

GRAPHICS

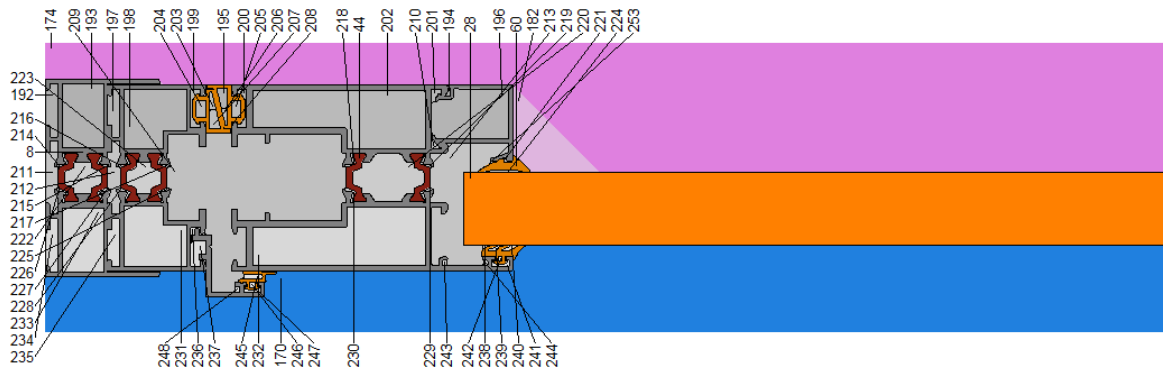


Figure 1. Frame section (with colour numbers)

