

Solis Cervical Cage

Product Overview

-
- Original design
 - Precise instrument set



Solis

... The science of better fit

A system you can rely on from preoperative templating to postoperative follow-up

In developing this system we strived to provide you with an enhanced implant design and a reduced, fully functional ancillary system for you to use in each and every surgical step including the bonegraft harvesting.

To do so, we optimised each aspect of the conception process in close collaboration with an international panel of renowned cervical specialists.

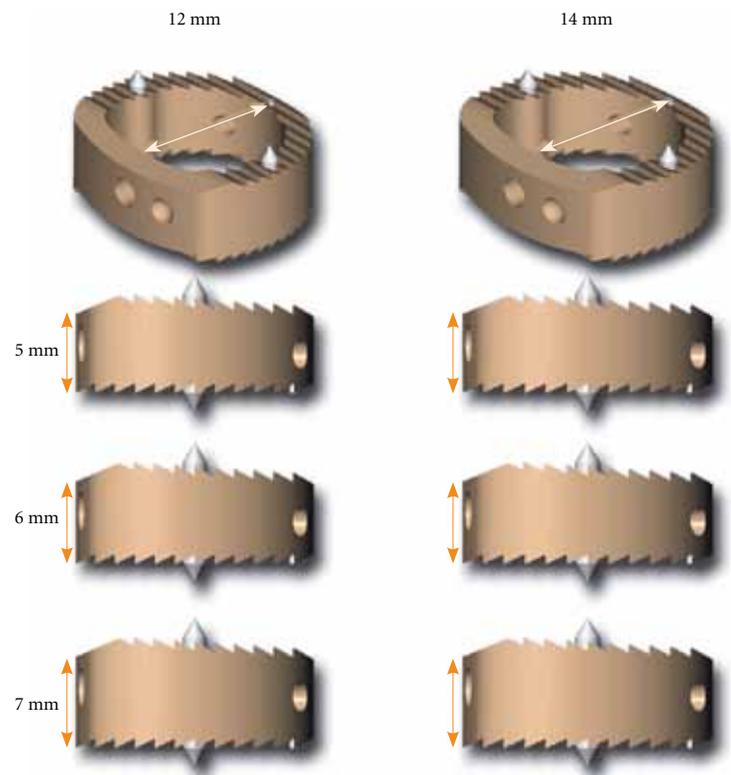
The result is a system named after the sun to stress the stand-alone character of the implant: The Solis System.



Anatomical Cage Design

... A Unique Shape

An anatomical design with a unique shape combining plane wing shape on the upper surface of the cages, as well as overall dimensions based on clinical findings* are designed to ensure full coverage of the anatomical variations as well as the restoration of the interbody height.



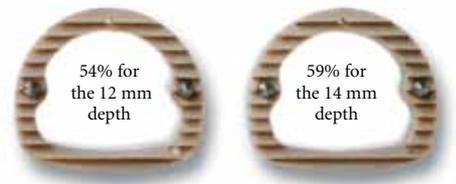
*“Cervical Human Vertebrae Quantitative Three Dimensional Anatomy of the Middle and Lower Regions”
M. Panjabi, J. Duranceau, V. Goes, T. Oxland and K. Takata

SPINE V16 N8 pp. 861-869, 1991.



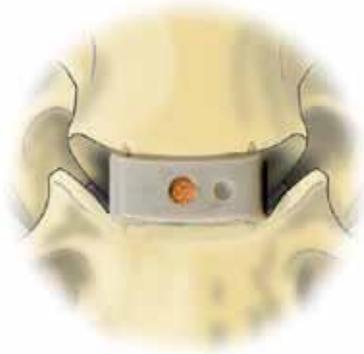
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The surface of bony ingrowth depends on the size of the Solis Cage and varies from 54% to 59%.



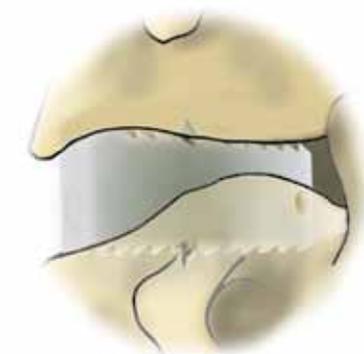
The Science of Better fit

- One part anatomy to make sure it will fit properly.
- One part stability to ensure nothing will compromise the graft fusion.
- One part contact area to provide surface for bony ingrowth.



