



GRP PRESSURE FILTERS

CATALOGUE 2021



WE ARE DIFFERENT



Design

We have our own R&D team



Consulting

We can help You select a right solution for Your project



Standards

We adhere to relevant European manufacturing standards



Customization

All our filters can be customized for Your application



Manufacture

All our filters use premium quality components



Aftersales

All our filters have warranty

Pressure media filters are integral part of any swimming pool water filtration system.

After a successful practice in engineering and construction of public and private swimming pools, spa and wellness centers, we decided to start manufacturing our own line of pressure media filters under the brand name A FILTER. Considering that we already had R&D team in place, and available production capabilities, this was natural and logical way forward. To unite our experience in designing and constructing public and private swimming pools in order to offer our customers a complete and valuable solution that includes high quality pressure filters.

Thanks to our streamlined production process and technical know-how, we manufacture sand filters that are competitive in the European markets, reliable and safe.

A FILTER brand currently consists of four product lines: DIN Series, Series 1, Series 2 and Series 3.

Tailoring of filters according to customer's specific requirements and needs is also feasible.

Besides the use in swimming pool water filtration, A Filter-DIN pressure filter can be used in municipal drinking water treatment plants or for treatment of technical, process or wastewater. It is suitable for application in textile, chemical, pharmaceutical, agricultural and food processing industry wherever the mechanical filtration is needed.

We constantly work on further improvement of existing products and on investments in R&D, in order to establish A FILTER brand as valuable and reliable reference in water treatment equipment manufacturing worldwide.

We possess knowledge, capacity and experience to design and produce pressure filters, vessels and sedimentation tanks for industrial water treatment plants as well as variety of storage tanks for different purposes.

In designing our bobbin wound GRP line of filters we have taken into consideration globally recognized standards – AD – Merkblatt N1, which is German standard and BS4994 which is used in United Kingdom. We have chosen to adhere to them simply because adherence to these two standards provide the finished pressure vessel with the highest quality. Also these two standards encompass all the rest European standards.

Our pressure vessels are constructed from GRP as it is stated in DIN 18820. Layers are shown in the diagram on the right. Apart from those principal layers, we use additional reinforcement in all the joints and connections in the filter.

WATER TIGHT, CHEMICAL AND ABRASION RESISTANT LAYER:

1. CBL - Inner layer of the filter vessel in direct contact with the medium, made of combination of vinyl ester resin, C-glass veil and glass fibres.
2. Mechanical reinforcement of CBL made of resin and combination of spray-up roving and woven roving fabrics.

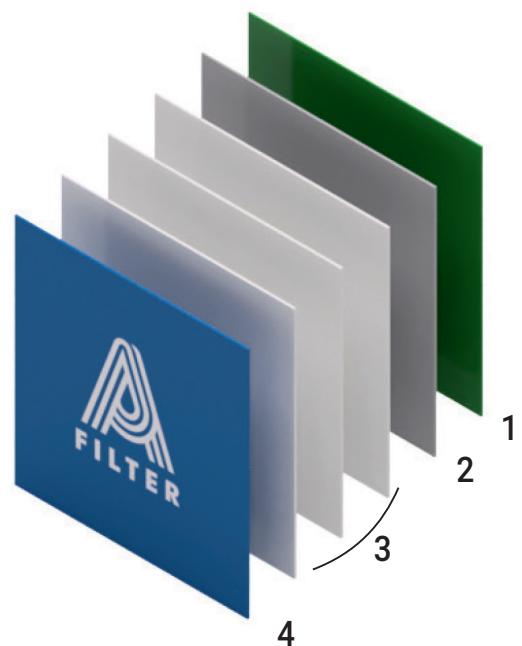
MECHANICAL REINFORCEMENT LAYER FOR PROVIDING STRUCTURAL RESISTANCE TO FILTER'S INTERNAL OPERATIONAL PRESSURE:

3. Combination of radial and helical filament winding layers made of roving for filament winding and adequate resin.

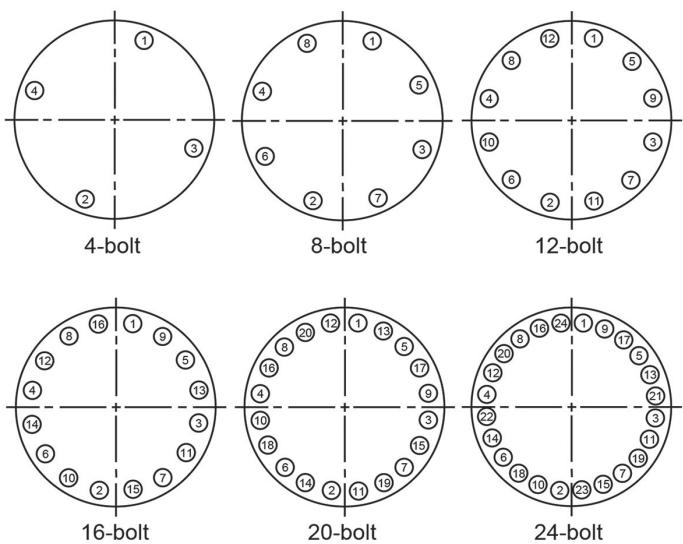
OUTER SURFACE PROTECTION:

4. Coloured ISO NPG topcoat. Finishing, protective and aesthetic layer in RAL 5015 (standard) or in any other desired colour.

STRUCTURE OF THE FILTERS



FLANGE BOLT TIGHTENING SEQUENCE





DIN Series GRP Sand Filters

IN ACCORDANCE WITH DIN 19605/19643/18820
VINYL ESTER LINING AS STANDARD



ENG

DIN Series filters can be manufactured in diameters from 800 to 2.600 mm with top lid and a manhole on the side. Filters are designed according to DIN 19605/19643/18820 standard and constructed according to AD-Merkablatt N1 and BS.

They are equipped with nozzle plate with filter nozzles. Flanges, interior components, tubing and sup-

port legs are made of GRP. Filtration media height ranges from 1.200 to 1.500 mm.

Maximum working pressure of the vessel is 2,5 bar, 4 and 6 bar are possible as well, and it is submitted to pressure tests of up to 50% more than maximum working pressure.

- ▶ DIN 19605/19643/18820
- ▶ Vinyl ester lining as standard
- ▶ Diametar from 800mm to 2600mm
- ▶ Pressure tested up to 50% more than maximum working pressure
- ▶ Bed height 1200mm or 1500 mm
- ▶ Manholes, Inlet, Outlet and other connections can be oriented as per customers wishes



DIN Series GRP Sand Filters

IN ACCORDANCE WITH DIN 19605/19643/18820
VINYL ESTER LINING AS STANDARD

RUS

DE

СООТВЕТСТВУЕТ DIN 19605/19643/18820
ВИНИЛ-ЭФИРНОЕ ПОКРЫТИЕ

Фильтр «А фильтр-DIN» имеет цилиндрическую форму, диаметр поперечного сечения может варьироваться от 800 до 2600мм, высота корпуса-1200мм и 1500мм.

В фильтре предусмотрены два ревизионных отверстия. Согласно со стандартами DIN 19605/19643/18820 фильтры изготовлены в соответствии с AD-Merkblatt и BS.

Распределительная система представлена в виде фильтрующей плиты с соплами, высота элемента фильтрации может быть 1,2 и 1,5м.

Фланцы, внутренние составляющие, трубы, как и подставка изготавливаются из волокнистого полиэстера. Максимальное рабочее давление- 2,5 бар (фильтры тестируют при давлении 3,75 бар). Гарантийный срок обслуживания- 5 лет.

NACH DER NORM DIN 19605/19643/18820
VINYLESTERHARZ-BESCHICHTUNG ALS STANDARD

Filter nach DIN-Reihe werden in Durchmesser von 800 bis 2600 mm mit dem obersten Deckel und dem seitlichen Mannloch hergestellt.

Die Filter sind gemäß der Norm DIN 19605/19643/18820 entworfen und gemäß dem AD-Merkblatt N1 und BS konstruiert.

Sie sind mit der Düsenplatte mit Filterdüsen ausgestattet. Die Flansche, Innenkomponenten, Rohrleitungen und Stützfüße sind aus GFK gefertigt.

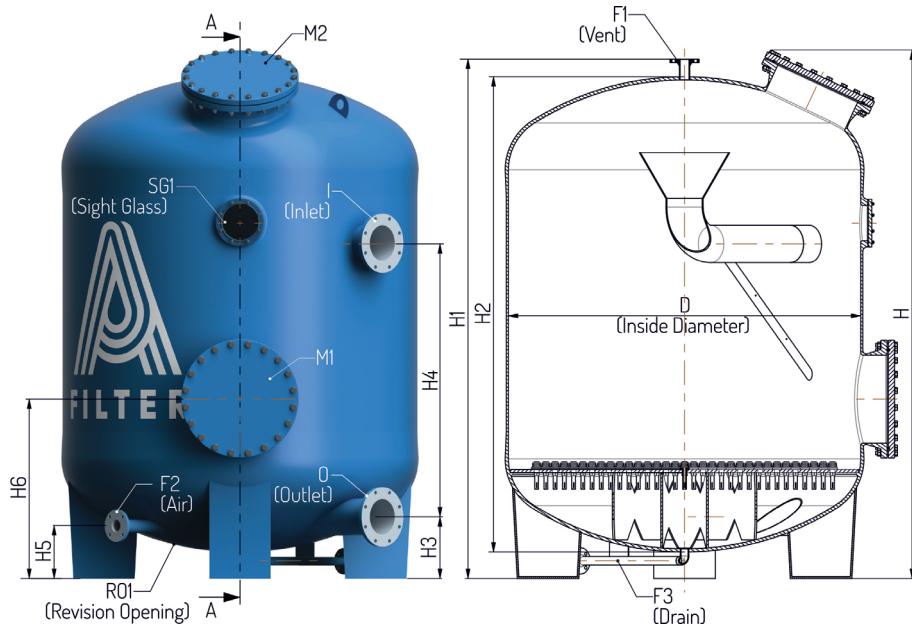
Filtermedienhöhe ist im Bereich zwischen 1200 und 1500 mm. Der maximale Arbeitsdruck ist 2,5 bar und Drucktests auf Max.Gehäusdruck ist 3,75 bar werden durchgeführt. 5 Jahre Garantie.

