



CORiTEC 650i Series

FUTURE-ORIENTED
Technology

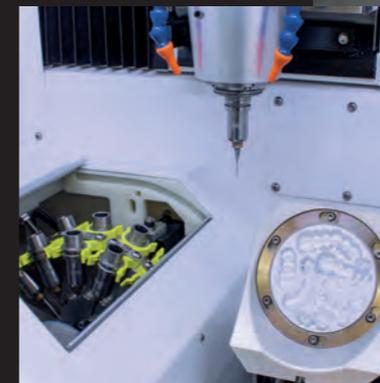
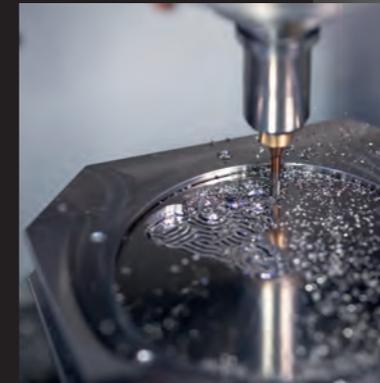


CORiTEC 650i/650i Loader

WITH FUTURE-ORIENTED TECHNOLOGY

We developed the CORiTEC 650i and CORiTEC 650i Loader machine systems for the area of PREMIUM machines and PREMIUM requirements. The systems are offered with very attractive pricing and are equipped with high-quality industrial milling technologies, such as granite structure, linear drives in the linear axes, torque motors in the rotary axes, as well as digital absolute length measuring systems, and powerful main spindles. The machine concept impresses with its precise, vibration-free and dynamic motion sequences in the demanding and complex metal working processes. All other relevant materials can also be milled or ground with high quality using this machine system.

The CORiTEC 650i loader includes a fully integrated automatic 16-fold blank changer. This enables you to operate the machine system at full capacity around the clock without supervision, while maintaining consistent high precision. Thus, the machine system is ideally suited for large labs and milling centers where these high-quality standards and large quantities are at the forefront.



- WET
- DRY
- 5 AX
- 6 mm
32x
- Temperature icon
- Touchscreen icon
- Mobile device icon
- Blank icon
- 16x
- ION

CORiTEC 650i



WET AND DRY
PROCESSING

3.2 KW HIGH-
FREQUENCY SPINDLE
WITH HSK-25 TOOL HOLDER

LEADING LINEAR AND
TORQUE MOTOR TECHNOLOGY

POWERFUL PERFORMANCE
high-resolution absolute-measuring
systems in all axes

ERGONOMIC
HANDLING
simple touchscreen
operating

MASSIVE AXLE
STRUCTURE OF
GRANITE NATURE

32-FOLD
TOOLCHANGER

HIGHLIGHTS

- Solid axis construction made of polished natural granite for 5-axis simultaneous machining in high dynamics for high-precision milling results
- Absolute, high-resolution measuring systems in all axes (0.5 µm)
- High-frequency spindle up to 50.000 rpm and 3.2 kW power, with HSK 25 tool holder
- High precision due to integrated temperature compensation
- Optional HighFlow cooling/filter system with coolant treatment
- Optional coolant suction system
- Optimized tool and blank changer
- Hybrid machining without additional measurement

PMMA	WAX	Standard	PreMilled Abutment	Dentures	Crown, Bridge	Inlay, Onlay, Veneer	Hybrid Abutment	Splint
Zr	COMPOSITE							
PEEK	PreFab Abutments	C-Clamp	Block	zero point clamping system	Full Denture	Model	Surgical guide	Model casting
Glass-ceramics	Ti							
CoCr					Bridge	Telescopic technology	Abutment	Hybrid machining

CORiTEC 650i Loader



HIGHLIGHTS

- Fully integrated automatic 16-fold blank changer
- Production around the clock
- Hybrid machining (Precise remilling of LPBF work)
- Ideally suited for large labs and milling centers
- Absolute, high-resolution measuring systems in all axes (0.5 µm)
- High-frequency spindle up to 50.000 rpm and 3.2 kW power with HSK 25 tool holder
- High precision due to integrated temperature compensation
- Optional HighFlow cooling/filter system with coolant treatment
- Optional coolant suction system
- Optimized tool and blank changer
- Hybrid machining without additional measurement

