
RWA 1000

RWA 1000

Model	24V DC
Application	Bottom-hung / Top-hung / Side-hung inward opening windows
Opening drives	PL6 S1 (600 N) / PL10 S1 (1.000 N) on the side closing edeg (NSK)
Locking drives	FV3 / OFV / (FV1 with USKM) on the main closing edge (HSK)
Frame brackets	K15 (H = 150 mm), B20 für FV3 (FM)
Casement brackets	F11
Version	Opening drives Solo / TE = Tandem (with USKM)
Protection rating	IP32

RWA 1000


RWA 1100

RWA 1100

Model	24V DC
Application	Bottom-hung / Top-hung / Side-hung ourward opening windows
Opening drives	PL6 S1 (600 N) / PL10 S1 (1.000 N) on the side closing edeg (NSK)
Locking drives	FV3 / (FV1 with USKM) on the main closing edge (HSK)
Frame brackets	K15 (H = 150 mm) / K37 (H = 250 mm) / B20
Casement brackets	F11
Version	Opening drives Solo / TE = Tandem (with USKM)
Protection rating	IP32

RWA 1100


RWA 1050

RWA 1050

Model	24V DC
Application	Side-hung inward opening windows
Opening drives	PL6 S1 (600 N) / PL10 S1 (1.000 N) on the side closing edeg (NSK)
Locking drives	FV3 / OFV / (FV1 with USKM) on the main closing edge (HSK)
Frame brackets	K97 right hand / left hand
Casement brackets	F11
Version	Opening drives Solo / TE = Tandem (with USKM)
Protection rating	IP32

RWA 1050

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RWA HARDWARE SYSTEMS

RWA hardware system	Rated voltage	Locking drive: Type	Locking drive: Number of VP	Locking drive: Lenght	Opening drives	Accessories: Control modules Accessories	Accessories: Frame bracket	Accessories: Casement bracket	Casement dimensions: Bottom-/top-hung: FAB	Casement dimensions: Bottom-/top-hung: FAH	Casement dimensions: Bottom-/top-hung: max. weight	Casement dimensions: Side-hung: FAB	Casement dimensions: Side-hung: FAH	Casement dimensions: Side-hung: max. weight	Required mounting space	Use: Natural ventilation	Use: RWA	Use: NRWG	Location: Facade: inward	Location: Facade: outward	Location: Roof
	[VDC]			[mm]		[A]			[mm]	[mm]	[Kg]	[mm]	[mm]	[Kg]	[mm]						
1000	24	FV3	1 (*1	450	PL6	(B20-1)	K15	F11	500 – 1200	600 – 1500	50	600 – 1500	500 – 2400	90	40	●	●	●	●	■	■
					PL10						90			150		●	●	●	●	■	■
		OFV	(*2		PL6						50	500 – 1500		90		●	●	●	●	■	■
					PL10						90			150		●	●	●	●	■	■
1000-TE	24	FV1	2; 3	1200	2x PL6	USKM	2x K15	2x F11	1250 – 2400	600 – 2000	90	600 – 1500	1250 – 2400	130	40	●	●	●	●	■	■
					2x PL10						160			200		●	●	●	●	■	■
			3	2000	2x PL6	USKM			2050 – 2400		90		2050 – 2400	130		●	●	●	●	■	■
					2x PL10						160			200		●	●	●	●	■	■
		OFV	(*2		2x PL6	USKM			500 – 1200	600 – 1500	50	500 – 1500	500 – 2400	90		●	●	●	●	■	■
					2x PL10						90			150		●	●	●	●	■	■
1100	24	FV3 (*2	1 (*1	450	PL6	B21-1	K15 (K37)	F11	500 – 1200	800 – 1600	70	600 – 1500	500 – 2400	90	40	●	●	●	■	●	■
					PL10						120			150		●	●	●	■	●	■
1100-TE	24	FV1 (*2	2; 3	1200	2x PL6	USKM (B20-2)	2x K15 (2x K37)	2x F11	1250 – 2400	800 – 2000	130	600 – 1500	1250 – 2400	130	40	●	●	●	■	●	■
					2x PL10						200			200		●	●	●	■	●	■
			3	2000	2x PL6	USKM (B20-3)			2050 – 2400		130		2050 – 2400	130		●	●	●	■	●	■
					2x PL10						200			200		●	●	●	■	●	■
1050	24	FV3 (*2			PL6		K97 (re/li)	F11				550 – 1250	500 – 1500	90	22	●	●	●	●	■	■
					PL10									130		●	●	●	●	■	■
		OFV	(*2		PL6									90		●	●	●	●	■	■
					PL10									130		●	●	●	●	■	■
1050-TE	24	FV1	(*1		2x PL6	USKM	K97 R+L	2x F11				550 – 1500	500 – 2400	130	22	●	●	●	●	■	■
					2x PL10									150		●	●	●	●	■	■
		OFV	(*2		2x PL6	USKM								130		●	●	●	●	■	■
					2x PL10									150		●	●	●	●	■	■

LEGEND

● suitable ■ not recommended

(*1 On the main closing edge of side -hung windows use of FV with 2 or 3 locking points (VP) is possible
(*2 Window specific multi-locking system

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OVERVIEW OF SPINDLE DRIVES

Opening drives	Version		Stroke	Force		Speed		Stroke in	Cut-off current	Use			Location		Function		
	Cut-off switch	Rated voltage	up – to	Pulling force	Pushing force	OPEN	ZU	60 s	Max.	Natural ventilation	RWA	NRWG	Facade	Roof	Run monitoring	Synchronised run	Sequence control
		[VDC]	[mm]	[N]	[N]			[mm]	[A]								
PL6	S1	24	100 – 300	600	600	5,8	5,8	350	0,8	●	●	●	●		○		○
PL10	S1	24	100 – 300	1000	1000	2,6	2,6	150	0,8	●	●	●	●		○		○

OVERVIEW OF LOCKING DRIVES

Locking drives	Locking stroke (Rotating angle)	Rated voltage	Force (Torque)		Runtime	Close circuit current	Opening drives		Use			Location		Functions		
			Pulling/Pushing force	Initial force (torque)			Model	Cut-off current	Natural ventilation	RWA	NRWG	Facade	Roof	Run monitoring	Synchronised run	Sequence control
	[mm]	[VDC]	[N]	[N]	[s]	[A]		[A]								
FV1		24	600	1000	5,0	0,3	○	○	●	●	●	●				○
FV3		24	600	1000	5,0	0,3	S1	0,8	●	●	●	●				●
OFV	90° – 180°	24	10 Nm	22 Nm	4,5/9,0	0,3	S1	0,9 – 3,0	●	●	●	●				●

