

# VITA ENAMIC<sup>®</sup> Implant Solutions

Clinically Proven Force Absorption for Prosthetic and Implant Success



**VITA**

# Unbelievably Fast and Naturally Resilient

The VITA ENAMIC IS CAD/CAM block is the natural choice for implant prosthetics. With all the characteristics of a natural tooth, VITA ENAMIC IS delivers unrivaled resiliency and force-absorption for more successful implant treatment. This evolution in material offers a balanced blend of energy distribution, fracture resistance and reliability. Plus, you benefit from simplified processing and placement precision for faster chairtime.

## **Greater force absorption**

ENAMIC-implant supported crowns absorb 71% more mastication forces than zirconia restorations – much higher than either glass ceramic or gold alloy.

## **Higher implant success**

Clinical studies demonstrate an increase in survival rate of 98.7% with ENAMIC implant-supported crowns.

## **Faster chairtime**

With no furnace required, ENAMIC IS decreases chairtime by up to 50% compared with other CAD/CAM material.



# It's *Only* Natural

Like a natural tooth, VITA ENAMIC is one of a kind. The only dual-network ceramic block in the world, VITA ENAMIC boasts a dominant ceramic structure infused with polymer to deliver the same material properties of natural dentition as part of a biomimetic approach.

In fact, VITA ENAMIC features a modulus of elasticity and enamel-like abrasion behavior that is virtually identical to that of a natural tooth. The result: Resilient elasticity with force absorption plus integrated crack prevention for successful implant performance.



**Ceramic Network + Polymer = Dual Network**



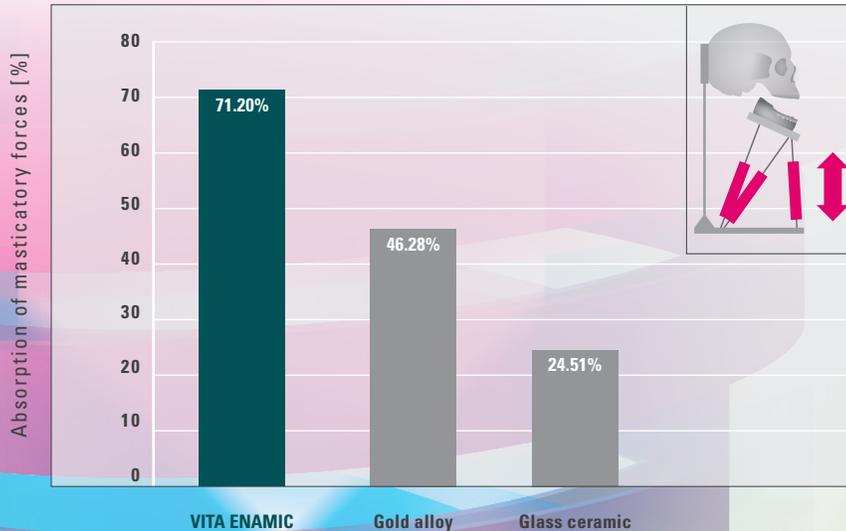
Implant case by Dr. Daniel Vasquez

*“As a clinician, I want to give the most natural restorations to my patients. VITA ENAMIC IS has all the characteristics of natural dentition as well as force absorption, which helps ensure more successful implant treatment. This helps make my practice truly unique.”*

*– Dr. Daniel Vasquez  
Oceanside, California*

# Essential Force Management for Implant Success

Absorption of masticatory forces compared to zirconia (ZrO<sub>2</sub>)



Occlusal load is a significant factor when it comes to the implant healing phase and long-term survival and success of dental implants. VITA ENAMIC IS delivers higher force absorption for greater implant stability.

VITA ENAMIC demonstrates 71.20% higher absorption of mastication forces than traditional zirconia, whereas glass ceramic and gold alloy exhibit absorption rates of 24.51% and 46.28%, respectively.<sup>1</sup>

Material Class	Modulus of Elasticity [GPa]	Force Transmission (N)	Absorption of Forces (%) Compared with ZrO <sub>2</sub>
Zirconia	210	641.8 N (SD 6.8)	
Glass ceramic	96	484.5 N (SD 5.5)	24.51%
Gold alloy	77	344.8 N (SD 5.7)	46.28%
VITA ENAMIC	30	184.9 N (SD 3.9)	71.20%

