

OVERVIEW OF BRACKETS

Typical applications					1	2	3	4	5	6	7	8	9	10
Frame bracket					K5	K5	K5	K17	K82	K122	K127	K122-1	K122-1	K7
Mounting aid							K21							
Bracket accessories					clamping ring B4 (36 mm-G1/8)									
Casement bracket					F29-1	F1, F1V, F1.1, F10.6, F10.8S, F11, F13, F40				F29	F11	F36	F30	F12
Special application					Heroal 085D					Heroal 085 D	Wing 105D	AWS 57RO	Wictec 50	Sky light Essmann
Space requirement		min.	[mm]		50	50	40 – 50	70	45	60	35	68	68	120
Window material		Alu			●	●	●	●	●	●	●	●	●	
		Wood				●	●	●	●	●				
		PVC				●	●	●	●					●
Type of window and mounting	Bot-tom hung	in-ward	HSK	FM			■		■					
				RM										
			NSK	FM										
				RM										
		out-ward	HSK	RM			●		●					
				PR		●		●						
			NSK	RM										
				PR										
	Top hung	in-ward	HSK	FM			■		■					
				RM										
			NSK	FM										
				RM										
		out-ward	HSK	RM			●		●					
				PR		●		●						
			NSK	RM										
				PR										
	Side hung	in-ward	HSK	FM			■		■					
				RM										
			NSK	FM										
				RM										
	Roof	out-ward	HSK	RM	●		●		●					
				PR		●		●						
			NSK	RM			●			●	●	●	●	
				PR		●		●						
	Sky-light	out-ward	HSK	RM		●		●	●					●
			NSK	RM										
FAB(*1		Solo	[mm]		450 – 1300								600 – 1200	
		Sync2	[mm]		1200 – 2400								1200 – 2400	
FAH(*1		Solo	[mm]		450 – 1500								600 – 1200	
		Sync2	[mm]		450 – 2500								1200 – 1500	

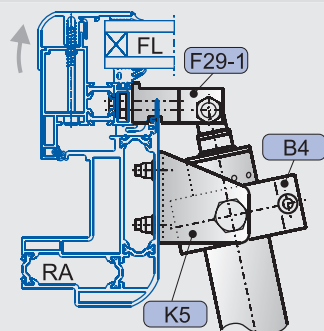
LEGEND

● suitable ■ not recommended

(*1 Sample value of the casement dimensions. The actual casement dimensions depend on the stroke and the position of the drives to the hinges. The values of FAB/FAH are to be used analogue for side hung windows.

