



EXTERNAL BLINDS **PROTAL**

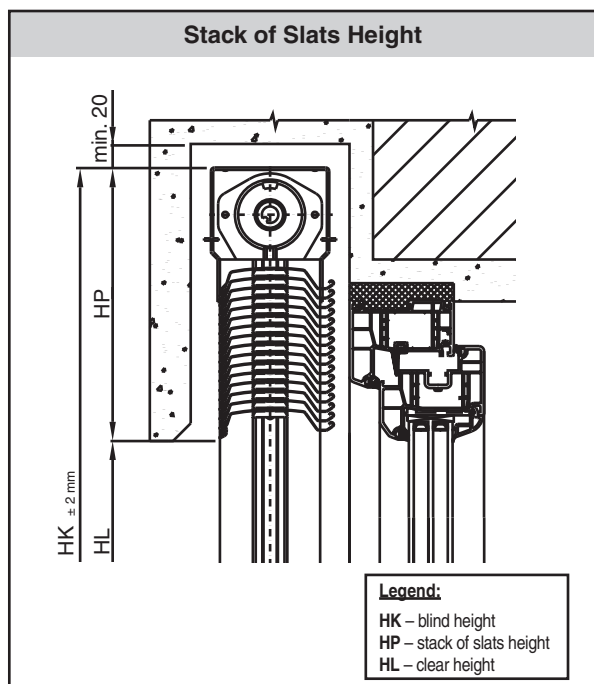
03/2014

Updating: 08/2015

CLIMAX 
Sunscreens by Servis Climax a.s.

1. External Blinds PROTAL

1.1 Stack of Slats Height



STACK OF SLATS HEIGHT (cm)		HP
HL		
from	to	-
50.0	145.6	25.7
145.7	162.4	26.9
162.5	170.9	28.2
171.0	187.8	29.5
187.9	204.6	30.8
204.7	213.1	32.0
213.2	230.0	33.3
230.1	238.4	34.6
238.5	255.3	35.8
255.4	272.2	37.1
272.3	280.6	38.4
280.7	297.5	39.6
297.6	305.9	40.9
306.0	322.8	42.2
322.9	339.0	43.5
339.8	348.1	44.7
348.2	365.0	46.0
366.0	382.0	47.3
383.0	391.0	48.6
392.0	400.0	49.9

BLIND HEIGHT (cm)		HP
HK = HL + HP		
from	to	-
75.0	171.3	25.7
171.4	172.5	26.3
172.6	189.3	26.9
189.4	190.6	27.4
190.7	199.1	28.2
199.2	200.4	28.8
200.5	217.3	29.5
217.4	218.6	30.2
218.7	235.4	30.8
235.5	236.6	31.4
236.7	245.1	32.0
245.2	246.4	32.7
246.5	263.3	33.3
263.4	264.6	34.0
264.7	273.0	34.6
273.1	274.2	35.2
274.3	291.1	35.8
291.2	292.4	36.5
292.5	309.3	37.1
309.4	310.6	37.8
310.7	319.0	38.4
319.1	320.2	39.0
320.3	337.1	39.6
337.2	338.4	40.3
338.5	346.8	40.9
346.9	348.1	41.6
348.2	365.0	42.2
365.1	366.3	42.9
366.4	382.5	43.5
382.6	384.4	44.1
384.5	392.8	44.7
392.9	394.1	45.4
394.2	411.0	46.0
411.1	413.2	46.7
413.3	429.3	47.3
429.4	431.5	48.0
431.6	439.6	48.6
439.7	441.8	49.3
441.9	450.0	49.9

1.2 Limiting Dimensions

Operation type	Min. width (cm)	Max. width (cm)	Min. height (cm)	Max. height (cm)	Max. area of blind (m ²)	Max. width when connected (cm)	Max. area when connected (m ²)	Max. number of connected blinds
Motor	65	280	75	450	9 m ²	840	21 m ²	3
Crank	50	280	75	450	6 m ²	840	7 m ²	3

Note: The side of operation is always determined from the interior.



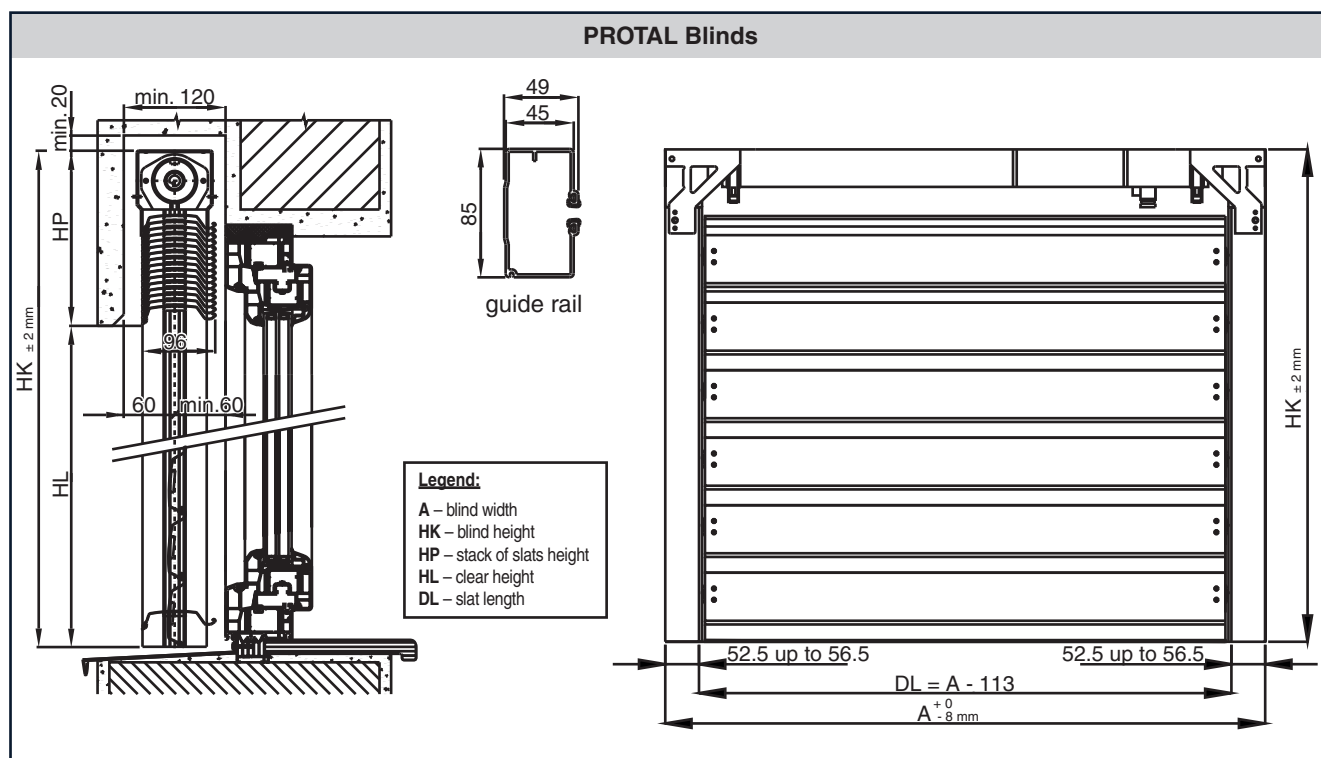
View from exterior

Standard version

- ✓ motor-operated version
- ✓ self-supporting system
- ✓ guide rails 85 x 45 mm – anodized with installation holes
- ✓ operating mechanism integrated into guide rail
- ✓ equalizing pad (2 pcs per hole – installation without brackets)
- ✓ standard colours of slats according to colour collection
- ✓ safety lock against lifting
- ✓ safety lock against pressing
- ✓ slat tilting only in lower end position
- X without brackets

Other possible versions

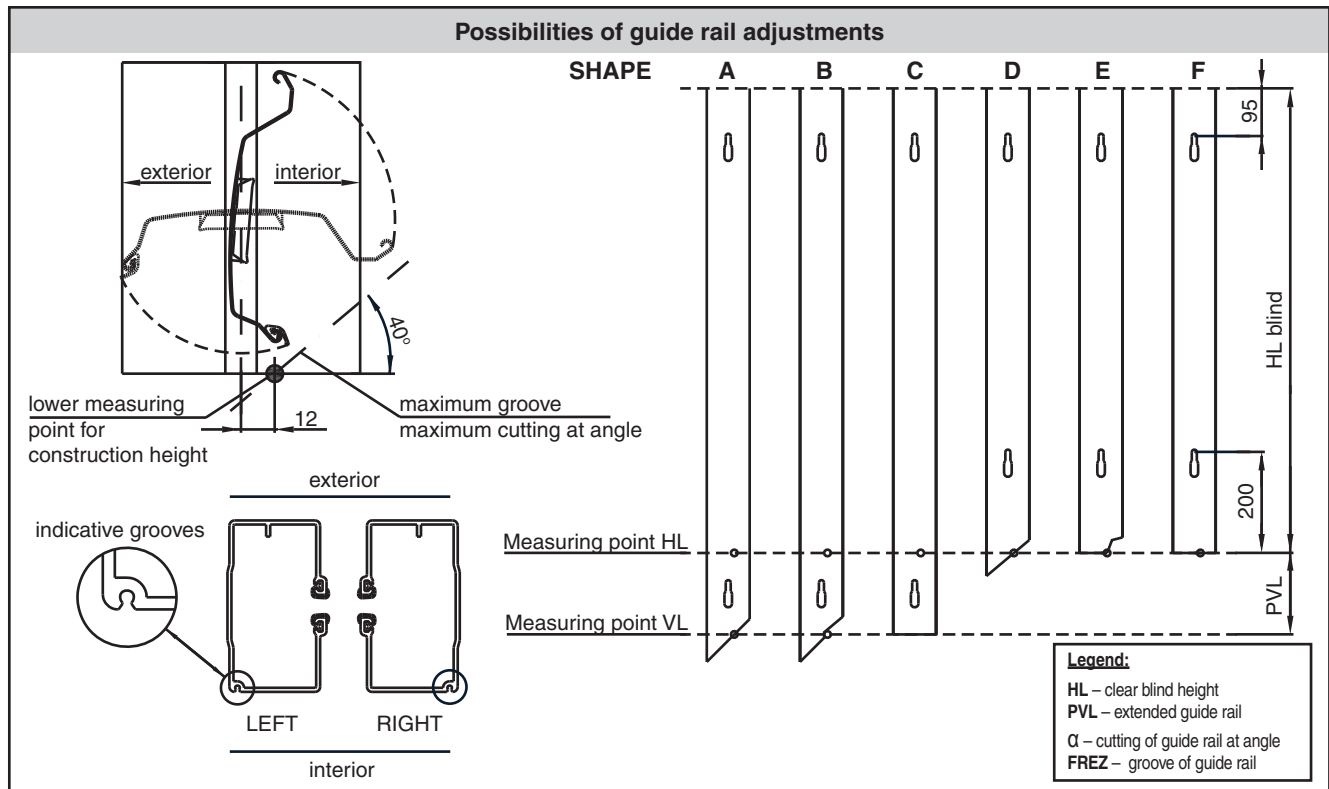
- ✓ crank - elox
- ✓ gear-box, bushing 45°, 90°
- ✓ interior gear-box
- ✓ cover plate holder
- ✓ guide rails in RAL
- ✓ prolongation of guide rails
- ✓ cutting of guide rails at angle
- ✓ groove of guide rails
- ✓ brackets L, T, I



