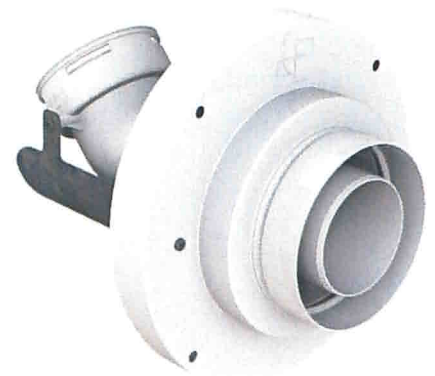


Fire Classification Fire Resistant Wall Plate CoxDENS® PP/Metal Flexible 45° models ARMG and BRMG

This fire classification report defines the fire resistance/rating classifications assigned to several flue gas pipe penetration seals following testing whereby the Cox Geelen Fire Resistant Wall Plate was affixed to the exposed face of the wall. The testing was conducted by authorised body "Peutz Laboratory for Fire Safety" in Mook, in accordance with EN 1366-3:2009 using the standard heating curve as defined in EN 1363-1:1999.

Based on the results, the Fire Resistant Wall Plate has been classified in accordance with the procedures given in EN 13501-2:2016.

This summary provides an outline of the product properties and the conclusions of the test. For a complete description of the examined Fire Resistant Wall Plate, please refer to the reports mentioned in the footnote.



1. Unique identification code of the product type:

**Cox Geelen CoxDENS® PP/Metal Flexible 45°
Ø 60/100 mm Fire Resistant Wall Plate ARMG**

**Cox Geelen CoxDENS® PP/Metal Flexible 45°
Ø 80/125 mm Fire Resistant Wall Plate BRMG**

2. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Convey products of combustion and air for combustion through a rigid or flexible wall whilst guaranteeing a certain fire resistance.

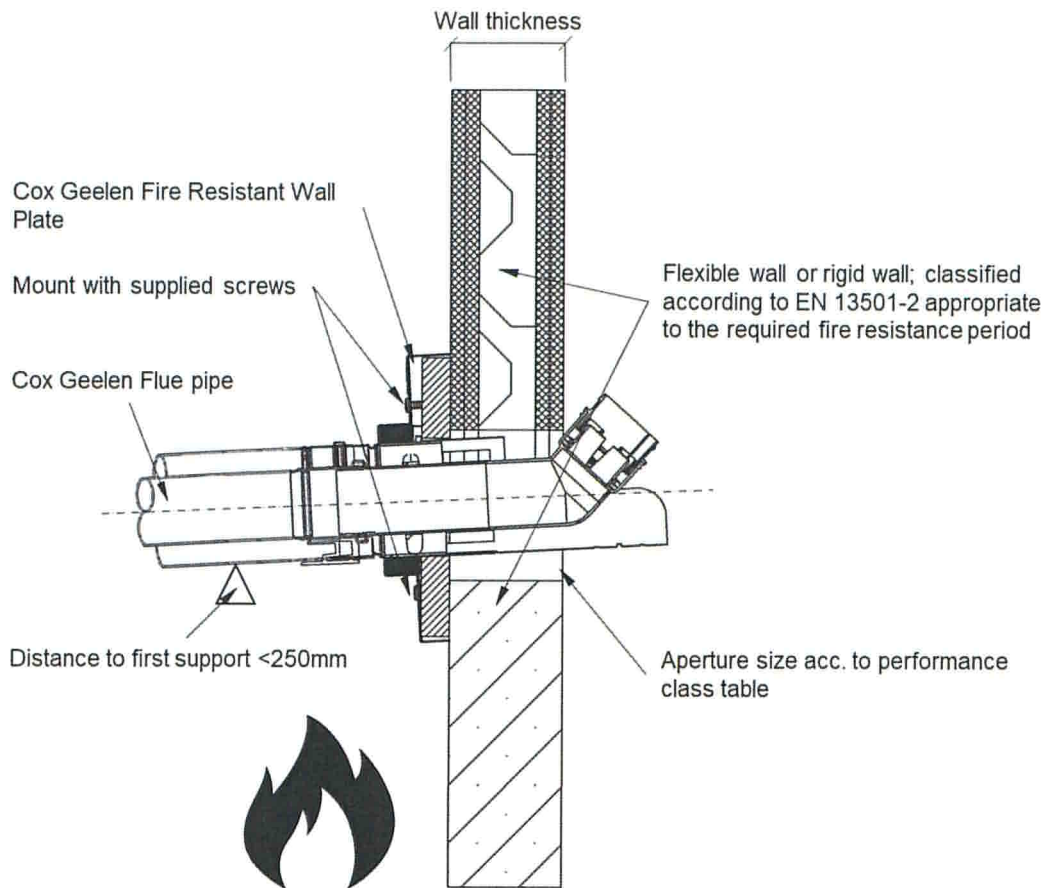
3. Name, registered trade name or registered trade mark and contact address of the manufacturer:

**Cox Geelen
Emmastraat 92
P.O.Box 6
6245 HZ Eijsden
The Netherlands**

4. Name or registered trade name of the Notified Body executing the test(s):

**Peutz B.V.
Lindenlaan 41
6584 AC Molenhoek
Postbus 66
6585 ZH Mook
The Netherlands
Notified body NB 2264.
"Stichting Raad voor Accreditatie" (RvA) number : L505**

