

DECLARAȚIA DE PERFORMANȚĂ

DoP_19-0553_03 (RO)

1. Cod unic de identificare al produsului-tip

Șuruburi HECO-TOPIX-plus, HECO-TOPIX-plus-T, HECO-TOPIX-plus-CC

2. Tipul, lotul sau numărul de serie sau orice alt element care permite identificarea produsului pentru construcții astfel cum este solicitat la articolul 11 alineatul (4):

Identificare conform ETA-19/0553 Anexa 6A

3. Utilizarea sau utilizările preconizate ale produsului pentru construcții, în conformitate cu specificația tehnică armonizată aplicabilă, astfel cum este prevăzut de fabricant:

ETA-19/0553 Capitolul 1

Obiectul atestării	Șuruburi HECO-TOPIX-plus, HECO-TOPIX-plus-T, HECO-TOPIX-plus-CC
Diametre	3,5 mm; 4,0 mm; 4,5 mm; 5,0 mm; 6,0/6,5 mm; 8,0/8,5 mm; 10,0 mm
Scopul utilizării	Șuruburi autoforante pentru îmbinări lemn-lemn
Încărcări	Preponderent încărcări statice sau cvasi-statice
Domeniu de utilizare	Șuruburi zincate clasa de utilizare 1 - 2 conform Eurocode 5
	Șuruburi din oțel inox clasa de utilizare 3 conform Eurocode 5

4. Numele, denumirea socială sau marca înregistrată și adresa de contact a fabricantului, astfel cum se solicită în temeiul articolului 11 alineatul (5):

HECO-Schrauben GmbH & Co. KG

Dr.-Kurt-Steim-Str. 28

78713 Schramberg (Germania)

5. Sistemul sau sistemele de evaluare și verificare a constanței performanței produsului pentru construcții, astfel cum este prevăzut în anexa V:

System 3

6. În cazul declarației de performanță pentru un produs pentru construcții pentru care s-a emis o evaluare tehnică europeană:

ETA-19/0553 emisă de către ETA-Danmark A/S pe baza EAD 130118-01-0603

7. Performanța declarată

Tabelle 1.1: HECO-TOPIX-plus, HECO-TOPIX-plus-T, HECO-TOPIX-plus-CC screws made of carbon steel without MagicClose

	Characteristic			HECO-TOPIX-plus screws							HECO-TOPIX-plus-CC		HECO-TOPIX-plus-T	
			Screws Ø	3,5	4,0	4,5	5,0	6,0	8,0	10,0	6,0/6,5	8,0/8,5	8,0	10,0
Mechanical resistance and stability (BWR 1)														
1	$l, l_g, d_1, d, d_s, d_{head}, p$		[mm]	according to ETA-19/0553 Annex A										
2	$M_{y,k}$	ETA-19/0553 chapter 3.9	[Nm]	2,3	2,8	4,5	5,9	9,5	20,0	36,0	9,5	20,0	20,0	36,0
3	α_{bend}	ETA-19/0553 chapter 1	[°]	38,7	37,1	35,7	34,6	32,8	30,5	29,0	32,1	30,5	30,5	29,0
4a	$f_{ax,k}$	ETA-19/0553 chapter 3.9	[N/mm²]	13,7	13,7	13,7	11,8	11,8	11,8	11,8	12,5	12,5	10,5	10,5
4b	$f_{ax,k}$ LVL Buche, Träger BauBuche GL75	ETA-19/0553 chapter 3.9	[N/mm²]	-	-	-	35,0	35,0	35,0	30,0	-	-	-	-
4c	$f_{ax,k}$ Particle Board, OSB	ETA-19/0553 chapter 3.9	[N/mm²]	-	10,0	10,0	10,0	10,0	-	-	-	-	-	-
5a	$f_{head,k}$	ETA-19/0553 chapter 3.9	[N/mm²]	$f_{head,k} = 14,0 \text{ N/mm}^2$ for $d_h < 23 \text{ mm}$; $f_{head,k} = 9,4 \text{ N/mm}^2$ for $23 \text{ mm} < d_h < 35 \text{ mm}$										
5b	$f_{head,k}$ Ash, Beech, Oak $\geq 20\text{mm}$	ETA-19/0553 chapter 3.9	[N/mm²]	$f_{head,k} = 20,0 \text{ N/mm}^2$ for $d_h \leq 20 \text{ mm}$; $f_{head,k} = 15 \text{ N/mm}^2$ for $d_h > 20 \text{ mm}$										
5c	$f_{head,k}$ LVL Buche, Träger BauBuche GL75	ETA-19/0553 chapter 3.9	[N/mm²]	$f_{head,k} = 32,0 \text{ N/mm}^2$ for $d_h < 35 \text{ mm}$										
6	$f_{tens,k}$	ETA-19/0553 chapter 3.1	[kN]	3,8	4,7	6,4	7,9	11,3	20,0	30,0	10,0	18,0	20,0	25,0
7	$R_{0,2,k}$		[Nmm²]	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
8	$f_{tor,k}$	ETA-19/0553 chapter 3.1	[Nm]	2,2	2,9	4,5	6,5	11,0	25,0	42,0	10,0	23,0	24,0	42,0
9	$R_{tor,mean}$	ETA-19/0553 chapter 3.1	[Nm]	1,5	1,9	3,0	4,3	7,3	16,7	28,0	6,7	15,3	16,0	28,0
10	$a_1; a_2; a_{1,CG}; a_{2,CG}$	ETA-19/0553 Annex B	[mm]	according to ETA-19/0553 Annex B										
11	K_{ser}	ETA-19/0553 chapter 3.9	[N/mm]	Softwood: $K_{ser} = 25 \times d \times l_{ef}$; Hardwood: $K_{ser} = 30 \times d \times l_{ef}$										
12	Corrosion protection	ETA-19/0553 chapter 3.10		Table 2										
Safety in case of fire (BWR 2)														
13		ETA-19/0553 chapter 3.2		Class A1										
Safety and accessibility in use (BWR 4)														
14				-										

