In nature we can observe the air abrasion effect of disintegration and fragmentation caused by winds with their loads of particles in suspension. The same principle is applied in modern dentistry.
WHAT IS ABRASIVE AIR?

Abrasions is a technique used to remove caries and to prepare the enamel for sealing, reconstruction and periodontal microsurgery.

This excellent technique is based on a jet spray of fine powder that replaces the use of burs.

THE ADVANTAGES OF MICRO-ABRASION

A simple, precise and fast procedure. Micro- abrasion does not generate heat, noise, pressure or vibrations. Does not overheat treated teeth. Minimises the need for anaesthesia. Abrasion is less invasive and preserves more of the surrounding tissue.

Reduces the risk of cracking and chipping teeth that might affect the gold-plating of the reconstruction. Can be used to treat multiple lesions in a single session. Significant reduction in work time with subsequent increase in profitability.
**General Dentistry**
- Preparation of all types of cavities
- Removal of old composite and amalgam fillings and inlays
- Cleaning and preparation of dental surfaces for sealing
- Etching of surfaces for adhesive reconstructions
- Silicating powder preparation (Siljet) of metallic, ceramic, zirconium, aluminium oxide and composite surfaces for repairs
- Microsurgery of periodontal pockets (glass beads)

**Cosmetic Dentistry**
- Removal of surface stains
- Removal of discoloured composite or fractured resin fillings
- Cementation of veneers

**Endodontics**
- Identification of endodontic orifices
- Root canal retreatment with removal of posts
- Endodontic accesses through ceramic crowns
Orthodontics
• Abrasion of the orthodontic bands before applying adhesives or cement
• Removal of composite resins after removing brackets

Prostheses
• Cleaning of the preparation before re-cementation
  • Sandblasting of the metallic surfaces
  • Modelling of the edges of the crown

Paediatric Dentistry
• Reduces the use of diamond burs and minimises the use of anaesthesia

FIELDS OF APPLICATION

Removal of old amalgam filling

Microsurgery of periodontal pockets with glass beads

Cleaning an old fracture for cosmetic reconstruction

Removal of old restoration

Horizontal fracture Frangment sandblasting with MicroEtcher cementation completed
The Prepstart is the answer to this need

The Air Abrasion technology avoids the traumatizing of the Pulp/Dentin System

- No vibration, no water - therefore a minimum of pains and almost no anaesthesia
- Minimum invasive therapies
- Cavity preparation - adhesive power increased for more than 400%
  - Cleaning of cavities
  - Cleaning and removing posts
  - Removal of cement surpluses
- Tunneling preparation under the marginal ridge from the occlusal surface
  - Removing of old composites and preparation of anterior teeth
  - Extremely fast cleaning of crowns, ceramic parts, etc.
  - Preparation of ceramic restauration silanization
  - Removal of incisal pits in anterior teeth
  - Preparation and repair of angle fractures
  - Creation of extra coronal and intracoronal periosplints
  - Repair of composite restaurations
- Alla types extraoral cleaning work, e.g., crowns, brackets, etc.

Powder flow can be adjusted between 4.5 and 7.5 bar
Powder flow cane be adjusted between 0.8 and 4.8 gr/minute
Therefore extremely fast and precise work possible
PrepStart Air Abrasion Cavity Prep Unit
Connection to existing air supplies

**Specification:**
- Portable and Ultra compact Unit
- Extreme working precision
- Crisp on/off control for a precise cut
- Adjustable Flow regulator
- Adjustable pressure control
- 3 Stage Air control
- Availability of multiple tip sizes for rapid cutting at low pressure (patient comfort)
- Pressure setting: 4/8 bar
- Powder size 27 micron

PrepStart includes:
- PrepStart Unit with Foot Pedal
  2KG (16.5 cm W x 140 H x 23 cm L)
- Installation Kit
- Handpiece & Nozzle Kit
  2 Handpieces, .015 & .019 Tips
- Instructions & Technique Manual
- 450 g Aluminum Oxide 27
- 1 year warranty

PowerPlus™
PrepStart Air Pressure Booster

Normally, it is easy to increase the pressure range in your Office by adjusting the controller box on the compressor. If, however, this adjustment is not possible the PowerPlus is the perfect solution.

