

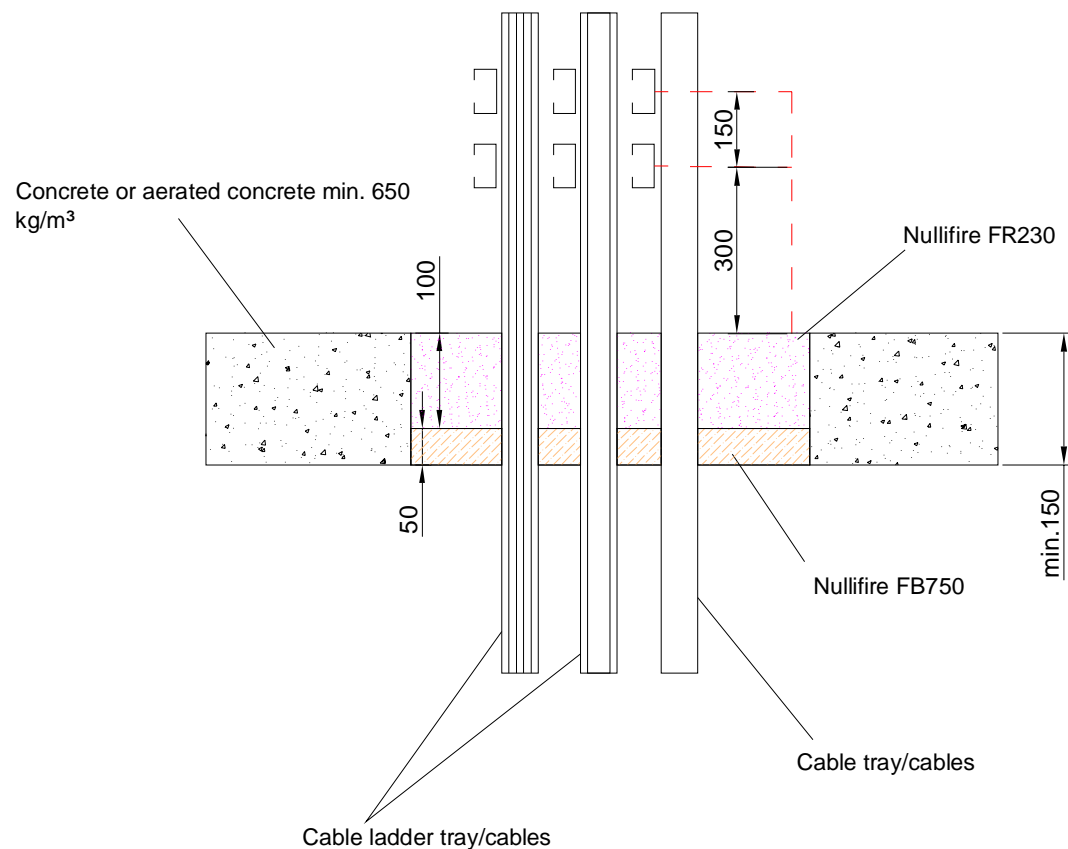
Nullifire Technical Drawings

FR230 Fire Stopping Compound Electrical and Pipe Penetrations Through Walls and Floors

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- ▶ Cables and cable ladders in a rigid floor constructions (FR230-SL1)
- ▶ Cables and cable ladders in a rigid wall construction (FR230-SS1)
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- ▶ Plastic pipe in a rigid floor constructions (FR230-PL1)
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- ▶ Ø15 mm metallic pipes in a rigid wall and floor with a continuous glass mineral wool insulation (FR230-PS5 & FR230-PL5)
- ▶ Ø15 mm metallic pipes in a rigid wall and floor with a continuous glass mineral wool insulation (FR230-PS6 & FR230-PL6)
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Nullifire **FR230-SL1**



APPROVAL:

ETA 17/0582

Tested cable types and max. Ø of the cables

Look at the table in this detail

FR230-SL1

Fire class; Look at the table
in this detail

Additional information ETA-
approval/ Annex A.

Technical installation
instructions need to be followed
installing the products.

Fastening has shown in this detail.

The max. seal size of 1100 x 1100 mm.

The max. cross section of services 60 %.

The min. permitted separation between
adjacent seals/apertures is 200 mm.

Cable	Fire class
Electrical cable up to Ø0-80 mm (single, bundled and on steel trays / ladders up to 500 mm wide)	EI60
Unsheathed wires up to Ø24 mm	EI90
Telecom cable up to Ø21 mm in tied bundles max. Ø100 mm	EI120

