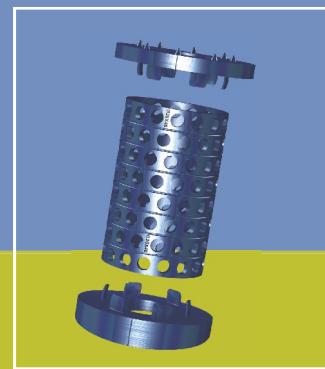


VBOSS™

System Overview

Vertebral Body Support System



Background

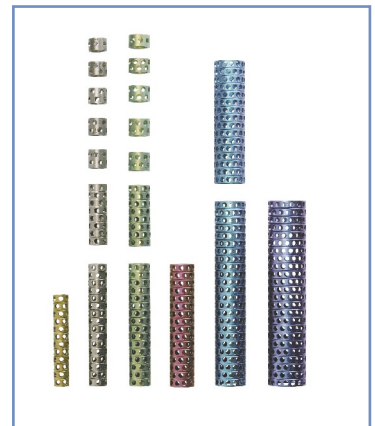
An international group of surgeons composed of some of the world's leading spine professionals designed the VBOSS™ system, incorporating key features to address the shortcomings and limitations of other Vertebral Body Replacement devices (mainly subsidence).

The group's input as well as a thorough review of clinical outcomes has enabled Stryker Spine to deliver a "Best in Class system incorporation leading edge instrumentation design such as parallel distractor, cage cutting and sizing.

System description

The Stryker Spine Vertebral Body Support System (VBOSS™) is intended for use as an aid in spinal fusion and consists of a hollow cylindrical tube. The sides of the cylinder are perforated by equally spaced holes. The cylinder is segmented and the grooves can be used as cutting lines. VBOSS™ implants are available in a variety of diameters from Ø10mm* to 25mm and lengths from 8mm to 120mm.

The end caps snap into each end of the cage. The exterior side of the end cap features evenly spaced round spikes providing fixation. The end cap is available in round, oval, round angled and oval angled shapes depending on the cage diameter. The system also offers end caps in different heights and pre-cut cages, very convenient for most procedures...



Implants are color coded for easy size identification.

VBOSS

VBOSS™ is :

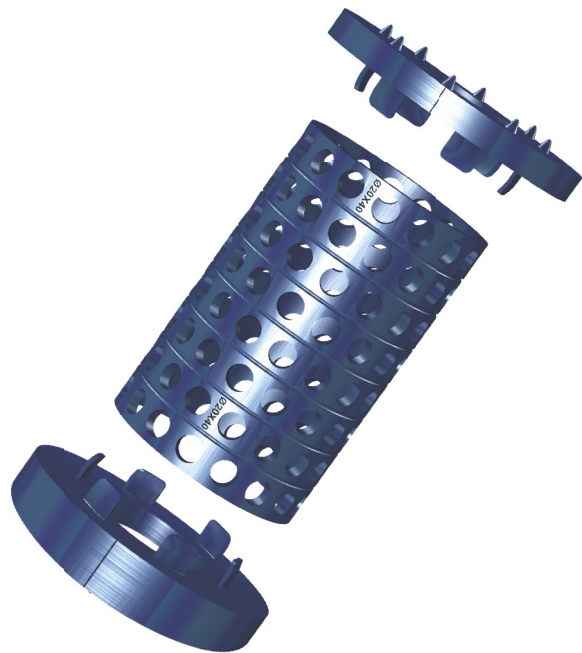
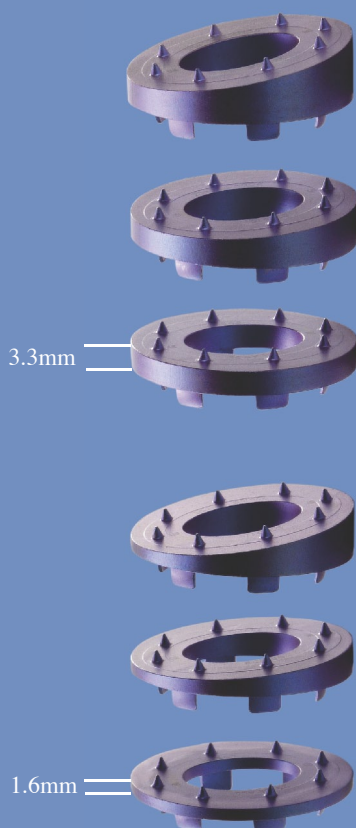
“A well designed implant that offers the structural anterior column support necessary with precisely fitted implants created through quick, efficient cutting and modular end caps that reduce subsidence and perfectly match patient anatomy.”

