

### OVERVIEW OF BRACKETS

Typical applications			1	2	3	4	5	6		
Frame bracket			K5, K82	K5	K28	K29	K29	K41		
Mounting aid				K21	K15, K16		K21			
Bracket accessories			B7		Rear holes	Front holes	Front holes	Front holes		
Casement bracket			F1, F1V, F1.1, F2, F10.6		F1, F1V, F2, F10.6			F12		
Special use								Sky light Essmann		
Space requirement	min.	[mm]	50	40 – 50	40	40	40 – 50	90		
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]						700 – 1300		
	Sync2	[mm]						1200 – 2500		
FAH*1	Solo	[mm]						450 – 1500		
	Sync2	[mm]						450 – 2500		

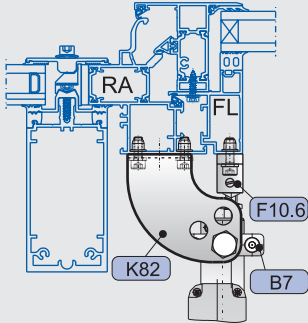
#### LEGEND

● 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.

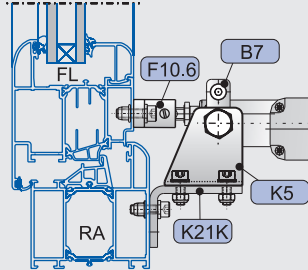
TYPICAL APPLICATIONSE

1 RM, HSK, roof



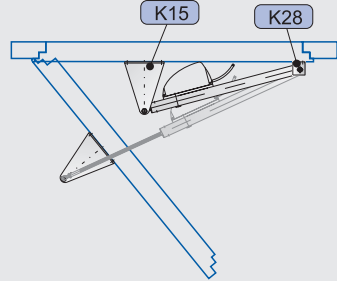
View on aluminium window

2 RM, HSK, top-hung outward opening



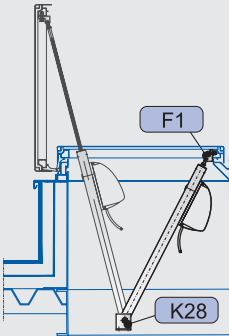
View on PVC-window

2 RM, NSK, side-hung outward opening



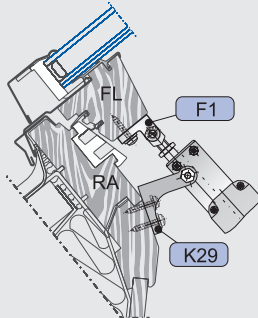
View for example

3 RM, HSK, roof



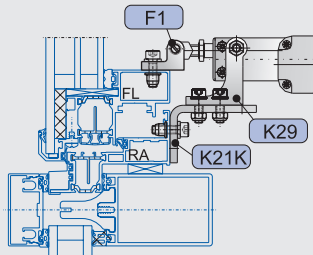
View on roof window

4 RM, HSK, roof



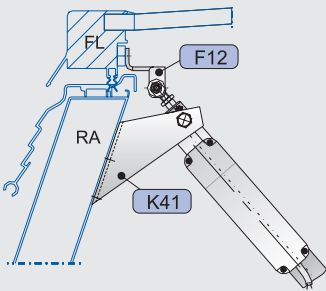
View on wooden window

5 RM, HSK, top-hung outward opening



View on aluminium window

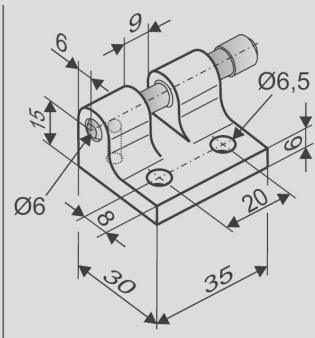
6 RM, HSK, sky light



