

# INTERNATIONAL STANDARD

**ISO**  
**565**

Third edition  
1990-07-15

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## **Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings**

*Tamis de contrôle — Tissus métalliques, tôles métalliques perforées et  
feuilles électroformées — Dimensions nominales des ouvertures*



Reference number  
ISO 565:1990(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 565 was prepared by Technical Committee ISO/TC 24, *Sieves, sieving and other sizing methods*.

This third edition cancels and replaces the second edition (ISO 565:1983), of which it constitutes a technical revision (see the Introduction).

Annex A of this International Standard is for information only.

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## Introduction

When test sieves of electroformed sheet were incorporated in the second edition of ISO 565 which was published in 1983, the range of sizes of openings were extended down to 5  $\mu\text{m}$  by introducing the values of the R'10 series, in accordance with ISO 497, for all principal sizes from 32  $\mu\text{m}$  and smaller.

In the meantime it has been recognized that there is little call for some of the smaller sizes of openings in metal wire cloth and in electroformed sheet. It was agreed therefore to delete the supplementary sizes 28  $\mu\text{m}$  and 22  $\mu\text{m}$  and the principal sizes 12,5  $\mu\text{m}$ , 8  $\mu\text{m}$  and 6,3  $\mu\text{m}$  from the tables of nominal sizes of openings.

Apart from these omissions, the ratio of successive sizes in the series is as shown in table 0.1.

**Table 0.1**

Series ISO 3 and ISO 497	Step	Ratio
R 20/3	about 40 %	1,40
R'10	about 25 %	1,25
R 40/3	about 19 %	1,19
R 20	about 12 %	1,12

This International Standard will be further revised if it becomes evident that one of the supplementary series given in table 1 and table 2, namely R 20 or R 40/3, has found sufficient general and worldwide recognition that it is no longer necessary to include both series.

Requirements for test sieves, for example tolerances on sizes of openings and methods for verification, are given in ISO 3310-1, ISO 3310-2 and ISO 3310-3.

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# Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings

## 1 Scope

This International Standard specifies the nominal sizes of openings for metal wire cloth, perforated metal plate and electroformed sheet as sieving media in test sieves.

It applies to

- metal wire cloth with square openings;
- perforated metal plate and electroformed sheet with square or circular openings.

## 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 2395:1972, *Test sieves and test sieving — Vocabulary*.

## 3 Definitions

For the purposes of this International Standard, the definitions given in ISO 2395 apply.

## 4 Designation

**4.1** Sieving media in test sieves shall be designated by the nominal size of the openings (central separation of opposite sides or diameter). For perforated metal plate and electroformed sheet, the type of opening, square or circular (round), shall also be stated.

**4.2** Sizes of openings of 1 mm and above shall be expressed in millimetres (mm); sizes of openings below 1 mm shall be expressed in micrometres ( $\mu\text{m}$ ).

## 5 Nominal sizes of openings

The nominal sizes of openings listed in table 1 and table 2 have the following ranges of application:

- a) for metal wire cloth: from 125 mm to 20  $\mu\text{m}$
- b) for perforated metal plate
  - with square holes: from 125 mm to 4 mm
  - with circular holes: from 125 mm to 1 mm
- c) for electroformed sheet with square or circular apertures: from 500  $\mu\text{m}$  to 5  $\mu\text{m}$ .

It is recommended that the principal sizes be used where possible, but that if a series having smaller steps is required it should be drawn from only one of the supplementary series and not from both, i.e. from either R 20 or R 40/3.

**Table 1 — Millimetre sizes**

Principal sizes	Supplementary sizes	
	R 20	R 40/3
R 20/3	R 20	R 40/3
125	125 112	125 106
90	100 90 80	90 75
63	71 63 56	63 53
45	50 45 40	45 37,5
31,5	35,5 31,5 28	31,5 26,5
22,4	25 22,4 20	22,4 19
16	18 16 14	16 13,2
11,2	12,5 11,2 10	11,2 9,5
8	9 8 7,1	8 6,7
5,6	6,3 5,6 5	5,6 4,75
4	4,5 4 3,55	4 3,35
2,8	3,15 2,8 2,5	2,8 2,36
2	2,24 2 1,8	2 1,7
1,4	1,6 1,4 1,25	1,4 1,18
1	1,12 1	1

**Table 2 — Micrometre sizes**

Principal sizes	Supplementary sizes	
	R 20	R 40/3
R 20/3	R 20	R 40/3
900	850	
710	800 710 630	710 600
500	560 500 450	500 425
355	400 355 315	355 300
250	280 250 224	250 212
180	200 180 160	180 150
125	140 125 112	125 106
90	100 90 80	90 75
63	71 63 56	63 53
45	50 45 40	45 38
	36	
R'10		
32 25 20 16 10 5		

## Annex A (informative)

### Bibliography

- [1] ISO 3:1973, *Preferred numbers — Series of preferred numbers.*
- [2] ISO 497:1973, *Guide to the choice of series of preferred numbers and of series containing more rounded values of preferred numbers.*
- [3] ISO 3310-1:1990, *Test sieves — Technical requirements and testing — Part 1: Test sieves of metal wire cloth.*
- [4] ISO 3310-2:—<sup>1)</sup>, *Test sieves — Technical requirements and testing — Part 2: Test sieves of perforated metal plate.*
- [5] ISO 3310-3:1990, *Test sieves — Technical requirements and testing — Part 3: Test sieves of electroformed sheets.*

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1) To be published. (Revision of ISO 3310-2:1982.)

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**Descriptors:** test equipment, sieves, wire cloth, sieve plates, openings, dimensions, hole size.

Price based on 3 pages

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