

HARDWOOD CERTIFICATION

Special tip with diamond geometry and notched, serrated thread. ETA-11/0030 certification for use with high density timber without any pre-drill. Approved for structural applications subject to stresses in any direction vs the grain ($\alpha = 0^\circ - 90^\circ$).

INCREASED DIAMETER

Internal thread diameter increased to ensure tightening in the highest density woods. Excellent torsional moment values. HBS H Ø0.24 inch, comparable to a 0.28 inch diameter; HBS H Ø0.32 inch, comparable to a 0.35 inch diameter.

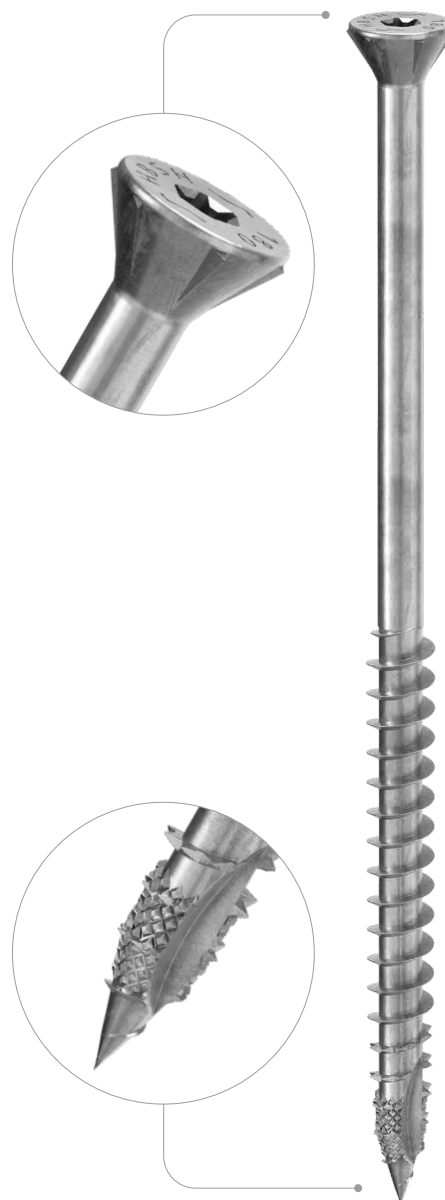
60° COUNTERSUNK HEAD

Concealed head, 60°, for effective, minimally invasive insertion, even in high density woods.

HYBRID SOFTWOOD-HARDWOOD

Approved in ETA-11/0030 for different types of applications without the need for pre-drill hole with softwood and hardwood used simultaneously. For example: composite beam (softwood and hardwood) and hybrid engineered timbers (softwood and hardwood).

	 BIT INCLUDED			
DIAMETER [in]	0.12	0.24	0.32	0.48
LENGTH [in]	1/2	3 1/8	19	39 3/8
EXPOSURE CONDITION	EC1 or WET			
ATMOSPHERIC CORROSIVITY	C1 C2			
WOOD CORROSIVITY	T1 T2			
MATERIAL	Zn ELECTRO PLATED electrogalvanized carbon steel			



FIELDS OF USE

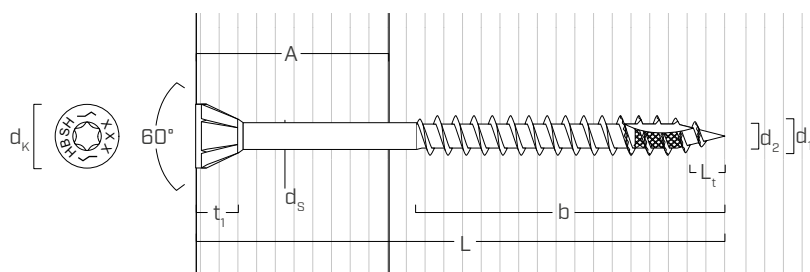
- timber based panels
- solid timber and glulam
- CLT and LVL
- high density woods
- beech, oak, cypress, ash, eucalyptus, bamboo

