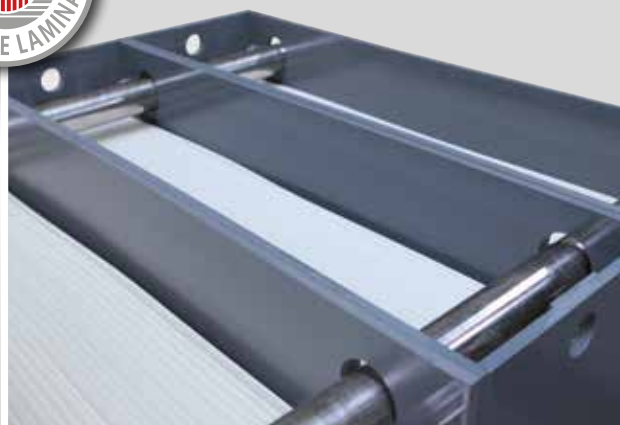
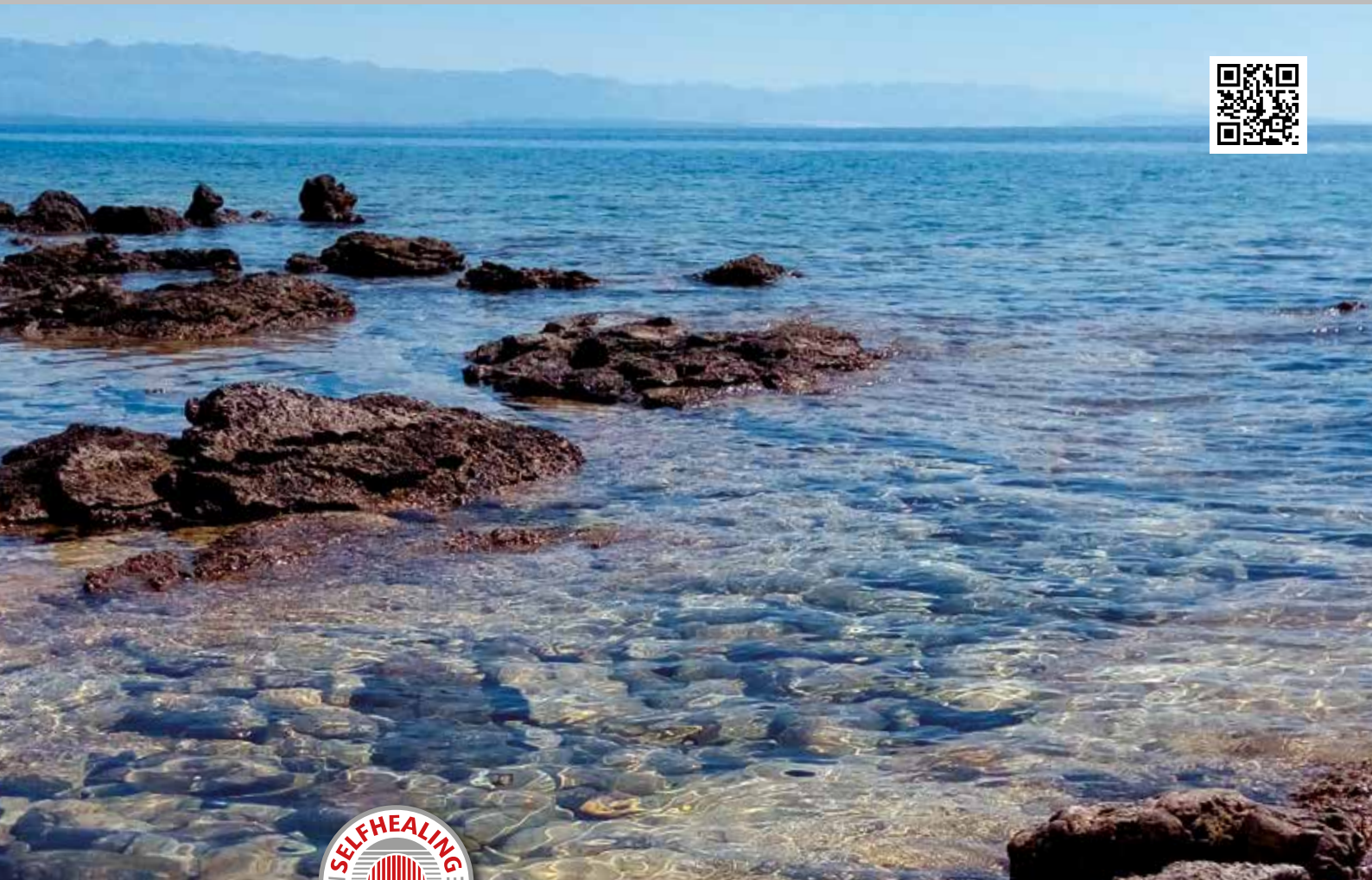