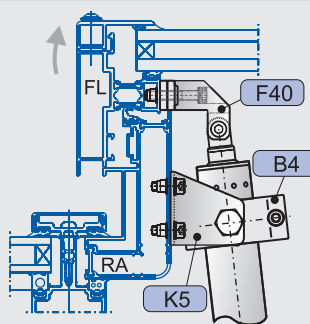
TYPICAL APPLICATIONS

1 RM, HSK, roof



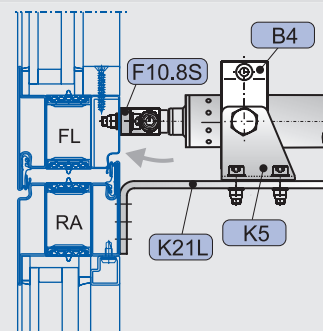
View on aluminium window

2 RM, HSK, roof



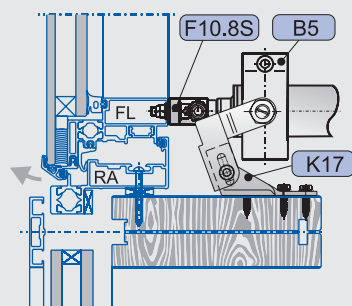
View on aluminium window

3 RM, HSK, top hung outward opening



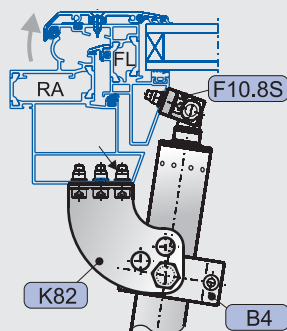
View on aluminium window

4 RM, HSK, top hung outward opening



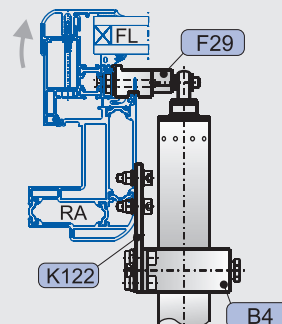
View on aluminium window

5 RM, HSK, roof



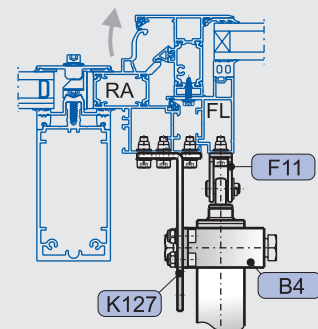
View on aluminium window

6 RM, NSK, roof



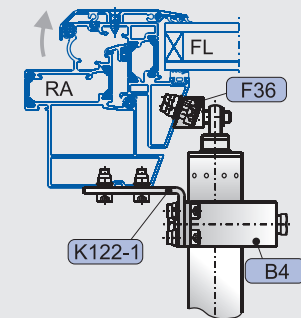
View on aluminium window

7 RM, NSK, roof



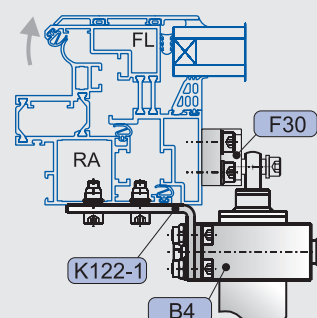
View on aluminium window

8 RM, NSK, roof



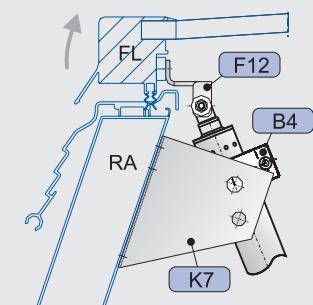
View on aluminium window

9 RM, NSK, roof



View on aluminium window

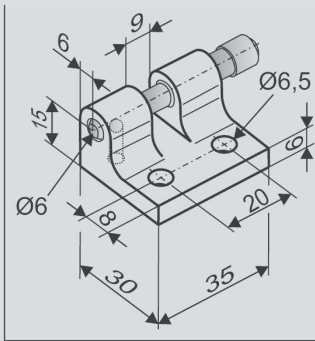
10 RM, HSK, sky-light



View on sky light

CASEMENT BRACKETS

F1



Application

Surface mounting on the main closing edge of casement profiles of outward opening windows or skylights, for drives with front or rear suspension with bore Ø6 mm, manual removal of drive possible

Part.-No. 150102

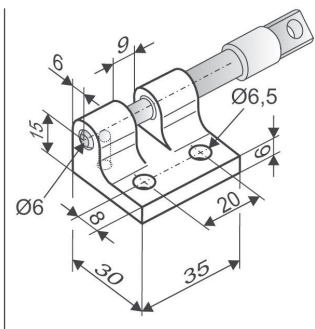
Material/Finish
aluminium, diecast

Feature/Equipment

1x locking bolt
Ø6 mm

Load
max. 1000 N

F1.1



Application

Surface mounting on the main closing edge of casement profiles of outward opening windows or skylights, for drives with front or rear suspension with bore Ø6 mm, manual removal of drive possible

Part.-No. 150110

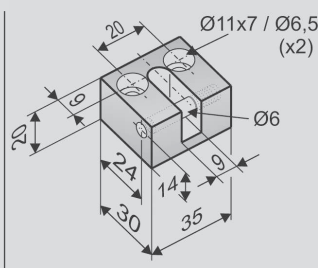
Material/Finish
aluminium, diecast

Feature/Equipment

1x locking spring bolt
Ø6 mm

Load
max. 600 N

F1V



Application

Surface mounting on the main closing edge of casement profiles of outward opening windows or skylights, for drives with front or rear suspension with bore Ø6 mm

Part.-No. 150101

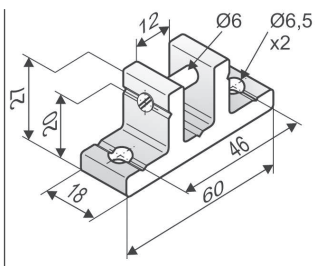
Material/Finish
aluminium

Feature/Equipment

1x grub screw Ø6 mm

Load
max. 1600 N

F10.6



Application

Surface mounting on main closing edge of casement profiles of outward opening windows or skylights, for drives with front or rear suspension with bore Ø6 mm, threaded stud bolt

