

**PERFORMANCE TESTING IN ACCORDANCE WITH  
AAMA/WDMA/CSA 101/I.S.2/A440-11 (NAFS 2011) & A440S1-17**

PRODUCT MANUFACTURER
<b>ALUMINCO S.A.</b> Inofita Viotia Greece 32011

REPORT AI-04823-B1
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TEST REPORT SUMMARY	
<b>Product type</b>	<b>Aluminum Combination Window</b>
<b>Product series/model</b>	<b>AL 450</b>
<b>Primary product designator</b>	<b>Class CW – PG55 : Size tested 2325 x 2340 mm (~ 92 x 92 in) - Type C</b>
<b>Optional secondary designator</b>	<b>Positive Design pressure (DP) = 2640 Pa (~55 psf)</b> <b>Negative design pressure (DP) = -2640 Pa (~-55 psf )</b> <b>Water penetration resistance test pressure = 720 Pa (~15.04 psf)</b> <b>Canadian air infiltration / exfiltration level = A3 Level</b>

*See CLEB laboratory Inc. complete report AI-04823-B1 for test specimen description and detailed test results*

<b>Test completion date</b>	2018-01-25	<b>Number of pages</b>	7 pages & 1 appendix
<b>Report date</b>	2018-03-02	<b>Revision date</b>	-

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**APPENDIX: DRAWINGS, SEALANT, DRAINAGE DETAILS & BILL OF MATERIALS**

## 1.0 INTRODUCTION

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CLEB Laboratory Inc. was retained by "**ALUMINCO S.A.**" to test a fenestration product according to the performance levels in the AAMA/WDMA/CSA 101/I.S. 2/A440-11 (NAFS 2011) & A440S1-17 Standards. The sample components and manufacturing are documented in section 2.0.

Note concerning the use of units of measurement in this report:

According to the AAMA/WDMA/CSA 101/I.S.2/A440 Standard, the use of SI (metric) units is the standard, while IP (Imperial) values given in parentheses are for reference purposes only, and are inexact rounded values. Section 5.0 contains testing results converted to IP units for the sake of convenience only. The only exception to using SI values is in the Performance Grade (PG) portion of the product designation.

Note concerning drawings:

The drawings reviewed for the production of this report are stamped and are on file at CLEB Laboratory Inc. The availability of individual drawings will be at the discretion of the client.

## 2.0 DESCRIPTION OF THE SPECIMEN(S) TESTED

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**Model**

Combination Assembly Window (1 casement with 3 fixed units)

**Product type**

C – (Casement window)

**Operation mode**

Outward opening with lever and fixed

**Drawings (Appendix)**

ELEVATION (INTERNAL SIDE, p15 of 16), VERTICAL COMBINATION MULLION SCREW POSITION, HORIZONTAL COMBINATION MULLION SCREW POSITION, COMPOSITE WINDOW AL 450 (pages 3 to 9 of 16), COMPOSITE WINDOW AL 450 DRAINAGE (page 16 of 16), CAMERA EUROPEA (hardware details), BUILD OF MATERIALS

**Drawings (Others)**

COMPOSITE WINDOW AL 450 (p.1 & 2, 10-12; list of profiles and accessories)

**Date(s) of sample reception**

2018-01-10

**Date(s) of testing**

2018-01-10, 2018-01-11, 2018-01-22, 2018-01-25

### Test specimen installation (test buck)

Material: Oriented strand board panels (~2" x 8") doubled by spruce lumber at perimeter (~2" x 6")

R.O. clearances: 0 mm (0.00")

Fastening (from exterior of test buck through window frame): Sill: (2) # 12 x 3" self-drilling screws; at 125 mm (4.92") from each corner of the smaller fixed unit and (3) # 12 x 3" self-drilling screws; at 150 mm (5.91") from each corner and at mid span of the wider fixed unit. Head: (2) # 12 x 2-1/2" self-drilling screws; at 125 mm (4.92") from each corner of the casement sub-frame and (3) # 12 x 2-1/2" self-drilling screws; at 150 mm (5.91") from each corner and at mid span of the larger fixed unit. Jambs: (2) # 12 x 3" self-drilling screws; at 120 mm (4.72") from each corner of the fixed units at base and (3) # 12 x 3" self-drilling screws at 150 mm (5.91") from each corner and at mid span of the top units.

Sealing detail: Sealant between test buck and specimen on exterior perimeter only

### Combination assembly description

Mullion type: Horizontal combination mullion; vertical combination mullion and vertical integral mullion.

Joinery type: Corner keys at frame junctions. Vertical combination mullion: (2) rows of # 8 x 2" screws at the frames assembly; one in the exterior section of frame before glass unit installation and one in the interior section under the glazing stops. Horizontal combination mullion: (1) row of # 8 x 2" screws at the frames assembly under the glazing stops. See drawings *VERTICAL COMBINATION MULLION SCREW POSITIONS* and *HORIZONTAL COMBINATION MULLION SCREW POSITIONS* in the Appendix.

Reinforcement: Aluminum T-shaped couplers at mullions; interior and exterior; see drawing *COMPOSITE WINDOW AL 450* (pages 3-5-9 of 16) in the Appendix

Sealant: See drawing *COMPOSITE WINDOW AL 450* (pages 3-5-9 of 16) in the Appendix

Overall dimensions: 2325 mm (91.54") W x 2340 mm (92.13") H

### Frame (Two small fixed units at bottom)

Material: Extruded Aluminum

Joinery type: Mechanical assembly (screwed / crimped)

Reinforcement: No reinforcement

Weatherstripping: See drawing *COMPOSITE WINDOW AL 450* (pages 6-7-9 of 16) in the Appendix

Sealant: See drawing *COMPOSITE WINDOW AL 450* (pages 6-7-9 of 16) in the Appendix

Drainage: See drawing *COMPOSITE WINDOW AL 450* (pages 6-7-9 of 16) in the Appendix

Glazing: Double glazed sealed unit (26.0 mm) / Glass thickness: Exterior: 6 mm – Interior: 3+3 mm / Air space gap: 14.0 mm / Type of glass: Exterior: Clear tempered with LowE; Interior: Laminated with PVB / Type of spacer: Metallic (*Aluminum, hollow*) / Type of sealant: Single-sealed / Type of filling gas: Air or Argon

/ Glass retention: Glazing stop / Glazing seals: Gasket on the exterior face (dry glazing) and gasket on the interior face (dry glazing) / Grid description: None / Setting blocks: None; glass inserted over profiled foam extrusions, see drawing *COMPOSITE WINDOW AL 450* (pages 6-7-9 of 16) in the Appendix

Daylight opening Fx1: 830 mm W x 374 mm H

Daylight opening Fx2: 1290 mm W x 374 mm H

Frame depth: 59.5 mm (2.34")

Overall dimensions: 2325 mm (91.54") W x 503.5 mm (19.82") H

### Frame (Large fixed unit at top)

Material: Extruded Aluminum

Joinery type: Mechanical assembly (screwed / crimped)

Reinforcement: No reinforcement

Weatherstripping: See drawing *COMPOSITE WINDOW AL 450* (pages 5-7-8 of 16) in the Appendix.

Sealant: See drawing *COMPOSITE WINDOW AL 450* (pages 5-7-8 of 16) in the Appendix.

Drainage: See drawing *COMPOSITE WINDOW AL 450* (pages 5-7-8 of 16) in the Appendix.

