



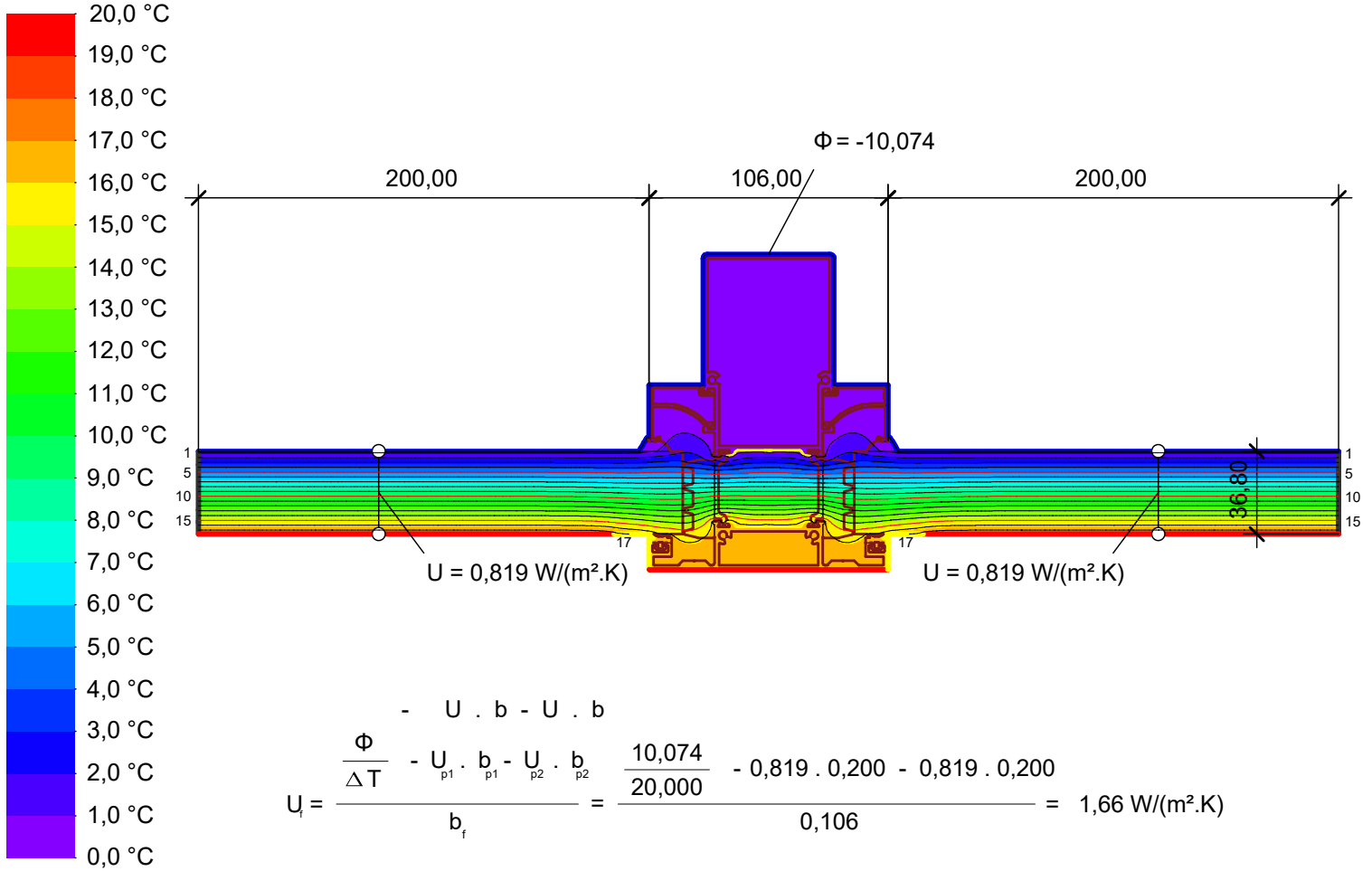
TERMAL ANALİZ

THERMAL ANALYSIS



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THERMAL ANALYSIS

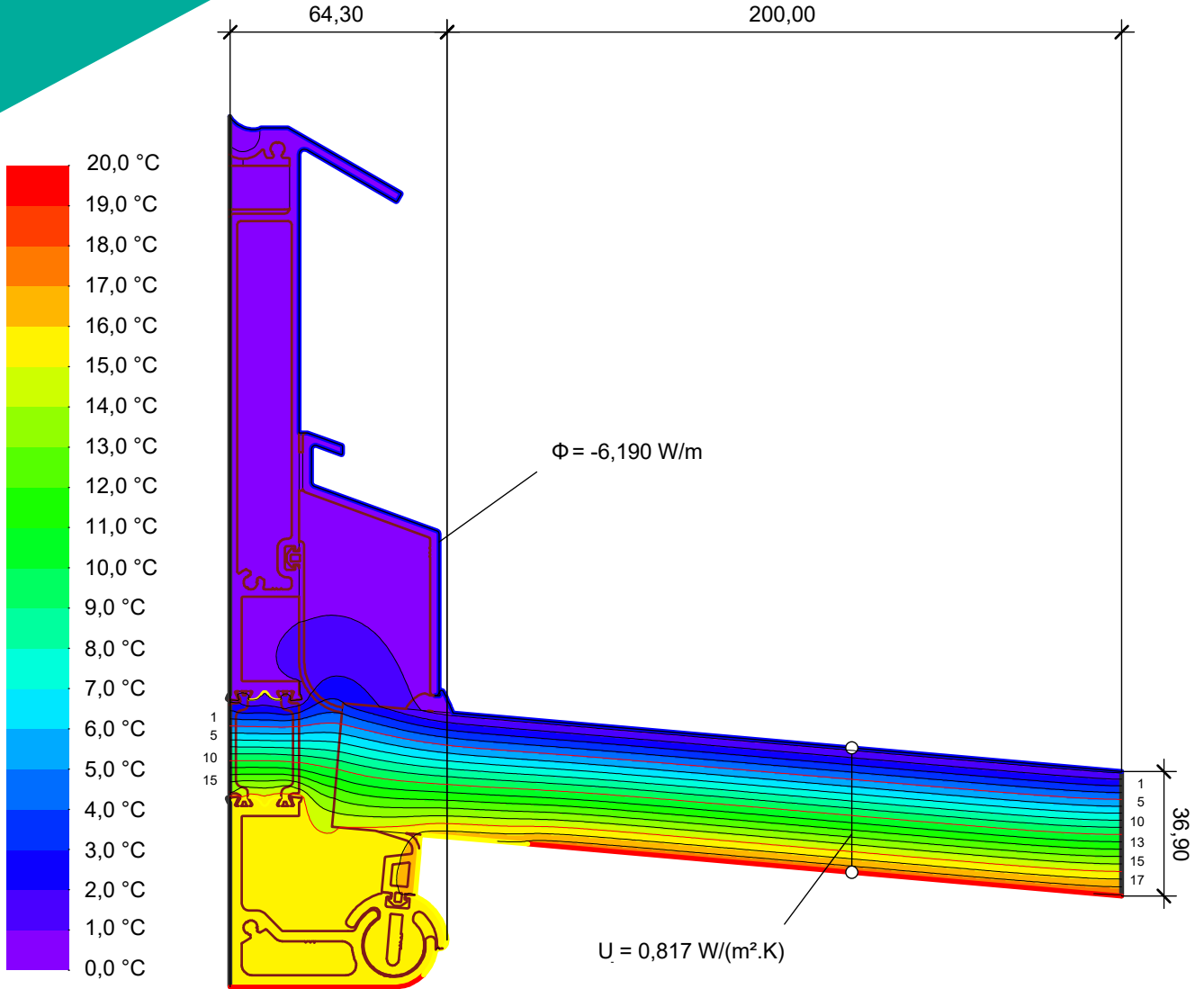


Material	λ [W/(m.K)]	ϵ	Boundary Condition	q [W/m ²]	θ [°C]	R (m ² .K)/W]	ϵ
Aluminium (Si Alloys)	160,000	0,300	Epsilon 0.3				0,300
Aluminium (Si Alloys)	160,000	0,900	Epsilon 0.9				0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900	Exterior, frame		0,000	0,040	
Norton	0,041	0,900	Interior, frame, normal		20,000	0,130	
Panel	0,035	0,900	Interior, frame, reduced		20,000	0,200	
Polyamid 6.6 with 25% glassfibre	0,300	0,900	Symmetry/Model section	0,000			
Unventilated air cavity **							
epdm sünger							
** EN ISO 10077-2:2017, 6.4.3/anisotrop	0,037	0,900					



