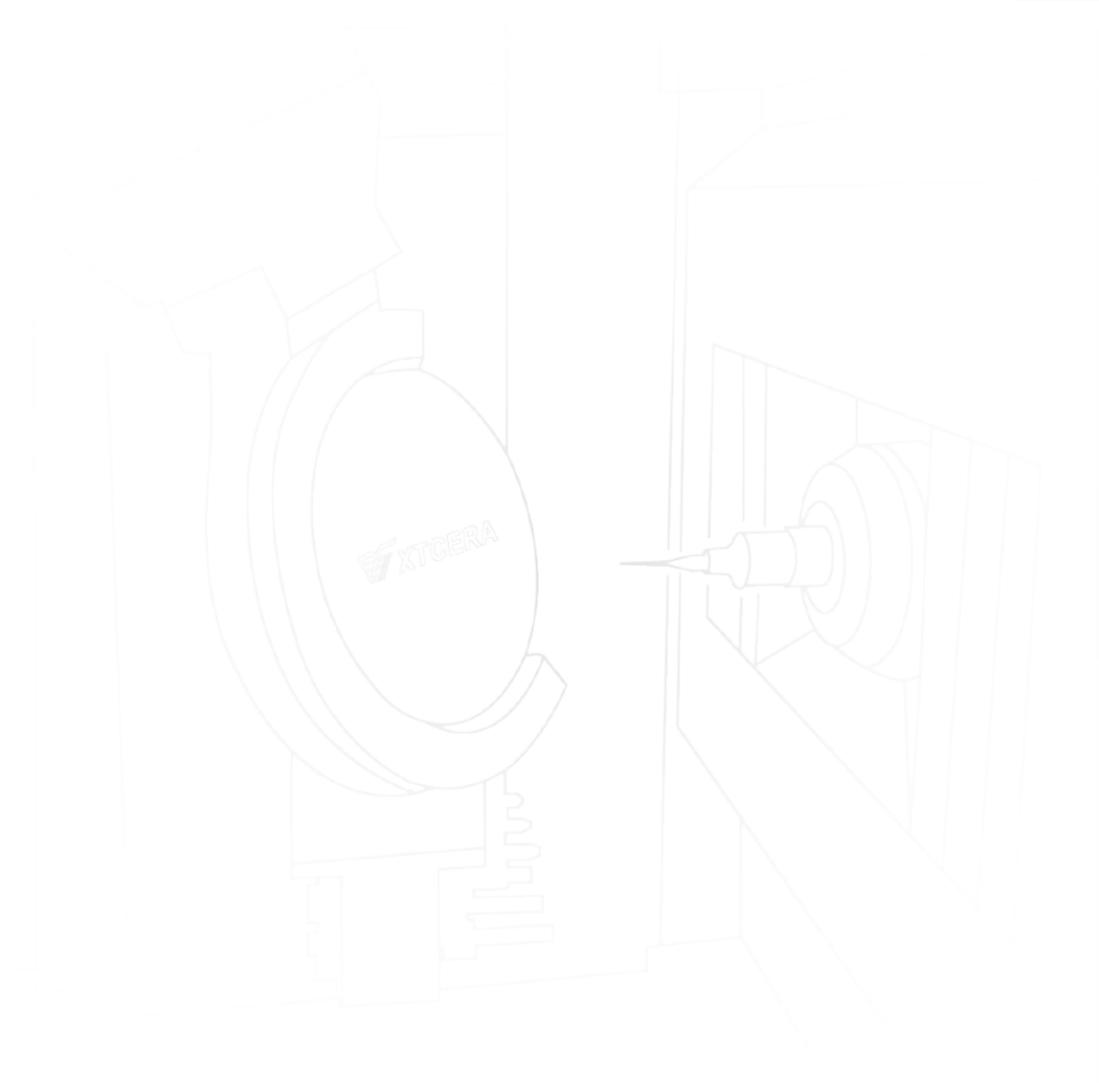




**22 Years' R&D Experience on
Dental Zirconia blank and Milling Machine**



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2022.11.16

CE 0197 **CFDA FDA** Cleared

CATALOGUE

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Sold to
60+
Countries and regions
globally



Owning
30,000m²+
R&D and industrial park

Hired
1600+
Employees



DEVELOPMENT — 2001-NOW

COMPANY PROFILE

XTCEAR was founded in 2001, owning over 20 years of R&D experience on Zirconium Dioxide Ceramic Material and Dental Milling Machine.

