NEW SERIES

ALMİN
ARCHITECTURAL SYSTEMS



ROUTE LINE

ART64

YALITIMLI PENCERE KAPI SERİSİ

Insulated Door and Window Series

Almin® Alüminyum Profil Tescilli Markasıdır.

TEKNİK ÖZELLİKLER (Technical Specifications)

KASA DERİNLİĞİ (Frame Depth)	64 mm
KANAT DERİNLİĞİ (Sash Depth)	74 mm
PROFİL ET KALINLIĞI (Profile Wall Thickness)	1,5/1,6 / 1,8 / 2,0 mm
MAKS. CAM KALINLIĞI (Max. Glass Thickness)	46 mm
YALITIM BARİYERİ (Thermal Break)	24 mm

KULLANIM SEÇENEKLERİ (Application Options)

İÇ AÇILIM PENCERE (Inward Opening Window / Inswing Window)	+
İÇ AÇILIM KAPI (Inward Opening Door / Inswing Door)	+
DIŞ AÇILIM PENCERE (Outward Opening Window / Outswing Window)	+
DIŞ AÇILIM KAPI (Outward Opening Door / Outswing Door)	+
VASİSTAS PENCERE (Bottom-Hung Window / Transom Window)	+
ÇİFT EKSENEL AÇILIM (Tilt & Turn Opening)	+
PVC AKSESUAR (PVC Hardware Compatibility)	+
PARALEL SÜRME (Tilt & Slide / Parallel Sliding)	+
KATLANIR KAPI (Bi-fold Door / Folding Door)	+
PİVOT (Pivot Window)	+

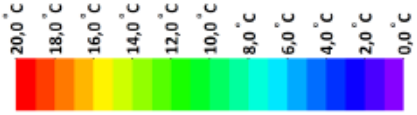
PERFORMANS DEĞERLERİ (Performance Values)

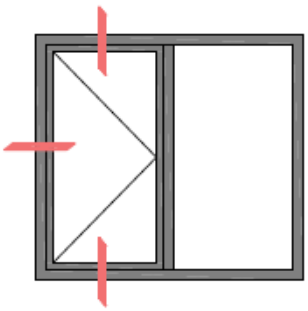
HAVA GEÇİRGENLİĞİ - EN 12207 (Air Permeability)	CLASS 4 (600 Pa)
SU SIZDIRMAZLIK - EN 12208 (Watertightness)	CLASS 9A (600 Pa)
RÜZGAR YÜKÜ DAYANIM - EN 12210 (Wind Load Resistance)	CLASS 4 (1600 Pa)
SEHİM - EN 12210 (Deflection)	CLASS C (L/300)
SİSTEM UF DEĞERİ - EN 10077-2 (System Uf Value (Thermal Transmittance))	1,86-2,57 W/m² K