The cage body is available in 6 diameters and 9 heights (see table). The grooves are 5mm apart and are designed to aid in the cutting of the cage. The evenly staggered holes allow optimal porosity for maximum bone fusion.

The cage body and end caps are composed of commercially pure titanium (T60) and are color coded for easy identification (Photo)

The end caps are modular and available in 6 diameters and 10 different configurations:

- 2 shapes: round and oval,
- 3 angles: 0°, 5° and 10°,
- 2 different heights: small (1.6mm) and large (3.3mm).



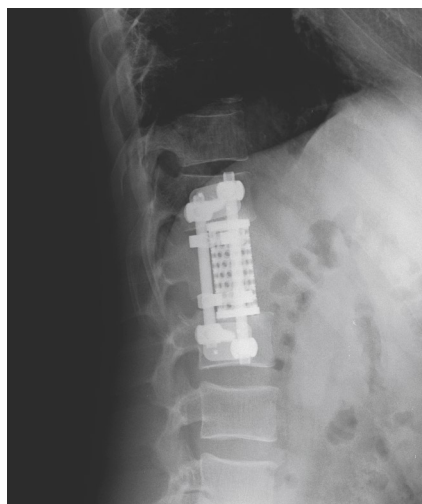
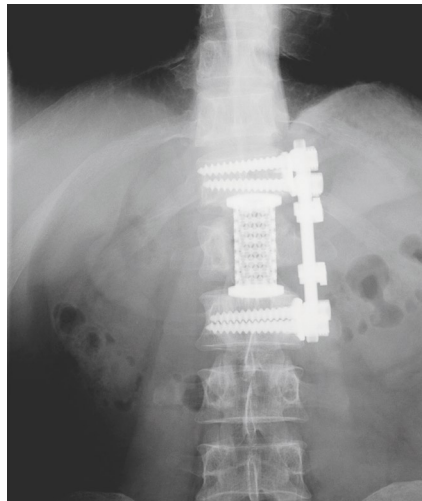
Indications

USA only :

The Stryker Spine Vertebral Body Support System implant is a device intended to replace a vertebral body or an entire vertebra. It is for use in the thoracolumbar spine (T1-L5) to replace a collapsed, damaged, or unstable vertebral body or vertebra due to tumor or trauma (e.g. fracture). For both corpectomy and vertebrectomy procedures, the VBOSS™ system is intended to be used with supplemental internal fixation systems. The use of bone graft is optional.

Outside the USA :

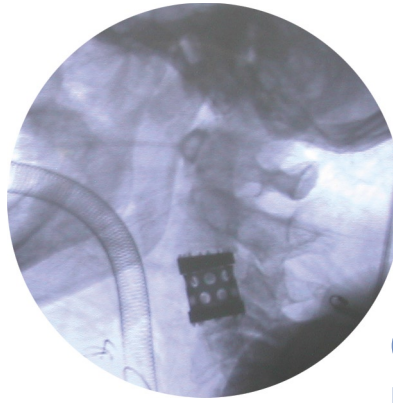
The Stryker Spine Vertebral Body Support System implant is a device intended to replace a vertebral body or an entire vertebra. It is for use in all levels of spine (C1-L5) to replace a collapsed, damaged, or unstable vertebral body or vertebra due to tumor or trauma (e.g. fracture). For both corpectomy and vertebrectomy procedures, the VBOSS™ system is intended to be used with supplemental internal fixation systems. The use of bone graft is optional.



