



Filtertechnik Jäger GmbH

Filter Cartridges



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Wound Filter Cartridges

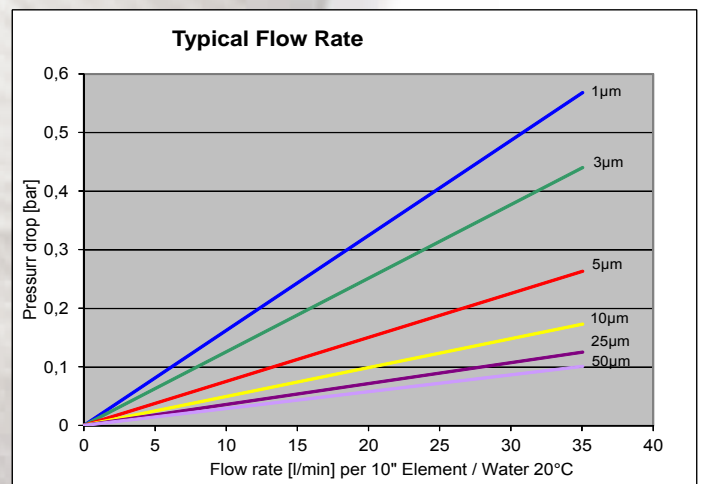
Large selection of filter media and support cores • Wide range of applications • Low filtration costs • Free of wetting agents / Lubricant •

String Wound Filter Cartridges are depth filter element with possibly several centimeter thick filter thickness. The cylindrical filter element consist of a core with on winded filter media. Winding pattern and winding procedure determ beside the quality also the filter rating. FTJ string wound cartridges are manufactured on state of the art winding machines , this assures constant high quality and filter characteristics. Beside different polymer fibres also nature fibres as well as mineral fibres are used. Support cores made normally from polymers or metals. String wound cartridges are used typically in single cartridge filter housing or stacked in cluster in multiple filter

housings (increased filter area). The media to be filtered is fed from the outside of the filter element, pass through the wounded filter media and leave purified via the inner support core the filter element. Unwanted particles are trapped during on their way through the filter in the media matrix and removed from the liquid. The filter characteristics of string wound filter cartridges are specified by the construction, type of used fibres (fibre thickness) and manufacturing method. In general string wound filter cartridges are rated nominal and filter characteristics depend extremely on operating conditions.



Application:
Condensate treatment, galvanic bathes, Process water, chemical products, Waste water, Fotografic Chemicals, Petrochemie, Water treatment, Prefiltration etc.



Flow rates > 1 m³/h per 10" candles are to be avoided. In the case of candles of several lengths, the throughput must be limited to a maximum of 3.5 m³/h. The graph shows typical performances for coiled cartridge filters. In individual cases, a test filtration is recommended.

Product code
Wound cartridges

Filter media material
PP = Polypropylene
PPW = Polypropylene washed
PES = Polyester
BV = Cotton

P

P

Support core material
P = Polypropylene
VA = Stainless Steel 304
VZ = C-Steel zinc galv.

Length
5", 9", 10", 19", 20", 29", 30", 39", 40", 60"

20"