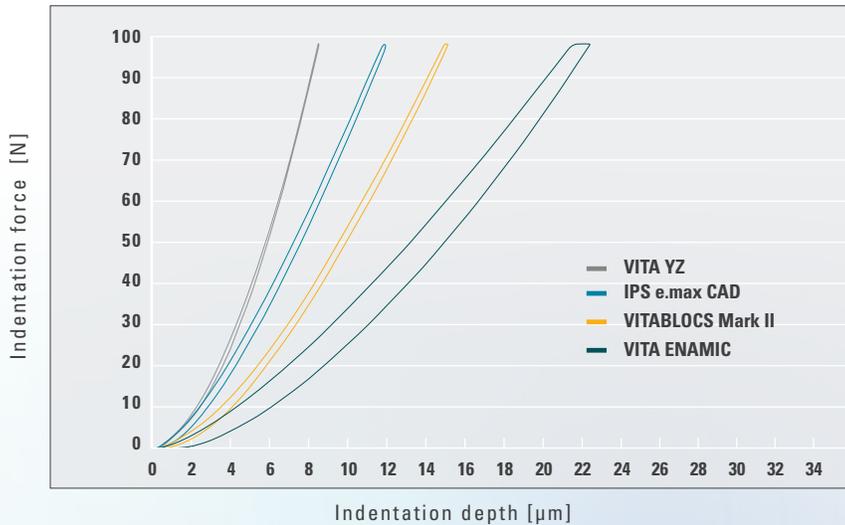
“A causal relationship between the incidence of marginal bone loss next to an implant and occlusal overload implies a treatment plan and occlusal scheme would benefit from a force management approach.”<sup>2</sup>

<sup>1</sup> University of Genoa, Department for fixed and implant-prosthetic restorations, Dr. Maria Menini et al., Genoa, Italy ([4], cf. p. 38).

<sup>2</sup> Benaissa A et al. Effects of overloading in mastication on the mechanical behavior of dental implants. Materials & Design 2013;47:210-217.

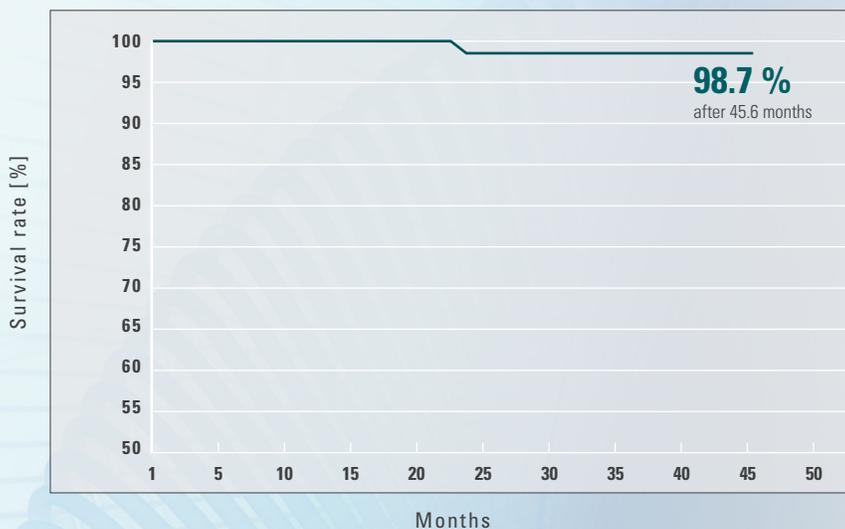
# Uniform Force Distribution to Avert Excess Loading

Force path



The material properties of VITA ENAMIC IS more evenly distribute the occlusal forces over a large contact surface, preventing excess loading in individual areas compared with other materials.<sup>3</sup>

Implant survival study



Due to higher force absorption and distribution characteristics, a survival rate of 98.7% was observed in VITA ENAMIC implant crowns after a maximum observation period of 45.6 months.<sup>4</sup>