Part.-No. 151000

Material/Finish
aluminium

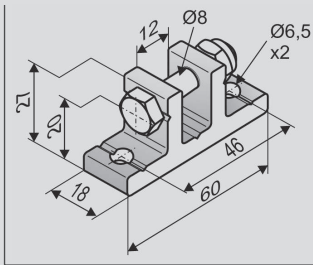
Feature/Equipment

1x stud bolt Ø6 mm

Load
max. 1600 N

CASEMENT BRACKETS

F10.8S

**Application**

Surface mounting on the **main closing edge** of casement profiles of outward opening windows, for drives with **front or rear suspension** with bore **Ø8 mm**

Part.-No. 151105

Material/Finish
aluminium

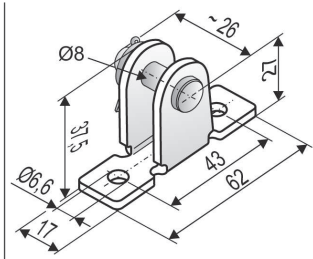
Feature/Equipment

1x nut M8,
1x screw M8x35

Load

max. 3000 N

F11ST

**Application**

Surface mounting on the **side closing edge** of casement/ window frame profiles of in-/outward opening windows or on skylights, for drives with front or rear suspension with bore **Ø8 mm**, mounting holes aligned with central axis of drive

Part.-No. 151400

Material/Finish
steel galvanized

Feature/Equipment

1x bolt Ø8 mm,
washer,
cotter pin

Load

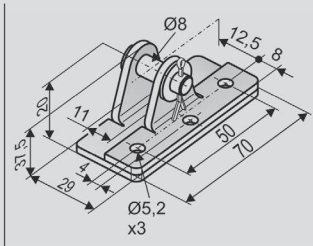
max. 3000 N

F11VA

Part.-No. 151401

Material/Finish
stainless steel

F13

**Application**

Surface mounting on the **side closing edge** of casement/ window frame profiles of in-/outward opening windows or on skylights, for drives with front or rear suspension with bore **Ø8 mm**, mounting holes not aligned with the central axis of drive

Part.-No. 151405

Material/Finish
steel galvanized

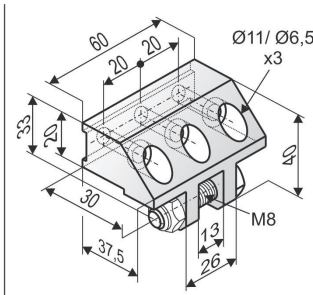
Feature/Equipment

1x bolt Ø8 mm,
washer,
cotter pin

Load

max. 1600 N

F40

**Application**

Surface mounting on the **main closing edge** of the casement profiles of outward opening roof windows, for drives with **front or rear suspension** with bore **Ø8 mm**

Part.-No. 155172

Material/Finish
aluminium

Feature/Equipment

1x screw M8x35,
nut M8

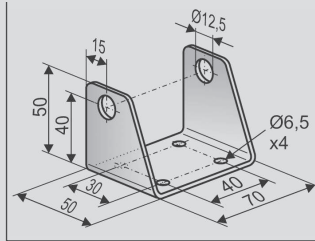
Optional accessories

B2 Base Plate F39/F40

Part.-No. 155173

FRAME BRACKETS

K5



Application

Surface mounting on the main closing edge of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for swivelling suspension of drives

PLA with B4,
SP with B13,
LKS with B7

Part.-No. 155800

Material/Finish

steel galvanized

Feature/Equipment
drilled holes Ø12,5 mm

Accessories

B4 clamp ring PLA
(Ø36 mm, G1/8)

Part.-No. 515900

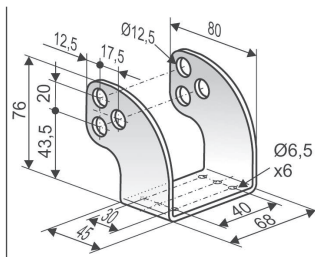
K21K Frame bracket

Part.-No. 159900

K21L Frame bracket

Part.-No. 159905

K82



Application

Surface mounting on the main closing edge of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for swivelling suspension of drives

PLA with B4,
SP with B13,
LKS with B7

Part.-No. 151320

Material/Finish

stainless steel

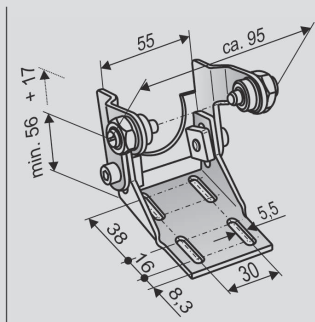
Feature/Equipment
drilled holes Ø12,5 mm

