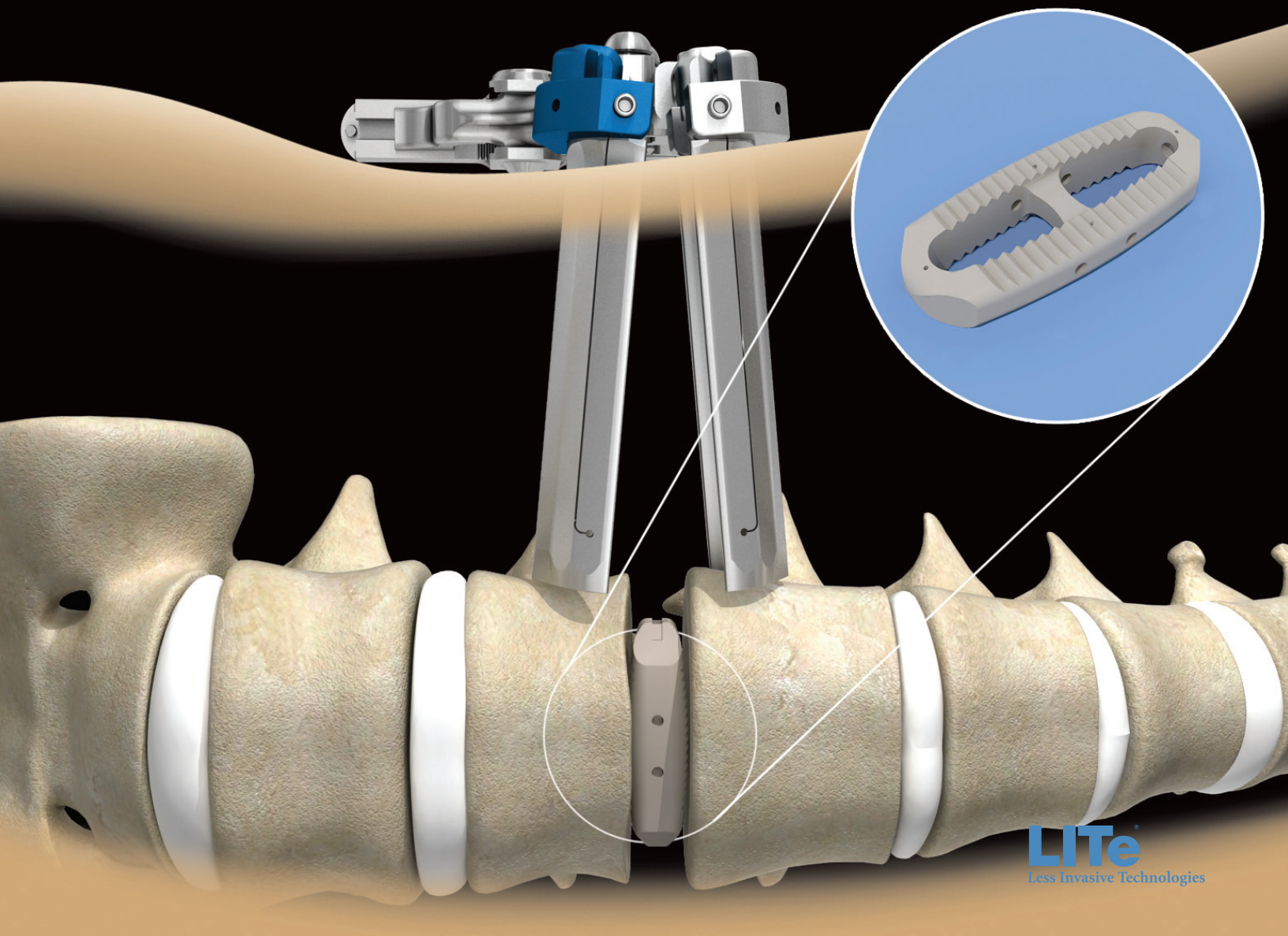
stryker®

Spine

AVS® ARIA™

Product Overview



LITe®
Less Invasive Technologies

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Indications

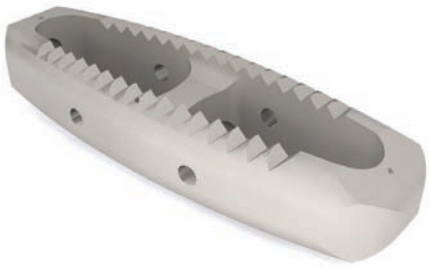
The Stryker Spine AVS® ARIA™ PEEK Spacers are intervertebral body fusion devices indicated for use with autogenous bone graft in patients with degenerative disc disease (DDD) at one level or two contiguous levels from L2 to S1.

DDD is defined as back pain of discogenic origin with degeneration of the disc confirmed by history and radiographic studies. The DDD patients may also have up to Grade I spondylolisthesis at the involved level(s). These patients should be skeletally mature and have six months of nonoperative therapy.

The AVS® ARIA™ PEEK Spacers are intended to be used with supplemental fixation systems that have been cleared for use in the lumbosacral spine.

Adaptive Sizing

The various AVS® ARIA™ sizing options available are designed to enable more precise anatomic height and lordotic restoration in a variety of patient populations.



18mm Wide AVS® ARIA™ Implants			
Reference Number	Description (Height x Length x Lordosis - Width)	Reference Number	Description (Height x Length x Lordosis - Width)
	Lordosis - 0°		Lordosis - 8°
Length 40mm			
