

Water & Sanitation

Technical Data sheet

BB140 Reverse Osmosis Unit



WATER PURIFICATION TECHNOLOGY

The equipment is manufactured from best-in-class quality components to obtain very compact, lightweight and mobile water cleaning systems.

The standard units have been designed to comply with basic needs and typical client criteria, but specifications can be altered to accommodate local conditions.

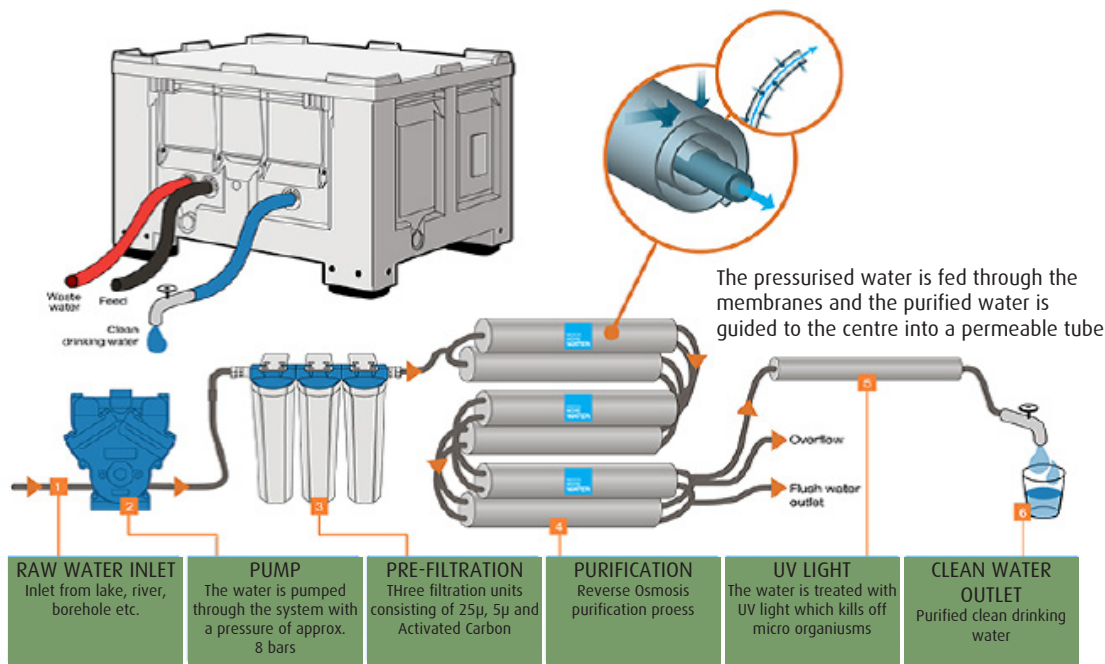
CLEANING PROCESSES

The BlueBox units are able to extract potable water of a quality exceeding WHO standards from virtually any contaminated water source (including brackish and saline water).

The BlueBox equipment uses ultra-filtration or reverse osmosis depending on the level of pollution and the type of contaminants in the water to be cleaned. All models can be adapted to local water conditions. The different steps of the cleaning process are as follows:

Pre-filtration Large particles are removed when the water passes through a strainer (100 micron), and three filters (25 micron, 5 micron and activated carbon).

Ultra-filtration UF is a mechanical separation process which removes microorganisms, particles and organic material from a water stream. Particles sizes are in the range of 0.1-0.01 micron.



