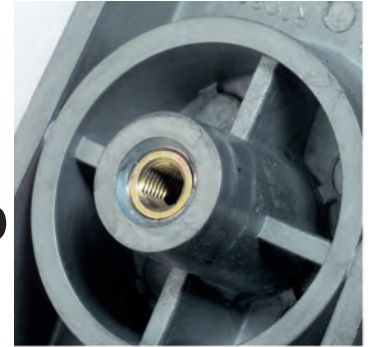




# The Ensats® – pull-out resistance due to flange cover ...



Connections using threaded insert Ensats® 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 Ensats® 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 Ensats® male thread is distributed evenly over the individual thread turns of the Ensats® male thread.

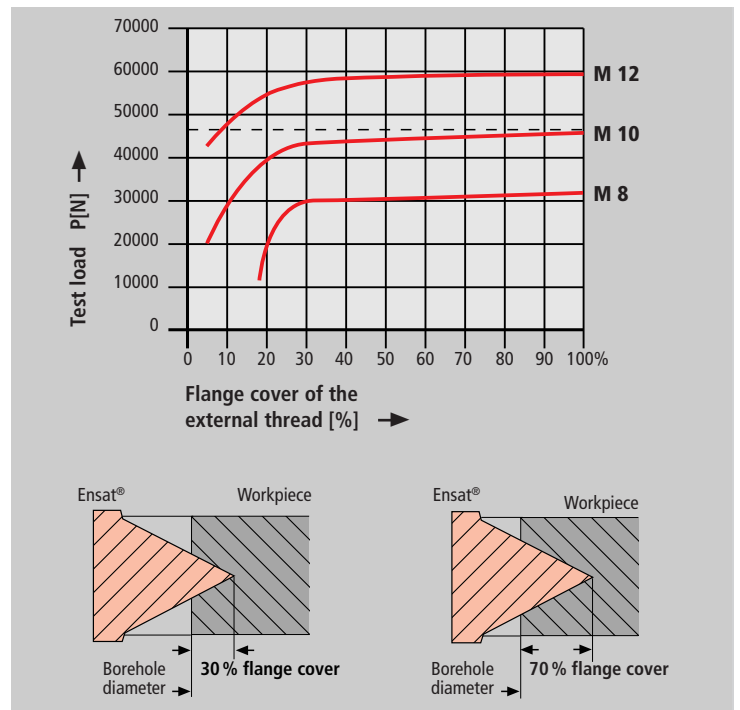


Fig. 3

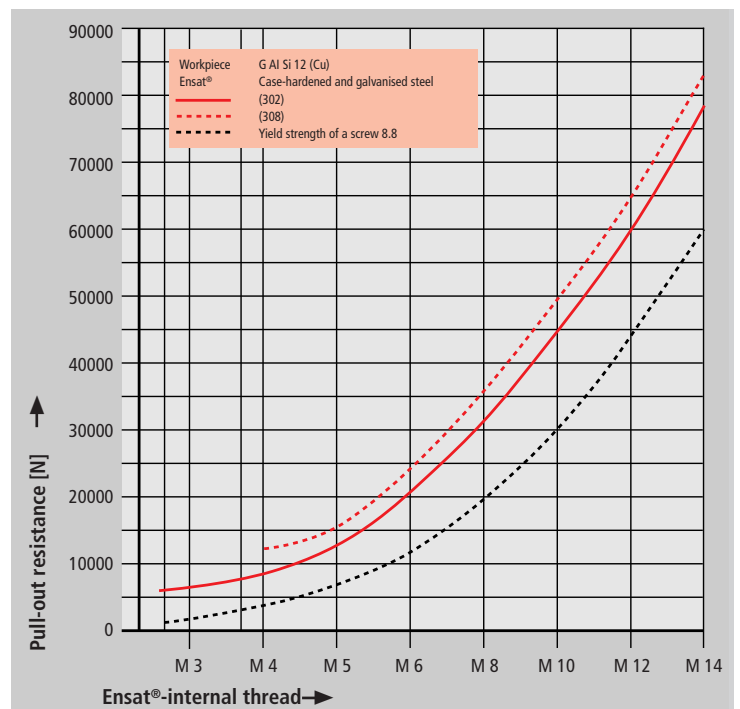
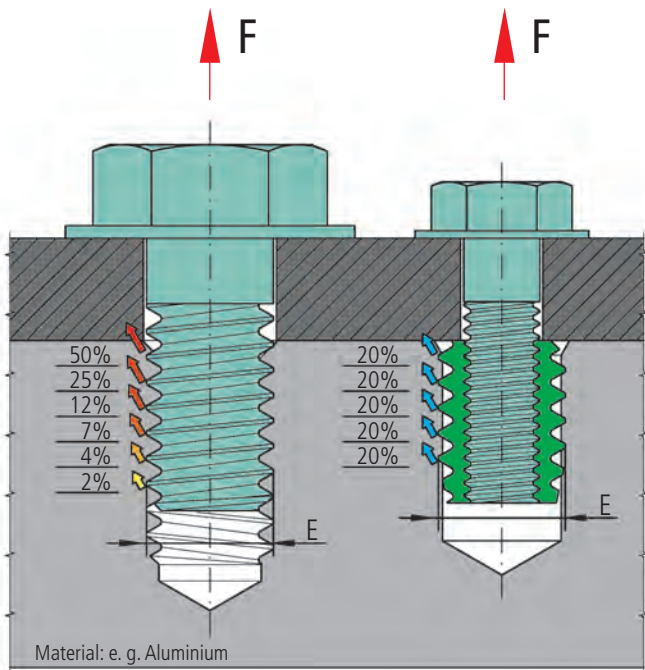


