

GRAPHICS

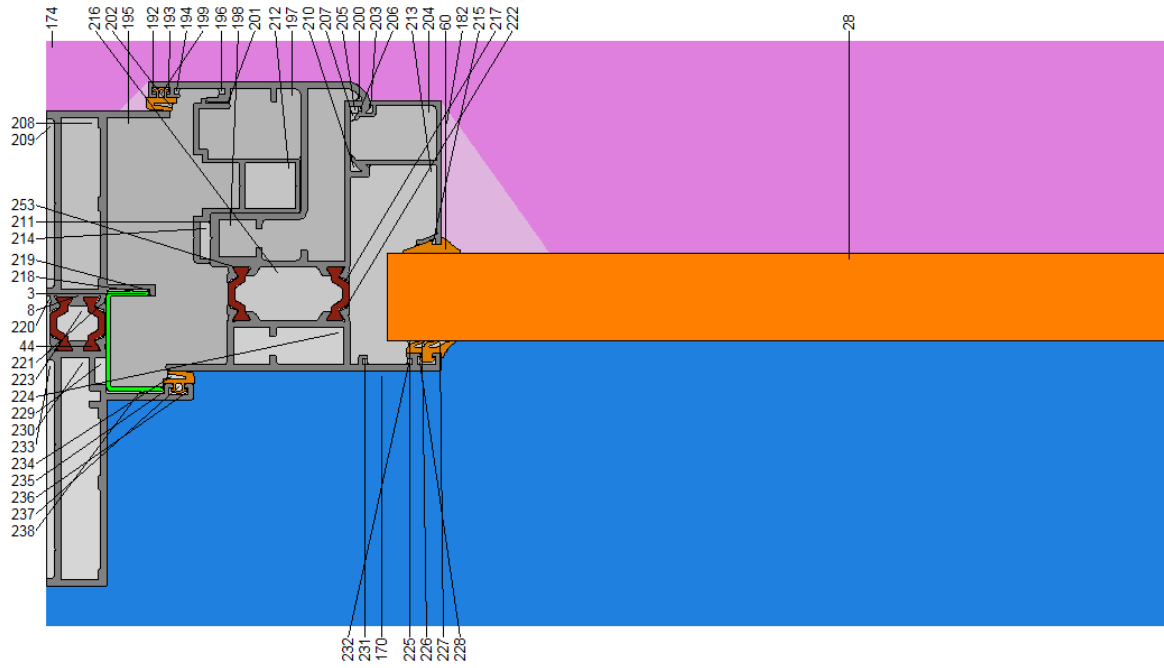


Figure 1. Frame section (with colour numbers)

