

Bellaterra: 9<sup>th</sup> of October, 2017  
File number: 17/14816-1442 M1  
Client: **ALUMINIOS CORTIZO, S.A.**  
C/ Extramundi s/n  
15901 Padrón  
A Coruña

**LGAI Technological  
Center, S.A.  
Notified Body 0370**

# TYPE PRODUCT TEST REPORT

The present document is a translation of the Spanish type product test report 17/14816-1442 M1. In the case of dispute, the valid one is the Spanish version. This translation is issued on the 6<sup>th</sup> of June, 2019.

The present report supersedes the test report number 17/14816-1442 dated on 25<sup>th</sup> of July, 2017. It is responsibility of the client to replace the original and all the copies.

**Description of the modification:** The edition of the standard UNE-EN 12207 is corrected.

Date of test: 19<sup>th</sup> of June, 2017

## **TEST ELEMENT**

Aluminium window composed of one fixed frame and one sliding leaf, with external dimensions (frame included) 4000 x 3000 mm (width x height), with drainage system with pickup duct of 52 mm, reinforcement profile in both leaves, thermal bridge brake and referenced COR-VISION PLUS.

Technical specifications provided by the client are attached on TECHNICAL DOCUMENTATION (see annex).

## **REQUESTED TEST**

Aluminium window composed of one fixed frame and one sliding leaf, with external dimensions (frame included) 4000 x 3000 mm (width x height), with drainage system with pickup duct of 52 mm, reinforcement profile in both leaves, thermal bridge brake and referenced COR-VISION PLUS, according to:

- UNE-EN 14351-1:2006+A:2017 'Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets'.
- UNE-EN 1026:2017 'Windows and doors. AIR PERMEABILITY. Test method'.
- UNE-EN 1027:2017 'Windows and doors. WATERTIGHTNESS. Test method'.
- UNE-EN 12211:2017 'Windows and doors. RESISTANCE TO WIND LOAD. Test method'.

Classification standards:

- UNE-EN 14351-1:2006+A:2017 'Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets'.
- UNE-EN 12207:2000 'Windows and doors. AIR PERMEABILITY. Classification'.
- UNE-EN 12208:2000 'Windows and doors. WATERTIGHTNESS. Classification'.
- UNE-EN 12210:2017 'Windows and doors. RESISTANCE TO WIND LOAD. Classification'.

Test carried out by: Anna Ollés (Enclosures Laboratory – LGAI Technological Center)

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This document consists of 22 pages of which 8 are Appendixes.

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## **1. TEST OBJECT**

The window performance characteristics have been tested according to the requirements defined in the standards:

- UNE-EN 1026:2017 'Windows and doors. AIR PERMEABILITY. Test method'.
- UNE-EN 1027:2017 'Windows and doors. WATERTIGHTNESS. Test method'.
- UNE-EN 12211:2017 'Windows and doors. RESISTANCE TO WIND LOAD. Test method'.
- UNE-EN 14351-1:2006+A:2017 'Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets'.

Classification standards:

- UNE-EN 14351-1:2006+A:2017 'Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets'.
- UNE-EN 12207:2017 'Windows and doors. AIR PERMEABILITY. Classification'.
- UNE-EN 12208:2000 'Windows and doors. WATERTIGHTNESS. Classification'.
- UNE-EN 12210:2017 'Windows and doors. RESISTANCE TO WIND LOAD. Classification'.

## **2. PLACE OF TEST**

The specimen has been fixed to the test bench K. SCHULTEN FENSTERTECHNIK model KS 3025/300, placed in:

ALUMINIOS CORTIZO, S.A.  
C/ Extramundi s/n  
15901 Padrón (A Coruña)

### 3. TEST ELEMENT DESCRIPTION

Technical specifications and drawings of the test specimen are provided by the client and attached in the Annex B (TECHNICAL DOCUMENTATION). LGAI Technological Center, S.A. is not responsible for this information.

The main characteristics of the test element are listed below.

<b>Manufacturer</b>	ALUMINIOS CORTIZO, S.A.
<b>Model / Reference</b>	<b>COR-VISION PLUS</b>
<b>Sampling place</b>	ALUMINIOS CORTIZO, S.A.
<b>Type of test element</b>	Window composed of one fixed frame and one sliding leaf.
<b>Composition</b>	Aluminium
<b>External dimensions</b>	4000 x 3000 mm (width x height)
<b>Total surface</b>	12,00 m <sup>2</sup>
<b>Leaf surface</b>	5,56 m <sup>2</sup>
<b>Joints length</b>	9,62 m
<b>Profiles</b>	<ul style="list-style-type: none"> <li>- Perimeter frame, ref: COR-4880</li> <li>- Bearing housing profile ,ref: COR-4831</li> <li>- Milling bearing housing profile, ref: COR-4881</li> <li>- Channel cover, ref: COR-15919</li> <li>- Perimeter frame lateral cover, ref: COR-4865</li> <li>- Open manual hardware frame coupling, ref: COR-4860</li> <li>- Running sash, ref: COR-4820</li> <li>- Railing, ref: COR-4811</li> <li>- Manual open lateral sash, ref: COR-4822</li> <li>- Lateral sash, ref: COR-4823</li> <li>- Reinforced intersection sash, ref: COR-4826</li> <li>- Intersection sash standing seam, ref: COR-4828</li> <li>- Polyamide espagnolette, ref: COR-2130</li> </ul>
<b>Accessories</b>	<ul style="list-style-type: none"> <li>- Main cleat, ref: 248220</li> <li>- Alignment cleat, ref: 287310</li> <li>- Angle for sash fixing, ref: 364835</li> <li>- Rollers kit, wheel + axis, ref: 364850</li> <li>- Trickle vent set bottom-top, ref: 364855</li> <li>- Cover set central sash frame, ref: 364859</li> <li>- Wool pile cover central sash three rail frame, ref: 364857</li> <li>- Manual sash lateral cover set, ref: 364862</li> <li>- Central sash right lateral cover set, ref: 364863</li> </ul>

