FIRE RESISTANCE CLASSIFICATION REPORT No. 24437C

OWNER OF THE CLASSIFICATION REPORT

AGC Glass Europe
Avenue Jean Monnet 4
BE 1348 Louvain-la-Neuve
Belgium

INTRODUCTION

This classification report defines the classification assigned to a non-loadbearing timber frame glazed wall (type: Pyrobel in glued-laminated Rubberwood Hévéa frame) – in a standard flexible supporting wall, in accordance with the procedures given in EN 13501-2:2023: Fire classification of products and building elements – Part 2: Classification using data from fire resistance tests, excluding ventilation services.

This classification report consists of 17 pages and 10 annexes and may only be used or reproduced in its entirety.

TABLE OF CONTENTS

1 DETAILS OF CLASSIFIED PRODUCT

1.1 General

The element, type: Pyrobel in glued-laminated Rubberwood Hévéa frame, is defined as a non-loadbearing with fire resistance characteristics.

1.2 Description

The element, Pyrobel in glued-laminated Rubberwood Hévéa frame, is fully described below, in support of this classification. The drawings of the test element as it was tested, are enclosed in the annexes 1 till 10 of this classification report.

1.2.1 Composition of the test specimen

The test specimen is a non-loadbearing glazed wall in a timber frame. The timber frame is mounted into a standard flexible wall.

Outer dimensions of the test construction:

- height: 3280 mm;
- width: 3200 mm;
- thickness: 100 mm.

1.2.1.1 Standard supporting structure

The test specimen is installed in a standard supporting construction, which is described in and constructed according to the European standard EN 1363-1:2020 §7.2.2.4.

[1] Flexible partition wall	
Thickness	75 mm
Outer dimensions	3200 mm (w) x 3280 mm (h)
Installation opening	3000 mm (w) x 3080 mm (h)
[1.1] Profiles	
Type	MSH 50 and MSV 50
Group	A
Material	steel
Width	50 mm
[1.2] Gypsum board	
Type according to EN 520	F
Material	paper faced gypsum board
Thickness	12.4 mm
Density	859.9 kg/m³

Moisture content (at 50 °C)	0.54 %
Quantity	1 layer on both sides of the frame, and 1 layer at the inside edges of the installation opening.
[1.3] Insulation	
Manufacturer	Rockwool
Reference	Rockfit Mono
Material	stone wool
Thickness	50 mm
Density	35 kg/m³ (NV)

1.2.1.2 Glazing system

[2] Glass pane					
Manufacturer	AGC Glass Europe nv				
Reference	Pyrobel 16				
Composition	3/8/3 3 = 3mm float glass (NV) 8 = 8mm float glass (NV) / = 1.65mm intumescent layer (NV)				
Orientation	symmetrical				
Thickness	(17.3 ± 1.5) mm (NV)				
Dimensions		Width (mm)	Height (mm)	Weight (kg)	Reference
	3a	433	976	16.92	OL004-34-034
	3b	433	976	16.92	OL004-34-030
	3c	433	976	16.92	OL004-34-037
	3d	433	976	16.92	OL004-34-040
	3e	905	968	35.08	OL004-34-028
	3f	500	3000	60.00	OL004-34-013
	3g	1400	3000	168.00	OL004-34-007
Fixing	Clasped between frame and glazing beads				
[3] Glazing setting block					
Material	hardwood				
Thickness	3 mm				
Dimensions	80 mm x 12 mm				
Density	355 kg/m³ (NV)				
Quantity	2 underneath each glass pane				

[4] Glazing strip	
Manufacturer	Odice
Reference	Superwool paper
Material	Ceramic paper tape
Section dimensions	15 mm x 5 mm
Density	230 kg/m³ (NV)
Position	between the glass pane and the glazing beads on both sides
Fixing	self-adhesive
[5] Sealant	
Manufacturer	Dow Corning
Reference	Dowsil Firestop 700
Material	neutral silicone
Position	on top of the glazing strips, at both sides, and at the vertical joints between the glass panes, at both sides
[6] Timber glazing bead	
Material	Glued laminated (Glulam) finger-jointed Rubberwood Hévéa
Section dimensions	15 mm (w) x 17 mm (h)
Density	700.4 kg/m³
Fixing to the frame	with nails (material: steel, diameter: 1.5 mm, length: 38 mm), c/c distance: 200-250 mm

1.2.1.3 Timber framing system

[7] Timber frame	
Material	Glued laminated (Glulam) finger-jointed Rubberwood Hévéa
Section dimensions	20/30 mm x 57 mm
Density	700.4 kg/m³
Moisture content (at 105°C)	8.88 %
Composition frame	2 modules
Composition modules	Edge framing member (outer section dimensions: 20 mm x 57 mm) Intermediary framing member (outer section dimensions: 30 mm x 57 mm)
Fixing of the framing modules	with 2 screws (material: steel, diameter: 5 mm, length: 80 mm), c/c distance: 50 mm; and

	1 dowel (reference: Domino, section dimensions: 24 mm x 10 mm, length: 48 mm), glued (reference: Rectavit D4, material: polyurethane)
Inter-fixing of the framing modules	with: 1 lath (material: Glued laminated (Glulam) finger-jointed Rubberwood Hévéa, section dimensions: 35 mm x 15 mm, length: 3050 mm), glued (reference: Rectavit D4, material: polyurethane); and screws (material: steel, diameter: 5 mm, length: 35 mm), c/c distance: 300 mm
Fixing to the concrete furnace frame at the bottom edge	with fixing anchors (reference: Hilti 100 HT 10x100, material: steel with plastic plug, diameter: 7 mm, length: 107 mm, diameter plug: 10 mm, length plug: 100 mm), c/c distance: 450-500 mm
Fixing to the standard flexible supporting structure at the fixed vertical and top edge	with fixing anchors (reference: Hilti 100 HT 10x100, material: steel with plastic plug, diameter: 7 mm, length: 107 mm, diameter plug: 10 mm, length plug: 100 mm), c/c distance: 450-500 mm.
[8] Frame setting block	
Material	Calcium silicate
Thickness	2 x 6 mm (NV)
Dimensions	65 mm x 200 mm
Density	1000 - 1200 kg/m³ (NV)
Quantity	7 spread underneath the timber frame, sets of 2 at the joint between the frame modules, c/c distance at the vertical joint between the frame modules: 200 mm

1.2.1.3.1 Insulation

[9] Insulation	
Manufacturer	Promat
Reference	Delfratherm 1200 ULS Blanket
Material	Alkaline earth silicate
Initial thickness	13 mm
Initial density	96 kg/m³ (NV)
Position	around timber frame at the fixed edges

1.2.1.3.2 Decorative film

[10] Insulation	
Manufacturer	3M
Reference	5525
Material	PVC, colourless frosted decorative film
thickness	80 µm
dimensions	420 mm x 279 mm
Position	locally, at glass pane [3g], at both sides.

