

GRAPHICS

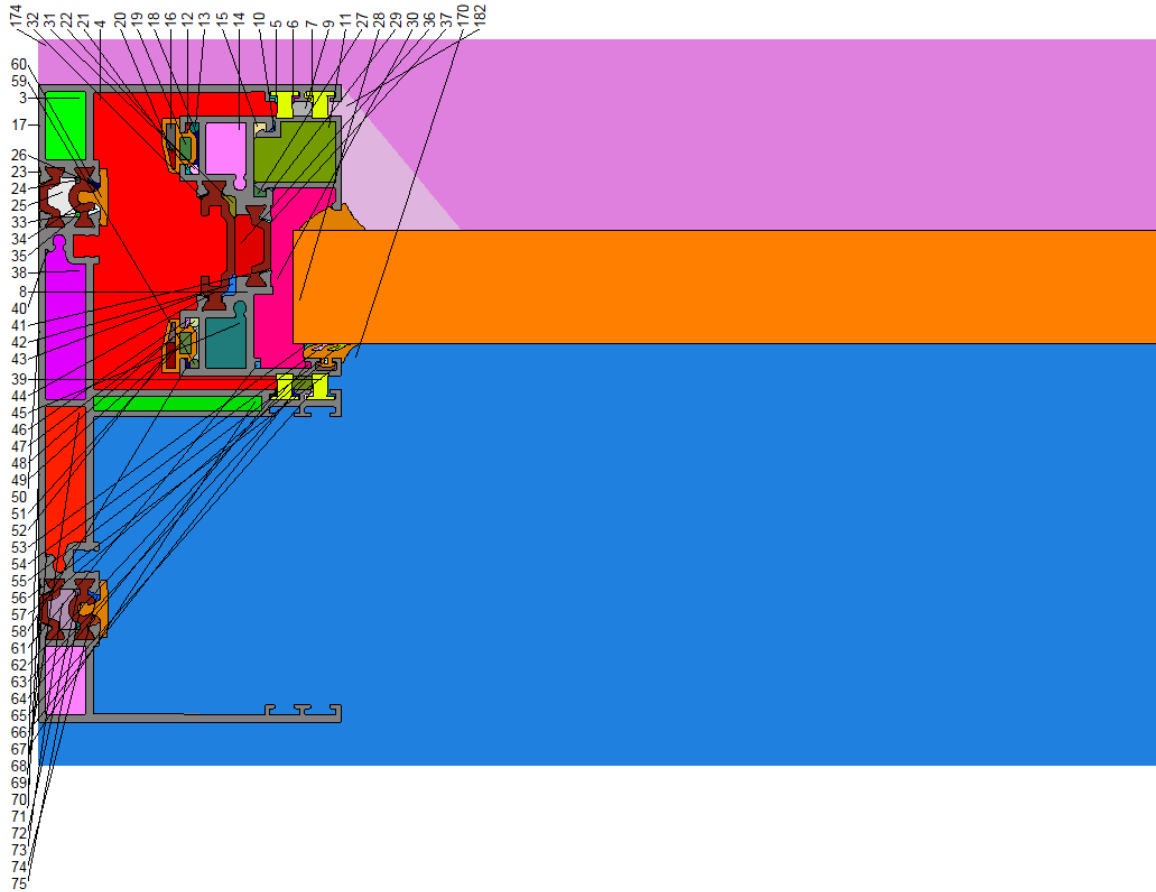


Figure 1. Frame section (with colour numbers)

