

CALCULATION REPORT No. 306025/7691/CPD

**issued by Istituto Giordano in the capacity of notified testing laboratory (No. 0407)
pursuant to Regulation 89/106/CEE (CPD)**

Place and date of issue: Bellaria-Igea Marina - Italy, 31/05/2013

Customer: ETEM S.A. LIGHT METALS COMPANY - 1, Iroon Polytechniou str - 19018 MAGOULA
ATTIKI - Greece

Date calculation requested: 19/04/2013

Order number and date: 59441, 19/04/2013

Date drawing received: from 23/04/2013 to 14/05/2013

Date calculation performed: from 14/05/2013 to 20/05/2013

Purpose of calculation: calculation of thermal transmittance of a frame constructed from aluminium profiles with thermal break in accordance with standard UNI EN ISO 10077-2:2012 with reference to product standard UNI EN 14351-1:2010

Calculation venue: Istituto Giordano S.p.A. - Blocco 2 - Via Rossini, 2 - 47814 Bellaria-Igea Marina (RN) - Italy

Drawing origin: supplied by Customer

Identification of drawing received: No. 2013/0951/A-B

Name of window assemblies*

The window assemblies for which the calculation is performed are called "E50".

(*) according to that stated by the Customer.

Comp. AV
Revis. FT

This calculation report consists of 38 sheets.
This document is the English translation of the calculation report No. 306025/7691/CPD dated 31/05/2013 issued in Italian; in case of dispute the only valid version is the Italian one. Date of translation: 19/09/2016.

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Calculation results

Frame thermal transmittance

Frame thermal transmittance value calculated in accordance with standard UNI EN ISO 10077-2:2012, including fixed and moveable parts (with reference to the widths given in the table), is:

Section [Cod.]	Width considered "b _f " [mm]	Thermal transmittance "U _f " [W/(m ² · K)]
01	127,5	3,53
02	127,5	3,26
03	127,5	3,80
04	127,5	3,09
05	127,5	2,46
06	127,5	3,08
07	127,5	3,00
08	112,0	3,67
09	127,5	3,15
10	127,5	3,16
11	127,5	3,02
12	127,5	3,53
13	127,5	3,80
14	127,5	3,14
15	127,5	3,08
16	127,5	3,17
17	127,5	3,38
18	127,5	4,06
19	127,5	3,82
20	127,5	3,27
21	127,5	3,09

Section [Cod.]	Width considered "b _f " [mm]	Thermal transmittance "U _f " [W/(m ² · K)]
22	127,5	3,41
23	127,5	3,66
24	127,5	3,43
25	115,5	3,09
26	197,0	2,79
27	115,5	3,31
28	127,5	3,08
29	127,5	3,16
30	127,5	3,80
31	120,5	2,66
32	127,5	3,17
33	127,5	3,10
34	127,5	3,80
35	115,5	3,07
36A	127,5	3,19
36B	45,0	2,06
37A	127,5	3,15
37B	45,0	2,04
38	127,5	3,21
39	45,0	2,06
40	80,0	3,07

Note: the thermal transmittance values "U_f" of frames, shown in the table, are applicable with insulating glass thickness greater than or equal to 26 mm.