

Ceramill CAD/CAM System (Amann Girrbach) Project 13-018



The Ceramill CAD/CAM System was evaluated at Peterson AFB, CO and JBSA-Lackland TX. The system is comprised of the Ceramill Map400 scanner, Ceramill Mind software and Ceramill Motion 2 (5X) milling unit. The Ceramill Map400 scanner has an open interface, so that scans (STL files) can be loaded in other CAD software; it can scan single arch dental models using 2 axes, and can also record articulated models in an occlusal relationship. The dimensions and weight of the scanner are 415mm x 407mm x 535mm, 31kg. The Ceramill Mind software is based on traditional workflow with an open architecture; it is open for every type of construction data. The software allows for simultaneous designing of the upper and lower jaw, with library teeth automatically incorporated into the scanned image. The Ceramill Motion 2 (5X) milling machine can be used with open CAD/CAM systems. The milling machine combines the 5-axis milling technique (wet or dry) with the wet-grinding technique in a compact machine and has material-appropriate processing for each material. The dimensions and weight of the milling machine are 588mm x 516mm x 755mm, 78kg.

Manufacturer (or Source):

Amann Girrbach America, Inc.
5265 Parkway Plaza Blvd, Suite 150
Charlotte, NC 28217
(800) 851-3719

Suggested Retail & Government Prices:

Item Number	Item Description	Retail	DOD
PCSET	Ceramill PC Set • Ceramill CAD/CAM system PC • Ceramill CAD/CAM TFT-monitor • Ceramill CAD/CAM keyboard • Power Cables • CAD/CAM PC Accessories	\$ 3,278.00	\$ 2,491.28
179250	Ceramill Motion 2	\$ 47,520.00	\$ 36,115.20
179140	Ceramill Map400	\$ 21,470.00	\$ 16,317.20
179157	Ceramill Mind + Ceramill Artex + Match 2	\$ 6,590.00	\$ 5,008.40

ADVANTAGES:

- + Completely open system, can be used with open CAD/CAM systems
- + Multiple die scanning
- + Wet and dry milling option
- + Smaller burs allowed for closer margins, better fit and nicer anatomy

DISADVANTAGES:

- Difficult to scan cast without using Ceramill's articulating/mounting system, Artex
- Buccal scans are not an option unless using the transfer jig if mounted on an Artex articulator
- Scanning process is time consuming

SUMMARY AND CONCLUSIONS: Six dental laboratory technicians from the Fixed/CAD/CAM section of large regional/area dental labs, with an average experience of ten years, used the Ceramill CAD/CAM system comprised of the Ceramill Map400 scanner, Ceramill Mind software, and Ceramill Motion 2 (5x) milling unit, for an average of 4 months, fabricating over 250 units. The majority of the evaluators found the instruction manuals for the Ceramill CAD/CAM system to be comprehensive (4/6) and easy to understand (5/6). All of the evaluators found the hands-on instructions were sufficient to allow for efficient use of the Ceramill CAD/CAM system. Laboratory evaluators all agreed that the Ceramill Motion 2 milling unit was easy to operate. Several evaluators noted that the scanning process was very time consuming and the crown design software was difficult to learn which could be a disadvantage for an inexperienced dental laboratory technician. The majority of the laboratory evaluators found that the scanning and design processes are more suited for experienced CAD/CAM dental laboratory technicians. Finally, the majority (4/6) noted they would recommend this product to other dental laboratories, for experienced technicians. The **Ceramill CAD/CAM system** was rated **Acceptable** for use in US Air Force dental facilities.

