

# C-Tek<sup>®</sup> Anterior Cervical Plate System

Surgical Technique





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# Introduction

The **C-Tek** Anterior Cervical Plate System is a universal system that promotes simplicity and ease of use by providing a multitude of options. The system offers Constrained, Semi-Constrained, and Dynamic construct options, pre-contoured plates, as well as, diverse bone screw and plate selections.



# **Design Features**

The Anterior Cervical Plate System is a flexible system that promotes diverse options and facilitates surgeon ease of use.

### Locking Mechanism

Single step integrated slider that efficiently locks construct.



(Unlocking)



(Locking)

#### **Fixed Bone Screws**



Fixed Bone Screws have a 14° trajectory at the superior and inferior ends.

#### Variable Bone Screws



Variable Bone Screws have an additional 10° of angulation in any direction, providing 20° of cone angulation.

### **Universal Construct Options**



**Constrained:** (Fixed Plate with Fixed Bone Screws) Screws do not move, restricting motion and providing additional stability.



**Semi-Constrained:** (Fixed Plate with Variable Bone Screws) Screws rotate or pivot in the recess of the plate providing micro-motion.



**Dynamic:** (Slotted Plate with Fixed and Variable Bone Screws) Bone Screw translates while plate is stationary, which ultimately promotes graft settling through load sharing.



# System Components

The **C-Tek** Anterior Cervical Plate System is an anterior cervical spinal fixation device made from titanium alloy (Ti-6AI-4V). Plates are available in one through five level configurations. The system also includes Variable and Fixed Bone Screws available in several diameters and lengths.

### Implants

#### Plates

Slotted and Fixed Plates are available in one through five level configurations, ranging from 20mm-110mm in length. Plates are measured by overall length.



2-level Slotted Plate



2-level Fixed Plate



Variable Bone Screw



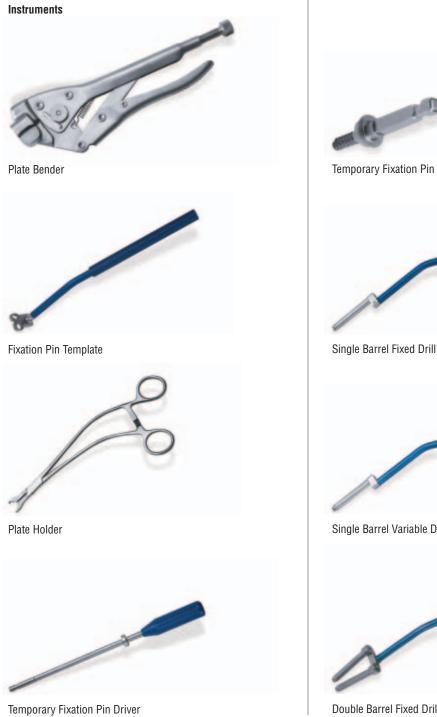
Fixed Bone Screw

#### **Bone Screws**

Color coded Fixed and Variable Bone Screws are available in five lengths (10-18 in 2.0mm increments) and two diameters. (4.0mm and 4.35mm)

**NOTE:** 4.5mm diameter Bone Screws are also available for special order.

# System Components (Continued)







Single Barrel Fixed Drill Guide



Single Barrel Variable Drill Guide



Double Barrel Fixed Drill Guide





# Surgical Technique

### **Surgical Approach And Preparation**

The patient is positioned supine on the operative table with a folded towel beneath the intrascapular region to maintain the head in slight extension. The use of a head halter attached to an outrigger for traction may be helpful. If fluoroscopy is used, it can be utilized at this point to confirm positioning and check that the desired vertebral levels can be adequately visualized. (See Figure 1)

The standard anterior approach to the mid and lower cervical spine is utilized. This can be through one of several incisions with the exposure typically medial to the carotid sheath and lateral to the trachea and esophagus. Adequate fascial plane release is important for optimal exposure. After identification of the disc space through intraoperative confirmation of levels with x-ray, preparation for anterior interbody fusion is begun. (See Figure 2)

The discectomy and resection of osteophytes is performed. Further preparation of the interbody fusion bed or for corpectomy is performed as indicated. (See Figure 3)

Interbody grafts or a strut graft is then positioned and impacted into place. Any distraction previously applied can be released at this point to assess graft stability. It is critical to remove anterior osteophytes for proper plate placement. Repeat the procedure at each disc space as necessary. (See Figure 4)

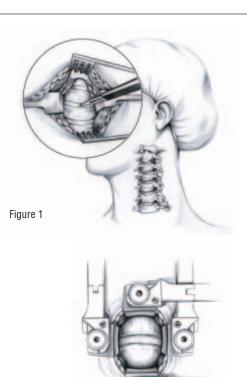


Figure 2

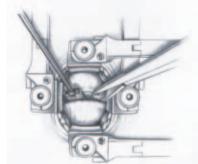


Figure 3

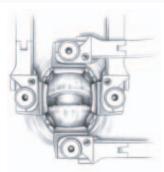


Figure 4



#### **Plate Selection And Positioning**

#### Plate Selection

The **C-Tek** plates are available in 1, 2, 3, 4 and 5-Level lengths and range from 20mm to 110mm. Select the desired style plate and estimated length.

