BOPP FI
Filter meshes

www.bopp.com

«THE ART OF SWISS PRECISION»

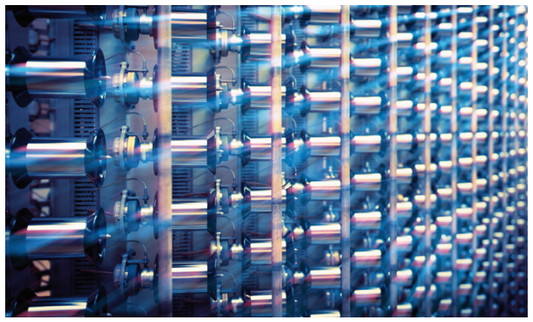
BOPP – Leading the way in mesh for filtration

Zürich Headquarters

Established in 1881 in Switzerland, G. BOPP + Co. AG soon developed from a manufacturer of coarse mesh products into a world leader for the finest high tech filter meshes. The very finest wire diameters from as little as 0.015mm are woven to the highest standards of quality into high tech filter meshes for a comprehensive range of applications in filtration. BOPP supplies a global market and has subsidiary companies in Germany, UK, Italy, USA, Korea and China.

Know-How from decades of experience

In-house research and development combined with close working relationships with our customers have resulted in a wealth of experience which makes a real contribution to your individual application solutions. Alongside customer specific solutions, this experience also feeds product development and ongoing development of our plant and equipment.


Warp creel with up to 1000 warp wire reels

Milestones along the way

Blue chip companies throughout industry were early adopters of BOPP filter meshes. These include NASA during construction of the Saturn-V rockets and the associated Apollo space missions in the 1960s. Our meshes played a vital role on the launch pad, in the spacecraft and also in the lunar module. 760 BOPP filters operating in 80 different filter modules travelled into space on every mission. This groundbreaking success led to NASA also specifying BOPP meshes for the space shuttle programme. During the course of the space travel programme, we have gained valuable experience in weaving the finest meshes.

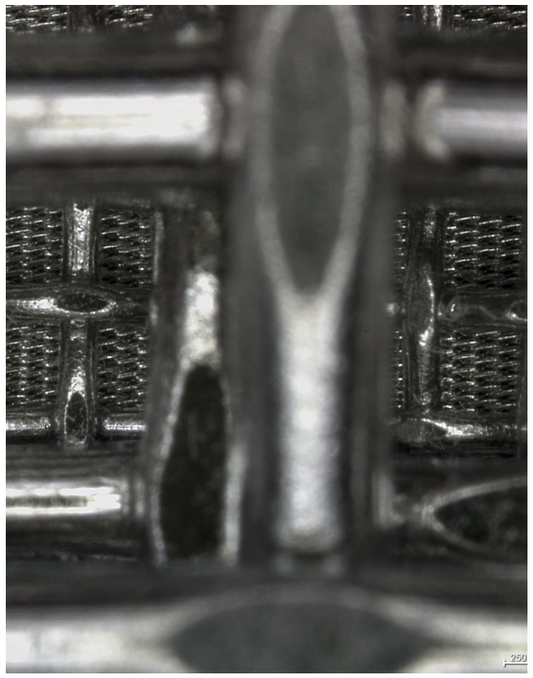
Even today, our meshes continue to travel into space.


Launch of a space shuttle

Filtration using BOPP meshes

The best filtration results are only possible when the individual factors are optimally attuned: high grade materials, ideal to meet the challenges of defined specifications and perfect meshes achieved by meticulous workmanship.


Single-layer and multi-layer mesh under the microscope



More than just premium filter meshes

Even where our high end filter meshes are the stars of the application, today our customers quite rightly expect more than just a product solution. Increasingly, aspects such as bespoke consultancy, secure production processes, traceability, cost efficiency and professional support as well as seamless logistics all form part of the expectation. BOPP promises all this, alongside an innovative and agile structure.

Seamless traceability

Focus on key applications

When precision and quality are imperative, BOPP filter meshes are always the right choice. That's why demanding customers from the most diverse sectors of industry choose our products. Typical applications include:


Water


Microplastics


Air


Chemicals


Biotech/Pharmaceuticals


Laboratories


Dryers


Ballast Water


Hydraulics


Air and space travel


Automotive


Fuels


Petrochemicals


Food/Drink


Rockets


Fuel Cells

Key attributes for applications in the filtration process are

- Material
- Operational loading, mechanical, thermal and chemical
- Pressure ratios
- Flow rates
- Mass, dimensions, design
- Installation situation
- Attachments
- Cleanliness requirements
- Ergonomic operation
- Standards requirements

The key attributes for a solution approach to demanding filtration applications are

- Material
- Wire diameter
- Pore count, mesh count
- Filter fineness
- Mesh design, geometry
- Yield point
- Workability
- Joining technology

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The advantages of using BOPP meshes in filtration

You can rely on our meshes! Choosing our steel meshes is a guarantee of secure and economical filtration results, even for the most challenging filtration applications.

Microscopic
Our portfolio of specifications in terms of geometric aperture sizes extends down to the single figure micrometre range around 5 µm.

Economy
Reduced energy usage thanks to lower pressure drops, durable products, less downtime and reduced material usage resulting in earlier amortisation.

Precise
Highly sensitive filtration applications place uncompromising demands on the precision of the filter medium. Only the highest aperture count accuracy achieved with steel meshes can guarantee this.

Robust
For particularly harsh operating conditions, multilayer composite meshes come into their own.

High flow rates
Flow performance benefits many factors at the same time. Optimised meshes save energy and increase the efficiency of the filtration process. Our portfolio is designed around this requirement.

Recyclable
All our filter meshes are made of metal and are therefore relatively easy to recycle. This gives them a deciding advantage in terms of sustainability.

Longevity
In comparison with other filter media produced using plastics or paper pulp, metal filter meshes stand out in terms of longevity, offsetting higher initial investment costs.

Metallurgy
We insist on premium quality raw materials for our products. We only use stainless steel. Our finest meshes use the purest melts with the least possible contamination.

Surface efficiency
Higher levels of permeability mean the filter surface can be reduced, saving on space.

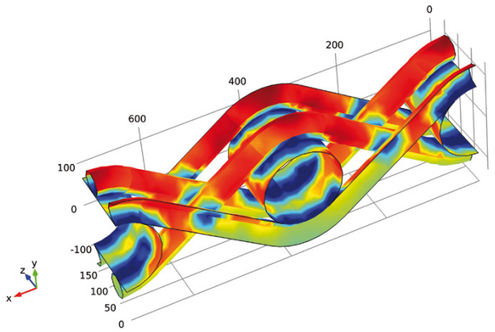
Original size screw-in filter

What else is important for us

To achieve optimum results, the entire environment matters. Alongside exceptional products, BOPP offers a comprehensive range of benefits which work to your advantage, either directly or indirectly.

