
International Standard



4783/2

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

Industrial wire screens and woven wire cloth — Guide to the choice of aperture size and wire diameter combinations —

Part 2 : Preferred combinations for woven wire cloth

*Tamis et tissus métalliques industriels — Guide pour le choix des combinaisons d'ouverture de maille et de diamètre du fil —
Partie 2 : Combinaisons préférentielles pour tissus non préformés*

First edition — 1981-08-15

STANDARDSISO.COM : Click to view the full PDF of ISO 4783-2:1981

UDC 621.928.2

Ref. No. ISO 4783/2-1981 (E)

Descriptors : openings, sizing screens, wire cloth, dimensions.

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 4783/2 was developed by Technical Committee ISO/TC 24, *Sieves, sieving and other sizing methods*, and was circulated to the member bodies in November 1979.

It has been approved by the member bodies of the following countries :

Canada	Netherlands	United Kingdom
Egypt, Arab Rep. of	Portugal	USA
France	Romania	USSR
Germany, F.R.	South Africa, Rep. of	Yugoslavia
India	Spain	
Ireland	Switzerland	

No member body expressed disapproval of the document.

Industrial wire screens and woven wire cloth — Guide to the choice of aperture size and wire diameter combinations —

Part 2 : Preferred combinations for woven wire cloth

1 Scope and field of application

This part of ISO 4783 tabulates preferred combinations of aperture size and wire diameter for industrial woven wire cloth which are taken from the general list of aperture/wire combinations given in ISO 4783/1.

It applies to woven wire cloth of aperture size from 16 to 0,020 mm.

NOTE — This is the first International Standard on woven wire cloth for industrial purposes; these specifications are a compromise which takes account of existing national standards. ISO Member Bodies are earnestly requested to rationalize further in order to reduce the number of wire diameters per aperture width within the next 5 years without excluding the option of increasing the number of preferred apertures.

Part 3 of this International Standard gives the preferred combinations for pre-crimped or pressure-welded wire screens.

2 References

ISO 3, *Preferred numbers — Series of preferred numbers.*

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

ISO 2194, *Wire screens and plate screens for industrial purposes — Nominal sizes of apertures.*

ISO 4782, *Industrial wire screens and woven wire cloth — Diameters of metal wire.*

ISO 4783/1, *Industrial wire screens and woven wire cloth — Guide to the choice of aperture size and wire diameter combinations — Part 1 : Generalities.*

ISO 4783/3, *Industrial wire screens and woven wire cloth — Guide to the choice of aperture size and wire diameter combinations — Part 3 : Preferred combinations for pre-crimped or pressure-welded wire screens.*

3 Designation

Woven wire cloth for industrial purposes shall be designated in the following sequence by

- a) width of aperture w ;
- b) diameter of wire d ;
- c) material of wire;
- d) type of weave (see figure 2).

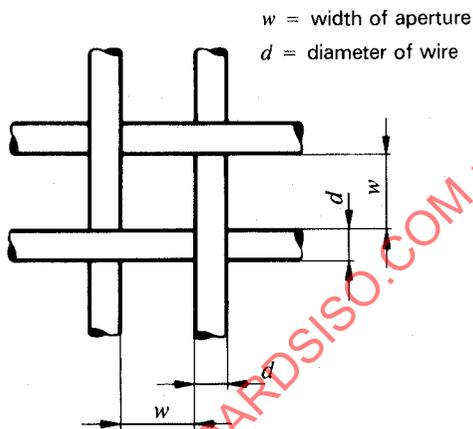
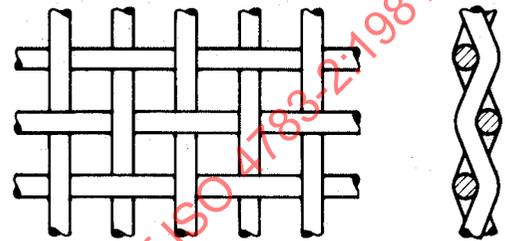


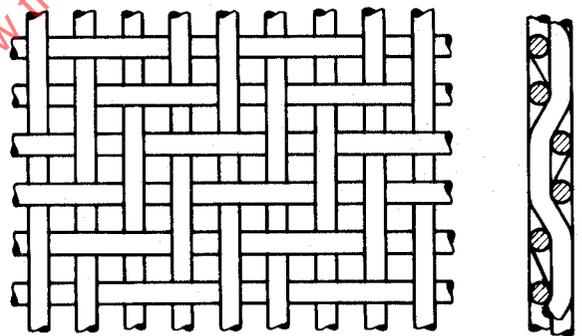
Figure 1 — Width of aperture and diameter of wire

4 Aperture size and wire diameter combinations

Table 1 lists the preferred combinations of aperture size and wire diameter for woven wire cloth and states the open area A_o and the mass per square metre, ρ_A , for each combination.



