

OVERVIEW OF RWA HARDWARE SYSTEMS																					
RWA hardware system	Rated voltage	Locking drive			Opening drives	Accessories			Casement dimensions						Required mounting space	Use			Location		
		Type	Number of VP	Length		Control modules Accessories	Frame bracket	Casement bracket	Bottom-/top-hung			Side-hung				Natural ventilation	RWA	NSHEV	Facade		Roof
									FAB	FAH	max. weight	FAB	FAH	max. weight					inward	outward	
[VDC]				[mm]	[A]			[mm]	[mm]	[Kg]	[mm]	[mm]	[Kg]	[mm]							
1000	24	FV3	1 (*1)	450	PL6	(B20-1)	K15	F11	500	600	50	600	500	90	40	●	●	●	●	■	■
					PL10						90	- 1500		150		●	●	●	●	■	■
		OFV (*3)	(*2)	PL6	- 1200	- 1500	50	500	- 2400	90	●	●	●	●		■	■				
				PL10			90	- 1500	150	●	●	●	●	■		■					
1000-TE	24	FV1	2; 3	1200	2x PL6	USKM	2x K15	2x F11	1250	600	90	600	1250	130	40	●	●	●	●	■	■
					2x PL10						- 2400			160		- 2400	200	●	●	●	●
			3	2000	2x PL6	USKM	- 2000	90	- 1500	2050	130	●	●	●		●	■	■			
					2x PL10			160	- 2400	200	●	●	●	●		■	■				
		(*2)	2x PL6	USKM	- 1200	- 1500	50	500	500	90	●	●	●	●		■	■				
							2x PL10	90	- 1500	- 2400	150	●	●	●		●	■	■			
1100	24	FV3 (*3) (*2)	1 (*1)	450	PL6	B21-1	K15 (K37)	F11	500	800	70	600	500	90	40	●	●	●	■	●	■
					PL10						- 1200	- 1600	120	- 1500		- 2400	150	●	●	●	■
1100-TE	24	FV1 (*4) (*2)	2; 3	1200	2x PL6	USKM (B20-2)	2x K15 (2x K37)	2x F11	1250	800	130	600	1250	130	40	●	●	●	■	●	■
					2x PL10						- 2400			200		- 2400	200	●	●	●	■
		3	2000	2x PL6	USKM (B20-3)	- 2000	130	- 1500	2050	130	●	●	●	■		●	■				
				2x PL10			200	- 2400	200	●	●	●	■	●		■					
1050	24	FV3 (*3) (*2)	(*2)	450	PL6	K97 (re/li)	F11	500	500	- 1250	- 1500	90	22	●	●	●	●	■	■		
					PL10							130		●	●	●	●	■	■		
		OFV (*3)	PL6	90	●	●	●	●	■	■											
					PL10	130	●	●	●	●	■	■									
1050-TE	24	FV1 (*1)	(*1)	450	2x PL6	USKM	K97 re+li	2x F11	500	- 1500	- 2400	130	22	●	●	●	●	■	■		
					2x PL10							150		●	●	●	●	■	■		
		OFV (*4) (*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

(*3) Use of FVR3 / FVB3 possible

(*4) Use of FVR4 / FVB4 possible



RWA 1000

RWA 1000

- Model 24 V DC
- Application Bottom-/Top-/Side-hung inward opening windows
- Opening drives PL6 S1 (600 N) / PL10 S1 (1000 N)
on the side closing edge (NSK)
- Locking drives FV3 / OFV / FVR3 / FVB3 / (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 1100

RWA 1100

- Model 24 V DC
- Application Bottom-/Top-/Side-hung outward opening windows
- Opening drives PL6 S1 (600 N) / PL10 S1 (1000 N)
on the side closing edge (NSK)
- Locking drives FV3 / FVR3 / (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 1050

RWA 1050

- Model 24 V DC
- Application Side-hung inward opening windows
- Opening drives PL6 S1 (600 N) / PL10 S1 (1000 N)
on the side closing edge (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

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	SHEV	NSHEV	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	●	●	●	●		○		○

