

Spider Screw®

Temporary Orthodontic Anchorage System

Exclusive Patented Design

Only Available from

Ortho Technology

Journal of Clinical Orthodontics

“Temporary anchorage devices now allow us to bring about orthodontic movements that were previously considered impossible, and to reduce or even eliminate the need for patient compliance.”

Robert G. Keim, DDS, EDD, PHD

**THE EDITOR'S CORNER — The Only Constant
Volume 40, Number 06, 2006**

Spider Screw Applications

- **Intrusion Posterior Area**
- **Direct Anchorage**
- **Lower Molar Protraction Indirect Anchorage**
- **Class II Correction**
- **Molar Uprighting and Intrusion**
- **Plus, Many Other Applications**

Spider Screw Applications

Intrusion Posterior Area



Spider Screw Applications

Direct Anchorage



Spider Screw Applications

Lower Molar Protraction Indirect Anchorage



Spider Screw Applications

Class II Correction



Spider Screw Applications

Molar Uprighting and Intrusion



Spider Screw System Development



Giuliano Maino, MD, DDS

Dr. Maino is a graduate firstly in Medicine, 1974 and then Dentistry, 1977. He completed the postgraduate program in Orthodontics of Boston University, 1979-1982 and a second postgraduate degree in Orthodontics from Cagliari University, 1993. He has been in Private Practice in Orthodontics since 1975 and is Visiting Professor of Orthodontics at Parma University. Dr. Maino is an active member of the Angle Society of Europe, Past President of the Italian Society of Bi-dimensional Technique and is Board Certified with the Italian Board of Orthodontics and the European Board of Orthodontics.

Journal Articles Featuring the Spider Screw System



Journal of Clinical Orthodontics

The Spider Screw for Skeletal Anchorage

B. Giuliano Maino^{*}, John Bednar[§], Paolo Pagin[†], and Paola Mura^{††}
Published February 2003

PROGRESS in ORTHODONTICS

Spider Screw: Skeletal Anchorage System

B. Giuliano Maino^{*}, Giovanna Maino^{''}, and Paola Mura^{††}
Published 2005



Seminars in Orthodontics Miniscrew Implants

The Spider Screw Anchorage System

B. Giuliano Maino^{*}, Paola Mura[†], and John Bednar[§]
Published 2005

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Types of Spider Screws

Spider Screw K1 & C1

Available in 2 Thread Types

Conical Thread K1

Self-Drilling and Self-Tapping
— Most Popular —

Cylindrical Thread C1

Spider Screw C2

Available in 1 Thread Type

Cylindrical Thread C2

Spider Screw K1



Spider Screw K1

- Most Popular Screws
- Self-Drilling and Self-Tapping
- Bracket Like Head Design
- Conical Thread
- Short Neck
 - Available in 3 lengths
- Long Neck
 - Available in 3 lengths
- Immediate Loading

Spider Screw K1



Spider Screw K1



Bracket Like Head Design

The bracket like head design features 2 external .022" rectangular slots that make the Spider Screw easy to use and extremely versatile for orthodontic purposes.

Spider Screw K1



Spider Screw K1



**Perpendicular
Round Slots**

Features 2 round .027" slots with a funneled entry for easy insertion of ligatures, and wires.

Spider Screw K1



Spider Screw K1



**Generous Under
Tie Wing Area**

The internal rectangular slot with the correct proportion between height and depth, will assure that the device connections (elastic, chains, wires) will not detach from the Spider Screw and does not slide against soft tissue, causing inflammation and failures.

Spider Screw K1



Spider Screw K1



Short or Long Collared Necks

SHORT NECK: Reduced neck height for thin tissue.
(anterior and lateral areas)

LONG NECK: Larger neck height for soft thick tissue.
(posterior and lateral areas)

Spider Screw K1



Spider Screw K1



**Self-Drilling
and Self-Tapping**

The tapering thread (infrabony portion) allows you to insert the Spider Screw without the use of a drill.

In the case of compact bone density, it is suggested you make a small hole with the drill in order to pass the cortical plate.

Spider Screw K1



Spider Screw K1

Immediate loading is possible because it is designed as a non osteointegrable implant and consequently force can be applied immediately after placement. The application forces can range from 50 grams to 300 grams depending on bone quality and desired orthodontic movement

Spider Screw Material

The Purest Medical Grade 5 Titanium Alloy
(Chosen for its Bio-compatibility and Durability)

Ti 6Al-4V ELI

Ti = Titanium	90.0%
Al = Aluminum	06.0%
V = Vanadium	04.0%

Grade 5 Ti 6Al-4V – Known for its high strength, light weight and corrosion resistance, which enables this grade of titanium alloy to be used in many applications. The most common markets are aerospace and medical.