THE CONTENTS OF THE DRAWING

Cables and cable ladders in a rigid floor
constructions

DESIGNER

REV

DATE

20.9.2018

SCALE

Not scaled

DETAIL MARK

FR230-SL1

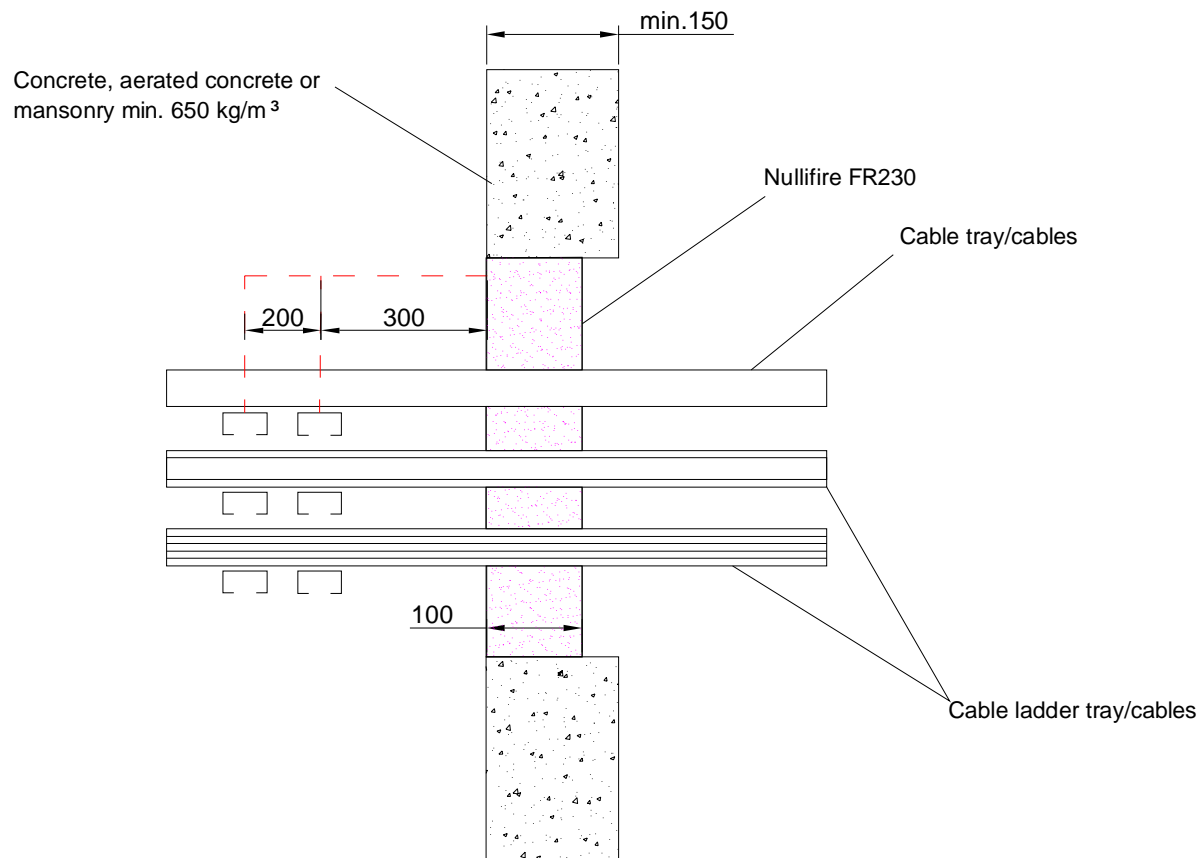
Nullifire has provided this specification on the basis of the data and information
given to Nullifire by the customer, the Nullifire product information and level of
technical knowledge this specification relates to is expected to provide the level of
fire performance, should the proposed detail be subjected to the standardised fire
resistance performance against which the judgment has been made.

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2. The specific products are installed by a competent person, utilising Nullifire
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4. For Details on CE Marked Products Refer to the CE Technical Data Sheets.

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Nullifire

Nullifire **FR230-SS1**



APPROVAL:

ETA 17/0582

Tested cable types and max. Ø of the cables
Look at the table in this detail

FR230-SS1
Fire class; Look at the table in this detail

Additional information ETA-approval/ Annex A.

Technical installation instructions need to be followed installing the products.

Fastening has shown in this detail.

The max. seal size of 1200 x 1200 mm.

The max. cross section of services 60 %.

The min. permitted separation between adjacent seals/apertures is 200 mm.

Cable	Fire class
Electrical cable up to Ø0-80 mm (single, bundled and on steel trays / ladders up to 500 mm wide)	EI60
Unsheathed wires up to Ø24 mm	EI45
Telecom cable up to Ø21 mm in tied bundles max. Ø100 mm	EI90

THE CONTENTS OF THE DRAWING

Cables and cable ladders in a rigid wall construction

DESIGNER

REV

DATE

20.9.2018

SCALE

Not scaled

DETAIL MARK

FR230-SS1

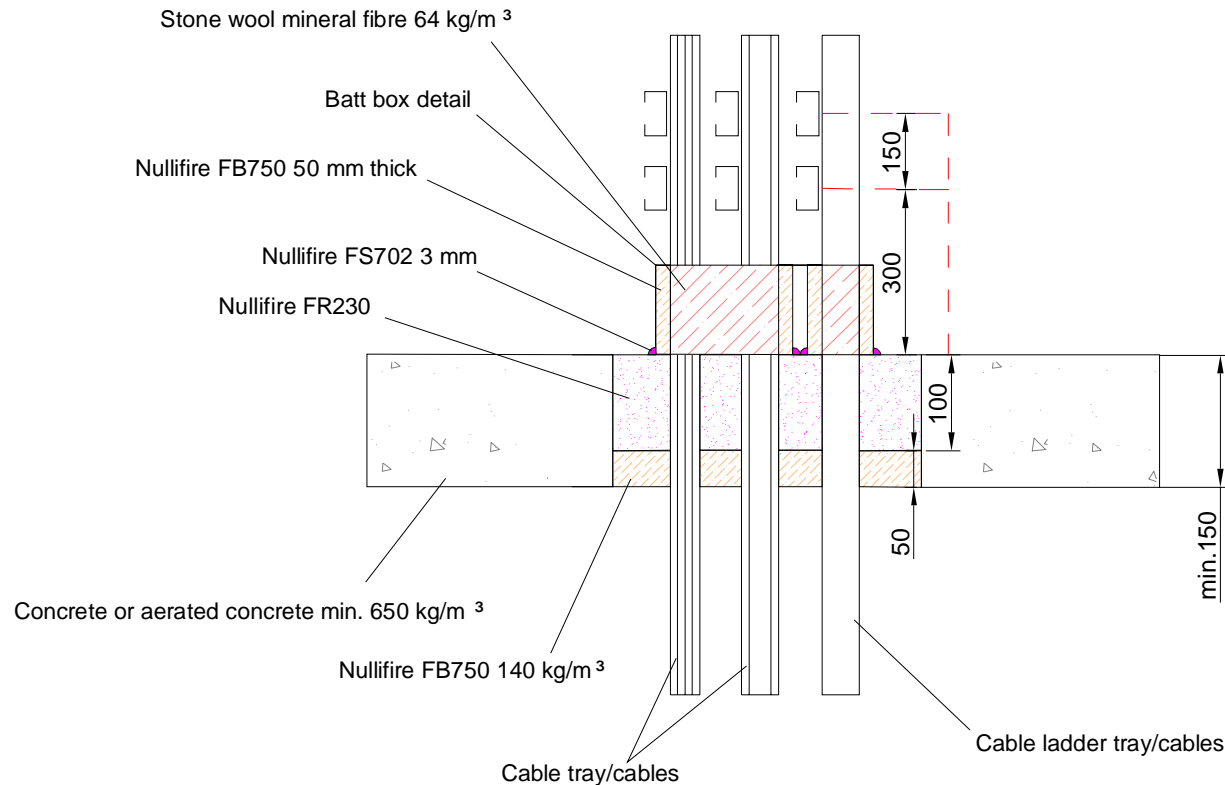
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Nullifire

Nullifire **FR230-SL1-BB**



APPROVAL:

ETA 17/0582

Tested cable types and max. Ø of the cables
Look at the table in this detail

FR230-SL1-BB
Fire class; Look at the table in this detail

Additional information ETA-approval/ Annex A.

