

CLASSIFICATION OF FIRE RESISTANCE PERFORMANCE
IN ACCORDANCE WITH EN 13501-2:2016

Sponsor	: BAYRAK GRUP ORM. ÜRÜN İNŞ. İŞL. İNŞ. MAL. İTH. İHR. SAN. TİC. LTD. ŞTİ. Tekeler Mah. Karahmetoğlu Gölü Keresteciler Sit. Adapazarı, SAKARYA/TURKEY
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Product name	: <i>Single Leaf Timber Doors</i> " BG DOORLIFE HOTEL, BG DOORLIFE HOUSE "
Classification report No.	: EEA -20-164
Issue number	: 1/2
Date of issue	: 12.10.2020

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1. INTRODUCTION

This classification report defines the classification in accordance with the procedures given in EN 13501-2:2016, assigned to *Single Leaf Timber Doors* "**BG DOORLIFE HOTEL, BG DOORLIFE HOUSE**"

2. DETAILS OF CLASSIFIED PRODUCT

2.1. General:

The element, *Single Leaf Timber Doors* "**BG DOORLIFE HOTEL, BG DOORLIFE HOUSE**", are defined as a type of product.

2.2. Description:

Single Leaf Timber Doors "**BG DOORLIFE HOTEL, BG DOORLIFE HOUSE**" are fully described below.

2.2.1. General:

Product identification : *Single Leaf Timber Doors* "**BG DOORLIFE HOTEL, BG DOORLIFE HOUSE**"

Door Nr.1 : **BG DOORLIFE HOTEL**
Door Nr.2 : **BG DOORLIFE HOUSE**

Direction of fire : Opening into the fire

Manufacturer : BAYRAK GRUP ORM. ÜRÜN İNŞ. İŞL. İNŞ. MAL. İTH. İHR. SAN. TİC. LTD. ŞTİ.
Tekeler Mah. Karahmetoğlu Gölü Keresteciler Sit. Adapazarı, SAKARYA/TURKEY

Sponsor of test : BAYRAK GRUP ORM. ÜRÜN İNŞ. İŞL. İNŞ. MAL. İTH. İHR. SAN. TİC. LTD. ŞTİ.
Tekeler Mah. Karahmetoğlu Gölü Keresteciler Sit. Adapazarı, SAKARYA/TURKEY

2.2.2. Construction:

Single action timber door constructions, *Single Leaf Timber Doors* "**BG DOORLIFE HOTEL, BG DOORLIFE HOUSE**" were mounted in a masonry supporting construction, made of aerated concrete blocks with the mounting clearances dimensions of 1060 x 2200 mm (w x h) and 1060 x 2170 mm (w x h).

The supporting construction was supplied by the test laboratory (Efectis Era Avrasya) and consisted of aerated concrete blocks which have a density of 450 kg/m³ and thickness of 100 mm.

2.2.3. Components:**2.2.3.1. Door Nr.1:****2.2.3.1.1. Door Frame:**

The frame and jamb were consisted of MDF. Polyurethane based foam was used between the frame and supporting construction. Acrylic sealant was used between the supporting construction and the jamb at both sides and joints of the frame and the jamb. Intumescent seals were used at the contact points of leaf and frame. Smoke seal was used at rebated edge of the frame.

- **Type** : Frame – MDF(3 layers) ; Density: 770 kg/m³ ; Thickness: 18/12/18 mm
Jamb - MDF ; Density: 770 kg/ m³
- **Dimensions** :
 - Frame studs : 32/48 x 100 x 2158/2190 mm (w x d x h)
 - Frame header : 32/48 x 100 x 944/1040 mm (w x d x l)
 - Jamb (stud) : 80 x 2260 x 12 mm (w x h x t)
 - Jamb (header) : 80 x 1150/1180 x 12 mm (w x l x t)
- **Filler** :
 - Type : Polyurethane based fire resistant foam – TYTAN B1
 - Locations : Between the supporting construction and the frame.
- **Sealant** :
 - Type : EI240 intumescent acrylic sealant – PYROPLEX 2WT310
 - Thickness : 10 mm
 - Locations : Between the supporting construction and the jamb at both sides and joints of the frame and the jamb.
- **Seals** :
 - Type : Graphite based smoke seal – REDDIPLEX 11301/ HARMONY CORNER 9946
 - Dimensions : 12 x 12 mm (w x t)
 - Locations : Rebated edge of the frame.
 - Type : Graphite based intumescent seal/Rigid box with pile - PYROPLEX 8510
 - Dimensions : 10 x 4 mm (w x t)
 - Locations : Contact points of leaf and frame, at the frame.
 - Type : Graphite based intumescent seal/ Rigid box - PYROPLEX 8500
 - Dimensions : 10 x 4 mm (w x t)
 - Locations : Contact points of leaf and frame, at the frame.

2.2.3.1.2. Leaf:

The leaf was consisted of MDF at both sides. Door stile and rails softwood and tubular chipboard were used inside the leaf. Threshold seal was fitted in bottom edge of the door leaf.

- **Dimensions** : 970 x 47 x 2150 mm (w x t x h)
- **Outer Layer** : MDF ; Density: 770 kg/m³; Thickness: 6 mm (at both sides)
- **Inner Layer** :
 - Type : Spruce door stile and rails softwood
 - Dimensions : 35 x 42 mm (t x w)
 - Density : 450 kg/m³.
 - Locations :Inside the leaf, each both sides.(See figures 4-5)
 - Type : Tubular chipboard – SAUERLAND SPANPLATTE – RH 987
 - Dimensions : 35 x 886 mm (t x w)
 - Density : 363 kg/m³
 - Hole diameter: 18 mm
 - Locations : Used was inside the leaf. (See figures 4-5)
- **Seal** :

- Type : Threshold seal – PLANET KT FH RD 31109
 - o Dimensions : 25 x 13 mm (h x t)
 - o Location : In the bottom edge of the door leaf.
 - o Insulation : Silicate based intumescent sheet – PYROPLEX PMFS2; Thickness : 1 mm

2.2.3.1.3. Accessories:

- Hinges :

The leaf was hung on three steel hinges.

