VGZ EVO C5

ELC-4645 ESR-4645 ETA-11/0030

FULLY THREADED SCREW WITH CYLINDRICAL HEAD

C5 ATMOSPHERIC CORROSIVITY

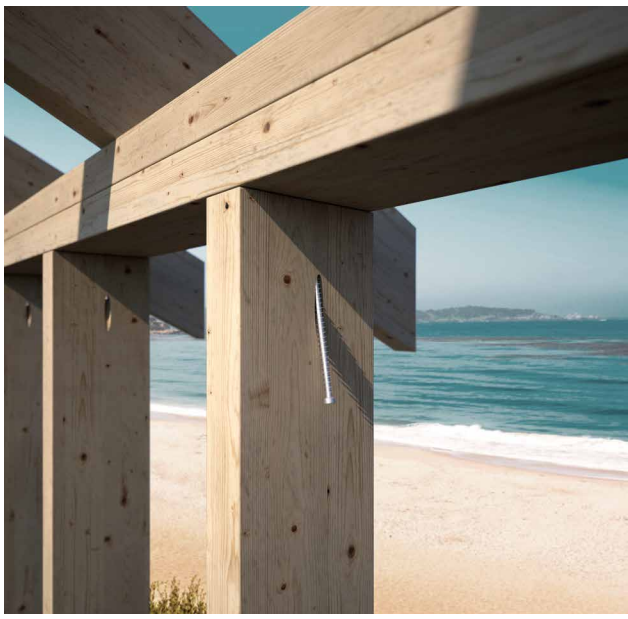
Multi-layer coating capable of withstanding outdoor environments classified C5 according to ISO 9223. Salt Spray Test (SST) with exposure time greater than 3000 h carried out on screws previously screwed and unscrewed in Douglas fir timber.

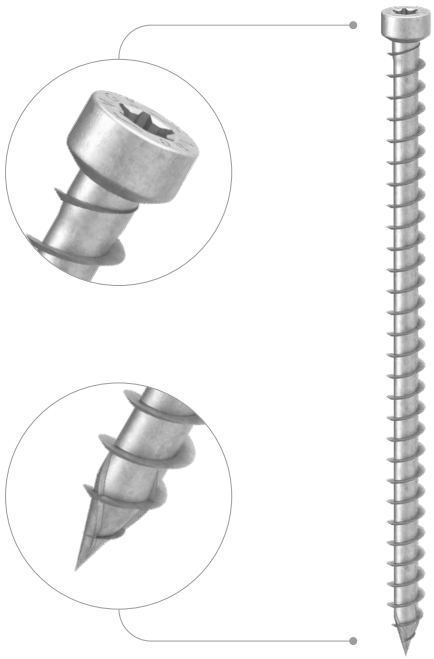
3 THORNS TIP

Thanks to the 3 THORNS tip, minimum installation distances are reduced. More screws can be used in less space and larger screws in smaller elements. Costs and time for project implementation are reduced.

MAXIMUM STRENGTH

It is the screw of choice if high mechanical performance is required under very adverse atmospheric corrosive conditions.
The cylindrical head makes it ideal for concealed joints, timber couplings and structural reinforcements.





MANUALS

BIT INCLUDED

DIAMETER [in]

0.20 | **0.28** **0.36** | 0.44

LENGTH [in]

