



# EXPERT SOLUTIONS FOR THE MOST DEMANDING APPLICATIONS

Transit System for  
cables and pipes



**FOR A  
SAFER  
SEAL.**

**Transit system for cables  
and pipes.  
Fire-resistant, watertight  
and gastight.**





## YOU CAN DEPEND ON US.



Hilti has been a leading manufacturer and supplier of high-quality, easy-to-use firestop systems for over 20 years. We support you at the preparatory and execution stages of your firestop projects by offering quick planning assistance, comprehensive technical literature and application-specific training. With Hilti you can depend on high-grade products and services that secure your competitive edge by offering many decisive advantages and thus tremendous added value.

### Fire Test Approvals

- Rubber Modules are Fire-resistant and halogen-free elastomeric material

#### Onshore Firetest approvals:

- **European Technical Assessment**  
Hilti Firestop cable transit CFS-T were assessed according to EAD 350454-00-1104 EN 1366-3 and EN 1366-3:2009 for cables, metal pipes and mixed penetrations: fire ratings up to 180mins
- **UL approval**  
Resistance to fire according ANSI / UL 1479 (ASTM E814) with fire ratings up to 4 hours available UL listings and FM approved.

#### Offshore approvals:

- **A-60 approvals**  
According IMO 754(18) class A and B for marine or offshore applications in steel bulkheads and decks available from MED, ABS, DNV-GL, Lloyd register, US Coast Guard, Transport Canada, RMRS and CCS
- **A-0 approvals**  
According IMO 754(18) class A for marine or offshore applications in steel bulkheads and decks available from ABS, DNV-GL
- **H-120 approvals**  
According IMO 754(18) class A for marine or offshore applications in steel bulkheads and decks available from ABS and Lloyd register
- **J-60 Approval**  
Tested on Jet fire for 60mins approval from ABS.

### Applications – Sealing and fire stop solutions e.g. in

Oil and Gas	Power	Industry
Offshore platforms	Thermal Power plants	Petrochemical
Shipbuilding	Nuclear Power plants	Gas processing
Onshore facilities (refineries)	Wind power	Telecommunication and data centers

### Features and Benefits

Simplicity	Reliability & Inspection	Productivity
<ul style="list-style-type: none"> <li>• Low inventory only 7 different modules are needed to cover all cable diameters from 3 to 99 mm</li> </ul>	<ul style="list-style-type: none"> <li>• Versatile adapter modules for quick, easy accommodation of each cable diameter</li> <li>• Easy inspection - visual inspection of correct installation within seconds due to color-coded adapter system</li> <li>• The special design of the flexible sealing lips ensures a high contact pressure for a higher water and air tightness with lower pre-compression forces</li> </ul>	<ul style="list-style-type: none"> <li>• Big savings thanks to module interlinking, especially where cables run vertically through deck penetrations.</li> <li>• Easy to install using fixing anchor plate and the CFS-T SQU module squeezer</li> <li>• Wedge seals with only one bolt for quick installation</li> </ul>

## SEALING SOLUTION THAT GOES BEYOND FIRE.

The safety standards including various attributes demanded by energy and industry projects make them some of the most uncompromising, exacting engineering works of all. For these critical specifications, Hilti multi-cable transit systems (MCT) deliver you a high-performance but practical solution for creating fire-, water- and gas-resistant protective seals around cables and pipes.



### Water Tightness

Hilti Cable transit systems are tested up to 4.5 bar for water tightness in accordance with the applicable standards minimizing damage in case of accident.



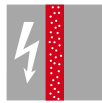
### Gas

Hilti Cable transit systems are tested up to 3 bar for Gas and Air tightness supporting compliance with customer application requirements.



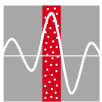
### Resistance against mold & mildew

Hilti Cable transit systems' rubber components were tested according to ASTM G-21 determining the effect of fungi, receiving a rating of 0. Therefore they can be considered mold and mildew resistant.



### Electromagnetic Shielding

The EMC product lines of the Hilti Cable transit systems, were designed and tested to act as an Electro Magnetic shield at specific frequencies.



### Seismic Performance

Hilti Cable transit systems are tested for their performance during and after seismic actions showing excellent smoke tightness and excellent fire performance.



### Blast resistance

Hilti Cable transit systems were tested and remained in good condition after being subjected to air blast loading.

## TRANSIT SYSTEM APPROVAL

### ON shore and Industry applications

Product/approval	UL	FM	EN
CFS-T SB			
CFS-T SBO			
CFS-T RR			
CFS-T RRS			

### Offshore and Shipbuilding applications

Product/approval	ABS	DNV-GL	LR	CCS	RMRS	
CFS-T SS						ATEX
CFS-T SSF						ATEX
CFS-T SSR/R30						ATEX
CFS-T RR						ATEX
CFS-T RRS						ATEX

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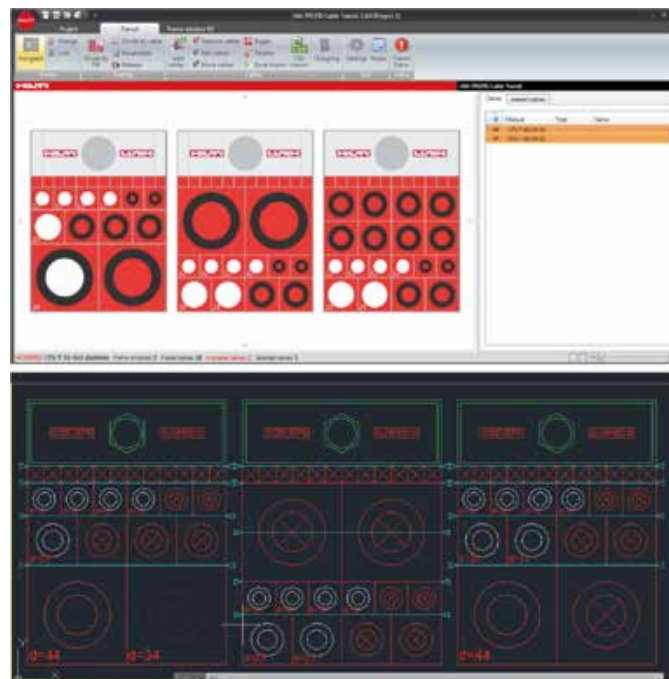
# PUTS FIRESTOP SOLUTIONS AT YOUR FINGERTIPS.

**PROFIS**  
cable transit  
planning  
software and  
AVEVA PDMS  
library.

The Hilti PROFIS cable transit planning software helps you achieve high safety standards right from the very earliest stages of your project. It helps you calculate and select frames and modules of the right dimensions for your projects, prepares accurate bills of materials and lets you define each individual cable according to the needs of the installation. This easy-to-use program helps you save time and costs right from the word go.



- Designing and calculating the frames and modules required according to the size of the opening and applicable materials (CFS-T SB, CFS-T SBO, CFS-T SS, CFS-T SSF, CFS-T RR).  
Precise planning of all cable transits according to the number, size and type of cables.
- Adding of cables by xls import is possible.
- Preparation of parts lists and drawings to be used as a basis for ordering the items required for a project.
- Presentation of the frame packing and cable layout plans for each cable transit, plus documentation containing all project-relevant information.
- Export into AutoCad files is possible.
- The Project Manager incorporated in the Hilti planning software takes the user step-by-step through the project, designing each cable transit on the basis of the specific cable configuration.

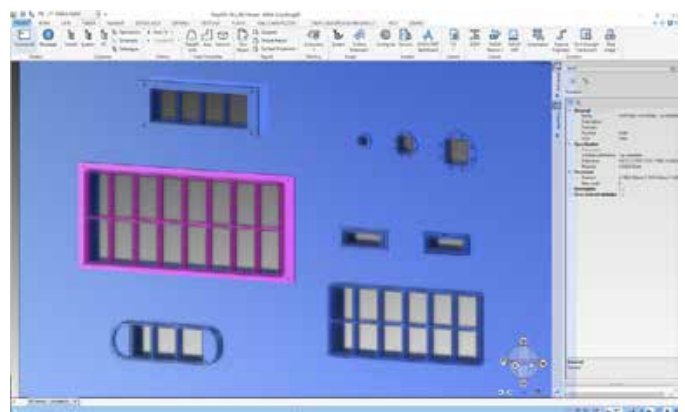






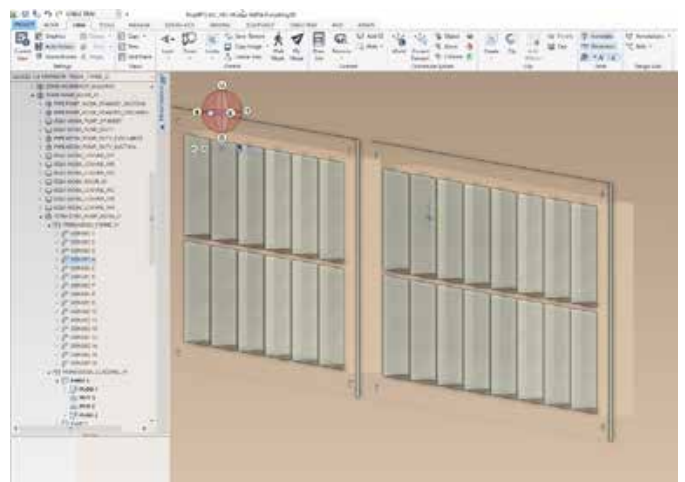
**Features of Hilti PDMS library:**

- 2-level categorization for easy selection
- Structural opening created automatically
- Combo frames placed in one step
- Quick BOM from Hilti Part-list button



**By documenting CFS-T objects in plant's entire 3D model, customers can benefit from:**

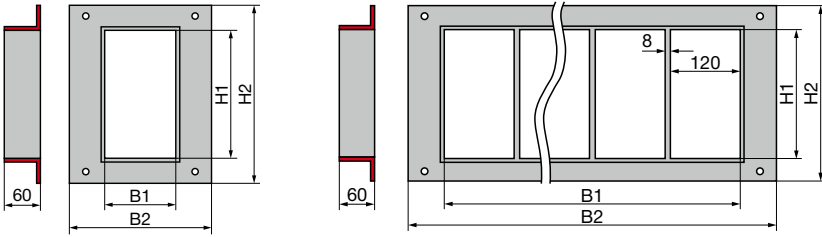
- Improved coordination between teams to properly plan cable sealing related tasks
- Clash detection and positioning
- quick and accurate BOM from single source of truth



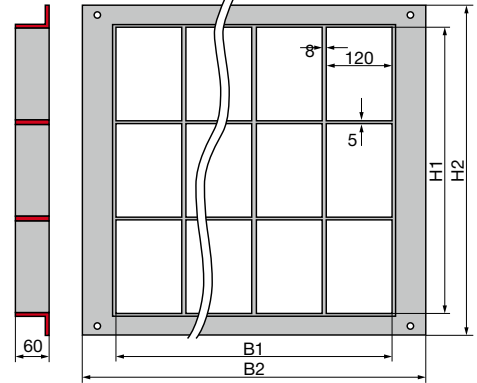
SAFETY ON ALL SIDES.

### CFS-T SBF frame sizes single/double/triple

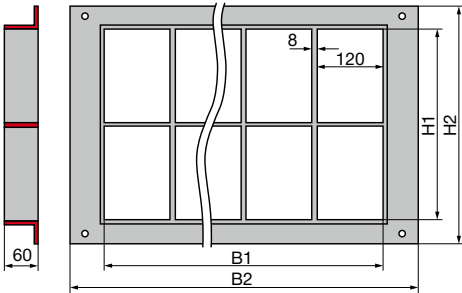
Single Row



Triple Row



Double Row



#### Frame sizes (single-row)\*

	2 x 1		2 x 2		2 x 3		2 x 4		2 x 5		2 x 6		2 x 7		2 x 8		2 x 9		2 x 10	
H1 x B1 (in mm)	101	120	101	248	101	376	101	504	101	632	101	760	101	888	101	1016	101	1144	101	1272
H2 x B2 (in mm)	232	251	232	379	232	507	232	635	232	763	232	891	232	1019	232	1147	232	1275	232	1403
	4 x 1		4 x 2		4 x 3		4 x 4		4 x 5		4 x 6		4 x 7		4 x 8		4 x 9		4 x 10	
H1 x B1 (in mm)	160	120	160	248	160	376	160	504	160	632	160	760	160	888	160	1016	160	1144	160	1272
H2 x B2 (in mm)	291	251	291	379	291	507	291	635	291	763	291	891	291	1019	291	1147	291	1275	291	1403
	6 x 1		6 x 2		6 x 3		6 x 4		6 x 5		6 x 6		6 x 7		6 x 8		6 x 9		6 x 10	
H1 x B1 (in mm)	218	120	218	248	218	376	218	504	218	632	218	760	218	888	218	1016	218	1144	218	1272
H2 x B2 (in mm)	349	251	349	379	349	507	349	635	349	763	349	891	349	1019	349	1147	349	1275	349	1403
	8 x 1		8 x 2		8 x 3		8 x 4		8 x 5		8 x 6		8 x 7		8 x 8		8 x 9		8 x 10	
H1 x B1 (in mm)	277	120	277	248	277	376	277	504	277	632	277	760	277	888	277	1016	277	1144	277	1272
H2 x B2 (in mm)	408	251	408	379	408	507	408	635	408	763	408	891	408	1019	408	1147	408	1275	408	1403

\* All sizes are covered by ETA approval

#### Frame sizes (double-row)\*\*

	4+4 x 1		4+4 x 2		4+4 x 3		4+4 x 4		4+4 x 5		4+4 x 6		4+4 x 7		4+4 x 8		4+4 x 9		4+4 x 10	
H1 x B1 (in mm)	328	120	328	248	328	376	328	504	328	632	328	760	328	888	328	1016	328	1144	328	1272
H2 x B2 (in mm)	459	251	459	379	459	507	459	635	459	763	459	891	459	1019	459	1147	459	1275	459	1403
	6+6 x 1		6+6 x 2		6+6 x 3		6+6 x 4		6+6 x 5		6+6 x 6		6+6 x 7		6+6 x 8		6+6 x 9		6+6 x 10	
H1 x B1 (in mm)	444	120	444	248	444	376	444	504	444	632	444	760	444	888	444	1016	444	1144	444	1272
H2 x B2 (in mm)	575	251	575	379	575	507	575	635	575	763	575	891	575	1019	575	1147	575	1275	575	1403
	8+8 x 1		8+8 x 2		8+8 x 3		8+8 x 4		8+8 x 5		8+8 x 6		8+8 x 7		8+8 x 8		8+8 x 9		8+8 x 10	
H1 x B1 (in mm)	562	120	562	248	562	376	562	504	562	632	562	760	562	888	562	1016	562	1144	562	1272
H2 x B2 (in mm)	693	251	693	379	693	507	693	635	693	763	693	891	693	1019	693	1147	693	1275	693	1403

\*\* Sizes up to 8+8x4 are covered by ETA approval, an Engineering Judgement is required for all other sizes

