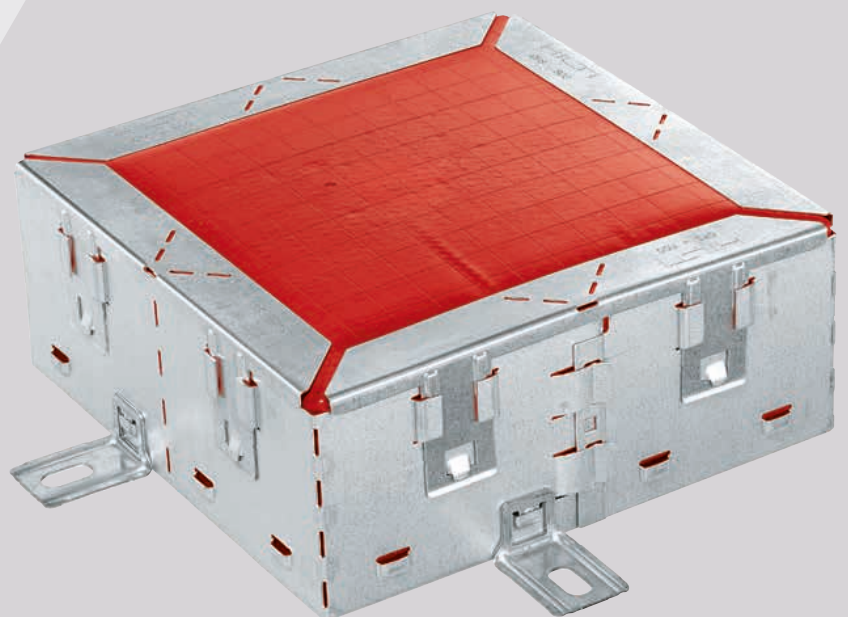




# FIRESTOP RECTANGULAR CABLE COLLAR CFS-RCC TECHNICAL MANUAL

European technical assessment  
ETA-20/0990



# FIRESTOP CABLE COLLAR CFS-RCC



## Applications

- Flexible solution for cables, conduits, cable trays and pipes in concrete, masonry and drywall applications
- For new and existing penetrations in floors and walls
- Especially suitable for renovation projects under difficult conditions
- Can be used to seal old/damaged fire compartment penetrations without removing the existing material

## Advantages

- Broad approval range – also covers mixed penetrations and mechanical penetrations with metal pipes up to 114 mm and plastic pipes up to 50 mm
- Modular system – fast and easy to install, no mortar or mineral wool required
- Surface-mounted solution – perfect for use at openings with 100% cable fill
- Excellent solution for irregular openings
- Time-saving, dust-free solution – no need for framework for drywall applications, no chiseling work on solid walls necessary
- Preformed product – immediately functional after installation
- Reliable solution – easy to inspect
- Re-penetrable – allows easy increase in future cable capacity
- Also suitable for single-sided applications for floor and wall openings
- Green building – contains no halogens, solvents or asbestos.
- LEED information available

## Technical Data

<b>Base material</b>	Concrete, aerated concrete, drywall, masonry
<b>Chemical basis</b>	Polyurethane foam
<b>Color</b>	Red
<b>Complementary products</b>	CFS-FIL, CFS-F FX, CFS-P BA, CP636
<b>Intumescent</b>	Yes
<b>Expansion temperature (approx.)</b>	200 °C
<b>Expansion ratio (unrestricted, up to)</b>	1:3
<b>Application temperature range</b>	5 – 40 °C
<b>Storage and transportation temperature range</b>	-5 – 40 °C
<b>Temperature resistance range</b>	-15 – 60 °C



Order designation	Package contents	Minimum order quantity	Item number
CFS-RCC firestop cable collar	2	2	2126526
CFS-RCC EXT firestop cable collar	2	2	2126527

## FIRESTOP FILLER MASTIC CFS-FIL

### Applications

- For use with Hilti Firestop Cable Collar CFS-RCC (gap filling)

### Advantages

- Can be used with Hilti dispenser CFS-DISP



Order designation	Package contents	Minimum order quantity	Item number
Firestop Filler Mastic CFS-FIL	310 ml	1 pc	2052899

## CFS-F FX FIRESTOP FOAM

### Applications

- For use with Hilti Firestop Cable Collar RCC (gap filling)
- For use with Hilti Firestop Cable Collar (polyurethane inlay replacement on both sides)
- For use with Hilti Firestop Cable Collar (wall opening filling for single-sided application)

### Advantages

- Can be used with Hilti HDM 330 Manual Dispenser and HDE 500-A22 Cordless Dispenser
- Allows rough cutting of the polyurethane inlay