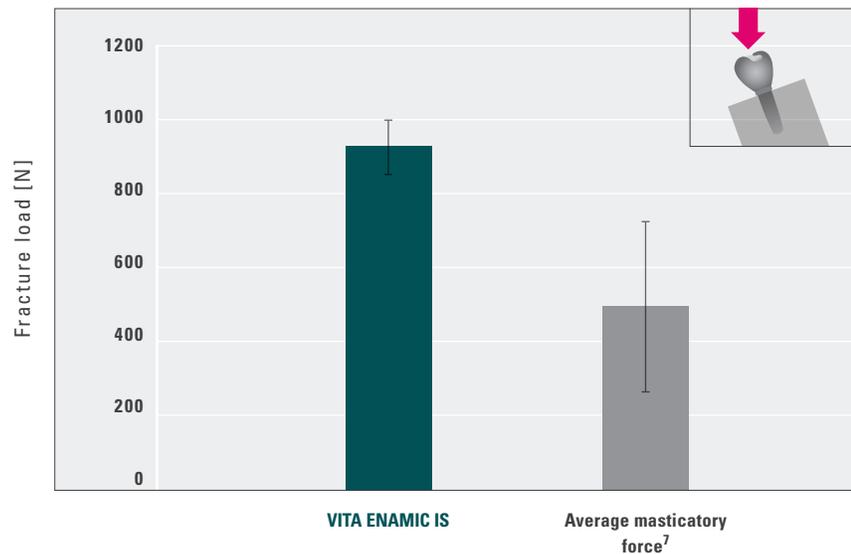
<sup>3</sup> Internal study; data on file. Force-displacement diagram for examining dental restorative materials, ([1], cf. p. 38).

<sup>4</sup> Multicenter clinical observational study; VITA Application Technology and VITA Product Management departments in cooperation with pilot users (11 practicing dentists, Germany/Austria/Switzerland), as of: 11.2014, ([2], cf. p. 38).

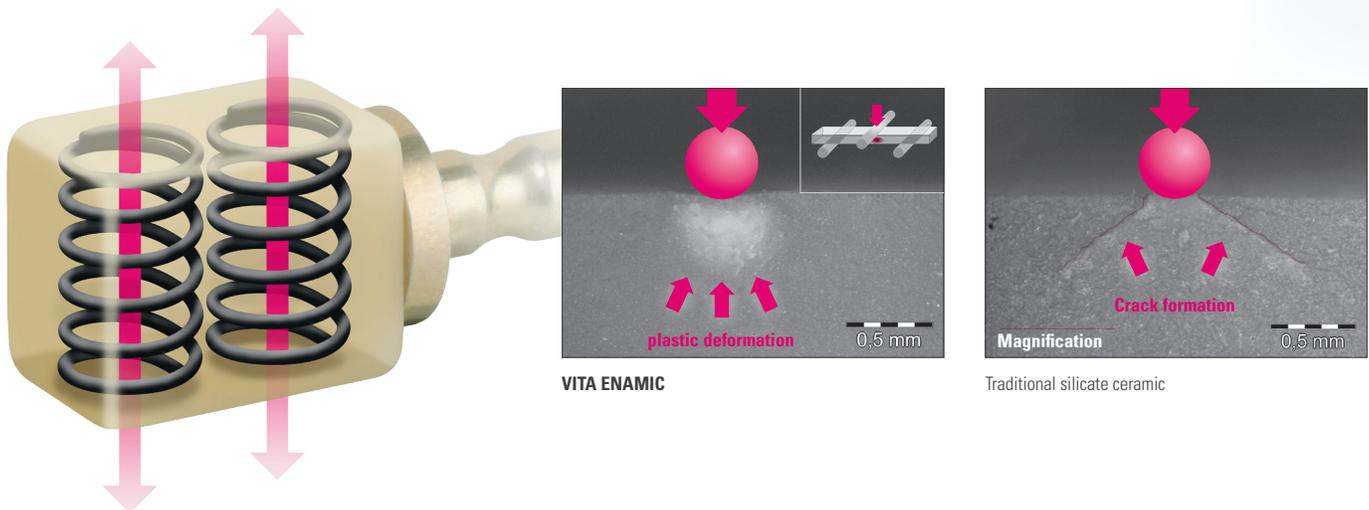
# Greater Fracture Load Capacity

VITA ENAMIC implant-supported molar crowns demonstrated an ability to withstand an average load of 926 N.<sup>5</sup>

Compared with the average masticatory force of 490 N, VITA ENAMIC molar crowns demonstrated a higher level of load capacity.<sup>6</sup>



# Fracture Resistance with “Crack-Stop” Function to Prevent Catastrophic Failures



VITA ENAMIC is fracture resistant and features a “crack-stop” function that prevents catastrophic failure, whereas traditional silicate ceramic is relatively stiff and brittle and may crack during loading.<sup>8</sup>

<sup>5,6</sup> Internal study; data on file. Fracture load of VITA ENAMIC IS crowns on L-TiBase adhesive base and Straumann Bone Level implant system, ([1], cf. p. 27).

