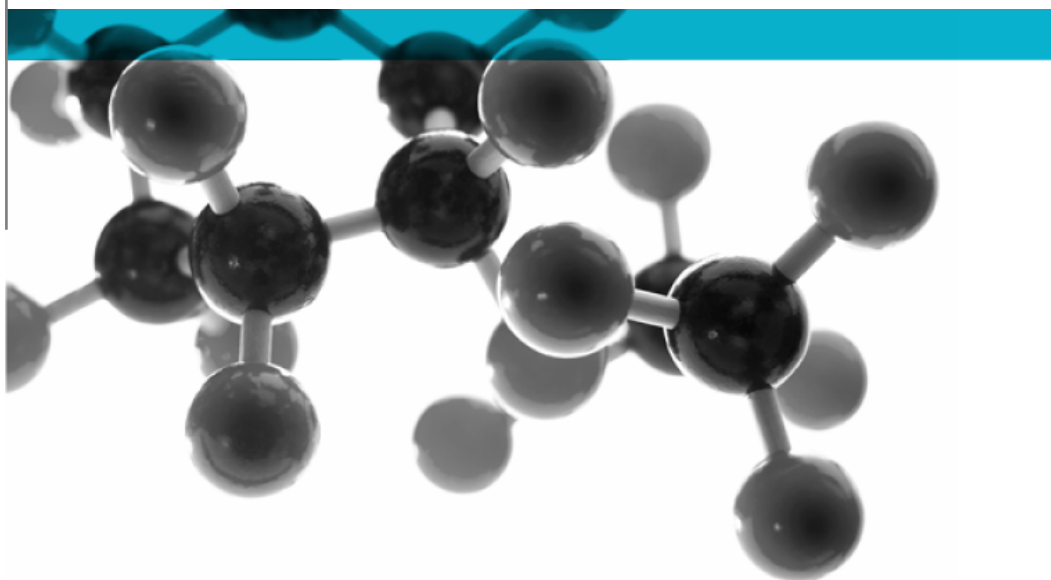


EN 1634-3: 2004

Smoke control test for door and shutter assemblies

To the Principles of BS EN 1026:2016

Windows and Doors – Air Permeability



Test of: 53-FR120-PD-BF-3WL-30DB Single leaf Access Panel

Sponsor: Panel Technologies

49-61 Jodrell Street
Nuneaton
Warwickshire
CV11 5EG

Date of Test: 08/09/2020

Copy: 1

Issue No.: 1

Page 1

Document Reference: WYC432287

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Results of Test: WYC432287/Test1

Panel Technologies

49-61 Jodrell Street
Nuneaton
Warwickshire
CV11 5EG

This document confirms that performance testing was conducted on 8th September 2020. Testing was conducted to BS EN 1634-3: 2004 Incorporating corrigendum № 1: 2007 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	53-FR120-PD-BF-3WL-30DB Access Panel		
Test Detail	Locked, with threshold untaped		
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	19.68	2.99
	25	10.75	1.63
	10	0.79	0.12
Results under negative chamber (door leaf opening away from chamber)	50	23.93	3.63
	25	14.72	2.24
	10	9.81	1.49

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

The perimeter length of gap was 6.584m



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Issue date:

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1762

Results of Test: WYC432287/Test2

Panel Technologies

49-61 Jodrell Street

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CV11 5EG

This document confirms that performance testing was conducted on 8th September 2020. Testing was conducted to BS EN 1026: 2016 – Windows and Doors – Air permeability – Test method:-

The following results were achieved:

Product tested: 53-FR120-PD-BF-3WL-30DB 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	19.26	2.93	8.92	50	23.42	3.56	10.84
100	32.14	4.88	14.88	100	35.60	5.41	16.48
150	41.36	6.28	19.15	150	46.56	7.07	21.56
200	46.68	7.09	21.61	200	52.27	7.94	24.20
250	54.71	8.31	25.33	250	66.97	10.17	31.01
300	65.08	9.88	30.13	300	76.45	11.61	35.39
450	100.79	15.31	46.66	450	94.60	14.37	43.80
600	114.34	17.37	52.93	600	118.94	18.06	55.06

Testing was carried out at 25.2°C and 61.7%RH. The perimeter length of gap was 6.584m

The overall area was 2.16m²

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



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1 Introduction

Performance testing to BS EN 1634-3: 2004 incorporating corrigendum № 1: 2007 was conducted on the access panel on 8th September 2020. 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 smoke leakage laboratory on 8th September 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 at 1 hour at an average temperature between 24°C and 26°C. Relative humidity was between 60% and 65%. *(This does not meet the conditioning requirements of the standard)*