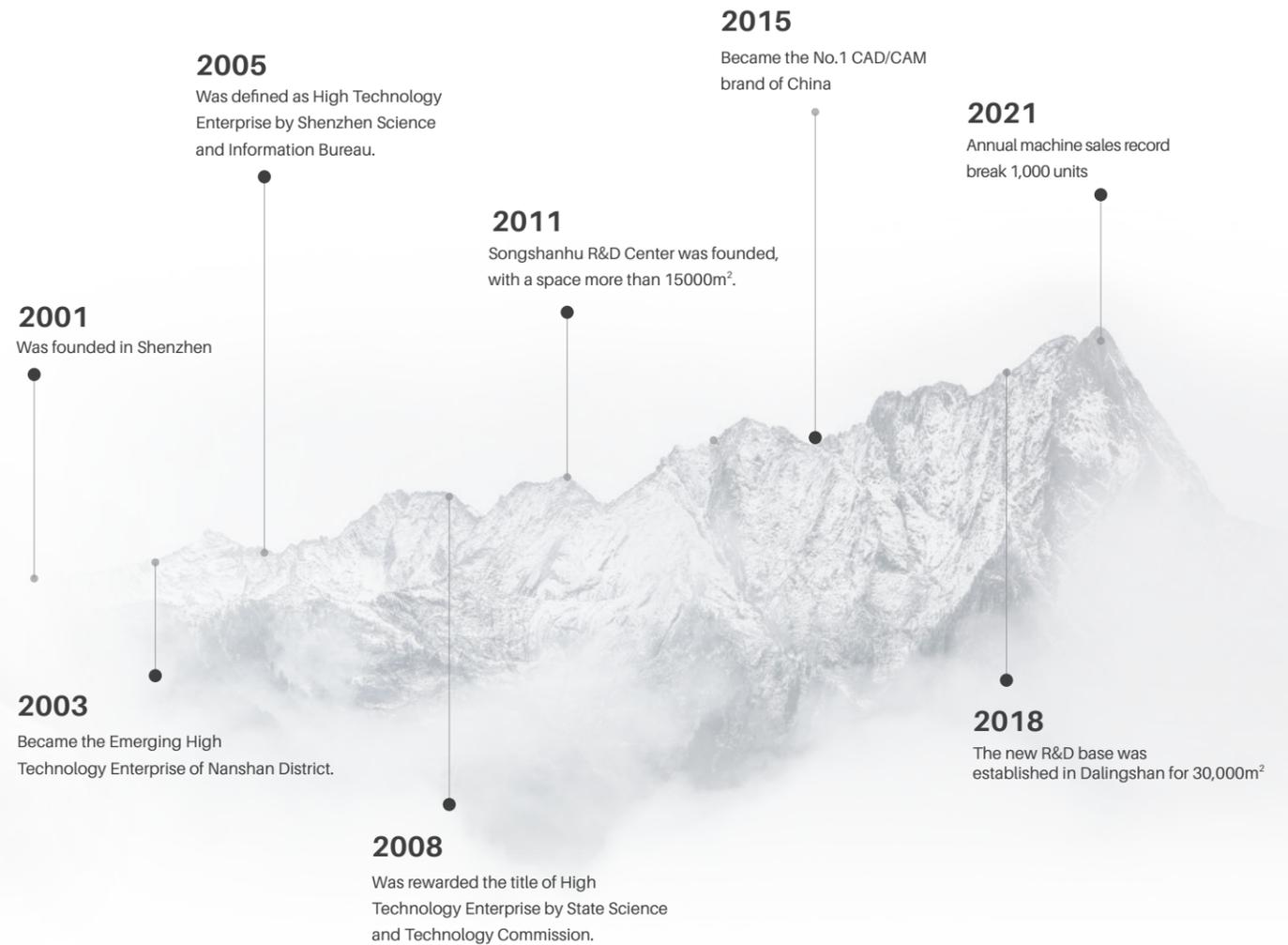
XTCERA has more than 1600 employees and an industrial park larger than 30,000 sq meters.

