

## **Classification of fire resistance according to EN 13501-2: 2023 of a fire curtain assembly of type RGT EW60 Compact of Metacon-Next B.V.**

Classification no.	2019-Efectis-R002438[Rev. 1]
Sponsor	Metacon-Next B.V. Zuidbaan 450 2841 MD Moordrecht THE NETHERLANDS
Product name	<b>RGT EW60 Compact</b>
Prepared by	Efectis Nederland BV
Author(s)	P.G.R. Scholten B.Sc. R.D. Scheepe B.Sc.
Project number	ENL-19-001247, ENL-23-000740
Date of issue	June 2024
Number of pages	13

## TABLE OF CONTENTS

---

1.	Introduction	3
1.1	Exception of Accreditation	3
1.2	Normative references	3
1.3	Revision information	3
2.	Details of classified product	4
2.1	General	4
2.2	Description	4
3.	Test reports/extended application reports and test results in support of classification	4
3.1	Test reports and exap reports	4
3.2	Extended application results	5
4.	Classification	7
4.1	Reference of classification	7
4.2	Classification	7
5.	Field of direct and extended application of fire resistance test results	7
5.1	General	7
5.2	Materials and construction	7
5.3	Permissible size variations	8
5.4	Asymmetrical assemblies	8
5.5	Supporting constructions	8
5.6	Curtain	8
5.7	Coiling mechanism	8
5.8	Supports for barrel/casing	9
5.9	Axle	9
5.10	Tubular motor	9
6.	Endplate dimensions	9
7.	Bottom bar	9
8.	Field of direct application of test results for durability of operability	9
9.	Limitations	9
10.	Drawings	10

## 1. INTRODUCTION

This classification report defines the resistance to fire classification assigned to the product family RGT EW60 Compact of Metacon-Next B.V., in accordance with the procedures given in EN 13501-2: 2023.

### 1.1 EXCEPTION OF ACCREDITATION

An exception of accreditation has to be made for the test report issued according to EN 12604. This has not been issued under the accreditation of Efectis Nederland B.V. Therefore the C2 classification is not under the accreditation of Efectis Nederland B.V.

### 1.2 NORMATIVE REFERENCES

Table 1-1: **Normative references**

European standard	Part
EN 1634-1:2014 + A1:2018	Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 1: Fire resistance test for door and shutter assemblies and openable windows
EN 15269-11:2018+ C1:2019	Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware - Part 11: Fire resistance for operable fabric curtains
EN 13501-2:2023	Fire classification of construction products and building elements – Part 2: Classification using data from fire resistance tests, excluding ventilation services
EN 12604: 2017	Industrial, commercial and garage doors and gates - Mechanical aspects - Requirements and test methods

### 1.3 REVISION INFORMATION

This is the second issue of the report.

This version supersedes all previous versions of this report that are hereby withdrawn. Details on the changes can be found in the tables below.

Table 1-2: Revision information

Issue	Date of issue
First issue	December 2019
Second issue	June 2024

### 1.3.1 Second issue detailed information

Table 1-3: Second issue information

Chapter of revision	All
Reason of revision	Test evidence has been added, company name change
Consequences of revision	Different field of application, ExAp field of application now given under accreditation Efectis Nederland

## 2. DETAILS OF CLASSIFIED PRODUCT

### 2.1 GENERAL

The element, product family RGT EW60 Compact, is defined as a fire curtain assembly.

### 2.2 DESCRIPTION

The element, product family RGT EW60 Compact consisting of a fabric curtain of type REFLECTORGATE'

The curtain is made of a glassfiber textile with on both sides an aluminium foil, the thickness is 1.8 mm.

The textile is used horizontally, and each part is stitched together with 4 double seams. In the curtain are steel rods to hold the curtain in the side guides.

The side guides are made from steel, width is 80 mm and depth 60 mm and are mounted to the wall at least every 400 mm (in height).

The bottom bar is a steel rod and is 112 mm shorter than the width between the side guides.

Casing dimension is 400 mm and is mounted to the wall every 300 mm (in width), lower points 600 mm c.t.c. and upper points 600 mm c.t.c.

