

# The Varseo XS

# 3D PRINTING SYSTEM

## for Dental Applications

Partners in Progress



# 3D PRINTING SOLUTIONS TAILORED FOR DENTAL 3D PRINTING

The high dental technology requirements regarding precision, safety, and reproducibility of 3D printing solutions differ considerably from those of other application fields.

BEGO is a long-established family company with 130 years of dental expertise, a pioneer of CAD/CAM technology with more than 20 years of experience in the field of 3D printing, and a specialist in all dental fabrication techniques. The BEGO Varseo 3D printing system offers you:

- a system specially developed with and for dental laboratories
- a coordinated portfolio of 3D printer, light-curing device, scientifically tested materials, software tools, and services
- the means to achieve fast, simple and cost-efficient fabrication of a wide range of restorations made from resins and ceramic filled hybrids – in your own laboratory and with complete flexibility and unrivalled precision
- validated processes from scanning to finishing.



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## Interested in 3D Printing Training Courses?

In the BEGO TRAINING CENTER in Bremen we teach dental technology at the highest level. On the basis of our own concept, we have developed a sophisticated programme for seminars and practical courses that help interested dental technicians to become even more successful.

Interested technicians from all over the world are encouraged to contact their BEGO Sales Partner or to visit our website at [www.bego.com/training-center](http://www.bego.com/training-center).



## VarseoSmile Crown <sup>plus</sup>

The tooth-colored ceramic filled hybrid material for 3D printing of permanent single crowns, inlays, onlays, and veneers

### Advantages for the laboratory

- Specially for the resin developed printing and processing parameters ensure smooth production sequences with reproducible results at any time
- High dimensional stability and strength of the printed objects due to high values of flexural strength and flexural modulus – therefore precise fit
- Minimized resin sedimentation for easy handling, no mixing or shaking necessary with regular use
- Easy to grind and polish by using standard tools
- Seven shades according to the proven VITA\* classical shades: A1, A2, A3, B1, B3, C2, D3
- Satisfies all the requirements for a Class IIa\*\* medical device

### Advantages for the patient

- Excellent aesthetics thanks to a balanced ratio of opacity and translucency
- Low tendency to age and discolor thanks to very low water absorption
- Low plaque accumulation due to smooth surface
- High comfort thanks to low cold and heat sensitivity
- Antagonist-friendly material with mechanical buffering effect – ideal for implant-supported crowns
- Minimized formation of secondary caries thanks to a high adhesive bond with luting composites
- High biocompatibility due to very low water solubility – therefore not cytotoxic, not genotoxic, not toxic, not irritating, and not sensitizing

\* This symbol is a commercial designation/registered trademark of a company which is not part of the BEGO company group.

\*\* Class IIa medical device as defined by Directive 93/42/EEC.

Images and illustrations are examples. Colors, symbols, designs, and information on the depicted labels and/or packaging may differ from reality.

### Product details

Color	A1, A2, A3, B1, B3, C2, D3
Density	approx. 1.4–1.5 g/cm <sup>3</sup>
Layer thickness	50 µm
Viscosity	2,500–6,000 mPa*s
Flexural strength	116 MPa
Flexural modulus	4,090 MPa
Water solubility	0.23 µg/mm <sup>3</sup>
Water sorption	3.6 µg/mm <sup>3</sup>
Wavelength	405 nm

Availability	Contents	REF
VarseoSmile Crown <sup>plus</sup> A1	250 g bottle	41117
VarseoSmile Crown <sup>plus</sup> A2	250 g bottle	41118
VarseoSmile Crown <sup>plus</sup> A3	250 g bottle	41119
VarseoSmile Crown <sup>plus</sup> B1	250 g bottle	41120
VarseoSmile Crown <sup>plus</sup> B3	250 g bottle	41121
VarseoSmile Crown <sup>plus</sup> C2	250 g bottle	41122
VarseoSmile Crown <sup>plus</sup> D3	250 g bottle	41123