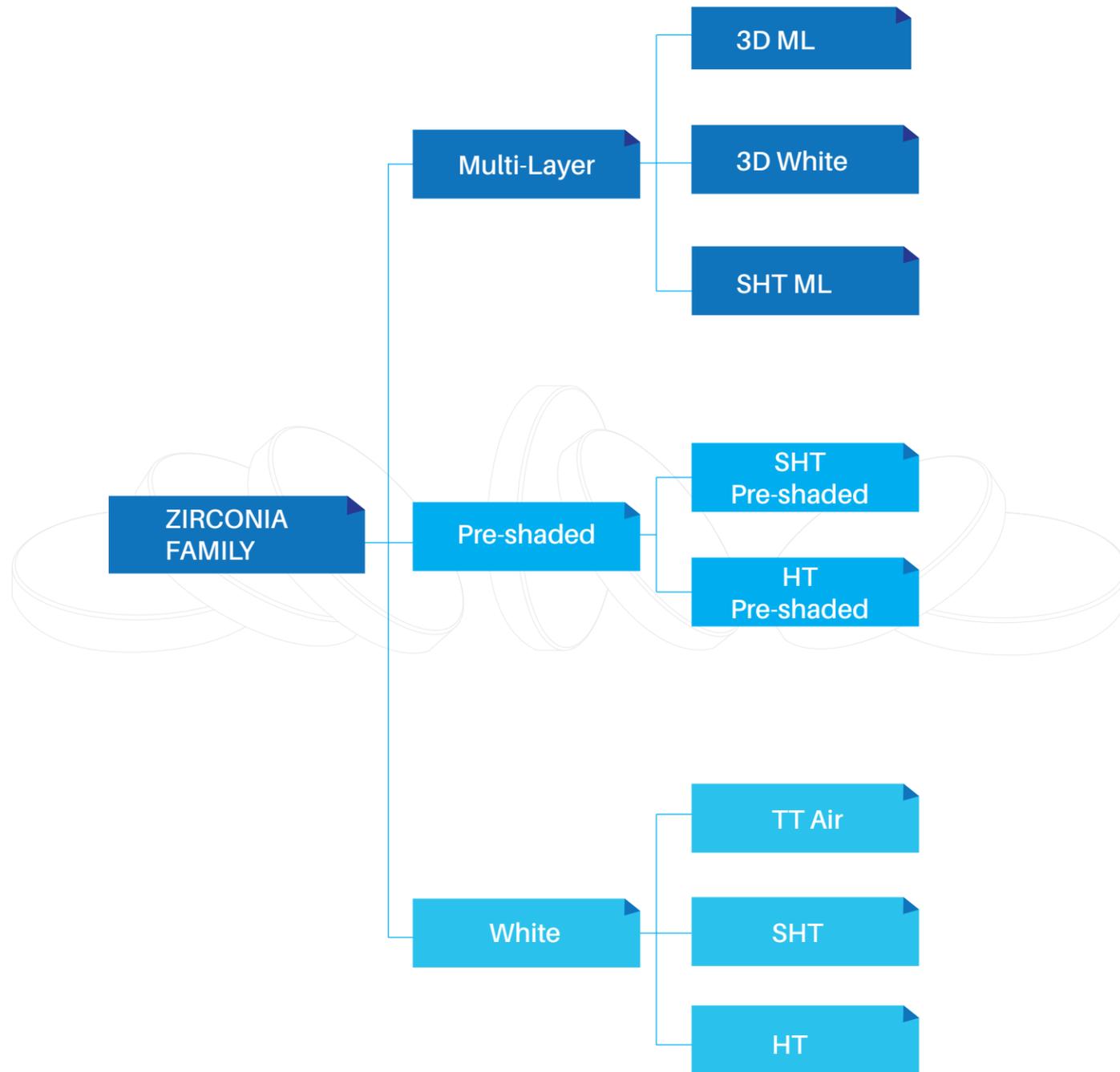
In the past 20 years, XTCERA has sold over 7,000 units of dental milling machines and over a million pieces of Zirconia blanks every year to the global dental market.

We believe quality is the life of production and trust is the foundation of a healthy business relation.



CERTIFICATE





APPLICATIONS

- Crowns, bridges, anterior and posterior region
- Personalized abutments on titanium base
- Conical and telescope crowns
- Multi-unit restorations on titanium base

CHEMICAL COMPOSITION

| | |
|------------------------------------|---------|
| ZrO ₂ +HfO ₂ | >94.0 |
| Y ₂ O ₃ | 4.5-6.0 |
| Al ₂ O ₃ | 0.2-0.5 |
| Other oxides | <0.2 |

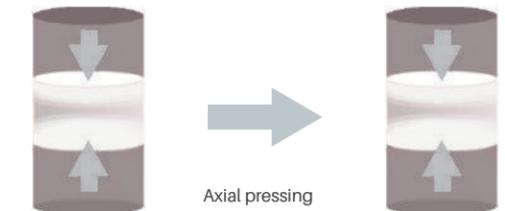
FEATURE

- Esthetics
- Resisting fracture and chipping
- Avoiding uneven shading of the edge
- Anti-aging and wearproof

