INTERNATIONAL STANDARD

ISO 7786

Second edition
1990-08-01

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Dental rotary instruments — Laboratory abrasive instruments

Instruments rotatifs dentaires — Instruments abrasifs de laboratoire

Reference number
ISO 7786:1990(E)

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.

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.

International Standard ISO 7786 was prepared by Technical Committee ISO/TC 106, *Dentistry*.

This second edition cancels and replaces the first edition (ISO 7786:1984), of which it constitutes a minor revision, incorporating draft Addendum 1 of 1988.

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Introduction

This International Standard is one of a series of standards relating to dental rotary instruments.

The various dimensional and other requirements specified herein are those considered important to ensure the interchangeability of laboratory abrasive instruments.

Attention is drawn to ISO 6360-1 which specifies a 15 digit number for the identification of dental rotary instruments of all types.

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Dental rotary instruments — Laboratory abrasive instruments

1 Scope

This International Standard specifies the dimensional and other requirements for grinding instruments used in the dental laboratory.

Other characteristics of dental abrasive instruments are not covered by this International Standard. These will be dealt with in a future International Standard.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1797:1985, *Dental rotary instruments — Shanks.*

ISO 2157:1984, *Dental rotary instruments — Nominal sizes and designation.*

ISO 2859-1:1989, *Sampling procedures for inspection by attributes — Part 1: Sampling plans indexed by acceptable quality level (AQL) for lot-by-lot inspection.*

ISO 6360-1:1985, *Dental rotary instruments — Number coding system — Part 1: General characteristics.*

ISO 8325:1985, *Dental rotary instruments — Test methods.*

3 Symbols

The following symbols are used in this International Standard:

d diameter of the working part, head diameter.

l_1 length of the working part, head length.

l_2 overall length.

4 Material

The shaft shall be made of steel or other suitable material. The selection of the type of steel and the treatment given to it shall be left to the discretion of the manufacturer. The working part shall be made of abrasive materials. The selection of the type, the bonding and the treatment of the abrasive material shall be left to the discretion of the manufacturer.

5 Dimensions

All dimensions are in millimetres.

The dimensions, determined as described in ISO 8325, shall be as specified in table 1 to table 9 and as shown in figure 1 to figure 9.

The shank shall be type 2 of ISO 1797.

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5.1 Cylindrical

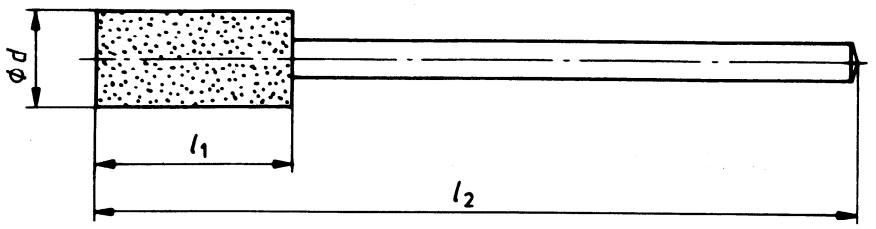

Figure 1

Table 1 — Dimensions

Nominal size	d $^{+0,5}_{0}$	l_1 $^{+1}_{-0,5}$	l_2 ± 3
050	5	12	48
065	6,5	13	50

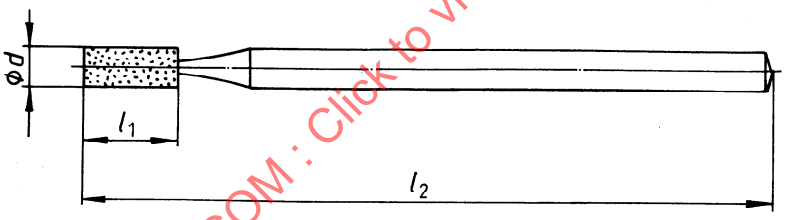

Figure 2

Table 2 — Dimensions

Nominal size	d $^{+0,5}_{0}$	l_1 $^{+1}_{-0,5}$	l_2 ± 3
021	2	6	44
031	3	6	44
040	4	6	44
050	5	6	44

