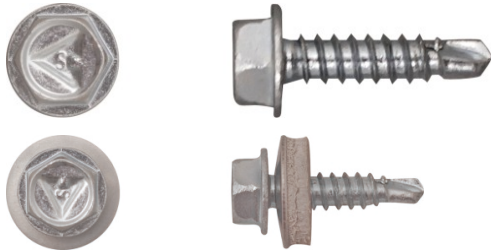


OCWS Stainless steel self-drilling screws

Stainless steel self drilling screw with reduced drilling point guarantees optimum tightness of the fastening



Approvals and Reports

- ETA-10/0183



Product information

Features and benefits

- Stainless steel self drilling screw made with BIMETAL
- Hardened surface of the thread (flexible core). Corrosion resistant zinc coating has a thickness of no less than 12um.
- The full length thread design prevents twisting and allows application without a washer. Furthermore the specific shape and type of thread allow metal sheets to be connected together.
- Self vulcanizing EPDM washer. Temperature and UV resistant. The special shape of the washer ensures proper seating of the sealing material on the outer cladding material fixture which guarantees a proper seal.
- The drill point is designed to provide a fast and hassle-free installation in wood. Sharp point of the drill prevents movement of the surface of the fixture.
- Reduced drilling point ensures optimal tightness and correct hole diameter in thin metal sheets.

Applications

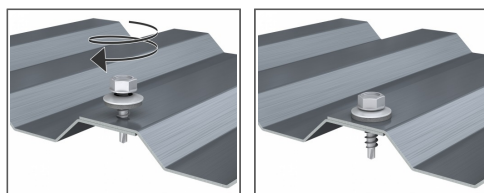
- For fixing of: Overlapping sheet connection

Base materials

Approved for use in:

- Structural Steel
- Metal Sheet & Profiles

Installation guide



1. Screw must be installed at 90 degrees to substrate.
2. Special 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
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Installation data

Size			Ø4.8	Ø5.5
Screw diameter	d	[mm]	4.8	5.5
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]	0.4	1
Min. spacing	s _{min}	[mm]	30	30
Min. edge distance	c _{min}	[mm]	10	10
Wrench size	Sw	[mm]	8	8

Basic performance data

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

Size		TENSION LOAD		SHEAR LOAD	
		Ø4.8 [S14]	Ø5.5 [S16]	Ø4.8	Ø5.5
MEAN ULTIMATE LOAD					
Substrate thickness 0,50mm	[kN]	0.60	-	1.02	-
Substrate thickness 0,75mm	[kN]	1.09	-	2.12	-
Substrate thickness 1,00mm	[kN]	1.56	0.97	2.78	2.44
Substrate thickness 1,50mm	[kN]	0.00	2.15	-	0.00
CHARACTERISTIC LOAD					
Substrate thickness 0,50mm	[kN]	0.45	-	0.88	-
Substrate thickness 0,75mm	[kN]	0.81	-	1.61	-
Substrate thickness 1,00mm	[kN]	1.29	0.80	2.40	2.11
Substrate thickness 1,50mm	[kN]	1.49	1.67	-	2.83
DESIGN LOAD					
Substrate thickness 0,50mm	[kN]	0.34	-	0.66	-
Substrate thickness 0,75mm	[kN]	0.61	-	1.21	-
Substrate thickness 1,00mm	[kN]	0.97	0.60	1.80	1.59
Substrate thickness 1,50mm	[kN]	1.12	1.26	-	2.13
RECOMMENDED LOAD					
Substrate thickness 0,50mm	[kN]	0.24	-	0.47	-
Substrate thickness 0,75mm	[kN]	0.44	-	0.86	-
Substrate thickness 1,00mm	[kN]	0.69	0.43	1.29	1.14
Substrate thickness 1,50mm	[kN]	0.80	0.90	-	1.52

