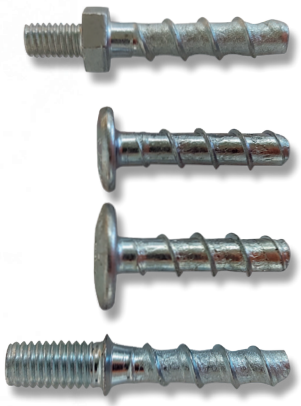
certifix

CFCS-L



Quick. Easy to use. And super compact. The ultimate anchor screw for concrete.

PRODUCT DESCRIPTION

The **Certifix CFCS-L** all-round screw is specially designed for ease and speed of use in interior design and drywall construction. One of the shortest screws suited to the job, this time-saving anchor has a minimum screw-in depth of just 25mm. This highly compact shape means it is extremely easy to handle. For assembly, all that's needed is a drill and cordless screwdriver, so even overhead use is quick and easy, especially compared to using conventional ceiling nails.

PRODUCT FEATURES

- Super-short, compact, 28mm design for optimum ease of use
- Constructed from galvanised steel
- Ideal for use with compacted reinforced and compacted unreinforced concrete without fibres to EN 206:2013
- Perfect for interior design and drywall construction
- Much quicker and easier to use overhead than ceiling nails

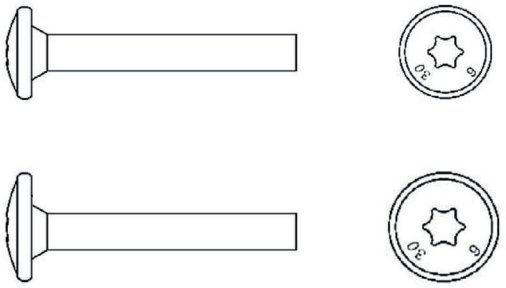
PRODUCT SPECIFICATION

PRODUCT NAME	MATERIAL		
CFCS-L	Steel EN 10263-4:2017 galvanised acc. to EN ISO 4042:2018 Zink flake coating according to EN ISO 10683:2018 (≥5µm)		
CFCS-L A4	1.4401; 1.4404; 1.4571; 1.4578		
CFCS-L HCR	1.4529		
	NORMAL CHARACTERISTICS STEEL		
	Yield Strength f_{yk} [N/mm²]	Ultimate Strength f_{uk} [N/mm²]	Rupture Elongation A_5 [%]
CFCS-L CFCS-L A4 CFCS-L HCR	400	600	≤ 8

INSTALLATION AND HANDLING / SPECIFICATION OF INTENDED USE

INSTALLATION TOOL	Variable speed electric screwdriver
INSTALLATION SPEED	Hammer drilling
CORRECT INSTALLATION	Anchor installation should be carried out by qualified personnel, under the supervision of the person responsible for on-site technical matters. If a hole is aborted, any new drilling must be a minimum distance of twice the depth of the aborted hole, provided the original hole is filled with high strength mortar and is not in the direction of the oblique tensile or shear load. After installation, there should be no further turning of the anchor, the head of which anchor must not be damaged.
ANCHORAGES SUBJECT TO	Static and quasi-static loads. Uses only for anchorages with fire-resistance requirements. Multiple use only in non-structural applications according to EN 1992-4:2018.
BASE MATERIALS	Compacted reinforced and compacted concrete without fibres, according to EN 206:2013. Strength classes C20/25 to C50/60 according to EN 206:2013. Cracked and uncracked concrete.
USE CONDITIONS (ENVIRONMENTAL CONDITIONS)	All concrete screw types with h_{nom1} and h_{nom2} are subject to dry internal conditions. For areas subject to external atmospheric exposure (including industrial and marine environments) or to permanently damp internal conditions, use screw types made of stainless steel with marking A4/HCR. Note: Aggressive conditions include permanent, alternating immersion in seawater or in the splash zone of seawater, the chloride atmosphere of indoor swimming pools, or an atmosphere with chemical pollution (e.g. in desulphurisation plants or road tunnels where de-icing materials are used).
DESIGN	Verifiable calculation notes and drawings should be prepared, taking account of the loads to be anchored, and with the position of the anchor indicated on the design drawings (e.g. the position of the anchor relative to reinforcement or to supports, etc.). Anchorages are designed according to EN 1992-4:2018 and EOTA Technical Report TR 055, Edition February 2018. The design for shear load according to EN 1992-4:2018, Section 6.2.2 applies for all specified diameters of clearance hole in the fixture.

