

GUANGDONG YOHOME DOOR CO., LTD. TEST REPORT

SCOPE OF WORK

EN 16034:2014 AND EN 14351-1:2006+A2:2016 TESTING ON CE WOODEN FIRE DOORSET,
MODEL YHCEFD60

REPORT NUMBER

251208003SHF-001

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TEST REPORT

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REPORT ISSUED TO

GUANGDONG YOHOME DOOR CO., LTD.

Room 1101, 11th Floor, Ruiheng Science and Technology Innovation Park, No. 20 Juyuan South Road, Guicheng Sub-district, Nanhai District, Foshan City, Guangdong Province, China.

SECTION 1

SCOPE

Intertek has conducted an evaluation for GUANGDONG YOHOME DOOR CO., LTD. to determine the performance characteristics of the CE Wooden fire doorset, model YHCEFD60. This evaluation began on December 8, 2025 and was completed on April 10, 2026. The tests were conducted from February 5, 2026 to March 17, 2026

The tests were conducted in accordance with EN 16034:2014 Pedestrian doorsets, industrial, commercial, garage doors and openable windows - Product standard, performance characteristics - Fire resisting and/or smoke control characteristics and EN 14351-1:2006+A2:2016 Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets.

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For INTERTEK B&C:

COMPLETED BY: Olivia Tang
Project Engineer -
Building & Construction
TITLE:
SIGNATURE: *Olivia Tang*
+DATE: 2026-04-10

REVIEWED BY: Jason Xu
Operation Support
Building & Construction
TITLE:
SIGNATURE: *Jason Xu*
DATE: 2026-04-10



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SECTION 2

SUMMARY OF TEST RESULTS

Product Name: CE Wooden fire doorset

Series/Model: YHCEFD60

EN 16034:2014		
Product: fire resisting doorsets		
Intended use: fire compartmentation		
Essential Characteristics	Performance	Note
Resistance to fire (for fire compartmentation uses) *	El ₂ 60	AVCP 1 NPD- No performance determined
Smoke control (only for applications where limitation of smoke spread is required) *	S _{a4} S ₂₀₀	
Ability to release	NPD	
Self-closing (only for self-closing fire resistant and/or smoke control doorsets)	C	
Durability of ability to release	NPD	
Durability of self-closing (only for self-closing fire resistant and/or smoke control doorsets) – against degradation (cycling test)	3	
Durability of self-closing (only for self-closing fire resistant and/or smoke control doorsets) – against ageing (corrosion)	achieved	

EN 14351-1:2006+A2:2016		
Product: external pedestrian doorsets		
Intended use: communication in domestic and commercial locations		
Essential Characteristics	Performance	Note
Resistance to wind load	NPD	
Watertightness	NPD	

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Dangerous substances (indoor impact only)	No dangerous substances declared for this product	NPD- No performance determined
Impact resistance	NPD	
Load-bearing capacity of safety devices	NPD	
Height and width	Height: Up to 2405 mm Width: Up to 1010 mm	
Ability to release (Locked doors in escape routes only)	NPD	
Acoustic performance	NPD	
Thermal transmittance	NPD	
Air permeability	NPD	

Note: “*” means that the detailed test results of fire resistance duration / Leakage rate and the classifications for each side of doorset can be found in the Section 6.

SECTION 3

TEST METHODS

The specimens were evaluated in accordance with the following:

EN 16034:2014, Pedestrian doorsets, industrial, commercial, garage doors and openable windows - Product standard, performance characteristics - Fire resisting and/or smoke control characteristics

EN 14351-1:2006+A2:2016, Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets

EN 1363-1:2020, Fire resistance tests - Part 1: General requirements

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

EN 1191:2012, Windows and doors – Resistance to repeated opening and closing – Test method

EN 1634-3:2004, 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

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EN 13501-2:2023, *Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance and / or smoke control tests, excluding ventilation services*

SECTION 4

MATERIAL SOURCE/INSTALLATION

The specimens were randomly selected by Intertek B&C personnel Seven Song at the manufacturer of GUANGDONG YOHOME INDUSTRIAL CO., LTD., located at No. 280 Hefu Road, Hecheng Street, Gaoming District, Foshan City, Guangdong Province, China. The specimens were witnessed during production and signed prior to shipment from December 23, 2025 to December 26, 2025. Test specimens were received at the Shanghai Evaluation Center on January 29, 2026.

The subject test specimen is a traceable sample selected from the manufacturer's facility. Intertek selected the specimen and has verified the composition, manufacturing techniques and quality assurance procedures. All values quoted below are nominal, unless tolerances are given. All dimensions are in mm in this report, unless otherwise specified.

DOOR ASSEMBLY DESCRIPTION		
Door	Type	Single Leaf Single Action Swing Wooden Fire Door
	Nominal Size	1034 mm wide × 2410 mm high × 45 mm thick
	Facing	5 mm thick flame-retardant plywood, density of 750 kg/m ³
	Core	(15+5+15) mm thick flame-retardant plywood, density of 750 kg/m ³
	Rail	1) Top rail: Material: 904 mm x 65 mm x 35 mm thick flame-retardant plywood, density of 750 kg/m ³ ; Location: one strip at the top edge of door leaf. 2) Bottom rail: Material: 904 mm x 65 mm x 35 mm thick flame-retardant plywood, density of 750 kg/m ³ ; Location: one strip at the bottom edge of door leaf.
	Stile	1) Hinge stile: Material: 2410 mm x 65 mm x 35 mm thick flame-retardant plywood, density of 750 kg/m ³ ; Location: one strip at the hinge edge of door leaf. 2) Latch stile: Material: 2410 mm x 65 mm x 35 mm thick flame-retardant plywood, density of 750 kg/m ³ ; Location: one strip at the leading edge of door leaf.

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Frame	Nominal Size	1100 mm (wide) × 2450 mm (high) × 110 mm deep
	Clear opening size	1010 mm wide × 2405 mm high
	Type	Single rebate
	Frame stop	15 mm
	Material	Flame-retardant plywood, density of 750 kg/m ³
	Installation	The frame was installed in an aerated concrete block wall opening by five (5) sets of steel bars and nails on each jamb, spaced approx. 500 mm on center (o.c.) and with a distance of 225 mm from the top and bottom of each jamb. The clearances between the door frame and the wall were filled with mineral wool and clad with quick-setting cement on both sides.
Hardware	Hinge	Model: SSA001 5×4×3.5, Stainless steel 304 Size: 5.0" × 4" × 3.5 mm; Quantity: 4 pcs Bedding material: Graphene Intumescent seal, Size: 127 x 49 x 1 mm; Location: below both hinge leaves.
	Lock	Mortise Lock, Model: 72-60A; Latch bolt length: 12 mm; Latch bolt: Engaged; Dead bolt: Disengaged; Backset: 60 mm; Lock case size: 87 x 165 x 15 mm Bedding material: Graphene Intumescent seal, a) Size: 193 x 175 x 1 mm; Location: enclosed the entire lock body. b) Size: 180 x 5 x 1 mm; Location: below the strike plate.
	Door closer	Model: 071; Installation: Surface mounted with the standard installation at the opening face of door leaf.
	Automatic drop seal	Model: Schall-Ex L-15/30 WS; Size: 15 x 30 x 1034 mm; Location: Concealed mounted at the bottom of the door leaf.
	Smoke Seal	Model Size Location
		FQ-VA002 12 x 12 mm One strip surface mounted on the door stop.

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Intumescent seal	Type 1	Model	FQ-C1504
		Size	15 × 4 mm
		Location	Two strips mortise mounted on both jambs and header.
	Type 2	Model	FQ-C3006
		Size	30 × 6 mm
		Location	One strip mortise mounted centrally at the top edge, leading edge and hinge edge of the door leaf.

The sample ID numbers assigned by the test lab are S251208003SHF.001 and S251208003SHF.005 for Resistance to Fire Test, S251208003SHF.003 for Durability of Self-closing Test and S251208003SHF.004 for Smoke Control Test.

The drawing of the fire doorset, the CE certificate of the hardware and the drawing of test wall construction can be found in Section 7, 8 and 9 respectively.

A comprehensive drawings and Installation Instructions of the CE Wooden fire doorset, model YHCEFD60, are maintained on Intertek file.

SECTION 5

TEST PROCEDURE

The test items are listed in the following according to EN 16034:2014 and EN 14351-1:2006+A2:2016.

Operability test before the resistance to fire test

According to A.2 of EN 16034:2014, prior to the commencement of the EN 1634-1 fire test and according to A.3 of EN 16034:2014, prior to the commencement of the EN 1634-3 smoke control test, the doorsets to be tested were checked for operability in the test frames by operating from fully closed to the maximum possible opening and at least 90° and back to fully closed for 25 cycles.

Self-closing test

According to A.4.1 of EN 16034:2014, prior to the commencement of the EN 1634-1 fire test and the EN 1634-3 smoke control test, the doorsets to be tested were opened to 10° ± 2° (for controlled closing devices) and held for 20 s ± 2 s, released without shock and allowed to close at a maximum mean speed of 300 mm/s to ensure that their closed position is achieved.

Resistance to fire test

According to 4.1 and 5.1 of EN 16034:2014, the fire resistance was determined by testing according to EN 1634-1:2014+A1:2018 and results are classified according to EN 13501-2:2023.

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Door gap measurements

According to 10.1.2 of EN 1634-1:2014+A1:2018, the primary gaps between the edge of the door leaf and the frame were measured and recorded. Details can be found in Section 10.

Closing force measurements

According to 10.1.3 of EN 1634-1:2014+A1:2018, the closing forces for doorsets which incorporate closing devices were measured and recorded. Details can be found in Section 11.

Final Setting

According to 10.1.4 of EN 1634-1:2014+A1:2018, the doorsets were subjected to a final closing which involved opening the door leaves to a distance of approximately 300 mm and returning them to the closed position.

Fire resistance test

After completing the pre-test examination, the test assembly was placed in front of the furnace for fire exposure according to EN 1634-1:2014+A1:2018. After positioning the assembly frame over the furnace opening, the burners were ignited, and the timer started. Temperatures within the furnace were monitored using thermocouples and the data was recorded. The burners were controlled to keep the furnace temperatures within the allowable limits specified in the test standards. After 5 minutes, the furnace pressure was adjusted so that the neutral plane was established at approximately 500 mm above the notional floor level. Periodic observations were made of the surface of the test assembly during the fire resistance test.

Door deflection relative to the frame, where applicable, was monitored throughout the test. Position for measurement of deflection is presented in the drawing of Section 10.

Smoke control test

According to 4.2 and 5.2 of EN 16034:2014, the smoke control was determined by testing according to EN 1634-3:2004 and results are classified according to EN 13501-2:2023.

Pre-test procedure

After installation of the assembly in the supporting construction, but before it was mounted in front of the chamber, each door leaf was opened to an angle of 30° and closed 10 times, using the closing devices to ensure the assembly operates normally. The primary gaps between the edge of the door leaf and the frame were measured and recorded. Details can be found in Section 10.

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According to 10.1.2 of EN 1634-3:2004, the closing forces for doorsets which incorporate closing devices were measured and recorded. Details can be found in Section 11.

Smoke control test

After completing the pre-test examination, the test assembly was mounted and sealed in front of the test chamber for performing the air leakage test according to EN 1634-3:2004.

Procedure for ambient temperature only testing to satisfy S_a classification

The air flow was to be adjusted in the test chamber to provide a positive test pressure differential of 10 Pa, 25 Pa and 50 Pa at 20 ± 10 °C of the temperature of the exposed face of the test assembly. Each pressure difference was maintained for 2 minutes, the apparatus leakage rate and the supporting / associated construction leakage rate, the total leakage rate for ambient temperature exposure test were measured and recorded. The length of gaps between the frame and the door of the test door assembly excluding the gap along the threshold was measured and recorded.

Procedure for ambient together with medium temperature testing to satisfy S_m classification

After ambient temperature exposure test specified above, the temperature of test chamber increased to 200 ± 20 °C within 30 ± 5 minutes. Temperatures within the chamber were monitored using thermocouples and the data was recorded. The heating devices were controlled to keep the chamber temperatures within the allowable limits specified in the test standards. The air flow was to be adjusted in the test chamber to provide a positive test pressure differential of 10 Pa, 25 Pa and 50 Pa at 200 ± 20 °C of the temperature of the exposed face of the test assembly. Each pressure difference was maintained for 2 minutes, the total leakage rate, the apparatus leakage rate and the supporting / associated construction leakage rate for medium temperature exposure test were measured and recorded. Periodic observations were made of unexposed surface of the test assembly during the air leakage test.

