Firetect®

# DECLARATION OF PERFORMANCE

(DoP)

**No. CPR-14/0260-coat**

version 23/1

| | | |
|---|---|---|
| 1. | Unique identification of product | **Firetect® PA coating** |
| 2. | Intended use | service closure and cold smoke finish for joints + perimeters of structural openings for pipe and cable penetrations, to form a penetration seal in case of fire to reinstate the fire resistance of:<br>- standard flexible walls ≥ 100mm<br>- standard rigid walls ≥ 100mm<br>- standard rigid floors ≥ 150mm |
| 3. | Manufacturer | KLF Building Products BV<br>Techniekweg 11, 4207 HC Gorinchem, The Netherlands |
| 4. | Authorised representative | not applicable |
| 5. | System of AVCP | System 1 |
| 6a. | Harmonised standard | not applicable |
| | Notified body | not applicable |
| 6b. | European Assessment Document (EAD) | 350454-00-1104 |
| | European Technical Assessment (ETA) | ETA-14/0260 |
| | Certificate of Constancy of Performance | 0960-CPR-SKGIKOB.011131.01.NL |
| | Technical Assessment Body (TAB) | SKG-IKOB |
| | Identification notified body | No. 0960 |

7. Declared performances

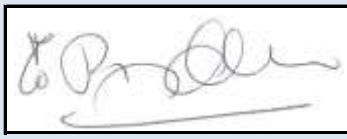
| basic requirements | characteristics | performances |
|---|---|---|
| **BWR 1 Mechanical resistance + stability** | | not relevant |
| **BWR 2 Safety in case of fire** | | |
| EN 13501-1 | reaction to fire | Class F |
| EN 13501-2 | resistance to fire | per tested assembly; EI 30 up to EI 180, |
| | field of application | + Sa - S200; see ANNEX BWR2 + ANNEX A |
| **BWR 3 Hygiene, health + environment** | | IA1/S/W3 |
| EAD 350454-00-1104, §2.2.3 | air permeability | npd |
| EAD 350454-00-1104, §2.2.4 | water permeability | npd |
| EAD 350454-00-1104, §2.2.5 | content, emission and/or release of dangerous substances | acc. CLP classified as not dangerous acc. Regulation 1272/2008 |
| **BWR 4 Safety + accessibility in use** | | |
| EAD 350454-00-1104, §2.2.6 | mechanical resistance + stability | npd |
| EAD 350454-00-1104, §2.2.7 | resistance to impact / movement | npd |
| EAD 350454-00-1104, §2.2.8 | adhesion | npd |
| EAD 350454-00-1104, §2.2.9 | durability | $Z_2$ (internal use) |
| **BWR 5 Protection against noise** | | |
| EAD 350454-00-1104, §2.2.10 | airborne sound insulation | npd |
| **BWR 6 Energy economy + heat retention** | | |
| EAD 350454-00-1104, §2.2.11 | thermal properties | npd |
| EAD 350454-00-1104, §2.2.12 | water vapour permeability | npd |
| **General aspects relation to fitness for use** | | |
| EAD 350454-00-1104, §1.2.2 | assumed working life for the intended use | 10 years |

8. Specific Technical Documentation: not applicable

npd= no performance determined

The performances of the products identified are in conformity with the declared performances. This declaration of performance is issued, in accordance with Regulation 305/2011, under the sole responsibility of the manufacturer.

