



Zimmer®  
Universal  
Locking  
System



Please refer to the *Zimmer* Universal Locking System Surgical Technique for a listing of all part numbers of ULS Implants and Instrumentation.



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Confidence is flexibility and compatibility in one system.



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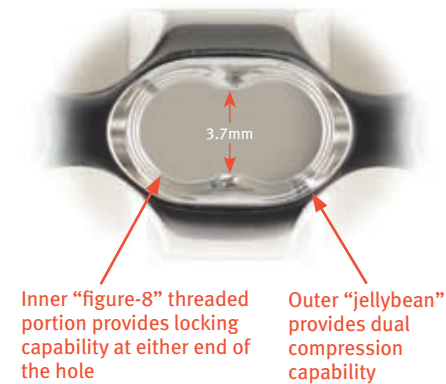
# Universal Locking System

One system for the treatment of many fractures.

Combining a wide range of plates with both standard and locking screws. With the Universal Locking System (ULS), Zimmer offers a comprehensive solution for the treatment of many types of fractures using one fully-compatible system. ULS includes both straight and formed plates, available in 316L stainless steel and Ti-6Al-4V Titanium Alloy or CP Titanium (Based on Plate Style), that accommodate standard cortical and cancellous screws, as well as new locking screw technology.

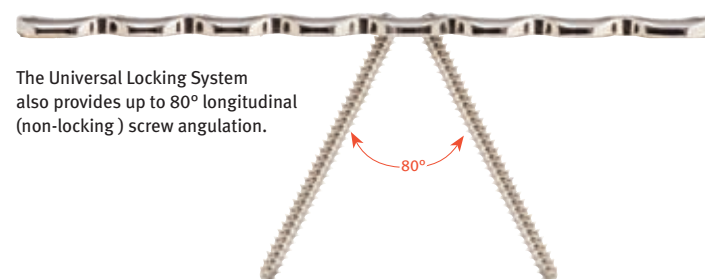
Locking screws have threaded heads which enable them to be threaded into plate holes. In the Universal Locking System, the plates are designed with “figure-eight shaped” holes that accommodate both standard and locking screws on either side of the hole. As a result, the plate

may be used as a compression plate, as a locked fixator or as an internal fixation system which combines both techniques. With a slightly different philosophy of use and modified surgical techniques, ULS provides more fixation options and often better fixation in difficult fractures.

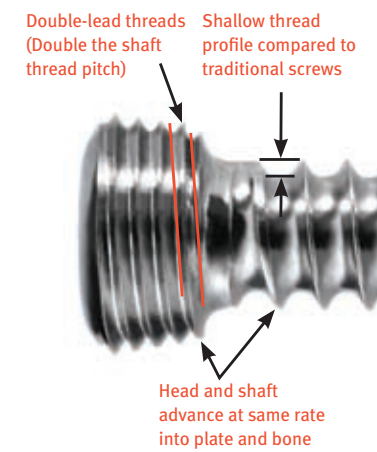


The Universal Locking System is indicated for temporary internal fixation and stabilization of osteotomies and fractures, including:

- Comminuted fractures
- Supracondylar fractures
- Extra-articular fractures
- Fractures in osteopenic bone
- Nonunions
- Malunions



Using biomechanical principles for maximum clinical benefit.



## Standard Compression Plating

The Universal Locking System allows surgeons to treat fractures using compression plating techniques with standard cortical or cancellous screws. A large selection of straight and formed plates enables the plate to be placed on the bone according to the fracture pattern or type—rather than the plate design. The plate may be applied submuscularly, with or without a guide.

## Locked Plating

Locking screw technology allows the implant to be applied as an internal fixator to bridge highly comminuted zones while providing stable fixation. Locking screws do not rely on plate/bone compression, but function similarly to multiple small angled blade plates—to ensure angular and axial stability. Bridging the fracture with a locked construct does not compress the periosteum or disrupt the fracture hematoma, thereby improving chances for fracture healing.

## Combined Plating

The Universal Locking System provides for the combining of two biomechanical principles: interfragmentary compression and bridging techniques. The plate designs allow the surgeon to utilize both standard and locking screws in the same construct. Combined plating is used most effectively to treat:

- Articular fractures with comminuted fracture extension into the diaphysis
- Segmental fractures which include one simple fracture pattern and one comminuted fracture pattern

## A streamlined approach.

The Universal Locking System includes many different plates for use in the treatment of a large number of fracture types. The system utilizes existing screws and instrumentation from the Zimmer Periarticular Locking Plate System and Zimmer Plates and Screws (ZPS).

## Locking Screw Technology

Zimmer’s locking screw technology gives surgeons the ability to create a fixed-angle construct while using familiar plating techniques. The locking screw heads contain male threads, while the holes in the plates contain female heads. This allows the screw head to be threaded into the plate hole, locking the screw into the plate. The heads are designed to create a nearly flush profile on the plate, which helps to decrease soft tissue irritation. The locking plate design does not require compression between the plate and bone to accommodate loading, therefore screw purchase in the bone can be achieved with a thread profile that is shallower than that of traditional screws. In turn, the shallow thread profile allows for screws with a large core diameter to accommodate loading with improved bending and shear strength.

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