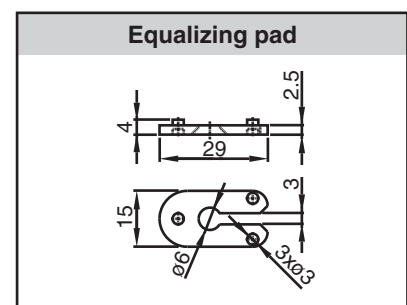
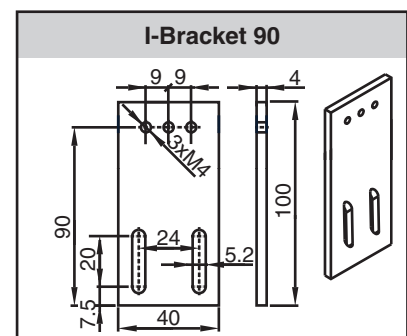
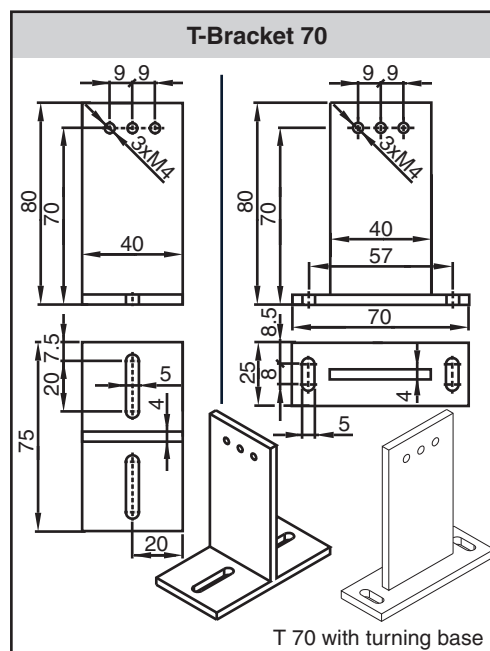
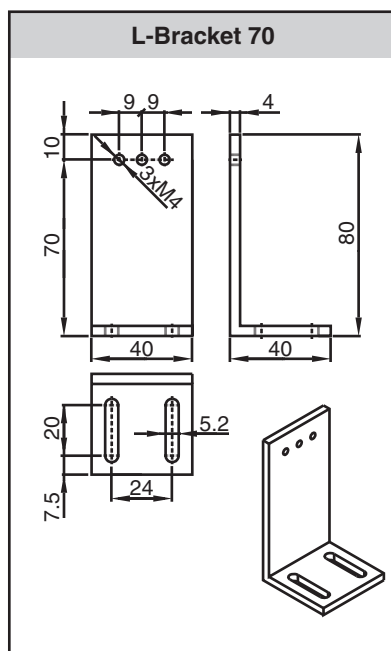
1.6 Guide Rails and Brackets

Number of installation holes

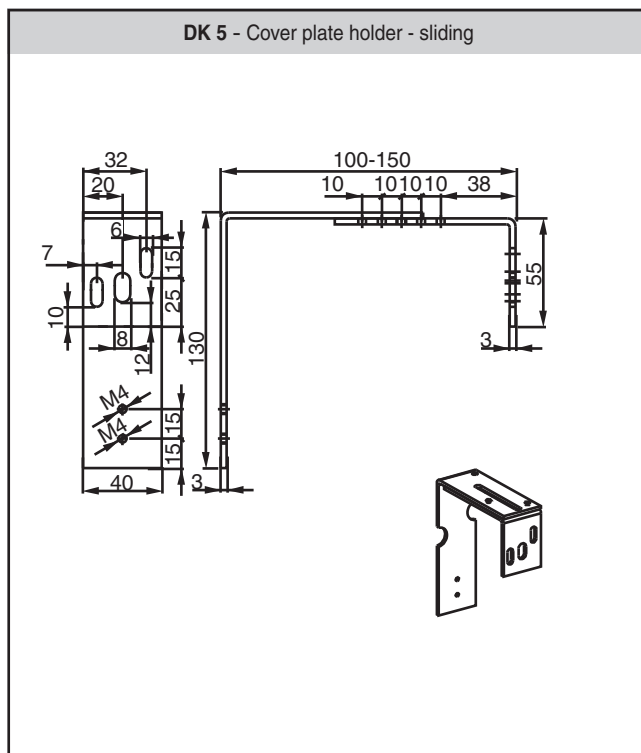
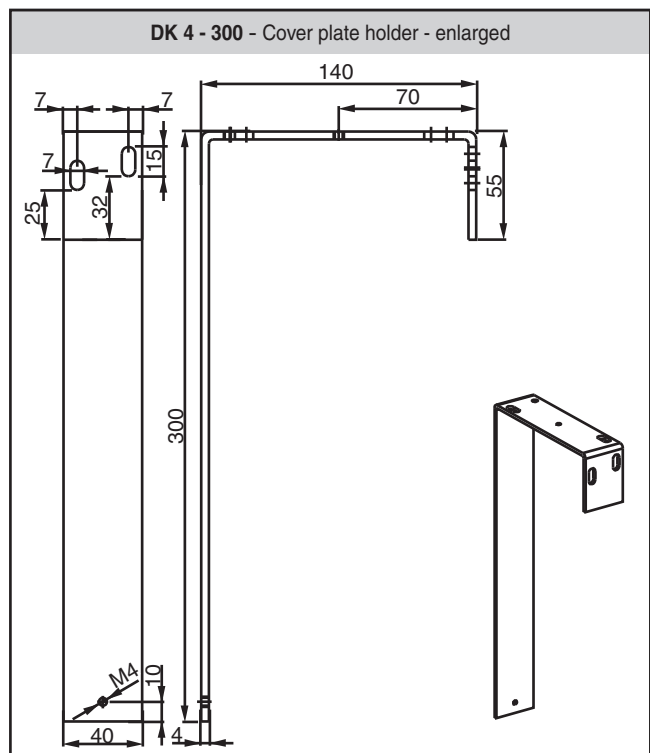
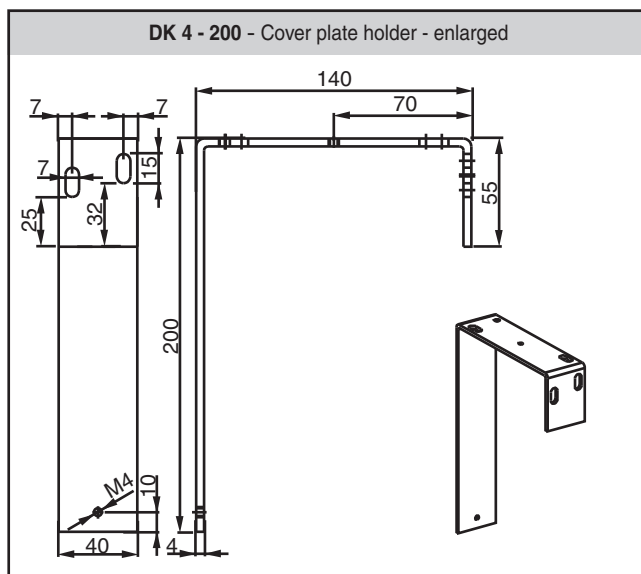
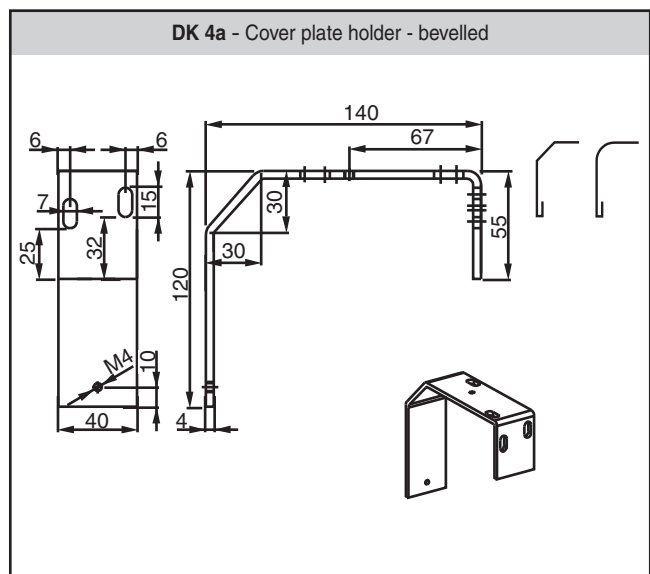
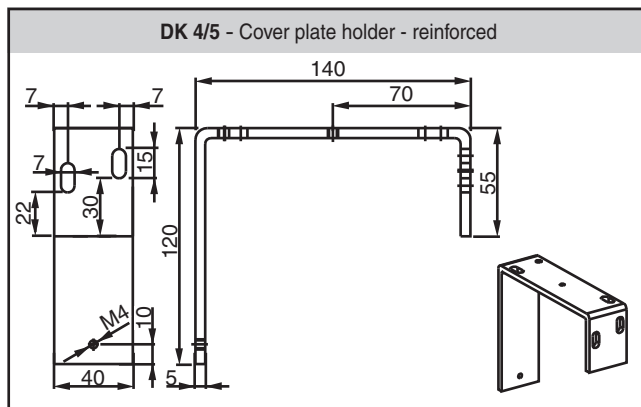
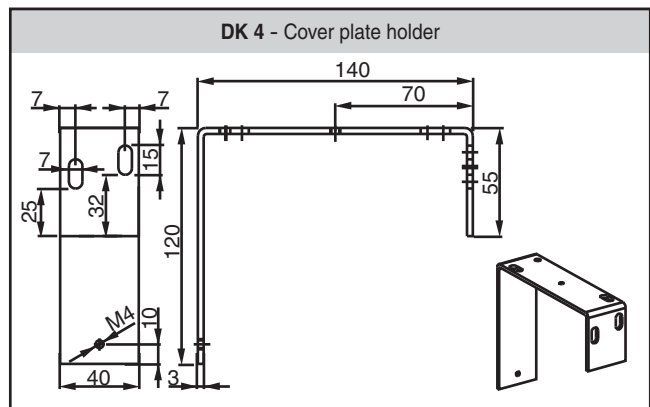
HL + PVL	No. of holes for mounting of blinds
≤ 130 cm	2
130.1 - 230 cm	3
230.1 - 330 cm	4
> 330 cm	5

