

**Renfert**

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# SIMPLEX 2 SX

NEW | Dental 3D filament printing system

# NEW SIMPLEX 2 SX

## Dental 3D filament printing system



The first fully coordinated 3D filament printing system designed specifically for dental applications. SIMPLEX 2 SX integrates hardware, software, materials, and accessories into a seamless workflow that delivers consistent, reproducible results – without the need for post-processing. Guided processes and smart presets make advanced technology easy and intuitive to use. Whether you are just getting started or looking to optimize existing workflows, SIMPLEX 2 SX provides a reliable and efficient solution.

The system supports a wide range of applications – from orthodontic models and customized impression trays to temporary crowns and bridges. Its modular material portfolio includes MDR-compliant filaments as well as practical workflow enhancers like SIMPLEX model isolation and a polishing kit for smooth, high-quality surfaces.

### Advantages

- Frees up staff time thanks to immediate print start capability – no prior experience required – and optimized workflows for both dental offices and labs.
- Cost-effective, precise, and future-ready with outstanding print results, at optimized costs and times.
- Clean operation without chemicals thanks to filament technology that eliminates the need for post-processing

### Details

- All-in-one system comprising slicing software, optional model designer, printer, dental filaments, and accessories for clean, reproducible results.
- Direct service and support provided from Germany.

### Technical data

Permissible mains voltage	120–240 V	Filament diameter	1,75 mm   0.689"
Mains frequency / Hz	50/60 Hz	Sound pressure level (LpA**)	41dB (A)
Power consumption	350 W	Internal memory	16 GB
Temperature range (Nozzle)	300 °C   573 °F	External memory	16 GB
Temperature range (Print bed)	110 °C   230 °F	Display size	5 "
Number of extruders	Single	Display type	TFT full color touch-screen
Type of extruder	Direct Drive Single Extruder	Layer thickness (depending on indication)	70–150 µm
Print bed	Flexible metal plate with special coating ensuring a long service life	** Sound pressure level according to DIN EN ISO 11202	
Max. printing speed	250 mm/s		
Software package	SIMPLEX slice studio		
File types	OBJ / STL		
Operating system slice studio	Windows 7 and higher		
Weight (empty)	28 kg   61.7 lbs		
Dimensions (W x H x D) (Build volume)	523 x 450 x 577 mm   20.6 x 17.7 x 22.7"		
Nozzle diameter (included in delivery)	0,4 mm   0.2"		



Direct data transfer via LAN connection.

### Ordering information

SIMPLEX 2 SX	No. 1734 0000
SIMPLEX nozzle 0.25 mm // Spare part kit Nozzle 0.25 mm	No. 1734 0062
SIMPLEX nozzle 0.40 mm // Spare part kit Nozzle 0.40 mm	No. 1734 0061
SIMPLEX filaments	<a href="http://www.renfert.com/g1122">www.renfert.com/g1122</a>



## NEW SIMPLEX filaments temp

Filament for temporary crowns and bridges



SIMPLEX filaments temp are specialized dental filaments designed to produce temporary crowns and bridges using 3D filament printing. They combine biocompatible safety in accordance with MDR standards with high mechanical strength and natural aesthetics in VITA shades. Developed for both dental offices and laboratories, they enable efficient fabrication of short- and long-term temporaries – without the need for complex post-processing.

### Advantages

- Fast temporary restoration of prepared teeth thanks to direct 3D printing of crowns and bridges.
- Natural-looking aesthetics thanks to availability in common VITA shades.
- Easy to polish and customize.