Durability of self-closing (only for self-closing doorsets)

Durability of self-closing against degradation (cycling test)

The durability of self-closing against degradation is ensured by cycling testing according to 5.4.2 of EN 16034:2014. The test methods for cycling testing are given in Annex H of EN 1191:2012 for pedestrian doorsets.

One single specimen was kept in the laboratory from the date it was received until the date it was tested and had thus been conditioned at a temperature of between 15° to 30°C and a relative humidity of between 25 to 75%.

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The doorset was opened to 90° and the operation was via the handle. According to EN 1191:2012, adjusted the door closer regulators so that the door closes smoothly from 90° open to fully close within a time of 3 s to 7 s. No slamming, even incorporated latch action. Backcheck or delay action shall set to inoperable or minimum effect. Run the cycle with opening time 2 s to 3 s. The rest time shall be at least 1 s but shall not exceed 4 s for manually operated moving components. Verified the backcheck function according to EN 1191:2012 if applicable. Completed the full number of cycles specified by the sponsor and conducted the final measurements and inspection and verified whether the door met the requirements specified in Section 7.4 of EN 1191:2012.

The results shall be expressed according to the use categories indicated in Table 1 of EN 16034:2014.

Durability of self-closing against ageing (corrosion)

The durability of self-closing is considered to be achieved if the building hardware used in the doorset complies with the relevant clauses of the building hardware product standards as listed in Table 2 of EN 16034:2014 except in cases where the hardware is classified by these standards as not corrosion resistant. Building hardware not covered by product standards listed in Table 2 shall show their compliance to EN 1670.

The durability of self-closing against ageing (corrosion) of the doorset shall be expressed as "achieved".

Height and Width

According to 4.9 of EN 14351-1:2006+A2:2016, the clear opening height and clear opening width of external pedestrian doorset was measured and expressed in mm (see EN 12519:2004 clause 3.1).

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SECTION 6

TEST RESULTS

Test 1, Resistance to fire test conducted on February 5, 2026, opening away from the furnace

The doorset was installed in a steel restraint frame and built into a concrete masonry unit partition, with fully mortared joints. The doorset was mounted so that the leaf swung away the fire.

The nominal dimensions of the test wall were 3 m high by 3 m wide.

Self-closing (only for self-closing fire resistant doorsets)

Operability test before the resistance to fire test

The doorset was checked for operability in the restraint frame prior to the commencement of fire resistance test by operating from fully closed to 90° and back to fully closed for 25 cycles. The doorset was in good condition after the operability test.

Self-closing test

The doorset was checked for self-closing test prior to the commencement of the fire resistance test. The closing speed for doorset was 129 mm/s.

The doorset was checked for operability in the restraint frame prior to the commencement of fire resistance test. The doorset could close fully into their frames and engage the latching devices by the closing force applied by the door closers. The result for the doorset was classified and expressed by "C".

Resistance to fire test

Integrity

The doorset withstood the fire resistance test without passage of flame or gases hot enough to ignite cotton waste for 60 minutes. No through openings or penetrations were evident at this 60 minutes fire exposure portion of the test. During this 60 minutes fire exposure period no significant flaming was observed on the unexposed face of the assembly.

The doorset therefore met the criteria of the test standards for integrity performance of 60 minutes.

Insulation

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Transmission of heat through doorset during the fire resistance test of 60 minutes did not raise the average temperature on the unexposed surface by more than 140°C above its initial value and did not raise the maximum temperature on the unexposed surface by more than 180°C above the initial mean unexposed face temperature. In addition, the transmission of heat through the assembly did not raise the maximum temperature of the unexposed surface of the frame by more than 360°C for 60 minutes.

The doorset therefore met the criteria of the test standards for insulation performance of 60 minutes (Classification I₂ according to EN 13501-2).

The test doorset was tested for fire resistance in accordance with EN 1634-1:2014+A1:2018 and classified in accordance with EN 13501-2:2023. The test doorset satisfied the performance requirements for the following periods:

Performance Criteria		Test Result
		Doorset open away from the furnace
Integrity	Sustained flaming	60 minutes, no failure
	Gap gauge	60 minutes, no failure
	Cotton pad	60 minutes, no failure
Insulation		60 minutes, no failure

The test was discontinued after a period of 60 minutes at the request of the sponsor.

Test 2, Resistance to fire test conducted on March 17, 2026, opening into the furnace

The doorset was installed in a steel restraint frame and built into a concrete masonry unit partition, with fully mortared joints. The doorset was mounted so that the leaf swung into the fire.

The nominal dimensions of the test wall were 3 m high by 2 m wide.

Self-closing (only for self-closing fire resistant doorsets)

Operability test before the resistance to fire test

The doorset was checked for operability in the restraint frame prior to the commencement of fire resistance test by operating from fully closed to 90° and back to fully closed for 25 cycles. The doorset was in good condition after the operability test.

Self-closing test

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The doorset was checked for self-closing test prior to the commencement of the fire resistance test. The closing speed for doorset was 97 mm/s.

The doorset was checked for operability in the restraint frame prior to the commencement of fire resistance test. The doorset could close fully into their frames and engage the latching devices by the closing force applied by the door closers. The result for the doorset was classified and expressed by "C".

Resistance to fire test

Integrity

The doorset withstood the fire resistance test without passage of flame or gases hot enough to ignite cotton waste for 60 minutes. No through openings or penetrations were evident at this 60 minutes fire exposure portion of the test. During this 60 minutes fire exposure period no significant flaming was observed on the unexposed face of the assembly.

The doorset therefore met the criteria of the test standards for integrity performance of 60 minutes.

Insulation

Transmission of heat through doorset during the fire resistance test of 60 minutes did not raise the average temperature on the unexposed surface by more than 140°C above its initial value and did not raise the maximum temperature on the unexposed surface by more than 180°C above the initial mean unexposed face temperature. In addition, the transmission of heat through the assembly did not raise the maximum temperature of the unexposed surface of the frame by more than 360°C for 60 minutes.

The doorset therefore met the criteria of the test standards for insulation performance of 60 minutes (Classification I₂ according to EN 13501-2).

The test doorset was tested for fire resistance in accordance with EN 1634-1:2014+A1:2018 and classified in accordance with EN 13501-2:2023. The test doorset satisfied the performance requirements for the following periods:

Performance Criteria		Test Result
		Doorset open into the furnace
Integrity	Sustained flaming	60 minutes, no failure
	Gap gauge	60 minutes, no failure

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	Cotton pad	60 minutes, no failure
	Insulation	60 minutes, no failure

The test was discontinued after a period of 60 minutes at the request of the sponsor.

Classification

The classification has been carried out in accordance with clause 7.5.5.4 of EN 13501-2:2023.

Fire resistance classification: **EI₂60**

Test 3, Durability of self-closing (only for self-closing doorsets) on March 2, 2026 through March 9, 2026

The doorset was mounted in a steel restraint frame and using a controlled hydraulic cylinder for the cycling test.

Durability of self-closing against degradation (cycling test)

After completing 50000 cycles, no material failure of any component that is essential to the function of the test doorset, the operating force applied by the operating equipment did not exceed 150 % of the last measurement of the operating forces necessary to release and secure the fastening systems, the closing mechanism was still functional and the clearance between the door and the frame remained within the tolerances given in EN 1634-1.

The results were expressed according to the use categories indicated in Table 1 of EN 16034:2014.

Durability classification: **Category 3 (50,000 cycles)**

Durability of self-closing against ageing (corrosion)

Documents and CE certifications of hardware were checked and found that the hardware met the building hardware product standards as listed in Table 2 of EN 16034:2014. The durability of self-closing against ageing (corrosion) of the doorset was expressed as "achieved". The CE certificate of the hardware can be found in Section 8.

Product Group	Relevant European Standard	Clauses of the European Standards covering the essential characteristic "Durability of self-closing"	
Single axis hinges	EN 1935:2002	5.4	Grade: 7
		5.5	Grade: 4

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		5.8	N/A
Controlled door closing devices	EN 1154:1996	5.2.2	Grade: 8
		5.2.17.1	Grade: 3
		5.2.17.2	
Mechanical locks and latches	EN 12209:2003	5.3.1	Grade: X

Test 4, Smoke control test conducted on March 12, 2026, opening away from the chamber

The test assembly was installed in the test chamber opening. The test assembly was fixed into a steel stud gypsum board wall system. The door clearances were adjusted so that they complied with installation instruction provided by the customer. Prior to the commencement of air leakage test, the specimen to be tested was checked for operability in the test chamber opening and opened to an angle of 30° and closed 10 times using the closing devices and then the retention force measurements were carried out. The door was closed automatically to its final closed position and the lock was latched; the threshold was sealed by the automatic drop seal provided by the sponsor. The test measurement data was shown in Section 11.

The test door was oriented to open away from the test chamber.

The nominal dimensions of the test wall were 3 m high by 3 m wide.

Operability test before the smoke control test

The doorset was checked for operability in the restraint frame prior to the commencement of fire resistance test by operating from fully closed to 90° and back to fully closed for 25 cycles. The doorset was in good condition after the operability test.

Self-closing test

The doorset was checked for self-closing test prior to the commencement of the fire resistance test. The closing speed for doorset was 83.9 mm/s.

Smoke control test result

Leakage rate for ambient together with medium temperature test as below:

Test No.	Door opening direction	Temperature	Leakage rate Q_{spec} (m ³ /h) at pressure difference of	Linear leakage rate Q_l (m ³ /h/m) at pressure difference of
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			10 Pa	25 Pa	50 Pa	10 Pa	25 Pa
1	Outwards	Ambient	2.10	4.10	6.20	0.36	0.70
2	Outwards	Medium	0.10	0.30	0.40		

Note:

1. The measured leakage/linear leakage rate include the leakage at the threshold.
2. Outwards: Door opened away from the test chamber.

Test 5, Smoke control test conducted on March 12, 2026, opening into the chamber

The test assembly was installed in the test chamber opening. The test assembly was fixed into a steel stud gypsum board wall system. The door clearances were adjusted so that they complied with installation instruction provided by the customer. Prior to the commencement of air leakage test, the specimen to be tested was checked for operability in the test chamber opening and opened to an angle of 30° and closed 10 times using the closing devices and then the retention force measurements were carried out. The door was closed automatically to its final closed position and the lock was latched; the threshold was sealed by the automatic drop seal provided by the sponsor. The test measurement data was shown in Section 11.

The test door was oriented to open into the test chamber.

The nominal dimensions of the test wall were 3 m high by 3 m wide.

Operability test before the smoke control test

The doorset was checked for operability in the restraint frame prior to the commencement of fire resistance test by operating from fully closed to 90° and back to fully closed for 25 cycles. The doorset was in good condition after the operability test.

Self-closing test

The doorset was checked for self-closing test prior to the commencement of the fire resistance test. The closing speed for doorset was 83.9 mm/s.

Smoke control test result

Leakage rate for ambient together with medium temperature test as below:

Test No.	Door opening direction	Temperature	Leakage rate Q_{spec} (m ³ /h) at pressure difference of			Linear leakage rate Q_l (m ³ /h/m) at pressure difference of	
			10 Pa	25 Pa	50 Pa	10 Pa	25 Pa

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1	Inwards	Ambient	2.60	4.20	6.10	0.44	0.71
2	Inwards	Medium	1.00	0.40	1.20		

Note:

3. The measured leakage/linear leakage rate include the leakage at the threshold.
4. Outwards: Door opened into the test chamber.

Classification

The classification has been carried out in accordance with clause 7.5.5.3.4 of EN 13501-2:2023.

Fire resistance classification: **S_{a4}, S₂₀₀**

Height and width

Clear opening Height of doorset: 2405 mm;

Clear opening Width of doorset: 1010 mm;

Dangerous substances (indoor impact only)

No dangerous substances declared by the client for this product.

A full set of test data is included in Section 11, and photographs have been presented in Section 12.