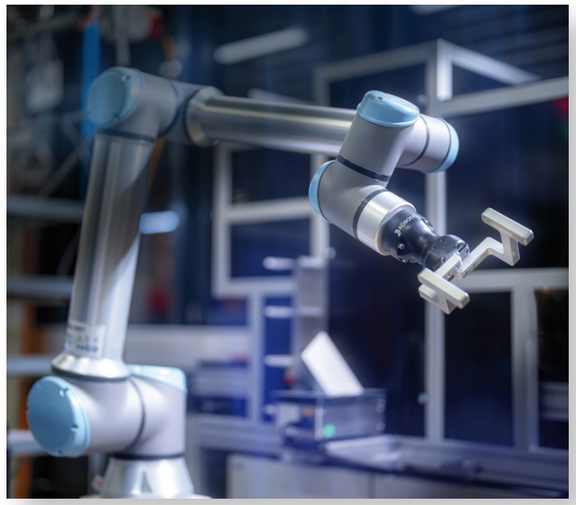
Engineering and Consultancy

At a time when our customers are predominantly buying bespoke mesh products rather than mesh in roll form, it is not just products that are becoming more complex, but also engineering and consultancy. We welcome this development. Working closely with our customers, we develop application specific solutions which make all the difference.



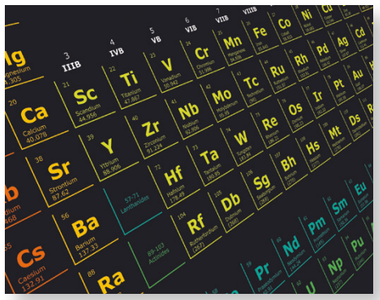
From one-offs through to mass production

In contrast to many of the major suppliers, we have always remained committed to supplying smaller users. This does not preclude us from supplying large businesses on the international stage with automated mass production numbering millions every month.



Logistics

The backbone of our supply chain, we operate a fully automated warehousing system, ensuring high levels of efficiency and accuracy.
In order for your goods to reach you in perfect condition, we do not use standard packaging materials but have our own joinery division where customised packaging units are manufactured.



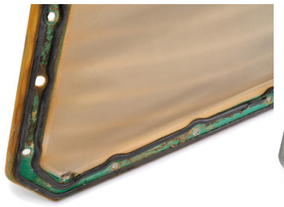
Materials in use

Our filter meshes are predominantly manufactured using stainless steel to DIN M. 1.4404/AISI 316L, 1.4301/304L and DIN M. 1.4539/AISI 904L. For the most challenging applications, we use Hastelloy alloys. However, we can also weave to order using titanium, tungsten, aluminium and various non-ferrous metals.

Standards

Mandatory internationally recognised standards and certificated processes guarantee high levels of reproducibility. However, these are often not adequate for our requirements, which is why we also work to our own internal (IN) standards, the requirements of which extend far beyond the established international standards.
We are officially certified to:

- ISO 9001:2015
- ISO 14001:2015
- ISO/IEC 27001:2013
- BSE/TSE Statement
- REACH
- ROHS
- FOOD Contact compliance



Replacement parts and Rescreening

Our contribution does not end with delivery. For many of our customers, we have become an important source for replacement parts. We also offer an in-house rescreening service, where filter components which have reached their wear limits are fully refurbished.

Infrastructure and Equipment

Our plant and equipment consist mainly of machinery designed and built by us, which is subject to constant developments and improvements. This enables us to achieve above average levels of productivity combined with the highest levels of quality, guaranteeing reproducibility for many years.

Single layer filter meshes

BOPP manufactures a comprehensive range of fine and ultra-fine filter meshes, developed for the most diverse applications. Each mesh type has its own specific properties and strengths.

Betamesh-PLUS

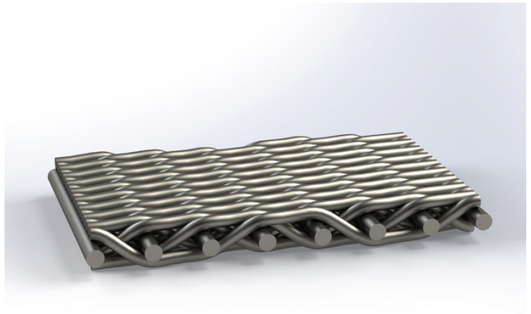
The star of filter meshes

Betamesh-PLUS is the latest addition to our range. With aperture sizes from 5 µm, Betamesh-PLUS in the finest single layer filter mesh. Betamesh-PLUS is characterised by a high flow rate despite the finest pore sizes. The mesh owes this to its high porosity and large open area, which is achieved through a sophisticated choice of wire diameters and spacings. In addition, filter cake build up occurs almost exclusively on the surface of the mesh. This eliminates the possibility of blockages and also means that the material exhibits exceptional backwashing properties.

Robusta

Our single layer solution for challenging mechanical demands

The regular cross section in both warp and weft directions facilitates the highest mechanical loadings. Thanks to higher levels of porosity, this mesh can withstand particularly high flow rates. These robust meshes are used for settling filters, filter candles, vacuum filters and well filters.



Twilled Dutch Weave

Five offset aperture levels in a single layer mesh

The weave of the twilled dutch mesh weave results in particularly fine filter pores and a smooth mesh surface. The larger material cross section gives higher levels of mesh stability. When passing through a twilled dutch weave mesh, the particles must negotiate five offset pore levels. This means that oblong, thin, rod-shaped and fibrous particles are securely retained. Fine specification twilled meshes are used for fine filtration such as pressure filtration in hydraulic steering equipment and fuel filters for critical applications. Coarser specification twilled dutch weave meshes are used for pressure and vacuum filtration (disc, cell and drum filters) and as a porous medium for fluidised bed applications. These meshes are usually manufactured from stainless steel.

Duplex

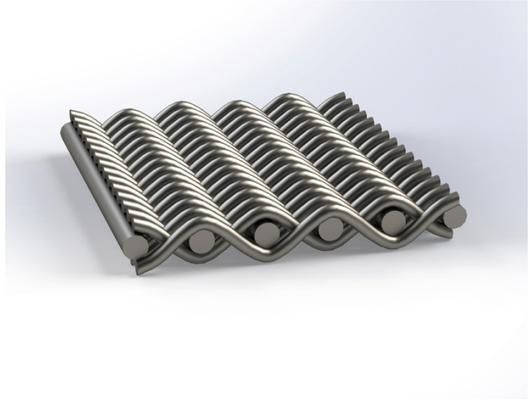
Good flow rates for increased mechanical loads

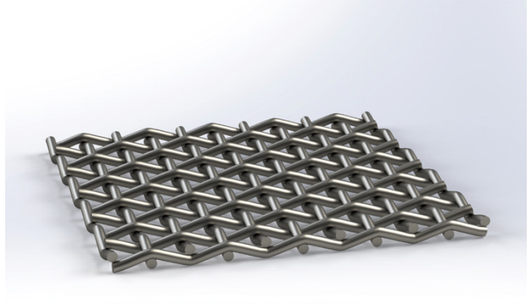
Duplex meshes exhibit high flow rates and can withstand high mechanical loadings. Duplex meshes are the preferred choice for applications such as pressure and vacuum filters, as well as filter candles.

