



SPECIAL FEATURES PLA

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- Robust corrosion-resistant design in a slim aluminium housing (D = 36 mm), optionally in RAL colors
- Easy installation due to adjustable clamp ring and rear suspension
- Spindle is ball beared with end position dampening
- Stainless steel spindle tube
- Programmable parameters of Intelligent Control Electronics S12
 - Synchronised multi-operation and sequence control without add. devices
 - Electronic soft-start, soft-close and soft-stop at end of stroke control
 - Stroke, force, speed
 - Rebate control
- Protection rating IP 65
- With GoreTex membrane
- Suitable for operation with M-COM for the automatic configuration of synchronised run of multi drive systems and sequence control

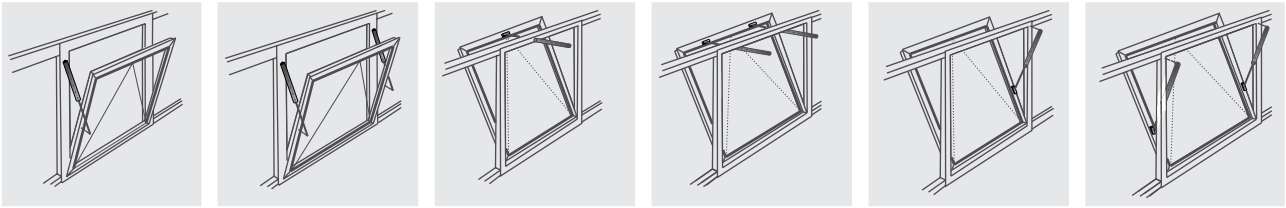
For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.

The LCA results of the different product types are listed at the end of this product catalogue.

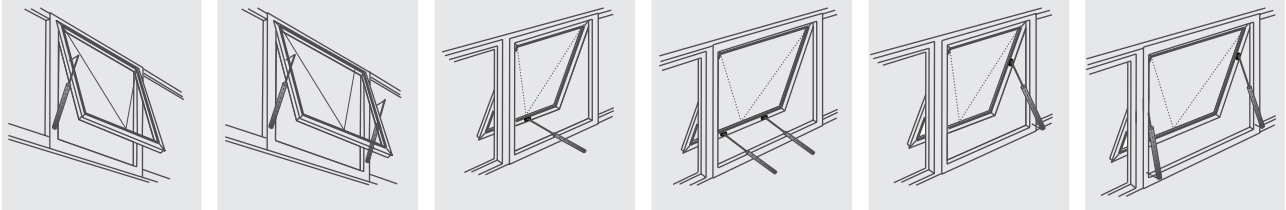
The EPD documents can be viewed or downloaded from our homepage www.aumueller-gmbh.de.

FACADE

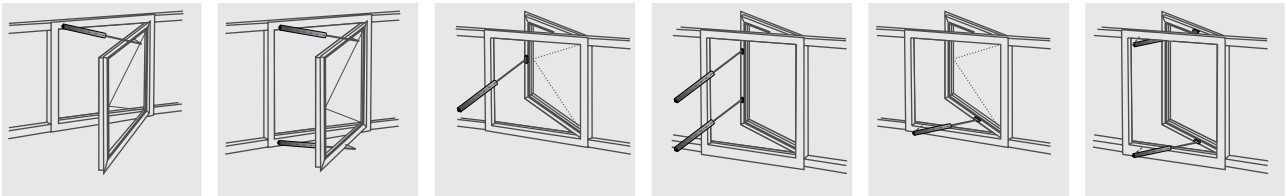
Bottom-hung



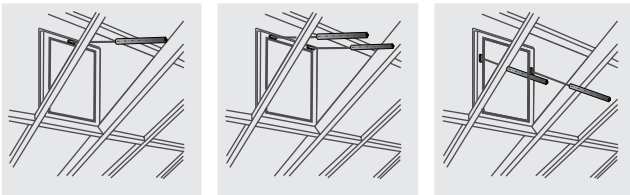
Top-hung



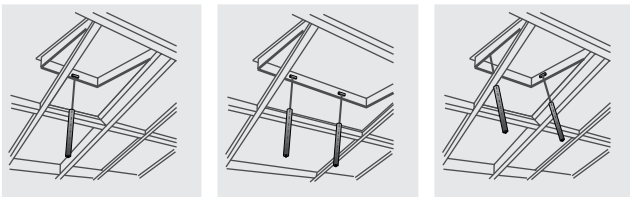
Side-hung

**ROOF**

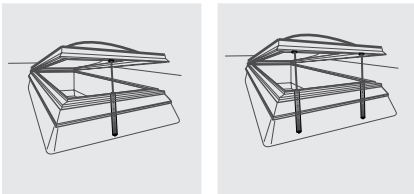
Bottom-hung



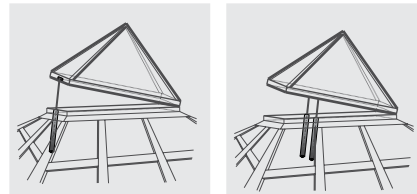
Top-hung

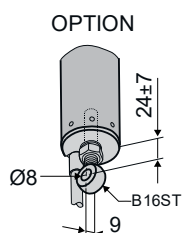
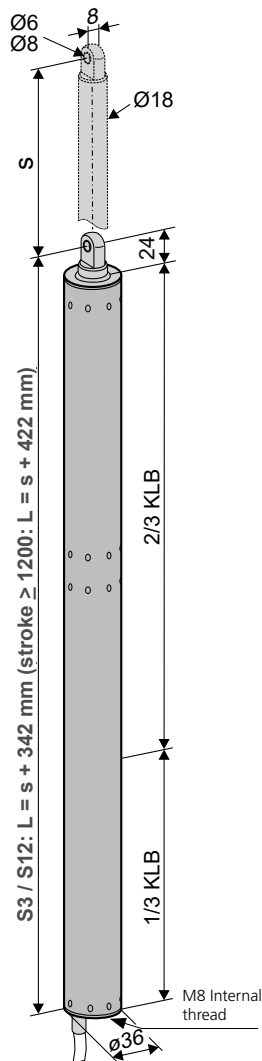
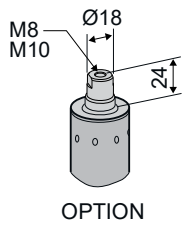


Sky light



Glass pyramid





- Application: natural ventilation, RWA, ferralux®-NRWG

Options

- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspension

S3

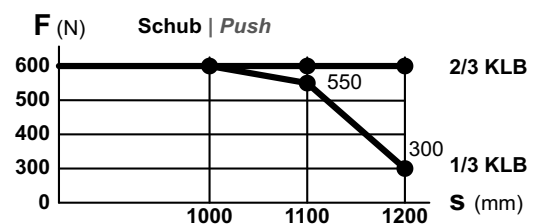
- Internal load dependent cut-off switch, post cycle resistant S3
- Programmable motion monitored run (up to 300 mm stroke)
- Programmable sequence control with Locking drives (S3 / S12)

S12

- Internal Intelligent Control Electronics S12
- Options
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)

TECHNICAL DATA

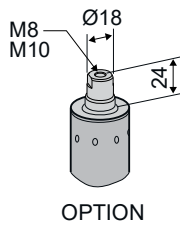
U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,6 A
I_A	Cut-off current	0,8 A
P_N	Rated power	15 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 65
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	600 N
F_A	Pushing force max.	