Signed for and on behalf of the manufacturer in Gorinchem dated 12-05-2023 by C. Buikema



## field of application
(FoA)

**Firetect® PA coating**

tested and certified by ETA-14/0260;
fire resistance performances and assembly methods for uses in:

### constructive element [1)]

| | |
|---|---|
| **fire rated walls**<br>acc. EN 1363-1 | - flexible wall ≥100mm; metal or timber studs, plaster board type A + wall insulation<br>- rigid wall ≥100mm: blockwork/concrete/masonry, density ≥ 600 kg/m$^3$<br>- rigid wall ≥150mm: blockwork/concrete/masonry, density ≥ 600 kg/m$^3$ |
| **fire rated floors**<br>acc. EN 1363-1 | - rigid floor ≥150mm: (aerated) concrete, density ≥ 600 kg/m$^3$ |

[1)] the constructive element must be classified acc. EN 13501-2 for the required fire resistance period

### fire resistance

smoke control acc. EN 1634-3
smoke leakage control: Sa - S200

**field of application**:
EI **30** up to EI **180**: PA coating

acc. EN 13501-2 / 1366-3
**pipe + cable penetrations:** [2)]

| | | |
|---|---|---|
| - copper | ≤ Ø54mm | |
| - steel | ≤ Ø101mm | |
| - spiral pipes | ≤ Ø125mm | with circular fire dampers, also with valve* |
| - cable trays, PA board-to-board connections | ≤ 600x1200mm +25% in walls | coat back is **not** required |
| | ≤ 1000x1200 mm / 600x5000mm in floors | coat back is **not** required |

**field of application**:
EI **60** up to EI **120**: PA coating

acc. EN 13501-2 / 1366-2 + EN 1366-3
**air control**

| | | |
|---|---|---|
| - duct cladding, PA board-to-board connections | ducts ≤ 1000x1000mm | fire resistant cladding |
| - fire dampers, PA board-to-board connections | fire dampers ≤ 600x300mm | rectangular fire dampers *, installation + upgrade |

[2)] support services; support distance: see principle detail

* principle configuration

| environmental performances | BREEAM | LEED | VOC France | EN 717-1§ | EMICODE | M1 | Indoor Air |
|---|---|---|---|---|---|---|---|
| example protocols, click for full list | ☑ | | A+ | E1 | EC1 PLUS | ☑ | Comfort GOLD |

**directions for use: application, fasteners, finish & maintenance: see TDS**

## product information

Product certification by DoP; more info on certification of CE building products through ETA at firetect.eu/certification
- full DoP version: declaration of performance + ANNEX BWR2 + ANNEX A; upon request
- web DoP version: declaration of performance + ANNEX BWR2; other info can be downloaded at firetect.eu/download
- FoA charts; suitable products per type of fireseal + EI performance + product / joint details
- TDS: general directions for use + product specs

Consult firetect.eu/download for updated versions; product development + fire tests are ongoing processes at KLF.
Contact KLF for other EI requirements and (non)standard or complex site requirements; mail info@klf.nl

# How-to-read

charts Field of Application Firetect® fire rated building products

## certification

Use FoA charts as *guideline* to quickly identify suitable Firetect products within classification.

Always apply acc. details as stated per principle detail; click EI performance in chart.

Product certification of CE marked building products is done by DoPs (Declaration of Performance), rather than test reports; more info at www.firetect.eu. Charts do not include all test data. Contact KLF for non-standard (EI) requirements: +31 345 63 97 97 or info@klf.nl.

## supporting construction

product has been tested in + certified for constructive element, default type:

| | |
|---|---|
| **1** | flexible wall ≥ 100 mm; metal or timber studs, plaster board type A + wall insulation |
| **1-n**(xxx) | flexible wall ≥ (xxx) mm; metal or timber studs, plaster board type F, **no** wall insulation |
| **1-sh**(xxx) | shaft wall ≥ (xxx) mm, **non**-insulated |
| | (xxx) = wall thickness in mm; see in charts with EI performance |
| **1-sw** | sandwich wall ≥ 100 mm |
| **2** | rigid wall ≥ 100 mm: blockwork/concrete/masonry, density ≥ 600 kg/m$^3$ |
| **3** | rigid wall ≥ 150 mm: blockwork/concrete/masonry, density ≥ 600 kg/m$^3$ |
| **4** | flexible ceiling ≥ 150 mm: metal studs, plaster board type F |
| **5** | rigid floor ≥ 150 mm: (aerated) concrete, density ≥ 600 kg/m$^3$ |
| **6** | CLT wall ≥ 100 mm |
| **7** | CLT floor ≥ 140 mm |

