
CVDentus ultrasonic tips

We are glad to present you **CVDentus**, an innovative solution for dental treatment using ultrasonic equipment. Allied with your ability, **CVDentus** tips will provide the basis for a remarkable quality of work and a superior comfort level for patients.

CVDentus tips are created with a distinctive technology for artificial synthesis of diamond, initially conceived by the company founders for use in aerospace applications, at the National Institute of Space Research, Brazil (INPE).

Now available to dental professionals, **CVDentus** is an exclusive product with exceptional characteristics. The enhancement of the adherence of the CVD diamond to the drill's tip allows its innovative use in ultrasound equipment, supplying a full new set of applications for dentistry.

TECHNICAL OVERVIEW

CVDentus tips are a genuinely new, patented product, a breakthrough technology for use in dental treatment, with a new concept in abrasion and cutting. The use of ultrasound equipment makes it much easier to obtain a localized wear, with low impact and low noise. The effective results of ultrasound tips in dentistry have only become a reality due to the highly adherent diamond layer used for the tip coating, which forms a single diamond stone, as shown in the picture below.

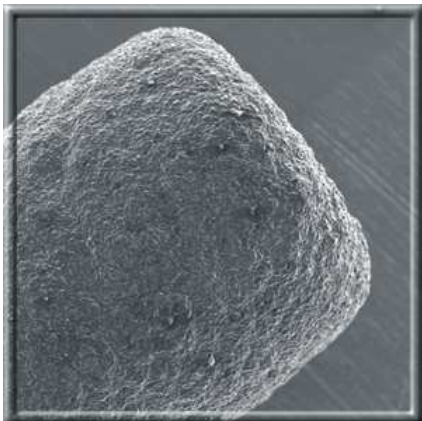


Photo of scanning electron microscopy, with 150 times amplification, shows that the drill tip is entirely in CVD diamond.

CVDentus tips are made in different shapes and sizes, all of them formed by a single diamond stone, with neatly wrinkled surface providing a high cutting efficiency and a long useful life.

The use of a single diamond stone prevents contact of human tissue with the metallic parts of the tip and significantly reduces the retention of dentinal residues, resulting in minimized contamination risks and easier cleaning. Furthermore, the tips' design allows a clear view of the area to be treated.

The tips only cut hard materials and tissues, with no action over soft tissues. One may touch the gum or the tongue without pain or bleeding.

CVDentus tips can be used in most of the ultrasound equipments already available in the market.

RECOMMENDATIONS OF USE

For correct **Product Assembly and Usage**, observe the following steps:

1. The **CVDentus** tips should be assembled to a fixation mandrel adapted to the ultrasound hand piece (a different adapter exists for each ultra-sound equipment). In the manipulation of the mandrel, it is recommended to attach it firmly, to guarantee a good cutting efficiency
2. Introduce the **CVDentus** drill in the mandrel pressing it gently up to its stop
3. Tight the mandrel nut to hold the **CVDentus** drill firmly
4. With the ultrasound equipment in operation, regulate the water flow. A small leak through the tip is enough
5. Keep the diamond tip in contact with the teeth preparation surface with water flow at all time and with small movement around the contact area

Bear in mind that the concept of using CVDentus tip and ultrasound equipment for teeth treatment is **very different from that of using high speed rotation burrs**:

- ✓ For higher work efficiency, always maintain the **CVDentus** drill in contact with the treated area while moving it. While it cuts, the **CVDentus** drill emits a characteristic scratching noise. An important clue is to obtain the maximum noise: **MAXIMIZE THE NOISE TO MAXIMIZE THE CUTTING EFFICIENCY**.
- ✓ Do not press the tip on the teeth surface, even on amalgam or resin surfaces. Just keep it on that without forcing down. **SEVERE PRESSING OF TIP MAY CAUSE IT TO CRASH**.
- ✓ Higher cutting efficiency is obtained with the tip perpendicular to the surface. The frontal and back surfaces are also efficient. The lateral cutting is less effective. This is related to the ultrasonic vibration direction.

