



**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 27787-1:2000

<https://standards.iteh.ai/catalog/standards/sist/dee5f86a-9aea-44f2-b15c-0b6bf734caff/sist-en-27787-1-2000>

EUROPEAN STANDARD

EN 27 787

NORME EUROPEENNE

Part 1

EUROPAISCHE NORM

February 1990

UDC 615.472:616.314

Key words: Dentistry, dental equipment, dental rotary-cutting instruments, burs (dental), steels, specifications, number of teeth, dimensions, shape

### English version

#### Dentistry - Dental rotary instruments - Cutters - Part 1: steel laboratory cutters (ISO 7787-1:1984)

Art dentaire - Instruments rotatifs  
dentaires - Fraises techniques - Partie  
1: Fraises techniques en acier (ISO  
7787-1:1984)

Zahnheilkunde - Zahnärztliche  
rotierende Instrumente - Fräser - Teil  
1: Laborfräser aus Stahl (ISO  
7787-1:1984)

This European Standard was accepted by CEN on 1989-12-20 and is identical to the ISO standard as referred to.

CEN members are bound to comply with the requirements of the CEN/CENELEC Common Rules which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Central Secretariat or to any CEN member. <https://standards.iteh.ai/catalog/standards/sist/dee5f86a-9aea-44f2-b15c-0b6bf734caff/sist-en-27787-1-2000>

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to CEN Central Secretariat has the same status as the official versions.

CEN members are the national standards organizations of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

### CEN

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue Bréderode 2, B-1000 Brussels

(c) CEN 1990 Copyright reserved to all CEN members

Ref. No. EN 27 787-1:1989 E

### Brief History

This draft European Standard has been taken over by CEN/TC 55 "Dental Products" from the work of the International Organization for Standardization (ISO).

The content of this draft European Standard is identical with the International Standard 7787-1 of ISO published in 1984.

The results of the Formal Vote being positive, the CEN Technical Board ratified this European Standard on 1989-12-20.

In accordance with the CEN/CENELEC Common Rules, the following countries are bound to implement this European Standard : Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**ITeH STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 27787-1:2000

<https://standards.iteh.ai/catalog/standards/sist/dee5f86a-9aea-44f2-b15c-0b6bf734caff/sist-en-27787-1-2000>

---

International Standard



7787/1

---

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

---

## Dental rotary instruments — Cutters Part 1 : Steel laboratory cutters

*Instruments rotatifs dentaires — Fraises techniques — Partie 1 : Fraises techniques en acier*

First edition — 1984-12-15

**ITeH STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN 27787-1:2000](https://standards.iteh.ai/catalog/standards/sist/dee5f86a-9aea-44f2-b15c-0b6bf734caff/sist-en-27787-1-2000)

<https://standards.iteh.ai/catalog/standards/sist/dee5f86a-9aea-44f2-b15c-0b6bf734caff/sist-en-27787-1-2000>

---

UDC 616.314 : 615.472-089

Ref. No. ISO 7787/1-1984 (E)

Descriptors : dentistry, dental instruments, dental rotary-cutting instruments, burs (dental), specifications, dimensions, dimensional tolerances.

## 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7787/1 was prepared by Technical Committee ISO/TC 106, *Dentistry*, in collaboration with the following international organization : FDI (International Dental Federation).

SIST EN 27787-1:2000

<https://standards.iteh.ai/catalog/standards/sist/dee5f86a-9aea-44f2-b15c-0b6bf734caff/sist-en-27787-1-2000>

# Dental rotary instruments — Cutters — Part 1 : Steel laboratory cutters

## iTeh STANDARD PREVIEW (standards.iteh.ai)

### 0 Introduction

This International Standard is one of a series of standards relating to dental rotary instruments. It consists of two parts:

Part 1 : Steel laboratory cutters.

Part 2 : Carbide laboratory cutters.

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

Attention is drawn to ISO 6360 which specifies a 15 digit number for the identification of dental rotary instruments of all types.

### 1 Scope and field of application

This part of ISO 7787 specifies the dimensional and other requirements for the nine most commonly used steel cutters<sup>1)</sup> which are predominantly used in the dental laboratory.

Other characteristics of cutters, for example spiralled blades, cross-cut, are not covered by this International Standard. These will be dealt with in a future International Standard.

