

# Osteotome System

**R**esearchers at the University of South Florida have developed novel osteotomes with interlocking side channels that allow surgeons to custom build multi-osteotome tools as needed.

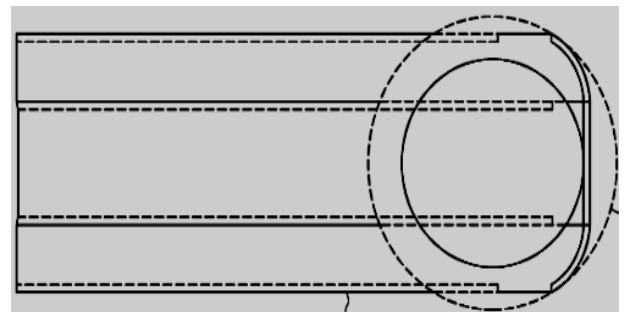
An osteotome is a device that has the appearance of a chisel, such as those used for woodworking. Orthopedic surgeons have used osteotomes for decades to perform cuts in bone. This surgical technique is known as osteotomy. Current osteotomes are available in a number of sizes with varying thicknesses, widths, and handle styles. However, many osteotomies require osteotomes that are longer than what is available (i.e. for pelvic osteotomies). In these cases, surgeons will usually resort to using multiple osteotomes at once, with a row of osteotomes attached individually. The problem with this technique is that there is no guarantee that the osteotomes will remain in parallel, which could affect the accuracy and outcome of the osteotomy. This highlights the need for a system that enables multiple osteotomes to remain in a desired conformation during a procedure.

USF researchers have developed a series of modified osteotomes that may be linked in a manner that would allow them to remain in parallel (or any other desired confirmation) when used to manipulate bone. The system includes a single 'central' osteotome and one or more additional 'accessory' osteotomes linked together. Various coupling channels and edge types may also be implemented into the design. This device is useful for a wide range of orthopedic surgical procedures. Furthermore, it will limit the possibility of injury to vital structures during surgery and improve surgeon accuracy.

### ADVANTAGES:

- Ensures that osteotomes will remain in parallel during surgery
- Improves osteotomy accuracy
- Limits potential injuries during surgery
- Various coupling channels and edge designs

*A Novel Device Which is Applicable Towards a Wide Range of Orthopedic Procedures*



*A Side View of Three Osteotomes Linked Together*

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