Order designation	Package contents	Item number
CFS-F FX Firestop foam	incl. 1 mixing nozzle, instructions for use	429802

## FIRESTOP PUTTY BANDAGE CFS-B PA

### Applications

- For use with Hilti Cable Collar CFS-RCC
- For specific cable configurations, to achieve EI 120

### Advantages

- Easy to cut
- Self-adhesive



Order designation	Packing content	Minimum order quantity	Item number
Firestop Putty Bandage CFS-PBA	5 m	1 pc	2062876

## CP 636 FIRESTOP MORTAR

### Applications

- Permanent firestopping of cables, cable trays, and non-combustible pipes in medium-to-large wall and floor openings
- Single, multiple and mixed penetrations
- Medium-large multiple penetrations in concrete and masonry in combination with other products

### Advantages

- Easier to install – consistency can be varied for application with a trowel or commercially available pumps
- Excellent thermal insulating properties
- Minimal shrinkage during curing and no spalling in event of fire



Order designation	Packing content	Minimum order quantity	Item number
CP 636 Firestop Mortar	20 kg	1	334897

## INSTALLATION INSTRUCTIONS

**CFS-RCC**  
#2126526

2x  
4x  
8x  
8x

**CFS-RCC EXT**  
#2126527

2x  
4x  
4x  
4x

**1**

$y \leq 162 \text{ mm}$

$x \leq 162 \text{ mm}$  1x CFS-RCC  
 $x \leq 362 \text{ mm}$  1x CFS-RCC + 1x CFS-RCC EXT  
 $x \leq 562 \text{ mm}$  1x CFS-RCC + 2x CFS-RCC EXT

**2**

? x

min. 3x    min. 4x    min. 6x

**3**

**4**

**5**

>19 mm  
>19 mm

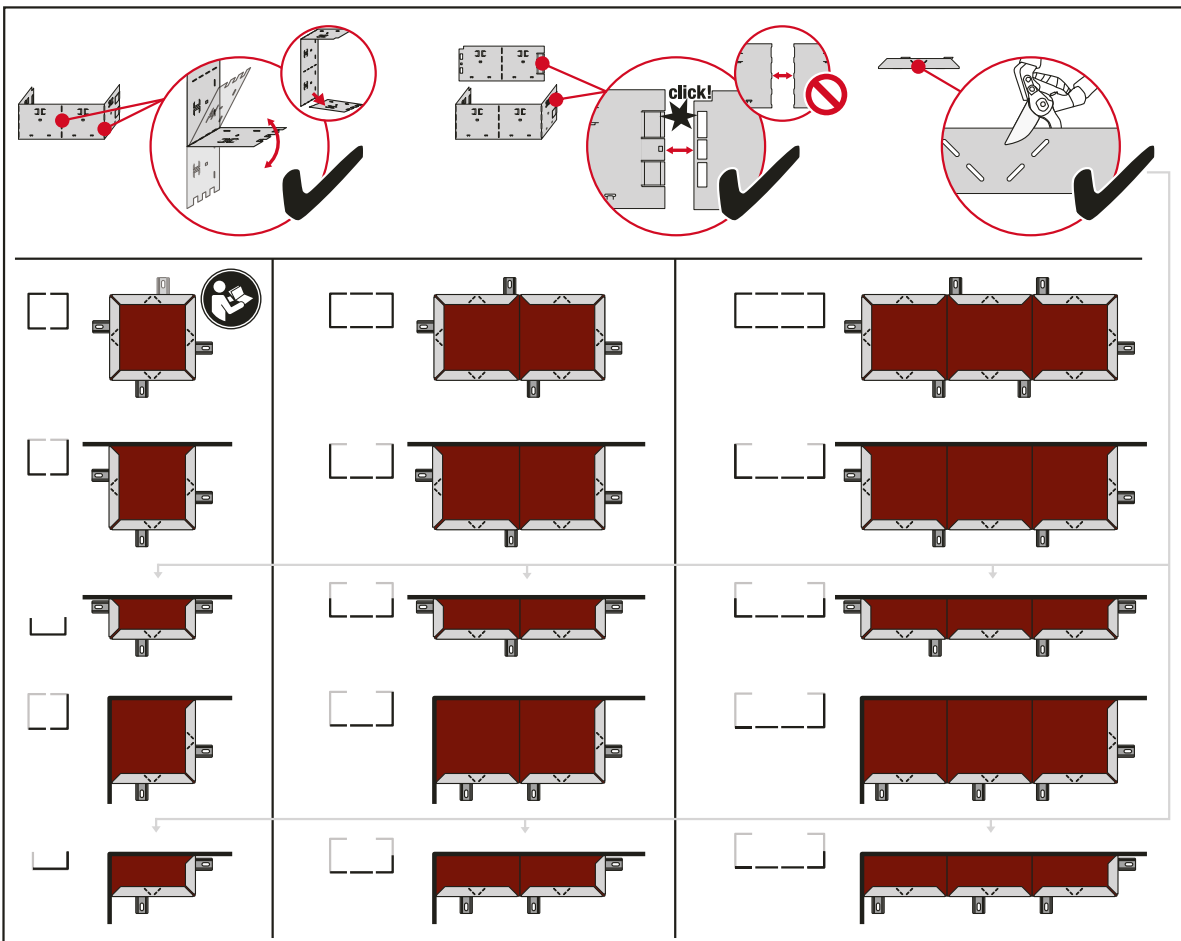
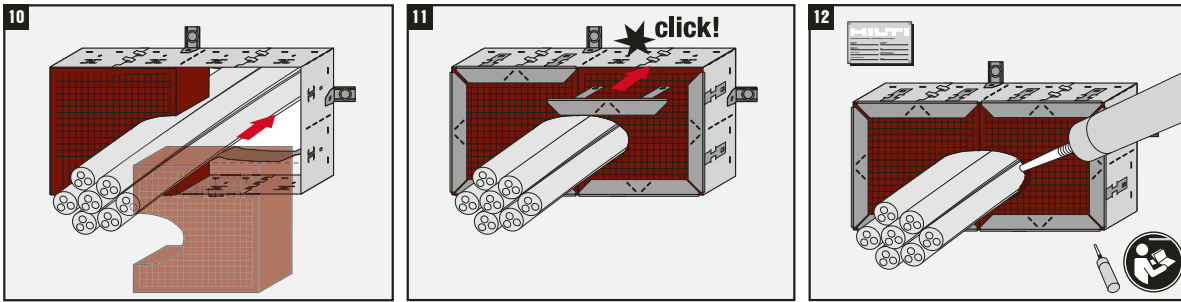
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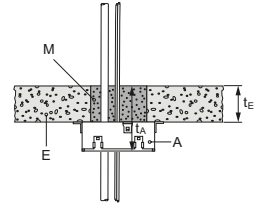
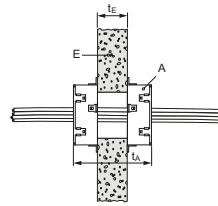
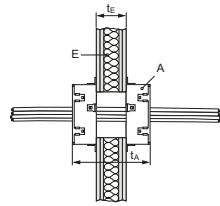
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## INSTALLATION INSTRUCTIONS