Almin Alüminyum Profil TESCİLLİ MARKASIDIR.
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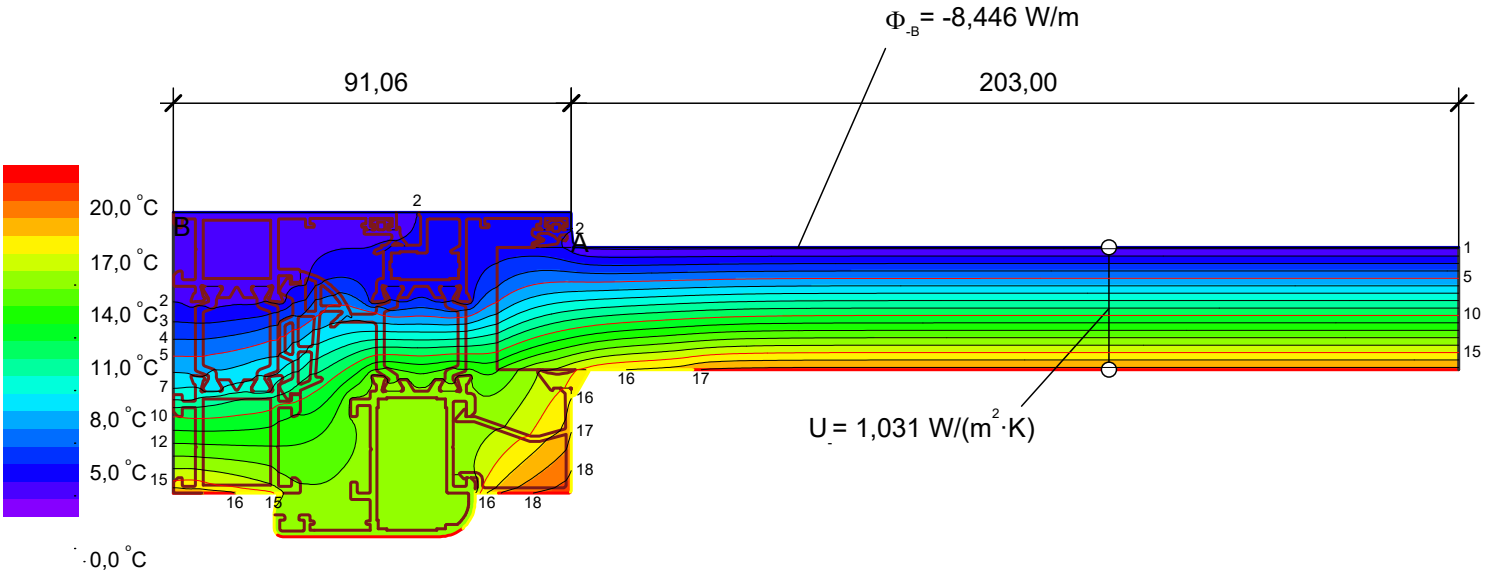
TERMAL PERFORMANS DEĞERLERİ
THERMAL PERFORMANCE VALUES

TERMAL HESAP KOŞULLARI
THERMAL CALCULATION CONDITIONS
DIŞ ORTAM SICAKLIĞI: 0°C
(OUTER TEMPERATURE)
İÇ ORTAM SICAKLIĞI : 20°
(ROOM TEMPERATURE)
BAĞIL NEM : %50
(RELA TIVE HUM/O/TV)





KESİT-1

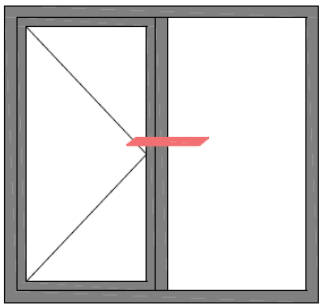


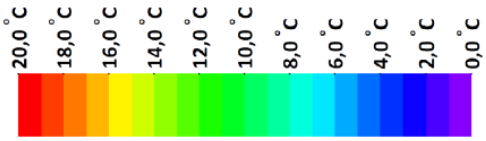
$$U_{f\,A,B} = \frac{\frac{\Phi}{\Delta T} - U_p \cdot b_p}{b_f} = \frac{\frac{8{,}446}{20{,}000} - 1{,}031 \cdot 0{,}203}{0{,}091} = 2{,}34\ W/(m^2 \cdot K)$$

Material	λ[W/(m·K)]	ε
Aluminium (Si Alloys)	160,000	0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900
Panel	0,035	0,900
Polyamid 6.6 with 25% glass fibre	0,300	0,900
Slightly ventilated air cavity	anisotropic	
Unventilated air cavity	anisotropic	

Boundary Condition	q[W/m²]	θ[°C]	R[(m²·K)/W]	ε
Epsilon 0.9				0,900
Exterior, frame		0,000	0,040	
Interior, frame, normal		20,000	0,130	
Interior, frame, reduced		20,000	0,200	
Symmetry/Model section	0,000			