Matured Pressing Technique (Homogeneous Density) Based on Years of Testing

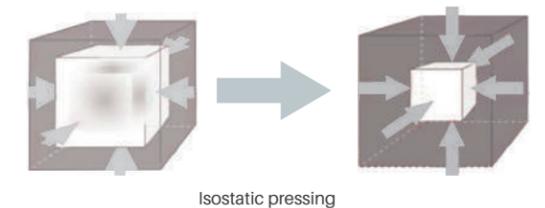
Step1

1. The first step is to shape the zirconia powder to blanks through the axial pressing
2. The pre-pressed blanks will be sealed into water-proof pressing sleeves for isostatic pressing



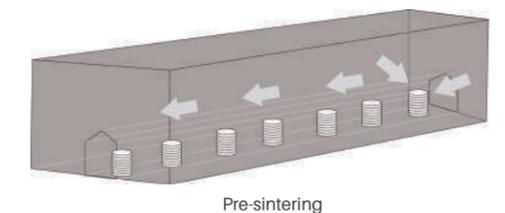
Step2

1. Though time-consuming, isostatic pressing is essential for reducing material internal stress
2. The key procedure is to exert massive pressure during the isostatic pressing, which ensures homogeneous density in all blanks



Step3

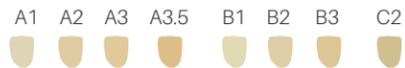
Ensure the consistency and stability of zirconia products



3D MULTILAYER (Pre-shaded&White) Zirconia Blanks

| Vickers Hardness(HV) | Strength(Mpa) | Color | Translucency |
|----------------------|---------------|----------|--------------|
| ≥1250 | 750 | Incisal | 55% |
| ↑ | ↑ | ↓ | ↓ |
| ≥1350 | 1250 | Cervical | 43% |

Regular providing pre-shaded blanks:



Other shades in Vita Classical shades are available with MOQ request

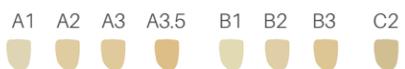


Layerless, natural gradation

SHT Multilayer Zirconia Blanks

| Vickers Hardness(HV) | Strength(Mpa) | Color | Translucency |
|----------------------|---------------|----------|--------------|
| ≥1300 | 1050 | Incisal | 47% |
| ↑ | ↑ | ↓ | ↓ |
| ≥1350 | 1250 | Cervical | 43% |

Regular providing pre-shaded blanks:



Other shades in Vita Classical shades are available with MOQ request



Layerless, natural gradation

SHT Pre-Shaded Zirconia Blanks

| Vickers Hardness(HV) | Strength(Mpa) | Color | Translucency |
|----------------------|---------------|-----------------------|--------------|
| ≥1300 | 1050 | Vita classical shades | 47% |

Regular providing pre-shaded blanks:

A1 A2 A3 A3.5 B1 B2 B3 C2 BL2



Other shades in Vita Classical shades are available with MOQ request

Incisal Liquid : T1



HT Pre-Shaded Zirconia Blanks

| Vickers Hardness(HV) | Strength(Mpa) | Color | Translucency |
|----------------------|---------------|-----------------------|--------------|
| ≥1250 | 1250 | Vita classical shades | 43% |

Regular providing pre-shaded blanks:

A1 A2 A3 A3.5 B1 B2 B3 C2 BL2



Other shades in Vita Classical shades are available with MOQ request

Incisal Liquid : T1



Translucency and Strength

| | HT | SHT | TT Air | 3D |
|-------------------|---------|---------|--------|----------------|
| Translucency | 43% | 47% | 60% | 55% → 43% |
| Flexural strength | 1250Mpa | 1050Mpa | 650Mpa | 750Mpa-1250Mpa |

Biological properties

| Items | ISO10993 Standards Requirements | Test Results |
|------------------------------|---------------------------------|------------------------|
| Cytotoxicity test | Cytotoxicity ≤1 | No cytotoxicity |
| Sensitization test | Sensitization not allowed | No sensitization |
| Oral mucosa irritation test | Irritation not allowed | No stimulation |
| Acute systemic toxicity test | Sensitization not allowed | No acute oral toxicity |
| Genotoxicity test | Avirulent | AMES test:negative |

Physical and chemical properties

| Model | | HT | SHT | TT Air | 3D |
|--------------------------|---|-----------------------|-----------------------|---------------------------|-----------------------|
| | | Test results | Test results | Test results | Test results |
| Density(after sintering) | 6.05±0.05g/cm ³ | 6.04g/cm ³ | 6.03g/cm ³ | 6.07±0.2g/cm ³ | 6.07g/cm ³ |
| Chemical solubility | 100μg/cm ² | 64μg/cm ² | 63μg/cm ² | 64μg/cm ³ | 64μg/cm ² |
| CTE | (10±0.5)X10 ⁻⁶ K ⁻¹ | Complied | Complied | Complied | Complied |
| Radioactivity | 0.1Bq.g-1 | Complied | Complied | Complied | Complied |