PAN HEAD & LARGE PAN HEAD - STEEL, ZINC PLATED



Configuration with pan head
and TORX drive
e.g CFCS-L 6x30 P VZ 40

METRIC CONNECTION THREAD M6 - STEEL - ZINC PLATED

Configuration with hexagon drive
and metric connection thread
e.g CFCS-L 6x30 M8 SWS10

METRIC CONNECTION THREAD M8 - STEEL - ZINC PLATED

Configuration with metric connection
thread and TORX drive
e.g CFCS-L 6x30 M10 SW5

CERTIFICATION

ETAG 001
-For anchoring in cracked and non-cracked concrete
- For multiple fastening of non-structural systems
CFCS-L 6

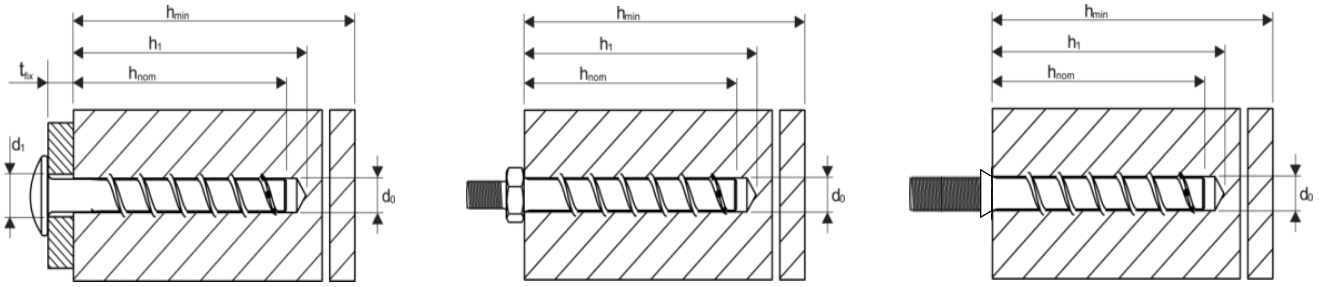
R 30 - R 120

TECHNICAL CHARACTERISTIC WITHOUT FIRE EXPOSURE FOR MULTIPLE USE CFCS-L

SCREW SIZE CFCS-L				CFCS-L	
EMBEDMENT DEPTH	h_{nom}		[mm]	$h_{nom,1}$	$h_{nom,2}$
				25	35
Nominal diameter of drill bit	d_0		[mm]	6	
Depth of drill hole	h_1	min	[mm]	28	38
Embedment depth	h_{ef}		[mm]	19	27
Diameter of clearance hole in the fixture	d_f	max	[mm]	8	
Approved tension load in cracked concrete [1);2)]	N_{zul}		[kN]	0.4	1.0
Approved shear load in cracked concrete [1);2)]	V_{zul}		[kN]	1.4	2.3
Approved tension load in uncracked concrete [1);2)]	N_{zul}		[kN]	1.0	1.9
Approved shear load in uncracked concrete	V_{zul}		[kN]	1.9	3.3
Approved bending resistance	M_{zul}		[kN]	6.3	
Minimum edge distance	C_{min}		[mm]	30	
Minimum spacing	S_{min}		[mm]	30	
Minimum base material thickness	h_{min}		[mm]	80	
Installation torque for connection thread version	T_{inst}		[Nm]	10	

1) The partial safety factor for material resistance from the approval as well a partial safety factor fo load actions γF=1,4 were considered for determining the load.

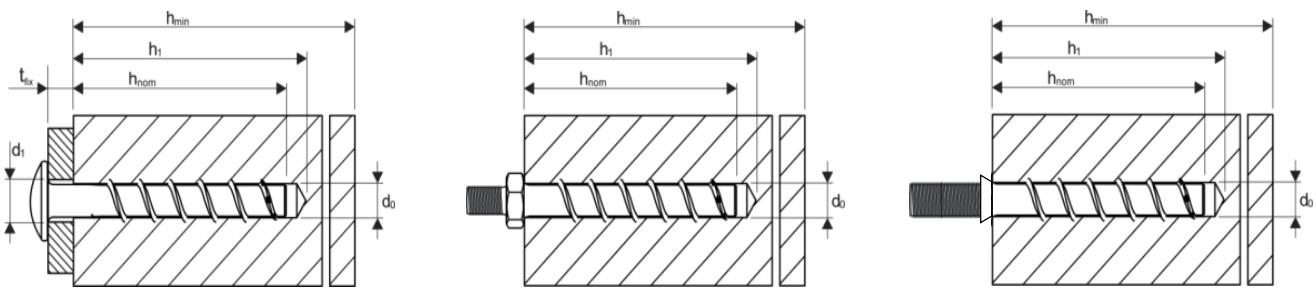
2) These values apply without influence of the spacing and edge distances.



