



MERIDIAN[®] WITH REEF[®] A

ANTERIOR LUMBAR INTERBODY SYSTEM

NANOMETALENE® TECHNOLOGY

SUBMICRON TITANIUM LAYER MOLECULARLY BONDED TO ENTIRE PEEK IMPLANT





PRECLINICAL RESULTS SHOW GREATER BONE ONGROWTH WITH NANOMETALENE® VS. PEEK³⁺





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DESIGN RATIONALE

The Meridian[®] ALIF system was designed to be a modular instrument and implant system to streamline the ALIF procedure and provide diverse fixation options for single to multilevel ALIFs in a reduced number of sets. Reef[®] A implants feature the unique SeaSpine[®] NanoMetalene[®] surface technology and the latest macrostructure design for greater titanium surface area while maintaining the mechanical and imaging properties of PEEK.^{13,†}



2-hole No-profile



3-hole No-profile



2-hole TruProfile®



4-hole TruProfile

Implant Features

- Reef Topography[®] and NanoMetalene surface technology
- Modular fixation options for single and multilevel constructs
- Large implant graft aperture for autograft or allograft placement
- Height options: 10–18mm
- Lordotic options: 10°, 15°, 20°, 25°

Multiple Footprint Options

- 31 x 24mm
- 35 x 27mm
- 39 x 30mm
- 43 x 30mm





PRECLINICAL EVALUATION

PRECLINICAL EVALUATION OF REEF TOPOGRAPHY[®]

Clinically relevant endplate-sparing sheep interbody fusion model results comparing NanoMetalene[®] (NM) implants with and without Reef Topography[®].

Endplate Undercut Macrostructures





Aperture Undercut Macrostructures





Undercut Macrostructures results in ~3X INCREASE IN MECHANICAL STABILITY ^{5,†}

Ultimate Tensile Strength



REEF TOPOGRAPHY MAY DRIVE EARLIER AND IMPROVED BIOMECHANICAL STABILITY 57

REEF TOPOGRAPHY®

UNDERCUT MACROSTRUCTURES DESIGNED TO PROMOTE BONY INTERLOCKING^{5,†}

UP TO 132% MORE

NANOMETALENE® ENDPLATE SURFACE AREA Endplate features place graft material in direct contact with the endplates.



UP TO 24% MORE

NANOMETALENE APERTURE SURFACE AREA

Aperture features secure graft within the aperture during interbody placement.

PROCEDURAL SOLUTIONS

DIFFERENTIATED AND COMPLEMENTARY TECHNOLOGIES



Mariner[®] MIS Posterior Fixation System

[†]Preclinical testing, such as animal studies, may not be indicative of human results. ¹Results from mechanical testing. Data on file. TR-0010-11-01 ²Results from imaging study. Data on file. TR-0010-11-01 ³Walsh, et al. The in vivo response to a novel Ti coating compared with polyether ether ketone: evaluation of the periphery and inner surfaces of an implant. *Spine Journal* 2018 Jul; 18(7): 1231-1240. ⁴NanoMetalene SEM images on file. TR-0094-19-01

⁵Results from preclinical *in vivo* testing. Data on File. D0003269

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