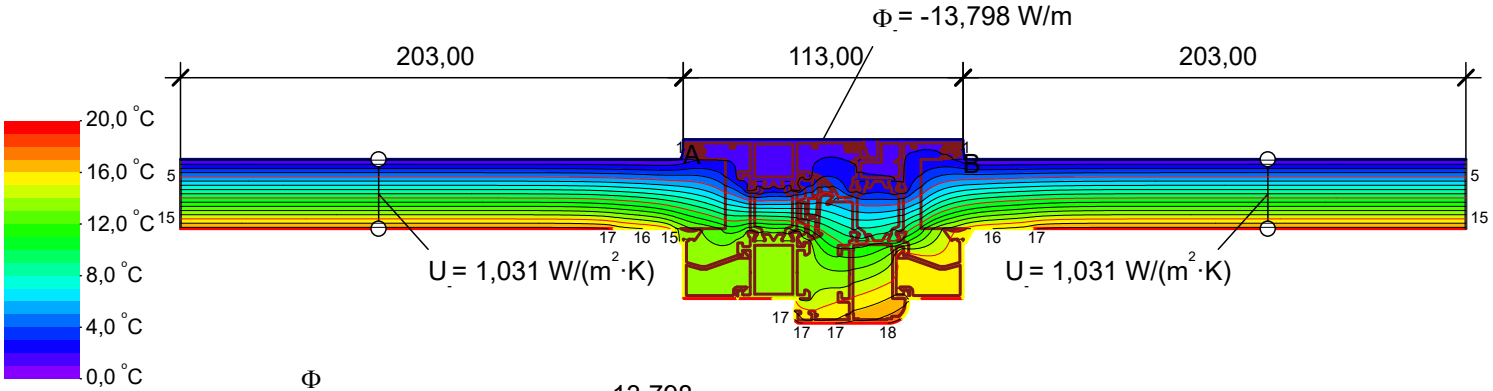
TERMAL PERFORMANS DEĞERLERİ
THERMAL PERFORMANCE VALUES





TERMAL HESAP KOŞULLARI
THERMAL CALCULATION CONDITIONS
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(ROOM TEMPERATURE)
BAĞIL NEM : %50
(RELATIVE HUMIDITY)

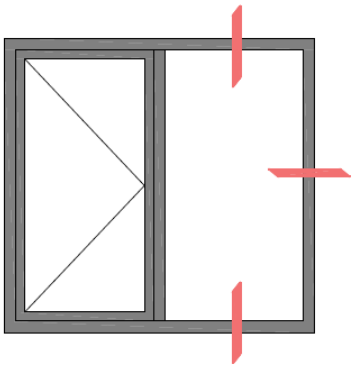
KESİT-2



$$U_{f\,A,B} = \frac{\frac{\Phi}{\Delta T} - U_{p1}\cdot b_{p1} - U_{p2}\cdot b_{p2}}{b_f} = \frac{\frac{13,798}{20,000} - 1,031\cdot 0,203 - 1,031\cdot 0,203}{0,113} = 2,40\ W/(m^2\cdot K)$$

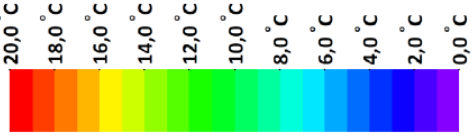
Material	λ[W/(m·K)]	ε
Aluminium (Si Alloys)	160,000	0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900
Panel	0,035	0,900
Polyamid 6.6 with 25% glass fibre	0,300	0,900
Slightly ventilated air cavity	anisotropic	
Unventilated air cavity	anisotropic	

Boundary Condition	q[W/m²]	θ[°C]	R[(m²·K)/W]	ε
Epsilon 0.9				0,900
Exterior, frame		0,000	0,040	
Interior, frame, normal		20,000	0,130	
Interior, frame, reduced		20,000	0,200	
Symmetry/Model section	0,000			

