



Weaving solutions!



Weisse & Eschrich has been synonymous with the highest quality wire mesh for almost 100 years.

The company started out as a wire business in 1914 and within a short space of time developed into an expanding firm with its own production plants in Ludwigsstadt (Bavaria).

As early as the 1950s, we employed 200 employees working on 250 looms and exported to over 80 countries all over the world. As a traditional, family-run company, the business has been in the family for three generations. We regard it as our responsibility to uphold this tradition - on behalf of our location and for our industrial sector.



Bernhard Weisse



Susanne Weisse



The challenges our company faces have changed considerably since it was founded. Globalisation and technological development are progressing at an ever increasing rate and adapting to these changes requires high levels of flexibility and creativity. We combine these traits with our knowledge and experience to offer our customers the service we have always stood for - innovative quality and unerring precision.

Producing hi-tech wire mesh is our basic business. The added value we deliver today comes from integrating other materials and technologies and finding solutions to customer challenges. In cooperation with our strong partners we work to fulfil our customers' every requirement: innovative materials, special manufacturing, finishing and much more - we offer individual solutions for individual requirements. This is the basis of the trust our customers have been placing in us for decades. We are close to the market and close to our customers and we are constantly reassessing their requirements. Customers also benefit from our well-stocked warehouse which enables us to deliver quickly and react flexibly. All this means we meet our most important goal:

perfect service for our customers!

Innovative capacity and monitored quality!



„The mesh is only as good as the weaver!“. We produce on state-of-the-art, computer-controlled machines, under optimal conditions and using only the best materials. But in the end it is always the people who really count - it is their contribution that governs product perfection.

Only when people and machines work optimally together can the desired quality be achieved or even surpassed. And we have always made it our policy to invest in both - with on-going training for our employees and constant modernisation of our machines.

All this places our innovative capacity on a sustainable basis we can project into the future!

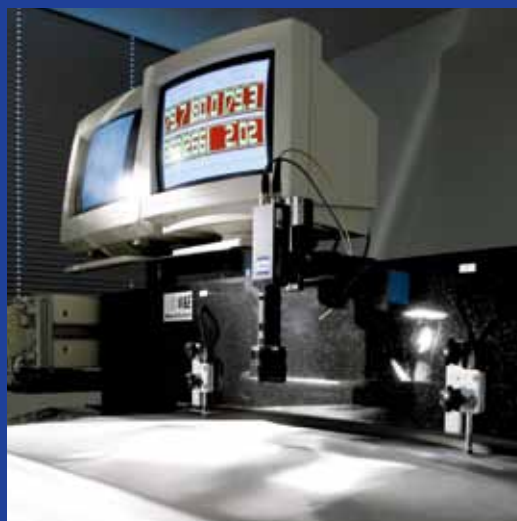
Environmental protection is also an issue we take very seriously and we have introduced an environmental management system in accordance with DIN EN ISO 14001.

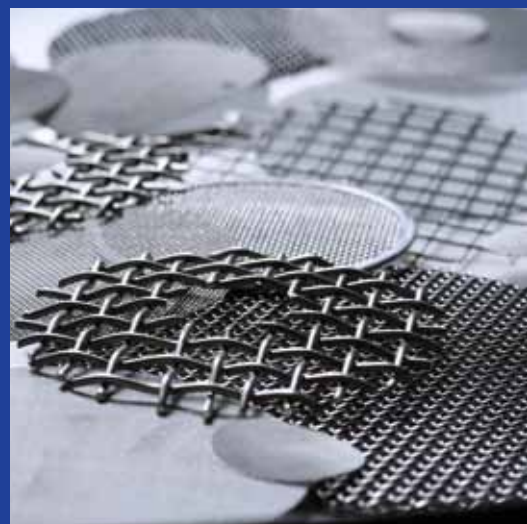
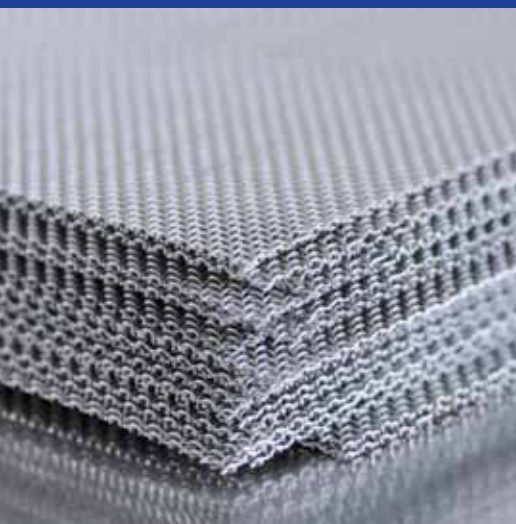
We work to minimize our impact on the environment, train our employees in environmental matters and follow an active environmental policy. The wood for our packaging, for example, comes from local forests where a strict ecological management system is in place.

