



SURGICAL TECHNIQUE GUIDE  
S<sub>100</sub> PEDICLE SCREW SYSTEM





## S 100 PEDICLE SCREW SYSTEM

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### Features

- Low Profile, polyaxial design
- 60 degrees of screw angulation
- Helical Flange locking technology
- Wide range of diameter options
- **Quick Thread, double-lead** thread design
- Multiple rod reduction devices
- Streamlined instrumentation, cases and trays




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## Introduction

The KYOCERA S100 Pedicle Screw System offers the spinal surgeon an outstanding system for reduction of spinal deformities, stabilization of unstable spinal segments, and enhanced fusion. This comprehensive system provides a top loading variable axis pedicle screw with helical flange technology, which reduces splaying of the tulip. This feature, in turn, allows for a more narrow profile increasing space for fusion and decreasing adjacent segment facet impingement.

This system provides options that will allow the surgeon to tailor the construct to the specific needs of the patient. Rod diameters consist of 5.5mm and 6.0mm and are available in the following materials; commercially pure Titanium, Titanium alloy and Cobalt-Chrome alloy. The system provides reduction screws to the deformity surgeon and cannulated screws to MIS surgeons desiring this feature. Screws are self-tapping and have a double-lead thread design. Diameters range from 4.5mm to 8.5mm to fit all anatomic variations encountered during spinal stabilization.

The instrumentation is designed for patient safety, surgeon comfort and efficiency. The three trays that contain this system provide great OR efficiency. Enhanced features include a novel engagement for rod reduction, multiple reduction options, a unique zero-clearance rod reduction alternative, and an innovative screw removal instrument. Screw distraction and screw compression as well as sagittal and coronal in-situ bending instruments allow for deformity correction.



## Indications for Use

The KYOCERA S100 Pedicle Screw System is intended to provide immobilization and stabilization of spinal segments in skeletally mature patients as an adjunct to fusion in the treatment of the following acute and chronic instabilities or deformities of thoracic, lumbar, and sacral spine: fracture, dislocation, failed previous fusion (pseudoarthrosis), spinal stenosis, degenerative spondylolisthesis with objective evidence of neurological impairment, spinal deformations such as scoliosis or kyphosis, and loss of stability due to tumors.

The Renovis S 100 Pedicle Screw System is intended for the treatment of severe spondylolisthesis (Grade 3 and 4) of the L5-S1 vertebrae in skeletally mature patients receiving fusion by autogenous bone graft having implants attached to the lumbar and sacral spine (L3 to sacrum) with removal of the implants after the attainment of a solid fusion.

# Warnings

These warnings do not include all possible adverse surgical effects, but are particular to metallic internal fixation devices. Be sure to explain general surgical risks to the patient before surgery.

The safety and effectiveness of pedicle screw spinal systems have been established for spinal conditions with significant mechanical instability or deformity requiring fusion with instrumentation. These conditions are significant mechanical instability or deformity of the thoracic, lumbar, and sacral spine secondary to severe spondylolisthesis (grades 3 and 4) of the L5-S1 vertebrae, degenerative spondylolisthesis with objective evidence of neurological impairment, fracture, dislocation, scoliosis, kyphosis, spinal tumor, and failed previous fusion (pseudoarthrosis). The safety and effectiveness of these devices for any other conditions are unknown.

Based on fatigue testing results, when using the RENOVIS™ S100 Pedicle Screw System, the physician/surgeon should consider the levels of implantation, patient weight, patient activity level, and other patient conditions, which may impact on the performance of this system.

# Cautions

Only experienced spinal surgeons with specific training in the use of this pedicle screw spinal system should implant pedicle screw spinal systems, because this is a technically demanding procedure presenting a risk of serious injury to the patient

1. **Surgical implants must never be reused.** Even though the device appears undamaged, it may have small defects and internal stress patterns which may lead to early breakage.
2. **Correct implant handling is vital.** Only contour metal implants with proper equipment. Avoid any notching, scratching or reverse bending of the devices when contouring. Alterations will produce defects in surface finish and internal stresses that may become the focal point for eventual breakage. Do not use the implant if damage is suspected.
3. **Bending the construct.** Titanium alloy components should never be bent sharply or reverse bent. If a construct is over-contoured, contour a new construct correctly rather than reverse bending the over-contoured construct.
4. **Implant removal after healing.** If the device is not removed after the completion of its intended use, any of the following complications may occur:
  - a. Corrosion, with localized tissue reaction or pain;
  - b. Implant migration resulting in injury;
  - c. Risk of additional injury from postoperative trauma;
  - d. Bending, loosening, and/or breakage, which could make removal impractical or difficult;
  - e. Pain, discomfort, or abnormal sensations due to device presence;
  - f. Possible increased risk of infection;
  - g. Bone loss due to stress shielding. Carefully weigh the risks versus benefits when deciding whether to remove the implant. Implant removal should be followed by adequate postoperative management to avoid refracture or deformity. If the patient is older and has a low activity level, the surgeon may choose not to remove implant thus eliminating the risks involved in a second surgery.
5. **Adequately instruct the patient.** Postoperative care and the patient's ability and willingness to follow instructions are among the most important aspects of successful bone healing. Inform the patient about the implant limitations, and to limit physical activities, especially lifting and twisting motions and participating in any type of sports. Tell the patient that a metallic implant is not as strong as normal healthy bone and could loosen, bend, and/or break if excessive demands are placed on it, especially in the absence of complete bone healing. Implants displaced or damaged by improper activities may migrate and damage the nerves or blood vessels. Active, debilitated, or demented patients who cannot properly use weight-supporting devices may be particularly at risk during postoperative rehabilitation.

# Surgical Technique

## Patient Positioning

Position the patient in a prone position using a suitable positioning method, such as chest rolls or a positioning frame designed for such purposes, ensuring decompression of the abdomen and sufficient protection for all bony prominences. Maintain hips in extension to preserve lumbar lordosis for fusion and instrumentation of the lumbosacral junction. Care should be taken to avoid undue intra-abdominal pressure that can increase venous congestion and lead to excessive intra-operative bleeding.

## Surgical Exposure

Exposure is accomplished using a standard midline incision over the spinous processes, extended to include one level above and one level below the intended instrumentation levels. Expose the spinal column in routine fashion, proceeding to decompression as indicated. Care should be taken to avoid disruption of the facet joint capsules above and below the intended fusion segments.

## Placement of Components

**NOTE:** Decortication and placement of bone graft is typically performed after preparation of pedicle screw pilot holes, but before actual pedicle screw insertion. Meticulous attention to proper fusion technique is critical to the success of the procedure.

## PEDICLE SCREWS

As with all surgical procedures involving pedicle screw instrumentation systems, pre-operative evaluation of CT scans and MRI scans is essential in planning the appropriate size, angle, and depth of pedicle screws. Intra-operative attention to several pedicle screw placement factors such as entry point, orientation, and depth of placement can help ensure safety, optimize fixation, and enhance ultimate surgical outcome.

