COMPOSITE FILTRATION

FRP CARTRIDGE FILTER HOUSINGS

Composite engineering.
Application-led selection.

FIVE SERIES.
ONE FILTRATION PLATFORM.

PL FO / PL HFO
PL SF-S / PL HSF-S
PL SF-B

Product illustration. Final configuration follows the approved model drawing.

PRODUCT FAMILY

Choose the right arrangement

FRP cartridge housings for RO prefiltration, desalination, water treatment and process-water applications. Selection starts with the fluid, cartridge duty and available service space.

Series	Configuration
PL FO	Vertical fast-open housing. Individual cartridge replacement.
PL HFO	Horizontal fast-open arrangement for installations with suitable end-access clearance.
PL SF-S	Vertical single-flange housing with side inlet and bottom outlet.
PL HSF-S	Horizontal configuration of the SF-S family.
PL SF-B	Vertical single-flange housing with bottom inlet, top outlet and removable filtering package.

MATCH THE SYSTEM TO THE DUTY

Confirm cartridge medium, flow, operating conditions, connection standard and maintenance access.

MATERIALS & DESIGN BASIS

Specify the complete vessel

Construction options in the existing PureLife product catalogue are summarised below. The selected bill of materials defines the supplied configuration.

Component	Selection considerations
Shell & closure	FRP composite. Resin system and chemical barrier selected for the actual liquid.
Wetted internals	FRP, PVC or PPH depending on the component and selected series.
Seals	EPDM listed in the range; verify compatibility with the liquid and temperature.
Supports & hardware	FRP, coated carbon steel or stainless steel options, according to the series.
Connections	FRP flanges. Confirm drilling, face type, nominal size and orientation.
Service accessories	Vents, drains, lifting points, davit arms and swing bolts as applicable.

MODEL-SPECIFIC APPROVAL

Pressure and temperature limits, design code and certification scope are specified for the selected model in the approved technical schedule.

SERIES SELECTION

PL FO

VERTICAL FAST-OPEN

DOE cartridge supports; boltless closure concept; davit arm optional.

Catalogue sizing basis: 0.65 m³/h per 10-inch cartridge length. Confirm actual duty against the selected element, liquid and pressure-drop allowance.

Model	Flow m³/h	Cartridges	Length in	DN mm
3-30	6	3	30	50
3-40	8	3	40	50
3-50	10	3	50	50
5-30	10	5	30	50
5-40	13	5	40	50
5-50	16	5	50	50
7-30	14	7	30	50
7-40	19	7	40	50
7-50	23	7	50	80
12-30	24	12	30	100
12-40	32	12	40	100
12-50	39	12	50	100
22-30	43	22	30	100
22-40	58	22	40	100
22-50	72	22	50	100
35-30	69	35	30	150
35-40	91	35	40	150
35-50	114	35	50	150
50-30	98	50	30	150
50-40	130	50	40	150
50-50	163	50	50	200
70-30	137	70	30	200
70-40	182	70	40	200

Selection data from the PureLife product range. Final duty and availability are confirmed in the technical proposal.

DIMENSIONAL REFERENCE

PL FO | Dimensions

Use these dimensions for preliminary planning. Dimension letters refer to the model-specific drawing. Request the approved general arrangement before manufacture or installation.

Model	A mm	B mm	C mm	D mm	E mm
3-30	150	105	995	1100	155
3-40	150	105	1250	1350	155
3-50	150	105	1400	1600	155
5-30	200	105	995	1100	180
5-40	200	105	1250	1300	180
5-50	200	105	1400	1500	180
7-30	250	250	895	1500	235
7-40	250	250	1150	1700	235
7-50	250	250	1400	1950	235
12-30	300	250	895	1500	260
12-40	300	250	1150	1700	260
12-50	300	250	1400	1950	260
22-30	400	250	895	1500	310
22-40	400	250	1150	1700	310
22-50	400	250	1400	1950	310
35-30	500	250	895	1500	360
35-40	500	250	1150	1700	360
35-50	500	250	1400	1950	360
50-30	600	285	895	1600	410
50-40	600	285	1150	1850	410
50-50	600	285	1400	2100	410
70-30	700	285	895	1600	500
70-40	700	285	1150	1850	500

Check closure movement, cartridge withdrawal, supports and connection orientation on the approved installation drawing.

SERIES SELECTION

PL HFO

HORIZONTAL FAST-OPEN

Horizontal arrangement. Confirm cartridge withdrawal space and support saddle design.

Catalogue sizing basis: 0.65 m³/h per 10-inch cartridge length. Confirm actual duty against the selected element, liquid and pressure-drop allowance.

