# MONACO

3D Printed Expandable Spacer System with surface dial technology

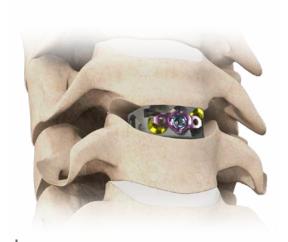


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# NeuroStructures

NeuroStructures is a medical device company focused on designing, developing, manufacturing, and marketing proprietary, high-quality medical device systems. All of our products provide comprehensive medical solutions to improve and enhance the quality of life for patients. NeuroStructures is dedicated to exceeding expectations in product quality, customer service, and product cost. The company is led by a team of experienced marketing, engineering, and sales individuals with extensive knowledge and training in the domestic and international spine surgery device markets.

NeuroStructures is ISO 13485 and FDA registered.



Cavetto®-SA EX



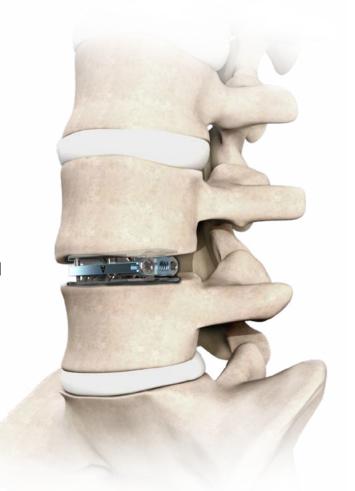
Arco<sup>™</sup>-SA EX





# **Torus**<sup>™</sup>

3D PRINTED EXPANDABLE LUMBAR SPACER SYSTEM WITH SURFACE DIAL TECHNOLOGY



# Torus<sup>™</sup>-SA

3D PRINTED EXPANDABLE STAND-ALONE LUMBAR SPACER SYSTEM WITH SURFACE DIAL TECHNOLOGY



MINIMAL DISRUPTION | OPTIMAL RESTORATION

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# Monaco

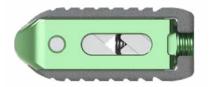
The Monaco Expandable Spacer System is a titanium alloy market-leading solution that is inserted through conventional Posterior Lumbar Interbody Fusion (PLIF) and Transforaminal Lumbar Interbody Fusion (TLIF) approaches. Once inserted into the disc space, the Monaco expandable cage, with tactile sensitivity, can be expanded continuously with minimal turns of the distraction mechanism. The implant height can increase to restore disc space height and reduce subsidence.

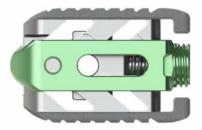


Monaco implants can be placed seamlessly into the disc space due to their low profile and bulleted design. The implant can be inserted, expanded, and rapidly post packed through a proprietary inserter, optimizing surgical efficiency. The Monaco interbody system provides restoration of sagittal alignment with customizable degrees of lordosis and was designed to induce lordosis in an anatomical fashion, unique to what is currently on the market.

The Monaco Expandable Spacer System represents the next generation of expandable technology.

#### PARALLEL





#### **ANGULAR**





### Value Proposition

The Monaco Expandable Spacer System provides a robust expandable titanium cage with instrumentation that delivers control and performance to clinicians through tactile feedback and reliable graft delivery for the PLIF/TLIF approach.

Its unique design minimizes both neural retraction and insertion force, accommodates a larger graft channel, and provides controlled expansion to restore disc height.





The wide array of implant options and expansive instrumentation delivers a streamlined, efficient procedural sequence that can address even the most difficult pathologies.

### System Features & Benefits

- Titanium Alloy Implant with 3D Printed Textured Titanium Endplates Promotes Immediate Mechanical Fixation & Potentially Upregulating the Production of Osteogenic Factors that are Critical for Bone Growth & Fusion
- Inserted at a Reduced Height to Minimize Impaction & Preserve Endplate Integrity
- Automatic Locking Once Desired Expansion Height is Achieved Without Loss of Height Restoration Helps to Streamline Procedure
- Large Graft Window with the Ability to Pack Bone Graft After Being Expanded, Assists with Sentinel & Columnar Fusion Through the Implant
- Length is Not Compromised There is No Loss of Length When the Implant is Fully Expanded
- Controlled & Continuous In Situ Expansion Allows for Foraminal & Disc Height Restoration
- When Expanded in the Disc Space, the Implant Optimizes Endplate-to-Endplate Fit to Assist in the Restoration of Normal Alignment
- Bulleted Tip Simplifies Insertion in Collapsed Degenerative Discs Without Compromising the Apophyseal Ring
- Adjustable Trials Reduces Trailing Steps & Accurately Determines Optimal Implant & Disc Height
- Multiple Footprints With Effective Sizing Allows for Minimally Invasive Surgery (MIS) Approach & Optimal Fit for Larger Patient Anatomies
- Streamlined Instrumentation Provides the Surgeon Minimal Tissue Disruption & Nerve Retraction While Restoring Patient Alignment



**PARALLEL** 



**ANGULAR** 

### Monaco Expandable Spacer System

The platform will provide a robust, expandable titanium interbody device with instrumentation that delivers control and performance to clinicians through tactile feedback and reliable graft delivery, producing a true procedural solution for the PLIF/TLIF approach.

