

# TECHNICAL SPECIFICATION

## FTP-V, FTW-V, FTU-V WOODEN PIVOT ROOF WINDOWS



WINDOW TYPE	FTP-V	FTW-V	FTU-V
<b>I. APPLICATION</b>			
Installation	installation angle 15°-90° universal installation system on rafters and battens		
<b>II. FEATURES</b>			
Material	pinewood, vacuum impregnated		
Lacquer	acrylic natural colour	acrylic white colour NCS S0502-Y	polyurethane white NCS S0502-Y
Varnishing	twice	twice	triple
Air inlet type	automatic V40P		
Air inlet capacity	up to 49m³/h		
System	top Safe		
Seals	four		
Micro-opening facility	+		
Handle	Elegant		
Warranty	10 years for windows, 20 years for glazing unit, 20 years for hardware elements		
<b>III. TECHNICAL PARAMETERS</b>			
Air permeability class	class 4 as per EN 12207		
Wind load resistance	class C5** as per EN 12210		
Watertightness – unshielded (A)	E900 as per EN 12208		
Impact resistance	class 3 (450mm) as per EN 13049		
Applicability of glazing units	U3, U5, P5, R1, P2, G2, G61		

WINDOW TYPE	FTP-V	FTW-V	FTU-V
<b>IV. OPTIONS</b>			
Wooden profiles for FTP-V	- painted in colours of RAL spectrum - painted in one of five Lazure colours - in mahogany woodwork		
Cladding	- painted in colours of RAL spectrum - cladding elements made of different types of sheet metal (CU, TC)		
	- non-standard size and shape of the window FT_V U3: a (width)=50-134, b (height)=78-140 FT_V U5: a (width)=50-134, b (height)=78-140 FT_V R1: a (width)=50-134, b (height)=78-118 FT_V P2: a (width)=50-134, b (height)=78-140 FT_V G2: a (width)=50-134, b (height)=78-140 FT_V G4: a (width)=50-134, b (height)=78-140 FT_V G6: a (width)=50-134, b (height)=78-140 - window with black mullion bar and cladding - window without air inlet		
<b>V. ADDITIONAL PRODUCTS TO BE USED</b>			
Flashings	- standard, - special, - combination		
Control	- manual - electric		
Mounting accessories	- insulation sets - linings - auxiliary rafters - insulating band - frame extensions		
External accessories	- awning blind - roller shutter		
Internal accessories	- ARF blackout blind - ARP roller blind - ARS standard roller blind - AJP venetian blind - APS pleated blind - APF pleated blind - AMS insect screen		

VI. TECHNICAL PARAMETERS FOR WINDOWS IN PARTICULAR SIZES													
frame external size [cm]	55x78	55x98	66x98	66x118	78x98	78x118	78x140	78x160	94x118	94x140	114x118	114x140	134x98
window size symbol	01	02	03	04	05	06	07	13	08	09	10	11	12
window internal area [m²]	0.32	0.41	0.51	0.62	0.62	0.75	0.91	1.04	0.93	1.12	1.15	1.38	1.11
effective glazing area [m²]	0.22	0.29	0.38	0.47	0.47	0.59	0.73	0.85	0.75	0.92	0.95	1.16	0.92
window weight for U3 glazing unit [kg]±1kg	20	23	26	30	30	34	40	43	39	48	46	52	46
air inlet capacity at a pressure difference of 10Pa [m³/h]	17.28	17.28	23.34	23.34	27.89	27.89	27.89	27.89	27.89	27.89	49.08	49.08	49.08

