

Irish Standard I.S. EN ISO 13017:2012&A1:2015

# Dentistry - Magnetic attachments (ISO 13017:2012)

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#### I.S. EN ISO 13017:2012&A1:2015

Incorporating amendments/corrigenda/National Annexes issued since publication:

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NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
Northwood, Santry	E standards@nsai.ie	F +353 1 857 6729
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#### National Foreword

I.S. EN ISO 13017:2012&A1:2015 is the adopted Irish version of the European Document EN ISO 13017:2012, Dentistry - Magnetic attachments (ISO 13017:2012)

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## EUROPEAN STANDARD NORME EUROPÉENNE

## EN ISO 13017:2012/A1

### **EUROPÄISCHE NORM**

December 2015

ICS 11.060.10

**English Version** 

## Dentistry - Magnetic attachments - Amendment 1 (ISO 13017:2012/Amd 1:2015)

Médecine bucco-dentaire - Attaches magnétiques -Amendement 1 (ISO 13017:2012/Amd 1:2015) Zahnheilkunde - Magnetische Retentionselemente -Änderung 1 (ISO 13017:2012/Amd 1:2015)

This amendment A1 modifies the European Standard EN ISO 13017:2012; it was approved by CEN on 3 October 2015.

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#### **European foreword**

This document (EN ISO 13017:2012/A1:2015) 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 Amendment to the European Standard EN ISO 13017:2012 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2016, and conflicting national standards shall be withdrawn at the latest by June 2016.

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## EUROPEAN STANDARD

## EN ISO 13017

## NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2012

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**English Version** 

#### Dentistry - Magnetic attachments (ISO 13017:2012)

Médecine bucco-dentaire - Attaches magnétiques (ISO 13017:2012)

Zahnheilkunde - Magnetische Befestigungselemente (ISO 13017:2012)

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#### Foreword

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ISO 13017

First edition 2012-07-15

## Dentistry — Magnetic attachments

Médecine bucco-dentaire — Attaches magnétiques



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ISO 13017:2012(E)



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#### Foreword

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ISO 13017 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 2, *Prosthodontic materials*.

#### Introduction

The early practical uses of permanent magnets were as navigational compasses. Magnets have since become firmly integrated into today's modern electronic device technology. The development of magnetic technology has generated rare earth magnets. Their excellent magnetic character properties permit predictable clinical applications and use. Dental magnetic attachments are one of the products composed of rare earth magnets, providing retention, support and stabilization of dental and maxillofacial appliances.

#### **Dentistry — Magnetic attachments**

#### 1 Scope

This International Standard specifies requirements and test methods for assessing the applicability of dental magnetic attachments that provide retention, support and stabilization of crowns and bridges, removable partial dentures, overdentures, superstructures of dental implants and orthodontic or maxillofacial prostheses including obturators.

This International Standard does not specify qualitative and quantitative test methods for demonstrating freedom from unacceptable biological risk, which can be assessed using ISO 10993-1 and ISO 7405.

#### 2 Normative references

The following referenced documents are indispensable for the application 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 3585, Borosilicate glass 3.3 — Properties

ISO 5832-1, Implants for surgery — Metallic materials — Part 1: Wrought stainless steel

ISO 10271, Dentistry — Corrosion test methods for metallic materials

ISO 15223-1, Medical devices — Symbols to be used with medical device labels, labelling and information to be supplied — Part1: General requirements

ISO 22674, Dentistry — Metallic materials for fixed and removable restorations and appliances

ISO/IEC 17025, General requirements for the competence of testing and calibration laboratories

IEC 60404-8-1: Magnetic materials — Part 8-1: Specifications for individual materials — Magnetically hard materials

#### 3 Terms and definitions

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

#### 3.1

#### magnetic attachment

device to provide retention of a prosthesis utilizing magnetic attraction as shown in Figures 1 and 2

#### 3.1.1

#### open magnetic circuit attachment

magnetic attachment which utilizes an open magnetic circuit between coupled components

NOTE The magnet is encased within a corrosion-resistant metal or alloy cover of titanium, titanium alloy or stainless steel to prevent corrosion of the magnet, and utilizes the attractive force between either two magnets or between a magnet and a ferromagnetic alloy keeper as retentive coupling components.

See Figure 1.



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