



MEMBER OF



**REPORT No.** 066470-002-3-a

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<b>PURPOSE</b>	FIRE RESISTANCE CLASSIFICATION REPORT ACCORDING TO UNE-EN 13501-2:2016
<b>TESTED SAMPLE</b>	SINGLE-LEAF SWING TIMBER DOOR  REF. «MODELO RF T-30-O'FLYNN»
<b>DATE OF RECEIPT</b>	20.12.2017
<b>TEST DATE</b>	22.12.2017
<b>DATE OF ISSUE</b>	15.03.2018
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## 1.- INTRODUCTION

This classification report defines the fire resistance classification assigned to a fire door referenced as «**MODELO RF T-30-O'FLYNN**» in accordance with the procedures given in [C].

### 1.1 REFERENCE STANDARDS

- [A] *EN 1363-1:2012 “Fire resistance tests – Part 1: General Requirements”.*
- [B] *EN 1634-1:2014 “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”.*
- [C] *EN 13501-2:2016 “Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services”.*

## 2.- DETAILS OF CLASSIFIED ELEMENT

### 2.1 GENERAL

The sample referenced as «**MODELO RF T-30-O'FLYNN**» is defined as a fire resistant door as stated in [C] 7.5.5.

### 2.2 SAMPLE CHARACTERISTICS

The element, a fire door with reference “**MODELO RF T-30-O'FLYNN**”, is fully described below or in the test reports that support this classification listed in Section 3.1.

<b>Number of leaves</b>	1 leaf
<b>Number of sides tested</b>	1 side
<b>Test direction</b>	Opening towards the inside of the furnace
<b>Frame Material</b>	Wood
<b>Leaf Material</b>	Wood

## Sample definition

Verification of the sample tested has been carried out superficially during its assembly along with the technical documentation issued by the applicant relating to point 3.1 of this report which has been included in Annex 4.

### FRAME

#### *Frame*

Jamb material	Pine wood
Density (kg/m <sup>3</sup> )	450 approx.
Cross-section (mm)	100x44 (46 mm rebate with a depth of 12 mm).
Connection between timber elements	Via 2 screws of 4.5 x 80 mm secured from the lintel to the jamb.
Supporting construction attachment method	8 M6 x 112 mm metal anchors with 10 mm diameter. Ref.: EPS 6112 / M-6 x 112 PZ3 from the manufacturer Index.
	Location: 4 on the hinge side, and 4 on the locking plate side, at 100 mm from the upper section and 100 mm from the lower section, placing the remaining two to form 3 equal spaces.
	Gaps of 10 mm (5 mm from each side) and 5 mm in height from the upper section of the frame and subframe.
	The gap is filled with fire-resistant polyurethane foam, reference Blue 60 from the manufacturer

## LEAF

Exitex.

Dimensions (mm)	Height: 2110 Width: 930
Thickness (mm)	44
<i>Inner Frame</i>	
Material	Pine wood
Type of connection	Staples.
Density (kg/m <sup>3</sup> )	450 approx.
Cross-section (mm)	2 stiles and 2 crosspieces of (24.2x30) mm.
<i>Core</i>	Material: Formed by a ST-type MDF panel 24.2 mm thick from the manufacturer Tafibra, which fills the entire space inside the frame.  Density: 680 kg/m <sup>3</sup> approx.
<i>Facings</i>	Material: MDF panel formed by 2 ST type boards 5 mm thick from the manufacturer Tafibra.  Density: 820 kg/m <sup>3</sup> approx.
Assembly method	Glued to the frame and the core filled with glue.
Adhesive	D3 PVAc, reference 3030 from the manufacturer Akzo Nobel.
<i>Decorative panel</i>	Material: MDF panel formed



by 2 ST type boards 5 mm thick from the manufacturer Tafibra.

Density: 820 kg/m<sup>3</sup> approx.

Assembly method

Glued to the facings with D3 PVAc glue, reference 3030 from the manufacturer Akzo Nobel.

*Flashing*

Material: Fibreboard.