Technical installation instructions need to be followed installing the products.

Fastening and insulation has shown in this detail.

The max. seal size of 800 x 600 mm.

The max. cross section of services 60 %.

The min. permitted separation between adjacent seals/apertures is 200 mm.

Electrical cables can be single, bundled and on steel trays/ladders up to 500mm wide.

Cable	Paloluokka
Electrical cables up to Ø21 mm	EI240
Telecom cable up to Ø21 mm in tied bundles max. Ø100 mm	EI240
Unsheathed wires up to Ø24 mm	EI120
Electrical cables Ø 22 to 80 mm	EI120

THE CONTENTS OF THE DRAWING

Cables and cable ladders in rigid floor constructions with a batt box

DESIGNER

REV

DATE

20.9.2018

SCALE

Not scaled

DETAIL MARK

FR230-SL1-BB

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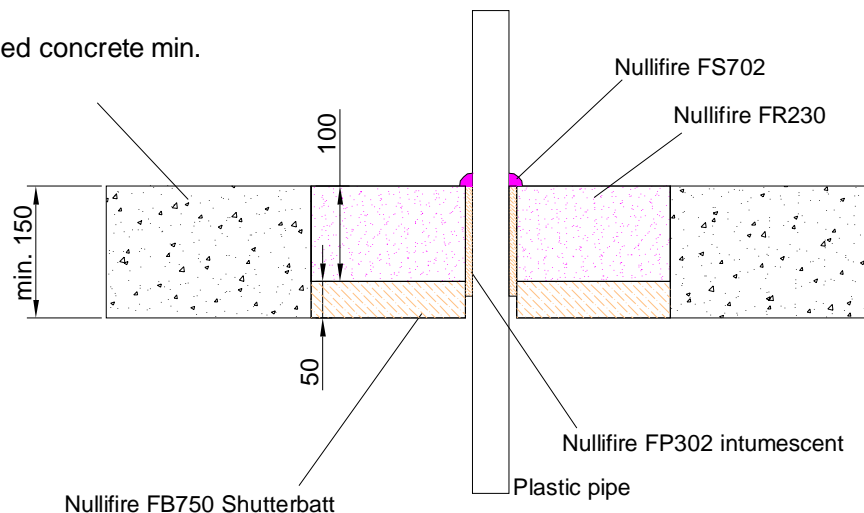
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Nullifire FR230-PL1

Concrete or aerated concrete min.
650 kg/m³



Fire class EI240

APPROVAL:

ETA 17/0582

**Tested cable types and
max. Ø of the cables**
Look at the table in this detail

FR230-PL1
Fire class; Look at the table
in this detail

Additional information ETA-
approval/ Annex A.

Technical installation
instructions need to be followed
installing the products.

The max. seal size of 1100 x 1100 mm.

Min. 60mm to edge of seal and between
services

The max. cross section of services 60 %.

The min. permitted separation between
adjacent seals/apertures is 200 mm.

U/C = (Uncapped/Capped)

Pipe	Aperture in seal mm	Fire class
PVC-u EN1329 BS4514 pipe Ø82mm / 3.2mm wall	Ø98 mm	EI240: U/C
PVC-u EN1329 pipe Ø82mm / 2.0mm wall	Ø98 mm	EI240: U/C
PVC-u EN1329 pipe Ø110mm / 3.2mm wall	Ø134 mm	EI240: U/C
PVC-u EN1329 BS4514 pipe Ø160mm / 3.2mm wall	Ø192 mm	EI240: U/C

THE CONTENTS OF THE DRAWING

Plastic pipe in a rigid floor constructions

DESIGNER

REV

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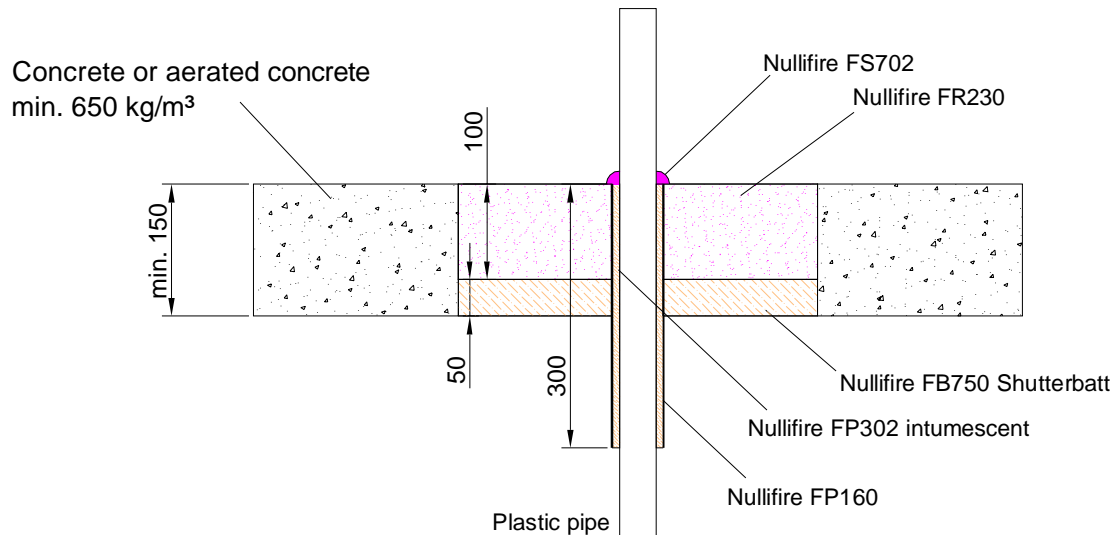
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DETAIL MARK

FR230-PL1

Nullifire

Nullifire FR230-PL2



**Fire class
EI240: C/U**

APPROVAL:

ETA 17/0582

**Tested pipe types and max.
Ø of the pipes**
Look at the table in this detail

FR230-PL2
Fire class; EI240

Additional information ETA-
approval/ Annex A.