Model	Flow m³/h	Cartridges	Length in	DN mm
7-30	14	7	30	80
7-40	19	7	40	80
7-50	23	7	50	80
12-30	24	12	30	100
12-40	32	12	40	100
12-50	39	12	50	100
22-30	43	22	30	100
22-40	58	22	40	100
22-50	72	22	50	100
35-30	69	35	30	150
35-40	91	35	40	150
35-50	114	35	50	150
50-30	98	50	30	150
50-40	130	50	40	150
50-50	163	50	50	200
70-30	137	70	30	200
70-40	182	70	40	200
70-50	228	70	50	200

Selection data from the PureLife product range. Final duty and availability are confirmed in the technical proposal.

DIMENSIONAL REFERENCE

PL HFO | Dimensions

Use these dimensions for preliminary planning. Dimension letters refer to the model-specific drawing. Request the approved general arrangement before manufacture or installation.

Model	A mm	B mm	C mm	D mm	E mm
7-30	250	250	895	1500	235
7-40	250	250	1150	1700	235
7-50	250	250	1400	1950	235
12-30	300	250	895	1500	260
12-40	300	250	1150	1700	260
12-50	300	250	1400	1950	260
22-30	400	250	895	1500	310
22-40	400	250	1150	1700	310
22-50	400	250	1400	1950	310
35-30	500	250	895	1500	360
35-40	500	250	1150	1700	360
35-50	500	250	1400	1950	360
50-30	600	285	895	1600	410
50-40	600	285	1150	1850	410
50-50	600	285	1400	2100	410
70-30	700	285	895	1600	500
70-40	700	285	1150	1850	500
70-50	700	285	1400	2100	500

Check closure movement, cartridge withdrawal, supports and connection orientation on the approved installation drawing.

SERIES SELECTION

PL SF-S

VERTICAL SINGLE-FLANGE

Side inlet / bottom outlet. Swing bolts and davit arm are optional.

Catalogue sizing basis: 0.65 m³/h per 10-inch cartridge length. Confirm actual duty against the selected element, liquid and pressure-drop allowance.

Model	Flow m³/h	Cartridges	Length in	DN mm
90-40	234	90	40	250
90-50	293	90	50	250
114-40	297	114	40	250
114-50	371	114	50	300
114-70	519	114	70	350
180-40	468	180	40	300
180-50	585	180	50	350
180-70	819	180	70	400
215-40	559	215	40	350
215-50	699	215	50	350
215-70	979	215	70	400
260-40	676	260	40	350
260-50	845	260	50	400
260-70	1183	260	70	450
295-40	767	295	40	400
295-50	959	295	50	400
295-70	1343	295	70	500
335-40	871	335	40	400
335-50	1089	335	50	450
335-70	1525	335	70	500
410-40	1066	410	40	450
410-50	1333	410	50	500
410-70	1866	410	70	600

Selection data from the PureLife product range. Final duty and availability are confirmed in the technical proposal.

DIMENSIONAL REFERENCE

PL SF-S | Dimensions

Use these dimensions for preliminary planning. Dimension letters refer to the model-specific drawing. Request the approved general arrangement before manufacture or installation.

Model	A mm	B mm	C mm	D mm	E mm
90-40	800	690	1825	2795	640
90-50	800	690	2080	3050	640
114-40	900	690	1845	2915	700
114-50	900	800	2215	3285	700
114-70	900	900	2825	3890	700
180-40	1100	800	2065	3205	850
180-50	1100	900	2420	3560	850
180-70	1100	1010	3040	4175	850
215-40	1200	900	2115	3280	875
215-50	1200	900	2370	3530	875
215-70	1200	1010	2985	4145	875
260-40	1300	900	2115	3290	925
260-50	1300	1010	2475	3650	925
260-70	1300	1115	3085	4260	925
295-40	1400	1010	2355	3805	1100
295-50	1400	1010	2610	4060	1100
295-70	1400	1215	3320	4770	1100
335-40	1500	1010	2365	3800	1150
335-50	1500	1115	2725	4160	1150
335-70	1500	1215	3330	4765	1150
410-40	1600	1115	3025	4700	1150
410-50	1600	1215	3355	5040	1150
410-70	1600	1365	4075	5820	1150

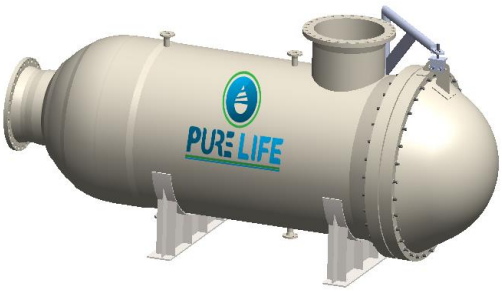
Check closure movement, cartridge withdrawal, supports and connection orientation on the approved installation drawing.

SERIES SELECTION

PL HSF-S

HORIZONTAL SINGLE-FLANGE

Horizontal arrangement of SF-S. Confirm nozzle layout on the approved drawing.



