

ARTiC-L™ 3D Ti  
Spinal System

with TiONIC™ Technology

Medtronic



**TIONIC  
TECHNOLOGY—  
3D-PRINTED  
MANUFACTURING  
TECHNIQUE  
ENABLING  
A COMPLEX  
IMPLANT DESIGN.**

# ARTiC-L 3D Ti Spinal System Implant

## Insertion

Tapered-tip design allows for self-distraction and ease of insertion

## Titanium Surface

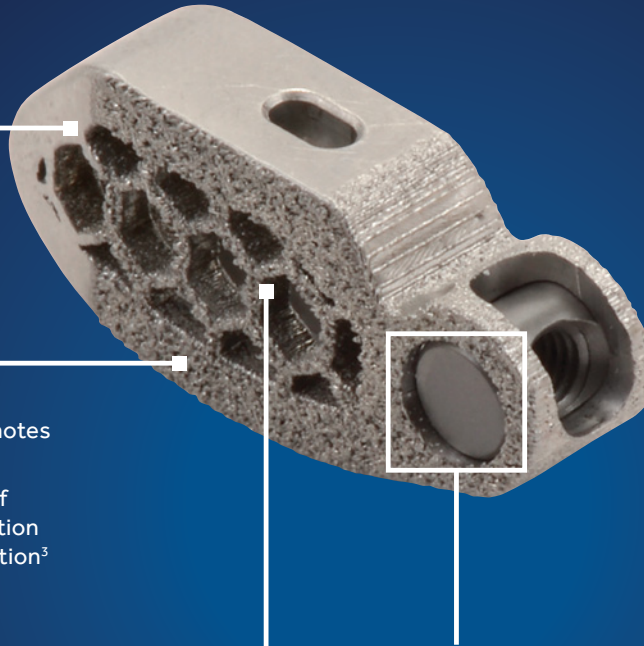
- Features a rough titanium surface texture that promotes bone formation<sup>1,2</sup>
- Creates high coefficient of friction to aid in initial fixation and to help prevent migration<sup>3</sup>

## Honeycomb Design

- Uses honeycomb design as an osteoconductive scaffold for bony growth into the implant<sup>1,2</sup>
- Honeycomb lattice structure is designed to minimize the stress load compared to an open cage design<sup>4</sup>

## Articulation

Internal Articulation for Inserter attachment



## Unique Topology

Allows for a more unique topology compared to standard PEEK or machined Ti Alloy designs

## Shape

Curved shape to resemble anatomy of apophyseal ring

## Lordotic angles

5°, 10° and 20°

## Length

25mm, 30mm, 35mm

## Width

12mm

## Risks/potential risks associated with the device include, but are not limited to:

- Implant migration
- Loss of spinal curvature, correction, height, and/or reduction
- Bone fracture or stress shielding at, above, or below the level of surgery
- Bone graft donor site complication
- Loss of spinal mobility
- Disc disruption
- Neurological impairment