Technical installation
instructions need to be followed
installing the products.

The max. seal size of 1100 x 1100 mm.

Min. 60mm to edge of seal and between
services.

The max. cross section of services 60 %

The min. permitted separation between
adjacent seals/apertures is 200 mm.

U/C = (Uncapped/Capped)

Material	Size	Aperture in seal mm
PPR DIN8077/8078 pipe	Ø90mm / 8.2mm wall	Ø120 mm
HDPE pipe	Ø82mm / 4.2mm wall	Ø120 mm
PVC-u EN1329 pipe	Ø90mm / 3.2mm wall	Ø120 mm
PVC-u EN1329 pipe	Ø110mm / 3.2mm wall	Ø140 mm
muPVC EN1566 pipe	Ø55mm / 2.0mm wall	Ø90 mm
PVC-u EN1329 pipe	Ø160mm / 3.2mm wall	Ø300 mm

THE CONTENTS OF THE DRAWING

Plastic pipe in a rigid floor constructions

DESIGNER

REV

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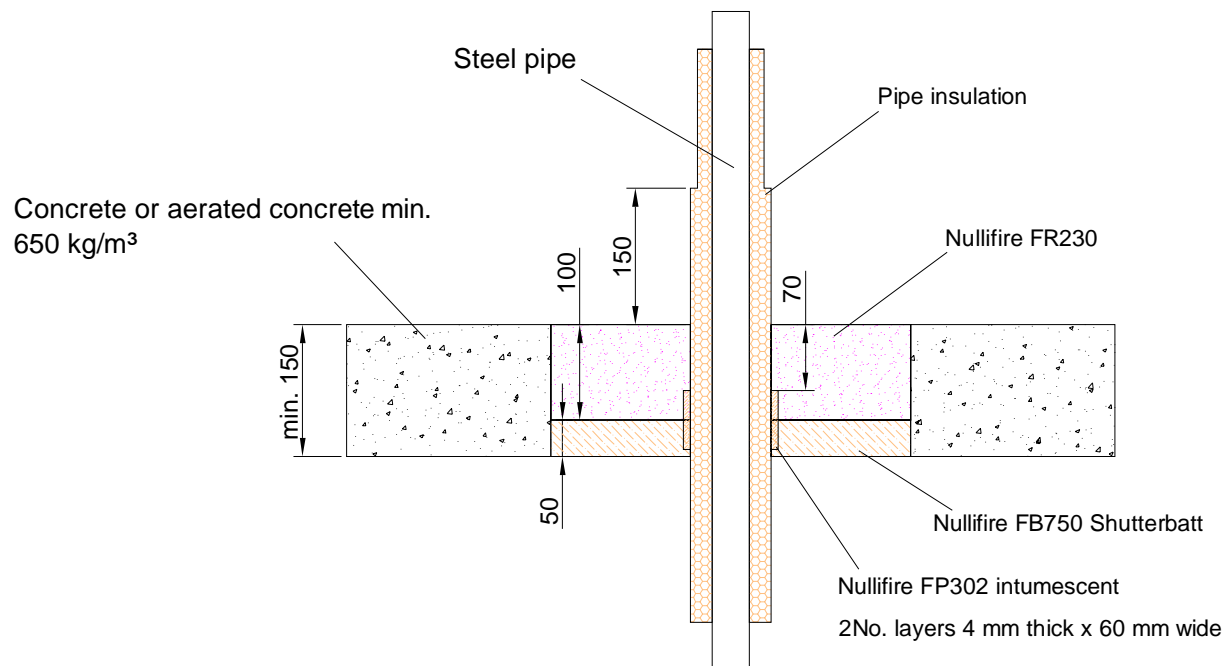
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DETAIL MARK

FR230-PL2

Nullifire

Nullifire FR230-PL3



APPROVAL:

ETA 17/0582

Tested pipe types and max. Ø of the pipes
Look at the table in this detail

FR230-PL3

Fire class; Look at the table in this detail

Additional information ETA-approval/ Annex A.

Technical installation instructions need to be followed installing the products.

Insulation has shown in this detail.

The max. seal size of 1100 x 1100 mm.

Min. 60mm to edge of seal and between services.

The max. cross section of services 60 %.

The min. permitted separation between adjacent seals/apertures is 200 mm.

Steel pipe	Fire class
Ø55mm / 4.0-14.2mm wall, insulated with 38mm thick Armaflex reducing to 19mm thick 150mm above fire seal	EI180: C/U
Ø160mm / 5.0-14.2mm wall, insulated with 50mm thick foil faced isover glass fibre	EI60: C/U

U/C = (Uncapped/Capped)

