

Test Report



Number 23-002574-PR01 (PB-E01-02-en-01)

Owner
(Client) ALUMINCO S.A.
Megali Rahi
32011 Inofita Viotias
Greece

Product Pergola Awning

Designation System: **PERGOLA BIOCLIMATIC**
Shipping name: BIOCLIMATE PERGOLA ROOFTOP

Details Manufacturer ift Hellas P.C., Oreokastro; Material Aluminium;
Overall dimensions (W x H) 2595 mm x 3200 mm; Clear opening 2460 mm x 2850 mm; Cross section (L x W) 2440 mm x 215 mm; Cross section (H x D) 50 mm x 215 mm; Drive Motor

Special features Fixed slats, non-retractable pergola awning

Order Resistance to wind loads - shutters

Contents The test report contains a total of 7 pages
and annexes (9 pages)

Note The test report shall only be published in its unabbreviated form.
The "Guidance Sheet for the Use of ift Test Documents" applies.

1 Execution

1.1 Sampling and product description

The following details have been presented to ift:

Sampler: ALUMINCO S.A., 32011 Inofita Viotias (Greece)
Sampling date: 05.09.2023
Evidence: A sampling report has been presented to ift.
Date of delivery: 11.12.2023
Description: For product identification the specimen tested is described/represented in the Annex. Material specifications, item numbers and other company-specific descriptions are details provided by the client and will be checked for plausibility by ift.

ift-No. of test specimen (PK): 23-002574-PK01 / WE: 59894-001

1.2 Basic documents *) of the procedures

EN 1932:2013 - 06

External blinds and shutters - Resistance to wind loads - Method of testing and performance criteria

EN 13561:2015 - 05 + AC:2016 - 03

External blinds and awnings - Performance requirements including safety

*) and the relevant national versions, e.g. DIN EN

1.3 Short description of the procedures

Resistance to wind loads according to EN 1932:2013-06

Method of loading "N°3" was applied as specified by the standard.

For testing the test specimens were mounted to the window and facade test rig, and for application of the requested static pressure a film was attached over the complete surface of the test specimen. The size of the film, as set out by the standard, is documented in the measuring data sheet.

Testing was performed with the nominal load and/or the safety load. The relevant test pressure depending on the wind load class was applied in a jolt-free manner for 2 minutes each. During the testing of the nominal load the deflection was measured at each pressure level.

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Resistance to wind loads - shutters

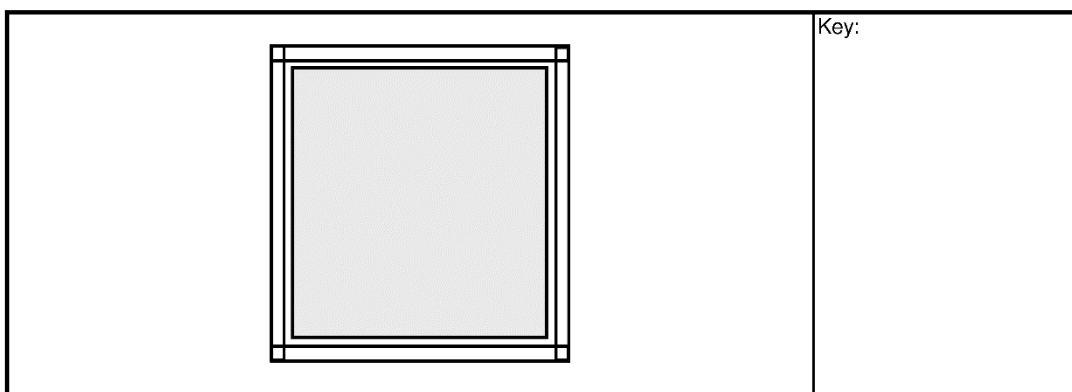
2 Detailed results

Resistance to wind loads according to EN 1932:2013-06

Project No.	23-002574-PR01
Basis of test	EN 1932:2013-06 External blinds and shutters - Resistance to wind loads - Method of testing and performance criteria
Test equipment	EPst/026691 - Window - Facade test rig
Test specimen	Pergola Awning
Test specimen No.	59894-001
Date of test	11.12.2023
Testing personnel in charge	Alexandros Simeonidis
Test engineer/s	Alexandros Simeonidis
Implementation of test	
Deviation	There are no deviations from the test method according standard/basis.
Boundary/ambient conditions	Temperature 15 °C Air humidity 63,4 % Air pressure 1003 hPa The ambient conditions are in accordance with the standard requirements.