#### Plate Positioning

The **C-Tek** Plate Holder can hold the plate at widest and narrowest sections. The Plate Holder may be utilized to insert, hold and position the plate on the anterior surface of the cervical spine. Review landmarks to ensure that the plate is centered appropriately medially/laterally on the spine. Confirm that the superior and inferior screw holes are in correct position on the vertebral bodies.



**NOTE:** It is recommended that the fixed end of the Slotted Plate be placed cephalad to allot for settling and translation inferiorly, thereby minimizing the possibility of adjacent level disease.

#### **Temporary Fixation Pin Positioning (Optional)**

The Fixation Pin Template is used to identify the optimum placement of the fixation pin and ultimately the cervical plate.



This instrument allows the surgeon to identify key landmarks such as the center of the vertebral body or the endplates to gauge optimal implant placement. Once the template has been properly positioned, the fixation pin is inserted into the bone through the notch at the end of the Fixation Pin Template. Depending on the quality of the bone the fixation pin can be tapped or threaded.



# Surgical Technique (Continued)

### Adjust Lordotic Curvature Of Plate (Optional)

The amount of lordosis designed into the **C-Tek** Anterior Cervical Plate is pre-contoured to the normal lordotic curve of the cervical spine.



However, the Plate Bender can be used to increase the amount of lordotic curvature. Insert the plate into the Plate Bender and compress the handle until desired lordosis has been achieved.

**NOTE:** Avoid abruptly bending the plate.

### **Temporary Fixation Pin Insertion (Optional)**

After the plate has been positioned, a Temporary Fixation Pin may be inserted into the endplate notches. The Temporary Fixation Pin is positioned utilizing the Temporary Fixation Pin Driver. The fixation pin is loaded into the Fixation Pin Driver by pulling back on the locking sleeve and sliding the pin into place.

The Temporary Fixation Pin is inserted by turning the fixation driver in a clockwise direction until the pin is fully seated and the plate is secure to the bone. Once the pin shoulder is fully seated into the endplate notch, the Temporary Fixation Pin Driver is removed by pulling back on the locking sleeve and releasing.



**NOTE:** You may also use a mallet to tap the fixation pin instead of threading.



### Drill Guide Positioning

The **C-Tek** Anterior Cervical Plate System drill guides accommodate both Fixed and Variable Bone Screws. The system provides maximum Bone Screw flexibility, offering four drill guide options. The Fixed and Variable Bone Screw orientation is as follows:

#### Fixed Drill Guide (Single Or Double Barrel)

- Preset convergence 7°
- 14° cephalad and caudal



Variable Drill Guide (Single Or Double Barrel)

• Variable screws add 10° of angulation in any direction, providing 20° of cone angulation. All drill guides have two spikes on the tip to engage the bone and prevent slipping



For optimum performance, the drill guides should be fully seated into the screw holes to ensure that ideal angulation is achieved. Proper use of the drill guides will keep the screw angles within the prescribed limits.

#### **Drill Holes For Bone Screws**

The appropriate size Drill Bit is selected based on the corresponding Bone Screw size. Color-coded Bone Screws are available in the following dimensions:

Lengths of 10mm, 12mm, 14mm, 16mm, 18mm and 20mm.

- 4.0mm Diameter Fixed Bone Screw (Bronze)
- 4.0mm Diameter Variable Bone Screw (Green)
- 4.35mm Diameter Fixed Bone Screw (Blue)
- 4.35mm Diameter Variable Bone Screw (Magenta)
- Optional: 4.5mm Fixed and Variable Bone Screws (Special order)

The Drill Bit is designed to pierce the anterior cortex of the vertebral body and create the appropriate hole size for the Bone Screw. Drill Bits are provided in 12mm, 14mm, and 16mm depths. Place the Drill Bit into the barrel and apply downward pressure while turning the drill until the step contacts the drill guide shaft.

**Optional:** A 2.3mm diameter Punch can also be used through the drill guides to penetrate the anterior cortex and create a 10mm deep hole.

**Optional:** For surgeons who prefer to tap the screw holes, a Tap and Tap Sleeve are provided with the system. The Tap Sleeve limits the depth of tapping to 12mm.

# Surgical Technique (Continued)

#### **Drill Holes For Bone Screws (Continued)**

Select the appropriate Drill Bit. Attach the desired Drill Bit to the Quick Connect Handle by pushing the locking sleeve forward and inserting the Drill Bit into the opening.



Insert the Drill Bit into the selected drill guide barrel and advance the drill into the anterior vertebral body to the maximal depth allowed by the drill step.



Single Barrel Drill Guide



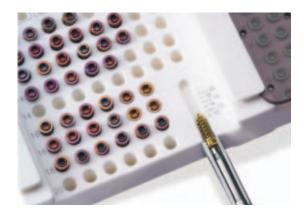
Double Barrel Drill Guide

#### **Verify Bone Screws**

Attach the appropriate size screw to the Screw Inserter by inserting the distal tip into the screw head, sliding the shaft down over the head of the Bone Screw, and engaging the serrated ridges of the shaft with the head of the Bone Screw.

Bone Screws are measured from the underside of the cervical plate and do not include the height of the screw head. The appropriate length can be verified using the Screw Gauge located on the Screw Holding racks.

Insert the Bone Screw into the gauge until the Screw Holder contacts the Caddy.



**NOTE:** A Bone Screw placed beyond the allowable range may not properly seat into the plate, which may prevent the integrated slider from closing.



