

# FRAMELESS GLASS CURTAINS LIMITED TEST REPORT

#### **SCOPE OF WORK**

AAMA/WDMA/CSA 101/I.S.2/A440 TESTING ON P5, SLIDING/STACKING DOOR (3L/3R)

#### **REPORT NUMBER**

S2754.01-301-44-R0

# TEST DATE(S)

10/29/25 - 11/12/25

#### **ISSUE DATE**

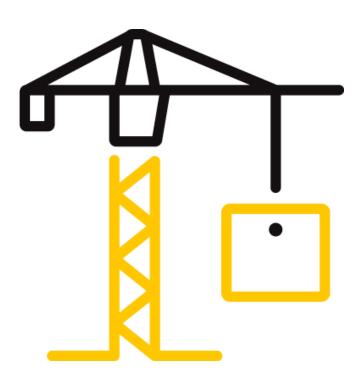
11/20/25

#### **PAGES**

24

# **DOCUMENT CONTROL NUMBER**

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#### TEST REPORT FOR FRAMELESS GLASS CURTAINS LIMITED

Report No.: S2754.01-301-44-R0

Date: 11/20/25

#### **REPORT ISSUED TO**

#### FRAMELESS GLASS CURTAINS LIMITED

Ballard Business Park, Cuxton Road Unit 6 Strood, Kent ME2 2NY

#### **SECTION 1**

#### **SCOPE**

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Frameless Glass Curtains Limited, Strood, Kent to perform testing in accordance with AAMA/WDMA/CSA 101/I.S.2/A440 on their P5, Sliding/Stacking Door (3L/3R). Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at the Intertek test facility in Fresno, California where testing was completed.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

FOR INTERTEK B&C:

COMPLETED BY: Jarod Hardman

REVIEWED BY: Tyler Westerling, P.E.

TITLE: Senior Project Lead

TITLE: Regional Manager

SIGNATURE: DATE: J1/20/25

JSH:ms

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Version: 06/21/24 Page 2 of 24 RT-R-AMER-Test-2804



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#### TEST REPORT FOR FRAMELESS GLASS CURTAINS LIMITED

Report No.: S2754.01-301-44-R0

Date: 11/20/25

#### **SECTION 2**

#### **SUMMARY OF TEST RESULTS**

TITLE	RESULTS
AAMA/WDMA/CSA 101/I.S.2/A440-22	Class R – DP15: Size Tested 6150 x 2100 mm (242-1/8 x 82-43/64 ln.) – Type FLD
Design Pressure	±720 Pa (±15.04 psf)
Air Infiltration	<0.1 L/s/m² (<0.01 cfm/ft²)
Water Penetration Resistance Test Pressure	180 Pa (3.76 psf)

#### **SECTION 3**

# TEST SPECIFICATION(S)/METHOD(S)

The specimens were evaluated in accordance with the following:

**AAMA/WDMA/CSA 101/I.S.2/A440:22**, North American Fenestration Standard/Specification for Windows, Doors, and Skylights

The following test methods were used during testing:

**ASTM E283/E283M-19**, Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen

**ASTM E330/E330M-14(2021)**, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

**ASTM E547-00(2016)**, Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference

**ASTM E987-88(2017)**, Standard Test Methods for Deglazing Force of Fenestration Products

**ASTM E2068-00(2022),** Standard Test Method for Determination of Operating Force of Sliding Windows and Doors

**AAMA 1304-18,** Voluntary Specification for Determining Forced Entry Resistance of Side-Hinged Door Systems

Version: 06/21/24 Page 3 of 24 RT-R-AMER-Test-2804



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# **TEST REPORT FOR FRAMELESS GLASS CURTAINS LIMITED**

Report No.: S2754.01-301-44-R0

Date: 11/20/25

#### **SECTION 4**

# **MATERIAL SOURCE/INSTALLATION**

Test specimen was provided by the client. Representative samples of the test specimen(s) will be retained by Intertek B&C for a minimum of four years from the test completion date.

The specimen was installed into a Douglas-Fir wood line steel test chamber. The rough opening allowed for a 3/8" shim space and the exterior perimeter of the specimen was sealed to the test buck. Installation of the tested product was performed by the client.