1.3 Drawings

The present drawings are not to scale.

Annex 1: front view (unexposed side) – dimensions.
Annex 2: section A-A – details – dimensions.
Annex 3: section B-B – details – dimensions.
Annex 4: section C-C – details – dimensions.
Annex 5: section D-D – details – dimensions.
Annex 6: section E-E – details – dimensions.

1.4 Sampling of the test specimen

Sampling				
Product:	**By:**	**Date:**	**Identification:**	**Report:**
Pyrobel 16	WARRINGTONFIRE TESTING AND CERTIFICATION LIMITED 3rd Floor, Davidson Building, 5 Southampton Street, London, WC2E 7HA United Kingdom	21/10/2026	Sample report nr°: AO-146846 Pyrobel 16 nr°: OL002-97-7 45, OL002-97-7 43, OL002-97-741, OL002-97-736, OL002-97-725 Signature: B. Lechat	Annex 7-8

The sampling and/or production control was not carried out by the laboratory (nor through subcontracting). The obtained information could not be verified by the laboratory and does not fall under the responsibility nor under the EN ISO/IEC 17025 accreditation scope of the laboratory.

Annex 7: sampling report – page 1.
Annex 8: sampling report – page 2.

2 TEST REPORTS/EXAP REPORTS AND TEST RESULTS IN SUPPORT OF THE CLASSIFICATION

2.1 Test reports/EXAP reports

Name of the laboratory	Report ref. no.	Name of the owner	Date of the test	Method
WFRGENT nv	24437A	AGC Glass Europe	09/04/2026	EN 1364-1:2015.
WFRGENT nv	24437B	AGC Glass Europe	-	EN 15254-4:2018

2.2 Exposure conditions during the fire resistance test:

Temperature/time curve: standard as in EN 1363-1:2020.

Direction of exposure: The test specimen is a symmetrical construction.

No extra load supplementary to the own weight of the non-loadbearing glazed wall was applied during the test.

One vertical edge is free, the other edges are fixed.

2.3 Test results

The results presented in this report relate only to the item tested and are valid solely for the specific specimen described in § 1.2.

Parameters	Results
Thermal insulation – I	
ΔT_m = 140°C	34 minutes, no failure(1)
ΔT_M = 180°C	34 minutes
Integrity – E	
Spontaneous and sustained flaming	34 minutes
Failure with gap gauge ∅ 6 mm	34 minutes, no failure(3)
Failure with gap gauge ∅ 25 mm	34 minutes, no failure(3)
Ignition of cotton pad	34 minutes, no failure(2)
Radiation – W	
Radiation intensity = 15 kW/m²	34 minutes, no failure(3)

(1) The test was discontinued after 34 minutes at the test sponsor's request

(2) No failure until the moment of failure of the thermal insulation (I).

(3) No failure until the moment of spontaneous and sustained flaming.

3 CLASSIFICATION AND FIELD OF APPLICATION

3.1 Reference of classification

This classification has been carried out in accordance with clause 7 of EN 13501-2:2023.

3.2 Classification

The element, type: Pyrobel in glued-laminated Rubberwood Hévéa frame, is classified according to the following combinations of performance parameters and classes as appropriate. No other classifications are permitted.

The classifications are valid for both sides of the non-loadbearing timber frame glazed wall.

EI 30, EI 20, EI 15
EW 30, EW 20, EW 15
E 30, E 20, E 15

3.3 Field of direct application

This classification is valid for the following end use applications according to EN 1364-1:2015.

The results of the fire test are directly applicable to similar constructions where one or more of the changes listed below are made and the construction continues to comply with the appropriate design code for its stiffness and stability:

3.3.1 Glazed element

3.3.1.1 Installation angle

A change in the angle of installation up to ± 10° from the vertical plane is allowed, provided the height of the glazed element does not exceed 3050 mm.

3.3.1.2 Height of the glazed element with overrun

For the classification times:

- EI 30;
- EW 30;
- E 30.

An increase in height up to a maximum of 3355 mm is allowed, provided the allowances for thermal expansion of the construction are increased pro-rata.

For the classification times:

- EI 20, EI 15;
- EW 20, EW 15;
- E 20, E 15.

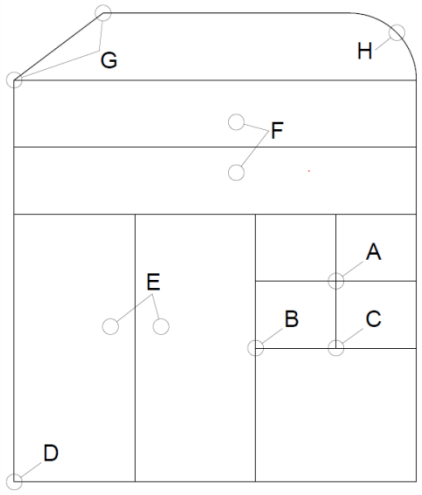
An increase in height up to a maximum of 3660 mm is allowed, provided the allowances for thermal expansion of the construction are increased pro-rata.

3.3.1.3 Width of the glazed element

A greater width is allowed by replicating the tested glazed elements or parts thereof, provided the framing system is identical to the one tested and the connection joints between the glazed elements have been tested.

Tested connection joints:

- Type A: four panes joining together;
- Type B: three panes joining together at one point including a full height vertical pane;
- Type C: three panes joining together at one point including a full width horizontal pane;
- Type D: corner junction;
- Type E: two full vertical panes side by side.



3.3.2 Glazing system

3.3.2.1 Linear dimensions

An unlimited decrease in height and/or width of the panes is allowed.

3.3.2.2 Dimensions and area of individual rectangular glass panes with overrun

For the classification times:

- EI 30;
- EW 30;
- E 30.

The following table shows the calculated extended size/area:

Tested sizes/areas			**Extended sizes/areas**		
Width (mm)	**Height** (mm)	**Area** (m²)	**Width** (mm)	**Height** (mm)	**Area** (m²)
1400	3000	4.200	1540	3300	4.620

In order to accommodate the increase in glass dimensions, it is permitted to increase the distance between mullions and/or transoms.

The results are given in the following annex:

Annex 9: the maximum allowed dimensions of rectangular shaped glass panes are represented by the outer lines.

For the classification times:

- EI 20, EI 15;
- EW 20, EW 15;
- E 20, E 15.

The following table shows the calculated extended size/area:

Tested sizes/areas			Extended sizes/areas		
Width (mm)	**Height** (mm)	**Area** (m²)	**Width** (mm)	**Height** (mm)	**Area** (m²)
1400	3000	4.200	1680	3600	5.082

In order to accommodate the increase in glass dimensions, it is permitted to increase the distance between mullions and/or transoms.

The results are given in the following annex:

Annex 10: the maximum allowed dimensions of rectangular shaped glass panes are represented by the outer lines.

3.3.2.3 Glazing beads

Test results on timber beads fixed by nails/pins cover screw fixing of at least the same length, applied with the same or smaller centre to centre distance (≤ 200-250 mm).