LEGEND

● suitable ■ not recommended

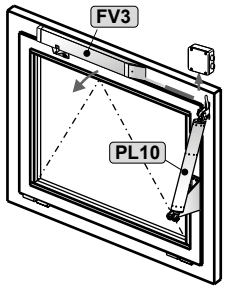
S1 without internal cut-off switch for operation with RWA1000-, RWA1100-, RWA1050-systems

○ only with external cut-off switch or control module USKM

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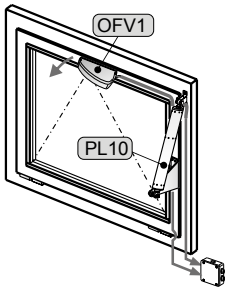
TYPICAL APPLICATION

RWA1000 – inward opening



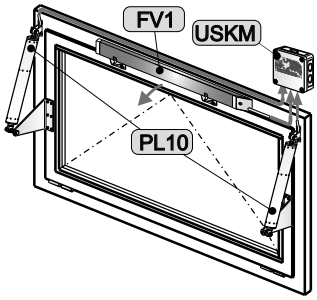
View on bottom-hung window

RWA1000 – inward opening



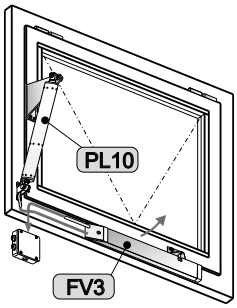
View on bottom-hung window

RWA1000 TE – inward opening



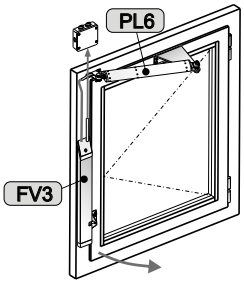
View on bottom-hung window

RWA1000 – inward opening



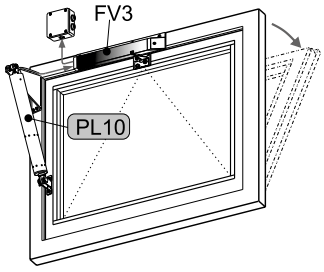
View on top-hung window

RWA1000 – inward opening



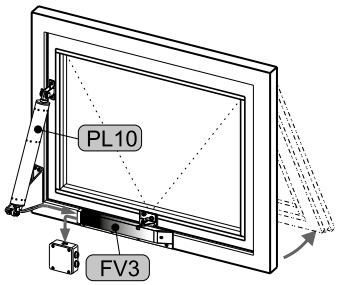
View on side-hung window

RWA1100 – outward opening



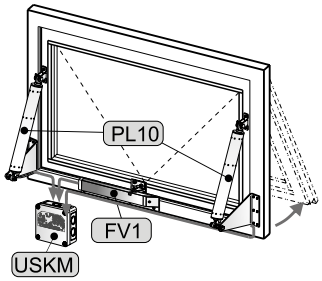
View on bottom-hung window

RWA1100 – outward opening



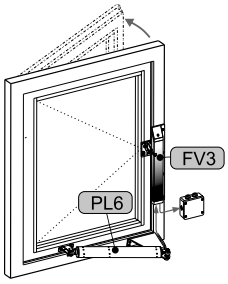
View on top-hung window

RWA1100 TE – outward opening



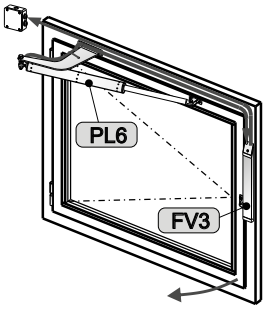
View on top-hung window

RWA1100 – outward opening



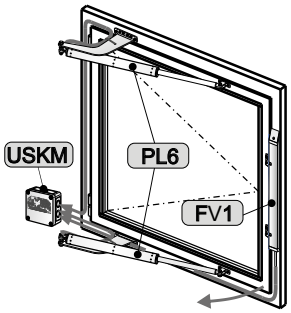
View on side-hung window

RWA1050 – inward opening



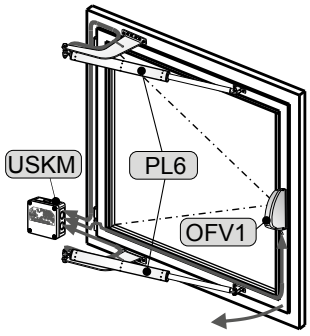
View on side-hung window

RWA1050 TE – inward opening



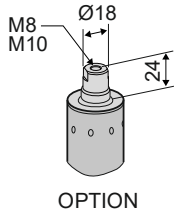
View on side-hung window

RWA1050 TE – inward opening



View on side-hung window

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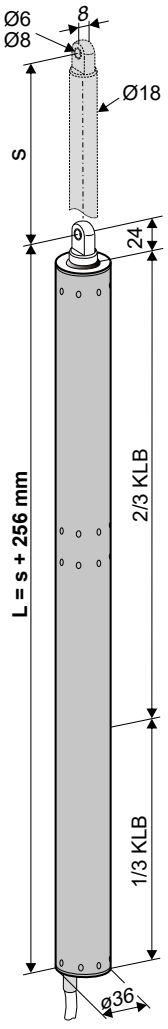


OPTION

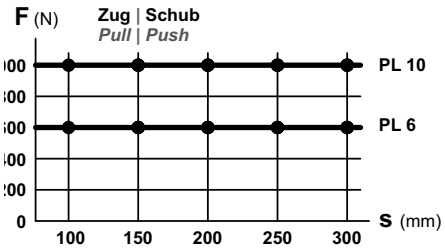
- Application: natural ventilation, RWA, ferralux®-NRWG
- Force: PL6 = 600 N / PL10 = 1.000 N
- Without internal cutt-off switch – external cutt-off switch required! (control module USKM or locking drive FV3 / OFV1)

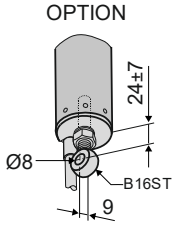
Options

- Rear eye bolt, spindel tube with interior thread for clevis



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 20% - ON: 2 min. / OFF: 8 min.)
	Protection rating	IP 65
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	PL6 = 600 N PL10 = 1.000 N
F_A	Pushing force max.	
F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 2 x 0,75 mm², ~ 3 m
v	Speed	PL6 5,8 mm/s 5,8 mm/s PL10 2,6 mm/s 2,6 mm/s
s	Stroke	see order data
L	Length	s + 256 mm (see order data)
	Sound pressure level	≤ 70 dB (A)



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ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
100	356	PL6 100 S1	E6/C-0	1	**562010**
		PL10 100 S1		1	**565010**
150	406	PL6 150 S1	E6/C-0	1	**562015**
		PL10 150 S1		1	**565015**
200	456	PL6 200 S1	E6/C-0	1	**562020**
		PL10 200 S1		1	**565020**
250	506	PL6 250 S1	E6/C-0	1	**562025**
		PL10 250 S1		1	**565025**
300	556	PL6 300 S1	E6/C-0	1	**562030**
		PL10 300 S1		1	**565030**