Catalogue sizing basis: 0.65 m³/h per 10-inch cartridge length. Confirm actual duty against the selected element, liquid and pressure-drop allowance.

Model	Flow m³/h	Cartridges	Length in	DN mm
90-40	234	90	40	250
90-50	293	90	50	250
114-40	297	114	40	250
114-50	371	114	50	300
114-70	519	114	70	350
180-40	468	180	40	300
180-50	585	180	50	350
180-70	819	180	70	400
215-40	559	215	40	350
215-50	699	215	50	350
215-70	979	215	70	400
260-40	676	260	40	350
260-50	845	260	50	400
260-70	1183	260	70	450
295-40	767	295	40	400
295-50	959	295	50	400
295-70	1343	295	70	500
335-40	871	335	40	400
335-50	1089	335	50	450
335-70	1525	335	70	500
410-40	1066	410	40	450
410-50	1333	410	50	500
410-70	1866	410	70	600

Selection data from the PureLife product range. Final duty and availability are confirmed in the technical proposal.

DIMENSIONAL REFERENCE

PL HSF-S | Dimensions

Use these dimensions for preliminary planning. Dimension letters refer to the model-specific drawing. Request the approved general arrangement before manufacture or installation.

Model	A mm	B mm	C mm	D mm	E mm
90-40	800	615	1320	2020	640
90-50	800	615	1320	2275	640
114-40	900	670	1160	2015	700
114-50	900	670	1415	2270	700
114-70	900	671	1925	2775	700
180-40	1100	725	1270	2200	850
180-50	1100	725	1520	2455	850
180-70	1100	725	2030	2965	850
215-40	1200	825	1215	2185	875
215-50	1200	825	1470	2440	875
215-70	1200	825	1975	2950	875
260-40	1300	875	1215	2200	925
260-50	1300	875	1470	2450	925
260-70	1300	875	1975	2960	925
295-40	1400	985	1410	2475	1100
295-50	1400	985	1660	2730	1100
295-70	1400	985	2170	3240	1100
335-40	1500	1085	1360	2490	1150
335-50	1500	1085	1610	2740	1150
335-70	1500	1085	2120	3255	1150
410-40	1600	1177	1915	3260	1150
410-50	1600	1177	2170	3510	1150
410-70	1600	1177	2675	4020	1150

Check closure movement, cartridge withdrawal, supports and connection orientation on the approved installation drawing.

SERIES SELECTION

PL SF-B

EXTRACTABLE FILTERING PACKAGE

Bottom inlet / top outlet. Plan overhead lifting clearance for package removal.

Catalogue sizing basis: 0.65 m³/h per 10-inch cartridge length. Confirm actual duty against the selected element, liquid and pressure-drop allowance.

Model	Flow m³/h	Cartridges	Length in	DN mm
100-40	260	100	40	250
100-50	325	100	50	250
121-40	315	121	40	250
121-50	394	121	50	250
121-70	551	121	70	300
150-40	390	150	40	300
150-50	488	150	50	300
150-70	683	150	70	350
195-40	507	195	40	300
195-50	634	195	50	350
195-70	888	195	70	400
240-40	624	240	40	350
240-50	780	240	50	400
240-70	1092	240	70	450
280-40	728	280	40	350
280-50	910	280	50	400
280-70	1274	280	70	500
315-40	819	315	40	450
315-50	1024	315	50	450
315-70	1434	315	70	500
360-40	936	360	40	400
360-50	1170	360	50	450
360-70	1638	360	70	600
433-40	1126	433	40	450
433-50	1408	433	50	500
433-70	1971	433	70	600

Selection data from the PureLife product range. Final duty and availability are confirmed in the technical proposal.

DIMENSIONAL REFERENCE

PL SF-B | Dimensions

Use these dimensions for preliminary planning. Dimension letters refer to the model-specific drawing. Request the approved general arrangement before manufacture or installation.

Model	A mm	B mm	C mm
100-40	800	690	2860
100-50	800	690	3120
121-40	900	690	2970
121-50	900	690	3220
121-70	900	900	3845
150-40	1000	800	3180
150-50	1000	800	3435
150-70	1000	900	4045
195-40	1100	800	3335
195-50	1100	900	3690
195-70	1100	1010	4310
240-40	1200	900	3400
240-50	1200	1010	3760
240-70	1200	1115	4370
280-40	1300	900	3420
280-50	1300	1010	3780
280-70	1300	1215	4490
315-40	1400	1010	3925
315-50	1400	1115	4140
315-70	1400	1215	4750
360-40	1500	1010	3935
360-50	1500	1115	4290
360-70	1500	1365	5050
433-40	1600	1115	4490
433-50	1600	1215	4840
433-70	1600	1365	5550

Check closure movement, cartridge withdrawal, supports and connection orientation on the approved installation drawing.