Plain Dutch Weave

Our balanced all rounder for a range of applications

These meshes have a slightly textured surface and are particularly useful for high flow rates and low pressure loss. They are used where mechanical loading is increased, such as for settling filters and filter candles.





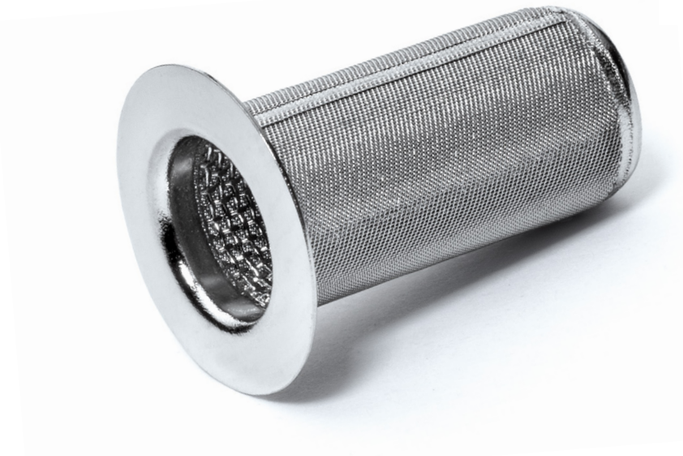
Square weave meshes

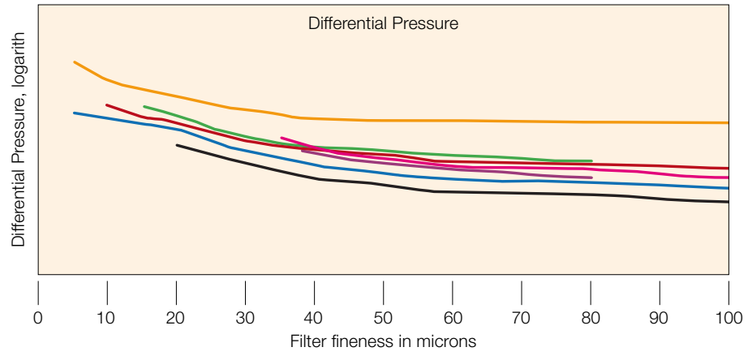
First class flow rates and good backwashing properties

In contrast to the twilled meshes, the wires in this design of mesh are woven with a gap. This results in open apertures, which allow liquids to stream through. Exceptionally low resistance and particularly effective backwash and cleaning properties particular characteristics of this mesh. Square weave meshes are used for dirt filters with low pressure differentials, for applications such as backwashing in conjunction with support meshes.

Filter mesh comparisons

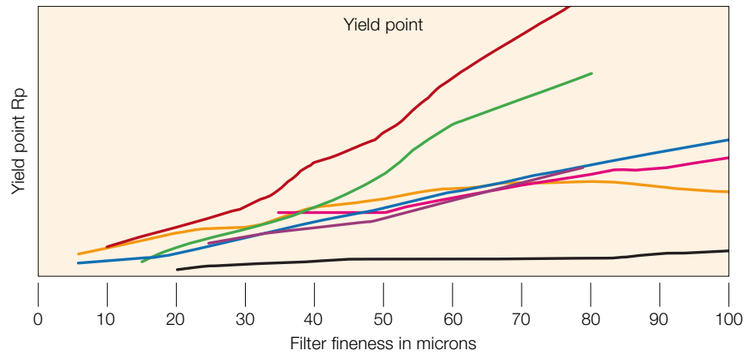
Take a look at a direct comparison of the various properties and strengths of our single layer filter meshes. Accurate product evaluation can be found at the end, in direct exchanges with our customers.





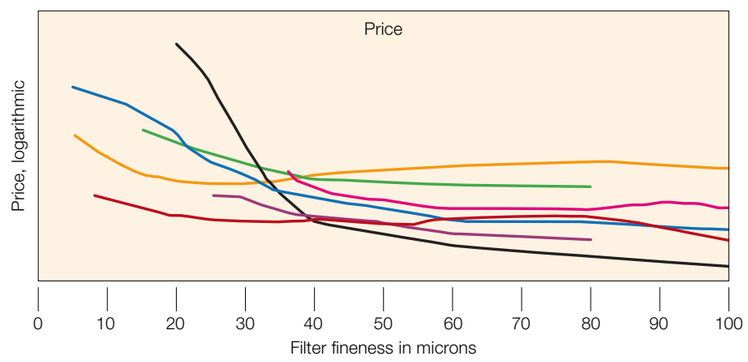
Differential pressure

Differential pressure refers to the difference in pressure ratios between two defined points in a system. This difference in pressure can be used to measure various parameters such as fluid flow, air flow or in our case, flow rate.



Yield point

The yield point descries the maximum load a material can withstand in terms of tensile stress before plastic deformation occurs. It is a measure of material stability. Using tensile testing we determine the yield point of our wires and meshes for each different material. A high yield point indicates high levels of material stability and therefore higher load bearing capacity.



The graphics are for illustration purposes only. For more precise comparisons for specific applications, further parameters are necessary and must be individually calculated or determined by trials. We can assist with this.

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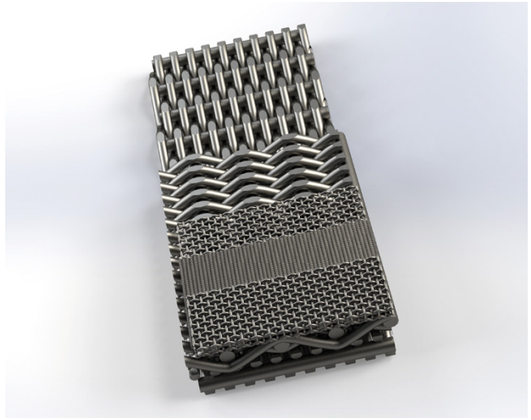
Composite-Meshes

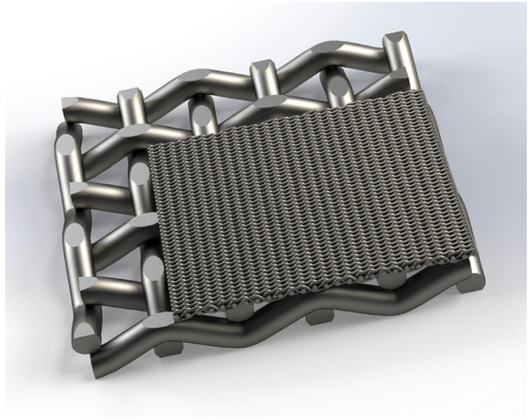
For demanding filtration applications or where higher levels of stability are essential, our sintered steel meshes are increasingly the specification of choice. These laminated meshes combine the individual advantages of each of the mesh layers sintered together to form an unbeatable filter product.