VII. TECHNICAL PARAMETERS FOR WINDOWS WITH PARTICULAR GLAZING UNIT TYPES								
Technical parameters	Glazing unit type							
	U3	U4	U5	P5	R1	P2	G2	G61
Glazing structure	4H-16-4T	4HT-12-4-12-4T	4HT-10-4H-10-4HT	4HS-10-4HT-8-33.2T	6H-12-33.2SRT	4H-15-33.2T	4HT-15-33.1T	6HT-12-33.2SR
glazing U-value as per EN 673	1.0 W/m²K	0.7 W/m²K	0.5 W/m²K	0.5 W/m²K	1.0 W/m²K	1.0 W/m²K	1.0 W/m²K	1.0 W/m²K
window U-value as per EN ISO 12567-2, EN ISO 10077-1	1.3 W/m²K	1.1 W/m²K	0.97 W/m²K	0.97 W/m²K	1.3 W/m²K	1.3 W/m²K	1.3 W/m²K	1.3 W/m²K
acoustic insulation Rw (the window with air inlet) as per EN ISO 717-1	32(-1;-5)	33(-1;-4)	33(-2;-6)	35(-2;-4)	36(-2;-3)	35(-1;-3)	35(-1;-3)	36(-2;-4)
acoustic insulation Rw (the window without air inlet) as per EN ISO 717-1	33(-1;-5)	35(-2;-5)	33(-1;-5)	37(-2;-5)	39(-2;-5)	36(-1;-4)	36(-1;-4)	39(-2;-5)
light transmittance factor τ <sub>v</sub> as per EN 410	0.76	0.68	0.73	0.68	0.75	0.75	0.40	0.40
solar factor g as per EN 410	0.53	0.46	0.53	0.48	0.51	0.52	0.24	0.23
UV radiation as per EN 410	0.26	0.17	0.28	0.01	0.01	0.01	0.01	0.01
frame thermal insulation Uf* as per EN ISO 10077-1, EN ISO 10077-2	1.68 W/m²K	npd	1.70 W/m²K	1.61 W/m²K	1.68 W/m²K	1.68 W/m²K	1.68 W/m²K	1.68 W/m²K
thermal insulation of frame and glazing connection Ψ* as per EN ISO 10077-1, EN ISO 10077-2	0.066 W/mK	npd	0.051 W/mK	0.062 W/mK	0.078 W/mK	0.070 W/mK	0.070 W/mK	0.078 W/mK

\* FAKRO internal test results  
 \*\* for the window width > 114 cm and height > 140 cm: npd  
 \*\*\* for the window with air inlet  
 npd – no performance determined



# TECHNICAL SPECIFICATION

**FTP-V Secure, FTU-V Secure**  
ANTI-BURGLARY  
WOODEN PIVOT ROOF WINDOWS



WINDOW TYPE	FTP-V Secure	FTU-V Secure
<b>I. APPLICATION</b>		
Installation	installation angle 15°-90° universal installation system on rafters and battens	
<b>II. FEATURES</b>		
Material	pinewood, vacuum impregnated	
Lacquer	acrylic natural colour	polyurethane white NCS S0502-Y
Varnishing	twice	triple
Air inlet type	automatic V40P	
Air inlet capacity	up to 49m³/h	
System	top Safe	
Seals	four	
Micro-opening facility	+	
Handle	Elegant with lock	
Warranty	10 years for windows, 20 years for glazing unit, 20 years for hardware elements	
<b>III. TECHNICAL PARAMETERS</b>		
Air permeability class	4 as per EN 12207	
Wind load resistance	class C5** as per EN 12210	
Watertightness – unshielded (A)	E900 as per EN 12208	
Impact resistance	class 3 (450mm) as per EN 13049	
Applicability of glazing units	P2	

FTP-V P2 Secure window meets European 2nd anti-burglary class RC 2 N as per EN 1627.

WINDOW TYPE	FTP-V Secure	FTU-V Secure
<b>IV. OPTIONS</b>		
Wooden profiles for FTP-V	- painted in colours of RAL spectrum - painted in one of five Lazure colours - in mahogany woodwork	
Cladding	- painted in colours of RAL spectrum - cladding elements made of different types of sheet metal (CU, TC)	
	- non-standard size and shape of the window [cm] FTP-V P2: a (width)=50-134, b (height)=78-140 - 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	
External accessories	- awning blind - roller shutter	
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 WINDOWS WITH PARTICULAR GLAZING UNIT TYPES	
Technical parameters	Glazing unit type
	<b>P2</b>
Glazing structure	4H-15-33.2T
glazing U-value as per EN 673	1.0 W/m²K
window U-value as per EN ISO 12567-2, EN ISO 10077-1	1.3 W/m²K
acoustic insulation Rw (the window with air inlet) as per EN ISO 717-1	35(-1;-3)
acoustic insulation Rw (the window without air inlet) as per EN ISO 717-1	36 (-1;-4)
light transmittance factor τ <sub>v</sub> as per EN 410	0.75
solar factor g as per EN 410	0.52
UV radiation as per EN 410	0.01
frame thermal insulation Uf* as per EN ISO 10077-1, EN ISO 10077-2	1.68 W/m²K
thermal insulation of frame and glazing connection Ψ* as per EN ISO 10077-1, EN ISO 10077-2	0.070 W/mK