Design performance data

DESIGN PERFORMANCE DATA Ø4.8

TENSION LOADS FOR SCREW WITH WASHER 14

Size			Ø4.8									
Sheet metal thickness	t_N	[mm]	0.40	0.50	0.55	0.63	0.75	0.88	1.00	1.13	1.25	1.50
SUBSTRATE THICKNESS 0.40 mm												
Characteristic load	N_{Rk}	[kN]	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Design resistance $\gamma_{Ms} = 1.33$	N_{Rd}	[kN]	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
SUBSTRATE THICKNESS 0.50 mm												
Characteristic load	N_{Rk}	[kN]	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
Design resistance $\gamma_{Ms} = 1.33$	N_{Rd}	[kN]	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
SUBSTRATE THICKNESS 0.55 mm												
Characteristic load	N_{Rk}	[kN]	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	-
Design resistance $\gamma_{Ms} = 1.33$	N_{Rd}	[kN]	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	-
SUBSTRATE THICKNESS 0.63 mm												
Characteristic load	N_{Rk}	[kN]	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	0.62	-
Design resistance $\gamma_{Ms} = 1.33$	N_{Rd}	[kN]	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	-
SUBSTRATE THICKNESS 0.75 mm												
Characteristic load	N_{Rk}	[kN]	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	-
Design resistance $\gamma_{Ms} = 1.33$	N_{Rd}	[kN]	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	-
SUBSTRATE THICKNESS 0.88 mm												
Characteristic load	N_{Rk}	[kN]	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	-	-
Design resistance $\gamma_{Ms} = 1.33$	N_{Rd}	[kN]	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	-	-
SUBSTRATE THICKNESS 1.00 mm												
Characteristic load	N_{Rk}	[kN]	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	-	-
Design resistance $\gamma_{Ms} = 1.33$	N_{Rd}	[kN]	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	-	-
SUBSTRATE THICKNESS 1.13 mm												
Characteristic load	N_{Rk}	[kN]	1.49	1.49	1.49	1.49	1.49	1.49	-	-	-	-
Design resistance $\gamma_{Ms} = 1.33$	N_{Rd}	[kN]	1.12	1.12	1.12	1.12	1.12	1.12	-	-	-	-
SUBSTRATE THICKNESS 1.25 mm												
Characteristic load	N_{Rk}	[kN]	1.49	1.49	1.49	1.49	1.49	1.49	-	-	-	-
Design resistance $\gamma_{Ms} = 1.33$	N_{Rd}	[kN]	1.12	1.12	1.12	1.12	1.12	1.12	-	-	-	-
SUBSTRATE THICKNESS 1.50 mm												
Characteristic load	N_{Rk}	[kN]	1.49	1.49	-	-	-	-	-	-	-	-
Design resistance $\gamma_{Ms} = 1.33$	N_{Rd}	[kN]	1.12	1.12	-	-	-	-	-	-	-	-

SHEAR LOAD

Size			Ø4.8									
Sheet metal thickness	t_N	[mm]	0.40	0.50	0.55	0.63	0.75	0.88	1.00	1.13	1.25	1.50
SUBSTRATE THICKNESS 0.40 mm												
Characteristic resistance	V_{Rk}	[kN]	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
SUBSTRATE THICKNESS 0.50 mm												
Characteristic resistance	V_{Rk}	[kN]	0.71	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.53	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
SUBSTRATE THICKNESS 0.55 mm												
Characteristic resistance	V_{Rk}	[kN]	0.77	0.94	1.11	1.11	1.11	1.11	1.11	1.11	1.11	-
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.58	0.71	0.83	0.83	0.83	0.83	0.83	0.83	0.83	-
SUBSTRATE THICKNESS 0.63 mm												
Characteristic resistance	V_{Rk}	[kN]	0.86	1.07	1.17	1.34	1.34	1.34	1.34	1.34	1.34	-
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.65	0.80	0.88	1.01	1.01	1.01	1.01	1.01	1.01	-
SUBSTRATE THICKNESS 0.75 mm												
Characteristic resistance	V_{Rk}	[kN]	1.05	1.05	1.20	1.34	1.61	1.61	1.61	1.61	1.61	-
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.79	0.79	0.90	1.01	1.21	1.21	1.21	1.21	1.21	-

