Contents:

1. SURFACE FILTRATION MEDIA

➢ **Materials** :

Our woven wire cloth is available in different types of metals as :

- **Carbon steel** is one of the less expensive metals in the coarse and medium meshes, tough enough to withstand temperatures to 500°C (=930°F), but susceptible to corrosion.

- **Galvanized steel** has the same properties as carbon steel but less corrosive, withstanding temperatures of 200°C (= 390°F).

- **Type 304 stainless steel** is probably the most widely used metal in wire cloth. It has a Chromium and Nickel content, which makes it capable of withstanding temperatures to 600°C (= 1110°F).

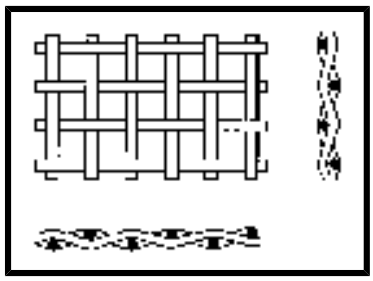
- **Type 316 stainless steel** has a Chromium - Nickel - Molybdene content. It is capable of withstanding temperatures up to 600°C (= 1110°F) and is more corrosive resistant than type 304.

  Miscellaneous metals available are :
  copper and **brass** which are used in situations around salt water because of their superior resistance to corrosion.

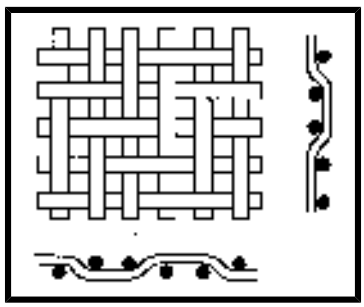
1.1. Classical weaves

Also called "square weave" is the most simple woven wire cloth.
The filtration rate is defined by the distance between two consecutive wires.

➢ Type of classical weave :



- **Plain weave** : chute wires are woven over one and under one warp wire.



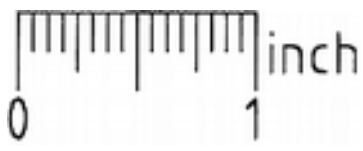
- **Twill weave** : chute wires are woven over two and under two warp wires.

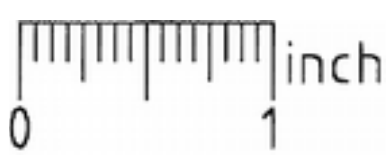
➢ Identification :

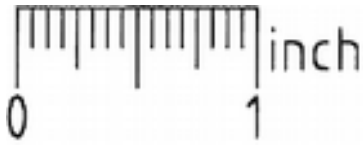
A = AISI norm

Square wire cloth is identified by a *mesh count* and a *wire diam*. The mesh count is an entire or fractional number which refers to the number of openings and fractions thereof, per linear inch (25,4mm), as measured from the center of one wire to a point 1 inch away.

4 MESH **8 MESH** **10 MESH**



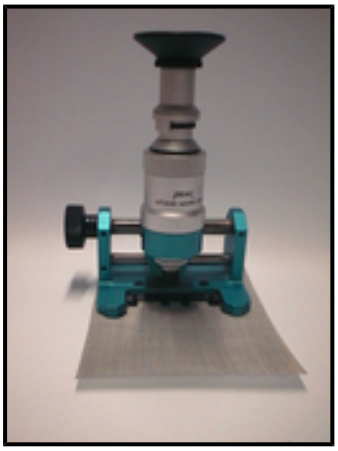




➢ How to measure :

For nets between 20 and 100 mesh by aid of a counting glass.

The wire diam is checked by a micrometer in both directions.



For finer nets by a microscope.

On fine meshes, care must be taken not to crush the fine wire in the micrometer.
For more security in checking the wire mesh you are using, we advise you to send us a sample.

➢ Filtration properties :

Square weaves are identified by the aperture and openings percentage or transparency (porosity).

- ❖ The aperture is obtained by the formula :

$$S\ (mm) = \frac{25{,}4mm}{mesh} - \text{wire diam (mm)}$$

- ❖ The opening percentage or transparency is obtained by the formula :

$$T\% = \left(\frac{mesh \times S}{25{,}4}\right)^2$$

➢ Characteristics and availability :

Square woven wire cloth

Here below you find a list of the most important square weaves with their technical characteristics. Note that from 250 mesh and higher, the weave is twilled.

X = on stock
(X) = available in short term
0 = available only on demand
N = not available

Mesh	Wire diam µm	Material			M/qcm	Opening		Weight (kg/m²)
		PS	AISI 304	AISI 316		Micron. (S)	% (T)	
2	1000	0	(X)	0	0.62	11700	84.9	0.97
	2000	0	(X)	0		10700	71.0	3.9
3	1000	0	(X)	0	1.4	7467	77.8	1.5
	1800	0	(X)	0		6667	62.0	4.8
4	800	0	X	0		5550	76.4	1.3
	1190	0	X	0		5160	66.0	2.7
	1200	0	(X)	0		5150	65.8	2.8
6	890	X	0	0	5.58	3343	62.4	2.3
	900	X	(X)	0		3333	62.0	2.4
8	600	0	X	0	9.92	2575	65.8	1.4
	700	0	(X)	0		2475	60.8	1.9
	710	X	X	0		2465	60.3	2
	900	X	X	0		2275	51.3	3.3
10	550	0	X	0		1990	61.4	1.5
	600	0	X	0		1940	58.3	1.8
	630	X	X	X		1910	56.5	2
	800	0	(X)	0		1740	46.9	3.3
	900	0	0	X		1640	41.7	4.2
	1000	0	X	(X)		1540	36.8	5.3
11	750	X	0	0	18.8	1559	45.6	3.2
12	560	X	0	0	22.3	1557	54.1	1.9
	584	(X)	(X)	0		1533	52.4	2
	600	0	X	0		1517	51.3	2.2
	800	0	X	0		1317	38.7	4
14	500	(X)	X	0	30.4	1314	52.5	1.8
	508	0	X	0		1306	51.8	1.8
	800	X	0	0		1014	31.2	4.8
15	240	0	(X)	0	34.9	1453	73.7	0.42
	250	0	X	0		1443	72.7	0.46
	650	X	0	0		1043	38.0	3.3
	700	X	0	0		993	34.4	3.9
16	450	0	(X)	X	39.7	1138	51.3	1.6
	457	X	(X)	0		1131	50.7	1.7
	460	0	0	(X)		1128	50.4	1.7
	630	0	0	(X)		958	36.4	3.3
	710	(X)	0	0		878	30.6	4.3
	800	(X)	0	0		788	24.6	5.7