LOCATION	ANCHOR DESCRIPTION	ANCHOR SPACING
Through frame	#10 x 3" wood screw	29" on center

#### **SECTION 5**

# **EQUIPMENT**

The following equipment was utilized to apply Forced Entry Resistance (FER) loading in accordance with AAMA 1304:

EQUIPMENT	ASSET NUMBER(S)	CALIBRATION DUE DATE
Load Cell	INT01368	03/19/26

#### **SECTION 6**

#### LIST OF OFFICIAL OBSERVERS

COMPANY
Frameless Glass Curtains Limited
Intertek B&C
Intertek B&C



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# **TEST REPORT FOR FRAMELESS GLASS CURTAINS LIMITED**

Report No.: S2754.01-301-44-R0

Date: 11/20/25

#### **SECTION 7**

# **TEST SPECIMEN DESCRIPTION**

**Product Type**: Sliding/Stacking Door (3L/3R)

Series/Model: 5P

# **Product Size(s):**

# Test Specimen #1

OVERALL AREA:	WIDTH		HEIGHT	
17.84 m <sup>2</sup> (191.97 ft <sup>2</sup> )	Millimeters	Inches	Millimeters	Inches
Overall size	6150	242-1/8	2100	82-43/64
Panel (x6)	950	37-13/32	1965	77-23/64

#### **Frame Construction:**

MEMBER	MATERIAL	DESCRIPTION	
Sill	Aluminum	Thermally broken extrusion, Part #SWL9287	
Head	Aluminum	Thermally broken extrusion, Part #SWL9285	
Jambs	Aluminum	Thermally broken extrusion, Part #SWL7998	
Jambs	Aluminum	Locking jamb, thermally broken extrusion, Part #13	
	JOINERY TYPE	DETAIL	
All corners	Coped	Secured to jamb and sealed.	

# **Panel Construction:**

MEMBER	MATERIAL	DESCRIPTION
Rails	Aluminum	Thermally broken extrusion, Part #SWL9286
	JOINERY TYPE	DETAIL
All corners	N/A	N/A

**Reinforcement:** No reinforcement was utilized.

Version: 06/21/24 Page 5 of 24 RT-R-AMER-Test-2804



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# **TEST REPORT FOR FRAMELESS GLASS CURTAINS LIMITED**

Report No.: S2754.01-301-44-R0

Date: 11/20/25

# Weatherstripping:

DESCRIPTION	QUANTITY	LOCATION
Vinyl wrapped foam, Part #1	4 rows	Channel inserted into lock jamb of frame at interior and exterior face.
Polypile with fin, Part #2	4 rows	Channel inserted into head of frame at head.
Polypile with fin, Part #2	2 rows	Channel inserted into bottom rail of each panel.
Hollow bulb gasket, Part #14	2 rows	Channel inserted into bottom rail of each panel.
Polypile with fin, Part #3	2 rows	Channel inserted into lock jamb of frame at interior and exterior face.
Rubber gasket, Part #4	1 row	Adhered to each stile of each panel in opposing directions of intermediate joints.
Rubber gasket, Part #4	2 rows	Adhered to lock jamb of end panel stiles.

**Glazing:** No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.

<b>GLASS TYPE</b>	SPACER TYPE	INTERIOR LITE	EXTERIOR LITE	GLAZING METHOD
1" IG	GL-S (Stiles) TP-D (Rails)	1/4" tempered	1/4" tempered	Channel glazed into rails with Eurobond Quick Fix flex adhesive.

LOCATION	QUANTITY	DAYLIGHT OPENING		GLASS BITE
		Millimeters Inches		
Panel	6	950 x 1840	37-13/32 x 72-7/16	1"

Version: 06/21/24 Page 6 of 24 RT-R-AMER-Test-2804



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# **TEST REPORT FOR FRAMELESS GLASS CURTAINS LIMITED**

Report No.: S2754.01-301-44-R0

Date: 11/20/25

# Drainage:

METHOD	SIZE	QUANTITY	LOCATION
Weephole	1/4" diameter	6	Through sill face, 13-1/2"-15" from corner and 28-1/2"-57" on center spacing.

#### Hardware:

DESCRIPTION	QUANTITY	LOCATION
Locking assembly	2	Secured to jamb of frame at each jamb.
PVC strip	2 rows	Channel inserted into sill frame extrusion.
Slide pivot	2 per panel	Secured to top and bottom rail of panels.
Locating bracket	1 per panel	Secured to bottom rail of panels at opposite side to slide pivot.
Locating T-lug	2 per panel	Secured to top rail of panels at opposite side to slide pivot.

