

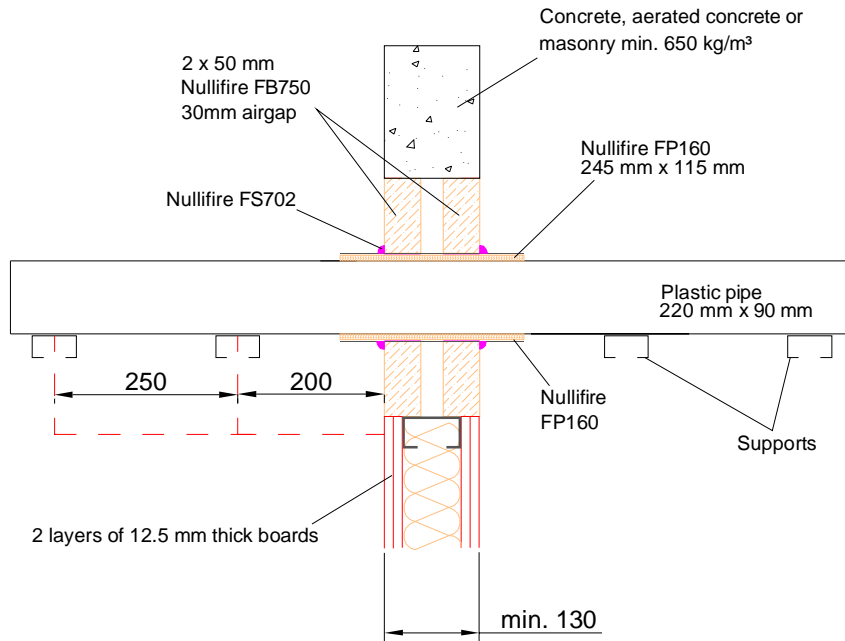
# Nullifire Technical Drawings

## FP302 Intumescent Strap and FP160 Sleeve Pipe Penetrations Through Wall

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- ▶ Rectangular PVC pipe penetrating through a flexible (lined aperture) or rigid wall construction (FP302/FP160-PS1)
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- ▶ PVC or PE pipes penetrating through a flexible or rigid wall construction with 2x50mm FB750 (FP302/FP160-PS5)
- ▶ PVC-U square pipe penetrating through a flexible or rigid wall construction (FP302/FP160-PS6)
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**Nullifire  
FP302/FP160-PS1**



**APPROVAL:**

ETA 17/0391

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

**Nullifire FP302/FP160-PS1**  
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 1200 mm wide by 1800 mm high

Services	Seal specification	Fire class
Rectangular PVC pipe, 220 x 90 mm / 2mm wall	Nullifire FP160 0.7 mm thick steel - 245 mm wide x 115 mm high x 250 mm deep with 62 mm protruding from each face and containing 2No. layers 4 mm thick x 250 mm wide intumescent, fitted on both faces	<b>EI 120 U/U</b>

U/C = (Uncapped/Capped)

THE CONTENTS OF THE DRAWING

Rectangular PVC pipe penetrating through a flexible (lined aperture) or rigid wall construction

DESIGNER

REV

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.

- The accuracy of this specification relies on the following:
1. Only Nullifire products as defined in the specification are used.
  2. The specific products are installed by a competent person, utilising Nullifire installation manual and data sheets noting limitations.
  3. The proposed specification has been checked by the user.
  4. For Details on CE Marked Products Refer to the CE Technical Data Sheets.