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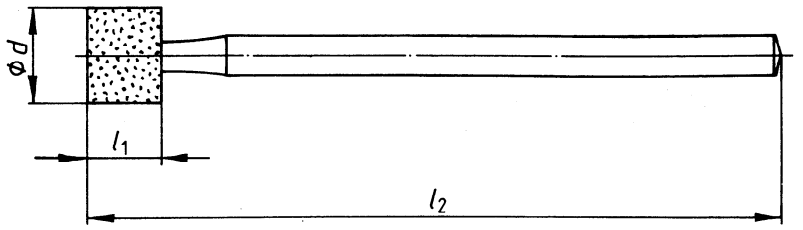
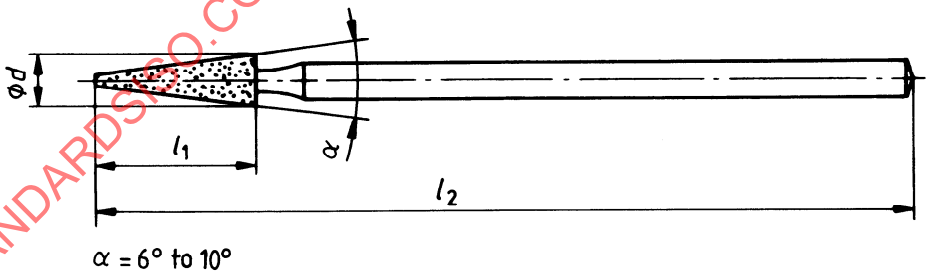


Figure 3

Table 3 — Dimensions

Nominal size	d $^{+0,5}_{0}$	l_1 $^{+1}_{-0,5}$	l_2 ± 3
060	6	3	44
060	6	5	44
100	10	2	44
100	10	3	44
100	10	4	44

5.2 Truncated conical



α = 6° to 10°

Figure 4

Table 4 — Dimensions

Nominal size	d $^{+0,5}_{0}$	l_1 $^{+1}_{-0,5}$	l_2 ± 3
030	3	7	46,5
035	3,5	10,5	53,5

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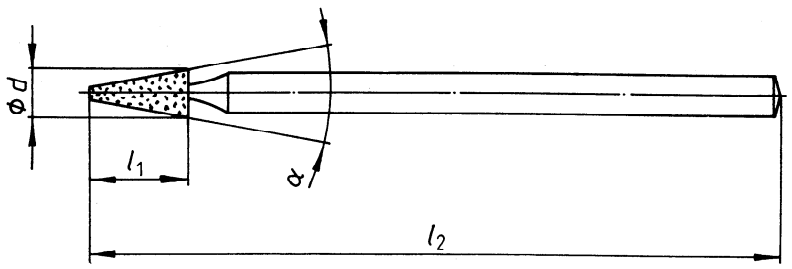

α = 8° to 14°

Figure 5

Table 5 — Dimensions

Nominal size	d $^{+0,5}_{0}$	l_1 $^{+1}_{-0,5}$	l_2 ± 3
021	2	6	44
031	3	6	44
040	4	6	44
050	5	6	44

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5.3 Knife edged

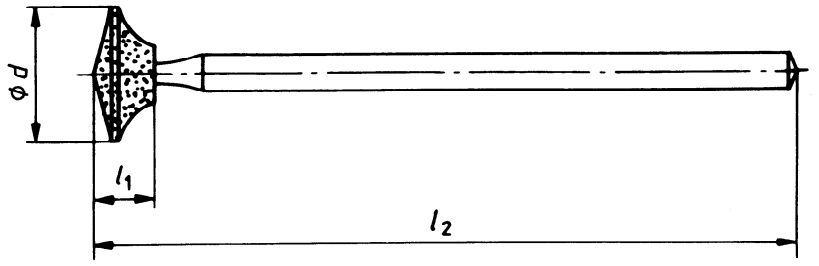

Figure 6

Table 6 — Dimensions

Nominal size	d $^{+0,5}_{0}$	l_1 $^{+0,5}_{0}$	l_2 ± 3
090	9	4	46

5.4 Inverted conical, concave

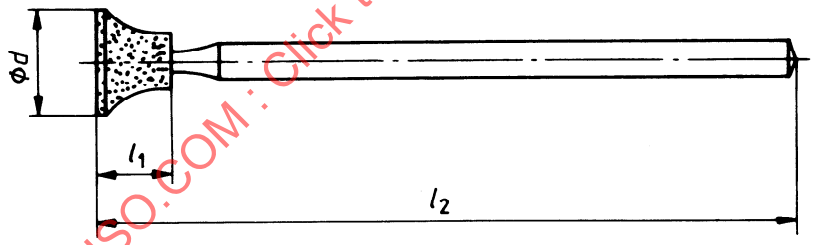

Figure 7

Table 7 — Dimensions

Nominal size	d $^{+0,5}_{0}$	l_1 $^{+0,5}_{0}$	l_2 ± 3
070	7	5	46

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