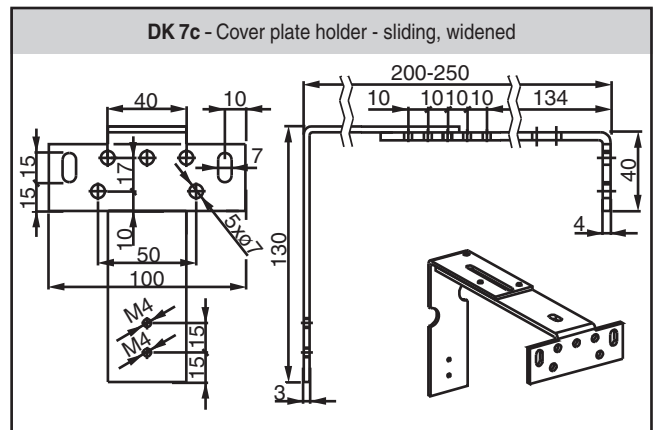
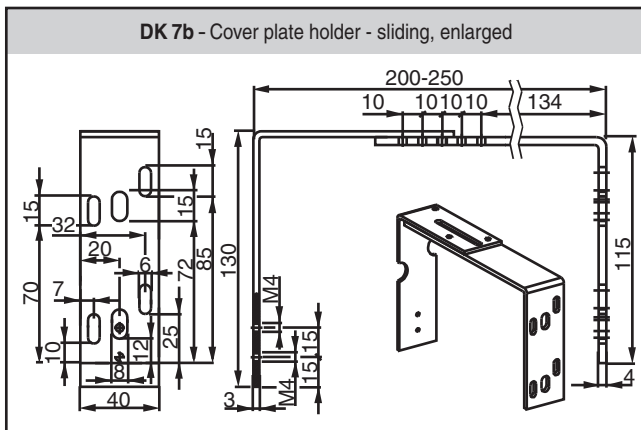
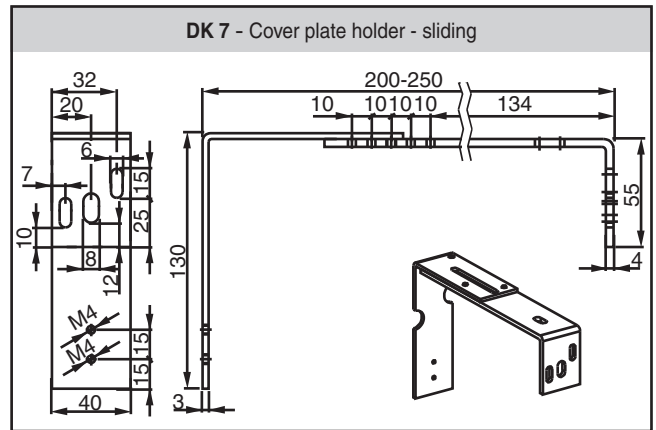
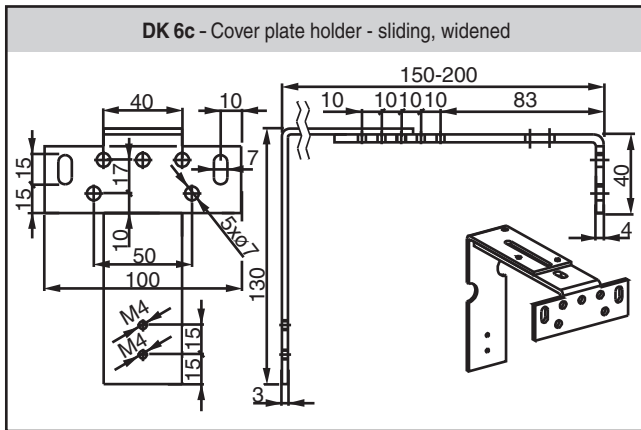
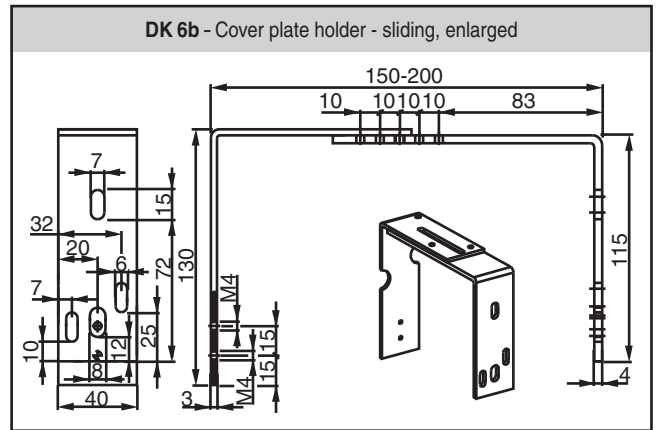
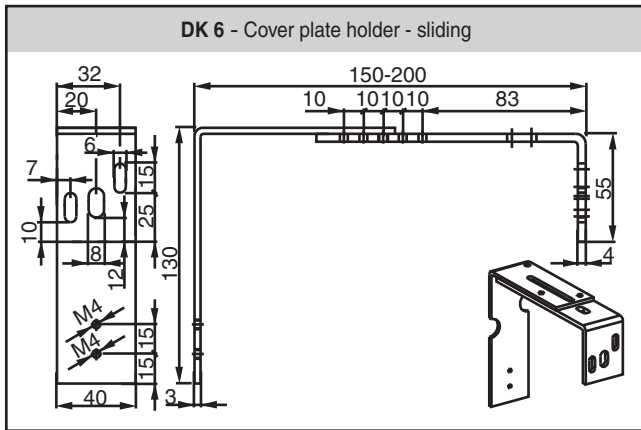
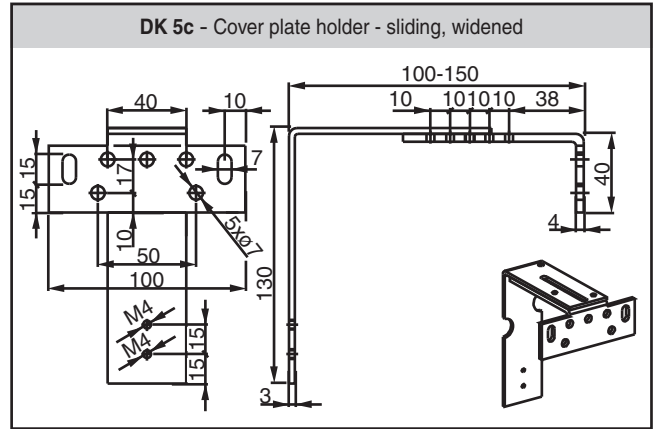
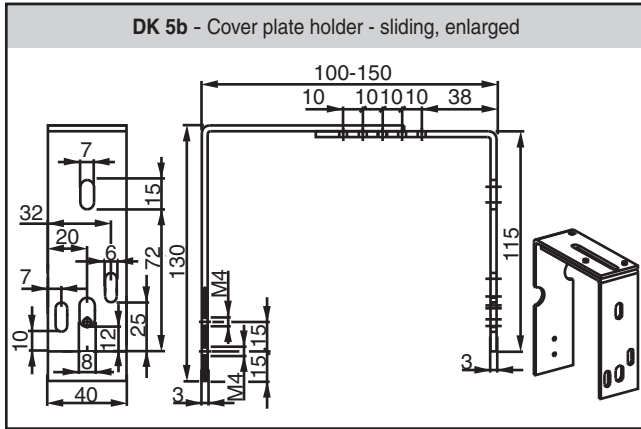