SEAL OF APPROVAL MUST BE VERIFIED IF THIS DOCUMENT HAS BEEN MODIFIED

DATE

28.9.2018

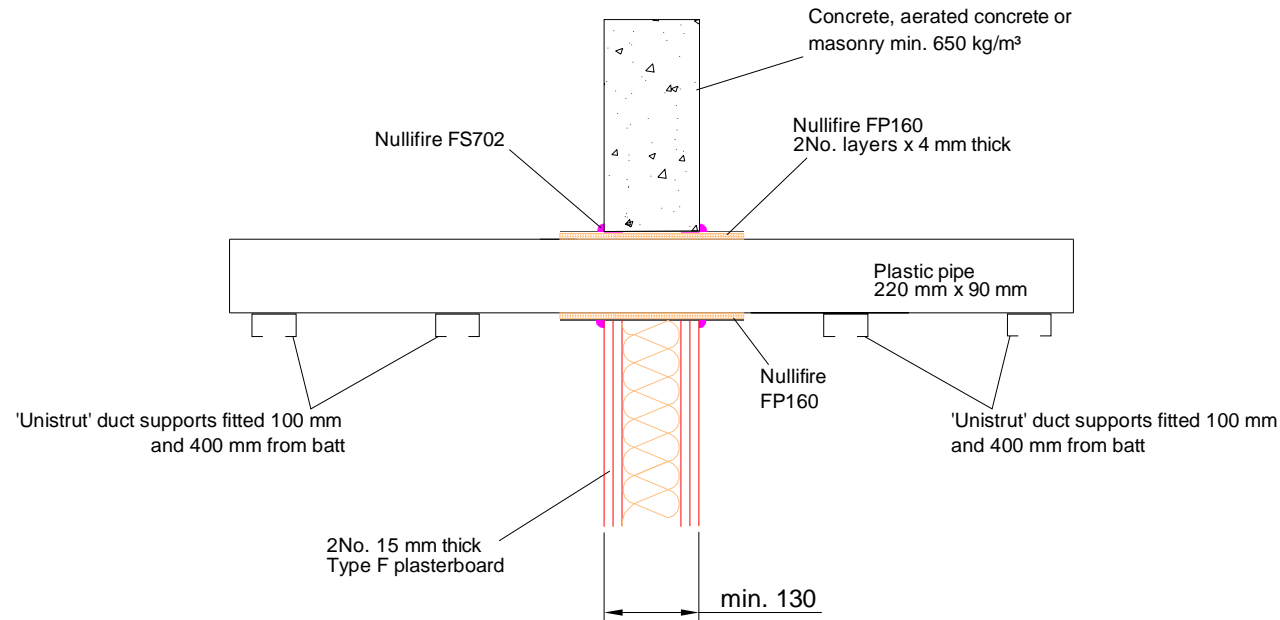
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DETAIL MARK

**FP302/FP160-PS1**

**Nullifire  
FP302/FP160-PS2**



**APPROVAL:**

ETA 17/0391

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

**Nullifire FP302/FP160-PS2**  
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 1200 mm wide by 1800 mm high

Services	Seal specification	Fire class
Rectangular uPVC* pipe, 220 x 90 mm / 2mm wall	Nullifire FP160 0.7 mm thick steel - 245 mm wide x 115 mm high x 250 mm deep with 62 mm protruding from each face and containing 2No. layers 4 mm thick x 250 mm wide intumescent, fitted on both faces	EI 120 U/U

\* PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1

U/C = (Uncapped/Capped)

THE CONTENTS OF THE DRAWING

Rectangular uPVC pipe penetrating through a flexible or rigid wall construction.

DESIGNER

REV

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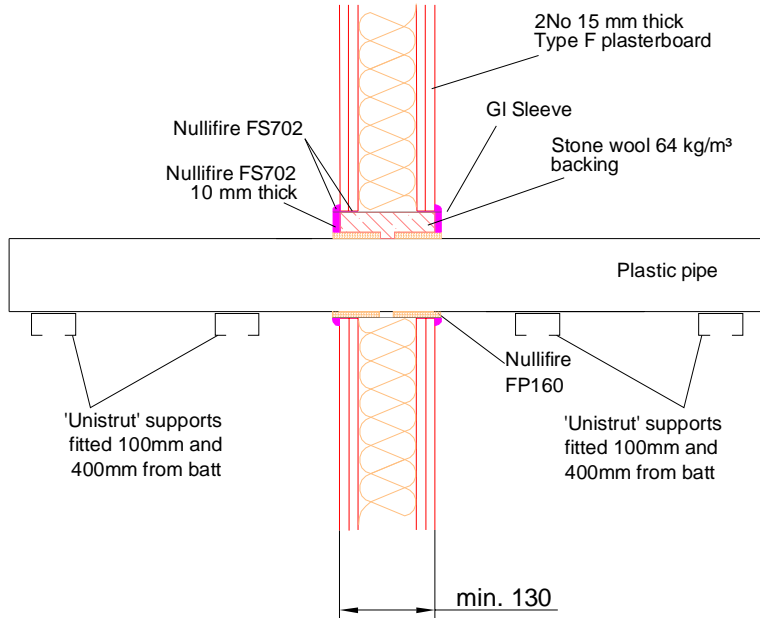
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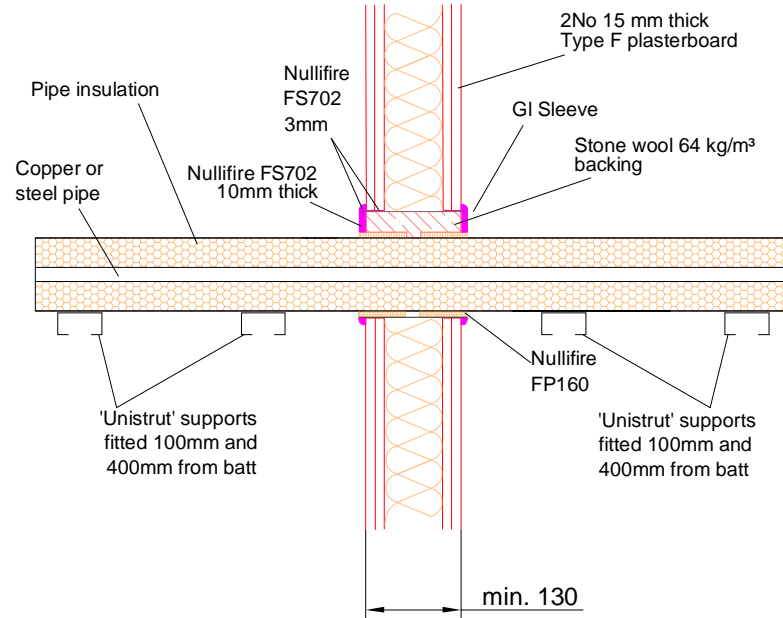
**FP302/FP160-PS2**