\* FAKRO internal test results  
\*\* for the window width > 114 cm and height > 140 cm: npd

VI. TECHNICAL PARAMETERS FOR WINDOWS IN PARTICULAR SIZES													
frame external size [cm]	55x78	55x98	66x98	66x118	78x98	78x118	78x140	78x160	94x118	94x140	114x118	114x140	134x98
window size symbol	01	02	03	04	05	06	07	13	08	09	10	11	12
window internal area [m²]	0.32	0.41	0.51	0.62	0.62	0.75	0.91	1.04	0.93	1.12	1.15	1.38	1.11
effective glazing area [m²]	0.22	0.29	0.38	0.47	0.47	0.59	0.73	0.85	0.75	0.92	0.95	1.16	0.92
window weight for P2 glazing unit [kg]±1kg	22	26	30	34	34	39	46	50	46	53	53	61	53
air inlet capacity at a pressure difference of 10Pa [m³/h]	17.28	17.28	23.34	23.34	27.89	27.89	27.89	27.89	27.89	27.89	49.08	49.08	49.08



# TECHNICAL SPECIFICATION

## FTP-V Z-Wave, FTU-V Z-Wave ELECTRICALLY CONTROLLED WOODEN PIVOT ROOF WINDOWS



WINDOW TYPE	FTP-V Z-Wave	FTU-V Z-Wave
<b>I. APPLICATION</b>		
Installation	installation angle 15°-90° universal installation system on rafters and battens	
<b>II. FEATURES</b>		
Material	pinewood, vacuum impregnated	
Lacquer	acrylic natural colour	polyurethane white NCS S0502-Y
Varnishing	twice	triple
Air inlet type	automatic V4OP	
Air inlet capacity	up to 49m <sup>3</sup> /h	
System	top Safe	
Seals	four	
Factory equipment	Z-Wave module, actuator, power supply, remote control, rain sensor	
Actuator	chain reach 24 cm	
Warranty	10 years for windows, 20 years for glazing unit, 20 years for hardware elements	
<b>III. TECHNICAL PARAMETERS</b>		
Air permeability class	3 as per EN 12207	
Wind load resistance	class C5** as per EN 12210	
Watertightness – unshielded (A)	E900 as per EN 12208	
Impact resistance	class 3 (450mm) as per EN 13049	
Applicability of glazing units	U3, U5, P5, R1, P2, G2, G61	

WINDOW TYPE	FTP-V Z-Wave	FTU-V Z-Wave
<b>IV. OPTIONS</b>		
Wooden profiles for FTP-V	- painted in colours of RAL spectrum - painted in one of five Lazure colours - 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 - window without air inlet	
<b>V. ADDITIONAL PRODUCTS TO BE USED</b>		
Flashings	- standard, - special, - combination	
Control	- electric - manual (in case of no power)	
Mounting accessories	- insulation sets - linings - auxiliary rafters - insulating band - frame extensions	
External accessories	- awning blind - roller shutter	
Internal accessories	- ARF blackout blind - ARP roller blind - ARS standard roller blind - AJP venetian blind - APS pleated blind - APF pleated blind - AMS insect screen	

VI. TECHNICAL PARAMETERS FOR WINDOWS IN PARTICULAR SIZES													
frame external size [cm]	55x78	55x98	66x98	66x118	78x98	78x118	78x140	78x160	94x118	94x140	114x118	114x140	134x98
window size symbol	01	02	03	04	05	06	07	13	08	09	10	11	12
window internal area [m <sup>2</sup> ]	0.32	0.41	0.51	0.62	0.62	0.75	0.91	1.04	0.93	1.12	1.15	1.38	1.11
effective glazing area [m <sup>2</sup> ]	0.22	0.29	0.38	0.47	0.47	0.59	0.73	0.85	0.75	0.92	0.95	1.16	0.92
window weight for U3 glazing unit [kg]±1kg	22	26	30	34	34	39	44	49	44	50	51	58	53
air inlet capacity at a pressure difference of 10Pa [m <sup>3</sup> /h]	17.28	17.28	23.34	23.34	27.89	27.89	27.89	27.89	27.89	27.89	49.08	49.08	49.08

