

OCFH-ZF Self-drilling screws

The special drill bit shape designed to provide quick and trouble-free installation in metal constructions made from cold formed sections



Product information

Features and benefits

- Hardened surface of the thread (flexible core). High quality anti-corrosion coating guarantees resistance up to 500 hours. The shape of the thread and its height is closely related to the intended use of self drilling fixing into steel construction.
- The drill bit is designed to provide quick and trouble-free installation in the steel. Sharp point of the drill prevents movement of the surface of the fixture.
- Corrosion-resistant protection (500h in Neutral Salt Spray test)
- Hardened thread surface

Applications

- For fixing: Supporting and cladding metal sheet to steel structures on facades or flat roof construction

Base materials

Approved for use in:

- Structural Steel
- Metal Sheet & Profiles

Installation guide

1. Screw must be installed at 90 degrees to substrate.
2. Magnetic driver must be used.
3. Lowest torque setting on impact screwdriver to start.
4. Reduce speed when the washer starts to deform.
5. Use a cordless Impact screwdriver. Note: Never use a power drill.
6. For installation please use screwdriver of load capacity 1600 - 2000 rpm with regulated torque.

Product information

Size	Product Code	Screw		Fixture	Max. drilling thickness
		Diameter	Length	Max. thickness without washer	
		d	L	t _{fix}	
[mm]					
Ø4.8	OCFH-48016-ZF	4.8	16	4	3
	OCFH-48019-ZF	4.8	19	7	3

Installation data

Size	Ø4.8		
Hole diameter in substrate	d ₀	[mm]	-
Min. hole depth in substrate	h ₀	[mm]	-
Min. installation depth	h _{nom}	[mm]	-
Min. substrate thickness	h _{min}	[mm]	0.75
Min. spacing	s _{min}	[mm]	30
Min. edge distance	c _{min}	[mm]	10
Wrench size	Sw	[mm]	8
Screw diameter	d	[mm]	4.8

Basic performance data

Performance data for single screw without influence of edge distance and spacing

Size	TENSION LOAD		SHEAR LOAD	
	Ø4.8 (T14)		Ø4.8	
MEAN ULTIMATE LOAD				
Substrate thickness 0,75mm	[kN]	0.76	1.34	
Substrate thickness 1,00mm	[kN]	1.08	1.95	
Substrate thickness 1,25mm	[kN]	1.63	2.70	
Substrate thickness 1,50mm	[kN]	2.54	3.02	
Substrate thickness 2,00mm	[kN]	3.21	-	
CHARACTERISTIC LOAD				
Substrate thickness 0,75mm	[kN]	0.61	1.07	
Substrate thickness 1,00mm	[kN]	0.87	1.58	
Substrate thickness 1,25mm	[kN]	1.27	2.11	
Substrate thickness 1,50mm	[kN]	2.08	2.48	
Substrate thickness 2,00mm	[kN]	2.64	-	
DESIGN LOAD				
Substrate thickness 0,75mm	[kN]	0.46	0.80	
Substrate thickness 1,00mm	[kN]	0.65	0.19	
Substrate thickness 1,25mm	[kN]	0.95	1.59	
Substrate thickness 1,50mm	[kN]	1.56	1.86	
Substrate thickness 2,00mm	[kN]	1.98	-	
RECOMMENDED LOAD				
Substrate thickness 0,75mm	[kN]	0.33	0.57	
Substrate thickness 1,00mm	[kN]	0.46	0.14	
Substrate thickness 1,25mm	[kN]	0.68	1.14	
Substrate thickness 1,50mm	[kN]	1.11	1.33	
Substrate thickness 2,00mm	[kN]	1.42	-	
Substrate thickness 3,00mm	[kN]	1.42	-	

Design performance data

DESIGN PERFORMANCE DATA Ø4.8

TENSION LOAD

Size			Ø4.8				
Substrate thickness	h_{min}	[mm]	0.75	1.00	1.25	1.50	2.00
Characteristic load	N_{Rk}	[kN]	0.61	0.87	1.27	2.08	2.93
Design resistance $\gamma_{Ms} = 1.33$	N_{Rd}	[kN]	0.46	0.65	0.95	1.56	2.20

TENSION LOAD TO PULL SCREW WITH WASHER 14 THROUGH FIXTURE

Size			Ø4.8				
Sheet metal thickness	t_N	[mm]	0.40	0.50	0.63	0.75	1.00
Characteristic resistance	$N_{o,Rk}$	[kN]	1.62	2.64	3.56	4.27	4.75
Design resistance $\gamma_{Ms} = 1.33$	$N_{o,Rd}$	[kN]	1.22	1.98	2.68	3.21	3.57

SHEAR LOAD

Size			Ø4.8					
Sheet metal thickness	t_N	[mm]	0.50	0.63	0.75	1.00	1.25	1.50
SUBSTRATE THICKNESS 0.75 mm								
Characteristic resistance	V_{Rk}	[kN]	0.96	1.02	1.07	-	-	-
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.72	0.77	0.80	-	-	-
SUBSTRATE THICKNESS 1.00 mm								
Characteristic resistance	V_{Rk}	[kN]	0.96	1.02	1.07	1.58	-	-
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.72	0.77	0.80	1.19	-	-
SUBSTRATE THICKNESS 1.25 mm								
Characteristic resistance	V_{Rk}	[kN]	0.92	1.02	1.07	1.58	2.11	-
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.72	0.77	0.80	1.19	1.59	-
SUBSTRATE THICKNESS 1.50 mm								
Characteristic resistance	V_{Rk}	[kN]	0.92	1.02	1.07	1.58	2.11	2.48
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.72	0.77	0.80	1.19	1.59	1.86