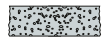
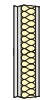
## GENERAL INFORMATION



Partition	Flexible wall	Rigid wall	Floor
Base material thickness ( $t_E$ )	$\geq 100$ mm	$\geq 100$ mm	$\geq 150$ mm
Opening size*	$\leq 181 \times 581$ mm		
Total service surface	$\leq 60\%$ of surface of the opening		
Penetration	Blank seal, cables and cable bundles, waveguides, conduits (flexible/rigid, metal/plastic), Insulated and non-insulated pipes (metal/plastic), aluminium composite pipes, mixed and special penetrations e.g. climasplit		

\* Depending on configuration type

## MAIN APPROVED APPLICATIONS



Penetration	Penetration $\varnothing$	Flexible wall	Rigid wall	Rigid floor
Blank seal			EI120	EI180
Small cables	$\leq 21$ mm		EI120	EI180
	$21 \leq \varnothing \leq 80$ mm		EI90	EI180
Cable bundle	$\varnothing \leq 150$ mm		EI120	
Waveguides	$\varnothing \leq 59.9$ mm		EI120	EI180
Conduits	$\varnothing \leq 16$ mm		EI120	EI180
	$\varnothing \leq 50$ mm		EI120	EI120
Conduit bundle	$\varnothing \leq 80$ mm		EI120	EI120
Special penetration bundle	$\varnothing \leq 80$ mm		EI120	
Plastic pipes	$\varnothing \leq 50$ mm		EI120	EI180
Copper pipes with combustible insulation	$\varnothing \leq 42$ mm		EI120	EI180
Copper pipes with non-combustible insulation	$\varnothing \leq 42$ mm		EI120	EI120
	$\varnothing \leq 28$ mm			EI180
Steel pipes with combustible insulation	$\varnothing \leq 108$ mm		EI120	
	$\varnothing \leq 114$ mm		EI90	EI120
Steel pipes with non-combustible insulation	$\varnothing \leq 108$ mm		EI120	
	$\varnothing \leq 114$ mm		EI90	
Aluminum composite pipes with combustible insulation	$\varnothing \leq 42$ mm		EI120	EI180
Mixed seals without electrical cables	View ETA please		EI60 / EI90 / EI120	
Mixed seals with large electrical cables			EI90	