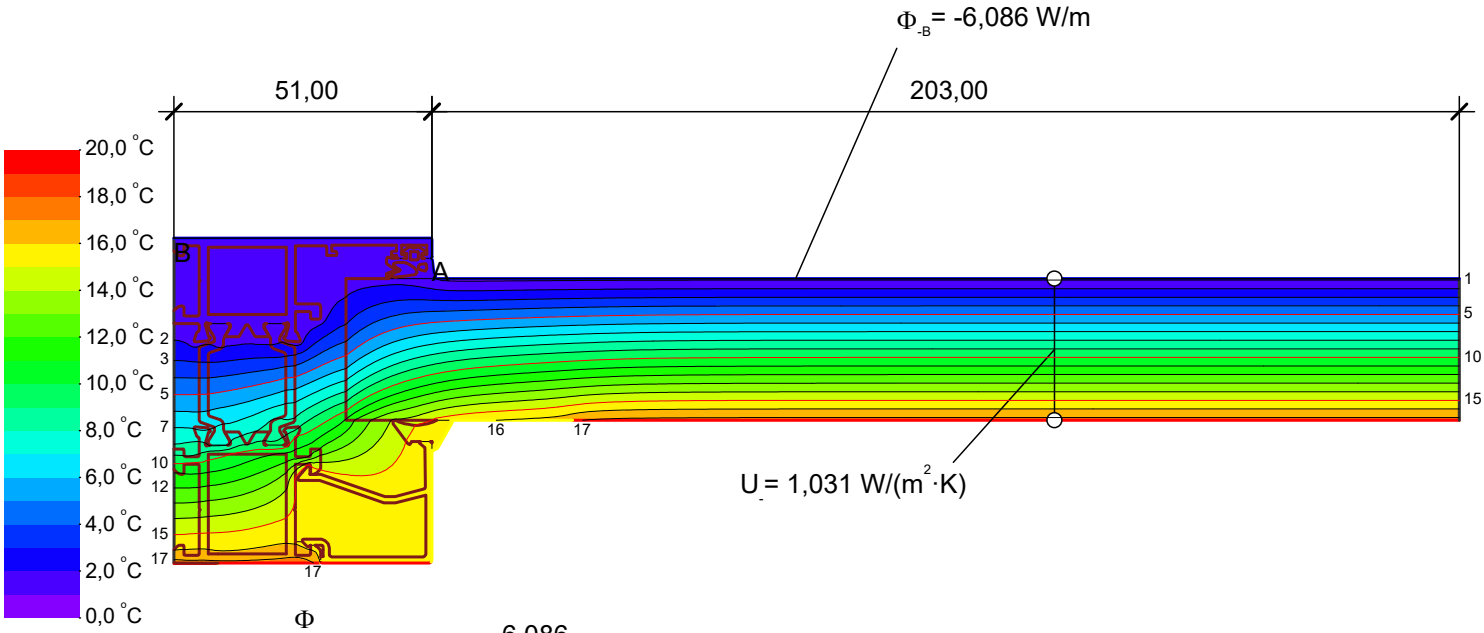


TERMAL PERFORMANS DEĞERLERİ
THERMAL PERFORMANCE VALUES

TERMAL HESAP KOŞULLARI
THERMAL CALCULATION CONDITIONS
DIŞ ORTAM SICAKLIĞI: 0°C
(OUTER TEMPERATURE)
İÇ ORTAM SICAKLIĞI : 20°
(ROOM TEMPERATURE)
BAĞIL NEM : %50
(RELA TIVE HUM/O/TV)



KESİT-3

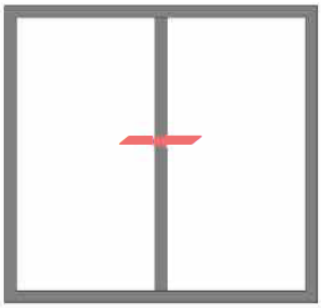


$$U_{f\,A,B} = \frac{\frac{\Phi}{\Delta T} - U_p \cdot b_p}{b_f} = \frac{\frac{6,086}{20,000} - 1,031 \cdot 0,203}{0,051} = 1,86\ W/(m^2 \cdot K)$$

