rainbow™
Digital Dentistry

rainbow™ **Digital Dentistry**

rainbow™ Digital Dentistry is a complete dental diagnostic system ranging from CAD/CAM equipment to Lab products. Dentium is committed to developing, manufacturing and offering a full series of products related to prosthetics for our customers. The system is compatible with other companies' software and equipment. Dentium is currently the only company developing and manufacturing the "all-in-one system" in the nation (South Korea). We expect to release a diverse range of Digital Dentistry as we continue to pave the way as the leader in the industry.

Contents

Digital Dentistry

Lab Products

Dentium Global Milling Center

Croatia
Russia
Korea
Headquarter
Shanghai
Iran
Iraq
Nepal
Thailand

Optimized for the implant products from Dentium

Better margin design and control
A natural and better emergence profile
Superior angulation

• Ti-based zirconia curtomized abutment

• Customized titanium Abutment

• Zirconia Crown (Full Zirconia and Build-up Crown)

• Surgical Guide

• Various restorations work

Dentium
For Dentists By Dentists

rainbow™ CT

· Provided CT, Pano and Cephalo for dental diagnosis
· Implementation of implant planning software
· Multiple panoramic scan arch
· High resolution and standard scan mode for CT
· Image data format compatible with DICOM 3.0
· Providing a large FOV (Normal: 16x10cm, Stitching: 16x18cm)

FOV size (cm)	5x5, 16x10, 16x18 (Stitching Mode)
Scan time	CBCT: 19s, Pano: 19s, Line Ceph: 19s, One-shot Ceph: 1s
CBCT sensor	CMOS sensor
Focal spot	0.5mm
Generator voltage	60 ~ 100 kVp
Generator current	4 ~ 12 mA
Reconstruction time	Less than 60s
Patient Position	Standing / Wheel chair accessible
Voxel size	300 μm (High 200 μm)

CT Scan


Panorama Scan

Cephalo Scan

rainbow™ Scanner Prime

· Structured light tech (Accuracy <10μm)
· Wide scan area & Deep depth of scan field
· Convenient scan jig accessary
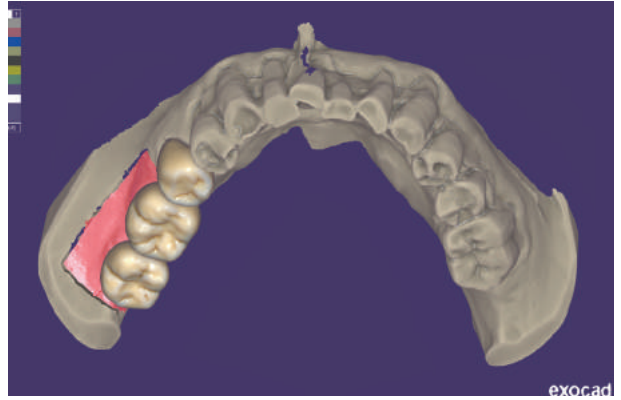· 2MP camera resolution & USB 3.0 interface

Scan type	White light technology
Camera resolution	2.0 Mega pixels (Twin-Camera)
Scan time	Single: 29 sec, 4-Bridge: 103 sec
Accuracy	≤10μm
Interface	USB 3.0
File format	Open STL
Scan area (W X D X H)	80 X 60 X 60 ㎜
Dimensions	28 X 40 X 45 ㎝
Weight	15 kg

White light scanning
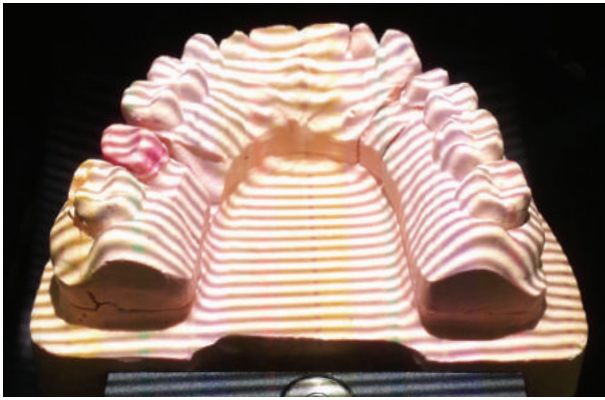
EXOCAD (CAD software)