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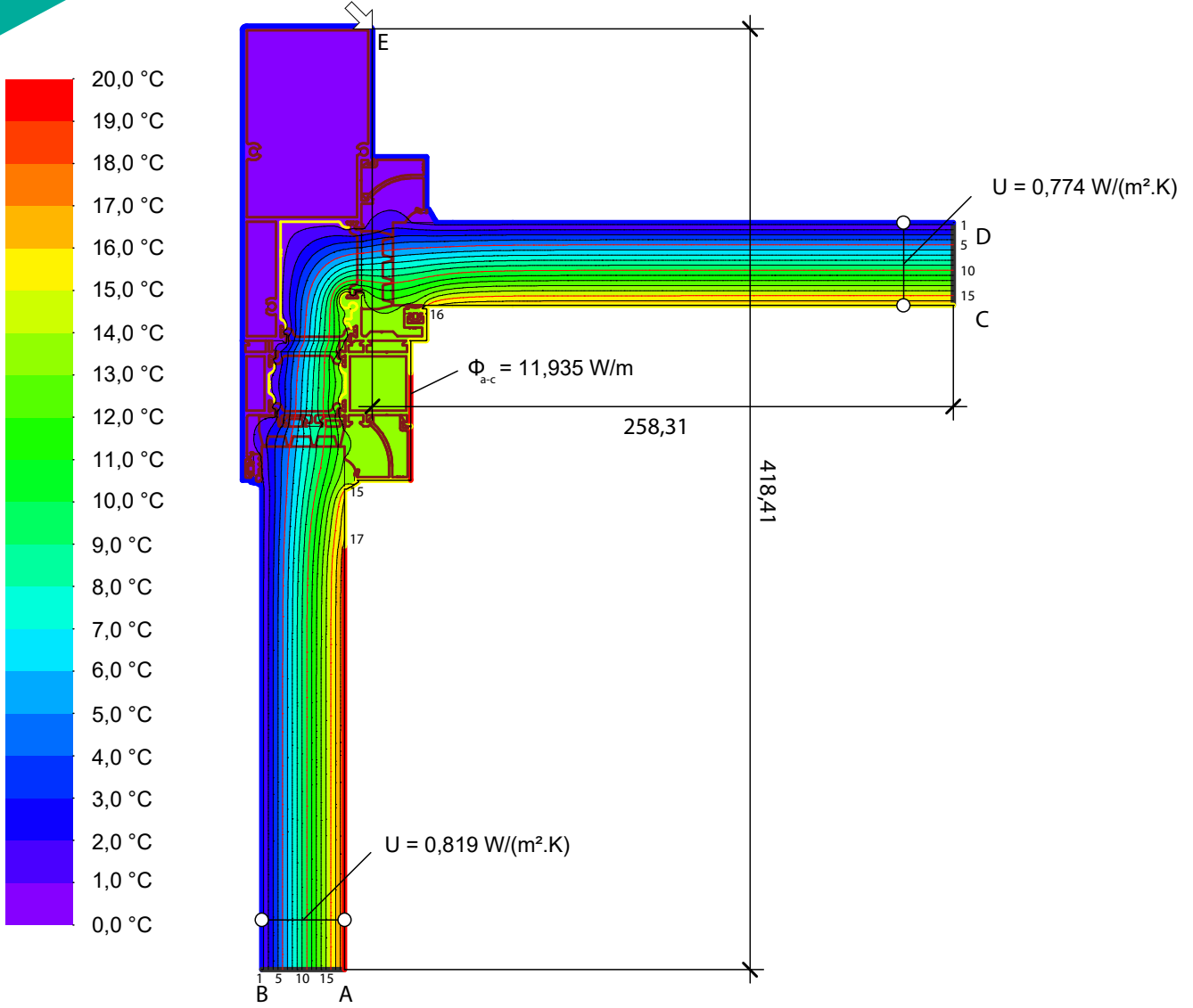
$$U_i = \frac{\frac{\Phi}{\Delta T} - U_p \cdot b_p}{b_i} = \frac{\frac{6,190}{20,000} - 0,817 \cdot 0,200}{0,064} = 2,77 \text{ W/(m}^2\text{.K)}$$

