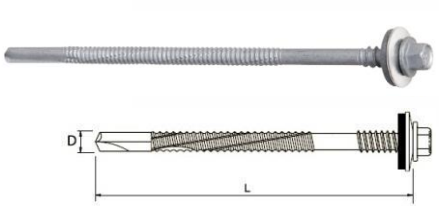
GTR 25 SP A19

SELF-DRILLING SCREWS
FOR SANDWICH PANELS



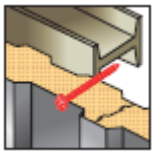
PRODUCT DESCRIPTION

Self-drilling, self-tapping screws (double thread) made of surface-hardened carbon steel, drilling point #8, with fine working thread and enlarged hex head, with integrated aluminum washer with vulcanized EPDM. Additional corrosion protection: gRey.coat coating.

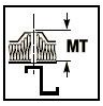
APPLICATION

Designed for mounting sandwich panels to hot-rolled steel structures of very high thickness. Designed for use in environments with atmospheric corrosivity categories C1, C2, C3, C4 according to PN-EN ISO 12944-2: 2001 standard.

Due to the high thickness of the substrate and the diversity of materials on the construction site, it is recommended to perform drilling tests each time. Maximum drilling thickness is given for the horizontal position of the screw only.



LENGTH OF SCREWS

Fastener type		Dimensions D x L [mm]	Maximum drill capacity [mm]	Maximum thickness of fixed elements [mm] 	
			DC	MTmin	MTmax
GTR 25 SP	A19	6,3/7,0 x 160	25,00	45	95
GTR 25 SP	A19	6,3/7,0 x 180	25,00	65	115
GTR 25 SP	A19	6,3/7,0 x 200	25,00	85	135
GTR 25 SP	A19	6,3/7,0 x 220	25,00	105	155
GTR 25 SP	A19	6,3/7,0 x 240	25,00	125	175
GTR 25 SP	A19	6,3/7,0 x 260	25,00	145	195
GTR 25 SP	A19	6,3/7,0 x 280	25,00	165	215

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

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EUROPEAN TECHNICAL ASSESMENT 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]			4,00	5,00	8,00	10,00	12,00	14,00	≥ 15,00
Element I: $t_{n,1}$lub $t_{n,2w}$ [mm]	SHEAR $V_{R,k}$ w [kN]	0,50	1,29	1,29	1,29	1,29	1,29	1,29	1,29
		0,55	1,29	1,29	1,29	1,29	1,29	1,29	1,29
		0,63	2,35	2,35	2,35	2,35	2,35	2,35	2,35
		0,75	2,50	2,50	2,50	2,50	2,50	2,50	2,50
		0,88	2,50	2,50	2,50	2,50	2,50	2,50	2,50
		1,00	2,50	2,50	2,50	2,50	2,50	2,50	2,50
	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	1	1	1	1	1	1
		40	1	1	1	1	1	1	1
		50	1	1	1	1	1	1	1
		60	2,5	2,5	2,5	2,5	2,5	2,5	2,5
		70	2,5	2,5	2,5	2,5	2,5	2,5	2,5
		80	2,5	2,5	2,5	2,5	2,5	2,5	2,5
		90	4	4	4	4	4	4	4
		100	4	4	4	4	4	4	4
		120	4	4	4	4	4	4	4
		≥140	4	4	4	4	4	4	4

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 γm = 1.33.

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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]			4,00	5,00	6,00	7,00	8,00	9,00	≥ 10,00
Element I: $t_{n,1}$ lub $t_{n,2w}$ [mm]	SHEAR $V_{R,k}$ w [kN]	0,50	1,29	1,29	1,29	1,29	1,29	1,29	1,29
		0,55	1,29	1,29	1,29	1,29	1,29	1,29	1,29
		0,63	2,35	2,35	2,35	2,35	2,35	2,35	2,35
		0,75	2,50	2,50	2,50	2,50	2,50	2,50	2,50
		0,88	2,50	2,50	2,50	2,50	2,50	2,50	2,50
		1,00	2,50	2,50	2,50	2,50	2,50	2,50	2,50
	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	1	1	1	1	1
		40	1,5	1	1	1	1	1	1
		50	1,5	1	1	1	1	1	1
		60	4	2,5	2,5	2,5	2,5	2,5	2,5
		70	4	2,5	2,5	2,5	2,5	2,5	2,5
		80	4	2,5	2,5	2,5	2,5	2,5	2,5
		90	6	4	4	4	4	4	4
		100	6	4	4	4	4	4	4
		120	6	4	4	4	4	4	4
		≥140	6	4	4	4	4	4	4

Element I – steel plate s280gd; s320gd; s350gd accordingto: en 10346.
Element II – steel plate s235 according to: en 10025-1orsteel plate s280gd; s320gd; s350gd accordingto: en 10346.
To define a design load should divide the value of the characteristic load by a safety factor γm = 1,33.

OTHER FEATURES

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BASE MATERIAL:	*HOT ROLLED STEEL PROFILE*
SIZE OF HEX HEAD:	*8 mm*
MINIMUM THICKNESS OF STEEL BASE:	*4,0 mm*
MAXIMUM DRILLING CAPACITY:	*25,0 mm*
ADDITIONAL CORROSION PROTECTION:	*gRey.coat*
CORROSIVITY CATEGORY:	*C4*
TECHNICAL OPINION ON CORROSION PROTECTION:	*02248/16/Z00NZM*
PAINTING POSSIBILITY:	*YES*
THICKNESS OF POLYESTER PAINT:	*50 µm*
TIGHTENING TORQUE:	*6 Nm*
RECOMMENDED SPEED OF THE TOOL WITHOUT LOAD:	*1200 rpm*
WASHER DIAMETER (ALUMINUM A19):	*19 mm*

ETA DWU/DoP KDWU ZKP

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