

GRAPHICS

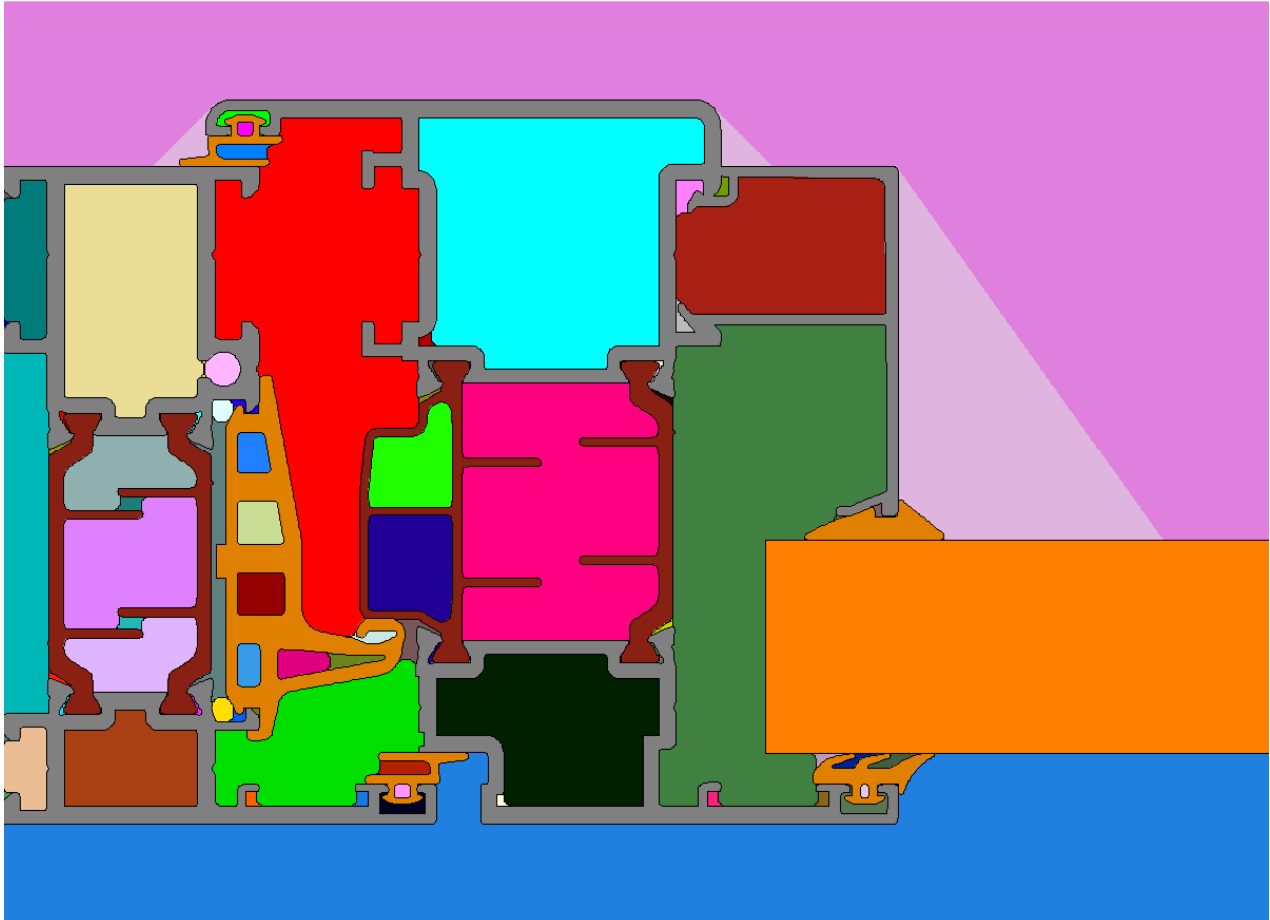


Figure 1. Frame section (with colour numbers)

