

Surgical Technique

INNOVATIONS IN HIP SURGERY

smith&nephew
ACCORD[®]
Cable System





ACCORD[®] Cable System

Surgical technique completed in conjunction with:

Robert Barrack, MD
St. Louis, Missouri

Paul Di Cesare, MD
New York, New York

Fares Haddad, MD
London, England

Michael Huo, MD
Dallas, Texas

Michael Ries, MD
San Francisco, California

Khaled Saleh, MD
Charlottesville, Virginia

Nota Bene: *The technique description herein is made available to the healthcare professional to illustrate the authors' suggested treatment for the uncomplicated procedure. In the final analysis, the preferred treatment is that which addresses the needs of the patient.*

There are two techniques. One technique involves the use of cables only, and the second technique involves the implantation of a trochanteric grip with cables (grip contains preassembled clamps).

Introduction

The ACCORD[®] Cable System is the result of the most advanced cable technology in orthopaedics. It is the most effective, efficient and extensive system on the market.

The ACCORD Cable System is effective because of the strength and flexibility of the cable – it has up to four times the fatigue life of previous 7x7 cable designs¹.

The ACCORD Cable System is efficient because it allows a clamped cable to be loosened and retightened without deforming the cable – something that no other cable system can offer.

The ACCORD Cable System is an extensive system – it includes cobalt chrome and stainless steel cables, titanium trochanteric grips that come in two sizes and four lengths for a total of eight options and even grip trials. The system also includes stainless steel screws and spikes as well as titanium plates for trauma situations.



¹Jones, Bob, and Tsai, Stanley. "Fatigue Testing of a Prototype Cable for the Orthopaedic Cable System," Smith & Nephew, Inc., Memphis, TN, Orthopaedic Research Report, OR-02-34, May 2002.

Implanting Cables Only

Technique 1

This technique can be used, for example, for attaching a femoral strut graft. For this technique, the cable with clamp (7134-0007) must be used.

Step One

Slide the appropriate Cable Passer under and around the bone. There are three cable passers available: straight, 30° offset, and large 30° offset.

Step Two

Slip the non-beaded end of the cable through the pointed end of the Cable Passer (*Figure 1*). Remove the Cable Passer. The cable should now be around the bone.

Step Three

Run the free end of the cable through the clamp, thus creating a loop (*Figure 2*).

Instrumentation:

Cable Passers



Figure 1



Figure 2



Implanting Cables Only

Step Four

Reset the Tensioner by turning the reset switch clockwise (Figure 3). Confirm that the locking handle of the Tensioner is open by turning it counterclockwise (Figure 4). Pass the free end of the cable through the Tensioner and pull through until the tip of the Tensioner is seated against the clamp and there is no slack (Figure 5).

Note: If a red band is protruding from the locking handle, the Tensioner has not been reset (Figure 6).

Step Five

Turn the locking handle clockwise (as indicated by the word “lock” on the Tensioner) until well tightened to grip the cable (Figure 4).

Step Six

Apply tension to the cable by pumping the lever on the Tensioner.

Note: If the tension gauge does not advance with each pump, the Tensioner is not gripping the cable sufficiently. Retighten the locking handle and continue pumping until the desired tension is obtained.

The amount of tension placed on the cable should be based on the patient’s bone quality and surgical experience of the operative surgeon. However, tension should not continue to be applied if the second red band is visible and protruding from the locking handle (Figure 7).

Note: Due to the superior design of the ACCORD® Cable Tensioner, surgeons are able to receive tactile feedback to help determine if the appropriate tension is being applied.

Instrumentation:

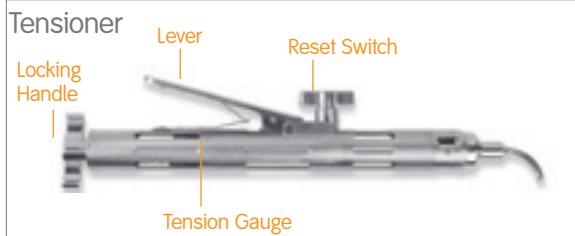


Figure 3



Figure 4



Figure 5

Figure 6



Figure 7



Step Seven

Before removing the Tensioner, tighten the clamp screw completely with the 35lb. Torque-Limiting Screwdriver by turning clockwise.

Note: Tighten the clamp screw until a single click is heard.

