NATIONAL DECLARATION OF PERFORMANCE NO:

KDWU-2017/0022 SPS

Version: V-1.2025

1. Name and trade name of construction product:

Fasteners GT6SP, GTR6SP, GTX6SP, GT12SP, GTR12SP, GTX12SP, GT16SP, GTR16SP, GT20SP, GTR20SP, GT25SP, GTR25SP, GTWSP i GTRWSP for installing sandwich panels

2. Type of the construction product:

GT6SP 5,5/6,3xL, GTR6SP 5,5/6,3xL, GTX6SP 5,5/6,3xL, GT12SP 5,5/6,3xL, GTR12SP 5,5/6,3xL, GTX12SP 5,5/6,3xL, GT16SP 6,3/7,0xL, GTR16SP 6,3/7,0xL, GT20SP 6,3/7,0xL, GTR20SP 6,3/7,0xL, GT25SP 6,3/7,0xL, GTR25SP 6,3/7,0xL, GTWSP 6,4/7,0xL, GTRWSP 6,4/7,0xL

3. Intended uses or use:

GT6SP, GTX6SP, GTR6SP, GT12SP, GTX12SP, GTR12SP, GT16SP, GTR16SP, GT20SP, GTR20SP, GT25SP and GTR25SP fasteners are intended for fastening sandwich panels to steel structure elements made of steel grade S280GD, S320GD or S350GD according to PN-EN 10346:2015 or S235JR according to PN-EN 10025-1:2007.

GTWSP and GTRWSP fasteners are designed for fastening sandwich panels to substrates made of:

- normal concrete class C20/25 ÷ C50/60 according to the PN-EN 206+A2:2022 standard,
- timber class ≥ C24 according to the PN-EN 338:2016 standard.

GTWSP and GTRWSP fasteners used in sets with ULTRA plastic expansion sleeves are designed for fastening sandwich panels to substrates made of:

- normal concrete class C20/25 ÷ C50/60 according to the PN-EN 206+A2:2021 standard,
- timber class ≥ C24 according to the PN-EN 338:2016 standard,
- solid clay brick, class ≥ 15 according to the PN-EN 771-1+A1:2015 standard,
- hollow clay brick, class ≥ 15 according to the PN-EN 771-1+A1:2015 standard (minimum brick wall thickness 12 mm),
- calcium silicate hollow brick, class ≥ 15 according to the PN-EN 771-2+A1:2015 standard (minimum brick wall thickness 50 mm),
- autoclaved aerated concrete, density class ≥ 600 and strength class ≥ 7 according to the PN-EN 771-4+A1:2015 standard.

Due to the corrosive nature of the atmospheric environment:

- fasteners made of plain carbon steel, with a zinc coating of at least 12 µm thickness (with a galvanized carbon steel or aluminum washer), should be used in environments with a corrosiveness category and a durability period of C1 and C2 H according to the PN-EN ISO 12944-1:2018 and PN-EN ISO 12944-2:2018 standards,
- fasteners made of plain carbon steel, with a zinc coating of at least 12 µm thickness and an additional polyester powder.coat of at least 50 µm thickness (with a galvanized carbon steel, aluminum, or stainless steel washer), can be used in environments with a corrosiveness category and a durability period of C1, C2 VH, and C3 H according to the PN-EN ISO 12944-1:2018 standards. and PN-EN ISO 12944-2:2018,
- fasteners made of plain carbon steel, with a zinc coating and an additional gRey.coat coating, with or without a polyester powder.coat on the head (with an aluminum or stainless steel washer), can be used in environments with a corrosiveness category and durability period of C1,

C2 VH, C3 VH, and C4 H according to the PN-EN ISO 12944-1:2018 and PN-EN ISO 12944-2:2018 standards,

- fasteners made of BIMETAL stainless steel, with a gRey.coat coating or a polyester powder.coat coating with a thickness of at least 50 µm (with a stainless steel washer), should be used in environments with a corrosiveness category and durability period of C1, C2 VI-I, C3 VH, C4 H, and C5 H according to the PN-EN ISO 12944-1:2018 and PN-EN ISO 12944-2:2018 standards. 12944-1:2018 and PN-EN ISO 12944-2:2018.

