Sieving & Screens

Test sieves

Test sieves are precision metal sieves applied for laboratory sampling and particle size analysis. It generally consists of a stainless steel wire mesh screen held in a round metal frame. It is designed to provide desirable precision when filtering out unwanted particles from final products. Test sieves come in a variety of sizes and specifications to meet the screening requirements of various industries. It is widely used in industries involving powdered and granular materials classification, such as chemicals, pharmaceutical and food industries.

Benefits for sieving

√ ASTM E11 and ISO 3310 compliant stainless steel sieve cloth
√ Uniform and accurate opening sizes for accurate screening
√ Durable and polished stainless steel frame
√ Smooth frame surface prevents cross-contamination.
√ Evenly tensioned wire cloth for precise and accurate analysis
√ Wide rang of wire cloth & frame sizes for your option

Specification

Wire cloth material: 304, 316, 316L.
Wire diameter: two or three.
Sieve opening: 0.03–0.5 mm
Sieving size: 16–325 mesh

Standard*A	Sieve Designation Alternative*D	Nominal Sieve Opening*B	Permissible Variations in Average Openings	Maximum Individual Openings	Permissible Average Wire Diameter (mm)*C	
					Minimum	Maximum
125 mm	5 in.	5.00	±3.30 mm	129.06 mm	6.8	9.2
112 mm	–	4.41	±2.96 mm	115.74 mm	6.8	9.2
106 mm	4.24 in.	4.24	±2.80 mm	109.59 mm	5.4	7.2
100 mm	4 in.	3.50	±2.65 mm	103.44 mm	5.4	7.2
90 mm	3-1/2 in.	3.15	±2.39 mm	93.18 mm	5.4	7.2
80 mm	–	2.80	±2.13 mm	82.91 mm	5.4	7.2
75 mm	3 in.	3.00	±2.00 mm	77.78 mm	5.4	7.2
71 mm	–	2.80	±1.89 mm	73.67 mm	4.8	6.4
63 mm	2-1/2 in.	2.50	±1.69 mm	65.44 mm	4.8	6.4
56 mm	–	2.20	±1.50 mm	58.24 mm	4.3	5.8
53 mm	2.12 in.	2.12	±1.42 mm	55.15 mm	4.3	5.8
50 mm	2 in.	2.00	±1.34 mm	52.06 mm	4.3	5.8
45 mm	1-3/4 in.	1.75	±1.21 mm	46.91 mm	3.8	5.2
40 mm	–	1.57	±1.08 mm	41.45 mm	3.8	5.2
37.5 mm	1-1/2 in.	1.50	±1.01 mm	39.17 mm	3.8	5.2
35.5 mm	–	1.40	±0.961 mm	37.10 mm	3.4	4.6
31.5 mm	1-1/4 in.	1.25	±0.855 mm	32.97 mm	3.4	4.6
28 mm	–	1.10	±0.762 mm	29.35 mm	3.0	4.1
26.5 mm	1.06 in.	1.06	±0.722 mm	27.79 mm	3.0	4.1
25 mm	1 in.	1.00	±0.682 mm	26.24 mm	3.0	4.1
22.4 mm	7/8 in.	.875	±0.613 mm	23.54 mm	3.0	4.1
20 mm	–	.787	±0.548 mm	21.05 mm	2.7	3.6
19 mm	3/4 in.	.750	±0.522 mm	20.01 mm	2.7	3.6
18 mm	–	.709	±0.495 mm	18.97 mm	2.7	3.6
16 mm	5/8 in.	.625	±0.441 mm	16.89 mm	2.7	3.6
14 mm	–	.551	±0.387 mm	14.81 mm	2.4	3.2
13.2 mm	.530 in.	.530	±0.365 mm	13.98 mm	2.4	3.2
12.5 mm	1/2 in.	.500	±0.346 mm	13.25 mm	2.1	2.9
11.2 mm	7/16 in.	.438	±0.311 mm	11.89 mm	2.1	2.9
10 mm	–	.394	±0.279 mm	10.64 mm	2.1	2.9
9.5 mm	3/8 in.	.375	±0.265 mm	10.11 mm	1.9	2.6
9 mm	–	.354	±0.251 mm	9.59 mm	1.9	2.6
8 mm	5/16 in.	.312	±0.224 mm	8.54 mm	1.7	2.3
7.1 mm	–	.280	±0.20 mm	7.60 mm	1.5	2.1
6.7 mm	.265 in.	.265	±0.189 mm	7.18 mm	1.5	2.1
6.3 mm	1/4 in.	.250	±0.178 mm	6.76 mm	1.5	2.1
5.6 mm	No. 3-1/2 *D	.223	±0.159 mm	6.02 mm	1.3	1.9
5 mm	–	.197	±0.142 mm	5.39 mm	1.3	1.9
4.75 mm	No. 4	.187	±0.135 mm	5.12 mm	1.3	1.9
4.5 mm	–	.177	±0.128 mm	4.86 mm	1.2	1.7
4 mm	No. 5	.157	±0.114 mm	4.33 mm	1.2	1.7
3.55 mm	–	.140	±0.102 mm	3.85 mm	1.06	1.5
3.35 mm	No. 6	.132	±0.096 mm	3.64 mm	1.06	1.5
3.15 mm	–	.124	±0.091 mm	3.43 mm	1.06	1.5
2.8 mm	No. 7	.110	±0.081 mm	3.06 mm	.95	1.3
2.5 mm	–	.0984	±0.073 mm	2.74 mm	.85	1.15
2.36 mm	No. 8	.0937	±0.069 mm	2.59 mm	.85	1.15
2.24 mm	–	.0882	±0.065 mm	2.46 mm	.77	1.04
2 mm	No. 10	.0787	±0.059 mm	2.20 mm	.77	1.04
1.8 mm	–	.0709	±0.053 mm	1.99 mm	.68	.92
1.7 mm	No. 12	.0661	±0.050 mm	1.88 mm	.68	.92

