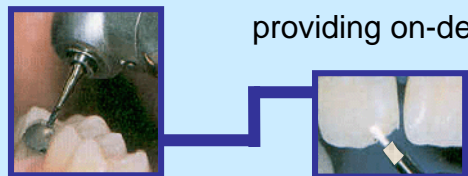


**What is Micro Air Abrasion?** A drill-free technique for removing tooth structure with virtually no loss of healthy tooth material. Operationally, a thin stream of aluminum oxide particles driven to high velocity by compressed air, quickly “blasts” away tooth decay where the smallest bur cannot reach. The **PrepMaster®** is an alternative to conventional high-speed drill preparations, providing on-demand **Micro-Dentistry** capabilities.



## Why Micro Air Abrasion?

Air abrasion does NOT generate tooth vibration, heat, odor, or noise like the dental drill. For patients, this means fillings without the typical pain and discomfort. In fact, the majority of adults and children remain **comfortable** throughout the procedures without requiring an anesthetic, allowing multi-quadrant restorations in a single visit.

*“Simple, fast, and convenient.”*  
Jerry Klein, DDS



Clinically, air abrasion causes less chipping and cracking in adjacent tooth structures. The **PrepMaster®** facilitates immediate treatment of incipient lesions to prevent further decay, even when the decay is still invisible through x-rays. In conjunction with acid etch, composite resin bond strength is increased and micro leakage is decreased.

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## Q Will I be able to use my new PrepMaster® immediately?

**A** Yes, however, as with other new dental equipment, some practice and study of technique is recommended. We particularly emphasize a deliberate case selection during this learning phase.

## Q For what procedures should I use the PrepMaster®?

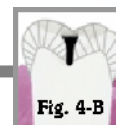
**A** Applications include class I, II\*, III, IV & V preparations, removing composites, porcelain and amalgam stains and composite resin restoration preparations; also improves bonding of laminates, increases cement retention for crowns, improves retention for indirect restorations.

**General Considerations** - Air abrasion is indicated for small and medium incipient carious lesions and surface preparation. Air abrasion is not indicated for large carious lesions or removal of amalgam which can most efficiently be done with rotary instruments. All patients should wear safety glasses to protect their eyes from rebounding particles. A rubber dam (Figs 2-B, 3-B) is the best device to protect soft tissue and reduce the chance of injecting air into the gums or cheek (air emphysema). Matrix band should be used to protect adjacent teeth during inter-proximal preparation.

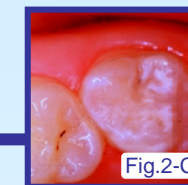
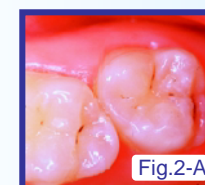
**Pit and Fissure Caries (Class 1 Preps)** - Small pit and fissure lesions are best suited for air abrasion (Figs. 1-A, 1-B, 2-A, 3-A). Since the shape of the abrading stream of the PrepMaster® differs from a rotary instrument, a “top-down” technique for cavity preparation is indicated (Fig. 4). A preparation is developed in its full occlusal dimension before proceeding pulpally instead of first accomplishing the depth of the caries followed by final extensions. This “top-down” approach limits over-preparation of pulpal floors. The tip of the PrepMaster® is kept moving in a ‘brushing’ motion across the selected tooth surface to achieve uniform depth and ‘blow’ away decay. The closer the tip is to the surface, the narrower the preparation will be and the faster the tooth structure will be removed. As caries or stain is removed from a portion of the prep, that area is no longer in need of the abrasive stream. If preparation needs to be wider, start widening prior to attaining the desired depth by angling the tip toward the walls. Attempting to widen a preparation after attaining the desired depth will also deepen the preparation. During initial technique practice, the preparation should be inspected visually and with an explorer every few seconds, since the depth cannot be accurately determined while cutting. When areas of deeper caries are discovered, the tip movement should be concentrated in those areas.