5. Classification of the fire resistance CoxDENS PP/metal Flexible 45°:



Fire resistance applied in a flexible wall				
Type of wall	Size of aperture(mm)	Pipe diameter (mm)		Performance class with pipe end configuration
		Inner pipe	Outer pipe	
Insulated flexible wall thickness ≥ 100 mm	$\leq \text{Ø}105$	60	100	EI 120-C/U E 120-C/U
	$\leq \text{Ø}130$	80	125	EI 90-C/U E 90-C/U
Non-Insulated flexible wall thickness ≥ 100 mm	$\leq \text{Ø}105$	60	100	EI 60-C/U E 90-C/U
	$\leq \text{Ø}130$	80	125	EI 60-C/U E 90-C/U

Fire resistance applied in a rigid wall				
Type of wall	Size of aperture(mm)	Pipe diameter (mm)		Performance class with pipe end configuration
		Inner pipe	Outer pipe	
Rigid wall thickness ≥ 100 mm	$\leq \text{Ø}160$	60	100	EI 120-C/U E 120-C/U
	$\leq \text{Ø}130$	80	125	EI 90-C/U E 120-C/U
	$> \text{Ø}130$ and $\leq \text{Ø}180$			EI 30-C/U E 120-C/U

Fire resistance applied on a calcium silicate board mounted on a rigid wall				
Type of wall	Size of aperture(mm)	Pipe diameter (mm)		Performance class with pipe end configuration
		Inner pipe	Outer pipe	
Rigid wall thickness ≥ 100 mm	$\leq \text{Ø}160$	60	100	EI 60-C/U E 60-C/U
	$\leq \text{Ø}130$	80	125	EI 60-C/U E 60-C/U
	$> \text{Ø}130$ and $\leq \text{Ø}180$			EI 30-C/U E 60-C/U

6. General conditions and field of application:

The classifications are valid for the system as tested. The standard conditions of the direct and extended field of application can be summarized as listed below:

- the fire resistances are valid with the pipes passing through in an orientation of 3° to the perpendicular of the vertical wall (standard angle of fall for condensate flow back towards the boiler);
- the fire resistances are valid in one direction with the Fire Resistant Wall Plate at the exposed face;
- when applied in a rigid wall, the system may be applied in any type of wall of aerated concrete (class G4/600 or heavier), concrete, block work or masonry with a thickness of at least 100 mm;
- when applied on calcium silicate boards mounted on a rigid wall the following conditions apply:
 - the size of the aperture must be 450 x 450 mm or smaller;
 - the calcium silicate boards used to reduce the aperture, must overlap the rigid wall for at least 50 mm;
 - the calcium silicate boards used to reduce the aperture, are fixed to the rigid wall with at least four galvanised concrete screws 07.2 x 92 mm (one screw placed at each corner);
 - between the rigid wall and the boards a smoke seal of non-intumescent material has to be installed (fire resistant sealant, fire rope or fire resistant strip) in such a way that an airtight system is created;
 - the expected fire resistance is valid for two boards Promatect 100 placed on top of each other (thickness 15 mm each, total thickness 30 mm);
 - it is possible to use calcium silicate boards of other manufactures. When boards of other manufacturers are used, the installation instructions of that typical manufacturer apply and at least a fire resistance and the field of application of the desired performance class of 60 minutes in accordance with EN 13501-2 must be verified;
- when applied in a flexible wall, the system may be applied to any type of insulated or non-insulated flexible wall provided the following conditions are met:
 - the total thickness of the flexible wall (for example walls with wooden or metal framing) shall be at least 100 mm;
 - the wall shall consist of in total four board layers (2 layers each face) with a thickness of 12.5 mm each;
 - a distance of at least 100 mm to a stud shall be obtained;
 - when wooden studs are used, at least 100 mm of rock wool insulation class A1 or A2 according to EN 13501-1 shall be present between the penetration seal and the stud(s);
 - when applicable, the rock wool insulation inside the flexible shall be at least 45 kg/m3 and class A1 or A2 according to EN 13501-1;

- it must be demonstrated that the flexible wall construction has a fire resistance classification in accordance with EN 13501-2 that is the same or better than the fire resistance classification of the particular pipe or cable penetration seal;
- the maximum distance to the first support of the concentric flue gas pipes is 250 mm from the position where the pipe emerges from wall; No support is necessary for the flexible pipe.
- the Fire Resistant Wall Plate shall be mounted at the centre of the aperture;
- a distance of at least 200 mm from the edges of the aperture to a different wall, floor or transfer to another type of wall shall be taken into account;
- the Fire Resistant Wall Plates are mounted to the wall with four galvanised concrete screws $\varnothing 7.2 \times 92$ mm;
- more concentric flue gas pipes with Fire Resistant Wall Plate may be placed in the wall at any pattern at a distance of at least 200 mm. If other penetration elements such as cables or pipes are placed in the wall, the distance between the apertures, cables or pipes shall be at least 200 mm.

This summary of a test into fire resistance consists of 4 pages. The reports that form the basis for this summary are available for inspection at Cox Geelen B.V. headquarters and are registered as test report Y 1860-1E-RA-001 dated December 15, 2017, Summary including additional expert judgement C 1801-1E-RA-002 dated December 18, 2017 and classification report YA 1860-1E-RA-001 dated December 15, 2017.

This summary of fire resistance is issued under the sole responsibility of the manufacturer identified in point 3.

Signed for and on behalf of the manufacturer by:

Lucien Goessen
Manager Product Engineering



Eijsden, 29-01-2018