Standard*A	Sieve Designation Alternative*D	Nominal Sieve Opening*B	Permissible Variations in Average Openings	Maximum Individual Openings	Permissible Average Wire Diameter (mm)*C	
					Minimum	Maximum
1.6 mm	–	.0630	±0.047 mm	1.77 mm	.68	.92
1.4 mm	No. 14	.0555	±0.042 mm	1.56 mm	.60	.82
1.25 mm	–	.0492	±0.038 mm	1.40 mm	.54	.72
1.18 mm	No. 16	.0469	±0.036 mm	1.32 mm	.54	.72
1.12 mm	–	.0441	±0.034 mm	1.26 mm	.48	.64
1 mm	No. 18	.0394	±0.03 mm	1.13 mm	.48	.64
900 µm *E	–	.0354	±27.60 µm	1018 µm	.43	.58
850 µm	No. 20	.0331	±26.20 µm	964 µm	.43	.58
800 µm	–	.0315	±24.80 µm	909 µm	.38	.52
710 µm	No. 25	.0278	±22.20 µm	811 µm	.38	.52
630 µm	–	.0248	±19.90 µm	723 µm	.34	.46
600 µm	No. 30	.0234	±19.00 µm	691 µm	.34	.46
560 µm	–	.0220	±17.90 µm	647 µm	.30	.41
500 µm	No. 35	.0197	±16.20 µm	580 µm	.27	.36
450 µm	–	.0177	±14.70 µm	525 µm	.24	.32
425 µm	No. 40	.0165	±14.00 µm	498 µm	.24	.32
400 µm	–	.0157	±13.30 µm	470 µm	.21	.29
355 µm	No. 45	.0139	±12.00 µm	420 µm	.19	.26
315 µm	–	.0124	±10.80 µm	375 µm	.17	.23
300 µm	No. 50	.0117	±10.40 µm	358 µm	.17	.23
280 µm	–	.0110	±9.80 µm	336 µm	.15	.21
250 µm	No. 60	.0098	±8.90 µm	302 µm	.13	.19
224 µm	–	.0088	±8.10 µm	273 µm	.13	.19
212 µm	No. 70	.0083	±7.80 µm	259 µm	.12	.17
200 µm	–	.0079	±7.40 µm	245 µm	.12	.17
180 µm	No. 80	.0070	±6.80 µm	223 µm	.106	.15
160 µm	–	.0063	±6.30 µm	200 µm	.095	.13
150 µm	No. 100	.0059	±6.00 µm	188 µm	.085	.115
140 µm	–	.0055	±5.70 µm	177 µm	.085	.115
125 µm	No. 120	.0049	±5.20 µm	159 µm	.077	.104
112 µm	–	.0044	±4.80 µm	144 µm	.068	.092
106 µm	No. 140	.0041	±4.70 µm	137 µm	.06	.082
100 µm	–	.0039	±4.50 µm	130 µm	.06	.082
90 µm	No. 170	.0035	±4.20 µm	119 µm	.054	.072
80 µm	–	.0031	±3.90 µm	107 µm	.048	.064
75 µm	No. 200	.0029	±3.70 µm	101 µm	.043	.058
71 µm	–	.0028	±3.60 µm	96 µm	.043	.058
63 µm	No. 230	.0025	±3.40 µm	87 µm	.038	.052
56 µm	–	.0022	±3.20 µm	78 µm	.034	.046
53 µm	No. 270	.0021	±3.10 µm	74 µm	.031	.041
50 µm	–	.0020	±3.00 µm	71 µm	.031	.041
45 µm	No. 325	.0017	±2.80 µm	65 µm	.027	.037
40 µm	–	.0016	±2.70 µm	59 µm	.027	.037
38 µm	No. 400	.0015	±2.60 µm	56 µm	.024	.035
36 µm	–	.0014	±2.60 µm	54 µm	.024	.035
32 µm	No. 450	.0012	±2.40 µm	49 µm	.023	.033
25 µm	No. 500	.0010	±2.20 µm	40 µm	.021	.029
20 µm	No. 635	.0008	±2.10 µm	33 µm	.017	.023

