



Zimmer® Cable-Ready® Bone Plate

Abbreviated
Surgical Technique



Integral crimp for secure low profile implant

Design of the Bone Plate

The Zimmer *Cable-Ready*® Bone Plate is distinctly designed to incorporate the cable into the plate. The cable is an integral part of the plate and not only passes through the plate but is fixed to the plate. This Bone Plate is distinct in that the cable is secured internally in a low profile mechanism that does not require a crimper! Nothing fits onto or rides on top of the plate. Each cable is locked by turning a set screw in the plate. The same Tensioner is used as is found in the *Cable-Ready* Instrument Set. The only additional piece of equipment needed for this plate system is a Tensioner Bit.

The purpose of combining the screws and cables with the plate is to help secure the bone both internally and externally. The bone screws are effective in resisting torsion and the cables are effective in resisting flexion and extension. The Bone Plate is also effective when bone screws cannot be used such as when a prosthesis occupies the canal of the bone. The Bone Plate is designed to support axial loading due to column support of the cables.

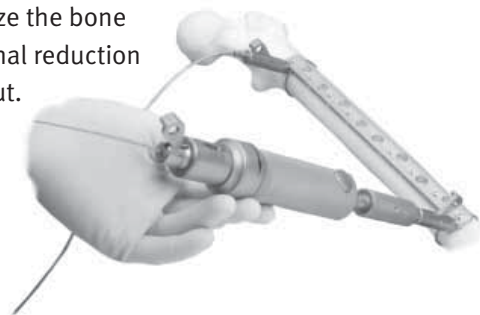
Indications for the Bone Plate

The Bone Plate is designed to address complicated fractures or reconstruction of the femur or tibia. Examples of possible uses for the bone plate include fractures below or above the prosthesis, comminuted femoral shaft fractures (both proximal and distal), nonunions of fractures with failed previous hardware, reconstruction of bone defects, and revisions of total hip or total knee arthroplasty with bone loss or fractures.

Surgical Technique

There are three different Bone Plates – 6, 8, 10 hole. The appropriate plate is selected. The individual cables may be inserted before or after the plate is attached to the bone. The recommended technique is to insert a cable on each end of the plate prior to applying the plate to the bone. The cables are harder to insert on the ends of the plate due to soft tissue limitations. (Sometimes it is easier to insert many or most of the cables into the plate prior to inserting the plate.)

The cables on each end of the plate may be wrapped around the bone to secure the plate to the bone and help stabilize the bone while the final reduction is carried out.



1 Cable Insertion

The cable may be inserted in either direction. In the usual lateral approach to the femur, the cable is inserted into the posterior side of the plate and pulled until the plug countersinks into the plate.

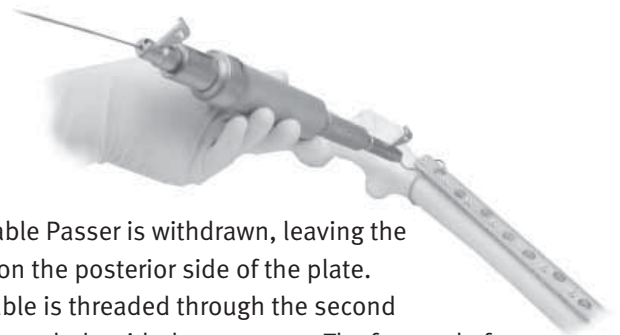
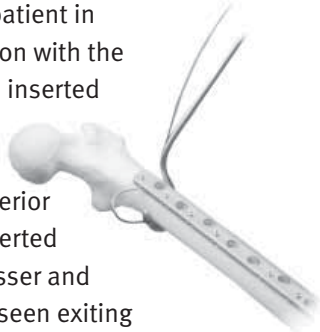


NOTE: The cable should be pulled relatively parallel to the cable holes in the plate.

If an attempt is made to pull the cables perpendicular to the cable holes of the plate, it will be difficult to slide the cables through the plate.

2 Using the Cable Passer

It is easier to position the patient in the lateral decubitus position with the knee flexed. The cables are inserted into the Cable Plate on the posterior side. The Cable Passer is passed from posterior to anterior. The cable is inserted into the tip of the Cable Passer and threaded until the cable is seen exiting from the shaft of the Cable Passer.



The Cable Passer is withdrawn, leaving the cable on the posterior side of the plate. The cable is threaded through the second transverse hole with the set screw. The free end of the cable is directed anteriorly. Once the cable is thread through the plate, it is tensioned with the Tensioner on the anterior side of the plate. Again, pull the cable parallel to the cable holes in the plate.

