

Fire resistance test report

Issuing laboratory: Warringtonfire Testing and Certification Limited

Test standard: BS EN 1634-1:2014 + A1:2018

Test sponsor: Wood International Agency Ltd

16 King Edward Road
Brentwood
Essex
CM14 4HL
United Kingdom

Product: One Asymmetrical, Single-Acting, Single-Leaf Timber Doorset & One Asymmetrical, Single-Acting, Double Leaf Timber Doorset

Report number: 557972/R

Test date: 10 March 2026

Issue: 1

Warringtonfire, accredited for compliance with ISO/IEC 17025:2017 – Testing

Registered Laboratory:
Warringtonfire
Holmesfield Road
Warrington
Cheshire
WA1 2DS
United Kingdom



Approved Body Number 0833



Summary of Tested Specimen

Both doorsets were installed into two apertures within a rigid low-density blockwork supporting construction. For the purposes of the test the doorsets were referenced as **Doorset A** and **Doorset B**.

Doorset A had overall nominal dimensions of 2080 mm high by 892 mm wide, incorporating a single door leaf with nominal dimension of 2040 mm high by 826 mm wide by 44 mm thick. The door leaf was hung within a Framebreak PI450 softwood frame on three stainless steel hinges, such that the leaf opened away from the heating conditions. The door leaf was formed from a solid engineered timber door blank referenced 'Soloman 44' with an 8 mm lipping adhered to all edges of the leaves. **Doorset A** had an overhead door closing device on the unexposed face referenced 'DC135 rack & pinion overhead closer'. The doorset also incorporated two locksets referenced 'EL595' (top) and 'EL560' (bottom) which remained disengaged throughout the test. The doorset remained latched throughout the test.

Structural opening – 2090 mm high by 925 mm wide

Doorset B had overall nominal dimensions of 2080 mm high by 1421 mm wide, incorporating two leaves referenced as '**Door Leaf 1**' and '**Door Leaf 2**'. **Door Leaf 1** had overall dimensions of 2040 mm high by 426 mm wide by 44 mm thick and active **Door Leaf 2** had overall nominal dimensions of 2040 mm high by 926 mm wide by 44 mm thick. The door leaves were hung within a Framebreak PI450 softwood frame on six stainless steel hinges (three per leaf), such that the leaves opened towards the heating conditions.

Both door leaves were formed from a solid engineered timber door blank referenced 'Soloman 44' with 8 mm lipping adhered to all edges of the leaves. **Door Leaf 1** had an overhead closing device referenced 'DC140A-1 rack and pinion to slave leaf' and **Door Leaf 2** had an overhead closing device referenced 'DC135 rack and pinion to main leaf' which were both installed on the exposed face. The doorset incorporated two locksets referenced 'EL595' (top) and 'EL560' (bottom) which remained disengaged throughout the test. The doorset also incorporated a set of flush bolts at the top and bottom of the meeting edge referenced 'CB200 FBT1008 sss lever action' which remained engaged throughout the test. The doorset remained latched throughout the test.

Structural Opening – 2090 mm high by 1459 mm wide

Detailed drawings of the test specimen(s) and a comprehensive description of the test construction based on a detailed survey of the specimen(s) and information supplied by the sponsor of the test are included in the Test Specimen and Schedule of Components sections of this report.

Test Results

Integrity It is required that the specimen retains its separating function, without either causing ignition of a cotton pad when applied or permitting the penetration of a gap gauge as specified in BS EN 1634-1: 2014 + A1:2018 or resulting in sustained flaming on the unexposed surface. **These requirements were satisfied for the periods shown below:**

	Specimen A		Specimen B	
Sustained flaming	39 minutes	No failure*	37 minutes	Failure
Gap gauge	39 minutes	No failure*	38 minutes	Area extinguished
Cotton pad	39 minutes	No failure*	37 minutes	Due to sustained flaming

Insulation (I₂) The mean temperature rise of the unexposed surface shall not be greater than 140°C and that the maximum temperature rise shall not be greater than 180°C with the exception that the limit for temperature rise for any frame member or transom member adjacent to the leaf/leaves of the doorset or openable window shall be 360°C. Insulation failure also occurs simultaneously with integrity failure as specified in BS EN 1634-1: 2014 + A1:2018. **These requirements were satisfied for the period shown below:**

Specimen	39 minutes	No failure*	37 minutes	Due to integrity failure
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Insulation (I₁) The test specimen shall be evaluated against the maximum temperature rise criterion specified in EN 1363-1: 2020 (180°C).

Specimen	39 minutes	No failure*	37 minutes	Due to integrity failure
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*Test was discontinued after a period of 39 minutes.

Date of test 10 March 2026

Location of test Element Materials Technology, 722 Birchwood Park, Warrington WA3 6FW, United Kingdom

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Quality Management

Issue No: 1		Issue Date: 18 June 2026	
Responsible Officer:	P. White* Technical Officer	Approved By:	S. Whittle* Testing Manager
			

* For and on behalf of **Warringtonfire**.

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Test Conditions

Standard

In accordance BS EN 1634-1:2014+A1:2018 Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 1: Fire resistance test for door and shutter assemblies and openable windows.

Sampling

A representative of **BMTrada** sample selected the following components of the tested specimen:

Component	Sampling date	Sampling report reference
Double Leaf Doorset	06/03/2026	SC26135T
Single Leaf Doorset	06/03/2026	SC26134T
Timber Door Blank	16/01/2026	SC26045B

Copies of sampling reports are included in the Sample Report section.

Installation

The doorsets were received on the 10 March 2026 and mounted within an apertures in a blockwork wall construction; **Doorset A** was single-acting and Doorset B was single-acting. **Doorset A** could open away from the furnace only and **Doorset B** could open into the furnace only. Representatives of the **Test Sponsor** conducted the installation on the 10 March 2026.

Specimen Direction

Tested specimen **A** was **asymmetrical**. Specimen **B** was **asymmetrical** The **Test Sponsor** defined the direction in which the specimen was tested, and it is shown in the test specimen drawings section of this report.

Conditioning

The specimen's storage, construction, and test preparation took place in the test laboratory over a total, combined time of 5 days. Throughout this period of time both the temperature and the humidity of the laboratory were measured and recorded as being within a range of from 11°C to 18°C and 52% to 76.5% respectively.

Instruction to Test

The test was conducted on the 10 March 2026 at the request of Wood International Agency Ltd, the **Test Sponsor**.

Neil Harrison, a representative of the **Test Sponsor** witnessed the test.

Pre-Test Conditioning

Prior to testing, the doorset was subjected to appropriate mechanical pre-test conditioning in accordance with the below requirements:

Test	Relevant Clause	Description	Comments
Operability	A.2.2 of EN 16034	25 cycles	25 cycles completed
Self closing	A.2.2 and A.4 of EN 16034	1 cycle	1 cycle completed
Final setting	10.1.4 of EN 1634-1: 2018	1 cycle	1 cycle completed

Ambient Temperature

The ambient air temperature in the vicinity of the test construction was 19°C at the start of the test with no variation during the test.

Furnace

The furnace was controlled so that its mean temperature complied with the requirements of BS EN 1363-1: 2020 Clause 5.1 using nine plate thermometers, distributed over a plane 100 mm from the surface of the test construction.

Thermocouples

Thermocouples were provided to monitor the unexposed surface of the specimens. The output of all instrumentation was recorded at no less than one minute intervals. The locations and reference numbers of the various unexposed surface thermocouples are shown in Figure 1.

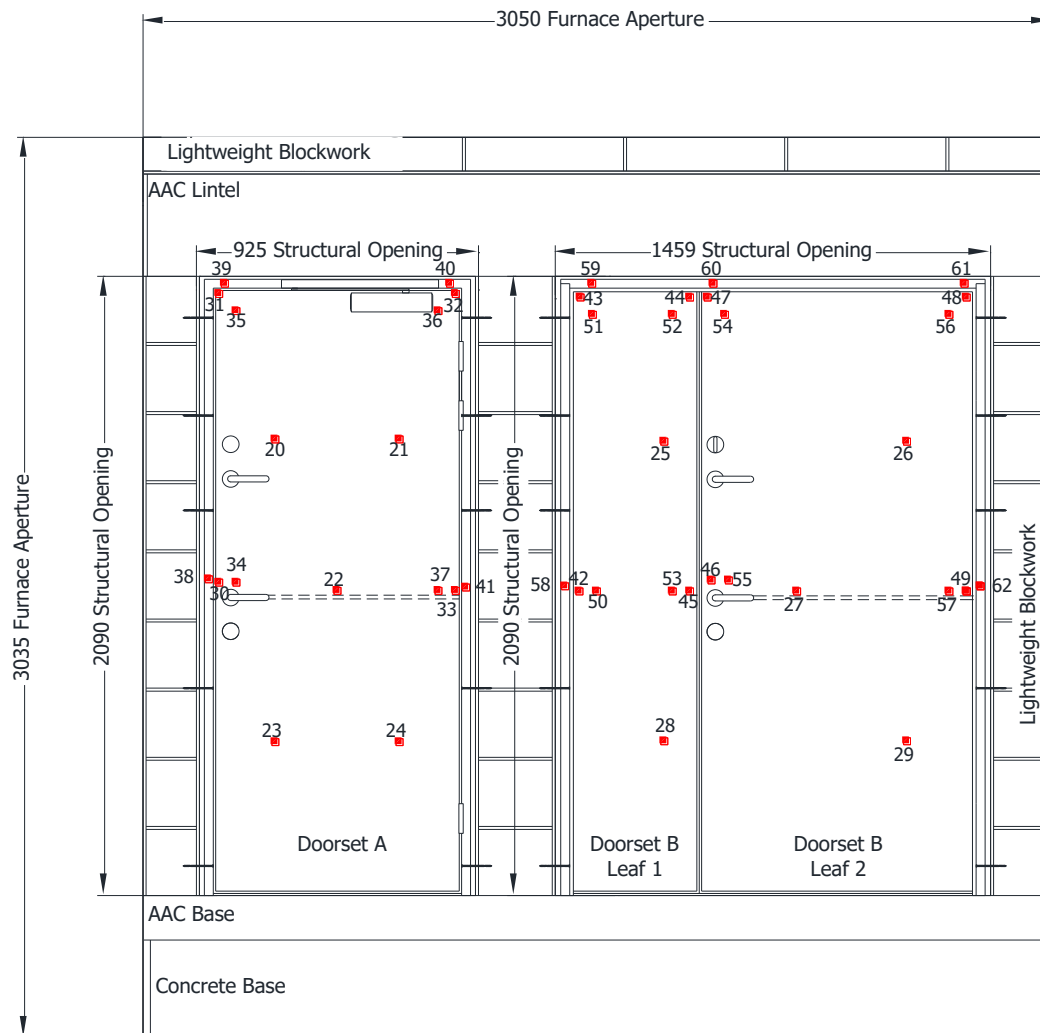
Furnace Pressure

After the first five minutes of testing and for the remainder of the test, the furnace atmospheric pressure was controlled so that it complied with the requirements of BS EN 1363-1: 2020, clause 5.2.1 The calculated pressure differential relative to the laboratory atmosphere at the top of the specimen was 13.4 (± 5) Pa between 5 and 10 minutes and 13.4 (± 3) Pa thereafter.

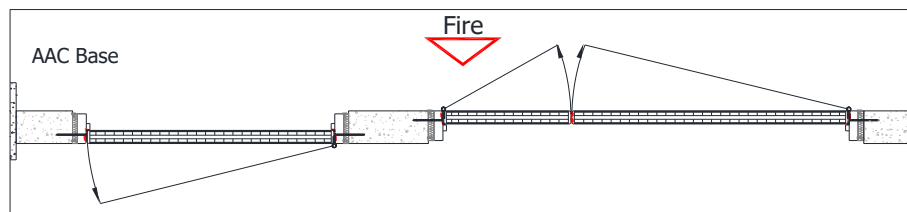
During the test a furnace pressure above the limitations specified under Clause 5.2.1 of BS EN 1363-1: 2020 was recorded. As this represents more severe conditions than specified, the results achieved may still be accepted as valid – as outlined in Clause 5.7 of BS EN 1363-1: 2020.

Due to necessary adjustments of the gas and air input to control the furnace, pressures outside the specified tolerances were recorded sporadically at short intervals. As the pressure fluctuations recorded at those intervals did not represent the pressure conditions throughout the test, their effect on the test results can be disregarded.

Test Specimen Drawings



General elevation of thermocouple positions
unexposed face



Horizontal section through test construction

Figure 1 General Elevation / Horizontal cross section -Thermocouple positions-UXF

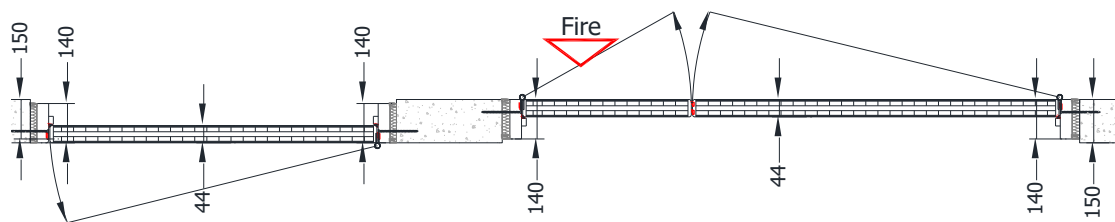
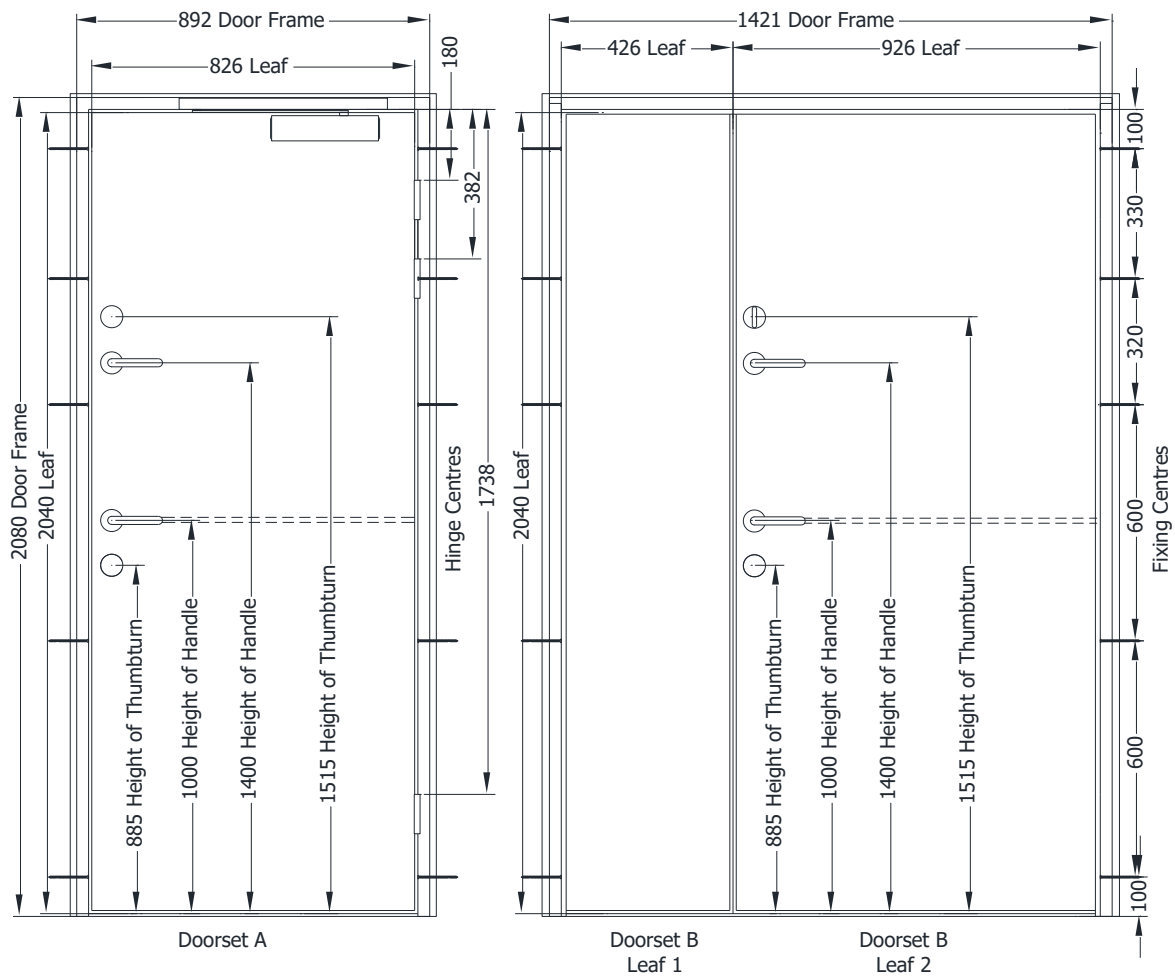