The tested bead width may be increased (≥ 15 mm). The bead depth may not be changed. (according to EN 15254-4:2018, figure 5)

3.3.2.4 Framing system

The distance between mullions and/or transoms may be decreased from that tested.

The distance between fixing centres may be decreased from that tested (supporting construction ≤ 450-500 mm, inter-fixing modules: ≤ 450-500 mm).

The cross-sectional dimensions of the frame profiles may be increased from the dimensions tested (≥ 20/30 mm x ≥ 57 mm).

3.3.2.5 Supporting constructions

The classification is valid for the following standard supporting constructions in accordance with EN 1363-1 with at least the same fire resistance and overall thickness as the test specimen:

- high density rigid standard supporting construction;
- standard flexible wall supporting construction.

Alternative flexible wall constructions are covered provided that:

- the same fire resistance classification is obtained;
- the construction is of a stud and board type construction, classified in accordance with EN 13501-2;
- the construction has an overall thickness not less than the minimum thickness of the appropriate range given in EN 1363-1 for the standard flexible wall used in the test;
- the number of board layers and the overall board layer thickness is equal to or greater than that tested;
- flexible wall constructions with timber studs are constructed with at least the same number of layers given in EN 1363-1 on the faces and at the interface-between the glazed element and the supporting construction.

The flexible wall can be used for both vertical and horizontal edge type connections to the glazed wall.

3.4 Field of extended application

3.4.1 Replacement of glass within the same glass product range

It is allowed to exchange the glass pane with the Pyrobel 16 EG or the Pyrobel 16 DGU variant from the same product range.

No Limitation: The Pyrobel 16 EG variant can be used in a direction indifferent to the fire. As long as the thickness of the added non-fire protection interlayer is smaller than 1 mm.

Limitation: The Pyrobel 16 DGU variant can only be used with the fire side at the side of the fire-resistant segment.

3.4.2 Glass shapes

Circular, triangular or 4-sided non-rectangular shapes may be cut from within the extended rectangular pane size defined by the field of direct application.

All other non-rectangular shapes may only be cut from the tested rectangular pane size and shall not be extended further.

3.4.3 Timber beads: Exchange of timber species / bead fixing / bead shape and dimensions

Allowed changes:

- The tested glued laminated timber beads may be replaced by solid timber beads (identical design).
- The timber type can be exchanged with a timber type with a density (≥ 700.4 kg/m³).
- The tested unprotected timber can be replaced by protected timber.
- The bead depth may be increased (≥ 17 mm) provided the mechanical edge cover remains within the limits determined by the reference test.

The bead width (≥ (15 mm) may be increased without restriction.

Limitations:

Hard wood with a density (≥ 450 kg/m³) shall not be exchanged with soft wood.

A bead fixed by screws shall not be exchanged by a clipped or nailed bead.

3.4.4 Exchange of gaskets / glazing strips / setting blocks

Exchange of a glazing material, e.g. gaskets, is only allowed if it is demonstrated in a reference test and/or pre-existing test data that the exchange does not have a

detrimental effect on the fire performance within a comparable glazing system of the same glass product range.

3.4.5 Changing or adding surface coverings

Decorative surface coverings of the glazing beads may be added.

Limitations:

It must be demonstrated that the covering material achieves at least Class A2 when tested according to EN 13501-1.

Any coverings on glazed elements classified EI shall be secured using only fixing method(s) proven in the reference test and/or by pre-existing test data.

3.4.6 Timber frames: Thickness / profile / timber type (charring rate / density)

Allowed changes:

- The tested glued laminated timber frame may be replaced by a solid timber frame (identical design).
- The timber type can be exchanged with a timber type with a density (≥ 700.4 kg/m³).
- The tested unprotected timber can be replaced by protected timber.
- The frame depth (≥ 20/30 mm) may be increased without restriction.
- The frame width (≥ 57 mm) may be increased without restriction.

Limitations:

Hard wood with a density (≥ 450 kg/m³) shall not be exchanged with soft wood.

A frame fixed by screws shall not be exchanged by a clipped or nailed fixing.

3.4.7 Changes or adding frame surface coverings

Decorative surface coverings of the framing members may be added.

Limitations:

Decorative surface coverings of the framing members may be added where one does not exist, provided it is demonstrated that the covering material achieves at least Class A2 when classified according to EN 13501-1.

If the surface covering is not Class A2 then the rules laid down in the EN 15269-2, EN 15269-3 and EN 15269-5 apply.

4 LIMITATIONS

This classification report does not represent type approval nor certification of the product.

SIGNED

Herwin Coghe (Signature)
Project Coordinator
Ghent
2026.06.19 08:22:03 +02'00'

APPROVED

Seppe Van Damme
(Signature)
Project Leader
Ghent
2026.06.19 10:56:29 +02'00'

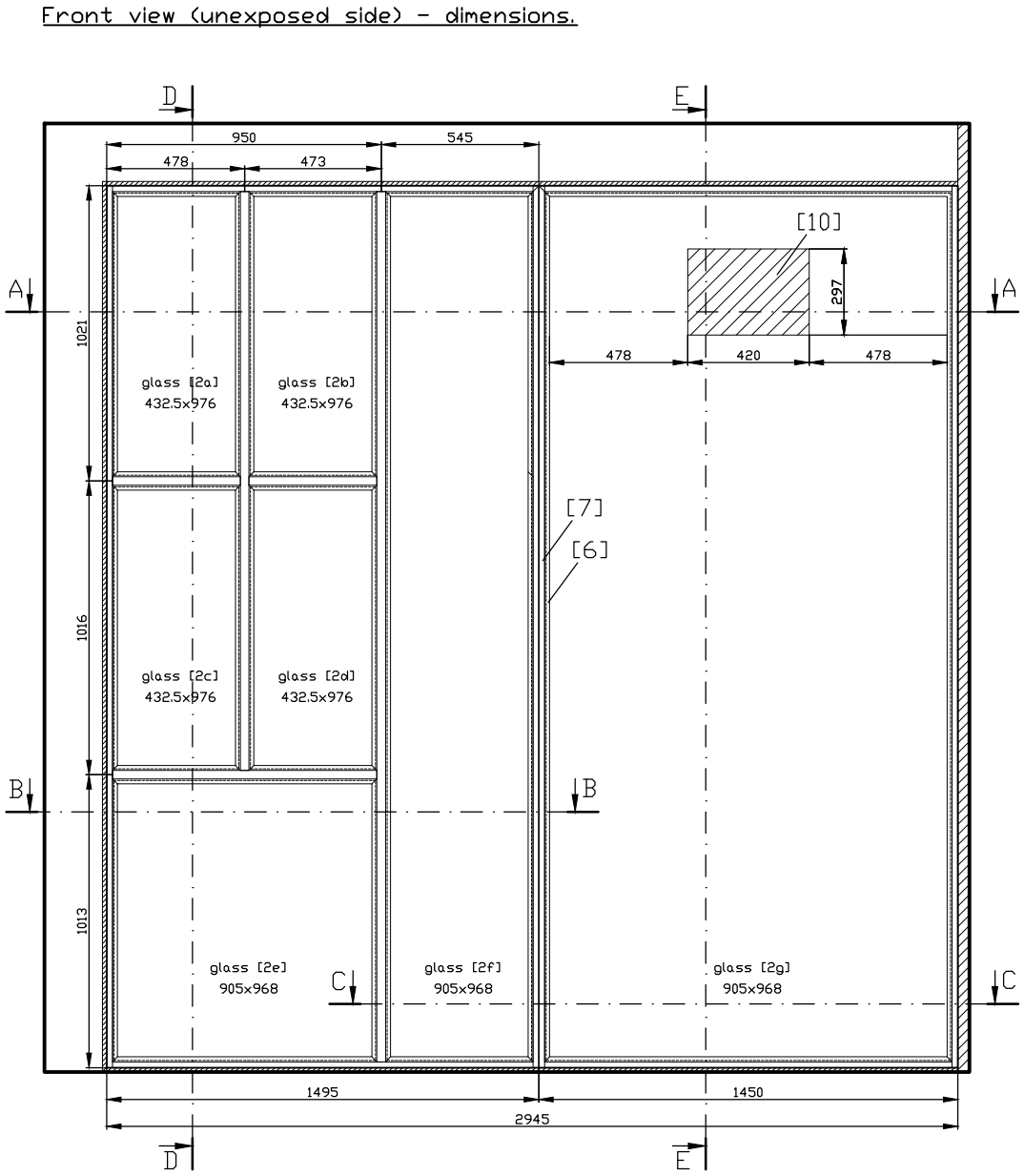
Signed for and on behalf of Warringtonfire Gent.

