

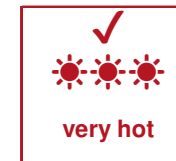
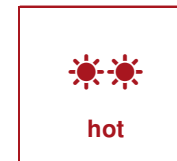
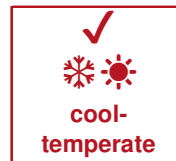
On behalf of: **Moralt AG, Hausham, GERMANY**
 Project/Product: **FERRO PASSIV Akustik SSK3**

Description	Door leaf / Glazing		Uf value [W/(m²K)]				Frame Width [m]				Glazing Edge Ψ-value [W/(m²K)]				Temperature factor (min) $f_{Rsi=0,25}$ [-]	Overall U-value [W/(m²K)]
	U _{dl} -value [W/(m²K)]	U _g -value [W/(m²K)]	Lock s.	Hinge s.	Sill	Head	Lock s.	Hinge s.	Sill	Head	Lock s.	Hinge s.	Sill	Head		
FERRO PASSIV Akustik SSK3	0,49		1,16	1,38	1,96	1,38	0,199	0,114	0,080	0,114	0,002	0,004	0,005	0,004	0,47	0,79

Drawings and material data were provided by the manufacturer. The sole responsibility for the provided information lies with the manufacturer.
 The temperature factor for the cool-temperate climate zone is not achieved.

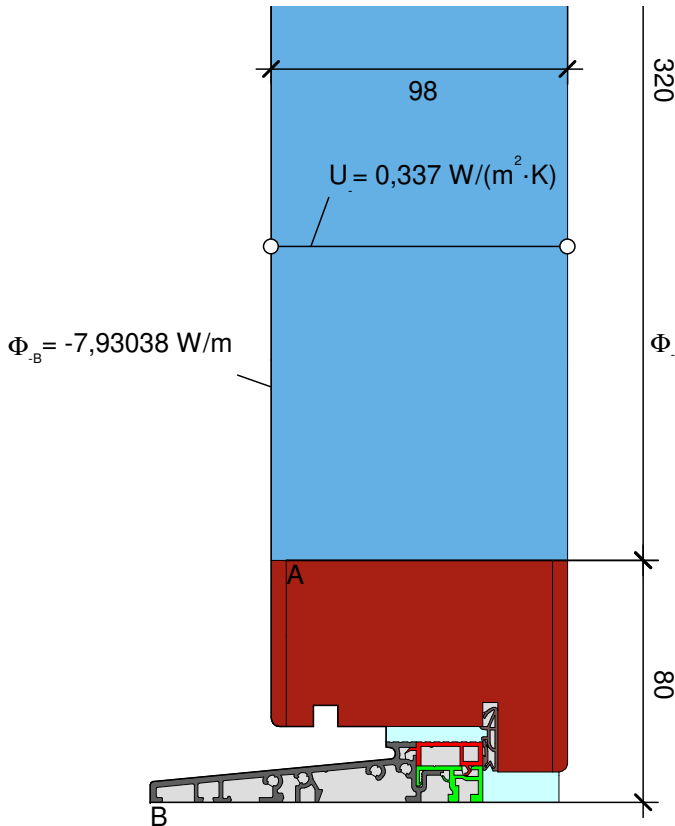
comfort criterion for cool-temperate climate zone achieved

