

**SONIC-LOK<sup>®</sup>**, is designed for rapid installation into thermoplastics using heat or ultrasonics. Moulding-in is also an option.

It features opposed helical knurl bands to provide a combination of high torque and pull out resistance.

Headed versions are also available.

### ADVANTAGES

- Permits thin boss walls allowing compact boss designs
- Provides high torque and pull out resistance
- Rapid installation using heat or ultrasonics
- Self aligning - assists installation
- A range of standard lengths available

### DESIGN GUIDE

#### HOLE PREPARATION

Moulded holes are recommended. The taper on the moulded hole should be 1° inclusive and the diameter recommended should apply at the point reached by the bottom of the insert. The top of hole should not be chamfered or counterbored. Hole diameter tolerance -0.00 +0.05mm.

#### BOSS WALL THICKNESS

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

#### INSTALLATION

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



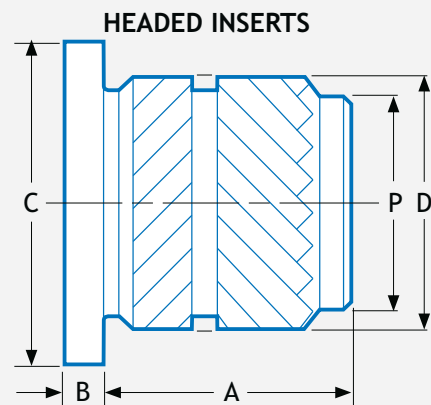
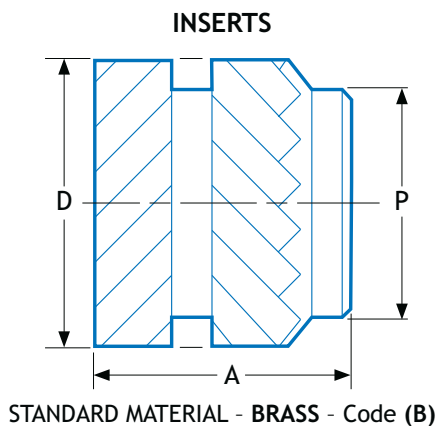
#### PERFORMANCE DATA

Performance figures which are typical values based on application testing, please refer to **FMP-04-1**.

## PRODUCT RANGE

MINIATURE SONIC-LOK® can be supplied with and without a head to suit application requirements. The range includes thread sizes M1.2, M1.4, & M1.6 in a variety of lengths and diameters. See the product range table below. If a part does not suit your application, contact PSM with your exact requirements.

## TECHNICAL DATA



## GENERAL DIMENSIONS - INSERTS

PRODUCT CODE	THREAD SIZE	STANDARD LENGTHS A	KNURL DIAMETER D	KNURL DIAMETER CODE **	SPIGOT DIAMETER P	HOLE SIZE -0.00 +0.05	MIN BOSS WALL THICKNESS
SL	M1.2	1.8, 2.0, 2.2	2.10		1.75	1.80	0.70
SL	M1.4	1.8, 2.0, 2.2, 2.5, 2.7, 3.0	2.30		1.90	1.95	0.70
SL	M1.6	2.0, 2.2, 2.35, 2.5, 2.7, 3.0	2.50		2.10	2.15	0.80
SL	M1.4	1.8, 2.0, 2.2, 2.5	2.10	OD2.1	1.75	1.80	0.70
SL	M1.4	1.8, 2.0, 2.2, 2.5, 2.7, 3.0	2.50	OD2.5	2.10	2.15	0.80
SL	M1.6	2.0, 2.2, 2.5, 2.65, 3.0	2.35	OD2.35	1.95	2.00	0.75

NOTE: Product Codes in bold are PSM standard parts.

## GENERAL DIMENSIONS - HEADED INSERTS

PRODUCT CODE	THREAD SIZE	LENGTHS A	HEAD THICKNESS B	HEAD DIAMETER C	KNURL DIAMETER D	SPIGOT DIAMETER P	HOLE SIZE -0.00 +0.05	MIN BOSS WALL THICKNESS
SHK	M1.4	2.1, 2.35, 2.55, 2.85	0.35	2.80	2.30	1.90	1.95	0.70
SHK	M1.6	2.1, 2.35, 2.55, 2.85, 3.05, 3.35	0.35	3.00	2.50	2.10	2.15	0.80

## HOW TO SPECIFY

### INSERTS

PRODUCT CODE	SL-B-M1.4-2.0
MATERIAL	SL-B-M1.4-2.0
THREAD SIZE	SL-B-M1.4-2.0
LENGTH	SL-B-M1.4-2.0
KNURL DIAMETER CODE**	SL-B-M1.4-2.0-OD2.1

### HEADED INSERTS

PRODUCT CODE	SHK-B-M1.4-2.55
MATERIAL	SHK-B-M1.4-2.55
THREAD SIZE	SHK-B-M1.4-2.55
LENGTH	SHK-B-M1.4-2.55

\*\* Specify for non standard diameters only.