



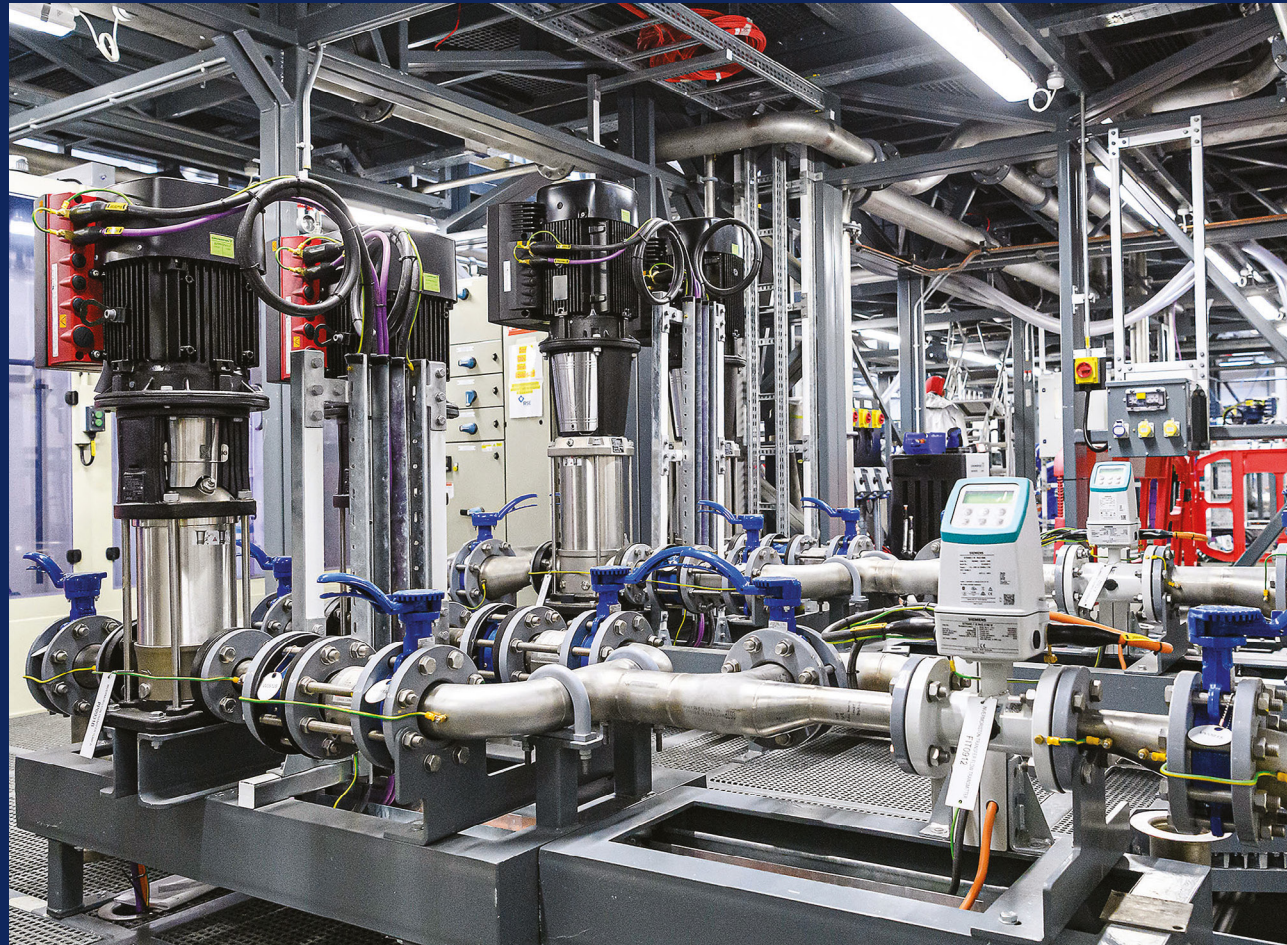
Mega Modular Treatment Plant

Municipal Treatment Range

ross-eng.com

Nanofiltration Plant
50<500m³ / DAY





An Introduction

Modular Treatment Solutions



RSE offers its clients a complete modular design, build and delivery engineering and construction service. RSE is the market leader in the design, fabrication and delivery of award winning water treatment plants across the UK.