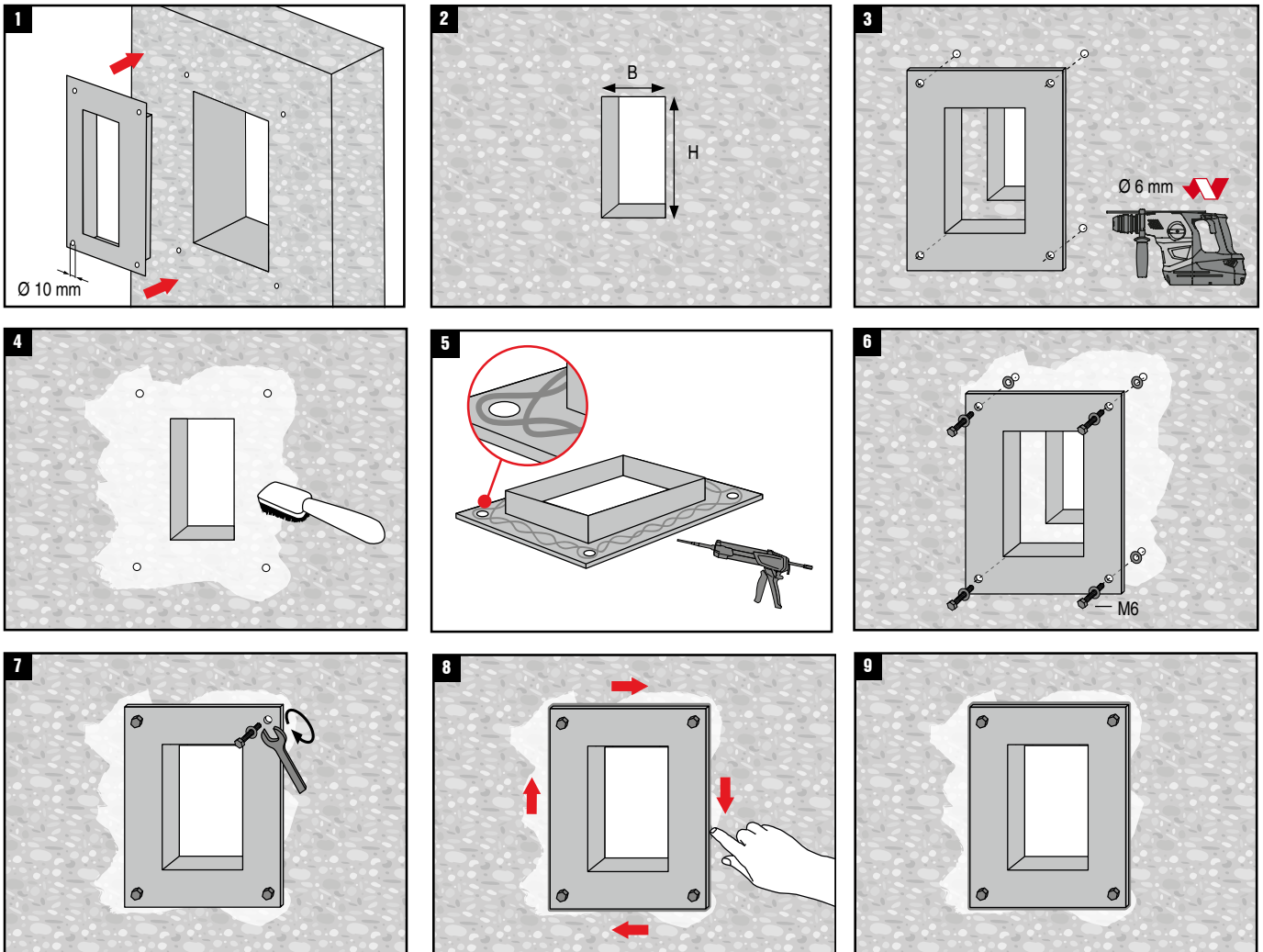
#### Frame sizes (triple-row)\*\*\*

	4+4+4 x 1		4+4+4 x 2		4+4+4 x 3		4+4+4 x 4		4+4+4 x 5		4+4+4 x 6		4+4+4 x 7		4+4+4 x 8		4+4+4 x 9		4+4+4 x 10	
H1 x B1 (in mm)	496	120	496	248	496	376	496	504	496	632	496	760	496	888	496	1016	496	1144	496	1272
H2 x B2 (in mm)	627	251	627	379	627	507	627	635	627	763	627	891	627	1019	627	1147	627	1275	627	1403
	6+6+6 x 1		6+6+6 x 2		6+6+6 x 3		6+6+6 x 4		6+6+6 x 5		6+6+6 x 6		6+6+6 x 7		6+6+6 x 8		6+6+6 x 9		6+6+6 x 10	
H1 x B1 (in mm)	670	120	670	248	670	376	670	504	670	632	670	760	670	888	670	1016	670	1144	670	1272
H2 x B2 (in mm)	801	251	801	379	801	507	801	635	801	763	801	891	801	1019	801	1147	801	1275	801	1403
	8+8+8 x 1		8+8+8 x 2		8+8+8 x 3		8+8+8 x 4		8+8+8 x 5		8+8+8 x 6		8+8+8 x 7		8+8+8 x 8		8+8+8 x 9		8+8+8 x 10	
H1 x B1 (in mm)	847	120	847	248	847	376	847	504	847	632	847	760	847	888	847	1016	847	1144	847	1272
H2 x B2 (in mm)	987	251	987	379	987	507	987	635	987	763	987	891	987	1019	987	1147	987	1275	987	1403

\*\*\* The sizes are not covered by ETA approval, an Engineering Judgement will be required

## INSTALLATION OF BOLTED FRAME CFS-T SBF

### Instructions for use



- Insert the frame into aperture. Center the frame in the aperture and use it as template for the flange hole pattern. Remove the frame and drill the holes for the bolts.
- Clean the surface with a brush. Apply silicone sealant (CP 601S) onto the frame flange with a thickness of minimum 6 mm; a second string of sealant isolates the holes; attach 2 mm washers or similar behind the flange to ensure a 2 mm gap between the frame flange and the structure.
- Attach the frame to the structure. Attach the frame using bolts, nuts and washers.
- To complete the installation, tighten the nuts crosswise according to your selected fasteners.
- Smooth out the sealant so that it closes any gap completely all around. Consider the curing time of the sealant.

**!** You do not need to drill more holes. The necessary holes have been drilled at production offsite. The size of the holes are standard ones and have dimension of 10 mm. For large frames, simplify the installation by attaching two bolts first. Then drill the remaining holes with the frame in place. Max. size of opening must not exceed +7 mm of B1 and H1 on all sides.

## CFS-T SBF TRANSIT FRAMES SINGLE-ROW



<b>Transit frames (single-row)*</b>		
Ordering designation	Package contents	Item no.
Transit frame CFS-T SBF-2x1 HDG	1	2280325
Transit frame CFS-T SBF-4x1 HDG	1	2280326
Transit frame CFS-T SBF-4x2 HDG	1	2280327
Transit frame CFS-T SBF-4x3 HDG	1	2280328
Transit frame CFS-T SBF-4x4 HDG	1	2280329
Transit frame CFS-T SBF-4x5 HDG	1	2280820
Transit frame CFS-T SBF-4x6 HDG	1	2280821
Transit frame CFS-T SBF-4x7 HDG	1	2280822
Transit frame CFS-T SBF-4x8 HDG	1	2280823
Transit frame CFS-T SBF-4x9 HDG	1	2280824
Transit frame CFS-T SBF-4x10 HDG	1	2280825
Transit frame CFS-T SBF-6x1 HDG	1	2280836
Transit frame CFS-T SBF-6x2 HDG	1	2280837
Transit frame CFS-T SBF-6x3 HDG	1	2280838
Transit frame CFS-T SBF-6x4 HDG	1	2280323
Transit frame CFS-T SBF-6x5 HDG	1	2280324
Transit frame CFS-T SBF-6x6 HDG	1	2280839
Transit frame CFS-T SBF-6x7 HDG	1	2280840
Transit frame CFS-T SBF-6x8 HDG	1	2280841
Transit frame CFS-T SBF-6x9 HDG	1	2280842
Transit frame CFS-T SBF-6x10 HDG	1	2280843
Transit frame CFS-T SBF-8x1 HDG	1	2280854
Transit frame CFS-T SBF-8x2 HDG	1	2280855
Transit frame CFS-T SBF-8x3 HDG	1	2280856
Transit frame CFS-T SBF-8x4 HDG	1	2280857
Transit frame CFS-T SBF-8x5 HDG	1	2280858
Transit frame CFS-T SBF-8x6 HDG	1	2280859
Transit frame CFS-T SBF-8x7 HDG	1	2280860
Transit frame CFS-T SBF-8x8 HDG	1	2280861
Transit frame CFS-T SBF-8x9 HDG	1	2280862
Transit frame CFS-T SBF-8x10 HDG	1	2280863

\*Standard items

## CFS-T SBF TRANSIT FRAMES DOUBLE-ROW

<b>Transit frames (double-row)*</b>		
Ordering designation	Package contents	Item no.
Transit frame CFS-T SBF-4+4x1 HDG	1	2280826
Transit frame CFS-T SBF-4+4x2 HDG	1	2280827
Transit frame CFS-T SBF-4+4x3 HDG	1	2280828
Transit frame CFS-T SBF-4+4x4 HDG	1	2280829
Transit frame CFS-T SBF-4+4x5 HDG	1	2280830
Transit frame CFS-T SBF-4+4x6 HDG	1	2280831
Transit frame CFS-T SBF-4+4x7 HDG	1	2280832
Transit frame CFS-T SBF-4+4x8 HDG	1	2280833
Transit frame CFS-T SBF-4+4x9 HDG	1	2280834
Transit frame CFS-T SBF-4+4x10 HDG	1	2280835
Transit frame CFS-T SBF-6+6x1 HDG	1	2280844
Transit frame CFS-T SBF-6+6x2 HDG	1	2280845
Transit frame CFS-T SBF-6+6x3 HDG	1	2280846
Transit frame CFS-T SBF-6+6x4 HDG	1	2280847
Transit frame CFS-T SBF-6+6x5 HDG	1	2280848
Transit frame CFS-T SBF-6+6x6 HDG	1	2280849
Transit frame CFS-T SBF-6+6x7 HDG	1	2280850
Transit frame CFS-T SBF-6+6x8 HDG	1	2280851
Transit frame CFS-T SBF-6+6x9 HDG	1	2280852
Transit frame CFS-T SBF-6+6x10 HDG	1	2280853
Transit frame CFS-T SBF-8+8x1 HDG	1	2280864
Transit frame CFS-T SBF-8+8x2 HDG	1	2280865
Transit frame CFS-T SBF-8+8x3 HDG	1	2280866
Transit frame CFS-T SBF-8+8x4 HDG	1	2280867
Transit frame CFS-T SBF-8+8x5 HDG	1	2280868
Transit frame CFS-T SBF-8+8x6 HDG	1	2280869
Transit frame CFS-T SBF-8+8x7 HDG	1	2280870
Transit frame CFS-T SBF-8+8x8 HDG	1	2280871
Transit frame CFS-T SBF-8+8x9 HDG	1	2280321
Transit frame CFS-T SBF-8+8x10 HDG	1	2280322

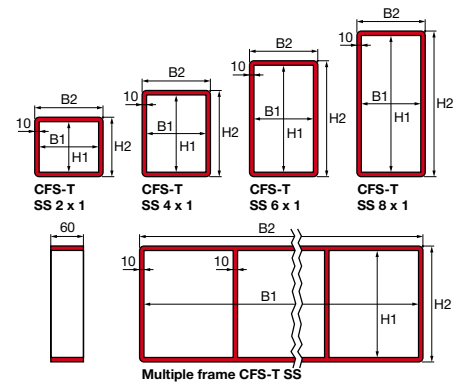
\*Standard items



## CFS-T SS transit frames



CFS-T SS



### Technical information

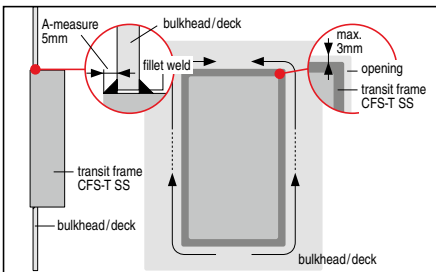
- Made from 10 mm flat bar
- CFS-T SS transit frames with higher number of frame windows or double-row CFS-T SS transit frames available on request.

### Material availability options

- Standard Steel (primer coated)
- Stainless steel
- Aluminium

Hilti CFS-T SS transit frames have been optimized for use in steel structures.

### Welding procedure for transit frames CFS-T SS



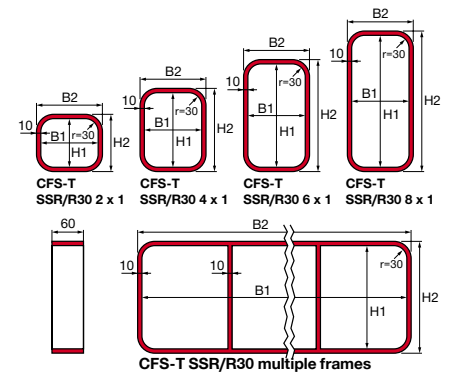
### Dimensions of CFS-T SS transit frames (single-row)

CFS-T SS	2 x 1	2 x 2	2 x 3	2 x 4	2 x 5
H1 x B1 (in mm)	101x120	101x250	101x380	101x510	101x640
H2 x B2 (in mm)	121x140	121x270	121x400	121x530	121x660
	4 x 1	4 x 2	4 x 3	4 x 4	4 x 5
H1 x B1 (in mm)	160x120	160x250	160x380	160x510	160x640
H2 x B2 (in mm)	180x140	180x270	180x400	180x530	180x660
	6 x 1	6 x 2	6 x 3	6 x 4	6 x 5
H1 x B1 (in mm)	218x120	218x250	218x380	218x510	218x640
H2 x B2 (in mm)	238x140	238x270	238x400	238x530	238x660
	8 x 1	8 x 2	8 x 3	8 x 4	8 x 5
H1 x B1 (in mm)	277x120	277x250	277x380	277x510	277x640
H2 x B2 (in mm)	297x140	297x270	297x400	297x530	297x660

## CFS-T SSR/R30 transit frames



CFS-T SSR/R30



### Approvals

Approvals issued by international certification organizations for use of the product in SOLAS A60 decks and bulkheads in accordance with IMO 754(18) are available on request.

### Material availability options

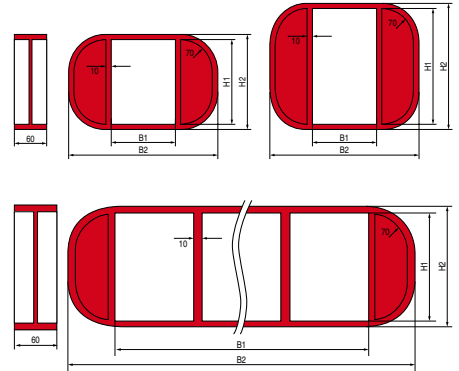
- Standard Steel (primer coated)

Hilti CFS-T SSR/R30 transit frames are the high-strength alternative for steel structures in shipbuilding and offshore applications where the frame is subjected to extra-high loads.

### Dimensions of CFS-T SSR/R30 transit frames

CFS-T SSR/R30	4 x 1	4 x 2	4 x 3	4 x 4	4 x 5
H1 x B1 (in mm)	160x120	160x250	160x380	160x510	160x640
H2 x B2 (in mm)	180x140	180x270	180x400	180x530	180x660
	6 x 1	6 x 2	6 x 3	6 x 4	6 x 5
H1 x B1 (in mm)	218x120	218x250	218x380	218x510	218x640
H2 x B2 (in mm)	238x140	238x270	238x400	238x530	238x660
	8 x 1	8 x 2	8 x 3	8 x 4	8 x 5
H1 x B1 (in mm)	277x120	277x250	277x380	277x510	277x640
H2 x B2 (in mm)	297x140	297x270	297x400	297x530	297x660

## CFS-T SSR transit frames



CFS-T SSR



Material Availability options  
 • Standard Steel (primer coated)

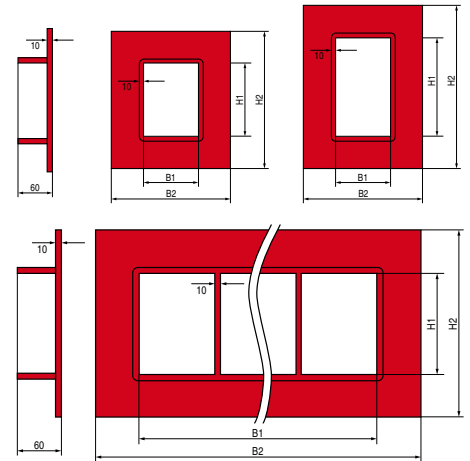
<b>Dimensions of CFS-T SSR transit frames (single-row)</b>					
<b>CFS-T SSR</b>	<b>4 x 1</b>	<b>4 x 2</b>	<b>4 x 3</b>	<b>4 x 4</b>	<b>4 x 5</b>
H1 x B1 (in mm)	160x120	160x250	160x380	160x510	160x640
H2 x B2 (in mm)	180x300	180x430	180x560	180x690	180x820
	<b>6 x 1</b>	<b>6 x 2</b>	<b>6 x 3</b>	<b>6 x 4</b>	<b>6 x 5</b>
H1 x B1 (in mm)	218x120	218x250	218x380	218x510	218x640
H2 x B2 (in mm)	238x300	238x430	238x560	238x690	238x810
	<b>8 x 1</b>	<b>8 x 2</b>	<b>8 x 3</b>	<b>8 x 4</b>	<b>8 x 5</b>
H1 x B1 (in mm)	277x120	277x250	277x380	277x510	277x640
H2 x B2 (in mm)	297x300	297x430	297x560	297x690	297x810



## CFS-T SSF transit frames



CFS-T SSF



### Technical information

- Made from 10 mm flat bar

### Material availability options

- Standard Steel (primer coated)
- Stainless steel

Hilti CFS-T SSF transit frames have been optimized for use in steel structures

### Dimensions of CFS-T SSF transit frames

CFS-T SSF	4 x 1	4 x 2	4 x 3	4 x 4	4 x 5
H1 x B1 (in mm)	160x120	160x250	160x380	160x510	160x640
H2 x B2 (in mm)	300x260	300x390	300x520	300x650	300x780
	<b>6 x 1</b>	<b>6 x 2</b>	<b>6 x 3</b>	<b>6 x 4</b>	<b>6 x 5</b>
H1 x B1 (in mm)	218x120	218x250	218x380	218x510	218x640
H2 x B2 (in mm)	358x260	358x390	358x520	358x650	358x780
	<b>8 x 1</b>	<b>8 x 2</b>	<b>8 x 3</b>	<b>8 x 4</b>	<b>8 x 5</b>
H1 x B1 (in mm)	277x120	277x250	277x380	277x510	277x640
H2 x B2 (in mm)	417x260	417x390	417x520	417x650	417x780

## QUICK, EASY AND VERSATILE.

The Hilti cable transit system.