See also the drawings in paragraph 10 with the typical details for the RGT EW60 Compact.

## 3. TEST REPORTS/EXTENDED APPLICATION REPORTS AND TEST RESULTS IN SUPPORT OF CLASSIFICATION

### 3.1 TEST REPORTS AND EXAP REPORTS

Name of laboratory	Name of sponsor	Report ref. no	Test/ExAp standard
Efectis Nederland	Metacon-NextB.V.	2020-Efectis-R000576[Rev.2]	EN 15269-11:2018+C1:2019
Efectis Nederland	Next Door Systems	2019-Efectis-R002373	EN 1634-1:2014+A1:2018
Efectis Nederland	Metacon-Next B.V.	2021-Efectis-R000167[Rev.1]	EN 1634-1:2014+A1:2018
Efectis Nederland	Metacon-Next B.V.	2022-Efectis-R000420[Rev.1]	EN 12604:2017

### 3.2 EXTENDED APPLICATION RESULTS

#### 3.2.1 Extended application results 2020-Efectis-R000576[Rev.2]

Performances	Criteria	Time	Failure?
<b>Integrity</b>	<i>Ignition of a cotton pad</i>	60	No
	<i>Sustained flaming</i>	60	No
	<i>Cracks or openings in excess of given dimensions</i>	60	No
<b>Radiation</b>	<i>Maximum radiation value &gt; 15 kW/m<sup>2</sup></i>	60	No

#### 3.2.2 Test report 2019-Efectis-R002373, mounted on the non-exposed side

Name of laboratory and its notified body number	Efectis Nederland BV, 1234
Name of sponsor	Next Door Systems Randweg 19 8304 AS EMMELOORD THE NETHERLANDS
Test report ref. no.	2019-Efectis-R002373
Date of test	4 <sup>th</sup> of December 2019
Test method	EN 1634-1: 2014+A1: 2018
Aperture size	3400 x 3500 mm (w x h)
Side guides	Galvanized steel
Case	Galvanized steel
Fabric curtain	REFLECTORGATE
Centre bracket	Galvanized steel
Tubular motor	Simu T5
Tube (axis)	Steel
Supporting construction	Rigid standard supporting construction according to EN 1363-1, aerated concrete, density 575 kg/m <sup>3</sup> ± 50 kg/m <sup>3</sup> thickness 150 mm

#### Test results

Performances	Criteria	Time	Failure
<b>Integrity</b>	<i>Ignition of a cotton pad</i>	82	82
	<i>Sustained flaming</i>	83	No
	<i>Cracks or openings in excess of given dimensions</i>	82	82

<b>Radiation</b>	<i>5 kW/m<sup>2</sup> after 42 min</i> <i>8.1 kW/m<sup>2</sup> after 60 min</i> <i>10 kW/m<sup>2</sup> after 68 min</i> <i>13.5 kW/m<sup>2</sup> after 83 min</i>
------------------	--

### 3.2.3 Test report 2021-Efectis-R000167[Rev.1], mounted on the exposed side

Name of laboratory and its notified body number	Efectis Nederland BV 1234
Name of sponsor	Metaalwarenfabriek Metacon B.V. Zuidbaan 450 2841 MD MOORDRECHT THE NETHERLANDS
Date of test	26 <sup>th</sup> of January 2021
Test method	EN 1634-1: 2014+A1: 2018
Aperture size	3400 x 2850 mm (w x h)
Side guides	Galvanized steel
Case	Galvanized steel
Fabric curtain	REFLECTORGATE
Tubular motor	Becker XL
Tube (axis)	Steel
Supporting construction	Plasterboard clad metal stud wall built according to EN 1363-1, thickness 125 mm

### Test results

Performances	Criteria	Time	Failure
<b>Integrity</b>	<i>Ignition of a cotton pad</i>	<i>71</i>	<i>No</i>
	<i>Sustained flaming</i>	<i>71</i>	<i>No</i>
	<i>Cracks or openings in excess of given dimensions</i>	<i>70</i>	<i>70</i>
<b>Radiation</b>	<i>5 kW/m<sup>2</sup> after 49 min</i> <i>6.8 kW/m<sup>2</sup> after 60 min</i> <i>9.3 kW/m<sup>2</sup> after 71 min</i>		