Glazing: Double glazed sealed unit (26.0 mm) / Glass thickness: Exterior: 6 mm – Interior: 3+3 mm / Air space gap: 14.0 mm / Type of glass: Exterior: Clear tempered with LowE; Interior: Laminated with PVB / Type of spacer: Metallic (*Aluminum, hollow*) / Type of sealant: Single-sealed / Type of filling gas: Air or Argon / Glass retention: Glazing stop / Glazing seals: Gasket on the exterior face (dry glazing) and gasket on the interior face (dry glazing) / Grid description: None / Setting blocks: None; glass inserted over profiled foam extrusions, see drawing *COMPOSITE WINDOW AL 450 (pages 5-7-8 of 16)* in the Appendix  
Daylight opening Fx3: 1290 mm W x 1722 mm H  
Frame depth: 59.5 mm (2.34")  
Overall dimensions: 1407.5 mm (55.41") W x 1834.5 mm (72.22") H

### **Frame (Casement frame)**

Material: Extruded Aluminum  
Joinery type: Mechanical assembly (screwed / crimped)  
Reinforcement: No reinforcement  
Weatherstripping: See drawing *COMPOSITE WINDOW AL 450 (pages 3-4-5 of 16)* in the Appendix  
Sealant: See drawing *COMPOSITE WINDOW AL 450 (pages 3-4-5 of 16)* in the Appendix  
Drainage: See drawing *COMPOSITE WINDOW AL 450 (pages 3-4-5 of 16)* in the Appendix  
Glazing: None  
Frame depth: 59.5 mm (2.34")  
Overall dimensions: 915.5 mm (36.04") W x 1834.5 mm (72.22") H

### **Sash**

Material: Extruded Aluminum  
Joinery type: Mechanical assembly (crimped)  
Reinforcement: No reinforcement  
Weatherstripping: See drawing *COMPOSITE WINDOW AL 450 (pages 3-4-5 of 16)* in the Appendix.  
Sealant: See drawing *COMPOSITE WINDOW AL 450 (pages 3-4-5 of 16)* in the Appendix.  
Drainage: See drawing *COMPOSITE WINDOW AL 450 (page 16 of 16)* in the Appendix  
Glazing: Double glazed sealed unit (26.0 mm) / Glass thickness: Exterior: 6 mm – Interior: 3+3 mm / Air space gap: 14.0 mm / Type of glass: Exterior: Clear tempered with LowE; Interior: Laminated with PVB / Type of spacer: Metallic (*Aluminum, hollow*) / Type of sealant: Single-sealed / Type of filling gas: Air or Argon / Glass retention: Glazing stop / Glazing seals: Gasket on the exterior face (dry glazing) and gasket on the interior face (dry glazing) / Grid description: None / Setting blocks: (1) per rail and (1) per stile, diagonally opposed; combined with profiled foam extrusions, see drawing *COMPOSITE WINDOW AL 450 (pages 3-4-5 of 16)* in the Appendix / Daylight opening: 720 mm W x 1645 mm H  
Overall dimensions: 865 mm (34.06") W x 1790 mm (70.47") H

### **Hardware (see hardware detail drawing *CAMERA EUROPEA*)**

(1) Multipoint lock Handle (ROTO); (2) #8 x 1/2"  
(3) Keepers (ROTO) at 114 mm (4.49"), 900mm (35.43") and 1680 mm (66.14") from sill on the jamb; (1) set screw per keeper.  
(1) Keeper (ROTO) per member at casement sub-frame sill and head mid-span.  
(3) Hinges (ROTO); (2) #8 x 1/2" screws; with fixation plate inserted into frame profile groove  
(2) Corner transfers (ROTO)

### 3.0 ALTERATION(S)

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Alteration(s) performed in the laboratory on tested specimen to meet the reported performances: None.

### 4.0 TEST BENCH INFORMATION

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Test bench identification: TB-AWS-05

The calibration of this test bench was done as per Article 9.0 of *ASTM E283, Standard Test Method for Rate of Air Leakage through Exterior Windows, Curtain Walls and Doors*, and *ASTM E331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Uniform Static Air Pressure Difference* and *ASTM E547 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors and Curtain Walls by Cycling Static Air Pressure Difference*. The last calibration of this test bench and related equipment was performed in January, 2018.

5.0 RESULTS OF PERFORMANCE TESTS

SPECIFICATIONS	TEST RESULTS
<p><b><u>Ease of operation test</u></b>  <b><u>U.S. (only) requirements:</u></b>                      Force to initiate motion: Reported only                      Force to maintain motion:                      R – LC Classifications &lt; 100 N (~22.48 lbf)                      CW-AW Classifications &lt; 135 N (~30.35 lbf)                      Force to latch &lt; 100 N (~22.48 lbf)  <b><u>Canadian (only) requirements:</u></b>                      Force to initiate motion &lt; 155 N (~34.85 lbf)                      Force to maintain motion &lt; 100 N (~22.48 lbf)                      Force to latch &lt; 100 N (~22.48 lbf)                      AAMA/WDMA/CSA 101/I.S.2/A440-11 par. 9.3.1.                      A440S1-17 Canadian Supplement par. 5.2                      ASTM-E2068-00 (2008)</p>	<p><b>Passed</b>  <b>CW Classification – U.S. &amp; Canadian Requirements</b></p> <p>Measured to initiate = 62 N (~14 lbf)                      Measured to maintain = 5 N (~1 lbf)                      Measured to latch = 80 N (~18 lbf)</p>
<p><b><u>U.S. Air Leakage Resistance Test</u></b>                      R – LC – CW Classifications:  <math>Q_{inf} \leq 1.5 \text{ l/s-m}^2 @ 75 \text{ Pa}</math> (~ ≤ 0.3 cfm/ft<sup>2</sup> @ 1.57 psf)                      AW Classification:  <math>Q_{inf} \leq 0.5 \text{ l/s-m}^2 @ 300 \text{ Pa}</math> (~ ≤ 0.1 cfm/ft<sup>2</sup> @ 6.27 psf)  <b><u>Canadian air infiltration/exfiltration level</u></b>                      R – LC – CW Classifications:                      A2: <math>Q \leq 1.5 \text{ l/s-m}^2 @ 75 \text{ Pa}</math> (~ ≤ 0.3 cfm/ft<sup>2</sup> @ 1.57 psf)                      A3: <math>Q \leq 0.5 \text{ l/s-m}^2 @ 75 \text{ Pa}</math> (~ ≤ 0.1 cfm/ft<sup>2</sup> @ 1.57 psf)                      AW Classification:                      A2: <math>Q \leq 0.5 \text{ l/s-m}^2 @ 300 \text{ Pa}</math> (~ ≤ 0.1 cfm/ft<sup>2</sup> @ 6.27 psf)                      A3: <math>Q \leq 0.5 \text{ l/s-m}^2 @ 300 \text{ Pa}</math> (~ ≤ 0.1 cfm/ft<sup>2</sup> @ 6.27 psf)                      AAMA/WDMA/CSA 101/I.S.2/A440-11 par. 9.3.2                      A440S1-17 Canadian Supplement par. 5.3                      ASTM-E283-04 (2012)</p>	<p><b>Class CW – U.S. Requirements</b></p> <p><b>A3 Level – Canadian Requirements</b></p> <p>Surface: 5.44 m<sup>2</sup> (~58.51 ft<sup>2</sup>)</p> <p><math>Q_{inf} = 0.05 \text{ l/s-m}^2 @ 75 \text{ Pa}</math> (~0.01 cfm/ft<sup>2</sup> @ 1.57 psf)  <math>Q_{exf} = 0.06 \text{ l/s-m}^2 @ 75 \text{ Pa}</math> (~0.01 cfm/ft<sup>2</sup> @ 1.57 psf)</p>
<p><b><u>Water Resistance Test</u></b>                      No water infiltration under a minimum pressure differential:                      Class R: 140 Pa (~ 2.92 psf)                      Class LC: 180 Pa (~ 3.76 psf)                      Class CW: 220 Pa (~ 4.59 psf)                      Class AW: 390 Pa (~ 8.15 psf)                      AAMA/WDMA/CSA 101/I.S.2/A440-11 par. 9.3.3.                      A440S1-17 Canadian Supplement par. 5.4                      ASTM-E547-00 (2009)</p>	<p><b>Class CW – U.S. &amp; Canadian Requirements</b></p> <p>No water infiltration under the minimum test pressure for the Class.</p> <p>No water infiltration at an optional test pressure differential of:</p> <p><b>580 Pa (~12.19 psf)</b>- U.S. &amp; Canadian Requirements  <b>720 Pa (~15.04 psf)</b> - Canadian requirements only</p>
<p><b><u>Uniform Load Deflection Test</u></b>                      Member deflection at a minimum design pressure (DP) and at optional DP:                      Class R: 720 Pa (~15.04 psf) – Reported only                      Class LC: 1200 Pa (~25.06 psf) – Reported only                      Class CW: Limited to L/175 at 1440 Pa (~30.08 psf)                      Class AW: Limited to L/175 at 1920 Pa (~40.10 psf)                      AAMA/WDMA/CSA 101/I.S.2/A440-11 par. 9.3.4                      ASTM-E330-02 (2010)</p>	<p><b>DP 55 – Class CW</b></p> <p>Net deflection measured on the vertical mullion:                      3.75 mm @ -1440 Pa (~0.15" @ -30.08 psf)                      3.78 mm @ +1440 Pa (~0.15" @ +30.08 psf)                      6.82 mm @ -2640 Pa (~0.27" @ -55.14 psf)                      7.25 mm @ +2640 Pa (~0.29" @ +55.14 psf)                      Allowed ≤ 13.06 mm (~0.51")</p> <p>Net deflection measured on the snubber stile (sash):                      1.08 mm @ -1440 Pa (~0.04" @ -30.08 psf)                      1.30 mm @ +1440 Pa (~0.05" @ +30.08 psf)                      1.87 mm @ -2640 Pa (~0.07" @ -55.14 psf)                      2.49 mm @ +2640 Pa (~0.10" @ +55.14 psf)                      Allowed ≤ 9.57 mm (~0.38")</p>