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Mesh	Wire diam µm	Material			M/qcm	Opening		Weight (kg/m²)
		PS	AISI 304	AISI 316		Micron. (S)	% (T)	
17	500	0	0	0	44.8	994	44.3	2.2
18	400	X	X	0	50.2	1011	51.3	1.5
	500	0	X	0		911	41.7	2.3
20	250	0	X	0	62	1020	64.5	0.62
	340	0	X	0		930	53.6	1.2
	400	X	X	X		870	46.9	1.6
	470	0	(X)	0		800	39.7	2.3
	500	X	X	(X)		770	36.8	2.6
	560	X	0	0		710	31.3	3.4
24	300	0	X	X	89.3	758	51.3	1.1
	350	0	X	0		708	44.8	1.5
	360	X	(X)	0		698	43.5	1.6
	400	0	X	0		658	38.7	2.0
25	400	0	0	0	96.9	616	36.8	2.1
28	250	0	X	0	122	657	52.5	0.88
	400	0	X	0		507	31.3	2.4
	420	X	0	0		487	28.8	2.7
30	280	X	0	0	140	567	44,8	1.2
	300	X	X	X	140	547	41,7	1.4
	330	X	0	0	140	517	37,2	1.7
	400	(X)	0	0	140	447	27,8	2,6
32	250	0	(X)	0	159	544	46,9	1
35	279	(X)	0	0	190	447	37,9	1,4
	280	X	X	0		446	37,7	1.4
36	200	0	(X)	(X)	201	506	51,3	0.73
	220	X	0	0		486	47,4	0.89
37	200	0	0	X	212	486	50,2	0.75
38	140	0	(X)	0	224	528	62,5	0.37
39	250	(X)	0	0	236	401	38,0	1.3
40	180	0	(X)	X	248	455	51,3	0.66
	195	0	0	X		440	48,0	0.78
	220	0	(X)	0		415	42,7	1.0
	250	X	X	X		385	36,8	1.3
	254	X	(X)	0		381	36,0	1.4
42	280	0	0	0	273	325	28,8	1,6
45	241	(X)	0	0	314	323	32,8	1.4
48	125	0	0	X	357	404	58,3	0.38
50	200	X	X	0	388	308	36,8	1.1
	220	0	(X)	(X)		288	32,1	1.3
	229	X	X	0		279	30,2	1,4
	230	X	0	(X)		278	29,9	1.3
60	160	X	X	X	558	263	38,7	0.80
	190	X	X	X		233	30,4	1,2
78	125	0	0	(X)	943	201	38,0	0.64
80	120	0	X	0	992	198	38,7	0.60
	140	0	X	X		178	31,3	0,84
	180	0	X	(X)		138	18,8	1,5

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Mesh	Wire diam µm	Material			M/qcm	Opening		Weight (kg/m²)
		PS	AISI 304	AISI 316		Micron. (S)	% (T)	
100	100	N	X	0	1550	154	36,8	0.53
	110	N	X	X		144	32,1	0.65
	112	N	(X)	0		142	31,3	0.67
120	89	N	X	X	2232	123	33,6	0,51
150	65	N	X	X	3488	104	38,0	0,33
180	52	N	X	X	5022	89	39,9	0.25
200	50	N	X	X	6200	77	36,8	0,26
250	40	N	0	X	9688	62	36,8	0,21
270	40	N	0	X	11300	54	33,0	0.23
300	36	N	0	(X)	13950	49	33,0	0.21
320	35	N	(X)	0	15872	44	31,3	0.21
325	35	N	0	X	16372	43	30,5	0,22
400	29	N	0	X	24800	35	29,5	0.18
	30	N	0	X		34	27,8	0.20
445	25	N	0	X	30694	32	31,6	0,15
450	26	N	0	(X)	31388	30	29,1	0.17
500	23	N	0	X	38750	28	29,9	0.14
	25	N	0	(X)		26	25,8	0.17

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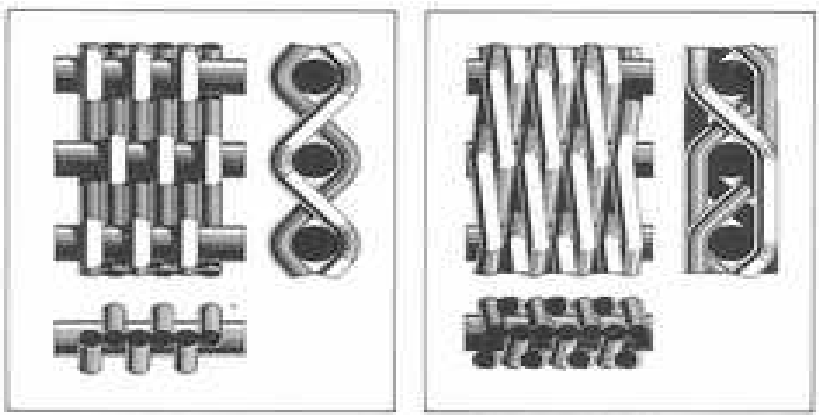
1.2. Dutch Weave

➢ **Definition** :

❖ Dutch weave is obtained by interlacing of small diameter corrugated wire (warp wire) closely jointed woven between great diam. wire (chute wire) not corrugated and not jointed.