Tabelle 1.2: HECO-TOPIX-plus, HECO-TOPIX-plus-T, HECO-TOPIX-plus-CC screws made of carbon steel with MagicClose

	Characteristic			HECO-TOPIX-plus screws							HECO-TOPIX-plus-CC		HECO-TOPIX-plus-T	
			Screws Ø	3,5	4,0	4,5	5,0	6,0	8,0	10,0	6,0/6,5	8,0/8,5	8,0	10,0
Mechanical resistance and stability (BWR 1)														
1	$l, l_g, d_1, d, d_s, d_{head}, p$		[mm]	according to ETA-19/0553 Annex A										
2	$M_{y,k}$	ETA-19/0553 chapter 3.9	[Nm]	2,3	2,8	4,5	5,9	9,5	-	-	-	-	-	-
3	α_{bend}	ETA-19/0553 chapter 1	[°]	39	37	36	35	33	-	-	-	-	-	-
4a	$f_{ax,k}$	ETA-19/0553 chapter 3.9	[N/mm²]	11,8	11,8	11,8	11,8	11,8	-	-	-	-	-	-
4b	$f_{ax,k}$ LVL Buche, Träger BauBuche GL75	ETA-19/0553 chapter 3.9	[N/mm²]	-	-	-	-	-	-	-	-	-	-	-
4c	$f_{ax,k}$ Particle Board, OSB	ETA-19/0553 chapter 3.9	[N/mm²]	-	10,0	10,0	10,0	10,0	-	-	-	-	-	-
5a	$f_{head,k}$	ETA-19/0553 chapter 3.9	[N/mm²]	$f_{head,k} = 14,0 \text{ N/mm}^2$ for $d_h < 23 \text{ mm}$; $f_{head,k} = 9,4 \text{ N/mm}^2$ for $23 \text{ mm} < d_h < 35 \text{ mm}$										
5b	$f_{head,k}$ Ash, Beech, Oak $\geq 20 \text{ mm}$	ETA-19/0553 chapter 3.9	[N/mm²]	$f_{head,k} = 20,0 \text{ N/mm}^2$ for $d_h \leq 20 \text{ mm}$; $f_{head,k} = 15 \text{ N/mm}^2$ for $d_h > 20 \text{ mm}$										
5c	$f_{head,k}$ LVL Buche, Träger BauBuche GL75	ETA-19/0553 chapter 3.9	[N/mm²]	$f_{head,k} = 32,0 \text{ N/mm}^2$ for $d_h < 35 \text{ mm}$										
6	$f_{tens,k}$	ETA-19/0553 chapter 3.1	[kN]	3,4	4,4	5,6	7,9	11,3	-	-	-	-	-	-
7	$R_{0,2,k}$		[Nmm²]	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD	NPD
8	$f_{tor,k}$	ETA-19/0553 chapter 3.1	[Nm]	2,1	2,9	4,5	6,2	11,0	-	-	-	-	-	-
9	$R_{tor,mean}$	ETA-19/0553 chapter 3.1	[Nm]	1,4	1,9	3,0	4,1	7,3	-	-	-	-	-	-
10	$a_1; a_2; a_{1,CG}; a_{2,CG}$	ETA-19/0553 Annex B	[mm]	according to ETA-19/0553 Annex B										
11	K_{ser}	ETA-19/0553 chapter 3.9	[N/mm]	Softwood: $K_{ser} = 25 \times d \times l_{ef}$; Hardwood: $K_{ser} = 30 \times d \times l_{ef}$										
12	Corrosion protection	ETA-19/0553 chapter 3.10		Table 2										
Safety in case of fire (BWR 2)														
13		ETA-19/0553 chapter 3.2		Class A1										
Safety and accessibility in use (BWR 4)														
14				-										

