MANTIS
ABOVE THE STANDARD

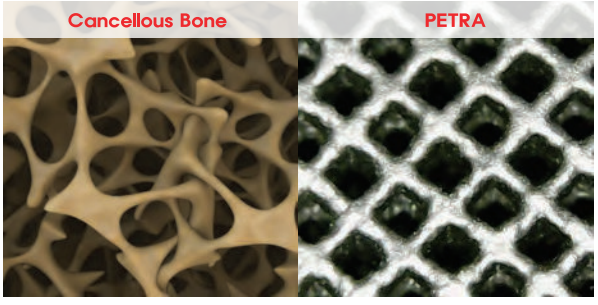
3D PRINTED PETRA™

Cervical Interbody Fusion Cage System

Porous Mesh Structure
for Optimized Bone in-Growth High Roughness Surface

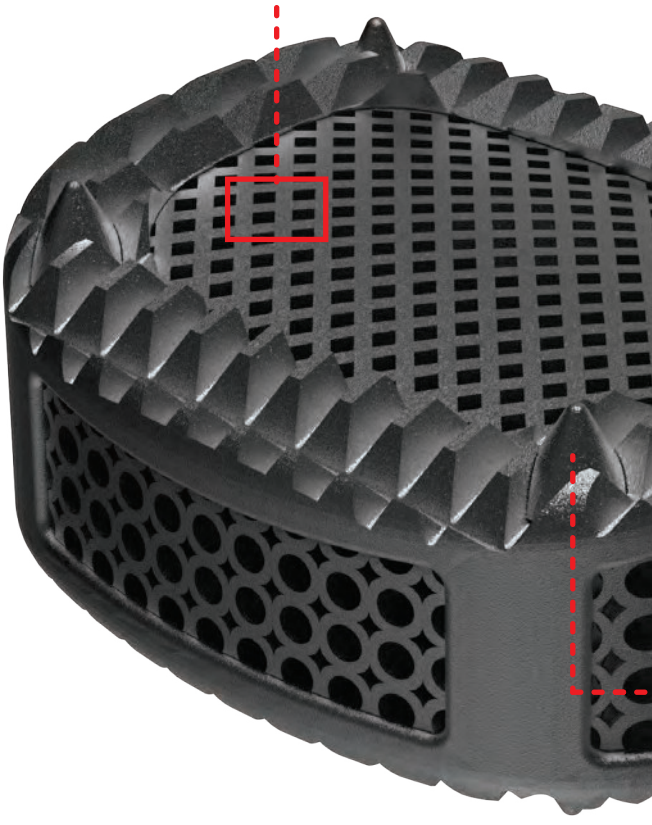
Product Overview

Optimized Bone in growth



PETRA has been created to optimized bone in-growth in spinal procedure.

mean pore size : 630~730μm
mean porosity : 70~80%



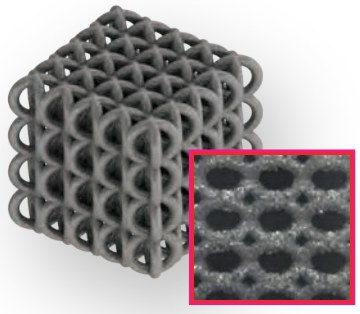
Various Design & Footprints

PETRA has various design and footprint sizes to match vertebral endplates.

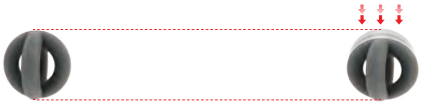
Design	Length x Width
Convex 	12mmx15mm
Parallel 	12mmx17mm
	14mmx17mm
Lodortic 	14mmx19mm

3D Ring Frame Mesh Structure

PETRA has the **elasticity** what is similar to the bone has, because it is adopted the specially designed structure of cross intersected **3D ring frame mesh**.