48750008	8x40x0°-18	48751008	8x40x8°-18
48750010	10x40x0°-18	48751010	10x40x8°-18
48750012	12x40x0°-18	48751012	12x40x8°-18
48750014	14x40x0°-18	48751014	14x40x8°-18
48750016	16x40x0°-18	48751016	16x40x8°-18
48750018	18x40x0°-18	48751018	18x40x8°-18
Length 45mm			
48750108	8x45x0°-18	48751108	8x45x8°-18
48750110	10x45x0°-18	48751110	10x45x8°-18
48750112	12x45x0°-18	48751112	12x45x8°-18
48750114	14x45x0°-18	48751114	14x45x8°-18
48750116	16x45x0°-18	48751116	16x45x8°-18
48750118	18x45x0°-18	48751118	18x45x8°-18
Length 50mm			
48750208	8x50x0°-18	48751208	8x50x8°-18
48750210	10x50x0°-18	48751210	10x50x8°-18
48750212	12x50x0°-18	48751212	12x50x8°-18
48750214	14x50x0°-18	48751214	14x50x8°-18
48750216	16x50x0°-18	48751216	16x50x8°-18
48750218	18x50x0°-18	48751218	18x50x8°-18
Length 55mm			
48750308	8x55x0°-18	48751308	8x55x8°-18
48750310	10x55x0°-18	48751310	10x55x8°-18
48750312	12x55x0°-18	48751312	12x55x8°-18
48750314	14x55x0°-18	48751314	14x55x8°-18
48750316	16x55x0°-18	48751316	16x55x8°-18
48750318	18x55x0°-18	48751318	18x55x8°-18
Length 60mm			
48750408	8x60x0°-18	48751408	8x60x8°-18
48750410	10x60x0°-18	48751410	10x60x8°-18
48750412	12x60x0°-18	48751412	12x60x8°-18
48750414	14x60x0°-18	48751414	14x60x8°-18
48750416	16x60x0°-18	48751416	16x60x8°-18
48750418	18x60x0°-18	48751418	18x60x8°-18

