

Autotrophic De-Nitrification Reactor ADN

- the safe nitrate filter -



AquaCare GmbH & Co. KG
Am Wiesenbusch 11 • D-45966 Gladbeck • Germany
☎ 0 20 43 - 37 57 58-0 • 📠 0 20 43 - 37 57 58-90
www.aquacare.de • info@aquacare.de



- Stable nitrate elimination without complex measuring technique
- Compact design
- Frequency controlled energy saving circulation pump
- Pass meters inlet flow
- Automatically driven flushing system with energy-saving frequency converter
- Built with shock resistant material (PVC)

The ADN filter is compact de-nitrification system for fresh (pH>8) and sea water. On the sulphur granules specialized autotrophic bacteria will grow, "eat" the sulphur and respire the nitrate. Organic substances are not necessary. The AquaCare ADN filter has a built in flushing system to prevent blocking the filter bed. The flushing is automatically driven. Every time you can see the condition of the filter bed because the main tube is made of transparent PVC (except ADN1000 and larger: sight glasses). The de-aeration is made with the water outlet.

Technical Data of AquaCare ADN Filters:

Size	ADN 400	ADN 600	ADN 1000	ADN 1150	ADN 1500
Order number with autom. flushing	301-041	301-061	301-101	301-111	301-151
Volume in litres	70	200	480	680	1150
Diameter in mm	400	600	1000	1150	1500
max. size of aquarium in m ³	75	200	500	700	1000
maximum elimination in kg N/d ¹⁾	1.0	3.0	7.2	9.9	16.8
in kg protein / d ²⁾	6.3	19	45	62	105
in kg food / d ³⁾	10.5	31.3	75	103	175
Height in cm	115	130	170	170	200
Footprint size length × wide in cm	115 × 50	140 × 70	200 × 100	210 × 130	230 × 160
Materials	PVC gray and transparent, NBR o-ring, PA screws				
Connection inlet / outlet (PVC)	d25 / d40	d50 / d50	d63 / d63	d75 / d75	d75 / d75
Drain ball valve	d20	d25	d32	d40	d40
Electrical connection	400 V / 50 Hz 0.32 kW	400 V / 50 Hz 0.5 kW	400 V / 50 Hz 1.5 kW	400 V / 50 Hz 2.2 kW	400 V / 50 Hz 4.4 kW
Filter material	Sulphur granules (99,8% purity), size proximal 3-5 mm				
Recommended inlet water flow in m ³ /h	0,2 – 0,9	0,6 – 2,5	1,5 – 6,0	2,1 - 8,5	3,6 - 14
Maximum operation pressure	1 metre water column (calculated from top cap)				
Transport weight in kg	150	400	900	1100	2200
Operation weight in kg	200	500	1300	1800	2800
pH value of outlet water	0,5-1,0 pH values lower than water inlet (depending on alkalinity)				
ORP (Redox) sensor connector	For all sensors with diameter 12 mm				

* special sizes possible! 1) at 50 mg/l nitrate aquarium concentration, 20°C; 2) calculated with 16% N in protein; 3) calculated with 60% protein in dry mass; a perfect function is only guaranteed if there is a sufficient supply of trace elements, especially iron