OPTIONS

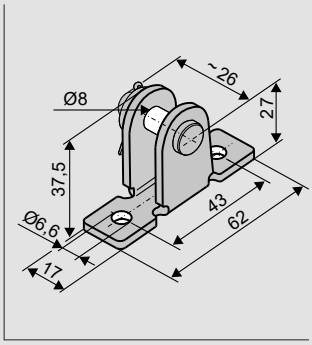
Special model	PU/pcs.	Part.-No.
Front suspension		
Pushing rod end with interior thread M8	1	**515061**
Pushing rod end with interior thread M10	1	**515060**
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m – non-halogen, grey – 2 x 0,75 mm²		**501024**
10 m – non-halogen, grey – 2 x 0,75 mm²		**501026**

Accessories for fron / rear suspension	PU/pcs.	Part.-No.
Rear Suspension		
B16ST Eyebolt Ø8 mm, galvanized	1	**100044**
B16VA Eyebolt Ø8 mm, stainless steel	1	**100144**
B27ST clevis M8x16 mm, galvanized, Grubscrew M8x45 mm	1	**105510**
External cutt-off switch		
Control module USKM (up to max. s 300 mm)	1	**512140**

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FRAME BRACKETS

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

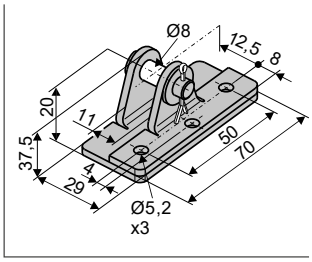
Material/Finish
steel galvanized
Feature/Equipment
1x bolt Ø8 mm,
1x washer,
1x cotter pin
Load
max. 3.000 N

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

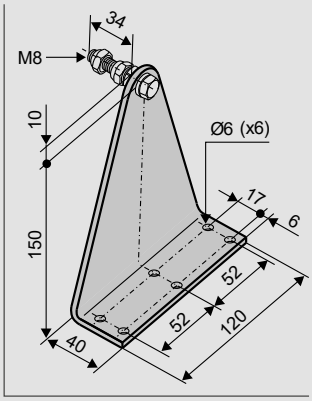
Part.-No. 151405

Material/Finish
steel galvanized
Feature/Equipment
1x bolt Ø8 mm,
1x washer,
1x cotter pin
Load
max. 1600 N

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CASEMENT 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

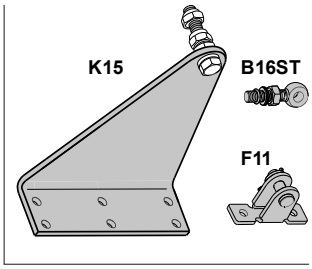
Material/Finish
steel galvanized
Feature/Equipment
H=150 mm, t=4 mm

Optional accessories

B16ST Eyebolt (Ø8 x 40 mm ST) — **Part.-No. 100044**

B16VA Eyebolt (Ø8 x 40 mm VA) — **Part.-No. 100144**

K15-Set



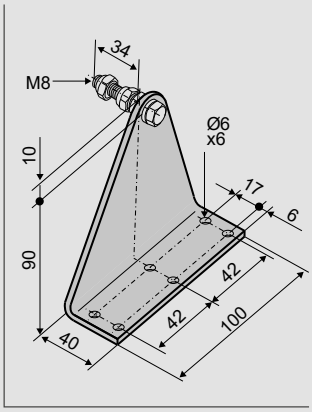
Application

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

K16



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. 307200

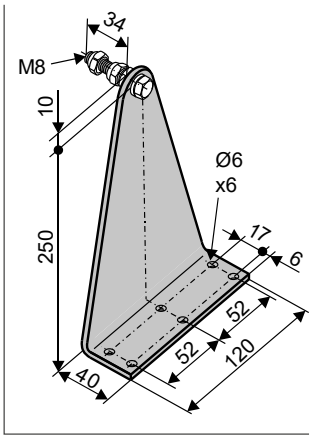
Material/Finish
steel galvanized
Feature/Equipment
H=90 mm, t=4 mm

Optional accessories

B16ST Eyebolt (Ø8 x 40 mm ST) — **Part.-No. 100044**

B16VA Eyebolt (Ø8 x 40 mm VA) — **Part.-No. 100144**

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 **D = 8 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

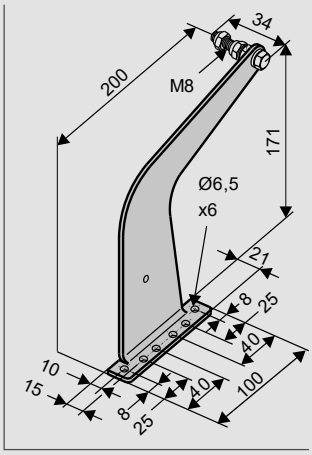
B16ST Eyebolt (Ø8 x 40 mm ST) — **Part.-No. 100044**

B16VA Eyebolt (Ø8 x 40 mm VA) — **Part.-No. 100144**

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CASEMENT 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 **22 mm**

Part.-No. 160938

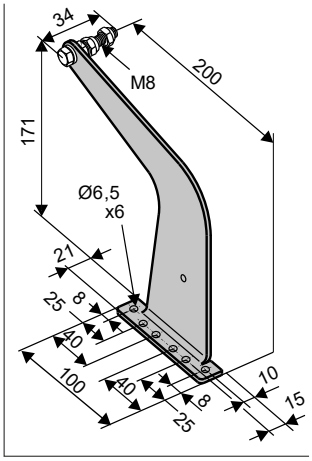
Material/Finish
stainless steel, vibratory grinding
Feature/Equipment
left hand

Optional accessories

B16ST Eyebolt (Ø8 x 40 mm ST) — **Part.-No. 100044**

B16VA Eye bolt (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 **22 mm**

Part.-No. 160939

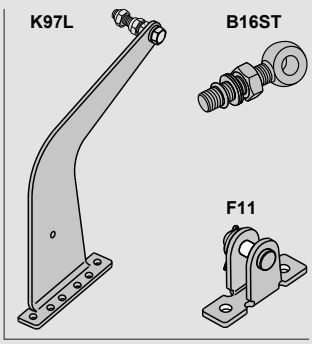
Material/Finish
stainless steel, vibratory grinding
Feature/Equipment
right hand

Accessories

B16ST Eyebolt (Ø 8 x 40 mm ST) — **Part.-No. 100044**

B16VA Eyebolt (Ø 8 x 40 mm VA) — **Part.-No. 100144**

K1050-L



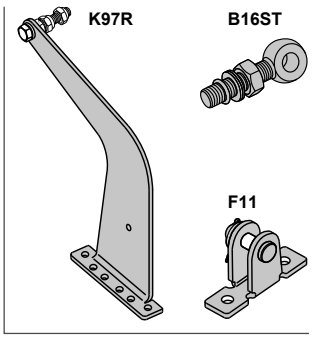
Application

Surface mounting of drives on the **side closing edge** like RWA-1050 hardware system.
Required space on the frame **22 mm**

