INTERNATIONAL STANDARD

ISO 7787-1

Second edition
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Dentistry — Laboratory cutters —

Part 1: Steel laboratory cutters

Médecine bucco-dentaire — Fraises de laboratoire —

Partie 1: Fraises de laboratoire en acier

Reference number
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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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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 second edition cancels and replaces the first edition (ISO 7787-1:1984), which has been technically revised.

ISO 7787 consists of the following parts, under the general title *Dentistry — Laboratory cutters*:

— *Part 1: Steel laboratory cutters*

— *Part 2: Carbide laboratory cutters*

— *Part 3: Tungsten carbide cutters for milling machines*

— *Part 4: Miniature carbide laboratory cutters*

Introduction

This part of ISO 7787 is one of a series of International Standards relating to dental rotary instruments.

The various dimensional and other requirements specified for steel cutters are those considered important to ensure the interchangeability of these instruments.

Dentistry — Laboratory cutters —

Part 1: Steel laboratory cutters

1 Scope

This part of ISO 7787 specifies dimensional and other requirements for the nine most commonly used steel cutters which are predominantly used in the dental laboratory.

Other characteristics of laboratory cutters, for example, spiralled blades or cross-cut, are not covered by this part of ISO 7787.

NOTE These cutters are also used in podiatry.

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 1797[1)], *Dentistry — Shanks for rotary and oscillating instruments*

ISO 1942, *Dentistry — Vocabulary*

ISO 2157, *Dentistry — Nominal diameters and designation code numbers for rotary instruments*

ISO 6360-3, *Dentistry — Number coding system for rotary instruments — Part 3: Specific characteristics of burs and cutters*

ISO 8325, *Dentistry — Test methods for rotary instruments*

3 Terms, definitions and symbols

For the purposes of this document, the terms and definitions given in ISO 1942, ISO 6360-3, and the following apply.

3.1 Terms and definitions

3.1.1
laboratory cutter
cutter designed for use with dental materials in the dental laboratory

3.1.2
dental laboratory
facility where dental technical procedures complementing dental clinical treatment are carried out

[SOURCE: ISO 1942:2009, 2.77]

1) To be published.

3.2 Symbols

For the purposes of this part of ISO 7787, the following symbols apply:

d diameter of the working part, head diameter;

l length of the working part, head length.

4 Material

The shaft and the working part shall be made of steel.

The selection of the type of steel and the treatment given to it shall be left to the discretion of the manufacturer.

5 Dimensions and number of blades

All dimensions are in millimetres.

The dimensions, measured as described in ISO 8325, shall be as specified in Tables 1 to 9 and as shown in Figures 1 to 9.

The shank shall be Type 2 of ISO 1797.

The shank length shall be (38 ± 1) mm.

In this part of ISO 7787, the laboratory cutters are differentiated according to the shape of the head of the laboratory cutters.

5.1 Round (spherical)

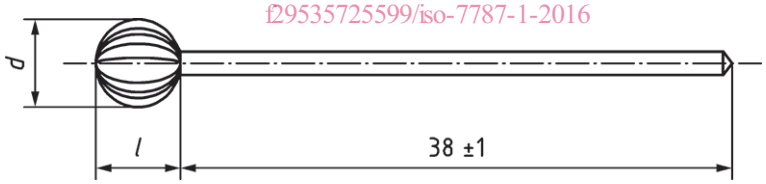

Figure 1 — Round

Table 1 — Round — Dimensions and number of blades

Dimensions in millimetres

Nominal size	*d* +0,15 -0,25	*l* ±0,25	Number of blades min.
040	4	3,7	8
050	5	4,7	10
060	6	5,8	12
070	7	6,8	14
080	8	7,8	16

5.2 Cylindrical, double domed

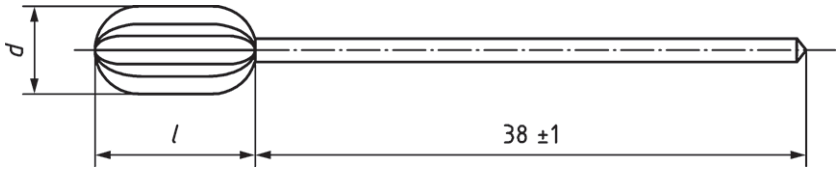

Figure 2 — Cylindrical

Table 2 — Cylindrical — Dimensions and number of blades

Dimensions in millimetres

Nominal size	*d* +0,15 -0,25	*l* ±0,25	Number of blades min.
040	4	9	8
050	5	10	10
060	6	11	12
070	7	12	14
080	8	13	16

5.3 Egg

Figure 3 — Egg

Table 3 — Egg — Dimensions and number of blades

Dimensions in millimetres

Nominal size	*d* +0,15 -0,25	*l* ±0,25	Number of blades min.
040	4	9	8
050	5	10	10
060	6	11	12
070	7	12	14
080	8	13	16

5.4 Oval, transverse

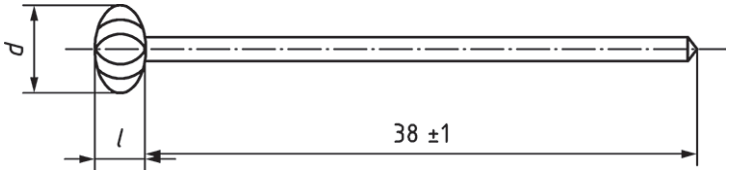

Figure 4 — Oval, transverse