



FIRE DOORSET

DELTA

TURIA

FONO-TURIA

METER DOORS



OPENING DOORS TO THE FUTURE

Ever since its beginnings as a small steel carpentry workshop in 1970, **Andreu** has sought to offer its customers new products with the highest standards of quality, using the most advanced technology available on the market. In 1972, we designed and patented the model known in Spain as the "ENSAMBLADA" door, manufactured in accordance with our own exclusive system. Subsequently, our experience and the knowledge acquired have led us to develop a more technical and specialized product: the FIRE-DOORSET. Later, thanks to the good reputation of our products and our interest in innovation, we launched a range of more aesthetic, elegant doors: the RESIDENTIAL DOORS.

In line with its tradition, **Andreu** opens new doors to the imagination day by day. All our resources are allocated to the innovation of new steel doors; MULTI-USE, FIRE-DOORSET AND RESIDENTIAL doors, with personalised solutions in each case.

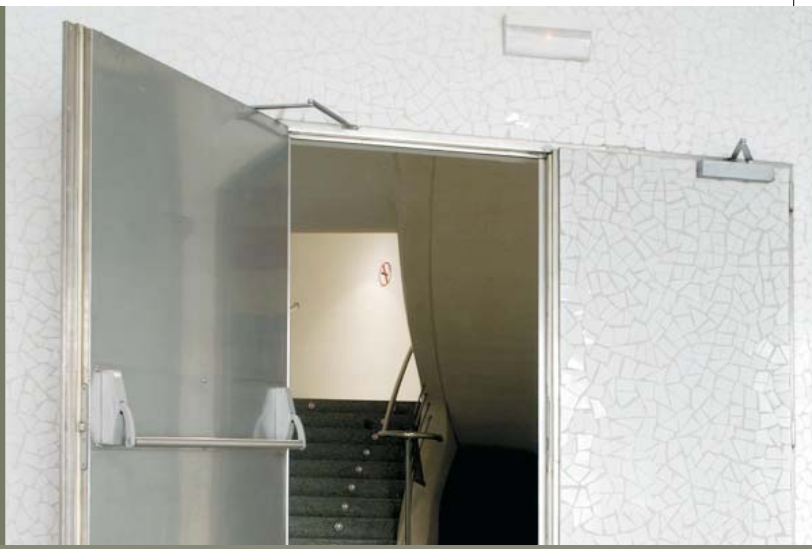
Our state-of-the-art production systems and our excellent R&D team give us a competitive edge in an increasingly complex and demanding market. We are specialised in providing new ideas for our customers' projects, incorporating an added value and a guarantee of quality in each new model.

Our quality management system for the design, production and commercialisation processes of all our lines of steel doors and accessories are certified by AENOR in accordance with UNE-EN-ISO 9001:2000 standards.

Andreu opens new doors to the future.



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FIRE DOORSET

Life for your Home

Delta

Turia

Double Leaf Turia

Fono-Turia

Turia Meter Door

Basic Meter Door

Lex Meter Door

Accessories

Some of the main concerns and obligations for architects and constructors are the planning and construction of safe, habitable buildings. Security begins with prevention and the selection of adequate structural materials and components, such as fire-doorsets, an essential protective element against the destructive force of fire. As a result, the use of fire-doorsets is obligatory in certain locations, in accordance with current regulations.

Andreu has more than 30 years experience in the development of ever-more advanced technological solutions. The range of fire-doorsets is the fruit of this effort and of our know-how in the manufacture of high-quality steel doors.

El₂ t C5



SINGLE LEAF FIRE RATED DOOR EI₂ 60 C5

DELTA



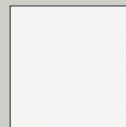
The latest model in the range of fire-doorsets, the **DELTA** is a security door featuring the most advanced technological innovations, and a structure similar to that of the rest of doors in the same range. The door is characterized by its easy installation and maintenance.

Built and assembled without soldering, the door is classified in the EI₂ 60 category, after having passed the tests carried out in an approved laboratory.

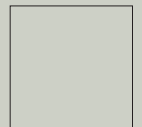
EI₂ 60 C5



• GALVANISED
+Antifinger Protection



• WHITE



• Other RAL to select

Technical Characteristics - Delta Door

Leaf

Its **STRUCTURE** consists of two **unsoldered 0'7-mm-thick galvanised steel sheet with "antifinger" protection**. The door is also available in White pre-lacquered steel finish.

Sheet

Galvanised steel
+ **antifinger** protection

¿What is the **ANTIFINGER PROTECTION**?

The Antifinger finish is a **clear prime as a supplement over the galvanised**.

3 advantages

Allow the door to be **painted on directly**, without the need of prior treatment.

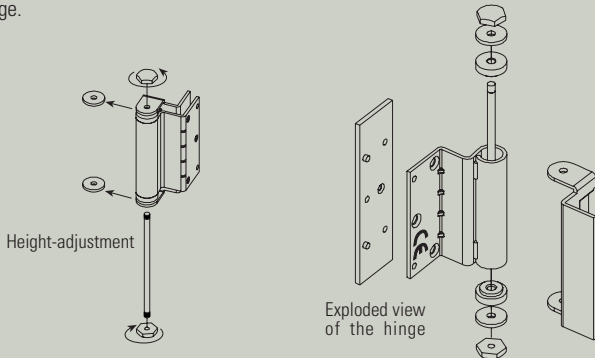
Provide a greater **anti-corrosive protection**.

Its look is **grey, transparent, homogeneous** and not oily.

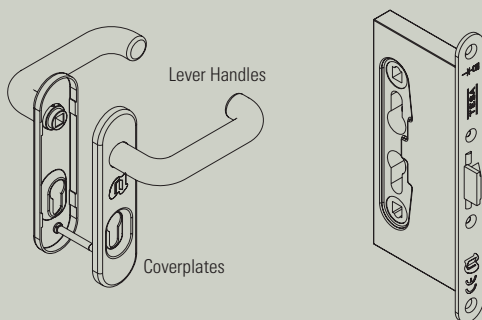
Its **INTERIOR** is filled with a combination of fire-resistant materials. **The door is 62 mm thick**, with a 16 mm wide, 2 mm thick edge.

The door is equipped with **2 HINGES** of **3 mm thick** screwed onto the leaf and **soldered onto the frame**. Own manufacturing. Certified **EC Mark** according to EN-1935.

A central steel **anti-crow bar bolt** for improved security is incorporated into the hinge.



