



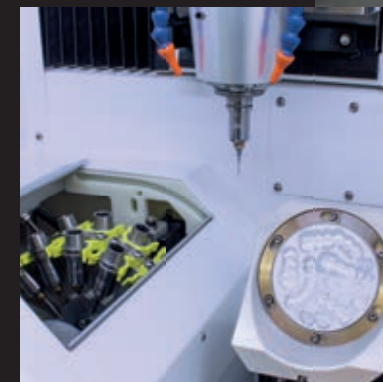
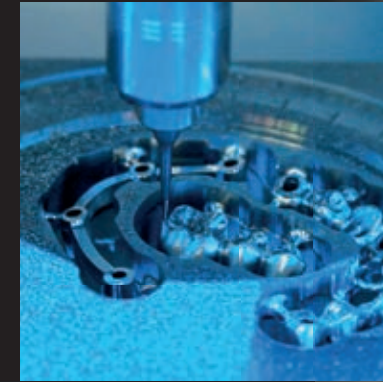
# CORiTEC 650i

# 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

16x

ION

16x

ION

16x

ION

16x

ION

16x

ION

16x

ION




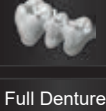


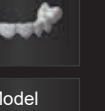

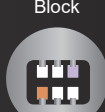

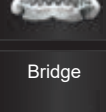
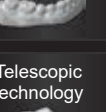
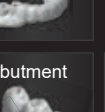





ION

# CORiTEC 650i

## HIGHLIGHTS

- Solid axle 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



PMMA	WAX	Standard	PreMilled Abutment	Dentures	Crown, Bridge	Inlay, Onlay Veneer	Hybrid Abutment	Splint
Zr	COMPOSITE							
PEEK	SINT	C-Clamp	Block	zero-point clamping system	Full Denture	Model	Drilling template	Model casting
Glass-ceramics	PreFab Abutments							
CoCr	Ti				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 SLM 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

32-FOLD  
TOOLCHANGER

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 GRANITE  
AXLE STRUCTURE

FULLY INTEGRATED  
AUTOMATIC 16-FOLD  
BLANK CHANGER

AROUND THE CLOCK  
full capacity

Water-cooled high-end spindle

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

# Applications & holder

## C-CLAMP

- enables 5-axis machining up to 90 degrees axis adjustment
- extension of the technical possibilities of your milling machine
- end face machining



## MANUFACTURE OF DENTAL PROSTHESES

- Baltic Denture from Merz Dental
- Dentsply Sirona Dentures



## PREFABRICATED ABUTMENTS

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

DESS  
Abutmentholder



NT-Preform® Abutment  
(nt-trading)



PreFace® Abutment  
(Medentika)



DDSoldiConnect®  
(Dental Direkt)



## THERAPEUTIC SPLINTS

- Bite splints, bleaching splints
- snoring splints, Aligners
- simple and high-quality implementation in CAD/CAM processes



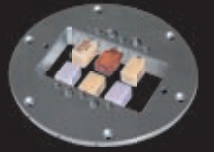
## HYBRID MACHINING - SINTERING AND MILLING

- milling post-processing of finished restorations using the SLM method
- high precision milling combined with low-cost SLM process
- compatible with most SLM 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 combustible 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 BAUMANN SYSTEM

