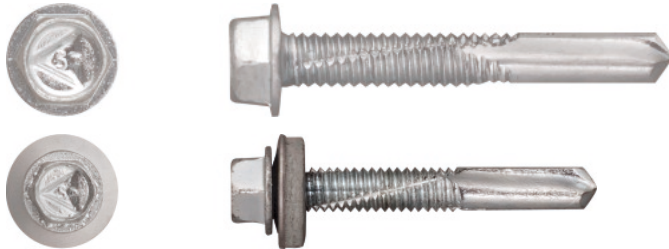


ONS Stainless steel self-drilling screws

Stainless steel self drilling screw with the special drill bit shape designed to provide quick and trouble-free installation in metal constructions made from hot rolled sections



Approvals and Reports

- ETA-10/0183
- UKTA-22/6336



Product information

Features and benefits

- Stainless steel self drilling screw made with BIMETAL
- Hardened surface of the thread (flexible core). Corrosion resistant zinc coating of thickness not less than 12 um. The shape of the thread and its height is closely related to the intended use of self drilling fixing into steel construction.
- 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 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.

Applications

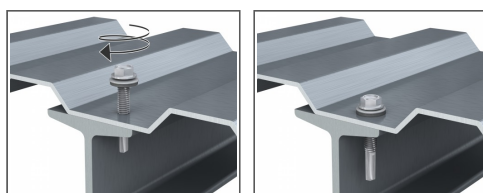
- For fixing: Supporting and cladding metal sheet to steel structures on facades or flat roof construction

Base materials

Approved for use in:

- Structural Steel

Installation guide

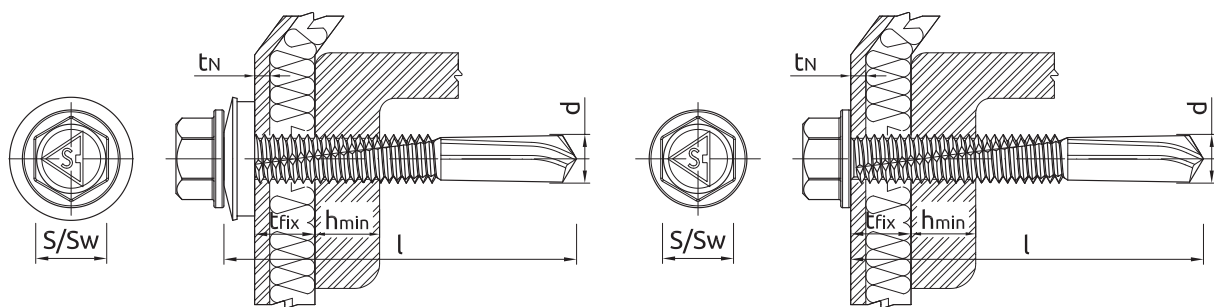


1. Screw must be installed at 90 degrees to substrate.
2. Special driver must be used.
3. Lowest torque setting on impact screwdriver to start.
4. Reduce speed when the washer starts to deform.
5. Use a cordless Impact screwdriver. Note: Never use a power drill.
6. For installation please use screwdriver of load capacity 1600 - 2000 rpm with regulated 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]								
Ø5.5	ONS-55040	5.5	40	8	17	20	12	16, 19
	ONS-55040S19	5.5	40	8	17	20	12	16, 19
	ONS-55040S14	5.5	40	8	17	20	12	16, 19
	ONS-55040S16	5.5	40	8	17	20	12	16, 19

Installation data



Size	Ø5.5		
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]	4
Min. spacing	s_{min}	[mm]	30
Min. edge distance	c_{min}	[mm]	10
Wrench size	Sw	[mm]	8
Screw diameter	d	[mm]	5.5

Basic performance data

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

Size	TENSION LOAD		SHEAR LOAD	
	Ø5.5 (S16)		Ø5.5	
MEAN ULTIMATE LOAD				
Substrate thickness 4,00mm	[kN]	2.23	-	-
Substrate thickness 4mm	[kN]	-	2.17	-
CHARACTERISTIC LOAD				
Substrate thickness 4,00mm	[kN]	1.67	-	-
Substrate thickness 4mm	[kN]	-	1.38	-
DESIGN LOAD				
Substrate thickness 4,00mm	[kN]	1.26	-	-
Substrate thickness 4mm	[kN]	-	1.04	-
RECOMMENDED LOAD				
Substrate thickness 4,00mm	[kN]	0.90	-	-
Substrate thickness 4mm	[kN]	-	0.74	-

