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**Dentistry — Number coding system for  
rotary instruments —**

**Part 3:  
Specific characteristics of burs and  
cutters**

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*Art dentaire — Système de codification numérique pour instruments  
rotatifs —*  
(standards.iteh.ai)

*Partie 3: Caractéristiques spécifiques des fraises et fraises  
de laboratoire*

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# Contents

Page

Foreword.....	iv
Introduction .....	v
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions.....	1
4 Code numbers for specific characteristics .....	2
4.1 General .....	2
4.2 Type of tothing .....	2
4.3 Default information .....	3
5 Tothing of burs .....	3
6 Tothing of finishing burs .....	5
7 Tothing of cutters .....	7
7.1 Cutters, very fine.....	7
7.2 Cutters, fine .....	8
7.3 Cutters, medium .....	9
7.4 Cutters, coarse .....	11
7.5 Cutters, very coarse .....	12
8 Tothing of surgical instruments.....	13

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 6360-3 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 4, *Dental instruments*.

ISO 6360 consists of the following parts, under the general title *Dentistry — Number coding system for rotary instruments*:

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- *Part 1: General characteristics*
- *Part 2: Shapes*
- *Part 3: Specific characteristics of burs and cutters*
- *Part 4: Specific characteristics of diamond instruments*
- *Part 6: Specific characteristics of abrasive instruments*
- *Part 7: Specific characteristics of mandrels and special instruments*

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The following part is under preparation:

- *Part 5: Specific characteristics of root-canal instruments*

## Introduction

This part of ISO 6360 is one of a series of International Standards relating to dental rotary instruments. A wide variety of dental rotary instruments, including root-canal instruments, is manufactured throughout the world for use by the dental profession.

ISO 6360 provides a general number coding system for all types of dental rotary instruments, including accessories used in connection with these rotary instruments.

The benefits of this system for dentistry in its entirety will only be derived if the system is widely adopted; manufacturers of dental instruments, as well as the dental trade, are therefore requested to refer to ISO 6360 in their catalogues.

This part of ISO 6360 was prepared in response to a need by the dental trade and industry and the dental profession for a universal system of classification and designation for these instruments. It establishes a comprehensive number coding system suitable for all dental rotary instruments by use of a 15-digit code number identifying general and specific characteristics of instruments or groups of instruments.

The first group of three digits identifies the materials used for the working part of instruments.

The second group of three digits identifies the shanks and handles used for instruments and the overall lengths of instruments.

The third group of three digits identifies the shapes of instruments.

The fourth group of three digits identifies the specific characteristics for groups of instruments.

The fifth group of three digits identifies the nominal diameter of the working part of the instruments.

The code numbers are generic code numbers. They do not provide exact product information. This information is given in the respective product standards for dental rotary instruments.

For the application of the system and for the correct allocation of numbers or their identification it is intended that the user consult ISO 6360-1 and ISO 6360-2 for general information, and in addition one of the subsequent parts (ISO 6360-3 to ISO 6360-7) for further information on specific characteristics of instruments or groups of instruments.

For the allocation of new numbers complying with ISO 6360, an application supported by a description and a drawing should be sent to the secretariat of ISO/TC 106/SC 4, *Dental instruments*, which keeps updated records of all numbers currently allocated. An international group of experts will then decide on an appropriate identification number for the instrument in question, including its specific characteristics. The Secretary will inform the applicant, in due course, of the result and assist him in using the number correctly. The Secretariat of ISO/TC 106/SC 4 can be contacted at:

DIN NADENT  
Alexander-Wellendorff-Str. 2  
75172 Pforzheim  
Germany

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# Dentistry — Number coding system for rotary instruments —

## Part 3: Specific characteristics of burs and cutters

### 1 Scope

This part of ISO 6360 specifies the code numbers for specific characteristics of burs, finishing burs, cutters and surgical instruments, which refer to the type of tothing on the working part of the instrument. This three digit number appears in the locations 10 to 12 of the 15-digit overall number and forms the fourth group of three digits in the 15-digit overall number, the principles of which are explained in ISO 6360-1 and 6360-2.

NOTE In addition to terms for rotary instruments and accessories used in two of the three official ISO languages (English, French and Russian) this part of ISO 6360 gives the equivalent terms in the German language; these are published under the responsibility of the member body for Germany (DIN). However, only the terms given in the official languages can be considered as ISO terms.

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### 2 Normative references (standards.iteh.ai)

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6360-1, *Dentistry — Number coding system for rotary instruments — Part 1: General characteristics*

ISO 6360-2, *Dentistry — Number coding system for rotary instruments — Part 2: Shapes*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6360-1 and the following apply.

#### 3.1

##### **primary tothing**

first tothing

tothing on the working part of the instrument which is the deepest tothing

NOTE The orientation of the helix is either in the left or right direction.