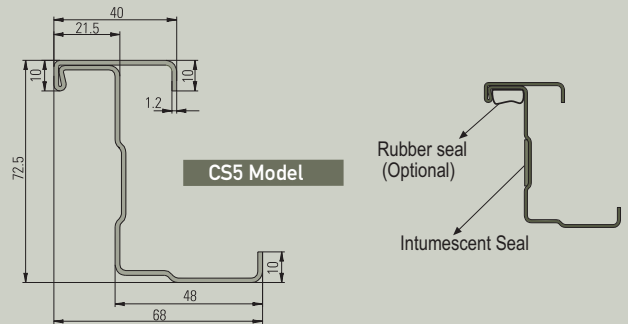
The **LOCKING SYSTEM** includes a mortice **lock of one-point** locking system with EC Mark according to EN-12209:2007. The system also comprises a **35x35 brass cylinder** with keys.



The **HANDLE SYSTEM** included in the standard range comprises two lever handles made of a **highly-resistant material, coverplates and backplates**, also made of the same material, **with key-holes** on both sides.

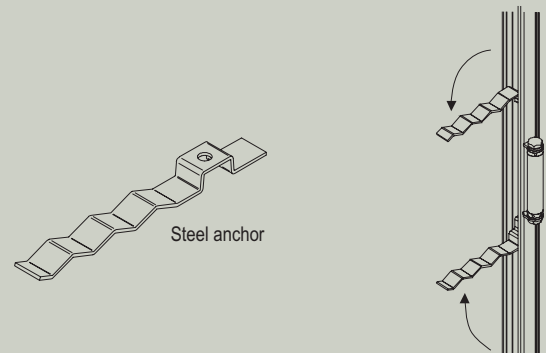
Frame

The profile of this door is mounted onto a **frame** called CS5 made of **1'2 mm-thick galvanised steel**.



An **intumescent seal or rubber seal** can also be installed even if the door is **not equipped with a seal**, as standard regulation does not require it.

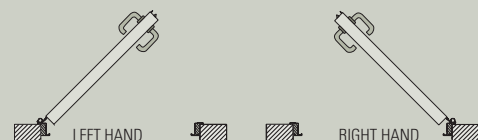
There are **3 galvanised steel anchors** on each side, allowing the frame to be installed in brickwork, or screwed onto a sub-frame.



When installing the frame into a brick wall, always use cement-based mortars and do not use plaster or other derivatives. Plaster attacks the zinc coating which protects the galvanised steel against corrosion.

The CS5 frame can be screwed onto a specially designed galvanised steel **SUB-FRAME**, which is **optional**, and allows the easy installation of the door once the construction works are completed (see page 15).

Door Opening



Standardized Sizes

The standardized sizes of the Delta door are the same as the fire door Turia Model (see page 7).



FIRE RATED DOOR 1 & 2 LEAVES EI₂ 30-60-90-120 C5

TURIA



The **Turia** fire-doorset is available in four models: single-leaf, double-leaf, double-leaf asymmetric and meter doors.

Characterized by their great versatility, both the frame and the leaf of this range of doors are manufactured in different finishes, in accordance with the requirements of specific projects, and incorporate various accessories, many designed exclusively. These doors fulfill the double function of security and design, and provide effectiveness and adaptability to any architectural setting.

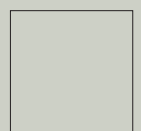
- EI₂ 30 C5
- EI₂ 60 C5
- EI₂ 90 C5
- EI₂ 120 C5



• GALVANISED
+Antifinger Protection



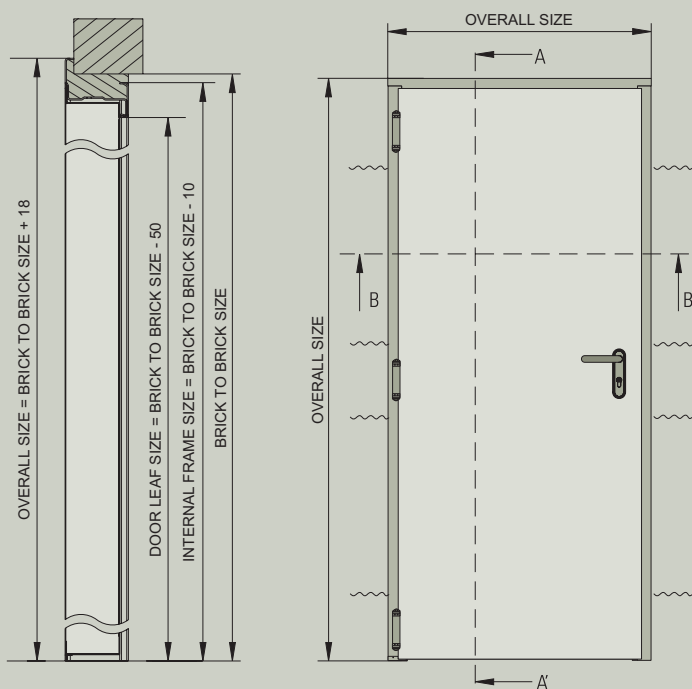
• WHITE



• Other RAL to select

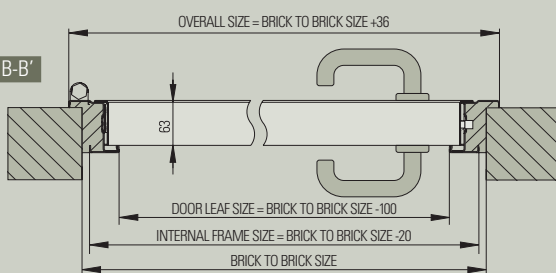
Technical Characteristics – Turia Doorset

CROSS-SECTION A-A'



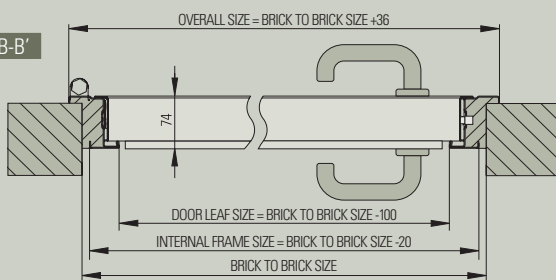
CROSS-SECTION B-B'

Turia Door
El₂ 30-60-90



CROSS-SECTION B-B'

Turia Door
El₂ 120



Standardized Measurements

CS5 FRAME Model	Brick to Brick Size		Internal Frame Size		Door Leaf Size		Overall Size	
	Width	Height	Width	Height	Width	Height	Width	Height
TU 800 x 2050	800	2050	780	2040	700	2000	836	2068
TU 900 x 2050	900	2050	880	2040	800	2000	936	2068
TU 1000 x 2050	1000	2050	980	2040	900	2000	1036	2068
TU 1100 x 2050	1100	2050	1080	2040	1000	2000	1136	2068
TU 1200 x 2050	1200	2050	1180	2040	1100	2000	1236	2068

Measurements in millimetres.
Contact us for made-to-measure orders.

Leaf

The **STRUCTURE** of the **Turia El₂ 30-60-90** consists of two **unsoldered 0'8 mm-thick galvanised steel sheets**. The door is **63 mm thick**, with a 16 mm wide, 2 mm thick edge.