VII. TECHNICAL PARAMETERS FOR WINDOWS WITH PARTICULAR GLAZING UNIT TYPES							
Technical parameters	Glazing unit type						
	U3	U5	P5	R1	P2	G2	G61
Glazing structure	4H-16-4T	4HT-10-4H-10-4HT	4HS-10-4HT-8-33.2T	6H-12-33.2SR T	4H-15-33.2T	4HT-15-33.1T	6HT-12-33.2SR
glazing U-value as per EN 673	1.0 W/m <sup>2</sup> K	0.5 W/m <sup>2</sup> K	0.5 W/m <sup>2</sup> K	1.0 W/m <sup>2</sup> K	1.0 W/m <sup>2</sup> K	1.0 W/m <sup>2</sup> K	1.0 W/m <sup>2</sup> K
window U-value as per EN ISO 12567-2	1.3 W/m <sup>2</sup> K	0.97 W/m <sup>2</sup> K	0.97 W/m <sup>2</sup> K	1.3 W/m <sup>2</sup> K	1.3 W/m <sup>2</sup> K	1.3 W/m <sup>2</sup> K	1.3 W/m <sup>2</sup> K
acoustic insulation Rw (the window with air inlet) as per EN ISO 717-1	32(-1;-5)	33(-2;-6)	35(-2;-4)	36(-2;-3)	35(-1;-3)	35(-1;-3)	36 (-2;-4)
acoustic insulation Rw (the window without air inlet) as per EN ISO 717-1	33 (-1;-5)	33 (-1;-5)	37 (-2;-5)	39 (-2;-5)	36 (-1;-4)	36 (-1;-4)	39 (-2;-5)
light transmittance factor τ <sub>v</sub> as per EN 410	0.76	0.73	0.68	0.75	0.75	0.40	0.40
solar factor g as per EN 410	0.53	0.53	0.48	0.51	0.52	0.24	0.23
UV radiation as per EN 410	0.26	0.28	0.01	0.01	0.01	0.01	0.01
frame thermal insulation Uf* as per EN ISO 10077-1. EN ISO 10077-2	1.63 W/m <sup>2</sup> K	1.70 W/m <sup>2</sup> K	1.60 W/m <sup>2</sup> K	1.63 W/m <sup>2</sup> K	1.63 W/m <sup>2</sup> K	1.63 W/m <sup>2</sup> K	1.63 W/m <sup>2</sup> K
thermal insulation of frame and glazing connection Ψ** as per EN ISO 10077-1. EN ISO 10077-2	0.061 W/mK	0.047 W/mK	0.064 W/mK	0.074 W/mK	0.074 W/mK	0.074 W/mK	0.074 W/mK

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



# TECHNICAL SPECIFICATION

## FTS, FTS-V

### WOODEN PIVOT ROOF WINDOWS



WINDOW TYPE	FTS	FTS-V
<b>I. APPLICATION</b>		
Installation	installation angle 15°-90° universal installation system on rafters and battens	
<b>II. FEATURES</b>		
Material	pinewood, vacuum impregnated	
Lacquer	acrylic, natural colour	
Varnishing	twice	
Air inlet type	-	V22
Air inlet capacity	-	up to 31m³/h
System	-	
Seals	two	
Micro-opening facility	+	
Handle	Standard	
Warranty	10 years for windows, 20 years for glazing unit, 20 years for hardware elements	
<b>III. TECHNICAL PARAMETERS</b>		
Air permeability class	3 as per EN 12207	
Wind load resistance	class C5** as per EN 12210	
Watertightness – unshielded (A)	E900 as per EN 12208	
Impact resistance	class 3 (450mm) as per EN 13049	
Applicability of glazing units	U2	

WINDOW TYPE	FTS	FTS-V
<b>IV. OPTIONS</b>		
Standard type windows: FTS, FTS-V are manufactured only in standard version, this also applies to glazing units		
<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	
External accessories	- awning blind - roller shutter	
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 WINDOWS WITH PARTICULAR GLAZING UNIT TYPES	
Technical parameters	Glazing unit type
Glazing structure	4H-16-4T
glazing U-value as per EN 673	1.1 W/m²K
window U-value as per EN ISO 12567-2	1.3 W/m²K
acoustic insulation Rw (the window with air inlet) as per EN ISO 717-1	32(-1;-5)
acoustic insulation Rw (the window without air inlet) as per EN ISO 717-1	33(-1;-5)
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 Uf* 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