**Nullifire  
FP302/FP160-PS3a**



Alternative construction is rigid wall which contains concrete, aerated concrete or masonry min. 650 kg/m³

**Nullifire  
FP302/FP160-PS3b**



Alternative construction is rigid wall which contains concrete, aerated concrete or masonry min. 650 kg/m³

**APPROVAL:**

ETA 17/0391

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

**Nullifire FP302/FP160-PS3**  
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.

Oversize (up to 50 mm annular space) steel sleeve installed into the opening with annular space filled to full depth with stone wool and capped with FS702 sealant

Services	Seal specification	Fire class
uPVC* pipe up to Ø55 mm / 3.7 mm wall	1 x layer Nullifire FP302 – 4 mm thick by 60 mm wide to both faces	E1120 U/C
uPVC* pipe up to Ø160 mm / 11.8 mm wall	2 x layers Nullifire FP302 – 4 mm thick by 60 mm wide to both faces	
Copper or steel pipe Ø15 mm / 0.7 mm wall, insulated with 50mm glass wool insulation CS	2 x layers Nullifire FP302 – 4 mm thick by 60 mm wide to both faces	E1120 C/U

\* PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1

U/C = (Uncapped/Capped)

CS – Continuous Sustained

THE CONTENTS OF THE DRAWING

Plastic and metal pipes penetrating through a flexible or rigid wall construction

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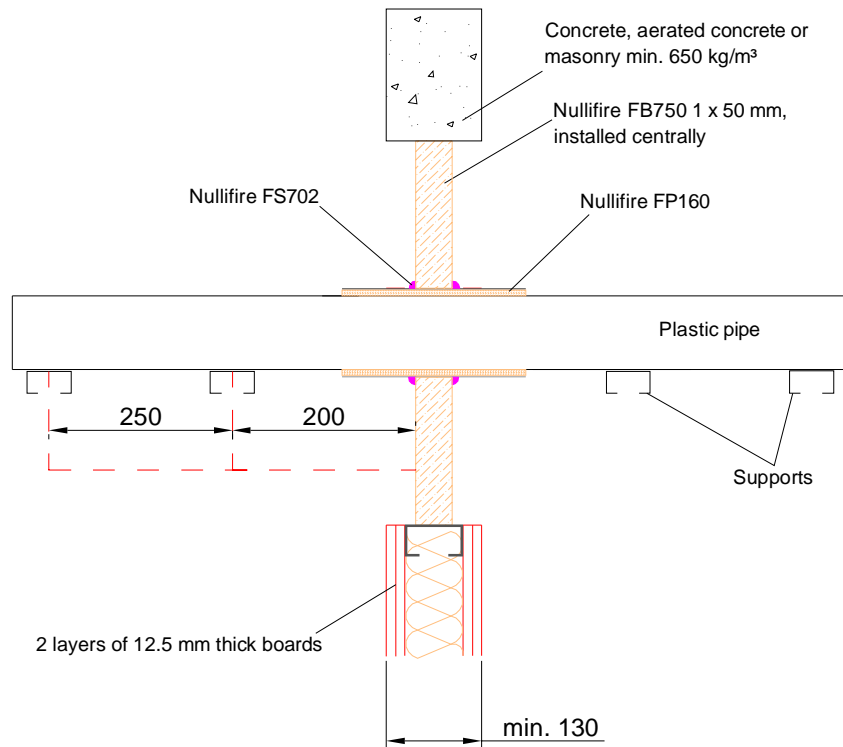
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DETAIL MARK

**FP302/FP160-PS3**

**Nullifire**

### Nullifire FP302/FP160-PS4



#### APPROVAL:

ETA 17/0391

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

**Nullifire FP302/FP160-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.

The max. seal size of 1200 mm wide by 1800 mm high

\* PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1

\$ PE pipe according to EN 1519-1, EN 12201-2 and EN 1266-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1

U/C = (Uncapped/Capped)

