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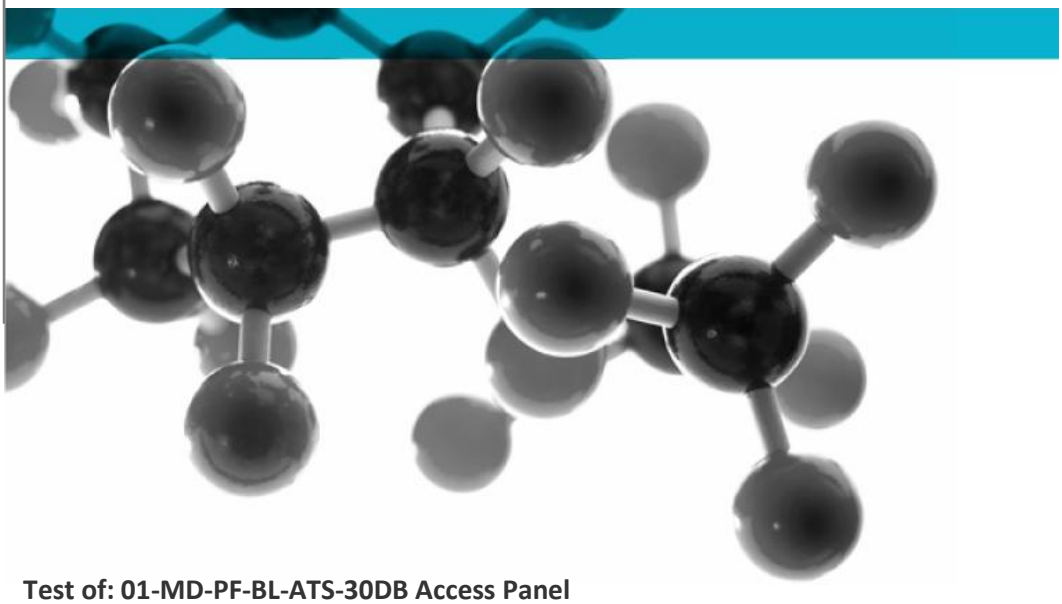
EN 1634-3: 2004

Smoke control test for door and shutter assemblies

To the principles of BS EN 1026: 2016

Windows and Doors – Air Permeability



Test of: 01-MD-PF-BL-ATS-30DB Access Panel

Date of Test: 30/03/22

Copy: 1

Issue No.: 1

Sponsor: Panel Technologies Ltd

49-61 Jodrell Street
Nuneaten
Warwickshire
CV11 5EG

Document Reference: WYC516711/01

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Results of Test: WYC516711/01/Test1

Panel Technologies Ltd

49-61 Jodrell Street

Whitacre Road Industrial Estate

Nuneaton

Warwickshire

CV11 5EG

This document confirms that performance testing was conducted on 30th March 2022. Testing was conducted to BS EN 1634-3: 2004 Incorporating corrigendum no. 1 Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware – Part 3: Smoke control test for door and shutter assemblies.

The following results were achieved:

Product tested	**01-MD-PF-BL-ATS-30DB access panel**
Test Detail	**Locked, with threshold not taped**

Summary of testing procedure			**Result**
BS EN 1634-3: 2004	**Pressure (Pa)**	**Leakage (m³/h)**	**Leakage (m³/m/h)**
Results under positive chamber (door leaf opening away from chamber)	**50**	2.27	0.63
	25	1.12	0.31
	10	0.52	0.15
Results under negative chamber (door leaf opening away from chamber)	**50**	0.82	0.23
	25	0.52	0.15
	10	0.29	0.08

Testing was carried out at ambient temperature only: temperature of the test chamber was measured using a calibrated digital thermometer before and after testing.

The perimeter length of gap was 3.580m

Issued by:
Jamie Nelson
Technical Officer

Authorised by:
Lee Grant-Riach
Lead Technical Officer
Issued Date: 12th April 2022

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1762

Results of Test: WYC516711/01/Test2

Panel Technologies Ltd

49-61 Jodrell Street

Whitacre Road Industrial Estate

Nuneaton

Warwickshire, CV11 5EG

This document confirms that performance testing was conducted on 30th March 2022. Testing was conducted to the principles of BS EN 1026: 2016 – Windows and Doors – Air permeability – Test method:- The following results were achieved:

Product tested		01-MD-PF-BL-ATS-30DB single leaf access panel					
Summary of testing procedure		Results		Summary of testing procedure		Results	
Positive Pressure (Pa)	Leakage (m^3/h)	Leakage ($m^3/h/m$)	Leakage ($m^3/h/m^2$)	Negative Pressure (Pa)	Leakage (m^3/h)	Leakage ($m^3/h/m$)	Leakage ($m^3/h/m^2$)
50	2.28	0.638	2.820	**50**	0.83	0.23	1.02
100	2.92	0.815	3.603	**100**	1.22	0.34	1.50
150	8.09	2.260	9.989	**150**	2.74	0.76	3.38
200	13.82	3.860	17.058	**200**	2.99	0.83	3.69
250	20.04	5.597	24.736	**250**	4.60	1.28	5.68
300	26.63	7.438	32.874	**300**	5.38	1.50	6.65
450	49.80	13.912	61.486	**450**	6.54	1.83	8.08
600	79.89	22.317	98.634	**600**	9.05	2.53	11.17

Testing was carried out at 11.4°C and 64.7% RH. The perimeter length of gap was 3.58m. The overall area was 0.81m^2

*The access panel is not covered under the EN 12207: 2016 classification standard, but based on the dimensions and leakages from EN 1026 test, the panel would 'achieve' **300Pa Class 2'** classification.*
Please note that is for reference only as this product is neither a doorset nor window and cannot be fully classified under EN 12207: 2016

Issued by:
Jamie Nelson
Technical Officer

Authorised by:
Lee Grant-Riach
Lead Technical Officer
Issued Date: 12th April 2022

Warringtonfire (UK) Ltd (Part of the Element Group)

Chiltern House Stocking Lane, Hughenden Valley, High Wycombe, HP14 4ND, UK.

Tel: 01494 569800 Fax: 01494 564895

Web: www.Warringtonfire.com Email: europe@bmtrada.com

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1. Introduction

Performance testing to BS EN 1634-3:2004 incorporating corrigendum no. 1 and to the principles of EN 1026: 2016 was conducted on the access panel on 30th March 2022. The specimen was configured as a single leaf, single acting access panel. The specimen was installed opening out of the test chamber. In accordance with BS EN 1634-3: 2004 section 10.1.1, the leaf was pre-cycled before the smoke leakage test (See section 6.1 for further details).

2. Specimen verification

The access panel was delivered to Warringtonfire on 30th March 2022. The component parts of the specimen were identified based on nominal information provided by the sponsor. These details are outlined in the specimen construction section of this report (section 5).

2.1. Conditioning

The specimen was made from non-hygroscopic materials and was conditioned for 1 hour before the test at an average temperature between 11°C and 12°C. Relative humidity was between 64% and 65%.

2.2 Sampling

Warringtonfire was not involved in factory sampling of the products and materials used for the test specimen described in this report, and as such the results apply to the sample as received.

3 Description of supporting construction

The partition was constructed of nominal 90mm x 45mm timber studs at 600mm centres with one layer of 12.5mm plasterboard on each face. The stud wall is taken to be of a standard wall construction.

The specimen was fixed with 3.5mm x 50mm Bugle Head Drywall Screws

The perimeter of the front of the frame was sealed with a bead of fire rated intumescent mastic. The gap between the back of the specimen and supporting construction was nominal 7mm, capped with fire rated intumescent mastic.

4. Test Equipment

Description
Scientific Monitor
Tape Measure
Callipers
Laminar Flow element:
Mass Flow Meter
Pressure Transducer
Force Gauge

5. Description of Specimen Construction

The specimen was identified as a 01-MD-PF-BL-ATS-30DB single leaf access panel. The overall frame dimensions were 650mm wide x 1250mm high x 27mm deep. The panel dimensions were 597mm wide x 1197mm high x 22mm thick.

See Appendix 1 for more information.

Panel

	Material/type	Dimensions (mm)
Door Tray	Folded Zintec Steel*	1 thick*
Core	dB Plasterboard Glued to internal face of tray and retained by core retainer	12.5 thick
Core retainer	0.7mm thick Folded Zintec Steel* fixed by 3No. 3.8mm x 16mm self-tapping screws	40 x 11
Joints	Welded	-

* As stated by sponsor, not checked by laboratory

Frame

	Material/type	Dimensions (mm)
Stiles and Rails	1mm thick folded Zintec Steel*	27 x 43
Rebate	Single type	26 x 19
Joints	Mitred and welded	-
Fixing brackets	1mm thick steel brackets welded to back of frame	-