#### Insert And Lock Bone Screws

Insert the appropriate length Bone Screw through the plate. Release the shaft of the Screw Driver as the screw head gets closer to being fully seated. To disengage the driver, pull the Screw Driver shaft upwards to release. A slightly prowed Bone Screw may prevent the Cover Plate from locking; therefore insure that all Bone Screws are fully seated before engaging the locking mechanism.

The integrated slider is pre-assembled in the plate and held in place by a cantilever spring and pin. The Cover Plate, in one motion, will lock all Bone Screws at the same time and snap into its final locked position.

To slide the Cover Plate closed, place the tip of the Cover Plate Driver into the half moon cut-out of the plate. Advance the cover plate until the spring snaps into place. When locked, the Cover Plate ends will be flush with the ends of the cervical plate.



**Optional:** The Screw Driver can also be used to engage the locking mechanism and lock the Cover Plate.

#### Screw Removal

The Cover Plate Driver is used to unlock the plate. To return the Cover Plate to its unlocked position follow the steps below:

- Hook the small, notched tab of the Cover Plate Driver under the end of the cantilever spring
- Lift the cantilever spring up by levering back on the Cover Plate Driver, using the back side of the driver as a pivot point or fulcrum
- While maintaining this lift, slide the Cover Plate to its unlocked position by pushing the driver along the top of the cervical plate



# Additional Surgical Options

- It is recommended that the fixed end of the Slotted Plate be placed cephalad to allot for settling and translation inferiorly, thereby minimizing the possibility of adjacent level disease
- Avoid abruptly bending the plate
- The Screw Driver can also be used to engage the locking mechanism and lock the Cover Plate
- Plate holder can hold the cervical plate at both it's narrowest and widest sections
- Screw lengths are measured from the underside of the cervical plate and do not include the height of the screw head
- Be sure that the screw heads are flush to the plate to ease locking mechanism engagement
- Temporary Fixation Pins can be positioned in the holes of the plate or in the end plate notches
- Depending on the quality of bone the Fixation Pin can be threaded or tapped
- All Drill Guides have two spikes on the tip to engage the bone and prevent slipping

# **Closure And Postoperative Care**

### Closure

After implantation of the **C-Tek** Anterior Cervical Plate System is complete, closure is performed in layers according to standard protocol.

### **Postoperative Care**

A soft collar may be used postoperatively for patient comfort. Postoperative radiographs should be taken.

### Implant Removal

Removal of the **C-Tek** Anterior Cervical Plate System is performed by reversing the order of the implant procedure. To unlock the screws use the Cover Plate Driver to lift the cantilever spring and disengage the integrated slider. Use the hook on the Cover Plate Driver as a pivot point or fulcrum to disengage the slider. Then insert the distal tip of the Screw Driver into the screw heads for removal.



# **Indications For Use**

The **C-Tek** C-Thru Anterior Cervical Plate System is intended for anterior interbody screw fixation of the cervical spine. This system is indicated for use in the temporary stabilization of the anterior spine from C2 to C7 during the development of cervical spinal fusions in patients with: degenerative disc disease (as defined by neck pain of discogenic origin with degeneration of the disc confirmed by patient history and radiographic studies); trauma (including fractures); primary and metastic malignant tumors; deformity (defined as kyphosis, lordosis, or scoliosis); pseudarthrosis; failed previous fusions; and/or spinal cord stenosis and cervical myelopathy.

# **Contraindications**

Contraindications include, but are not limited to: Infection, local to the operative site; morbid obesity; mental illness; signs of local inflammation; fever or leukocytosis; pregnancy; metal sensitivity/allergies to the implant materials; any medical or surgical condition which would preclude the potential benefit of spinal implant surgery, such as the elevation of sedimentation rate unexplained by other diseases, elevation of white blood count (WBC), or a marked left shift in the WBC differential count; grossly distorted anatomy due to congenital abnormalities; rapid joint disease, bone absorption, osteopenia, and/or osteoporosis (osteoporosis is a relative contraindication since this condition may limit the degree of obtainable correction, the amount of mechanical fixation, and/or the quality of the bone graft); any case not needing a bone graft and fusion or where fracture healing is not required; any case requiring the mixing of metals from different components; any patient having inadequate tissue coverage over the operative site or where there is inadequate bone stock, bone quality, or anatomical definition; any case not described in the Indications; any patient unwilling to cooperate with the postoperative instructions; any time implant utilization would interfere with anatomical structures or expected physiological performance.

### Warnings

This device is not intended for screw attachment or fixation to the posterior elements (pedicles) of the cervical, thoracic, or lumbar spine.

Mixing of dissimilar metals can accelerate the corrosion process. Stainless steel and titanium implants must NOT be used together in building a construct. The **C-Tek** Anterior Cervical Plate System should not be used with the components from any other system or manufacturer. As with all orthopaedic implants, the **C-Tek** Anterior Cervical Plate System should never be reused under any circumstances.

This device system is not intended to be the sole means of support. Its use without a bone graft or in cases that develop into a nonunion will not be successful. No implant can withstand the loads of the body without maturation of a solid fusion mass. If there is no solid fusion, the implant will eventually bend, loosen, or fracture.

Proper implant selection and patient compliance to postoperative precautions will greatly affect surgical outcomes. Patients who smoke have been shown to have an increased incidence of nonunion. Therefore, these patients should be advised of this fact and warned of the potential consequences.