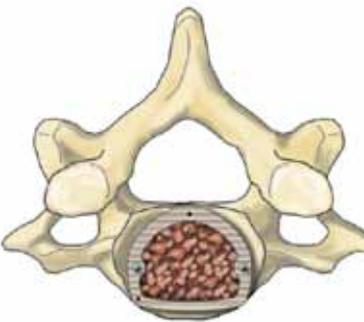
Immediate Stability

The combination of a “stand alone” mechanism composed of two titanium spikes and retentive teeth on the anterior and posterior aspect of the implant helps to ensure the implant’s positioning in the intervertebral space.



Greater Contact Area

The peek implant design provides space for bonegraft and vascularization with greater load bearing surface area. The mechanical properties of the Solis Cage provides state of the art load transfer properties.

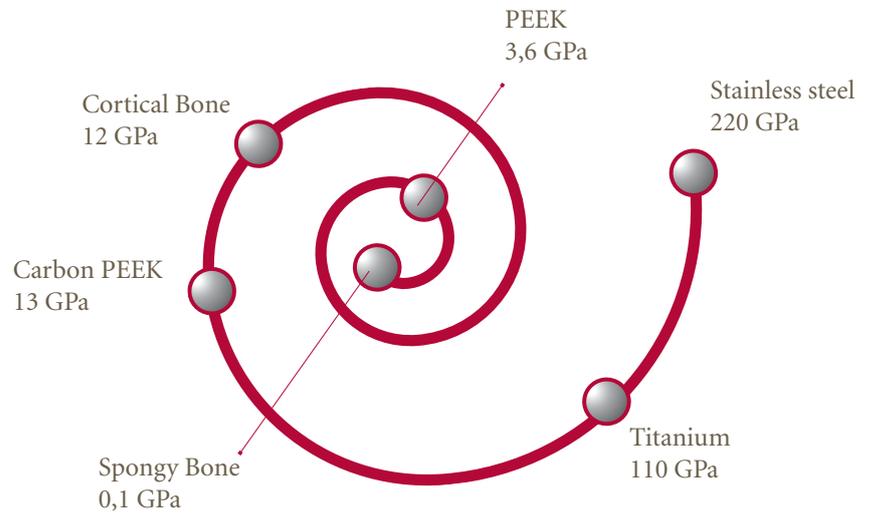


Material : PEEK

... Poly - Ether - Ether - Ketone

Promotes conditions for fusion

PEEK modulus of elasticity is much closer to that of spongy bone than either stainless steel, titanium, or carbon. PEEK and consequently this material allows bone growth and fusion.



Close to Spongy Bone...

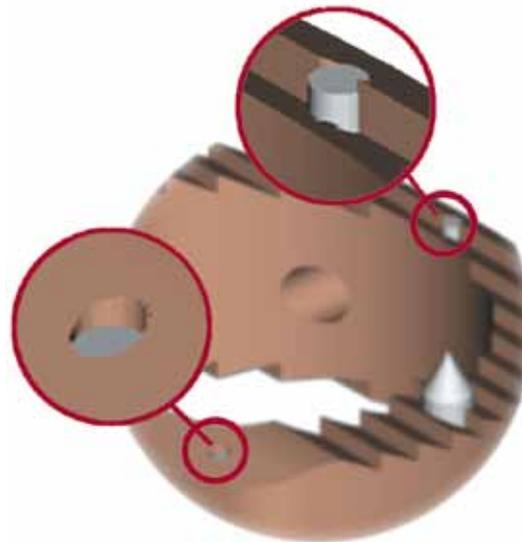
Implants, design and performance are directly related to the material used. Stryker Spine, which was among the first companies to use PEEK, made it part of the Solis cage design because its unique mechanical properties made it appropriate for the cage design as well as allowed the Solis Cage to outperform the existing competitive solutions.



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Post-operative follow-up

Radiolucent with integrated X-ray markers (1 front / 1 rear) peek implant allows 3D visualization and radiological assessment of graft density.