### Entry Point

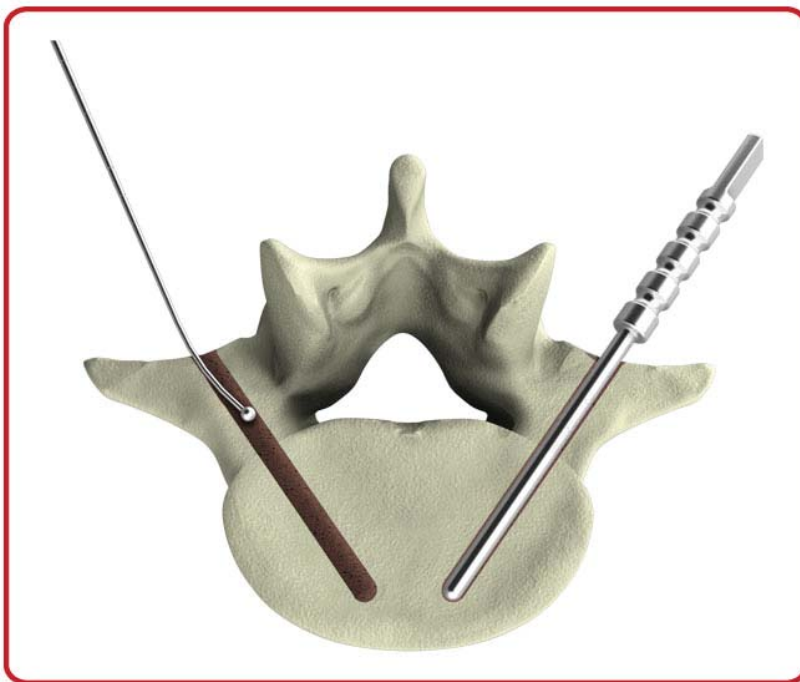
Identify the pedicle entry point at the intersection of the horizontal line bisecting the middle of the transverse processes and vertical line connecting the lateral edges of the pars inter-articularis. Decorticate the intended pedicle entry point using a rongeur or burr then create a small cortical opening using an awl. Repeat the process at each intended point of pedicle screw insertion.

### Orientation

Insert the pedicle probe through the entry point and advance into the pedicle canal, in the sagittal and axial direction, to a depth determined by preoperative imaging. Repeat the process at each intended point of pedicle screw insertion. Utilize a ball tipped feeler gage to palpate the superior, inferior, medial, and lateral walls of the pedicle canal.



Confirm proper positioning and orientation radiographically by first placing guide pins into each of the pedicle canals. Use grooved guide pins for one side of the patient and non-grooved pins for the other side to aid in radiographic identification. Angle the image intensifier along the pedicle axis to ensure proper positioning in the sagittal and axial directions.



### **Length**

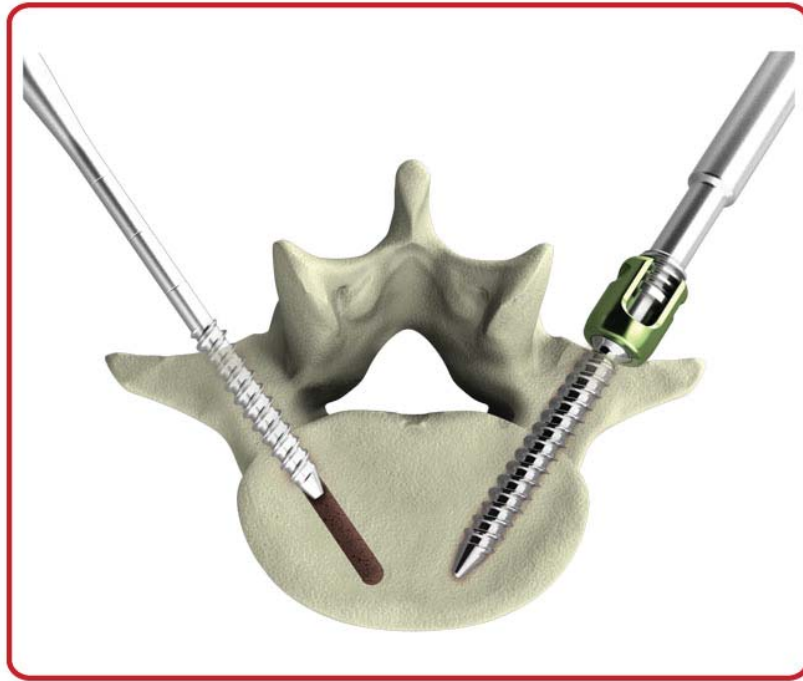
After confirming satisfactory guide pin positioning in the axial and sagittal directions, obtain a lateral image to confirm appropriate length. Advance the guide pin to between 60% and 80% of the depth of the vertebral body as projected on a true lateral image. Determine pedicle screw length using the pedicle marker.

### **Screw Insertion**

**Tap:** Use the appropriate size tap to thread the proximal portion of the pedicle screw pilot hole. Use the ball tipped feeler gage to again assess the integrity of the pedicle after tapping.

**Driver:** Affix the pedicle screw to the appropriate screwdriver assembly by engaging the female hexalobular tip of the driver with the proximal male hexalobular end of the screw. Then slide the sleeve of the driver down and thread the sleeve into the tulip. Ensure that the sleeve is fully engaged in order to keep the axis of the screwdriver and pedicle screw properly aligned. Finally, lock the sleeve by engaging the adaptor at the proximal end of the driver.

**NOTE:** While assembling the pedicle screw to the screwdriver assembly it is important to keep the ratcheting mechanism of the large axial ratcheting driver handle in the reverse position.



**Insertion:** Insert the pedicle screw to the desired depth by turning the driver in a clockwise fashion. After satisfactory placement, the driver is disengaged by disengaging the locking adapter and thereafter turning the sleeve counter-clockwise while holding the handle stationary and withdrawing in an axial manner.

## **RODS**

### **Selection**

Rods included in the KYOCERA S100 Pedicle Screw System are available in straight and lordotic contours of various lengths. Rod contour selection is based on surgeon preference and depends on the specific correction goals of each individual procedure. Rod length determination should allow for at least 5mm extension beyond the most superior and most inferior pedicle screw bodies.

### **Contour**

The polyaxial design of the KYOCERA S100 Pedicle Screw System helps limit the degree of rod bending necessary for achieving adequate rod seating. If necessary, rods may be contoured using a rod bender and/or bending irons to enhance correction or to help ensure complete seating within the body (proximal end) of each pedicle screw. Care should be taken to avoid off-plane or bi-directional bending.