Accessories

B4 clamp ring PLA
(Ø36 mm, G1/8)

Part.-No. 515900

K17



Application

Surface mounting on the main closing edge of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for swivelling suspension of drives

PLA with B5,
SP with B12

Part.-No. 159200

Material/Finish

steel galvanized

Feature/Equipment
adjustable height

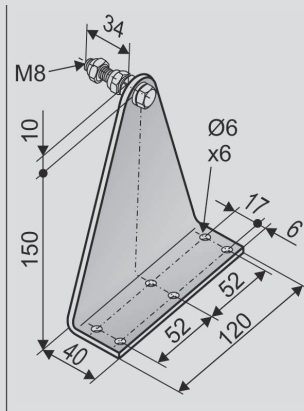
Accessories

B5 clamp ring PLA
(Ø36 mm, Ø8 mm)

Part.-No. 515825

FRAME BRACKETS

K15



Application

Surface mounting on the **side closing edge** of window frame profiles of in-/outward opening windows, by obliquely arranged drives with **rear suspension** with bore **Ø8 mm**

Required space on the frame
40 mm

Part.-No. 307000

Material/Finish

steel galvanized

Feature/Equipment

H=150 mm, t=4 mm

Optional accessories

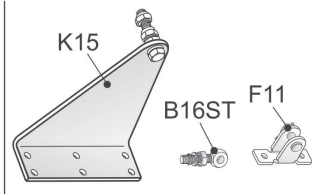
B16ST Eyebolt
(Ø8 x 40 mm ST)

Part.-No. 100044

B16VA Eyebolt
(Ø8 x 40 mm VA)

Part.-No. 100144

K15-Set



Application

Surface mounting on the **side closing edge** like RWA-1000/1100 hardware sets

Required space on the frame
40 mm

Part.-No. 517590

Material/Finish

steel galvanized

Feature/Equipment

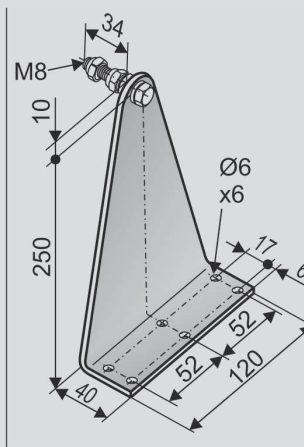
Set:

1x K15

1x F11ST

1x B16ST

K37



Application

Surface mounting on the **side closing edge** of window frame profiles of in-/outward opening windows, by obliquely arranged drives with rear suspension with bore **Ø8 mm**

Required space on the frame
40 mm

Part.-No. 307500

Material/Finish

steel galvanized

Feature/Equipment

H=250 mm, t=5 mm

Optional accessories

B16ST Eyebolt
(Ø8 x 40 mm ST)

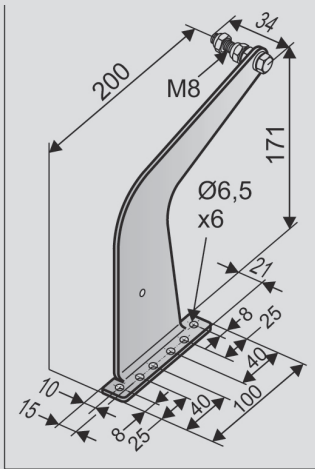
Part.-No. 100044

B16VA Eyebolt
(Ø8 x 40 mm VA)

Part.-No. 100144

FRAME BRACKETS

K97L



Application

Surface mounting on the **side closing edge** of window frame profiles of inward opening side hung windows, by obliquely arranged drives with **rear suspension** with bore **Ø8 mm**. Required space on the frame **20 mm**

Part.-No. 160938

Material/Finish

stainless steel,
vibratory grinding

Feature/Equipment

left hand

Optional accessories

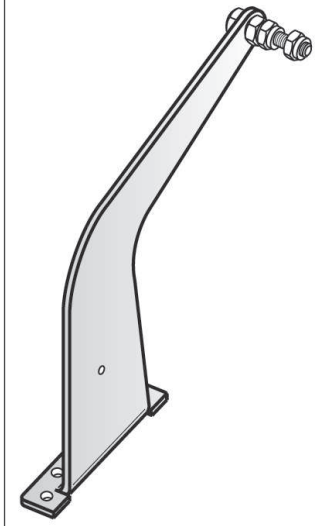
B16ST Eyebolt
(Ø8 x 40 mm ST)

Part.-No. 100044

B16VA Eyebolt
(Ø8 x 40 mm VA)

