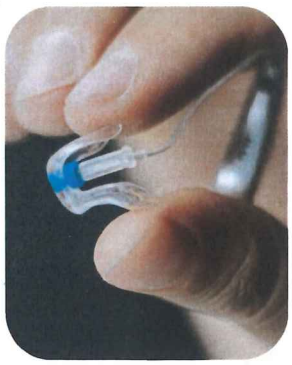
detax

Workflow Guide · dx nobreak

3D printing earmolds and shells – the dx nobreak.







This guide will lead you through the process of designing, manufacturing and finishing of earmolds and shells.

Workflow

1. Design

Time

- **Approx. 10 min**

Design Parameter

- **Compatible with all types of design software (no additional settings required)**

Wall Thickness

- **min. 0.5 mm**

2. Create Print Job

Time

- **Approx. 5 min**

Note

- **Use the validated parameter files for Medicalprint nobreak + COLOR**.**

Support parameter settings belong to the available 3D printing system.

3. Printing Process

Time

- **Approx. 45 min**

Note

- **Use a Detax-validated 3D printer.**

Printing time belongs to the application and printing system.

4. Post Process

4.1. Cleaning

Time

- **Ultrasonic bath:**
  2 x 3 min in isopropyl alcohol (purity ≥ 98 %)
  Please use two separate containers.
- **Software controlled device:**
  Use the following settings: Medicalprint nobreak + COLOR**

Note

- **Between the two cycles and after the washing process, careful blow out with compressed air.**
- **Between the two cycles and after the washing process, careful blow out with compressed air.**

4.2. Post Curing

Time	NK Optics Otoflash G171 N^2	Rapidshape RScure	Dreve PCU LED
• Depending on used device	• 2x 2000 flashes under inert gas, turn around components after 2000 flashes	• Medicalprint nobreak + COLOR**	• 2:30 min with Nitrogen Light intensity 33%

** The placeholder **COLOR** shall be replaced by **beige, black, blue-transparent, brown, clear, dark brown, dark grey, green-opaque, light beige, light grey, medium brown, neon yellow, orange-transparent, purple, red-transparent, rose-orange, skin** or **white**

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5. Surface processing

5.1 Varnishing

Coat	Process
Medicalprint® coat / soft coat	1. Roughen components (e. g. with sandpaper). 2. Clean components with isopropyl alcohol (max. 2 min.). 3. Dry components with compressed air (the surface must be free of remaining alcohol). 4. Varnishing of components: either apply lacquer with a brush or by immersing. Remove excess lacquer after immersion by shaking off (Attention: wear protective glasses / protective gloves). 5. Curing of the lacquer using the following post-curing devices: • Xenon flash device with nitrogen (e. g., Otoflash G171 N2), exposure: 2 × 2000 flashes • PCU LED N2 with nitrogen, exposure: 6:30 minutes at 33% power. • After curing, thoroughly clean the earmold, sound channel drills, vents, etc. with a mixture of distilled water / isopropanol (mixing ratio 1:1) to remove potential residues.

5.2. Mechanical finishing

Polishing unit	Process
Otec ECO-Maxi wet	1. Media: DZS 10/10 Ceramic grinding wheel, Compound: SC 15 Compound, Runtime: 90 min, Splitting system: Wet splitting, Speed: 280 U / min, Compound content: 3 %, Water flow: 4 l / h 2. Media: KM 10 plastic abrasive media (70 %), PM 10 plastic abrasive media (30 %), Compound: SC 15 Compound, Runtime: 90 min, Splitting system: Wet splitting, Speed: 280 U / min, Compound content: 3 %, Water flow: 4 l / h • Media: ZSP 4/5 Porcelain polishing body, Runtime: 60 min, Splitting system: Wet splitting, Speed: 260 U / min, Water flow: 10 l / h

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