### 3.2.4 Test report 2022-Efectis-R000420[Rev.1]

Number of the cycles	Type A: 20183 – 602 = 19581 Type B: 14601 - 568 = 14033 Type C: 12238 – 85 = 12153
Distance of the cycles	Type A: 3480 mm Type B: 6000 mm Type B: 7800 mm

Test specimen type A, free entrance 4585 x 3480 mm  
Test specimen type B, free entrance 2000 x 6000 mm  
Test specimen type C, free entrance 8000 x 7800 mm

## 4. CLASSIFICATION

---

### 4.1 REFERENCE OF CLASSIFICATION

This classification has been prepared in accordance with clause 7.5.5 of EN 13501-2:2023.

### 4.2 CLASSIFICATION

The element, product family of Metacon-Next B.V. is classified according to the criteria and classes:

**E 60-C2**  
**EW 60-C2**

Tests performed according to EN 12604 are not on the scope of accreditation of Efectis Nederland B.V. Therefore the C classification is not issued under the accreditation of Efectis Nederland B.V.

## 5. FIELD OF DIRECT AND EXTENDED APPLICATION OF FIRE RESISTANCE TEST RESULTS

---

### 5.1 GENERAL

The field of direct application defines the allowable changes to the test specimen following a successful fire resistance test. These variations can be applied automatically without the need for the sponsor to seek additional evaluation, calculation, or approval.

*NOTE When extended product size requirements are envisaged, the dimensions of certain components within the test specimen can be less than those intended to be used at full size in order to maximize the extrapolation of the test results by modelling the interaction between components at the same scale.*

Where referred to annex B or annex C in this paragraph, the annexes in EN 1634-1 are meant.

### 5.2 MATERIALS AND CONSTRUCTION

#### 5.2.1 General

Unless otherwise stated in the following text, the materials and construction of the doorset or openable window shall be the same as that tested. The number of leaves and the mode of operation (e.g. sliding, single action or double action) shall not be changed.

#### 5.2.2 Specific restrictions on materials and construction

##### 5.2.2.1 Metal construction

The type of metal shall not be changed from that tested.

### 5.2.3 Fixings

The number of fixings per unit length used to attach door sets to supporting constructions may be increased but shall not be decreased and the distance between fixings may be reduced but shall not be increased.

### 5.2.4 Building hardware

No change in building hardware is allowed.

## 5.3 PERMISSIBLE SIZE VARIATIONS

### 5.3.1 EW and E classified door sets

The door set may be increased in size, and an unlimited size reduction is permitted. The maximum opening height is 8000 mm, the maximum opening width is 10000 mm.

The material thickness of side guides and barrel carrying end plates may be increased up to 50% but it shall not be reduced beyond acceptable metal industry tolerances.

## 5.4 ASYMMETRICAL ASSEMBLIES

### 5.4.1 Exposed and non-exposed side

The fire curtain may be mounted on the exposed or the non-exposed side of the supporting construction. The construction may not be installed within the wall.

## 5.5 SUPPORTING CONSTRUCTIONS

### 5.5.1 Rigid supporting constructions

The fire curtain may be mounted in a rigid, i.e. aerated concrete supporting construction, of at least  $575 \pm 50 \text{ kg/m}^3$  and a thickness of 125 mm or greater than that. The maximum doorset dimensions in this supporting construction are: opening height of 8000 mm and opening width of 10000 mm.

### 5.5.2 Flexible standard supporting construction

The fire curtain may be mounted in a flexible standard supporting construction which is of the gypsum boards, type F according to EN 520, covered type with studs made from metal or timber. The partition shall have a fire resistance of at least EI 90, 2 layers of 12.5 mm gypsum boards on each side, and with insulation with a density of  $110 \text{ kg/m}^3$ . The maximum doorset dimensions in this supporting construction are: opening height of 8000 mm and opening width of 10000 mm.