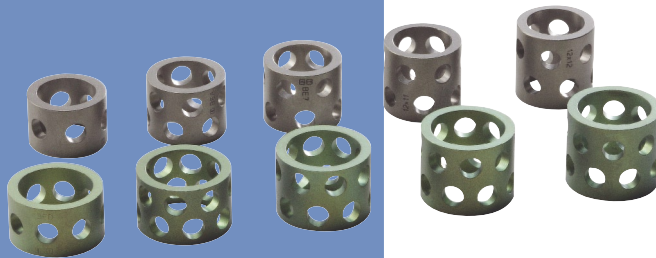
3 month follow-up X-rays of a patient presenting a burst fracture and treated with a cage Ø20mm x 40mm

Titanium cage implant

Easy to cut, yet strong enough not to deform, X-ray visible, MRI compatible, strong, load bearing, structural device. The cage design provides unequalled stability compared to other cages on the market and prevents cage subsidence into the endplates.



Post-op X-ray of a patient presenting a tumor and treated with a cage Ø12mm x 10mm and two large end caps (0° and 5°)

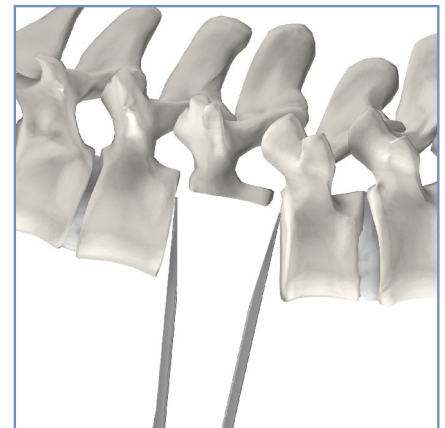


Construct height increments between 1mm and 3.3mm

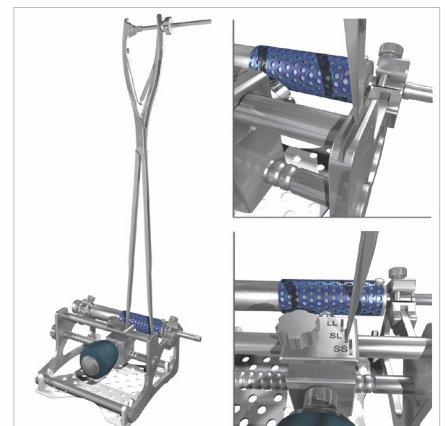
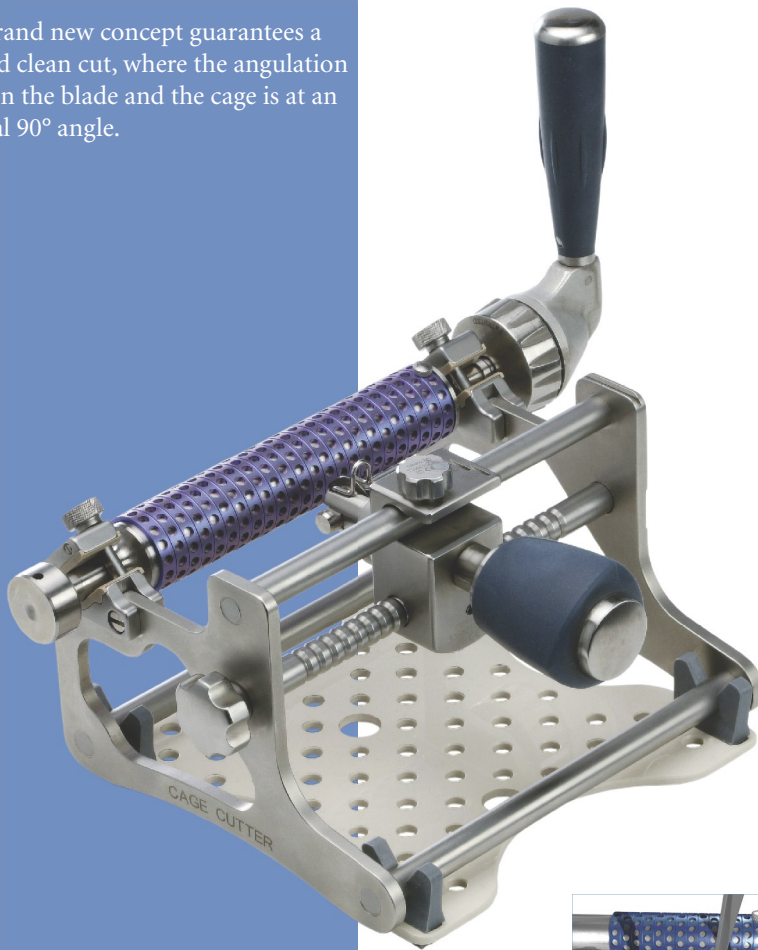
Small cages offer millimetric adjustment. Larger cage constructs range from 1.6mm to 3.3mm height increments. Both minimize the risk of overdistraction.