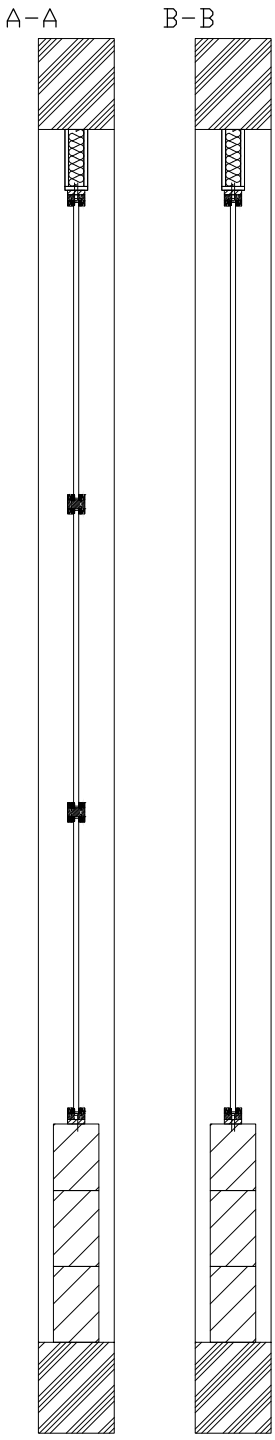
This document is the original version of the classification report and is written in English.

In case of doubt, the most recent version prevails, originally issued in English.

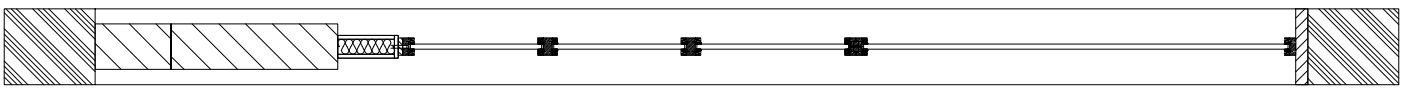
The authenticity of the electronic signatures is assured by Belgium Root CA.

Front view (unexposed side) - dimensions.





A-A



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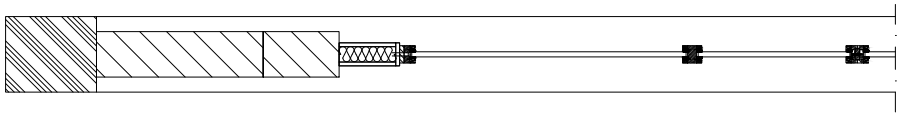
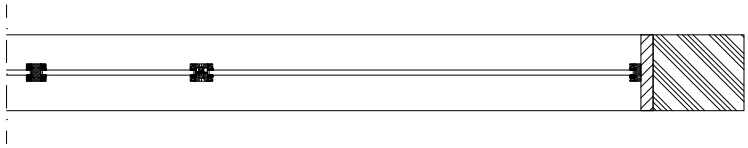