- Air booster is the easiest and fastest way of providing an upper range of air pressure for maximum performance.
- Totally pneumatic
- With the PowerPlus station you don’t have to touch your compressor
- Styled to be addition to Prepstart or Prepstart H₂O

PrepStart Nozzle

All Nozzle are made on high quality materials, precise, and fully autoclavable

<table>
<thead>
<tr>
<th>Orifice Size</th>
<th>45°</th>
<th>80°</th>
<th>90°</th>
<th>120°</th>
</tr>
</thead>
<tbody>
<tr>
<td>.015</td>
<td>650706</td>
<td>650707*</td>
<td>650708</td>
<td>650709</td>
</tr>
<tr>
<td>.019</td>
<td>670710</td>
<td>650711*</td>
<td>650712</td>
<td>650713</td>
</tr>
<tr>
<td>.019 Straight</td>
<td>670705</td>
<td>650704</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>.026</td>
<td>650714</td>
<td>650715</td>
<td>650716</td>
<td>650717</td>
</tr>
</tbody>
</table>

*Available also a Set of 3 tips
Hydro Abrasion Cavity Prep Unit

The addition of a cone of water mist surrounding the air/abrasive stream captures almost all of the dust! Cutting results continue to be optimal. Use of warm water further enhances patient comfort. Water mist starts & stops instantly with air/abrasive flow.

**Specification:**
- Captures almost all dust
- Warm water increases patient comfort
- No water connection, water is self contained
- On-Off water switch
- Adjustable water flow
- Air connection only to PrepStart foot pedal line

**PrepStart H₂O tip**
in incorporate carbide orifices for long life. Orifice size .019 – 80°

**H₂O Hydro Abrasion Unit Accessory**

**To transform your Prepstart unit in a Prepstart H₂O**
- Update Prepstart in approximately 5 minutes
- Offer to the Prepstart the benefit of Hydro abrasion

**Specification:**
- H₂O installed on new PrepStart top cover
- Handpiece with .019 inch nozzle
- All tubing & connections
- Instruction manual
- 1 year warranty

**H₂O TECHNIQUE**

**Procedure Guide**

Patient presents a failed restoration with recurrent decay on DEJ surfaces as confirmed by DIAGN-dent*

PrepStart H₂O creates prep without anesthesia.

Water spray surrounds aluminum oxide to control powder spray. Cutting action is not affected.

Completed preparation

Composite shade A-1 is used for final restoration

* Not a trademark of Danville Materials
The MICROETCHERS
The INTRAORAL and EXTRAORAL Sandblaster

- Precision micro roughening
- Pit and fissure preparation
- Tough stain removal from grooves
- Crown, bridges, and posts and other restorations roughened for maximum bond
- Existing composite, porcelain and amalgam can be etched intra orally
- Siljet powder application
- Intraoral porcelain repair and acrylic re-facing
- Denture repairs
- Silanization of metals, composites and other surfaces for maximum bond
- Using GLASS BEADS the unit can also be used for TOOTH CLEANING
- Widely used in ORTHODONTICS for bond, bracket roughening, and cement removal for reuse

Microetcher CD connects to all major turbines, such as KAVO, Sirona, Bien-Air, NSK, W&E

CD works at turbine air pressure of 2.5 - 3.8 bar

Microetchers II and IIA work at compressor air pressure of 5-7 bar

Model CD and IIA have a slim profile patented nozzle fully autoclavable
MicroEtcher™ CD

Intraoral Sandblaster

The most valuable tool for dentistry is now even more versatile!
A custom disconnected at the rear of the MicroEtcher CD, allows you to plug the unit directly into your Kavo, Sirona or Bien-Air handpiece quick connector.