Design performance data

Size			Ø4.8									
Sheet metal thickness	t _N	[mm]	0.40	0.50	0.55	0.63	0.75	0.88	1.00	1.13	1.25	1.50
SUBSTRATE THICKNESS 0.88 mm												
Characteristic resistance	V _{Rk}	[kN]	1.05	1.05	1.20	1.34	1.61	2.01	2.01	-	-	-
Design resistance V _{Mc} = 1.33	V _{Rd}	[kN]	0.79	0.79	0.90	1.01	1.21	1.51	1.51	-	-	-
SUBSTRATE THICKNESS 1.00 mm												
Characteristic resistance	V _{Rk}	[kN]	1.05	1.05	1.20	1.34	1.61	2.01	2.40	-	-	-
Design resistance V _{Mc} = 1.33	V _{Rd}	[kN]	0.79	0.79	0.90	1.01	1.21	1.51	1.80	-	-	-
SUBSTRATE THICKNESS 1.13 mm												
Characteristic resistance	V _{Rk}	[kN]	1.05	1.05	1.20	1.34	1.61	-	-	-	-	-
Design resistance V _{Mc} = 1.33	V _{Rd}	[kN]	0.79	0.79	0.90	1.01	1.21	-	-	-	-	-
SUBSTRATE THICKNESS 1.25 mm												
Characteristic resistance	V _{Rk}	[kN]	1.05	1.05	1.20	1.34	1.61	-	-	-	-	-
Design resistance V _{Mc} = 1.33	V _{Rd}	[kN]	0.79	0.79	0.90	1.01	1.21	-	-	-	-	-
SUBSTRATE THICKNESS 1.50 mm												
Characteristic resistance	V _{Rk}	[kN]	1.05	1.05	-	-	-	-	-	-	-	-
Design resistance V _{Mc} = 1.33	V _{Rd}	[kN]	0.79	0.79	-	-	-	-	-	-	-	-

DESIGN PERFORMANCE DATA Ø5.5

TENSION LOADS FOR SCREW WITH WASHER 16

Size			Ø5.5									
Sheet metal thickness	t _N	[mm]	0.55	0.63	0.75	0.88	1.00	1.13	1.25	1.50	1.75	2.00
SUBSTRATE THICKNESS 1.00 mm												
Characteristic load	N _{Rk}	[kN]	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Design resistance V _{M5} = 1.33	N _{Rd}	[kN]	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
SUBSTRATE THICKNESS 1.13 mm												
Characteristic load	N _{Rk}	[kN]	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Design resistance V _{M5} = 1.33	N _{Rd}	[kN]	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
SUBSTRATE THICKNESS 1.25 mm												
Characteristic load	N _{Rk}	[kN]	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
Design resistance V _{M5} = 1.33	N _{Rd}	[kN]	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
SUBSTRATE THICKNESS 1.50 mm												
Characteristic load	N _{Rk}	[kN]	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79
Design resistance V _{M5} = 1.33	N _{Rd}	[kN]	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
SUBSTRATE THICKNESS 1.75 mm												
Characteristic load	N _{Rk}	[kN]	1.67	1.92	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30
Design resistance V _{M5} = 1.33	N _{Rd}	[kN]	1.26	1.44	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73
SUBSTRATE THICKNESS 2.00 mm												
Characteristic load	N _{Rk}	[kN]	1.67	1.92	2.32	2.81	2.81	2.81	2.81	2.81	2.81	2.81
Design resistance V _{M5} = 1.33	N _{Rd}	[kN]	1.26	1.44	1.74	2.11	2.11	2.11	2.11	2.11	2.11	2.11
SUBSTRATE THICKNESS 2.50 mm												
Characteristic load	N _{Rk}	[kN]	1.67	1.92	2.32	2.93	3.61	3.85	3.85	3.85	3.85	3.85
Design resistance V _{M5} = 1.33	N _{Rd}	[kN]	1.26	1.44	1.74	2.20	2.71	2.89	2.89	2.89	2.89	2.89
SUBSTRATE THICKNESS 3.00 mm												
Characteristic load	N _{Rk}	[kN]	1.67	1.92	2.32	2.93	3.61	4.25	4.25	4.25	4.25	4.25
Design resistance V _{M5} = 1.33	N _{Rd}	[kN]	1.26	1.44	1.74	2.20	2.71	3.20	3.20	3.20	3.20	3.20

