



CFS-SL GA: FIRESTOP SLEEVE

Product pack

ETA – 17/0081

TECHNICAL DATA ➤

APPLICATIONS ➤

CHANGE LOG ➤



FIRESTOP SLEEVE CFS-SL GA

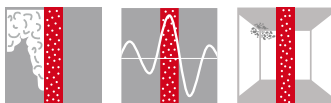


APPLICATIONS

- Sealing penetrations for single cables and cable bundles
- Suitable for small to medium-sized circular openings in walls and ceilings
- For use on drywall, concrete, masonry and sandwich panel
- Ideal solution when cable configurations are regularly changed, such as in data centers, server rooms, hospitals, event halls or production plants
- Firestop sleeves can be used together with gangplate for optimal use of space with professional designs

ADVANTAGES

- Easy to install and to inspect
- Fully functional immediately after installation
- Cable fill up to 100%
- Optimum airflow control
- Conduits up to $\varnothing \leq 63$ mm
- Easy subsequent installation of additional cables
- Fire resistance rating of up to 2 hours



Technical data

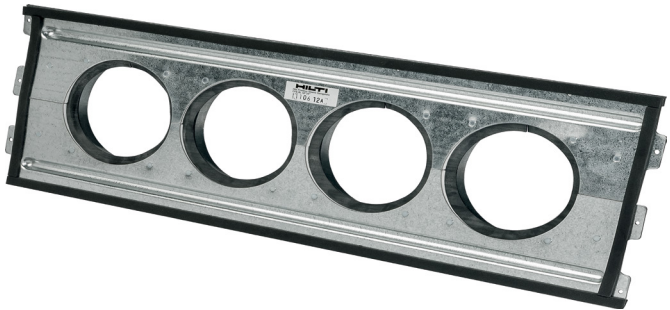
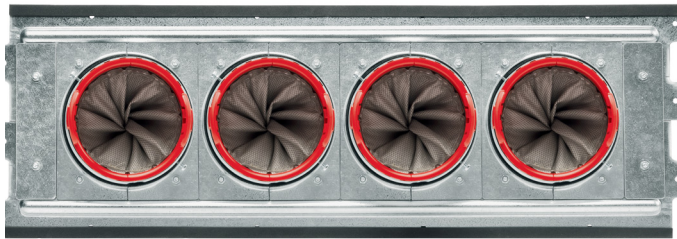
Base materials	Drywall, Concrete, Masonry, Sandwich panel
Approvals	ETA 17/0081
Repenetration	Easy
Airflow control	Test report available
Application temperature range	-5 – 50° C
Application resistance range	-30 – 100° C
Reaction to fire class (EN 13501-1)	E
Max. annular space	7 mm
Shelf life ¹	Not relevant
Mould and mildew resistant	Yes

¹ at 77° F/25° C and 50% relative humidity; from date of manufacture



Order designation	Outside diameter	Recommended opening size	Wall/floor thickness	Sales pack quantity	Item number
CFS-SL GA Small	63 mm	66 – 73 mm	100-200 mm	1 pc	2178492
CFS-SL GA Medium	110 mm	113 – 122 mm	100-200 mm	1 pc	2178493
CFS-SL GA Long	110 mm	113 – 122 mm	200-300 mm	1 pc	2178494

FIRESTOP GANGPLATE CFS-SL GP



APPLICATIONS

- New and renovation construction projects, increases cable capacity and productivity
- For use on drywall, concrete, masonry and sandwich panel
- Accommodates all Hilti Firestop Sleeves M and L sizes (CFS-SL and CFS-SL GA)
- Easily surface mounted with neat appearance

ADVANTAGES

- Gangplates can be stacked in columns
- Assembling Firestop Sleeves in high cable volume environments such as data centers, hospitals and server rooms
- Pre-assembled, ready-to-use right out of the package – no assembly required
- Gangplate cap available for blank openings and future capacity

Technical data

Base materials	Drywall, Concrete, Masonry, Sandwich panel
Approvals	ETA 17/0081
Number of ganged devices supported	3 or 4
Types of device	CFS-SL M, CFS-SL GA M, CFS-SL L, CFS-SL GA L
Application temperature range	-5 – 50° C
Application resistance range	-30 – 100° C
Reaction to fire class (EN 13501-1)	E
Max. annular space	7 mm
Shelf life	Not relevant
Mould and mildew resistant	Yes

Order designation	Outside width	Outside height	Recommended opening size	Number of openings	Wall thickness	Sales pack quantity	Item number
CFS-SL GP 16" / 40	420 mm	210 mm	113 – 122 mm	3	100 – 300 mm	2 pc	2064273
CFS-SL GP 24 " / 60	620 mm	210 mm	113 – 122 mm	4	100 – 300 mm	2 pc	2064274
CFS-SL GP CAP	127 mm	140 mm	–	–	–	1 pc	2064275

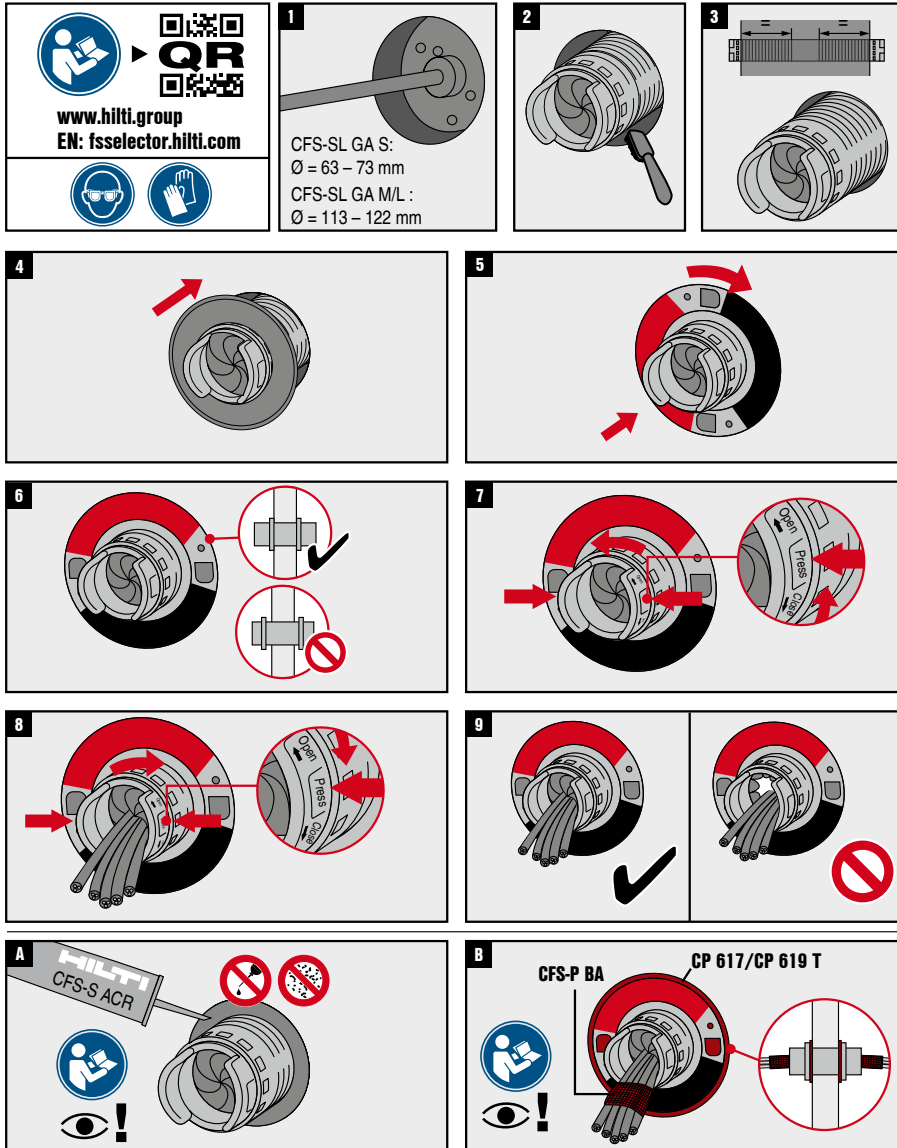
CHARACTERISTICS

Characteristics	Assessment of characteristics	Norm, standard, test
Health and the environment Dangerous substances	According to the Manufacturer's Declaration, the product specification has been compared with the list of dangerous substances of the European Commission to verify that it does not contain such substances above the acceptable limits. CFS-SL GA is in compliance concerning the registration, evaluation, authorisation and restriction of Chemicals (REACH).	Material safety datasheet
Durability and serviceability	Hilti Firestop Sleeve CFS-SL GA has been assessed for the Z2 use category, and the results of the tests have demonstrated suitability for penetration seals intended for use at internal conditions with humidity classes other than Z1, excluding temperatures below 0 °C ("internal dry conditions").	ETAG 026-2
Reaction to fire	Class E	EN 13501-1
Air permeability (Device 0% Filled) (CFS-SL GA M/L)	Pressure	Leakage
	10 Pa	0.24 m ³ /(h)
	50 Pa	0.83 m ³ /(h)
	100 Pa	1.38 m ³ /(h)
	150 Pa	1.83 m ³ /(h)
	200 Pa	2.21 m ³ /(h)
	250 Pa	2.59 m ³ /(h)
	300 Pa	2.95 m ³ /(h)
	450 Pa	3.94 m ³ /(h)
	600 Pa	4.79 m ³ /(h)
		EN 1026:2000

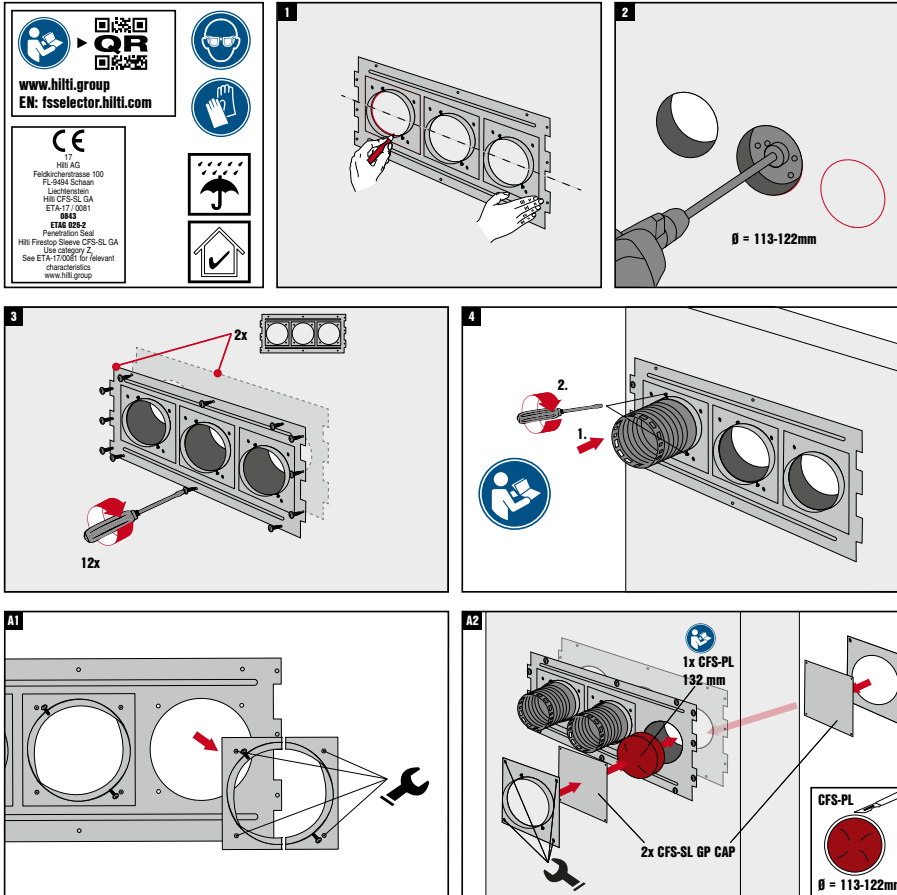
Estimated Maximum number of cables per device

Type	Dia	Example Spec	Nr of Cables	
			Small Device	Medium/Long Device
CAT Cables	5 – 8 mm	CU 7002 4P (AWG23)	19 – 56	109 – 287
	11 – 14 mm	NY-Y-J 5x1,5 RE VV 5x1,5 N2XH-J 5x1,5RE N2XH-O 5x1,5RE H07RN-F 5G1,5	7	38
Small Cables	15 – 17 mm	A-2YL2Y St III Bd: solid PE	3 – 5	19 – 26
	18 – 21 mm	NY-Y-J 1x95RM NY-Y-O 1x95RM VV 1x95	2 – 3	14 – 19
Medium Cables	23 – 25 mm	NY-Y-J 1x185RM NY-Y-O 1x185RM VV 1x185	1	2 – 8
	38 – 45 mm	NYCWY 4x95SM/50 H07RN-F 4G95 N2XH-J 4x95SM N2XH-O 4x95SM	1	2 – 3
Large Cables	55 – 60 mm	NYCWY 4x185SM/95 H07RN-F 4G185 N2XH-J 4x185SM N2XH-O 4x185SM	0	1

INSTALLATION INSTRUCTIONS CFS-SL GA



INSTALLATION INSTRUCTIONS CFS-SL GP



APPLICATION INFORMATION

FOR PIPES/CABLE DIAMETERS

S = Single pipe/cable*

B = pipe/cable Bundle

*For pipes, if no S or B, assume single pipe.