2.0 MP Camera resolution

**1.3 MP
Camera resolution**

**2.0 MP
Camera resolution**
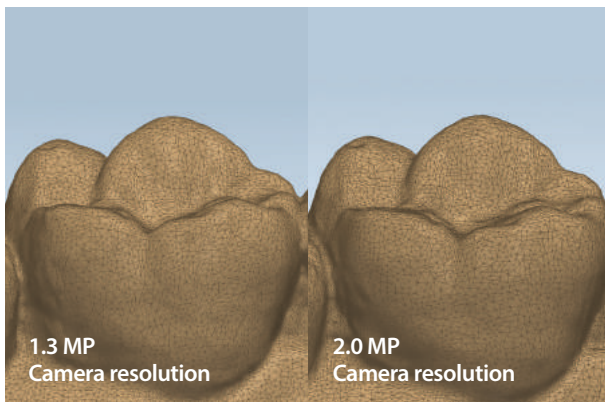
Wide scan area & Deep depth of scan field

rainbow™ Scanner Prime   Center of jig

1 cm

Competitor

1 cm

Basic jig				Optional jig		

Standard jig   Multi die   All-in-one jig   Calibration jig   Impression jig   Occlusion jig   Adapter plate (Artex)
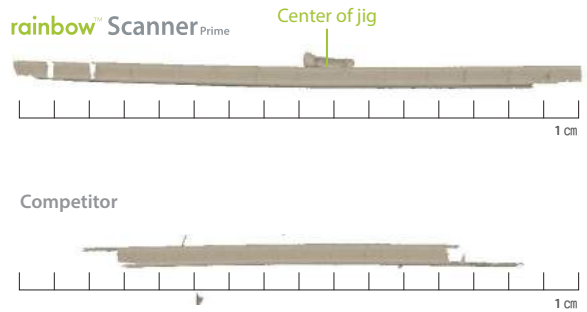
rainbow™ Scanner offers precise and accurate scanning capability and reliable performance. The doorless entry accessibility makes the setting up of the scan-jig fast and easy. The open STL file format enables compatibility of various CAD software. Increased speed and highly accurate scanning of 3D data are possible due to the perfect synchronization between cameras and pattern projection device, and data processing technology.

Dentium's diverse implant system library, as well as other implant systems' library provides convenience of prosthetic design.

rainbow™ Mill - Metal

Material	Titanium, PMMA, Glass ceramic, Wax
Control axis	4 Axis
Spindle	50,000rpm / 0.45kw
Motion drives	All servo motors
Tool Posts	8 Posts (Automatic tool change)
Ti Blank holder	10
Milling type	Wet processing
Dimensions	51 x 71 x 64 cm
Weight	150kg

· Optimized for titanium abutment milling
· High speed and steady quality in milling
· Multi NC data loading system
· Stable water cooling control system
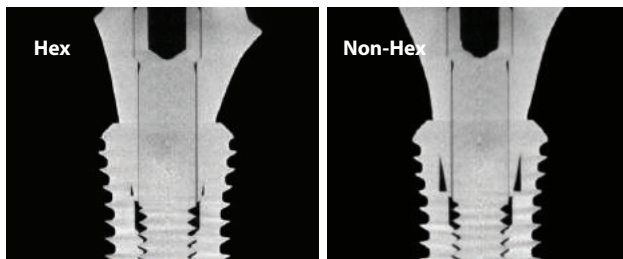· Easy control and user friendly interface

Black

White

Optimized for implant products from Dentium

Dentium Ti Blank

Hex

Non-Hex

Cross section of Dentium customized titanium abutment & SuperLine FX4510W

Optimized for Glass ceramic, Zirconia, PMMA

Link type

Link-Less type

Bar type
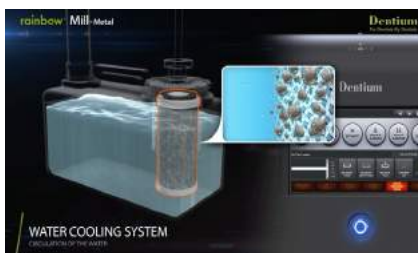

Disc type

Ti-blank

Ti-blank

Glass Ceramic

PMMA, WAX

Water-cooling system

MNLS (Multi NC data load system)

hyperDENT (CAM Software)

rainbow™ Mill-Metal is a 4-axis, wet processing machine optimized for titanium abutment.
It provides jigs for processing of various materials. In the case of abutment processing, you can increase the process efficiency by using the link-less jig. Intuitive and easy to use with a simple GUI with convenient functions.