Figure 2 General Elevations of unexposed face of Doorsets

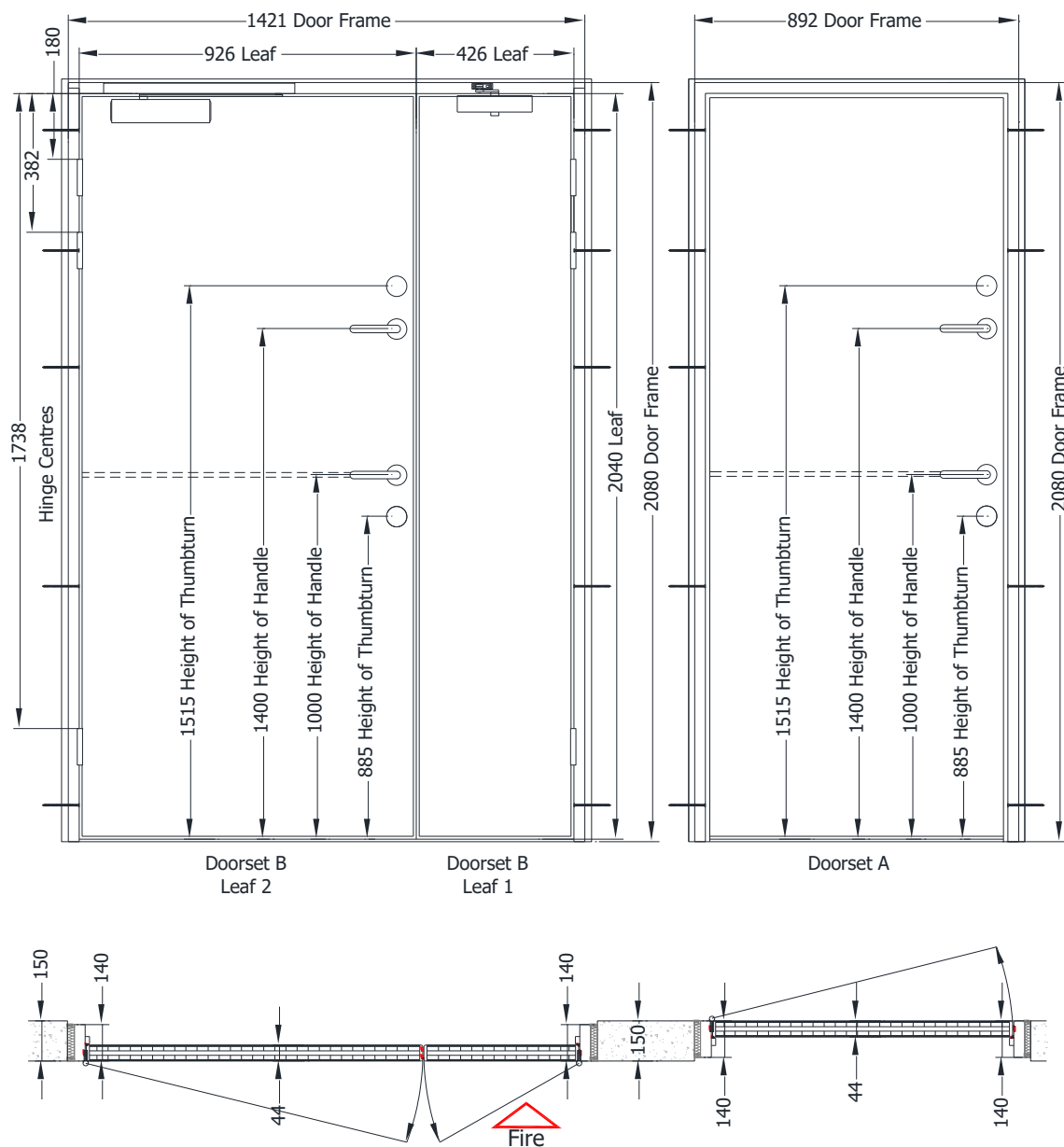


Figure 3 General Elevations of exposed face of Doorsets

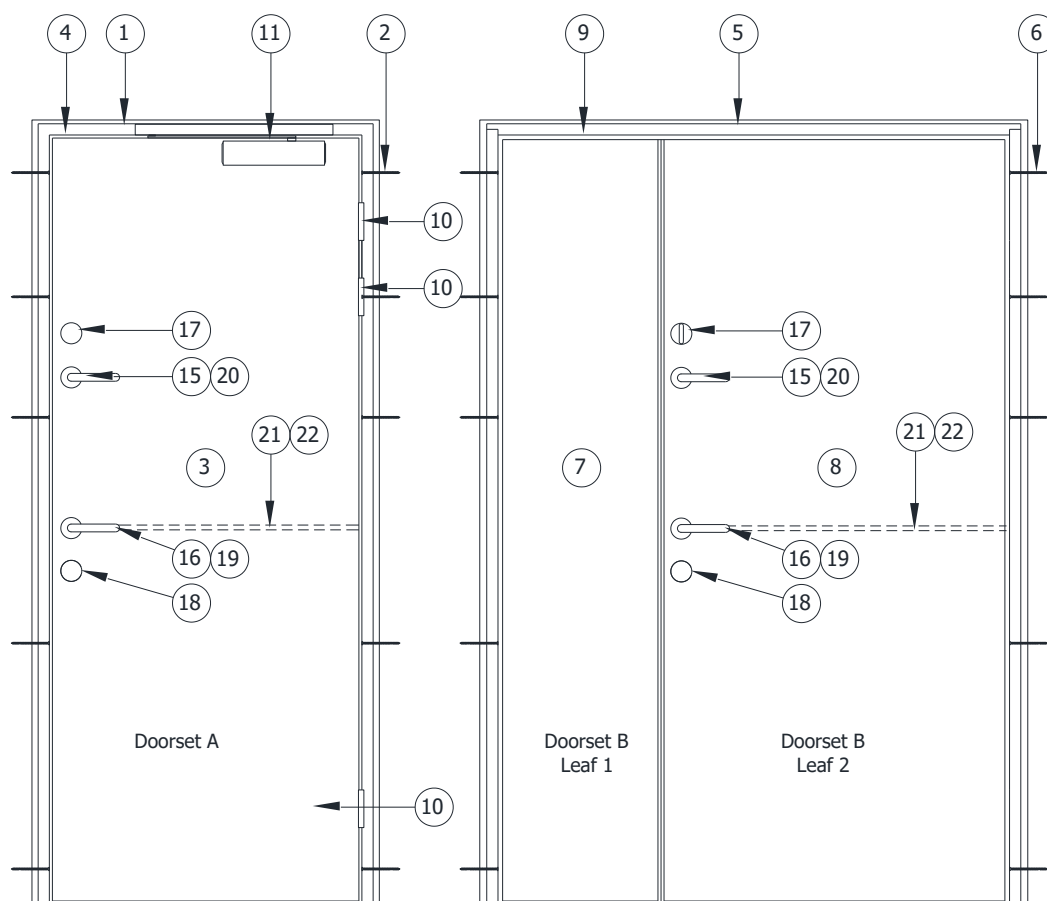


Figure 4 General Elevations of unexposed face of Doorset

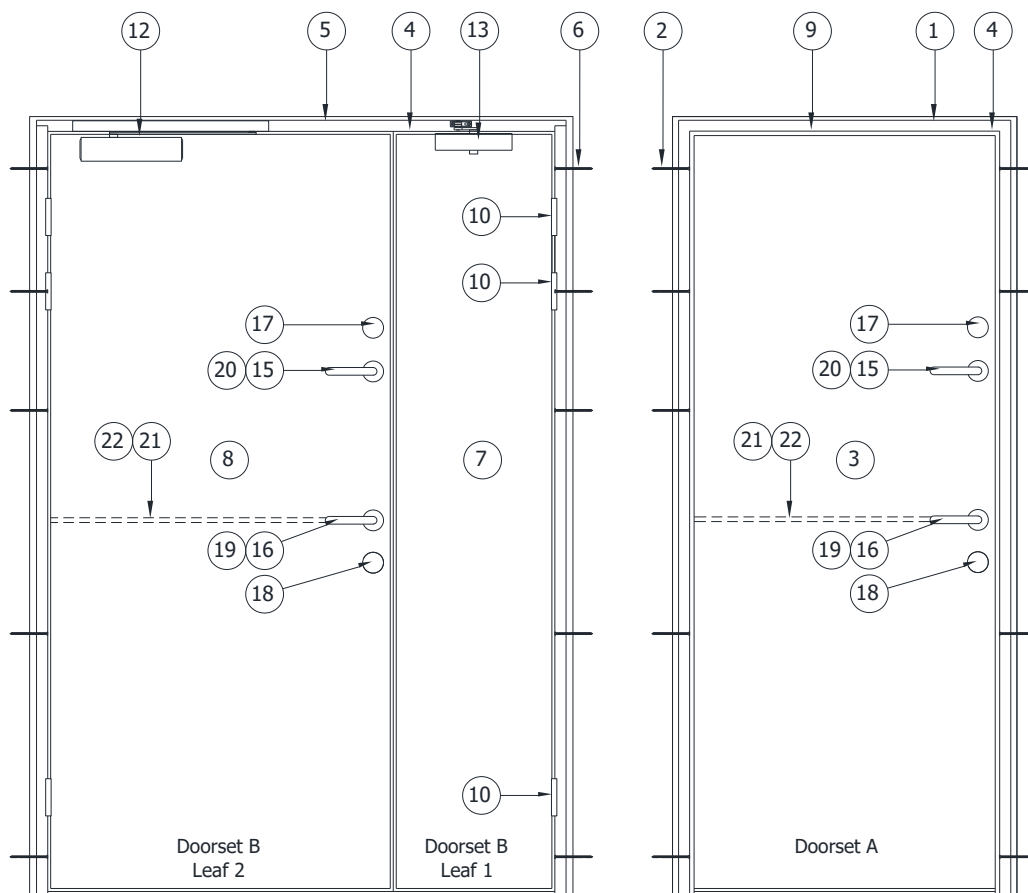


Figure 5 General Elevations of exposed face of Doorset

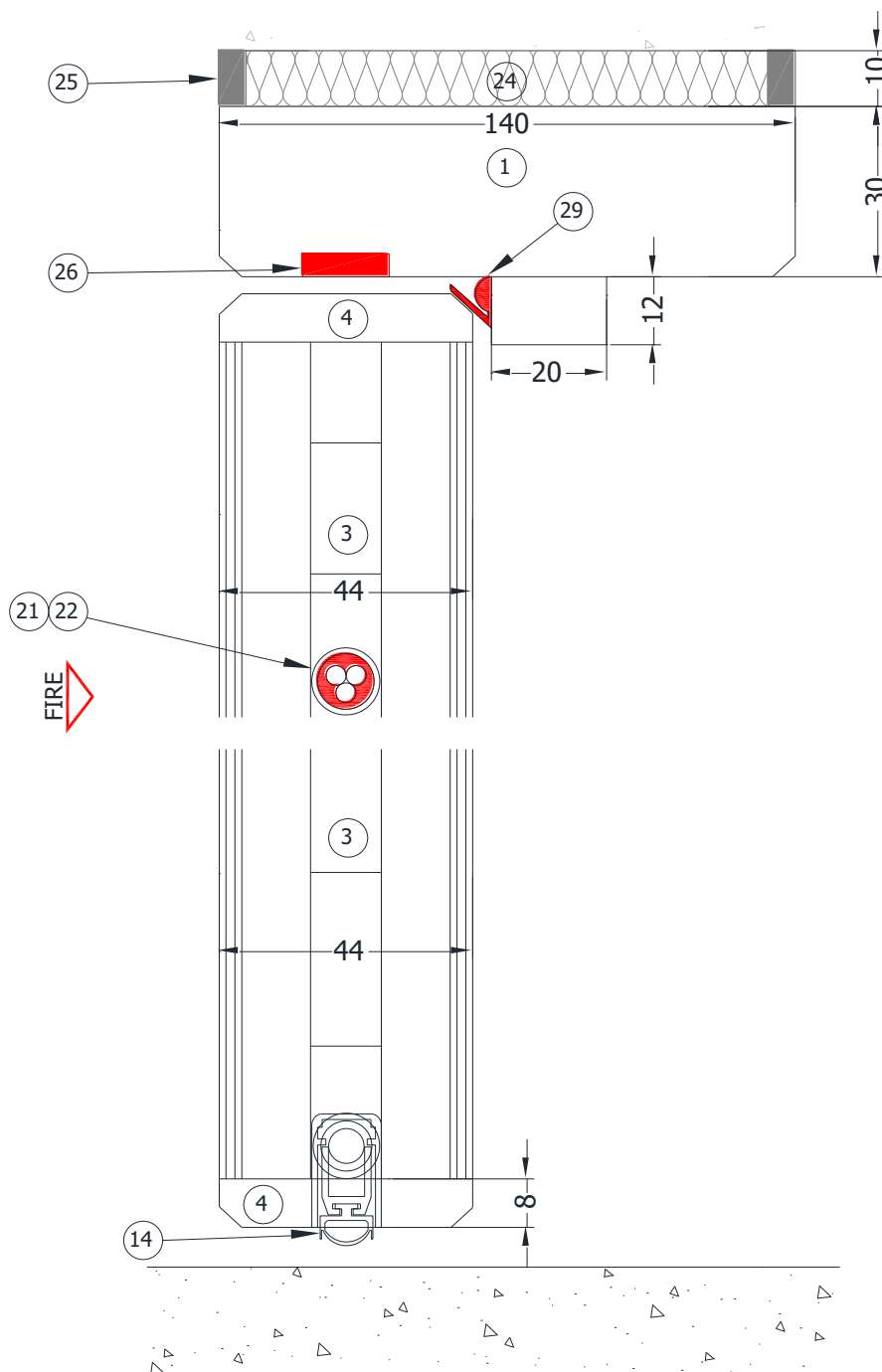


Figure 6 Typical Vertical Section Through Doorset A

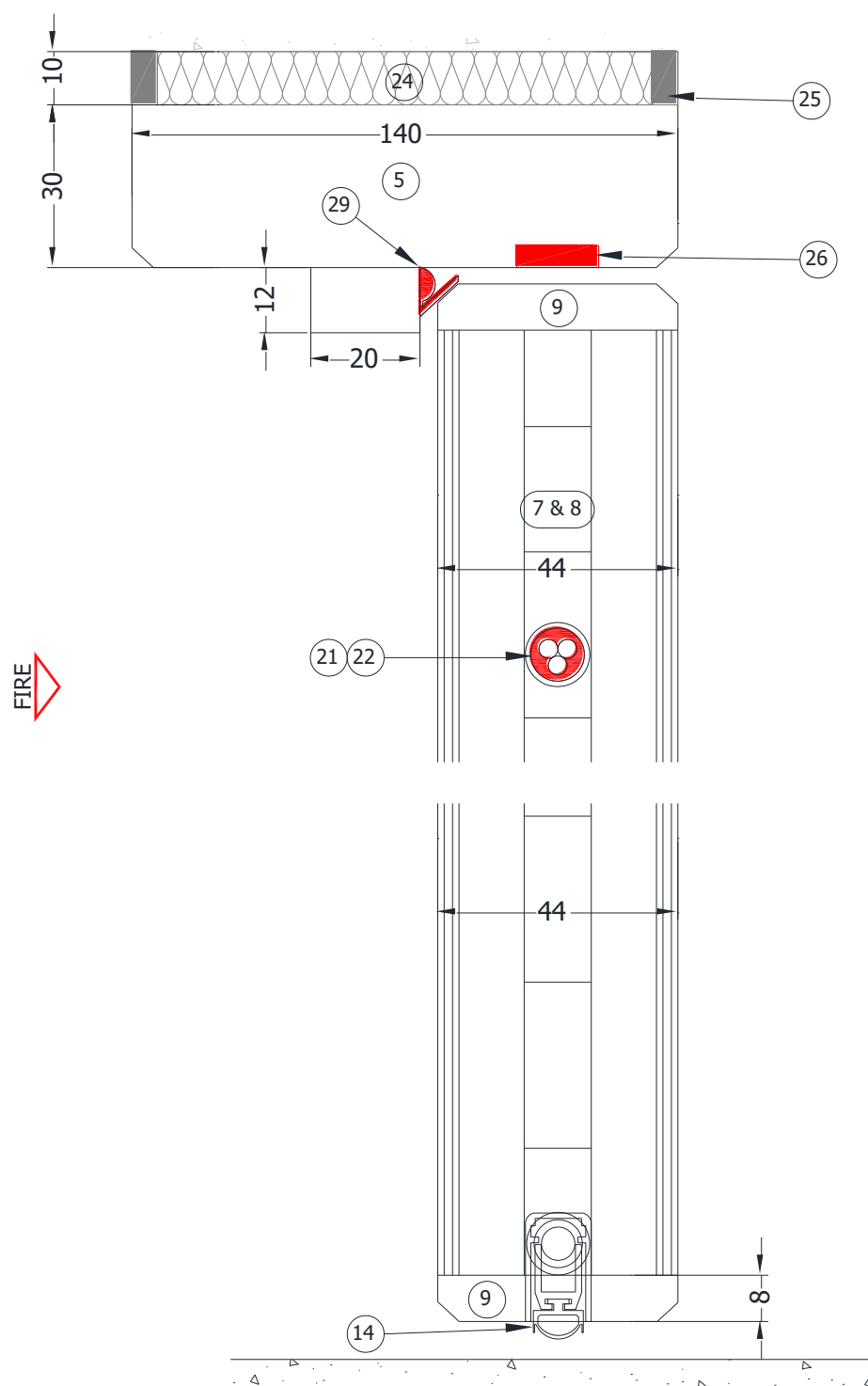


Figure 7 Typical Vertical Section Through Doorset B

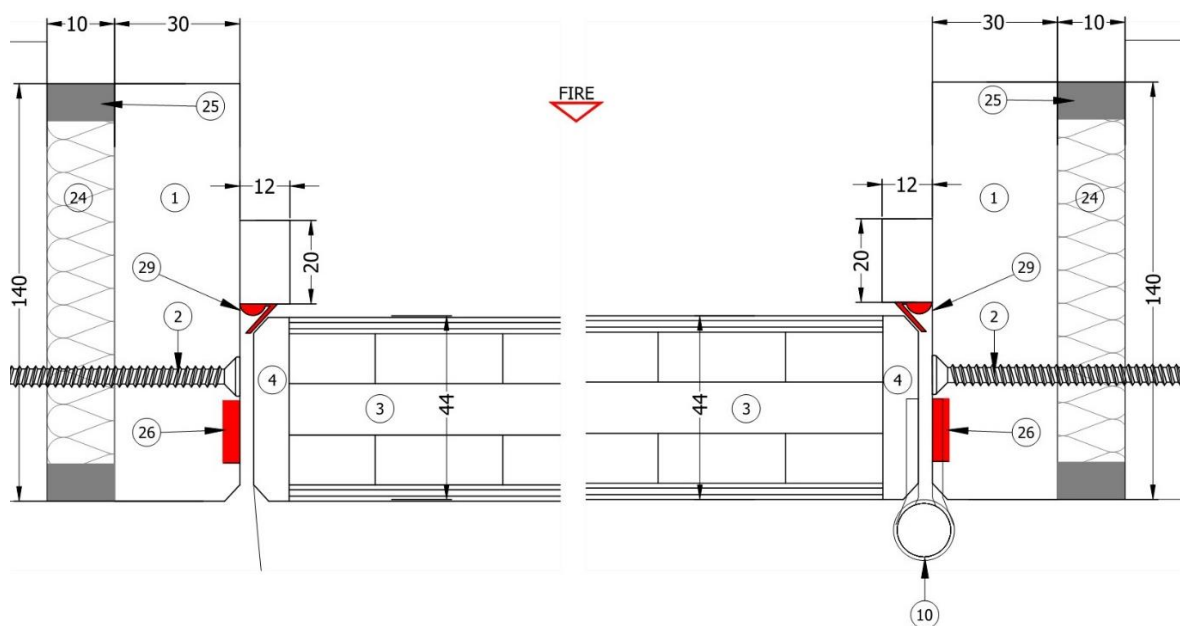