FOR INSULATION

N-C = Non-Combustible (e.g., stone wool etc.)

C = Combustible (e.g., Armaflex, phenolic etc.)

None = No insulation

LS = Local Sustained

LI = Local Interrupted

CS = Continuous Sustained

CI = Continuous Interrupted

Please note, in many cases details have numerous pages. Please check all pages for the necessary information as differing insulation layouts might be on differing pages (e.g., LS one page 1 and LI on page 2 etc.).

PENETRATION TYPE

Single = penetration seal intended for penetrations with only one service passing through

Multi = penetration seal intended for penetrations where more than one service of the same type (e.g. cables) or pipe material group pass through

Mixed = penetration seal intended for penetrations where more than one type of services (e.g. cables and pipes or pipes of different pipe material groups) pass through

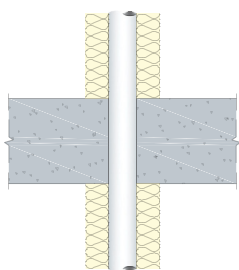
CLASSIFICATION

Classification will give the best-case EI value possible. As such, check each specific detail as there may be instances where a higher I value is possible or another sized service within the application may attain a lower value (e.g., 110mm pipe achieves EI 120 but a 160mm pipe achieves EI 90).

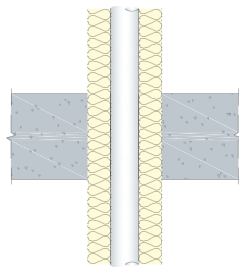
PRODUCT/DETAIL

Full product name first/Detail ID (See specific detail for the full ID).

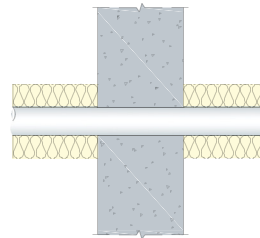
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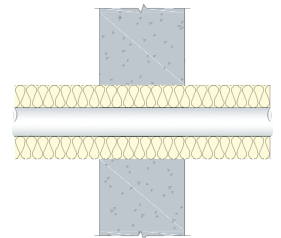
Continued Interrupted (CI)



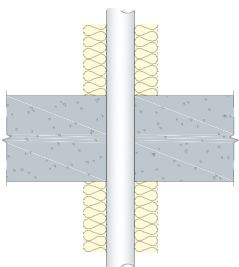
Continued Sustained (CS)



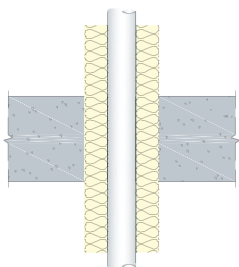
Continued Interrupted (CI)



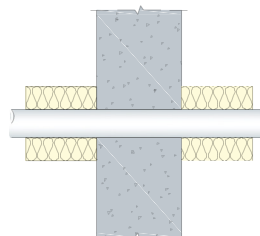
Continued Sustained (CS)



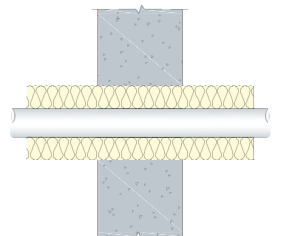
Local Interrupted (LI)



Local Sustained (LS)



Local Interrupted (LI)



Local Sustained (LS)

Single board drywall	Double board drywall	Rigid wall	Timber wall	Sandwich panel	Rigid floor	Timber floor	Metal deck	Linear joints
Mechanical			Electrical			HVAC		
Min. base material thickness	Service	Electrical service		Penetration type ¹			Classification ¹	Product/Detail ¹
		Max. Diameter (Ø) or Size (H x W)	Insulation	Single	Multi	Mixed		
≥ 100	Single Cable	≤ 21		✓			EI 90	SL-GA:FW/RW-E-01
≥ 100	Single Cable	≤ 21		✓			EI 120	SL-GA:FW/RW-E-01
≥ 100	Single Cable	≤ 50		✓			EI 90	SL-GA:FW/RW-E-01
≥ 100	Single Cable	≤ 80		✓			EI 60	SL-GA:FW/RW-E-01
≥ 100	Cable Bundle	≤ 36		✓			EI 90	SL-GA:FW/RW-E-01
≥ 100	Cable Bundle	≤ 86		✓			EI 90	SL-GA:FW/RW-E-01
≥ 100	Single Conduit	≤ 25		✓			EI 120	SL-GA:FW/RW-E-02
≥ 100	Single Conduit	≤ 63		✓			EI 90	SL-GA:FW/RW-E-02
≥ 100	Single Conduit	≤ 63		✓			EI 120	SL-GA:FW/RW-E-02
≥ 100	Conduit Bundle	≤ 48		✓			EI 120	SL-GA:FW/RW-E-02
≥ 100	Conduit Bundle	≤ 92		✓			EI 90	SL-GA:FW/RW-E-02
≥ 100	Conduit Bundle	≤ 92		✓			EI 120	SL-GA:FW/RW-E-02
≥ 100	Single Cable (Gangplate)	≤ 21		✓			EI 120	SL-GA:FW/RW-E-03



Single board drywall	Double board drywall	Rigid wall	Timber wall	Sandwich panel	Rigid floor	Timber floor	Metal deck	Linear joints
Mechanical			Electrical			HVAC		
Min. base material thickness	Service	Electrical service		Penetration type ¹			Classification ¹	Product/Detail ¹
		Max. Diameter (Ø) or Size (H x W)	Insulation	Single	Multi	Mixed		
≥ 100	Single Cable	≤ 21		✓			EI 90	SL-GA:FW/RW-E-01
≥ 100	Single Cable	≤ 21		✓			EI 120	SL-GA:FW/RW-E-01
≥ 100	Single Cable	≤ 50		✓			EI 90	SL-GA:FW/RW-E-01
≥ 100	Single Cable	≤ 80		✓			EI 60	SL-GA:FW/RW-E-01
≥ 100	Cable Bundle	≤ 36		✓			EI 90	SL-GA:FW/RW-E-01
≥ 100	Cable Bundle	≤ 86		✓			EI 90	SL-GA:FW/RW-E-01
≥ 100	Single Conduit	≤ 25		✓			EI 120	SL-GA:FW/RW-E-02
≥ 100	Single Conduit	≤ 63		✓			EI 90	SL-GA:FW/RW-E-02
≥ 100	Single Conduit	≤ 63		✓			EI 120	SL-GA:FW/RW-E-02
≥ 100	Conduit Bundle	≤ 48		✓			EI 120	SL-GA:FW/RW-E-02
≥ 100	Conduit Bundle	≤ 92		✓			EI 90	SL-GA:FW/RW-E-02
≥ 100	Conduit Bundle	≤ 92		✓			EI 120	SL-GA:FW/RW-E-02
≥ 100	Single Cable (Gangplate)	≤ 21		✓			EI 120	SL-GA:FW/RW-E-03



Single board drywall	Double board drywall	Rigid wall	Timber wall	Sandwich panel	Rigid floor	Timber floor	Metal deck	Linear joints
Mechanical			Electrical			HVAC		
Min. base material thickness	Service	Electrical service		Penetration type ⁱ		Classification ⁱ	Product/Detail ⁱ	
		Max. Diameter (Ø) or Size (H x W)	Insulation	Single	Multi	Mixed		
≥ 100	Single Cable	≤ 21		✓			EI 90	SL-GA:TW-E-01



Single board drywall	Double board drywall	Rigid wall	Timber wall	Sandwich panel	Rigid floor	Timber floor	Metal deck	Linear joints
Mechanical			Electrical			HVAC		
Min. base material thickness	Service	Electrical service		Penetration type ¹			Classification ¹	Product/Detail ¹
		Max. Diameter (Ø) or Size (H x W)	Insulation	Single	Multi	Mixed		
≥ 100	Single Cable	≤ 21		✓			EI 90	SL-GA:SWP-E-01
≥ 150	Single Cable	≤ 21		✓			EI 120	SL-GA:SWP-E-01
≥ 100	Single Cable	≤ 50		✓			EI 90	SL-GA:SWP-E-01
≥ 100	Single Cable (Gangplate)	≤ 21		✓			EI 60	SL-GA:SWP-E-02
≥ 100	Single Cable (Gangplate)	≤ 21		✓			EI 120	SL-GA:SWP-E-02



Single board drywall	Double board drywall	Rigid wall	Timber wall	Sandwich panel	Rigid floor	Timber floor	Metal deck	Linear joints
Mechanical			Electrical			HVAC		
Min. base material thickness	Service	Electrical service		Penetration type ¹			Classification ¹	Product/Detail ¹
		Max. Diameter (Ø) or Size (H x W)	Insulation	Single	Multi	Mixed		
≥ 150	Single Cable	≤ 21		✓			EI 180	SL-GA:RF-E-01
≥ 150	Single Cable	≤ 50		✓			EI 180	SL-GA:RF-E-01
≥ 150	Single Cable	≤ 80		✓			EI 60	SL-GA:RF-E-01
≥ 150	Cable Bundle	≤ 36		✓			EI 180	SL-GA:RF-E-01
≥ 150	Single Cable	≤ 86		✓			EI 120	SL-GA:RF-E-01
≥ 150	Single Conduit	≤ 25		✓			EI 120	SL-GA:RF-E-02
≥ 150	Single Conduit	≤ 63		✓			EI 120	SL-GA:RF-E-02



Single board drywall	Double board drywall	Rigid wall	Timber wall	Sandwich panel	Rigid floor	Timber floor	Metal deck	Linear joints
Mechanical			Electrical			HVAC		
Min. base material thickness	Service	Electrical service		Penetration type ⁱ			Classification ⁱ	Product/Detail ⁱ
		Max. Diameter (Ø) or Size (H x W)	Insulation	Single	Multi	Mixed		
≥ 80	Single Cable	≤ 21		✓			EI 60	CFS-IS:TF-E-01
≥ 100	Single Cable	≤ 21		✓			EI 90	CFS-IS:TF-E-01
≥ 140	Single Cable	≤ 21		✓			EI 90	CFS-IS:TF-E-01