VI. TECHNICAL PARAMETERS FOR WINDOWS IN PARTICULAR SIZES													
frame external size [cm]	55x78	55x98	66x98	66x118	78x98	78x118	78x140	78x160	94x118	94x140	114x118	114x140	134x98
window size symbol	01	02	03	04	05	06	07	13	08	09	10	11	12
window internal area [m²]	0.32	0.41	0.51	0.62	0.62	0.75	0.91	1.04	0.93	1.12	1.15	1.38	1.11
effective glazing area [m²]	0.22	0.29	0.38	0.47	0.47	0.59	0.73	0.85	0.75	0.92	0.95	1.16	0.92
window weight for U2 glazing unit [kg]±1kg	20	23	26	30	30	34	40	43	39	48	46	52	46
air inlet capacity at a pressure difference of 10Pa [m³/h]	11.02	11.02	17.64	17.64	19.06	19.06	19.06	19.06	19.06	19.06	30.99	30.99	30.99



# TECHNICAL SPECIFICATION

## PTP, PTP-V

ALUMINIUM CLAD-PLASTIC  
PIVOT ROOF WINDOWS



thermoPro

WINDOW TYPE	PTP	PTP-V
<b>I. APPLICATION</b>		
Installation	installation angle 15°-90° universal installation system	
<b>II. FEATURES</b>		
Material	multi-chamber PVC profiles	
Colour	white (RAL 9010)	white (RAL 9010)
Varnishing	-	
Air inlet type	-	V35
Air inlet capacity	-	up to 41m³/h
System	top Safe	
Seals	four	
Micro-opening facility	+	
Handle	Elegant white	
Warranty	10 years for windows, 20 years for glazing unit, 20 years for hardware elements	
<b>III. TECHNICAL PARAMETERS</b>		
Air permeability class	3 as per EN 12207	
Wind load resistance	class C4** as per EN 12210	
Watertightness – unshielded (A)	E900 as per EN 12208	
Impact resistance	class 3 (450mm) as per EN 13049	
External fire resistance	class Broof (t1) as per EN 13501-5+A1	
Applicability of glazing units	U3, U5, P5, R1, P2, G2, G61	

WINDOW TYPE	PTP	PTP-V
<b>IV. OPTIONS</b>		
Wooden profiles	- available in veneer colours: - golden oak (GO) - pinewood (PI)	
Cladding	- painted in colours of RAL spectrum - cladding elements made of different types of sheet metal (CU, TC) - non-standard size and shape of the window [cm] PTP U3: a (width)=50-134, b (height)=78-140 PTP-V U3: a (width)=50-134, b (height)=78-140 - window with black mullion bar and cladding	
<b>V. ADDITIONAL PRODUCTS TO BE USED</b>		
Flashings	- standard, - special, - combination	
Control	- electric - manual	
Mounting accessories	- insulation sets - linings - auxiliary rafters - insulating band - frame extensions	
External accessories	- awning blind - roller shutter	
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	U4	U5	P5	R1	P2	G2	G61
Glazing structure	4H-16-4T	4HT-12-4-12-4T	4HT-10-4H-10-4HT	4HS-10-4HT-8-33.2T	6H-12-33.2SR T	4H-15-33.2T	4HT-15-33.1T	6HT-12-33.2SR
glazing U-value as per EN 673	1.0 W/m²K	0.7 W/m²K	0.5 W/m²K	0.5 W/m²K	1.0 W/m²K	1.0 W/m²K	1.0 W/m²K	1.0 W/m²K
window U-value as per EN ISO 12567-2, EN ISO 10077-1	1.3 W/m²K	1.1 W/m²K	1.1 W/m²K	1.1 W/m²K	1.3 W/m²K	1.3 W/m²K	1.3 W/m²K	1.3 W/m²K
acoustic insulation Rw (the window with air inlet) as per EN ISO 717-1	32(-1;-4)	33(-1;-4)	34(-2;-6)	36(-1;-3)	37(-1;-4)	33(-1;-4)	33(-1;-4)	37(-1;-4)
acoustic insulation Rw (the window without air inlet) as per EN ISO 717-1	34(-2;-5)	35 (-2;-5)	34(-2;-5)	38(-1;-4)	39(-2;-5)	36(-1;-4)	36(-1;-4)	39 (-2;-5)
light transmittance factor τ <sub>v</sub> as per EN 410	0.76	0.68	0.73	0.68	0.75	0.75	0.40	0.40
solar factor g as per EN 410	0.53	0.46	0.53	0.48	0.51	0.52	0.24	0.23
UV radiation as per EN 410	0.26	0.17	0.28	0.01	0.01	0.01	0.01	0.01
frame thermal insulation U <sub>F</sub> * as per EN ISO 10077-1, EN ISO 10077-2	1.56 W/m²K	npd	npd	npd	npd	1.42 W/m²K	1.42 W/m²K	npd
thermal insulation of frame and glazing connection Ψ** as per EN ISO 10077-1, EN ISO 10077-2	0.051 W/mK	npd	npd	npd	npd	0.061 W/mK	0.061 W/mK	npd