rainbow™ Mill - Clinic

· Optimized for glass ceramic milling by stable water-cooling control system
· Simultaneous 5-axis milling system optimized for variety of designs
· High speed and steady quality in milling
· Tool load and broken detection system
· Multi NC data loading system
· Easy control and User-friendly interface
· Simple and elegant design for dental clinic

Material	Glass ceramic, Zirconia, PMMA, Wax
Control axis	Simultaneous 5-axis
Spindle	60,000 rpm, 250W
Motion drives	All servo motors
Tool posts	7 posts (Automatic tool change)
Milling type	Wet processing
Dimensions	45 x 71 x 71 ㎝
Weight	100 kg

Optimized for Glass ceramic, Zirconia, PMMA

Glass ceramic   Zirconia   PMMA

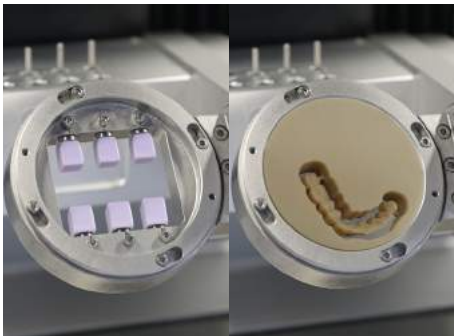## Water-cooling system

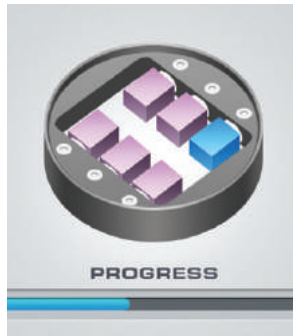WATER COOLING SYSTEM
CIRCULATION OF THE WATER

Double layered filter, grinding oil insufficiency and filter replacement alarm

Bar & disk type block can be applied

MNLS function applied
(Multi NC data loading system)

PROGRESS

7 Tool posts (Automatic change)

High-precision spindle

Jager   Type : High frequency spindle
Spec : 250W, 60,000 rpm / Run out <1㎛

User friendly touch interface

hyperDENT (CAM Software)

