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Authorised and notified according to Article 29 of the Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011

European Technical Assessment ETA-23/0167 of 2025/08/27

I General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S	
Trade name of the construction product:	fischer FCFcl Plus
Product family to which the above construction product belongs:	Fire Stopping, Fire Sealing & Fire Protective Products. Fire Retardant Products
Manufacturer:	fischerwerke GmbH & Co. KG Klaus-Fischer-Str. 1 DE-72178 Waldachtal Telephone: +49 7443 12-0 www.fischer-international.com
Manufacturing plant:	fischerwerke
This European Technical Assessment contains:	18 pages including 2 annexes which form an integral part of the document
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:	EAD 350141-00-1106 Fire Stopping and Fire Sealing Products, Linear Joint and Gap Seals The ETA with the same number issued on 2024-07-04

II SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of the product

fischer FCFcl Plus is a 100 & 120 mm thick aluminum-clad mineral wool used to reinstate the fire resistance performance of linear joint gaps in rigid wall constructions, rigid floor constructions, and perimeter joints in curtain wall façades.

fischer FCFcl Plus is supplied in boards and can be friction-fit in systems specified in Annex B of this document.

2 Specification of the intended use in accordance with the applicable European Assessment Document (hereinafter EAD)

The intended use of fischer FCFcl Plus is to reinstate the fire resistance performance of linear joint gaps in rigid wall and floor constructions, and perimeter joints in curtain wall façades.

The specific elements of construction that the system fischer FCFcl Plus may be used to provide a linear joint seal:

Rigid Floors:
The floor must have a minimum thickness of 150 mm and comprise concrete or aerated concrete with a minimum density of 650 kg/m^3.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

The individual requirements for floors are detailed in the respective systems in Annex B of this document.

Rigid Walls:
The wall must have a minimum thickness of 150 mm and comprise concrete or aerated concrete with a minimum density of 650 kg/m^3.

The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

Drywalls:
The wall must have a minimum thickness of 95 mm and comprise minimum 1 layer of gypsum board, steel or wood studs and stone wool insulation or no insulation.

The individual requirements for walls are detailed in the respective systems in Annex B of this document

fischer FCFcl Plus may be used to provide a linear joint or gap seal with specific supporting constructions and substrates (for details see Annex B of this document).

More information in table, section 3 “Performance of the product and references to the methods used for this assessment”.

The fire resistance of fischer FCFcl Plus is tested according to EN 1366-4 and EN 1364-4.

The maximum permitted joint/gap width for fischer FCFcl Plus is 450 mm.

The maximum movement capability of fischer FCFcl Plus is 5%

The installation guidelines for fischer FCFcl Plus in the technical datasheet accompanying this product must be followed.

The provisions made in this European Technical Assessment are based on an assumed intended working life of the sealant system of 25 years, provided that the conditions laid down in the product data sheet for the packaging/transport/storage/installation/use/repair are met.

The indications given on the intended working life cannot be interpreted as a guarantee given by the producer or the Technical Assessment Body but are to be regarded only as a means for selecting the appropriate products in relation to the expected economically reasonable working life of the works.

3 Performance of the product and references to the methods used for its assessment.

Characteristic	Assessment of characteristic
3.2 Safety in case of fire (BWR 2)	
Reaction to fire	The product is classified as **A1** in accordance with EN13501-1, and the EC Delegated regulation 96/603/EC.
Resistance to fire	**See Annex B**
3.3 Hygiene, Health and the Environment (BWR 3)	
Air permeability	**No performance assessed**
Water permeability	**No performance assessed**
Content, emission and/or release of dangerous Substances*	Release scenario: **IA1**

	3 days [mg/m^3]	28 days [mg/m^3]
SVOC	**< 0.005**	**< 0.005**
VOC	**< 0.005**	**< 0.005**

3.4 Safety and accessibility in use (BWR4)	
Mechanical resistance and stability	**No performance assessed**
Resistance to impact/movement	**No performance assessed**
Adhesion	**No performance assessed**
Durability	Use category: **Type Y_1**
Movement capability	**See Annex B**
Cycling of perimeter seals for curtain walls	**Cycle tested at 30 cpm**
Compression set	**No performance assessed**
Linear expansion on setting	**No performance assessed**
3.5 Protection against noise (BWR5)	
Airborne sound insulation	**Rw (C; Ctr) = 27 (-0; -3) dB**
3.6 Energy economy and heat retention (BWR6)	
Thermal properties	**No performance assessed**
Water vapour permeability	**No performance assessed**

See additional information in section 3.7-3.8

*) In addition to the specific clauses relating to dangerous substances contained in this European technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g., transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

3.7 Methods of assessment

The product is fully covered by EAD 350141-00-1106 Firestopping and fire sealing products, Linear Joint Seals. Mineral wool complying with the requirements of EN 14303 are deemed to satisfy the durability requirements for use conditions type Y_1. Products that meet requirements for types Y_1: Intended for use at temperatures below 0 °C with casual exposure to UV but no exposure to rain, also meet the requirements for type Y_2, Z_1 and Z_2.