SL-GA: SP-FW/RW-E-01

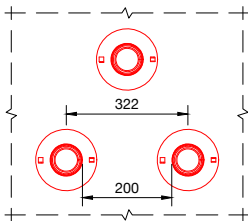
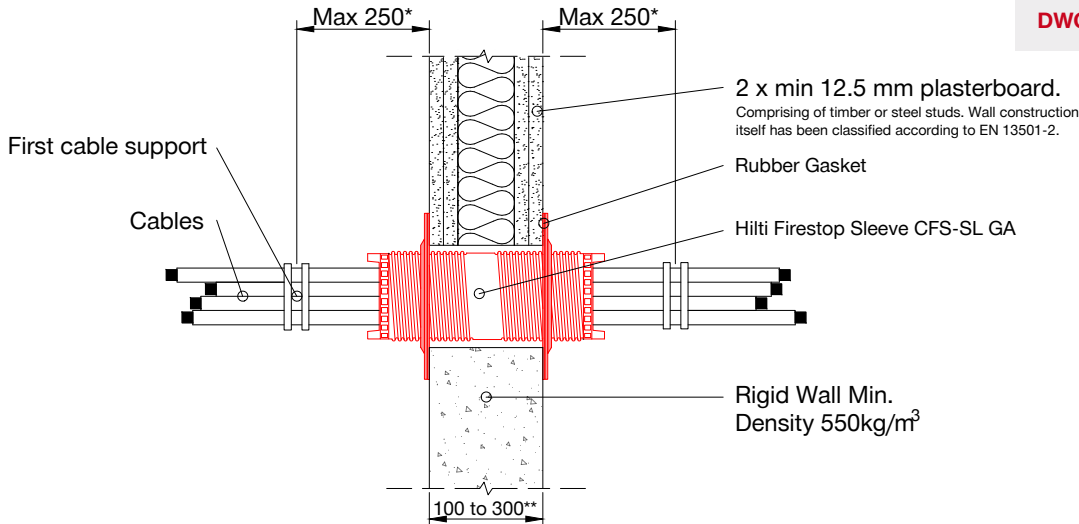
CABLES THROUGH FLEXIBLE & RIGID WALL

Fire rating up to EI 120

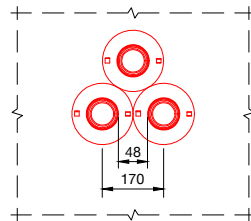
Information

- Not to scale
- All units are in millimetres
- Tested according EN 1366-3
- [Approval ETA - 20-1234](#)

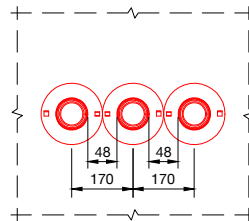
DWG PDF BIM/CAD Web



200mm (horizontal/vertical distance between openings)



Zero distance (horizontal/vertical distance between flanges cluster)



Zero distance (horizontal/vertical distance between flanges linear)

Device	Opening Ø
CFS-SL GA S	63 - 73 mm
CFS-SL GA M/L	113 - 122 mm

Description	200mm dist between Flanges		0mm dist between Flanges	
	CFS-SL GA S	CFS-SL GA M/L	CFS-SL GA S	CFS-SL GA M/L
Blank Device	EI 120	EI 120	EI 120	EI 90
All sheathed cables ≤ 21 mm	EI 90	EI 90	EI 60	EI 90
All sheathed cables ≤ 50 mm	-	EI 90	-	EI 60
All sheathed cables ≤ 80 mm	-	EI 60	-	EI 60
Cable bundles ≤ 36 mm	EI 90	-	EI 90	-
All sheathed cables ≤ 21 mm	-	-	-	-
Cable bundles ≤ 86 mm	-	EI 90	-	EI 60
All sheathed cables ≤ 21 mm	-	-	-	-
100% filled device with cables ≤ 21 mm	EI 60	EI 90	EI 60	EI 60
100% filled device with cables ≤ 80 mm	-	-	-	EI 60

(*) First support and ancillary products should be capable of achieving the same fire performance as the seal and supporting structure.

(**) **CFS-SL GA S/M:** Minimum thickness 100mm & maximum thickness 200 mm
(Maximum thickness: 180mm if **CFS-SL GA M** in combination with Gangplate)
CFS-SL GA L: Minimum thickness 200mm & maximum thickness 300 mm
(Maximum thickness: 280mm if **CFS-SL GA L** in combination with Gangplate)

1. The application limits on this detail are for guidance purposes only. For more detailed information based on the full range of available test results please contact the Hilti Technical Advisory Service.
2. The product and application has been assessed as a minimum to the BS 476 standard. It may have additional European and worldwide testing. Please contact Hilti for further information.
3. All installations should be carried out in accordance with Hilti's installation instructions and by competent & experienced installers using Hilti branded products.
4. All services are to be correctly and adequately supported to prevent collapse and distortion.

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SL-GA: SP-FW/RW-E-01

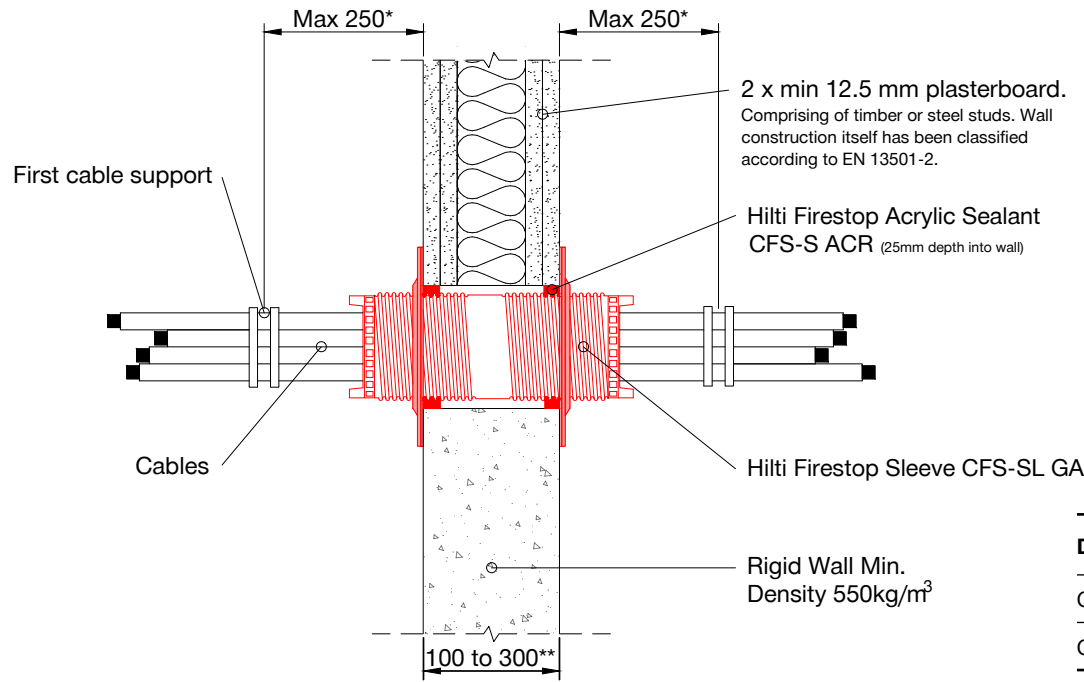
CABLES THROUGH FLEXIBLE & RIGID WALL

Fire rating up to EI 120

Information

- Not to scale
- All units are in millimetres
- Tested according EN 1366-3
- [Approval ETA - 20-1234](#)

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Device	Opening Ø
CFS-SL GA S	63 - 73 mm
CFS-SL GA M/L	113 - 122 mm

For higher Fire Classifications - follow Seal Type 1a (ACR) installation

Description	200mm dist between Flanges	
	CFS-SL GA S	CFS-SL GA M/L
All sheathed cables ≤ 21 mm	-	EI 120
100% filled device with cables ≤ 21 mm	EI 90	-

(*) First support and ancillary products should be capable of achieving the same fire performance as the seal and supporting structure.

- (**) **CFS-SL GA S/M**: Minimum thickness 100mm & maximum thickness 200 mm
 (Maximum thickness: 180mm if **CFS-SL GA M** in combination with Gangplate)
CFS-SL GA L: Minimum thickness 200mm & maximum thickness 300 mm
 (Maximum thickness: 280mm if **CFS-SL GA L** in combination with Gangplate)

Higher Fire Classification rating in specific flexible or rigid wall applications: Hilti Firestop Acrylic Sealant CFS-S ACR can be applied to seal annular gaps in place of Rubber Gaskets

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SL-GA: SP-FW/RW-E-02

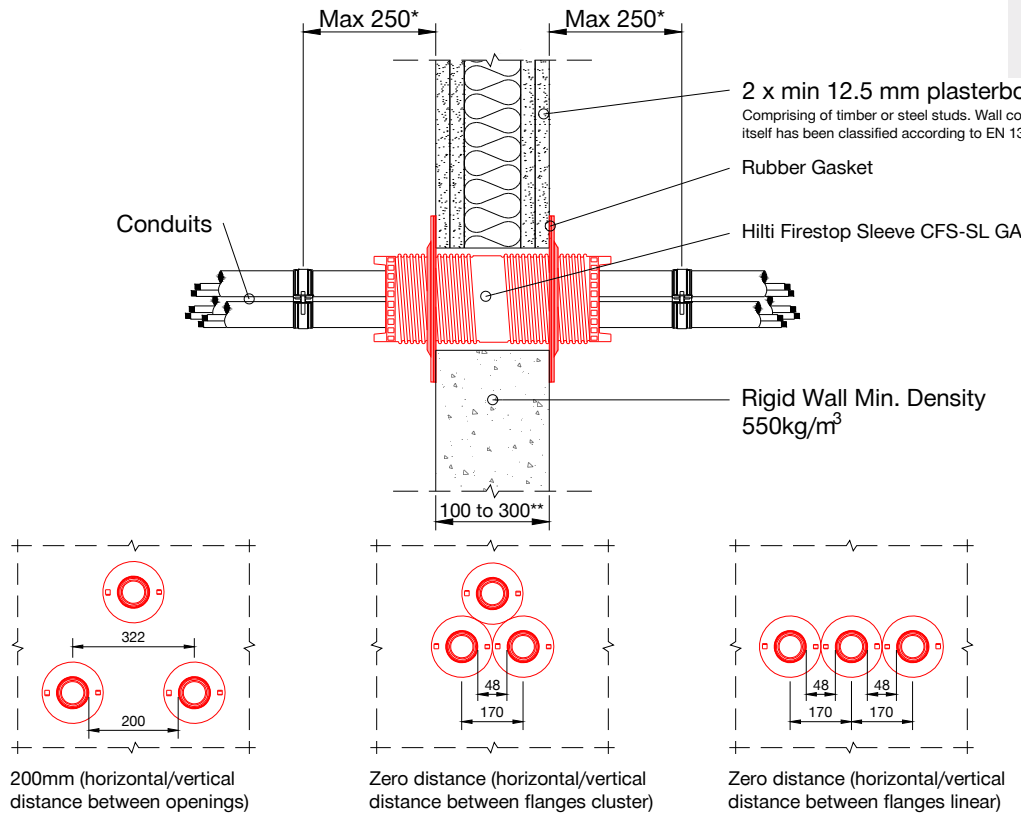
CONDUITS THROUGH FLEXIBLE & RIGID WALL

Fire rating up to EI 120

Information

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- [Approval ETA - 20-1234](#)

DWG PDF BIM/CAD Web



Device	Opening Ø
CFS-SL GA S	63 - 73 mm
CFS-SL GA M/L	113 - 122 mm

Penetrating services

Description

Single conduits Ø ≤ 25mm: CFS-SL GA S	Rigid, flexible and pliable plastic conduits and metal conduits with a diameter Ø ≤ 25mm with or without cables
Single conduits Ø ≤ 63mm: CFS-SL GA M/L	Rigid, flexible and pliable plastic conduits and metal conduits with a diameter Ø ≤ 63mm with or without cables
Conduits bundle: CFS-SL GA S	Conduits with a max. single conduit diameter Ø ≤ 25mm with or without cables can be bundled to a diameter Ø ≤ 48mm
Conduits bundle: CFS-SL GA M/L	Conduits with a max. single conduit diameter Ø ≤ 63mm with or without cables can be bundled to a diameter Ø ≤ 92mm

Description	200mm dist between Flanges		0mm dist between Flanges	
	CFS-SL GA S	CFS-SL GA M/L	CFS-SL GA S	CFS-SL GA M/L
Conduits ≤ 25 mm	EI 120	-	EI 90	-
Conduits ≤ 63 mm	-	EI 90	-	EI 60

(*) First support and ancillary products should be capable of achieving the same fire performance as the seal and supporting structure.

