


# TECHNICAL SPECIFICATION

## FWP









### UNIVERSAL WOODEN ACCESS ROOF LIGHTS

ACCESS ROOF LIGHT TYPE	FWP
	
Opening method	option to set the sash opening side (left or right) opened to right as standard (view from the outside)
<b>I. APPLICATION</b>	
Installation	installation angle 15°-55° installed on rafters, equipped with installation brackets
<b>II. FEATURES</b>	
Material	pinewood, vacuum impregnated
Lacquer	acrylic natural colour
Varnishing	twice
Air inlet type	-
Seals	four
Micro-opening facility	+
Handle	Elegant
Warranty	10 years for windows, 20 years for glazing unit
<b>III. TECHNICAL PARAMETERS</b>	
Air permeability	3 as per EN1026, EN 12207
Wind load resistance	class C4* as per EN 12210
Watertightness – unshielded (A)	E900 as per EN 12208
Impact resistance	class 5 (950mm) as per EN 13049
Applicability of glazing units	U3, P2, U5, P5

ACCESS ROOF LIGHT TYPE	FWP
<b>IV. OPTIONS</b>	
Wooden profiles	- painted in colours of RAL spectrum - painted in one of five Lazure colours - painted with polyurethane varnish (white) - in mahogany woodwork
Cladding	- painted in colours of RAL spectrum - cladding elements made of different types of sheet metal (CU, TC) - window with black mullion bar and cladding
<b>V. ADDITIONAL PRODUCTS TO BE USED</b>	
Flashings	- standard - special - combination
Control	- manual
Mounting accessories	- insulation sets - linings - auxiliary rafters - insulating band - frame extensions
Internal accessories	- ARF blackout blind - ARP roller blind - ARS standard roller blind - AJP Venetian blind - APS pleated blind - APF pleated blind - AMS insect screen

Technical parameters	Glazing unit type			
	U3	U5	P2	P5
glazing unit structure	4H-16-4T	4H-10-4H-10-4H	4H-15-33.2T	4HS-10-4HT-8-33.2T
glazing U-value as per EN 673	1.0 W/m²K	0.5 W/m²K	1.0 W/m²K	0.5 W/m²K
window U-value as per EN 12567-2	1.3 W/m²K	1.0 W/m²K	1.3 W/m²K	1.1 W/m²K
acoustic insulation Rw as per EN 12567-2, EN 10077	35(-1,-5)	33(-1,-4)	35(-1,-5)	36(-1,-4)
light transmittance factor τ <sub>v</sub> as per EN 410	0.76	0.73	0.75	0.63
solar factor g as per EN 410	0.53	0.53	0.52	0.48
UV radiation as per EN 410	0.26	0.28	0.01	0.01
frame thermal insulation U <sub>f</sub> as per EN ISO 10077-1, EN ISO 10077-2	npd	npd	npd	npd
thermal insulation of frame and glazing connection Ψ as per EN ISO 10077-1, EN ISO 10077-2	npd	npd	npd	npd

\* for the access roof light width > 114 cm and height > 140 cm: npd  
npd – no performance determined

VI. TECHNICAL PARAMETERS FOR WINDOWS IN PARTICULAR SIZES								
frame external size [cm]	66x78	66x98	66x118	78x98	78x118	78x140	94x98	94x118
window size symbol	22	03	04	05	06	07	15	08
								
window internal area [m²]	0.39	0.51	0.62	0.62	0.75	0.91	0.76	0.93
effective glazing area [m²]	0.28	0.38	0.47	0.47	0.59	0.73	0.60	0.75
window weight for U3 glazing unit [kg]±1kg	28	33	38	36	42	??	40	46



# TECHNICAL SPECIFICATION

## PWP

### UNIVERSAL ALUMINIUM CLAD-PLASTIC ACCESS ROOF LIGHTS

ACCESS ROOF LIGHT TYPE	PWP
Opening method	możliwość przełożenia skrzydła dla otwierania na prawą lub na lewą stronę, standardowo otwierany na prawo (widok z zewnątrz)
<b>I. APPLICATION</b>	
Montaż	kąt montażu 15°-55° montaż na krokwiach, wyposażony w kątowniki przykręcone do ościeżnicy
<b>II. FEATURES</b>	
Material	multi-chamber PVC profiles
Colour	white (RAL 9010)
Varnishing	–
Air inlet type	–
Seals	four
Micro-opening facility	+
Handle	Elegant
Warranty	10 years for windows, 20 years for glazing unit
<b>III. TECHNICAL PARAMETERS</b>	
Air permeability	3 as per EN1026, EN 12207
Wind load resistance	class C4* as per EN 12210
Watertightness – unshielded (A)	E900 as per EN 12208
Impact resistance	class 5 (950mm) as per EN 13049
Applicability of glazing units	U5, P5