Plain weave



Twilled weave

Figure 2 — Types of weave

Table 1 — Preferred aperture size and wire diameter combinations

Width of aperture			Diameter of wire <i>d</i> mm	Open area <i>A_o</i> %	Mass ¹⁾ per unit area <i>ρ_A</i> kg/m ²	Width of aperture			Diameter of wire <i>d</i> mm	Open area <i>A_o</i> %	Mass ¹⁾ per unit area <i>ρ_A</i> kg/m ²				
R 10 <i>w</i> mm	R 20 <i>w</i> mm	R 40/3 <i>w</i> mm				R 10 <i>w</i> mm	R 20 <i>w</i> mm	R 40/3 <i>w</i> mm							
16	16	16	1,60	83	1,85	6,3	6,3	6,3	0,900	79	1,29				
			1,80	81	2,31				1,12	75	1,94				
			2,00	79	2,82				1,25	72	2,38				
			2,24	77	3,49				1,40	70	2,93				
			3,15	70	6,58				1,60	67	3,74				
			3,55	67	8,19				1,80	64	4,62				
	14		1,40	83	1,62	5,6	5,6	5,6	1,80	62	4,84				
			1,80	79	2,60				3,15	46	12,80				
			2,24	74	3,92				0,800	79	1,14				
			2,80	69	5,93							1,00	74	1,74	
12,5	12,5	13,2	2,80	68	6,22	5	5	5	1,12	72	2,15				
			1,25	83	1,44				1,40	67	2,23				
			1,60	79	2,31				1,80	60	5,08				
			1,80	76	2,88				2,00	58	6,12				
			2,00	74	3,50				2,24	54	7,46				
			2,24	72	4,31				2,50	51	9,02				
16	11,2	11,2	2,80	67	6,51	5	5	5	2,80	48	10,94				
			1,12	83	1,29				3,15	44	13,34				
			1,25	81	1,59				0,710	79	1,01				
			1,40	79	1,98				0,800	77	1,27				
			1,80	74	3,17				0,900	74	1,58				
			2,00	72	3,85				1,12	69	2,37				
			2,24	69	4,74				1,25	67	2,90				
			2,50	67	5,79				1,40	64	3,56				
			2,80	64	7,11				1,60	60	4,52				
			3,15	61	8,78				1,80	57	5,56				
			3,55	57	10,58				2,24	51	8,13				
10	10		1,12	81	1,43	5	5	5	0,710	77	1,12				
			1,40	77	2,18				0,900	72	1,74				
			1,60	74	2,80				1,00	69	2,12				
			1,80	72	3,49				1,25	64	3,18				
			2,00	69	4,23				1,40	61	3,89				
			2,50	64	6,35				1,60	57	4,93				
	9,5		1,40	76	2,28	5	5	5	1,80	54	6,05				
			1,80	71	3,64				2,00	51	7,26				
			2,00	68	4,42				2,24	48	8,80				
			2,24	65	5,43				2,50	44	10,58				
			2,50	63	6,61				2,80	41	12,77				
			2,80	60	8,09				4,75	0,900	71	1,82			
			3,15	56	9,96								1,25	63	3,31
			3,55	53	12,27								1,40	60	4,05
1,00	81	1,27	1,60	56	5,12										
8	8	8	1,00	81	1,27	4,5	4,5	4,5	2,00	50	7,53				
			1,25	77	1,94				2,24	46	9,12				
			1,40	75	2,39				2,50	43	10,95				
			1,60	73	3,07				2,80	40	13,19				
			1,80	69	3,81				0,630	77	0,98				
			2,24	64	5,67							0,800	72	1,53	
8	8	8	1,00	79	1,41	8	8	8	0,900	69	1,91				
			1,25	75	2,15				1,00	67	2,31				
			1,40	72	2,65				1,12	64	2,83				
			1,60	69	3,39				1,25	61	3,45				
			1,80	67	4,20				1,40	58	4,22				
			2,00	64	5,08				1,60	54	5,33				
			2,24	61	6,22				1,80	51	6,53				
			2,50	58	7,56				2,00	48	7,82				
			2,80	55	9,22				2,24	45	9,46				

1) For plain steel wire, $\rho = 7\,850\text{ kg/m}^3$ (see clause 5).

