

## TUNGSTEN CARBIDE BURS



Cavity  
Transmetal  
Endo  
Finishing  
Surgery

## Conception

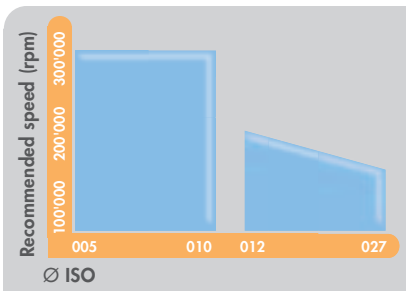
Dentsply Maillefer's tungsten carbide burs are cut from high tenacity, micro grain hard metal. After the cutting edges of the active part have been ground by a precision tool impregnated with fine grained diamond, each bur individually undergoes a strength test.

## Recommended Speed

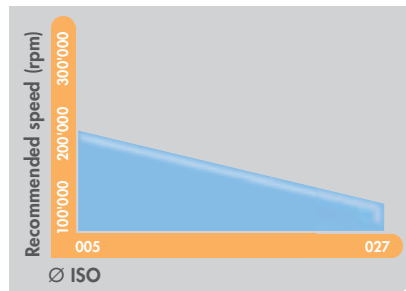
A rotation speed of 300'000 rpm is recommended for burs up to No. ISO 010. For sizes ISO 012 and above, the recommended speed is between 150'000 and 200'000 rpm.

Regardless of their diameter, burs which have an active part that is longer than 8 mm must never be used at speeds in excess of 200'000 rpm.

Tungsten carbide burs are preferably used with a turbine or with a high speed handpiece. With the turbine, minimal pressure guarantees better efficiency of the bur.





Length of active part less than 8 mm



Length of active part greater than 8 mm

## Plain Cut or Cross Cut?

		
Performance	⊙ ⊙	⊙ ⊙ ⊙
Service life	⊙ ⊙ ⊙	⊙ ⊙
Surface quality	⊙ ⊙ ⊙	⊙ ⊙

### Number of teeth :

- ⊙ Cutting burs : 6 to 8 teeth
- ⊙ Finishing burs : 12 to 20 teeth
- ⊙ Polishing burs : more than 20 teeth

**TUNGSTEN CARBIDE CAVITY BURS**

**04-05**

**TUNGSTEN CARBIDE METAL BURS**

**06-07**

**TUNGSTEN CARBIDE AND DIAMOND ENDO BURS**

**08-09**

**TUNGSTEN CARBIDE SURGICAL BURS**

**10-11**

**TUNGSTEN CARBIDE FINISHING BURS**

**12-15**

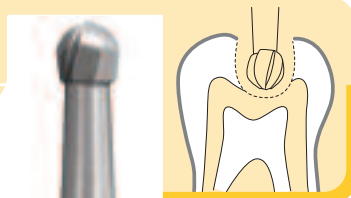
- Finishing work on amalgam and composite fillings
- Cavity finishing and tooth stump preparation

# TUNGSTEN CARBIDE CAVITY BURS

## Round

**E 0123**

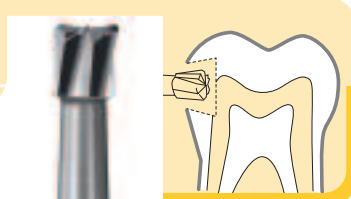
Perforation, penetration, trepanation, excavation, retention.



## Inverted cone

**E 0124**

Retention (class V, ...).

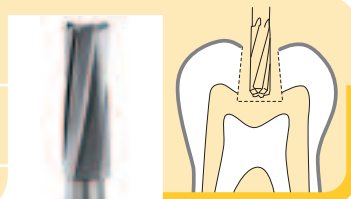


## Cylindrical

Round end **E 0128** plain cut  
**E 0136** cross cut

Flat end **E 0129** plain cut  
**E 0137** cross cut

Cavity preparation with widening or undercut (depending on the inclination of the bur).

