

MULTILAYER DENTAL ZIRCONIA DISC SERIES

Seamless Integration of Translucency, Shade & Flexure Strength

Professional Technical Catalog for Dental Laboratories

4Y Multilayer Zirconia

43% Translucency
≥1100 MPa

Multilayer Pro Zirconia

40–49% Translucency
600–1200 MPa

3D Multilayer Zirconia

43–57% Translucency
600–900 MPa

3D Pro F Versatile Disc

Fast + Regular
Sintering

- Natural multilayer gradient color from gingiva to incisal
- Optimized translucency & strength balance for every indication
- Fast 2-hour sintering support (3D Pro F)
- Full Vita shade range • 98 mm / 95 mm / 87 mm / CEREC blocks
- FDA, CE, ISO 13485, NMPA & CFG certified • OEM available

Designed for dental technicians who demand precision, aesthetics and reliability.

Product Series Overview

The Multilayer Zirconia Disc Series delivers a complete range of solutions covering every clinical indication — from high-strength posterior bridges to highly aesthetic anterior restorations. Each disc features true multilayer gradient technology for natural shade and translucency transitions.

Feature	4Y Multilayer	Multilayer Pro	3D Multilayer	3D Pro F
Translucency	43%	40–49%	43–57%	High (UT-ML)
Flexural Strength	≥1100 MPa	600–1200 MPa	600–900 MPa	Layered 800–1250 MPa
Layers	Multilayer	6 Layers	6 Layers	6 Layers
Gradient Type	Color	Color + Strength + Translucency	Color + Strength + Translucency	Color + Strength + Translucency
Best For	High-strength bridges & crowns	Balanced aesthetic strength	Superior aesthetics	Speed + Versatility (Fast sinter)
Fast Sintering	—	—	—	Yes (2 hrs)

Available Formats & Systems

- **98 mm** discs — Regular round, Open system
- **95 mm** discs — Zirkonzahn system compatible
- **87 mm / 89×71 mm** discs — Amann Girrbach system compatible
- **Small blocks** — CEREC / Sirona system compatible
- Full **Vita Classical** & **Vita 3D-Master** shade range

Certifications & Quality

All products are manufactured under strict quality systems and carry: **FDA** (USA), **CE** (Europe), **ISO 13485**, **NMPA** (China) and **CFG** certificates. OEM and custom logo options are available for laboratory suppliers and distributors.

Common Clinical Indications

Bridge Full-contour & framework bridges	Anterior Crown High-aesthetic anterior restorations	Implant Implant abutments & screw-retained	Posterior Crown High-load posterior single units	Veneer Ultra-thin aesthetic veneers
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1. 4Y Multilayer Zirconia

4Y multilayer zirconia with natural color gradient from gingiva to incisal. High translucency (43%) combined with ≥ 1100 MPa flexural strength — ideal for long-span bridges and high-load posterior restorations where strength and aesthetics must both perform.



Key Features for Technicians

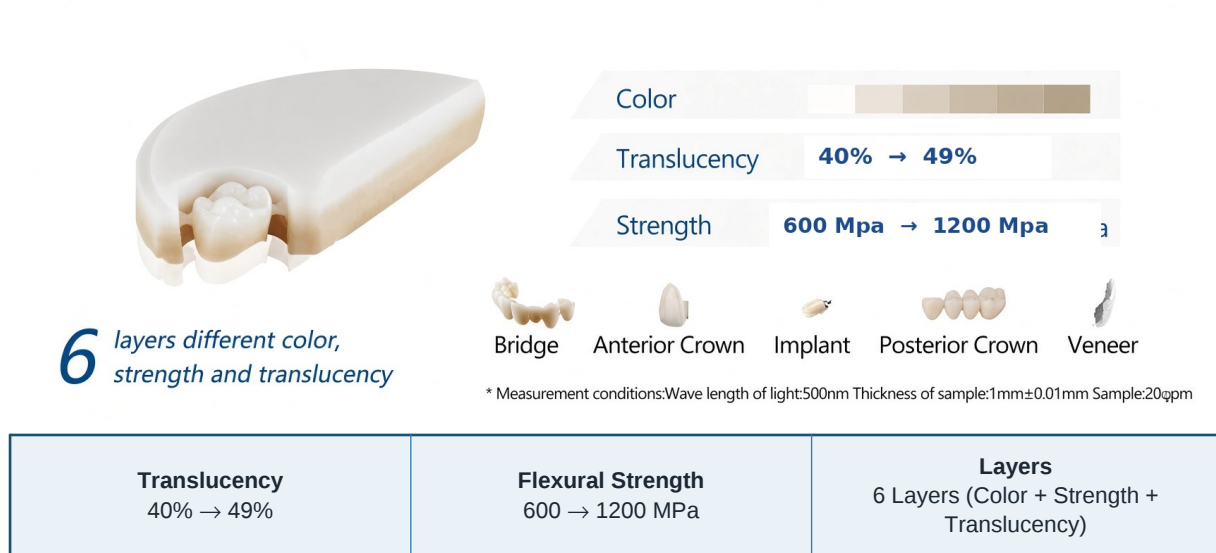
- 4Y multilayer formulation with natural color gradient from gingival to incisal edge.
- Flexural strength ≥ 1100 MPa supports long-span bridges and posterior high-load cases.
- Consistent 43% translucency optimized for strength-focused restorations.
- Excellent milling performance with stable sintering results.
- Suitable for full-contour crowns, bridges, implant restorations and frameworks.