The **El₂ 120 Turia** door is **built with 3 galvanised steel sheets**, with a **"reinforcement" plate** on the pan side of the door. Its leaf is **74 mm thick**.

The door is also available in White finish or Stainless steel finish, and other RAL upon request.

Its **INTERIOR** is filled with a combination of fire-resistant materials.

The door is equipped with **3 steel galvanised HINGES of 3 mm thick, screwed onto the leaf and soldered onto the frame**. Own manufacturing. Certified in accordance with EN-1935 and **EC Mark**.

The **LOCKING SYSTEM** comprises a mortice lock with one-point locking system. Certified **EC Mark** according to EN 12209:2004. The system also includes a 35x35 or 35x50 (for El₂ 120 door) **brass cylinder** with the keys.

The **HANDLE SYSTEM** included in the standard range comprises **two lever handles made of a highly-resistant material**, cover-plates and back plates with **key holes** on both sides.

Frame

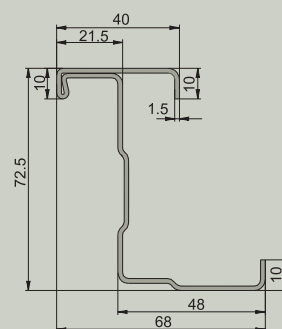
The door is mounted onto a **CS5 FRAME** made of **1'5 mm thick** galvanised steel.

There are **4 galvanised steel anchors** on each side, allowing the frame to be installed in brickwork, or screwed onto a sub-frame.

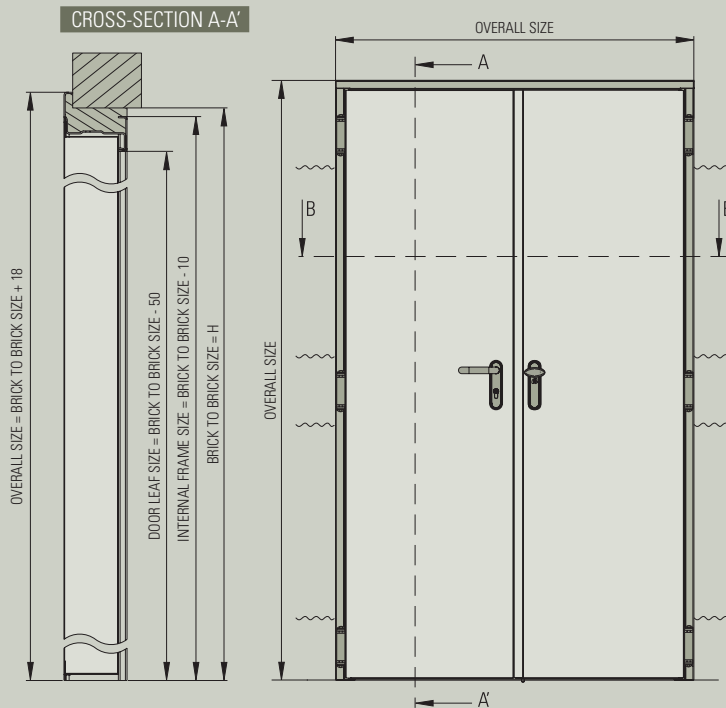
The door is also equipped with an graphite **intumescent seal**. The fitting of a **rubber seal is optional**.

A specially designed **SUB-FRAME** onto which the CS5 frame can be screwed is also available. This sub-frame allows the easy installation of the door once the construction works are completed (see page 15).

CS5 Model

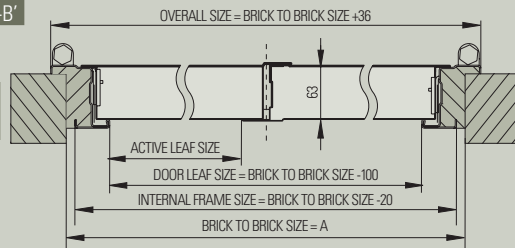


Technical Characteristics – Turia Double Leaf Door



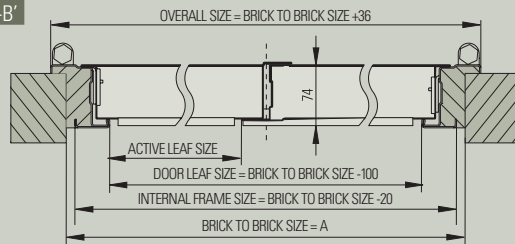
CROSS-SECTION B-B'

Turia Door
El₂ 30-60-90



CROSS-SECTION B-B'

Turia Door
El₂ 120



The **Double Leaf Turia El₂ 120 C5**, the same as the Turia single leaf leaf **El₂ 120 C5**, is built with **3 galvanised steel sheets**, with a **"reinforcement"** plate on the pan side. Its leaf is **74 mm thick**.

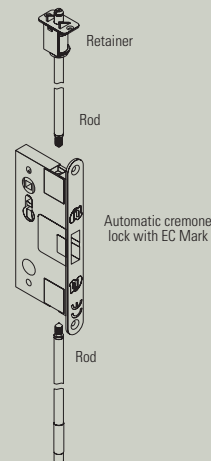
This double leaf door is also available in white prelaquered finish and stainless steel and for any other finish upon request.

The **ACTIVE LEAF** has the **same characteristics** as the **TURIA** model.

The interior of the **INACTIVE LEAF** is the same as that of its **active** counterpart, except that it incorporates an automatic cremone lock (instead of the traditional bolt lock system installed on the edge).

This mechanism comprises the following parts:

- **Retainer** in the upper part of the inactive leaf.
- **Rods fitted** into the interior of the inactive leaf.
- An **automatic closing** system for the cremone lock.
- 9 mm mortice lock.



El₂ 30 C5
El₂ 60 C5
El₂ 90 C5
El₂ 120 C5

When the handle of the inactive leaf is activated, the locking mechanism of the door is released, opening the door.

This mechanism allows for the installation of panic bars without having to install external fasteners, improving appearance and efficiency.

Standardized Measurements

CS5 FRAME	Brick to Brick Size		Internal Frame Size		Door Leaf Size			Overall Size		
					Active leaf size	Maximum active leaf size	2-Leaf size			
	Width	Height	Width	Height	Width	Height	Width	Height		
Model										
DH TU 1200 x 2050 asimétrica 520	1200	2050	1180	2040	520	860	1100	2000	1236	2068
DH TU 1300 x 2050 asimétrica 570	1300	2050	1280	2040	570	960	1200	2000	1336	2068
DH TU 1400 x 2050 asimétrica 620	1400	2050	1380	2040	620	1060	1300	2000	1436	2068
DH TU 1500 x 2050 asimétrica 670	1500	2050	1480	2040	670	1120	1400	2000	1536	2068
DH TU 1600 x 2050 asimétrica 720	1600	2050	1580	2040	720	1120	1500	2000	1636	2068
DH TU 1700 x 2050 asimétrica 770	1700	2050	1680	2040	770	1120	1600	2000	1736	2068
DH TU 1800 x 2050 asimétrica 820	1800	2050	1780	2040	820	1120	1700	2000	1836	2068
DH TU 1900 x 2050 asimétrica 870	1900	2050	1880	2040	870	1120	1800	2000	1936	2068
DH TU 2000 x 2050 asimétrica 920	2000	2050	1980	2040	920	1120	1900	2000	2036	2068
DH TU 2100 x 2050 asimétrica 970	2100	2050	2080	2040	970	1120	2000	2000	2136	2068
DH TU 2200 x 2050 asimétrica 1020	2200	2050	2180	2040	1020	1120	2100	2000	2236	2068

Measurements in millimetres.
Contact us for made-to-measure orders.