\* FAKRO internal test results  
\*\* for the window width > 114 cm and height > 140 cm: npd  
\*\*\* for the window with air inlet  
npd – no performance determined

### VI. TECHNICAL PARAMETERS FOR WINDOWS IN PARTICULAR SIZES

frame external size [cm]	55x78	55x98	66x98	66x118	78x98	78x118	78x140	78x160	94x118	94x140	114x118	114x140	134x98
window size symbol	01	02	03	04	05	06	07	13	08	09	10	11	12
window internal area [m²]	0.32	0.41	0.51	0.62	0.62	0.75	0.91	1.04	0.93	1.12	1.15	1.38	1.11
effective glazing area [m²]	0.22	0.29	0.38	0.47	0.47	0.59	0.73	0.85	0.75	0.92	0.95	1.16	0.92
window weight for U3 glazing unit [kg]±1kg	23	26	31	34	34	40	46	51	47	54	55	62	55
air inlet capacity at a pressure difference of 10Pa [m³/h]	15.05	15.05	20.59	20.59	25.32	25.32	25.32	25.32	27.55	27.55	40.97	40.97	40.97



# TECHNICAL SPECIFICATION

## FTT, FTT Thermo WOODEN PIVOT ROOF WINDOWS



thermoPro

WINDOW TYPE	FTT	FTT/U
<b>I. APPLICATION</b>		
Installation	installation angle 15°-70° universal installation system on rafters and battens	
<b>II. FEATURES</b>		
Material	pinewood, vacuum impregnated	
Lacquer	acrylic natural colour	polyurethane white NCS S0502-Y
Varnishing	twice	triple
Air inlet type	-	
System	top Safe, Passive House (for FTT U8 Thermo)	
Seals	five	
Micro-opening facility	+	
Handle	Elegant	
Warranty	10 years for windows, 20 years for glazing unit	
<b>III. TECHNICAL PARAMETERS</b>		
Air permeability class	4 as per EN 12207	
Wind load resistance	class C5*** as per EN 12210	
Watertightness – unshielded (A)	E1050 as per EN 12208	
Impact resistance	class 5 (950mm) as per EN 13049	
Applicability of glazing units	U6, U8 (FTT U8 Thermo), U8 VSG, R3	

WINDOW TYPE	FTT	FTT/U
<b>IV. OPTIONS</b>		
Wooden profiles for FTT	- 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	
<b>V. ADDITIONAL PRODUCTS TO BE USED</b>		
Flashings	- standard, - special, - combination	
Control	- electric - manual	
Mounting accessories	- insulation sets - linings - auxiliary rafters - insulating band - frame extensions	
External accessories	- awning blind - roller shutter	
Internal accessories	- ARF blackout blind - ARP roller blind - ARS standard roller blind - AJP venetian blind - APS pleated blind - APF pleated blind - AMS insect screen	

VI. TECHNICAL PARAMETERS FOR WINDOWS IN PARTICULAR SIZES												
frame external size [cm]	55x98	66x98	66x118	78x98	78x118	78x140	78x160	94x118	94x140	114x118	114x140	134x98
window size symbol	02	03	04	05	06	07	13	08	09	10	11	12
window internal area [m <sup>2</sup> ]	0.41	0.51	0.62	0.62	0.75	0.91	1.04	0.93	1.12	1.15	1.38	1.11
effective glazing area [m <sup>2</sup> ]	0.29	0.37	0.47	0.47	0.58	0.72	0.83	0.74	0.91	0.94	1.15	0.91
window weight with U6 glazing unit [kg]	36	42	48	47	56	65	74	66	77	79	91	73
window weight with U8 glazing unit U8 [kg] without flashing ±1kg	38	42	48	47	56	65	74	66	77	79	91	73