Suitable for climate zone

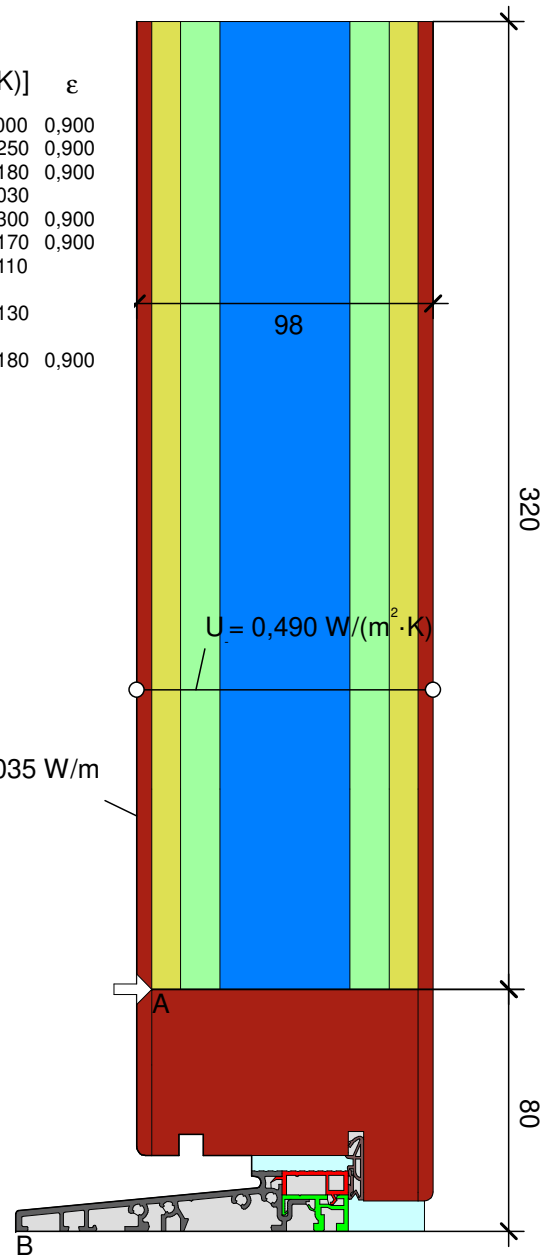


Material	λ [W/(m·K)]	ϵ
Aluminum Aluminium 10456	160,000	0,900
EPDM	0,250	0,900
Hardwood Hartholz 0.18 700 kg/m3 10456	0,180	0,900
PU foam PU-Schaum 030	0,030	
Polyamide 25% Glassfiber	0,300	0,900
Polyvinylchloride (PVC)	0,170	0,900
Sound insulation layer Schalldämmeinlage	0,110	
Unvent. cavity unbel. Hohlr. **		
Wooden-based material Holzwerkstoff 0.13	0,130	
slightly vent. cav. leicht bel. Hohlr. **		
wooden-based material Holzwerkstoff 0.18	0,180	0,900

