BSI Standards Publication

Dentistry - Central suction source equipment

bsi.

National foreword

This British Standard is the UK implementation of EN ISO 10637:2018. It is identical to ISO 10637:2018. It supersedes BS EN ISO 10637:2000, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee CH/106/4, Dental Instruments and Equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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English Version

Dentistry - Central suction source equipment (ISO 10637:2018)

Médecine bucco-dentaire - Systèmes d'aspiration centrale (ISO 10637:2018)

Zahnheilkunde - Zentrale Absauganlage (ISO 10637:2018)

This European Standard was approved by CEN on 9 March 2018.

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European foreword

This document (EN ISO 10637:2018) has been prepared by Technical Committee ISO/TC 106 "Dentistry" in collaboration with Technical Committee CEN/TC 55 “Dentistry” the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by December 2018, and conflicting national standards shall be withdrawn at the latest by December 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 10637:2000.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 10637:2018 has been approved by CEN as EN ISO 10637:2018 without any modification.

Contents

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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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 6, *Dental equipment.*

This second edition cancels and replaces the first edition (ISO 10637:1999), which has been technically revised.

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

— clarification of the scope;

— addition of the classification according to the air flow rate (Type 1, Type 2 or Type 3);

— addition of measurement and test methods;

— addition of diagrams for different suction source equipment in the Annexes.

Introduction

Dental suction systems evacuate solids, liquids, aerosols and gases from the oral cavity and immediate surrounding area for the purpose of improving operating effectiveness and efficiency during oral treatment procedures and limiting the contamination of the immediate environment. In central suction systems the equipment that generates suction and performs other supporting functions is located in a central location outside of the dental treatment room to isolate this equipment from the immediate vicinity of patient treatment and often to provide suction to multiple treatment rooms.

A central suction system consists of four basic elements:

1) dental treatment room suction components (e.g. dental unit suction system);

2) facility suction pipeline;

3) central suction source equipment;

4) exhaust pipeline.

The central suction source equipment consists of all the components from the facility suction pipeline connection point (i.e. discharge end of the facility suction pipeline) to the exhaust pipeline connection point (i.e. inlet to the exhaust pipeline). In addition to the equipment that generates air flow, centrally located amalgam separators and air water separators (if present) are also component parts of the central suction source equipment.

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Dentistry - Central suction source equipment

1 Scope

This document specifies requirements and test methods for stationary, electrically powered central suction source equipment, including centrally located amalgam separators and air water separators.

It also specifies requirements for information to be supplied by the manufacturer on the performance, installation, operation and maintenance of the central suction source equipment as part of the complete dental suction system.

This document specifies requirements for central suction source equipment used to provide vacuum pressure and flow at the facility pipeline connection point.

This document does not apply to portable suction source equipment, air/water venturi suction source equipment, or to suction source equipment located in the treatment room. It also does not apply to suction source equipment used for life support or for scavenging halogenated anaesthetic gases.

This document does not include requirements for facility and exhaust piping systems or treatment room equipment.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. 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 5167-1, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full — Part 1: General principles and requirements*

ISO 7010:2011, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 7494-2, *Dentistry — Dental units — Part 2: Air, water, suction and wastewater systems*

ISO 9687, *Dentistry — Graphical symbols for dental equipment*

ISO 11143, *Dentistry — Amalgam separators*

ISO 29463-1:2017, *High efficiency filters and filter media for removing particles from air — Part 1: Classification, performance, testing and marking*

IEC 60335-1, *Household and similar electrical appliances — Safety — Part 1: General requirements*

IEC 61000-6-2, *Electromagnetic compatibility (EMC) — Part 6-2: Generic standards — Immunity standard for industrial environments*

IEC 61000-6-3, *Electromagnetic compatibility (EMC) — Part 6-3: Generic standards — Emission standard for residential, commercial and light-industrial environments*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1942, ISO 7494-2 and the following apply.