

# TECHNICAL SPECIFICATION

## FWR, FWL

### WOODEN INSULATED SIDE HUNG ESCAPE WINDOWS



WINDOW TYPE	FWR	FWL
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, P2	

WINDOW TYPE	FWR	FWL
<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>- AMS insect screen</li> </ul>	

VI. TECHNICAL PARAMETERS FOR WINDOWS WITH PARTICULAR GLAZING UNIT TYPES		
Technical parameters	Glazing unit type	
	U3	P2**
glazing U-value as per EN 673	1.0 W/m²K	1.1 W/m²K
window U-value as per EN 12567-2	1.4 W/m²K	1.4 W/m²K
acoustic insulation Rw as per EN 12717-1	34(-2;-6)	npd
light transmittance factor τ <sub>v</sub> as per EN 410	0.70	0.70
solar factor g as per EN 410	0.53	0.52
UV radiation as per EN 410	0.26	0.01
frame thermal insulation U <sub>f</sub> as per EN ISO 10077-1, EN ISO 10077-2	npd	npd
thermal insulation of frame and glazing connection Ψ as per EN ISO 10077-1, EN ISO 10077-2	npd	npd



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

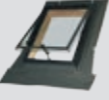
VII. TECHNICAL PARAMETERS FOR WINDOWS IN PARTICULAR SIZES								
frame external size [cm]	66x78	66x98	66x118	78x98	78x118	94x118	94x98	
window size symbol	22	03	04	05	06	08	15	
window internal area [m²]	0.39	0.51	0.62	0.62	0.75	0.93	0.76	
effective glazing area [m²]	0.28	0.38	0.47	0.47	0.59	0.75	0.60	
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	4H (WGT) 4H-9-4H (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	3 as per EN 1026, EN 12207
Wind load resistance	class C4 as per EN 12210	class C2 as per EN 12210
Watertightness – unshielded (A)	5A as per EN 12208	8A as per EN 12208
Impact resistance	npd	
<b>IV. OPTIONS</b>		
Wooden profiles	- painted in colours of RAL spectrum - painted in one of five Lazure colours	
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	

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
<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 2C as per EN 12210		
Watertightness – unshielded (A)	E1050 as per EN 12208		
Impact resistance	npd		
<b>IV. OPTIONS</b>			
Wooden profiles	- painted in colours of RAL spectrum - painted in one of five Lazure colours		
Cladding	- painted in colours of RAL spectrum - cladding elements made of different types of sheet metal (CU, TC)		

VII. 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

V TECHNICAL PARAMETERS FOR ACCESS ROOF LIGHTS WITH PARTICULAR GLAZING UNIT TYPES			
Technical parameters	Glazing unit type		
	4H-8-4H	4H	4H-9-4H
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 window width > 114 cm and height > 140 cm: npd  
npd – no performance determined

WLI access roof light



WSZ access roof light