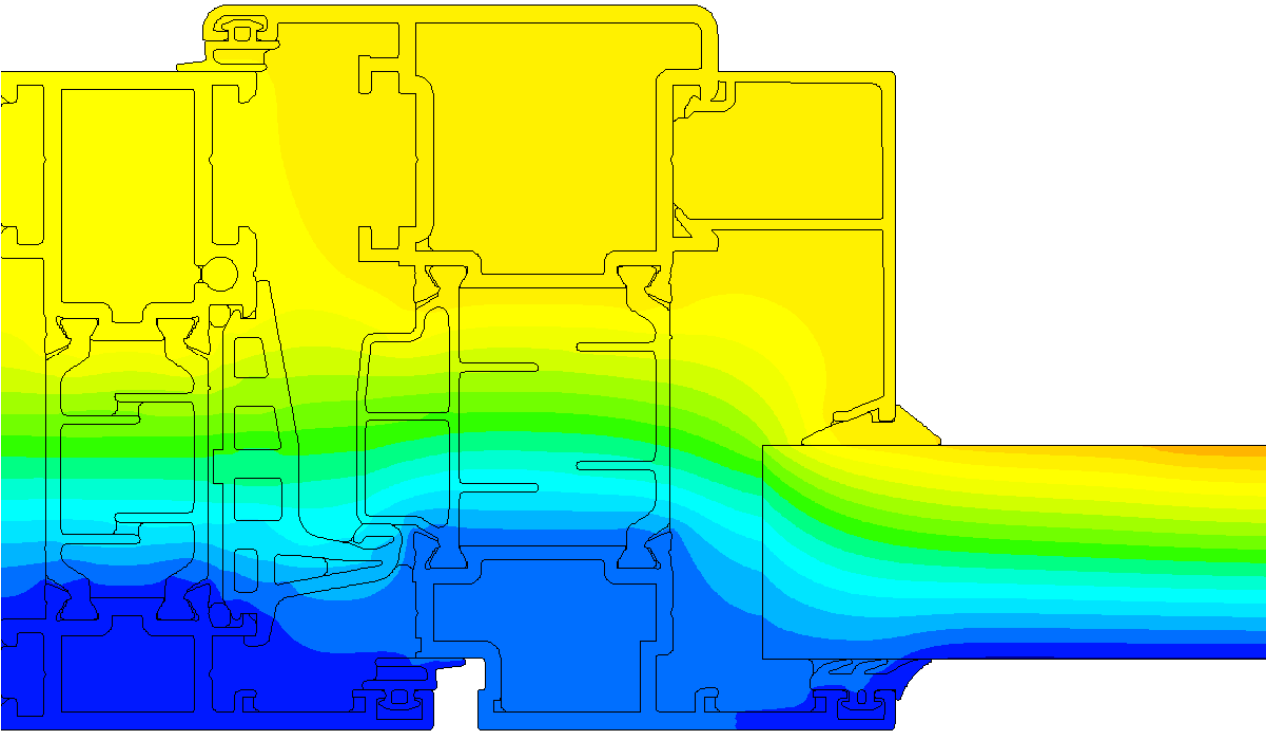


Figure 2. Isotherms (colour increment of 1°C, line increments of 1°C and 5°C)

