The new microPEM® Type MSIB™ thru-threaded inserts for plastic are designed for use in straight or tapered holes. The symmetrical design eliminates the need for orientation. They are installed by pressing them into the mounting hole with ultrasonic insertion equipment. Frictional heat caused by the vibration melts the plastic surrounding the insert allowing easy insertion. When the vibration ceases, the plastic solidifies, locking the insert permanently in place. Type MSIB inserts can also be installed by pressing the insert into the mounting hole with a thermal press to melt the plastic surrounding the insert.

**Features and Benefits**

- **Threads as small as M1.**
- **Designed for use in straight or tapered holes.**
- **Symmetrical design eliminates the need for orientation.**
- **Provides excellent performance in wide range of plastics.**

### Type MSIB™ microPEM® Inserts For Plastics

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### Part Number Designation

- **MSI**
- **B**
- **M**
- **100**

**METRIC**

<table>
<thead>
<tr>
<th>Thread Size x Pitch</th>
<th>Type</th>
<th>Thread Code</th>
<th>Length Code</th>
<th>A ±0.1</th>
<th>E ± 0.1</th>
<th>C Max.</th>
<th>Mounting Hole in Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1 x 0.25⁽³⁾</td>
<td>MSIB</td>
<td>M1</td>
<td>100⁽¹⁾</td>
<td>1</td>
<td>2.1</td>
<td>—</td>
<td>0.7, 1.77, 1.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>250⁽²⁾</td>
<td>2.5</td>
<td>1.75</td>
<td>—</td>
<td>0.7, 2.27, 1.75</td>
</tr>
<tr>
<td>M1.2 x 0.25⁽³⁾</td>
<td>MSIB</td>
<td>M1.2</td>
<td>100⁽¹⁾</td>
<td>1</td>
<td>2.1</td>
<td>—</td>
<td>0.7, 2.7, 1.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>250⁽²⁾</td>
<td>2.5</td>
<td>1.75</td>
<td>—</td>
<td>0.7, 3.27, 1.75</td>
</tr>
<tr>
<td>M1.4 x 0.3⁽⁴⁾</td>
<td>MSIB</td>
<td>M1.4</td>
<td>150⁽³⁾</td>
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<td>2.5</td>
<td>2.15</td>
<td>0.8, 2.27, 2.15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>300⁽³⁾</td>
<td>3</td>
<td>2.5</td>
<td>2.15</td>
<td>0.8, 3.27, 2.15</td>
</tr>
<tr>
<td>M1.6 x 0.35⁽⁵⁾</td>
<td>MSIB</td>
<td>M1.6</td>
<td>150⁽³⁾</td>
<td>1.5</td>
<td>2.5</td>
<td>2.15</td>
<td>0.8, 3.27, 2.15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>300⁽³⁾</td>
<td>3</td>
<td>2.5</td>
<td>2.15</td>
<td>0.8, 3.27, 2.15</td>
</tr>
</tbody>
</table>

(1) **Style #1** - length codes less than 150
(2) **Style #2** - length codes 150 and greater
(3) Metric ISO 68-1, 5H
(4) Metric ISO 68-1, 6H
(5) Metric ASME B1.13M, 6H
(6) Refers to wall diameter of boss as tested in ABS and polycarbonate.

**Insert Material:** Free-machining, leaded brass, plain finish

**www.pemnet.com**
PERFORMANCE DATA

The values reported are averages when all installation specifications and procedures are followed. Variations in mounting hole size, sheet material and installation force will affect results. Performance testing of this product in your application is recommended. We will be happy to provide samples for this purpose.

Torque-out performance will depend on the strength and type of screw being used. In most cases, the screw threads will fail before the insert threads.

For testing purposes, inserts were installed using heat stake equipment into a flat sheet.

HOLE PREPARATION GUIDELINES

Thinner walls and bosses may be used but will affect performance.