

Technical datasheet. Efficpool PRFV Filters

1. General description

Efficpool FRP filters are two-body regenerative filters made of polyester reinforced with fiberglass (FRP) with vertical candles. They are specially designed for collective swimming pools, spas, fountains, industrial processes, and aquatic facilities with large volumes of water. Their regenerative filtration technology using perlite provides high filtration quality, water savings, and energy efficiency.

They can be manufactured for use with fresh or saltwater and are available in two configurations:

- **Horizontal** outlet (HPRFV)
- **Vertical** outlet (VRPFV)

This product supports use with saltwater up to approximately 35,000 ppm.

2. Models and capacities

Table of models and capacities

Model	Candles	Filtering area (m2)			Flow rate depending on speed (m3/h/m2)								
					HI (Lc 1000)			HI-L (Lc 1300)			HI-XL (Lc 1600)		
		HI	HI-L	HI-XL	V= 1,3	V=3,3	V=4,8	V=1,3	V=3,3	V=4,8	V=1,3	V=3,3	V=4,8
PRFV-1000	396	42,8	55,6	68,5	55,6	141,2	205,4	72,3	183,5	267,0	89,0	225,9	328,6
PRFV-1200	558	60,3	78,4	96,5	78,4	198,9	289,4	101,9	258,6	376,2	125,4	318,3	463,0
PRFV-1400	776	83,8	109,0	134,1	109,0	276,7	402,4	141,7	359,7	523,2	174,4	442,7	643,9
PRFV-1600	1032	111,5	144,9	178,4	144,9	367,9	535,2	188,4	478,3	695,7	231,9	588,7	856,3
PRFV-1800	1326	143,3	186,2	229,2	186,2	472,8	687,7	242,1	614,6	893,9	298,0	756,4	1100,2

Candles ref. 36.2

3. Technical characteristics

Common characteristics for all Efficpool VPRFV and HPRFV models.

- Two-body regenerative filter with perlite as filtering medium, retains up to 1 micron.
- No backwash required.
- Body, legs, and cover material: polyester reinforced with fiberglass (FRP).
- External finish: coated with polyurethane paint for UV protection, with optional RAL colour selection.
- External bolts and screws: stainless steel.
- Internal bolts and screws: duplex stainless steel.
- Removable collector plate with bolts.
- Candles with threaded collectors, replaceable individually.
- Side manhole Ø400 mm, operable, for maintenance.

- Automatic vibration regeneration system (patented).
- Automatic collector cleaning system by Vortex (patented).
- Semi-automatic perlite loading by suction.
- Top cover with the same diameter as the filter (full access to filter interior).
- Control panel with glycerin-filled inlet and outlet pressure gauges.
- Includes drain valve, purge manifold (2 valves), and inlet check valve.
- Bottom drain valve for full emptying.
- Filtration capacity: from 1.3 to 4.8 m³/h/m².
- Standard operating temperature: 40°C.
- Design pressure options: 2.5, 4, 6, 8, 10 bar.
- Test pressure: 1.5 × design pressure.
- Chemical barrier: isophthalic resin.
- Mechanical reinforcement: orthophthalic resin.
- Inspection sight glasses in FRP (EN 1092-1 FF) for candles, collector plate, and vortex access (depending on model).
- Lifting by lifting lugs.
- Water inlet connection horizontal; outlet connection available in vertical or horizontal orientation.
- Electrical supply: 400V III 50Hz.
- Maximum power consumption: 1.5 kWh.
- Maximum daily consumption: 0.7 kWh/day.