Technical Characteristics – Turia Asymmetric Double Leaf Door



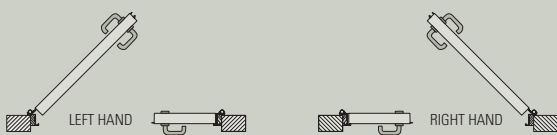
The **Asymmetric Double Leaf Door** characteristics are exactly the same as a **Turia Double Leaf Door**, except for the width of the active leaf, which differs from that of the inactive leaf. This mechanism also allows for the installation of panic bars.

The asymmetry of the Turia double leaf differs according to the requirements of each project.

All things considered, the Turia model is part of the fire rated door range which can be personalized according each project, always maintaining its classification:

- EI₂ 30 C5
- EI₂ 60 C5
- EI₂ 90 C5
- EI₂ 120 C5

Door Opening





FIRE RATED AND ACOUSTIC DOOR—SINGLE LEAF EI₂ 60-90 C5

FONO-TURIA



Andreu launches its new **Fono-Turia** door model which combines the characteristics of the Fire Door with the acoustic insulation of this door.

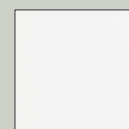
The **Fono-Turia** is fire rated door, single leaf, with steel frame, assembled without soldering and designed to resist against the fire and also against the air noise.

This door is tested and certified in accordance with **EN- 1634-1: 2000, EN ISO 140-3:1995, EN 1191:2000.**

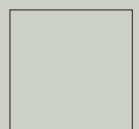
Fire Resistance	Automatic Closing Durability	Acoustic Insulation
EI ₂ 60	C5	33 dB
EI ₂ 90		34 dB
		35 dB



• GALVANISED
+Antifinger Protection



• WHITE



• Other RAL to select

Technical Characteristics Fono-Turia Doorset

Leaf

Its **STRUCTURE** consists of two unsoldered **0'8 mm thick galvanised steel sheets**. Its interior is filled with a combination of insulated materials such as rockwool and plasterboard. **The door is 63 mm thick.**

Sheet

Galvanised steel
+ antifinger protection

¿What is the **ANTIFINGER PROTECTION**?

The Antifinger finish is a clear prime as a supplement over the galvanised.

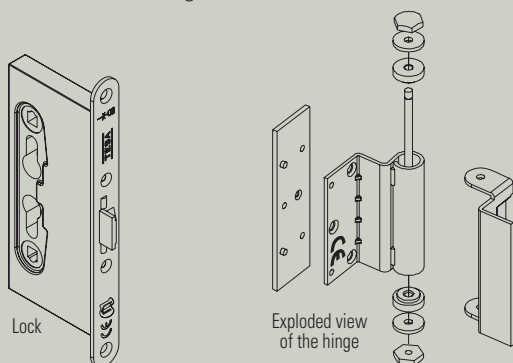
3 advantages

Allow the door to be painted on directly without the need of prior treatment.

Provide a greater anti-corrosive protection.

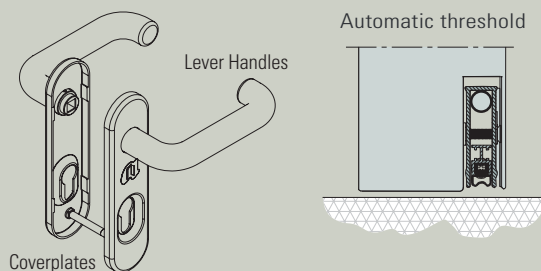
Its look is grey, transparent, homogeneous and not oily.

The door is equipped with **3 HINGES** of **3 mm thick** screwed onto the leaf and soldered onto the frame. Own manufacturing. **Certified EC** Mark according to EN-1935.



The **LOCKING SYSTEM** includes a mortice **lock of one-point** locking system with EC Mark according to EN-12209:2007. The system also comprises a **35x35 brass cylinder** with keys.

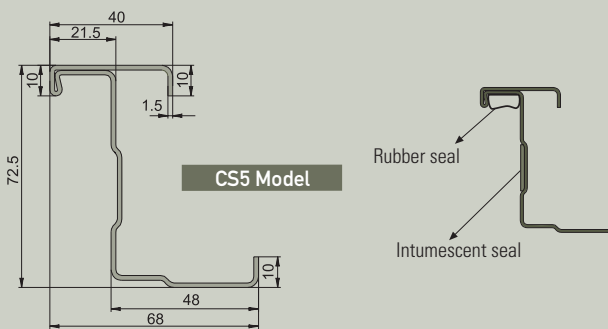
The **HANDLE SYSTEM** included in the standard range comprises two lever handles made of a **highly-resistant material, coverplates and backplates**, also made of the same material, with key-holes on both sides.



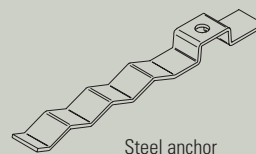
To provide an **ACOUSTIC INSULATION**, rubber seals are incorporated **onto the leaf**: one of black rubber 15x3 mm and another one of vinyl which is activated automatically when the door closed.

Frame

The door is mounted onto a **CS5 FRAME** made of **1'5 mm thick galvanised steel**. There are galvanised **steel anchors** on each side, allowing the frame to be installed in brickwork, or screwed onto a sub-frame.



The frame is also equipped with an **intumescent graphite joint 20x3 mm** and a **rubber seal** onto the frame perimeter to provide the acoustic insulation required.