3.8 General aspects related to the fitness for use of the product.

The European Technical Assessment is issued for the product based on agreed data/information, deposited with ETA-Denmark, which identifies the product that has been assessed and judged. Changes to the product or production process, which could result in this deposited data/information being incorrect, should be notified to ETA-Denmark before the changes are introduced. ETA-Denmark will decide if such changes affect the ETA and consequently the validity of the CE marking based on the ETA and if so whether further assessment or alterations to the ETA, shall be necessary.

The fischer FCFcl Plus for firestopping and fire sealing purposes are manufactured in accordance with the provisions of this European Technical Assessment using the manufacturing processes as identified in the inspection of the plant by the notified inspection body and laid down in the technical documentation.

4 Attestation and verification of constancy of performance (hereinafter AVCP) system applied, with reference to its legal base.

4.1 AVCP system

According to the decision 1999/454/EC of the European Commission, the system of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) is: **1.**

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD.

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark prior to CE marking.

Issued in Copenhagen on 2025-08-27 by

Thomas Bruun
Managing Director, ETA-Danmark

Annex A

References

A.1 References to standards mentioned in the ETA

EN 1364-4:2014	Fire resistance tests for non-loadbearing elements - Part 4: Curtain walling - Part configuration
EN 1366-4:2021	Fire resistance tests for service installations - Part 4: Linear joint seals
EN 13501-1:2018	Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests
EN 13501-2:2023	Fire classification of construction products and building elements - Part 2: Classification using test data from fire resistance tests
EN 14303:2015	Thermal insulation products for building equipment and industrial installations - Factory made mineral wool (MW) products
EN 16516:2017+A1:2020	Construction products: Assessment of release of dangerous substances - Determination of emissions into indoor air

A.2 Other reference documents

EAD 350141-00-1106	European Assessment Document: Fire Stopping and Fire Sealing Products, Linear Joint and Gap Seals, September 2017
EOTA TR 024	EOTA Technical Report: Technical description and assessment of reactive products effective in case of fire, Edition November 2006, Amended August 2019
Council Directive 67/548/EEC	Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances
1999/454/EC	Commission Decision of 22 June 1999 on the procedure for attesting the conformity of construction products pursuant to Article 20(2) of Council Directive 89/106/EEC as regards fire stopping, fire sealing and fire protective products (notified under document number C(1999) 1481) (Text with EEA relevance)
Regulation (EU) No 305/2011	Regulation 305/2011/EU on construction products: European CE-Regulation that outlines safety requirements for all construction products sold within the EU
EC Delegated regulation 96/603/EC	Commission Decision of 4 October 1996 establishing the list of products belonging to Classes A 'No contribution to fire' provided for in Decision 94/611/EC implementing Article 20 of Council Directive 89/106/EEC on construction products (Text with EEA relevance)

Table of Contents

Annex B

Resistance to Fire Classification of fischer FCFcl Plus

B.1. Rigid wall construction with wall thickness of minimum 150 mm

B.1.1 Single sided horizontal linear joint seal, installed in wall, without brackets

Joint Seal: fischer FCFcl Plus compressed and installed friction-fit flush with unexposed side of wall.

Construction details:

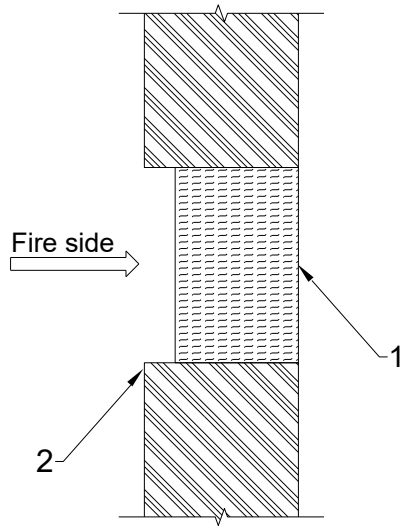

Figure not to scale

Key:

1. fischer FCFcl Plus 120
2. Wall

Table B.1.1

Substrate	Joint width	Brackets	Compression	Classification
Rigid wall ($\rho \geq 650$ kg/m³)	≤150 mm*	Not required	≥25 %	EI 120 – T – X – F – W 5 to W 150

* Splices to be covered with 100 mm wide aluminum tape on both sides

B.1.2 Single sided horizontal linear joint seal, installed in wall, with brackets

Joint Seal: fischer FCFcl Plus compressed and installed with steel fischer Universal Bracket FiUB flush with unexposed side of wall.