Part.-No. 100144

K97R



Application

Surface mounting on the **side closing edge** of window frame profiles of inward opening side hung windows, by obliquely arranged drives with **rear suspension** with bore **Ø8 mm**. Required space on the frame **20 mm**

Part.-No. 160939

Material/Finish

stainless steel,
vibratory grinding

Feature/Equipment

right hand

Accessories

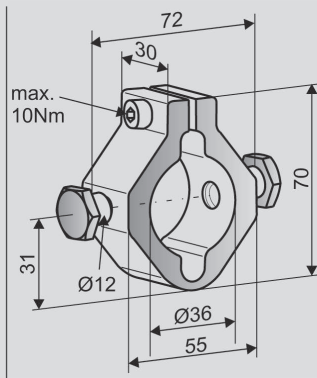
B16ST Eyebolt
(Ø 8 x 40 mm ST)

Part.-No. 100044

B16VA Eyebolt
(Ø8 x 40 mm VA)

Part.-No. 100144

OPTIONAL ACCESSORIES

B4**Application**

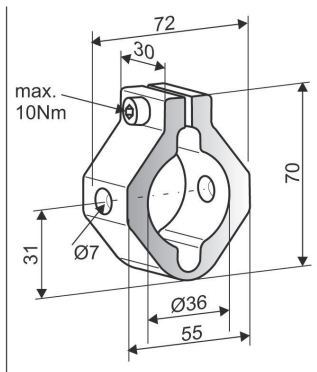
Adjustable clamping of the PLA drive housing, for surface mounting with **swivelling suspension** on **K5, K7, K82, K22, K22-1, K127** (preferably on outward opening windows)

Part-No. 515900**Material/Finish**

aluminium (antreated), stainless steel

Feature/Equipment

2x B8 collar screw Ø12mm, G1/8
1x cylinder head screw M6x16mm

B5**Application**

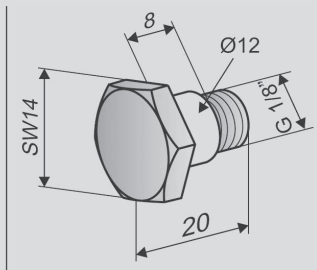
Adjustable clamping of the PLA drive housing, for surface mounting with **swivelling suspension** on **K17** (preferably on outward opening windows)

Part-No. 515825**Material/Finish**

aluminium (antreated), stainless steel

Feature/Equipment

2x Holes Ø7 mm
1x cylinder head screw M6x16

B8**Application**

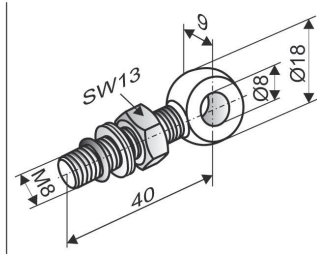
Swivelling suspensin of the clamp rings
B4 for PLA
B7 for LKS
or of the clamping blocks
B11, B13 for SP
for U-shaped frame brackets with bore **Ø12,5 mm**

Part-No. 172800**Material/Finish**

stainless steel

Feature/Equipment

Collar Ø12 mm, G1/8"

B16ST**Application**

Eye bolt for rear or front **suspension** of spindle drives with **M8** thread in the rear base cap or in the spindle tube

Part-No. 100044**Material/Finish**

steel galvanized

Feature/Equipment

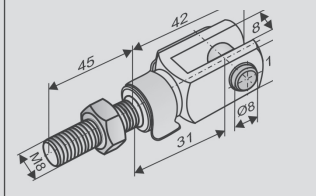
M8x40 (Eye Ø8 mm),
1 x nut M8 + Nordlock-safety-washer + O-ring
max. screw-in depth in the drive 25 mm

B16VA**Part-No. 100144****Material/Finish**

stainless steel (V2A)

OPTIONAL ACCESSORIES

B27ST



Application

Clevis for rear or front suspension of spindle drives with M8 thread in the rear base cap or in the spindle tube

Part.-No. 105510

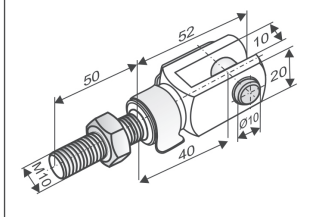
Material/Finish

steel galvanized

Feature/Equipment

Clevis M8 x 40 mm with spring bolt Ø8 mm and thread M8 x 45 mm
1x nut M10 + Nordlock-safety-washer + O-ring, max. screw-in depth in the drive 25 mm

