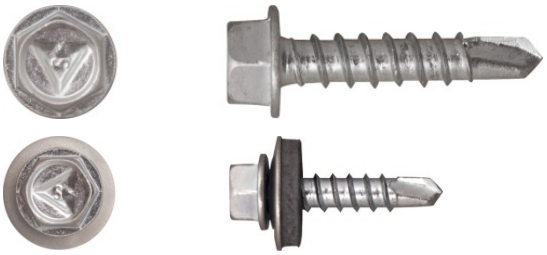
OCS Stainless steel self-drilling screws

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

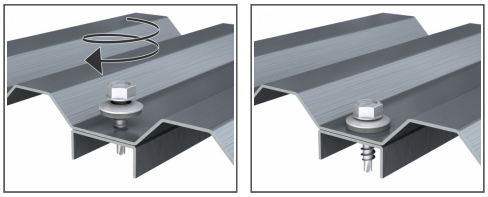
- For fixing: Supporting and cladding metal sheet to steel structures on facades or flat roof construction

Base materials

Approved for use in:

- Structural Steel
- Metal Sheet & Profiles

Installation guide

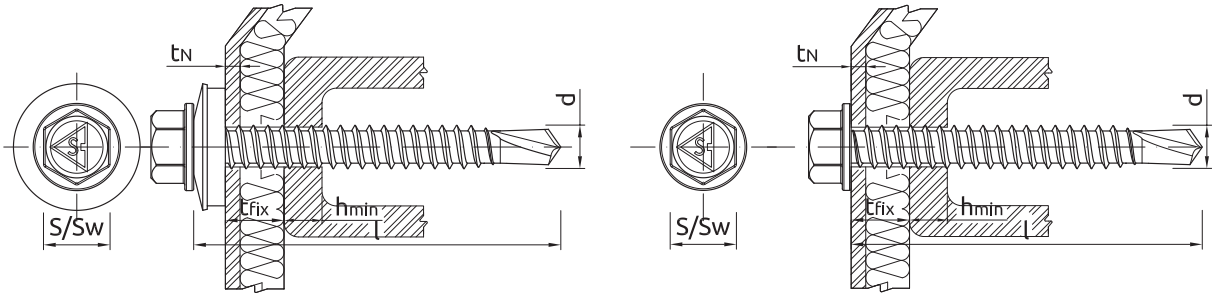


1. Screw must be installed at 90 degrees to substrate.
2. Special driver must be used.
3. Lowest torque setting on impact screwdriver to start.
4. Reduce speed when the washer starts to deform.
5. Use a cordless Impact screwdriver. Note: Never use a power drill.
6. For installation please use screwdriver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

Product information

Size	Product Code	Screw			Fixture		Max. drilling thickness	Washer size	RAL Colour
		Diameter	Length	Head size	Max. thickness with washer	Max. thickness without washer			
		d	l	S	t_{fix}				
		[mm]							
Ø5.5	OCS-55025	5.5	25	8	7	10	6	14, 16, 19	-
	OCS-55030	5.5	30	8	12	15	6	14, 16, 19	-
	OCS-55035	5.5	35	8	17	20	6	14, 16, 19	-
	OCS-55050	5.5	50	8	32	35	6	14, 16, 19	-
	OCS-55070	5.5	70	8	52	55	6	14, 16, 19	-
	OCS-5502514	5.5	25	8	7	10	6	14, 16, 19	-
	OCS-55030S14	5.5	30	8	12	15	6	14, 16, 19	-
	OCS-5503016	5.5	30	8	12	15	6	14, 16, 19	-
	OCS-55035S14	5.5	35	8	17	20	6	14, 16, 19	-
	OCS-55035S16	5.5	35	8	17	20	6	14, 16, 19	-
	OCS-55050S14	5.5	50	8	32	35	6	14, 16, 19	-
	OCS-55050S16	5.5	50	8	32	35	6	14, 16, 19	-
	OCS-55070S14	5.5	70	8	52	55	6	14, 16, 19	-
	OCS-55025S149005	5.5	25	8	7	10	6	14, 16, 19	9005
	OCS-55025S149010	5.5	25	8	7	10	6	14, 16, 19	9010
	OCS-55030S14	5.5	30	8	12	15	6	14, 16, 19	-
	OCS-55030S169017	5.5	30	8	12	15	6	14, 16, 19	9017
	OCS-55070S141015	5.5	70	8	52	55	6	14, 16, 19	1015
	OCS-55070S145005	5.5	70	8	52	55	6	14, 16, 19	5005
	OCS-55070S147016	5.5	70	8	52	55	6	14, 16, 19	7016
	OCS-55070S147047	5.5	70	8	52	55	6	14, 16, 19	7047