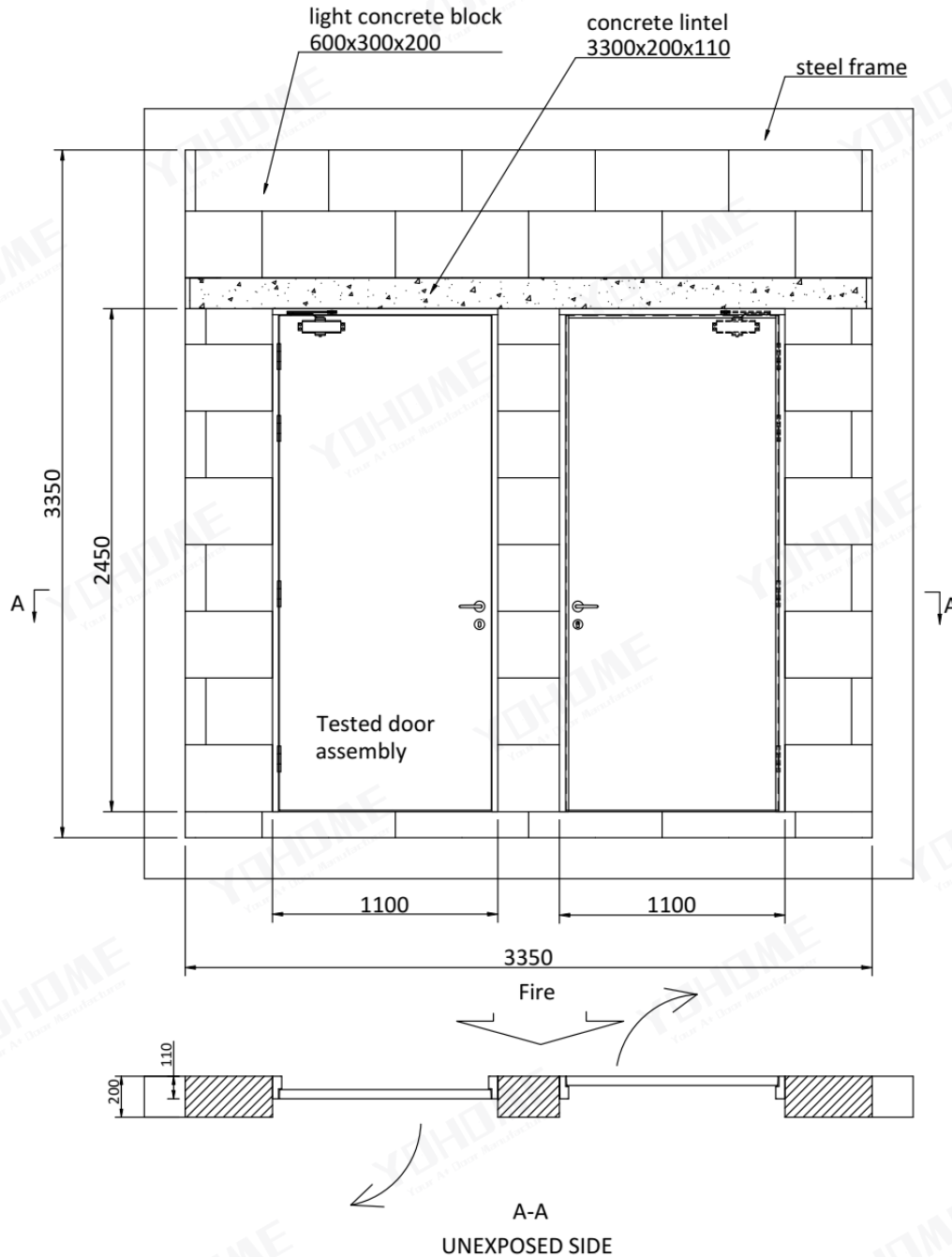
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SECTION 9

TEST WALL CONSTRUCTION

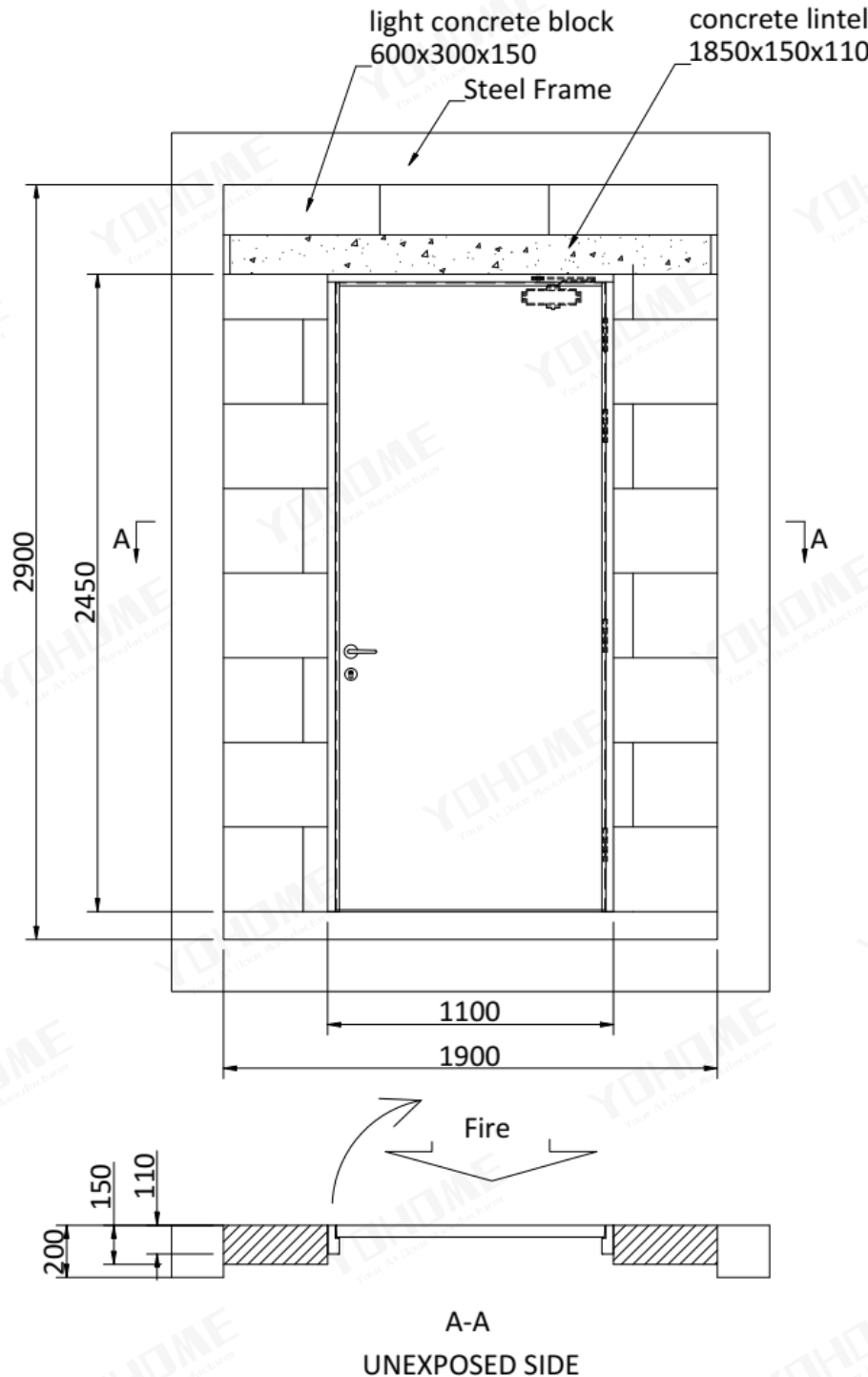


RESISTANCE TO FIRE TEST 1 - OPENING AWAY FROM THE FURNACE

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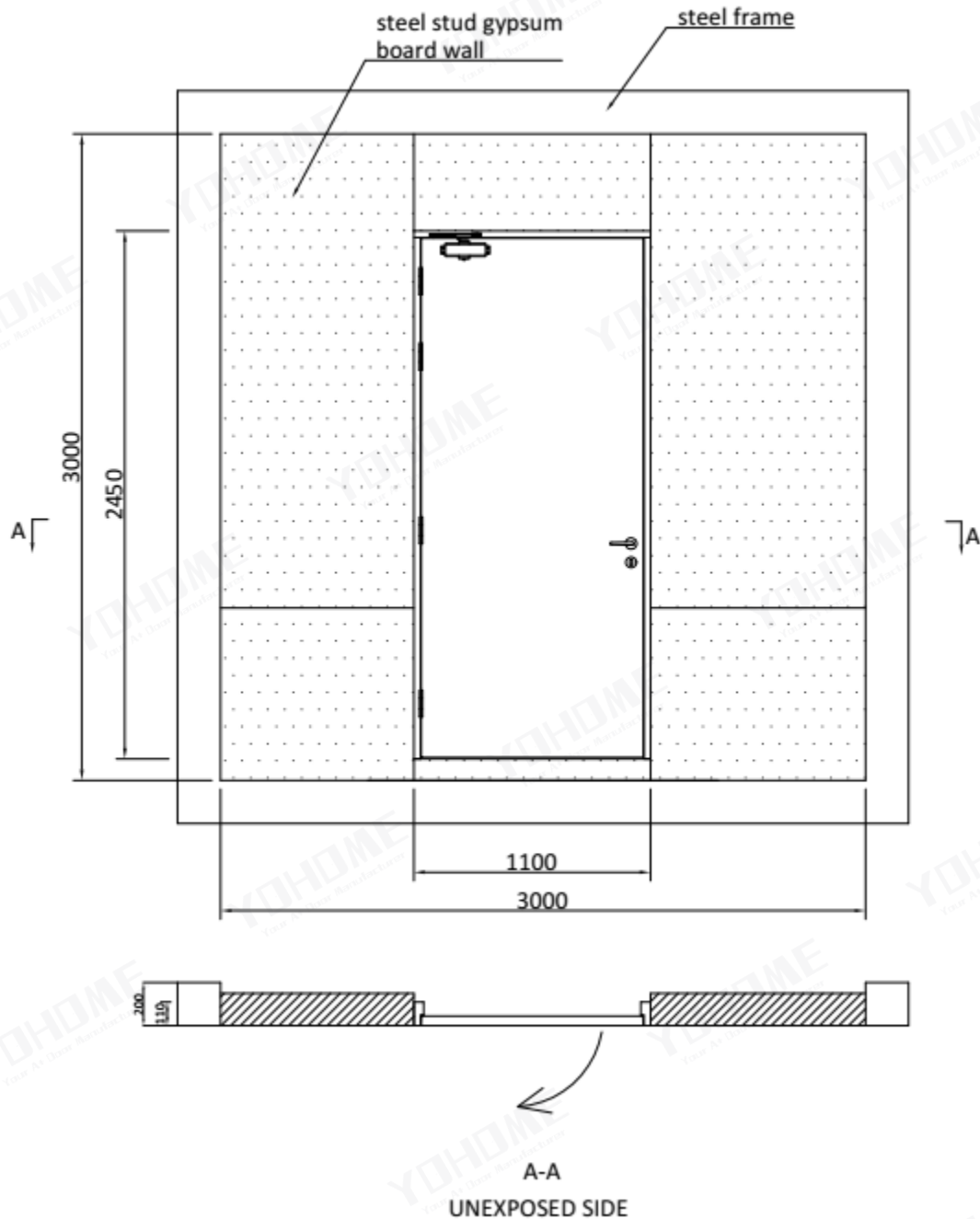


