Grandio blocs · Grandio disc

NANO-CERAMIC HYBRID CAD / CAM MATERIAL

VOCO
THE DENTALISTS

Grandio® blocs · Grandio® disc

NANO-HYBRID EXPERTISE FOR CAD / CAM APPLICATIONS

Hybrid materials have been employed for permanent restorations for many years. Take for example, Grandio and GrandioSO, which have proven their optimal properties in a multitude of studies and are used day in, day out all over the world. Material characteristics similar to those of natural tooth substance, such as the dentine-like modulus of elasticity, together with a very high filler content and low shrinkage – this is what puts Grandio and GrandioSO among the premium filling materials available on the market. And both Grandio blocs and Grandio disc complement these two products perfectly. The Grandio product range has now been combined with CAD / CAM technology, and the result is a material that is easy to work, allows permanent restorations, and a whole lot more besides.

Case 1

Initial situation

Prepared cores

Adhesive luting of Grandio blocs crowns

After luting and polishing

View directly after insertion

Satisfied patient at the 6-month check-up

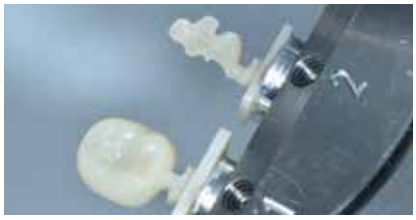
Source: Prof. Breno de Mont'Alverne, Brazil

Case 2

Initial situation teeth 36 and 37

Tooth 37 showing core preparation, tooth 36 with cavity awaiting inlay

Blocks in clamp



Restoration after completion of milling

Adhesively luted restorations

Individualised fissures (FinalTouch)

Source: Dr. Jongki Hadi, Indonesia

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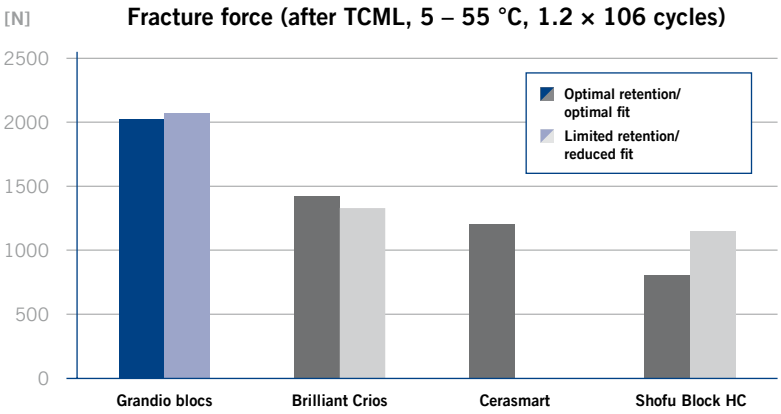
STRONGEST IN THEIR CLASS

The amount of the study results shown here demonstrates that the nano-ceramic hybrid CAD / CAM material Grandio blocs / Grandio disc is stronger than the composite blocs and discs currently available on the market.

High fracture force

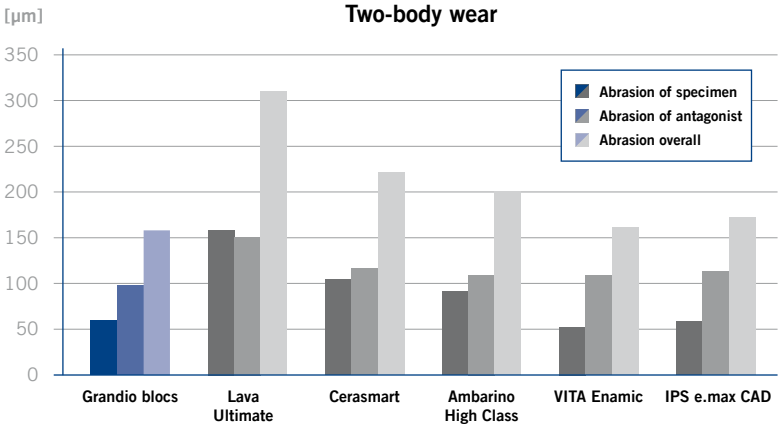
An investigation of the fracture force of the materials shows that Grandio blocs / Grandio disc has a high value even with limited retention and reduced fit of the crown until it breaks.