F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm ² , ~ 3 m
v	Speed	Factory settings: X = 6,0 mm/s ↷ = 6,0 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm (S12), programmable
L	Length	S3 / S12: s + 342 mm (see order data) stroke ≥ 1200: s + 422 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

ORDER DATA						
s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.	
100	442	PLA6 100 S3	E6/C-0	1	564111	
	442	PLA6 100 S12		1	546310	
200	542	PLA6 200 S3	E6/C-0	1	564122	
	542	PLA6 200 S12		1	546320	
300	642	PLA6 300 S3	E6/C-0	1	564131	
	642	PLA6 300 S12		1	546330	
400	742	PLA6 400 S3	E6/C-0	1	564141	
	742	PLA6 400 S12		1	546340	
500	842	PLA6 500 S3	E6/C-0	1	564151	
	842	PLA6 500 S12		1	546350	
600	942	PLA6 600 S3	E6/C-0	1	564161	
	942	PLA6 600 S12		1	546360	
750	1092	PLA6 750 S3	E6/C-0	1	564176	
	1092	PLA6 750 S12		1	546375	
1000	1342	PLA6 1000 S3	E6/C-0	1	564201	
	1342	PLA6 1000 S12		1	546400	
1200	1622	PLA6 1200 S3	E6/C-0	1	564213	
	1622	PLA6 1200 S12		1	546412	

OPTIONS						
Special model				PU/pcs.	Part.-No.	
Front Fixing						
Spindle tube end with interior thread M8				1	515061	
Spindle tube end with interior thread M10				1	515060	
Drive housing painted/powder coated in other RAL colours						
Lump sum for coating					516030	
Specify at order stage:				1 – 20	516004	
				21 – 50	516004	
				51 – 100	516004	
				from 101	516004	
Extra length connecting cable:						
5 m – non-halogen, grey – 3 x 1,0 mm ²					501037	
10 m – non-halogen, grey – 3 x 1,0 mm ²					501039	
Mechanic stroke reduction S3						
Stroke reduction without construction length - mechanically				1	516000	
Accessories for front / rear suspension						
B16ST Eyebolt Ø8 mm, galvanized				1	100044	
B16VA Eyebolt Ø8 mm, stainless steel				1	100144	
B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm				1	105510	
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm				1	105520	
Microprocessor programming S3						
Motion monitored run / sequence control				1	524181	
Microprocessor programming S12						
Electronic stroke reduction 24V S12				1	524190	
Programming drives 24V / 230V S12				1	524180	
Other lengths available on request						
Optional accessories				PU/pcs.	Part.-No.	
M-COM Configuration module for synchronised multi-drive systems				1	524177	



- Application: natural ventilation, RWA, ferralux®-NRWG

Options

- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspension

S3

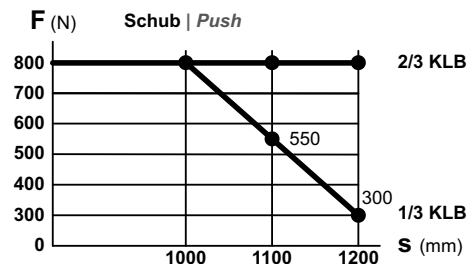
- Internal load dependend cut-off switch, post cycle resistant S3
- Programmable motion monitored run (up to 300 mm stroke)
- Programmable sequence control with locking drives (S3 / S12)

S12

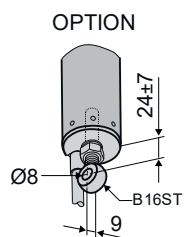
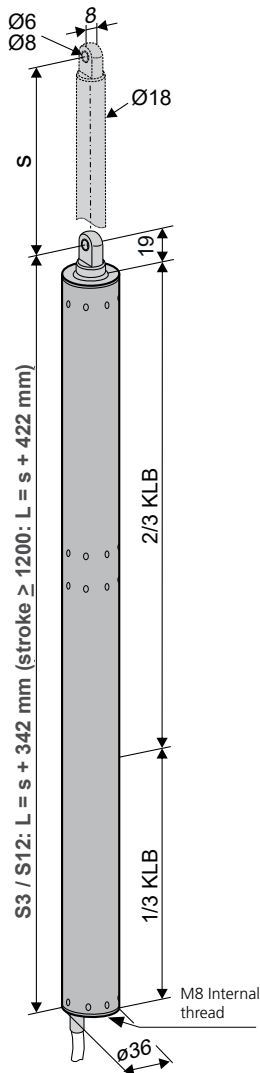
- Internal Intelligent Control Electronics S12
- Options
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)

TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,0 A
I_A	Cut-off current	1,4 A
P_N	Rated power	24 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 65
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	800 N
F_A	Pushing force max.	



F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm ² , ~ 3 m
v	Speed	Factory settings: X 10,0 mm/s 10,0 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm (S12), programmable
L	Length	S3 / S12: s + 342 mm (see order data) stroke ≥ 1200: s + 422 mm (see order data)
	Sound pressure level	≤ 70 dB (A)



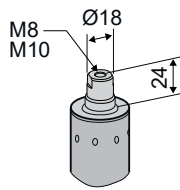
ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.		
100	442	PLA8 100 S3	E6/C-0	1	523711		
	442	PLA8 100 S12		1	515210		
200	542	PLA8 200 S3	E6/C-0	1	523721		
	542	PLA8 200 S12		1	515220		
300	642	PLA8 300 S3	E6/C-0	1	523731		
	642	PLA8 300 S12		1	515230		
400	742	PLA8 400 S3	E6/C-0	1	523741		
	742	PLA8 400 S12		1	515240		
500	842	PLA8 500 S3	E6/C-0	1	523751		
	842	PLA8 500 S12		1	515250		
600	942	PLA8 600 S3	E6/C-0	1	523761		
	942	PLA8 600 S12		1	515260		
750	1092	PLA8 750 S3	E6/C-0	1	523776		
	1092	PLA8 750 S12		1	515275		
1000	1342	PLA8 1000 S3	E6/C-0	1	523801		
	1342	PLA8 1000 S12		1	515295		
1200	1622	PLA8 1200 S3	E6/C-0	1	523812		
	1622	PLA8 1200 S12		1	515312		

