PURITE

Purite Water Purification

Laboratory Product Guide

WATER PURIFICATION SYSTEMS

Assurance of reliability & consistency

Purite specialises in the design, development and manufacture of advanced, high performance laboratory water purification systems.

Every Purite system is designed to meet the needs of specific applications, providing high levels of water quality, consistency and reliability using a wide range of advanced technologies.

We also offer full technical support, training and aftermarket services, to ensure a maximum return on investment and unrivalled value for our customers.

Choose a Purite system for:

Range of technologies

- **Reverse osmosis:** a total membrane process which can remove > 98% minerals and > 99% bacteria from potable water
- **Irradiation:** applied at 254 or 185nm to destroy micro organisms or to reduce Total Organic Carbon (TOC) levels
- **Filtration:** incorporates a wide range of sub-micron ratings which can be used to effectively reduce levels of bacteria, endotoxin, RNases and DNases from ultrapure water
- **Ion-exchange:** specifically selected nuclear grade resin combined with high activity absorbents to produce an ultra pure water quality (18.2MΩ.cm) with low TOC
- **Electrodeionisation:** to perform deionisation using an electronic cell to replace the traditional resin method, providing consistent purity of water and low running costs.

Ease of use

- A clear touch screen panel for easy menu navigation providing fingertip diagnostic functionality
- A range of menu features simplify operation and identification of key parameters
- Multiple dispense options available.

Simple maintenance and servicing

- Our range of long life cartridge packs and consumables are easy to change
- Semi-automated cleaning and sanitising routines minimise operator intervention
- Audible alarms for critical system conditions or routine operations
- WiFi connectivity to local LAN for software updates, data storage and operational maintenance assistance
- Service engineers are available as part of our maintenance care programmes, which can be tailored to meet your exact requirements.

Complete reliability

- High quality, long life pre-treatment modules based on proven technology ensure a consistent supply of purified water
- Data capture as standard.

Improved energy and water efficiency

- Our Purite units have an ECO option which incorporates an energy saving standby feature and 50% recovery of the RO water, making our ECO Purite units energy efficient and low on water usage and waste. (Excluding Purite Neptune Ultimate)

Fast configuration and installation

- A modular, optimised design enables quick system construction and configuration and simplifies installation and set-up
- QR codes for video viewing of consumable changes and installation procedures.

Maximum flexibility

- A space-saving design, with minimal external connections makes the units simple to install and allows for bench-top, wall mounted or under bench installation.

Compliance and accreditation

- Water qualities comply with industry standards:
  - BS EN ISO 3696
  - ASTM D1193-06 industry standards
- Designed and manufactured within an ISO 9001 (Quality), ISO 14001 (Environment) and ISO 45001 (Occupational Health & Safety) certified Management system.

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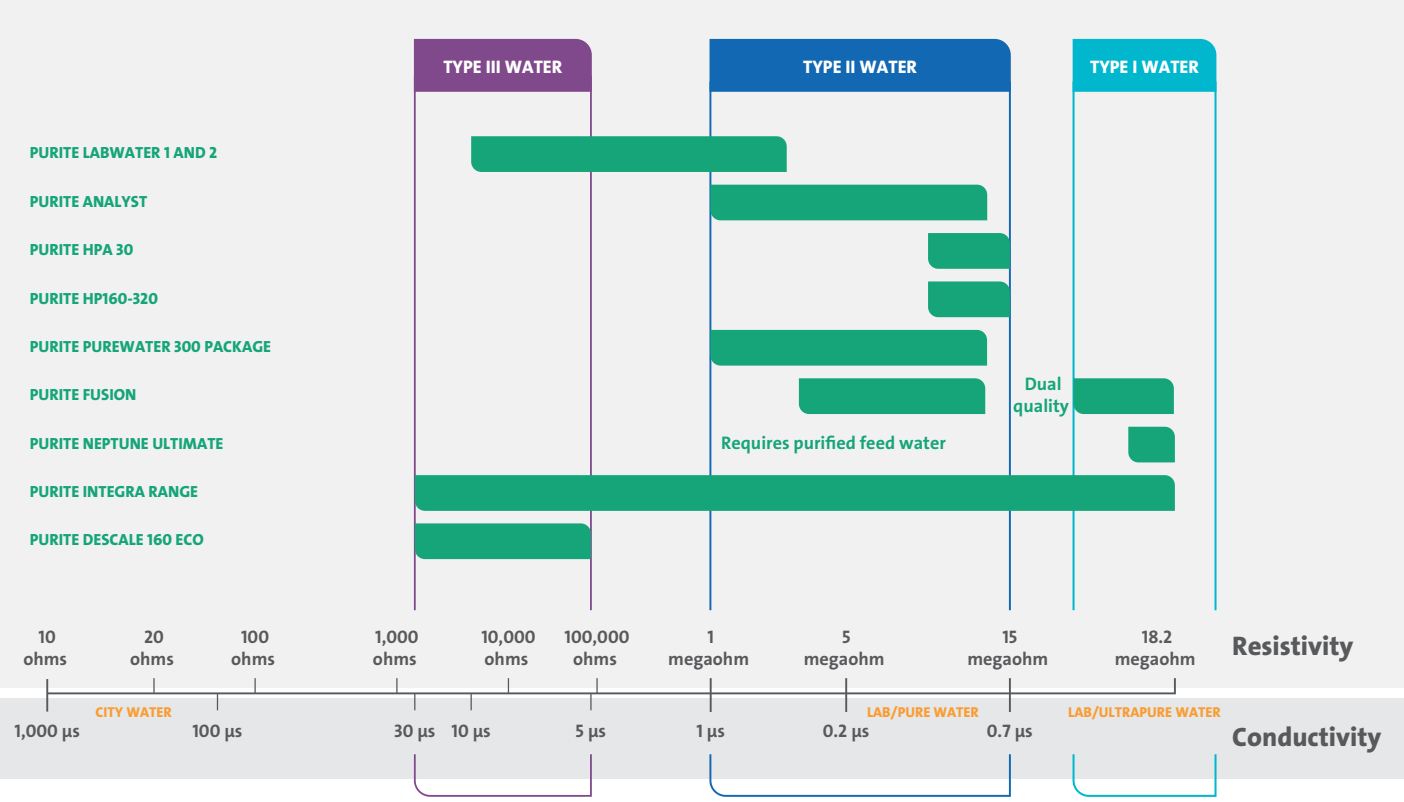
The right system for your requirements

