

# SW180S

istituto sperimentale per l'edilizia s.p.a.

ISTEDIL

Autorizzato all'esecuzione delle prove ai sensi e per gli effetti dell'Art. 20 della legge del 5-11-71 n. 1086 con Decreti Ministero LL. PP. Autorizzato alle certificazioni CE - Notificato CEE n. 0529  
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## TEST REPORT n° 203/2006-E

Guidonia M. 11/05/2006

Results of calculation of thermal transmittance of frame profile, with numerical method, carried out on 03/05/2006.

Geometrical and structural characteristics of the test-piece are given in the attached description sheet, supplied by the Customer, which form an integral part of this test report.

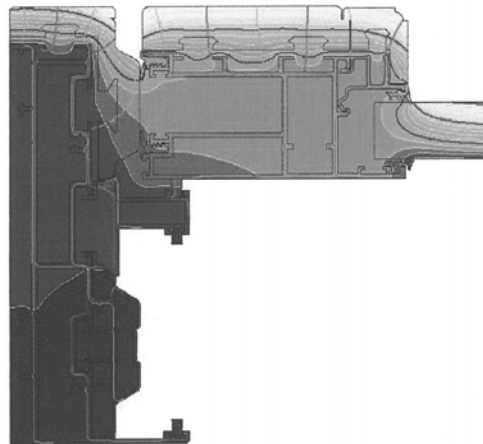
**CUSTOMER** : STARPUR S.r.l.

### DECLARED DATA

Product name : SW 180s side joint  
Frame : ALUMINUM-WOOD

Thermal conductivity of materials:

Aluminum	160.000	W/m°K
EPDM	0.250	W/m°K
Soft Wood	0.130	W/m°K
Insulation panel	0.035	W/m°K



### TEST PROCEDURE

Reference standard: UNI EN ISO 10077-2  
Calculation program: PHISIBEL BISCO vers. 7.0w

### TEST RESULTS

BISCO data file: sw180slaterale.bsc

THERMAL TRANSMITTANCE OF FRAME (UNI EN ISO 10077-2)

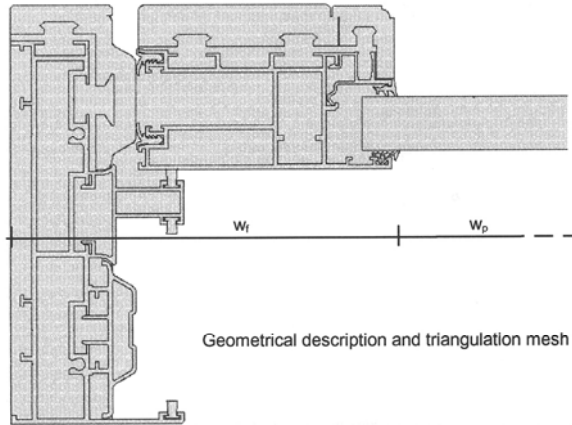
$$U_f = (Q / (t_i - t_e) - U_p * w_p) / w_f$$

with:

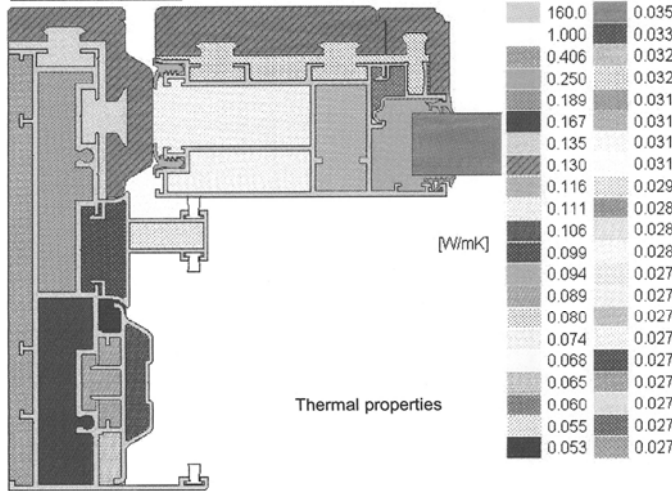
Q = 24.000 W/m	[total heat flow (frame+panel)]
t <sub>i</sub> = 20.00 °C	[internal temperature]
t <sub>e</sub> = 0.00 °C	[external temperature]
U <sub>p</sub> = 1.243 W/(m <sup>2</sup> .K)	[thermal transmittance of the insulation panel]
w <sub>p</sub> = 0.4247 m	[projected width of insulation panel]
w <sub>f</sub> = 0.1578 m	[projected width of frame]

THERMAL TRANSMITTANCE OF FRAME U<sub>f</sub> = 4.26 W/m<sup>2</sup> K

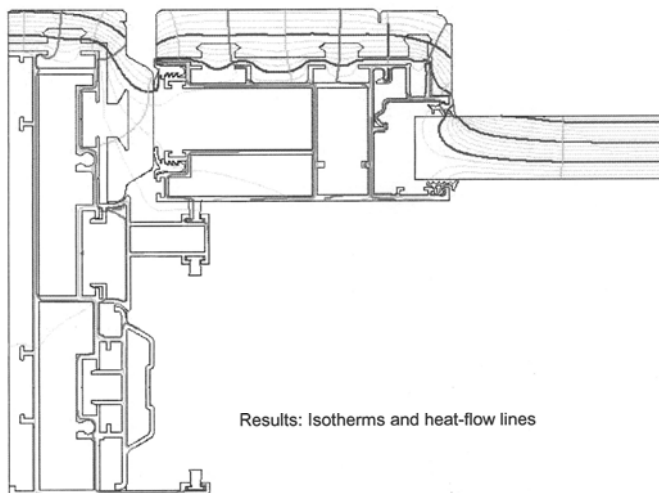
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Geometrical description and triangulation mesh



Thermal properties



Results: Isotherms and heat-flow lines