



## **CLASSIFICATION REPORT N° EFR-16-U-002097 a - Version 4**

According to standard EN 13501-2: 2016

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<b>Concerning</b>	A range of vertical single sliding leaf transfer shutters reference "VT60": <ul style="list-style-type: none"><li>○ Free passage dimensions: 300 x 200 mm at 800 x 800 mm (w x h)</li><li>○ Direction of fire: indifferent</li></ul>
<b>Requester</b>	RF-TECHNOLOGIES LANGE AMBACHTSTRAAT 40 B – 9860 OOSTERZELE

**The classification report cancels and replaces the classification report EFR-16-U-002097 - Version 3**

**DISCLAIMER** : The current document is a translation of the corresponding and official French version. In all situations where the meaning of the current document is unclear or ambiguous, the French document should be used for purposes of disambiguation.

**MODIFICATIONS FOLLOW-UP**

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Version	Date	Modification	Author
2	03/09/2018	PROMATECT H (PROMAT) boards, 25 mm thickness composing the leaf Intumescent seal commercial denomination change	RST
3	13/11/2019	Option 2 lock system validation Grille and mounting description adding Free passage dimension augmentation	RST
4	31/01/2022	Extra supporting constructions validation	RST

## 1. INTRODUCTION

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Fire resistance classification report defining the classification or a range of transfer shutters, in accordance with the operational modes given in standard EN 13501-2: 2016 "Fire classification of construction products and elements - Part 2: Classification using data from fire resistance tests, excluding products used in ventilation systems".

## 2. TEST LABORATORY

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Efectis France  
Voie Romaine  
F - 57280 Maizières-lès-Metz

Number of notified body: 1812

## 3. APPLICANT

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N.V. RF-TECHNOLOGIES  
LANGE AMBACHTSTRAAT 40  
B – 9860 OOSTERZELE

## 4. REFERENCE DOCUMENT

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Document number: EFR-16-U-002097 a

Edited: 01/02/2017

## 5. REFERENCE AND ORIGIN OF THE CLASSIFIED ELEMENTS

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### 5.1. SHUTTER

Reference: VT 60

Source: RF-TECHNOLOGIES

## 6. PRINCIPLE OF ASSEMBLY

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### 6.1. GENERAL

- Free passage dimensions: 300 x 200 mm at 800 x 800 mm (w x h)

## 6.2. DETAILED DESCRIPTION

### 6.2.1. Metal frame

The frame of the transfer shutter comprises a galvanised steel sheet 20/10 mm thick of overall dimensions  $(2 \times H_n + 265) \times (L_n + 162) \times 50$  (w x h x d). This incorporates 2 openings of  $H_n \times L_n$ . These elements are mitre-cut and are assembled by welding.

Two L of guides in stainless steel 20/10 mm thick and section 25 x 28 mm allow the blade to slide. These are affixed onto the frame at each end by one M5 x 10 mm screw.

The lower cross-piece receives a foam cushioning joint, reference Situseal (KRAMO) of section 25 x 5 mm glued into the bottom of the rebate.

Fixing of the shutter into the wall is provided in the installation element. These are slideways which are fixed by 6 x 25 mm screws.

An intumescent seal reference Blazeseal (Rectorseal) or ROKUSTRIP (Rectorseal) section 35 x 1.5 mm is positioned around the periphery of the lower opening of the inner face at the bottom of the rebate.

An intumescent seal reference Blazeseal (Rectorseal) or ROKUSTRIP (Rectorseal) section 20 x 1.5 mm is positioned around the periphery of the lower opening of the external face.

### 6.2.2. Leaf

The leaf is 25 mm thick, and comprises a panel of Igniboard (KEEN EAGLE) or PROMATECT H (PROMAT) dimensions  $(L + 117) \times (H + 117)$  mm (w x h).

The leaf slides along the slideways.

### 6.2.3. Closure

#### Option 1:

Manual closure of the leaf is achieved through either 1 (for  $L < 500$  mm) or 2 (for  $L \geq 500$  mm) notches 200 x 50 x 12 mm formed in the leaf.

The leaf is blocked from closing by a galvanised steel bracket 20/10 mm thick. A fuse reference "model B 165°F" (GLOBE TECH) allows this bracket to be moved out of the way.

#### Option 2:

This lock contains both fuse and the manual trigger system.

The lock consists of a steel plate 3 mm thick on which 2 axes are mounted. On one of the axe a 4 mm thick steel locking piece is mounted. On the 2<sup>nd</sup> axis a 3 mm steel pivoting plate of is mounted. The plate can lock together with the locking piece. On the 2<sup>nd</sup> axis also turns a 2<sup>nd</sup> 3 mm steel pivoting plate which can carry the blade.

The fuse is mounted between the 2 switch plates. Between the locking piece and the second pivoting plate there is a spring.

The lock can be triggered using a screwdriver or other sharp object by moving a lever in the oval opening situated at the top of the lock.

A user instruction is visible on the side of the lock.

The trigger is protected to prevent accidental triggering.

#### 6.2.4. Grille

2 grilles can be installed:

- A G-VT60 type "hood" grille which is fixed to the VT60 shutter using the screws and spacers provided. The cover is made of a perforated steel sheet with 10 x 10 mm mesh facing the air passage of the VT60. This grille can be replaced by another metal grille which will completely cover the VT60 and which has a free physical surface greater than or equal to that tested.