Our specialist water treatment division has successfully delivered multiple modular plants offering tremendous environmental, quality and health and safety benefits over traditional on-site fabrication and assembly. The RSE modular water treatment range offers a simple, robust solution. Our technologies include nanofiltration and ultrafiltration, reverse osmosis and other specialist processes for the supply of top quality water from poor quality raw water envelopes.

What we offer

Project cost certainty – offsite build means minimal site time

Programme efficiency and certainty – weather, site and logistical dependencies removed

Treatment processes tailored to individual site conditions

Consistently high build quality

Health and safety benefits from construction in a factory environment

Environmental benefits from offsite factory construction

Proven process engineering, factory tested

Standardisation for O&M's and commonality of spares

Guaranteed whole life costs

Inbuilt redundancy / supply resilience

Fully wet tested and pre-commissioned before load-out

Energy efficient plant reducing opex costs

Remote supervision and support facilities

Accelerated regulatory compliance, delivering top quality potable water

Guarantees customer satisfaction

Reputational benefits

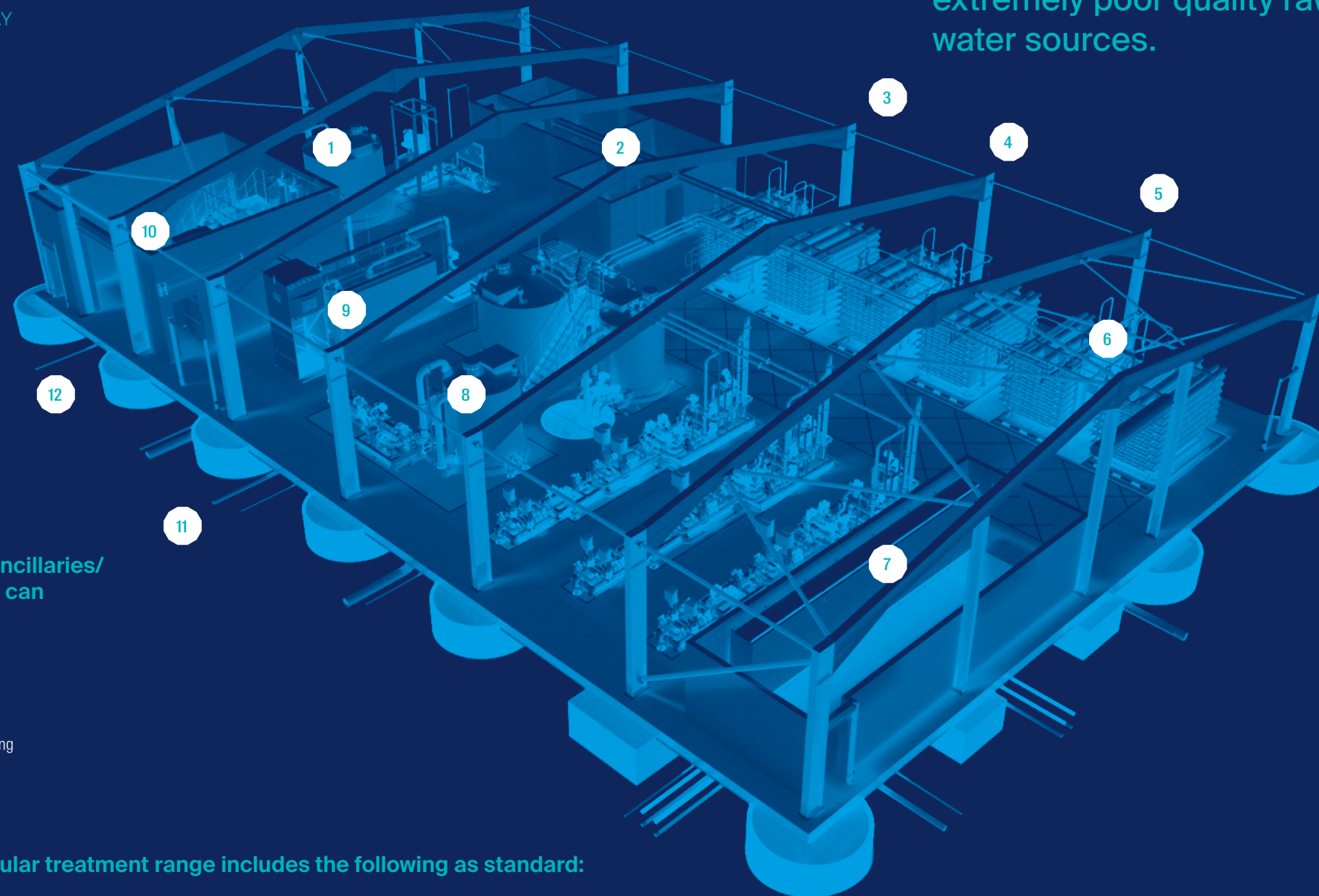


The Water Treatment Experts

Mega Modular

Nanofiltration Plant

0.5ML<2.5ML / DAY



The following ancillaries/ enhancements can be provided:

- Reverse osmosis
- Chloramination
- SCADA
- Plumbosolvency dosing
- UV disinfection

Our mega modular treatment range includes the following as standard:

- BIM compliant autodesk inventor 3D model
- Factory pre-assembly
- Duty/standby plant and equipment
- Water quality sampling instruments
- Integrated HMI (human machine interface)
- Telemetry
- IMCC (intelligent motor control centre)
- Profibus communications network
- Remote plant control

A range of robust solutions based on Nanofiltration treatment for the supply of excellent quality water from extremely poor quality raw water sources.

This range is particularly suited to municipal water supplies and industrial applications.

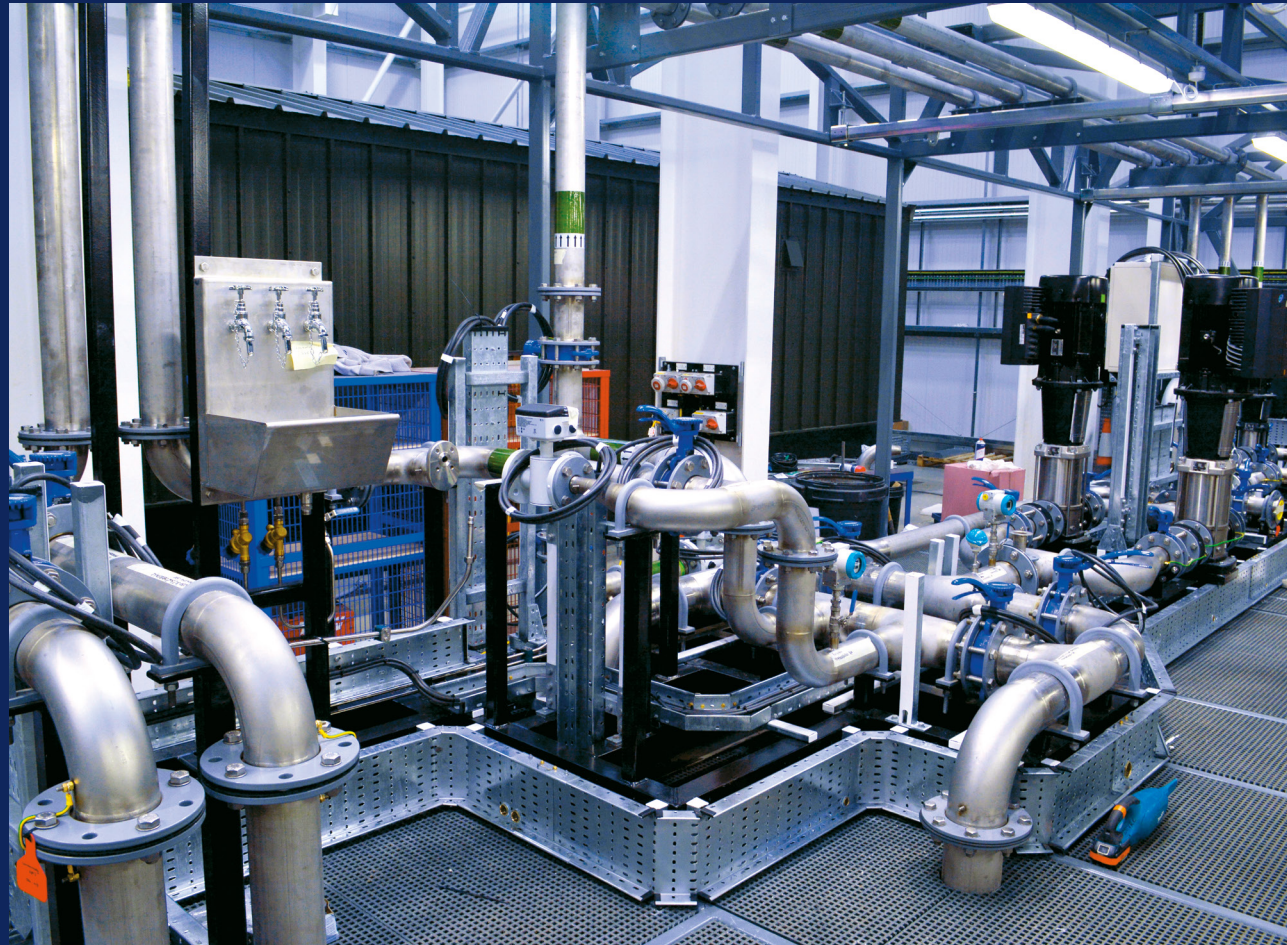
Each plant is comprised of modular skids which are fabricated and fully dry assembled including interconnections within our purpose built facility, before shipping to site for installation within a portal frame building. All terminations and civil interfaces are accurately surveyed, confirmed and verified before leaving our premises.