4. Name and address of the manufacturer and place of manufacture of the product:

Simpson Strong-Tie Etanco P.S.A., Al. Jana Pawła II 1, 81-345 Gdynia,

Production plant: ul. Olsztyńska 30, 11-130 Orneta

5. Name and address of the authorized representative, if established:

N/A

6. National system used for assessment and verification of constancy of performance:

System 2+

7. National technical specification:

7a. Polish Standard of the product: **N/A**

Name of the accredited certification body, accreditation number and national certificate number or name of the accredited laboratory/laboratories and accreditation number: **N/A**

7b. National Technical Assessment: **KOT-2017/0022 Issue 3**

Technical Assessment Body / National Technical Assessment Body: **Instytut Techniki Budowlanej**

Name of the accredited certification body and certificate number:

Zakład Certyfikacji ITB Warszawa AC 020

Factory Production Control Certificate No.: 020-UWB-1104/Z

8. Declared performance properties

Essential characteristics of the construction product for the intended use or uses	Declared performances	Comments
Characteristic load capacity of fasteners: – pull-out $N_{R,k}$ [kN] – shear $V_{R,k}$ [kN]	According to tables C1÷C13 of the assessment	ITB-KOT-2017/0022 Issue 3
Protective coating / Corrosion protection:	According to point 2 of the assessment	ITB-KOT-2017/0022 Issue 3 PN-EN ISO 12944-1:2018 PN-EN ISO 12944-2:2018
Reaction to fire	Class A1 according to point 2 of the assessment	PN-EN 13501-1+A1:2010

Tabela A1

Wymiary łączników.

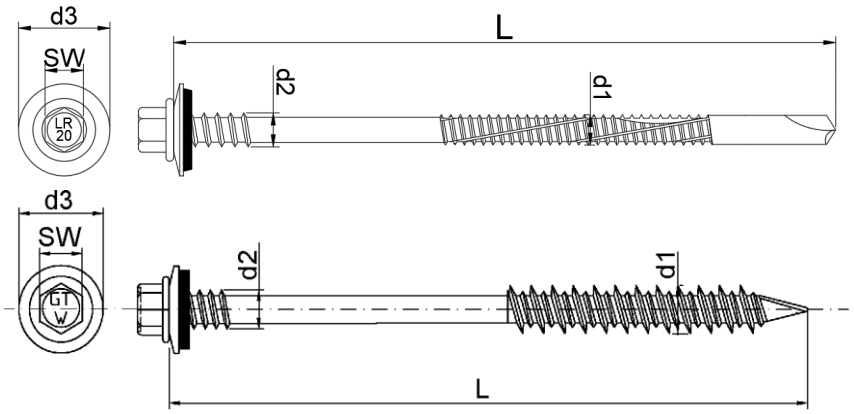
Poz.	Typ łącznika	Oznaczenie	Wymiary				Rozmiar podkładki Z, S lub A
			średnica	średnica	długość całkowita	szerokość łba	
			d1 [mm]	d2 [mm]	L [mm]	SW [mm]	d3 [mm]
							
1	GT6SP GT6SP powder.coat GTR6SP GTR6SP powder.coat	5,5/6,3 x L	5,5	6,3	65-400	8	19,22 lub 29
2	GTX6SP	5,5/6,3 x L	5,5	6,3	85-400	8	19,22 lub 29
3	GT12SP GT12SP powder.coat GTR12SP GTR12SP powder.coat	5,5/6,3 x L	5,5	6,3	70-400	8	19,22 lub 29
4	GTX12SP	5,5/6,3 x L	5,5	6,3	95-400	8	19,22 lub 29
5	GT16SP GT16SP powder.coat GTR16SP GTR16SP powder.coat	6,3/7,0 x L	6,3	7,0	85-400	8	19,22 lub 29
6	GT20SP GT20SP powder.coat GTR20SP GTR20SP powder.coat	6,3/7,0 x L	6,3	7,0	95-400	8	19,22 lub 29
7	GT25SP GT25SP powder.coat GTR25SP GTR25SP powder.coat	6,3/7,0 x L	6,3	7,0	140-400	8	19,22 lub 29
8	GTWSP GTWSP powder.coat GTRWSP GTRWSP powder.coat	6,4/7,0 x L	6,4	7,0	100-400	8	19,22 lub 29

Table A2

Expansion sleeve dimensions.