- A decorative grille, of the GRIDEC type which is fixed to the wall. The grille will completely cover the wall opening, small dimension for VT-60 or larger dimension for E-VT60. This grille is fixed to the wall by 4 screws of 4.2 x 30 mm steel. The grille is made of a perforated aluminum sheet with 10x10 mm mesh with a free surface of 69.4% (data provided by Rf-t). This grid can be replaced by another metal grid which has a free physical surface greater than or equal to that tested. The fixing of the grid must be made by four steel screws with a diameter greater than or equal to that tested.

### 6.3. INSTALLATION OF THE SHUTTERS

#### 6.3.1. Installation in a plasterboard partition

##### 6.3.1.1. Framework

In the lower and upper part of the bay, a galvanised steel rail NPV500 (PROFISTEEL) and NPH500 (PROFISTEEL) of 6/10 mm thickness is affixed into a reinforced concrete structure using SP6 hammer-in fixings reference FMA Ø6 x 30 mm (FISCHER) at intervals of 800 mm.

The partition framework is formed of single galvanised steel NPV500 (PROFISTEEL) uprights of 6/10 mm thickness, folded, slotted and punched into the upper and lower rails. An expansion gap of around 5 mm is left at the top to allow for expansion of the uprights.

##### 6.3.1.2. Header

A header designed to allow for passage of the shutter is made using NPV500 (PROFISTEEL) uprights.

Two cross-pieces made from two NPV500 (PROFISTEEL) uprights are folded and punched into two vertical uprights. The split uprights are clipped into these two cross-pieces.

Fitting the header dictates:

- splitting the uprights at a height  $H_n$ ;
- fitting the top and bottom cross-pieces in NPV500 (PROFISTEEL)  $H_n$  apart;
- fitting the supplementary double uprights in NPV500 (PROFISTEEL)  $L_n$  mm apart.

##### 6.3.1.3. Facings

Fitting of the 12.5 mm thick papered plasterboard Pregyplac AB 13 GKB type A (SINIAT), or BA12, BA15, BA25 is done with the vertical joints offset by 600 mm between the two skins within the same facing, and between the skins with respect to the two facings.

The vertical joints of the panels are aligned with the uprights. The panels are fixed to the framework with 3.5/25 self-tapping screws at 750 mm intervals for the first skin fitted and 3.5/35 screws at 200 mm intervals on the second skin.

Visible joints between panels and edges with the concrete structure are treated with JOINTFILLER coating + sealing tape. The screw heads are also covered with the same coating.

The void between the panels is filled with 40 mm thick Rockfitadapt rock wool (ROCKWOOL) of bulk density 40 kg/m<sup>3</sup>.

A cut-out of dimensions  $(H_n + 25) \times (L_n + 25)$  mm is made in the facings to form the opening for the shutter. After the panels are cut out, the partition is re-closed on its edges with panels of papered plasterboard of dimensions  $2 \times (L_n + 25) \times 100$  mm et  $2 \times H_n + 100$  mm. These panels are affixed into the headers by screws  $\varnothing 3.5 \times 25$  mm across the corners and at intervals of 300 mm.

The shutters are fixed into the supporting structure using screws  $\varnothing 6 \times 70$  mm.

#### 6.3.1.4. Joint between the shutters and the supporting structure

A joint in Polyflex HM SA-40 (DEN BRAVEN) is made between the shutter frame and the supporting structure.

#### 6.3.2. Installation in a minimal 100 mm cellular or reinforced or bricks concrete wall

The shutter is positioned into a reservation dimensions:

- $W \times H$  mm and then fixed with screws  $\varnothing 6 \times 70$  mm and dowels positioned in each corner on the frame with a maximum center distance of 400 mm between two consecutive screws.
- $(W + 330) \times (H + 460)$  mm in which a Promat or Geostaff frame is constructed and then fastened with  $\varnothing 6 \times 70$  mm screws and dowels positioned in each corner on the frame with maximum spacing 400 mm between two consecutive screws.

#### 6.3.3. Installation in a 70 or 100 mm plater-bricks wall

The shutter is positioned into a reservation dimensions:

- $W \times H$  mm and then fixed with screws  $\varnothing 6 \times 70$  mm and dowels positioned in each corner on the frame with a maximum center distance of 400 mm between two consecutive screws.
- $(W + 330) \times (H + 460)$  mm in which a Promat or Geostaff frame is constructed and then fastened with  $\varnothing 6 \times 70$  mm screws and dowels positioned in each corner on the frame with maximum spacing 400 mm between two consecutive screws.

## 7. REPRESENTATIVE NATURE OF ELEMENTS

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The samples subjected to testing have been judged representative of the current fabrication of the applicant.

The conditions to be respected when installing the parts are described in this classification report, and comply with those observed during setting-up for the test.

## 8. FIRE RESISTANCE CLASSIFICATIONS

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### 8.1. CLASSIFICATION REFERENCES

This classification was performed in accordance with Section 7.5.5 of Standard EN 13501-2.

### 8.2. CLASSIFICATIONS

The elements are classified according to the following combinations of performance and class parameters.

