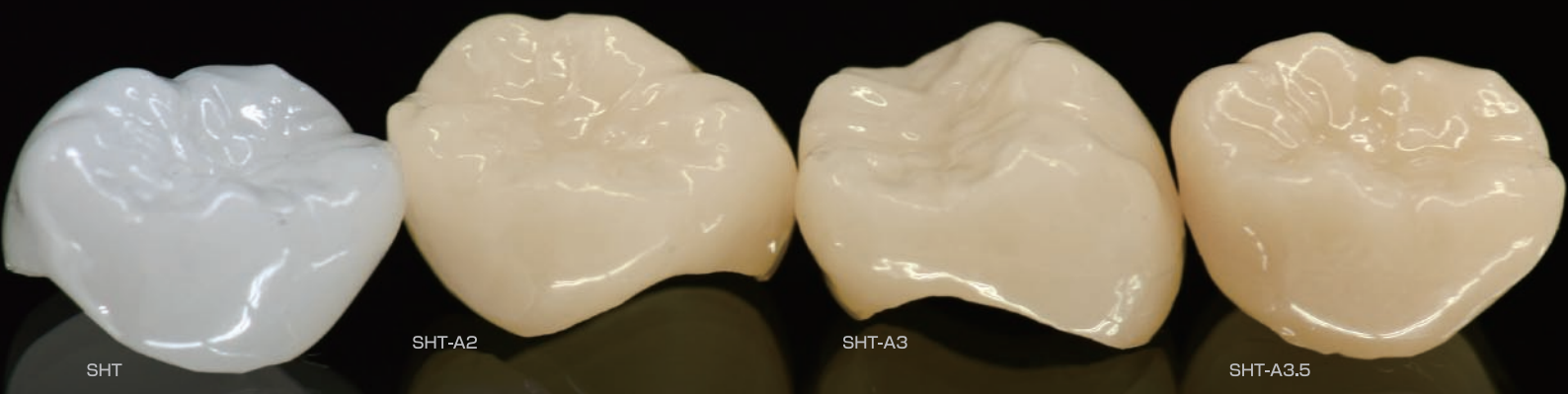
# Super High Translucent (SHT) Zirconia Disc

## SHT Color Shades Available!




Purely Made-in-Japan Zirconia Disc with Isostatic Pressure Technique and YAMAKIN's Unique Technology*1

*1: Pre-Sintering Technology

Zirconia Disc for CAD/CAM

# KZR-CAD Zr

## Product Lineup

### SHT (Super High Translucent)

- The highest light transmission in the series.
- Makes it possible to perform restoration utilizing the color of the abutment tooth.
- Suitable for cases requiring high aesthetic quality on anteriors so as to harmonize with natural teeth.

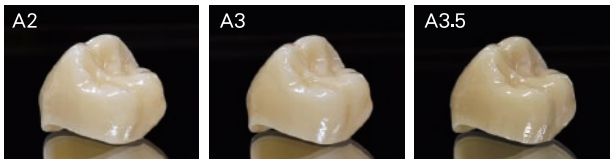
*Due to the physical properties of SHT, please do not use for cases which require high strength.


NEW Lineup HT and SHT Offer Pre-Colored Shades!

### HT (High Translucent)

- Higher translucency than T(Translucent) with well-balanced of strength and translucency.
- Minimizes the working time required for layering and staining.
- Pre-colored shades are available.

HT Color lineup




### T (Translucent)

- Original Shade was released in April, 2014.
- Suitable for making frameworks on an abutment tooth.
- High strength enables long bridges.

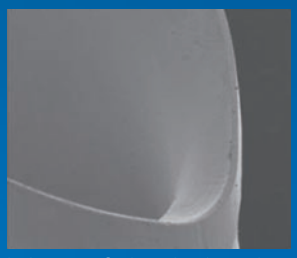
### Characteristics (reference values)

| | SHT | HT | T |
|---|---|---|---|
| Comparison of light transmission using a pellet of 0.5 mm thickness |  | | |
| Light Transmission (%) | 51 | 43 | 33 |
| Flexural Strength (MPa) | 770 | 1,080 | 1,280 |

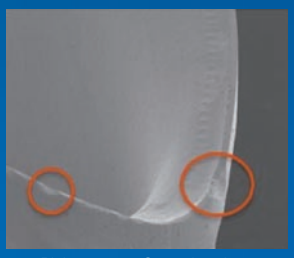
SHT has excellent light transmission, T has high flexural strength, and HT is designed to have a good balance of flexural strength and light transmission. For these reasons, KZR-CAD Zr is suitable for use with a broad range of cases.


## High Machining Precision by CIP and Optimal Sintering Technology

KZR-CAD Zr has excellent compatibility thanks to non-directional CIP (Cold Isostatic Pressing) compression molding.
Carefully controlled CIP pressure and optimal sintering prevent fractures, cracks and detachment; also, they are designed so as to make machining precision higher.



Left Image: Optimal sintering under good conditions



Right Image: Over-sintering

Enlarged Image of Margin Area after Machining

## Made in Japan

$Y_2O_3$ enables high levels of strength and fracture toughness in zirconia, as it stabilizes zirconia crystallization. The raw materials for KZR-CAD Zr are produced by TOSOH Corporation, a Japanese company with a proven record worldwide. This means that KZR-CAD Zr is a purely made-in-Japan product.

Raw Material Composition of Zirconia Disc (Weight Percentage)

| | T | HT | SHT |
|---|---|---|---|
| $ZrO_2$ $(HfO_2)+Y_2O_3$ | ＞99.00 | ＞99.00 | ＞99.00 |
| $Y_2O_3$ | 4.95≦～≦5.35 | 5.15≦～≦5.55 | 9.15≦～≦9.55 |
| $Al_2O_3$ | 0.20≦～≦0.30 | 0.03≦～≦0.07 | 0.03≦～≦0.07 |
| $SiO_2$ | ≦0.020 | ≦0.020 | ≦0.020 |
| $Fe_2O_3$ | ≦0.010 | ≦0.010 | ≦0.010 |

For control of color shade type, pigments are added to the composition of HT and STH raw materials.

## Short Sintering Time

KZR-CAD Zr sintering is completed in less than 8 hours, including cooling time. Mass production of restorations is possible, as KZR-CAD Zr enables operation 3 times a day.

<Sintering Program>

| | Heat Rate | Heat Rate | Hold | Cooling |
|---|---|---|---|---|
| Temperature (˚C) | 1,000 | 1,450 | 1,450 | 400 (in the furnace) |
| Time (hour) | 2 | 1.5 | 2 | 1.5 |

In the case of a single crown to an 8-unit bridge made of T or HT or a single crown to a 3 unit-bridge made of SHT

## Lineup

| Color | Diameter(Φ) 98.5mm Thickness ( t ) | | | | | |
|---|---|---|---|---|---|---|
| | 14mm | 16mm | 18mm | 20mm | 22mm | 25mm |
| SHT | ○ | — | ○ | ○ | — | — |
| HT | ○ | — | — | ○ | — | ○ |
| T | ○ | ○ | ○ | ○ | ○ | ○ |
| HT-A2, HT-A3, HT-A3.5 | ○ | — | — | ○ | — | ○ |
| SHT-A2, SHT-A3, SHT-A3.5 | ○ | — | ○ | ○ | — | — |

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