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STANDARD

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**Dental equipment — Connections for  
supply and waste lines**

*Matériel dentaire — Raccords pour lignes de distribution et déchets*



Reference number  
ISO 11144:1995(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 11144 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 6, *Dental equipment*.

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## Introduction

The designs and instrumentation of dental treatment centres with a dental unit are continually being improved in order to meet the requirement of modern dentistry. The size and relative positions of the services to be connected vary depending on the manufacturer and type of unit.

Choice of equipment, particularly in large installations, may have to be made for the building at an earlier stage than would otherwise be desirable, in order to determine the arrangement of the plumbing. When replacement units are later fitted, major plumbing alterations are frequently necessary. Through standardization of the arrangement of services, these difficulties will be avoided. It will ensure that plumbing contractors know the correct service requirements.

It is not the purpose of this International Standard to specify where the services should be placed within the dental surgery room but rather to specify their mutual positions.

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# Dental equipment — Connections for supply and waste lines

## 1 Scope

This International Standard specifies requirements for the layout of the connections to the supply and waste lines for dental equipment, dental units, apparatus and devices, both as concerns the building plumbing and as mutually related to each other. It also lays down the relative positions, centres and minimum dimensions to accommodate the water, waste-water and suction (vacuum) supply lines, and adjacent spaces destined for electrical lines and compressed air lines for dental services.

This International Standard covers requirements for all types of dental units and dental treatment centres.

## 2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1942-4:1989, *Dental vocabulary — Part 4: Dental equipment*.

## 3 Definitions

For the purposes of this International Standard, the

definitions given in ISO 1942-4 and the following definition apply.

**3.1 dental treatment centre:** Combination of functional items for dental use which consists, for example, of the dental unit, the dental patient chair and interconnected sub-units of dental equipment and instruments, providing a functional environment for dental care.

## 4 Requirements

**4.1** The configuration of connections shall be in accordance with figure 1.

Dimensions for the connections for electricity and compressed air areas are given as maximum values.

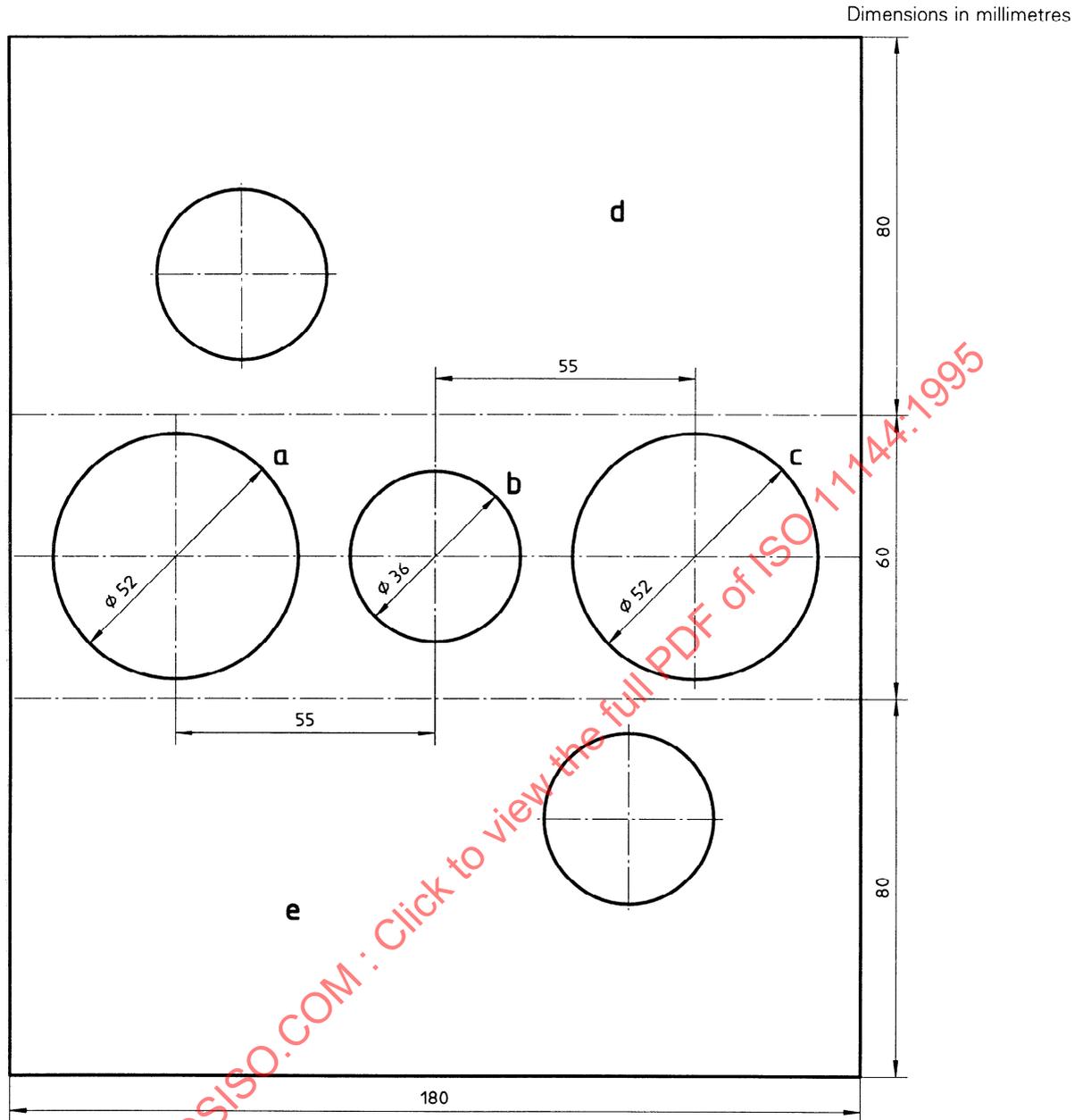
Dimensions for plumbing holes are given as minimum values. The diameters specify the free space required for tubes and hoses.

The holes without dimensions may be positioned anywhere inside the connection area.

Gas tubing — if required — shall not be located inside the areas specified in figure 1.

The location of other utility connections which are not indicated should be specified by the manufacturer.

**4.2** The dimensions specified in figure 1 shall be measured with commonly used measuring devices of adequate accuracy.



- |                    |   |
|--------------------|---|
| a Waste-water      | d Connection area for electricity and telecommunication |
| b Water supply     | e Connection area for compressed air                    |
| c Suction (vacuum) |   |

**Figure 1 — Configuration of supply and waste lines, and adjacent supply areas**