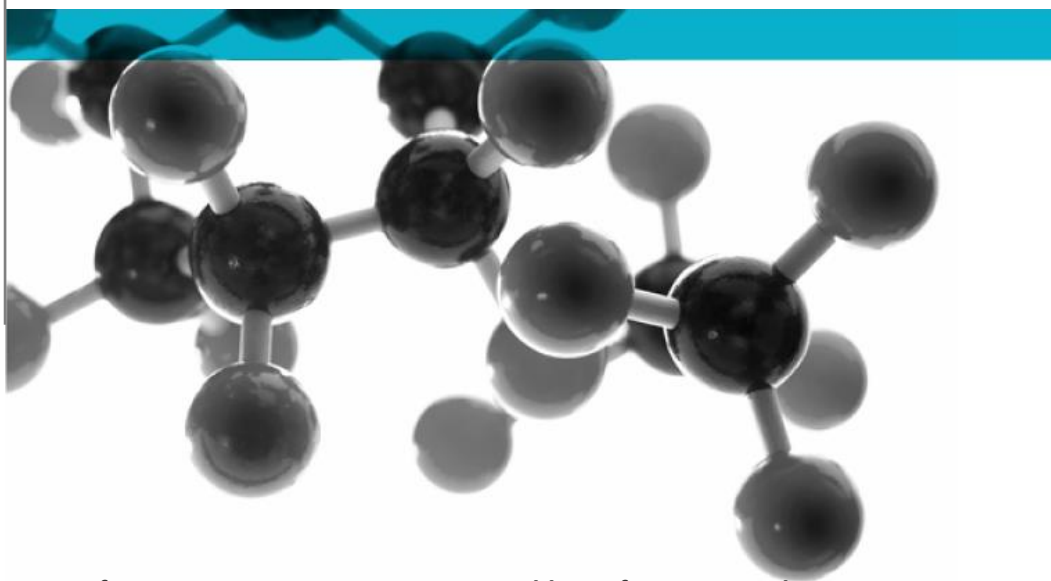


EN 1634-3: 2004

Smoke control test for door and shutter assemblies

To the principles of BS EN 1026: 2016

Windows and Doors – Air Permeability



Test of: 51-120-MD-PF-3WL-2D-36DB Double Leaf Access Panel

Sponsor: Panel Technologies Ltd

49-61 Jodrell Street
Nuneaten
Warwickshire
CV11 5EG

Date of Test: 15/07/2020

Copy: 1

Issue No.: 1

Page 1

Document Reference: WYC432519

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Results of Test: WYC432519/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 15th July 2020. 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	51-120-MD-PF-3WL-2D-36DB double leaf access panel		
Test Detail	Locked, with threshold not taped		
Summary of testing procedure			Result
BS EN 1634-3: 2004	Pressure (Pa)	Leakage (m ³ /h)	Leakage (m ³ /m/h)
Results under positive chamber (door leaf opening away from chamber)	50	38.29	3.56
	25	24.69	2.29
	10	14.78	1.37
Results under negative chamber (door leaf opening away from chamber)	50	36.94	3.43
	25	23.94	2.22
	10	12.92	1.20

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 10.760m



Issued by:
Jamie Nelson
Technical Officer



Authorised by:
Lee Grant-Riach
Lead Technical Officer
Issued Date: 11th September 2020

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Results of Test: WYC432519/Test2

Panel Technologies Ltd

49-61 Jodrell Street
Whitacre Road Industrial Estate
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Warwickshire, CV11 5EG

This document confirms that performance testing was conducted on 15th July 2020. 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		51-120-MD-PF-3WL-2D-36DB double leaf access panel					
Summary of testing procedure		Results		Summary of testing procedure		Results	
Positive Pressure (Pa)	Leakage (m³/h)	Leakage (m³/h/m)	Leakage (m³/h/m²)	Negative Pressure (Pa)	Leakage (m³/h)	Leakage (m³/h/m)	Leakage (m³/h/m²)
50	38.10	3.541	8.819	50	36.75	3.42	8.51
100	55.97	5.201	12.955	100	51.01	4.74	11.81
150	73.53	6.833	17.020	150	63.24	5.88	14.64
200	84.95	7.895	19.664	200	77.77	7.23	18.00
250	107.38	9.980	24.858	250	90.95	8.45	21.05
300	126.07	11.716	29.183	300	95.23	8.85	22.04
450	198.05**	18.406**	45.846**	450	97.76	9.09	22.63
600	248.05**	23.053**	57.419**	600	119.23	11.08	27.60