B28ST



Application

Clevis for rear or front suspension of spindle drives with M10 thread in the rear base cap or in the spindle tube

Part.-No. 105520

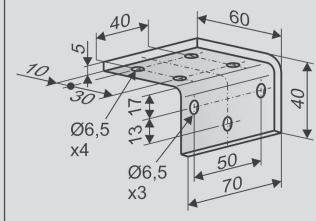
Material/Finish

steel galvanized

Feature/Equipment

Clevis M10 x 40 mm with spring bolt Ø8 mm and thread M10 x 50 mm
1x nut M10 + Nordlock-safety-washer + O-ring, max. screw-in depth in the drive 25 mm

K21K



Application

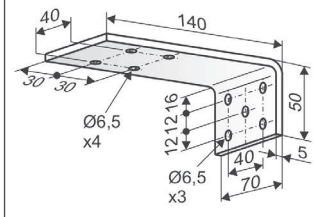
Shift the fastening level of the frame brackets **K5**, **K29** from the horizontal to the vertical position of the **main closing edge** of window frame profiles

Part.-No. 159900

Material/Finish

steel galvanized

K21L



Application

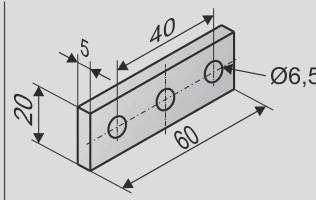
Shift the fastening level of the frame brackets **K5**, **K29** from the horizontal to the vertical position of the **main closing edge** of window frame profiles

Part.-No. 159905

Material/Finish

steel galvanized

B2



Application

Support for **F39** and **F40** as packing plate for mounting on the casement profiles of outward opening roof windows

Part.-No. 155173

Material/Finish

aluminium

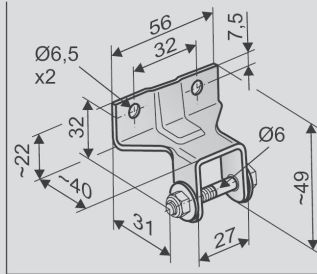
Feature/Equipment

60 x 20 x 5 mm

SPECIFIC APPLICATIONS

SKY-LIGHT ESSMANN TYP 810

F12

**Application**

Surface mounting on the main closing edge of the case-ment profiles of skylight domes **Essmann 810** for drives with front suspension with bore Ø6 mm

Part.-No. 151500

Material/Finish
steel galvanized

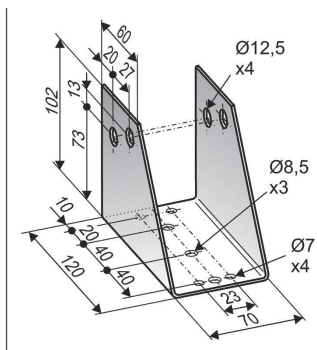
Feature/Equipment

1x screw M6,
washer,
nut

Load

max. 800 N

K7

**Application**

Surface mounting on the main closing edge of the upstand of skylight domes **Essmann 810** for swivelling suspension of drives
PLA with **B4**,
SP with **B13**,
LKS with **B7**

Part.-No. 157500

Material/Finish
steel galvanized

Feature/Equipment
drilled holes Ø12,5 mm

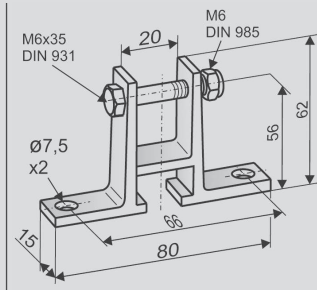
Accessories

B4 clamp ring PLA
(Ø36 mm, G1/8)

Part.-No. 515900

SKY-LIGHT ETERNIT

F2

**Application**

Surface mounting on the main closing edge of skylight domes **Eternit**, for drives with front suspension with bore Ø6 mm

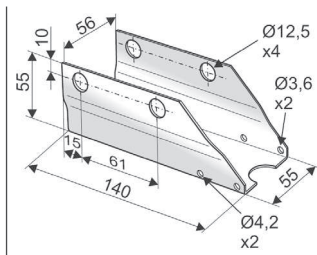
Part.-No. 150303

Material/Finish
aluminium

Feature/Equipment

1x nut M6,
1x screw M6x35

K4-L

**Application**

Surface mounting on the main closing edge of the upstand of skylight domes **Eternit** for swivelling suspension of drives
PLA with **B4**,
SP with **B11**,