Figure 8 Typical Horizontal Sections Through Doorset A

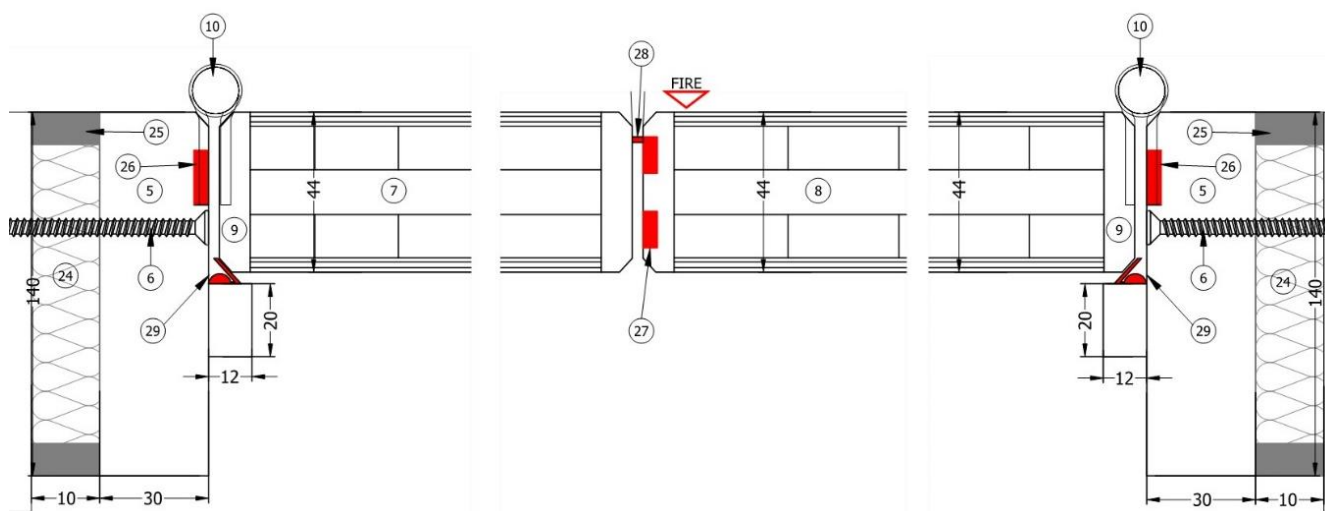


Figure 9 Typical Horizontal Section Through Doorsets B

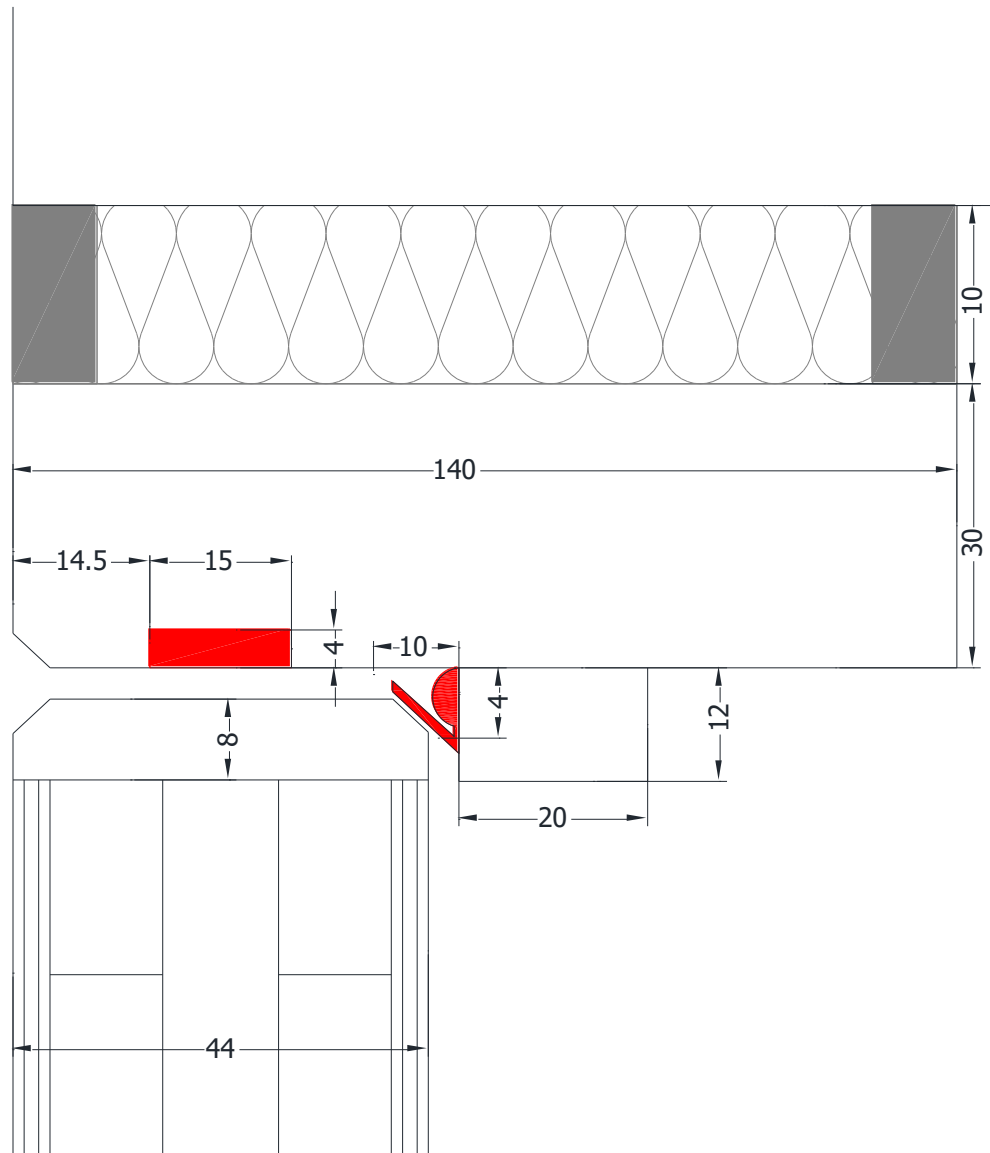


Figure 10 Typical section through frame head



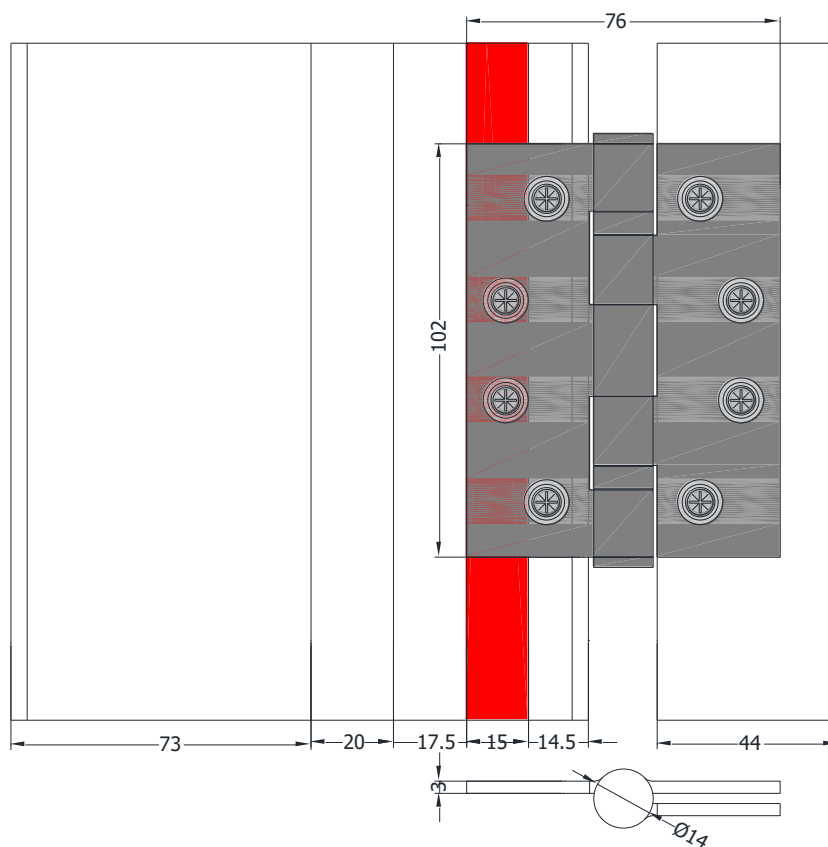


Figure 12 Typical hinge detail of doorset item 10

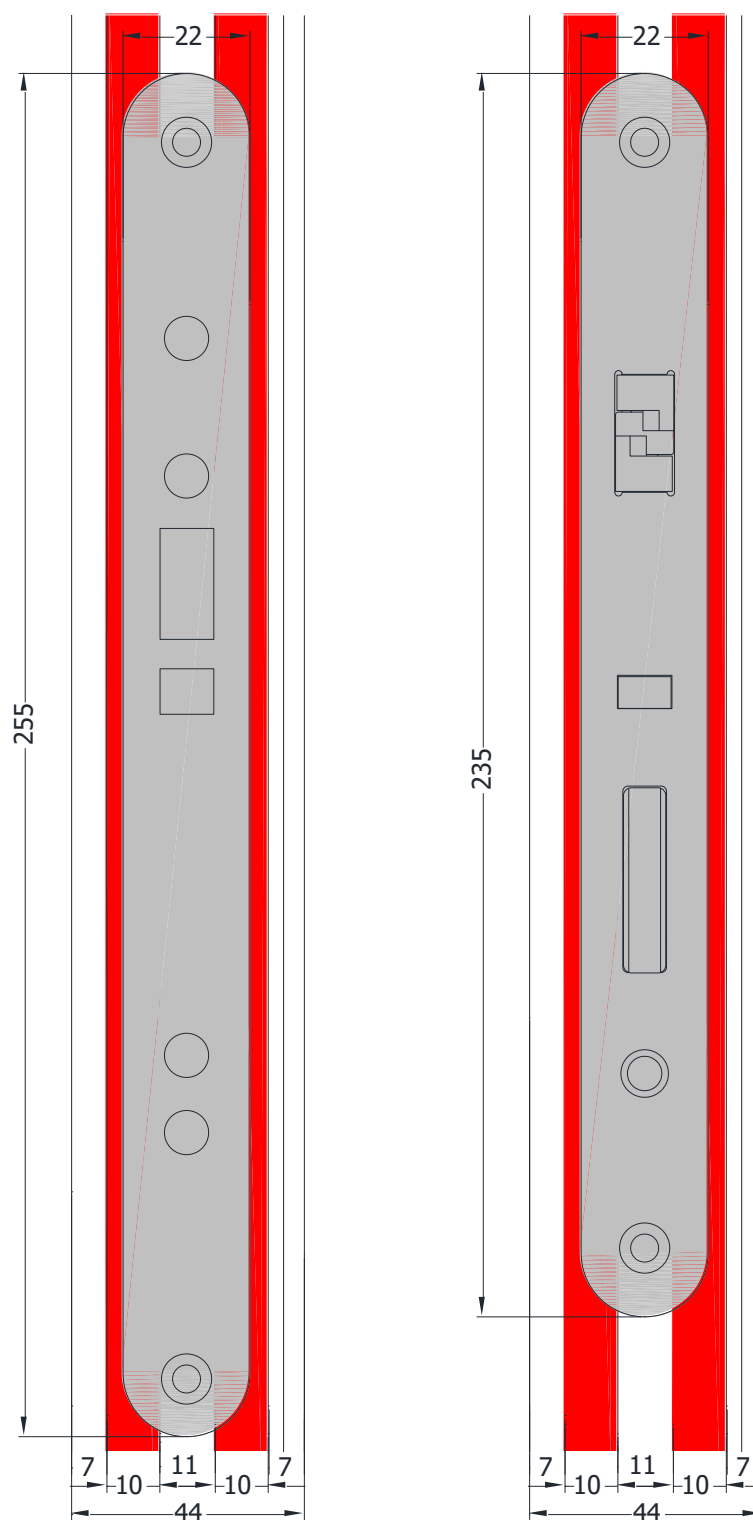


Figure 13 Doorset B Leaf 2 lock detail, items 15 & 16

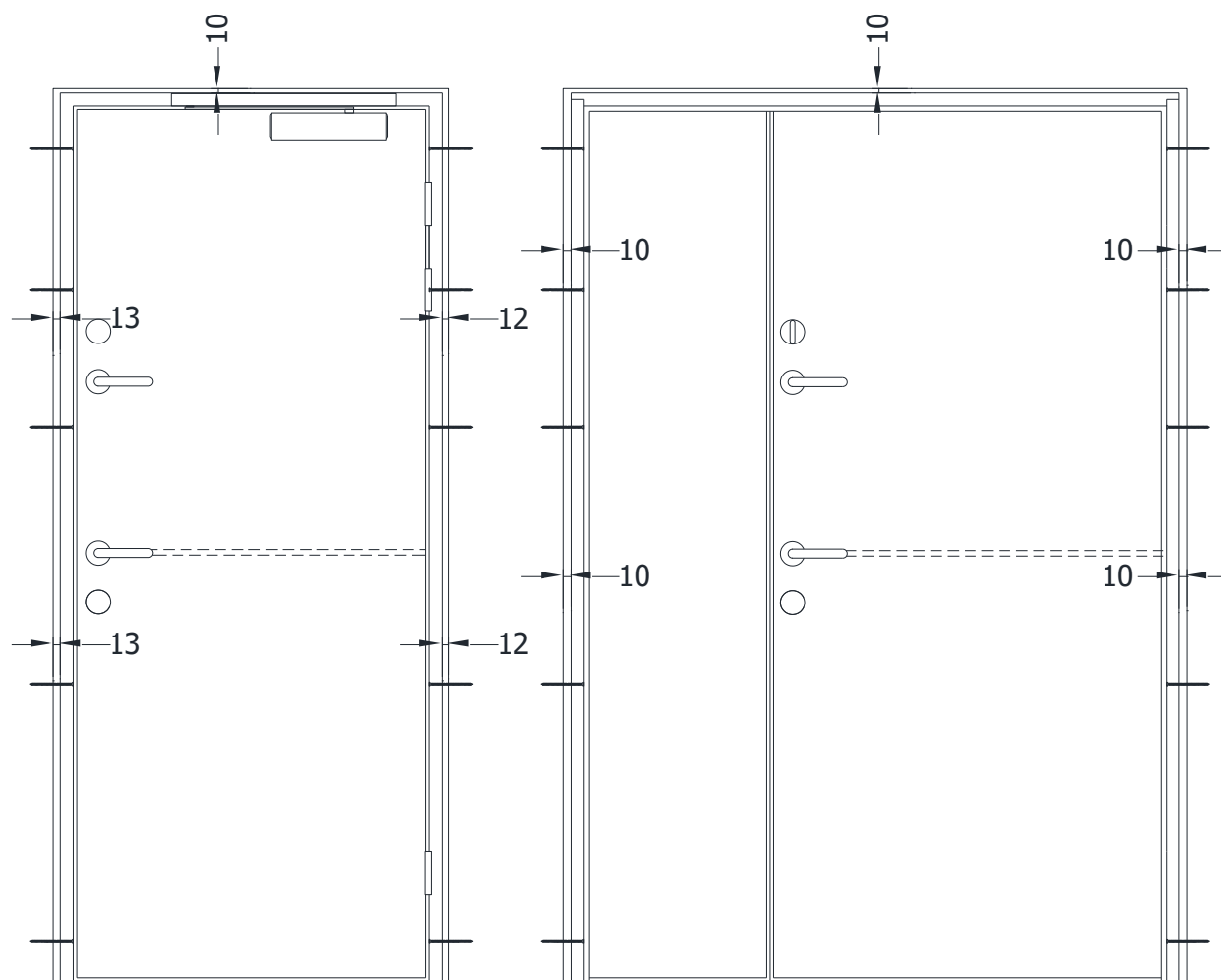


Figure 14 Detailed drawing showing space between door frame and supporting construction