No other classification is permitted.

For VT60 shutters installed in:

- a minimum 100 mm thick cellular or reinforced concrete wall;
- a minimum 100 mm thick bricks wall;
- a 70 or 100 mm thick plaster-bricks wall;
- a plasterboard partition type A acc. EN520 of type 98/48, or BA13 or BA15 or BA25.

For the classification above, the grill (fire side or opposite to fire) is optional.

R	E	I	W		t	-	M	C	S	G	K
	E				60						

For VT60 shutters installed with passage on fire side in:

- a minimum 100 mm thick cellular or reinforced concrete wall;
- a minimum 100 mm thick bricks wall;
- a 70 or 100 mm thick plaster-bricks wall;
- a plasterboard partition type A acc. EN520 of type 98/48, or BA13 or BA15 or BA25.

For the classification above, the grill has to be installed on both sides (fire and non exposed side).

R	E	I	W		t	-	M	C	S	G	K
	E	I			60						

## **9. FIRE RESISTANCE CLASSIFICATION VALIDITY CONDITIONS**

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### **9.1. DURING MANUFACTURE AND INSTALLATION**

The element and its assembly must comply with the detailed description in the reference report. Should there be dispute concerning the element which is the subject of this classification report, the reference report may be requested from its owner, with no obligation to transfer the document.

### **9.2. DIRECTION OF FIRE**

**Indifferent for classification E 60 and opposite to the grill side for classification EI 60.**

### 9.3. SCOPE OF VALIDITY CONDITIONS FOR THE CLASSIFICATION REPORT

#### 9.3.1. Permitted overall dimensional variations of each leaf

	Minimum	Maximum
Width	300	800
Height	200	800

#### 9.3.2. Maximum authorised operational play (taking into account the intumescent seal):

- In lower cross-piece : 0 mm
- Laterally : 2 mm

These conclusions only relate to the fire resistance performances of the elements covered by this document. They are without prejudice, in any case, to other performances related to their use in a structure.

Maizières-Lès-Metz, 31 January 2022

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Charlotte SCHNELLER

Project leader  
Signé par : Charlotte SCHNELLER


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Romain  
STOUVENOT

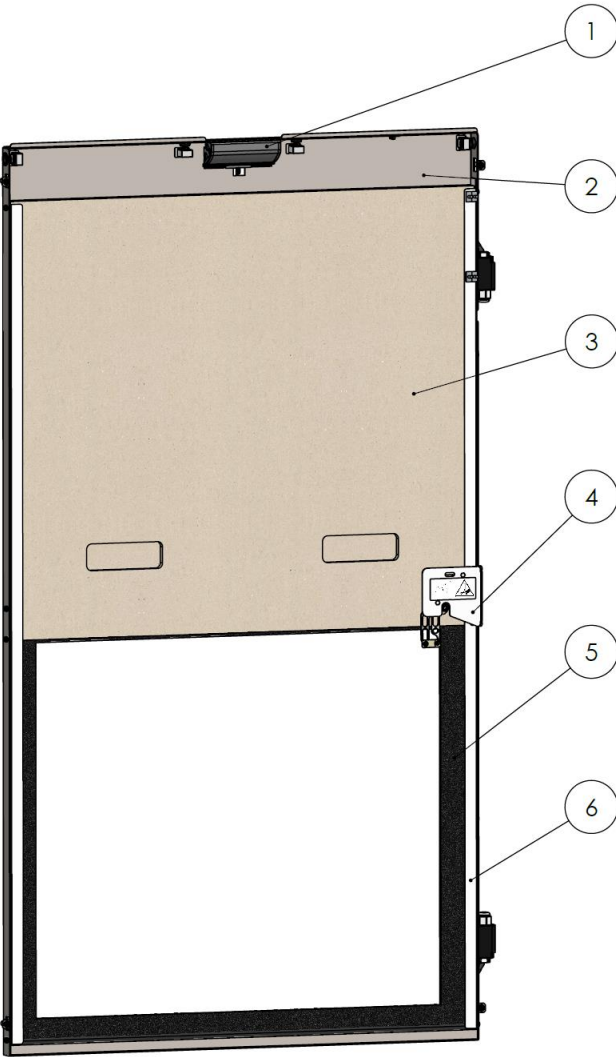
Supervisor  
Signé par : Romain STOUVENOT