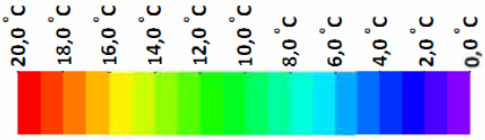
Material	λ[W/(m·K)]	ε
Aluminium (Si Alloys)	160,000	0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900
Panel	0,035	0,900
Polyamid 6.6 with 25% glass fibre	0,300	0,900
Unventilated air cavity	anisotropic	

Boundary Condition	q[W/m²]	θ[°C]	R[(m²·K)/W]	ε
Epsilon 0.9				0,900
Exterior, frame		0,000	0,040	
Interior, frame, normal		20,000	0,130	
Interior, frame, reduced		20,000	0,200	
Symmetry/Model section	0,000			

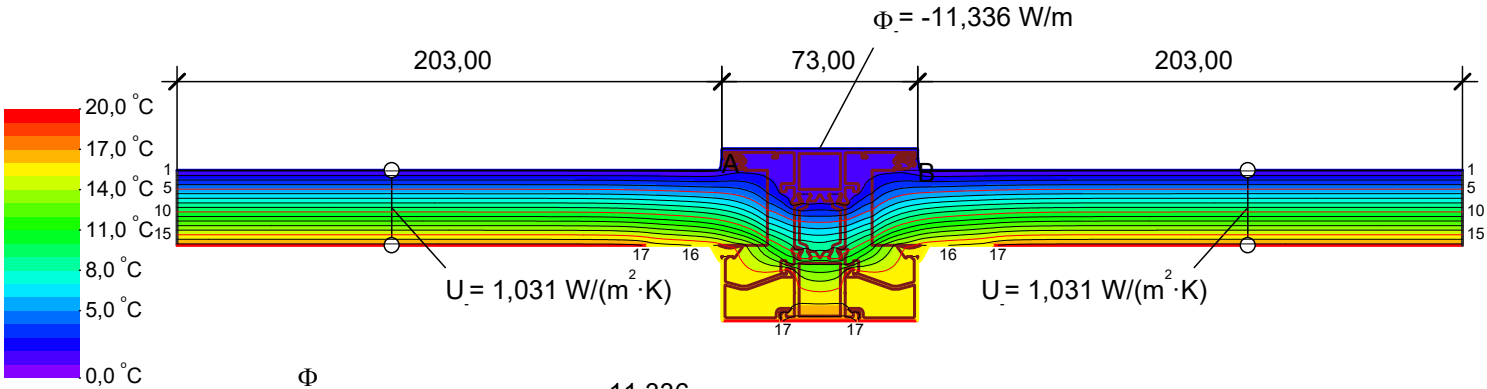
TERMAL PERFORMANS DEĞERLERİ
THERMAL PERFORMANCE VALUES



TERMAL HESAP KOŞULLAR!
THERMAL CALCULATION CONDITIONS
DIŞ ORTAM SICAKLIĞI: 0°C
{OUTER TEMPERATURE)
İÇ ORTAM SICAKLIĞI : 20°
(ROOM TEMPERATURE)
BAĞIL NEM : %50
(RELATIVE HUMIDITY)



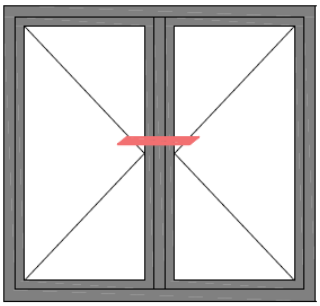
KESİT-4



$$U_{f\,A,B} = \frac{\frac{\Phi}{\Delta T} - U_{p1}\cdot b_{p1} - U_{p2}\cdot b_{p2}}{b_f} = \frac{\frac{11,336}{20,000} - 1,031\cdot 0,203 - 1,031\cdot 0,203}{0,073} = 2,03\ W/(m^2\cdot K)$$