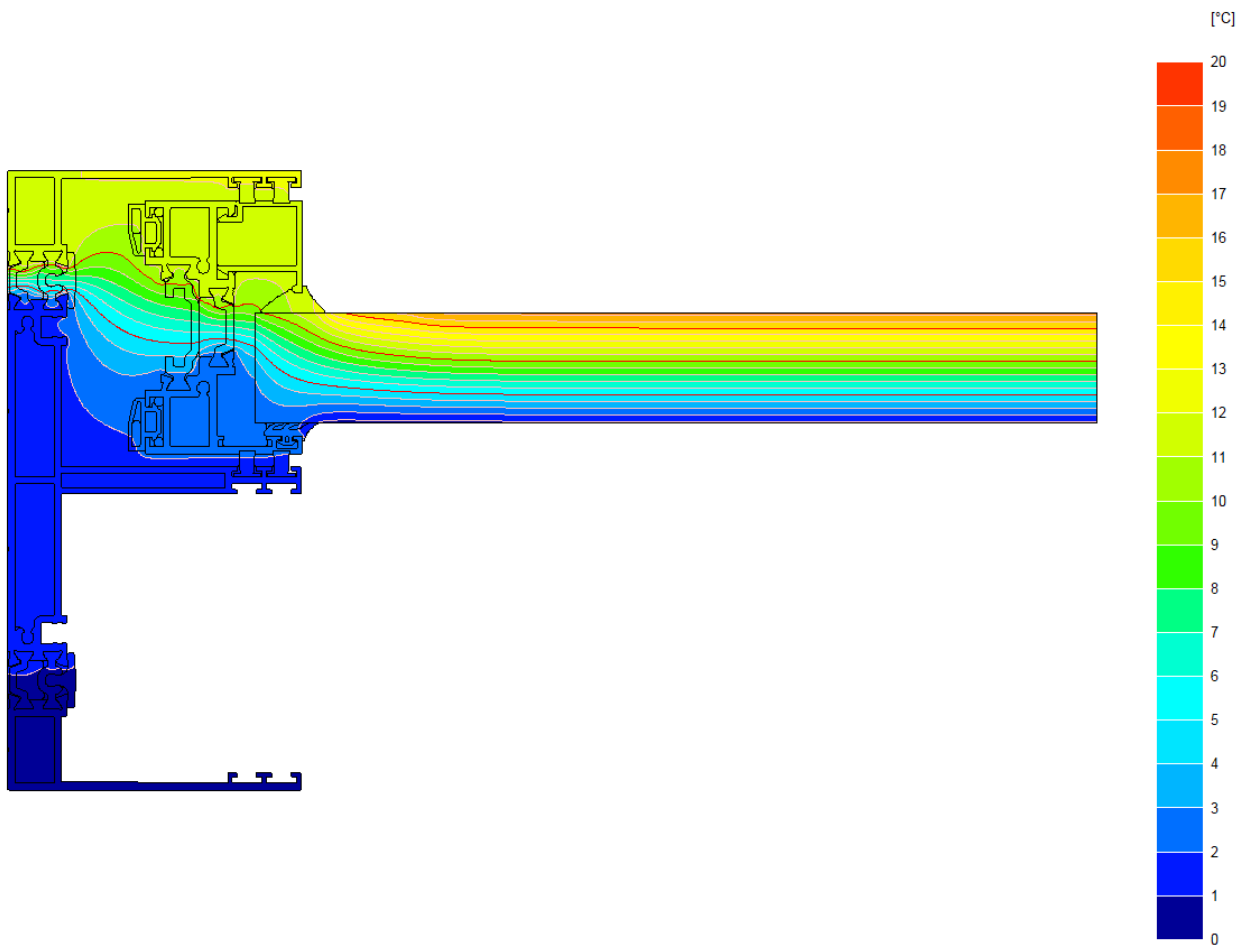


Figure 2. Isotherms (colour increment of 1°C, line increments of 1°C and 5°C)

