

TEST REPORT No. 357422

Place and date of issue: Bellaria-Igea Marina - Italia, 18/12/2018

Customer: IDECO ARIGIRIS PAPAPOPOULOS INDUSTRIAL S.A. - Egnatia Odos Veria-Thessaloniki km 10,000 - Veria, IMATHIA - Greece

Date testing requested: 09/10/2018

Order number and date: 78085, 09/10/2018

Date sample received: 09/03/2018

Date of testing: 06/12/2018

Purpose of testing: testing the wind resistance of an awning with lateral guiderail with tension system according to clause 7.5 of standard UNI EN 1932:2013 with test parameters and results evaluation according to standard UNI EN 13561:2015

Place of testing: Istituto Giordano S.p.A. - Strada Erbosa Uno, 72 - 47043 Gatteo (FC) - Italia

Origin of sample: sampled and supplied by the Customer

Identification of sample received: No. 2018/0517

Name of sample*

The test sample is named "VERTICAL SCREEN".

(*) according to that stated by the Customer.

Comp. MB
Revis. PB

This test report consists of 5 sheets.

Sheet
1 of 5

Description of sample*

The sample under test consists of an awning with lateral guiderail with tension system, nominal size 1400 mm × 1500 mm.

The sample is composed by curtain with stated openness coefficient "Co" 65%.



Photograph of the sample.

Normative references

Testing was carried out according to the following standards:

- UNI EN 13561:2015 dated 09/07/2015 "Tende esterne e tendoni - Requisiti prestazionali compresa la sicurezza" (*"External blinds and awnings - Performance requirements including safety"*);
- UNI EN 1932:2013 del 18/07/2013 "Tende e chiusure oscuranti esterne - Resistenza al carico del vento - Metodo di prova e criteri di prestazione" (*"External blinds and shutters - Resistance to wind loads - Method of testing and performance criteria"*).

(*) according to that stated by the Customer.

Test apparatus

Testing was carried out using the following equipment:

- measure and control computerized semiautomatic system with differential pressure transducers;
- Mitutoyo Corporation digital meter model “TD-S551D1 216-452”, full scale 5500 mm (in-house apparatus code: FT364);
- 25 kN load cell with related reader.

Test methods

The test was performed in accordance with clause 7.5 “Awnings with lateral guiderail with tension system” of standard UNI EN 1932:2013 and with clause 4.1 “Resistance to wind loads” of standard UNI EN 13561:2015. The test loads for the reference class in clause 4.1 of standard UNI EN 13561:2015, were determined using the following equation

$$F_{N-Co>20\%} = (\beta \cdot p_N \cdot L \cdot H) \cdot (1 - Co)$$

where: L = sample width, expressed in m;

H = sample height, expressed in m;

p_N = threshold value of nominal test pressure, in N/m^2 , corresponding to the class considered in accordance with table 1 of standard UNI EN 13561:2015;

β = 1 (coefficient of conversion for the distribution of loads);

Co = openness coefficient of the fabric.

The sample was tested to determine the wind load resistance using method 1:

- applying a nominal load “ F_N ” distributed on each end of the bar test, for at least 2 min, releasing and inspecting;
- half of the nominal load is applied to each and of the bar test, then one end of the test bar is released.

The drop test was carried out on one side and then on the other, releasing and inspecting each time.

Environmental conditions at the time of testing

Room temperature	(19 ± 1) °C
Relative humidity	(56 ± 5) %

Test results

Load method*	1
Width "L"	1,330 m
Height "H"	1,450 m

(*) according to clause 5 of standard UNI EN 1932:2013.

Wind load resistance test.

Applied load		Side	Result*
[Pa]	[N]		
60	115	outer	complying

(*) According to clause 7.3.6 "Performance criteria" of standard UNI EN 1932:2013 there shall be no:

- tearing in fabric;
- breakage (stitching, frame, guiding pins..);
- permanent deformations (profiles, rails, roller tube..);
- exit from guide rails.



Photograph of the sample during test.

Drop test.

Drop height H/3 [mm]	Side	Result*
483	right	complying
483	left	complying

(*) According to clause 7.3.6 "Performance criteria" of standard UNI EN 1932:2013 there shall be no:

- tearing in fabric;
- breakage (stitching, frame, guiding pins..);
- permanent deformations (profiles, rails, roller tube..);
- exit from guide rails.

Findings

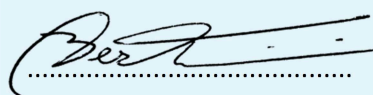
On the basis of the test performed, on the basis of the results obtained and based on standards UNI EN 13561:2015 and UNI EN 1932:2013, the test sample, comprising an awning with lateral guiderail with tension system, called "VERTICAL SCREEN" and submitted by the company IDECO ARIGIRIS PAPADOPOULOS INDUSTRIAL S.A. - Egnatia Odos Veria-Thessaloniki km 10,000 - Veria, IMATHIA - Greece, results to belong, according to clause 4.1 of standard UNI EN 13561:2015, to the performance class specified in the following table.

Test type	Test reference	Class reference	Class
wind load resistance	UNI EN 1932:2013	UNI EN 13561:2015	4

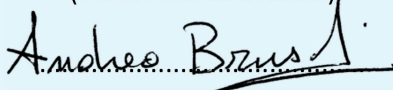
The results given refer exclusively to the test sample itself and are only valid under the same conditions in which testing was carried out.

This test report alone shall not be considered a certificate of conformity.

Test Technician
(Dott. Ing. Paolo Bertini)



Head of
Security and Safety Laboratory
(Dott. Andrea Bruschi)



Chief Executive Officer

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