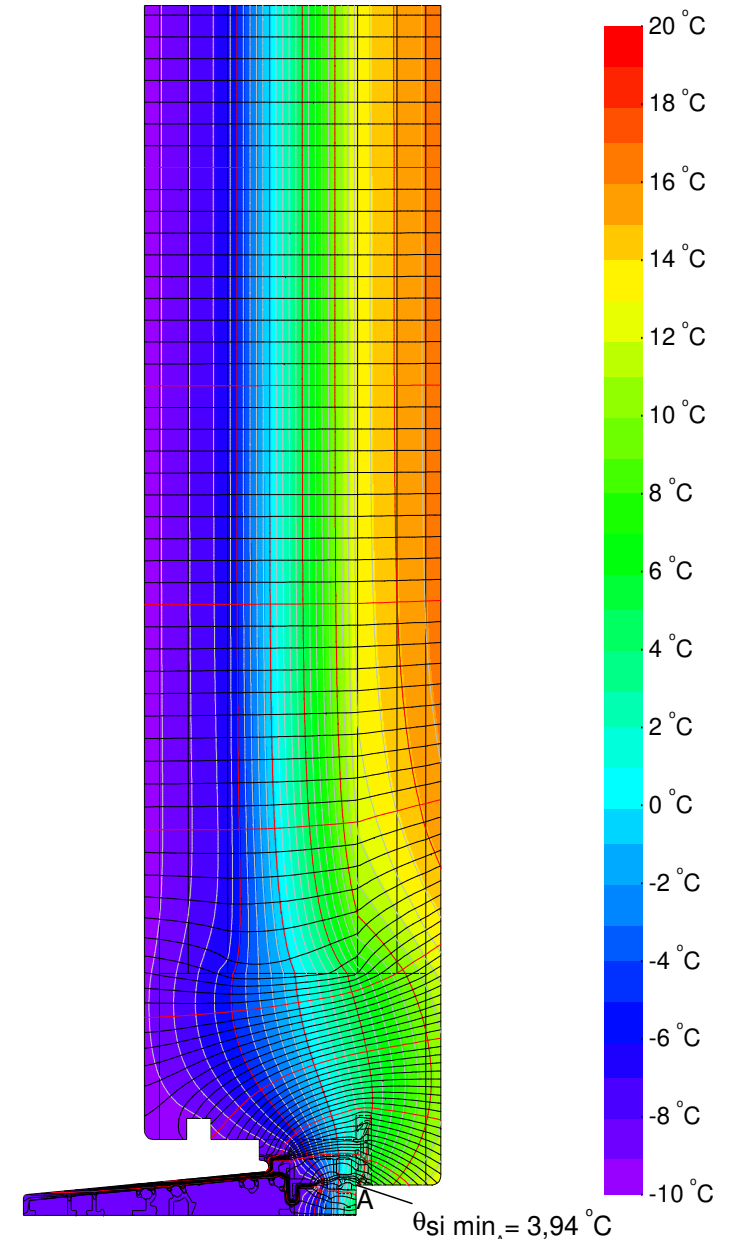
** EN ISO 10077-2:2017, 6.4.3



$$U_{fA,B} = \frac{\frac{\Phi}{\Delta T} - U_p \cdot b_p}{b_f} = \frac{\frac{7,930}{30,000} - 0,337 \cdot 0,320}{0,080} = 1,958 \text{ W/(m}^2 \cdot \text{K)}$$