**The tooth-colored resin for 3D printing of temporary crown and bridge restorations, inlays, onlays, and veneers**

### **Advantages for the laboratory**

- Specially for the resin developed printing and processing parameters ensure smooth production sequences with reproducible results at any time
- Easy finishing due to smooth surfaces of the printed objects
- Outstanding dimensional stability and strength of the printed objects – precise and dimensionally stable fit
- Extremely short fabrication times and low material consumption equate to cost-efficient production in the laboratory
- Three shades according to the proven VITA\* classical shades: A2, A3, C2
- Satisfies all the requirements for a Class IIa\* medical device

### **Advantages for the patient**

- The finished restoration can be attached using conventional temporary cements
- High biocompatibility – therefore not cytotoxic, not genotoxic, not toxic, not irritating, and not sensitizing

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**Product details**

Color	A2, A3, C2
Density	approx. 1.4–1.5 g/cm <sup>3</sup>
Layer thickness	50 µm
Viscosity	2,500–6,000 mPa*s
Flexural strength	≥ 100 MPa
Wavelength	405 nm

Availability	Contents*	REF
VarseoSmile Temp A2	250 g bottle	41102
VarseoSmile Temp A3	250 g bottle	41103
VarseoSmile Temp C2	250 g bottle	41104



\* 250 g bottles are exclusively available for Varseo XS.  
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## VarseoWax CAD/Cast

The resin for the 3D printing of burnout objects

- Can be burned out without leaving any residue – provides optimal conditions for pore-free, smooth and precise partial dentures
- Specially for the resin developed printing and processing parameters ensure smooth production sequences with reproducible results at any time
- Further processing with the investment materials VarseoVest P<sup>plus</sup> and VarseoVest C&B, specially developed for shock-heat investing of 3D printed objects possible
- Excellent dimensional stability of the printed objects enables deformationfree investment and thus an excellent accuracy of fit of the casted objects



**Product details**

Color	yellow
Modulus of elasticity	> 1,500 MPa
Viscosity	700 – 1,500 mPa*s
Density at 22 °C	approx. 1.10 g/cm <sup>3</sup>
Flexural strength	> 50 MPa
Residual ash content	< 0.1 % at 700 °C
Wavelength	405 nm

<b>Availability</b>	<b>Content*</b>	<b>REF</b>
VarseoWax CAD/Cast	1.0 kg bottle	41136
VarseoWax CAD/Cast	250 g bottle	41137



\* 250 g bottles are exclusively available for Varseo XS.

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## Varseo XS

The compact DLP 3D printer specially developed for dental uses

- Cost-effective, high-resolution DLP 3D printer with outstanding detail accuracy
- Building speed independent of the number of elements to be produced
- Handy building platform – printing of up to 20 crowns or two large-span bridges with up to seven units
- Network capability via W-LAN or Ethernet connection allows fast and uncomplicated data exchange to the PC
- Compatible with the following materials:
  - VarseoSmile Crown <sup>plus</sup>
  - VarseoSmile Temp
- Replaceable resin tank allows easy material change
- Right-sized and appealing design

### Technical specifications

Product dimensions (L × W × H)	290 × 357 × 427 mm
Weight	11 kg
Nominal voltage	100–240 VAC, 50/60 Hz
Rated capacity	100 VA
Build area (W × D × H)	64 × 40 × 120 mm
Resolution (X, Y, Z)	50 µm
Building speed	approx. 30 mm/h

**Product details**

Availability	REF
Varseo XS (incl. scope of delivery)	26490

**Scope of delivery**

Activation of <b>one</b> material key of your choice:	
• Activation Varseo XS material key VarseoSmile Crown <sup>plus</sup>	99124
• Activation Varseo XS material key VarseoSmile Temp	99123
• Activation Varseo XS material key VarseoWax CAD/Cast	99121
Original Varseo XS operating instruction (on the USB stick provided)	86109
Quick Guide	80286
Scraper	19550
Building Platform	20702
Resin Tank	20703
BEGO CAMcreator Print	99118
Power Cord	-
Power Adapter	-
USB stick with data	-
Rinse Basket	-
Gloves	-