Model T-80 x 16-D, type ST from the manufacturer Intasa.

Dimensions: 80 x 16 mm

Density: 700 kg/m<sup>3</sup>

Position: on both sides of the door.

Fixing: attached using pins.

SEALS

*Intumescent*

Reference:

Fire resistant seal with a palusol base, hydrated sodium silicate wrapped with vinyl paper, and a smoke sealant, from the manufacturer Exitex.

Location

In the rebate section, placed in a groove made in the frame itself.

Type

Recessed

Units

1

Cross-section (mm)

15x4



BUILDING HARDWARE

<i>Lock</i>	Mortise lock in stainless steel with 1 locking point.
Make and model	Model AR910-R60-SSS from the manufacturer Arrone.
Distribution of central locking point, distance from the base of the door to the centre of the handle	At 1070 ± 1 mm.
Dimensions (mm)	Height: 235 Width: 24 Depth: 92 With spindle: 60
Protection	With an intumescent product, thermally expanding material with an ammonium phosphate base, reference AR/INT-DIN-LOCK-60 from the manufacturer Arrone, with a thickness of 1 mm encased in the mortise.
<i>Locking plate</i>	
Make and model	Included with the lock.
Dimensions (mm)	170x24x1.5
Protection	With an intumescent product, thermally expanding material with an ammonium phosphate base, reference AR/INT-DIN-LOCK-60 from the manufacturer Arrone, with a thickness of 1 mm encased in the mortise.
Position	1020 mm from the upper section of the frame to the centre of where the latch is housed, and 8 mm from the inner part of the rebate.



*Lock cylinder* 70 mm push-button lock cylinder, EP70CTSKD model from the manufacturer ARC.

*Drive*

Drive Type Handle and keyhole.  
On both sides

Make and model Model Siena from the manufacturer AT.

*Hinges*

Make and model Model AR8182-SSS from the manufacturer ARRONE.

Material Stainless steel

Type Visible.

Dimensions (mm) 102x76x3

Number 3

Fixing With screws.

Location on leaf 120, 1005 and 1888 mm from the top part of the leaf to the hinge.

*Door closer*

Make and model Model AR1500-SE/SE from the manufacturer ARRONE.

Type Air.

Position Upper part of the door.

*Others* Drop seal:

Model: Concealex A8100 from the manufacturer Exitex.



Protection: Interdens 15 from the manufacturer Odice, 1 mm thick.

Position: a groove with a cross section of (37x17) mm is made in the upper section of the leaf, where a watertight drop seal is placed.

The drawings made by the laboratory following verification of the samples and technical documentation are listed in Annex 1 and Annex 4 of the test report detailed in Section 3.1 of this report.



### 3.- TEST REPORT AND TEST RESULTS SUPPORTING THE CLASSIFICATION

#### 3.1 TEST REPORTS

Laboratory name	Applicant's name	Report reference No.	Test method	Opening direction	Date of test
TECNALIA RESEARCH & INNOVATION	NORMA DOORS TECHNOLOGIES, S.A.	066470-002-1	[B]	Opening towards the inside of the furnace	22.12.2017

### 3.2 RESULTS

<b>Integrity (E)</b>		<b>36 min</b>
<b>Performance criterion</b>		
Cotton pad	Flaming or glowing of the cotton pad.	36 min <sup>(1)</sup>
Gauge Ø 6 mm	Openings in the sample letting the gauge to pass through, moving within a distance of 150 mm throughout the opening.	36 min <sup>(1)</sup>
Gauge Ø 25 mm	Openings in the sample which allow the gauge to pass through.	36 min <sup>(1)</sup>
Sustained flames > 10 s	Sustained flaming on the unexposed side of the sample for more than 10 s.	36 min
<b>Insulation (I<sub>1</sub>)</b>		<b>36 min</b>
<b>Performance criterion</b>		
Maximum temperature I <sub>1</sub>	Not exceeding the initial temperature of each thermocouple by 180 °C.	36 min <sup>(1)</sup>
<b>Insulation (I<sub>2</sub>)</b>		<b>36 min</b>
<b>Performance criterion</b>		
Maximum temperature I <sub>2</sub>	Not exceeding the initial temperature of each thermocouple on the leaf by 180 °C and that of each thermocouple on the frame by 360 °C.	36 min <sup>(1)</sup>
Average temperature	Not exceeding the average initial temperature of the thermocouples located in each different insulation area by 140 °C.	36 min <sup>(1)</sup>

<sup>(1)</sup>: Measurement not completed due to integrity failure, sustained flame.