Each of our systems is designed to provide the exact purity and volume of water required based on the quality of the feed water and the nature of the application, while also meeting storage and distribution requirements.

The table below shows the grades of water typically used by laboratories and outlines the Purite products that produce the required standards of water:



TYPE III WATER | REVERSE OSMOSIS (RO)

5-30 µsiemens

Humidifiers
Steam generators
Glasswasher feed
Feed to ultrapure water systems
Hydroponics
Autoclave feed

TYPE II WATER | DEIONISED (DI)

1-15 megaohm

Clinical analysers
Glassware washing and rinsing
Chemical synthesis
Cytology and histology
Spectrophometry
Protein electrophoresis
Sample dilution and reagant preparation
Buffer and media preparation

TYPE I WATER | ULTRAPURE

18.2 megaohm

Precision spectrophotometry
Electrochemistry
Molecular biology
DNA sequencing
Tissue engineering
IC, GC, (GF) AAS, ICPMS, MS, HPLC
Critical Cell and Tissue Culture
Immunology
Proteomics
Cell imaging
Pharmacology
Genomics
PCR

*Note - The above graphic only shows the Conductivity/ Resistivity parameter. Review the Data Sheets for information on additional treated water quality parameters.

Purite Labwater Deionisers

A simple, cost effective method of producing 10-1µS.cm purified water at low volumes.

The Purite Labwater product incorporates an easily replaceable cartridge, containing specifically designed resin, which changes colour through absorption of ionic contaminants, facilitating a low level of maintenance. When the indicator changes from blue to brown, it is the reminder it is time to replace the cartridge.

The product is typically wall mounted; it is easily connected via a dedicated hose (supplied separately) to a tap or stopcock and operates direct from water pressure thus requiring no external electrical supply.

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Technical specification	Labwater 1	Labwater 2
Max. feed pressure (bar)	0.5 – 5	0.5 – 5
Max. feed flow rate (l/hr)	30	60
Output capacity, litres		
@ 50 mg/l tds (soft)	640	1280
@ 200 mg/l tds (medium-hard)	160	320
@ 300 mg/l tds (hard)	106	212
pH	Neutral	
Conductivity	10 – 1µS/cm	

tds = total dissolved solids

Dimensions	Labwater 1	Labwater 2
Width (mm)	80	80
Depth (mm)	100	100
Height (mm)	580	760
Max shipping weight (Kg)	2.8	4.4
Max working weight (Kg)	2.5	3.5
Installation requirements		
Feed water	Potable	
Maximum TDS (ppm)	1000	
Feed water temperature	1 - 35°C	

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Specification	
Output pressure	3 bar maximum
Outlet flow	60 l/hr maximum
On / Off cycles	6 per minute maximum
Feedwater	< 150 microns particulates
Operating temperature	5°C to 46°C
Power required	Single Phase, 230V, +/- 10%, 50 Hz
Shipping weight	3 kg
Dimensions (w x h)	170 mm x 275 mm

Mini Pure Water Boost Pump

The Mini Pure Water Boost Pump is an on demand, delivery pump which can be used with any pure water system.

It is controlled by a built-in pressure sensing switch, which starts and stops the pump automatically when the outlet pressure drops or increases.