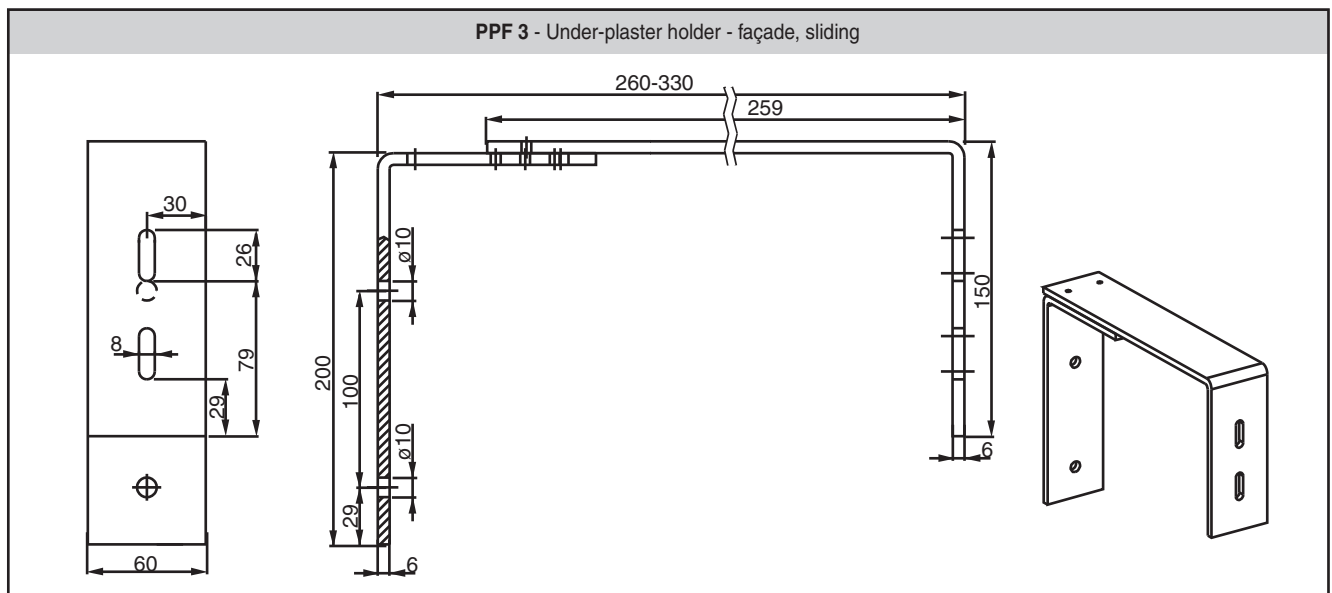
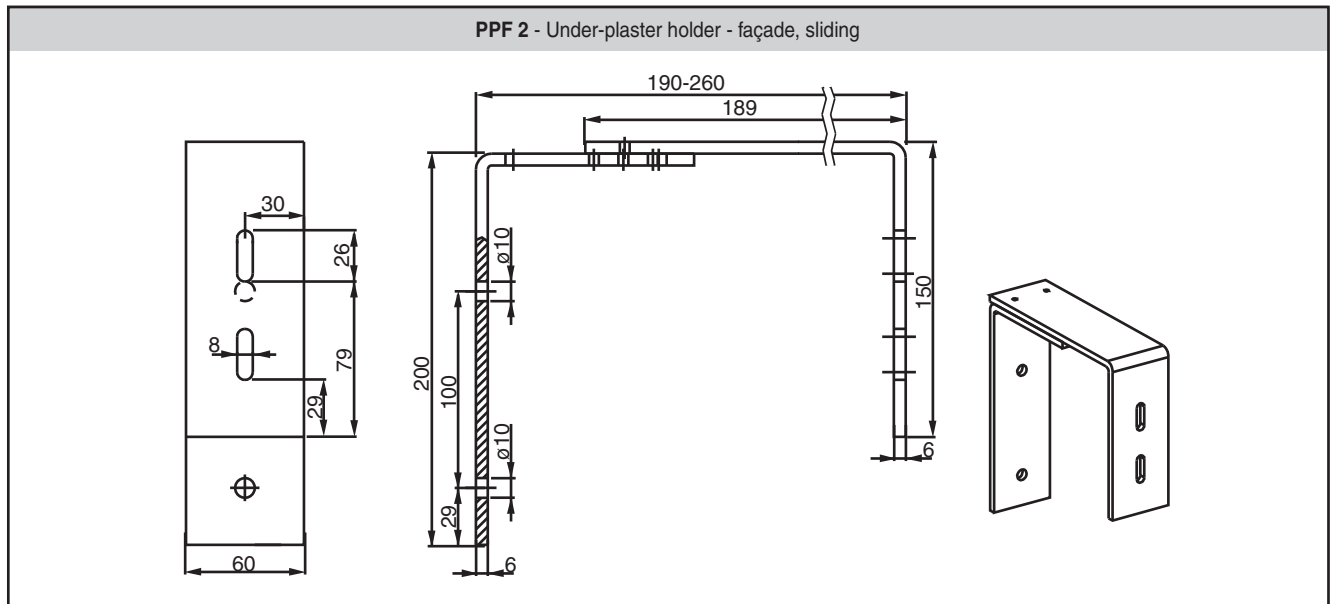
SHAPE	A	B	C	D	E	F
PVL	> 0	> 0	> 0	0	0	0
α	0 – 45°	0 – 45°	0	0 – 40°	0	0
FREZ	no	yes	no	no	yes	no



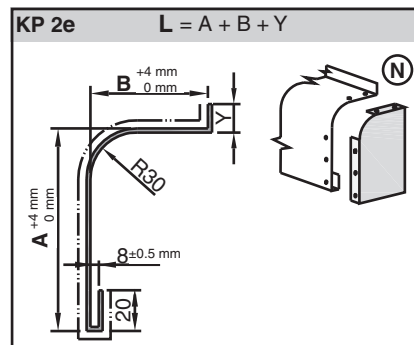
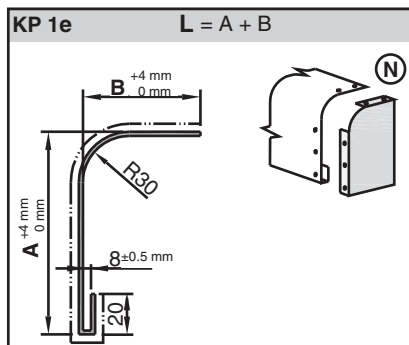
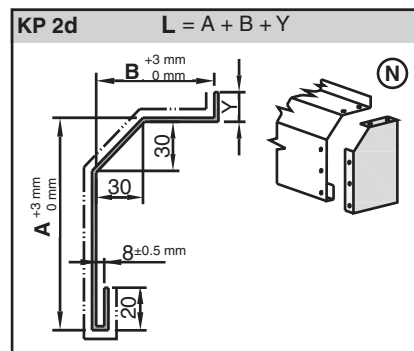
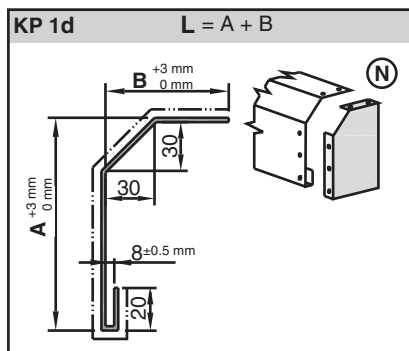
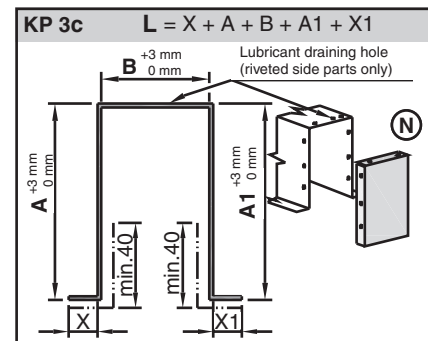
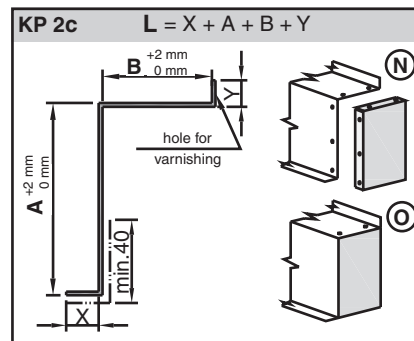
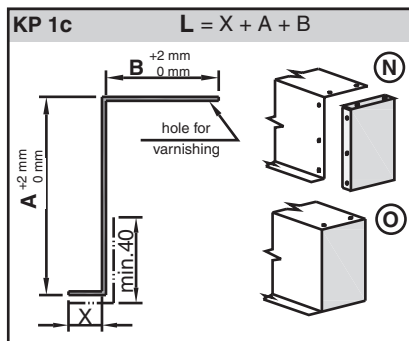
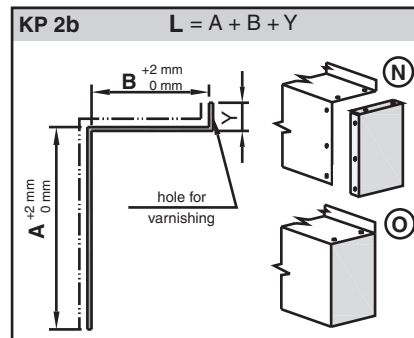
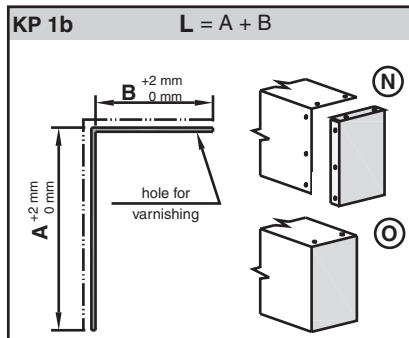
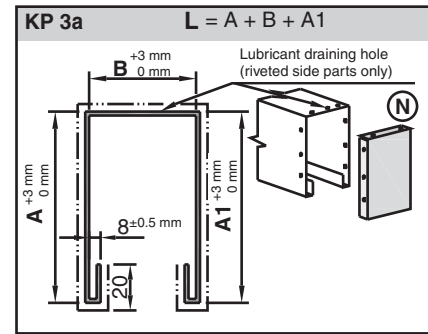
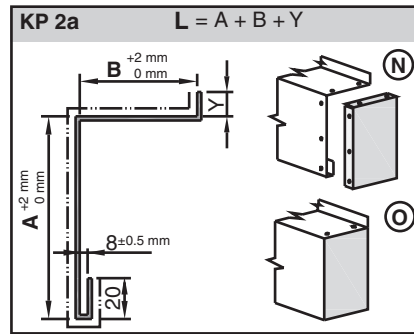
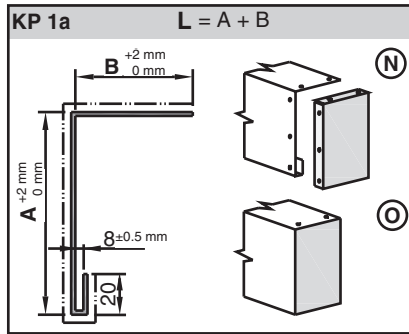
1.7 Mounting Holders