- Fixed sash lateral cover set, ref: 364865
- Fixed central sash right lateral cover set, ref: 364866
- Shock-absorbing and anti-lifting cap sash lock, ref: 364870
- Limit top lateral and central sash, ref: 304385

**Sealing elements**

- Wool pile 7x5 mm, ref: 360704
- Wool pile 7x7 mm, ref: 950030
- Wool pile 7x9 mm, ref: 950010

**Drainage**

Outside groove:

- 11 drains of 12 mm diameter (type 1 drain)
- 11 drains of 12 mm diameter (type 2 drain)

Inside groove:

- 11 drains of 12 mm diameter (type 1 drain)
- 11 drains of 12 mm diameter (type 2 drain)
- 3 drains of 15 x 20 mm (type 5 drain)

In pickup duct:

- 11 x 2 drains of 12 mm diameter (type 4 drain)

**Glazing**

Dimensions: 1898 x 2887 mm (2 Units)

Type: 6/14/4.14.6

Installation and sealing: Sealing external gasket and 56 mm glazing support wedge. Inside and outside silicone.

**4. TEST ELEMENT CONDITIONING**

The specimen was conditioned for more than 4 hours in the test laboratory with a temperature between 10°C and 30°C and a relative humidity between 25% and 75% according to the requirements in standards UNE-EN 1026:2017, UNE-EN 1027:2017 and UNE-EN 12211:2017.

Environmental conditions: 19<sup>th</sup> of June, 2017

TEMPERATURE:	25 °C
RELATIVE HUMIDITY:	60 %
ATMOSPHERIC PRESSURE:	101,0 kPa

## 5. **APPARATUS AND CALIBRATION**

The apparatus used during the tests are:

<b>Apparatus</b>	<b>Identification</b>	<b>Date of last calibration</b>
Immersion thermometer	0560 9056 39805466	01.10.2015
Weather station	PE70713A17	07.04.2017
Displacement sensors	87074900047	23.05.2016
	87074900053	23.05.2016
	87074900055	23.05.2016
Pressure sensor	9002.1998 KL380212	24.03.2017
Venturi 1	Banco 1	06.06.2017
Waterflow meter	AEV 1	06.06.2017
Goniometer	1191101	03.10.2015

## 6. RESULTS

### 6.1 AIR PERMEABILITY TEST

The air permeability of the test specimen is the quantity of air that crosses through it in the closed position due to the test pressure, which is the differential pressure between the outside and the inside of the test element.

Air permeability test results of the specimen are:

Total Pressure	Total Air Permeability	Air Permeability by overall area		Air Permeability by joint length	
(Pa)	(m <sup>3</sup> /h)	(m <sup>3</sup> /h·m <sup>2</sup> )	CLASS	(m <sup>3</sup> /h·m)	CLASS
50	5,81	0,5	CLASS 4	0,6	CLASS 3
100	9,85	0,8	CLASS 4	1,0	CLASS 3
150	12,92	1,1	CLASS 4	1,3	CLASS 3
200	15,76	1,3	CLASS 4	1,6	CLASS 3
250	18,59	1,5	CLASS 4	1,9	CLASS 3
300	20,62	1,7	CLASS 4	2,1	CLASS 3
450	28,51	2,4	CLASS 4	3,0	CLASS 3
600	34,68	2,9	CLASS 4	3,6	CLASS 3
-50	6,82	0,6	CLASS 4	0,7	CLASS 3
-100	12,07	1,0	CLASS 4	1,2	CLASS 3
-150	18,19	1,5	CLASS 4	1,9	CLASS 3
-200	23,98	2,0	CLASS 4	2,5	CLASS 3
-250	18,63	1,5	CLASS 4	1,9	CLASS 3
-300	32,76	2,7	CLASS 4	3,4	CLASS 3
-450	41,91	3,5	CLASS 4	4,4	CLASS 3
-600	54,42	4,5	CLASS 4	5,7	CLASS 3

Air permeability table

Total Pressure	Average Air Permeability by overall area	CLASS	Average Air Permeability by joint length	CLASS
Nominal (Pa)	m <sup>3</sup> /h · m <sup>2</sup>		m <sup>3</sup> /h · m	
50	0,5	CLASS 4	0,7	CLASS 3
100	0,9	CLASS 4	1,1	CLASS 3
150	1,3	CLASS 4	1,6	CLASS 3
200	1,7	CLASS 4	2,1	CLASS 3
250	1,5	CLASS 4	1,9	CLASS 3
300	2,2	CLASS 4	2,8	CLASS 3
450	2,9	CLASS 4	3,7	CLASS 3
600	3,7	CLASS 4	4,6	CLASS 3

Air permeability table – Average results

**Remarks:** No anomaly was observed over the specimen and the specimen opens and closes correctly. The significant air losses are detected at the top and bottom meeting edges of the leaves.

Classification according to:

- UNE-EN12207:2000 'Windows and doors. AIR PERMEABILITY. Classification'.

Classification based on the overall area: Class 4

Classification based on the opening Joints: Class 3

<b>CLASSIFICATION</b>	<b>CLASS 4</b>
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## 6.2 WATER TIGHTNESS TEST

Water tightness of the test specimen is the capacity that it has in the closed position to resist water penetration with the test conditions up to maximum pressure.

Water tightness test results of the specimen are:

<b>Spraying Method:</b>	A	<b>Number of Nozzles:</b>	20	<b>Water flow:</b>	1800	l/h	30	l/m
Method A: Nozzle Spaying Angle 24° Method B: Nozzle Spaying Angle 84° Water temperature between 4°C and 30°C								

Total Pressure (Pa)	Time	Remarks
0	0:15:00	OK
50	0:05:00	OK
100	0:05:00	OK
150	0:05:00	OK
200	0:05:00	OK
250	0:05:00	OK
300	0:05:00	OK
450	0:05:00	OK
600	0:05:00	OK

Water tightness table

**Remarks:** The test is stopped by decision of the laboratory.

Classification according to:

- UNE-EN12208:2000 'Windows and doors. WATERTIGHTNESS. Classification'.