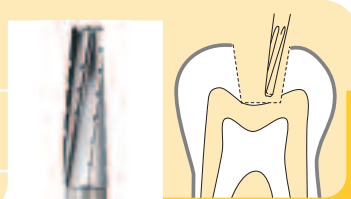


## Conical

Round end **E 0147/E 0149** plain cut  
**E 0148** cross cut

Flat end **E 0130** plain cut  
**E 0138** cross cut

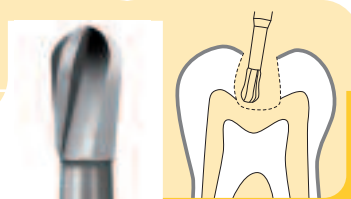
Cavity or crown preparation with widening or undercut (Inlay, Onlay, ...).  
Execution of groove, box, channel.



## Pear

**E 150A – E 150B – E 150C**

Cavity forming with undercut (amalgam filling, subsequent composite filling, ...).



## Excavabur

E 123A

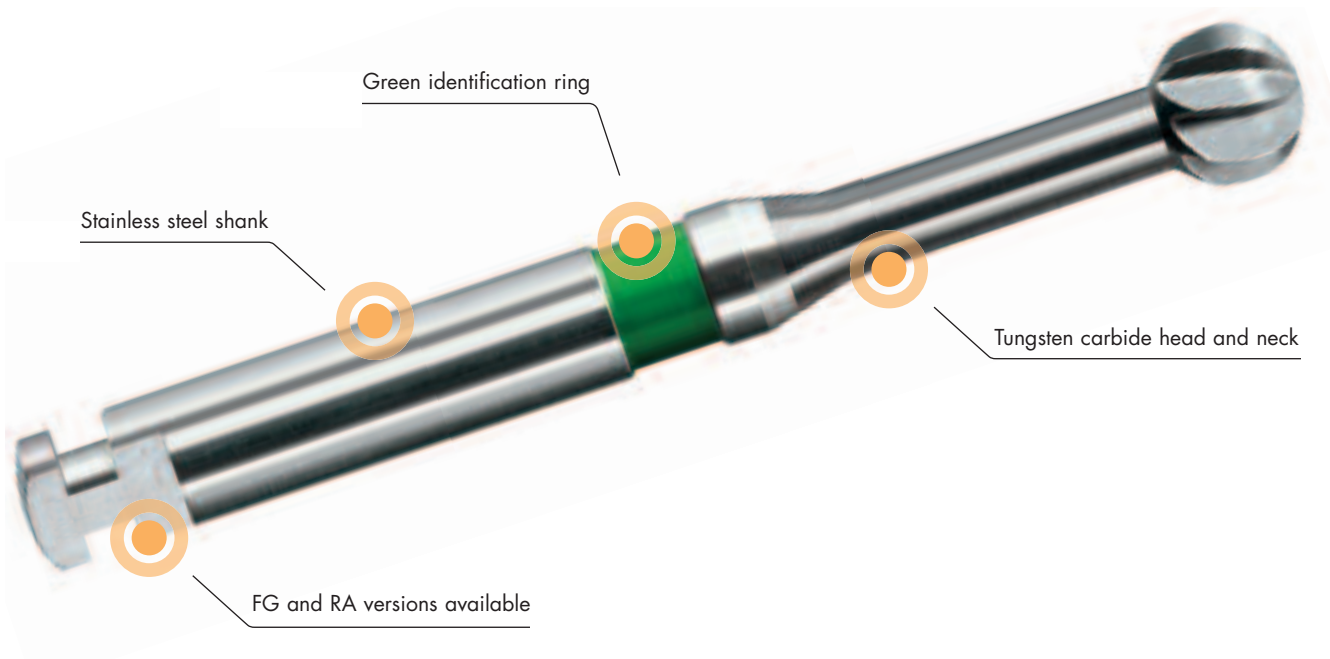
### Applications:

Excavating carious dentine.  
Recommended speed (RA): 500 to 2'000 rpm.