10 µm

Filter rating (nominal)
1, 3, 5, 10, 25, 50, 75, 100, 150, 200 µm

Technical data see page 10 / 11



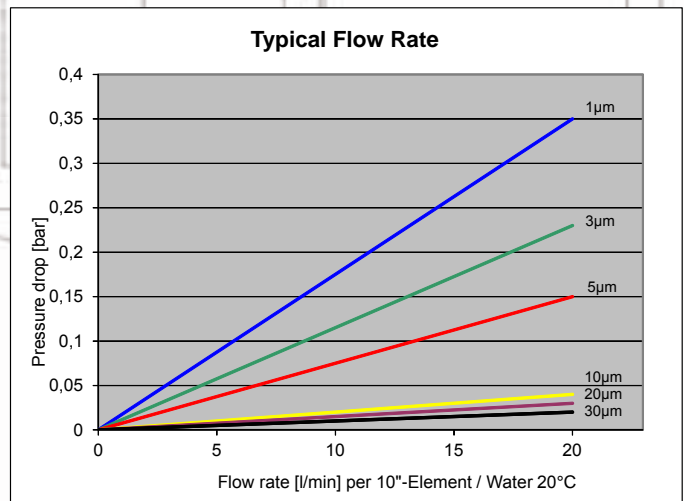
Nominal Filter Cartridges NT Series

Pure Polypropylene • Increased pore volume • Longer life • Fully welded • No extra binder • High dirt holding capacity •

Nominal Filter Cartridges NT Series

consist of thermally bonded micro fibres (melt blown) and are depth filter elements with a high pore volume and corresponding dirt holding capacity. The manufacturing process allows the use of pure polypropylene without extractable components. The generated filter matrix is very stable and does not release any fibres to the filtrate under normal operating conditions. The filter media ma-

terial is suitable for food contact and complies with FDA 21CFR 177.1520. The standard version does not contain a support core and has a differential pressure resistance of 1.5 bar at max. 80°C. A version with a support core is available for higher differential pressures. Different lengths and connection types are available for use in common single and multiple cartridge filter housings.



Applications:
Filtration of drinking water, RO-protection, Galvanic bathes, Chemicals, Beverages and juices, Cooling agents and emulsions, Vegetable oils.

Product coding
NT Series

Filter media material
NT = Polypropylene

NT

1µ

Filter rating
0.8, 1, 3, 5, 10, 20, 30, 50, 75 µm

Length
9", 10", 19", 20", 29", 30", 39", 40", 45"

10"

DOE

Adapter
DOE, P3, P7, P8

Gaskets
B = NBR
V = FPM
E = EPDM
S = SI (Silicone)
G = Foam gasket for DOE type

G

Technical data see page 10 / 11

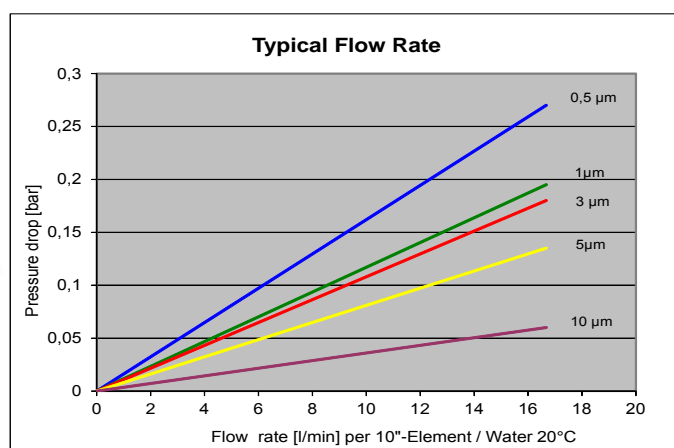


Filter Cartridges AT & ATN Series

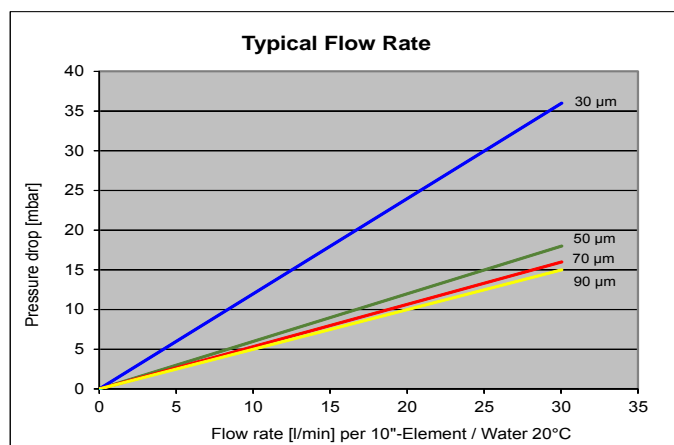
**Pure Polypropylene or Polyamide • Support core for high differential pressures •
99.98 % Separation efficiency / β -Ratio 5000 • Adapted connections •**

