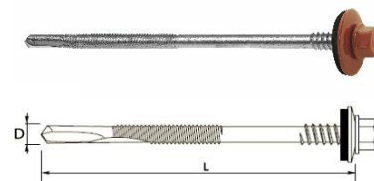


GT 12 SP Z19

SELF-DRILLING SCREWS
FOR SANDWICH PANELS

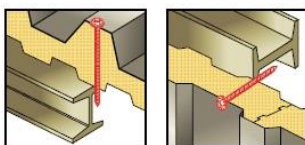


PRODUCT DESCRIPTION


Self-drilling, self-tapping screws (double thread) made of surface-hardened carbon steel, drilling point #5, with very fine thread and hex head, with integrated steel washer with vulcanized EPDM layer.

APPLICATION

Designed for mounting sandwich panels to hot rolled steel structures. Protected with paint coating - polyester thickness of not less than 50 μm , intended for use in environments with corrosivity class C1, C2 and C3 according to PN-EN ISO 12944-2: 2001 standard. Galvanized without paint coating intended for use in environments with corrosivity class C1, C2.



LENGTH OF SCREWS

Fastener type		Dimensions D x L [mm]	Maximum drill capacity [mm]	Maximum thickness of fixed elements [mm]	
			DC	MTmin	MTmax
GT 12 SP	Z19	5,5/6,3 x 70	12,00	25	30
GT 12 SP	Z19	5,5/6,3 x 90	12,00	25	50
GT 12 SP	Z19	5,5/6,3 x 110	12,00	45	70
GT 12 SP	Z19	5,5/6,3 x 130	12,00	65	90
GT 12 SP	Z19	5,5/6,3 x 140	12,00	75	100
GT 12 SP	Z19	5,5/6,3 x 150	12,00	85	110
GT 12 SP	Z19	5,5/6,3 x 160	12,00	95	120
GT 12 SP	Z19	5,5/6,3 x 175	12,00	110	135
GT 12 SP	Z19	5,5/6,3 x 185	12,00	110	145
GT 12 SP	Z19	5,5/6,3 x 190	12,00	115	150
GT 12 SP	Z19	5,5/6,3 x 200	12,00	125	160

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	≥ 11,00	
Element I: $t_{n,1} lub t_{n,2} w$ [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	3,65	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	3,65
		0,63	4,60	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	5,45
		0,88	5,45	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	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	1,5	
	40	1,5	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	1,5	
	60	4	4	4	4	4	4	4	
	70	4	4	4	4	4	4	4	
	80	4	4	4	4	4	4	4	
	90	6	6	6	6	6	6	6	
	100	6	6	6	6	6	6	6	
	120	6	6	6	6	6	6	6	
	≥140	6	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 $t_{n,2}$ w [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	3,65	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	3,65
		0,63	4,60	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	5,45
		0,88	5,45	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	5,45
Max. head displacement u^* depending on the sandwich panel thickness in [mm]		1,5	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	1,5	
	50	1,5	1,5	1,5	1,5	1,5	1,5	1,5	
	60	4	4	4	4	4	4	4	
	70	4	4	4	4	4	4	4	
	80	4	4	4	4	4	4	4	
	90	6	6	6	6	6	6	6	
	100	6	6	6	6	6	6	6	
	120	6	6	6	6	6	6	6	
	≥140	6	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:	HOT ROLLED STEEL PROFILE
SIZE OF HEX HEAD:	8 mm
MINIMUM THICKNESS OF STEEL BASE:	3,0 mm
MAXIMUM DRILLING CAPACITY:	12,0 mm
THICKNESS OF ZINC COATING:	12 µm
CORROSIVITY CATEGORY:	PAINTED - C3 UNPAINTED - C2
TECHNICAL OPINION ON CORROSION PROTECTION:	02248/16/Z00NZM
PAINTING POSSIBILITY:	YES
THICKNESS OF POLYESTER PAINT:	50 µm
TIGHTENING TORQUE:	5 Nm
RECOMMENDED SPEED OF THE TOOL WITHOUT LOAD:	1500 rpm
WASHER DIAMETER (STEEL Z19):	19 mm



ETA



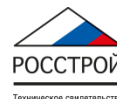
DWU/DoP



KDWU



ZKP



TC



POCC



SZU