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 53-FR120-PD-BF-3WL-30DB Access Panel. The overall frame dimension was 950mm wide x 2450mm high x 80mm deep. The leaf dimensions were 895mm wide x 2395mm high x 70mm deep. 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	Siniat Soundbloc Plasterboard*	12.5 thick	848*
Door Strengtheners	Zintec Steel*	40 x 90*	-

* As stated by sponsor, not checked by laboratory

Frame

	Material/type	Dimensions (mm)
Stiles and rails	1.5mm thick folded zintec steel*	80 x 50
Rebate	Single type	45 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 spring hinge*	20 x 8 x 40*	Welded into panel leaf
Locking mechanism	3 point locking mechanism manufactured from Bright Zintec Plated Mild Steel*	2345 length	2No. M5 x 29 machine bolts into panel
Grommet	White dome plug manufactured from Nylon*	16Ø	Push fit
Bung	Aluminium lock hole ferrule	16Ø	Push fit
keeps	All keeps are cut outs in frame / leaf	-	-

* As stated by sponsor, not checked by laboratory

Perimeter Sealing details

		Make/type	Size (mm)	Location
Leaf Edges		None present	-	-
Frame reveal	Head and jambs	Norseal (Ref. FS1000)* intumescent foam seal	10 x 4	On rebate upstand
Seal continuity		Seals 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 cycles completed	10

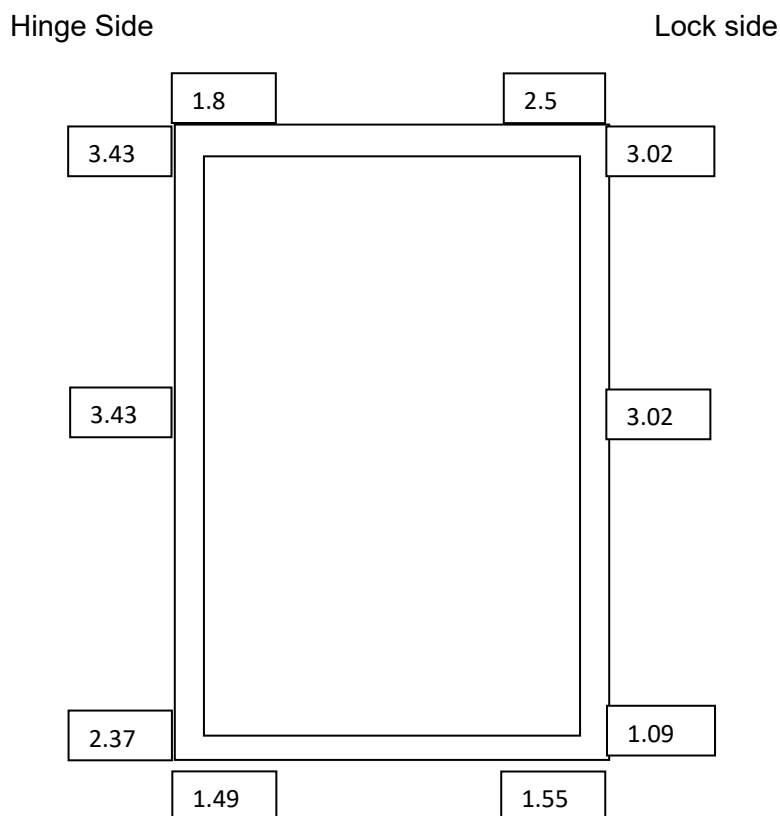
6.2 Retention forces

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

Opening Forces
N/A

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.



7 Limitations

- The results only relate to the behaviour of the specimen submitted for test, as described in the Technical Specification (section 5), and under the particular conditions of test.
- The results are not intended to be the sole criteria for assessing the smoke leakage performance of the element in use nor do they necessarily reflect the actual behaviour once installed on site.
- The specification and interpretation of test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons it is recommended that the relevance of test reports over 5 years old should be considered by the user. WARRINGTONFIRE will be able to offer a review of the procedures adopted for a particular test to ensure that they are consistent with current practices.
- The results are solely for use by the sponsor and the stated purpose.
- The sponsor cannot rely on information provided without consent from WARRINGTONFIRE.
- Any recommendations are specific to the assignment and the sponsor.
- Extracts from the report are not permitted.