Installed on the outlet from a pure water supply tank it will provide a flow rate of up to 60 litres per hour and at a pressure of up to 3 bar.

Ideal applications include:

- Pressurised pure water supply for glasswashers
- Environmental chambers
- Humidity cabinets
- Autoclaves
- Corrosion testing equipment
- Single points of use and for any laboratory equipment that requires a pressurised feed.

Installation is simple, via 8 mm push fit connections for the inlet and outlet (supplied) and connects to the mains electric supply.

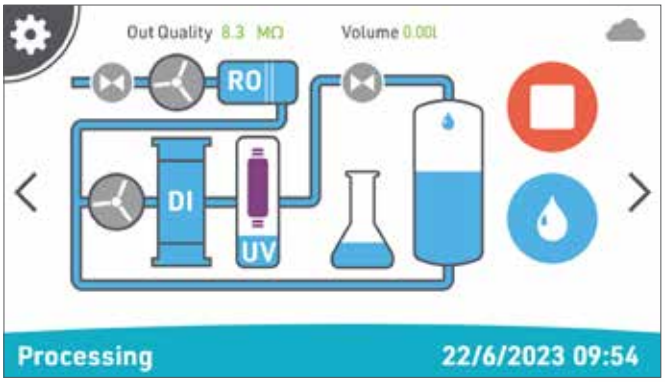
Our Purite range:

Our Purite range of water purification systems are compact, robust, simple to use, easy to maintain and available in six standard models: Analyst, HP, Purewater 300 Package, Fusion, HPA 30 and Neptune Ultimate.

Common features of all our Purite systems include:

- Space-saving, dependable, bench top or wall mounted systems
- RO Removes > 98% minerals and > 99% bacteria
- Choice of production rates up to 48 l/hr
- Optional external storage tanks up to 100 litres
- RO Boost pump fitted as standard
- Installation kit and first set of consumables included
- LCD colour touch screen panel
- Visual and audible alarms included
- Utilises carbon pre-treatment, RO, deionisation, filtration, UF, UV, EDI and recirculation
- USB port to download event data and upload software updates
- WiFi connectivity to local LAN for software updates, data storage and operational maintenance assistance
- Integral 20 litre storage as standard (excludes Neptune Ultimate)
- Semi-automatic clean cycle
- ECO option available on certain product ranges offering 50% recovery which equates to a significant reduction in water usage and waste.

Touchscreen panel example*



* for illustration guide only

LED UV-C disinfection at point of use

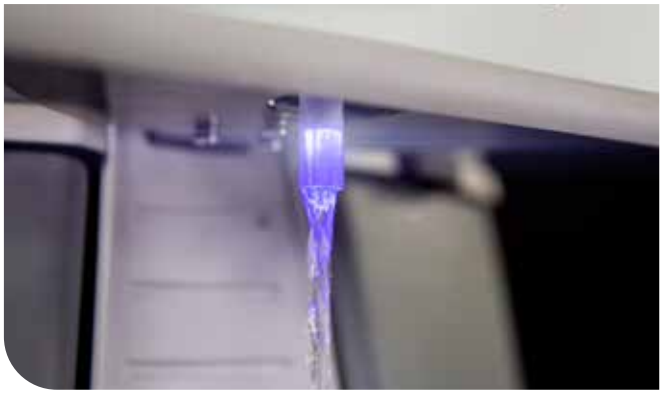
Our long-life LED UV Point OF USE (POU) reduces the risk of bacterial contamination, with lower operating costs and eliminates the impact on the environment relating to the disposal of mercury lamps.

Laboratory water purification systems typically use a combination of sub-micron membrane filters and low pressure, mercury UV lamps to disrupt the DNA of bacteria and viruses. The lamps are embedded within the water purification unit, away from the point at which purified water is dispensed. Each time the dispense valve is opened there is a risk that environmental airborne bacteria will enter the downstream dispense point.

Our special system eliminates these problems by using miniature LED lamps located within the dispense head, at the point of use.

These units are designed for all applications requiring the following grades of water:

- ASTM Type I, II, III
- BS grades of laboratory water.



ECO: sustainable water purification systems for laboratories

We responded to increasing laboratory interest in sustainable solutions by the introduction of ECO options for our most popular Purite water purification systems. The ECO option is available exclusively on our 160 models.

In addition to saving electricity with the intelligent standby mode on the feature for the HP and Fusion ranges, our customers can now save water through high recovery reverse osmosis (RO) systems.

Key features:

- High quality RO systems with water recovery rates of up to 50%
- Intelligent standby option (HP and Fusion ranges) maintains water quality while saving electricity and water wastage.

Comparison of water consumption and typical costs between ECO (high recovery) and standard (normal recovery) purification systems.

