

# NEXUS REVERSE OSMOSIS

For pure water



**NEXUS**

REVERSE OSMOSIS

# OPTIMIZE THE GROWTH OF YOUR CROP

Although rainwater is the best water for any crop, it is not always available, so a backup to bridge dry periods is essential. Groundwater is often used in such circumstances, because it is often available and its quality and temperature are more consistent compared to surface water. However, groundwater often contains so many dissolved elements that it cannot be used directly, and requires desalination. Reverse osmosis (RO) is the most suitable desalination method, and produces water with quality comparable to that of rainwater



## Omgekeerd osmose-systeem Nexus

Van der Ende Group has developed a high-quality, compact reverse osmosis system called Nexus. Nexus removes all unwanted components from water, such as sodium and other salts, as well as all kinds of organic contamination and bacteria. It is a reliable purification system, which produces pure, soft water.

What makes it different is its simplicity: it is built around a modular system (see next page) and

selfsupporting structure. This simple design makes it possible to expand the capacity of the system if desired, and also saves money in comparison to traditional systems. The low-maintenance modular systems can be designed completely according to requirements and the local situation. The capacity of a Nexus system varies between 24 m<sup>3</sup> and 1,200 m<sup>3</sup> per day.

There are 3 types of Nexus products:

- o Nexus
- o Nexus Light
- o Nexus Mini

'Thanks to Van der Ende Group's innovative RO, we can now run 24 hours a day and get more water from the well.'

*Philip van Antwerpen*  
Agro Care Managing Director



Description	Nexus	Nexus Light	Nexus Mini
Suitable for drinking water	yes	yes	yes
Suitable for groundwater	yes	yes	yes
Permeate capacity (m <sup>3</sup> /h)	2 to at least	2 to 7.5	1 or 1.5
EC of untreated water (mS/cm)	up to 25	up to 4	up to 2
Maximum system pressure (bar)	35	25	20
Maximum recovery* (%)	90%	90%	90%
Membrane size (inches)	8	8	4
Simetra datalogging system	optional	optional	optional
Horticultural computer ready**	yes	yes	yes
Dimensions***			
Length (m)	1.5 to 6.5	1.5 to 3.5	1.16
Width (m)	0.85	0.65	0.52
Height (m)	2	1.8	1.6

\* The attainable recovery is calculated according to a water analysis

\*\* Climate computer can control the system and read the alarm

\*\*\* Standard sizes, may vary with custom equipment

### Custom-made Dutch product

Since every situation is unique, every installation is customer specific designed. This reverse osmosis system is manufactured in the Netherlands. The Nexus system is easy to use on site, one of the reasons being that it can be connected to the climate computer and controlled remotely.



### Benefits of a Nexus reverse osmosis system

- o Pure irrigation water the whole year round, independent of rainfall;
- o Longer circulation of drain water, and therewith less waste water thanks to low sodium input;
- o Crops grow best with water which only contains the desired added nutrients;
- o Lower maintenance costs thanks to protection of the watering system

### Modular

The most eye-catching feature of the Nexus are the black blocks based on patented IPM™ technology. These blocks, which form the self-supporting structure of the system, houses all necessary piping. Building different models of these pressure vessel blocks together avoids the necessity for complex pipework, and allows any required membrane structure to be made.

### Simetra datalogging system

System Simetra is a datalogging system which stores data and facilitates the identification and solution of any problems, keeping maintenance and other costs low.

### Maintenance

The Nexus RO system will operate longer if it is properly maintained and periodically cleaned with a CIP service (Cleaning In Place). This involves cleaning the membranes with a special cleaning agent to remove various kinds of dirt. The frequency of this service varies according to the situation, and depends on the feed water quality and consumption.



'What appeals to us about the RO Nexus is the compact, attractive and simple design, which is ideal for the international market. It's great working with Van der Ende Group, where a deal is a deal.'



Ron van der Knaap  
Director  
Van der Knaap Groep



#### **Low energy consumption and sustainable**

The Nexus consumes very little energy, thanks to the use of high efficiency pumps and special membranes. The system is tailor-made to match the specific needs and situation of each client. Individual objectives and circumstances are taken into consideration so that the system can operate as efficiently as possible.

#### **Pre-filtration and post-filtration**

In order to protect membranes from things such as solids or high concentrations of iron, the system can be equipped with various types of pre-filtration. This includes sand/multimedia filtration, deferrization and disc filtration. Water can also be post-treated with an aeration tower, for example. This can be useful if gases such as methane have to be removed.



**Vander Ende**  
**Group**