Services	Seal specification	Fire class
PVC-U* pipes up to Ø55mm/3.2-7.2mm wall	Nullifire FP160 150mm long / 1 of 140 x 4 mm intumescent layer	E160 U/C
PE pipe\$ up to Ø55mm/3.2-7.6mm wall		
PVC-U* pipes up to Ø90mm/3.4-7.8mm wall	Nullifire FP160 150mm long / 2 of 140 x 4mm intumescent layers	
PE pipe\$ up to Ø90mm/4.3-10mm wall		
PVC-U* pipes up to Ø125mm/3.6-8.4mm wall	Nullifire FP160 150mm long / 3 of 140 x 4mm intumescent layers	
PE pipe\$ up to Ø125mm/5.4-12.5mm wall		
PVC-U* pipes up to Ø160mm/3.8-9mm wall	Nullifire FP160 150mm long / 4 of 140 x 4mm intumescent layers	
PE pipe\$ up to Ø160mm/6.4-15mm wall		

#### THE CONTENTS OF THE DRAWING

PVC or PE pipes penetrating through a flexible or rigid wall construction with 1x50mm FB750

DESIGNER

REV

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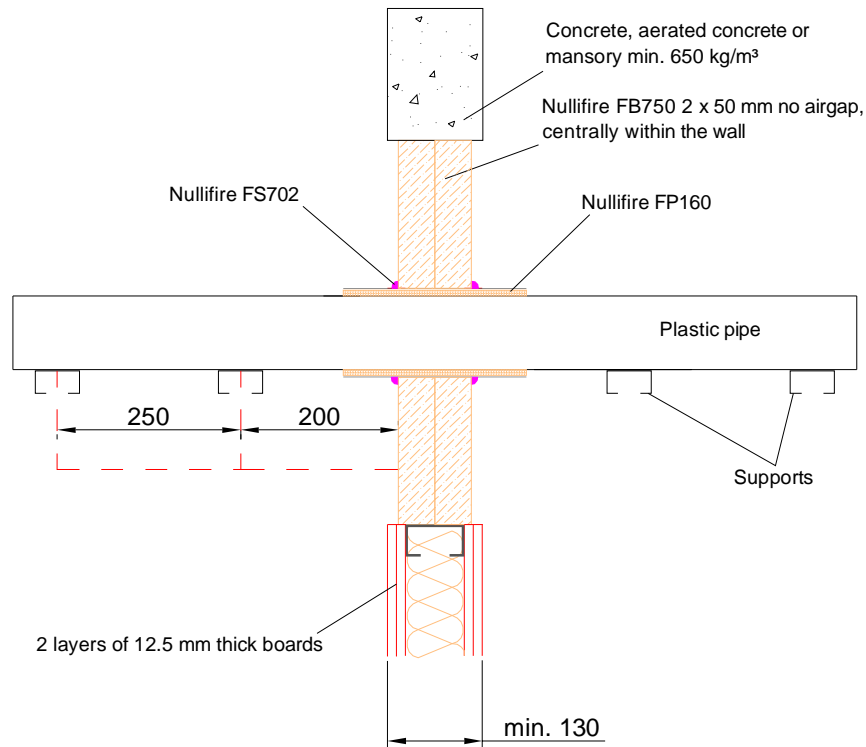
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DETAIL MARK

**FP302/FP160-PS4**

### Nullifire FP302/FP160-PS5



#### APPROVAL:

ETA 17/0391

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

**Nullifire FP302/FP160-PS5**  
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 1200mm wide by 1800mm high

\* PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1

\$ PE pipe according to EN 1519-1, EN 12201-2 and EN 1266-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1

U/C = (Uncapped/Capped)

Services	Seal specification	Fire class
PVC-U* pipes up to Ø55mm/3.2-7.2mm wall	Nullifire FP160 150mm long / 1 of 140 x 4 mm intumescent layer	E1120 U/C
PE pipe\$ up to Ø55mm/3.2-7.6mm wall		
PVC-U* pipes up to Ø90mm/3.4-7.8mm wall	Nullifire FP160 150mm long / 2 of 140 x 4mm intumescent layers	
PE pipe\$ up to Ø90mm/4.3-10mm wall		
PVC-U* pipes up to Ø125mm/3.6-8.4mm wall	Nullifire FP160 150mm long / 3 of 140 x 4mm intumescent layers	
PE pipe\$ up to Ø125mm/5.4-12.5mm wall		
PVC-U* pipes up to Ø160mm/3.8-9mm wall	Nullifire FP160 150mm long / 4 of 140 x 4mm intumescent layers	
PE pipe\$ up to Ø160mm/6.4-15mm wall		

THE CONTENTS OF THE DRAWING

PVC or PE pipes penetrating through a flexible or rigid wall construction with 2x50mm FB750