ACCESS ROOF LIGHT TYPE	PWP
<b>IV. OPTIONS</b>	
Profiles	Available in veneer colours: – golden oak (GO) – pine (PI)
Cladding	– painted in colours of RAL spectrum – cladding elements made of different types of sheet metal (CU, TC) – window with black mullion bar and cladding
<b>V. ADDITIONAL PRODUCTS TO BE USED</b>	
Flashings	– standard – special – combination
Control	– manual
Mounting accessories	– insulation sets – linings – auxiliary rafters – insulating band – frame extensions
Internal accessories	– ARF blackout blind – ARP roller blind – ARS standard roller blind – AJP Venetian blind – APS pleated blind – APF pleated blind – AMS insect screen

VII. TECHNICAL PARAMETERS FOR ACCESS ROOF LIGHTS WITH PARTICULAR GLAZING UNIT TYPES		
Technical parameters	Glazing unit type	
	U5	P5
Glazing unit structure	4H -10 -4H -10 -4H	4HS-10-4HT-8-33.2T
glazing U-value as per EN 673	0.5 W/m²K	0.5 W/m²K
window U-value as per EN 12567-2	1.2 W/m²K	1.2 W/m²K
acoustic insulation Rw as per EN 12567-2, EN 10077	34(-1;-4)	37(-1;-4)
light transmittance factor $\tau_v$ as per EN 410	0.73	0.68
solar factor g as per EN 410	0.53	0.48
UV radiation as per EN 410	0.28	0.01
frame thermal insulation Uf as per EN ISO 10077-1, EN ISO 10077-2	npd	npd
thermal insulation of frame and glazing connection $\Psi$ as per EN ISO 10077-1, EN ISO 10077-2	npd	npd



\* for the access roof light width > 114 cm and height > 140 cm: npd  
npd – no performance determined

VI. TECHNICAL PARAMETERS FOR WINDOWS IN PARTICULAR SIZES						
frame external size [cm]	66x78	66x98	66x118	78x98	78x118	94x98
window size symbol	22	03	04	05	06	15
window internal area [m²]	0.39	0.51	0.62	0.62	0.75	0.76
effective glazing area [m²]	0.28	0.38	0.47	0.47	0.59	0.60



# TECHNICAL SPECIFICATION








## FWR, FWL SIDE HUNG ESCAPE WINDOWS

WINDOW TYPE	FWL	FWR
		
Opening method	left	right
<b>I. APPLICATION</b>		
Installation	installation angle 15°-55° installation on battens, equipped with brackets screwed to the frame	
<b>II. FEATURES</b>		
Material	pinewood, vacuum impregnated	
Lacquer	acrylic natural colour	
Varnishing	twice	
Air inlet type	-	
Seals	two	
Micro-opening facility	+	
Handle	Standard	
Warranty	10 years for windows, 20 years for glazing unit	
<b>III. TECHNICAL PARAMETERS</b>		
Air permeability class	3 as per EN 1026, EN 12207	
Wind load resistance	class C5* as per EN 12210	
Watertightness – unshielded (A)	9A as per EN 12208	
Impact resistance	class 4 (700mm) as per EN 13049	
Applicability of glazing units	U3	

WINDOW TYPE	FWL	FWR
<b>IV. OPTIONS</b>		
Wooden profiles	<ul style="list-style-type: none"> <li>- painted in colours of RAL spectrum</li> <li>- painted in one of five Lazure colours</li> <li>- coated with polyurethane lacquer (white)</li> <li>- in mahogany woodwork</li> </ul>	
Cladding	<ul style="list-style-type: none"> <li>- painted in colours of RAL spectrum</li> <li>- cladding elements made of different types of sheet metal (CU,TC)</li> <li>- window with black mullion bar and cladding</li> </ul>	
<b>V. ADDITIONAL PRODUCTS TO BE USED</b>		
Flashings	<ul style="list-style-type: none"> <li>- special (E_W) for access roof lights,</li> <li>- combination</li> </ul>	
Control	- manual	
Mounting accessories	- insulation sets	
Internal accessories	<ul style="list-style-type: none"> <li>- ARS standard roller blind</li> <li>- AJP venetian blind</li> <li>- APS pleated blind</li> <li>- APF pleated blind</li> <li>- AMS insect screen</li> </ul>	