rainbow™ Mill - Clinic is a 5-axis, wet processing machine optimized for glass ceramic.
Clinic It provides a compact design optimized for the environment and a jig for processing various materials.
Intuitive and easy to use with a simple GUI with convenient functions.
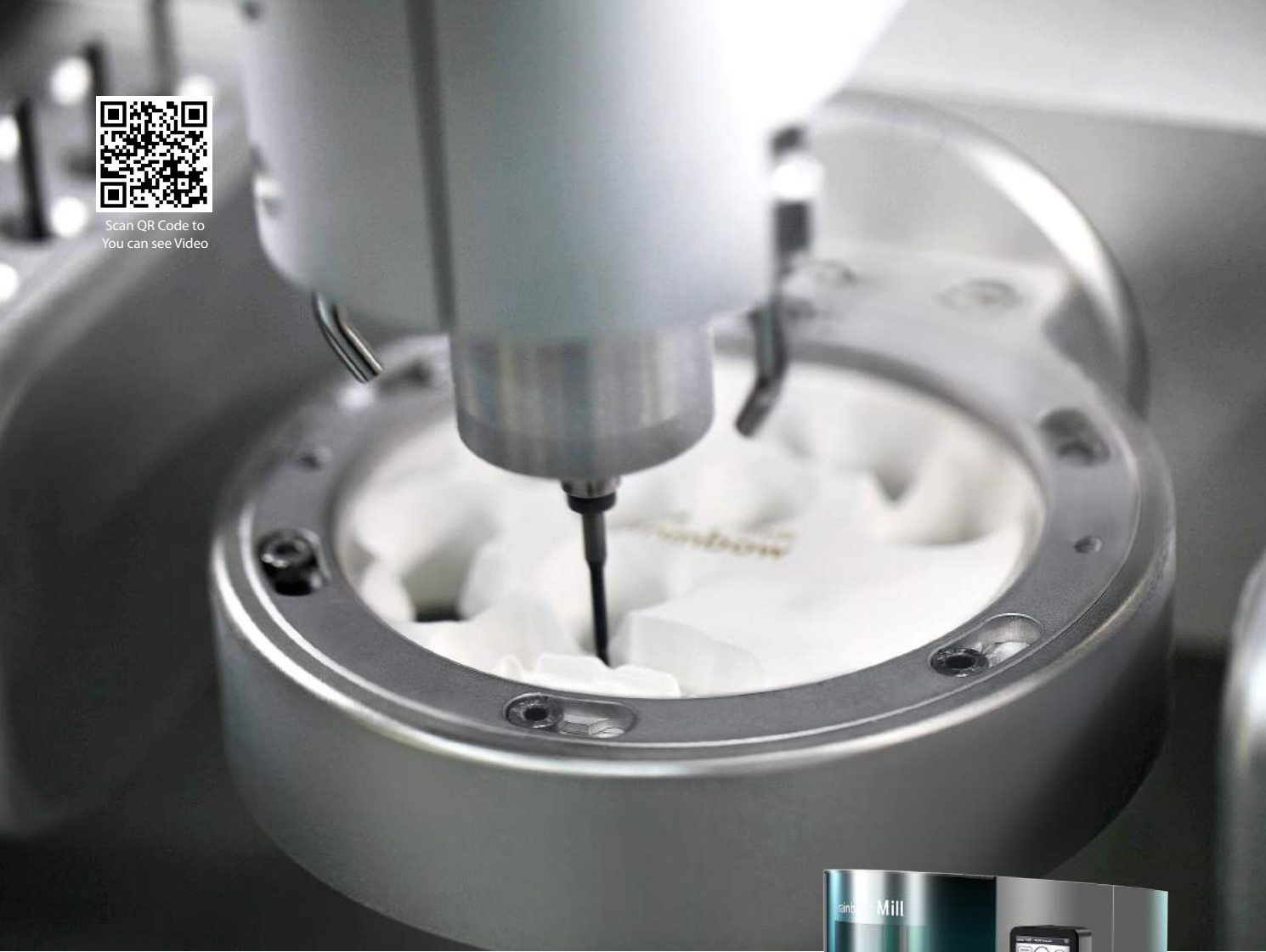
rainbow™ Mill - Zr

· Diverse design and precise production with simultaneous 5-axis milling system
· Equipped with a spindle, allowing highly precise and fine machining
· Enhanced convenience with user-focused interface
· Provides space-efficient by integrated design dust collector

Material	Zirconia, PMMA, Wax
Milling time	Single : 15 Min, 3Br : 45 Min
Control axis	Simultaneous 5-axis
Spindle	60,000 rpm, 250W
Motion drives	All servo motors
Tool posts	7 posts (Automatic changes)
Milling type	Dry processing
Dimensions (W x D x H)	71 x 81 x 170 ㎝
Weight	280 kg

Fast milling speed & Stable milling quality

15min
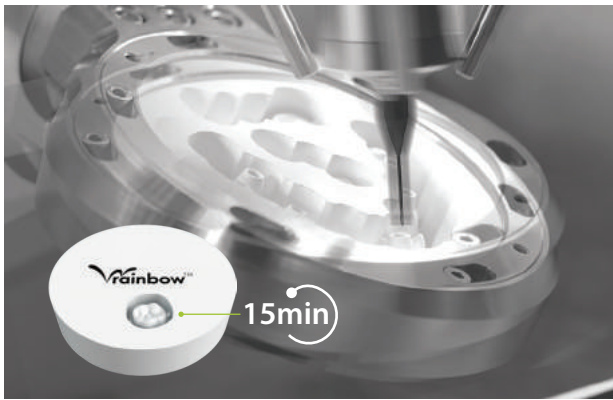
Automatic tool change &
Broken tool detection system
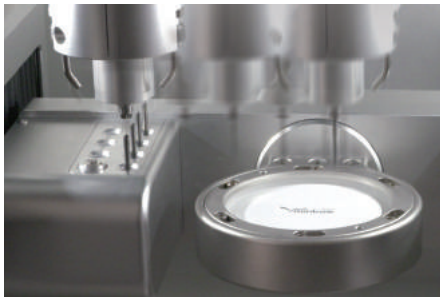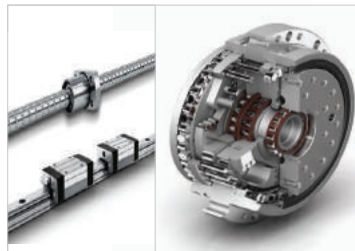