(**) **CFS-SL GA S/M**: Minimum thickness 100mm & maximum thickness 200 mm
(Maximum thickness: 180mm if **CFS-SL GA M** in combination with Gangplate)
CFS-SL GA L: Minimum thickness 200mm & maximum thickness 300 mm
(Maximum thickness: 280mm if **CFS-SL GA L** in combination with Gangplate)

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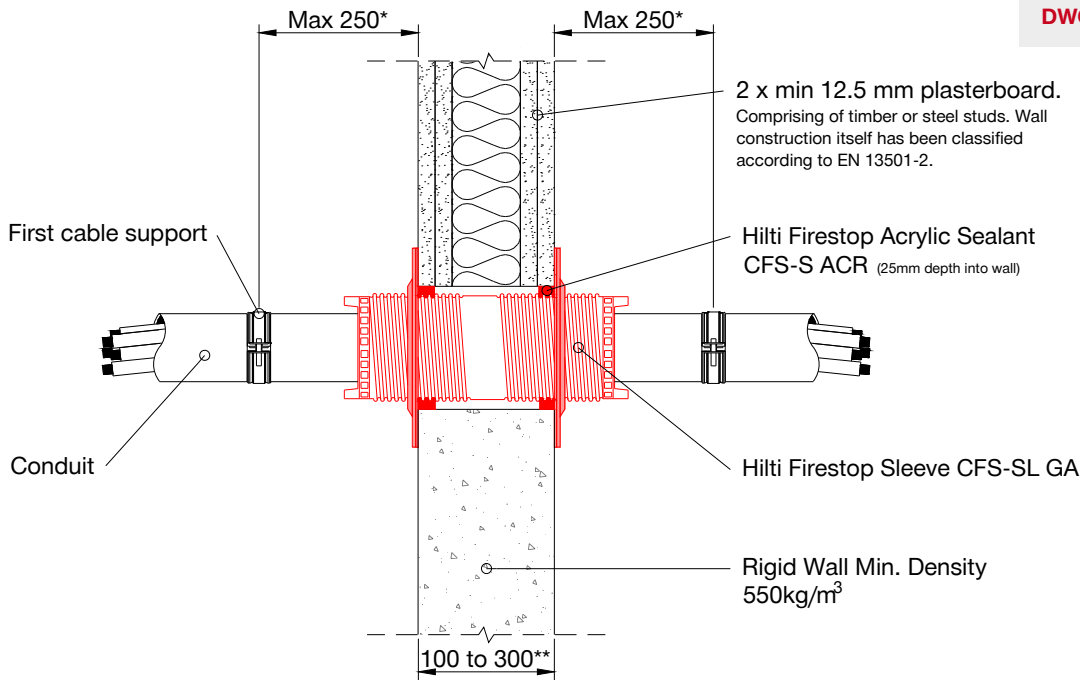
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SL-GA: SP-FW/RW-E-02

CONDUITS THROUGH FLEXIBLE & RIGID WALL

Fire rating up to EI 120



Information

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- [Approval ETA - 20-1234](#)

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Device	Opening Ø
CFS-SL GA S	63 - 73 mm
CFS-SL GA M/L	113 - 122 mm

Penetrating services	Description
Single conduits $\varnothing \leq 25\text{mm}$: CFS-SL GA S	Rigid, flexible and pliable plastic conduits and metal conduits with a diameter $\varnothing \leq 25\text{mm}$ with or without cables
Single conduits $\varnothing \leq 63\text{mm}$: CFS-SL GA M/L	Rigid, flexible and pliable plastic conduits and metal conduits with a diameter $\varnothing \leq 63\text{mm}$ with or without cables
Conduits bundle: CFS-SL GA S	Conduits with a max. single conduit diameter $\varnothing \leq 25\text{mm}$ with or without cables can be bundled to a diameter $\varnothing \leq 48\text{mm}$
Conduits bundle: CFS-SL GA M/L	Conduits with a max. single conduit diameter $\varnothing \leq 63\text{mm}$ with or without cables can be bundled to a diameter $\varnothing \leq 92\text{mm}$

Description	200mm dist between Flanges	
	CFS-SL GA S	CFS-SL GA M/L
Conduits $\leq 63\text{ mm}$	-	EI 120

(*) First support and ancillary products should be capable of achieving the same fire performance as the seal and supporting structure.

(**) **CFS-SL GA S/M**: Minimum thickness 100mm & maximum thickness 200 mm
(Maximum thickness: 180mm if **CFS-SL GA M** in combination with Gangplate)
CFS-SL GA L: Minimum thickness 200mm & maximum thickness 300 mm
(Maximum thickness: 280mm if **CFS-SL GA L** in combination with Gangplate)

Higher Fire Classification rating in specific flexible or rigid wall applications: Hilti Firestop Acrylic Sealant CFS-S ACR can be applied to seal annular gaps in place of Rubber Gaskets

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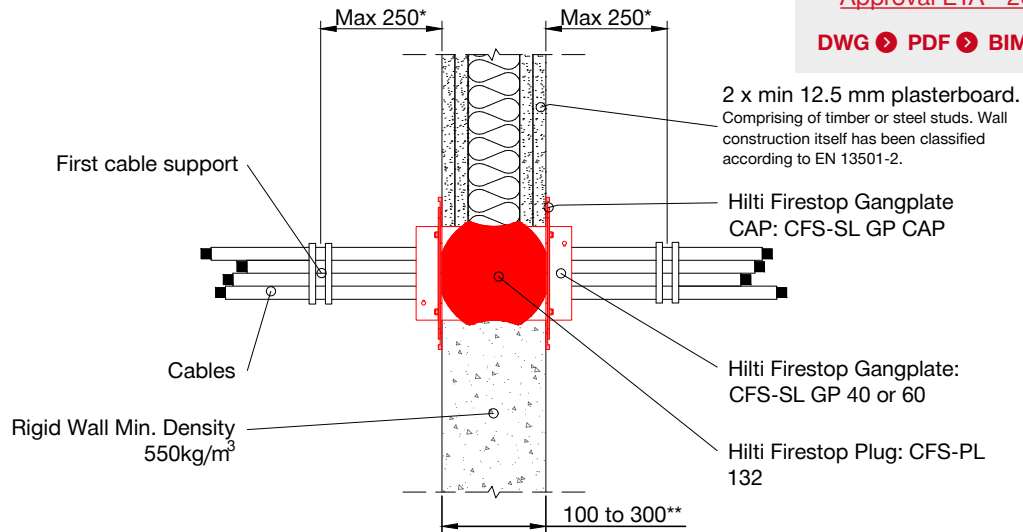
SL-GA: SP-FW/RW-E-03

CABLES THROUGH FLEXIBLE & RIGID WALL

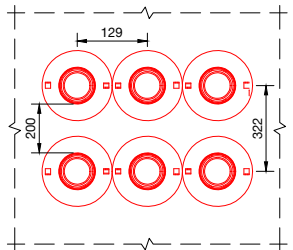
Fire rating up to EI 120

Information

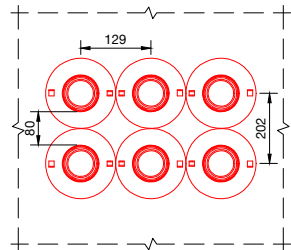
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- Tested according EN 1366-3
- [Approval ETA - 20-1234](#)

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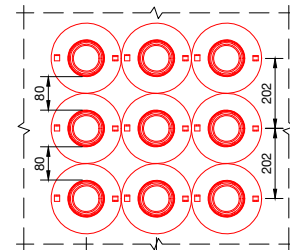
Depending on Fire Classification and space requirements, the Hilti Firestop Sleeve CFS-SL GP can be installed with:
 ≥ 200mm distance between openings, or Gangplates touching or slight overlap (zero distance)



200mm from Opening to nearest Opening - For Single to any number of installations



Zero Distance between Devices - For Double Gangplate installation: (200mm from one Double Gangplate to another Double Gangplate)



Zero Distance between Devices (200mm from one Triple Gangplate)

≥ 200mm Distance between Openings

Flexible & Rigid wall	Blank Device to 100% filled Cables ≤ 21	EI 120
	Blank Seal (CAP and Plug)	
Double Gangplate Zero Distance between Devices		
Flexible & Rigid wall	Blank Device to 100% filled Cables ≤ 21	EI 90
	Blank Seal (CAP and Plug)	
Triple Gangplate (or more) Zero Distance between Devices		
Flexible & Rigid wall	Blank Device to 100% filled Cables ≤ 21	EI 60
	Blank Seal (CAP and Plug)	

(*) First support and ancillary products should be capable of achieving the same fire performance as the seal and supporting structure.

(**) **CFS-SL GA S/M:** Minimum thickness 100mm & maximum thickness 200 mm
 (Maximum thickness: 180mm if **CFS-SL GA M** in combination with Gangplate)

CFS-SL GA L: Minimum thickness 200mm & maximum thickness 300 mm
 (Maximum thickness: 280mm if **CFS-SL GA L** in combination with Gangplate)

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SL-GA: SP-FW/RW-E-01

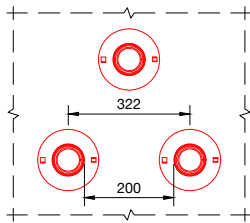
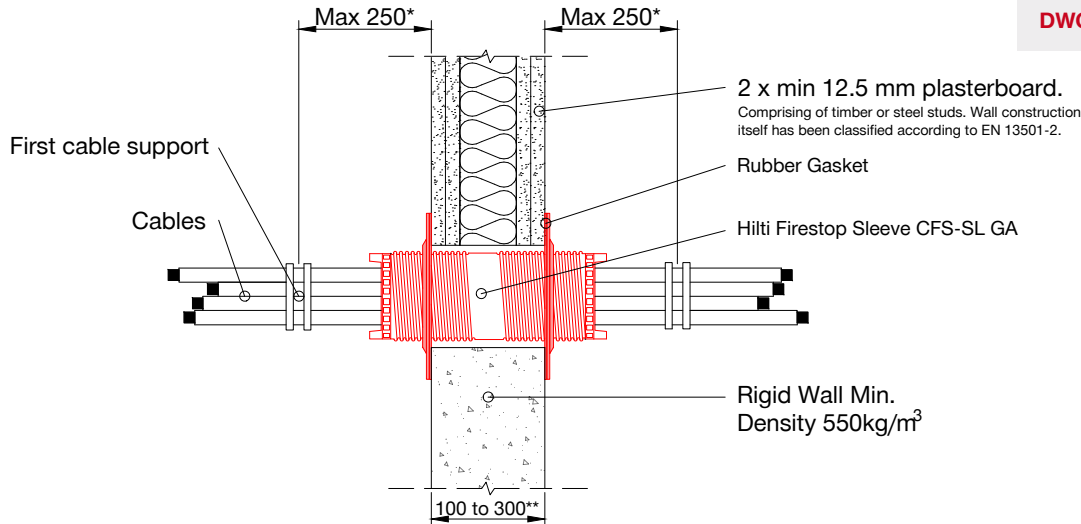
CABLES THROUGH FLEXIBLE & RIGID WALL

Fire rating up to EI 120

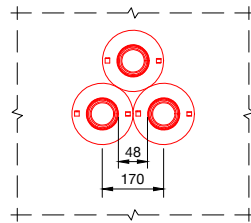
Information

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- Tested according EN 1366-3
- [Approval ETA - 20-1234](#)

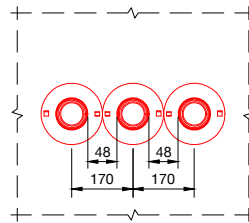
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200mm (horizontal/vertical distance between openings)



Zero distance (horizontal/vertical distance between flanges cluster)



Zero distance (horizontal/vertical distance between flanges linear)

Device	Opening Ø
CFS-SL GA S	63 - 73 mm
CFS-SL GA M/L	113 - 122 mm

Description	200mm dist between Flanges		0mm dist between Flanges	
	CFS-SL GA S	CFS-SL GA M/L	CFS-SL GA S	CFS-SL GA M/L
Blank Device	EI 120	EI 120	EI 120	EI 90
All sheathed cables ≤ 21 mm	EI 90	EI 90	EI 60	EI 90
All sheathed cables ≤ 50 mm	-	EI 90	-	EI 60
All sheathed cables ≤ 80 mm	-	EI 60	-	EI 60
Cable bundles ≤ 36 mm	EI 90	-	EI 90	-
All sheathed cables ≤ 21 mm	-	-	-	-
Cable bundles ≤ 86 mm	-	EI 90	-	EI 60
All sheathed cables ≤ 21 mm	-	-	-	-
100% filled device with cables ≤ 21 mm	EI 60	EI 90	EI 60	EI 60
100% filled device with cables ≤ 80 mm	-	-	-	EI 60

(*) First support and ancillary products should be capable of achieving the same fire performance as the seal and supporting structure.