Features:
- MicroEtcher CD handpiece
- Fully Autoclavable (except jar)
- 360° rotatable and removable nozzle
- Slim Profile nozzle offers better intraoral usability
- Use 50 micron ALOX only and GLASS BEADS
- 8 - 12 gr / Minute powder use

Replacement nozzle for Microetcher CD, IIA, II

Nozzles to be replaced every 1-3 months according frequency of usage

MicroEtcher CD for Kavo
Reference 650100

MicroEtcher CD for Sirona
Reference 650101

MicroEtcher CD for Bien-Air
Reference 650102

Noozle diameter 1,2 mm
Reference 650108 (standard)

Noozle diameter 0,8 mm
Reference 650106 (pit&fissure)

Noozle diameter 1,2 mm
Reference 650107 (slim profile)
MicroEtcher™ IIA

**Intraoral Sandblaster**

The MicroEtcher IIA is recognized as one of the most valuable tools for dentistry. The MicroEtcher provides precise surface micro-roughening, improving bond strength up to 400%. Surface area and surface reactivity is dramatically increased for maximum bond. Sandblasting is fast and easy with most surface roughening procedures requiring only a few seconds. It offers all stainless construction and replaceable carbide tip. Now with a spill resistant abrasive filter.

**Features:**
- MicroEtcher IIA handpiece
- Fully Autoclavable (except jar)
- 360° rotatable and removable nozzle
- Slim Profile nozzle offers better intraoral usability
- Use 50 micron ALOX only and GLASS BEADS
- 8 - 12 gr / Minute powder use

MicroEtcher™ II

**Intraoral Sandblaster**

All the performance and application offered by the model IIA. Only the nozzle is autoclavable. All stainless construction. Replaceable carbide tip. Now with a permanently affixed jar lid and spill resistant abrasive filter.

**Connections for MicroEtcher IIA/II**

- 650502
- 650501
- 650504
- 650505

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**MicroEtcher IIA**
Reference 650500

**Filter IIA Jar cap 10 pk**
Reference 650109

**MicroEtcher II**
Reference 650503

**Handpiece Adapter Kavo Style**
Reference 650502

**Quick disconnect Kit**
Reference 650501

**Quick disconnect station**
Reference 650504

**Quick disconnect (for laboratory)**
Reference 650505
The DUST CABINETS

Both, MICROcab+ and MACROcab+ are indispensable for the use in AIR ABRASION TECHNOLOGY.

• They differ in size only, not in performance
• They are built in suction filter systems - depending on the frequency of use they need to be cleaned regularly
• The Dust Cabinets are good and efficient for all type of Extra oral use of Prepstarts and MicroEtchers for sandblasting, handpiece grinding, etc.
• Depending on the frequency of use, also the WINDOWS need to be replaced regularly.
• Both, MICROcab+ and MACROcab+ have full hand access into the interior chamber through hand guards
• Acrylic temporaries and stone dies can also easily be trimmed in Dust Cabinets

Macrocab Plus (dim. 32x27xH20) Reference 650400
10 crystal shield replacement Reference 650405
Filter replacement Reference 650402
Handgards Reference 650404

Microcab Plus (dim. 22x27xH20) Reference 650600
10 crystal shield replacement Reference 650605
Filter replacement Reference 650602
Handgards Reference 650607
Wall Mount 220volt Reference 650606
Dental Surface Silicating Powder for cementation and repair

Siljet is a bonding enhancement air abrasive powder. Siljet allows effective bonding and repair of ceramic, composite, zirconia and metal restorations. It is used in both chairside and intraorally. Powder is applied with a Microetcher, or similar device.

Kit includes 40 g of Siljet powder, 2 each syringes of composite opaquer, 10 ml perhydrolized saline, 10 ml of enamel bonding agent, needle tips, Microbrushes and a dispensing well.

