

all ceramic all options™

**WIELAND**  
**ZENOTEC® *select* hybrid**  
*The innovative milling system*



**IPS e.matrix**  
with IPS e.max® CAD for Zenotec



***The right  
milling option***  
***High precision and productivity***

**ivoclar  
vivadent®**  
passion vision innovation

# Customized digital solutions for every laboratory



Scanners and Software



Material Selection



Milling



Finishing



Service and Training

Ivoclar Vivadent offers an extensive CAD/CAM system that is comprised of products and services for the entire digital processing chain. Dental laboratories have a wide choice of fully coordinated products including scanners, materials and equipment. The system is complemented by a comprehensive range of services. As a result dental laboratories benefit from optimized workflows, maximum productivity and flexibility.



## WIDE RANGE OF MATERIALS

The Zenotec select hybrid system features coordinated materials that cover a broad and comprehensive spectrum of indications. The materials include ceramics, such as zirconium oxide and lithium disilicate, as well as acrylic resins (PMMA, PU) and wax.



## AUTOMATED MATERIAL CHANGER

The machine incorporates automatic materials management in the form of the 8-slot material changer. Depending on the restoration, a suitable material is selected and automatically inserted into the machine. This feature enables laboratories to process milling jobs automatically and in sequence. The working hours of the laboratory can be fully exploited. Processed materials are subsequently transferred back to the stack, from where they can be removed without interrupting the milling or grinding operation. A software-controlled workflow guides the switchover from wet to dry operation and vice versa.

# ***Zenotec® select hybrid***

## ***The innovative milling system***

Zenotec® select hybrid is distinguished by its precision and productivity. The milling system combines state-of-the-art five-axis simultaneous operation with the advantages of automated manufacture and compact design.



### **USER-FRIENDLY SOFTWARE**

Apart from the machine control applications, the Zenotec select hybrid software suite also contains the user-friendly Zenotec CAM program. This software is a valuable aid to blank management, ensuring space-saving nesting combined with fast computation and exceptional ease of use. Furthermore, the proven Wieland milling strategies and milling geometries produce high-precision results.



### **WET GRINDING**

Zenotec select hybrid additionally offers the option of wet-grinding operation. Up to six IPS e.max® CAD or IPS Empress® CAD for Zenotec blocks can be machined in each patented IPS e.matrix.



### **PATENTED 16-POSITION TOOL CHANGER EFFICIENT AND UNIVERSAL**

The 16-position tool changer, which is located directly at the workpiece, allows tools to be changed automatically. Worn tools are automatically replaced with new ones.



### **5-AXIS OPERATION MANUFACTURING WITHOUT LIMITATIONS DUE TO**

The 5-axis simultaneous milling protocol enables the reproduction of the most complex of shapes, even those featuring undercuts and different insertion directions. Consequently, the equipment has an extensive application spectrum.

# Dry Milling



Zenotec select hybrid is distinguished by its precision and efficiency in the dry milling of a wide array of dental materials. Premium components and proven milling strategies in combination with a broad range of materials ensure top-quality, high-precision results. The integrated 8-disc material changer allows different types of materials to be processed automatically.

## MATERIALS

- Zenostar®
- Zenotec® Zr Bridge
- Telio® CAD for Zenotec
- Zenotec® PMMA Cast
- Zenotec® Wax
- Zenotec® Model



## ADVANTAGES

- Coordinated materials for a wide range of indications
- High precision and accuracy of fit due to top-quality machine components
- Automated job processing due to the 8-disc material changer
- Exceptional productivity and short processing time as a result of optimized milling strategies



# Wet Grinding

Zenotec select hybrid is distinguished by its dependability and high-precision in the wet grinding of glass-ceramics. The system is specially designed to fulfil the requirements of IPS e.max® CAD and IPS Empress® CAD for Zenotec. It offers maximum quality and productivity. The innovative IPS e.matrix allows up to 48 blocks to be loaded in the Zenotec select hybrid with changer.

## MATERIALS

- IPS e.max® CAD for Zenotec
- IPS Empress® CAD for Zenotec



IPS e.max® CAD for Zenotec



## ADVANTAGES

- Exclusively developed for machining IPS e.max® CAD for Zenotec
- IPS e.matrix multiholder with space for up to six blocks
- High-precision restorations showing excellent surface quality
- Coordinated milling tools and milling strategies

# Accessories



## Zenotec® cyclon

The powerful, sound-insulated extraction unit smoothly blends into the laboratory environment. In addition, the low-maintenance unit is very quiet. The cyclone technology helps to extend the life of the filters. Milling dust is easy to remove by means of dust bags.