Part.-No. 307050

Feature/Equipment
Set:
1x K97L
1x F11
1x B16ST

K1050-R



Application

Surface mounting of drives on the **side closing edge** like RWA-1050 hardware system.
Required space on the frame **22 mm**

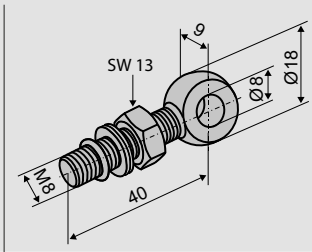
Part.-No. 307051

Feature/Equipment
Set:
1x K97R
1x F11
1x B16ST

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ACCESSORIES

B16ST



Application
Rear or front suspension of spindle drives with **M8 thread** in the rear base pice or in the spindle tube

Part.-No. 100044

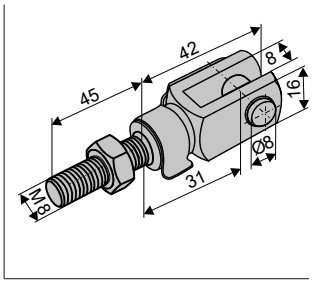
Material/Finish
steel, galvanized
Feature/Equipment
M8x40 (Eye Ø8 mm),
1x nut M8 + Nordlock-safety-washer + o-ring
max. screw-in depth in the drive 25 mm

B16VA

Part.-No. 100144

Material/Finish
stainless steel (V2A)

B27ST



Application
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 M10 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

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

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SPECIAL FEATURES RWA1000

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- Siutable for inwards opening bottom/top/side-hung windows
- Large opening angles relized with short strokes and opening times due to the mounting of the spindle drives at an acute angle to the side closing edge
- Maximum opening angles and balanced force-stroke ratio with K15 mounted on the side closing edge of the casement profile at app. 1/3 of the casemnet lenght related to the hinge side
- Other combinations of various spindle drives in SOLO or TANDEM arrangements with locking actuators for actuating of window profile-specific hardware systems on request

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**.

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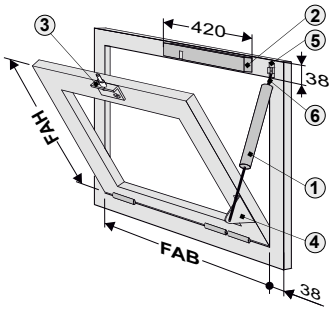
MOUNTING DIMENSIONS OF RWA1000 FOR BOTTOM-/TOP-HUNG INWARD OPENING WINDOWS

Hardware set	Frame bracket	Stroke of the opening drive	CASEMENT CLOSED			Mounting dimension „X" (*1 (*2	FAH (NSK) (side closing edge)	Opening angle	Opening width	CASEMENT OPEN			Weight of the casement (max.)		Required space on the window frame		FAB (HSK)
			Angle of the drive force application	Applied force at the drive fixing point						Angle of the drive force application	Applied force at the drive fixing point						
				PL6	PL10						PL6	PL10	PL6	PL10	NSK	HSK	
			[DEG]	[N]	[N]	[mm]	[mm]	[DEG]	[mm]	[DEG]	[N]	[N]	[Kg]	[Kg]	[mm]	[mm]	
RWA 1000 (*3	K15	100	19	195	326	200	560	25	242	48	447	745	32	53	40	40	Depends of the used locking drive (*4
						250	610	22	233	47	442	736	36	60			
						300	660	20	229	47	437	729	40	66			
						400	760	17	225	46	430	717	45	75			
						500	860	15	225	47	442	736	51	86			
						600	960	13	217	45	422	703	53	88			
		150	16	165	276	225	645	34	377	57	503	838	35	58	40	40	
						275	695	30	360	55	490	817	39	65			
						325	745	28	360	54	487	811	42	71			
						450	870	23	347	52	474	790	49	82			
						550	970	20	337	51	467	778	53	88			
						650	1070	18	335	50	462	769	56	93			
		200	15	155	259	250	720	42	516	64	541	902	38	63	40	40	
						300	770	38	501	62	531	885	41	69			
						350	820	35	493	61	523	872	45	74			
						400	870	32	480	59	516	861	47	79			
						500	970	27	453	57	503	839	52	86			
						600	1070	24	445	56	497	829	56	93			
						700	1170	22	446	55	491	818	59	98			
						800	1270	20	441	54	486	810	61	102			
		250	13	135	225	275	795	50	672	71	567	945	39	65	40	40	
						325	845	45	647	68	557	928	43	71			
						375	895	41	627	66	549	915	46	77			
						425	945	38	615	65	544	906	49	81			
						550	1070	31	572	62	528	880	54	90			
						650	1170	28	566	60	519	865	58	96			
						750	1270	25	550	59	513	854	61	101			
						850	1370	23	546	58	507	844	63	105			
		300	12	125	208	300	870	56	817	77	584	973	40	67	40	40	
						350	920	51	792	74	576	959	44	73			
						400	970	46	758	71	569	948	47	78			
						450	1020	43	748	69	561	935	50	83			
						500	1070	40	732	68	555	925	52	86			
						600	1170	35	704	65	544	907	56	93			
						700	1270	31	679	63	536	893	59	98			
						800	1370	28	663	62	529	882	62	103			
						900	1470	26	661	61	523	872	64	107			
						1000	1570	24	653	60	519	864	66	110			

(*1 Mounting meaurse „**X**" = distance **K15** to **hinge side** (≥ 1/3 FAH)
(*2 Other mounting meaurse and wing heights on request

(*3 For RWA1000TE (tandem) the drive forces and the max. window weigths are doubled!
(*4 FV1 – 1x = 450 mm
FV1 – 2x = 1200 or 2000 mm
FV1 – 3x = 2000 mm

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① 1x **PL10 S1**
(100 / 150 / 200 / 300 mm)



② 1x **FV3-R** (1x) L = 420 mm)

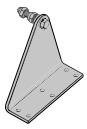


③ incl. **B18**



1 x K15-Set:

④ 1x **K15**



⑤ 1x **F11**



⑥ 1x **B16ST** (8x40)