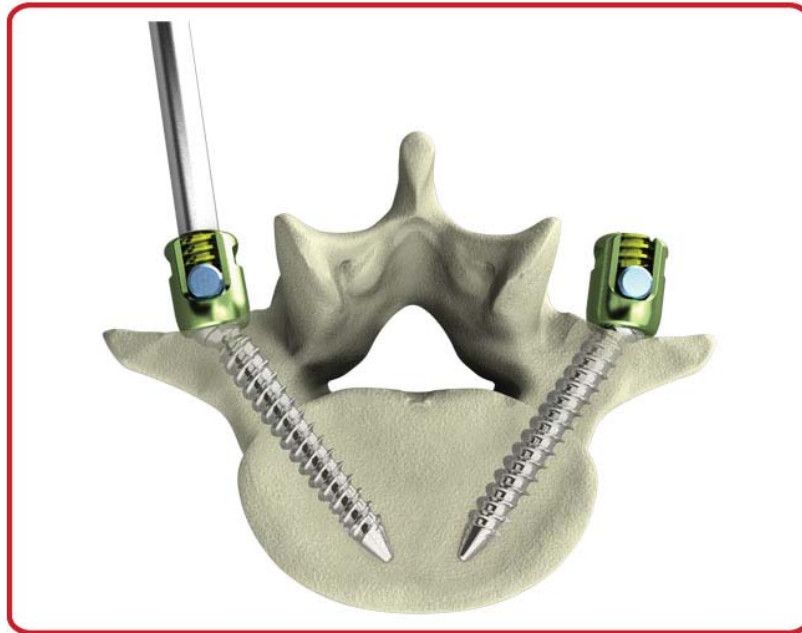
### **Placement**

Rods are placed within the open portions of the bodies of the top-loading pedicle screws. The polyaxial design of the KYOCERA S100 Pedicle Screw System allows adjustment to the position and orientation of the rod.



## LOCKING CAPS

Locking caps are inserted into the pedicle screw bodies after the rods have been placed into position. Locking caps should not be fully tightened at this point but should remain loose and in place until the rod derotation, compression, or distraction is accomplished.

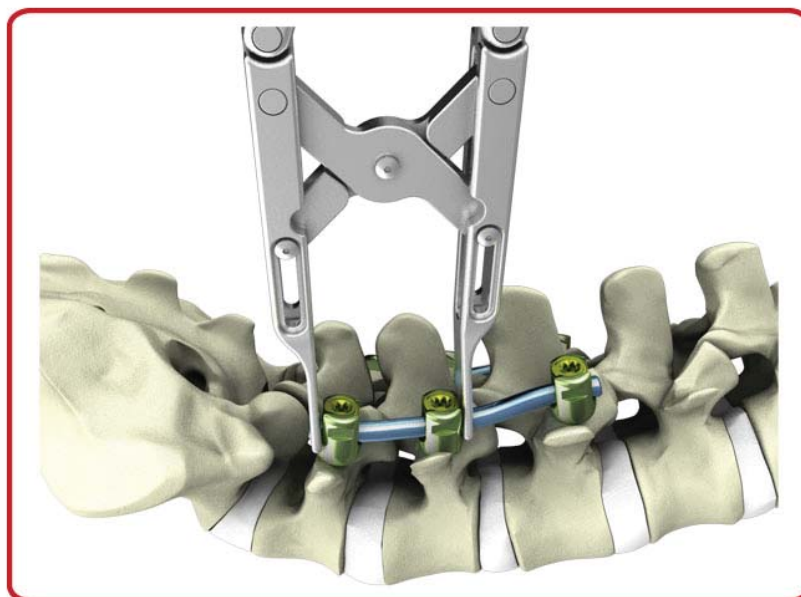


### Rod Rotation

After the rods are placed within the pedicle screw bodies and all locking caps are in place, the rod holders are used to turn the contoured rod into lordosis, if necessary. Following derotation, the superior locking cap is tightened to hold the rod in position. The rod should remain loose in all other pedicle screw bodies to accommodate compression and distraction as needed.

### Alignment and Tightening

**Alignment:** After the construct has been properly assembled, each locking cap is tightened provisionally beginning at the superior end of the construct and proceeding distally. Segmental compression or distraction is accomplished (using the compressor or distractor, respectively) to correct deformities in the frontal and/or sagittal planes as indicated. As each segmental interval is adjusted, the locking cap is provisionally tightened.



**Final Tightening:** Final tightening of the locking caps is conducted after provisional tightening has been accomplished and satisfactory compression and distraction have been achieved. Instrumentation used for final locking cap tightening consists of the large hexalobular driver with the torque limiting handle and the anti-torque device.

The anti-torque device is employed to limit force applied to the rod while torque is applied to the locking cap to achieve final tightening. The torque driver handle is pre-set to transmit a torque of 100 inch-pounds to the locking cap.

Final tightening is accomplished by first placing the anti-torque device over the pedicle screw and rod, and thereafter inserting the hexalobular driver within

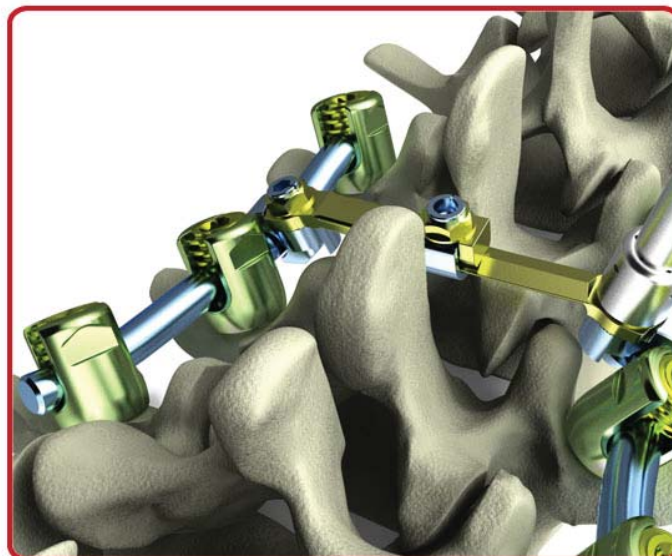


the barrel of the anti-torque device until the locking cap is engaged. Tightening is accomplished by turning the driver in a clockwise manner, while holding the anti-torque device steady, until the torque limiter prevents further tightening. The anti-torque device is then withdrawn in an axial manner.

## TRANSVERSE LINKS

### Transverse Link Placement

One or more transverse links may be placed between adjacent rods to enhance torsional stability of the overall construct. The transverse link is adjustable in length and, if desired, can be placed with the rods in slight horizontal compression by use of the compressor. After the transverse link is in position and its length adjusted as appropriate, the locking cap is tightened using the transverse link driver.



## Closure

A layered closure of the deep fascia, superficial fascia, subcutaneous tissue and skin is performed in a standard fashion. Drains are used at the discretion of the surgeon and decided on a case-by-case basis.

## Post-operative Care

Standard post-operative management protocols are utilized. Post-operative bracing is ordered at the discretion of the surgeon and is somewhat dependent upon the location and strength of bone fixation and the degree of pre-operative instability. Radiographs to assess alignment and fusion maturation are generally taken at one month, three months and six months post-operatively.

## REMOVAL

All locking caps must first be removed. Use the hexalobular driver to engage the locking cap and remove it from the pedicle screw. Using the small rod holder, disengage the rod from the pedicle screws. Then, using the inner hexalobular driver, back out and remove the polyaxial screw. If the inner driver cannot engage with the screw shaft, then use the revision driver assembly to back out and remove the screw.



