



DEFENDER® REGENERATIVE MEDIA FILTER

NEPTUNE BENSON® PROCESS TECHNOLOGY

Precoat filters are well known for their excellent filtrate quality and low backwash water requirement, but also for their elaborate operation and large footprint. This is where the Defender® filter comes into play, which is the result of a continuous development and meets all requirements of DIN 19643-1 "Treatment of water of swimming pools and baths."

Defender filters use capillary-shaped filter surfaces. This structure yields a very large filter area with minimum space requirements during the membrane process. The filtering effect of the Defender filter is comparable with the membrane process as well and no flocculant must be added.

Perlite, a harmless volcanic magma, is used as regenerative filter material, which also can be used as insulating material.

A vacuum conveyor is used for the dust-free application directly from the packaging. The application onto the capillary surfaces is done automatically, which allows for simple operation.

In case of sand filters, the filtered particles must be separated from the filtration material and discharged. For this, the filter bed must be fluidized with a relatively high water volume flow. The backwash water must be stored in backwash water tanks. With the Defender, however, the bump mechanically shakes off the filtration material from the capillary surface and suspends it in the filter tank.

The separated particles and the spent filtration material thus can be discharged with up to 90% less water than with a sand filter. A backwash water tank is not required for the Defender filter. The Defender is a space saving, efficient, easy to operate and economical regenerative capillary filter.

Benefits

- In comparison to conventional sand filters, up to:
 - 90% less water demand
 - 75% less space
 - 50% less energy demand
 - 30% less chemicals
- Removes particles down to 1 µm
- According to DIN 19643
- No flocculant needed
- No backwash water tank
- 10 year limited warranty

TECHNICAL DATA

Model	Filter area m ²	Flow max. m ³ /h	Height cm*	Diameter cm	Perlite kg	Transport Weight kg	Operation Weight kg
SP 27-48-487	35.60	121.75	285	85	13.6	748	1347
SP 33-48-732	53.14	181.73	308	100	20.4	817	1760
SP 41-48-1038	75.44	258.00	311	122	29.0	1066	2730
SP 49-48-1548	112.50	384.75	321	140	43.5	1506	3827
SP 55-48-2076	150.97	516.32	324	157	58.1	1746	4920

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Model	Filter area m ²	Flow max. m ³ /h	Height cm*	Diameter cm	Perlite kg	Transport Weight kg	Operation Weight kg
SP-29-36-200	10.9	37.28	244	84	4	333	1021
SP-29-36-250	13.6	46.51	244	84	5	340	1027
SP-29-36-300	16.3	55.75	244	84	6	347	1034
SP-29-36-350	19.0	64.98	244	84	7	354	1041
SP-29-36-400	21.7	74.21	244	84	8	361	1048
SP-29-36-450	24.5	83.8	244	84	9	367	1055
SP-29-36-500	27.3	93.4	244	84	10	374	1061

HIGHER FLOW RATES, LOWER CAPACITIES AND REDUCED HEIGHTS ON REQUEST.

THE REQUIRED PERLITE MEDIA VOLUME IS BASED ON A 3 MM THICK CAKE WHICH IS RECOMMENDED FOR OPTIMAL PERFORMANCE.

*: WITH OPERATING SPACE



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