**Siljet Kit per intraoral restauration**
Reference 650300

**Siljet powder refill 3x40g**
Reference 650301

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**PORCELAIN REPAIR**

**Procedure Guide**

1. Place a generous bevel on the remaining porcelain.
2. Siljet the fractured porcelain, exposed metal and ceramic layers. 40-45 psi air pressure is optimal.
3. Entire surface to be repaired should exhibit a silica coating.
4. Generous air spray is applied to blow off alumina particles. Silica will remain attached to the surface.
5. S-Bond silane primer is applied in a thin layer to all Siljet treated surfaces.
6. After 30 seconds dwell time, dry the silanated surface with a water free air stream.
7. Accolade OP Mask can now be applied directly from the syringe via needle in a very thin layer to block any grey or yellow metal that may be exposed. Light cure at a minimum of 600 mwatt for 30 seconds.
8. E-Bond is applied liberally over the entire repair surface. E-Bond is air thinned to assure an even layer.
9. The E-Bond layer is cured with a 600 mwatt minimum curing light for 10 seconds.
10. A paste type composite may now be applied to match the existing fractured porcelain. Finally, finish the restoration by polishing.
**Abrasive Powder and Pearl**

The final performance and result is greatly influenced by the abrasive selected. Danville only sells the highest quality medical grade alpha alumina. Particles are precisely sized and desiccated for an even flow and efficient cut. Poorly graded abrasives can clog equipment or cause intermittent flow, due to the presence of oils, contaminants and moisture content.

<table>
<thead>
<tr>
<th>ABRASIVE</th>
<th>APPLICATION</th>
<th>FOR USE IN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminium Oxide (white) - 27 μm</td>
<td>bonding and cavity preparation, General use, metal, porcelain, acrylic, composite and metal</td>
<td>Prepstart, Prepstart H2O</td>
</tr>
<tr>
<td>Aluminium Oxide (white) - 50 μm</td>
<td>bonding and cavity preparation, General use, metal, porcelain, acrylic, composite and metal</td>
<td>Microetcher Prepstart, Prepstart H2O</td>
</tr>
<tr>
<td>Aluminium Oxide (tan) - 90 μm</td>
<td>bonding and cavity preparation, General use, metal, porcelain, acrylic, composite and metal</td>
<td>Prepstart, Prepstart H2O</td>
</tr>
<tr>
<td>Glass Beads - 90 μm</td>
<td>Not for bonding preparation; creates satin luster on metal surfaces and removes plaque from dentures. Removes extra cement from instrument</td>
<td>Microetcher</td>
</tr>
<tr>
<td>Orthoprophy - 85 μm Soft Alumina</td>
<td>Resin removal. Remove orthodontic, pit and fissure resin, ceramic bracket cement, temporary cement without damage to enamel</td>
<td>Microetcher</td>
</tr>
</tbody>
</table>

**Sand trap intraoral Dust Confinement**

Soft plastic sphere slips onto high speed suction, and with the MicroEtcher tip inserted through the top opening, trap the abrasive.

- Aluminium Oxide 27 μm (white) Reference 650202
- Aluminium Oxide 50 μm (white) Reference 650200
- Aluminium Oxide 90 μm (tan) Reference 650203
- Glass Beads 90 μm Reference 650201
- Orthoprophy 85 μm Soft Alumina Reference 650204

- Sandtrap adaptor for saliva ejector Reference 650103
Aluminium Oxide 27 μm (white) Reference 650202
Aluminium Oxide 50 μm (white) Reference 650200
Glass Beads 90 μm Reference 650201
Aluminium Oxide 90 μm (tan) Reference 650203
Orthoprophy 85 μm Soft Alumina Reference 650204
Sandtrap adaptor for saliva ejector Reference 650103
European Exclusive Distributor

INTERNATIONAL DENTAL SUPPLY
17100 Savona
Via Valletta San Cristoforo, 28/10
Tel. +39 019 862080 - Fax +39 019 2304865
email: info@idsdental.eu
www.idsdental.eu