Dimensions / Размеры/Dimensionen											
Inside Diameter Внутренний диаметр Der innere Durchmesser	(m)	800	1000	1200	1400	1600	1800	2000	2200	2400	2600
Filtration Area Область фильтрации Filtrationsfläche	(m ²)	0.50	0.79	1.13	1.54	2.01	2.54	3.14	3.80	4.52	5.31
Flow rate at 30 m/h Поток на 30 м/ч Durchfluss auf 30 m/h	(m ³ /h)	15	24	34	46	60	76	94	114	136	159
Number of nozzles Количество форсунок Dü senzahl	(pcs)	37	61	91	121	163	199	253	301	349	423



DIN Series GRP Sand Filters

IN ACCORDANCE WITH DIN 19605/19643/18820
VINYL ESTER LINING AS STANDARD

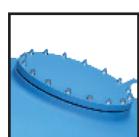
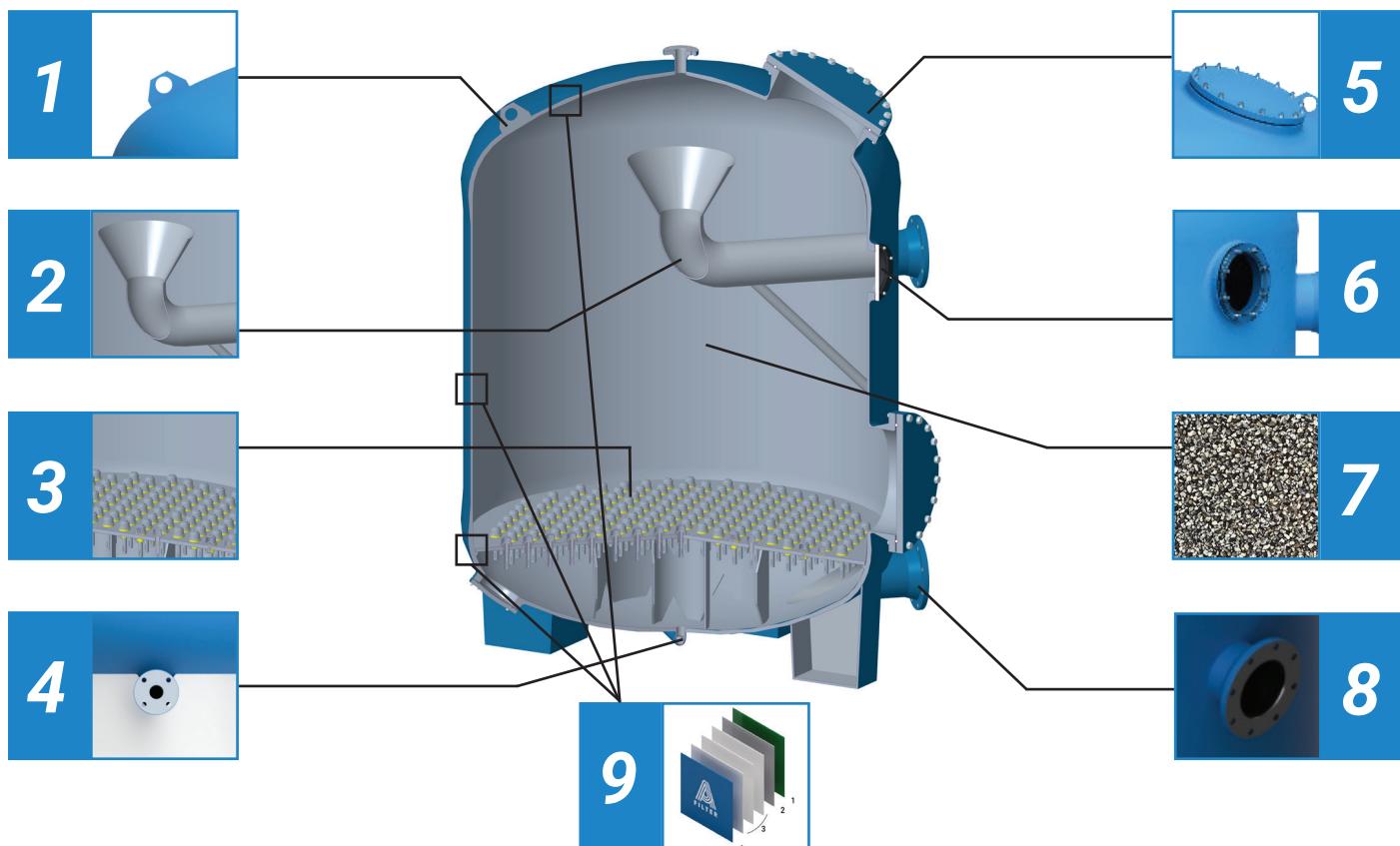


Dimensions / Размеры/Dimensionen			800	1000	1200	1400	1600	1800	2000	2200	2400	2600	
Sand bed Высота песка Sandberührhöhe	1.200 mm	H	(mm)	2370	2470	2630	2720	2800	2920	3000	3120	3200	3300
		H1	(mm)	2350	2450	2550	2650	2750	2850	2950	3050	3150	3250
		H2	(mm)	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000
		H3	(mm)	225	275	300	300	325	350	350	400	450	500
		H4	(mm)	1600	1600	1550	1550	1500	1550	1550	1500	1500	1475
		H5	(mm)	225	250	250	250	300	300	300	350	400	400
		H6	(mm)	700	750	800	800	850	950	1000	1050	1100	1150
1.500 mm		H	(mm)	2670	2770	2930	3020	3100	3220	3300	3420	3500	3600
		H1	(mm)	2650	2750	2850	2950	3050	3150	3250	3350	3450	3550
		H2	(mm)	2400	2500	2600	2700	2800	2900	3000	3100	3200	3300
		H3	(mm)	225	275	300	300	325	350	350	400	450	500
		H4	(mm)	1900	1900	1850	1850	1800	1850	1850	1800	1800	1775
		H5	(mm)	225	250	250	250	300	300	300	350	400	400
		H6	(mm)	700	750	800	800	850	950	1000	1050	1100	1150
M1			DN	400	400	400	400	400	500	500	500	500	
M2			DN	200	200	400	400	400	500	500	500	500	
I			DN	80	100	125	125	150	200	200	200	250	
O			DN	80	100	125	125	150	200	200	200	250	
F1			DN	40	40	40	50	50	50	50	65	65	
F2			DN	40	40	50	50	50	65	65	80	80	
F3			DN	40	40	40	40	40	40	40	40	40	
SG1			DN	200	200	200	200	200	200	200	200	200	
R01			DN	100	200	200	200	200	200	200	200	200	
N			(pcs.)	4	4	4	4	4	4	4	4	6	
\emptyset			(mm)	600	800	1000	1000	1200	1400	1600	1800	1800	2000



DIN Series GRP Sand Filters

IN ACCORDANCE WITH DIN 19605/19643/18820
VINYL ESTER LINING AS STANDARD



All openings, flanges and accessories can be positioned and oriented according to the clients specific needs. Manhole M1 and M2 in sizes from DN 200 to DN 500, depending upon filter size.



Compressor connection flange, air relief flange and drainage flange can be positioned as per customers request.



Sight glass SG1 in DN200 size. Sight glass is made of thick machined shatter resistant acrylic plate.



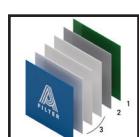
Lifting and transportation points made of stainless steel embedded in GRP.



GRP Nozzle plate with heavy duty ABS filtration nozzles



GRP reinforced Inlet and Outlet flanges in sizes from DN 80 to DN 250. Flanges can be oriented as per clients requirements.



1. CBL - Inner layer of the filter vessel in direct contact with the medium, made of combination of vinyl ester resin, C-glass veil and glass fibres.
2. Mechanical reinforcement of CBL made of resin and combination of spray-up roving and woven roving fabrics.
3. Combination of radial and helical filament winding layers made of roving for filament winding and adequate resin.
4. External protective coating in RAL 5015 (standard) or in any other desired colour.



GRP Funnel with reinforcement beam



Ready for multilayer bed filtration



ENG

Series 1 filters can be manufactured in diameters from 800 to 2.600 mm with top lid and a manhole on the side. Filters are designed according to DIN 19605/19643/18820 standard.

They are equipped with nozzle plate with filter nozzles. Flanges, interior components, tubing and sup-

port ring are made of GRP. Filtration media height ranges from 1.200 to 1.500 mm.

Maximum working pressure of the vessel is 2,5-4 bar and it is submitted to pressure tests of up to 50% more than maximum working pressure.

- ▶ DIN 19605/19643/18820
- ▶ Vinyl ester lining as standard
- ▶ Diametar from 800mm to 2600mm
- ▶ Pressure tested up to 50% more than maximum working pressure
- ▶ Bed height 1200mm or 1500 mm
- ▶ Manholes, Inlet, Outlet and other connections can be oriented as per customers wishes



Series 1

IN ACCORDANCE WITH DIN 19605/19643/18820
VINYL ESTER LINING AS STANDARD

RUS

DE

СООТВЕТСТВУЕТ DIN 19605/19643/18820
ВИНИЛ-ЭФИРНОЕ ПОКРЫТИЕ

Фильтр «А фильтр-1» имеет цилиндрическую форму, диаметр поперечного сечения может варьироваться от 800 до 2600мм.