## 4.- CLASSIFICATION AND FIELD OF APPLICATION

### 4.1 CLASSIFICATION REFERENCE

This classification has been carried out in accordance with [C] Chapter 7.

### 4.2 CLASSIFICATION

According to [C], the fire door referenced as «MODELO RF T-30-O'FLYNN», the classification is:

El <sub>2</sub>			30						
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El <sub>1</sub>			30						
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E			30						
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**Fire Resistance Classification: El<sub>1</sub> 30 E30**

**Fire Resistance Classification: El<sub>2</sub> 30 E30**



### 4.3 DIRECT FIELD OF APPLICATION

The direct field of application of the test results refers to those changes that can be carried out on a sample after a fire resistance test with a satisfactory result. These variations can be entered automatically without the need for the applicant to obtain additional evaluations, calculations or approvals.

Parameter	Permitted Variation	Tested sample
Thickness and density of the leaf.	Increase provided that the total increase in weight is not higher than 25% of the latter.	<p>Thickness of the leaf: 44 mm</p> <p>Density by element:</p> <p><i>Wood frame</i></p> <p>Material: Pine wood Density: 450 kg/m<sup>3</sup> approx.</p> <p><i>Core</i></p> <p>Material: Formed by a ST-type MDF panel 24.2 mm thick from the manufacturer Tafibra, which fills the entire space inside the frame. Density: 680 kg/m<sup>3</sup> approx.</p> <p><i>Facings</i></p> <p>Material: MDF panel formed by 2 ST type boards 5 mm thick from the manufacturer Tafibra. Density: 820 kg/m<sup>3</sup> approx.</p> <p><i>Decorative panels</i></p> <p>Material: MDF panel formed by 2 ST type boards 5 mm thick from the manufacturer Tafibra. Density: 820 kg/m<sup>3</sup> approx.</p>
Density of the board with wooden base.	May be increased.	See previous point.



Parameter	Permitted Variation	Tested sample
Cross-section size and/or density of frame.	May be increased.	Material: Pine wood Density: 450 kg/m <sup>3</sup> Cross-section: (100x44) mm
Paint finishes.	Paint which does not contribute to fire resistance.	Sample tested with no paint
Decorative laminates	Decorative laminates and wood veneers up to 1.5 mm-thick can be applied on sides (never on edges) of door leaves and frames complying with insulation criteria.  In all doors tested with decorative laminates on their sides, variations of said laminates will only be admitted for similar thickness and types to those of the material (e.g. colour, model, make).	
Fixings	The number of fixings for fastening the door may be increased but not reduced, and the distance between fixings can be reduced but not increased.	8 M6 x 112 mm metal anchors with 10 mm diameter. Ref.: EPS 6112 / M-6 x 112 PZ3 from the manufacturer Index.  Location: 4 on the hinge side, and 4 on the locking plate side, at 100 mm from the upper section and 100 mm from the lower section, placing the remaining two to form 3 equal spaces.
Building hardware.	Increase the number of fixings designed to restrict movement (locks, latches and hinges).  Building hardware may not be changed.	<i>Lock</i>  Mortise lock in stainless steel with 1 locking point. Model AR910-R60-SSS from the manufacturer Arrone.  <i>Locking plate</i>  Included with the lock, with dimensions of (170x24x1.5)



