





Self-drilling SAF special screw: advantages, that convince





Reduced countersunk flat head with milling ribs

The SAF drilling screw has a reduced head diameter of 15 mm. Due to its milling ribs the screw head can get countersunk up to 40 mm deep into the timber. The emerged drilling hole of 15 mm might be closed with a standard wood plug. No further works are necessary.

The use of appropriate wood plugs protects the screw and increases the fire-resistance level of the connection (see Table). The SAF drilling screw is classified fire-resistance class A1 according to DIN EN 13501-1:2007+A1:2009. The low T40 drive guarantees an optimum power transmission. For a simple control of the mounted screws the screw length is imprinted onto the screw head.



The screw threads - the special distinctive feature

Contrary to common dowel rods a permanent and strong connection is achieved by the screw threads. The threads resistance within the connector and the generated pressure of the screw head inside the timber provide a secure connection.

The relation of threads/screw length is asymmetric. It is coordinated depending on its use to a flush, alternatively up to 40 mm deep countersunk screw connection. The screw is hidden with a standard wood plug due to aesthetic reasons or to increase the level of fire-resistance classification. Additionally, through its threads the screw can get readjusted or removed entirely.



Drill bit

The special constructed drill bit drills and screws itself in a single step through any familiar kinds of hidden wood-steel connections.

The spike is inherently stable and enables a secure screw-in and -out or rather readjustment. Due to its special notches the wood chip gets pulverized and transported to the outside.

The drilling performance is proven and certified by the TU Graz - Lignum Test Center (A). Suitable for aluminium connectors with a thickness up to 6 mm, steel S275 up to 8 mm and steel S235 with a maximum thickness of 10 mm. No pre-drilling of wood is necessary.

Important!

Screw-in speed 600 (aluminium) - 1000 (steel) rpm. We recommend equipment with at least 710 Watt power and a torsional moment of 78 Nm.

At spraying method hot-dipped galvanised steel carry out tests before.

Hint:

Start with a lesser turn (approx. 600/700) at the wooden part. As soon as the steel plate is hit, speed up to 1000 rpm.

		Angle between force and grain direction = 90°				Angle between force and grain direction = 0°					
d x L	Bar [mm]	C24	GL24h	GL28h	GL32h	GL36h	C24	GL24h	GL28h	GL32h	GL36h
7x73	80	5,62	5,93	6,24	6,44	6,65	7,25	7,69	8,13	8,42	8,72
7x93	100	6,23	6,63	7,02	7,28	7,54	8,32	8,89	9,45	9,83	10,21
7x113	120	7	7,48	7,96	8,28	8,6	9,55	10,25	10,95	11,42	11,75
7x133	140	7,85	8,42	8,99	9,37	9,74	10,36	10,8	11,21	11,48	11,75
7x153	160	8,59	8,95	9,3	9,52	9,74	10,36	10,8	11,21	11,48	11,75
7x173	180	8,59	8,95	9,3	9,52	9,74	10,36	10,8	11,21	11,48	11,75
7x193	200	8,59	8,95	9,3	9,52	9,74	10,36	10,8	11,21	11,48	11,75
7x213	220	8,59	8,95	9,3	9,52	9,74	10,36	10,8	11,21	11,48	11,75
7x233	240	8,59	8,95	9,3	9,52	9,74	10,36	10,8	11,21	11,48	11,75

Ø	L	Drive	Minimum width of the secondary beam					
(mm)	(mm)		Min. width	Wood plugs 10 mm	Fire resistance F30 wood plugs 20 mm	Fire resistance F60 wood plugs 40mm		
7	73	T40	80	100	120	160		
7	93	T40	100	120	140	180		
7	113	T40	120	140	160	200		
7	133	T40	140	160	180	220		
7	153	T40	160	180	200	240		
7	173	T40	180	200	220	260		
7	193	T40	200	220	240	280		
7	213	T40	220	240	260	300		
7	233	T40	240	260	280	320		

Minimum axis and edge distance	L	mm
parallel to the wood fiber	a1 [mm]	35
perpendicular to the wood fiber	a2 [mm]	25
nclaimed end grain	a3t [mm]	80
unclaimed end grain	a3c [mm]	25
claimed edge	a4t [mm]	30
unclaimed edge	a4c [mm]	25

Technical information

Nominal diameter: 7 mm Available lengths: 73 - 233 mm (in 20 mm steps)



study research engineering test center

Certification

The SAF drilling screw fulfill the requirements of the standard EN 14592:2008+prA1:2012. The tests were carried out at the technical universities of Vienna and Graz. Performance explanation on demand.