В фильтре предусмотрены два ревизионных отверстия. Фильтры изготовлены согласно со стандартами DIN 19605/19643/18820.

Распределительная система представлена в виде фильтрующей плиты с соплами, высота элемента фильтрации может быть 1,2 и 1,5м.

Фланцы, внутренние составляющие, трубы, как и подставка изготавливаются из волокнистого полиэстера. Максимальное рабочее давление- 2,5 бар (фильтры тестируют при давлении 3,75 бар). Гарантийный срок обслуживания- 5 лет.

NACH DER NORM DIN 19605/19643/18820
VINYLESTERHARZ-BESCHICHTUNG ALS STANDARD

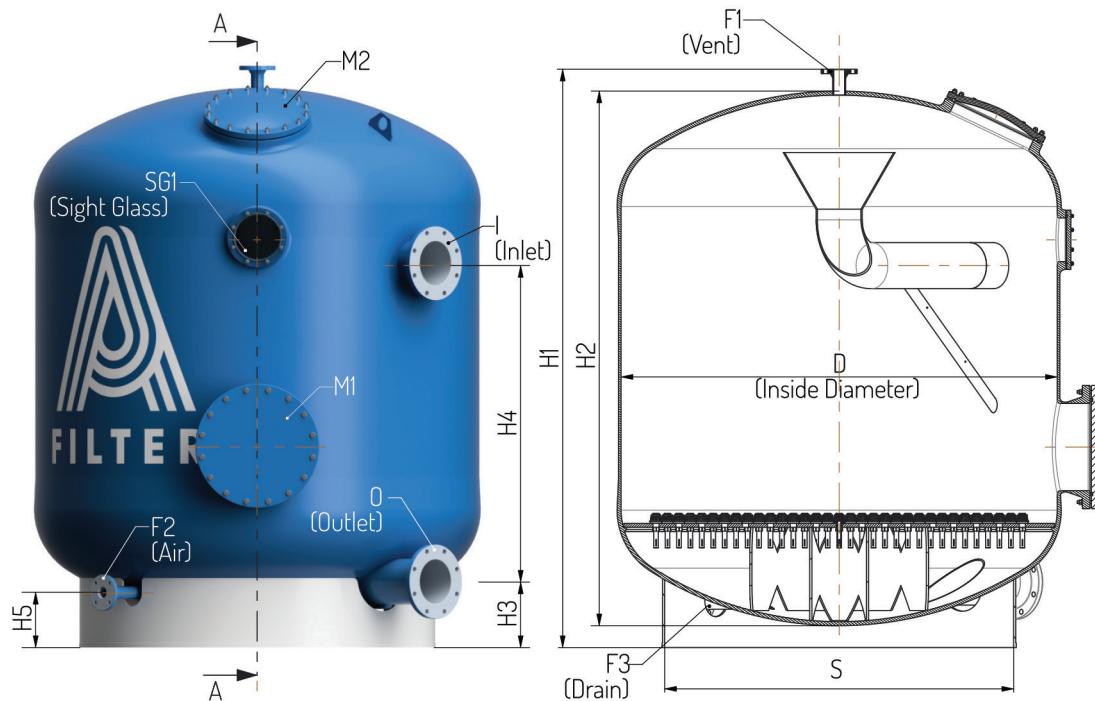
Filter nach DIN-Reihe 1 werden in Durchmesser von 800 bis 2600 mm mit dem obersten Deckel und dem seitlichen Mannloch hergestellt.

Die Filter sind gemäß der Norm DIN 19605/19643/18820 entworfen. Sie sind mit der Düsenplatte mit Filterdüsen ausgestattet.

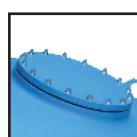
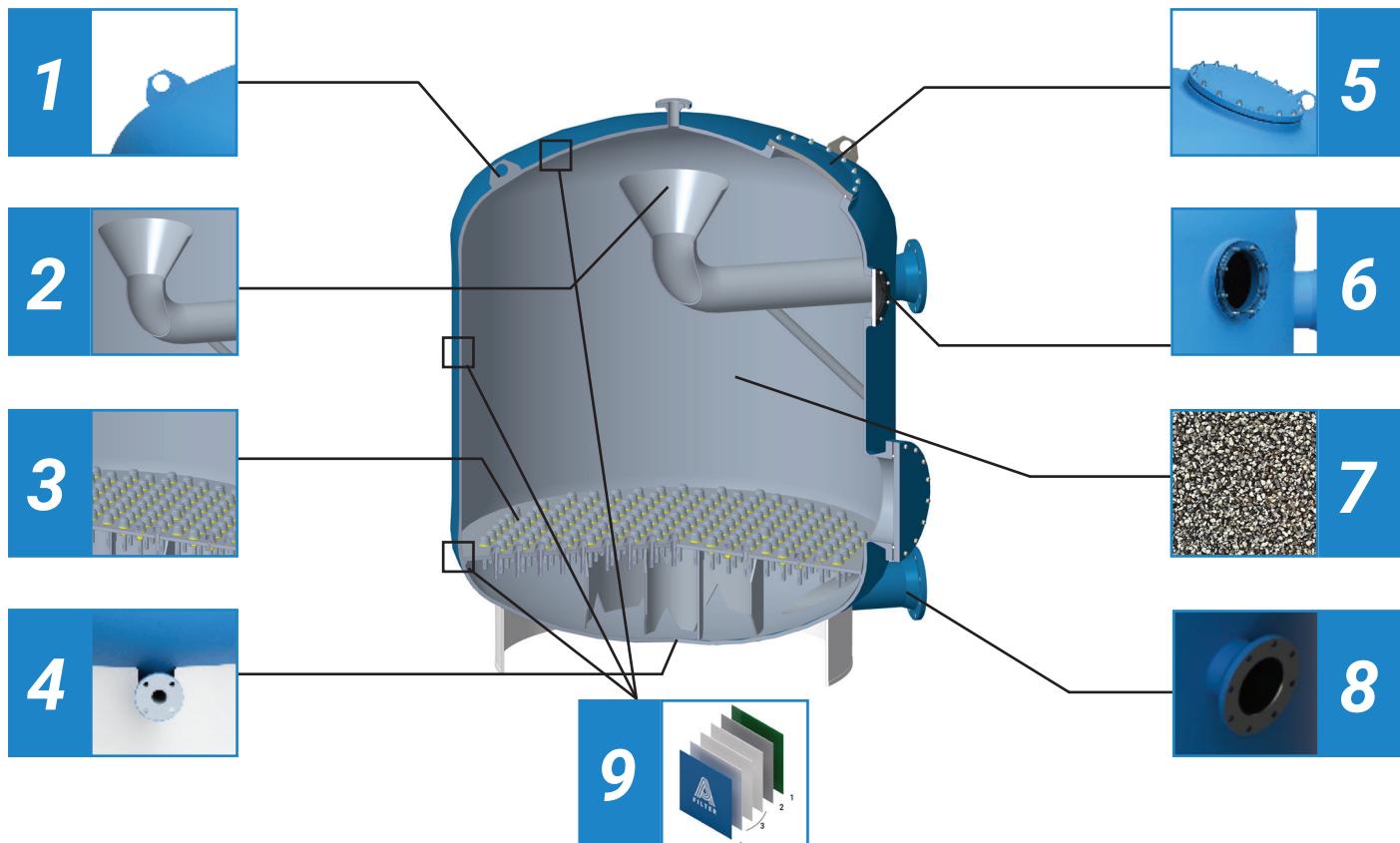
Die Flansche, Innenkomponenten, Rohrleitungen und Stützfüße sind aus GFK gefertigt. Filtermedienhöhe ist im Bereich zwischen 1200 und 1500mm.

Der maximale Arbeitsdruck ist 2,5 bar und Drucktests auf Max.Gehäusdruck ist 3,75 bar werden durchgeführt. 5 Jahre Garantie.

Dimensions / Размеры/Dimensionen										
Inside Diameter Внутренний диаметр Der innere Durchmesser	(m)	800	1000	1200	1400	1600	1800	2000	2200	2400
Filtration Area Область фильтрации Filtrationsfläche	(m ²)	0.50	0.79	1.13	1.54	2.01	2.54	3.14	3.80	4.52
Flow rate at 30 m/h Поток на 30 м/ч Durchfluss auf 30 m/h	(m ³ /h)	15	24	34	46	60	76	94	114	136
Number of nozzles Количество форсунок Dü senzahl	(pcs)	37	61	91	121	163	199	253	301	349



Dimensions / Размеры/Dimensionen			800	1000	1200	1400	1600	1800	2000	2200	2400	
Samd bed Высота горла sandbett Höhe	1.200 mm	H1	(mm)	2250	2325	2400	2450	2550	2600	2650	2700	2800
		H2	(mm)	2050	2125	2200	2250	2350	2400	2450	2500	2600
		H3	(mm)	175	225	250	250	275	300	300	350	400
		H4	(mm)	1500	1450	1450	1450	1450	1500	1450	1400	1400
		H5	(mm)	175	200	200	200	250	250	250	300	350
	1.500 mm	H1	(mm)	2550	2625	2700	2750	2850	2900	2950	3000	3100
		H2	(mm)	2350	2325	2500	2550	2650	2700	2750	2800	2900
		H3	(mm)	175	225	250	250	275	300	300	350	400
		H4	(mm)	1800	1750	1750	1750	1750	1800	1750	1700	1700
		H5	(mm)	175	200	200	200	250	250	250	300	350
M1			DN	200	200	400	400	400	400	400	400	
M2			DN	400	400	400	400	400	400	400	400	
I			DN	80	100	125	125	150	150	200	200	
O			DN	80	100	125	125	150	150	200	200	
F1			DN	40	40	40	50	50	50	50	65	
F2			DN	40	40	50	50	50	50	65	80	
F3			DN	40	40	40	40	40	40	40	40	
SG1			DN	200	200	200	200	200	200	200	200	
S			Ø	600	800	1000	1000	1200	1400	1600	1800	



All openings, flanges and accessories can be positioned and oriented according to the clients specific needs. Manhole M1 and M2 in sizes from DN 200 to DN 400, depending upon filter size.