SHEAR LOAD

Size			Ø5.5										
Sheet metal thickness	t _N	[mm]	0.50	0.55	0.63	0.75	0.88	1.00	1.13	1.25	1.50	1.75	2.00
SUBSTRATE THICKNESS 1.00 mm													
Characteristic resistance	V _{Rk}	[kN]	1.30	1.36	1.45	1.69	1.90	2.11	2.11	2.11	2.11	2.11	2.11
Design resistance V _{M5} = 1.33	V _{Rd}	[kN]	0.98	1.02	1.09	1.27	1.43	1.59	1.59	1.59	1.59	1.59	1.59

Design performance data

Size			Ø5.5										
Sheet metal thickness	t_N	[mm]	0.50	0.55	0.63	0.75	0.88	1.00	1.13	1.25	1.50	1.75	2.00
SUBSTRATE THICKNESS 1.13 mm													
Characteristic resistance	V_{Rk}	[kN]	1.30	1.36	1.68	1.88	2.08	2.24	2.24	2.24	2.24	2.24	2.24
Design resistance $V_{M_c} = 1.33$	V_{Rd}	[kN]	0.98	1.02	1.26	1.41	1.56	1.68	1.68	1.68	1.68	1.68	1.68
SUBSTRATE THICKNESS 1.25 mm													
Characteristic resistance	V_{Rk}	[kN]	1.30	1.36	1.91	2.08	2.26	2.42	2.42	2.42	2.42	2.42	2.42
Design resistance $V_{M_c} = 1.33$	V_{Rd}	[kN]	0.98	1.02	1.44	1.56	1.70	1.82	1.82	1.82	1.82	1.82	1.82
SUBSTRATE THICKNESS 1.50 mm													
Characteristic resistance	V_{Rk}	[kN]	1.30	1.36	1.91	2.13	2.36	2.59	2.71	2.83	2.83	2.83	2.83
Design resistance $V_{M_c} = 1.33$	V_{Rd}	[kN]	0.98	1.02	1.44	1.60	1.77	1.95	2.04	2.13	2.13	2.13	2.13
SUBSTRATE THICKNESS 1.75 mm													
Characteristic resistance	V_{Rk}	[kN]	1.30	1.36	1.91	2.18	2.47	2.74	2.99	3.23	3.23	3.23	3.23
Design resistance $V_{M_c} = 1.33$	V_{Rd}	[kN]	0.98	1.02	1.44	1.64	1.86	2.06	2.25	2.43	2.43	2.43	2.43
SUBSTRATE THICKNESS 2.00 mm													
Characteristic resistance	V_{Rk}	[kN]	1.30	1.36	1.91	2.18	2.63	3.08	3.40	3.72	3.72	3.72	3.72
Design resistance $V_{M_c} = 1.33$	V_{Rd}	[kN]	0.98	1.02	1.44	1.64	1.98	2.32	2.56	2.80	2.80	2.80	2.80
SUBSTRATE THICKNESS 2.50 mm													
Characteristic resistance	V_{Rk}	[kN]	1.30	1.36	1.91	2.18	2.87	3.57	4.13	4.70	4.70	4.70	4.70
Design resistance $V_{M_c} = 1.33$	V_{Rd}	[kN]	0.98	1.02	1.44	1.64	2.16	2.68	3.11	3.53	3.53	3.53	3.53
SUBSTRATE THICKNESS 3.00 mm													
Characteristic resistance	V_{Rk}	[kN]	1.30	1.36	1.91	2.18	3.13	4.08	4.88	5.68	5.68	5.68	5.68
Design resistance $V_{M_c} = 1.33$	V_{Rd}	[kN]	0.98	1.02	1.44	1.64	2.35	3.07	3.67	4.27	4.27	4.27	4.27