Its high density of wires gives it a higher mechanical tensile than square wire mesh.
A Dutch weave can also be twilled.

PLAIN DUTCH WEAVE **TWILL DUTCH WEAVE**



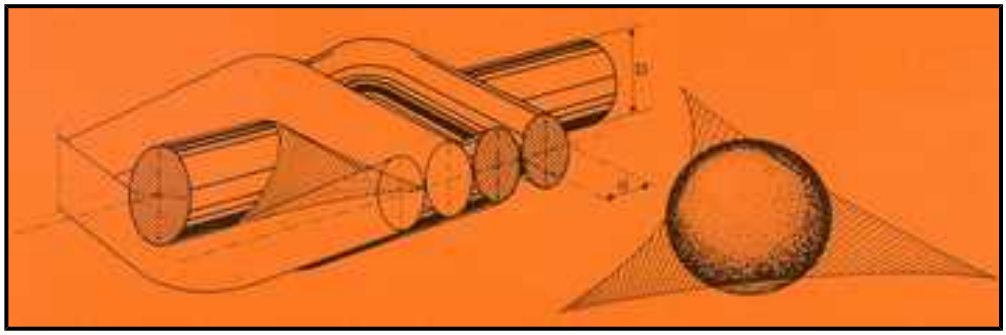
❖ A Dutch weave can also be woven reversed : that means that the big wire is in the warp direction, and the small one in chute direction. This type of Dutch weave gives more resistance for the same opening.

➢ **Identification** :

Dutch weave is identified :

- ❖ either by its mesh counts and wire diameters in each directions.
  For example :
  24 x 110 mesh 0.35 x 0.25
  indicates a Dutch weave , with :
  24 chute wires of 0.35mm diam. per linear inch,110 warp wires of 0.25mm diam. per linear inch.

- ❖ or by its **aperture**.
  This is given by the diameter of the smallest sphere tangent to the three sides of a curvilinear triangle formed by a chute wire (D) and two warp (d) wires as shown on drawing. This theoretically calculated and is so called nominal opening. This opening varies from 300 to 10 microns.



The opening percentage of a Dutch weave is calculated by a geometric way. It is always very low (8 to 20%).

➢ Characteristics and identification :

Dutch Weave

Mesh	Wire diam µm	Material			Nominal Opening (Micron.)	Weight (kg/m²)
		PS	AISI 304	AISI 316		
5 x 32	1.25 x 0.80	0	X	0	700	5.2
12 x 64	0.58 X 0.40	X	0	0	300	3.5
12 x 64	0.58 X 0.43	X	X	0	300	3.8
12 x 64	0.60 X 0.40	(X)	0	0	300	3.9
12 x 70	0.60 x 0.40	(X)	0	0	300	4.1
14 x 88	0.50 X 0.34	X	X	0	250	3.2
20 x 270 *	0.25 X 0.20	0	X	0	160	2.9
24 x 110	0.35 x 0.25	X	X	X	150	2.3
40 x 200	0.18 x 0.14	N	X	X	85	1.1
50 x 250	0.14 x 0.11	N	X	0	65	1,0
80 x 330	0.12 x 0.08	N	X	0	50	0.7
80 x 700 *	0.10 x 0.076	N	X	X	40	1.21
165 x 800 *	0.07 x 0.05	N	0	X	25	0.7
165 x 1400 *	0.07 x 0.04	N	X	0	20	0.65
200 x 600 *	0.058 x 0.046	N	(X)	0	20	0.49
200 x 1400 *	0.07 x 0.04	N	0	(X)	12	0.81
325 x 2300 *	0,035 x 0,025	N	0	0	8	0.47
400 x 2800 *	0.025 x 0.02	N	0	(X)	5	0.45
Reverse Dutch weaves						
72 x 15		N	0	0	380	6.35
132 x 14		N	0	0	180	4.80
132 x 17		N	0	0	170	4.65
135 x 35		N	0	0	90	3.75
152 x 24		N	0	0	155	2.85
260 x 40		N	0	0	130	2.25
338 x 36		N	0	0	55	2.70

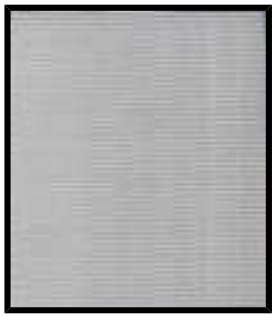
*= TWILLED

12 x 64

14 x 88

24 x 110

40 x 200



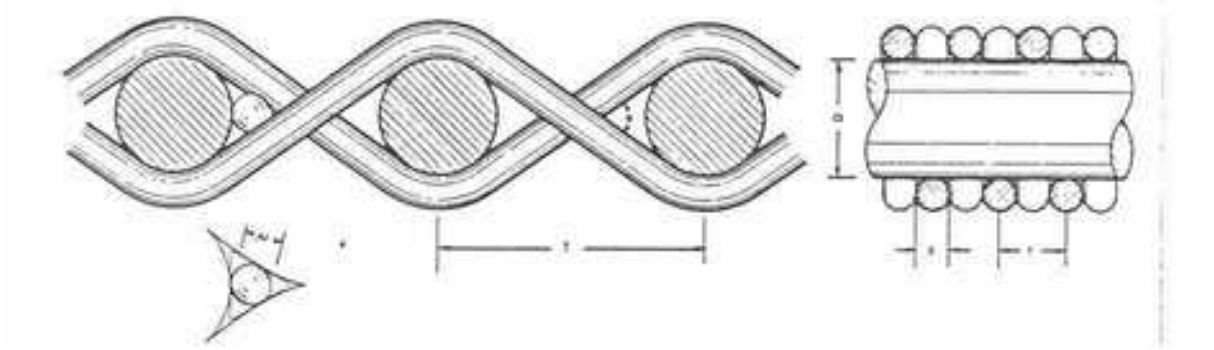
1.3. Multipor™

This is a new generation of Dutch weave that offers :