Our products are subjected to constant controls and tests during production. We were one of the first companies in our sector to introduce a quality management system and have been certified in accordance with IN EN ISO 9001: 2000 since 1995.

Our offensive quality management system guarantees our mesh is always of impeccable high quality. All processes are constantly analysed and subject to on-going enhancement. This is how we meet our high standards - this is how we keep on improving.

Our company's internal standards for manufacturing filter mesh exceed the specific DIN standards ISO 9044 (industrial wire mesh), ISO 3310 (test sieves and metal mesh) and ISO 4783 (wire mesh). We analyse and secure the quality of the mesh with the aid of computers in our own test and measuring labs.





Best solutions for our customers!

Products

first-class weaving

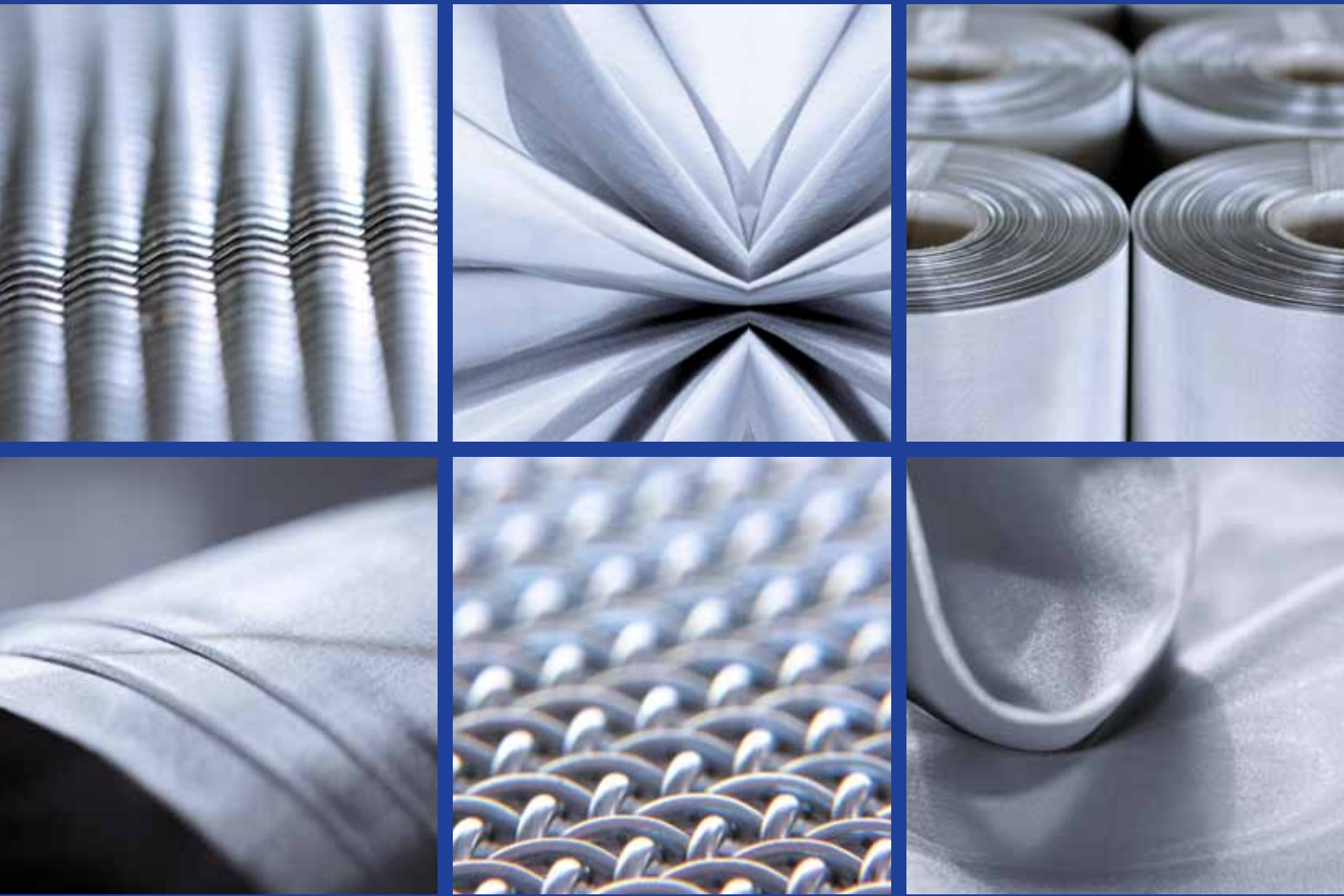


We aim to fulfil our customers' every requirement.