Tabelle 1.3: HECO-TOPIX-plus, HECO-TOPIX-plus-T, HECO-TOPIX-plus-CC screws made of stainless steel without MagicClose

	Characteristic			HECO-TOPIX-plus screws							HECO-TOPIX-plus-CC		HECO-TOPIX-plus-T	
			Screws Ø	3,5	4,0	4,5	5,0	6,0	8,0	10,0	6,0/6,5	8,0/8,5	8,0	10,0
Mechanical resistance and stability (BWR 1)														
1	$l, l_g, d_1, d, d_s, d_{head}, p$		[mm]	according to ETA-19/0553 Annex A										
2	$M_{y,k}$	ETA-19/0553 chapter 3.9	[Nm]	1,9	2,8	3,4	4,4	7,1	17,0	30,0	-	-	15,0	27,0
3	α_{bend}	ETA-19/0553 chapter 1	[°]	39	37	36	35	33	30	29	-	-	30	29
4a	$f_{ax,k}$	ETA-19/0553 chapter 3.9	[N/mm²]	13,7	13,7	13,7	11,8	11,8	11,8	11,8	-	-	11,8	11,8
4b	$f_{ax,k}$ LVL Buche, Täger BauBuche GL75	ETA-19/0553 chapter 3.9	[N/mm²]	-	-	-	35,0	35,0	35,0	30,0	-	-	-	-
4c	$f_{ax,k}$ Particle Board, OSB	ETA-19/0553 chapter 3.9	[N/mm²]	-	10,0	10,0	10,0	10,0	-	-	-	-	-	-
5a	$f_{head,k}$	ETA-19/0553 chapter 3.9	[N/mm²]	$f_{head,k} = 14,0 \text{ N/mm}^2$ for $d_h < 23 \text{ mm}$; $f_{head,k} = 9,4 \text{ N/mm}^2$ for $23 \text{ mm} < d_h < 35 \text{ mm}$										
5b	$f_{head,k}$ Ash, Beech, Oak $\geq 20\text{mm}$	ETA-19/0553 chapter 3.9	[N/mm²]	$f_{head,k} = 20,0 \text{ N/mm}^2$ for $d_h \leq 20 \text{ mm}$; $f_{head,k} = 15 \text{ N/mm}^2$ for $d_h > 20 \text{ mm}$										
5c	$f_{head,k}$ LVL Buche, Täger BauBuche GL75	ETA-19/0553 chapter 3.9	[N/mm²]	$f_{head,k} = 32,0 \text{ N/mm}^2$ for $d_h < 35 \text{ mm}$										
6	$f_{tens,k}$	ETA-19/0553 chapter 3.1	[kN]	2,9	3,8	4,8	5,9	7,5	15,0	22,0	-	-	14,0	22,0
7	$R_{0,2,k}$		[Nmm²]	NPD	NPD	NPD	NPD	NPD	NPD	NPD	-	-	NPD	NPD
8	$f_{tor,k}$	ETA-19/0553 chapter 3.1	[Nm]	1,8	2,7	4,1	6,0	8,0	19,0	35,0	-	-	18,0	37,0
9	$R_{tor,mean}$	ETA-19/0553 chapter 3.1	[Nm]	1,3	1,9	2,3	3,3	4,7	12,7	23,3	-	-	12,0	24,7
10	$a_1; a_2; a_{1,CG}; a_{2,CG}$	ETA-19/0553 Annex B	[mm]	according to ETA-19/0553 Annex B										
11	K_{ser}	ETA-19/0553 chapter 3.9	[N/mm]	Softwood: $K_{ser} = 25 \times d \times l_{ef}$; Hardwood: $K_{ser} = 30 \times d \times l_{ef}$										
12	Corrosion protection	ETA-19/0553 chapter 3.10		Table 2										
Safety in case of fire (BWR 2)														
13		ETA-19/0553 chapter 3.2		Class A1										
Safety and accessibility in use (BWR 4)														
14				-										