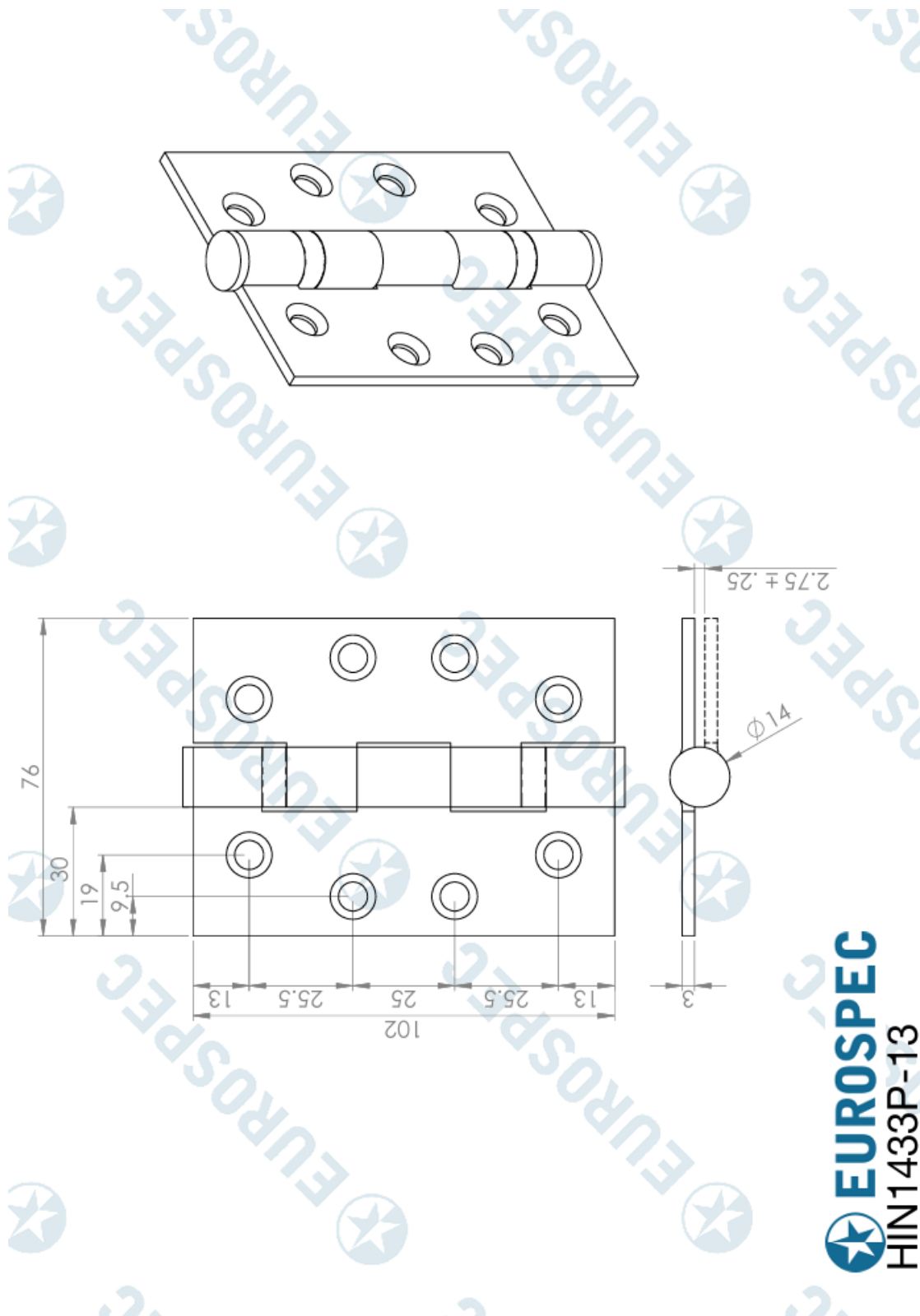


Figure 15 Manufacturer drawing of item 10 hinge

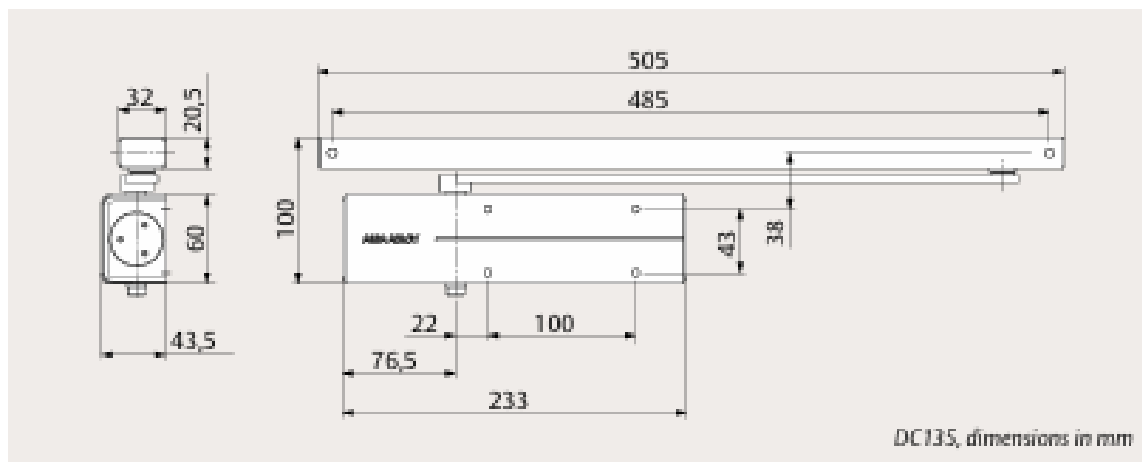


Figure 16 Manufacturer drawing of item 11 Door Closer 1

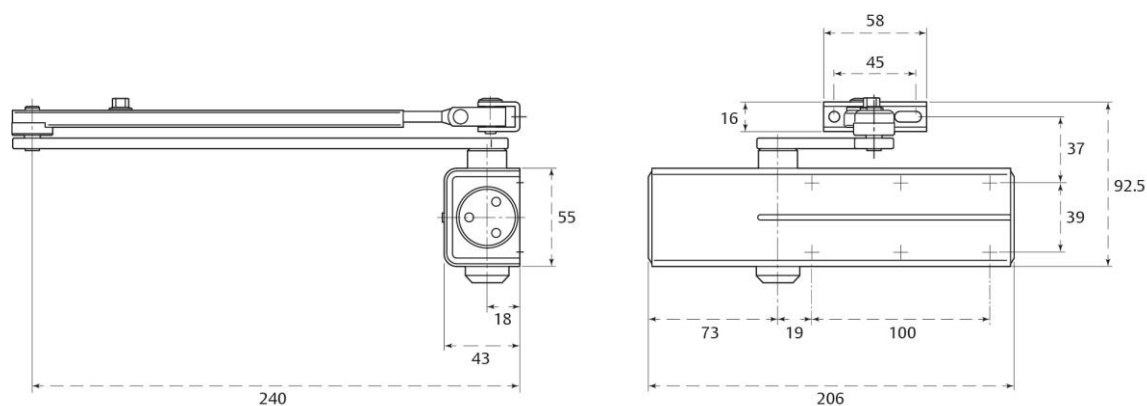


Figure 17 Manufacturer drawing of item 12 Door Closer 2

STS 422 Door-bottom seal

:1

Characteristics / features

Product code	Size / Length	Colour(s)	Performance
STS 422 - "SIZE" See table below	VARIOUS See table below	N / A	ACOUSTIC - See STS data sheets :01 - :16

Characteristics / features

Protects against / Resists	Fitting / installation	Material(s)
FIRE SMOKE SOUND DRAUGHT DUST INFESTATION	See STS data sheet :17	Casing: ALUMINIUM (T60/60) Seal: NEOPRENE/BUTYL Mechanism: STEEL/NYLON

Sizes

mm	Product size (pre-cut) mm							
	330	530	730	830	930	1030	1130	1330
	70	200	200	200	200	200	200	200
Product cuts back by (maximum) mm								

Please note

Pre-cut sizes are available at 925mm, 825mm & 725mm to suit standard width doorsets.

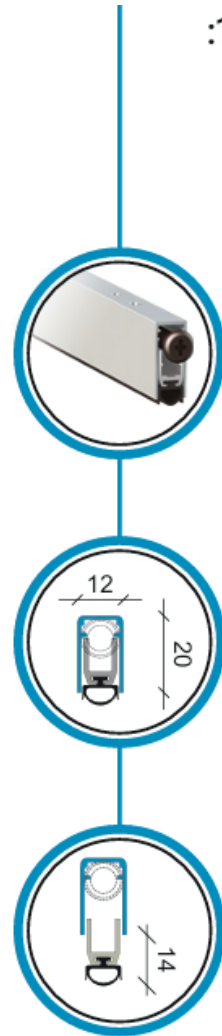


Figure 18 Manufacturer drawing of item 14 Drop Down Seal



ABLOY® EL595 Motor lock EL595 for wooden and metal doors

Product description

ABLOY EL595 is a motor lock for exterior swing doors.
EL595 can be installed with door automatics.
Latch bolt can be controlled with motor.
EL595 can be integrated with BMS and burglary system. Door and locking status can be monitored remotely from control room.

Handle works always mechanically (single handle).
EL595 is EN179 EXIT-approved.

Suitable for fire-rated doors.

Application

Typical applications are e.g. commercial buildings, hospitals, schools, universities etc., especially there, where automated swing doors are being used.

Overview of Advantages

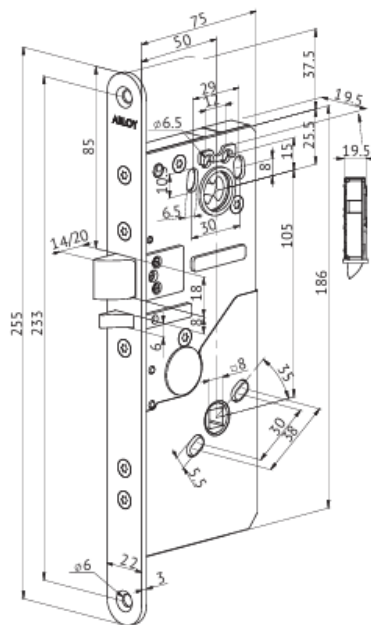
- Settable handing, left/right
- Mechanical override with key cylinder
- Settable latch out throw: 14 mm or 20 mm
- Monitoring functions
 - Door status
 - Bolt in
 - Bolt dead locked
 - Handle usage
 - Key cylinder usage (In special version)

Scope of delivery

- Lock case

Ordered separately

- EA228 Cable 0,5m or EA217 Cable 6m or EA227 Cable 10m
- EA280 / EA281, Lead cover
- Key cylinder(s)
- Handle(s)



Technical data

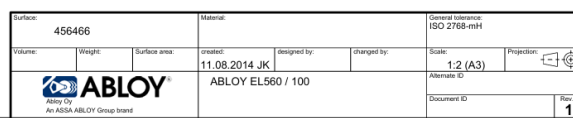
Handing	Non handed, left/right
Backset	50 mm
Mechanical key override	Yes
Operating temperature	-25 °C – +70 °C
Input operating voltage	12 – 24 VDC (+/-15%)
Rated current consumption	12 VDC: Max 1700 mA Norm. 600 mA Idle 50 mA 24 VDC: Max. 700 mA Norm. 250 mA Idle 25 mA
Microswitch capacity (monitoring contacts)	Max. 0,1 A 30VAC / VDC resist 3 W
Opening delay	1,7 s
EN179:2008	0809-CPR-1053
EN 14846:2008	0809-CPR-1157

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ABLOY

Figure 19 Manufacturer drawing of item 15 Lockset 1



ABLOY® CY037C,P,E,Z,D,N,U,T (CY-G)

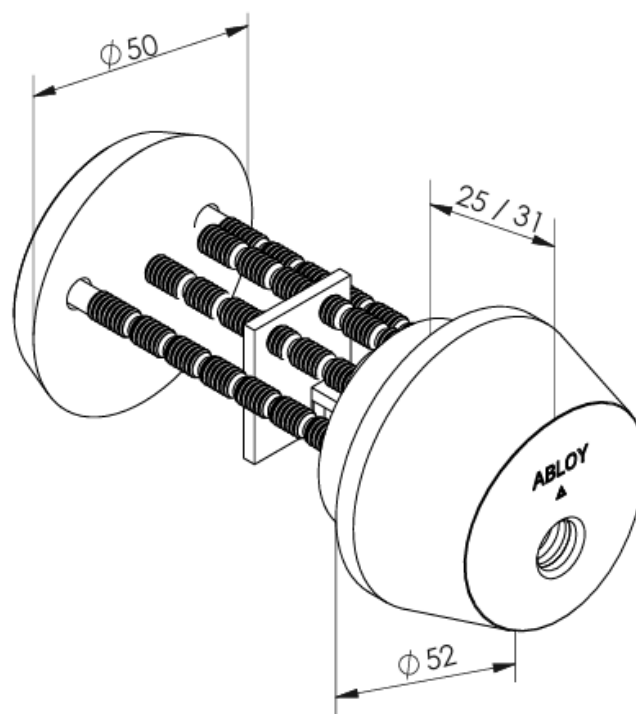


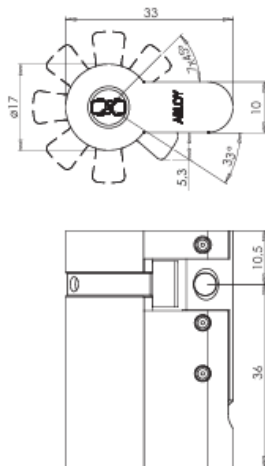
Figure 21 Manufacturer drawing of item 17 Thumb turn 1

ABLOY® CY326
DIN single cylinder



Product description
High durability cylinder against pulling, twisting and sawing.

- Overview of Advantages**
- Can be use with wide range applications for DIN cylinders
 - Suitable for both outer and inner door use
 - Adjustable length with extension system to match different door thicknesses
 - Adjustable locked position of cam
 - Several plating options



Technical data	
Available key systems	ABLOY PROTEC, ABLOY PROTEC ² , ABLOY NOVEL
Available plating options	Bright chrome (Cr), Satin chrome (HCr), Brushed nickel (NiHa), Bright brass (MSKLa), Satin brass (MSHaLa)
Cylinder length	36mm
Length adjustable	with 5mm steps 36–86mm, and with 10mm steps 86–136mm
Weight	0,17kg