<p><b>Uniform Load Structural</b>                  Permanent deformation is limited at a minimum structural test pressure (STP) and at optional STP of:  <i>Class R: ≤ 0.4% (L) at 1080 Pa (~22.56 psf)</i>  <i>Class LC: ≤ 0.4% (L) at 1800 Pa (~37.59 psf)</i>  <i>Class CW: ≤ 0.3% (L) at 2160 Pa (~45.11 psf)</i>  <i>Class AW: ≤ 0.2% (L) at 2880 Pa (~60.15 psf)</i>                  AAMA/WDMA/CSA 101/I.S.2/A440-11 par. 9.3.4                  ASTM-E330-02 (2010)</p>	<p><b>STP 55 – Class CW</b></p> <p>Permanent deformation measured on the vertical mullion:                  0.21 mm @ -2160 Pa (~0.01" @ -45.11 psf)                  0.45 mm @ +2160 Pa (~0.02" @ +45.11 psf)                  0.31 mm @ -3960 Pa (~0.01" @ -82.71 psf)                  0.93 mm @ +3960 Pa (~0.04" @ +82.71 psf)                  Allowed ≤ 6.86 mm (~0.27")</p> <p>Permanent deformation measured on the snubber stile:                  0.12 mm @ -2160 Pa (~0.00" @ -45.11 psf)                  0.08 mm @ +2160 Pa (~0.00" @ +45.11 psf)                  0.03 mm @ -3960 Pa (~0.00" @ -82.71 psf)                  0.03 mm @ +3960 Pa (~0.00" @ +82.71 psf)                  Allowed ≤ 5.03 mm (~0.20")</p>
<p><b>Forced-Entry Resistance</b>                  All windows shall be tested according to ASTM F588-07 Grade 10.                  AAMA/WDMA/CSA 101/I.S.2/A440-11 par. 9.3.5</p>	<p><b>Passed</b>  <b>Grade 40</b>                  T<sub>1</sub>=10 min., L<sub>1</sub>=1334 N (~300 lbf), L<sub>2</sub>=667 N (~150 lbf) &amp; L<sub>3</sub>=267 N (~60 lbf)</p>
<p><b>Sash Vertical Deflection Test</b>                  Vertical deflection &lt; 2% of sash width under a load of :                  Classes R &amp; LC: 200 N (~44.96 lbf)                  Classes CW – AW: 270 N (~60.70 lbf)                  AAMA/WDMA/CSA 101/I.S.2/A440-11 par. 9.3.6.4.2</p>	<p><b>Passed</b>  <b>Class CW</b>                  Allowed: 17.2 mm (0.68")                  Measured: 1.9 mm (0.07") for 270 N (~60.70 lbf)</p>
<p><b>Distributed Load Test</b>                  No damage to hardware under a uniform load of                  Class R : 240 Pa (~5.0 psf)                  Classes LC-CW-AW : 300 Pa (~6.27 psf)                  AAMA/WDMA/CSA 101/I.S.2/A440-11 par. 9.3.6.5.2</p>	<p><b>N/A</b></p>
<p><b>Insect Screen Test</b>  <u>Canadian (only) requirements:</u>                  Insect screens shall be tested in accordance with ASTM E1748-95(09) in the outward direction only under a load of 60 N (~13 lbf).                  A440S1-17 Canadian Supplement par. 5.1</p>	<p><b>N/A</b>                  No screen supplied with the product.</p>



## 6.0 CONCLUSION

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Based on the tests results, the fenestration product described in this report meets the requirements of the AAMA/WDMA/CSA 101/I.S. 2/A440-11 and A440S1-17 Standards regarding performance testing.

Detailed assembly drawings showing wall thickness of all members, corner construction and hardware application are on file and have been compared to the sample submitted.

The above results were secured by using the designated test methods and they indicate compliance with the performance requirements of the referenced specification. The test records from this evaluation will be retained for a minimum of four (4) years from the date of report issuance. This report does not constitute certification of this product, which may only be granted by a certification agency.

*Note on the Limitation of Liability:*

*Due care was taken in performing the testing sequence and in reporting the results related to the test specimen received for evaluation. Through acceptance of this report, the Client agrees to exempt CLEB Laboratory Inc. employees and owners from all liability claims and demands arising from any matter related to or concerning the quality and execution of the performance evaluation contained in this report.*

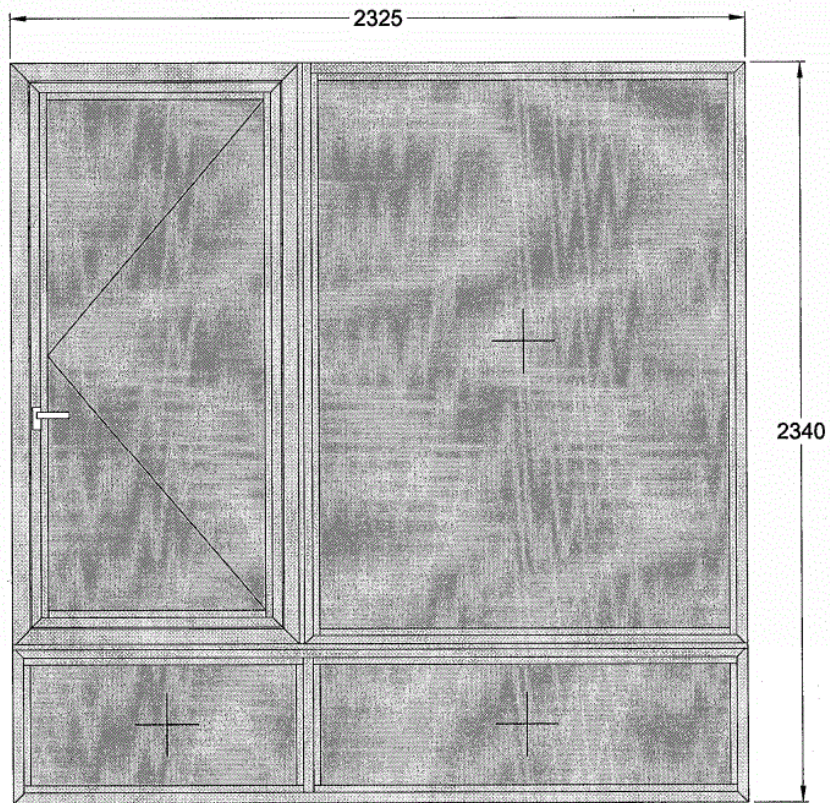
## 7.0 REVISION LOG

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Rev. #	Date	Page(s)	Revision(s)
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**APPENDIX**  
**DRAWINGS, SEALANT, DRAINAGE DETAILS & BILL OF MATERIALS**