### 2 References

ISO 1797, *Dental rotary instruments — Shanks.*<sup>2)</sup>

ISO 2157, *Dental rotary instruments — Nominal sizes and designation.*

ISO 2859, *Sampling procedures and tables for inspection by attributes.*

ISO 6360, *Dental rotary instruments — Number coding system.*<sup>3)</sup>

ISO 8325, *Dental rotary instruments — Test methods.*<sup>3)</sup>

### 3 Symbols

$d$  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.

1) Sometimes called laboratory burs.

2) At present at the stage of draft. (Revision of ISO 1797-1976.)

3) At present at the stage of draft.

## ISO 7787/1-1984 (E)

## 5 Dimensions and number of blades

All dimensions are in millimetres.

The dimensions, determined as described in ISO 8325, shall be as specified in the tables and as shown in figures 1 to 9.

The shank shall be type 2 of ISO 1797.

## 5.1 Round head (spherical)

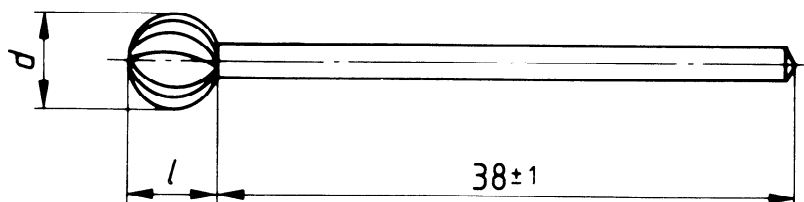


Figure 1

Table 1 — Dimensions and number of blades

Nominal size	$d$ + 0,15 - 0,25	$l$ $\pm 0,25$	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

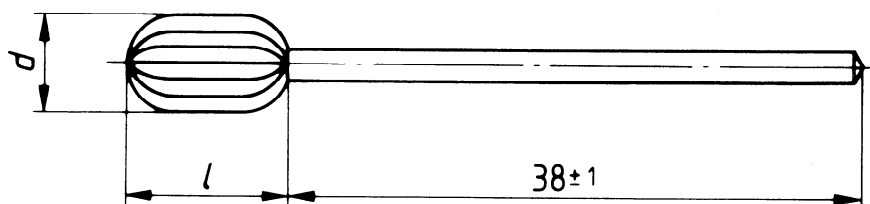


Figure 2

Table 2 — Dimensions and number of blades

Nominal size	$d$ + 0,15 - 0,25	$l$ $\pm 0,25$	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 (longitudinal ellipsoidal)

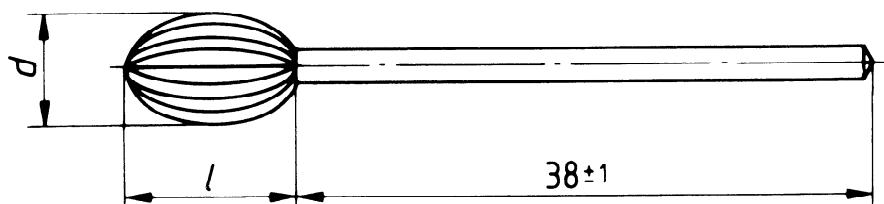


Figure 3

Table 3 – Dimensions and number of blades

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

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

## 5.4 Transverse oval

SIST EN 27787-1:2000

<https://standards.iteh.ai/catalog/standards/sist/dee5f86a-9aea-44f2-b15c-0b6bf734caff/sist-en-27787-1-2000>

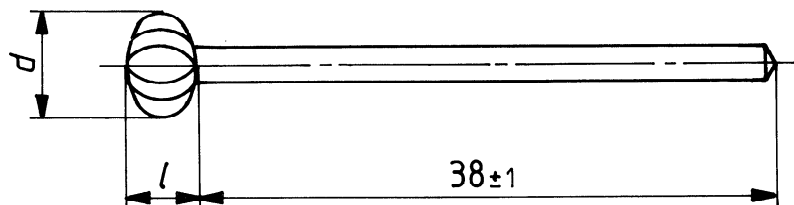


Figure 4

Table 4 – Dimensions and number of blades

Nominal size	$d$ + 0,15 - 0,25	$l$ $\pm 0,25$	Number of blades min.
040	4	2,5	8
050	5	3,0	10
060	6	3,5	12
070	7	4,0	14
080	8	4,5	16