

Basket and screen data

Wire mesh specifications

Eaton strainers are available with woven wire mesh screens. Wire mesh provides smaller openings for very fine straining applications down to 40 microns. Eaton baskets and screens use monofilament mesh possessing equal wire size and wire count in both directions to produce square openings. Other types of mesh such as Dutch (or Hollander) are also available. Dutch weave has a greater quantity of wires in one direction and fewer wires of a larger diameter in the other direction. This creates a rectangular opening. As with perforated sheet, the best wire mesh selection is a balance of open area, wire diameter and type of weave.

Openings

Standard wire mesh liners for Eaton baskets and screens are available from 20 to 400 mesh. For any size mesh, there are different open area selections based on the diameter of the wires used. Twenty mesh means 20 wires per inch in both a vertical and horizontal direction. Therefore, as the wire size increases, the hole size decreases. Eaton baskets offer wire mesh with openings from 0.034" to 0.0015" (20 mesh to 400 mesh).

Open area

The open area of wire mesh is a function of both the weave and the wire diameter. Eaton uses a plain square weave in most cases because its straight-through flow path creates the least pressure drop. The mesh is

reinforced with a perforated metal backing possessing greater than a 60% open area. This combination affords the greatest degree of strength, yet offers a lower pressure drop than other types of wire mesh. In certain instances, such as Y strainer in steam applications, the increased pressure drop resulting from the use of a Dutch weave is not as critical as the retention of small particles. Therefore, in applications that involve steam, Eaton suggests the use of weave such as the 30 x 160 size that can withstand a much higher differential pressure without bursting. Eaton can supply baskets and screens with open areas from 14% to 46%

Plain square weave

Woven in an over and under pattern of wire having the same diameter, this weave produces a square opening with excellent flow characteristics.

Plain dutch weave

Woven in an over and under pattern in one direction in which the horizontal wires are larger in diameter than the vertical wires, which are driven close and crimped at each pass. This weave produces greater strength, but lower flow rates, than a square weave. Most often used in steam applications.

Mesh liners available

The number of openings per linear inch determines the size of mesh liners. The standard sizes Eaton can furnish are 20, 40, 60, 80, 100, 200, 325 and 400.

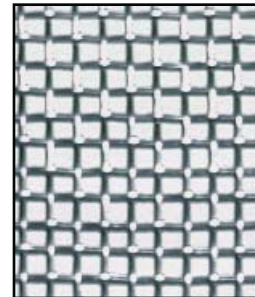
Perforated basket sheet specifications

| Perforation size inches | Sheet thickness uss gauge # | Hole pattern | % Open area |
|-------------------------|-----------------------------|--------------|-------------|
| 0.020 | 26 (0.018 mm) | Straight | 16.0 |
| 1/32 | 26 (0.018 mm) | Straight | 28.0 |
| 3/64 | 26 (0.018 mm) | Straight | 30.2 |
| 0.045 | 26 (0.018 mm) | Straight | 37.0 |
| 1/16 | 26 (0.018 mm) | Straight | 31.0 |
| 1/8 | 26 (0.018 mm) | Staggered | 40.0 |
| 5/32 | 26 (0.018 mm) | Staggered | 63.0 |
| 1/4 | 26 (0.018 mm) | Staggered | 42.0 |
| 3/8 | 26 (0.018 mm) | Staggered | 52.0 |
| 1/2 | 26 (0.018 mm) | Staggered | 47.9 |

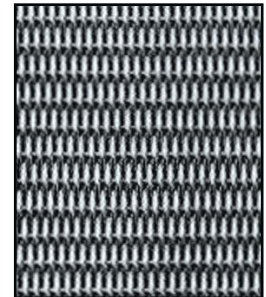
Mesh basket sheet specifications

| Mesh size | Wire diameter inches | Mesh opening inches | Mesh opening microns | % Open area |
|-----------|----------------------|---------------------|----------------------|-------------|
| 20 | 0.016 | 0.0340 | 864 | 46.2 |
| 40 | 0.010 | 0.0150 | 381 | 36.0 |
| 60 | 0.0075 | 0.0092 | 234 | 30.5 |
| 80 | 0.0060 | 0.0065 | 165 | 27.0 |
| 100 | 0.0045 | 0.0055 | 140 | 30.3 |
| 200 | 0.0021 | 0.0029 | 74 | 33.6 |
| 325 | 0.0014 | 0.0017 | 43 | 30.0 |
| 400 | 0.0010 | 0.0015 | 38 | 36.0 |

Wire mesh weaves



Plain square weave



Plain dutch weave

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