<b>CLASSIFICATION</b>	<b>CLASS 9A</b>
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### 6.3 RESISTANCE TO WIND LOAD

The window was subjected to positive and negative pressure checking the admissible deformation (deflection test), the upkeep of its properties (repeated pressure test) and the guarantee of safety for the users (safety test).

Resistance to wind load test has the following sequence:

- Deflection Test
- Repeated Pressure Test
- Air Permeability Test
- Safety Test

Test conditions:

Test	Test pressure in Pa	
P1 for deflection	1600	-1600
P2 for the cycles	-800	800
P3 for safety test	-2400	2400

$$P2 = 0,5 P1 \quad P3 = 1,5 P1$$

#### 6.3.1. DEFLECTION TEST

Deflection Test up to pressure P1 with positive and negative pressures.

Distance between displacement sensors:

$$T1 \text{ to } T3 = 2840 \text{ mm}$$

Displacement sensors positions are defined in section 7 'Specimen Drawing'.

Relative frontal deflection classification:

$$A \leq 1/150 \quad B \leq 1/200 \quad C \leq 1/300$$

3 pressure pulses of 1760 Pa are applied

Pressure (Pa)	Absolute displacement (mm)			Frontal deflection (mm)	Relative frontal deflection
1600	T1 = -6,16	T2 = -14,01	T3 = -7,79	$F_{p1} = -7,04$	1/403
Residual	T1 = -0,00	T2 = -0,00	T3 = -0,00	$F_{p1} = -0,00$	

**Class: C4**

3 pressure pulses of -1760 Pa are applied

Pressure (Pa)	Absolute displacement (mm)			Frontal deflection (mm)	Relative frontal deflection
-1600	T1 = 5,06	T2 = 12,69	T3 = 6,05	F <sub>p1</sub> = 7,13	1/398
Residual	T1 = 0,00	T2 = 0,00	T3 = 0,00	F <sub>p1</sub> = 0,00	

**Class: C4**

### 6.3.2. REPEATED PRESSURE TEST

The specimen is subjected to 50 cycles of pressure P2

50 cycles – **800 Pa / 800 Pa** applied

**Remarks:** No anomaly was observed over the specimen and the specimen opens and closes correctly.

### 6.3.3. AIR PERMEABILITY TEST

The specimen is subjected to a second air permeability test according to UNE-EN 1026:2017 'Windows and doors. AIR PERMEABILITY. Test method'.

Total Pressure (Pa)	Total Air Permeability (m <sup>3</sup> /h)	Air Permeability by overall area (m <sup>3</sup> /h·m <sup>2</sup> )		Air Permeability by joint length (m <sup>3</sup> /h·m)	
			CLASS		CLASS
50	5,94	0,5	CLASS 4	0,6	CLASS 3
100	10,07	0,8	CLASS 4	1,0	CLASS 3
150	13,11	1,1	CLASS 4	1,4	CLASS 3
200	16,19	1,3	CLASS 4	1,7	CLASS 3
250	16,41	1,4	CLASS 4	1,7	CLASS 3
300	21,03	1,7	CLASS 4	2,2	CLASS 3
450	28,45	2,4	CLASS 4	3,0	CLASS 3
600	33,96	2,8	CLASS 4	3,5	CLASS 3
-50	7,26	0,6	CLASS 4	0,7	CLASS 3
-100	13,49	1,1	CLASS 4	1,4	CLASS 3
-150	20,50	1,7	CLASS 4	2,1	CLASS 3
-200	26,05	2,2	CLASS 4	2,7	CLASS 3
-250	30,63	2,5	CLASS 4	3,2	CLASS 3
-300	34,83	2,9	CLASS 4	3,6	CLASS 3
-450	44,88	3,7	CLASS 4	4,7	CLASS 3
-600	56,90	4,7	CLASS 4	5,9	CLASS 3

Air permeability table

Total Pressure	Average Air Permeability by overall area	CLASS	Average Air Permeability by joint length	CLASS
Nominal (Pa)	$m^3/h \cdot m^2$		$m^3/h \cdot m$	
50	0,5	CLASS 4	0,7	CLASS 3
100	1,0	CLASS 4	1,2	CLASS 3
150	1,4	CLASS 4	1,7	CLASS 3
200	1,8	CLASS 4	2,2	CLASS 3
250	2,0	CLASS 4	2,4	CLASS 3
300	2,3	CLASS 4	2,9	CLASS 3
450	3,1	CLASS 4	3,8	CLASS 3
600	3,8	CLASS 4	4,7	CLASS 3

Air permeability table – Average results

Difference with the obtained class in the first air permeability test (Overall area)

Overall area							
Total P.	Air permeability based on the overall area, first test	Class OBTAINED	Air permeability based on the overall area, second test	Difference	MAXIMUM class OBTAINED	Maximum deviation (20%) in relation to MAXIMUM class OBTAINED	Difference vs Maximum deviation
Pa	$m^3/h \cdot m^2$	CLASS	$m^3/h \cdot m^2$	$m^3/h \cdot m^2$	$m^3/h \cdot m^2$	$m^3/h \cdot m^2$	LOWER/HIGHER
50 Pa	0,53	CLASS 4	0,55	0,02375	1,8899	2,26788	LOWER
100 Pa	0,91	CLASS 4	0,98	0,0683333	3	3,6	LOWER
150 Pa	1,30	CLASS 4	1,40	0,1041667	3,9311	4,71732	LOWER
200 Pa	1,66	CLASS 4	1,76	0,1041667	4,7622	5,71464	LOWER
250 Pa	1,55	CLASS 4	1,96	0,4091667	5,526	6,6312	LOWER
300 Pa	2,22	CLASS 4	2,33	0,1033333	6,2403	7,48836	LOWER
450 Pa	2,93	CLASS 4	3,06	0,12125	8,177	9,8124	LOWER
600 Pa	3,71	CLASS 4	3,79	0,0733333	9,9058	11,88696	LOWER