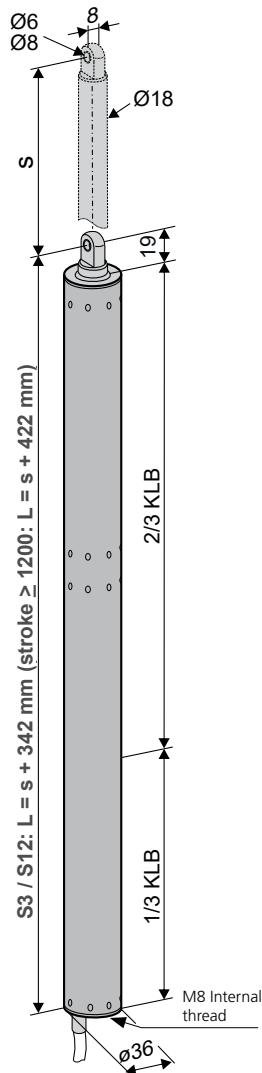
NEW

OPTIONS

Special model	PU/pcs.	Part.-No.		
Front Fixing				
Spindle tube end with interior thread M8	1	515061		
Spindle tube end with interior thread M10	1	515060		
Drive housing painted/powder coated in other RAL colours				
Lump sum for coating		516030		
Specify at order stage:	1 – 20	516004		
	21 – 50	516004		
	51 – 100	516004		
	from 101	516004		
Extra length connecting cable:				
5 m – non-halogen, grey – 3 x 1,0 mm ²		501037		
10 m – non-halogen, grey – 3 x 1,0 mm ²		501039		
Mechanic stroke reduction S3				
Stroke reduction without construction length - mechanically	1	516000		
Accessories for front / rear suspension				
B16ST Eyebolt Ø8 mm, galvanized	1	100044		
B16VA Eyebolt Ø8 mm, stainless steel	1	100144		
B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm	1	105510		
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	105520		
Microprocessor programming S3				
Motion monitored run / sequence control	1	524181		
Microprocessor programming S12				
Electronic stroke reduction 24V S12	1	524190		
Programming drives 24V / 230V S12	1	524180		
Other lengths available on request				
Optional accessories	PU/pcs.	Part.-No.		
M-COM Configuration module for synchronised multi-drive systems	1	524177		

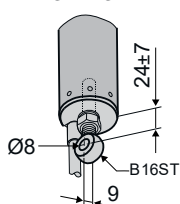


OPTION



S3 / S12: L = s + 342 mm (stroke ≥ 1200 : L = s + 422 mm)

OPTION



- Application: natural ventilation, RWA, ferralux®-NRWG

Options

- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspension

S3

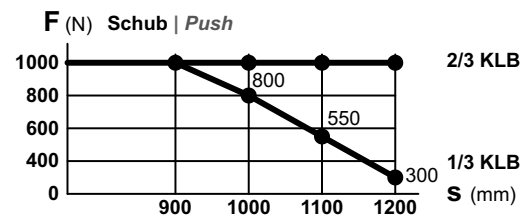
- Internal load dependent cut-off switch, post cycle resistant S3
- Programmable motion monitored run (up to 300 mm stroke)
- Programmable sequence control with locking drives (S3 / S12)

S12

- Internal Intelligent Control Electronics S12
- Options
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)

TECHNICAL DATA

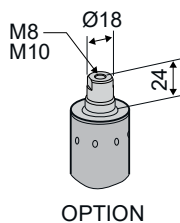
U_N	Rated voltage	24V DC (19V ... 28V)
I_N	Rated current	0,8 A
I_A	Cut-off current	1,0 A
P_N	Rated power	19 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 65
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	1000 N
F_A	Pushing force max.	



F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm ² , ~ 3 m
v	Speed	Factory settings: ↖ 4,6 mm/s ↗ 4,6 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm (S12), programmable
L	Length	S3 / S12: s + 342 mm (see order data) stroke ≥ 1200 : s + 422 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

ORDER DATA						
s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.	
100	442	PLA101 100 S3	E6/C-0	1	565111	
	442	PLA101 100 S12		1	564910	
200	542	PLA101 200 S3	E6/C-0	1	565121	
	542	PLA101 200 S12		1	564922	
300	642	PLA101 300 S3	E6/C-0	1	565131	
	642	PLA101 300 S12		1	564930	
400	742	PLA101 400 S3	E6/C-0	1	565141	
	742	PLA101 400 S12		1	564940	
500	842	PLA101 500 S3	E6/C-0	1	565151	
	842	PLA101 500 S12		1	564950	
600	942	PLA101 600 S3	E6/C-0	1	565161	
	942	PLA101 600 S12		1	564960	
750	1092	PLA101 750 S3	E6/C-0	1	565176	
	1092	PLA101 750 S12		1	564975	
1000	1342	PLA101 1000 S3	E6/C-0	1	565201	
	1342	PLA101 1000 S12		1	565000	
1200	1622	PLA101 1200 S3	E6/C-0	1	565213	
	1622	PLA101 1200 S12		1	565012	

OPTIONS			
Special model	PU/pcs.	Part.-No.	
Front Fixing			
Spindle tube end with interior thread M8	1	515061	
Spindle tube end with interior thread M10	1	515060	
Drive housing painted/powder coated in other RAL colours			
Lump sum for coating		516030	
Specify at order stage:	1 – 20	516004	
	21 – 50	516004	
	51 – 100	516004	
	from 101	516004	
Extra length connecting cable:			
5 m – non-halogen, grey – 3 x 1,0 mm ²		501037	
10 m – non-halogen, grey – 3 x 1,0 mm ²		501039	
Mechanic stroke reduction S3			
Stroke reduction without construction length - mechanically	1	516000	
Accessories for front / rear suspension			
B16ST Eyebolt Ø8 mm, galvanized	1	100044	
B16VA Eyebolt Ø8 mm, stainless steel	1	100144	
B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm	1	105510	
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	105520	
Microprocessor programming S3			
Motion monitored run / sequence control	1	524181	
Microprocessor programming S12			
Electronic stroke reduction 24V S12	1	524190	
Programming drives 24V / 230V S12	1	524180	
Other lengths available on request			
Optional accessories	PU/pcs.	Part.-No.	
M-COM Configuration module for synchronised multi-drive systems	1	524177	



- Application: natural ventilation, RWA, ferralux®-NRWG
- Options**
- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspension

S3

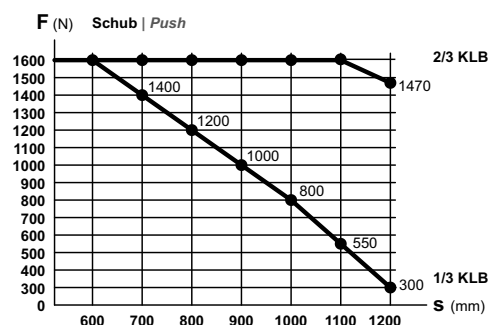
- Internal load dependend cut-off switch, post cycle resistant S3
- Programmable motion monitored run (up to 300 mm stroke)
- Programmable sequence control with locking drives (S3 / S12)

S12

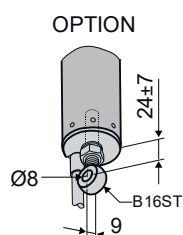
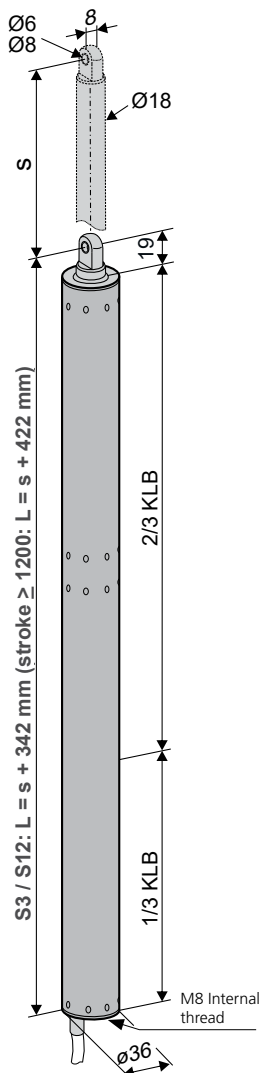
- Internal Intelligent Control Electronics S12
- Options**
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)

TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,0 A
I_A	Cut-off current	1,2 A
P_N	Rated power	24 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 65
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	1600 N
F_A	Pushing force max.	

