Dental 3D Printer

DWP-80S

by **Roland**

DWP-80S

Dental 3D Printer

EASE MEETS PRECISION

ADVANCED 3D TECHNOLOGY FOR DENTURE CREATION

Calling it "simple" does not do justice to the effortless production of the DWP-80S. At the touch-of-a-button, users can print custom trays, base plates and frameworks. Combined with Roland's new Quick Denta 3D software, creating precision denture components has never been so convenient or accessible.
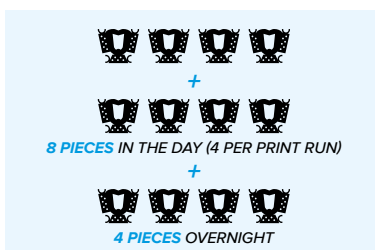

CUSTOM TRAY

BASE PLATE
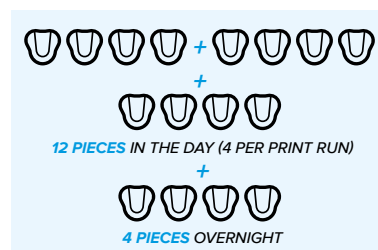
FRAMEWORK

TYPICAL OUTPUT PER DAY (8 HOURS)

FRAMEWORK

8 PIECES IN THE DAY (4 PER PRINT RUN)
+
4 PIECES OVERNIGHT

BASE PLATE

12 PIECES IN THE DAY (4 PER PRINT RUN)
+
4 PIECES OVERNIGHT

CUSTOM TRAY

6 PIECES IN THE DAY (3 PER PRINT RUN)
+
3 PIECES OVERNIGHT

Calculations are indicative. Based on average sample size.

DENTURES MADE EASY

Traditional production of custom trays, base plates and frameworks requires a highly advanced level of skill. With the DWP-80S Dental 3D Printer, users can speed-up and simplify denture fabrication. The digital production method of the DWP-80S intelligently determines how denture components are printed, chooses the ideal layout and number of support points, adjusts for material shrinkage, and makes other critical decisions for you.

Quick Denta SOFTWARE FOR SIMPLE 3-STEP OPERATION

Quick Denta 3D software is included with the DWP-80S and powers print production in three easy steps. Pre-configured with the optimum parameters for creating frameworks, trays and base plates with an easy-to-follow workflow wizard. This allows users of all skill levels to import STL files and print with minimal effort.

STEP 1
Select application

STEP 2
Generate supports

STEP 3
Start printing

KEY SOFTWARE FEATURES

Automatic Positioning
With Quick Denta, setting up a file for 3D printing is no longer a manual process. It automatically adjusts 3D data to produce the most efficient and stable position on the printer's work surface. The optimum angle of orientation can also be automatically saved as a preset value and configured for each type of model being made - eliminating the need to reset values each time.

Automatic Support Generation
Quick Denta simplifies the complex process of model support creation by automatically generating support structures with a single click.

Error Detection and 3D Mesh Healing
An optional feature allows Quick Denta to automatically detect and repair minor errors during the STL importing process, without the need to return to the CAD software.
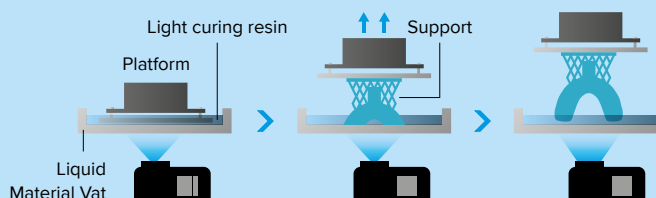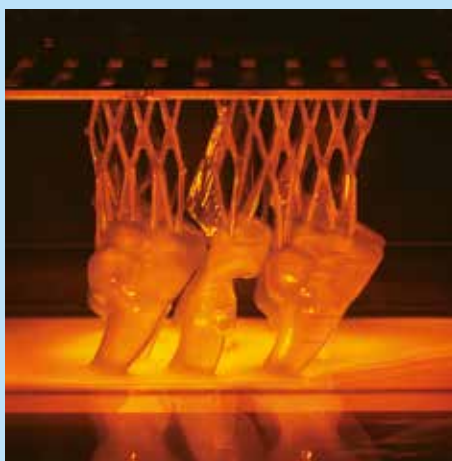
Cost-Effective Resin Calculation
Quick Denta provides accurate, timesaving and cost-effective production by calculating the exact amount of resin needed for each job.