(**) **CFS-SL GA S/M:** Minimum thickness 100mm & maximum thickness 200 mm
(Maximum thickness: 180mm if **CFS-SL GA M** in combination with Gangplate)
CFS-SL GA L: Minimum thickness 200mm & maximum thickness 300 mm
(Maximum thickness: 280mm if **CFS-SL GA L** in combination with Gangplate)

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SL-GA: SP-FW/RW-E-01

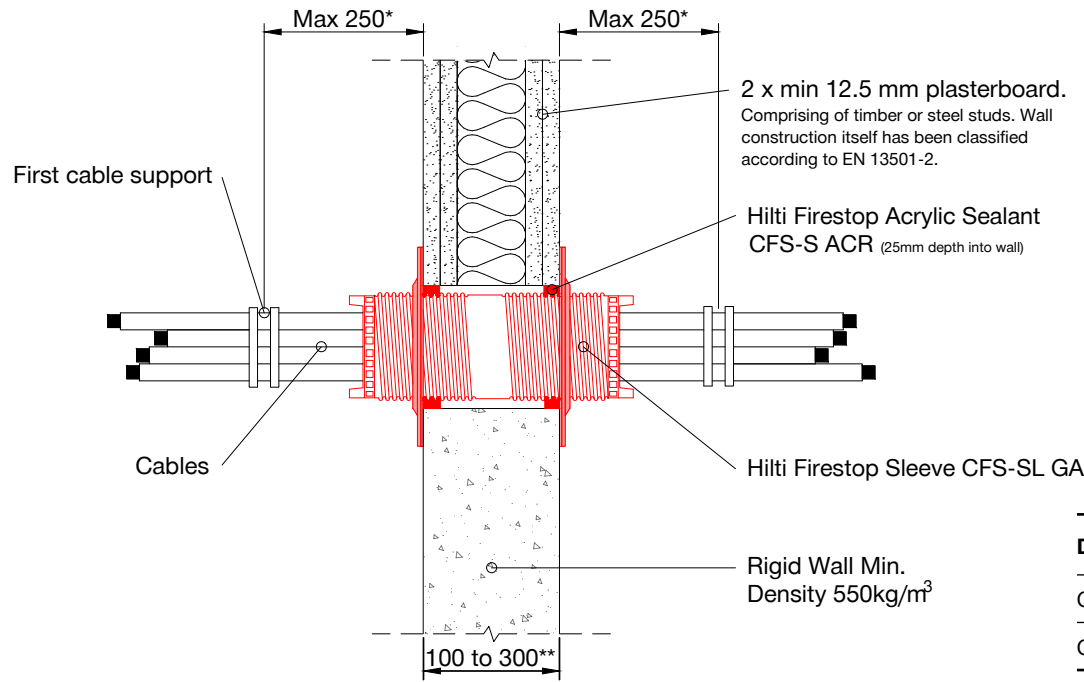
CABLES THROUGH FLEXIBLE & RIGID WALL

Fire rating up to EI 120

Information

- Not to scale
- All units are in millimetres
- Tested according EN 1366-3
- [Approval ETA - 20-1234](#)

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Device	Opening Ø
CFS-SL GA S	63 - 73 mm
CFS-SL GA M/L	113 - 122 mm

For higher Fire Classifications - follow Seal Type 1a (ACR) installation

Description	200mm dist between Flanges	
	CFS-SL GA S	CFS-SL GA M/L
All sheathed cables ≤ 21 mm	-	EI 120
100% filled device with cables ≤ 21 mm	EI 90	-

(*) First support and ancillary products should be capable of achieving the same fire performance as the seal and supporting structure.

- (**) **CFS-SL GA S/M**: Minimum thickness 100mm & maximum thickness 200 mm
 (Maximum thickness: 180mm if **CFS-SL GA M** in combination with Gangplate)
CFS-SL GA L: Minimum thickness 200mm & maximum thickness 300 mm
 (Maximum thickness: 280mm if **CFS-SL GA L** in combination with Gangplate)

Higher Fire Classification rating in specific flexible or rigid wall applications: Hilti Firestop Acrylic Sealant CFS-S ACR can be applied to seal annular gaps in place of Rubber Gaskets

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SL-GA: SP-FW/RW-E-02

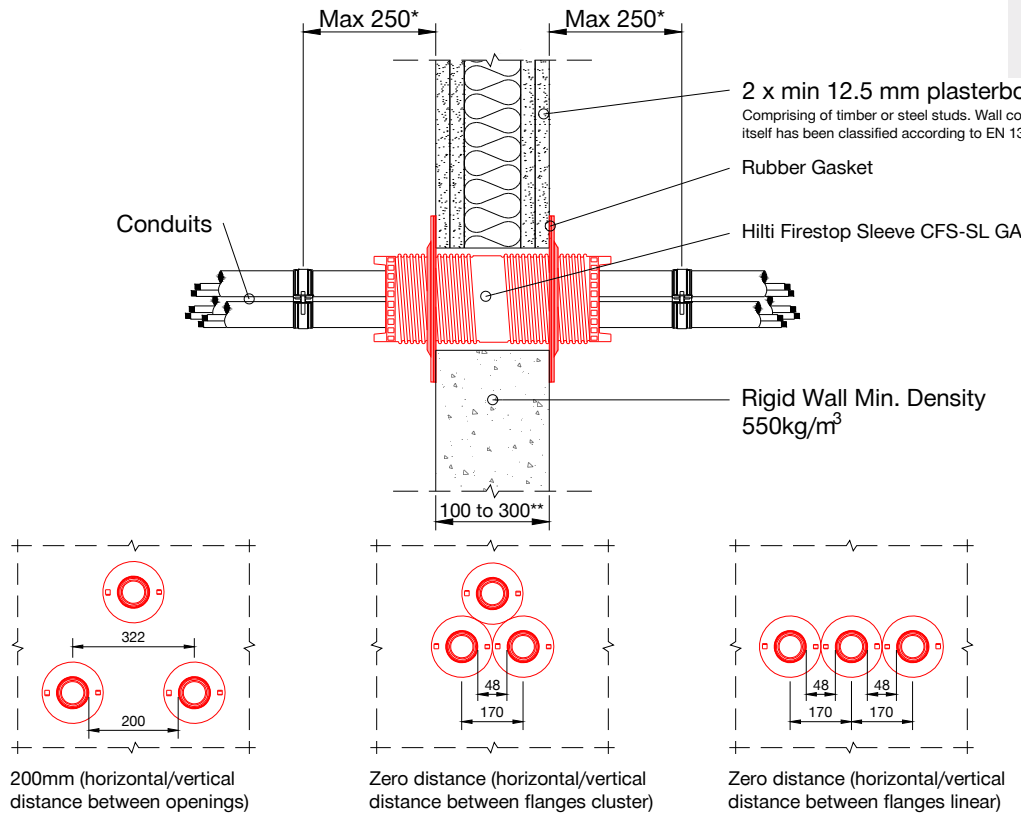
CONDUITS THROUGH FLEXIBLE & RIGID WALL

Fire rating up to EI 120

Information

- Not to scale
- All units are in millimetres
- Tested according EN 1366-3
- [Approval ETA - 20-1234](#)

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Device	Opening Ø
CFS-SL GA S	63 - 73 mm
CFS-SL GA M/L	113 - 122 mm

Penetrating services	Description
Single conduits $\varnothing \leq 25\text{mm}$: CFS-SL GA S	Rigid, flexible and pliable plastic conduits and metal conduits with a diameter $\varnothing \leq 25\text{mm}$ with or without cables
Single conduits $\varnothing \leq 63\text{mm}$: CFS-SL GA M/L	Rigid, flexible and pliable plastic conduits and metal conduits with a diameter $\varnothing \leq 63\text{mm}$ with or without cables
Conduits bundle: CFS-SL GA S	Conduits with a max. single conduit diameter $\varnothing \leq 25\text{mm}$ with or without cables can be bundled to a diameter $\varnothing \leq 48\text{mm}$
Conduits bundle: CFS-SL GA M/L	Conduits with a max. single conduit diameter $\varnothing \leq 63\text{mm}$ with or without cables can be bundled to a diameter $\varnothing \leq 92\text{mm}$

Description	200mm dist between Flanges		0mm dist between Flanges	
	CFS-SL GA S	CFS-SL GA M/L	CFS-SL GA S	CFS-SL GA M/L
Conduits $\leq 25\text{ mm}$	EI 120	-	EI 90	-
Conduits $\leq 63\text{ mm}$	-	EI 90	-	EI 60

(*) First support and ancillary products should be capable of achieving the same fire performance as the seal and supporting structure.

(**) **CFS-SL GA S/M**: Minimum thickness 100mm & maximum thickness 200 mm
(Maximum thickness: 180mm if **CFS-SL GA M** in combination with Gangplate)
CFS-SL GA L: Minimum thickness 200mm & maximum thickness 300 mm
(Maximum thickness: 280mm if **CFS-SL GA L** in combination with Gangplate)

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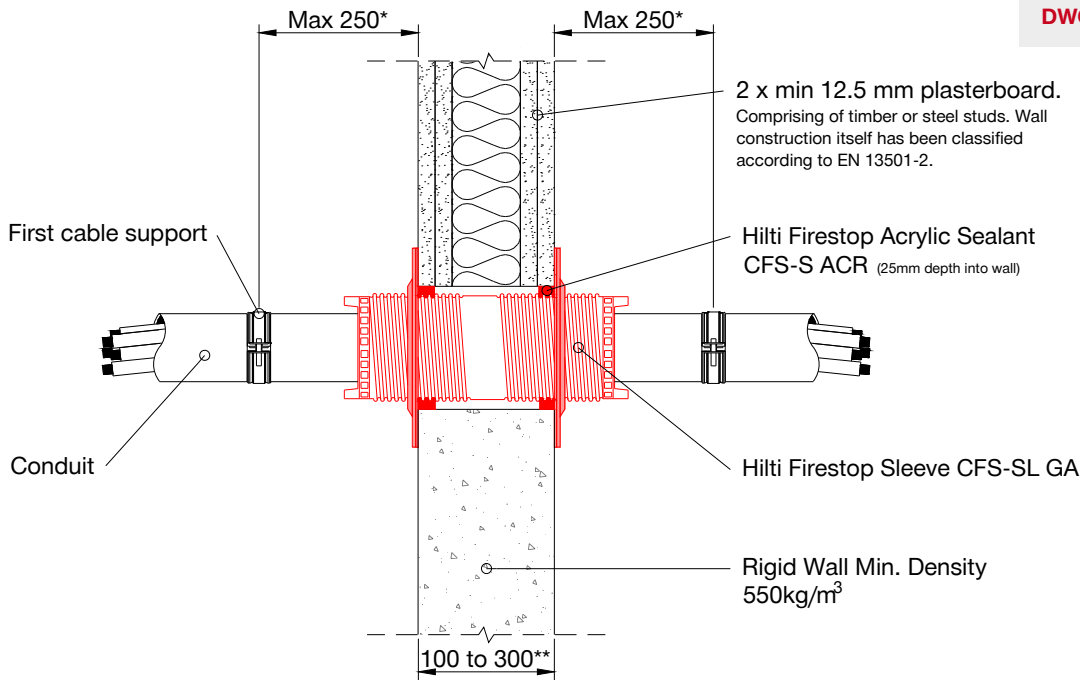
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SL-GA: SP-FW/RW-E-02

CONDUITS THROUGH FLEXIBLE & RIGID WALL

Fire rating up to EI 120



Information

- Not to scale
- All units are in millimetres
- Tested according EN 1366-3
- [Approval ETA - 20-1234](#)

DWG PDF BIM/CAD Web

Device	Opening Ø
CFS-SL GA S	63 - 73 mm
CFS-SL GA M/L	113 - 122 mm

Penetrating services	Description
Single conduits Ø ≤ 25mm: CFS-SL GA S	Rigid, flexible and pliable plastic conduits and metal conduits with a diameter Ø ≤ 25mm with or without cables
Single conduits Ø ≤ 63mm: CFS-SL GA M/L	Rigid, flexible and pliable plastic conduits and metal conduits with a diameter Ø ≤ 63mm with or without cables
Conduits bundle: CFS-SL GA S	Conduits with a max. single conduit diameter Ø ≤ 25mm with or without cables can be bundled to a diameter Ø ≤ 48mm
Conduits bundle: CFS-SL GA M/L	Conduits with a max. single conduit diameter Ø ≤ 63mm with or without cables can be bundled to a diameter Ø ≤ 92mm

Description	200mm dist between Flanges	
	CFS-SL GA S	CFS-SL GA M/L
Conduits ≤ 63 mm	-	EI 120

(*) First support and ancillary products should be capable of achieving the same fire performance as the seal and supporting structure.

