

Locking Plate Cable System



990220022

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Warning

This publication describes the recommended procedures for using Double Engine devices and instruments. It offers guidance that you should pay attention to. But as with any such technical guide, the guide alone does not provide sufficient background for direct use of the instrument set, each surgeon should also consider the particular needs of each patient and make appropriate adjustments when required. Instruction by experienced surgeon is still highly recommended.

All non-sterile devices must be cleaned and sterilized before use. Multi-component instruments must be disassembled for cleaning. Please follow the instructions provided in our *Reprocessing, Care and Maintenance Guide (RCMG-2012)*.

Please refer to *Package Insert* for a complete list of potential adverse effects, contraindications, warnings and precautions. The surgeon must discuss all relevant risks, including the finite lifetime of the device, with the patient, when necessary.

Caution

The implants are designed for temporary fixation of fractured bone fragments until the bone heals. Therefore, if bone does not heal or bone consolidation is delayed or not sufficient, the system may break. Post-operative care under the guidance of the surgeon is also very important and it must be done to ensure the promotion of bone consolidation.

Surgical Technique

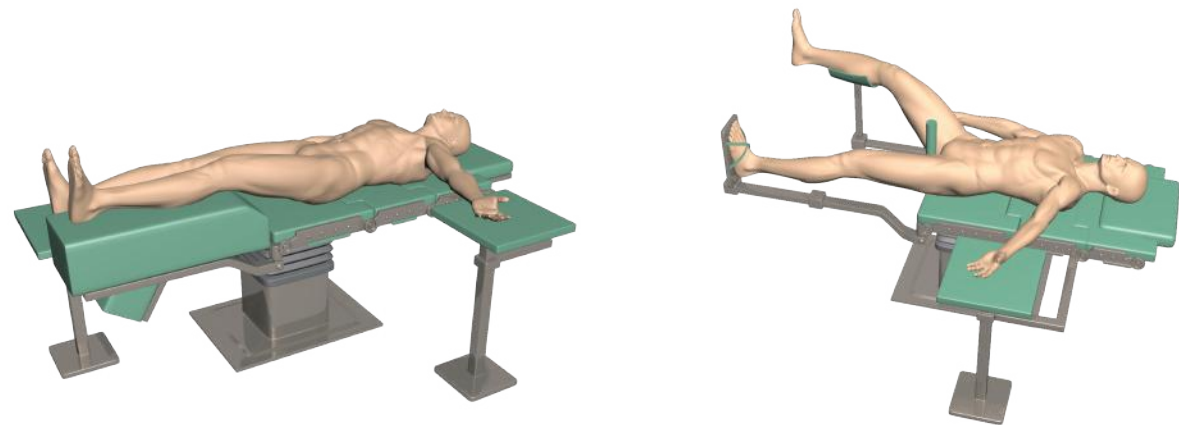
Indications

- Trochanteric osteotomy
- Extended trochanteric osteotomy
- Trochanteric fracture
- Periprosthetic long bone fractures

Position Patient

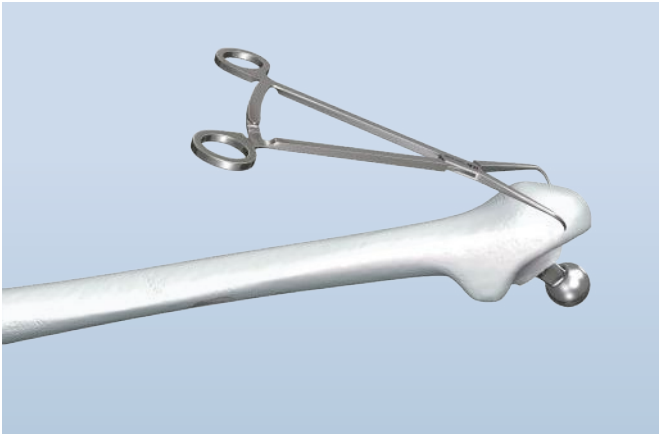
Place the patient in the supine or lateral position on a radiolucent surgical table according to surgeon preference and fracture pattern. If using a fracture table, the foot of the affected limb is placed in a foot holder or a skeletal traction pin is used to achieve traction. The unaffected limb is extended down and away from the affected limb or placed up in a leg holder. Check the affected limb for length and rotation by comparison to the unaffected limb. Rotate the C-Arm to ensure optimal AP and lateral visualization of the proximal femur.