1.8 Types of Cover Plates and Side Parts



Legend: (N) - Side part – riveted or enclosed (O) - side part - bent L - overall cover plate width - - - - - varnished areas

1.11 Standard Colours
















Standard Slat Colours

NUMBER	PAINT	DESCRIPTION	RAL	VSR
010	H	white	9003	010
130	H	grey	7038	130
140	H	silver	9006	140
240	H	light beige	-	240
110	H	beige	-	110
071	H	brown	8028	071
220	H	dark green	6005	220
440	H	azure blue	5009	440
780 H	H	bronze	-	780
330	H	purple red	3011	330
120	H	terracotta	3013	120
720	H	chrome yellow	1007	720
9010	H	white	9010	901
904	H	light grey	7035	904
909	H	beige-green	1000	909
908	H	turquoise blue	5018	908
903	H	light blue-grey	5014	903
906	H	flash blue	5002	906
9007	H	grey (silver)	9007	907
7016	H	black (anthracite)	7016	-
7022	H	grey	7022	-
905	H	black 905	9005	-

Legend: H - smooth paint

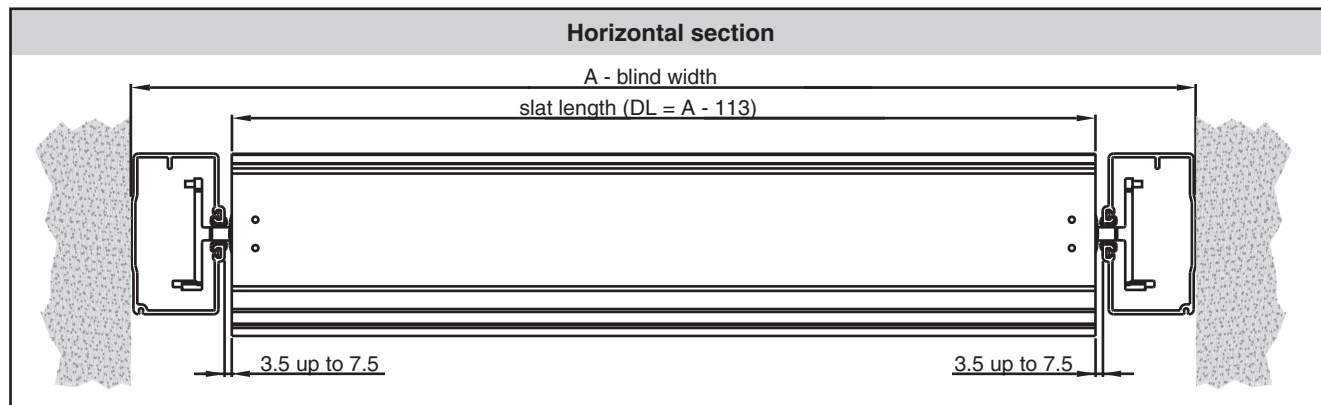
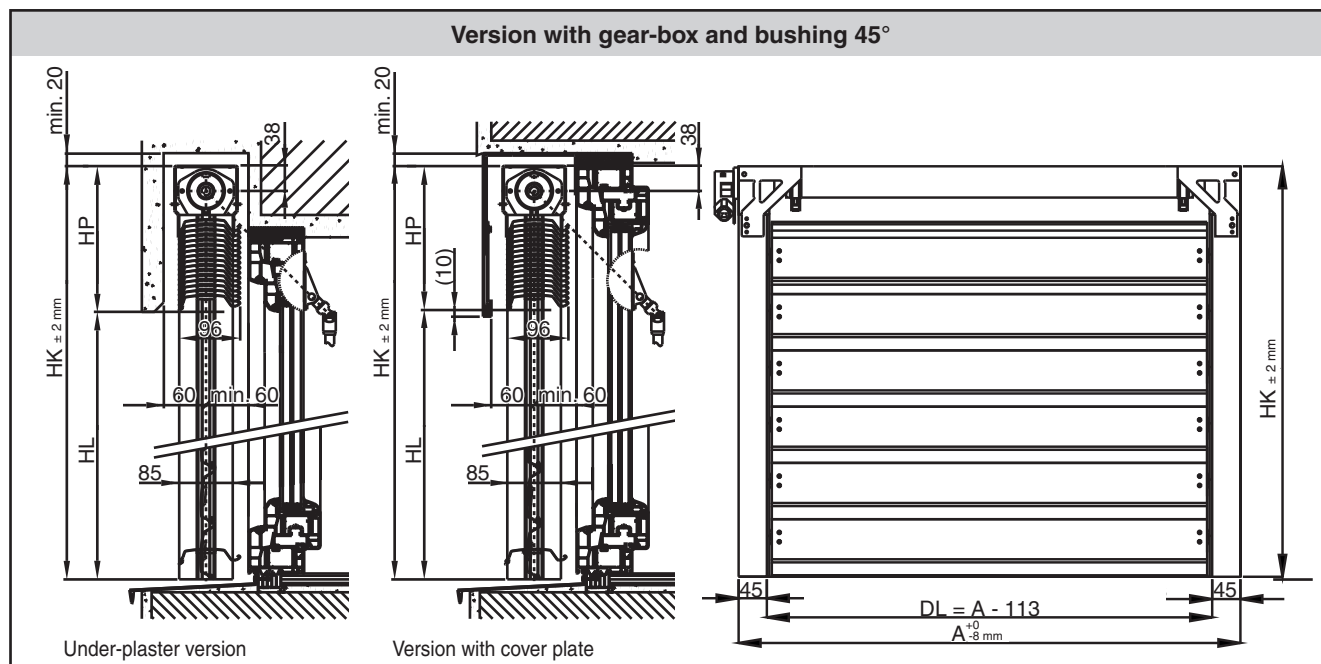
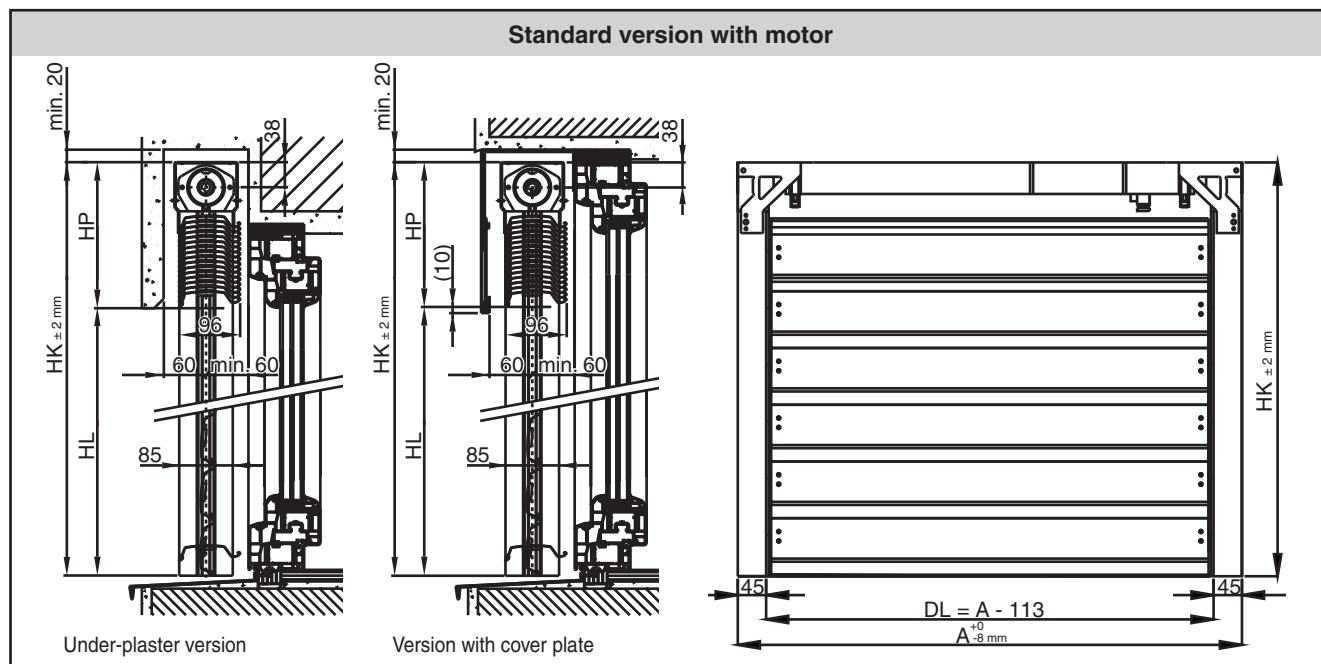
Note: Each VSR colour is matched to the closest colour shade of the RAL collection. Slat colours – gloss 60%, other painted components – gloss 80%.