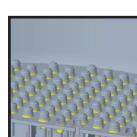
Compressor connection flange, air relief flange and drainage flange can be positioned as per customers request.



Sight glass SG1 in DN200 size. Sight glass is made of thick machined shatter resistant acrylic plate.



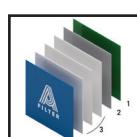
Lifting and transportation points made of stainless steel embedded in GRP.



GRP Nozzle plate with heavy duty ABS filtration nozzles



GRP reinforced Inlet and Outlet flanges in sizes from DN 80 to DN 250. Flanges can be oriented as per clients requirements.



1. CBL - Inner layer of the filter vessel in direct contact with the medium, made of combination of vinyl ester resin, C-glass veil and glass fibres.
2. Mechanical reinforcement of CBL made of resin and combination of spray-up roving and woven roving fabrics.
3. Combination of radial and helical filament winding layers made of roving for filament winding and adequate resin.
4. External protective coating in RAL 5015 (standard) or in any other desired colour.



GRP Funnel with reinforcement beam



Ready for multilayer bed filtration



ENG

Filters can be manufactured in diameters from 800 to 2.400 mm with top lid and a manhole on the side. Internal liner of the vessel is designed in accordance with DIN 18820 standard.

Filters can be equipped with nozzle plate with filter nozzles or lateral system. Flanges, interior compo-

nents and tubing are made of PVC. Support ring is made of GRP. Filtration media height could be 1.000 and 1.200 mm.

Maximum working pressure of the vessel is 2,5 bar and it is submitted to pressure tests of up to 50% more than maximum working pressure.

- ▶ Best price/performance ratio
- ▶ DIN 18820
- ▶ Can be ordered in with nozzle plate or laterals
- ▶ Optional Vinyl ester lining
- ▶ Diametar from 800mm to 2400mm
- ▶ Pressure tested up to 50% more than maximum working pressure
- ▶ Bed height 1000mm or 1200 mm
- ▶ Manholes, Inlet, Outlet and other connections can be oriented as per customers wishes

RUS

DE

ОТЛИЧНОЕ СООТНОШЕНИЕ ЦЕНЫ И КАЧЕСТВА СООТВЕТСТВУЕТ DIN 18820

Фильтры «А фильтр-2N» и «А фильтр-2L» имеют цилиндрическую форму, диаметр поперечного сечения может варьироваться от 800 до 2400мм, высота корпуса- 1000мм и 1200мм.

В фильтре предусмотрены два ревизионных отверстия. Изготовлены в соответствии с DIN18820.

Распределительная система может быть как в виде фильтрующей плиты с соплами или ттрубах с отверстиями (L-ответвления) в зависимости от выбранного типа фильтра. Высота элемента фильтрации может быть 1.0 и 1.2м.

Фланцы, внутренние составляющие и трубы изготовлены из ПВХ. Корпус фильтра выполнен из волокнистого полиэстера. Максимальное рабочее давление- 2,5 бар (фильтры тестируют при давлении 3,75 бар). Гарантийный срок обслуживания- 5 лет.

DAS BESTE PREIS-LEISTUNGS-VERHÄLTNIS NACH DER NORM DIN 18820

Die Filter können in Durchmesser von 800 bis 2400 mm mit dem obersten Deckel und dem seitlichen Mannloch hergestellt werden.

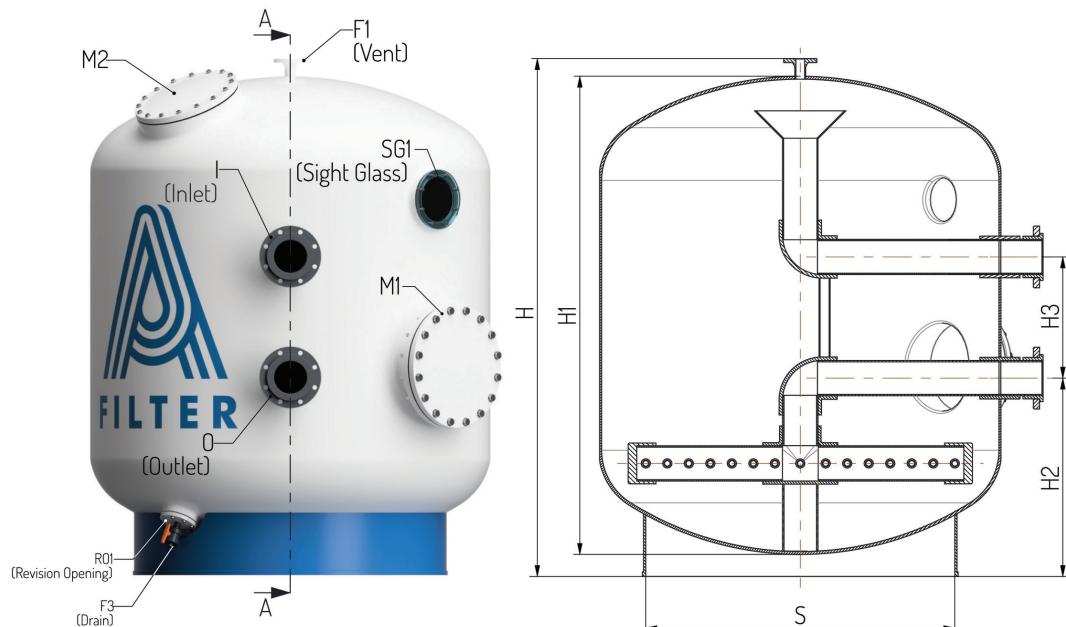
Die innere Gefäßbeschichtung ist nach der Norm DIN 18820 entworfen. Die Filter können mit einer Düsenplatte mit Filterdüsen oder mit einem Lateral system ausgestattet werden.

Die Flansche, Innenkomponenten und Rohrleitungen sind aus PVC. Der Stützring ist aus GFK gefertigt. Die Filtermedienhöhe kann 1000 und 1200mm sein.

Der maximale Arbeitsdruck ist 2,5 bar und Drucktests auf Max.Gehäusdruck ist 3,75 bar werden durchgeführt. 5 Jahre Garantie.

Dimensions / Размеры/Dimensionen

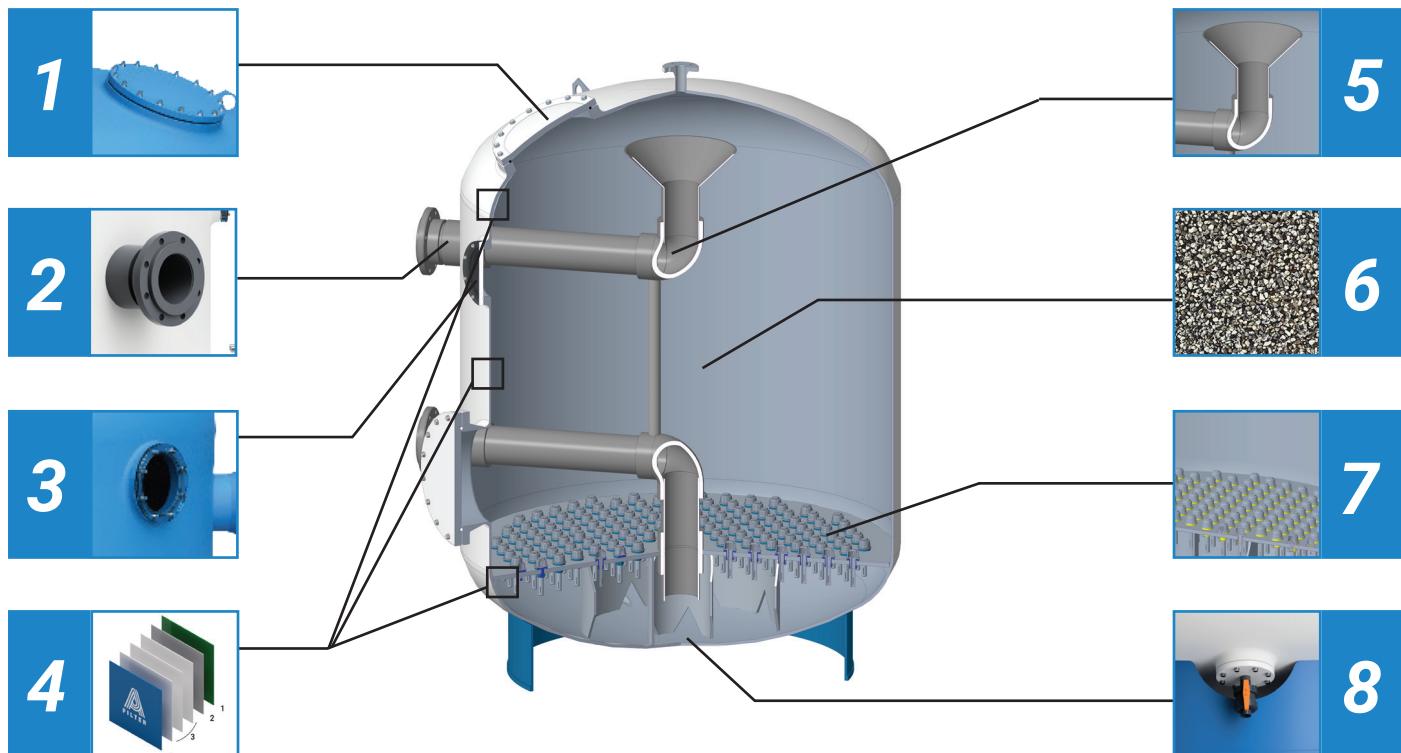
Inside Diameter Внутренний диаметр Der innere Durchmesser	(m)	800	1000	1200	1400	1600	1800	2000	2200	2400
Filtration Area Область фильтрации Filtrationsfläche	(m ²)	0.50	0.79	1.13	1.54	2.01	2.54	3.14	3.80	4.52
Flow rate at 30 m/h Поток на 30 м/ч Durchfluss auf 30 m/h	(m ³ /h)	15	24	34	46	60	76	94	114	136