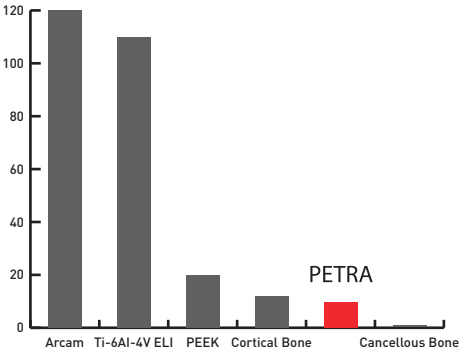


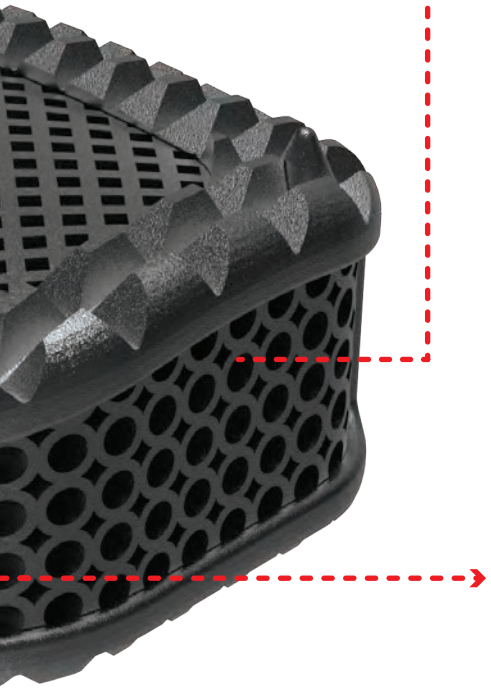
Elasticity of 3D Ring Frame Mesh



Designed to **minimize subsidence** by adopting the **cross intersected ring frame.**

Elasticitic Modulous (GPa) by KTL



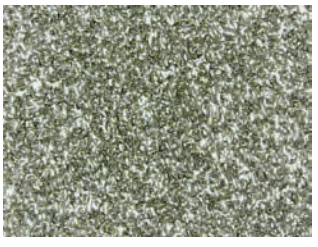


4 Spikes for Extra Stability

PETRA is fitted with 4 spikes for extra stability and even better protection against implant immigration.

3D PRINTING

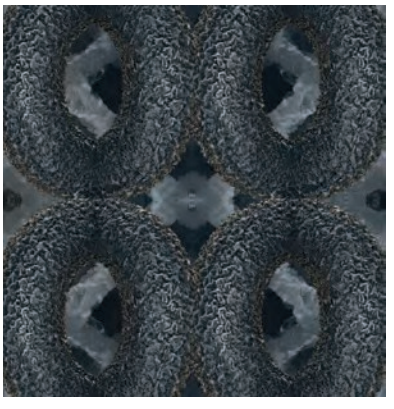
Titanuim Powder Laser Melted Porous Structure



Average porosity of SLM 3D printed solid part is 3%. It leads to **accelerated protein and mesenchymal stem cell attachment.**

