system 5-8 m^2	16 m^2	16 m^2
Type of slat	folded edges	folded edges	folded edges	folded edges
Side guide	cable / guide channels	cable / guide channels	guide channels	guide channels
Slat rotation	90° / 180°	90° / 180°	90°	90°
Type of guide	PVC / ALU	PVC / ALU	ALU	PVC / ALU
Positioning of guides	every other slat	every other slat	every other slat	every other slat
Number of available colours	5	22	5	8

Bottom bar

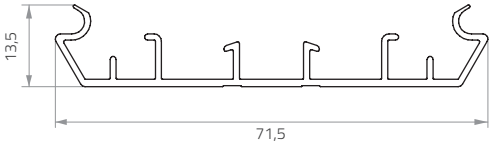
Bottom bar

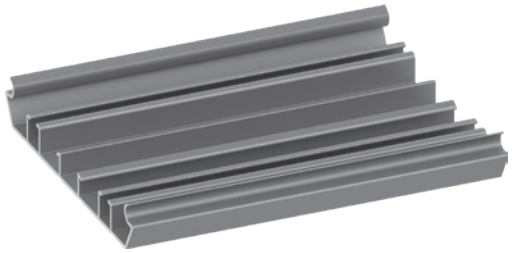
aluminium bar, 67 to 93 mm wide, depending on the slat type. The bar is closed from the top by pressing a slat on it until it clicks. On both ends of the bar there are end caps with guidance pins.

C-65 bottom bar

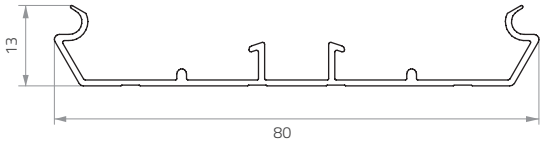


S-70 bottom bar

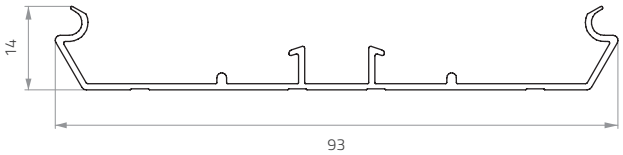




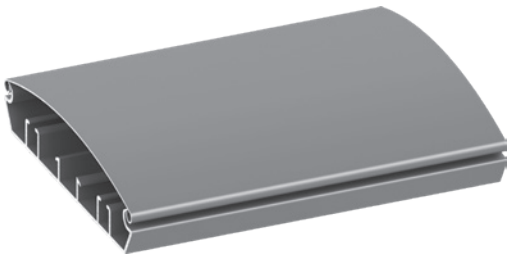
C-80 bottom bar



Z-90 bottom bar



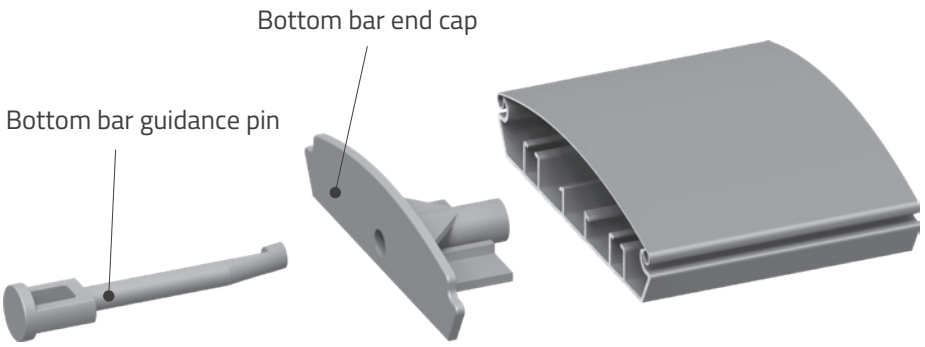
Closing the bottom bar



The standard bottom bar is closed from the top with a slat which is part of the system.

Note: when maintenance or repair work needs to be carried out inside the bottom bar, it must be dismantled with care. The top slat must be carefully levered up and supported across the entire width.

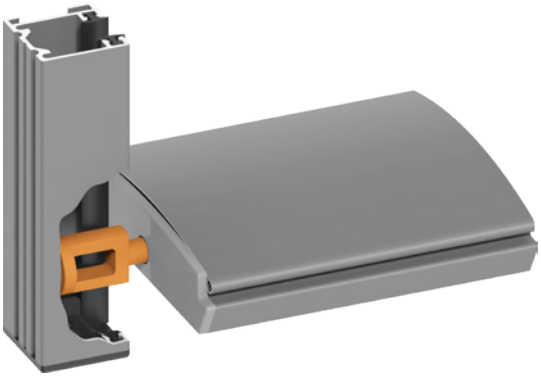
Bottom bar



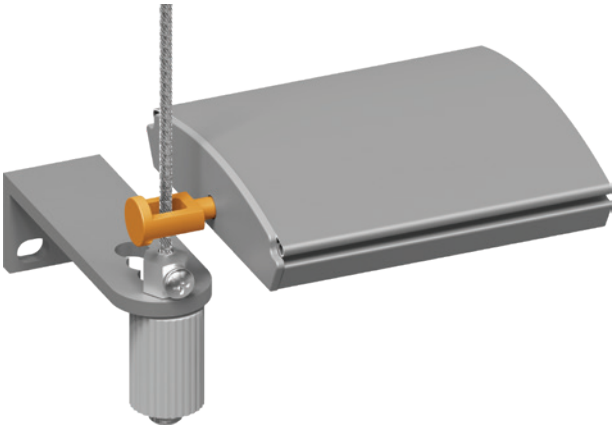
The standard end cap is riveted to the bottom bar during manufacturing process.

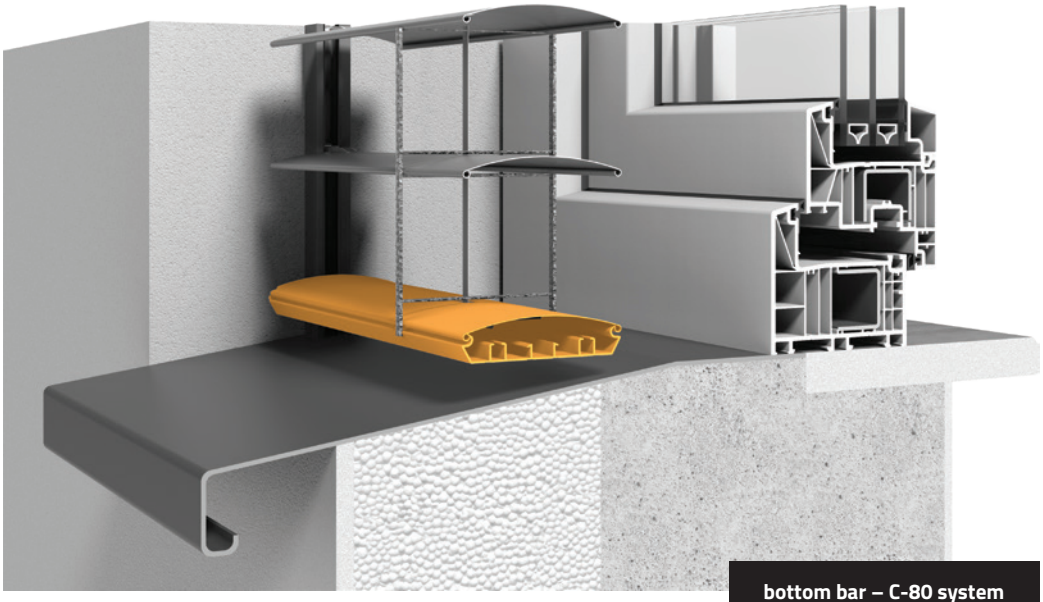
Positioning of guidance pin in different types of side guide

Guide channels



Cable guide





bottom bar – C-80 system

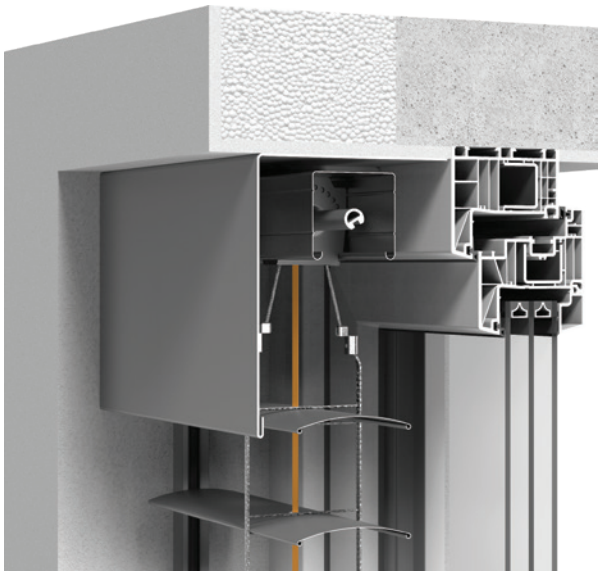
Cloth tape

Cloth tape

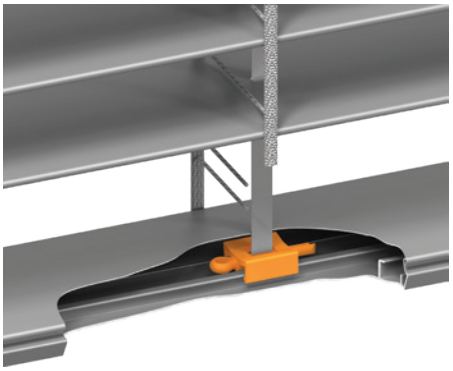
responsible for raising and lowering the blind, made of special fabric with polyester fibres with addition of Kevlar® for extra durability, increased wear resistance, colour fastness as well as resistance to UV radiation and adverse weather conditions. Available widths – 6 or 8 mm (depending on slat) in two colour options: grey or black.

		C-65	C-80	S-70	Z-90
cloth tape	6 mm	✓	✓		
	8 mm			✓	✓

		C-65	C-80	S-70	Z-90
colour	grey	✓	✓	✓	✓
	black	✓	✓		✓



Installing cloth tape in the bottom bar



Cloth tape lock

Cloth tape lock is a fitting component only and should not be used as a tool for adjusting bottom bar level.

The level of the bottom bar should be adjusted with ladder lock (the component joining the ladder with the bearing) or directly – by using the bearings fitted in the head rail.

Ladders

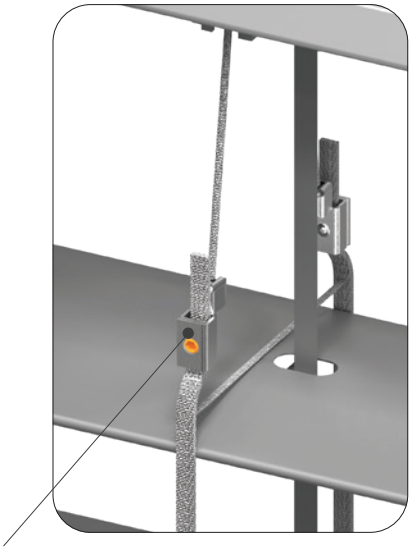
The ladder

makes it possible for the slats to rotate. Made of special textile fabrics, usually from polyester fibres for extra durability, colour fastness as well as wear, UV and weather resistance. Available in grey and black.

		C-65	C-80	S-70	Z-90
ladder	standard	✓	✓		
	HAGO FIX®			✓	✓

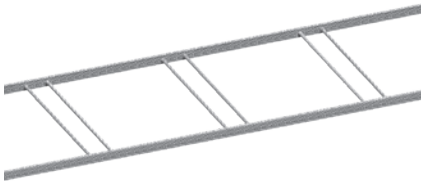
		C-65	C-80	S-70	Z-90
colour	grey	✓	✓	✓	✓
	black	✓	✓		✓

Joining the ladder with control bearing



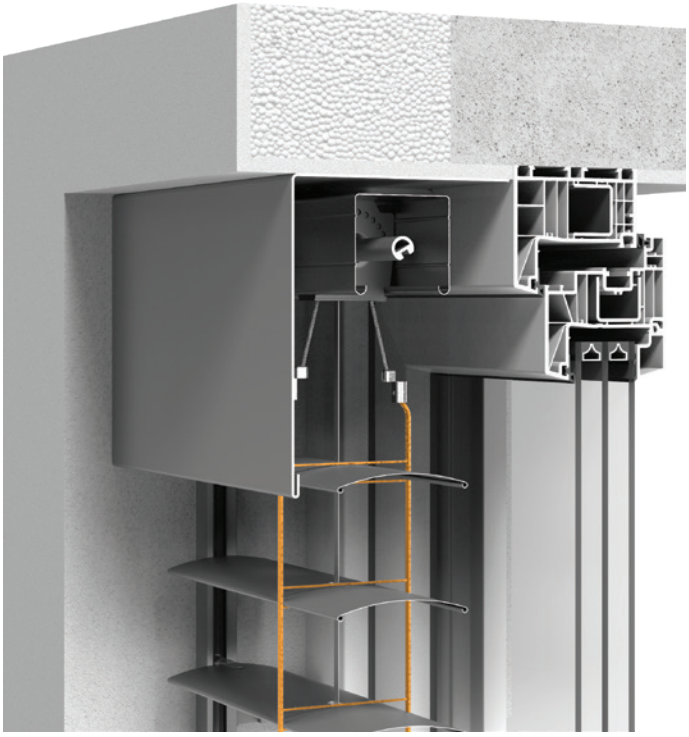
M4x5 set screw
2,5 hex key

Standard ladder



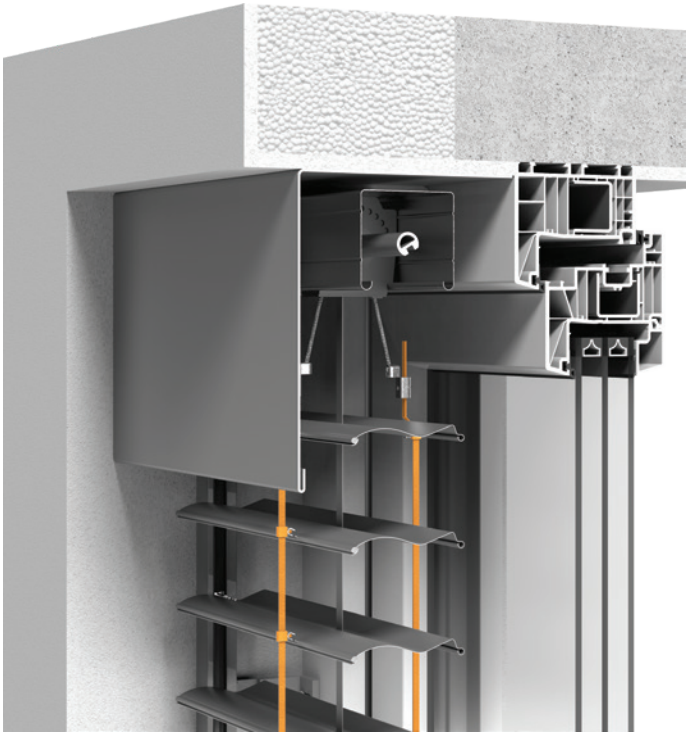
Tape spacing:
– C-65: 54 mm
– C-80: 72 mm

Irregular folding of ladder between the slats while the blind is pulled up (so called uneven package) is a natural phenomenon resulting from the properties of textile fabric, which does not in any way interfere with the operation of the blind and does not constitute grounds for a complaint.