- Minimal filter use due to cyclone technology
- Maximum extraction performance due to low filter resistance
- Powerful and low-maintenance due to brushless turbines



## Zenotec® hydro

Zenotec hydro is a state-of-the-art water cooling system. It is specially designed for the equipment and the materials of the Zenotec select hybrid milling system.

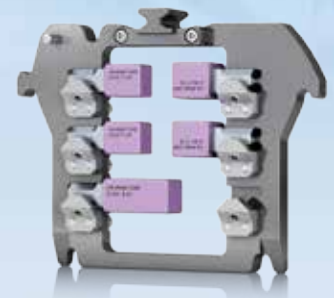
- High pumping pressure for optimal cooling of the cutting tools and materials
- High-capacity membrane pump
- Low-maintenance pump due to brushless turbines



## IPS e.matrix

The patented multiholder IPS e.matrix allows up to six blocks of various sizes to be machined in one grinding sequence. The multiholder is easy to remove from the stack and can therefore be loaded outside the machine.

- Space for up to six different blocks of different sizes and colours
- Ideally matched to the Zenotec select hybrid milling system



## Tools

The milling and grinding tools have been developed specifically for Zenotec select hybrid. They are characterized by durability and versatility. Apart from the standard machining tools for zirconium oxide, PMMA and wax, the assortment also comprises high-quality diamond-coated cutters for wet grinding applications.

- Specially developed for the machining requirements of Zenotec materials and the associated milling strategies
- High quality and long service life
- Broad variety of shapes for different requirements



# Technical specifications

|  |  |
|--|--|
| Dimensions in inches (w x h x d)                   | 19.3 x 21.3 x 17.5 (without changer)<br>27.2 x 21.3 x 17.5 (including changer)   |
| Weight   | 165 lb. (without changer)<br>209 lb. (including changer)   |
| Spindle  | synchronous spindle with 4 hybrid ball bearings and integrated inner taper shank cleaning<br>max. output 600 W,<br>max. speed 60,000 rpm   |
| Tool holder  | pneumatic chuck for tools with 3-mm shank  |
| Tool positions                                     | 16; including replacement tool management system   |
| Automatic tool measurement with breakage detection | ✓  |
| Inclination angle of the rotation axis             | ± 180° (A-axis) and<br>± 30° (B-axis)  |
| Repeatability value                                | ± 0.003 mm   |
| Material changer (optional)                        | for 8 discs or 8 IPS e.matrix holders  |
| Remote maintenance                                 | ✓  |
| Compressed air connection                          | min. 7 bar   |
| Voltage / Frequency                                | 110V / 230 V / 50 Hz   |
| Warranty   | 24 mo. limited warranty. Zenotec select dry spindle warrantied for 2,000 hrs. or 24 mo. if under 2,000 hrs. of use. Zenotec select hybrid spindle warrantied for 500 hrs. or 24 mo. if under 500 hrs. of use. Free backup milling available. |



Zenotec select hybrid including material changer\*  
\* Also available as Zenotec select dry



Zenotec select hybrid\*

The company that brought you  
**all** ceramics now brings you...



## Many choices from the one name you trust.

Ivoclar Vivadent revolutionized dentistry with IPS Empress®, the ultimate in metal-free esthetics. We changed everything again with IPS e.max® – and we're just getting started with **all ceramics all options.™**

As the world leader in all-ceramic restorative systems, we are constantly moving in new directions to provide exciting, innovative products. We are committed to offering dental professionals world wide with the most advanced technologies, highest quality products, and world-class education.

 Available at Ivoclar Vivadent LabShop®  
[shopivoclarvivadent.com](http://shopivoclarvivadent.com)

©2014 Ivoclar Vivadent, Inc.  
Ivoclar Vivadent, IPS e.max, all ceramic all options, Labshop, IPS e.max,  
IPS Empress and Telio are trademarks of Ivoclar Vivadent, Inc.  
Wieland, Zenostar and Zenotec are registered trademarks of Wieland Dental + Technik GmbH & Co. KG.  
667079 Rev. 2 9/2014

**United States**  
175 Pineview Drive  
Amherst, New York 14228  
716-691-0010  
800-533-6825  
Fax: 716-691-2285  
[www.ivoclarvivadent.com](http://www.ivoclarvivadent.com)

**Canada**  
1 - 6600 Dixie Road  
Mississauga, Ontario L5T 2Y2  
905-670-8499  
800-263-8182  
Fax: 905-670-3102  
[www.ivoclarvivadent.com](http://www.ivoclarvivadent.com)

  
**ivoclar**  
**vivadent**®  
passion vision innovation