Step Eight

Release the cable from the Tensioner by loosening the locking handle (turn counterclockwise). Remove the Tensioner.

Note: The ACCORD® Cable System allows you to loosen the clamp with the Torque-Limiting Screwdriver and retighten when necessary without the use of any extra instruments.

Step Nine

Use the Flush Cutter to cut the excess cable (Figure 8).

Note: In order for the cut to be flush, the cutting side of the Flush Cutter must be adjacent to the clamp. This side is indicated on the instrument by the words "cut this side."

Instrumentation:

Torque-Limiting Screwdriver



Flush Cutter



Figure 8



Implanting a Trochanteric Grip with Cables

Technique 2

This technique can be used to reattach the greater trochanter. For this technique, clamps are built into the grips, and therefore cables without clamps (7134-0020) should be used.

Step One

Use the Trochanteric Grip Trials to determine which size and length grip will best accommodate the patient's femur. There are two trochanter sizes: small and standard, and there are four lengths: 3-, 5-, 8- and 11-cable grips.

These grips range in length from 75 to 255mm for small grips and 85 to 265mm for standard grips.

Step Two

Attach the Positioner to the Trochanteric Grip or Trial by placing the foot of the Positioner over the threaded hole. Once seated, connect the Positioner by screwing the handle into the hole. Place the hooks of the grip over the trochanter to capture it, and position the trochanter in place on the patient's femur.

Note: The Positioner will attach to the trials and grips (Figure 9). If desired, the handle of the Positioner can be subjected to light mallet blows in order to sink the hooks of the grip into the bone.

Step Three

Pass the non-beaded end of the cable through either one of the pair of holes on the clamp built into the Trochanteric Grip.

Instrumentation:
Trochanteric Grip Trial



Figure 9

Step Four

Use the Cable Passers to run cable under and around the femur (Figure 10).

Note: The cable must be inserted through the pointed end of the Cable Passers.

Step Five

Run the free end of the cable back though the remaining hole for the clamp.

Perform the following steps for each cable:

Step Six

Reset the Tensioner by turning the reset switch clockwise (Figure 11). Confirm that the locking handle of the Tensioner is open and turned counterclockwise (Figure 12). Pass the free end of the cable through the Tensioner and pull through until the Tensioner is seated against the clamp and there is absolutely no slack (Figure 13).

Note: If a red band is protruding from the locking handle, the Tensioner has not been reset. (Figure 6, page 4).

Step Seven

Turn the locking handle clockwise (as indicated by the word “lock” on the Tensioner) until well tightened to grip the cable (Figure 12).

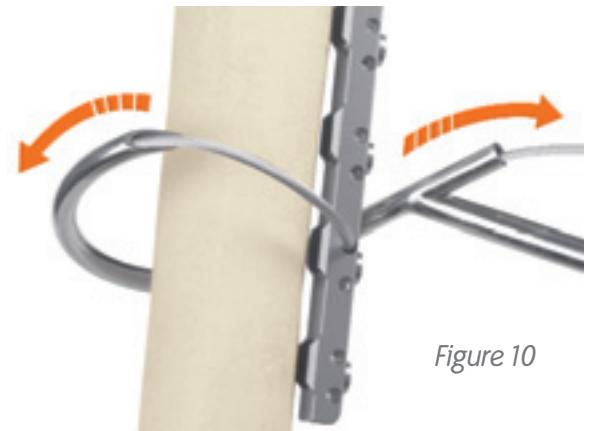
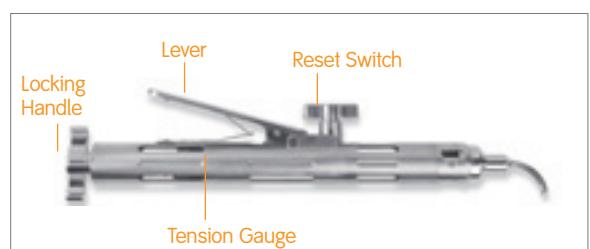


Figure 10

Instrumentation:

Tensioner



Reset Switch



Figure 11

Locking Handle



Figure 12

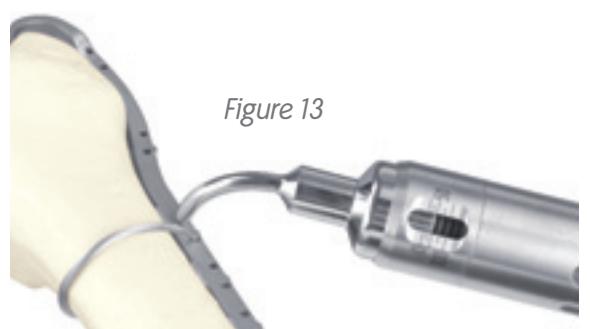


Figure 13

Implanting a Trochanteric Grip with Cables

Step Eight

Apply tension to the cable by pumping the lever on the Tensioner.