#### 3.2

##### **secondary tothing**

tothing on the working part of the instrument with a tothing depth less than the primary tothing

#### 3.3

##### **crosscut**

helical crosscut

spiral cut

secondary tothing which is formed by a single uninterrupted helical cut

NOTE Crosscuts can affect only the cutting edges of the primary toothing or can be lowered down to the root of the primary toothing or even deeper. The pitch of the helix may be varied to achieve finer or coarser crosscuts. A crosscut might be oriented either in left or right direction.

**3.4**  
**serpentine cut**

special case of the crosscut

**3.5**  
**x-cut**

double cut  
staggered cut  
secondary toothing which crosses the primary toothing

NOTE The angle of the helix is similar to the angle of the primary toothing in most cases. The orientation of the helix is either the same as the orientation of the primary toothing or in the opposite direction.

**3.6**  
**diamond cut**

secondary toothing with a toothing depth similar to the primary toothing

NOTE The angle of the helix is similar (approximately 45°) to the angle of the primary toothing but the orientation is in the opposite direction.

**4 Code numbers for specific characteristics**

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**4.1 General**

The general characteristics of the number coding system for rotary instruments are described in ISO 6360-1. The first and second group of three digits of the 15-digit overall number are specified in ISO 6360-1.

The shapes of rotary instruments and their respective numbers are specified in ISO 6360-2 as the third group.

The fourth group of three digits identifies specific characteristics for groups of instruments.

The specific characteristics of burs, finishing burs, cutters and surgical instruments refer to the type of toothing on the working part of the instruments. This is designated by a three-digit number, which appears in the locations 10 to 12 of the overall 15-digit code number.

The code numbers identify the type of toothing of burs and cutters, including surgical instruments.

**4.2 Type of toothing**

The type of toothing on the working part is based on the following:

- a) type of instrument: bur, finishing bur, cutter, surgical instrument;

EXAMPLE The toothing designations are: bur toothing, finishing bur toothing, cutter toothing, surgery toothing.

- b) type of primary toothing:

- 1) direction of primary toothing: straight, left helicoidal, right helicoidal;
- 2) cutting direction of primary toothing: left cutting, right cutting;
- 3) grade of fineness of primary toothing: very fine, fine, medium, coarse, very coarse;

EXAMPLE The characteristics of the primary toothing are specified in several subsequent designations separated by a comma, e.g. as "left helicoidal, right cutting, fine".



- c) type of secondary tothing and additional characteristics: crosscut, x-cut, diamond cut, saw tothing;
  - 1) direction of crosscut: left crosscut, right crosscut;
  - 2) grade of fineness of secondary tothing: fine, medium, coarse.

EXAMPLE The characteristics of the secondary tothing are specified in one designation without separation by a comma, e.g. as “fine right crosscut”.

“Right” or “left” refers to the direction of the tothing on the working part of the instrument, when viewed from the shaft of the instrument.

The general designation of the geometric form of the rotary instruments goes from the shank to the working part. This is illustrated with the shank on the right side of a figure and the working part on the left side of a figure. Therefore in the following illustrations the designation “right” is on top of the figure, and the designation “left” is on the bottom of the figure.

### 4.3 Default information

If no information is given, use the following default values:

- a) without information on the cutting direction of the primary tothing, the cutting direction is right cutting.
- b) without information on the grade of fineness of the tothing, the grade of fineness of the tothing is medium;
- c) without information on the direction of the crosscut, the direction of the crosscut is right crosscut.

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### 5 Tothing of burs

ISO 6360-3:2005

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Code numbers for the tothing of burs shall be as given in Table 1. The numbers, shown in Table 1, range from 001 to 023.

**Table 1 — Tothing of burs**

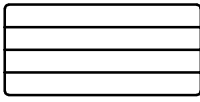
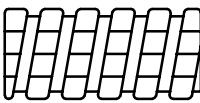
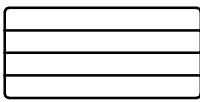
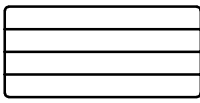
Type of tothing	Designation	Code number
	en: bur tothing; straight fr: denture de fraise; rectiligne de: Bohrerverzahnung; gerade	001
	en: bur tothing; straight; left crosscut fr: denture de fraise; rectiligne; coupe à gauche surtaillée de: Bohrerverzahnung; gerade; linker Querhieb	002
	en: bur tothing; straight, sharp cutting angle fr: denture de fraise; rectiligne, angle pointu à coupe de: Bohrerverzahnung; gerade, spitzer Schneidwinkel	003
	en: bur tothing; straight, blunt cutting angle (for scaling) fr: denture de fraise; rectiligne; angle de coupe raclant de: Bohrerverzahnung; gerade; stumpfer Schneidwinkel	004

Table 1 (continued)



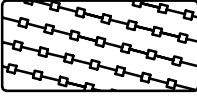
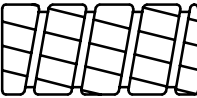


