

CLASSIFICATION REPORT n°. 10 - F - 675 - B

According to standards EN 15650: 2010 and EN 13501-3: 2005 + A1: 2009

Reference test report	Efectis France n°10 - F - 675
Regarding	A range of "SC+120"-type fire dampers installed in feed-through in reinforced concrete walls. Operating vacuum pressure: - 300Pa.
Sponsor	RF TECHNOLOGIES Lange Ambachtstraat, 40 B - 9860 OOSTERZELE

1. INTRODUCTION

This classification report defines the classification assigned to a range of "SC+120"-type fire dampers in accordance with the procedures set out in the standard EN 13501-3: 2005 + A1: 2009 "Fire classification of construction products and building elements - Part 3: Classification using data from fire resistance tests, on products and elements used in building service installations: fire resisting ducts and fire dampers" and in the standard EN 15650: 2010 "Ventilation for buildings. Fire dampers".

2. BODY

Efectis France
Voie Romaine
F - 57280 MAIZIERES-LES-METZ

3. SPONSOR

RF TECHNOLOGIES
Lange Ambachtstraat, 40
B - 9860 OOSTERZELE

4. REFERENCE DOCUMENT

Efectis France n°10 - F - 675 fire test report

5. REFERENCE AND ORIGIN OF THE TEST SPECIMENS

Reference: SC+ 120

Origin: RF TECHNOLOGIES
Lange Ambachtstraat, 40
B - 9860 OOSTERZELE

6. OVERALL PRINCIPLE

6.1. TYPE OF FUNCTION

The "SC + 120" - type damper is defined as a "fire damper". Its function is to be fire-resistant as regards fire integrity, thermal insulation and leakage flow rates.

6.2. GENERAL POINTS

Each fire damper is composed of a tunnel, within which a horizontally-mounted blade pivots. Each fire damper is composed of a tunnel, within which two half-blades pivoted on a shared hinge pin.

6.3. DETAILED DESCRIPTION OF THE ELEMENTS

6.3.1. Fire damper casing

The fire damper was an automatically-controlled device consisting of an 80 to 200mm Ø cylindrical casing and an embodied energy mechanism.

The 60mm long, 6/10mm-thick steel casing was fitted with a groove in which the "W"-shaped rubber (EPDM) gasket seal was placed. Also placed in the groove and glued to one of the two grooves formed by the gasket mentioned above was a strip of graphite-based, self-adhesive intumescent tape with cross section dimensions of 8 x 1.8mm (w x th.), and which was fixed to the entire circumference of the fire damper.

Two stainless steel 4/10mm-thick tabs, holding the half-blades in closed position, were fixed to the casing with a steel rivet (Ø 3.2mm), perpendicular to the hinge pins of the half-blades.

6.3.2. Blade

The device consisted of two 8mm-thick, semi-circular "PROMATECT H" blades, pivoting on a steel hinge pin (Ø 7mm). The hinge pin was fixed to an 8/10mm-thick galvanized steel bracket, fixed to the blade using two steel rivets (Ø 3.2mm).

Both surfaces were covered with a 2.5mm-thick layer of graphite-based intumescent material. At the edge where the blades came together, there was a 3 x 3mm notch, filled with 2mm-thick graphite. A gasket seal made of 2mm-thick "PUR"-type self-adhesive foam was glued onto the blade.

An 8 x 1.8mm graphite-based intumescent seal was glued perpendicular to the blade on the fire damper casing.

The blade and hinge assembly was fixed to the fire damper casing using two steel rivets (Ø 3.2mm).

The damper blades were held open by a steel fuse, held in plastic brackets and placed in the flow of air.

7. INSTALLATION OF THE TEST SPECIMENS

Installation in a concrete wall :

The fire damper was installed in a duct, fed through a 110mm-thick reinforced concrete wall with a bulk density of 2200kg/m³.

The duct (Ø x 5mm) was positioned in an opening with dimensions Ø (X + 50) mm.

The duct was then sealed in place with standard mortar.

Once the duct had been sealed, the fire damper was installed so that the fire damper blade was located in the middle of the wall when in the closed position.