## 5.6 CURTAIN

Only the seam variation as shown in Figure 10-2 and Figure 10-4 are possible for the field of application given. The seam variation shown in Figure 10-1 is only possible with the construction as described in test report 2019-Efectis-R002373.

## 5.7 COILING MECHANISM

For the maximum width between the side guides of 10000 mm and the maximum possible door opening height of 8000 mm a tube diameter of 219.1 mm and wall thickness of 4.0 mm is required.

## 5.8 SUPPORTS FOR BARREL/CASING

For the maximum width between the side guides of 10000 mm and the maximum possible door opening height of 8000 mm two barrel supports are required. The distance between centreline of axle and rear of barrel support bracket is 160 mm. The distance between barrel support centre of gravity and the point of greatest stress is 160 mm.

No brackets are required for the specimen in an opening size of 3400 x 2850 mm (w x h)

## 5.9 AXLE

For the maximum width between the side guides of 10000 mm and the maximum possible door opening height of 8000 an axle diameter of 50 mm is required.

## 5.10 TUBULAR MOTOR

Both the Simu T5 and the Becker XL are possible to be used.

## 6. ENDPLATE DIMENSIONS

---

The dimensions of the endplates for the upscaled dimensions of height, 8000 mm, and width, 10000 mm is given in Figure 10-5.

## 7. BOTTOM BAR

---

The dimensions of the bottom bar or the upscaled dimensions of height, 8000 mm, and width, 10000 mm is 9850 mm. The upscaled clearance between bottom bar and side guides on each side is 38.3 mm.

## 8. FIELD OF DIRECT APPLICATION OF TEST RESULTS FOR DURABILITY OF OPERABILITY

---

Tests performed according to EN 12604 are not on the scope of accreditation of Efectis Nederland B.V. Therefor the C classification is not issued under the accreditation of Efectis Nederland B.V.

Tested sizes for durability of operability were:

Test specimen type A, dimension 4585 x 3480 mm, w x h

Test specimen type B, dimension 2000 x 6000 mm, w x h

Test specimen type C, dimension 8000 x 7800 mm, w x h

## 9. LIMITATIONS

---

This classification report does not represent any type approval or certification of the product.