CODES AND DIMENSIONS

d ₁	CODE	L		b		A	pcs
[mm]		[mm]	[in]	[mm]	[in]	[in]	
6 0.24 #14 TX 30	HBSH680	80	3 1/8	50	1 15/16	1	100
	HBSH6100	100	4	60	2 3/8	1 1/2	100
	HBSH6120	120	4 3/4	70	2 3/4	1 3/4	100
	HBSH6140	140	5 1/2	80	3 1/8	2 1/4	100
	HBSH6160	160	6 1/4	90	3 1/2	2 3/4	100

d ₁	CODE	L		b		A	pcs
[mm]		[mm]	[in]	[mm]	[in]	[in]	
8 0.32 TX 40	HBSH8120	120	4 3/4	70	2 3/4	1 3/4	100
	HBSH8140	140	5 1/2	80	3 1/8	2 1/4	100
	HBSH8160	160	6 1/4	90	3 1/2	2 3/4	100
	HBSH8180	180	7 1/8	100	4	3	100
	HBSH8200	200	8	100	4	3 3/4	100
	HBSH8220	220	8 5/8	100	4	4 1/2	100
	HBSH8240	240	9 1/2	100	4	5 1/2	100
	HBSH8280	280	11	100	4	7	100
	HBSH8320	320	12 5/8	100	4	8 1/2	100
	HBSH8360	360	14 1/4	100	4	10	100
	HBSH8400	400	15 3/4	100	4	11 3/4	100
	HBSH8440	440	17 1/4	100	4	13 1/4	100
	HBSH8480	480	19	100	4	14 3/4	100

GEOMETRY

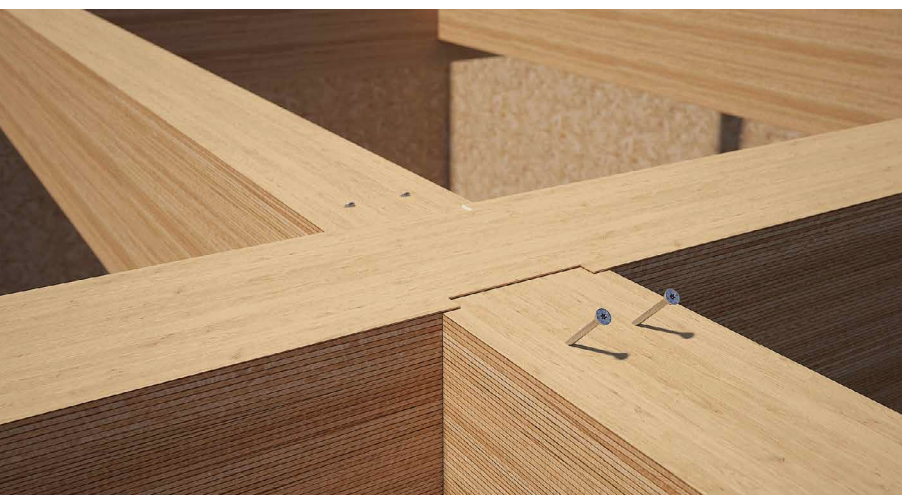


Nominal diameter	d ₁	[in] ⁽¹⁾	0.24	0.32
Outer thread diameter	d ₁	[mm]	6	8
		[in]	0.236	0.236
Head diameter	d _K	[in]	0.472	0.571
Root diameter	d ₂	[in]	0.177	0.232
Shank diameter	d _S	[in]	0.189	0.248
Head thickness	t ₁	[in]	0.295	0.331
Tip length	L _t	[in]	0.236	0.315
Pre-drilling hole diameter ⁽²⁾	d _{V,G≤0.55}	[in]	5/32	13/64
Pre-drilling hole diameter ⁽³⁾	d _{V,G>0.55}	[in]	5/32	15/64

⁽¹⁾The nominal diameter of the screw is converted into imperial units and rounded up to the nearest decimal point.

⁽²⁾Pre-drilling applies to timber with G≤0.55 (optional).

⁽³⁾Pre-drilling applies to timber with G>0.55 (required).



HARDWOOD PERFORMANCE

Geometry developed for high performance and use without pre-drilling on structural woods such as beech, oak, cypress, ash, eucalyptus, bamboo.

BEECH LVL

Values also tested, certified and calculated for high density woods such as beech laminated veneer lumber. Certified for use without pre-drilling, for densities of up to G = 0.88.