PMMA	WAX	Standard	PreMilled Abutment	Dentures	Crown, Bridge	Inlay, Onlay, Veneer	Hybrid Abutment	Splint
Zr	COMPOSITE							
PEEK	PreFab Abutments				Full Denture	Model	Surgical guide	Model casting
Glass-ceramics	Ti	C-Clamp	Block	zero point clamping system				
CoCr					Bridge	Telescopic technology	Abutment	Hybrid machining

Applications & holder

C-CLAMP

- Enables 5-axis machining up to 90 degrees axis adjustment
- Extends the technical possibilities of your milling machine
- End face machining



MANUFACTURE OF DENTAL PROSTHESES

- Dentsply Sirona Dentures



PREFABRICATED ABUTMENTS

- Short production times
- Production of abutments in very simple processes
- High accuracy of fit due to prefabricated implant interface

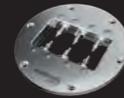
NT-Preform® Abutment
(nt-trading)



PreFace® Abutment
(Medentika)



MED-Preform® Abutment
(medentis)



DESS
Abutmentholder



ELOS premilled
Abutment System



THERAPEUTIC SPLINTS

- Bite splints, bleaching splints
- Snoring splints, aligners
- Simple and high-quality implementation in CAD/CAM processes



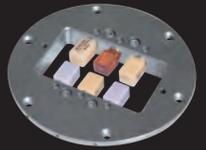
HYBRID MACHINING - SINTERING AND MILLING

- Milling post-processing of finished restorations using the LPBF method
- High precision milling combined with low-cost LPBF process
- Compatible with most LPBF systems



GRINDING OF CAD/CAM BLOCKS

- New 6-fold adapter enables effective production
- Exchangeable strips for different adapter systems
- Crowns, onlays, inlays, veneers, bridge frameworks etc.



IMPLANT-SUPPORTED BRIDGES AND BARS / ONE-PIECE ABUTMENTS

- Highest fitting accuracy due to new CAM technologies (ReFit)
- Stress-free fit even with larger spans
- Easy production due to high degree of automation with coordinated CAM software



BIOHPP ELEGANCE PREFABS

- Individual hybrid abutment on PEEK basis
- BioHPP for permanent dentures, free of metal, oxide and monomer
- Homogeneous combination of titanium and BioHPP



MILLING OF MODEL CASTS

- Production in burnout materials, PEEK or directly in CoCr
- Allergy-free and lightweight model casting when using PEEK
- Cost-efficient



