



CONFIDENTIAL

Classification report:  
Chilt/CR12070

Resistance to fire classification  
report for an air transfer grille in a  
non-loadbearing wall in accordance  
with BSEN 13501-2: 2007 +A1: 2009

Date of report: 25<sup>th</sup> January 2013

Page 1 of 7

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[www.chilterndynamics.co.uk](http://www.chilterndynamics.co.uk)

[www.qmark.info](http://www.qmark.info)

Prepared for: AFP Air Technologies LLP  
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Sevenoaks  
Kent  
TN13 1YH

Prepared by: Chiltern International Fire Ltd  
Chiltern House  
Stocking Lane  
Hughenden Valley  
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HP14 4ND



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*The legal validity of this report can only be claimed on presentation of the complete report.*

## 1 Introduction

This resistance to fire classification report defines the classification assigned to an AFP Air Technologies EVI 60 500 air transfer grille in accordance with the procedures given in BSEN 13501-2: 2007 + A1: 2009.

## 2 Details of classified product

### 2.1 Type of function

The AFP Air Technologies EVI 60 500 air transfer grille, fitted within an autoclaved aerated concrete, standard vertical supporting construction, applies to concrete, block work and masonry vertical supporting elements of a thickness and density equal to or greater than that tested, is defined as a vertical fire resisting non-loadbearing wall system. Its function is to resist fire in respect of the fire performance characteristics given in clause 5 of BSEN 13501-2.

### 2.2 Description

The AFP Air Technologies EVI 60 500 air transfer grille is fully described in the test report in support of this classification, listed in clause 3.

## 3 Test reports and test results in support of classification

### 3.1 Summary of test report

This classification report is supported by the following test report:

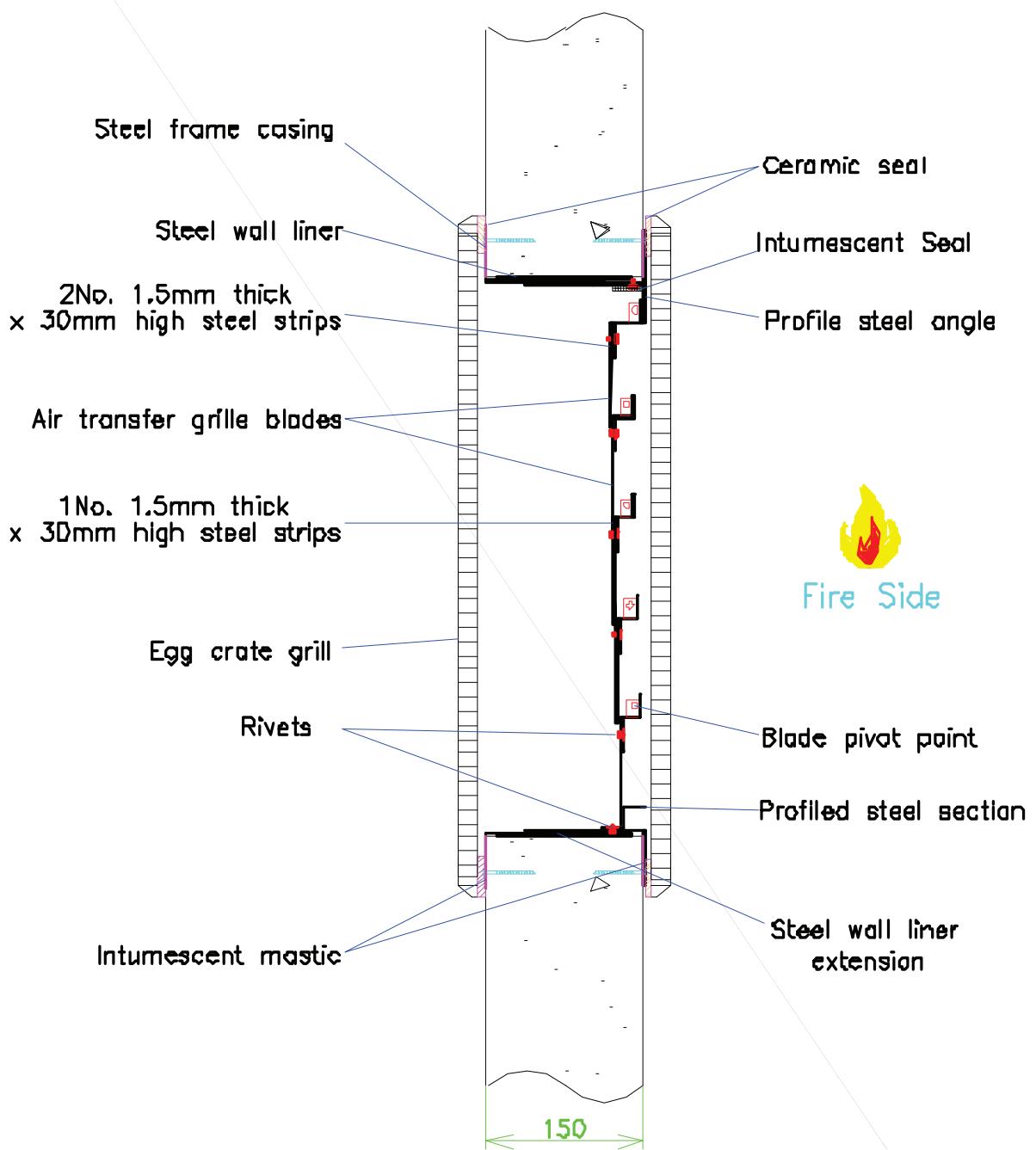
Test laboratory	Test sponsor	Test report ref	Test methods	Test date
Chiltern International Fire Ltd, Stocking Lane Hughenden Valley, High Wycombe Bucks. HP14 4ND Notified body No: 1314	AFP Air Technologies LLP Lime Tree House 15 Lime Tree Walk Sevenoaks Kent TN13 1YH	Chilt/IF12070	BSEN 1363-1: 1999 and BSEN 1364-1: 1999	3 <sup>rd</sup> October 2012