### Characteristics and advantages:

- Specially developed tooth geometry (pronounced cutting angle)
 >> Efficient cutting and good material evacuation
- Sensitive touch transmission when in contact with healthy dentine
 >> Tactile distinction between healthy and carious dentine
- Reduced neck
 >> Good visibility



# TUNGSTEN CARBIDE METAL BURS

## DC Burs

E 0155 – E 0156 – E 0158 – E 0571

### Characteristics:

Due to their tooth pattern geometry, these burs are specially recommended for the removal of amalgam and composite fillings.

### Applications:

Due to their form, they permit:



- The removal of the old amalgam filling and preparation of the cavity to receive the new filling



- The reworking of the occlusal face of the inlay core



E 0570

### Characteristics:

The shape of this bur is recommended for cutting metal and for forming stumps.

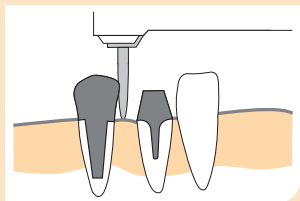
Compared to diamond cutters, this bur:

- wears much less rapidly (no breaking away of diamond grains)
- leaves a smooth surface for accurate impression-taking with no risk of deformation

### Applications:



- Forming inlay core



- Forming of stumps in the mass of a full cast crown



## Transmetal Cylinder

E 0153

### Applications:

Specially recommended for cutting crowns and bridges (gold, nickel-chromium and other non-precious alloys). The active axial part is applied to the surface to be cut with moderate pressure. An alternating up and down movement improves the efficiency of the bur.

Recommended speed: between 120'000 and 180'000 rpm.

### Characteristics:

Spiral drill with extra-fine cross cut guaranteeing effective debris removal (no accumulation), hence preventing heating.



Extra-fine cross cut

## Transmetal Pear

E 0154

### Applications:

The pear Transmetal is recommended for perforating metal by axial pressure. Due to its shape, penetration is easier as friction and heating are less than with a cylindrical bur.

As the lever arm is smaller than with the E 0153 and E 0580, this bur has a higher breaking strength.



Cutting a crown

## Long Neck

E 0205

### Characteristics:

Long neck for enhanced visibility.

### Applications:

- Excavating carious dentine
- Widening and finishing cavity access
- Location of the root orifices



## Endo Access Bur

A 0164

### Characteristics:

Diamond plated conical bur with round tip (grit size 130 µm).

### Applications:

- Opening and preparing the pulp cavity. Cavity access performed within one operation using a single bur on monoradicular teeth and shaping, on pluriradicular teeth, of a conical access adapted to the insertion of the Endo-Z and Diamendo burs



## Diamendo

A 0165

### Characteristics:

Diamond plated conical bur with non-cutting extremity to avoid perforating the floor of the pulp chamber or the root walls.

### Applications:

- Opening and preparing the pulp cavity (access to the root orifices)
- Rapid elimination of any interference before the insertion of canal instruments