MAKE MULTIPLE UNITS SIMULTANEOUSLY

Using DLP (Digital Light Processing) technology the DWP-80S builds layers of resin which hardens after being cured with UV light. A proprietary lens on the DWP-80S ensures a highly accurate and consistent result. The square work area (80mm x 80mm) is ideal for printing multiple custom trays, base plates and frameworks. Quick Denta Software enables users to nest multiple jobs for printing i.e. select up to 4 different frameworks at once.

Only one type of component can be printed in the same print run.

Light curing resin

Support

Platform

Liquid
Material Vat

POST-PRODUCTION

The Quick Denta software enables an easy post-production process which, when combined with the Roland post curing unit, delivers optimal results.

If the base plate resin or the custom tray resin does not cure sufficiently, the job will not meet biocompatibility requirements. It is mandatory to use the genuine resins and post curing unit for producing the applications above.

DWP-80S

Specifications

Applications		Custom trays, base plates and frameworks
Build technology		Layered projection system
Build size		80 (W) × 80 (D) × 80 (H) mm (3.15 (W) × 3.15 (D) × 3.15 (H) in.) (The maximum weight of finished print(s) is 300 g (0.66 lb.))
Light source		UV-LED (Ultraviolet light-emitting diode)
Power supply	Machine	DC 24 V, 0.8 A
	Dedicated AC adapter	AC 100 to 240 V ±10 %, 50/60 Hz
Power consumption		20 W
Operating noise	During operation	55 dB (A) or less
	During standby	49 dB (A) or less
External dimensions		430 (W) × 365 (D) × 450 (H) mm (16.93 (W) × 14.37 (D) × 17.72 (H) in.)
Weight		24 kg (53lb)
Interface		USB
Installation environment	During operation	Temperature: 20 to 30 °C (68 to 86 °F), Humidity: 35 to 80 % RH (no condensation)
	Power off	Temperature: 5 to 40 °C (41 to 95 °F), Humidity: 20 to 80 % RH (no condensation)
Included items		AC adapter, power cable, USB cable, liquid material vat, printing/cleaning tools (Metallic spatula, plastic spatula, tweezers, washing container × 2, hexagonal wrench, rubber gloves, work tray, etc.), Read First (booklet), Roland DG Software Package CD, etc.

System Requirements

Operating system (OS)*	A model preinstalled with Windows® 10, 8.1, 7 (32/64-bit versions) (64-bit version recommended) or an upgraded computer originally preinstalled with Windows® 7 or later
CPU	Intel® Core i5 or better CPU (Core i7 or higher recommended)
Memory	4 GB of memory or more (8 GB of memory or more recommended)
Optical drive	CD-ROM drive
Video card and monitor	1,280 × 1,024 pixels or more
Free hard-disk space required for installation	100 MB or more
USB cable	Use the included USB cable

*Operation of the machine has been verified using an Intel® Graphics HD 4000 graphics card built in to the CPU.

Options

SR100-TR	Photo-Cured Resin for Custom Trays, 1,000 g
SR100-BS	Photo-Cured Resin for Base Plates, 1,000 g
SR100-CS	Photo-Cured Resin for Frameworks, 1,000 g
LMV-80	Replacement vat
LC-3DPrint Box	Post Curing Unit

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Roland Care Warranty

Enjoy the peace of mind of having one of the most comprehensive warranty packages in the industry, included with the DWP-80S.

The DGSHAPE Brand Promise

DGSHAPE is the brand name of the 3D business unit spun off from Roland DG with the core mission: "make innovation, make life better." DGSHAPE delivers digital technologies that bring ideas to life, revolutionise business processes, and shape a better future. Our goal is to fuse human creativity with digital workflows to provide exceptional value across multiple endeavours, from individual craftsmanship to manufacturing, healthcare and beyond.

Imagine.

Roland