And for special requirements, we can rely on the support of an extensive network of competent partners. From technical screens, metal and synthetic filter inserts, right through to stamping parts and synthetic casting in large and small production runs: we work with and on behalf of our customers to find the right solutions.

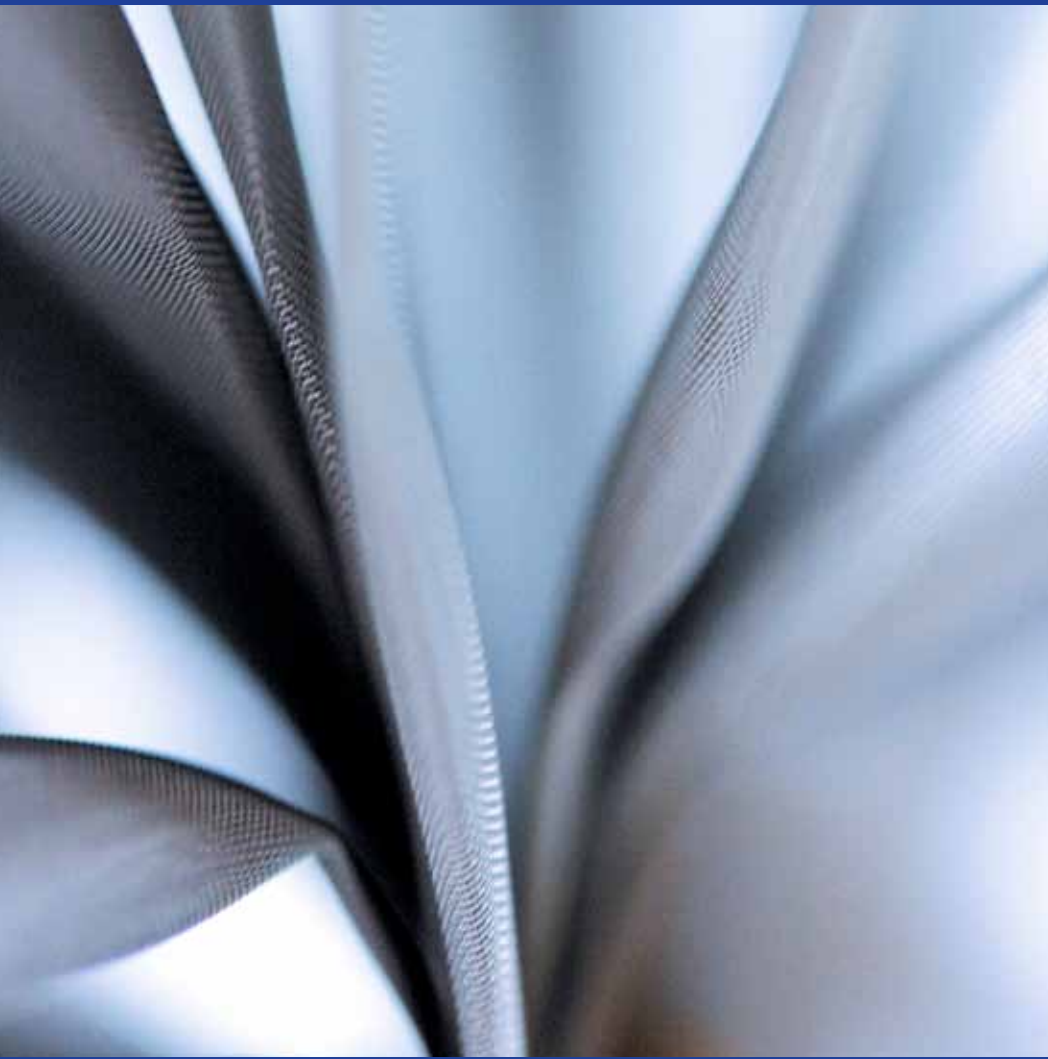
This network means we operate a streamlined and efficient organisation - a clear advantage for you!

The beauty of functionality!



Products

the aesthetics of the mesh



Precision mesh for every application

Today, our wire meshes are used in a wide variety of different sectors and fields.

Our products are used in electrical technology and mechanical engineering, in screen printing and in the chemical and medical technology sector - in fact everywhere where precise and reliable filtration, grading, screening, separation or layering is required.

