

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

	<b>Materials</b>	
	Fastener:	Stainless steel A2 or A4 - EN ISO 3506
	Washer:	Stainless steel A2 or A4 - EN ISO 3506 with EPDM-seal
	Component I:	S280GD to S450GD - EN 10346
	Component II:	Timber (coniferous timber) - EN 14081
<b>Drilling-capacity</b>		$\Sigma(t_i) \leq 2.00 \text{ mm}$
<b>Characteristics</b>		$M_{y,Rk} = 12.1 \text{ Nm}$ $f_{ax,k} = 13.2 \text{ N/mm}^2 (l_{ef} = 35 \text{ mm}, \rho_a = 350 \text{ kg/m}^3)$ $f_{h,k} = 27.2 \text{ N/mm}^2 (\rho_a = 350 \text{ kg/m}^3)$

		l <sub>ef</sub> [mm]						
		35	45	55	65	75		
V <sub>R,k</sub> [kN]	0.50	1.55	1.55	1.55	1.55	1.55	1.55	V <sub>R,I,k</sub> [kN]
	0.55	1.71	1.71	1.71	1.71	1.71	1.71	
	0.63	1.73	2.23	2.73	2.90	2.90	2.90	
	0.75	1.73	2.23	2.73	3.22	3.50	3.50	
	0.88	1.73	2.23	2.73	3.22	3.72	4.00	
	1.00	1.73	2.23	2.73	3.22	3.72	4.50	
	1.25	1.73	2.23	2.73	3.22	3.72	5.40	
	1.50	1.73	2.23	2.73	3.22	3.72	5.70	
N <sub>R,k</sub> [kN]	0.50	1.68	1.68	1.68	1.68	1.68	1.68	N <sub>R,I,k</sub> [kN]
	0.55	1.88	1.88	1.88	1.88	1.88	1.88	
	0.63	2.70	2.70	2.70	2.70	2.70	2.70	
	0.75	2.70	3.40	3.40	3.40	3.40	3.40	
	0.88	2.70	3.47	4.10	4.10	4.10	4.10	
	1.00	2.70	3.47	4.25	4.80	4.80	4.80	
	1.25	2.70	3.47	4.25	5.02	5.60	5.60	
	1.50	2.70	3.47	4.25	5.02	5.60	5.60	
N <sub>R,II,k</sub> [kN]		2.70	3.47	4.25	5.02	5.79		

#### Additional definitions

The indicated values  $V_{R,k}$ ,  $N_{R,k}$  and  $N_{R,II,k}$  apply to  $k_{mod} = 0.9$  and  $\rho_k = 350 \text{ kg/m}^3$ . Values for other  $k_{mod}$  or  $\rho_k$  can be determined according to Annex 3.

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

SXW-S16-6,5 x L, SXW-L12-S16-6,5 x L

Annex 48

	<b>Materials</b>	
	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:	Timber (coniferous timber) - EN 14081
<b>Drilling-capacity</b> $\Sigma(t_i) \leq 2.00$ mm		
<b>Characteristics</b>		
$M_{y,Rk} = 14.9$ Nm		
$f_{ax,k} = 13.2$ N/mm <sup>2</sup> ( $l_{ef} = 35$ mm, $\rho_a = 350$ kg/m <sup>3</sup> )		
$f_{h,k} = 27.2$ N/mm <sup>2</sup> ( $\rho_a = 350$ kg/m <sup>3</sup> )		

		l <sub>ef</sub> [mm]						
		35	45	55	65	75		
V <sub>R,k</sub> [kN]	0.50	1.58	1.58	1.58	1.58	1.58	1.58	V <sub>R,I,k</sub> [kN]
	0.55	1.73	1.73	1.73	1.73	1.73	1.73	
	0.63	1.73	1.97	1.97	1.97	1.97	1.97	
	0.75	1.73	2.23	2.33	2.33	2.33	2.33	
	0.88	1.73	2.23	2.33	2.33	2.33	2.33	
	1.00	1.73	2.23	2.33	2.33	2.33	2.33	
	1.25	1.73	2.23	2.33	2.33	2.33	2.33	
	1.50	1.73	2.23	2.33	2.33	2.33	2.33	
N <sub>R,k</sub> [kN]	0.50	1.63	1.63	1.63	1.63	1.63	1.63	N <sub>R,I,k</sub> [kN]
	0.55	1.93	1.93	1.93	1.93	1.93	1.93	
	0.63	2.41	2.41	2.41	2.41	2.41	2.41	
	0.75	2.70	3.13	3.13	3.13	3.13	3.13	
	0.88	2.70	3.47	3.91	3.91	3.91	3.91	
	1.00	2.70	3.47	4.25	4.68	4.68	4.68	
	1.25	2.70	3.47	4.25	4.68	4.68	4.68	
	1.50	2.70	3.47	4.25	4.68	4.68	4.68	
N <sub>R,II,k</sub> [kN]		2.70	3.47	4.25	5.02	5.79		