RESISTANCE TO FIRE TEST 2 - OPENING INTO THE FURNACE

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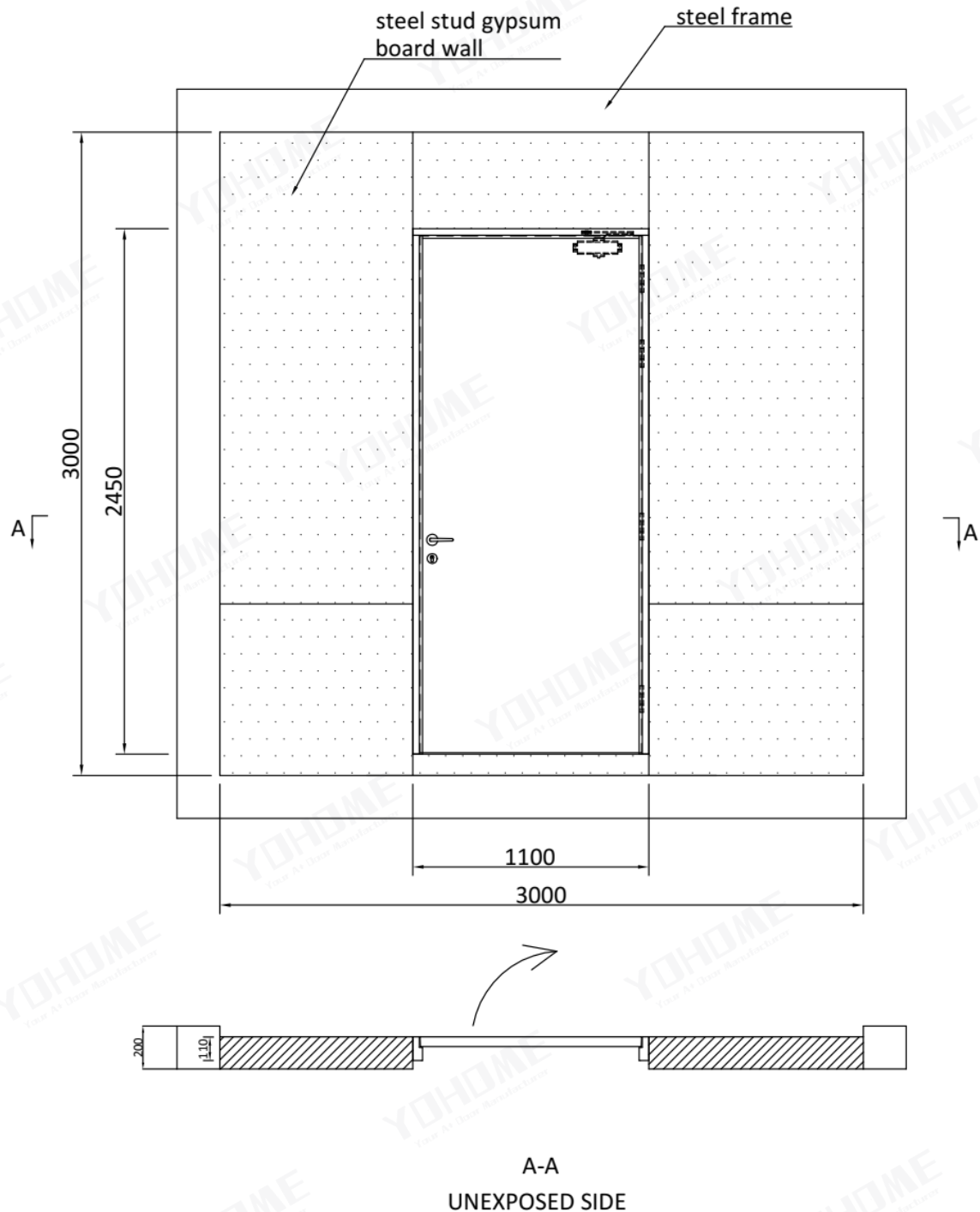


SMOKE CONTROL TEST 4 - OPENING AWAY FROM THE FURNACE

TEST REPORT

Issue Date: 2026-04-10

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SMOKE CONTROL TEST 5 - OPENING INTO THE FURNACE

TEST REPORT

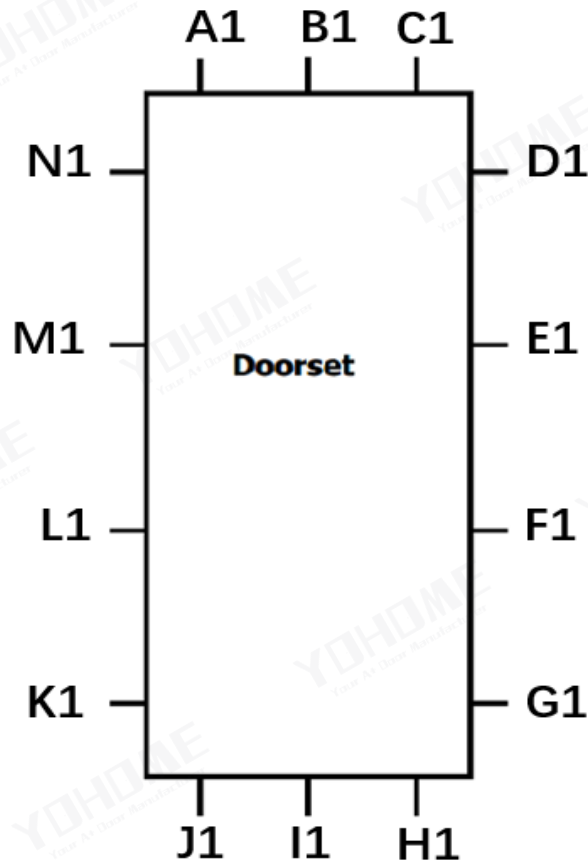
Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

SECTION 10

TEST MEASUREMENT DATA

RESISTANCE TO FIRE TEST:



UNEXPOSED SIDE - OPENING AWAY FROM THE FURNACE

Clearance dimension in mm at each position of the doorset opening away from the furnace													
A1	B1	C1	D1	E1	F1	G1	H1	I1	J1	K1	L1	M1	N1
3.3	5.0	6.3	1.8	0.8	3.2	3.5	3.3	5.6	6.5	0.5	2.6	2.5	2.5

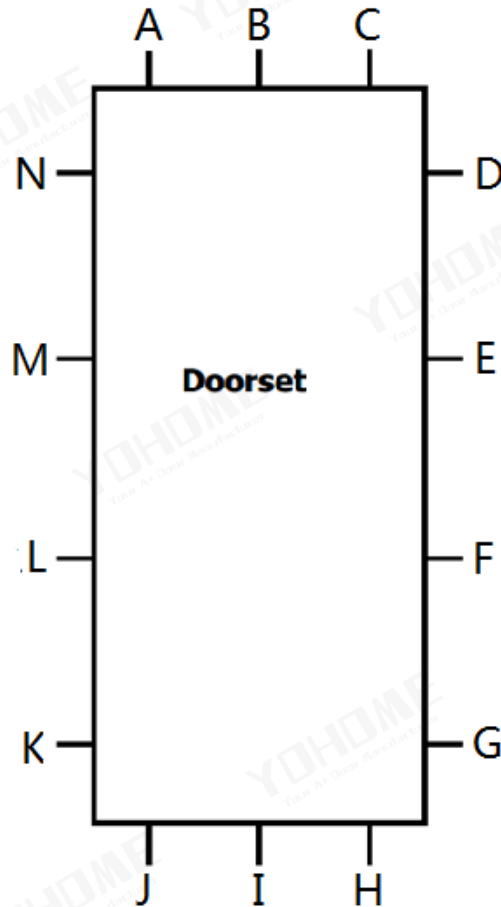
DO NOT SCALE

DOOR ASSEMBLY INITIAL CLEARANCES

TEST REPORT

Issue Date: 2026-04-10

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EXPOSED SIDE - OPENING INTO THE FURNACE

Clearance dimension in mm at each position of the doorset opening into the furnace													
A	B	C	D	E	F	G	H	I	J	K	L	M	N
4.1	4.1	3.5	1.4	1.9	3.5	2.4	6.0	6.4	6.2	2.0	3.0	2.8	1.7

DO NOT SCALE

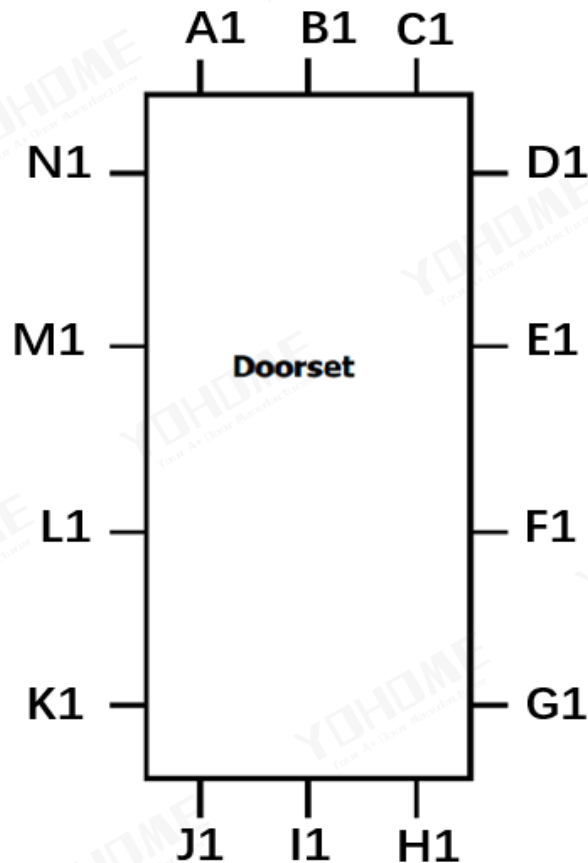
DOOR ASSEMBLY INITIAL CLEARANCES

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

SMOKE CONTROL TEST:



UNEXPOSED SIDE - OPENING AWAY FROM THE CHAMBER

Clearance dimension in mm at each position of the doorset opening away from the chamber													
A1	B1	C1	D1	E1	F1	G1	H1	I1	J1	K1	L1	M1	N1
2.1	3.0	3.2	2.6	3.3	3.0	2.1	10.7	9.2	9.5	2.5	2.0	2.0	2.4

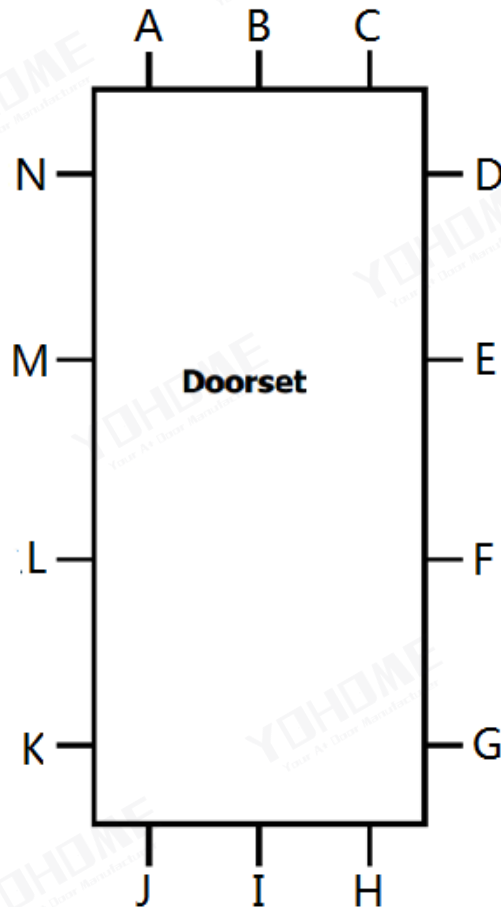
DO NOT SCALE

DOOR ASSEMBLY INITIAL CLEARANCES

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001



EXPOSED SIDE - OPENING INTO THE CHAMBER

Clearance dimension in mm at each position of the doorset opening into the chamber													
A	B	C	D	E	F	G	H	I	J	K	L	M	N
2.7	2.7	2.5	3.2	3.0	2.7	2.2	8.3	6.4	8.5	2.4	2.5	2.3	2.5