Construction details:

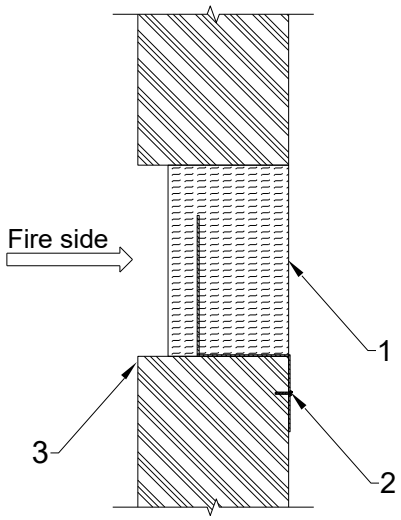

Figure not to scale

Key:

1. fischer FCFcl Plus 120
2. fischer FiUB
3. Wall

Table B.1.2

Substrate	Joint width	Brackets	Compression	Classification
Rigid wall ($\rho \geq 650$ kg/m³)	≤150 mm*	Min. 2 fischer FiUB per section of board and to be spaced max 300 mm on center. fischer FiUB inserted at 30 mm from the fire side of fischer FCFcl Plus and protruding ¾ width of joint opening	≥10 %	E 120 – T – X – F – W 5 to W 150 EI 90 – T – X – F – W 5 to W 150
Rigid wall ($\rho \geq 2400$ kg/m³)	≤200 mm*	Min. 2 fischer FiUB per section of board and to be spaced max 600 mm on center. fischer FiUB inserted at 90 mm from the fire side of fischer FCFcl Plus and protruding ¾ width of joint opening	≥20 %	E 240 – T – X – F – W 5 to W 200 EI 180 – T – X – F – W 5 to W 200
	≤400 mm*			E 240 – T – X – F – W 5 to W 400 EI 60 – T – X – F – W 5 to W 400

* Splices to be covered with 100 mm wide aluminum tape on both sides

B.1.3 Vertical linear joint seal, installed between rigid and flexible walls, with brackets

Joint Seal: fischer FCFcl Plus installed in the cavity of the wall (cavity barrier), without compression.

Construction details:

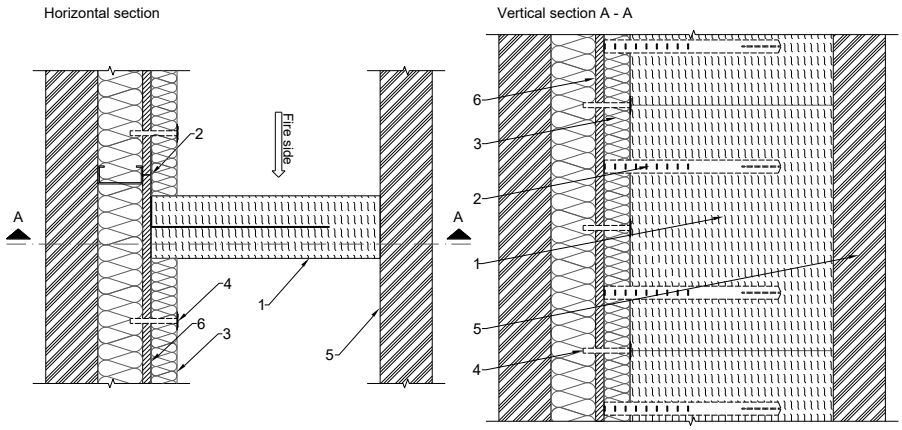

Figure not to scale

Key:

1. fischer FCFcl Plus
2. fischer FiUB[d)]
3. Insulation[b)]
4. fischer DHM Anchor[c)]
5. Wall
6. Flexible wall[a)]