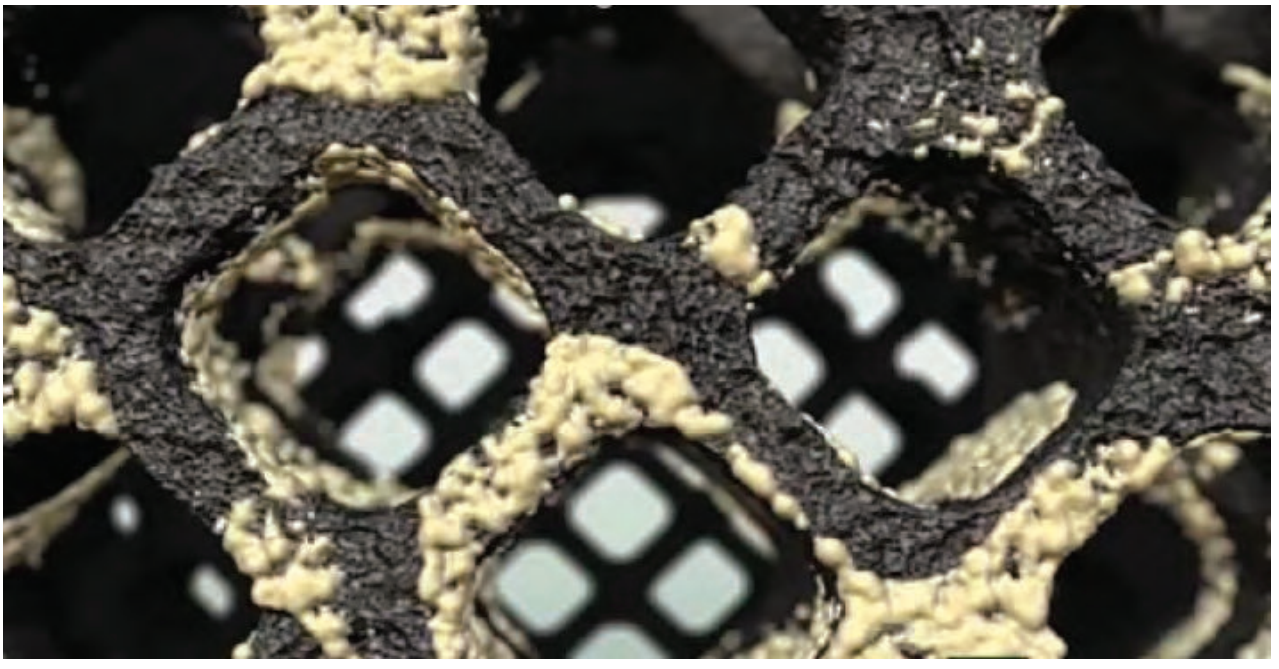
High Primary Stability

Average roughness of SLM 3D printed solid part surface is 40Ra(μm). Elevated surface of Titanium **provides high primary stability.**



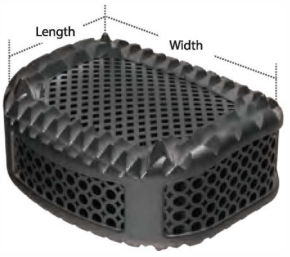
SLM(Selective Laser Melting) 3D Printing Technique

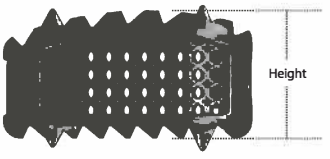
PETRA is produced with **Selective Laser Melting 3D Printing Technique**.
SLM 3D Printing Technique is possible to mass-produce
various products by size and shape with a single production process
and then it can be biodegradable to the body
through several post-treatment processes.



PETRA offers an **Osteoconductive Scaffold**
which allows for boney in-growth into the material of the implant,
a high friction coefficient to help **prevent migration and expulsion.**

Convex





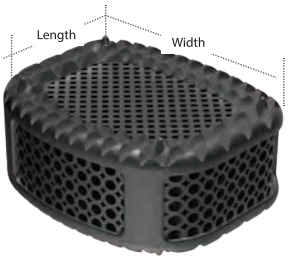
Full Mesh type

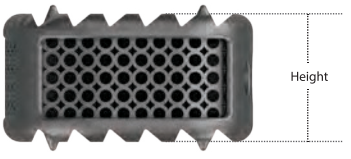
Graft Hole type

Cat'No	Length	Width	Angle	Height
V1-1215-A05	12	15	0	05
V1-1215-A06	12	15	0	06
V1-1215-A07	12	15	0	07
V1-1215-A08	12	15	0	08
V1-1215-A09	12	15	0	09
V1-1215-A10	12	15	0	10
V1-1215-A11	12	15	0	11
V1-1215-A12	12	15	0	12
V1-1217-A05	12	17	0	05
V1-1217-A06	12	17	0	06
V1-1217-A07	12	17	0	07
V1-1217-A08	12	17	0	08
V1-1217-A09	12	17	0	09
V1-1217-A10	12	17	0	10
V1-1217-A11	12	17	0	11
V1-1217-A12	12	17	0	12
V1-1417-A05	14	17	0	05
V1-1417-A06	14	17	0	06
V1-1417-A07	14	17	0	07
V1-1417-A08	14	17	0	08
V1-1417-A09	14	17	0	09
V1-1417-A10	14	17	0	10
V1-1417-A11	14	17	0	11
V1-1417-A12	14	17	0	12
V1-1419-A05	14	19	0	05
V1-1419-A06	14	19	0	06
V1-1419-A07	14	19	0	07
V1-1419-A08	14	19	0	08
V1-1419-A09	14	19	0	09
V1-1419-A10	14	19	0	10
V1-1419-A11	14	19	0	11
V1-1419-A12	14	19	0	12