### Ordering information

ELDY Plus Filament A1	250 g   Ø 1,75 mm	No. DPELA1FIL250175
ELDY Plus Filament A2	250 g   Ø 1,75 mm	No. DPELA2FIL250175
ELDY Plus Filament A3	250 g   Ø 1,75 mm	No. DPELA3FIL250175
ELDY Plus Filament A3,5	250 g   Ø 1,75 mm	No. DPELA35FIL250175
ELDY Plus Filament B2	250 g   Ø 1,75 mm	No. DPELB2FIL250175
ELDY Plus Filament B3	250 g   Ø 1,75 mm	No. DPELB3FIL250175
ELDY Plus Filament C2	250 g   Ø 1,75 mm	No. DPELC2FIL250175
ELDY Plus Filament C3	250 g   Ø 1,75 mm	No. DPELC3FIL250175

## NEW SIMPLEX filaments tray

Filament for custom and functional impression trays



SIMPLEX filaments tray are specialized dental filaments designed to produce custom impression and functional trays using 3D filament printing. Our filaments ensure biocompatible safety, excellent processing properties and consistent pigmentation. Developed for dental laboratories and dental offices, they enable fast, clean, and cost-efficient production of trays – without the need for extensive post-processing, chemical cleaning, or light curing. Whether for standard impressions or complex implant cases, the results are consistently precise and reproducible.

### Advantages

- Efficient production thanks to direct 3D printing with no post-processing or chemical cleaning – clean tray fabrication straight from the digital patient model.
- Excellent compatibility with common impression materials such as polyether and vinyl polysiloxane, ensuring reliable results and maximum flexibility.
- Increased safety in complex cases and noticeably greater comfort for patients with limited mouth opening – for accurate impressions and enhanced patient satisfaction.

### Ordering information

Ledy Filament tray	750 g   Ø 1,75 mm blue	No. DPLFIL750175BLAU
Ledy Filament tray	750 g   Ø 1,75 mm pink	No. DPLFIL750175ROSA



# Accessories

## 3D filament printing



**SIMPLEX**  
study model 2

The bio filament SIMPLEX study model 2 for the production of planning and diagnostic models complies with the ISO 5425 norm and features high detail reproduction and sharpness. It is free from irritants, does not produce any unpleasant or harmful vapors during the printing process, and is both recyclable and industrially compostable. Important note: SIMPLEX sliceware version  $\geq 1.1.3$  is required for use in the SIMPLEX 3D filament printer system.

No. 17350110



**SIMPLEX**  
working model 2

The bio filament SIMPLEX working model 2 is specially designed for the digital 3D printing of working models in the orthodontic field, offers high detail reproduction, and complies with the ISO 5425 norm. It is free from irritants, contributing to a pleasant working environment. No unpleasant or harmful vapors are released during the printing process. The filament is recyclable and industrially biodegradable. Important note: SIMPLEX sliceware version  $\geq 1.1.3$  is required for use in the SIMPLEX 3D filament printer system.

No. 17350210



**SIMPLEX**  
aligner model 2

The special SIMPLEX aligner model 2 filament is tailored to aligner fabrication and to applications in the thermoforming technique\*. It promotes a pleasant working environment, as it is free from irritants and does not release any unpleasant or harmful vapors during the printing process. No post-processing or curing is required. Important note: SIMPLEX sliceware version  $\geq 1.1.3$  is required for use in the SIMPLEX 3D filament printer system.

No. 17350320

\* For thermoforming foils with a foil thickness of  $\leq 1.0$  mm; excluded: Zendura Clear Aligner & Retainer Material



**SIMPLEX**  
multi-use model 2

The bio filament SIMPLEX multi-use model 2 features an innovative formulation with anhydride components, providing better performance compared to plaster-like filaments. The result is precise planning and diagnostic models with silky matt surface and high detail reproduction. It complies with the ISO 5425 norm. The filament is free from irritants, releases no unpleasant or harmful vapors during the printing process, and is both recyclable and industrially compostable. In addition, it can be optimally worked with rotary instruments or scalpels. Important note: SIMPLEX sliceware version  $\geq 1.1.3$  is required for use in the SIMPLEX 3D filament printer system.

No. 17350610



**SIMPLEX**  
model Isolation

SIMPLEX model isolation\* is a model separating agent that is adapted for use with 3D printed models. With the ready to use separating agent, orthodontic appliances can be easily fabricated from dental resin on the printed model. An even, ultra-fine film of isolating agent is applied on the surface of the model using a brush. This results in a clear separation between the model and the dental resin. After polymerization, the workpiece can be easily removed from the model, maintaining all surface details.

No. 17350010

\* Not available in the USA and Canada