Meshes from our broad range are available by the metre, in cuts of any kind, supplied in strips or stamped. We also offer rabbeted sieve trays (with PU strips on request), multi-layered screens and other pre-assembled products.

Using plasma, water jet, laser or CNC technology, we can cut the forms of your choice out of all types of mesh.

Upon request we can of course supply all our meshes ultrasonically cleaned and free from grease.

We can process all weavable metal and synthetic wires with diameters from 0,02 mm to 3 mm in widths of 8 mm to 3000 mm.

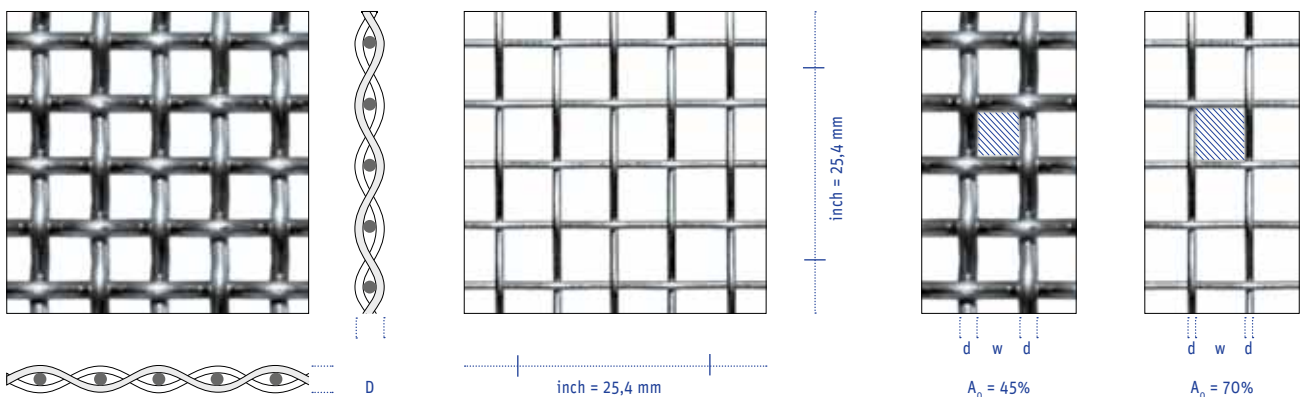
The mesh sizes range from 6 - 100 mm for crimped and welded screens and 0,02 - 20,0 mm for wire meshes. We supply plain dutch weave from an absolute filtration fineness of 5 µm - 350 µm.

This means we can deliver a broad range of different mesh types, as well as the range of special productions we can offer our customers.

The following weave examples show the popular types of weave from our standard range and we briefly describe the weave structure and special characteristics of the individual types of weave. We offer these weaves in various levels of fineness, thicknesses and forms to suit the intended use and the specific requirements of the final product.

Weaveology

The two key parameters for classifying wire mesh are mesh size and diameter of the wire, whereby the strength of the wire used has decisive influence on the weave thickness of the end product. Using plain weave as an example (also known as square mesh), the most common weave type along with twilled weave, we will provide a brief description of the most important criteria and indicators for comparing and selecting the correct weave.



The **Plain Weave/Square Mesh** is characterised by extremely exact mesh sizes. Weft wires are wound over and under the warp wires alternately in a constant pattern. The characteristics of this weave can be modified for special requirements.

The **fineness of the mesh/mesh** refers to the number of wires per inch and this also influences **mesh size (w)** and **wire strength (d)**:

$$\text{mesh} = \frac{25,4 \text{ mm}}{w \text{ (mm)} + d \text{ (mm)}}$$

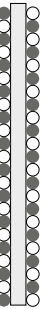
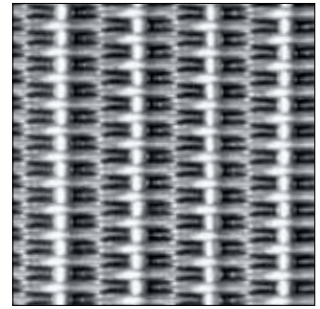
The **open screen surface (A_0)** defines the mesh openings as a percentage of the entire screen surface and is based on the ratio between mesh size and wire diameter:

$$A_0 = \left(\frac{w \text{ (mm)}}{w \text{ (mm)} + d \text{ (mm)}} \right)^2 \times 100\%$$



Rectangular Mesh - oblong/broad

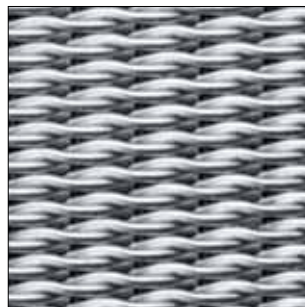
The most common mesh ratio is 1:3. If the numbers are reversed the mesh is known as broad mesh. This mesh is for example used for vibrating sieving screens.