User friendly touch interface

Built-in dust collector

High-precision spindle

Jager

Type : High frequency spindle
Spec : 250W, 60,000 rpm / Run out <1㎛

High precision & stiffness parts for
maximum durability

hyperDENT (CAM Software)

rainbow™ Mill-Zr is a 5-axis, dry-type machine optimized for zirconia.
Various types of jigs are available to use disc(with step) blocks of various thicknesses.
Intuitive and easy to use with a simple GUI with convenient functions.

rainbow™ Mill Bur List

rainbow™ Mill - Zr & Clinic

Design	Art. No.	Type	Shank diameter	Diameter	Material
	BE3D2-D	ENDMILL	Ø 3	Ø 2	ZIRCONIA
	BE3D1-D	ENDMILL	Ø 3	Ø 1	ZIRCONIA
	BE3D0.5-D	ENDMILL	Ø 3	Ø 0.5	ZIRCONIA
	BE3D2-N	ENDMILL	Ø 3	Ø 2	PMMA / WAX
	BE3D1-N	ENDMILL	Ø 3	Ø 1	PMMA / WAX
	FE3D2-N	FLAT ENDMILL	Ø 3	Ø 2	CALIBRATION
	GT3D2-ED	GRINDING	Ø 3	Ø 2	GLASS CERAMIC / COMPOSITE RESIN
	GT3D1-ED	GRINDING	Ø 3	Ø 1	GLASS CERAMIC / COMPOSITE RESIN
	GT3D0.6-ED	GRINDING	Ø 3	Ø 0.6	GLASS CERAMIC / COMPOSITE RESIN

rainbow™ Mill Bur List

rainbow™ Mill - Metal

Design	Art. No.	Type	Shank diameter	Diameter	Material
	BE6D3-T	ENDMILL	Ø 6	Ø 3	TITANIUM
	BE6D2-T	ENDMILL	Ø 6	Ø 2	TITANIUM
	BE6D1.5-T	ENDMILL	Ø 6	Ø 1.5	TITANIUM
	BE6D2-N	ENDMILL	Ø 6	Ø 2	PMMA / WAX
	BE6D1-N	ENDMILL	Ø 6	Ø 1	PMMA / WAX
	GT6D2-ED	GRINDING	Ø 6	Ø 2	GLASS CERAMIC / COMPOSITE RESIN
	GT6D1-ED	GRINDING	Ø 6	Ø 1	GLASS CERAMIC / COMPOSITE RESIN
	GT6D0.6-ED	GRINDING	Ø 6	Ø 0.6	GLASS CERAMIC / COMPOSITE RESIN

rainbow™ Shine-T

Zircornia block with superb aesthetics and high flexural strength.

· Simultaneously securing transparency and strength similar to natural teeth
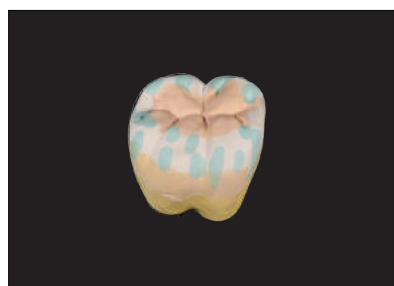· Transparency rate (~45%, A0) enables aesthetic prosthetics on the anterior site

