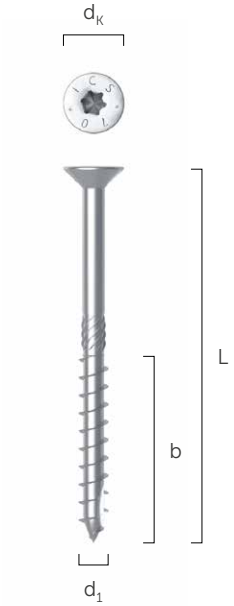


ICS

CE EN 14592

SCREW WITH COUNTERSUNK HEAD

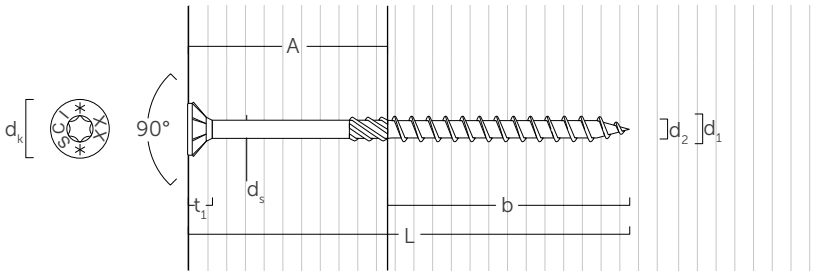
- Tip with setback notch, asymmetric "umbrella" thread, elongated cutter and sharp under-head ribs
- Geometric details provide the screw with greater torsional strength for more secure screwing
- Austenitic stainless steel A2 | AISI305 for high corrosion resistance. Ideal for aggressive environments
- Use in aggressive outdoor environments. Suitable for service classes 1-2-3
- Application on timber boards with density of < 470 kg/m³ (without pre-drilling hole) and < 620 kg/m³ (with pre-drilling hole)

MATERIAL: A2 | AISI305 austenitic stainless steel

A2 AISI 305 | INCLUDED

d_1 [mm]	d_K [mm]	CODE	L [mm]	b [mm]	A [mm]	pcs
5 TX 25	10,00	**ICS5050**	50	24	26	200
		ICS5060	60	30	30	200
		ICS5070	70	35	35	100

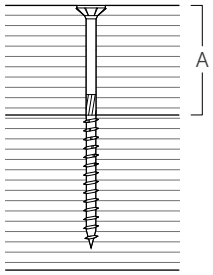
GEOMETRY AND MECHANICAL CHARACTERISTICS



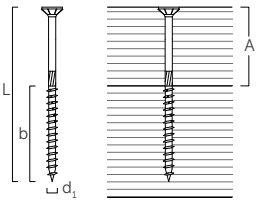
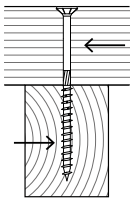
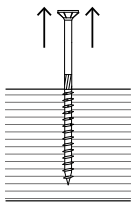
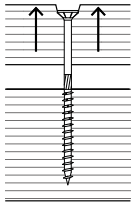
nominal diameter	d_1	[mm]	5
head diameter	d_K	[mm]	10,00
thread diameter	d_2	[mm]	3,40
underhead diameter	d_{UK}	[mm]	3,65
head thickness	t_1	[mm]	4,65
pre-drilling hole diameter(1)	d_V	[mm]	3,00
characteristic yield moment	$M_{y,k}$	[Nm]	4,37
characteristic withdrawal-resistance parameter(2)	$f_{ax,k}$	[N/mm²]	17,90
characteristic head-pull-through parameter(2)	$f_{head,k}$	[N/mm²]	17,60
characteristic tensile strength	$f_{tens,k}$	[kN]	5,01

(1) For high density materials, pre-bored holes are recommended based on the wood species.
(2)Associated density ρ_a = 440 kg/m³.

A maximum fastening thickness



STRUCTURAL VALUES

				SHEAR	TENSION	
geometry				timber-to-timber	thread withdrawal[1]	head pull-through[2]
						
d_1 [mm]	L [mm]	b [mm]	A [mm]	$R_{V,k}$ [kN]	$R_{ax,k}$ [kN]	$R_{head,k}$ [kN]
5	50	24	26	1,21	1,93	1,58
	60	30	30	1,35	2,41	1,58
	70	35	35	1,35	2,82	1,58

NOTES

[1] The axial thread withdrawal resistance was calculated considering a 90° angle between the grain and the connector and for a fixing length of b.
[2] The axial resistance to head pull-through was calculated using timber elements.

GENERAL PRINCIPLES

- Characteristic values according to EN 1995:2014.
- Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_k \cdot k_{mod}}{\gamma_M}$$

  The coefficients γ_M and k_{mod} should be taken according to the current regulations used for the calculation.
- Mechanical strength values and screw geometry according to CE marking according to EN 14592.
- For the calculation process a timber characteristic density ρ_k = 385 kg/m$_3$ has been considered.
- Values were calculated considering the threaded part as being completely inserted into the wood.
- Dimensioning and verification of timber and steel elements must be carried out separately.
- The characteristic shear resistances are calculated for screws inserted without pre-drilling hole. In the case of screws inserted with pre-drilling hole, greater resistance values can be obtained.