Dutch Twilled Weave

This process involves forcing the weft wires together during weaving.

This kind of mesh has double the number of weft wires compared with the plain Dutch weave, providing a particularly smooth surface for ultra-fine filtration.



Twilled Weave

This type of weave is suitable where there is a need for relatively small mesh sizes and strong wires. The special form of herring-bone twill was created to compensate for the diagonal movement of the weave. Suitable as a lining weave.



Multiplex Twilled Weave

This special form of mesh is woven in the 4-bonded weave process. Warp and weft are formed from bundles of individual wires creating a close weave.

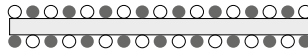


Weaves

weaving know-how

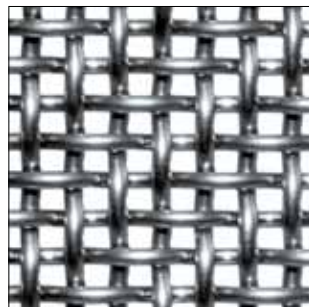
Plain Dutch Weave

The warp wires in this weave type are always stronger than the weft wires. The so-called „zero mesh“ is created by positioning the weft wires as closely as possible together. The specific benefits are good flow rate and even openings.



Reverse Dutch Weave

The weft wires are significantly thicker than the warp wires. As the bulk of the wires are located in the warp, this weave type is often referred to as the reverse of the plain Dutch weave. This weave is characterized by good stability and flow rate.

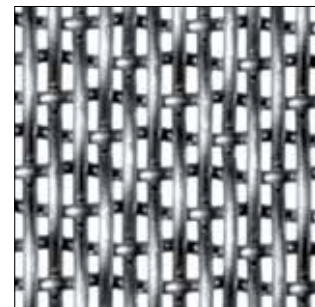


Twilled Weave, 5-bonded

A special weave type for drain filters with good flow rate.

Every fifth wire goes over and under alternately. This creates a smooth surface on one side.

This weave type is quick and easy to clean.



Crimped Screen

Crimped wires are used in both directions and combined to create a robust wire screen with a stable form and surface.

Suitable as protective screens for fences, gates and partitions for rack shelving systems.



Welded Mesh/Welded Screen

Similar to reinforced meshes, the horizontal wires (roll width) are secured to the vertical wires (roll length) by spot welding.

These constant connection points give the screen a high level of stability.

Stainless steel mesh and screen printing mesh

	mesh per inch (25,4 mm)	mesh width w (mm)	wire diameter d (mm)	meshes per cm	open screen area $A_o = \left(\frac{w}{w+d}\right)^2 \times 100\%$	cloth thickness μm	cloth thickness tolerance μm	recommended screen tension 0,5 % Res. N/cm	Theor. Ink volume V th cm ³ /m ²
Standard Mesh	80	0,220	0,100	31	48%	215	5	62-64	103
	105	0,160	0,075	43	46%	162	4	44-45	75
	120	0,140	0,065	49	47%	140	3	39-41	65
	135	0,130	0,065	53	43%	140	3	42-44	61
	145	0,120	0,056	57	46%	120	3	35-37	55
	165	0,103	0,050	67	44%	110	3	36-38	49
	180	0,095	0,045	71	46%	102	3	33-35	47
	200	0,087	0,040	77	48%	90	3	31-33	43
	230	0,075	0,036	90	46%	80	2	22-24	37
	250	0,066	0,036	101	40%	80	2	31-33	32
	280	0,059	0,032	110	42%	68	2	21-23	29
	270	0,058	0,036	109	37%	80	2	28-30	30
	325	0,050	0,028	128	41%	62	2	21-23	24
	370	0,040	0,028	147	35%	58	2	21-23	20
	400	0,040	0,025	154	38%	52	2	20-22	19
Heavy Mesh	150	0,100	0,065	61	37%	140	3	50-52	51
	200	0,080	0,050	77	38%	119	2	39-41	42
	250	0,063	0,040	97	37%	90	2	31-33	34
	270 K	0,056	0,040	104	34%	88	2	35-37	30
	325 K	0,042	0,036	128	29%	76	2	32-34	22
	400 K	0,036	0,028	156	32%	60	2	25-27	19
	400 K	0,033	0,030	159	27%	64	2	21-23	17
	500 K	0,025	0,025	200	25%	54	2	25-27	14
K = twilled weave									
Thin Mesh	70	0,300	0,065	27	68%	140	3	21-23	95
	80	0,265	0,050	31	71%	110	3	15-17	78
	82	0,245	0,065	32	62%	140	3	25-27	87
	200	0,090	0,036	79	51%	80	2	20-22	41
	230	0,080	0,030	91	53%	62	2	15-17	33
	250	0,071	0,030	98	49%	60	2	16-18	30
	280	0,067	0,025	110	53%	53	2	12-14	28
	325	0,053	0,024	128	47%	52	2	13-15	25
	350	0,053	0,020	137	53%	42	2	9-11	22