Table 1 — Preferred aperture size and wire diameter combinations (continued)

Width of aperture			Diameter of wire <i>d</i> mm	Open area <i>A_o</i> %	Mass ¹⁾ per unit area <i>ρ_A</i> kg/m ²	Width of aperture			Diameter of wire <i>d</i> mm	Open area <i>A_o</i> %	Mass ¹⁾ per unit area <i>ρ_A</i> kg/m ²
R 10 <i>w</i> mm	R 20 <i>w</i> mm	R 40/3 <i>w</i> mm				R 10 <i>w</i> mm	R 20 <i>w</i> mm	R 40/3 <i>w</i> mm			
4	4	4	0,560	77	0,87	2	2	2	0,315	74	0,60
			0,630	75	1,09				0,400	69	0,85
			0,710	72	1,36				0,560	61	1,56
			0,900	67	2,10				0,630	58	1,92
			1,00	64	2,54				0,710	54	2,36
			1,12	61	3,11				0,900	48	3,55
			1,25	58	3,78				1,00	44	4,23
			1,40	55	4,61				1,25	38	6,11
								1,60	31	9,03	
	3,55		0,500	77	0,78		1,8		0,315	72	0,60
		0,560	75	0,97	0,355	70		0,74			
		0,630	72	1,21	0,400	67		0,92			
		0,800	67	1,87	0,500	61		1,38			
		0,900	64	2,31	0,560	58		1,69			
		1,00	61	2,79	0,630	55		2,07			
		1,12	58	3,41	0,800	48		3,13			
		1,25	55	4,13							
		3,55	0,560	73	1,02			1,7	0,400	66	0,97
			0,900	62	2,42	0,630	53		2,16		
			1,25	53	4,31	0,800	46		3,25		
									1,12	36	5,65
									1,40	30	8,03
3,15	3,15		0,450	77	0,71	1,6	1,6		0,280	72	0,53
			0,500	74	0,87			0,315	70	0,66	
			0,560	72	1,07			0,355	67	0,82	
			0,710	67	1,66			0,450	61	1,25	
			0,800	64	2,05			0,500	58	1,51	
			0,900	60	2,54			0,560	55	1,84	
			1,12	54	3,73			0,630	51	2,26	
			1,25	51	4,51			0,710	48	2,77	
								0,800	44	3,39	
								1,00	38	4,88	
	2,8	2,8	0,450	74	0,79			1,4	0,250	72	0,48
			0,500	72	0,96	0,315	67		0,73		
			0,560	69	1,19	0,450	57		1,39		
			0,710	64	1,82	0,560	51		2,03		
			0,800	60	2,26	0,630	48		2,48		
			0,900	57	2,78	0,710	44		3,03		
			1,12	51	4,06	0,900	37		4,47		
			1,60	40	7,39	1,25	28		7,49		
	1,80	37	8,95								
	2,00	34	10,85								
2,5	2,5		0,400	74	0,70	1,25	1,25		0,250	69	0,53
			0,450	72	0,87			0,280	67	0,65	
			0,500	69	1,06			0,315	64	0,81	
			0,630	64	1,61			0,400	57	1,23	
			0,710	61	1,99			0,500	51	1,81	
			0,800	57	2,46			0,560	48	2,20	
			0,900	54	3,08			0,630	44	2,68	
			1,00	51	3,63			0,800	37	3,96	
		2,36	0,800	56	2,57			1,18	0,450	52	1,58
			1,00	49	3,78	0,630	43		2,78		
			1,80	32	9,89	0,800	36		4,11		
									1,00	29	5,83
	2,24		0,355	75	0,62		1,12		0,250	67	0,58
		0,400	72	0,77	0,315	61		0,88			
		0,450	69	0,96	0,355	58		1,09			
		0,560	64	1,42	0,400	54		1,34			
		0,630	61	1,76	0,450	51		1,64			
		0,710	58	2,17	0,560	44		2,37			
		0,900	51	3,28	1,00	31		5,64			

1) For plain steel wire, $\rho = 7\,850\text{ kg/m}^3$ (see clause 5).

