The CerviFix™ System

Including the StarLock Components
The **CerviFix System**

The *CerviFix* System is a comprehensive set of implants, including clamps, screws, hooks, and rods, designed for posterior stabilization of the upper spine.* It provides the flexibility required to meet variable patient anatomy.

The *CerviFix* System has the versatility to extend to the occiput and to cross the cervicothoracic junction. Linking the *CerviFix* System to the Universal Spinal System allows a continuous construct spanning from the occiput to the sacrum.

**Two different clamp/screw designs address varying surgical needs:**

1. The *CerviFix* clamps and screws permit optimal variability in clamp placement along the rod, facilitating proper device alignment.
2. The *StarLock* clamps attach after screw insertion and create a rigid, locked construct.

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*Indications:

**Hooks, Plate/Rods, Rods and Screws**—When intended to promote fusion of the cervical spine and occipitocervical junction (Occiput–T3), the plate/rod, rod, hook and screw (3.2 mm cortex) components of the Synthes *CerviFix* System are indicated for the following: DDD (neck pain of discogenic origin with degeneration of the disc as confirmed by patient history and radiographic studies), spondylolisthesis, spinal stenosis, fracture/dislocation, atlantoaxial fracture with instability, occipitocervical dislocation, revision of previous cervical spine surgery, tumors. When used to treat these cervical and occipitocervical conditions, these screws are limited to occipital fixation only.

**Rods, Clamps, Screws and Nuts**—The rods, clamps, screws and nuts are intended to promote fusion following reduction of fracture/dislocation or trauma in the upper thoracic spine (T1–T3). The use of these screws (3.5 mm cancellous, 4.0 mm cancellous, 3.5 mm cortex, and 4.2 mm cortex) is limited to placement in T1–T3 in treating thoracic conditions only. They are not intended to be placed in or treat conditions involving the cervical spine. The Synthes *CerviFix* System can also be linked to the Synthes Universal Spinal System using the 3.5 mm/6.0 mm parallel connectors from that system and via the *CerviFix* tapered rods using lamina hooks, transverse process hooks, pedicle hooks, 4.2 mm screws, and the 5.0 mm/6.0 mm parallel connector.
CerviFix Implants

Titanium Clamps

Medial [498.947] (green)
Provides 15° nominal medial screw angulation (5°–25° range when 3.5 mm cancellous screws are used) and sufficient variability in screw placement in the cephalocaudal plane.

Lateral [498.948] (blue)
Provides 15° nominal lateral screw angulation (5°–25° range when 3.5 mm cancellous screws are used) and sufficient variability in screw placement in the cephalocaudal plane.

Neutral [498.955] (purple)
Permits screw insertion perpendicular to the rod.

Titanium Screws

3.5 mm Cancellous Bone Screws
Fully threaded, [403.508–403.540]
8 mm–40 mm lengths*
For use with the clamps, facilitating adequate screw insertion and allowing an additional 10° angulation in all directions

4.0 mm Cancellous Bone Screws
5.0 mm head, fully threaded [409.010–409.026]
10 mm–26 mm lengths*
For emergency applications

3.2 mm Cortex Screws
[403.308.99–403.322.99]
8 mm–22 mm lengths*
For use in the occiput with the Occipital Plate/Rod

* 2 mm increments
CerviFix Implants

Titanium Occipital Plate/Rod [498.956]
- Provides simple, stable anatomic fixation of the occipitocervical junction
- Contourable implant fits varying patient anatomy
- Fixes to occiput with the 3.2 mm Cortex Screws

3.5 mm Titanium Rods [498.120, 498.125, 498.957]
- 80 mm, 120 mm, 240 mm lengths
- Contourable

- 3.5 mm/5.0 mm and 3.5 mm/6.0 mm
- 120 mm/170 mm and 240 mm/250 mm lengths
- Link the CerviFix System to the Universal Spinal System (USS)

Preassembled Transconnector
- Easy placement after CerviFix construct is in position
- Variable axis connection increases flexibility of use
- Bridges rod distances from 32 mm to 60 mm [498.916] and 32 mm to 75 mm [498.917]
- Connection is easily locked and may be unlocked with the same instrument

Titanium Hooks
- For sublaminar insertion and stabilization
- For right [498.940] and left [498.941] applications
- Shorter hooks for right [498.942] and left [498.943] applications

3.5 mm/3.5 mm Titanium Parallel Rod Connector [498.935]
- Extends an existing construct
- Provides a lateral offset to assist in crossing the cervicothoracic junction