3 1/8 | **5 1/2** **14 1/4** | 39 3/8

EXPOSURE CONDITION

EC1 **EC2** **EC3**

ATMOSPHERIC CORROSIVITY

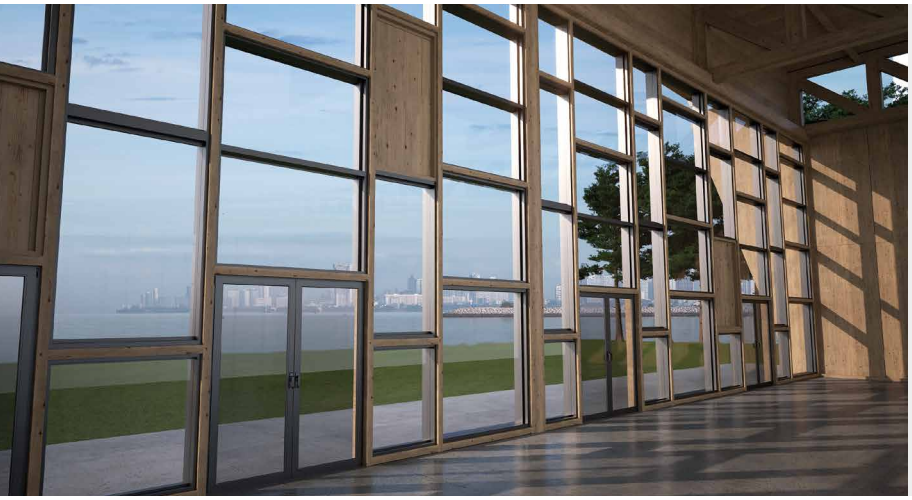
C1 **C2** **C3** **C4** **C5**

WOOD CORROSIVITY

T1 T2 T3 T4

MATERIAL

C5 EVO COATING — carbon steel with C5 EVO coating with very high corrosion resistance



FIELDS OF USE

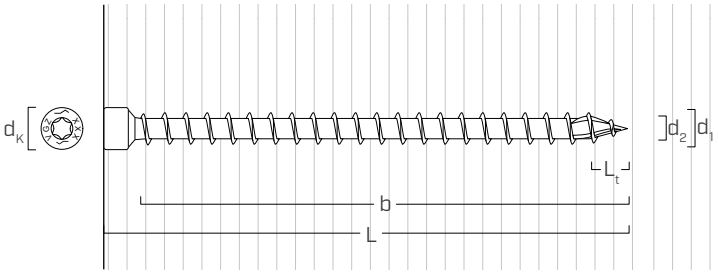
- timber based panels
- solid timber and glulam
- CLT and LVL
- high density woods

CODES AND DIMENSIONS

d_1 [mm] [in]	CODE	L [mm]	L [in]	b [mm]	b [in]	pcs
7 **0.28** **#16** **TX 30**	**VGZEVO7140C5**	140	5 1/2	130	5 1/8	25
	VGZEVO7180C5	180	7 1/8	170	6 3/4	25
	VGZEVO7220C5	220	8 5/8	210	8 1/4	25
	VGZEVO7260C5	260	10 1/4	250	10	25
	VGZEVO7300C5	300	11 3/4	290	11 7/16	25

d_1 [mm] [in]	CODE	L [mm]	L [in]	b [mm]	b [in]	pcs
9 **0.36** **TX 40**	**VGZEVO9200C5**	200	8	190	7 1/2	25
	VGZEVO9240C5	240	9 1/2	230	9 1/16	25
	VGZEVO9280C5	280	11	270	10 5/8	25
	VGZEVO9320C5	320	12 5/8	310	12 3/16	25
	VGZEVO9360C5	360	14 1/4	350	13 3/4	25

GEOMETRY



Nominal diameter	**d_1**	**[in](1)**	**0.28**	**0.36**
Outer thread diameter	**d_1**	[mm]	7	9
		[in]	**0.276**	**0.354**
Head diameter	d_K	**[in]**	0.374	0.453
Root diameter	d_2	**[in]**	0.181	0.232
Tip length	L_t	**[in]**	0.276	0.354
Pre-drilling hole diameter(2)	$d_{V,G\leq0.55}$	**[in]**	5/32	13/64
Pre-drilling hole diameter(3)	$d_{V,G>0.55}$	**[in]**	13/64	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).

For minimum distances and structural values see VGZ on page 144.

SEASIDE BUILDINGS

Ideal for fastening elements with small cross-sections close to the sea. Certified for application parallel to the grain and with reduced minimum distances.

THE HIGHEST PERFORMANCE

The strength and robustness of a VGZ combined with the best anti-corrosion performance.

VGZ HARDWOOD

FULLY THREADED SCREW FOR HARDWOODS

UKTA-0836 22/6195

ETA-11/0030

HARDWOOD CERTIFICATION

Special tip with diamond geometry and notched, serrated thread. ETA-11/0030 certification for use with high-density wood without pre-drilling hole or with an appropriate pilot hole. Approved for structural applications subject to stresses in any direction vs the grain (0° - 90°).