Always orient the **C-Tek** Anterior Cervical Plate as close as possible along the midline of the spine.

The Step Drills are for single intraoperative use only and are not to be reused.

Repeated opening and closing of the cover plate may compromise the integrity of the locking mechanism.

**CAUTION:** Federal (USA) law restricts these devices to sale by or on the order of a licensed physician.

### Sterilization Recommendations

All **C-Tek** Anterior Cervical Plate System components are provided nonsterile. All packaging should be sealed and intact upon receipt. If the package or product is damaged, it should not be used and should be returned immediately. High temperature steam sterilization should be used. All packaging materials must be removed prior to sterilization. The following cycle has been laboratory validated:

| Method:        | Steam         |
|----------------|---------------|
| Cycle:         | Pre-vacuum    |
| Temperature:   | 270°F (132°C) |
| Exposure Time: | Four minutes  |

NOTE: Allow for cooling.

Individuals or hospitals not using the recommended method, temperature and time are advised to validate any alternative methods or cycles using an approved method or standard.

U.S. Patent Numbers: 6,224,602; 6,602,256



# **Ordering Information**

| LACPB (Standard Fixed Plate Implant Tray) |  |      |
|---|--|------|
| 1-Level Plat                              | les                                      | Qty. |
| 1100-0120                                 | Fixed Hole Anterior Cervical Plate, 20mm | 2    |
| 1100-0122                                 | Fixed Hole Anterior Cervical Plate, 22mm | 2    |
| 1100-0124                                 | Fixed Hole Anterior Cervical Plate, 24mm | 2    |
| 1100-0126                                 | Fixed Hole Anterior Cervical Plate, 26mm | 2    |
| 1100-0128                                 | Fixed Hole Anterior Cervical Plate, 28mm | 2    |
| 1100-0130                                 | Fixed Hole Anterior Cervical Plate, 30mm | 2    |
| 1100-0132                                 | Fixed Hole Anterior Cervical Plate, 32mm | 2    |
| 1100-0134                                 | Fixed Hole Anterior Cervical Plate, 34mm | 2    |
| 1100-0136                                 | Fixed Hole Anterior Cervical Plate, 36mm | 2    |

| 2-Level Plat | les                                      | Qty. |
|--------------|--|------|
| 1100-0236    | Fixed Hole Anterior Cervical Plate, 36mm | 2    |
| 1100-0238    | Fixed Hole Anterior Cervical Plate, 38mm | 2    |
| 1100-0240    | Fixed Hole Anterior Cervical Plate, 40mm | 2    |
| 1100-0242    | Fixed Hole Anterior Cervical Plate, 42mm | 2    |
| 1100-0244    | Fixed Hole Anterior Cervical Plate, 44mm | 2    |
| 1100-0246    | Fixed Hole Anterior Cervical Plate, 46mm | 2    |
| 1100-0248    | Fixed Hole Anterior Cervical Plate, 48mm | 2    |
| 1100-0250    | Fixed Hole Anterior Cervical Plate, 50mm | 2    |
| 1100-0252    | Fixed Hold Anterior Cervical Plate, 52mm | 2    |

| 3-Level Pla | tes                                      | Qty. |
|-------------|--|------|
| 1100-0352   | Fixed Hole Anterior Cervical Plate, 52mm | 2    |
| 1100-0355   | Fixed Hole Anterior Cervical Plate, 55mm | 2    |
| 1100-0358   | Fixed Hole Anterior Cervical Plate, 58mm | 2    |
| 1100-0361   | Fixed Hole Anterior Cervical Plate, 61mm | 2    |
| 1100-0364   | Fixed Hole Anterior Cervical Plate, 64mm | 2    |
| 1100-0367   | Fixed Hole Anterior Cervical Plate, 67mm | 2    |
| 1100-0370   | Fixed Hole Anterior Cervical Plate, 70mm | 2    |
| 1100-0374   | Fixed Hole Anterior Cervical Plate, 74mm | 2    |
|             |  |      |



| Bone Screw | S                                 | Qty. |
|------------|-----------------------------------|------|
| 1100-2010  | 4.0mm x 10mm Variable Bone Screw  | 4    |
| 1100-2012  | 4.0mm x 12mm Variable Bone Screw  | 12   |
| 1100-2014  | 4.0mm x 14mm Variable Bone Screw  | 12   |
| 1100-2016  | 4.0mm x 16mm Variable Bone Screw  | 8    |
| 1100-2018  | 4.0mm x 18mm Variable Bone Screw  | 6    |
| 1100-3010  | 4.0mm x 10mm Fixed Bone Screw     | 4    |
| 1100-3012  | 4.0mm x 12mm Fixed Bone Screw     | 12   |
| 1100-3014  | 4.0mm x 14mm Fixed Bone Screw     | 12   |
| 1100-3016  | 4.0mm x 16mm Fixed Bone Screw     | 8    |
| 1100-3018  | 4.0mm x 18mm Fixed Bone Screw     | 6    |
| 1100-2112  | 4.35mm x 12mm Variable Bone Screw | 4    |
| 1100-2114  | 4.35mm x 14mm Variable Bone Screw | 4    |
| 1100-2116  | 4.35mm x 16mm Variable Bone Screw | 4    |
| 1100-2118  | 4.35mm x 18mm Variable Bone Screw | 4    |
| 1100-3112  | 4.35mm x 12mm Fixed Bone Screw    | 4    |
| 1100-3114  | 4.35mm x 14mm Fixed Bone Screw    | 4    |
| 1100-3116  | 4.35mm x 16mm Fixed Bone Screw    | 4    |
| 1100-3118  | 4.35mm x 18mm Fixed Bone Screw    | 4    |
|            |                                   |      |