MILLED IMPLANT MODELS

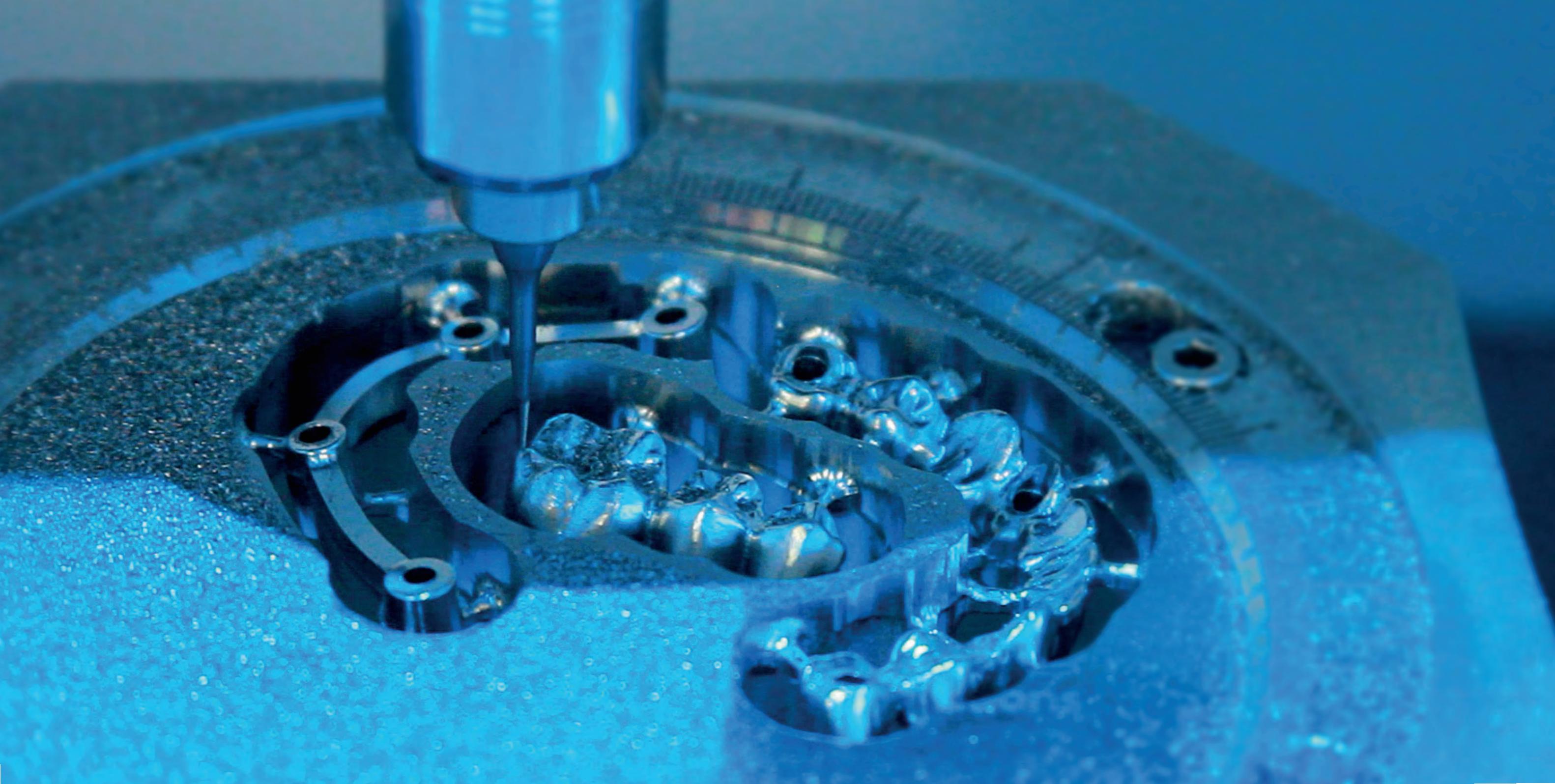
- DIM (Digital Implant Model) from nt-trading
- Precisely positionable
- 2-part implant analog



MODEL MILLING

- Model fabrication in CAD/CAM process
- High reproducibility and precision
- Model fabrication with digital impression by intraoral scanner





Cutters & grinders | 6 mm shaft

CUSTOMIZED SOLUTIONS OPTIMIZED FOR THE CORTEC 650i SERIES

T1/T6 - 3.0 | 6.0 mm
radius milling tool short (l = 15 mm)

T1	Ti
T6	CoCr

3.0 mm Ø 6 mm

up to 15 mm

Blades

Art.-No. 526029 3006

T5/T10 - 1.5 | 6.0 mm
shaft milling tool short (l = 12 mm, four blades)

T5	Ti
T10	CoCr

1.5 mm Ø 6 mm

up to 15 mm

Blades

Art.-No. 526002 1506

T12/T14 - 1.0 | 6.0 mm
radius milling tool

T12	PMMA
	WAX
T14	Zr

1.0 mm Ø 6 mm

up to 25 mm

Blades

Art.-No. 526019 1006

T17 - 1.5 | 6.0 mm
shaft milling tool (l = 15 mm)

	PMMA
T17	WAX
	Zr

1.5 mm Ø 6 mm

up to 25 mm

Blades

Art.-No. 526001 1506

T2/T7 - 2.0 | 6.0 mm
radius milling tool short (l = 12 mm)

T2	Ti
T7	CoCr

2.0 mm Ø 6 mm

up to 15 mm

Blades

Art.-No. 526029 2006

T11 - 2.5 | 6.0 mm
radius milling tool (single blade, slide coated)

	PMMA
T11	WAX
	PEEK

2.5 mm Ø 6 mm

up to 25 mm

Blade

Art.-No. 530004 2506

T13/T40/T50 - 2.5 | 6.0 mm
radius milling tool (diamond coated)

T13	Zr
T40	SINT
T50	COMP

2.5 mm Ø 6 mm

up to 25 mm

Blades

Art.-No. 526013 2506

T18 - 0.5 | 6.0 mm
radius milling tool (l = 4 mm)

T18	UNIVERSAL*
-----	------------

0.5 mm Ø 6 mm

up to 15 mm

Blades

Art.-No. 526026 0506

T14/T41/T51 - 1.0 | 6.0 mm
radius milling tool (diamond coated)