**Screen Construction:** No screen was utilized.

Version: 06/21/24 Page 7 of 24 RT-R-AMER-Test-2804



Telephone: 559-233-8705 Facsimile: 717-764-4129 www.intertek.com/building

# **TEST REPORT FOR FRAMELESS GLASS CURTAINS LIMITED**

Report No.: S2754.01-301-44-R0

Date: 11/20/25

#### **SECTION 8**

# **TEST RESULTS**

The temperature during testing was 13°C (55°F). The results are tabulated as follows:

TITLE OF TEST	DECLUTO	ALLOWED	NOTE
TITLE OF TEST	RESULTS	ALLOWED	NOTE
	Initiate Motion:		
	22.2 N (5.0 lbf)	155 N (35 lbf) max	
Operating Force,	Maintain Motion:		
per ASTM E2068	13.3 N (3.0 lbf)	155 N (35 lbf) max	
	Latches:		
	8.9 N (2.0 lbf)	100 N (22.5 lbf) max	
Air Leakage,			
Infiltration per ASTM E283	<0.1 L/s/m <sup>2</sup>	1.5 L/s/m <sup>2</sup>	
at 75 Pa (1.57 psf)	(<0.01 cfm/ft <sup>2</sup> )	(0.3 cfm/ft <sup>2</sup> ) max.	1, 2
Air Leakage,			
Exfiltration per ASTM E283	0.1 L/s/m <sup>2</sup>	1.5 L/s/m <sup>2</sup>	
at 75 Pa (1.57 psf)	(0.01 cfm/ft <sup>2</sup> )	(0.3 cfm/ft <sup>2</sup> ) max.	1, 2
Water Penetration,			
per ASTM E547			
at 140 Pa (2.92 psf)	N/A	N/A	3
Uniform Load Deflection,			
per ASTM E330			
Deflections taken at vertical			
panel joint			
+720 Pa (+15.04 psf)	2.0 mm (0.08")		
-720 Pa (-15.04 psf)	0.5 mm (0.02")	Report only	4, 5, 6
Uniform Load Structural,			
per ASTM E330			
Permanent set taken at vertical			
panel joint			
+1080 Pa (+22.56 psf)	0.3 mm (0.01")	7.9 mm (0.31") max.	
-1080 Pa (-22.56 psf)	0.3 mm (0.01")	7.9 mm (0.31") max.	5, 6
Forced Entry Resistance,			
per ASTM AAMA 1304	Pass	No entry	
OPTIONAL PERFORMANCE			
Water Penetration,			
per ASTM E547			
at 180 Pa (3.76 psf)	Pass	No leakage	

Version: 06/21/24 Page 8 of 24 RT-R-AMER-Test-2804



Telephone: 559-233-8705 Facsimile: 717-764-4129 www.intertek.com/building

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Report No.: S2754.01-301-44-R0

Date: 11/20/25

**Note 1:** The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.

Note 2: Test Date 10/29/25 / Time: 9:00 AM

**Note 3:** The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.

**Note 4:** The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.

Note 5: Loads were held for 10 seconds.

**Note 6:** Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

#### **SECTION 9**

#### **ALTERATIONS**

No alterations were required.

Version: 06/21/24 Page 9 of 24 RT-R-AMER-Test-2804



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# **TEST REPORT FOR FRAMELESS GLASS CURTAINS LIMITED**

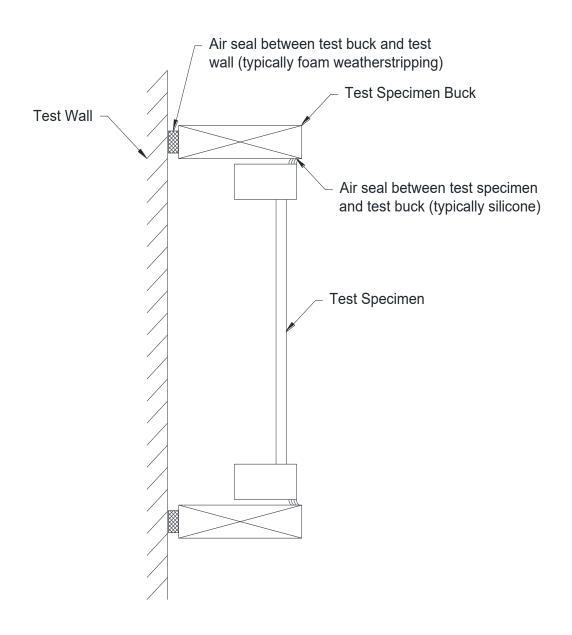
Report No.: S2754.01-301-44-R0

Date: 11/20/25

#### **SECTION 10**

#### **LOCATION OF AIR SEAL**

The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.