# S100 PEDICLE SCREW SYSTEM Product Catalogue



2101-001-001 - Awl



2101-001-002 - Curved Flat Probe



2101-001-004 - Straight Flat Probe



2101-001-005 - Lenke Style Probe



2101-001-006  
Double Sided Flexible Feeler Gage



2101-001-007  
Single Sided Flexible Feeler Gage

2101-001-008  
Stiff Feeler Gage



2101-001-009 - Revision Screw Driver



2101-001-010  
Screw Driver Assembly

# S100 PEDICLE SCREW SYSTEM

## Product Catalogue



2101-403-000 - 4.0mm Tap



2101-453-000 - 4.5mm Tap  
2101-453-001 - 4.5mm Cannulated Tap



2101-553-000 - 5.5mm Tap  
2101-553-001 - 5.5mm Cannulated Tap



2101-653-000 - 6.5mm Tap  
2101-653-001 - 6.5mm Cannulated Tap



2101-753-000 - 7.5mm Tap  
2101-753-001 - 7.5mm Cannulated Tap



2101-853-000 - 8.5mm Tap  
2101-853-001 - 8.5mm Cannulated Tap



2101-001-011 - Inner Screw Driver



2101-001-012 - Smooth Marker

# S100 PEDICLE SCREW SYSTEM Product Catalogue

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2101-001-013 - Ringed Marker



2101-001-014 - Head Adjuster



2101-001-015 - Rod Pusher



2101-001-016 - Insertion Tube



2101-001-017 - 2101-001-020  
Rod Templates



2101-001-021 - Locking Cap Inserter



2101-001-022 - Locking Cap Driver

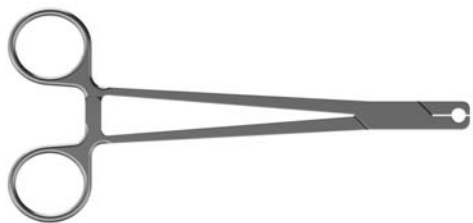


2101-001-025 - 2101-001-026  
L Shaped In-situ Bending Iron

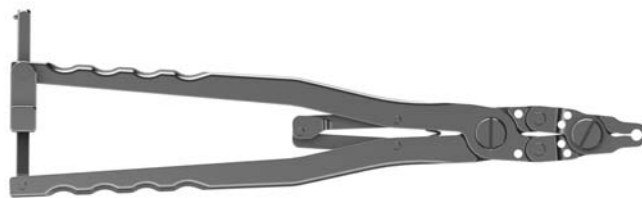
# S100 PEDICLE SCREW SYSTEM

## Product Catalogue

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2101-001-027 - Small Rod Holder



2101-001-028 - Large Rod Holder



2101-001-029 - Compressor



2101-001-030 - Distractor



2101-001-031 - Rod Reducer Assembly



2101-001-032 - Rod Bender



2101-001-034 - Rod Rocker



2001-000-002  
Large Axial Ratcheting Driver Handle

# S100 PEDICLE SCREW SYSTEM Product Catalogue

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2101-001-035  
Ratcheting Palm Style Handle



2101-001-036  
Large Torque Limiting T-Handle



2101-001-037 - Anti Torque Device



2101-001-038  
Medium Ratcheting T-Handle



20600 - Crosslink Driver



2101-001-040 - Table Top Rod Cutter



2101-001-042 - Rod Rotation Wrench



2101-001-043 - Reduction Screw Sleeve



# S100 PEDICLE SCREW SYSTEM

## Product Catalogue

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2101-001-044  
Reduction Screw Break-off Instrument



Pre Lordosed Rod  
30mm - 100mm Lengths  
5.5mm and 6.0mm Diameters



Straight Rod 240mm and 480mm Length  
Titanium Ti6Al4V  
5.5mm and 6.0mm Diameters



Straight Rod 240mm and 480mm Length  
CP Titanium  
5.5mm and 6.0mm Diameters



Straight Rod 240mm and 480mm Length  
CoCr  
5.5mm and 6.0mm Diameters



Polyaxial Pedicle Screw  
4.5mm-8.5mm Diameters  
For use with 5.5mm or 6.0mm Rod

# S100 PEDICLE SCREW SYSTEM Product Catalogue

## KYOCERA S100 Pedicle Screw System Implants

Catalog Number	Description
1101-453-025	Polyaxial Screw 4.5mm Diameter 25mm Length for use with a 5.5mm Rod
1101-453-030	Polyaxial Screw 4.5mm Diameter 30mm length for use with a 5.5mm Rod
1101-453-035	Polyaxial Screw 4.5mm Diameter 35mm length for use with a 5.5mm Rod
1101-453-040	Polyaxial Screw 4.5mm Diameter 40mm length for use with a 5.5mm Rod
1101-453-045	Polyaxial Screw 4.5mm Diameter 45mm length for use with a 5.5mm Rod
1101-553-025	Polyaxial Screw 5.5mm Diameter 25mm length for use with a 5.5mm Rod
1101-553-030	Polyaxial Screw 5.5mm Diameter 30mm length for use with a 5.5mm Rod
1101-553-035	Polyaxial Screw 5.5mm Diameter 35mm length for use with a 5.5mm Rod
1101-553-040	Polyaxial Screw 5.5mm Diameter 40mm length for use with a 5.5mm Rod
1101-553-045	Polyaxial Screw 5.5mm Diameter 45mm length for use with a 5.5mm Rod
1101-553-050	Polyaxial Screw 5.5mm Diameter 50mm length for use with a 5.5mm Rod
1101-553-055	Polyaxial Screw 5.5mm Diameter 55mm length for use with a 5.5mm Rod
1101-553-060	Polyaxial Screw 5.5mm Diameter 60mm length for use with a 5.5mm Rod
1101-653-030	Polyaxial Screw 6.5mm Diameter 30mm length for use with a 5.5mm Rod
1101-653-035	Polyaxial Screw 6.5mm Diameter 35mm length for use with a 5.5mm Rod
1101-653-040	Polyaxial Screw 6.5mm Diameter 40mm length for use with a 5.5mm Rod
1101-653-045	Polyaxial Screw 6.5mm Diameter 45mm length for use with a 5.5mm Rod
1101-653-050	Polyaxial Screw 6.5mm Diameter 50mm length for use with a 5.5mm Rod
1101-653-055	Polyaxial Screw 6.5mm Diameter 55mm length for use with a 5.5mm Rod
1101-653-060	Polyaxial Screw 6.5mm Diameter 60mm length for use with a 5.5mm Rod
1102-653-040	Reduction Polyaxial Screw 6.5mm Diameter 40mm length for use with a 5.5mm Rod
1102-653-045	Reduction Polyaxial Screw 6.5mm Diameter 45mm length for use with a 5.5mm Rod
1102-653-050	Reduction Polyaxial Screw 6.5mm Diameter 50mm length for use with a 5.5mm Rod
1101-753-030	Polyaxial Screw 7.5mm Diameter 30mm length for use with a 5.5mm Rod
1101-753-035	Polyaxial Screw 7.5mm Diameter 35mm length for use with a 5.5mm Rod
1101-753-040	Polyaxial Screw 7.5mm Diameter 40mm length for use with a 5.5mm Rod
1101-753-045	Polyaxial Screw 7.5mm Diameter 45mm length for use with a 5.5mm Rod

