INTERNATIONAL STANDARD

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# Dentistry — Nominal diameters and designation code numbers for rotary instruments

*Médecine bucco-dentaire — Diamètres nominaux et designation par numéro de code pour instruments rotatifs dentaires*



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# Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 106, *Dentistry*, Subcommittee SC 4, *Dental instruments*.

This fourth edition cancels and replaces the third edition (ISO 2157:1992), which has been technically revised with the following changes:

a) Clause 2, Normative references was added;

b) General reference to ISO 1942 vocabulary was added;

c) Clause 3, Terms and definitions was added.



# Introduction

This International Standard is one of several basic standards for dental rotary instruments and describes a series of nominal diameters for the working parts of dental rotary instruments. It also lists the designations corresponding to those diameters. These designations give the diameters, in tenths of millimetres, in the form of a three-digit number which is used as part of the number code in ISO 6360 (all parts).

# Dentistry — Nominal diameters and designation code numbers for rotary instruments

## 1 Scope

This International Standard specifies the nominal diameters of the working parts of dental rotary instruments, for example burs, laboratory burs, grinding instruments, diamond instruments, mandrels and the corresponding designation.

Excluded are the diameters of endodontic instruments and scaler tips.

## 2 Normative references

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

ISO 3, *Preferred numbers — Series of preferred numbers*

ISO 1942, *Dentistry — Vocabulary*

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

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1942 and ISO 6360-1 and the following apply.

**3.1**
**code number**
series of numbers for specific detail information for dental *rotary instruments* (3.4) or their accessories

[SOURCE: ISO 6360-1:2004, 3.3.]

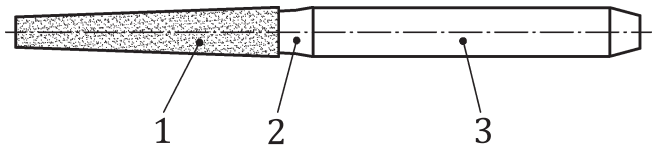
**3.2**
**designation code number**
resulting designation as derived from the *nominal diameter* (3.3)

**3.3**
**nominal diameter**
theoretical value of the diameter

**3.4**
**rotary instrument**
tool used for rotary or oscillating movements, consisting of a working end, neck (if applicable) and shank, which is constructed to fit into a handpiece

Note 1 to entry: This includes continuous rotation or oscillating instruments.

Note 2 to entry: See Figure 1.




**Key**

1 working end
2 neck
3 shank

**Figure 1 — Designation of parts of rotary instrument**

## 4 Nominal diameters and designation

The nominal diameters, in millimetres, and the designation by code number of the working parts of dental rotary instruments shall be selected from those listed in Table 1, Table 2 and Table 3.

In the range of 2,5 mm to 9,5 mm, it is recommended to use the diameters of the R 20 series. This reduces the number of diameters in this area from 21 to 12 (see Table 2).

**Table 1 — Nominal diameters and designation code number, range 0,5 mm to 2,3 mm**

| Nominal diameter<br>mm | Designation code number |
|---|---|
| 0,5 | 005 |
| 0,6 | 006 |
| 0,7 | 007 |
| 0,8 | 008 |
| 0,9 | 009 |
| 1,0 | 010 |
| 1,2 | 012 |
| 1,4 | 014 |
| 1,6 | 016 |
| 1,8 | 018 |
| 2,1 | 021 |
| 2,3 | 023 |

**Table 2 — Nominal diameter and designation code number, range 2,5 mm to 9,5 mm**

| Nominal diameter<br>mm | Preferred sizes ISO 3: R 20 series[a] | Designation code number |
|---|---|---|
| 2,5 | **2,50** | 025 |
| 2,7 | | 027 |
| | **2,80** | 028 |
| 2,9 | | 029 |
| 3,1 | | 031 |
| | **3,15** | 031 |
| 3,3 | | 033 |
| 3,5 | | 035 |
| | **3,55** | 035 |
| 3,7 | | 037 |
| 4,0 | **4,00** | 040 |
| 4,2 | | 042 |
| 4,5 | **4,50** | 045 |
| 4,7 | | 047 |
| 5,0 | **5,00** | 050 |
| 5,5 | | 055 |
| | **5,60** | 056 |
| 6,0 | | 060 |
| | **6,30** | 063 |
| 6,5 | | 065 |
| 7,0 | | 070 |
| | **7,10** | 071 |
| 7,5 | | 075 |
| 8,0 | **8,00** | 080 |
| 8,5 | | 085 |
| 9,0 | **9,00** | 090 |
| 9,5 | | 095 |

[a] It is recommended (in the range of 2,5 mm to 9,5 mm) to substitute the diameters of the R 20 series, in order to reduce the number of diameters in this area from 21 to 12.