Version: 06/21/24 Page 10 of 24 RT-R-AMER-Test-2804



Telephone: 559-233-8705 Facsimile: 717-764-4129 www.intertek.com/building

# **TEST REPORT FOR FRAMELESS GLASS CURTAINS LIMITED**

Report No.: S2754.01-301-44-R0

Date: 11/20/25

#### **SECTION 11**

# **CONCLUSION**

The specimen tested successfully met the performance requirements for a Class R – DP15: Size Tested 6150 x 2100 mm (242-1/8 x 82-43/64 in.) – Type FLD rating.

Version: 06/21/24 Page 11 of 24 RT-R-AMER-Test-2804



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# **TEST REPORT FOR FRAMELESS GLASS CURTAINS LIMITED**

Report No.: S2754.01-301-44-R0

Date: 11/20/25

# **SECTION 12**

# **PHOTOGRAPHS**



Photo No. 1
Test Specimen Overall



Photo No. 2
Test Specimen during Air Infiltration



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# TEST REPORT FOR FRAMELESS GLASS CURTAINS LIMITED

Report No.: S2754.01-301-44-R0

Date: 11/20/25



Photo No. 3
Test Specimen during Structural Wind Loading



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# **TEST REPORT FOR FRAMELESS GLASS CURTAINS LIMITED**

Report No.: S2754.01-301-44-R0

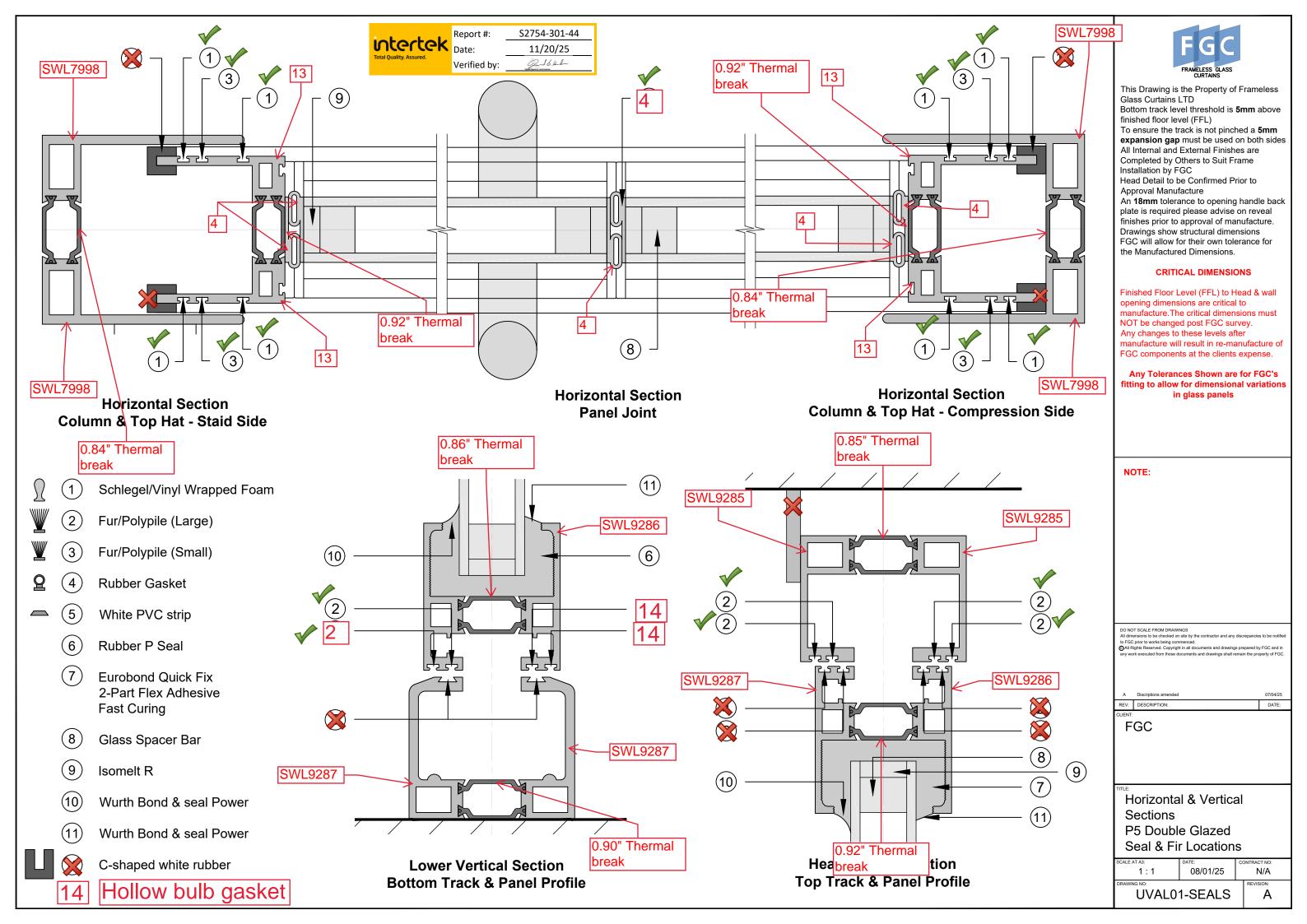
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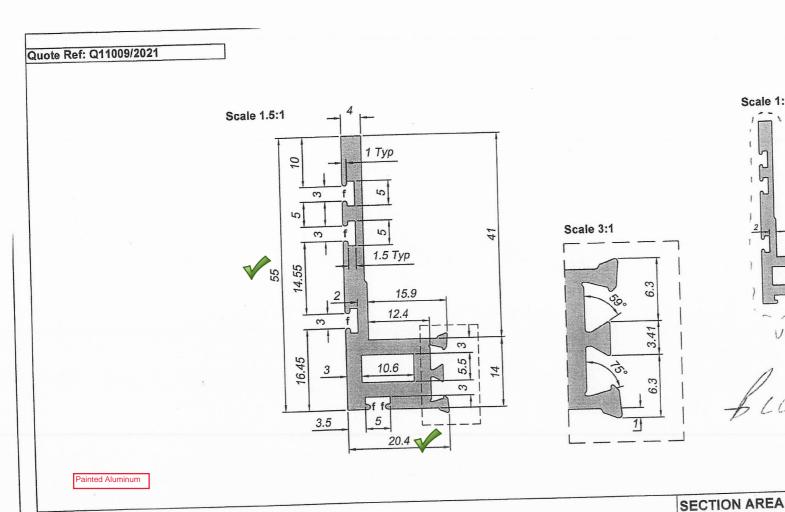
#### **SECTION 13**