Difference with the obtained class in the first air permeability test (Joint length)

Joint length							
Total P.	Air permeability based on joint length, first test	Class OBTAINED	Air permeability based on joint length, second test	Difference	MAXIMUM class OBTAINED	Maximum deviation (20%) in relation to MAXIMUM class OBTAINED	Difference vs Maximum deviation
Pa	$m^3/h \cdot m$	CLASE	$m^3/h \cdot m$	$m^3/h \cdot m$	$m^3/h \cdot m$	$m^3/h \cdot m$	LOWER/HIGHER
50 Pa	0,66	CLASS 3	0,69	0,0296258	1,4174	1,70088	LOWER
100 Pa	1,14	CLASS 3	1,22	0,0852391	2,25	2,7	LOWER
150 Pa	1,62	CLASS 3	1,75	0,1299376	2,9483	3,53796	LOWER
200 Pa	2,07	CLASS 3	2,20	0,1299376	3,5717	4,28604	LOWER
250 Pa	1,93	CLASS 3	2,44	0,510395	4,1445	4,9734	LOWER
300 Pa	2,77	CLASS 3	2,90	0,1288981	4,6802	5,61624	LOWER
450 Pa	3,66	CLASS 3	3,81	0,1512474	6,1328	7,35936	LOWER
600 Pa	4,63	CLASS 3	4,72	0,0914761	7,4293	8,91516	LOWER

The results obtained in the second air permeability test based on the overall area does not exceed the upper limits of the claimed air permeability class by more than 20 %.

Classification according to:

- UNE-EN 12207:2017 'Windows and doors. AIR PERMEABILITY. Classification'.

Classification based on the overall area: Class 4

Classification based on the opening Joints: Class 3

### 6.3.4. SAFETY TEST

The specimen was subjected to one cycle with negative and positive pressure P3.

Test	Test pressure in Pa	
P3 for the safety test	-2400	2400

**Remarks:** After the safety test the test specimen remains closed. No anomaly was observed and the specimen opens and closes correctly.

Classification according to:

- UNE-EN 12210:2017 'Windows and doors. RESISTANCE TO WIND LOAD. Classification'.

<b>CLASSIFICATION</b>	<b>CLASS C4</b>
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Expanded uncertainty associated to the air permeability test does not exceed  $\pm 5\%$ .

Expanded uncertainty of measurement has been given as measurement typical uncertainty multiplied by a factor  $k = 2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.