Material	λ [W/(m.K)]	ϵ	Boundary Condition	q [W/m ²]	θ [°C]	R (m ² .K)/W]	ϵ
Aluminium (Si Alloys)	160,000	0,300	Epsilon 0.3				0,300
Aluminium (Si Alloys)	160,000	0,900	Epsilon 0.9				0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900	Exterior, frame		0,000	0,040	
Norton	0,041	0,900	Interior, frame, normal		20,000	0,130	
Panel	0,035	0,900	Interior, frame, reduced		20,000	0,200	
Polyamid 6.6 with 25% glassfibre	0,300	0,900	Symmetry/Model section	0,000			
Silicone, pure (1)	0,350	0,900					
Slightly ventilated air cavity **							
Unventilated air cavity **							
styrofoam	0,040	0,900					

** EN ISO 10077-2:2017, 6.4.3/anisotrop

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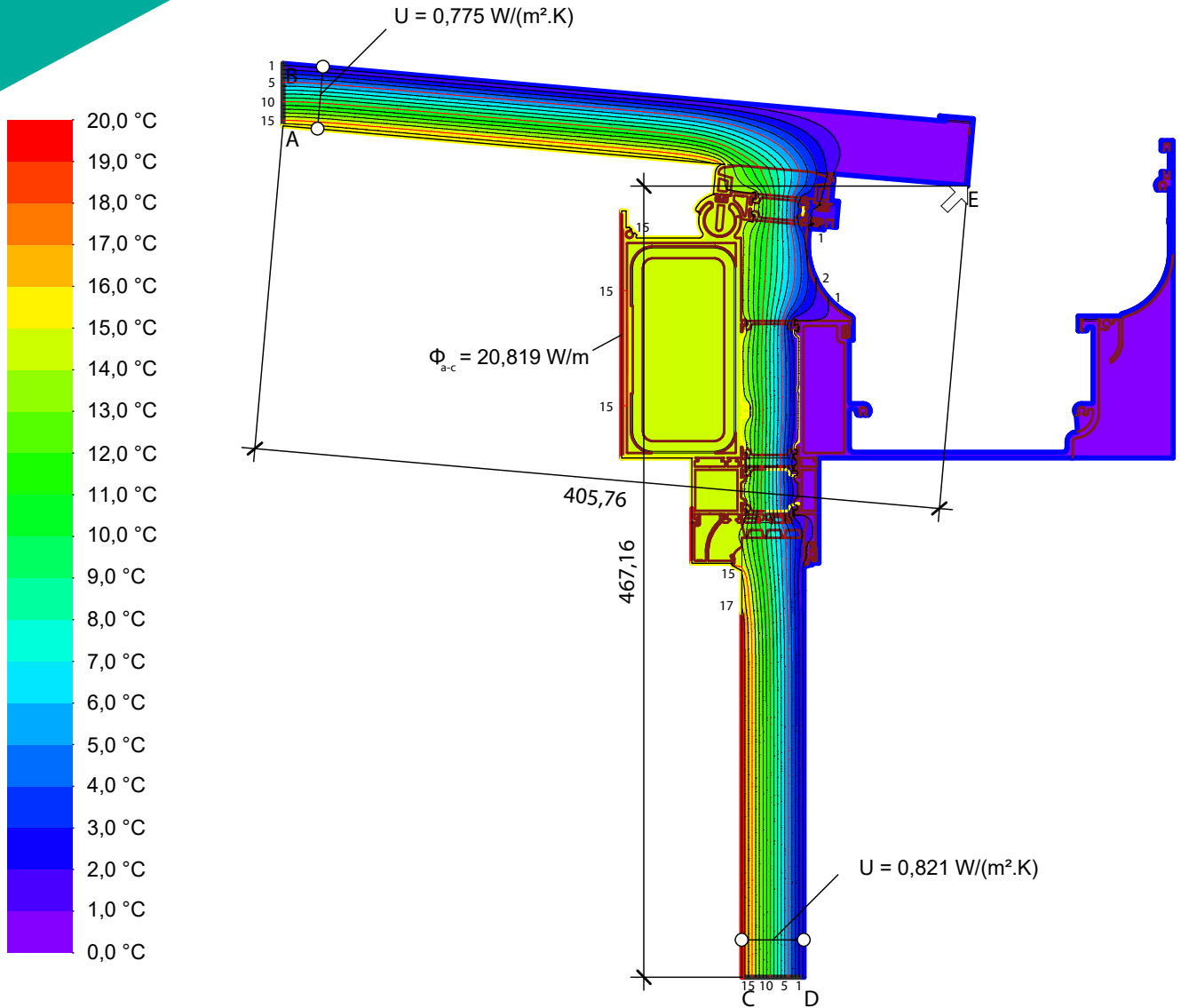