BIO-CEL® MBR Systems

Efficient Wastewater Treatment with
BIO-CEL® MBR for a Naturist Camp in Croatia



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



MICRODYN
NADIR

ADVANCED SEPARATION TECHNOLOGIES

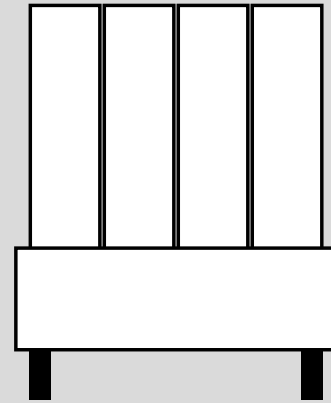
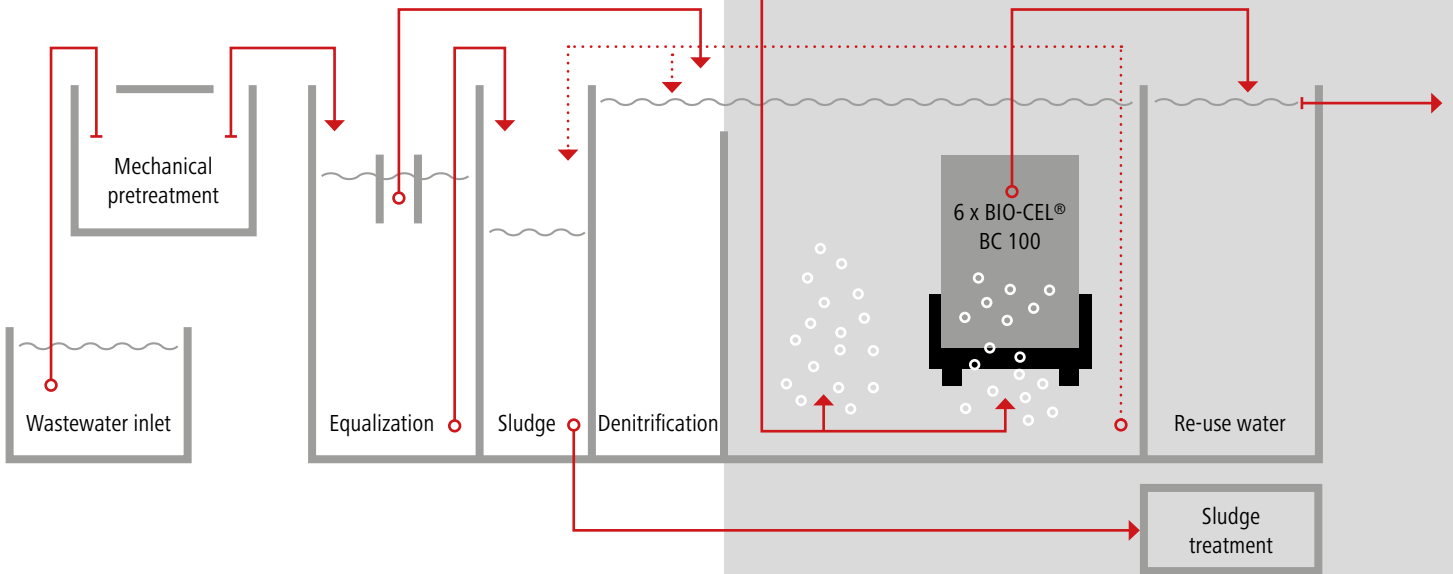
BIO-CEL® MBR Systems

Efficient Wastewater Treatment with BIO-CEL® MBR for a Naturist Camp in Croatia

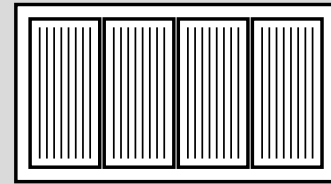
Baldarin Camp is a naturist camp surrounded by unspoiled nature. In benefit of this, an MBR plant for the treatment of municipal wastewater was built in 2013. The plant runs at a capacity of 143 m³/day. The idea was to build a second wastewater treatment line for the additional influent (total 1900 PE) resulting from the growing capacity of the camp.

The MBR plant is equipped with 6 modules type BIO-CEL® BC100 with a total membrane area of 600 m² arranged in one filtration line. The membranes are operating at 10.5 l/m²h with a Trans Membrane Pressure (TMP) of - 0.32 bar. The MLSS in the filtration basin ranges between 12 - 14 g/l. After a dehydration process in simple bags without polymer the sludge is stabilized and used for fertilization.

The plant is running during the working season of the camp (April - October). At the end of the season the membrane modules have to be preserved in clean chlorinated water (100 - 500 ppm).



BIO-CEL® BC 100



ADVANTAGES

- » Space saving installation
- » High and constant effluent quality
- » Reliable plant performance
- » Efficient plant operation
- » Reuse of stabilized sludge as fertilizer

Parameters of the plant

	Influent quality	Effluent quality
Suspended solids	400 - 450 [mg/l]	< 5 [mg/l]
BOD	200 - 400 [mg/l]	< 5 [mg/l]
COD	650 - 750 [mg/l]	< 30 [mg/l]
Nitrogen (total)	10 - 45 [mg/l]	< 15 [mg/l]
Phosphate (total)	5 - 15 [mg/l]	< 2 [mg/l]

Plant design

Commissioning	2013
Plant Integration	Almes-eko d.o.o.
Number of BIO-CEL® BC 100 installed	6
Total Membrane Area	600 m ²
Maximum Daily Flow	143 m ³ /d
Daily Average Flow	23.8 m ³ /h
Trans Membrane Pressure	- 0.32 bar