- Type : Stainless steel hinge – METALURGIA PONS 135/1922
 - o Dimensions : 14 x 76 x 101 x 3 mm (Ø x w x h x t)
 - o Locations : Distance of 375 mm from the bottom of the door to the center, 200 mm distance from the top of the leaf to the center and 500 mm from the center of the top hinge to the center.
 - o Insulation : Silicate based intumescent sheet – PYROPLEX PMFS2; Thickness : 1 mm

- Lock :

- Type : Card-operated lock – MIWA AL5H 072215
 - o Dimensions : 20 x 230 mm (w x h)
 - o Location : 950 mm distance from bottom of the leaf.
 - o Insulation : Silicate based intumescent sheet – PYROPLEX PMFS2; Thickness : 1 mm

- Door closer:

- Type : Hidden closer – CDC 3800 – OZONE
 - o Location : 90 mm distance from edge of the leaf.
 - o Leaf gap dimensions for inside side: 275 x 75 x 30 mm (w x h x t)
 - o Insulation : Silicate based intumescent sheet – PYROPLEX PMFS2; Thickness : 1 mm

- Door viewer:

- Type : Fire resistant door viewer – QUPUOPTIC 4014
 - o Diameter : 20 mm
 - o Location : 1520 mm from the sill.
 - o Insulation : Silicate based intumescent sheet – PYROPLEX PMFS2; Thickness : 1 mm

For detailed information see figure 1-5.

2.2.3.2. Door Nr.2:

2.2.3.2.1. Door Frame:

The frame and jamb were consisted of MDF. Polyurethane based foam was used between the frame and supporting construction. Acrylic sealant was used between the supporting construction and the jamb at both sides and joints of the frame and the jamb. Intumescent seal was used at the contact points of leaf and frame. Smoke seal was used at rebated edge of the frame.

- Type : Frame – MDF(3 layers) ; Density: 770 kg/m³ ; Thickness: 18/12/18 mm
Jamb – MDF ; Density: 770 kg/ m³

- Dimensions :

- Frame studs : 32/48 x 100 x 2128/2158 mm (w x d x h)
- Frame header : 32/48 x 100 x 952/1036 mm (w x d x l)
- Jamb (stud) : 80 x 2228 x 12 mm (w x h x t)
- Jamb (top) : 80 x 1150/1176 x 12 mm (w x l x t)

- Filler :

- Type : Polyurethane based fire resistant foam – TYTAN B1
 - Locations : Between the supporting construction and the frame.
- Sealant :
 - Type : EI240 intumescent acrylic sealant – PYROPLEX 2WT310
 - Thickness : 10 mm
 - Locations : Between the supporting construction and the jamb at both sides and joints of the frame and the jamb.
- Seals :
 - Type : Graphite based smoke seal – REDDIPLEX 11301/ HARMONY CORNER 9946
 - Dimensions : 12 x 12 mm (w x t)
 - Locations : Rebated edge of the frame.
 - Type : Graphite based intumescent seal/ Rigid box - PYROPLEX 8700
 - Dimensions : 15 x 4 mm (w x t)
 - Locations : Contact points of leaf and frame, at the frame.

2.2.3.2.2. Leaf:

The leaf was consisted of MDF at both sides. Door stile and rails softwood and chipboard without tubular were used inside the leaf.

- Dimensions : 970 x 44 x 2120 mm (w x t x h)
- Outer Layer : MDF ; Density: 770 kg/m³; Thickness: 3 mm (at both sides)
- Inner Layer :
 - Type : Spruce door stile and rails softwood
 - Dimensions : 38 x 42 mm (w x h)
 - Density : 450 kg/ m³
 - Locations : Inside the leaf, each both sides.(See figure 9-10)
 - Type : Chipboard without tubular – SAUERLAND SPANPLATTE - 38 VL
 - Dimensions : 38 x 884 mm (t x w)
 - Density : 490 kg /m³
 - Locations : Used was inside the leaf. (See figure 9-10)

2.2.3.2.3. Accessories:

- Hinges :

The leaf was hung on three steel hinges.

 - Type : Stainless steel hinge– METALURGIA PONS 135/1922
 - Dimensions : 14 x 76 x 101 x 3 mm (Ø x w x h x t)
 - Locations : Distance of 350 mm from the bottom of the door to the center, 200 mm and 700 mm from the top of the leaf to the center respectively.
 - Insulation : Silicate based intumescent sheet – PYROPLEX PMFS2,Thickness : 1 mm
- Lock :
 - Type : Mortise lock with barrel – ASSA ABLOY 1050
 - Dimensions : 24 x 235 mm (w x h)
 - Location : 1100 mm distance from bottom of the leaf.
 - Insulation : Silicate based intumescent sheet – PYROPLEX PMFS2,Thickness : 1 mm
- Door handle:
 - Type : Fire resistant steel door handle – ASSA ABLOY AHW500UU00
 - Location : 950 mm distance from the bottom of the leaf.
 - Insulation : Silicate based intumescent sheet – PYROPLEX PMFS2,Thickness : 1 mm
- Door viewer:
 - Type : Fire resistant door viewer – QUPUOPTIC 4014

- o Diameter : 20 mm
- o Location : 1520 mm from bottom of the door sill.
- o Insulation : Silicate based intumescent sheet – PYROPLEX PMFS2, Thickness : 1 mm

For detailed information see figure 6-10.

3. REPORTS AND RESULTS IN SUPPORT OF CLASSIFICATION

3.1. Reports

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
EFFECTIS ERA AVRASYA Test ve Belgelendirme A.Ş.	BAYRAK GRUP ORM. ÜRÜN İNŞ. İŞL. İNŞ. MAL. İTH. İHR. SAN. TİC. LTD. ŞTİ.	RFTR20249	EN 1634- 1:2014+A1:2018

3.2. Results

Test method	Parameter	Results	
		Door Nr.1.	Door Nr.2.
EN 1634- 1+A1	Integrity, (E) – Cotton pad – Gap gauges Ø 6 mm Ø 25 mm – Flames longer than 10 sec.	47 th minute no failure (not applied) no failure (not applied) no failure (not observed)	no failure(not applied) no failure (not applied) no failure (not applied) 53 rd minute
	Insulation:, [I] – average temperature – maximum temperature	47 th minute (due to the failure of integrity) 47 th minute (due to the failure of integrity)	51 th minute for I ₁ . 53 rd minute (due to the failure of integrity)
The heating was terminated at 54 th minute due to the failure of the integrity.			

