SLOVENSKI STANDARD
SIST EN ISO 7711-1:2000

01-januar-2000

Dental rotary instruments - Diamond instruments - Part 1: Dimensions, requirements, marking and packaging (ISO 7711-1:1997)

Dental rotary instruments - Diamond instruments - Part 1: Dimensions, requirements, marking and packaging (ISO 7711-1:1997)

Zahnärztliche rotierende Instrumente - Diamantinstrumente - Teil 1: Maße, Anforderungen, Kennzeichnung und Verpackung (ISO 7711-1:1997)

Instruments rotatifs dentaires - Instruments diamantés - Partie 1: Dimensions, exigences, marquage et emballage (ISO 7711-1:1997)

Ta slovenski standard je istoveten z: **EN ISO 7711-1:1998**

ICS:

11.060.25	Zobotehniļ ni instrumenti	Dental instruments

SIST EN ISO 7711-1:2000 **en**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 7711-1

August 1998

ICS 11.060.20

Descriptors: see ISO document

Supersedes EN 27711:1990

English version

Dental rotary instruments - Diamond instruments - Part 1: Dimensions, requirements, marking and packaging (ISO 7711-1:1997)

Instruments rotatifs dentaires - Instruments diamantés - Partie 1: Dimensions, exigences, marquage et emballage (ISO 7711-1:1997)

Zahnärztliche rotierende Instrumente - Diamantinstrumente - Teil 1: Maße, Anforderungen, Kennzeichnung und Verpackung (ISO 7711-1:1997)

This European Standard was approved by CEN on 1 May 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations 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 Central Secretariat or to any CEN member.

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 the Central Secretariat has the same status as the official versions.

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

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of the International Standard from Technical Committee ISO/TC 106 "Dentistry" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 55 "Dentistry", the secretariat of which is held by DIN.

This European Standard replaces EN 27711:1990.

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 February 1999, and conflicting national standards shall be withdrawn at the latest by February 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, 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 7711-1:1997 has been approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

Annex ZA (normative)
Normative references to international publications with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

Publication	Year	Title	EN	Year
ISO 1797-1	1992	Dental rotary instruments - Shanks - Part 1: Shanks made of metals	ENISO 1797-1	1995
ISO 2157	1992	Dental rotary instruments - Nominal diameters and designation code number	EN ISO 2157	1995
ISO 3696	1987	Water for analytical laboratory use - Specification and test methods	EN ISO 3696	1995
ISO 6360-1	1985	Dentistry - Dental rotary instruments - Number coding system - Part 1: General characteristics	EN 26360-1	1990
ISO 6360-2	1986	Dentistry - Dental rotary instruments - Number coding system - Part 2: Shape and specific characteristics - Addendum 1	EN 26360-2	1991
ISO 7711-3	1992	Dental rotary instruments - Diamond instruments - Part 3: Grit sizes, designation and colour code	EN ISO 7711-3	1995
ISO 8325	1985	Dentistry - Dental rotary instruments - Test methods	EN 28325	1990

INTERNATIONAL STANDARD

ISO 7711-1

First edition
1997-02-15

Dental rotary instruments — Diamond instruments —

Part 1: Dimensions, requirements, marking and packaging

Instruments rotatifs dentaires — Instruments diamantés —
Partie 1: Dimensions, exigences, marquage et emballage

Reference number
ISO 7711-1:1997(E)

Contents

International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet central@iso.ch
X.400 c=ch; a=400net; p=iso; o=isocs; s=central

Printed in Switzerland

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 7711-1 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 4, *Dental instruments*.

This first edition of ISO 7711-1 cancels and replaces the first edition of ISO 7711:1984, which has been technically revised.

ISO 7711 consists of the following parts, under the general title *Dental rotary instruments — Diamond instruments:*

— *Part 1: Dimensions, requirements, marking and packaging*

— *Part 2: Discs*

— *Part 3: Grit sizes, designation and colour code*

Introduction

This part of ISO 7711 is one of a series of standards relating to dental rotary instruments.

This first edition of ISO 7711-1 contains the updated specifications for diamond instruments given in ISO 7711:1984. It was also aligned in several details with the other International Standards on dental rotary instruments.

The various dimensional and other requirements specified for diamond instruments are those considered important to ensure the interchangeability and safe usage of these instruments in the practice of dentistry.