POREMET

Five layer filter medium with exceptionally fine filtration

POREMET is a lead-like filter medium consists of five different wire cloth layers. These layers are perfectly matched to ensure the optimum balance. They are sintered together using heat and pressure. Their design achieves the optimum combination of stability, filter fineness, flow rate and backwashing properties. POREMET is used primarily for the filtration of highly viscous fluids.





TOPMESH 2

Increased stability due to the combination of support layers

TOPMESH 2 is a two layer combination consisting of a filter mesh and a support layer. Sintering the two together results in a robust filter medium achieving fine filtration in harsh industrial conditions.

ABSOLTA N

A highly porous composite-mesh for high flow rates

An extremely porous filter medium developed for high flow capacities and optimum backwash capabilities.

TOPMESH 3

Three layer mesh for harsh industrial applications

TOPMESH 3 is an even more stable version of TOPMESH 2 and features an additional support layer for even greater loads.

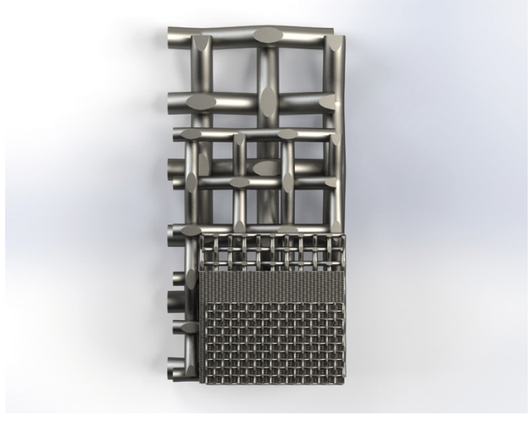
Composite-PLUS

Our Betamesh-PLUS filter meshes can also be specified in place of our multi-layer filter meshes. Benefit from even finer filtration results alongside increased flow capacities. Find more information in our brochure “BOPP – Composite-Meshes” or on our website at www.bopp.com

ABSOLTA D

An exceptionally thin/fine version of BOPP ABSOLTA

ABSOLTA D is a five layer example featuring a reduced thickness of 1.7 – 1.8mm. ABSOLTA is often selected for liquid and gas filtration applications.



POREFLO

Excellent in use of fluidizing elements

POREFLO is a metal sheet-like, two- or three-layer composite-mesh featuring offset layers of twilled wire cloth which can subsequently be configured for differing levels of pressure loss using mechanical compression. This changes the composite-mesh into an air permeable metallic membrane which is particularly suited to applications in fluidisation, aeration and fluid bed technology.

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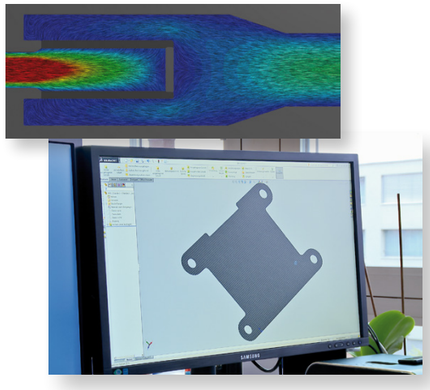
BOPP – Our expanded range of services

BOPP not only leads the world with exceptional filter meshes but also specialises in further processing these meshes. Our comprehensive range of plant and equipment enables us to process mesh rolls according to customer specification into semi finished goods or as an assembly, ready for integration directly into your production processes.

Engineering

We are pleased to support you in choosing the correct mesh specification in terms of flow values, material properties, geometric form and component layout with:

- Demand analyses
- Materialisation recommendations
- Design suggestions
- Construction drawings
- Cost calculations
- Production technology



Fabrications

We process our meshes into semi-finished and finished goods to individual customer specifications using:

- recision cutting – perfect cut edges and angularity
- Forming, bending, deep drawing, edging
- Welding, soldering, annealing, tensioning
- Calendering
- Stamping
- Building prototypes, one-offs
- Automated mass production
- Process oriented packaging
- Laser cutting

Thermal Treatment

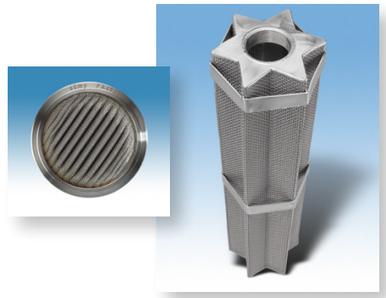
Using a variety of treatments, the mechanical properties of materials such as hardness, elasticity and plasticity can be matched to further processing requirements.

- Workability optimisation
- Variable hardness and plasticity
- Elimination of loose wires on DKS meshes
- Stress relief annealing

Moulded Parts

On request, we can fabricate our meshes into moulded parts to your individual specifications. For example:

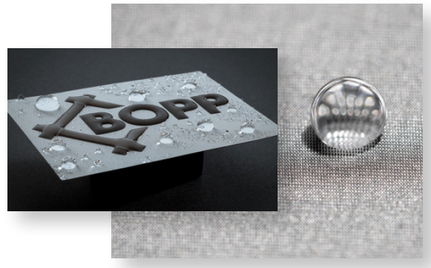
- Filter frames
- Filter candles
- Star filters
- Discs
- Pleated filters
- And many more



Coatings

Hydrophobic, hydrophilic, grey scale to black or inscribed, our coatings add so much more to your filter meshes without having any detrimental effect on the aperture size.

- Applied to selected areas of the mesh
- Chemically resistant
- UV resistant
- Temperature resistance from -50°C to 200°C



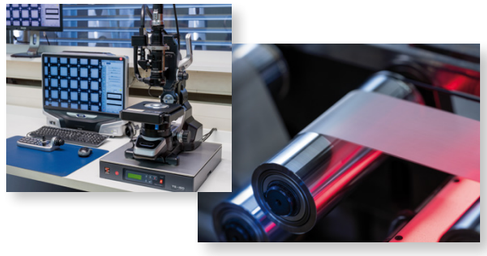
Partnering

In partnership with renowned companies across the globe, we can also offer additional fabrication and processing capabilities for tasks including:

- Back injection
- Component assemblies
- And many more

Quality Control, Measuring

- Customer-specific quality control processes
- Issue of measuring protocols
- Certification, attestations
- Flow measurement
- Glass bead testing
- Bubble point testing



Seven good reasons to choose BOPP

The power to innovate at BOPP is based on decades of experience. Alongside exceptional product characteristics in the most diverse sectors, we also excel in terms of fundamental attributes and qualities.

