

## S-Lok® – threaded insert and stud ...

The S-Lok® is a threaded insert / stud with a graduated opposing herringbone knurl on the outside and a pilot end for problem-free insertion.

Its unique shape has been tailored to the requirements of the material and was developed especially for insertion into plastic components by means of ultrasonic vibration or heat transfer.

Well-known manufacturers of ultrasonic welding machines recommend S-Lok® due to the low energy requirement, the short insertion time and the problem-free production.

### Field of application

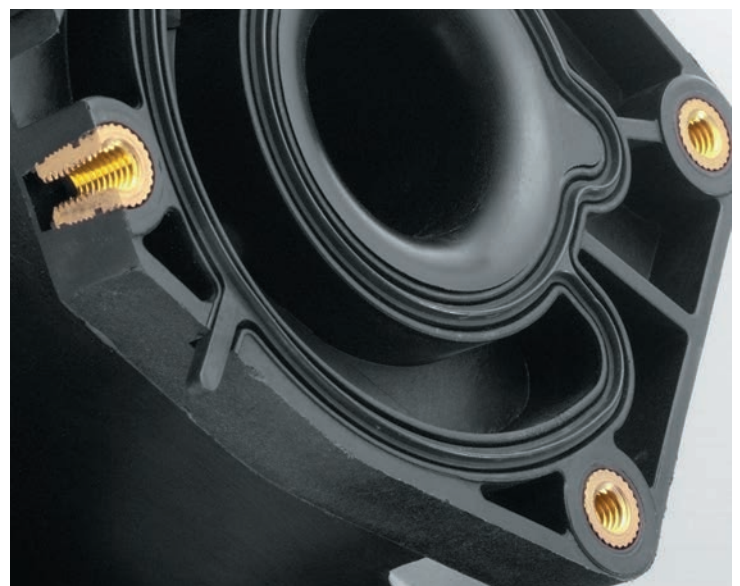
For all moulded parts made of thermoset plastics.

### Product features

- Also suitable for thin-wall thicknesses, elimination of material tension.
- The firm seating is largely insensitive to borehole tolerances and material shrinkage.

### Available versions:

- Standard length
- Shortened version
- Contact head for electrical contacts or simultaneous fastening of several parts.
- Stud with and without contact head



# S-Lok® – Construction and installation ...

## Design of the moulded component and receiving hole

**Hole diameter** ( $L$ , fig. 24) and wall thicknesses ( $W$ ) are dependent on the material used for the formed part, the insertion method and the requirements imposed on pull-out resistance / torque safety. Please inquire or ascertain by testing. For guideline values, see the Works Standard sheets.

**Countersinking** ( $N$ ) is recommended if the insert would not moulded in.

Countersinking diameter ( $N$ ) = S-Lok®-outside diameter  $E$ .

Countersinking depth  $t$ :

M 2	~ 0,4 mm
M 2,5 / M 3,5	~ 0,5 mm
M 4 / M 5	~ 0,7 mm
M 6 / M 8 / M 10	~ 1,1 mm

Hole depth:

( $T$ )  $\geq$  length of the S-Lok® + 1 mm.  
(fig. 24).

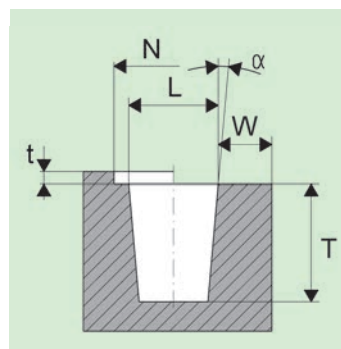


Fig. 24

## Installation

Inserts are installed by means of ultrasonic or heat transfer. This causes the plastic to soften so that it flows into the knurl profile of the S-Lok®. On subsequent cooling, a firm seat is obtained which is capable of withstanding high loads.

The pull-out resistance is generally higher than is the case with moulded-in components, and depends on the plastic, the size of the receiving hole, the wall thickness, the edge distance and the correct setting of the installation equipment.

## Installation machine

(fig. 22 and 23) on request.



Fig. 22

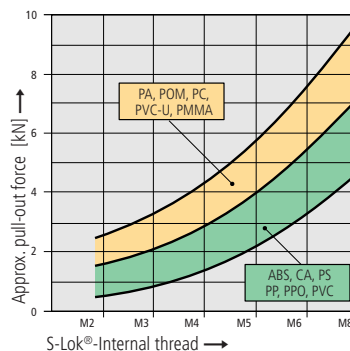


Fig. 25



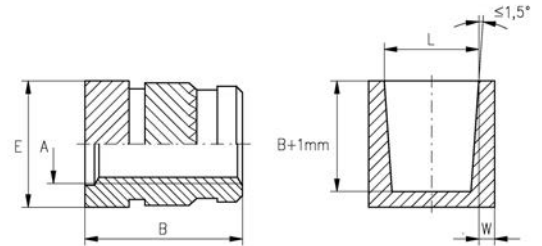
Fig. 23

#### Application

For the manufacture of wear and vibration-resistant screw fasteners with high loading capacity in plastic, preferably thermoset plastics.

The inserts are pressed into pre-formed receiving holes while the hole wall is softened using heat or ultrasound.

#### Animation

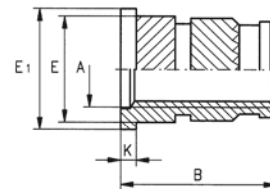


Dimensions in mm

Article number	Internal thread	External diameter	Length	Hole diameter (guideline values)	Minimum wall thickness	Article number short version	Length
	A	E	B	L +0,1	W		B
860 000 020.800	M 2	3,6	4,0	3,2	2,0		
860 000 025.800	M 2,5	4,6	5,8	4,0	2,3	861 000 025.800	4,0
860 000 030.800	M 3	4,6	5,8	4,0	2,3	861 000 030.800	4,0
860 000 035.800	M 3,5	5,4	7,2	4,8	2,5	861 000 035.800	5,8
860 000 040.800	M 4	6,3	8,2	5,6	2,5	861 000 040.800	7,2
860 000 050.800	M 5	7,0	9,5	6,4	2,7	861 000 050.800	8,2
860 000 060.800	M 6	8,6	12,7	8,0	3,0	861 000 060.800	9,5
860 000 080.800	M 8	10,2	12,7	9,6	3,5	861 000 080.800	9,5
860 000 100.800	M10	12,3	12,7	11,7	4,0	861 000 100.800	9,5

#### Example for finding the article number

Threaded insert S-Lok® to Works Standard 860 0 without head and internal thread M4 made of brass: S-Lok® 860 000 040.800



Dimensions in mm

Article number	Internal thread	External diameter (excluding head)	Head diameter	Head height	Length
	A	E	E <sub>1</sub>	K	B
862 000 020.800	M 2	3,6	4,8	0,6	4,6
862 000 025.800	M 2,5	4,6	5,6	0,6	6,4
862 000 030.800	M 3	4,6	5,6	0,6	6,4
862 000 035.800	M 3,5	5,4	6,4	0,8	8,0
862 000 040.800	M 4	6,3	7,2	0,8	9,0
862 000 050.800	M 5	7,0	8,0	1,0	10,5
862 000 060.800	M 6	8,6	9,5	1,3	14,0
862 000 080.800	M 8	10,2	11,0	1,3	14,0
862 000 100.800	M 10	12,3	14,0	1,3	14,0

For receiving hole diameter, see article no. 860 ... ..

#### Materials

Brass

Other materials on request.

Article no. (fourth group of digits) ... .. 800

#### Tolerances

ISO 2768-m

#### Thread

Internal thread A: as per ISO 6H