3.5 mm/6.0 mm Titanium Parallel Rod Connector [498.960]
- Links the CerviFix System to the Universal Spinal System, bridging the cervicothoracic junction
CerviFix Instruments

Template for Occipital Plate/Rod [388.869]

Template for 3.5 mm Rod [388.868]

Plate/Rod Cutter [391.990]

Bending Pliers for 3.5 mm Titanium Rods [388.005]

Rod Cutter for 3.5 mm Titanium Rods [388.016]
**CerviFix Instruments**

**Awl, for 2.0 mm hole [388.01]**

**2.0 mm Drill Bit, quick coupling, with 65 mm stop, 165 mm [388.03]**

**2.0 mm Kirschner Wire, with stop [388.04]**

**Drill Guide, with graduation for 2.0 mm drill bit [388.029]**

Depth can be preset to provide stop for safe drilling

**Handle with quick coupling, small [311.43.99]**

**Tap for 3.5 mm Cancellous Bone Screws, 145 mm, 50 mm calibration [388.05]**

Calibrations allow tapping depth to be monitored when used with the tap sleeve

**Tap Sleeve [388.07]**

**Tap for 3.2 mm Cortex Bone Screws, 145 mm 50 mm calibration [388.06]**

**Depth Gauge for 2.7 mm and small screws [319.04]**
Small Hexagonal Screwdriver, long [314.57]

Holding Sleeve [314.08]

Holding Forceps for 3.5 mm Rods [388.011]
Permit in situ rod bend adjustment

Holding Forceps [387.53]

Clamp Holding Forceps [388.034]

Compression Forceps [388.015]
Facilitate restoration of lordosis

Crimper, for use with Transconnector [388.038]
The StarLock Components

The StarLock implants create a rigid, locked variable axis clamp and screw construct, and are compatible with the CerviFix implants. *

The StarLock implants allow independent screw placement
- Clamps attach after screw insertion
- Clamps with different offsets accommodate medial-lateral variability

The StarLock implants eliminate the need for preassembly
- Rod may be attached after clamp placement

The StarLock implants create a rigid, locked construct
- Resistant to screw backout
- Resistant to construct pullout
- Based on fundamental AO ASIF principles

StarLock Implants

Titanium Clamps

Upgoing (left/right) [498.963/498.962]
(left = blue, right = medium green)
Provide up to 50° screw angulation in the cephalocaudal plane

Neutral [498.961] (medium blue)
Provides 25° of screw angulation in all directions

Offset Neutral [498.964] (gold)
Provides an additional 2 mm offset between the rod and screw to accommodate medial-lateral variability

Offset Upgoing (left/right) [498.967/498.966], additionally available
Provides an additional 2 mm offset between the rod and the screw

Extended Offset Neutral [498.969], additionally available
Provides an additional 4 mm offset between the rod and the screw

* StarLock and CerviFix screws are not interchangeable
StarLock Implants

Titanium Screws

- Self-tapping tip eliminates the need for tapping
- Self-retaining StarDrive recess facilitates screw loading

3.5 mm Titanium Cancellous StarLock Screws [497.301–497.312]
10 mm–30 mm lengths (thread + collar)
- For primary applications

4.0 mm Titanium Cancellous StarLock Screws [497.341–497.352]
10 mm–30 mm lengths (thread + collar)
- For emergency applications

3.5 mm Titanium Cortex StarLock Screws [497.321–497.333]
32 mm–54 mm lengths (thread + collar)
- Longer screw lengths accommodate special applications
- Larger core diameter for increased bending strength

Titanium Nut [498.965]
5.5 mm width across flats
- Rigidly locks screw to clamp
**StarLock Instruments**

3.5 mm/4.0 mm *StarDrive* Screwdriver, self-retaining [388.032]
Eliminates the need for a holding sleeve

Socket Wrench, 5.5 mm width across flats [388.031]
- Self-retaining tip facilitates loading and insertion of the 5.5 mm nut
- Provides countertorque when used with the screwdriver, facilitating screw tightening

Clamp Removal Tool [388.035]
Disengages the clamp from the screw if removal is required

**Also Available**

Persuader for *StarLock* [388.036]
Facilitates rod insertion to the clamp

Reamer for *StarLock* [388.037]
Removes excess bone around the screw head

Holding Sleeve for *StarLock* Screws [388.033]
The CerviFix System

The CerviFix System consists of the following sets:

145.889  CerviFix Instrument Set (includes Graphic Case 690.006)
145.864  CerviFix Titanium Hook, Rod, and Connector Module Set
145.888  CerviFix Titanium Clamp and Screw Module Set