* As stated by sponsor, not checked by laboratory

Hardware

	Make/type	Size (mm)	Fixing details (dimensions in mm)
Hinges	M5 x 12 Bright Zinc Plated (BZP) Pan Pozi Head Cross Recess Machine screw*	M5 x 12	Screw fixed in place through a M5 Bright Zinc Plated (BZP) Round Flat Head Serrated Open End Rivet Nuts*
Locking mechanism	2No. C.R.A International (Ref. BL-ZINC-WMH)* Budget locks	85 x 23	Welded into panel leaf*
Bung	2No. Machine screws with Neoprene washer	M14 x 25	Self thread
Keeps	All keeps are cut outs in frame	-	-

* As stated by sponsor, not checked by laboratory

Perimeter Sealing Details

	Make/type	Size (mm)	Location
Door Edges	Neoprene seal	9 x 5.5	Self-adhered to leaf face
	C.R.A. International (Ref. 18693)*	10 x 2	Self-adhered to leaf face
Frame reveal	None present	-	-
Seal continuity	Uninterrupted by hardware	-	-

* As stated by sponsor, not checked by laboratory

6. Pre-test measurements

6.1 Operational check

Operability test of 10 manual cycles was completed on the leaf in accordance with BS EN 1634-3: 2004 section 10.1.1.

Minimum angle of opening	30°
Number of operation cycle completed	10

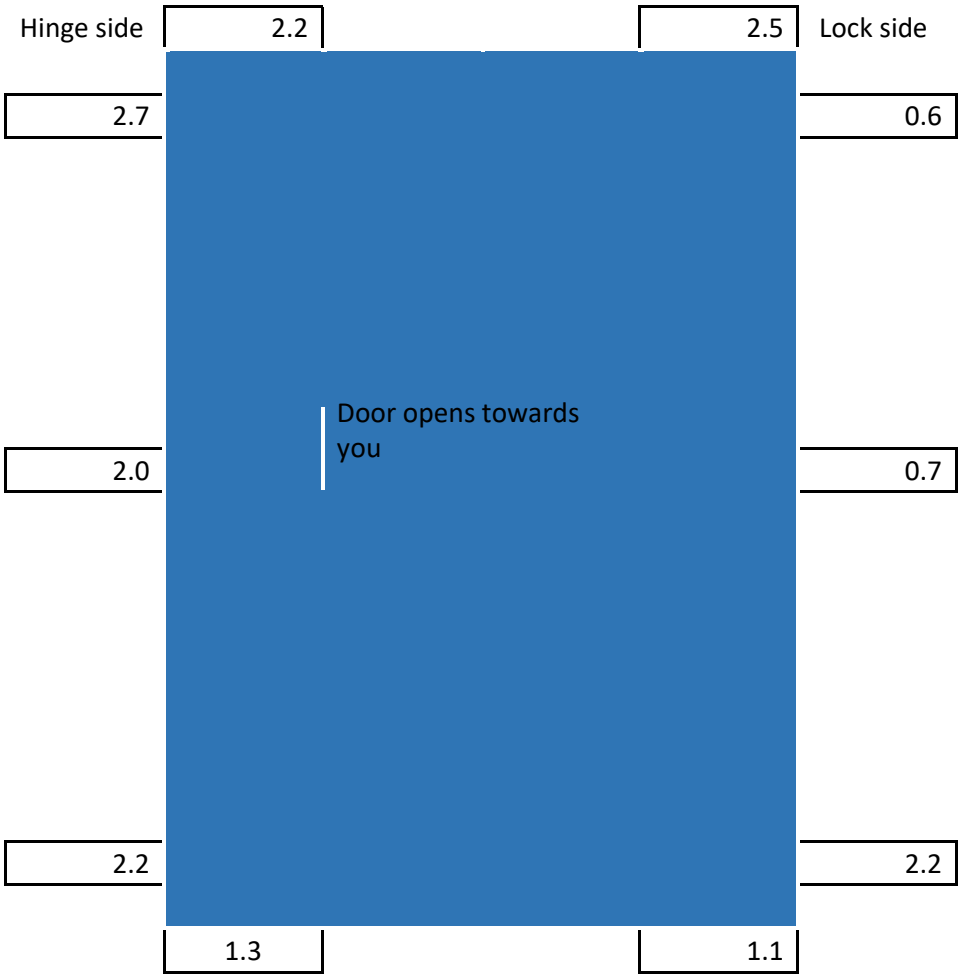
6.2 Retention forces

Measured in accordance with BS EN 1634-3: 2004 section 10.1.2.

