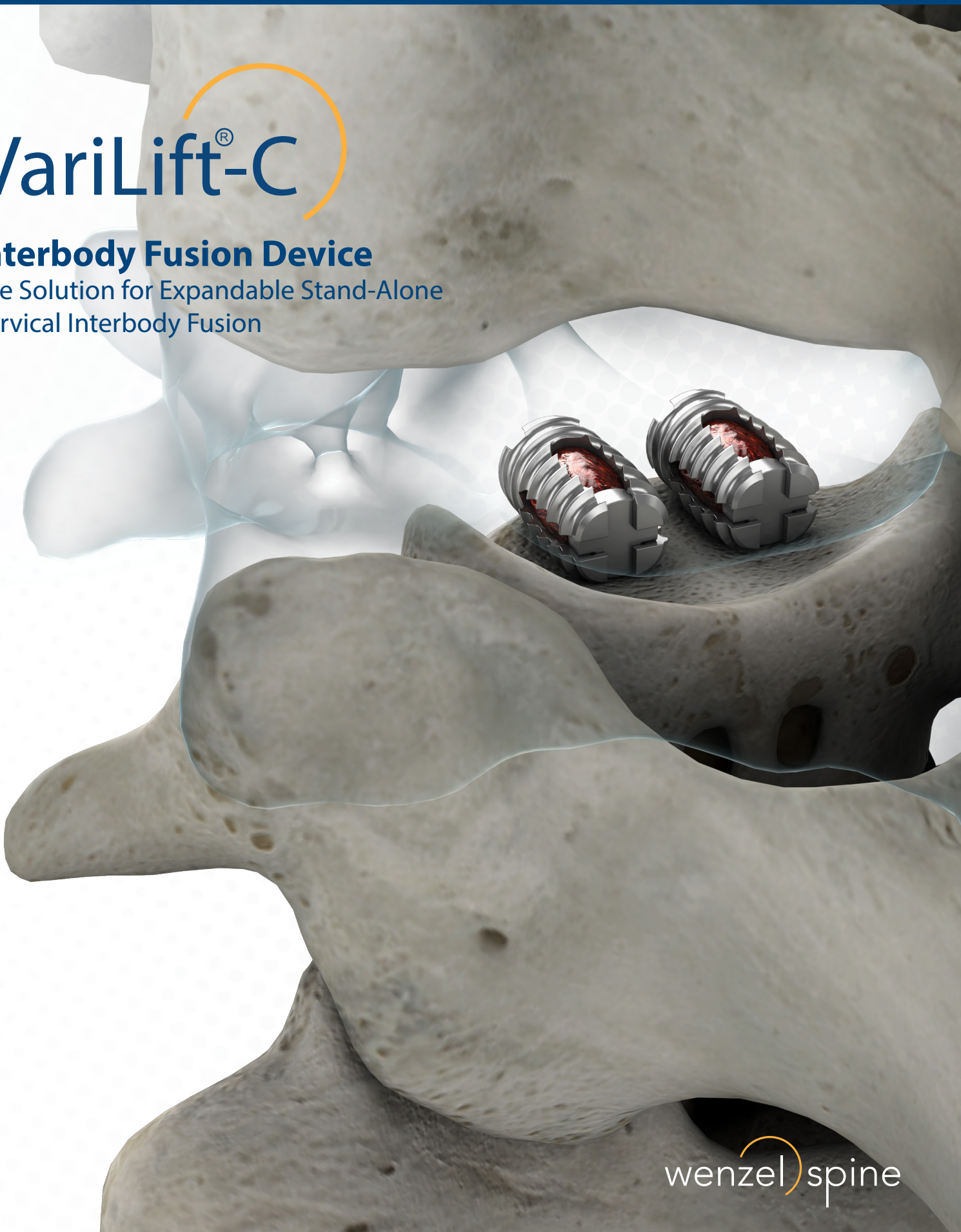
VariLift®-C

Interbody Fusion Device

The Solution for Expandable Stand-Alone Cervical Interbody Fusion



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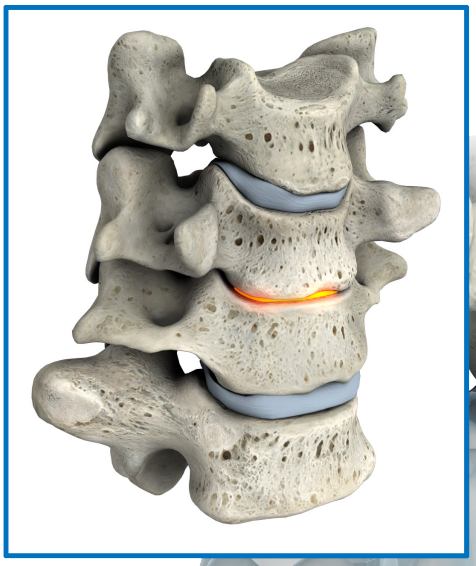
VariLift®-C