DRAWINGS APPENDIX

 www.rf.t.be	Reference - Subject - Date <b>VT60_Commercial_14_11_2019</b>	Plate A 2/2
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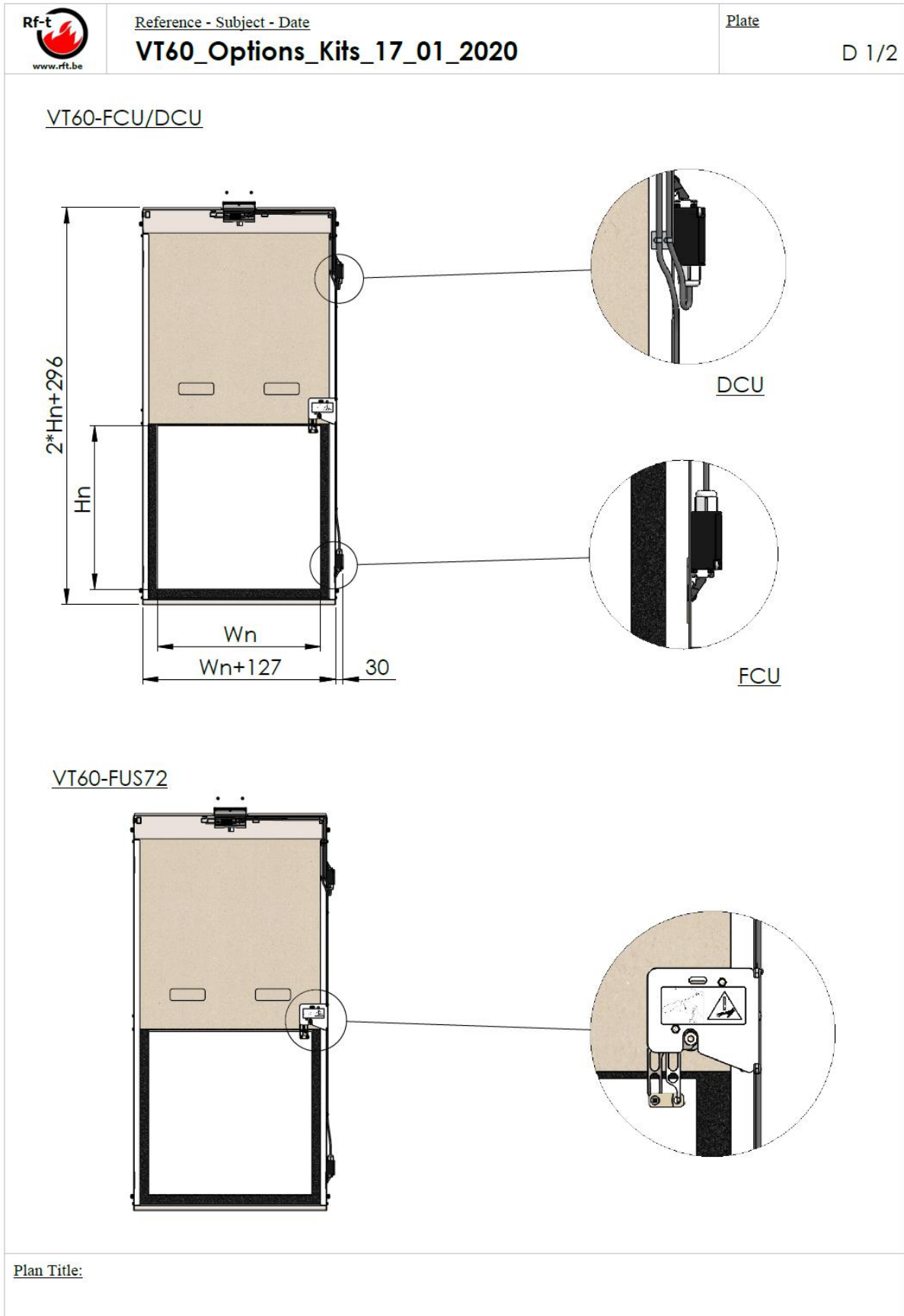
1. Connection Box  
 2. Product casing  
 3. Damper Blade  
 4. Fusible link  
 5. Intumescent strip  
 6. Guide