## 7. SPECIMEN DRAWING

Dimensions (height x width): 4,00 x 3,00 m

Joints length: 9,62 m

Overall Area: 12,00 m<sup>2</sup>

Leaves Area: 5,56 m<sup>2</sup>



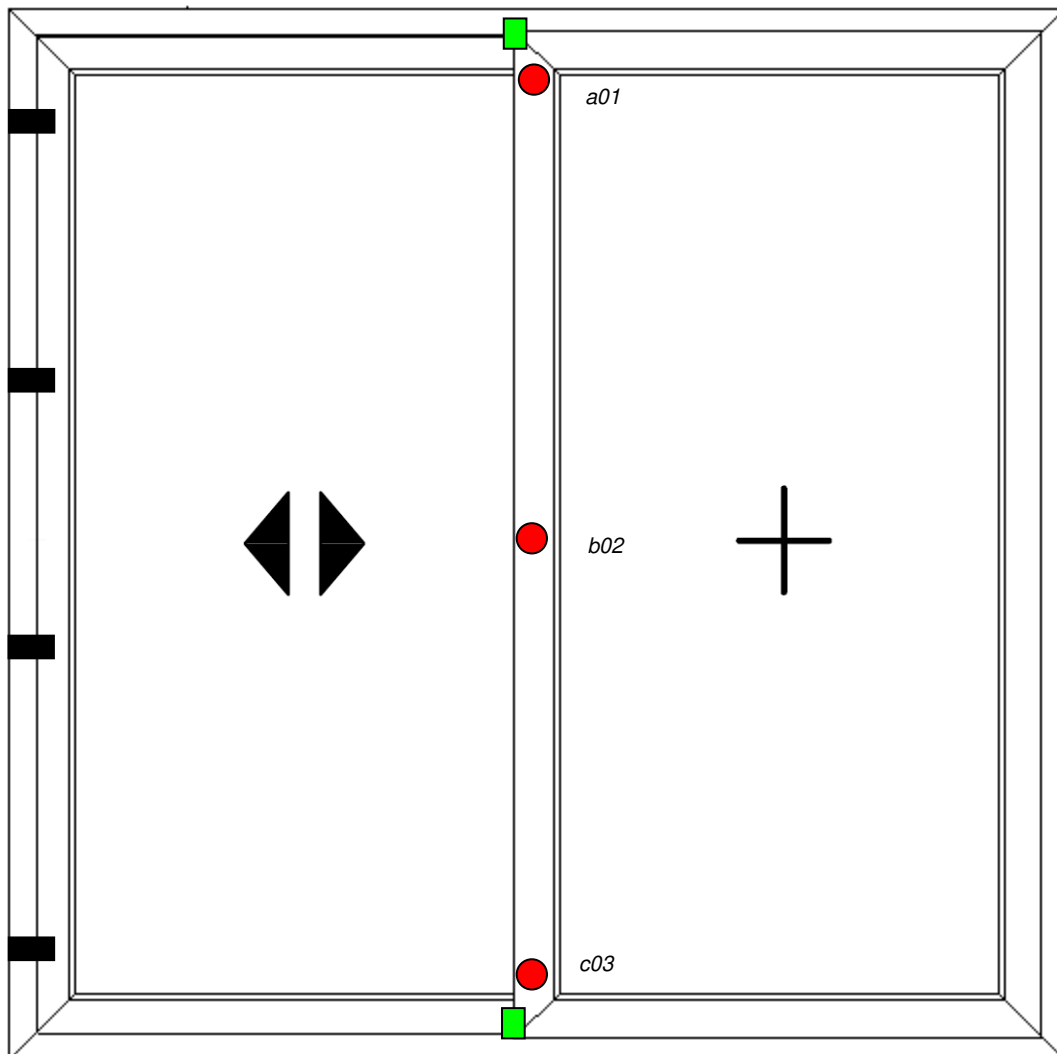
Displacement sensors

Locking points

Drainages

Air loss

Water penetration



## 8. **TEST CONCLUSIONS**

Aluminium window composed of one fixed frame and one sliding leaf, with external dimensions (frame included) 4000 x 3000 mm (width x height), with drainage system with pickup duct of 52 mm, reinforcement profile in both leaves, thermal bridge brake and referenced COR-VISION PLUS. Has been tested obtaining the following results:

<b>AIR PERMEABILITY</b>	<b>CLASS 4</b>
<b>WATER TIGHTNESS</b>	<b>CLASS 9A</b>
<b>RESISTANCE TO WIND LOAD</b>	<b>CLASS C4</b>



Alejandro Gutiérrez Richarte  
Technician Responsible Enclosures Laboratory  
LGAI Technological Center, S.A. (APPLUS)

The results reported in this document relate only to the sample, product or item delivered to LGAI Technological Center the appointed day having been tested under the conditions established in this document. In the indicated classifications, the specification limit has not been exceeded considering the result of the measurement plus the expanded uncertainty, with a coverage probability of 95%.

**Service Quality Assurance**

**Applus+** guarantees that this work has been made in accordance with our Quality and Sustainability System, fulfilling the contractual conditions and legal norms. Within our improvement program we would be grateful if you would send us any commentary that you consider opportune, to the person in charge who signs this document, or to the Quality Manager of Applus+, in the following e-mail address: [satisfaccion.cliente@applus.com](mailto:satisfaccion.cliente@applus.com)

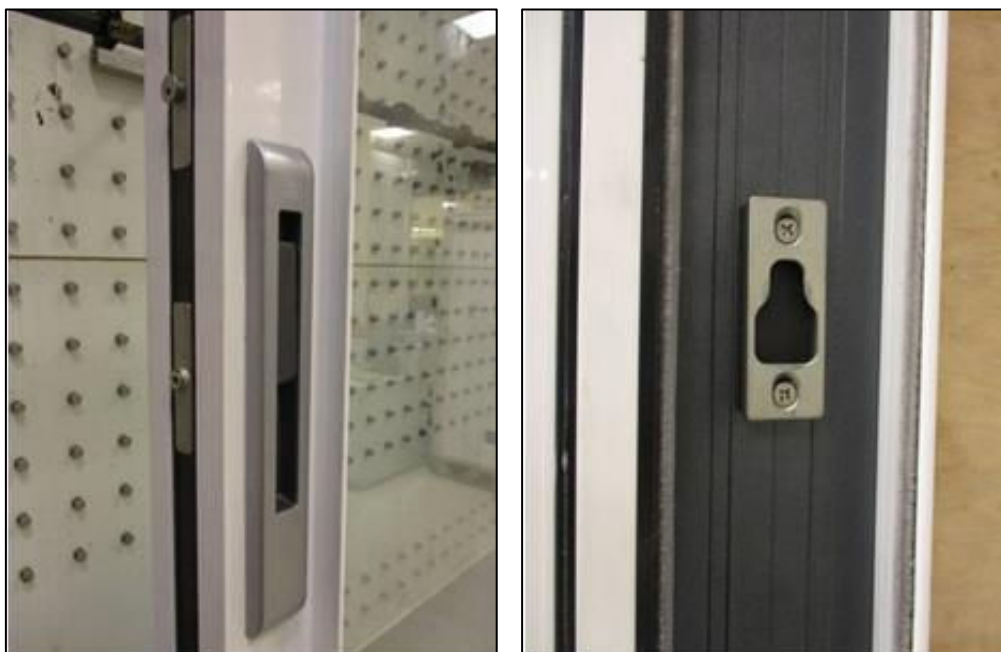
**ANNEXES:**

**A. PICTURES**

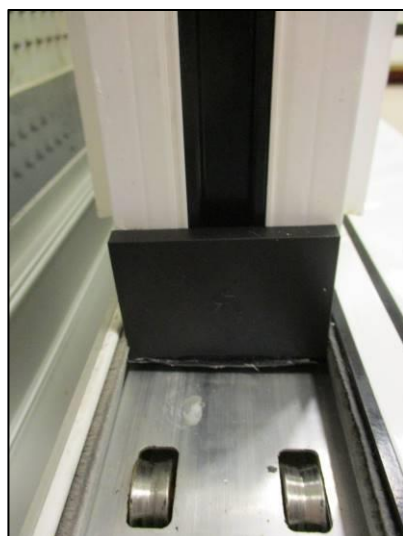
*Picture N° 1 General view of the test element*



