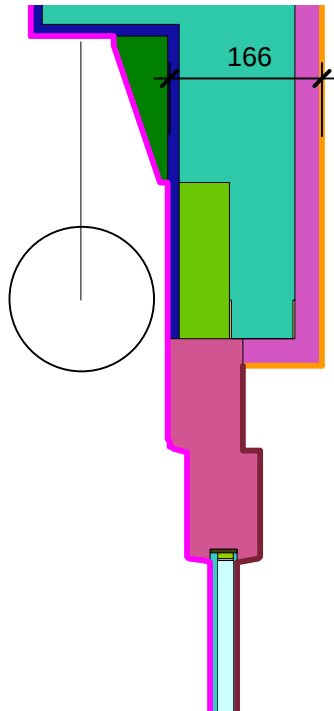




HYGIENIC CRITERIA FOR PH - MOULD ON OPAQUE SURFACES:

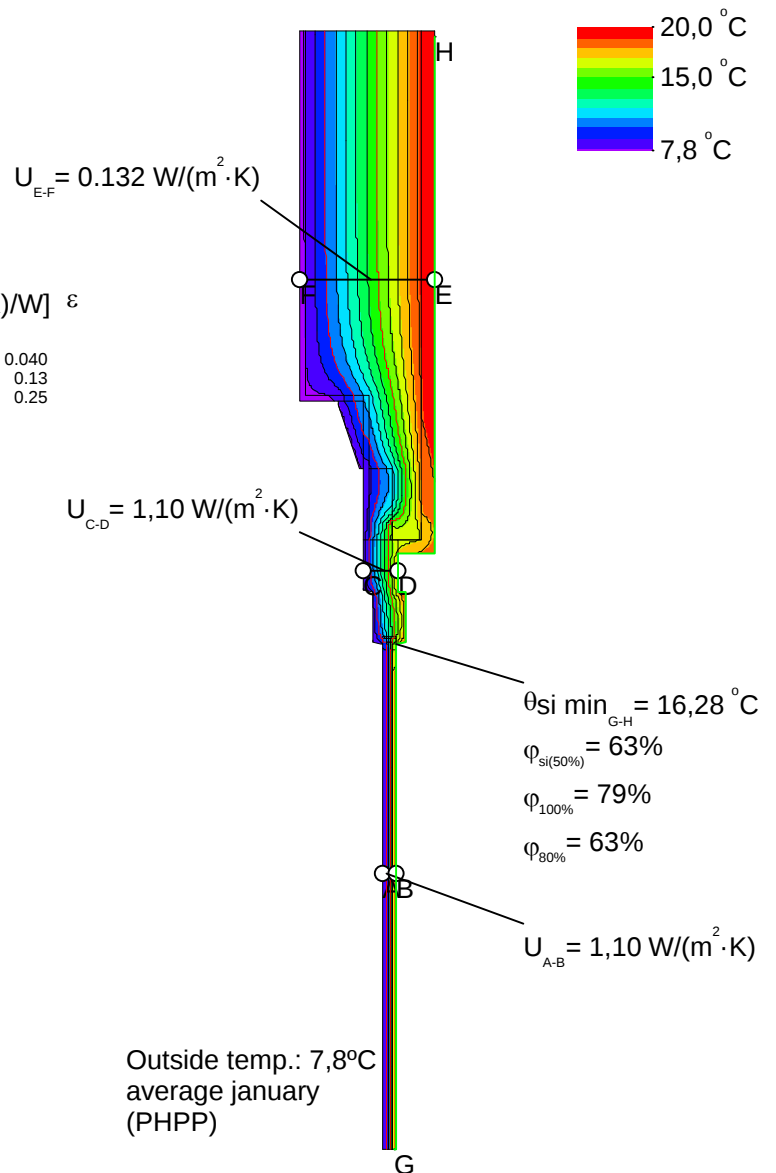
Minimum temp. to avoid mould
(80% with 50% interior humidity): 12,6°C
Calculated min. temp.: 16,28°C (average january) >>>
No risc for mould on opaque surfaces.