SERIES 2N		RO1	Option Опция Option
		F2	Option Опция Option

SERIES 2L		RO1	Standard Стандартно Standard
		F2	N/A N/A N/A

Dimensions / Размеры/Dimensionen			800	1000	1200	1400	1600	1800	2000	2200	2400
Sand bed Высота песка sandbett Höhe Series 2N 1.200 mm	H	(mm)	2250	2325	2400	2450	2550	2570	2650	2700	2800
	H1	(mm)	2050	2125	2200	2250	2350	2370	2450	2500	2600
	H2	(mm)	600	650	750	750	850	900	1000	1000	1100
	H3	(mm)	1050	900	900	950	850	850	650	600	600
	H	(mm)	2000	2070	2120	2170	2270	2370	2440	2450	2500
	H1	(mm)	1800	1870	1920	1970	2070	2170	2240	2250	2300
	H2	(mm)	600	700	750	800	850	900	950	950	1000
	H3	(mm)	800	700	700	600	650	650	600	600	600
M1	DN		400	400	400	400	400	400	400	400	400
M2	DN		200	200	400	400	400	400	400	400	400
I	Ø		90	110	140/110*	140	160/140*	160	225/160*	225/160*	225/160*
O	Ø		90	110	140/110*	140	160/140*	160	225/160*	225/160*	225/160*
F1	DN		40	40	40	50	50	50	50	65	65
F2*	DN		40	40	40	50	50	50	50	65	65
F3	DN		40	40	40	40	40	40	40	40	40
SG1	DN		200	200	200	200	200	200	200	200	200
RO1*	DN		100	100	100	200	200	200	200	200	200
S	Ø		600	800	1000	1000	1200	1400	1600	1800	1800



All openings, flanges and accessories can be positioned and oriented according to the clients specific needs. Manhole M1 and M2 in sizes from DN 200 to DN 400, depending upon filter size.



Premium quality PVC flanges with reinforced welds. Flanges can be oriented as per clients requirements.



Sight glass SG1 in DN200 size. Sight glass is made of thick machined shatter resistant acrylic plate.



Revision opening standard for 2L model.



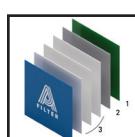
GRP Nozzle plate with heavy duty ABS filtration nozzles



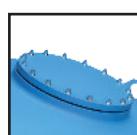
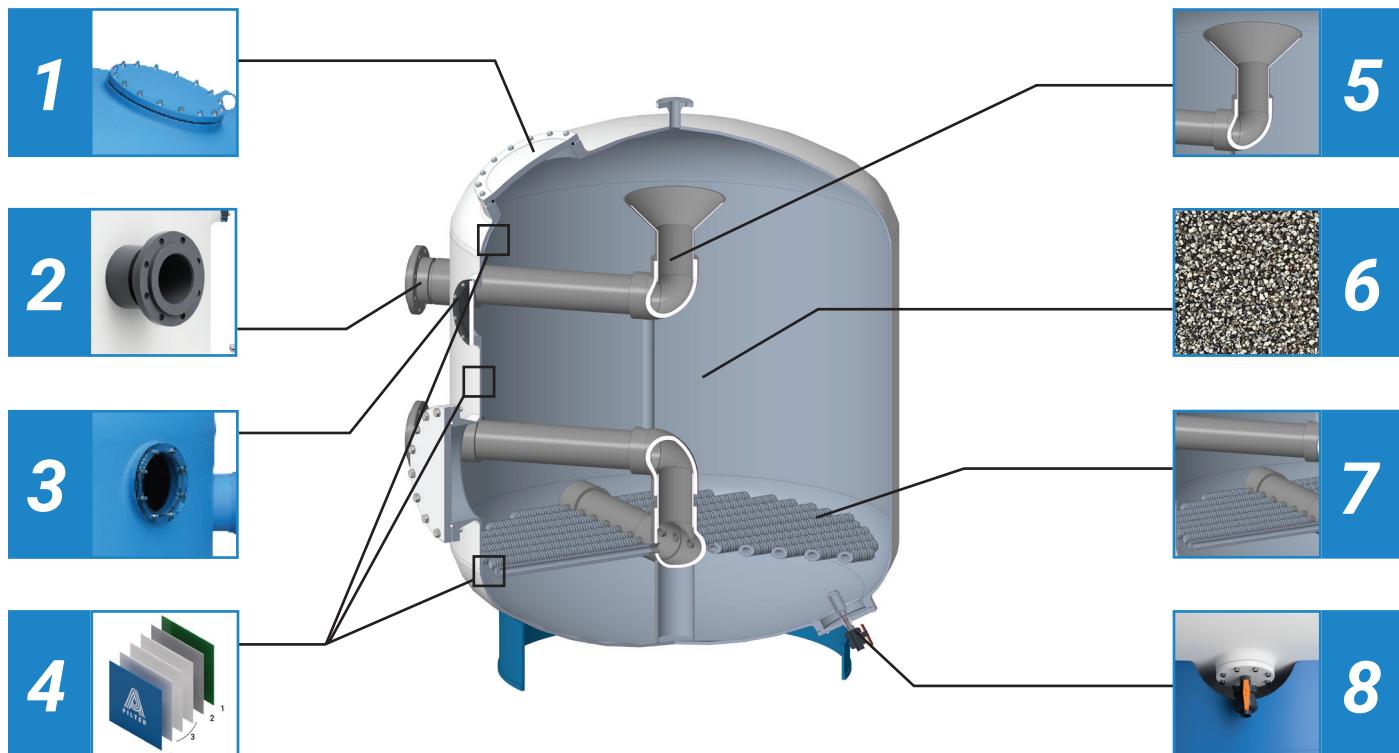
Premium quality PVC Funnel with interior element.



Ready for multilayer bed filtration



1. CBL - Inner layer of the filter vessel in direct contact with the medium, made of combination of vinyl ester resin, C-glass veil and glass fibres.
2. Mechanical reinforcement of CBL made of resin and combination of spray-up roving and woven roving fabrics.
3. Combination of radial and helical filament winding layers made of roving for filament winding and adequate resin.
4. External protective coating in RAL 5015 (standard) or in any other desired colour.



All openings, flanges and accessories can be positioned and oriented according to the clients specific needs. Manhole M1 and M2 in sizes from DN 200 to DN 400, depending upon filter size.



Premium quality PVC flanges with reinforced welds. Flanges can be oriented as per clients requirements.



Sight glass SG1 in DN200 size. Sight glass is made of thick machined shatter resistant acrylic plate.



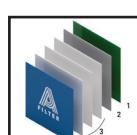
Revision opening standard for 2L model.



ABS laterals mounted on PVC fittings



Premium quality PVC Funnel with interior element.



1. CBL - Inner layer of the filter vessel in direct contact with the medium, made of combination of vinyl ester resin, C-glass veil and glass fibres.
2. Mechanical reinforcement of CBL made of resin and combination of spray-up roving and woven roving fabrics.
3. Combination of radial and helical filament winding layers made of roving for filament winding and adequate resin.
4. External protective coating in RAL 5015 (standard) or in any other desired colour.



Ready for multilayer bed filtration



ENG

Filters can be manufactured in diameters from 800 to 2.400 mm with top lid and optional manhole on the side. Internal liner of the vessel is designed in accordance with DIN 18820 standard.

Filters can be equipped with lateral or star system. Flanges, interior components and tubing are made of

PVC. Support ring is made of GRP. Filtration media height is 1.000 mm.

Maximum working pressure of the vessel is 2,5 bar and it is submitted to pressure tests of up to 50% more than maximum working pressure.

- ▶ Economic solution
- ▶ DIN 18820
- ▶ Optional Vinyl ester lining
- ▶ Diametar from 800mm to 2400mm
- ▶ Pressure tested up to 50% more than maximum working pressure
- ▶ Bed height: 1000mm
- ▶ Manholes, Inlet, Outlet and other connections can be oriented as per customers wishes

RUS

DE

**ЭКОНОМИЧЕСКОЕ РЕШЕНИЕ
СООТВЕТСТВУЕТ DIN 18820**

Фильтр «А фильтр-3L» имеют цилиндрическую форму, диаметр поперечного сечения может варьироваться от 800 до 2400мм, высота корпуса- 1000мм.

Фильтр имеет одно ревизионное отверстие, с возможностью монтажа еще одного бокового отверстия. Изготовлен в соответствии с DIN18820.

В зависимости от диаметра поперечного сечения распределительная система может быть выполнена трубами с отверстием в виде звезды или в виде трубах с отверстиями (L-ответвления), высота фильтрующего элемента 1.0м.

Фланцы, внутренние составляющие и трубы изготовлены из ПВХ. Корпус фильтра стоит на подставке сделанной из волокнистого полиэстера. Максимальное рабочее давление- 2,5 бар (фильтры тестируют при давлении 3,75 бар). Гарантийный срок обслуживания- 5 лет.