### One system – a host of advantages

Designed as a modular system, the Hilti Cable Transit System solves three problems simultaneously. These versatile sets consisting of the fire-resistant, gas- and watertight basic module, module adapter and core module not only seal around cables quickly and reliably, they're also re-usable. That saves time, cuts costs and helps keep your inventory to a minimum.

### Basic module

The basic module for sealing around cables to a tolerance of 2-3 mm (without use of an adapter). The modules are supplied in a joined-together state but can be easily separated for individual use. Available in 7 different module sizes (15, 20, 30, 40, 60, 90 and 120mm).

### Adapter module

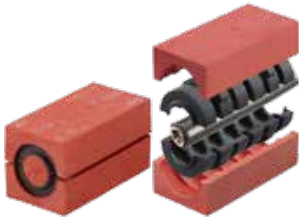
Adapter modules in black or gray for sealing around cables to a tolerance of 3-5 mm.

### Core module

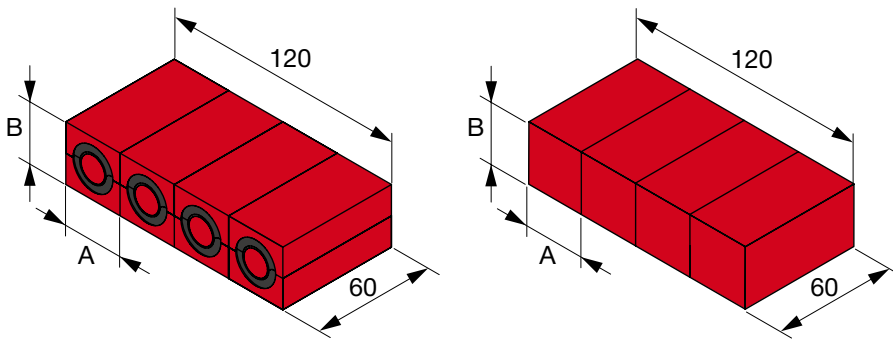
The core module is used as a filler where space is reserved for future cable installations.

### Filler modules

Space reserved for future cable installations can be filled with the filler modules in the sizes 5, 10, 15, 20, 30, 40 and 60. The filler modules are supplied in a joined-together state (filler module blocks) but can be easily separated for individual use.



## DIMENSIONS OF THE BASIC MODULES.



Module	Rohrhersteller		Diameter range	Diameter range per module / adapter
<b>Cable modules</b>				
	Dimension A (in mm)	Dimension B (in mm)		
CFS-T 15/0+3-9	15	15	3 - 9 mm	Black adapter = 3 - 5 mm Grey adapter = 6 - 8 mm Basic module = 9 mm
CFS-T 20/0+5-12	20	20	5 - 12 mm	Black adapter = 5 - 7 mm Grey adapter = 8 - 10 mm Basic module = 11 - 12 mm
CFS-T 20/0+5-16 (with extended diameter range)	20	20	5 - 16 mm	Black adapter = 5 - 8 mm Grey adapter = 9 - 11 mm Red adapter = 12 - 14 mm Basic module = 15 - 16 mm
CFS-T 30/0+13-23	30	30	13 - 23 mm	Black Adapter = 13 - 16 mm Grey Adapter = 17 - 21 mm Basic Module = 22 - 23 mm
CFS-T 40/0+23-33	40	40	23 - 33 mm	Black Adapter = 23 - 26 mm Grey Adapter = 27 - 31 mm Basic Module = 32 - 33 mm
CFS-T 60/0+34-51	60	60	34 - 51 mm	Black Adapter = 34 - 38 mm Grey Adapter = 39 - 43 mm Red insert = 44 - 48 mm Basic Module = 49 - 51 mm
CFS-T 90/0+52-78	90	90	52 - 78 mm	Black Adapter (thick) = 52 - 57 mm Grey Adapter = 58 - 63 mm Red Adapter = 64 - 69 mm Black Adapter (thin) = 70 - 75 mm Basic Module = 76 - 78 mm
CFS-T 120/0+79-99	120	120	79 - 99 mm	Black Adapter = 79 - 84 mm Grey Adapter = 85 - 90 mm Red Adapter = 91 - 96 mm Basic Module = 97 - 99 mm
<b>Filler modules</b>				
CFS-T FB 24x5/0	5	5	0	-
CFS-T FB 12x10/0	10	10	0	-
CFS-T FB 15/0	15	15	0	-
CFS-T FB 20/0	20	20	0	-
CFS-T FB 30/0	30	30	0	-
CFS-T FB 40/0	40	40	0	-
CFS-T FB 60/0	60	60	0	-

## CLEVER ACCESSORIES.

### Wedge compression kit

The CFS-T WD 120 wedge compression kit is used to allow quick and easy compression of modules and filler blocks for an effective seal. The sealing wedge can be placed anywhere within the frame and there is only one central bolt to be tightened.

Available with bolt and counter-plate made from galvanized steel or A4 stainless steel material.

The CFS-T WD 120 wedge compression kit is supplied complete with 4 anchor plates, one fixing anchor plate, Hilti ruler and lubricant (30 g).



### Anchor plate

The anchor plate facilitates assembly of the cable modules and filler modules, secures these within the frame and increases tightness of the seal against static and dynamic pressure. The anchor plate is available in galvanized steel, stainless steel material or in aluminium.

Use one anchor plate between each row of modules and also to secure the CFS-T WD 120 wedge.



### Fixing anchor plate

The fixing anchor plate is used in conjunction with the module squeezer. After precompression of the modules, the fixing anchor plate can be secured by tightening the screws against the frame. It thus holds the rows of modules in their precompressed position. This facilitates insertion of the last module and the wedge seal. Use of the fixing anchor plate is recommended in situations where a large number of cables pass through the transit frame.



### Module squeezer

The module squeezer uses the screw jack principle to achieve easy precompression of the modules before insertion of the row, or last two rows, and thus facilitates further assembly of the cable modules and insertion of the wedge seal.



### Wedge puller

The wedge puller is used as a disassembly tool to aid removal of the CFS-T WD 120 wedge seal without damage to allow subsequent retrofitting of additional cables.



### Lubricant

The Hilti CFS-T LUB is lubricant which must be used to grease all rubber module parts during assembly to facilitate installation, ensure sealing effect to achieve required water and gas tightness of the system, as well as it prevents modules from sticking together in case they are disassembled, Lubricant is available in two sizes 30 gm and 500 grams.



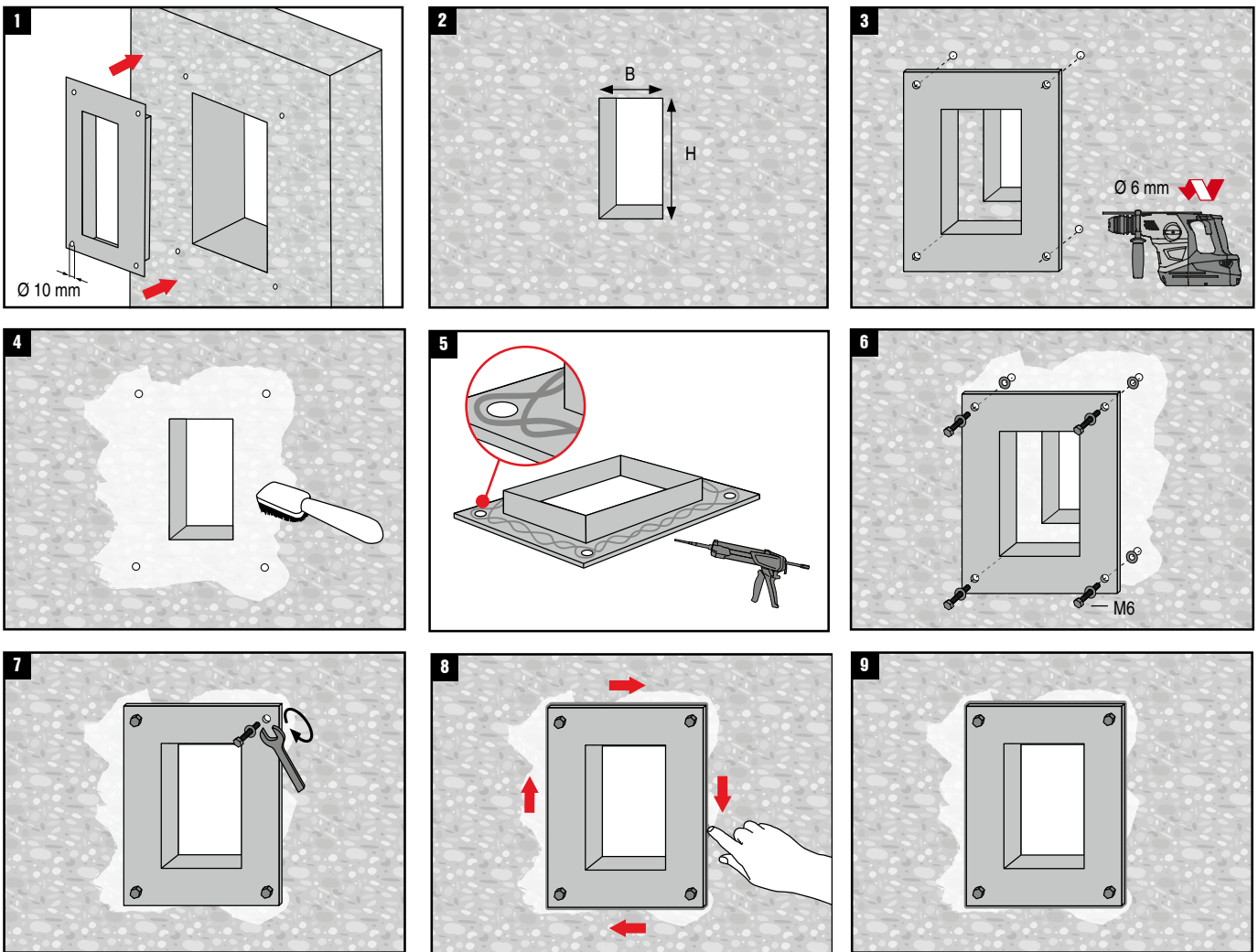
# INSTRUCTIONS FOR USE



[www.hilti.com](http://www.hilti.com)  
[www.hilti.ca](http://www.hilti.ca)  
[www.hilti.group](http://www.hilti.group)

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- fr** Avant toute utilisation et pour tout détail concernant une application, se référer à la documentation Hilti, à la liste de publications des tierces parties et aux approbations nationales. Seulement pour utilisateurs professionnels.
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- cn** 操作之前以及有关特殊应用细节, 请参阅Hilti产品资料、第三方发布编目和国家认证。仅用于工业用途
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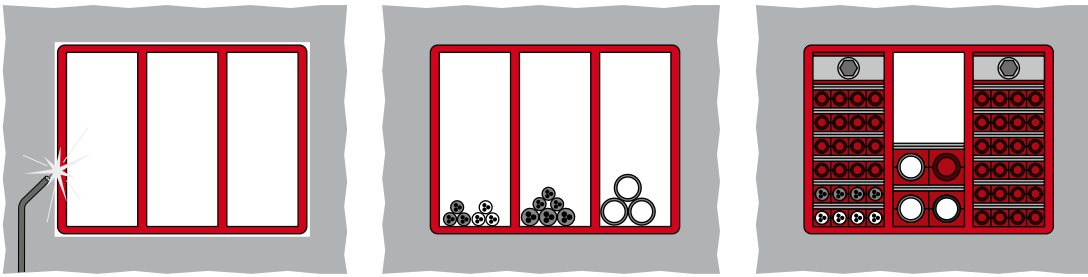
## Instructions for use



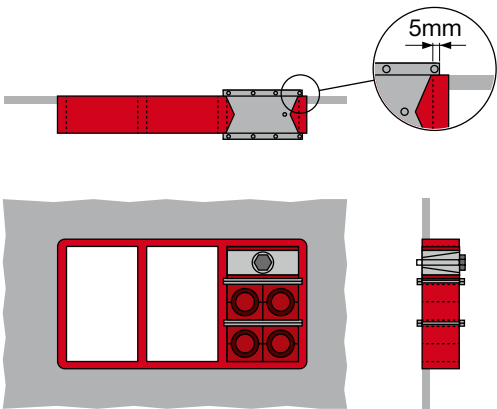
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 Hilti Brasil, Av. Ceci, 426, Centro Empresarial, Tamboré Barueri - SP, CEP 06460 120, Tel.: 0800 14 44 48, www.hilti.com/brazil  
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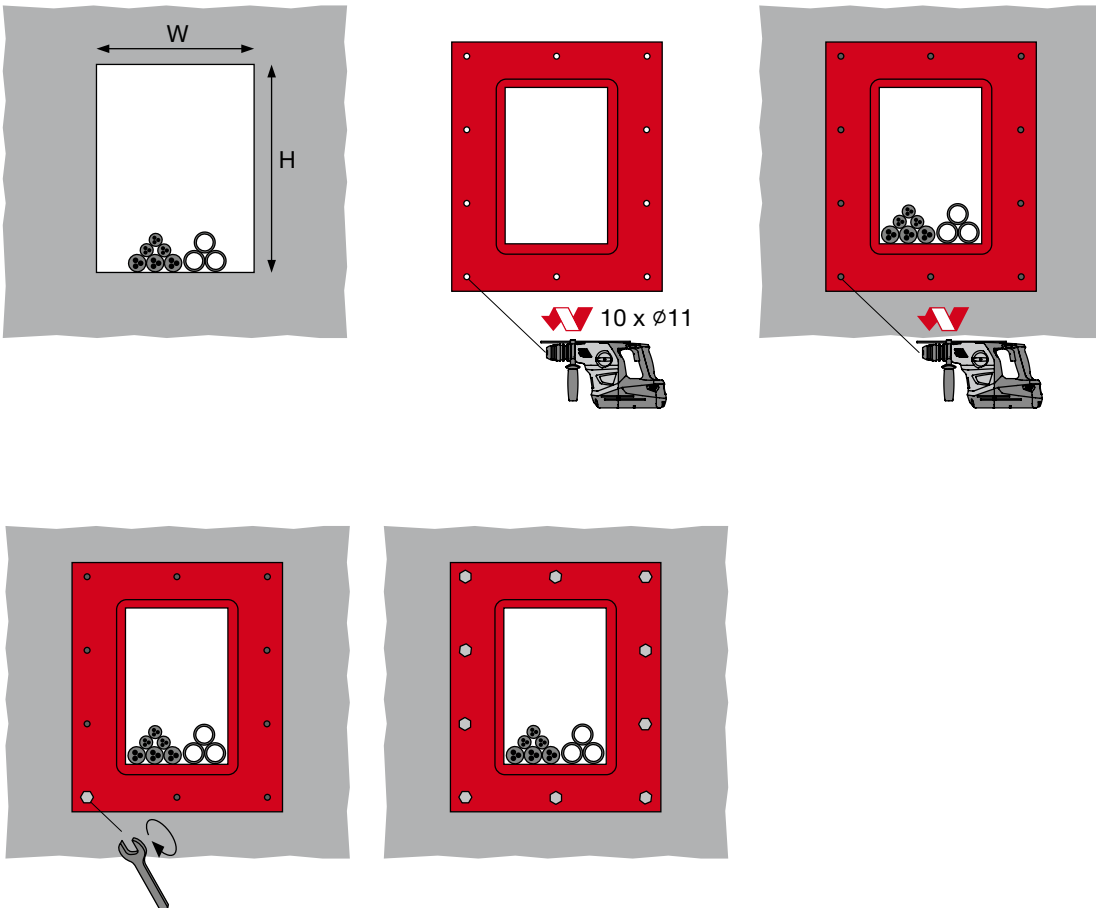
## INSTALLING THE RECTANGULAR FRAMES TO THE STEEL DIVISIONS



Frames should be welded to bulkhead or deck according to Hilti Welding Guideline issue date 2020.