Adaptive Sizing

22mm Wide AVS® ARIA™ Implants			
Reference Number	Description (Height x Length x Lordosis - Width)	Reference Number	Description (Height x Length x Lordosis - Width)
	Lordosis - 0°		Lordosis - 8°
Length 40mm			
48752008	8x40x0°-22	48753008	8x40x8°-22
48752010	10x40x0°-22	48753010	10x40x8°-22
48752012	12x40x0°-22	48753012	12x40x8°-22
48752014	14x40x0°-22	48753014	14x40x8°-22
48752016	16x40x0°-22	48753016	16x40x8°-22
48752018	18x40x0°-22	48753018	18x40x8°-22
Length 45mm			
48752108	8x45x0°-22	48753108	8x45x8°-22
48752110	10x45x0°-22	48753110	10x45x8°-22
48752112	12x45x0°-22	48753112	12x45x8°-22
48752114	14x45x0°-22	48753114	14x45x8°-22
48752116	16x45x0°-22	48753116	16x45x8°-22
48752118	18x45x0°-22	48753118	18x45x8°-22
Length 50mm			
48752208	8x50x0°-22	48753208	8x50x8°-22
48752210	10x50x0°-22	48753210	10x50x8°-22
48752212	12x50x0°-22	48753212	12x50x8°-22
48752214	14x50x0°-22	48753214	14x50x8°-22
48752216	16x50x0°-22	48753216	16x50x8°-22
48752218	18x50x0°-22	48753218	18x50x8°-22
Length 55mm			
48752308	8x55x0°-22	48753308	8x55x8°-22
48752310	10x55x0°-22	48753310	10x55x8°-22
48752312	12x55x0°-22	48753312	12x55x8°-22
48752314	14x55x0°-22	48753314	14x55x8°-22
48752316	16x55x0°-22	48753316	16x55x8°-22
48752318	18x55x0°-22	48753318	18x55x8°-22
Length 60mm			
48752408	8x60x0°-22	48753408	8x60x8°-22
48752410	10x60x0°-22	48753410	10x60x8°-22
48752412	12x60x0°-22	48753412	12x60x8°-22
48752414	14x60x0°-22	48753414	14x60x8°-22
48752416	16x60x0°-22	48753416	16x60x8°-22
48752418	18x60x0°-22	48753418	18x60x8°-22

Wedge Nose Design

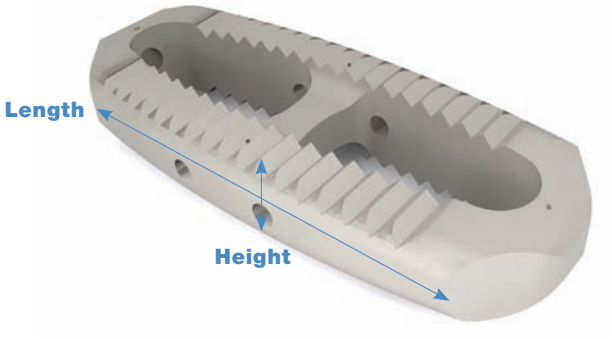
The ergonomically designed, unique wedge nose of the AVS® ARIA™ implant allows for **self distraction upon insertion**, which is designed to allow the implants to be inserted into small disc spaces. In addition, the ergonomic shape allows for safe navigation around neural tissues.

AVS® ARIA™ Wedge Nose Heights in 18mm Wide Implants					
Implant Height	**40mm Length**	**45mm Length**	**50mm Length**	**55mm Length**	**60mm Length**
	0° Lordotic Angle	**0° Lordotic Angle**	**0° Lordotic Angle**	**0° Lordotic Angle**	**0° Lordotic Angle**
8mm	5.2mm	5.1mm	5.0mm	4.9mm	4.8mm
10mm	7.1mm	7.0mm	6.9mm	6.8mm	6.7mm
12mm	7.3mm	7.0mm	6.9mm	6.8mm	6.7mm
14mm	9.2mm	8.9mm	8.6mm	8.4mm	8.2mm
16mm	11.1mm	10.8mm	10.5mm	10.3mm	10.1mm
18mm	13.4mm	13.1mm	12.4mm	10.8mm	10.6mm
	8° Lordotic Angle	**8° Lordotic Angle**	**8° Lordotic Angle**	**8° Lordotic Angle**	**8° Lordotic Angle**
8mm	6.5mm	6.5mm	6.5mm	6.5mm	6.5mm
10mm	7.7mm	7.7mm	7.6mm	7.6mm	7.6mm
12mm	8.2mm	8.1mm	8.0mm	7.9mm	7.8mm
14mm	10.1mm	10.0mm	9.9mm	9.8mm	9.7mm
16mm	12.0mm	11.9mm	11.8mm	11.7mm	11.6mm
18mm	14.0mm	13.8mm	13.7mm	13.6mm	13.5mm