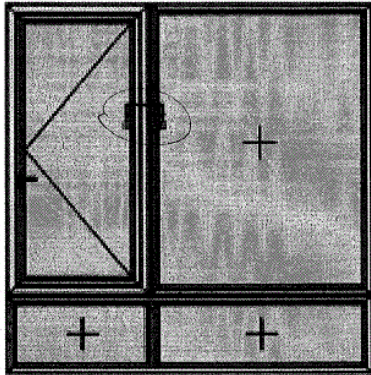
**ELEVATION  
(INTERNAL SIDE)**



 **CLEB** CONFORME DOSSIER  
**AI-04823-B**  
COMPLIES TO FILE

 **CLEB** CLEB laboratoire inc.  
/  
CLEB laboratory inc.  
2018-03-02  
VÉRIFIÉ / CHECKED

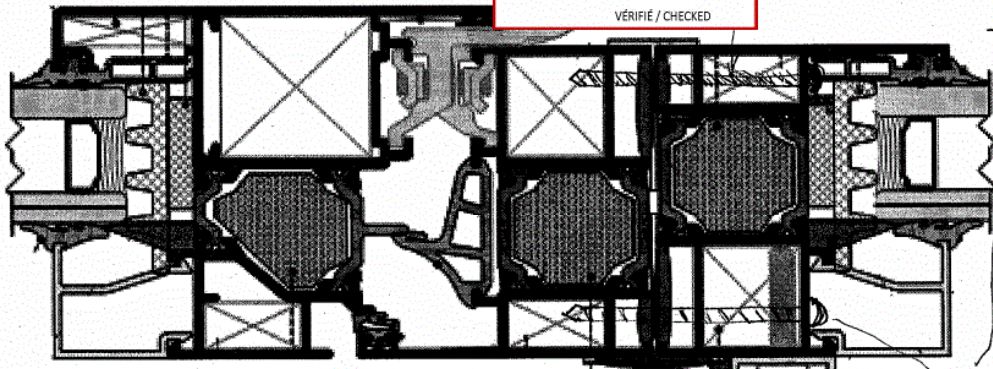




VERTICAL COMBINATION  
MULLION JOINERY  
(SCREW POSITIONS)



(13) # 8x2" at 120mm c-c  
(4.72") c-c



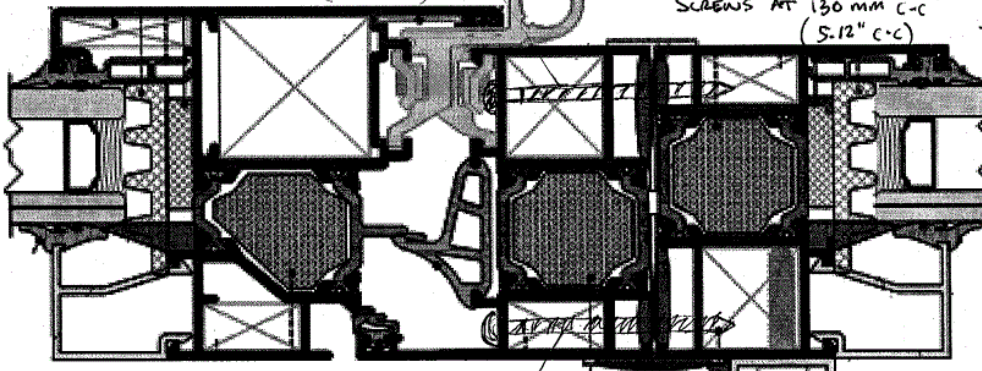
FROM  
LARGE  
FIX  
THROUGH  
CASEMENT  
FRAME

(7) # 8x2" at 220mm c-c  
(8.66" c-c)

2018-03-01

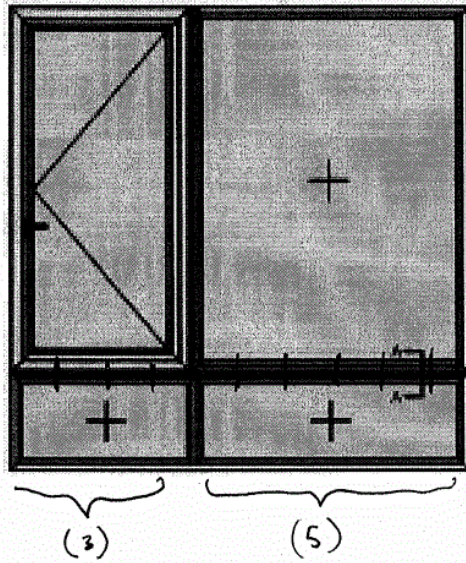
(16) # 6x 3/4" SELF-DRILLING  
SCREWS AT 130 mm c-c  
(5.12" c-c)

(10) # 8x2" at 180mm c-c  
(7.08") c-c



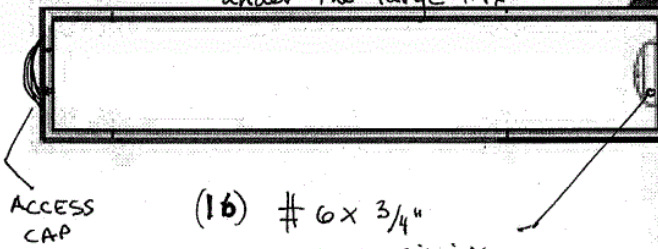
FROM  
CASEMENT  
FRAME  
THROUGH  
LARGE  
FIX

(10) # 8x2" at 175mm c-c  
(6.89" c-c)

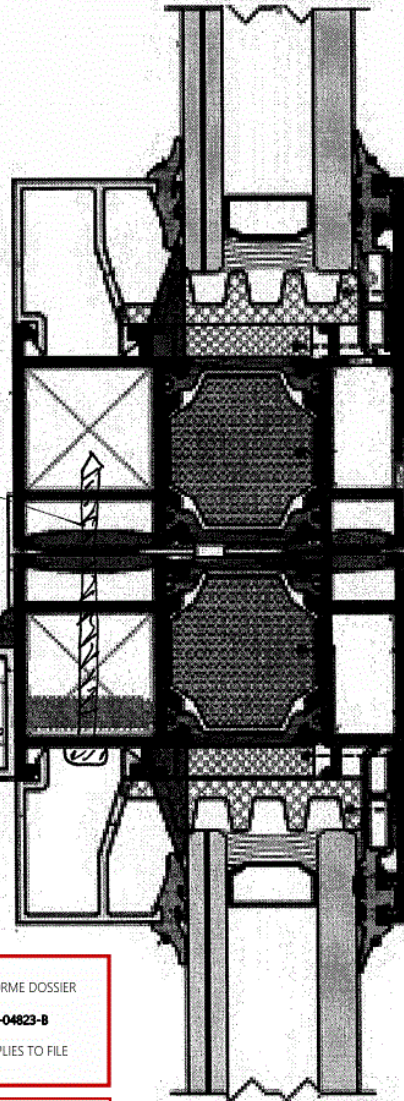


HORIZONTAL  
COMBINATION  
MULLION  
SCREWS  
POSITIONS

#8 x 2" screws  
(3) at 220 mm C-C (8.66" C-C)  
under the casement  
(5) at 230 mm C-C (9.20" C-C)  
under the large fix