HYBRID SOFTWOOD-HARDWOOD

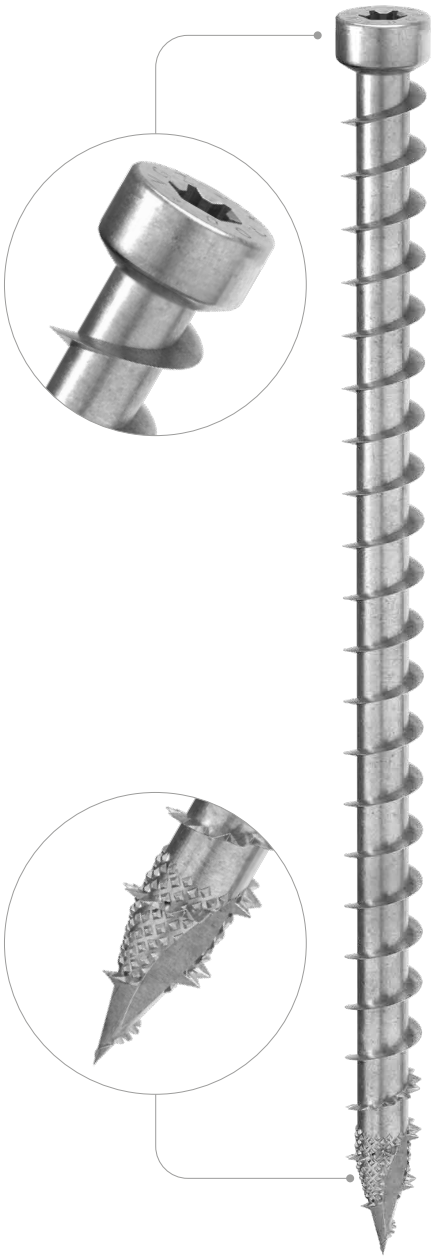
The high-strength steel and the increased screw diameter allow excellent tensile and torsional performance to be achieved, thus ensuring safe screwing in high-density wood.

INCREASED DIAMETER

Deep thread and high resistance steel for excellent tensile performance. Characteristics that, together with an excellent torsional moment value, guarantee screwing in the highest densities of wood.

CYLINDRICAL HEAD

Ideal for concealed joints, timber couplings and structural reinforcements. Improved performance in fire conditions compared to countersunk head.



BIT INCLUDED

DIAMETER [in]	0.20		0.24	0.32		0.44
LENGTH [in]	3 1/8		5 1/2	17 1/4		39 3/8
EXPOSURE CONDITION	EC1	DRY				
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
- hybrid engineered timbers (softwood-hardwood)
- beech, oak, cypress, ash, eucalyptus, bamboo

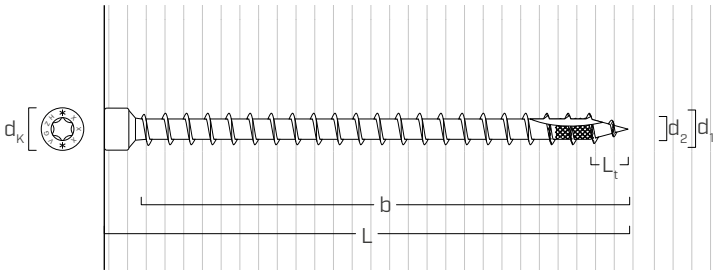
CODES AND DIMENSIONS

d_1 [mm] [in]	CODE	L [mm]	L [in]	b [mm]	b [in]	pcs
6 **0.24** #14 TX 30	**VGZH6140**	140	5 1/2	130	5 1/8	25
	VGZH6180	180	7 1/8	170	6 3/4	25
	VGZH6220	220	8 5/8	210	8 1/4	25
	VGZH6260	260	10 1/4	250	10	25
	VGZH6280	280	11	270	10 5/8	25
	VGZH6320	320	12 5/8	310	12 3/16	25
	VGZH6420	420	16 9/16	410	16 1/8	25

d_1 [mm] [in]	CODE	L [mm]	L [in]	b [mm]	b [in]	pcs
8 **0.32** TX 40	**VGZH8200**	200	8	190	7 1/2	25
	VGZH8240	240	9 1/2	230	9 1/16	25
	VGZH8280	280	11	270	10 5/8	25
	VGZH8320	320	12 5/8	310	12 3/16	25
	VGZH8360	360	14 1/4	350	13 3/4	25
	VGZH8400	400	15 3/4	390	15 3/8	25
	VGZH8440	440	17 1/4	430	16 15/16	25

NOTES: upon request, EVO version is available.