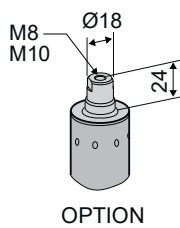


F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm ² , ~ 3 m
v	Speed	Factory settings: $\times$ 4,0 mm/s $\rightarrow$ 4,0 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 750 mm (S12), programmable
L	Length	S3 / S12: s + 342 mm (see order data) stroke $\geq$ 1200: s + 422 mm (see order data)
	Sound pressure level	$\leq$ 70 dB (A)

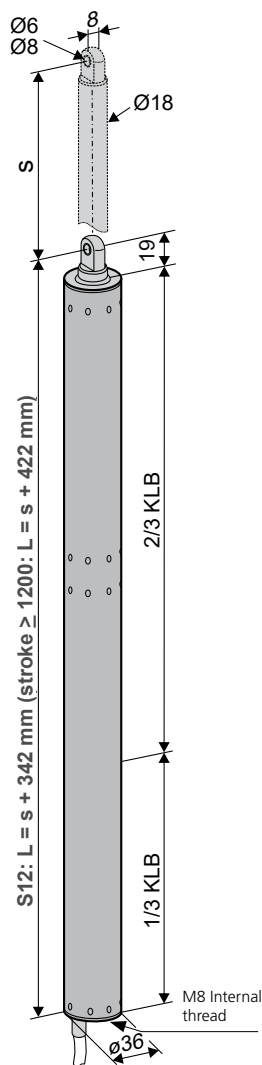


ORDER DATA						
s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.	
100	442	PLA116 100 S3	E6/C-0	1	565312	
	442	PLA116 100 S12		1	565510	
200	542	PLA116 200 S3	E6/C-0	1	565321	
	542	PLA116 200 S12		1	565520	
300	642	PLA116 300 S3	E6/C-0	1	565331	
	642	PLA116 300 S12		1	565530	
400	742	PLA116 400 S3	E6/C-0	1	565341	
	742	PLA116 400 S12		1	565540	
500	842	PLA116 500 S3	E6/C-0	1	565351	
	842	PLA116 500 S12		1	565550	
600	942	PLA116 600 S3	E6/C-0	1	565361	
	942	PLA116 600 S12		1	565560	
750	1092	PLA116 750 S3	E6/C-0	1	565376	
	1092	PLA116 750 S12		1	565575	
1000	1342	PLA116 1000 S3 NEW	E6/C-0	1	565411	
	1342	PLA116 1000 S12		1	565610	
1200	1622	PLA116 1200 S3 NEW	E6/C-0	1	565413	
	1622	PLA116 1200 S12		1	565612	

OPTIONS			
Special model	PU/pcs.	Part.-No.	
Front Fixing			
Spindle tube end with interior thread M8	1	515061	
Spindle tube end with interior thread M10	1	515060	
Drive housing painted/powder coated in other RAL colours			
Lump sum for coating		516030	
Specify at order stage:	1 – 20	516004	
	21 – 50	516004	
	51 – 100	516004	
	from 101	516004	
Extra length connecting cable:			
5 m – non-halogen, grey – 3 x 1,0 mm ²		501037	
10 m – non-halogen, grey – 3 x 1,0 mm ²		501039	
Mechanic stroke reduction S3			
Stroke reduction without construction length - mechanically	1	516000	
Accessories for front / rear suspension			
B16ST Eyebolt Ø8 mm, galvanized	1	100044	
B16VA Eyebolt Ø8 mm, stainless steel	1	100144	
B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm	1	105510	
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	105520	
Microprocessor programming S3			
Motion monitored run / sequence control	1	524181	
Microprocessor programming S12			
Electronic stroke reduction 24V S12	1	524190	
Programming drives 24V / 230V S12	1	524180	
Other lengths available on request			
Optional accessories	PU/pcs.	Part.-No.	
M-COM Configuration module for synchronised multi-drive systems	1	524177	

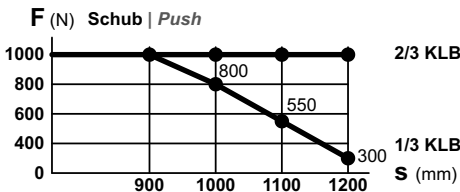


- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Options**
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)
- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspension

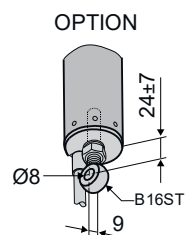


TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,9 A
I_A	Cut-off current	2,5 A
P_N	Rated power	45 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 65
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	1000 N
F_A	Pushing force max.	



F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm ² , ~ 3 m
v	Speed	Factory settings: 12,6 mm/s 12,6 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm
L	Length	S12: s + 342 mm (see order data) stroke ≥ 1200: s + 422 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

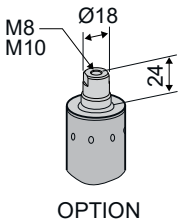


ORDER DATA

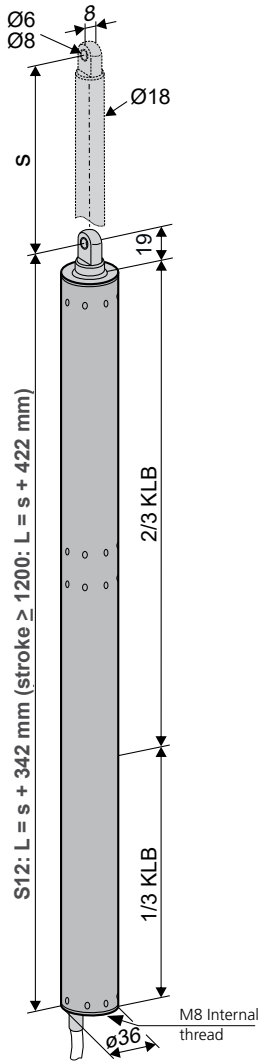
s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.		
100	442	PLA10 100 S12	E6/C-0	1	523610		
200	542	PLA10 200 S12	E6/C-0	1	523620		
300	642	PLA10 300 S12	E6/C-0	1	523630		
400	742	PLA10 400 S12	E6/C-0	1	523640		
500	842	PLA10 500 S12	E6/C-0	1	523650		
600	942	PLA10 600 S12	E6/C-0	1	523660		
750	1092	PLA10 750 S12	E6/C-0	1	523675		
1000	1342	PLA10 1000 S12	E6/C-0	1	523700		
1200	1622	PLA10 1200 S12 New	E6/C-0	1	523702		