Absolute Filter Cartridges AT Series are made from 100% pure Polypropylene. The „meltblown“ production process, in which the microfibers are thermally welded at their points of contact, eliminates the need for additional binders. The resulting solid, cylindrical filter structure made of polypropylene has excellent filter properties. Separation rates of 99.98 % (β -Ratio 5000) are

achieved and the high pore volume guarantees excellent depth filtration with corresponding dirt-holding capacity. The filter elements are supplied in many lengths and for use in various filter housings with the necessary connections.



Absolute Filter Cartridges ATN Series are made of 100% pure polyamide. The „meltblown“ production process, in which the microfibers thermally welded at their points of contact, eliminates the need for additional binders. The resulting solid, cylindrical filter structure made of polyamide has excellent filter properties. Separation rates of 99.98 % (β -Ratio 5000) are achieved and the high pore volume guarantees excellent depth filtration with corresponding dirt-holding capacity. The filter elements are supplied in many lengths and for use in various filter housings with the necessary connections.



Product coding
AT / ATN series

Filter media / Type
AT = Polypropylene
ATN = Polyamide

AT

1µ

Length
AT = 10", 20", 30", 40"
ATN = 10", 20", 30", 40"

10"

DOE

Gaskets
S = SI (Silicone)
V = FPM
G = PP Foam gasket für DOE
B = NBR
E = EPDM

Silicon

Filter rating
0.5, 1, 3, 5, 10, 20, 30, 50, 70, 90, 120 µ

Adapter / connection
DOE, P3, P7, P8

Technical data see page 10 / 11

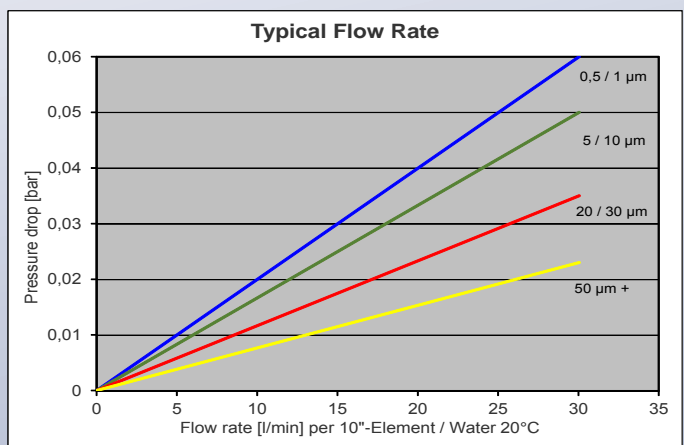


Filter Cartridges NAT Series

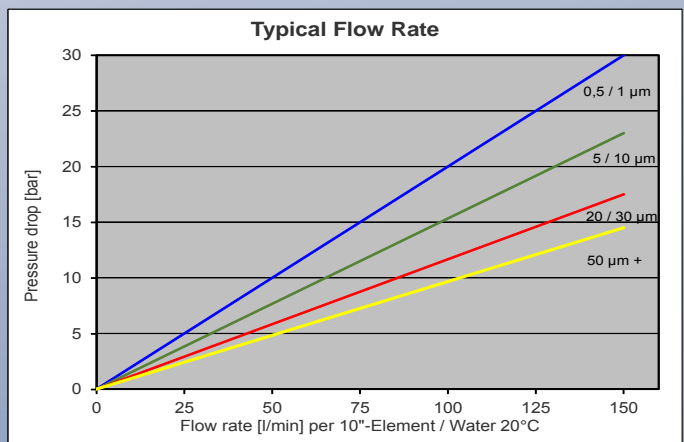
Pure polypropylene • Differential pressure resistant • Adapted connections • Excellent dirt hold capacity • 94 % Separation efficiency