# S100 PEDICLE SCREW SYSTEM

## Product Catalogue

KYOCERA S100 Pedicle Screw System Implants	
Catalog Number	Description
1101-753-050	Polyaxial Screw 7.5mm Diameter 50mm length for use with a 5.5mm Rod
1101-753-055	Polyaxial Screw 7.5mm Diameter 55mm length for use with a 5.5mm Rod
1101-753-060	Polyaxial Screw 7.5mm Diameter 60mm length for use with a 5.5mm Rod
1102-753-040	Reduction Polyaxial Screw 7.5mm Diameter 40mm length for use with a 5.5mm Rod
1102-753-045	Reduction Polyaxial Screw 7.5mm Diameter 45mm length for use with a 5.5mm Rod
1102-753-050	Reduction Polyaxial Screw 7.5mm Diameter 50mm length for use with a 5.5mm Rod
1101-853-030	Polyaxial Screw 8.5mm Diameter 30mm length for use with a 5.5mm Rod
1101-853-035	Polyaxial Screw 8.5mm Diameter 35mm length for use with a 5.5mm Rod
1101-853-040	Polyaxial Screw 8.5mm Diameter 40mm length for use with a 5.5mm Rod
1101-853-045	Polyaxial Screw 8.5mm Diameter 45mm length for use with a 5.5mm Rod
1101-853-050	Polyaxial Screw 8.5mm Diameter 50mm length for use with a 5.5mm Rod
1101-853-055	Polyaxial Screw 8.5mm Diameter 55mm length for use with a 5.5mm Rod
1101-853-060	Polyaxial Screw 8.5mm Diameter 60mm length for use with a 5.5mm Rod
1102-853-040	Reduction Polyaxial Screw 8.5mm Diameter 40mm length for use with a 5.5mm Rod
1102-853-045	Reduction Polyaxial Screw 8.5mm Diameter 45mm length for use with a 5.5mm Rod
1102-853-050	Reduction Polyaxial Screw 8.5mm Diameter 50mm length for use with a 5.5mm Rod
1101-300-001	Locking Cap
1101-053-030	Pre Lordosed Rod 5.5mm Diameter 30mm length Ti6Al4V
1101-053-035	Pre Lordosed Rod 5.5mm Diameter 35mm length Ti6Al4V
1101-053-040	Pre Lordosed Rod 5.5mm Diameter 40mm length Ti6Al4V
1101-053-045	Pre Lordosed Rod 5.5mm Diameter 45mm length Ti6Al4V
1101-053-050	Pre Lordosed Rod 5.5mm Diameter 50mm length Ti6Al4V
1101-053-060	Pre Lordosed Rod 5.5mm Diameter 60mm length Ti6Al4V
1101-053-070	Pre Lordosed Rod 5.5mm Diameter 70mm length Ti6Al4V
1101-053-080	Pre Lordosed Rod 5.5mm Diameter 80mm length Ti6Al4V
1101-053-090	Pre Lordosed Rod 5.5mm Diameter 90mm length Ti6Al4V
1101-053-100	Pre Lordosed Rod 5.5mm Diameter 100mm length Ti6Al4V

# S100 PEDICLE SCREW SYSTEM Product Catalogue

KYOCERA S100 Pedicle Screw System Implants	
Catalog Number	Description
1101-053-240	Straight Rod 5.5mm Diameter 240mm length Ti6Al4V
1101-053-480	Straight Rod 5.5mm Diameter 480mm length Ti6Al4V
1102-053-030	Pre Lordosed Rod 5.5mm Diameter 30mm length CP Titanium
1102-053-035	Pre Lordosed Rod 5.5mm Diameter 35mm length CP Titanium
1102-053-040	Pre Lordosed Rod 5.5mm Diameter 40mm length CP Titanium
1102-053-045	Pre Lordosed Rod 5.5mm Diameter 45mm length CP Titanium
1102-053-050	Pre Lordosed Rod 5.5mm Diameter 50mm length CP Titanium
1102-053-060	Pre Lordosed Rod 5.5mm Diameter 60mm length CP Titanium
1102-053-070	Pre Lordosed Rod 5.5mm Diameter 70mm length CP Titanium
1102-053-080	Pre Lordosed Rod 5.5mm Diameter 80mm length CP Titanium
1102-053-090	Pre Lordosed Rod 5.5mm Diameter 90mm length CP Titanium
1102-053-100	Pre Lordosed Rod 5.5mm Diameter 100mm length CP Titanium
1102-053-240	Straight Rod 5.5mm Diameter 240mm length CP Titanium
1102-053-480	Straight Rod 5.5mm Diameter 480mm length CP Titanium
1103-053-030	Pre Lordosed Rod 5.5mm Diameter 30mm CoCr
1103-053-035	Pre Lordosed Rod 5.5mm Diameter 35mm CoCr
1103-053-040	Pre Lordosed Rod 5.5mm Diameter 40mm CoCr
1103-053-045	Pre Lordosed Rod 5.5mm Diameter 45mm CoCr
1103-053-050	Pre Lordosed Rod 5.5mm Diameter 50mm CoCr
1103-053-060	Pre Lordosed Rod 5.5mm Diameter 60mm CoCr
1103-053-070	Pre Lordosed Rod 5.5mm Diameter 70mm CoCr
1103-053-080	Pre Lordosed Rod 5.5mm Diameter 80mm CoCr
1103-053-090	Pre Lordosed Rod 5.5mm Diameter 90mm CoCr
1103-053-100	Pre Lordosed Rod 5.5mm Diameter 100mm CoCr
1103-053-240	Straight Rod 5.5mm Diameter 240mm CoCr
1103-053-480	Straight Rod 5.5mm Diameter 480mm CoCr
1101-063-030	Pre Lordosed Rod 6.0mm Diameter 30mm length Ti6Al4V

# S100 PEDICLE SCREW SYSTEM

## Product Catalogue

### KYOCERA S100 Pedicle Screw System Implants

Catalog Number	Description
1101-063-035	Pre Lordosed Rod 6.0mm Diameter 35mm length Ti6Al4V
1101-063-040	Pre Lordosed Rod 6.0mm Diameter 40mm length Ti6Al4V
1101-063-045	Pre Lordosed Rod 6.0mm Diameter 45mm length Ti6Al4V
1101-063-050	Pre Lordosed Rod 6.0mm Diameter 50mm length Ti6Al4V
1101-063-060	Pre Lordosed Rod 6.0mm Diameter 60mm length Ti6Al4V
1101-063-070	Pre Lordosed Rod 6.0mm Diameter 70mm length Ti6Al4V
1101-063-080	Pre Lordosed Rod 6.0mm Diameter 80mm length Ti6Al4V
1101-063-090	Pre Lordosed Rod 6.0mm Diameter 90mm length Ti6Al4V
1101-063-100	Pre Lordosed Rod 6.0mm Diameter 100mm length Ti6Al4V
1101-063-240	Straight Rod 6.0mm Diameter 240mm length Ti6Al4V
1101-063-480	Straight Rod 6.0mm Diameter 480mm length Ti6Al4V
1102-063-030	Pre Lordosed Rod 6.0mm Diameter 30mm length CP Titanium
1102-063-035	Pre Lordosed Rod 6.0mm Diameter 35mm length CP Titanium
1102-063-040	Pre Lordosed Rod 6.0mm Diameter 40mm length CP Titanium
1102-063-045	Pre Lordosed Rod 6.0mm Diameter 45mm length CP Titanium
1102-063-050	Pre Lordosed Rod 6.0mm Diameter 50mm length CP Titanium
1102-063-060	Pre Lordosed Rod 6.0mm Diameter 60mm length CP Titanium
1102-063-070	Pre Lordosed Rod 6.0mm Diameter 70mm length CP Titanium
1102-063-080	Pre Lordosed Rod 6.0mm Diameter 80mm length CP Titanium
1102-063-090	Pre Lordosed Rod 6.0mm Diameter 90mm length CP Titanium
1102-063-100	Pre Lordosed Rod 6.0mm Diameter 100mm length CP Titanium
1102-063-240	Straight Rod 6.0mm Diameter 240mm length CP Titanium
1102-063-480	Straight Rod 6.0mm Diameter 480mm length CP Titanium
1103-063-030	Pre Lordosed Rod 6.0mm Diameter 30mm CoCr
1103-063-035	Pre Lordosed Rod 6.0mm Diameter 35mm CoCr
1103-063-040	Pre Lordosed Rod 6.0mm Diameter 40mm CoCr
1103-063-045	Pre Lordosed Rod 6.0mm Diameter 45mm CoCr