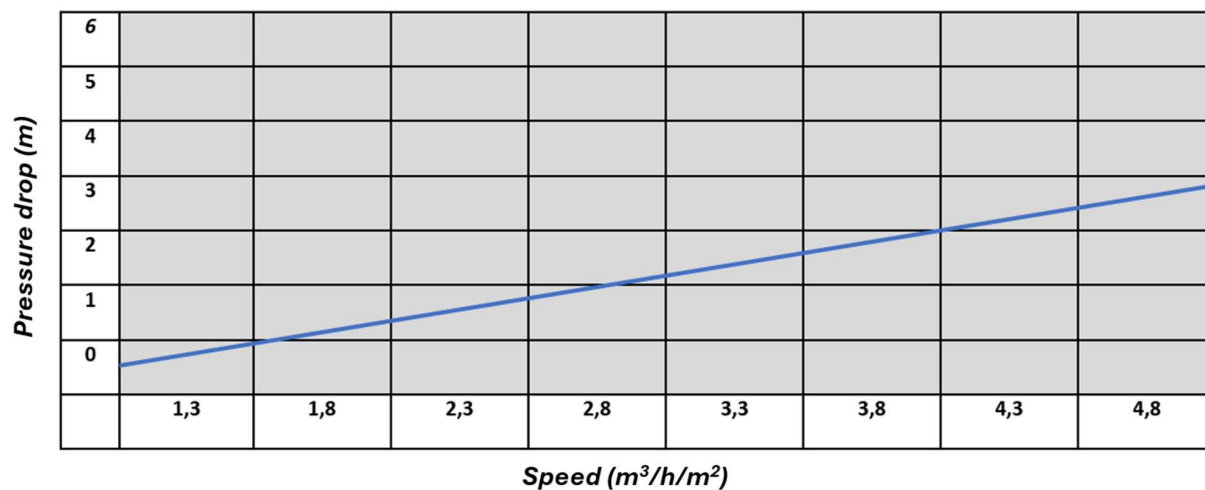
4. Installation and use recommendations

- Install on a level and stable surface.
- Respect the specified connections and diameters.
- Wash the candles once a year.
- Do not exceed the recommended maximum working pressure.
- Protect from direct sunlight and frost.
- Replace the perlite monthly or whenever ΔP exceeds 0.6 bar.
- **The use of flocculants is not permitted**

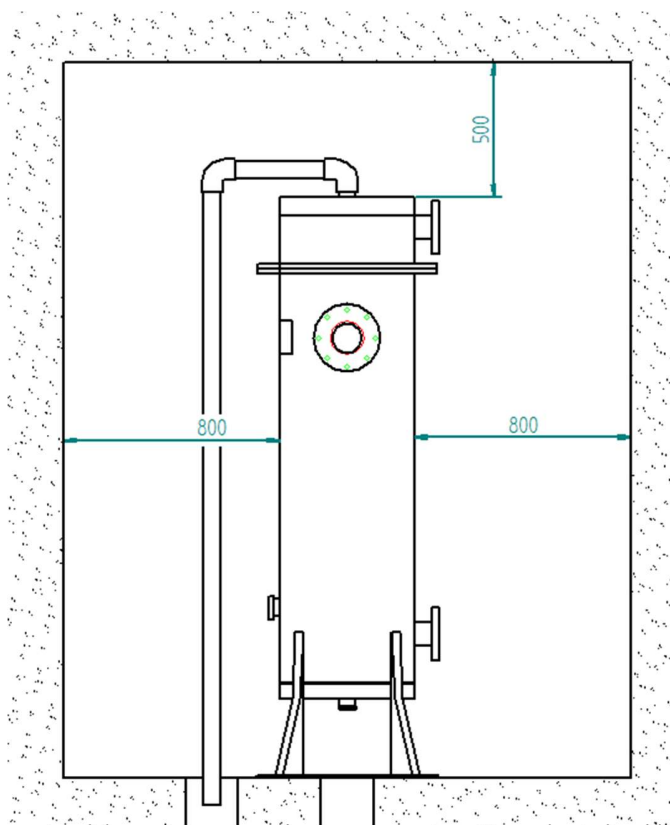
5. Available options:

- Additional nozzles and flanges, sight glasses, etc.
- Variable leg height (custom-made).
- Inlet/outlet connections using FRP elbows.
- Different maximum differential pressures for the candle plate.
- Resins selected according to pH and temperature.
- Bolting in alternative materials.
- Other design codes: ASME, etc.

