

INTERNATIONAL STANDARD

ISO
2194

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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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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 10	R 20	R 40
125	125	125
		118
	112	112
		106
100	100	100
		95
	90	90
		85
80	80	80
		75
	71	71
		67
63	63	63
		60
	56	56
		53
50	50	50
		47,5
	45	45
		42,5
40	40	40
		37,5
	35,5	35,5
		33,5
31,5	31,5	31,5
		30
	28	28
		26,5
25	25	25
		23,6
	22,4	22,4
		21,2
20	20	20
		19
	18	18
		17
16	16	16
		15
	14	14
		13,2
12,5	12,5	12,5
		11,8
	11,2	11,2
		10,6
10	10	10
		9,5
	9	9
		8,5
8	8	8
		7,5
	7,1	7,1
		6,7
6,3	6,3	6,3
		6
	5,6	5,6
		5,3
5	5	5
		4,75
	4,5	4,5

Principal sizes	Supplementary sizes	
R 10	R 20	R 40
		4,25
4	4	4
		3,75
	3,55	3,55
		3,35
3,15	3,15	3,15
		3
	2,8	2,8
		2,65
2,5	2,5	2,5
		2,36
	2,24	2,24
		2,12
2	2	2
		1,9
	1,8	1,8
		1,7
1,6	1,6	1,6
		1,5
	1,4	1,4
		1,32
1,25	1,25	1,25
		1,18
	1,12	1,12
		1,06
1	1	1

Table 2 — Nominal sizes of openings — Micrometre sizes

Principal sizes	Supplementary sizes	
R 10	R 20	R 40
800	900	950
		900
		850
	800	800
		750
630	710	710
		670
	630	630
		600
	560	560
500		530
	500	500
		475
	450	450
		425
400	400	400
		375
	355	355
		335
	315	315
315		300
	280	280
		265
	250	250
		236
250	224	224
		212
	200	200
		190
	180	180
160		170
	160	160
		150
	140	140
		132
125	125	125
		118
	112	112
		106
	100	100
100		95
	90	90
		85
	80	80
		75
80	71	71
		67
	63	63
		60
	56	56
63		53
		50
	50	50

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

Annex A
(informative)

Bibliography

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|--|---|
| [1] ISO 3:1973, <i>Preferred numbers — Series of preferred numbers.</i> | [3] ISO 7806:1983, <i>Industrial plate screens — Codification for designating perforations.</i> |
| [2] ISO 497:1973, <i>Guide to the choice of series of preferred numbers and of series containing more rounded values of preferred numbers.</i> | [4] ISO 9044:1990, <i>Industrial woven wire cloth — Technical requirements and testing.</i> |

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