

# INTERNATIONAL STANDARD

**ISO**  
**13295**

First edition  
1994-12-15

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## Dental rotary instruments — Mandrels

*Instruments rotatifs dentaires — Mandrins*  
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ISO 13295:1994

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Reference number  
ISO 13295:1994(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 13295 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 4, *Dental instruments*.

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# Dental rotary instruments — Mandrels

## 1 Scope

This International Standard specifies requirements, packaging and marking for mandrels suitable for holding mounted and unmounted dental discs and polishers.

Mandrels may be used for dental rotary instruments of different working diameters.

For mandrels with mounted discs and polishers, the specification for the thread and screw do not apply.

Attention is drawn to ISO 6360-1 and ISO 6360-2 which specify a 15-digit number for the identification of dental rotary instruments of all types.

## 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 1797-1:1992, *Dental rotary instruments — Shanks — Part 1: Shanks made of metals*.

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

ISO 6360-2:1986, *Dental rotary instruments — Number coding system — Part 2: Shape and specific characteristics*.

## 3 Classification

Mandrels are classified into the following two types, according to their application:

- Type 1: mandrels for standard application;
- Type 2: mandrels for heavy-duty application.

## 4 Requirements

### 4.1 Material

Mandrels and screws shall be made of a material with a yield strength of at least 600 N/mm<sup>2</sup>. Type and treatment shall be at the discretion of the manufacturer.

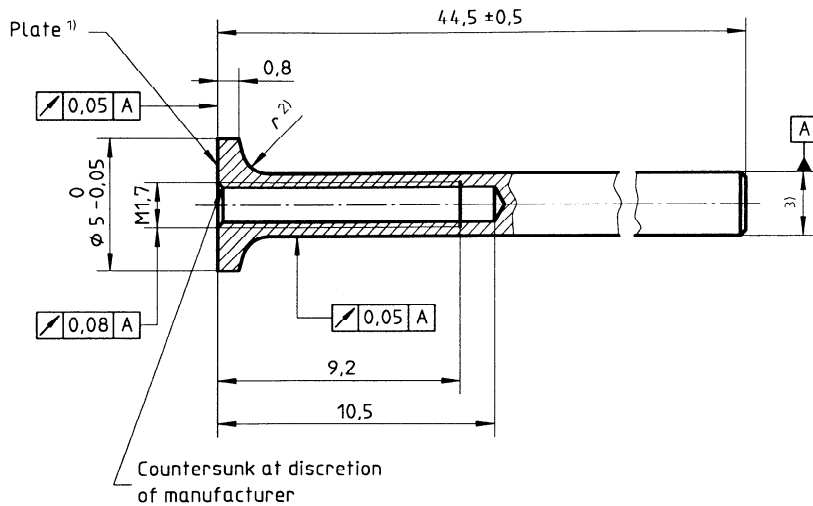
Testing shall be carried out in accordance with 5.1.

### 4.2 Dimensions

The dimensions and tolerances are given in millimetres. They shall be as shown in figures 1 to 3.

This International Standard specifies only mandrels with a diameter of the plate and screw head of 5 mm. Other diameters are possible [see clause 6 f)].

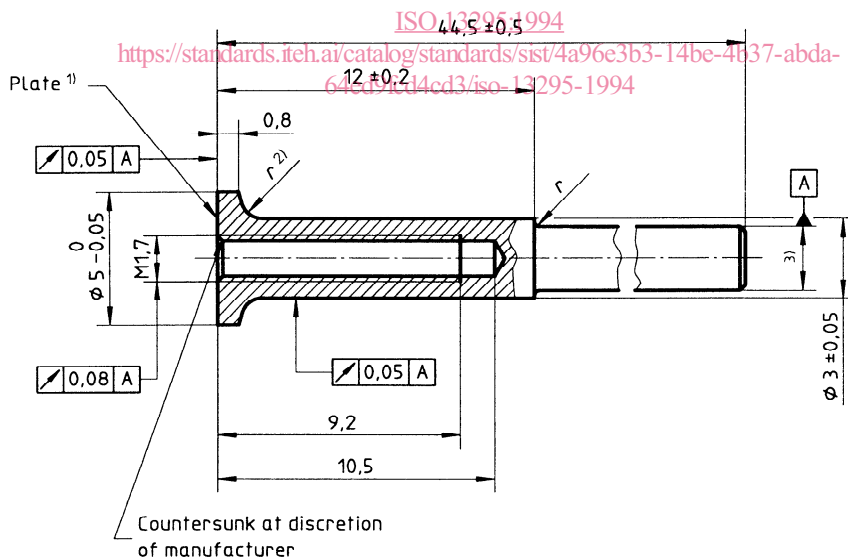
Testing shall be carried out in accordance with 5.2.



- 1) The plate diameter shall be identical with the screw head diameter.
- 2) Radius at discretion of manufacturer.
- 3) Shank in accordance with ISO 1797-1, type 1 or 2.

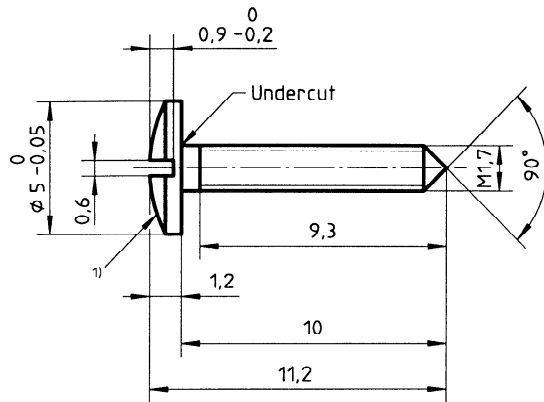
**Figure 1 — Mandrel for standard application, type 1**

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- 1) The plate diameter shall be identical with the screw head diameter.
- 2) Radius at discretion of manufacturer.
- 3) Shank in accordance with ISO 1797-1, type 1 or 2.

**Figure 2 — Mandrel for heavy-duty application, type 2**



1) Radius at discretion of manufacturer.

**Figure 3 — Screw**

## 5 Testing

### 5.1 Material

The yield strength shall be measured with commonly available test devices of adequate accuracy.

### 5.2 Dimensions

Testing shall be in accordance with ISO 1797-1:1992, clause 7.

## 6 Marking

The marking of the package of mandrels shall contain at least the following information:

- name and/or trademark and address of the manufacturer or distributor;
- material (e.g. stainless steel, corrosion-resistant steel);
- type of shank, in accordance with ISO 1797-1;
- general characteristics encoded in accordance with ISO 6360-1;
- shape and specific characteristics encoded in accordance with ISO 6360-2;
- diameter of the plate.

## 7 Packaging

Packaging of mandrels shall be at the discretion of the manufacturer.

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### ICS 11.060.20

**Descriptors:** dentistry, dental equipment, dental instruments, dental rotary-cutting instruments, mandrels, classification, specifications, mechanical strength, dimensions, marking, packaging.

Price based on 3 pages

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