THE CONTENTS OF THE DRAWING

Continuous sustained insulated metal pipes in a rigid floor constructions

DESIGNER

REV

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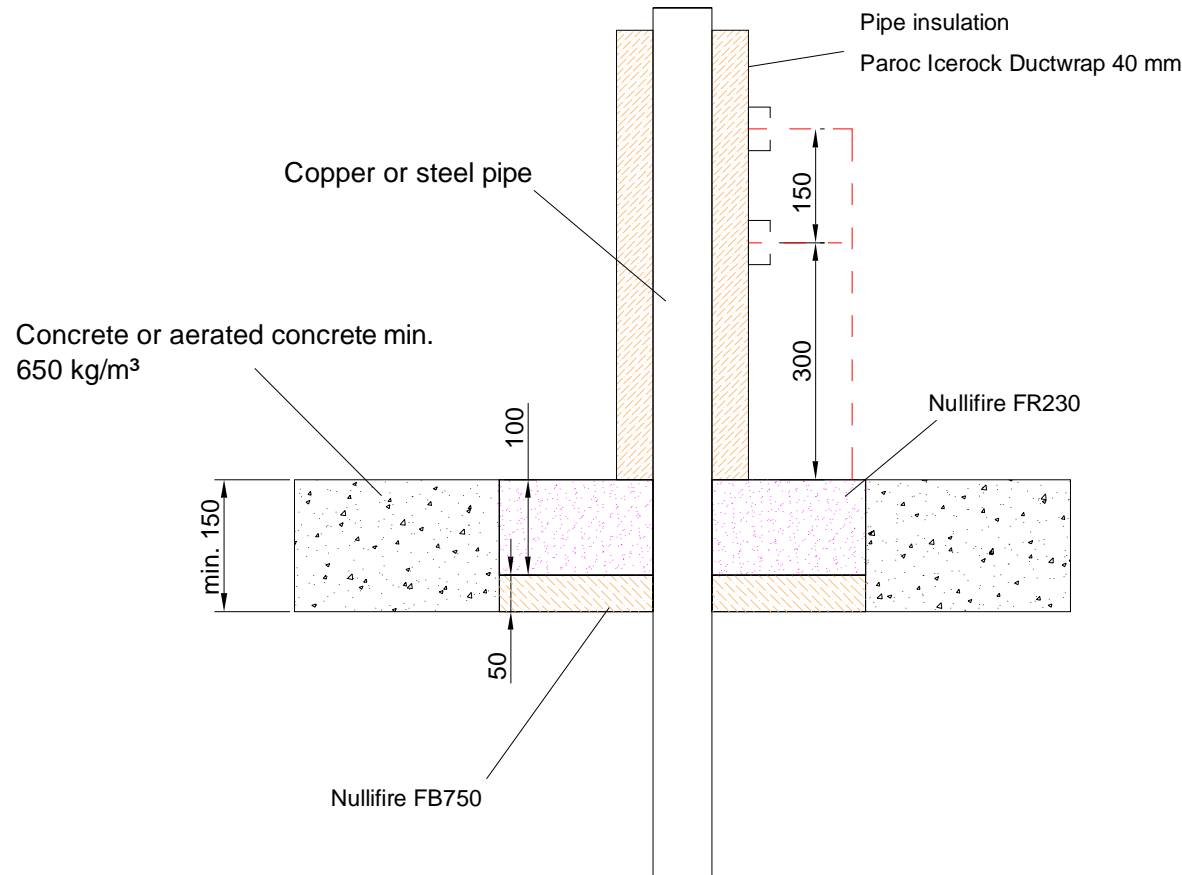
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DETAIL MARK

FR230-PL3

Nullifire

Nullifire FR230-PL4



APPROVAL:

ETA 17/0582

Tested pipe types and max. Ø of the pipes
Look at the table in this detail

FR230-PL4

Fire class; Look at the table in this detail

Additional information ETA-approval/ Annex A.

Technical installation instructions need to be followed installing the products.

Fastening and insulation has shown in this detail.

The max. seal size of 1100 x 1100 mm.

Min. 60mm to edge of seal and between services .

The max. cross section of services 60 %.

The min. permitted separation between adjacent seals/apertures is 200 mm.

Aperture in seal [mm] is same as Ø of the pipe.

U/C = (Uncapped/Capped)

Pipe	Fire class
Steel pipe Ø170mm / 7.0-14.2mm wall	EI90: C/U
Steel pipe Ø150mm / 3.0-14.2mm wall	EI60: C/U
Copper or steel pipe Ø108mm / 1.5-14.2mm wall	EI45: C/U
Steel pipe Ø40mm / 1.5-14.2mm	EI240: C/U

THE CONTENTS OF THE DRAWING

Metallic pipes in a rigid floor constructions with a interrupted insulation

DESIGNER

REV

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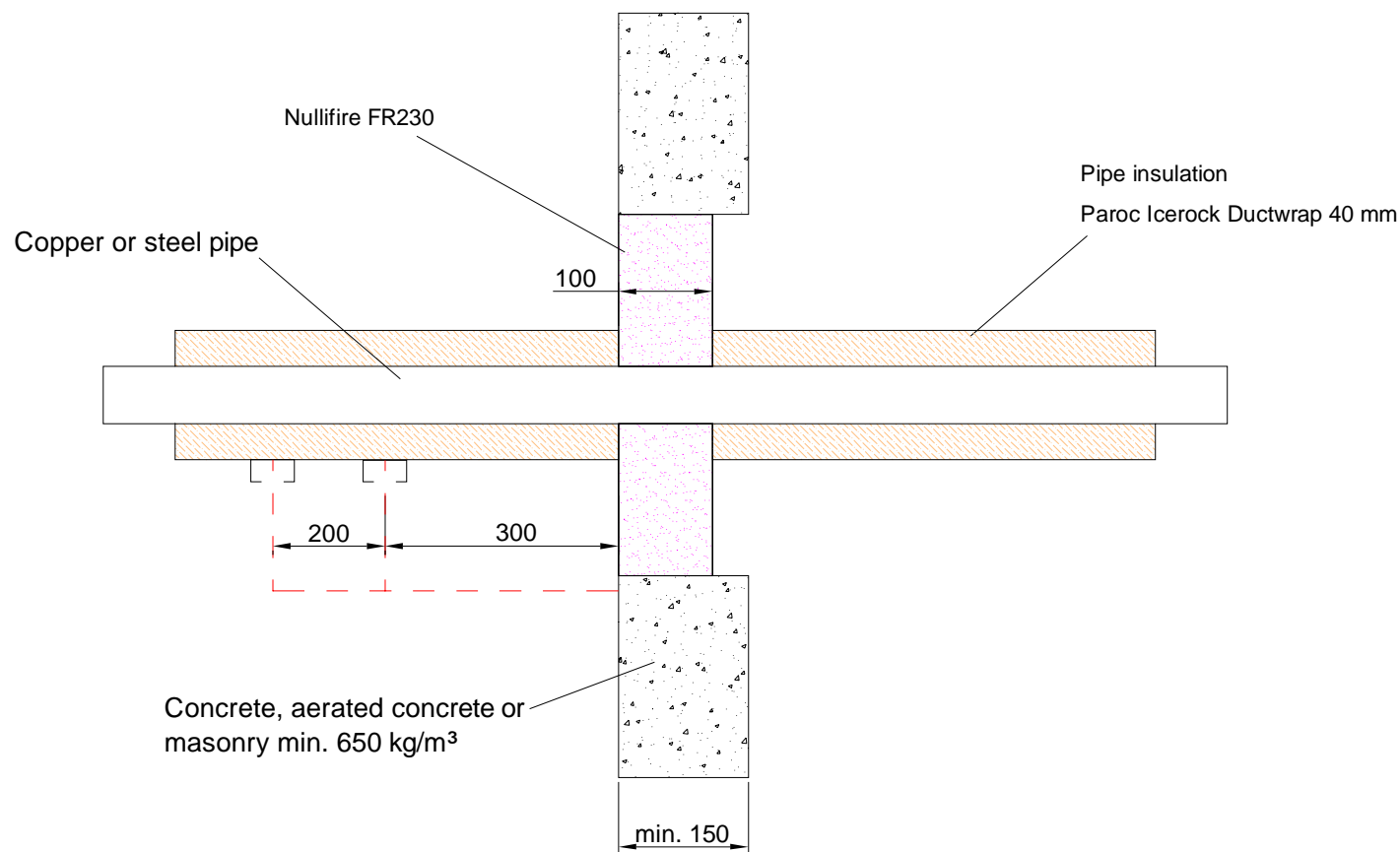
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DETAIL MARK