Figure 22 Manufacturer drawing of item 18 Thumb turn 2

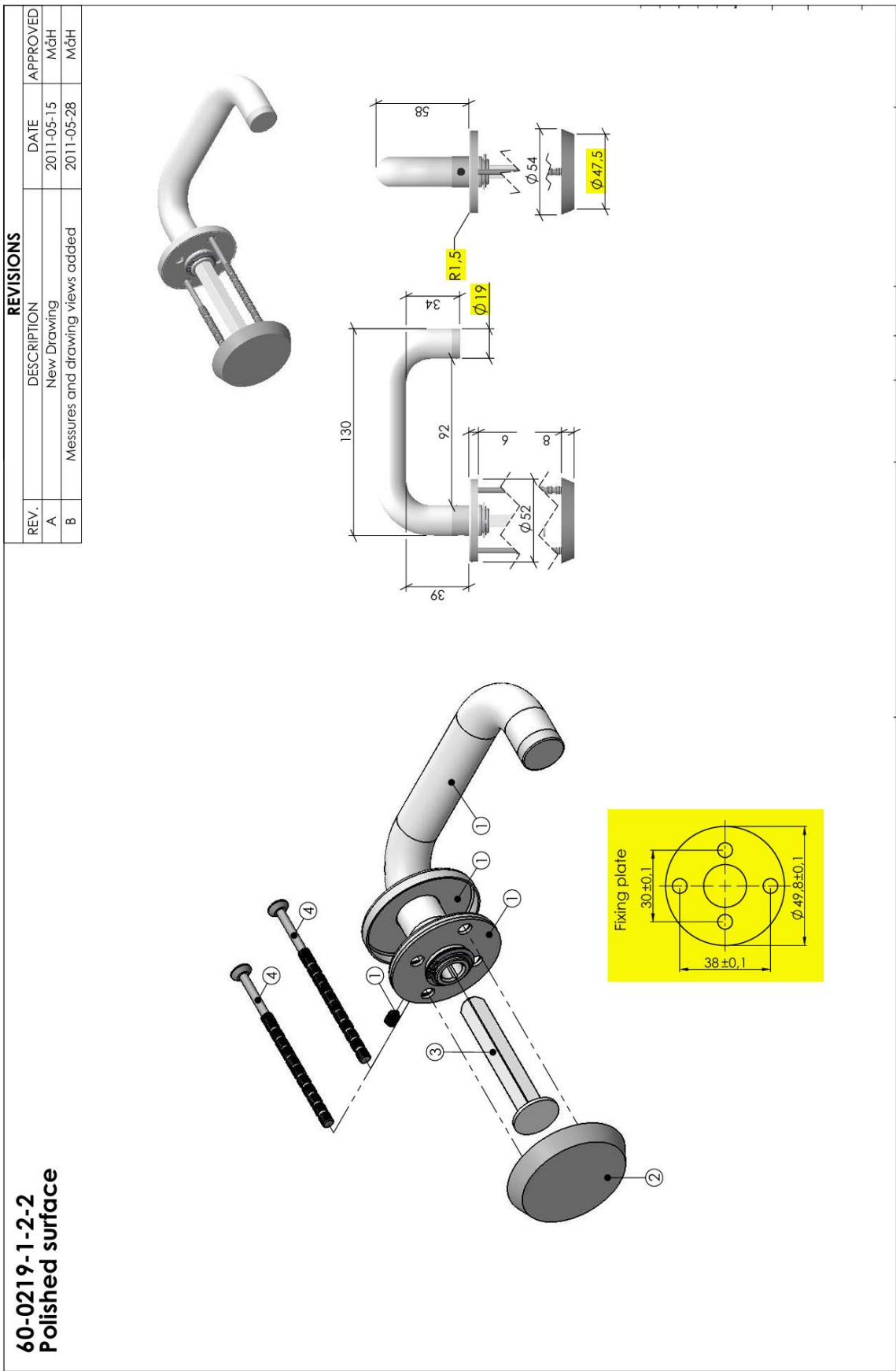


Figure 23 Manufacturer drawing of item 19 Lever Handle 1

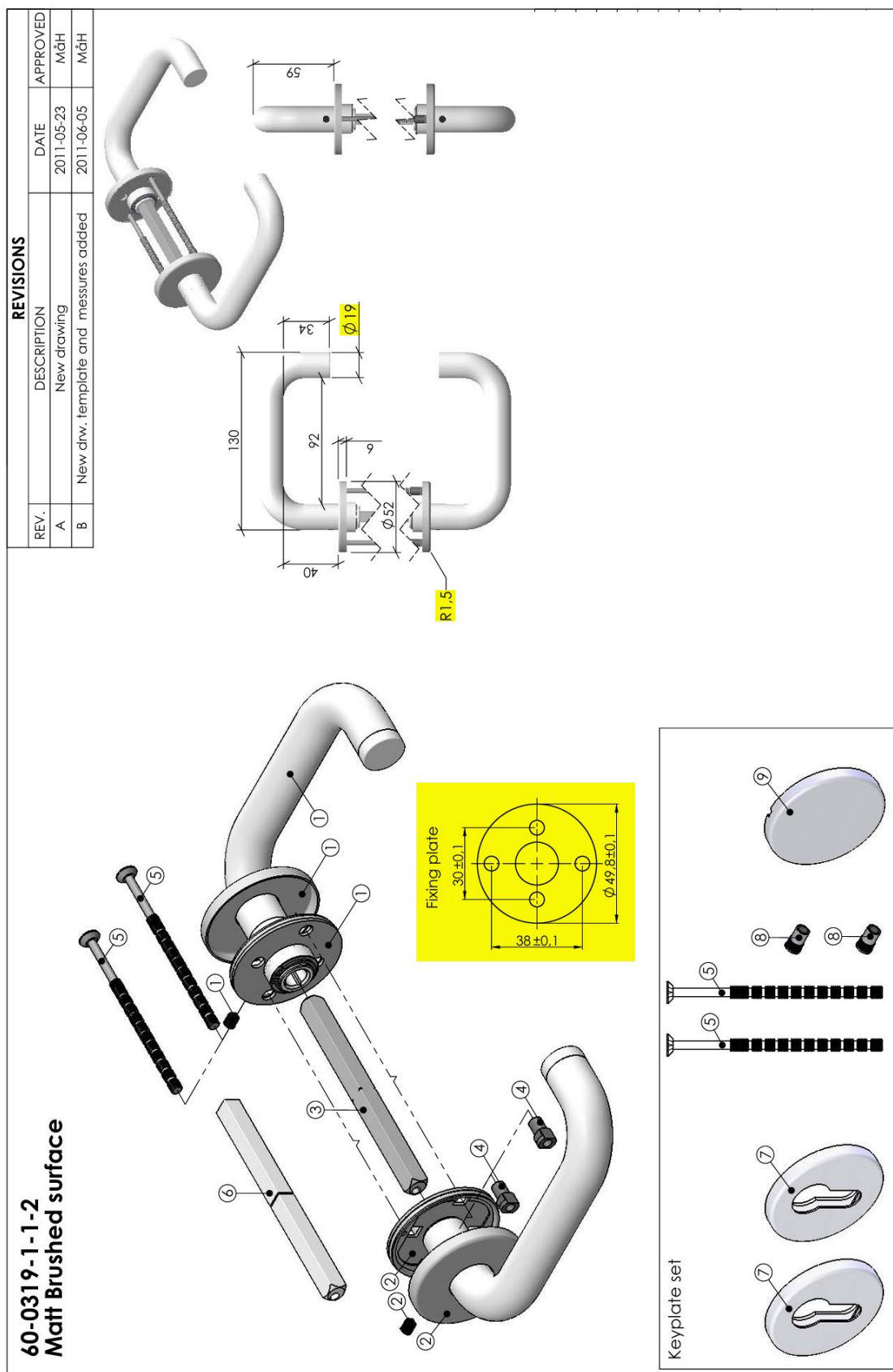


Figure 24 Manufacturer drawing of item 20 Lever Handle 2

EA280

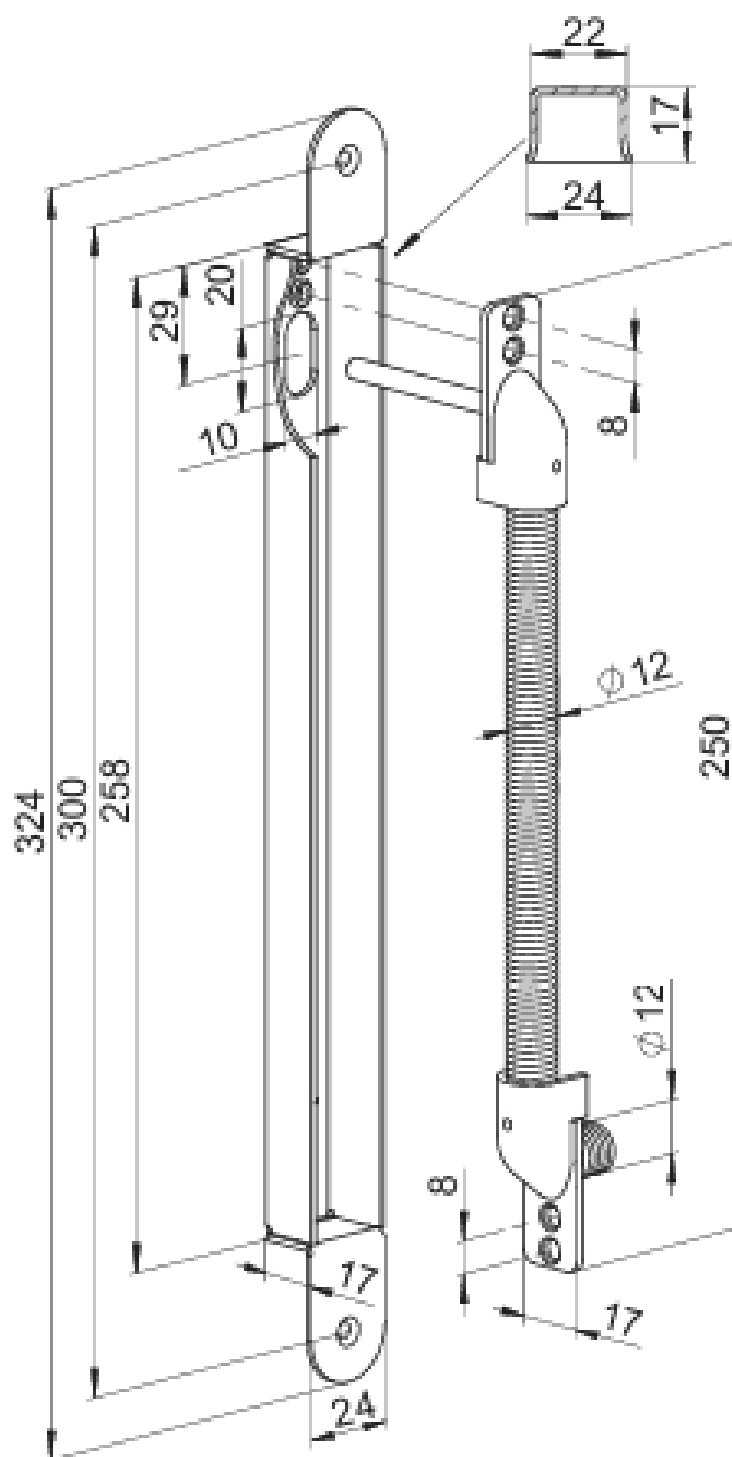


Figure 25 Manufacturer drawing of item 21 Cable Loop

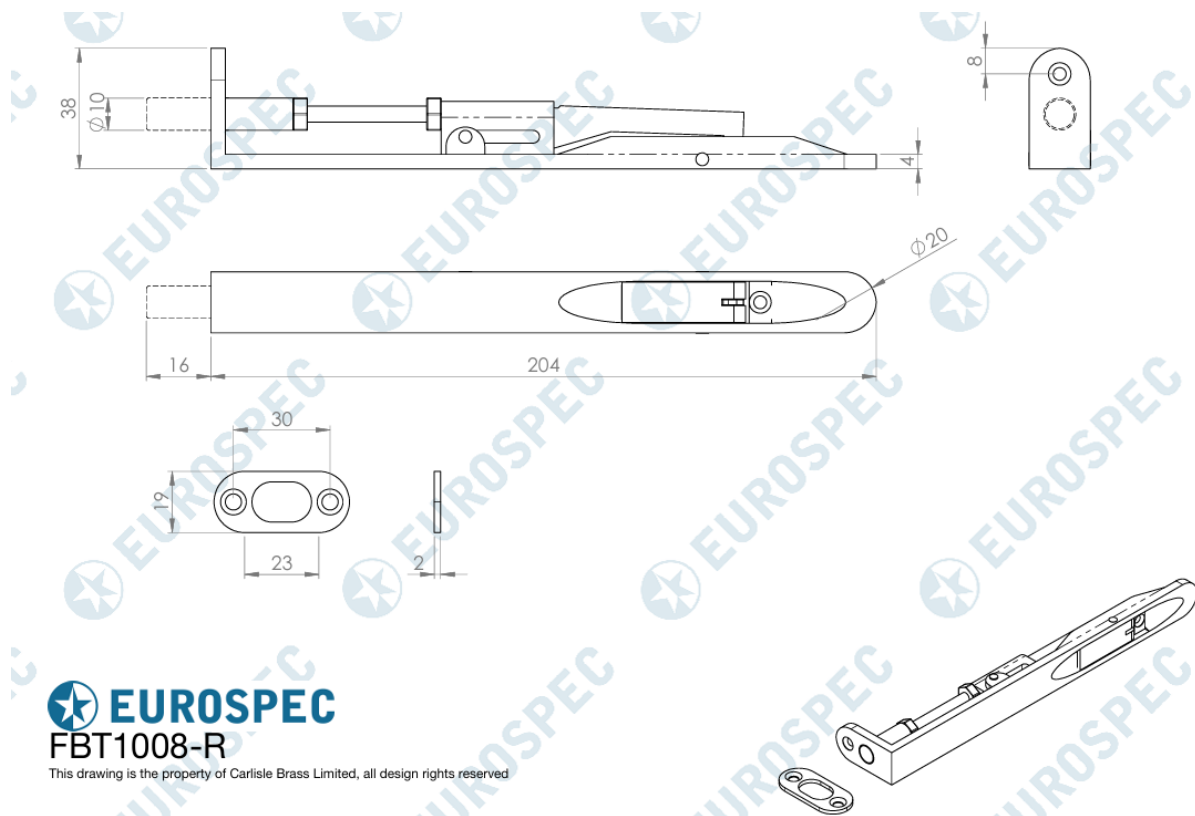


Figure 26 Manufacturer drawing of item 23 Flush Bolt

Schedule of Components

Schedule of components

Table 1 details the schedule of components which describes the test specimen and lists the components used in the construction of the test specimen. These were provided by the test sponsor and surveyed by Warringtonfire.

All measurements were verified by Warringtonfire unless stated otherwise in the schedule of components. All components marked with an “*” have not been verified by Warringtonfire.

Table 1 Schedule of components

Doorset A

1. Door frame	
Manufacturer	Wood International Agency Limited
Material	Framebreak PI450 engineered softwood head and jambs
Density	463 kg/m ³ (measured at sampling)
Moisture content	14.0% (measured during sampling) 11.0% (measured using a Protimeter at Warringtonfire)
Overall size	892 mm wide x 2080 mm high 44 mm thick
Frame (Head & Jambs)	140mm wide x 30mm thick 20 mm 12 mm plant on stop
Jambs to head jointing method	2 No. Woodscrews 5x70/40 though head into end grain of each jamb. Pilot Holes beforehand. Heads trenched by 10mm
Stop	
Overall Size	20 mm x 12 mm
Stop fixings	
Manufacturer	Montana
Type and Material	Stainless Steel Pneumatically Fired Brads
Overall Size	16 g x 38 mm long
Quantity	8 per jamb, 4 in head (50 mm from corners, 300 mm centres)
Adhesive used	
Manufacturer	Wurth
Type	PVA
Reference	D4 PVA ready mix
Curing method	Evaporation
Application method	By hand to trench joints, head to jambs.

2. Frame Fixing Method to Supporting Construction

Fixings	
Manufacturer	Würth
Type and Material	Steel masonry torx frame fixing screw
Overall Size	7.5 mm diameter x 102 mm long
Quantity	10 per frame
Fixing centres both sides of frame	100 mm from head/100 mm from base/ with maximum centres of 600 mm
Packing material	Plastic shim packers
Material	Polypropylene
Location	Around perimeter of frame behind fixings

Door leaf (Doorset A)

3. Leaf

Manufacturer	Wood International Agency Limited
Reference	Soloman 44
Sample Number	SC26045B
Material	Solid Engineered Timber Door Blank
Density	436 kg/m ³ (measured during sampling)
Moisture content	12.1 % (measured using a Protimeter at Warringtonfire)
Orientation	Opening away from furnace
Overall leaf size supplied for testing	826 mm wide x 2040 mm high x 44 mm thick
Fixing method	Cut to size and hung in frame from 3 no hinges

4. Lipping

Manufacturer	By Deziign Carpentry
Material	Sapele
Density recorded at sampling visit	640 kg/m ³ (nominal) 729 kg/m ³ (measured during sampling)
Moisture content	14.0% (measured during sampling)
Overall size	44 mm wide x 8 mm thick square edge (trimmed from 52 mm x 8.3 mm)
Detail	3 mm x 3 mm chamfer to all edges (reference figures 6 to 11)
Fixing method	Hand applied/cramped
Location	All 4 edges Verticals lipping overrun horizontals
Adhesives	Yes
Manufacturer	Würth
Type	Polyurethane

Reference	Rapid MCPU Adhesive batch 5102672810
Curing method	Moisture
Application method	Hand spread/Mechanical clamped
Light Fitting to Fame Head	
Reference	SCMM27163 John Cullen
Location & Size	15mm diameter hole in frame head 30mm from edge

Doorset B

5. Door frame	
Manufacturer	Wood International Agency Limited
Material	Framebreak PI450 Engineered Softwood Head and Jambs
Density	456 kg/m ³ (measured during sampling)
Moisture content	10.0% (measured during sampling) 11.2% (measured using a Protimeter at Warringtonfire)
Overall size	1421 mm wide x 2080 high x 44 mm thick
Frame (Head & Jambs)	140mm wide x 30mm thick with 20 mm 12 mm plant on stop
Jambs to head jointing method	2 No. Woodscrews 5x70/40 though head into end grain of each jamb. Pilot Holes beforehand. Heads trenched by 10mm
Stop	
Overall Size	20 mm x 12 mm
Stop fixings	
Manufacturer	Motana
Type and Material	Stainless Steel Pneumatically Fired BradsWood screws
Overall Size	16g x 38mm long5 mm diameter x 70 mm long
Quantity	8 per jamb,4 in head (50mm from corners, 300mm centres)
Adhesive used	
Manufacturer	Wurth
Type	PVA
Reference	D4 PVA ready mix
Curing method	Evaporation
Application method	By hand to trench joint head & jambs

6. Frame Fixing Method to Supporting Construction

Fixings	
Manufacturer	Würth
Type and Material	Steel masonry torx frame fixing screw
Overall Size	7.5 mm diameter x 102 mm long
Quantity	10 per frame
Fixing centres both sides of frame	100 mm from head/50 mm from base/ with maximum centres of 600 mm
Packing material	Plastic shim packers
Material	Polypropylene
Location	Around perimeter of frame behind fixing

Door leaf (Doorset B)

7. Leaf 1

Manufacturer	Wood International Agency Limited
Reference	Soloman 44
Sample Number	SC26045B
Material	Solid Engineered Timber Door Blank
Density	456 kg/m ³ (measured during sampling)
Moisture content	12.0% (measured during sampling) 12.3 % (measured using a Protimeter at Warringtonfire)
Orientation	Opening toward furnace
Overall leaf size supplied for testing	426 mm wide x 2040 mm high x 44 mm thick
Fixing method	Cut to size and hung in frame from 3 no hinges

8. Leaf 2

Manufacturer	Wood International Agency Limited
Reference	Soloman 44
Sample Number	SC26045B
Material	Solid Engineered Timber Door Blank
Density	456 kg/m ³ (measured during sampling)
Moisture content	12.0% (measured during sampling) 12.3% (measured using a Protimeter at Warringtonfire)
Orientation	Opening toward furnace
Overall leaf size supplied for testing	926 mm wide x 2040 mm high x 44 mm thick
Fixing method	Cut to size and hung in frame from 3 no hinges

9. Lipping	
Manufacturer	By Deziign Carpentry
Material	Sapele
Density recorded at sampling visit	640kg/m ³ (nominal) 730kg/m ³ (measured during sampling)
Moisture content	14% (measured during sampling) 10.9% (measured using a Protimeter at Warringtonfire)
Overall size	44 mm wide x 8 mm thick square edge (trimmed from 52 mm x 8,3 mm)
Detail	3 mm x 3 mm chamfer to all edges (reference figures 6 to 11)
Fixing method	Hand applied/cramped
Location	All 4 edges Verticals lipping overrun horizontals
Adhesives	
Manufacturer	Würth
Type	Polyurethane
Reference	Rapid MCPU Adhesive batch 5102672810
Curing method	Moisture
Application method	Hand spread/Mechanical clamped

Hardware

10. Hinges	
Supplier	Carslile Brass
Reference	Eurospec HIN 1433P/13SSS
Quantity	3 hinges per leaf
Primary material	Stainless Steel
Type	Butt Hinge
Size	
Knuckle	14Ø mm x 105 mm high
Blades	102 mm high x 76 mm wide x 3 mm thick
Fixings	
Type	Wood screws
Material	Stainless steel
Sizes	4.5Ø mm x 30 mm long
Number per blade	4 per hinge blade

Hinge centres relative to head of leaf	180mm (top leaf to top blade), 382mm (top leaf to top blade of second hinge), 1738mm from top leaf to top blade of bottom hinge
Details of intumescent protection	
Manufacturer	Sealed Tight Solutions Limited
Material	Graphite
Reference	STS 100 x 30 Hinge Protection
Size	1 mm thickness
Interruptions to Intumescent within the frame reveal	Fully interrupted
Fixing Method	Cut to size and adhered to rear of hinge blades

11. Door Closer 1 (Doorset A)

Manufacturer	Assa Abloy
Reference	DC135 rack & pinion overhead closer
Material	
Body	Steel
Closer arm	Steel
Cover	Steel
Configuration	Opening away from furnace
Overall size	
Body	58 mm high x 230 mm wide x 40 mm deep
Cover	60 mm high x 233 mm wide x 43.5 mm deep
Fixing method	Attached to door frame on mounting plate using manufacturer supplied fittings
Maximum opening force	55.5 N
Maximum closing force	25.8 N
Distance from hinge	780 mm
Maximum opening moment	43.29 Nm
Maximum closing moment	20.12 Nm

12. Door Closers 2 (Active Main Leaf Doorset B)

Manufacturer	Assa Abloy
Reference	DC135 rack and pinion to main leaf
Material	
Body	Steel
Closer arm	Steel
Cover	Steel
Configuration	Opening towards furnace
Overall size	

Body	58 mm high x 230 mm wide x 40 mm deep
Cover	60 mm high x 233 mm wide x 43.5 mm deep
Fixing method	Attached to door frame on mounting plate using manufacturer supplied fittings
Maximum opening force	59.4 N
Maximum closing force	29.7 N
Distance from hinge	850 mm
Maximum opening moment	46.33 Nm
Maximum closing moment	23.16 Nm

13. Door Closers 3(Slave Leaf Doorset B)

Manufacturer	Assa Abloy
Reference	DC140A-1 rack and pinion to slave leaf
Material	
Body	Steel
Closer arm	Steel
Cover	Steel
Configuration	Opening towards furnace
Overall size	
Body	55mm high x 205mm wide x 40mm deep
Cover	55 mm high x 206 mm wide x 42 mm deep
Fixing method	Attached to door frame on mounting plate using manufacturer supplied fittings
Maximum opening force	57.9 N
Maximum closing force	24.6 N
Distance from hinge	380 mm
Maximum opening moment	20.84 Nm
Maximum closing moment	9.35 Nm

14. Drop Down Seal

Manufacturer	Sealed Tight Solutions Limited
Reference	ST422
Material	
Body	Aluminium (T60/60 grade)
Seal	Neoprene/Butyl
Mechanism	Steel/Nylon
Overall size	12 mm x 20 mm
Location within leaf	Centrally in bottom of leaf
Maximum operating drop	14 mm