Parameter	Permitted Variation	Tested sample
		mm.
		<i>Drive</i>
		Handle and keyhole, Model Siena from the manufacturer AT.
		<i>Hinges</i>
		3 in stainless steel, model AR8182-SSS from the manufacturer ARNONE, with dimensions of (120x76x3) mm.
		<i>Door closer</i>
		Overhead. Model AR1500-SE/SE from the manufacturer ARNONE.
		<i>Drop seal</i>
		Model: Concealex A8100 from the manufacturer Exitex.
Dimensional changes:	<p><u>Class B:</u> Dimensional increases are permitted:</p> <ul style="list-style-type: none"> <li>- 15% in height</li> <li>- 15% in width</li> <li>- 20% in surface</li> </ul> <p>Unlimited size reductions are allowed.</p>	Outer dimensions of the leaf: (2110x930) mm.
For larger doors	<p>The height of the lock above the floor must be the same or greater.</p> <p>The distance between the upper hinge and the upper section of the door leaf must be</p>	<p>Hinge distances:</p> <p>At 120, 1005 and 1888 mm from the top part of the leaf to the hinge.</p> <p>Distance of the lock to the</p>



Parameter	Permitted Variation	Tested sample
	<p>equal to or less than that in the test specimen.</p> <p>The distance between the lower hinge and the lower part of the leaf must be the same or less.</p> <p>When three hinges or anti-deflection devices are used, the distance between the lower part of the leaf of the door and the hinge of the central device should be equal to or greater than that in the test specimen.</p>	<p>bottom edge of the door:</p> <p>1070 mm ± 1 mm</p>
For smaller doors	The relative positions of the elements are maintained enabling assembly action (locks, hinges, etc.) or modification of distances are limited to the same reduction percentage applied to the size of the test specimen.	See previous point.
Opening direction	Valid for both opening directions.	Opening towards the interior of the furnace.
Supporting construction	<p>The tested model is valid for:</p> <p>Rigid supporting construction with: Density ≥ 1200 kg/m<sup>3</sup></p> <p>Thickness ≥ 100 mm</p> <p>Flexible supporting construction.</p>	<p>Low-density standardised rigid supporting construction, made with ceramic double hollow brick rendered on both sides.</p> <p>Approximate density: 1200 kg/m<sup>3</sup> and thickness 100 mm.</p>



## 5.- LIMITATIONS

This classification document does not represent any sort of product approval or certification.

Any modifications that have not been expressly included in the sections above will not be considered for the purpose of possible changes without due additional express approvals.



## EXTENDED APPLICATION TECHNICAL ASSESSMENT REPORT OF FIRE RESISTANCE TEST RESULTS

REPORT Nr:	245219ENG	Nº PROYECTO: PY18-0077	ALBARÁN: MV70062
		Project Nr.	Ref. Nr
DATE OF ISSUE	15/05/2018		
PRODUCT	Type:	SINGLE-LEAF SWING TIMBER DOOR	
	Reference:	MODELO RF T-30 O'FLYNN	
APPLICANT	NORMA DOORS TECHNOLOGIES, S.A. PARAJE DE QUIÑONES S/N 42120 SAN LEONARDO DE YAGÜE (SORIA)		

**Elena Malaina Bengoa**  
Department Director

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## 1 SCOPE

The purpose of this report is to determine the extended field of application of fire resistance test results, of a swing wooden door with a leaf, manufactured by **NORMA DOORS TECHNOLOGIES, SA**, referenced as **MODELO RF T-30 O'FLYNN**, for the modifications described in section 4.1 of this report

This extension report concerns the test results obtained in accordance with the procedures of the standard:

- EN 1634-1:2014. *“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.”*

The technical evaluation process of the test results is carried out according to the laboratory's experience in tests of fire resistance of wooden doors

## 2 EVALUATED PRODUCT

<i>Description:</i>	Single-Leaf Swing Timber Door
<i>Manufacturer:</i>	NORMA DOORS TECHNOLOGIES, S.A.
<i>Reference:</i>	RF T-30 O'FLYNN
<i>Number of leaves:</i>	1
<i>Closing action</i>	One point lock and door closer
<i>Total dimension:</i>	2149 mm x 997 mm
<i>Leaf dimension:</i>	2110 mm x 930 mm
<i>Light measurement:</i>	2105mm x 909 mm
<i>Leaf thickness</i>	44 mm
<i>Main material</i>	Wood
<i>Opening Sense:</i>	opening into the furnace