A0 A2 Shade

Indication

● recommend   ○ Possible

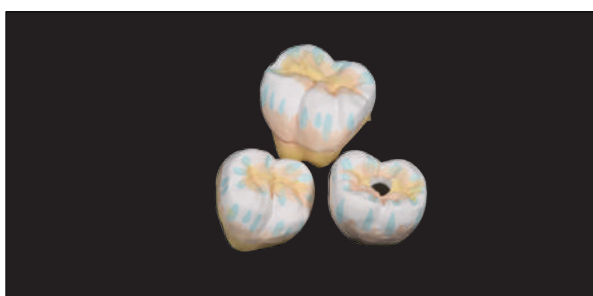|	Single Crown		Bridge(3-unit-Bridge)		Bridge (≥ 4-unit Bridge)
	Anterior Crown	Posterior Crown	Anterior Bridge	Posterior Bridge	
Shine-T	●	●	●	●	○
Trans/Shade	○	●	○	●	●

Case 1.

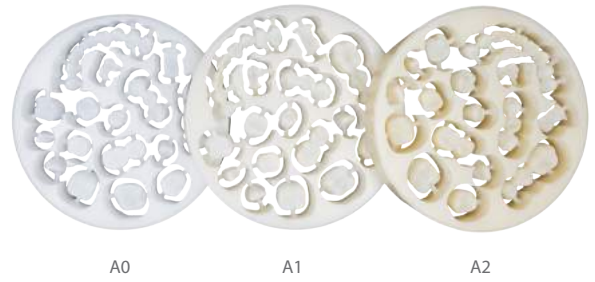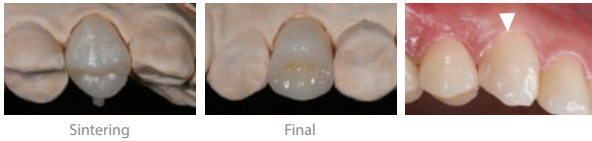Brushing   Final Prosthesis

Case 2.

Brushing   Final Prosthesis

rainbow™ **High Shine** Block

· Clearer and more transparent than the traditional opaque and translucent blocks
· Higher in strength than the Lithium Disilicate product group
· Product available in shades A0, A1 and A2 for best esthetic result

Sintering   Final

A0   A1   A2

rainbow™ **Shade** Block

· Original color of the blocks eliminates the need for additional dipping
· Uniform color tone is preserved even after occlusal articulation
· Entire "Vita A" shades are expressible with simplified constitution of A0.5 and A2 blocks

Sintering   Final

A0.5   A2
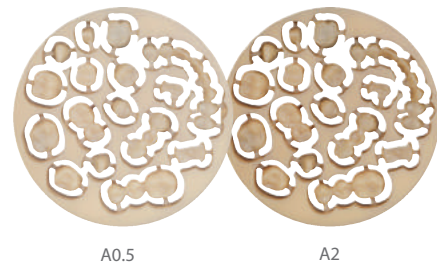
rainbow™ **Trans** Block

· Enhanced durability through increased fracture resistance
· Precise marginal fit due to the uniform shrinkage (x, y, z axis)
· More economically beneficial compared to gold or other translucent blocks

Sintering   Final

rainbow™ **Block**

· Precise marginal fit through the uniform shrinkage (20% shrinkage - x, y, z axis)
· Composed of Zirconia material similar in appearance to a natural tooth
· High flexural strength
· Fracture resistance

Sintering   Final

rainbow™ **LS** Block

Lithium disilicate block with superior esthetics
· Excellent transparency and 9 shades (A1, A2, A3, A3.5, A4, B1, B2, B3, B4)
· High flexural strength (370MPa)
· Various indications (Veneer, Inlay, Onlay, Single crown and so on)
· Compatible disk-type block for milling machine

rainbow™ **LS** Pressing

Lithium disilicate ingot for pressing technique
· Excellent esthetic results and high strength
· Various indications (Veneer, Inlay, Onlay, Single crown)
· Capable of precise marginal fit