1.12 Fixation Material for Installation

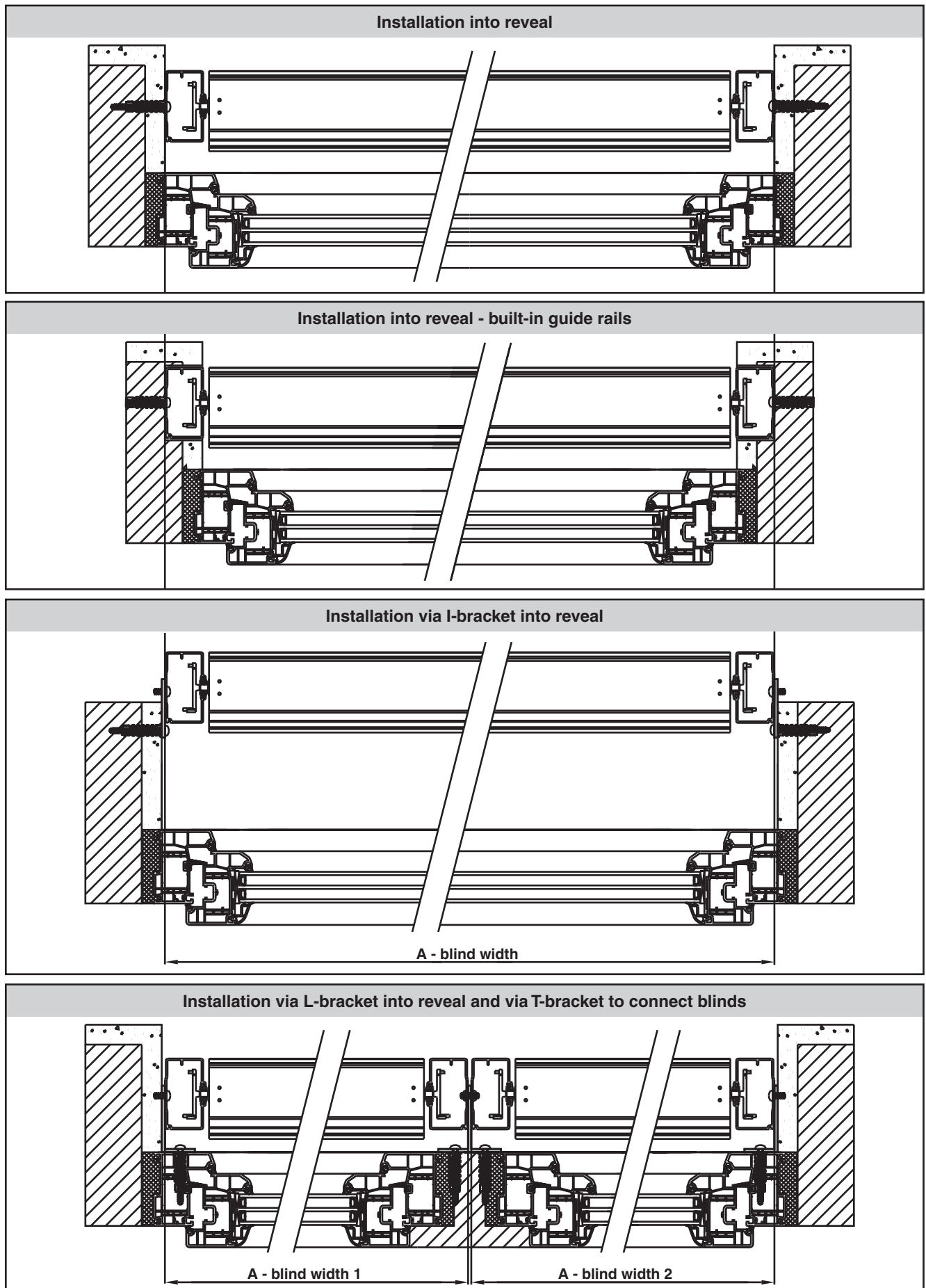
	Guide rails	Brackets
Wood, plastic, plate up to 4 mm	4.2 x 25 stainless steel 	M4 x 10 stainless steel + 4.2 x 25 stainless steel  
Plate 1.75 - 3 mm	4.2 x 25 stainless steel 	M4 x 10 stainless steel + 4.2 x 25 stainless steel - Tex  
Metal from 4 mm	M4 x 10 stainless steel 	M4 x 10 stainless steel 
Concrete, brick, plaster	Wall plug 5/31+ 4.2 x 45 stainless steel 	M4 x 10 stainless steel + Wall plug 5/31 + 4.2 x 45 stainless steel  
Light material – aerated concrete	Wall plug into aerated concrete + 4.2 x 45 stainless steel 	M4 x 10 stainless steel + Wall plug into aerated concrete + 4.2 x 45 stainless steel  
Insulation up to 30 mm	Wall plug 5/31 + 4.2 x 60 stainless steel 	

1.11 Technical Documentation

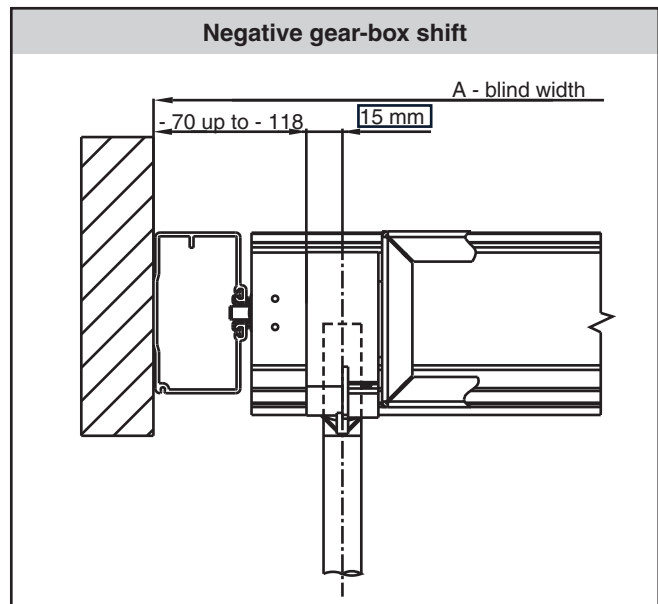
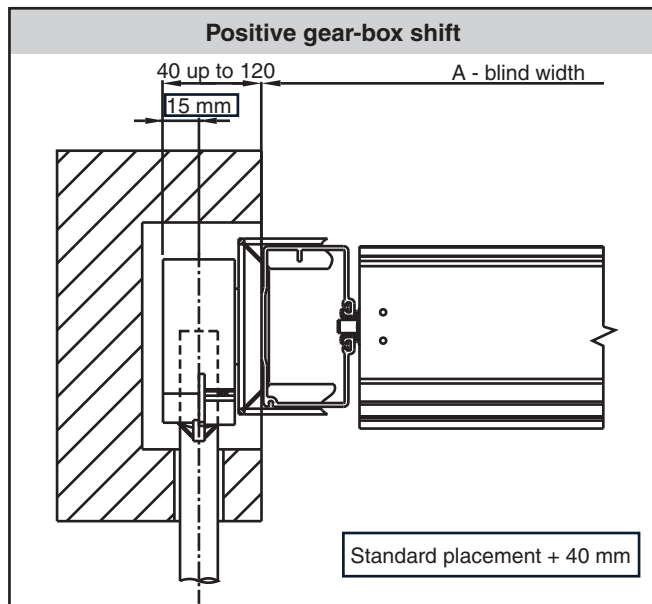
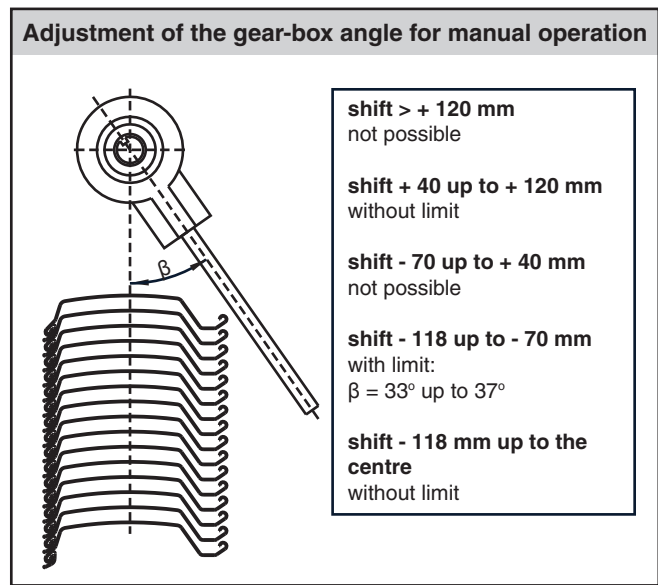
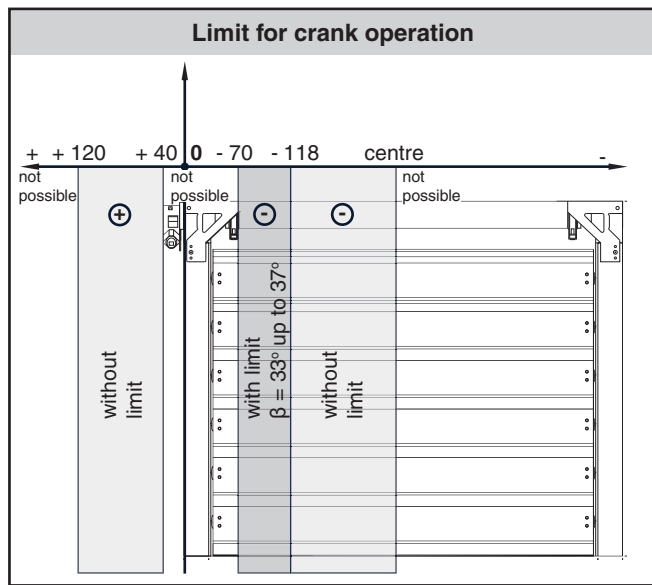
Comparison of blinds with motor / crank



