

## ONS-55/63 Stainless steel self-drilling screws for composite panels max 12mm

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-13/0453



### 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 designed for applications into sandwich panels and steel construction.
- Two types of threads: one designed for mounting into a steel structure, second under head thread, prevents external panel dents and helps to seal the connection.
- 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.

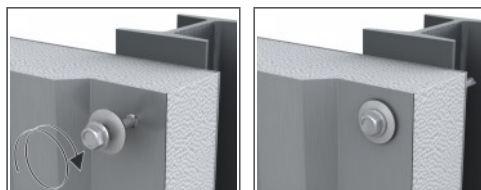
#### Applications

- For fixing of: Composite panels to thick wall hot rolled steel sections

#### Base materials

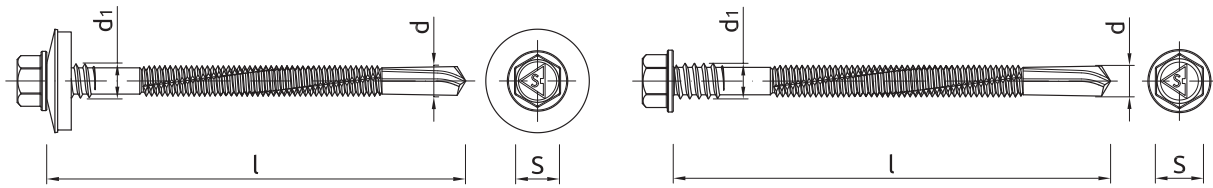
- Approved for use in:**
- Structural Steel

### Installation guide



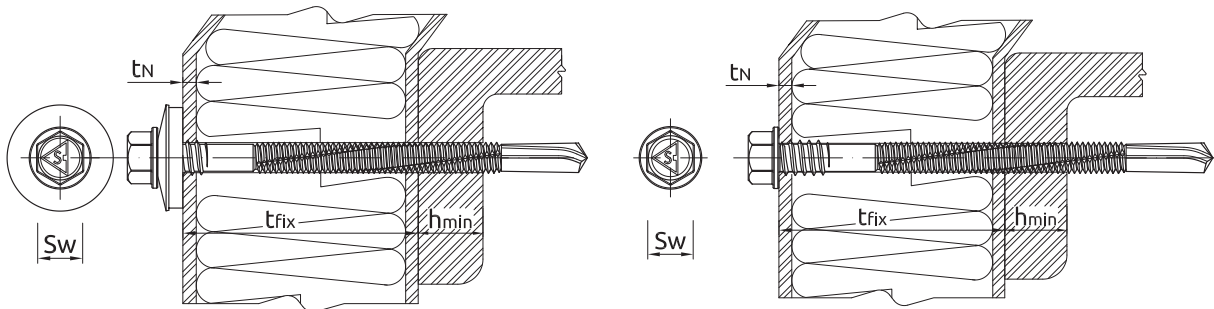
1. Screw must be installed at 90 degrees to substrate.
2. Special driver must be used.
3. Lowest torque setting on impact screwdriver to start.
4. Reduce speed when the washer starts to deform.
5. Use a cordless Impact screwdriver. Note: Never use a power drill.
6. For installation please use screwdriver 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	d <sub>1</sub>	l	S	t <sub>fix</sub>			
[mm]									
Ø5.5/6.3	ONS-55/63075	5.5	6.3	75	8	52	55	12	16, 19
	ONS-55/63095	5.5	6.3	95	8	72	75	12	16, 19
	ONS-55/63115	5.5	6.3	115	8	92	95	12	16, 19
	ONS-55/63135	5.5	6.3	135	8	112	115	12	16, 19
	ONS-55/63155	5.5	6.3	155	8	132	135	12	16, 19
	ONS-55/63175	5.5	6.3	175	8	152	155	12	16, 19
	ONS-55/63195	5.5	6.3	195	8	172	175	12	16, 19
	ONS-55/63235	5.5	6.3	235	8	212	215	12	16, 19