Measurement data/results

Total size l x h	2595	x	3200 mm
Curtain size L x H	2460	x	2850 mm
Area of test specimen	7,01	m ²	
Distance film/axis curtain (x)			200 mm



Key:

Photo 1 Test specimen

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Calculation nominal load: $F_N = \beta \times p_N \times L \times H$ (General)

Coeffizient β :

1

Table 1 Conversion test loads, nominal load

Class	0	1	2	3	4	5	6
Nominal test pressure p_N [N/m ²]		40	70	110	170	270	400
Nominal test pressure p_N at $Co > 20\%$ [N/m ²]		40	70	110	170	270	400
Nominal load $F_{N-Co > 20\%}$ [N]		280	491	771	1192	1893	2804

Calculation safety load: $F_S = \gamma \times F_N$

Safety factor γ :

1,5

Table 2 Conversion test loads, nominal load

Class	0	1	2	3	4	5	6
Safety test pressure p_S [N/m ²]		60	100	170	250	400	600
Safety test pressure p_S at $Co > 20\%$ [N/m ²]		60	100	170	250	400	600
Safety load F_S [N]		421	701	1192	1753	2804	4207

Requirements:

After each sequence, all of the following criteria must be fulfilled:

- no crack of the lining may occur
- no break may occur
- no permanent deformation may occur
- no getting out of the guides may occur

Calculation size of film:

$H_f = H + 1250 + 2x$

$H_f = 4500 \text{ mm}$

$L_f = L + 1000 + 2x$

$L_f = 3860 \text{ mm}$

1 Nominal load

1.1 Direct nominal load (positive)

Table 3 Test results direct nominal load

Test load p_s [Pa] (2 min.)	Sliders or rollers blocked	Breakage	Permanent deflection	Get out of guides	Observation
40					
70					
110					
170					
270					
400	no	no	no	no	-
800	no	no	no	no	-

1.2 Reverse nominal load (negative)

Table 4 Test results reverse nominal load

Test load p_s [Pa] (2 min.)	Sliders or rollers blocked	Breakage	Permanent deflection	Get out of guides	Observation
60					
100					
170					
250					
400					
600	no	no	no	no	-
800	no	no	no	no	-

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2 Safety load

2.1 Direct safety load (positive)

Table 5 Test results direct safety load

Test load p_s [Pa] (2 min.)	Crack of lining	Breakage	Permanent deflection	Get out of guides	Observation
60					
100					
170					
250					
400					
600	no	no	no	no	-

2.2 Reverse safety load (negative)

Table 6 Test results reverse safety load

Test load p_s [Pa] (2 min.)	Crack of lining	Breakage	Permanent deflection	Get out of guides	Observation
60					
100					
170					
250					
400					
600	no	no	no	no	-

Remarks

An extra pressure at 1500 Pa applied

3 Summary

3.1 Result

The test results are shown in the measuring data sheet, see item "Detailed results".

3.2 Instructions for use

This test/evaluation does not allow any statement to be made on further characteristics of the present structure regarding performance and quality, in particular the effects of weathering and ageing.

The test was performed according to standard and the details for identification of the test specimen are complete; on the basis of this Test Report an "ift-Nachweis" (Evidence) can be issued.

ift Rosenheim

22.12.2023



Thomas Stefan, Dipl.-Ing. (FH)
Head of Testing Department
Building Component Testing



Alexandros Simeonidis, B.Eng.
Operating Testing Officer
Building Component Testing

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Die Beschreibung des geprüften Probekörpers dient der normkonformen Identifizierung des Produkttyps, für den die festgestellten Werte gelten. Alternativ zur vorgegebenen tabellarischen Datenerfassung kann die Beschreibung auch in Form von technischen Zeichnungen, Verarbeitungsrichtlinien, Stücklisten etc. erfolgen. Zusätzliche Produktdetails bitte ergänzen.

Die *Mindest-Angaben sind Voraussetzung für die Erstellung eines ift-Nachweises. Nur bei Angabe aller in diesem Dokument angeforderten Daten ist ggf. eine nachträgliche Gutachtliche Stellungnahme möglich. Alle *Mindest-Angaben des Auftraggebers werden vom ift auf Plausibilität geprüft; ggf. festgestellte Abweichungen und/oder ergänzende Feststellungen werden dokumentiert.