Overall comments:

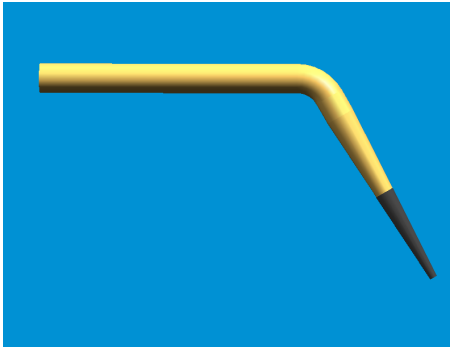
- ✓ The **CVDentus** tips only cut hard materials and tissues, with no action over soft tissues. One may touch the gum or the tongue without pain or bleeding. This characteristic makes the **CVDentus** tips especially suitable for sub gingival cavity preparation.
- ✓ The **CVDentus** tips can be used to wear away enamel and dentine, to remove amalgamates, to wear away resins and other restoration materials, without suffering appreciable wear. They can be used routinely for a long period.
- ✓ Due to the properties of the abrasion surface of the **CVDentus** drill and the ultrasound action the cutting is constant and durable, without the need to force the tip against the tooth. The application of a very light pressure allows an efficient ultrasound cutting.
- ✓ The procedure of cleaning and sterilization of the CVDentus tips can follow the routine of the clinic, without any loss of its characteristics.
- ✓ Sterilization is always necessary before using.

PRODUCT IMPROVEMENT

CVDentus is an innovative product in constant improvement. Your comments and suggestions are very much appreciated. Please email us your suggestion: cvdentus@uol.com.br

AVAILABLE MODELS AND KEY RECOMMENDATIONS

- The power information is referred as a percentage of the maximum ultrasonic power (P_{max}) of the ultrasonic dental scaler. Respecting this upper limit power is a key factor for a long life of the diamond tip.
- All Tips are 19 mm long and 1.2 mm base diameter. Key Tip dimension refers to lowest diameter of the tip. Dimensions in parenthesis refer to diameter and length of the active part of the tip.
- Cutting tips are in silver, and finishing tips are in gold.



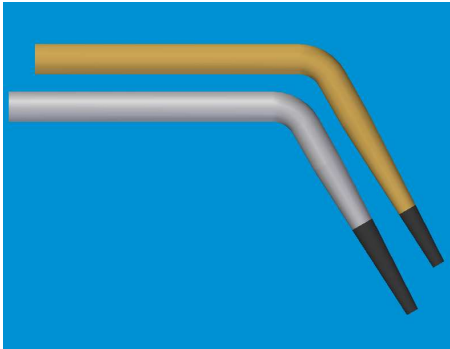
Cone tip 0.3 mm

6.1107 (0.3 x 4.0 mm)

Power: 25% of P_{max}

Recommendations:

- Preparation of pits and fissures with incipient lesions
- Finishing of compound resin
- Removal of excess restoration materials in inter-papila, supra and sub-gingival regions
- Endodontic location
- Pediatric use



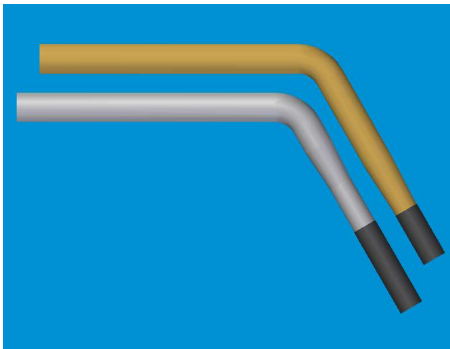
Cone tip 0.5 mm

6.1114 (0.5 x 2.5 mm) and 8.1117 (0.5 x 4.0 mm)

Power: 60% of P_{max}

Recommendations:

- Preparation of pits in more developed lesions
- Beveling occlusion adjust
- Removal of old restorations (amalgam and resin)
- Removal of tartar and stains, supra or sub gingival
- Gingival peeling



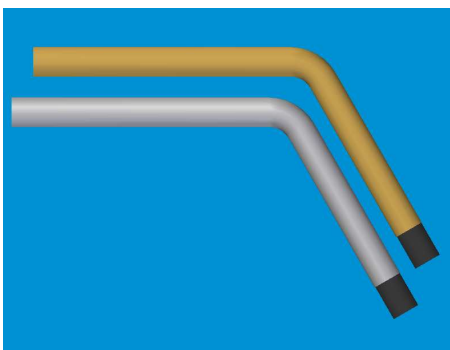
Cylinder tip 1 mm

6.2134 (1.0 x 2.5 mm) and 8.2137 (1.0 x 4.0 mm)