GEOMETRY



Nominal diameter	d_1	[in](1)	0.24	0.32
Outer thread diameter	d_1	[mm]	6	8
		[in]	**0.236**	**0.315**
Head diameter	d_K	**[in]**	0.374	0.453
Root diameter	d_2	**[in]**	0.177	0.232
Tip length	L_t	**[in]**	0.236	0.315
Pre-drilling hole diameter(2)	$d_{V,G\leq0.55}$	**[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 beech laminated veneer lumber. Certified for use for densities of up to [G = 0.94].

VGS

ELC-4645 ESR-4645 UKTA-0836 22/6195 ETA-11/0030

FULLY THREADED SCREW WITH COUNTERSUNK OR HEXAGONAL HEAD

3 THORNS TIP

Thanks to the 3 THORNS tip, minimum installation distances are reduced. More screws can be used in less space and larger screws in smaller elements. Costs and time for project implementation are reduced.

CERTIFICATION FOR TIMBER AND CONCRETE

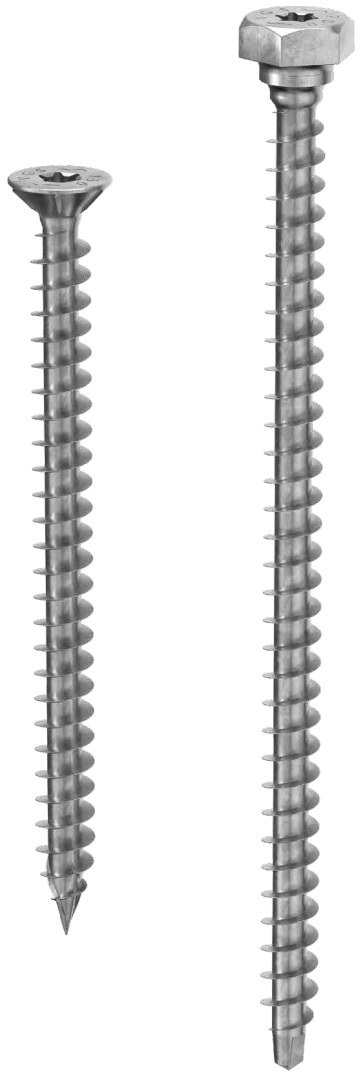
Structural connector approved for timber applications according to ETA-11/0030 and for timber-concrete applications according to ETA-22/0806.

TENSILE STRENGTH

Deep thread and high strength steel for excellent tensile or sliding performance. Approved for structural applications subject to stresses in any direction vs the grain (0° - 90°).
Can be used on steel plates in combination with the VGU and HUS washers.

COUNTERSUNK OR HEXAGONAL HEAD

Countersunk head up to L = 23 5/8" (600 mm), ideal for use on plates or for concealed reinforcements. Hexagonal head L > 23 5/8" (600 mm) to facilitate gripping with screwdriver.



MY PROJECT SOFTWARE | MANUALS

BIT INCLUDED

DIAMETER [in]	0.36	**0.36**			**0.60**	0.60
LENGTH [in]	3 1/8	**3 1/8**			**78 3/4**	78 3/4
EXPOSURE CONDITION	**EC1**	**DRY**				
ATMOSPHERIC CORROSIVITY	**C1**	**C2**				
WOOD CORROSIVITY	T1	T2				
MATERIAL	Zn ELECTRO PLATED	electrogalvanized carbon steel				

METAL-to-TIMBER recommended use:

NO IMPACT

TORQUE LIMITER

$M_{ins,max}$

FIELDS OF USE

- timber based panels
- solid timber
- glulam (Glued Laminated Timber)
- CLT and LVL
- high density woods

TC FUSION

The ETA-22/0806 approval of the TC FUSION system allows the VGS screws to be used together with the reinforcements in the concrete so that the panel floor slabs and the bracing core can be bonded together with a small integration of the casting.