OC-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)

Applications

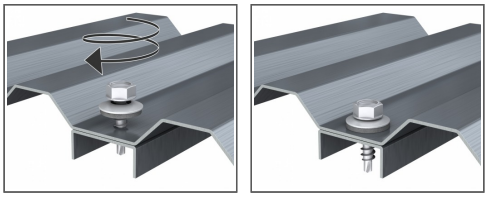
- For fixing: Supporting and cladding metal sheet to steel structures on facades or flat roof construction

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 trogue.

Product information

Size	Product Code	Screw			Fixture		Max. drilling thickness	Washer size
		Diameter	Length	Head size	Max. thickness with washer	Max. thickness without washer		
		d	L	S	t_{Fix}			
		[mm]						
Ø4.8	OC-48025-ZF	4.8	25	8	10	13	3	14

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_{oRd}	[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