15. Lockset Latch 1 Top Lock	
Manufacturer	Assa Abloy
Reference	EL595
Material	
Lockcase	Stainless steel
Forend plate	Stainless steel
Latch bolt	Stainless steel
Lock bolt	Stainless steel
Lock operation	Disengaged both doorsets
Latch operation	Disengaged both doorsets
Latching Force	
Doorset A	26.3 N
Doorset B	25.9 N
Overall sizes	
Lockcase	75 x 186mm
Forend plate	
Lock	255 x 22mm 3 mm thick
Latch bolt	10mm
Lock bolt	20mm
Fixing Method	Aperture cut in leaf and then fitted with manufacturer kit 25mm long steel screws
Details of intumescent protection	
Manufacturer	Assa Abloy
Material	Monoammonium Phosphate
Size	2 mm thickness
Application Method	Pre cut kit wrapped around body and under forend plate
Keep	
Manufacturer	Assa Abloy
Reference	LP712_100000
Material	
Centre Strike Plate and Keep	Steel
Overall sizes	
Strike Plate	40cm x 200mm x 6mm With a 37wide x 140mm x 30mm deep integral back box
Keep Plate	18mm x 24.25mm x 6mm
Fixing Method	25 mmlong x 4 mm thick stainless steel screws within kit.
Details of intumescent protection	

Manufacturer	Assa Abloy
Reference	EL595
Material	Monoammonium Phosphate Graphite
Size	2 mm thick
Application Method	Pre-cut kit wrapped around body and under forend plate

16. Lockset Latch 2 Bottom Lock

Manufacturer	Assa Abloy
Reference	EL560
Material	
Lockcase	Stainless Steel
Forend plate	Stainless Steel
Latch bolt	Stainless Steel
Lock bolt	Stainless Steel
Lock operation	Disengaged both doorsets
Latch operation	Engaged both doorsets
Latching Force	
Doorset A	26.3 N
Doorset B	25.9 N
Overall sizes	
Lockcase	98mm x 168.5mm x 16.5mm
Forend plate	235 x 22 x 3mm thick
Latch bolt	22mm high x 10mm projection
Lock bolt	35mm high x 20mm projection
Fixing Method	Aperture cut in leaf and then fitted with manufacturer kit 25mm long steel screws
Details of intumescent protection	
Manufacturer	Assa Abloy
Material	Monoammonium Phosphate Graphite
Size	2 mm thick
Application Method	Pre-cut kit wrapped around body and under forend plate Cut to size and wrapped around body and under forend plate
Keep	
Manufacturer	Assa Abloy
Reference	EA322
Material	
Centre Strike Plate and Keep	Steel
Overall sizes	

Strike Plate	176mm x 16mm x 3mm
Keep Plate	232mm x 24mm x 3mm
Fixing Method	25 mm long x 3.5 mm thick stainless steel screws within kit
Details of intumescent protection	
Manufacturer	Assa Abloy
Material	Monoammonium Phosphate
Size	2 mm thick
Application Method	Pre-cut kit wrapped around body and under forend plate

17. Cylinder with Thumbturn 1

Manufacturer	Assa Abloy
Reference	CY037U_119005
Material	Steel
Overall size	
Lock side	52 mm diameter plate 31 mm protrusion
None Lock side	50mm diameter
Cylinder size	36mm x 46.5mm
Fixing Method	Fixed with 3.4mm diameter screws provided with kit
Location	1515 mm from base of leaf
Details of intumescent protection	N/A

18. Cylinder with Thumbturn 2

Manufacturer	Assa Abloy
Reference	CY326U_219005
Material	Steel
Overall size	
Lock side	52 mm diameter plate 31 mm protrusion
None Lock side	50mm diameter
Cylinder size	36mm x 46.5mm
Fixing Method	Fixed with 3.4mm diameter screws provided with kit
Location	855 mm from base of leaf
Details of intumescent protection	N/A

19. Lever Handle 1

Manufacturer	Assa Abloy
Reference	Beslag original futura 8600219 (60-219)
Material	Steel
Overall size	130 mm long x 20 mm diameter
Location Central Spindle	1000 mm from base of leaf

Fixing Method	Manufacturer screws and kit
Details of intumescent protection	N/A
Escutcheon	
Reference	8600319 (60-219)
Material	Steel
Overall size	49 mm diameter
Fixing Method	Fixed with manufacturer supplied fixings
Details of intumescent protection	N/A
20. Lever Handle 2	
Manufacturer	Assa Abloy
Reference	Beslag original futura 8600219 (60-219)
Material	Steel
Overall size	130 mm long x 20 mm diameter
Location Central Spindle	1400 mm from base of leaf
Fixing Method	Manufacturer screws and kit
Details of intumescent protection	N/A
Escutcheon	
Reference	8600219 (60-219)
Material	Steel
Overall size	49 mm diameter
Fixing Method	Fixed with manufacturer supplied fixings
Details of intumescent protection	N/A
21. Cable Loop	
Manufacturer	Assa Abloy
Reference	EA280
Material	
Body	Steel
Spring	Steel
Overall size	
Forend	324 mm x 24 mm
Morticed Cases	22 mmx 24 mm x 17mm
Spring	12mm diameter
Cut out	-
Fixing method	Screws provided within product kit 3.5mm diameter 15 mm long steel screws
Location	Leaf – frame connection
Intumescent protection	

Manufacturer	Assa Abloy
Material	Monoammonium Phosphate
Size	2 mm thick
Application Method	Pre-cut kit wrapped around body and under forend plate

22. Cable Through Leaf

Manufacturer	Assa Abloy
Reference	Cable connecting ASSA ABLOY EA280 Concealed Door Loop leaf to frame connection
Material	steel
Overall size	-
Cut out size	10 mm diameter hole 1000mm from leaf bottom,
Location	1000 mm from bottom of leaf through leaf horizontal to connect lock and loop
Intumescent protection	STS Cable Pro wireway protection around cable

23. Flush Bolt (Doorset B only)

Manufacturer	Carlisle Brass
Reference	CB200 ref FBT1008 sss lever action
Material	
Body	Stainless steel
Bolt	Stainless steel
Face plate	Stainless steel
Overall size	
Body	204 mm long x 38 mm wide x 4 mm thick
Bolt	10 mm
Face plate	38 mm long x 19 mm wide x 2 mm thick
Fixings Used	2 x 30mm x 3.4 mm diam steel screws
Location of Flush bolts within doorset	1 No. to top and 1 No. to bottom, centrally in edge of secondary leaf meeting stile.



Operation of Flush bolt	Engaged
Details of Intumescent Protection	
Manufacturer	Sealed Tight Solutions Limited
Material	Graphite
Size	1 mm
Application Method	Placed under forend and lining mortice

24. Light Fitting to Frame Head

Reference	SCMM27163 John Cullen
Location & Size	
Doorset A	Central to exposed side of Doorset A, 15mm diameter hole in frame head 30mm from edge
Doorset B	Central to unexposed side of Doorset B, 15mm diameter hole in frame head 30mm from edge



Fire Stopping

25. Frame supporting construction fire stopping

Manufacturer	Morgan Advanced Materials
Reference	Superwool Plus
Material	High temperature insulation wool
Overall size	25 mm, uncompressed
Density	96 kg/m ³ (stated)
Application method	Push fitted between the supporting construction and the door frame/jambs/head

26. Capping Sealant

Manufacturer	Sealed Tight Solutions Limited
Reference	ST88
Material	Acrylic sealant
Overall dimension	Approximately 10 mm nominal bead
Application method	Cartridge gunned around perimeter of the door frame to both faces.

27. Intumescent Strip 1

Intumescent to frame reveal	
Quantity	1 No.
Manufacturer	Sealed Tight Solutions Limited
Reference	STS 1504 FO
Material	PVC Encased Graphite
Overall section size	15 mm wide x 4 mm thick
Application method	Friction/Adhesive Tape
Presence of Adhesives	Strip of self adhesive on rear of seal
Location (relative to frame edge)	14.7 mm
Interruptions	Fully interrupted at hinge and keep positions

28. Intumescent Strip 2

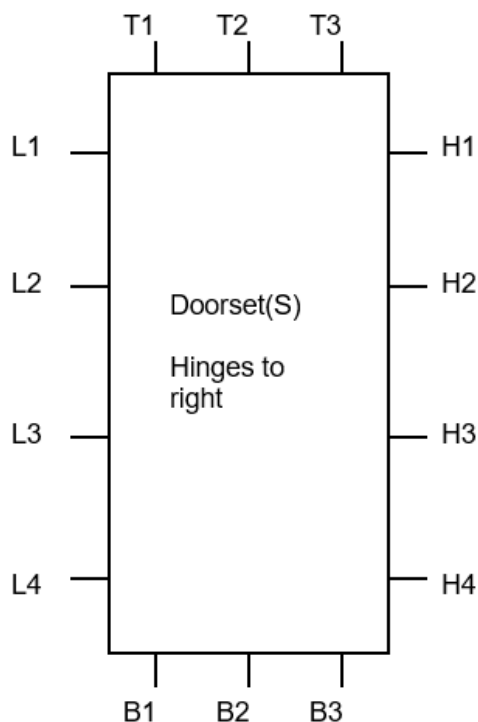
Intumescent to Meeting edge (Doorset B only)	
Quantity	1 No.
Manufacturer	Sealed Tight Solutions Limited
Reference	STS 1004 FO
Material	PVC Encased Graphite
Overall section size	10 mm wide x 4mm thick
Application method	Self-adhered into groove within leaf edge.
Location (relative to leaf edge)	7 mm

Interruptions	Partially interrupted at lockset
29. Intumescent Strip 3	
Intumescent to Meeting edge (Doorset B only)	
Quantity	1 No.
Manufacturer	Sealed Tight Solutions Limited
Reference	STS 1004 SBS
Material	PVC encased graphite with butyl fin
Overall section size	10 mm wide x 4mm thick
Application method	Self-adhered into groove within leaf edge.
Location (relative to leaf edge)	7 mm
Interruptions	Partially interrupted at lockset
30. Smoke Seal	
Quantity	1 No.
Manufacturer	Sealed Tight Solutions Limited
Reference	STS 1009
Material	PVC encased graphite
Overall section size	10 mm wide x 4mm thick
Application method	Self-adhered to stop upstand

Supporting Construction

31. Lightweight Blockwork	
Manufacturer	Thermalite
Reference	Thermalite Shield
Material	Lightweight concrete blocks
Size	150 mm x 215 mm x 440 mm
Density	946 ~ 960 kg/m ³ (stated)
Fixing method	Ordinary sand/cement mortar, mix 3:1
32. AAC Lintel	
Type	Steel reinforced concrete
Material	Steel reinforced autoclaved aerated concrete
Overall Size	150 mm wide x 250 mm high x 3000 mm long
Density	670 kg/m ³ (stated)
33. AAC Floor Slab	
Type	Steel reinforced concrete
Material	Steel reinforced autoclaved aerated concrete
Overall Size	150 mm wide x 600 mm high x 3000 mm long
Density	670 kg/m ³ (stated)
34. Concrete Base	
Type	Steel reinforced concrete lintel
Material	Steel reinforced concrete
Overall Size	355 mm wide x 400 mm high x 3000 mm long
Density	2400 kg/m ³ (stated)

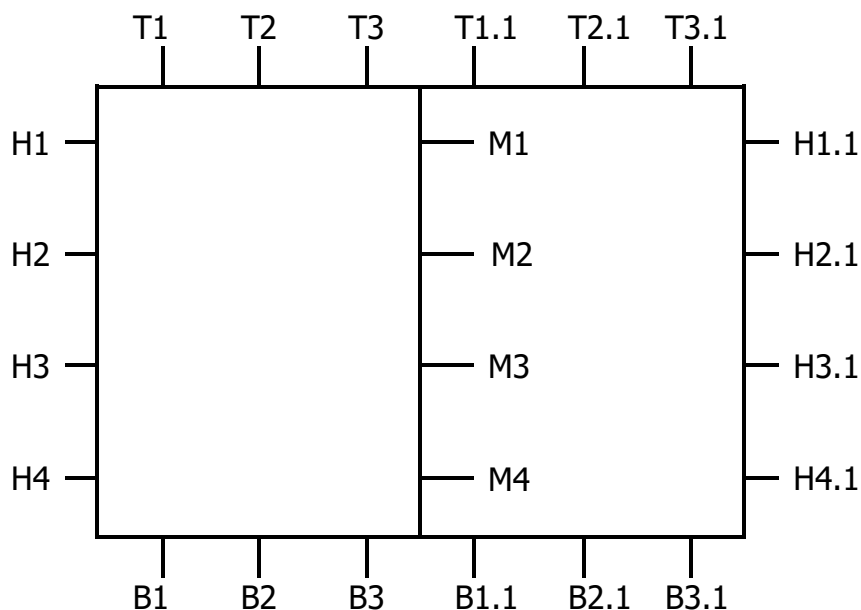
Doorset clearance gaps



View from unexposed face

Doorset A (mm)					
Hinge Side	Primary	Leaf to Stop	Leading Edge	Primary	Leaf to Stop
H1	3.3	1.6	L1	1.9	1.5
H2	3.7	1.6	L2	2.4	1.4
H3	3.9	1.5	L3	2.9	1.3
H4	3.8	1.4	L4	3.0	1.3
Mean	3.7		Mean	2.6	
Max	3.9		Max	3.0	
Min	3.3		Min	1.9	
Max Permitted	5.8		Max Permitted	4.8	
Top edge	Primary	Leaf to stop	Threshold	Primary	
T1	3.3	1.9	B1	7.6	
T2	*	1.9	B2	7.7	
T3	3.3	1.9	B3	7.7	
Mean	3.3		Mean	7.7	
Max	3.3		Max	7.7	
Min	3.3		Min	7.6	
Max Permitted	5.3		Max Permitted	9.7	

*Obscured by closer



Doorset B (mm)							
Hinge Side	Primary	Leaf to Stop	Hinge Side	Primary	Leaf to Stop	Meeting Edge	Primary
H1	3.2	1.2	H1.1	3.6	1.8	M1	2.4
H2	3.0	2.0	H2.1	3.0	1.3	M2	2.3
H3	2.7	1.0	H3.1	3.9	2.1	M3	2.3
H4	4.0	1.6	H4.1	3.7	2.2	M4	2.9
Mean	3.2		Mean	3.6		Mean	2.5
Max	4.0		Max	3.9		Max	2.9
Min	2.7		Min	3.0		Min	2.3
Max Permitted	5.6		Max Permitted	5.7		Max Permitted	4.7
Top edge	Primary	Leaf to stop	Threshold	Primary			
T1	3.3	1.1	B1	7.9			
T2	2.6	1.0	B2	7.2			
T3	3.2	0.8	B3	7.5			
Mean	3.0		Mean	7.5			
Max	3.3		Max	7.9			
Min	2.6		Min	7.2			
Max Permitted	5.2		Max Permitted	9.7			
Top edge	Primary	Leaf to stop	Threshold	Primary			
T1.1	3.3	1.5	B1.1	7.0			
T2.1	3.5	0.7	B2.1	7.1			
T3.1	3.2	1.1	B3.1	7.9			
Mean	3.3		Mean	7.3			
Max	3.5		Max	7.9			
Min	3.2		Min	7.0			
Max Permitted	5.4		Max Permitted	9.6			

Test Observations

Time All observations are from the unexposed face unless noted otherwise.

mins secs

00	00	The test commences.
00	53	Smoke release from the meeting edge of Doorset B and from the leading edge Doorset A.
02	25	Yellow discolouration on the top left of the frame of Doorset A.
03	07	Intense smoke release from both doorsets.
04	10	Brown discolouration on the meeting edge of Doorset B.
05	13	Flicker of flame from the bottom leading edge Doorset B.
06	32	Loud audible bang heard from Doorset A.
07	43	Flicker of flame from the bottom leading edge of Doorset B.
07	53	Drop seal at the leading edge of Doorset B is melting.
09	32	Brown/Black discolouration at the head of Doorset A.
09	46	Intumescent at the top of Doorset B falling away.
11	23	Audible cracking continues from both specimens.
13	35	Yellow discolouration on both door leaves.
17	20	Glowing behind the hinge side of Doorset A.
18	39	Black discolouration at the hinge side of Doorset A.
19	13	Flicker of flame at the bottom left of Doorset A.
27	00	Fluid seeping out of the cylinder and keyhole of Doorset B.
29	53	Top left Door Leaf 2 has discoloured black.
35	30	Doorset B meeting edge is beginning to glow.
36	20	Cotton pad applied to the meeting edge of Doorset B. The cotton pad did not ignite nor show glowing embers.

