Schmid Schrauben Hainfeld GmbH I Landstal 10 I A - 3170 Hainfeld
T +43 (0) 2764 2652 I F +43 (0) 2764 3148 I info@schrauben.at

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 (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	-	-
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 * d * l_{ef} ... in N/mm for softwood; K_{ser} = 53 * d * l_{ef} ... 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	-

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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 d²	≥ 21 x d²	- / -	-
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

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Dr. Johann Scheibenreiter

Supplement UKCA, values from 30.3.2022 are unchanged

Hainfeld, 18.11.2022