Part.-No. 155610

Material/Finish
steel galvanized

Feature/Equipment

2x screw Taptite M4x10,
1x nut M4,
1x screw M4x65

Accessories

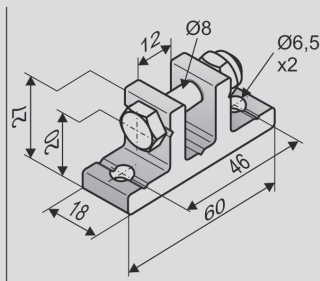
B4 clamp ring PLA
(Ø36 mm, G1/8)

Part.-No. 515900

SPECIFIC APPLICATIONS

SCHÜCO AWS 57RO, WICONA WICTEC 50, RAICO WING 105D – HSK

F10.8S



Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows, for drives with **front or rear suspension** with bore **Ø8 mm**

Part.-No. 151105

Material/Finish
aluminium

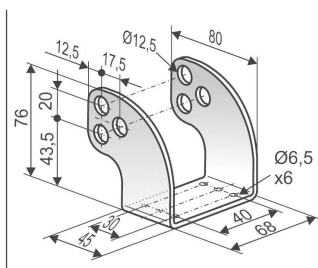
Feature/Equipment

1x nut M8,
1x screw M8x35

Load

max. 3000 N

K82



Application

Surface mounting on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives

PLA with **B4**,
SP with **B13**,
LKS with **B7**

Part.-No. 151320

Material/Finish
stainless steel

Feature/Equipment

drilled holes Ø12,5 mm

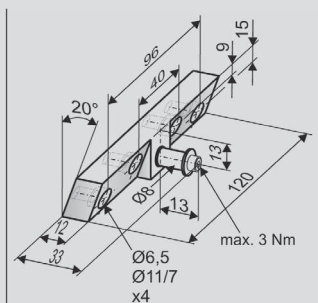
Accessories

B4 clamp ring PLA
(Ø36 mm, G1/8)

Part.-No. 515900

SCHÜCO AWS 57R – NSK

F36



Application

Surface mounting on the **side closing edge** of outward opening casement profiles of roof windows **Schüco AWS 57RO**, for drives with **front suspension** with bore **Ø8 mm**

Part.-No. 155170

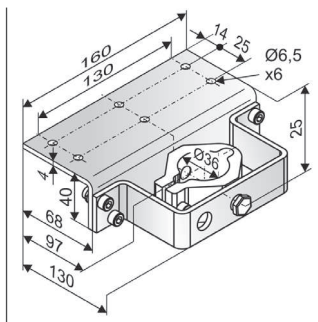
Material/Finish
aluminium,

stainless steel

Feature/Equipment

1x bolt Ø8 mm,
screw M4,
washer A4,3

K122-1



Application

Surface mounting on the **side closing edge** of window frame profiles of outward opening roof windows **Schüco AWS 57RO**, **Wicona Wictec 50** for **swivelling suspension** of drives
PLA with **B4**

Part.-No. 155116

Material/Finish
stainless steel

Feature/Equipment

without clamping ring B4

Accessories

B4 clamp ring PLA
(Ø 36 mm, G1/8)

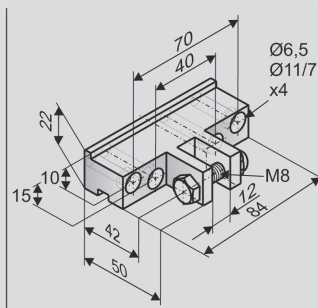
Part.-No. 515900

WICONA WICTEC 50 – NSK					
F30		Application Surface mounting on the side closing edge of the outward opening casement profiles of roof windows Wicona Wictec 50 , for drives with front suspension with bore Ø8 mm	Part-No. 155160 Material/Finish aluminium, stainless steel Feature/Equipment 1x bolt Ø8 mm, screw M4, washer A4,3		
K122-1		Application Surface mounting on the side closing edge of window frame profiles of outward opening roof windows Schüco AWS 57RO , Wicona Wictec 50 for swivelling suspension of drives PLA with B4	Part-No. 155116 Material/Finish stainless steel Feature/Equipment without clamping ring B4		
			Accessories		
B4 clamp ring PLA (Ø36 mm, G1/8)			Part-No. 515900		
RAICO WING 105D – NSK					
F11ST		Application Surface mounting on the side closing edge of casement/window frame profiles of in-/outward opening windows or on skylights, for drives with front or rear suspension with bore Ø8 mm, mounting holes aligned with central axis of drive	Part-No. 151400 Material/Finish steel galvanized Feature/Equipment 1x bolt Ø8 mm, washer, cotter pin Load max. 3000 N		
F11VA			Part-No. 151401 Material/Finish stainless steel		
K127		Application Surface mounting on the side closing edge of window frame profiles of outward opening roof windows Raico Wing 105D for swivelling suspension of drives PLA with B4	Part-No. 155119 Material/Finish stainless steel Feature/Equipment without clamping ring B4		
			Accessories		
B4 clamp ring PLA (Ø36 mm, G1/8)			Part-No. 515900		