View on sky light Essmann

### CASEMENT BRACKETS

F1



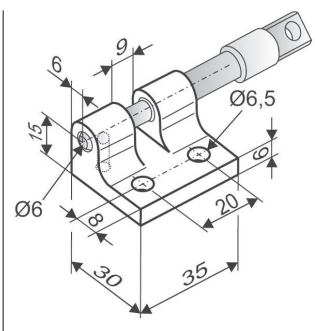
**Application**

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 the drive is possible

Part.-No. 150102

**Material/Finish**  
aluminium, diecast  
**Feature/Equipment**  
1x Locking bolt  
Ø6 mm  
**Load**  
max. 1000 N

F1.1



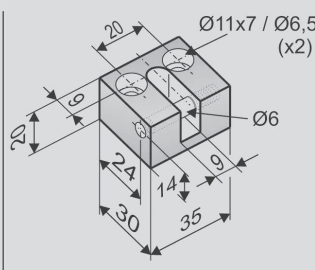
**Application**

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 the drive is possible

Part.-No. 150110

**Material/Finish**  
aluminium, diecast  
**Feature/Equipment**  
1x Locking spring bolt  
Ø6 mm  
**Load**  
max. 600 N

F1V



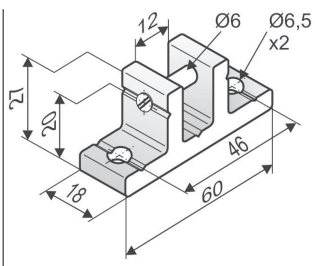
**Application**

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 grubscrew Ø 6 mm  
**Load**  
max. 1600 N

F10.6



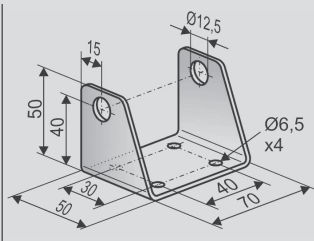
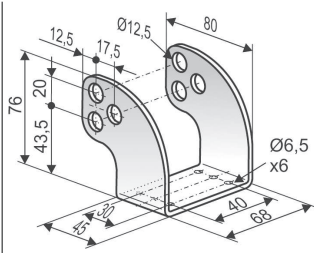
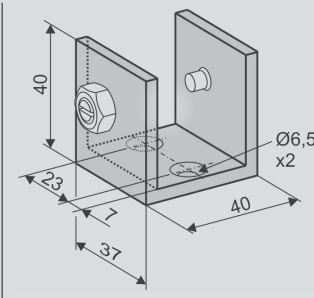
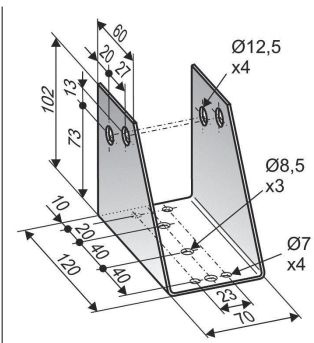
**Application**

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

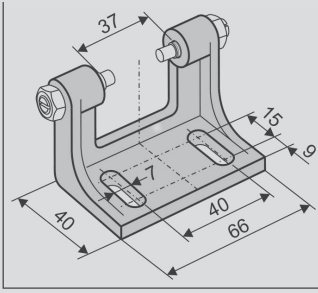
Part.-No. 151000

**Material/Finish**  
aluminium  
**Feature/Equipment**  
1x stud bolt Ø6 mm  
**Load**  
max. 1600 N

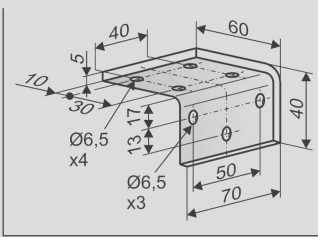
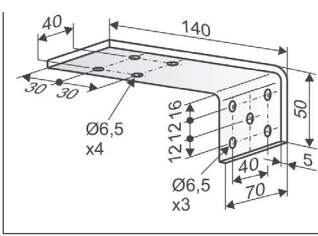
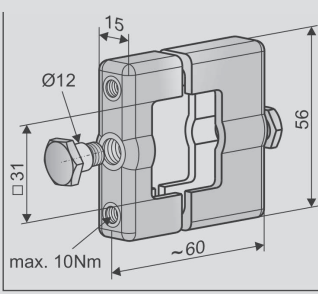
## CASEMENT BRACKETS