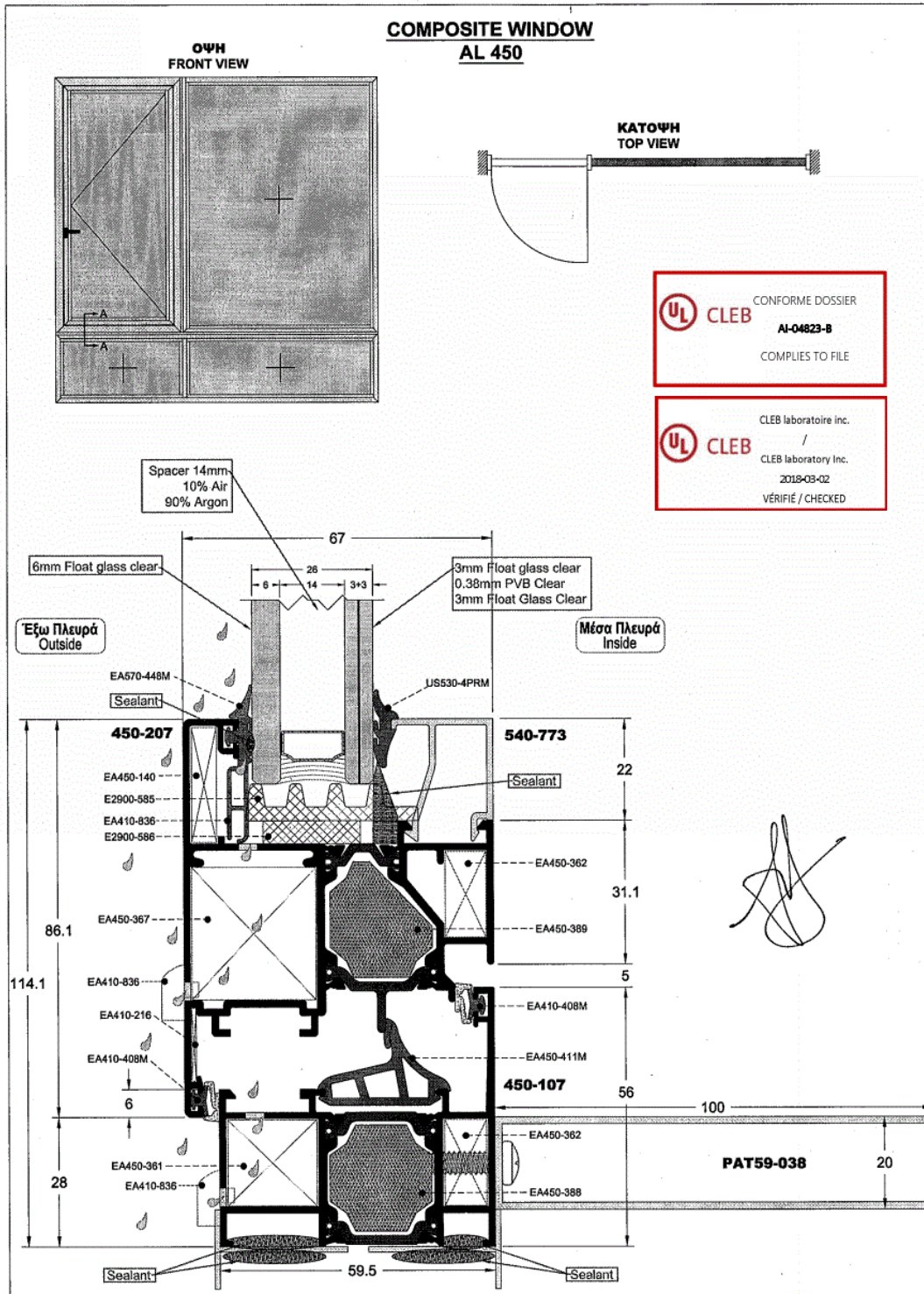


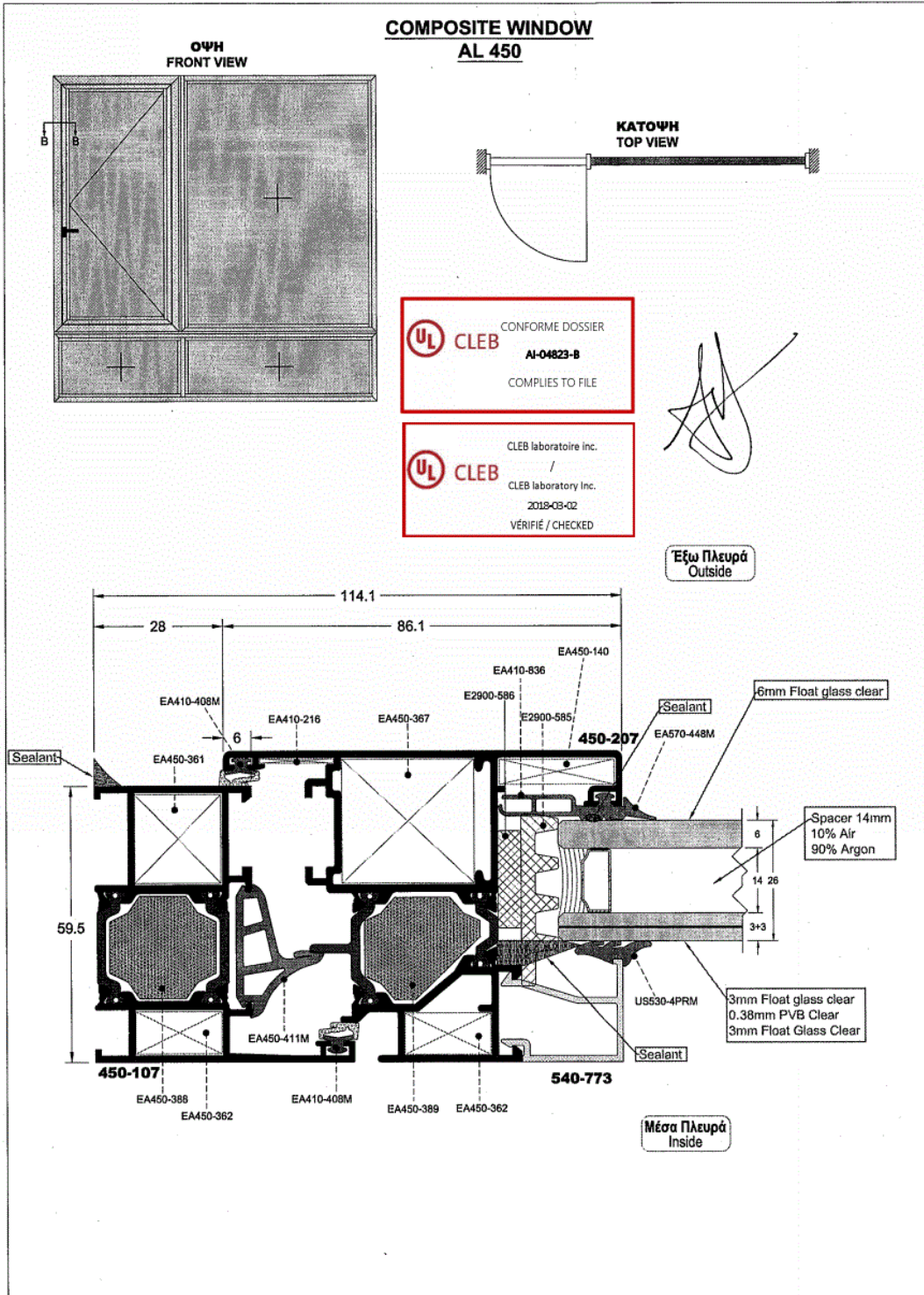
(16) #6 x 3/4"  
SELF-DRILLING  
SCREWS  
at 130 mm C-C  
(5.12" C-C)



