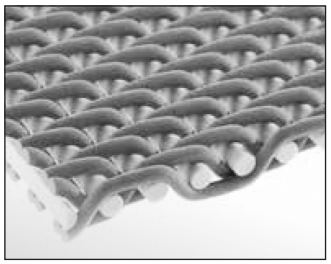
Wire Cloth Terminology

All Applications, Virtually All Metals

Broad Mesh Twilled Weave To optimize the filtration capacity of the cloth, the shute wires of the broad mesh twilled weave are arranged loosely instead of being close to each other. This means that the retention accuracy is lower than that of a classic twilled weave. Nevertheless, the accuracy is sufficient for the requirements of most applications. In addition, this modified weave allows significantly higher flow rates with low loss of pressure and good regeneration characteristics. The surface of the BMT cloth is smooth on both sides, meaning that the filter can be easily cleaned.



Broad Mesh Twilled Weave

Calendered Wire Cloth Wire cloth that has passed through a pair of heavy rolls to reduce the thickness of the fabric, or to flatten the intersections to provide a smooth surface.

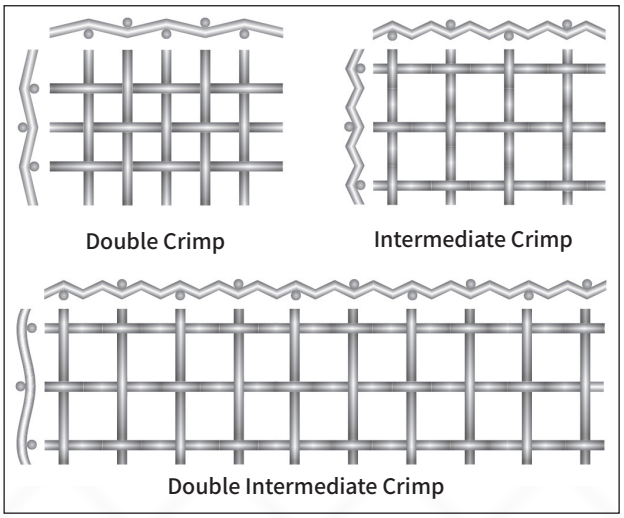
Clear Opening (Space) Space between adjacent parallel wires.

Crimp Corrugations in wires to permit locking them in place when perpendicular to one another.

Double Crimp This option crimps down on both the warp and shute wires, creating a winged look.

Double Intermediate Crimp Usually the warp wires lay in every crimp in the shute wires, and the shute wires lay in every other crimp in the warp wires.

Intermediate Crimp Warp and shute wires lay in every other crimp.



Double Crimp

Intermediate Crimp

Double Intermediate Crimp

Easy Clean Wire Cloth A plain mesh that can be woven in either Dutch or Reverse Dutch and provides high flow rates and excellent backflushing properties.

Fill Wires (Shute Wires) Wires running across the width of the cloth as a woven.

Gauge (Wire Size) To avoid possible errors, specify wire diameter in decimal sizes rather than gauge numbers.

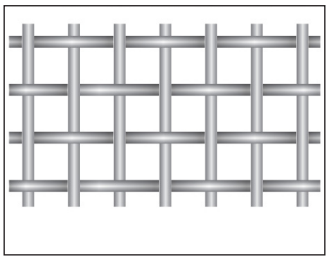
Market Grade Most commonly used sizes of industrial wire cloth and best balance of combination of mesh count and wire diameter that creates the most uniform weave.

Mesh The number of wires from the center of one wire to a point 1” distant.

Mesh Count The number of wires from the center of one wire to a point 1” distant.

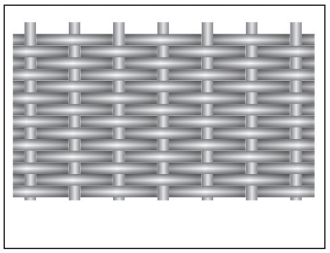
Mill Grade A wire mesh grade in between Market Grade and Tensile Bolting Cloth with slightly more open air. This type is typically used in separation.

Plain Weave The plain weave has its origins in braiding. With this weave, the material is interwoven. Each warp wire and each shute wire pass over one and under the next adjacent wire. Wires are crimped in the weaving operation. There are a number of ways of doing this, making the family of plain weaves extremely diverse with respect to appearance and structure.



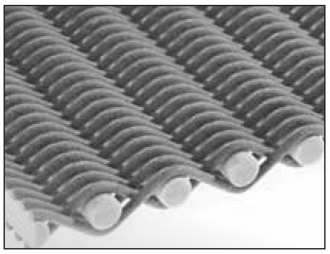
Plain Weave

Plain Dutch Weave Like plain weave, the wire in plain dutch weave is interwoven but the warp wires are thicker than the shute wires. These are arranged very close together to form a zero-mesh structure. This generates a weave that has high inherent stability with a relatively small mesh size. Plain dutch weave has excellent filtration qualities and can be easily cleaned of filtrate deposits and residual dirt.