DO NOT SCALE

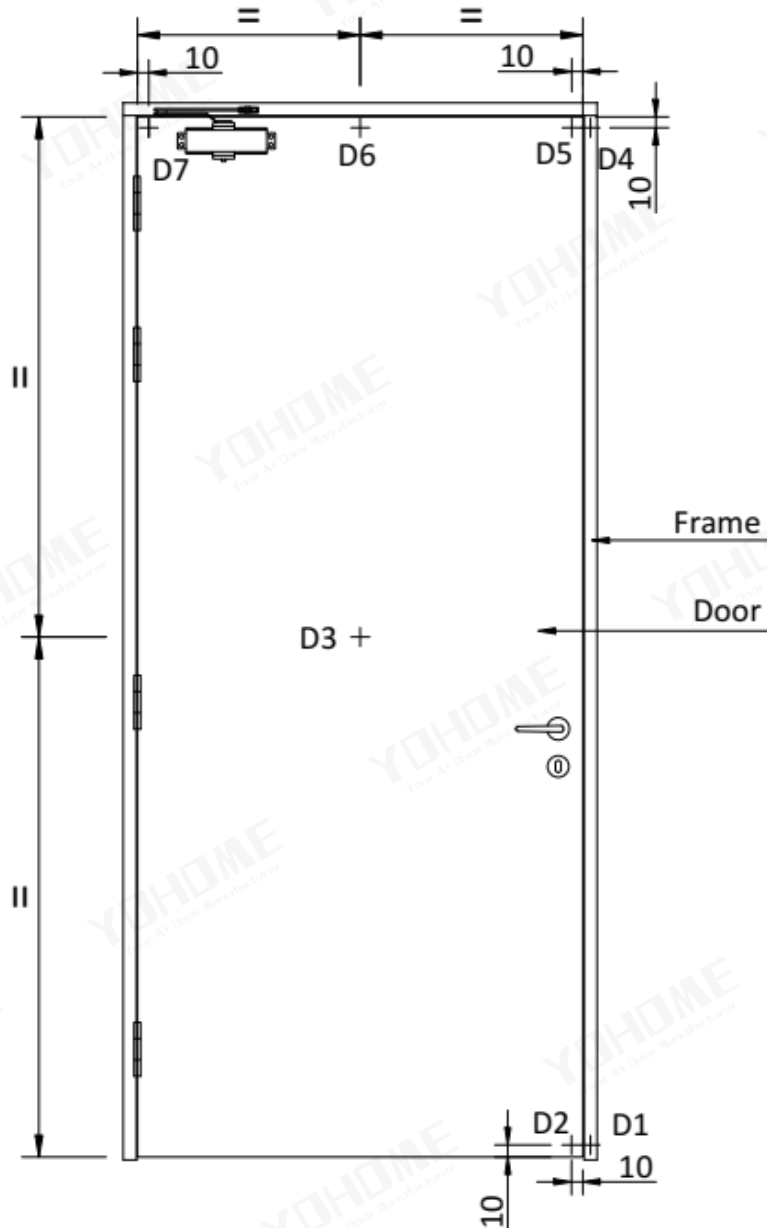
DOOR ASSEMBLY INITIAL CLEARANCES

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

RESISTANCE TO FIRE TEST:



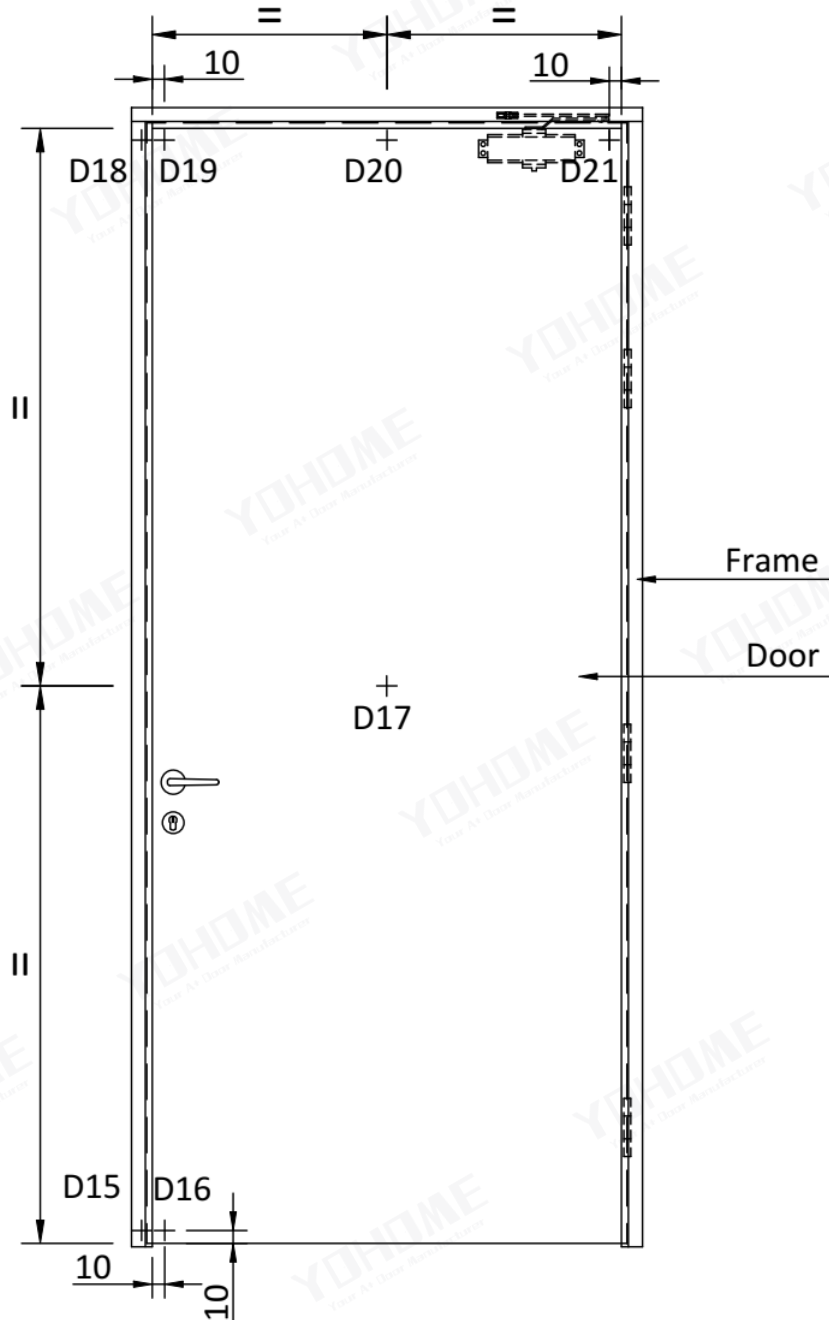
UNEXPOSED SIDE

POSITION FOR MEASUREMENT OF HORIZONTAL DEFLECTION OF OPENING AWAY FROM THE FURNACE

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001



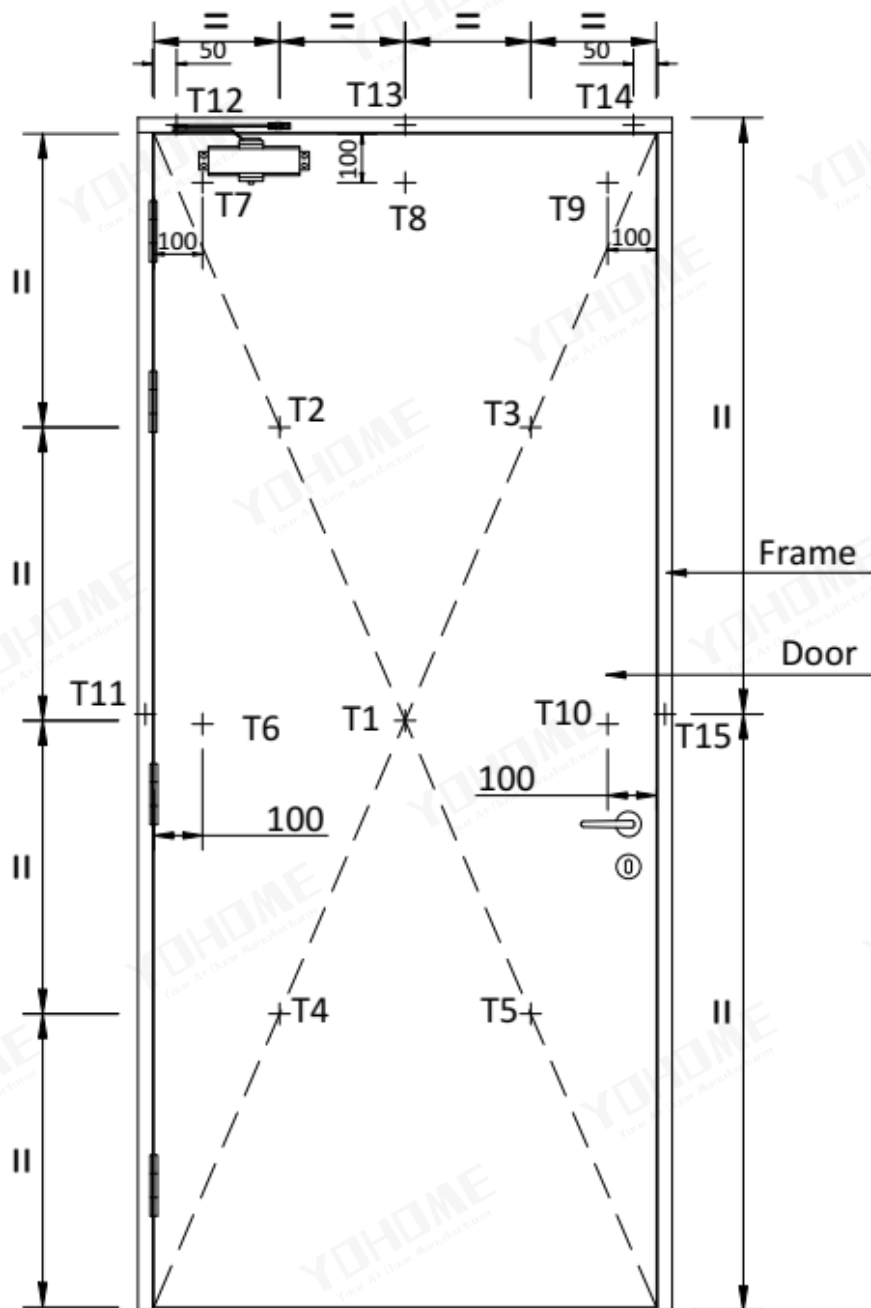
UNEXPOSED SIDE

POSITION FOR MEASUREMENT OF HORIZONTAL DEFLECTION OF OPENING INTO THE FURNACE

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

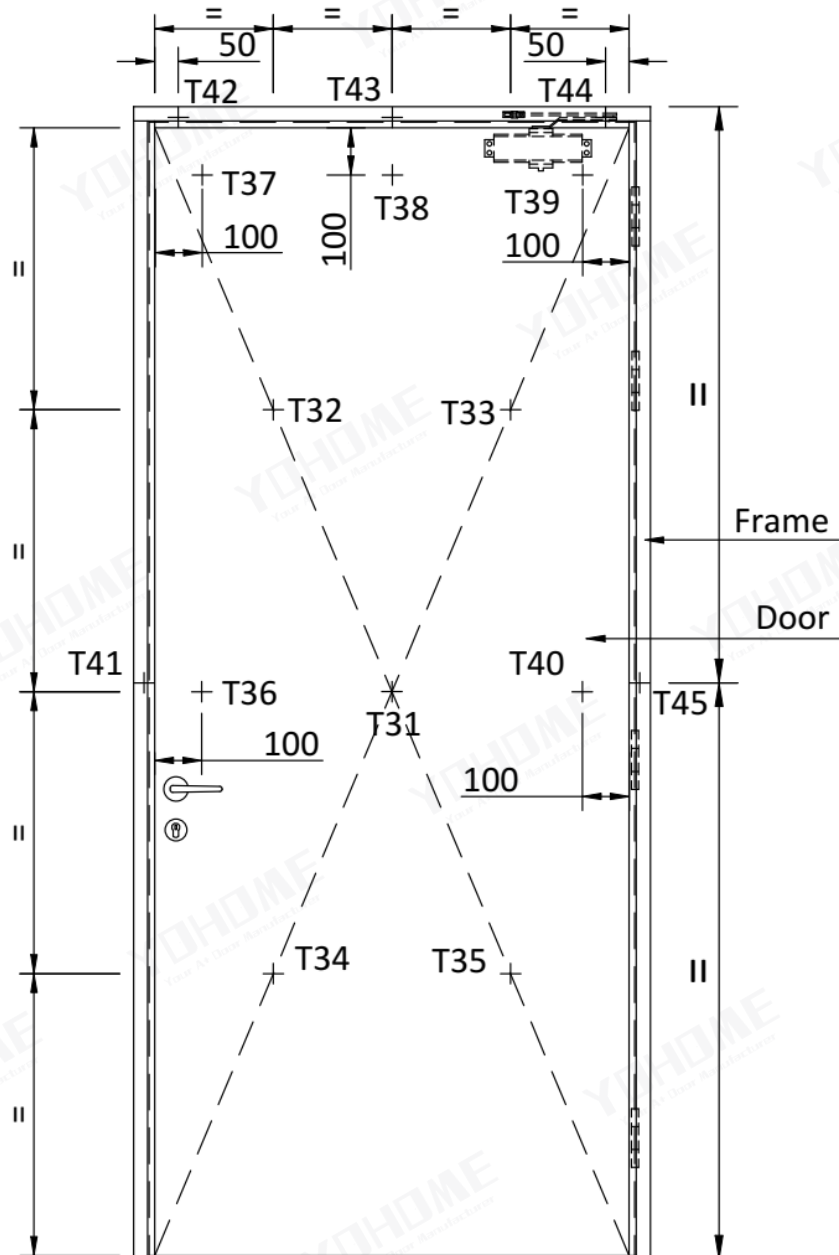


POSITION FOR MEASUREMENT OF UNEXPOSED TEMPERATURE OF OPENING AWAY FROM THE FURNACE

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001



POSITION FOR MEASUREMENT OF UNEXPOSED TEMPERATURE OF OPENING INTO THE FURNACE

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

SECTION 11

TEST DATA

RESISTANCE TO FIRE TEST:

Standards: 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

Procedure: Part 1: Fire resistance test for door and shutter assemblies and openable windows

Conditioning: According to EN 1363-1, Section 8

Equipment:

ITEM	ID
Full scale furnace	SH1097
Middle scale furnace	SH1098
Furnace pressure gauge	SH1097-15 & SH1097-15-2; SH1097-15-4 & SH1348
Test Clock	SH1042
Furnace thermocouple	SH1097-4 & SH1097-4-1~8
Ambient temperature gauge	SH1097-11
Unexposed thermocouple	SH1097-12
Clearance Measurements	SH1506
Force gauge	SH1211
Displacement Measurements	SH1377-1~11 & SH1377-13~15

Heating Conditions: According to EN 1363-1, Section 5.1

Pressure Conditions: According to EN 1363-1, Section 5.2

Ambient Conditions: 10 to 40°C according to EN 1363-1, Section 5.6

Test Specimen: According to EN 1634-1, Section 6

Installation of test specimen: According to EN 1634-1, Section 7

Furnace Thermocouples: According to EN 1634-1, Section 9.1.1

Unexposed Face Thermocouples: According to EN 1634-1, Section 9.1.2

Thermocouple Pads: Length and width 30 mm, thickness 2.0 ± 0.5 mm, dry density 900 ± 90 kg/m²

Pressure Measurements: According to EN 1634-1, Section 9.2

Deflection Measurements: According to EN 1634-1, Section 9.3

Pre-test Examination: According to EN 1634-1, Section 10.1

Test Procedure: According to EN 1634-1, Section 10.2

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Resistance to fire test 1 conducted on February 5, 2026, opening away from the furnace:

Test Observations:

Time		All observations are from the unexposed face unless noted otherwise.
Mins	Secs	
00	00	Test started.
00	16	Smoke issued from the top of the leading edge of door leaf.
01	05	Smoke issued from the leading edge, the top edge of door leaf, handle and the cylinder of door leaf.
01	43	Smoke issued from the hinge edge of door leaf.
02	00	Smoke issued from the bottom edge of door leaf.
08	11	Darkening was observed at the surface of the header.
19	00	Darkening was observed at the door surface around the cylinder and the handle. Darkening was observed at the jamb around the strike plate.
23	40	Darkening was observed at the door surface near the hinges.
30	00	No significant change.
60	00	Test was discontinued at the request of the client. Neither sustained flaming, ignition of cotton pad nor through openings were evident on unexposed surface of the doorset.

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Temperature Data:

Mean furnace temperature together with temperature-time relationship specified in the standard

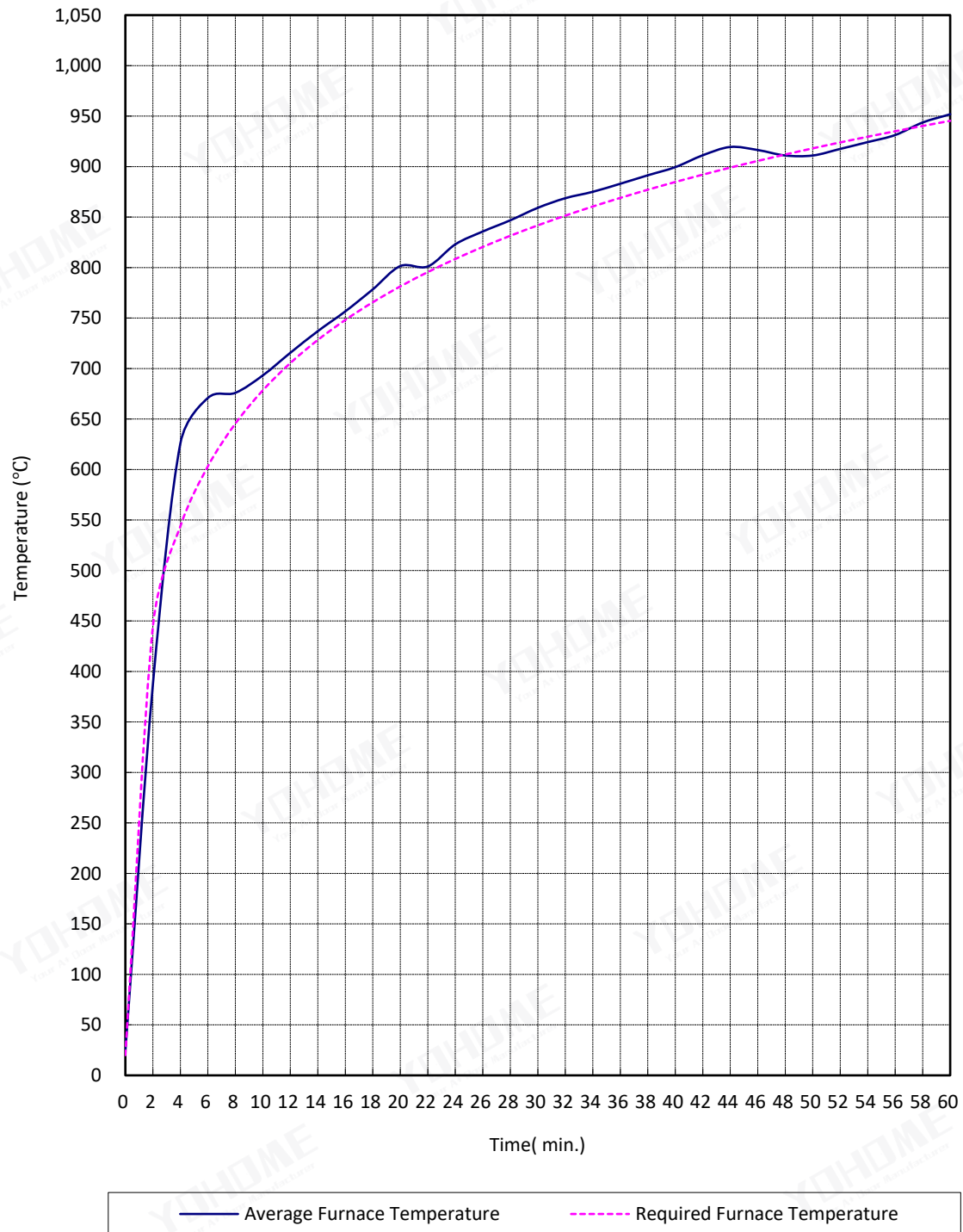
Time Mins	Specified Furnace Temperature/ °C	Furnace mean Temperature/ °C
0	20	24
2	445	387
4	544	626
6	603	671
8	645	676
10	678	693
12	705	716
14	728	737
16	748	757
18	766	778
20	781	802
22	796	801
24	809	823
26	820	836
28	832	847
30	842	859
32	851	869
34	860	875
36	869	883
38	877	891
40	885	899
42	892	911
44	899	919
46	906	916
48	912	911
50	918	911
52	924	918
54	930	924
56	935	931
58	940	944
60	945	952

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Graph for mean furnace temperature and temperature-time curve specified in the standard



TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Unexposed surface temperatures

Time Mins	T1 (°C)	T2 (°C)	T3 (°C)	T4 (°C)	T5 (°C)	Mean temperature (°C)
0	15	14	13	13	13	14
2	15	14	13	13	13	14
4	15	14	13	13	13	14
6	15	14	13	13	13	14
8	15	14	14	13	13	14
10	15	14	14	14	13	14
12	16	14	14	14	14	14
14	15	15	15	14	14	15
16	16	15	15	14	14	15
18	17	16	16	15	15	16
20	18	17	17	16	16	17
22	19	18	18	17	17	18
24	21	20	20	19	19	20
26	23	21	22	20	20	21
28	25	23	23	22	22	23
30	26	25	25	24	24	25
32	28	26	27	26	25	27
34	30	28	29	28	27	29
36	32	30	32	30	29	31
38	34	33	34	32	32	33
40	36	35	36	34	34	35
42	38	38	39	37	36	38
44	40	40	42	39	38	40
46	42	43	44	42	41	42
48	47	46	47	44	43	45
50	52	49	50	47	46	49
52	59	52	53	49	50	53
54	67	56	57	52	52	57
56	72	60	60	55	55	60
58	77	64	64	58	58	64
60	79	67	67	60	60	67

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Unexposed surface temperatures

Time Mins	T6 (°C)	T7 (°C)	T8 (°C)	T9 (°C)	T10 (°C)	T11 (°C)	T12 (°C)	T13 (°C)	T14 (°C)	T15 (°C)
0	13	14	14	14	13	12	12	12	12	12
2	13	14	14	15	13	12	12	15	16	14
4	13	14	14	15	13	12	12	15	32	14
6	13	14	15	15	14	12	17	16	36	15
8	13	14	15	15	14	12	26	16	39	18
10	13	14	15	15	16	14	35	17	47	24
12	14	15	16	16	17	14	40	24	51	30
14	14	16	17	17	18	18	44	32	55	39
16	15	18	18	19	20	21	48	38	54	50
18	15	19	20	21	23	23	49	44	55	57
20	17	21	22	23	25	26	50	49	55	64
22	18	23	24	26	27	29	52	52	55	73
24	19	25	26	29	29	32	55	54	56	74
26	21	28	29	31	31	35	58	56	59	77
28	23	30	31	34	33	40	59	58	62	78
30	25	32	34	37	34	44	61	61	65	79
32	27	35	36	39	36	48	61	64	69	81
34	29	38	39	42	38	51	62	69	73	84
36	31	40	41	45	40	55	64	74	76	86
38	32	43	44	48	42	58	65	78	79	88
40	34	46	46	51	45	61	68	81	82	92
42	36	49	49	53	48	64	70	83	84	93
44	38	51	51	56	50	68	73	85	86	95
46	42	54	54	59	53	71	76	87	87	96
48	44	57	56	61	55	74	78	89	88	97
50	48	59	58	63	59	77	81	90	89	97
52	50	62	60	66	62	81	83	91	86	98
54	53	65	62	68	65	84	85	91	85	99
56	56	67	64	70	67	86	87	91	83	99
58	58	70	66	72	70	87	88	91	84	100
60	60	72	67	73	72	88	88	92	83	100

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Horizontal Deflection (Positive values indicate movement into the furnace)

Time Mins	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	D6 (mm)	D7 (mm)
0	0	0	0	0	0	0	0
10	1	-2	-1	-8	4	4	-4
20	0	-1	-2	/	5	7	5
30	3	1	-1	/	/	9	8
40	3	1	-2	/	8	15	12
50	3	2	-10	/	30	17	12
60	4	2	-16	-16	17	18	13

Note: "/" means that the deflection measurement was discontinued as heavy smoke.