ELI (Extra Low Interstitials) – The elements oxygen, nitrogen and carbon, referred to as interstitials, which have been reduced beyond the standard titanium alloy requirements in order to improve the ductility and fracture toughness of the alloys.

Spider Screw

Quality Assurance

United States of America
Food and Drug Administration
FDA 510k Premarket Approval
Since November 2005

European CE Mark
Since January 2002

Canadian Clearance
Release Date January 2007

Spider Screw Starter Kit



Spider Screw Starter Kit - Item # CSS-4008

Includes: 2x spiral drills, contra angle pick-up driver, screwdriver body, cross handle driver shaft, pick-up handle shaft, handle driver short, and organizer

Spider Screw Starter Kit



1.1 mm Diameter
X
5.0 mm Length



1.2 mm Diameter
X
10.0 mm Length

For use in the case of compact bone density.
To make a pilot hole in order to pass the cortical plate.

Spider Screw Starter Kit

Includes: 2x spiral drills, contra angle pick-up driver, screwdriver body, cross handle driver shaft, pick-up handle shaft, handle driver short, and organizer

Spider Screw Starter Kit



Used in low speed contra angle hand pieces to pick up and insert the Spider Screw when there is limited access.

Spider Screw Starter Kit

Includes: 2x spiral drills, contra angle pick-up driver, screwdriver body, cross handle driver shaft, pick-up handle shaft, handle driver short, and organizer

Spider Screw Starter Kit



Used with the pick-up driver and cross handle driver shafts.

Spider Screw Starter Kit

Includes: 2x spiral drills, contra angle pick-up driver, screwdriver body, cross handle driver shaft, pick-up handle shaft, handle driver short, and organizer

Spider Screw Starter Kit



Screws into the screwdriver body and can be used to insert the Spider Screw or finalize placement after another insertion method is used.

Spider Screw Starter Kit

Includes: 2x spiral drills, contra angle pick-up driver, screwdriver body, cross handle driver shaft, pick-up handle shaft, handle driver short, and organizer

Spider Screw Starter Kit



Screws into the screwdriver body and allows for hands-free pick-up and insertion of the Spider Screw.

Spider Screw Starter Kit

Includes: 2x spiral drills, contra angle pick-up driver, screwdriver body, cross handle driver shaft, pick-up handle shaft, handle driver short, and organizer

Spider Screw Starter Kit



Allows for Spider Screw placement into hard to reach areas and can also be used for screw removal.

Spider Screw Starter Kit

Includes: 2x spiral drills, contra angle pick-up driver, screwdriver body, cross handle driver shaft, pick-up handle shaft, handle driver short, and organizer

Spider Screw Sterilization

Spider Screws are delivered non-sterile and must be sterilized prior to use. It is recommended for the user facility to validate their sterilization methods accordingly. The screws should be prepared for sterilization using the double wrapping technique.

Autoclavable up to 273°F/134°C

Heat Sterilizable up to 356°F/180°C

Chemiclavable up to 297°F/132°C

Spider Screw

Pre-Insertion General Information

Placement of the Spider Screw is a procedure requiring specific knowledge of anatomy and technique so it is absolutely necessary that it is carried out by specifically trained doctors.

It is important to know that improper patient selection and/or incorrect technique can cause placement failure and/or loss of supporting bone. An effective and complete screening of the patient must be performed and each and every case carefully evaluated.

A very thorough examination is needed, as well as anatomical reference and evaluation of bone quantity and quality using radiographic research.

Spider Screw

Pre-Insertion General Information

Carefully read the instructions of use inside the package before the insertion. The Spider Screw is not to be reused.

Use only the instruments designed for the Spider Screw. Make sure that all the instruments and screws are sterilized. It is suggested to disinfect the insertion area and where necessary, give local anesthesia as needed.

Spider Screw Application



— 1 —

In areas close to delicate anatomical structures, such as interdental spaces, a long cone radiograph is recommended.

If a Spider Screw is to be inserted in a edentulous area where there is bone availability, references from a panoramic radiograph can be sufficient.