Specifications

mesh in detail

Dutch and special weaves

	mesh per inch (25,4 mm)	warp wire diameter (mm)	weft wire diameter (mm)	absolute filter fineness μm	water flow ltr/min F = 1 cm ² , p = 200 mbar	air flow Nm ³ /h F = 20 cm ² , p = 2 mbar	
Plain Dutch Weave	80 / 400	0,125	0,071	40-45	9,6	12,0	
	50 / 250	0,140	0,112	58-63	10,0	17,0	
	40 / 200	0,180	0,140	70-75	8,5	16,5	
	30 / 150	0,230	0,180	95-105	9,6	19,2	
	24 / 110	0,360	0,260	115-125	8,4	18,0	
	20 / 150	0,250	0,180	150-160	11,1	23,5	
	14 / 88	0,500	0,320	220-240	11,8	23,9	
	12 / 95	0,340	0,280	230-250	12,0	24,5	
	12 / 64	0,600	0,400	270-290	11,5	26,1	
	8 / 85	0,360	0,320	300-330	12,5	29,0	
Dutch Twilled Weave	325 / 2300	0,038	0,025	8-9	2,5	1,0	
	250 / 1400	0,055	0,040	11-12	0,8	0,5	
	200 / 1400	0,070	0,040	12-14	3,2	1,3	
	165 / 1400	0,070	0,040	16-18	4,8	2,9	
	165 / 800	0,070	0,050	24-26	9,0	7,5	
	200 / 600	0,060	0,045	28-32	9,6	11,2	
	80 / 700	0,100	0,076	35-38	6,2	5,0	
	50 / 250	0,140	0,110	55-60	2,4	3,9	
	30 / 360	0,250	0,150	90-100	5,6	9,1	
	20 / 260	0,250	0,200	110-120	3,9	6,5	
Reinforced Dutch Weave	290 / 75	0,09	0,20	50-55	6,2	8,4	Pz 40
	292 / 69	0,09	0,22	55-57	6,8	9,9	Pz 50
	175 / 50	0,15	0,30	82-94	8,0	13,4	Pz 60
	130 / 35	0,22	0,40	98-105	7,0	11,3	Pz 80S
	173 / 41	0,15	0,30	87-102	9,2	17,9	Pz 80L
Five-shaft Twilled Weave	110 / 60	0,16	0,16	160-180	16,6	46,0	5 / 110 / 60
	80 / 60	0,20	0,20	200-220	17,6	39,8	5 / 80 / 60
	65 / 36	0,30	0,30	260-290	16,6	48,5	5 / 65 / 36
	30 / 18	0,50	0,50	600-650	20,0	63,0	5 / 30 / 18
	15 / 13	0,90	0,90	1150-1200	21,4	60,3	5 / 15 / 30

Square mesh

mesh per inch (25,4 mm)	mesh width w (mm)	wire diameter d (mm)	open screen area $A_0 = \left(\frac{w}{w+d}\right)^2 \times 100\%$	meshes per cm	meshes per cm ²	weight (steel) kg/m ²
500	0,025	0,025	25%	200	40.000	0,16
400	0,033	0,030	27%	159	25.195	0,18
400	0,036	0,028	32%	156	24.414	0,16
325	0,042	0,036	29%	128	16.437	0,21
295	0,050	0,036	34%	116	13.521	0,19
280	0,050	0,040	31%	111	12.346	0,23
275	0,056	0,036	37%	109	11.815	0,18
254	0,060	0,040	36%	100	10.000	0,20
250	0,063	0,040	37%	97	9.426	0,20
212	0,070	0,050	34%	83	6.944	0,26
200	0,071	0,056	31%	79	6.200	0,31
200	0,077	0,050	37%	79	6.200	0,25
195	0,080	0,050	38%	77	5.917	0,24
175	0,090	0,055	39%	69	4.756	0,26
165	0,100	0,050	44%	67	4.444	0,21
150	0,100	0,063	38%	61	3.764	0,31
141	0,100	0,080	31%	56	3.086	0,45
121	0,120	0,090	33%	48	2.268	0,49
135	0,125	0,063	44%	53	2.829	0,27
125	0,125	0,080	37%	49	2.380	0,40
120	0,125	0,090	34%	47	2.163	0,48
113	0,125	0,100	31%	44	1.975	0,56
113	0,135	0,090	36%	44	1.975	0,46
102	0,140	0,110	31%	40	1.600	0,61
100	0,160	0,100	38%	38	1.479	0,49
83	0,180	0,125	35%	33	1.075	0,65
88	0,200	0,090	48%	34	1.189	0,35
80	0,200	0,125	38%	31	947	0,61
74	0,250	0,100	51%	29	816	0,36
62	0,250	0,160	37%	24	595	0,79
56	0,250	0,200	31%	22	494	1,13
55	0,280	0,180	37%	22	473	0,89
51	0,280	0,220	31%	20	400	1,23
60	0,315	0,110	55%	24	554	0,36
53	0,315	0,160	44%	21	443	0,68
50	0,315	0,200	37%	19	377	0,99
45	0,315	0,250	31%	18	313	1,40
47	0,355	0,180	44%	19	349	0,77
40	0,360	0,280	32%	16	244	1,56