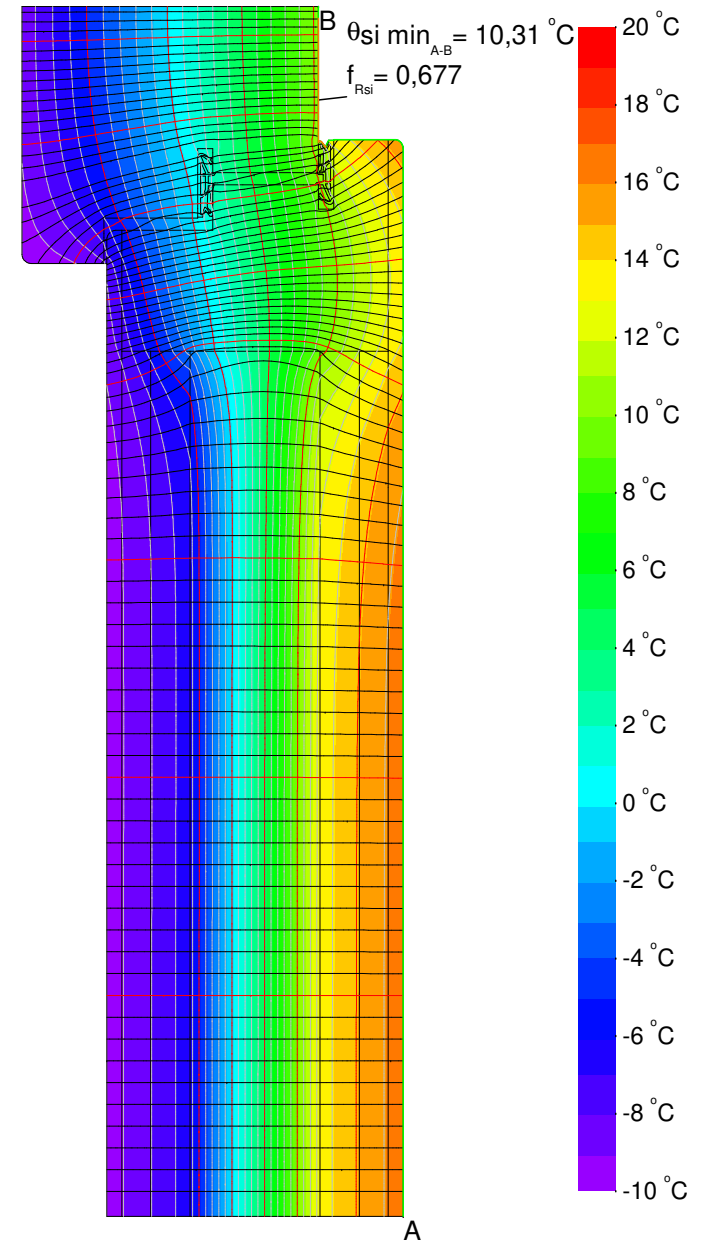
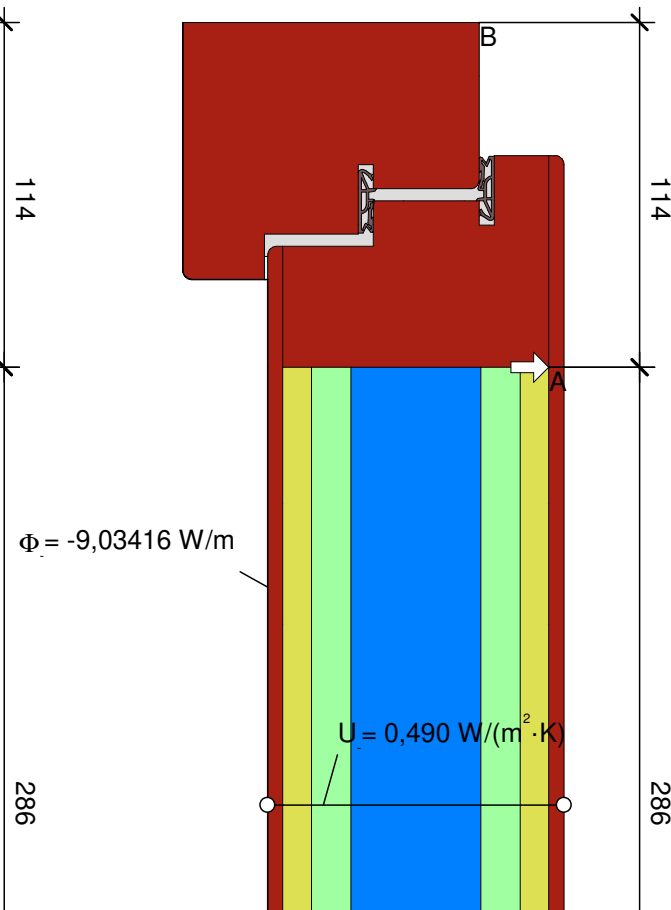
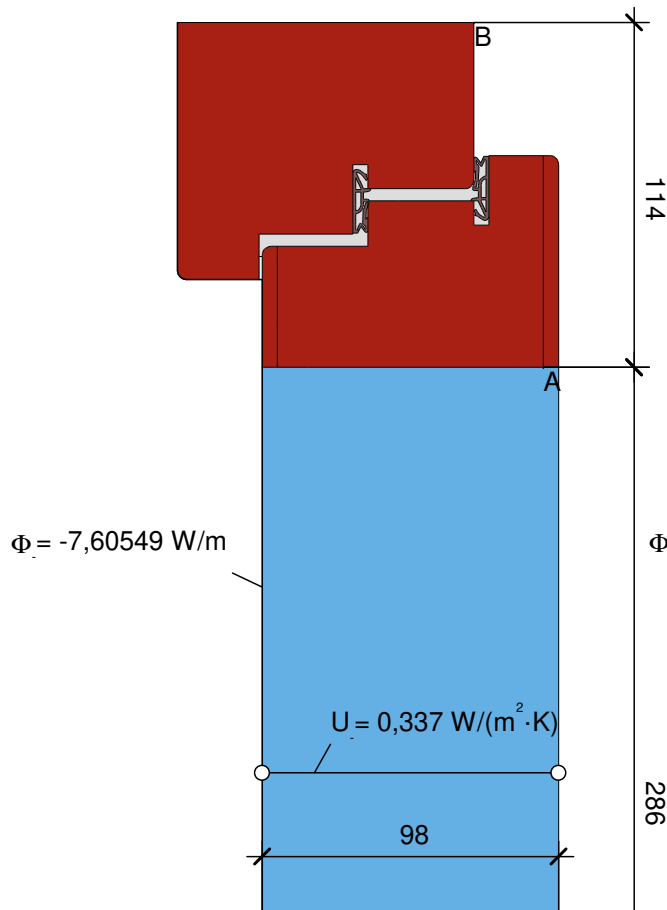