8. FIRE RESISTANCE CLASSIFICATIONS

8.1. CLASSIFICATION REFERENCE

This classification procedure was conducted in accordance with section 7.2.4 of the standard EN 13501-3.

8.2. CLASSIFICATIONS

The elements are classified according to the following combinations of performance parameters and classes for the following supporting constructions:

- 110mm-thick reinforced concrete wall.

No other classification is authorised.

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The above performances of the elements are valid for heating as described in section 5.1.1 of the European standard EN 1363-1.

9. FIELD OF APPLICATION OF THE RESULTS

9.1. GENERAL POINTS

The requirements related to the field of application of all the fire dampers tested in accordance with EN 1366-2 apply, as well as the following items.

9.2. DIMENSIONS OF THE FIRE DAMPER

In accordance with section 13.1 of the standard EN 1366-2, the classifications indicated in section 7.2 of this classification report are valid for all fire dampers of the same type (including all the aspect ratios), provided the maximum flow cross-section dimensions do not exceed 200mm Ø and that the minimum flow cross-section dimensions are not less than 80mm Ø.

9.3. SEPARATION BETWEEN FIRE DAMPERS AND BETWEEN FIRE DAMPERS AND CONSTRUCTION ELEMENTS

In accordance with section 13.5 of the standard EN 1366-2, the fire classifications indicated in section 7.2 of this classification report apply, in practice, with a minimum spacing of:

- a) 200mm between fire dampers installed in separate ducts;
- b) of 75mm between the fire damper and a construction element (wall or boards).

9.4. SUPPORTING CONSTRUCTIONS

In accordance with section 13.6.1 of the standard EN 1366-2, the classifications indicated in section 7.2 of this classification report apply only to fire dampers installed in feed-through in a reinforced concrete wall with a minimum thickness of 110mm and a minimum bulk density of 2200kg/m³.

No modifications may be applied to the dimensions expressed above (see section 5.3.1) and no modifications may be made to the structure of the element without the prior issue of a classification extension by the laboratory.