The nominal diameters of the working part listed in tables 1 to 48 comply with the diameters specified in ISO 2157. The diameters listed in the first column (preferred diameters) should be used in preference.

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

Dental rotary instruments — Diamond instruments —

Part 1:
Dimensions, requirements, marking and packaging

1 Scope

This part of ISO 7711 specifies dimensional and other relevant requirements for the 14 most commonly used shapes of dental diamond instruments, including a quality control for these instruments.

It is envisaged to update this part of ISO 7711 at each periodical revision to cover at that time the commonly used shapes and other specifications.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 7711. 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 7711 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 2157:1992, *Dental rotary instruments — Nominal diameters and designation code number.*

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods.*

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.*

ISO 7711-3:1992, *Dental rotary instruments — Diamond instruments — Part 3: Grit sizes, designation and colour code.*

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

3 Symbols

For the purposes of this part of ISO 7711, the following symbols apply:

d_1 diameter of working part; head diameter

d_2 neck diameter, measured directly behind the diamond coating

d_3 diameter of the coated neck, measured at the smallest diameter

l_1 length of the working part; head length

l_2 overall length

α angle of the working part

4 Requirements

4.1 Materials

4.1.1 Shank

The material of the shank shall comply with ISO 1797-1.

4.1.2 Working part

The working part shall be made of diamond grit, bound in either metal, plastics or other suitable material at the discretion of the manufacturer.

Grit sizes shall comply with ISO 7711-3.

4.2 Shapes

The shape of the working part shall be as specified in the appropriate figures 1 to 48. Variations of shape within the limited dimensions and the descriptions in the subclause titles are permitted.

Testing shall be carried out in accordance with 5.1.

4.3 Dimensions

4.3.1 Overall length

The overall length of the instrument, l_2, is the sum of the fitting length of the shank and the length of the working part. In tables 1 to 48, "Standard" refers to instruments with standard fitting lengths of shank. For instruments with longer or shorter shank lengths, the overall length, l_2, will vary accordingly. See ISO 1797-1:1992, table 1, for fitting lengths of shanks.

4.3.2 Shank

The shank shall be Type 1, 2 or 3 of ISO 1797-1.

4.3.3 Working part

The dimensions of the working part shall be as specified in the appropriate tables 1 to 48.

Testing shall be carried out in accordance with 5.1.

4.3.3.1 Round head (spherical)

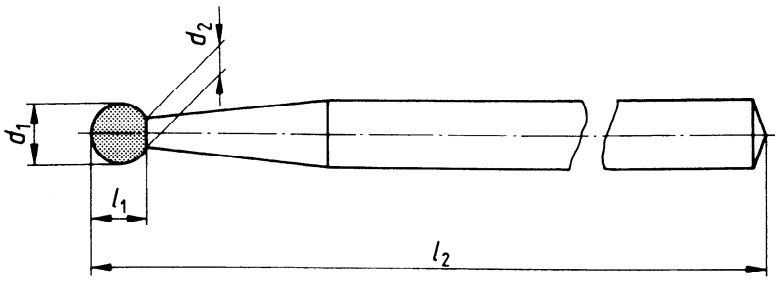

Figure 1

Table 1 — Dimensions (see figure 1)

Dimensions in millimetres

Designation of nominal diameter		d_1		d_2	l_1	l_2 ± 0,5			
Preferred diameters		nom.	tol.	max.	min.	Shank Type 1 Standard	Shank Type 2 Standard	Shank Type 3 Standard	Shank Type 3 Short
—	007	0,7	± 0,08	0,50	0,50	22,0	44,5	19,0	16,5
008	—	0,8		0,53	0,55				
009	—	0,9		0,60	0,60				
010	—	1,0		0,70	0,65				
012	—	1,2		0,73	0,85				
014	—	1,4		0,83	1,05				
016	—	1,6	± 0,10	0,93	1,30				
018	—	1,8		1,03	1,50				
021	—	2,1		1,05	1,80				
023	—	2,3		1,23	2,00				
—	025	2,5		1,25	2,15				
—	027	2,7		1,33	2,35				
—	029	2,9		1,53	2,55				
—	033	3,3		1,63	2,90				
—	035	3,5		1,73	3,10				
—	042	4,2		2,01	3,80				
—	050	5,0		2,35	4,80				