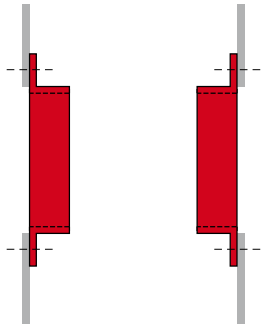


## INSTALLING THE CFS-T SSF FRAME (BOLTED VERSION) TO THE STEEL DIVISIONS

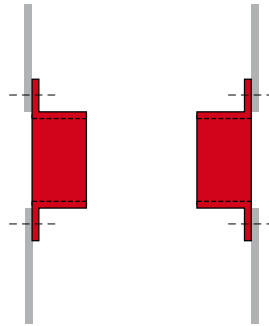


# FRAME/PLUG POSITIONS ON BULKHEAD AND DECK

## Bolted version to bulkhead

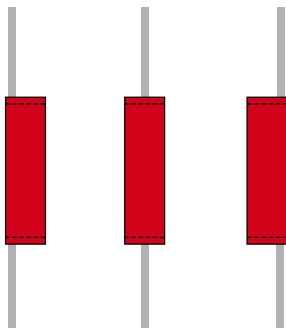


Rectangular frames

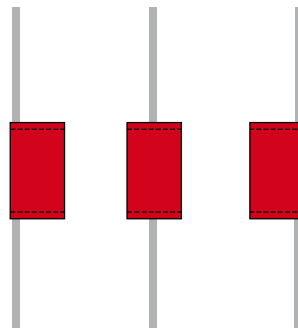


Round plugs with sleeve

## Welded version to bulkhead

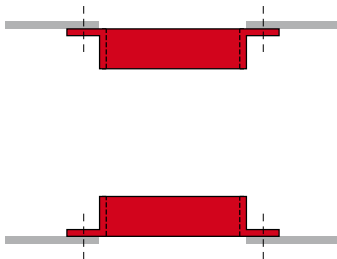


Rectangular frames

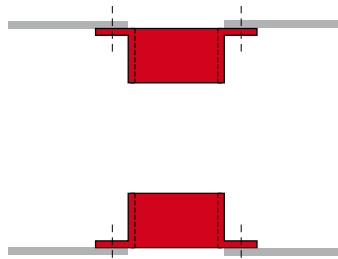


Round plugs with sleeve

## Bolted version to deck

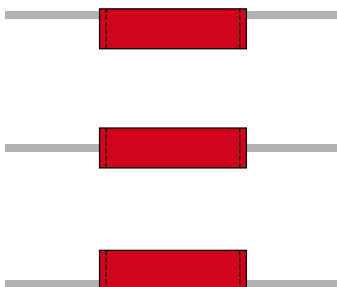


Rectangular frames

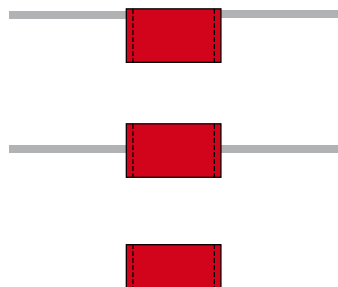


Round plugs with sleeve

## Welded version to deck

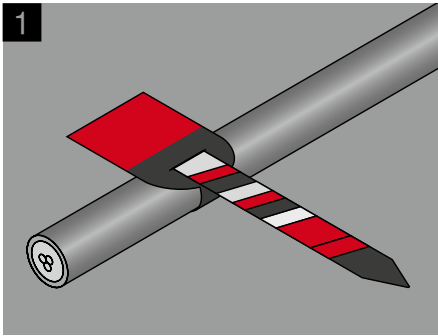


Rectangular frames

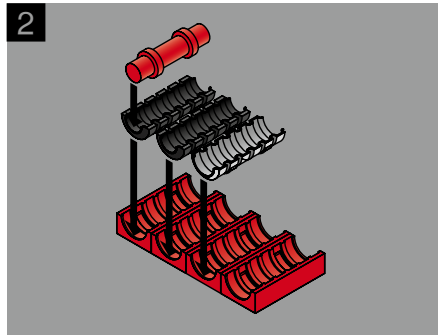


Round plugs with sleeve

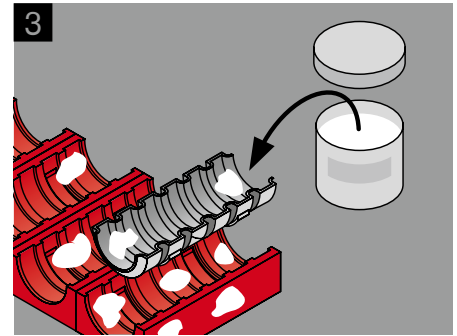
## INSTALLING THE SYSTEM – THIS IS HOW IT’S DONE IN A FEW EASY STEPS.



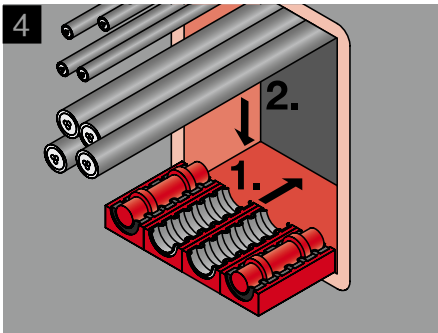
1  
Wrap the Hilti size gauge around the cable/pipe in order to determine the module and adapter size required.



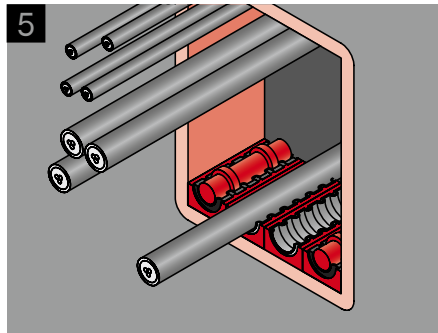
2  
If necessary, remove the black adapter and replace it with one of the correct size or, depending on the size required, use the basic module without the adapter.



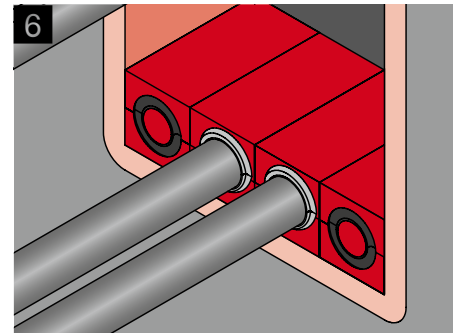
3  
Carefully apply Hilti CFS-T LUB lubricant to all system parts.



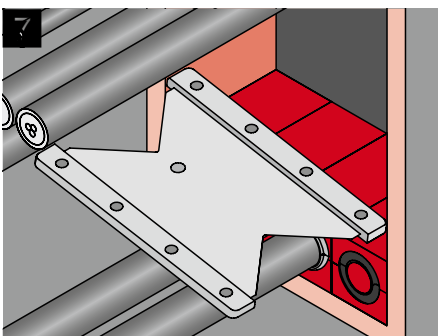
4  
Place the open module in the frame beneath the cables/pipes.



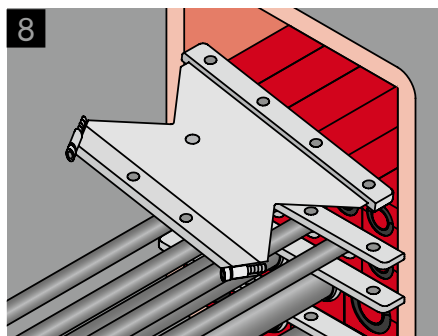
5  
Position the cables/pipes in the module.



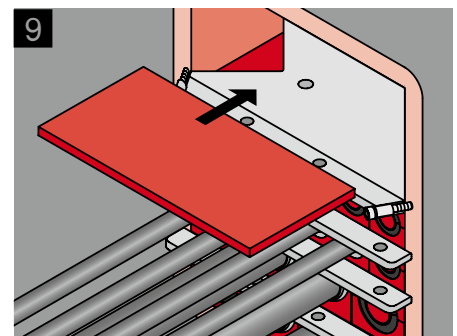
6  
Close the module by fitting the appropriate top half.



7  
Place the anchor plate on top of the module row and then continue with the next row as described above, using modules of the appropriate sizes.

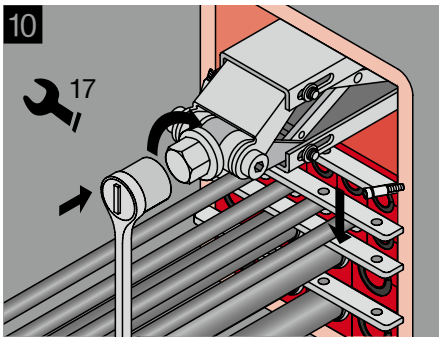


8  
Place the fixing anchor plate on top of the second-last module row.

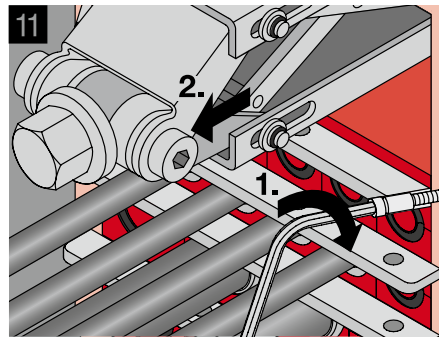


9  
Place the pressure plate on top of the last anchor plate in the frame.

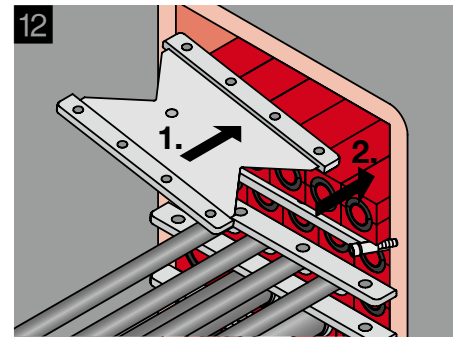




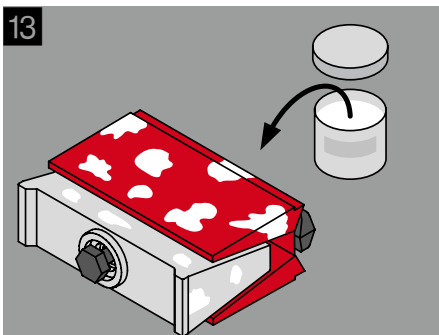
Position the module squeezer centrally in the space above the last module and apply pressure by turning the spindle with a suitable wrench.



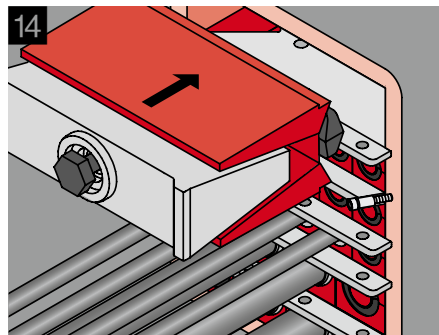
Tighten the screws on the fixing anchor plate. Remove the module squeezer. The modules remain compressed, making it easier to insert the wedge seal.



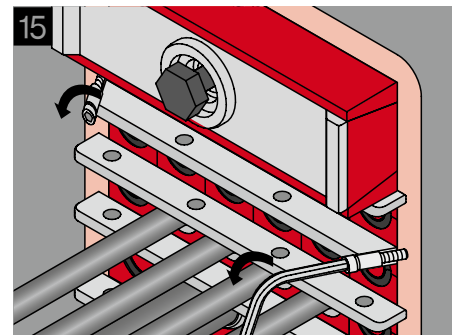
The last anchor plate and module row can then be inserted.



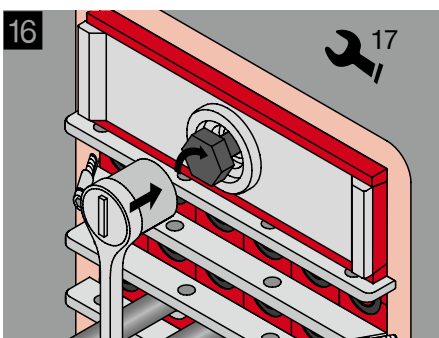
Apply lubricant to all surfaces of the CFS-T WD 120 wedge seal.



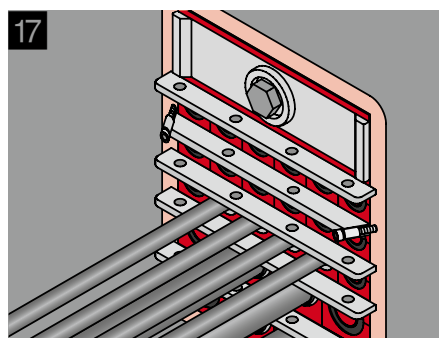
Push the wedge seal into the remaining space in the frame.



Release the screws on the fixing anchor plate before tightening the bolt in the wedge seal.



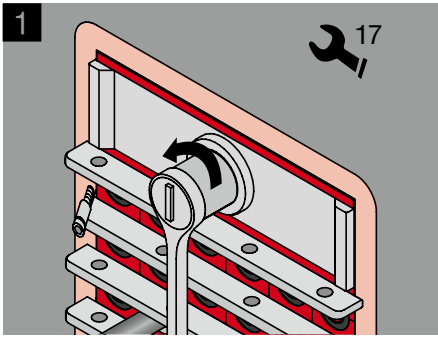
Secure the whole assembly by tightening the bolt in the wedge seal with a suitable wrench.



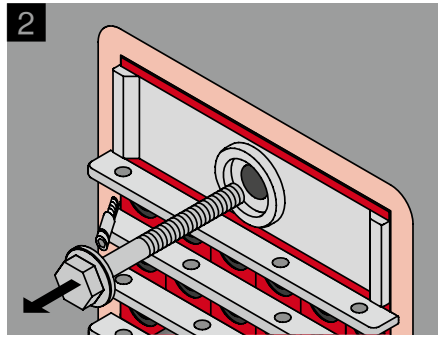
Make sure that all modules have been correctly installed in accordance with the points in the checklist.

#### Technical information

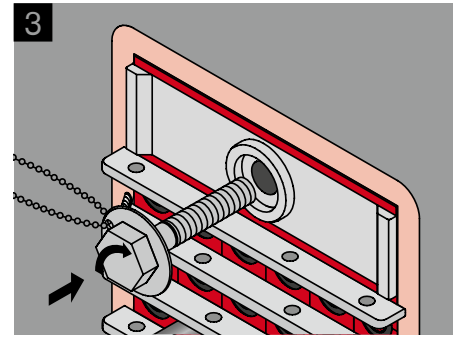
- Is the wedge seal completely, or almost completely, within the frame?
- Are all modules securely seated behind the raised edge of the anchor plate where they cannot fall out?
- Has the right number of modules been installed? Check the original installation plan.
- Have modules of the correct size been installed? Check the original installation plan.
- Have module adapters and core modules of the correct color been installed (gray, red, black or none)?
- Were all modules, adapters and core modules well lubricated?

**EXCHANGING THE MODULES QUICKLY AND EASILY.**

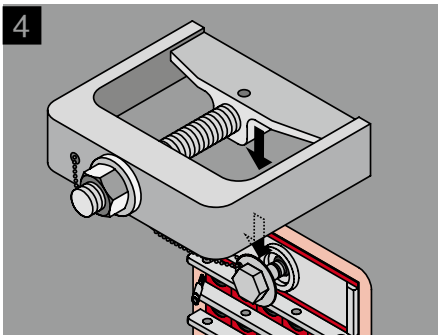
Use a wrench to unscrew the bolt in the wedge seal.



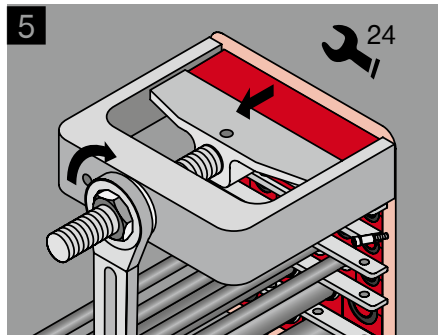
Remove the bolt from the wedge seal.



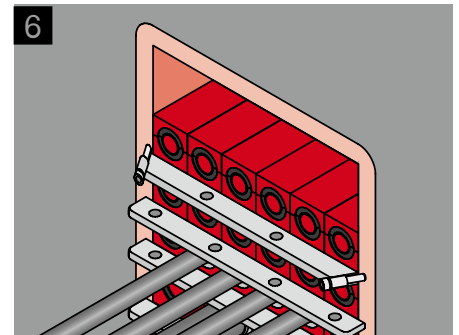
Insert the pulling bolt (attached to the wedge puller).



Bring the CFS-T WD 120 wedge puller into position so that it grips the head of the pulling bolt.



Pull the wedge seal out of the frame by turning the nut on the puller with an M24 ring wrench.