Maizières-lès-Metz, 25 April 2022

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Charlotte SCHNELLER

Project Leader


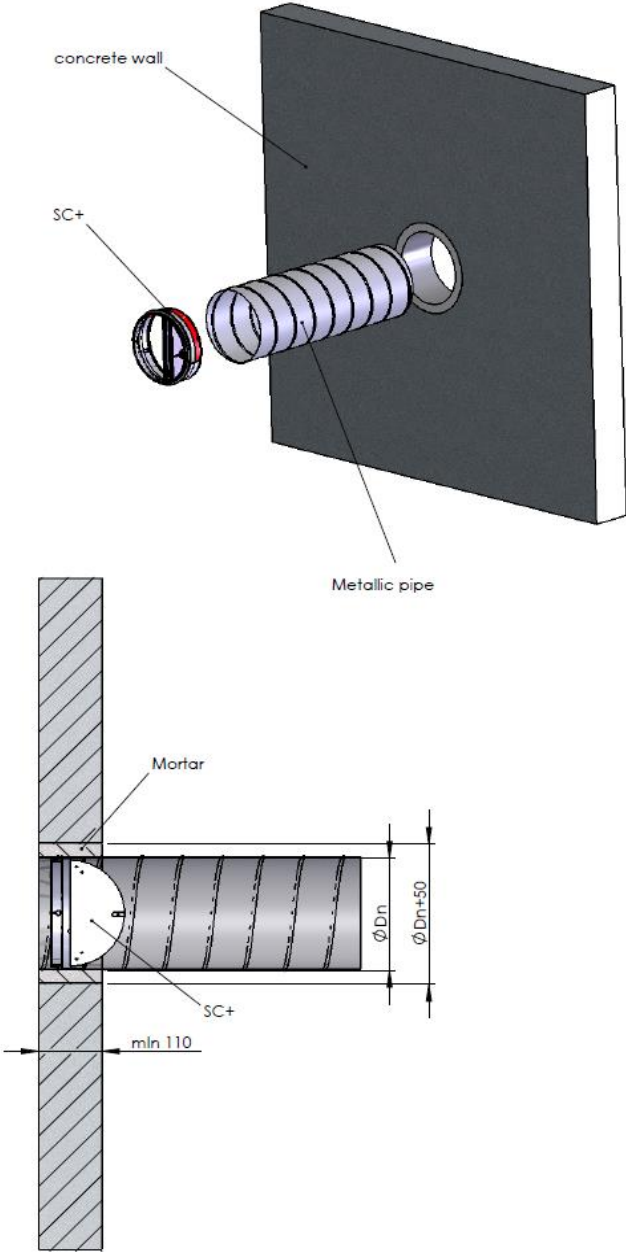
Signé par : Charlotte SCHNELLER

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Romain STOUVENOT

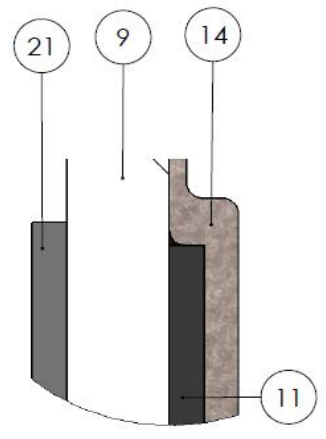
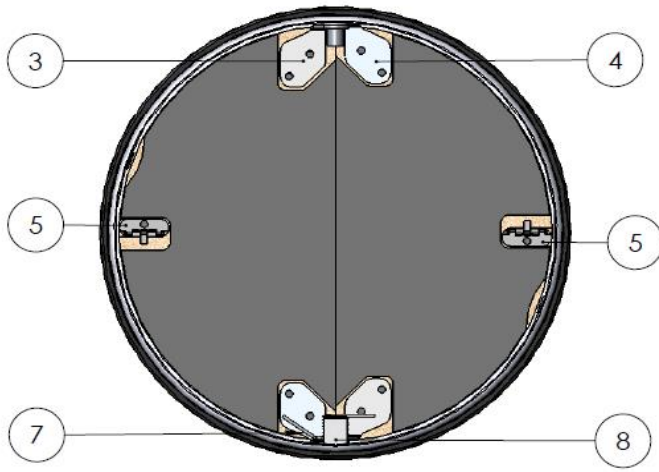
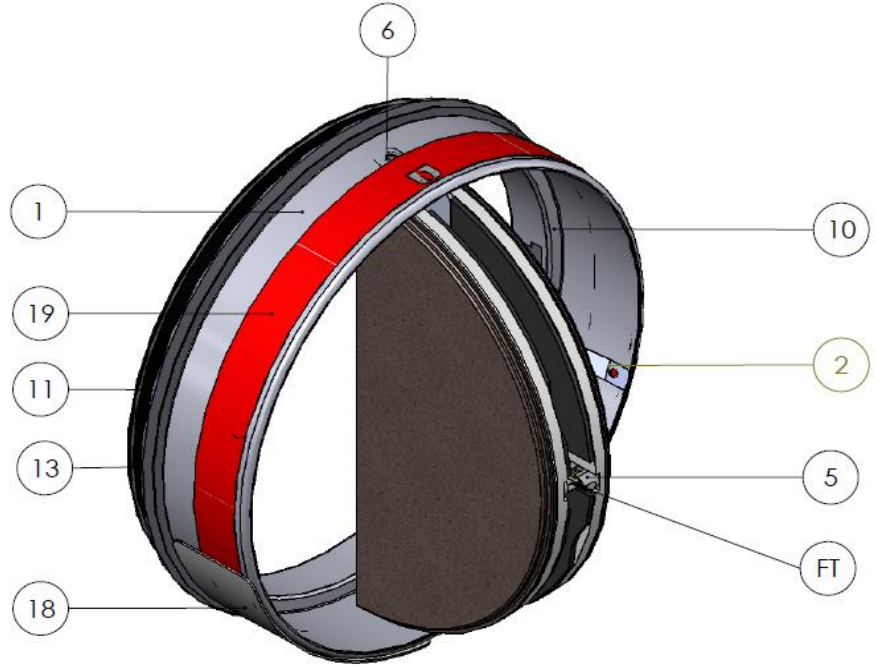
Supervisor