4.3.3.2 Round head (with collar)

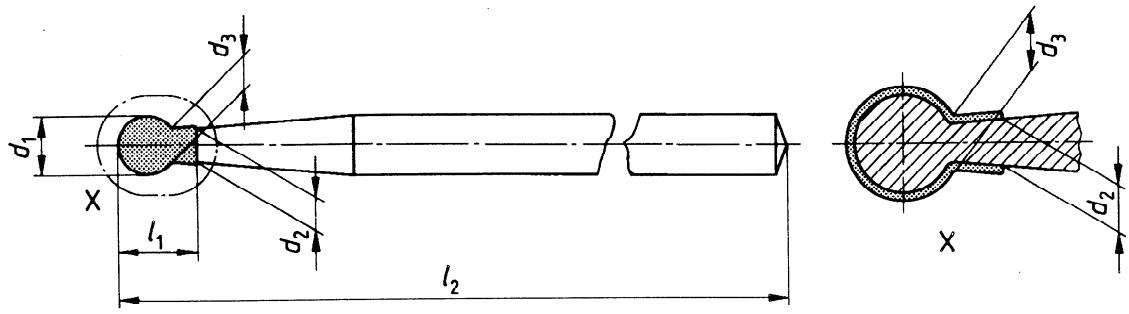

Figure 2

Table 2 — Dimensions (see figure 2)

Dimensions in millimetres

Designation of nominal diameter		d_1		d_2	d_3 ± 0,1	l_1	l_2 ± 0,5			
Preferred diameters		nom.	tol.	max.		min.	Shank Type 1 Standard	Shank Type 2 Standard	Shank Type 3 Standard	Shank Type 3 Short
009		0,9	± 0,08	0,75	0,68	2,2	22,0	44,5	19,0	16,5
010	—	1,0		0,96	0,78					
012	—	1,2	± 0,10	1,00	0,88					
014	—	1,4		1,04	0,98					
016	—	1,6		1,10	1,04					
018	—	1,8		1,18	1,12					
021	—	2,1		1,26	1,20					
023	—	2,3		1,32	1,28	2,5				
—	025	2,5		1,44	1,40					
—	033	3,3		1,60	1,52	3,5				

4.3.3.3 Inverted cone head (inverted, truncated conical)

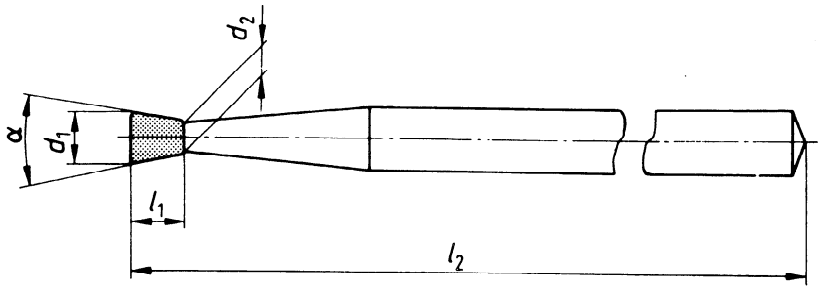

Figure 3

Table 3 — Dimensions (see figure 3)

Dimensions in millimetres, angles in degrees

Designation of nominal diameter		d_1		d_2	α	l_1	l_2 ± 0,5			
Preferred diameters		nom.	tol.	max.		min.	Shank Type 1 Standard	Shank Type 2 Standard	Shank Type 3 Standard	Shank Type 3 Short
—	007	0,7	± 0,08	0,50	8° to 14°	0,50	22,0	44,5	19,0	16,5
008	—	0,8		0,50		0,55				
009	—	0,9		0,53		0,60				
010	—	1,0		0,63		0,65				
012	—	1,2		0,73	10° to 18°	0,85				
014	—	1,4		0,83		1,05				
016	—	1,6		0,89		1,30				
018	—	1,8		1,07		1,50				
021	—	2,1	± 0,10	1,15	10° to 22°	1,80				
023	—	2,3		1,40		2,00				
—	0,25	2,5		1,60		2,15				
—	027	2,7		1,70		2,35				
—	042	4,2		2,00	40° to 60°	2,35				