Source: V. Preis, M. Behr, S. Schneider-Feyrer, M. Rosentritt, J Dent Res Spec Iss 97 B: 3329, 2018

Antagonist-friendly

The two-body wear test shows that Grandio blocs demonstrates similarly low abrasion to lithium disilicate and, in addition, is also antagonist-friendly.

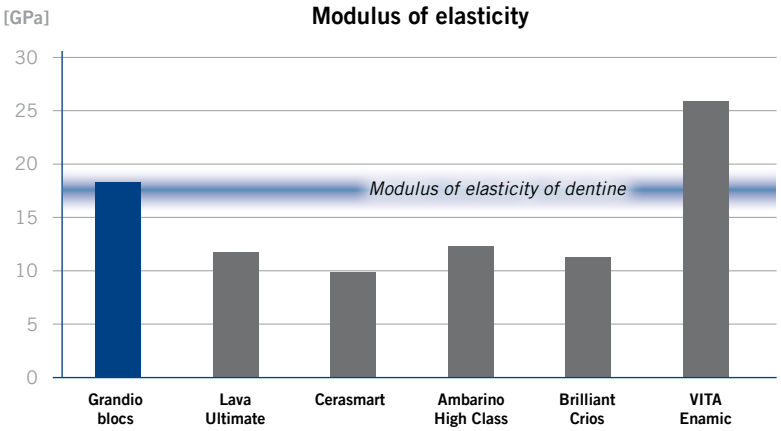


Source: J. Geis Gerstorfer et al., Universität Tübingen, Bericht an VOCO, 2016

Similar to natural tooth substance

The modulus of elasticity is a measure of the resistance that a material exerts against its deformation. In the best case scenario, it should be the same as that of natural tooth substance.

Grandio blocs also achieves this with ease, and thus offers not only extremely high strength, but also the similarity to natural tooth substance desired by practitioners.



Source: Spintzyk, S.; Geis-Gerstorfer, J. et al, 4th EuroBioMat, Weimar, 2017, accepted

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THE MATERIAL OF CHOICE

Alongside its outstanding physical values, Grandio blocs and Grandio disc also offer a whole range of additional advantages, which makes these materials a genuine alternative to ceramics e.g. lithium disilicate or silicate ceramics:

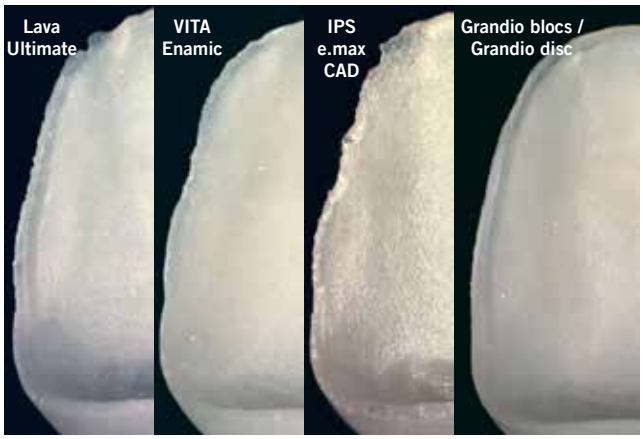
- **Exact grindability**
  The use of Grandio blocs / Grandio disc makes it possible to mill even thinly tapering edges precisely and without the risk of chipping or breakages. This means precision-fit restorations that are also easy to polish inside or outside the mouth.