OPTIONS

Special model	PU/pcs.	Part.-No.		
Front Fixing				
Spindle tube end with interior thread M8	1	515061		
Spindle tube end with interior thread M10	1	515060		
Drive housing painted/powder coated in other RAL colours				
Lump sum for coating		516030		
Specify at order stage:	1 – 20	516004		
	21 – 50	516004		
	51 – 100	516004		
	from 101	516004		
Extra length connecting cable:				
5 m – non-halogen, grey – 3 x 1,0 mm ²		501037		
10 m – non-halogen, grey – 3 x 1,0 mm ²		501039		
Accessories for front / rear suspension				
B16ST Eyebolt Ø8 mm, galvanized	1	100044		
B16VA Eyebolt Ø8 mm, stainless steel	1	100144		
B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm	1	105510		
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	105520		
Microprocessor programming S12				
Electronic stroke reduction 24V S12	1	524190		
Programming drives 24V / 230V S12	1	524180		
Other lengths available on request				
Optional accessories	PU/pcs.	Part.-No.		
M-COM Configuration module for synchronised multi-drive systems	1	524177		

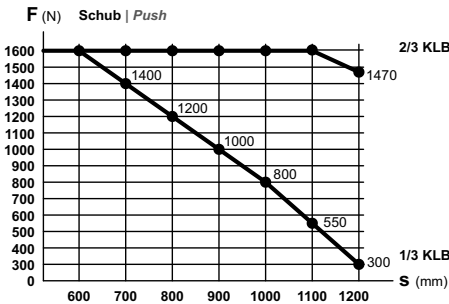


- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Options**
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)
- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspension

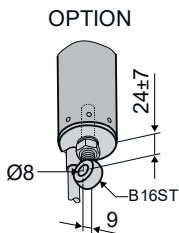


TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,9 A
I_A	Cut-off current	2,5 A
P_N	Rated power	45 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 65
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	1600 N
F_A	Pushing force max.	



F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm ² , ~ 3 m
v	Speed	Factory settings: 7,0 mm/s 7,0 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm
L	Length	S12: s + 342 mm (see order data) stroke ≥1200: s + 422 mm (see order data)
	Sound pressure level	≤ 70 dB (A)



ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.		
100	442	PLA16 100 S12	E6/C-0	1	565710		
200	542	PLA16 200 S12	E6/C-0	1	565720		
300	642	PLA16 300 S12	E6/C-0	1	565730		
400	742	PLA16 400 S12	E6/C-0	1	565740		
500	842	PLA16 500 S12	E6/C-0	1	565750		
600	942	PLA16 600 S12	E6/C-0	1	565760		
750	1092	PLA16 750 S12	E6/C-0	1	565775		
1000	1342	PLA16 1000 S12	E6/C-0	1	565800		
1200	1622	PLA16 1200 S12 NEW	E6/C-0	1	565812		

OPTIONS

Special model	PU/pcs.	Part.-No.		
Front Fixing				
Spindle tube end with interior thread M8	1	515061		
Spindle tube end with interior thread M10	1	515060		
Drive housing painted/powder coated in other RAL colours				
Lump sum for coating		516030		
Specify at order stage:	1 – 20	516004		
	21 – 50	516004		
	51 – 100	516004		
	from 101	516004		
Extra length connecting cable:				
5 m – non-halogen, grey – 3 x 1,0 mm ²		501037		
10 m – non-halogen, grey – 3 x 1,0 mm ²		501039		
Accessories for front / rear suspension				
B16ST Eyebolt Ø8 mm, galvanized	1	100044		
B16VA Eyebolt Ø8 mm, stainless steel	1	100144		
B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm	1	105510		
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	105520		
Microprocessor programming S12				
Electronic stroke reduction 24V S12	1	524190		
Programming drives 24V / 230V S12	1	524180		
Other lengths available on request				
Optional accessories	PU/pcs.	Part.-No.		
M-COM Configuration module for synchronised multi-drive systems	1	524177		

OVERVIEW OF BRACKETS														
Typical applications			1	2	3	4	5	6	7	8	9	10		
Frame bracket			K5	K5	K5	K17	K82	K127	K122-1	K82	K159	K7		
Mounting aid					K21					Insertion profile				
Bracket accessories			Clamping ring B4 (36 mm-G1/8)											
Casement bracket			F29-1	F1, F1V, F1.1, F10.6, F10.8S, F11, F13, F40				F11	F36	F10.12	F29-3	F12		
Special application			Heroal 085D					Wing 105D	AWS 57RO	AW RO 50		Sky light Essmann		
Space requirement		min.	[mm]	50	50	40 – 50	70	45	35	68	62	62	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		

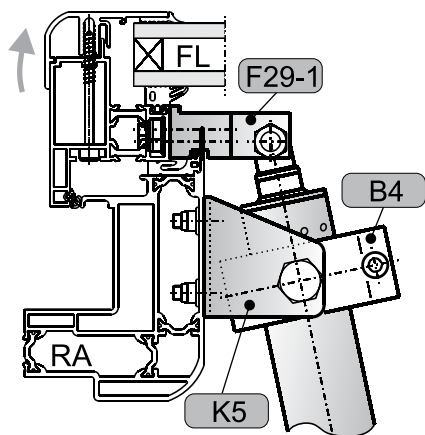
LEGEND

● 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.

