

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-10/0198
of 29 June 2017

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

Fastening Screws SFS SX, SLG, SL, TDA, TDB, TDC,
SD, SXW, SW

Product family
to which the construction product belongs

Fastening screws for metal members and sheeting

Manufacturer

SFS intec AG
Rosenbergsaustraße 10
9435 Heerbrugg
SCHWEIZ

Manufacturing plant

Factory 1
Factory 5
Factory 7
Factory 16
Factory 18

This European Technical Assessment
contains

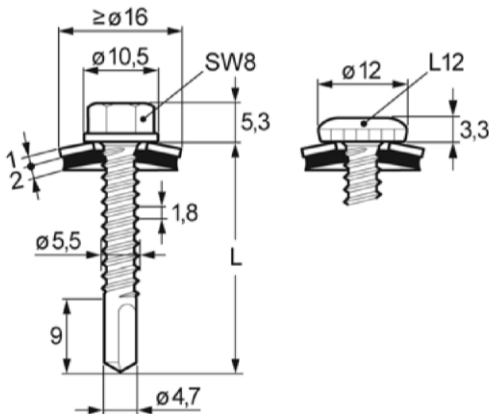
75 pages including 68 annexes which form an integral
part of this assessment

This European Technical Assessment is
issued in accordance with Regulation (EU)
No 305/2011, on the basis of

European Assessment Document (EAD)
330046-01-0602 "Fastening Screws for Metal Members
and Sheetting", Version 1

This version replaces

ETA-10/0198 issued on 26 June 2013



Materials

Fastener: Carbon steel with anticorrosion coating

Washer: Carbon steel with anticorrosion coating
or stainless steel A2 - EN ISO 3506
with EPDM-seal

Component I: S280GD to S450GD - EN 10346

Component II: S235 to S355 - EN 10025
S280GD to S450GD - EN 10346
HX300LAD to HX460LAD - EN 10346

Drilling-capacity

$$\Sigma(t_I + t_{II}) \leq 6.00 \text{ mm}$$

		t _{II} [mm]														
		1.50		1.75		2.00		2.50		3.00		4.00		5.00		
V _{R,k} [kN]	0.50	1.57 ^a	ac	1.67 ^a	ac	1.76 ^a	ac	1.76 ^a	ac	1.76 ^a	ac	1.76 ^a	ac	1.76 ^a	ac	
	0.55	1.71 ^a	ac	1.79 ^a	ac	1.86 ^a	ac	1.86 ^a	ac	1.86 ^a	ac	1.86 ^a	ac	1.86 ^a	a	
	0.63	1.94 ^a	ac	1.99 ^a	ac	2.03 ^a	ac	2.03 ^a	ac	2.03 ^a	ac	2.03 ^a	ac	2.03 ^a	a	
	0.75	2.28 ^a	ac	2.28 ^a	ac	2.28 ^a	ac	2.28 ^a	ac	2.28 ^a	ac	2.28 ^a	ac	2.28 ^a	a	
	t _{II} [mm]	0.88	2.86 ^a	ac	2.86 ^a	ac	2.86 ^a	ac	3.04 ^a	ac	3.27 ^a	ac	3.27 ^a	ac	3.27 ^a	a
	1.00	3.43	ac	3.43	ac	3.43	ac	3.74	ac	4.18	ac	4.18	ac	4.18	ac	a
	1.25	3.43	-	3.87	-	4.31	-	5.20	-	6.08	ac	6.08	a	-	-	
	1.50	3.43	-	3.87	-	4.31	-	5.20	-	6.08	-	6.08	-	-	-	
N _{R,k} [kN]	0.50	1.53	ac	1.53	ac	1.53	ac	1.53	ac	1.53	ac	1.53	ac	1.53	ac	
	0.55	1.71	ac	1.71	ac	1.71	ac	1.71	ac	1.71	ac	1.71	ac	1.71	a	
	0.63	1.98	ac	1.98	ac	1.98	ac	1.98	ac	1.98	ac	1.98	ac	1.98	a	
	0.75	2.20	ac	2.41	ac	2.41	ac	2.41	ac	2.41	ac	2.41	ac	2.41	a	
	t _{II} [mm]	0.88	2.20	ac	2.70	ac	2.86	ac	2.86	ac	2.86	ac	2.86	ac	2.86	a
	1.00	2.20	ac	2.70	ac	3.20	ac	3.29	ac	3.29	ac	3.29	ac	3.29	a	
	1.25	2.20	-	2.70	-	3.20	-	4.10	-	4.10	ac	4.10	a	-	-	
	1.50	2.20	-	2.70	-	3.20	-	4.30	-	5.00	-	5.00	-	-	-	
N _{R,II,k} [kN]		2.20		2.70		3.20		4.30		5.40		n/a		n/a		