Cat'No	Length	Width	Angle	Height	Hole (G_L)	Hole (G_W)
V2-1215-A05	12	15	0	05	7	10
V2-1215-A06	12	15	0	06	7	10
V2-1215-A07	12	15	0	07	7	10
V2-1215-A08	12	15	0	08	7	10
V2-1215-A09	12	15	0	09	7	10
V2-1215-A10	12	15	0	10	7	10
V2-1215-A11	12	15	0	11	7	10
V2-1215-A12	12	15	0	12	7	10
V2-1217-A05	12	17	0	05	7	12
V2-1217-A06	12	17	0	06	7	12
V2-1217-A07	12	17	0	07	7	12
V2-1217-A08	12	17	0	08	7	12
V2-1217-A09	12	17	0	09	7	12
V2-1217-A10	12	17	0	10	7	12
V2-1217-A11	12	17	0	11	7	12
V2-1217-A12	12	17	0	12	7	12
V2-1417-A05	14	17	0	05	9	12
V2-1417-A06	14	17	0	06	9	12
V2-1417-A07	14	17	0	07	9	12
V2-1417-A08	14	17	0	08	9	12
V2-1417-A09	14	17	0	09	9	12
V2-1417-A10	14	17	0	10	9	12
V2-1417-A11	14	17	0	11	9	12
V2-1417-A12	14	17	0	12	9	12
V2-1419-A05	14	19	0	05	9	14
V2-1419-A06	14	19	0	06	9	14
V2-1419-A07	14	19	0	07	9	14
V2-1419-A08	14	19	0	08	9	14
V2-1419-A09	14	19	0	09	9	14
V2-1419-A10	14	19	0	10	9	14
V2-1419-A11	14	19	0	11	9	14
V2-1419-A12	14	19	0	12	9	14

Parallel





Full Mesh type

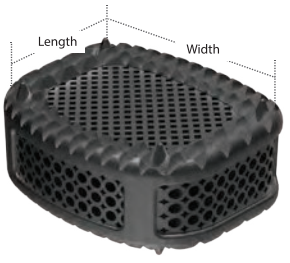
Graft Hole type

Cat'No	Length	Width	Angle	Height
V5-1215-A05	12	15	0	05
V5-1215-A06	12	15	0	06
V5-1215-A07	12	15	0	07
V5-1215-A08	12	15	0	08
V5-1215-A09	12	15	0	09
V5-1215-A10	12	15	0	10
V5-1215-A11	12	15	0	11
V5-1215-A12	12	15	0	12
V5-1217-A05	12	17	0	05
V5-1217-A06	12	17	0	06
V5-1217-A07	12	17	0	07
V5-1217-A08	12	17	0	08
V5-1217-A09	12	17	0	09
V5-1217-A10	12	17	0	10
V5-1217-A11	12	17	0	11
V5-1217-A12	12	17	0	12
V5-1417-A05	14	17	0	05
V5-1417-A06	14	17	0	06
V5-1417-A07	14	17	0	07
V5-1417-A08	14	17	0	08
V5-1417-A09	14	17	0	09
V5-1417-A10	14	17	0	10
V5-1417-A11	14	17	0	11
V5-1417-A12	14	17	0	12
V5-1419-A05	14	19	0	05
V5-1419-A06	14	19	0	06
V5-1419-A07	14	19	0	07
V5-1419-A08	14	19	0	08
V5-1419-A09	14	19	0	09
V5-1419-A10	14	19	0	10
V5-1419-A11	14	19	0	11
V5-1419-A12	14	19	0	12