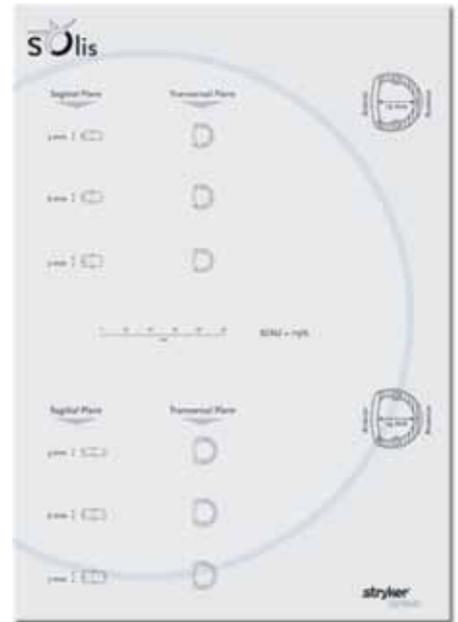
Solis X-Rays Markers



Surgical Technique

... Prepare then validate

We provide you templates and trials to simplify implant selection.



Just open the set, everything's inside:

The system provides a distractor as well as a minimally invasive harvesting set composed of a trocar sleeve, a trocar with square awl, a trephine and a pusher.

Follow the guide

Each instrument guides you at every step of surgical technique.

The technique and the instruments have been designed in close cooperation with a panel of surgeons. Consequently implanting Solis Cage to contain your graft typically does not take any longer than an unsecured traditional grafting procedure.



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Implant holder: 3 in 1

Safely

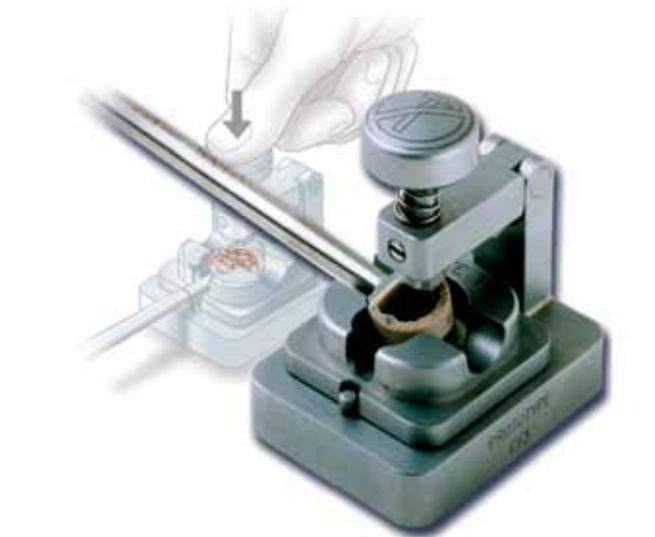
- hold
- position
- release



Prevents the cage mispositioning during the insertion due to:

- an etching (cranial) that indicates the right position
- ball on the tip of the instrument that corresponds to a lateral hole on the anterior side of the implant.

Bonegraft Compactor: one step impaction



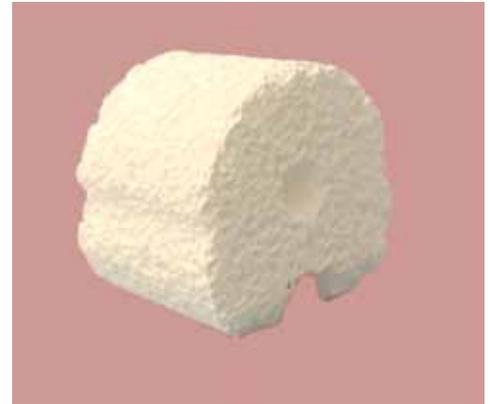
Tribone 80

Synthetic Bone Substitute

Tribone 80 permits the Solis cervical cage users to promote bone fusion while optimizing surgery time, and potentially improving the post-operative outcomes.

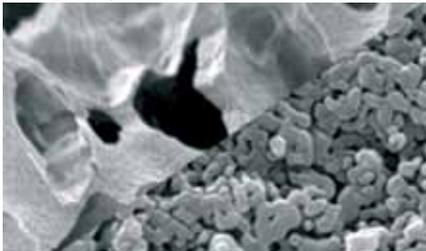
Designed to optimise Operative Time:

- Tribone 80 insert is “ready to use”. Delivered sterile and without any additional instrumentation needed, each Solis cage has a corresponding insert.
- Using a Tribone 80 insert specifically adapted to the Solis cage cancels the need for an autograft bone harvesting procedure.
- Tribone 80’s shape has been designed to fit into the Solis cage: In conjunction with the “butterfly wings” shape to respect the internal part of the cage, 2 different markers (superior and anterior) have been added for better handling. A “cone shape” to ensure good positioning and a pressfit effect promotes ease of use.