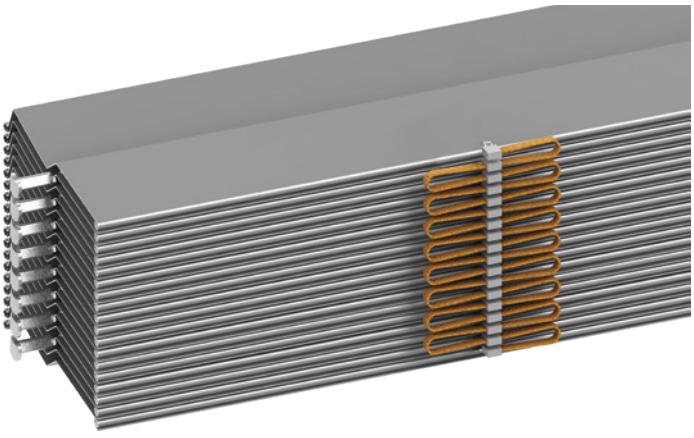
HAGO FIX® ladder

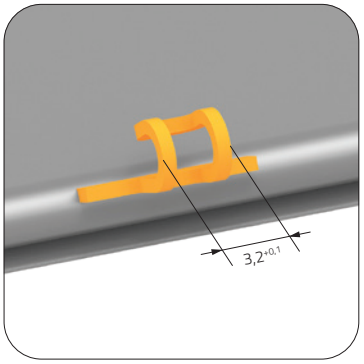
Tape spacing:
– S-70: 60 mm
– Z-90: 82 mm



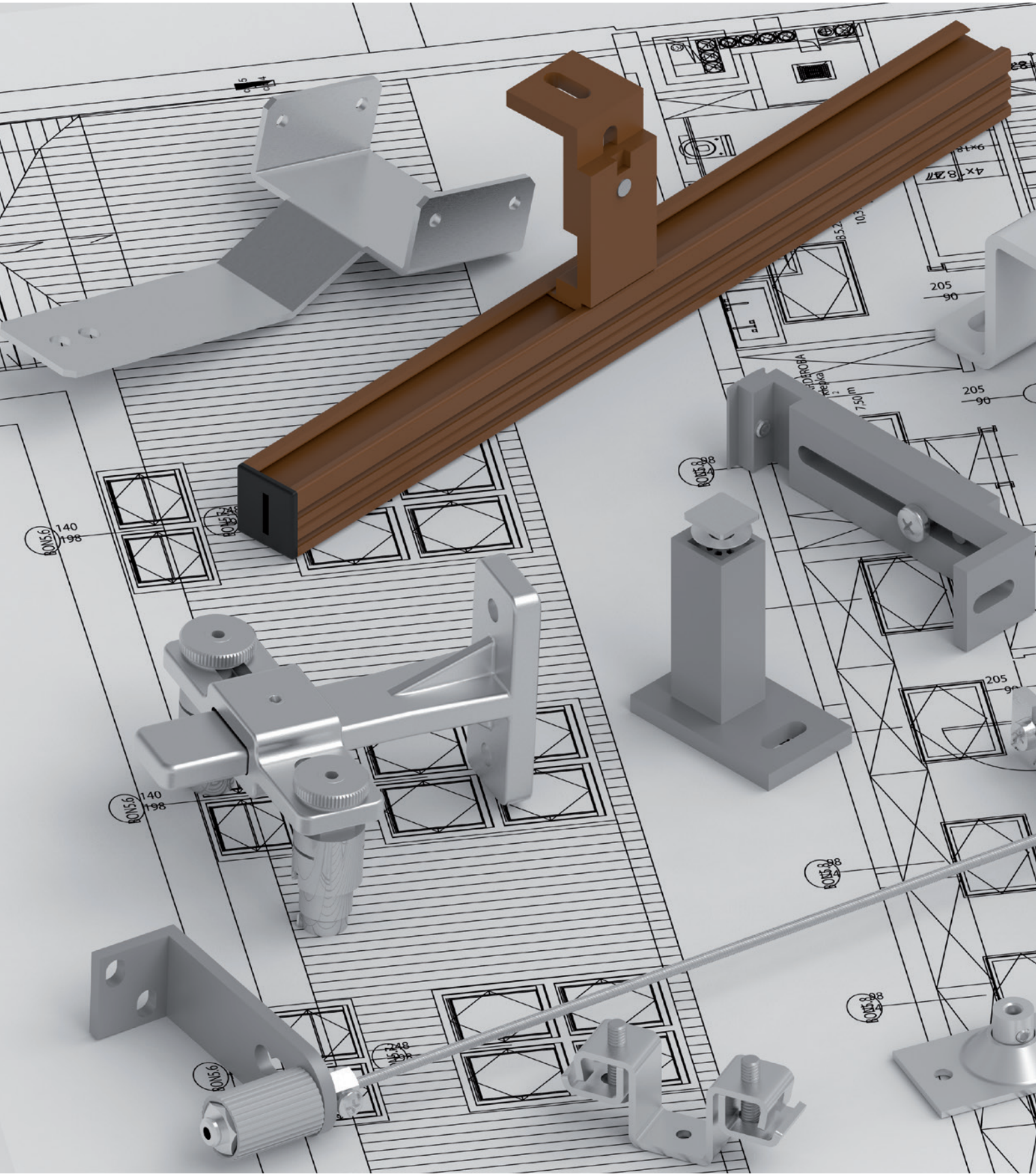
HAGO FIX® ladder system – special, small, steel hooks are put into slat profiles; a special machine presses on them a tiny ball – integral part of the ladder – until it clicks making sure that the ladder is evenly distributed once the packet is folded (see drawing below).

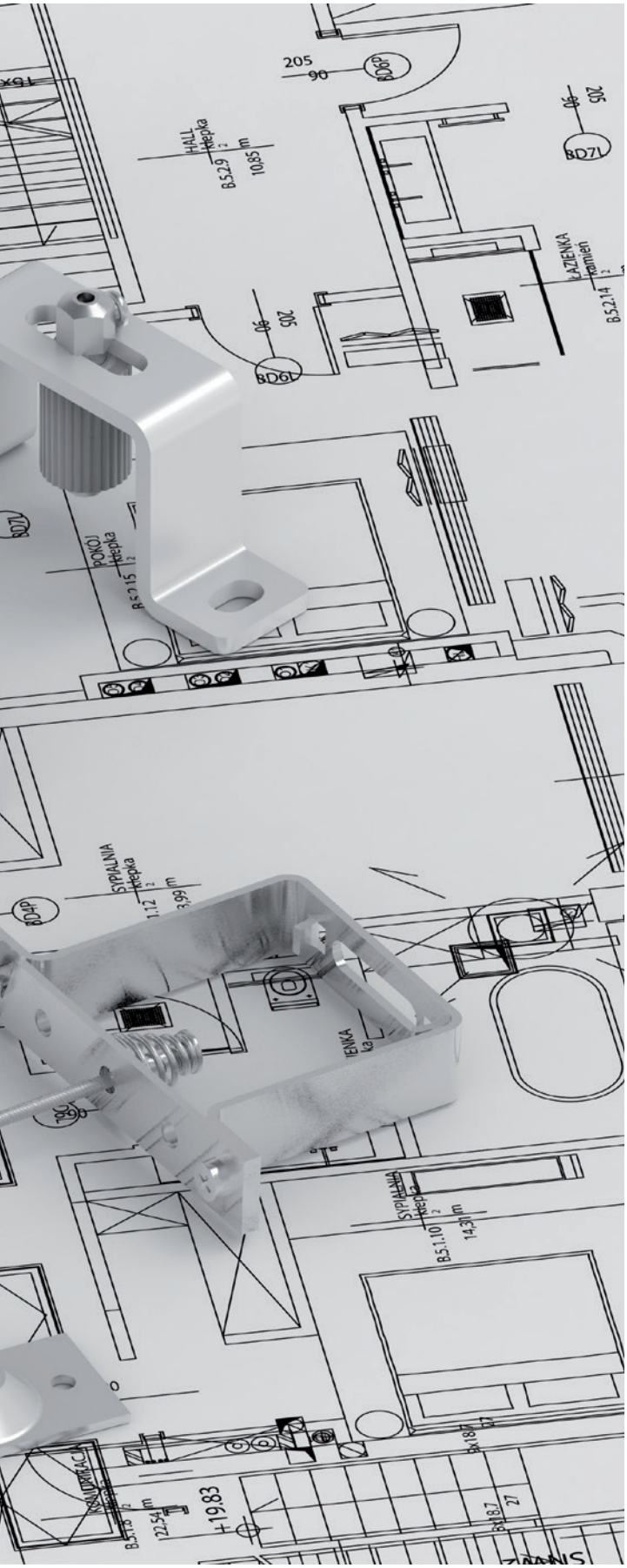
HAGO FIX® ladder alignment in a packet of slats



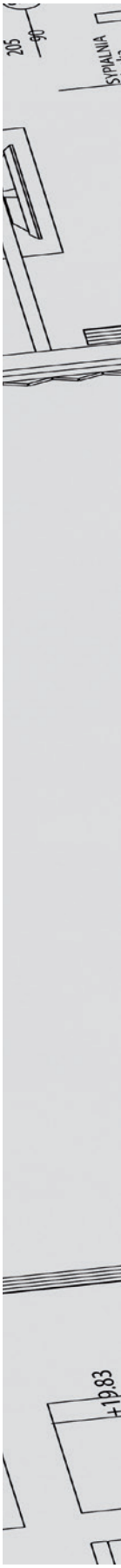


When HAGO FIX® ladders are being replaced as part of the standard maintenance procedure, it is crucial to push the ball (part of the ladder) well into the steel hook, so it finally clicks in and the distance between the hook's edges remains as shown in the drawing above.





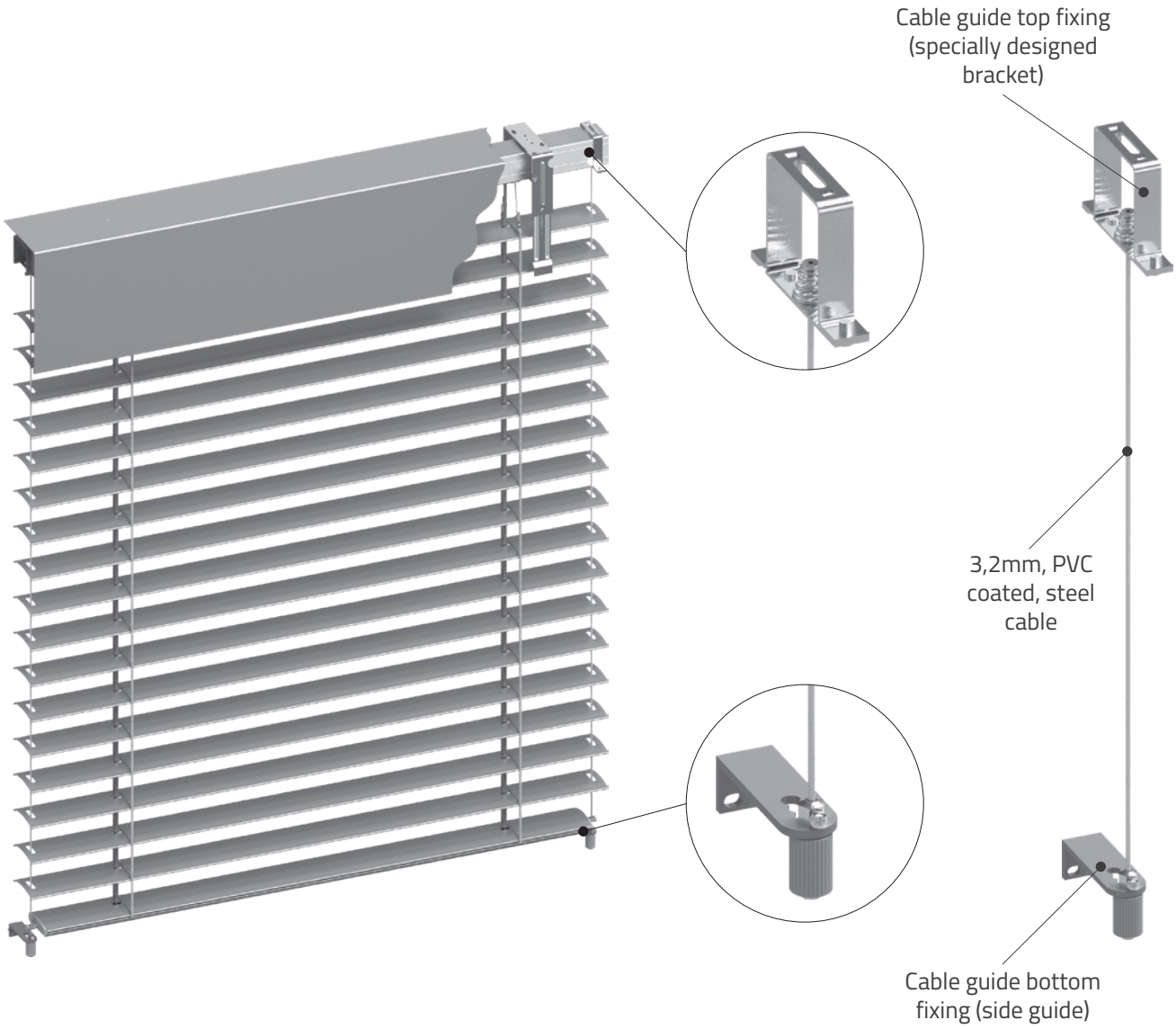
SIDE GUIDE



Side guide system – cable guide

Cable guide

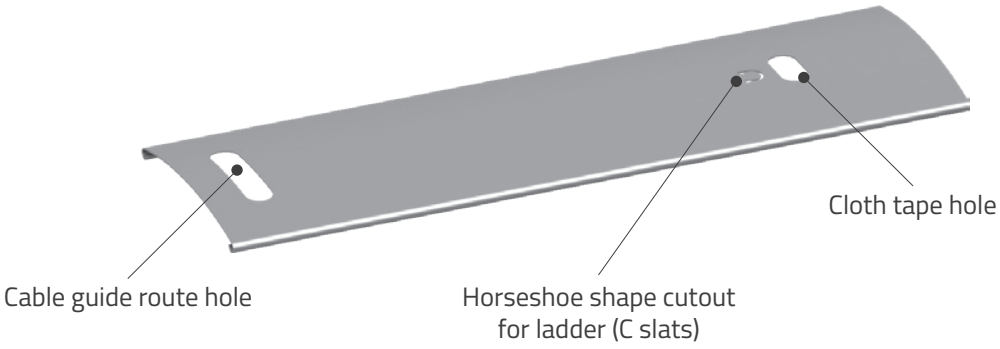
Based on its main element – 3,2mm, PVC coated, steel cable in grey, which is threaded through each slat of the packet via slat route holes. Its upper end is attached to the top cable guide bracket using tightly crimped sleeve and a spring that ensures that the cable is properly tensioned. The bottom end of the cable is attached to a compatible cable guide bottom bracket.

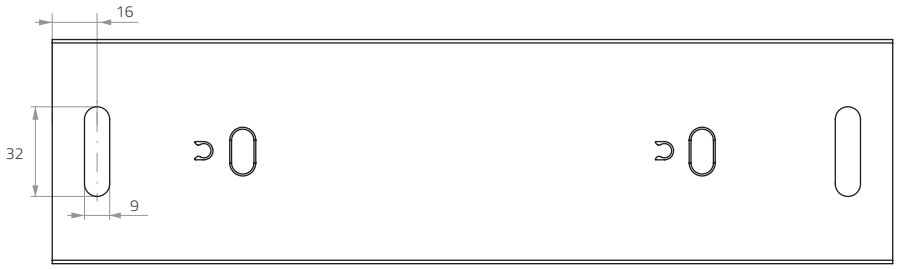


	C-65	C-80	S-70	Z-90
Cable guide	✓	✓		

Cable guide – slat route hole dimensions

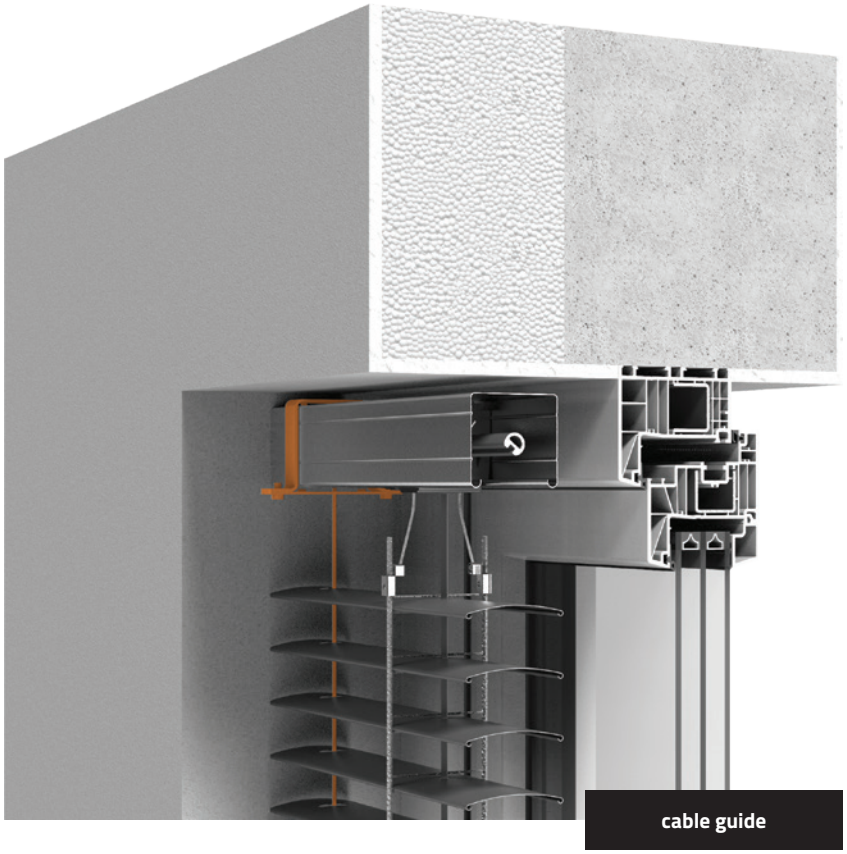
Slat route hole for cable guide - dimensions





In external venetian blinds with 90^0 rotating slats the horseshoe shape cutout holding the ladder is found in every 5th slat,whereas in blinds with 180^0 rotating slats there are 3 cutouts per total height of the blind.

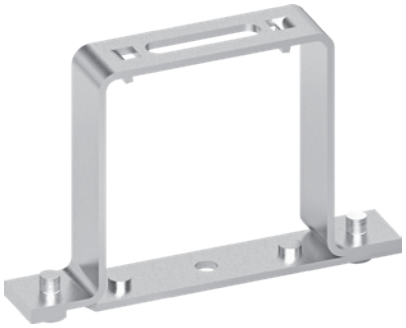
External blinds < 800 mm (wide) are manufactured with 90^0 rotating slats only.