- **No firing process**
  Yet another advantage is that there is no need for the firing process required when using ceramics. As Grandio blocs / Grandio disc is a completely polymerised material, it can be further processed immediately after the milling procedure. This time saving enables you to offer your patients a complete restoration in just one session.

- **Simple individualisation**
  Grandio blocs and Grandio disc come in monolithic shades as well as in multicolour shades (Grandio disc) and can be customised just like ceramics. For this, the low-viscosity material GrandioSO Flow and the high-viscosity material GrandioSO Heavy Flow are particularly suitable, as they permit exact shade matching. FinalTouch can then be used to add particular accents such as fissures and white spots as well as other effects found in natural teeth.

- **Intraoral processing**
  Whilst chips in ceramic restorations (e.g. lithium disilicate or silicate ceramics) require extensive treatment, any defects in Grandio blocs / Grandio disc restorations can be repaired quickly and easily. This is done by roughening the surface of the defect, applying the bonding agent and then correcting the situation with a composite.

Edges after grinding



Source: Internal pictures, veneer 0.6 mm

Minimum wall thickness

Crown

Veneer

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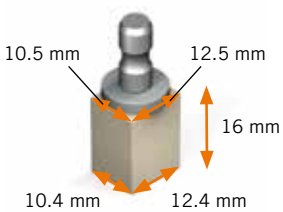
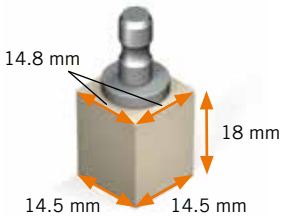
VERSATILE, AESTHETICALLY PLEASING, SECURE HOLD

Grandio blocs is available in two sizes

12 – for small restorations such as inlays

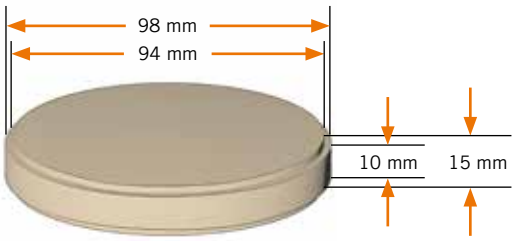


14L – for larger restorations such as crowns



Grandio disc

Average number of restorations per disc: 25 – 30



The shade spectrum includes:

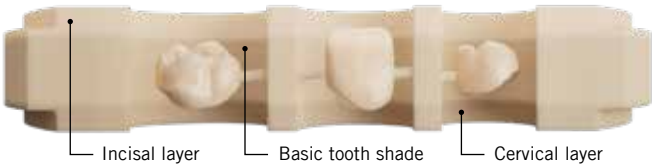
Grandio blocs / Grandio disc (monochromatic) in two grades of translucency

LT – ideal for the anterior region in the shades A1, A2, A3, A3.5, B1, C2, BL

HT – ideal for the posterior region in the shades A1, A2, A3, A3.5

Grandio disc multicolor

A1, A2, A3, A3.5, B1, C2 (Basic tooth shade)



The different positioning of the restoration in the disc determines the individualisation with optional emphasis on the incisal or the cervical area:

Adhesive luting

Luting of Grandio blocs / disc is always carried out using an adhesive luting system. Bifix QM, in combination with Futurabond U and Ceramic Bond, is the system of choice for ensuring that the highest standards are also met in this respect. Bifix QM is a universal dual-curing luting material, which, when used together with the state-of-the-art universal adhesive Futurabond U and the silane coupling agent Ceramic Bond, achieves a long-term bond which your patients can rely on completely.

Source: Prof. Dr. Jürgen Manhart, Munich / Germany

Grandio® disc

THE NATURAL COLOUR GRADIENT OF THE TOOTH

Ideal colour combination: Grandio disc (monochromatic) on the right side of the picture (tooth 21) and Grandio disc multicolor on the left side of the picture (tooth 11).

