Spider Screw®
Temporary Orthodontic Anchorage System

Exclusive Patented Design
Only Available from
Ortho Technology
“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
Spiders 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.
Mini Spider Screw

Mini 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)
Mini Spider Screw

Mini Spider Screw K1

Self-Drilling and Self-Tapping

The tapering thread (infrabony portion) allows you to insert the Spider Screws 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.
Mini Spider Screw

Mini Spider Screw K1

Perpendicular Round Slots

Features 2 round .027” slots with a funneled entry for easy insertion of ligatures, and wires.
Mini Spider Screw

Mini 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.
Mini Spider Screw

Mini 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 Screws and does not slide against soft tissue, causing inflammation and failures.
Journal Articles Featuring the Spider Screw System

**Journal of Clinical Orthodontics**
The Spider Screw for Skeletal Anchorage
B. Giuliano Maino*, John Bednar§, Paolo Pagini†, 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

*Department of Maxillofacial Surgery, Parma University, Parma, Italy, †Private practice, Bologna, Italy, ‡Private practice, Vicenza, Italy, §Department of Orthodontics, Boston University, Boston, MA.
Mini 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.

Mini Spider Screw Starter Kit
Includes: 2x spiral drills, contra angle pick-up driver, screwdriver body, cross handle driver shaft, pick-up handle shaft, and handle driver short
Mini Spider Screw Starter Kit

Includes: 2x spiral drills, contra angle pick-up driver, screwdriver body, cross handle driver shaft, pick-up handle shaft, and handle driver short.
Mini Spider Screw Starter Kit

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

Mini Spider Screw Starter Kit

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

<table>
<thead>
<tr>
<th>Element</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ti</td>
<td>90.0%</td>
</tr>
<tr>
<td>Al</td>
<td>06.0%</td>
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<tr>
<td>V</td>
<td>04.0%</td>
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**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.
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.
Mini 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
Mini Spider Screw Removal

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
Mini Spider Screw

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

If a Spider Screw is to be inserted in an edentulous area where there is bone availability, references from a panoramic radiograph can be sufficient.
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
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
Mini 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, and handle driver short
Mini 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.
Mini Spider Screw
Pre-Insertion General Information

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

Use only the instruments designed for the Mini Spider Screws. 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.
Mini 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.

Mini Spider Screw Starter Kit

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

Mini Spider Screw Starter Kit
Includes: 2x spiral drills, contra angle pick-up driver, screwdriver body, cross handle driver shaft, pick-up handle shaft, and handle driver short
Spider Screw
Temporary Orthodontic Anchorage System

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CALL: 1-800-999-3161
Or 813-991-5896
Mini Spider Screw Starter Kit

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

Mini Spider Screw Starter Kit
Includes: 2x spiral drills, contra angle pick-up driver, screwdriver body, cross handle driver shaft, pick-up handle shaft, and handle driver short
Types of Spider Screws

Mini Spider Screw
Available in 2 Thread Types

Conical Thread
Self-Locking and Self-Tapping
— Most Popular —

Cylindrical Thread

Spider Screw
Available in 1 Thread Type

Cylindrical Thread
Mini Spider Screw Application

Use a periapical radiograph (by using the long-cone parallel technique) to verify the correct placement of the orthodontic wire.
Mini 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.
After site disinfection (chlorhexidine) insert the Mini 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.