AVS® ARIA™ Wedge Nose Heights in 22mm Wide Implants					
Implant Height	**40mm Length**	**45mm Length**	**50mm Length**	**55mm Length**	**60mm Length**
	0° Lordotic Angle	**0° Lordotic Angle**	**0° Lordotic Angle**	**0° Lordotic Angle**	**0° Lordotic Angle**
8mm	5.8mm	5.7mm	5.6mm	5.5mm	5.4mm
10mm	7.6mm	7.5mm	7.4mm	7.3mm	7.2mm
12mm	8.1mm	7.8mm	7.6mm	7.4mm	7.2mm
14mm	10.0mm	9.7mm	9.5mm	9.3mm	9.1mm
16mm	12.0mm	11.7mm	11.4mm	11.2mm	11.0mm
18mm	13.9mm	13.6mm	13.3mm	13.0mm	12.9mm
	8° Lordotic Angle	**8° Lordotic Angle**	**8° Lordotic Angle**	**8° Lordotic Angle**	**8° Lordotic Angle**
8mm	6.5mm	6.4mm	6.4mm	6.4mm	6.4mm
10mm	7.9mm	7.8mm	7.7mm	7.7mm	7.6mm
12mm	8.3mm	8.2mm	8.0mm	7.9mm	7.8mm
14mm	10.2mm	10.0mm	9.9mm	9.8mm	9.7mm
16mm	12.1mm	11.9mm	11.8mm	11.7mm	11.6mm
18mm	14.0mm	13.8mm	13.7mm	13.6mm	13.5mm

Graft Volumes

One of the truly distinguishing features of the AVS® ARIA™ implant is the large internal graft chamber. This directly translates into a large internal graft volume, **optimized to provide maximum superior/inferior surface area contact between the bone graft and the endplate.** While the use of bone graft is optional, large graft volumes may potentially enhance fusion rates.



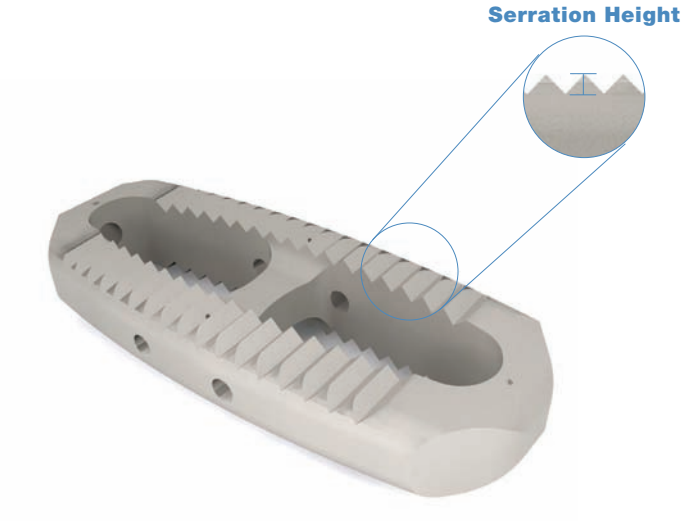
AVS® ARIA™ Graft Volumes (cc)					
Implant Height	40mm Length	45mm Length	50mm Length	55mm Length	60mm Length
	0° Lordotic Angle	0° Lordotic Angle	0° Lordotic Angle	0° Lordotic Angle	0° Lordotic Angle
8mm	1.6	1.9	2.3	2.6	3.0
10mm	2.0	2.4	2.9	3.3	3.8
12mm	2.4	2.8	3.3	3.9	4.4
14mm	2.8	3.4	4.0	4.6	5.2
16mm	3.2	3.9	4.6	5.3	6.0
18mm	3.6	4.4	5.2	5.8	6.8
	8° Lordotic Angle	8° Lordotic Angle	8° Lordotic Angle	8° Lordotic Angle	8° Lordotic Angle
8mm	1.4	1.7	2.1	2.4	2.7
10mm	1.8	2.2	2.6	3.0	3.4
12mm	2.2	2.6	3.1	3.5	4.0
14mm	2.6	3.1	3.7	4.2	4.8
16mm	3.0	3.6	4.3	5.0	5.6
18mm	3.4	4.2	4.9	5.5	6.4

Note: The graft volumes are the same for 18mm and 22mm wide AVS® ARIA™ implants.