rainbow™ Lab products

rainbow™ Porcelain

· Harmonized coefficient of thermal expansion with Zirconia minimizes the possibility of cracking
· Can express a huge diversity of color shade while delivering an excellent esthetic due to the superb Opalescent and Flourescent effect
· Natural-looking prosthesis production is possible with such a simple build-up procedure
· The special treatment to the powder creates high viscosity even when mixed with just distilled water, offering high user convenience
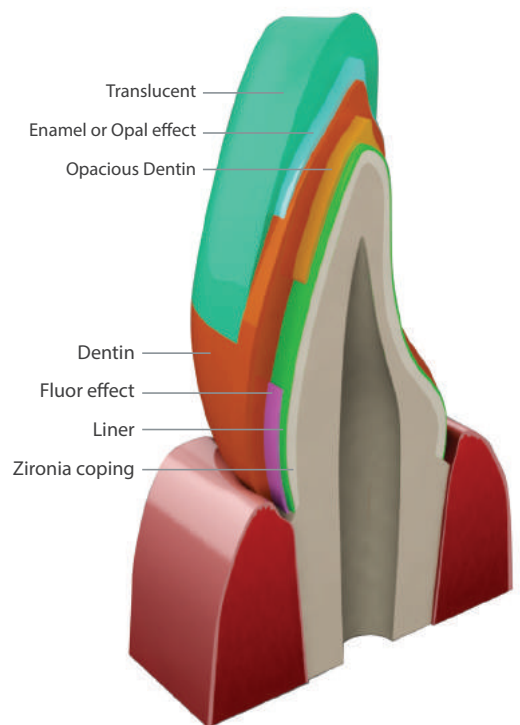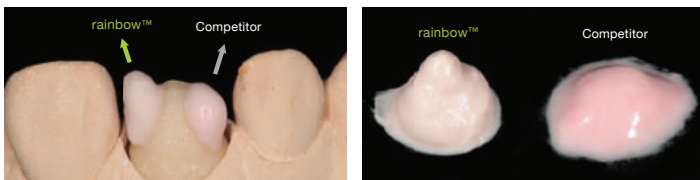

Translucent
Enamel or Opal effect
Opacious Dentin

Dentin
Fluor effect
Liner
Zironia coping

Opal Effect

rainbow™   Competitor

Fluor Effect

rainbow™   Competitor
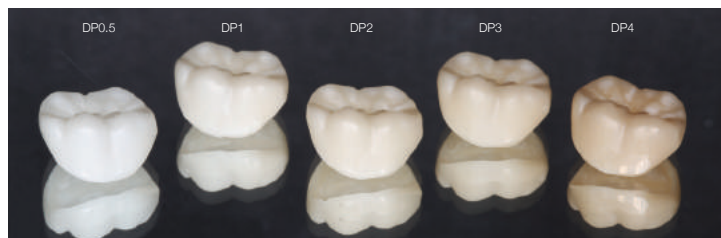
Excellent Workability

rainbow™   Competitor

rainbow™   Competitor

rainbow™ Coloring Liquid

· Coloring liquid for Zirconia prosthesis
· Comprised of the five most commonly used dipping colors
· Deep color penetration to express a natural esthetic

rainbow™ Brushing Liquid

· Fine detailing by implementing the brushing technique
· Solution Type and Pen Type are available to accommodate user's preference
· Comprised of 11 colors to enhance the esthetics of the prosthesis and a
  diluting solution to adjust the color intensity
· Brushed area is easily distinguishable through the incorporated food dyes

Before

After

Solution Type
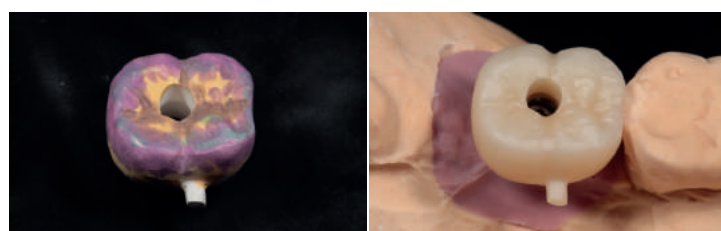
Pen Type

rainbow™ Paste Stain

Enhanced uniform application and ease of use

· The paste-like consistency of the product allows for ease of use and makes uniform
  application possible
· The sintering temperature requirement is lowered to under 800°C to allow application
  on diverse materials including Zirconia and Lithium Disilicate
· Available in 16 most commonly used shades

Coping   Glazing   Firing   Finish

Coping   Glazing & Firing   Finish

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