Renfert

making work easy

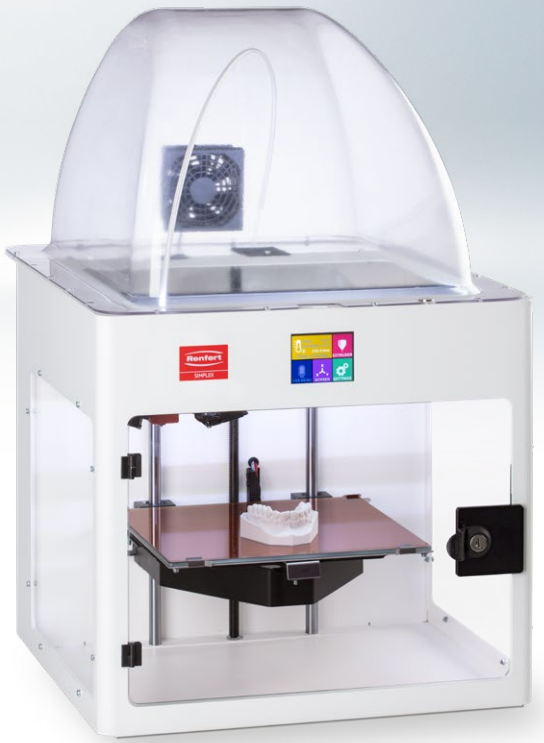
SIMPLEX

3D filament printer

SIMPLEX

3D filament printer

compact



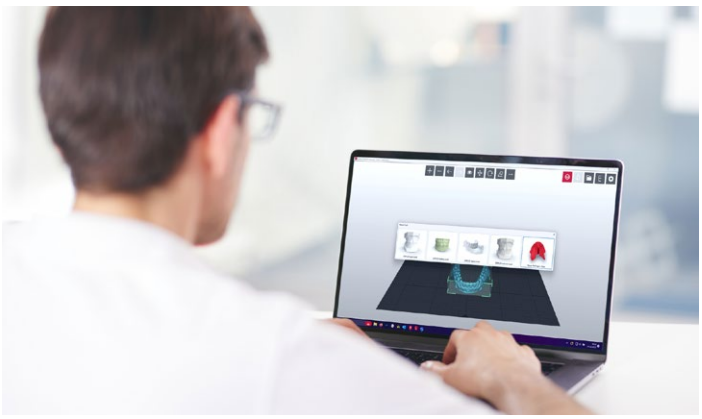
SIMPLEX is the easy way to a printed orthodontic model. The dental-specific SIMPLEX 3D filament printer system is a complete solution that comprises everything you need: a modern printer, smart modeling software, dental-specific slicer software and various special filaments. Low investment costs as well as low printing and material costs ensure high efficiency. This allows you to print orthodontic models easily, safely, and in a way that is healthy and environmentally friendly. This space-saving system can be easily integrated into the daily routine of an orthodontic office and is ideal for pushing forward the digitalization of orthodontics.

Advantages

- Easy access to the digital production of orthodontic models, even without prior digital knowledge.
- Smooth process flow from intraoral scan to orthodontic model without post-processing (no need for post-processing with chemicals or in the light curing unit).
- Intuitive operation thanks to pre-installed parameters and dental-specific software.

Details

- No harmful vapors during printing process.
- Sustainable, environmentally friendly 3D printing.
- Pleasant working environment with a low level of noise (≤ 49 dB).
- Safety thanks to a closed build chamber, lockable door, and removable cover.
- Dental-specific CE-compliant 3D filament printer system consisting of SIMPLEX (filament printer), SIMPLEX sliceware (slicer software) and SIMPLEX filaments (material).