4. CLASSIFICATION AND FIELD OF APPLICATION

4.1. Reference of classification

This classification has been carried out in accordance with clause 7.5.5 of EN 13501-2:2016.

4.2. Classification

Single Leaf Timber Doors “**BG DOORLIFE HOTEL, BG DOORLIFE HOUSE**” are classified according to the following combinations of performance parameters and classes as appropriate:

R	E	I	W		t	t	-	M	S	C	IncSlow	sn	ef	r
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FIRE RESISTANCE CLASSIFICATION	
Direction: Opening away from the fire and into the fire*	
Category A	Category B
(Door Nr.1) BG DOORLIFE HOTEL: E45, EI₂45, EI₁45	(Door Nr.1) BG DOORLIFE HOTEL: E30, EI₂30, EI₁30
(Door Nr.2) BG DOORLIFE HOUSE: E45, EI₂45, EI₁45	(Door Nr.2) BG DOORLIFE HOUSE: E45, EI₂45, EI₁30

* Classifications for the direction "opening away from the fire" is valid as long as the conditions in the clause 4.3.4. are met.

4.3. Field of application

4.3.1 General

This report details the method of construction, the test conditions and the results obtained when the specific elements of construction described herein was tested following the procedure outlined in EN 1363-1:2020, and when appropriate EN 1363-2:1999. Any significant deviation with respect to size, constructional details, load 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.

Except if otherwise specified hereafter, the design of the door-unit shall be identical to that of the test specimen. It is not allowed to modify the number of door leaves and the operating mode (e.g. swing door or pivoted door, single or double acting door).

4.3.2 Specific Restrictions Concerning Materials And Structures

4.3.2.1 Timber construction

It is not allowed to decrease the thickness of the door leaf or leaves but it is allowed to increase provide increase in weight up to 25%.

It is not allowed to change the composition (e.g. type of resin) of timber based products(e.g. particle board, blockboard etc.).

It is not allowed to reduce dimensions and/or the density of the timber frames but it is allowed to increase dimensions and/or the density of the timber frames.

4.3.2.2 Decorative coatings

4.3.2.2.1 Paint

Where the paint finish is not expected to contribute to the fire resistance of the door, alternative paints are acceptable and can be added to door leaves or frames for which unfinished test specimens were tested. Where the paint finish contributes to the fire resistance of the door (e.g. intumescent paints) then no change is allowed.

4.3.2.2.2 Timber veneers

Decorative laminates and timber veneers up to 1,5 mm thickness are allowed to be added to the faces (but not the edges) of leaves and frames in doorsets which satisfy the insulation criteria (Allowed for only: Door Nr.1: EI₁45, EI₂45; Door Nr.2: EI₁45, EI₂45).

4.3.2.2.3 Fixings

It is permitted to increase the number of fasteners used to attach the fire resistant doors onto the supporting structures but it is not allowed to be reduced, and it is allowed to reduce the distance between the fasteners but it is not allowed to be increased.

4.3.2.3 Hardware

It is allowed to increase the number of movement-limiting devices such as locks, bolts and hinges but it is not allowed to be reduced.

Where self-closing characteristics are not required, it is allowed to remove closing device.

4.3.3 Permissible Size Variations

4.3.3.1 General

Doors with dimensions which are different from those of the test specimens shall be permitted within some extent, but variations depend on the type of product and on the time during which the fire resistance criteria are met.

The increase and decrease of dimensions permitted by the field of direct application are applicable to the overall size of each leaf, each side panel, each transom panel and each over panel independently and including ant rebates which may be present on the leaf or panel.

The limits of permitted size variation are given in Annex B of the standard EN 1634-1:2014+A1:2018.

4.3.3.2 Dimension variations according to the type of product

4.3.3.2.1 Permissible dimension variations of the leaf

The amount of variation of size permitted is dependent on whether the classification time was just reached (category 'A') or whether an extended time (category 'B' overrun) in accordance with the following values was fulfilled before the test was concluded.

Classification time	All performance criteria fulfilled for at least
15 minutes	18 minutes
20 minutes	24 minutes
30 minutes	36 minutes
45 minutes	52 minutes
60 minutes	68 minutes

Consequently, increase of the dimension is only valid in case of related performance about "Category B overrun" is achieved in Clause 8, Table 2.

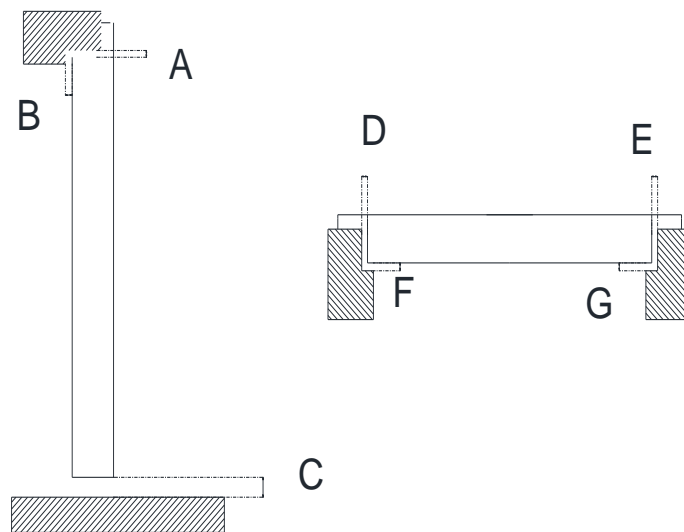
a) Category A classification:

Unlimited size reduction is permitted for timber doors (hinged or pivoted). Size increase is not permitted.

b) Category B classification:

	DOOR Nr.1		DOOR Nr. 2	
Overall dimension of the leaf	Min.	Max.	Min.	Max.
Height	Unlimited	2472,5 mm (%15)	Unlimited	2438 mm (%15)
Width	Unlimited	1115,5 mm (%15)	Unlimited	1115,5 mm (%15)
Area	-	2,50 m ² (%20)	-	2,46 m ² (%20)