# **Ordering Information** (Continued)

| LACPSB (Standard Slotted Plate Implant Tray)  |   |  |
|---|---|--|
| 1-Level Pla   | tes   | Qty.   |
| 1100-1120   | Slotted Anterior Cervical Plate, 20mm   | 2  |
| 1100-1122   | Slotted Anterior Cervical Plate, 22mm   | 2  |
| 1100-1124   | Slotted Anterior Cervical Plate, 24mm   | 2  |
| 1100-1126   | Slotted Anterior Cervical Plate, 26mm   | 2  |
| 1100-1128   | Slotted Anterior Cervical Plate, 28mm   | 2  |
| 1100-1130   | Slotted Anterior Cervical Plate, 30mm   | 2  |
| 1100-1132   | Slotted Anterior Cervical Plate, 32mm   | 2  |
| 1100-1134   | Slotted Anterior Cervical Plate, 34mm   | 2  |
| 1100-1136   | Slotted Anterior Cervical Plate, 36mm   | 2  |
|   |   |  |
|   |   |  |
| 2-Level Pla   | tes   | Qty.   |
| <b>2-Level Pla</b><br>1100-1236   | tes<br>Slotted Anterior Cervical Plate, 36mm  | Qty.<br>2                                      |
|   |   | •  |
| 1100-1236   | Slotted Anterior Cervical Plate, 36mm   | 2  |
| 1100-1236<br>1100-1238  | Slotted Anterior Cervical Plate, 36mm<br>Slotted Anterior Cervical Plate, 38mm  | 2  |
| 1100-1236<br>1100-1238<br>1100-1240   | Slotted Anterior Cervical Plate, 36mm<br>Slotted Anterior Cervical Plate, 38mm<br>Slotted Anterior Cervical Plate, 40mm   | 2<br>2<br>2<br>2                               |
| 1100-1236<br>1100-1238<br>1100-1240<br>1100-1242  | Slotted Anterior Cervical Plate, 36mm<br>Slotted Anterior Cervical Plate, 38mm<br>Slotted Anterior Cervical Plate, 40mm<br>Slotted Anterior Cervical Plate, 42mm  | 2<br>2<br>2<br>2<br>2                          |
| 1100-1236<br>1100-1238<br>1100-1240<br>1100-1242<br>1100-1244                           | Slotted Anterior Cervical Plate, 36mm<br>Slotted Anterior Cervical Plate, 38mm<br>Slotted Anterior Cervical Plate, 40mm<br>Slotted Anterior Cervical Plate, 42mm<br>Slotted Anterior Cervical Plate, 44mm   | 2<br>2<br>2<br>2<br>2<br>2                     |
| 1100-1236<br>1100-1238<br>1100-1240<br>1100-1242<br>1100-1244<br>1100-1246              | Slotted Anterior Cervical Plate, 36mm<br>Slotted Anterior Cervical Plate, 38mm<br>Slotted Anterior Cervical Plate, 40mm<br>Slotted Anterior Cervical Plate, 42mm<br>Slotted Anterior Cervical Plate, 44mm<br>Slotted Anterior Cervical Plate, 46mm  | 2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2      |
| 1100-1236<br>1100-1238<br>1100-1240<br>1100-1242<br>1100-1244<br>1100-1246<br>1100-1248 | Slotted Anterior Cervical Plate, 36mm<br>Slotted Anterior Cervical Plate, 38mm<br>Slotted Anterior Cervical Plate, 40mm<br>Slotted Anterior Cervical Plate, 42mm<br>Slotted Anterior Cervical Plate, 44mm<br>Slotted Anterior Cervical Plate, 46mm<br>Slotted Anterior Cervical Plate, 48mm | 2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2<br>2 |

| 3-Level Plat | tes                                   | Qty. |
|--------------|---------------------------------------|------|
| 1100-1352    | Slotted Anterior Cervical Plate, 52mm | 2    |
| 1100-1355    | Slotted Anterior Cervical Plate, 55mm | 2    |
| 1100-1358    | Slotted Anterior Cervical Plate, 58mm | 2    |
| 1100-1361    | Slotted Anterior Cervical Plate, 61mm | 2    |
| 1100-1364    | Slotted Anterior Cervical Plate, 64mm | 2    |
| 1100-1367    | Slotted Anterior Cervical Plate, 67mm | 2    |
| 1100-1370    | Slotted Anterior Cervical Plate, 70mm | 2    |
| 1100-1374    | Slotted Anterior Cervical Plate, 74mm | 2    |