The closing force of door closer

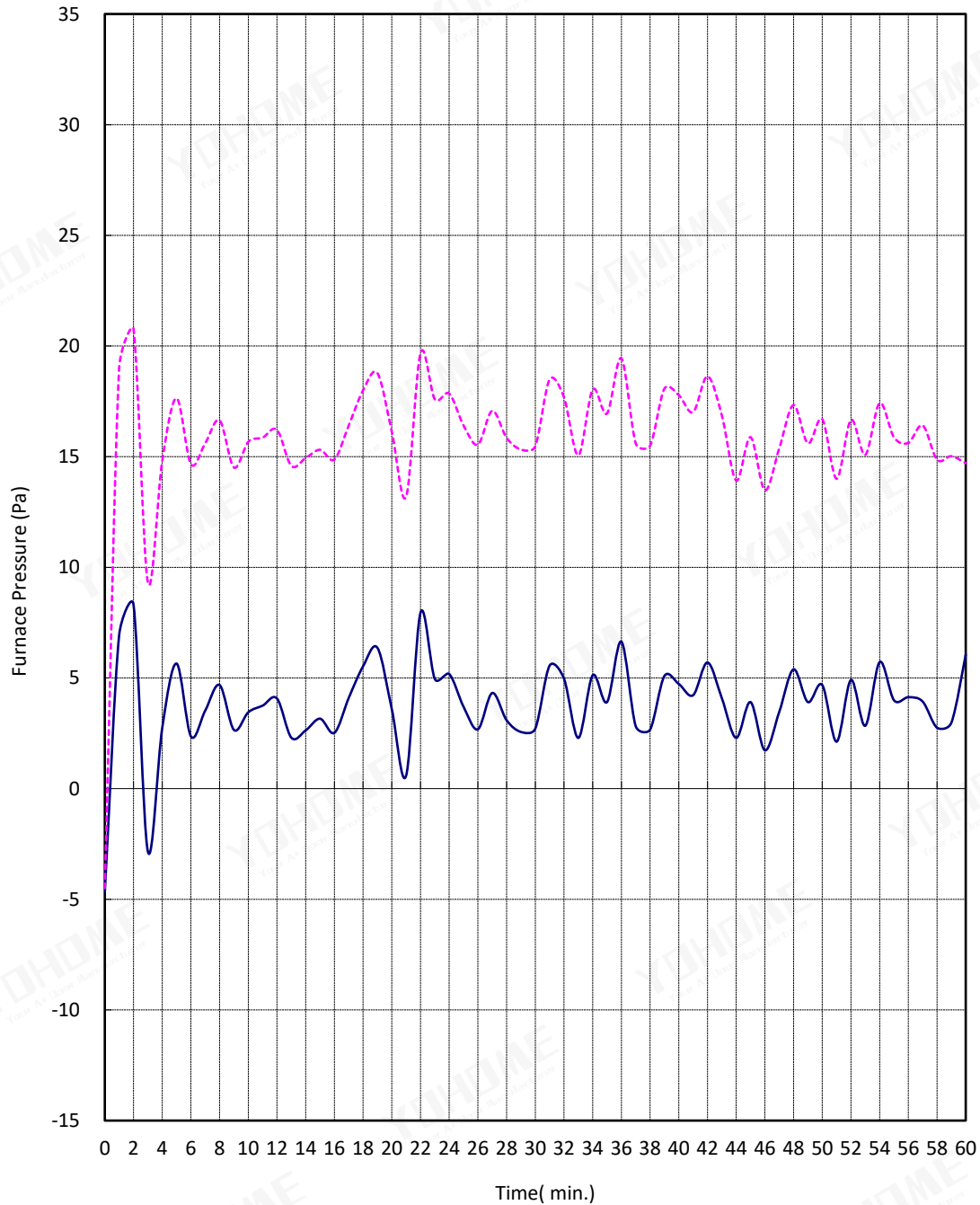
Door Closer Closing Force		
Highest gauge reading	Distance	Moment
(N)	(m)	(N·m)
19.3	0.975	18.7
18.9	0.975	
19.2	0.975	

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Graph for Furnace pressure



— P1: Pressure at 1000mm above the notional floor level
- - - P2: Pressure at 2500mm above the notional floor level

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Resistance to fire test 2 conducted on March 17, 2026, opening into the furnace:

Test Observations:

Time		All observations are from the unexposed face unless noted otherwise.
Mins	Secs	
00	00	Test started.
02	46	Smoke issued from the top edge, the handle and the cylinder positions of door leaf.
04	40	Smoke issued from the leading edge and the hinge edge of door leaf.
09	08	Darkening was observed at the door surface around the cylinder and the handle.
32	02	Darkening was observed at the door surface near the top-right corner of door leaf and around the hinges.
40	00	Darkening was observed at the door surface around the cylinder and the handle obviously and the darkening area was expanded.
60	00	Test was discontinued at the request of the client. Neither sustained flaming, ignition of cotton pad nor through openings were evident on unexposed surface of the doorset.

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Temperature Data:

Mean furnace temperature together with temperature-time relationship specified in the standard

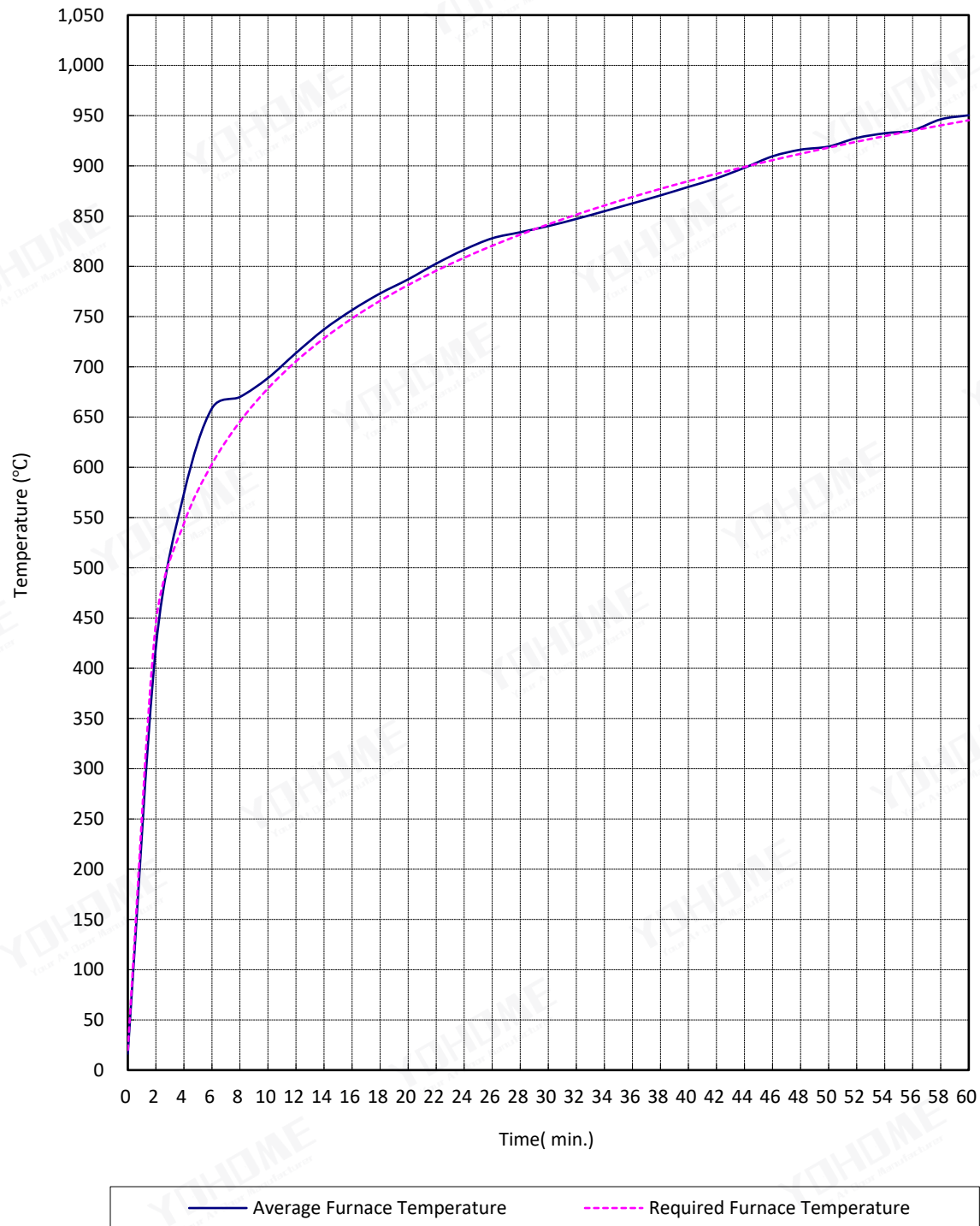
Time Mins	Specified Furnace Temperature/ °C	Furnace mean Temperature/ °C
0	20	17
2	445	421
4	544	573
6	603	659
8	645	670
10	678	689
12	705	714
14	728	737
16	748	756
18	766	773
20	781	787
22	796	803
24	809	817
26	820	828
28	832	834
30	842	840
32	851	847
34	860	855
36	869	863
38	877	871
40	885	879
42	892	888
44	899	898
46	906	909
48	912	916
50	918	919
52	924	928
54	930	932
56	935	935
58	940	946
60	945	950

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Graph for mean furnace temperature and temperature-time curve specified in the standard



TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Unexposed surface temperatures

Time Mins	T31 (°C)	T32 (°C)	T33 (°C)	T34 (°C)	T35 (°C)	Mean temperature (°C)
0	13	12	12	11	11	12
2	13	12	12	11	11	12
4	13	12	12	11	11	12
6	13	12	12	11	11	12
8	13	12	12	11	11	12
10	13	12	12	11	11	12
12	13	12	12	12	11	12
14	14	13	12	12	12	12
16	14	13	13	12	12	13
18	15	14	13	13	12	13
20	16	15	15	14	13	15
22	17	16	16	15	14	16
24	19	18	17	16	15	17
26	20	19	18	18	17	18
28	22	21	20	19	18	20
30	23	23	22	21	20	22
32	25	25	24	22	21	23
34	27	27	26	24	23	25
36	29	29	28	26	24	27
38	31	31	30	28	26	29
40	33	34	32	30	28	31
42	35	36	34	32	30	33
44	37	39	36	33	32	35
46	39	41	39	35	34	37
48	40	44	41	37	35	39
50	41	46	43	38	37	41
52	42	48	46	40	39	43
54	44	50	48	41	41	45
56	45	51	50	43	43	46
58	48	52	52	45	44	48
60	50	53	54	47	46	50

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Unexposed surface temperatures

Time Mins	T36 (°C)	T37 (°C)	T38 (°C)	T39 (°C)	T40 (°C)	T41 (°C)	T42 (°C)	T43 (°C)	T44 (°C)	T45 (°C)
0	12	12	12	13	11	11	11	11	11	11
2	12	12	12	13	11	11	11	11	11	11
4	11	12	13	13	11	11	11	11	12	11
6	12	12	12	13	11	11	11	11	12	11
8	13	12	12	13	11	11	11	11	12	11
10	15	13	13	13	11	12	12	11	13	11
12	17	13	13	13	12	12	12	11	13	11
14	19	14	13	14	12	13	12	12	13	11
16	22	15	14	14	13	13	13	12	14	11
18	26	16	15	15	13	13	14	12	15	12
20	28	18	16	17	15	12	14	13	16	12
22	29	19	18	18	16	12	15	13	16	12
24	30	21	19	20	17	13	16	14	17	12
26	32	22	21	22	19	13	17	14	18	13
28	31	24	23	24	21	13	18	15	20	13
30	31	26	25	26	23	14	19	16	21	14
32	33	28	27	28	25	14	20	17	22	15
34	34	30	29	30	27	15	21	18	23	16
36	36	33	31	33	30	16	22	19	25	17
38	38	35	34	35	32	16	24	20	27	18
40	40	38	36	37	34	17	25	21	28	19
42	41	40	38	40	37	18	26	23	30	21
44	43	42	40	42	39	20	27	24	32	22
46	45	45	43	45	41	21	28	26	33	24
48	47	47	44	48	43	22	30	27	35	26
50	49	50	46	50	45	23	31	29	37	28
52	51	52	49	53	47	25	32	30	38	30
54	53	54	51	55	50	26	33	31	40	33
56	55	57	52	58	52	27	35	33	41	35
58	57	59	54	60	54	29	36	34	43	37
60	59	61	56	63	57	30	38	36	44	39

TEST REPORT

Issue Date: 2026-04-10

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Horizontal Deflection (Positive values indicate movement into the furnace)

Time Mins	D15 (mm)	D16 (mm)	D17 (mm)	D18 (mm)	D19 (mm)	D20 (mm)	D21 (mm)
0	0	0	0	0	0	0	0
10	0	1	-1	1	1	1	-3
20	0	8	-2	1	4	1	4
30	0	15	-6	3	7	3	7
40	-1	24	-9	3	10	4	8
50	0	25	-10	4	12	4	7
55	0	26	-12	4	11	4	4