- a longer lifetime of your filters (till 5 times longer)
- a more efficient filter giving a higher production output
- a filter easy to clean

For the classical Dutch weave, the opening is given by the diameter of a sphere tangential to the three sides of a curvilinear triangle formed by one chute wire (D) and two warp wires (d).
This opening changes obviously at each weave and is also very difficult to control.
Also because of this characteristic :

- the opening percentage is very low (8-18%)
- the filter is difficult to clean



These inconveniences are avoided by ***Multipor***'s™ characteristics :

Chute wire diameter D is calculated only in function of strength.
Warp wire diameter d is so that the opening left between two consecutive wires is smaller than the opening of the curvilinear triangle described above.

Consequently :

- The opening is given by the distance between two consecutive warp wires This opening is constant at each weave and easy to control.
- The opening percentage is much higher (45% against 8 to 18% Dutch weave).

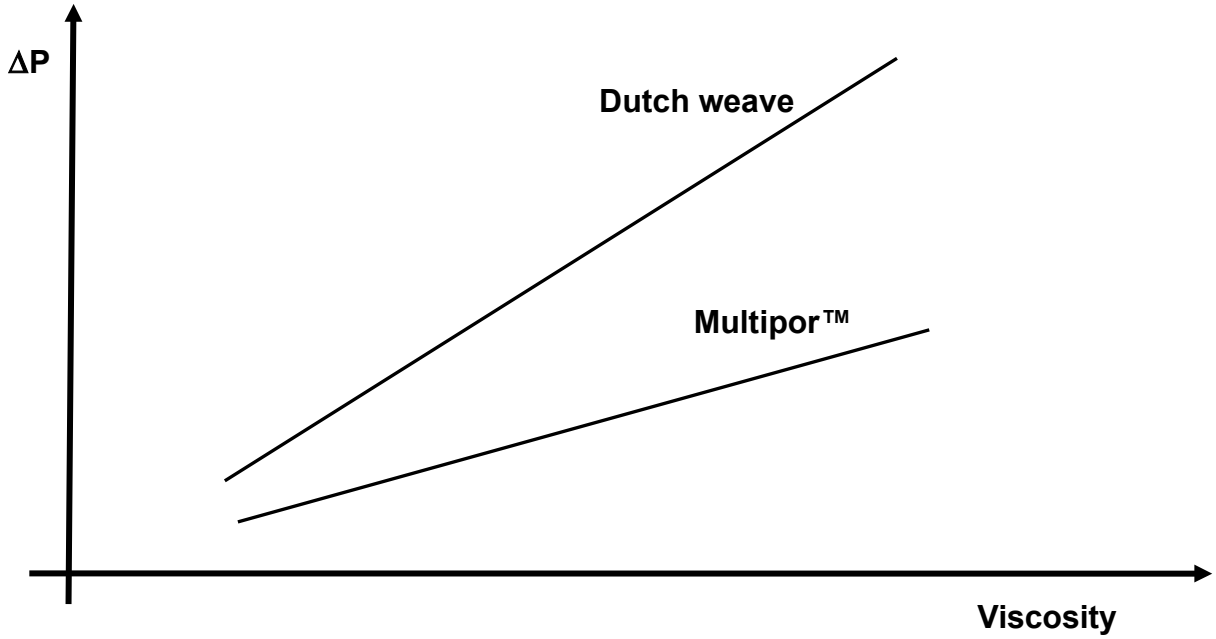
Advantages :

- a more accurate filtration
- less pressure drop or higher flow
- longer lifetime
- easy to clean by back flush

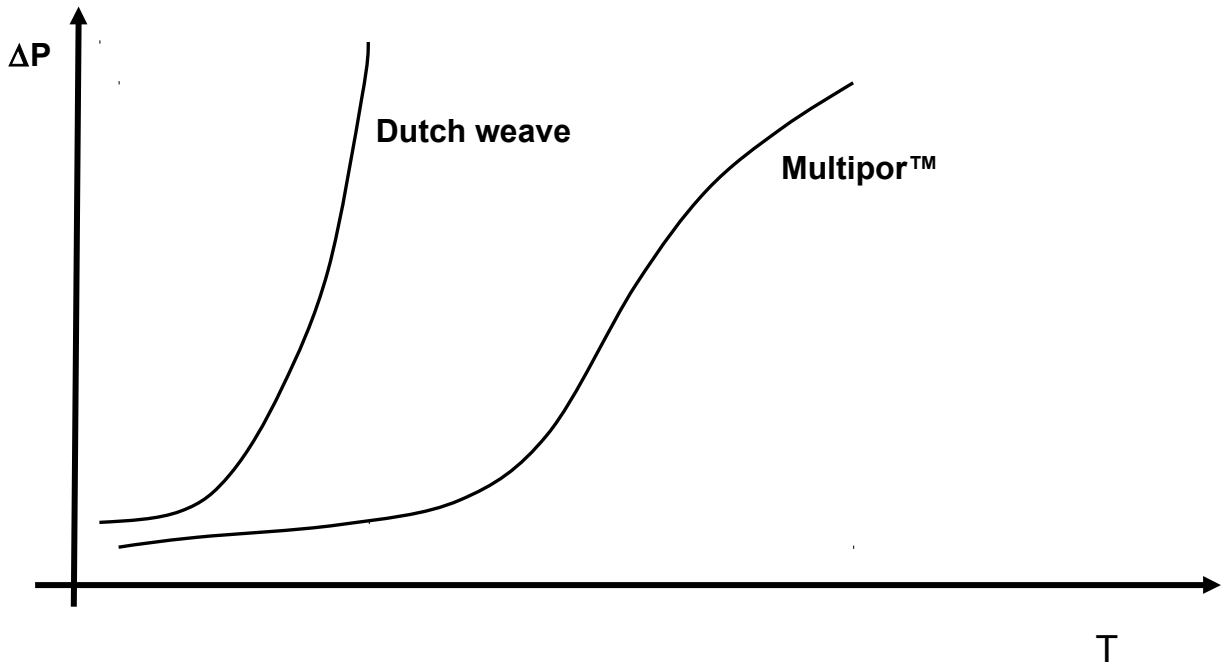
Following graphics represent :

1. Pressure drop in function of viscosity.
2. Pressure drop increases in function of time in same condition of flow - viscosity and temperature.