**ÖKONOMISCHE LÖSUNG
NACH DER NORM DIN 18820**

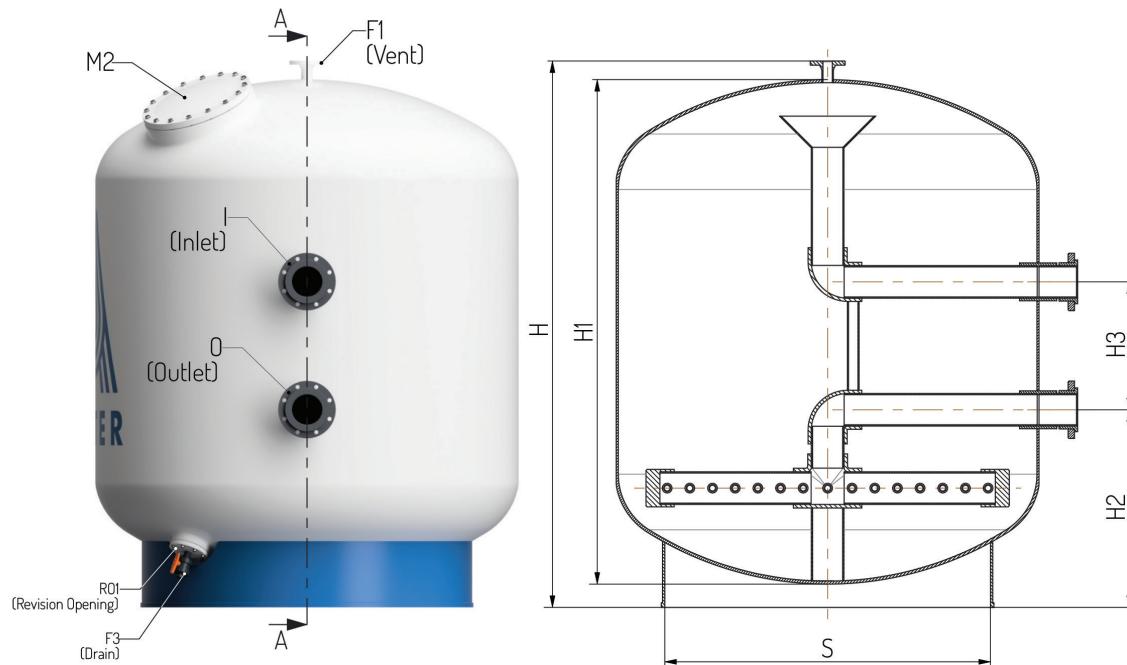
Die Filter können in Durchmesser von 800 bis 2400 mm mit dem obersten Deckel und dem optionellen seitlichen Mannloch hergestellt werden.

Die innere Gefäßbeschichtung ist nach der Norm DIN 18820 entworfen. Die Filter können mit einem Lateral- oder Sternensystem ausgestattet werden.

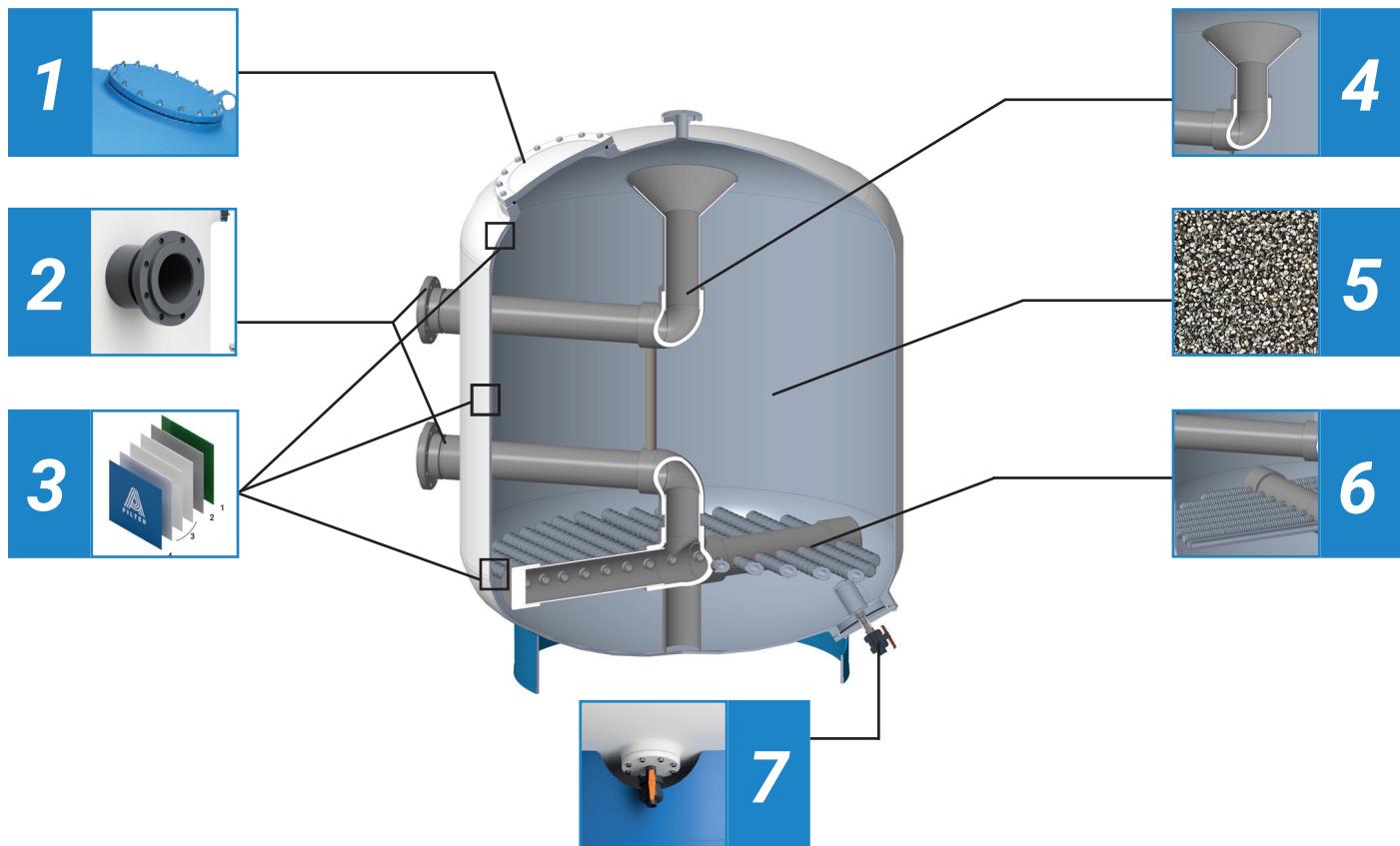
Die Flansche, Innenkomponenten und Rohrleitungen sind aus PVC. Der Stützring ist aus GFK gefertigt. Die Filtermedienhöhe ist 1000 mm.

Der maximale Arbeitsdruck ist 2,5 bar und Drucktests auf Max.Gehäusdruck ist 3,75 bar werden durchgeführt. 5 Jahre Garantie.

Dimensions / Размеры/Dimensionen										
Inside Diameter Внутренний диаметр Der innere Durchmesser	(m)	800	1000	1200	1400	1600	1800	2000	2200	2400
Filtration Area Область фильтрации Filtrationsfläche	(m ²)	0.50	0.79	1.13	1.54	2.01	2.54	3.14	3.80	4.52
Flow rate at 30 m/h Поток на 30 м/ч Durchfluss auf 30 m/h	(m ³ /h)	15	24	34	46	60	76	94	114	136


SERIES 3
**SIDE MANHOLE (DN 400)
БОКОВОЙ ЛЮК (DN400)
DAS SEITLICHE MANNLOCH (DN 400)**
*Option
Опция
Option*
**SIGHT GLASS (DN 100/DN 200)
СМОТРОВОЕ СТЕКЛО(DN 100/DN 200)
SCHAUGLAS(DN 100/DN 200)**
*Option
Опция
Option*
**I/O FLANGE SIZES FOR DIFFERENT FILTRATION SPEEDS
ПАТРУБКИ ДЛЯ ДРУГИХ СКОРОСТЕЙ ФИЛЬТРАЦИИ
E/A FLANSCHGRÖSSEN FÜR VERSCHIEDENE FILTRATIONSGESCHWINDIGKEITEN**
*Option
Опция
Option*

	Dimensions / Размеры/Dimensionen		800	1000	1200	1400	1600	1800	2000	2200	2400	
Sand bed Высота песка sandbett Höhe	1.000 mm	H	(mm)	1900	1950	1970	2000	2100	2180	2230	2380	2330
		H1	(mm)	1750	1780	1810	1820	1920	2000	2050	2100	2150
		H2	(mm)	600	650	700	700	750	950	900	925	925
		H3	(mm)	550	550	550	550	550	550	550	550	550
V	(m³)			0.86	1.270	1.780	2.390	3.270	4.260	5.290	6.590	7.600
M1	DN			400	400	400	400	400	400	400	400	400
I	Ø			63	75	90	110	140	140	160	160	160
O	Ø			63	75	90	110	140	140	160	160	160
F1	col			1"	1"	DN40						
F2	col			1"	1"	1"	1"	1"	1"	1"	1"	1"
RO1	DN			100	100	100	200	200	200	200	200	200
S	Ø			600	800	1000	1000	1200	1400	1600	1800	1800



All openings, flanges and accessories can be positioned and oriented according to the clients specific needs. Manhole M2 in sizes from DN 200 to DN 400, depending upon filter size.



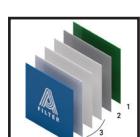
Premium quality PVC flanges with reinforced welds. Flanges can be oriented as per clients requirements.