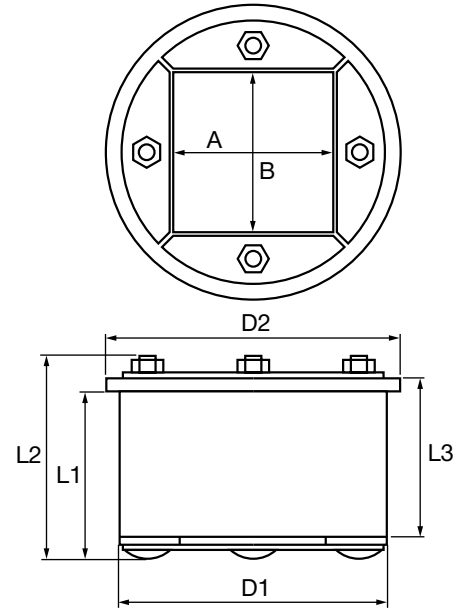


Remove the applicable modules from the frame and then follow the installation instructions when refitting the required items.



## CFS-T RR - THE SOLUTION FOR ROUND CABLE TRANSITS

### CFS-T RR plug seal



The CFS-T RR plug seal is an important component of the Hilti cable transit system for sealing around cables in circular openings. It forms a fire-resistant, watertight and gastight seal.

#### Technical information

The CFS-T RR plug seal consists of an elastic, halogen-free and highly flame-resistant synthetic rubber (HFE) insert with tensioning bolts and plates made from galvanized steel or A4 stainless steel.

#### Dimensions of the CFS-T RR plug seal

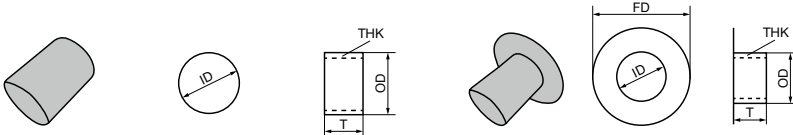
Type	Space avail.		Hole dia. ø mm	Dimensions in mm				Module length L 3	Tensioning bolts DIN603(DIN84)
	AxB	cm <sup>2</sup>		D 1	D 2	L 1	L 2		
CFS-T RR 50	30x30	9	50 - 51	50	56	71	85	60	4 pcs. M4x70
CFS-T RR 70	40x40	16	70 - 72	70	76	71	85	60	4 pcs. M5x70
CFS-T RR 100	60x60	36	100 - 103	100	110	71	85	60	4 pcs. M6x80
CFS-T RR 125	80x80	64	125 - 128	125	135	76	95	60	8 pcs. M6x90
CFS-T RR 150	90x90	81	150 - 154	150	160	76	95	60	8 pcs. M8x90
CFS-T RR 200	120x120	144	200 - 205	200	210	76	95	60	8 pcs. M8x90

Type	Filler	Maximum cable capacity (example)
CFS-T RR 50	1 pcs. 30/0 or 4 pcs. 15/0	4 cables 3-9 mm dia. or 1 cable up to 23 mm dia.
CFS-T RR 70	4 pcs. 20/0	4 cables 3-12 mm dia. or 1 cable up to 33 mm dia.
CFS-T RR 100	4 pcs. 30/0	9 cables 5-12 mm dia. or 1 cable 34-51 mm dia.
CFS-T RR 125	16 pcs. 20/0	16 cables 5-12 mm dia. or 4 cables 13-33 mm dia. or 1 cable up to 51 mm dia
CFS-T RR 150	9 pcs. 30/0	16 cables 5-12 mm dia. or 9 cables 13-23 mm dia. or 1 cable up to 78 mm dia.
CFS-T RR 200	16 pcs. 30/0	36 cables 5-12 mm dia. or 16 cables 13-23 mm dia. or 9 cables 23-33 mm dia. or 4 cables 34-51 mm dia. or 1 cable up to 99 mm dia.



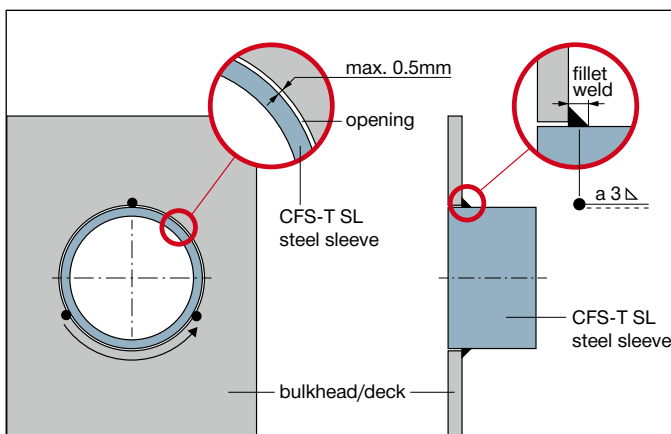
### CFS-T SL sleeves

### CFS-T SLF sleeves



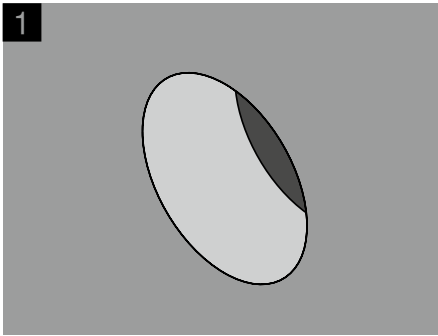
Sleeve type	To be used for	ID	OD	FD	T	THK
CFS-T SL 50 CFS-T SLF 50	CFS-T RR 50	51.2 mm	57.0 mm	157 mm	70 mm	mind. 3 mm
CFS-T SL 70 CFS-T SLF 70	CFS-T RR 70	70.3 mm	76.1 mm	176 mm	70 mm	mind. 3 mm
CFS-T SL 100 CFS-T SLF 100	CFS-T RR 100	102.2 mm	108.0 mm	210 mm	70 mm	mind. 3 mm
CFS-T SL 125 CFS-T SLF 125	CFS-T RR 125	127.0 mm	140.0 mm	240 mm	80 mm	mind. 6.5 mm
CFS-T SL 150 CFS-T SLF 150	CFS-T RR 150	150.0 mm	159.0 mm	260 mm	80 mm	mind. 4.5 mm
CFS-T SL 200 CFS-T SLF 200	CFS-T RR 200	203.1 mm	219.1 mm	320 mm	80 mm	mind. 8 mm

### Welding procedure for transit sleeves CFS-T SL

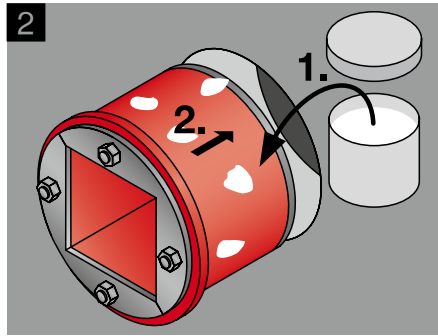


### NOTE:

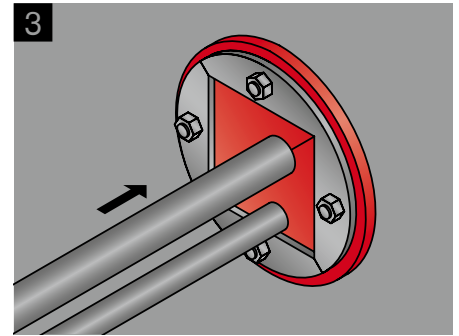
Welding of frames and sleeves in A-Class divisions with one or two side welding depending on shipyard standards or stress condition of the penetrated division.

**INSTALLING THE SYSTEM - THIS IS HOW IT'S DONE IN A FEW EASY STEPS.**

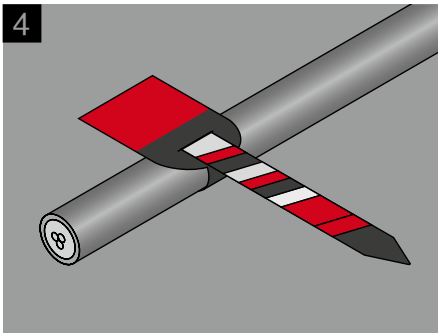
1  
Check the size of the opening to ensure that the plug seal will fit snugly.



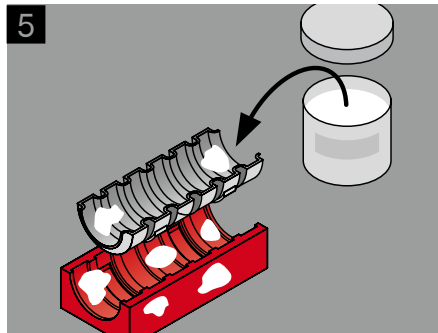
2  
Lubricate and push the plug seal into the opening.



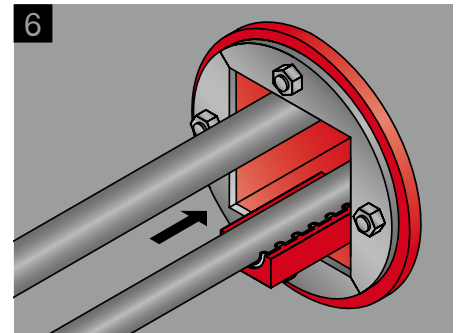
3  
Install the cables/pipes in accordance with the frame packing plan.



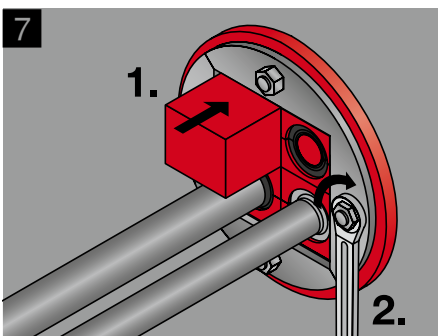
4  
Use the Hilti size gauge to determine the modules required.



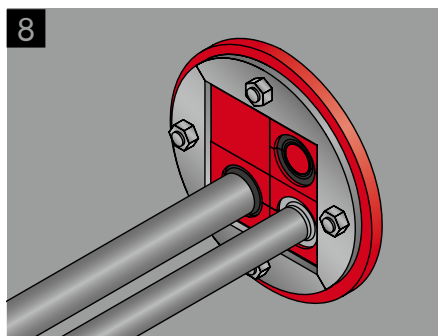
5  
Lubricate all system parts carefully with Hilti lubricant.



6  
Insert the modules, row by row, and lay the cable/pipe on top. Rotate the modules through 90° if necessary.

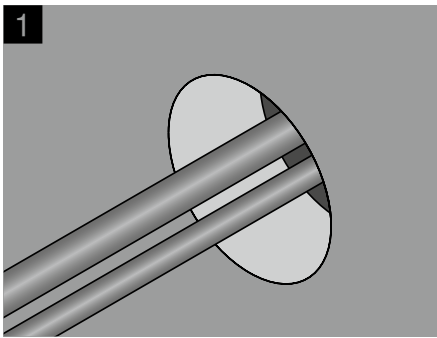


7  
After inserting the last module (can be a blank module), use a ring wrench to tighten the bolts on the frame.

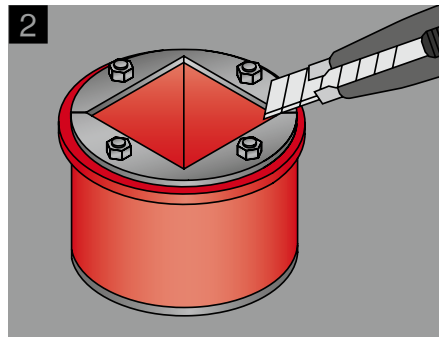


8  
Check that the modules are seated and installed correctly.

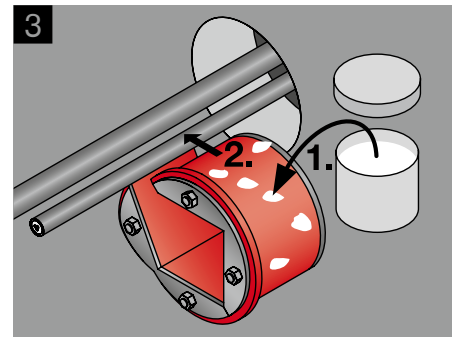
## INSTALLING THE SYSTEM WHERE CABLES/PIPES ARE ALREADY IN PLACE.



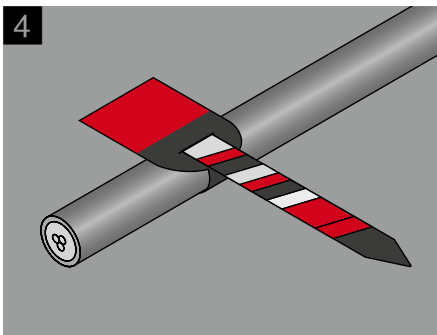
1  
Check the size of the opening to ensure that the plug seal will fit snugly.



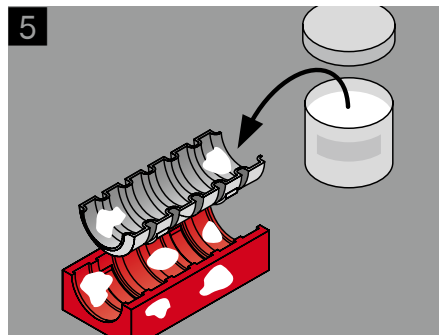
2  
In situations where cables/pipes are already in place, use a sharp knife to cut right through the plug seal at a corner of the frame.



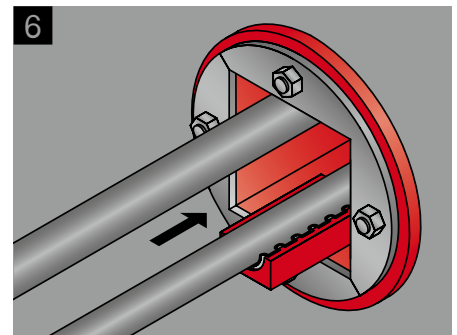
3  
Lubricate and slip the opened frame over the cables/pipes and then push the plug seal into the opening (tap in with a hammer if necessary).



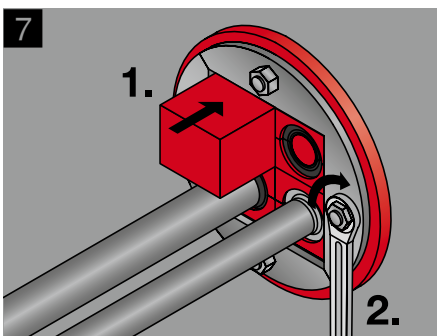
4  
Use the Hilti size gauge to determine the modules required.



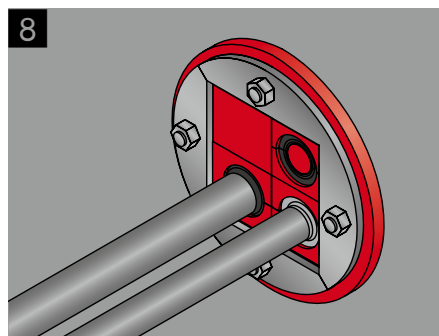
5  
Lubricate all system parts carefully with Hilti lubricant.



6  
Insert the modules, row by row, and lay the cable/pipe on top. Rotate the modules through 90° if necessary.



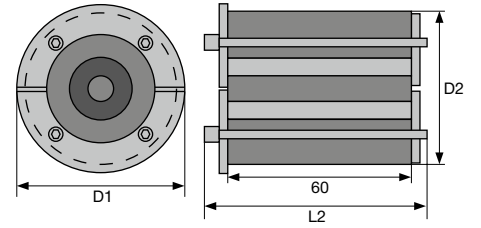
7  
After inserting the last module (can be a blank module), use a ring wrench to tighten the bolts on the frame.



8  
Check that the modules are seated and installed correctly.

## CFS-T RRS - THE SOLUTION FOR SINGLE CABLES AND PIPES

### CFS-T RRS – plug seal



Sealing individual cables and pipes against fire, gas and to ensure watertightness in cored holes or sleeved pipes.

#### Technical information

The CFS-T RRS plug seal consists of an elastic, halogen-free and highly flame-resistant synthetic rubber (HFE) insert with tensioning bolts and plates made from galvanized steel or A4 stainless steel.