*Picture N° 2 Detail of locking points*

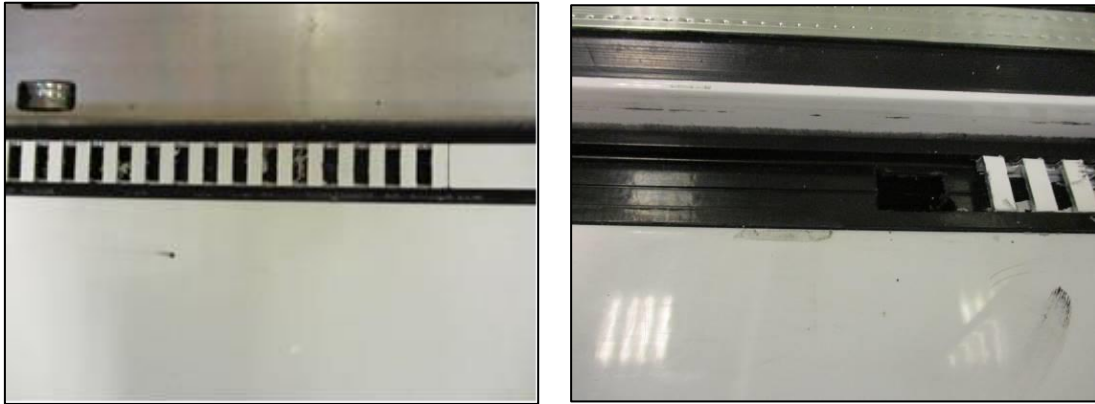


*Picture N° 3 Details of profiles, gaskets and accessories*





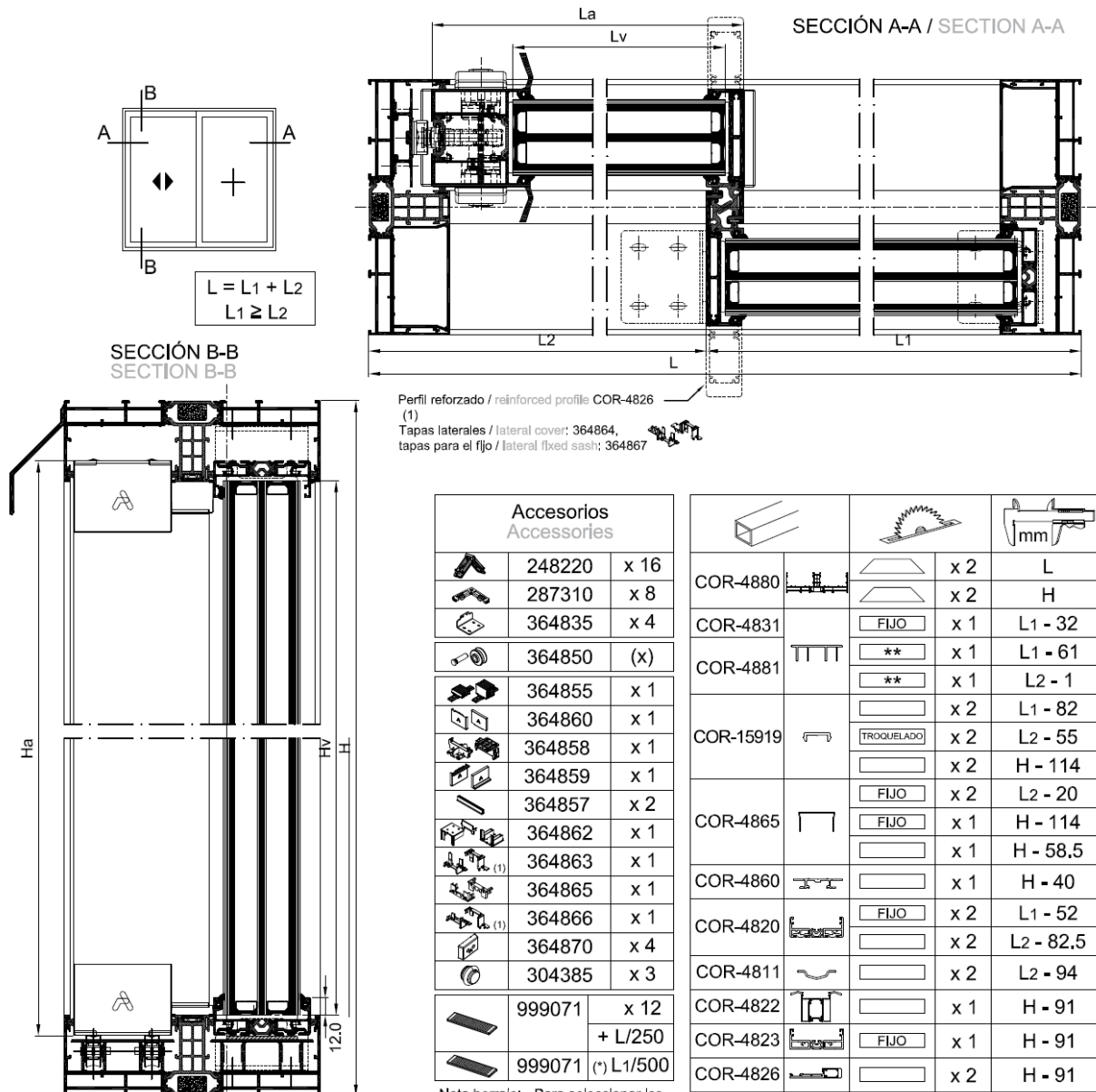
*Picture N° 4 Details of drainage*



*Picture N° 5 Detail of displacement sensors position*



**B. TECHNICAL DOCUMENTATION PROVIDED BY THE CLIENT**



$L = L1 + L2$   
 $L1 \geq L2$

Perfil reforzado / reinforced profile COR-4826  
(1)  
Tapas laterales / lateral cover: 364864,  
tapas para el fijo / lateral fixed sash: 364867

Accesorios Accessories			
	248220	x 16	
	287310	x 8	
	364835	x 4	
	364850	(x)	
	364855	x 1	
	364860	x 1	
	364858	x 1	
	364859	x 1	
	364857	x 2	
	364862	x 1	
	364863	x 1	
	364865	x 1	
	364866	x 1	
	364870	x 4	
	304385	x 3	
	999071	x 12	
		+ L/250	
	999071	(*) L1/500	

			mm
COR-4880		x 2	L
		x 2	H
COR-4831		x 1	L1 - 32
COR-4881		x 1	L1 - 61
		x 1	L2 - 1
COR-15919		x 2	L1 - 82
		x 2	L2 - 55
		x 2	H - 114
COR-4865		x 2	L2 - 20
		x 1	H - 114
		x 1	H - 58,5
COR-4860		x 1	H - 40
COR-4820		x 2	L1 - 52
		x 2	L2 - 82,5
COR-4811		x 2	L2 - 94
COR-4822		x 1	H - 91
COR-4823		x 1	H - 91
COR-4826		x 2	H - 91
COR-4828		x 2	H - 148,5
COR-2130		x 1	***
Vierteaguas		x 1	L

Hardware note: - To select the hardware own elements, check the specific tables.  
(\*) Wedge fixed sash

Nota herraje: - Para seleccionar los elementos propios del herraje, acceder a las tablas correspondientes.  
(\*) Calce hoja fija.