Size increases are only allowed for the doorsets provided that used with the gaps indicated in the table below:



	Average measured	Maximum measured	Practical maximum allowed
Door Nr.1.			
A	3.0	4.0	5.50
B	3.0	3.0	5.00
C	5.7	6.0	7.83
D	3.3	4.0	5.67
E	2.0	2.0	4.00
F	2.3	3.0	4.67
G	3.3	4.0	5.67
Door Nr.2.			
A	4.0	5.0	6.50
B	3.0	4.0	5.50
C	5.0	5.0	7.00
D	2.0	2.0	4.00
E	3.3	4.0	5.67
F	2.0	2.0	4.00
G	2.7	3.0	4.83

4.3.3.2.2 Other changes

For doors with smaller dimensions, the relative position of the movement-limiting devices (e.g. hinges, bolts, etc.) shall remain identical to that of the test specimen, or any modification in the distance between them shall be limited to the same reduction percentage as the dimension reduction of the test specimen.

It is not allowed to change the relative position of the movement-limiting devices (Hinges, bolts, etc.). It is permitted to modify the distance with the same percentage for the reduction of the test specimen.

For larger doorset sizes the following also must be applied (Category B):

- 1) The height of the latch above floor level must be equal to or greater than the tested height, and the maximum of any change in height must be proportional to the increase in doorset height;
- 2) The distance of the top hinge from the top of door leaf must be equal to or less than that tested;
- 3) The distance of the bottom hinge from bottom of door leaf must be equal to or less than that tested.
- 4) For three hinges or distortion preventers are used, the distance between bottom of the door leaf and centre restraint must be equal to or greater than tested.

4.3.3.2.3 Timber construction

It is not allowed to change the number, size, location and orientation of any joints in the timber framing.

It is not allowed substitute with alternatives of lesser thickness or strength for decorative timber veneers that have more than 1.5 mm thick or other claddings which themselves provide constructive benefits are part of the test specimen.

4.3.4 Direction of opening

Test results of the doorsets consist of timber frame and timber leaf are valid for the opposite direction as well, as long as the conditions below are met:

- That each of the door leaves are themselves of symmetrical construction with the exception of the edges (e.g. lock/leading edge and hinge edge or double rebated doors)
- That any restraining/supporting elements of building hardware has been included in a test to EN 1634-1 when exposed in both directions so that they will retain their function when exposed to the heat of the test
- That there is no change in the number of leaves or the mode of operation (e.g. sliding, swinging, single action or double action)
- That side, over and transom panels are excluded from Table 2 unless they are fully symmetrical

4.3.5 Supporting Construction

Aerated concrete block with a density of at least 450 kg/m³, having a thickness of at least 100 mm.

Rigid construction with a minimum EI45 classification according to EN 13501-2:2016 standard.

5. LIMITATIONS

This classification report does not represent any type approval or certification of the product. This report is initially valid until **12th October 2021** providing that no significant modifications are made in technical specification of the specimen and related test and classification standards.

Signed:

.....
İrem ATMACA

Person in the charge of tests



Approved:

.....
Ali BAYRAKTAR

Laboratory Manager

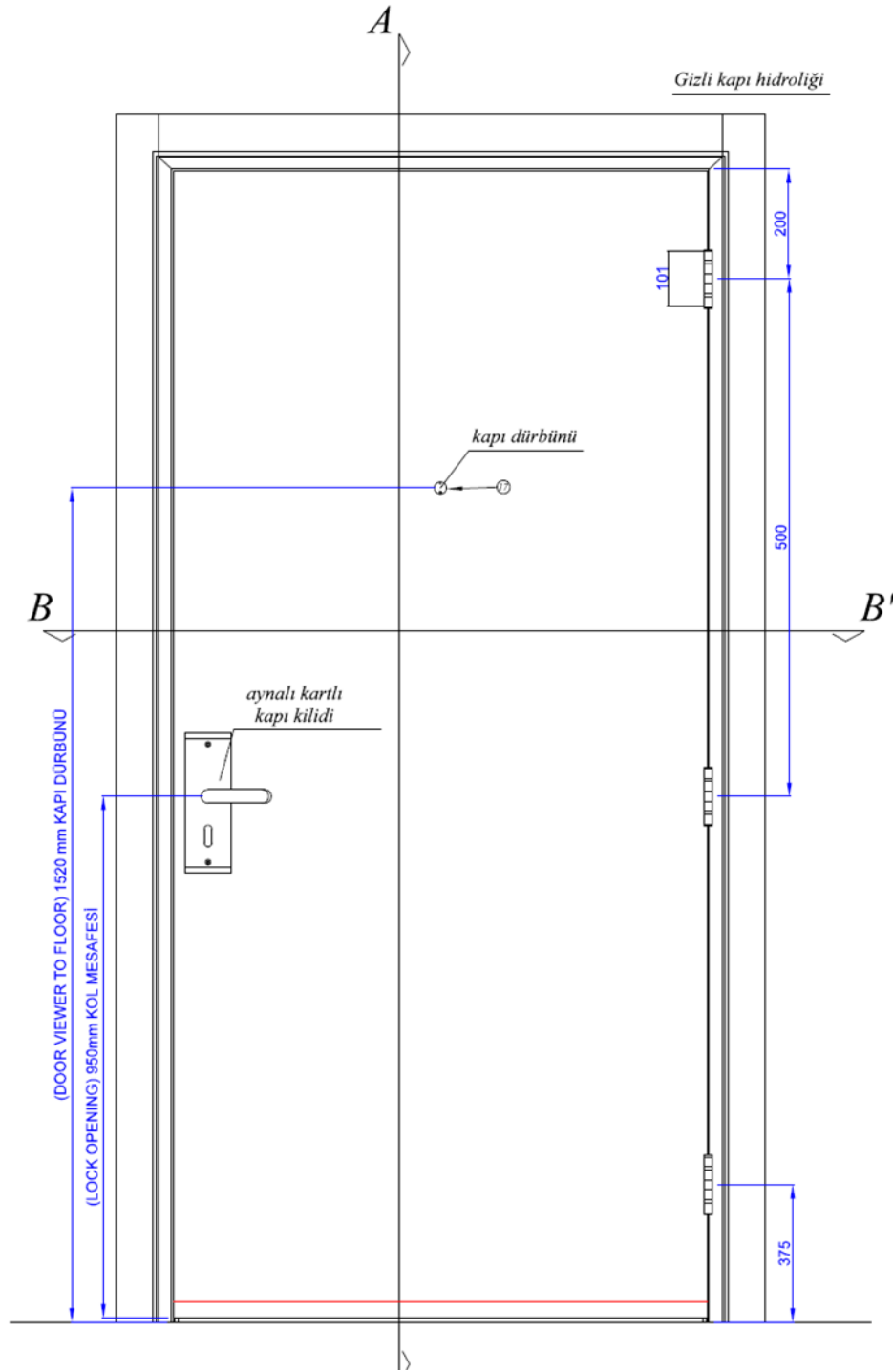
6. DRAWINGS

Figure 1: Accessories locations of Door Nr.1.

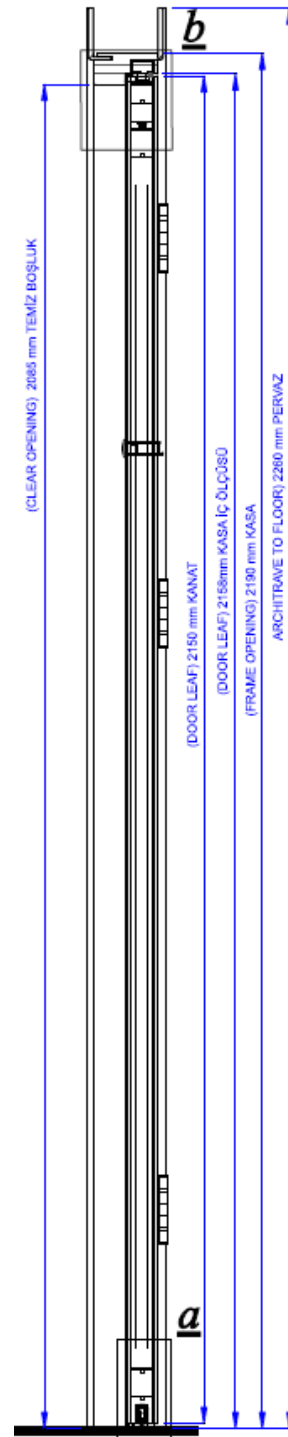


Figure 2: Longitudinal section view of the Door Nr.1.



Figure 3: Cross section view of Door Nr.1.

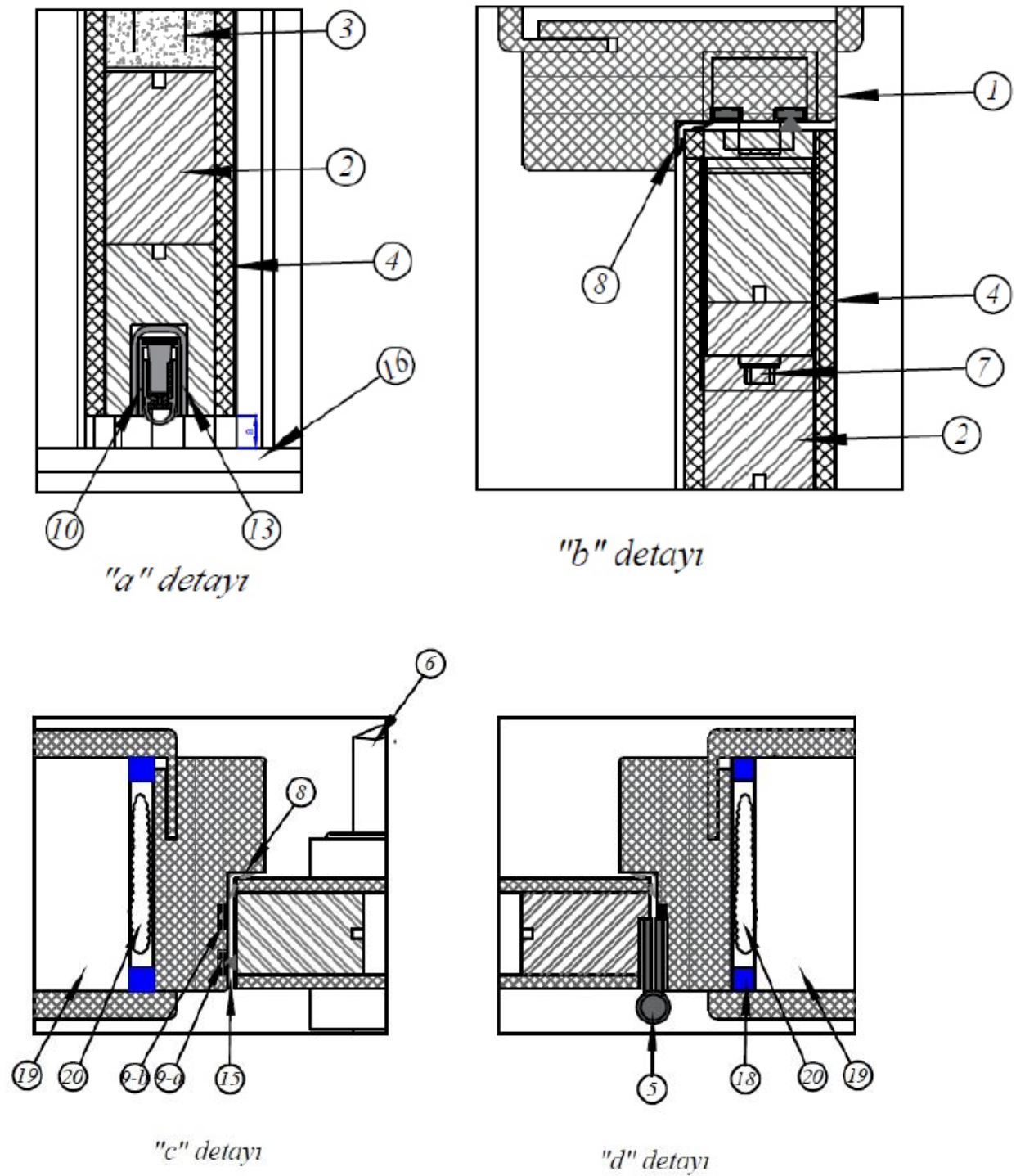


Figure 4: Sectional details of Door Nr.1.