P.G.R. Scholten B.Sc.  
Project leader resistance to fire



R.D. Scheepe B.Sc.  
Team leader resistance to fire

## 10. DRAWINGS

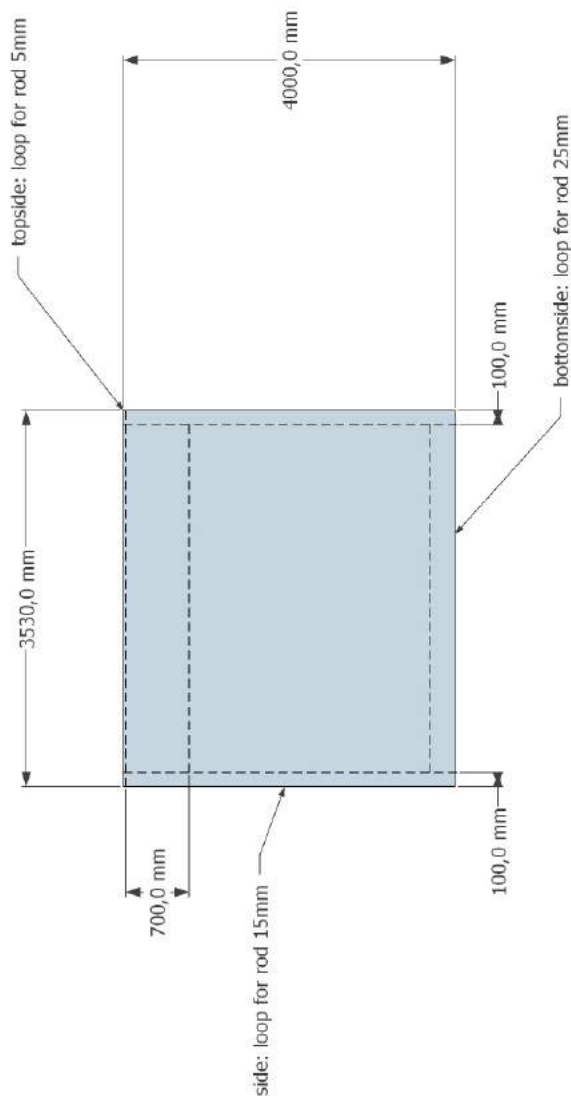


Figure 10-1 Horizontal and vertical seams as reported in 2019-Effectis-R002373

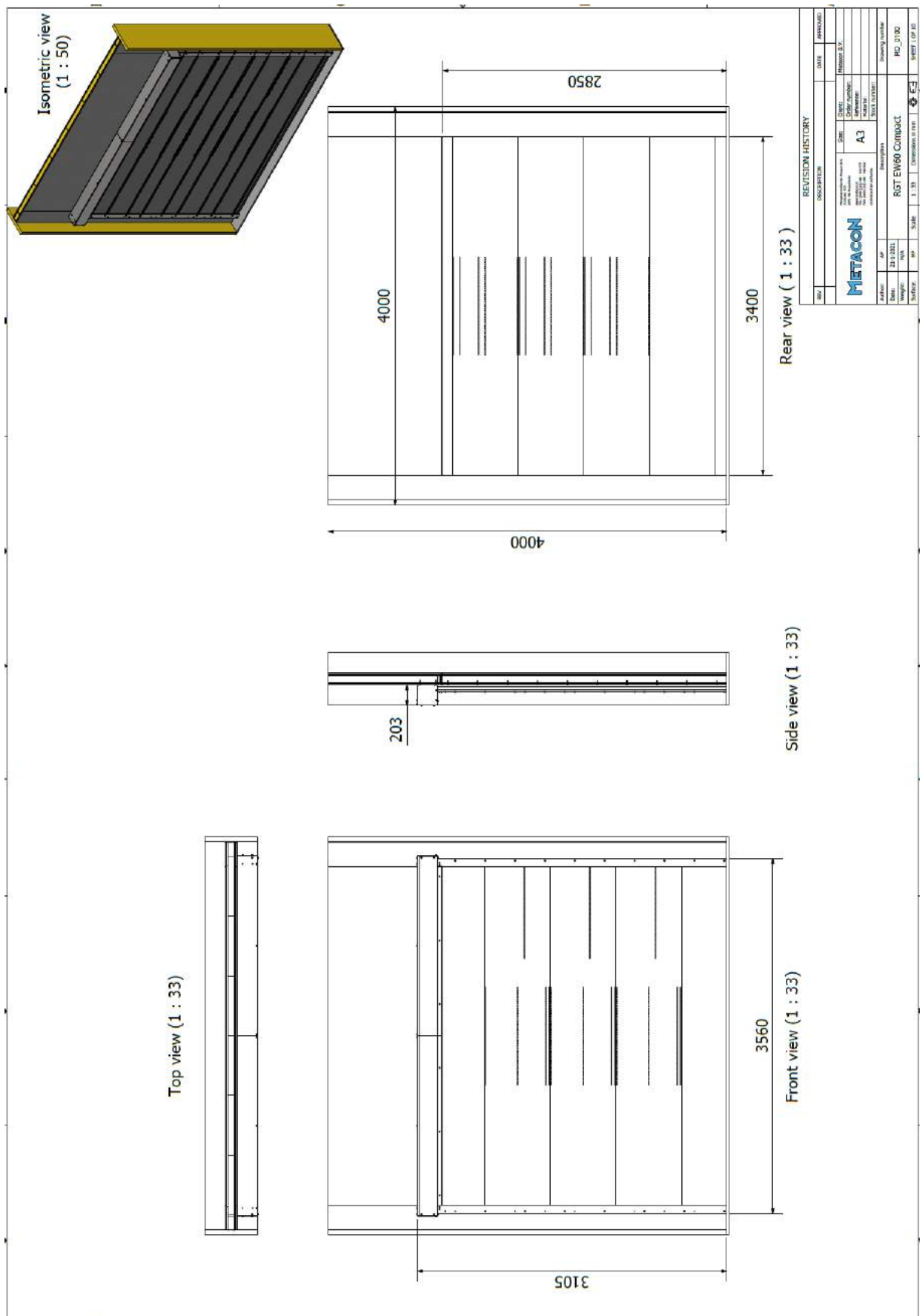


Figure 10-2 Horizontal and vertical seams as reported in 2021-Efectis-R000167[Rev.1]