**Note** Constructive element must be classified acc. EN 13501-2 for the required fire resistance period.

| | |
|---|---|
| tested in construction type **1** | also applicable in constructive element type **2+3** if wall thickness + m$^3$ weight are either equal or increased |
| tested in construction type **2** | also application in constructive element type **3** if wall thickness + m$^3$ weight are either equal or increased |
| tested in PA board | also applicable in FR Mortar fireseal; contact KLF for more info |

***"you may always upgrade, but never downsize"***

## pipe penetrations

| | |
|---|---|
| type of plastic | all plastic pipe types acc. EN norms |
| type of metal | all copper or steel or pipes; also suitable for material with lower thermal conductivity + melting point at least equal to tested material |
| EI | fire resistance in minutes (integrity + insulation) |
| U/U + U/C + C/U + C/C | pipe end: U = uncapped and C = capped, at resp. exposed / unexposed side |
| 1S + 2S | PA board coated on 1 side (1S) or 2 sides (2S) |

pipe insulation

- all synthetic rubber min. 60 kg/m$^3$ eg Armaflex
- all glass wool or rock wool min. 75 kg/m$^3$ eg Climpipe or U Protect Pipe Section Alu2
- all polyolefin foam min. 28 kg/m$^3$ eg Uponor
- all PIR min. 33 kg/m$^3$

| | |
|---|---|
| LS | local sustained = partly insulated pipe; total insulation length in mm through constructive element (symmetrically) |
| LI | local interrupted = partly insulated pipe; insulation length in mm on either side of constructive element |
| CS | continued sustained = fully insulated pipe |
| CI | continued interrupted = fully insulated pipe, yet interrupted in constructive element |

max. opening

see principle detail, plus:
- allowed oversize opening ≤ 15mm with collar + wrap; if larger, use PA board:
  walls: max. 600 x 1200 mm + 25%, floors: max. 1000 x 1200 mm up to 600 x 5000 mm
- allowed 'oversized' collar ≤ 15mm, eg use Ø90 collar for Ø80 pipe

**Note** Support pipes; support distance: see principle detail.
Fasten glass wool or rock wool individually (not wrapped!) with steel wire; see principle detail.

# How-to-read

charts Field of Application Firetect® fire rated building products

## certification

Use FoA charts as *guideline* to quickly identify suitable Firetect products within classification.

Always apply acc. details as stated per principle detail; click EI performance in chart.

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## cable penetrations

type of service: all steel (galvanised) cable trays + ladders, non-perforated + perforated
all steel (galvanised) mesh wire cable trays

EI: fire resistance in minutes (integrity + insulation)

minimum working spaces

| | configuration | horizontal | vertical |
|---|---|---|---|
| Min. distances from opening edges | LARGE | 35mm | 30 mm |
| | MIXED | 30 mm | 0 mm |
| Min. distances between services | LARGE | 5mm | 100 mm |
| | MIXED | 20 mm | 20 mm |

cable groups

| | |
|---|---|
| group 1 - small sheathed | max. Ø 21mm |
| group 2 - medium sheathed | max. Ø 50mm |
| group 3 - large sheathed | max. Ø 80mm |
| group 4 - data + fibre optic | max. Ø 100mm bundle |
| group 5 - non-sheathed | max. Ø 23mm |
| conduit, steel or plastic | max. Ø 16mm |

max. opening: see principle detail

**Note**: Support cable services; support distance: see principle detail.

## blank seals

gaps + openings without any service penetrations

EI: fire resistance in minutes (integrity + insulation)

up to EI 120 for application in walls + floors

## disclaimer

Consult www.firetect.eu/download for updates; product development + fire tests are ongoing processes at KLF.
Mentioned brand names are for illustrative purpose only, to indicate type of material tested.