\* **Class 2 preparations** are possible for advanced users.  
See [www.GromanInc.com](http://www.GromanInc.com) for more details.

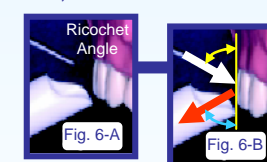
**Class 3 Preparations** - Small class 3 carious lesions can be prepared with air abrasion. Rubber dam isolation is preferred to reduce the chance for soft tissue damage and air emphysema. Rubber dam material is placed inter-proximally to protect the adjacent tooth from secondary abrasion (Fig. 5). A wooden wedge will help hold the small piece of protective dam in place if the contact is open.



**Class 4 Preparations** - The removal of class 4 composite restorations can be easily accomplished with the PrepMaster®. Protect soft tissue and adjacent teeth with rubber dam. Due to the hardness of the composite, it will air abrade well. Especially on anterior teeth, positioning of the high speed evacuator tips close to the preparation and at the powder ricochet angle (Fig. 6) will reduce overspray. Use of air abrasion on anterior teeth requires close attention to evacuation techniques.



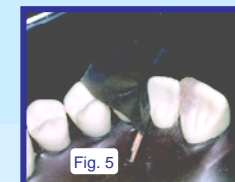
**Class 5 Preparations** - Class 5 preparations require the protections of the gingival tissues either with a rubber dam or Zekrya Gingival Protectors (Fig. 7). With the aid of Zekrya Gingival Protectors or rubber dam and rubber dam clamp, the gingiva may also be retracted exposing the lesion. Do not direct the air stream towards gingival tissues or apically along the root surface of the tooth. Due to the thinness of enamel in the cervical area, accelerated removal of dentin is possible. Stop frequently to inspect the preparation's depth. After removal of caries, acid etch and bond normally.



**Restoring Narrow Preps** - Since air abrasion preparations are often small and narrow (Figs. 2-B, 3-B), a flowable composite is indicated (Figs. 2-C, 3-C). Care should be taken to avoid air bubbles trapped in the flowable composite or preparation. Restore these narrow preparations from the bottom up by placing the composite tip or canula at the bottom of the preparation and slowly fill the preparation. Observe the placement of the composite to ensure there are no bubbles trapped in the preparation. If the preparation is so narrow that a tip cannot reach the bottom of the preparation, allow the composite to slowly flow down one wall. In this manner the composite can be observed while it displaces the air in the preparation.

## The PrepMaster® Enables Micro-Dentistry

The PrepMaster® is an **economical** air abrasion system that **empowers** the dental community to take a less invasive, more preventive approach to dentistry. It is now **practical** to build a micro-dentistry centric practice and to provide patients with better care and greater comfort. The reduced need for anesthesia and ability to treat multiple quadrants directly increase your **profitability**. The easy to use **Chairside Protocol Reference Chart**, plus minimal PrepMaster® setup time and no clean-up time increase your dental-team's overall productivity.



## PrepMaster® Empowers

The PrepMaster® is NOT a new air abrasion technology, rather it is a **new delivery system** in a disposable package. The PrepMaster® performance is ‘tuned’ to be usable by dentists who

*“Noticeably less overspray than other air abrasion equipment.”*  
Donald Antonson, DDS MED

are **new** to air abrasion as well as dentists who are **experienced** with air abrasion. Practitioners commonly state that the PrepMaster® creates **minimal** overspray. Due to the improved **comfort** level and speed of air abrasion, it is often the treatment of choice for **children**. Many children treated with the PrepMaster® early on avoid the anxiety that traditional methods may induce.

**Compiled by the Clinical Directors of Groman Inc. Based on User Feedback** - Use of the PrepMaster® follows the same methods and procedures as any other air abrasion product. As with any new technique or product, careful reading of the User Instructions, practice, and CE Programs about Air Abrasion will improve both the patient and operator benefits from this technology.