K5		<p><b>Application</b>  <b>Surface mounting</b> on the <b>main closing edge</b> of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for <b>swivelling suspension</b> of drives  <b>PLA</b> with <b>B4</b>,  <b>SP</b> with <b>B13</b>,  <b>LKS</b> with <b>B7</b></p>	<p><b>Part.-No. 155800</b>  <b>Material/Finish</b>  steel, galvanized  <b>Feature/Equipment</b>  bore holes Ø12,5 mm</p>			
		<b>Accessories</b>				
		<b>B7</b> clamp ring LKS (30 x 30 mm, G1/8)	<b>Part.-No. 513900</b>			
		<b>K21K</b> Frame bracket	<b>Part.-No. 159900</b>			
		<b>K21L</b> Frame bracket	<b>Part.-No. 159905</b>			
K82		<p><b>Application</b>  <b>Surface mounting</b> on the <b>main closing edge</b> of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for <b>swivelling suspension</b> of drives  <b>PLA</b> with <b>B4</b>,  <b>SP</b> with <b>B13</b>,  <b>LKS</b> with <b>B7</b></p>	<p><b>Part.-No. 151320</b>  <b>Material/Finish</b>  stainless steel  <b>Feature/Equipment</b>  bore holes Ø12,5 mm</p>			
		<b>Accessories</b>				
		<b>B7</b> clamp ring LKS (30 x 30 mm, G1/8)	<b>Part.-No. 513900</b>			
K28		<p><b>Application</b>  <b>Surface mounting</b> on the <b>main closing edge</b> of window frame profiles (or on the mullion/transom) of outward opening (roof-)windows, for <b>swivelling suspension</b> of drives <b>LKS</b> with <b>front or rear</b> bore <b>Ø6,0 mm</b></p>	<p><b>Part.-No. 160800</b>  <b>Material/Finish</b>  aluminium, nature  <b>Feature/Equipment</b>  2x grubscrew M8,  nut M8  <b>Load</b>  max. 600 N</p>			
		<b>Accessories</b>				
		2 rear holes Ø6 mm	<b>Part.-No. 520901</b>			
K7		<p><b>Application</b>  <b>Surface mounting</b> on the <b>main closing edge</b> of the upstand of skylight domes <b>Essmann 810</b> for <b>swivelling suspension</b> of drives  <b>PLA</b> with <b>B4</b>,  <b>SP</b> with <b>B13</b>,  <b>LKS</b> with <b>B7</b></p>	<p><b>Part.-No. 157500</b>  <b>Material/Finish</b>  steel galvanized  <b>Feature/Equipment</b>  drilled holes Ø12,5 mm</p>			
		<b>Accessories</b>				
		<b>B4</b> clamp ring PLA (Ø36 mm, G1/8)	<b>Part.-No. 515900</b>			

### CASEMENT BRACKETS

<b>K29</b> 	<b>Application</b> <b>Surface mounting</b> on the <b>main closing edge</b> of window frame profiles (or on the mullion/transom) of outward opening (roof-) windows, for <b>swivelling suspension</b> of drives <b>LKS</b> with <b>front or rear bore Ø6,0 mm</b>	<b>Part.-No. 160900</b>  <b>Material/Finish</b> aluminium, nature <b>Feature/Equipment</b> 2x grubscrew M8, nut M8 <b>Load</b> max. 600 N			
	<b>Accessories</b>  <b>2 rear holes</b> Ø 6 mm	<b>Part.-No. 520901</b>			
	<b>K21K</b> Frame bracket	<b>Part.-No. 159900</b>			
	<b>K21L</b> Frame bracket	<b>Part.-No. 159905</b>			