1 Quality

We always maintain strict compliance with industry specific weaving standards. What's more, we have created our own in-house standards alongside each of these, which demand far more than the officially accepted values in terms of challenges and tolerances.

2 Experience

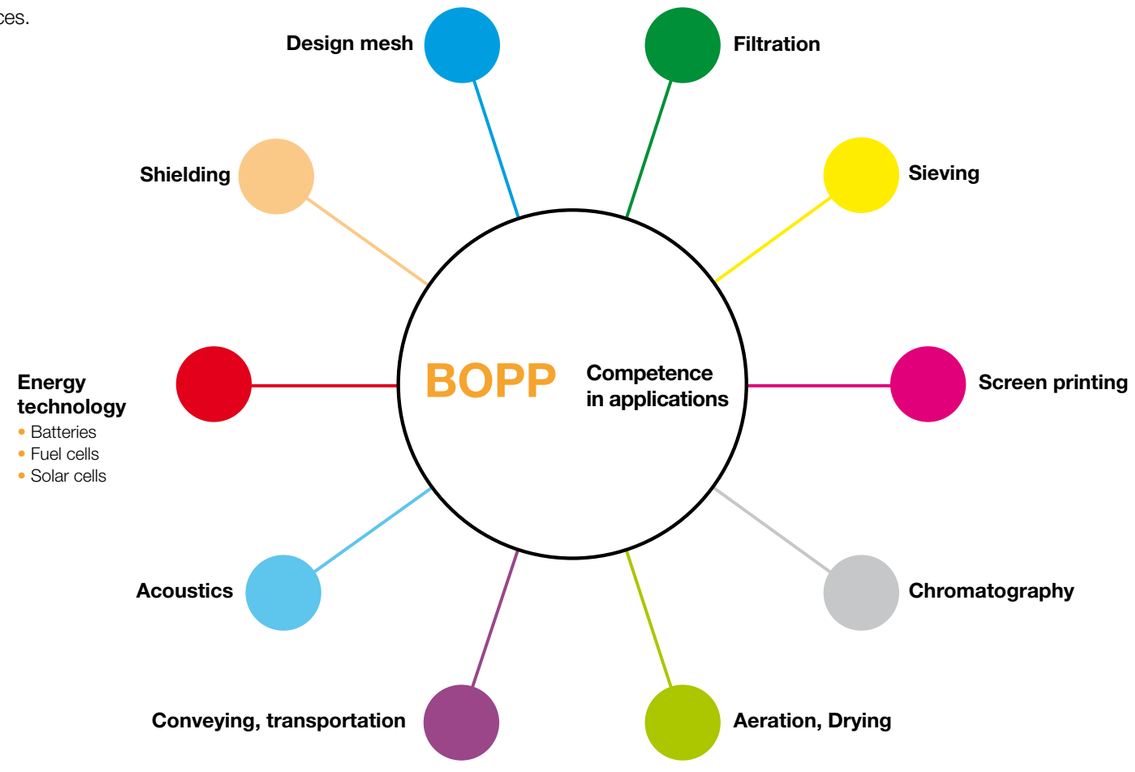
Thanks to in-house research and development and valuable feedback from our customers in diverse industrial sectors, we have acquired an enormous wealth of experience, which is used in consultancy as well as product development.

3 Cost Efficiency

We continue to find new ways to increase our production efficiencies with a simultaneous increase in quality standards.

4 Reproducibility

We maintain a process orientated approach to ensure optimum reproducibility.



5 In-house Wire Drawing

We are the only fine wire weavers to operate our own fine wire drawing plant. This means we can ensure a more consistent supply capability and maintain quality procedures totally independent of third party input.

6 Security

We manufacture in a trade-friendly and commercially stable environment, and are therefore able to guarantee above average levels of product availability, supported by extensive stockholding. In addition, the BOPP Group operates two weaving mills and other production facilities, providing higher levels of process security in the supply chain.

7 Protecting the Environment

Our manufacturing plant complies with modern standards in terms of energy use and environmental sustainability. We are active participants in programmes to improve energy efficiency, and a member of Cleantech organisations.

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The key to optimum filtration: The right mesh

Diverse applications place individual challenges demands on our meshes and their design. A perfectly matched mesh fabricated accordingly can improve your processes significantly.

Industry sector	Type of filtration, Application	Advantages, Features
Chemicals	• Candle filters	• Easy to pleat
	• Nutsche filters	• Advanced levels of separation
	• Dryers	• Defined flow, defined pressure differential
	• Bag filters	• Robust, easy to clean
Pharmaceuticals	• Aeration elements	• Chemical resistance
	• Fluidised bed floors	• Defined flow, defined pressure differential
	• De-aeration filters	• Facilitates CIP (Cleaning in Place)
Hydraulics	• Filter elements and discs	• Robust, precise
	• as dirt or control filter	• Low pressure differential
Machine tools	• Coolant filter/filter drum	• Low pressure differential
Green Technology	• Screw-in filters in the hydrogen circuit	• Precise
	• Last chance filters	• Reliable
Automotive industry	• Fuel filters	• Accurate, low pressure differential
	• Filters for brake fluid and servos	
Foodstuffs	• Filters for oil presses	• Cleanable
	• Filter plates for juice and wine	• Chemical resistance
Plastics manufacture	• Melt filters	• Accurate
	• Polymer candle filters	• Stable to high pressure
	• Spinning filters	

Materials

DIN M. 1.4404/AISI 316L, 1.4301/304L and
DIN M. 1.4539/AISI 904L. Hastelloy alloys

Other materials available on request

Defining filter fineness and aperture size

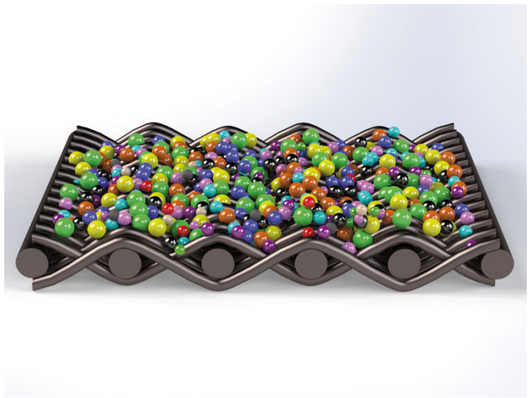
The most deciding criteria in choosing the right filter mesh is the required filter fineness. We define this in terms of geometric aperture size. This refers to characteristic mesh parameters including type of weave, warp and weft diameters and mesh count. It expresses the diameter of the largest spherical ball which can pass through the mesh. The underlying calculation equations were developed at Stuttgart University's Institute of Mechanical Process Engineering under the framework of AVIF projects A224 and A251 and experimentally validated. For mesh specifications where these calculations are not valid, the aperture sizes are established using glass bead and GeoDict (PoroDict).