Filter Cartridges NAT Series with asymmetrical design (the filter matrix becomes finer on downstream side) are characterized by extremely high dirt holding capacity combined with low pressure drop. The microfibres made of pure polypropylene are melt bonded and form an extremely stable filter matrix, which is additionally supported by a solid core of PP. Reliable filtration is guaranteed

even under extreme process conditions. Fiber release and particle breakthroughs are excluded. The separation rate of 94 % (β -ratio = 16) is due to the high flow rate and the extremely good dirt hold capacity.



Filter cartridges NAT / 114 mm B-Blue have the same structure as standard NAT, so they are also made of pure polypropylene. The dimensions of the elements are matched to the housing whose inner diameter allows the use of much „thicker“ filter cartridges. High throughput rates and high dirt hold capacity are achieved at the same time.



Note: In practice, the high possible theoretical flow rates should be matched to the connection cross-section of the filter housing used (economic flow velocity in pipelines, e. g. connection 1" = max. 3. 6m³/h).

Product coding
NAT series

Filter material / Type
NAT = Polypropylene
NAT/ 116 mm B-Blue

NAT

1µ

Length
NAT = 9", 10", 20", 30", 40"

10"

DOE

Gaskets
S = SI (Silicone)
V = FPM
G = Foam gasket for DOE type
B = NBR
E = EPDM

Silicon

Filter rating
0,5, 1, 3, 5, 10, 20, 30, 50, 70, 90, 120 µ

Adapter / Connection
DOE, P3, P7, P8

Technical data see page 10 / 11



Membrane Cartridge PPA Series

Pure Polypropylene • Extraction-free • Separation rate 99.98% / β -Ratio 5000 • Multiple sterilisable • Large filter surfaces • Adapted connections •



PPA Series Membrane Filter Cartridges are robust depth filter elements with an absolute separation rate. They are equipped with a pleated filter medium made of pure polypropylene microfibres. The „filter membrane“ is supported on both sides by a fleece media. The large filter surfaces result in elements with a low initial differential pressure in the application and a high dirt holding capacity. All construction parts besides the filter medium (outer protection, support core, end caps and adapter) are made of pure polypropylene. All parts are welded in the same material and free of extractables. High chemical resistance makes the elements suitable for almost all requirements. The materials comply with FDA requirements (FDA Title 21 and USP Class VI) and EC Directive EC 1935/2004 (materials in contact with food).



Individually packed with batch identification

Applications:

Food and beverages such as wine, beer, mineral water, spirits.

Fine chemicals e. g. polymers, acids, bases, solvents,

Cosmetics such as alcohols, etheric oils

Pharmaceutical products, water treatment, RO prefiltration, coatings, washing liquids and much more.

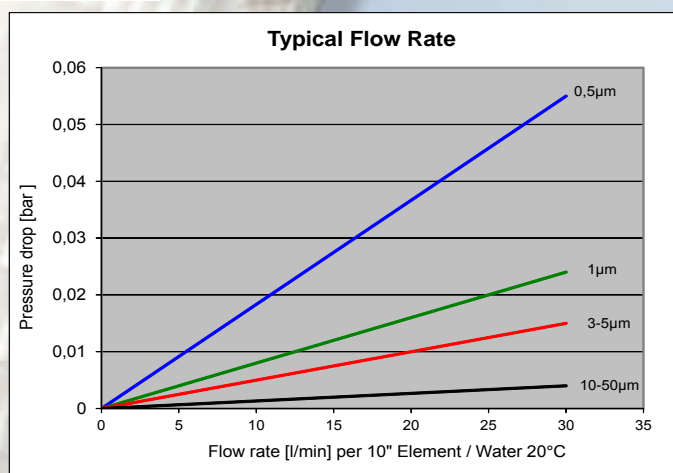
Filter surfaces: 0.4 to 0.6 m²

Sterilizable: Steam 121 °C, 15 min (20 cycles) *
Hot water 90 °C, 30 min (0.2 bar Δp max)

Options:

Reinforced support core for higher application temperatures

*With single open end cartridges only permitted with end caps in glass-fibre reinforced version (option).