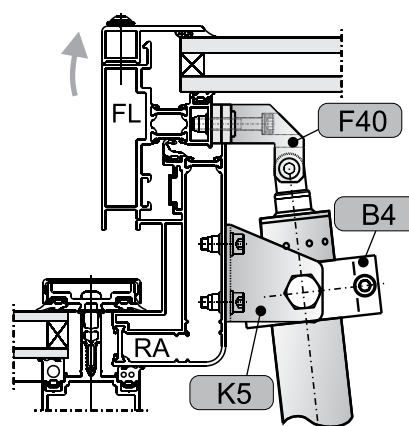
TYPICAL APPLICATIONS

1 RM, HSK, roof outward opening



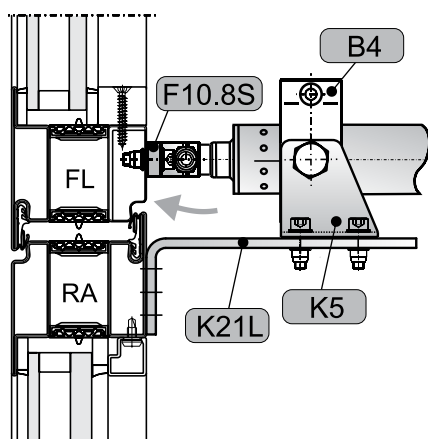
View on aluminium window

2 RM, HSK, roof outward opening



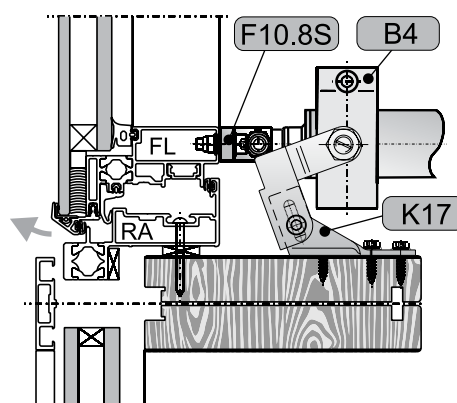
View on aluminium window

3 RM, HSK, top hung outward opening



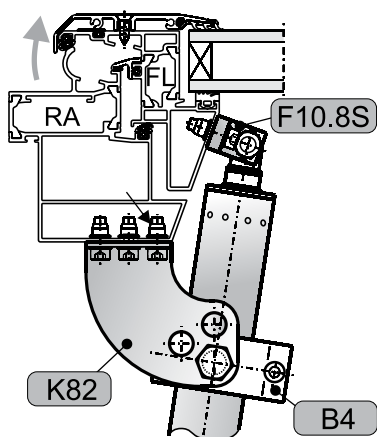
View on steel window

4 RM, HSK, top hung outward opening



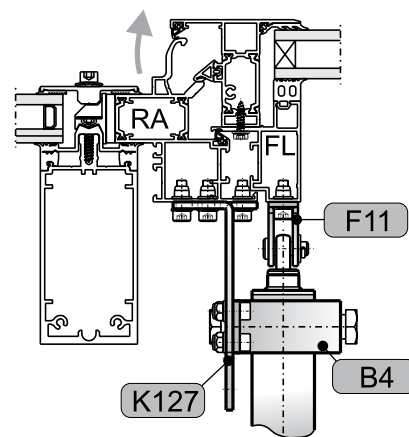
View on aluminium window

5 RM, HSK, roof outward opening



View on aluminium window

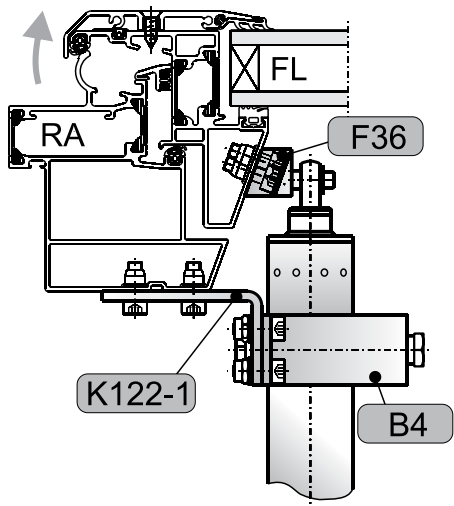
6 RM, NSK, roof outward opening



View on aluminium window

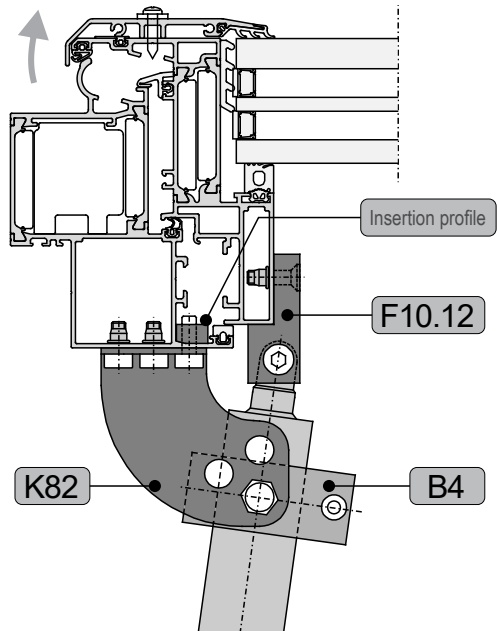
TYPICAL APPLICATIONS

7 RM, NSK, roof outward opening



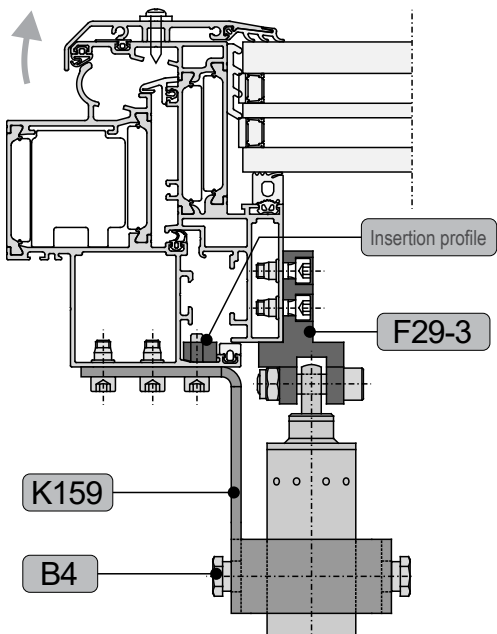
View on aluminium window

8 RM, HSK, roof outward opening



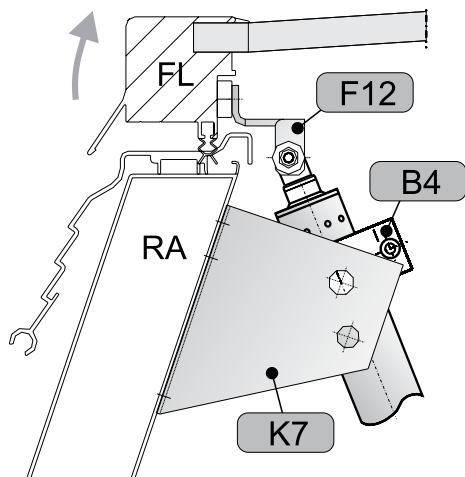
View on aluminium window

9 RM, NSK, roof outward opening



View on aluminium window

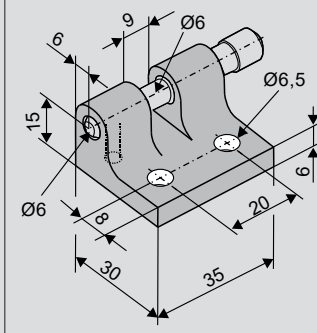
10 RM, HSK, sky-light



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

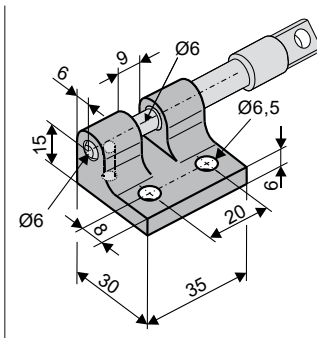
Part-No. 150102**Material/Finish**
aluminium, diecast**Feature/Equipment**