(**) **CFS-SL GA S/M**: Minimum thickness 100mm & maximum thickness 200 mm
(Maximum thickness: 180mm if **CFS-SL GA M** in combination with Gangplate)
CFS-SL GA L: Minimum thickness 200mm & maximum thickness 300 mm
(Maximum thickness: 280mm if **CFS-SL GA L** in combination with Gangplate)

Higher Fire Classification rating in specific flexible or rigid wall applications: Hilti Firestop Acrylic Sealant CFS-S ACR can be applied to seal annular gaps in place of Rubber Gaskets

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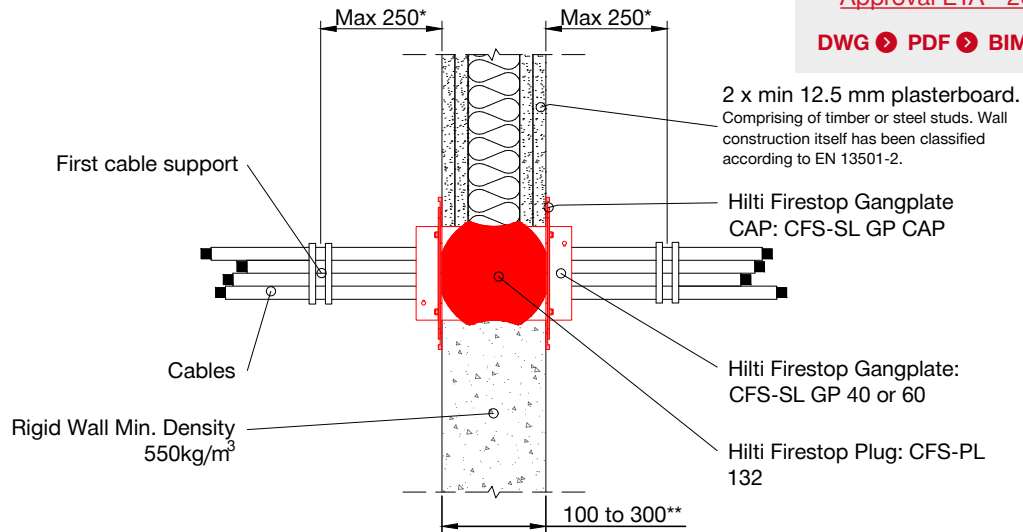
SL-GA: SP-FW/RW-E-03

CABLES THROUGH FLEXIBLE & RIGID WALL

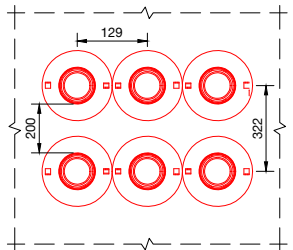
Fire rating up to EI 120

Information

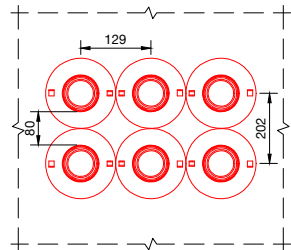
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- Tested according EN 1366-3
- [Approval ETA - 20-1234](#)

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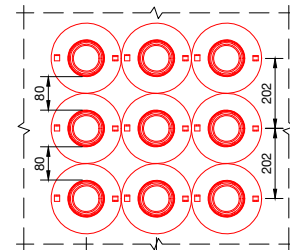
Depending on Fire Classification and space requirements, the Hilti Firestop Sleeve CFS-SL GP can be installed with:
 ≥ 200mm distance between openings, or Gangplates touching or slight overlap (zero distance)



200mm from Opening to nearest Opening - For Single to any number of installations



Zero Distance between Devices - For Double Gangplate installation: (200mm from one Double Gangplate to another Double Gangplate)



Zero Distance between Devices (200mm from one Triple Gangplate)

≥ 200mm Distance between Openings

Flexible & Rigid wall	Blank Device to 100% filled Cables ≤ 21	EI 120
	Blank Seal (CAP and Plug)	
Double Gangplate Zero Distance between Devices		
Flexible & Rigid wall	Blank Device to 100% filled Cables ≤ 21	EI 90
	Blank Seal (CAP and Plug)	
Triple Gangplate (or more) Zero Distance between Devices		
Flexible & Rigid wall	Blank Device to 100% filled Cables ≤ 21	EI 60
	Blank Seal (CAP and Plug)	

(*) First support and ancillary products should be capable of achieving the same fire performance as the seal and supporting structure.

(**) **CFS-SL GA S/M**: Minimum thickness 100mm & maximum thickness 200 mm
 (Maximum thickness: 180mm if **CFS-SL GA M** in combination with Gangplate)

CFS-SL GA L: Minimum thickness 200mm & maximum thickness 300 mm
 (Maximum thickness: 280mm if **CFS-SL GA L** in combination with Gangplate)

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Revision 01 – 05/2025

CFS-SL GA: Firestop Sleeve

SL-GA: SP-RF-E-01

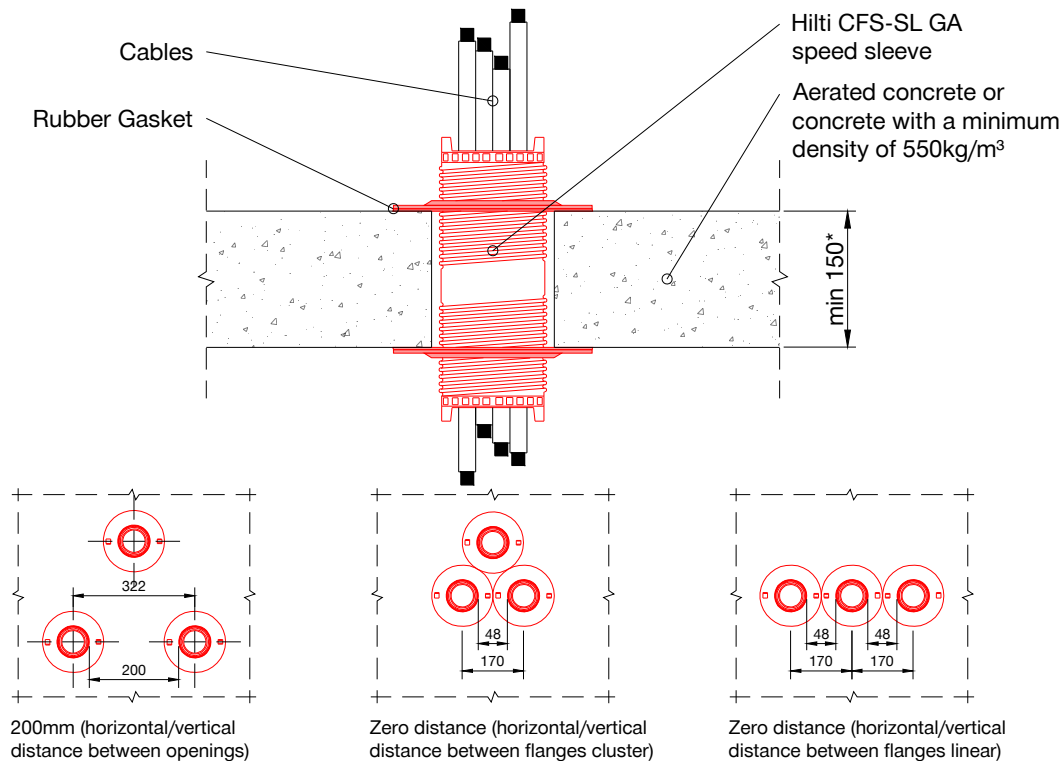
CABLES THROUGH RIGID FLOOR

Fire rating up to EI 180

Information

- Not to scale
- All units are in millimetres
- Tested according to EN 1366-3
- [Approval ETA - 20-1234](#)

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Description	CFS-SL GA S	CFS-SL GA M/L
Blank Device	EI 180	EI 180
All sheathed cables ≤ 21 mm	EI 180	EI 180
All sheathed cables ≤ 50 mm	-	EI 120 ⁵⁾
All sheathed cables ≤ 80 mm	-	EI 60
Cable bundles ≤ 36 mm	EI 180	-
All sheathed cables ≤ 21 mm	-	-
Cable bundles ≤ 86 mm	-	EI 120
All sheathed cables ≤ 21 mm	-	-
100% filled device with cables ≤ 21 mm	EI 120	-
100% filled device with cables ≤ 80 mm	-	EI 120

Device	Opening Ø
CFS-SL GA S	63 - 73 mm
CFS-SL GA M/L	113 - 122 mm

(*) Floors:

- Minimum thickness 150mm & maximum thickness 200mm (CFS-SL GA S/M)
- Minimum thickness 200mm & maximum thickness 300mm (CFS-SL GA L)
- Aerated concrete or concrete with a minimum density of 550kg/m³

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SL-GA: SP-RF-E-02

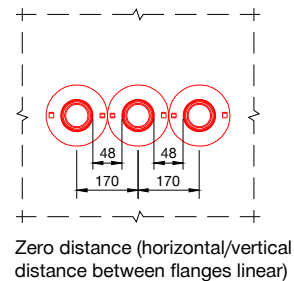
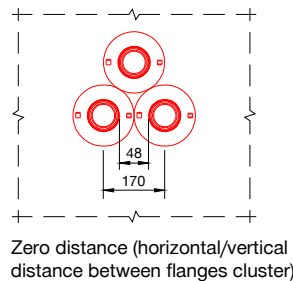
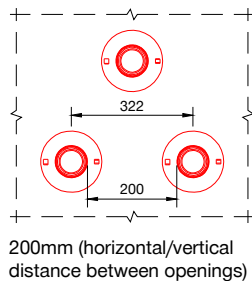
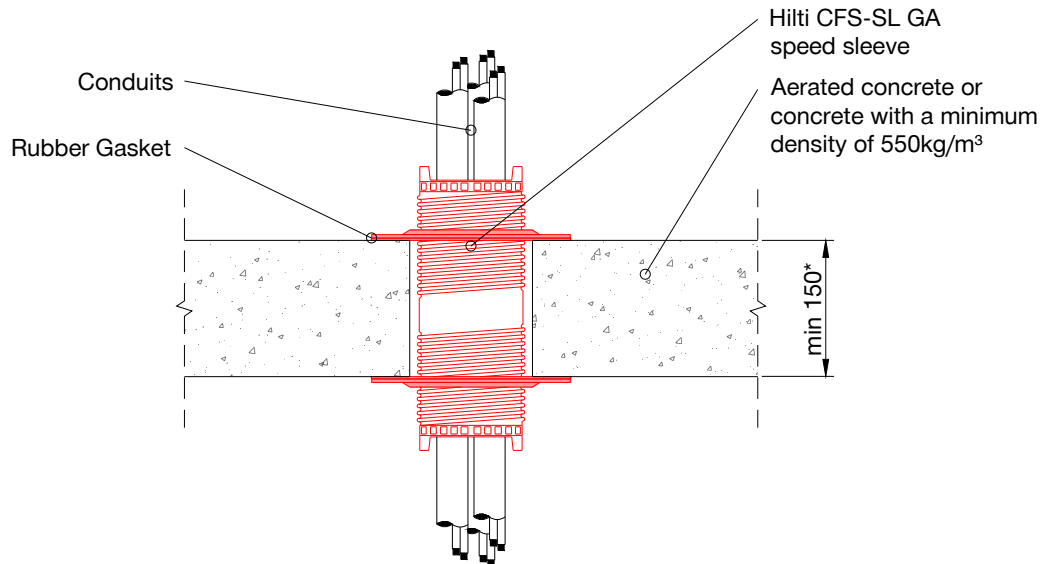
CONDUIT THROUGH RIGID FLOOR