## COPPER classification ≤ Ø76 mm

Fire performances are valid for range of dØ pipe diameter + s1 pipe thickness within the same pipe material:

**copper**
dØ max. 76 mm
s1 max. 14,0 mm
pipe insulation brands eg Climpipe, Rockwool, Armaflex, U Protect Pipe Section Alu2

### suitable Firetect products within classification:

| dØ | s1 | pipe insulation | Graphite sealant DoP CPR-14/0273 walls | Graphite sealant DoP CPR-14/0273 floors | Acrylic sealant or PA sealer DoP CPR-14/0273 walls | Acrylic sealant or PA sealer DoP CPR-14/0273 floors | Wrap DoP CPR-14/0251 walls | Wrap DoP CPR-14/0251 floors |
|---|---|---|---|---|---|---|---|---|
| up to Ø28 | 1,0 up to 1,2 | non-insulated | individual results max.<br>EI 180 in wall | individual results max.<br>EI 180 in floor 5 | individual results max.<br>EI 120 in wall | individual results max.<br>EI 120 in floor 5 | | |
| up to Ø42 + synth. rubber or rock wool (alu) insulation | 1,0 up to 14,0 | + pipe insulation | | | | | | |
| | | + synth. rubber, min. 60 kg/m³ | | | | | | |
| | | 13mm | EI 90 in wall 1+2+3<br>individual results max.<br>EI 60 in wall 1-n75 | individual results max.<br>EI 90 in floor 7 | individual results max.<br>EI 120 in wall 3 | individual results max.<br>EI 120 in floor 5 | | individual results max.<br>EI 90 in floor 7 |
| | | 25mm | EI 90 in wall 1+2+3<br>individual result:<br>EI 90 in wall 1-n100<br>individual results max.<br>EI 60 in wall 1-n75 | | | | | |
| | | + rock wool (alu), min. 90 kg/m³ | | | | | | |
| | | 25mm | EI 60 in wall 1+2+3 | | individual results max.<br>EI 90 in wall 1-n100<br>EI 60 in wall 1-n75<br>EI 120 in wall 3 | individual results max.<br>EI 120 in floor 5 | | |
| | | 50mm | EI 90 in wall 1+2+3 | | | | | |
| up to Ø76 + glass or rock wool (alu) insulation | 1,0 up to 2,1 | + pipe insulation | | | | | | |
| | | + glass or rock wool (alu), min. 75 kg/m³<br>20 up to 30mm | EI 90 in wall 1+2+3 | EI 90 in floor 5 | | | EI 90 in wall 1+2<br>EI 120 in wall 3<br>2 layer | EI 120 in floor 5<br>2 layer |
| | | 40mm | EI 90 in wall 1+2+3 | EI 90 in floor 5 | | | EI 90 in wall 1+2<br>EI 120 in wall 3<br>1 layer | EI 120 in floor 5<br>2 layer |
| | | 50mm | EI 90 in wall 1+2+3 | EI 90 in floor 5 | | | EI 90 in wall 1+2<br>EI 120 in wall 3<br>2 layer | EI 120 in floor 5<br>2 layer |
| | | 60mm | EI 90 in wall 3 | EI 90 in floor 5 | | | EI 60 in wall 1+2<br>EI 120 in wall 3<br>3 layer | EI 120 in floor 5<br>3 layer |
| | | 80mm | EI 240 in wall 3 | EI 240 in floor 5 | | | EI 60 in wall 1+2<br>EI 120 in wall 3<br>3 layer | EI 120 in floor 5<br>3 layer |
| | | | joint details: min. W x D, default:<br>walls: 10 x 25 mm, apply on 2 sides<br>floors: 15 x 25 mm, apply on 2 sides | | joint details: min. W x D, default:<br>walls: 10 x 25 mm, apply on 2 sides<br>floors: 15 x 25 mm, apply on 2 sides | | default:<br>walls: apply on 2 sides<br>floors: apply on 1 side<br>always apply smokeseal Acrylic sealant on 2 sides | |