# S100 PEDICLE SCREW SYSTEM Product Catalogue

## KYOCERA S100 Pedicle Screw System Implants

Catalog Number	Description
1103-063-050	Pre Lordosed Rod 6.0mm Diameter 50mm CoCr
1103-063-060	Pre Lordosed Rod 6.0mm Diameter 60mm CoCr
1103-063-070	Pre Lordosed Rod 6.0mm Diameter 70mm CoCr
1103-063-080	Pre Lordosed Rod 6.0mm Diameter 80mm CoCr
1103-063-090	Pre Lordosed Rod 6.0mm Diameter 90mm CoCr
1103-063-100	Pre Lordosed Rod 6.0mm Diameter 100mm CoCr
1103-063-240	Straight Rod 6.0mm Diameter 240mm CoCr
1103-063-480	Straight Rod 6.0mm Diameter 480mm CoCr
5528-31	Extra Small Variable Crosslink 28-31mm length for use with a 5.5mm Rod
5531-36	Small Variable Crosslink 31-36mm length for use with a 5.5mm Rod
5536-46	Medium Variable Crosslink 36-46mm length for use with a 5.5mm Rod
5546-66	Large Variable Crosslink 46-66m for use with a 5.5mm Rod
20130-001	23mm Fixed Crosslink for use with a 5.5mm Rod
20130-002	24mm Fixed Crosslink for use with a 5.5mm Rod
20130-003	25mm Fixed Crosslink for use with a 5.5mm Rod
20130-004	26mm Fixed Crosslink for use with a 5.5mm Rod
20130-005	27mm Fixed Crosslink for use with a 5.5mm Rod
20130-006	28mm Fixed Crosslink for use with a 5.5mm Rod
6028-31	Extra Small Variable Crosslink 28-31mm length for use with a 6.0mm Rod
6031-36	Small Variable Crosslink 31-36mm length for use with a 6.0mm Rod
6036-46	Medium Variable Crosslink 36-46mm length for use with a 6.0mm Rod
6046-66	Large Variable Crosslink 46-66m for use with a 6.0mm Rod
20170-001	23mm Fixed Crosslink for use with a 6.0mm Rod
20170-002	24mm Fixed Crosslink for use with a 6.0mm Rod
20170-003	25mm Fixed Crosslink for use with a 6.0mm Rod
20170-004	26mm Fixed Crosslink for use with a 6.0mm Rod
20170-005	27mm Fixed Crosslink for use with a 6.0mm Rod

# S100 PEDICLE SCREW SYSTEM

## Product Catalogue

KYOCERA S100 Pedicle Screw System Implants	
Catalog Number	Description
20170-006	28mm Fixed Crosslink for use with a 6.0mm Rod
1103-453-025	Polyaxial Screw 4.5mm Diameter 25mm length for use with a 6.0mm Rod
1103-453-030	Polyaxial Screw 4.5mm Diameter 30mm length for use with a 6.0mm Rod
1103-453-035	Polyaxial Screw 4.5mm Diameter 35mm length for use with a 6.0mm Rod
1103-453-040	Polyaxial Screw 4.5mm Diameter 40mm length for use with a 6.0mm Rod
1103-453-045	Polyaxial Screw 4.5mm Diameter 45mm length for use with a 6.0mm Rod
1103-553-025	Polyaxial Screw 5.5mm Diameter 25mm length for use with a 6.0mm Rod
1103-553-030	Polyaxial Screw 5.5mm Diameter 30mm length for use with a 6.0mm Rod
1103-553-035	Polyaxial Screw 5.5mm Diameter 35mm length for use with a 6.0mm Rod
1103-553-040	Polyaxial Screw 5.5mm Diameter 40mm length for use with a 6.0mm Rod
1103-553-045	Polyaxial Screw 5.5mm Diameter 45mm length for use with a 6.0mm Rod
1103-553-050	Polyaxial Screw 5.5mm Diameter 50mm length for use with a 6.0mm Rod
1103-553-055	Polyaxial Screw 5.5mm Diameter 55mm length for use with a 6.0mm Rod
1103-553-060	Polyaxial Screw 5.5mm Diameter 60mm length for use with a 6.0mm Rod
1103-653-030	Polyaxial Screw 6.5mm Diameter 30mm length for use with a 6.0mm Rod
1103-653-035	Polyaxial Screw 6.5mm Diameter 35mm length for use with a 6.0mm Rod
1103-653-040	Polyaxial Screw 6.5mm Diameter 40mm length for use with a 6.0mm Rod
1103-653-045	Polyaxial Screw 6.5mm Diameter 45mm length for use with a 6.0mm Rod
1103-653-050	Polyaxial Screw 6.5mm Diameter 50mm length for use with a 6.0mm Rod
1103-653-055	Polyaxial Screw 6.5mm Diameter 55mm length for use with a 6.0mm Rod
1103-653-060	Polyaxial Screw 6.5mm Diameter 60mm length for use with a 6.0mm Rod
1104-653-040	Reduction Polyaxial Screw 6.5mm Diameter 40mm length for use with a 6.0mm Rod
1104-653-045	Reduction Polyaxial Screw 6.5mm Diameter 45mm length for use with a 6.0mm Rod
1104-653-050	Reduction Polyaxial Screw 6.5mm Diameter 50mm length for use with a 6.0mm Rod
1103-753-030	Polyaxial Screw 7.5mm Diameter 30mm length for use with a 6.0mm Rod
1103-753-035	Polyaxial Screw 7.5mm Diameter 35mm length for use with a 6.0mm Rod
1103-753-040	Polyaxial Screw 7.5mm Diameter 40mm length for use with a 6.0mm Rod