Item	Designation	d	L
		[mm]	[mm]
1	Expansion sleeve ULTRA	10	50

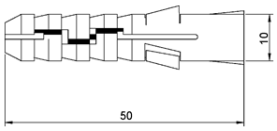
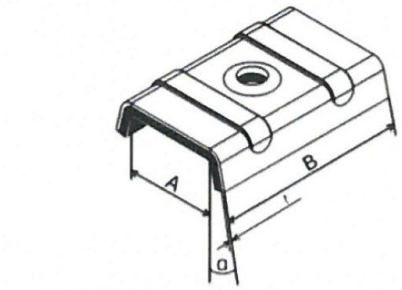


Table A3

Saddle washer dimensions.

Item	Designation	Width	Length	Thickness	Opening angle
		A	B	t	α
		[mm]	[mm]	[mm]	[°]
1	Saddle washer[1)]	26	40	1	20



[1)] other dimensions, however not smaller than those specified above, can be supplied

Table A4

GSPW washers dimensions

Item	Designation	Width	Length	Thickness
		Hmin	L	Tmin
		[mm]	[mm]	[mm]
1	GSPW 80/30	22	80	1,2
2	GSPW 100/25	22	100	1,2
3	GSPW 150/25	22	150	1,2
4	GSPW 150/30	22	150	1,2

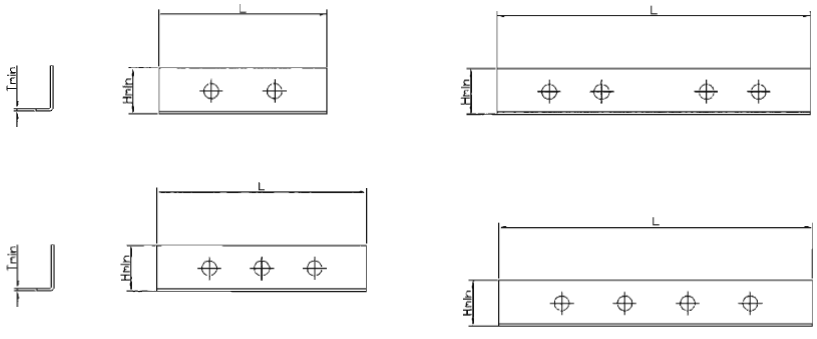


Table C1

Characteristic resistances of installed fasteners GT6SP, GT6SP powder.coat and GTR6SP with washer Z or A – steel substrate

Substrate thickness[1] [mm]				1,00	1,50	2,00	2,50	3,00	4,00	≥ 5,00
Sandwich panel thickness[2] [mm]	Characteristic resistance	Shear [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 [kN]	0,50	1,10	1,93	3,45	3,45	3,45	3,45	3,45
			0,55	1,10	1,93	3,45	3,45	3,45	3,45	3,45
			0,63	1,10	1,93	3,45	3,45	3,45	3,45	3,45
			0,75	1,10	1,93	3,45	3,45	3,45	3,45	3,45
			0,88	1,10	1,93	3,45	3,45	3,45	3,45	3,45
			1,00	1,10	1,93	3,45	3,45	3,45	3,45	3,45
Max. head displacement[3] depending on sandwich panel thickness [mm]			30	12	12	12	12	1,5	1,5	1,5
			40	12	12	12	12	1,5	1,5	1,5
			50	12	12	12	12	1,5	1,5	1,5
			60	18	18	18	18	4	4	4
			70	18	18	18	18	4	4	4
			80	18	18	18	18	4	4	4
			90	23	23	23	23	10	10	10
			100	23	23	23	23	10	10	10
			120	23	23	23	23	10	10	10
			≥140	23	23	23	23	10	10	10

[1] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015 at substrate thickness <2 mm or S235JR acc. to PN-EN 10025-1:2007 at substrate thickness ≥ 2 mm

[2] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015

[3] fastener head displacement, measured from fastener axis, resulting from the displacement of exterior sandwich panel cladding, due to thermal expansion

Table C2

Characteristic resistances of installed fasteners GTX6SP, GTX6SP powder.coat with washer S – steel substrate.