SPECIFIC APPLICATIONS

HEROAL 085D – HSK

F29-1



Application

Surface mounting on the **main closing edge** of casement profiles of roof windows **Heroal 085D** for drives with **front suspension** with bore **Ø8 mm**

Part.-No. 155158

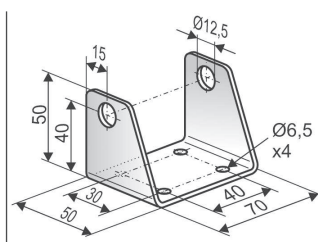
Material/Finish

aluminium
(natural anodized),
stainless steel

Feature/Equipment

1x screw M8x35,
nut M8

K5



Application

Surface mounting on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives

PLA with **B4**,
SP with **B13**,
LKS with **B7**

Part.-No. 155800

Material/Finish

steel galvanized

Feature/Equipment

drilled holes Ø12,5 mm

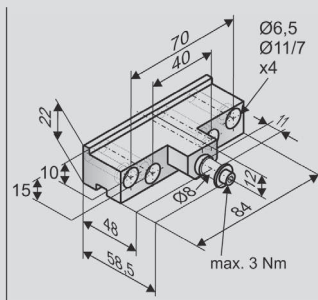
Accessories

B4 clamp ring PLA
(Ø36 mm, G1/8)

Part.-No. 515900

HEROAL 085D – NSK

F29



Application

Surface mounting on the **side closing edge** of casement profiles of roof windows **Heroal 085D** for drives with **front suspension** with bore **Ø8 mm**

Part.-No. 155156

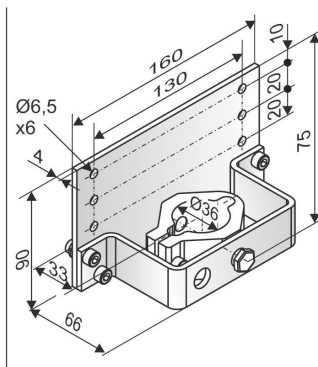
Material/Finish

aluminium
(natural anodized),
stainless steel

Feature/Equipment

1x bolt Ø8 mm,
screw M4,
washer A4,3

K122



Application

Surface mounting on the **side closing edge** of window frame profiles of outward opening roof windows **Schüco RS 106D**, **Heroal 085D** for **swivelling suspension** of drives

PLA with **B4**

Part.-No. 155115

Material/Finish

stainless steel

Feature/Equipment

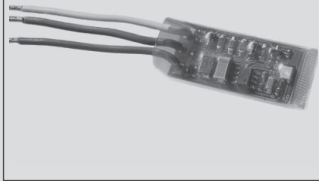
without clamping ring B4
(#515900)

Accessories

B4 clamp ring PLA
(Ø36 mm, G1/8)

Part.-No. 515900

OPTIONAL ACCESSORIES

Main control unit					
M-COM		Application Configuration module for automatic configuration and surveillance of max. 6 opening or locking drives version S12 / S3 in synchronised multi-drive systems Rated voltage: 24 V DC +/- 20%, (max. 2 Vss) Current consumption: <12 mA Drive type: S12	Part.-No. 524177 Protection rating IP30 rubber envelope Ambient temperature range 0 °C ... + 70 °C Dimensions 45 x 17 x 6 mm Connecting wires 3 wires 0,5 mm² x 50 mm Feature/Equipment Printed circuit board with components and connection wires to be installed in connection box to be supplied on site.		

Special model	PU/pcs.	Part.-No.			
Casement brackets painted / powder coated in other RAL colours					
Lump sum for coating		516030			
Specify at order stage:	1 – 20	516032			
	21 – 50	516032			
	51 – 100	516032			
	up 101	516032			
Frame brackets painted / powder coated in other RAL colours					
Lump sum for coating		516030			
Specify at order stage:	1 – 20	516031			
	21 – 50	516031			
	51 – 100	516031			
	up 101	516031			