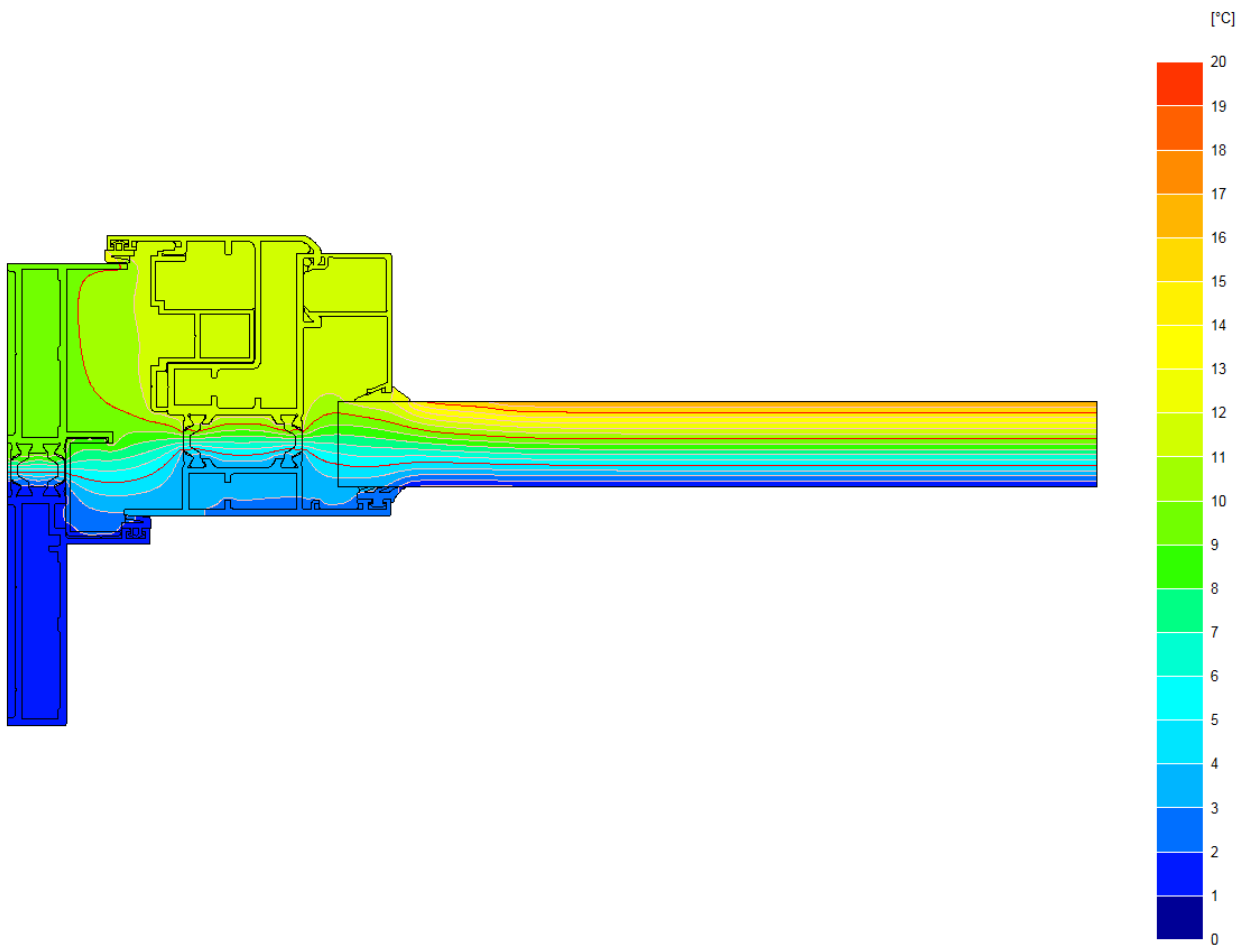


Figure 2. Isotherms (colour increment of 1°C, line increments of 1°C and 5°C)