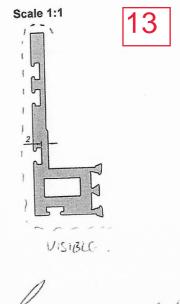
# **DRAWINGS**

The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

Version: 06/21/24 Page 14 of 24 RT-R-AMER-Test-2804







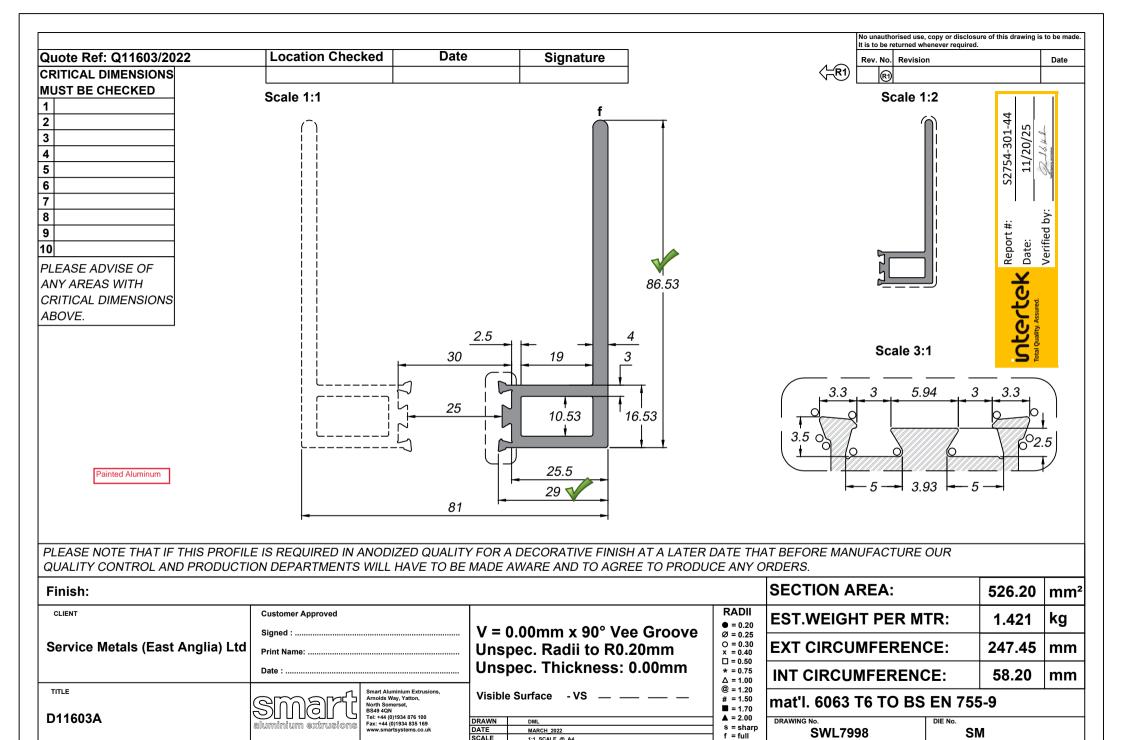
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T.			SECTION AREA:	325.41	mm²
Finish:		RADII	EST.WEIGHT PER MTR:	0.879	kg
CLIENT	V = 0.00mm x 90° Vee Groove	W = 0.20	EXT CIRCUMFERENCE:	200.00	mm
Service Metals (East Anglia) Ltd	Unspec. Thickness: 0.00mm	M - 0.70	INT CIRCUMFERENCE:	31.86	mm
