Declaration of Performance LE002D

according to Regulation (EU) no. 305/2011

General data	
Unique identification code of the product-type	**LE002D, StarDrive GPR, StarDrive GPR CS, StarDrive GPR WH, RAPID® Top-2-Roof**
Intended use	**Screws as timber fasteners for load-carrying timber structures**
Manufacturer	Schmid Schrauben Hainfeld GmbH, A-3170 Hainfeld, Landstal 10, www.schrauben.at
AVCP - System	3
European assessment document	EAD 130118-01-0603 of Februar 2019
European technical assessment	**ETA-12/0373** of 29.12.2025
European technical assessment body	Austrian Institute of Construction Engineering (OIB)
Notified body	NB 1379

Declared performances

Essential characteristics		Unit	Performance (ρ_k = 350 kg/m³, e.g. C24)							
Dimension d		mm	**Ø 4.0**	**Ø 4.5**	**Ø 5.0**	**Ø 6.0**	**Ø 7.0**	**Ø 8.0**	**Ø 10.0**	**Ø 12.0**
Tensile strength $f_{tens,k}$	carbon steel	kN	5.0	5.8	8.5	12.4	17.1	22.0	32.0	42.0
	stainless steel		-	-	-	-	-	13.5	18.5	-
Yield moment $M_{y,k}$	carbon steel	Nm	3.2	4.9	6.5	10.1	12.6	21.0	33.0	46.9
	stainless steel		-	-	-	-	-	13.8	20.7	-
Bending angle		°	>45°	>45°	>45°	>45°	>45°	>45°	>45°	>45°
Withdrawal parameter $f_{ax,k,90°}$		N/mm²	14.8	13.8	12.8	13.5	11.5	13.1	12.5	8.9
Withdrawal parameter of cement bonded particle boards (EN 13986)	$f_{ax,k,lat}$	N/mm²	20.3	19.7	19.2	18.0	-	-	-	-
	$f_{ax,k,narr}$		24.3	22.4	20.5	16.6	-	-	-	-
Yield strength $f_{y,k}$	carbon steel	N/mm²	900	900	900	900	900	900	900	900
	stainless steel		-	-	-	-	-	500	500	-
Torsional strength $f_{tor,k}$	carbon steel	Nm	3.0	4.2	6.2	9.5	16.1	24.8	44.8	59.6
	stainless steel		-	-	-	-	-	17.5	27.0	-
Insertion moment ($f_{tor,k}$ / $R_{tor,mean}$)		-	>1,5	>1,5	>1,5	>1,5	>1,5	>1,5	>1,5	>1,5
Withdrawal strength (ε = 90°) **$f_{w,k}$**		N/mm²	5.21	5.02	4.44	4.77	3.99	4.73	4.55	3.24
Factor for withdrawal strength (ε = 90°) **k_{screw}**		N/mm²	8.23	8.25	7.56	8.62	7.59	9.39	9.72	7.35
Slip modulus K_{ser}		N/mm	according to ETA-12/0373 A.6.1.7 (axial) and A.6.2.4 (lateral)							
Reaction to fire		-	A1							
Corrosion protection	carbon steel	Service class	I	II	II	II	II	II	II	II
	stainless steel		-	-	-	-	-	III	III	-
CS (Countersunk-head) head diameter d_k		mm	**Ø 8.0**	**Ø 9.0**	**Ø 10.0**	**Ø 12.0**	**Ø 14.0**	**Ø 15.0**	**Ø 18.5**	**Ø 21.0**
Head pull-through parameter $f_{head,k}$		N/mm²	17.1	17.6	14.6	14.6	13.1	12.4	12.2	10.3
DUAL (Dual-head) head diameter d_k = SW		mm	-	-	-	**SW 9.0**	-	**SW 12.0**	**SW 15.0**	**SW 17.0**
Head pull-through parameter $f_{head,k}$		N/mm²	-	-	-	16.0	-	16.5	16.7	17.1
CL (Cylinder-head) head diameter d_k		mm	-	-	-	**Ø 8.0**	**Ø 9.2**	**Ø 10.2**	**Ø 13.4**	**Ø 14.2**
Head pull-through parameter $f_{head,k}$		N/mm²	-	-	-	-	-	-	-	-
SSF (Supersenkfix-head) head diameter d_k		mm	-	-	-	**Ø 13.0**	-	**Ø 19.0**	**Ø 24.0**	-
Head pull-through parameter $f_{head,k}$		N/mm²	-	-	-	19.7	-	22.9	12.3	-
WH (Washer-head) head diameter d_k		mm	-	-	**Ø 14.0**	**Ø 14.0**	-	**Ø 20.0**	**Ø 25.0**	-
Head pull-through parameter $f_{head,k}$		N/mm²	-	-	16.7	16.7	-	17.6	15.2	-

The performance of the above-mentioned products is in conformity with the performance declared.
The above-mentioned manufacturer is solely responsible for the preparation of the declaration of performance in accordance with Regulation (EU) No 305/2011.

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Declared performances

Minimum spacings and distances of screws		**Axial loaded screws**			**Shear and axial loaded or only shear loaded screws**		
		Softwood and softwood-based materials (predrilled, not-predrilled) and Hardwood (predrilled)			Cross laminated timber (CLT)		Softwood and softwood-based materials (predrilled, not-predrilled) and Hardwood (predrilled)
		end-grain and side-grain			wide face	narrow face	end-grain and side-grain
Requirement	$a_1 \times a_2$	$\geq 25 \times d^2$	$\geq 21 \times d^2$	d > 8 mm	-	-	-
Spacings //	a_1	5 x d	7 x d	7 x d	4 x d	10 x d	Analogous to predrilled nails or analogous to not-predrilled nails according to EN1995-1-1, table 8.2
End distances //	$a_{1,c}$	5 x d		10 x d	-	-	
Spacings ⊥	a_2	2,5 x d	3 x d	5 x d	2.5 x d	3 x d	
Edge distances ⊥	$a_{2,c}$	4 x d			-	-	
End distances // loaded	$a_{3,t}$	-	-	-	6 x d	12 x d	
End distances // unloaded	$a_{3,c}$	-	-	-	6 x d	7 x d	
Edge distances ⊥ loaded	$a_{4,t}$	-	-	-	6 x d	5 x d	
Edge distances ⊥ unloaded	$a_{4,c}$	-	-	-	2,5 x d	3 x d	
Spacing between crossing screws	a_{cross}	1,5 x d					

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Signed for the manufacturer on the manufacturer's behalf:

DI (FH) Andreas Gebert
CEO Schmid Schrauben Hainfeld
Hainfeld, 31.3.2026
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