
INTERNATIONAL STANDARD



2194

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Wire screens and plate screens for industrial purposes – Nominal sizes of apertures

First edition – 1972-02-15

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 2194:1972](https://standards.iteh.ai/catalog/standards/sist/be7743f3-f58a-4ach-bd73-75b0095be71f/iso-2194-1972)

<https://standards.iteh.ai/catalog/standards/sist/be7743f3-f58a-4ach-bd73-75b0095be71f/iso-2194-1972>

TC. 24

UDC 621.928.2

Ref. No. ISO 2194-1972 (E)

Descriptors : apertures, sieve plates, sizing screens, wire cloth.

Price based on 3 pages

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

International Standard ISO 2194 was drawn up by Technical Committee ISO/TC 24, *Sieves, sieving and other sizing methods*.

It was approved in July 1971 by the Member Bodies of the following countries :

Australia	India	South Africa, Rep. of
Belgium	Ireland	Switzerland
Canada	Italy	Turkey
Czechoslovakia	Netherlands	United Kingdom
Egypt, Arab Rep. of	New Zealand	U.S.A.
Germany	Romania	U.S.S.R.

The Member Body of the following country expressed disapproval of the document on technical grounds :

France

Wire screens and plate screens for industrial purposes – Nominal sizes of apertures

1 SCOPE AND FIELD OF APPLICATION

This International Standard gives the nominal sizes of apertures for wire screens and plate screens for industrial purposes.

NOTE – This document represents only a first step; the diameters and tolerances of the wires will be the subject of a further International Standard.

2 REFERENCES

ISO/R 3, *Preferred numbers – Series of preferred numbers.*

ISO/R 497, *Guide to the choice of series of preferred numbers and of series containing more rounded values of preferred numbers.*

3 TYPE OF SIEVING MEDIA IN SCREENS

3.1 Wire screens consist of plain or stranded wires or synthetic monofilaments (or multifilaments assembled as monofilaments) crossing to form the openings (such as woven wire cloth, precrimped wire mesh and cloth, welded mesh).

3.2 Perforated plate screens are sheets of metal or synthetic material with openings made by punching or by any other method.

4 DESIGNATION

4.1 Wire screens are designated according to nominal size of aperture, wire diameter, the material and the type of weave.

4.2 Plate screens are designated according to nominal size of aperture, the material and the plate thickness; the type of hole (square, round or any other form) shall be stated.

4.3 Sizes for apertures below 1 mm are expressed in micrometres (μm)¹⁾; sizes for apertures of 1 mm and above, in millimetres (mm).

1) 1 000 micrometres (μm) = 1 mm

5 NOMINAL SIZES OF APERTURES

Three series of nominal sizes of apertures are given in the following table.

The sizes given in the first column (R 10) should preferably be chosen; otherwise, sizes from the second column (R 20) and, if necessary, from the third column (R 40) can be chosen.

Nominal sizes of apertures		
R 10	R 20	R 40
mm	mm	mm
125	125	125
	118	118
	112	112
	106	106
100	100	100
	95	95
	90	90
	85	85
80	80	80
	75	75
	71	71
	67	67
63	63	63
	60	60
	56	56
	53	53
50	50	50
	47.5	47.5
	45	45
	42.5	42.5
40	40	40
	37.5	37.5
	35.5	35.5
	33.5	33.5
31.5	31.5	31.5
	30	30
	28	28
	26.5	26.5
25	25	25
	23.6	23.6
	22.4	22.4
	21.2	21.2

Nominal sizes of apertures		
R 10	R 20	R 40
mm	mm	mm
20	20	20
		19
	18	18
16	16	17
		16
	14	15
		14
12.5	12.5	13.2
		12.5
	11.2	11.8
		11.2
10	10	10.6
		10
	9	9.5
		9
8	8	8.5
		8
	7.1	7.5
		7.1
6.3	6.3	6.7
		6.3
	5.6	6
		5.6
5	5	5.3
		5
	4.5	4.75
		4.5
4	4	4.25
		4
	3.75	3.75
		3.55
3.15	3.15	3.35
		3.15
	2.8	3
		2.8
2.5	2.5	2.65
		2.5
	2.24	2.36
		2.24
2	2	2.12
		2
	1.8	1.9
		1.8
1.6	1.6	1.7
		1.6
	1.4	1.5
		1.4
1.25	1.25	1.32
		1.25
	1.12	1.18
		1.12
1	1	1.06
		1

Nominal sizes of apertures		
R 10	R 20	R 40
μm	μm	μm
800		950
		900
		850
630	800	800
		750
		710
500	630	670
		630
		600
		560
400	500	530
		500
		475
		450
315	400	425
		400
		375
		355
250	315	335
		315
		300
		280
200	250	265
		250
		236
		224
160	200	212
		200
		190
		180
125	160	170
		160
		150
		140
100	125	132
		125
		118
		112
80	100	106
		100
		95
		90
63	80	85
		80
		75
		71
50	63	67
		63
		60
		56
	50	53
	50	50
	45	48 ¹⁾
		45
		42 ¹⁾

STANDARD PREVIEW
 (standards.iteh.ai)
 ISO 2194:1972
<https://standards.iteh.ai/catalog/standards/sist/bc7743f3-f58a-4a2b-bd73-75b0095be710/iso-2194-1972>

1) From the R'40 series of rounded values given in ISO/R 497.

Nominal sizes of apertures		
R'10	R'20	R'40
μm	μm	μm
40	40	40
		38
		36
32	36	36
		34
		32
25	28	30
		28
		26
20	25	25
		24
		22
20	22	21
		21
		20

NOTE – The proposed apertures are taken from the R 10, R 20 and R 40 series of preferred numbers given in ISO/R 3 and from the R'10, R'20 and R'40 series of rounded values of preferred numbers given in ISO/R 497, respectively.

Preferred numbers are graded in geometric progression. Each aperture in each of the series (R 10 – R 20 – R 40) is a certain constant percentage larger than the preceding aperture of the same series.

Size series	Step	Ratio
R 10 (first choice)	about 25 %	1.25
R 20 (second choice)	about 12 %	1.12
R 40 (if needed)	about 6 %	1.06

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 2194:1972

<https://standards.iteh.ai/catalog/standards/sist/be7743f3-f58a-4acb-bd73-75b0095be71f/iso-2194-1972>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 2194:1972

<https://standards.iteh.ai/catalog/standards/sist/be7743f3-f58a-4acb-bd73-75b0095be71f/iso-2194-1972>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 2194:1972

<https://standards.iteh.ai/catalog/standards/sist/be7743f3-f58a-4acb-bd73-75b0095be71f/iso-2194-1972>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 2194:1972

<https://standards.iteh.ai/catalog/standards/sist/be7743f3-f58a-4acb-bd73-75b0095be71f/iso-2194-1972>