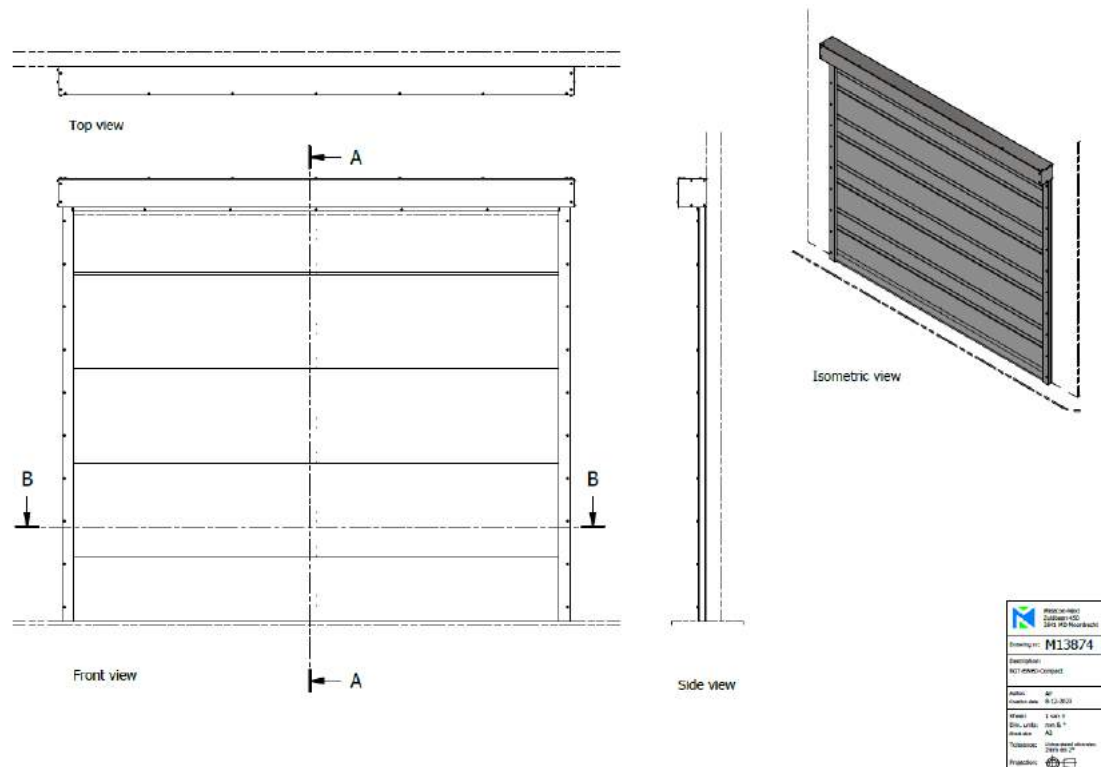


Figure 10-3 Views of the operable fabric curtain

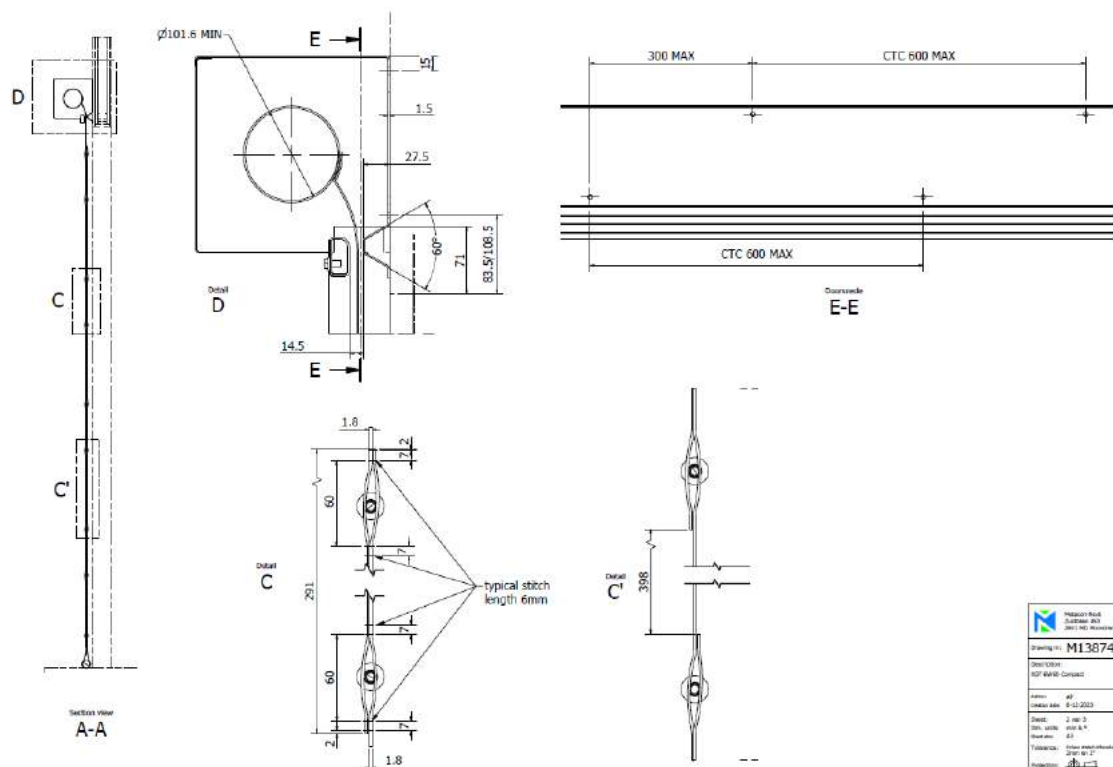