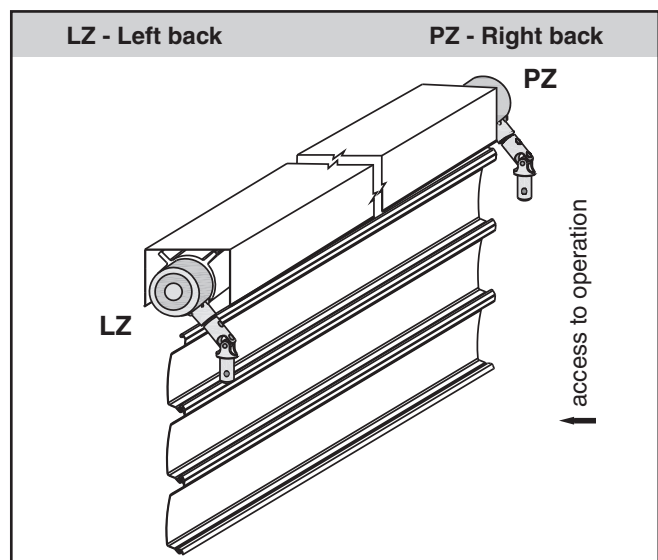
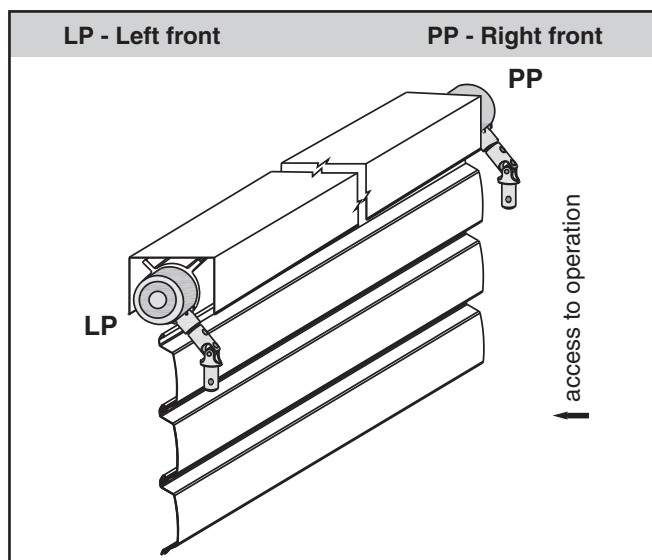
1.14 Installation of Guide Rails



1.15 Standard Placement of Gear-Box / Gear-Box Shift

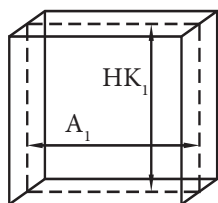


Selection of operation side for interior gear-box



3. Manual

3.1 Measuring Instructions – Blind into Window Opening

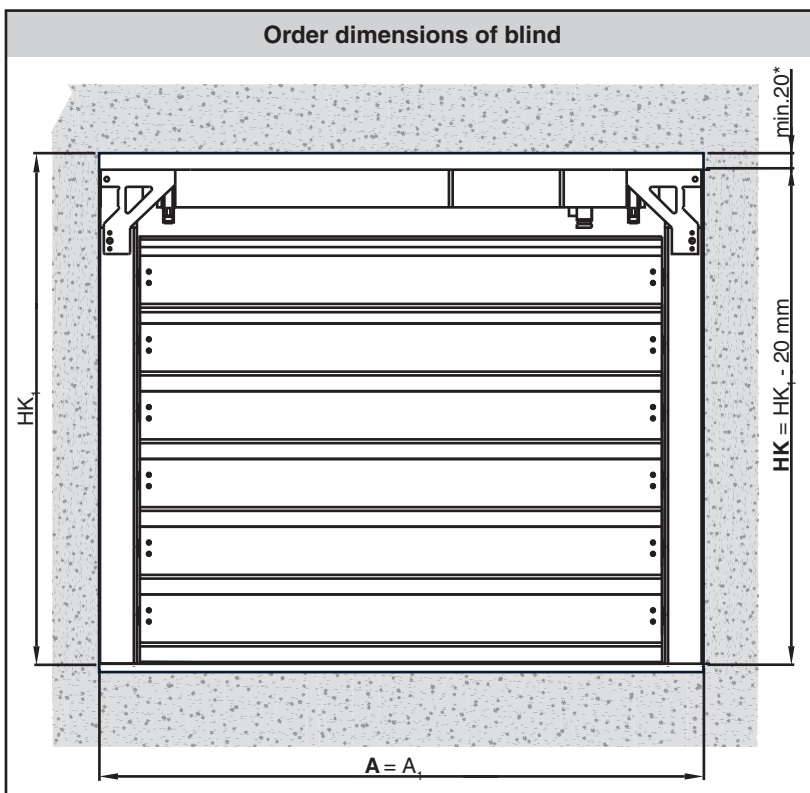


Legend:
 A_1 – window opening width
 HK_1 – window opening height
 A – blind width
 HK – blind height

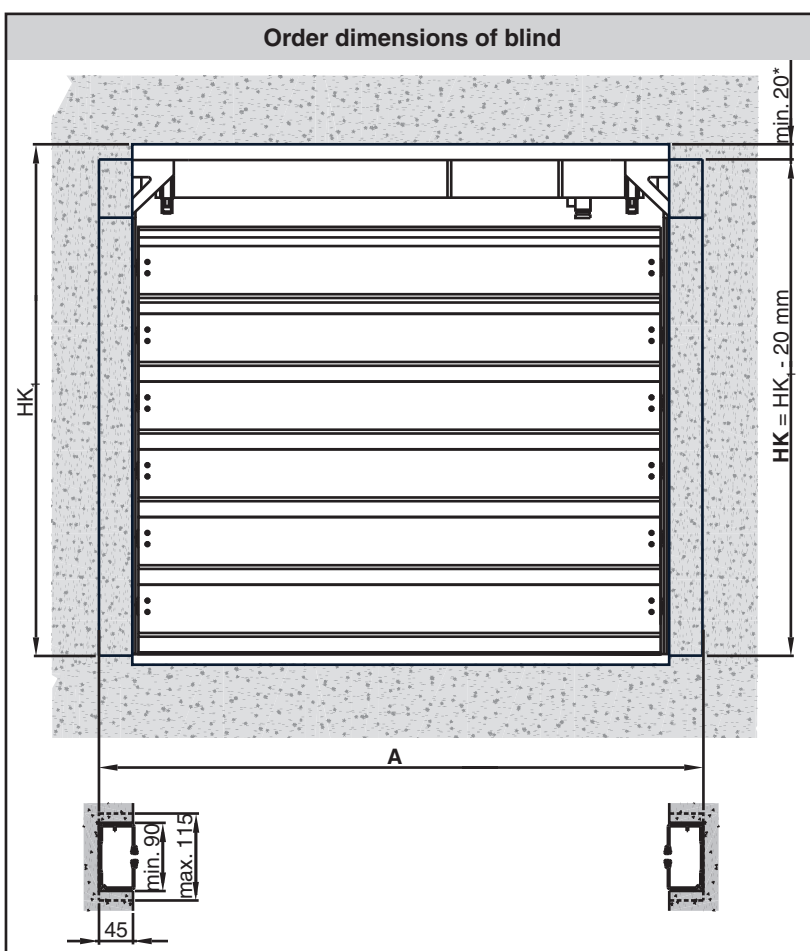
Blind width A:
 Measure the inner width of the window opening (A_1) at least at top, middle and bottom parts. Use the minimum measured dimension.

Blind height HK:
 Measure the inner height of the window opening (HK_1) again at the three points. Take the minimum measured dimension and deduct min. 20 mm from this value.
 Blind height $HK = HK_1 - 20 \text{ mm}$.

Crank length L_K :
 The crank length is measured while straightened. Standard crank length $L_K = HK - 250 \text{ mm}$.



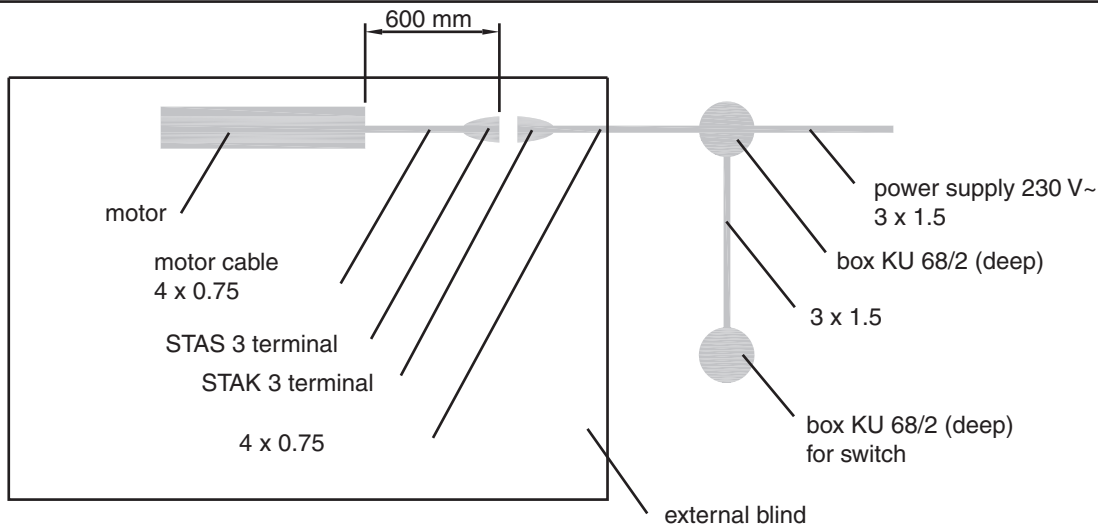
3.1.1 Possibility of Built-in Guide Rails