UL CLEB CONFORME DOSSIER  
AI-04823-B  
COMPLIES TO FILE

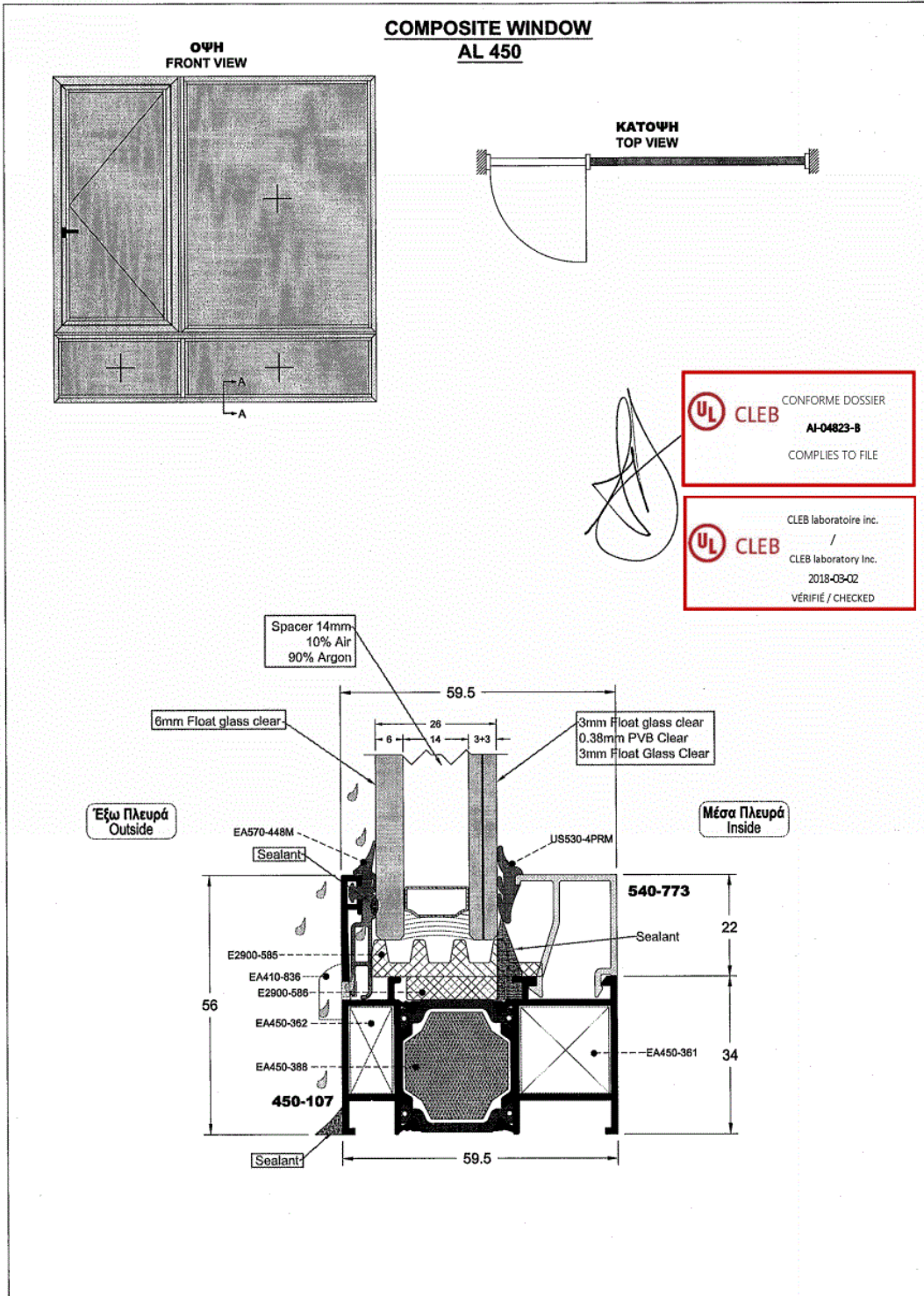
UL CLEB CLEB laboratoire inc.  
/  
CLEB laboratory inc.  
2018-03-02  
VERIFIÉ / CHECKED