Design performance data

DESIGN PERFORMANCE DATA Ø5.5

TENSION LOADS FOR SCREW WITH WASHER 16

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 4.00 mm													
Characteristic load	N _{Rk}	[kN]	1.67	1.92	2.32	2.93	2.96	2.96	2.96	2.96	2.96	2.96	2.96
Design resistance $\gamma_{Ms} = 1.33$	N _{Rd}	[kN]	1.26	1.44	1.74	2.20	2.23	2.23	2.23	2.23	2.23	2.23	2.23
SUBSTRATE THICKNESS 5.00 mm													
Characteristic load	N _{Rk}	[kN]	1.67	1.92	2.32	2.93	3.30	3.30	3.30	3.30	3.30	3.30	3.30
Design resistance $\gamma_{Ms} = 1.33$	N _{Rd}	[kN]	1.26	1.44	1.74	2.20	2.48	2.48	2.48	2.48	2.48	2.48	2.48
SUBSTRATE THICKNESS 6.00 mm													
Characteristic load	N _{Rk}	[kN]	1.67	1.92	2.32	2.93	3.30	3.30	3.30	3.30	3.30	3.30	3.30
Design resistance $\gamma_{Ms} = 1.33$	N _{Rd}	[kN]	1.26	1.44	1.74	2.20	2.48	2.48	2.48	2.48	2.48	2.48	2.48
SUBSTRATE THICKNESS 7.00 mm													
Characteristic load	N _{Rk}	[kN]	1.67	1.92	2.32	2.93	3.30	3.30	3.30	3.30	3.30	3.30	3.30
Design resistance $\gamma_{Ms} = 1.33$	N _{Rd}	[kN]	1.26	1.44	1.74	2.20	2.48	2.48	2.48	2.48	2.48	2.48	2.48
SUBSTRATE THICKNESS 8.00 mm													
Characteristic load	N _{Rk}	[kN]	1.67	1.92	2.32	2.93	3.30	3.30	3.30	3.30	3.30	3.30	3.30
Design resistance $\gamma_{Ms} = 1.33$	N _{Rd}	[kN]	1.26	1.44	1.74	2.20	2.48	2.48	2.48	2.48	2.48	2.48	2.48
SUBSTRATE THICKNESS 9.00 mm													
Characteristic load	N _{Rk}	[kN]	1.67	1.92	2.32	2.93	3.30	3.30	3.30	3.30	3.30	3.30	3.30
Design resistance $\gamma_{Ms} = 1.33$	N _{Rd}	[kN]	1.26	1.44	1.74	2.20	2.48	2.48	2.48	2.48	2.48	2.48	2.48
SUBSTRATE THICKNESS 10.00 mm													
Characteristic load	N _{Rk}	[kN]	1.67	1.92	2.32	2.93	3.30	3.30	3.30	3.30	3.30	3.30	3.30
Design resistance $\gamma_{Ms} = 1.33$	N _{Rd}	[kN]	1.26	1.44	1.74	2.20	2.48	2.48	2.48	2.48	2.48	2.48	2.48
SUBSTRATE THICKNESS 11.0 mm													
Characteristic load	N _{Rk}	[kN]	1.67	1.92	2.32	2.93	3.30	3.30	-	-	-	-	-
Design resistance $\gamma_{Ms} = 1.33$	N _{Rd}	[kN]	1.26	1.44	1.74	2.20	2.48	2.48	-	-	-	-	-

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 4.00 mm													
Characteristic resistance	V _{Rk}	[kN]	1.38	1.53	1.85	2.18	2.76	3.22	3.55	3.90	4.53	5.05	5.45
Design resistance $\gamma_{Mc} = 1.33$	V _{Rd}	[kN]	1.04	1.15	1.39	1.64	2.08	2.42	2.67	2.93	3.41	3.80	4.10
SUBSTRATE THICKNESS 5.00 mm													
Characteristic resistance	V _{Rk}	[kN]	1.38	1.53	1.85	2.18	2.76	3.22	3.55	5.87	6.63	7.39	8.16
Design resistance $\gamma_{Mc} = 1.33$	V _{Rd}	[kN]	1.04	1.15	1.39	1.64	2.08	2.42	2.67	4.41	4.98	5.56	6.14
SUBSTRATE THICKNESS 6.00 mm													
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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 11.0 mm													
Characteristic resistance	V_{Rk}	[kN]	1.38	1.53	1.85	2.18	2.76	3.22	-	-	-	-	-
Design resistance $V_{Mc} = 1.33$	V_{Rd}	[kN]	1.04	1.15	1.39	1.64	2.08	2.42	-	-	-	-	-

Product commercial data

Product Code	Washer size [mm]	Quantity [pcs]			Weight [kg]			Bar Codes
		Box	Outer	Pallet	Box	Outer	Pallet	
ONS-55040 ¹⁾	16, 19	100	1600	38400	0.63	10.1	271.9	5906675331324
ONS-55040S19 ¹⁾	16, 19	100	1600	38400	0.73	11.7	310.3	5906675331355
ONS-55040S14 ¹⁾	16, 19	100	1600	51200	0.80	12.8	439.6	5906675331331
ONS-55040S16 ¹⁾	16, 19	100	1600	51200	0.84	13.4	460.1	5906675331348

1) ETA-10/0183