

CASE STUDY UNITED ARAB EMIRATES

INDEPENDENT WATER SOLUTION FOR AGRICULTURE

Client

Environment Agency, United Arab Emirates (UAE)

Location

remote agriculture farm, near Al-Alin Desert

Introduction

Beside of harsh climate conditions, one of the major difficulties for the agriculture farms in desert areas is access to salt-free water. Most underground water resources are brackish and not suitable for irrigation. Trunz Water Systems and its local distribution partner provided a tailor-made solution to the Environment Agency who is operating a plantation near Al-Alin desert. The containerised solution contains several advantages: all components are protected from dirt, sand and high air temperature, at times above 50 degrees. Further to this, the container unit is easy to relocate and can be locked during operation or night time. The container holds a special brackish water unit which is able to treat 1400 l/h. Thanks to the proprietary "Pearson" energy recovery pump, the Reverse Osmosis-System is producing clean water with an exceptionally low energy consumption (approx. 2.7 kWh).



On-site conditions

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| Access to location | 4 wheel drive (sand, desert) |
| Water sources | reservoir, delivered by pipeline |
| Common contamination in raw water | organic and inorganic contamination brackish water up to 12'000 ppm |
| ∅ distance from source water to unit | approx. 20 metres (from reservoir) |
| ∅ water temperature | 30 – 40° C |
| ∅ air temperature | 50 – 65° C |
| Site preparation work | none |
| ∅ sun radiation | 6 hours |



Technical layout

- 1 Water source (reservoir, delivered by pipeline) and feed pump 24V with 20m hose
- 2 Solar panels, 24 V, 160 Wp
- 3 Trunz Brackish Container TBC 100 (1400 l/h) incl. Power Center
- 4 Clean water for irrigation