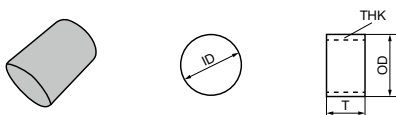
Type	Cable/pipe diameter	D2	D1	Tolerance / bore type	L2	No. of bolts	Bolts
CFS-T RRS-43/0+5-23	0+5-23 mm	43 mm	53 mm	43 - 45 mm	75 mm	4	M5x70
CFS-T RRS-50/0+13-33	0+13-33 mm	50 mm	60 mm	50 - 52 mm	75 mm	4	M5x70
CFS-T RRS-70/0+23-51	0+23-51 mm	70 mm	80 mm	70 - 72 mm	75 mm	4	M5x70
CFS-T RRS-100/0+34-78	0+34-78 mm	100 mm	110 mm	100 - 103 mm	76 mm	6	M6x70
CFS-T RRS-100/0+23-78	0+23-78 mm	100 mm	110 mm	100 - 103 mm	76 mm	6	M6x70



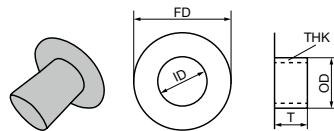
CFS-T RRS-43/0+5-23		CFS-T RRS-50/0+13-33		CFS-T RRS-70/0+23-51	
Cable diameter and corresponding system part					
22 - 23 mm	Basic	32 - 33 mm	Basic	49 - 51 mm	Basic
17 - 21 mm	Adapter grey L	27 - 31 mm	Adapter grey L	44 - 48 mm	Adapter red L
13 - 16 mm	Adapter black L	23 - 26 mm	Adapter black L	39 - 43 mm	Adapter grey L
11 - 12 mm	Adapter ring red	22 - 23 mm	Adapter ring red	34 - 38 mm	Adapter black L
8 - 10 mm	Adapter grey S	17 - 21 mm	Adapter grey S	32 - 33 mm	Adapter ring red
5 - 7 mm	Adapter black S	13 - 16 mm	Adapter black S	27 - 31 mm	Adapter grey S
-	Core	-	Core	23 - 26 mm	Adapter black S
				-	Core

CFS-T RRS-100/0+34-78		CFS-T RRS-100/0+23-78	
Cable diameter and corresponding system part			
76 - 78 mm	Basic	76 - 78 mm	Basic
70 - 75 mm	Adapter black XL	70 - 75 mm	Adapter black XL
64 - 69 mm	Adapter red XL	64 - 69 mm	Adapter red XL
58 - 63 mm	Adapter grey XL	58 - 63 mm	Adapter grey XL
52 - 57 mm	Adapter black L	52 - 57 mm	Adapter black L
49 - 51 mm	Adapter ring red L	49 - 51 mm	Adapter ring red L
44 - 48 mm	Adapter red L	44 - 48 mm	Adapter red L
39 - 43 mm	Adapter grey L	39 - 43 mm	Adapter grey L
34 - 38 mm	Adapter black M	34 - 38 mm	Adapter black M
		32 - 33 mm	Adapter ring red S
		27 - 31 mm	Adapter grey S
		23 - 26 mm	Adapter black S

### CFS-T SL sleeves

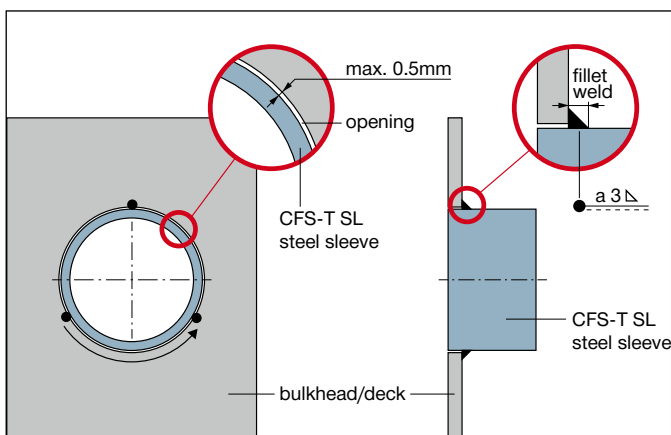


### CFS-T SLF sleeves



Sleeve type	To be used for	ID	OD	FD	T	THK
CFS-T SL 50 CFS-T SLF 50	CFS-T RRS 50	51.2 mm	57.0 mm	157 mm	70 mm	mind. 3 mm
CFS-T SL 70 CFS-T SLF 70	CFS-T RRS 70	70.3 mm	76.1 mm	176 mm	70 mm	mind. 3 mm
CFS-T SL 100 CFS-T SLF 100	CFS-T RRS 100	102.2 mm	108.0 mm	210 mm	70 mm	mind. 3 mm

### Welding procedure for transit sleeves CFS-T SL



### NOTE:

Welding of frames and sleeves in A-Class divisions with one or two side welding depending on shipyard standards or stress condition of the penetrated division.

## CFS-T EMC SOLUTIONS

### CFS-T cable modules and filler modules



EMC modules with contact tips and tapes (made from electrolytic copper) form a conductive connection between cable shield and frame.



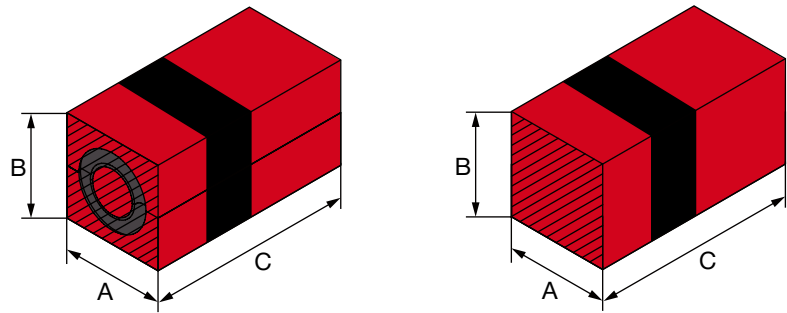
#### Applications

- EMC sealing solution (electromagnetic compatibility) for protection against electromagnetic influences.
- Highly sensitive electronic equipment, like signal and control systems, communication techniques and instruments.
- Instruments to be tightly shielded from electromagnetic fields caused by sudden electromagnetic pulses (EMP), lightning (LEMP), nuclear explosions (NEMP), control operations in overhead lines and transformer stations or electromagnetic fields from electronic instruments or other equipment not sufficiently shielded.
- Special areas of navy ships, offshore platforms (upstream), offshore transformer stations (wind energy).

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EMC wedge kits are available in

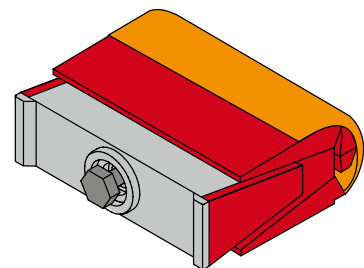
- Galvanised steel
- Stainless steel



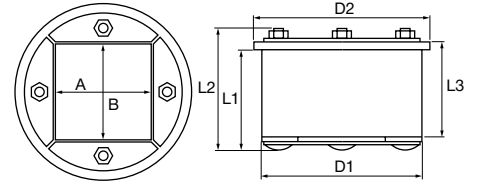
Module	Dimension A	Dimension B	Dimension C	Diameter range	Diameter range per module/adapter
<b>Cable modules</b>					
<b>CFS-T EMC 20/0+5-12</b>	20 mm	20 mm	60 mm	5 - 12 mm	Black adapter = 5 - 7 mm Grey adapter = 8 - 10 mm Basic module = 11 - 12 mm
<b>CFS-T EMC 30/0+13-23</b>	30 mm	30 mm	60 mm	13 - 23 mm	Black adapter = 13 - 16 mm Grey adapter = 17 - 21 mm Basic module = 22 - 23 mm
<b>CFS-T EMC 40/0+23-33</b>	40 mm	40 mm	60 mm	23 - 33 mm	Black adapter = 23 - 26 mm Grey adapter = 27 - 31 mm Basic module = 32 - 33 mm
<b>CFS-T EMC 60/0+34-51</b>	60 mm	60 mm	60 mm	34 - 51 mm	Black adapter = 34 - 38 mm Grey adapter = 39 - 43 mm Red insert = 44 - 48 mm Basic module = 49 - 51 mm
<b>CFS-T EMC 90/0+52-78</b>	90 mm	90 mm	60 mm	52 - 78 mm	Black adapter (thick) = 52 - 57 mm Grey adapter = 58 - 63 mm Red adapter = 64 - 69 mm Black adapter (thin) = 70 - 75 mm Basic module = 76 - 78 mm
<b>CFS-T EMC 120/0+79-99</b>	120 mm	120 mm	60 mm	79 - 99 mm	Black adapter = 79 - 84 mm Grey adapter = 85 - 90 mm Red adapter = 91 - 96 mm Basic module = 97 - 99 mm
<b>Filler modules</b>					
<b>CFS-T FB EMC 24x5/0</b>	5 mm	5 mm	60 mm	0	-
<b>CFS-T FB EMC 12x10/0</b>	10 mm	10 mm	60 mm	0	-
<b>CFS-T FB EMC 15/0</b>	15 mm	15 mm	60 mm	0	-
<b>CFS-T FB EMC 20/0</b>	20 mm	20 mm	60 mm	0	-
<b>CFS-T FB EMC 30/0</b>	30 mm	30 mm	60 mm	0	-

## CFS-T EMC wedge kits

CFS-T EMC wedge seals are available in galvanized steel or stainless steel. Each wedge kit contains one CFS-T EMC wedge seal, 4 anchor plates and one CFS-T EMC contact paste (to protect copper contact strips on modules and compression wedge from corrosion). Anchor plates are available in galvanized steel, stainless steel or aluminium.



## CFS-T RR EMC plug seals



### Material availability options

- Galvanised steel
- Stainless steel

### Dimensions of the CFS-T RR EMC plug seals

Type	Space avail.		Hole dia.	Dimensions in mm				Module length	Tensioning bolts
	AxB	cm <sup>2</sup>	∅ mm	D 1	D 2	L 1	L 2	L 3	DIN603 (DIN84)
<b>CFS-T RR 50 EMC</b>	30x30	9	50 - 51	50	56	71	85	60	4 pcs. M4x40
<b>CFS-T RR 70 EMC</b>	40x40	16	70 - 72	70	76	71	85	60	4 pcs. M5x40
<b>CFS-T RR 100 EMC</b>	60x60	36	100 - 103	100	111	71	85	60	4 pcs. M6x80
<b>CFS-T RR 125 EMC</b>	80x80	64	125 - 128	125	135	76	95	60	8 pcs. M6x90
<b>CFS-T RR 150 EMC</b>	90x90	81	150 - 154	150	160	76	95	60	8 pcs. M8x90
<b>CFS-T RR 200 EMC</b>	120x120	144	200 - 205	200	210	76	95	60	8 pcs. M8x90

Type	Filler	Maximum cable capacity (example)
<b>CFS-T RR 50 EMC</b>	1 pcs. 30/0 or 4 pcs. 15/0	4 cables 3 - 9 mm dia. or 1 cable up to 23 mm dia.
<b>CFS-T RR 70 EMC</b>	4 pcs. 20/0	4 cables 3 - 12 mm dia. or 1 cable up to 33 mm dia.
<b>CFS-T RR 100 EMC</b>	4 pcs. 30/0	9 cables 5 - 12 mm dia. or 1 cable 34-51 mm dia.
<b>CFS-T RR 125 EMC</b>	16 pcs. 20/0	16 cables 5 - 12 mm dia. or 4 cables 13 - 33 mm dia. or 1 cable up to 51 mm dia.
<b>CFS-T RR 150 EMC</b>	9 pcs. 30/0	16 cables 5 - 12 mm dia. or 9 cables 13 - 23 mm dia. or 1 cable up to 78 mm dia.
<b>CFS-T RR 200 EMC</b>	16 pcs. 30/0	36 cables 5 - 12 mm dia. or 16 cables 13 - 23 mm dia. or 9 cables 23 - 33 mm dia. or 4 cables 34 - 51 mm dia. or 1 cable up to 99 mm dia.

**FOR A  
SAFER SEAL.**

**Transit System  
for cables  
and pipes**



## CFS-T EX FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES

### CFS-T EX



#### Applications

- Industries affected by the ATEX directive, such as the petrochemical and chemical industries.
- Oil and gas platforms which are not covered by the IMO resolution.

Sealing solution certified according to ATEX ("Atmosphères Explosibles") for use in areas with a potentially explosive atmosphere.

  
**Hilti Cable Transit System**  
  
II 2 GD  
EX e II IP 65  
EX5 11 12 51975 001  
**Frame type:**  
CFS-T SS  
CFS-T SSF  
CFS-T RR  
CFS-T STRF  
Certification body: TÜV Süd  
Hilti = registered trademark of Hilti Corporation, Schaan, LI  
2025977-12.2011

### CFS-T EX wedge kits



#### Technical information

- Each wedge kit contains one EX marked wedge seal, 4 EX marked anchor plates, one EX marked fixing anchor plate (available in galvanized steel and stainless steel) and one CFS-T lubricant.

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Material availability options for wedge seals and anchorplat

- Galvanised steel
- Stainless steel

### CFS-T EX Cable Module



### CFS-T EX Filler Module



## SEALING SOLUTIONS FOR SWITCH CABINETS

### CFS-T STRF basic frame



CFS-T GF



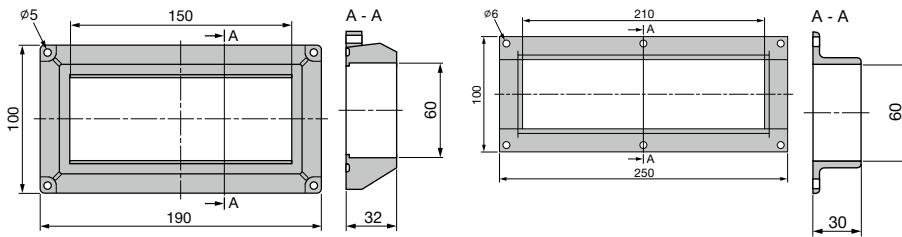
CFS-T GS

#### Technical information

- Low inventory requirements: only four different modules are needed to cover all diameters from 3 to 33 mm
- Sealing cables and pipes against dust and splashed water (up to safety class IP-65)
- Frames available in two standard sizes (inner width of 60 mm, inner length of 150 or 210mm)

#### Material availability options

- Galvanised steel
- Fiberglass



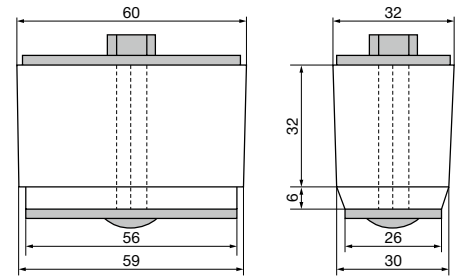
Sealing cables, pipes and other conduits leading into switch cabinets, appliances and casings.



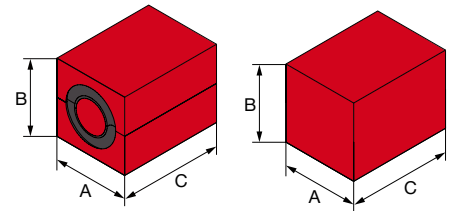
Type	Available space	Inner width LB (mm)	Inner length LL (mm)	Outer width AB (mm)	Outer length AL (mm)	Flange width FB (mm)	Flange length FL (mm)	Aperture (mm)
CFS-T STRF 150	60x120	60	150	88	178	100	190	81x171
CFS-T STRF 210	60x180	60	210	88	238	100	250	81x221



### CFS-T WD 60 wedge seal



### CFS-T S cable module



Module	Dimension A/B	Dimension C	Diameter range	Diameter range per module / adapter
<b>Cable modules</b>				
CFS-T S 15/0+3-9 cable module	15 mm	30 mm	3 - 9 mm	Black adapter = 3 - 5 mm Grey adapter = 6 - 8 mm Basic module = 9 mm
CFS-T S 20/0+5-12 cable module	20 mm	30 mm	5 - 12 mm	Black adapter = 5 - 7 mm Grey adapter = 8 - 10 mm Basic module = 11 - 12 mm
CFS-T S 30/0+13-23 cable module	30 mm	30 mm	13 - 23 mm	Black adapter = 13 - 16 mm Grey adapter = 17 - 21 mm Basic module = 22 - 23 mm
CFS-T S 40/0+23-33 cable module	40 mm	30 mm	23 - 33 mm	Black adapter = 23 - 26 mm Grey adapter = 27 - 31 mm Basic module = 32 - 33 mm
<b>Filler modules</b>				
CFS-T FB S 24x5/0 filler module	5 mm	30 mm	0	-
CFS-T FB S 12x10/0 filler module	10 mm	30 mm	0	-

## CFS-T BASIC SYSTEM



### Cable modules

Ordering designation	Package contents	Item no.
<b>CFS-T 15/0+3-9 cable module</b> incl. adapter and core modules	64	2014595
<b>CFS-T 20/0+5-12 cable module</b> incl. adapter and core modules	36	2014596
<b>CFS-T 20/0+5-16 cable module</b> incl. adapter and core modules	36	2097591
<b>CFS-T 30/0+13-23 cable module</b> incl. adapter and core modules	16	2014597
<b>CFS-T 40/0+23-33 cable module</b> incl. adapter and core modules	9	2014598
<b>CFS-T 60/0+34-51 cable module</b> incl. adapter and core modules	4	2014599
<b>CFS-T 60/34-51 cable module</b> incl. adapter (without core modules)	4	2060568
<b>CFS-T 90/0+52-78 cable module</b> incl. adapter and core modules	1	2014860
<b>CFS-T 90/52-78 cable module</b> incl. adapter (without core modules)	1	2060569
<b>CFS-T 120/0+79-99 cable module</b> incl. adapter and core modules	1	2014861
<b>CFS-T 120/79-99 cable module</b> incl. adapter (without core modules)	1	2060670