Accessories	Contents	REF
1 Set Cover Resin Tank	3 pieces	20625

**Services**

Inclusive	<ul style="list-style-type: none"> <li>• Activation of <b>one</b> material key of your choice (REF see above)</li> <li>• Professional hotline support</li> </ul>
Fee-based	<ul style="list-style-type: none"> <li>• Activation of another material key (REF see above)</li> <li>• Device installation, commissioning, and familiarization in your laboratory (REF 99119)</li> </ul>





## BEGO Otoflash

The light-curing device for rapid and reliable light-curing of VarseoWax and VarseoSmile resins

- Two flashlight bulbs shining from below into the polymerization chamber and hence make short resin light-curing times possible
- Wide wavelength field ensures very good resin hardening and hence achievement of the final physical characteristics of the printed objects
- Protective gas equipment prevents oxygen inhibition, guarantees completely adhesive-free surface curing and hence efficient reduction of the residual monomer content and biocompatibility
- Device can be used for photopolymerization of all materials that harden under light at wavelengths between 300 to 700 nm

### Product details

Nominal voltage	100, 115, 230 VAC, 50/60
Power consumption	approx. 250 W
Flash frequency	10 flashes a second
Size of the polymerisation space	approx. 120 × 120 × 50 mm
Spectral distribution	300 – 700 nm
Dimensions (L × W × H)	approx. 310 × 310 × 140 mm
Weight	approx. 6 kg
Gas pressure	1.0–1.2 bar
Gas type	Nitrogen N <sub>2</sub> /2.6
Gas flow	approx. 10 l/min

### Availability

BEGO Otoflash

### REF

26465

### Accessories

Pressure reducer for the protective gas connection

20349



## Varseo Accessories Set

Your introduction to 3D printing with Varseo

### The set contains:

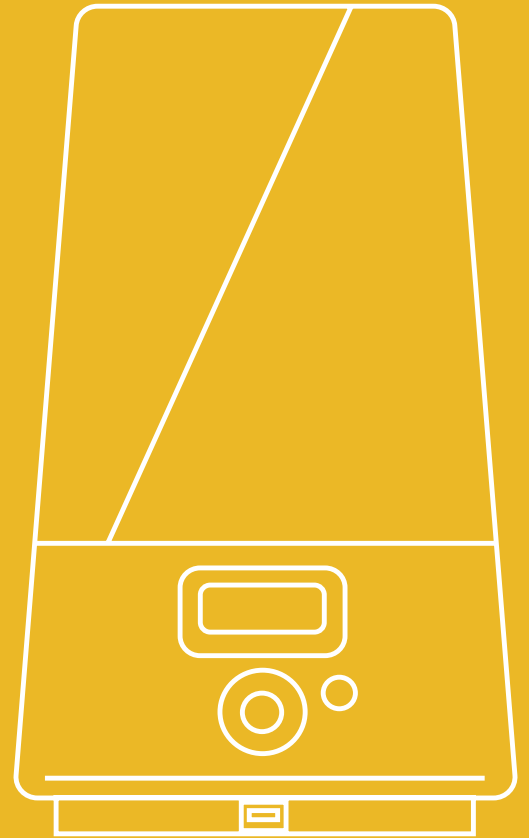
- Spray bottle, 1,000 ml
- 2 × Plastic cup 600 ml, incl. lid
- 3 × Anti-acid tweezers
- Solvent-resistant funnel, 16 cm
- PVC plaster-mixing bowl, black
- Varseo holder for lacquer filter (E-D-high-speed sieve)
- Varseo lacquer filter E-D-high-speed sieve (125 pieces)
- Solvent-resistant brush
- Measuring cup, 1,000 ml
- Label for dangerous substance Ethanol German/English (1 piece)

### Product details

Availability	Contents	REF
Varseo Accessories Set	1 Set	41041







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