<b>VII. TECHNICAL PARAMETERS FOR WINDOWS WITH PARTICULAR GLAZING UNIT TYPES</b>	
Technical parameters	Glazing unit type
	<b>U3</b>
Glazing structure	4H-16-4T
glazing U-value as per EN 673	1.0 W/m²K
window U-value as per EN 12567-2	1.3 W/m²K
acoustic insulation Rw as per EN ISO 717-1	34(-2;-6)
light transmittance factor τ <sub>v</sub> as per EN 410	0.76
solar factor g as per EN 410	0.53
UV radiation as per EN 410	0.26
frame thermal insulation U <sub>f</sub> as per EN ISO 10077-1, EN ISO 10077-2	npd
thermal insulation of frame and glazing connection Ψ as per EN ISO 10077-1, EN ISO 10077-2	npd



\* for the window width > 114 cm and height > 140 cm: npd  
npd – no performance determined


<b>VI. TECHNICAL PARAMETERS FOR WINDOWS IN PARTICULAR SIZES</b>							
frame external size [cm]	66x78	66x98	66x118	78x98	78x118	94x118	94x98
window size symbol	22	03	04	05	06	08	15
							
window internal area [m²]	0.39	0.51	0.62	0.62	0.75	0.93	0.76
effective glazing area [m²]	0.28	0.38	0.47	0.47	0.59	0.75	0.60
window weight for U3 glazing unit [kg]±1kg	21	25	29	29	33	38	34



# TECHNICAL SPECIFICATION

## WLI, WG\_, WS\_ ACCESS ROOF LIGHTS FOR UNHEATED ROOMS





WINDOW TYPE	WLI	WG_
		
Opening method	left/right side	upwards
<b>I. APPLICATION</b>		
Installation	15°-70°	15°-60°
	installation on battens integrated flashing	
Flashing	universal	in S, Z, H version
<b>II. FEATURES</b>		
Frame material	pinewood, vacuum impregnated	
Sash material	aluminium profile	
Glazing unit	4H-8-4H	4 (WGT) 4-9-4 (WGI)
Control	manual	
Locking of access roof light	3 positions	
Warranty	5 years	
<b>III. TECHNICAL PARAMETERS</b>		
Air permeability class	2 as per EN 1026, EN 12207	1 as per EN 1026, EN 12207 (WGT) 2 as per EN 1026, EN 12207 (WGI)
Wind load resistance	class C4 as per EN 12210	WGI - class C2 WGT - class B2 as per EN 12210
Watertightness – unshielded (A)	5A as per EN 12208	5A as per EN 12208
Impact resistance	npd	
<b>IV. OPCJE</b>		
Cladding	- painted in colours of RAL spectrum - window with black mullion bar and cladding	

WINDOW TYPE	WSS	WSZ	WSH
			
Opening method	upwards		
<b>I. APPLICATION</b>			
Installation	15°-55°		
	installation on battens integrated flashing		
Flashing	type S	type Z	type H
Roofing	flat	corrugated	high profile
<b>II. FEATURES</b>			
Frame material	pinewood, vacuum impregnated		
Dome	semicircular polycarbonate dome		
Control	manual		
Locking of access roof light	3 positions		
Warranty	5 years		
<b>III. TECHNICAL PARAMETERS</b>			
Air permeability class	1 as per EN 1026, EN 12207		
Wind load resistance	class C2 as per EN 12210*		
Watertightness – unshielded (A)	E1050 as per EN 12208		
Impact resistance	npd		
<b>IV. OPCJE</b>			
Cladding	- painted in colours of RAL spectrum - cladding elements made of different types of sheet metal (CU,TC)		

VI. TECHNICAL PARAMETERS FOR ACCESS ROOF LIGHTS WITH PARTICULAR GLAZING UNIT TYPES			
Technical parameters	Glazing unit type		
	4H-8-4H	4	4-9-4
glazing U-value as per EN 673	npd	npd	npd
light transmittance factor $\tau_v$ as per EN 410	0.83	0.91	0.83
solar factor g as per EN 410	0.79	0.88	0.79
UV radiation as per EN 410	npd	npd	npd

\* for the size 86x86: npd  
npd – no performance determined

### V. TECHNICAL PARAMETERS FOR ACCESS ROOF LIGHTS IN PARTICULAR SIZES

ACCESS ROOF LIGHT TYPE	WLI		WG_	
frame external dimensions [cm]	54x83	86x87*	46x55	46x75
				
access roof light internal dimensions [cm]	48x77	80x81	42x51	42x71
WLI access roof light weight [kg]±1kg	19	26		
WGT access roof light weight [kg]±1kg			8	9
WGI access roof light weight [kg]±1kg			11	13

ACCESS ROOF LIGHT TYPE	WSS, WSZ, WSH	
frame external dimensions [cm]	54x75	86x86*
		
access roof light internal dimensions [cm]	48x69	80x80
WSS access roof light weight [kg]±1kg	9	12
WSZ access roof light weight [kg]±1kg	9	14
WSH access roof light weight [kg]±1kg	11	14

Access roof light WLI



Access roof light WSZ