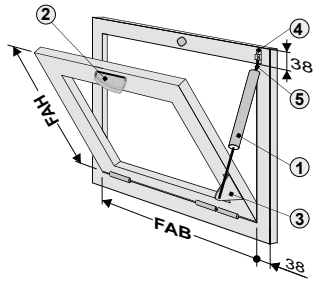


ORDER DATA

	Part.-No.		
Components			
1x PL10 S1			
PL10-100 (FAH min. 550 mm)	**565010**		
PL10-150 (FAH min. 600 mm)	**565015**		
PL10-200 (FAH min. 700 mm)	**565020**		
PL10-300 (FAH min. 1000 mm)	**565030**		
1x FV3-R L= 420 mm			
FV3-R (1x) FAB min. 450 mm	**515102**		
1x Frame bracket set			
K15 Set	**517590**		
Optional accessories			
B21-1 base plate FV L = 420; FÜ>10 mm	**515181**		
B22 base plate for B18 glazing bead	**301599**		

Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space FV (on the window frame profile)	min. 38 mm
Required mounting space PL (on the window frame profile)	min. 38 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	450 – 1300 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	0,8 A
Rated power	15 W

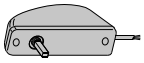
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① 1x **PL10 S1**
(100 / 150 / 200 / 300 mm)

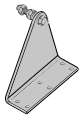


② 1x **OFV1**



1 x K15-Set

③ 1x **K15**



④ 1x **F11**



⑤ 1x **B16ST** (8x40)

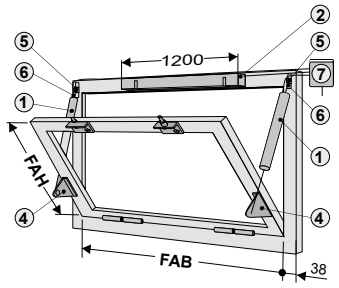


ORDER DATA

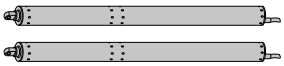
	Part.-No.
Components	
1x PL10 S1	
PL10-100 (FAH min. 550 mm)	**565010**
PL10-150 (FAH min. 600 mm)	**565015**
PL10-200 (FAH min. 700 mm)	**565020**
PL10-300 (FAH min. 1000 mm)	**565030**
1x OFV1	
OFV1 (FAB min. 450 mm)	**513850**
1x Frame bracket set	
K15 Set	**517590**

Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space OFV (on the casemnet profile)	min. 40 mm
Required mounting space PL (on the window frame profile)	min. 38 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	450 – 1300 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	1,1 A
Rated power	26 W

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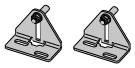
① 2x **PL 10 S1**
(100 / 150 / 200 / 300 mm)



② 1x **FV1** (2x) L= 1200 mm

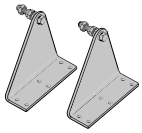


③ incl. 2x **B18**

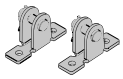


2x K15-Set

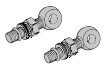
④ 2x **K15**



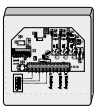
⑤ 2x **F11**



⑥ 2x **B16ST** (8x40)



⑦ 1x **USKM**

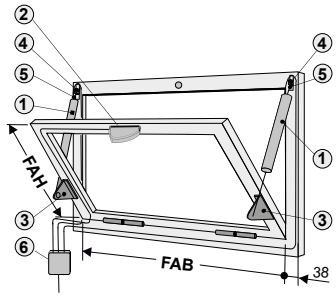


ORDER DATA

	Part.-No.		
Components			
2x PL10 S1 (price per drive)			
PL10-100 (FAH min. 550 mm)	**565010**		
PL10-150 (FAH min. 600 mm)	**565015**		
PL10-200 (FAH min. 700 mm)	**565020**		
PL10-300 (FAH min. 1000 mm)	**565030**		
1x FV1-R L= 1200 mm			
FV1-R (2x) (FAB min. 1200 mm)	**515111**		
2x Frame bracket set (price per frame bracket set)			
K15 Set	**517590**		
1x Control module			
USKM	**512140**		
Optional accessories			
B21-2 base plate FV L = 1200; FÜ>10 mm	**515183**		
B22 base plate for B18 glazing bead	**301599**		

Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space FV (on the window frame profile)	min. 38 mm
Required mounting space PL (on the window frame profile)	min. 38 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	1200 – 2500 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	1,6 A
Rated power	30 W

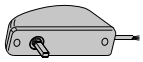
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① 2x **PL10 S1**
(100 / 150 / 200 / 300 mm)