Stand-Alone Expandable Cervical Interbody Fusion Device

A straight-forward and anatomical solution for stand-alone cervical fusion



Preoperative loss of disc space height and lordosis

True Zero Profile

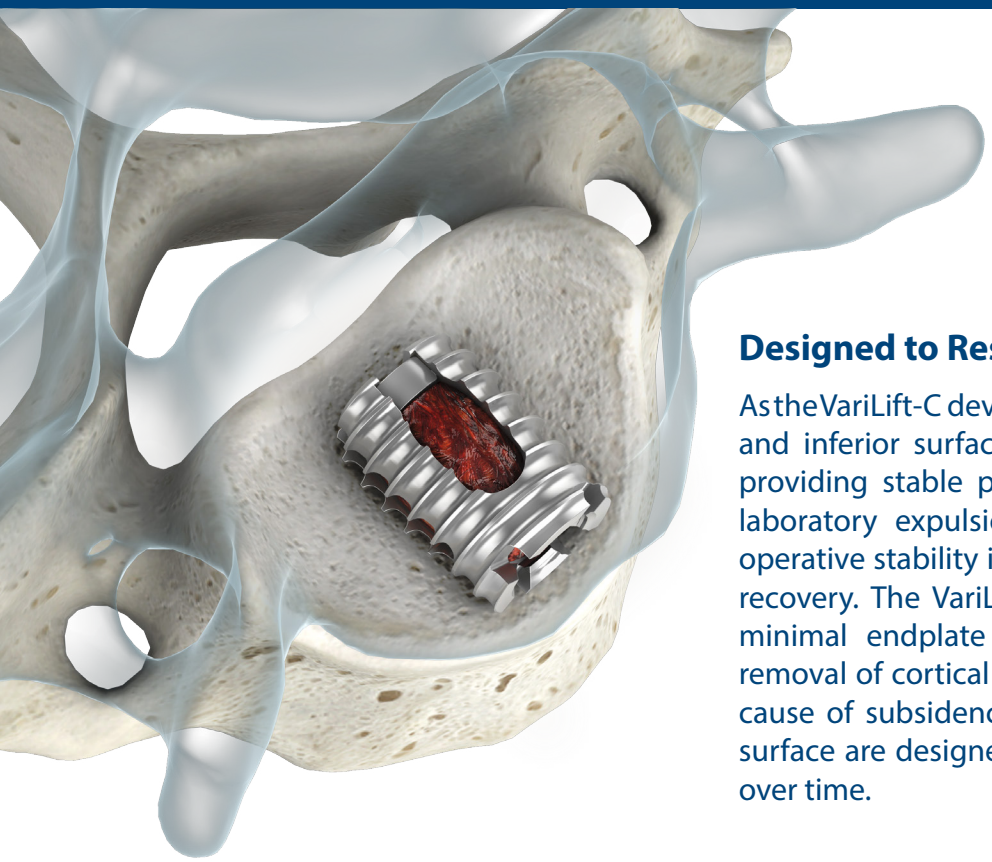
By eliminating the need for plates and screws, the zero-profile VariLift-C Interbody Fusion Device was designed to achieve primary stability for stand-alone use in both unilateral and bilateral procedures.

The VariLift-C technique emphasizes endplate preservation, providing a solid foundation for device fixation.

- **True Zero-Profile Construct, No Plates or Screws**
- **Minimal Retraction Requirements**
- **Stand-Alone Device**
- **Unilateral or Bilateral Placement**
- **Expands *In Situ***
- **Zero Impact Insertion**
- **Immediate and Long-term Stability**
- **Large Fenestrations for Fusion Assessment**
- **Generous Graft Chamber**
- **Restores 7° Lordosis**

Proven Mechanical Strength

In laboratory tests, fully expanded VariLift-C devices withstood dynamic and static compressive loads that greatly exceed the expected *in vivo* loads for stand-alone use.[3]



Cranial view of expanded VariLift-C device, showing large graft-to-bone contact area.

Designed to Resist Migration and Subsidence

As the VariLift-C device is expanded, ridges on the superior and inferior surface grip into the vertebral endplates, providing stable primary fixation, as demonstrated in laboratory expulsion testing.[3] This immediate post-operative stability is crucial to early ambulation and fast recovery. The VariLift-C surgical technique emphasizes minimal endplate cortical bone removal. Aggressive removal of cortical bone from the endplates is a known cause of subsidence.[1,2] The wedge shape and ridged surface are designed to provide resistance to migration over time.