OPEN SYSTEM ZIRCONIA BLANKS

| Specification | Translucency |
|---------------|------------------|
| φ98-10 | HT/SHT/TT Air/3D |
| φ98-12 | HT/SHT/TT Air/3D |
| φ98-14 | HT/SHT/TT Air/3D |
| φ98-16 | HT/SHT/TT Air/3D |
| φ98-18 | HT/SHT/TT Air/3D |
| φ98-20 | HT/SHT/TT Air/3D |
| φ98-22 | HT/SHT/TT Air/3D |
| φ98-25 | HT/SHT/TT Air/3D |



Z SYSTEM ZIRCONIA BLANKS

| Specification | Translucency |
|---------------|------------------|
| φ95-10 | HT/SHT/TT Air/3D |
| φ95-12 | HT/SHT/TT Air/3D |
| φ95-14 | HT/SHT/TT Air/3D |
| φ95-16 | HT/SHT/TT Air/3D |
| φ95-18 | HT/SHT/TT Air/3D |
| φ95-20 | HT/SHT/TT Air/3D |
| φ95-25 | HT/SHT/TT Air/3D |



D SHAPE ZIRCONIA BLANKS

| Specification | Translucency |
|---------------|------------------|
| 90-72-10 | HT/SHT/TT Air/3D |
| 90-72-12 | HT/SHT/TT Air/3D |
| 90-72-14 | HT/SHT/TT Air/3D |
| 90-72-18 | HT/SHT/TT Air/3D |
| 90-72-20 | HT/SHT/TT Air/3D |
| 90-72-25 | HT/SHT/TT Air/3D |



S SYSTEM ZIRCONIA BLANKS

| Specification | Translucency |
|---------------|------------------|
| 20-14-16 | HT/SHT/TT Air/3D |
| 29-19-16 | HT/SHT/TT Air/3D |
| 40-14-16 | HT/SHT/TT Air/3D |
| 40-19-15 | HT/SHT/TT Air/3D |
| 65-25-22 | HT/SHT/TT Air/3D |



OPEN SYSTEM ZIRCONIA BLANKS WITH FRAME

| Specification | Translucency |
|---------------|------------------|
| φ100-10 | HT/SHT/TT Air/3D |
| φ100-12 | HT/SHT/TT Air/3D |
| φ100-14 | HT/SHT/TT Air/3D |
| φ100-16 | HT/SHT/TT Air/3D |
| φ100-18 | HT/SHT/TT Air/3D |
| φ100-20 | HT/SHT/TT Air/3D |
| φ100-22 | HT/SHT/TT Air/3D |
| φ100-25 | HT/SHT/TT Air/3D |



MANUAL SYSTEM ZIRCONIA BLANKS

| Specification | Translucency |
|---------------|------------------|
| 43-25-16 | HT/SHT/TT Air/3D |
| 58-29-16 | HT/SHT/TT Air/3D |
| 60-25-16 | HT/SHT/TT Air/3D |
| 65-30-16 | HT/SHT/TT Air/3D |
| 75-36-16 | HT/SHT/TT Air/3D |
| 75-36-22 | HT/SHT/TT Air/3D |
| 87-56-16 | HT/SHT/TT Air/3D |
| 72-42-16 | HT/SHT/TT Air/3D |

Indication Reference of XTCERA Zirconia Blanks

XTCERA Color Liquid

| Indications | Model | Indication Reference of XTCERA Zirconia Blanks | | | | | |
|--|-------|--|----------|----------------|--------|-----------------------------|---------------------------|
| | | 3D Multilayer | 3D White | SHT Multilayer | TT air | SHT white SHT pre-shaded | HT white HT pre-shaded |
| Aesthetic full contour for anterior | | ✓ | ✓ | ⊙ | ✓ | ⊙ | |
| Full contour for posterior | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Coping | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Inlay/Onlay | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 5-7 unit Bridges | | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ |
| Unit 14 is connected to the bridge | | ⊙ | ⊙ | ⊙ | ✗ | ✓ | ✓ |
| Post & core | | | | ⊙ | ✗ | ⊙ | ✓ |
| Veneer | | ✓ | ✓ | ⊙ | ✓ | ⊙ | |
| Abutment | | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Telescope | | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ |
| Maryland bridge | | ⊙ | ⊙ | ✓ | ✗ | ✓ | ✓ |
| Implant Bridge for more than 7 units | | ⊙ | ⊙ | ⊙ | ✗ | ✓ | ✓ |
| Anterior bridge with 4 consecutive pontics | | ✗ | ✗ | ⊙ | ✗ | ⊙ | ⊙ |
| Bridge with 1 unit distal extensive pontic | | ✗ | ✗ | | ✗ | | ⊙ |