Note: If the tension gauge does not advance with each pump, the Tensioner is not gripping the cable sufficiently. Retighten the locking handle and continue pumping until the desired tension is obtained.

The amount of tension placed on the cable should be based on the patient's bone quality and surgical experience of the operative surgeon. However, tension should not continue to be applied if the second red band is visible and protruding from the locking handle (Figure 7, page 4).

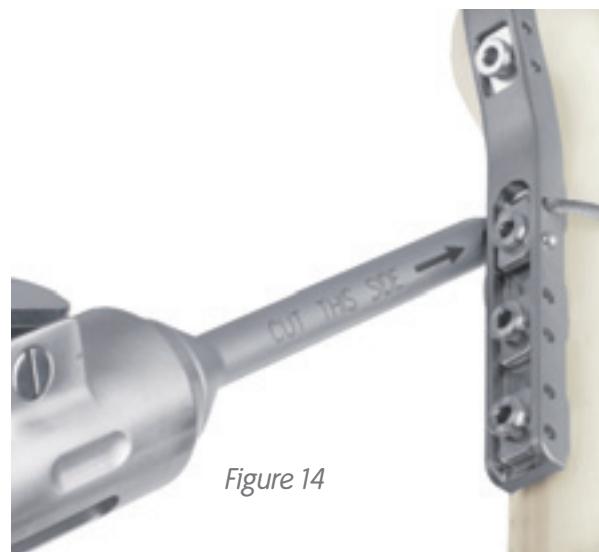


Figure 14

Step Nine

Before removing the Tensioner, tighten the clamp screw completely with the 35lb Torque-Limiting Screwdriver by turning clockwise.

Note: Tighten the clamp screw until a single click is heard.

Step Ten

Release the cable from the Tensioner by loosening the locking handle (turn counterclockwise). Remove the Tensioner.

Step Eleven

Repeat this tensioning process for each cable and clamp on the Grip.

Note: Remember that the ACCORD® Cable System allows you to loosen the clamp with the Torque-Limiting Screwdriver and retighten when necessary without the use of any extra instruments.

Step Twelve

Use the Flush Cutter to cut the excess cable (Figure 14).

Note: In order for the cut to be flush, the cutting side of the Flush Cutter must be adjacent to the clamp. This side is indicated on the instrument by the words "cut this side."

ACCORD® Catalog Information

ACCORD Instruments



ACCORD Instrument Set
Cat. No. 7136-0005



ACCORD Tensioner
Cat. No. 7136-0020



ACCORD Large 30° Offset
Cable Passer
Cat. No. 7136-0019



ACCORD Straight
Cable Passer
Cat. No. 7136-0021



ACCORD 30° Offset
Cable Passer
Cat. No. 7136-0022



ACCORD Flush Cutter
Cat. No. 7136-0024



ACCORD Scissor Cutter
Cat. No. 7136-0025



ACCORD Trochanteric
Grip Positioner
Cat. No. 7136-0026



ACCORD Small
Trochanteric Grip Trial
Cat. No. Description

7136-0029	ACCORD Small 75 mm 3-Cable Troch Grip Trial
7136-0030	ACCORD Small 115 mm 5-Cable Troch Grip Trial
7136-0031	ACCORD Small 185 mm 8-Cable Troch Grip Trial
7136-0032	ACCORD Small 255 mm 11-Cable Troch Grip Trial



ACCORD Standard
Trochanteric Grip Trial

Cat. No. Description

7136-0033	ACCORD Std 85mm 3-Cable Troch Grip Trial
7136-0034	ACCORD Std 125mm 5-Cable Troch Grip Trial
7136-0035	ACCORD Std 195mm 8-Cable Troch Grip Trial
7136-0036	ACCORD Std 265mm 11-Cable Troch Grip Trial