LARGE-DIAMETER SELECTIONS

PL SF-S | Custom range

Large-diameter configurations listed in the PureLife catalogue. Define the cartridge package, footprint, handling method and nozzle arrangement for each project.

Model	Qty	Length in	A mm	Average[1]	Maximum[1]
433-40	433	40	1700	1126	1732
433-50	433	50	1700	1408	2165
433-70	433	70	1700	1971	3031
504-40	504	40	1800	1311	2016
504-50	504	50	1800	1638	2520
504-70	504	70	1800	2294	3528
553-40	553	40	1900	1438	2212
553-50	553	50	1900	1798	2765
553-70	553	70	1900	2517	3871
638-40	638	40	2000	1659	2552
638-50	638	50	2000	2074	3190
638-70	638	70	2000	2903	4466

[1] Flow in m^3/h. The source uses an average basis of 0.65 and a maximum basis of 1.00 m^3/h per 10-inch cartridge length. Maximum values are catalogue sizing references, not guaranteed operating duty.

ENGINEERED TO THE PROJECT

Request the approved drawing, hydraulic review and technical schedule for the selected custom model.

LARGE-DIAMETER SELECTIONS

PL HSF-S | Custom range

Large-diameter configurations listed in the PureLife catalogue. Define the cartridge package, footprint, handling method and nozzle arrangement for each project.

Model	Qty	Length in	A mm	Average[1]	Maximum[1]
433-40	433	40	1700	1126	1732
433-50	433	50	1700	1408	2165
433-70	433	70	1700	1971	3031
504-40	504	40	1800	1311	2016
504-50	504	50	1800	1638	2520
504-70	504	70	1800	2294	3528
553-40	553	40	1900	1438	2212
553-50	553	50	1900	1798	2765
553-70	553	70	1900	2517	3871
638-40	638	40	2000	1659	2552
638-50	638	50	2000	2074	3190
638-70	638	70	2000	2903	4466

[1] Flow in m^3/h. The source uses an average basis of 0.65 and a maximum basis of 1.00 m^3/h per 10-inch cartridge length. Maximum values are catalogue sizing references, not guaranteed operating duty.

ENGINEERED TO THE PROJECT

Request the approved drawing, hydraulic review and technical schedule for the selected custom model.

LARGE-DIAMETER SELECTIONS

PL SF-B | Custom range

Large-diameter configurations listed in the PureLife catalogue. Define the cartridge package, footprint, handling method and nozzle arrangement for each project.

Model	Qty	Length in	A mm	Average[1]	Maximum[1]
470-40	470	40	1700	1222	1880
470-50	470	50	1700	1528	2350
470-70	470	70	1700	2139	3290
542-40	542	40	1800	1410	2168
542-50	542	50	1800	1762	2710
542-70	542	70	1800	2467	3794
590-40	590	40	1900	1534	2360
590-50	590	50	1900	1918	2950
590-70	590	70	1900	2685	4130
673-40	673	40	2000	1750	2692
673-50	673	50	2000	2188	3365
673-70	673	70	2000	3063	4711

[1] Flow in m^3/h. The source uses an average basis of 0.65 and a maximum basis of 1.00 m^3/h per 10-inch cartridge length. Maximum values are catalogue sizing references, not guaranteed operating duty.

ENGINEERED TO THE PROJECT

Request the approved drawing, hydraulic review and technical schedule for the selected custom model.

INSTALLATION & OPERATION

Make service access part of the design

Stage	Planning requirement
Before installation	Check the approved drawing, support requirements, nozzle orientation and local load conditions.
Cartridge seating	Confirm DOE cartridge length, support rods, sealing interfaces and cartridge retention for the selected series.
Maintenance clearance	Allow space for the closure and cartridge withdrawal. SF-B package removal requires suitable lifting equipment.
Commissioning	Follow the model-specific procedure for flushing, venting, leak checking and controlled pressurisation.
Cartridge change-out	Use the approved differential-pressure criterion. Isolate, drain and verify zero pressure before opening.
Inspection & records	Inspect seals, internals and closure hardware according to the supplied maintenance instructions.

DOCUMENTATION TO REQUEST

Approved drawing / Technical schedule / Material specification / Operating manual / Inspection and certification documents applicable to the order.

PROJECT ENQUIRY

Tell us about your application

Send the following information for a model-specific selection and quotation.

Input	Information required
Fluid	Liquid composition, salinity, contaminants and chemical exposure.
Duty	Normal and peak flow, temperature, operating and design pressure.
Filtration	Required micron rating, cartridge type and pressure-drop allowance.
Configuration	Preferred series, nozzle sizes, flange standard and installation space.
Service	Cartridge withdrawal space and lifting equipment for package removal.
Project	Quantity, delivery destination, required design code and documentation.

Discuss your FRP housing requirement

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