The closing force of door closer

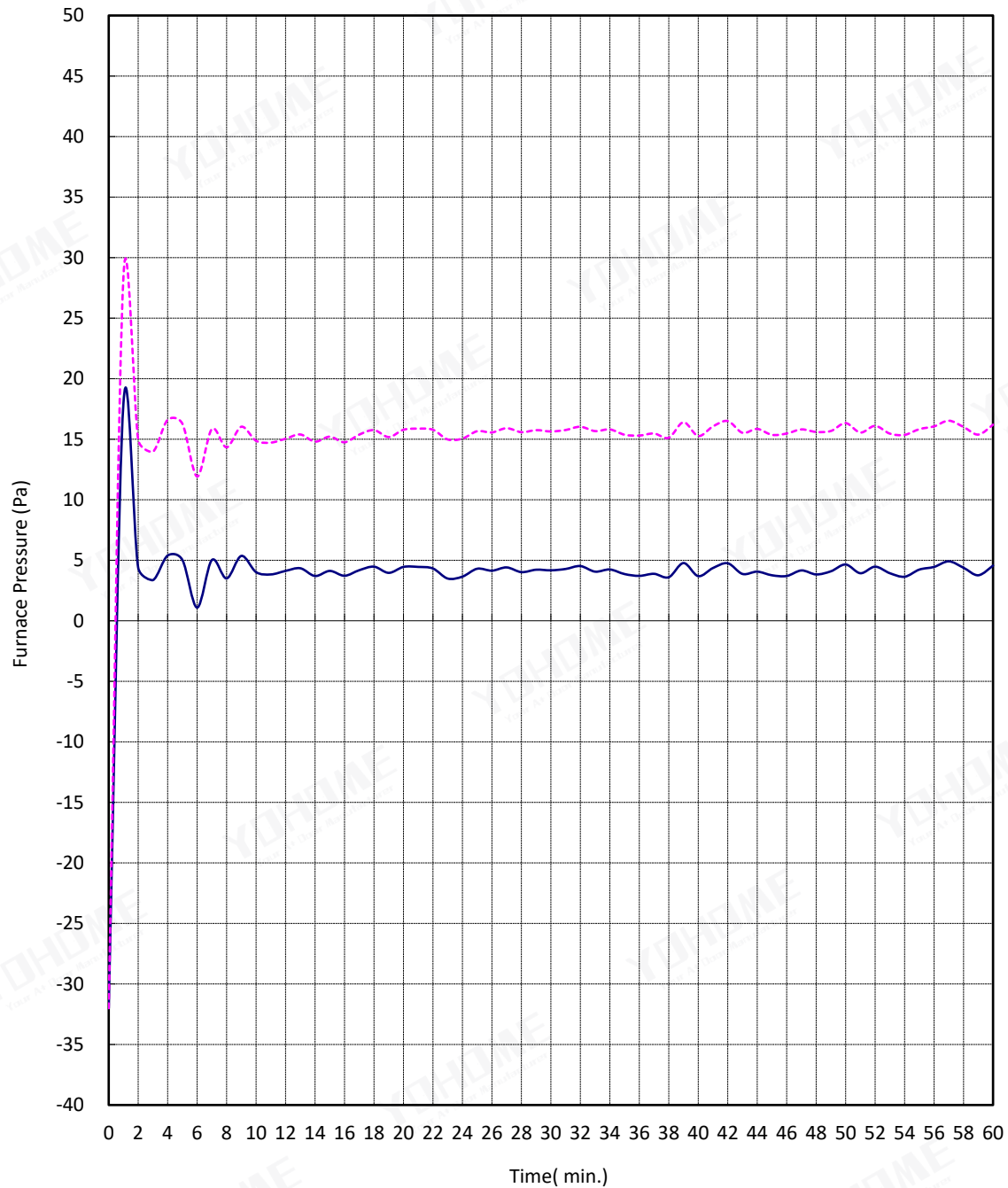
Door Closer Closing Force		
Highest gauge reading	Distance	Moment
(N)	(m)	(N·m)
22.9	0.95	22.5
23.2	0.95	
25.0	0.95	

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Graph for Furnace pressure



— P1: Pressure at 1000mm above the notional floor level
- - - P2: Pressure at 2200mm above the notional floor level

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Smoke control test 4 & 5 conducted on March 12, 2026:

Standards: EN 1634-3:2004, 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

Conditioning: According to EN 1634-3, Section 8

Equipment:

ITEM	ID
Test Chamber	SH1346
Chamber thermocouple	SH1097-12
Pressure Gauge	SH1346-1
Air Flow Gauge	SH1346-2
Ambient temperature gauge	SH1097-11
Clearance Measurements	SH1506
Test Clock	SH1042

Test equipment:	According to EN 1634-3, Section 4
Test Condition:	According to EN 1634-3, Section 5
Test Specimen:	According to EN 1634-3, Section 6
Installation of test specimen:	According to EN 1634-3, Section 7
Conditioning:	According to EN 1634-3, Section 8
Application of instrumentation:	According to EN 1634-3, Section 9
Test Procedure:	According to EN 1634-3, Section 10

TEST REPORT

Issue Date: 2026-04-10

Intertek Report No.: 251208003SHF-001

Test Observations – opening away from the chamber:

Time		All observations are from the unexposed face unless noted otherwise.
Mins	Secs	
00	00	Ambient temperature test started. Ambient temperature was 12.5 °C.
25	00	Ambient temperature test was completed, and leakage rates of $Q_{sup/assoc} + Q_{app}$ and Q_t were measured at test pressure differentials of 10 Pa, 25 Pa and 50 Pa. No deformations were noted and no other observations of irregular behavior of the test assembly were made during the ambient temperature test.
25	30	Medium temperature test started, and the heating system started to work.
55	30	The chamber temperature adjacent to exposed face of the specimen reached to mean temperature of 220 °C and then started to measure leakage rate of $Q_{sup/assoc} + Q_{app}$ and Q_t at test pressure differentials of 10 Pa, 25 Pa and 50 Pa.
70	00	The medium temperature test was completed. No deformations were noted and no other observations of irregular behavior of test assembly were made during the medium temperature test. After the test, opened the door manually and no damage was observed from the perimeter seals on the door and frame and the automatic drop seal under the door.

Door Closer Closing Force – opening away from the chamber:

Door Closer Closing Force		
Highest gauge reading	Distance	Moment
(N)	(m)	(N·m)
21.3	0.96	20.3
20.8	0.96	
21.4	0.96	

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Leakage rate for ambient together with medium temperature test – opening away from the chamber:

The length of gaps between the frame and the door of the test door assembly excluding the gap along the threshold was 5.88 m.

Test No.	Door opening direction	Temperature	Leakage rate Q_{spec} (m ³ /h) at pressure difference of			Linear leakage rate Q_l (m ³ /h/m) at pressure difference of	
			10 Pa	25 Pa	50 Pa	10 Pa	25 Pa
1	Outwards	Ambient	2.10	4.10	6.20	0.36	0.70
2	Outwards	Medium	0.10	0.30	0.40		

Note:

1. The measured leakage/linear leakage rate include the leakage at the threshold.
2. Outwards: Door opened away from the test chamber.

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Test Observations – opening into the chamber:

Time		All observations are from the unexposed face unless noted otherwise.
Mins	Secs	
00	00	Ambient temperature test started. Ambient temperature was 15.5 °C.
30	00	Ambient temperature test was completed, and leakage rates of $Q_{sup/assoc} + Q_{app}$ and Q_t were measured at test pressure differentials of 10 Pa, 25 Pa and 50 Pa. No deformations were noted and no other observations of irregular behavior of the test assembly were made during the ambient temperature test.
31	00	Medium temperature test started, and the heating system started to work.
61	00	The chamber temperature adjacent to exposed face of the specimen reached to mean temperature of 220 °C and then started to measure leakage rate of $Q_{sup/assoc} + Q_{app}$ and Q_t at test pressure differentials of 10 Pa, 25 Pa and 50 Pa.
86	00	The medium temperature test was completed. No deformations were noted and no other observations of irregular behavior of test assembly were made during the medium temperature test. After the test, opened the door manually and no damage was observed from the perimeter seals on the door and frame and the automatic drop seal under the door.

Door Closer Closing Force – opening into the chamber:

Door Closer Closing Force		
Highest gauge reading	Distance	Moment
(N)	(m)	(N·m)
21.6	0.96	20.5
21.2	0.96	
21.4	0.96	

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Leakage rate for ambient together with medium temperature test – opening into the chamber:

The length of gaps between the frame and the door of the test door assembly excluding the gap along the threshold was 5.88 m.

Test No.	Door opening direction	Temperature	Leakage rate Q_{spec} (m^3/h) at pressure difference of			Linear leakage rate Q_l ($\text{m}^3/\text{h}/\text{m}$) at pressure difference of	
			10 Pa	25 Pa	50 Pa	10 Pa	25 Pa
1	Inwards	Ambient	2.60	4.20	6.10	0.44	0.71
2	Inwards	Medium	1.00	0.40	1.20		

Note:

1. The measured leakage/linear leakage rate include the leakage at the threshold.
2. Inwards: Door opened into the test chamber.

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Durability of self-closing test 3 conducted on March 2, 2026 through March 9, 2026:

Standards: EN 1191:2012, Windows and doors – Resistance to repeated opening and closing – Test method

Procedure: Annex H Test procedures for side-hung pedestrian doorsets excluding power operated doors

Test Condition: According to EN 1191, Section 6

Equipment:

ITEM	ID
Torque wrench	SH1254
Force gauge	SH1211
Stopwatch	SH1228
Clearance Measurements	SH1506
Electronic scale	SH1386-2

Test requirements: EN 1191:2012, Section 5

Preparation for testing: EN 1191:2012, Section 6

Test procedure: EN 1191:2012, Section 7 & Annex H

Test data

The dead loads applied to the operation points were measured 1.5 kg.

The weight of the door was measured 99.5 kg.

Cycling completed: 50000 cycles

Opening time: 3s - 7s

Closing time: 2s - 3s

Rest time: 1s

Operating forces measured before and after the cycling test:

Test sequence	Operation of Door Closer (Opening force)	Operation of the handle de-latch
Before Test	Avg. 59.2 N·m	Avg. 0.7 N·m
After Test	Avg. 53.8 N·m	Avg. 0.6 N·m

The clearance measured between the door and the frame before and after the cycling test:

Test sequence	Top edge	Leading edge	Hinge edge	Bottom edge
Before Test	Avg. 4.2 mm	Avg. 4.1 mm	Avg. 2.6 mm	Avg. 4.6 mm
After Test	Avg. 4.3 mm	Avg. 3.8 mm	Avg. 2.6 mm	Avg. 4.9 mm

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SECTION 12 PHOTOGRAPHS



Fig. 1 Exposed Side Prior to the Fire Test 1



Fig. 2 Unexposed Side Prior to the Fire Test 1

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Fig. 3 Unexposed Side after 20 Minutes of the Fire Test 1



Fig. 4 Unexposed Side after 40 Minutes of the Fire Test 1

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Fig. 5 Unexposed Side after 60 Minutes of the Fire Test 1



Fig. 6 Exposed Side after 60 Minutes of the Fire Test 1

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Fig. 7 Exposed Side Prior to the Fire Test 2

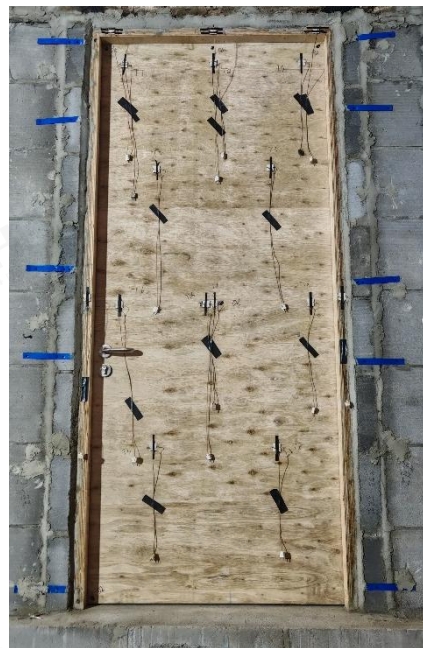


Fig. 8 Unexposed Side Prior to the Fire Test 2

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Fig. 9 Unexposed Side after 20 Minutes of the Fire Test 2



Fig. 10 Unexposed Side after 40 Minutes of the Fire Test 2

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Fig. 11 Unexposed Side after 60 Minutes of the Fire Test 2



Fig. 12 Exposed Side after 60 Minutes of the Fire Test 2

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Fig. 13 Unexposed Side of test door assembly before air leakage test 4



Fig. 14 Exposed Side of test door assembly before air leakage test 4

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Fig. 15 Unexposed Side of test door assembly after air leakage test 4



Fig. 16 Exposed Side of test door assembly after air leakage test 4

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Fig. 17 Unexposed Side of test door assembly before air leakage test 5



Fig. 18 Exposed Side of test door assembly before air leakage test 5

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Fig. 19 Unexposed Side of test door assembly after air leakage test 5



Fig. 20 Exposed Side of test door assembly after air leakage test 5

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SECTION 13

REVISION LOG

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