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



**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. 526026 3006

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

PMMA
WAX
PEEK

T11

2,5 mm Ø 6 mm

up to 25 mm

Blade

Art.-No. 526004 2506c

**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

**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. 526026 2006

**T11/T13 - 2.5 | 6.0 mm**  
radius milling tool

PMMA
WAX
Zr

T11  
T13

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
WAX
Zr
SINT
COMP

T15  
T42  
T52

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

**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. 526026 1506

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

PMMA
WAX
PEEK

T12

1,0 mm Ø 6 mm

up to 25 mm

Blade

Art.-No. 526004 1006c

**T16/T28 - 1.5 | 6.0 mm**  
radius milling tool long (l = 15 mm)

PMMA
WAX
Zr
Ti
CoCr

T16  
T28

1,5 mm Ø 6 mm

up to 25 mm

Blades

Art.-No. 526027 1506

**T21 - 2.5 | 6.0 mm**  
radius milling tool (diamond)

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

2,5 mm Ø 6 mm

up to 25 mm

Blades

Art.-No. 526005 2506

**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. 526026 1006

**T12/T14 - 1.0 | 6.0 mm**  
radius milling tool

PMMA
WAX
Zr

T12  
T14

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
WAX
Zr

T17

1,5 mm Ø 6 mm

up to 25 mm

Blades

Art.-No. 526001 1506

**T22 - 1.0 | 6.0 mm**  
radius milling tool (diamond)

T22	glass ceramics
-----	----------------

1,0 mm Ø 6 mm

up to 25 mm

Blades

Art.-No. 526005 1006

**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

**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

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

T23	glass ceramics
-----	----------------

0,6 mm Ø 6 mm

up to 25 mm

Blades

Art.-No. 526005 0606

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

Ti		16 - 20 mm	Blades
CoCr			

3,0 mm Ø 6 mm

Art.-No. 526027 3006

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

PMMA		up to 25 mm	Blades
WAX			
Zr			
SINT			

T43  
T53 COMP 0,3 mm Ø 6 mm

Art.-No. 526019 0306

**T63 - 1.5 I 6.0 mm**  
torus milling tool (r = 0,08 mm, l = 7 mm, two blades)

Ti		up to 15 mm	Blades
CoCr			

1,5 mm Ø 6 mm

Art.-No. 526025 1506

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

Ti		16 - 20 mm	Blades
CoCr			

2,0 mm Ø 6 mm

Art.-No. 526027 2006

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

PMMA		up to 30 mm	Blades
WAX			

3,0 mm Ø 6 mm

Art.-No. 526012 3006

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

Ti		up to 15 mm	Blades
CoCr			

1,5 mm Ø 6 mm

Art.-No. 526028 1506

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

Ti		16 - 20 mm	Blades
CoCr			

1,0 mm Ø 6 mm

Art.-No. 526027 1006

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

PMMA		up to 30 mm	Blades
WAX			

2,0 mm Ø 6 mm

Art.-No. 526012 2006

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

Ti		up to 15 mm	Blades
CoCr			

2,0 mm Ø 6 mm

Art.-No. 526002 2006

**T30 - 4.0 I 6.0 mm**  
shaft milling tool long (l = 32 mm, single blade, slide coated)

PMMA		up to 30 mm	Blade
WAX			
PEEK			

4,0 mm Ø 6 mm

Art.-No. 526012 4006

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

Ti		up to 15 mm	Blades
CoCr			

3,0 mm Ø 6 mm

Art.-No. 526025 3006

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

UNIVERSAL		up to 20 mm	Blades

1,5 mm Ø 6 mm

Art.-No. 526021 1506

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

Ti		up to 20 mm	Drill
CoCr			

1,5 mm Ø 6 mm

Art.-No. 526023 1506

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

PMMA		up to 25 mm	Blades
WAX			
Zr			

0,6 mm Ø 6 mm

Art.-No. 526012 0606

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

Ti		up to 15 mm	Blades
CoCr			

2,0 mm Ø 6 mm

Art.-No. 526025 2006

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

Ti		up to 20 mm	Drill
CoCr			

2,5 mm Ø 6 mm

Art.-No. 526023 2506

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

CALIBR.		up to 20 mm	Blades

2,5 mm Ø 6 mm

Art.-No. 526024 2506



# CORiTEC Materials

## CORiTEC ZR (ZIRCONIUM DIOXIDE)

Covers all indications for dental restorations of up to 16 units.  
Ideally suited for monolithic restorations.