Substrate thickness[1] [mm]				1,00	1,50	2,00	2,50	3,00	4,00	≥ 5,00
Sandwich panel thickness[2] [mm]	Characteristic resistance	Shear [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 [kN]	**0,50**	1,04	1,92	3,65	3,65	3,65	3,65	3,65
			0,55	1,04	1,92	3,65	3,65	3,65	3,65	3,65
			0,63	1,04	1,92	3,71	3,71	3,71	3,71	3,71
			0,75	1,04	1,92	3,71	3,71	3,71	3,71	3,71
			0,88	1,04	1,92	3,71	3,71	3,71	3,71	3,71
			1,00	1,04	1,92	3,71	3,71	3,71	3,71	3,71
Max. head displacement[3] depending on sandwich panel thickness [mm]			**30**	12	12	12	1,5	1,5	1,5	1,5
			40	12	12	12	1,5	1,5	1,5	1,5
			50	12	12	12	1,5	1,5	1,5	1,5
			60	18	18	18	4	4	4	4
			70	18	18	18	4	4	4	4
			80	18	18	18	4	4	4	4
			90	23	23	23	10	10	10	10
			100	23	23	23	10	10	10	10
			120	23	23	23	10	10	10	10
			≥140	23	23	23	10	10	10	10

[1] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015 at substrate thickness <2 mm or S235JR acc. to PN-EN 10025-1:2007 at substrate thickness ≥ 2 mm

[2] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015

[3] fastener head displacement, measured from fastener axis, resulting from the displacement of exterior sandwich panel cladding, due to thermal expansion

Table C3

Characteristic resistances of installed fasteners GT12SP, GT12SP powder.coat and GTR12SP with washer Z – steel substrate

Substrate thickness[1] [mm]				3,00	4,00	5,00	6,00	7,00	8,00	≥ 9,00
Sandwich panel cladding thickness[2] [mm]	Characteristic resistance	shear [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 [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[3] depending on sandwich panel thickness [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

[1] steel grade S235JR acc. to PN-EN 10025-1:2007

[2] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015

[3] fastener head displacement, measured from fastener axis, resulting from the displacement of exterior sandwich panel cladding, due to thermal expansion

Table C4

Characteristic resistances of installed fasteners GT12SP, GT12SP powder.coat and GTR12SP with washer A – steel substrate.

Substrate thickness[1] [mm]				3,00	4,00	5,00	6,00	7,00	8,00	≥ 9,00
Sandwich panel cladding thickness[2] [mm]	Characteristic resistance	shear [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 [kN]	**0,50**	3,67	3,67	3,67	3,67	3,67	3,67	3,67
			0,55	3,67	3,67	3,67	3,67	3,67	3,67	3,67
			0,63	4,11	4,11	4,11	4,11	4,11	4,11	4,11
			0,75	5,28	5,28	5,28	5,28	5,28	5,28	5,28
			0,88	5,28	5,28	5,28	5,28	5,28	5,28	5,28
			1,00	5,28	5,28	5,28	5,28	5,28	5,28	5,28
Max head displacement[3] depending on sandwich panel thickness [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

[1] steel grade S235JR acc. to PN-EN 10025-1:2007

[2] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015

[3] fastener head displacement, measured from fastener axis, resulting from the displacement of exterior sandwich panel cladding, due to thermal expansion

Table C5

Characteristic resistances of installed fasteners GTX12SP or GTX12SP powder.coat with washer S – steel substrate.

Substrate thickness[1] [mm]				3,00	4,00	5,00	6,00	7,00	8,00	≥ 9,00
Sandwich panel cladding thickness[2] [mm]	Characteristic resistance	shear [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 [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[3] depending on sandwich panel thickness [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

[1] steel grade S235JR acc. to PN-EN 10025-1:2007

[2] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015

[3] fastener head displacement, measured from fastener axis, resulting from the displacement of exterior sandwich panel cladding, due to thermal expansion

Table C6

Characteristic resistances of installed fasteners GT16SP, GT16SP powder.coat, GTR16SP or GTR16SP powder.coat with washer Z – steel substrate.

Substrate thickness[1] [mm]				4,00	5,00	6,00	7,00	8,00	9,00	≥ 10,00
Sandwich panel cladding thickness[2] [mm]	Characteristic resistance	shear [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 [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[3] depending on sandwich panel thickness [mm]			**30**	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

[1] steel grade S235JR acc. to PN-EN 10025-1:2007

[2] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015

[3] fastener head displacement, measured from fastener axis, resulting from the displacement of exterior sandwich panel cladding, due to thermal expansion

Table C7

Characteristic resistances of installed fasteners GT16SP, GT16SP powder.coat, GTR16SP or GTR16SP powder.coat with washer A – steel substrate.