Table B.1.3

Substrate	Joint width	Brackets	Product	Classification
Rigid wall ($\rho \geq 650$ kg/m³) / Flexible wall	≤450 mm*	Min. 2 fischer FiUB per section of board and to be spaced max 600 mm on center. fischer FiUB are inserted in the middle of the fischer FCFcl Plus and protruding ¾ width of joint opening	fischer FCFcl Plus 100	E 120 – V – X – F – W 5 to W 450 EI 30 – V – X – F – W 5 to W 450
			fischer FCFcl Plus 120	E 120 – V – X – F – W 5 to W 450 EI 60 – V – X – F – W 5 to W 450

* - Splices to be covered with 150 mm wide aluminum tape on both sides. Long edge of fischer FCFcl Plus on non-bracket side to be protected with 150 mm wide aluminium tape overlapping min. 15 mm onto front faces of fischer FCFcl Plus

- Minor irregularities (≤ 5 mm) to be sealed with fischer FiAM Plus to a depth of 10 mm on each side of floor

a) The flexible wall is to be constructed as follows:
- for the fischer FCFcl Plus 100 System: 1 Layer Knauf AQUAPANEL® Cement Board Outdoor 12.5 mm, C & U profile 50mm wide, Rockwool Termarock 40 insulation (40 mm; 40 kg/m3)
- for the fischer FCFcl Plus 120 System: 1 Layer Knauf Piano GKF 12.5 mm, C & U profile 50 mm wide, Rockwool Termarock 40 insulation (40 mm thick; 40 kg/m3)

b) Insulation: Rockwool Fixrock 035 (≥80 mm thick, 45 kg/m³)

c) fischer DHM Anchors have the following specifications: fischer DHM 100 A2 (dimensions: 140 mm long, 8 mm drill diameter & 35 mm disc diameter), material (stainless steel grade A2) to be used with the fischer DTM 70/10 disc to fix the Rockwool Fixrock 035 insulation panel in accordance with the manufacturer's installation instructions

d) fischer FiUB are fixed in the flexible wall using fischer DuoTec 12 and fischer PowerFast 5,0 x 40 A2

B.2. Rigid floor construction with floor thickness of minimum 150 mm

B.2.1 Single sided linear joint seal, installed in floor on top side, without brackets

Joint Seal: fischer FCFcl Plus compressed and installed friction-fit flush with top surface of floor.

Construction details:

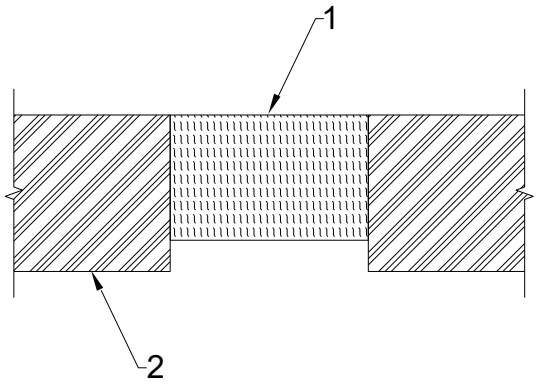

Figure not to scale

Key:

1. fischer FCFcl Plus 120
2. Floor

Table B.2.1

Substrate	Joint width	Brackets	Compression	Classification
Rigid floor (ρ ≥650 kg/m³)	≤150 mm*	Not required	≥25 %	EI 120 – H – X – F – W 5 to W 150

* Splices to be covered with 100 mm wide aluminum tape on both sides

B.2.2 Single sided linear joint seal, installed in floor on top side, with brackets

Joint Seal: fischer FCFcl Plus compressed and installed with steel fischer Universal Bracket FiUB flush with top surface of floor.

Construction details:

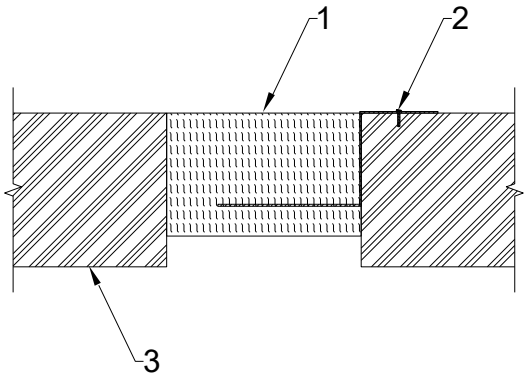

Figure not to scale

Key:

1. fischer FCFcl Plus 120
2. fischer FiUB
3. Floor

Table B.2.2

Substrate	Joint width	Brackets	Compression	Classification
Rigid floor ($\rho \geq 650$ kg/m³)	≤150 mm*	Min. 2 fischer FiUB per section of board and to be spaced max 300 mm on center. fischer FiUB inserted at 90 mm from top side of fischer FCFcl Plus and protruding ¾ width of joint opening	≥10 %	E 120 – H – X – F – W 5 to W 150 EI 90 – H – X – F – W 5 to W 150
Rigid floor ($\rho \geq 2400$ kg/m³)	≤200 mm*	Min. 2 fischer FiUB per section of board and to be spaced max 600 mm on center. fischer FiUB inserted at 90 mm from top side of fischer FCFcl Plus and protruding ¾ width of joint opening	≥20 %	E 240 – H – X – F – W 5 to W 200 EI 180 – H – X – F – W 5 to W 200
	≤400 mm*			E 240 – H – X – F – W 5 to W 400 EI 60 – H – X – F – W 5 to W 400

* Splices to be covered with 100 mm wide aluminum tape on both sides

B.3. Rigid floor constructions with floor thickness of minimum 200 mm

B.3.1 Single sided linear joint seal, installed in floor on top side, with Bracket-System 1

Joint Seal: fischer FCFcl Plus installed with steel fischer Universal Bracket FiUB flush with top surface of the floor, without compression. The fischer FCFcl Plus is notched around an Bracket-System 1 angle support system.

Construction details:

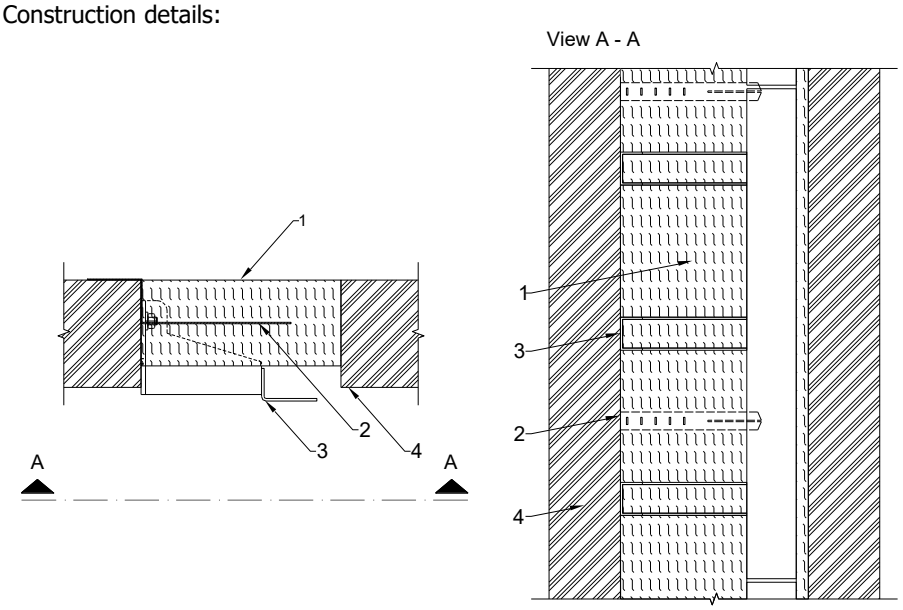

Figure not to scale

Key:

1. fischer FCFcl Plus 120
2. fischer FiUB
3. Bracket System 1[a)]
4. Floor

Table B.3.1

Substrate	Joint width	Brackets	Product	Classification
Rigid floor (ρ ≥2400 kg/m³)	≤350 mm*	Min. 2 fischer FiUB per section of board and to be spaced max 600 mm on center. fischer FiUB inserted at mid-thickness of fischer FCFcl Plus and protruding ¾ width of joint opening	fischer FCFcl Plus 120	E 120 – H – X – F – W 230 to W 350 EI 45 – H – X – F – W 230 to W 350

* - Splices to be covered with 100 mm wide aluminum tape on the top side. Long edge of fischer FCFcl Plus 120 on non-bracket side to be protected with 150 mm wide aluminum tape overlapping 15 mm onto front faces of fischer FCFcl Plus 120

- Minor irregularities (≤ 5 mm) to be sealed with fischer FiAM Plus to a depth of 10 mm on each side of floor

a) Bracket-System 1 made of 3 mm thick stainless steel, 50 mm wide, 230 mm long, 177 mm high and fixed to the concrete at 300 mm c/c along the opening and welded to a 4 mm thick 90 x 50 mm stainless steel L-profile. Gap from top of bracket angle support system to top of floor to be 30 mm

B.3.2 Single sided linear joint seal, installed in floor on top side, with Bracket-System 2

Joint Seal: fischer FCFcl Plus installed with fischer DHM Anchor flush with top surface of the floor, without compression. The fischer FCFcl Plus is notched around an Bracket-System 2 support system.