Note: If using a radiolucent surgical table, a distraction device may be helpful in reducing the fracture.



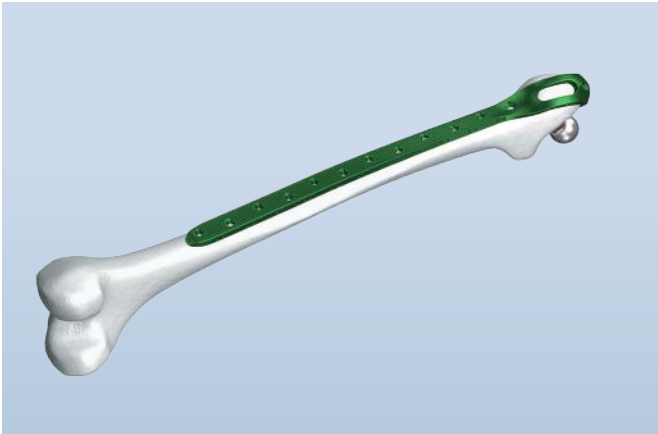
Preoperative Preparation

Perform the preoperative radiographic evaluation and make the preoperative plan. Ensure the AP and lateral views of the entire femur should be done for necessary assessment. Identify proper placement of the proximal locking screws before using the proximal femoral locking plate III. Make a straight incision which is flush with the lateral femur and fully expose the fracture sites.



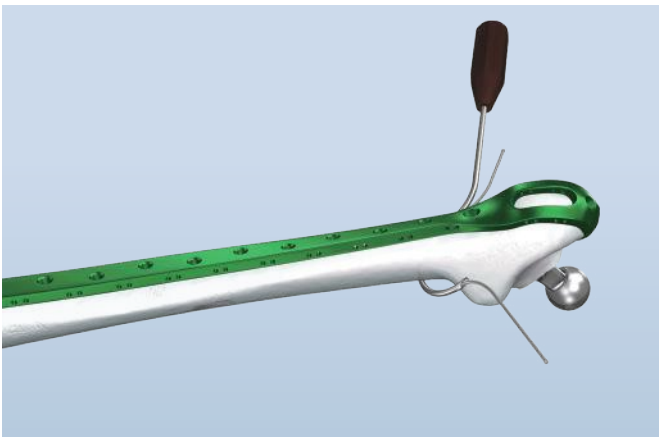
STEP 1 REDUCTION

Obtain gross skeletal alignment using applied traction, reduction forceps, a ball spike pusher, half pins or other conventional methods of reduction. Provisionally secure fracture fragments using 2.0mm K-wires or reduction forceps. Reduction aids should be placed so as not to interfere with final plate placement.



STEP 2 POSITION GRIP LOCKING PLATE AND TEMPORARY FIXATION

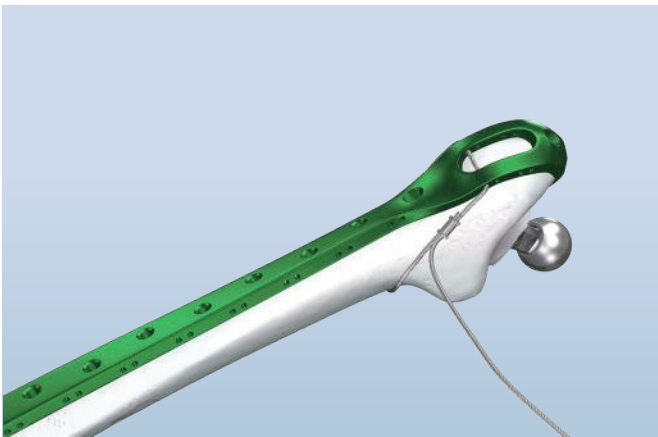
Position the grip locking plate on the bone and place the proximal hooks of the grip into or above the greater trochanter and reduce the assembly into position on the bleeding bone of the femur.