Invisible Layer Technology

The multicolor version imitates the colour gradient of natural teeth from the incisal edge to the tooth neck – and that with just three layers. The special composition of the material reflects and absorbs light to create the particularly intense chameleon effect, which allows the individual layers of the restoration to transition into each other and produces a highly aesthetic colour gradient. The optical adaption to the neighbouring teeth and the overall aesthetic appearance also benefit from this effect.

Clinical case

Initial situation

Prepared cores

Inserted crowns

Final view

Source: Dr. Carlos Pena, Brazil

Grandio® blocs · Grandio® disc

ALWAYS IN THE RIGHT WORKFLOW WITH OUR TRUSTED PARTNERS

Perfect solutions for modern digital dentistry - these are the goals of the dental specialists, implemented with numerous renowned milling machine manufacturers. Together, they develop the best possible strategies for the production of high-quality restorations. You can find a comprehensive overview of the compatibilities at **www.voco.dental/devicesgrandio.**

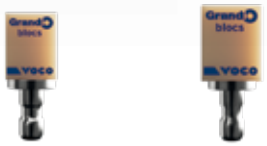
VOCO TRUSTED PARTNER

Zirkonzahn Human Zirconium Technology · PLANMECA · DGSHAPE · vhf

imes-icore competence in dental solutions · 3shape · AMANNGIRRBACH · exocad

Presentation

Grandio® blocs



Universal

Low translucent (LT)	5 × No. 12	5 × No. 14L
A1 LT	REF 6003	REF 6018
A2 LT	REF 6004	REF 6019
A3 LT	REF 6005	REF 6020
A3.5 LT	REF 6006	REF 6021
B1 LT	REF 6007	REF 6022
C2 LT	REF 6008	REF 6023
BL LT	REF 6009	REF 6024
High translucent (HT)	**5 × No. 12**	**5 × No. 14L**
A1 HT	REF 6012	REF 6027
A2 HT	REF 6013	REF 6028
A3 HT	REF 6014	REF 6029
A3.5 HT	REF 6015	REF 6030

PlanMill®

Low translucent (LT)	5 × No. 12	5 × No. 14L
A1 LT	REF 6153	REF 6168
A2 LT	REF 6154	REF 6169
A3 LT	REF 6155	REF 6170
A3.5 LT	REF 6156	REF 6171
B1 LT	REF 6157	REF 6172
C2 LT	REF 6158	REF 6173
BL LT	REF 6159	REF 6174
High translucent (HT)	**5 × No. 12**	**5 × No. 14L**
A1 HT	REF 6162	REF 6177
A2 HT	REF 6163	REF 6178
A3 HT	REF 6164	REF 6179
A3.5 HT	REF 6165	REF 6180

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NANO-CERAMIC HYBRID CAD / CAM MATERIAL

Indications

Crowns, inlays, onlays, veneers

Implant supported crowns

Advantages

- Highest filler content (86 % w/w)
- Resembles natural teeth perfectly
- Excellent physical values for flexural strength and abrasion
- No firing required
- Highly aesthetic due to multicolour shades - ideal for the anterior region
- Can be processed using any conventional milling unit
- Can be polished and repaired optimally
- Ideal for milling even in cases with thin edges
- Based on the nano-hybrid technology
- High radiopacity

Presentation

Grandio® blocs

see inside

Grandio® disc

Low translucent (LT)	1 × 15 mm, ø 98 mm
A1 LT	REF 6050
A2 LT	REF 6051
A3 LT	REF 6052
A3.5 LT	REF 6053
B1 LT	REF 6054
C2 LT	REF 6055
BL LT	REF 6056
High translucent (HT)	**1 × 15 mm, ø 98 mm**
A1 HT	REF 6057
A2 HT	REF 6058
A3 HT	REF 6059
A3.5 HT	REF 6060

Grandio® disc multicolor

Basic shade	1 × 15 mm, ø 98 mm
A1	REF 6216
A2	REF 6217
A3	REF 6218
A3.5	REF 6219
B1	REF 6220
C2	REF 6221

MULTI COLOR

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