Cage cutter

This brand new concept guarantees a fast and clean cut, where the angulation between the blade and the cage is at an optimal 90° angle.

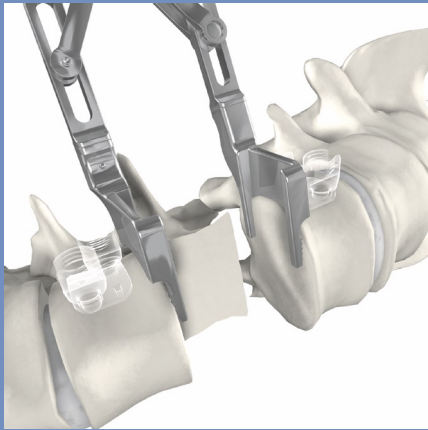


VBOSS™ Caliper and Cage Cutter



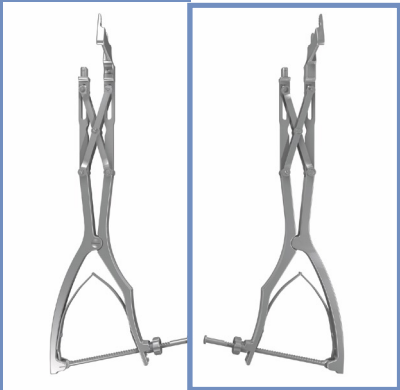
The all in one cage cutter and caliper determine the appropriate cage and end cap construct, no need to calculate the constructs height. Caliper measurement corresponds to the cage height and appropriate choice of end caps.

VBOSS

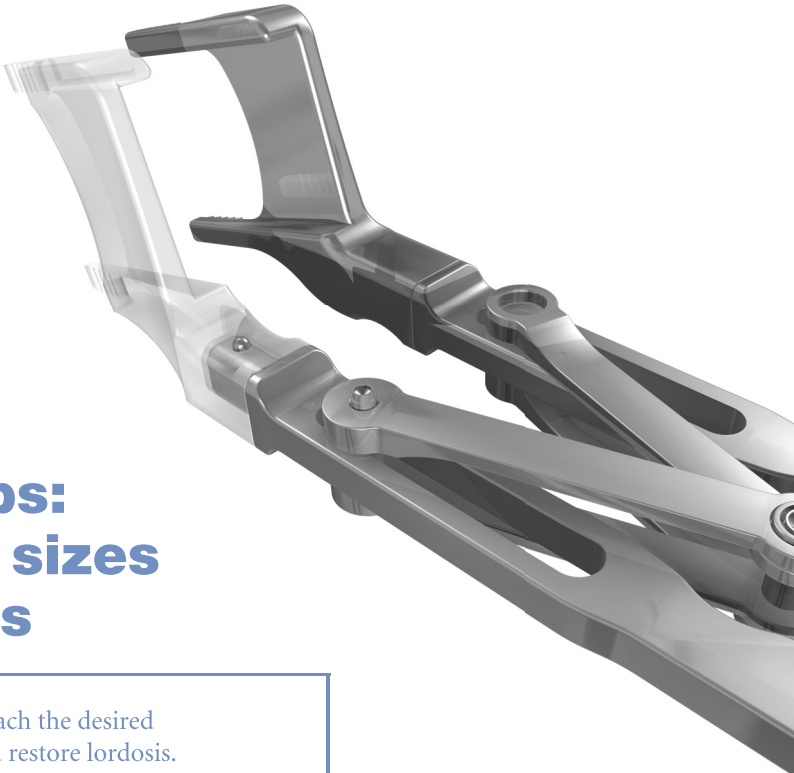


Parallel distractor

The two-in-one distractor provides simultaneous distraction while serving as an insertion guide for the cage. Its appropriate use enables cage insertion without scraping or damaging the endplates. Reversible end tips can be clipped on either side for both left and right hand use of the distractor.



