

The Comprehensive 3D Printing Checklist for Dental Labs

Are you a dental lab considering the exciting leap into the world of 3D printing? Look no further — we've crafted a comprehensive checklist to help you navigate the journey toward choosing the perfect 3D printer for your lab's needs.

01. DEFINE YOUR REQUIREMENTS

- › Determine your specific dental applications for 3D printing (e.g., digital dentures, models, crowns, bridges, surgical guides to name a few).
- › Identify the level of precision and detail required for your projects. Do you need a 3D printer that places an emphasis on speed, accuracy, or both?
- › Decide on the volume of printing you expect to handle.

02. CHOOSE THE RIGHT 3D PRINTER

- › Select a 3D printer model that suits your lab's needs and can be integrated into your existing digital workflow or add to it.
- › Consider features like build volume, resolution, speed, and material compatibility.
- › Ensure the printer supports dental-grade materials for biocompatibility.

03. OPT FOR RELIABLE SCANNING TECHNOLOGY

- › Ensure compatibility with your chosen 3D printing system.
- › Choose a scanner that comes with design capabilities for the appliances that you plan to print in your dental lab.
- › If adding a scanner to your workflow, look for scanners with high-resolution capabilities and efficient scanning workflows.

04. EXPLORE DENTAL-SPECIFIC RESINS

- › Research Elite Dental Partners-grade resins compatible with your chosen printer.
- › Consider a range of materials for different applications, such as bio-compatible, high-strength, or flexible resins.
- › Ensure the resins offer the necessary esthetics and functionality for your dental prostheses.
- › Don't overlook the curing and cleanup process. Confirming resins you print work with the curing unit you purchase is just as important as the 3D printer you select.

05. WORKFLOW INTEGRATION

- › Invest in nesting software that facilitates seamless file preparation, importing from a CAD system, nesting and printing the appliances.
- › Ensure your chosen software supports common dental file formats (STL, OBJ, etc.).
- › Integrate the software with your scanner and printer for a streamlined workflow.

06. TRAINING AND SUPPORT

- › Plan for training sessions to ensure your staff can operate the equipment effectively.
- › Commit to both virtual and in-person trainings to understand the design steps that build the foundation for 3D printing in the lab.
- › Establish a connection with your technical support representative who can troubleshoot or direct you to additional training modules and videos.

07. COMPLIANCE AND QUALITY ASSURANCE

- › Familiarize yourself with industry regulations and standards for dental 3D printing.
- › Implement quality control procedures to maintain precision and consistency in your prints.

08. MAINTENANCE AND UPKEEP

- › Establish a maintenance schedule for your equipment to ensure consistent performance.
- › Stock up on consumables (resins, calibration tools, etc.) to avoid interruptions.
- › Understand the need and differences with printer calibrations between systems.

09. COST ANALYSIS

- › Calculate the total cost of ownership, including equipment, materials, software, and training.
- › Evaluate the potential return on investment considering time saved, increased efficiency, and new service offerings.

10. START SMALL, SCALE GRADUALLY

- › Begin with a manageable scope of cases to gain familiarity with the technology.
- › Gradually expand your 3D printing capabilities as your team gains confidence and proficiency.

At Zahn Dental, we're here to guide you **through every step of the process**, from selecting the right equipment to providing ongoing technical support and education. Our team of consultants and technical experts can assist you in selecting the right **3D printing workflow for your dental lab.**