FR230-PL4

Nullifire

Nullifire FR230-PS4



APPROVAL:

ETA 17/0582

**Tested pipe types and max.
Ø of the pipes**
Look at the table in this detail

FR230-PS4
Fire class; Look at the table in
this detail

Additional information ETA-
approval/ Annex A.

Technical installation
instructions need to be followed
installing the products.

Fastening and insulation has shown in this detail.

The max. seal size of 1200 x 1200 mm.

Min. 60mm to edge of seal and between services

The max. cross section of services 60 %.

The min. permitted separation between adjacent
seals/apertures is 200 mm.

Aperture in seal [mm] is same as Ø of the pipe.

U/C = (Uncapped/Capped)

Pipe	Fire class
Steel pipe Ø170mm / 7.0-14.2mm wall	EI180: C/U
Steel pipe Ø150mm / 3.0-14.2mm wall	EI120: C/U
Copper or steel pipe Ø108mm / 1.5-14.2mm wall	EI60: C/U
Steel pipe Ø40mm / 1.5-14.2mm	EI120: C/U
Copper or steel pipe Ø115mm / 0.7-14.2mm wall	EI180: C/U

THE CONTENTS OF THE DRAWING
Metallic pipes in a rigid wall with supports and a
interrupted insulation

DESIGNER

REV

DATE

20.9.2018

SCALE

Not scaled

DETAIL MARK

FR230-PS4

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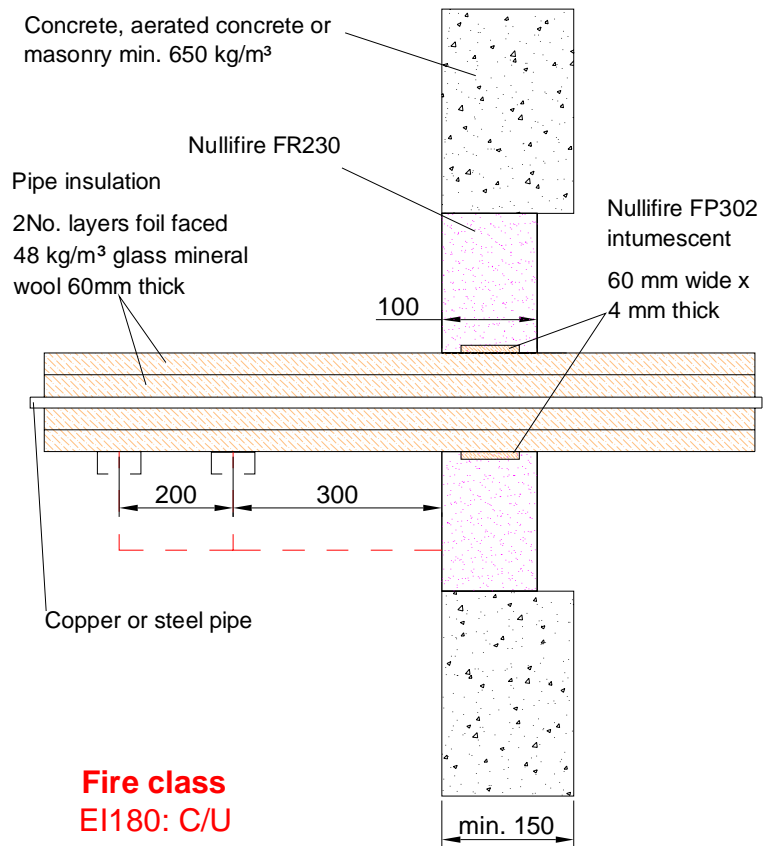
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Nullifire

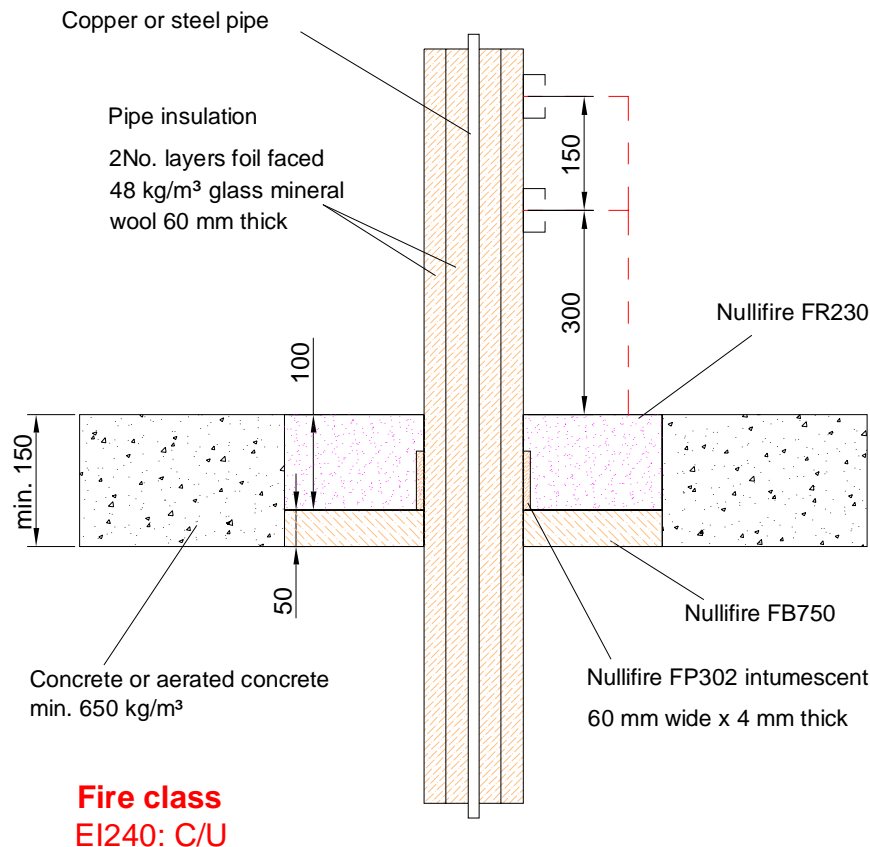
FR230-PS5

Rigid wall constructions



FR230-PL5

Rigid floor constructions



APPROVAL:

ETA 17/0582

**Tested pipe types and max.
Ø of the pipes**

Look at the table in this detail

FR230-PS5/PL5

Fire class; Look at the
drawing in this detail

Additional information ETA-
approval/ Annex A.