Figure 10-4 Section views of the operable fabric curtain

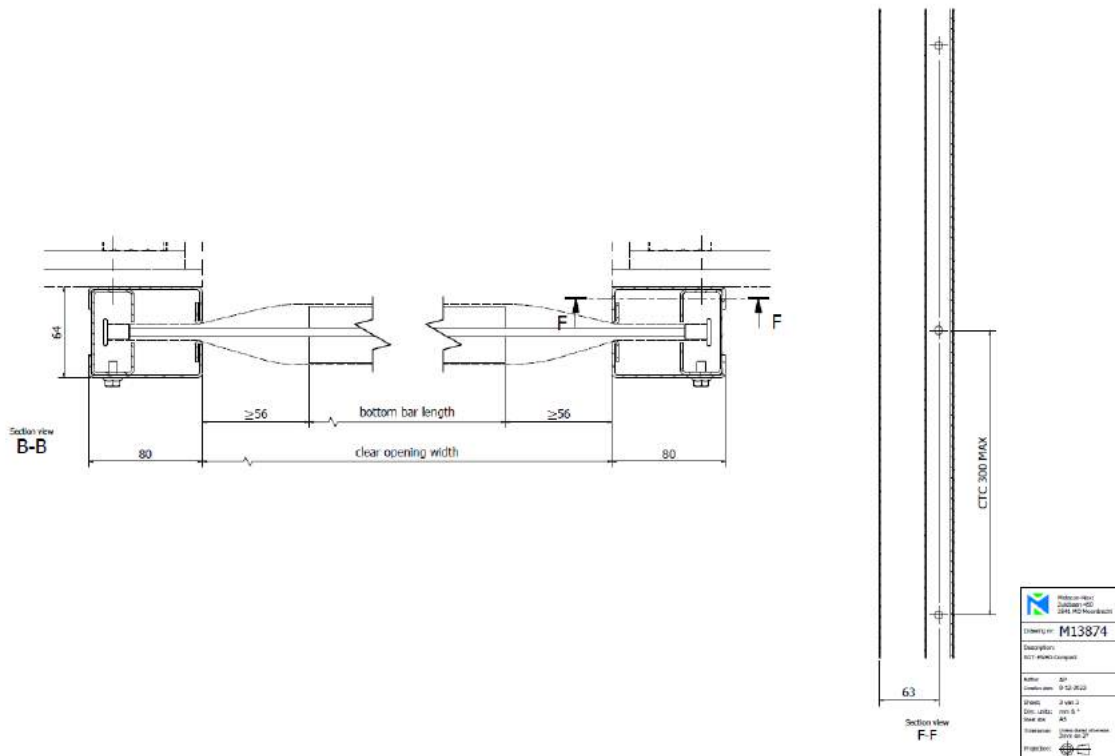


Figure 10-5 Section views of the operable fabric curtain, continued