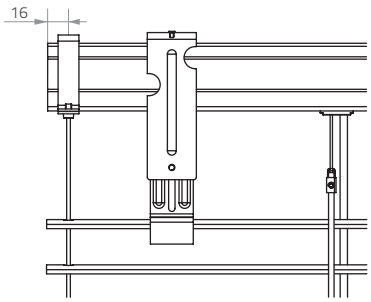


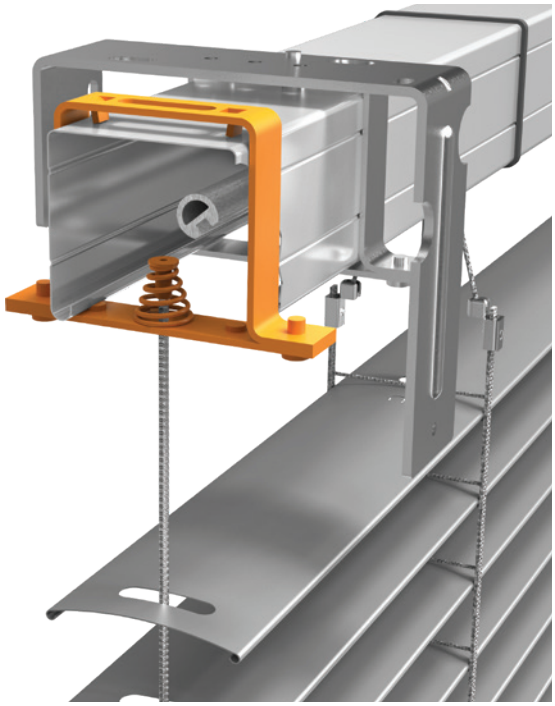
cable guide

Cable guide – top fixing

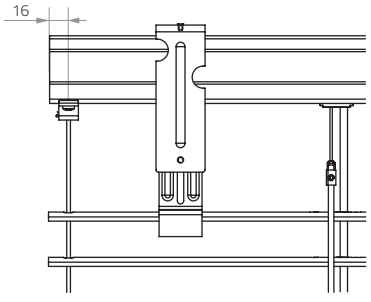
Specially designed top bracket for cable guide

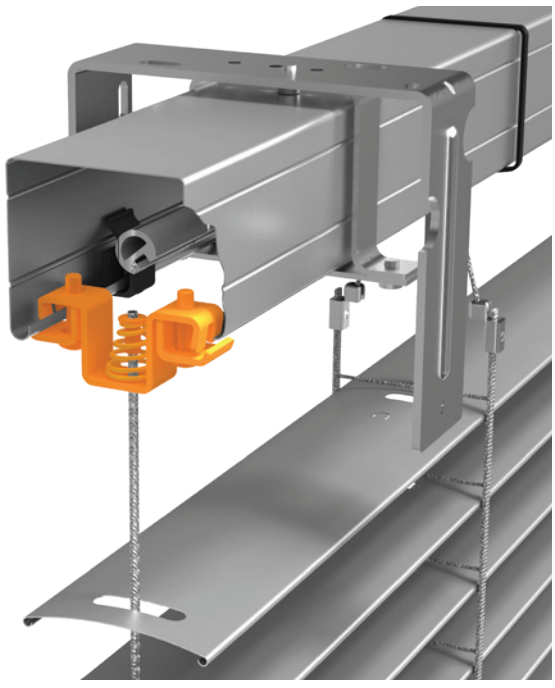






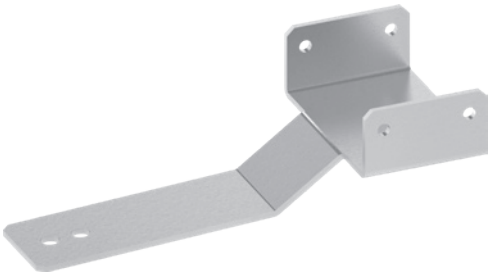
Internal top bracket for cable guide

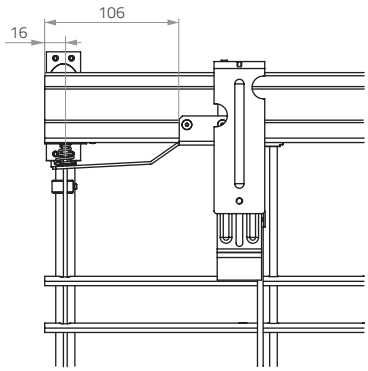


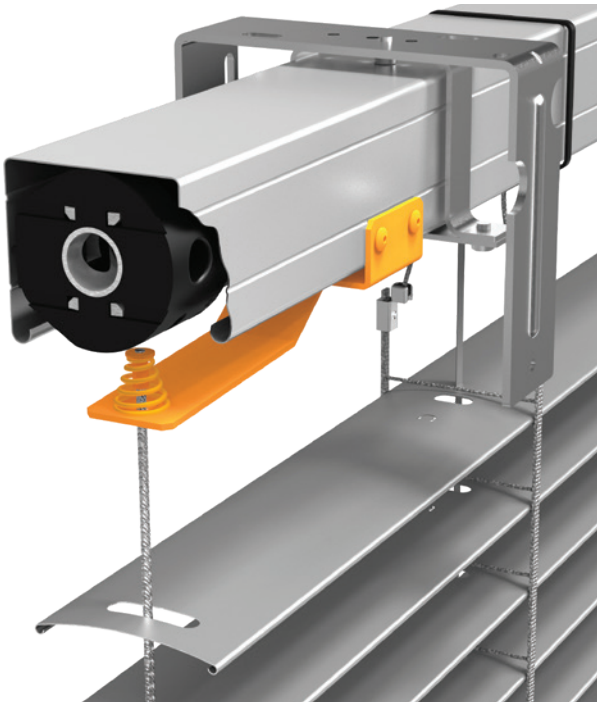


Cable guide – top fixing

Top bracket for cable guide **(under gear)**



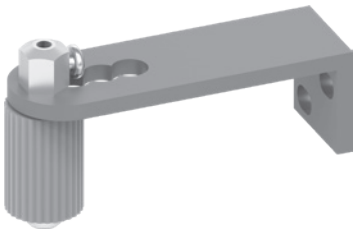


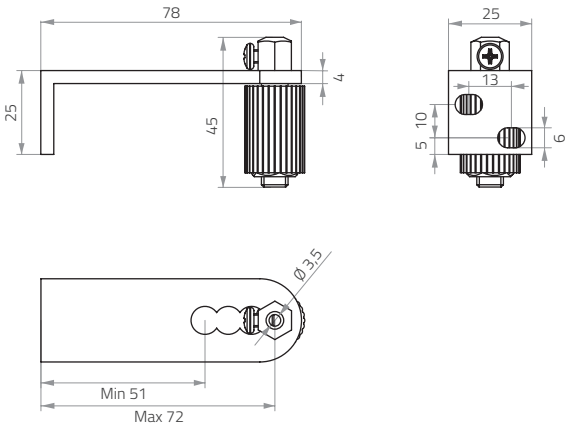


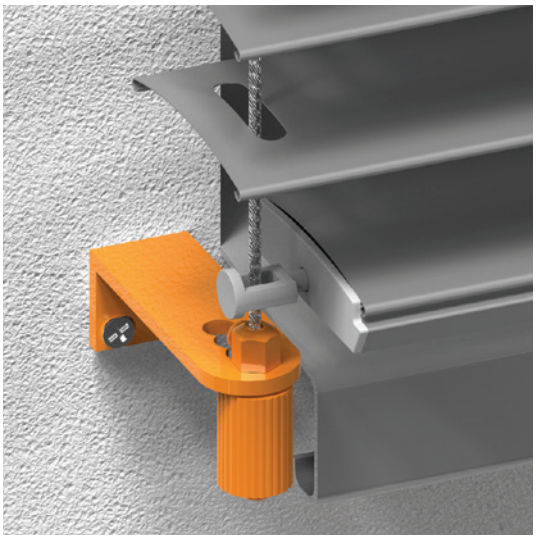
The standard bracket is mounted on the same side as the crank gear.

Cable guide – bottom fixing

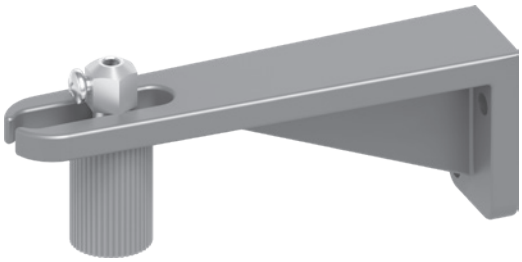
Bottom bracket **b** for cable guide (range: 51 – 72 mm)

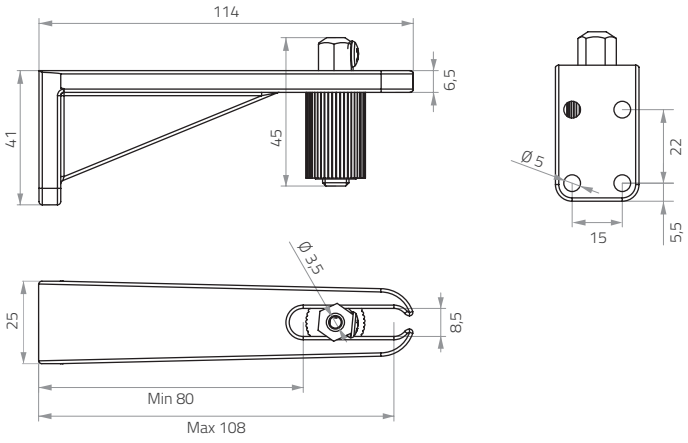


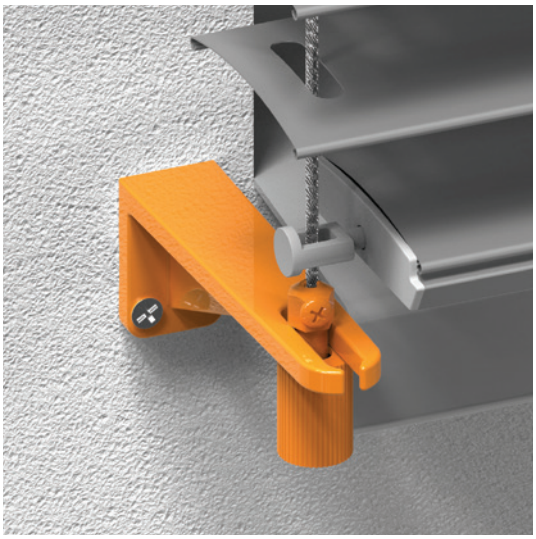




Bottom bracket **a** for cable guide (range: 80 – 108 mm)

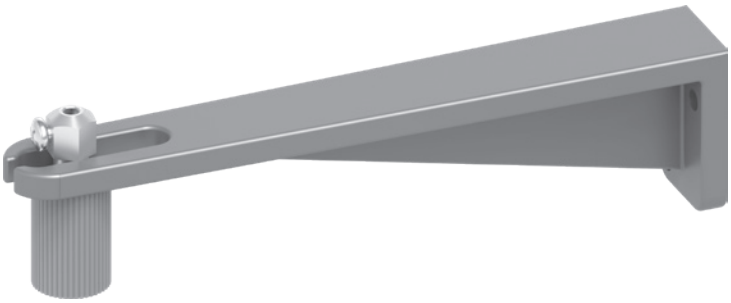


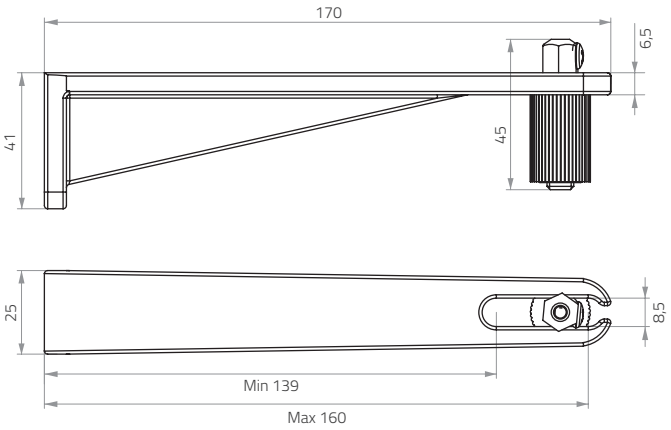


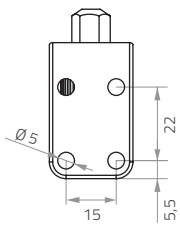


Cable guide – bottom fixing

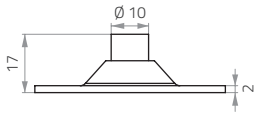
Bottom bracket **e** for cable guide (range: 139 – 160 mm)

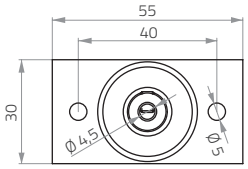


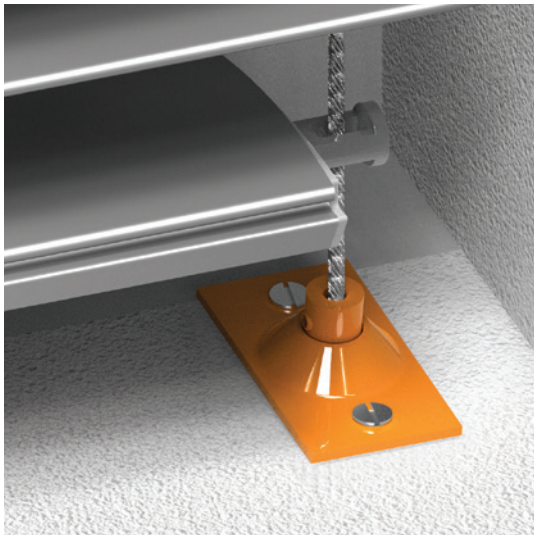




Bottom bracket **d** for cable guide

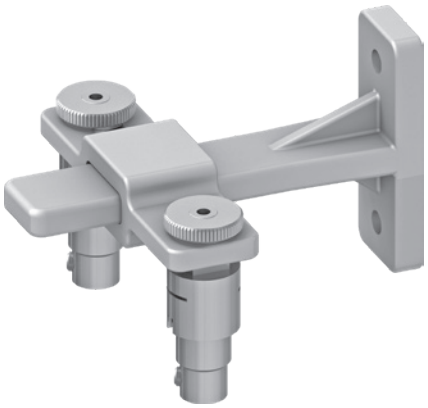


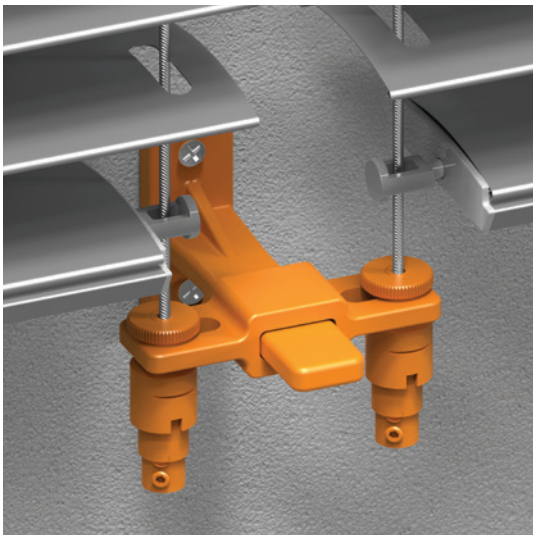




Cable guide – bottom fixing

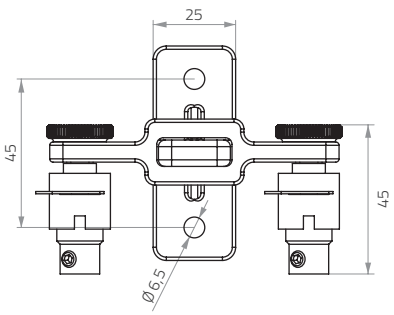
Bottom bracket **c** for cable guide (range: 50 – 90 mm)

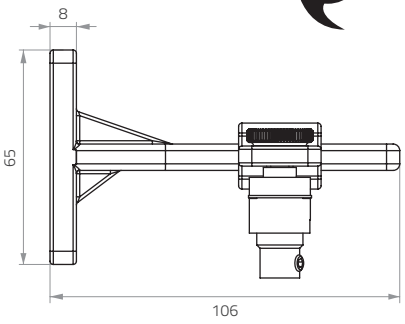


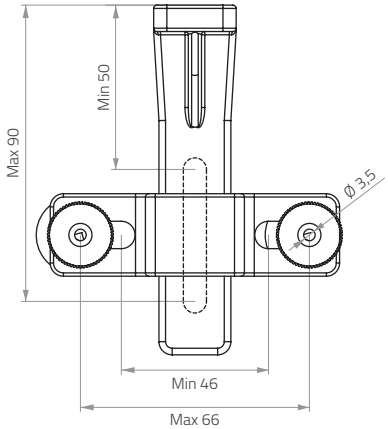


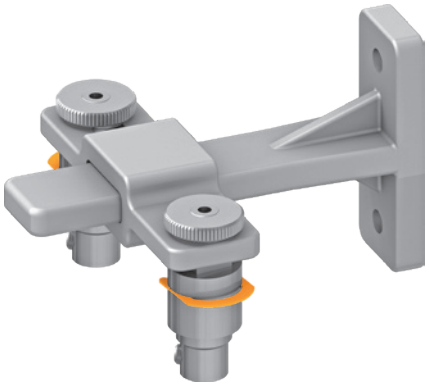
Joins the blind with cable guide

Min. space between the slats: 10 mm





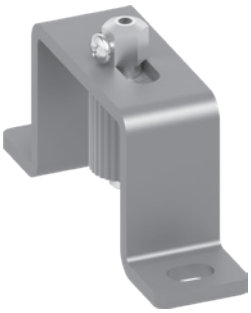


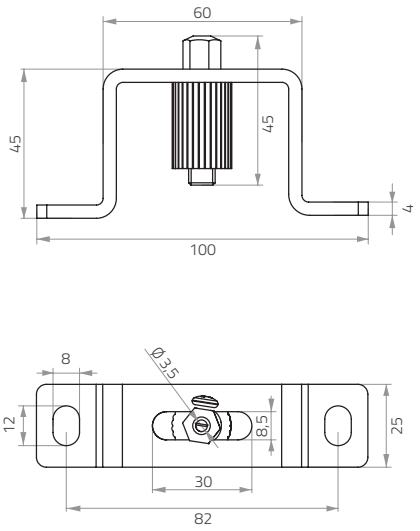


Once the bracket (with cables) is mounted on the frame or building facade, safety pins should be removed. This will immediately increase the tension of the cables.