Fire rating up to EI 120

Information

- Not to scale
- All units are in millimetres
- Tested according EN 1366-3
- [Approval ETA - 20-1234](#)

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Description	CFS-SL GA S	CFS-SL GA M/L
Conduits ≤ 25mm (CFS-SL GA S)	EI 120	-
Conduits ≤ 63mm (CFS-SL GA M/L)	-	EI 60 ⁵⁾
For higher Fire Classifications – increase distances between openings - 200mm:		
⁵⁾ All sheathed cables ≤ 50mm	-	EI 180
⁶⁾ Conduits ≤ 63mm (CFS-SL GA M/L)	-	EI 120

Device	Opening Ø
CFS-SL GA S	63 - 73 mm
CFS-SL GA M/L	113 - 122 mm

(*) Floors:

- Minimum thickness 150mm & maximum thickness 200mm (CFS-SL GA S/M)
- Minimum thickness 200mm & maximum thickness 300mm (CFS-SL GA L)
- Aerated concrete or concrete with a minimum density of 550kg/m³

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SL-GA: SP-SWP-E-01

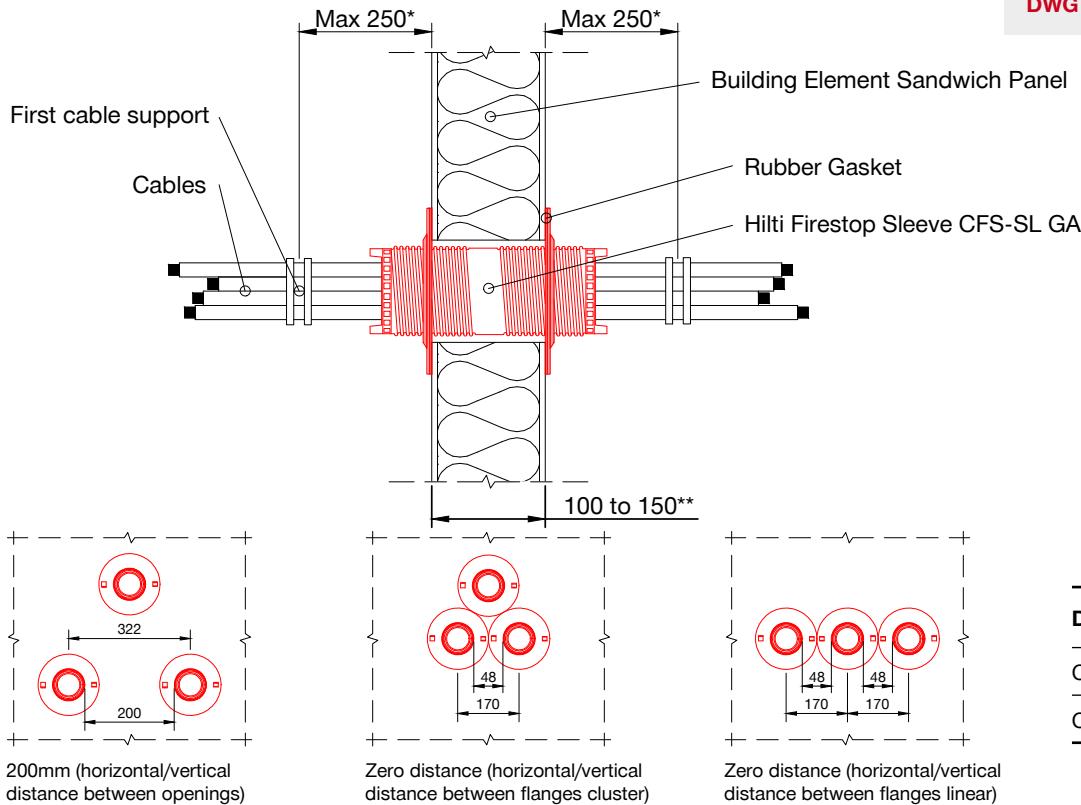
CABLES THROUGH SANDWICH PANEL

Fire rating up to EI 90

Information

- Not to scale
- All units are in millimetres
- Tested according EN 1366-3
- [Approval ETA - 20-1234](#)

DWG PDF BIM/CAD Web



Device	Opening Ø
CFS-SL GA S	63 - 73 mm
CFS-SL GA M/L	113 - 122 mm

Description	Sandwich Panel (150mm Thickness)		Sandwich Panel (100mm Thickness)	
	200mm dist between Flanges		0mm dist between Flanges	
	CFS-SL GA S	CFS-SL GA M/L	CFS-SL GA S	CFS-SL GA M/L
Blank Device	EI 90	EI 90 ⁴⁾	EI 45	EI 90
All sheathed cables ≤ 21 mm	EI 60	EI 90 ⁴⁾	EI 45	EI 90
All sheathed cables ≤ 50 mm	-	EI 90	-	EI 60
100% filled device witch cables ≤ 21 mm	EI 60	-	EI 45	EI 60
100% filled device witch cables ≤ 80 mm	-	EI 60 ⁴⁾	-	EI 60

- (*) First support and ancillary products should be capable of achieving the same fire performance as the seal and supporting structure.
- (**) **Sandwich panels:** Tested with 100mm Paroc line 200 AST F 100/99 and 150mm Paroc line 200 AST F. Field of application, based on tested Specimens (in accordance with Standard EN 14509:2013):
- Minimum thickness: 100mm & maximum thickness 200mm (CFS-SL GA S/M) Maximum thickness: 180mm if CFS-SL GA M in combination with Gangplate
 - Minimum thickness: 200mm & maximum thickness 300mm (CFS-SL GA S/M) Maximum thickness: 280mm if CFS-SL GA M in combination with Gangplate

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4. All services are to be correctly and adequately supported to prevent collapse and distortion.

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SL-GA: SP-SWP-E-01

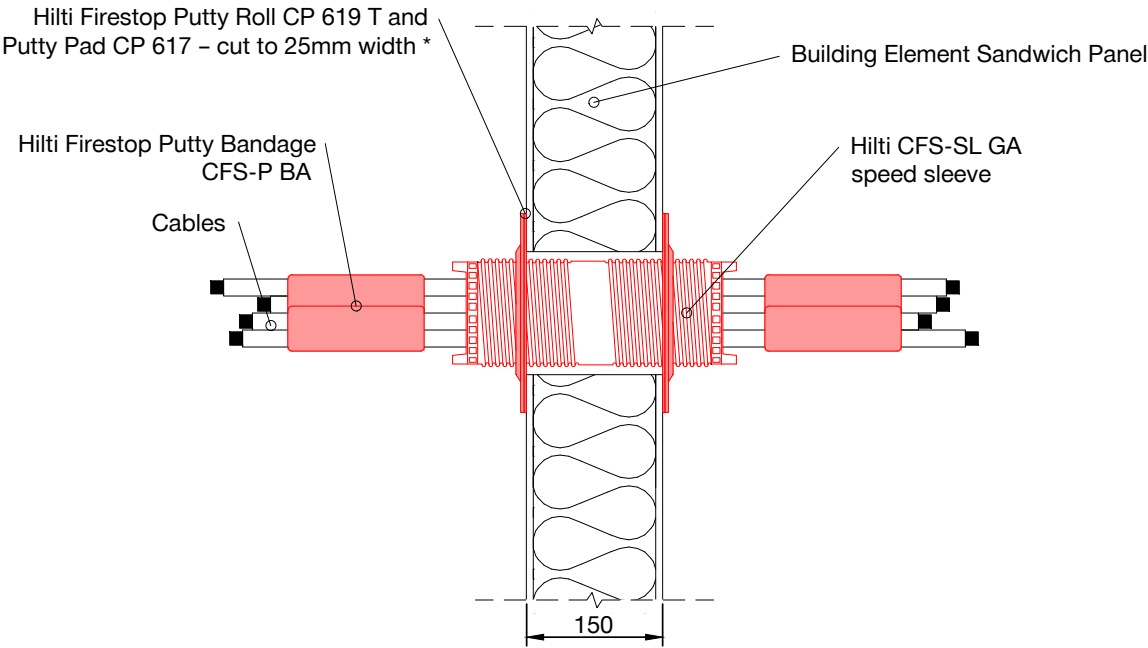
CABLES THROUGH SANDWICH PANEL

Fire rating up to EI 120

Information

- Not to scale
- All units are in millimetres
- Tested according EN 1366-3
- [Approval ETA - 20-1234](#)

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Device	Opening Ø
CFS-SL GA M/L	113 - 122 mm

Description	Sandwich Panel (150mm Thickness)	
	200mm dist between Flanges	
	CFS-SL GA S	CFS-SL GA M/L
For higher Fire Classifications - follow Seal Type 1b (Putty) installation:		
⁴⁾ 100% filled device with cables ≤ 21 mm (CFS-SL GA M/L)	-	EI 120

(*) Section – CFS-SL GA M/L with CP 619 T or CP 617 behind flanges and CFS-P BA around Cables - in 150mm Sandwich Panel

Higher Fire Classifications for CFS-SL GA M/L in 150mm thick Sandwich Panels: Hilti Firestop Putty is pressed around opening - CP 619 T or CP 617 (cut to 25mm width) before installing rubber gasket, and CFS-P BA used to wrap first 100mm of cables as they project from tabs of sleeve.