### supporting construction

**Constructive element** must be classified acc. EN 13501-2 for the required fire resistance period:

**1**: flexible wall ≥ 100 mm, insulated
**1-n**: flexible wall ≥ (xxx) mm, **non-insulated**
**1-sh**: shaft wall ≥ (xxx) mm, **non-insulated**
**1-sw** sandwich wall ≥ 100 mm
**2**: rigid wall ≥ 100 mm
**3**: rigid wall ≥ 150 mm
**4**: flexible ceiling ≥ 150 mm
**5**: rigid floor ≥ 150 mm
**6**: CLT wall ≥ 100 mm
**7**: CLT floor ≥ 140 mm

Max. **opening** in constructive element: see principle detail. Use PA board if opening is larger; see how-to-read.

Penetration services must be **supported**;
support distance walls max. 500mm
support distance floors max. 400mm

Min. length pipe insulation LI / LS / CS / CI:
see principle detail.

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## STEEL classification ≤ Ø219 mm

Fire performances are valid for range of dØ pipe diameter + s1 pipe thickness within the same pipe material:

**steel**
dØ max. 219,1 mm
s1 max. 14,2 mm

pipe insulation brands eg Climpipe, Rockwool, Armaflex, U Protect Pipe Section Alu2

## suitable Firetect products within classification:

| dØ | s1 | pipe insulation | Graphite sealant DoP CPR-14/0273 walls | Graphite sealant DoP CPR-14/0273 floors | Acrylic sealant or PA sealer DoP CPR-14/0273 walls | Acrylic sealant or PA sealer DoP CPR-14/0273 floors | Wrap DoP CPR-14/0251 walls | Wrap DoP CPR-14/0251 floors |
|---|---|---|---|---|---|---|---|---|
| steel Ø12 up to Ø219 | 1,0 up to 4,5 mm<br>Ø12 up to Ø219 mm | non-insulated | individual results max.<br>EI 120 in wall | individual results max.<br>EI 120 in floor 5 | individual results max.<br>EI 180 in wall | individual results max.<br>EI 180 in floor 5 | | |
| | 1,0 up to 14,2 mm<br>Ø15 up to Ø219 mm | + pipe insulation<br>+ synth. rubber, min. 60 kg/m³ | | | | | | |
| | | 10mm | EI 90 in wall 1+2+3 | EI 90 in floor 5 | | | | |
| | | 13mm | EI 120 in wall 1+2+3<br>individual results max.<br>EI 90 in wall 1-n100<br>EI 60 in wall 1-n75 | EI 60 in floor 5<br>EI 90 in floor 7 | individual results max.<br>EI 120 in wall 3 | individual results max.<br>EI 120 in floor 5 | | EI 90 in floor 7<br>2 layer |
| | | 25mm | EI 60 in wall 1+2+3<br>EI 60 in wall 1-n100<br>individual results max.<br>EI 60 in wall 1-n75 | EI 60 in floor 5 | | | | |
| | 1,0 up to 14,2 mm<br>Ø15 up to Ø219 mm | + pipe insulation<br>+ glass or rock wool (alu), min. 75 kg/m³ | | | | | | |
| | | 20 up to 30mm | EI 60 in wall 1+2+3 | EI 90 in floor 5 | | | EI 60 in wall 1+2+3<br>1 layer | EI 90 in floor 5<br>2 layer |
| | | 40mm | EI 60 in wall 1+2+3 | EI 90 in floor 5 | | | EI 90 in wall 1+2+3<br>1 layer | EI 90 in floor 5<br>2 layer |
| | | 50mm | EI 90 in wall 1+2+3 | EI 90 in floor 5 | | | EI 120 in wall 1+2+3<br>2 layer | EI 120 in floor 5<br>2 layer |
| | | 60mm | EI 90 in wall 1+2+3 | EI 90 in floor 5 | | | EI 60 in wall 1+2+3<br>3 layer | EI 120 in floor 5<br>3 layer |
| | | 80mm | EI 90 in wall 1+2+3 | EI 180 in floor 5 | | | EI 60 in wall 1+2+3<br>3 layer | EI 120 in floor 5<br>3 layer |
| | 1,0 up to 14,2 mm<br>Ø15 up to Ø219 mm | + pipe insulation<br>+ rock wool (alu), min. 90 kg/m³ | | | | | | |
| | | 25mm | EI 60 in wall 1+2+3 | | EI 120 in wall 3<br>EI 60 in wall 1-n100<br>individual results max.<br>EI 30 in wall 1-n75 | EI 120 in floor 5<br>also on PA board | | |
| | | 50mm | EI 90 in wall 1+2+3 | | individual results max.<br>EI 90 in wall 1-n100 | | | |
| | 3,25 up to 14,2 mm<br>Ø42 up to Ø219 mm | + pipe insulation<br>+ PIR, min. 33 kg/m³ | | | | | | |
| | | 25mm | EI 60 in wall 1+2+3 | EI 180 in floor 5 | | | | |
| | | 50mm | EI 60 in wall 1+2+3 | EI 90 in floor 5 | | | | |
| | | | joint details: min. W x D, default:<br>walls: 10 x 25 mm, apply on 2 sides<br>floors: 15 x 25 mm, apply on 2 sides | | joint details: min. W x D, default:<br>walls: 10 x 25 mm, apply on 2 sides<br>floors: 15 x 25 mm, apply on 2 sides | | default:<br>walls: apply on 2 sides<br>floors: apply on 1 side<br>always apply smokeseal Acrylic sealant on 2 sides | |