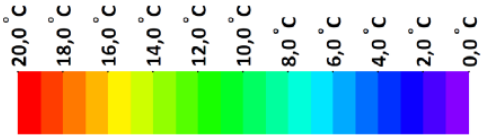
Material	λ[W/(m·K)]	ε
Aluminium (Si Alloys)	160,000	0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900
Panel	0,035	0,900
Polyamid 6.6 with 25% glass fibre	0,300	0,900
Unventilated air cavity	anisotropic	

Boundary Condition	q[W/m²]	θ[°C]	R[(m²·K)/W]	ε
Epsilon 0.9				0,900
Exterior, frame		0,000	0,040	
Interior, frame, normal		20,000	0,130	
Interior, frame, reduced		20,000	0,200	
Symmetry/Model section	0,000			

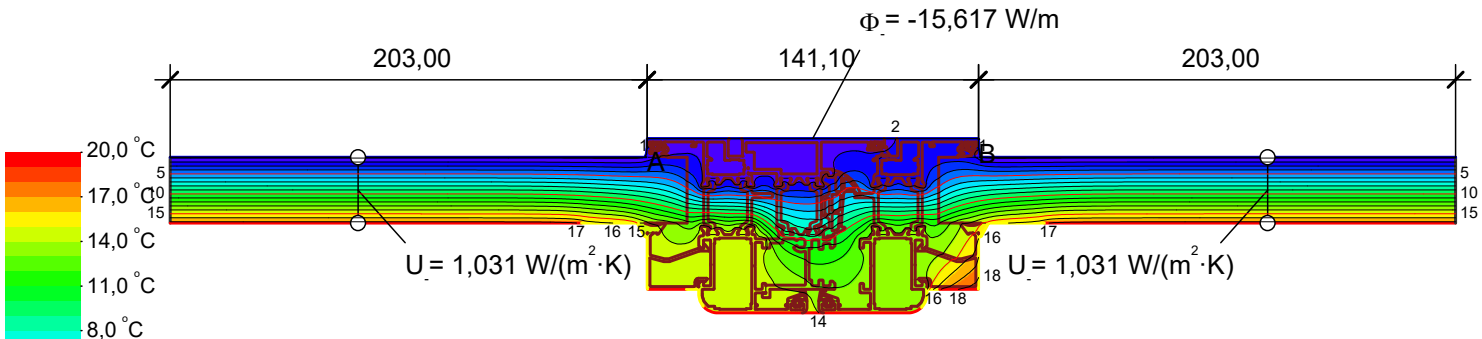


TERMAL PERFORMANS DEĞERLERİ
THERMAL PERFORMANCE VALUES

TERMAL HESAP KOŞULLARI
THERMAL CALCULATION CONDITIONS
DIŞ ORTAM SICAKLIĞI: 0°C
(OUTER TEMPERATURE)
İÇ ORTAM SICAKLIĞI : 20°
(ROOM TEMPERATURE)
BAĞIL NEM : %50
(RELA TIVE HUM/O/TV)



KESİT-5



$$U_{f\,A,B} = \frac{\frac{\Phi}{\Delta T} - U_{p1}\cdot b_{p1} - U_{p2}\cdot b_{p2}}{b_f} = \frac{\frac{15{,}617}{20{,}000} - 1{,}031\cdot 0{,}203 - 1{,}031\cdot 0{,}203}{0{,}141} = 2{,}57\ W/(m^2\cdot K)$$

Material	λ[W/(m·K)]	ε
Aluminium (Si Alloys)	160,000	0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900
Panel	0,035	0,900
Polyamid 6.6 with 25% glass fibre	0,300	0,900
Slightly ventilated air cavity	anisotropic	
Unventilated air cavity	anisotropic	

Boundary Condition	q[W/m²]	θ[°C]	R[(m²·K)/W]	ε
Epsilon 0.9				0,900
Exterior, frame		0,000	0,040	
Interior, frame, normal		20,000	0,130	
Interior, frame, reduced		20,000	0,200	
Symmetry/Model section	0,000			