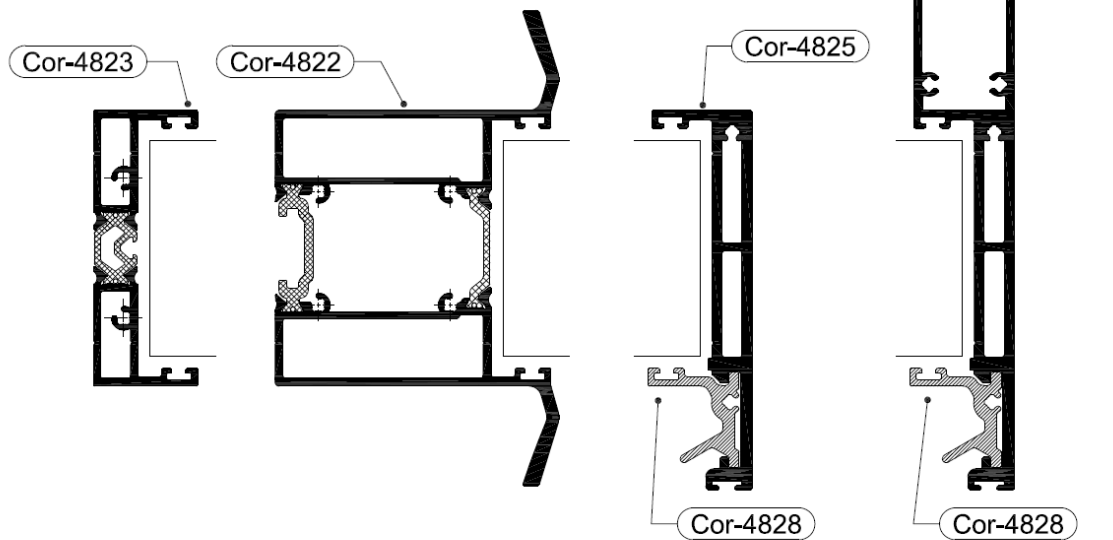
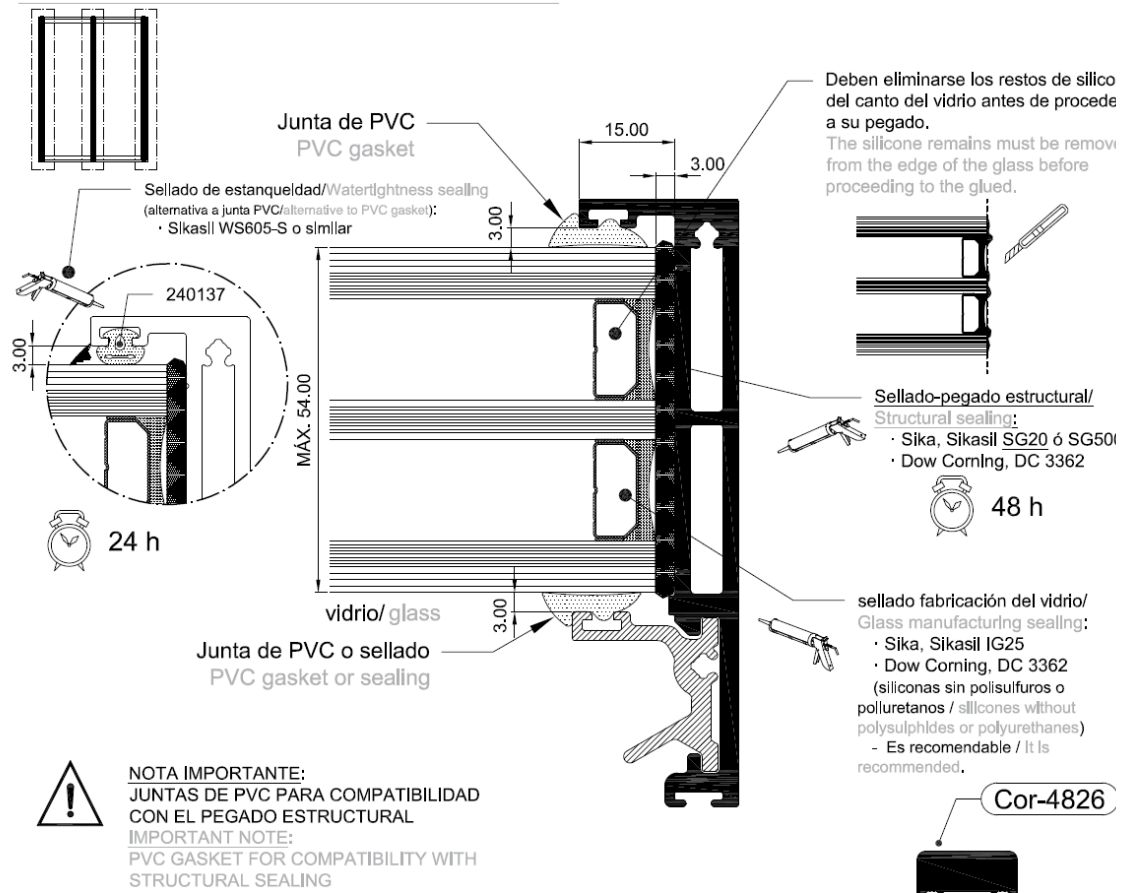
(x) 2x (L/200)