<sup>7</sup> Körber K, Ludwig K (1983). Maximal masticatory forces as calculation factor for dental technical constructions. Dent-Labor XXXI, 1/83: 55-60.

<sup>8</sup> Internal study; data on file. Cross section of the fractured surface after pre-damaging material with a tungsten carbide ball ([1], cf. p. 27).

# Faster Chairtime and Extraordinary Results

Featuring simplified processing protocols with no post-mill firing required, VITA ENAMIC IS delivers unprecedented ease of use. After CAM fabrication and polishing, VITA ENAMIC IS can be seated immediately, reducing chairtime up to 50%.

In addition, precise milling ensures a seamless, smooth transition where the margin meets the TiBase, providing excellent biocompatibility and reducing the likelihood of chipping and tissue irritation.

VITA ENAMIC IS also features excellent optical properties with color stability for patient esthetics as well as a highly retentive surface structure for reliable bonding.



## System Compatibility



VITA IMPLANT SOLUTIONS blanks with a specific holder system are available for the following CAD/CAM systems:

- CEREC with software version 4.4 (Sirona Dental GmbH)
- inLab with software 15.0 (Sirona Dental GmbH)

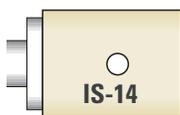
VITA IMPLANT SOLUTIONS are compatible\* with the following implant system manufacturers via the integrated interface for the adhesive/titanium base (TiBase, Sirona Dental GmbH):

- Nobel Biocare
- Straumann
- Astra Tech
- Friadent
- Zimmer
- Medentika Implant
- CAMLOG
- Biomet 3i

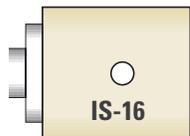
\* A comprehensive list of implant systems compatible with TiBase is available at [sirona.com](http://sirona.com).

## Geometries

An integrated S or L interface is available for each geometry size.

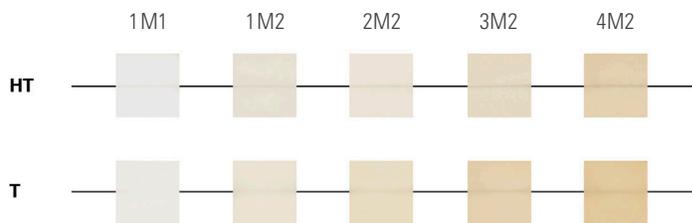


**IS-14:** 18 x 14 x 12  
(for abutment posts)



**IS-16:** 18 x 16 x 18  
(for abutment crowns)

## Shades



## Ordering Information

Order No.	Patterson Order No.	Translucency	Shade	Qty	Size/Type (L or S)
EC4EM4069485	0492785	HT	1M1	5	16mm L
EC4EM4079485	0492793	HT	1M2	5	16mm L
EC4EM4129485	0492801	HT	2M2	5	16mm L
EC4EM4209485	0492819	HT	3M2	5	16mm L
EC4EM4289485	0492827	HT	4M2	5	16mm L
EC4EM3069725	0492835	T	1M1	5	14mm L
EC4EM3079725	0492843	T	1M2	5	14mm L
EC4EM3129725	0492850	T	2M2	5	14mm L
EC4EM3209725	0492868	T	3M2	5	14mm L
EC4EM3289725	0492876	T	4M2	5	14mm L
EC4EM4069365	0492918	HT	1M1	5	16mm S
EC4EM4079365	0492926	HT	1M2	5	16mm S
EC4EM4129365	0492934	HT	2M2	5	16mm S
EC4EM4209365	0492942	HT	3M2	5	16mm S
EC4EM4289365	0492959	HT	4M2	5	16mm S
EC4EM3069605	0492967	T	1M1	5	14mm S
EC4EM3079605	0492975	T	1M2	5	14mm S
EC4EM3129605	0492983	T	2M2	5	14mm S
EC4EM3209605	0492991	T	3M2	5	14mm S
EC4EM3289605	0493007	T	4M2	5	14mm S

Polishing Sets	Description	Order No.
VITA ENAMIC Polishing Set – clinical	8 pre and high-gloss polishers for contra-angle	EENPSETCV1
VITA ENAMIC Polishing Set – technical	8 pre and high-gloss polishers for HP	EENPSETT

800-828-3839 USA • 800-263-4778 CAN  
vitanorthamerica.com/enamicIS

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