SIMPLEX sliceware with pre-installed presets for orthodontic use

Technical data

Use	Fused Filament Fabrication (FFF)
Permissible mains voltage	90–264 V
Permissible mains frequency	50/60 Hz
Temperature range (Nozzle)	180–260 °C // 356–500 °F
Temperature range (Print bed)	50–110 °C // 122–230 °F
Layer resolution	50 µm
Number of extruders	Single
Type of extruder	All-Metal Hotend
Max. printing speed	120 mm/s
Traverse speed	200 mm/s
Operating system	Windows 7 and higher
Position precision	4 x 4 x 2 µm
Weight (empty)	~16,3 kg // ~35.94 lbs
Dimensions (W x H x D) (Build volume)	250 x 200 x 200 mm // 10 x 8 x 8"
Dimensions (W x H x D) (Housing)	415 x 358 x 360 mm // 16 x 14 x 14"
Dimensions (W x H x D) (Device, exterior size)	415 x 635 x 500 mm // 16.3 x 25 x 19.7"
Diameter (Nozzle)	0,4 mm // 0.0016"
Diameter (Filament)	1,75 mm // 0.0689"

Ordering information

SIMPLEX with Wifi	No. 17350000
SIMPLEX	No. 17351000
SIMPLEX steel nozzle 0,4 mm	No. 17350002
SIMPLEX model designer	No. 17350050
SIMPLEX model isolation, 80 g	No. 17350010

Further product data at: www.renfert.com/p/item number

NEW SIMPLEX 2 filaments

Filament for orthodontic model fabrication

SIMPLEX 2 filaments represent a new filament generation for dental 3D printing. The high-quality special filaments are suitable for the specific requirements of the orthodontic field: they have excellent mechanical and physical properties and do not pose a risk to health. The high consistency and dimensional accuracy of the filaments enable detailed print quality. The clearly defined filament selection designed for the respective area of application ensures optimum results.

Advantages

- Print orthodontic models at a high level thanks to premium dental-specific materials.
- High process reliability thanks to a filament selection tailored to the application and the 3D printer.
- Efficient and health-friendly printing of orthodontic models without post-processing, cleaning, light curing or harmful vapors.

Details

- Dentistry-specific filaments designed for 3D printing of orthodontic models.
- No post-processing with chemicals and curing unit necessary.
- 100% free from irritants – no harmful vapors during printing process.
- Bio filaments are recyclable and industrially biodegradable.
- Sustainable, environmentally friendly, and cost-effective printing.
- Bio filaments comply with the ISO 5425 norm.
- Excellent mechanical and physical printing properties (e.g. layer and print bed adhesion).
- Uniform diameter (1.75 mm) and roundness along the entire length of the filament for process-stable 3D printing and detailed results.
- Supply in resealable aluminum bag (vacuum-sealed) protects against moisture and light.

Important note

SIMPLEX sliceware version ≥ 1.1.3 is required for use in the SIMPLEX 3D filament printer system.

Designed for complete model fabrication for orthodontic applications

You can continue working with the model as usual without any post-processing

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.

Bio filament, polar white,1 x 1000 g (35.27 oz.),
Filament: Ø 1.75 mm, Spool: Ø 200 x 67 mm (7.8 x 2.6")

Printing temperature: 190–220°C / 374–428°F
Print bed temperature: 0–60°C / 32–140°F
SIMPLEX Operating temperature: TEMP 1
Working temperature: 15–32°C
Storage temperature: 15–32°C
Transport temperature: -5–45°C

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.

Bio filament, viridian green, 1 x 1000 g (35.27 oz.),
Filament: Ø 1.75 mm, Spool: Ø 200 x 67 mm (7.8 x 2.6")

Printing temperature: 190–220°C / 374–428°F
Print bed temperature: 0–60°C / 32–140°F
SIMPLEX Operating temperature: TEMP 1
Working temperature: 15–32°C
Storage temperature: 15–32°C
Transport temperature: -5–45°C

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.

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

Heat-resistant special filament, light gray,
1 x 1000 g (35.27 oz.),
Filament: Ø 1.75 mm, Spool: Ø 200 x 67 mm (7.8 x 2.6")

Printing temperature: 230–255°C / 446–491°F
Print bed temperature: 60–80°C / 140–176°F
SIMPLEX Operating temperature: TEMP 2
Working temperature: 15–32°C
Storage temperature: 15–32°C
Transport temperature: -5–45°C

No. 17350320

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.

Filament with anhydride components,
off-white, 1 x 1000 g (35.27 oz.),
Filament: Ø 1.75 mm, Spool: Ø 200 x 67 mm (7.8 x 2.6")

Printing temperature: 200–220°C / 392–428°F
Print bed temperature: 55–65°C / 131–149°F
SIMPLEX Operating temperature: TEMP 1
Working temperature: 15–32°C
Storage temperature: 15–32°C
Transport temperature: -5–45°C

No. 17350610