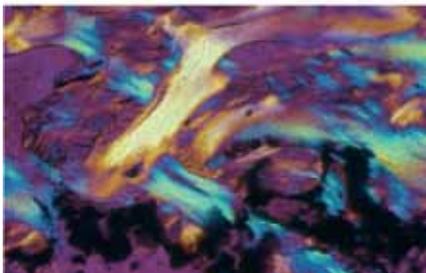


Tribone 80 insert

Macroporosity



Macroporosity



Human spine arthrodesis, bone and residual ceramic, Haversian canal, 2 years after implantation

Designed to promote bone fusion:

- Tribone 80’s composition is designed to have **the greatest effect on bone formation**. It is a biphasic calcium phosphate composed of 80% of Tricalcium Phosphate (highest resorption rate) and 20% of Hydroxyapatite (closest composition to osseous mineral phase) which allows a controlled bioactivity (progressive dissolution).^{1,2}
- Thanks to its **micro and macroporous structure**, Tribone 80 balances resorption and bone substitution. While microporosity allows the diffusion of biological fluids as a basis for osteogenic stimulation, the macroporosity promotes a deep invasion of osteogenic cells by osteoconduction.
- The use of a biphasic calcium phosphate has shown a **fusion rate comparable to autograft (with the Solis cage)**. The Solis cage, with an elasticity modulus close to spongy bone and its unique anatomical shape allows fusion to occur.³

Designed to improve post-operative-outcomes:

By avoiding a bone harvesting procedure, the use of Tribone 80 in combination with Solis cage excludes comorbidities associated with it. This may lead to a **reduction in blood loss, a shorter hospital stay and eradicates donor sites complications** such as pain.

1 Product to optimise operative time...

2 Components to promote bone fusion...

3 Designed to improve post operative outcomes...

1. S.Yamada, D. Heymann, J.-M Boulter, G. Daculsi. Osteoclastic resorption of biphasic calcium phosphate ceramic in vitro. J Biomed Mater Res, 37,346-352,1997.
2. G. Daculsi, R.Zi LeGeros, E.Nery and K. Lynch, B. Kerebel. Transformation of biphasic calcium phosphate ceramics in vivo: Ultrastructural and physicochemical characterization. Journal of Biomedical Materials Research, Vol. 23, 883-894 (1989)
3. Der-Yang Cho, MD, Wuen-Yen Lee, MD, Pon-Chun Sheu, MD, Chun-Chung Chen, MD. Cage containing a biphasic calcium phosphate ceramic (Triosite) for the treatment of cervical spondylosis. Surgical Neurology 63 (2005) 497-504

List of implants

... And instruments

Solis Implants

Item #	Reference	Size
6741204	Solis Cervical Cage	12/4
6741205	Solis Cervical Cage	12/5
6741206	Solis Cervical Cage	12/6
6741207	Solis Cervical Cage	12/7
6741208	Solis Cervical Cage	12/8
6741209	Solis Cervical Cage	12/9



Item #	Reference	Size
6741404	Solis Cervical Cage	14/4
6741405	Solis Cervical Cage	14/5
6741406	Solis Cervical Cage	14/6
6741407	Solis Cervical Cage	14/7
6741408	Solis Cervical Cage	14/8
6741409	Solis Cervical Cage	14/9

Tribone 80 Implants

Item #	Reference	Size
T806741204	Insert for Solis Cage	12/4
T806741205	Insert for Solis Cage	12/5
T806741206	Insert for Solis Cage	12/6
T806741207	Insert for Solis Cage	12/7
T806741208	Insert for Solis Cage	12/8
T806741209	Insert for Solis Cage	12/9



Item #	Reference	Size
T806741404	Insert for Solis Cage	14/4
T806741405	Insert for Solis Cage	14/5
T806741406	Insert for Solis Cage	14/6
T806741407	Insert for Solis Cage	14/7
T806741408	Insert for Solis Cage	14/8
T806741409	Insert for Solis Cage	14/9

