



EN

## DECLARATION OF PERFORMANCE

according to Annex III of the Regulation (EU) Nr. 305/2011 (Construction Products Regulation)

Hilti timber construction screws S-WWP, S-WCP  
Nr. Hilti-SF-DoP-043

- 1. Unique identification code of the product-type:** Hilti timber construction screws S-WWP, S-WCP
- 2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4):** Type and Lot-Number displayed on the packaging
- 3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:**

Generic type and use	Screws for connections in load bearing timber structures (load bearing timber construction screws)
Product size covered	Ø 4.0 mm / Ø 5.0 mm / Ø 6.0 mm / Ø 8.0 mm / Ø 10.0 mm / Ø 12.0 mm
Fastener material	Hardened carbon steel, electrogalvanized, passivated
Loading	Static & quasi static

**4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):** Hilti AG, Business Unit Direct Fastening, 9494 Schaan, Principality of Liechtenstein

**5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):** n.a.

**6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:** System 3

**7. In case of the declaration of performance concerning a construction product covered by a harmonized standard:** n.a.

**8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued:** On the basis of EAD 130118-01-0603 issued ETA-22/0772. The notified body Holzforschung Austria (NB 1359) performed third party tasks under system 3.

**9. Declared performance:**

Essential characteristic	Performance	Harmonized technical specification
Dimensions	see table 1 in the Annex	EAD 130118-01-0603
Characteristic yield moment		
Bending angle		
Characteristic withdrawal parameter		
Characteristic head pull-through parameter		
Characteristic tensile strength		
Characteristic yield strength		
Characteristic torsional strength		
Insertion moment		
Slip modulus		
Durability against corrosion		
Reaction to fire		
Min. spacing, end and edge distances		

**10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.**

Signed for and on behalf of the manufacturer by:

**Rafael Garcia**  
Head of Business Unit Direct Fastening

Hilti AG, Schaan, 01.05.2024

**Pierre Hohmeier**  
Head of Quality Screw Fastening

**Table 1: Characteristic load bearing capacities**

Essential characteristic	Unit	Performance (for $\rho_k = 350 \text{ kg/m}^3$ , e.g. C24)					
		Ø 4.0	Ø 5.0	Ø 6.0	Ø 8.0	Ø 10.0	Ø 12.0
Dimension d	[mm]	Ø 4.0	Ø 5.0	Ø 6.0	Ø 8.0	Ø 10.0	Ø 12.0
Characteristic tensile strength $f_{tens,k}$	[kN]	5.0	8.8	13.1	23.3	35.0	42.0
Characteristic yield moment $M_{y,k}$	[Nm]	3.1	5.9	10.7	22.6	33.6	46.9
Bending angle	[°]	> 45°	> 45°	> 45°	> 45°	> 45°	> 45°
Characteristic withdrawal parameter $f_{ax,k,90^\circ}$	[N/mm <sup>2</sup> ]	14.3	13.6	13.0	10.9	11.0	11.2
Characteristic yield strength $f_{y,k}$	[N/mm <sup>2</sup> ]	900	900	900	900	900	900
Characteristic torsional strength $f_{tor,k}$	[Nm]	3.5	6.6	10.9	28.0	52.5	59.6
Insertion moment $f_{tor,k} / R_{tor,mean}$	[-]	≥ 1.5	≥ 1.5	≥ 1.5	≥ 1.5	≥ 1.5	≥ 1.5
Slip modulus for mainly axially loaded screws $K_{ser,ax}$	[N/mm]	Softwood: $K_{ser,ax} = 25 * d * l_{ef}$ LVL Beech: $K_{ser,ax} = 53 * d * l_{ef}$					
Reaction to fire	[-]	Class A1					
Service class corrosion protection	Class	I	II	II	II	II	II
<b>Countersunk head (S-WCP)</b> Head diameter $d_k$	[mm]	Ø 8.0	Ø 10.0	Ø 12.0	Ø 15.0	Ø 18.5	Ø 21.0
Characteristic head pull-through parameter $f_{head,k}$	[N/mm <sup>2</sup> ]	17.1	14.6	14.6	12.4	12.2	10.3
<b>Washer head (S-WWP)</b> Head diameter $d_k$	[mm]	n.a.	n.a.	Ø 14.0	Ø 20.0	Ø 25.0	Ø 27.0
Characteristic head pull-through parameter $f_{head,k}$	[N/mm <sup>2</sup> ]	n.a.	n.a.	16.7	17.6	15.2	14.5

**Table 2: Minimum spacing, end and edge distances**

Screw spacing [mm]		Axially loaded		Axially and shear loaded or only shear loaded		
		Timber and wood-based products made of softwood (pre-drilled, not pre-drilled) and hardwood (predrilled)		Cross laminated timber		Timber and wood-based products made of softwood (pre-drilled, not pre-drilled) and hardwood (predrilled)
		side- and end-grain		Wide face	Narrow face	side- and end-grain
Boundary condition	$a_1 \cdot a_2$	≥ 25 $d^2$	≥ 21 $d^2$	-	-	-
Spacings II	$a_1$	5 d	7 d	4 d	10 d	analogous to pre-drilled or non pre-drilled nails, according to EN 1995-1-1, Table 8.2  LVL Beech analogous to non pre-drilled nails, according to EN 1995-1-1, Table 8.2
Edge distance II	$a_{1,c}$	5 d		-	-	
Spacings I	$a_2$	2.5 d	3 d	2.5 d	3 d	
Edge distance I	$a_{2,c}$	4 d		-	-	
Edge distance II loaded	$a_{3,t}$	-	-	6 d	12 d	
Edge distance II unloaded	$a_{3,c}$	-	-	6 d	7 d	
Edge distance I loaded	$a_{4,t}$	-	-	6 d	5 d	
Edge distance I unloaded	$a_{4,c}$	-	-	2.5 d	3 d	
Spacing between the crossing screws	$a_{cross}$	1.5 d				