



Proteus

Series **Fact Sheet**

The **Proteus** Series is a range of **Mobile Water Treatment Systems** available alone, in parallel or in series with other systems from the **Ecolutia** mobile fleet. This range features the **Proteus Solo**, a single vessel suitable for smaller applications and the **Proteus**, a combination of four vessels housed within a standard shipping container. The **Proteus** units are delivered pre loaded with the specified treatment media ready to start working immediately.

The **Proteus** Series is integrated with high levels of instrumentation and automation to guarantee the quality and volume of water required. This is also supported by a university graduate Ecolutia Field Service Engineer (FSE) who will operate and maintain the equipment for you.

Part of a much larger range of Mobile Water Treatment equipment from Ecolutia, the **Proteus** offers typical water treatments such as: filtration, softening, demineralisation, condensate polishing, de-oxygenation and carbon absorption. Multiple configurations allow for flexible

customisation specific to your project. Common to the **Proteus** Series and throughout Ecolutia's fleet, are the industry leading high flow rates and large capacities.

The **Proteus** can be combined with both seawater and brackish water **Triton RO** units to provide pre treated water. It can also be configured as an ion exchange unit post treatment to produce higher specification product water. Both **on** and **off** site regeneration options are available. With so many treatment options, and exceptional service, there are multiple applications for the Ecolutia **Proteus** Series.



Proteus Solo





PROTEUS



PROTEUS SOLO

Typical configurations, applications and flow data are shown in the table below:

<p>Filtration</p> <p>Proteus up to 175m³/h Proteus Solo up to 35m³/h</p> <ul style="list-style-type: none"> Activated filter media is used for reduction of Turbidity (NTU), Suspendid Solids (TSS) and Silt Density Index (SDI). Turbidity monitoring systems and in-line coagulation dosing and with automated shut down features to ensure quality operation. <p>Softening</p> <p>Proteus up to 300m³/h with a product hardness of <1ppm.</p> <p>Proteus Solo up to 130m³/h with a product hardness of <1ppm.</p> <ul style="list-style-type: none"> Includes a separate brine skid for onsite regeneration resulting in reduced expenses from transport and trailer/resin exchanges. Hardness monitoring and automated control ensure efficient and reliable operation. 	<p>Demineralisation</p> <p>Proteus using ion exchange resin up to 280m³/h 2 step demineralisation and, 200m³/h mixed bed quality.</p> <p>Proteus Solo using ion exchange resin up to 130m³/h</p> <ul style="list-style-type: none"> OFF site regeneration. 'Regen – in – place' skid for efficient on-site regeneration. In – line conductivity monitoring systems with automated shut down features to ensure quality operation. <p>Carbon absorption</p> <p>Proteus up to 175m³/h Proteus Solo up to 35m³/h</p> <ul style="list-style-type: none"> Treats most feedwaters and produces greater flows than competing mobile water treatment equipment. Flow rates are dependent on contact times required in each particular application. 	<p>De-oxygenation</p> <p>Proteus up to 80m³/h with <5ppb dissolved oxygen.</p> <p>Proteus Solo up to 40m³/h with <5ppb dissolved oxygen.</p> <ul style="list-style-type: none"> Results indicate this service to be invaluable during high pressure boiler start ups or restarts. Treats most feedwaters and produces greater flows than competing mobile water treatment equipment. <p>Condensate Polishing</p> <p>Proteus up to 280m³/h Proteus Solo up to 130m³/h</p> <ul style="list-style-type: none"> Saves both discharge and make up water costs. Invaluable service for commissioning of air cooled condensers.
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Some of the typical applications of the **Proteus** Series follow, but the list extends into many industry specific utilisations. Add also to this list the possibility of configuring the **Proteus**, **Proteus Solo** or other Ecolutia Mobile Water Treatment Systems, in series, parallel or as stand alone units and you have many design options for your project.

Proteus Series Typical Applications

- Emergency water requirement
- Plant start up and commissioning
- Planned or unplanned maintenance outages
- Seasonal or peak water consumption changes
- Temporary change in quality requirement
- Pre treatment to existing plant feedwater or RO
- Environmental and reuse requirements

Proteus Key Data	
Max Operating Temp	50°C (122 °F)
Length	12.2m (40 ft)
Width	2.5m (8 ft)
Height	2.9m (9.6 ft)
Shipping Weight	22,000 - 26,000 kg (~ 48,500 - 57,300 lbs)
Max Operating Weight	~ 38,500 kg (~ 84,900lbs)
Max Inlet Pressure	7 bar (100psi)
Inlet, Outlet and Waste Connector	DN 150 PN 16 (6")
Power Requirements	380 - 460V, 50 - 60Hz, 16A

Proteus Solo Key Data	
Max Operating Temp	50°C (122 °F)
Length	3m (10 ft)
Width	2m (6.7 ft)
Height	2.5m (8.3 ft)
Shipping Weight	7,500 kg (~16,500 lbs)
Max Operating Weight	8,500 kg (~ 18,700lbs)
Max Inlet Pressure	7 bar (100psi)
Inlet, Outlet and Waste Connector	DN 100 PN 16 (4")
Power Requirements*	110 - 240V, 50 - 60Hz, 10A

* power only required with optional instrument package

Ecolutia operates 24-hours, 365 days a year around the world. With a **superior** fleet set up for **swift deployment** and a **dedicated team** focused on meeting customer needs, Ecolutia can provide you with an **immediate, cost effective** and **superior mobile solution** for your water treatment needs. Whether you are interested in a **rapid response** service to deal with critical issues or you are more likely to deploy a **short or long term solution**, Ecolutia can provide you with the technology and the service that fits.

Speak to your sales representative or contact us at www.ecolutia.com to discuss your project's exact requirements and how Ecolutia can find the right service solution.