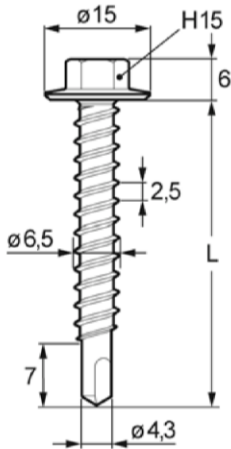
#### Additional definitions

The indicated values  $V_{R,k}$ ,  $N_{R,k}$  and  $N_{R,II,k}$  apply to  $k_{mod} = 0.9$  and  $\rho_k = 350$  kg/m<sup>3</sup>. Values for other  $k_{mod}$  or  $\rho_k$  can be determined according to Annex 3.

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

SW3-T-T16-6,5 x L, SW3-T-L12-T16-6,5 x L, SW3-T-S16-6,5 x L, SW3-T-L12-S16-6,5 x L

#### Annex 51



#### Materials

Fastener:	Carbon steel with anticorrosion coating
Washer:	-
Component I:	S280GD to S450GD - EN 10346
Component II:	Timber (coniferous timber) - EN 14081

Drilling-capacity  $\Sigma(t_i) \leq 2.00$  mm

#### Characteristics

$M_{y,Rk}$	=	14.9 Nm
$f_{ax,k}$	=	13.2 N/mm <sup>2</sup> ( $l_{ef} = 35$ mm, $\rho_a = 350$ kg/m <sup>3</sup> )
$f_{h,k}$	=	27.2 N/mm <sup>2</sup> ( $\rho_a = 350$ kg/m <sup>3</sup> )

		l <sub>ef</sub> [mm]						
		35	45	55	65	75		
V <sub>R,k</sub> [kN]	0.50	1.58	1.58	1.58	1.58	1.58	1.58	V <sub>R,I,k</sub> [kN]
	0.55	1.73	1.73	1.73	1.73	1.73	1.73	
	0.63	1.73	1.97	1.97	1.97	1.97	1.97	
	0.75	1.73	2.23	2.33	2.33	2.33	2.33	
	0.88	1.73	2.23	2.33	2.33	2.33	2.33	
	1.00	1.73	2.23	2.33	2.33	2.33	2.33	
	1.25	1.73	2.23	2.33	2.33	2.33	2.33	
	1.50	1.73	2.23	2.33	2.33	2.33	2.33	
N <sub>R,k</sub> [kN]	0.50	1.84	1.84	1.84	1.84	1.84	1.84	N <sub>R,I,k</sub> [kN]
	0.55	2.01	2.01	2.01	2.01	2.01	2.01	
	0.63	2.29	2.29	2.29	2.29	2.29	2.29	
	0.75	2.70	2.71	2.71	2.71	2.71	2.71	
	0.88	2.70	3.47	3.55	3.55	3.55	3.55	
	1.00	2.70	3.47	4.25	4.33	4.33	4.33	
	1.25	2.70	3.47	4.25	4.33	4.33	4.33	
	1.50	2.70	3.47	4.25	4.33	4.33	4.33	
N <sub>R,II,k</sub> [kN]		2.70	3.47	4.25	5.02	5.79		

#### Additional definitions

The indicated values  $V_{R,k}$ ,  $N_{R,k}$  and  $N_{R,II,k}$  apply to  $k_{mod} = 0.9$  and  $\rho_k = 350$  kg/m<sup>3</sup>. Values for other  $k_{mod}$  or  $\rho_k$  can be determined according to Annex 3.

Self-drilling screw

SW3-T-H15-6,5 x L

Annex 52