

**DECLARATION OF PERFORMANCE**  
**No. LE\_5392000246\_01\_M\_Zuganker Vplus**

**This is an English translation of the original German wording.**  
**In cases of doubt, the German version applies**

1. Unique identification code of the product:

**Vplus stay**  
**Art. pre-no.: 53920002\***

2. Type, batch, or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4):

**Batch number: see packaging**

3. Intended use(s):

<b>Product type</b>	Vplus stay
<b>For use in</b>	wood structures
<b>Material</b>	D11 according to EN 10025-2:2004, galvanized
<b>Load</b>	See ETA 14/0274

4. Manufacturer as required pursuant to Article 11(5)

**Adolf Würth GmbH & Co. KG**  
**Reinhold-Würth-Str. 12 - 17**  
**D-74653 Künzelsau, Germany**

5. Authorized representative whose mandate covers the tasks specified in Article 12(2):

**Not relevant**

6. System(s) of assessment and verification of constancy of performance of the construction product as set out in Annex V

**2+**

7. a) When the construction product is covered by a harmonized standard:

**Not relevant**

When 7(a) applies, the notified body or bodies:

**Not relevant**

7. b) When the construction product is covered by a European Assessment Document

When 7(b) applies:

European Technical Assessment

**ETA 14/0274**

Technical Assessment Body

**ETA Danmark A/S**

Notified Body

**Karlsruhe Institute of Technology (KIT) No. 769**

## 8. Declared performance:

Property				Performance					
<b>Mechanical resistance and stability (BWR 1)</b>									
Rigidity				No assessed performance					
Ductility under cyclic testing				No assessed performance					
Load-bearing capacity				Force $F_{1,}$ , 1 x stay/connection wood-concrete / softwood <sup>1)</sup> $\rho_k = 350 \text{ kg/m}^3$					
	Load-bearing capacity per nail in vertical leg ( $F_{v,Rk}$ ) [kN] <sup>2)</sup>			Load bearing capacity per screw in vertical leg ( $F_{v,Rk}$ ) [kN] <sup>2)</sup>			Concrete	Steel <sup>3)</sup>	Screw/bolt
	4x40mm	4x50mm	4x60mm	5x35mm	5x40mm	5x50mm		Tensile ( $F_{t,Rk}$ ) [kN]	$k_t$
V Plus L x 90 x 65 x 3.0	1.57	1.87	1.93	1.80	1.92	2.52	See EN 1992	36.2	1.4
V Plus L x 90 x 65 x 4.0	1.57	1.87	1.93	1.80	1.92	2.52		48.3	1.4

 1) For other characteristic bulk densities of softwood,  $F_{v,Rk}$  is multiplied by:

$$k_{\text{dens}} = \left( \frac{\rho_k}{350} \right)^{0.5}$$

 For hardwood,  $F_{v,Rk}$  is calculated according to EN 1995-1-1.

When a wood-based intermediate layer no greater than 26 mm thick is installed between the connecting plate and the wood component, the lateral load-bearing capacity of the nail or screw must also include the effects of this intermediate layer.

- 2) When 4.0 mm nails or 5.0 mm screws are used
- 3) Base plates or washers used according to the planning documents

Property	Performance	
<b>Fire protection (BWR 2)</b>	Euroclass A1	EN 13501-1 and EU Commission Decision 96/603/EC, as amended by EU Commission Decision 2000/605/EC
<b>Hygiene, health and environment (BWR 3)</b>	No hazardous materials	
<b>Sustainable use of natural resources (BWR 7)</b>	No assessed performance	

9. When pursuant to Articles 37 and 38 appropriate technical documentation and/or Specific Technical Documentation has been used

**ETAG 015**

The performance of the above product corresponds to the declared performance. The declaration of performance is issued in compliance with EU Regulation 305/2011 under the sole responsibility of the above manufacturer.

Signed for and on behalf of the manufacturer by:



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Frank Wolpert  
(Head of Product Management)  
Künzelsau, 1/20/2018



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Dr.-Ing. Siegfried Beichter  
(Head of Quality, Authorized Signatory)