ACCORD Torque-Limiting
Screwdriver Handle

Cat. No. 7136-0039



ACCORD Screwdriver Bit

Cat. No. 7136-0040



ACCORD Cable Spike Driver

Cat. No. 7136-0042

ACCORD Cable System
Instrument Tray

Cat. No. 7136-0041

ACCORD® Catalog Information

ACCORD Implants

ACCORD Implant Set

Cat. No.	7134-5000
Includes:	all small & standard grips, 3 fracture management plates, 12 cables w/clamp, 12 cables for grips/plates



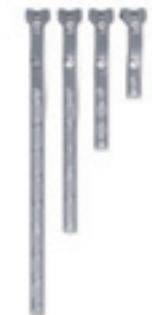
ACCORD 2.0mm CoCr Cable for Grips/Plates

Cat. No. 7134-0020



ACCORD 2.0mm CoCr Cable w/Clamp

Cat. No. 7134-0007



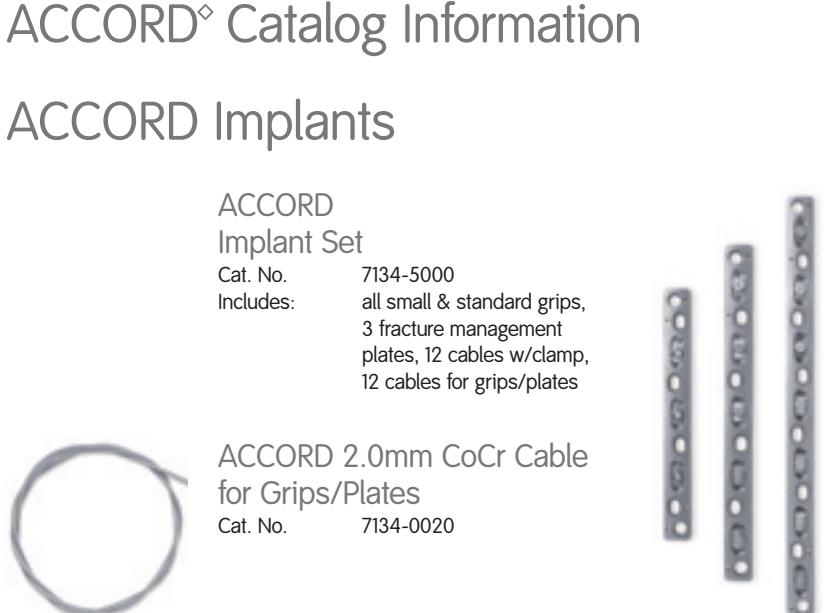
ACCORD Small Trochanteric Grip

Cat. No.	Description
7134-0003	ACCORD Small 75mm 3-Cable Troch Grip
7134-0004	ACCORD Small 115mm 5-Cable Troch Grip
7134-0005	ACCORD Small 185mm 8-Cable Troch Grip
7134-0006	ACCORD Small 255mm 11-Cable Troch Grip



ACCORD Standard Trochanteric Grip

Cat. No.	Description
7134-0010	ACCORD Std 85mm 3-Cable Troch Grip
7134-0011	ACCORD Std 125mm 5-Cable Troch Grip
7134-0012	ACCORD Std 195mm 8-Cable Troch Grip
7134-0013	ACCORD Std 265mm 11-Cable Troch Grip



ACCORD Titanium Plate

Cat. No.	Description
7134-6150	ACCORD 150mm 3-Cable Titanium Plate
7134-6200	ACCORD 200mm 5-Cable Titanium Plate
7134-6250	ACCORD 250mm 7-Cable Titanium Plate

ACCORD[®] Fracture Management Implants

ACCORD Stainless Steel Implant Set

Cat. No. 7134-5002
Includes: 4 Stainless Steel cable
spikes, 4 Stainless Steel
cable screws, 8 2.0mm
Stainless Steel cables
with clamps



ACCORD Stainless Steel Cable Spike

Cat. No. 7134-0001



ACCORD Stainless Steel Cable Screw

Cat. No. 7134-0002



ACCORD 2.0mm Stainless Steel Cable w/Clamp

Cat. No. 7134-0008

Notes

Orthopaedics

Smith & Nephew, Inc.
1450 Brooks Road
Memphis, TN 38116
USA

www.smith-nephew.com

Telephone: 1-901-396-2121
Information: 1-800-821-5700
Orders/Inquiries: 1-800-238-7538