$$\psi_A = \frac{\Phi}{\Delta T} - U_g \cdot b_g - U_i \cdot b_i = \frac{9,540}{30,000} - 0,490 \cdot 0,320 - 1,958 \cdot 0,080 = 0,005 \text{ W/(m} \cdot \text{K)}$$



$\theta_{si \min_A} = 3,94 \text{ } ^\circ\text{C}$
 $f_{Rsi} = 0,465$

th - THRESHOLD | SCHWELLE



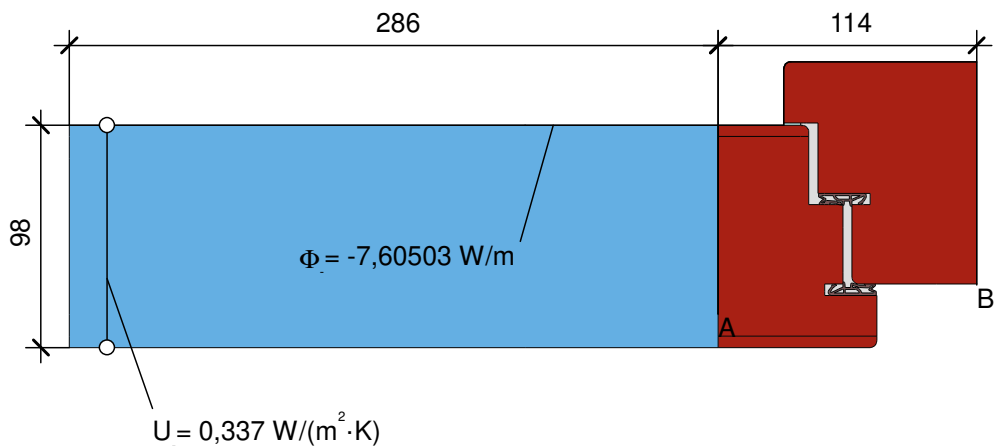
Material	λ [W/(m·K)]	ϵ
EPDM	0,250	0,900
Hardwood Hartholz 0.18 700 kg/m3 10456	0,180	0,900
PU foam PU-Schaum 030	0,030	
Softwood, OSB Weichholz, OSB 10456	0,130	0,900
Sound insulation layer Schalldämmeinlage	0,110	
Unvent. cavity unbel. Hohlr. **		
Wooden-based material Holzwerkstoff 0.13	0,130	
slightly vent. cav. leicht bel. Hohlr. **		
wooden-based material Holzwerkstoff 0.18	0,180	0,900

** EN ISO 10077-2:2017, 6.4.3

$$U_{fA,B} = \frac{\Phi}{\Delta T} - U_p \cdot b_p = \frac{7,605}{30,000} - 0,337 \cdot 0,286 = 1,379 \text{ W/(m}^2 \cdot \text{K)}$$