Power: 60% of P_{max}

Recommendations:

- Extensive preparations
- Posterior preparations
- Beveling
- Angular preparations
- Preparations which need parallelism



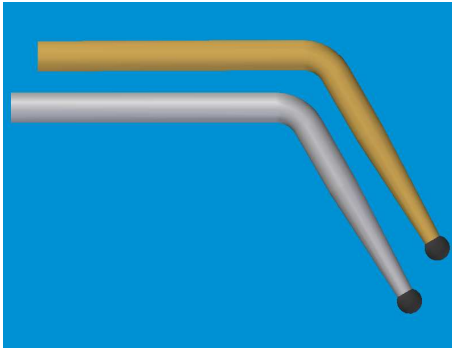
Cylinder tip 1.2 mm

6.2142 and 8.2142 (1.2 x 1.5 mm)

Power: 80% of P_{max}

Recommendations:

- Extended preparations
- Mechanical retentions
- Angular preparations
- Removal of amalgam and temporary cement
- Deep penetration to form grooves (Gingival Peeling)



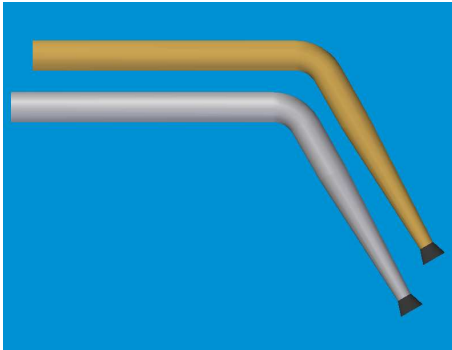
Ball tip 1 mm

6.3231 and 8.3231 (1.0 x 1.0 mm)

Power: 60% of P_{max} .

Recommendations:

- Access to anterior teeth
- Preparation in proximal cavities
- Tunnel preparations
- Papillary contour during gingival peeling.



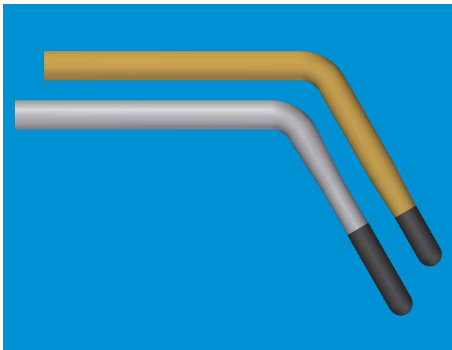
Inverted cone tip 1 mm

6.4131 and 8.4131 (1.0 x 0.8 mm)

Power: 60% of P_{max} .

Recommendations:

- Micro-mechanical retentions
- Preparation in regions of de-mineralized enamel
- Removal of old restorations
- Removal of temporary cement
- Pediatric use.



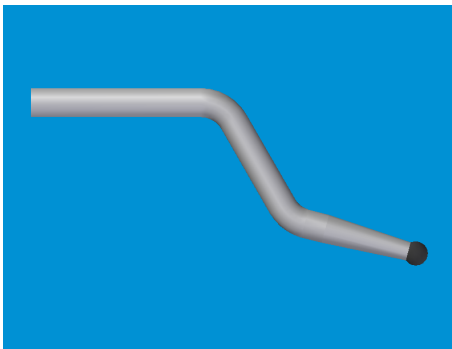
Cylinder tip with round end 1 mm

6.2234 (1.0 x 2.5 mm) and 8.2237 (1.0 x 4.0 mm)

Power: 60% of P_{max} .

Recommendations:

- Finishing of prosthetic preparations
- Sub-gingival cavities
- Rounded cavities with parallel faces
- Dentistry



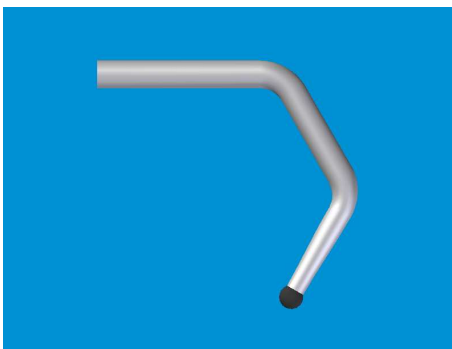
Ball tip with forward bent 1 mm

8.3231-1 (1.0 x 1.0 mm)

Power: 60% of P_{max} .