Strong recommended: ✓ Recommended: ⊙ Not recommended: ○ Contraindication: ✗

| | | | |
|-----------------------|-------------------------------------|--------------------|--|
| <p>VITA classical</p> | Dentine Shade | | |
| | 0M1 0M2 0M3 | | |
| | A1 A2 A3 A3.5 A4 | | |
| | B1 B2 B3 B4 | | |
| | C1 C2 C3 C4 | | |
| D2 D3 D4 | | | |
| <p>VITA 3D-MASTER</p> | Dentine Shade | | |
| | 0M1 0M2 0M3 | | |
| | 1M1 1M2 | | |
| | 2L1.5 2L2.5 2M1 2M2 2M3 2R1.5 2R2.5 | | |
| | 3L1.5 3L2.5 3M1 3M2 3M3 3R1.5 3R2.5 | | |
| | 4L1.5 4L2.5 4M1 4M2 4M3 4R1.5 4R2.5 | | |
| | 5M1 5M2 5M3 | | |
| <p>Diluent Liquid</p> | <p>Incisal Liquid</p> | <p>Color Guide</p> | |

XTCERA Special shades: P1 P2 P3 - gingival shade, O1 O2 - fossa shade, G2 - incisal shade

Optimized for all-ceramic restorations, with a wide choice of shades.

Best performed on zirconia blocks

Thorough penetration throughout crown to ensure predictable colors

Highly match the natural colors of teeth, shorter dyeing duration, easy operation.

XTCERA Glass-ceramic

Description

Suitable for digital CAD/CAM process and chairside restoration for inlays, onlays, ultra-thin veneers and crowns.

Excellent mechanical strength, high transmittance and natural aesthetic effect.

Indications:

- Venner
- Inlay
- Onlay
- Partial crowns
- Anterior crown
- Posterior crown

Parameters

| | |
|--|---|
| Radioactivity | Active concentration of uranium-238 $\leq 1.0\text{Bq/g}$; |
| Density after partial crystallization | $2.3\text{-}2.6\text{g/cm}^3$ |
| Density after complete crystallization | $2.4\text{-}2.7\text{g/cm}^3$ |
| Biaxial bending strength | $\geq 400\text{MPa}$ |
| Fracture toughness | $\geq 1\text{MPa}\cdot\text{m}^{1/2}$ |
| Expansion coefficient | $10\text{-}11 \times 10^{-6}\text{K}^{-1}$ |
| Vickers hardness | $\geq 550\text{HV02}$ |
| Chemical solubility | $\leq 100\mu\text{g/cm}^2$ |



Regular shades



Special shades



Crytalization program

| Initial temperature (°C) | Dry time (Min) | Heating rate (°C/Min) | Keep the temp (°C) | Residence time (s) | Heating rate (°C/Min) | Keep the temp (°C) | Residence time (Min) | End temp (°C) | Vaccum I I 1 (°C) I 2 (°C) | Vaccum II II 1 (°C) II 2 (°C) |
|--------------------------|----------------|-----------------------|--------------------|--------------------|-----------------------|--------------------|----------------------|---------------|----------------------------|-------------------------------|
| 400 | 6 | 90 | 820 | 10 | 30 | 840 | 07:00 | 550 | 550 820 | 820 840 |

XTCERA Co-Cr soft metal blank

Physical Properties

| | | | |
|---------------------|-------------------------|----------------------|--|
| 0.2% yield strength | 500Mpa | Density | $7.9\pm 0.2\text{g/cm}^3$ |
| Tensile strength | $\geq 800\text{Mpa}$ | Corrosion resistance | $< 200\mu\text{g/cm}^2$ |
| Vickers hardness | 270 ± 27 | Liquidus temperature | $(1410\pm 50)\text{°C}$ |
| Solidus temperature | $(1350\pm 50)\text{°C}$ | (CTE) (25-500)°C | $(14.2\text{-}14.8) \times 10^{-6}\text{K}^{-1}$ |

Composition

| | |
|------------|-----------------|
| Cobalt | $66.0\pm 2.0\%$ |
| Chrome | $28.0\pm 2.0\%$ |
| Molybdenum | $5.0\pm 1.0\%$ |
| Silicium | $< 1.0\%$ |
| Manganese | $< 1.0\%$ |
| Iron | $< 0.8\%$ |
| Carbon | $< 0.8\%$ |
| Other | $< 2.0\%$ |



Description

XTCERA Co-Cr soft metal blank, a non-precious metal, is innovated based on many years of research and experience of our technicians and is going to revolutionize the traditional PFM manufacturing process.