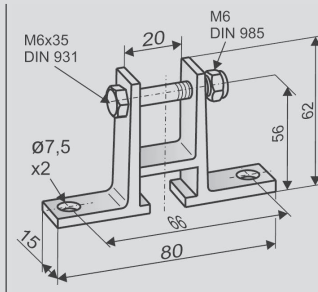
### ACCESSORIES

<b>Frame bracket</b>					
<b>K21K</b> 	<b>Application</b> Shift the fastening level of the frame brackets <b>K5, K29</b> from the horizontal to the vertical position of the <b>main closing edge</b> of window frame profiles	<b>Part.-No. 159900</b>  <b>Material/Finish</b> steel, galvanized			
	<b>K21L</b> 	<b>Application</b> Shift the fastening level of the frame brackets <b>K5, K29</b> from the horizontal to the vertical position of the <b>main closing edge</b> of window frame profiles	<b>Part.-No. 159905</b>  <b>Material/Finish</b> steel, galvanized		
<b>Clamp ring</b>					
<b>B7</b> 	<b>Application</b> <b>Adjustable clamping</b> of the <b>LKS</b> drive housing, for surface mounting with <b>swivelling suspension</b> on <b>K5, K7, K82</b> , (preferably on outward opening windows)	<b>Part.-No. 513900</b>  <b>Material/Finish</b> aluminium (E6/C-0), stainless steel <b>Feature/Equipment</b> 2x B8 collar screw Ø12mm, G1/8 2x cylinder head screw M6x50			

## SPECIFIC APPLICATIONS

## SKY LIGHT ETERNIT

F2



## Application

Surface mounting on the main closing edge of skylight domes **Eternit**, for drives with front suspension with bore  $\text{Ø}6$  mm

Part.-No. 150303

Material/Finish  
aluminium

Feature/Equipment

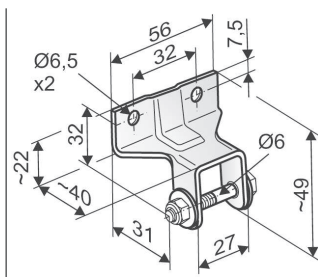
1x nut M6,  
1x screw M6x35

Load

max. 800 N

## SKY-LIGHT ESSMANN TYP 810

F12



## Application

Surface mounting on the main closing edge of the casement profiles of skylight domes **Essmann 810** for drives with front suspension with bore  $\text{Ø}6$  mm

Part.-No. 151500

Material/Finish  
steel, galvanized

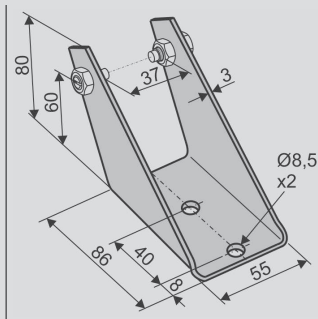
Feature/Equipment

1x screw M6,  
washer,  
nut

Load

max. 800 N

K41



## Application

Finish mounting on the main closing edge (**HSK**) of the upstand of skylight domes **Essmann 810** for swivelling suspension of drives **LKS**

Part.-No. 160910

Material/Finish  
steel, galvanized

Feature/Equipment

2x grubscREW M8,  
nut M8

### OPTIONAL ACCESSORIES

Collar screw			
<b>B8</b>		<p><b>Application</b>                      Swivelling suspensin                      of the clamp rings  <b>B4 for PLA</b>  <b>B7 for LKS</b>                      or of the clamping blocks  <b>B11, B13 for SP</b>                      for U-shaped frame brackets                      with bore <b>Ø12 mm</b></p>	<p><b>Part.-No. 172800</b>  <b>Material/Finish</b>                      stainless steel (1.4305)  <b>Feature/Equipment</b>                      collar Ø12 mm, G1/8"</p>

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