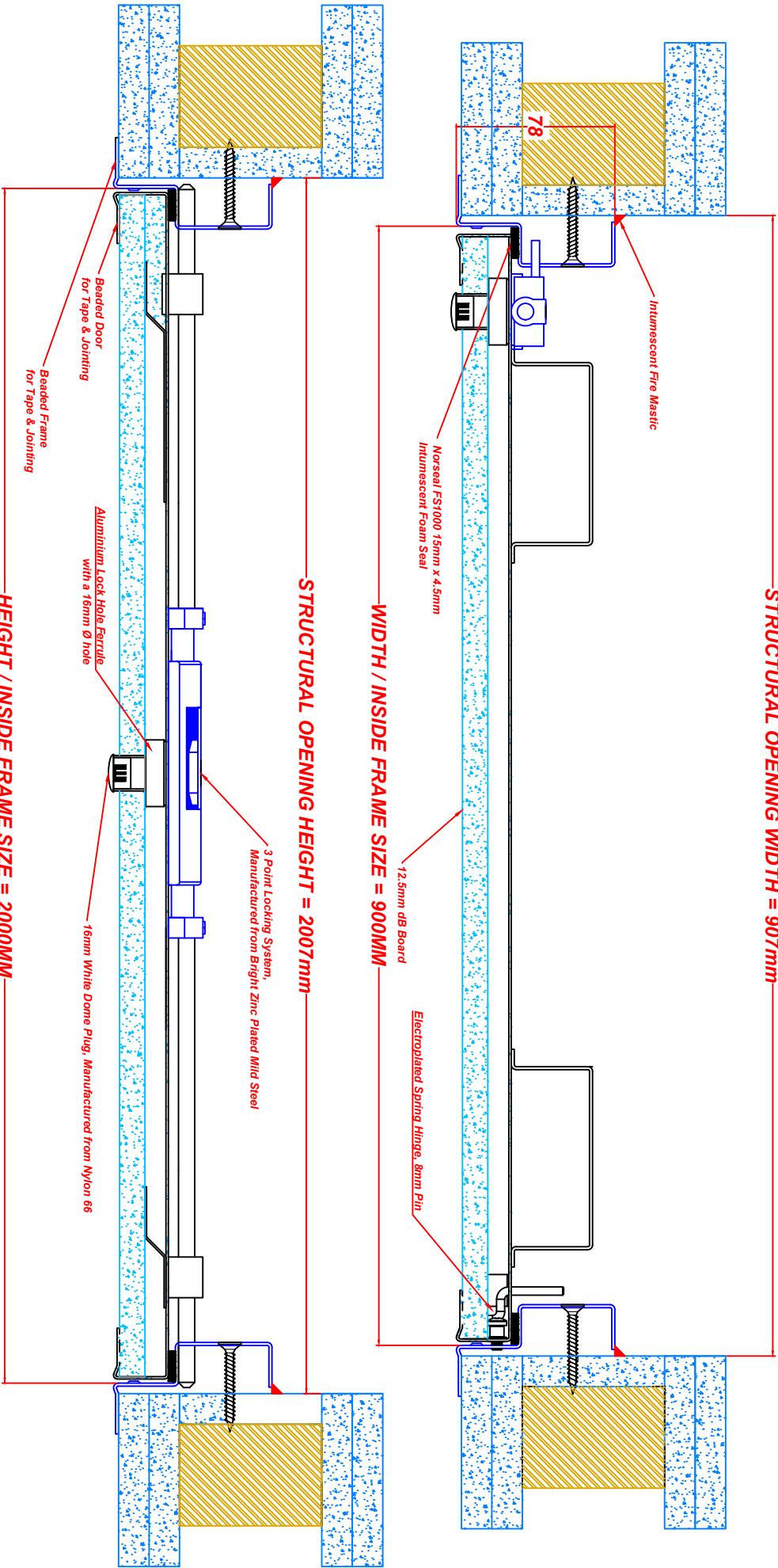
8 Field of direct application of test results

The results of the test are directly applicable to similar constructions where one or more of the changes listed in BS EN 1634-3: 2004, Clause 13, are made and the construction continues to comply with that appropriate design code for its stiffness and stability. Other changes are not permitted by the document. A copy of the field of direct application is available from Warringtonfire upon request.

Appendix 1 – Sponsors Drawing (1 page)



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	11/08/20	RS	ZINTEC	0.9mm/1.2mm	AS PER ORDER	53-FR120-PD-BF-3WL-DB
PLASTERBOARD FACED WALL DOOR						
Issue no:	Drawing no:	Linear Tolerances	Address:	Item of Panel or Trim		
1	53-FR120-PD-BF-3WL-DB (ACOUSTIC TEST)	+/- 0.5 DEGREES	WILLIAM HOUSE, 49-61 JODRELL STREET, NUNEATON WARWICKSHIRE, CV11 5EG	PD-BF-3WL-DB ASSEMBLY		



This drawing is confidential and the copyright therein is owned by Panel Technologies. This Drawing must not be copied, loaned or the information otherwise disclosed without the written permission of Panel Technologies Company Limited.