Recommended Indications

Posterior crowns • Multi-unit bridges • Implant superstructures • Frameworks requiring high strength

2. Multilayer Pro Zirconia (3Y–5Y Multilayer High Translucent)

3Y–5Y multilayer high translucent zirconia with 6-layer gradient color, translucency and strength in a single disc. Natural transition of optical and mechanical properties from gingiva to incisal delivers both aesthetics and reliability.



Key Features for Technicians

- 3Y–5Y multilayer high translucent formulation for balanced aesthetics and strength.
- 6 distinct layers with different color, strength and translucency values.
- Translucency increases toward the incisal (40% → 49%) for natural light transmission.
- Strength transitions from 600 MPa (incisal) toward 1200 MPa (gingival) for structural support.
- Seamless gradient eliminates visible layer lines after sintering and finishing.
- Versatile for anterior & posterior crowns, bridges, implant restorations and veneers.

3. 3D Multilayer Zirconia (4Y–5Y Ultra Aesthetic)

4Y–5Y ultra aesthetic and high-translucency multilayer zirconia engineered for the highest optical demands. Incisal translucency reaches 57% while cervical strength reaches ≥ 900 MPa — the perfect balance of beauty and durability.



Translucency 57% (incisal) → 43% (cervical)	Flexural Strength 600 MPa (incisal) → 900 MPa (cervical)	Gradient Color + Strength + Translucency
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Layer Structure & Flexural Strength

Layer	Position	Proportion	Flexural Strength
1st Layer	Incisal (Light Shade)	20%	≥ 600 MPa
2nd Layer	—	15%	≥ 630 MPa
3rd Layer	—	15%	≥ 730 MPa
4th Layer	—	15%	≥ 780 MPa
5th Layer	—	15%	≥ 830 MPa
6th Layer	Cervical / Gingival	20%	≥ 900 MPa

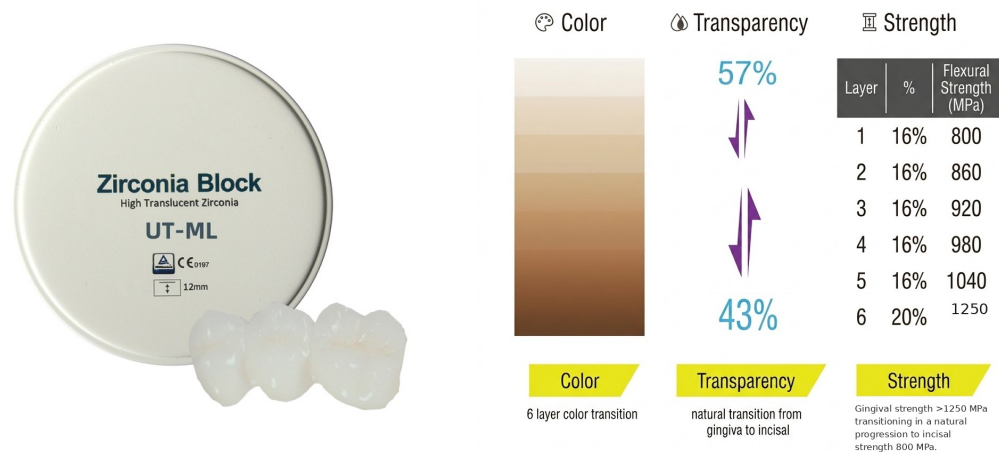
* Measurement conditions: Wavelength 500 nm • Sample thickness 1 mm ± 0.01 mm • Sample Ø 20 mm

Key Features for Technicians

- Highest aesthetic level in the series — 57% translucency at the incisal edge.
- Strength increases toward the cervix (≥ 900 MPa) providing reliable support.
- Natural shade and translucency transition eliminates the need for extensive staining.
- Ideal for anterior single crowns, short-span bridges and high-visibility cases.
- Excellent polishing and characterization response.

