

# Declaration of Performance LE002C

according to Regulation (EU) no. 305/2011

General data										
Unique identification code of the product-type		Stardrive GPR®, RAPID® Top-2-Roof, StarDrive, SP								
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 / UK assessment document		EAD 130118-01-0603 of February 2019					UKAD 130118-01-0603			
European / UK technical assessment		ETA-12/0373 of 30.03.2022					UKTA-0836-22/6490 of 18.11.2022			
European / UK technical assessment body		Austrian Institute of Construction Engineering (OIB)					British Board of Agrément (BBA)			
Notified body		NB 1379					NB 0836			
Declared performances										
Essential characteristics		Unit	Performance (pk = 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	-	-
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	-	-
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		-	-	-	-	-	-	-	-
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	-	-
Insertion moment ( $f_{tor,k}/R_{tor,mean}$ )		-	>1,5	>1,5	>1,5	>1,5	>1,5	>1,5	>1,5	>1,5
Slip modulus $K_{ser}$ for mainly axially loaded screws		-	$K_{ser} = 25 \cdot d \cdot l_{ef} \dots$ in N/mm for softwood; $K_{ser} = 53 \cdot d \cdot l_{ef} \dots$ in N/mm for LVL-beech							
Reaction to fire		-	A1							
Corrosion protection		Service class	I	II	II	II	II	II	II	II
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-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
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	-	-	-	-	-	-	-	-
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	-
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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Notified body	NB 1379			NB 0836		
Declared performances						
Minimum spacings 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		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	a1 x a2	≥ 25 x d <sup>2</sup>	≥ 21 x d <sup>2</sup>	-	-	-
Spacings //	a1	5 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  LVL-beech analogous nails, not-pre-drilled according to EN1995-1-1, table 8.2
Edge distances //	a1, c	5 x d		-	-	
Spacings ⊥	a2	2,5 x d	3 x d	2,5 x d	3 x d	
Edge distances ⊥	a2, c	4 x d		-	-	
Edge distances // loaded	a3, t	-	-	6 x d	12 x d	
Edge distances // unloaded	a3, c	-	-	6 x d	7 x d	
Edge distances ⊥ loaded	a4, t	-	-	6 x d	5 x d	
Edge distances ⊥ unloaded	a4, 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:



Dr. Johann Scheibenreiter

Hainfeld, 30.3.2022  
en



Dr. Johann Scheibenreiter

Supplement UKCA, values from 30.3.2022 are unchanged  
Hainfeld, 18.11.2022