



SLOVENSKI STANDARD
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Zobozdravstvo - Instrumenti za zobni kanal - 3. del: Kompaktorji (ISO/DIS 3630-3:2019)

Dentistry - Endodontic instruments - Part 3: Compactors: pluggers and spreaders (ISO/DIS 3630-3:2019)

Zahnheilkunde - Endodontische Instrumente - Teil 3: Verdichter: Stopfer und Spreader (ISO/DIS 3630-3:2019)

Médecine bucco-dentaire - Instruments d'endodontie - Partie 3: Compacteurs axiaux et latéraux (ISO/DIS 3630-3:2019)

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Dentistry — Endodontic instruments —

Part 3: Compactors: pluggers and spreaders

*Médecine bucco-dentaire — Instruments d'endodontie —**Partie 3: Compacteurs axiaux et latéraux*

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Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Types	2
5 Classification	2
6 Requirements	2
6.1 Material	2
6.2 Dimensional requirements	2
6.2.1 General	2
6.2.2 Diameters	2
6.2.3 Length	2
6.2.4 Hand compactors	5
6.3 Mechanical requirements	6
6.3.1 Stiffness (resistance to bending), finger compactors	6
6.3.2 Stiffness (resistance to bending), hand compactors	6
6.3.3 Stiffness (resistance to bending), heat-carrier instruments	6
6.3.4 Handle security	6
6.3.5 Surface finish	6
6.4 Resistance to reprocessing	6
6.5 Color-coding	6
7 Sampling	6
8 Testing	7
8.1 General	7
8.1.1 Size	7
8.1.2 Stiffness (resistance to bending), finger instruments	7
8.1.3 Stiffness (resistance to bending), hand instruments	8
8.1.4 Bending (stiffness), heat-carrier instruments	9
9 Designation, marking, and identification	9
10 Packaging	9
11 Instructions for use	9
12 Labeling	9
Bibliography	10

ISO/DIS 3630-3:2019(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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/106, *Dentistry*, Subcommittee SC 4, *Dental instruments*.

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This third edition cancels and replaces the second edition (ISO 3630-3:2015), which has been technically revised.

The main changes compared to the previous editions are as follows:

- harmonization of d_0 , d_3 and d_{16} with other 3630 documents.

A list of all parts in the ISO 3630- series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Dentistry — Endodontic instruments —

Part 3: Compactors: pluggers and spreaders

1 Scope

This document specifies requirements and test methods for endodontic instruments used as pluggers and spreaders, used to compact endodontic filling materials not cited in the other parts of the 3630 series.

This document specifies requirements for size, marking, product designation, safety considerations, and their labeling and packaging.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1942, *Dentistry — Vocabulary*

ISO 3630-1:2019, *Dentistry — Endodontic instruments — Part 1: General requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1942, ISO 3630-1, and the following apply.

3.1

compactor

instrument whose working part is cylindrical or tapered, and circular in cross-section which is designed to condense the filling material in a root canal in the axial and/or lateral direction

Note 1 to entry: See [Figure 3](#).

3.2

plugger

finger or hand instrument whose working part is cylindrical or tapered, circular in cross-section and has a flat tip end which is designed to compact filling materials in a root canal mainly in an axial direction

Note 1 to entry: See [Figure 1](#).

3.3

spreader

finger or hand instrument whose working part is cylindrical or tapered, circular in cross-section and has a pointed tip end which is designed to compact filling materials in a root canal mainly in a lateral direction

Note 1 to entry: See [Figure 2](#).

ISO/DIS 3630-3:2019(E)

3.4

heat-carrier instrument

hand instrument used for transferring heat to a root canal instrument used for transferring heat to the filling material in a root canal

3.5

thermomechanical compactor

instrument that may be heated or rotary for compacting obturation material in the root canal

4 Types

For the purposes of this document, endodontic compactors are categorized as Type 1, Type 2, and Type 4 as specified in ISO 3630-1:2019, Clause 4.

5 Classification

The definitions in [Clause 3](#) above specify the classification of endodontic compactors and instruments which can be used in a lateral or axial direction or as thermomechanical or heat carrier instrument.

6 Requirements

6.1 Material

The material for the working part of the instrument as well as design of the handle or the shank is left to the discretion of the manufacturer but shall meet the requirements in ISO 3630-1:2019, 5.7.

6.2 Dimensional requirements

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6.2.1 General

The nominal diameter and taper dimensions of the compactors, when stated, shall meet the requirements in ISO 3630-1:2019, Clause 5 except as specified. The instruments shall comply with the appropriate tables and figures. Within the dimensional requirements, variations in shape and design are at manufacturer's discretion.

Working part length, operative part length, overall length and tip end are left to the discretion of the manufacturer.

The manufacturer shall specify working part length as a minimum and operative part length shall be within 0,5 mm of the length specified. When provided by the manufacturer, the stated overall length shall be within 1,0 mm of the stated length.