Efficient Fixation

Each isometric serration provides immediate bidirectional fixation to help resist subsidence.

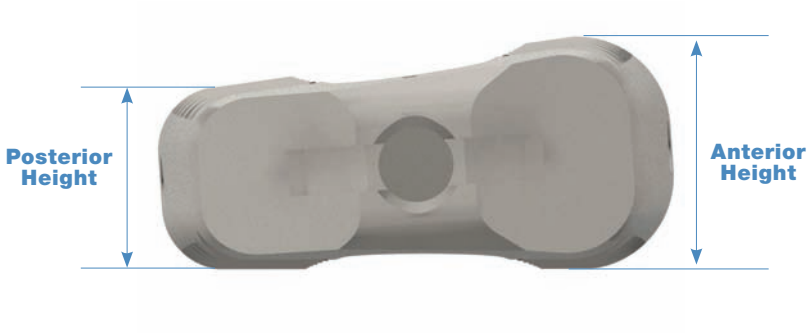
Serration Dimensions		
Implant Height	Height of Serrations	
	0° Lordotic Angle	8° Lordotic Angle
40mm	0.8mm	0.9mm
45mm	0.9mm	1mm
50mm	1mm	1.1mm
55mm	1.1mm	1.2mm
60mm	1.2mm	1.3mm



Lordotic Height Descriptions

One of the primary purposes of the AVS® ARIA™ implants is to **restore natural sagittal alignment**. The lordotic AVS® ARIA™ implants are designed to restore 8° of lordosis.

It is important to know the height differences between the anterior and posterior aspects in the lordotic implants. The height differences can be calculated by subtracting the Posterior height from the Anterior height. Note that the length and width of any implant does not influence the height difference, and there is no anterior-posterior height difference in implants with 0° of lordosis.

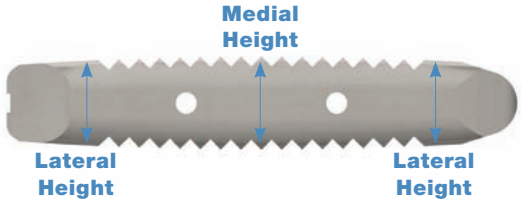


Anterior – Posterior Height Differences in 8° Lordotic Implants			
Implant Height	Anterior Height	Posterior Height	Height Difference
8mm	8mm	6mm	2mm
10mm	10mm	8mm	2mm
12mm	12mm	10mm	2mm
14mm	14mm	12mm	2mm
16mm	16mm	14mm	2mm
18mm	18mm	16mm	2mm

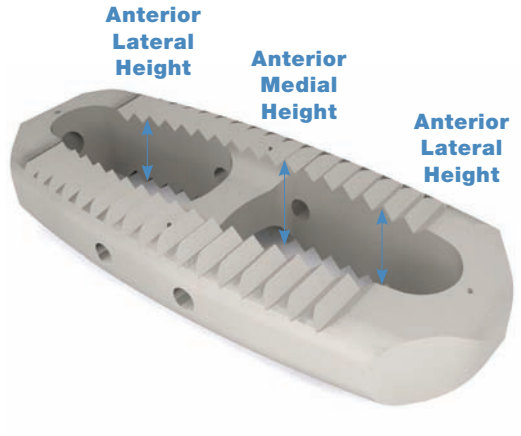
Anatomical Height Descriptions

The anatomical shape of the AVS® ARIA™ implant is designed to provide **maximum surface area contact and to promote structural stability**, to facilitate placement and match the endplates for optimal engagement.