Signé par : Romain STOUVENOT

FIGURES APPENDIX

	<u>Reference / Référence</u> SC+	<u>Subject / Sujet</u> Mounting/Montage	<u>Plate / Planche</u> 6b
			
<u>Plan Title / Titre du plan</u> Mounting in concrete wall		<u>Date / Date :</u> 12/01/11	


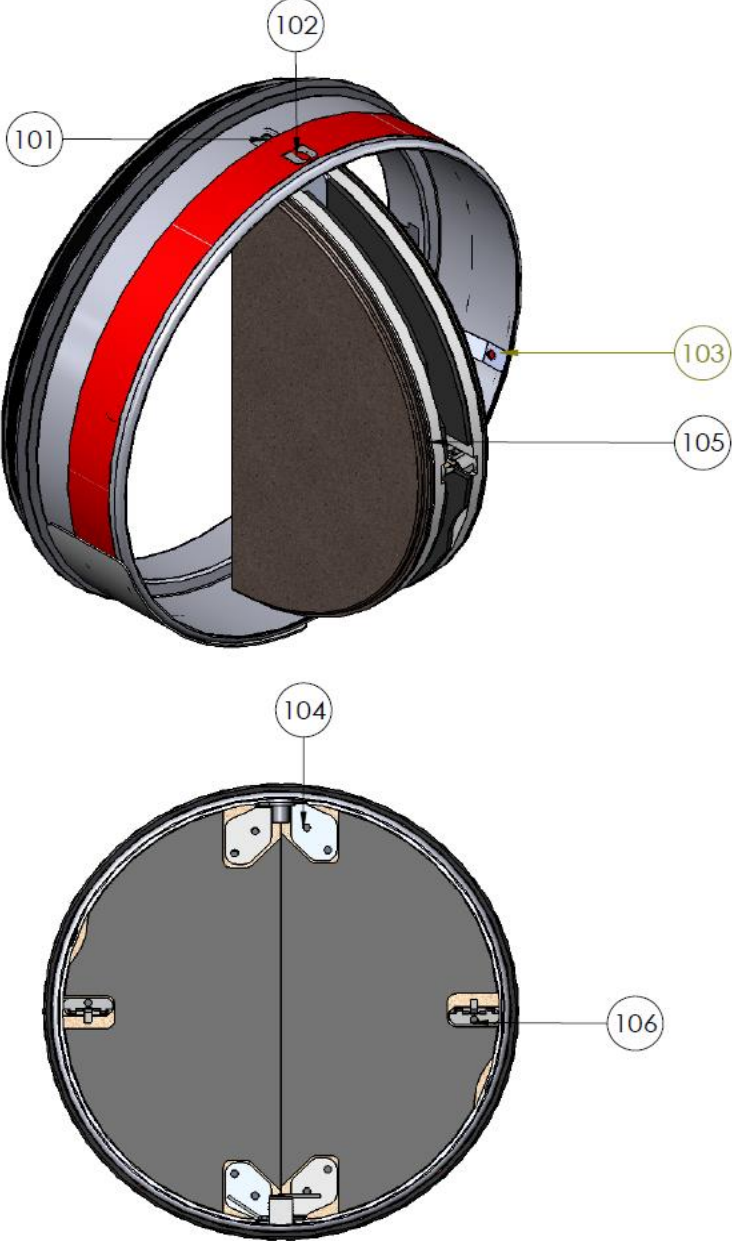
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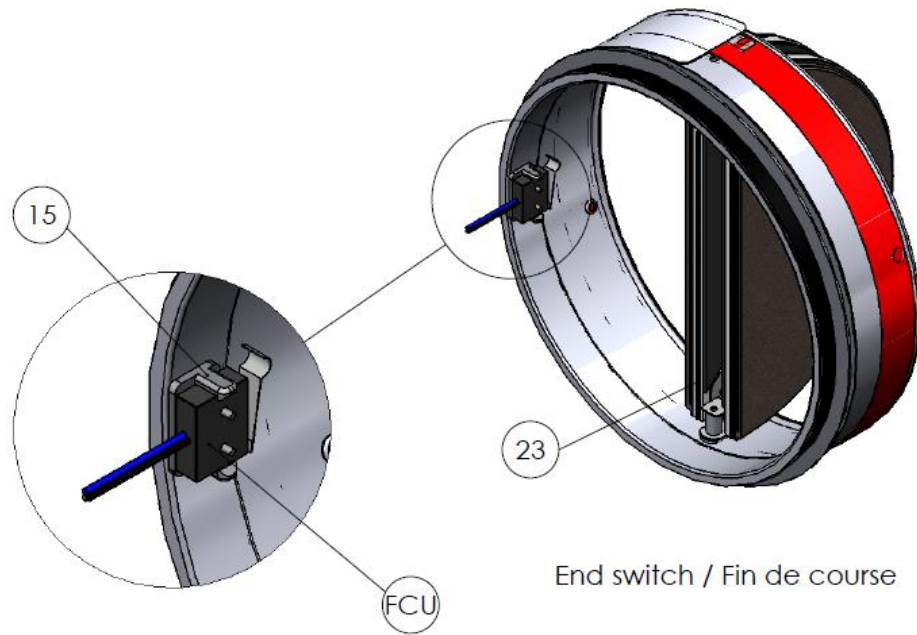