DESIGNER

REV

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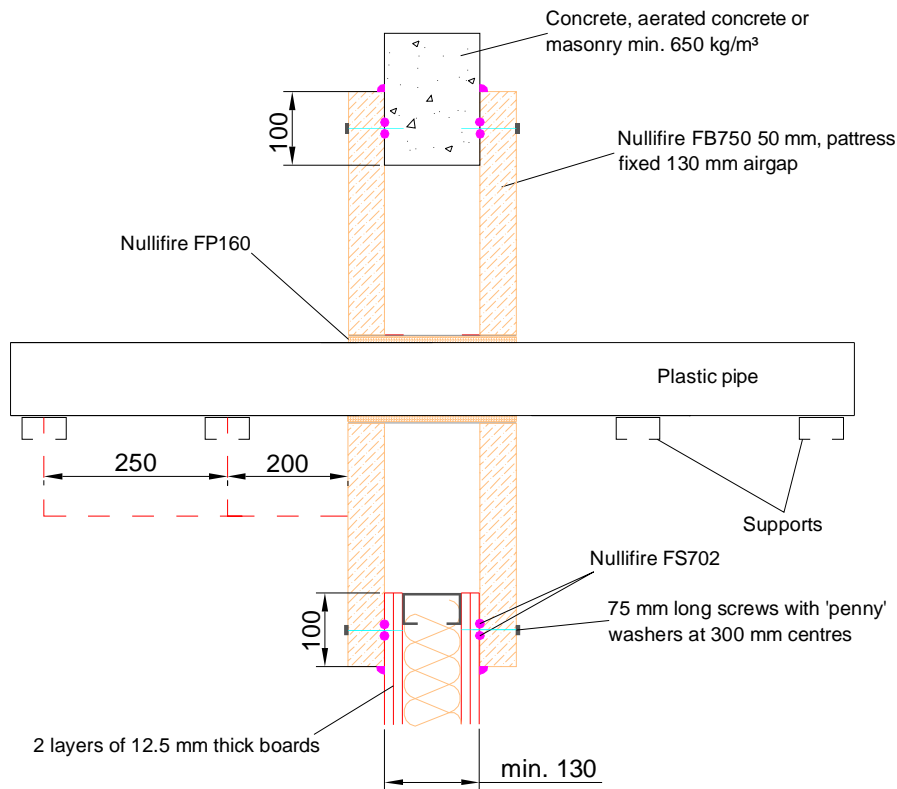
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DETAIL MARK

**FP302/FP160-PS5**

**Nullifire  
FP302/FP160-PS6**



**APPROVAL:**

ETA 17/0391

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

Look at the table in this detail

**Nullifire FP302/FP160-PS6**  
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 1200mm wide by 1800mm high

Services	Seal specification	Fire class
PVC-U* rectangular pipe 204 mm wide by 60 mm high / 1.5 mm wall	Nullifire FP160 250 mm long x 230 mm wide x 90 mm high / 4 of 250 x 4 mm intumescent layers	<b>EI 120 U/C</b>

\* PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1

U/C = (Uncapped/Capped)

THE CONTENTS OF THE DRAWING

PVC-U square pipe penetrating through a flexible or rigid wall construction

DESIGNER

REV

DATE

28.9.2018

SCALE

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DETAIL MARK

**FP302/FP160-PS6**

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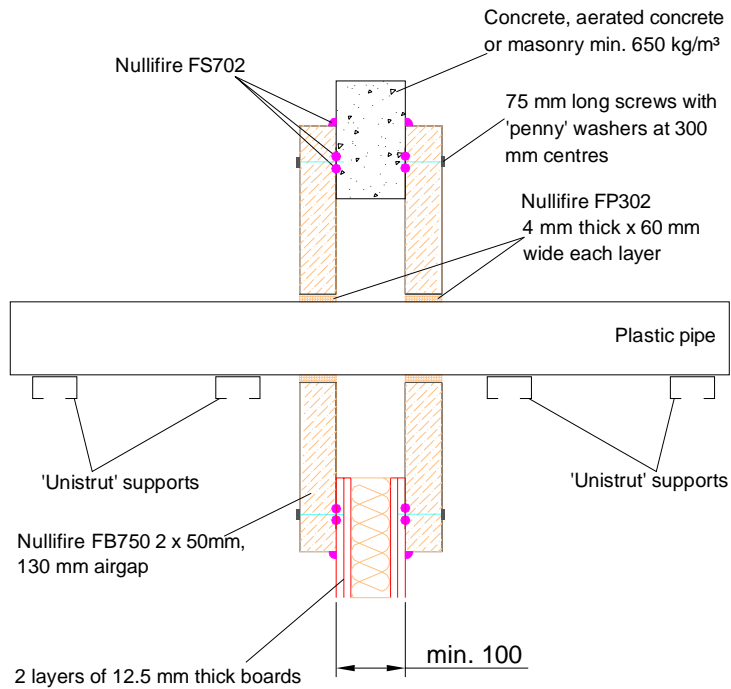
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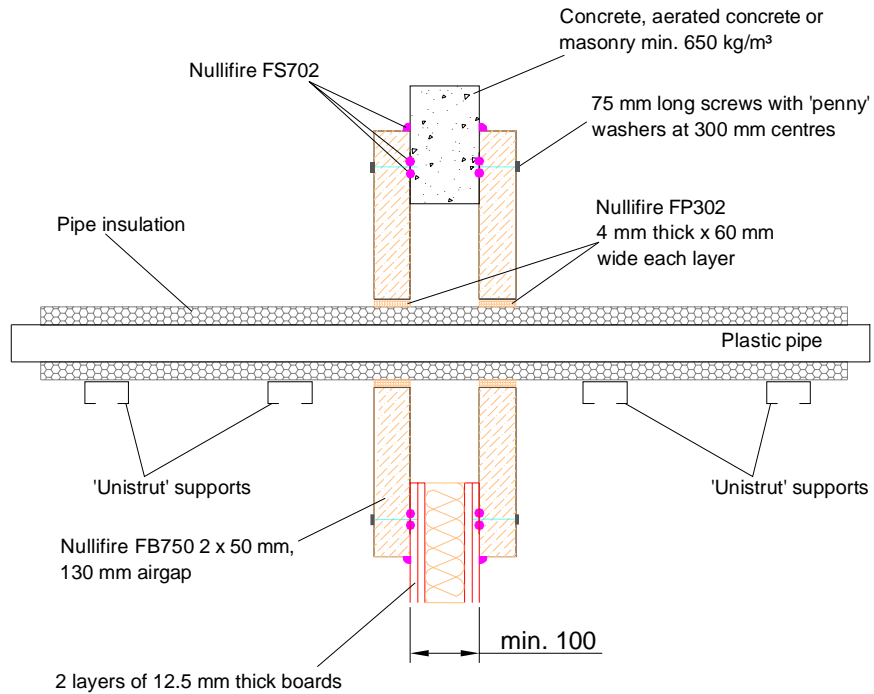
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**Nullifire**