Purite model	Product output (l/hr) [1]	Drain flow (l/hr)		Approx. water usage per year (m^3) [2]		Total annual water cost [3]		Potential annual saving [4]
		Standard version	ECO version	Standard version	ECO version	Standard version	ECO version	ECO version
160	14.4	66	approx. 15	705	258	£1,763	£645	£1,118

[1] Based on 60 psi, 10°C [2] Based on 24 hrs per day, 365 days per year usage [3] Based on typical water charges of £1.50/m^3 for mains water and £1.00/m^3 for waste water
[4] It should be noted that the high recovery RO system described cannot be used if input water has very high levels of hardness

Purite Smart Connect simplifies water purification management and maintenance for laboratories

Internet connectivity is available for certain models in our Purite range of laboratory water purification systems to further simplify asset management and maintenance for our customers.

The water purification systems are connected to the internet, utilising the laboratory's local Wi-Fi connection, and establishes a secure link which allows key data from the system to be remotely accessed and viewed in real-time by our customers and also the Purite service and customer support functions, when required.

This provides vital information for our customers and allows Purite service engineers to monitor and assess the system's flow rates, purity levels, dispense rates and more, enabling any faults to be remotely and efficiently diagnosed, saving time and hassle for laboratories.

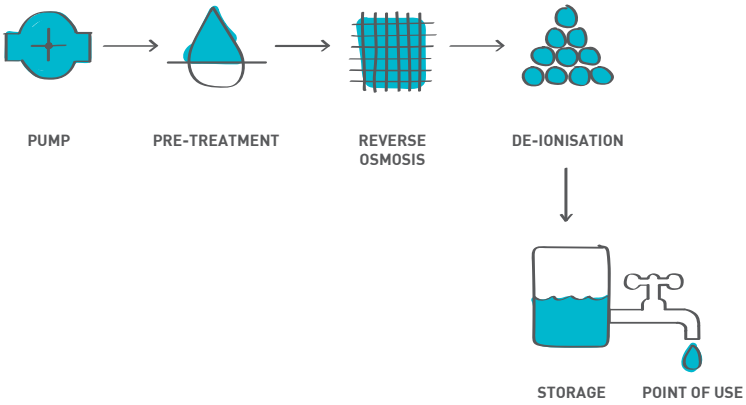
Purite Analyst

The Purite Analyst is a compact unit ideal for laboratory use, delivering a steady supply of > 1MΩ.cm pure water for laboratory tasks using carbon pre-treatment, reverse osmosis and deionisation. Typical applications include glassware rinsing, buffers and stains, reagent make-up, and media preparation.

Standard features:

- > 1MΩ.cm water quality
- Optional remote display
- ECO option now available offering significant reduction in water usage and waste.

Purite Analyst process flow



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Purite Storage Tanks

There is a choice of Purite storage tank for your application, available to store the purified water externally to the unit. Level switches ensure the tank does not overflow and refills when low.

The range include two models that offer either:

- 50 or 100 litre working volume
- Optional UV
- Optional high flow outlet.

As well as Purite storage tanks we can supply on-demand pumps to provide a pressurised feed from the tanks.

Purite HP

The Purite HP is a compact unit designed to produce a consistent supply of > 10MΩ.cm water for HPLC, ion chromatography, atomic absorption, hydrogen generation, and clinical analyser feed.

Standard features:

- Guaranteed > 10MΩ.cm water quality
- Optional Remote Dispenser
- Energy saving intelligent standby mode
- Dispense rate of up to 2 litres/min
- Water quality parameters, MΩ.cm, °C, flowrate displayed
- Selectable manual dispense feature
- Internal microfiltration
- UV LED disinfection incorporated within the dispense head
- ECO option now available offering a significant reduction in water usage and waste
- WiFi enabled for remote monitoring and operation.

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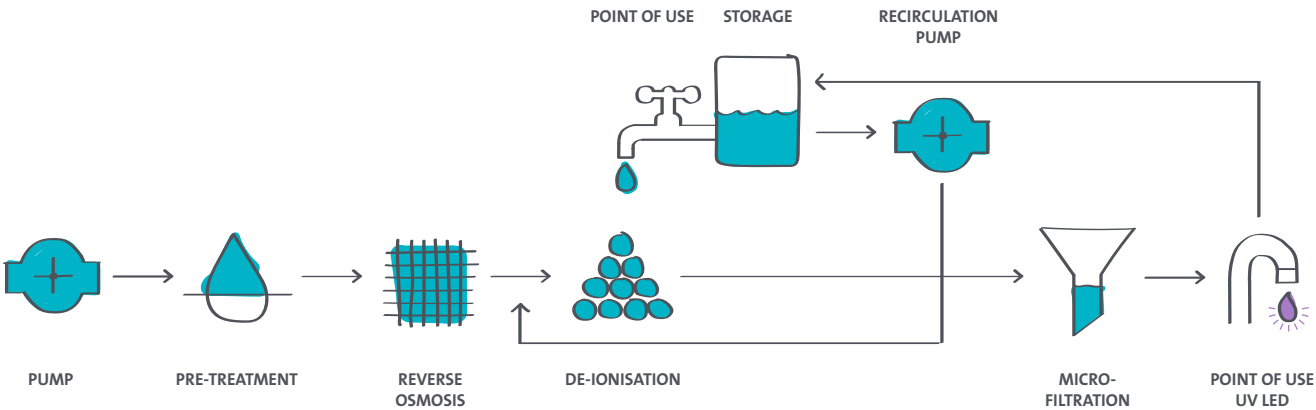
Purite HP process flow