Fono-Turia

Fono-Turia

EI2 60 35 dB, without vision panel
EI2 60 33 dB, maximum vision panel 400x500
EI2 60 35 dB, maximum vision panel with double glass 200x200
EI2 90 35 dB, without vision panel
EI2 90 34 dB, maximum vision panel 400x500
EI2 90 35 dB, maximum vision panel with double glass 200x200

Standardized Sizes

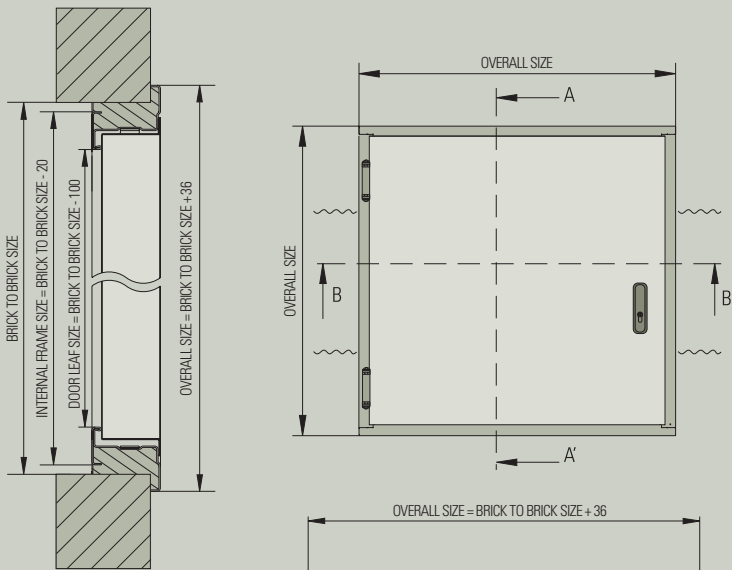
The standardized sizes of the Fono-Turia door are the same as the Turia fire rated door (see page 7).



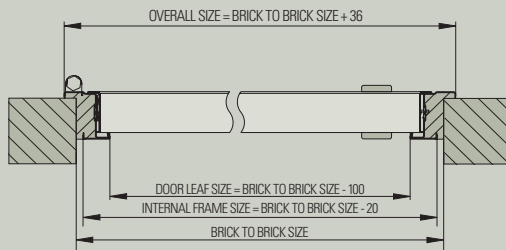
Fire Rated Meter Doors

Turia Meter Doors

CROSS-SECTION A-A'



CROSS-SECTION B-B'



The **TURIA METER DOOR** has the **same technical characteristics** as the other TURIA doors, except for the following:

- It comprises a **CS5 frame closed** on all four sides.
- The **number of hinges varies** in function of the size of the door, with a minimum of 2 hinges.
- The **four sides of the leaf are bordered by an edge** to ensure a tight fit in the closed frame.

The Turia Meter Doors can be manufactured in single or double leaf.



Cylinder with thumb turn

The standard handle system of the meter door comprises a **coverplates with key hole on both sides and cylinder with thumb turn on lid side**. However, any type of opening system can be fitted upon request.

EI₂ 30 **EI₂ 90**
EI₂ 60 **EI₂ 120**

Standardized Measurements

The following table refers all the allowed sizes of the certification in accordance with UNE 1634-1:2001, for each Fire Meter Door.

		H E I G H T																				
		300	400	500	600	700	710	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	
W I D T H	330	B	B	B	B	L	L	L	L	L	L	L	L	L	L	L	L	-	-	-	-	
	400	B	B	B	L	L	L	L	L	L	L	L	L	L	L	L	L	-	-	-	-	
	500	B	B	B	L	L	L	L	L	L	L	L	L	L	L	L	L	-	-	-	-	
	600	B	B	B	B	B	L	B	B	B	B	L	L	L	L	L	L	L	L	L	L	
	700	B	B	B	B	B	L	B	B	B	B	L	L	L	L	L	L	L	L	L	L	
	710	B	B	B	B	B	B	T	B	T	B	T	B	T	L	T	L	T	L	T	T	T
	800	B	B	B	B	B	B	T	B	T	B	T	B	T	L	T	L	T	L	T	T	T
	900	B	B	B	B	B	B	T	B	T	B	T	B	T	L	T	L	T	L	T	T	T
	1000	B	B	B	B	B	B	T	B	T	B	T	B	T	L	T	L	T	L	T	T	T

T Cover by Turia certification

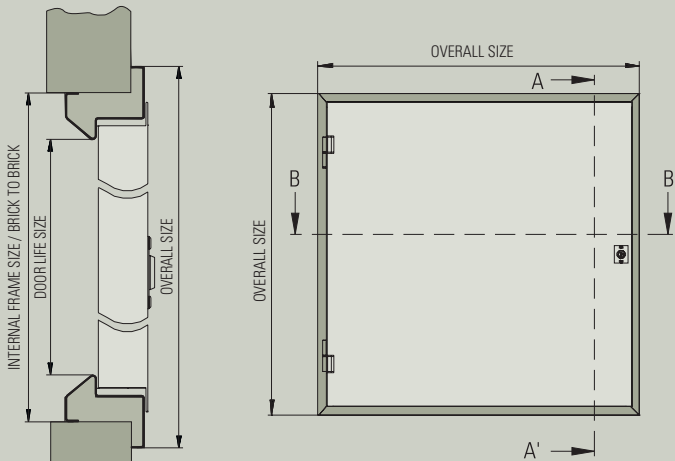
L Cover by Lex certification

B Cover by Basic certification

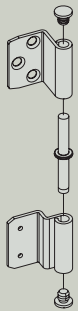
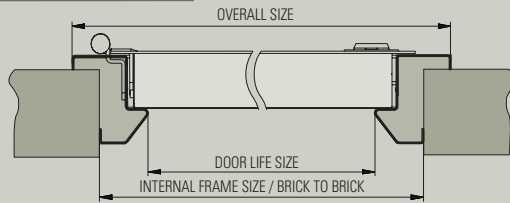
Basic Meter Door

Lex Meter Door

CROSS-SECTION A-A'



CROSS-SECTION B-B'



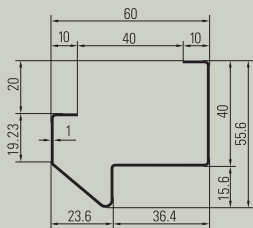
Basic Hinge

Its **STRUCTURE** comprises two **unsoldered 0'5 mm thick galvanised steel sheets**. Its interior is filled with a combination of fire-resistant materials such as rockwool and plasterboard. **The door is 38 mm thick.**

The door is equipped with **2 opposite galvanised steel HINGES of 2,5 mm thick**. Own manufacturing. These hinges are screwed onto the leaf and soldered onto the frame.

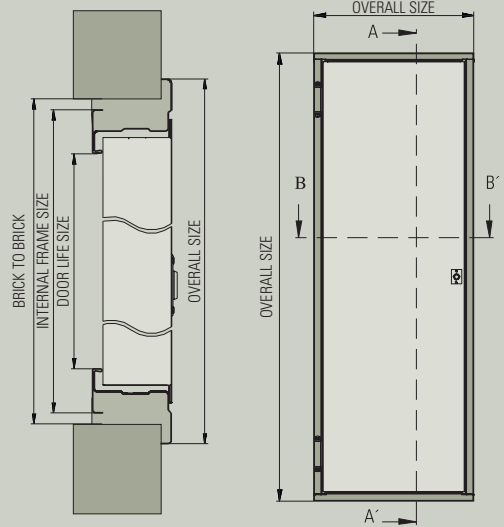
This meter door includes **steel cam with triangular spindle. Not lever handle included.**

The **FRAME** is a corner frame called **CS4**, assembled without soldering. It is made of **1 mm galvanised steel sheet**, with steel galvanised anchors allowing the frame to be installed in brickwork. The fitting of a **rubber seal is optional**.