Testing was carried out at 24°C and 61% RH. The perimeter length of gap was 10.760m. The overall area was 4.38m²

**leakage readings at 450Pa and 600Pa could not be measured by the calibrated pressure transducer as the readings were too high. The leakages for these pressures were estimated using the graph plotted against the figures above. These figures are only estimates and could be higher or lower.

*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' 150Pa Class 1' 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*



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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 15th July 2020. The specimen was configured as a double leaf, single acting riser doorset. 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 panel was delivered to Warringtonfire on 15th July 2020. 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 25°C and 29°C. Relative humidity was between 58% and 61%.

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 4No. 5 x 80 screws per jamb.

The gap between the specimen and supporting construction was nominal 10mm, this gap was tightly packed with mineral wool and capped with intumescent mastic on both sides to create an impermeable barrier.

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 51-120-MD-PF-3WL-2D-36DB double leaf access panel. The overall frame dimensions were 1795mm wide x 2445mm high x 77mm deep. The leaves dimensions were 895mm wide by 2390mm high x 44mm thick. The specimen was locked for the test.

Panel

	Material/type	Dimensions (mm)	Density (kg/m ³)
Door Tray	Folded Zintec Steel	1.5 thick	-
Core	ISO Base (Ref. R50 Acoustic matting)*	5 thick	33*
	Acoustic Plasterboard	12.5 thick*	889*
Door Strengtheners	Zintec steel fixed to leaf door tray by 3.8 x 15.2 self-tapping screws	1.5 thick	-
Astragal	1.5mm thick Zintec steel fixed by 5 x 19 machine screws	36 x 47	-

* As stated by sponsor, not checked by laboratory

Frame

	Material/type	Dimensions (mm)
Stiles and Rails	1.5mm thick folded zintec steel	77 x 44
Rebate	Single type	25 x 20
Joints	Mitred and welded	-

* As stated by sponsor, not checked by laboratory

Hardware

	Make/type	Size (mm)	Fixing details (dimensions in mm)
Hinges	Electroplated left hand rapid fit hinge	19.1 x 19.1 x 40, 8mm pin	Welded into panel leaf*
Locking mechanism	3 point locking system manufactured from bright zinc plated mild steel, with 18mm stroke*	2345 length	M5 x 25 Bright Zinc Plated (BZP) 8.8 High Tensile Steel Hexagon Head Bolts*
Grommet	White Dome Plug, Manufactured from Nylon 66*	5.5Ø*	Push fit
Bung	RAL 9010 white, hinged flip top bung and collar	19Ø	Push fit
Shootbolt Mechanism	304 grade bright drawn round bar*	19Ø	M5 x 8 Bright Zinc Plated (BZP) 8.8 High Tensile Steel Hexagon Head Bolts*
Keeps	All keeps are cut outs in frame / leaves	-	-

* As stated by sponsor, not checked by laboratory

Perimeter Sealing Details

	Make/type	Size (mm)	Location
Door Edges	White 'p' profile compression self-adhesive EPDM seal	9 x 5	On edges of stiles and rails
	Envirograph (Ref. G10/10)* grey self adhesive intumescent strip	10 x 2	On edges of stiles and rails
Seal continuity	Envirograph (Ref. G10/10)* grey self-adhesive intumescent strip interrupted by hardware only	-	-

* 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.

