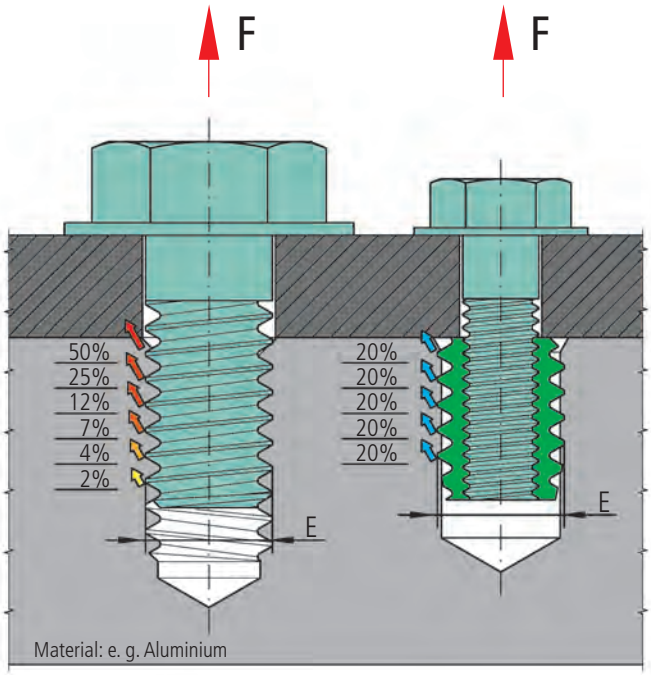
The Ensat® – pull-out resistance due to flange cover ...

Connections using threaded insert Ensat® permit substantially smaller dimensions and consequently material and weight-saving designs.

The illustration below (Fig. 2) shows a screw connection with different screw cross-sections. Despite the smaller screw cross-section, a screw joint with an Ensat® is capable of withstanding higher axial forces than the screw joint with larger screw cross-section; because the force – both under static and dynamic load – in the Ensat® male thread is distributed evenly over the individual thread turns of the Ensat® male thread.