### 3 TEST REPORTS AND RESULTS IN SUPPORT OF THE TECHNICAL EVALUATION

#### 3.1 Test reports

<b>Nº Report</b>	<b>Laboratory</b>	<b>Applicant</b>	<b>Date of Test</b>	<b>Test Method</b>
066470-001-1	TECNALIA	NORMA DOORS TECHNOLOGIES, S.A.	28/07/2017	EN 1634-1: 2014
244659	ENSATEC	NORMA DOORS TECHNOLOGIES, S.A.	23/02/2018	EN 1634-1: 2014

#### 3.2 Tested samples

<b>Element</b>	<b>Report nº 066470-002-1</b>	<b>Report nº 244659</b>
<i>Description:</i>	SINGLE-LEAF SWING TIMBER DOOR	Timber simple leaf swinging door
<i>Manufacturer:</i>	Norma Doors Technologies S.A.	Norma Doors Technologies S.A.
<i>Reference:</i>	RF T-30 O'FLYNN	RF T-30-B
<i>Number of leaves:</i>	1	1
<i>Closing action</i>	One point lock and door closer	One point lock and concealed door closer
<i>Total dimension:</i>	2149 mm x 997 mm	2141 mm x 981 mm
<i>Leaf dimension:</i>	2110 mm x 930 mm	2110 mm x 930 mm
<i>Light measurement:</i>	2105mm x 909 mm	2105 mm x 893 mm
<i>Leaf thickness</i>	44 mm	44 mm
<i>Main material (leaf and frame):</i>	Leaf.- Particle board Frame.- Wood	Leaf.- Particle board Frame.- Wood
<i>Certification Reference:</i>	Opening into the furnace	1121 FM395212 21/02/2018 (opening into the furnace)



### 3.3 Test Conditions

Test report nº 066470-002-1	
Reference:	MODELO RF T-30 O'FLYNN
Exposed side:	Opening inwards into the furnace
Number of side tested:	1
Sample selection:	There is no record of the sampling
Supporting Construction:	Standard rigid supporting construction, made with ceramic brick double hollow plastered on both sides, with a density of 1200 Kg/m <sup>3</sup> and thickness 100 mm received with cement glue.
Maximum allowed gaps:	Lock side: (0,0 – 3,5) mm. Hinges side: (0,0 – 3,5) mm. Upper part: (0,0 – 4,0) mm. Sill: (0,0 – 6,5) mm.
Details:	Detailed descriptions of the samples and assembly are presented in report 066470-002-1

Test report nº 244659	
Reference:	Door 2: RF T-30-B
Exposed side:	Opening inwards into the furnace
Number of side tested:	1
Sample selection:	The sample was selected by Warrington Certification in the sampling made on 21/02/2018 at the facilities of NORMA DOORS TECHNOLOGIES S.A. and sent to the laboratory by the applicant. File number FM395212
Supporting Construction:	Standard rigid supporting construction, low density Clay block wall of 90 mm thick revoked with mortar on both sides. Total wall thickness 100 mm Density 676 kg/m <sup>3</sup>
Maximum allowed gaps:	Hinges side: 4.0 mm Strike side: 5.4 mm Upper part: 4.6 mm Lower part: 7.1 mm
Details:	Detailed descriptions of the samples and assembly are presented in report 244659