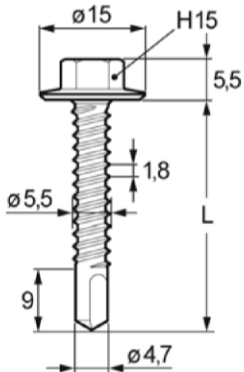
Additional definitions

Index ^a: For component I made of S320GD to S450GD the indicated values may be increased by 8.3%.

Self-drilling screw with sealing washer $\geq \varnothing 16$ mm

SD6-T16-5,5 x L, SD6-L12-T16-5,5 x L, SD6-S16-5,5 x L, SD6-L12-S16-5,5 x L

Annex 37



Materials

Fastener: Carbon steel with anticorrosion coating

Washer: -

Component I: S280GD to S450GD - EN 10346

Component II: S235 to S355 - EN 10025
S280GD to S450GD - EN 10346
HX300LAD to HX460LAD - EN 10346

Drilling-capacity $\Sigma(t_I + t_{II}) \leq 6.00 \text{ mm}$

		$t_{II} [\text{mm}]$							
		1.50	1.75	2.00	2.50	3.00	4.00	5.00	
$V_{R,k} [\text{kN}]$	0.50	1.57 ^a ac	1.67 ^a ac	1.76 ^a ac	1.76 ^a ac	1.76 ^a ac	1.76 ^a ac	1.76 ^a ac	1.76 ^a ac
	0.55	1.71 ^a ac	1.79 ^a ac	1.86 ^a ac	1.86 ^a ac	1.86 ^a ac	1.86 ^a ac	1.86 ^a ac	1.86 ^a a
	0.63	1.94 ^a ac	1.99 ^a ac	2.03 ^a ac	2.03 ^a ac	2.03 ^a ac	2.03 ^a ac	2.03 ^a ac	2.03 ^a a
	0.75	2.28 ^a ac	2.28 ^a ac	2.28 ^a ac	2.28 ^a ac	2.28 ^a ac	2.28 ^a ac	2.28 ^a ac	2.28 ^a a
	0.88	2.86 ^a ac	2.86 ^a ac	2.86 ^a ac	3.04 ^a ac	3.27 ^a ac	3.27 ^a ac	3.27 ^a ac	3.27 ^a a
	1.00	3.43 ac	3.43 ac	3.43 ac	3.74 ac	4.18 ac	4.18 ac	4.18 ac	4.18 a
	1.25	3.43 -	3.87 -	4.31 -	5.20 -	6.08 ac	6.08 a	-	-
	1.50	3.43 -	3.87 -	4.31 -	5.20 -	6.08 -	6.08 -	-	-
$N_{R,k} [\text{kN}]$	0.50	1.15 ac	1.15 ac	1.15 ac	1.15 ac	1.15 ac	1.15 ac	1.15 ac	1.15 ac
	0.55	1.28 ac	1.28 ac	1.28 ac	1.28 ac	1.28 ac	1.28 ac	1.28 ac	1.28 a
	0.63	1.80 ac	1.80 ac	1.80 ac	1.80 ac	1.80 ac	1.80 ac	1.80 ac	1.80 a
	0.75	2.20 ac	2.70 ac	3.20 ac	3.20 ac	3.20 ac	3.20 ac	3.20 ac	3.20 a
	0.88	2.20 ac	2.70 ac	3.20 ac	4.00 ac	4.00 ac	4.00 ac	4.00 ac	4.00 a
	1.00	2.20 ac	2.70 ac	3.20 ac	4.30 ac	4.80 ac	4.80 ac	4.80 ac	4.80 a
	1.25	2.20 -	2.70 -	3.20 -	4.30 -	5.40 ac	5.60 a	-	-
	1.50	2.20 -	2.70 -	3.20 -	4.30 -	5.40 -	5.80 -	-	-
$N_{R,II,k} [\text{kN}]$		2.20	2.70	3.20	4.30	5.40	n/a	n/a	