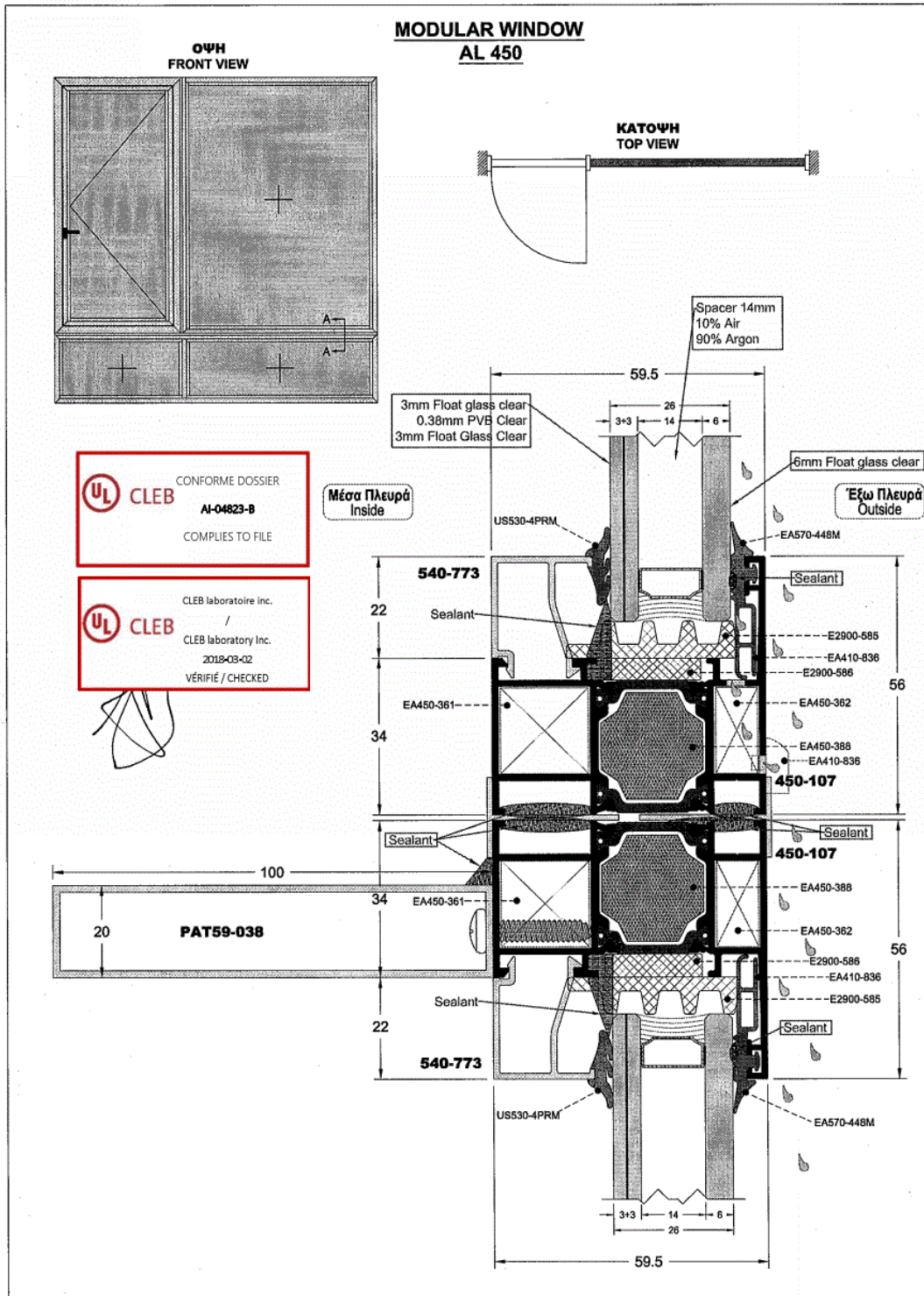




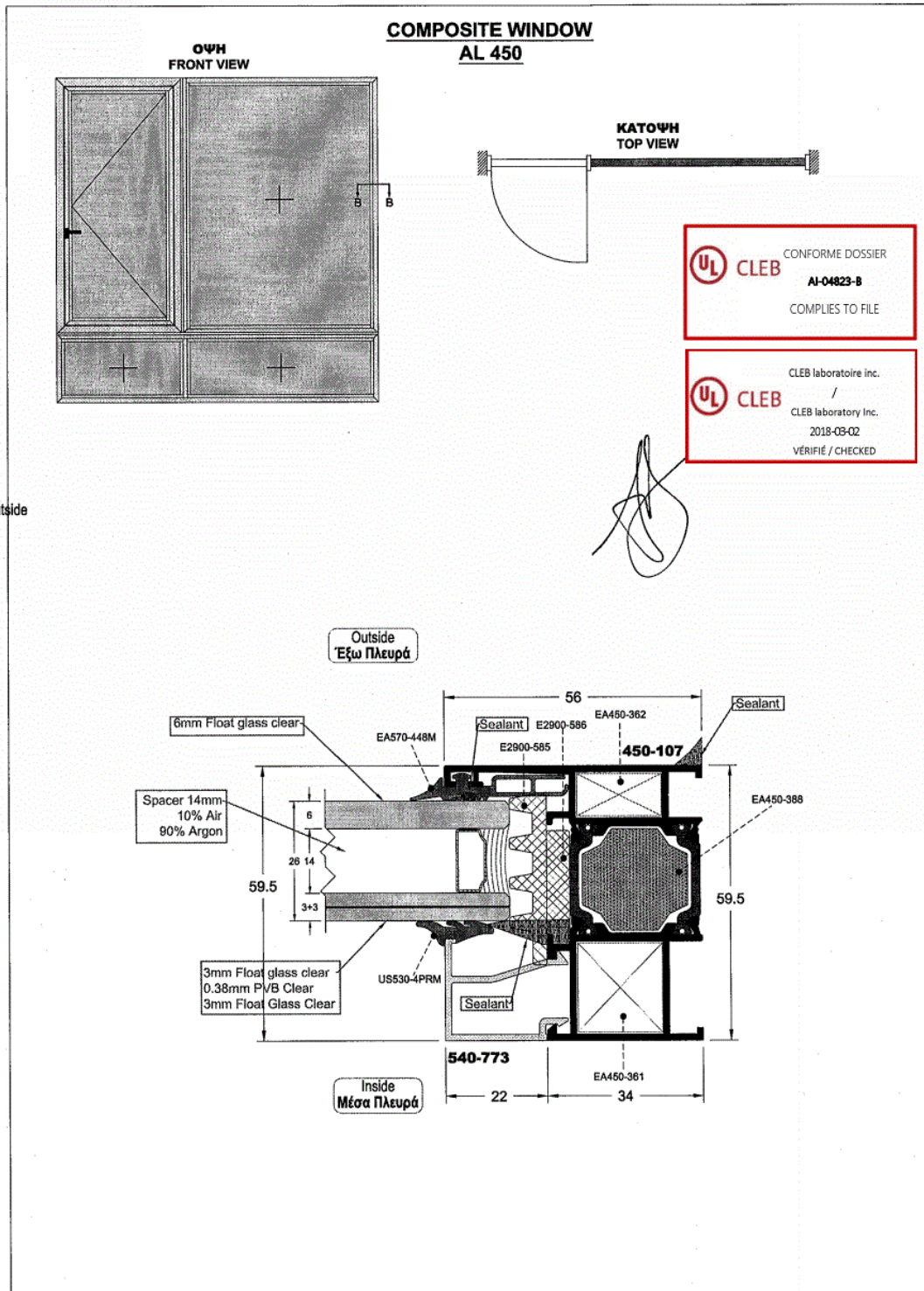




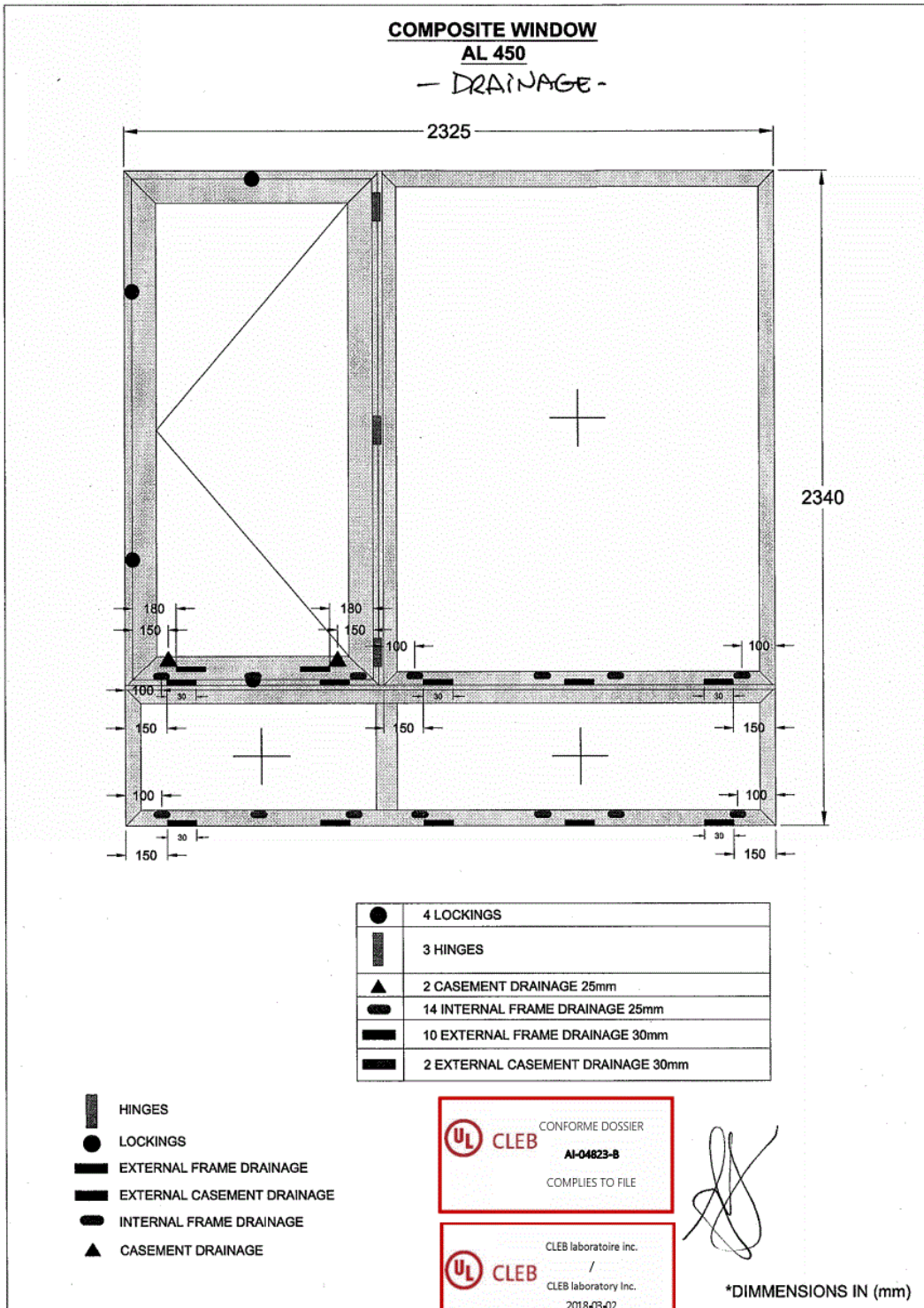




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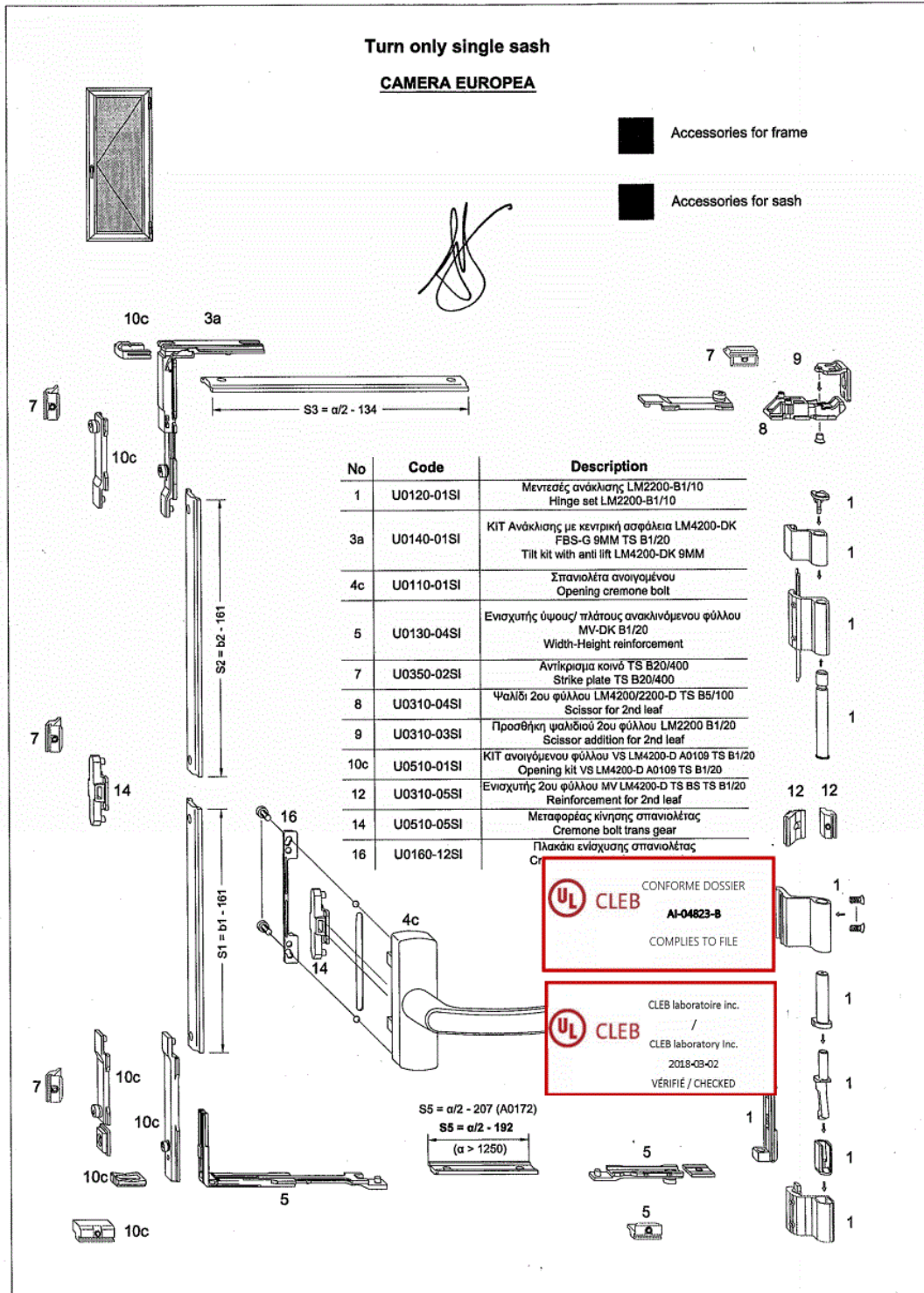


Turn only single sash

**CAMERA EUROPEA**

■ Accessories for frame

■ Accessories for sash



<u>Build of Materials</u>			
A/A	Code	Description	Material
1	450-107	Frame/ Κάσα	17.7m
2	450-207	Outwards opening window sash C.E/ Φύλλο τζ, ανοιγόμενο προς τα έξω C.E	5.1m
3	540-773	Bead/ Πηχάκι	16.8m
4	PAT59-038	Tube/ Καρέ	4.7m
5	EA450-361	Crimping Corner/ Γωνία γωνιάστρας 19.4x18.6mm	12pcs ✓
6	EA450-362	Crimping corer/ Γωνία γωνιάστρας 8.9x18.6mm	16pcs ✓
7	EA450-367	Crimping corner/ Γωνία γωνιάστρας 26.8 x 28.6 mm	4pcs
8	EA450-140	Cast alignment corner/ Γωνία γωνιάστρας 24.5 mm	4pcs
9	EA450-216	Aligment corner/ Γωνία ευθυγράμμισης 16mm	4pcs
10	EA450-141	Mullion connector left-right/ Σύνδεσμος χωρίσματος αριστερός-δεξής	4pcs ✓
11	EA450-875	Vulcanized epdm corner for central gasket EA450-411/ Βουλκανισμένη γωνία κάσας	12pcs ✓
