

TEST REPORT No. 400387/15703/CPR

issued by Istituto Giordano in the capacity of notified test laboratory (No. 0407)
pursuant to Regulation 305/2011/EU of the European Parliament
and of the Council of 9 March 2011


Customer

TEHNI PANTELOS S.A.
2nd Km Kimerion - Pigadion - XANTHI - Greece

Item[#]

**door constructed from aluminium profiles named
"TLS 80 Triple Glazed Door"**

Activity

 **calculation of thermal transmittance in accordance with
standards UNI EN ISO 10077-1:2007/EC 1-2010/EC 2-
2012 and UNI EN ISO 10077-2:2018, with reference to
harmonised standard UNI EN 14351-1:2016**

Results

**Thermal transmittance
 $U_D = 1,3 \text{ W}/(\text{m}^2 \cdot \text{K})$**

Order:
94570

Technical documentation origin:
supplied by the customer

Technical documentation received date:
22 November 2022

Activity date:
from 28 November 2022 to 30 November 2022

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

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The results relate only to the item examined, as received, and are valid only in the conditions in which the activity was carried out.

The original of this document consists of an electronic document digitally signed pursuant to the applicable Italian Legislation.

Chief Test Technician:

Dott. Ing. Gabriele Graci

Head of Heat Transfer Laboratory - Calculations:

Dott. Corrado Colagiacomo

Technical Director:

Dott. Ing. Giuseppe Persano Adorno

Compiler: Agostino Vasini

Reviewer: Dott. Ing. Gabriele Graci

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(#) according to that stated by the customer.

Bellaria-Igea Marina - Italy, 30 November 2022

Chief Executive Officer

(Dott. Arch. Sara Lorenza Giordano)

Firmato digitalmente da SARA LORENZA GIORDANO

Description of item^(#)

The item under examination consists of a single leaf door constructed from aluminium profiles with polyamide strips to provide thermal break.

The door size is width 1150 mm and height 2250 mm.

The frame nominal thickness is 68,7 mm and the sash nominal thickness is 77 mm.

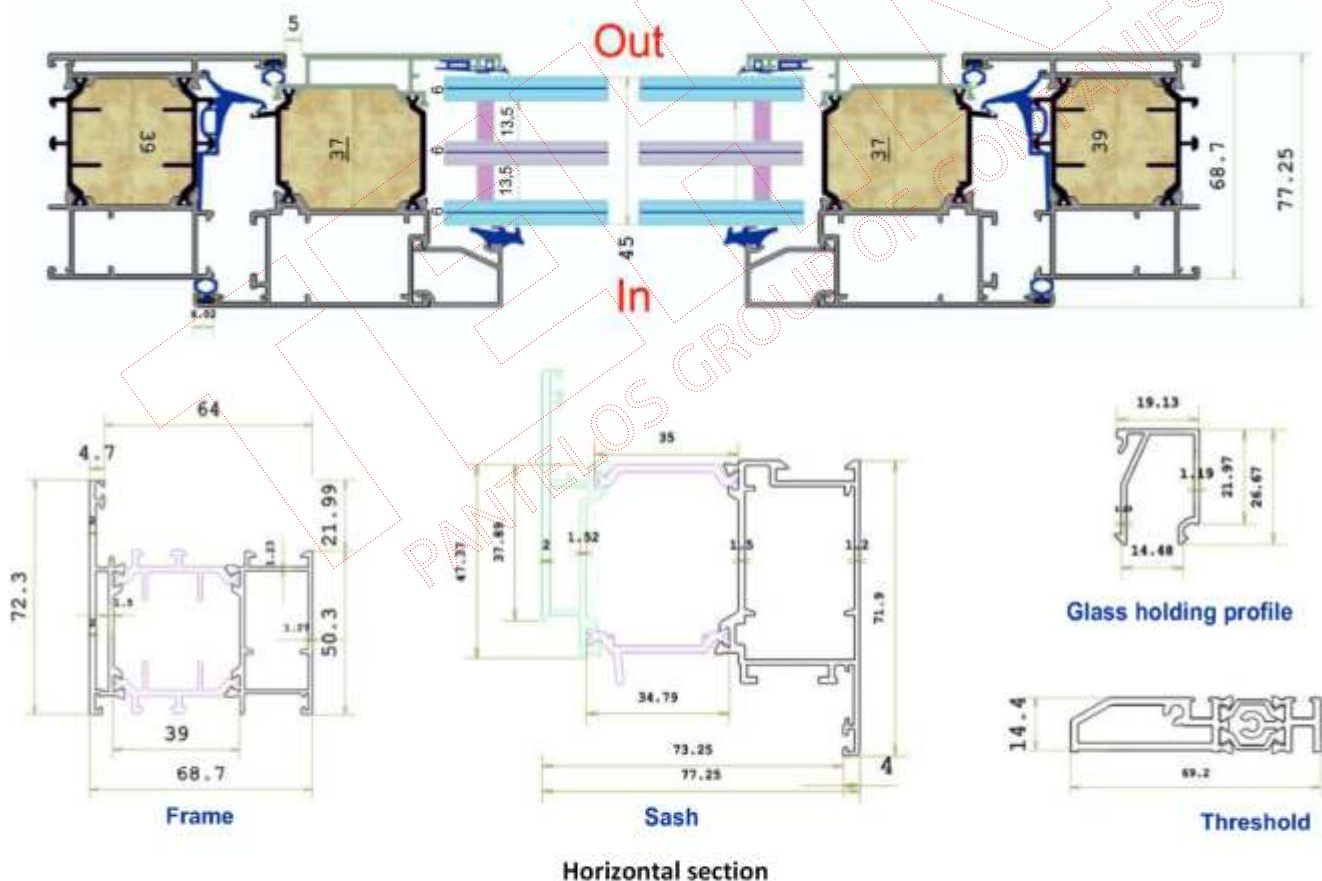
The door leaf consists of a triple glazing system with two Low E Laminated 3.3.1 glasses and one standard 3.3.1 glass in the centre.