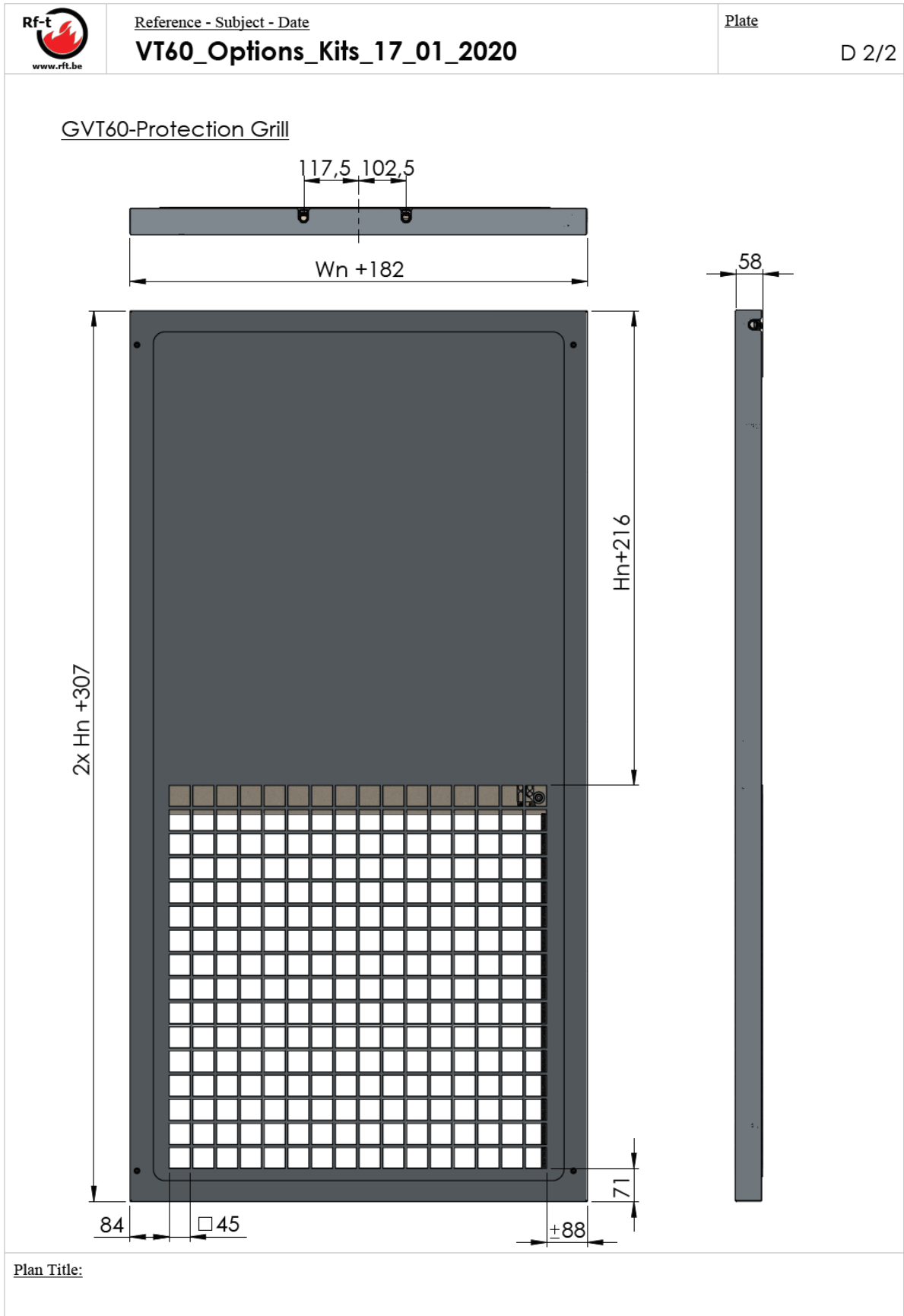
  

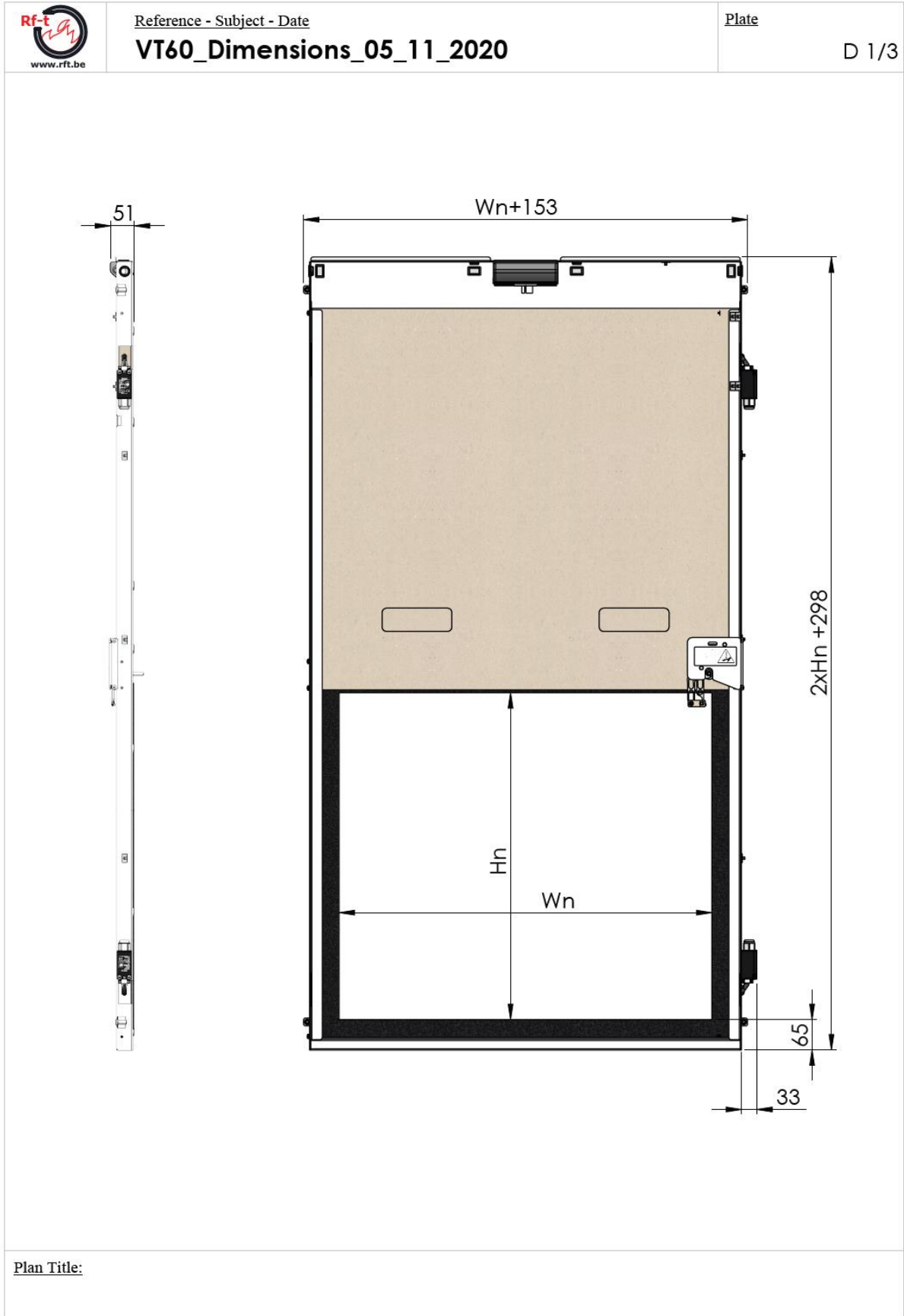
	Product range	
	Minimum dimensions	Maximum dimensions
WxH(mm)	300x200	800x800
W= Width H= Height	W/H/ per step of 50mm	


