

INTERNATIONAL STANDARD

ISO
2194

Second edition
1991-09-15

Industrial screens — Woven wire cloth, perforated plate and electroformed sheet — Designation and nominal sizes of openings

*Cribles et tamis industriels — Tissus métalliques, tôles perforées et
feuilles électroformées — Désignation et dimensions nominales des
ouvertures*



Reference number
ISO 2194:1991(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 2194 was prepared by Technical Committee ISO/TC 24, *Sieves, sieving and other sizing methods*, Sub-Committee SC 3, *Industrial wire screens*.

This second edition cancels and replaces the first edition (ISO 2194:1972), of which the scope has been extended to include perforated plate and some additional sizes.

Annex A of this International Standard is for information only.

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International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Introduction

The nominal sizes of openings specified in this International Standard are taken from the R 10, R 20 and R 40 series of preferred numbers in accordance with ISO 3 and from the R'10, R'20 and R'40 series of rounded values in accordance with ISO 497.

The sizes within each series follow a geometric progression. Therefore, each size of a series differs from the successive size by a constant percentage. Apart from the omission of a few unusual values in the range of the very small sizes, the ratios of the successive sizes are as follows.

Series ISO 3	Step	Ratio
R 10	about 25 %	1,25
R 20	about 12 %	1,12
R 40	about 6 %	1,06

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Industrial screens — Woven wire cloth, perforated plate and electroformed sheet — Designation and nominal sizes of openings

1 Scope

This International Standard specifies the designation and nominal sizes of openings for woven wire cloth, perforated plate and electroformed sheet used as screening media for industrial purposes.

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 9045:1990, *Industrial screens and screening — Vocabulary*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 9045 apply.

4 Designation

4.1 General

Nominal sizes of openings of 1 mm and above shall be expressed in millimetres (mm); sizes below 1 mm shall be expressed in micrometres (μm).

4.2 Woven wire cloth

Woven wire cloth shall be designated by the nominal size of the apertures w , the type of weave, and the nominal diameter d and the material of the wire.

4.3 Perforated plate

Perforated plate shall be designated by the nominal size of the holes w (central separation of opposite sides or diameter), the shape of the holes (square, circular or any other regular geometric shape), and by the nominal thickness and the material of the plate.

It is recommended that the codification of perforations in accordance with ISO 7806 be used.

4.4 Electroformed sheet

Electroformed sheet shall be designated by the nominal size of the apertures w , the shape of the apertures (square or circular) and the denomination "electroformed".

5 Nominal sizes of openings

Three series of nominal sizes of openings are specified (see tables 1 and 2).

The R 10 (R'10) sizes shall be chosen by preference; otherwise the R 20 (R'20) sizes and, if necessary, the R 40 (R'40) sizes may be chosen.

NOTE 1 Attention is drawn to the fact that any two consecutive sizes of the R 40 series may overlap when the tolerances for industrial woven wire cloth apertures given in ISO 9044 are taken into account.

Table 1 — Nominal sizes of openings — Millimetre sizes

Principal sizes	Supplementary sizes	
	R 20	R 40
125	125	125
		118
100	112	112
	100	106
	90	100
80	90	90
	80	85
	71	80
		75
63	63	71
		67
	56	63
		60
50	50	56
		53
	45	50
		47,5
40	40	45
		42,5
	35,5	40
		37,5
31,5	31,5	35,5
		33,5
	28	31,5
		30
25	25	28
		26,5
	22,4	25
		23,6
20	20	22,4
		21,2
	18	20
		19
16	16	18
		17
	14	16
		15
12,5	12,5	14
		13,2
	11,2	12,5
		11,8
10	10	11,2
		10,6
	9	10
		9,5
8	8	9
		8,5
	7,1	8
		7,5
6,3	6,3	7,1
		6,7
	5,6	6,3
		6
5	5	5,6
		5,3
	4,5	5
		4,75

Principal sizes	Supplementary sizes	
	R 20	R 40
4	4	4,25
		4
3,15	3,55	3,75
		3,55
	3,15	3,35
2,5	2,8	3,15
		3
	2,5	2,8
		2,65
2	2,24	2,5
		2,36
	2	2,24
		2,12
1,6	1,8	2
		1,9
	1,6	1,8
		1,7
1,25	1,4	1,6
		1,5
	1,25	1,4
		1,32
1	1,12	1,25
		1,18
	1	1,12
		1,06

Table 2 — Nominal sizes of openings — Micrometre sizes

Principal sizes	Supplementary sizes	
	R 20	R 40
800	900	950
	800	900
		850
		800
		750
		710
		670
		630
		600
		560
630	500	530
		500
		475
		450
		425
400	400	400
		375
		355
		335
		315
315	315	315
		300
		280
		265
		250
250	250	236
		224
		212
		200
		190
200	200	180
		170
		160
		150
		140
160	160	132
		125
		118
		112
		106
125	125	100
		95
		90
		85
		80
100	80	75
		71
		67
		63
		60
80	63	56
		53
		50
63	56	50
50	50	

Principal sizes	Supplementary sizes		
	R'10	R'20	R'40
40		45	48
		40	45
			42
			40
			38
32		36	36
			34
			32
25			
20			
16			
10			
5			

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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 7806:1983, *Industrial plate screens — Codification for designating perforations.*
- [4] ISO 9044:1990, *Industrial woven wire cloth — Technical requirements and testing.*

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