C-C



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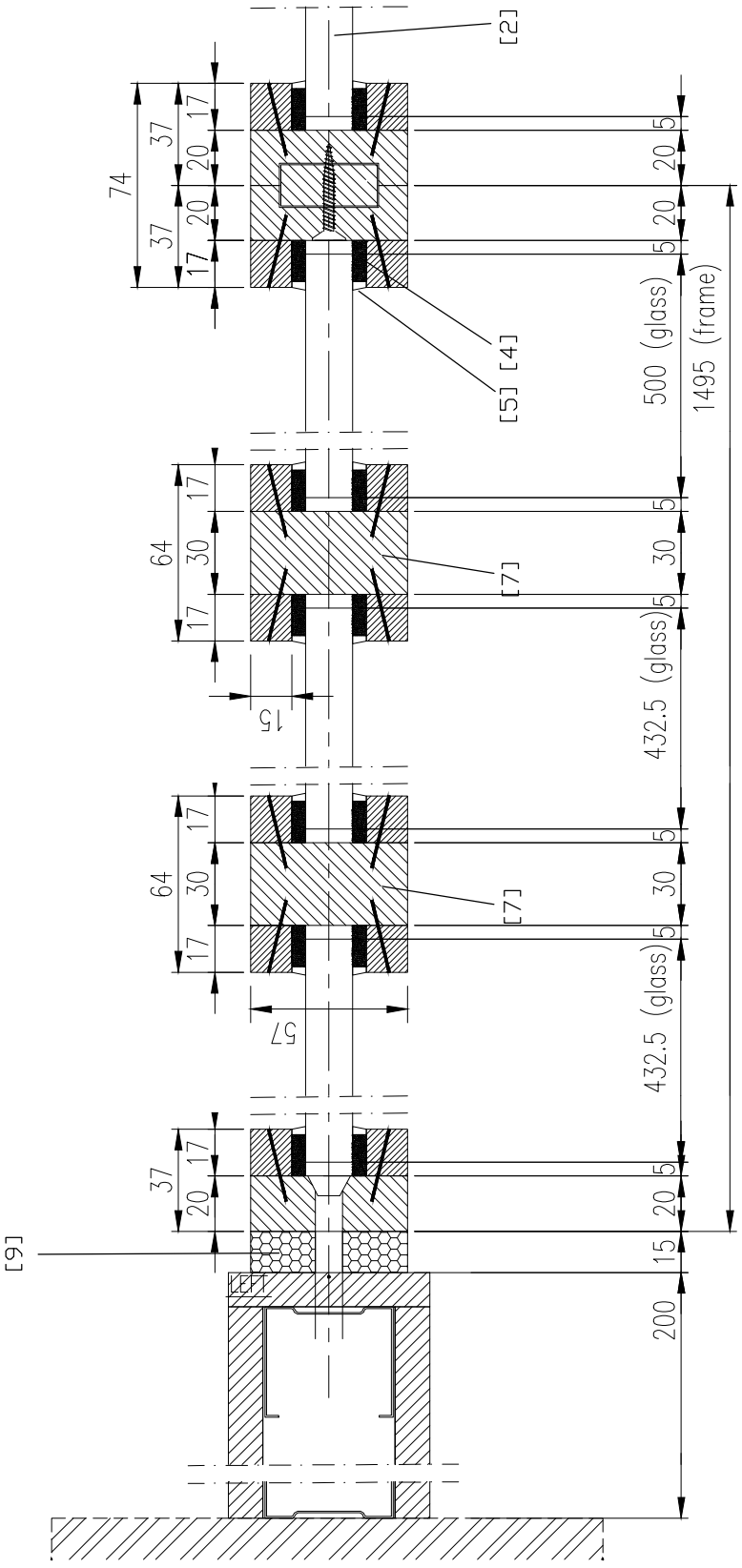
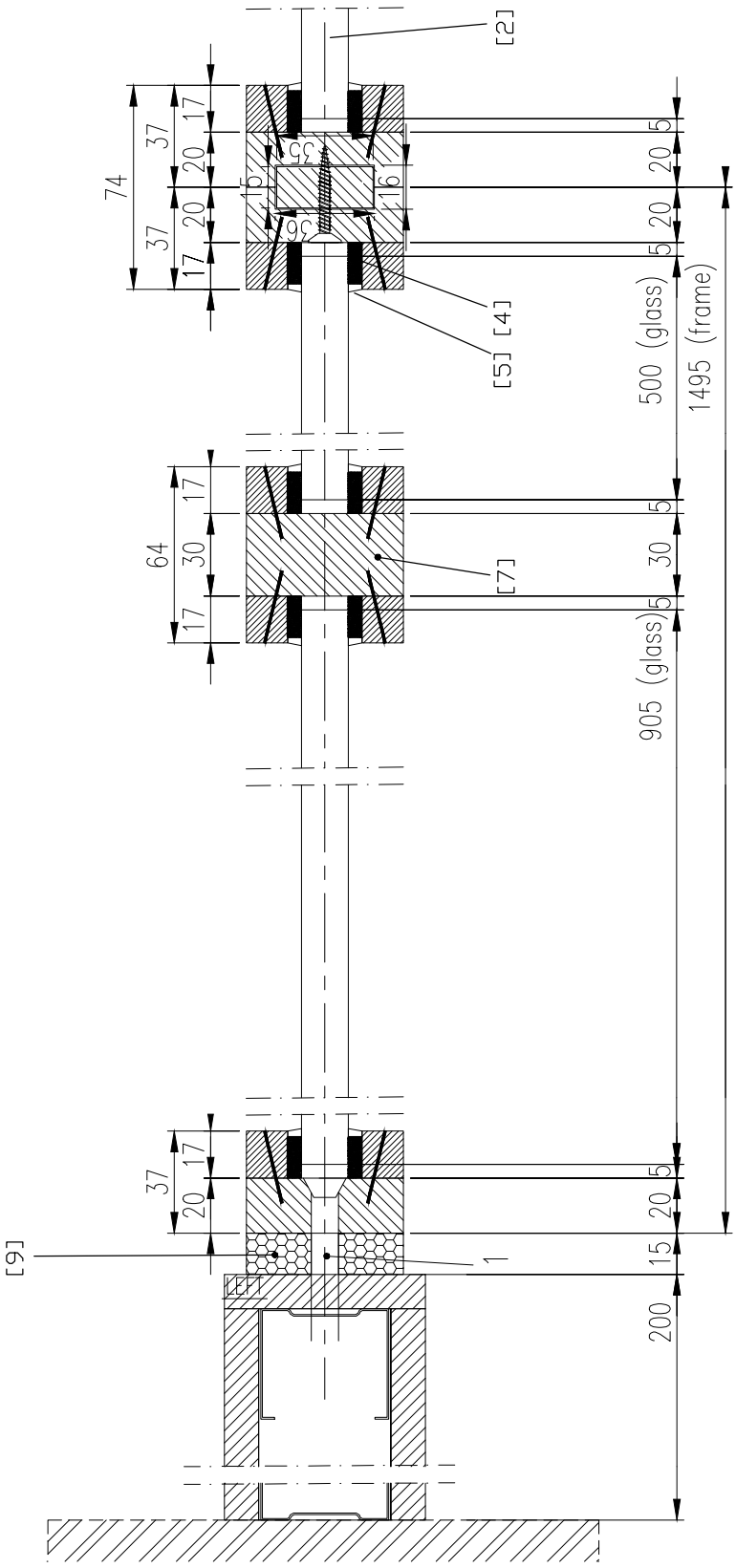
Bovenaanzicht - doorsneden AA en BB.



Bovenaanzicht - doorsneden AA en BB.