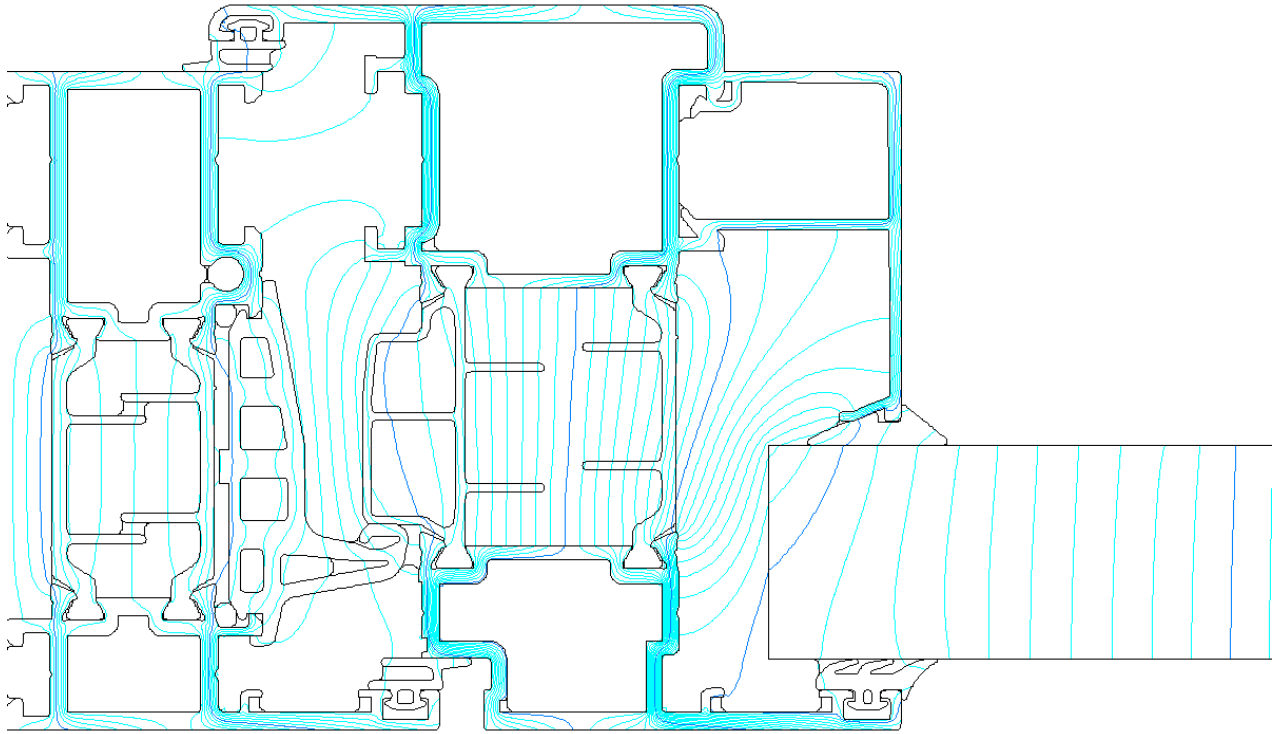


Figure 3. Heat flow lines (increment 0.1 W/m).

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 **58069**

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	

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 [W/mK]	Col. lambda [W/mK]	Col.
3 0.030	4 0.183	5 0.106	6 0.030
7 0.026	9 0.026	10 0.031	11 0.029
12 0.075	13 0.067	14 0.033	15 0.094
16 0.028	17 0.030	18 0.028	19 0.184
20 0.029	21 0.155	22 0.036	23 0.028
24 0.028	25 0.027	26 0.025	27 0.026
29 0.026	30 0.125	31 0.028	32 0.028
33 0.032	34 0.029	35 0.055	36 0.027
37 0.027	38 0.026	39 0.026	40 0.066
41 0.049	42 0.038	43 0.028	45 0.030
46 0.064	47 0.039	48 0.028	49 0.026
50 0.056	51 0.026	52 0.039	53 0.029
54 0.047	55 0.028	56 0.033	57 0.029
58 0.027	59 0.027	61 0.037	62 0.034
63 0.030	64 0.069	65 0.026	66 0.026
67 0.064	68 0.028	69 0.027	70 0.027
71 0.032	72 0.026	73 0.026	74 0.028
75 0.027	76 0.054	77 0.025	78 0.025
79 0.046	80 0.027	81 0.028	82 0.028
83 0.029	84 0.030	85 0.026	86 0.029
87 0.026	88 0.032	89 0.029	90 0.026
91 0.027	92 0.029	93 0.029	94 0.029
95 0.029	96 0.031	97 0.028	

BISCO MAIN RESULTS

U-value of frame	2.665 W/(m².K)
Width of frame	0.1010 m
U-value of panel 1	1.169 W/(m².K)
Width of panel 1	0.1900 m

Frame thermal transmittance calculation table

Thermal transmittance of frame (EN 10077-2)

$$U_f = (Q / (t_i - t_e) - U_{p1} \cdot w_{p1} - U_{p2} \cdot w_{p2}) / w_f = 2.665 \text{ W/(m}^2 \cdot \text{K)}$$

$$Q = 9.826 \text{ W/m}$$

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

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

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

$$w_{p1} = 0.1900 \text{ m} \quad (\text{distance no. 2})$$

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

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

$$w_f = 0.1010 \text{ m} \quad (\text{distance no. 1})$$