The description of the specimen to be tested serves to identify, in conformity with the standards, the product type, for which the values determined will apply. Alternatively to the specified tabulated data collection, the description may also be made by technical drawings, processing instructions, parts lists, etc. Please supplement additional product details.

The *minimum details are the precondition for issuing the "ift-Nachweis". Only upon provision of all requested data subsequently requested Expert Statements may be issued. All *minimum details provided by the client will be checked for plausibility by ift, any deviations observed and/or additional findings will be documented.

* Mindestangaben

* minimum details

Alle Maßangaben in mm

All dimensions in mm

Nicht Zutreffendes bitte löschen.

Please delete non-appropriate.

Wareneingang-Nr.: 59894-001

ID of goods received :

ift Mitarbeiter: asi

ift staff member :

Eigenschaft Characteristic	Angaben des Auftraggebers (unverändert) Information provided by client (unchanged)
Produkt Product	* BIOCLIMATIC PERGOLA
Hersteller Manufacturer	* ALUMINCO S.A.
Bezeichnung / Typ / Art.-Nr. Designation / type / item no.	* BIOCLIMATE PERGOLA ROOFTOP
System System	* PERGOLA BIOCLIMATIC
Probekörper 1 (B _{zul} x H _{max}) Test specimen 1 (W _{permitted} x H _{max})	*
Elementgröße (B x H) Element size (W x H)	2,595 mm x 3,200 mm
Charakterisierte Größe (B x H) Characterized size (W x H)	2,460 mm x 2,850 mm
Herstelldatum Date of manufacture	05.09.2023
Rollladenpanzer Roller curtain	
Material Material	ALUMINIUM 6063-T66
Profilnummer Profile no.	PS20-200 APS20-1101 PS20-300, fixed slat PS20-301, fixed slat
Profilquerschnitte (BxD) Profile cross sections (W x T)	215 mm x 50 mm