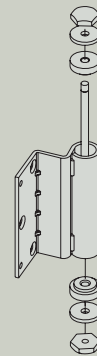
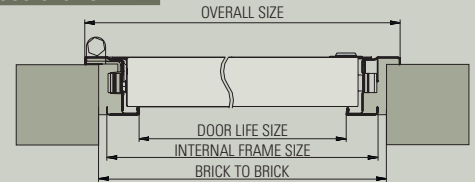


CS4 Model

CROSS-SECTION A-A'



CROSS-SECTION B-B'



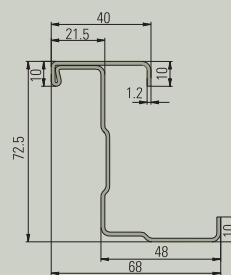
Lex / Turia Hinge

Its **STRUCTURE** comprises two **unsoldered 0'7 mm thick galvanised steel sheets**. Its interior is filled with a combination of fire-resistant materials such as rockwool and plasterboard. **The door is 62 mm thick.**

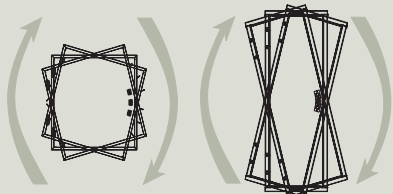
The door is equipped with **2 opposite galvanised steel HINGES of 2,5 mm thick**. Own manufacturing. These hinges are screwed onto the leaf and soldered onto the frame. **Certified EC Mark** in accordance with EN 1935.

This meter door is equipped with **steel cam with triangular spindle. Not lever handle included.**

The **FRAME** is a corner frame called **CS5**, assembled without soldering. It is made of **1,2 mm galvanised steel sheet**, with steel galvanised anchors allowing the frame to be installed in brickwork. **The fitting of a rubber seal and intumescent joint are optional.**

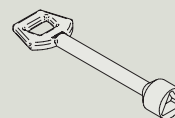


CS5 Model

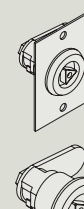


REVERSIBILITY

El₂ 60



Steel cam with triangular key



Lock

Finishes



• GALVANISED + Antifinger Protection



• WHITE



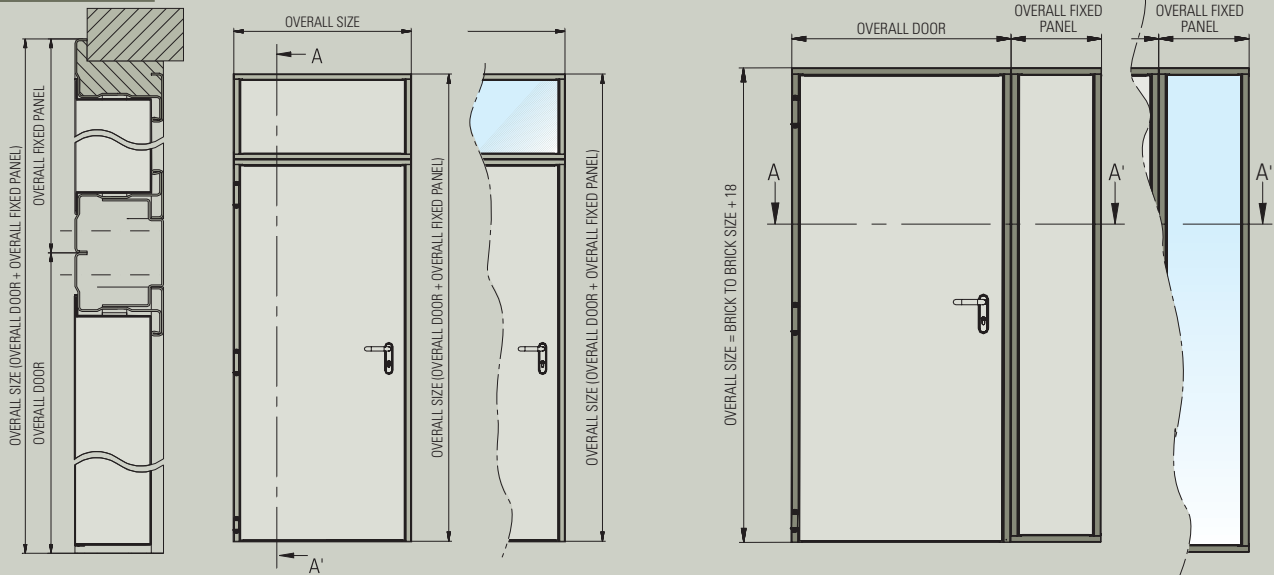


Turia Fix Panels

The **Fixed Panel** is a special solution offered by Andreu, allowing customers to use standard-size doors and adjust them to the space available.

Fixed panels with a structure identical to that of the **Turia** model are used mainly to close very large openings, as well as to improve the aesthetics of the door. Fixed panels can be installed to the top part or on either side of the door.

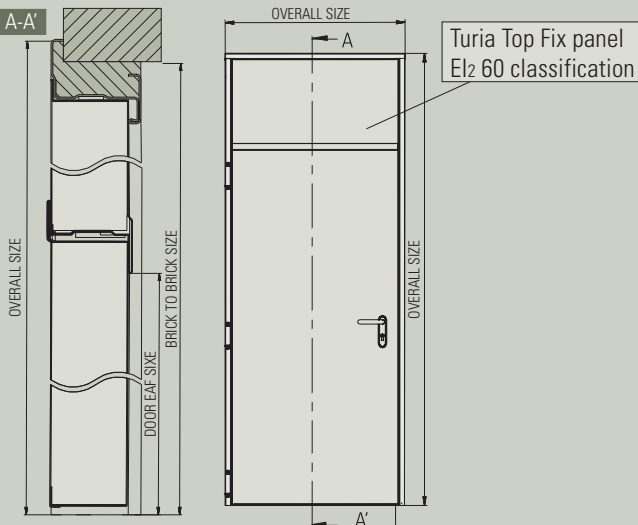
CROSS-SECTION A-A'



Top Panel and Side Panel with Intermediate Frame

The fixed panels with intermediate frames between the leaf and the panel are used for improved rigidity in large dimensions or for the installation of a glass panel.

CROSS-SECTION A-A'



Top Panel without Intermediate Frame

For a lighter structure, these can be manufactured without the intermediate frame between the leaf and the frame.