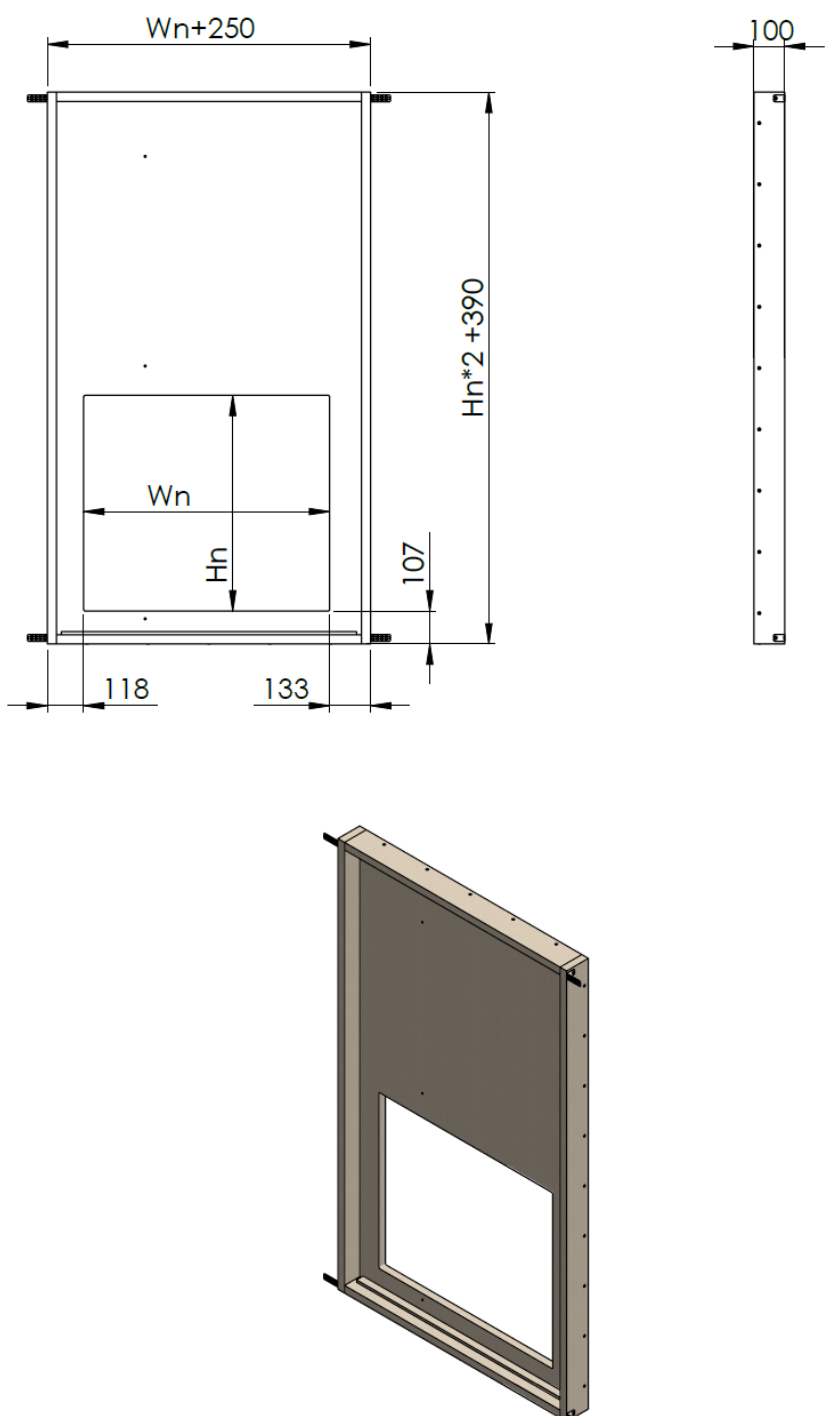
  



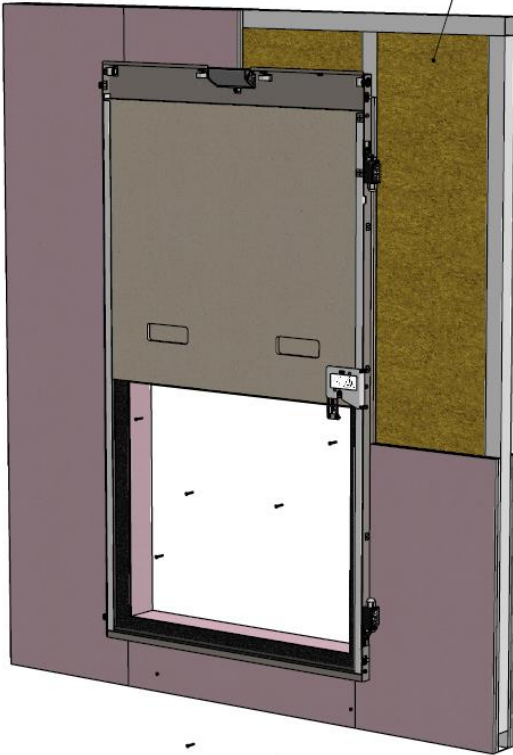
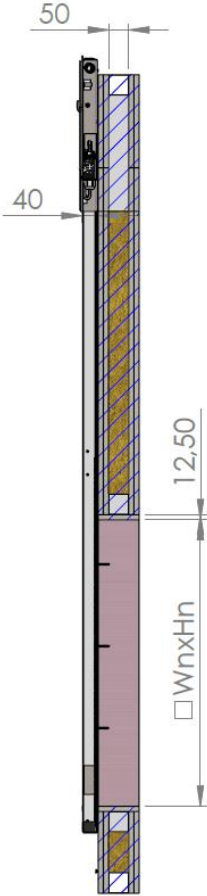