Purite Purewater 300 Package

The Purite Purewater 300 Package is designed specifically for use with laboratory glassware washing machines, providing rinse water to a purity of over 1MΩ.cm at a flow rate of up to 48 litres per hour.

It can be fitted with an on-demand pure water boost pump to provide up to 1.5 bar pressurised feed with a flow rate of up to 200 litres per hour.

Standard features:

- Guaranteed > 1MΩ.cm water quality
- Make-up production rate of 30 litres per hour @10°C
- Optional water boost pump for pressurised output[1]
- Additional high flow gravity outlet.

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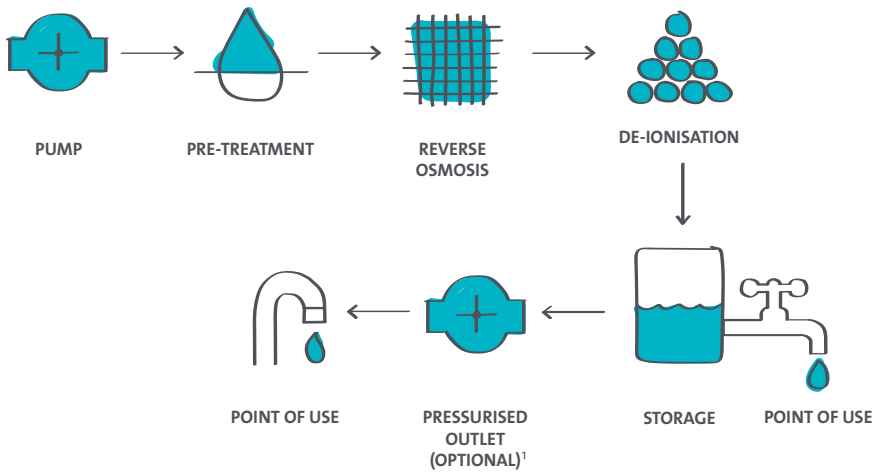
Purite Purewater 300 Package process flow



Purite Fusion

The Purite Fusion is a self-contained water purification unit that reliably delivers a steady supply of both Type I and Type II purified water from a mains supply to life science laboratories.

Standard features:

- Dual water quality available 1-10MΩ.cm (Type II) and up to 18.2MΩ.cm (Type I)
- Optional Remote Dispenser
- Energy saving intelligent standby mode
- Dispense rate of up to 2 litres/min
- Water quality parameters, TOC, MΩ.cm, °C and flowrate displayed
- Selectable manual and volumetric dispense feature
- 5000m.wt cut off internal ultrafiltration for endotoxin, RNase/DNase removal
- Dual wavelength (185nm/254nm) UV irradiation
- Integral TOC indicator
- UV LED disinfection incorporated within the dispense head
- ECO option now available offering a significant reduction in water usage and waste
- WiFi enabled for remote monitoring and operation.

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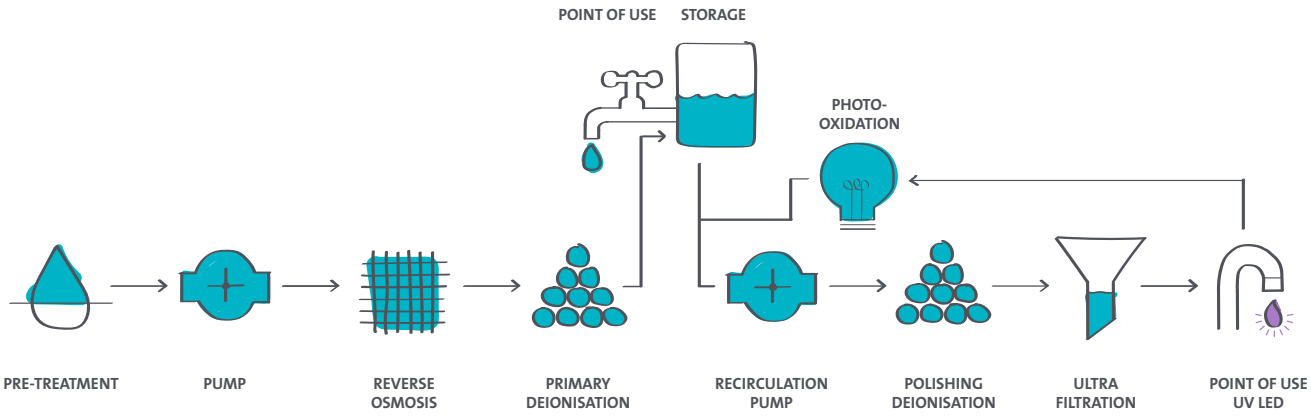
Purite Fusion process flow



Purite HPA 30

The Purite HPA 30 is compact, simple to operate and maintain, complete with an integral 20 litre storage tank as standard. Compatible for supply to all analyser manufacturers.