The specimen tested was fitted into a 500mm high x 500mm wide x 150mm deep aperture, and comprised a 1.2mm thick x 130mm wide steel wall liner extension fitted centrally within the aperture, a 1.2mm thick x 115mm wide x 50mm high steel wall liner fitted around the aperture on the exposed face and a 1.5mm thick x 115mm wide x 50mm high steel frame fitted on the unexposed face.

The transfer grill blades were pivoted within the frame. A 20mm x 2mm Envirograf intumescent seal product reference 68 was fitted at the head detail above the top blade. An AFP Air Technologies LLP aluminium Egg Crate grille fitted to both faces.

The wall liners and frame were sealed to the wall with intumescent mastic, and a 34mm wide x 6mm thick self adhesive ceramic tape was fitted between the wall and Egg Crate grill.

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### 3.2 Field of direct application

The results of the fire test are directly applicable to similar constructions where one or more of the changes listed below are made and the construction continues to comply with the appropriate design code for its stiffness and stability. Other changes are not permitted.

- The number of fixings used to attach the wall lining and vent framing to the supporting construction may be increased but shall not be decreased and the distance between fixings may be reduced but shall not be increased.
- Paint finishes are acceptable and may be added to the frame or wall liner components.
- The fire resistance of the air transfer grille assembly applies when mounted in the following standard supporting constructions:
- Masonry or lightweight concrete of minimum density 800kg/m<sup>3</sup> or concrete (solid or blocks) of minimum density 1200kg/m<sup>3</sup> of minimum 150mm thickness.

### 3.3 Test results

<b>Integrity</b>	
Cotton pad	132 (one hundred and thirty two) minutes*
Continuous flaming	132 (one hundred and thirty two) minutes*
Gap gauges	132 (one hundred and thirty two) minutes*
<b>Insulation</b>	
Maximum	92 (ninety two) minutes
Average set	98 (ninety eight) minutes

\* Failure criteria was not achieved upon termination of the test at 132 minutes

*The legal validity of this report can only be claimed on presentation of the complete report.*



## 4 Classification and direct field of application

### 4.1 Reference of classification

This classification has been carried out in accordance with clause 7 of BSEN 13501-2: 2007 + A1: 2009, specifically clause 7.5.2 for non load bearing wall elements.

### 4.2 Classifications

The product, AFP Air Technologies EVI 60 500 air transfer grille, may be classified to the following combinations of performance parameters and classes as appropriate:

R	E	I	W		t	t	-	M	C	S	IncSlow	sn	ef	r
	✓	✓	✓											

Considering the test evidence submitted for classification provides the following classifications:-

**AFP Air Technologies EVI 60 500 air transfer grille incorporating an Egg Crate grille, fitted in a vertical fire resisting non-loadbearing wall system**

**Fire resistance classification of E20, E30, E60, E90, E120, EI15, EI20,  
EI30, EI45, EI60, EI90, EW20, EW60, EW90, EW120**

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#### 4.3 Field of direct application

The results of the test are directly applicable to similar constructions where one or more of the changes listed under the Field of Direct Application (section 3.2) are made and the construction continues to comply with that appropriate design code for its stiffness and stability. Other changes are not permitted by this document.

