

ZGF TECH BRIEF

MESH versus MICRON

(INCHES & MILLIMETERS TOO!)

The Most Advanced, Automatic,
Non-Disposable Liquid Filtration System



Determining mesh is easy. Simply count how many openings there are in one inch of screen. The number of openings is the mesh size. A 20-mesh screen means there are 20 openings across one linear inch of screen. A 100-mesh screen has 100 openings, and so on. Therefore, as the mesh number increases, the size of the openings decreases.

In metric terms, a micron is one millionth of a meter, or 1 micron = 1×10^{-6} meter. In English terms, a micron is 1 inch divided into 25,400 equal parts, or 1 micron = 3.937×10^{-5} inch

People interpret mesh and micron ratings in different ways. **ZGF considers mesh ratings and the use of screens as strainer or pre-filter applications. ZGF considers micron ratings for filter applications. We consider filter vs. strainer and micron vs. mesh cut-off at 400 micron / 40 mesh.**

Many companies sell screens as tight as 37 micron / 400 mesh. However, as the screen weave gets finer, the wires are closer together and eventually there is virtually no space between the wires.

There is no formula to convert from Mesh to Micron. Mesh and micron are two independent methods for rating particle separation technologies. Mesh size is not a precise measurement of particle size retention because screens can be made with different thicknesses of wire. The thicker the wires, the smaller the particle passing through the openings in the screen, and vice versa. As the capture and removal of particles becomes more critical in a process / application, it becomes more important to utilize micron ratings and filters in lieu of mesh ratings and strainers.

The ZGF Spring Filter element sets the standard for permanent media, fully automatic, self-cleaning filters. The absolute gap allows for efficient and effective particle capture from liquids; and the unique continuous coil design ensures complete cleaning of the filter element with each backwash. The proprietary, non-disposable, absolute gap filter elements are available in micron ratings ranging from 20 – 400 micron and are guaranteed for 5-years!

Mesh vs Micron (inches & millimeters too)			
U.S. MESH	INCHES	MICRONS	MILLIMETERS
3	0.2650	6730	6.730
4	0.1870	4760	4.760
5	0.1570	4000	4.000
6	0.1320	3360	3.360
7	0.1110	2830	2.830
8	0.0937	2380	2.380
10	0.0787	2000	2.000
18	0.0394	1000	1.000
20	0.0331	841	0.841
30	0.0232	595	0.595
35	0.0197	500	0.500
40	0.0165	400	0.400
50	0.0117	297	0.297
60	0.0098	250	0.250
70	0.0083	210	0.210
80	0.0070	177	0.177
100	0.0059	149	0.149
120	0.0049	125	0.125
140	0.0041	105	0.105
200	0.0029	74	0.074
270	0.0021	53	0.053
325	0.0017	44	0.044
400	0.0015	37	0.037
625	0.0008	20	0.020
1250	0.0004	10	0.010
2500	0.0002	5	0.005