Cat'No	Length	Width	Angle	Height	Hole (G_L)	Hole (G_W)
V6-1215-A05	12	15	0	05	7	10
V6-1215-A06	12	15	0	06	7	10
V6-1215-A07	12	15	0	07	7	10
V6-1215-A08	12	15	0	08	7	10
V6-1215-A09	12	15	0	09	7	10
V6-1215-A10	12	15	0	10	7	10
V6-1215-A11	12	15	0	11	7	10
V6-1215-A12	12	15	0	12	7	10
V6-1217-A05	12	17	0	05	7	12
V6-1217-A06	12	17	0	06	7	12
V6-1217-A07	12	17	0	07	7	12
V6-1217-A08	12	17	0	08	7	12
V6-1217-A09	12	17	0	09	7	12
V6-1217-A10	12	17	0	10	7	12
V6-1217-A11	12	17	0	11	7	12
V6-1217-A12	12	17	0	12	7	12
V6-1417-A05	14	17	0	05	9	12
V6-1417-A06	14	17	0	06	9	12
V6-1417-A07	14	17	0	07	9	12
V6-1417-A08	14	17	0	08	9	12
V6-1417-A09	14	17	0	09	9	12
V6-1417-A10	14	17	0	10	9	12
V6-1417-A11	14	17	0	11	9	12
V6-1417-A12	14	17	0	12	9	12
V6-1419-A05	14	19	0	05	9	14
V6-1419-A06	14	19	0	06	9	14
V6-1419-A07	14	19	0	07	9	14
V6-1419-A08	14	19	0	08	9	14
V6-1419-A09	14	19	0	09	9	14
V6-1419-A10	14	19	0	10	9	14
V6-1419-A11	14	19	0	11	9	14
V6-1419-A12	14	19	0	12	9	14

Lodortic

4° Lordosis Angle



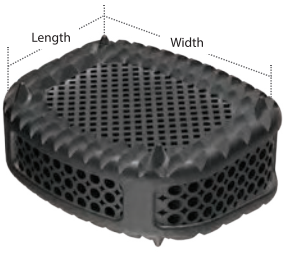
Full Mesh type

Graft Hole type

Cat'No	Length	Width	Angle	Height
V3-1215-E05	12	15	4	05
V3-1215-E06	12	15	4	06
V3-1215-E07	12	15	4	07
V3-1215-E08	12	15	4	08
V3-1215-E09	12	15	4	09
V3-1215-E10	12	15	4	10
V3-1215-E11	12	15	4	11
V3-1215-E12	12	15	4	12
V3-1217-E05	12	17	4	05
V3-1217-E06	12	17	4	06
V3-1217-E07	12	17	4	07
V3-1217-E08	12	17	4	08
V3-1217-E09	12	17	4	09
V3-1217-E10	12	17	4	10
V3-1217-E11	12	17	4	11
V3-1217-E12	12	17	4	12
V3-1417-E05	14	17	4	05
V3-1417-E06	14	17	4	06
V3-1417-E07	14	17	4	07
V3-1417-E08	14	17	4	08
V3-1417-E09	14	17	4	09
V3-1417-E10	14	17	4	10
V3-1417-E11	14	17	4	11
V3-1417-E12	14	17	4	12
V3-1419-E05	14	19	4	05
V3-1419-E06	14	19	4	06
V3-1419-E07	14	19	4	07
V3-1419-E08	14	19	4	08
V3-1419-E09	14	19	4	09
V3-1419-E10	14	19	4	10
V3-1419-E11	14	19	4	11
V3-1419-E12	14	19	4	12

Cat'No	Length	Width	Angle	Height	Hole (G_L)	Hole (G_W)
V4-1215-E05	12	15	4	05	7	10
V4-1215-E06	12	15	4	06	7	10
V4-1215-E07	12	15	4	07	7	10
V4-1215-E08	12	15	4	08	7	10
V4-1215-E09	12	15	4	09	7	10
V4-1215-E10	12	15	4	10	7	10
V4-1215-E11	12	15	4	11	7	10
V4-1215-E12	12	15	4	12	7	10
V4-1217-E05	12	17	4	05	7	12
V4-1217-E06	12	17	4	06	7	12
V4-1217-E07	12	17	4	07	7	12
V4-1217-E08	12	17	4	08	7	12
V4-1217-E09	12	17	4	09	7	12
V4-1217-E10	12	17	4	10	7	12
V4-1217-E11	12	17	4	11	7	12
V4-1217-E12	12	17	4	12	7	12
V4-1417-E05	14	17	4	05	9	12
V4-1417-E06	14	17	4	06	9	12
V4-1417-E07	14	17	4	07	9	12
V4-1417-E08	14	17	4	08	9	12
V4-1417-E09	14	17	4	09	9	12
V4-1417-E10	14	17	4	10	9	12
V4-1417-E11	14	17	4	11	9	12
V4-1417-E12	14	17	4	12	9	12
V4-1419-E05	14	19	4	05	9	14
V4-1419-E06	14	19	4	06	9	14
V4-1419-E07	14	19	4	07	9	14
V4-1419-E08	14	19	4	08	9	14
V4-1419-E09	14	19	4	09	9	14
V4-1419-E10	14	19	4	10	9	14
V4-1419-E11	14	19	4	11	9	14
V4-1419-E12	14	19	4	12	9	14