12	EA410-874B	Vulcanized corner for frame for gasket EA410-408/ Βουλκανισμένη γωνία κάσας	4pcs ✓
13	EA410-874M	Vulcanized corner for casement for gasket EA410-408/ Βουλκανισμένη γωνία φύλλου	4pcs ✓
14	EA570-448	EPDM glazing gasket/ Λάστιχο κουρίνα	17m ✓
15	US530-4PRM	Glazing gasket/ Λάστιχο σφήνα 4mm	17m ✓
16	EA450-411	EPDM central gasket/ EPDM κεντρικό λάστιχο	4.8m ✓
17	EA410-408	EPDM gasket for sash & frame with weatherstrips foam/ EPDM λάστιχο κάσας-φύλλου με αφρώδες υλικό και σκληρή βάση	7m ✓
18	E2900-585	Foam insulation/ Αφρός μόνωσης 35x10mm ( $\lambda=0,038$ w/m x k)	17.2m
19	E2900-586	Foam insulation/ Αφρός μόνωσης 19x5mm ( $\lambda=0,038$ w/m x k)	17.2m
20	EA450-388	Insulation Bars Neocoat EPS/ Μπάρα μόνωσης ( $\lambda=0,03$ W/m x K)	17.7m
21	EA450-389	Insulation Bars Neocoat EPS/ Μπάρα μόνωσης ( $\lambda=0,03$ W/m x K)	5.1m ✓
22	UO110-01SI	Cremona bolt/ Σπανιολέτα	1pcs ✓
23	Siegenia	Turn mechanism C.E Siegenia/ μηχανισμός ανοιγόμενων Siegenia	1 set ✓
24	EA410-836	End cover for water drainage/ Τάπα νεροχύτη	10pcs

