

R-AQUADYN®

Rack Solutions for Water Treatment



MICRODYN-NADIR GmbH
Kasteler Straße 45
65203 Wiesbaden / Germany
Phone: + 49 611 962 6001
info@microdyn-nadir.de
www.microdyn-nadir.com

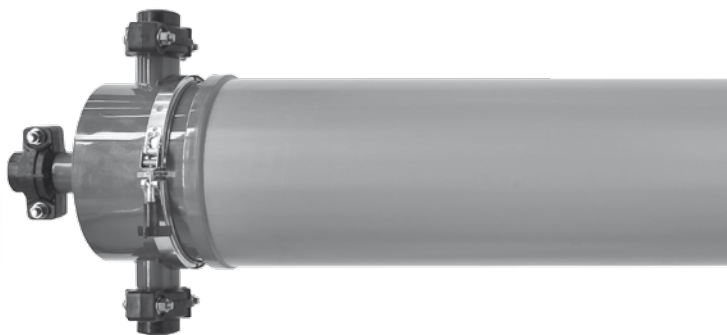


MICRODYN
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ADVANCED SEPARATION TECHNOLOGIES

R-AQUADYN®

Rack solution with AQUADYN® UA1060 PAN hollow fiber modules



The R-AQUADYN® is a rack solution based on the double asymmetric and hydrophilic low fouling PAN hollow fiber membrane modules type AQUADYN® UA1060. It is the perfect choice for large-scale water treatment plants.

The simple construction of the rack allows for the easy integration of a set of pre-assembled AQUADYN® UA1060 modules into a water treatment plant. The R-AQUADYN® is available in different configurations. The number of AQUADYN® UA1060 modules in one rack unit is 24 pieces (1440 m² / 15,500 ft² membrane area). These 24 pieces rack units can be manifolded to a bigger rack (parallel arrangement) resulting in a set of 48 (2880 m² / 31,000 ft²) or respectively 96 pieces (5760 m² / 62,000ft²).

The R-AQUADYN® plug-and-play solution focuses on the cost optimization per m³ filtrate produced. It is designed to fit into standard shipping containers.

Applications:

- » effluent treatment after biological treatment plants
- » pre-treatment for reverse osmosis (sea water desalination and boiler feed production)
- » stormwater management
- » river water treatment for industrial use
- » cooling water
- » filtration of industrial water for the food industry
- » borehole water treatment
- » karst water filtration

Rack- / Module Specifications and Operation Data

Rack Unit Specification	
Rack type	R-AQUADYN®
Frame material	Stainless Steel
Number of modules in one unit	24
Total Membrane Area	1440 m ² / 15,500 ft ²
Height	2159 mm / 85"
Length	2560 mm / 100.8"
Width	1885 mm / 74.2"
Weight	1830 kg / 4034 lbs
Connection Aeration	6" Stainless Steel
Connection Permeate	8" PVC
Connection Feed	6" PVC
Connection Reject	8" PVC

Module Specification	
Filtration type	Ultrafiltration
Membrane type	Hollow fiber
Membrane structure	Double asymmetric
Membrane potting	Epoxy
Membrane material	PAN
Housing material	uPVC
Fiber arrangement	U-Shape
Flow type	Out/In
Type of filtration	Dead End
Regeneration	(enhanced) Back Flush, Forward Flush, Air Scouring
Membrane area	60 m ² / 646 ft ²
Hollow fiber diameter OD/ID	1.7 mm/0.9 mm / 0.07"/0.035"
Pore size	0.025 µm
Module diameter	267 mm / 10.5"
Module length	1737 mm / 68.4"
Connectors	Feed port: 2" Victaulic Permeate port: 2" Victaulic Reject port: 2" Victaulic Air inlet port: G1/2"
Standard preservative	Sodium meta-bisulphite

ADVANTAGES

- » easy installation & integration
- » plug-and-play
- » small footprint
- » optimized costs / m³ filtrate
- » hydrophilic low fouling membrane material
- » double asymmetric hollow fiber membranes
- » effective retention of particles and bacteria
- » high and stable permeate performance
- » flexible flushing modes

Operation Specification Per Rack Unit *	
Applicable water flux (m ³ /h)	≤ 172.8
Capacity feed pump (m ³ /h)	≤ 345.6
Cap. backflush pump (m ³ /h)	≤ 345.6
Max. transmembrane pressure	1.0 bar
Max. module pressure	5.0 bar
Applicable air scour rate	72 - 240 Nm ³ /h
Air pressure	< 1.2 bar
Temperature range	5 - 45°C
pH range, operation	2 - 10
pH range, cleaning	1 - 10
Max. TSS feed	≤ 350 mg/L
Max. NTU feed	≤ 300 NTU

* Depending on feed water quality and operating conditions