### 3.4 Test results.

Test report nº 066470-002-1	
<b>Set A. MODELO RF T-30 O'FLYNN</b>	
<b>INTEGRITY (E): 36 minutes</b>	
<b>Cotton pad:</b>	36 minutes (without failure, test stopped)
<b>Gap gauge <math>\Phi 6</math> mm:</b>	36 minutes (without failure, test stopped)
<b>Gap gauge <math>\Phi 25</math> mm:</b>	36 minutes (without failure, test stopped)
<b>Sustained flames:</b>	36 minutes
<b>INSULATION (I<sub>1</sub>): 36 minutes</b>	
<b>Mean Temperature:</b>	36 minutes (without failure, test stopped)
<b>Maximum Temperature:</b>	36 minutes (without failure, test stopped)
<b>INSULATION (I<sub>2</sub>): 36 minutes</b>	
<b>Mean Temperature:</b>	36 minutes (without failure, test stopped)
<b>Maximum Temperature:</b>	36 minutes (without failure, test stopped)
<b>CONCLUSIONS:</b>	
The test is stopped at minute 36 minutes due to integrity failure, passage of flame.	

Test report nº 244659	
<b>DOOR 2 MODELO RF T-30-B</b>	
<b>INTEGRITY (E): 46 minutes</b>	
<b>Cotton pad:</b>	46 minutes (without failure, test stopped)
<b>Gap gauge <math>\Phi 6</math> mm:</b>	46 minutes (without failure, test stopped)
<b>Gap gauge <math>\Phi 25</math> mm:</b>	46 minutes (without failure, test stopped)
<b>Sustained flames:</b>	46 minutes
<b>INSULATION (I<sub>1</sub>): 43 minutes</b>	
<b>Mean Temperature:</b>	43 minutes (without failure, test stopped)
<b>Maximum Temperature:</b>	43 minutes (without failure, test stopped)
<b>INSULATION (I<sub>2</sub>): 46 minutes</b>	
<b>Mean Temperature:</b>	46 minutes (without failure, test stopped)
<b>Maximum Temperature:</b>	46 minutes (without failure, test stopped)
<b>TEST EXTENSION: 46 minutes</b>	
<b>MAXIMUM DEFLECTION: 24 mm</b>	
<b>CONCLUSIONES:</b>	
The test is stopped at minute 46 by passing flame through the upper corner, side hinges. In the minute 43 there is failure by insulation, maximum temperature in the additional thermocouples.	



## 4 EXTENSION OF APPLICATION OF TEST RESULTS

### 4.1 Planned modifications

The studied modifications are shown below:

- Change of frame material, from particle board to pine wood
- Replacement of surface mounted door closer for concealed door closer
- Decreased number of hinges

### 4.2 Applied principles for technical evaluation

The study and justification of the planned modifications will be carried out according to the laboratory's experience in test of fire resistance and the durability of the self-closing for swing doors of a wooden leaf tested according to the standards EN 1634-1:2014.

## 5 PROCEDURE

Then the product parameters are listed for which the evaluation is requested, and the combination of changes allowed is justified, according to the study documentation provided by the petitioner.

### 5.1 Replacement of surface mounted door closer for concealed door closer

It is intended to exchange the ARNONE tested door closer ref. AR1500-SE/SE for an alternative one with the following characteristics.

Alternative doorcloser Test 244659	
<i>Manufacturer:</i>	ARRONE
<i>Series/family:</i>	AR7383
<i>Reference:</i>	AR7383
<i>Position (aerial, ground):</i>	Aerial
<i>Assembly (face mounted/concealed):</i>	concealed
<i>Material:</i>	aluminium
<i>Dimensions (mm):</i>	
Length:	242
Width:	32
Height:	49
<i>Element protection:</i>	AR/INT-7383 1 mm thickness , inlay in the door closer recess

#### Justification changes.

The alternative door closer has been successfully tested on a door with similar characteristics, as shown in the test report 244659, reference RF T-30 B

In the test report presented as evidence you can see the complete description of the sample and the assembly of it. As shown summary comparison of the leaves and frames.



