

TEST REPORT No. 368061

Customer

PCA - PAPADOPOULOS CONSTRUCTIVE APPLICATIONS
Industrial Area of Thessaloniki, Block 38 - 57022 SINDOS - Greece

Item*

glazed railing without handrail named "M16"

Activity

**resistance to linear distributed static load using standard
UNI 10806:1999 test method with increased loads**

Results

Activity	Requirement	Result
linear distributed static load	2,0 kN/m	compliant

(*) according to that stated by the customer.

Bellaria-Igea Marina - Italy, 30 December 2019

Chief Executive Officer

Order:
82336Item origin:
sampled and supplied by the customerIdentification of item received:
2019/3088 dated 16 December 2019Activity date:
16 December 2019Activity site:
Istituto Giordano S.p.A. - Strada Erbosa Uno, 74 -
47043 Gatteo (FC) - 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.

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Chief Test Technician:

Dott. Andrea Bruschi

Head of Security and Safety Laboratory:

Dott. Andrea Bruschi

Compiler: Dott. Marina Bonito**Reviewer:** Dott. Andrea Bruschi

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Description of item*

The item consists of a glass/aluminum railing without handrail with the following characteristics:

Measured overall width	1000 mm
Measured effective height	1000 mm

The glass type is laminated glass, overall nominal thickness 17,52 mm, made of:

- 8 mm tempered glass;
- 1,52 mm PVB;
- 8 mm tempered glass.

Further details of item specifications in annex "A".

Customer-supplied component list

Code	Description	Material
GM05B	railing profile fixing rubber	EPDM
GM05-1	railing profile	aluminum
GM05-2	glass holding profile	aluminum
GM01SF-16	railing profile fixing rubber-wedges	ABS
GM05-7_2	1 SET-6 PCS A+B	AISI 304 SS
GM05-8 SET	railing profile end cap-set	steel
//	glass 88.4 tempered	glass
//	lifting eye bolt M10 DIN 580	steel
//	hexagonal bolt M10x50 mm DIN 933	steel
//	washer M10 DIN 123	steel
//	hex nut M10 DIN 934	steel



Item photograph

(*) according to that stated by the customer, apart from characteristics specifically stated to be measurements; Istituto Giordano declines all responsibility for the information and data provided by the customer that may influence the results.

Normative references

Standard	Title
UNI 10806:1999*	Ringhiere, balaustre o parapetti prefabbricati - Determinazione della resistenza meccanica ai carichi statici distribuiti (<i>Prefabricated railing systems - Determination of the mechanical strength under distributed static loads</i>)

(*) with the exception of the length of the railing and with heavier load than the one prescribed for public use.

Apparatus

Description	In-house identification code
Steel frame simulating actual installation of the sample on the floor with pneumatic equipment for the simulation of the static load with 5 load actuators	EDI048
AEP 100 kg load cell	EDI063
3 GEFTRAN electronic displacement transducers model "PZ-34-S150", range 0 - 150 mm	FT451/1, FT451/2 e FT451/3
LA CROSSE TECHNOLOGY digital thermo-hygrometer model "WS8009"	EDI111
BORLETTI electronic gauge model "CDEP15"	EDI066
MITUTOYO Corporation digital tape model "TD-S551D1 216-452"	FT364

Method

The test was carried using the method specified in standard UNI 10806:1999 but with increased load.

Both the underside and side were fixed to the test rig in order to reproduce actual installation conditions.

Procedure

Normative reference	Activity	Test parameters
clause 7	linear distributed static load	<p>Three gauges were positioned in order to measure the relative displacement of the panel top edge (two at the ends and one at the midpoint between them) and the following test sequence was performed:</p> <ul style="list-style-type: none"> – preload of 0,6 kN for 5 min – preload removal and gauge reset – uniformly-distributed horizontal linear static load of 2,0 kN/m was gradually applied (in at least 5 s) to the top edge of the sheet and kept for 15 min upon reaching the test load – recording of deformation after 15 min – load gradually released back to zero – recording of permanent deformation after 5 min

Environmental conditions

Temperature	(17 ± 1) °C
Relative humidity	(50 ± 5) %

Results

Load step	Load [kN/m]	Duration [min]	Deflection at the measuring points			Effect
			A [mm]	B [mm]	C [mm]	
preload	0,6	5	//	//	//	no damage
working load	2,0	15	3,2	5,1	2,8	no damage
load removal	0,0	5	0,2	0,4	0,2	//



Photograph of the sample during load application

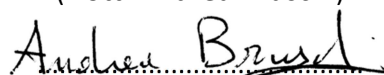
Findings

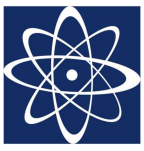
Activity	Requirement	Result
linear distributed static load	2,0 kN/m	compliant