Specifications

mesh in detail

Square mesh

mesh per inch (25,4 mm)	mesh width w (mm)	wire diameter d (mm)	open screen area $A_o = \left(\frac{w}{w+d}\right)^2 \times 100\%$	meshes per cm	meshes per cm ²	weight (steel) kg/m ²
41	0,40	0,22	42%	16	260	0,99
39	0,40	0,25	38%	15	237	1,22
36	0,45	0,25	41%	14	204	1,13
40	0,50	0,14	61%	16	244	0,39
36	0,50	0,20	51%	14	204	0,73
34	0,50	0,25	44%	13	178	1,06
31	0,50	0,32	37%	12	149	1,59
30	0,56	0,28	44%	12	142	1,19
29	0,61	0,26	49%	11	132	0,99
29	0,63	0,25	51%	11	129	0,90
25	0,60	0,40	36%	10	100	2,03
25	0,63	0,40	37%	10	94	1,97
26	0,71	0,25	55%	10	109	0,83
24	0,80	0,25	58%	10	91	0,76
23	0,80	0,32	51%	9	80	1,16
20	0,80	0,50	38%	8	59	2,44
21	0,90	0,32	54%	8	67	1,07
21	1,00	0,22	67%	8	67	0,50
20	1,00	0,30	59%	8	59	0,88
19	1,00	0,36	54%	7	54	1,21
17	1,00	0,50	44%	7	44	2,12
16	1,00	0,63	38%	6	38	3,09
13	1,00	1,00	25%	5	25	6,35
18	1,12	0,32	60%	7	48	0,90
17	1,25	0,25	69%	7	44	0,53
15	1,25	0,40	57%	6	37	1,23
15	1,25	0,50	51%	6	33	1,81
12	1,25	0,80	37%	5	24	3,96
15	1,40	0,25	72%	6	37	0,48
13	1,60	0,36	67%	5	26	0,84
12	1,60	0,50	58%	5	23	1,51
10	1,60	1,00	38%	4	15	4,88
12	1,80	0,40	67%	5	21	0,92
11	1,80	0,56	58%	4	18	1,69
11	2,00	0,32	74%	4	19	0,56
11	2,00	0,40	69%	4	17	0,85
10	2,00	0,56	61%	4	15	1,56
10	2,00	0,60	59%	4	15	1,76

Square mesh

mesh per inch (25,4 mm)	mesh width w (mm)	wire diameter d (mm)	open screen area $A_o = \left(\frac{w}{w+d}\right)^2 \times 100\%$	meshes per cm	meshes per cm ²	weight (steel) kg/m ²
9	2,00	0,80	51%	4	13	2,90
9	2,00	0,90	48%	3	12	3,55
8	2,00	1,00	44%	3	11	4,23
8	2,00	1,20	39%	3	10	5,72
8	2,50	0,50	69%	3	11	1,06
8	2,50	0,71	61%	3	10	1,99
7	2,50	1,00	51%	3	8	3,63
7	3,15	0,56	72%	3	7	1,07
6	3,15	0,80	64%	3	6	2,06
6	3,15	1,20	52%	2	5	4,20
5	4,00	0,70	72%	2	5	1,32
5	4,00	1,00	64%	2	4	2,54
5	4,00	1,40	55%	2	3	4,61
5	4,00	1,60	51%	2	3	5,81
4	5,00	0,70	77%	2	3	1,09
4	5,00	0,90	72%	2	3	1,74
4	5,00	1,20	65%	2	3	2,95
4	5,00	1,60	57%	2	2	4,93
4	5,00	2,00	51%	1	2	7,26
3	6,30	1,00	74%	1	2	1,74
3	6,30	2,00	58%	1	1	6,12
3	7,00	2,00	60%	1	1	5,64
3	8,00	1,00	79%	1	1	1,41
3	8,00	1,20	76%	1	1	1,99
3	8,00	1,60	69%	1	1	3,39
3	8,00	2,00	64%	1	1	5,08
2	10,00	1,00	83%	1	1	1,15
2	10,00	1,40	77%	1	1	2,18
2	10,00	1,60	74%	1	1	2,80
2	10,00	1,80	72%	1	1	3,49
2	10,00	2,00	69%	1	1	4,23
2	10,00	2,50	64%	1	1	6,35
2	10,00	3,00	59%	1	1	8,79
2	12,50	2,00	74%	1	0	3,50
2	12,50	2,80	67%	1	0	6,51
1	15,00	2,00	78%	1	0	2,99
1	16,00	2,50	75%	1	0	4,29
1	20,00	2,00	83%	0	0	2,31
1	20,00	3,00	76%	0	0	4,97