1.



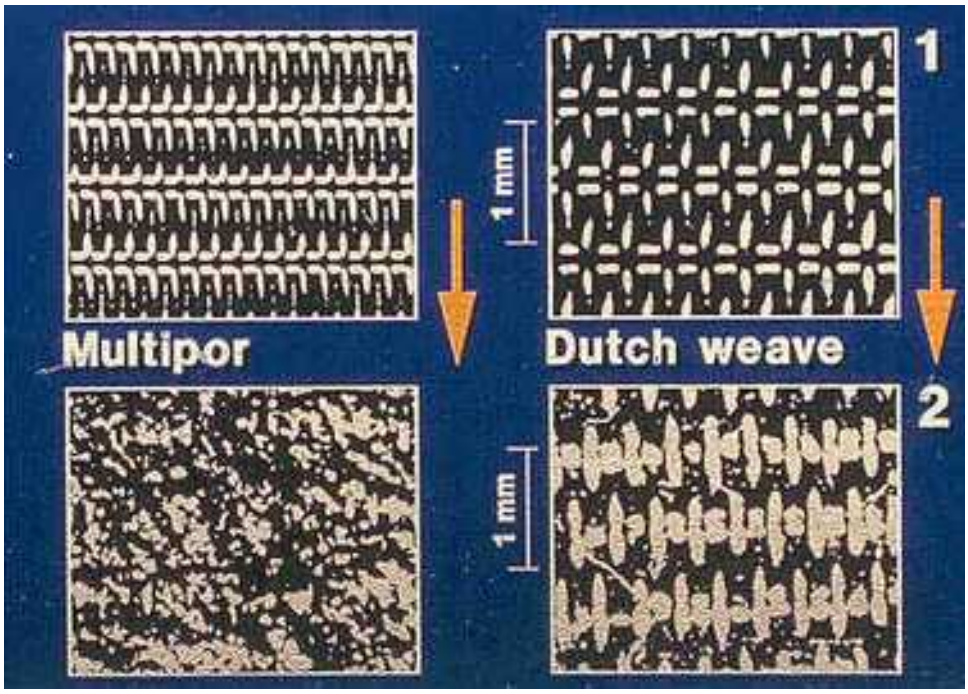
2.



Following pictures show :

1. Visual aspect of Dutch weave and Multipor™.
2. Visual aspect of Dutch weave and Multipor™ after usage.

By Multipor™, the clogging appears on surface.



Availability of Multipor™ is following :

Multipor™
15 µm
20 µm
25 µm
30 µm
35 µm
40 µm
50 µm
60 µm
75 µm
80 µm
90 µm
100 µm

2. DEPTH FILTRATION MEDIA

2.1. Sintered Fibers (Porofelt®)

Porofelt® is a multi-layered metal fiber depth filter medium with very high dirt holding capacity and gel retention capability.

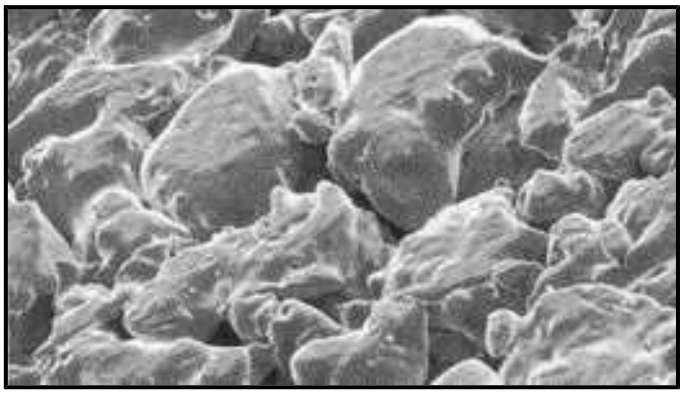
Standard material : 316 LPossible : Hastelloy - Inconel 601 - Fecralloy (20 µm)

Media design	Absolute filter rating µm	Absolute BPP Pa (1)	Aver.AP AP at 200P a1min.dm (2)	Thickness mm	Weight g/m²	Porosity %	Dirt holding (3) mg/cm²	Compressi -bility bar
Porofelt® A								
3	3	12300	10	0.40	975	70	7.2	25
5	5	7600	34	0.37	600	80	6.51	25
7	7	5045	62	0.29	600	74		25
10	10	3700	108	0.34	600	78	6.89	25
15	15	2470	180	0.38	600	80	10.41	25
20	20	1850	265	0.51	750	82	12.06	25
25	25	1480	325	0.62	1050	79	17.20	25
30	30	1235	450	0.62	1050	79	21.12	25
40	40	925	620	0.62	1200	76	20.98	25
60	59	630	1350	0.65	750	86	26.40	25
75	79	470	1900	0.86	900	87	44	25
Porofelt® B								
5	5.3	7000	45	0.17	300	78	4	40
10	10	3700	100	0.17	300	78	4.60	40
15	15	2470	175	0.17	300	78	4.7	40
20	20	1850	255	0.17	300	78	6.1	40
40	37	925	580	0.17	300	78	14.6	40
60	57	650	1.100	0.15	300	74	21.5	40