Construction details:

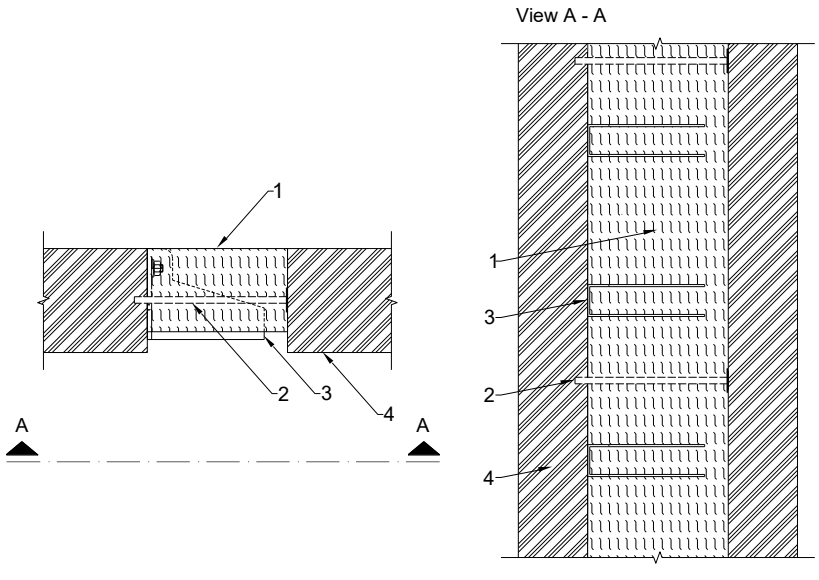

Figure not to scale

Key:

1. fischer FCFcl Plus 120
2. fischer DHM Anchor[b)]
3. Bracket System 2[a)]
4. Floor

Table B.3.2

Substrate	Joint width	Brackets	Product	Classification
Rigid floor (ρ ≥2400 kg/m³)	≤270 mm*	Min. 2 fischer DHM Anchor per section of board and to be spaced max 600 mm on center. fischer DHM Anchor are inserted at mid-thickness of fischer FCFcl Plus and fixed into concrete	fischer FCFcl Plus 120	E 120 – H – X – F – W 230 to W 270 EI 90 – H – X – F – W 230 to W 270

* - Splices to be covered with 100 mm wide aluminum tape on the top side. Long edge of fischer FCFcl Plus 120 on non-bracket side to be protected with 150 mm wide aluminum tape overlapping 15 mm onto front faces of fischer FCFcl Plus 120

- Minor irregularities (≤ 5 mm) to be sealed with fischer FiAM Plus to a depth of 10 mm on each side of floor

a) Bracket-System 2 made of 4 mm stainless steel, 60 mm wide x 230 mm long x 177 mm high and fixed to the concrete at 300 mm c/c along the opening flush to top surface of floor. Aluminium foil tape applied on the top surface of the barrier where support brackets penetrated

b) fischer DHM Anchors have the following specification fischer DHM 260 A2 (dimensions: 300 mm long, 8 mm drill diameter & 35 mm disc diameter), material (stainless steel grade A2) which is installed every 600 mm at mid-thickness of fischer FCFcl Plus

B.3.3 Single sided linear joint seal, installed in floor on top side, with Bracket-System 3

Joint Seal: fischer FCFcl Plus installed with steel fischer Universal Bracket FiUB in the floor, without compression. The fischer FCFcl Plus is notched around an Bracket-System 3 support system and installed flushed to bottom side of bracket.