Recommendations:

- Inter-proximal preparations
- Direct access to the vestibular
- Tunnel preparation with mesial access.



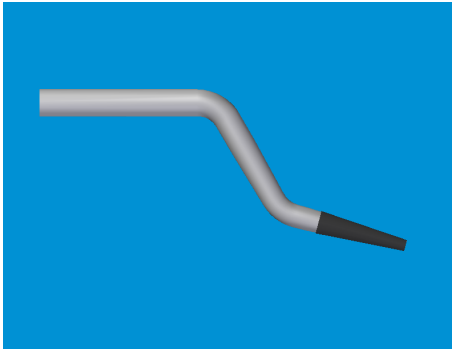
Ball tip with backward bent 1 mm

8.3231-2 (1.0 x 1.0 mm)

Power: 60% of P_{max} .

Recommendations:

- Preparation at the distal of second and third molar
- Tunnel preparation with distal access.



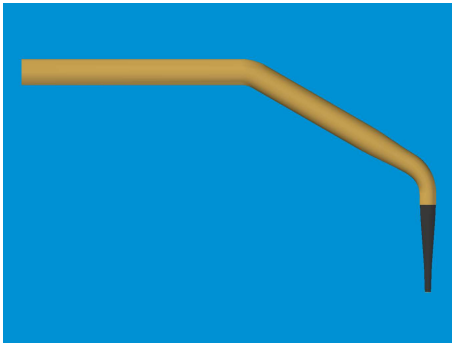
Cone tip with forward bent 0.5 mm

8.1117-1 (0.5 x 4.0 mm)

Power: 60% of P_{max} .

Recommendations:

- Removal of excess restoration material
- Bone perforation
- Root sectioning
- Occlusal cavities



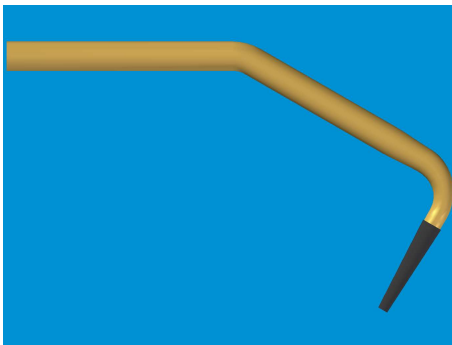
Cone tip with double bents 30°/60° 0.3 mm

6.1107-5 (0.3 x 4.0 mm, 30°/8mm/60°)

Power: 25% of P_{max}

Recommendations:

- Apical surgery



Cone tip with double bents 30°/90° 0.3 mm

6.1107-6 (0.3 x 4.0 mm, 30°/8mm/90°)

Power: 25% of P_{max} .

Recommendations:

- Apical surgery

CVDentus ultrasonic tips by specialty

General Dentistry	Pediatric	Endo	Perio	Prosthetics (finishing only)
6.1107	6.1107	6.1107	6.1107	
6.1114	6.1114	6.1114	6.1114	
6.2134	6.2134			
6.2142			6.2142	
6.3231	6.3231		6.3231	
6.4131	6.4131			
6.2234	6.2234			6.2234
6.1107-5		6.1107-1		
6.1107-6		6.1107-2		
8.1117	8.1117			
8.2137	8.2137			
8.2142				
8.3231	8.3131			
8.4131	8.4131			
8.2237	8.2237			
8.3231-1				
8.3231-2		8.3231-2		
8.1117-1		8.1117-1		

***CV*Dentus ultrasonic tips catalog**

FINISHING TIPS (GOLD)



Φ	0.3	0.5	1.0	1.2	1.0	1.0	1.0
L	4.0	2.5	2.5	1.5	1.0	0.8	2.5
Code	6.1107	6.1114	6.2134	6.2142	6.3231	6.4131	6.2234

CUTTING TIPS (SILVER)



Φ	0.6	1.0	1.2	1.0	1.0	1.0
L	4.0	4.0	1.5	1.0	0.8	4.0
Code	8.1117	8.2137	8.2142	8.3231	8.4131	8.2237

DOUBLE BENT TIPS



Φ	0.3	0.3	1.0	1.0	0.6
L	4.0	4.0	1.0	1.0	4.0
Code	6.1107-5	6.1107-6	8.3231-1	8.3231-2	8.1117-1

CODE DEFINITION – BASE TABLE

X.X X X X-X