6.2.2 Diameters

The diameter designated as d_0 for Type 1, Type 2, and Type 4 instruments is the reference for the nominal size of the instrument, as shown in [Figures 1](#) and [2](#), when tested as specified in ISO 3630-1:2019, 7.3. The diameter designated as d_0 for Type 4 instruments is the functional diameter. All other dimensions identified in the figures or tables of that International Standard are used for the purpose of calculation of the taper for the working part of Type 2 instruments, the calculation for d_0 , and for determination of instrument diameter test locations.

6.2.3 Length

Measure the length in accordance with ISO 3630-1:2019, 7.3.

6.2.3.1 Type 1

Length of working part shall be a minimum of 16 mm. The operative part and overall length shall be left to the discretion of the manufacturer.

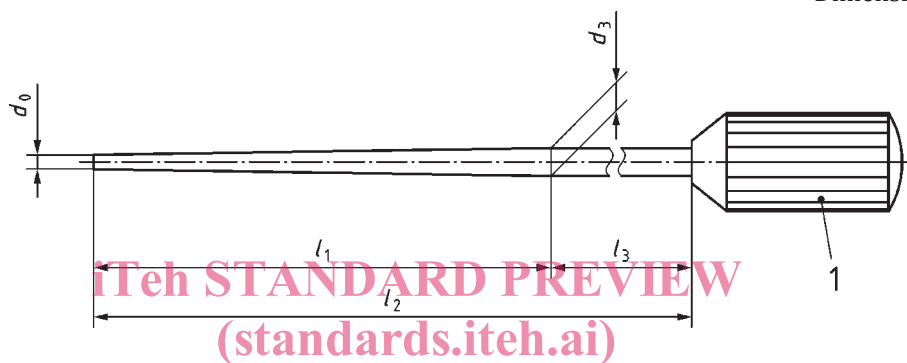
6.2.3.2 Type 2 and Type 4

The manufacturer shall specify working part as a minimum and operative part length shall be within 0,5 mm of the length specified.

The tip shall be flat and perpendicular to the axis of the instrument. The working part shall be either Type 1 (standard sized), Type 2 (tapered size), or Type 4 (non-tapered) along l_1 , based on d_0 and d_3 of [Table 1](#).

The neck shall be either cylindrical or tapered. The diameter d_0 shall not exceed d_3 , when non-tapered.

Dimensions in millimetres



Key

1 handle

d_0 diameter of the working part at the tip end (nominal size)

d_3 diameter at the end of working part

l_1 length for measuring point, d_3 , and minimum length of working part

l_2 length of operative end

l_3 neck portion

Figure 1 — Plugger

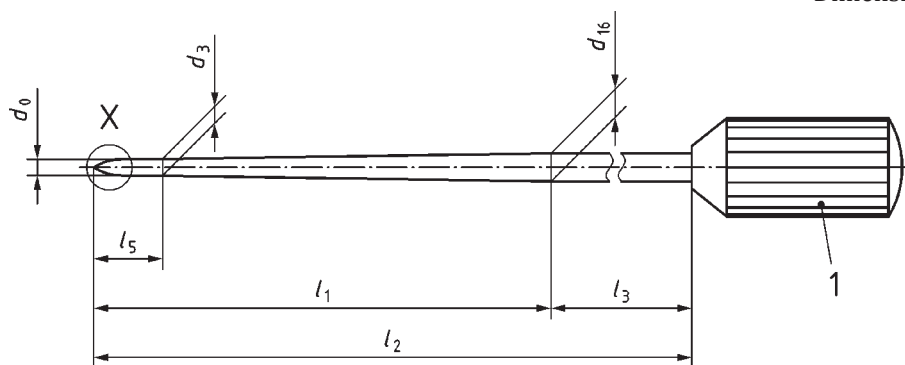
Table 1 — Diameters and designation of pluggers

Nominal size	d_0 $\pm 0,02$	d_3 $\pm 0,02$	Colour designation
025	0,25	0,57	red
030	0,30	0,62	blue
035	0,35	0,67	green
040	0,40	0,72	black
045	0,45	0,77	white
050	0,50	0,82	yellow
055	0,55	0,87	red
060	0,60	0,92	blue
070	0,70	1,02	green
080	0,80	1,12	black
090	0,90	1,22	white

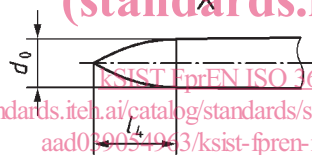
Table 1 (continued)

Nominal size	d_0 $\pm 0,02$	d_3 $\pm 0,02$	Colour designation
100	1,00	1,32	yellow
110	1,10	1,42	red
120	1,20	1,52	blue
130	1,30	1,62	green
140	1,40	1,72	Black

Dimensions in millimetres



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Key

- 1 handle
- d_0 diameter of the working part at the tip end (nominal size)
- d_3 diameter at fixed length l_5
- d_{16} diameter at length l_1
- l_1 length for measuring point d_{16} and minimum length of working part
- l_2 length of operative end
- l_3 neck portion
- l_4 length of tip
- l_5 fixed length of 3 mm for measuring point d_3

Figure 2 — Spreader

The taper along l_1 is specified by d_0 and d_3 of Table 2. The neck portion shall be cylindrical, continuously tapered or both. The diameter d_0 shall not exceed d_3 , when cylindrical.