Table 1 — Preferred aperture size and wire diameter combinations (continued)

Width of aperture			Diameter of wire <i>d</i> mm	Open area <i>A_o</i> %	Mass ¹⁾ per unit area <i>ρA₂</i> kg/m ²	Width of aperture			Diameter of wire <i>d</i> mm	Open area <i>A_o</i> %	Mass ¹⁾ per unit area <i>ρA₂</i> kg/m ²
R 10 <i>w</i> mm	R 20 <i>w</i> mm	R 40/3 <i>w</i> mm				R 10 <i>w</i> mm	R 20 <i>w</i> mm	R 40/3 <i>w</i> mm			
1	1	1	0,224	67	0,52	0,5	0,5	0,5	0,140	61	0,39
			0,250	64	0,64				0,160	57	0,49
			0,280	61	0,78				0,200	51	0,73
			0,315	58	0,96				0,224	48	0,88
			0,355	54	1,18				0,250	44	1,06
			0,400	51	1,45				0,280	41	1,28
			0,450	48	1,77				0,315	38	1,55
			0,500	44	2,12				0,355	34	1,87
			0,560	41	2,55				0,400	31	2,26
			0,710	34	3,74						
			0,900	28	5,41						
	0,9		0,200	67	0,46				0,140	58	0,42
			0,224	64	0,57				0,200	48	0,78
			0,250	61	0,69				0,250	41	1,13
			0,315	55	1,04				0,280	38	1,36
			0,355	51	1,28				0,315	35	1,65
			0,400	48	1,56						
			0,450	45	1,91						
			0,500	41	2,27						
		0,85	0,355	50	1,33			0,425	0,200	46	0,81
			0,400	44	1,63				0,280	36	1,41
			0,500	40	2,35				0,355	30	2,05
			0,630	33	3,41						
			0,800	27	4,93						
0,8	0,8		0,200	64	0,51				0,125	58	0,38
			0,250	58	0,76				0,180	48	0,71
			0,280	55	0,92				0,224	41	1,02
			0,315	51	1,13				0,250	38	1,22
			0,355	48	1,39				0,280	35	1,46
			0,450	41	2,06						
			0,500	38	2,44						
	0,71	0,71	0,180	64	0,46				0,125	55	0,41
			0,200	61	0,56				0,140	51	0,50
			0,250	55	0,83				0,180	44	0,77
			0,280	51	1,01				0,200	41	0,92
			0,315	48	1,23				0,224	38	1,10
			0,355	44	1,50				0,250	34	1,31
			0,450	37	2,22				0,280	31	1,57
			0,560	31	3,14				0,315	28	1,88
									0,355	25	2,25
0,63	0,63		0,160	64	0,41				0,112	54	0,37
			0,180	60	0,51				0,160	44	0,69
			0,224	54	0,75				0,200	37	0,99
			0,250	51	0,90				0,250	31	1,40
			0,280	48	1,09						
			0,315	44	1,33						
0,400	37	1,97									
		0,6	0,280	46	1,13				0,160	43	0,71
			0,400	36	2,03				0,200	36	1,02
			0,450	33	2,45				0,224	33	1,18
	0,56		0,160	60	0,45				0,250	30	1,44
			0,224	51	0,81				0,280	28	1,57
			0,280	44	1,19				0,315	25	1,88
			0,355	37	1,75				0,355	22	2,25
			0,160	64	0,41				0,112	54	0,37
			0,180	60	0,51				0,160	44	0,69
			0,224	54	0,75				0,200	37	0,99
			0,250	51	0,90				0,250	31	1,40
			0,280	48	1,09						
			0,315	44	1,33						
			0,400	37	1,97						
			0,280	46	1,13				0,100	54	0,33
			0,400	36	2,03				0,112	51	0,41
			0,450	33	2,45				0,140	44	0,59
									0,160	40	0,74
									0,180	37	0,89
									0,224	31	1,26
			0,280	46	1,13				0,100	51	0,36
			0,400	36	2,03				0,125	44	0,53
			0,450	33	2,45				0,140	41	0,64
									0,160	37	0,79
									0,180	34	0,96
									0,200	31	1,13
			0,160	60	0,45				0,090	51	0,33
			0,224	51	0,81				0,100	48	0,39
			0,280	44	1,19				0,125	41	0,57
			0,355	37	1,75				0,160	34	0,85
									0,180	31	1,02

1) For plain steel, $\rho = 7\,850\text{ kg/m}^3$ (see clause 5).