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International Standard



8009/7

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## Reusable rubber contraceptive diaphragms — Part 7 : Determination of compression resistance of coil spring and flat spring diaphragms

*Diaphragmes contraceptifs réutilisables en caoutchouc — Partie 7 : Détermination de la résistance à la compression des diaphragmes à ressort à boudin et à ressort plat*

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Descriptors : birth control, contraceptives, caps (contraceptives), tests, determination, compression strength.

## 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8009/7 was prepared by Technical Committee ISO/TC 157, *Mechanical contraceptives*.

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# Reusable rubber contraceptive diaphragms — Part 7 : Determination of compression resistance of coil spring and flat spring diaphragms

## 1 Scope and field of application

This part of ISO 8009 specifies a method for determining compression resistance of coil spring and flat spring reusable rubber contraceptive diaphragms.

This method is not applicable to diaphragms with springs designed to form an arc when compressed.

## 2 Reference

ISO 8009/2, *Reusable rubber contraceptive diaphragms — Part 2 : Determination of size.*

## 3 Principle

Compression of the diaphragm across its diameter with a mass of 280 g using a suitable apparatus. Determination of the change in diameter after 15 s.

## 4 Apparatus

**Compression testing apparatus**, capable of applying to the diaphragm the gravitational force of a mass of 280 g.

An example of suitable apparatus is shown in the figure.

## 5 Procedure

**5.1** Measure the original diameter of the diaphragm in accordance with ISO 8009/2.

**5.2** Place the diaphragm between the two metal rods, as shown in the figure.

**5.3** Release the upper rod slowly so that the diaphragm is compressed across its diameter.

**5.4** Record the distance between the load points of the rim after compression for 15 s.

## 6 Expression of results

The change in diameter during compression,  $D_c$ , expressed as a percentage of the original diameter, is given by the formula

$$\frac{100 \times d_2}{d_1}$$

where

$d_2$  is the distance, in millimetres, between load points;

$d_1$  is the original diameter, in millimetres.

## 7 Test report

The test report shall include the following particulars :

- identification of the sample;
- number of samples tested;
- change in diameter during compression, expressed as a percentage of the original diameter for each tested diaphragm;
- date of testing.

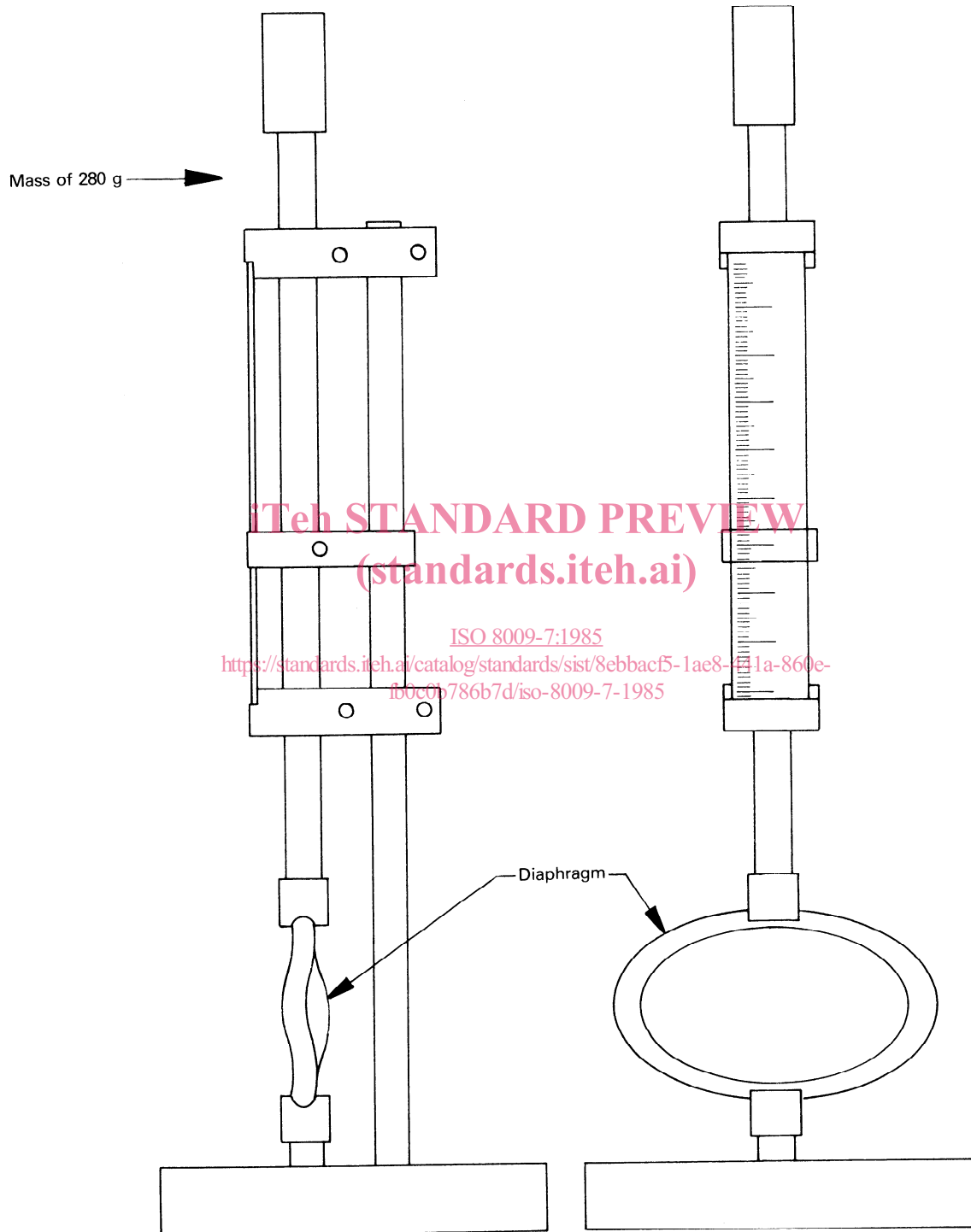


Figure – Compression testing apparatus