Plain Dutch Weave

Plain Dutch Weave HF (High Flow) This cloth, which is woven in the same way as the classic plain dutch weave, earns the title “High Flow“ through the high flow rates that it allows. These are due to the shute wires being considerably thinner than usual which doubles the pore count. As a result, this cloth has a much higher contaminant trapping capability. With a free open area of 28 - 42%, the HF performs better than other filters with a similar mesh count.



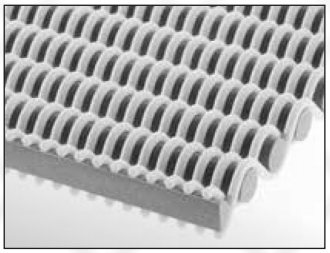
Dutch Weave High Flow

Permeability The ability of a wire mesh to allow gas or liquid to pass through it. Air permeability is defined as the rate of airflow passing through a known area under a prescribed air pressure.

Porosity Wire mesh porosity is defined as the volume of the mesh pores/openings in relation to the total volume of the wire cloth expressed as a percentage.

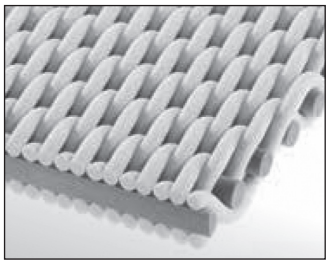
Rectangular Openings Long dimension of an opening can be specified as parallel or perpendicular to the length.

Reverse Plain Dutch Weave “Reverse” describes the fact that the warp wires of this weave are relatively thin and the shute wires are thick – in other words, the exact opposite of the standard dutch weaves. The reverse dutch design produces precisely defined pore openings that run under an angle to the surface of the mesh. The high number of warp wires increases the active filtration cross section. Depending on the specifications, this can be approx. 21 - 25%. The reverse dutch weave is available in “heavy” and “light” versions. The light version has a special wire combination that increases the active filtration cross section to 25 - 38%.



Reverse Plain Dutch Weave

Reverse Dutch Twilled Weave An important version of the reverse dutch weave is the reverse dutch twilled weave. With this weave, the warp wires are also relatively thin – as in the case of the normal reverse dutch weave. The difference is the twilled weave pattern of the shute wires. This means that the warp wires are not as heavily deformed and physically stressed as in the case of plain weaves. The strength of this weave design is its suitability for applications that are subject to high levels of mechanical stress.



Reverse Dutch Twilled Weave

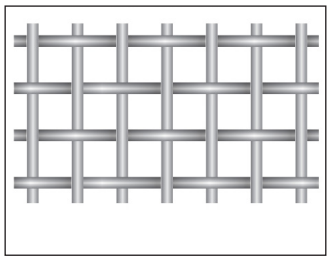
Selvage Finished edges running the length of the roll to prevent unraveling.

Shute Wires Wires running across the width of the cloth as woven.

Slotted Opening Weave in which shute wires are arranged to provide rectangular openings.

Space Cloth When mesh is defined by the clear opening (space) instead of the mesh count. Usually associated with pre-crimped weaves or when the opening is large (1/2", 3/4" or 1" opening, for example).

Square Mesh Wire cloth with mesh count the same in both directions. Plain Square Mesh is the most common weave with same number and diameter of warp and shute wires woven in a simple over and under pattern. Creates maximum weaving stability and same mesh count in both directions.

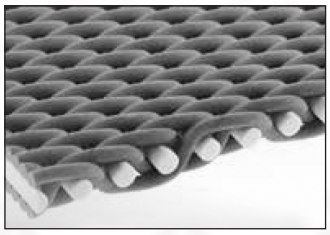


Plain Weave

Tensile Bolting Cloth This mesh provides greater open air % for the same mesh count by using thin wires. Very commonly used in separation.

Twilled Weave In a twill weave, each warp wire and each shute wire pass successively over two and under the next adjacent pair of wires.

Twilled Dutch Weave As with the plain weave, the shute wires of the twilled dutch weave (TDW) are arranged as close together as possible. However, this weave has double the number of shute wires than a plain dutch weave. A very small aperture is formed by three shute wires which cross in different directions and, together with the warp wires, create a channel that is open on two sides. The characteristic structure of this tight weave provides high filtration accuracy. Another variation of this is Open Twilled Dutch Weave where fewer shute wires are used to influence the filtration rate.



Twilled Dutch Weave

Warp Wire Wires running the length of the cloth as woven.

Weft Wires Another name for Shute Wires, i.e., those running across the width of the cloth.

Welded Wire Cloth Warp and shute wires lay flat (no crimp), welded at the intersections.