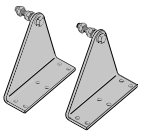


② 1x **OFV1**

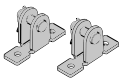


2 x K15-Set

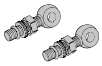
③ 2x **K15**



④ 2x **F11**



⑤ 2x **B16ST (8x40)**



⑥ 1x **USKM**

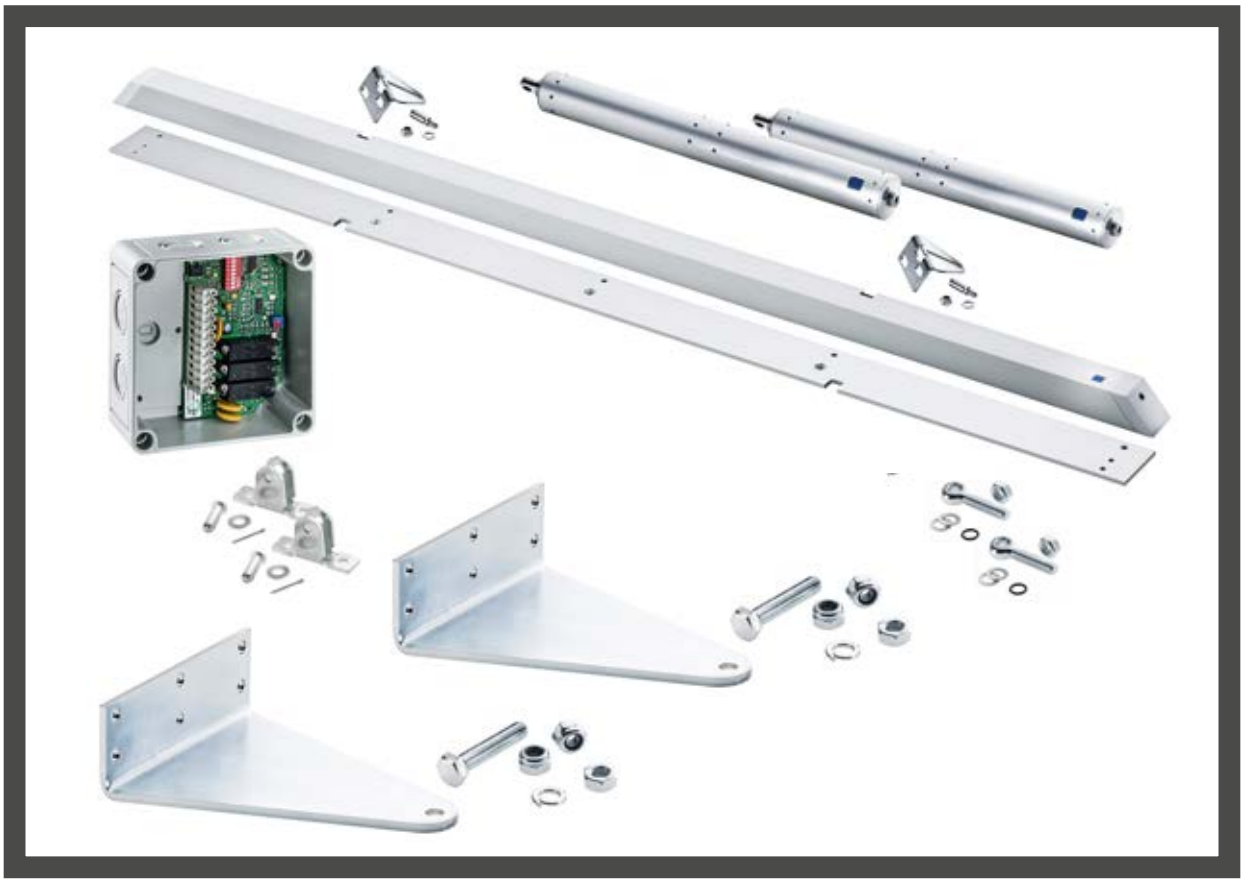


ORDER DATA

	Part.-No.
Components	
2x PL10 S1 (price per drive)	
PL10-100 (FAH min. 550 mm)	**565010**
PL10-150 (FAH min. 600 mm)	**565015**
PL10-200 (FAH min. 700 mm)	**565020**
PL10-300 (FAH min. 1000 mm)	**565030**
1x OFV1	
OFV1 (FAB min. 450 mm)	**513850**
2x Frame bracket set (price per frame bracket set)	
K15 Set	**517590**
1x Control module	
USKM	**512140**

Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space OFV (on the casemnet profile)	min. 40 mm
Required mounting space PL (On the window frame profile)	min. 38 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	450 – 1300 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	1,6 A
Rated power	30 W

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SPECIAL FEATURES RWA1100

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- Siutable for outward opening bottom/top/side-hung windows
- Large opening angles relized with short strokes and opening times due to the mounting of the spindle drives at an acute angle to the side closing edge
- Maximum opening angle and balanced force-stroke ratio with casement bracket F11 mounted on the side closing edge of the casement profile at
  - app. 1/2 of the casement lenght if using K15
  - app. 1/3 of the casemnet lenght related to the hinge side if using K37
- Other combinations of various spindle drives in SOLO or TANDEM arrangements with locking actuators for actuating of window profile-specific hardware systems on request
- Use for skylights on request

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**.

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MOUNTING DIMENSION OF RWA1100 FOR BOTTOM-/TOP-HUNG OUTWARD OPENING WINDOWS

Hardware set	Frame bracket	Stroke of the opening drive	CASEMENT CLOSED			Mounting dimension „X" (*1 (*2	FAH (NSK) (side closing edge)	Opening angle	Opening width	CASEMENT OPEN			Weight of the casement (max.)		Required spaceon the window frame		FAB (HSK)
			Angle of the drive force application	Applied force at the drive fixing point						Angle of the drive force application	Applied force at the drive fixing point						
				PL6	PL10						PL6	PL10	PL6	PL10	NSK	HSK	
			[DEG]	[N]	[N]	[mm]	[mm]	[DEG]	[mm]	[DEG]	[N]	[N]	[Kg]	[Kg]	[mm]	[mm]	[mm]
RWA 1100 (*3	K15	100	19	194	324	400	800	26	365	67	554	923	55	92	40	40	Depends of the used locking drive (*4
						500	900	23	360	64	537	896	60	100			
						600	1000	18	320	60	519	865	62	104			
		150	17	171	286	450	900	33	516	75	580	966	58	97		40	
						550	1000	28	479	69	559	932	61	103			
						650	1100	24	450	66	549	914	65	108			
						750	1200	21	429	63	536	894	67	112			
		200	15	153	255	500	1000	38	648	79	590	983	59	98	40	40	
						600	1100	32	608	74	577	962	63	105			
						700	1200	28	577	71	566	943	66	110			
						800	1300	25	554	88	600	999	74	123			
						900	1400	22	534	66	546	910	70	117			
		250	13	139	232	550	1100	41	778	82	595	991	60	99	40	40	
						650	1200	36	736	78	586	976	63	106			
						750	1300	31	704	74	576	961	66	111			
						850	1400	28	684	72	571	952	69	116			
						950	1500	25	657	69	559	932	71	118			
						1050	1600	23	638	67	552	921	72	121			
		250	12	127	211	600	1200	44	907	85	598	996	60	100	40	40	
						700	1300	39	861	80	591	985	64	106			
						800	1400	34	828	77	584	973	67	111			
						900	1500	31	799	74	576	960	69	115			
						1000	1600	28	777	72	569	948	71	119			
						1100	1700	26	756	70	563	938	73	121			
						1200	1800	24	742	68	557	928	74	124			
	K37	100	36	352	586	200	600	42	425	94	599	998	40	67	40	40	
						300	700	28	342	80	591	985	51	84			
						400	800	21	296	73	573	955	57	96			
		150	31	312	520	250	650	42	527	97	595	992	46	76	40	40	
						350	750	35	452	85	598	996	56	93			
						450	850	28	407	78	586	976	62	103			
						550	950	23	376	73	573	955	66	111			
		200	28	279	465	300	750	52	659	99	593	988	47	79	40	40	
						400	850	40	583	88	600	999	56	94			
						500	950	24	390	81	593	988	62	104			
						600	1050	28	499	76	583	972	67	111			
						800	1150	24	474	73	573	956	70	116			
		250	25	253	421	350	850	55	786	100	591	984	49	81	40	40	
						450	950	44	712	90	600	1000	57	95			
						550	1050	37	661	84	596	994	62	104			
						650	1150	31	622	79	589	982	67	111			
						750	1250	28	594	76	581	969	70	116			
						850	1350	25	573	73	573	956	72	120			
		300	23	231	384	400	1000	58	962	101	589	982	47	79	40	40	
						500	1100	47	879	92	600	999	55	91			
						600	1200	40	821	86	598	997	60	100			
						700	1300	35	775	81	593	988	64	106			
						800	1400	31	741	78	587	978	67	112			
						900	1500	28	713	75	580	967	70	116			
						1000	1600	25	693	73	574	957	72	120			

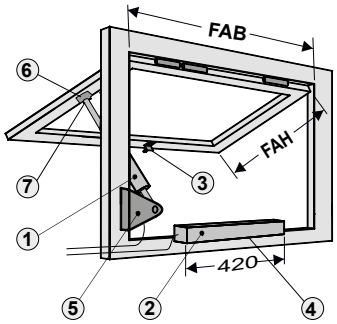
(*1 Mounting meaurse „**X**" = distance **F11** to **hinge side** (≥ 1/3 FAH)

(*2 Other mounting meaurse and wing heights on request.