Gaskets
S = SI (Silicone)
V = FPM
G = PP Foam gasket for DOE
B = NBR
E = EPDM

Product coding
PPA Series

Filter material / Type
PPA = Polypropylene

PPA

Length
9", 10", 20", 30", 40"

1 μ

10"

DOE

EPDM

Filter rating
0.2, 0.5, 1, 3, 5, 10, 20, 35, 50, 70, 90 μ m

Adapter / Connection
DOE, P3, P7, P8

Technical data see page 10 / 11



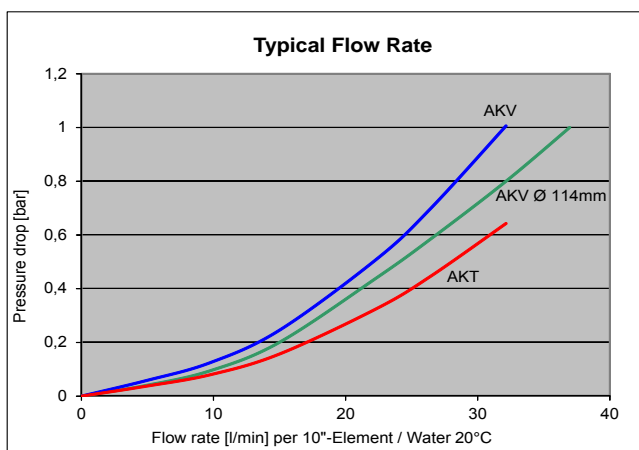
Activated Carbon Cartridges AKV & AKT Series

High adsorption capacity • Extruded carbon • No coal migration • Integrated pre-filter / Safety end filter optional • High carbon content •

Activated Carbon Filter Cartridges are used to remove free chlorine, organic compounds and residues (e. g. pesticides) as well as flavouring and odorants and discoloration from water, aqueous solutions, other liquids or gases. The applications are mainly in water treatment, spirits production and for the protection of galvanic baths. The substances to be removed are adsorbed on the large inner surface (up to 2000m² /g) of the highly porous spongy carbon structure. In extreme cases, the activated carbon filters can adsorb up to 20% of their own weight before breakthroughs take place. Like all cartridge filters, the activated carbon elements are flowed through from the outside to the inside. All activated carbon cartridges AK series contain block carbon, which is produced by pressing and extrusion under high pressure.

Activated Carbon Filter Cartridges Series AKV

Cylindrical Carbon block (extruded activated carbon) from coconut shell. The HDPE binder effectively prevents carbon components from being washed out. Protective screen, fleece and end caps made of polypropylene. EPDM gaskets (options on request). All components of the AKV elements are suitable for contact with food and are listed in the corresponding regulations.



Activated Carbon Filter Cartridges Series AKT

A combined filter element consisting of particle filter and activated carbon filters. The particle filter is made of polypropylene meltblown. The extruded block of micro-activated carbon (produced from coconut shells) is bonded with HDPE. The filter element is optionally available with a 1 µm pre-filter made of sintered HDPE (no carbon release into the filtrate). The gaskets are made of PP foam. Suitable for contact with food.