Chief Test Technician
(Dott. Andrea Bruschi)



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





ANNEX "A"
TO TEST REPORT No. 368061

Customer

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technical documentation

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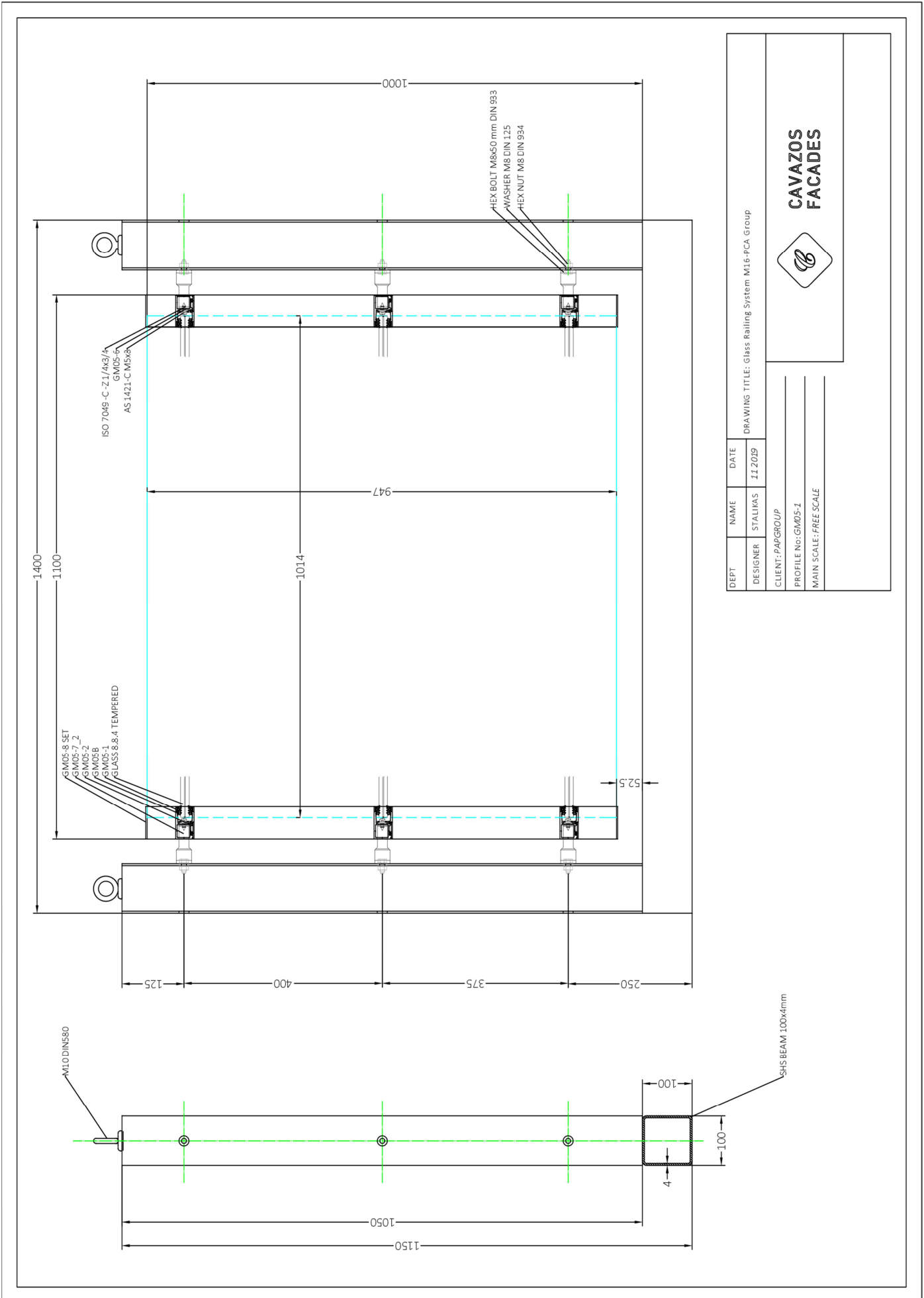
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Bellaria-Igea Marina - Italy, 30 December 2019

This annex consists of. 2 pages.

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DEPT	NAME	DATE	DRAWING TITLE: Glass Railing System M16-PCA Group	
DESIGNER	STALIMAS	11.2019		
CLIENT: PAPERGROUP				
PROFILE No: GMDS-1				
MAIN SCALE: FREE SCALE				



**CAVAZOS
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