Pressure drop curve – Efficpool VPRFV/HPRFV



Recommended free space

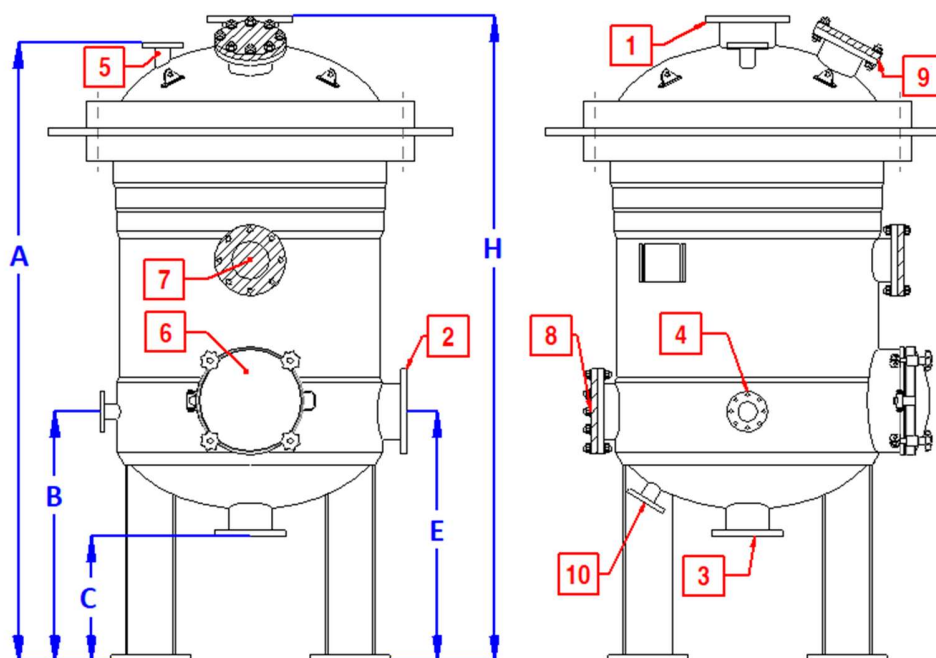


6. Connections and measurements (summary)

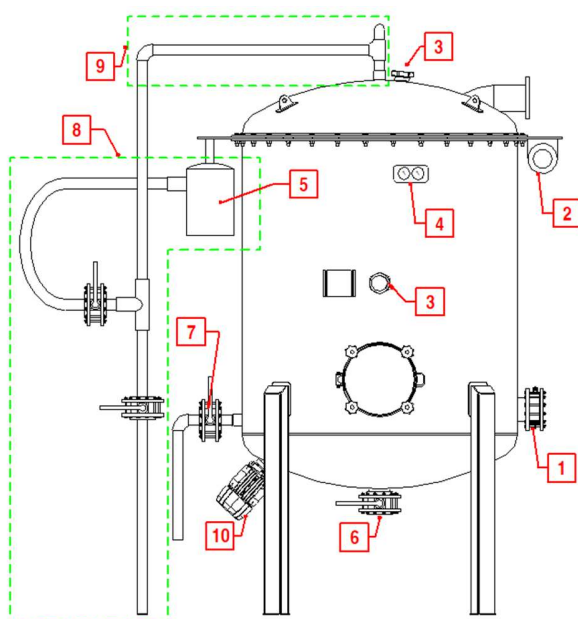
MODEL	Water outlet (flange)	Water inlet (flange)	Drain (flange)	Perlite inlet (flange)	Purge (threaded)	Manhole (Access)	Filter tubes sight glass (threaded)	Vórtex sight glass (threaded)	Collector plate sight glass (threaded)
	POS 1	POS 2	POS 3	POS 4	POS 5	POS 6	POS 7	POS 8	POS 9
PRFV-1000	DN200	DN200	DN150	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1000L	DN250	DN250	DN150	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1000XL	DN250	DN250	DN150	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1200	DN250	DN250	DN200	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1200L	DN250	DN250	DN200	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1200XL	DN315	DN315	DN200	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1400	DN315	DN315	DN250	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1400L	DN315	DN315	DN250	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1400XL	DN315	DN315	DN250	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1600	DN400	DN400	DN300	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1600L	DN400	DN400	DN300	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1600XL	DN400	DN400	DN300	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1800	DN400	DN400	DN300	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1800L	DN400	DN400	DN300	2" RH	2" RH	D.400	DN80	DN150	DN80
PRFV-1800XL	DN400	DN400	DN300	2" RH	2" RH	D.400	DN80	DN150	DN80

MODEL PRFV	1000	1000 L	1000 XL	1200	1200 L	1200 XL	1400	1400 L	1400 XL	1600	1600 L	1600 XL	1800	1800 L	1800 XL
(A)mm	2549	2849	3149	2692	2992	3292	2810	3110	3410	2860	3160	3460	3259	3559	3859
(B)mm	1000			1093			1170			1086			1573		
(C)mm	500			600			650			700			750		
(E)mm	1000			1052			1128			1257			1573		
(H)mm -VPRFV	2580	2880	3180	2812	3112	3412	2951	3251	3551	3030	3330	3630	3480	3780	4080
(H)mm -HPRFV (*)	2730	3030	3330	2962	3262	3562	3101	3401	3701	3180	3480	3780	3630	3930	4230

(*) The height in HPRFV models (horizontal outlet) is approximate due to manufacturing tolerances of the kloppers.



5. Composition of the EFFICPOOL HI systems



Pos.	Component
1	Water inlet check valve
2	Electric vibrator
3	Viewing ports
4	Pressure gauge units
5	230 AC 1.2 kW vacuum cleaner
6	PVC water drain valve.
7	63 mm PVC valve kit and perlite feed hose
8	Vacuum collector assembly.
9	Purge collector assembly
10	Filter tuber cleaning vortex system

6. Packaging

MODEL	LENGTH mm	WIDTH mm	HEIGHT mm	Package weight kg	CUSTOMS CODE
PRFV-1000	-	-	-	-	8421 21 90
PRFV-1000L	-	-	-	-	8421 21 90
PRFV-1000XL	-	-	-	-	8421 21 90
PRFV-1400	-	-	-	-	8421 21 90
PRFV-1400L	-	-	-	-	8421 21 90
PRFV-1400XL	-	-	-	-	8421 21 90
PRFV-1600	-	-	-	-	8421 21 90
PRFV-1600L	-	-	-	-	8421 21 90
PRFV-1600XL	-	-	-	-	8421 00 90
PRFV-1800	-	-	-	-	8421 21 90
PRFV-1800L	-	-	-	-	8421 21 90
PRFV-1800XL	-	-	-	-	8421 00 90

The dimensions of the FRP models will be modified according to the final measurements of each production.

For information requests, additional documentation, prescription calculations or drawings, please contact:

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Note: The information provided in this technical datasheet is for reference only, corresponds to the current product specifications, and may change without notice. The manufacturer is not responsible for misuse or errors. Please consult the updated datasheet before use.