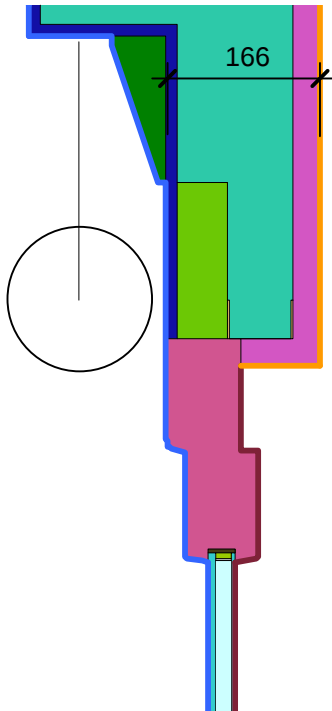
Window:

U_g= 1,1W/m²k (8/16/6 argon)
U_f= 1,1 W/m²k
Spacer following two-box model
Swisspacer-V

Boundary Condition	q[W/m ²]	θ[°C]	R[(m ² ·K)/W]	ε
Adiabático	0,0			
Ext. avrg.january		7,8	0.040	
Innen Fenster/Türen		20	0.13	
Innen Obere Raumhälfte		20	0.25	

Material	λ[W/(m·K)]
Air	0.025
Aluminium (Si Alloys)	160
Carton Yeso	0.25
Celulosa	0.039
Eqv. air U _g 1,1	0.022
Madera 0.13	0.13
Oriented strand board (OSB)	0.13
Profil U _f 1,1	0.11
Soda lime glass	1,0
TwoBox1	0.40
TwoBox2	0.18
XPS alta densidad	0.038



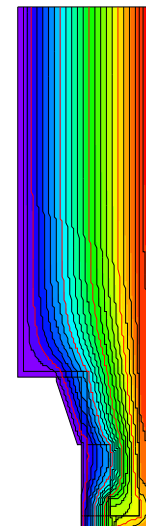
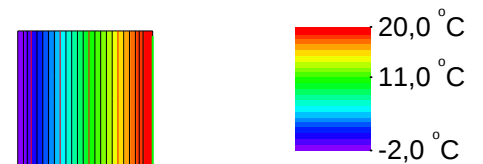


HYGIENIC CRITERIA FOR PH - CONDENSATION ON GLAS:
Minimum temp. to avoid condensation
(100% with 50% interior humidity): 9,3°C
Calculated min. temp.: 13,27°C >>>
No risc for condensation on the glass.
During coldest day, rel-hum of the window frame rises
up to 77%, but not critical as only puntual event.
For condensation on glas, room humidity has to rise up to 65%.

Window:
Ug= 1,1W/m2k (8/16/6 argon)
Uf= 1,1 W/m2k
Spacer following two-box model
Swisspacer-V

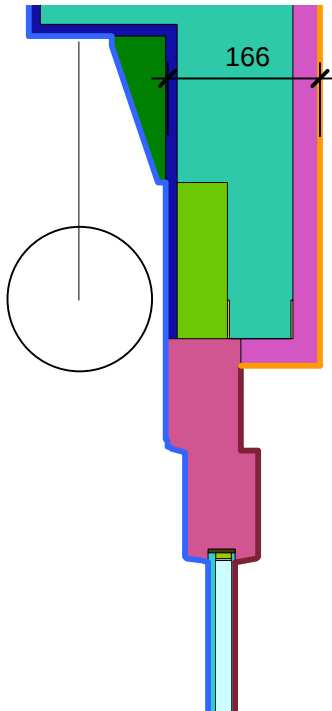
Boundary Condition	q[W/m ²]	θ[°C]	R[(m ² ·K)/W]	ε
Adiabático	0,0			
Coldest 12h avrg.		-2,0	0.040	
Innen Fenster/Türen		20	0.13	
Innen Obere Raumhälfte		20	0.25	

