



Strojirenský zkušební ústav, s. p., Brno, Česká republika
Engineering Test Institute, Brno, Czech Republic

CERTIFICATE

Number: **J-30-20386-10 rev.1**

Owner of certificate – Manufacturer: Hašpl a.s.
Ke Koupališti 172
549 32 Velké Poříčí, Czech Republic

Product: Nails

Type/Model: machine, convex, screw
- material: roller steel wire, minimal tensile strength 600 MPa
- \varnothing (2,1; 2,2; 2,3; 2,5; 2,8; 3,1; 3,4; 3,8; 4,2; 4,6) mm

Product identification and initial-type testing findings: see Annex 1 (page 2 and 3)

Base of certificate: Initial Type Test Final Report No. 30-9383 dated 2010-12-15
Supplement of Initial Type Test Final Report No. 30-9383
dated 2011-07-27

Standard applied: ČSN EN 14592:2009 (id. EN 14592:2008), table ZA.1

The Engineering Test Institute confirms that performed the initial-type testing of the said product according to the requirement stated in Directive 89/106/EEC, Annex III, (2) (ii), second possibility (corresponds with Government Order No. 190/2002 Coll. § 5 art. 1 let. b). Final Report containing Initial Type-Testing findings and data on product identification.

Brno, Date 2011-07-27




Petr Mašek
Director



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Product identification and the initial-type testing findings:

Nails	Characteristic yield moment $M_{y,k}$ [Nmm]	Characteristic withdrawal parameter $f_{ax,k}$ [N/mm ²]	Characteristic head pull-through parameter $f_{head,k}$ [N/mm ²]	Characteristic tensile capacity $f_{tens,k}$ [kN]
machine \varnothing 2,1 mm	1268	1,97	43,93	2,04
convex \varnothing 2,1 mm	934	2,38	41,73	1,69
screw \varnothing 2,1 mm	1155	3,50	59,98	1,65
machine \varnothing 2,2 mm	1415	2,12	37,74	2,32
convex \varnothing 2,2 mm	1233	3,86	38,39	2,37
screw \varnothing 2,2 mm	1349	3,19	48,73	2,31
machine \varnothing 2,3 mm	1715	2,55	54,27	3,17
convex \varnothing 2,3 mm	1390	6,68	53,77	2,73
screw \varnothing 2,3 mm	1767	2,89	48,56	2,94
machine \varnothing 2,5 mm	2635	2,68	45,96	3,45
convex \varnothing 2,5 mm	2212	6,02	40,13	3,51
screw \varnothing 2,5 mm	2533	3,16	38,14	3,57
machine \varnothing 2,8 mm	3522	3,52	38,36	4,45
convex \varnothing 2,8 mm	3226	4,47	42,22	4,25
screw \varnothing 2,8 mm	3153	3,77	39,91	4,12
machine \varnothing 3,1 mm	4695	3,99	40,99	4,28
convex \varnothing 3,1 mm	4384	5,07	41,08	4,97
screw \varnothing 3,1 mm	4577	4,10	39,56	4,70
machine \varnothing 3,4 mm	5780	3,73	36,10	3,43
convex \varnothing 3,4 mm	5347	3,5	27,62	5,25
screw \varnothing 3,4 mm	5960	2,87	28,63	4,73
machine \varnothing 3,8 mm	6783	3,72	44,23	6,60
convex \varnothing 3,8 mm	6731	5,18	37,39	5,98
screw \varnothing 3,8 mm	7386	2,20	40,87	6,06
machine \varnothing 4,2 mm	10317	2,06	31,09	6,52
convex \varnothing 4,2 mm	9561	2,19	31,70	7,71
screw \varnothing 4,2 mm	10208	3,10	28,56	6,59
machine \varnothing 4,6 mm	10488	3,64	25,33	8,31
convex \varnothing 4,6 mm	9802	5,26	25,57	7,92
screw \varnothing 4,6 mm	10700	2,61	26,30	8,33
Characteristic density of timber ρ_k [kg/m ³]	--	520	427	--
Corrosion resistance	BK – without coating, grade 1 NK – galvanized Zn, min. 12 μ m, grade 2 FV – hot dip zinc coating, min. 25 μ m, grade 3			

*) convex = ring

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Nails	Characteristic withdrawal parameter $f_{ax,k}$ [N/mm ²] loading across the fibre (radial)	Characteristic withdrawal parameter $f_{ax,k}$ [N/mm ²] loading across the fibre (tangential)	Characteristic density of timber ρ_k [kg/m ³]
machine \varnothing 2,1 mm	4,01	6,83	440
convex \varnothing 2,1 mm	13,33	16,65	535
screw \varnothing 2,1 mm	8,26	7,72	470
machine \varnothing 2,2 mm	5,07	4,82	430
convex \varnothing 2,2 mm	14,48	14,24	420
screw \varnothing 2,2 mm	6,89	8,36	440
machine \varnothing 2,3 mm	3,20	5,64	380
convex \varnothing 2,3 mm	12,63	13,91	460
screw \varnothing 2,3 mm	5,62	6,18	455
machine \varnothing 2,5 mm	5,71	7,53	505
convex \varnothing 2,5 mm	12,29	14,48	420
screw \varnothing 2,5 mm	6,76	7,05	465
machine \varnothing 2,8 mm	3,26	4,44	380
convex \varnothing 2,8 mm	9,13	10,49	410
screw \varnothing 2,8 mm	7,44	7,93	390
machine \varnothing 3,1 mm	4,30	4,55	465
convex \varnothing 3,1 mm	12,17	10,71	435
screw \varnothing 3,1 mm	5,93	6,49	430
machine \varnothing 3,4 mm	4,71	4,87	500
convex \varnothing 3,4 mm	12,55	13,36	505
screw \varnothing 3,4 mm	4,49	6,22	490
machine \varnothing 3,8 mm	3,83	3,97	490
convex \varnothing 3,8 mm	12,17	13,85	500
screw \varnothing 3,8 mm	4,48	3,95	480
machine \varnothing 4,2 mm	2,92	4,32	510
convex \varnothing 4,2 mm	9,65	13,42	500
screw \varnothing 4,2 mm	5,27	5,54	510
machine \varnothing 4,6 mm	4,17	4,63	495
convex \varnothing 4,6 mm	8,86	9,88	510
screw \varnothing 4,6 mm	3,89	5,02	490



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