Standard features:

- Up to 15MΩ.cm water quality
- Energy saving intelligent standby mode
- Manual dispense from storage tank
- Colour touch screen display with process graphics
- Water quality parameters, MΩ.cm, °C
- Internal microfiltration
- Make-up production rate of 30 litres per hour (@10°C)
- 20, 50 and 100 litre storage options
- Can be bench, under bench or wall mounted
- WiFi enabled for remote monitoring and operation
- 8mm pressurised outlet for direct connection to analyser.

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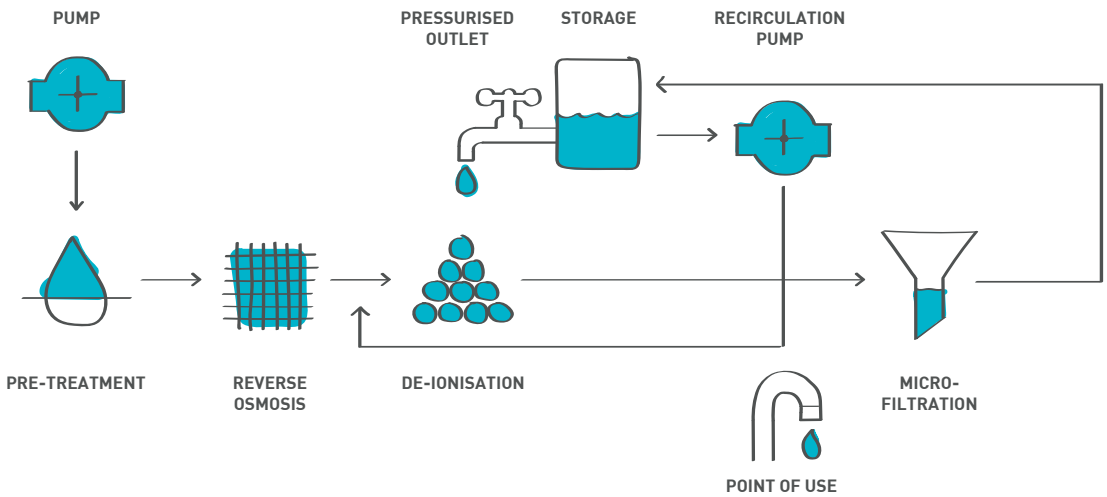
Purite HPA 30 process flow



Purite Neptune Ultimate Polisher

The Purite Neptune Ultimate provides a high flow of 18.2MΩcm ultrapure water for analytical and life science laboratory applications.

The Purite Neptune Ultimate utilises a number of proven technologies to produce ultra-pure, 18.2MΩ.cm water on-demand, including:

- Ion exchange cartridges incorporating monospherical, semiconductor grade mixed bed deionising resin with a low TOC leaching profile and a high activity organic absorption media
- Ultrafiltration to remove particles, bacteria and endotoxins
- 185nm photo-oxidising UV to cleave organic compounds into smaller charged ionic species that can be removed by ion exchange
- 254nm UV to reduce bacteria by more than 99%.

The Purite Neptune Ultimate recirculates purified water to maintain its quality and include data capture for traceability and intelligent monitoring systems that place the unit into standby when it's not in use.

Each unit also features semi-automated cleaning and sanitising routines, TOC indication and alarms for cartridge, UV and filter replacement.

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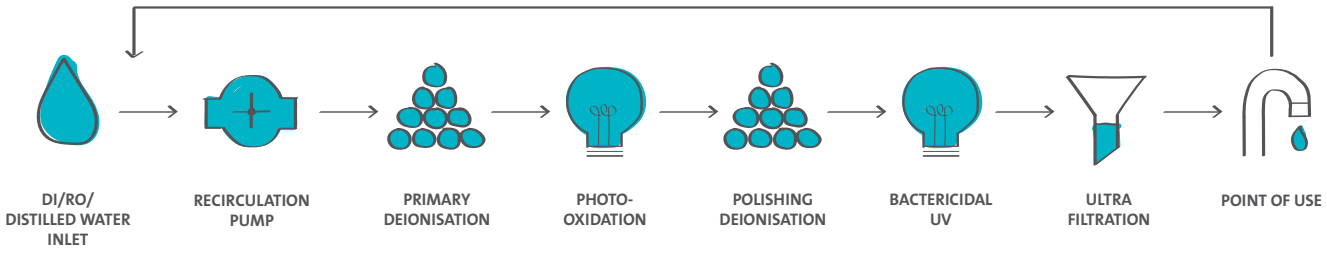
Purite Neptune Ultimate Polisher process flow



Purite Descale 160 ECO

The Purite Descale, is our eco-conscious benchtop reverse osmosis (RO) system tailored for the multifaceted demands of contemporary laboratories. The Purite Descale combines efficiency, versatility, and eco-friendly operations, ensuring your laboratory practices are both high-performing and sustainable, right from your benchtop.