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
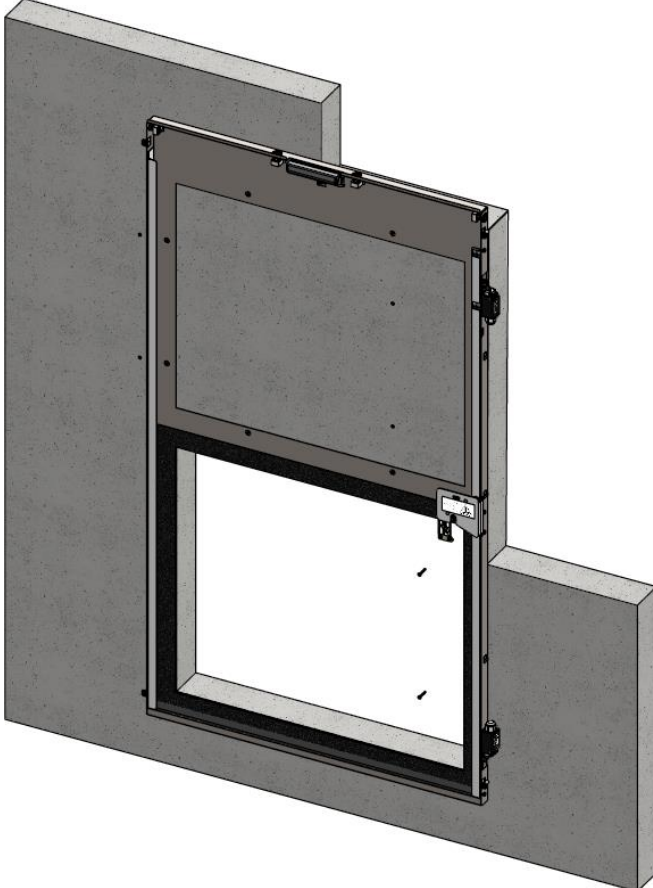
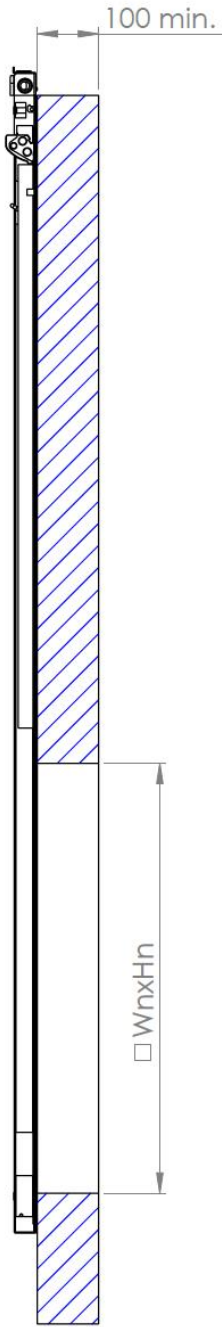