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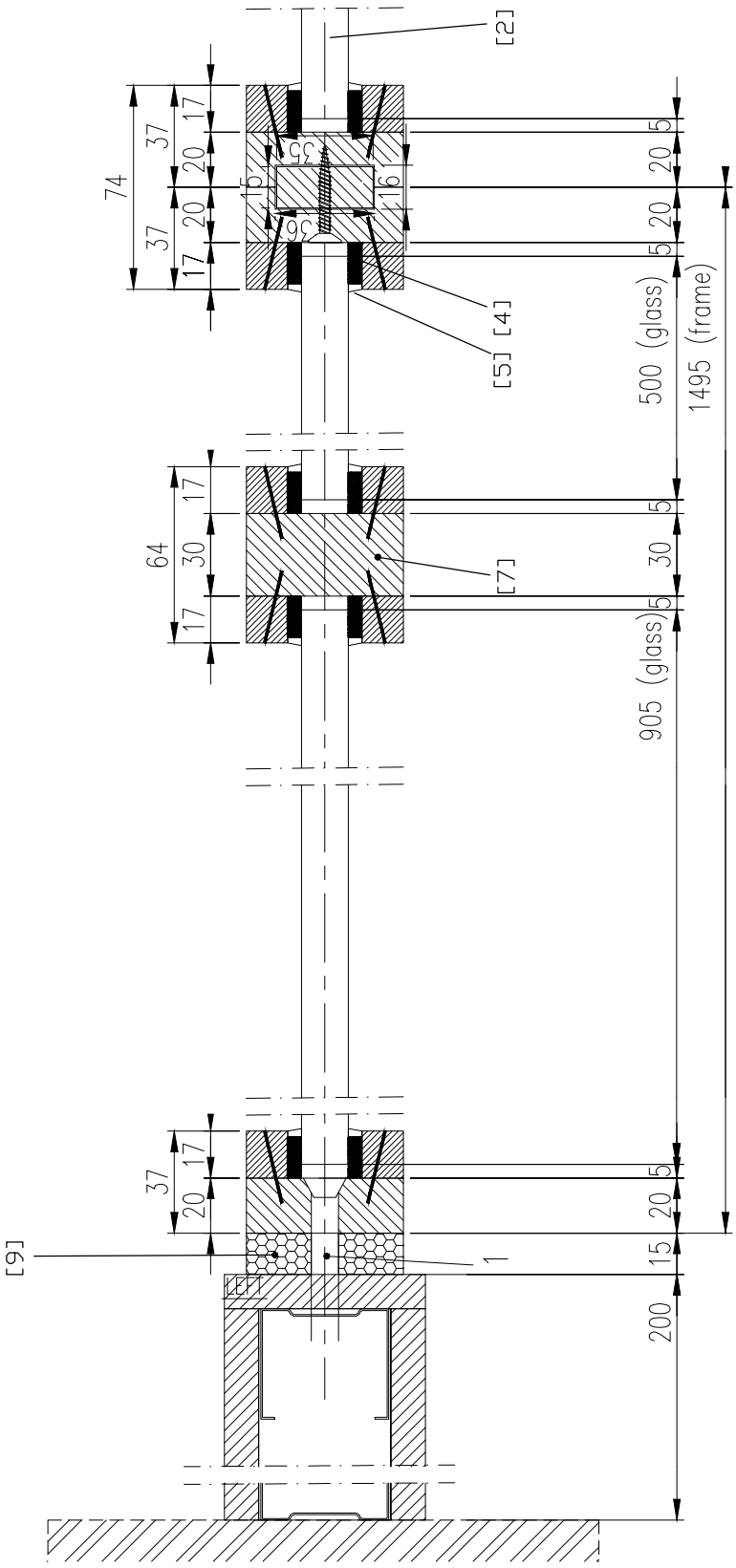
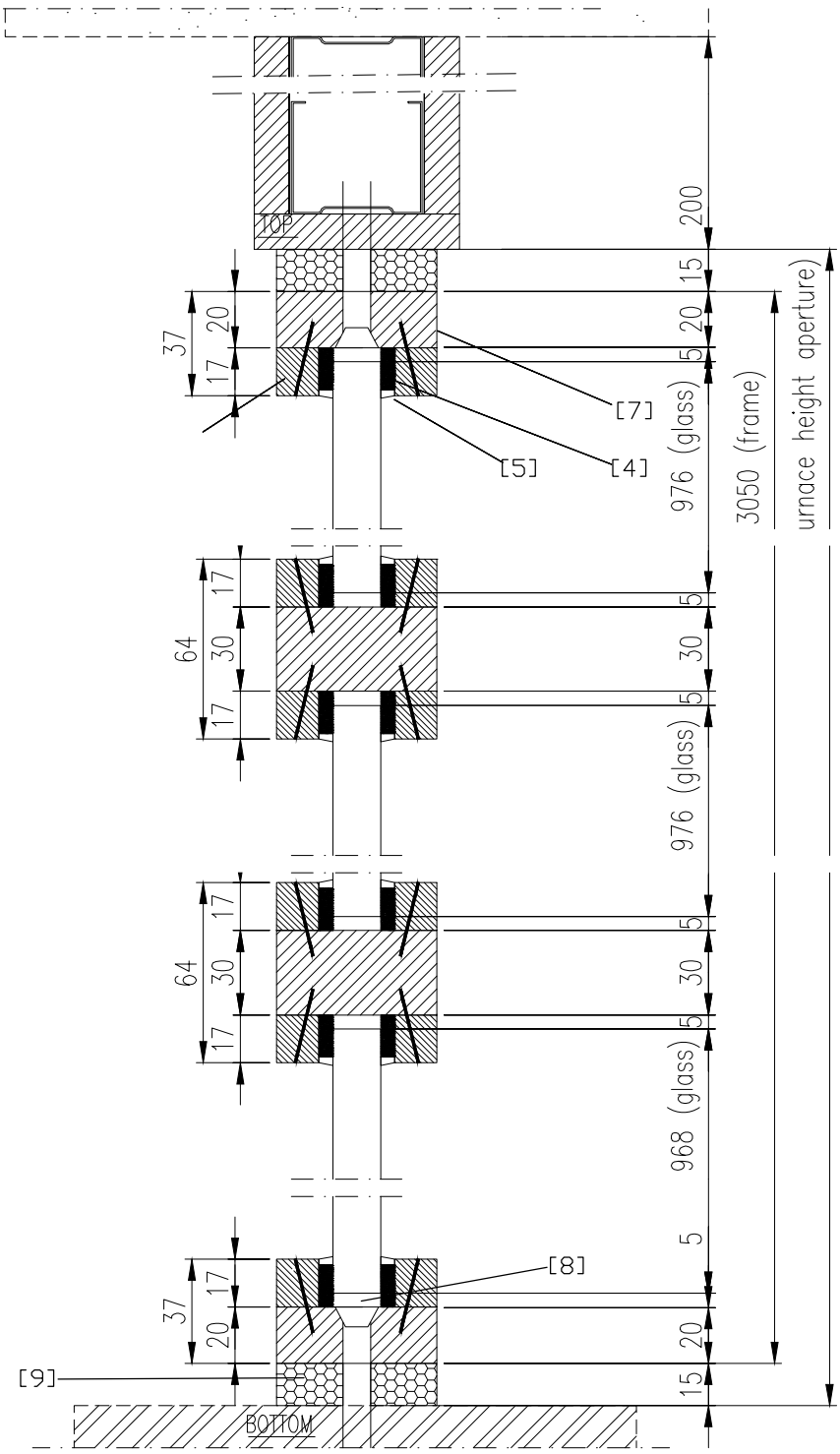
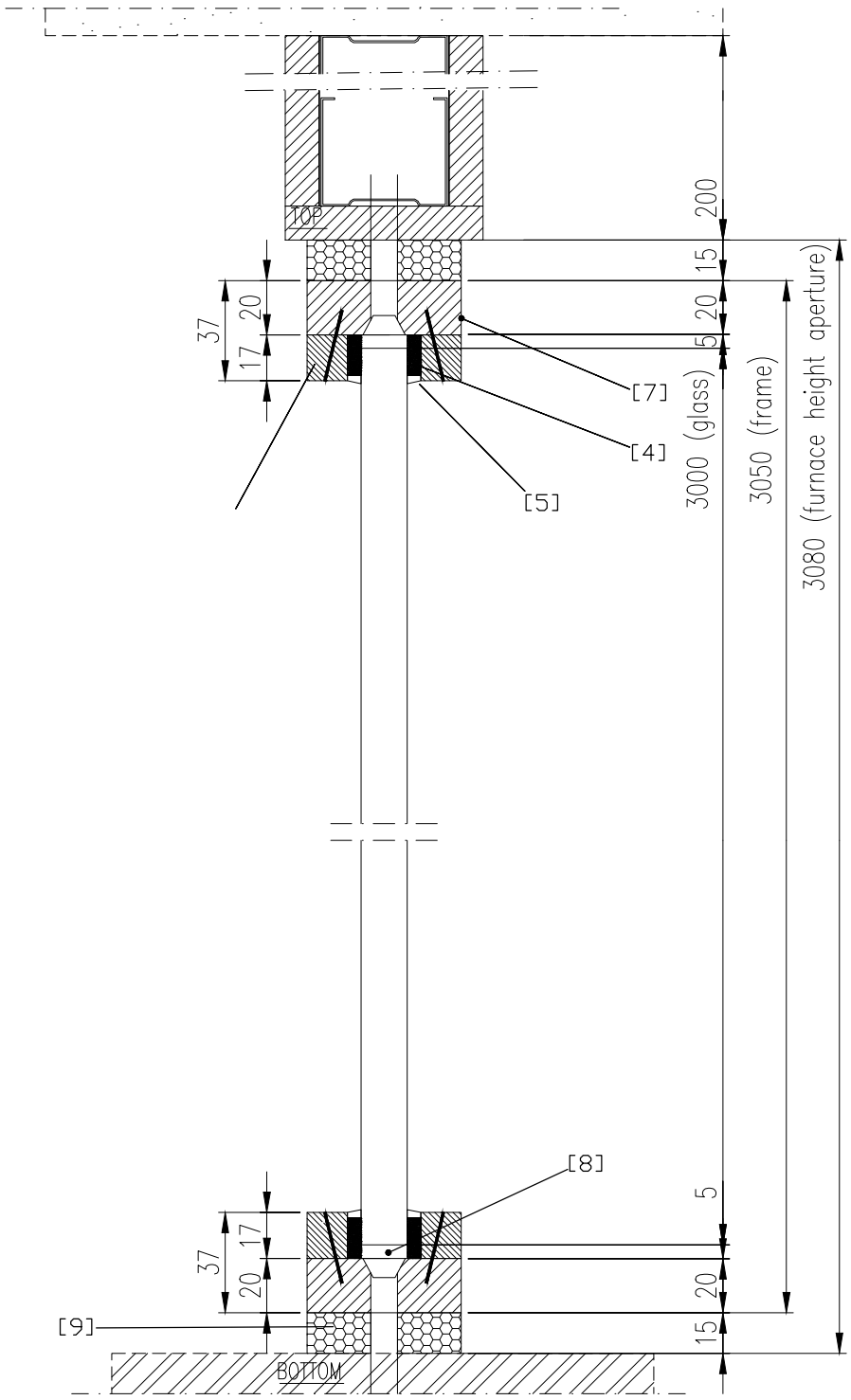