When designing the filter, it is important that the geometric aperture size is a concrete indication for the separation of particles via the sieve effect. Other methods of separation such as barrier effect, diffusion and inertia separation will clearly hold back smaller particles. The separation rate is dependent upon the actual requirements for the filter medium.

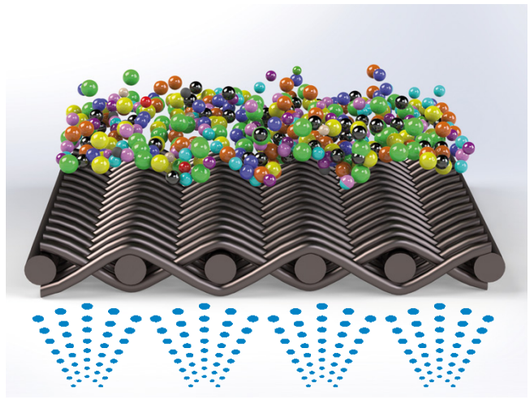
Filter cake build up and cleaning

Particles larger than the geometric aperture size deposit themselves from the outset flow onto the filter mesh. With time, a filter cake builds up, which acts as a depth filter. At the same time, alongside the build up of the filter cake, the flow rate reduces and particles smaller than the geometric aperture size will also collect in the filter cake. When defined parameters relating to loading and pressure drop are reached, a cleaning process is indicated. The smooth surface of our filter meshes ensures good release of the filter cake and cleaning using backwashing.

		Separation effect	Low pressure loss	High flow rates	Backwashability	Stability	Loadbearing	Porosity	Spot welding	Roll seam welding	TIG plasma welding	Resistance welding	Annealing	Stamping	Cutting	Bend radius	Pleating
Single layer filter meshes	Twilled	++	o	o	+	+	-	-	++	++	o		++	++	++	++	++
	Plain	++	+	++	++	++	-	o	++	++	-		++	++	+	++	++
	Betamesh-PLUS	++	++	+++	+++	o	-	++	++	++	-		++	++	++	++	++
	Betamesh R	+	++	+++	+++	o	o	++	++	++	-		++	++	++	+	o
	Robusta	+	+	++	++	++	o	o	++	++	-		++	++	+	+	o
	Duplex	++	+	+	++	++	o	o	++	++	-		++	++	++	++	+
	Square weave mesh	o	++++	++++	++++	-	-	++	++	++	-		++	++	++	++++	+++
Composite-Meshes	Poremet	++	-	-	o	++++	++++	-	++		++	++			o	o	-
	Absolta	++	o	o	+	+++	++++	o	++		+	-			o	-	-
	Topmesh 2	++	+	+	++	++	+	+	++		o	++		+	o	+	++
	Topmesh 3	++	+	+	++	++	++	+	++		+	-		+	o	o	+
	Poreflo	++	-	-	-	+++	+++	-	++		++	++			o	+	-