Product coding
AKV & AKT Series

Model / type
AKV = Ø 71 mm
AKV/114 = Ø 114 mm
AKT = Ø 65 mm

AKV

5µ

9"

Filter rating
AKV = 5, 10 µm
AKT = 1, 5, 10 µm

Length
AKV (T) = 4", 9", 20", 30"

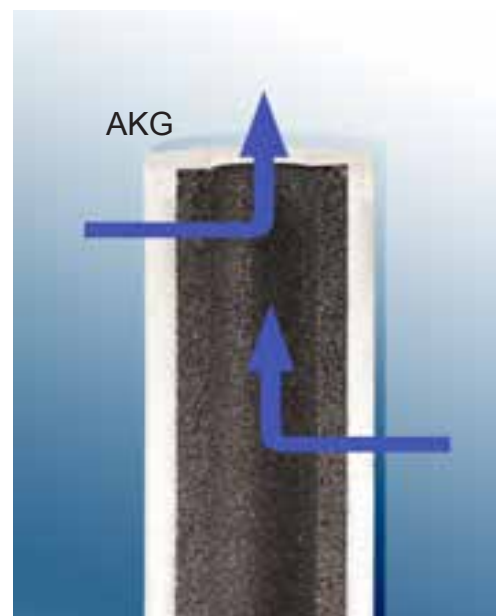
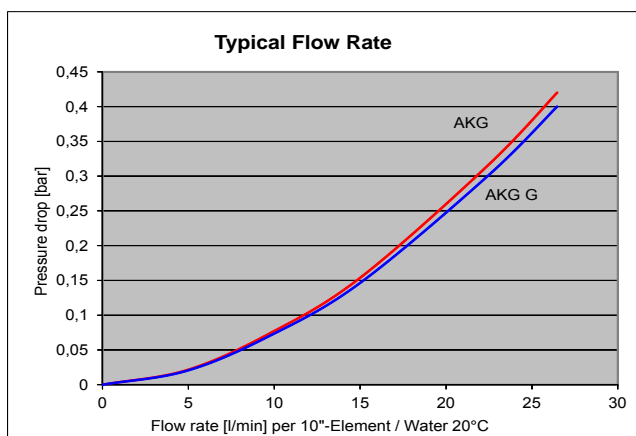


Activated Carbon Cartridges AKG & AKG G Series

High adsorption capacity • Extruded carbon • No coal migration • Integrated prefilter / Safety end filter optional • High carbon content •

Activated Carbon Filter Cartridges Series AKG G

The extruded cylindrical carbon block is essentially made from activated carbon produced from coconut shells. The HDPE binder effectively prevents carbon components from being washed out of the carbon block. On the outside, the carbon block is surrounded by a yarn winding of washed PP. The DOE end gaskets are made of PP foam. All components of AKG G-elements are suitable for contact with food and are listed in the corresponding regulations.



Activated Carbon Filter Cartridges AKG Series

a combination of particle filter and activated carbon filter. The relatively thick prefilter made of PP meltblown not only protects the activated carbon from contamination, but also allows larger amounts of unwanted particles to be retained. The activated carbon is produced from coconut shells and pressed (extruded) to the activated carbon block under high pressure. The HDPE binder effectively prevents carbon components from being washed out during operation. The gaskets are made of CR (Neoprene®). All components of AKG elements are suitable for contact with food and are listed in the relevant regulations.

Product coding
AKG & AKG G Series

Model / Type
AKG G = Ø 65 mm
AKG = Ø 65 mm

AKG G

5µ

Length
AKG G = 5", 9", 10", 20", 30"
AKG = 5", 9", 10", 20", 30"

9"

Filter rating
AKG G = 5, 10 µm
AKG = 5, 10 µm

Technical data see page 10 / 11



Stainless Filter Cartridges MG Series

**Product wetted parts made from Stainless Steel • Surface filter •
No fibre release • Cleanable • Long durability • High operating temperature •**

Stainless Steel Filter Cartridges MG Series

are completely made of stainless steel 1. 4301. The filter medium is a stainless steel mesh with defined mesh openings. Naturally, these elements are pure surface filters and have a clear separation threshold (all particles larger than the mesh size are retained). The filter mesh is supported against the differential pressure by a support core and, depending on the filter fineness, by an additional spacer mesh. Both DOE versions (open on both sides) with replaceable seals or SOE versions (open on one side) with various adapters are available as

connections to fit the filter housing. Stainless steel cartridge filters can be cleaned and, as a rule, used many times. Cleaning can be done by ultrasonic, chemical cleaning (pickling) or thermal treatment. However, the latter processes result in wear.