Section A-A - details - dimensions.



Section A-A - details - dimensions.



warringtonfire
Proud to be part of element

Sample Report

This report provides a record of the information relating to samples taken by Warringtonfire Testing and Certification Limited trading, or its agent, for certification of the products detailed below.

Job No.		AO-146846
Reason for Sampling		Initial Type Testing (ITT) ☐ Modification ☐ Audit Testing (Sample selected for Audit Testing has been agreed with Warringtonfire Technical) ☐ Other (Specify): ☒ CF 2029 changes
Certificate Number *(if applicable)*		2812-CPR-CA0004
Manufacturer Name		AGC
Manufacturing Site **(list all applicable sites)**		AGC Flat Glass Czech Sklarska 300 357 07 Olovi
Place of Sampling		As above
Traceability Information:	Date/time of production:	02/11/24
	Production unit/line:	Manufacturing – Date of Assembly
	Batch number:	OL002-97-745 OL002-97-743 OL002-97-741 OL002-97-736 OL002-97-725
	Shift:	am
	Document reference number/date/revision (e.g. recipe, drawing, etc):	Pyrobel 16 EI30_traceability Pyrobel 16 EI30_batch list
Product Details:	Name	Pyrobel 16
	Product Number (if applicable)	EI30
	Description	16mm
Marking of the product by the manufacturer e.g. label, batch number and date of manufacture		Label – see above batch numbers of Stock Sheets

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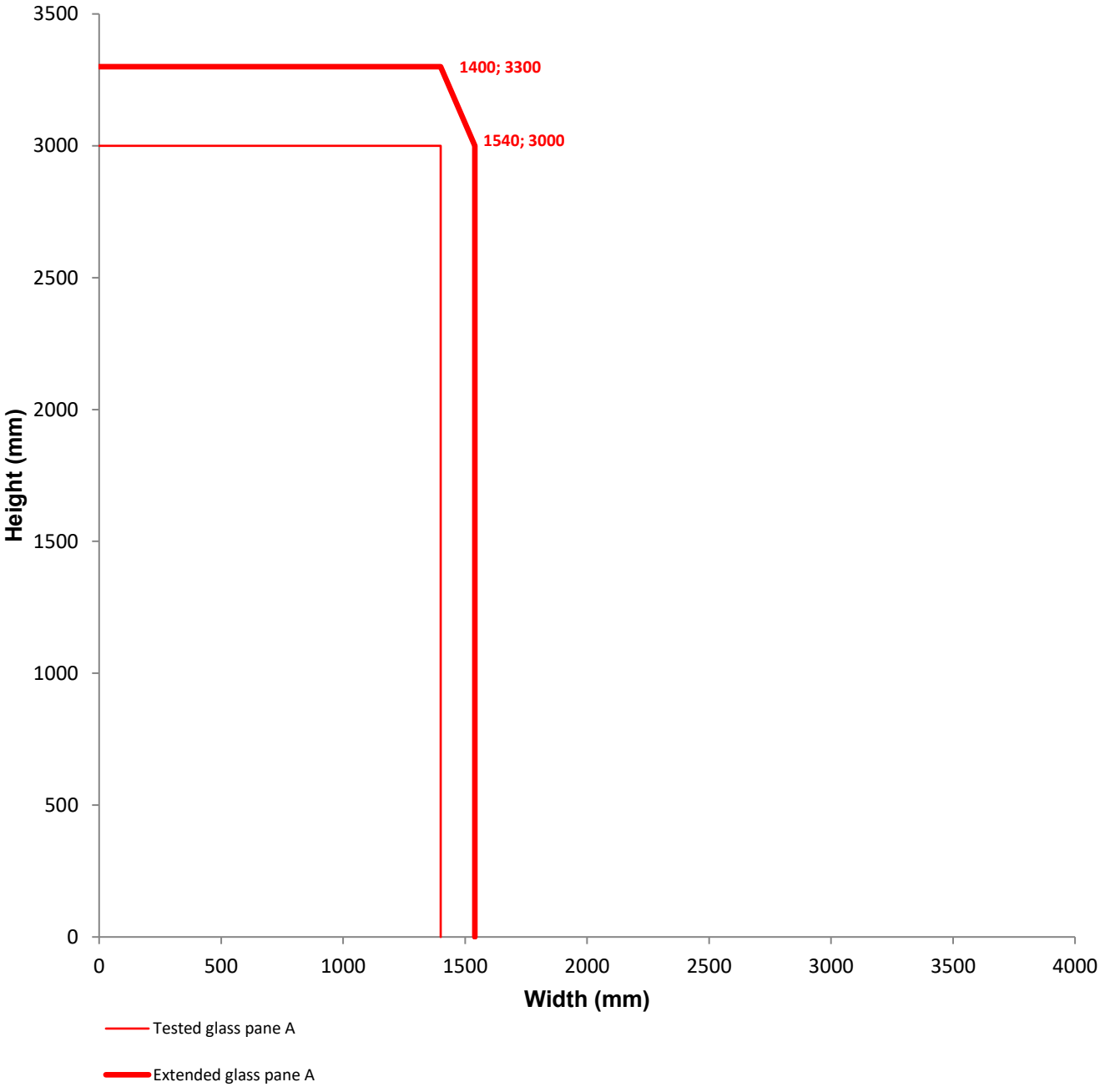
Sample Report