Construction details:

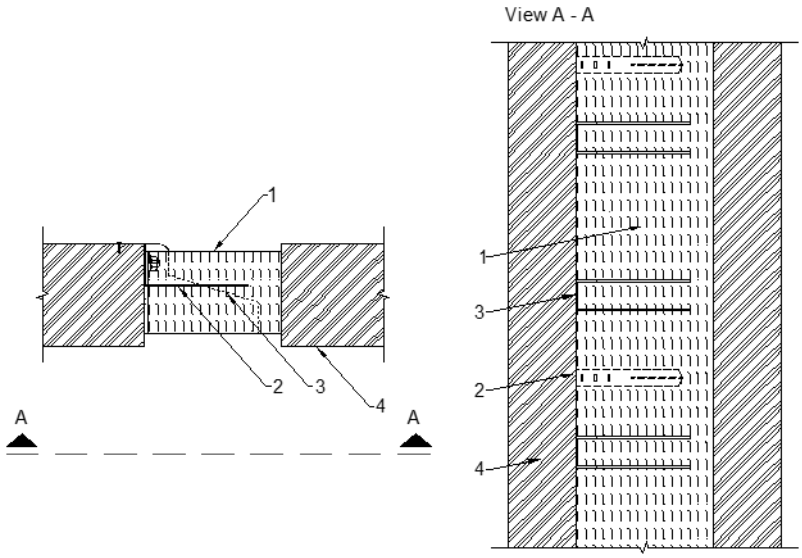

Figure not to scale

Key:

1. fischer FCFcl Plus 120
2. fischer FiUB
3. Bracket system 3[a)]
4. Floor

Table B.3.3

Substrate	Joint width	Brackets	Product	Classification
Rigid floor ($\rho \geq 2400$ kg/m³)	≤300 mm*	Min. 2 fischer FiUB per section of board and to be spaced max 600 mm on center. fischer FiUB inserted at mid-thickness of fischer FCFcl Plus and protruding ¾ width of joint opening	fischer FCFcl Plus 120	E 120 – H – X – F – W 234 to W 300 EI 45 – H – X – F – W 234 to W 300

* - Splices to be covered with 100 mm wide aluminum tape on the top side. Long edge of fischer FCFcl Plus 120 on non-bracket side protected with 150 mm wide aluminum tape overlapping 15 mm onto front faces of fischer FCFcl Plus 120

- Minor irregularities (≤ 5 mm) to be sealed with fischer FiAM Plus to a depth of 10 mm on each side of floor

a) Bracket-System 3 made of 4 mm thick stainless steel, 65 mm wide x 234 mm long x 170 mm high and fixed to the concrete at 300 mm c/c along the opening flush to top side of floor

B.4. Non-standard flexible wall abutting rigid floor, with floor thickness of minimum 200 mm

B.4.1 Linear joint seal (cavity barrier), installed in floor on top side

Joint Seal: fischer FCFcl Plus installed with steel fischer Universal Bracket FiUB flush with top surface of the floor, without compression.

Construction details:

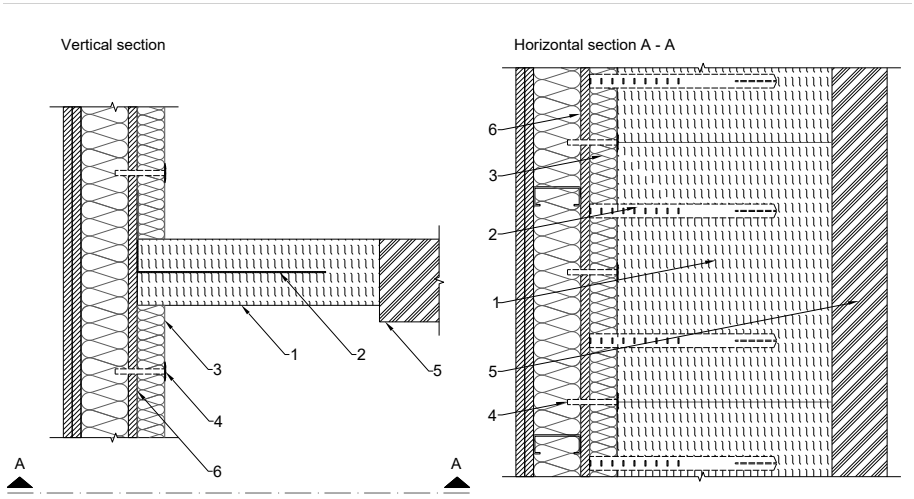

Figure not to scale

Key:

1. fischer FCFcl Plus 120
2. fischer FiUB[d)]
3. Insulation[b)]
4. fischer DHM Anchor[c)]
5. Floor
6. Flexible wall[a)]

Table B.4.1

Substrate	Joint width	Brackets	Product	Classification
Rigid floor (ρ ≥2400 kg/m³) / Flexible wall	≤300 mm*	Min. 3 fischer FiUB per section of board and to be spaced max 400 mm on center. fischer FiUB inserted at mid-thickness of fischer FCFcl Plus and protruding ¾ width of joint opening	fischer FCFcl Plus 120	E 120 – H – X – F – W 5 to W 300 EI 90 – H – X – F – W 5 to W 300