| Bone Screw | S                                 | Qty. |
|------------|-----------------------------------|------|
| 1100-2010  | 4.0mm x 10mm Variable Bone Screw  | 4    |
| 1100-2012  | 4.0mm x 12mm Variable Bone Screw  | 12   |
| 1100-2014  | 4.0mm x 14mm Variable Bone Screw  | 12   |
| 1100-2016  | 4.0mm x 16mm Variable Bone Screw  | 8    |
| 1100-2018  | 4.0mm x 18mm Variable Bone Screw  | 6    |
| 1100-3010  | 4.0mm x 10mm Fixed Bone Screw     | 4    |
| 1100-3012  | 4.0mm x 12mm Fixed Bone Screw     | 12   |
| 1100-3014  | 4.0mm x 14mm Fixed Bone Screw     | 12   |
| 1100-3016  | 4.0mm x 16mm Fixed Bone Screw     | 8    |
| 1100-3018  | 4.0mm x 18mm Fixed Bone Screw     | 6    |
| 1100-2112  | 4.35mm x 12mm Variable Bone Screw | 4    |
| 1100-2114  | 4.35mm x 14mm Variable Bone Screw | 4    |
| 1100-2116  | 4.35mm x 16mm Variable Bone Screw | 4    |
| 1100-2118  | 4.35mm x 18mm Variable Bone Screw | 4    |
| 1100-3112  | 4.35mm x 12mm Fixed Bone Screw    | 4    |
| 1100-3114  | 4.35mm x 14mm Fixed Bone Screw    | 4    |
| 1100-3116  | 4.35mm x 16mm Fixed Bone Screw    | 4    |
| 1100-3118  | 4.35mm x 18mm Fixed Bone Screw    | 4    |
|            |                                   |      |





| LACPB/LAC | PSB Standard Instrument Tray       | Qty. |
|-----------|------------------------------------|------|
| 1100-9017 | Fixation Pin Template              | 1    |
| 1100-9005 | Temporary Fixation Pin Driver      | 1    |
| 1100-9004 | Temporary Fixation Pin             | 3    |
| 1100-9008 | Single Barrel Fixed Drill Guide    | 1    |
| 1100-9010 | Single Barrel Variable Drill Guide | 1    |
| 1100-9009 | Double Barrel Fixed Drill Guide    | 1    |
| 1100-9011 | Double Barrel Variable Drill Guide | 1    |
| 1100-9018 | Quick Connect Handle               | 1    |
| 1100-9015 | Corpectomy Depth Gauge             | 1    |
| 1100-9007 | Screw Holder                       | 2    |
| 1100-9002 | Screw Driver                       | 2    |



| LACPB/LAC | PSB Standard Instrument Tray         | Qty. |
|-----------|--------------------------------------|------|
| 1100-9014 | Plate Bender                         | 1    |
| 1100-9006 | Plate Holder                         | 1    |
| 1100-9021 | 4.0mm Tap Sleeve                     | 1    |
| 1100-9013 | 4.0mm Tap Cancellous                 | 1    |
| 1100-9024 | 2.3mm/4.0mm Step Drill -12mm - Short | 2    |
| 1100-9012 | 2.3mm/4.0mm Step Drill -12mm         | 1    |
| 1100-9019 | 2.3mm/4.0mm Step Drill -14mm         | 1    |
| 1100-9020 | 2.3mm/4.0mm Step Drill -16mm         | 1    |
| 1100-9023 | 2.3mm Punch                          | 1    |
| 1100-9016 | Cover Plate Driver                   | 1    |
|           |                                      |      |

# **Ordering Information** (Continued)

| 1-Level Pla | tes                                   | Qty. |
|-------------|---------------------------------------|------|
| 1100-1120   | Slotted Anterior Cervical Plate, 20mm | 2    |
| 1100-1122   | Slotted Anterior Cervical Plate, 22mm | 2    |
| 1100-1124   | Slotted Anterior Cervical Plate, 24mm | 2    |
| 1100-1126   | Slotted Anterior Cervical Plate, 26mm | 2    |
| 1100-1128   | Slotted Anterior Cervical Plate, 28mm | 2    |
| 1100-1130   | Slotted Anterior Cervical Plate, 30mm | 2    |
| 1100-1132   | Slotted Anterior Cervical Plate, 32mm | 2    |
| 1100-1134   | Slotted Anterior Cervical Plate, 34mm | 2    |
| 1100-1136   | Slotted Anterior Cervical Plate, 36mm | 2    |
| 2-Level Pla | tes                                   | Qty. |
| 1100-1236   | Slotted Anterior Cervical Plate, 36mm | 2    |
| 1100-1238   | Slotted Anterior Cervical Plate, 38mm | 2    |
| 1100-1240   | Slotted Anterior Cervical Plate, 40mm | 2    |
| 1100-1242   | Slotted Anterior Cervical Plate, 42mm | 2    |
| 1100-1244   | Slotted Anterior Cervical Plate, 44mm | 2    |
| 1100-1246   | Slotted Anterior Cervical Plate, 46mm | 2    |
| 1100-1248   | Slotted Anterior Cervical Plate, 48mm | 2    |
| 1100-1250   | Slotted Anterior Cervical Plate, 50mm | 2    |
| 1100-1252   | Slotted Anterior Cervical Plate, 52mm | 2    |
| 3-Level Pla | tes                                   | Qty. |
| 1100-1352   | Slotted Anterior Cervical Plate, 52mm | 2    |
| 1100-1355   | Slotted Anterior Cervical Plate, 55mm | 2    |
| 1100-1358   | Slotted Anterior Cervical Plate, 58mm | 2    |
| 1100-1361   | Slotted Anterior Cervical Plate, 61mm | 2    |
| 1100-1364   | Slotted Anterior Cervical Plate, 64mm | 2    |
| 1100-1367   | Slotted Anterior Cervical Plate, 67mm | 2    |
|             |                                       | 0    |
| 1100-1370   | Slotted Anterior Cervical Plate, 70mm | 2    |