STEP 3 POSITION THE CABLE

- | | |
|-----------|-----------------------------|
| 111760400 | Cable Passer, large |
| 111760500 | Cable Passer, small |
| 111760800 | Cable Passer, large, curved |
| 111760900 | Cable Passer, small, curved |

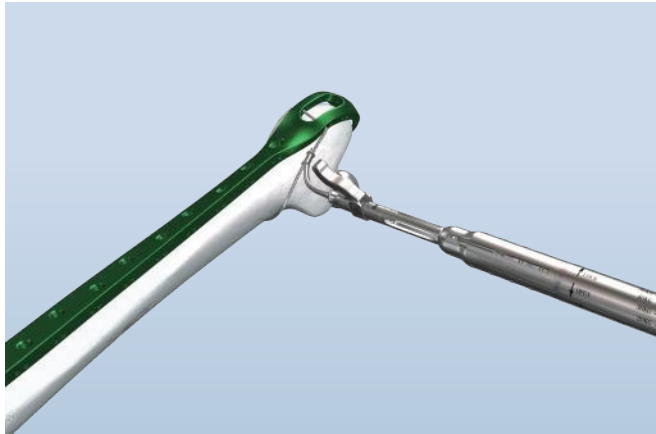
Select the appropriate cable passer. The size and shape of the cable passer depends upon the circumference of the bone and access to the site. Select a cable passer that will allow the instrument to pass around the bone without causing significant damage to soft tissues or excessive stripping of the periosteum. Pass the cable passer around the bone. Thread the free end of the cable into the end-hole of the cable passer until the cable exits through the proximal holes. Remove the cable passer leaving the cable wrapped around the bone.



STEP 4 POSITION CABLE CRIMP

Insert the end of the cable through the free hole of the crimp, and place the crimp in the desired position on the bone. When placing the crimp, ensure that it is covered by soft tissue and securely anchored in the bone. The four points on the underside of the crimp must contact the bone, and the smooth side must face upwards.

Note: The cables should not be passed around a prosthesis.



STEP 5 INSERT CERCLAGE CABLE INTO THE CABLE TENSIONER

111760100 Cable Tensioner
111760200 Cable Tension Holder
111760300 Attachment Bit for Tension Holder

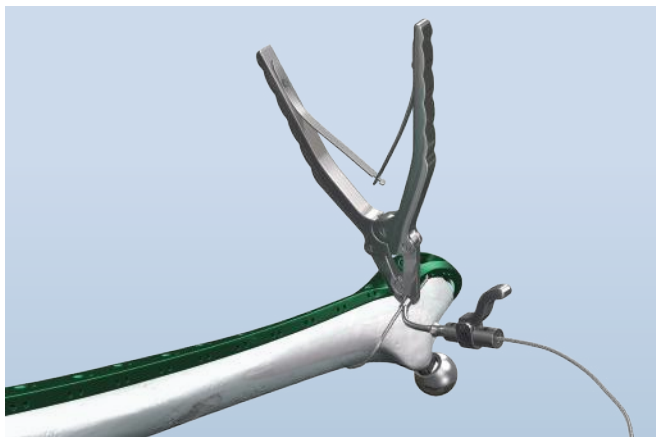
Mount the temporary tension holder and the attachment bit on the cable tensioner. To enable the cerclage cable to be inserted into the cable tensioner, turn the fluted knob at the end of the tensioner counterclockwise as far as possible. Insert the cerclage cable into the cable tensioner, and advance the attachment bit up to the crimp.



STEP 6 TENSION CERCLAGE CABLE

Turn the fluted knob on the cable tensioner until the desired tension is reached. The tension is shown by the markings on the tensioner (20–50 kg). If the cerclage cable is tensioned above the specified level, it may tear out of the crimp or cut through or crush osteoporotic bone.

Note: Take care not to exceed 50 kg of tension. Applying more tension may cause the cable to cut through soft or osteoporotic bone.