Time All observations are from the unexposed face unless noted otherwise.

mins **secs**

- | | | |
|-----------|-----------|--|
| 37 | 52 | Sustained flaming at the top meeting edge of Doorset B. Sustained flaming integrity failure is deemed to have occurred. Cotton pad integrity failure is also deemed to have occurred. |
| 38 | 20 | Doorset B extinguished. All modes of integrity criteria are no longer satisfied on Doorset B. |
| 39 | 48 | Test stopped at the request of the test sponsor. |

Test Photographs

The exposed face of the specimen prior to testing



The unexposed face of the specimen prior to the start of the test



The unexposed face of the specimen after a test duration of 5 minutes



The unexposed face of the specimen after a test duration of 10 minutes



The unexposed face of the specimen after a test duration of 15 minutes



The unexposed face of the specimen after a test duration of 20 minutes



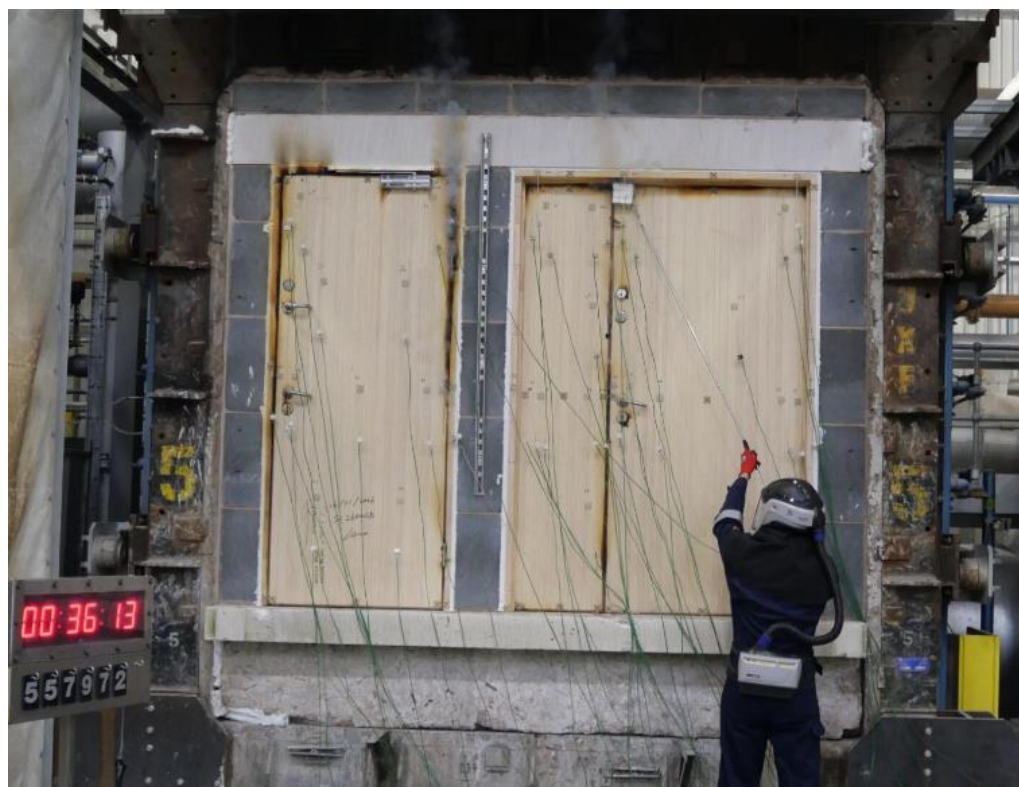
The unexposed face of the specimen after a test duration of 25 minutes



The unexposed face of the specimen after a test duration of 30 minutes



The unexposed face of the specimen after a test duration of 36 minutes



The exposed face of the specimen immediately after the test



Test Data

Mean furnace temperature, together with the temperature/time relationship specified in BS EN 1363-1: 2020

Time Mins	Specified Furnace Temperature Deg. C	Actual Furnace Temperature Deg. C
0	20	20
2	445	506
4	544	592
6	603	662
8	645	625
10	678	693
12	705	745
14	728	707
16	748	771
18	766	730
20	781	780
22	796	788
24	809	796
26	820	803
28	831	812
30	842	828
32	851	847
34	860	863
36	869	874
38	877	882
39	881	886

Individual and mean temperatures recorded on the unexposed surface of the Doorset A

Time Mins	T/C Number 20 Deg. C	T/C Number 21 Deg. C	T/C Number 22 Deg. C	T/C Number 23 Deg. C	T/C Number 24 Deg. C	Mean Temp Deg. C
0	18	17	17	17	18	17
2	18	17	17	17	18	17
4	18	18	18	17	19	18
6	18	18	18	17	18	18
8	18	18	18	17	18	18
10	18	18	19	18	19	18
12	19	19	20	18	20	19
14	20	20	23	19	21	21
16	22	23	25	21	23	23
18	24	25	28	23	25	25
20	26	28	31	25	28	28
22	29	31	34	28	32	31
24	33	35	38	31	36	35
26	37	39	42	34	41	39
28	42	44	46	38	46	43
30	46	48	52	42	52	48
32	51	52	58	46	57	53
34	56	57	65	50	63	58
36	61	63	73	55	69	64
38	66	68	82	60	75	70
39	69	72	86	63	79	74

Individual temperatures recorded on the door leaf 100 mm away from the edges on Doorset A

Time Mins	T/C Number 34 Deg. C	T/C Number 35 Deg. C	T/C Number 36 Deg. C	T/C Number 37 Deg. C
0	17	17	17	17
2	17	18	17	18
4	18	18	17	18
6	18	19	18	18
8	21	19	19	18
10	25	19	20	18
12	31	20	21	20
14	38	22	21	22
16	43	24	24	25
18	47	26	25	27
20	50	29	28	30
22	53	32	30	32
24	56	36	33	35
26	58	42	37	38
28	62	50	41	41
30	65	59	45	46
32	70	66	50	53
34	73	72	53	61
36	76	76	57	68
38	80	80	61	72
39	82	81	64	75

Individual temperatures recorded on the door leaf 25 mm away from the edges on Doorset A

Time Mins	T/C Number 30 Deg. C	T/C Number 31 Deg. C	T/C Number 32 Deg. C	T/C Number 33 Deg. C
0	17	17	16	19
2	17	20	17	19
4	18	23	17	19
6	20	33	17	19
8	23	35	21	20
10	30	33	24	21
12	38	36	29	25
14	44	39	31	29
16	48	40	39	35
18	51	42	47	39
20	54	44	52	44
22	57	46	51	47
24	61	48	51	50
26	65	50	51	53
28	68	53	52	55
30	72	57	57	58
32	76	60	62	61
34	79	63	66	66
36	84	68	70	73
38	88	73	75	80
39	90	76	78	82

Individual temperatures recorded on the door frame A

Time Mins	T/C Number 38 Deg. C	T/C Number 39 Deg. C	T/C Number 40 Deg. C	T/C Number 41 Deg. C
0	15	16	15	15
2	18	31	16	15
4	27	43	16	15
6	27	49	26	15
8	31	52	37	16
10	33	52	37	17
12	42	53	35	25
14	43	55	35	32
16	42	53	37	38
18	40	50	38	39
20	41	48	41	42
22	43	50	40	42
24	46	51	40	41
26	47	54	41	43
28	49	59	44	44
30	52	68	48	39
32	55	74	53	37
34	56	80	58	38
36	58	84	62	39
38	61	87	68	42
39	63	88	70	43

Individual and mean temperatures recorded on the unexposed surface of Doorset B

Time Mins	T/C Number 25 Deg. C	T/C Number 26 Deg. C	T/C Number 27 Deg. C	T/C Number 28 Deg. C	T/C Number 29 Deg. C	Mean Temp Deg. C
0	18	17	18	18	18	18
2	18	17	18	20	18	18
4	18	17	18	22	18	19
6	18	17	18	20	18	18
8	19	17	18	20	18	18
10	20	18	19	20	18	19
12	23	18	20	20	18	20
14	25	20	22	21	20	22
16	27	21	24	23	21	23
18	29	24	26	25	24	26
20	32	27	29	28	27	29
22	36	31	33	31	30	32
24	41	34	38	34	34	36
26	46	39	43	38	37	41
28	50	44	47	41	41	45
30	56	49	51	45	44	49
32	63	54	56	49	48	54
34	70	59	62	53	51	59
36	79	64	67	56	55	64
37	83	67	70	58	57	67
38	85	70	73	61	60	70
39	88	73	76	63	62	72

Individual temperatures recorded on the door leaf 100 mm away from the edges on Doorset B on Door Leaf 1

Time Mins	T/C Number 50 Deg. C	T/C Number 51 Deg. C	T/C Number 52 Deg. C	T/C Number 53 Deg. C
0	17	17	18	18
2	17	17	18	18
4	18	17	18	19
6	18	17	18	19
8	18	17	19	18
10	18	18	21	19
12	19	19	23	20
14	20	20	24	21
16	23	22	26	23
18	25	25	28	26
20	28	28	30	28
22	32	31	33	31
24	36	35	37	34
26	40	39	42	38
28	45	43	47	42
30	51	48	51	47
32	57	53	56	52
34	62	57	61	56
36	68	62	67	61
37	71	65	71	64
38	75	68	76	66
39	79	72	73	69

Individual temperatures recorded on the door leaf 100 mm away from the edges on Doorset B on Door Leaf 2

Time Mins	T/C Number 54 Deg. C	T/C Number 55 Deg. C	T/C Number 56 Deg. C	T/C Number 57 Deg. C
0	17	18	17	18
2	18	18	17	18
4	18	19	17	18
6	18	21	17	*
8	19	26	17	*
10	19	30	18	*
12	21	36	18	*
14	23	41	20	*
16	26	46	22	*
18	29	51	24	*
20	33	54	27	*
22	36	56	30	*
24	38	59	34	*
26	42	63	38	*
28	46	68	43	*
30	49	72	48	*
32	53	79	51	40
34	56	86	55	42
36	60	91	60	45
37	63	92	63	47
38	67	94	66	49
39	69	95	71	51

***TC Malfunction**

Individual temperatures recorded on the door leaf 25 mm away from the edges of Doorset B on Door Leaf 1

Time Mins	T/C Number 42 Deg. C	T/C Number 43 Deg. C	T/C Number 44 Deg. C	T/C Number 45 Deg. C
0	17	16	17	18
2	18	21	17	19
4	18	25	19	22
6	18	30	25	25
8	18	34	29	28
10	18	39	38	36
12	20	49	39	42
14	22	45	46	45
16	24	46	48	47
18	27	53	52	50
20	31	56	56	50
22	35	56	68	54
24	40	59	73	58
26	45	59	78	62
28	50	61	84	66
30	55	63	90	71
32	61	66	96	77
34	69	72	104	83
36	75	78	121	89
37	78	83	137	92
38	82	87	171	95
39	84	91	*	97

***Area Extinguished**

Individual temperatures recorded 25 mm away from the edges on Doorset B on Door Leaf 2

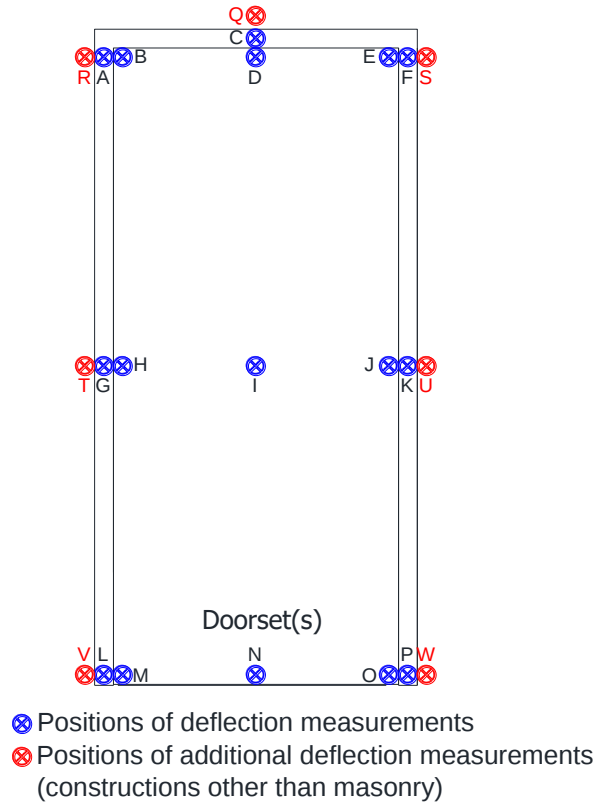
Time Mins	T/C Number 46 Deg. C	T/C Number 47 Deg. C	T/C Number 48 Deg. C	T/C Number 49 Deg. C
0	18	17	17	17
2	19	18	17	17
4	22	20	17	17
6	27	23	18	19
8	35	28	20	22
10	41	30	28	25
12	47	39	42	28
14	50	48	42	31
16	54	49	43	34
18	56	48	48	37
20	59	51	53	40
22	62	54	53	43
24	66	60	56	46
26	70	68	59	49
28	75	74	62	53
30	79	86	65	57
32	85	94	68	62
34	91	101	69	67
36	95	107	74	74
37	96	115	77	78
38	97	139	81	82
39	98	*	85	85

***Area Extinguished**

Individual temperatures recorded on the door frame B

Time Mins	T/C Number 58 Deg. C	T/C Number 59 Deg. C	T/C Number 60 Deg. C	T/C Number 61 Deg. C	T/C Number 62 Deg. C
0	16	15	18	18	18
2	16	16	19	18	18
4	16	16	19	18	18
6	16	16	19	18	18
8	16	16	20	18	18
10	16	17	22	18	18
12	16	18	24	19	18
14	16	19	27	20	18
16	16	20	28	20	19
18	16	20	27	20	19
20	16	21	26	20	19
22	16	21	26	21	19
24	16	21	26	21	19
26	16	21	26	22	19
28	17	21	27	22	19
30	17	21	27	22	19
32	17	22	28	23	20
34	18	22	29	24	20
36	18	23	30	24	20
37	18	23	33	24	20
38	18	24	40	24	20
39	19	25	45	25	21

Horizontal deflections of the Doorset A

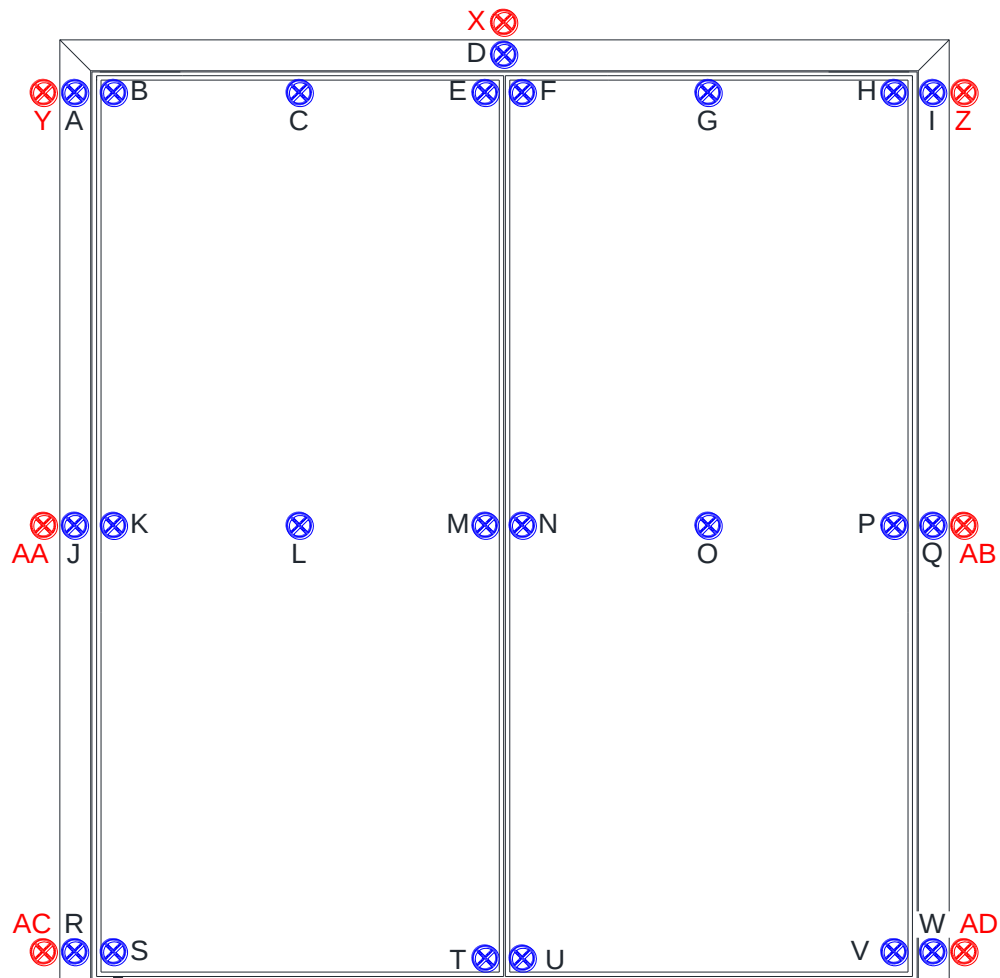


Deflections – mm																
Time-mins	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	*	-4	-3	10	1	-2	-3	-1	6	*	6	-2	-3	2	0	0
10	0	1	4	8	-2	0	1	-4	7	*	7	0	-7	5	3	1
15	*	-6	6	11	3	-1	-6	0	6	*	-5	-1	2	4	2	5
20	*	3	10	7	-10	1	2	3	8	*	7	-2	-10	-8	-3	0
25	2	3	*	7	-19	-13	5	-5	8	*	3	-1	-18	-11	-5	0
30	-1	7	*	10	*	*	0	3	*	*	6	-3	-14	-12	-6	1
35	0	6	*	6	*	*	3	-1	*	*	5	0	-13	-11	-3	1

*Deflection Malfunction

Positive values indicate movement towards the furnace

Horizontal deflections of the Doorset B



- ⊗ Positions of deflection measurements
- ⊗ Positions of additional deflection measurements (constructions other than masonry)

Deflections – mm															
Time-mins	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	-6	-4	*	*	4	*	0	2	-3	0	0	1	-1	0	3
10	-5	*	*	*	2	2	2	-1	-5	2	-1	-2	-5	*	1
15	-2	0	*	4	4	*	-1	-2	-5	1	-1	3	0	-1	4
20	-1	1	3	2	*	*	*	-4	-7	-1	1	8	10	13	8
25	-2	-2	4	-4	10	*	*	-1	-8	-12	0	9	12	14	8
30	-4	1	5	-3	6	2	-3	-5	-8	*	1	7	*	11	4
35	0	3	1	**	**	4	-4	-3	-9	*	*	*	*	*	*