### Filler modules

Ordering designation	Package contents	Item no.
<b>CFS-T FB 24x5/0 filler module</b>	36	2014862
<b>CFS-T FB 12x10/0 filler module</b>	18	2014863
<b>CFS-T FB 15/0 filler module</b>	96	2014864
<b>CFS-T FB 20/0 filler module</b>	54	2014865
<b>CFS-T FB 30/0 filler module</b>	24	2014866
<b>CFS-T FB 30/0R30 filler module</b>	16	2014867
<b>CFS-T FB 40/0 filler module</b>	9	2210445
<b>CFS-T FB 60/0 filler module</b>	4	2210446



### Wedge seals

Ordering designation	Package contents	Item no.
<b>CFS-T WD 120 GS wedge compression kit</b> comprising 1 wedge seal (galvanized), 4 anchor plates (galvanized), 1 fixing anchor plate (galvanized), lubricant (30 g)	1	2014880
<b>CFS-T WD 120 S/S wedge compression kit</b> comprising 1 wedge seal (stainless steel material 1.4571 / V4A (AISI 316Ti)), 4 anchor plates (stainless steel material 1.4301(AISI 304)), 1 fixing anchor plate (stainless steel material 1.4301 (AISI 304)), lubricant (30 g)	1	2014881
<b>CFS-T WD 120 AL wedge compression kit</b> comprising 1 wedge seal (stainless steel material 1.4571 / V4A (AISI 316Ti)), 5 anchor plates (aluminium), lubricant (30 g)	1	2014922
<b>CFS-T WD 120 GS wedge compression seal</b> (galvanized)	1	2047206
<b>CFS-T WD 120 S/S wedge compression seal</b> (stainless steel)	1	2047207

### Anchor plates

Ordering designation	Package contents	Item no.
<b>CFS-T AP 120 GS anchor plate set</b> comprising 9 anchor plates (galvanized), 1 fixing anchor plate (galvanized)	1	2014882
<b>CFS-T AP 120 S/S anchor plate set</b> comprising 9 anchor plates (stainless steel material 1.4301 (AISI 304)), 1 fixing anchor plate (stainless steel material 1.4301 (AISI 304))	1	2014883
<b>CFS-T AP 120 AL anchor plate set</b> comprising 10 anchor plates (aluminium)	1	2016767
<b>CFS-T FAP 120 S/S fixing anchor plate set</b> comprising 10 fixing anchor plates (stainless steel material 1.4301 (AISI 304))	1	2014923
<b>CFS-T FAP 120 GS fixing anchor plate</b> (Galvanised)	5	2233910
<b>CFS-T AP 120 GS anchor plate</b> (Galvanized)	5	2233911
<b>CFS-T AP 120 S/S anchor plate</b> (stainless steel)	5	2233912

## CFS-T RR PLUG SEALS

### Plug seal with fittings and bolts in galvanized steel

Ordering designation	Package contents	Item no.
CFS-T RR-50 GS plug seal	1	2014886
CFS-T RR-70 GS plug seal	1	2014888
CFS-T RR-90 GS plug seal	1	2014890
CFS-T RR-100 GS plug seal	1	2014892
CFS-T RR-103 GS plug seal	1	2014894
CFS-T RR-125 GS plug seal	1	2014896
CFS-T RR-150 GS plug seal	1	2014898
CFS-T RR-154 GS plug seal	1	2014900
CFS-T RR-200 GS plug seal	1	2014902



### Plug seal with fittings and bolts in stainless steel

Ordering designation	Package contents	Item no.
CFS-T RR-50 S/S plug seal	1	2014887
CFS-T RR-70 S/S plug seal	1	2014889
CFS-T RR-90 S/S plug seal	1	2014891
CFS-T RR-100 S/S plug seal	1	2014893
CFS-T RR-103 S/S plug seal	1	2014895
CFS-T RR-125 S/S plug seal	1	2014897
CFS-T RR-150 S/S plug seal	1	2014899
CFS-T RR-154 S/S plug seal	1	2014901
CFS-T RR-200 S/S plug seal	1	2014903



## CFS-T RRS PLUG SEALS

### Plug seal with fittings and bolts in galvanized steel

Ordering designation	Package contents	Item no.
CFS-T RRS-43/0+5-23 GS plug seal incl. adapter and core modules	1	2042729
CFS-T RRS-50/0+13-33 GS plug seal incl. adapter and core modules	1	2042731
CFS-T RRS-70/0+23-51 GS plug seal incl. adapter and core modules	1	2042733
CFS-T RRS-100/0+34-78 GS plug seal incl. adapter and core modules	1	2042735
CFS-T RRS-100/0+23-78 GS plug seal incl. adapter and core modules	1	2042737



### Plug seal with fittings and bolts in stainless steel

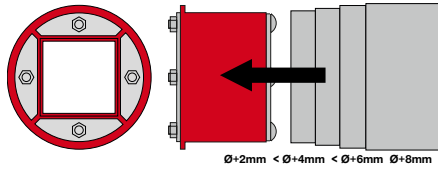
Ordering designation	Package contents	Item no.
CFS-T RRS-43/0+5-23 S/S plug seal incl. adapter and core modules	1	2042730
CFS-T RRS-50/0+13-33 S/S plug seal incl. adapter and core modules	1	2042732
CFS-T RRS-70/0+23-51 S/S plug seal incl. adapter and core modules	1	2042734
CFS-T RRS-100/0+34-78 S/S plug seal incl. adapter and core modules	1	2042736
CFS-T RRS-100/0+23-78 S/S plug seal incl. adapter and core modules	1	2042738

## ADAPTERSET/SEALING STRIP FOR DIAMETER ADJUSTMENT



### Adapter set

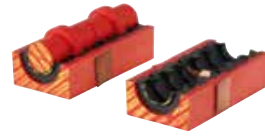
Ordering designation	Package contents	Item no.
<b>CFS-T AS-100</b> adapter for round plugs	2	2210448
<b>CFS-T AS-125</b> adapter for round plugs	2	2210449
<b>CFS-T AS-150</b> adapter for round plugs	2	2210450
<b>CFS-T AS-200</b> adapter for round plugs	2	2210451



### Sealing strip

Ordering designation	Package contents	Item no.
<b>CFS-T SST 60x1x720 HFE sealing strip</b> (halogen-free elastomer)	5	2210452
<b>CFS-T SST 60x4x720 HFE sealing strip</b> (halogen-free elastomer)	5	2042740

## CFS-T EMC SYSTEM



### Cable modules

Ordering designation	Package contents	Item no.
<b>CFS-T EMC 20/0+5-12 cable modules</b> incl. adapter and core modules	36	2014868
<b>CFS-T EMC 30/0+13-23 cable modules</b> incl. adapter and core modules	16	2014869
<b>CFS-T EMC 40/0+23-33 cable modules</b> incl. adapter and core modules	9	2014870
<b>CFS-T EMC 60/0+34-51 cable modules</b> incl. adapter and core modules	4	2014871
<b>CFS-T EMC 90/0+52-78 cable modules</b> incl. adapter and core modules	1	2014872
<b>CFS-T EMC 120/0+79-99 cable modules</b> incl. adapter and core modules	1	2014873

### Filler modules

Ordering designation	Package contents	Item no.
<b>CFS-T FB EMC 24x5/0 filler module</b>	36	2014874
<b>CFS-T FB EMC 12x10/0 filler module</b>	18	2014875
<b>CFS-T FB EMC 15/0 filler module</b>	96	2014876
<b>CFS-T FB EMC 20/0 filler module</b>	54	2014877
<b>CFS-T FB EMC 30/0 filler module</b>	24	2014878

### Wedge seals

Ordering designation	Package contents	Item no.
<b>CFS-T WD 120 EMC GS wedge compression kit</b> comprising 1 wedge seal (galvanized), 4 anchor plates (galvanized), 1 fixing anchor plate (galvanized), EMC contact paste (30 g)	1	2020707
<b>CFS-T WD 120 EMC S/S wedge compression kit</b> comprising 1 wedge seal (stainless steel material 1.4571 / V4A (AISI 316Ti)), 4 anchor plates (stainless steel material 1.4301(AISI 304)), 1 fixing anchor plate (stainless steel material 1.4301 (AISI 304)), EMC contact paste (30 g)	1	2020708
<b>CFS-T WD 120 EMC AL wedge compression kit</b> comprising 1 wedge seal (stainless steel material 1.4571 / V4A (AISI 316Ti)), 5 anchor plates (aluminium), EMC contact paste (30 g)	1	2020709

### Anchor plates

Ordering designation	Package contents	Item no.
<b>CFS-T AP 120 GS anchor plate set</b> comprising 9 anchor plates (galvanized), 1 fixing anchor plate (galvanized)	1	2014882
<b>CFS-T AP 120 S/S anchor plate set</b> comprising 9 anchor plates (stainless steel material 1.4301 (AISI 304)), 1 fixing anchor plate (stainless steel material 1.4301 (AISI 304))	1	2014883
<b>CFS-T AP 120 AL anchor plate set</b> comprising 10 anchor plates (aluminium)	1	2016767
<b>CFS-T FAP 120 S/S fixing anchor plate set</b> comprising 10 fixing anchor plates (stainless steel material 1.4301 (AISI 304))	1	2014923
<b>CFS-T AP 120 EX S/S Anchor plate</b> (Stainless steel)	5	2235218
<b>CFS-T AP 120 EX GS Anchor plate</b> (Galvanized)	5	2235280
<b>CFS-T FAP 120 EX GS fixing anchor plate</b> (Galvanized)	5	2235219



### Plug seals

Ordering designation	Package contents	Item no.
<b>CFS-T RR-50 EMC GS</b> (galvanized steel)	1	2014904
<b>CFS-T RR-50 EMC S/S</b> (stainless steel material 1.4571 / V4A (AISI 316Ti))	1	2014905
<b>CFS-T RR-70 EMC GS</b> (galvanized steel)	1	2014906
<b>CFS-T RR-70 EMC S/S</b> (stainless steel material 1.4571 / V4A (AISI 316Ti))	1	2014907
<b>CFS-T RR-90 EMC GS</b> (galvanized steel)	1	2014908
<b>CFS-T RR-90 EMC S/S</b> (stainless steel material 1.4571 / V4A (AISI 316Ti))	1	2014909
<b>CFS-T RR-100 EMC GS</b> (galvanized steel)	1	2014910
<b>CFS-T RR-100 EMC S/S</b> (stainless steel material 1.4571 / V4A (AISI 316Ti))	1	2014911
<b>CFS-T RR-103 EMC GS</b> (galvanized steel)	1	2014912
<b>CFS-T RR-103 EMC S/S</b> (stainless steel material 1.4571 / V4A (AISI 316Ti))	1	2014913
<b>CFS-T RR-125 EMC GS</b> (galvanized steel)	1	2014914
<b>CFS-T RR-125 EMC S/S</b> (stainless steel material 1.4571 / V4A (AISI 316Ti))	1	2014915
<b>CFS-T RR-150 EMC GS</b> (galvanized steel)	1	2014916
<b>CFS-T RR-150 EMC S/S</b> (stainless steel material 1.4571 / V4A (AISI 316Ti))	1	2014917
<b>CFS-T RR-154 EMC GS</b> (galvanized steel)	1	2014918
<b>CFS-T RR-154 EMC S/S</b> (stainless steel material 1.4571 / V4A (AISI 316Ti))	1	2014919
<b>CFS-T RR-200 EMC GS</b> (galvanized steel)	1	2014920
<b>CFS-T RR-200 EMC S/S</b> (stainless steel material 1.4571 / V4A (AISI 316Ti))	1	2014921

## CFS-T EX SYSTEM

### Cable modules

Ordering designation	Package contents	Item no.
<b>CFS-T EX 15/0+3-9 cable modules</b> incl. adapter and core modules	64	2042700
<b>CFS-T EX 20/0+5-12 cable modules</b> incl. adapter and core modules	36	2042701
<b>CFS-T EX 30/0+13-23 cable modules</b> incl. adapter and core modules	16	2042702
<b>CFS-T EX 40/0+23-33 cable modules</b> incl. adapter and core modules	9	2042703
<b>CFS-T EX 60/0+34-51 cable modules</b> incl. adapter and core modules	4	2042704
<b>CFS-T EX 90/0+52-78 cable modules</b> incl. adapter and core modules	1	2042705
<b>CFS-T EX 120/0+79-99 cable modules</b> incl. adapter and core modules	1	2042706



### Filler modules

Ordering designation	Package contents	Item no.
<b>CFS-T FB EX 24x5/0 filler module</b>	36	2042707
<b>CFS-T FB EX 12x10/0 filler module</b>	18	2042708
<b>CFS-T FB EX 15/0 filler module</b>	96	2042709
<b>CFS-T FB EX 20/0 filler module</b>	54	2042710
<b>CFS-T FB EX 30/0 filler module</b>	24	2042711

### Wedge seals and anchor plates

Ordering designation	Package contents	Item no.
<b>CFS-T WD 120 EX GS wedge compression kit</b> comprising 1 wedge seal (galvanized), 4 anchor plates (galvanized), 1 fixing anchor plate (galvanized), CFS-T lubricant (30 g)	1	2042713
<b>CFS-T WD 120 EX S/S wedge compression kit</b> comprising 1 wedge seal (stainless steel material 1.4571 / V4A (AISI 316Ti)), 4 anchor plates (stainless steel material 1.4301(AISI 304)), 1 fixing anchor plate (stainless steel material 1.4301 (AISI 304)), CFS-T lubricant (30 g)	1	2042714
<b>CFS-T AP 120 EX GS anchor plate set</b> comprising 9 anchor plates (galvanized), 1 fixing anchor plate (galvanized)	1	2042715
<b>CFS-T AP 120 EX S/S anchor plate set</b> comprising 9 anchor plates (stainless steel material 1.4301 (AISI 304)), 1 fixing anchor plate (stainless steel material 1.4301 (AISI 304))	1	2042716
<b>CFS-T FAP 120 EX S/S fixing anchor plate set</b> comprising 10 fixing anchor plates (stainless steel material 1.4301 (AISI 304))	1	2042717

### Accessories

Ordering designation	Package contents	Item no.
<b>CFS-T EX FS identification plate</b>	1	2029923

### Accessories

Ordering designation	Package contents	Item no.
<b>CFS-T SQU module squeezer</b>	1	2014885
<b>CFS-T PUL wedge puller</b>	1	2014884
<b>CFS-T LUB 500 g lubricant</b>	1	2042741
<b>Lubricant CFS-T LUB 30g</b>	12	2235217
<b>CFS-T SST 60x1x720 HFE sealing strip</b> (halogen-free elastomer)	5	2210452
<b>CFS-T SST 60x4x720 HFE sealing strip</b> (halogen-free elastomer)	5	2042740



## CFS-T STRF SYSTEM



### CFS-T S cable modules and CFS-T FB S filler modules

Ordering designation	Package contents	Item no.
<b>CFS-T S 15/0+3-9 cable module</b> incl. adapter and core modules	128	2042718
<b>CFS-T S 20/0+5-12 cable module</b> incl. adapter and core modules	72	2042719
<b>CFS-T S 30/0+13-23 cable module</b> incl. adapter and core modules	32	2042720
<b>CFS-T S 40/0+23-33 cable module</b> incl. adapter and core modules	18	2042721
<b>CFS-T FB S 24x5/0 filler module</b>	72	2042722
<b>CFS-T FB S 12x10/0 filler module</b>	36	2042723



### Wedge seal

Ordering designation	Package contents	Item no.
<b>CFS-T WD 60 wedge seal</b>	1	2042724



### Transit frames CFS-T STRF

Ordering designation	Package contents	Item no.
<b>CFS-T STRF-150 GF transit frame</b> (glass fiber)	1	2042725
<b>CFS-T STRF-210 GF transit frame</b> (glass fiber)	1	2042726
<b>CFS-T STRF-150 GS transit frame</b> (galvanized steel)	1	2042727
<b>CFS-T STRF-210 GS transit frame</b> (galvanized steel)	1	2042728