Cable guide – bottom fixing

Bottom bracket for cable guide **(omega)**





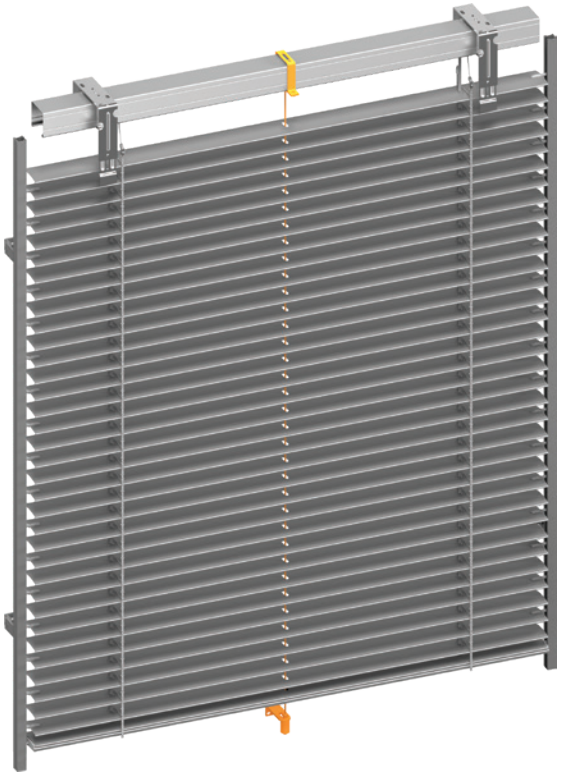
Anti-wind cable

Anti-wind cable

Placed in the middle of external venetian blind, its purpose is to make the blind more stable when the wind gets strong.

All blinds fitted with anti-wind cable are manufactured with an even number of bearings; should a blind have an odd number of bearings, one bearing is added.

One blind can be fitted with max. two anti-wind cables.

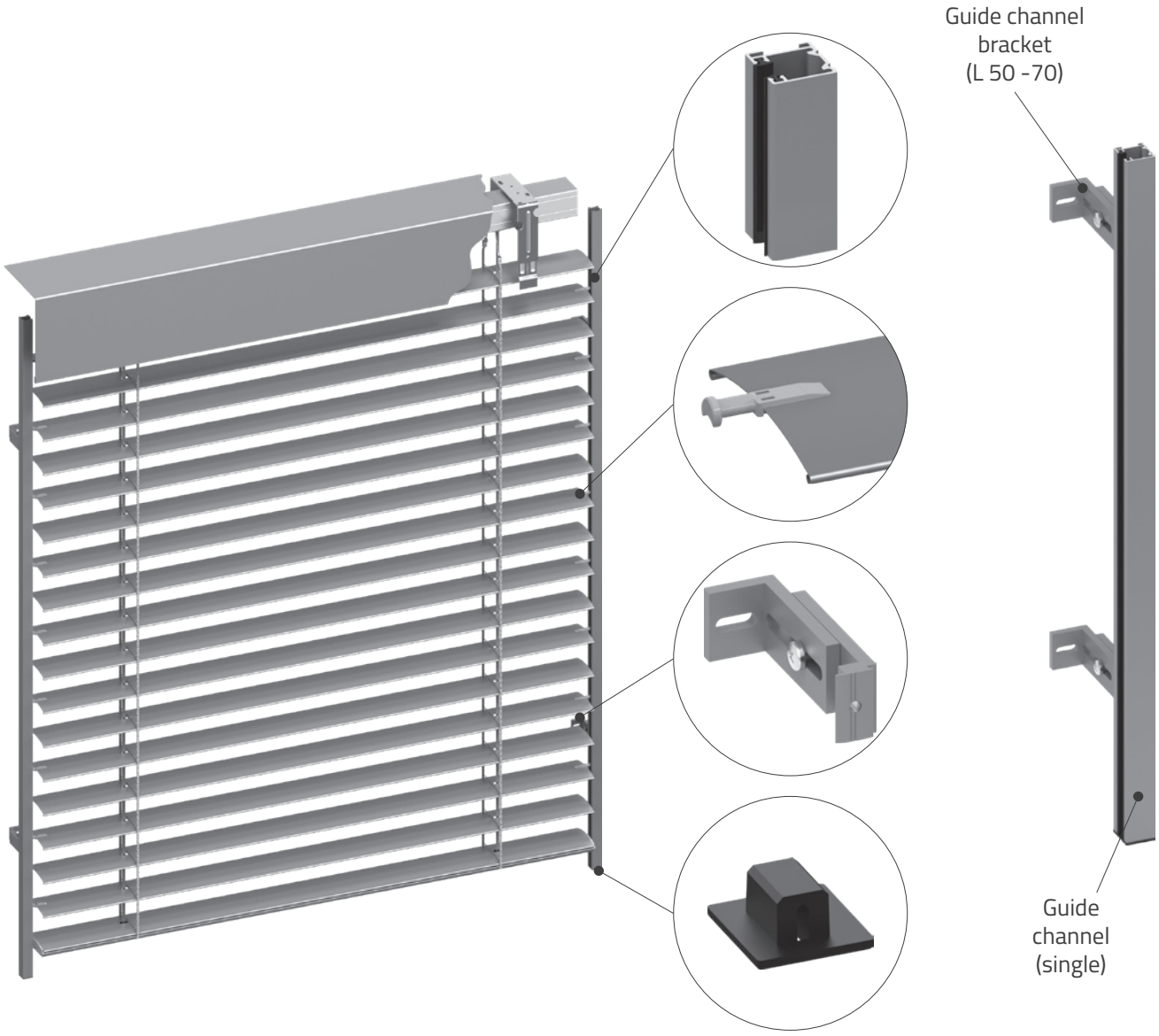


	C-65	C-80	S-70	Z-90
Anti-wind cable	✓	✓		

Guiding system – guide channels

Guiding with guide channels

produced from aluminium by extrusion, guide channels (profiles) are the main component of the guiding system. They can be single or double (in a set of blinds). Guide channels are fixed to the frame/structure of the building with aluminium or plastic mounting brackets.

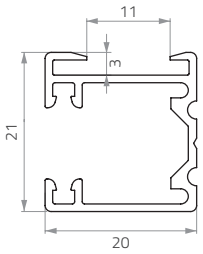


		C-65	C-80	S-70	Z-90
Guiding with guide channels		✓	✓	✓	✓
Pin	PVC*	✓	✓		✓
	ALU	✓	✓	✓	✓

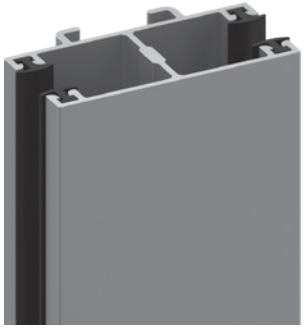
*blinds with 180^0 slat rotation feature aluminium pins only (concerns C-65, C-80 slats).

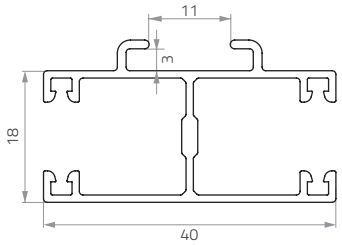
Guiding system – guide channels

Single guide channel – type A

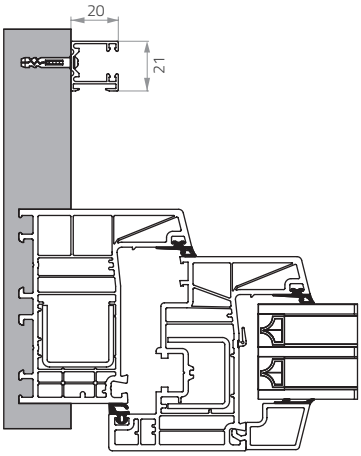


Double guide channel – type B

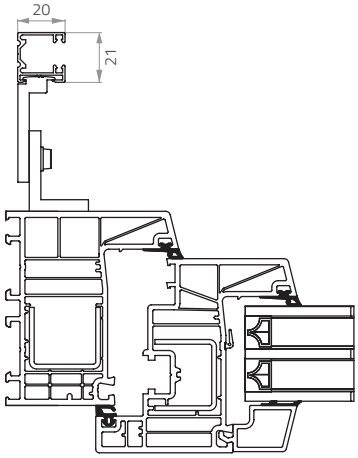




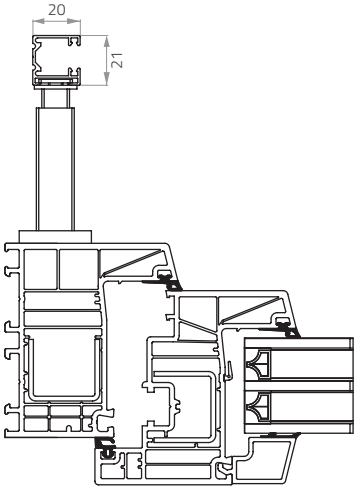
Guide channels mounted on the wall / window frame



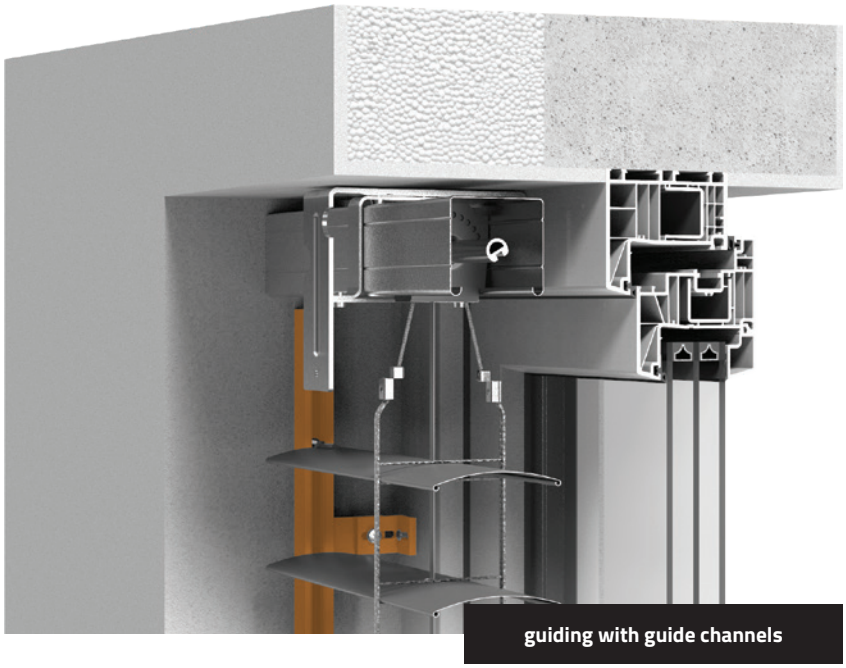
Mounting on a window splay



Mounting with type L brackets



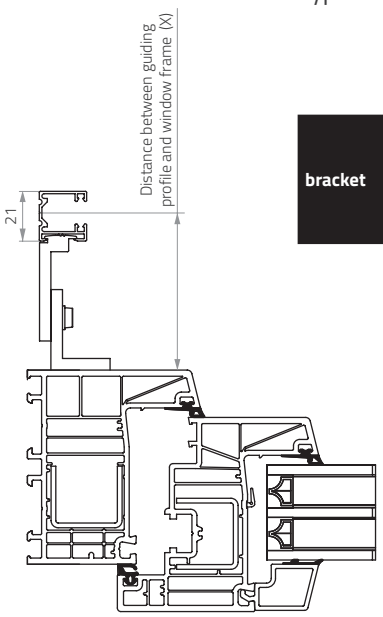
Mounting with telescopic brackets



guiding with guide channels

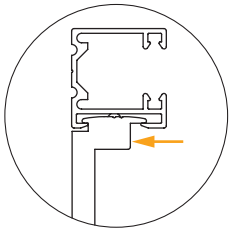
Guide channels – type B brackets

Type B bracket mounting range



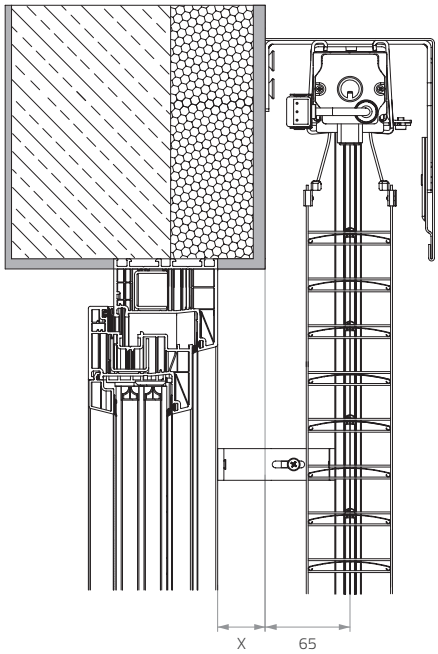
bracket	X
L-70	50 - 70 mm
L-100	70 - 100 mm
L-145	100 - 145 mm

Type B bracket – correct mounting



Once the bracket is securely placed in the guide channel, its outer edge must be aligned with the outer edge of the guide channel.

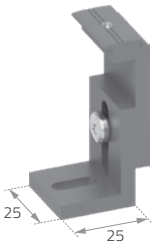
Selecting the size of the guide channel bracket

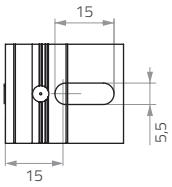


Bracket size = 65 + X

X – Distance between top bracket mounting surface and guide channel bracket mounting surface.

Dimensions of the basis of type B brackets





L – 70

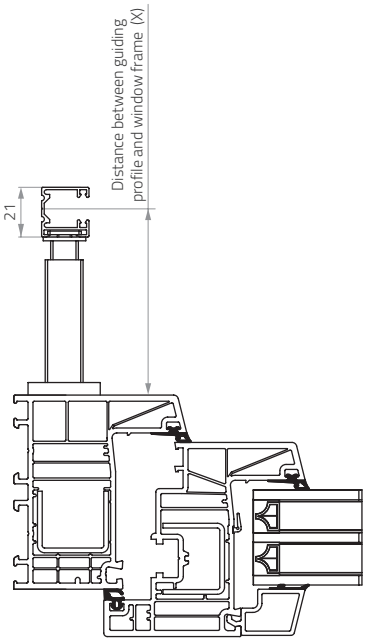
L – 100

L – 145

Number of guide channel brackets in external blinds of different size (type B brackets and type A – telescopic brackets)

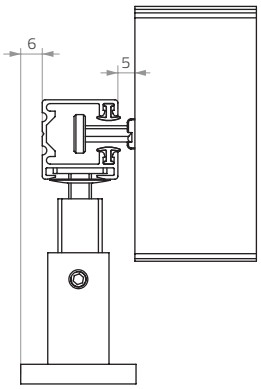
	≤ 1500	1501 - 2500	2501 - 3500	3501 - 4500	4501 - 5000
Number of brackets per pair of guide channels	4	6	8	10	12

Guide channels – type A brackets (telescopic)



type A brackets (telescopic)
mounting range

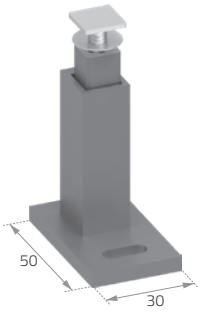
bracket		X
	XL	50 - 70 mm
	2 XL	70 - 105 mm
	3 XL	105 - 170 mm
	4 XL	170 - 295 mm

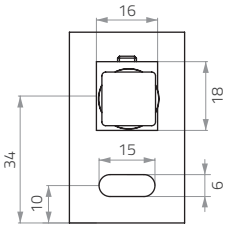


In telescopic brackets tension the shoe base protrudes 6 mm beyond the outer edge of the guide channel (dimension not included in that specified in order form).