(*3 For the tandem sets RWA1100TE the drive forces and the max. window weigths will be correspondingly higher. At outward opening windows the opening drives force axis needs to pass the hinge axis on its outward side with min. 25 mm. The above indicated mounting dimensions are valid for profile depths <75 mm.

(*4 FV1 – 1x = 450 mm
FV1 – 2x = 1200 or 2000 mm
FV1 – 3x = 2000 mm

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① 1x **PL10 S1**
(100 / 150 / 200 / 300 mm)



② 1x **FV3-R** (1x) L = 420 mm)



③ incl. **B18**

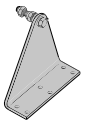


④ 1x **B20-1** (420 mm)



1 x K15-Set

⑤ 1x **K15**



⑥ 1x **F11**



⑦ 1x **B16ST** (8x40)

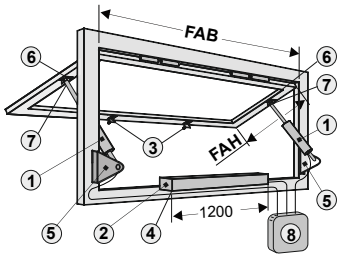


ORDER DATA

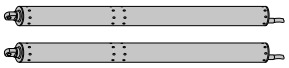
	Part.-No.		
Components			
1x PL10 S1			
PL10-100 (FAH min. 550 mm)	**565010**		
PL10-150 (FAH min. 600 mm)	**565015**		
PL10-200 (FAH min. 700 mm)	**565020**		
PL10-300 (FAH min. 1000 mm)	**565030**		
1x FV3-R L= 420 mm			
FV3-R (1x) (FAB min. 450 mm)	**515102**		
1x Mounting plate			
B20-1 L = 420 mm	**515191**		
1x Frame bracket set			
K15 Set	**517590**		
Optional 1x			
1x K37	**307500**		
1x F11	**151400**		
1x B16ST	**100044**		
Optional accessories			
B22 base plate for B18 glazing bead	**301599**		

Installation requirements	
Opening direction	outward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space FV (on the window frame profile)	min. 38 mm
Required mounting space PL (on the window frame profile)	min. 38 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	450 – 1300 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	0,8 A
Rated power	15 W

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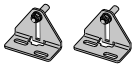
① 2x **PL 10 S1**
(100 / 150 / 200 / 300 mm)



② 1x **FV1** (2x) L= 1200 mm



③ incl. 2x **B18**

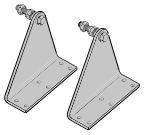


④ 1x **B20-2** (L= 1200 mm)

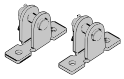


2x K15-Set

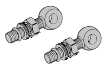
⑤ 2x **K15**



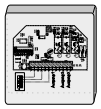
⑥ 2x **F11**



⑦ 2x **B16ST** (8x40)



⑧ 1x **USKM**



ORDER DATA

	Part.-No.
Components	
2x PL10 S1 (price per drive)	
PL10-100 (FAH min. 550 mm)	**565010**
PL10-150 (FAH min. 600 mm)	**565015**
PL10-200 (FAH min. 700 mm)	**565020**
PL10-300 (FAH min. 1000 mm)	**565030**
1x FV1-R L = 1200 mm	
FV1-R (2x) (FAB min. 1200 mm)	**515111**
1x Mounting plate	
B20-2 L = 1200 mm	**515193**
2x Frame bracket set (price per frame bracket set)	
K15 Set	**517590**
Optional 2x	
K37	**307500**
F11	**151400**
B16ST	**100044**
1x Control module	
USKM	**512140**
Optional accessories	
B22 base plate for B18 glazing bead	**301599**

Installation requirements	
Opening direction	outward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space FV (on the window frame profile)	min. 40 mm
Required mounting space PL (on the window frame profile)	min. 38 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	1200 – 2500 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	1,6 A
Rated power	30 W

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SPECIAL FEATURES RWA1050

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- Siutable for inward opening side-hung windows
- Opening angles of 90° relized with short strokes and opening times due to the mounting of the spindle drives at an acute angle to the side closing edge and due to the displacement of the pivoted point of the frame bracket behind the mullion/transom construction
- Required space of only 22 mm for the mounting of the frame bracket on the side closing edge of the window frame profile
- Other combinations of various spindle drives in SOLO or TANDEM arrangements with locking actuators for actuating of window profile-specific hardware systems on request

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**.

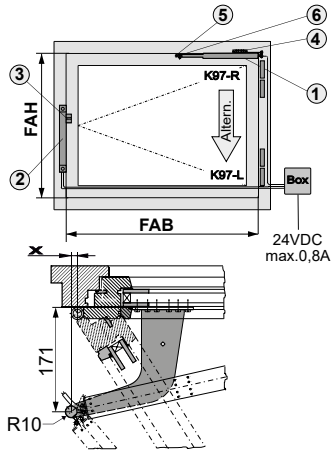
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MOUNTING DIMENSION OF RWA1050 FOR SIDE-HUNG INWARD OPENING WINDOWS

hardware set	Frame bracket	Stroke of the opening drive	CASEMENT CLOSED			Mounting dimension „X"	min. FAB (NSK) (side closing edge)	Opening angle	Opening width	CASEMENT OPEN			Weight of the casement (max.)		Required space on the frame		FAH (HSK)
			Angle of the drive force application	Applied force at the drive fixing point						Angle of the drive force application	Applied force at the drive fixing point						
				PL6	PL10						PL6	PL10	PL6	PL10	Hinge	NSK	
			[DEG]	[N]	[N]	[mm]	[mm]	[DEG]	[mm]	[DEG]	[N]	[N]	[Kg]	[Kg]	[mm]	[mm]	[mm]
RWA 1050 (*1	K97	100	19	167	279	0	510	35	(*2	16	163	272	90	130	10	22	500 – 1500
		150	13	139	232	20	600	55		11	112	187	90	130	30	22	
		200	11	119	198	40	680	75		6	60	100	90	130	50	22	
		250	10	103	172	80	740	85		6	60	100	90	130	90	22	

(*1 For the tandem sets RWA1100TE the drive forces and the max. window weigths will be correspondingly higher.
(*2 Depends on FAB

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① 1x PL6 S1
(100 / 150 / **200 / 250 mm)**



② 1x **FV3** (1x) L = 420 mm)

R



alternativ

L

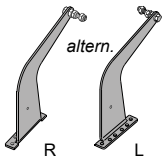


③ inkl. **B18**



1x K1050-R altern. **K1050-L**

④ 1x **K97**



⑤ 1x **F11**



⑥ 1x **B16ST** (8x40)