T14	Zr
T41	SINT
T51	COMP

1.0 mm Ø 6 mm

up to 25 mm

Blades

Art.-No. 526013 1006

T19 - 0.5 | 6.0 mm
shaft milling tool (l = 4 mm)

T19	UNIVERSAL*
-----	------------

0.5 mm Ø 6 mm

up to 15 mm

Blades

Art.-No. 526001 0506

T3/T8 - 1.5 | 6.0 mm
radius milling tool short (l = 12 mm)

T3	Ti
T8	CoCr

1.5 mm Ø 6 mm

up to 15 mm

Blades

Art.-No. 526029 1506

T11/T13 - 2.5 | 6.0 mm
radius milling tool

T11	PMMA
	WAX
T13	Zr

2.5 mm Ø 6 mm

up to 25 mm

Blades

Art.-No. 526019 2506

T15/T42/T52 - 0.6 | 6.0 mm
radius milling tool (conical)

	PMMA
T15	WAX
	Zr
T42	SINT
T52	COMP

0.6 mm Ø 6 mm

up to 25 mm

Blades

Art.-No. 526019 0606

T20 - 0.6 | 6.0 mm
radius milling tool (conical)

T20	Ti
	CoCr

0.6 mm Ø 6 mm

up to 15 mm

Blades

Art.-No. 526003 0606

T4/T9 - 1.0 | 6.0 mm
radius milling tool short (l = 9 mm)

T4	Ti
T9	CoCr

1.0 mm Ø 6 mm

up to 15 mm

Blades

Art.-No. 526029 1006

T12 - 1.0 | 6.0 mm
radius milling tool (single blade, slide coated)

	PMMA
T12	WAX
	PEEK

1.0 mm Ø 6 mm

up to 25 mm

Blade

Art.-No. 530004 1006

T16 - 1.5 | 6.0 mm
radius milling tool long (l = 15 mm)

	PMMA
T16	WAX
	PEEK

1.5 mm Ø 6 mm

up to 25 mm

Blades

Art.-No. 526019 1506

T21 - 2.5 | 6.0 mm
radius grinding tool (diamond)

T21	glass ceramics
-----	----------------

2.5 mm Ø 6 mm

up to 15 mm

Blades

Art.-No. 526005 2506

* Applications for processing glass ceramics not possible

Cutters & grinders | 6 mm shaft

CUSTOMIZED SOLUTIONS OPTIMIZED FOR THE CORTEC 650i SERIES

T22 - 1.0 | 6.0 mm
radius grinding tool (diamond)

glass ceramics

1.0 mm Ø 6 mm

Art.-No. 526005 1006

T27 - 2.0 | 6.0 mm
radius milling tool long (l = 16 mm)

Ti
CoCr

2.0 mm Ø 6 mm

16 - 20 mm
Blades

Art.-No. 526030 2006

T32 - 0.6 | 6.0 mm
radius milling tool long (l = 12 mm)

PMMA
WAX
Zr

0.6 mm Ø 6 mm

up to 25 mm
Blades

Art.-No. 526012 0606

T37 - 2.0 | 6.0 mm
radius milling tool long (l = 20 mm)

PMMA
WAX
Zr

1.5 mm Ø 6 mm

up to 30 mm
Blades

Art.-No. 530035 1506

T23 - 0.6 | 6.0 mm
radius grinding tool (conical, diamond)

glass ceramics

0.6 mm Ø 6 mm

Art.-No. 526005 0606

T28 - 1.5 | 6.0 mm
radius milling tool long (l = 15 mm)

Ti
CoCr

1.5 mm Ø 6 mm

16 - 20 mm
Blades

Art.-No. 526030 1506

T33/ T43/ T53 - 0.3 | 6.0 mm
radius milling tool (conical)

PMMA
WAX
Zr
SINT
COMP

0.3 mm Ø 6 mm

up to 25 mm
Blades

Art.-No. 526019 0306

T60 - 3.0 | 6.0 mm
highspeed milling tool short (l=15 mm)

Ti

3.0 mm Ø 6 mm

up to 15 mm
Blades

Art.-No. 530031 3006

T24 - 1.5 | 6.0 mm
radius grinding tool (diamond)

glass ceramics

1.5 mm Ø 6 mm

Art.-No. 526005 1506

T28 - 1.5 | 6.0 mm
radius milling tool long (l = 15 mm)