Substrate thickness[1] [mm]				4,00	5,00	6,00	7,00	8,00	9,00	≥ 10,00
Sandwich panel cladding thickness[2] [mm]	Characteristic resistance	shear [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 [kN]	**0,50**	3,67	3,67	3,67	3,67	3,67	3,67	3,67
			0,55	3,67	3,67	3,67	3,67	3,67	3,67	3,67
			0,63	4,11	4,11	4,11	4,11	4,11	4,11	4,11
			0,75	5,28	5,28	5,28	5,28	5,28	5,28	5,28
			0,88	5,28	5,28	5,28	5,28	5,28	5,28	5,28
			1,00	5,28	5,28	5,28	5,28	5,28	5,28	5,28
Max head displacement[3] depending on sandwich panel thickness [mm]			**30**	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

[1] steel grade S235JR acc. to PN-EN 10025-1:2007

[2] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015

[3] fastener head displacement, measured from fastener axis, resulting from the displacement of exterior sandwich panel cladding, due to thermal expansion

Table C8

Characteristic resistances of installed fasteners GT20SP, GT20SP powder.coat, GTR20SP or GTR20SP powder.coat with washer Z – steel substrate.

Substrate thickness[1] [mm]				4,00	5,00	6,00	7,00	8,00	9,00	≥ 10,00
Sandwich panel cladding thickness[2] [mm]	Characteristic resistance	shear [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 [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[3] depending on sandwich panel thickness [mm]			30	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

[1] steel grade S235JR acc. to PN-EN 10025-1:2007

[2] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015

[3] fastener head displacement, measured from fastener axis, resulting from the displacement of exterior sandwich panel cladding, due to thermal expansion

Table C9

Characteristic resistances of installed fasteners GT20SP, GT20SP powder.coat, GTR20SP or GTR20SP powder.coat with washer A – steel substrate.

Substrate thickness[1] [mm]				4,00	5,00	6,00	7,00	8,00	9,00	≥ 10,00
Sandwich panel cladding thickness[2] [mm]	Characteristic resistance	shear [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 [kN]	0,50	3,67	3,67	3,67	3,67	3,67	3,67	3,67
			0,55	3,67	3,67	3,67	3,67	3,67	3,67	3,67
			0,63	4,11	4,11	4,11	4,11	4,11	4,11	4,11
			0,75	5,28	5,28	5,28	5,28	5,28	5,28	5,28
			0,88	5,28	5,28	5,28	5,28	5,28	5,28	5,28
			1,00	5,28	5,28	5,28	5,28	5,28	5,28	5,28
Max head displacement[3] depending on sandwich panel thickness [mm]			30	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

[1] steel grade S235JR acc. to PN-EN 10025-1:2007

[2] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015

[3] fastener head displacement, measured from fastener axis, resulting from the displacement of exterior sandwich panel cladding, due to thermal expansion

Table C10

Characteristic resistances of installed fasteners GT25SP, GT25SP powder.coat, GTR25SP or GTR25SP powder.coat with washer Z – steel substrate.

Substrate thickness[1] [mm]				4,00	5,00	6,00	7,00	8,00	9,00	≥ 10,00
Sandwich panel cladding thickness[2] [mm]	Characteristic resistance	shear [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 [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[3] depending on sandwich panel thickness [mm]			30	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

[1] steel grade S235JR acc. to PN-EN 10025-1:2007

[2] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015

[3] fastener head displacement, measured from fastener axis, resulting from the displacement of exterior sandwich panel cladding, due to thermal expansion

Table C11

Characteristic resistances of installed fasteners GT25SP, GT25SP powder.coat, GTR25SP or GTR25SP powder.coat with washer A – steel substrate.

Substrate thickness[1] [mm]				4,00	5,00	6,00	7,00	8,00	9,00	≥ 10,00
Sandwich panel cladding thickness[2] [mm]	Characteristic resistance	shear [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 [kN]	**0,50**	3,67	3,67	3,67	3,67	3,67	3,67	3,67
			0,55	3,67	3,67	3,67	3,67	3,67	3,67	3,67
			0,63	4,11	4,11	4,11	4,11	4,11	4,11	4,11
			0,75	5,28	5,28	5,28	5,28	5,28	5,28	5,28
			0,88	5,28	5,28	5,28	5,28	5,28	5,28	5,28
			1,00	5,28	5,28	5,28	5,28	5,28	5,28	5,28
Max head displacement[3] depending on sandwich panel thickness [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

[1] steel grade S235JR acc. to PN-EN 10025-1:2007

[2] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015

[3] fastener head displacement, measured from fastener axis, resulting from the displacement of exterior sandwich panel cladding, due to thermal expansion

Table C12

Characteristic resistances of installed fasteners GTWSP, GTWSP powder.coat, GTRWSP or GTRWSP powder.coat, with washer Z or A – normal concrete or timber substrate.