* - Splices to be covered with 100 mm wide aluminum tape on the top side. Long edge of fischer FCFcl Plus 120 on non-bracket side protected with 150 mm wide aluminum tape overlapping 15 mm onto front faces of fischer FCFcl Plus 120

- Minor irregularities (≤ 5 mm) to be sealed with fischer FiAM Plus to a depth of 10 mm on each side of floor

a) The flexible wall is to be constructed as follows: 1 layer of Knauf Piano GKF 12.5mm (facing the joint seal), C & U profile 50 mm, Rockwool Termarock 40 insulation (40 mm; 40 kg/m3), 2 layers of Knauf Piano GKF 12.5 mm (on outside face of joint seal)

b) Insulation: Rockwool Fixrock 035, thickness ≥80 mm, density: 45 kg/m³

c) fischer DHM Anchors have the following specification fischer DHM 100 A2 (dimensions: 140 mm long, 8 mm drill diameter & 35 mm disc diameter), material (stainless steel grade A2) to be used with the fischer DTM 70/10 disc to fix the Rockwool Fixrock 035 insulation panel in accordance with the manufacturer's installation instructions

d) fischer FiUB are fixed in the flexible wall using fischer DuoTec 12 and fischer PowerFast 5,0 x 40 A2

B.5. Non-fire rated curtain wall façade abutting rigid floor, with floor thickness of minimum 150 mm

B.5.1 Single sided perimeter seal in floor, installed on top side

Perimeter Seal: fischer FCFcl Plus compressed and installed with steel fischer Universal Bracket FiUB flush with top urface of the floor.

Construction details:

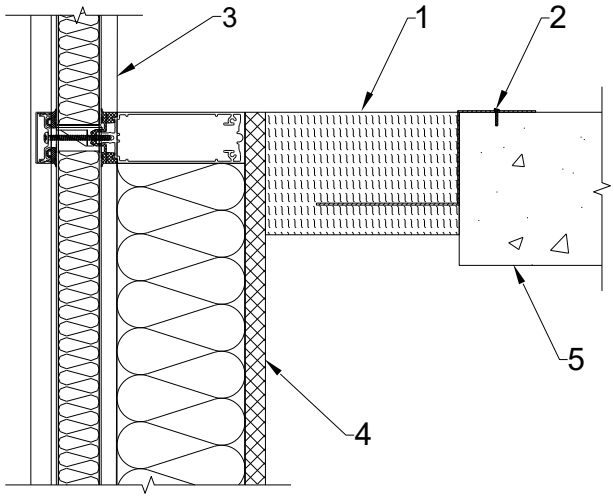

Figure not to scale

Key:

1. fischer FCFcl Plus 120
2. fischer FiUB
3. Curtain wall façade[c)]
4. Spandrel area[b)]
5. Floor

Table B.5.1

Substrate	Joint width	Brackets	Movement capability	Compression	Classification
Curtain wall[d)] / Rigid floor (ρ ≥2400 kg/m³)	≤250 mm*	Min. 2 fischer FiUB per section of board and to be spaced max 600 mm on center. fischer FiUB inserted at 90 mm from top side of fischer FCFcl Plus and protruding ¾ width of perimeter seal opening	±5 %[a)]	≥18 %	E 120 – H – M5 – F – W 5 to W 250 EI 60 – H – M5 – F – W 5 to W 250

* Splices to be covered with 100 mm wide aluminum tape on both sides

a) movement per EAD 350141-00-1106 with 500 cycles at a rate of 30 cycles per minute compression and extension

b) Mineral wool protection of spandrel area: Infill between mullions and transoms with stone wool (ρ ≥ 60 kg/ m³) backed with 50 mm thick stone wool board (ρ ≥ 150 kg/m³)

c) Curtain walls with metal framing, transoms and mullions (profile 125 x 50) made of aluminum with a maximum width of 983 mm on center between the mullions

Spandrel height: ≤ 1000 mm. Test results cover smaller panel width and height

Perimeter seal installation specifics:

fischer FCFcl Plus is installed between mineral wool boards of spandrel area and concrete floor flush to the top surface of floor and transom with min. 18% compression. Splice distance ≥ 1000 mm. The L-brackets (50 mm wide) of the façade system are fixed to each mullion above splice location of perimeter seal