Spider Screw Application



— 2 —

A surgical splint can be made with orthodontic wire, fixing it to the teeth with acrylic or thermoplastic resin. The orthodontic wire is inserted in the acrylic resin and is appropriately bent so that its tip corresponds to the point of insertion of the Spider Screw.

Spider Screw Application



— 3 —

Use a periapical radiograph (by using the long-cone parallel technique) to verify the correct placement of the orthodontic wire.

Spider Screw Application



— 4 —

The insertion site can be marked with a pressure point or methylene blue dot on the soft tissue. In mobile mucosa it is recommended to leave the surgical guide in place during the drilling phase and/or the screw insertion.

Spider Screw Application



— 5 —

After site disinfection (chlorhexidine) insert the Spider Screw using the manual pick-up driver. It is also possible to use the contra-angle pick up driver at low speed during insertion, in order to avoid excessive torque stress (which could cause bone compression and consequent recession or cause the screw to break) it is recommended to use a technique of alternating between screwing and unscrewing to gradually ease the screw into position.

Spider Screw Application



— 6 —

In case of very compact bone use a spiral drill of appropriate length and make a pilot hole. Used on a contra-angle low speed handpiece at a speed of 60-100 rpm to “feel” the transition from cortical bone to medullary bone. Then final screw placement is completed with the appropriate pick up device. If using mechanical insertion with a contra-angle pick up driver used at a speed of 25-30 rpm with final setting of the screw being achieved with a hand screwdriver until the collar reaches the ideal position.

Spider Screw

Post Application Patent Instruction



Application of chlorhexidine rinse
2 – 3 times per day for the first 7 days.

Perform normal hygiene procedures.
The patient should brush the screw normally
as if it were a tooth.

*Available From Ortho Technology
Though the Bulter Sunstar Gold Program*

**The first and only alcohol-free
FDA-approved chlorhexidine rinse**

Spider Screw Removal



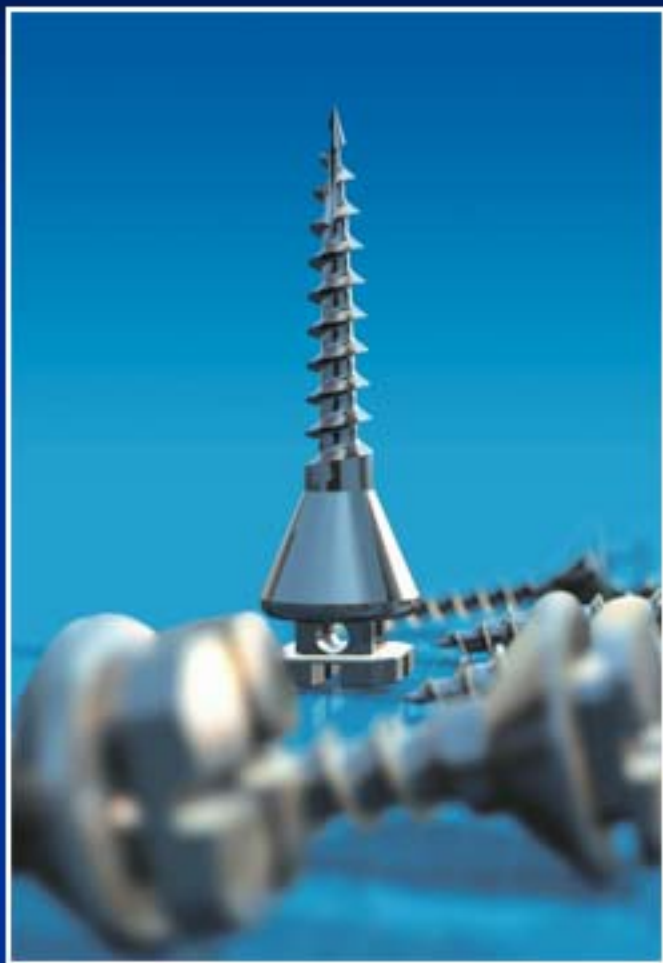
— A —

— B —

— C —

To remove the screw, it is simply unscrewed with the appropriate screwdriver. It can usually be accomplished without local anesthesia. During unscrewing it is recommended to use a technique of alternating between unscrewing and screwing. Healing takes place in a few days.

A. Spider Screw® Removal B. Immediately After Removal C. Seven Days Later



Spider Screw

Temporary Orthodontic Anchorage System

Exclusive Patented Design

Only Available from

Ortho Technology

CALL: 1-800-999-3161

Or 813-991-5896