

## 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).

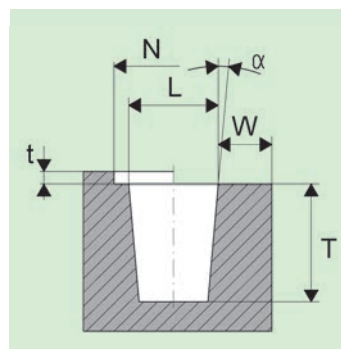


Fig. 24

## 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

30.1218

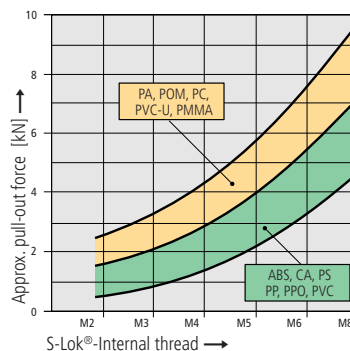
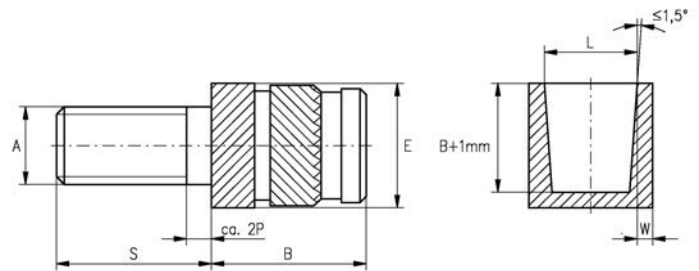


Fig. 25



Fig. 23



Available stud lengths  
(other lengths on request)

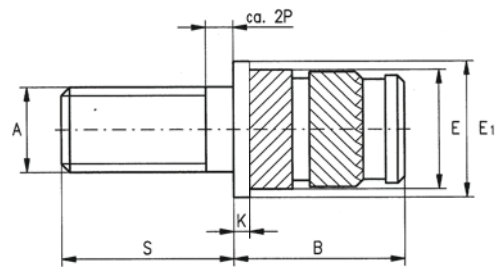
Dimensions in mm

Article number	Thread	External diameter	Inserted length	Hole diameter (guideline values)	Article number eleventh digit	Length
	A	E	B	L +0,1	S	
866 000 030. ...	M 3	4,6	5,8	4,0	... .. 820	6
866 000 035. ...	M 3,5	5,4	7,2	4,8	... .. 840	10
866 000 040. ...	M 4	6,3	8,2	5,6	... .. 860	16
866 000 050. ...	M 5	7,0	9,5	6,4	... .. 880	25
866 000 060. ...	M 6	8,6	12,7	8,0		
866 000 080. ...	M 8	10,2	12,7	9,6		

Thread length = S - 2P  
P = Threaded pitch

**Example for finding the article number**

Threaded insert S-Lok®-S Stud M4 to Works Standard 866 0, length of stud **S = 10 mm** made of brass: S-Lok®-S 866 000 040.**840**



Dimensions in mm

Article number	Thread	External diameter (excluding head)	Head diameter	Head height	Length
	A	E	E <sub>1</sub>	K	B
867 000 030. ...	M 3	4,6	5,6	0,6	6,4
867 000 035. ...	M 3,5	5,4	6,4	0,8	8,0
867 000 040. ...	M 4	6,3	7,2	0,8	9,0
867 000 050. ...	M 5	7,0	8,0	1,0	10,5
867 000 060. ...	M 6	8,6	9,5	1,3	14,0
867 000 080. ...	M 8	10,2	11,0	1,3	14,0

Available stud lengths: See table Works Standard 866

For receiving hole diameter, see article no. 866 ... ..

**Material** Brass  
**Other dimensions on request.**

**Tolerances** ISO 2768-m

**Thread** External thread A: as per ISO 6g