### Nullifire FP302/FP160-PS7a



### Nullifire FP302/FP160-PS7b



#### APPROVAL:

ETA 17/0391

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

**Nullifire FP302/FP160-PS7**  
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 1200mm wide by 1800mm high

Min. 100mm to edge of seal and between services

The min. permitted separation between pipes of 95mm

# PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1

§ EN12201 DIN 8074/8075  
@ ISO 15494 DIN 8077/8078

CS - Continuous sustained

U/C = (Uncapped/Capped)

Services	Seal specification	Fire class
PVC-U# pipe up to Ø36mm/1.8mm wall	1 x layer of 60 x 4mm Nullifire FP302 to both faces	E190 U/C
PVC-U# up to Ø40mm/1.9-3.0mm wall, insulated with 19mm Kaiflex ST - CS	2 x layers of 60 x 4mm Nullifire FB302 to both faces	
PE pipe \$ up to Ø40mm/2.4-3.7mm wall, insulated with 19mm Kaiflex ST - CS		
PP pipe @ up to Ø40mm/1.8-5.5mm wall, insulated with 19mm Kaiflex ST - CS	3 x layers of 60 x 4mm Nullifire FP302 to both faces	
PE pipe \$ up to Ø110mm/3.4mm wall		
PVC-U# pipes up to Ø110mm/3.2-4.2mm wall		
PP pipe @ up to Ø110mm/3.4mm wall		

THE CONTENTS OF THE DRAWING

PVC-U, PP or PE pipe penetrating through a flexible or rigid wall construction with FB750 pf

DESIGNER

REV

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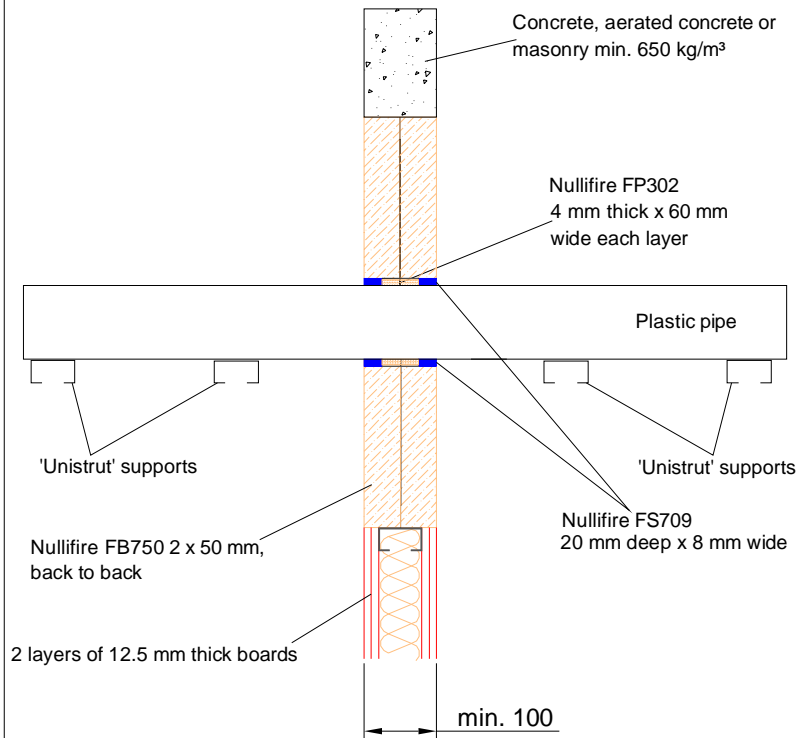
DETAIL MARK