XTCERA Co-Cr 3D printing powder



- ▶ Ultra-high powder utilization,
- ▶ Best powder particle size,
- ▶ Complete technical solution,
- ▶ Good biocompatibility, all-ceramic bonding strength.

| | | |
|--|--|---|
| Chemical Composition: Co: 60.5% Cr: 27% Mo: 5.5% W: 5% Si: 1.5% | | |
| Powder particle size: D10 \geq 12 μ m, D90 \leq 65 μ m, D50: 30 \pm 10 μ m | | |
| Proof Stress (Rp 0.2): \geq 800Mpa | Metal ceramic bonding properties: \geq 25Mpa | |
| Elongation: \geq 2% | Elastic Modulus: \geq 150Gpa | Corrosion Resistance: 200ug/cm ² |
| Density: 8.5 \pm 5%g/cm ³ | Vickers Hardness: \geq 450HV10 | CTE: 14.3 \pm 0.5 \times 10 ⁻⁶ K ⁻¹ |
| Solidus Temp: 1380 \pm 50°C | Liquidus Temp: 1430 \pm 50°C | Genotoxicity: Negative |
| Cytotoxicity: None | Oral mucosal irritation: None | Delayed hypersensitivity: None |
| Acute oral systemic toxicity: None | Subchronic systemic toxicity: None | |

Description

While taking into account the printing quality, it can effectively improve the tooth extraction rate and reduce the powder waste economically.

Through a large number of experiments to find the best powder size, reduce the phenomenon of gasification, so that the sintering roughness is reduced, the density is increased.

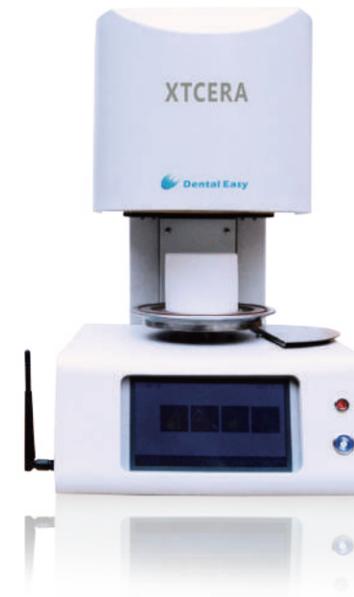
Complete training system, strong after-sales technical team, improve personalized customized machine solutions.

Strict implementation of YY/T-1702 medical standards, so that it has excellent biological compatibility and chemical stability.

Vibration density \geq 4.5g/cm³, with super physical characteristics, all-ceramic bonding force is strong, not easy to crack porcelain.

XTCERA Furnace

Porcelain furnace



Description

| | |
|------------------|---------------|
| Net weight (N.W) | 24kg |
| Machine size | 320X392X426mm |

- The highest sintering temperature is 1200°C
- Life of electric heating couple increased by more than 50%
- Accurate furnace temperature, suitable for all ambient temperatures
- 14 bit AD conversion, more accurate temperature, super clear crown bridge
- Automatic detection of all key parameters and intelligent fault judgment
- Industrial grade high quality parts selection
- Mobile Internet/Internet Interconnection (IoT)

Sintering furnace



Description

| | |
|------------------------|--------------------|
| Model | XT-S100 |
| Net weight (N.W) | 58kg |
| Machine size | 548X415X830mm |
| Sintering chamber size | ϕ 116 * 130mm |

- Mobile internet connection, auto fault diagnosis
- New ultrapure heating element, zirconia perfectly sintered
- 14 digits AD transition, more accurate temperature
- Industrial grade design, long-life, stable and reliable
- Full parameter detection, visible machine state
- Standard industrial antiknock touch screen
- Annular chamber, more uniform temperature, maximum temperature can reach to 1600°C
- Preset start time is available