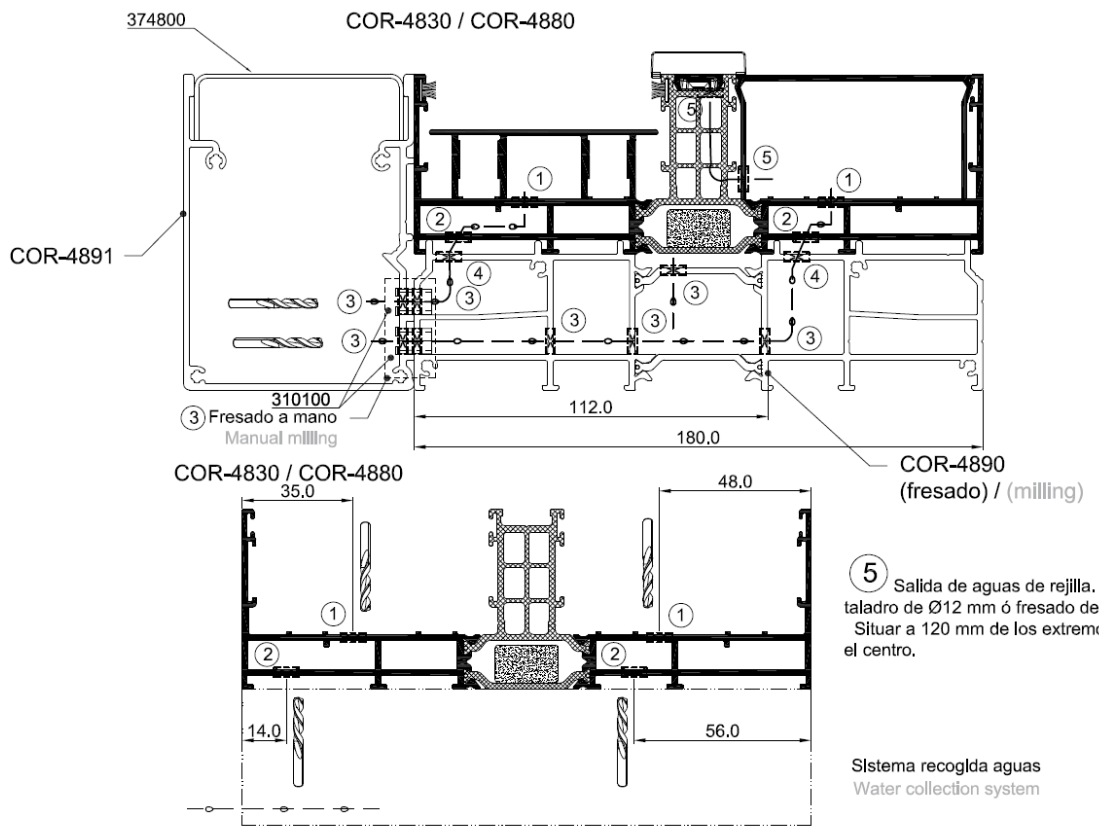
\*\* Perfil fresado (Cor-4881).  
\*\*\* Ver página de detalles de montaje (herraje).  
\*\* Milling profile (Cor-4881).  
\*\*\* View assembly detail page (hardware).

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**SELLADO Y PEGADO DEL VIDRIO - HOJAS LATERALES Y CENTRALES**  
**GLASS SEALING - LATERAL AND CENTRAL SASH**



**SALIDA DE AGUAS EN MARCOS - SISTEMA CON CANALETA DE RECOGIDA**  
**DRAINAGE IN FRAME - SYSTEM WITH PICKUP DUCT**

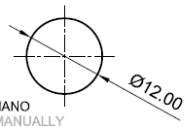


**Perfil de recogida y Canaleta de drenaje**

**COR-4830 / COR-4880**

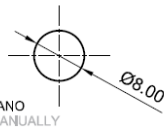
- ① ② Salida de aguas hacia cámaras. taladro de Ø12 mm.  
Horizontal inferior: Situar a 80 y 100 mm de los extremos, otro a L / 2 y cada 400 mm.

Water exit to chambers Ø12 mm drill.  
Bottom horizontal: Position 80 and 100 mm to the ends, another L / 2 and every 400 mm.



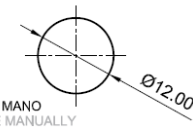
- ③ Salida de aguas hacia canaleta. taladro de Ø8 mm.  
Horizontal inferior: Situar a 120 mm de los extremos, otro a L / 2 y cada 400 mm.

Water exit to gutter Ø8 mm drill.  
Bottom horizontal: Position 120 mm to the ends, another L / 2 and every 400 mm.



- ④ Salida de aguas hacia recogida. taladro de Ø12 mm.  
Horizontal inferior: Situar a 120 mm de los extremos, otro a L / 2 y cada 400 mm. (PERFIL FRESADO COR-4890)

Water exit to gutter to collector Ø12 mm drill.  
Bottom horizontal: Position 120 mm to the ends, another L / 2 and every 400 mm. (MILLING PROFILE COR-4890)



- En la unión entre el perfil de recogida y la canaleta se podrán disponer de tubos de drenaje para Ø8 mm. (ref.: 310100)  
Nota: tubo de 40 mm a cortar a la longitud requerida.



**Nota muy importante:**

Los tubulares del marco en la unión a inglete, en la parte inferior y en ambos extremos, deberá ser sellado convenientemente por delante de las escuadras con el fin de evitar cualquier filtrado de agua hacia los mismos.

**Very important note:**

Tubular chambers in the mitred joint of the frame should be properly sealed in front of the cleats in order to avoid water infiltration.

**CIERRE MULTIPUNTO - CIERRE MANUAL SECURITY**