Fig. 4



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

Fig. 2

### Flange cover

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

### Pull-out strength

The Ensats® 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).





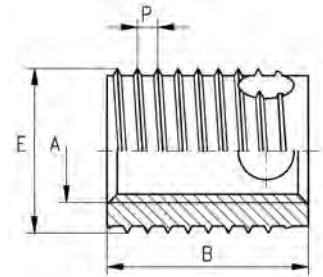
**Threaded insert**  
self-tapping

**Ensat®-SB**  
Works Standard  
307 0 and 308 0

**Application**

Threaded insert Ensat®-SB with cutting bores is a selftapping fastener for the creation of wear-free, vibration resistant

screw joints with high loading capacity in materials with higher shearing strength.



Dimensions in mm

Article number	Internal thread	External thread Special thread		Length B	Guideline values for receiving hole diameter L	Minimum borehole depth for blind holes T
	A	E	P			
307 000 030 ...	M 3	5	0,6	4	4,7 to 4,8	6
308 000 030 ...	M 3	5	0,6	6	4,7 to 4,8	8
307 000 035 ...	M 3,5	6	0,8	5	5,6 to 5,7	7
308 000 035 ...	M 3,5	6	0,8	8	5,6 to 5,7	10
307 000 040 ...	M 4	6,5	0,8	6	6,1 to 6,2	8
308 000 040 ...	M 4	6,5	0,8	8	6,1 to 6,2	10
307 000 050 ...	M 5	8	1	7	7,6 to 7,7	9
308 000 050 ...	M 5	8	1	10	7,6 to 7,7	13
307 000 060 ...	M 6	10	1,25	8	9,5 to 9,6	10
308 000 060 ...	M 6	10	1,25	12	9,5 to 9,6	15
307 000 080 ...	M 8	12	1,5	9	11,3 to 11,5	11
308 000 080 ...	M 8	12	1,5	14	11,3 to 11,5	17
307 000 100 ...	M 10	14	1,5	10	13,3 to 13,5	13
308 000 100 ...	M 10	14	1,5	18	13,3 to 13,5	22
307 000 120 ...	M 12	16	1,75	12	15,2 to 15,4	15
308 000 120 ...	M 12	16	1,75	22	15,2 to 15,4	26
307 000 140 ...	M 14	18	2	14	17,2 to 17,4	17
308 000 140 ...	M 14	18	2	24	17,2 to 17,4	28
307 000 160 ...	M 16	20	2	14	19,2 to 19,4	17
308 000 160 ...	M 16	20	2	24	19,2 to 19,4	28
307 000 180 ...	M 18	22	2	18	21,2 to 21,4	21
308 000 180 ...	M 18	22	2	24	21,2 to 21,4	28
308 000 200 ...	M 20	26	2	27	25,2 to 25,4	31
308 000 220 ...	M 22	26	2	30	25,2 to 25,4	34
308 000 240 ...	M 24	30	2	30	29,2 to 29,4	34

**Example for finding the article number**

Self-tapping threaded insert Ensat®-SB to Works Standard 307 0 with internal thread A = M5 made of case-hardened, zinc plated and blue passivated steel: Ensat®-SB 307 000 050.110

**Short design**  
**Long design**

Works Standard 307  
Works Standard 308

**Materials**

Case-hardened steel, zinc plated, blue passivated  
Case-hardened steel, zinc-nickel plated, transparent passivated  
Stainless steel 1.4305  
Brass

Article no. (**fourth** group of digits) ... 110  
Article no. (**fourth** group of digits) ... 143  
Article no. (**fourth** group of digits) ... 500  
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

**Animation**