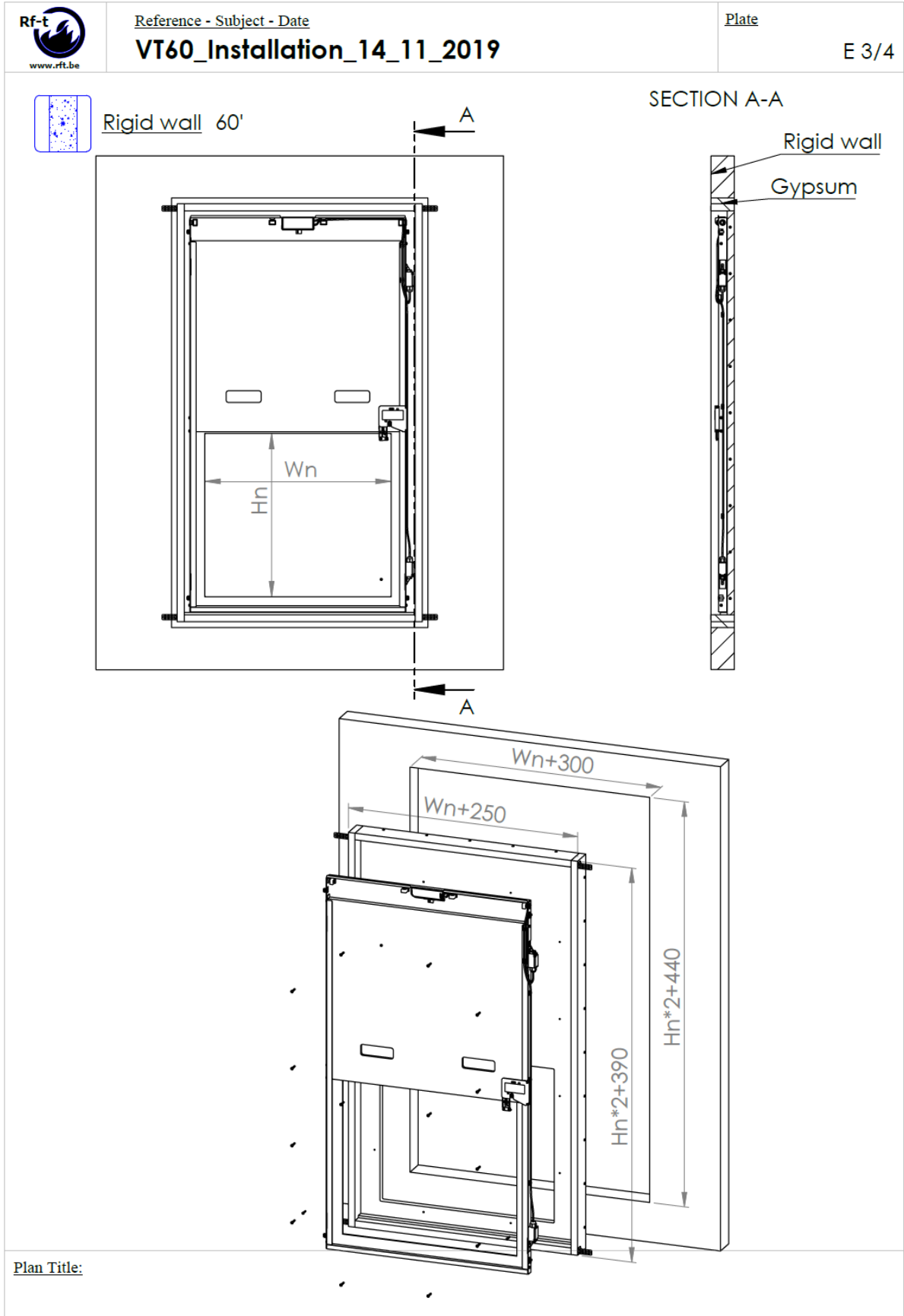




 <p>www.rf-t.be</p>	<p>Reference - Subject - Date <b>VT60_Dimensions_05_11_2020</b></p>	<p>Plate D 3/3</p>
<p><b>E-VT60</b></p>  <p>The drawing shows a rectangular frame with a central opening. The overall width is labeled <math>Wn+250</math> and the overall height is <math>Hn*2+390</math>. The inner opening has a width <math>Wn</math> and height <math>Hn</math>. A vertical dimension of 107 is shown on the right side. Horizontal dimensions of 118 and 133 are shown at the bottom. A vertical dimension of 100 is shown on the right side of the frame. A 3D perspective view of the frame is shown below the 2D drawing.</p> <p><u>Plan Title:</u></p>		

 <p>www.rf-t.be</p>	<p>Reference - Subject - Date <b>VT60_Installation_14_11_2019</b></p>	<p>Plate E 1/4</p>
<p><u>Flexible wall - Metal stud gypsum plasterboard wall</u></p> <div style="display: flex; align-items: flex-start;"> <div style="margin-right: 20px;">  <p>60'</p> <p>Gipswand Type A Acc EN520 Paroi de plâtre type A acc EN520 Gypsum wall type Type A acc EN 520</p> </div> <div style="margin-right: 20px;"> <p>Min.40Kg/m<sup>3</sup></p>  </div> <div>  </div> </div>		
<p><u>Plan Title:</u></p>		

 <p>www.rft.be</p>	<p>Reference - Subject - Date</p> <p><b>VT60_Installation_14_11_2019</b></p>	<p>Plate</p> <p>E 2/4</p>
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 20%;">  <p>Rigid wall 60'</p> </div> <div style="width: 60%; text-align: center;">  </div> <div style="width: 15%;">  <p>100 min.</p> <p>WnxHn</p> </div> </div>		
<p>Plan Title:</p>		





 <small>www.rf.be</small>	<u>Reference - Subject - Date</u> <b>VT60_Installation_02_09_2021</b>	<u>Plate</u> E 4/4
<p><u>Application</u></p>  <p><b>Fire side</b></p> <p>Decorative grill GRIDEC</p> <p>Guillotine-type VT60</p> <p>Cover G-VT60</p>		
<p><u>Plan Title:</u></p>		