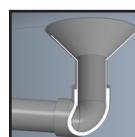
ABS laterals mounted on PVC fittings



Revision opening with 3/4" PVC valve



1. CBL - Inner layer of the filter vessel in direct contact with the medium, made of combination of vinyl ester resin, C-glass veil and glass fibres.
2. Mechanical reinforcement of CBL made of resin and combination of spray-up roving and woven roving fabrics.
3. Combination of radial and helical filament winding layers made of roving for filament winding and adequate resin.
4. External protective coating in RAL 5015 (standard) or in any other desired colour.



Premium quality PVC Funnel with interior element.



Ready for multilayer bed filtration



RECOMMENDED FILTER MATERIAL

GRAVEL AND SAND BED DEPTHS AND WEIGHTS

DIN SERIES

SIZE (mm)	30 (m³/h/m²)		Single Layer (Sand Bed 1500 mm)				Multi Layer (Sand Bed 1500 mm)				
	Q (m³/h)	I/O (DN)	Sand 0.4-0.8 mm (kg)	Gravel 1-2 mm (kg)	Gravel 2-3 mm (kg)	Gravel 3-5 mm (kg)	Hydro-Anthracite (kg)	Sand 0.4-0.8 mm (kg)	Gravel 1-2 mm (kg)	Gravel 2-3 mm (kg)	Gravel 3-5 mm (kg)
Ø800	15	80	850	75	75	75	275	450	75	75	75
Ø1.000	24	100	1350	150	150	150	425	675	150	150	150
Ø1.200	34	125	1900	175	175	175	575	950	175	175	175
Ø1.400	46	125	2600	250	250	250	775	1300	250	250	250
Ø1.600	60	150	3400	300	300	300	1000	1700	300	300	300
Ø1.800	76	200	4275	400	400	400	1275	2150	400	400	400
Ø2.000	94	200	5300	500	500	500	1575	2650	500	500	500
Ø2.200	114	200	6400	600	600	600	1875	3200	600	600	600
Ø2.400	136	250	7600	700	700	700	2200	3800	700	700	700
Ø2.600	159	250	8950	800	800	800	2575	4475	800	800	800
Layer Height			1200 mm	100 mm	100 mm	100 mm	600 mm	600 mm	100 mm	100 mm	100 mm

SIZE (mm)	30 (m³/h/m²)		Single Layer (Sand Bed 1200 mm)				Multi Layer (Sand Bed 1200 mm)				
	Q (m³/h)	I/O (DN)	Sand 0.4-0.8 mm (kg)	Gravel 1-2 mm (kg)	Gravel 2-3 mm (kg)	Gravel 3-5 mm (kg)	Hydro-Anthracite (kg)	Sand 0.4-0.8 mm (kg)	Gravel 1-2 mm (kg)	Gravel 2-3 mm (kg)	Gravel 3-5 mm (kg)
Ø800	15	80	775	75			275	300	75		75
Ø1.000	24	100	1300	150			425	475	150		150
Ø1.200	34	125	1775	175			575	625	175		175
Ø1.400	46	125	2375	250			775	875	250		250
Ø1.600	60	150	3100	300			1000	1125	300		300
Ø1.800	76	200	3925	400			1275	1425	400		400
Ø2.000	94	200	4850	500			1575	1750	500		500
Ø2.200	114	200	5875	600			1875	2150	600		600
Ø2.400	136	250	6975	700			2200	2550	700		700
Ø2.600	159	250	8200	800			2575	2975	800		800
Layer Height			1100 mm	100 mm			600 mm	400 mm	100 mm		100 mm

SERIES 1

SIZE (mm)	30 (m³/h/m²)		Single Layer (Sand Bed 1200 mm)				Multi Layer (Sand Bed 1200 mm)				
	Q (m³/h)	I/O (DN)	Sand 0.4-0.8 mm (kg)	Gravel 1-2 mm (kg)	Gravel 2-3 mm (kg)	Gravel 3-5 mm (kg)	Hydro-Anthracite (kg)	Sand 0.4-0.8 mm (kg)	Gravel 1-2 mm (kg)	Gravel 2-3 mm (kg)	Gravel 3-5 mm (kg)
Ø800	15	80	775	75			275	300	75		75
Ø1.000	24	100	1300	150			425	475	150		150
Ø1.200	34	125	1775	175			575	625	175		175
Ø1.400	46	125	2375	250			775	875	250		250
Ø1.600	60	150	3100	300			1000	1125	300		300
Ø1.800	76	200	3925	400			1275	1425	400		400
Ø2.000	94	200	4850	500			1575	1750	500		500
Ø2.200	114	200	5875	600			1875	2150	600		600
Ø2.400	136	200	6975	700			2200	2550	700		700
Layer Height			1100 mm	100 mm			600 mm	400 mm	100 mm		100 mm



¹ Approximate density of the filtration material:

Gravel - 1500 kg/m³, Sand - 1400 kg/m³, Hydroanthracite - 800 kg/m³.

² Weights of filtration materials are approximate, obligatory are the heights of the layers.

We reserve the right to change the specification without prior notice.

SERIES 2N

SIZE (mm)	30 (m ³ /h/m ²)		Single Layer (Sand Bed 1200 mm)				Multi Layer (Sand Bed 1200 mm)				
	Q (m ³ /h)	I/O (mm)	Sand 0.4-0.8 mm (kg)	Gravel 1-2 mm (kg)	Gravel 2-3 mm (kg)	Gravel 3-5 mm (kg)	Hydro-Anthracite (kg)	Sand 0.4-0.8 mm (kg)	Gravel 1-2 mm (kg)	Gravel 2-3 mm (kg)	Gravel 3-5 mm (kg)
Ø800	15	90	775	75			275	300	75		75
Ø1.000	24	110	1300	150			425	475	150		150
Ø1.200	34	140	1775	175			575	625	175		175
Ø1.400	46	140	2375	250			775	875	250		250
Ø1.600	60	160	3100	300			1000	1125	300		300
Ø1.800	76	160	3925	400			1275	1425	400		400
Ø2.000	94	225	4850	500			1575	1750	500		500
Ø2.200	114	225	5875	600			1875	2150	600		600
Ø2.400	136	225	6975	700			2200	2550	700		700
Layer Height			1100 mm	100 mm			600 mm	400 mm	100 mm		100 mm

SERIES 2L

SIZE (mm)	30 (m ³ /h/m ²)		Single Layer (Sand Bed 1000 mm)				Multi Layer				
	Q (m ³ /h)	I/O (mm)	Sand 0.4-0.8 mm (kg)	Gravel 1-2 mm (kg)	Gravel 2-3 mm (kg)	Gravel 3-5 mm (kg)	Hydro-Anthracite (kg)	Sand 0.4-0.8 mm (kg)	Gravel 1-2 mm (kg)	Gravel 2-3 mm (kg)	Gravel 3-5 mm (kg)
Ø800	15	90	650	175							
Ø1.000	24	110	1000	325							
Ø1.200	34	110	1425	500							
Ø1.400	46	140	1950	650							
Ø1.600	60	140	2550	950							
Ø1.800	76	160	3225	1305							
Ø2.000	94	160	3975	1775							
Ø2.200	114	160	4800	2,350							
Ø2.400	136	160	5700	3000							
Layer Height			900 mm	100 mm*							

SERIES 3

SIZE (mm)	30 (m ³ /h/m ²)		Single Layer (Sand Bed 1000 mm)				Multi Layer				
	Q (m ³ /h)	I/O (mm)	Sand 0.4-0.8 mm (kg)	Gravel 1-2 mm (kg)	Gravel 2-3 mm (kg)	Gravel 3-5 mm (kg)	Hydro-Anthracite (kg)	Sand 0.4-0.8 mm (kg)	Gravel 1-2 mm (kg)	Gravel 2-3 mm (kg)	Gravel 3-5 mm (kg)
Ø800	15	63	650	150							
Ø1.000	24	75	1000	250							
Ø1.200	34	90	1425	425							
Ø1.400	46	110	1950	525							
Ø1.600	60	140	2550	800							
Ø1.800	76	140	3225	1125							
Ø2.000	94	160	3975	1550							
Ø2.200	114	160	4800	2050							
Ø2.400	136	160	5700	2650							
Layer Height			900 mm	100 mm*							



RECOMMENDED AFM® MATERIAL

AFM® BED DEPTHS AND WEIGHTS

DIN SERIES SERIES 1

	20 (m³/h/m²)		AFM Bed 1.200 mm - (Single Layer) - 50% Grade 1 / 50% Grade 2					AFM Bed 1.200mm - (Multi Layer) - 20% Anthracite /40% Grade 1 / 40% Grade 2				
D (mm)	Q (m³/h)	I/O (DN)	Anthracite 1,18-2,5 mm (kg)	Grade 0 0,2-0,5 mm (kg)	Grade 1 0,4-0,8 mm (kg)	Grade 2 0,7-2,0 mm (kg)	Grade 3 2,0-4,0 mm (kg)	Anthracite 1,18-2,5 mm (kg)	Grade 0 0,2-0,5 mm (kg)	Grade 1 0,4-0,8 mm (kg)	Grade 2 0,7-2,0 mm (kg)	Grade 3 2,0-4,0 mm (kg)
Ø800	10	80	0	0	399	378	0	97	0	315	315	0
Ø1.000	15	100	0	0	609	588	0	151	0	483	483	0
Ø1.200	22	125	0	0	882	840	0	217	0	714	672	0
Ø1.400	30	125	0	0	1.176	1.155	0	296	0	945	924	0
Ø1.600	40	150	0	0	1.533	1.491	0	386	0	1.239	1.197	0
Ø1.800	50	200/150	0	0	1.953	1.890	0	489	0	1.554	1.512	0
Ø2.000	62	200	0	0	2.394	2.331	0	603	0	1.911	1.869	0
Ø2.200	76	200	0	0	2.898	2.814	0	730	0	2.331	2.247	0
Ø2.400	90	250/200	0	0	3.444	3.339	0	869	0	2.751	2.688	0
Ø2.600	106	250	0	0	4.032	3.927	0	1.019	0	3.213	3.150	0
Layer Height					600 mm	600 mm		240 mm		480 mm	480 mm	