The cavities between the polyamide strips are filled with polyurethane.

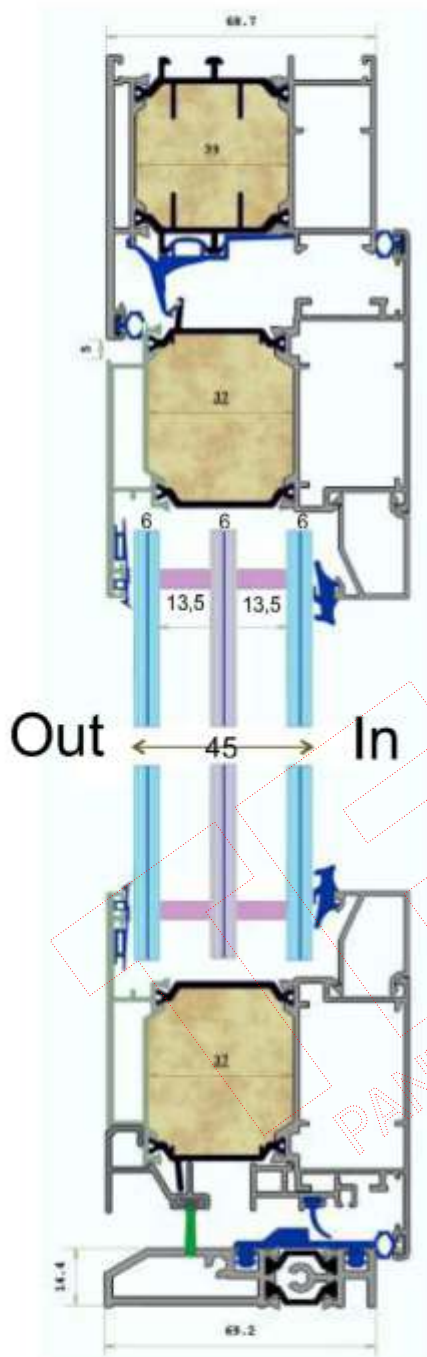
The door is equipped with EPDM gaskets.

The calculation was performed on the basis of customer-supplied drawings.

**SCHEMATIC DRAWING OF THE ITEM UNDER EXAMINATION
(SUPPLIED BY THE CUSTOMER)**



(#) according to that stated by the customer. Istituto Giordano declines all responsibility for the information and data provided by the client that may influence the results.



Materials

- Polyurethane
- Low E, Laminated glass 3.3.1
Guardian - KlimaGuard Neutral 70
- Standard Laminated Glass 3.3.1
Guardian Extra Clear
- EPDM Gaskets
- Polyamide
- Aluminium Profile
- Aluminium Spacers 17,5+15,5 mm
- Whisk

TLS 80
Triple Glazed

Vertical section

Manufacturing site[#]

TEHNI PANTELOS S.A. - 2nd Km Kimerion - Pigadion - XANTHI - Greece.

(#) according to that stated by the customer.

TEST REPORT No. 399655/15652/CPR

issued by Istituto Giordano in the capacity of notified test laboratory (No. 0407) pursuant to Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011

this document cancels and replaces test report No. 397922/15523/CPR dated 12 September 2022 issued by Istituto Giordano

Customer

TEHNI PANTELOS S.A. (1)
2nd Km Kimerion - Pigadion - XANTHI - Greece

Item*

**door constructed from aluminium profiles named
"TLS 80 Glazed Door"**

Activity



calculation of thermal transmittance in accordance with standards UNI EN ISO 10077-1:2007/EC 1-2010/EC 2-2012 and UNI EN ISO 10077-2:2018, with reference to harmonised standard UNI EN 14351-1:2016

Results

Thermal transmittance
 $U_D = 1,6 \text{ W}/(\text{m}^2 \cdot \text{K})$

Order:
93568

Technical documentation origin:
supplied by the customer

Technical documentation received date:
29 August 2022; 30 August 2022

Activity date:
from 31 August 2022 to 12 September 2022

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

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Chief Test Technician:
Dott. Ing. Gabriele Graci
Head of Heat Transfer Laboratory - Calculations:
Dott. Corrado Colagiacomo
Technical Director:
Dott. Ing. Giuseppe Persano Adorno
Compiler: Agostino Vasini
Reviewer: Dott. Ing. Gabriele Graci

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(*) according to that stated by the customer.

