



SLOVENSKI STANDARD
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Dental extraction forceps - Part 1: Screw and pin joint types (ISO 9173-1:1991)

Dental extraction forceps - Part 1: Screw and pin joint types (ISO 9173-1:1991)

Zahnärztliche Extraktionszangen - Teil 1: Zangenmodelle mit Schraubschluß und Stiftgelenk (ISO 9173-1:1991)

Daviers a usage dentaire - Partie 1: Types d'articulations a vis ou a tourillon (ISO 9173-1:1991)

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ICS:

11.060.20 Z[à[ç @ ã } æ] ! ^ { æ Dental equipment

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European Committee for Standardization
Comité Européen de Normalisation
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Foreword

The text of the International Standard from ISO/TC 106 "Dentistry" of the International Organization for Standardization (ISO) has been taken over as a European Standard by the Technical Committee CEN/TC 55 "Dentistry".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 1996, and conflicting national standards shall be withdrawn at the latest by April 1996.

According to the CEN/CENELEC Internal Regulations, 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 the United Kingdom.

Endorsement notice

The text of the International Standard ISO 9173-1:1991 has been approved by CEN as a European Standard without any modification.

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INTERNATIONAL STANDARD

ISO
9173-1

First edition
1991-07-01

Dental extraction forceps

Part 1: Screw and pin joint types

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*Daviers à usage dentaire —
(standards.iteh.ai)
Partie 1: Types d'articulations à vis ou à tourillon*

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ISO 9173-1 : 1991 (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 9173-1 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Sub-Committee SC 4, *Dental instruments*.

ISO 9173 consists of the following parts, under the general title, *Dental extraction forceps*:

- *Part 1: Screw and pin joint types*
- *Part 2: Box joint types*
- *Part 3: ...*

Annexes A and B are for information only.

Introduction

For many decades, "English" pattern forceps have been widely used by the world-wide dental community. The popularity of these forceps has been such that a number of manufacturers, from various countries, have produced their own versions. Quite naturally, each manufacturer attempted to introduce an element of individuality into the design; but as a consequence subtle dimensional changes occurred between forcep patterns produced by different manufacturers.

This part of ISO 9173 is based on commercial specifications and illustrates the popular patterns of forceps currently used in dental practice; it is by no means comprehensive and details of additional patterns may form the basis for future parts in this series.

The patterns described are not intended to specify a definitive design or formula but rather to reflect the range of dimensions currently used by manufacturers. For this reason some tolerances are rather generous and manufacturers are requested to work to closer tolerances on individual dimensions.

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Dental extraction forceps —

Part 1: Screw and pin joint types

1 Scope

This part of ISO 9173 specifies the dimensions and performance requirements for dental extraction forceps with screw or pin joints, commonly known as English pattern forceps.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 9173. 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 9173 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 6508 : 1986, *Metallic materials — Hardness test — Rockwell test (scales A - B - C - D - E - F - G - H - K)*.

ISO 7153-1 : 1983, *Instruments for surgery — Metallic materials — Part 1: Stainless steel*.

3 Construction materials

3.1 Component parts

With the exception of the pins and screws (see 3.2), the component parts shall be made of stainless steel of grade B or C of ISO 7153-1.

3.2 Pins and screws

The pins and screws shall be made of stainless steel chosen, at the discretion of the manufacturer, from the grades specified in ISO 7153-1.

4 Requirements for physical properties

4.1 Heat treatment and hardness

4.1.1 The component parts of the instruments, with the exception of the pins and screws, shall be heat-treated to attain a Rockwell hardness value of 42 HRC to 50 HRC when tested in accordance with ISO 6508.

4.1.2 Mating surfaces on the same instrument, such as those on opposite beaks, shall not vary in hardness by more than 3 units on the Rockwell hardness scale C.

4.2 Mechanical strength

When tested in accordance with 7.1, neither the forcep or any part thereof shall fracture, or show any sign of cracks or acquire a permanent set of dimension b_3 greater than 0,2 mm.

4.3 Resistance to corrosion by boiling water, autoclaving and dry heat

4.3.1 When subjected to the procedure described in 7.3, the instrument shall show no change in hardness or mechanical strength in any part or acquire a permanent set of dimension b_3 greater than 0,2 mm.

4.3.2 After being subjected to the procedure described in 7.2 and 7.3, the instrument shall show no evidence of corrosion (i.e. neither general or localized rust formation on the surface nor pitting).

NOTE — Discoloration due to water marking does not constitute evidence of corrosion.

4.4 Requirements for joint

4.4.1 The forcep joint shall be so constructed so that the instrument opens smoothly, without jerking, when gripped in one hand and levered open and closed with the index finger.

4.4.2 When tested in accordance with 7.4, the opening and closing moment of force shall be between 0,20 N·m and 0,68 N·m.

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