XTCERA Milling Machine



| Name | 600 Milling Machine | 600S Milling Machine | 580DC Milling Machine | 500 Plus Milling Machine | D5 Milling Machine | 300 Milling Machine |
|-----------------------|--|---------------------------------------|-----------------------------------|-----------------------------------|--|--|
| Dimension | 1110X820X1820(mm) | 1230X820X1830(mm) | 950x750x1640(mm) | 630X730X700(mm) | 624X540X680(mm) | 730X720X620(mm) |
| Net weight | Approximately 850kg | Approximately 950kg | Approximately 360kg | Approximately 197kg | Approximately 138kg | Approximately 150kg |
| Input voltage | Single phase AC 220V | Single phase AC 220V | Single phase AC 220V | Single phase AC 220V | Single phase AC 220V | Single phase AC 220V |
| Spindle power | 2.7kw | 4kw | 1.2kw | 1.2kw | 0.5kw | 1.8kw |
| Axis quantity | 5 | 4 | 5 | 5 | 5 | 4 |
| Milling range | XYZ: 320/130/150mm A: 360° B: ±40° | XYZ: 360/240/150mm A: 360° | XYZ: 165/110/90mm A: ±30° B: 360° | XYZ: 110/160/80mm A: ±35° B: 360° | XYZ: 130/100/94mm A: 360°, B: ±30° | XYZ: 125/130/80mm A: 360° (±20° positioning processing) |
| Milling mode | Wet milling | Wet milling | Dry milling | Dry milling | Wet and dry milling | Wet (dry milling optional) |
| Max speed | 60,000 rpm | 40,000 rpm | 60,000 rpm | 60,000 rpm | 60,000 rpm | 60,000 rpm |
| Max feeding speed | XYZ: 6000mm/min | XYZ: 6000mm/min | XYZ: 6000 mm/min | XYZ: 6000 mm/min | XYZ: 6000 mm/min | XYZ: 6000 mm/min |
| Bur capacity | 16 | 8 | 10 | 8 | 10 | 6 |
| Bur changing | Automatic | Automatic | Automatic | Automatic | Automatic | Automatic |
| Spindle cooling | Water cooling | Water cooling | Water cooling | Water cooling | Air cooling | Water cooling |
| Disc changing | / | / | Automatic | / | / | / |
| Disc changer magazine | / | / | 12 | / | / | / |
| Materials | CoCr, Titanium, PMMA, Wax, Glass ceramics, Hybrid ceramics | Titanium, Titanium Alloy, Co-Cr Alloy | Glass ceramic, PMMA, Resin | Zirconia, Wax, PMMA, Soft-metal | Zirconia, Glass ceramic, Resin, Premill abutment | Premill abutment, glass ceramic, Resin, PMMA, Zirconia |
| Processing time | Crown: 30mins, Abutment: 35-50mins, Bar: 2hrs | Crown: 25mins, Framework: 2-4hrs | Glass ceramic: 25mins | Zirconia: 8mins, Wax: 3mins | Zirconia: 8mins, Glass ceramic: 20mins, Premill abutment: 25mins | Glass Ceramic: 17mins, PMMA: 12mins, Premill abutment: 25mins, Resin: 15mins |

XTCERA Milling Burs

Zirconia burs



| Size | T1 | T1(long) | T2 | T2(long) | T3 | T4(endmill) |
|-----------------------|-----|----------|-----|----------|---------|-------------|
| Cut-edge Diameter(mm) | 2 | 2 | 1 | 1 | 0.6/0.3 | 1 |
| Cut-edge Length(mm) | 6 | 6 | 4 | 4 | 2 | 3 |
| Effective Length(mm) | 16 | 22 | 16 | 20 | 8 | 16 |
| Shank Size(mm) | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| Whole Length(mm) | 50 | 50 | 50 | 50 | 50 | 50 |

Glass ceramic burs



| Size | T1 | T2 | T3 |
|-----------------------|-----|----|---------|
| Cut-edge Diameter(mm) | 2.5 | 1 | 0.6/0.3 |
| Effective Length(mm) | 16 | 10 | 10 |
| Shank Size(mm) | 3 | 3 | 3 |
| Whole Length(mm) | 45 | 45 | 45 |

Metal burs



| Size | T1 | T2 | T3 |
|-----------------------|-----|----|-----|
| Cut-edge Diameter(mm) | 3 | 2 | 1.5 |
| Cut-edge Length(mm) | 4.5 | 3 | 2.5 |
| Effective Length(mm) | 14 | 12 | 8 |
| Shank Size(mm) | 4 | 4 | 4 |
| Whole Length(mm) | 50 | 50 | 50 |

PMMA burs



| Size | T1 | T2 | T3 | T4(endmill) |
|-----------------------|-----|-----|-----|-------------|
| Cut-edge Diameter(mm) | 2 | 1 | 0.6 | 0.6 |
| Cut-edge Length(mm) | 4 | 4 | 2 | 2 |
| Effective Length(mm) | 16 | 16 | 8 | 8 |
| Shank Size(mm) | 3/4 | 3/4 | 3/4 | 3/4 |
| Whole Length(mm) | 50 | 50 | 50 | 50 |

Customer Show