End tips can be clipped on either side for both left and right hand use of the distractor.



End caps: various sizes & angles

True versatility to reach the desired construct height and restore lordosis. Better anatomical fit with 0°, 5° and 10° angles.



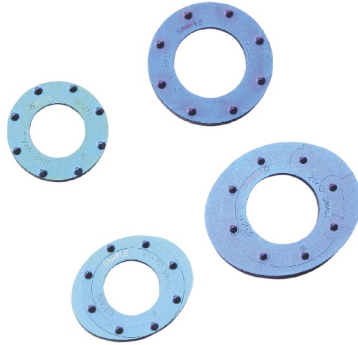
Markers on the cage and end caps

Enables visual check of the alignment of the cage and the end caps.



Large holes in end caps

The large holes in the end caps allow for enhanced bone in-growth. Additionally, oval end caps maximize the implant footprint on the vertebral endplate for greater load bearing, load sharing and stability.



Instruments



Bonegraft impaction

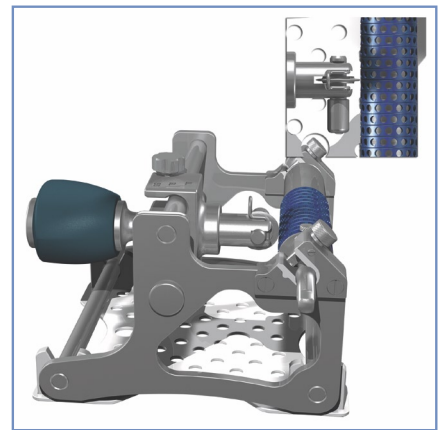
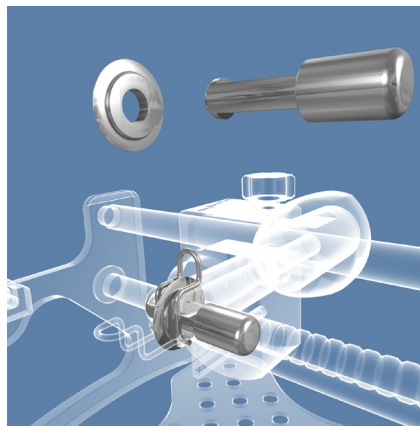
The system allows bone graft to be impacted into the cage. Appropriate impacting will eliminate graft voids seen in other systems.



Cage inserters

The standard and small inserters accommodate a variety of situations. The small inserter is only 8mm wide and truly low profile.

How does it work for you?



Who's the boss ?

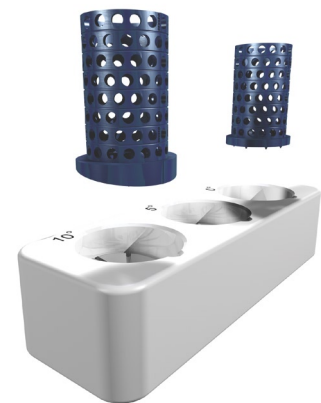
A radel plate and silicon feet provide an excellent stability for the cage cutter on any surface. The blade is guided by its supporting frame into the cutting grooves of the cage.

Cutting blade

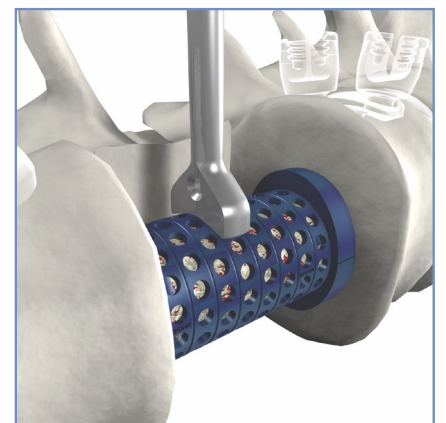
Quick assembly and locking of the cutting blade system composed of a stainless steel blade on a titanium shaft. Both materials deliver outstanding performance when cutting all cage diameters.



Deburring the cage after the cut.



The Teflon®-based end cap impactor bloc is designed to provide vertical alignment regardless of cage angulation.



After insertion of the implant, the final cage impactor has an angled extremity and a pin to allow for in situ adjustability of the cage.