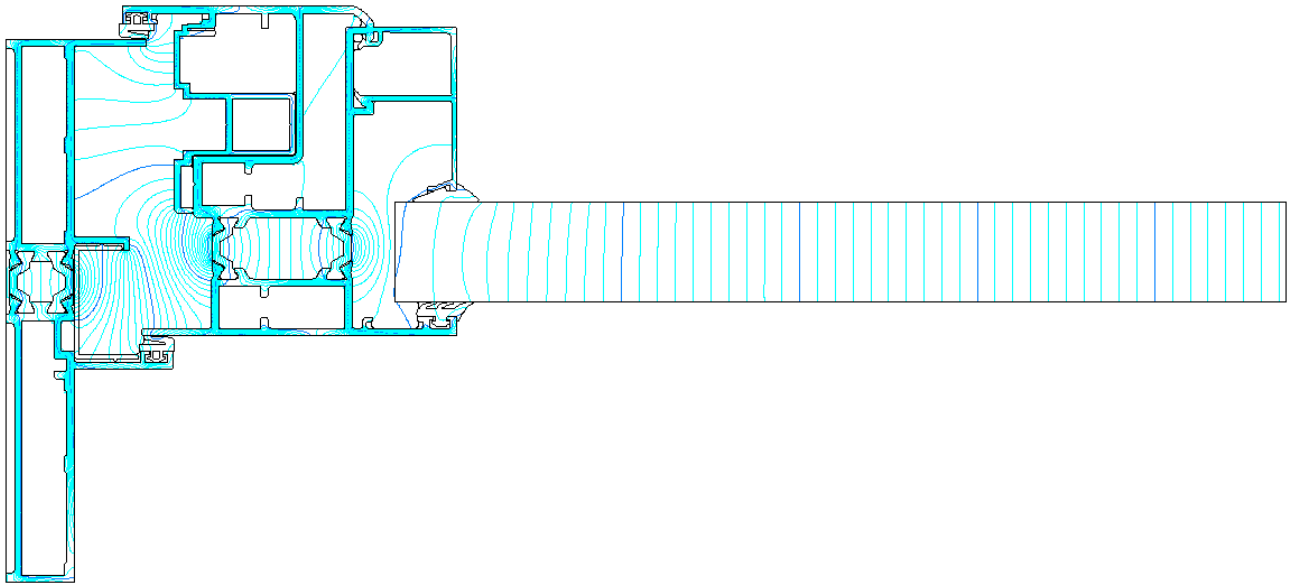


Figure 3. Heat flow lines (increment 0.1 W/m).

BISCO DATA SUMMARY

BISCO data file name **bisco_temp.tif.bsc**
 Bitmap file name **bisco_temp.tif.bmp**
 Pixel width **0.0001 m**
 Triangulation size **5 pixels**
 Number of nodes **66791**

Material thermal conductivity table

Col.	Name	lambda [W/mK]	eps [-]
3	PVC rigid	0.170	
8	aluminium	160.000	
28	insulation	0.035	
44	polyamid reinf.	0.300	
60	EPDM	0.250	
253	cavity <1x1 mm2	0.028	

Boundary condition table

Col.	Name	t [-C]	h [W/m ² K]	q [W/m ²]
170	exterior	0.0	25.00	0
174	interior (normal)	20.0	7.70	0
182	interior (reduced)	20.0	5.00	0

Cavity equivalent thermal conductivity table

Col.	lambda	Col.	lambda	Col.	lambda	Col.	
lambda	[W/mK]		[W/mK]		[W/mK]		
[W/mK]							
192	0.029	193	0.029	194	0.030	195	0.279
196	0.029	197	0.084	198	0.113	199	0.030
200	0.029	201	0.027	202	0.029	203	0.029
204	0.088	205	0.031	206	0.029	207	0.029
208	0.135	209	0.121	210	0.031	211	0.036
212	0.063	213	0.177	214	0.049	215	0.028
216	0.069	217	0.028	218	0.028	219	0.028
220	0.044	221	0.038	222	0.028	223	0.050
224	0.058	225	0.028	226	0.028	227	0.034
228	0.030	229	0.035	230	0.062	231	0.029
232	0.029	233	0.138	234	0.029	235	0.030
236	0.030	237	0.030	238	0.029		

BISCO MAIN RESULTS

U-value of frame	4.450 W/(m².K)
Width of frame	0.1088 m
U-value of panel 1	1.169 W/(m².K)
Width of panel 1	0.1999 m

Frame thermal transmittance calculation table

Thermal transmittance of frame (EN 10077-2)

$$U_f = (Q / (t_i - t_e) - U_{p1} * w_{p1} - U_{p2} * w_{p2}) / w_f = 4.450 \text{ W/(m}^2 \cdot \text{K)}$$

$$Q = 14.356 \text{ W/m}$$

$$t_i = 20.00^\circ\text{C}$$

$$t_e = 0.00^\circ\text{C}$$

$$U_{p1} = 1.169 \text{ W/(m}^2 \cdot \text{K)} \quad (\text{right edge of bitmap})$$

$$w_{p1} = 0.1999 \text{ m} \quad (\text{distance no. 2})$$

$$U_{p2} = 0.000 \text{ W/(m}^2 \cdot \text{K)}$$

$$w_{p2} = 0.0000 \text{ m}$$

$$w_f = 0.1088 \text{ m} \quad (\text{distance no. 1})$$