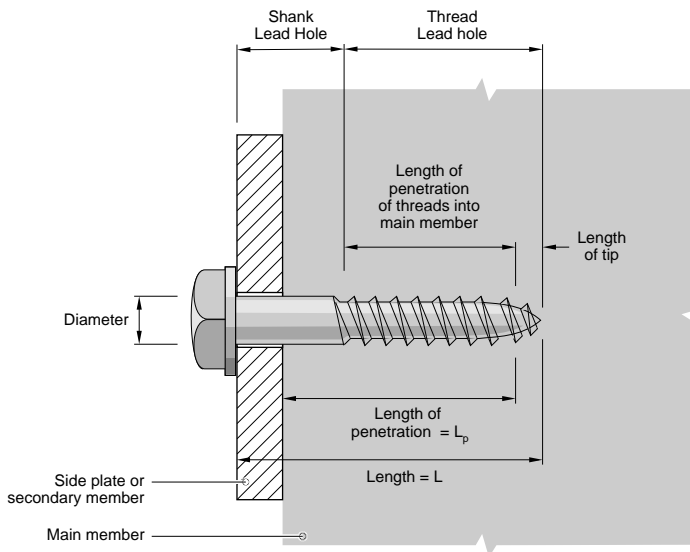
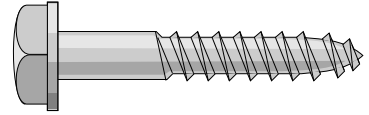


Figure 5.13  
Lag Screws for  
Wood  
Construction

Bolt Type	Usual Range of Diameters		Uses
	mm	in.	
Lag Screw (Bolt)	6.4 to 25	1/4 to 1	In lieu of bolts where nut location would be inaccessible; sometimes used for split ring and shear plate joints



The resistance of a lag screw generally increases with the length of the embedded threaded portion. However, it is also affected by other considerations such as side plate thickness.

As with other types of metal fasteners, sufficient end and edge distance must be provided to prevent splitting and to provide sufficient area for shear and bearing resistance in accordance with engineering design codes.

Stock sizes of lag screws range from 25 to 400mm (1" to 16") in length and 6 to 25mm (1/4" to 1") in diameter.

#### Washers

The same requirements for washers apply to those used with lag screws as to those used with bolts.

#### Installation

Two hole diameters are used to prepare a member to accept a lag screw, drill bits of two dimensions must be used. The smaller diameter hole is drilled to accept the threaded portion of the lag screw, and a larger diameter hole is drilled to accommodate the shank portion.

#### Glulam Rivets

A glulam rivet as shown in Figure 5.14 (→ 247) is a high strength fastener which resembles a nail but has a flattened oval shank with a wedge shaped head. The rivet is driven through pre-drilled holes in a steel side plate until the tapered head is wedged into the hole.

In Canada, glulam rivets have become the fastener of choice for glulam members because performance is proven, and machining for acceptance of bolts or split rings is eliminated. US design codes do not yet provide information on the glulam rivet.