Tabelle 1.4: HECO-TOPIX-plus, HECO-TOPIX-plus-T, HECO-TOPIX-plus-CC Screws made of stainless steel with MagicClose

	Characteristic			HECO-TOPIX-plus screws							HECO-TOPIX-plus-CC		HECO-TOPIX-plus-T	
			Screws Ø	3,5	4,0	4,5	5,0	6,0	8,0	10,0	6,0/6,5	8,0/8,5	8,0	10,0
Mechanical resistance and stability (BWR 1)														
1	$l, l_g, d_1, d, d_s, d_{head}, p$		[mm]	according to ETA-19/0553 Annex A										
2	$M_{y,k}$	ETA-19/0553 chapter 3.9	[Nm]	1,9	2,8	3,7	4,9	7,9	-	-	-	-	-	-
3	α_{bend}	ETA-19/0553 chapter 1	[°]	39	37	36	35	33	-	-	-	-	-	-
4a	$f_{ax,k}$	ETA-19/0553 chapter 3.9	[N/mm²]	11,8	11,8	11,8	11,8	11,8	-	-	-	-	-	-
4b	$f_{ax,k}$ LVL Buche, Träger BauBuche GL75	ETA-19/0553 chapter 3.9	[N/mm²]	-	-	-	-	-	-	-	-	-	-	-
4c	$f_{ax,k}$ Particle Board, OSB	ETA-19/0553 chapter 3.9	[N/mm²]	-	10,0	10,0	10,0	10,0	-	-	-	-	-	-
5a	$f_{head,k}$	ETA-19/0553 chapter 3.9	[N/mm²]	$f_{head,k} = 14,0 \text{ N/mm}^2$ for $d_h < 23 \text{ mm}$; $f_{head,k} = 9,4 \text{ N/mm}^2$ for $23 \text{ mm} < d_h < 35 \text{ mm}$										
5b	$f_{head,k}$ Ash, Beech, Oak ≥ 20mm	ETA-19/0553 chapter 3.9	[N/mm²]	$f_{head,k} = 20,0 \text{ N/mm}^2$ for $d_h \leq 20 \text{ mm}$; $f_{head,k} = 15 \text{ N/mm}^2$ for $d_h > 20 \text{ mm}$										
5c	$f_{head,k}$ LVL Buche, Träger BauBuche GL75	ETA-19/0553 chapter 3.9	[N/mm²]	$f_{head,k} = 32,0 \text{ N/mm}^2$ for $d_h < 35 \text{ mm}$										
6	$f_{tens,k}$	ETA-19/0553 chapter 3.1	[kN]	3,4	4,4	5,3	7,4	10,0	-	-	-	-	-	-
7	$R_{0,2,k}$		[Nmm²]	NPD	NPD	NPD	NPD	NPD	-	-	-	-	-	-
8	$f_{tor,k}$	ETA-19/0553 chapter 3.1	[Nm]	1,8	2,7	4,1	6,0	8,0	-	-	-	-	-	-
9	$R_{tor,mean}$	ETA-19/0553 chapter 3.1	[Nm]	1,2	1,8	2,7	4,0	5,3	-	-	-	-	-	-
10	$a_1; a_2; a_{1,CG}; a_{2,CG}$	ETA-19/0553 Annex B	[mm]	according to ETA-19/0553 Annex B										
11	K_{ser}	ETA-19/0553 chapter 3.9	[N/mm]	Softwood: $K_{ser} = 25 \times d \times l_{ef}$; Hardwood: $K_{ser} = 30 \times d \times l_{ef}$										
12	Corrosion protection	ETA-19/0553 chapter 3.10		Table 2										
Safety in case of fire (BWR 2)														
13		ETA-19/0553 chapter 3.2		Class A1										
Safety and accessibility in use (BWR 4)														
14				-										



8. Performanța produsului identificat la punctele 1 și 2 este în conformitate cu performanța declarată de la punctul 7. Această declarație de performanță este emisă pe răspunderea exclusivă a fabricantului identificat la punctul 4.

Semnată pentru și în numele fabricantului de către:

A handwritten signature in black ink, appearing to read 'A. Hettich', is positioned above the printed name of the signatory.

Schramberg, 20.01.2022

ppa.

Andreas Hettich, Head of Business Development