Material	λ[W/(m·K)]
Air	0.025
Aluminium (Si Alloys)	160
Carton Yeso	0.25
Celulosa	0.039
Eqv. air Ug 1,1	0.022
Madera 0.13	0.13
Oriented strand board (OSB)	0.13
Profil Uf 1,1	0.11
Soda lime glass	1,0
TwoBox1	0.40
TwoBox2	0.18
XPS alta densidad	0.038



θ_{si} min= 13,27 °C
φ_{si(50%)} = 77%
φ_{100%} = 65%
φ_{80%} = 52%

Outside temp.: -2°C
average coldest 12h
(Meteonorm-Palau i Plegamans)



COMFORT CRITERIA FOR PH:

Min. average temp. allowed for confort reasons: 17°C
Calculated avg. temp.: 17,04°C >>> criteria fulfilled

Window:

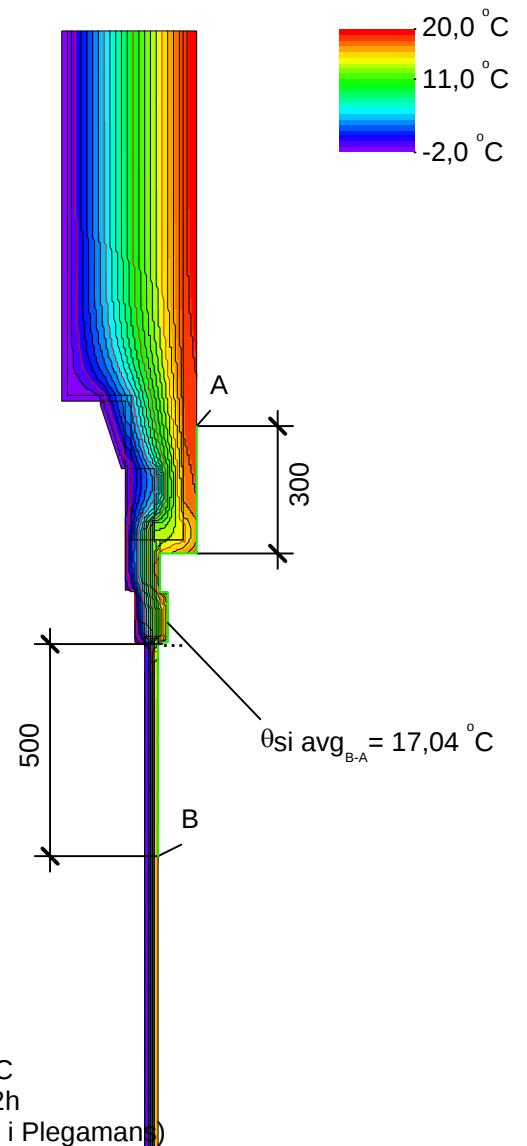
Ug= 1,1W/m2k (4/16/4 argón)

Uf= 1,1 W/m2k

Spacer following two-box model
of "Arbeitskreis Warme Kante"

Boundary Condition	$q[W/m^2]$	$\theta[^\circ C]$	$R[(m^2 \cdot K)/W]$	ε
Adiabático	0,0			
Coldest 12h avrg.		-2,0	0.040	
Innen Fenster/Türen		20	0.13	
Innen Obere Raumhälfte		20	0.25	

Material	$\lambda[W/(m \cdot K)]$
Air	0.025
Aluminium (Si Alloys)	160
Carton Yeso	0.25
Celulosa	0.039
Eqv. air Ug 1,1	0.022
Madera 0.13	0.13
Oriented strand board (OSB)	0.13
Profil Uf 1,1	0.11
Soda lime glass	1,0
TwoBox1	0.40
TwoBox2	0.18
XPS alta densidad	0.038



Outside temp.: -2°C
average coldest 12h
(Meteonorm-Palau i Plegamans)