Ti
CoCr

1.5 mm Ø 6 mm

16 - 20 mm
Blades

Art.-No. 526030 1506

T34 - 3.0 | 6.0 mm
radius milling tool long (l = 27 mm)

PMMA
WAX

3.0 mm Ø 6 mm

up to 30 mm
Blades

Art.-No. 526012 3006

T61 - 3.0 | 6.0 mm
Quattro speed milling tool (l = 15 mm)

CoCr

3.0 mm Ø 6 mm

up to 15 mm
Blades

Art.-No. 526025 3006

T26 - 3.0 | 6.0 mm
radius milling tool long (l = 20 mm)

Ti
CoCr

3.0 mm Ø 6 mm

16 - 20 mm
Blades

Art.-No. 526030 3006

T29 - 1.0 | 6.0 mm
radius milling tool long (l = 11 mm)

Ti
CoCr

1.0 mm Ø 6 mm

16 - 20 mm
Blades

Art.-No. 526030 1006

T35 - 2.0 | 6.0 mm
radius milling tool long (l = 20 mm)

PMMA
WAX

2.0 mm Ø 6 mm

up to 30 mm
Blades

Art.-No. 526012 2006

T62 - 2.0 | 6.0 mm
torus milling tool (r = 0,2 mm, l = 16 mm, four blades)

Ti
CoCr

2.0 mm Ø 6 mm

up to 15 mm
Blades

Art.-No. 526025 2006

Cutters & grinders | 6 mm shaft

CUSTOMIZED SOLUTIONS OPTIMIZED FOR THE CORTEC 650i SERIES

T64 - 1.5 | 6.0 mm
torus milling tool (r = 0,08 mm, l = 15 mm, two blades)



Art.-No. 526028 1506

T80 - 2.5 | 6.0 mm
drilling tool (l = 22 mm)



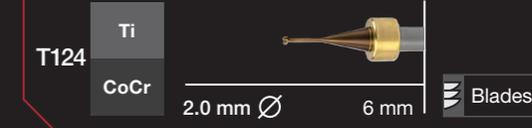
Art.-No. 526023 2506

T98 - 2.5 | 6.0 mm
shaft milling tool (l = 20 mm, three blades)



Art.-No. 526024 2506

T124 - Ø 2.0 x 1.0 | 6.0 mm
T-tool 90° (d = 1.0 mm, l = 9.5 mm, three blades)



Art.-No. 530040 2006

T67 - 2.0 | 6.0 mm
shaft milling tool short (l = 7 mm, four blades)



Art.-No. 526002 2006

T81 - 1.5 | 6.0 mm
drilling tool (l = 18 mm)



Art.-No. 526023 1506

T121 - Ø 1.6 x 0.7 | 6.0 mm
T-tool 90° (d = 0.65 mm, l = 7.5 mm, three blades)



Art.-No. 530040 1606

T68 - 1.5 | 6.0 mm
shaft milling tool long (l = 15 mm, four blades)



Art.-No. 526021 1506

T82 - 2.65 | 6.0 mm
drilling tool (l = 21 mm)



Art.-No. 526031 26506

T122 - Ø 1.7 x 0.7 | 6.0 mm
T-tool 90° (d = 0.65 mm, l = 8.0 mm, three blades)



Art.-No. 530040 1706

T69 - 1.5 | 6.0 mm
shaft milling tool (l = 7 mm, four blades)



Art.-No. 530032 1506

T83 - 2.25 | 6.0 mm
drilling tool (l = 21 mm)

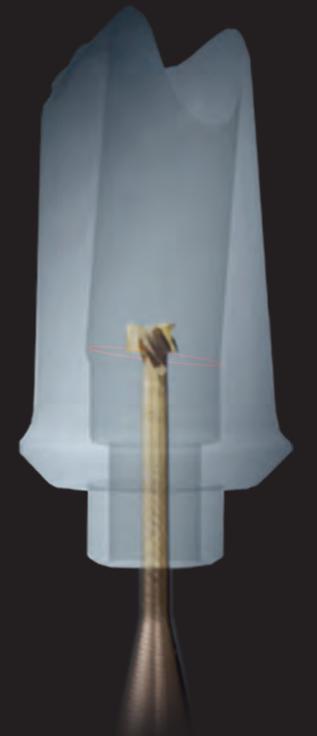


Art.-No. 526032 22506

T123 - Ø 1.8 x 1.0 | 6.0 mm
T-tool 90° (d = 0.9 mm, l = 7.1 mm, three blades)



Art.-No. 530040 1806



Materials

priti® MULTIDISC (ZIRCONIUM DIOXIDE)

High-end zirconium dioxide for the highest mechanical and aesthetic demands. Indications for use include up to 16-unit bridges, limited to a maximum of 3-unit bridges for High Translucent.