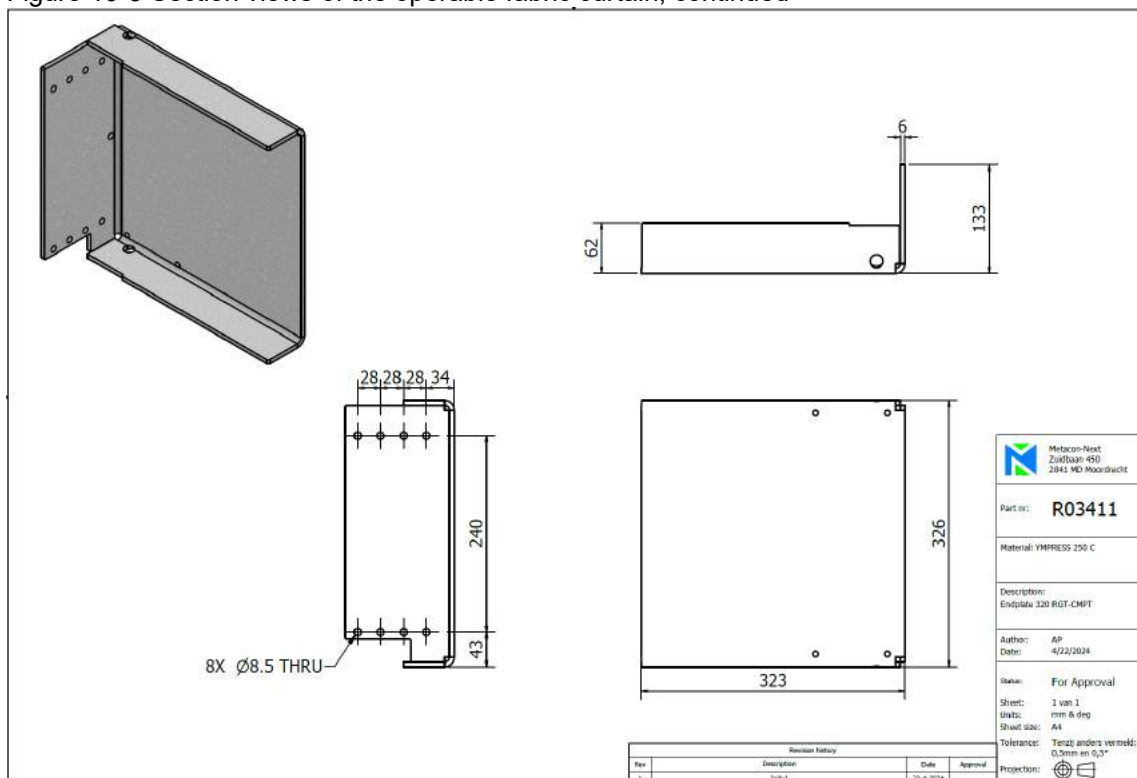


Figure 10-6 Endplate dimensions for the upscaled dimension of height, 8000 mm, and width, 10000 mm