Filter cake build-up



Backwashing

Technical data filter mesh

Mesh type	Mesh description	Geometric pore size [µm]	Yield Warp/Weft $R_{p0,2}$ [N/cm]	Number of pores [N_{Poren}/cm²]	AsK mm²/[cm]	AsS mm²/[cm]	Porosity [%]	A_{Orel} [%]	Weight [kg/m²]	Mesh thickness [mm]	Specific flow coefficient [EU]
Square weave mesh	w 0.020 mm–d 0.020 mm	20	30/30	62'500	0.08	0.08	56	25	0.13	0.04	138
	w 0.025 mm–d 0.025 mm	25	90/90	40'000	0.10	0.10	56	25	0.16	0.05	111
	w 0.032 mm–d 0.025 mm	32	70/70	30'779	0.09	0.09	62	32	0.14	0.05	77
	w 0.042 mm–d 0.036 mm	42	85/85	16'437	0.13	0.13	60	29	0.21	0.08	62
	w 0.050 mm–d 0.040 mm	50	95/95	12'346	0.14	0.14	62	31	0.23	0.09	68
	w 0.063 mm–d 0.040 mm	63	80/80	9426	0.12	0.12	67	37	0.20	0.09	41
	w 0.071 mm–d 0.050 mm	71	110/110	6830	0.16	0.16	65	34	0.26	0.11	42
	w 0.080 mm–d 0.050 mm	80	105/105	5917	0.15	0.15	68	38	0.24	0.11	33
	w 0.100 mm–d 0.065 mm	100	135/135	3673	0.20	0.20	67	37	0.33	0.14	28
Twilled weave	510x3600 mesh	6	55/75	142'000	0.10	0.25	32	5	0.28	0.05	5033
	450x2750 mesh	8	50/90	94'000	0.09	0.33	30	4	0.35	0.06	4959
	375x2300 mesh	8	85/125	63'000	0.12	0.42	28	4	0.46	0.08	4766
	350x2600 mesh	10	65/110	72'800	0.11	0.39	33	6	0.39	0.08	3064
	325x2300 mesh	10	75/160	54'000	0.15	0.42	31	4	0.46	0.08	3196
	200x1400 mesh	14	135/175	21'000	0.30	0.67	30	4	0.81	0.15	2505
	200x2000 mesh	18	85/155	32'000	0.15	0.48	40	8	0.50	0.11	1193
	165x1100 mesh	21	95/205	14'520	0.25	0.69	34	5	0.81	0.16	1472
	165x1400 mesh	21	95/180	17'000	0.25	0.67	36	6	0.76	0.15	1320
	80x700 mesh	46	140/445	4500	0.25	1.25	39	7	1.18	0.25	523
	40x560 mesh	88	140/870	1700	0.40	1.67	46	11	1.72	0.38	208
	30x360 mesh	121	205/940	840	0.58	2.50	44	9	2.49	0.55	181
	20x250 mesh	166	135/1300	380	0.39	3.67	42	6	3.34	0.69	168
	165x800 mesh[1]	38*	120/175	10'200	0.25	0.67	63	8	0.74	0.17	121
	200x600 mesh[1]	31*	100/95	9300	0.22	0.38	60	9	0.48	0.15	187
Plain weave	80x400 mesh	45	155/220	9400	0.39	0.59	61	14	0.82	0.26	187
	80x300 mesh	45	150/200	7440	0.42	0.75	59	8	0.92	0.31	190
	50x250 mesh	72	105/315	3700	0.30	0.94	65	13	1.03	0.36	114
	40x200 mesh	91	140/375	2400	0.40	1.17	65	13	1.30	0.46	93
	30x150 mesh	120	170/460	1400	0.49	1.50	65	14	1.61	0.59	72
	24x110 mesh	153	335/560	770	0.96	2.17	62	12	2.64	0.88	60
	20x150 mesh	162	135/495	930	0.39	1.50	69	23	1.53	0.61	54
	14x88 mesh	256	380/870	370	1.08	2.67	66	21	3.13	1.14	37
	12x64 mesh	301	465/1070	240	1.34	3.51	65	16	3.90	1.44	33
	8x85 mesh	306	120/1000	210	0.32	2.67	71	22	2.44	1.00	33
Betamesh-PLUS	Betamesh-PLUS 5	5	65/90	154'000	0.10	0.18	68	18	0.23	0.07	1683
	Betamesh-PLUS 6	6	65/85	146'000	0.10	0.17	68	21	0.22	0.07	1242
	Betamesh-PLUS 7	7	65/70	140'000	0.10	0.16	68	23	0.22	0.07	1136
	Betamesh-PLUS 8	8	70/90	92'000	0.15	0.21	66	22	0.30	0.09	880
	Betamesh-PLUS 10	10	70/90	82'000	0.15	0.21	66	25	0.30	0.10	727
	Betamesh-PLUS 12	12	70/95	72'000	0.15	0.22	66	25	0.32	0.10	615
	Betamesh-PLUS 15	15	80/85	81'000	0.14	0.18	65	31	0.27	0.09	421
	Betamesh-PLUS 20	20	95/80	55'000	0.17	0.22	64	31	0.33	0.11	366
	Betamesh-PLUS 25	25	140/100	30'000	0.27	0.28	64	32	0.47	0.15	265
	Betamesh-PLUS 30	30	175/125	17'000	0.35	0.36	65	32	0.59	0.20	193
	Betamesh-PLUS 35	35	220/160	12'000	0.45	0.46	64	31	0.77	0.25	164
	Betamesh-PLUS 40	40	305/205	8000	0.53	0.56	65	31	0.91	0.30	134
	Betamesh-PLUS 50	50	325/275	5000	0.69	0.72	65	30	1.18	0.38	108
	Betamesh-PLUS 70	70	435/285	3000	0.82	0.79	65	33	1.35	0.46	89
	Betamesh-PLUS 100	100	395/405	2000	1.24	1.15	64	33	2.00	0.66	68
	Betamesh-PLUS 125	125	475/440	1000	1.47	1.41	65	33	2.40	0.82	52
Betamesh R	Betamesh R 25	28	170/230	29'000	0.23	0.62	56	41	0.68	0.19	354
	Betamesh R 34	36	215/270	17'000	0.29	0.65	58	42	0.75	0.22	252
	Betamesh R 48	43	245/225	11'000	0.38	0.53	63	39	0.73	0.25	179
	Betamesh R 80	80	290/255	4000	0.65	0.79	64	37	1.35	0.42	100
Robusta	720x150 mesh	17	85/220	33'500	0.27	0.58	48	5	0.69	0.18	608
	600x125 mesh	21	100/240	23'300	0.34	0.60	51	8	0.75	0.20	439
	600x100 mesh	31	120/275	18'600	0.33	0.61	55	19	0.75	0.22	315
	280x70 mesh	40	150/335	6100	0.71	0.95	52	5	1.34	0.39	226
	175x50 mesh	53	205/485	2700	1.23	1.39	51	3	2.11	0.60	168
	140x40 mesh	65	250/625	1700	1.55	1.79	44	3	2.80	0.76	190
	130x35 mesh	83	295/605	1400	1.63	1.73	53	5	2.70	0.80	112
	108x24 mesh	151	510/360	804	2.09	0.96	62	12	2.50	0.86	60
	86x21 mesh	175	635/365	560	2.39	1.04	62	10	2.80	1.00	53
	400x125 mesh[2]	50*	155/180	15'500	0.55	0.39	61	3	0.75	0.23	105
Duplex	Duplex 15	16*	55/105	39'200	0.12	0.27	58	10	0.30	0.10	699
	Duplex 20	19*	95/150	22'300	0.21	0.38	54	8	0.47	0.14	860
	Duplex 30	44*	65/255	11'400	0.20	0.47	58	13	0.56	0.18	371
	Duplex 35	44*	185/340	3700	0.52	0.94	51	7	1.21	0.35	545
	Duplex 45	40*	155/350	3700	0.39	0.94	48	7	1.10	0.34	495
	Duplex 60	63*	435/515	1260	1.16	1.67	47	5	2.34	0.65	592
	Duplex 75	80*	405/670	870	1.16	1.92	49	7	2.59	0.74	356

*Determined using GeoDict (PoroDict) [1]Twilled dutch single weave [2]Robusta-twilled weave

Technical data Composite-Meshes

Composite-Mesh type	Mesh description	Geometric pore size [µm]	Thickness [mm]	Porosity [%]	A_{sK} resp. A_{sS} [mm²/cm]	$R_{p0,2}$ [N/cm]	Weight [kg/m²]	Specific flow coefficient [EU]
Poremet	Poremet 2	10	1.7	30	5.5	1080	9.25	4681
	Poremet 5	14	1.7	30	5.5	1080	9.60	4111
	Poremet 10	21	1.7	30	5.5	1080	9.55	2440
	Poremet 15	20	1.7	30	5.5	1080	9.10	1282
	Poremet 20	25	1.7	30	5.5	1080	9.15	1244
	Poremet 30	35	1.7	30	5.5	1080	9.29	1183
	Poremet 40	50	1.7	30	5.5	1080	9.55	1163
	Poremet 50	60	1.7	30	5.5	1080	9.70	1103
	Poremet 60	75	1.7	30	5.5	1080	10.00	1501
	Poremet 75	90	1.7	30	5.5	1080	10.15	1449
Absolta	Absolta 2	10	2.4	55	4.9	780	8.40	4194
	Absolta 5	14	2.4	55	4.9	780	8.75	2749
	Absolta 10	21	2.4	55	4.9	780	8.70	1548
	Absolta 15	20	2.4	55	4.9	780	8.25	546
	Absolta 20	25	2.4	55	4.9	780	8.30	462
	Absolta 30	35	2.4	55	4.9	780	8.44	401
	Absolta 40	50	2.4	55	4.9	780	8.70	280
	Absolta 50	60	2.4	55	4.9	780	8.85	253
	Absolta 60	75	2.4	55	4.9	780	9.15	222
	Absolta 75	90	2.4	55	4.9	780	9.30	197
Topmesh 3-layer	TM3-KT 2	10	2.0	60	3.6	573	6.25	3847
	TM3-KT 5	14	2.0	60	3.6	573	6.60	2528
	TM3-KT 10	21	2.0	60	3.6	573	6.55	1273
	TM3-BM 15	15	2.0	60	3.6	573	6.10	469
	TM3-BM 20	20	2.0	60	3.6	573	6.10	448
	TM3-BM 25	25	2.0	60	3.6	573	6.17	356
	TM3-BM 30	30	2.0	60	3.6	573	6.25	336
	TM3-QM 40	40	2.0	60	3.6	573	5.95	98
	TM3-QM 50	50	2.0	60	3.6	573	6.00	72
	TM3-QM 80	80	2.0	60	3.6	573	6.05	51
	TM3-QM 100	100	2.0	60	3.6	573	6.10	45
	TM3-QM 150	150	2.0	60	3.6	573	6.30	38
	TM3-QM 200	200	2.0	60	3.6	573	6.40	31
	TM3-QM 500	500	2.0	60	3.6	573	7.40	27
Topmesh 2-layer	TM2-KT 2	10	0.7	60	1.3	207	2.45	3710
	TM2-KT 5	14	0.7	60	1.3	207	2.80	2585
	TM2-KT 10	21	0.7	60	1.3	207	2.75	1304
	TM2-BM 15	15	0.7	60	1.3	207	2.30	537
	TM2-BM 20	20	0.7	60	1.3	207	2.30	437
	TM2-BM 25	25	0.7	60	1.3	207	2.37	363
	TM2-BM 30	30	0.7	60	1.3	207	2.45	345
	TM2-BM 40	40	0.7	60	1.3	207	2.60	236
	TM2-QM 50	50	0.7	60	1.3	207	2.20	67
	TM2-QM 60	60	0.7	60	1.3	207	2.20	58
	TM2-QM 80	80	0.7	60	1.3	207	2.25	49
	TM2-QM 100	100	0.8	60	1.3	207	2.30	40
	TM2-QM 150	150	0.8	60	1.3	207	2.50	35
	TM2-QM 200	200	1.4	60	1.3	207	2.60	29
	TM2-QM 500	500	1.4	60	1.3	207	3.60	16
Poreflo	Poreflo 303		1.25	14	5.4	1101	8.64	58'092
	Poreflo 304		1.45	18	5.4	1101	9.64	32'010
	Poreflo 305		1.60	19	5.4	1101	9.92	19'709
	Poreflo 206		0.85	12	4.9	1016	5.99	79'718
	Poreflo 207		1.00	18	4.9	1016	6.49	8655
	Poreflo 208		1.05	20	4.9	1016	6.72	4015
	Poreflo 209		1.20	31	4.9	1016	6.63	768