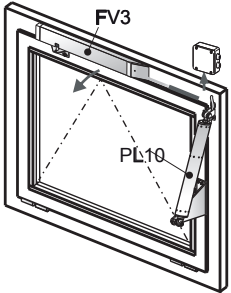
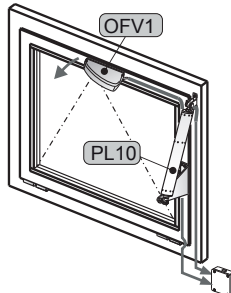
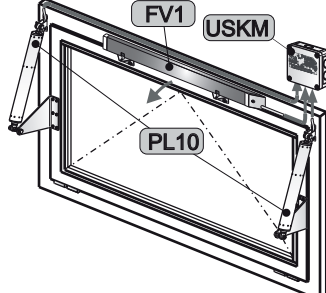
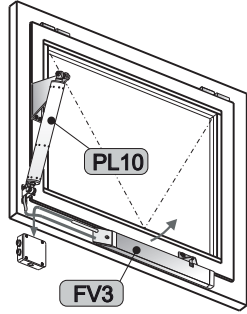
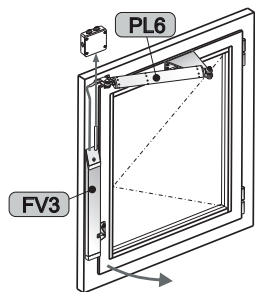
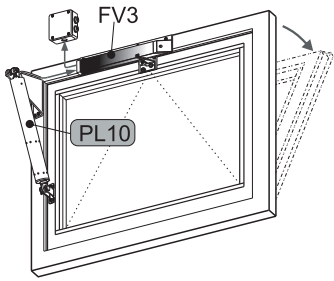
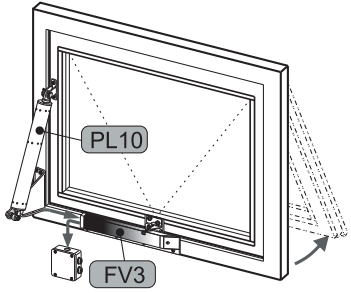
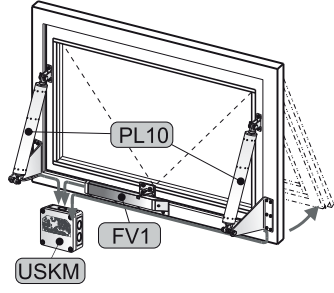
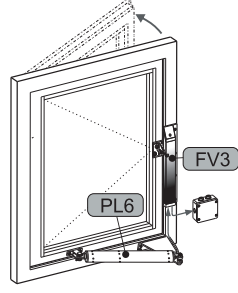
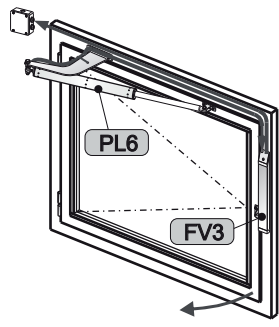
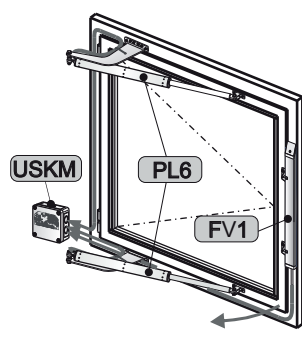
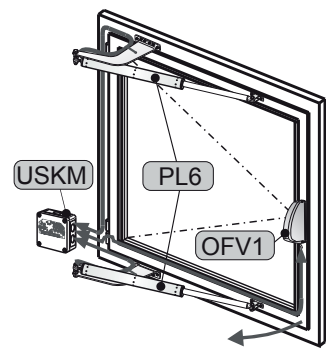
OVERVIEW OF LOCKING DRIVES																	
Locking drives	Locking stroke (Rotating angle)	Rated voltage	Force (Torque)		Runtime	Close circuit current	Opening drives		Use			Location		Functions			
			Pulling/Pushing force	Initial force (torque)			Model	Cut-off current	Natural ventilation	SHEV	NSHEV	Facade	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	●	●	●	●					●
FVR3	18	24	600	1000	5,0	0,3	S1	0,8	●	●	●	●					●
FVB3	16/22	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

TYPICAL APPLICATION		
<p>RWA1000 – inward opening</p>  <p>View on bottom-hung window</p>	<p>RWA1000 – inward opening</p>  <p>View on bottom-hung window</p>	<p>RWA1000 TE – inward opening</p>  <p>View on bottom-hung window</p>
<p>RWA1000 – inward opening</p>  <p>View on top-hung window</p>	<p>RWA1000 – inward opening</p>  <p>View on side-hung window</p>	<p>RWA1100 – outward opening</p>  <p>View on bottom-hung window</p>
<p>RWA1100 – outward opening</p>  <p>View on top-hung window</p>	<p>RWA1100 TE – outward opening</p>  <p>View on top-hung window</p>	<p>RWA1100 – outward opening</p>  <p>View on side-hung window</p>
<p>RWA1050 – inward opening</p>  <p>View on side-hung window</p>	<p>RWA1050 TE – inward opening</p>  <p>View on side-hung window</p>	<p>RWA1050 TE – inward opening</p>  <p>View on side-hung window</p>



SPECIAL FEATURES RWA1000

- For natural ventilation, smoke and heat exhausting and ferralux® NSHEV (EN12101-2)
- Suitable for inwards opening bottom/top/side-hung windows
- Large opening angles realized 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 casement length 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.

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				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		Weight of the casement (max.)				
				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	
						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				

Depends of the used locking drive (*4)

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

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