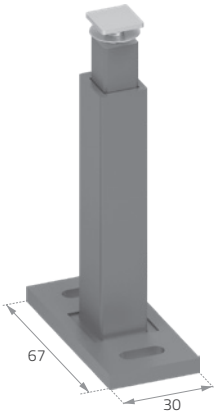
Type A (telescopic) bracket base – dimensions

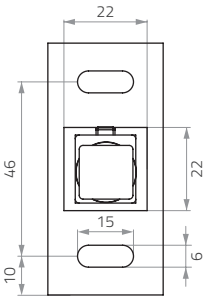
- XL, 2 XL brackets





- 3 XL, 4 XL brackets





XL

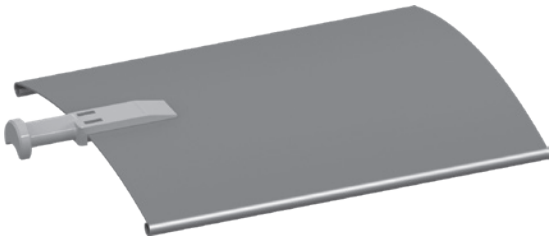
2 XL

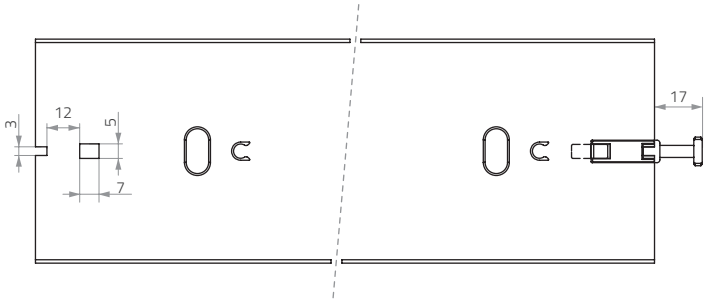
3 XL

4 XL

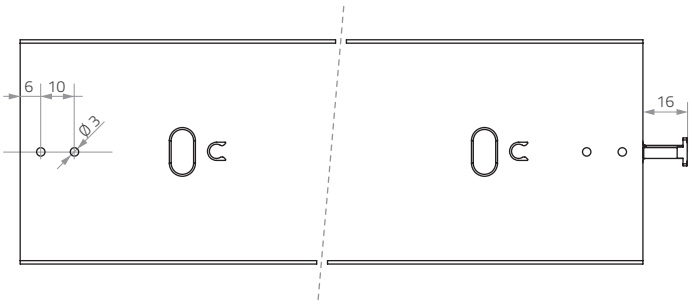
Guide channels – pins

PVC pin

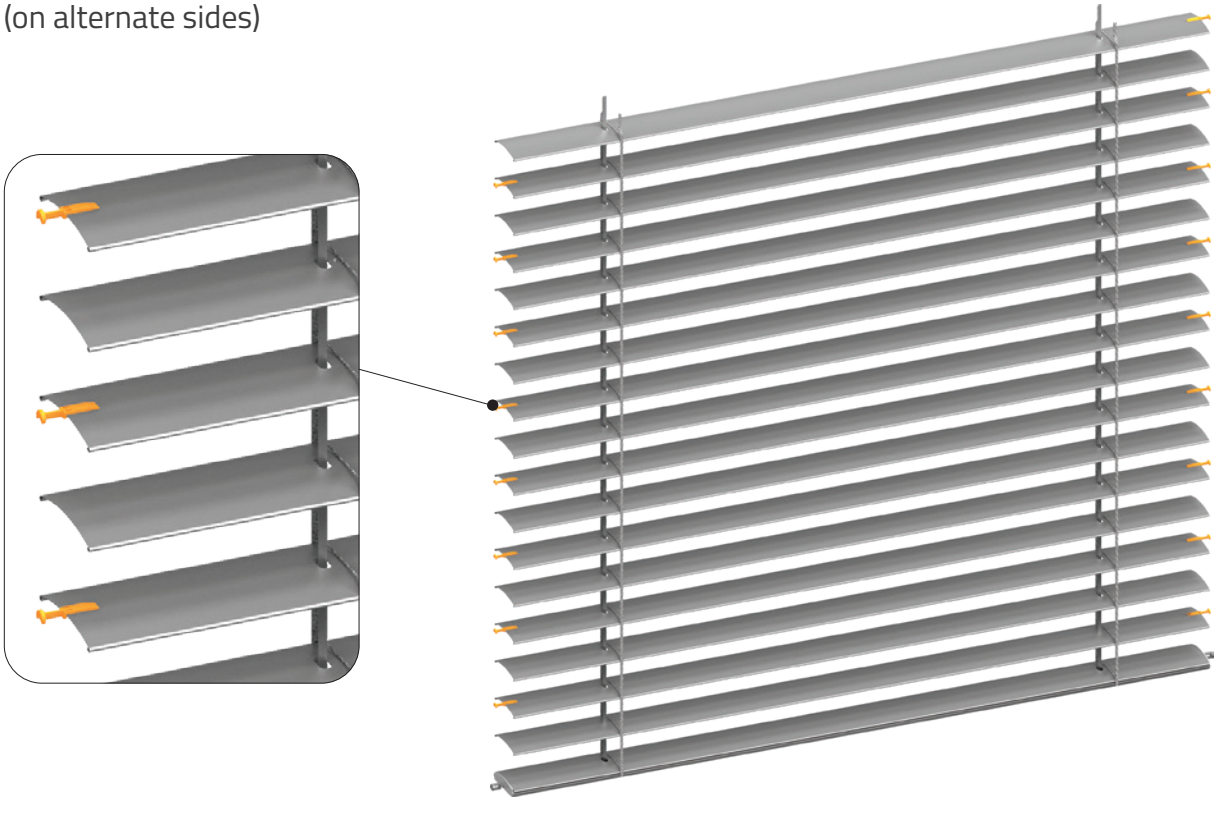




Aluminium pin

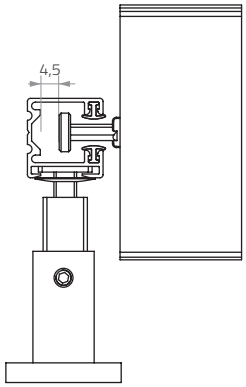


A pin on every other slat
(on alternate sides)



Guide channels – pins

	pros	cons
PVC pin	- easy replacement - strong wind damages the pin, not the whole slat	- the pin may break in strong wind - plastic material aging due to adverse weather conditions
Aluminium pin	- highly resistant to strong wind - highly resistant to adverse weather conditions	- replacement requires special tools and skills - strong wind damages the whole slat, not the pin



	C-65	C-80	S-70	Z-90
PVC pin	✓	✓		✓
Aluminium pin	✓	✓	✓	✓

External venetian blinds with 180° slat rotation are manufactured with aluminium pins only.

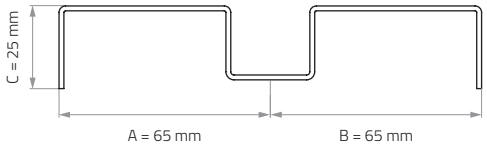
		C-65	C-80	S-70	Z-90
A pin on every other slat	**PVC pin**	✓	✓		✓
	Aluminium pin	✓	✓	✓	✓

Guide channel masking cover

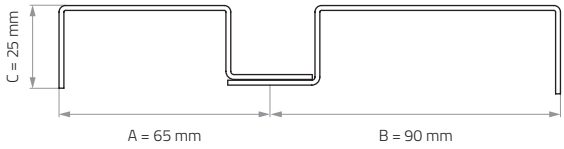
Guide channel masking cover

made of 1,5 mm thick aluminium sheet formed by bending and painted in any colour from the RAL range (except pearly, metallic or fluorescent ones). Depending on the dimensions of the blind the cover is made of one or two parts.
Maximum length of the cover is 3000 mm.

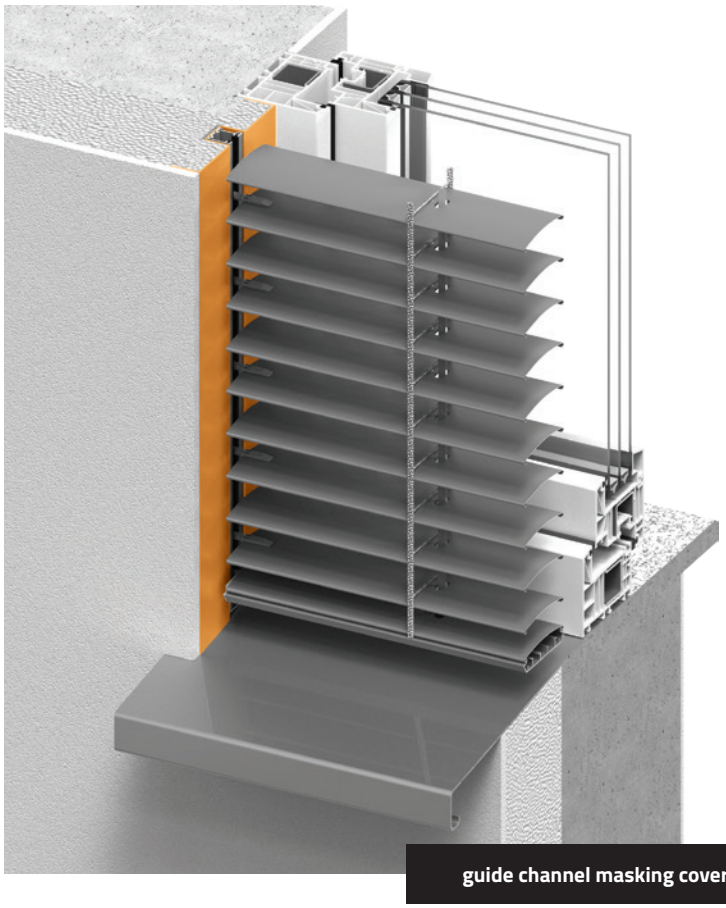
Option 1 – single-piece
A = B



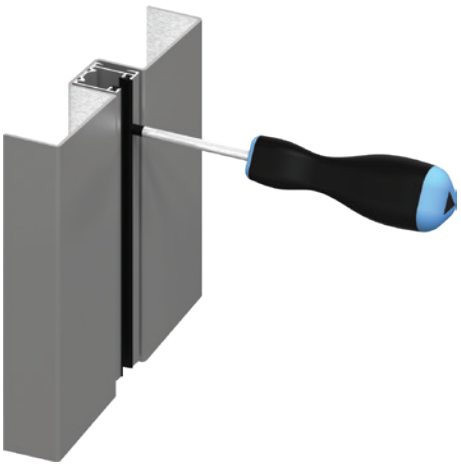
Option 2 – two-piece
A ≠ B



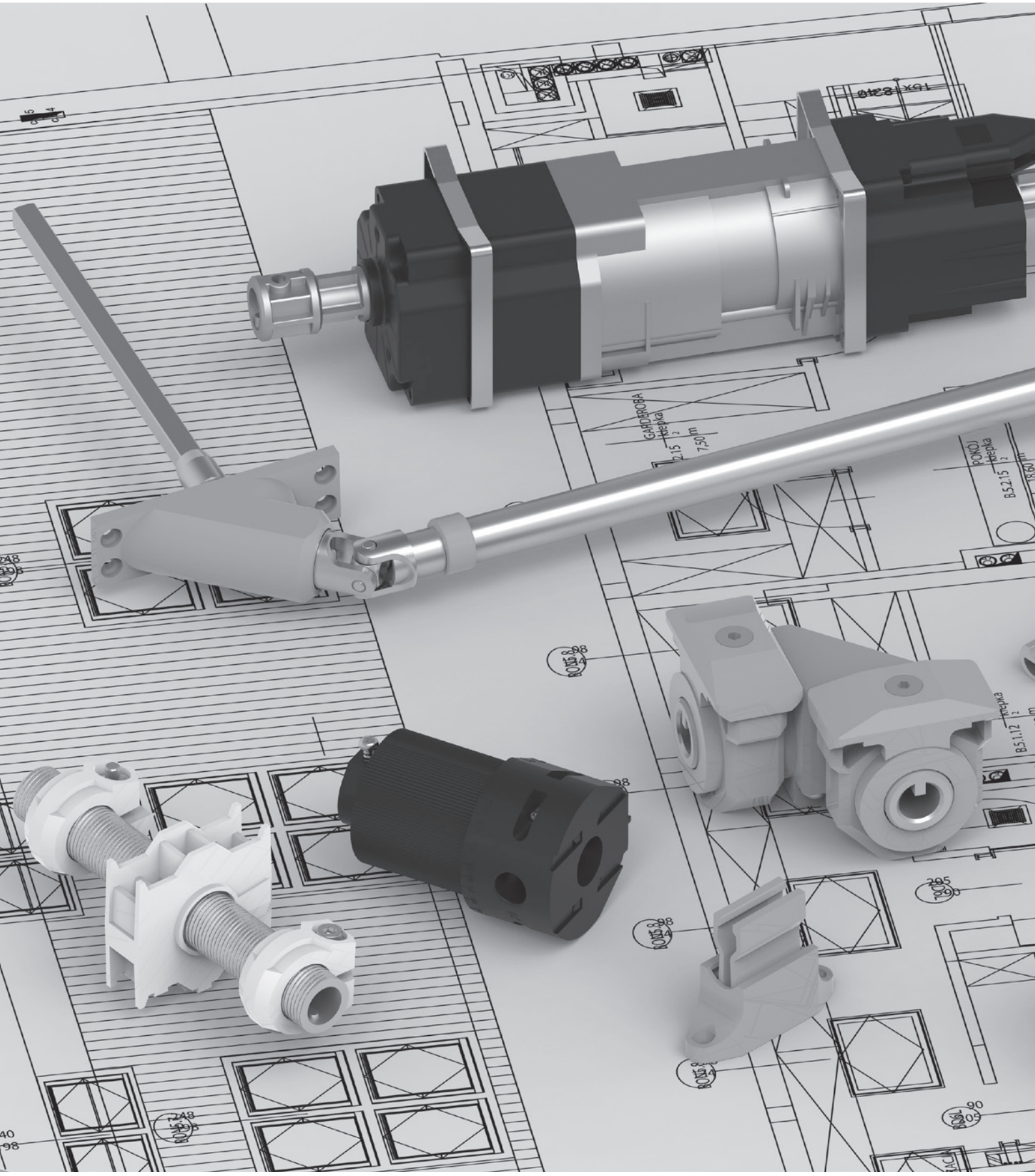
Masking covers can be made to bespoke sizes (A, B, C dimensions)

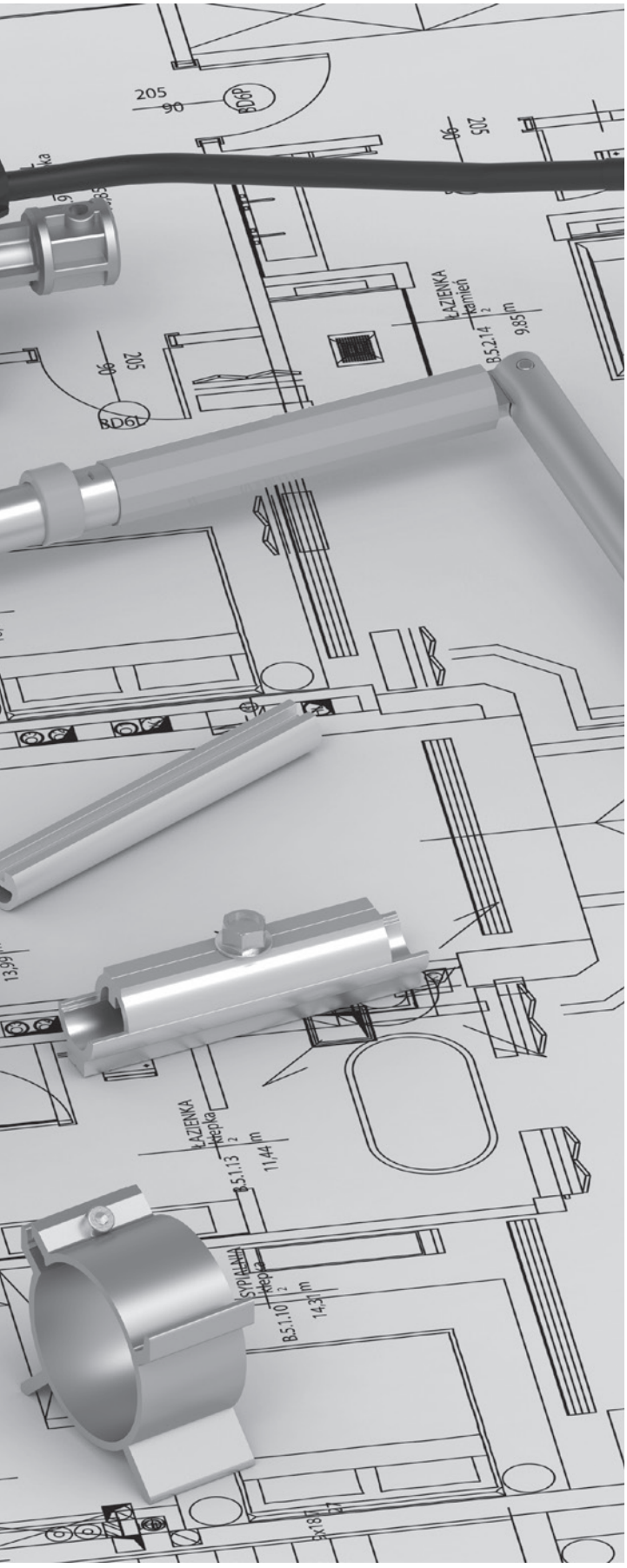


guide channel masking cover

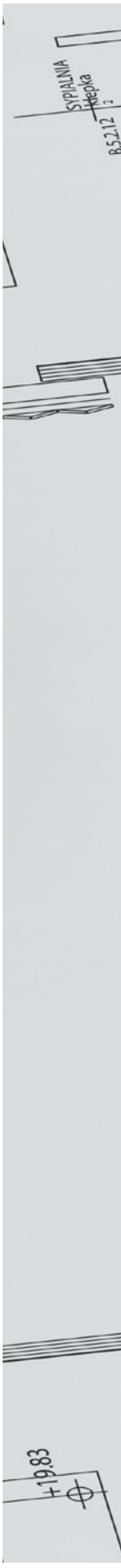


External blind guide channels must be fixed onto the masking cover at the construction stage.





