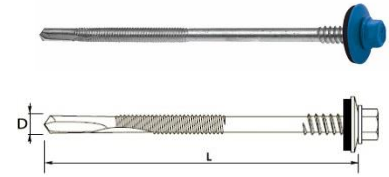


GTX 12 SP S29

BIMETALLIC SELF-DRILLING STAINLESS STEEL SCREWS WITH WASHER FOR FIXING OF SANDWICH PANELS

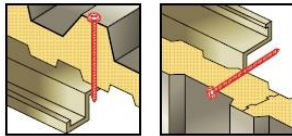


PRODUCT DESCRIPTION


Self-drilling (double thread) fasteners made of austenitic steel (bimetallic), with drilling point # 5, very fine working thread and hex head, with assembled stainless washer with vulcanized EPDM. Additional corrosion protection: gRey.coat coating.

APPLICATION

Designed for fixing sandwich panels to hot-rolled steel structures in aggressive environments. Intended for use in the environment with corrosivity category C1, C2, C3, C4, C5 according to PN-EN ISO 12944-2:2018 standards.



LENGTH OF SCREWS

Fastener type		Dimensions D x L [mm]	Maximum drill capacity [mm]	Maximum thickness of fixed elements [mm]	
			DC	MTmin	MTmax
GTX 12 SP	S29	5,5/6,3 x 95	12,00	35	65
GTX 12 SP	S29	5,5/6,3 x 125	12,00	65	90
GTX 12 SP	S29	5,5/6,3 x 150	12,00	90	115
GTX 12 SP	S29	5,5/6,3 x 175	12,00	115	140
GTX 12 SP	S29	5,5/6,3 x 185	12,00	125	150
GTX 12 SP	S29	5,5/6,3 x 210	12,00	150	175
GTX 12 SP	S29	5,5/6,3 x 235	12,00	175	200
GTX 12 SP	S29	5,5/6,3 x 250	12,00	190	215
GTX 12 SP	S29	5,5/6,3 x 275	12,00	215	240

The working length of the fastener is calculated from the maximum thickness of the DC substrate.

EUROPEAN TECHNICAL APPROVAL ETA-13/0199

CHARACTERISTIC CAPACITIES OF SHEAR ATTACHMENTS AND PULL-OUT FROM STEEL SUBSTRATE, DISPLACEMENT OF THE SCREW HEAD DUE TO HEAT EXPANSION

Element II: $t_{II} w$ [mm]		3,00	4,00	5,00	6,00	8,00	10,00	$\geq 11,00$	
Element I: $t_{n,1} lub t_{n,2w}$ [mm]	SHEAR $V_{R,k} w$ [kN]	0,50	1,40	1,40	1,40	1,40	1,40	1,40	1,40
		0,55	1,40	1,40	1,40	1,40	1,40	1,40	1,40
		0,63	1,60	1,60	1,60	1,60	1,60	1,60	1,60
		0,75	2,10	2,10	2,10	2,10	2,10	2,10	2,10
		0,88	2,10	2,10	2,10	2,10	2,10	2,10	2,10
		1,00	2,10	2,10	2,10	2,10	2,10	2,10	2,10
	PULL-OUT $N_{R,k} w$ [kN]	0,50	4,23	4,23	4,23	4,23	4,23	4,23	4,23
		0,55	4,23	4,23	4,23	4,23	4,23	4,23	4,23
		0,63	5,82	5,82	5,82	5,82	5,82	5,82	5,82
		0,75	6,35	6,35	6,35	6,35	6,35	6,35	6,35
		0,88	6,35	6,35	6,35	6,35	6,35	6,35	6,35
		1,00	6,35	6,35	6,35	6,35	6,35	6,35	6,35
Max. head displacement u^* depending on the sandwich panel thickness in [mm]		1	1,5	1,5	1,5	1,5	1,5	1,5	
	40	1	1,5	1,5	1,5	1,5	1,5	1,5	
	50	1	1,5	1,5	1,5	1,5	1,5	1,5	
	60	2,5	4	4	4	4	4	4	
	70	2,5	4	4	4	4	4	4	
	80	2,5	4	4	4	4	4	4	
	90	4	6	6	6	6	6	6	
	100	4	6	6	6	6	6	6	
	120	4	6	6	6	6	6	6	
	≥ 140	4	6	6	6	6	6	6	

Element I - sheet steel of S280GD grade; S320GD; S350GD according to EN 10346.