STEP 7 SECURE CERCLAGE CABLE WITH CABLE CRIMP

111760600 Cable Crimper

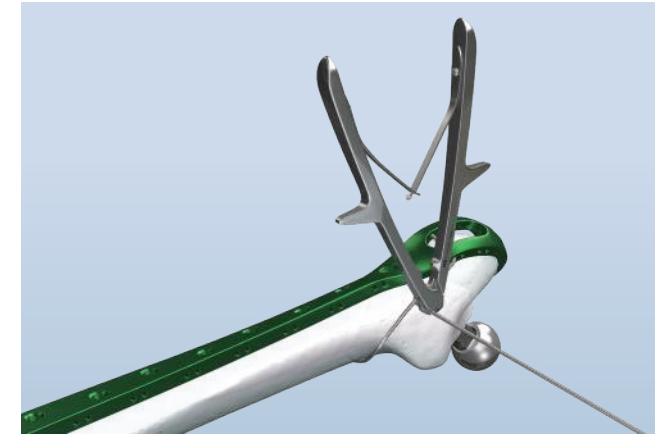
When the desired cable tension is reached, the cerclage cable can be secured with the crimp. Place the jaws of the cable crimper on the crimp, ensuring that the crimp is centred and is correctly held in the crimper jaws. Pull the inner start lever first, then squeeze the outer handles to complete crimping. The toothed mechanism of the cable crimper establishes the appropriate compression pressure for securing the crimp.

Note: Incorrectly placing the cable crimper can lead to crimp failure.



STEP 8 REMOVE CABLE TENSIONER

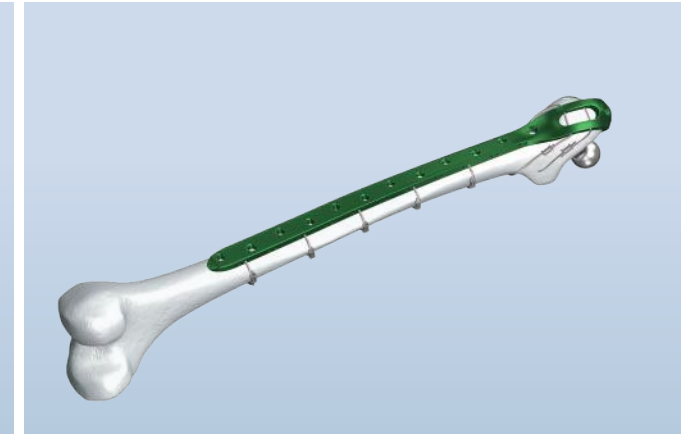
When the crimp – and thus the cerclage cable – is secured, turn the fluted knob on the cable tensioner as far as possible, and remove the tensioner. If the temporary tension holders are wed, push the lever of the cam lock forward, and pull the holder off the cable.



STEP 9 CUT CABLE

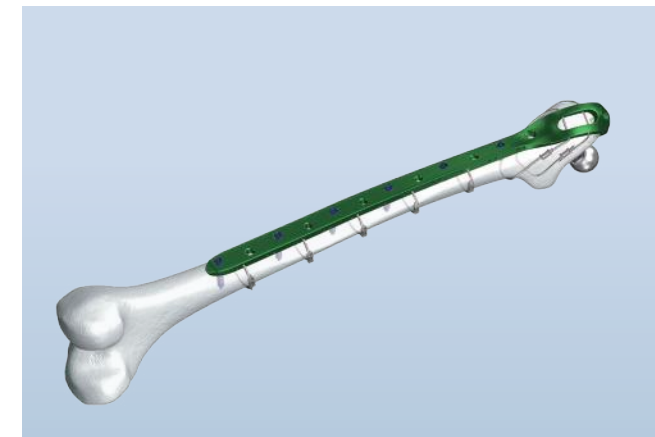
111760700 Cable Cutter

Cut the loose end of the cable using the cable cutter. Position the cutting jaws very close to the crimp, and make the cut in one action to produce a clean cut. Ensure that the adjacent cerclage cables do not get damaged.



STEP 10 PASS AND TENSION REMAINING CABLES IN SHAFT

Pass remaining cables following steps 2 to 3 and perform the Tension and locking of the remaining cables following step 5 to step 10.



STEP 11 SCREW FIXATION (OPTIONAL)

Based on the quality of bone and stability of the fracture construct, supplemental fixation may be accomplished with either conventional compression (cortical) screws, locking screws, or a combination of both types.

Instruments 111980000

111760100	Cable Tensioner
111760200	Cable Tension Holder
111760300	Attachment Bit for Tension Holder
111760400	Cable Passer, large
111760500	Cable Passer, small
111760600	Cable Crimper



111760700	Cable Cutter
111760800	Cable Passer, Large, curved
111760900	Cable Passer, small, curved
111980100	Cable System Instrument Case