	Absolute filter rating µm	Bubble point pressure Pa (1)	AverAP AP at 200Pa 1min.dm (2)	Thickness mm	Weight g/m²	Porosity %	Dirt holding (3) mg/cm²	Compres-sibility bar
Porofelt®								
C	5	7100	37	0.84	900	86	11.67	20
5	11	3500	110	0.76	900	85	10.71	20
10	15	2400	203	0.76	900	85	10.10	20
15	22	1700	345	0.79	900	86	21.43	20
20	25	1475	475	0.80	900	86	17.23	20
25	30	1230	650	0.80	900	86	19.05	20
30	40	925	675	0.80	900	86	28.14	20
40								
Porofelt®								
D	5	7400	27	0.40	900	72	6.80	80
5	7	5286	45	0.40	900	72	9.50	80
7	10	3700	71	0.40	900	72	9.50	80
10	16	2400	150	0.40	900	72	11.90	80
15	20	1850	200	0.40	900	72	12.00	80
20	25	1500	284	0.48	1050	72	12.25	80
25								
Porofelt®								
E	11	3500	90	0.26	600	71	3.50	40
10	15	2450	140	0.31	500	76	7.50	40
15	21	1800	240	0.28	675	70	6.00	40
20	40	925	690	0.29	675	71	9.00	40
40	67	570	1200	0.29	675	71	12.00	40
60								
Porofelt®								
E	2.2	16800	3	0.38	1500	51	2.20	120
2	3.3	11300	12	0.67	1500	72	6.80	120
3	5	7700	24	0.67	1500	72	7.74	120
5	7	5000	43	0.67	1500	72	10.50	120
7	9	4020	53	0.67	1500	72	7.51	120
10	12	3200	85	0.67	1500	72	12.80	120
12	15	2410	135	0.67	1500	72	9.13	120
15	19	1900	165	0.67	1500	72	13.42	120
20	25	1480	200	0.90	1650	77		120
25	30	1230	315	0.70	1500	76		120
30	40	925	625	0.75	1500	75		120
40								

(1) Bubble point pressure (Pa): determined according to ASTM E128-61 equivalent ISO 4003
(2) AP : air permeability : determined according to NF A-95-352 equivalent ISO 4022
(3) Dirt holding capacity : determined according to Multipass method ISO 4572 –Δ p = 8 Δ p initial, using AC fine test dust.

2.2. Sintered Powders



Stainless steel powder

SP is a multi-layered metal powder depth filter medium with high shear rates and small opening on request down to 0.2µm.

Standard material : 316 L
Exotic alloys on request

Media design	Mean filter rating µm	Mean BPP Pa (1)	Aver. AP AP at 200 Pa (2) l/min.cm²	Thickness mm	Weight g/m²	Porosity %	Dirt holding (3) mg/cm²
SP							
3	3	12,300	0.012	2	11.255	28.8	-
8	8	5,045	0.970	2	10.555	33.2	1.16
15	14	3,700	1.05	2	10.850	31.3	2.83
20	18	2,470	5.5	2	11.170	29.5	3.42
30	26	1,235	10.8	2	10.450	33.9	4.46
40	45	925	24.4	3	15.000	36.7	11.11
60	60	630	34	3.3	15.700	35.9	-

(1) Bubble point pressure (Pa): determined according to ASTM E128-61 equivalent ISO 4003
(2) AP : air permeability : determined according to NF A-95-352 equivalent ISO 4022
(3) Dirt holding capacity : determined according to Multipass method ISO 4572 –Δ p = 8 Δ p initial, using AC fine dust test.

2.3. Sintered Woven Media

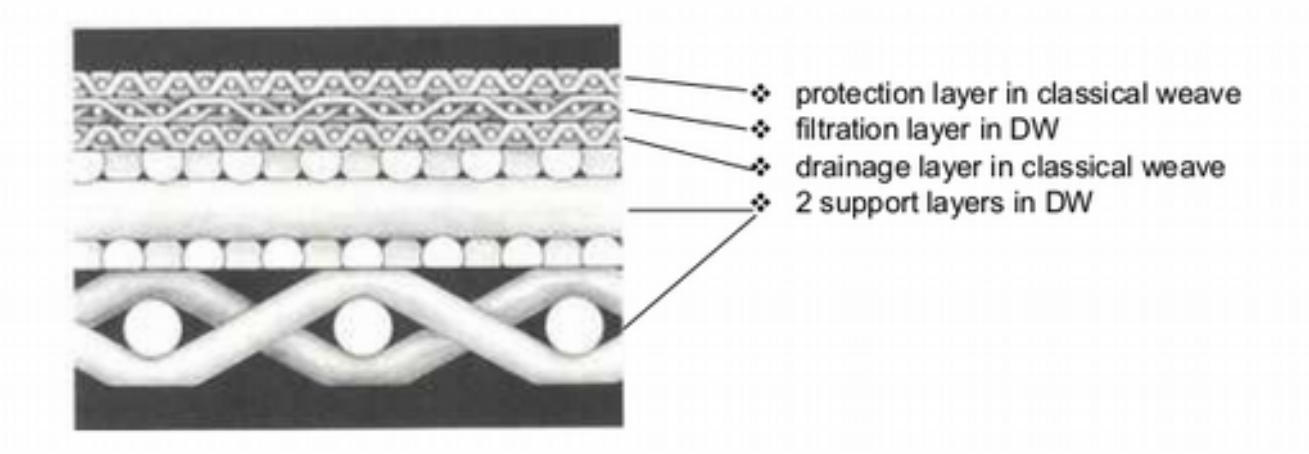
This media is composed of several layers of woven wire cloth sintered together.
The opening of the media is determined by the finest woven media included in the layers.
Material 304 - 316 or exotic materials
They can be made in flat sheets/round or tube materials.