The device expands by utilization of a threaded actuator shaft that, when rotated clockwise, forces the wedges of the Monaco Expandable Spacer System to move inward, thereby expanding the upper and lower plates.

The surgeon should use their discretion on whether or not the Monaco Expandable Spacer System needs to be expanded to its limit. In many cases, the Monaco Expandable Spacer System does not need to be expanded to its maximum limit to reduce the likelihood of endplate fracture and/or subsidence. Expansion force is achieved by utilizing the Torque-Limiting Handle.



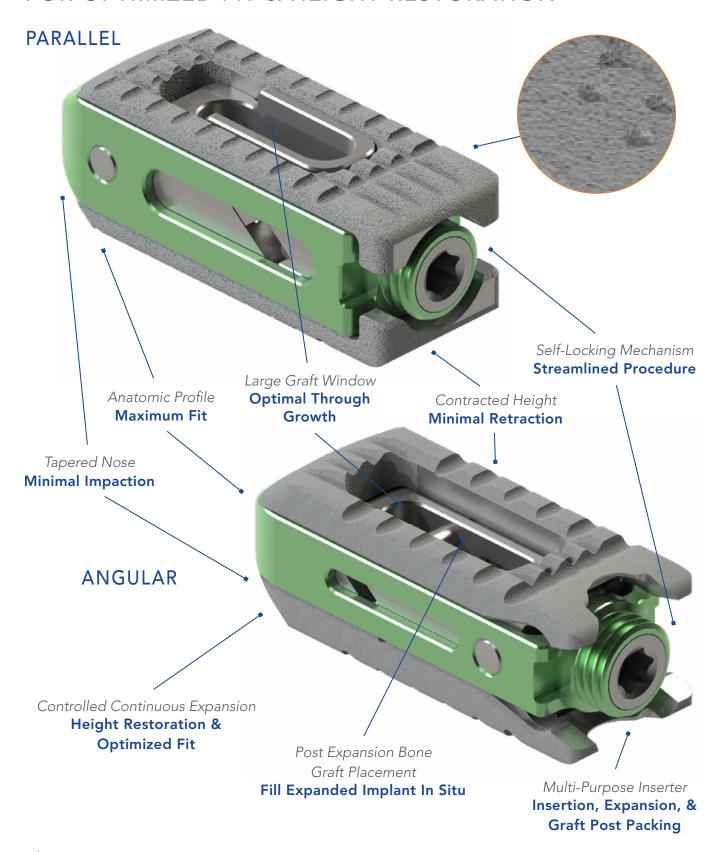
**PARALLEL** 



**ANGULAR** 

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# Surface Dial Technology FOR OPTIMIZED FIT & HEIGHT RESTORATION



### **WIDTHS**



8 mm



10.5 mm



12 mm

### **LENGTHS**



22 mm

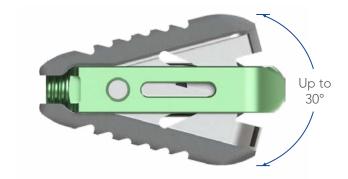


26 mm



30 mm

### ANGULAR LORDOTIC PROFILE



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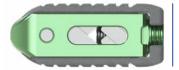
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#### **HEIGHT RANGE**

#### **PARALLEL**

7 – 18 mm







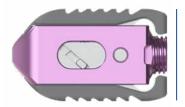
#### **ANGULAR**

7 – 18 mm











Parallel Implant Sizes			
Heights (mm)	Widths (mm)	Lengths (mm)	
7 – 10, 9 – 14, & 13 – 18	9, 10.5, & 12	22, 26, & 30	

<sup>\*</sup>Expansion varies based on implant height

Angular Implant Sizes (Max Angle 22°)			
Heights (mm)	Widths (mm)	Lengths (mm)	
7, 9, 11, 13, & 15	9, 10.5, & 12	22, 26, & 30	

<sup>\*</sup>Expansion varies based on implant height

Notes	

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