	2.25		2.67	3.01		2.39	
3.81	Secondary			3.01	Primary		2.21
2.31				2.72			3.15
2.45				2.18			2.63
	1.11		1.4	1.32		1.74	

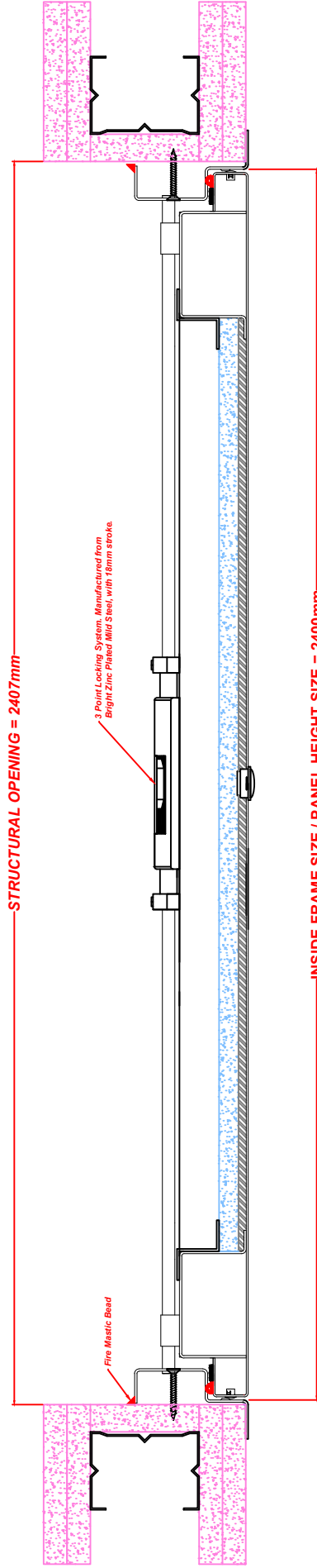
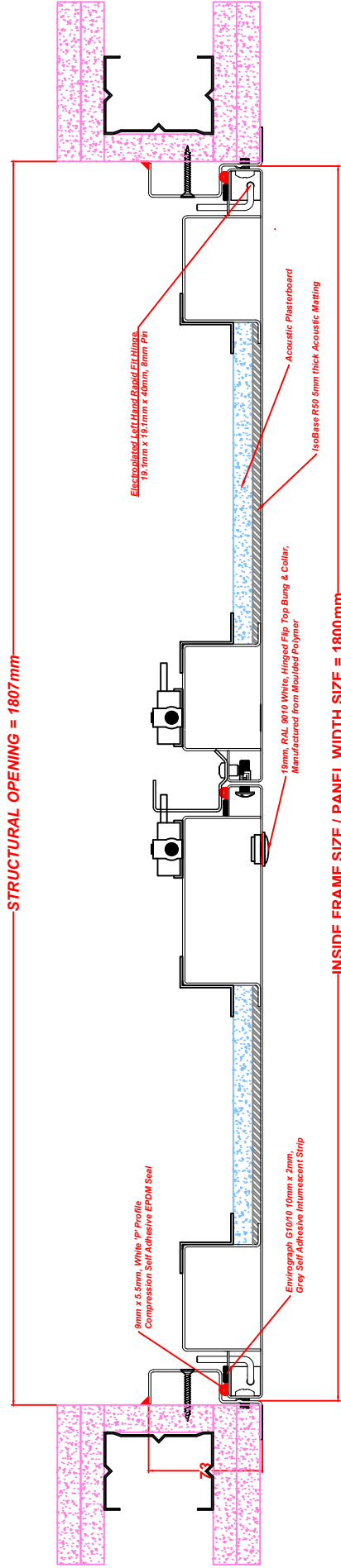
Appendix 1 – Sponsor Drawing (1 Page)

Document No.: WYC432519
Author: Jamie Nelson
Sponsor: Panel Technologies Ltd

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Issue No.: 1



ISSUE No:		CHANGE DETAIL'S:	



Critical Faces if applicable - - - - -

Scale	Date drawn	Drawn by	Material	Material Thickness	Paint Spec	Description of Panel or Trim
Do Not Scale	12/08/20	RS	ZINTEC	1.2mm/1.5mm	AS PER ORDER	FIRE RATED DOUBLE DOOR RISER DOOR
DOUBLE DOOR RISER DOOR						
Issue no:	Drawing no		Address		Item of Panel or Trim	
1	51-FR-MD-PF-3WL-2D-36DB		WILLIAM HOUSE, 49-61 JODRELL STREET, NUNEATON WARWICKSHIRE, CV11 5EG		ASSEMBLY	

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