Any special composition of sintered multi-layered media can also be made on request.

Typical sintered woven material is composed of 5 layers of woven material.

➢ **DSW :**

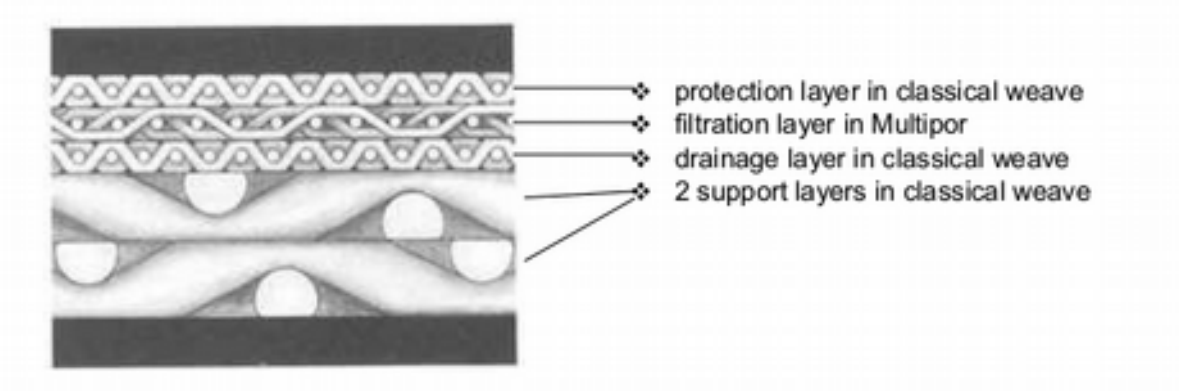
is composed of :



DSW	Absolute filter rating µm	Porosity %	Thickness mm	Weight kg/m²
2	5	8	1,6 – 2,0	9 – 9,2
5	10	8	1,6 – 2,0	9 – 9,2
10	15	8	1,6 – 2,0	9 – 9,2
15	20	10	1,6 – 2,0	9 – 9,2
20	25	10	1,6 – 2,0	9 – 9,2
30	35	12	1,6 – 2,0	9 – 9,2
40	50	15	1,6 – 2,0	9 – 9,2
50	60	18	1,6 – 2,0	9 – 9,2
60	75	18	1,6 – 2,0	9 – 9,2

➢ **MSW :**

is composed of :



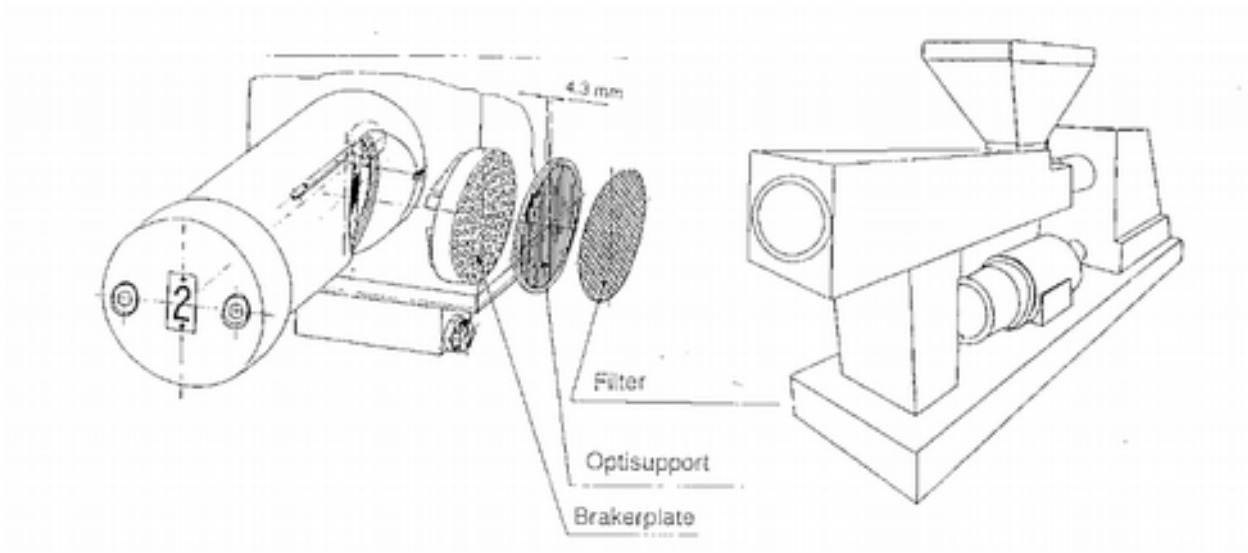
MBW	Absolute filter rating µ	Porosity %	Thickness mm	Weight kg/m²
15	15	45	2,5 – 3,0	8,8 – 9,0
20	20	45	2,5 – 3,0	8,8 – 9,0
30	30	45	2,5 – 3,0	8,8 – 9,0
40	40	45	2,5 – 3,0	8,8 – 9,0
50	50	45	2,5 – 3,0	8,8 – 9,0
60	60	45	2,5 – 3,0	8,8 – 9,0