CONTROL SYSTEMS

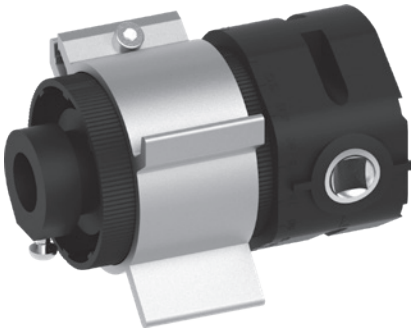


Control systems – crank mechanism

Manual operation – crank mechanism

Manual operation mechanism consists of gear, crank and a channel. The crank can be made of plastic, aluminium or steel, its standard length is 2/3 of the overall length of the blind. The length of unfolded crank is 345 mm. The channel, made of steel and PVC, transmits power from the crank to the gear; it is available in two options: 45^0 and 90^0. The standard set comes with a plastic bracket for the crank.

Crank mechanism (gear)



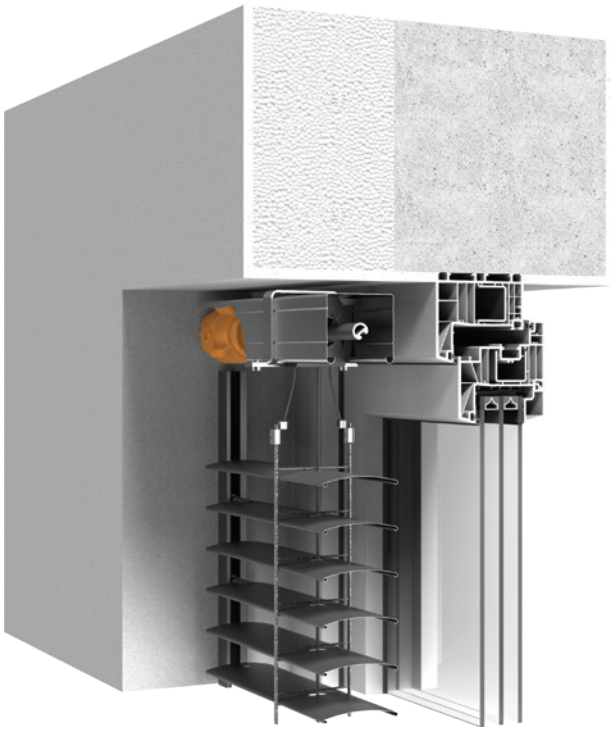
Min. width of manually operated blind: **450 mm**

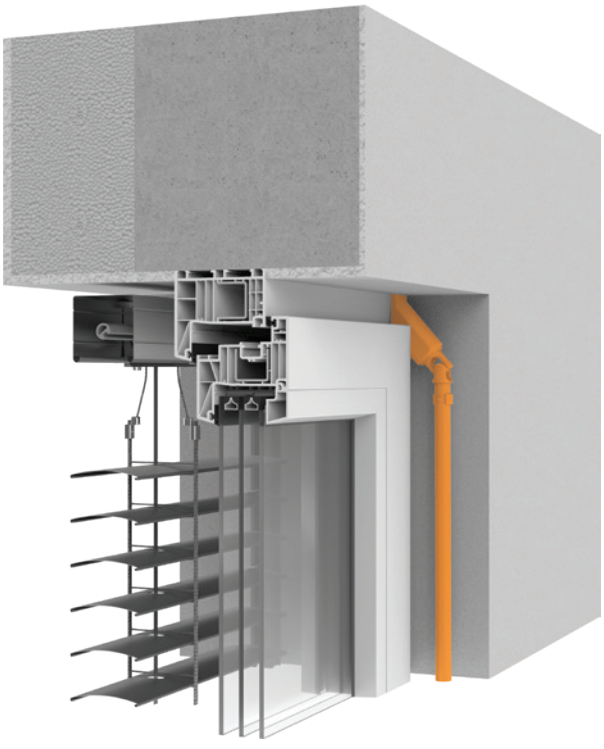
Technical characteristics

- max. torque: 5 Nm
- gear ratio: 2:1
- efficiency: 0,72

Features

- heavy-duty casing
- thanks to the guide opening for tube mounting, the gear can be mounted not only on the blind's edges
- the same type of gear mounted on the right and left
- no end limiter
- made of modern materials, the gears reduce the amount of energy needed to raise the blind by 30%
- long service life (10 000 cycles declared by the manufacturer) – 14203 DIN EN standard-compliant





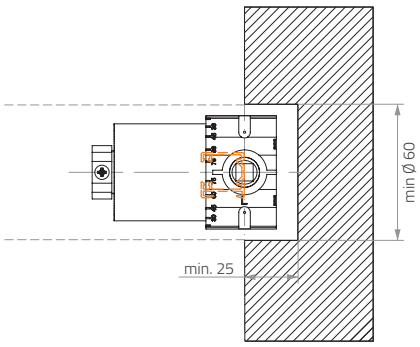
Control systems – fixing crank mechanism

Fixing crank mechanism

The position of the gear unit in the head rail depends on the way the window frame is mounted. The position of the gear unit is determined by the distance of the casing's axis from the edge of the headrail as seen from the inside.

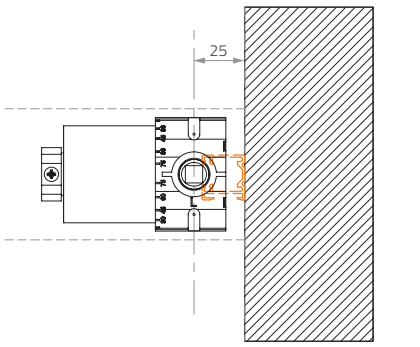
Option A

Gear unit channel axis at „0" point.



Option B

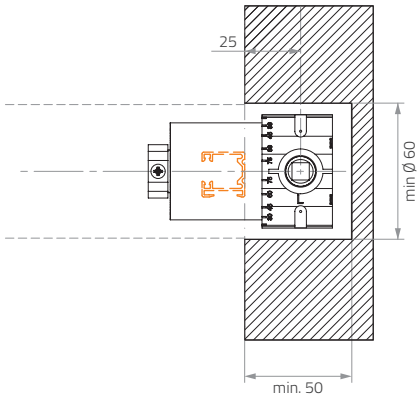
Gear unit channel axis inside the head rail.



It is possible to mount the gear inside the head rail except in places where control bearings are mounted.

Option C

Gear unit channel axis outside the head rail.

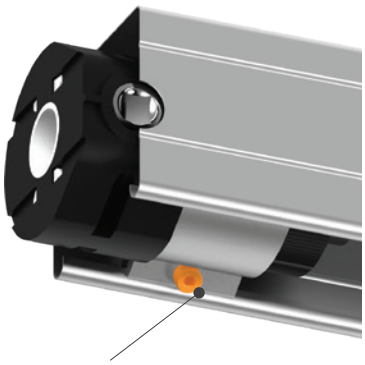


Max. distance of channel's axis from the outside edge of the head rail is 95 mm (without altering head rail measurements)

Crank mechanism – gear unit bracket

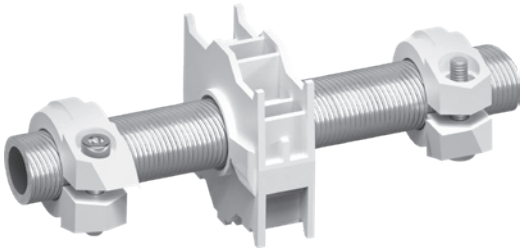
Gear unit bracket

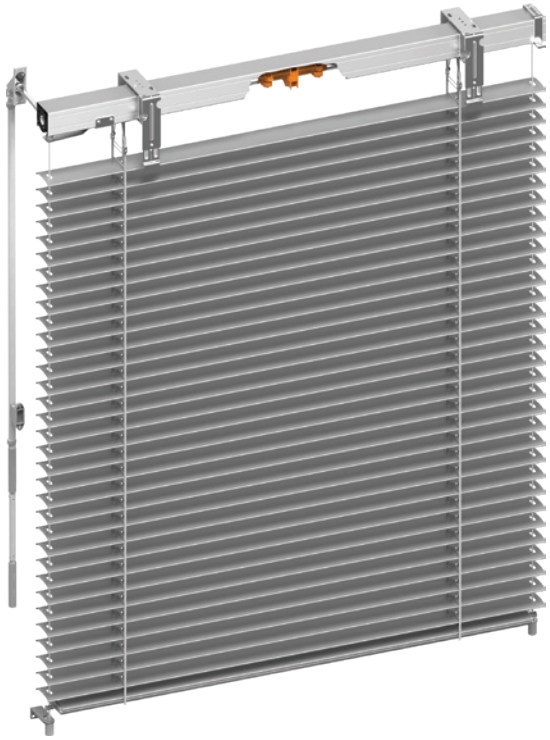
Used for mounting the gear unit in the head rail. It helps to position the axis of the channel in relation to the head rail as well as fix the angle of its exit from the head rail.



M4x12 hexagonal head screw
hex key no. 3

Brake – up/down limiter



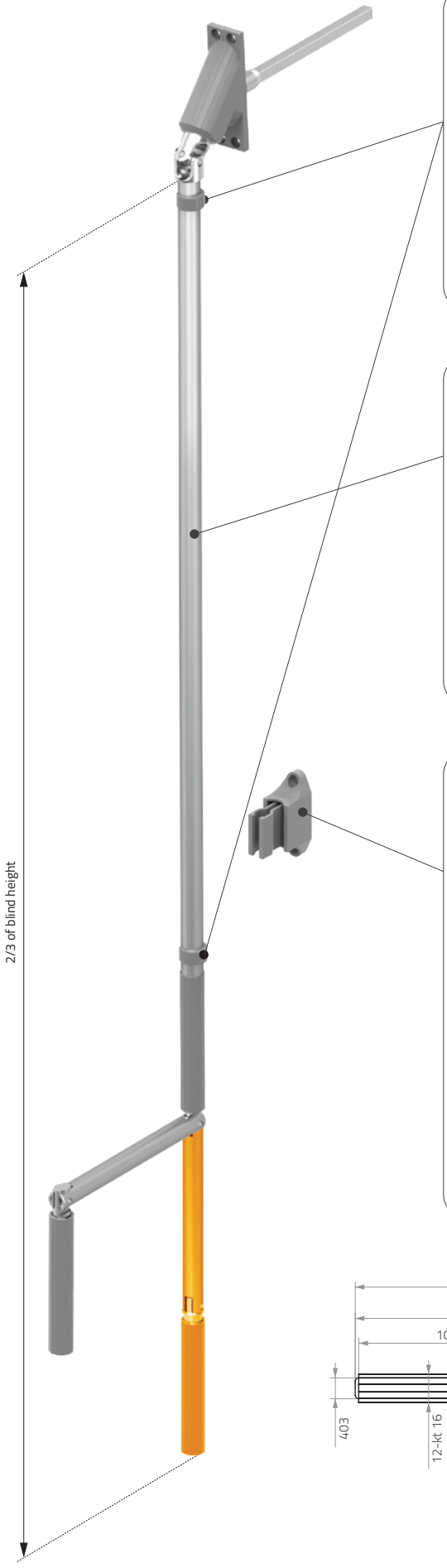


– mounted in manually operated external venetian blinds fitted with crank and crank gear unit
– brake sets top and bottom limits to the movement of the slats
– protects the blind against damage resulting from incorrect handling
– fitted with two adjustable end limiters
– the spindle is made of aluminium; the bracket and limiters are made of heavy-duty plastic

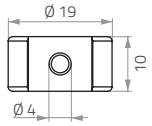
The standard brake is positioned in the middle of the head rail.

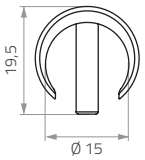
In blinds with an uneven number of gear units the brake is positioned next to the middle gear on the side where crank gear is fitted.

Crank mechanism – crank with accessories



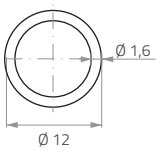
Locking pin



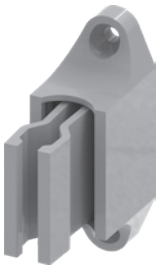


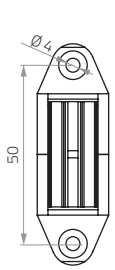
Used to join the crank with 90° channel

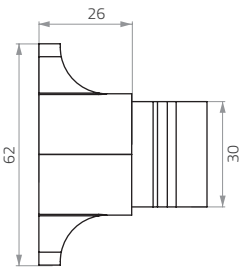
Crank pipe

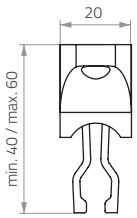


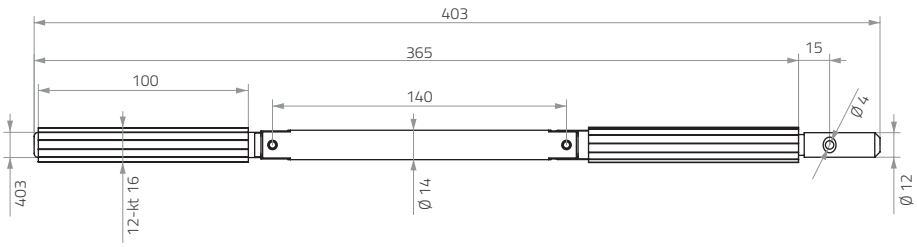
Crank bracket







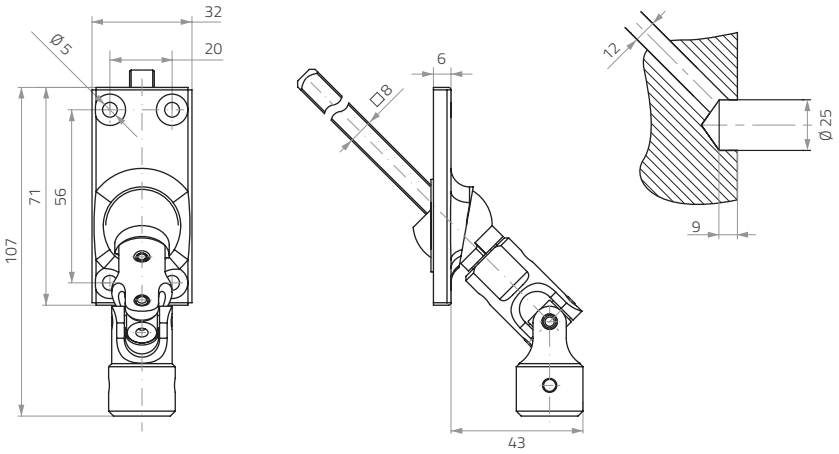




Crank mechanism – types of channels

45⁰ channel

Hole drilling for mounting 45⁰ channel – recommended dimensions (mm)

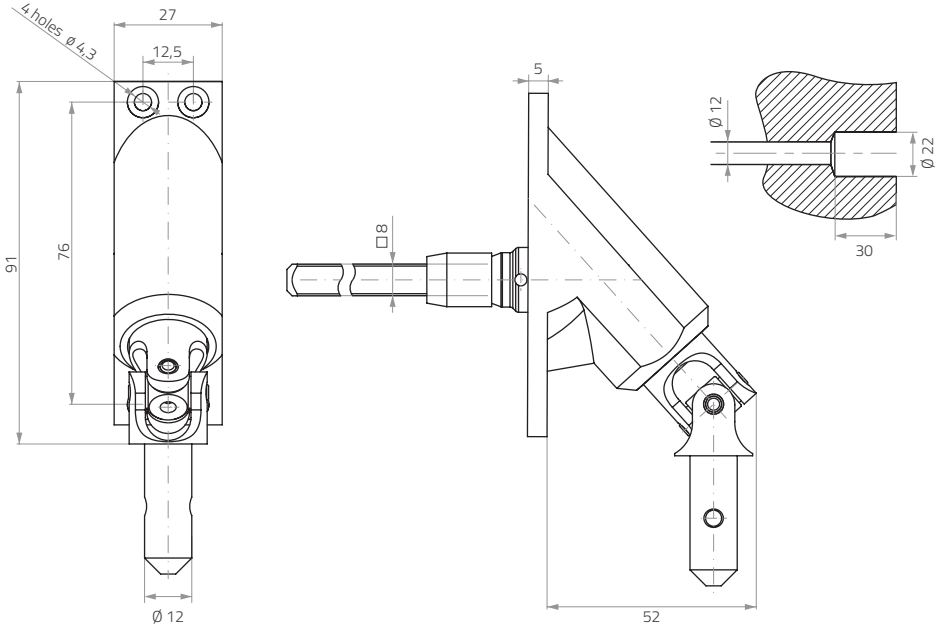


Max. length of channel rod – 500 mm

In 45⁰ channel the crank is joined with the channel using spring dowel pin

90⁰ channel

Hole drilling for mounting 90⁰ channel – recommended dimensions (mm)



Max. length of channel rod – 1000 mm

In 90⁰ channel the crank is joined with the channel using locking pin.

Motorised control

Motorised control

The standard electric motor with 230V nominal voltage and frequency 50 Hz is located inside the head rail. End positions can be set mechanically or electronically. Three types of motors available are: standard motors, radio-controlled motors and io-Homecontrol radio-controlled motors. Motors are fitted with a cable with Stas3 (Pass-S) Hirschmann plug.

Should the size of the blinds allow it, a group of blinds can be controlled by means of one motor (max. 3 blinds in a group, max width of the set: 5000 mm).

The minimum width of the blind in blinds powered with different types of motor / solutions

Motor / solution	the minimum width of the blind
Standard motor	520 mm
NHK motor	720 mm
Nonstandard solutions	
Double headrail system (cable guide or guide channels)	470 mm
Double headrail system (guide channels only)	420 mm

Electric shock risk

Before fitting, connecting or tuning of the motor please read the user manual.

