

57-16 AirTouch Tower Air Abrasion System (Project 98-19) (5-99)

The AirTouch Tower is Dentsply/Midwest's top of the line self-contained air abrasion system. Air abrasion provides an alternative to the high-speed handpiece for removing caries from tooth structure. Dentsply/Midwest reports it is indicated for sealants, Class I, Class II tunnel preparations, Class III, Class IV, root caries, removal of composite and stains, and porcelain repair. Its many purported advantages compared to traditional preparation procedures include: less invasive, more conservative treatment; reduced need for local anesthetic; earlier and more accurate diagnosis which reduces under- or over-treatment; reduction or elimination of vibration, chipping, and micro-fracturing; and immediate beveling of cavo surfaces. The AirTouch Tower is available with either single or dual powder chambers for use with 27- or 50-micron aluminum oxide powder. It is available in two different models based on whether pressurized air or gas is used to cause the flow of aluminum oxide. One model provides pressurized air with a built-in 1/3 horsepower oil-less compressor, while the other other uses a built-in CO2 tank. In addition, the AirTouch Tower is the only air abrasion system to provide both intra-oral and extra-oral powder evacuation. The digital display membrane touchpanel allows the user to regulate the air pressure (40 to 120 psi in 10-psi increments), cutting time (0.2 to 2.5 sec in 0.5-sec increments and continuous mode), powder size (27 or 50 microns), and includes a separate powder boost mode for increased powder flow when more powerful cutting is required. A memory function allows recall of preferred pre-set pressure and cutting settings. The Smart Digital Display provides continuous information and instructions on use and maintenance. Handpiece nozzles are available in three different angulations (45°, 90°, and 120°) and three different orifice diameters (.015", .018", and .027") for increased versatility. The AirTouch Tower measures 35"H x 14"W x 17.5"D and weighs 130 pounds (compressor model) or 99 pounds (CO2 tank model). The unit is available in 110V and 220V models and is UL listed and CSA certified.



Manufacturer:

Dentsply/Midwest
901 Oakton Street
Des Plaines, IL 60018-1884
(800) 800-7202
(847) 640-4800
(847) 640-6155 FAX

Suggested Retail Price:

Single-Chamber Model: \$15,495

Dual-Chamber Model: \$17,495

Includes:

- Midwest AirTouch Tower with air compressor and supplemental suction system.
- one pound each of 27-micron and 50-micron aluminum oxide powder.
- three autoclavable handpieces.
- five autoclavable nozzles.
- disposable mirrors -three pairs of safety glasses.
- evacuation kit.
- owner's manual including operating instructions and operational videotape.

Government Price:

Single Chamber Model \$10,072.00

Dual Chamber Model \$11,372.00

Includes: Same as above.

ADVANTAGES:

- + Portable self-contained mobile unit is easy to move from operatory to operatory.
- + On-board intra- and extra-oral evacuation.
- + Multiple nozzle angulations and orifice diameters.
- + Logical, organized membrane touchpad controls.
- + Autoclavable handpiece and nozzles. + Multiple air pressure settings.
- + User can easily switch between particle sizes (with dual-chamber model).
- + Membrane filter provides moisture control.
- + Contains a High Efficiency Particulate Air (Hepa) filter to reduce airborne pathogens in evacuation exhaust.
- + Multiple settings for cutting times.
- + Quiet operation [68 dB(A)].
- + Excellent instructional manual and videotape.
- + Easily cleaned or barrier protected.
- + UL listed and CSA certified for electrical safety.

DISADVANTAGES:

- Expensive.
- Powder overspray is messy and limits view of working area.
- Air abrasion offers limited clinical indications over highspeed handpieces for the general dental practice.
- Clinical evaluators reported that 70% to 80% of procedures still required local anesthesia.
- Not effective in removing soft caries.
- Depth and width of tooth preparations are difficult to control.
- Loss of tactile feel during tooth preparation.
- Removing the evacuation assembly for autoclaving can tear suction hose.

SUMMARY AND CONCLUSIONS:

The AirTouch Tower is a well-designed, easy-to-use, mobile air abrasion system with an on-board compressor and auxillary intra- and extra-oral evacuation system. The autoclavable handpiece and nozzles come in three angulations and three orifice diameters for increased procedure flexibility and access to all tooth surfaces. The clinical evaluators reported that the AirTouch functioned well and was easy to learn to use. They also reported that the unit effectively removed tooth structure as advertised but that air abrasion in general had limited indications. They reported only 20% to 30% of the preparations were able to be performed without local anesthesia and of those, none of the patients was completely comfortable. None of the clinical evaluators felt air abrasion should be made routinely available in all Air Force clinics due to its limited indications and high cost. However, the AirTouch Tower was judged favorably by the evaluators and met or exceeded the minimal requirements established by DIS. The **AirTouch Tower Air Abrasion System** is rated **Acceptable** for use by the federal dental services.