



Threaded Insert

self tapping / with hexagonal socket
metric inner thread

Ensats®-S/SI
Works Standard
302 0 / 302 2

Application

The threaded insert Ensats-S/SI with cutting slot is a self-tapping fastener for the creation of wear-free, vibration resistant screw joints with high loading capacity in materials with low shearing strength.

It is suitable for installation in the following materials:

- Aluminium and aluminium alloys
- Magnesium alloys
- Cast iron, brass, bronze
- Duroplastics, thermoplastics (with the exception of rubber-soft thermoplastics < 100 Shore A)

Ensats-SI

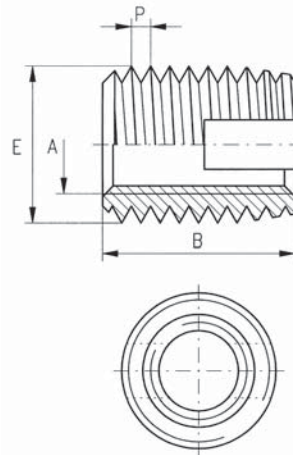
The Ensats is inserted via the hexagonal socket, permitting the achievement of short installation times.

Other benefits: More simple driving tools and machines which require only clockwise rotation.

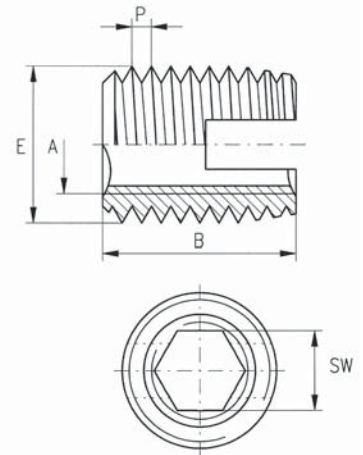
The Ensats can be extracted without problems before the recycling process, resulting in lower costs.

Available M4 to M12

Ensats-S 302 0



Ensats-SI 302 2



Dimensions in mm

Article no. second group of digits ... 000 ...	Internal thread A	External thread		Length B	Hexagonal socket SW _{+0,1} second group of digits ... 200 ...	Minimum borehole depth for blind holes T
302 ... 020 ...	M 2	4,5	0,5	6	—	8
302 ... 025 ...	M 2,5	4,5	0,5	6	—	8
302 ... 030 ...	M 3	5	0,5	6	—	8
302 ... 035 ...	M 3,5	6	0,75	8	—	10
302 ... 040 ...	M 4	6,5	0,75	8	3,2	10
302 ... 050 ...	M 5	8	1	10	4,1	13
302 ... 061 ...	M 6 (a)	9	1	12	—	15
302 ... 060 ...	M 6	10	1,5	14	4,9	17
302 ... 080 ...	M 8	12	1,5	15	6,6	18
302 ... 100 ...	M 10	14	1,5	18	8,3	22
302 ... 120 ...	M 12	16	1,5	22	10,1	26
302 ... 140 ...	M 14	18	1,5	24	—	28
302 ... 160 ...	M 16	20	1,5	22	—	27
302 ... 180 ...	M 18	22	1,5	24	—	29
302 ... 200 ...	M 20	26	1,5	27	—	32
302 ... 220 ...	M 22	26	1,5	30	—	36
302 ... 240 ...	M 24	30	1,5	30	—	36
302 ... 270 ...	M 27	34	1,5	30	—	36
302 ... 300 ...	M 30	36	1,5	40	—	46

Example for finding the article number

Self-tapping threaded insert Ensats-S to Works Standard series 302 0 with internal thread A = M5 made of case-hardened, zinc plated and yellow chromated steel: Ensats-S 302 000 050. 160;
with hexagonal socket: Ensats-SI 302 200 050. 160

Materials

Unhardened steel
Case-hardened steel, zinc plated, blue passivated
Case-hardened steel, zinc-nickel plated, transparent passivated
Case-hardened steel, zinc plated, yellow chromated
Stainless steel
Brass
Other materials, designs and finishes on request.