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]	1
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 1,00mm	[kN]	1.14	2.19
Substrate thickness 1,50mm	[kN]	2.23	4.16
CHARACTERISTIC LOAD			
Substrate thickness 1,00mm	[kN]	1.00	1.88
Substrate thickness 1,50mm	[kN]	1.67	2.62
DESIGN LOAD			
Substrate thickness 1,00mm	[kN]	0.75	1.41
Substrate thickness 1,50mm	[kN]	1.26	1.97
RECOMMENDED LOAD			
Substrate thickness 1,00mm	[kN]	0.54	1.01
Substrate thickness 1,50mm	[kN]	0.90	1.41

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 1.00 mm													
Characteristic load	N_{Rk}	[kN]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Design resistance γ_{Ms} = 1.33	N_{Rd}	[kN]	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
SUBSTRATE THICKNESS 1.13 mm													
Characteristic load	N_{Rk}	[kN]	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17
Design resistance γ_{Ms} = 1.33	N_{Rd}	[kN]	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
SUBSTRATE THICKNESS 1.25 mm													
Characteristic load	N_{Rk}	[kN]	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
Design resistance γ_{Ms} = 1.33	N_{Rd}	[kN]	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
SUBSTRATE THICKNESS 1.50 mm													
Characteristic load	N_{Rk}	[kN]	1.67	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71
Design resistance γ_{Ms} = 1.33	N_{Rd}	[kN]	1.26	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
SUBSTRATE THICKNESS 1.75 mm													
Characteristic load	N_{Rk}	[kN]	1.67	1.92	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14
Design resistance γ_{Ms} = 1.33	N_{Rd}	[kN]	1.26	1.44	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61
SUBSTRATE THICKNESS 2.00 mm													
Characteristic load	N_{Rk}	[kN]	1.67	1.92	2.32	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Design resistance γ_{Ms} = 1.33	N_{Rd}	[kN]	1.26	1.44	1.74	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95
SUBSTRATE THICKNESS 2.50 mm													
Characteristic load	N_{Rk}	[kN]	1.67	1.92	2.32	2.93	3.61	3.68	3.68	3.68	3.68	3.68	3.68
Design resistance γ_{Ms} = 1.33	N_{Rd}	[kN]	1.26	1.44	1.74	2.20	2.71	2.77	2.77	2.77	2.77	2.77	2.77
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	4.25
Design resistance γ_{Ms} = 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	3.20
SUBSTRATE THICKNESS 20.0 mm													
Characteristic load	N_{Rk}	[kN]	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Design resistance γ_{Ms} = 1.33	N_{Rd}	[kN]	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
SUBSTRATE THICKNESS 20.0 mm													
Characteristic load	N_{Rk}	[kN]	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33	1.33
Design resistance γ_{Ms} = 1.33	N_{Rd}	[kN]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

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 20.0 mm													
Characteristic load	N_{Rk}	[kN]	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66
Design resistance $\gamma_{Ms} = 1.33$	N_{Rd}	[kN]	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
SUBSTRATE THICKNESS 21.0 mm													
Characteristic load	N_{Rk}	[kN]	1.67	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93	1.93
Design resistance $\gamma_{Ms} = 1.33$	N_{Rd}	[kN]	1.26	1.44	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45