Integrated Components:

- 01 Final water collection and transfer**
 - Final water tank
 - Final water uplift pumps (if required)
 - 02 Mess facilities** typically comprises
 - Control room
 - Laboratory
 - Canteen
 - WC
 - 03 Stream 1**
 - 04 Stream 2**
 - 05 Stream 3**
 - 06 Nanofiltration membranes** Nanofiltration membranes remove
 - Colour
 - Cryptosporidium
 - Giardia
 - Particles as small as 2000 amu

Nanofiltration membranes are arranged in streams, each stream includes

 - Duty/standby feed pumps
 - Duty/standby recirculation pumps
 - 07 MCC room** Contained within the MCC room
 - IMCC
 - Telemetry systems
 - 08 Raw water strainers and storage tank**
 - 2mm basket strainers
 - Removal of coarse solids
 - 09 Disinfection dosing** Sodium hypochlorite dosing including
 - Chemical transfer
 - Dilution & storage
 - Dosing pumps
 - 10 pH correction & remineralisation**
 - Sodium carbonate dosing
 - Batching & storage
 - Dosing pumps
 - 11 Raw Water**
 - 12 Treated water to supply**
- Modular plants typically comprise of 2 to 5 nanofiltration membrane streams according to the required plant capacity.



The Modular Water Treatment Experts



Nanofiltration Table of Treatment

Parameter		Raw Water	Final Water
pH	—	2.0>9.5	Typically 8.0
Turbidity	FTU	Max. 10	Less than 0.2
Colour	Deg H	Max. 430	Less than 2
Iron	µg/l	Max. 3670	Less than 7
Total Mn	µg/l	Max. 430	Less than 10
Total Al	µg/l	Max. 860	Less than 9
Susp Solids	mg/l	Max. 5.0	Trace
TOC	mg/l	Max 43	Less than 10

Why Nanofiltration?

- No chemical /sludge removal
- Fully automated membrane cleaning system
- Low chemical usage
- Unmanned operation
- Remote monitoring
- Profibus enabled
- Duty stand-by system
- Energy efficient management system



For more information and contact details visit

ross-eng.com