SIRA NO	ÜRÜN ADI	PRODUCT	ÜRÜN KODLARI ve TEKNİK ÖZELLİKLERİ/PRODUCT CODES AND SPECIFICATION
1-	MDF kapı kasası	MDF door frame (770 kg/m ³)	MDF (770kg/m ³) 18+12+18mm
2-	Kapı sereni	Stile and rails softwood (400-450 kg/m ³)	Kökner, latın vb. 35x42mm (400-450kg/m ³)
3-	Kapı iç dolgu-delikli okal levha	Tubular chipboard Sauerland 35RH 363/kg m ³ holl Ø 18 mm	Sauerland 35RH (363 kg/m ³ Delikli yoğunluğu, delik çapı 188 mm)
4-	Kapı yüzeyi	Door skin 6mm MDF (770 kg/m ³)	MDF (770kg/m ³), 6 mm
5-	Menteşe	Butt hinges	Metahorgia Pons 135/1922 Test no 1239
6-	Onel kilidi	Hotel lock	MIWA ALSH 072215
7-	Gizli kapatıcı	Concealed closer	Ozone CDC 3800
8-	Soguk dıanan fitili	Smoke seal	Reddiplex 11301/ Hormony Corner (9946 12x12 mm)
9a-	İntumesan fitil fırçalı	Intumescent seal / Rigid box with pile	Pyroplex 8510 (10x4 mm fırçalı fitil)
9b-	İntumesan fitil fırçasız	Intumescent seal / Rigid box	Pyroplex 8500 (10x4 mm fırçasız fitil)
10-	Kapı altı gıyotini	Down drop seal	Planer KT FH RD 31109
11-	Kasa duvar arası boşluk 10mm	Masonry between frame gap / 10 mm	
12-	Pervaz	Casing / 100x12 mm MDF (770kg/m ³)	MDF (770kg/m ³), 100x12 mm
13-	Metal aksesuar şiltesi,yangın pedi	Intumescent metal accessory sheet	Pyroplex PMFS2, 1 mm
14-	İç dolgu çalışma boşluğu 2mm	Door core between stiles gap 2mm	
15-	Kanat ile kasa arası boşluk 3mm	Door leaf between frame opening	
16-	Kanat ile zemin arası boşluk 8mm	Door leaf between floor opening	
17-	Kapı dürbünü	Door viewer	Optuoptic 4014 / 40-60
18-	EL240 intumesan akrilik mastik	EL240 intumescent acrylic mastik	Pyroplex 2WT310
19-	Duvar	Drywall	
20-	B1 Poliüretan köpük	B1 polyurethane	Tytan B1

Figure 5: Materials list of Door Nr.1.

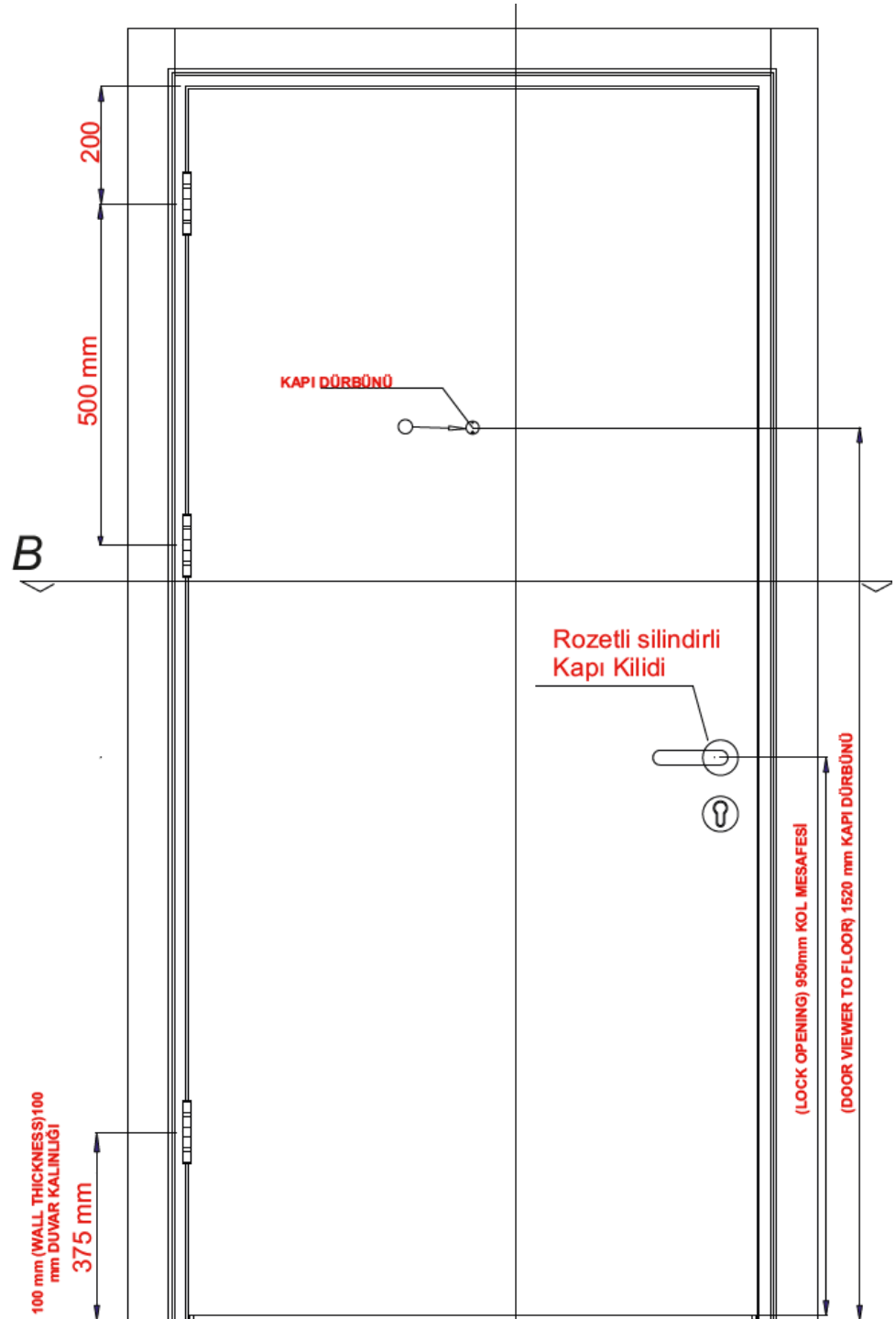


Figure 6: Locations of accessories of Door Nr.2.