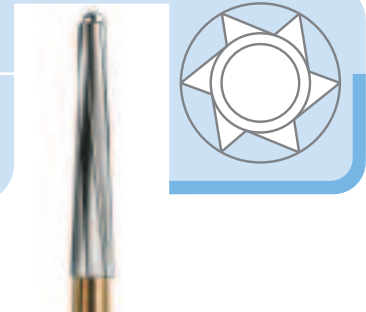
**Endo-Z**

**E 0152**

**Applications:**

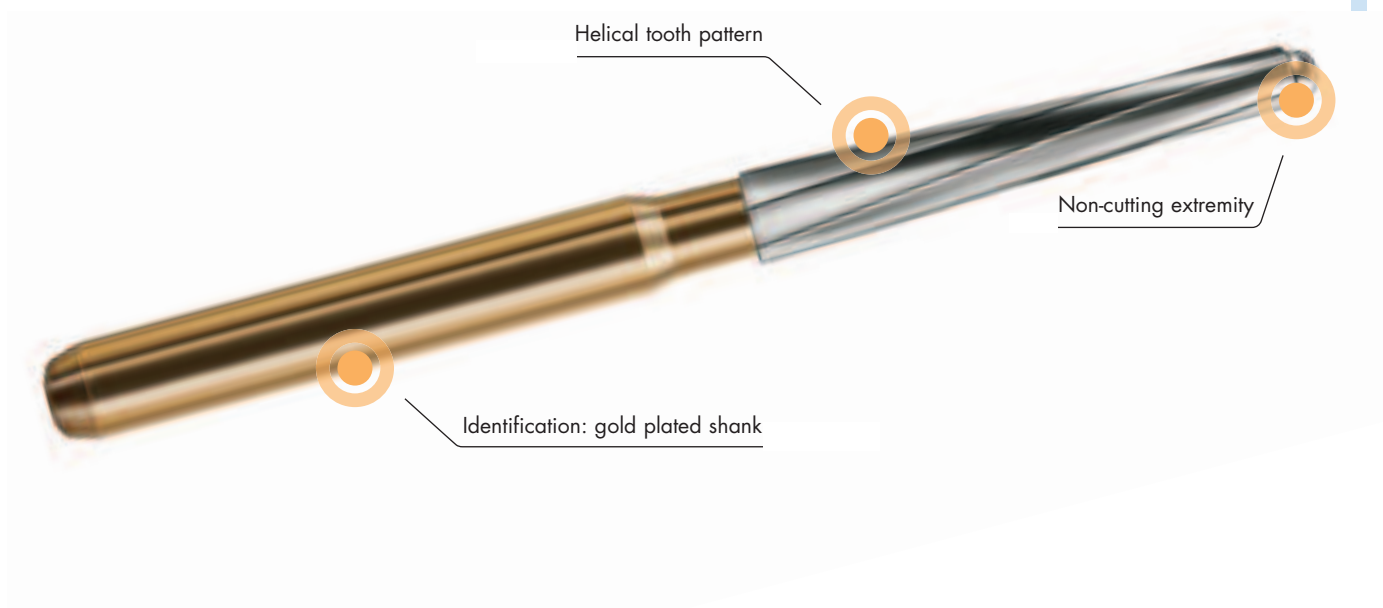
The ideal bur to produce a funnel-shaped opening of the pulp cavity to give access to the root orifices.

Recommended speed: 160'000 to 300'000 rpm.



**Characteristics and advantages:**

- **Non-cutting extremity**      >>    Enlargement of the access cavity with preservation of the original pulp floor anatomy (no risk of perforation – easy location of the canal orifices)
- **Conical shape**                      >>    Quick elimination of all interferences to give direct access to the instruments in the root canal
- **Helical tooth pattern (6 blades)**    >>    Few vibrations
- **2 lengths: 21 and 25mm**            >>    Adapted to all teeth anatomies
- **Gold plated shank**                      >>    Easy identification



## TUNGSTEN CARBIDE SURGICAL BURS

### Day-Z

E 0157

#### Characteristics:

- Active laterally and at the end
- Small dimensions
- Smooth shaft

#### Applications:

First phase of sectioning an impacted wisdom tooth prior to using the Zekrya bur (E 0151); as the smooth shaft of the bur is opposite the folded-back flap, there is no risk of it becoming damaged.

Removal of crowns or old amalgam fillings.



### Aryane-Z

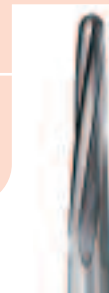
E 0560

#### Characteristics:

- Extended neck; tapered active part, oval and cutting at the tip
- Wide field of vision assists guidance; simple insertion along small impacted parts

#### Applications:

Resection and removal of fine broken roots.



### Bone burs

E 0540 – E 0541 – E 541A  
E 0552 – E 0553

#### Characteristics:

Specially adapted for working on bone structure; highly efficient due to cutting angle and debris removal facility.