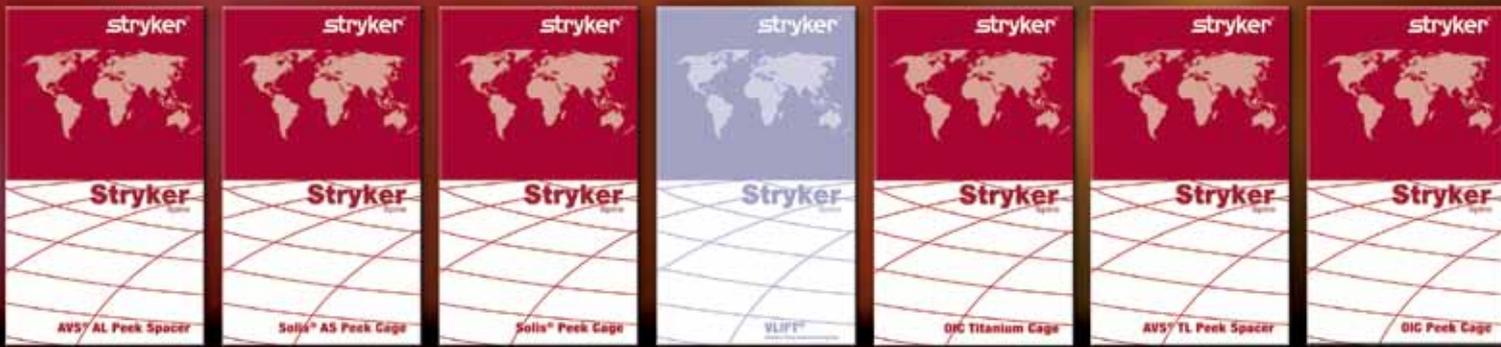
Trials

Item #	Reference	Size
8741204	Trial Cage	12/4
8741205	Trial Cage	12/5
8741206	Trial Cage	12/6
8741207	Trial Cage	12/7
8741208	Trial Cage	12/8
8741209	Trial Cage	12/9



Item #	Reference	Size
8741404	Trial Cage	14/4
8741405	Trial Cage	14/5
8741406	Trial Cage	14/6
8741407	Trial Cage	14/7
8741408	Trial Cage	14/8
8741409	Trial Cage	14/9

Solis Sterile Packaging



Stryker Spine sterile packaging offers:

- Implants individually packaged in double barrier blister packs
- Gamma sterilised
- Easy to read labels for quick identification of product and size
- Uniformly shaped boxes for ease of stacking and storing
- Quick pull tab for easy opening

Giving you and your hospital:

- Conveniently prepackaged, presterilised individual implants
- Facilitates lot traceability from manufacturing to patient implantation
- Reduced potential for lost inventory due to small size of some implants
- Reduction in the total number of trays needed in the operating room

Solis Sterile Implants

Item #	Reference	Size
6741204S	Sterile Solis Cervical Cage	12/4
6741205S	Sterile Solis Cervical Cage	12/5
6741206S	Sterile Solis Cervical Cage	12/6
6741207S	Sterile Solis Cervical Cage	12/7
6741208S	Sterile Solis Cervical Cage	12/8
6741209S	Sterile Solis Cervical Cage	12/9



Item #	Reference	Size
6741404S	Sterile Solis Cervical Cage	14/4
6741405S	Sterile Solis Cervical Cage	14/5
6741406S	Sterile Solis Cervical Cage	14/6
6741407S	Sterile Solis Cervical Cage	14/7
6741408S	Sterile Solis Cervical Cage	14/8
6741409S	Sterile Solis Cervical Cage	14/9

Instruments

Item #	Reference
874011	Distractor
874002	Distraction pin
874003	Bonegraft Compactor
874004	Implant Holder
874005	Pin Driver
874006	Bonegraft Harvesting Set
874007	Pins Guide
874008	Distractor Blade

Distractor Blade



Distractor



Bonegraft Compactor



Pin Driver



Pins Guide



Implant Holder



Bonegraft Harvesting Set



Joint Replacements

Trauma, Extremities & Deformities

Craniomaxillofacial

Spine

Biologics

Surgical Products

Neuro & ENT

Interventional Pain

Navigation

Endoscopy

Communications

Imaging

Patient Handling Equipment

EMS Equipment

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A surgeon must always rely on his or her own professional clinical judgment when deciding whether to use a particular product when treating a particular patient. Stryker does not dispense medical advice and recommends that surgeons be trained in the use of any particular product before using it in surgery.

The information presented is intended to demonstrate the breadth of Stryker product offerings. A surgeon must always refer to the package insert, product label and/or instructions for use before using any Stryker product.

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