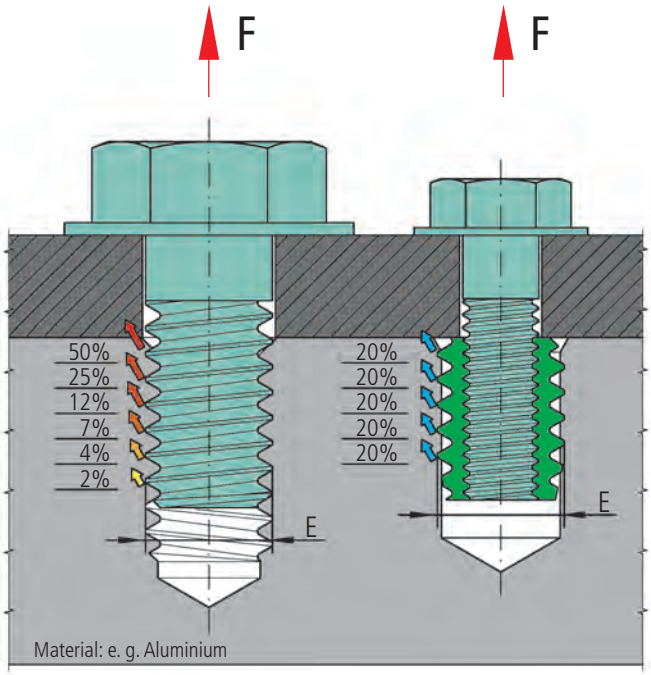
The Ensat® – pull-out resistance due to flange cover ...

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

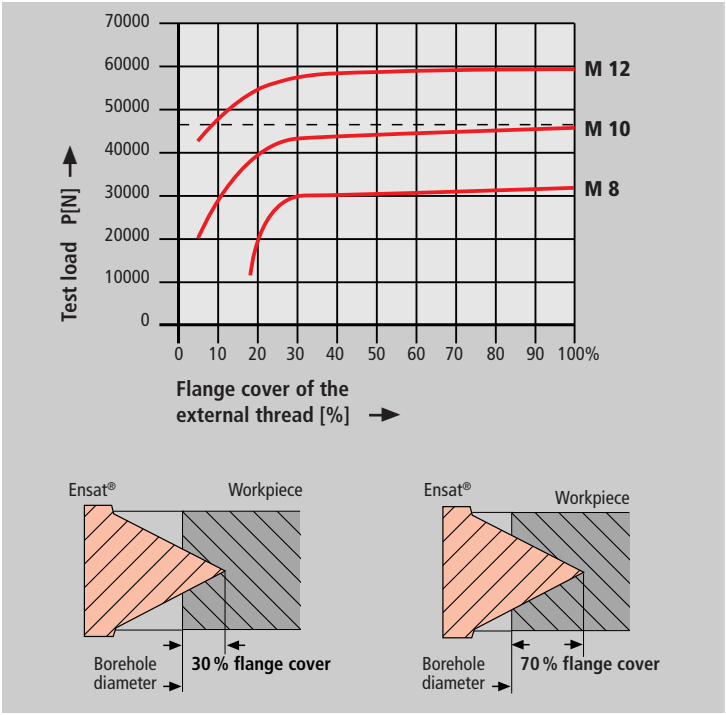


Fig. 3

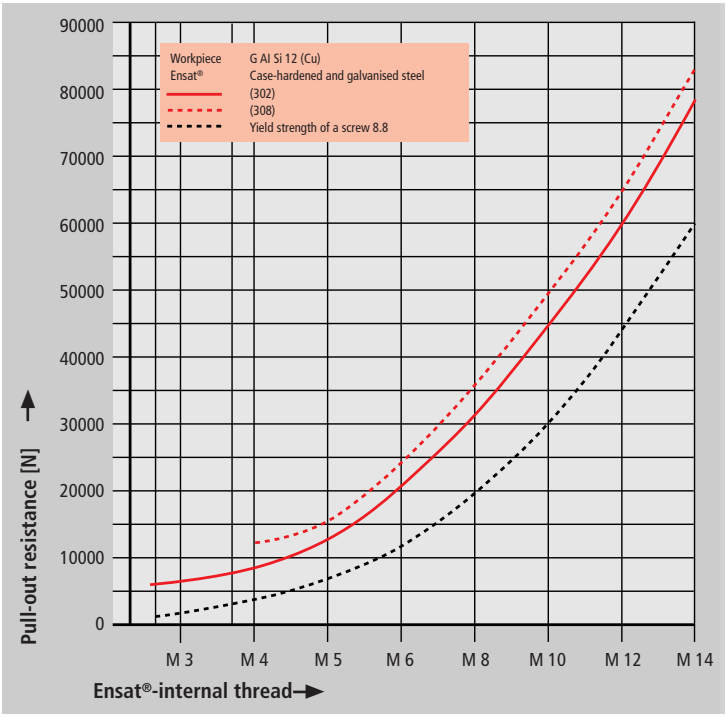


Fig. 4

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 with chip reservoirs and closed floor

Ensat®-SBT
Works Standard
357 0 and 358 0

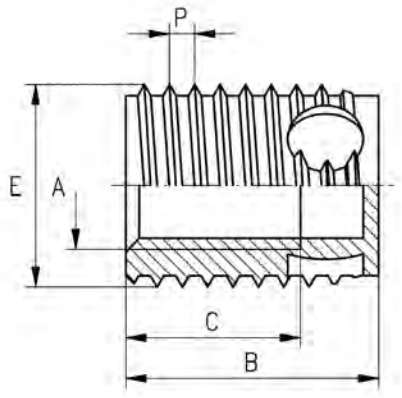
Application

This special Ensat®-SBT was developed primarily for applications in which chips – created by self-tapping process – exert a detrimental effect and could cause serious damage or failure during subsequent operation of the installed assembly – for example in electronic equipment.

The chips created during the installation process are stored in these reservoirs and cannot drop into sensitive equipment components.

The closed floor additionally prevents the penetration of chips into the female thread.

The thre cutting bores distributet as chip reservoirs.



Dimensions in mm

Article number	Internal thread	External thread Special thread		Length	Thread depth min.	Borehole diameter guideline value	Minimum borehole depth for blind holes
	A	E	P	B	C	L -0,1	T
357 000 040 …	M 4	6,5	0,8	6	3,2	6,2	8
358 000 040 …	M 4	6,5	0,8	8	4,5	6,2	10
357 000 050 …	M 5	8	1	7	4	7,7	9
358 000 050 …	M 5	8	1	10	6	7,7	13
357 000 060 …	M 6	10	1,25	8	4,8	9,6	10
358 000 060 …	M 6	10	1,25	12	7	9,6	15
358 000 080 …	M 8	12	1,5	14	8,8	11,5	17
358 000 100 …	M 10	14	1,5	18	11	13,5	22
358 000 120 …	M 12	16	1,75	22	14	15,4	26

Example for finding the article number
Self-tapping threaded insert Ensat®-SBT with chip reservoir and closed floor, to Works Standard 357 0 with internal thread A = M5 made of case-hardened, zinc plated and blue passivated steel: Ensat®-SBT 357 000 050.110

Short design
Works Standard 357

Long design
Works Standard 358

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
Stainless steel 1.4305 (M4 to M8) — Article no. (**fourth** group of digits) … … … 500
Brass — Article no. (**fourth** group of digits) … … … 800

Other materials, designs (e. g. fine thread) 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