Applications at:

High temperatures, high chemical load, freedom from fibre release and absolute mechanical stability, defined particle threshold required.

Technical data in brief:

Materials: Stainless Steel (1. 4301) /PTFE
Available lengths: 5" (127 mm) to 40" (1016 mm)
Available filter ratings: nom. 3 to 1000 µm
Available connections: Standard DOE and SOE, on request also other e. g. threads or similar
Differential pressure resistance: 2,5 bar
Design: flat cylindrical or pleated



stainless steel mesh
250µm magnified
plain weave

Stainless Steel Mesh
25µm magnified
plain dutch weave

2-dimensional filter media (surface filters) are sensitive to deformable particles (e. g. flakes, gel particles), which may easily pass through the filter as well as long-fibre particles whose diameter is smaller than the mesh

Product coding
MG Series

Type
MGG = flat surface
MGP = pleated surface

MGG

- 50µ

Filter rating
5 - 1000 µ

Length
5", 10", 20", 30", 40"

10

DOE

Adapter / connection
DOE, P3, P7, P8

Gaskets
T = PTFE DOE only
S = SI (Silicone)
V = FPM
B = NBR
E = EPDM

T

Technical data see page 10 / 11

Filter Cartridges Overview

Technical Data

Type of Filter Cartridges	Series	Outer Ø [mm]	Inner Ø [mm]	max. Δ pressure [bar]		Food contact*	β-Ratio / Efficiency [%] ns = not specified	Carbon weight each 10" [g]	
				at 20°C	long term				
String wound Cartridges	PP(W), BV, PES	62	27	2,0			ns. nominal		
	PP	114	27	2,0					
Nominal Cartridges	NT	60	27,5	1,5		x	ns. nominal		
Absolut Cartridges	AT	64	27	3,0	0,5 bar / 82°C	x	5000 / 99.98%		
	ATN	64	27	3,0	2,4 bar / 150°C		5000 / 99.98%		
	NAT	62	28	3,0	0,25 bar / 80°C	x	16 / 94%.		
	NAT / B-Blue	116	28	3,0	0,25 bar / 80°C	x	ns. nominal		
Membrane Cartridges	PPA	66	27	1,5		x	5000 / 99.98%		
Activated Carbon Cartridges	AKG G	65	27	2,5		x	ns. nominal	190	
	AKG	65	27	2,5		x	ns. nominal	190	
	AKV	71	27	2,5		x	ns. nominal	360	
	AKV / 114	114	27	2,5		x	ns. nominal	1250	
	AKT	65	26	2,5		x	ns. nominal	230	
SS Cartridges	MG	65	25	2,5	2,5	x	dep. on mesh type		

* listed in FDA CFR 172..1520 and /or EC 1935/2004

Programme of delivery

Type of Filter Cartridge	Description	Material	Filter media	Max. Temp. [°C]	Filter rating [µm]												
					0,2	0,5	1	3	5	10	20	25	30	35	40		
Wickel Cartridges	PP (W)	PP	Polypropylene	80			x	x	x	x		x					
	BV		Cotton	160			x	x	x	x		x					
	PES	PES	Polyester	130			x	x	x	x		x					
Nominal Cartridges	NT	PP	Polypropylene	80			x	x	x	x	x		x				
Absolut Cartridges	AT	PP	Polypropylene	80		x	x	x	x	x	x		x		x		
	ATN	PA	Polyamide	150		x	x	x	x	x	x		x		x		
	NAT	PP	Polypropylene	80			x		x	x	x		x				
	NAT-BigBlue	PP	Polypropylene	80			x		x	x	x		x				
Membrane Cartridges	PPA	PP	Polypropylene	80	x	x	x	x	x	x	x			x			
Activated Carbon Cartridges	AKG G		extruded A-Carbon	52					x	x							
	AKG		extruded A-Carbon	52					x	x							
	AKV		extruded A-Carbon	52					x	x							
	AKV / 114		extruded A-Carbon	52					x	x							
	AKT		extruded A-Carbon	52			x		x	x							
SS Cartridges	MG	VA	Stainless steel mesh	300					x	x		x	x		x		