VII. TECHNICAL PARAMETERS FOR WINDOWS WITH PARTICULAR GLAZING UNIT TYPES			
Technical parameters	Glazing unit type		
	U6	U8*	R3
Glazing structure	6H-18-4HT-18-33.2T	4H-12-4HT-12-4HT-12-4HT	8H-16-4HT-18-33.2SIT
glazing U-value as per EN 673	0.5 W/m <sup>2</sup> K	0.3 W/m <sup>2</sup> K	0.5 W/m <sup>2</sup> K
window U-value as per EN ISO 12567-2, EN ISO 10077-1	0.80 W/m <sup>2</sup> K	0.58 W/m <sup>2</sup> K	0.81 W/m <sup>2</sup> K
acoustic insulation Rw as per EN ISO 717-1	38(-1;-4)	36(-2;-5)	42(-2;-4)
light transmittance factor τ <sub>v</sub> as per EN 410	0.67	0.66	0.67
solar factor g as per EN 410	0.47	0.48	0.46
UV radiation as per EN 410	0.01	0.01	0.01
frame thermal insulation U <sub>f</sub> as per EN ISO 10077-1, EN ISO 10077-2	1.2 W/m <sup>2</sup> K	0.84 W/m <sup>2</sup> K	1.13 W/m <sup>2</sup> K**
thermal insulation of frame and glazing connection Ψ as per EN ISO 10077-1, EN ISO 10077-2	0.04 W/mK	0.039 W/mK	0.044 W/mK**

\* Glazing unit for the FTT U8 Thermo window. This window is supplied and installed along with EHV-AT Thermo flashing and XDK set (XDP and XDS insulation flashing kit)

\*\* FAKRO internal test results

\*\*\* for the window width > 114 cm and height > 140 cm: npd



# TECHNICAL SPECIFICATION

## FTP/B WOODEN ARC PIVOT ROOF WINDOWS



thermoPro

WINDOW TYPE	FTP/B
<b>I. APPLICATION</b>	
Installation	installation angle 15°-90° flashing supplied with window
<b>II. FEATURES</b>	
Material	pinewood, vacuum impregnated
Lacquer	acrylic, natural colour
Varnishing	twice
Air inlet type	-
System	top Safe
Seals	four
Micro-opening facility	+
Handle	Elegant
Warranty	10 years for windows, 20 years for glazing unit, 20 years for hardware elements
<b>III. TECHNICAL PARAMETERS</b>	
Air permeability class	4 as per EN 12207
Wind load resistance	class C4* as per EN 12210
Watertightness – unshielded (A)	E900 as per EN 12208
Impact resistance	class 3 (450mm) as per EN 13049
Applicability of glazing units	Z6

WINDOW TYPE	FTP/B
<b>IV. OPTIONS</b>	
Wooden profiles	- painted in colours of RAL spectrum - painted in one of five Lazure colours - in mahogany woodwork
Cladding	- painted in colours of RAL spectrum - cladding elements made of different types of sheet metal (CU,TC)
<b>V. ADDITIONAL PRODUCTS TO BE USED</b>	
Flashings	- special,
Control	- manual - electric
Mounting accessories	- insulation sets - insulating band

VII. TECHNICAL PARAMETERS FOR WINDOWS WITH PARTICULAR GLAZING UNIT TYPES	
Technical parameters	Glazing unit type
Glazing structure	4H-16-4HT
glazing U-value as per EN 673	1.1 W/m²K
window U-value as per EN ISO 12567-2,	1.4 W/m²K
acoustic insulation Rw as per EN ISO 717-1	33(-1;-3)
light transmittance factor $\tau_v$ as per EN 410	0.81
solar factor g as per EN 410	0.64
UV radiation as per EN 410	0.43
frame thermal insulation Uf as per EN ISO 10077-1, EN ISO 10077-2	npd
thermal insulation of frame and glazing connection $\Psi$ as per EN ISO 10077-1, EN ISO 10077-2	npd

\* for the window width > 114 cm and height > 158 cm: npd  
npd – no performance determined

VI. TECHNICAL PARAMETERS FOR WINDOWS IN PARTICULAR SIZES						
frame external size [cm]	55x87	66x108	78x130	94x133	114x158	134x119
window internal area [m²]	0.35	0.55	0.81	1.02	1.51	1.30
effective glazing area [m²]	0.24	0.42	0.65	0.84	1.29	1.10