### 5 Limitations

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

Signature:		
Name:	Robert Axe	Vincent Kerrigan
Title:	Deputy Head of Section - Fire Resistance	Technical Manager
Date of issue:	07.02.2013	07-02-2013

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CONFIDENTIAL

Classification report:  
Chilt/CR12017

Resistance to fire classification  
report for an air transfer grille in a  
non-loadbearing wall in accordance  
with BSEN 13501-2: 2007 +A1: 2009

Date of report: 21<sup>st</sup> May 2012

Page 1 of 8

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<b>5 Limitations .....</b>	<b>7</b>

*The legal validity of this report can only be claimed on presentation of the complete report.*

## 1 Introduction

This resistance to fire classification report defines the classification assigned to the product AFP Air Technologies EVI 60 500 air transfer grille in accordance with the procedures given in BSEN 13501-2: 2007 + A1: 2009.

## 2 Details of classified element

### 2.1 Type of function

The product, AFP Air Technologies EVI 60 500 air transfer grille, fitted within an autoclaved aerated concrete, standard vertical supporting construction, applies to concrete, block work and masonry vertical supporting elements of a thickness and density equal to or greater than that tested, is defined as a vertical fire resisting non-loadbearing wall system. Its function is to resist fire in respect of the fire performance characteristics given in clause 5 of BSEN 13501-2.

### 2.2 Description

The AFP Air Technologies EVI 60 500 air transfer grille is fully described in the test report in support of this classification, listed in clause 3.

## 3 Test reports and test results in support of classification

### 3.1 Summary of test report

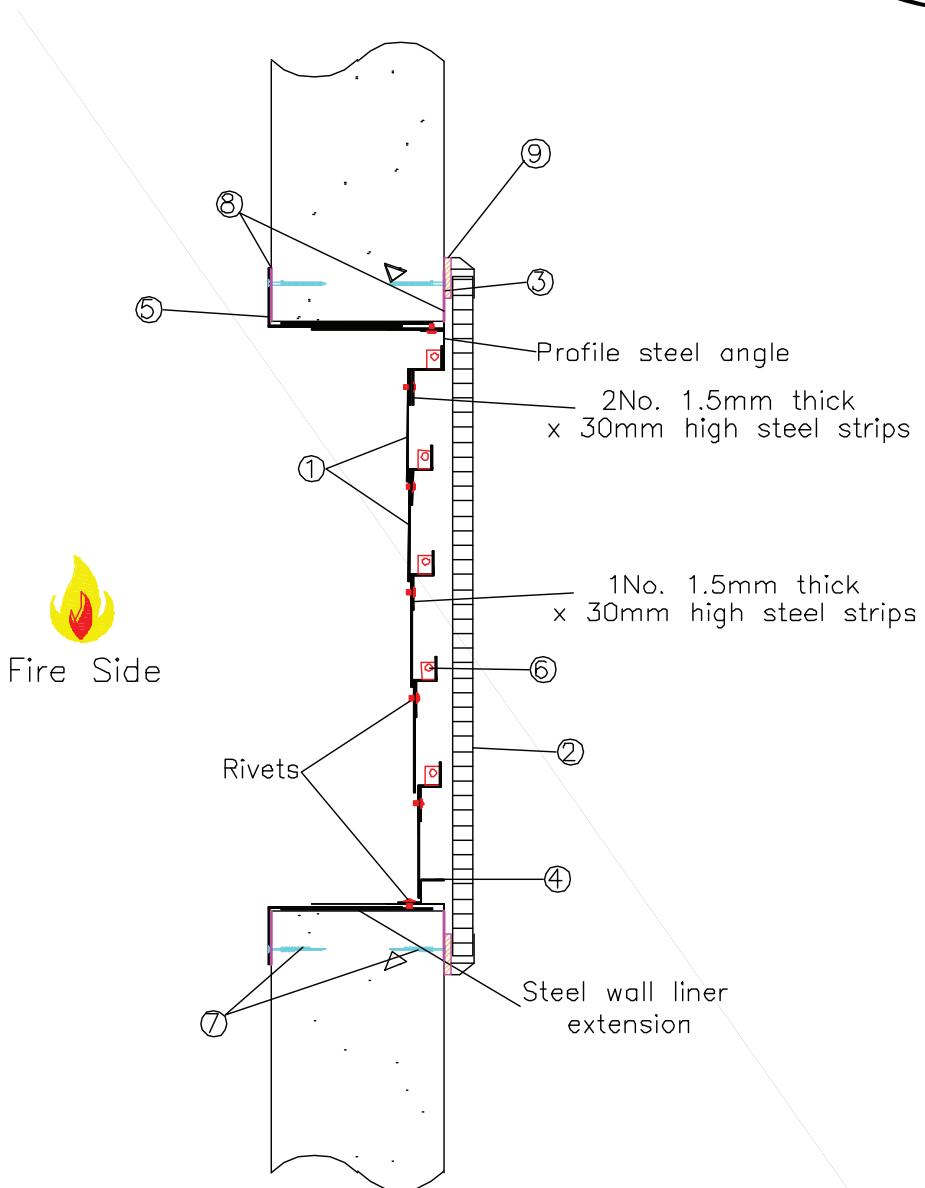
This classification report is supported by the following test report:

Test laboratory	Test sponsor	Test report ref	Test methods	Test date
Chiltern International Fire Ltd Stocking Lane Hughenden Valley High Wycombe Bucks. HP14 4ND Notified body No: 1314	AFP Air Technologies LLP 28 London Road Sevenoaks Kent TN13 1AS	Air transfer grille resistance to fire Chilt/IF12017	BSEN 1363-1: 1999 and BSEN 1364-1: 1999	6 <sup>th</sup> March 2012

The specimen tested was fitted into a 500mm high x 500mm wide x 150mm deep aperture, and comprised a 1-2mm thick x 130mm wide steel wall liner extension fitted centrally within the aperture, a 1-2mm thick x 115mm wide x 50mm high steel wall liner fitted around the aperture on the exposed face and a 1.5mm thick x 115mm wide x 50mm high steel frame fitted on the unexposed face. The transfer grill blades were pivoted within the frame. An AFP Air Technologies LLP aluminium Egg Crate grille fitted to the unexposed face.

The wall liners and frame were sealed to the wall with intumescent mastic, and a 34mm wide x 6mm thick self adhesive ceramic tape was fitted between the wall and Egg Crate grill.

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<b>1</b>	<b>Air transfer grille vent blade</b>
<b>2</b>	<b>Aluminium Egg Crate grille</b>
<b>3</b>	<b>Air transfer grille frame</b>
<b>4</b>	<b>Profiled steel 'Z' section stop</b>
<b>5</b>	<b>Wall liner</b>
<b>6</b>	<b>Air transfer grille blade pivot spindle</b>
<b>7</b>	<b>Masonry screw – 50mm long</b>
<b>8</b>	<b>Acrylic intumescent mastic</b>
<b>9</b>	<b>Self adhesive ceramic seal</b>

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### 3.2 Field of direct application

The results of the fire test are directly applicable to similar constructions where one or more of the changes listed below are made and the construction continues to comply with the appropriate design code for its stiffness and stability. Other changes are not permitted.

- The number of fixings used to attach the wall lining and vent framing to the supporting construction may be increased but shall not be decreased and the distance between fixings may be reduced but shall not be increased.
- Paint finishes are acceptable and may be added to the frame or wall liner components.
- The fire resistance of the air transfer grille assembly applies when mounted in the following standard supporting constructions:
- Masonry or lightweight concrete of minimum density 800kg/m<sup>3</sup> or concrete (solid or blocks) of minimum density 1200kg/m<sup>3</sup> of minimum 150mm thickness.

### 3.3 Test results

#### Air pressure vent in a vertical test construction

Integrity	
Cotton pad	68 (sixty eight) minutes*
Continuous flaming	68 (sixty eight) minutes*
Gap gauges	68 (sixty eight) minutes*
Insulation	
Maximum	68 (sixty eight) minutes*
Average set	68 (sixty eight) minutes*

\* Failure criteria was not achieved upon termination of the test at 68 minutes

*The legal validity of this report can only be claimed on presentation of the complete report.*



## 4 Classification and direct field of application

### 4.1 Reference of classification

This classification has been carried out in accordance with clause 7 of BSEN 13501-2: 2007 + A1: 2009, specifically clause 7.5.2 for non – load bearing wall elements.

### 4.2 Classifications

The product, AFP Air Technologies EVI 60 500 air transfer grille, may be classified to the following combinations of performance parameters and classes as appropriate:

R	E	I	W		t	t	-	M	C	S	IncSlow	sn	ef	r
	✓	✓												

Considering the test evidence submitted for classification provides the following classifications:-

**AFP Air Technologies EVI 60 500 air transfer grille incorporating an Egg Crate grille, fitted in a vertical fire resisting non-loadbearing wall system**

**Fire resistance classification of E20, E30, E60, EI15, EI20, EI30, EI45, EI60**

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#### 4.3 Field of direct application

The results of the test are directly applicable to similar constructions where one or more of the changes listed under the Field of Direct Application (section 3.2) are made and the construction continues to comply with that appropriate design code for its stiffness and stability. Other changes are not permitted by this document.

### 5 Limitations

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

Signature:		
Name:	Ross Newman	Vincent Kerrigan
Title:	Principal Test Engineer	Technical Manager
Date of issue:	25-05-2012	25-05-2012

*The legal validity of this report can only be claimed on presentation of the complete report.*