Performance and Technical Data

Type of Connections / Adapter

Rec. Operation [10"- Element] Initial pressure - Final pressure loss [Viscosity 1mPas / 20 °C]
max. 0,1 bar-1,0 bar
max. 0,1 bar-1,0 bar
max. 0,1 bar-1,0 bar
max. 0,1 bar-1,0 bar
approx. 8 L/min- Carbon saturated
approx. 8 L/min- Carbon saturated
approx. 4 L/min- Carbon saturated
approx. 11 L/min-Carbon saturated
approx. 5 L/min-Carbon saturated
dep. on type of element



Length comparison table

Coding	4"	5"	9"	10"	19"	20"	29"	30"	39"	40"	45"	60"
Inch	4 7/8"	5"	9 3/4"	10"	19 1/2"	20"	29 1/4"	30"	39"	40"	45"	60"
mm	124	127	248	254	495	508	742	762	991	1016	1143	1524

									Adapter				Support Core				Remarks
	50	70	75	90	100	120	150	200	DOE	P3	P7	P8	P	PA	VA	VZ	
	x		x		x		x	x	x				x				(W) = pre washed, special length possible
	x		x		x		x	x	x						x	x	
	x		x		x		x	x	x						x	x	
	x		x						x	x	x	x	x*				
		x		x		x			x	x	x	x	x				
		x		x		x			x	x	x	x		x			
	x		x		x		x	x	x	x	x	x					Asymmetric Filter matrix with support core
	x		x		x		x	x									
	x	x		x					x	x	x	x					
									x				x				String wound pre filter from PPW
																	Melt blown-prefilter from PP
																	Handling protection vleece from PP
																	Outer diameter 114mm
																	Melt blown-Prefilter, sintered Endfilter
	x		x		x		x	x	x	x	x	x			x		other Filter ratings on request



Filtertechnik Jäger GmbH

offers you a comprehensive portfolio of **Filter Cartridges** from various filter media
and the necessary **Cartridge Filter Housings.**

Filter Cartridges have become an essential part of today's filtration applications and they are very important and still "state of the art" in many areas of filtration. Their usage is simple and reliable. The filtration result is effective and the filtration process is extremely economical. A large selection of filter media and simple adaptation

of the filter system to the process requirements make the solution to any filtration problem to "no-brainer".

Filter cartridges are cylindrical filter elements. They are generally flowed through from the outside to the inside and, depending on the filter medium, are either depth filters, surface filters or a combination of both.

String Wound Filter Cartridges are universally applicable and extremely economical filter elements for simple filtration requirements.



Nominal Cartridges NT Series made of thermally bonded polypropylene microfibres for applications with increased demands on separation accuracy and filtrate purity.

Absolute Cartridges AT & ATN Series with a separation rate of 99.98% (β -ratio 5000), extraction-free, and sterilisable for reliable filtration results.



Absolute Cartridges NAT Series with a separation rate of 94%, made of pure polypropylene meltblown, with support core. For applications that require a safe and reliable filtration result.

Membrane Cartridges PPA Series with pleated PP membrane, a filter efficiency of 99.98% (β -Ratio 5000), extraction-free and sterilizable, are the filter element for high process reliability.



Activated Carbon Cartridges AK Series are the best choice for all applications for removing undesirable substances adsorbable on activated carbon from liquids.

Stainless Steel Cartridges MG Series reusable surface filters for extreme process conditions.



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