- **Geometric pore size x_{geo}** Based on characteristic mesh parameters including style of weave, wire diameter and division of calculated value. Describes the diameter of the largest spherical bead capable of passing through the mesh.
- **Yield point $R_{p0,2}$** Maximum permissible loading on the mesh in warp or weft direction, without significant permanent deformation.
- **A_{sK}** Actual material cross section on the cut surface of a vertical cut in the warp direction through the mesh. This material cross sectional area transmits the tensile forces in the warp direction.
- **A_{sS}** Actual material cross section on the cut surface of a vertical cut in the weft direction through the mesh. This material cross sectional area transmits the tensile forces in the weft direction.
- **Porosity** Proportion of the open area of the mesh to the given total volume of the mesh. The total volume is defined by the external dimensions length, width and thickness.
- **A_{Orel}** Theoretical free flow area, through which the filtrate can pass, in relation to the flow surface.
- **Eu** Dimensionless property (Euler's number) to assess the relationship of the pressure to the inertial forces of each respective mesh specification. Higher values denote higher pressure differential values under the same conditions (Air, 20 m/min, 20 °C). The values are merely intended to compare the meshes in terms of flow resistance.
- We reserve the right to make technical changes. The latest data can be found on our website.
- On request, bespoke meshes can be manufactured to individual customer specifications in all formats.

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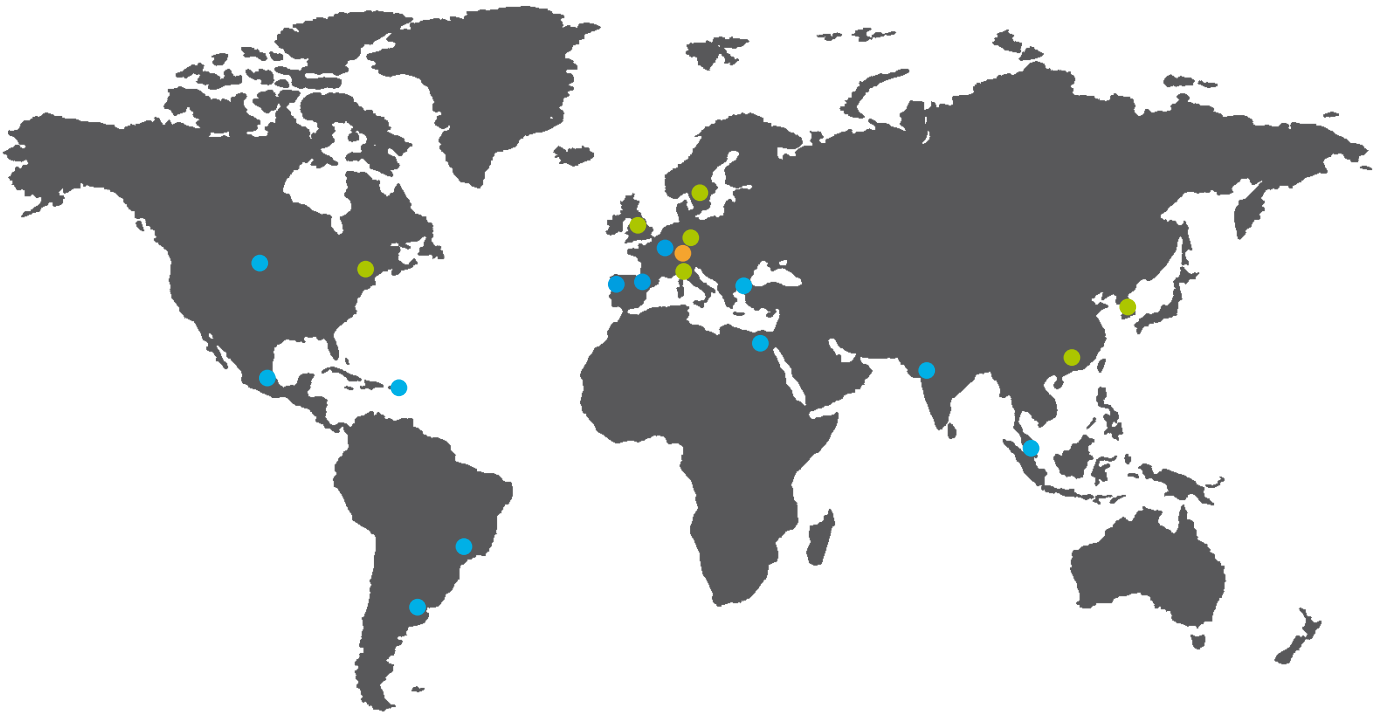

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