E = Diameter cut thread = Outside diameter of the Ensat®

Fig. 2

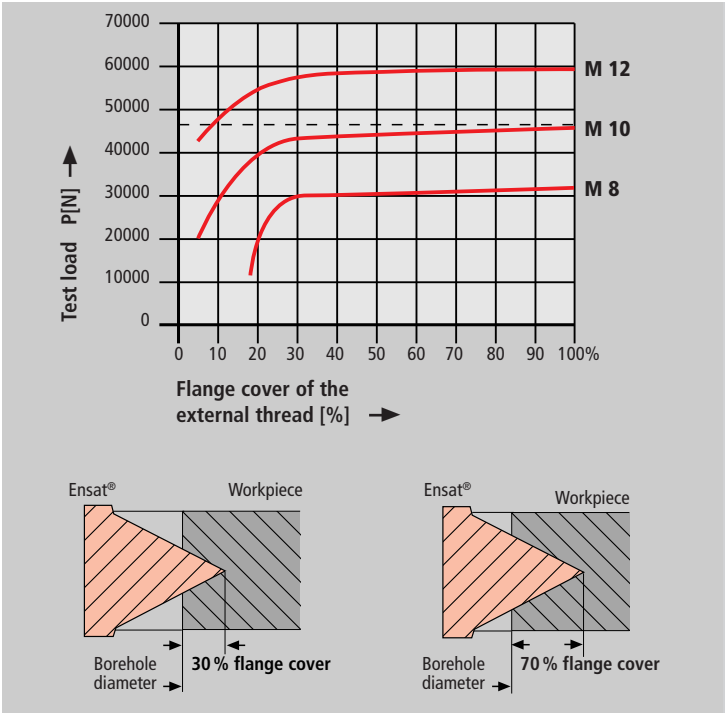


Fig. 3

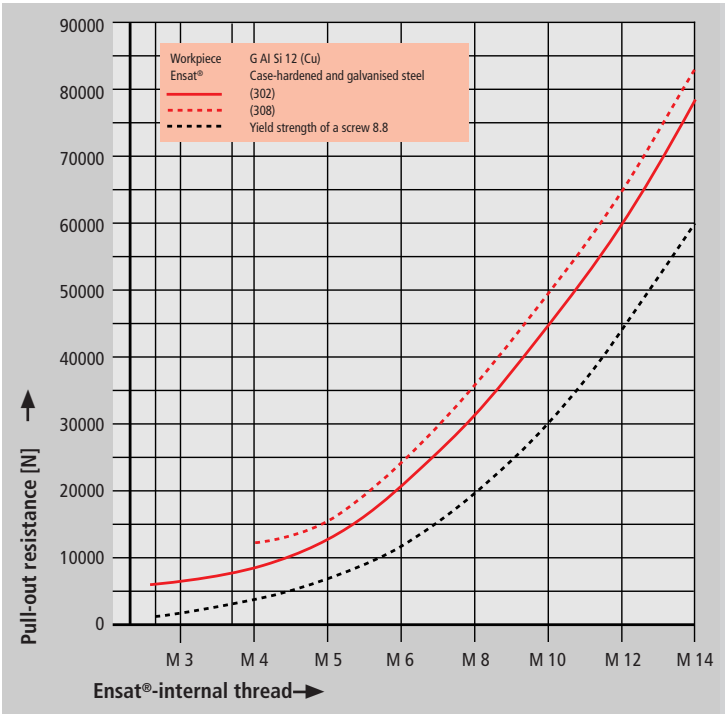


Fig. 4

Flange cover

In a workpiece made of a light alloy, the Ensat® 302 achieves almost maximum pull-out strength with only 30% flange cover (Fig. 3).

Pull-out strength

The Ensat® is capable of withstanding high loads. When used in light alloys, for example, a degree of pull-out strength is achieved which far exceeds the yield strength of the mating screw 8.8 (Fig. 4).

Kerb Konus

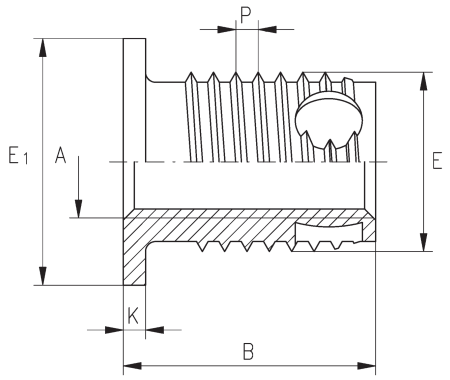
Threaded insert
self-tapping

Ensat®-SBSK
Works Standard
337 1 and 338 1

Application

The Threaded insert Ensat®-SBS based on the part geometry of the threaded insert Ensat®-SBS.

The head serves as a support for electrical contacts when fastening several parts simultaneously; when stress is applied against the head, the pull-through force is significantly increased.



Dimensions in mm

Article number	Internal thread	External thread Special thread		Head diameter	Head heigth	Length	Borehole diameter	Minimum borehole depth for blind holes
	A	E	P	E_1	K	B	L -0,1	T
337 100 050 …	M 5	8	1	11	1	8	7,7	9
338 100 050 …	M 5	8	1	11	1	11	7,7	13
337 100 060 …	M 6	10	1,25	13	1,5	9,5	9,6	10
338 100 060 …	M 6	10	1,25	13	1,5	13,5	9,6	15
337 100 080 …	M 8	12	1,5	15	1,5	10,5	11,5	11
338 100 080 …	M 8	12	1,5	15	1,5	15,5	11,5	17
337 100 100 …	M 10	14	1,5	17	1,5	11,5	13,5	13
338 100 100 …	M 10	14	1,5	17	1,5	19,5	13,5	22

Example for finding the article number
Self-tapping threaded insert Ensat®-SBSK to Works Standard 337 1 with internal thread A = M5 made of case-hardened, zinc plated and blue passivated steel: Ensat®-SBSK 337 100 050. 110

Short design
Works Standard 337
Long design
Works Standard 338

Materials

Case-hardened steel, zinc plated, blue passivated	Article no. (**fourth** group of digits) … … … 110
Case-hardened steel, zinc-nickel plated, transparent passivated	Article no. (**fourth** group of digits) … … … 143
Brass	Article no. (**fourth** group of digits) … … … 800

Other materials, designs and finishes on request.

Tolerance
ISO 2768-m

Thread
Internal thread A: as per ISO 6H
External thread E: Special thread with flattened thread root, as per KKV standard
Internal thread UNC, UNF, Whitworth on request