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

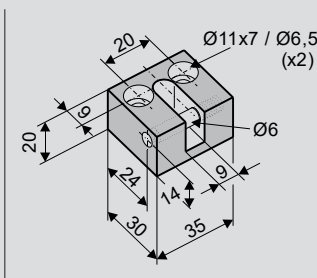
Part-No. 150110**Material/Finish**
aluminium, diecast**Feature/Equipment**

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**

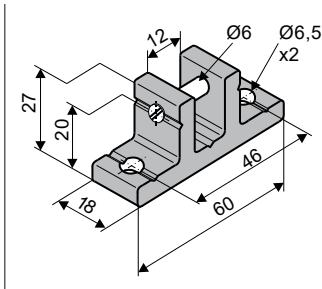
Part-No. 150101**Material/Finish**
aluminium**Feature/Equipment**

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

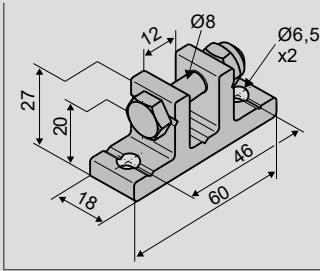
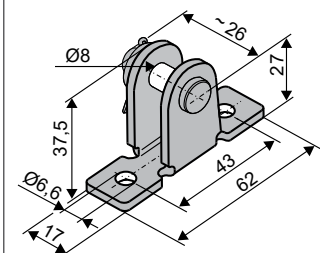
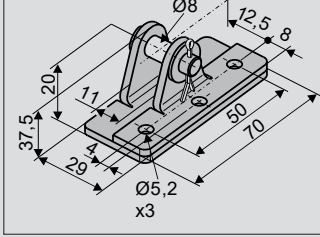
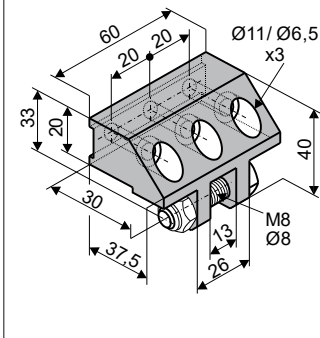
Part-No. 151000**Material/Finish**
aluminium**Feature/Equipment**

1x stud bolt Ø6 mm

Load

max. 1600 N

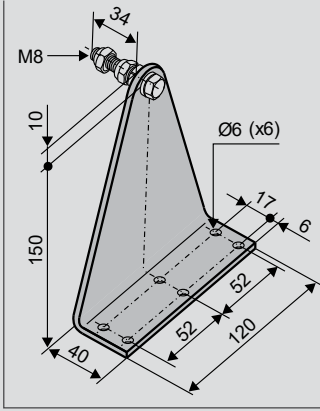
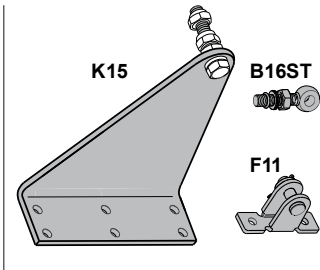
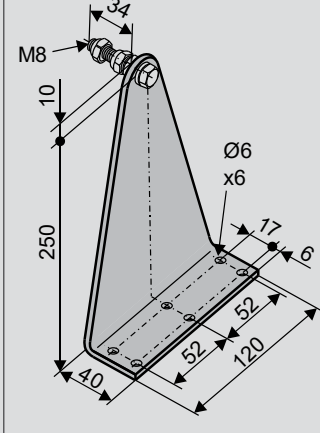
CASEMENT BRACKETS

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, 1x washer, 1x 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 alignet with the central axis of drive	Part.-No. 151405 Material/Finish steel galvanized Feature/Equipment 1x bolt Ø8 mm, 1x washer, 1x 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, 1x nut M8	

FRAME BRACKETS

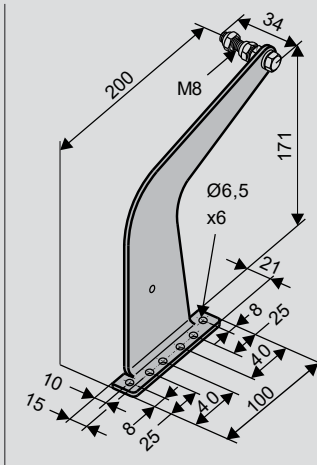
K5		Application Surface mounting on the main closing edge of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for swivelling suspension of drives PLA with B4, SP8 with B13, LKS with B7	Part.-No. 155800 Material/Finish stainless steel Feature/Equipment drilled holes Ø12,5 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, SP8 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		
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		

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	
K15-Set 		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	

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

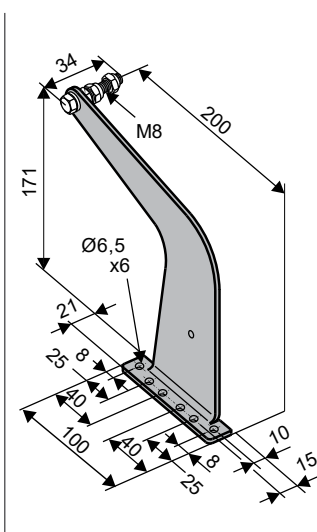
B16ST Eyebolt
(Ø8 x 40 mm ST)

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)

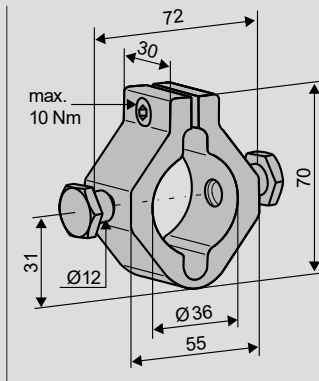
Part.-No. 100044

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

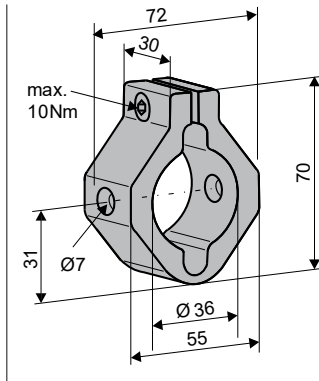
Material/Finish

aluminium (antreated), stainless steel

Feature/Equipment

2x B8 collar screw Ø12mm, G1/8
1x cylinder head screw M6x16

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

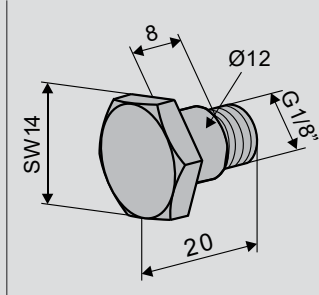
Material/Finish

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

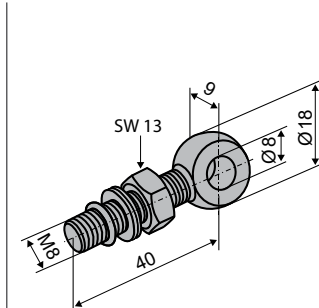
Material/Finish

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

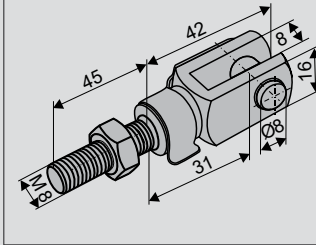
B16VA

Part-No. 100144

Material/Finish

stainless steel (V2A)