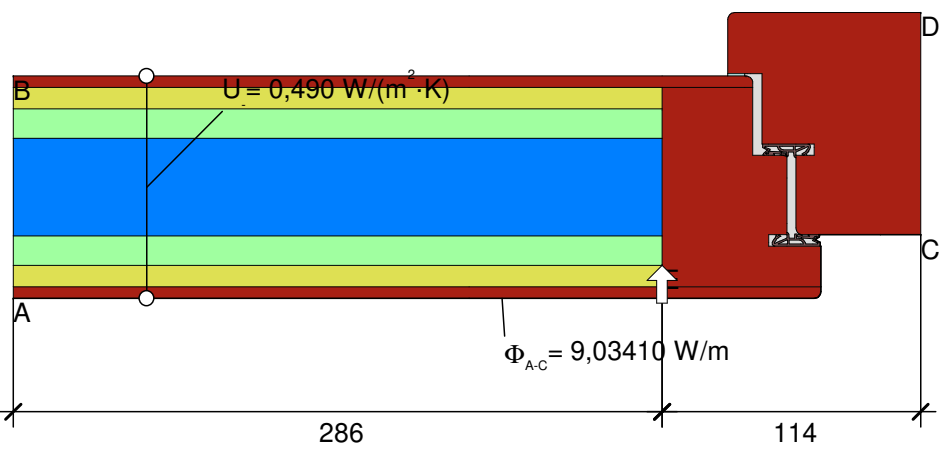
$$\psi_A = \frac{\Phi}{\Delta T} - U_g \cdot b_g - U_f \cdot b_f = \frac{9,034}{30,000} - 0,490 \cdot 0,286 - 1,379 \cdot 0,114 = 0,004 \text{ W/(m} \cdot \text{K)}$$

to - TOP | OBEN



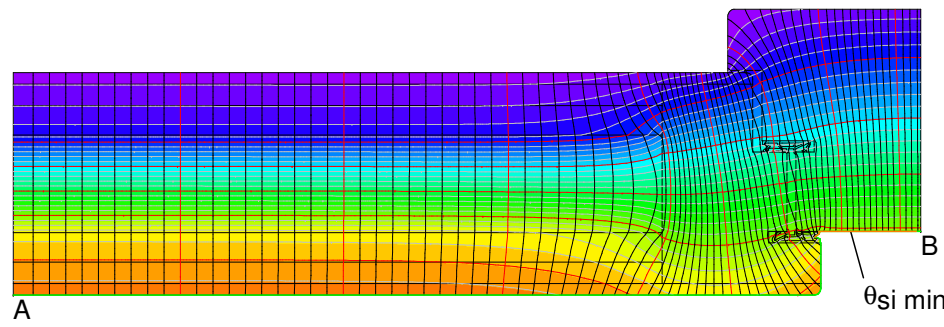
Material	λ [W/(m·K)]	ϵ
EPDM	0,250	0,900
Hardwood Hartholz 0.18 700 kg/m3 10456	0,180	0,900
PU foam PU-Schaum 030	0,030	
Softwood, OSB Weichholz, OSB 10456	0,130	0,900
Sound insulation layer Schalldämmeinlage	0,110	
Unvent. cavity unbel. Hohlr. **		
Wooden-based material Holzwerkstoff 0.13	0,130	
slightly vent. cav. leicht bel. Hohlr. **		
wooden-based material Holzwerkstoff 0.18	0,180	0,900
** EN ISO 10077-2:2017, 6.4.3		

$$U_{fA,B} = \frac{\frac{\Phi}{\Delta T} - U_p \cdot b_p}{b_f} = \frac{\frac{7,605}{30,000} - 0,337 \cdot 0,286}{0,114} = 1,379 \text{ W/(m}^2 \cdot \text{K)}$$