8° Lordosis Angle



Full Mesh type

Graft Hole type

Cat'No	Length	Width	Angle	Height
V3-1215-J05	12	15	8	05
V3-1215-J06	12	15	8	06
V3-1215-J07	12	15	8	07
V3-1215-J08	12	15	8	08
V3-1215-J09	12	15	8	09
V3-1215-J10	12	15	8	10
V3-1215-J11	12	15	8	11
V3-1215-J12	12	15	8	12
V3-1217-J05	12	17	8	05
V3-1217-J06	12	17	8	06
V3-1217-J07	12	17	8	07
V3-1217-J08	12	17	8	08
V3-1217-J09	12	17	8	09
V3-1217-J10	12	17	8	10
V3-1217-J11	12	17	8	11
V3-1217-J12	12	17	8	12
V3-1417-J05	14	17	8	05
V3-1417-J06	14	17	8	06
V3-1417-J07	14	17	8	07
V3-1417-J08	14	17	8	08
V3-1417-J09	14	17	8	09
V3-1417-J10	14	17	8	10
V3-1417-J11	14	17	8	11
V3-1417-J12	14	17	8	12
V3-1419-J05	14	19	8	05
V3-1419-J06	14	19	8	06
V3-1419-J07	14	19	8	07
V3-1419-J08	14	19	8	08
V3-1419-J09	14	19	8	09
V3-1419-J10	14	19	8	10
V3-1419-J11	14	19	8	11
V3-1419-J12	14	19	8	12

Cat'No	Length	Width	Angle	Height	Hole (G_L)	Hole (G_W)
V4-1215-J05	12	15	8	05	7	10
V4-1215-J06	12	15	8	06	7	10
V4-1215-J07	12	15	8	07	7	10
V4-1215-J08	12	15	8	08	7	10
V4-1215-J09	12	15	8	09	7	10
V4-1215-J10	12	15	8	10	7	10
V4-1215-J11	12	15	8	11	7	10
V4-1215-J12	12	15	8	12	7	10
V4-1217-J05	12	17	8	05	7	12
V4-1217-J06	12	17	8	06	7	12
V4-1217-J07	12	17	8	07	7	12
V4-1217-J08	12	17	8	08	7	12
V4-1217-J09	12	17	8	09	7	12
V4-1217-J10	12	17	8	10	7	12
V4-1217-J11	12	17	8	11	7	12
V4-1217-J12	12	17	8	12	7	12
V4-1417-J05	14	17	8	05	9	12
V4-1417-J06	14	17	8	06	9	12
V4-1417-J07	14	17	8	07	9	12
V4-1417-J08	14	17	8	08	9	12
V4-1417-J09	14	17	8	09	9	12
V4-1417-J10	14	17	8	10	9	12
V4-1417-J11	14	17	8	11	9	12
V4-1417-J12	14	17	8	12	9	12
V4-1419-J05	14	19	8	05	9	14
V4-1419-J06	14	19	8	06	9	14
V4-1419-J07	14	19	8	07	9	14
V4-1419-J08	14	19	8	08	9	14
V4-1419-J09	14	19	8	09	9	14
V4-1419-J10	14	19	8	10	9	14
V4-1419-J11	14	19	8	11	9	14
V4-1419-J12	14	19	8	12	9	14

Instruments

Cat'No.	Description	Picture
C1P-2018	Cervical Cage Holder	
C1P-2014	Cervical Trial 5-6mm	
C1P-2015	Cervical Trial 7-8mm	
C1P-2016	Cervical Trial 9-10mm	
C1P-2017	Cervical Trial 11-12mm	
C1P-2010	Cervical Distractor	
C1P-2011	Cervical Pin	
C1P-2012	Cervical Pin Nut	
C1P-2013	Cervical Pin Driver	

MEMO

ABOVE THE STANDARD

3D PRINTED

PETRA™

Cervical Interbody Fusion Cage System

Manufactured by

MANTIZ
ABOVE THE STANDARD

Manufacturing and R&D Center

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