### supporting construction

**Constructive element** must be classified acc. EN 13501-2 for the required fire resistance period:

**1**: flexible wall ≥ 100 mm, insulated
**1-n**: flexible wall ≥ (xxx) mm, **non-insulated**
**1-sh**: shaft wall ≥ (xxx) mm, **non-insulated**
**1-sw** sandwich wall ≥ 100 mm
**2**: rigid wall ≥ 100 mm
**3**: rigid wall ≥ 150 mm
**4**: flexible ceiling ≥ 150 mm
**5**: rigid floor ≥ 150 mm
**6**: CLT wall ≥ 100 mm
**7**: CLT floor ≥ 140 mm

Max. **opening** in constructive element: see principle detail. Use PA board if opening is larger; see how-to-read.

Penetration services must be **supported**;
support distance walls max. 500mm
support distance floors max. 400mm

Min. length pipe insulation LI / LS / CS / CI:
see principle detail.

NOTE:
CONDUITS: see
**STEEL CONDUITS**
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**TRAYS + LADDERS + WIRE MESH classification ≤ 600 mm**

Fire performances are valid for for **range** of cable group + max. Cu mm² with steel services:

**cable group 1 + 2 + 3 + 5**
dØ up to 80 mm

**cable group 4 (data + fibre optic)**
dØ up to 100 mm

**suitable Firetect products within classification:**

**Constructive element** must be classified acc. EN 13501-2 for the required fire resistance period:

**1**: flexible wall ≥ 100 mm, insulated
**1-n**: flexible wall ≥ (xxx) mm, **non-insulated**
**1-sh**: shaft wall ≥ (xxx) mm, **non-insulated**
**1-sw** sandwich wall ≥ 100 mm
**2**: rigid wall ≥ 100 mm
**3**: rigid wall ≥ 150 mm
**4**: flexible ceiling ≥ 150 mm
**5**: rigid floor ≥ 150 mm
**6**: CLT wall ≥ 100 mm
**7**: CLT floor ≥ 140 mm