*Minimum installation space 20 mm

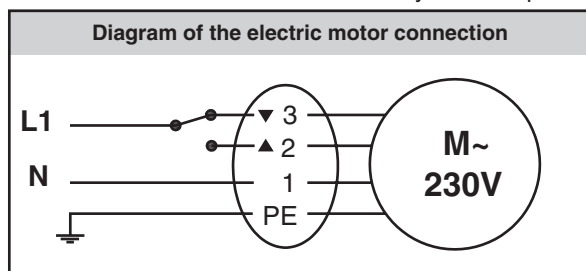
3.2 Electric Connection

3.2.1 Building Readiness of Electric Installation

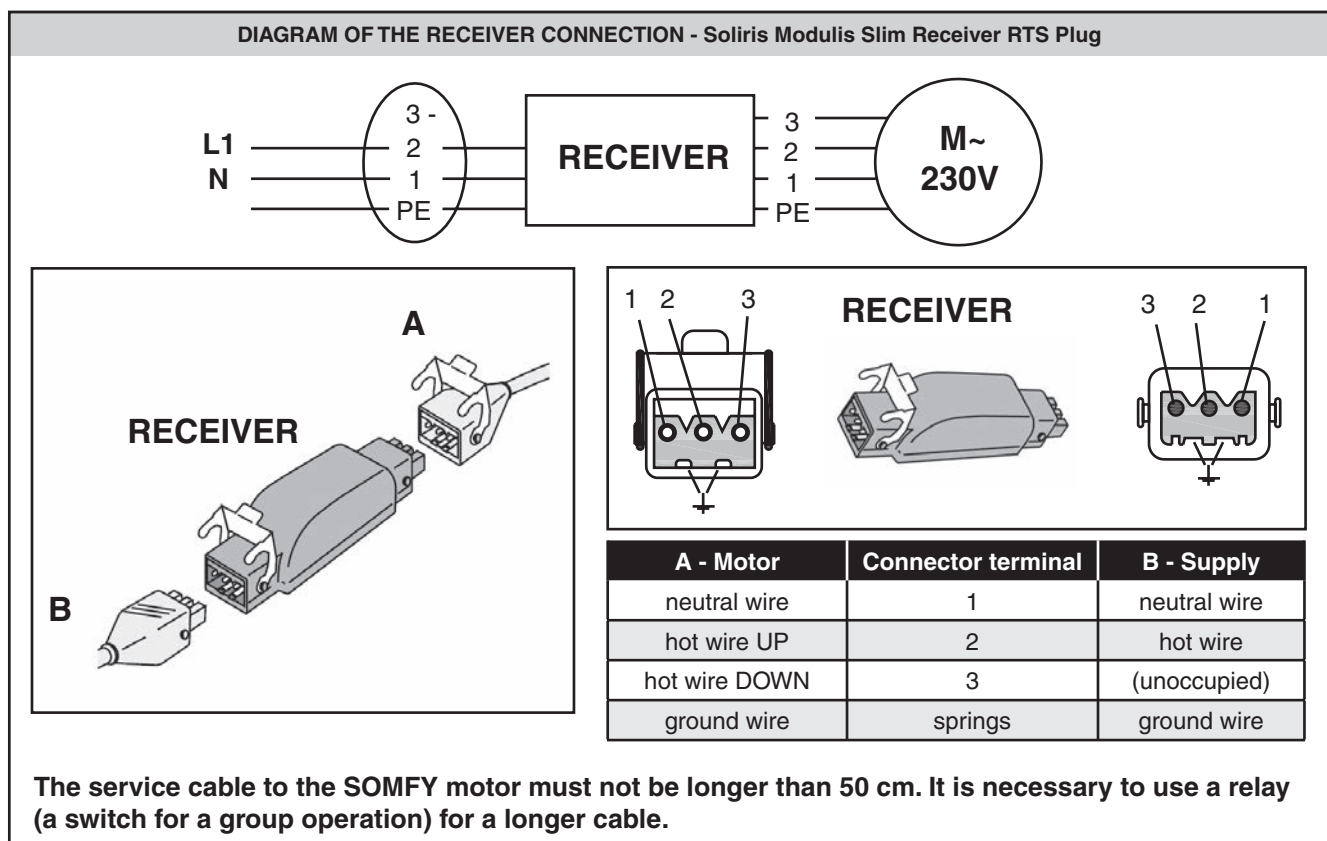


3.2.2 Motor and STAS Terminal Connection

- The supply cable 600 mm long is terminated with a STAS terminal.
- The connection shall be carried out by a skilled person.



Connector terminal
1 - blue neutral wire
2 - black hot wire
3 - brown hot wire
PE - yellow/green ground wire



3.3 Operation and Maintenance Instructions

3.3.1 Operation

Dropping, lifting and slat tilting:

motor - using a blind switch or remote control (if the RTS receiver is connected)

manually - crank: by turning either left or right

Slat tilting can only be done at the lower end position.

3.3.2 Maintenance

- The blind does not require any special maintenance.
- Functionality and service life are conditioned by the way of use.
- It is recommended to lubricate the mechanisms with a dry lubricant once a year.
- Use only water with detergents for cleaning, do not use any abrasive devices.
- In winter, when there are frosts and icing, before manipulating with the blind, check whether the slat holders are not frozen into the guide rails or onto the window-sill. If yes, remove the icing carefully otherwise mechanical damage of the blind can occur.


3.3.3 Wind Resistance of External Blinds

Classes of wind resistance were assigned on the basis of tests carried out in Wädenswil CH 8820 in accordance with the standard of EN 13659:2004+A1:2008.

blind width (cm)	50 – 280
wind resistance class	6
max. wind speed (km/h)	90

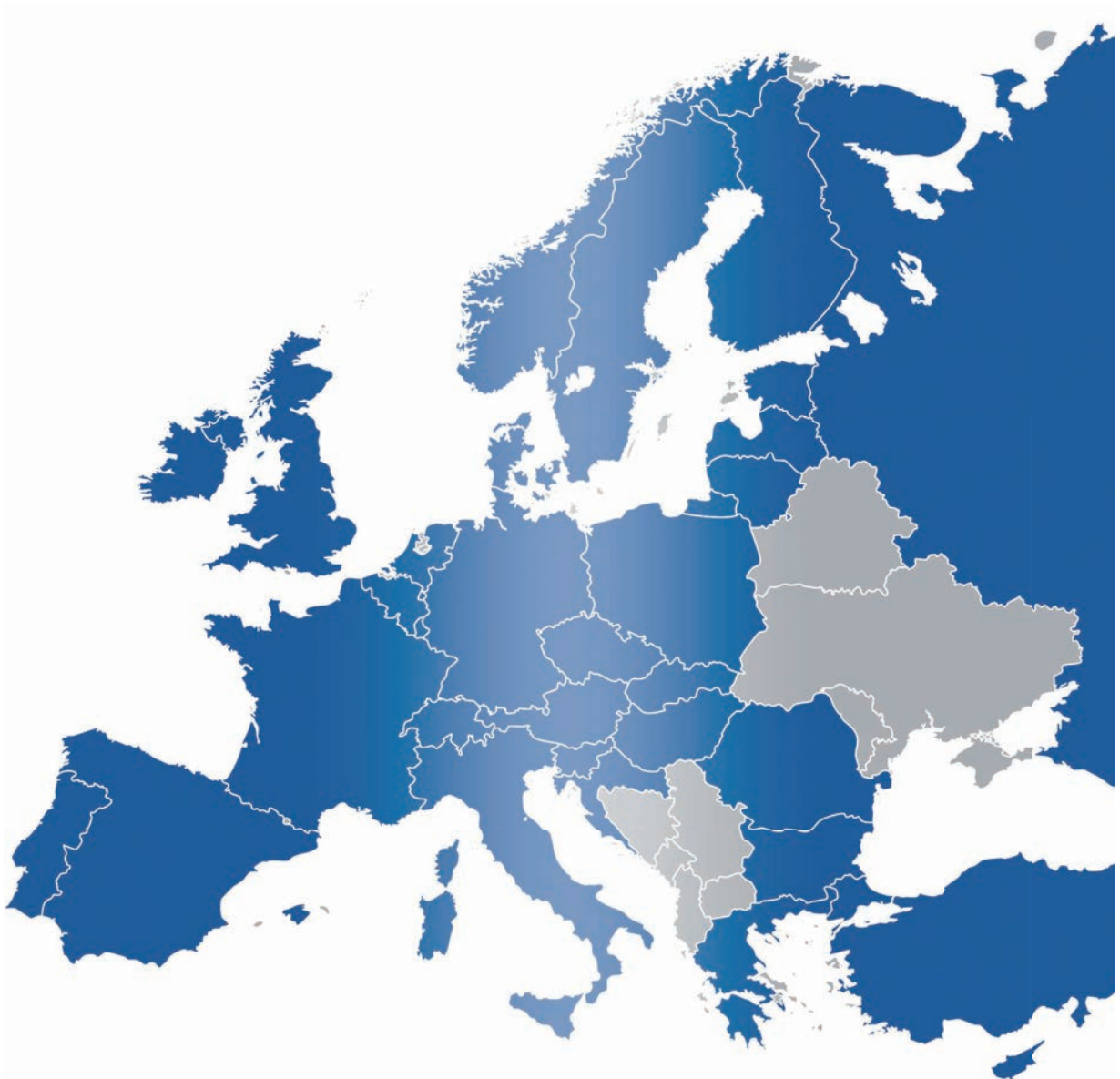
External blinds PROTAL are constructed to withstand the wind speed up to 105 km/hour without any damage.

The stated classes of wind resistance, or the wind speed, are valid for the product while pulled down and with closed slats, and provided that the wind is heading to the blind surface at a right angle with a minimum dynamic effect.


SERVIS CLIMAX a.s., Jasenice 1253, Vsetín, 75501, CZ 10
External blinds Protal 8-280-01-000000 Declaration on properties: 01-12-13 External sun shades Wind resistance: Technical class 6 (7), EN 13659

Our blinds, roller shutters, awnings and insect screens improve people's lives. They protect against the sun, ensure privacy and save energy.

■ Places where you can buy our products



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AWNINGS

EXTERNAL ROLLER SHUTTERS

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