**FP302/FP160-PS7**

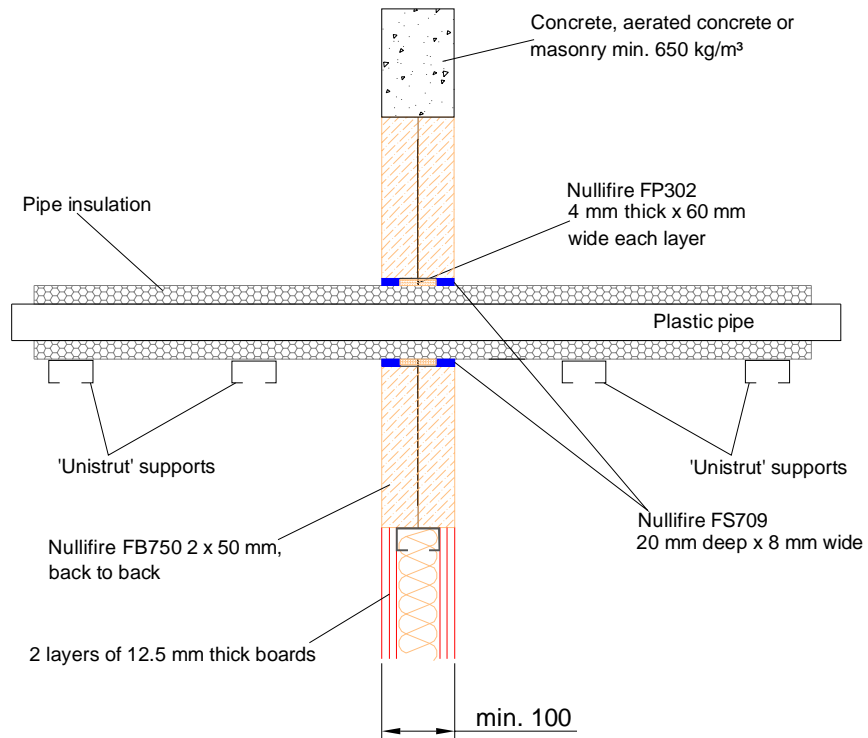
**Nullifire**



**Nullifire  
FP302/FP160-PS8a**



**Nullifire  
FP302/FP160-PS8b**



**APPROVAL:**

ETA 17/0391

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

**Nullifire FP302/FP160-PS8**  
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 1200mm wide by 1800mm high

Min. 100mm to edge of seal and between services

The min. permitted separation between pipes of 65mm

# PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1

\$ EN12201 DIN 8074/8075  
@ ISO 15494 DIN 8077/8078

CS - Continuous sustained

U/C = (Uncapped/Capped)

Services	Fire class	Seal specification
PVC-U# up to Ø40mm/1.9-3.0mm wall, insulated with 19mm Kaiflex ST - CS	Ei60 U/C	2 x layers of 60 x 4mm Nullifire FP302 central plus 8mm wide x 20mm deep flush to both faces
PE pipe\$ up to Ø40mm/2.4-3.7mm wall, insulated with 19mm Kaiflex ST - CS		
PP pipe @ up to Ø40mm/1.8-5.5mm wall, insulated with 19mm Kaiflex ST - CS		
PVC-U# pipe up to Ø110mm/4.2mm wall	Ei90 U/C	3 x layers of 60 x 4mm Nullifire FP302 central plus 12mm wide x 20mm deep flush to both faces
PE pipe\$ up to Ø110mm/3.4mm wall		
PVC-U# pipes up to Ø110mm/4.2mm wall		
PP pipe @ up to Ø110mm/3.4mm wall		

THE CONTENTS OF THE DRAWING

PVC-U, PP or PE pipe penetrating through a flexible or rigid wall construction with FB750 btob