## Installation data



Size	Ø5.5/6.3		
Screw diameter	d	[mm]	5.5/6.3
Hole diameter in substrate	d <sub>0</sub>	[mm]	-
Min. hole depth in substrate	h <sub>0</sub>	[mm]	-
Min. installation depth	h <sub>nom</sub>	[mm]	-
Min. substrate thickness	h <sub>min</sub>	[mm]	3
Min. spacing	s <sub>min</sub>	[mm]	30
Min. edge distance	c <sub>min</sub>	[mm]	10
Wrench size	Sw	[mm]	8

## Basic performance data

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

Size		TENSION LOAD		SHEAR LOAD	
		Ø5.5/6.3 (S16)		Ø5.5/6.3	
<b>MEAN ULTIMATE LOAD</b>					
Substrate thickness 3,00mm	[kN]	3.02		1.75	
Substrate thickness 5,00mm	[kN]	3.30		-	
<b>CHARACTERISTIC LOAD</b>					
Substrate thickness 3,00mm	[kN]	2.60		1.29	
Substrate thickness 5,00mm	[kN]	2.60		-	
<b>DESIGN LOAD</b>					
Substrate thickness 3,00mm	[kN]	1.95		0.97	
Substrate thickness 5,00mm	[kN]	1.95		-	
<b>RECOMMENDED LOAD</b>					
Substrate thickness 3,00mm	[kN]	1.40		0.69	
Substrate thickness 5,00mm	[kN]	1.40		-	

## Design performance data

DESIGN PERFORMANCE DATA Ø5.5/6.3

TENSION LOAD

Size			Ø5.5/6.3	
Substrate thickness	$h_{min}$	[mm]	3.00	5.00
Characteristic load	$N_{Rk}$	[kN]	2.92	5.30
Design resistance $\gamma_{Ms} = 1.33$	$N_{Rd}$	[kN]	2.20	3.98

TENSION LOAD TO PULL SCREW WITH WASHER 16/19 THROUGH FIXTURE

Size			Ø5.5/6.3			
Sheet metal thickness	$t_n$	[mm]	0.40	0.50	0.63	0.75
Characteristic resistance	$N_{o,Rk}$	[kN]	1.42	2.60	3.61	3.99
Design resistance $\gamma_{Ms} = 1.33$	$N_{o,Rd}$	[kN]	1.07	1.95	2.71	3.00

SHEAR LOAD

Size			Ø5.5/6.3		
Sheet metal thickness	$t_n$	[mm]	0.40	0.50	0.60
<b>SUBSTRATE THICKNESS 3.00 mm</b>					
Characteristic resistance	$V_{Rk}$	[kN]	0.76	1.29	1.94
Design resistance $\gamma_{Mc} = 1.33$	$V_{Rd}$	[kN]	0.57	0.97	1.46

## Product commercial data

Product Code	Screw	Washer size [mm]	Quantity [pcs]			Weight [kg]			Bar Codes
	Diameter [mm]		Box	Outer	Pallet	Box	Outer	Pallet	
ONS-55/63075 <sup>1)</sup>	6.3	16, 19	100	1200	28800	2.0	23.6	597.4	5906675343129
ONS-55/63095 <sup>1)</sup>	6.3	16, 19	100	1200	28800	2.0	23.6	597.4	5906675343228
ONS-55/63115 <sup>1)</sup>	6.3	16, 19	100	1200	28800	2.0	23.6	597.4	5906675343327
ONS-55/63135 <sup>1)</sup>	6.3	16, 19	100	800	19200	2.2	17.6	452.4	5906675343426
ONS-55/63155 <sup>1)</sup>	6.3	16, 19	100	800	19200	2.3	18.4	471.6	5906675343525
ONS-55/63175 <sup>1)</sup>	6.3	16, 19	100	800	19200	2.7	21.4	542.6	5906675343624
ONS-55/63195 <sup>1)</sup>	6.3	16, 19	100	800	19200	2.9	22.8	577.2	5906675343723
ONS-55/63235 <sup>1)</sup>	6.3	16, 19	100	800	19200	1.69	13.5	354.5	5906675115719

1) ETA-13/0453