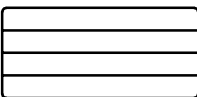


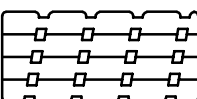
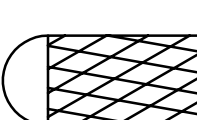
Type of tothing	Designation	Code number
	en: bur tothing; right helicoidal fr: denture de fraise; hélicoïdale à droite de: Bohrerverzahnung; rechts gewunden	006
	en: bur tothing; right helicoidal; left crosscut fr: denture de fraise; hélicoïdale à droite; coupe à gauche surtaillée de: Bohrerverzahnung; rechts gewunden; linker Querhieb	007
	en: bur tothing; right helicoidal; fine left crosscut fr: denture de fraise; hélicoïdale à droite; fine coupe à gauche surtaillée de: Bohrerverzahnung; rechts gewunden; feiner linker Querhieb	008
	en: bur tothing; right helicoidal; sharp cutting angle, left crosscut fr: denture de fraise; hélicoïdale à droite; angle de coupe tranchant, coupe à gauche surtaillée de: Bohrerverzahnung; rechts gewunden; spitzer Schneidwinkel, linker Querhieb	009
	en: bur tothing; left helicoidal fr: denture de fraise; hélicoïdale à gauche de: Bohrerverzahnung; links gewunden	010
	en: bur tothing; left helicoidal; left crosscut fr: denture de fraise; hélicoïdale à gauche; coupe à gauche surtaillée de: Bohrerverzahnung; links gewunden; linker Querhieb	011
	en: bur tothing; straight, left cutting fr: denture de fraise; rectiligne; coupe à gauche de: Bohrerverzahnung; gerade; links schneidend	012
	en: bur tothing; right helicoidal, left cutting fr: denture de fraise; taille hélicoïdale à droite; coupe à gauche de: Bohrerverzahnung; rechts gewunden; links schneidend	013
	en: bur tothing; right helicoidal, left cutting; right crosscut fr: denture de fraise, hélicoïdale à droite, coupe à gauche, coupe à droite surtaillée de: Bohrerverzahnung, rechts gewunden, links schneidend, rechter Querhieb	014
	en: bur tothing; straight; fine left crosscut fr: denture de fraise; rectiligne; fine coupe à gauche surtaillée de: Bohrerverzahnung; gerade; feiner linker Querhieb	015
	en: bur tothing; right helicoidal x-cut, transverse blade at the tip (e.g. for amalgam) fr: denture de fraise; double hélice symétrique, tranchant accentué sur la pointe de l'instrument (par exemple pour amalgame) de: Bohrerverzahnung; Kreuzverzahnung, Bohrschneide (z.B. für Amalgam)	018

Table 1 (continued)

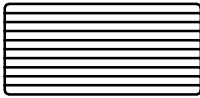

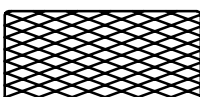
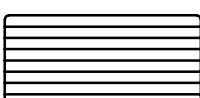
Type of tothing	Designation	Code number
	en: bur tothing; right helicoidal; x-cut fr: denture de fraise; hélicoïdale à droite; double hélice symétrique de: Bohrerverzahnung; rechts gewunden; Kreuzverzahnung	019
	en: bur tothing; cardia fr: denture de fraise; cardia de: Bohrerverzahnung; Cardia	020
	en: end: bur tothing; side: finishing bur tothing fr: bout: denture de fraise; latérale: denture à finir de: Stirn: Bohrerverzahnung; Seite: Finierverzahnung	021
	en: bur tothing; straight; x-cut fr: denture de fraise; rectiligne; double hélice symétrique de: Bohrerverzahnung; gerade; Kreuzverzahnung	022
	en: bur tothing; medium; diamond tothing fr: denture de fraise; moyenne; surtaille de diamant de: Bohrerverzahnung; mittel; Diamantverzahnung	023

## 6 Tothing of finishing burs ISO 6360-3:2005

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Code numbers for the tothing of finishing burs shall be as given in Table 2. The numbers, shown in Table 2, range from 031 to 081.

Table 2 — Tothing of finishing burs

Type of tothing	Designation	Code number
	en: finishing bur tothing; straight, very fine fr: denture à finir; rectiligne, très fine de: Finierverzahnung; gerade, sehr fein	031
	en: finishing bur tothing; right helicoidal, very fine fr: denture à finir; hélicoïdale à droite, très fine de: Finierverzahnung; rechts gewunden, sehr fein	032
	en: finishing bur tothing; very fine; x-cut fr: denture à finir; très fine; double hélice symétrique de: Finierverzahnung; sehr fein; Kreuzverzahnung	034
	en: finishing bur tothing; straight, fine fr: denture à finir; rectiligne, fine de: Finierverzahnung; gerade, fein	041