In all cases, putty is installed in 2 layers with minimum 5mm overlap. (See Seal Type 1b for installation)

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SL-GA: SP-SWP-E-02

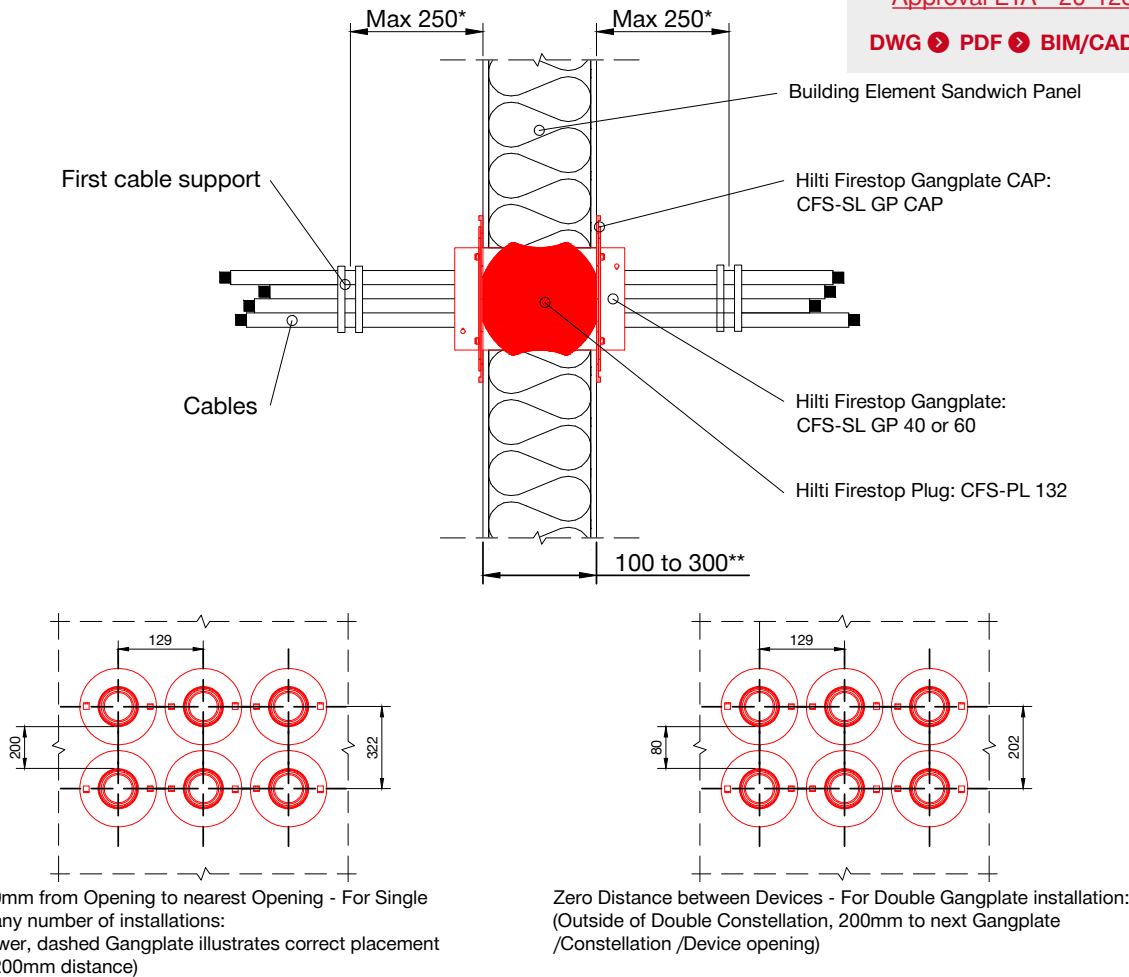
CABLES THROUGH SANDWICH PANEL

Fire rating up to EI 120

Information

- Not to scale
- All units are in millimetres
- Tested according EN 1366-3
- [Approval ETA - 20-1234](#)

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Double Gangplate Zero Distance between Devices

Sandwich Panels 100mm Thickness	Blank Device to 100% filled Cables ≤ 21	EI 60
	Blank Seal (CAP and Plug)	
	≥ 200 mm Distance between Openings	
Sandwich Panels 150mm Thickness	Blank Device to 100% filled Cables ≤ 21	EI 120
	Blank Seal (CAP and Plug)	

- (*) First support and ancillary products should be capable of achieving the same fire performance as the seal and supporting structure.
- (**) **Sandwich panels:** Tested with 100mm Paroc line 200 AST F 100/99 and 150mm Paroc line 200 AST F. Field of application, based on tested Specimens (in accordance with Standard EN 14509:2013):
- Minimum thickness: 100mm & maximum thickness 200mm (CFS-SL GA S/M) Maximum thickness: 180mm if CFS-SL GA M in combination with Gangplate
 - Minimum thickness: 200mm & maximum thickness 300mm (CFS-SL GA S/M) Maximum thickness: 280mm if CFS-SL GA M in combination with Gangplate

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SL-GA: SP-TF-E-01

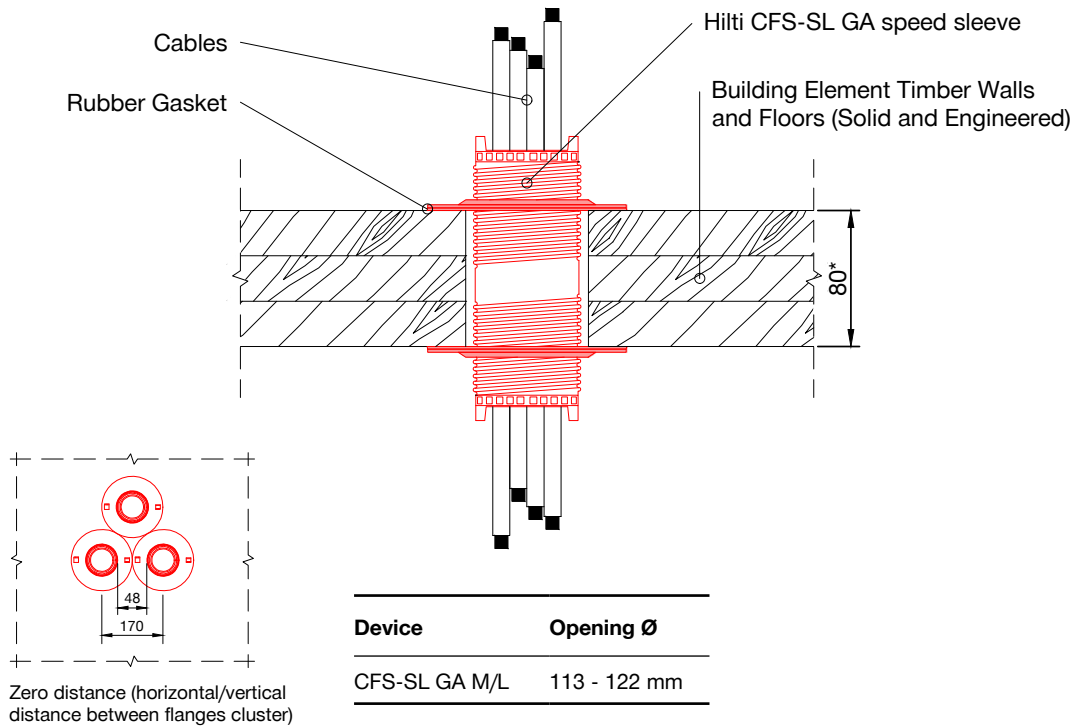
CABLES THROUGH TIMBER WALLS

Fire rating up to EI 90

Information

- Not to scale
- All units are in millimetres
- Tested according to EN 1366-3
- [Approval ETA - 20-1234](#)

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	Description	CFS-SL GA M/L
Timber Walls Thickness ≥ 80	Blank Device to 100% filled Cables ≤ 21	EI 60
Timber Walls Thickness ≥ 100	Blank Device to 100% filled Cables ≤ 21	EI 90
	Blank device to 100% filled Telecom cables (≤ 17 Ø)	E 90 / EI 60
Timber Floors Thickness ≥ 140	Blank Device to 100% filled Cables ≤ 21mm	EI 90

Timber Walls & Floors: (Solid and Engineered)

Timber wall and floor constructions should comprise of:

- Solid timber**
 - Softwoods such as: spruce/fir, pine, larch, stone pine
- Engineered timber**
 - Glued solid timber boards
 - Glued laminated timber (glulam) with or without finger joints
 - Cross laminated timber (CLT, X-Lam) with or without finger joints according to EN 16351, with Resistance to Fire Classification (REI) according to EN ISO 13501

Characteristics of Engineered timber:

- Softwoods such as: spruce/fir, pine, larch, stone pine
- Number of layers > 3
- Thickness of layers: $t_l > 20\text{mm}$
- Polyurethane and/or MUF (phenolic and amino plastic) based adhesives
- With or without grooves and edge bonds acc. EN 16351:2015, chapter 5.2.2.4

General Field of Application:

- Minimum thickness 80mm & maximum thickness 200mm (CFS-SL GA M)
- Minimum thickness 200mm & maximum thickness 300mm (CFS-SL GA L)

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SL-GA: SP-TW-E-01

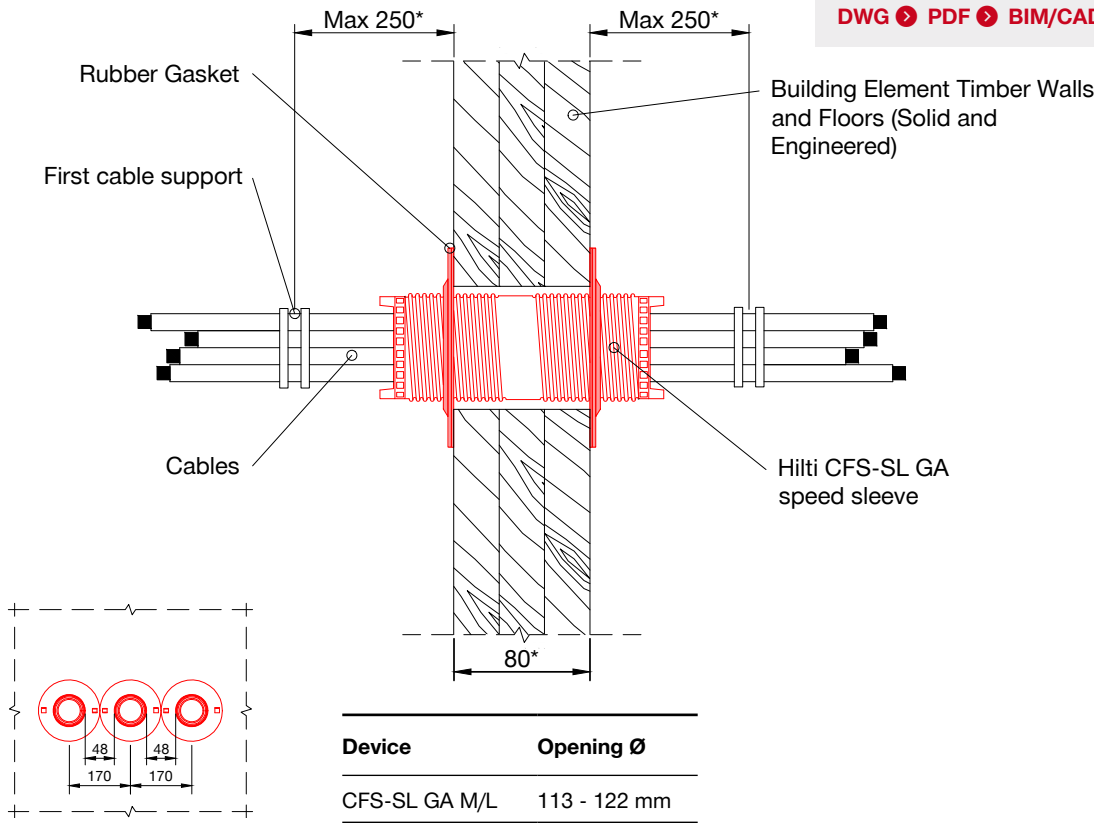
CABLES THROUGH TIMBER WALLS

Fire rating up to EI 90

Information

- Not to scale
- All units are in millimetres
- Tested according EN 1366-3
- [Approval ETA - 20-1234](#)

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Zero distance (horizontal/vertical distance between flanges linear)

	Description	CFS-SL GA M/L
Timber Walls Thickness ≥ 80	Blank Device to 100% filled Cables ≤ 21	EI 60
Timber Walls Thickness ≥ 100	Blank Device to 100% filled Cables ≤ 21	EI 90

Timber Walls & Floors: (Solid and Engineered)

Timber wall and floor constructions should comprise of:

- Solid timber**
 - Softwoods such as: spruce/fir, pine, larch, stone pine
- Engineered timber**
 - Glued solid timber boards
 - Glued laminated timber (glulam) with or without finger joints
 - Cross laminated timber (CLT, X-Lam) with or without finger joints according EN 16351, with Resistance to Fire Classification (REI) according EN ISO 13501

Characteristics of Engineered timber:

- Softwoods such as: spruce/fir, pine, larch, stone pine
- Number of layers > 3
- Thickness of layers: $t_l > 20\text{mm}$
- Polyurethane and/or MUF (phenolic and amino plastic) based adhesives
- With or without grooves and edge bonds acc. EN 16351:2015, chapter 5.2.2.4

General Field of Application:

- Minimum thickness 80mm & maximum thickness 200mm (CFS-SL GA M)
- Minimum thickness 200mm & maximum thickness 300mm (CFS-SL GA L)

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