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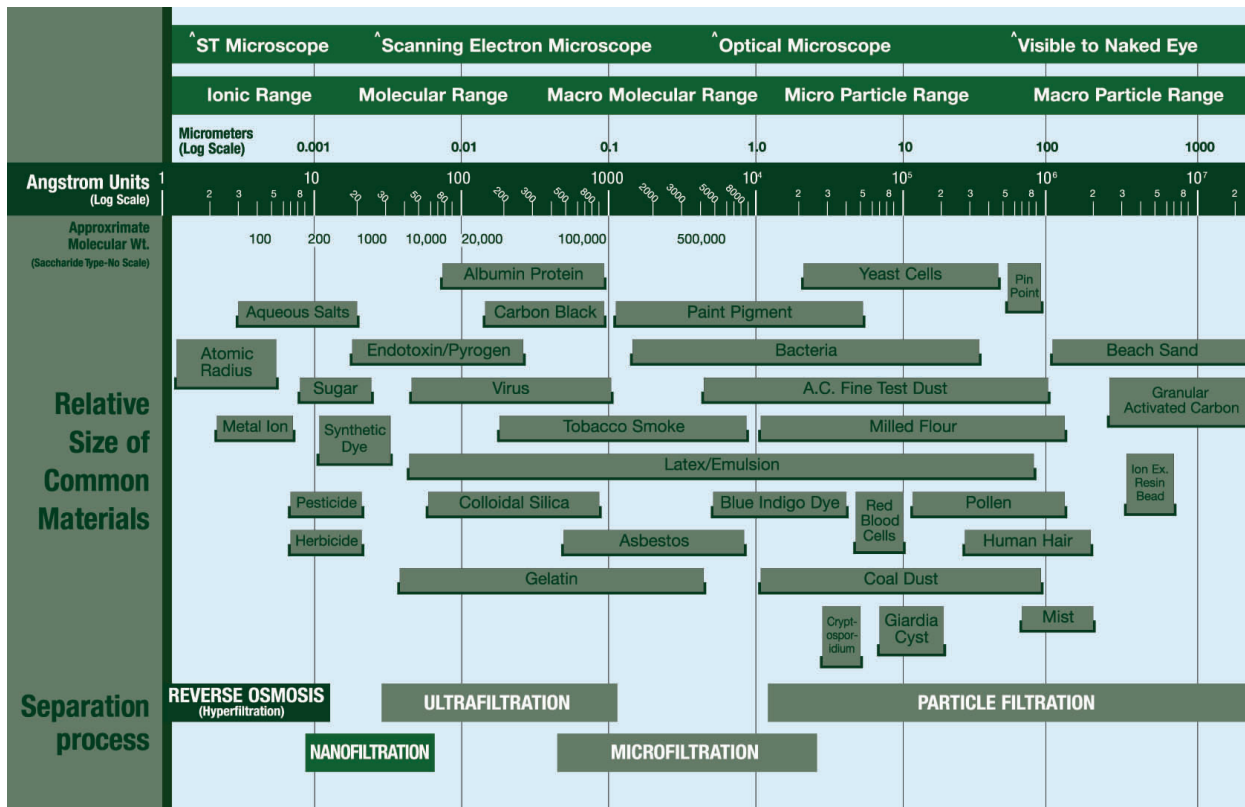
Reverse Osmosis RO is the only technology which can remove heavy metals such as lead, copper, barium, chrome, mercury, cadmium, flour, nitrates, selenium, arsenic, fluoride, pesticides etc. as well as E. coli bacteria and the Giardia and Cryptosporidium parasites. Particles sizes are in the range of 0.001-0.0001 micron.

UV-disinfection Finally, exposure to UV light is used as an extra safeguard to destroy any remaining microorganisms.

OPTIMIZED LOGISTICS In order to limit footprint while ensuring ample output, the construction of the BlueBox equipment is modular: The large units have been built into sturdy boxes of standard dimensions to facilitate stacking and transport. The small units have been fitted into trolley suitcases weighing as little as 23 kg, allowing them to be hand-carried.

COST-EFFICIENT DESIGN As a result of their low-tech design and robustness, the BlueBox units are very durable, even in harsh environments. In addition, they are easy to operate and require very little maintenance.

POWER SOURCES The BlueBox units are adaptable to most power sources: electricity grid, generators, solar power, fuel cells, and car batteries.



BB 140 Mobile, portable desalination unit.

This unit has a daily capacity of 3360 litres per day, giving 5 litres of drinking water for 672 people, or 168 pcs 20 L bottles.

Enclosed fan cooled (TEFC) induction 1300 watt motor. Draws 1300 watts in steady state operation. Optimised for 2kW generator or higher. Pre-filter and housing internally mounted for ease of service.

Jabco impeller pump to lift water and provide positive pressure to the high pressure pump.



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General Pump WM series 316 stainless steel high pressure pump, the workhorse of the RO industry. General Pump relief valve to prevent overpressurisation and allow for pressure washing.

Sturdy 5 metre draw hose fitted with one way valve so it remains primed, with detachable strainer. Four 5 micron pleated paper pre-filter cartridges included. Two compact RO 21" membranes.

Can be coupled with optional pressure washer gun. Heavy duty vibration dampeners. Sturdy Multibrix box with integrated wheels



BlueBox 140 RO Specifications

Type	Mobile Water Purification Unit, Reverse Osmosis (RO) filtration
Raw Water Source	Sea and brackish water > 2500ppm
Capacity	140 l/hr 3.2m ³ pd at +25C water temperature
Water Quality	Superior WHO quality
Dimensions	L: 900mm x B: 600mm x H: 400mm
Weight / Vol.	61.00kg / 0.22m ³
Power Source	1.3 kW, 220/230 Volt, 50/60 Hz
Packaging	Built into a sturdy, weather resistant plastic box with integrated wheels for easy transport
Purifying Filters	5 micron
Pump Type	WM series 316 stainless steel high pressure pump with a 1300 W electric motor
Operating Pressure	55 bar



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