105.887  StarLock Instrument and Titanium Implant Set, which consists of:
          145.887  StarLock Titanium Clamp and Screw Module Set
          388.031  Socket Wrench, 5.5 mm width across flats, 2 ea.
          388.032  3.5 mm/4.0 mm StarLock Screwdriver, self-retaining, 2 ea.
          388.035  Clamp Removal Tool

145.887  StarLock Titanium Clamp and Screw Module Set
          (included in Set 105.887, may also be ordered separately)

System Configurations

<table>
<thead>
<tr>
<th>For CerviFix procedures only:</th>
<th>For StarLock procedures only:</th>
<th>For both CerviFix and StarLock procedures:</th>
</tr>
</thead>
<tbody>
<tr>
<td>145.889</td>
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<tr>
<td>145.864</td>
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<td>145.888</td>
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<td>105.887</td>
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</tbody>
</table>
**CerviFix Titanium Hook, Rod and Connector Module Set [145.864]**

![CerviFix Module](image)

**Module Contents**

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>304.864</td>
<td><em>CerviFix</em> Titanium Hook, Rod and Connector Module Case</td>
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<tr>
<td>498.120</td>
<td>3.5 mm Titanium Rod, 80 mm, 4 ea.</td>
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<tr>
<td>498.125</td>
<td>3.5 mm Titanium Rod, 120 mm, 4 ea.</td>
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<td>498.957</td>
<td>3.5 mm Titanium Rod, 240 mm, 2 ea.</td>
</tr>
<tr>
<td>498.916</td>
<td>Titanium Transconnector, 60 mm, 2 ea.</td>
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<tr>
<td>498.917</td>
<td>Titanium Transconnector, 75 mm, 2 ea.</td>
</tr>
<tr>
<td>498.940</td>
<td>Titanium Hook, right, 2 ea.</td>
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<tr>
<td>498.941</td>
<td>Titanium Hook, left, 2 ea.</td>
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<tr>
<td>498.942</td>
<td>Titanium Small Hook, right, 2 ea.</td>
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<tr>
<td>498.943</td>
<td>Titanium Small Hook, left, 2 ea.</td>
</tr>
<tr>
<td>498.935</td>
<td>Titanium Parallel Rod Connector, 3.5 mm/3.5 mm, 4 ea.</td>
</tr>
<tr>
<td>498.960</td>
<td>Titanium Parallel Rod Connector, 3.5 mm/6.0 mm, 4 ea.</td>
</tr>
<tr>
<td>498.956</td>
<td>Titanium Occipital Plate/Rod, 4 ea.</td>
</tr>
<tr>
<td>403.308.99</td>
<td>3.2 mm Titanium Cortex Screws, 8 mm–18 mm,* 8 ea.</td>
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<tr>
<td>403.318.99</td>
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**Also Available**

<table>
<thead>
<tr>
<th>Item Code</th>
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<tbody>
<tr>
<td>403.320.99</td>
<td>3.2 mm Titanium Cortex Screw, 20 mm</td>
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<tr>
<td>403.322.99</td>
<td>3.2 mm Titanium Cortex Screw, 22 mm</td>
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<tr>
<td>498.950</td>
<td>Titanium Trans-Connector Clamp, right</td>
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<td>498.951</td>
<td>Titanium Trans-Connector Clamp, left</td>
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<tr>
<td>498.936</td>
<td>3.5/5.0 mm Titanium Hard Rod, 120/170 mm</td>
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<tr>
<td>498.937</td>
<td>3.5/6.0 mm Titanium Hard Rod, 120/170 mm</td>
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<td>498.938</td>
<td>3.5/6.0 mm Titanium Hard Rod, 240/250 mm</td>
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<tr>
<td>498.939</td>
<td>3.5/6.0 mm Titanium Hard Rod, 240/250 mm</td>
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* 2 mm increments
### Module Contents

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>304.888</td>
<td>CerviFix Titanium Clamp and Screw Module Case</td>
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<tr>
<td>498.947</td>
<td>Titanium Medial Clamp, 6 ea.</td>
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<tr>
<td></td>
<td>498.948 Titanium Lateral Clamp, 12 ea.</td>
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<tr>
<td></td>
<td>498.955 Titanium Neutral Clamp, 6 ea.</td>
</tr>
<tr>
<td>3.5 mm</td>
<td>Titanium Cancellous Bone Screws</td>
</tr>
<tr>
<td>403.508</td>
<td>8, 10, 24—40 mm,* 6 ea.</td>
</tr>
<tr>
<td>403.540</td>
<td>12—22 mm,* 12 ea.</td>
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* 2 mm increments
StarLock Titanium Clamp and Screw Module Set [145.887]