1100-1374 Slotted Anterior Cervical Plate, 74mm

2

| LACPX (Separate 1, 2 & 3-Level Fixed Plate Tray Insert) |  |      |
|---|--|------|
| 1-Level Plates  |  | Qty. |
| 1100-0120   | Fixed Hole Anterior Cervical Plate, 20mm | 2    |
| 1100-0122   | Fixed Hole Anterior Cervical Plate, 22mm | 2    |
| 1100-0124   | Fixed Hole Anterior Cervical Plate, 24mm | 2    |
| 1100-0126   | Fixed Hole Anterior Cervical Plate, 26mm | 2    |
| 1100-0128   | Fixed Hole Anterior Cervical Plate, 28mm | 2    |
| 1100-0130   | Fixed Hole Anterior Cervical Plate, 30mm | 2    |
| 1100-0132   | Fixed Hole Anterior Cervical Plate, 32mm | 2    |
| 1100-0134   | Fixed Hole Anterior Cervical Plate, 34mm | 2    |
| 1100-0136   | Fixed Hole Anterior Cervical Plate, 36mm | 2    |

| 2-Level Plates |  | Qty. |
|----------------|--|------|
| 1100-0236      | Fixed Hole Anterior Cervical Plate, 36mm | 2    |
| 1100-0238      | Fixed Hole Anterior Cervical Plate, 38mm | 2    |
| 1100-0240      | Fixed Hole Anterior Cervical Plate, 40mm | 2    |
| 1100-0242      | Fixed Hole Anterior Cervical Plate, 42mm | 2    |
| 1100-0244      | Fixed Hole Anterior Cervical Plate, 44mm | 2    |
| 1100-0246      | Fixed Hole Anterior Cervical Plate, 46mm | 2    |
| 1100-0248      | Fixed Hole Anterior Cervical Plate, 48mm | 2    |
| 1100-0250      | Fixed Hole Anterior Cervical Plate, 50mm | 2    |
| 1100-0252      | Fixed Hold Anterior Cervical Plate, 52mm | 2    |
|                |  |      |

| 3-Level Plates |  | Qty. |
|----------------|--|------|
| 1100-0352      | Fixed Hole Anterior Cervical Plate, 52mm | 2    |
| 1100-0355      | Fixed Hole Anterior Cervical Plate, 55mm | 2    |
| 1100-0358      | Fixed Hole Anterior Cervical Plate, 58mm | 2    |
| 1100-0361      | Fixed Hole Anterior Cervical Plate, 61mm | 2    |
| 1100-0364      | Fixed Hole Anterior Cervical Plate, 64mm | 2    |
| 1100-0367      | Fixed Hole Anterior Cervical Plate, 67mm | 2    |
| 1100-0370      | Fixed Hole Anterior Cervical Plate, 70mm | 2    |
| 1100-0374      | Fixed Hole Anterior Cervical Plate, 74mm | 2    |
|                |  |      |



### LACPL (Separate 4 & 5-Level Fixed Plate Tray Insert)

| 4-Level Plates |  | Qty. |
|----------------|--|------|
| 1100-0474      | Fixed Hole Anterior Cervical Plate, 74mm | 2    |
| 1100-0478      | Fixed Hole Anterior Cervical Plate, 78mm | 2    |
| 1100-0482      | Fixed Hole Anterior Cervical Plate, 82mm | 2    |
| 1100-0486      | Fixed Hole Anterior Cervical Plate, 86mm | 2    |
| 1100-0490      | Fixed Hole Anterior Cervical Plate, 90mm | 2    |
| 1100-0486      | Fixed Hole Anterior Cervical Plate, 86mm |      |

| 5-Level Plates |   | Qty. |
|----------------|---|------|
| 1100-0595      | Fixed Hole Anterior Cervical Plate, 95mm  | 2    |
| 1100-0500      | Fixed Hole Anterior Cervical Plate, 100mm | 2    |
| 1100-0505      | Fixed Hole Anterior Cervical Plate, 105mm | 2    |
| 1100-0510      | Fixed Hole Anterior Cervical Plate, 110mm | 2    |

### LACPSL (Separate 4 & 5 Slotted Plate Tray Insert)

| 4-Level Plates |                                       | Qty. |
|----------------|---------------------------------------|------|
| 1100-1474      | Slotted Anterior Cervical Plate, 74mm | 2    |
| 1100-1478      | Slotted Anterior Cervical Plate, 78mm | 2    |
| 1100-1482      | Slotted Anterior Cervical Plate, 82mm | 2    |
| 1100-1486      | Slotted Anterior Cervical Plate, 86mm | 2    |
| 1100-1490      | Slotted Anterior Cervical Plate, 90mm | 2    |
|                |                                       |      |

### 5-Level Plates

| 1100-1595 | Slotted Anterior Cervical Plate, 95mm  | 2 |
|-----------|--|---|
| 1100-1500 | Slotted Anterior Cervical Plate, 100mm | 2 |
| 1100-1505 | Slotted Anterior Cervical Plate, 105mm | 2 |
| 1100-1510 | Slotted Anterior Cervical Plate, 110mm | 2 |

Qty.