Specifications

mesh in detail

Materials and specifications

	material designation	material number	specific gravity	designation	tensile strength N/mm ²	working temperature °C air temperature
Stainless steel	nickel-chromium steel, stainless	1.4301	7,9	X 5 Cr Ni 18.9	600-800	300
		1.4306	7,9	X 2 Cr Ni Ti 189	600-800	350
		1.4541	7,9	X 10 Cr Ni Ti 189	600-800	400
	nickel-chromium steel, molybdenum steel, stainless	1.4401	7,9	X 5 Cr Ni Mo 18 10	600-800	300
		1.4404	7,9	X 2 Cr Ni Mo 18 10	600-800	400
		1.4439	7,9	X 3 Cr Ni Mo N 17135	600-800	400
		1.4539	8,0	X 2 Ni Cr Mo Cu 25205	600-800	300
		1.4571	7,9	X 10 Cr Ni Mo Ti 18 10	600-800	400
	nickel-chromium steel, highly heat resistant	1.4828	7,9	X 15 Cr Ni Si 20 12	700-900	1000
		1.4841	7,9	X 15 Cr Ni Si 25 20	700-900	1150
		1.4864	8,0	X 12 Ni Cr Si 36 16	700-900	1100
	chromium steel	1.4016	7,7	X 8 Cr 17	450-600	300
Heating conductor alloys	nickel-chromium steel	2.4869	8,3	Ni Cr 80 20	600-800	1250
	alu-chromium	1.4767	7,2	Cr Al 20 5	600-800	1300
	alu-chromium	2.4725	7,3	Cr Al 14 4	600-800	1050
Special alloys	incoloy 800	1.4876	8,0	X 10 Ni Cr Al Ti 32 20	550-760	1000
	incoloy 825	2.4858	8,1	Ni Cr 21 Mo	550-760	540
	incoloy 600	2.4816	8,5	Ni Cr 15 FE	580-800	1150
	incoloy 625	2.4856	8,4	Ni Cr 22 Mo 9 Nb	750-900	1050
Non-ferrous metals	copper	2.0100	8,96	E - Cu	200-300	100
	brass	2.0321	8,53	Cu Zn 37 (Ms 63)	350-450	200
	brass-tomb.	2.0250	8,67	Cu Zn 20 (Ms 80/20)	320-400	200
	tin bronze	2.1020	8,82	Cu Sn 6 (phosphor-bronze)	350-450	200
	tin bronze	2.1020	8,85	Cu Sn 7,5	360-470	200
	tin bronze	2.1030	8,87	Cu Sn 8,5	370-480	200
	nickel	2.4060	8,90	Ni 99,6	430-550	250
	nickel	2.4066	8,90	Ni 99,2	410-550	350
	monel	2.4360	8,80	Ni Cu 30 Fe	190-260	350
	aluminium	3.0280	2,70	aluminium various alloys Al 99,5, Al Mg 3, Al Mg 5		150
Steel	steel	1.0012	7,85	FE crude, galvanized, tinned	350-650	450
Hastelloy	hastelloy C 4	2.4610	8,64	Ni Mo 16 Cr 16 Ti	700-900	1050
	hastelloy B 2	2.4617	9,22	Ni Mo 28	750-950	750
	hastelloy C 270	2.4819	8,64	Ni Mo 16 Cr 15 W	750-950	700
Titanium	tantalum		16,6	tantalum	300-500	1700
	titanium	3.7025	4,5	Ti 1	300-420	650
	titanium	3.7035	4,5	Ti 2	400-550	650



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Drahtgewebefabriken

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