Leaf	Report nº 066470-002-1	Report nº 244659
<i>Nº of leaves:</i>	1	1
<i>Type:</i>	Set Wooden folding single leaf	Set Wooden folding single leaf
<i>Supporting Frame:</i>	Perimeter of pine Wood Section 24.2 x 30 mm Density 450 kg/m3	Perimetral, formed by 2 stiles of MDF medium density fibres, density 650 kg/m3, measuring 23 x 34,2 mm and 2 pine-wood rail, density 494 kg/m3, measuring 30 x 34.2 mm, assembled using staples. Attached to each of the two rails of MDF are placed 2 edges of solid wood of 44 mm x 7 mm
<i>Core:</i>	Medium-density fibreboard panel (MDF), 24.2 mm of thickness and density 680 kg/m3 TAFIBRA , type ST	Particle board consisting of 1 ultralight chipboard 34,2 mm thick manufactured by GRUPO LOSAN, density 455 kg/m3.
<i>Facings:</i>	Formed by 2 medium-density fibreboard panels (MDF), 5 mm thick, 820 Kg/m3 density	Medium-density fibreboard (MDF), density 820 kg/m3, consisting of 2 tables of 5 mm thick
<i>Method of fixing between elements:</i>	Glued with D3 glue PVAc, reference 3030 manufactured BY AZKO NOBEL	Glued with D3 glue PVAc, reference 3030 manufactured BY AZKO NOBEL.
<i>Total dimension:</i>	2110 mm x 930 mm	2110 mm x 930 mm
<i>Leaf thickness:</i>	44 mm	44 mm

Frame	Report nº 066470-002-1	Report nº 244659
<i>Sides Nr:</i>	3	3
<i>Material:</i>	Pine Wood, 450 Kg/m3	Pine Wood, 450 Kg/m3
<i>Section:</i>	100 mm / 44 mm with rebate of 46 x 12 mm	100 mm / 44 mm with rebate of 46 x 12 mm
<i>Fixing to the subframe:</i>	without preframe The set is fixed using 8 metric 6 x 112 mm metal anchors and 10 mm diameter to fix door frames, reference EPS 6112 / M-6 x 112 PZ3 manufactured by INDEX, distributed 4 on the side of the hinges and 4 on the side of the strike. The arrangement of the metal anchors on each side is 100 mm from the top and 100 mm from the bottom, and the other two distributed leaving 3 equal holes.	without preframe The set is fixed using 8 metric 6 x 112 mm metal anchors and 10 mm diameter to fix door frames, reference EPS 6112 / M-6 x 112 PZ3 manufactured by INDEX, distributed 4 on the side of the hinges and 4 on the side of the strike. The arrangement of the metal anchors on each side is 100 mm from the top and 100 mm from the bottom, and the other two distributed leaving 3 equal holes.



## Conclusion

It can be concluded that the alternative door closer can be installed, without the characteristics of fire resistance of the sample is negatively affected, whenever that the following conditions are met:

- The intumescent protection of the concealed door closer must be maintained, as shown in the test 244659 RF T-30-B

## 6 RESULTS OF APPLICATION EXTENSION

### 6.1 Application Interval.

Then, the allowable range of variability for different product parameters and / or end use application is shown. The other parameters should be maintained as described in the test report nº 066470-002-1, or changes defined in the field of direct application described in classification report can be applied.

Variation evaluated	Application interval
<i>Replacement of door closer</i>	It is possible to replace the ARRONE door closer ref. AR1500-SE/SE for the concealed door closer ARRONE ref. AR7383, considering the limitations described in section 5.1 of this report. The result is limited to lower results obtained in the tests involved.



## 6.2 Fire Performance Parameters

Then, the applicable results are shown for the application intervals covered by this evaluation report.

Variation evaluated	INTEGRITY (E)	INSULATION (I <sub>1</sub> ) / (I <sub>2</sub> )	CLASIFICATION
<i>Replacement of door closer</i>	36 min	36 min	E <sub>1</sub> 30/ E <sub>I2</sub> 30/ E 30

This evaluation does not represent a classification according to EN 13501-2.

## 7 LIMITATIONS

The results of the evaluation of the test results related to the behaviour of a product / product family or construction element under the test conditions, are not intended to be the sole criterion for assessing the potential fire hazard of the product / family of products or construction element in use.

This report is valid for as long as the reference test reports, as described in section 3.1 *Test reports* in this report.

This document does not represent a type approval or a product certification