Standard features:

- Product water: RO Grade
- Removes up to 99% of bacteria, colloids and organic contaminants
- Pre-treatment carbon cartridge
- Eco RO membrane - 50% water saving
- Dissolved salt rejection upto 98%
- Gravity dispense (optional boost pump)
- Integrated 20L tank as standard
- Ease of use
- Touchscreen HMI
- Compact footprint
- Simple to maintain.

Harnessing the depth of Purite's water purification heritage, the Purite Descale stands at the forefront of sustainable lab practices. This streamlined reverse osmosis system combines eco-conscious efficiency with the practical demands of varied lab applications. Designed for benchtop use, it underscores our pledge to lower the ecological impact of research environments. With sustainability in design, the Purite Descale embodies operational excellence and environmental care in water purification.

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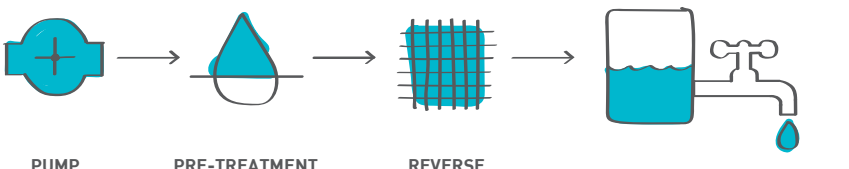
Purite Descale 160 ECO process flow



Purite Remote Dispenser

Discover seamless efficiency and unrivalled convenience with our Remote Dispenser, the latest addition to our Purite bench-top water purification systems.

Our state-of-the-art 'satellite' dispenser allows you to access high-quality water directly at your workstation, eliminating the need to reach out to the main RO system.

Standard features:

- Space-saving - compact and practical design
- Ergonomic workflow - improved user comfort
- Flexibility - can be easily repositioned as your lab layout evolves
- Reach - Position up to 5 meters from the main water purification system
- Reliability - backed by Purite's reputation for quality and durability
- Seamless integration - effortlessly connect to your existing Purite system
- High quality water - matches water quality produced by the main Purite system
- Integrated UV LED - microbiological inactivation at the point of dispense
- LCD colour touch screen panel.

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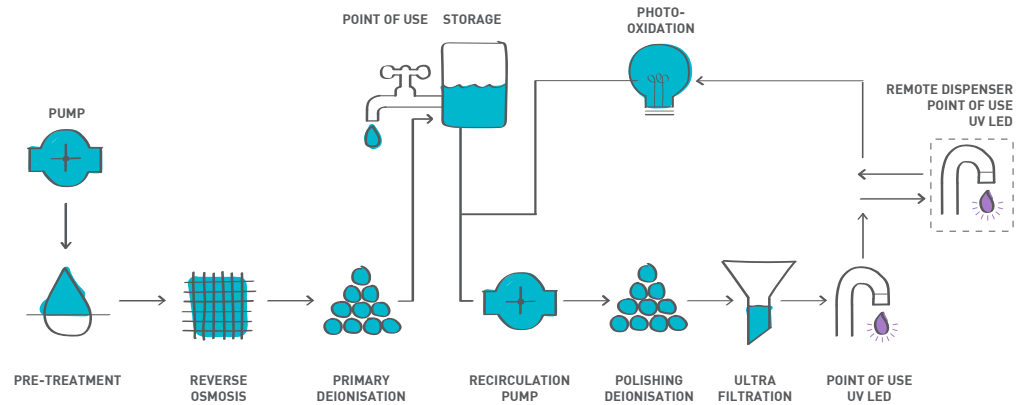
Purite Remote Dispenser process flow*



* The process flow diagrams differ according to which water purification system the dispenser is connected to.

Purite Prestige Descale

The Purite Prestige Descale is a compact, integrated water purifier with output options from 1000 to 6000 litres per day. The graphical user interface and integrated pre-filtration ensure the Purite Prestige Descale is easy to install and maintain.

- 5µm pre-filter: Protects reverse osmosis (RO) membrane from fouling by particulates and colloidal contaminants found in mains water
- Internal break tank: Protects against feedwater pressure fluctuations and allows easy cleaning
- Integral boost pump: Enables RO membranes to operate at optimum performance
- Permeate divert: Ensures consistent permeate quality
- RO membrane: Removes up to 98% of dissolved minerals, and up to 99% of organic, bacterial and particulate contaminants
- Automatic membrane concentrate flush: Extends membrane life
- Intelligent standby mode.

