

**AMC-20CF Mobile Dental System (Aseptico)
(PROJECT 2009-05) (5/10)**



The AMC-20CF Mobile Dental System is a mobile dental cart designed for routine dental prophylaxis, restorative dentistry, and oral surgery procedures. Because it is self-contained, it is intended for use in austere environments. It has a 2-horsepower, oil-less compressor providing air to the unit for motor cooling, handpiece chip air, and water pressurization of the air/water syringe and water supply. The AMC-20CF has an internal vacuum system for high- and low-volume evacuation (i.e., suction) and an aluminum air storage tank. An E-type motor connection with fiber optics supports the use of a variety of high- and low-speed electric handpieces. Handpiece attachments are additional and if desired, are available from Aseptico. The electric motor control panel is mounted on the front of the AMC-20CF cart. Two air-turbine handpiece lines with connections and fiber optics are standard. A three-way air/water syringe, high-volume evacuation (HVE), low-volume evacuation (LVE) (i.e., saliva ejector), and a variable speed foot switch are included. It also has a 1-gallon waste container, amalgam separator, and a two-bottle self-contained 2-L water system. The waste container is emptied by activating an internal electric pump. Other features include a light-emitting-diode (LED) curing light and a Piezoelectric ultrasonic scaler integrated into the cart. The unit has a circular workspace countertop and a height-adjustable bracket tray mounted on a swivel arm. The AMC-20CF cart measures 36.5"H x 30.0"L (deep) x 23.5"W and weighs 194 pounds. A custom Mil-spec transport/storage case is provided, which weighs 210 pounds. The total shipping weight and volume of the unit and container are approximately 404 pounds and 38 cubic feet, respectively. The cart has resettable circuit breakers and is true dual-voltage, operating on 120 VAC, 50/60 Hz or 230 VAC, 50/60 Hz.



Manufacturer:

Aseptico
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Woodinville, WA 98072
(800) 426-5913
(425) 487-3157
(360) 668-8722 FAX
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Suggested Retail Price:

\$24,534.00 AMC-20CF Mobile Cart

- Dental unit
- MIL-Spec transport/storage case
- Supply Case
- One e-type electric motor
- One three-way air/water syringe
- One LED light curing wand
- One Piezoelectric scaler with scaler tips
- One metal bracket tray and mounting post
- One amalgam separator filter
- Power cords

Government Price:

\$19,055.00 AMC-20CF Mobile Cart (contents as listed above)
Government Price includes shipping within CONUS

ADVANTAGES:

- + Excellent high-volume evacuation (i.e., suction) for an expeditionary/mobile unit
- + High-volume evacuation meets ORD specifications up to 13,000 feet above sea level
- + With one exception, exposure to extreme temperature and humidity did not affect performance
- + Meets overall MPID and electrical safety requirements
- + Countertop and bracket tray offer generous workspace
- + Locking casters on base of unit prevent unintended movement
- + Sturdy handles on sides of unit support unit's weight
- + Well-designed shipping case—easy to pack and unpack the unit
- + Shipping case allows additional storage room with unit packed in shipment configuration
- + Supply case can also function as an additional table surface
- + Dual voltage increases unit's operational usefulness
- + Automatic suction shut off prevents waste container from overflowing
- + Electric pump provides hands-off emptying of waste container
- + Shipping/storage case meets military specifications
- + Shipping case provides some insulation capacity against storage conditions
- + Easy to assemble and operate—unit ready-to-go upon removal from shipping case
- + Electrical components not affected by MIL-STD-810F vibration protocol testing
- + Comprehensive operating and maintenance manual
- + Unit controls are well labeled and easy to understand
- + Electrical motor allows multiple handpiece configurations

DISADVANTAGES:

- Unit and case considerably heavier than other field dental units
- Switches for choosing between the two separate water bottles were found to be reversed
- Lack of labels on instrument holders makes it difficult for proper location of instruments (e.g., suction tubes and handpieces)
- LED curing light function impaired during high-temperature/high-humidity exposure (i.e., 130°F/95% relative humidity), but function regained when returned to ambient temperature/humidity conditions

SUMMARY AND CONCLUSIONS:

The AMC-20CF Mobile Cart is a mobile dental unit/system accommodating both electric and air-turbine handpiece and includes LED-based visible light curing capability as well as an ultrasonic handpiece. The unit was found to be securely packaged in its military specification shipping container and the shipping configuration allows the AMC-20CF to be set up for patient care within 15 minutes. Upon inspection, that included disassembly, the AMC-20CF was found to be of good engineering design and consisted of sound construction. The unit's electrical and mechanical components were not affected under MIL-STD-810F vibration testing protocols. The high-volume evacuation (i.e., suction) was found to produce the highest values ever recorded for mobile/expeditionary dental units under DECS testing conditions and it met current military requirements up to 15,000 feet above sea level. Except for one minor exception, the AMC-20CF was not affected by any simulated storage and operational simulated environmental conditions that spanned from -40 to 130°C and 20 to 95% relative humidity levels. In contrast to previous mobile dental units evaluated by DECS, the AMC-20CF represents a considerable increase in cube and weight requirements. However, because of shifting mission requirements to more hardened locations as compared to strict expeditionary models, the need for a more robust, sustainment scope of dental care have been recognized. This laboratory evaluation found the AMC-20CF Mobile Cart well-suited to provide a reliable, sustainment-level scope of dental care in environments where transport is accessible. Although clinical-user testing will be carried out during future DENTRETE missions and reported separately, the laboratory evaluation of the **AMC-20CF** found it to have **Outstanding** potential to enable dental care in the expeditionary environment.