## CFS-T SBF TRANSIT FRAMES SINGLE-ROW

<b>CFS-T SBF transit frames (single-row)*</b>		
Ordering designation	Package contents	Item no.
Transit frame CFS-T SBF-2x1 HDG	1	2280325
Transit frame CFS-T SBF-4x1 HDG	1	2280326
Transit frame CFS-T SBF-4x2 HDG	1	2280327
Transit frame CFS-T SBF-4x3 HDG	1	2280328
Transit frame CFS-T SBF-4x4 HDG	1	2280329
Transit frame CFS-T SBF-4x5 HDG	1	2280820
Transit frame CFS-T SBF-4x6 HDG	1	2280821
Transit frame CFS-T SBF-4x7 HDG	1	2280822
Transit frame CFS-T SBF-4x8 HDG	1	2280823
Transit frame CFS-T SBF-4x9 HDG	1	2280824
Transit frame CFS-T SBF-4x10 HDG	1	2280825
Transit frame CFS-T SBF-6x1 HDG	1	2280836
Transit frame CFS-T SBF-6x2 HDG	1	2280837
Transit frame CFS-T SBF-6x3 HDG	1	2280838
Transit frame CFS-T SBF-6x4 HDG	1	2280323
Transit frame CFS-T SBF-6x5 HDG	1	2280324
Transit frame CFS-T SBF-6x6 HDG	1	2280839
Transit frame CFS-T SBF-6x7 HDG	1	2280840
Transit frame CFS-T SBF-6x8 HDG	1	2280841
Transit frame CFS-T SBF-6x9 HDG	1	2280842
Transit frame CFS-T SBF-6x10 HDG	1	2280843
Transit frame CFS-T SBF-8x1 HDG	1	2280854
Transit frame CFS-T SBF-8x2 HDG	1	2280855
Transit frame CFS-T SBF-8x3 HDG	1	2280856
Transit frame CFS-T SBF-8x4 HDG	1	2280857
Transit frame CFS-T SBF-8x5 HDG	1	2280858
Transit frame CFS-T SBF-8x6 HDG	1	2280859
Transit frame CFS-T SBF-8x7 HDG	1	2280860
Transit frame CFS-T SBF-8x8 HDG	1	2280861
Transit frame CFS-T SBF-8x9 HDG	1	2280862
Transit frame CFS-T SBF-8x10 HDG	1	2280863



\*Standard items

## CFS-T SBF TRANSIT FRAMES DOUBLE-ROW



<b>CFS-T SBF transit frames (double-row)*</b>		
Ordering designation	Package contents	Item no.
Transit frame CFS-T SBF-4+4x1 HDG	1	2280826
Transit frame CFS-T SBF-4+4x2 HDG	1	2280827
Transit frame CFS-T SBF-4+4x3 HDG	1	2280828
Transit frame CFS-T SBF-4+4x4 HDG	1	2280829
Transit frame CFS-T SBF-4+4x5 HDG	1	2280830
Transit frame CFS-T SBF-4+4x6 HDG	1	2280831
Transit frame CFS-T SBF-4+4x7 HDG	1	2280832
Transit frame CFS-T SBF-4+4x8 HDG	1	2280833
Transit frame CFS-T SBF-4+4x9 HDG	1	2280834
Transit frame CFS-T SBF-4+4x10 HDG	1	2280835
Transit frame CFS-T SBF-6+6x1 HDG	1	2280844
Transit frame CFS-T SBF-6+6x2 HDG	1	2280845
Transit frame CFS-T SBF-6+6x3 HDG	1	2280846
Transit frame CFS-T SBF-6+6x4 HDG	1	2280847
Transit frame CFS-T SBF-6+6x5 HDG	1	2280848
Transit frame CFS-T SBF-6+6x6 HDG	1	2280849
Transit frame CFS-T SBF-6+6x7 HDG	1	2280850
Transit frame CFS-T SBF-6+6x8 HDG	1	2280851
Transit frame CFS-T SBF-6+6x9 HDG	1	2280852
Transit frame CFS-T SBF-6+6x10 HDG	1	2280853
Transit frame CFS-T SBF-8+8x1 HDG	1	2280864
Transit frame CFS-T SBF-8+8x2 HDG	1	2280865
Transit frame CFS-T SBF-8+8x3 HDG	1	2280866
Transit frame CFS-T SBF-8+8x4 HDG	1	2280867
Transit frame CFS-T SBF-8+8x5 HDG	1	2280868
Transit frame CFS-T SBF-8+8x6 HDG	1	2280869
Transit frame CFS-T SBF-8+8x7 HDG	1	2280870
Transit frame CFS-T SBF-8+8x8 HDG	1	2280871
Transit frame CFS-T SBF-8+8x9 HDG	1	2280321
Transit frame CFS-T SBF-8+8x10 HDG	1	2280322

\*Standard items

## CFS-T SS TRANSIT FRAMES



CFS-T SS transit frames		
Ordering designation	Package contents	Item no.
CFS-T SS-2x1 MSP transit frame (steel, rust preventive coated)	1	2146055
CFS-T SS-2x1 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146056
CFS-T SS-2x2 MSP transit frame (steel, rust preventive coated)	1	2146057
CFS-T SS-2x2 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146058
CFS-T SS-2x3 MSP transit frame (steel, rust preventive coated)	1	2146059
CFS-T SS-2x3 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146060
CFS-T SS-2x4 MSP transit frame (steel, rust preventive coated)	1	2146061
CFS-T SS-2x4 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146062
CFS-T SS-2x5 MSP transit frame (steel, rust preventive coated)	1	2146063
CFS-T SS-2x5 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146064
CFS-T SS-4x1 MSP transit frame (steel, rust preventive coated)	1	2146065
CFS-T SS-4x1 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146066
CFS-T SS-4x2 MSP transit frame (steel, rust preventive coated)	1	2146067
CFS-T SS-4x2 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146068
CFS-T SS-4x3 MSP transit frame (steel, rust preventive coated)	1	2146069
CFS-T SS-4x3 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146070
CFS-T SS-4x4 MSP transit frame (steel, rust preventive coated)	1	2146071
CFS-T SS-4x4 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146072
CFS-T SS-4x5 MSP transit frame (steel, rust preventive coated)	1	2146073
CFS-T SS-4x5 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146074
CFS-T SS-6x1 MSP transit frame (steel, rust preventive coated)	1	2146075
CFS-T SS-6x1 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146076
CFS-T SS-6x2 MSP transit frame (steel, rust preventive coated)	1	2146077
CFS-T SS-6x2 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146078
CFS-T SS-6x3 MSP transit frame (steel, rust preventive coated)	1	2146079
CFS-T SS-6x3 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146080
CFS-T SS-6x4 MSP transit frame (steel, rust preventive coated)	1	2146081
CFS-T SS-6x4 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146082
CFS-T SS-6x5 MSP transit frame (steel, rust preventive coated)	1	2146083
CFS-T SS-6x5 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146084
CFS-T SS-8x1 MSP transit frame (steel, rust preventive coated)	1	2146085
CFS-T SS-8x1 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146086
CFS-T SS-8x2 MSP transit frame (steel, rust preventive coated)	1	2146087
CFS-T SS-8x2 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146088
CFS-T SS-8x3 MSP transit frame (steel, rust preventive coated)	1	2146089
CFS-T SS-8x3 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146090
CFS-T SS-8x4 MSP transit frame (steel, rust preventive coated)	1	2146091
CFS-T SS-8x4 S/S transit frame (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2146092
CFS-T SS-8x5 MSP transit frame (steel, rust preventive coated)	1	2146093

### CFS-T SS transit frames

Ordering designation	Package contents	Item no.
CFS-T SS-4+4x1 MSP transit frame (steel, rust preventive coated)	1	2262687
CFS-T SS-4+4x1 S/S transit frame (stainless steel material 1.4571/V4A (AISI 316 Ti))	1	2262688
CFS-T SS-4+4x2 MSP	1	2262689
CFS-T SS-4+4x2 S/S	1	2262900
CFS-T SS-4+4x3 MSP	1	2262901
CFS-T SS-4+4x3 S/S	1	2262902
CFS-T SS-4+4x4 MSP	1	2262903
CFS-T SS-4+4x4 S/S	1	2262904
CFS-T SS-4+4x5 MSP	1	2262905
CFS-T SS-4+4x5 S/S	1	2262906
CFS-T SS-6+6x1 MSP	1	2262907
CFS-T SS-6+6x1 S/S	1	2262908
CFS-T SS-6+6x2 MSP	1	2262909
CFS-T SS-6+6x2 S/S	1	2262910
CFS-T SS-6+6x3 MSP	1	2262911
CFS-T SS-6+6x3 S/S	1	2262912
CFS-T SS-6+6x4 MSP	1	2262913
CFS-T SS-6+6x4 S/S	1	2262914
CFS-T SS-6+6x5 MSP	1	2262915
CFS-T SS-6+6x5 S/S	1	2262685
CFS-T SS-8+8x1 MSP	1	2262916
CFS-T SS-8+8x1 S/S	1	2262917
CFS-T SS-8+8x2 MSP	1	2262918
CFS-T SS-8+8x2 S/S	1	2262919
CFS-T SS-8+8x3 MSP	1	2262920
CFS-T SS-8+8x3 S/S	1	2262921
CFS-T SS-8+8x4 MSP	1	2262922
CFS-T SS-8+8x4 S/S	1	2262923
CFS-T SS-8+8x5 MSP	1	2262684
CFS-T SS-8+8x5 S/S	1	2262686

## CFS-T SSR/R30 TRANSIT FRAMES



### CFS-T SSR/R30 transit frames

Ordering designation	Package contents	Item no.
CFS-T SSR/R30-4x1 MSP steel, rust preventive primer coated	1	2014985
CFS-T SSR/R30-4x2 MSP steel, rust preventive primer coated	1	2014986
CFS-T SSR/R30-4x3 MSP steel, rust preventive primer coated	1	2014987
CFS-T SSR/R30-4x4 MSP steel, rust preventive primer coated	1	2014988
CFS-T SSR/R30-4x5 MSP steel, rust preventive primer coated	1	2014989
CFS-T SSR/R30-6x1 MSP steel, rust preventive primer coated	1	2014990
CFS-T SSR/R30-6x2 MSP steel, rust preventive primer coated	1	2014991
CFS-T SSR/R30-6x3 MSP steel, rust preventive primer coated	1	2014992
CFS-T SSR/R30-6x4 MSP steel, rust preventive primer coated	1	2014993
CFS-T SSR/R30-6x5 MSP steel, rust preventive primer coated	1	2014994
CFS-T SSR/R30-8x1 MSP steel, rust preventive primer coated	1	2014995
CFS-T SSR/R30-8x2 MSP steel, rust preventive primer coated	1	2014996
CFS-T SSR/R30-8x3 MSP steel, rust preventive primer coated	1	2014997
CFS-T SSR/R30-8x4 MSP steel, rust preventive primer coated	1	2014998
CFS-T SSR/R30-8x5 MSP steel, rust preventive primer coated	1	2014999

### CFS-T SSR transit frames (single-row)

Ordering designation	Package contents	Item no.
CFS-T SSR-4x1 MSP steel, rust preventive coated	1	2050950
CFS-T SSR-4x2 MSP steel, rust preventive coated	1	2050951
CFS-T SSR-4x3 MSP steel, rust preventive coated	1	2050952
CFS-T SSR-4x4 MSP steel, rust preventive coated	1	2050953
CFS-T SSR-4x5 MSP steel, rust preventive coated	1	2050954
CFS-T SSR-6x1 MSP steel, rust preventive coated	1	2050955
CFS-T SSR-6x2 MSP steel, rust preventive coated	1	2050956
CFS-T SSR-6x3 MSP steel, rust preventive coated	1	2050957
CFS-T SSR-6x4 MSP steel, rust preventive coated	1	2050958
CFS-T SSR-6x5 MSP steel, rust preventive coated	1	2050959
CFS-T SSR-8x1 MSP steel, rust preventive coated	1	2050960
CFS-T SSR-8x2 MSP steel, rust preventive coated	1	2050961
CFS-T SSR-8x3 MSP steel, rust preventive coated	1	2050962
CFS-T SSR-8x4 MSP steel, rust preventive coated	1	2050963
CFS-T SSR-8x5 MSP steel, rust preventive coated	1	2050964

## CFS-T SSF TRANSIT FRAMES



<b>CFS-T SSF transit frames</b>		
Ordering designation	Package contents	Item no.
<b>CFS-T SSF-2x1 MSP transit frame</b> (steel, rust preventive coated)	1	2263754
<b>CFS-T SSF-2x1 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050981
<b>CFS-T SSF-4x1 MSP transit frame</b> (steel, rust preventive coated)	1	2263755
<b>CFS-T SSF-4x1 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050982
<b>CFS-T SSF-4x2 MSP transit frame</b> (steel, rust preventive coated)	1	2263756
<b>CFS-T SSF-4x2 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050982
<b>CFS-T SSF-4x3 MSP transit frame</b> (steel, rust preventive coated)	1	2263757
<b>CFS-T SSF-4x3 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050984
<b>CFS-T SSF-4x4 MSP transit frame</b> (steel, rust preventive coated)	1	2263758
<b>CFS-T SSF-4x4 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050985
<b>CFS-T SSF-4x5 MSP transit frame</b> (steel, rust preventive coated)	1	2263759
<b>CFS-T SSF-4x5 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050986
<b>CFS-T SSF-6x1 MSP transit frame</b> (steel, rust preventive coated)	1	2263780
<b>CFS-T SSF-6x1 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050987
<b>CFS-T SSF-6x2 MSP transit frame</b> (steel, rust preventive coated)	1	2263781
<b>CFS-T SSF-6x2 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050988
<b>CFS-T SSF-6x3 MSP transit frame</b> (steel, rust preventive coated)	1	2263782
<b>CFS-T SSF-6x3 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050989
<b>CFS-T SSF-6x4 MSP transit frame</b> (steel, rust preventive coated)	1	2263783
<b>CFS-T SSF-6x4 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050990
<b>CFS-T SSF-6x5 MSP transit frame</b> (steel, rust preventive coated)	1	2263784
<b>CFS-T SSF-6x5 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050991
<b>CFS-T SSF-8x1 MSP transit frame</b> (steel, rust preventive coated)	1	2263785
<b>CFS-T SSF-8x1 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050992
<b>CFS-T SSF-8x2 MSP transit frame</b> (steel, rust preventive coated)	1	2263786
<b>CFS-T SSF-8x2 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050993
<b>CFS-T SSF-8x3 MSP transit frame</b> (steel, rust preventive coated)	1	2263787
<b>CFS-T SSF-8x3 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050994
<b>CFS-T SSF-8x4 MSP transit frame</b> (steel, rust preventive coated)	1	2263788
<b>CFS-T SSF-8x4 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050995
<b>CFS-T SSF-8x5 MSP transit frame</b> (steel, rust preventive coated)	1	2263753
<b>CFS-T SSF-8x5 S/S transit frame</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2050996

## CFS-T SL AND CFS-T SLF SLEEVES

### Sleeves in mild steel, primed

Ordering designation	Package contents	Item no.
<b>CFS-T SL 50 MSP sleeve</b> (steel, rust preventive coated)	1	2044651
<b>CFS-T SL 70 MSP sleeve</b> (steel, rust preventive coated)	1	2044652
<b>CFS-T SL 100 MSP sleeve</b> (steel, rust preventive coated)	1	2044653
<b>CFS-T SL 125 MSP sleeve</b> (steel, rust preventive coated)	1	2044654
<b>CFS-T SL 150 MSP sleeve</b> (steel, rust preventive coated)	1	2044655
<b>CFS-T SL 200 MSP sleeve</b> (steel, rust preventive coated)	1	2044656



### Sleeves in stainless steel

Ordering designation	Package contents	Item no.
<b>CFS-T SL 50 S/S sleeve</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2044663
<b>CFS-T SL 70 S/S sleeve</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2044664
<b>CFS-T SL 100 S/S sleeve</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2044665
<b>CFS-T SL 125 S/S sleeve</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2044666
<b>CFS-T SL 150 S/S sleeve</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2044667
<b>CFS-T SL 200 S/S sleeve</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2044668

### Sleeves with flange in mild steel, primed

Ordering designation	Package contents	Item no.
<b>CFS-T SLF 50 MSP sleeve</b> (steel, rust preventive coated)	1	2044657
<b>CFS-T SLF 70 MSP sleeve</b> (steel, rust preventive coated)	1	2044658
<b>CFS-T SLF 100 MSP sleeve</b> (steel, rust preventive coated)	1	2044659
<b>CFS-T SLF 125 MSP sleeve</b> (steel, rust preventive coated)	1	2044660
<b>CFS-T SLF 150 MSP sleeve</b> (steel, rust preventive coated)	1	2044661
<b>CFS-T SLF 200 MSP sleeve</b> (steel, rust preventive coated)	1	2044662



### Sleeves with flange in stainless steel

Ordering designation	Package contents	Item no.
<b>CFS-T SLF 50 S/S sleeve</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2044669
<b>CFS-T SLF 70 S/S sleeve</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2044670
<b>CFS-T SLF 100 S/S sleeve</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2044671
<b>CFS-T SLF 125 S/S sleeve</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2044672
<b>CFS-T SLF 150 S/S sleeve</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2044673
<b>CFS-T SLF 200 S/S sleeve</b> (stainless steel material 1.4571 / V4A (AISI 316 Ti))	1	2044674



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