A large selection of colors and heights is available.



	Translucency	Strength
Multi Translucent PLUS	49-45 %	800 – 1150 MPa
Multi Translucent	49-40 %	800 – 1150 MPa
High Translucent	49 %	> 650 MPa
Extra Translucent	45 %	> 1150 MPa
Translucent	40 %	> 1150 MPa
Opaque	35 %	> 1150 MPa

CORTEC SPLINT COMFORT POLYMERS

Extremely comfortable and biocompatible material for the manufacturing of therapeutic splints such as occlusal or stabilization splints. Becomes more flexible at mouth temperature for maximum wearing comfort.

Available in 16 mm and 20 mm.



CORTEC SPLINT BASIC POLYMERS

Crystal-clear material for the manufacturing of therapeutic splints and drilling templates.

Available in 16 mm and 20 mm.



CORTEC TEMP PMMA DISC

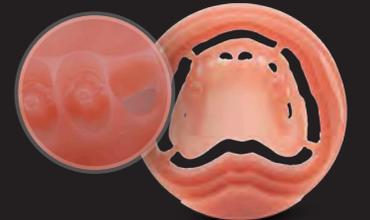
An excellently processable material suitable for long-term provisionals with a wear duration of up to three years, including intrinsic color gradients.

Available in 8 Vita colors in 16 mm and 20 mm.



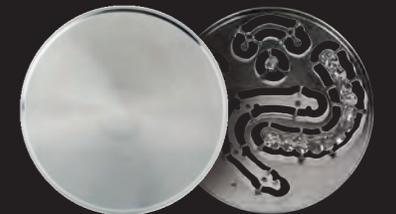
CORTEC GUM PMMA DISC

For gingiva replacement, available in 25 mm.



CORTEC TITAN GRADE 5 DISC

CORTEC Titan Grade 5 milling blanks made of titanium alloys are particularly suitable for the production of dental implants, bridge work, and combination work. This material is characterized by excellent millability and very good biocompatibility.



TO priti®MULTIDISC & CORTEC MATERIALS



MAX PERFORMANCE
for your milling centre

Scanner COMPATIBLE WITH **exocad**

CORiTEC i3Dscan eco

- All-round carefree package for newcomers or small laboratories
- Simple, fast, low-priced
- Very compact design



CORiTEC i3Dscan color

- Automatic object guidance into the measuring field
- Modern touch-operation design
- The 180-degree opening offers a large working area



CORiTEC i3Dscan color HR

- Enormously high scanning efficiency and precision (4 µm)
- Color Texture scan
- Blue-Light LED & High resolution camera (2.8 MP)
- All modules included in the scope of delivery

CAM Software

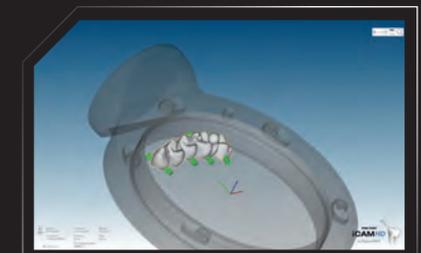
CORiTEC iCAM V5 smart

- All strategies optimized for 5-axis simultaneous machining
- Automatic exchange of implant connections (ReFit option)
- No annual license fees
- Fully automatic and easy operation with “Wizard Workflow“



CORiTEC iCAM HD

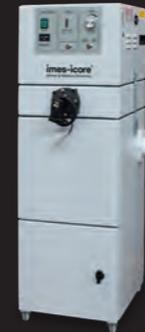
- hyperDENT based CAM software
- Flexible payment model (purchase or subscription model)



Suction systems

iVAC PRO⁺

The industrial extraction system with brushless motor, volume flow of 280 m³/hr, adjustable capacity, filter system with Teflon filter cartridge and large dust drawer, automatic compressed air self-cleaning is suitable for all dental milling machines from imes-icore®.