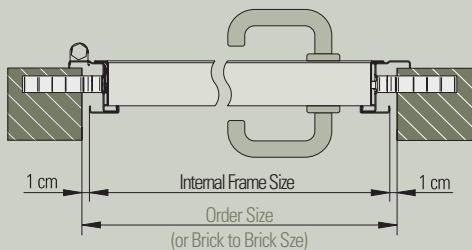


CS5 FRAME: Installation

.According to the installation and place, the sizes of the door can be changed. The wall opening (brick to brick size) will be always our reference size.

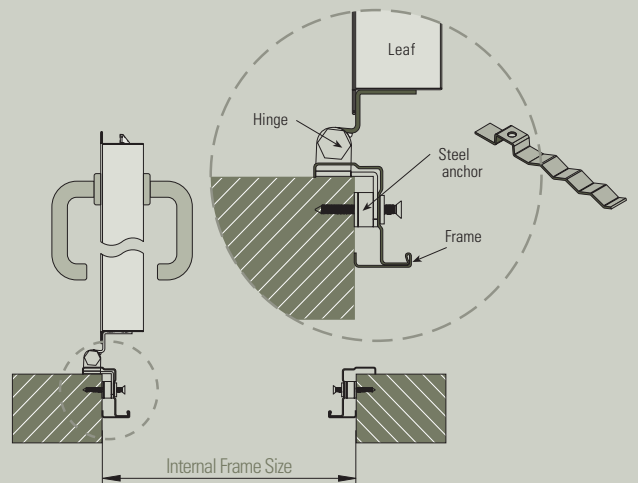
Installation: onto a corner wall

If the door is installed **onto wall with mortars:**
Wall opening = Order size of the door.



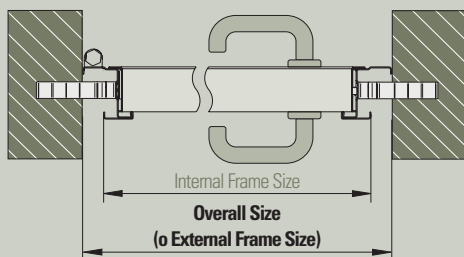
Installation: Screwed onto corner wall

If the door is screwed between walls:
Wall opening = Internal Frame Size



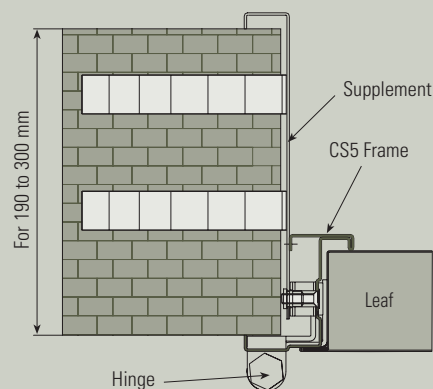
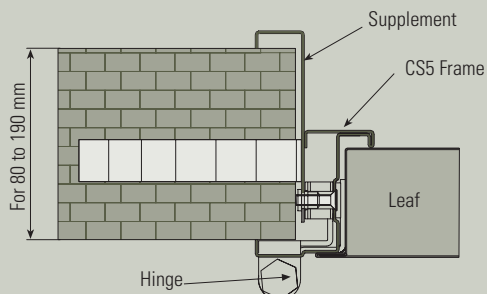
Installation: between walls

If the door is installed **between walls with mortar:**
Wall opening = Overall size or External frame size



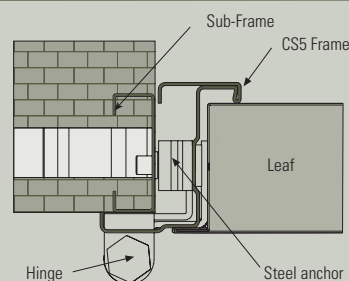
CS5 Frame Assembly with Wide Frame

The Wide Frame is a supplement which wraps the wall for 80 to 300 mm thick. Contact us for other measurements.



CS5 Frame: Assembly onto Sub-Frame

A specially designed Sub-frame onto which the CS5 frame can be screwed is also available. It allows the easy installation of the door once the construction works are completed.



Assembly screwed onto Sub-frame

Accessories and Complements

Some of the accessories which can be fitted onto fire-doorsets are shown below:

DOOR CLOSERS

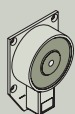
This accessory installed between the upper part of the leaf and the upper bar of the frame controls the closing of the door.



CE All the **door closers** have EC Mark.

ELECTRO-MAGNET

This mechanism consists of two parts:



An electro-magnet installed on a wall



Plate screwed onto a door

The electric current through the electro-magnet maintains the door opened, in case of cease current, the leaf is activated so the door closed.

CE All the **electric-magnets** installed have EC Mark.

DOOR SELECTOR

The mechanism installed onto the upper frame of a double-leaf door makes the active leaf closed against the inactive leaf.

CE All the **door selectors** fitted onto fire doorsets have to comply with EN 1158 STANDARD and EC Marking.



VISION PANELS

Due to the importance of this accessory, its characteristics are detailed on the following page:



Square vision panel with fire glass

CE The fire **glass** have to be certified EC Mark.

PANIC DEVICE

The panic bar allows the immediate opening of the door.



Panic Device 2000N Model

CE All the **panic bars** fitted onto the fire rated doors have to comply with the EN-1125/A1/AC and certified EC Mark.

Panic Device

Panic bars are often installed on fire-doorsets. This accessory is designed to open the door immediately in case of emergency. The most commonly used bars are shown below:



2000N Model

For one-point lock single leaf doors.



4000N Model

Consists of two panic bars 2000N model. The automatic locking system on the inactive leaf is a cremone lock, allowing the **internal rod to be activated with no need for additional installations** on the leaf and guarantees the locking of the door at two points.



4001N Model

Consists of two panic bars, 2000N model and 2001N model. In contrast with the previous one, the **locking mechanism is installed onto the surface of the leaf.**

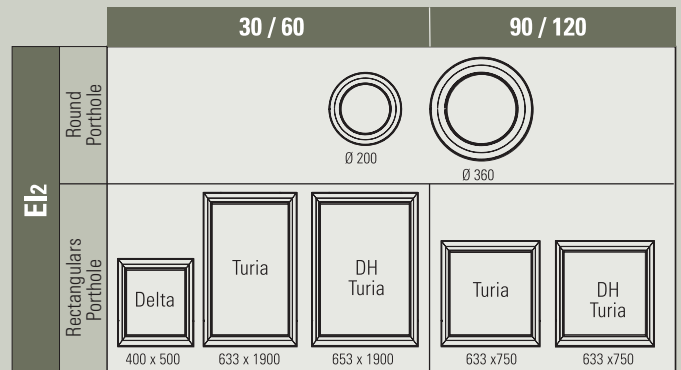


Vision Panels

The vision panels accessories are designed to allow the light through without losing the fire capacity, can be rounds or rectangulars.