Titanium Alloy

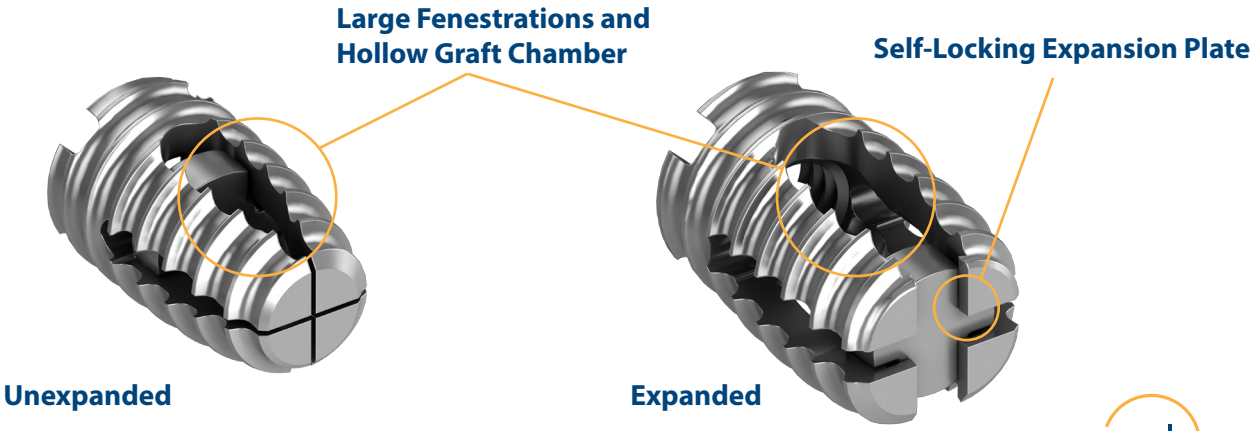
Titanium alloy (Ti6Al4V) is a high-performance material well-known for its strength and biocompatibility for orthopedic applications.[4] It is considered the "gold standard" for achieving secondary fixation in bone-contacting orthopedic applications.[5,6,7]

The Material Properties of Titanium Alloy Allow the VariLift-C Device to:

- Incorporate its novel expandability feature
- Meet the biomechanical demands of stand-alone use
- Include large fenestrations and a generous bone graft chamber

Expands *In Situ*

The design allows the VariLift-C device to be easily inserted as a tapered wedge-shape and then expanded *in situ* to open the disc space and provide immediate stability and fixation.



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The stand-alone VariLift-C Expandable Interbody Fusion System is a simplified approach to cervical fixation. With a no-impact insertion procedure and an innovative anatomic design, the VariLift-C device provides a true zero-profile, stand-alone solution to cervical fusion.

References

1 Oxland TR, Grant JP, Dvorak MF, Fisher CG. Effects of Endplate Removal on the Structural. Spine 2003;28(8): 771 -777.

2 Lowe TG, Hashim S, Wilson LA, O'Brien MF, Smith DA, Diekmann MJ, Trommeter J. A Biomechanical Study of Regional Endplate Strength and Cage Morphology as It Relates to Structural Interbody Support. Spine 2004; 29(21):2389-94.

3 ASTM Standard F2077-03, "Test Methods for Intervertebral Body Fusion Devices," ASTM F2267-04, "Standard Test Method for Measuring Load Induced Subsidence of Intervertebral Body Fusion Device Under Static Axial Compression," and ASTM Draft Standard F-04.25.02.02, "Static Push-out Test Method for Intervertebral Body Fusion Devices," Draft #4 – July 30, 2001. Data on file with Wenzel Spine.

4 Yoshiki O. Bioscience and bioengineering of titanium materials. Elsevier: Amsterdam, 2007.

5 Kieswetter K, et al. The role of implant surface characteristics in the healing of bone, Crit Rev Oral Biol Med (1996), 7(4): 329-345

6 Benzel EC. Biomechanics of spine stabilization. Thieme: New York, 2001.

7 Korovessis PG, Deligianni DP. Role of surface roughness of titanium versus hydroxyapatite on human bone marrow cells response. Journal of Spinal Disorders and Techniques (2002) 15(2): 175-183

Refer to the product insert for detailed indications/ contraindications, warnings/ precautions and possible adverse effects. To obtain labeling limitations, surgical technique manuals, and/or more information regarding Wenzel Spine products, contact your local sales representative or Wenzel Spine customer service at 512-469-0600.

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