Opening Forces
N/A – no closer fitted

6.3 Leaf/frame gaps

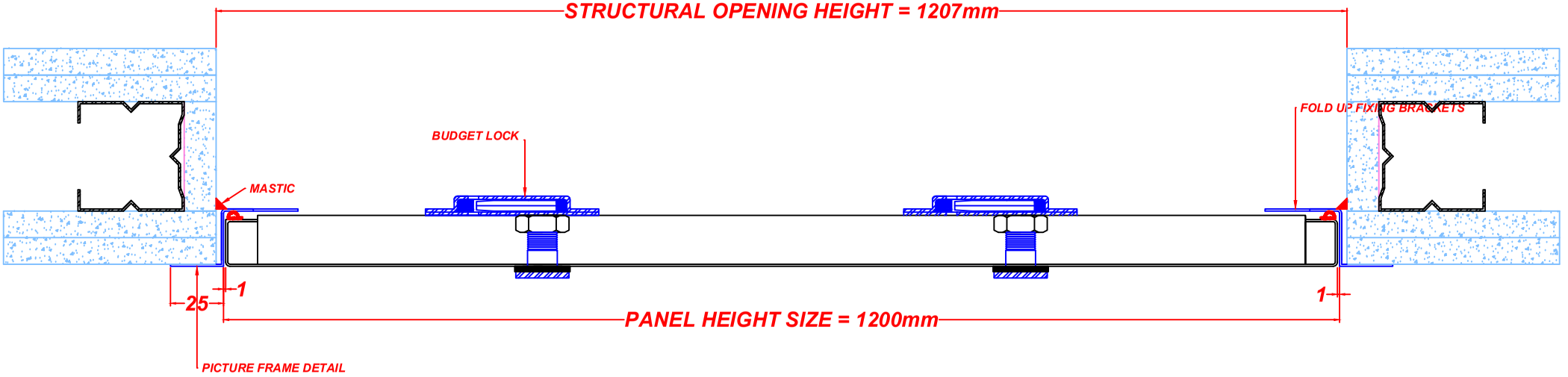
The gaps were measured before testing commenced – See diagram below (Gaps were measured within 20mm from corners and at the centre of stiles) – All measurements given in mm.

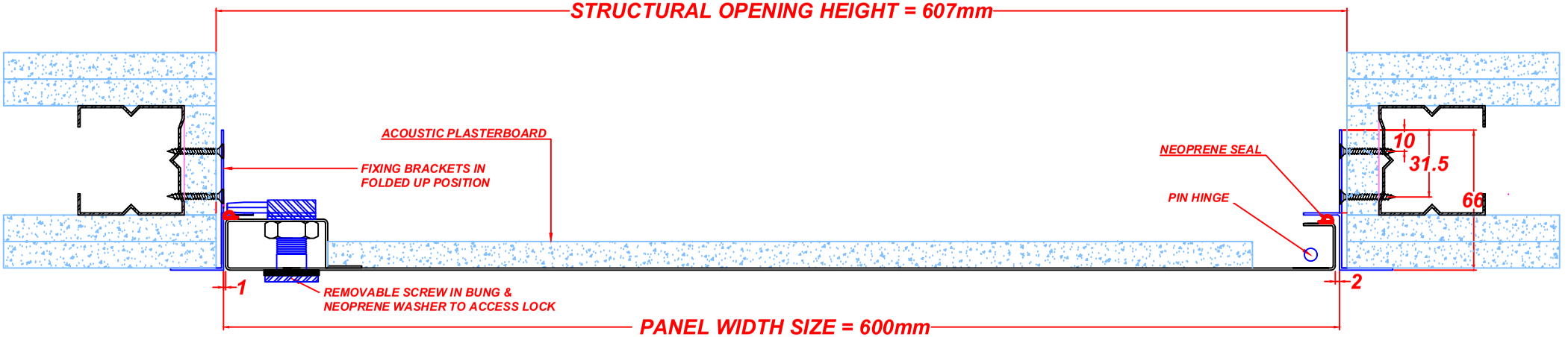


Appendix 1 – Sponsor Drawing (1 Page)

ISSUE No:	CHANGE DETAIL'S:

PANEL TECHNOLOGIES





Critical Faces if applicable

Scale	Date drawn	Drawn by	Material	Material Thickness	Paint Spec	Description of Panel or Trim
Do Not Scale	22/03/22	RS	ZINTEC	0.9mm	N/A	ACOUSTIC, AIRTIGHT, SMOKE, ACCESS PANEL
Description of Panel or Product: ACOUSTIC, AIRTIGHT, SMOKE ACCESS PANEL						Item of Panel or Trim: ASSEMBLY
Issue no: 1	Drawing no. 01-MD-PF-BL-ATS-30DB	Linear Tolerances +/-0.5 DEGREES	ADDRESS : WILLIAM HOUSE, 49-61 JODRELL STREET, NUNEATON WARWICKSHIRE, CV11 5EG			

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Appendix 2 – Photograph