| service size | Cu mm² | cable specs | Graphite sealant (DoP CPR-14/0273) | Acrylic or PA sealer (DoP CPR-14/0273) | PA board (DoP CPR-14/0260) | or FR Mortar | max. opening (mm) | support distance (mm) |
|---|---|---|---|---|---|---|---|---|
| **cable trays** ≤ 500mm + **cable ladders** ≤ 300mm | max. Cu mm² = **29647** | each cable assembly within max. Cu mm²; **all** cable groups are allowed, max.:<br>Ø 21mm group 1 - small sheathed<br>Ø 61mm group 2 - medium sheathed<br>Ø 80mm group 3 - large sheathed<br>Ø 100mm group 4 - data + fibre optic<br>Ø 23mm group 5 - non-sheathed<br>all conduits:<br>max. 3x Ø 16mm steel / plastic | | EI 60 in wall 1+2+3 | 2x 50mm 2S | 100mm | 600x1200 | at 250mm + 500mm |
| | | | | EI 30 in wall 1+2+3 | 2x 50mm 2S | 100mm | 600x1200 | at 500mm |
| | | | | EI 30 in wall 2+3 | 1x 50mm 2S | 50mm | 600x1200 | at 500mm |
| | | | | EI 60 in floor 5 | 2x 50mm 2S | 100mm | 600x5000 | at 250mm + 400mm |
| | max. Cu mm² = **15707** | each cable assembly within max. Cu mm²; **all** cable groups are allowed, max.:<br>Ø 21mm group 1 - small sheathed<br>Ø 47mm group 2 - medium sheathed<br>Ø 52mm group 3 - large sheathed<br>Ø 100mm group 4 - data + fibre optic<br>Ø 23mm group 5 - non-sheathed<br>all conduits:<br>max. 3x Ø 16mm steel / plastic | EI 60 in wall 1+2+3 | EI 60 in wall 1+2+3 | 2x 50mm 2S | 100mm | 600x1200 +25% | at 500mm |
| | | | EI 60 in floor 5 | EI 60 in floor 5 | 2x 50mm 2S | 100mm | 600x5000 | at 250mm + 400mm |
| **trays / ladders** ≤ 600mm | max. Cu mm² = **12619** | each cable assembly within max. Cu mm²; allowed cable groups:<br>group 1 - small sheathed<br>group 4 - data + fibre optic | results max.<br>EI 180 in wall 3 | EI 120 in wall 1+2+3 | 1x 50mm 2S | 50mm | 620 x 70 | at 500mm |
| | | | | EI 60 in wall 1+2+3 | - | - | 620 x 70 | at 500mm |
| | | | | EI 30 in wall 1n-75 | - | - | 220 x 80 | at 250mm + 500mm |
| **wire mesh trays** ≤ 600mm | max. Cu mm² = **6401** | each cable assembly within max. Cu mm²; allowed cable groups:<br>group 1 - small sheathed<br>group 2 - medium sheathed<br>group 4 - data + fibre optic | | EI 60 in wall 1+2+3 | 2x 50mm 2S | 100mm | 730 x 230 | at 250mm + 500mm |
| | | | | EI 90 in wall 1+2+3 | 2x 50mm 2S | 100mm | 660 x 120 | at 250mm + 500mm |
| | | | | EI 30 in wall 1n-75 | - | - | 420 x 100 | at 250mm + 500mm |
| | | | | EI 60 in floor 5 | 2x 50mm 2S | 100mm | 600 x 800 | at 400mm |

joint details, default:
walls: 5mm around cables, apply on 2 sides
floors: 5mm around cables, apply on 2 sides

finish, default:
**NO coating on cables, cable tray or on constructive element !**

Max. opening in constructive element: see also principle detail.

Penetration services must be **supported**.