	20 (m³/h/m²)		AFM Bed 1.500 mm - (Single Layer) - 50% Grade 1 / 50% Grade 2					AFM Bed 1.500mm - (Multi Layer) - 20% Anthracite /40% Grade 1 / 40% Grade 2				
D (mm)	Q (m³/h)	I/O (DN)	Anthracite 1,18-2,5 mm (kg)	Grade 0 0,2-0,5 mm (kg)	Grade 1 0,4-0,8 mm (kg)	Grade 2 0,7-2,0 mm (kg)	Grade 3 2,0-4,0 mm (kg)	Anthracite 1,18-2,5 mm (kg)	Grade 0 0,2-0,5 mm (kg)	Grade 1 0,4-0,8 mm (kg)	Grade 2 0,7-2,0 mm (kg)	Grade 3 2,0-4,0 mm (kg)
Ø800	10	80	0	0	483	483	0	121	0	399	399	0
Ø1.000	15	100	0	0	756	735	0	188	0	609	609	0
Ø1.200	22	125	0	0	1.092	1.050	0	271	0	882	861	0
Ø1.400	30	125	0	0	1.470	1.428	0	369	0	1.176	1.176	0
Ø1.600	40	150	0	0	1.911	1.869	0	483	0	1.533	1.512	0
Ø1.800	50	200/150	0	0	2.436	2.352	0	611	0	1.953	1.911	0
Ø2.000	62	200	0	0	3.003	2.898	0	754	0	2.415	2.352	0
Ø2.200	76	200	0	0	3.612	3.507	0	912	0	2.898	2.835	0
Ø2.400	90	250/200	0	0	4.284	4.179	0	1.086	0	3.444	3.381	0
Ø2.600	106	250	0	0	5.019	4.914	0	1.274	0	4.032	3.969	0
Layer Height					750 mm	750 mm		300 mm		600 mm	600 mm	

SERIES 2N

	20 (m³/h/m²)		AFM Bed 1.200 mm - (Single Layer) - 50% Grade 1 / 50% Grade 2					AFM Bed 1.200mm - (Multi Layer) - 20% Anthracite /40% Grade 1 / 40% Grade 2				
D (mm)	Q (m³/h)	I/O (Ø)	Anthracite 1,18-2,5 mm (kg)	Grade 0 0,2-0,5 mm (kg)	Grade 1 0,4-0,8 mm (kg)	Grade 2 0,7-2,0 mm (kg)	Grade 3 2,0-4,0 mm (kg)	Anthracite 1,18-2,5 mm (kg)	Grade 0 0,2-0,5 mm (kg)	Grade 1 0,4-0,8 mm (kg)	Grade 2 0,7-2,0 mm (kg)	Grade 3 2,0-4,0 mm (kg)
Ø800	10	90	0	0	399	378	0	97	0	315	315	0
Ø1.000	15	110	0	0	609	588	0	151	0	483	483	0
Ø1.200	22	140	0	0	882	840	0	217	0	714	672	0
Ø1.400	30	140	0	0	1.176	1.155	0	296	0	945	924	0
Ø1.600	40	160	0	0	1.533	1.491	0	386	0	1.239	1.197	0
Ø1.800	50	160	0	0	1.953	1.890	0	489	0	1.554	1.512	0
Ø2.000	62	225	0	0	2.394	2.331	0	603	0	1.911	1.869	0
Ø2.200	76	225	0	0	2.898	2.814	0	730	0	2.331	2.247	0
Ø2.400	90	225	0	0	3.444	3.339	0	869	0	2.751	2.688	0
Layer Height					600 mm	600 mm		240 mm		480 mm	480 mm	



	20 (m ³ /h/m ²)		AFM Bed 1.000 mm - (Single Layer) - 65% Grade 1/ 25% Grade 2/10% Grade 3					
D (mm)	Q (m ³ /h)	I/O (Ø)	Anthracite 1,18-2,5 mm (kg)	Grade 0 0,2-0,5 mm (kg)	Grade 1 0,4-0,8 mm (kg)	Grade 2 0,7-2,0 mm (kg)	Grade 3 2,0-4,0 mm (kg)	
Ø800	10	90/63	0	0	441	168	147	
Ø1.000	15	110/75	0	0	672	252	273	
Ø1.200	22	110/90	0	0	966	357	357	
Ø1.400	30	140/110	0	0	1.302	483	609	
Ø1.600	40	140	0	0	1.680	630	777	
Ø1.800	50	160/140	0	0	2.121	798	1.092	
Ø2.000	62	160	0	0	2.604	987	1.449	
Ø2.200	76	160	0	0	3.150	1.176	1.911	
Ø2.400	90	160	0	0	3.738	1.407	2.436	
Layer Height					650 mm	250 mm	100 mm*	

AFM® Activated Filter Media is a direct replacement for sand, that can be installed in all types of sand filters without modifications, doubling the performance of sand filters without the need of additional investments in infrastructure.

Self sterilizing surface: AFM® is 100% bio-resistant, prevents channeling and the biological conversion from urea to ammonia in the filter bed responsible for the toxic chlorine smells (trichloramines).



AFM® is a highly engineered product manufactured from a specific glass type, processed to obtain the optimum particle size and shape. It is then exposed to a 3-step activation process to become self-sterilizing and to acquire superior adsorption properties.

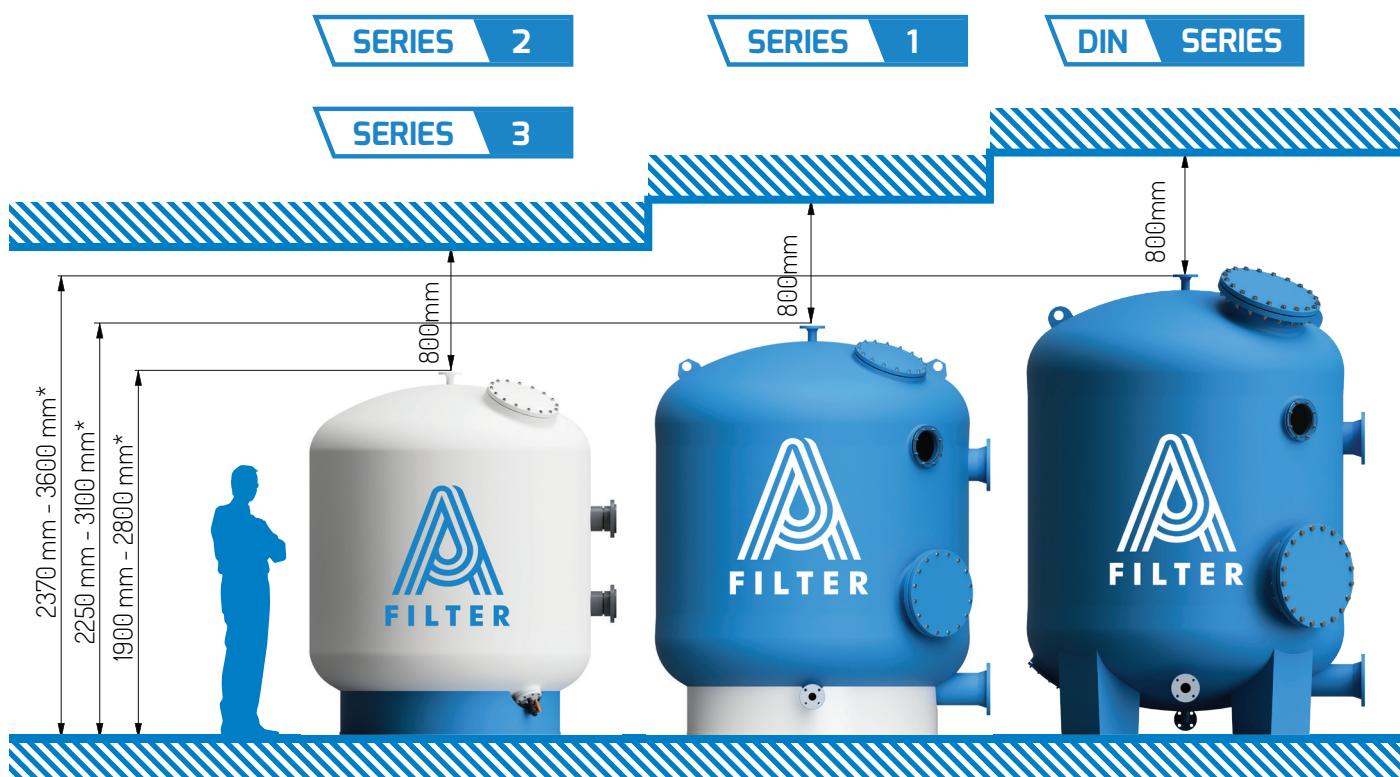


Superior adsorption properties: : The surface area of AFM® is strongly increased and becomes hydrophobic (water-repellent) to filter particles down to 1 micron and to remove about 50% more organic substances from the water than sand and other glass filter media, thus reducing the formation of harmful THMs including chloroform by up to 50%.

When sizing a plant room, keep in mind that filters need at least 600mm of space around them. Design a plant room in that way that you have at enough space in front of the filter to allow installation and operating of filter battery. Leave enough space in front of the manholes to freely access them.



When designing a new plant room for a filtration designed according to DIN 19643, remember to double check height of the filters. Do not forget to leave minimum of 800mm of free space on top of the filter. That space is needed for mounting of air relief valve assembly and periodic manipulation and servicing of the filter.









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ENGINEERING &
CONSTRUCTION

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