

INTERNATIONAL STANDARD

ISO
7785-1

Second edition
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Dental handpieces —

Part 1: High-speed air turbine handpieces

Pièces à main dentaires —

Partie 1: Pièces à main à turbines à air comprimé pour grandes vitesses



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 7785-1 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 4, *Dental instruments*.

This second edition cancels and replaces the first edition (ISO 7785-1:1992), which has been technically revised.

ISO 7785 consists of the following parts, under the general title *Dental handpieces*.

- *Part 1: High-speed air turbine handpieces*
- *Part 2: Straight and geared angle handpieces*

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Introduction

This part of ISO 7785 takes priority over IEC 601-1:1988 as specified in the individual clauses of this part of ISO 7785.

Only the specifications laid down in this part of ISO 7785 are applicable.

This part of ISO 7785 refers to IEC 601-1:1988, the basic standard on safety of medical electrical equipment wherever relevant, by stating the respective clause numbers of IEC 601-1:1988.

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Dental handpieces —

Part 1:

High-speed air turbine handpieces

1 Scope

This part of ISO 7785 specifies requirements and test methods for the application of high-speed air turbine dental handpieces (hereafter termed handpieces) to patients. It also contains specifications on manufacturer's instructions, packaging and marking.

This part of ISO 7785 is not applicable to single-use dental handpieces.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 7785. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 7785 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 554:1976,	Standard atmospheres for conditioning and/or testing - Specifications.
ISO 1797-1:1992,	Dental rotary instruments - Shanks - Part 1: Shanks made of metals.
ISO 1942-3:1989,	Dental vocabulary - Part 3: Dental instruments.
ISO 3696:1987,	Water for analytical laboratory use - Specification and test methods.
ISO 6507-2:1983,	Metallic materials - Hardness test - Vickers test - Part 2: HV 0,2 to less than HV 5.
ISO 9168:1991,	Dental handpieces - Hose connectors.
ISO 9687: 1993,	Dental equipment - Graphical symbols.
ISO 13402:1995,	Surgical and dental hand instruments - Determination of resistance against autoclaving, corrosion and thermal exposure.
IEC 651:1979,	Sound level meters.
IEC 601-1:1988,	Medical electrical equipment - Part 1: General requirements for safety.

3 Definitions

For the purposes of this part of ISO 7785, the definitions given in ISO 1942-3 apply.

4 Classification

High-speed air turbine handpieces are dental handpieces with a minimum free-running speed of 160 000 min⁻¹ (r/min).

Dental handpieces are classified according to their gear ratio (see table 1).

High-speed air turbine handpieces are usually type 2 handpieces.

Table 1 - Gear ratio

Type	Gear ratio
1	1 : < 1
2	1 : 1
3	1 : > 1