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aluPE-X
PE-Xa
copper
steel
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cables + bundles
fire dampers
air transfer grilles
duct cladding
linear joints
socket boxes
blank seals
EN norms for plastic pipes
how-to-read
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## AIR CONTROL SERVICES classification

Fire performances are **principle configurations**, valid for services within range:

| | |
|---|---|
| fire dampers | up to 600 x 300 mm |
| air ducts | up to 1000 x 1000 mm |

always install services acc. manufacturer's instructions

**suitable Firetect products within classification:**

| service size | service specs | Graphite sealant<br>DoP CPR-14/0273 | Acrylic sealant or PA sealer<br>DoP CPR-14/0273 | PA coating<br>DoP CPR-14/0260 | PA board or FR Mortar<br>DoP CPR-14/0260 | | Air grill |
|---|---|---|---|---|---|---|---|
| **fire dampers** | **installation** in firewall, supported to floor<br>max. 600 x 300 mm<br>acc. EN 1366-3<br>acc. EN 1634-3<br><br>**upgrade** towards firewall, supported to floor<br>acc. EN 1366-2<br>acc. EN 1634-3 | | | | EI 90 in wall 1+2+3<br>2x 50mm 2S | 100mm | |
| | | | | | EI 60 in wall 1+2+3<br>cladding: 1x 50mm 2S | 100mm | |
| | **in spiral pipes**<br>max.Ø 160 mm<br>with or without valve<br>acc. EN 1366-3 | in PA board<br>with pipe insulation:<br>EI 60 in wall 1-n100 | in PA board<br>EI 60 in wall 1-n75<br>EI 60 in wall 1-n100 | EI 120 in wall 1+2+3<br>EI 120 in ceiling 4<br>EI 120 in floor 5 | | | |
| **air ducts** | **circular ducts**<br>max. Ø 300 mm<br>acc. EN 1366-3 | | EI 90 in floor 7 | | | | |
| | **duct cladding**<br>max. 1000 x 1000 mm<br>acc. EN 1366-3<br><br>acc. EN 1634-3 | | | | EI 60 in wall 1+2+3<br>cladding: 1x 50mm 1S | 100mm | |
| | | | | | EI 60 in floor 5<br>cladding: 1x 50mm 1S | 60mm | |
| **air transfer grilles** | **ventilation**<br>max. 600 x 600 mm<br>acc. EN 1364-5 | | | | | | EI 60 in wall 1+2+3 |
| | | | | | | | EI 120 in floor 5 |
| | | joint details: min. W x D, default:<br>floors: 10 x 25 mm<br>apply on 2 sides | joint details: min. W x D, default:<br>floors: 10 x 25 mm<br>apply on 2 sides | 0,8mm coat layer 200 LI<br>walls: apply on 2 sides<br>floors: apply on 1 side<br>apply smokeseal Acrylic | 'butter' cross cut edges of PA board + opening with PA coating<br>apply smokeseal Acrylic | default:<br>floors: 30 x 25 mm<br>apply flush with construction | mount with Acrylic sealant<br>walls: apply centrally in wall<br>floors: apply flush with floor |

### supporting construction

**Constructive element** must be classified acc. EN 13501-2 for the required fire resistance period:

**1**: flexible wall ≥ 100 mm, insulated
**1-n**: flexible wall ≥ (xxx) mm, **non-insulated**
**1-sh**: shaft wall ≥ (xxx) mm, **non-insulated**
**1-sw** sandwich wall ≥ 100 mm
**2**: rigid wall ≥ 100 mm
**3**: rigid wall ≥ 150 mm
**4**: flexible ceiling ≥ 150 mm
**5**: rigid floor ≥ 150 mm
**6**: CLT wall ≥ 100 mm
**7**: CLT floor ≥ 140 mm

Max. **opening** in constructive element: see principle detail. Use PA board if opening is larger; see how-to-read.

Penetration services must be **supported.** Always install services acc. manufacturer's instructions.

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