Article no. (fourth group of digits) ... 100
Article no. (fourth group of digits) ... 110
Article no. (fourth group of digits) ... 143
Article no. (fourth group of digits) ... 160
Article no. (fourth group of digits) ... 500
Article no. (fourth group of digits) ... 800

Tolerances

ISO 2768-m

Thread

Internal thread A: as per ISO 6H
External thread E: metric, Tolerances in accordance with Works Standard
Internal thread UNC, UNF, Whitworth or fine threads see page 8.

Bore diameter

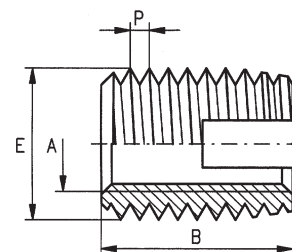
For details of bore diameter guideline values see the table on page 6.

Please note

M2 / M2,5 are only suitable for low-strength materials, as the shear resistance of studs in the driving tools may be insufficient.

Application

Threaded insert with cutting
slot and internal thread
Whitworth, UNC or UNF.



Dimensions in mm

	Article no.	Internal thread inch	External thread mm		Length mm	Minimum bore-hole depth for blind holes
			E	P		
Whitworth B.S.84 Internal thread Tolerance: medium	302 000 525 ...	1/4	10	1,5	14	17
	302 000 531 ...	5/16	12	1,5	15	18
	302 000 537 ...	3/8	14	1,5	18	22
	302 000 544 ...	7/16	16	1,5	22	26
	302 000 550 ...	1/2	18	1,5	22	26
	302 000 562 ...	5/8	20	1,5	22	27
UNC Unified Coarse Thread ANSI B1.1/BS 1580 Internal thread Tolerance 2B	302 000 604 ...	4 - 40	5	0,5	6	8
	302 000 606 ...	6 - 32	6	0,75	8	10
	302 000 608 ...	8 - 32	6,5	0,75	8	10
	302 000 610 ...	10 - 24	8	1	10	13
	302 000 625 ...	1/4 - 20	10	1,5	14	17
	302 000 631 ...	5/16 - 18	12	1,5	15	18
	302 000 637 ...	3/8 - 16	14	1,5	18	22
	302 000 644 ...	7/16 - 14	16	1,5	22	26
	302 000 650 ...	1/2 - 13	18	1,5	22	28
	302 000 662 ...	5/8 - 11	20	1,5	22	27
UNF Unified Fine Thread ANSI B1.1/B 1580 Internal thread Tolerance 2B	302 000 704 ...	4 - 48	5	0,5	6	8
	302 000 706 ...	6 - 40	6	0,75	8	10
	302 000 708 ...	8 - 36	6,5	0,75	8	10
	302 000 710 ...	10 - 32	8	1	10	13
	302 000 725 ...	1/4 - 28	10	1,5	14	17
	302 000 731 ...	5/16 - 24	12	1,5	15	18
	302 000 737 ...	3/8 - 24	14	1,5	18	22
	302 000 744 ...	7/16 - 20	16	1,5	22	26
	302 000 750 ...	1/2 - 20	18	1,5	22	28
	302 000 762 ...	5/8 - 18	20	1,5	22	27

Example for finding the article number

Self-tapping threaded insert Ensats-S to Works Standard series 302 with internal thread UNF 1/4"-28 made of case-hardened, zinc plated and yellow chromated steel: Ensats-S 302 000 725.160

Materials

Unhardened steel
Case-hardened steel, zinc plated, blue passivated
Case-hardened steel, zinc-nickel plated, transparent passivated
Case-hardened steel, zinc plated, yellow chromated
Stainless steel
Brass
Other materials, designs and finishes on request.

Article no. (fourth group of digits) ... 100
Article no. (fourth group of digits) ... 110
Article no. (fourth group of digits) ... 143
Article no. (fourth group of digits) ... 160
Article no. (fourth group of digits) ... 500
Article no. (fourth group of digits) ... 800

Tolerances

ISO 2768-m

Thread

External thread E: metric, tolerances in accordance with Works Standard