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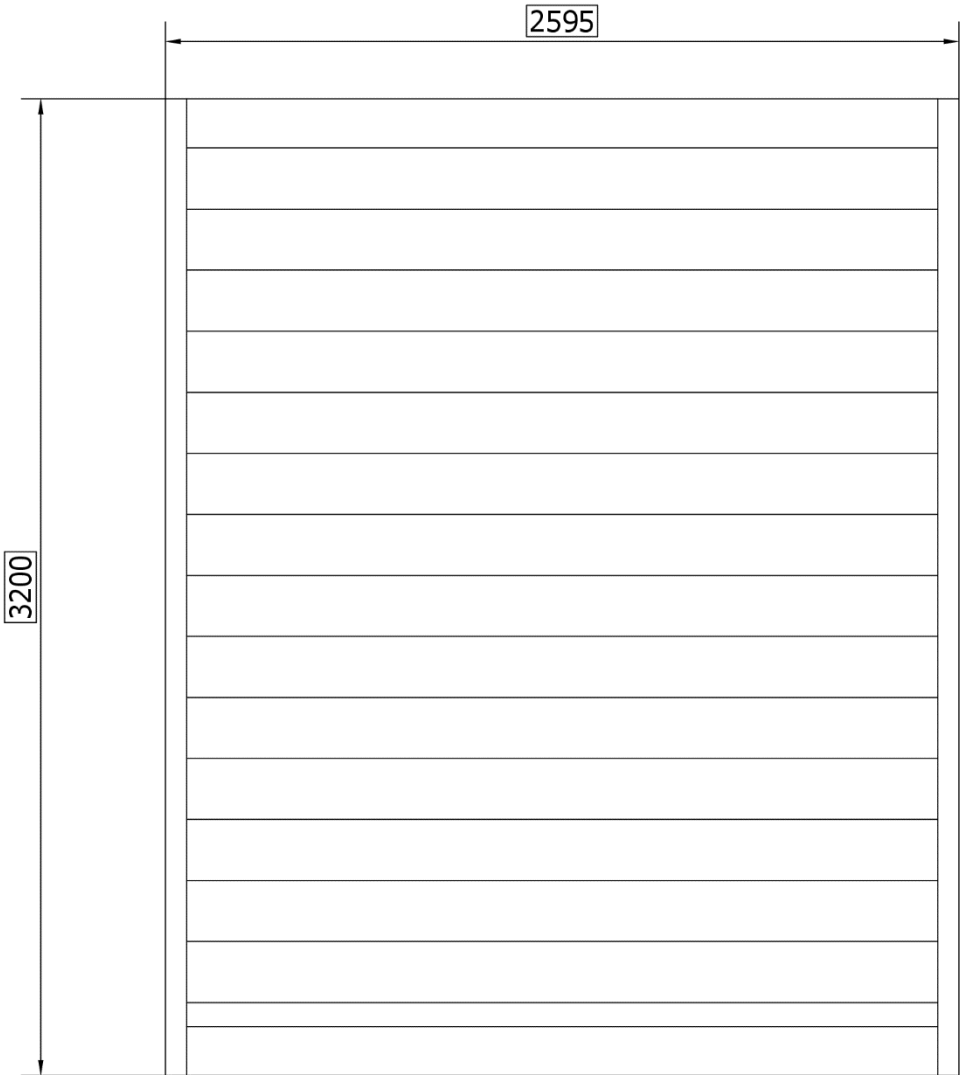
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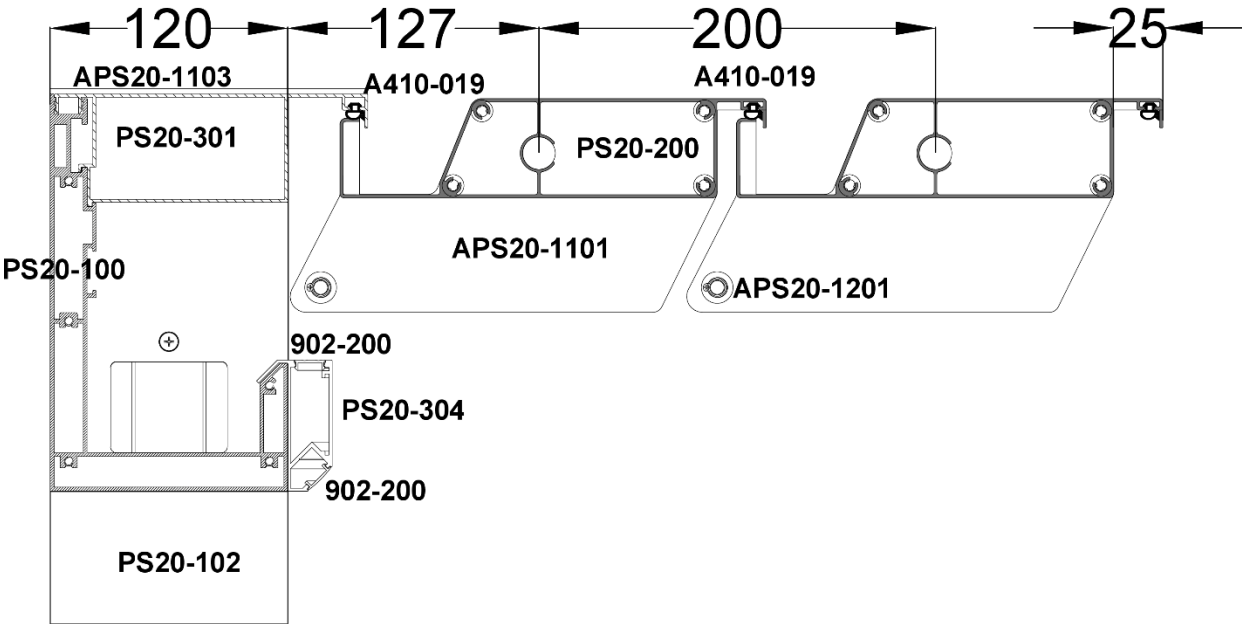
Eigenschaft Characteristic	Angaben des Auftraggebers (unverändert) Information provided by client (unchanged)
Einstand des Panzers in den Führungsnuten Lateral end-cap	N/A
Spiel des Panzers in den Führungsschienen Sealing of lamella	A410-019
Lamellenbreite Louvers width	2,440 mm
Antrieb/Bedienungsart Drive unit / mode of operation	LINEAR MOTOR 24V 2500N 300MM STROKE – Ø37MM
Hersteller Manufacturer	SOMFY-TELECO
Bezeichnung / Typ / Art.-Nr. Designation / type / item no.	LINEAR MOTOR
Untersetzungsverhältnis Reduction ratio	2500N – 300MM STROKE
Führungsschiene Guide track	
Material Material	ALUMINIUM 6063-T66
Profilnummer Profile no.	PS20-100 PS20-304, additional profile 902-200, cover profile, on PS20-304
Nutabmessung (T x B) Groove dimensions (D x W)	51 mm x 53.5 mm