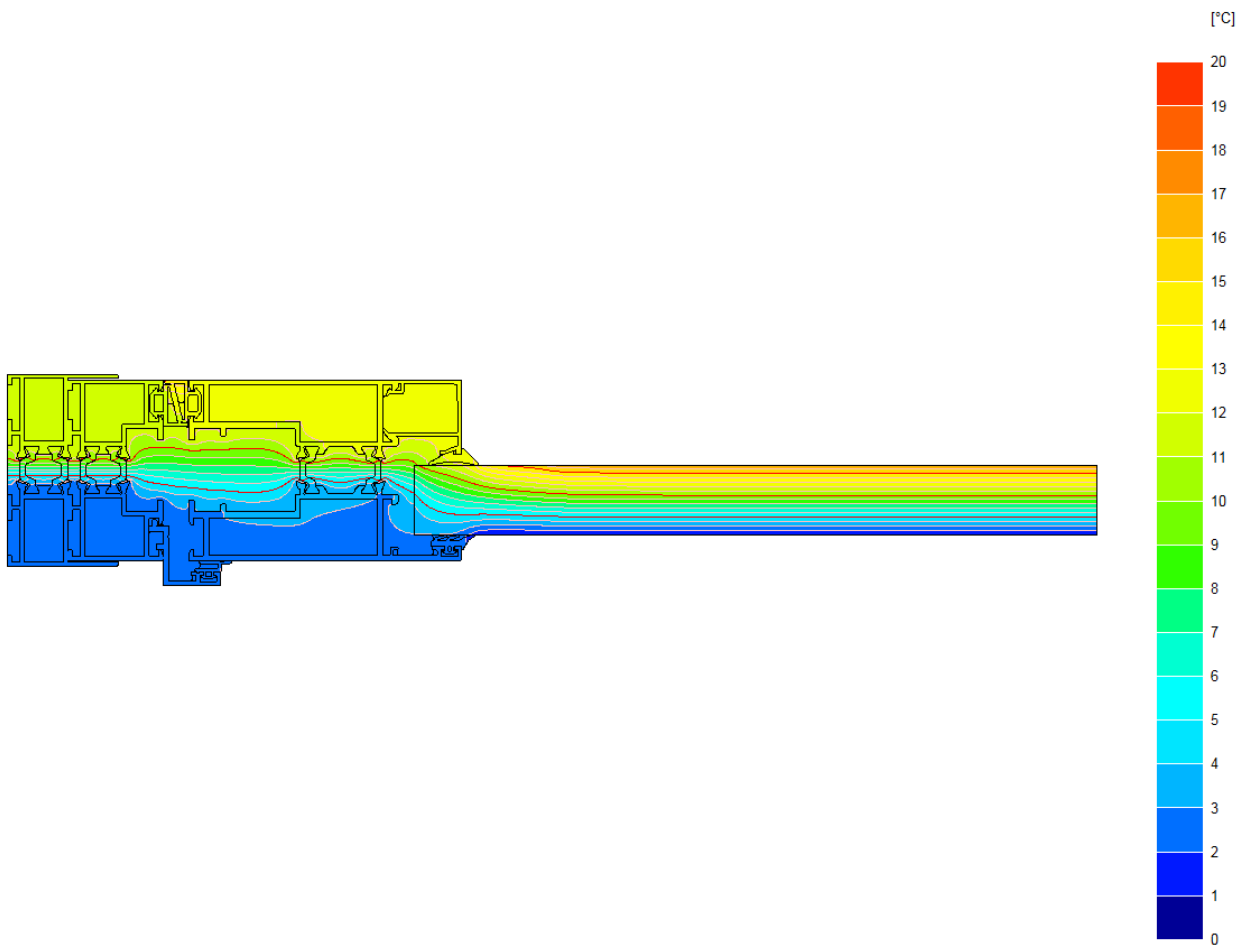


Figure 2. Isotherms (colour increment of 1°C, line increments of 1°C and 5°C)

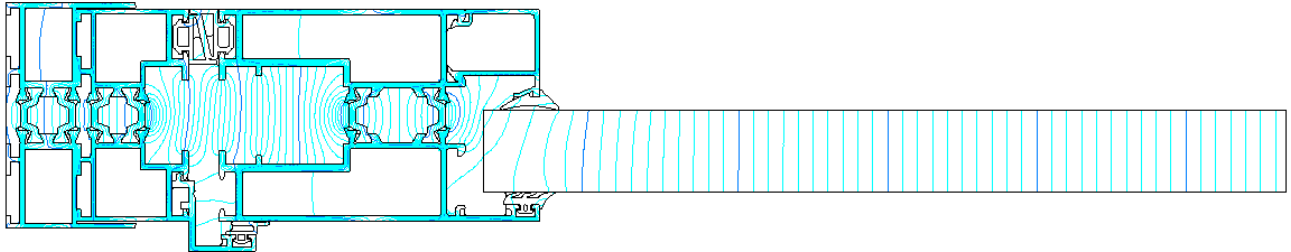


Figure 3. Heat flow lines (increment 0.1 W/m).

BISCO DATA SUMMARY

BISCO data file name **1bisco_temp.tif.bsc**
 Bitmap file name **1bisco_temp.tif.bmp**
 Pixel width **0.0001 m**
 Triangulation size **5 pixels**
 Number of nodes **59519**

Material thermal conductivity table

Col.	Name	lambda [W/mK]	eps [-]
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 lambda [W/mK]	Col. lambda lambda [W/mK]	Col. lambda lambda [W/mK]	Col. lambda lambda [W/mK]
192 0.062	193 0.079	194 0.029	195 0.040
196 0.074	197 0.058	198 0.077	199 0.033
200 0.033	201 0.033	202 0.084	203 0.031
204 0.035	205 0.035	206 0.036	207 0.035
208 0.029	209 0.170	210 0.033	211 0.070
212 0.069	213 0.114	214 0.031	215 0.031
216 0.031	217 0.031	218 0.031	219 0.031
220 0.064	221 0.029	222 0.051	223 0.050
224 0.028	225 0.031	226 0.031	227 0.031
228 0.031	229 0.031	230 0.031	231 0.073
232 0.079	233 0.074	234 0.058	235 0.055
236 0.032	237 0.037	238 0.028	239 0.028
240 0.029	241 0.034	242 0.028	243 0.029
244 0.029	245 0.030	246 0.029	247 0.033
248 0.029			

BISCO MAIN RESULTS

U-value of frame	4.084 W/(m².K)
Width of frame	0.1430 m
U-value of panel 1	1.252 W/(m².K)
Width of panel 1	0.1999 m

Frame thermal transmittance calculation table

Thermal transmittance of frame (EN 10077-2)

$$U_f = (Q / (t_i - t_e) - U_{p1} \cdot w_{p1} - U_{p2} \cdot w_{p2}) / w_f = 4.084 \text{ W/(m}^2 \cdot \text{K)}$$

$$Q = 16.688 \text{ W/m}$$

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

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

$$U_{p1} = 1.252 \text{ W/(m}^2 \cdot \text{K)} \quad (\text{right edge of bitmap})$$

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

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

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

$$w_f = 0.1430 \text{ m} \quad (\text{distance no. 1})$$