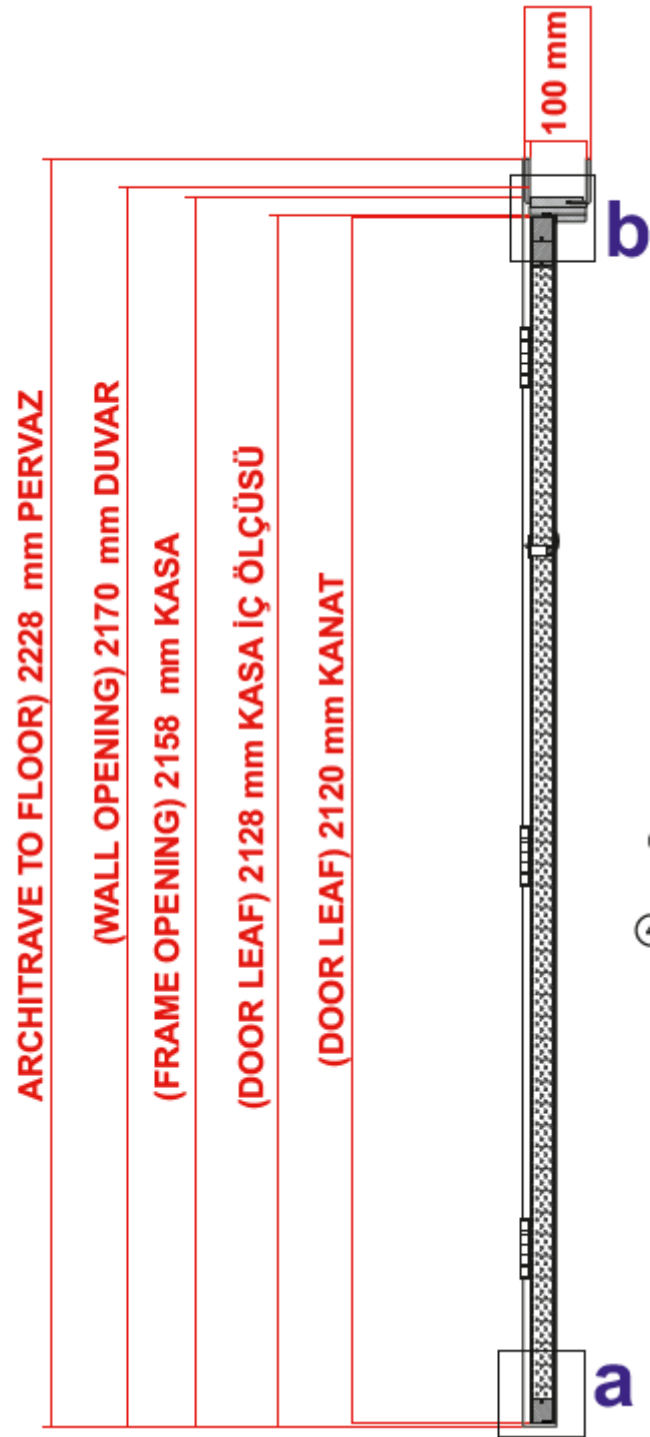


Figure 7: Vertical view of the Door Nr.2.