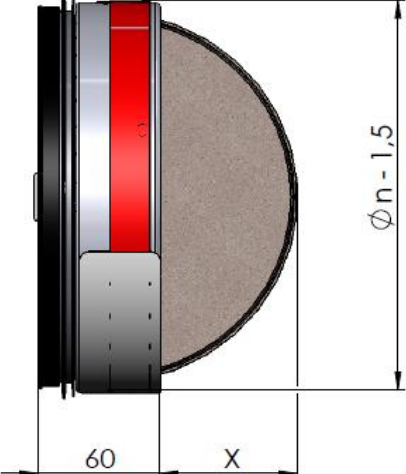
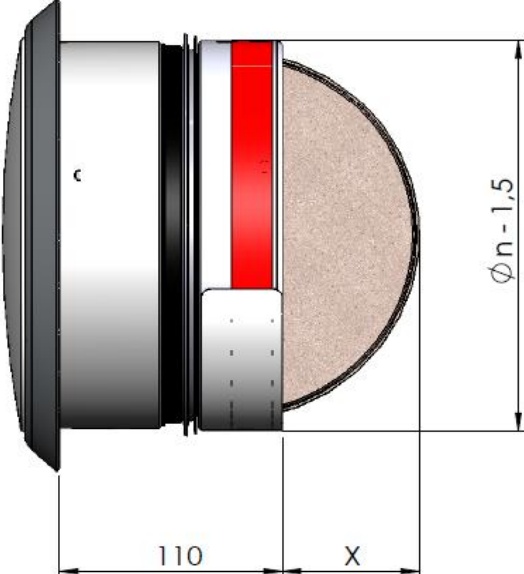
BACK

Damper Blade

<u>Plan Title / Titre du plan</u>	<u>Date / Date :</u>
Fire damper / Clapet terminal	13/07/09

	Reference / Référence SC+	Subject / Sujet Fixings / Fixations	Plate / Planche 2
			
Plan Title / Titre du plan Fire damper / Clapet terminal			Date / Date : 13/07/09



	<u>Reference / Référence</u> SC+	<u>Subject / Sujet</u> Dimensions	<u>Plate / Planche</u> 4														
<table border="1" data-bbox="327 481 790 840"> <thead> <tr> <th></th> <th>/SC(+)120</th> </tr> </thead> <tbody> <tr> <td>∅</td> <td>X</td> </tr> <tr> <td>80</td> <td>- / -</td> </tr> <tr> <td>100</td> <td>20</td> </tr> <tr> <td>125</td> <td>33</td> </tr> <tr> <td>160</td> <td>51</td> </tr> <tr> <td>200</td> <td>71</td> </tr> </tbody> </table> <div style="display: flex; justify-content: space-around; align-items: center;">   </div>					/SC(+)120	∅	X	80	- / -	100	20	125	33	160	51	200	71
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