Bellaria-Igea Marina - Italy, 11 November 2022

Chief Executive Officer

(Dott. Arch. Sara Lorenza Giordano)



Firma digitale di SARA LORENZA GIORDANO

Risultato delle prove di permeabilità all'aria, tenuta all'acqua e resistenza al vento eseguite il giorno 25/05/2021, su un campione di porta ad un'anta consegnata in data 12/05/2021.

Le caratteristiche geometriche e strutturali del campione risultano nella descrizione allegata, fornita dal Committente, che costituisce parte integrante del presente rapporto di prova.

Committente : TEHNI S.A. - PANTELOS

DATI DICHIARATI

Denominazione : TLS-80
 Tipo apertura : battente
 Struttura infisso : acciaio
 Dimensioni (mm) : 1100 x 2100 (totali) ; 980 x 2040 (apribili)

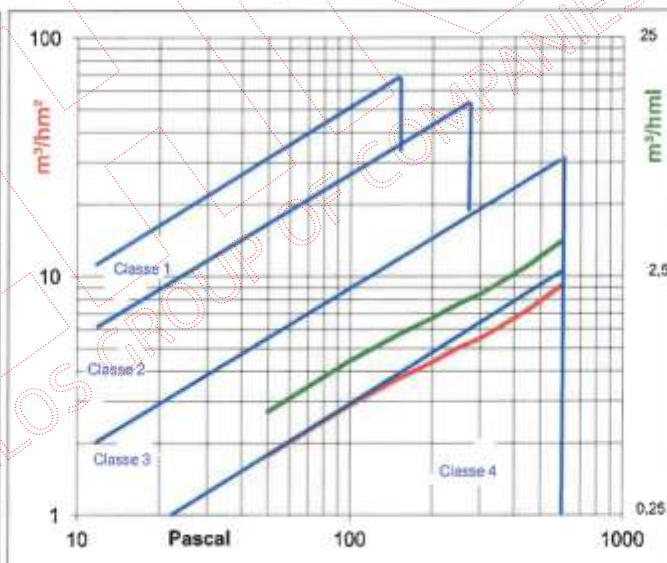


MODALITA' E RISULTATO DELLE PROVE

Condizioni ambientali : 24 45 % U.R.

PERMEABILITA' ALL'ARIA (UNI EN 1026) Area totale m² 2,31 Giunti apribili ml 6,04

Pascal	m ³ /h	m ³ /hm ²	m ³ /hml
50	4,1	1,8	0,7
100	6,7	2,9	1,1
150	8,6	3,7	1,4
200	10,1	4,4	1,7
250	11,6	5,0	1,9
300	12,7	5,5	2,1
450	16,7	7,2	2,8
600	21,2	9,2	3,5



Classificazione secondo UNI EN 12207

Classe 3

TENUTA ALL'ACQUA (UNI EN 1027 - Metodo A)

Dopo 1 minuto dal raggiungimento della pressione di prova di 100 Pa, si è manifestata infiltrazione di acqua dal bordo inferiore.

Classificazione secondo UNI EN 12208

Classe 2A

RESISTENZA AL CARICO DEL VENTO (UNI EN 12211)

Prova di deformazione (P1)

Luce elemento più deformabile (mm) : **2100**

		Pressione P1 (Pa)					
		0	1200	0	0	-1200	0
Misura spostamento (mm)	A	Ao	Ap	A residuo	Ao	Ap	A residuo
	M	0,0	1,5	0,0	0,0	-1,6	0,0
	B	Bo	Bp	B residuo	Bo	Bp	B residuo
		0,0	1,0	0,0	0,0	-1,4	0,0
Deformazione frontale (mm)		Fp			Fp		
		3,25			-2,10		
Deformazione frontale relativa		1/ 646			1/ -1000		
CLASSE		A		B		C	
Limiti freccia relativa frontale (mm)		<1/150	14,0	<1/200	10,5	<1/300	7,0

Prova a pressione ripetuta (P2)

Sono stati applicati n° 50 cicli, comprendenti pressioni negative e positive, a **600 Pascal**; al termine la funzionalità dell'infisso è risultata inalterata.

La permeabilità all'aria, effettuata dopo le prove P1 e P2, non ha subito variazioni > del 20 % rispetto all'aria massima ammissibile per la classe di permeabilità all'aria ottenuta.

Prova di sicurezza (P3)

E' stato applicato un ciclo di pressione di prova negativa e positiva pari a **1800 Pascal** (190 Kg/m² e 200 Km/h); al termine la funzionalità dell'infisso è risultata inalterata

Clasificazione secondo UNI EN 12210

Classe C3

LO SPERIMENTATORE

Geom. Danilo Maggi

LA DIREZIONE

Dott. Ing. Camillo Ottolenghi

Montecarlo (TR)