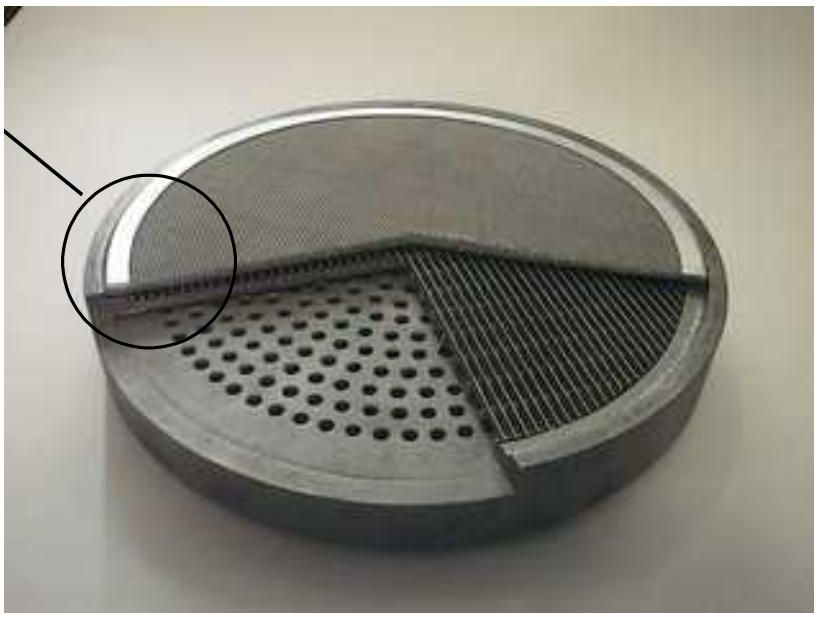
Any special composition of sintered multi-layered media is available upon request.

3. OPTISUPPORT

Optisupport increases the efficiency of your screen because :

- ❖ it increases the screen area having much more openings than the breaker plate.
- ❖ it limits the incrustation phenomenon and therefore dead zones are eliminated.





4. COPPER GAUZE

A new, low-cost, fast way to clean plastic processing equipment

Now, we introduce a new, more economical way to clean production equipment and molds in the plastics processing industries. It's our Copper gauze, an all-metal, highly flexible scouring material designed specifically for a wide range of heavy duty, industrial cleaning applications.

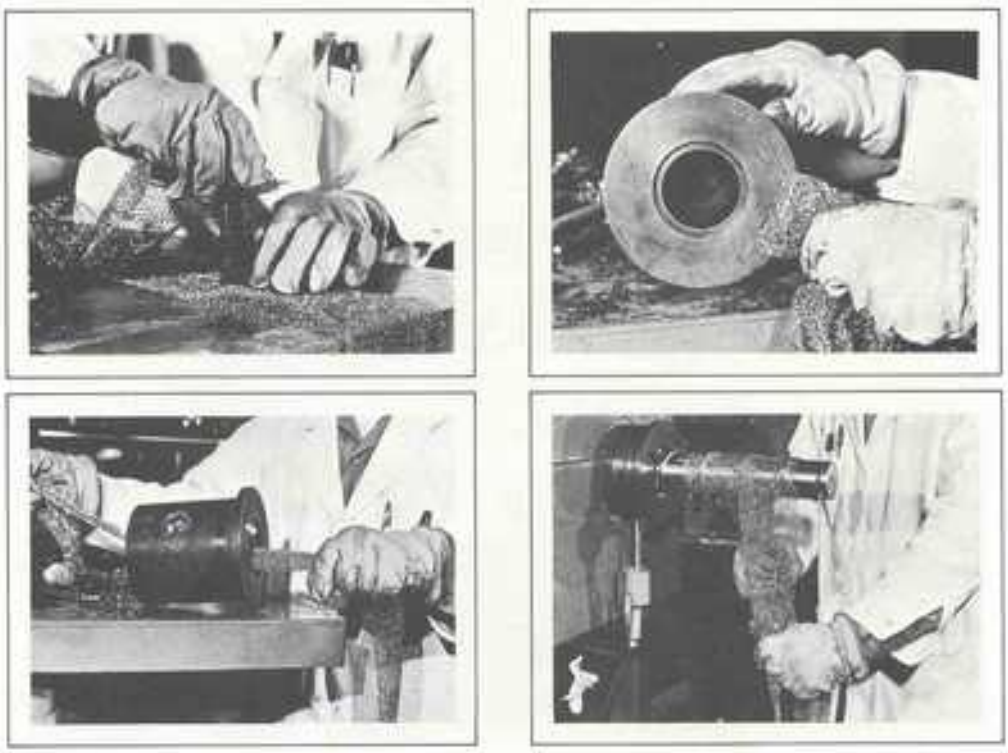
Scrape surfaces clean without a scratch

Knitted from flattened copper wire, our Copper gauze is produced as a seamless, continuous flat stocking, +/- 125mm wide. The flatness of the wire gives it excellent scraping properties. And yet the softness of the copper metal eliminates the dangers of scratching or eroding the precision work surfaces that it cleans since these are made of metal harder than soft copper.

Now it pays to clean your screws and barrels

Our Copper gauze saves your money and time. Since it's sold in 30,5m rolls, it costs less. And because it's designed specifically for industrial cleaning applications, it takes a lot less time to clean your equipment than many techniques currently in use. With less downtime and lower costs, our Copper gauze makes it profitable to clean screws and barrels on plastics extruders, mold injection machines, extrusion dies and many other surfaces more often, insuring optimum operation of your equipment.

Purolator Advanced Filtration



Consider these advantages :

- Safe : soft copper will never scratch or damage costly machine parts. No metal splinters make it safe for workmen, too.
- Effective: knitted structure keeps flat wire on edge for excellent scraping action without scratching.
- Tough : interlocked loops of heavy gauge copper wire make it impervious to disintegration.
- rust-free: pure solid copper will not rust or contaminate end product.
- Non-flammable: because our copper gauze is 100% metal, it can't burn or even smoke when used directly on full hot equipment.
- Lower cost : not only costs less than currently used household type metallic cleaners but does more heavy duty cleaning because it's exactly right for industrial use.
- Less down time: compared to other methods (charring, wire cooled brushes, metal sponges), our Copper gauze cleans in less time.
- Two grades in one : you get two grades of cleaning power in one grade of copper gauze. Use as supplied for normal cleaning. Turn inside out for heavy cleaning.
- This copper gauze is available in rolls of 30.5m (100").
- It is possible to use this copper gauze for any manual cleaning of heads, dies or other parts of extruders or injection presses.