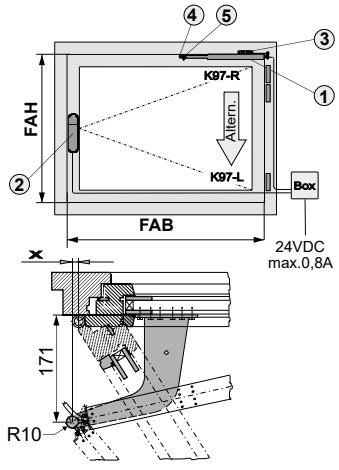


ORDER DATA

	Part.-No.
Components	
1x PL6 S1	
PL6-100 (FAB min. 510 mm)	**562010**
PL6-150 (FAB min. 600 mm)	**562015**
PL6-200 (FAB min. 680 mm)	**562020**
PL6-250 (FAB min. 740 mm)	**562025**
1x FV3-R L= 420 mm	
FV3-R (1x) (FAB min. 450 mm)	**515102**
1x Frame bracket set	
K1050-R Set	**307051**
Alternativ 1x	
K1050-L Set	**307050**
Optional accessories	
B22 base plate for B18 glazing bead	**301599**

Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space FV (on the window frame profile)	min. 38 mm
Required mounting space PL (on the window frame profile)	min. 20 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	450 – 1300 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	0,8 A
Rated power	15 W

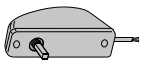
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① 1x PL6 S1
(100 / 150 / **200 / 250 mm)**

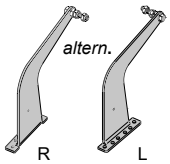


② 1x **OFV1**



1x K1050-R altern. **K1050-L**

③ 1x **K97**



④ 1x **F11**



⑤ 1x **B16ST** (8x40)

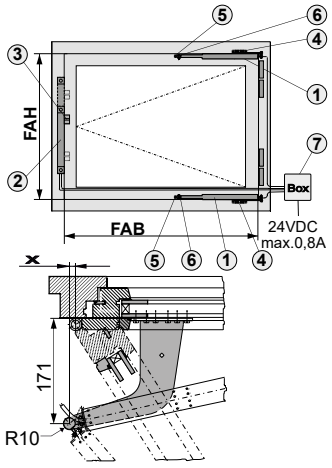


ORDER DATA

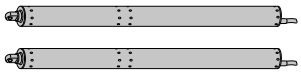
	Part.-No.
Components	
1x PL6 S1	
PL6-100 (FAB min. 510 mm)	**562010**
PL6-150 (FAB min. 600 mm)	**562015**
PL6-200 (FAB min. 680 mm)	**562020**
PL6-250 (FAB min. 740 mm)	**562025**
1x OFV1	
OFV1 (FAH min. 450 mm)	**513850**
1x Frame bracket set	
K1050-R Set	**307051**
Alternativ 1x	
K1050-L Set	**307050**
Optional accessories	
B22 base plate for B18 glazing bead	**301599**

Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space OFV (on the casemnet profile)	min. 40 mm
Required mounting space PL (on the window frame profile)	min. 20 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	1200 – 2500 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	1,6 A
Rated power	30 W

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① 2x **PL6 S1**
(100 / 150 / 200 / 250 mm)



② 1x **FV1-R (1x)** altern. **FV1-L (1x)**

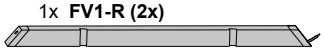


L = 420 mm

③ **1x B20-1 (L= 420 mm)**

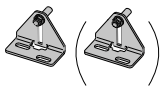


altern.
1x **FV1-R (2x)**



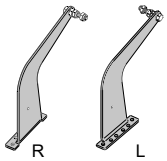
L = 1200 mm

④ incl. **B18**

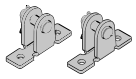


2x K1050 (1x R + 1x L)

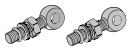
⑤ 2x **K97**



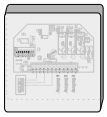
⑥ 2x **F11**



⑦ 2x **B16ST** (8x40)



⑧ 1x **USKM**

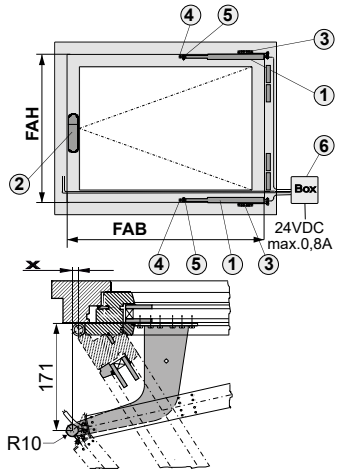


ORDER DATA

	Part.-No.
Components	
2x PL6 S1 (price per drive)	
PL6-100 (FAB min. 510 mm)	**562010**
PL6-150 (FAB min. 600 mm)	**562015**
PL6-200 (FAB min. 680 mm)	**562020**
PL6-250 (FAB min. 740 mm)	**562025**
1x FV1-R L= 420 mm	
FV1-R (1x) (FAB min. 450 mm)	**515103**
1x Mounting plate	
B21-1 base plate FV L = 420; FÜ>10 mm	**515181**
B21-2 base plate FV L = 1200; FÜ>10 mm	**515183**
2x Frame bracket set	
K1050-R Set	**307051**
K1050-L Set	**307050**
1x Control module	
USKM	**512140**
Optional accessories	
B22 base plate for B18 glazing bead	**301599**

Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space FV (on the window frame profile)	min. 38 mm
Required mounting space PL (on the window frame profile)	min. 20 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	450 – 1300 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	0,8 A
Rated power	15 W

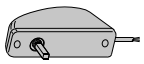
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① 2x **PL6 S1**
(100 / 150 / 200 / 250 mm)

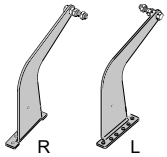


② 1x **OFV1**

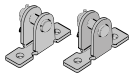


2 K1050 (1x R + 1x L)

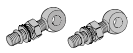
③ 2x **K97**



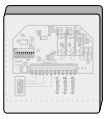
④ 2x **F11**



⑤ 2x **B16ST (8x40)**



⑥ 1x **USKM**



ORDER DATA

	Part.-No.		
Components			
2x PL6 S1 (price per drive)			
PL6-100 (FAB min. 510 mm)	**562010**		
PL6-150 (FAB min. 600 mm)	**562015**		
PL6-200 (FAB min. 680 mm)	**562020**		
PL6-250 (FAB min. 740 mm)	**562025**		
1x OFV1			
OFV1 (FAH min. 450 mm)	**513850**		
2x Frame bracket set			
K1050-R Set	**307051**		
K1050-L Set	**307050**		
1x Control module			
USKM	**512140**		
Optional accessories			
B22 base plate for B18 glazing bead	**301599**		

Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space OFV (on the casemnet profile)	min. 40 mm
Required mounting space PL (on the window frame profile)	min. 20 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	1200 – 2500 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	1,6 A
Rated power	30 W

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