- highly translucent zirconium dioxide for natural esthetics
- increased strength compared to lithium dioxide

**Zr ht+ Disc**  
(highly translucent)



**Zr Disc**



**Zr transpa Disc**



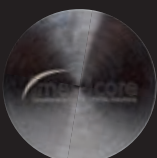
**Zr transpa Disc**  
(pre-colored translucent)



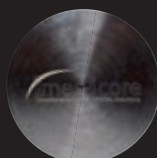
## CORiTEC ZR (ZIRCONIUM DIOXIDE)

- single crowns
- single cap
- bridges up to 16 units, full bridges, and PFM technology
- good mechanical properties
- good milling properties
- corrosion resistant

**CoCr Disc**  
(non-precious alloy)



**CoCr Mo Disc**  
(non-precious alloy)



**Ti Disc**  
(Grade 2, Grade 4, Grade 5)



## CORiTEC MODEL DISC IVORY

- Blank for the production of dental models
- low-cost material
- also suitable for test purposes or for milling calibration bodies



## JUVORA PEEK (POLYETHERETHERKETONE)

- clamp-retained constructions
- Juvora PEEK in its basic colour (brown-beige)
- highest biological compatibility



## CORiTEC WAX DISC (WAX, GRAY)

CORiTEC Wax Disc is not suitable for intraoral application.  
After milling, the material can be used as lost wax.  
Moulds can be used in casting technology.  
It can be milled easily and combusted residue-free.



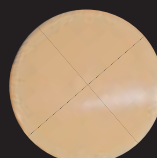
## CORiTEC PMMA (POLYMETHYL METHACRYLATE)

- bite guards, therapeutic splints, drilling templates, bite regulators
- very good mechanical properties
- aesthetic shade effect due to high translucency
- good milling behaviour

**PMMA Splint Disc**



**PMMA Disc**



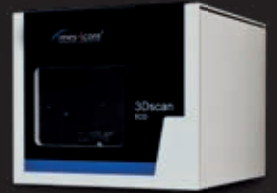


MAX PERFORMANCE  
for your milling centre

# 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

- the object to be scanned is automatically guided into the measuring field
- modern touch control 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 V4.7

- all strategies optimized for 5-axis simultaneous machining
- 64-bit multi-core support
- no annual license fees
- validated post-processors for all imes-icore® CORiTEC machines



## CORiTEC iCAM V5

- 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"



# Suction systems

## iVAC PRO<sup>+</sup>

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 <sup>+</sup>	
volume flow	280 m³/hr
output	1200 W
filter system	Teflon filter cartridge,automatic cleaning feature
filter volume	15 litres (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 expert

The iVAC expert is the appropriate vacuum system for the CORiTEC 650i and 650i Loader milling machines. High suction power with 1000m³/hr and 100 liters filter volume and HEPA filter. The brushless turbine guarantees a long service life.

iVAC expert	
volume flow	1000 m³/hr
output	2200 W
filter system	dust drawer, HEPA filter
filter volume	100 litres (filter bag)
width x depth x height	23.6 x 30.3 x 48 inch / 600 x 770 x 1220 mm
supply voltage	230 V
special features	high volume flow for room extraction



# Sintering Furnaces

## iSINT eco

The **iSINT eco** stands for economy and offers high-quality technology, matching accessories for high standards 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 with four high-quality molybdenum disilicide (MoSi<sub>2</sub>) heating elements, you can choose between conventional long-term sintering or SPEED sintering at a rate of up to 99 °C/minute. The **iSINT PRO** is controlled by a simple and convenient program control. The programs are displayed 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 in °C/min	30	99
Power in W	1720	3200
Lift function	No	Yes
Speedsintering	No	Yes