iVAC PRO ⁺	
Volume flow	280 m ³ /hr
Output	1200 W
Filter system	Teflon filter cartridge, automatic cleaning feature
Filter volume	15 liters/56.78 gpm (dust drawer)
Width x depth x height	13.8 x 13.8 x 39.4 inch / 350 x 350 x 1000 mm
Supply voltage	115 V/230 V
Special features	compressed air self-cleaning system

iVAC silent PRO

The iVAC silent PRO convinces with its compact design with high-quality technology at an affordable price. Equipped with Teflon filter cartridge with automatic cleaning and dust drawer with 8 liter volume. With a volume flow of 240m³/hour suitable for the milling machines COR TEC one, 150i, 250i and 350i. The iVAC silent PRO fits into the imes-icore T1 and T2 machine tables.



iVAC silent PRO	
Volume flow	240 m ³ /hr
Output	1610 watt
Filter system	Teflon filter cartridge, automatic cleaning feature
Filter volume	8 liters / 30.28 gpm
Width x depth x height	10.6 x 21.2 x 21.1 inch / 270 x 540 x 535 mm
Supply voltage	115 V - 230 V

Sintering Furnaces

iSINT eco

The iSINT eco offers high-quality technology as well as suitable accessories for high demands at a fair price. Compact and with a small footprint, the iSINT eco sintering oven still has sufficient capacity for a sintering bowl Ø 100 mm for approx. 25 units. The door stop can be mounted right and left.



iSINT PRO

A larger sintering capacity of up to 80 single crowns is offered by the new iSINT PRO. With a heating system of four high-quality molybdenum disilicide (MoSi₂) heating elements, you can choose between conventional long-term sintering or SPEED sintering at a rate of up to 99 °C/min/ 210.20°F/min. The iSINT PRO is operated with a simple and convenient program control. The programs are indicated on a 4-line LCD display. A timer function for overnight sintering or the use of pre-drying programs for shaded zirconium restorations offer further options. In addition, three service programs are available for easy maintenance of the sinter furnace.



	iSINT eco	iSINT PRO
Number of heating elements	4	4
Display	7-segment	4-line LCD
Number of program memories	9	30
Combustion chamber capacity	1 x 100	2 x 120
Max. heating rate	30 °C/min / 86 °F/min	99 °C/min / 210.20 °F/min
Power in W	1300	3200
Lift function	No	Yes
Speedsintering	No	Yes

CORiTEC 650i

IN THE HYBRID MACHINING PROCESS!

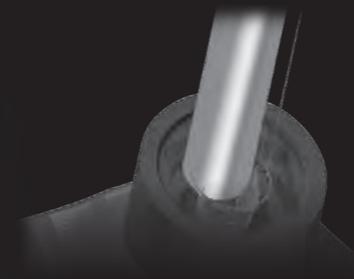


Special solutions Hybrid machining

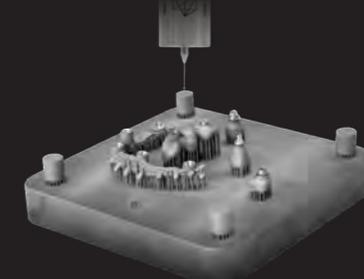
CORTEC 650i FOR LPBF FINISH MACHINING

The high-precision CORTEC 650i is the perfect milling system for the post-processing of 3D printed jobs using the LPBF technology. The process, developed in collaboration with technology partners, includes the complete process chain from design and 3D printing to remilling and polishing. Crowns, bridges and even highly complex frame works can be manufactured in a costoptimized way using the additive manufacturing. The interfaces are processed to a perfect fit and surface quality in the subsequent milling process.

The subtractive post-processing procedure is implemented in a special workflow and using integrated 3D-Measurement technology inside the CORTEC 650i. Optimized holders with a proved zero-point clamping system are used to hold the building plates in the machine. The orientation and position of plates is realized by defined geometries and 3D measurement functions. In combination with the CORTEC 650i, this process can basically be applied to any LPBF system and to various CAM Systems.



Adapted
CAM strategies



Precise
3D-Measurement



Milling results
with high surface quality

Position shifts and rotations are detected by 3D measurement using specified reference bodies. The calculation of correction values is performed in the background and then transmitted to the CAM software.