# S100 PEDICLE SCREW SYSTEM Product Catalogue

## KYOCERA S100 Pedicle Screw System Implants

Catalog Number	Description
1103-753-045	Polyaxial Screw 7.5mm Diameter 45mm length for use with a 6.0mm Rod
1103-753-050	Polyaxial Screw 7.5mm Diameter 50mm length for use with a 6.0mm Rod
1103-753-055	Polyaxial Screw 7.5mm Diameter 55mm length for use with a 6.0mm Rod
1103-753-060	Polyaxial Screw 7.5mm Diameter 60mm length for use with a 6.0mm Rod
1104-753-040	Reduction Polyaxial Screw 7.5mm Diameter 40mm length for use with a 6.0mm Rod
1104-753-045	Reduction Polyaxial Screw 7.5mm Diameter 45mm length for use with a 6.0mm Rod
1104-753-050	Reduction Polyaxial Screw 7.5mm Diameter 50mm length for use with a 6.0mm Rod
1103-853-030	Polyaxial Screw 8.5mm Diameter 30mm length for use with a 6.0mm Rod
1103-853-035	Polyaxial Screw 8.5mm Diameter 35mm length for use with a 6.0mm Rod
1103-853-040	Polyaxial Screw 8.5mm Diameter 40mm length for use with a 6.0mm Rod
1103-853-045	Polyaxial Screw 8.5mm Diameter 45mm length for use with a 6.0mm Rod
1103-853-050	Polyaxial Screw 8.5mm Diameter 50mm length for use with a 6.0mm Rod
1103-853-055	Polyaxial Screw 8.5mm Diameter 55mm length for use with a 6.0mm Rod
1103-853-060	Polyaxial Screw 8.5mm Diameter 60mm length for use with a 6.0mm Rod
1104-853-040	Reduction Polyaxial Screw 8.5mm Diameter 40mm length for use with a 6.0mm Rod
1104-853-045	Reduction Polyaxial Screw 8.5mm Diameter 45mm length for use with a 6.0mm Rod
1104-853-050	Reduction Polyaxial Screw 8.5mm Diameter 50mm length for use with a 6.0mm Rod
1105-453-025	Cannulated Polyaxial Screw 4.5mm Diameter 25mm length for use with a 5.5mm Rod
1105-453-030	Cannulated Polyaxial Screw 4.5mm Diameter 30mm length for use with a 5.5mm Rod
1105-453-035	Cannulated Polyaxial Screw 4.5mm Diameter 35mm length for use with a 5.5mm Rod
1105-453-040	Cannulated Polyaxial Screw 4.5mm Diameter 40mm length for use with a 5.5mm Rod
1105-453-045	Cannulated Polyaxial Screw 4.5mm Diameter 45mm length for use with a 5.5mm Rod
1105-553-025	Cannulated Polyaxial Screw 5.5mm Diameter 25mm length for use with a 5.5mm Rod
1105-553-030	Cannulated Polyaxial Screw 5.5mm Diameter 30mm length for use with a 5.5mm Rod
1105-553-035	Cannulated Polyaxial Screw 5.5mm Diameter 35mm length for use with a 5.5mm Rod
1105-553-040	Cannulated Polyaxial Screw 5.5mm Diameter 40mm length for use with a 5.5mm Rod
1105-553-045	Cannulated Polyaxial Screw 5.5mm Diameter 45mm length for use with a 5.5mm Rod



# S100 PEDICLE SCREW SYSTEM

## Product Catalogue

KYOCERA S100 Pedicle Screw System Implants	
Catalog Number	Description
1105-553-050	Cannulated Polyaxial Screw 5.5mm Diameter 50mm length for use with a 5.5mm Rod
1105-553-055	Cannulated Polyaxial Screw 5.5mm Diameter 55mm length for use with a 5.5mm Rod
1105-553-060	Cannulated Polyaxial Screw 5.5mm Diameter 60mm length for use with a 5.5mm Rod
1105-653-030	Cannulated Polyaxial Screw 6.5mm Diameter 30mm length for use with a 5.5mm Rod
1105-653-035	Cannulated Polyaxial Screw 6.5mm Diameter 35mm length for use with a 5.5mm Rod
1105-653-040	Cannulated Polyaxial Screw 6.5mm Diameter 40mm length for use with a 5.5mm Rod
1105-653-045	Cannulated Polyaxial Screw 6.5mm Diameter 45mm length for use with a 5.5mm Rod
1105-653-050	Cannulated Polyaxial Screw 6.5mm Diameter 50mm length for use with a 5.5mm Rod
1105-653-055	Cannulated Polyaxial Screw 6.5mm Diameter 55mm length for use with a 5.5mm Rod
1105-653-060	Cannulated Polyaxial Screw 6.5mm Diameter 60mm length for use with a 5.5mm Rod
1106-653-040	Cannulated Reduction Polyaxial Screw 6.5mm Diameter 40mm length for use with a 5.5mm Rod
1106-653-045	Cannulated Reduction Polyaxial Screw 6.5mm Diameter 45mm length for use with a 5.5mm Rod
1106-653-050	Cannulated Reduction Polyaxial Screw 6.5mm Diameter 50mm length for use with a 5.5mm Rod
1105-753-030	Cannulated Polyaxial Screw 7.5mm Diameter 30mm length for use with a 5.5mm Rod
1105-753-035	Cannulated Polyaxial Screw 7.5mm Diameter 35mm length for use with a 5.5mm Rod
1105-753-040	Cannulated Polyaxial Screw 7.5mm Diameter 40mm length for use with a 5.5mm Rod
1105-753-045	Cannulated Polyaxial Screw 7.5mm Diameter 45mm length for use with a 5.5mm Rod
1105-753-050	Cannulated Polyaxial Screw 7.5mm Diameter 50mm length for use with a 5.5mm Rod
1105-753-055	Cannulated Polyaxial Screw 7.5mm Diameter 55mm length for use with a 5.5mm Rod
1105-753-060	Cannulated Polyaxial Screw 7.5mm Diameter 60mm length for use with a 5.5mm Rod
1106-753-040	Cannulated Reduction Polyaxial Screw 7.5mm Diameter 40mm length for use with a 5.5mm Rod
1106-753-045	Cannulated Reduction Polyaxial Screw 7.5mm Diameter 45mm length for use with a 5.5mm Rod
1106-753-050	Cannulated Reduction Polyaxial Screw 7.5mm Diameter 50mm length for use with a 5.5mm Rod
1105-853-030	Cannulated Polyaxial Screw 8.5mm Diameter 30mm length for use with a 5.5mm Rod
1105-853-035	Cannulated Polyaxial Screw 8.5mm Diameter 35mm length for use with a 5.5mm Rod
1105-853-040	Cannulated Polyaxial Screw 8.5mm Diameter 40mm length for use with a 5.5mm Rod
1105-853-045	Cannulated Polyaxial Screw 8.5mm Diameter 45mm length for use with a 5.5mm Rod