$$\Psi_{A-E-C} = \frac{\Phi}{\Delta T} - U_1 \cdot b_1 - U_2 \cdot b_2 = \frac{11,935}{20,000} - 0,819 \cdot 0,418 - 0,774 \cdot 0,258 = 0,054 \text{ W/(m}^2\text{.K)}$$

Material	λ [W/(m.K)]	ϵ	Boundary Condition	q [W/m ²]	θ [°C]	R (m ² .K)/W]	ϵ
Aluminium (Si Alloys)	160,000	0,300	Epsilon 0.3				0,300
Aluminium (Si Alloys)	160,000	0,900	Epsilon 0.9				0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900	Exterior, frame		0,000	0,040	
Norton	0,041	0,900	Interior, frame, normal		20,000	0,130	
Panel	0,035	0,900	Interior, frame, reduced		20,000	0,200	
Polyamid 6.6 with 25% glassfibre	0,300	0,900	Symmetry/Model section	0,000			
Unventilated air cavity **							
epdm sünger							
** EN ISO 10077-2:2017, 6.4.3/anisotrop	0,037	0,900					

TERMAL ANALİZ

THERMAL ANALYSIS

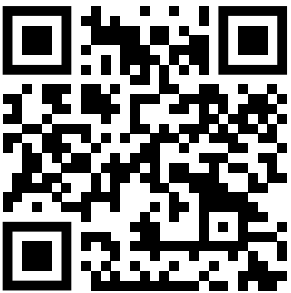


$$\Psi_{A-E-C} = \frac{\Phi}{\Delta T} - U_1 \cdot b_1 - U_2 \cdot b_2 = \frac{20,819}{20,000} - 0,775 \cdot 0,406 - 0,821 \cdot 0,467 = 0,343 \text{ W/(m}^2\text{.K)}$$

Material	λ [W/(m.K)]	ϵ	Boundary Condition	q [W/m ²]	θ [°C]	R (m ² .K)/W]	ϵ
Aluminium (Si Alloys)	160,000	0,300	Epsilon 0.3				0,300
Aluminium (Si Alloys)	160,000	0,900	Epsilon 0.9				0,900
EPDM (ethylene propylene diene monomer)	0,250	0,900	Exterior, frame	0,000	0,040		
EPDM membran	0,300	0,900	Interior, frame, normal	20,000	0,130		
Norton	0,041	0,900	Interior, frame, reduced	20,000	0,200		
Panel	0,035	0,900	Symmetry/Model section	0,000			
Polyamid 6.6 with 25% glassfibre	0,300	0,900					
Polyamid 6.6 with 25% glassfibre	0,300	0,900					
Slightly ventilated air cavity **		0,900					
Steel	50,000	0,900					
Unventilated air cavity **		0,900					
epdm sünger	0,037	0,900					

** EN ISO 10077-2:2017, 6.4.3/anisotrop





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