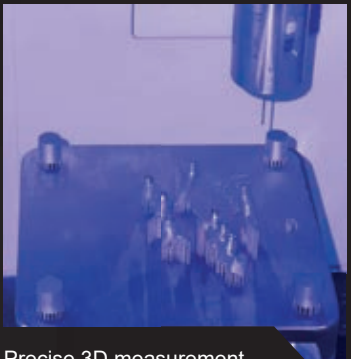


# Special solutions

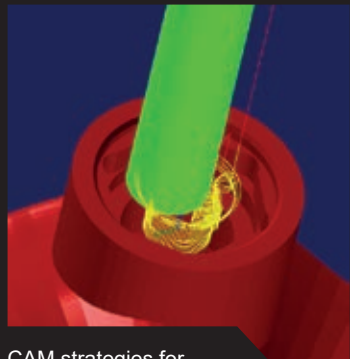
## Hybrid machining

### CORTEC 650i FOR SLM FINISH MACHINING

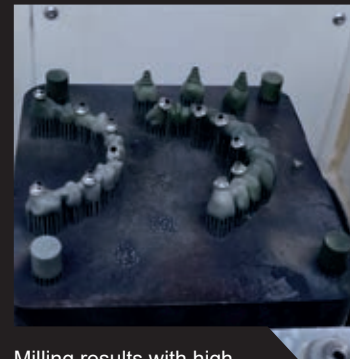
With the high-precision CORTEC 650i machine, technology partners have developed a special process to re-mill work that was previously produced in the SLM process with high precision. This allows e.g. build highly complex web constructions made of various materials such as titanium or CoCr in advance in the SLM process, and subsequently rework interfaces with the CORTEC 650i for the perfect fit and surface finish. This procedure is implemented in a special WorkFlow, in which a 3D probe is integrated in the CORTEC 650i. The touch probe determines the exact position and position of the SLM building board. Using 3D measurement functions of the CAM software, the fit and interface areas of the restorations on the SLM plate can then be precisely milled with the CORTEC 650i. This method can be used in principle with any SLM systems and with different CAM systems in combination with the CORTEC 650i.



Precise 3D measurement in the CORTEC 650i



CAM strategies for precision areas







Milling results with high surface quality

With the 3D probe, a controlled measurement is made via reference points in order to determine deviations, displacements and rotations. In the background, the imes-icore® 3D-measurement software calculates the values and writes them back to the CAM software to implement the corrections.

1

Compatible with among others the following SLM installations:



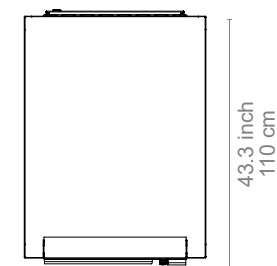
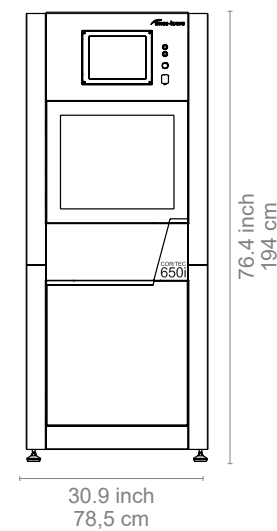
2

Compatible with among others the following CAM systems:

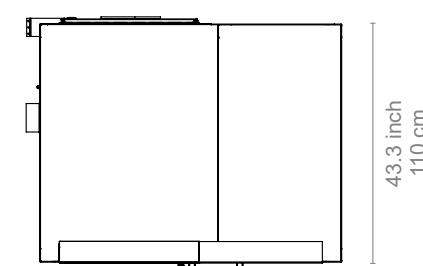
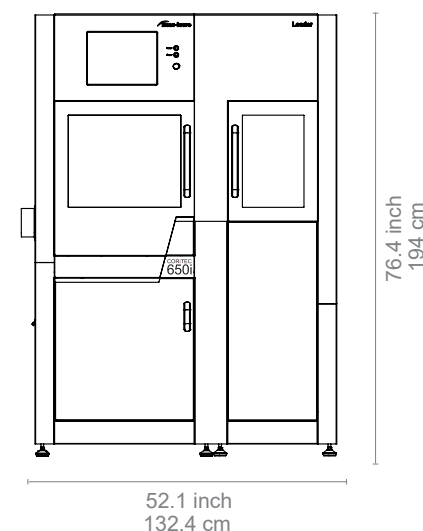


# Dimensions

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 constantly supply, 150 liters/minute	6 - 9 bar constantly supply, 160 liters/minute
cooling liquid	19 Liter integrated	19 Liter integrated
connecting requirements		
weight	625 kg	930 kg
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 your 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.de