*A: These Standard Designations correspond to the values for the test sieve openings recommended by the International Standards Organization, Geneva, Switzerland. Except where noted.
*B: Only approximately equivalent to the metric values in column 1.
*C: The average diameter of the wires in the x and y direction, measured separately, of any wire cloth shall not deviate from the nominal values by more than ±15%.
*D: These numbers (3-1/2 to 635 are approximate number of openings per linear in. but it is preferred that the sieve be identified by the standard designation in millimeters or micronmeters.
*E: 1000 µm – 1 mm.

Frame material: stainless steel, brass.

Nominal diameter: 3", 6", 8", 10", 12"

Nominal height:

Full height: 1-1/4" – 3-1/4" (31.8 mm – 82.6 mm)

Half height: 5/8" – 1-5/8" (15.9 mm – 41.3 mm)

Nominal Diameter	Diameter Tolerance		Typical Frame*			
	Inside at Top**		Nominal Height			
			Full Height		Half Height	
inch	inch	mm	inch	mm	inch	mm
3	3.000 + 0.030/-0.000	76.2 + 0.76/-0.00	1-1/4	31.8	5/8	15.9
6	6.000 + 0.030/-0.000	152.4 + 0.76/-0.00	1-3/4	44.5	1	25.4
8	8.000 + 0.030/-0.000	203.2 + 0.76/-0.00	2	50.8	1	25.4
10	10.000 + 0.030/-0.000	254 + 0.76/-0.00	3	76.2	1-1/2	38.1
12	12.000 + 0.030/-0.000	304.8 + 0.76/-0.00	3-1/4	82.6	1-5/8	41.3

*Frame height measured from top of frame to top of sieve cloth.
**Measured 0.2" (5 mm) below the top of the frame.

Applications

- Industrial rocks & minerals
- Food
- Soils
- Glass
- Ceramic
- Granulates
- Powders
- Pharmaceuticals

Industrial rocks & minerals

Powders

Granules

Soils