# S100 PEDICLE SCREW SYSTEM

## Product Catalogue

### KYOCERA S100 Pedicle Screw System Implants

Catalog Number	Description
1105-853-050	Cannulated Polyaxial Screw 8.5mm Diameter 50mm length for use with a 5.5mm Rod
1105-853-055	Cannulated Polyaxial Screw 8.5mm Diameter 55mm length for use with a 5.5mm Rod
1105-853-060	Cannulated Polyaxial Screw 8.5mm Diameter 60mm length for use with a 5.5mm Rod
1106-853-040	Cannulated Reduction Polyaxial Screw 8.5mm Diameter 40mm length for use with a 5.5mm Rod
1106-853-045	Cannulated Reduction Polyaxial Screw 8.5mm Diameter 45mm length for use with a 5.5mm Rod
1106-853-050	Cannulated Reduction Polyaxial Screw 8.5mm Diameter 50mm length for use with a 5.5mm Rod
1107-453-025	Cannulated Polyaxial Screw 4.5mm Diameter 25mm length for use with a 6.0mm Rod
1107-453-030	Cannulated Polyaxial Screw 4.5mm Diameter 30mm length for use with a 6.0mm Rod
1107-453-035	Cannulated Polyaxial Screw 4.5mm Diameter 35mm length for use with a 6.0mm Rod
1107-453-040	Cannulated Polyaxial Screw 4.5mm Diameter 40mm length for use with a 6.0mm Rod
1107-453-045	Cannulated Polyaxial Screw 4.5mm Diameter 45mm length for use with a 6.0mm Rod
1107-553-025	Cannulated Polyaxial Screw 5.5mm Diameter 25mm length for use with a 6.0mm Rod
1107-553-030	Cannulated Polyaxial Screw 5.5mm Diameter 30mm length for use with a 6.0mm Rod
1107-553-035	Cannulated Polyaxial Screw 5.5mm Diameter 35mm length for use with a 6.0mm Rod
1107-553-040	Cannulated Polyaxial Screw 5.5mm Diameter 40mm length for use with a 6.0mm Rod
1107-553-045	Cannulated Polyaxial Screw 5.5mm Diameter 45mm length for use with a 6.0mm Rod
1107-553-050	Cannulated Polyaxial Screw 5.5mm Diameter 50mm length for use with a 6.0mm Rod
1107-553-055	Cannulated Polyaxial Screw 5.5mm Diameter 55mm length for use with a 6.0mm Rod
1107-553-060	Cannulated Polyaxial Screw 5.5mm Diameter 60mm length for use with a 6.0mm Rod
1107-653-030	Cannulated Polyaxial Screw 6.5mm Diameter 30mm length for use with a 6.0mm Rod
1107-653-035	Cannulated Polyaxial Screw 6.5mm Diameter 35mm length for use with a 6.0mm Rod
1107-653-040	Cannulated Polyaxial Screw 6.5mm Diameter 40mm length for use with a 6.0mm Rod
1107-653-045	Cannulated Polyaxial Screw 6.5mm Diameter 45mm length for use with a 6.0mm Rod
1107-653-050	Cannulated Polyaxial Screw 6.5mm Diameter 50mm length for use with a 6.0mm Rod
1107-653-055	Cannulated Polyaxial Screw 6.5mm Diameter 55mm length for use with a 6.0mm Rod
1107-653-060	Cannulated Polyaxial Screw 6.5mm Diameter 60mm length for use with a 6.0mm Rod
1108-653-040	Cannulated Reduction Polyaxial Screw 6.5mm Diameter 40mm length for use with a 6.0mm Rod

# S100 PEDICLE SCREW SYSTEM

## Product Catalogue

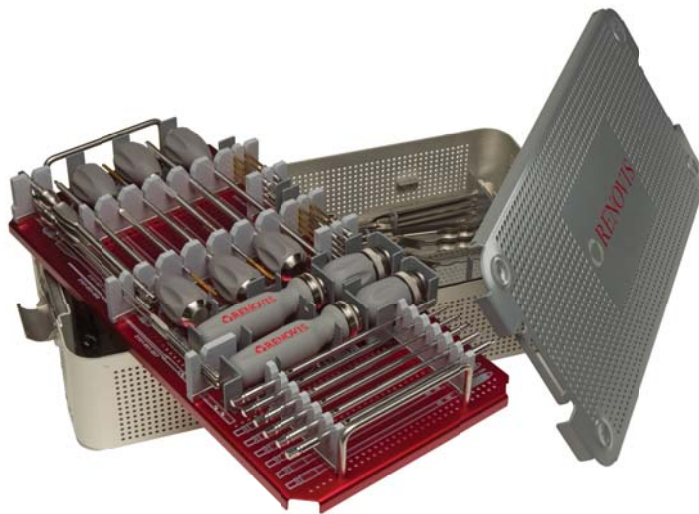
KYOCERA S100 Pedicle Screw System Implants	
Catalog Number	Description
1108-653-045	Cannulated Reduction Polyaxial Screw 6.5mm Diameter 45mm length for use with a 6.0mm Rod
1108-653-050	Cannulated Reduction Polyaxial Screw 6.5mm Diameter 50mm length for use with a 6.0mm Rod
1107-753-030	Cannulated Polyaxial Screw 7.5mm Diameter 30mm length for use with a 6.0mm Rod
1107-753-035	Cannulated Polyaxial Screw 7.5mm Diameter 35mm length for use with a 6.0mm Rod
1107-753-040	Cannulated Polyaxial Screw 7.5mm Diameter 40mm length for use with a 6.0mm Rod
1107-753-045	Cannulated Polyaxial Screw 7.5mm Diameter 45mm length for use with a 6.0mm Rod
1107-753-050	Cannulated Polyaxial Screw 7.5mm Diameter 50mm length for use with a 6.0mm Rod
1107-753-055	Cannulated Polyaxial Screw 7.5mm Diameter 55mm length for use with a 6.0mm Rod
1107-753-060	Cannulated Polyaxial Screw 7.5mm Diameter 60mm length for use with a 6.0mm Rod
1108-753-040	Cannulated Reduction Polyaxial Screw 7.5mm Diameter 40mm length for use with a 6.0mm Rod
1108-753-045	Cannulated Reduction Polyaxial Screw 7.5mm Diameter 45mm length for use with a 6.0mm Rod
1108-753-050	Cannulated Reduction Polyaxial Screw 7.5mm Diameter 50mm length for use with a 6.0mm Rod
1107-853-030	Cannulated Polyaxial Screw 8.5mm Diameter 30mm length for use with a 6.0mm Rod
1107-853-035	Cannulated Polyaxial Screw 8.5mm Diameter 35mm length for use with a 6.0mm Rod
1107-853-040	Cannulated Polyaxial Screw 8.5mm Diameter 40mm length for use with a 6.0mm Rod
1107-853-045	Cannulated Polyaxial Screw 8.5mm Diameter 45mm length for use with a 6.0mm Rod
1107-853-050	Cannulated Polyaxial Screw 8.5mm Diameter 50mm length for use with a 6.0mm Rod
1107-853-055	Cannulated Polyaxial Screw 8.5mm Diameter 55mm length for use with a 6.0mm Rod
1107-853-060	Cannulated Polyaxial Screw 8.5mm Diameter 60mm length for use with a 6.0mm Rod
1108-853-040	Cannulated Reduction Polyaxial Screw 8.5mm Diameter 40mm length for use with a 6.0mm Rod
1108-853-045	Cannulated Reduction Polyaxial Screw 8.5mm Diameter 45mm length for use with a 6.0mm Rod
1108-853-050	Cannulated Reduction Polyaxial Screw 8.5mm Diameter 50mm length for use with a 6.0mm Rod

# S100 PEDICLE SCREW SYSTEM

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# S100 PEDICLE SCREW SYSTEM

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