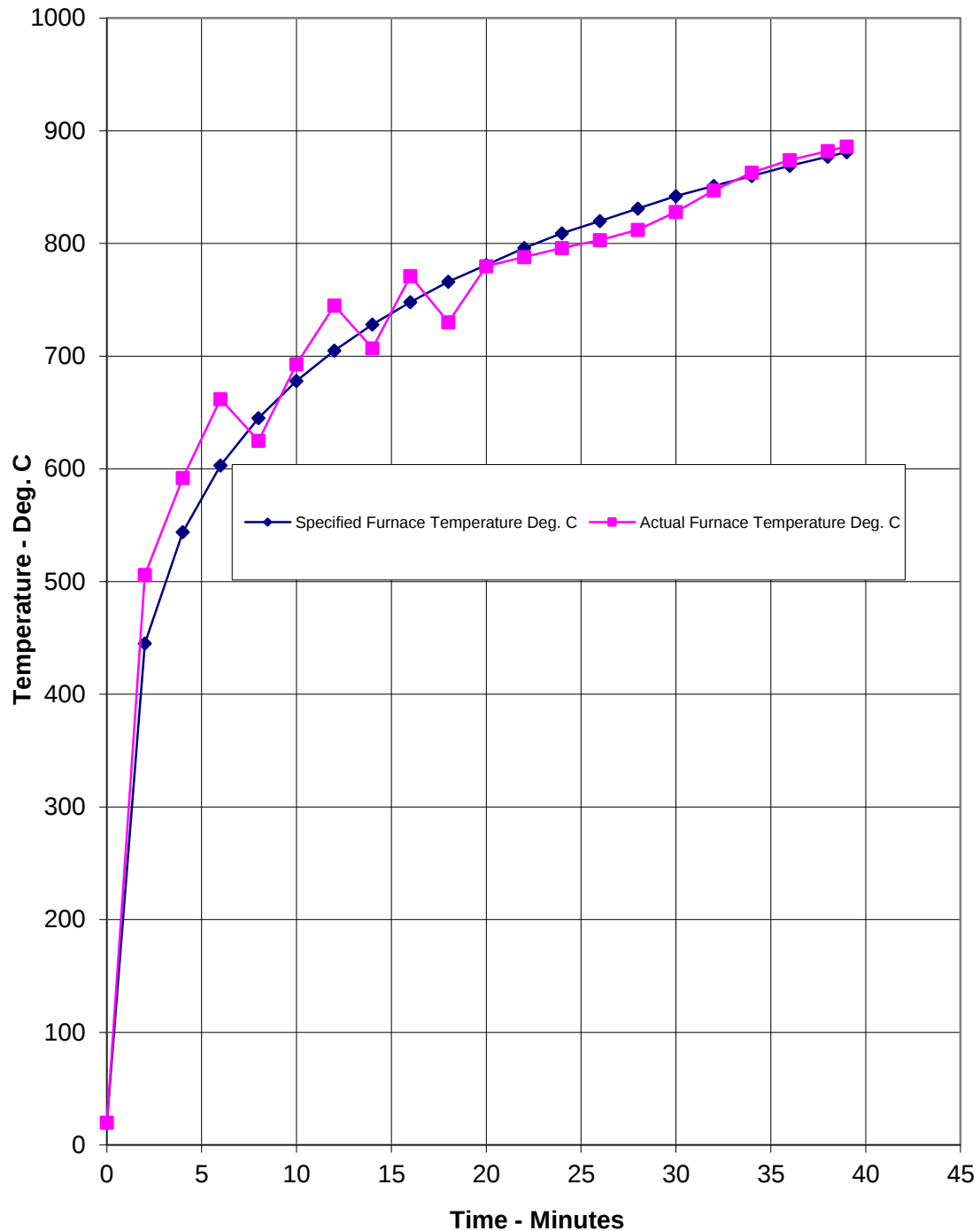
Deflections – mm								
Time-mins	P	Q	R	S	T	U	V	W
0	0	0	0	0	0	0	0	0
5	0	5	0	0	1	0	0	2
10	-2	7	0	5	1	0	2	-1
15	2	2	1	2	1	1	1	-1
20	-3	9	-1	-1	-1	0	-2	-1
25	2	8	0	-2	-1	0	-2	0
30	3	9	0	-2	-1	0	-2	-1
35	**	**	0	-1	-1	0	1	-1

***Deflection malfunction**

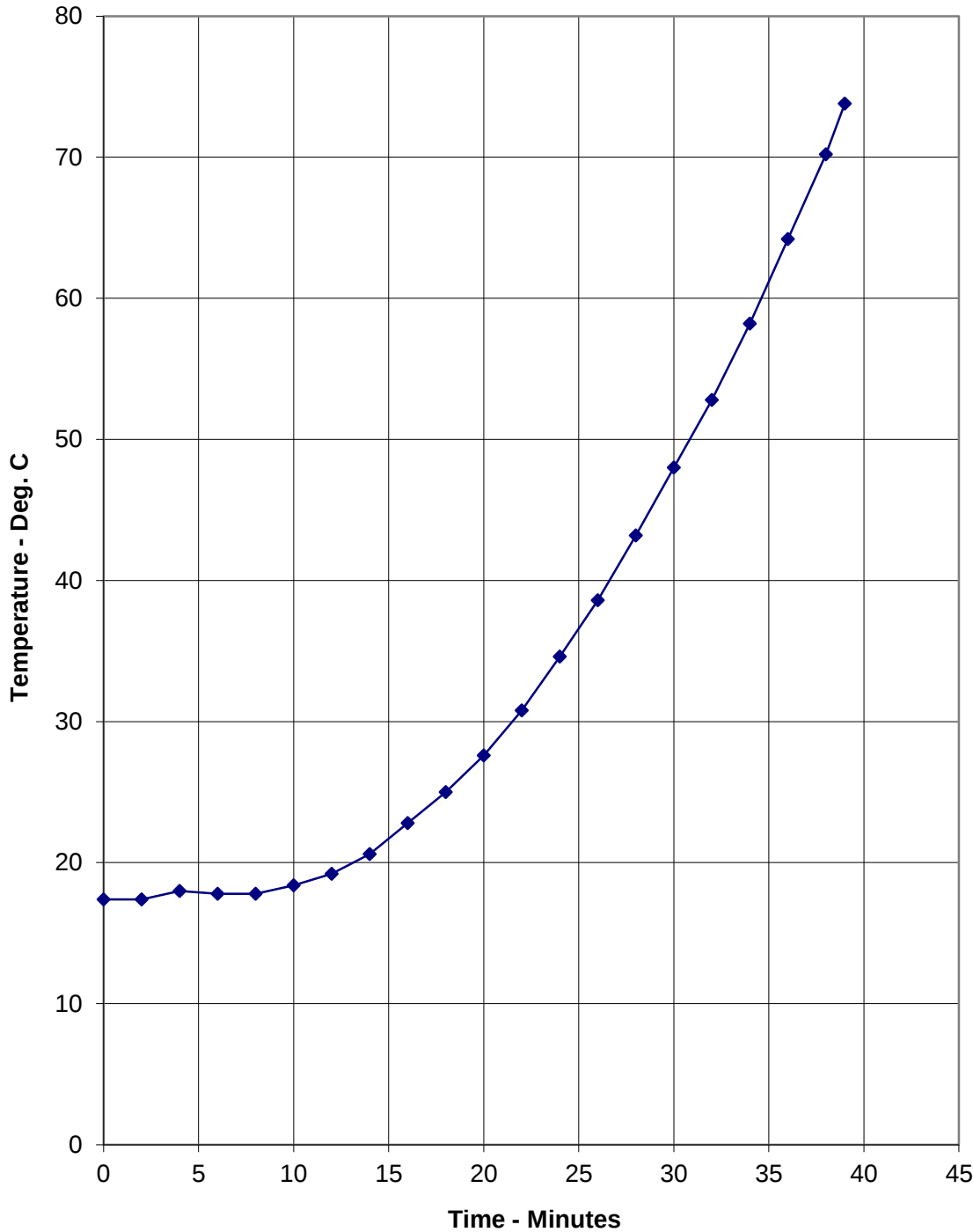
****Deflection measurement obscured by steam release and/or sustained flaming**

Positive values indicate movement towards the furnace

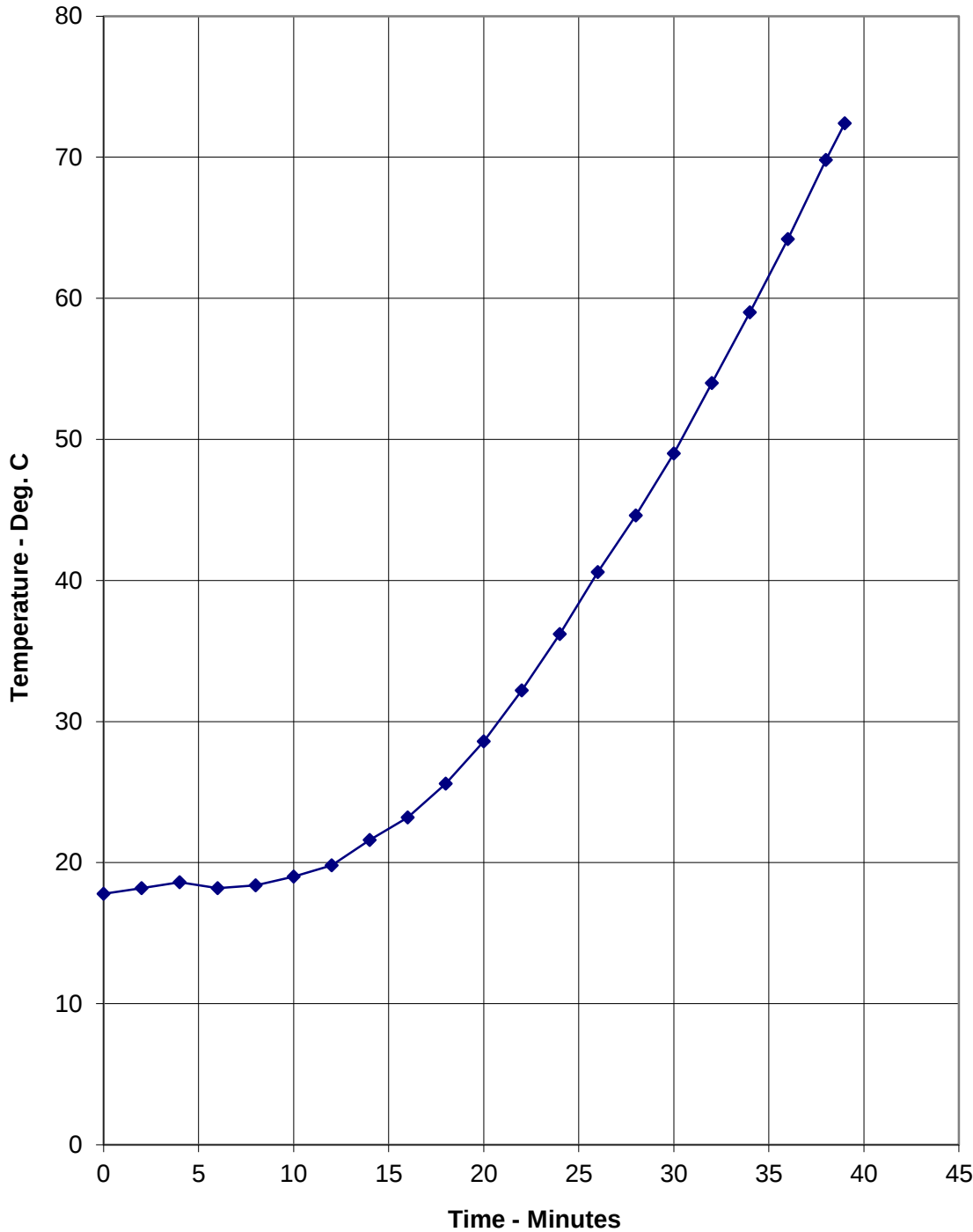
Graph showing mean furnace temperature, together with the temperature/time relationship specified in BS EN 1363-1: 2020



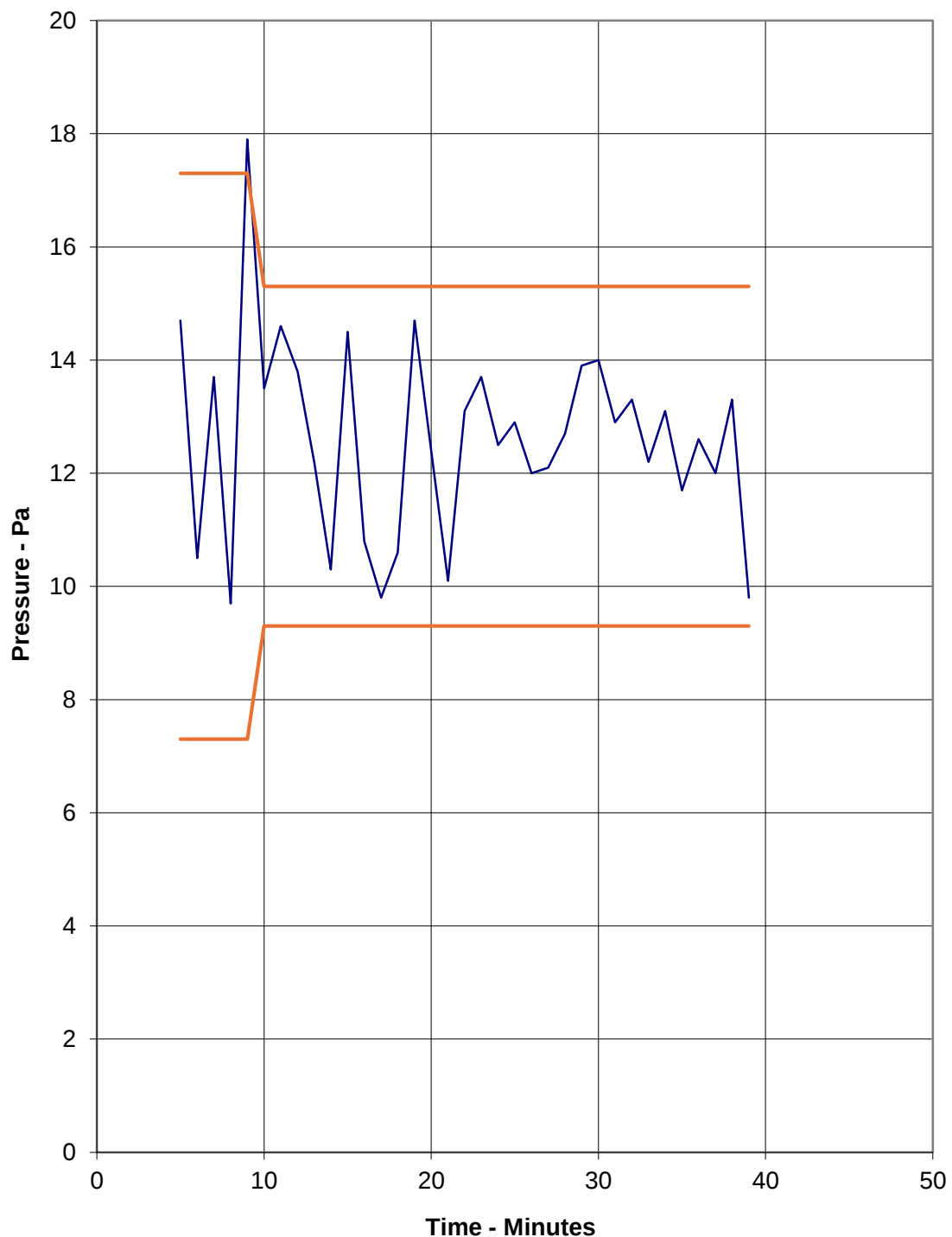
Graph showing mean temperature recorded on the unexposed surface of the Doorset A



Graph showing mean temperature recorded on the unexposed surface of the Doorset B



Graph showing recorded furnace pressure at 1950 mm above the threshold of the doorsets



During the test a furnace pressure above the limitations specified under Clause 5.2.1 of BS EN 1363-1: 2020 was recorded. As this represents more severe conditions than specified, the results achieved may still be accepted as valid – as outlined in Clause 5.7 of BS EN 1363-1: 2020.

Due to necessary adjustments of the gas and air input to control the furnace, pressures outside the specified tolerances were recorded sporadically at short intervals. As the pressure fluctuations recorded at those intervals did not represent the pressure conditions throughout the test, their effect on the test results can be disregarded.

On-going Implications

Validity

This document is the original version of this test report and is written in English. In case of doubt, the original version prevails over a translation. This document is issued subject to Warringtonfire's standard terms and conditions, which are available at: [Terms and Conditions | Element](#).

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criteria for assessing the potential fire hazard of the product in use, nor can the results be extrapolated and applied to other products.

Reports are statements of fact(s) prepared in accordance with the referenced version of the standard(s). Reports are based upon the information provided to Warringtonfire. Warringtonfire takes no responsibility for the accuracy or completeness of such information.

The results stated in this report apply to the test specimens as received. The results relate only to the behaviour of the specimens of the element of construction under the particular conditions of test. They are not intended to be the sole criteria for assessing the potential fire performance of the element in use, nor do they reflect the actual behaviour in fires.

This report details the method of construction, the test conditions and the results obtained when the specific element of construction described herein was tested following the procedure outlined in BS EN 1634-1:2014+A1:2018, BS EN 1363-1:2020, and where appropriate BS EN 1363-2:1999.

Any significant deviation with respect to size, constructional details, loads, stresses, edge or end conditions other than those allowed under the field of direct application in the relevant test method is not covered by this report.

Any differences in relation to the aforementioned characteristics may significantly affect the performance and will therefore invalidate the application of the test results to the variant product. It is recommended that any proposed variation to the tested configuration or product should be referred to the test sponsor. The test sponsor should then obtain appropriate documentary evidence of compliance from Warringtonfire or another accredited testing authority. The supplier of the product is responsible for ensuring that the product which is supplied for use is identical to the test specimens that were tested.

The specification and the interpretation of fire test methods are both the subject of ongoing development and refinement. Changes in the applicability of the results of tests in relation to associated legislation may also occur. For these reasons the currency and the relevance of test reports should be considered by the user.

The test report also relates only to the sample(s) of the product submitted to the test. The laboratory accepts no responsibility for the representativeness of the test specimens unless so stated in the test report.

Confidence that the product that is supplied to the market will have the performance indicated in the test report can be supported by use of third-party certification schemes.

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Uncertainty of measurements

Because of the nature of fire resistance testing and the consequent difficulty in quantifying the uncertainty of measurement of fire resistance, it is not possible to provide a stated degree of accuracy of the result.

EGOLF

Certain aspects of some fire test specifications are open to different interpretations. EGOLF have identified a number of such areas and have agreed Resolutions which define common agreement of interpretations between fire test laboratories which are members of the Groups. Where such Resolutions are applicable to this test they have been followed:

017-2018 - Position of thermocouples on door frame

019-2018 - Use of the average temperature thermocouples for determining maximum temperature criterion

021-2018 - Positioning of thermocouples on hotspots in door leaves

032-2018 - Definition of gaps and measurement of size of gaps

034-2018 - Opening/closing of doors before test

062-2022 V2 - Reporting test results

Revision history

N/a

Note: The field of direct application may only be defined following the identification of classification(s). The field of direct and, where applicable, extended application will be included in the classification report.



Registered office:

Warringtonfire Testing and Certification Limited
3rd Floor, Davidson Building, 5 Southampton Street, London,
WC2E 7HA, United Kingdom
Registered Company No. 11371436

Location of performance of laboratory activities:

Warringtonfire Testing and Certification Limited
Holmesfield Road, Warrington WA1 2DS, United Kingdom
a UKAS accredited testing laboratory No.0249

Element Materials Technology
722 Birchwood Park, Warrington WA3 6FW, United Kingdom
a UKAS accredited testing laboratory No.0249

Fire resistance laboratory locations:

High Wycombe, United Kingdom
a UKAS accredited testing laboratory No.1762
T: +44 (0) 1494 840 780

Warrington, United Kingdom
a UKAS accredited testing laboratory No.0249
T: +44 (0) 1925 655 116

Ghent, Belgium
BELAC accredited laboratory 196-TEST
T: +32 9 243 77 50

Tisselt, Belgium
BELAC accredited laboratory 196-TEST
T: +32 9 243 77 50

Heywood, United Kingdom
a UKAS accredited testing laboratory No.0249
T: +44 (0) 1925 655 116

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