## RELEVANT CONSIDERATIONS

### Configuration types: basic, side, corner



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### Seal and opening sizes

Dimensions [mm × mm]	Basic configuration	Corner configuration	Side configuration
Seal	200 × 200 (single), 200 × 400 (double), 200 × 800 (triple)		
	162 × 162 (single)	181/81 × 181 (single)	181/81 × 162 (single)
Opening [W <sub>1</sub> × W <sub>2</sub> ]	162 × 362 (double)	181/81 × 381 (double)	181/81 × 362 (double)
	162 × 562 (triple)	181/81 × 581 (triple)	181/81 × 562 (triple)

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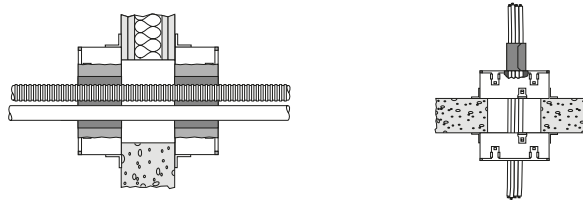
### Number of fastening points

	Basic configuration	Corner configuration	Side configuration
Basic configuration	3	4	6
Side configuration	3	3	4
Corner configuration	2	3	4

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### Seal types

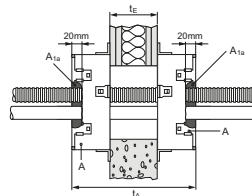
Both sides at the end wall/floor  
Both sides + foam inlay at the end wall/floor  
Single-sided application with FX foam



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### Filling gaps in penetration seals

Gaps between services and the Hilti Firestop Cable Collar are to be filled with Hilti CFS-FIL Firestop Filler.



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### Application with existing firestop installations or in renovation

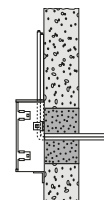
Old materials can remain inside opening between two Hilti cable collars. These have no negative influence on the fire resistance performance of the collar system.



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### Angle of penetrating services

Cables must lie perpendicular to the seal surface. In this case, up to 2 metal segments can be removed to make space for cable penetration. Three fixing hooks must be used to fasten the collar.

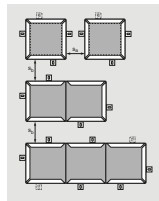


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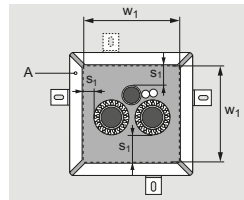
## RELEVANT CONSIDERATIONS

Distances between cluster arrangements, distances for penetrations and distances to support structures



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Special penetrations  
e.g. Climasplit, mixed penetrations



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## CHARACTERISTICS OF FIRESTOP CABLE COLLAR CFS-RCC

Hilti firestop products are comprehensively tested and individually tailored to the technical requirements of a building's mechanical and electrical installations. In addition to their superior behavior in passive fire protection, Hilti firestop products also meet the requirements in building technology that continue to gain significance and also help the designer and installer to meet these additional requirements. The assessment of fitness for use has been made in accordance with EOTA ETAG No 026 – Part 2.

Characteristics	Assessment of characteristics	Norm, standard, test
<b>Health and the environment</b> <b>Dangerous substances</b>	Below any respective occupational exposure limits as far as such limits exist (compared with the list of dangerous substances of the European Commission)	VOC test report in accordance with AgBB (2015) and AFSSET (2009). French VOC regulation (2011). French CMR components (2011). Belgian Regulation (2015). Indoor Air Comfort® (2015). BREEAM International. LEED 4
<b>Protection against noise</b> <b>(airborne sound insulation)</b>	CFS-RCC=Rw (C; Ctr)=63 (-3; -9) dB	EN ISO 140-1. EN 10140-2. EN ISO 717-1
<b>Thermal properties</b>	Thermal conductivity $\lambda = 0.089 \text{ W/mK}$ and thermal resistance $r = 0.55 \text{ m}^2\text{K/W}$	EN 12667
<b>Electrical properties</b>	Electrical volume resistivity: approx. $2.23\text{E}+9 \text{ } \Omega \text{ cm}$ Electrical surface resistivity: approx. $47.1\text{E}+9 \text{ } \Omega \text{ cm}$	IEC 60093 (VDE 0303 Part 30): 1993-12
<b>Durability and serviceability</b>	Overall: Category Z2 ( for internal use at low humidity)	EOTA TR 024:2009
<b>Reaction to fire</b>	Class E	EN 13501-1



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