OPTIONAL ACCESSORIES

B27ST**Application**

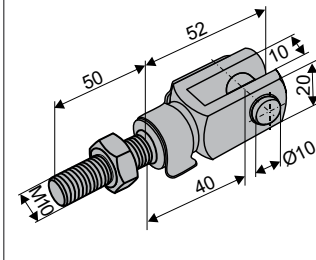
Clevis for rear or front suspension of spindle drives with **M8** thread in the rear base cap or in the spindle tube

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**

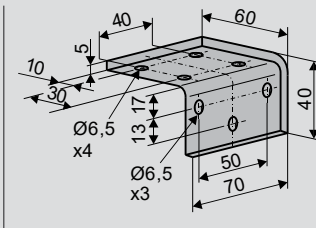
Clevis for rear or front suspension of spindle drives with **M10** thread in the rear base cap or in the spindle tube

Part.-No. 105520

Material/Finish
steel galvanized

Feature/Equipment

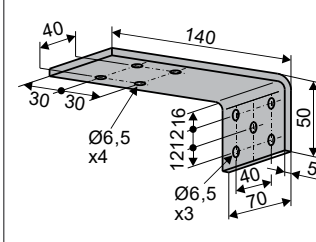
Clevis M10 x 40 mm with spring bolt Ø10 mm and thread M10 x 50 mm
1x nut M10 + Nordlock-safety-washer + O-ring, max. screw-in depth in the drive 25 mm

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

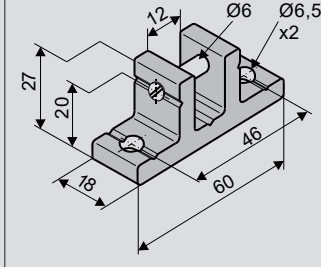
Material/Finish
steel galvanized

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 Ø6 mm	Part.-No. 151500 Material/Finish steel galvanized Feature/Equipment 1x screw M6, 1x washer, 1x 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		
SCHÜCO AW RO 50 – HSK					
F10.12		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. 151205 Material/Finish aluminium Feature/Equipment 1x screw M8x50 Load max. 3000 N		
K82		Application Surface mounting on the main closing edge of window frame-profiles (or mullion/transom) of outward opening (roof-)windows, for swivelling suspension of drives PLA natural anodized B4 SP8 with clamping stones B13 LKS natural anodized B7	Part.-No. 151320 Material/Finish stainless steel Feature/Equipment drilled hole Ø12,5 mm		
Accessories					
	B4 clamp ring PLA (Ø36 mm, G1/8)		Part.-No. 515900		
Insertion profile		Application Mounting aid for fame brackets K82 on the main closing edge on the casement profiles of outward opening roof windows Schüco AW RO 50	Part.-No. 151207 Material/Finish aluminium (E6/C-0) Feature/Equipment 2x thread M6		

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

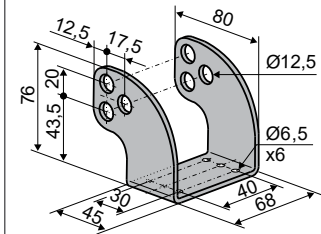
Feature/Equipment

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**,
SP8 with **B13**,
LKS with **B7**

Part-No. 151320

Material/Finish
stainless steel

Feature/Equipment

drilled holes Ø12,5 mm

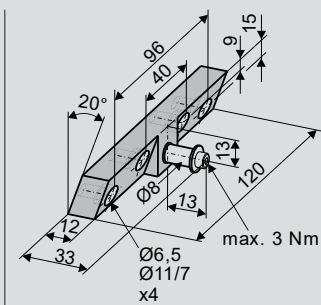
Accessories

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**

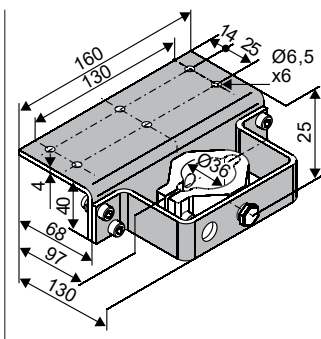
Part-No. 155170

Material/Finish
aluminium,
stainless steel

Feature/Equipment

1x bolt Ø8 mm,
1x screw M4,
1x 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

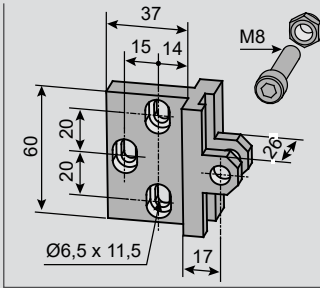
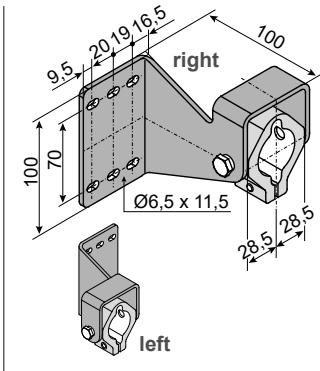
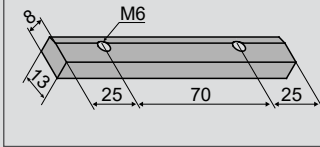
Feature/Equipment
without clamping ring B4

Accessories

B4 clamp ring PLA
(Ø 36 mm, G1/8)

Part-No. 515900

SPEZIFISCHE APPLICATIONEN

SCHÜCO AW RO 50 – NSK			
F29-3		Application Surface mounting on the side closing edge of casement profiles of outward opening windows, for drives with front or rear suspension with bore Ø8 mm	Part.-No. 155149 Material/Finish aluminium Feature/Equipment 1x screw M8x35 Load max. 3000 N
K159		Application Surface mounting on the side closing edge of window frame profiles (or mullion/transom) of outward opening (roof-)windows, for swivelling suspension of drives PLA natural anodized B4	K159 right: Part.-No. 160948 K159 left: Part.-No. 160949 Material/Finish stainless steel Feature/Equipment version left / right
Accessories			
	B4 clamp ring PLA (Ø36 mm, G1/8)	Part.-No. 515900	
Insertion profile		Application Mounting aid for frame brackets K159 on the side closing edge of casement profiles of outward opening roof windows Schüco AW RO 50	Part.-No. 155148 Material/Finish aluminium (E6/C-0) Feature/Equipment 2x thread M6

OPTIONAL ACCESSORIES

Main control unit				
M-COM		Application Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems Rated voltage: 24 V DC (19 V ... 28 V) 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.	

CASEMENT BRACKETS AND FRAME BRACKETS

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		
	from 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		
	from 101	516031		