3 Tensioning the Cable

To tension the cable, the Bone Plate Tensioner Bit is inserted into the Tensioner. The cable is threaded completely through the Tensioner and the slack is pulled out of the cable. The lever at the end of the Tensioner is depressed to lock the cable. The cable is tensioned by first depressing the button on the tensioner and pulling out the excess slack.



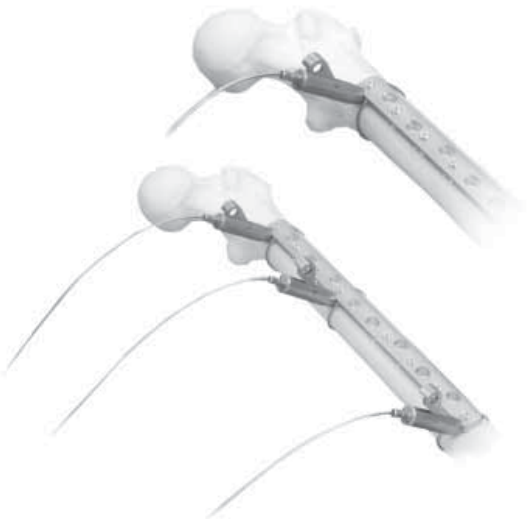
The desired tension is dialed in by rotating the handle of the Tensioner clockwise until the desired tension is achieved.



Normally, the tension should be adjusted to between 70 & 90 pounds. The angle of the Tensioner to the plate must NOT exceed 60 degrees or the cable will bind and make tensioning of the cable difficult or impossible. Also, if the direction of the pull is not in line with the hole in the plate, the cables may fray or bind and the proper tension will not be achieved.

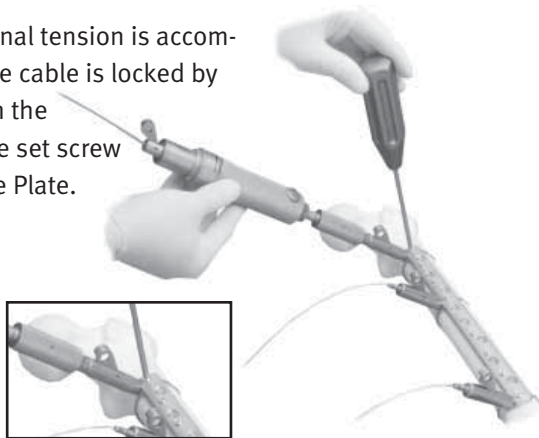
4 Tension/Re-Tension

The Cable Plate Tensioner Bit may then be used to hold the tension in the cable by depressing the lever on the bit. The cable may be retensioned later if necessary.



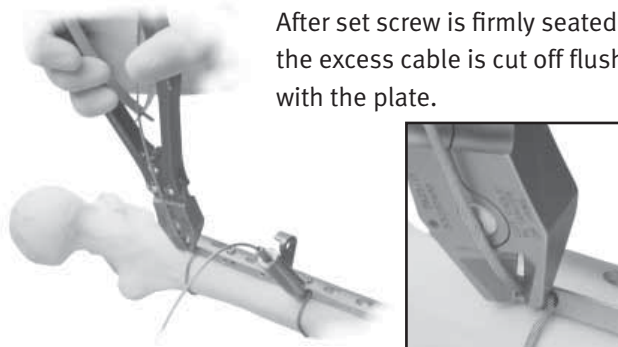
5 Seating the Set Screw

Once the final tension is accomplished, the cable is locked by screwing in the appropriate set screw in the Bone Plate.



6 Cable Insertion

After set screw is firmly seated, the excess cable is cut off flush with the plate.



It is recommended to use a cable at each site (transverse pair of holes). Whether or not a cable is utilized at a particular location in the Bone Plate, all set screws must be seated at the completion of the procedure. The order of cable insertion depends upon the fracture pattern or particular use or situation. Generally, if a cable is first inserted on each end of the plate, the plate and bone can be grossly stabilized. The cables can be loosely tensioned by hand and held with retensioning bits. The bones are then manipulated and final reduction accomplished. The cables are very useful in holding the reduction while the bicortical bone screws are inserted. The cables act as an adjunct or replacement of bone holding clamps.

Ordering Information

Cat. No.	Description
00-2232-003-01	6-Hole/6-Cable Plate, 187mm
00-2232-003-02	8-Hole/8-Cable Plate, 246mm
00-2232-003-03	10-Hole/10-Cable Plate, 305mm
00-2232-003-18	1.8mm Stainless Steel Bone Plate Cable, 610mm
00-2232-009-00	Bone Plate Tensioner Bit

Contact your Zimmer representative or visit us at www.zimmer.com



Please refer to package insert for complete product information, including contraindications, warnings, precautions and adverse effects.