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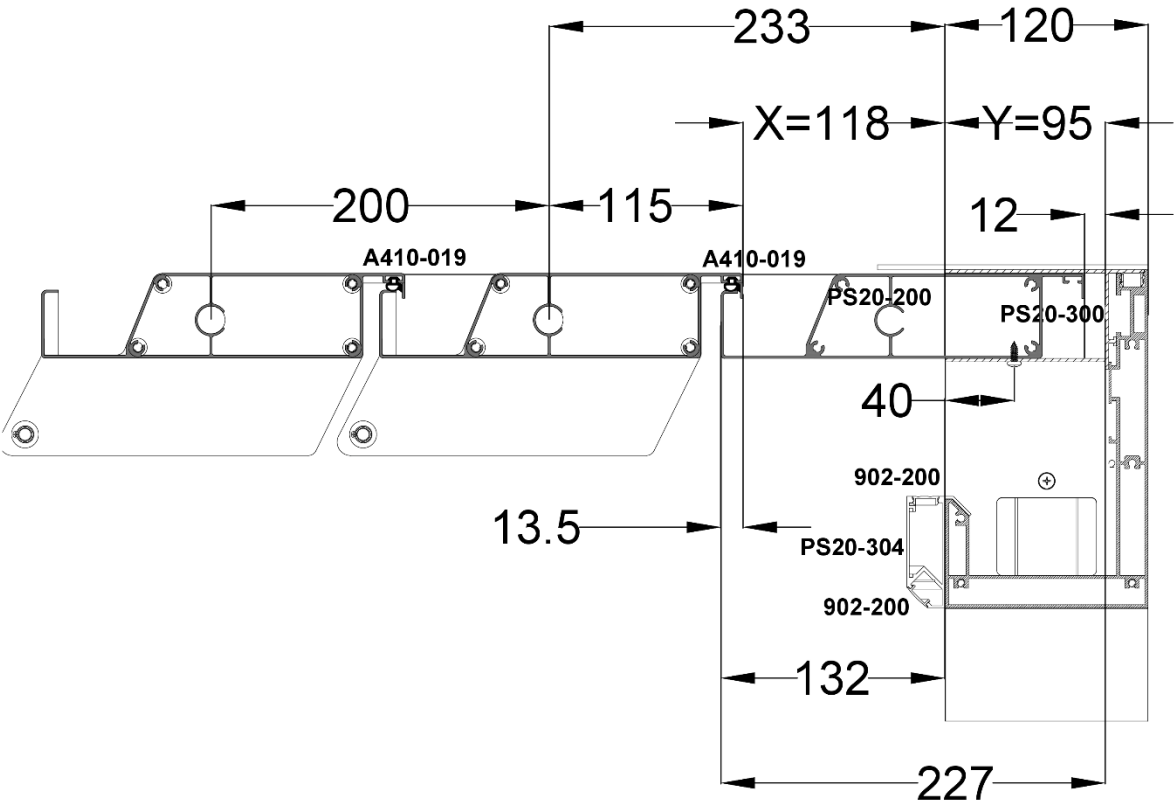
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Picture 1 View of test specimen



