Roland DG Corporation (Booth C2-228) has announced the release of its first dental 3-D printer, the DWP-80S, to assist in the production of dentures. Launched at the same time, the DWX-52DC is the newest addition to the popular DWX series dental mills and includes several new automated functions for the unattended production of precision dental restorations. With the announcement, the company now offers the dental industry both additive (3-D printing) and subtractive (milling) manufacturing processes to improve the workflow of dental technicians, representatives said.

With the goal to shorten production timeframes and lower costs whilst maintaining the quality and consistency of dental restorations, an increasing number of dental laboratories are installing digital systems consisting of CAD/CAM software, digital scanners and milling machines to replace conventional casting methods. Since its launch in 2010, Roland DG’s DWX series dental mills have gained industry recognition for their desktop precision, robust reliability and open architecture, which has contributed to the widespread digitalisation of dental restorations such as crowns and bridges. Now, the DWX-52DC adds exciting new features to further automate and expand the formerly laborious process. With a newly developed Automatic Disc Changer (ADC) capable of storing up to six discs, it is fully equipped to mill a variety of precision dental restorations overnight to increase lab productivity. The included pin type material adapter enables the setting up and milling of seven pin type blocks consecutively.

With the DWX-52DC’s expanded production capacity, a variety of dental restorations, including copings, crowns, full bridges, abutments, surgical guides and models can be produced. The 15-station Automatic Tool Changer (ATC) automatically replaces milling burs without interruption for the efficient milling of a wide range of materials, including zirconia, wax, PMMA, composite resin, PEKK, gypsum, CoCr sinter metal and fibre reinforced resin. The mill is capable of simultaneous 5-axis machining which supports complex restorations with undercut. Rather than being locked into one manufacturer, open architecture allows users to integrate the unit into their existing workflow with popular scanners, software and the latest materials. For continuous, reliable production, an air pressure system automatically changes the volume of air for the type of material being milled. The Virtual Machine Panel (VPanel) allows users to quickly configure settings for up to four machines from a single computer for high-volume production.

Roland has also recently launched its first 3-D dental printer, the DWP-80S, to assist in the production of dentures. According to Kohei Tanabe, Roland DG’s general manager of medical market development, denture production is still mostly carried out manually and requires an advanced level of skill. “Dental labs are seeking a more efficient, flexible digital solution to expedite the production of denture applications to accommodate the increasing demand from patients and clinicians,” he said. To meet these demands, Roland DG developed the DWP-80S 3-D printer to streamline the denture fabrication process. The DWP-80S uses a proprietary projector lens to cure resin materials with UV LED light. Bundled with the DWP-80S, new Quick Denta software provides a remarkably simple solution for the 3-D printing of custom trays, base plates and frameworks. Using the easy-to-fallow workflow wizard with pre-configured parameters, applications required for dentures can be printed in three simple steps, eliminating the need for time-consuming learning or editing.