If the door is tested according the EN 1634-1 Standard, its glass would be fire with EC Mark, if the contrary it will lose the test validity.

This glass ensures a high temperature capacity equivalent with door fire resistance EI2. Its thickness will depend on its fire classification test.



Door Closers

When selecting a door closer the following aspects should be taken into consideration:

- With **CE** Mark and the 4th digit of its classification has to be number 1, indicating its capacity for fire rated doors.
- The door closer force will be calculated according to width and weight of the door.
- Door closer frequency use : moderate, frequent or intensive.
- Installation type : normal, inverted, parallel or reverse...

CE	Telesco Comercial 2000, S.L. Llobatona, 19 08840 Viladecans Barcelona (Espana)	04
	1239-0800305	EN 1154: 1996 + A1:2002 3 8 2 4 1 3



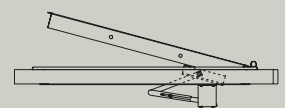
Normal installation

The body of the door closer fitted onto the door leaf.



Inverted installation

The door closers body is fitted onto the frame



Parallel arm installation

The door closers fitted to the opposite side of the hinges (pan).

Fire Rated Louvres

The fire intumescent louvres allow the air flow without changing the fire resistance capacity.

These louvres include horizontal intumescent slits with a perimetral frame of the same material **ensuring the maximum ventilation and fire resistance.**

EI₂ 30
EI₂ 60
EI₂ 90



Detail of Intumescent Louvre.



Comparative Technical Characteristics

The main technical characteristics of each fire-doorset are shown below:

		DELTA	TURIA		REGISTROS		
			1 LEAF	DOUBLE LEAF	FIXED PANEL	BASIC	LEX
FIRE RESISTANCE	EI ₂ 30 C5	No	Yes	Yes	Yes	No	No
	EI ₂ 60 C5	Yes	Yes	Yes	Yes	Yes	Yes
	EI ₂ 90 C5	No	Yes	Yes	Yes	No	No
	EI ₂ 120 C5	No	Yes	Yes	Yes	No	No
DOOR OPENINGS	Reversible	No	No	No	No	Yes	Yes
FINISHES	Galvanized + Antifinger Protection	0.7 mm	0.8 mm	0.8 mm	0.8 mm	0.5 mm	0.7 mm
	White	0.7 mm	0.8 mm	0.8 mm	0.8 mm	0.5 mm	0.7 mm
	Others materials	Contact us	Contact us	Contact us	Contact us	Contact us	Contact us
LEAF	Nº Hinges	2	3	3	2	2	2
	Opposite Hinges	No	No	No	No	Yes	No
	EC Hinge	Yes	Yes	Yes	Yes	No	Yes
	Anti-crow-bar bolt	1	No	No	No	No	No
LOCKING SYSTEM	One-point locking mechanism	Yes	Yes	No	Yes	Yes	Yes
	One-point locking mechanism + Cremone	No	No	Yes	No	No	No
	Triangular spindle model	No	No	No	No	Yes	Yes
	35x35 Cylinder	Yes	Yes ⁽²⁾	Yes ⁽²⁾	No	No	No
	Cylinder with thumb turn	No	No	No	Yes	Yes	No
FRAME	Intumescent seal	Optional ⁽¹⁾	Yes	Yes	Yes	Optional ⁽¹⁾	Opciona ⁽¹⁾
	Rubber seal	Optional	Optional	Optional	Optional	Optional	Optional
	Thickness	1.2 mm	1.5 mm	1.5 mm	1.5 mm	1.5 mm	1.5 mm
OTHERS PROJECTS	Made-to-measure sizes	No	Yes	Yes	Yes	Yes	Yes
	Extensions, Inclined doors...	No	Yes	Yes	Yes	Yes	Yes

(1) These doors or meter doors have been tested with intumescent seal.
 (2) For Turia Door EI₂ 120, the cylinder is 35x50.

Packaging And Weight

The single-leaf **DELTA**, **VOLTA** and **TURIA** doors can be delivered on either horizontal or vertical pallets. The characteristics of the two packaging systems are shown below:

The **TURIA DOUBLE LEAF** door, owing to its weight and dimensions, is packed on vertical pallets. The technical characteristics of this packaging system are shown below:



Vertical palletizing



Horizontal palletizing



Vertical palletizing

VERTICAL PALLETIZING	DELTA	TURIA
Nº of Doors	15 units	
Pallet width	0,96 * m	
Pallet length	1,18 m	
Pallet height	2,24 m approx.	
Approx. pallet weight	896* kg	1118* kg

* Order Reference 900 EI₂ 60.

HORIZONTAL PALLETIZING	DELTA	TURIA
Nº of Doors	12 units	
Pallet width	0,96 * m	
Pallet length	2,10 m	
Pallet height	1,10 m approx.	
Approx. pallet weight	741* kg	888* kg

* Order Reference 900 EI₂ 60.

VERTICAL PALLETIZING	TURIA DH
Nº of Doors	7 units
Pallet width	1,706 * m
Pallet length	0,79 m
Pallet height	2,24 m approx.
Approx. pallet weight	992* kg

* Reference DHTU 1700 EI₂ 60

Fire-Doorset Tests

Research and Development Test

The Research and Development Department at Andreu is equipped with an oven similar to those found in certified laboratories to carry out fire-resistance tests on its doors. This allows the company to speed up the tests for new designs in order to adapt them to current regulations and to the changing needs of the market.



The oven where fire-resistance tests are carried out.



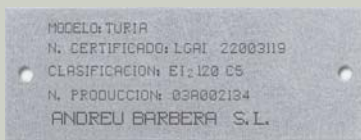
Details of two fire-doorsets in the oven during a fire-resistance test.



Detail of the thermocouples allowing the control of thermal insulation in fire-doorset during a fire-resistance test.

Fire-doorset Certification

All our fire-doorsets have been certified by approved laboratories in order to guarantee the fulfilment of the requisites established by the regulation of each country. This certification appears on an identification plate which indicates, among other characteristics, the fire-resistance and the test number for this certification. The doors also include one of the labels as shown below:



Identification plate



Identification labels

Durability Tests

All our fire rated doors have been tested to a **Closing Durability Test** according to the **EN1191-1 : 2000 Standard**.

All our range of products passed the 200.000 opening and closing cycles, **obtaining a C5 classification**.

C5



EC Mark Hinges without Spring

The fire-rated Andreu doors are equipped with new hinges without spring, own manufacturing. These hinges have been tested and certified by approval laboratories and achieve the **EC Mark** according to the EN 1935.

	ANDREU BARBERA S.L. Ciudad de Sevilla, 20 Pol. Ind. Fuente del Jarro 46988 Paterna (VALENCIA) ESPAÑA										
	0099/CPP/A44/0120										06
	EN 1935 : 2002										
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