Compatible with among others the following LPBF installations:

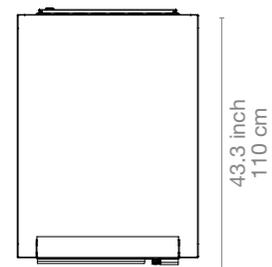
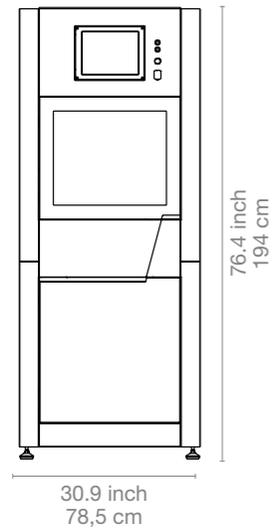


Compatible with among others the following CAM systems:

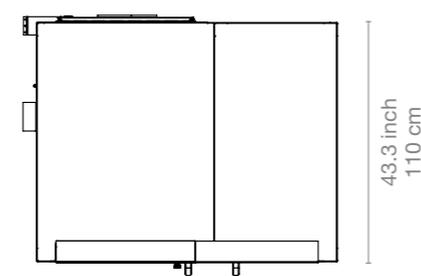
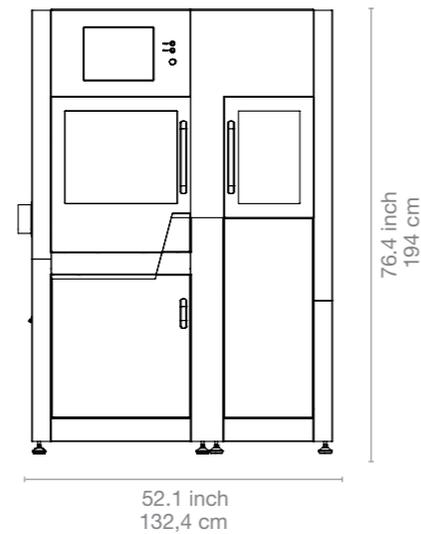


Dimensions

CORiTEC 650i



CORiTEC 650i Loader



In numbers

CORiTEC 650i

CORiTEC 650i Loader

Mechanics / electronics		
Number of axes and operation type	5 axes, simultaneous machining	5 axes, simultaneous machining
Rotation angle	A-axis 360°, B-axis 130°	A-axis 360°, B-axis 130°
Spindle / power	High-frequency spindle / 3.2 kW	High-frequency spindle / 3.2 kW
Spindle cooling	Water cooled	Water cooled
Maximum spindle speed	50.000 rpm	50.000 rpm
Tools	HSK 25	HSK 25
Tool changer	32-fold	32-fold
Tool length control	≤ 0.002 mm precision	≤ 0.002 mm precision
Blank changer	-	Up to 16 blanks
Integrated computer hardware	Windows based	Windows based
Monitor	Integrated 15" touch screen	Integrated 15" touch screen
Illumination	3 LED status colors	3 LED status colors
Software	Remote DENTAL 3.0	Remote DENTAL 3.0
Air pressure	6-9 bar / 87-130 PSI constantly supply, 150 liters/min / 567.75 gpm/min	6-9 bar / 87-130 PSI constantly supply, 160 liters/min / 605.60 gpm/min
Cooling liquid	19 liter / 71.92 gpm integrated	19 liter / 71.92 gpm integrated
Connecting requirements		
Weight	625 kg / 1378.13 lbs	930 kg / 2050.65 lbs
Width x depth x height	30.9 x 43.3 x 76.4 inch 785 x 1100 x 1940 mm	52.1 x 43.3 x 76.4 inch 1324 x 1100 x 1940 mm
Line voltage / frequency	400 V - 3 stages / 50/60 Hz	400 V - 3 stages / 50/60 Hz

Sales and support partner worldwide



Represented for you in over 100 countries.

imes-icore® GmbH has been a leading manufacturer and technology partner since 2003 in the field of dental CAD/CAM systems and solutions.

With its unique range of dental milling and grinding systems imes-icore® offers a perfect selection for all individual requirements of dental laboratories, milling centres and dental practices of all sizes.

Our Open-System product philosophy makes it possible to easily integrate our milling machines into your existing workflow and to integrate them with your open scanners and your CAD/CAM software. We are open for your material selection.

imes-icore® GmbH

Fon +49 (0) 66 72/898 228

Fax +49 (0) 66 72/898 222

dental@imes-icore.com