Randbedingung	q [W/m²]	θ [°C]	R [(m²·K)/W]	ϵ
Adiabatic Adiat	0,000			
Exterior Außen		-10,000	0,040	
Interior, frame, normal		20,000	0,130	
Interior, frame, reduced		20,000	0,200	
e 0,9 Cavity Hohlraum				0,900

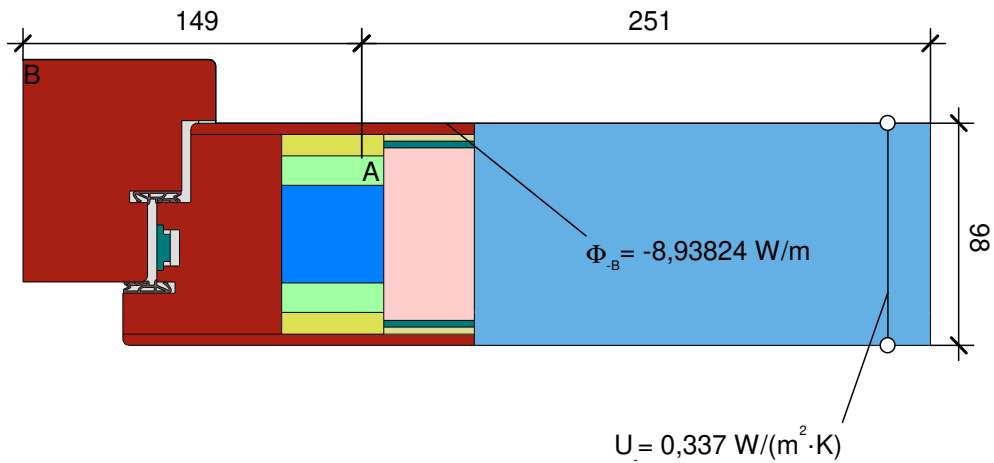
$$\psi_{A-E,C} = \frac{\Phi}{\Delta T} - U_1 \cdot b_1 - U_2 \cdot b_2 = \frac{9,034}{30,000} - 0,490 \cdot 0,286 - 1,379 \cdot 0,114 = 0,004 \text{ W/(m}^2 \cdot \text{K)}$$



Randbedingung	q [W/m²]	θ [°C]	R [(m²·K)/W]	ϵ
Adiabatic Adiat	0,000			
Exterior Außen		-10,000	0,040	
e 0,9 Cavity Hohlraum				0,900
fRsi: Interior Innen		20,000	0,250	

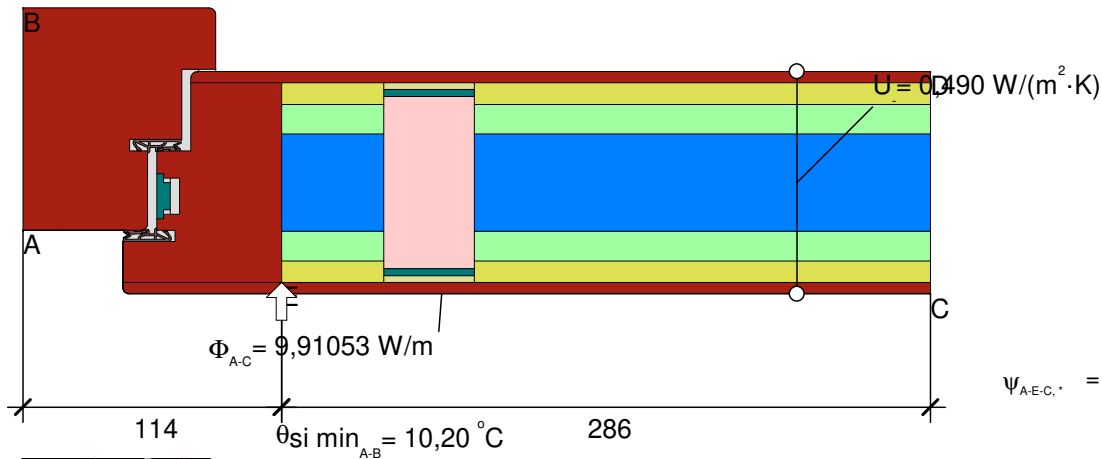
$\theta_{si \min_{A-B}} = 10,31 \text{ }^\circ\text{C}$
 $f_{Rsi} = 0,677$