The VBOSS™ range

The small and large end caps are respectively 1.65mm and 3.3mm high. The construct of the VBOSS™ (cage body and end caps) matches the spine anatomy.

Cage body references

		Diameter (Ø _{External}) [mm]					
		Ø10*	Ø12	Ø14	Ø16	Ø20	Ø25
Height [mm]	8		336612008	336614008			
	9		336612009	336614009			
	10		336612010	336614010			
	11		336612011	336614011			
	12		336612012	336614012			
	40		336612040	336614040	336616040	336620040	336625040
	60	336610060					
	80		336612080	336614080	336616080	336620080	336625080
	120					336620120	336625120

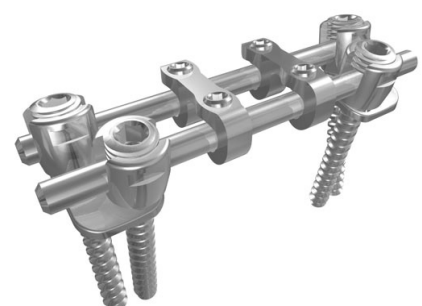
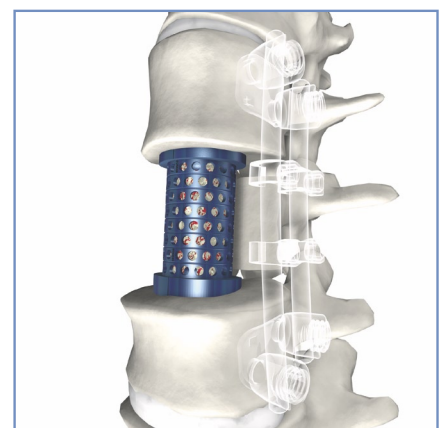
End cap references

			Diameter (Ø _{External}) [mm]					
Shape	Angle	Height	Ø10*	Ø12	Ø14	Ø16	Ø20	Ø25
Round shape 	0°	Small	33661000SR	33661200SR	33661400SR	33661600SR	33662000SR	33662500SR
		Large	33661000MR	33661200MR	33661400MR	33661600MR	33662000MR	33662500MR
	5°	Small	33661005SR	33661205SR	33661405SR	33661605SR	33662005SR	33662505SR
		Large	33661005MR	33661205MR	33661405MR	33661605MR	33662005MR	33662505MR
Oval shape 	0°	Small					33662000SO	33662500SO
		Large					33662000MO	33662500MO
	5°	Small					33662005SO	33662505SO
		Large					33662005MO	33662505MO
	10°	Small					33662010SO	33662510SO
		Large					33662010MO	33662510MO

A round end cap should be used in standard cases that do not require special consideration based on the shape of the vertebra or vertebral body to be replaced. If increased surface area is desired, oval endcaps should be used. Angle endcaps are available for those cages in which an angled implant would provide increased stabilization.

Appropriate supplemental fixation

For both corpectomy and vertebrectomy procedures, the VBOSS™ cage is intended for use with supplemental fixation. Anterior thoracolumbar plates and pedicle screw and rod systems are among the options for the surgeon to use.



Joint Replacements

Trauma

Spine

Micro Implants

Orthobiologics

Instruments

Interventional Pain

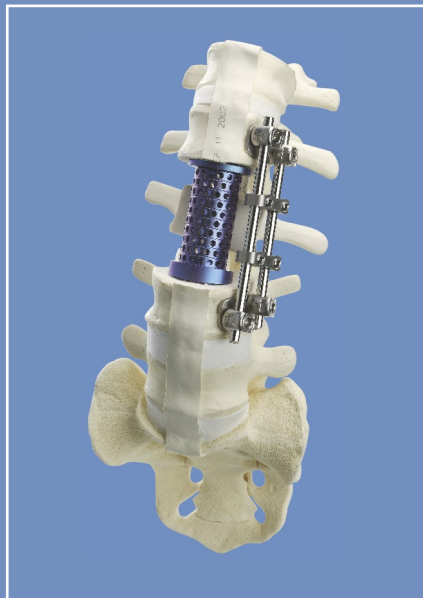
Navigation

Endoscopy

Communications

Patient Handling Equipment

EMS Equipment



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USA

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* Cage Ø10 is not cleared for sale in the USA

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