Technical installation
instructions need to be followed
installing the products.

Fastening and insulation has shown in this
detail.

The max. seal size of 1200 x1200 for wall and
1100 x 1100 mm for floor.

Min. 60 mm to edge of seal and between
services

The max. cross section of services 60 %.

The min. permitted separation between
adjacent seals/apertures is 200 mm.

Pipe	Aperture in seal mm
Copper or steel pipe Ø15mm / 0.7-14.2mm wall	Ø135 mm

U/C = (Uncapped/Capped)

THE CONTENTS OF THE DRAWING

Ø15 mm metallic pipes in a rigid wall and floor with a
continuous glass mineral wool insulation

DESIGNER

REV

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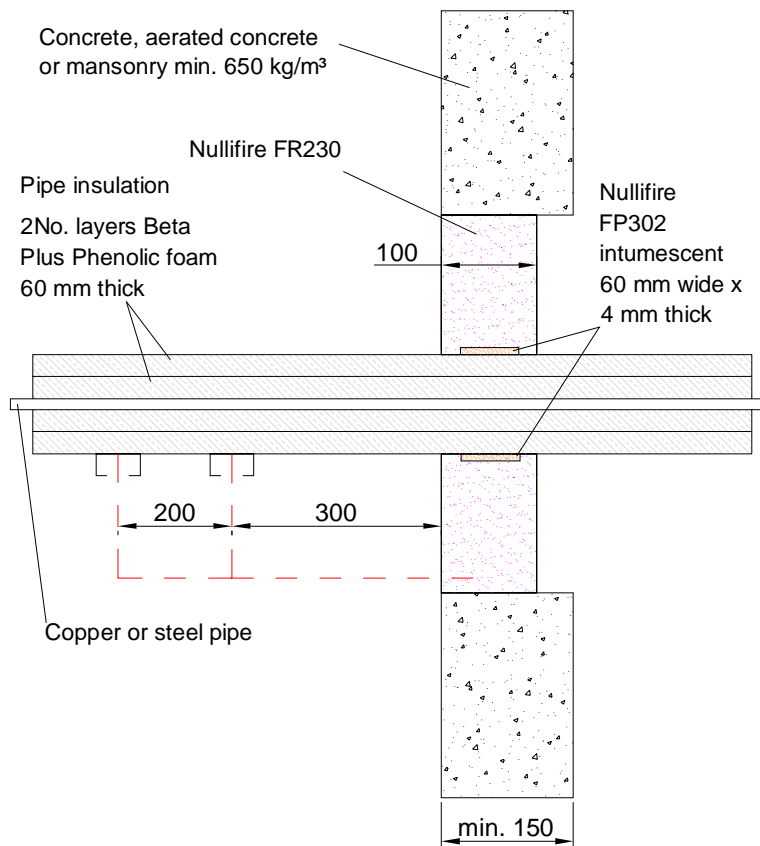
DETAIL MARK

FR230-PS5/ FR230-PL5

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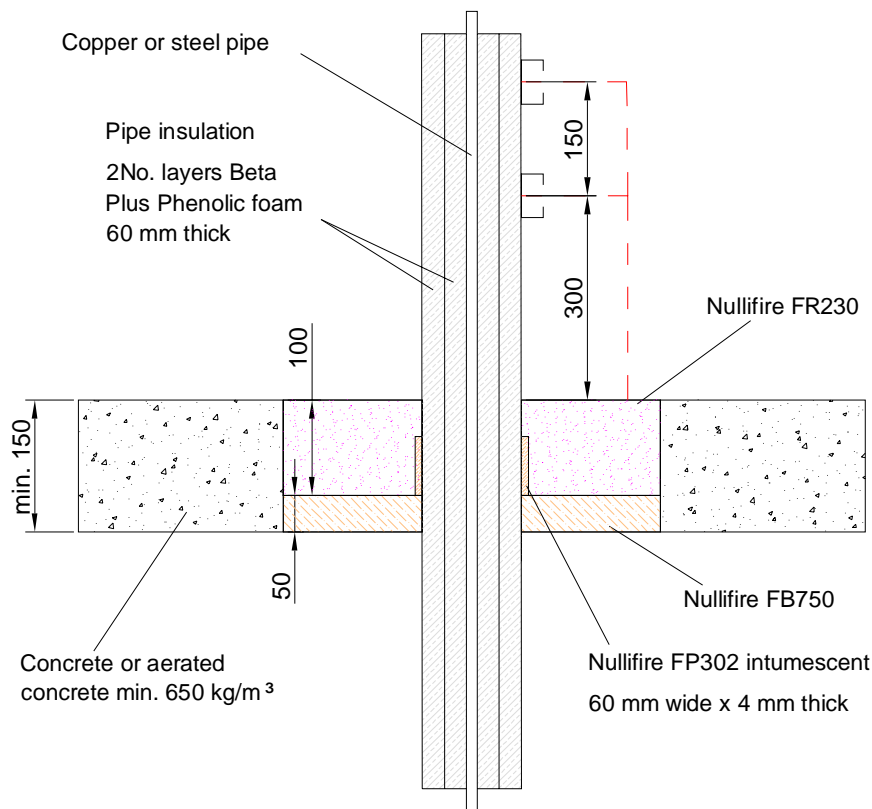
Nullifire FR230-PS6

Rigid wall constructions



Nullifire FR230-PL6

Rigid floor constructions



APPROVAL:

ETA 17/0582

Tested pipe types and max. Ø of the pipes

Look at the table in this detail

FR230-PS6/PL6

Fire class; Look at the table in this detail

Additional information ETA-approval/ Annex A.