Stock/batch quantity from which samples selected and sample quantity		5 x samples
Results of tests and/or inspections during manufacture		Dimensional checks
Marking of the samples by Warringtonfire Testing and Certification Limited or their Representative	Job No:	AO-146846
	Date:	21/01/26
	Signature or initials of sampler:	B. Lechat Pyrobel 16 – DL 0822-1
Testing laboratory (name and address) Samples to be dispatched within agreed time period		Samples selected for Stock with anticipation to test at later date for CERTIFIRE 2029 changes
Date of Sampling		21st January 2026
Warringtonfire Testing and Certification Limited UK Approved Body Number		1121

Signed: (for and on behalf of Manufacturer)	Signed: (for and on behalf of Warringtonfire Testing and Certification Limited)
Print: M. Zelenka	Print: B. Lechat
Date: 21/01/26	Date: 21/01/26

Individual rectangular glass panes: aspect ratio and increase in area

The extended dimensions are only valid for the following classification times:
- **EI 30;**
- **EW 30;**
- **E 30.**

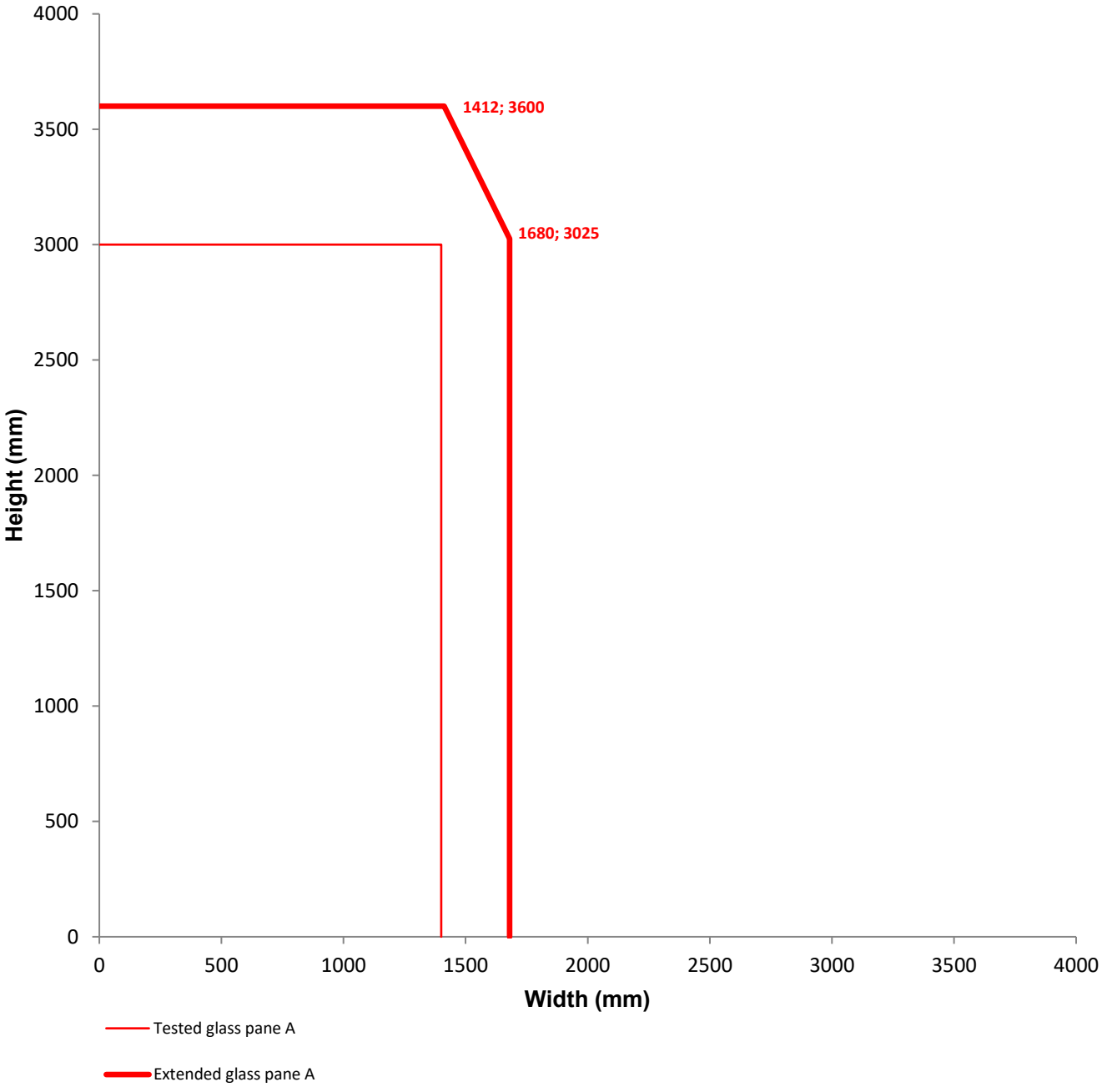


Note:

The maximum dimensions of rectangular glass panes are represented by the outer lines.

Individual rectangular glass panes: aspect ratio and increase in area

The extended dimensions are only valid for the following classification times:
- **EI 20, EI 15;**
- **EW 20, EW 15;**
- **E 20, E 15.**



Note:

The maximum dimensions of rectangular glass panes are represented by the outer lines.