Module Contents

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>304.887</td>
<td>StarLock Titanium Clamp and Screw Module Case</td>
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</tr>
<tr>
<td>498.961</td>
<td>Titanium Neutral StarLock Clamp, 14 ea.</td>
<td></td>
</tr>
<tr>
<td>498.962</td>
<td>Titanium Upgoing StarLock Clamp, right, 4 ea.</td>
<td></td>
</tr>
<tr>
<td>498.963</td>
<td>Titanium Upgoing StarLock Clamp, left, 4 ea.</td>
<td></td>
</tr>
<tr>
<td>498.964</td>
<td>Titanium Offset Neutral StarLock Clamp, 4 ea.</td>
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<tr>
<td>498.965</td>
<td>Titanium Nut, 5.5 mm width across flats, 32 ea.</td>
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</tbody>
</table>

- 3.5 mm Titanium Cancellous StarLock Screws
  - 497.301: 10 mm¹, 6 ea.
  - 497.302: 12–18 mm,⁴ 12 ea.
  - 497.305: 20–24 mm,⁴ 6 ea.
  - 497.308: 26 mm¹, 4 ea.
  - 497.311: 28–30 mm,⁴ 4 ea.

- 4.0 mm Titanium Cancellous StarLock Screws
  - 497.341: 10 mm¹, 4 ea.
  - 497.342: 12–18 mm,⁴ 8 ea.
  - 497.345: 20–26 mm,⁴ 4 ea.
  - 497.349: 28–30 mm,⁴ 4 ea.

- 3.5 mm Titanium Cortex StarLock Screws
  - 497.321: 32–48 mm,⁴ 4 ea.
  - 497.329: 50–54 mm,⁴ 4 ea.

Also Available

<table>
<thead>
<tr>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td>498.966</td>
<td>Titanium Offset Upgoing StarLock Clamp, right</td>
</tr>
<tr>
<td>498.967</td>
<td>Titanium Offset Upgoing StarLock Clamp, left</td>
</tr>
<tr>
<td>498.969</td>
<td>Titanium Extended Offset Neutral StarLock Clamp</td>
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</tbody>
</table>

¹ length includes thread + collar
⁴ 2 mm increments
**CerviFix Instrument Set [145.889]**

The *CerviFix* Graphic Case [690.006] consists of:

- 690.006.00 Lid
- 690.006.10 Base
- 690.006.20 Top Instrument Tray
- 690.006.30 Bottom Instrument Tray

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**Top Instrument Tray**

- 311.43.99 Handle with quick coupling, 2 ea.
- 314.08 Holding Sleeve, 2 ea.
- 314.57 Small Hexagonal Screwdriver, long, 2 ea.
- 319.04 Depth Gauge for 2.7 mm and small screws
- 388.01 Awl for 2.0 mm hole
- 388.029 Drill Guide with graduation for 2.0 mm drill bit
- 388.03 2.0 mm Drill Bit, quick coupling, with 65 mm stop, 165 mm, 2 ea.
- 388.04 2.0 mm Kirschner Wire with stop, 2 ea.
- 388.05 Tap for 3.5 mm Cancellous Bone Screws, 145 mm, 50 mm calibration
- 388.06 Tap for 3.2 mm Cortex Screws, 145 mm, 50 mm calibration
- 388.07 Tap Sleeve
- 388.868 Template for 3.5 mm Rod, 240 mm
- 388.869 Template for Occipital Plate/Rod

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**Bottom Instrument Tray**

- 387.53 Holding Forceps
- 388.005 Bending Pliers for 3.5 mm Titanium Rods
- 388.011 Holding Forceps for 3.5 mm Rods, 2 ea.
- 388.015 Compression Forceps
- 388.034 Clamp Holding Forceps
- 388.038 Crimper for use with Transconnector
- 391.990 Plate/Rod Cutter

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**Additional Instruments for Starlock Implants**

- 388.031 Socket Wrench, 5.5 mm width across flats, 2 ea.
- 388.032 3.5 mm/4.0 mm *StarDrive* Screwdriver, self-retaining, 2 ea.
- 388.035 Clamp Removal Tool

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**Also Available**

- 388.016 Rod Cutter for 3.5 mm Titanium Rods
- 388.036 Persuader for *StarLock*
- 388.037 Reamer for *StarLock*
- 388.033 Holding Sleeve for *StarLock* Screws

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**Reference Material**