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]	1.21	1.29	1.42	1.60	1.76	1.88	1.88	1.88	1.88	1.88	1.88
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.91	0.97	1.07	1.20	1.32	1.41	1.41	1.41	1.41	1.41	1.41
SUBSTRATE THICKNESS 1.13 mm													
Characteristic resistance	V_{Rk}	[kN]	1.21	1.29	1.42	1.60	1.76	1.88	1.88	1.88	1.88	1.88	1.88
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.91	0.97	1.07	1.20	1.32	1.41	1.41	1.41	1.41	1.41	1.41
SUBSTRATE THICKNESS 1.25 mm													
Characteristic resistance	V_{Rk}	[kN]	1.21	1.29	1.42	1.60	1.76	1.88	1.88	1.88	1.88	1.88	1.88
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.91	0.97	1.07	1.20	1.32	1.41	1.41	1.41	1.41	1.41	1.41
SUBSTRATE THICKNESS 1.50 mm													
Characteristic resistance	V_{Rk}	[kN]	1.21	1.29	1.50	1.75	2.01	2.24	2.43	2.62	2.62	2.62	2.62
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.91	0.97	1.13	1.32	1.51	1.68	1.83	1.97	1.97	1.97	1.97
SUBSTRATE THICKNESS 1.75 mm													
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.91	0.97	1.18	1.43	1.70	1.95	2.24	2.53	2.53	2.53	2.53
Characteristic resistance	V_{Rk}	[kN]	1.21	1.29	1.57	1.90	2.26	2.59	2.98	3.37	3.37	3.37	3.37
SUBSTRATE THICKNESS 2.00 mm													
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.91	0.97	1.18	1.43	1.70	1.95	2.24	2.53	2.53	2.53	2.53
Characteristic resistance	V_{Rk}	[kN]	1.21	1.29	1.57	1.90	2.26	2.59	2.98	3.37	3.37	3.37	3.37
SUBSTRATE THICKNESS 2.50 mm													
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.91	0.97	1.18	1.43	1.70	2.03	2.41	2.78	2.78	2.78	2.78
Characteristic resistance	V_{Rk}	[kN]	1.21	1.29	1.57	1.90	2.26	2.70	3.20	3.70	3.70	3.70	3.70
SUBSTRATE THICKNESS 3.00 mm													
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.91	0.97	1.18	1.43	1.70	2.11	2.57	3.03	3.03	3.03	3.03
Characteristic resistance	V_{Rk}	[kN]	1.21	1.29	1.57	1.90	2.26	2.81	3.42	4.03	4.03	4.03	4.03
SUBSTRATE THICKNESS 20.6 mm													
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Characteristic resistance	V_{Rk}	[kN]	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
SUBSTRATE THICKNESS 20.8 mm													
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.92	0.92	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14
Characteristic resistance	V_{Rk}	[kN]	1.23	1.23	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51
SUBSTRATE THICKNESS 20.9 mm													
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.92	0.92	1.14	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
Characteristic resistance	V_{Rk}	[kN]	1.23	1.23	1.51	1.83	1.83	1.83	1.83	1.83	1.83	1.83	1.83
SUBSTRATE THICKNESS 21.0 mm													
Design resistance $\gamma_{Mc} = 1.33$	V_{Rd}	[kN]	0.92	0.92	1.14	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62
Characteristic resistance	V_{Rk}	[kN]	1.23	1.23	1.51	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15

Product commercial data

Product Code	Washer size [mm]	RAL Colour	Quantity [pcs]			Weight [kg]			Bar Codes
			Box	Outer	Pallet	Box	Outer	Pallet	
OCS-55025 [1)]	14, 16, 19		200	3200	76800	0.60	9.6	260.4	5906675340227
OCS-55030 [1)]	14, 16, 19		200	3200	76800	2.2	35.2	874.8	5906675340326
OCS-55035 [1)]	14, 16, 19		200	3200	76800	1.40	22.4	567.6	5906675340425
OCS-55050 [1)]	14, 16, 19		100	1600	38400	0.70	11.2	298.8	5906675340524
OCS-55070 [1)]	14, 16, 19		100	1200	28800	0.70	8.4	231.6	5906675115702
OCS-5502514 [1)]	14, 16, 19								
OCS-55030S14 [1)]	14, 16, 19		200	3200	76800	2.4	38.4	951.6	5906675340333
OCS-5503016 [1)]	14, 16, 19								
OCS-55035S14 [1)]	14, 16, 19		200	3200	76800	0.70	11.2	298.8	5906675340432
OCS-55035S16 [1)]	14, 16, 19		200	3200	76800	0.70	11.2	298.8	5906675340449
OCS-55050S14 [1)]	14, 16, 19		100	1600	38400	0.70	11.2	298.8	5906675340531
OCS-55050S16 [1)]	14, 16, 19		100	1600	38400	0.70	11.2	298.8	5906675340548
OCS-55070S14 [1)]	14, 16, 19		100	1200	28800	1.25	15.0	390.0	5906675289465
OCS-55025S149005 [1)]	14, 16, 19	9005	200	3200	76800	1.77	28.3	709.7	5906675513911
OCS-55025S149010 [1)]	14, 16, 19	9010	200	3200	76800	1.77	28.3	709.7	5906675505732
OCS-55030S14 [1)]	14, 16, 19		200	3200	76800	2.4	38.4	951.6	5906675340333
OCS-55030S169017 [1)]	14, 16, 19	9017	200	3200	76800	1.40	22.4	567.6	5906675474113
OCS-55070S141015 [1)]	14, 16, 19	1015	100	1200	28800	0.70	8.4	231.6	5906675442686
OCS-55070S145005 [1)]	14, 16, 19	5005	100	1200	28800	0.70	8.4	231.6	5906675442693
OCS-55070S147016 [1)]	14, 16, 19	7016	100	1200	28800	0.70	8.4	231.6	5906675516257
OCS-55070S147047 [1)]	14, 16, 19	7047	100	1200	28800	0.70	8.4	231.6	5906675442709

1) ETA-10/0183