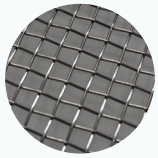
Choice of mesh

A general guide to our selection.

Mesh selection is one of the most important choices when deciding on the sieving machine requirement. Throughput expectations, machine size, and style of sieving are controlled by mesh size selection. Influencing factors are given below to aid customers in the choice of mesh for their application.

Stainless Steel Mesh

The most common material choice. It provides strength and is resistant to heat. It is ideal where a hot material is to be sieved or where a large amount of product will remain on the screen. It can be supplied in a variety of weave patterns, the most common being a plain grid type weave. Stainless steel mesh retains its size integrity even on larger meshes.



Magnetic Mesh

Woven mesh can also be supplied in a special SS430 magnetic stainless version. This mesh has a similar chromium content to standard stainless steel grades such as SS304 and SS316, but contains no nickel, making it more cost-effective and naturally magnetic. While less corrosion resistant than austenitic grades, it can be easily picked up by rare earth magnet assemblies should any breakages occur in use. Another variant is 318LN mesh, which is a nitrogen-strengthened austenitic-ferritic steel and is highly corrosion resistant. This type of mesh is available in a very limited range of apertures.

Perforated Mesh

This mesh is made from sheets punched to either square or round apertures. Supplied in sheet form and cut to size, they can be bonded to rings the same as woven mesh. These mesh types are extremely hard wearing and stable in use. They do have a reduced open area so advice should be sought to ensure capacity rates can still be met. Available in most types of stainless steel, aluminium and carbon steel.

Wedge Wire Screens

Wedge wire screens can be fabricated in a range of both flat panels and tubes. Wedge wire and support profiles are resistance welded with accurate slot dimensions. The screens can be mechanically and electro-polished and given additional surface hardening treatments. Further support structures and fastening brackets, can be added. Tubes can have various end piece connections and additional internal strengthening.

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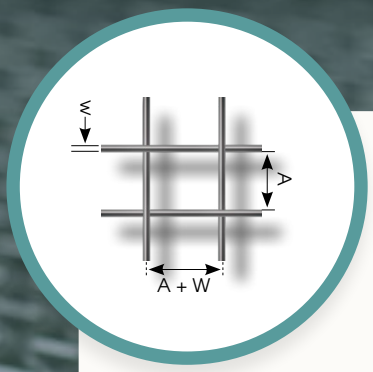
Choice of mesh cont.

Most meshes are now a bonded configuration and require a special jig to ensure optimum tension and aperture size integrity – the mesh is stretched along its warp and weft to a precise tension. Hand meshed systems cannot guarantee the size or shape of the aperture due to the stretching of the mesh from differing directions (diamond shaped holes, and irregular hole patterns).

All mesh used by Farleygreene conforms to ISO standards 9044 to ensure quality and accuracy of our meshing service.

Mesh is usually supplied in 1220mm wide rolls and in linear length increments as required. 1020, 1530 & 2000mm wide rolls are available but only in certain apertures.

Farleygreene offer a full re-mesh/meshing service. Please ask for our mesh information charts for more details of mesh apertures available.



OPEN AREA (Fo) = ...%

$$Fo = \frac{A^2 \times 100}{(A + W)^2}$$

A = APERTURE SIZE
W = WIRE DIAMETER
A + W = PITCH

APERTURE SIZE X 1000 = MICRONS
MESH COUNT = HOLES PER LINEAR INCH

TABLE SHOWS TYPICAL SIZES ONLY
MANY MORE APERTURES ON REQUEST

Aperture	Mesh	Wire dia	Open area %
0.063	250	0.040	38
0.075	230	0.036	45.7
0.100	165	0.050	44.4
0.150	100	0.100	36
0.200	88	0.090	48
0.250	62	0.160	38
0.400	40	0.220	41
0.500	38	0.160	57.6
0.630	32	0.160	64
0.710	29	0.180	64
0.850	24	0.200	65.5
0.900	23	0.200	67
1.000	19	0.320	57.6
1.250	15.4	0.400	57.6
1.500	12	0.630	49.6
2.000	10	0.560	60
2.500	8.5	0.500	69.4
3.15	6.4	0.800	64
4.000	5.4	0.710	72
5.000	3.8	1.6	57.6
6.300	3.4	1.250	69.4
7.100	3	1.400	69.4
8.000	2.6	1.600	69.4
10.000	2.2	1.400	77
11.200	2	1.600	77
12.500	1.8	1.6	79
16.000	2	2.000	79

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