Substrate				Concrete [1]		Timber [2]	
Głębokość zakotwienia [mm]				30	40	25,6	40
Sandwich panel cladding thickness[2] [mm]	Characteristic resistance	shear [kN]	0,50	1,74 [5]	1,74 [5]	1,74 [5]	1,74 [5]
			0,55	1,74 [5]	1,74 [5]	1,74 [5]	1,74 [5]
			0,63	2,34 [5]	2,34 [5]	2,34 [5]	2,34 [5]
			0,75	2,45 [6]	2,45 [6]	2,45 [6]	2,45 [6]
			0,88	2,45 [6]	2,45 [6]	2,45 [6]	2,45 [6]
			1,00	2,45 [6]	2,45 [6]	2,45 [6]	2,45 [6]
		pull-out [kN]	0,50	2,45 [6]	3,65 [5]	2,45 [6]	3,65 [5]
			0,55	2,45 [6]	3,65 [5]	2,45 [6]	3,65 [5]
			0,63	2,45 [6]	4,15 [5]	2,45 [6]	4,15 [5]
			0,75	2,45 [6]	4,15 [5]	2,45 [6]	4,15 [5]
			0,88	2,45 [6]	4,15 [5]	2,45 [6]	4,15 [5]
			1,00	2,45 [6]	4,15 [5]	2,45 [6]	4,15 [5]
Max head displacement[3] depending on sandwich panel thickness [mm]			30	1,0	1,0	1,0	1,0
			40	1,0	1,0	1,0	1,0
			50	1,0	1,0	1,0	1,0
			60	1,5	1,5	1,5	1,5
			70	1,5	1,5	1,5	1,5
			80	1,5	1,5	1,5	1,5
			90	2,0	2,0	2,0	2,0
			100	2,0	2,0	2,0	2,0
			120	2,0	2,0	2,0	2,0
			≥140	2,0	2,0	2,0	2,0

[1] normal concrete class ≥ C20/25 acc. to PN-EN 206+A1:2016

[2] timber class ≥ C24 acc. to PN-EN 338:2016

[3] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015

[4] fastener head displacement, measured from fastener axis, resulting from the displacement of exterior sandwich panel cladding, due to thermal expansion

[5] failure mode – failure to the steel sheet or pulling the screw head through the steel sheet

[6] failure mode – pulling the screw out of the substrate

Table C13

Characteristic resistances of installed fasteners GTWSP, GTRWSP, GTWSP powder.coat or GTRWSP powder.coat, with ULTRA sleeve, with washer Z or A – normal concrete, solid clay brick, hollow clay brick, calcium silicate hollow brick or autoclaved aerated concrete substrate.

Substrate				Concrete [1]	Solid clay brick [2]	Hollow clay brick [3]	Silicate hollow brick [4]	Autoclaved aerated concrete [5]
Głębokość zakotwienia [mm]				50	50	50	50	50
Sandwich panel cladding thickness [2] [mm]	Characteristic resistance	shear [kN]	0,50	1,74 [8]	1,74 [8]	1,74 [8]	1,74 [8]	1,74 [8]
			0,55	1,74 [8]	1,74 [8]	1,74 [8]	1,74 [8]	1,74 [8]
			0,63	2,34 [8]	2,34 [8]	2,34 [8]	2,34 [8]	2,34 [8]
			0,75	2,45 [8]	2,45 [8]	2,45 [8]	2,45 [8]	2,45 [8]
			0,88	2,45 [8]	2,45 [8]	2,45 [8]	2,45 [8]	2,45 [8]
			1,00	2,45 [8]	2,45 [8]	2,45 [8]	2,45 [8]	2,45 [8]
		pull-out [kN]	0,50	2,05 [9]	1,90 [9]	1,55 [9]	1,00 [9]	1,00 [9]
			0,55	2,05 [9]	1,90 [9]	1,55 [9]	1,00 [9]	1,00 [9]
			0,63	2,05 [9]	1,90 [9]	1,55 [9]	1,00 [9]	1,00 [9]
			0,75	2,05 [9]	1,90 [9]	1,55 [9]	1,00 [9]	1,00 [9]
			0,88	2,05 [9]	1,90 [9]	1,55 [9]	1,00 [9]	1,00 [9]
			1,00	2,05 [9]	1,90 [9]	1,55 [9]	1,00 [9]	1,00 [9]
Max head displacement [3] depending on sandwich panel thickness [mm]			30	1	1	1	1	1
			40	1	1	1	1	1
			50	1	1	1	1	1
			60	1,5	1,5	1,5	1,5	1,5
			70	1,5	1,5	1,5	1,5	1,5
			80	1,5	1,5	1,5	1,5	1,5
			90	2	2	2	2	2
			100	2	2	2	2	2
			120	2	2	2	2	2
			≥140	2	2	2	2	2