# **Ordering Information** (Continued)

### Additional Components (Special Order Only)

### 4.5mm Bone Screws

| 1100-3212 | 4.5mm x 12mm Fixed Bone Screw    |
|-----------|----------------------------------|
| 1100-3214 | 4.5mm x 14mm Fixed Bone Screw    |
| 1100-3216 | 4.5mm x 16mm Fixed Bone Screw    |
| 1100-3218 | 4.5mm x 18mm Fixed Bone Screw    |
|           |                                  |
| 1100-2212 | 4.5mm x 12mm Variable Bone Screw |
| 1100-2214 | 4.5mm x 14mm Variable Bone Screw |
| 1100-2216 | 4.5mm x 16mm Variable Bone Screw |
| 1100-2218 | 4.5mm x 18mm Variable Bone Screw |
|           |                                  |

### **Double Lead Bone Screws**

| 1100-2310 | Double Lead Variable Bone Screw 4.0mm x 10mm  |
|-----------|---|
| 1100-2312 | Double Lead Variable Bone Screw 4.0mm x 12mm  |
| 1100-2314 | Double Lead Variable Bone Screw 4.0mm x 14mm  |
| 1100-2316 | Double Lead Variable Bone Screw 4.0mm x 16mm  |
| 1100-2318 | Double Lead Variable Bone Screw 4.0mm x 18mm  |
|           |   |
| 1100-2412 | Double Lead Variable Bone Screw 4.35mm x 12mm |

| 1100-2414 | Double Lead Variable Bone Screw 4.35mm x 14mm |
|-----------|---|
| 1100-2416 | Double Lead Variable Bone Screw 4.35mm x 16mm |
| 1100-2418 | Double Lead Variable Bone Screw 4.35mm x 18mm |

| 1100-3310 | Double Lead Fixed Bone Screw 4.0mm x 10mm |
|-----------|---|
| 1100-3312 | Double Lead Fixed Bone Screw 4.0mm x 12mm |
| 1100-3314 | Double Lead Fixed Bone Screw 4.0mm x 14mm |
| 1100-3316 | Double Lead Fixed Bone Screw 4.0mm x 16mm |
| 1100-3318 | Double Lead Fixed Bone Screw 4.0mm x 18mm |

| 1100-3412 | Double Lead Fixed Bone Screw 4.35mm x 12mm |
|-----------|--|
| 1100-3414 | Double Lead Fixed Bone Screw 4.35mm x 14mm |
| 1100-3416 | Double Lead Fixed Bone Screw 4.35mm x 16mm |
| 1100-3418 | Double Lead Fixed Bone Screw 4.35mm x 18mm |

### Blunt Bone Screws

| Brant Bone Ger |   |
|----------------|---|
| 1100-2010B     | Blunt Variable Bone Screw 4.0mm x 10mm  |
| 1100-2012B     | Blunt Variable Bone Screw 4.0mm x 12mm  |
| 1100-2014B     | Blunt Variable Bone Screw 4.0mm x 14mm  |
| 1100-2016B     | Blunt Variable Bone Screw 4.0mm x 16mm  |
| 1100-2018B     | Blunt Variable Bone Screw 4.0mm x 18mm  |
| 1100-2020B     | Blunt Variable Bone Screw 4.0mm x 20mm  |
|                |   |
| 1100-3010B     | Blunt Fixed Bone Screw 4.0mm x 10mm     |
| 1100-3012B     | Blunt Fixed Bone Screw 4.0mm x 12mm     |
| 1100-3014B     | Blunt Fixed Bone Screw 4.0mm x 14mm     |
| 1100-3016B     | Blunt Fixed Bone Screw 4.0mm x 16mm     |
| 1100-3018B     | Blunt Fixed Bone Screw 4.0mm x 18mm     |
| 1100-3020B     | Blunt Fixed Bone Screw 4.0mm x 20mm     |
|                |   |
| 1100-2112B     | Blunt Variable Bone Screw 4.35mm x 12mm |
| 1100-2114B     | Blunt Variable Bone Screw 4.35mm x 14mm |
| 1100-2116B     | Blunt Variable Bone Screw 4.35mm x 16mm |
| 1100-2118B     | Blunt Variable Bone Screw 4.35mm x 18mm |
| 1100-2120B     | Blunt Variable Bone Screw 4.35mm x 20mm |
|                |   |
| 1100-3112B     | Blunt Fixed Bone Screw 4.35mm x 12mm    |
| 1100-3114B     | Blunt Fixed Bone Screw 4.35mm x 14mm    |
| 1100-3116B     | Blunt Fixed Bone Screw 4.35mm x 16mm    |
| 1100-3118B     | Blunt Fixed Bone Screw 4.35mm x 18mm    |
| 1100-3120B     | Blunt Fixed Bone Screw 4.35mm x 20mm    |
|                |   |



# Further Information

This brochure describes a surgical technique used by Jeff Wang, M.D., UCLA, Santa Monica, CA, Alan Hilibrand, M.D, Thomas-Jefferson Hospital, Philadelphia, PA and Dan Riew, M.D, Washington University, St. Louis, MO. Biomet Spine as the manufacturer of this device, does not recommend this product or any specific surgical technique for use on any individual patient. The surgeon who performs any implant procedure is responsible for determining the appropriate product(s) and utilizing the appropriate techniques(s) for said implantation in each individual patient. The contents of this manual are intended to be only a guide and are not intended to set a standard of care.

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