DESIGNER

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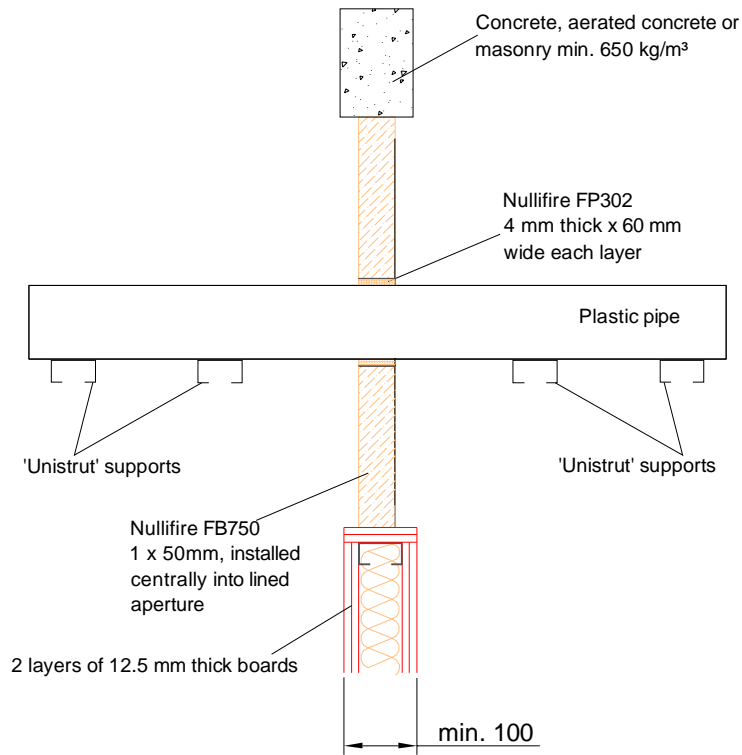
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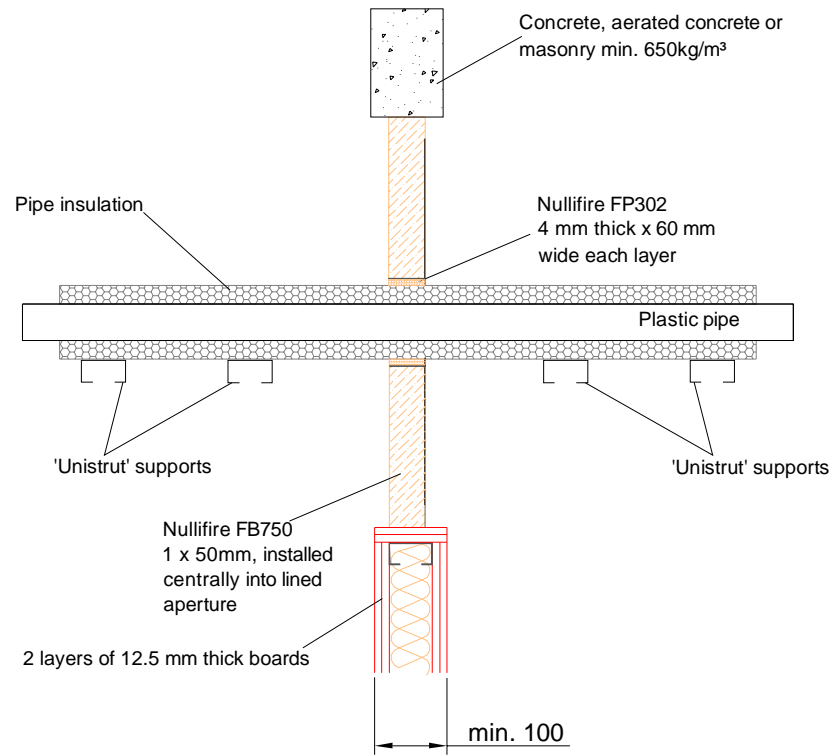
**FP302/FP160-PS8**

**Nullifire**

**Nullifire  
FP302/FP160-PS9a**



**Nullifire  
FP302/FP160-PS9b**



**APPROVAL:**

ETA 17/0391

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

**Nullifire FP302/FP160-PS9**  
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 1200mm wide by 1800mm high

Min permitted separation between pipes of 100mm and min. 58mm to edge of seal and between services

# PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1

\$ EN12201 DIN 8074/8075  
@ ISO 15494 DIN 8077/8078

Services	Seal specification	Fire class
PVC-U# up to Ø40mm/1.9-3.0mm wall, insulated with 19mm Kaiflex ST - CS	2 x layers of 60 x 4mm Nullifire FP302 central	E145 U/C
PE pipe\$ up to Ø40mm/2.4-3.7mm wall, insulated with 19mm Kaiflex ST - CS		
PP pipe @ up to Ø40mm/1.8-5.5mm wall, insulated with 19mm Kaiflex ST - CS		
PE pipe\$ up to Ø110mm/3.5mm wall	3 x layers of 60 x 4mm Nullifire FP302 central	

CS - Continuous Sustained

U/C = (Uncapped/Capped)

THE CONTENTS OF THE DRAWING

PVC-U, PP or PE pipe penetrating through a flexible or rigid wall construction

DESIGNER

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SCALE

Not scaled

DETAIL MARK

**FP302/FP160-PS9**

**Nullifire**