#### Applications:

- Bone trepanning by means of their very effective tips
- Removal of impacted wisdom or canine teeth
- Germectomy
- Bone resection, ...



Vestibular incision for extracting an impacted wisdom tooth



Separating roots



**Zekrya**

**E 0151**

**Applications:**

- Sectioning an impacted wisdom tooth prior to its extraction
- Separating roots
- Removing a broken root stump
- Cutting a tooth horizontally at neck level
- Reworking temporary teeth of acrylic material
- Preparing a shoulder on the vestibular side of the tooth

**Caractéristiques:**

- Active laterally (no vibrations on account of its 6 helical cutting edges)
- Active at end by means of its hemispherical, cutting tip



6 helical cutting edges: active laterally

Hemispherical, cutting tip



Finishing work on amalgam and composite fillings

**Axial tooth pattern-Cone** E 0510 – E 0536 – E 0537

**Characteristics:**

These burs with a fine cut and axial tooth pattern have the following advantages over diamond cutters:

- Higher efficiency
- Production of a clean and polished surface

Their non-cutting tips enable the practitioner to work under the gum

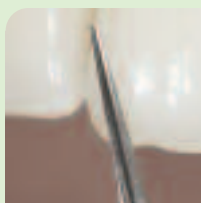
E 0510 > 8 blades to remove the composite surplus.

E 0536 > 16 blades for the finishing.

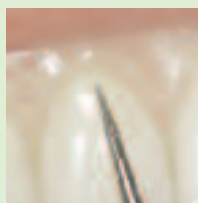
E 0537 > 30 blades to polish.

**Applications:**

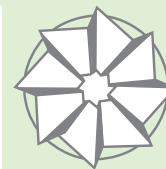
Finishing work on composite fillings.



Classes III and IV



Class V



**Cone round**

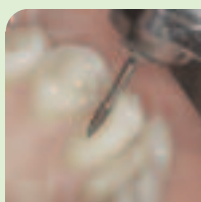
E 0517 – E 0518

**Characteristics:**

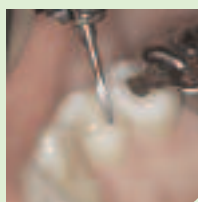
Identical to those described above.

**Applications:**

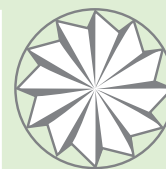
Finishing work on composite fillings (lingual surfaces: E 0517 and occlusal surfaces: E 0518).



Faces linguales



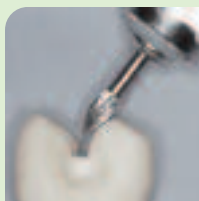
Faces occlusales



**Helical tooth pattern - Oval, flame-shaped burs**

E 0512 – E 0516 – E 0519

**Applications:**



- Executing a bevel



- Polishing an amalgam filling



- Finishing the lingual surface of a composite filling



Cavity finishing and tooth stump preparation

**Cylindrical and tapered burs with helical tooth pattern**

**Characteristics:**

The fine helical tooth pattern of these burs permits:

- Excellent control and high precision when cutting dentine, composite, glass ionomer or amalgam
- Production of a high quality surface finish, ensuring:
  - simple impression-taking without risk of tearing or stretching the impression material
  - effective insertion of the crown or bridge part, hence a good peripheral join and good sealing

They also have the following advantages over diamond cutters:

- Low level of debris accumulation
- Long service life

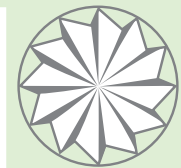
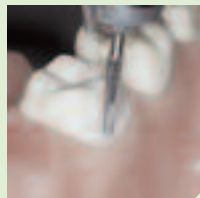
**Rounded burs**

**E 0534**

**Applications:**

The execution of a fillet increases the retention of a low profile crown preparation (compared to a bevel). This bur is therefore recommended for the following operations:

- Production of low profile metal-ceramic crowns
- Execution of bonded facets
- Finishing of composites
- Execution of bevels



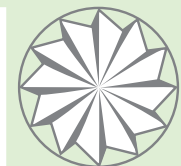
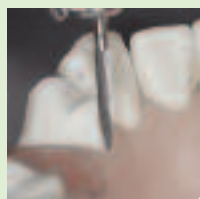
**Flame-shaped burs**

**E 0520**

**Applications:**

This bur is recommended for the following operations:

- Forming tooth stump preparations with a soft finishing line
- Finishing of composites
- Execution of bevels



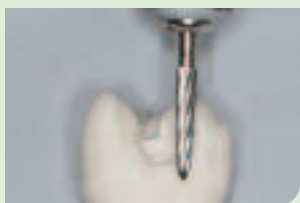
Cavity finishing and tooth stump preparation Characteristics: See page 13

### Conical burs with bevel edge

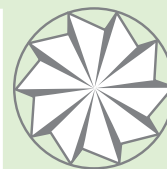
E 0525 – E 0527 – E 0529  
E 0531 – E 0523

**Applications:**

- Finishing neck interfaces (E 0523, long shaft provides good visibility)



- Preparing tooth stumps or cores for metal-ceramic crowns
- Preparing cavity inlay peripheral bevels



### Cylindrical burs with bevel edge

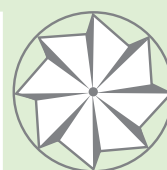
E 0522 – E 0524 – E 0526  
E 0528 – E 0530 – E 0515

**Applications:**

- Preparing tooth stumps or cores for metal-ceramic crowns
- E 0515 has a smooth tip



- Finishing neck interfaces (E 0522, long shaft provides good visibility)



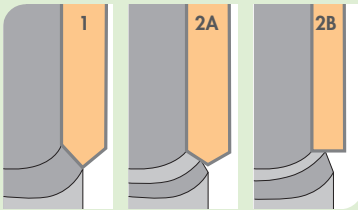
Cavity finishing and tooth stump preparation Characteristics: See page 13

**Cylindrical shouldered burs**

E 0550/1 – E 0550/2A  
E 0550/2B

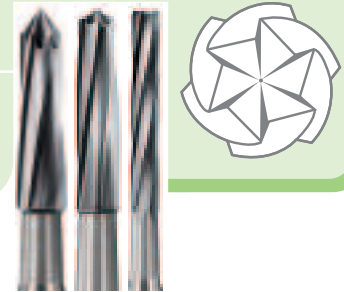
**Applications:**

- Executing a shoulder by the following method:



First phase

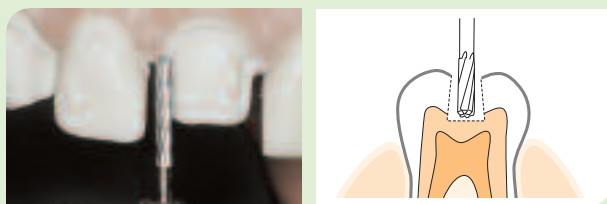
Second phase (2A or 2B)



**Cylindrical burs with rounded shoulder**

E 0521 – E 0532

**Applications:**



- Preparing a shoulder with rounded internal angle
- Cavity forming for an amalgam filling or subsequent composite filling

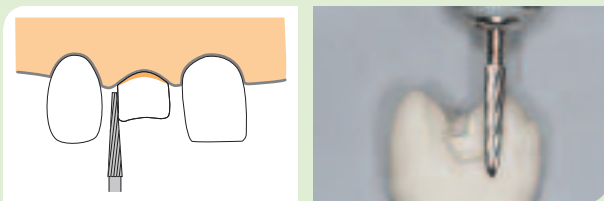


**Conical shouldered burs**

E 0535 – E 0533 – E 0511

**Applications:**

- Executing a box, groove or channel for improving retention



- Execution of preparations with vestibular shoulder
- Forming inlay or onlay cavities



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