Installation must be carried out by certified personnel who have the necessary training and technical competence required by rules and regulations applicable in the country where the installation is taking place.

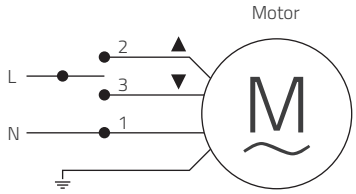
Non-compliance with the instructions can result in severe damage to health with the possibility of life threatening injuries; it can also impede the smooth functioning of the blinds as well as affect claims resulting from the warranty.

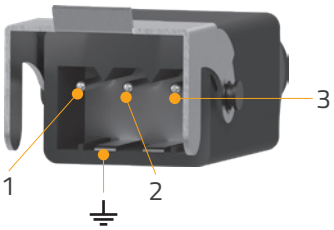
In blinds with an even number of control bearings the motor is positioned in the middle of the head rail.

In blinds with an uneven number of control bearings the motor is positioned next to the middle bearing.

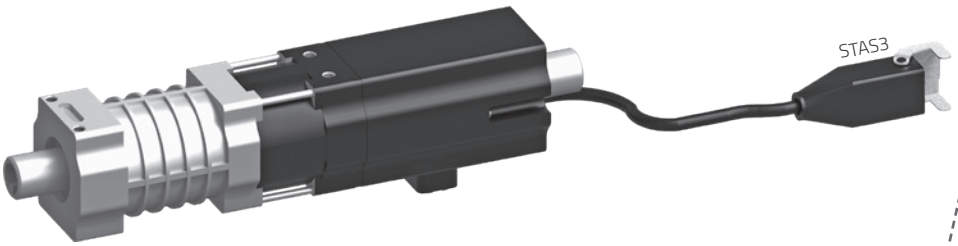
Motorised control – electrical connection

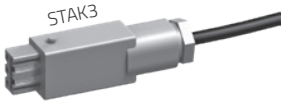
Connecting motor with external blind – diagram





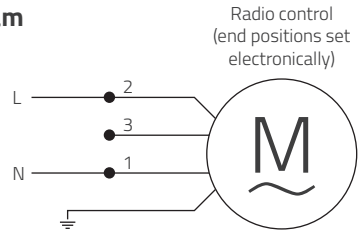
1	=	N Neutral / blue
2	=	Top / black
3	=	Bottom / brown
⏚	=	Protective / yellow-green

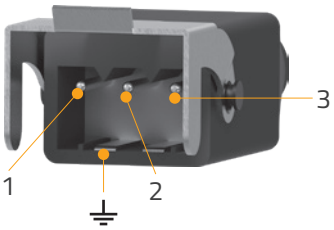




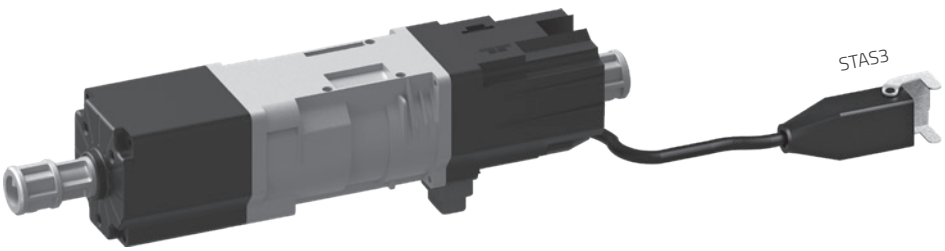
L	=	Phase
N	=	Neutral
⏚	=	Protective

Connecting radio-controlled motor with external blind – diagram





1	=	N Neutral / blue
2	=	Top / brown
3	=	– –
⏚	=	Protective / yellow-green



L	=	Phase
N	=	Neutral
⏚	=	Protective

JA Soft / JA dk motor

Technical characteristics:
- end positions set mechanically
- motors cannot be connected in parallel
- motor is fitted with safety button

	JA 06 Soft	JA 09 Soft	JA 20 dk
Nominal torque (Nm)	6	9	2 x 10
Rotational speed (rpm)	26	26	26
Nominal supply voltage (V)	~ 230	~ 230	~ 230
Frequency (Hz)	50	50	50
Amperage (A)	0,5	0,6	1,0
Energy consumption during use (W)	115	140	230
Quiet brake	✓	✓	
IP class	IP 44	IP 44	IP 44
Cable length (m)	0,8	0,8	0,8
Running time (thermal protection) (min.)	5	4	4
Operating temperature (ºC)	-20 / +60	-20 / +60	-20 / +60

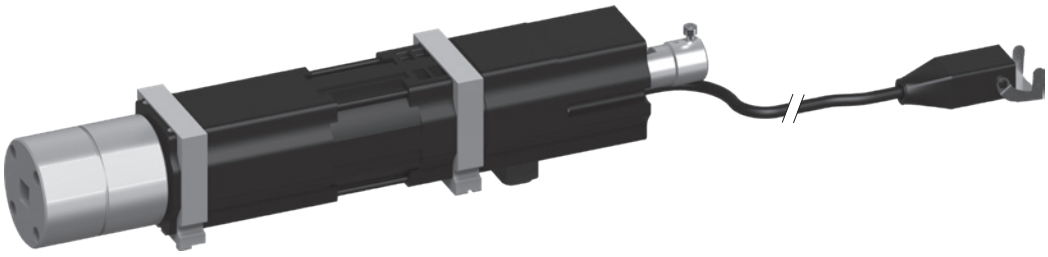
JA Comfort / JA Comfort 868

Technical characteristics:
- end positions set electronically
- slow rotating slats
- soft and quiet brake
- soft-close / soft start (two speeds – slow / fast)
- cyclical, automatic check correcting length of lifting tapes
- Ja Comfort 868 motor is fitted with an in-built radio receiver

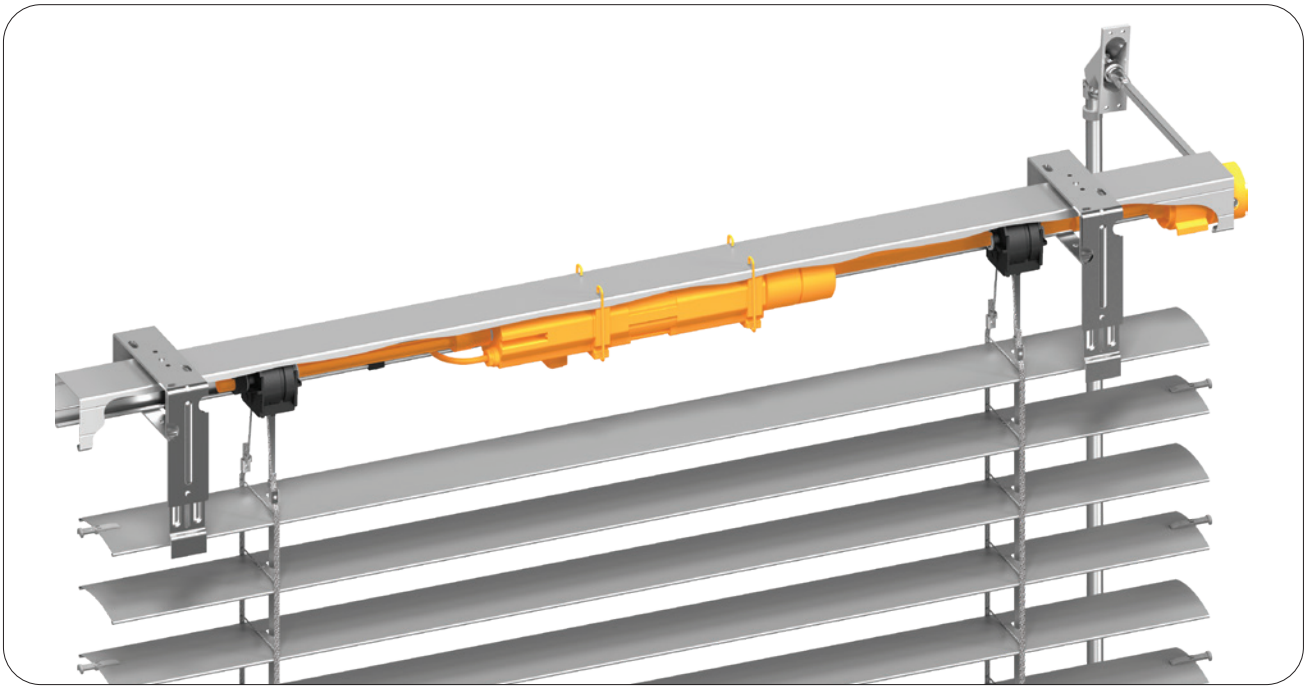
	JA 06 Comfort	JA 09 Comfort	JA 06 Comfort 868	JA 09 Comfort 868
Nominal torque (Nm)	6	9	6	9
Rotational speed (rpm)	26	26	26	26
Nominal supply voltage (V)	~ 230	~ 230	~ 230	~ 230
Frequency (Hz)	50	50	50	50
Amperage (A)	0,5	0,68	0,5	0,68
Energy consumption during use (W)	115	156	115	156
Quiet brake	✓	✓	✓	✓
IP class	IP 44	IP 44	IP 44	IP 44
Cable length (m)	0,8	0,8	0,8	0,8
Running time (thermal protection) (min.)	5	4	5	4
Operating temperature (ºC)	-20 / +60	-20 / +60	-20 / +60	-20 / +60
Radio receiver			✓	✓
Radio frequency (MHz)			869,25	869,25

JA NHK motor

Technical characteristics:
– end positions set electronically
– motors cannot be connected in parallel
– system is manually operable (rising, lowering the blind)

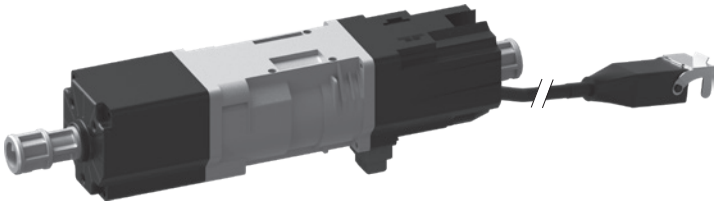


	JA 10 NHK
Nominal torque (Nm)	10
Rotational speed (rpm)	26
Nominal supply voltage (V)	~ 230
Frequency (Hz)	50
Amperage (A)	0,55
Energy consumption during use (W)	125
IP class	IP 44
Cable length (m)	0,8
Running time (thermal protection) (min.)	5
Operating temperature (°C)	-20 / +60



J4 WT / J4 WT PROTECT

Technical characteristics:
- end positions set electronically (via Somfygurator – universal installation cable)
- parallel installation of up to three motors (max. length of cable is 50 m)
- motor fitted with safety button
- frost and obstacle detection and tension release (in **PROTECT** version) for greater durability and all-weather protection



	J4 06 WT / J4 06 WT PROTECT	J4 10 WT / J4 10 WT PROTECT	J4 18 WT / J4 18 WT PROTECT
Nominal torque (Nm)	6	10	18
Rotational speed (rpm)	24	24	24
Nominal supply voltage (V)	~ 230	~ 230	~ 230
Frequency (Hz)	50	50	50
Amperage (A)	0,4	0,5	0,7
Energy consumption during use (W)	95	110	155
Protection class	class I	class I	class I
IP class	IP 54	IP 54	IP 54
Cable length (m)	0,9	0,9	0,9
Running time (thermal protection) (min.)	6	6	6
Operating temperature (°C)	-10 / +40	-10 / +40	-10 / +40

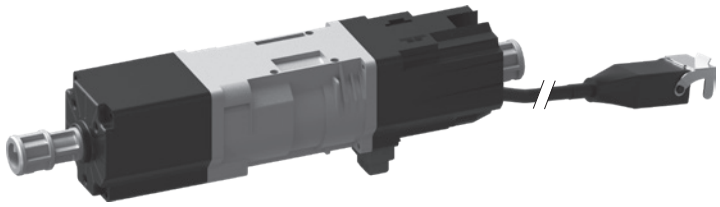
J4 RTS

Technical characteristics:
- end positions set electronically (via Somfygurator – universal installation cable)
- parallel installation of up to three motors (max. length of cable is 50 m)
- motor fitted with safety button
- in-built radio receiver with slat angle adjusting function
- compatible with sun sensor
- max. 12 RTS transmitters, 3 RTS sensors

	J4 06 RTS	J4 10 RTS	J4 18 RTS
Nominal torque (Nm)	6	10	18
Rotational speed (rpm)	24	24	24
Nominal supply voltage (V)	~ 230	~ 230	~ 230
Frequency (Hz)	50	50	50
Amperage (A)	0,5	0,6	0,7
Energy consumption during use (W)	95	110	155
Protection class	class I	class I	class I
IP class	IP 54	IP 54	IP 54
Cable length (m)	0,9	0,9	0,9
Running time (thermal protection) (min.)	6	6	6
Operating temperature (°C)	-10 / +40	-10 / +40	-10 / +40
Radio receiver	✓	✓	✓
Radio frequency (MHz)	433,42	433,42	433,42

J4 io PROTECT motor

Technical characteristics:
- end positions set electronically
- remote controlled end positions and slat rotation
- bi-directional system of data transmission (feedback info on vertical position and slat angle)
- frost detection at the start of the motor
- obstacle detention when the blind is raised (once an obstacle has been detected, the motor enters „back release" mode)
- comfortable position setup
- motor is fitted with safety button
- compatible with sun sensor
- max. 9 transmitters and RTS sensors

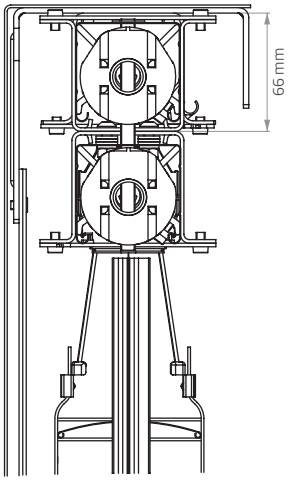


	J4 io PROTECT 06	J4 io PROTECT 10	J4 io PROTECT 18
Nominal torque (Nm)	6	10	18
Rotational speed (rpm)	24	24	24
Nominal supply voltage (V)	~ 230	~ 230	~ 230
Frequency (Hz)	50	50	50
Amperage (A)	0,4	0,5	0,7
Energy consumption during use (W)	95	110	155
Protection class	class I	class I	class I
IP class	IP 54	IP 54	IP 54
Cable length (m)	0,5	0,5	0,5
Running time (thermal protection) (min.)	4	4	4
Operating temperature (°C)	-20 / +70	-20 / +70	-20 / +70
Radio receiver	✓	✓	✓
Radio frequency (MHz)	868-870	868-870	868-870
Brake	sliding brake	sliding brake	sliding brake
Noise level (dB)	53	55	56
Weight of motor with adapter (kg)	1,5	1,7	2,2

Motorised control – non-standard solution

Double head rail with motor

In motorised external blind <520 mm wide the motor is mounted in the head rail; the drive is transferred to control bearings mounted in the rail beneath via two crank gears.

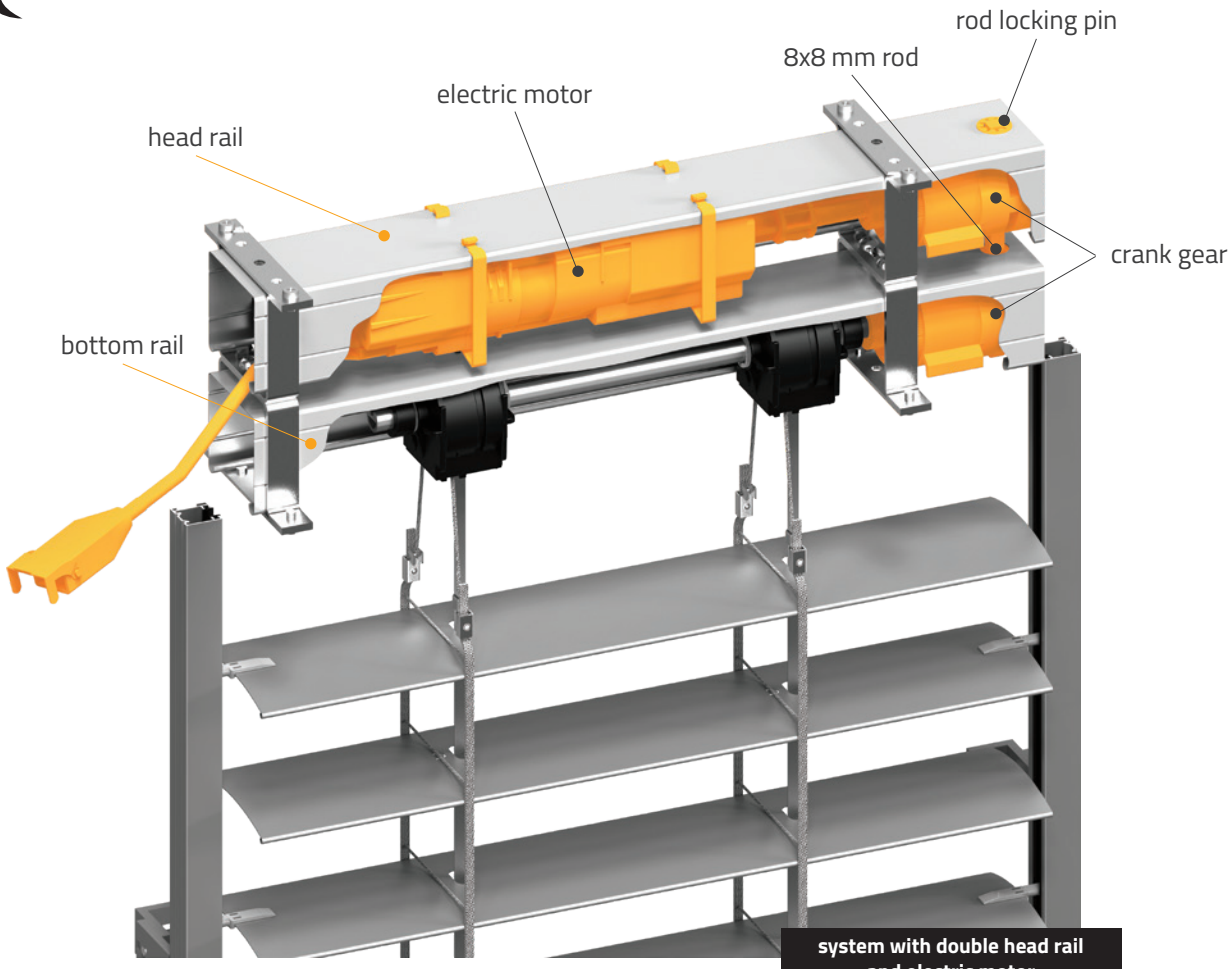


Minimum width of the blind fitted with double head rail.