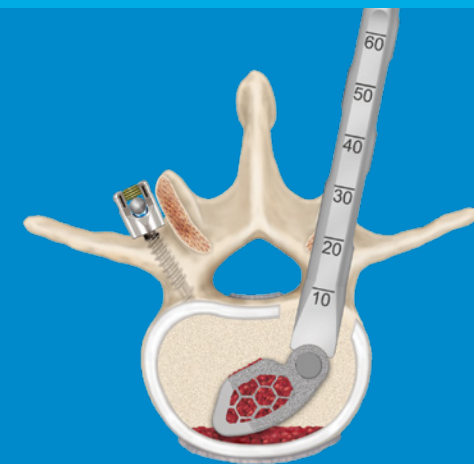
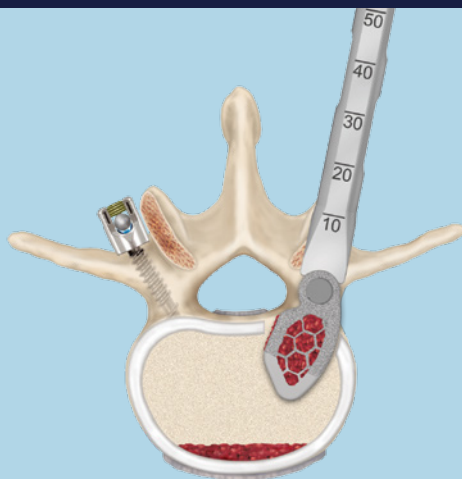
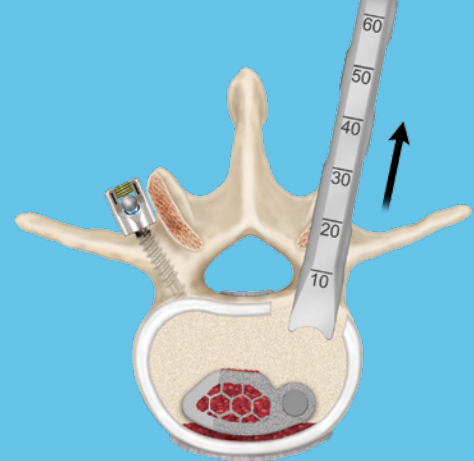
1 Wennerberg, A., & Albrektsson, T. (2009). Effects of titanium surface topography on bone integration: a systematic review. *Clin Oral Implants Res*, 20 Suppl 4, 172-184.

2 Gittens, R.A., Olivares-Navarrete, R., Schwartz, Z., Boyan, B.D. (2014). Implant osseointegration and the role of microroughness and nanostructures: lessons for spine implants. *Acta Biomater.*, 10(8), 3363-71.

3 Data on file.

4 Data on file.

# ONE INSTRUMENT TO INSERT AND POSITION



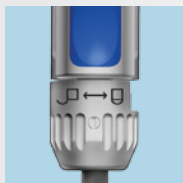
# Articulating Inserter

## Clutch Handle

- Manual depression creates ability to fix the implant at any angle
- Allows efficient workflow and one-hand implant positioning
- Lock allows implant to be fixed if desired

## Lock

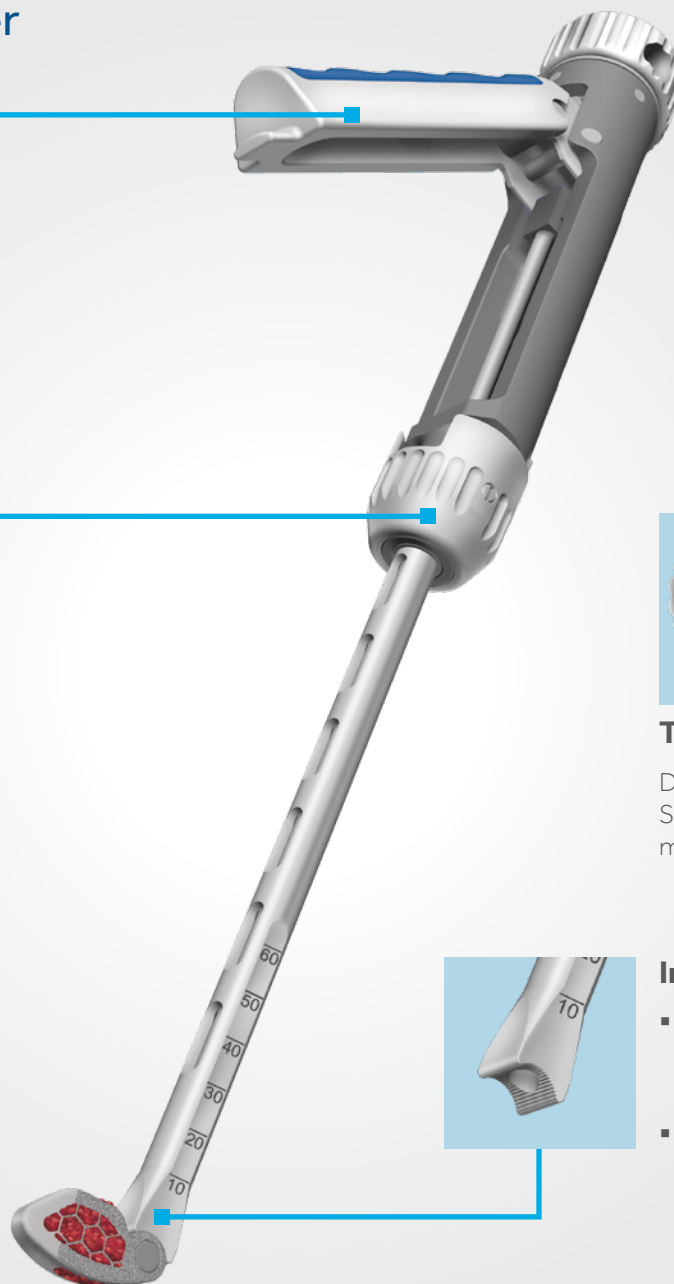
- Fixes clutch handle in closed position so that implant can be tightened at any angle
- Laser marks indicate open and closed positions



