






**SONIC-LOK**, is designed for rapid installation into thermoplastics using heat or ultrasonics. It features opposed helical knurl bands to provide a combination of high torque and pull out resistance. Headed and stud versions are also available.

## ADVANTAGES

-  PERMITS THIN BOSS WALLS ALLOWING COMPACT BOSS DESIGN
-  PROVIDES HIGH TORQUE AND PULL OUT PERFORMANCE
-  RAPID INSTALLATION USING HEAT OR ULTRASONICS
-  CHOICE OF LENGTHS AVAILABLE
-  SELF-ALIGNING - ASSISTS INSTALLATION



## DESIGN GUIDE

### HOLE PREPARATION

Moulded holes are recommended wherever possible. The taper on the hole should be 1° inclusive and the hole diameter recommended should apply at the point reached by the bottom of the insert. The top of the hole should not be chamfered or counterbored and care must be taken to avoid bell mouthing. Hole diameter tolerance -0.00 +0.10mm.

### INSTALLATION

The fastener may be installed using either a pre-heating process or using heat generated by ultrasonic vibrations. Where pre-heating is used care must be exercised to ensure that the fastener softens but does not melt the plastic. This will avoid any tendency to generate unsightly flash around the top of the insert. Ultrasonic installation is best carried out using low amplitude vibrations and the minimum power consistent with satisfactory softening of the plastic material.

In either case excessive pressure should be avoided, since this may result in the insert being forced into the hole without allowing the plastic to soften and flow around the surface profile.

### WALL THICKNESS

Where thinner walls are required these can often be accommodated but consultation with PSM Technology Centre or your local Sales Office and pre-production testing is strongly advised.

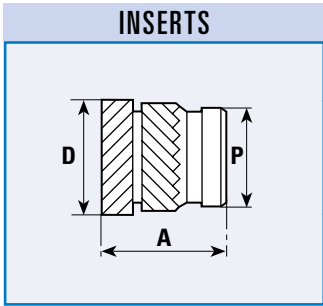
### PERFORMANCE DATA

The complexity of materials and variations in service conditions make it impossible to detail fastener performance for specific applications. The charts on page 28 give a general guide and show the relative performance of the inserts in the range.

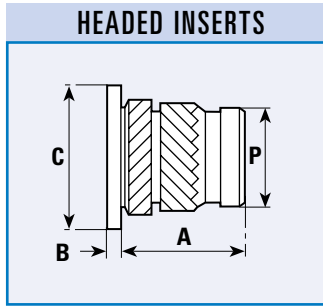
# TECHNICAL DATA

# SONIC-LOK

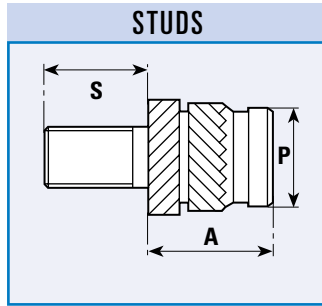
# SONIC-LOK™ INSERTS & STUDS



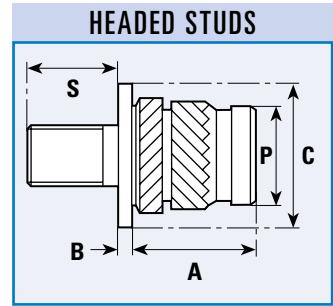
Product Code SL



Product Code SHK



Product Code SLTS



Product Code SLHS

**STANDARD MATERIALS** - Brass (B) - Other materials possible on quotation

## DIMENSIONS

INTERNAL THREAD SIZES		A	A*	B	C	D	P	Rec. Hole Size -0.00 +0.10	Min. Wall Thickness
Unified	ISO Metric	mm	mm	mm	mm	mm	mm	mm	mm
2	2	4.0	3.0	0.53	4.8	3.6	3.1	3.2	1.3
-	2.5	5.7	4.0	0.61	5.5	4.6	3.9	4.0	1.6
4	3	5.7	4/4.8	0.61	5.5	4.6	3.9	4.0	1.6
6	3.5	7.1	5.0	0.76	6.4	5.4	4.7	4.8	1.8
8	4	8.1	4/4.8/5.8	0.91	7.1	6.3	5.5	5.6	2.1
10	5	9.5	5.8	1.09	7.9	7.1	6.3	6.4	2.6
1/4	6	12.7	6.8/9.5	1.35	9.5	8.7	7.9	8.0	3.3
5/16	8	12.7	-	1.35	11.1	10.2	9.5	9.6	4.5
3/8	10	12.7	-	1.60	14.0	12.6	11.8	11.9	6.0
1/2	12	15.9	-	2.00	19.0	16.7	15.8	16.0	8.0

A\* - Preferred shorter lengths.  
Other lengths possible on quotation.

## Standard Stud Lengths (Dimensions 'S')

MILLIMETRES	5	6	8	10	12	14	16	18	20	25
INCHES	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1

## HOW TO SPECIFY

INSERTS	
PRODUCT CODE	SL-B-M3
MATERIAL	SL-B-M3
THREAD SIZE	SL-B-M3
LENGTH (if applicable)	SL-B-M3-4.8

HEADED INSERTS	
PRODUCT CODE	SHK-B-M3
MATERIAL	SHK-B-M3
THREAD SIZE	SHK-B-M3
LENGTH (if applicable)	SHK-B-M3-4.8

STUDS	
PRODUCT CODE	SLTS-B-M4-10mm
MATERIAL	SLTS-B-M4-10mm
THREAD SIZE	SLTS-B-M4-10mm
LENGTH	SLTS-B-M4-10mm

HEADED STUDS	
PRODUCT CODE	SLHS-B-M5-12mm
MATERIAL	SLHS-B-M5-12mm
THREAD SIZE	SLHS-B-M5-12mm
LENGTH	SLHS-B-M5-12mm

**NOTE:**

It is not necessary to specify a length where a standard insert is required.  
If the application requires a shorter than standard insert they may be selected from the table above (A\*).