si HINGE SIDE | BANDSEITE



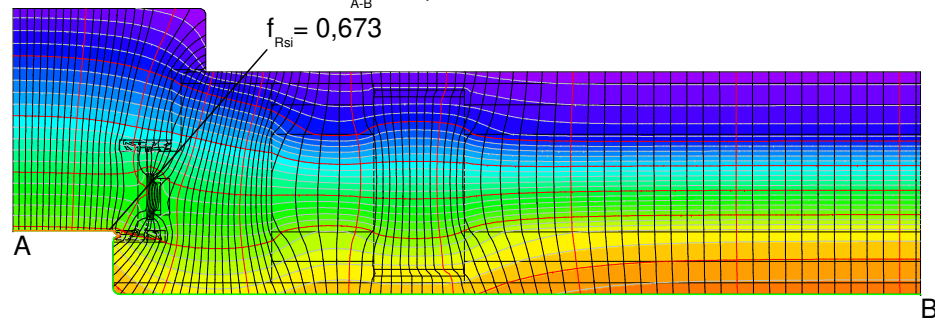
Material	λ [W/(m·K)]	ϵ
Balsa qsenkrecht 0,11 W/(mK)	0,110	
EPDM	0,250	0,900
Hardwood Hartholz 0.18 700 kg/m3 10456	0,180	0,900
PU foam PU-Schaum 030	0,030	
Softwood, OSB Weichholz, OSB 10456	0,130	0,900
Sound insulation layer Schalldämmeinlage	0,110	
Steel Stahl	50,000	0,900
Unvent. cavity unbel. Hohlr. **		
Wooden-based material Holzwerkstoff 0.13	0,130	
slightly vent. cav. leicht bel. Hohlr. **		
wooden-based material Holzwerkstoff 0.18	0,180	0,900
** EN ISO 10077-2:2017, 6.4.3		

$$U_{1A,B} = \frac{\Phi}{\Delta T} - \frac{U_p \cdot b_p}{b_1} = \frac{8,938}{30,000} - \frac{0,337 \cdot 0,251}{0,149} = 1,430 \text{ W}/(\text{m}^2 \cdot \text{K})$$



Randbedingung	q [W/m ²]	θ [°C]	R [(m ² ·K)/W]	ϵ
Adiabatic Adiabat	0,000			
Exterior Außen		-10,000	0,040	
Interior, frame, normal		20,000	0,130	
Interior, frame, reduced		20,000	0,200	
e 0,9 Cavity Hohlraum				0,900

$$\psi_{A-E-C} = \frac{\Phi}{\Delta T} - U_1 \cdot b_1 - U_2 \cdot b_2 = \frac{9,911}{30,000} - 1,157 \cdot 0,114 - 0,490 \cdot 0,286 = 0,058 \text{ W}/(\text{m} \cdot \text{K})$$



Randbedingung	q [W/m ²]	θ [°C]	R [(m ² ·K)/W]	ϵ
Adiabatic Adiabat	0,000			
Exterior Außen		-10,000	0,040	
e 0,9 Cavity Hohlraum				0,900
fRsi: Interior Innen		20,000	0,250	

sh - LOCK SIDE | SCHLOSS SEITE

PHPP Input Data-Sheet

Manufacturer: Moralt AG Product: FERRO PASSIV Akustik SSK3 Spacer: Thermix TX.N Secondary seal: Polysulfid

PHPP