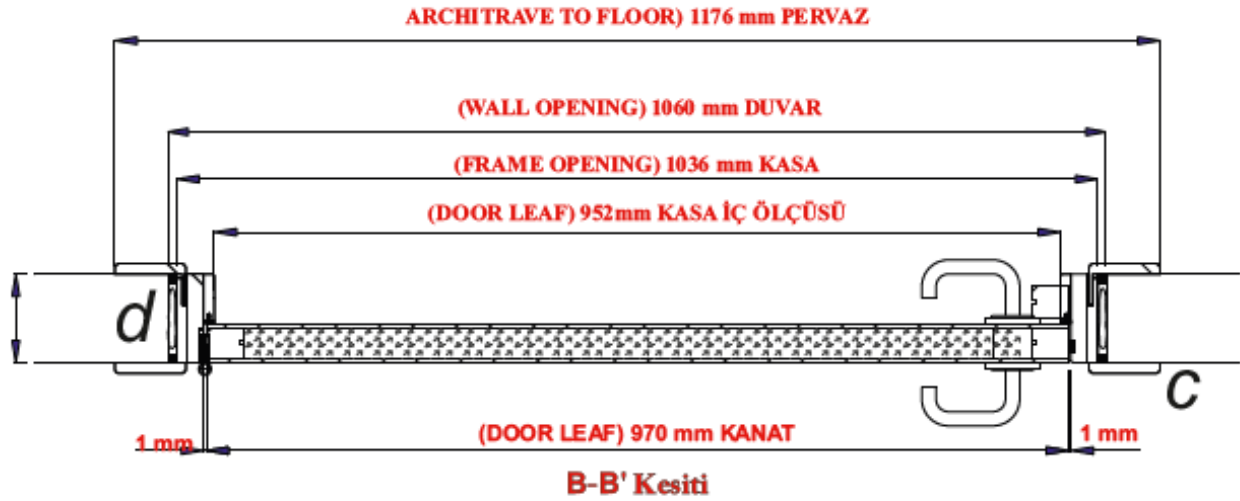


Figure 8: Cross section view of Door Nr.2

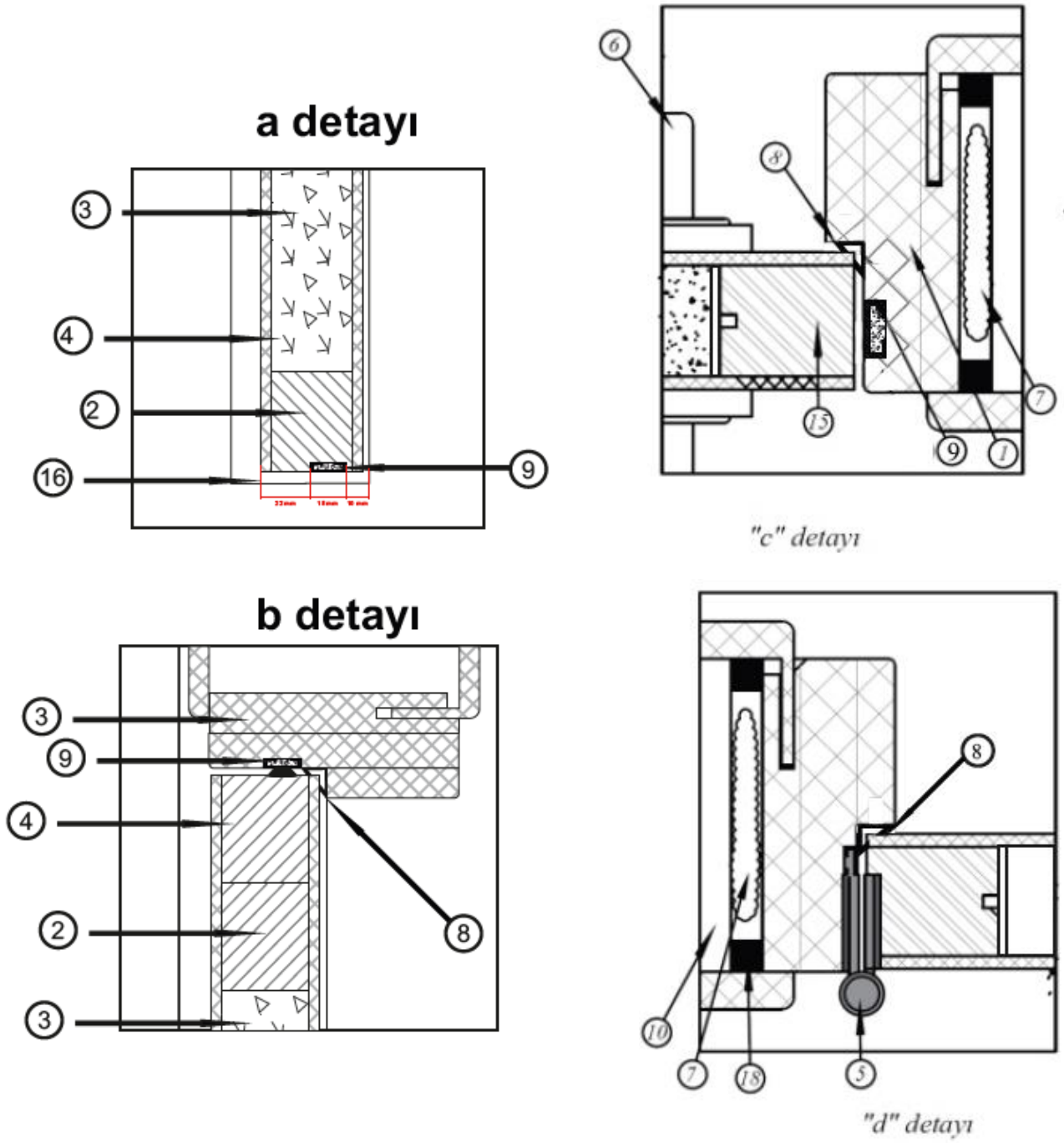


Figure 9: Sectional details of Door Nr.2.

SIRA NO	ÜRÜN ADI	PRODUCT	ÜRÜN KODLARI ve TEKNİK ÖZELLİKLERİ/PRODUCT CODES AND SPECIFICATION
1-	MDF kapı kasası	MDF door frame (770 kg/m ³)	MDF (770kg/m ³)12+18+12 mm
2-	Kapı sereni	Stile and rails softwood (400-450 kg/m ³)	Kökmar, ladın vb. 38x42 mm (400-450kg/m ³)
3-	Kapı iç dolgu-deliksiz okal levha	SAUERLAND 38VL Solid Board	SAUERLAND 38VL (490 kg/m ³)
4-	Kapı yüzeyi	Door skin 3mm MDF (770 kg/m ³)	MDF (770kg/m ³), 3 mm
5-	Menteşe	Butt hinges	Metahigia Pons 135/1922 Test no 1239
6-	Silindirik kilidi	Cylinder lock	ASSA ABLOY 1050
7-	B1 Politiüretan köpük	B1 polyurethane	Tytan B1
8-	Soğuk duman fitili	Smoke seal	Reddiplex 11301/ Harmony Corner (9946) 12x12 mm
9-	İntumesan fitil fırçasız	Intumescent seal / Rigid box	Pyroplex 8700 15x4 mm fırçasız fitil
10-	Dıvar	Drywall	
11-	Kasa dıvar arası boşluk 10mm	Masonry between frame gap / 10 mm	
12-	Pervaz	Casing / 100x12 mm MDF (770kg/m ³)	MDF (770kg/m ³), 100x12 mm
13-	Metal aksesuar şiltesi, yangın pedi	Intumescent metal accessory sheet	Pyroplex PMFS2, 1 mm
14-	İç dolgu çalışma boşluğu 2mm	Door core between stiles gap 2mm	
15-	Kanat ile kasa arası boşluk 3mm	Door leaf between frame opening	
16-	Kanat ile zemin arası boşluk 5mm	Door leaf between floor opening	
17-	Kapı diürbini	Door viewer	Qupuoptic 4014 / 40-60
18-	EI240 intumesan akrilik mastik	EI240 intumescent acrylic mastic	Pyroplex 2WT310 (10mm)
19-	Kapı Kolu	Handel	Assa Abloy AHW500UU00 Yuvarlak rozetli kol seti

Figure 10: Materials list of Door Nr.2.