4. 3D Pro F — 3Y–5Y Multilayer Versatile Clinical Application

3Y–5Y multilayer versatile zirconia for broad clinical application. Supports both fast and regular sintering programs in one disc — ultra-fast 2-hour sintering for single units & bridges up to 3 units, and conventional cycles for longer spans. This versatility significantly reduces production time and cost for high-volume milling centers.



Layer Structure (3D Pro F)

Layer	Proportion	Flexural Strength (MPa)
1 (Incisal)	16%	800
2	16%	860
3	16%	920
4	16%	980
5	16%	1040
6 (Gingival)	20%	1250

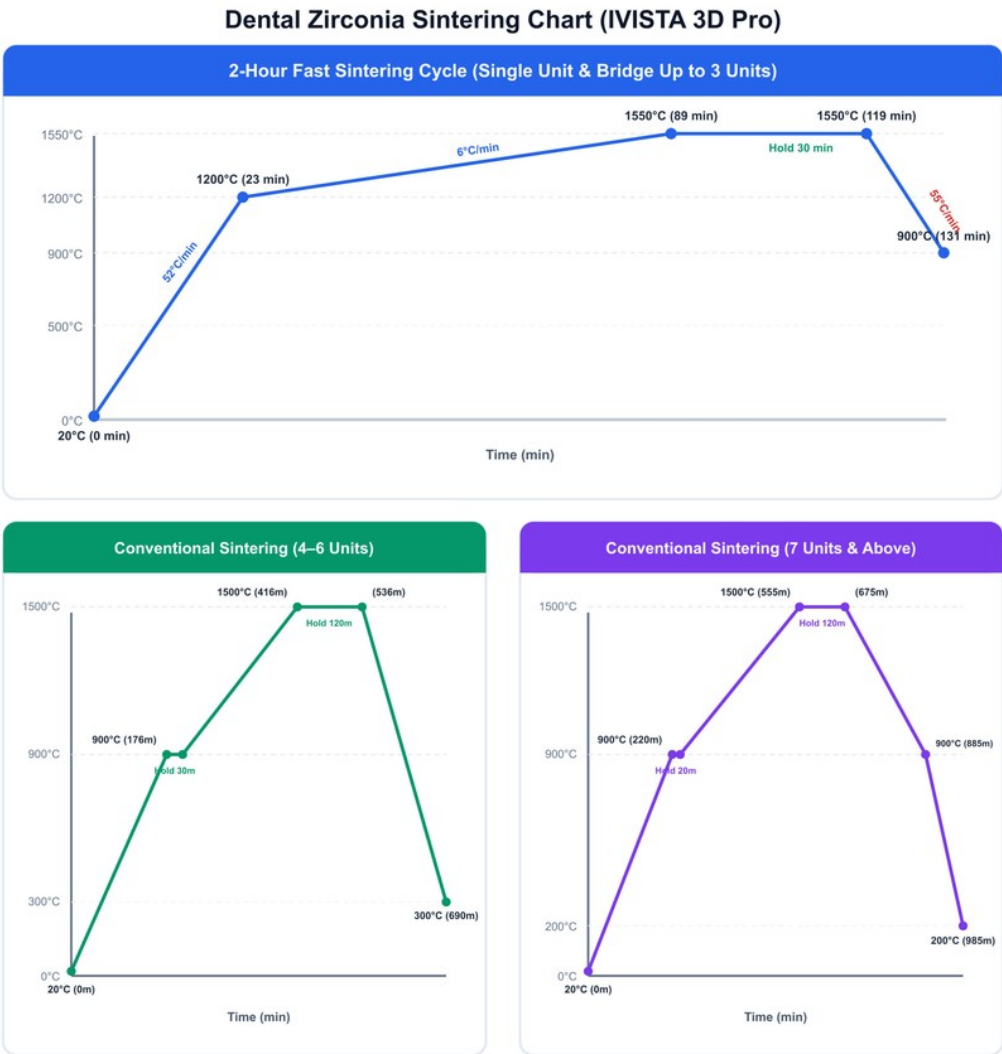
Natural progression: Gingival strength >1250 MPa transitioning to incisal strength 800 MPa. Transparency 57% → 43%. 6-layer color transition from gingiva to incisal.