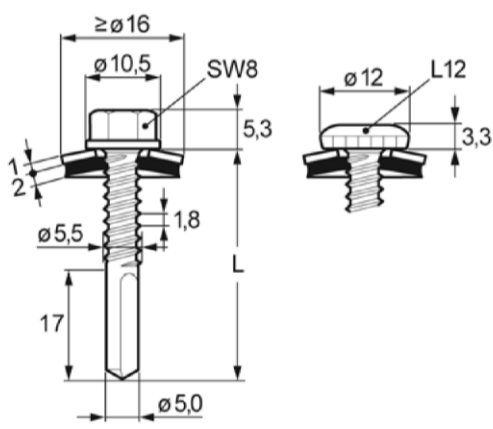
Additional definitions

Index ^a: For component I made of S320GD to S450GD the indicated values may be increased by 8.3%

Self-drilling screw

SD6-H15-5,5 x L

Annex 38

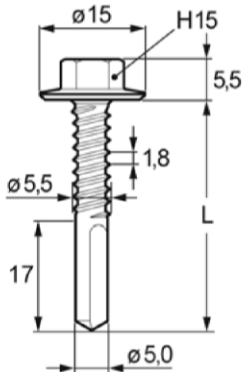
	<p>Materials</p> <p>Fastener: Carbon steel with anticorrosion coating</p> <p>Washer: Carbon steel with anticorrosion coating or stainless steel A2 - EN ISO 3506 with EPDM-seal</p> <p>Component I: S280GD to S450GD - EN 10346</p> <p>Component II: S235 to S355 - EN 10025 S280GD to S450GD - EN 10346 HX300LAD to HX460LAD - EN 10346</p> <p>Drilling-capacity $\Sigma(t_I + t_{II}) \leq 14.00 \text{ mm}$</p>
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			t _{II} [mm]											
			4.00		5.00		6.00		8.00		10.00		12.00	
V _{R,k} [kN]	t _I [mm]	0.50	1.76 ^a	ac	1.76 ^a	ac	1.76 ^a	ac	1.76 ^a	ac	1.76 ^a	ac	1.76 ^a	ac
		0.55	1.86 ^a	ac	1.86 ^a	ac	1.86 ^a	ac	1.86 ^a	ac	1.86 ^a	ac	1.86 ^a	ac
		0.63	2.63	ac	2.63	ac	2.63	ac	2.63	ac	2.63	ac	2.63	ac
		0.75	5.25	ac	5.25	ac	5.25	ac	5.25	ac	5.25	ac	5.25	ac
		0.88	6.22	ac	6.35	ac	6.49	ac	6.49	ac	6.49	ac	6.49	ac
		1.00	7.19	ac	7.46	ac	7.72	ac	7.72	ac	7.72	ac	7.72	ac
		1.25	7.19	-	7.46	-	7.72	-	8.22	-	8.22	-	8.22	-
		1.50	7.19	-	7.46	-	7.72	-	8.72	-	8.72	-	8.72	-
N _{R,k} [kN]	t _I [mm]	0.50	1.53	ac	1.53	ac	1.53	ac	1.53	ac	1.53	ac	1.53	ac
		0.55	1.71	ac	1.71	ac	1.71	ac	1.71	ac	1.71	ac	1.71	ac
		0.63	1.98	ac	1.98	ac	1.98	ac	1.98	ac	1.98	ac	1.98	ac
		0.75	2.41	ac	2.41	ac	2.41	ac	2.41	ac	2.41	ac	2.41	ac
		0.88	2.86	ac	2.86	ac	2.86	ac	2.86	ac	2.86	ac	2.86	ac
		1.00	3.29	ac	3.29	ac	3.29	ac	3.29	ac	3.29	ac	3.29	ac
		1.25	4.10	-	4.10	-	4.10	-	4.10	-	4.10	-	4.10	-
		1.50	5.00	-	5.00	-	5.00	-	5.00	-	5.00	-	5.00	-
N _{R,II,k} [kN]			6.99		8.75		9.62		n/a		n/a		n/a	