[1] normal concrete class ≥ C20/25 acc. to PN-EN 206+A1:2016

[2] solid clay brick class ≥ 15 acc. to PN-EN 771-1+A1:2015

[3] hollow clay brick class ≥ 15 acc. to PN-EN 771-1+A1:2015

[4] calcium silicate hollow brick class ≥ 15 acc. to PN-EN 771-2+A1:2015

[5] autoclaved aerated concrete density class ≥ 600 and strength class ≥ 7 acc. to PN-EN 771-4+A1:2015

[6] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2011

[7] fastener head displacement, measured from fastener axis, resulting from the displacement of exterior sandwich panel cladding, due to thermal expansion

[8] failure mode – failure to the steel sheet or pulling the screw head through the steel sheet

[9] failure mode – pulling the screw out of the substrate

Table B1

Installation parameters of GT6SP, GTX6SP, GTR6SP, GT12SP, GTX12SP, GTR12SP, GT16SP, GTR16SP, GT20SP, GTR20SP, GT25SP i GTR25SP.

Item	Fastener type	Min thickness of steel substrate[1)], [mm]	Max substrate drilling capacity of fastener, [mm]
1	GT6SP GT6SP powder.coat GTR6SP GTR6SP powder.coat	1	6
2	GTX6SP	1	6
3	GT12SP GT12SP powder.coat GTR12SP GTR12SP powder.coat	3	12
4	GTX12SP	3	12
5	GT16SP GT16SP powder.coat GTR16SP GTR16SP powder.coat	4	16
6	GT20SP GT20SP powder.coat GTR20SP GTR20SP powder.coat	4	20
7	GT25SP GT25SP powder.coat GTR25SP GTR25SP powder.coat	4	25

[1)] steel grade S280GD, S320GD or S350GD acc. to PN-EN 10346:2015
or S235JR acc. to PN-EN 10025-1:2007

Table B2

Installation parameters of GTWSP i GTRWSP.

Item	Fastener type	Substrate	Min fastenerage depth [mm]	Min hole depth [mm]	Pre-drilled hole diameter [mm]
1	GTWSP GTWSP powder.coat GTRWSP GTRWSP powder.coat	normal concrete[1)]	30 / 40 / 50	35 / 45 / 55	5
2		structural timber[2)]	25,6 / 40	—	—
3	GTWSP GTWSP powder.coat GTRWSP + ULTRA expansion sleeve	normal concrete[1)] solid clay brick[3)] hollow clay brick[4)] silicate hollow brick[5)] autoclaved aerated concrete[6)]	50	55	10

[1)] normal concrete class ≥ C20/25 acc. to PN-EN 206+A1:2016

[2)] timber class ≥ C24 acc. to PN-EN 338:2011

[3)] solid clay brick ≥ 15 acc. to PN-EN 771-1+A1:2015

[4)] hollow clay brick ≥ 15 acc. to PN-EN 771-1+A1:2015

[5)] calcium silicate hollow brick ≥ 15 acc. to PN-EN 771-2+A1:2015

[6)] autoclaved aerated concrete density class ≥ 600 and strength class ≥ 7 acc. to PN-EN 771-4+A1:2015

9. The performance properties of the product specified above are in accordance with all the declared performance characteristics listed in paragraph 8. This national declaration of performance is issued in accordance with the Act of 16 April 2004 on construction products, under the sole responsibility of the manufacturer.

Place and date of issue

Orneta 05.08.2025

On behalf of the manufacturer signed

Sewer Malesiński
Product Manager
Simpson Strong-Tie Etanco P.S.A.