	Visible Surface -VS — — —	章 = 1.70	mat'l. 6063 T6 TO BS EN 755-9		
Top hat extrusion	DRAWN YT DATE DECEMBER 2020	▲ = 2.00 s = sharp f = full			
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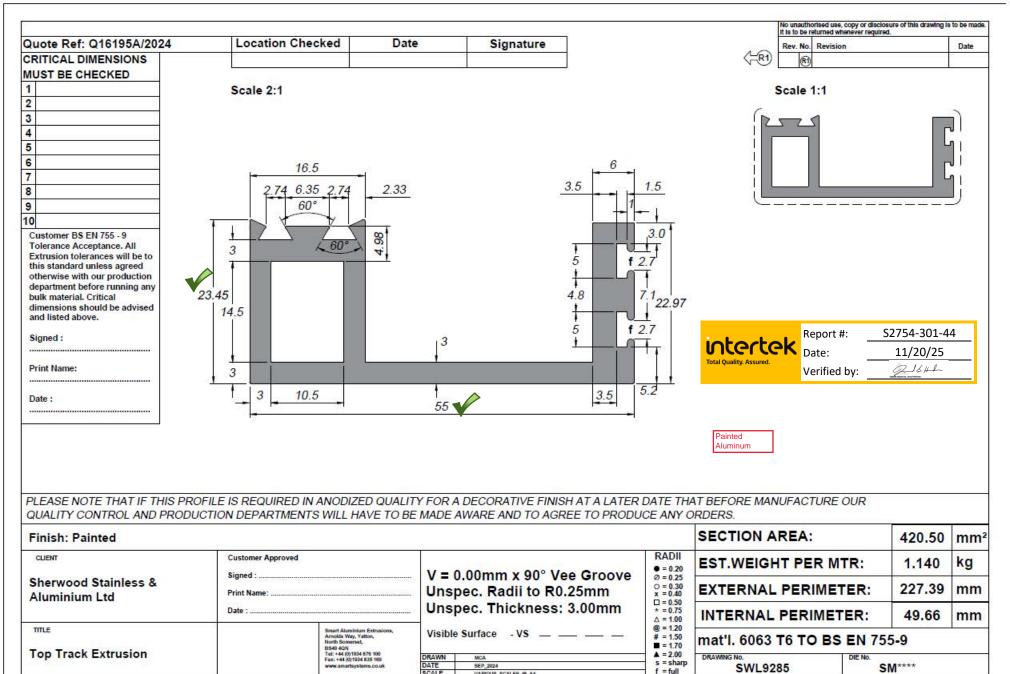
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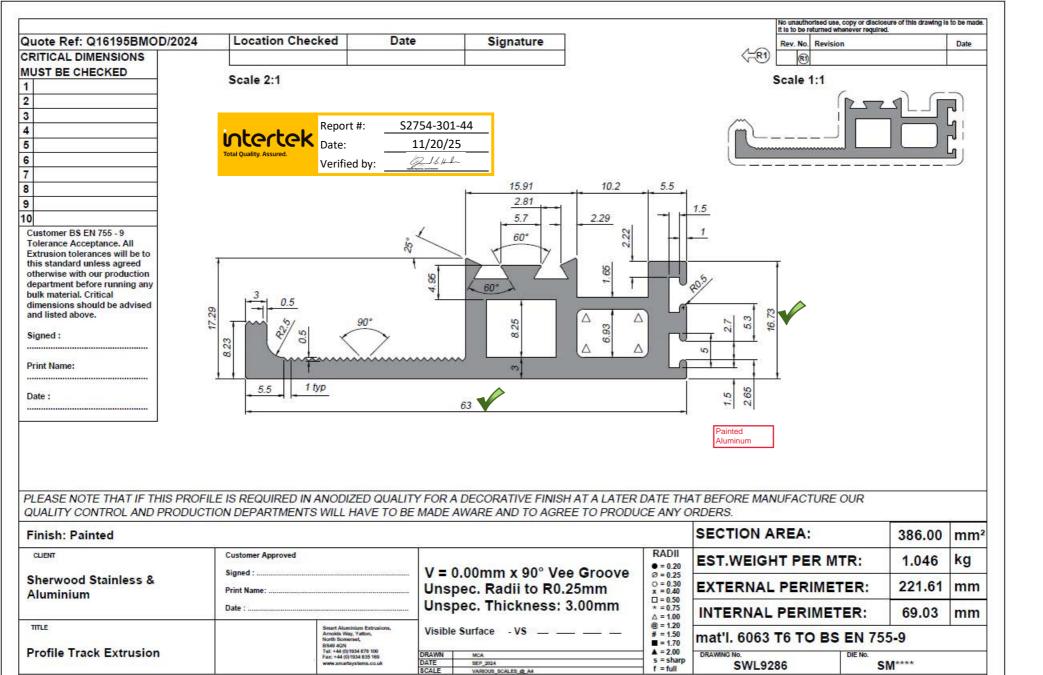
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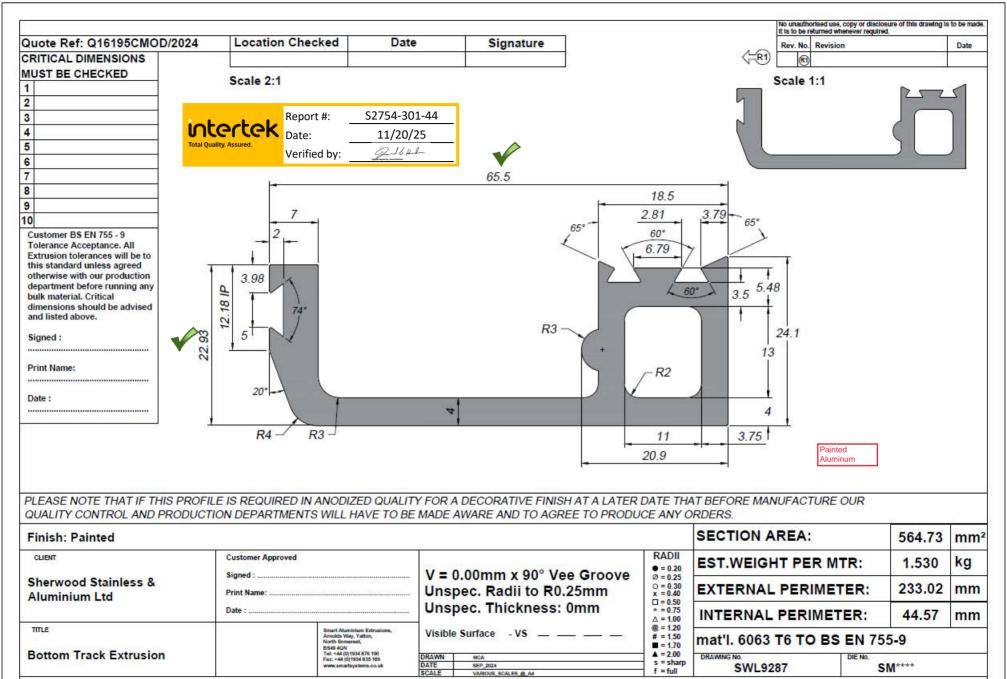