Key Advantages for Busy Labs

- **Fast sintering** — single units & bridges ≤3 units in as little as 2 hours.
- **Conventional sintering** — optimized cycles for 4–6 unit and 7+ unit bridges.
- One disc covers the majority of daily production needs — reduces inventory complexity.
- Maintains exceptional strength and aesthetics even under rapid sintering protocols.
- High translucent UT-ML grade for superior optical results.

3D Pro F — Sintering Curves (IVISTA 3D Pro)

Three validated sintering protocols allow technicians to choose the optimal cycle based on restoration size. Fast sintering dramatically shortens turnaround for everyday cases while conventional cycles guarantee maximum precision for longer spans.



Quick Reference — Sintering Strategy

2-Hour Fast Cycle Single unit & bridge ≤ 3 units Peak 1550 °C • Hold 30 min	Conventional 4–6 Units Peak 1500 °C • Hold 120 min Total ≈ 11.5 hours	Conventional 7+ Units Peak 1500 °C • Hold 120 min Longer ramp for max stability
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Technician Tip: Always verify furnace calibration and use the manufacturer’s recommended crucible / sintering tray. For best optical results after fast sintering, allow controlled cooling and perform final characterization as usual.

Technical Summary & Ordering Information

At-a-Glance Comparison

Product	Translucency	Strength (MPa)	Key Strength	Primary Use
4Y Multilayer	43%	≥ 1100	4Y High Strength	Long-span bridges
Multilayer Pro	40–49%	600–1200	3Y–5Y High Translucent	All-round daily work
3D Multilayer	43–57%	600–900	4Y–5Y Ultra Aesthetic	Anterior aesthetics
3D Pro F	High (UT-ML)	800–1250	3Y–5Y Fast + Regular	Speed & versatility

Available Disc Sizes & Systems

System	Diameter / Size	Notes
Open System	98 mm	Regular round disc
Zirkonzahn	95 mm	Standard large disc
Amann Girrbach	87 mm / 89×71 mm	AG system compatible
CEREC / Sirona	Small blocks	Chairside & lab blocks

Shade Range

Full **Vita Classical** (A1–D4) and selected **Vita 3D-Master** shades available across the series. Custom shade matching and special orders available on request.

Quality Approvals & OEM

- Certified: **FDA** (USA) • **CE** (MDR) • **ISO 13485** • **NMPA** (China) • **CFG**
- OEM and private-label / custom logo services available for laboratory suppliers and distributors.
- Consistent batch quality with full traceability.

For Dental Technicians — This catalog gives clear, actionable data: layer structure, strength values, translucency ranges and sintering protocols. Choose the right disc, follow the recommended sintering curve, and achieve predictable results.

5. Economic White & Pre-shaded 4Y PSZ Zirconia Disc

High translucent 4Y-PSZ zirconia available in economic white and pre-shaded options. Pre-colored in full **VITA 16 classical colors** plus **BL bleach shades** — reducing staining time while delivering reliable strength for posterior loading and framework bridges.

HIGH TRANSLUCENT ZIRCONIA 4Y-PSZ

AVAILABLE SYSTEMS

- 98mm Open System Disc
- 95mm-zirkonzahn system Disc
- Amann Girrbach (AG) System Disc

Small Cerec Blocks,
ST 40-19-15





98mm & 95mm Disc Form
- High Translucent

KEY PROPERTIES

1100 Mps
Strength

Optimized for heavy posterior loading

43%
Translucency

Stabilized for translucency

VERSATILE CLINICAL APPLICATIONS

-  Posterior Loading Crowns
-  Long Spans Framework Bridges
-  etc. and other restorations

Strength $\geq 1100 \text{ MPa}$	Translucency 43%	Material 4Y-PSZ High Translucent
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Available Formats

- **98 mm** regular round disc — Open system
- **95 mm** disc — Zirkonzahn system
- **Amann Girrbach (AG)** system disc
- **Small CEREC blocks** — ST 40-19-15 and compatible chairside sizes

Shade & Clinical Use

- Pre-shaded: VITA 16 classical colors + BL bleach shades
- Economic white option for full characterization flexibility
- Posterior loading crowns • Long-span framework bridges • Other restorations



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All specifications subject to continuous improvement. Always refer to the latest IFU for sintering parameters.