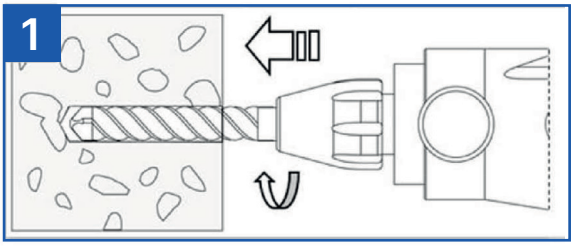
TECHNICAL CHARACTERISTIC UNDER FIRE EXPOSURE FOR MULTIPLE USE CFCS-L

SCREW SIZE CFCS-L				CFCS-L	
EMBEDMENT DEPTH		h_{nom}	[mm]	$h_{nom,1}$	$h_{nom,2}$
				25	35
APPROVED LOAD UNDER TENSION - AND SHEAR USE ($F_{zul,\,fi} = N_{zul,\,fi} = V_{zul,\,fi}$)					
FIRE RESISTANCE CLASS					
R30	APPROVED LOAD	$F_{zul,fi30}$	[kN]	0.23	0.27
R60		$F_{zul,fi60}$	[kN]	0.23	0.27
R90		$F_{zul,fi90}$	[kN]	0.22	
R120		$F_{zul,fi120}$	[kN]	0.17	
R30		$M_{zul,fi30}$	[Nm]	0.22	
R60		$M_{zul,\,fi60}$	[Nm]	0.22	
R90		$M_{zul,fi90}$	[Nm]	0.18	
R120		$M_{zul,fi120}$	[Nm]	0.14	
EDGE DISTANCE					
R 30 to R120		$C_{cr,fi}$	[mm]	2 x h_{ef}	
The edge distance must be at least 300 mm, if the fire load attached from more than one side.					
SPACING					
R 30 to R120		$S_{cr,fi}$	[mm]	2 x h_{ef}	
CONCRETE PRY-OUT FAILURE					
R 30 to R120		k	[–]	1.0	
For wet concrete, increase the anchorage depth by at least 30 mm					

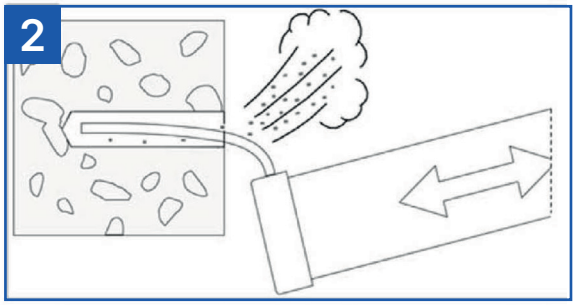
1) the partial safety factor for material resistance from the approval γM=1,0 as well a partial safety factor for load actions γF=1,0 were considered for determining the load.



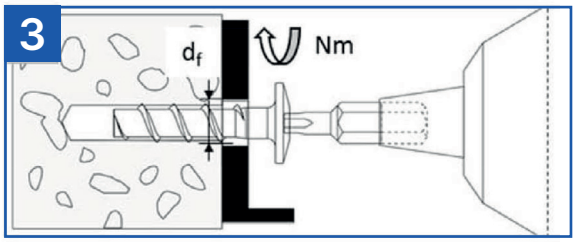
INSTALLATION INSTRUCTIONS



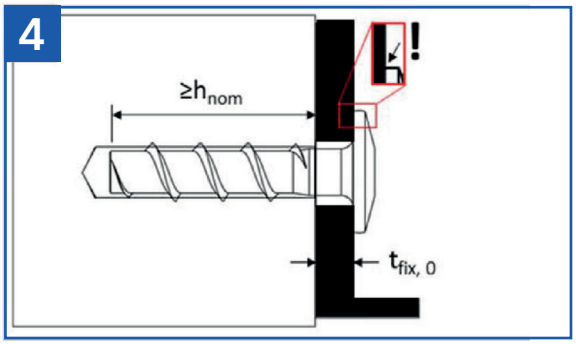
Drill the hole with a PGM approved SDS drill bit.



Remove drill dust by vacuuming or blowing.



Install with rotary screw driver or torque wrench (not with impact screw driver).



The head must be undamaged and in contact with the fixture. Do not overtighten fixing.