Additional definitions

Index ^a: For component I made of S320GD to S450GD the indicated values may be increased by 8.3%

<p>Self-drilling screw with sealing washer $\geq \varnothing 16 \text{ mm}$</p>	<p>Annex 41</p>
<p>SD14-T16-5,5 x L, SD14-L12-T16-5,5 x L, SD14-S16-5,5 x L, SD14-L12-S16-5,5 x L</p>	



Materials

Fastener: Carbon steel with anticorrosion coating

Washer: -

Component I: S280GD to S450GD - EN 10346

Component II: S235 to S355 - EN 10025
S280GD to S450GD - EN 10346
HX300LAD to HX460LAD - EN 10346

Drilling-capacity $\Sigma(t_I + t_{II}) \leq 14.00 \text{ mm}$

		$t_{II} [\text{mm}]$											
		4.00		5.00		6.00		8.00		10.00		12.00	
$V_{R,k} [\text{kN}]$	0.50	1.76 ^a	ac	1.76 ^a	ac	1.76 ^a	ac	1.76 ^a	ac	1.76 ^a	ac	1.76 ^a	ac
	0.55	1.86 ^a	ac	1.86 ^a	ac	1.86 ^a	ac	1.86 ^a	ac	1.86 ^a	ac	1.86 ^a	ac
	0.63	2.63	ac	2.63	ac	2.63	ac	2.63	ac	2.63	ac	2.63	ac
	0.75	5.25	ac	5.25	ac	5.25	ac	5.25	ac	5.25	ac	5.25	ac
	$t_I [\text{mm}]$	0.88	6.22	ac	6.35	ac	6.49	ac	6.49	ac	6.49	ac	6.49
		1.00	7.19	ac	7.46	ac	7.72	ac	7.72	ac	7.72	ac	7.72
		1.25	7.19	-	7.46	-	7.72	-	8.22	-	8.22	-	8.22
		1.50	7.19	-	7.46	-	7.72	-	8.72	-	8.72	-	8.72
$N_{R,k} [\text{kN}]$	0.50	1.15	ac	1.15	ac	1.15	ac	1.15	ac	1.15	ac	1.15	ac
	0.55	1.28	ac	1.28	ac	1.28	ac	1.28	ac	1.28	ac	1.28	ac
	0.63	2.00	ac	2.00	ac	2.00	ac	2.00	ac	2.00	ac	2.00	ac
	0.75	2.90	ac	2.90	ac	2.90	ac	2.90	ac	2.90	ac	2.90	ac
	$t_I [\text{mm}]$	0.88	3.62	ac	3.62	ac	3.62	ac	3.62	ac	3.62	ac	3.62
		1.00	4.33	ac	4.33	ac	4.33	ac	4.33	ac	4.33	ac	4.33
		1.25	6.13	-	6.13	-	6.13	-	6.13	-	6.13	-	6.13
		1.50	6.99	-	8.75	-	9.62	-	9.62	-	9.62	-	9.62
$N_{R,II,k} [\text{kN}]$		6.99		8.75		9.62		n/a		n/a		n/a	

Additional definitions

Index ^a: For component I made of S320GD to S450GD the indicated values may be increased by 8.3%

Self-drilling screw

SD14-H15-5,5 x L

Annex 42