Element II - steel sheet steel of grade S235 according to EN 10025-1 or S280GD; S320GD; S350GD according to EN 10346.

In order to determine the design load, the characteristic load factor must be divided by the safety factor $\gamma_m = 1.33$.

NATIONAL TECHNICAL ASSESSMENT ITB-KOT-2017/0022

CHARACTERISTIC CAPACITIES OF SHEAR ATTACHMENTS AND PULL-OUT FROM STEEL SUBSTRATE, DISPLACEMENT OF THE SCREW HEAD DUE TO HEAT EXPANSION

Element II: t_{II} w [mm]		3,00	4,00	5,00	6,00	7,00	8,00	≥ 9,00
Element I: $t_{n,1}$ lub $t_{n,2w}$ [mm]	SHEAR $V_{R,k}$ w [kN]	0,50	1,40	1,40	1,40	1,40	1,40	1,40
		0,55	1,40	1,40	1,40	1,40	1,40	1,40
		0,63	1,60	1,60	1,60	1,60	1,60	1,60
		0,75	2,10	2,10	2,10	2,10	2,10	2,10
		0,88	2,10	2,10	2,10	2,10	2,10	2,10
		1,00	2,10	2,10	2,10	2,10	2,10	2,10
	PULL-OUT $N_{R,k}$ w [kN]	0,50	3,65	3,65	3,65	3,65	3,65	3,65
		0,55	3,65	3,65	3,65	3,65	3,65	3,65
		0,63	4,60	4,60	4,60	4,60	4,60	4,60
		0,75	5,45	5,45	5,45	5,45	5,45	5,45
		0,88	5,45	5,45	5,45	5,45	5,45	5,45
		1,00	5,45	5,45	5,45	5,45	5,45	5,45
Max. head displacement u^* depending on the sandwich panel thickness in [mm]	30	1,5	1,5	1,5	1,5	1,5	1,5	
	40	1,5	1,5	1,5	1,5	1,5	1,5	
	50	1,5	1,5	1,5	1,5	1,5	1,5	
	60	4	4	4	4	4	4	
	70	4	4	4	4	4	4	
	80	4	4	4	4	4	4	
	90	6	6	6	6	6	6	
	100	6	6	6	6	6	6	
	≥140	6	6	6	6	6	6	

Element I – steel plate s280gd; s320gd; s350gd according to: en 10346.

Element II – steel plate s235 according to: en 10025-1 or steel plate s280gd; s320gd; s350gd according to: en 10346.

To define a design load should divide the value of the characteristic load by a safety factor $\gamma_m = 1,33$.

OTHER FEATURES

BASE MATERIAL:	<i>HOT-ROLLED STEEL PROFILE</i>
SIZE OF HEX HEAD:	<i>8 mm</i>
MINIMUM THICKNESS OF STEEL BASE:	<i>4,0 mm</i>
MAXIMUM DRILLING CAPACITY:	<i>12,0 mm</i>
HEAD AND SHAFT MADE OF:	<i>STAINLESS STEEL CLASS A2</i>
DRILLING POINT MADE OF:	<i>HARDENED STEEL</i>
ADDITIONAL CORROSION PROTECTION:	<i>gRey.coat</i>
CORROSIVITY CATEGORY:	<i>C5</i>
TECHNICAL OPINION ON CORROSION PROTECTION:	<i>02248/16/Z00NZM</i>
PAINTING POSSIBILITY:	<i>YES</i>
THICKNESS OF POLYESTER PAINT:	<i>50 µm</i>
TIGHTENING TORQUE:	<i>5 Nm</i>
RECOMMENDED SPEED OF THE TOOL WITHOUT LOAD:	<i>1200 rpm</i>
WASHER DIAMETER (STAINLESS S29):	<i>29 mm</i>