Locked Position



Unlocked Position



## Thumbwheel

Design incorporates Slap Hammer mating connection



## Inserter Tip

- Allows for implant and Trial rotation up to 90°
- Features ridges to ensure strong connection when implant is locked at an angle

**BONE GRAFT VOLUME**

Part Number	cc
56251020	0.6023
56251120	0.6976
56251220	0.7913
56251320	0.87988
56250810	0.49493
56250910	0.58849
56251010	0.68251
56251110	0.77803
56251210	0.86704
56251310	0.96026
56250805	0.53433
56250905	0.62777
56251005	0.72189
56251105	0.81731
56251205	0.9064
56251305	0.99962
56301020	0.84957
56301120	0.98636
56301220	1.11418
56301320	1.24929
56300810	0.6947
56300910	0.83038
56301010	0.96469
56301110	1.1014

**BONE GRAFT VOLUME**

Part Number	cc
56301210	1.20232
56301310	1.36444
56300805	0.75106
56300905	0.88673
56301005	1.02104
56301105	1.15785
56301205	1.28568
56301305	1.4209
56350810	0.90087
56350910	1.08149
56351010	1.26184
56351110	1.44349
56351210	1.61655
56351310	1.79661
56350805	0.9744
56350905	1.15494
56351005	1.3354
56351105	1.51705
56351205	1.69011
56351305	1.87017
56351020	1.11857
56351120	1.2991
56351220	1.47286
56351320	1.65471

**ARTiC-L™ 3D Ti Spinal System  
Instrument Set**

**SPS02918**

Part Number	Item Description	Qty
5330008	Articulating Inserter	2
5330009	Inserter Inner Shaft	3
5330012	Straight Tamp	1
5330020	Removal Tool	1
5330021	Slap Hammer	1

**ARTiC-L™ 3D Ti Spinal System Trial  
Instrument Set**

**SPS02924**

Part Number	Length	Height	Degree	Qty
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**Fixed Trials**

5250800	25	8mm	0°	1
5250900	25	9mm	0°	1
5251000	25	10mm	0°	1
5251100	25	11mm	0°	1
5251200	25	12mm	0°	1
5251300	25	13mm	0°	1
5300800	30	8mm	0°	1
5350800	35	8mm	0°	1

**Articulating Trials**

5250805	25	8mm	5°	1
5250905	25	9mm	5°	1
5251005	25	10mm	5°	1
5251105	25	11mm	5°	1
5251205	25	12mm	5°	1
5251305	25	13mm	5°	1
5251020	25	10mm	20°	1
5251120	25	11mm	20°	1
5251220	25	12mm	20°	1
5251320	25	13mm	20°	1
5300805	30	8mm	5°	1
5350805	35	8mm	5°	1