Solution / side guide system	Min. width of the blind
Double head rail (cable guide or guide channels)	470 mm
Double head rail (guide channels only)	420 mm

Blinds with double head rail are mounted using automatic head rail brackets only.

In blinds with double head rail 66 mm should be added to the height of the packet of slats.

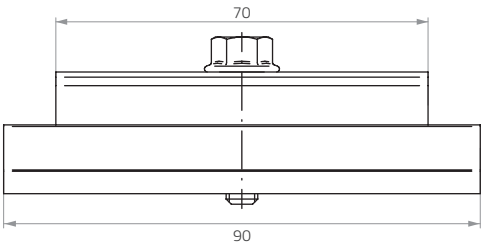


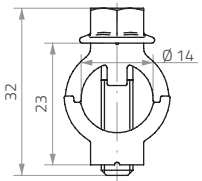
system with double head rail and electric motor

Motorised control – power trasmission

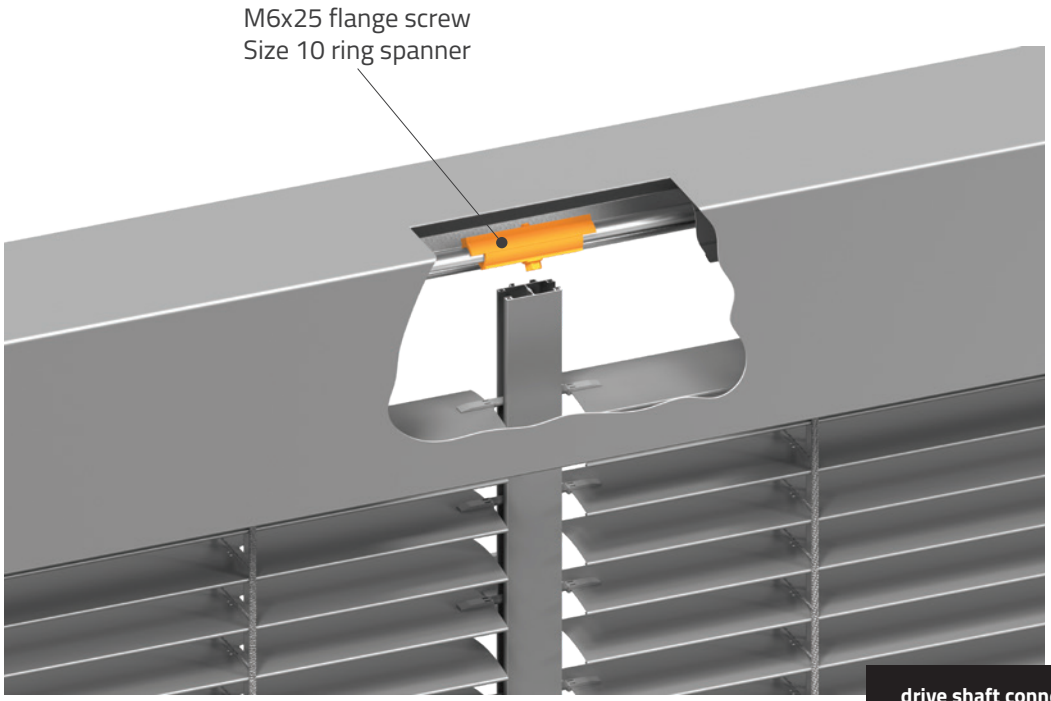
Drive shaft connector

Used to operate a group of blinds (max.3) with one motor. Applicable when all the blinds are of the same height only. For minimum shaft torsion, in sets of 3 blinds the motor should be fitted in the middle blind. Max. width of the group of blinds is 5000 mm.





Using drive shaft connector may result in shaft torsion and differences in slat tilt angle. This is a consequence of the solution applied and is not subject to complaint.



drive shaft connector

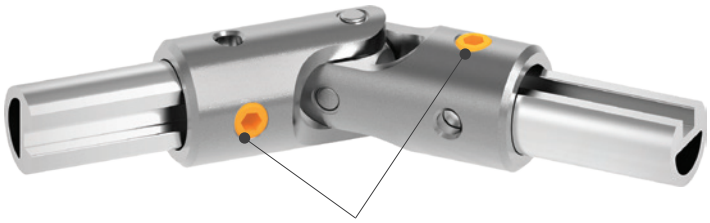
Motorised control – power trasmission

45⁰ drive shaft connector

Used to operate a group of blinds (max. 3) with one motor.
Compatible with crank mechanism and electric motors.
For minimum shaft torsion, in sets of 3 blinds the motor should be fitted in the middle blind. The connector is intended for bay windows.

Max. width of the group of blinds is 5000 mm.

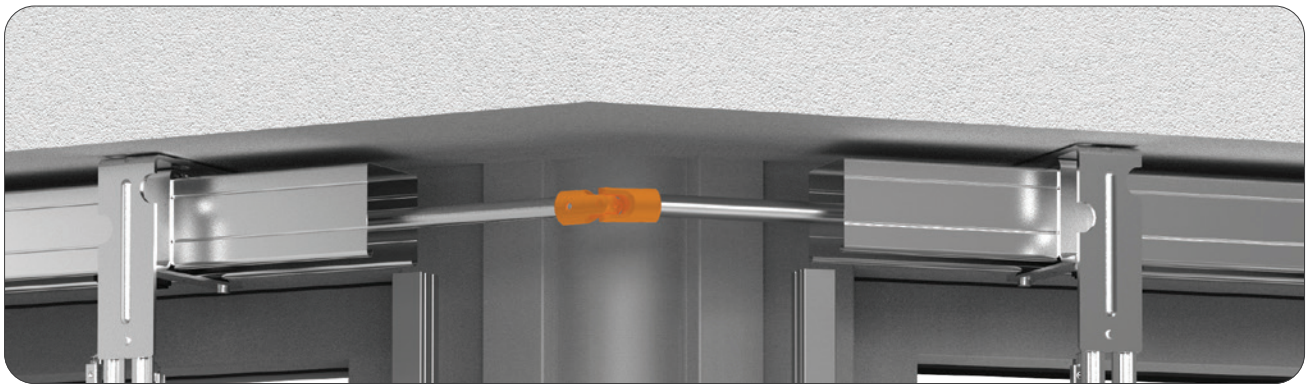
Mounting 45⁰ drive shaft connector

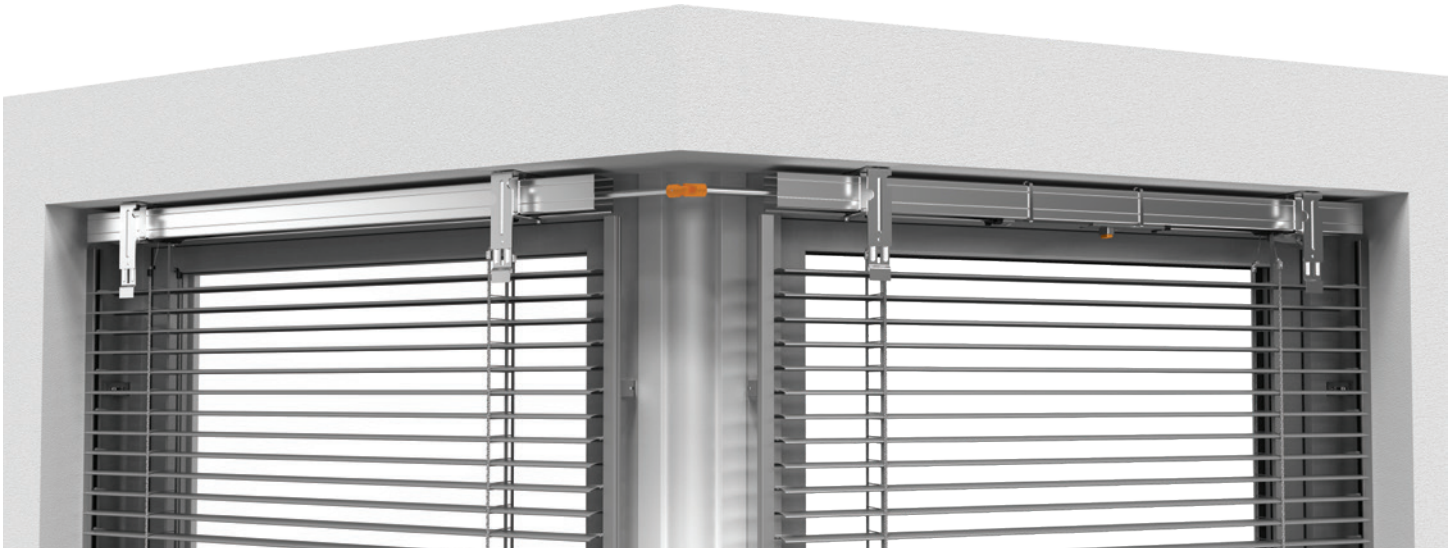


M6x10 hexagonal head screw
Hex key size 3

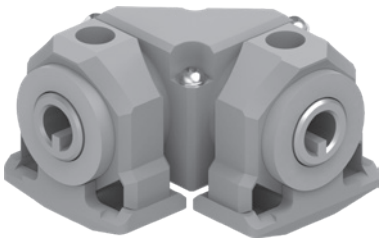
Drive shaft connector requires adjustment of the length of shafts. Recommended depth of setting of the shaft in the connector is 15 mm.

Using drive shaft connector may result in shaft torsion and differences in slat tilt angle. This is a consequence of the solution applied and is not subject to complaint.





Motorised control – power trasmission



90⁰ drive shaft connector

Used to operate a group of blinds (max. 2) with one motor.
Compatible with crank mechanism and electric motors.
For minimum shaft torsion, in sets of 3 blinds the motor should be fitted in the middle blind. The connector is intended for corner windows.
The transmission ratio is 1:1.

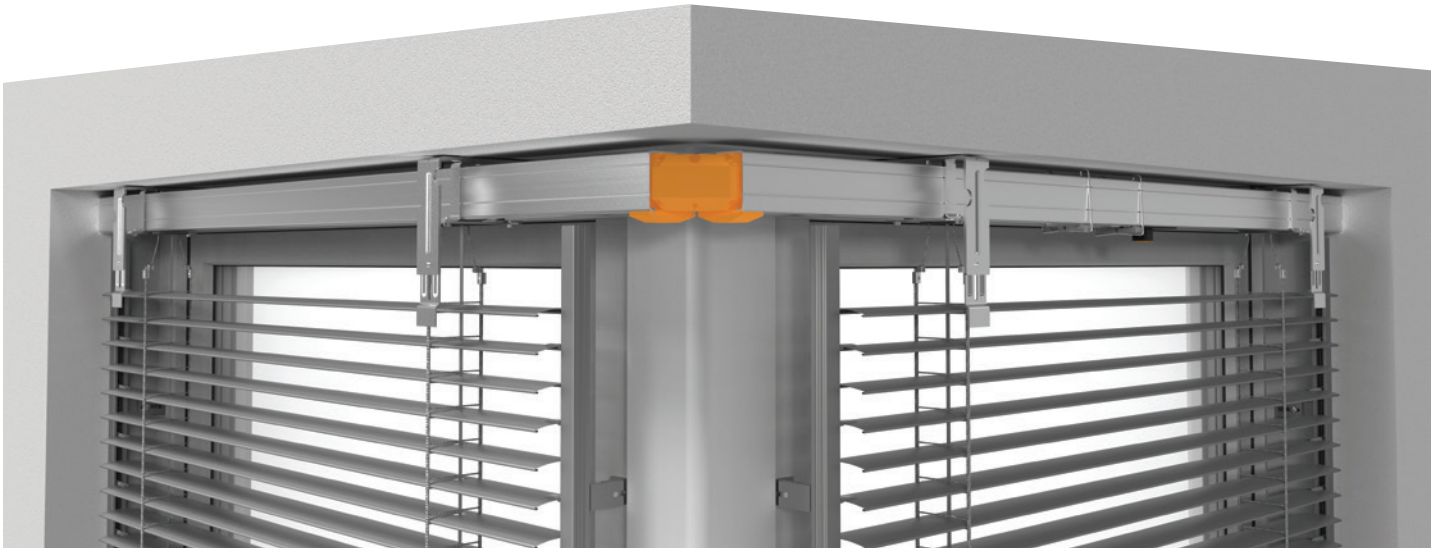
Max. width of the group of blinds is 5000 mm.

Mounting 90⁰ drive shaft connector

M6x12 hexagonal head screw
Hex key size 4

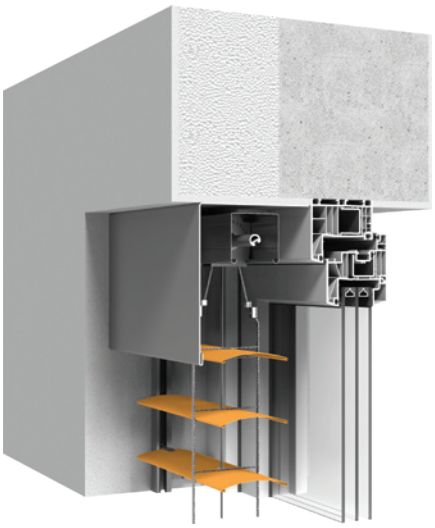
a view of head rails turned upside down

When mounting the drive shaft connector, the manufacturer recommends that the brackets are positioned as close to the connector as possible.



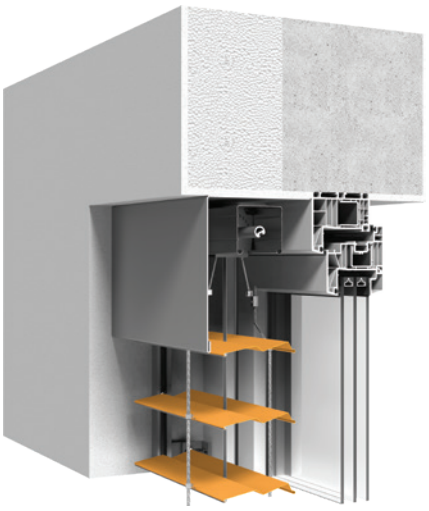
DWG drawings

C-65, C-80 slat



	cable	guide channel
crank mechanism		
motorised		

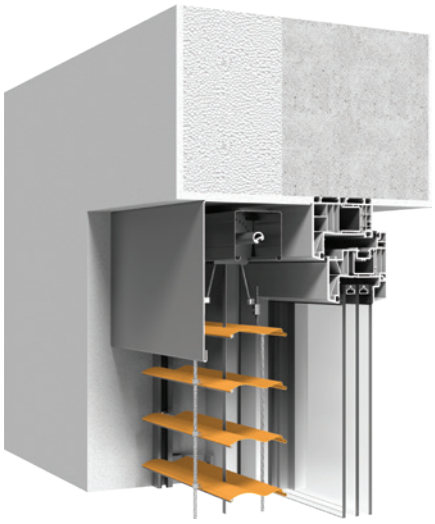
Z-90 slat



	guide channel
crank mechanism	
motorised	

DWG drawings

S-70 slat



	guide channel
crank mechanism	
motorised	

A set of DWG drawings for all systems

More information

Key to symbols:

Information for customers placing an order

Information for persons installing the product

Wire control

Radio control

More information

This cataloque cannot be considered as a trade offer within the meaning of Polish trade law and the civil code. Its character is purely informative.

The information included in the Cataloque reflects the current state of our knowledge and experience.

Due to numerous factors that might influence the way our products are applied and which remain beyond our control, ANWIS shall not be held responsible for occurence of the prospective difficulties resulting from incorrect application of its products. The recipients of ANWIS products are obliged to ensure that the products are applied in the correct way.

The information included in the Catalogue should not be seen as an encouragement to apply ANWIS products without due regard to binding EU standards and regulations.

Anwis sp. z o.o. [Ltd.]
PL, 87-800 Włocławek, Smocza 16/18
tel. +48 54 412 88 00, fax +48 54 412 88 26
www.anwis.pl

www

facebook

Anwis
PL, 87–800 Włocławek, Smocza 16/18
tel. 48 54 412 88 00, fax 48 54 412 88 26
www.anwis.pl