It is important to know the height differences between the medial and lateral aspects in the lordotic and non-lordotic implants. The height differences can be calculated by subtracting the Lateral height from the Medial height. Note that the length of any implant does not influence the height difference. Additionally, the width of any implant does not influence the height difference in implants with 8° of lordosis.



Medial – Lateral Height Differences in 0° Lordotic Implants			
Implant Height	Medial Height	Lateral Height	Height Difference
Width 18mm			
8mm	8mm	7mm	1mm
10mm	10mm	9mm	1mm
12mm	12mm	10mm	2mm
14mm	14mm	12mm	2mm
16mm	16mm	14mm	2mm
18mm	18mm	16mm	2mm
Width 22mm			
8mm	8mm	7mm	1mm
10mm	10mm	9mm	1mm
12mm	12mm	10mm	2mm
14mm	14mm	12mm	2mm
16mm	16mm	14mm	2mm
18mm	18mm	16mm	2mm

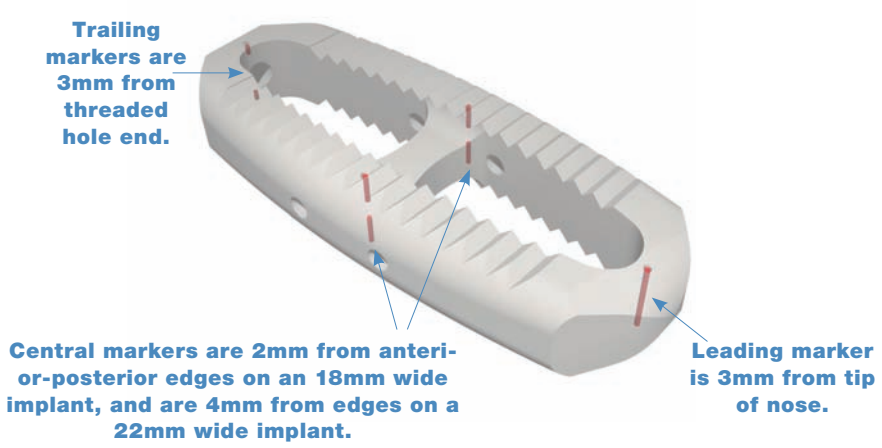


Medial – Lateral Height Differences in 8° Lordotic Implants			
Implant Height	Anterior Medial Height	Anterior Lateral Height	Anterior Height Difference
8mm	8mm	7.7mm	0.3mm
10mm	10mm	9mm	1mm
12mm	12mm	10mm	2mm
14mm	14mm	12mm	2mm
16mm	16mm	14mm	2mm
18mm	18mm	16mm	2mm

Visualization

Each AVS® ARIA™ implant has seven tantalum markers strategically embedded in each implant to help surgeons identify the **position and orientation** of the AVS® ARIA™ implants once inserted.

Two markers are positioned above and below the threaded hole of the implant, and one marker is embedded at the tip of the wedge nose. In addition, four markers are positioned centrally, two on the anterior side and on the posterior side of the implant. All seven markers are oriented in the same vertical (superior/inferior) direction.



Tantalum Marker Dimensions in 0° Lordotic Implants			
Implant Height	Central Markers Length	Trailing Markers Length	Leading Marker Length
8mm	2.5mm	1mm	4mm
10mm	3mm	1mm	5mm
12mm	4mm	1mm	5mm
14mm	5mm	2.5mm	6mm
16mm	6mm	2.5mm	8mm
18mm	7mm	2.5mm	8mm

Tantalum Marker Dimensions in 8° Lordotic Implants				
Implant Height	Anterior Central Markers Length	Posterior Central Markers Length	Trailing Markers Length	Leading Marker Length
8mm	2.5mm	1mm	1mm	4mm
10mm	3mm	1mm	1mm	5mm
12mm	4mm	3mm	1mm	5mm
14mm	5mm	4mm	1mm	6mm
16mm	6mm	5mm	1mm	8mm
18mm	7mm	6mm	1mm	8mm

For a Proper Insertion

Lateral View

A/P View

stryker®

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Hips

Knees

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