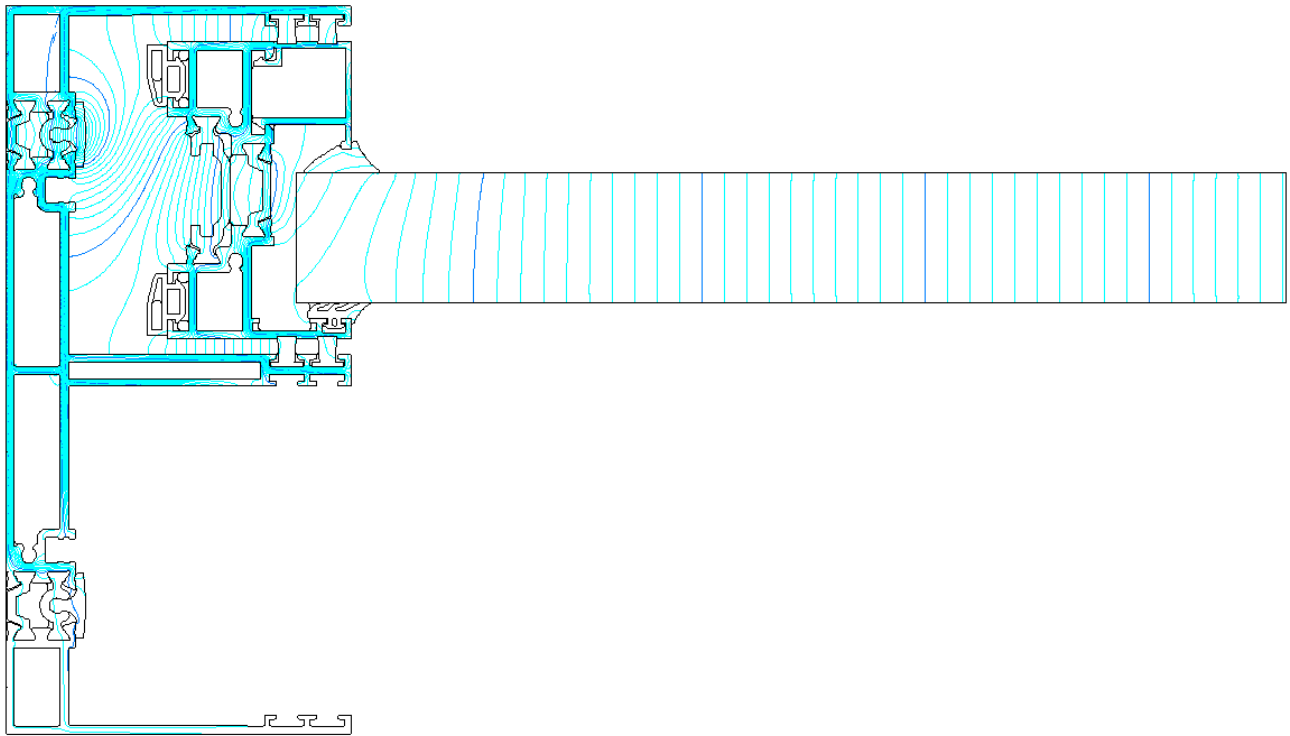


Figure 3. Heat flow lines (increment 0.1 W/m).

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 **61065**

Material thermal conductivity table

Col.	Name	lambda [W/mK]	eps [-]
8	aluminium	160.000	
28	insulation	0.035	
39	polypropyl.sol.	0.220	
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 lambda [W/mK]	Col. lambda lambda [W/mK]	Col.
3 0.071	4 0.227	5 0.029	6 0.029
7 0.029	9 0.036	10 0.029	11 0.080
12 0.030	13 0.031	14 0.066	15 0.033
16 0.041	17 0.027	18 0.029	19 0.035
20 0.031	21 0.030	22 0.031	23 0.038
24 0.029	25 0.047	26 0.031	27 0.033
29 0.027	30 0.120	31 0.033	32 0.029
33 0.031	34 0.025	35 0.029	36 0.060
37 0.028	38 0.108	40 0.027	41 0.028
42 0.032	43 0.028	45 0.062	46 0.029
47 0.031	48 0.035	49 0.038	50 0.027
51 0.038	52 0.032	53 0.028	54 0.028
55 0.034	56 0.033	57 0.028	58 0.029
59 0.031	61 0.029	62 0.029	63 0.035
64 0.029	65 0.029	66 0.029	67 0.039
68 0.057	69 0.026	70 0.027	71 0.037
72 0.029	73 0.046	74 0.031	75 0.025
76 0.031	77 0.029	78 0.066	79 0.026

BISCO MAIN RESULTS

U-value of frame **4.479 W/(m².K)**
 Width of frame **0.0751 m**
 U-value of panel 1 **1.031 W/(m².K)**
 Width of panel 1 **0.2028 m**

Frame thermal transmittance calculation table

Thermal transmittance of frame (EN 10077-2)

$U_f = (Q / (t_i - t_e) - U_{p1} * w_{p1} - U_{p2} * w_{p2}) / w_f = 4.479 \text{ W/(m}^2 \cdot \text{K)}$

$Q = 10.910 \text{ W/m}$

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

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

$U_{p1} = 1.031 \text{ W/(m}^2 \cdot \text{K)}$ (right edge of bitmap)

$w_{p1} = 0.2028 \text{ m}$ (distance no. 2)

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

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

$w_f = 0.0751 \text{ m}$ (distance no. 1)