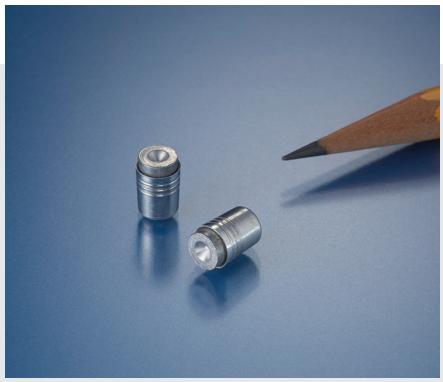
LEE IMH 6mm Short Betaplug®

The Lee Company's new 6mm Short Betaplug® is the latest addition to our Short Betaplug product line. The 6mm Short Betaplug is a pre-assembled, tapered expansion plug specifically engineered to seal fluid passages leak-tight in metal and plastic housings, without the use of threads, sealants, or O-rings. The unique, tapered design of the Short Betaplug features controlled expansion during installation that causes the lands and grooves on the O.D. of the plug body to bite into the wall of the fluid passage, creating a leak-tight seal and assuring retention. The tapered design also eliminates the tight manufacturing tolerances and extra machining necessary with cylindrical expansion devices or threaded plugs, and allows engineers to minimize the wall thickness required around the plug, even for brittle housing materials.

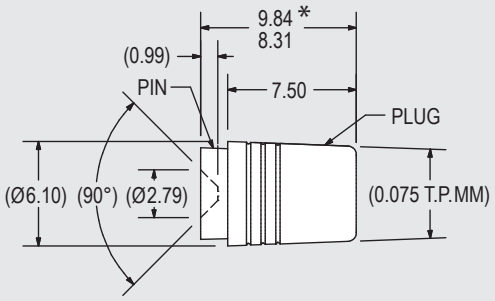
- One-piece design
  - Facilitates reliable automated or manual installation
- Controlled expansion
  - Ensures consistent performance
  - Eliminates cracking of brittle materials
- No threads or sealants required
  - Designed to seal for life
  - No extra machining necessary



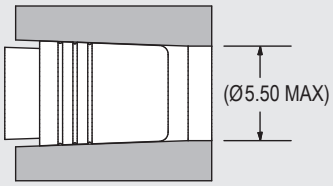
ACTUAL SIZE

As Installed

6mm Short Betaplug

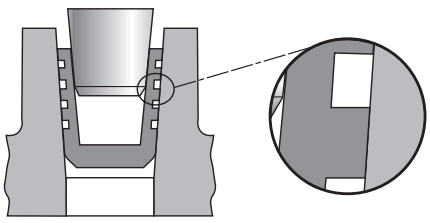


Maximum Passage Diameter



LOA before installation. All dimensions in millimeters, except where noted.

Lee Betaplug Advantage



Known Boss Stress

Conventional, cylindrical shaped expansion plugs require additional expansion for the clearance between the plug O.D. and the installation hole.

The matching tapers of the Betaplug and its installation hole create a perfect fit, eliminating the need for additional expansion. Since the Betaplug's expansion is precisely controlled by the size of the tapered pin, the amount of expansion and any resulting boss stress is completely predictable.

PART NUMBER
PLBA0602610S

PERFORMANCE	
† Rated Pressure:	35 Bar (500 psi)
Materials:	6061 Aluminum
Maximum Temperature Rating:	135°C (275°F)

† *Rated pressures may be higher depending on specific application requirements. Contact your Lee Sales Engineer for higher pressure requirements.*

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LEE IMH 6mm Short Betaplug®

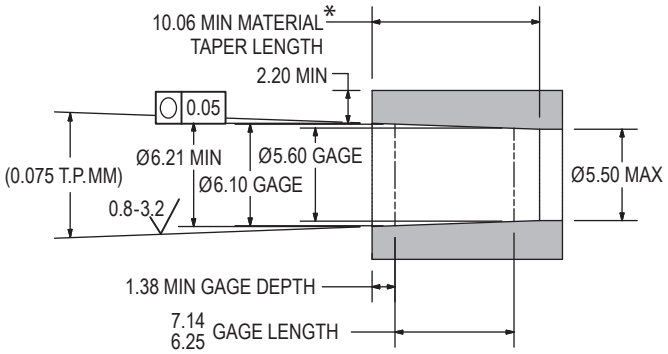
INSTALLATION HOLE

The installation hole for the 6mm Short Betaplug has an included taper angle, Beta, of 4.3°, which matches the tapered outside diameter of the Short Betaplug. This included draft angle of 4.3° is very easy to achieve with a core pin in a die-cast or molded part, or to machine using a tapered tool.

A tolerance of ±0.3° on the taper angle of 4.3° is specified to guarantee that the Short Betaplug's rated performance is achieved. If the taper angles are out of tolerance, the plug will either wedge first at the top or at the bottom, reducing the plug's performance. Tapered reamers are available, see table below for part number.

The Lee Company recommends that the Short Betaplug be installed below the surface of the housing to ensure optimum performance.

The use of coatings or surface treatments in the area of the installation hole where the Short Betaplug is to be installed is not recommended.



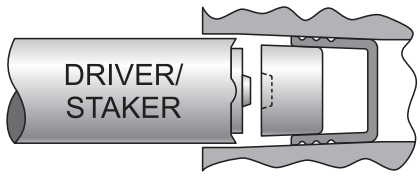
* Depth of tapered hole from depth of 6.21 minimum diameter.
All dimensions are in millimeters.

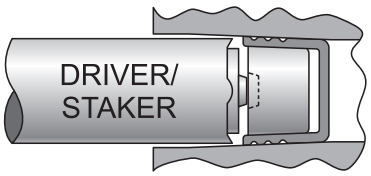
BETAPLUG INSTALLATION

The installation of Lee Short Betaplugs, whether performed manually or automatically, is very easy and economical. First, the preassembled Short Betaplug is inserted into the tapered installation hole narrow end first. The pin is then driven into the plug using the recommended Lee Company Installation/Staking Tool until the pin is below flush and the plug is staked. The installation tool is designed to install the pin below flush while staking over the back edge of the plug (see illustration at right). The 6mm Short Betaplug pin should be installed 0.38mm to 0.46mm (0.015" to 0.018") below flush.

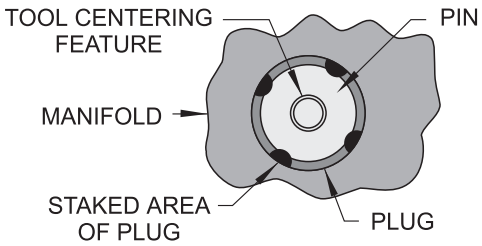
The Installation/Staking Tool contains a centering feature which ensures proper tool alignment during installation. All Short Betaplug pins are coated with a wax that produces a thin, solid lubricating film that reduces friction, allowing the pin to be driven to its correct position relative to the plug. Do not clean prior to installation.

The installation force required to drive the pin into the Short Betaplug is a function of boss material, installation hole and boss geometry, and plug size. A boss made of a stronger material or having a larger wall thickness will require a greater installation force than one made of a weaker material or having thinner walls. Typical installation force for A380 die-cast aluminum is shown in the table below.





Top View of Installed Short Betaplug



INSTALLATION/STAKING TOOL PART NUMBER	TAPERED REAMER PART NUMBER	TYPICAL INSTALLATION FORCE (kN)
PLBT0670031S	PLBT0670020S	4.9 (1,100 lbf.)

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