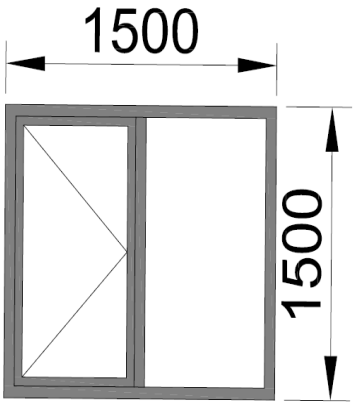
9.08.2025
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Ucw Hesaplama

PROFİL KOMBİNASYONLARI

Pos.	Adet	Açıklama	Genişlik [m]	Yükseklik [m]	Uf-Değeri [W/m²K]	Alan Af [m²]	%A
01	1	A-1 KESİT	0,091	2,995	2,34	0,27	46,4%
02	1	A-2 KESİT	0,113	1,433	2,39	0,16	27,6%
03	1	A-3 KESİT	0,051	2,995	1,86	0,15	26,0%
04						0,00	0,0%
05						0,00	0,0%
06						0,00	0,0%
07						0,00	0,0%
08						0,00	0,0%
09						0,00	0,0%
10						0,00	0,0%
11						0,00	0,0%
12						0,00	0,0%
13						0,00	0,0%
14						0,00	0,0%
15						0,00	0,0%



Uf Ortalama	Af Toplam	
2,23	0,587219	100,0%

DOLGULAR

Pos.	Adet	Açıklama	Genişlik [m]	Yükseklik [m]	Cam/Panel Ug/p-Değeri [W/m²K]	Alan Ag/p [m²]	%A	Spacer Ψg/p [W/mK]	Uzunluk lg/p [m]	%l
01	1	SABİT CAM	0,607	1,432	1,3	0,87	51,0%	0,11	4,078	50,9%
02	1	AÇILIR CAM	0,617	1,352	1,3	0,83	49,0%	0,11	3,938	49,1%
03						0,00	0,0%		0	0,0%
04						0,00	0,0%		0	0,0%
05						0,00	0,0%		0	0,0%
06						0,00	0,0%		0	0,0%
07						0,00	0,0%		0	0,0%
08						0,00	0,0%		0	0,0%
09						0,00	0,0%		0	0,0%
10						0,00	0,0%		0	0,0%
11						0,00	0,0%		0	0,0%
12						0,00	0,0%		0	0,0%
13						0,00	0,0%		0	0,0%
14						0,00	0,0%		0	0,0%
15						0,00	0,0%		0	0,0%

Ug/p Ortalama	Ag/p Toplam		Ψg/p Ortalama	lg/p Toplam	
1,30	1,70	100,0%	0,11	8,016	100,0%

SONUÇ

Ucw = 1,92 W/m²K

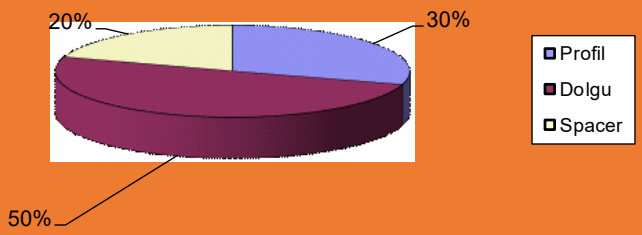
A_{Toplam} = 2,29 m²

H_{Toplam} = 4,41 W/K

CAD-PLAN

Yüzdeler

Profil	0,57
Dolgu	0,97
Spacer	0,38



$$U_{cw} = \frac{\sum_i A_{g_i} \cdot U_{g_i} + \sum_j A_{f_j} \cdot U_{f_j} + \sum_k l_{f_k} \cdot \psi_{f_k}}{\sum_i A_{g_i} + \sum_j A_{f_j}}$$