Technical installation instructions need to be followed installing the products.

Fastening and insulation has shown in this detail.

The max. seal size of 1200 x 1200 for wall and 1100 x 1100 mm for floor.

Min. 60mm to edge of seal and between services

The max. cross section of services 60 %.

The min. permitted separation between adjacent seals/apertures is 200 mm.

Pipe	Aperture in seal mm	Fire class
Copper or steel pipe Ø15mm / 0.7-14.2mm wall	Ø135mm	E1240: C/U

U/C = (Uncapped/Capped)

THE CONTENTS OF THE DRAWING

Ø15 mm metallic pipes in a rigid wall and floor with a continuous Beta Plus Phenolic insulation

DESIGNER

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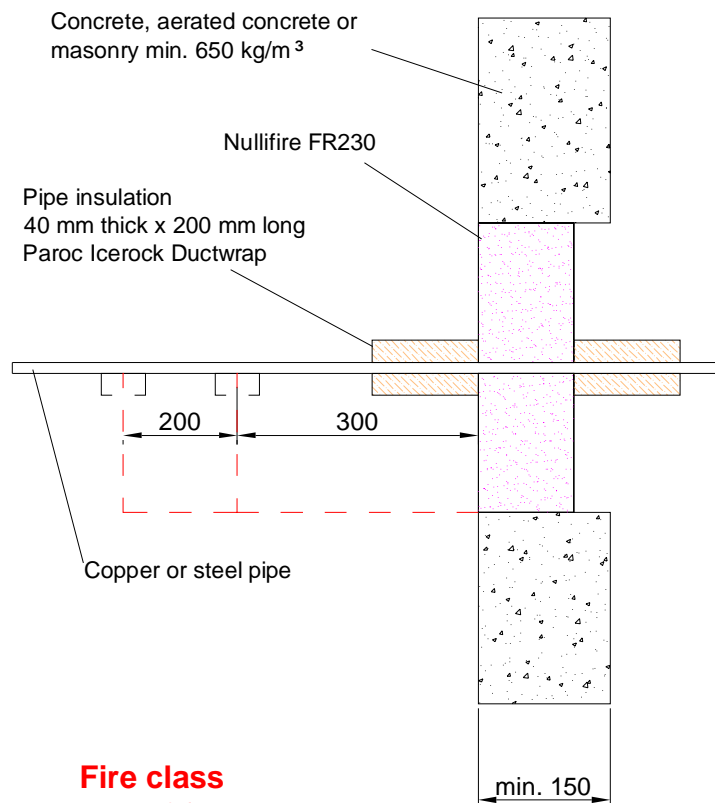
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FR230-PS6/ FR230-PL6

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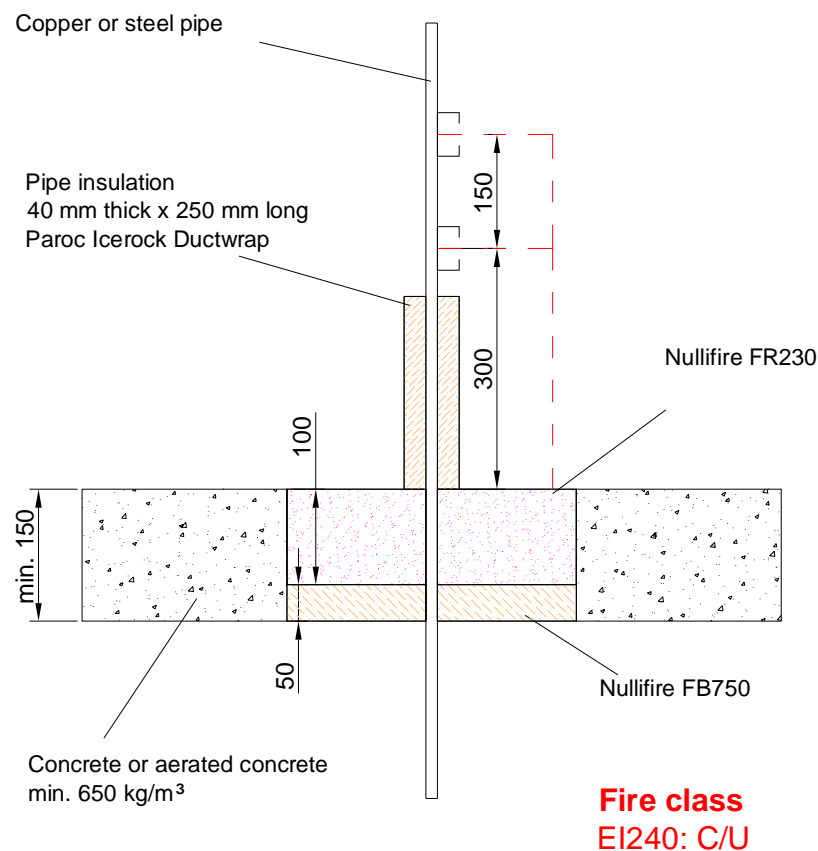
Nullifire FR230-PS7

Rigid wall



Nullifire FR230-PL7

Rigid floor



APPROVAL:

ETA 17/0582

Tested pipe types and max. Ø of the pipes

Look at the table in this detail

FR230-PS7/PL7

Fire class; Look at the drawing in this detail

Additional information ETA-approval/ Annex A.

Technical installation instructions need to be followed installing the products.

Fastening and insulation has shown in this detail.

The max. seal size of 1200 x 1200 for wall and 1100 x 1100 mm for floor.

Min. 60mm to edge of seal and between services

The max. cross section of services 60 %.

The min. permitted separation between adjacent seals/apertures is 200 mm.

Pipe	Aperture in seal mm
Copper or steel pipe Ø15mm / 0.7-14.2mm wall	Ø15 mm

U/C = (Uncapped/Capped)

THE CONTENTS OF THE DRAWING

Ø15 mm metallic pipes in a rigid wall and floor with a Paroc Icerock Ductwrap

DESIGNER

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DETAIL MARK

FR230-PS7/ FR230-PL7

Nullifire