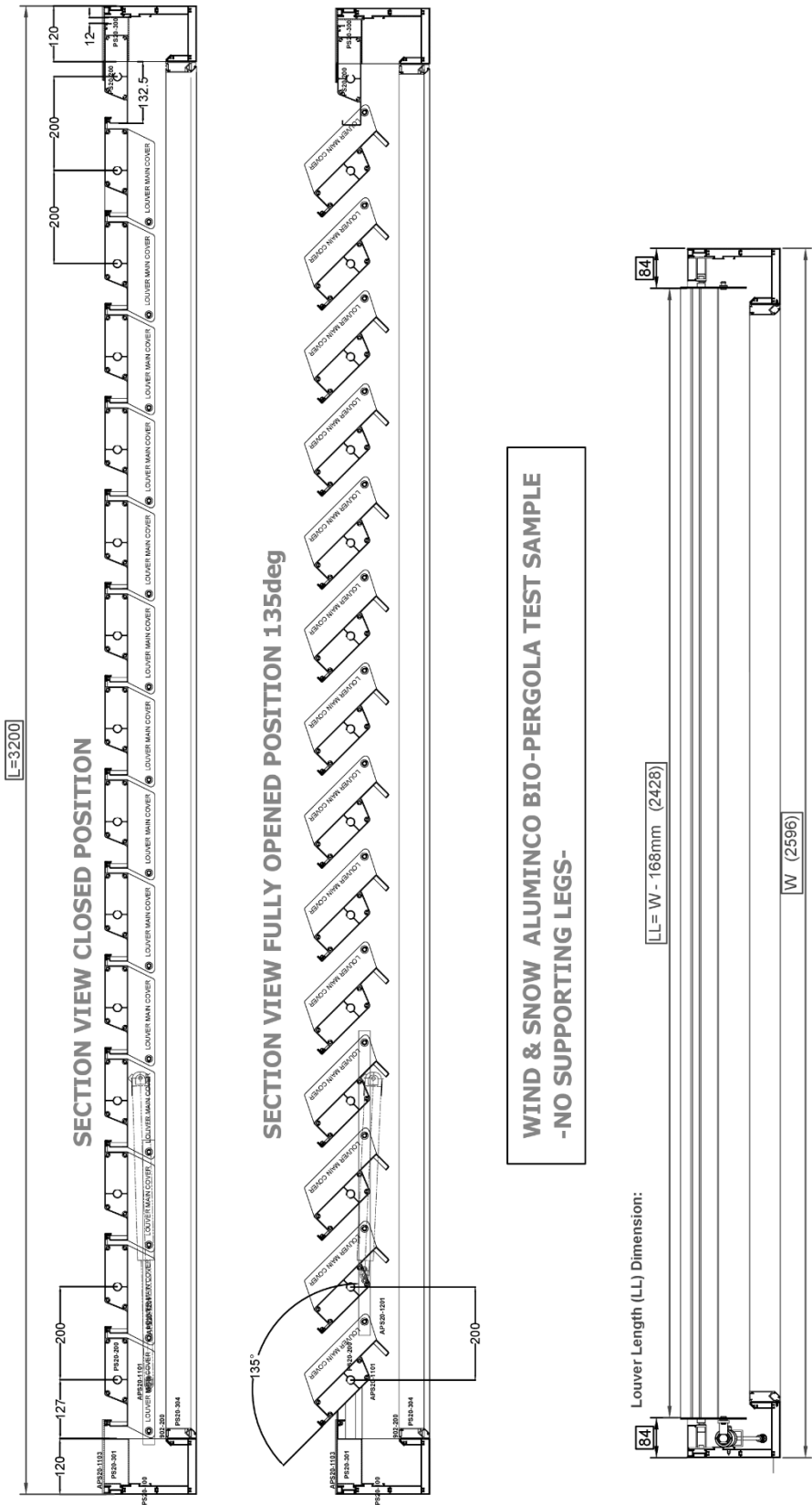
Picture 2 Vertical section



Picture 3 Vertical section

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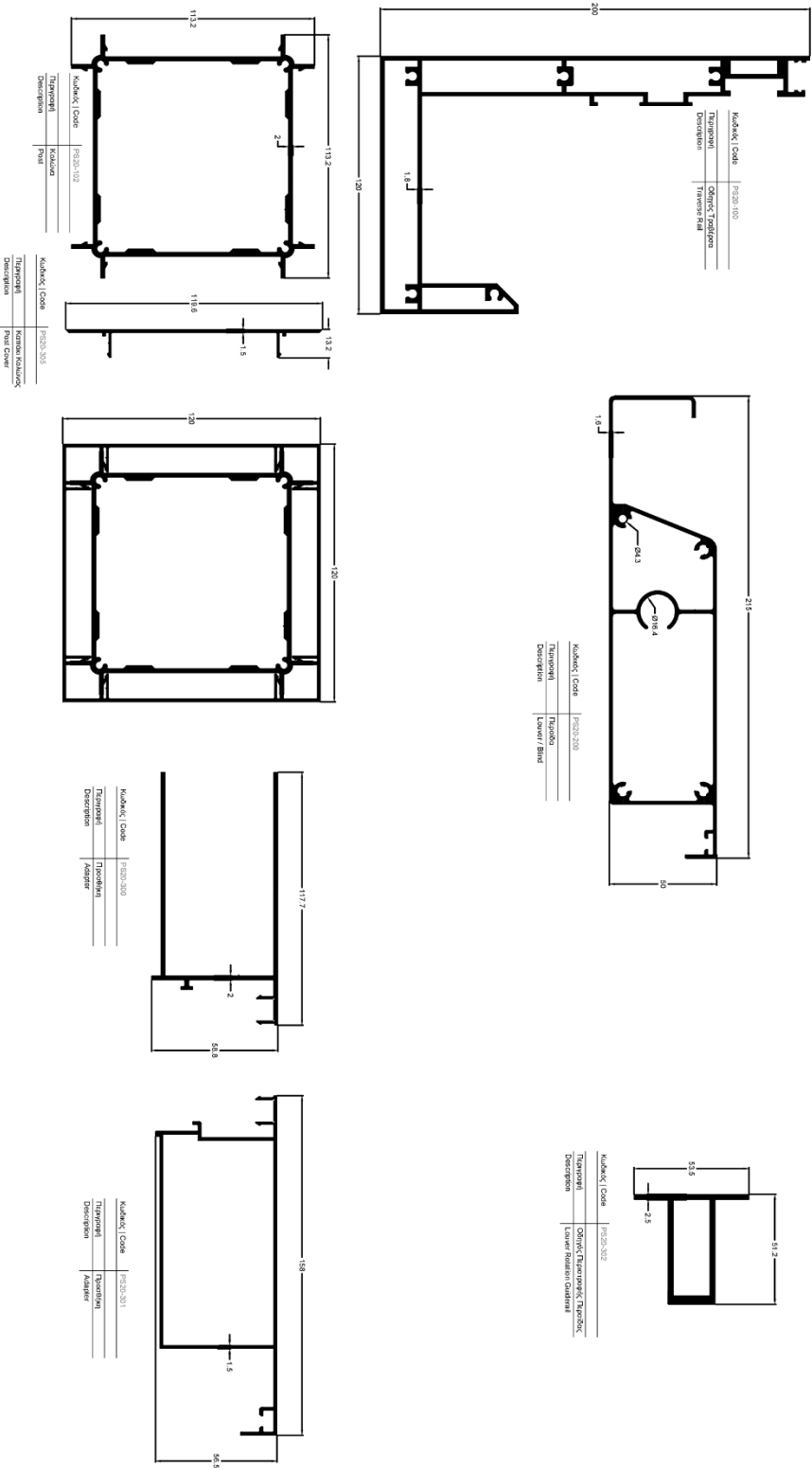
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Picture 4 Horizontal and vertical sections

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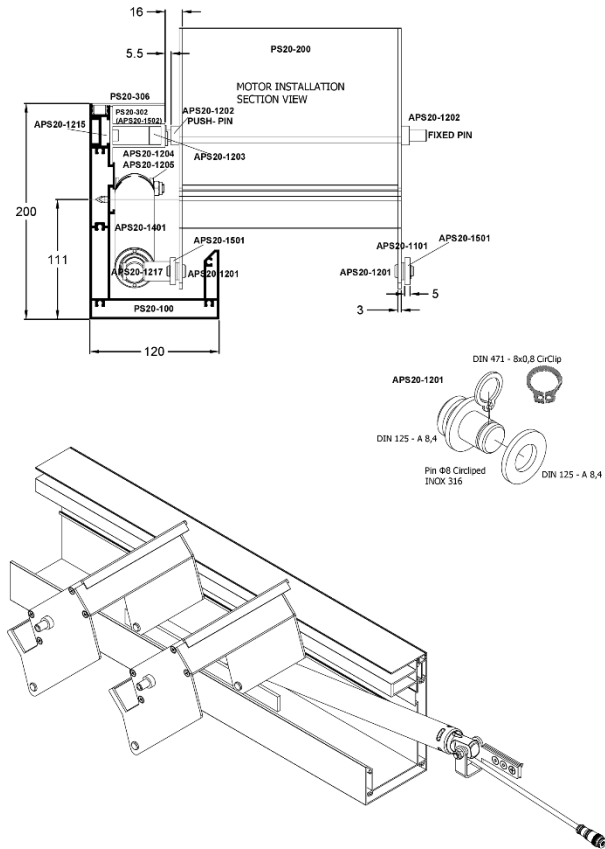
Picture 5

Profiles

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Picture 6 Motor fixation



Picture 1 External view



Picture 2 Internal view



Picture 3 Corner of test specimen



Picture 4 Louvre profile



Picture 5 Louvre sealing gasket



Picture 6 Louvre mechanism

Attachment 3: Photo documentation of test specimen

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Picture 7 Louvre, opening view