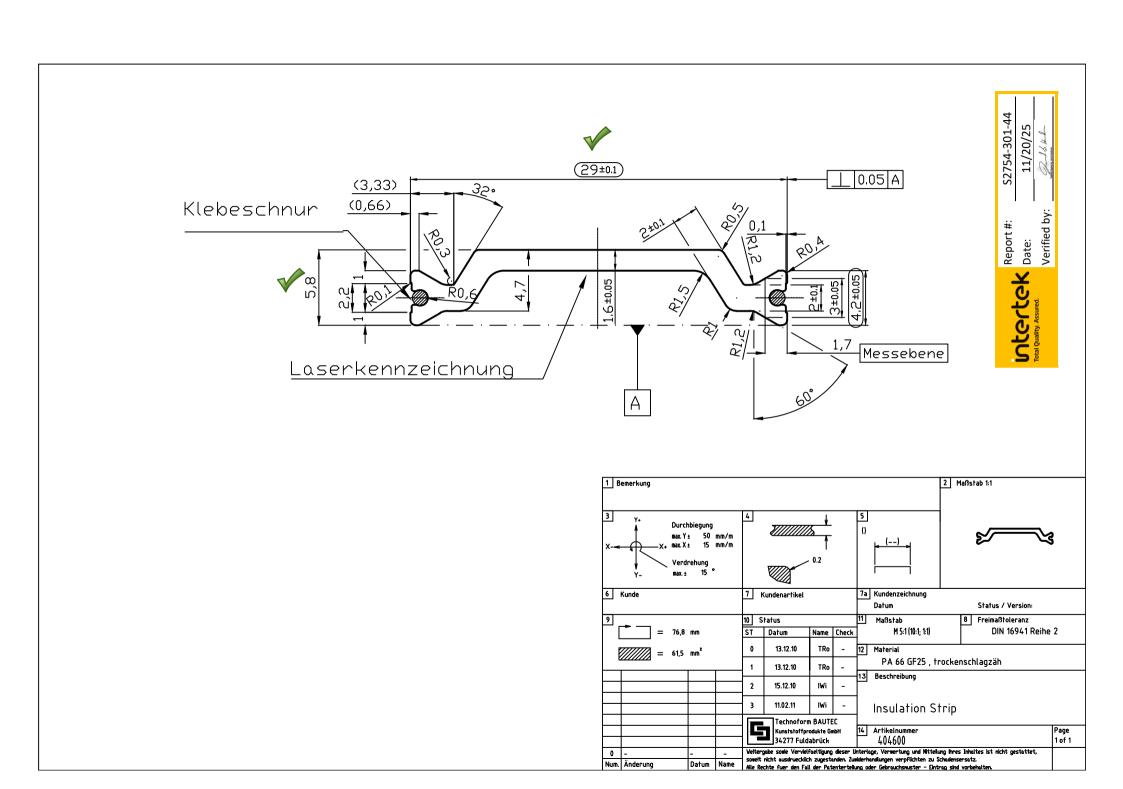
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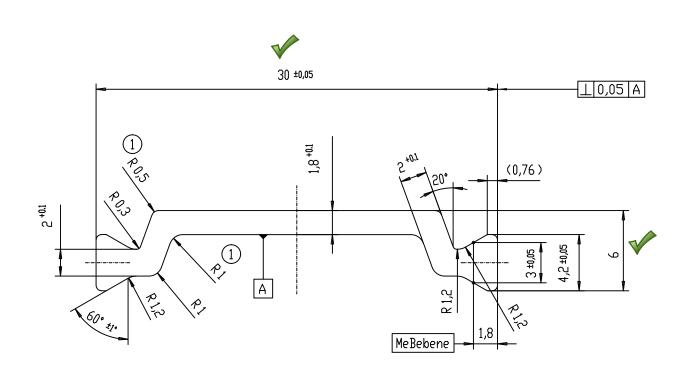


VARIOUS SCALES @ A4









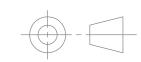


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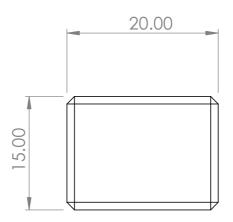


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# **RESEARCH & DEVELOPMENT: P5 PROJECT**









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CLIENT:

Frameless Glass Curtains

BY: resford	DATE: 16/08/2023	INSTRUMENT	GLASSES - GLASS SPACER	≀BAR
DEBURR AND BREAK SHARP EDGES	FINISH: TOUGHENED	DWG NO:	IG-GSB-01	A3

DO NOT SCALE MATERIAL:
DRAWING PLANIBEL (FLOAT GLASS)

SCALE:1:5

SHEET 1 OF 1

TITLE:



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# **TEST REPORT FOR FRAMELESS GLASS CURTAINS LIMITED**

Report No.: S2754.01-301-44-R0

Date: 11/20/25

# **SECTION 14**

#### **REVISION LOG**

REVISION #	DATE	PAGES	REVISION
0	11/20/25	N/A	Original Report Issue