Part Number	Item Description	Qty
5330023	Trial Handle	2

ARTiC-L™ 3D Ti SPINAL SYSTEM  
**PRODUCT ORDERING INFORMATION**

**ARTiC-L™ 3D Ti Spinal System  
 Sterile 5 & 10 Degree Implants**

**SPS02925**

Part Number	Length	Height	Degree	Qty
56250805	25mm	8mm	5°	1
56250905	25mm	9mm	5°	1
56251005	25mm	10mm	5°	2
56251105	25mm	11mm	5°	2
56251205	25mm	12mm	5°	2
56251305	25mm	13mm	5°	1
56250810	25mm	8mm	10°	2
56250910	25mm	9mm	10°	2
56251010	25mm	10mm	10°	2
56251110	25mm	11mm	10°	2
56251210	25mm	12mm	10°	1
56251310	25mm	13mm	10°	1
56300805	30mm	8mm	5°	2
56300905	30mm	9mm	5°	2
56301005	30mm	10mm	5°	1
56301105	30mm	11mm	5°	1
56301205	30mm	12mm	5°	1
56301305	30mm	13mm	5°	1
56300810	30mm	8mm	10°	2
56300910	30mm	9mm	10°	2
56301010	30mm	10mm	10°	2
56301110	30mm	11mm	10°	2
56301210	30mm	12mm	10°	2
56301310	30mm	13mm	10°	1
56350805	35mm	8mm	5°	2
56350905	35mm	9mm	5°	2
56351005	35mm	10mm	5°	2

**ARTiC-L™ 3D Ti Spinal System Sterile  
 5 & 10 Degree Implants *continued***

**SPS02925**

Part Number	Length	Height	Degree	Qty
56351105	35mm	11mm	5°	2
56351205	35mm	12mm	5°	2
56351305	35mm	13mm	5°	2
56350810	35mm	8mm	10°	1
56350910	35mm	9mm	10°	1
56351010	35mm	10mm	10°	1
56351110	35mm	11mm	10°	1
56351210	35mm	12mm	10°	1
56351310	35mm	13mm	10°	1

**ARTiC-L™ 3D Ti Spinal System  
 Sterile 20 Degree Implants**

**SPS02926**

Part Number	Length	Height	Degree	Qty
56251020	25mm	10mm	20°	2
56251120	25mm	11mm	20°	2
56251220	25mm	12mm	20°	2
56251320	25mm	13mm	20°	2
56301020	30mm	10mm	20°	2
56301120	30mm	11mm	20°	2
56301220	30mm	12mm	20°	2
56301320	30mm	13mm	20°	2
56351020	35mm	10mm	20°	1
56351120	35mm	11mm	20°	1
56351220	35mm	12mm	20°	1
56351320	35mm	13mm	20°	1



# IMPORTANT PRODUCT INFORMATION

## INDICATIONS

The ARTiC-L™ 3D Ti Spinal System with TiONIC™ technology is indicated for use as an intervertebral body fusion device in skeletally mature patients with degenerative disc disease (DDD - defined by discogenic back pain with degeneration of the disc confirmed by patient history and radiographic studies) at one or two contiguous levels of the lumbar spine (L2-S1). Additionally, the ARTiC-L™ 3D Ti Spinal System with TiONIC™ technology can be used in patients diagnosed with spinal deformities as an adjunct to fusion. These patients should be skeletally mature and have undergone 6 months of non-operative treatment prior to surgery. These implants are used to facilitate fusion in the lumbar spine using autogenous bone and/or allogenic bone graft comprised of cancellous and/or corticocancellous bone graft. When used as an interbody fusion device, these implants are intended for use with supplemental internal fixation systems.

## NOTES

# Medtronic

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The surgical technique shown is for illustrative purposes only. The technique(s) actually employed in each case will always depend upon the medical judgment of the surgeon exercised before and during surgery as to the best mode of treatment for each patient.

Please see the package insert for the complete list of indications, warnings, precautions, and other important medical information.



Consult instructions for use at this website [www.medtronic.com/manuals](http://www.medtronic.com/manuals).

Note: Manuals can be viewed using a current version of any major internet browser. For best results, use Adobe Acrobat® Reader with the browser.

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