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Technical specification

	PD100H	PD100	PD250
Dimensions W, D, H (mm)	460 x 580 x 880	460 x 580 x 880	460 x 580 x 880
Maximum shipping weight (kgs)	37	37	42
Maximim working weight (kgs)	43	43	50
Unit type	Floor standing		
Power phase	Single		
Power/Mains frequency +/- 10%	230v/50hz		
Feedwater standard required (Input)	Potable water	Soft water	
Minimum inlet pressure - psi (bar)	30 (2)		
Maximum inlet pressure - psi (bar)	90 (6)		
Feed water temperature in °C (min/max)	1 to 45		
Maximum TDS (ppm)	1000		
Free Chlorine (ppm)	<0.1		
Display	LCD Touchscreen		
Pre-treatment	✓	✓	✓
Reverse osmosis	✓	✓	✓
Clean cycle type	Semi automatic		
Product - Treated water specification (Output) Mega Ohms	Typically 98% rejection		
Product outputs @ 10°C (l/hr)*	84	84	230
Product outputs @ 25°C (l/hr)*	146	146	400
Ph**	Neutral		
Water standard produced	ASTM Type III		
Pure water storage	External		

* Based on feedwater meeting specification pressure
** pH of stored water may decrease due to absorption of free carbon dioxide

Purite Range Specifications

Unit specification

	Analyst		HP		Fusion		Purewater 300 Package
	160	320	160	320	160	320	
Width (mm)	440						
Depth (mm)	560						
Height (mm)	750						
Max shipping weight (kg)	36	41	36	41	36	41	68**
Max working weight (kg)	51	59	51	59	51	59	176**
Installation requirements							
Power	Single Phase, 110-230V, +/- 10%, 50/60 Hz						
Feed water	Potable						
Maximum TDS (ppm)	1000						
Minimum inlet pressure – psi (bar)	10 (0.5)						
Maximum inlet pressure – psi (bar)	30 (2.0)						
Feed water temperature	1-35°C						
Product Outputs*							
@ 10°C (l/hr)	14.4	30	14.4	30	14.4	30	30
@ 25°C (l/hr)	24	48	24	48	24	48	48

*Product outputs based on a feed water pressure of 4 bar **Combined unit and 100L external tank

System specification

	Analyst	HP	Fusion	Purewater 300 Package
Pure water storage	20 litre storage as standard (External 50 & 100 litre tanks available)			
Display panel	LCD – Colour touch screen			
Pre-treatment cartridge	✓	✓	✓	✓
Reverse osmosis	✓	✓	✓	✓
Deionisation cartridge	✓	✓	✓	✓
Internal filtration	–	Ultrafiltration	Ultrafiltration	–
Point of use	–	UV / LED	UV / LED	–
Internal UV - type/wavelength	–	–	185nm / 254nm	–
Recirculation pump	–	✓	✓	–
Ultrapure polishing cartridge	–	–	✓	–

Treated water specification

	Analyst	HP	Fusion	Purewater 300 Package
Inorganics	> 1MΩ.cm	> 10MΩ.cm	up to 18.2MΩ.cm	> 1MΩ.cm
pH*	Neutral	Neutral	Neutral	Neutral
Bacteria	> 99% rejection**	< 1 cfu/ml	< 0.1 cfu/ml	> 99% rejection**
Organics – TOC (ppb)	< 50	< 20	< 5	< 50
Particles	–	< 0.1µm	< 0.005µm	–
Endotoxins	–	–	< 0.001 EU/ml	–
DNases	–	–	< 4 pg/µl	–
RNases	–	–	< 0.01 ng/ml	–
Dispense modes	Bib tap on storage tank	Manual - Latched - Volume	Manual - Latched - Volume	Bib tap on storage tank
Dispense flow rate	–	up to 2.0 l/min	up to 2.0 l/min	–

* pH of stored water may decrease due to absorption of free carbon dioxide
** When measured directly across the membrane

	HPA 30	Descale 160 Eco	Neptune Ultimate Polisher	Storage Tanks	
				50L	100L
Width (mm)	440		310	430	430
Depth (mm)	560			570	570
Height (mm)	750			670	750
Max shipping weight (kg)	41	36	21	10	17
Max working weight (kg)	59	41	29	60	117
Installation requirements					
Power	Single Phase, 110-230V, +/- 10%, 50/60 Hz	Single Phase, 110-240V, +/- 10%, 50/60 Hz	Single Phase, 110-230V, +/- 10%, 50/60 Hz	–	
Feed water	Potable		Pre-treated	–	
Maximum TDS (ppm)	1000	1000	11 (<20 micro Siemens)	–	
Minimum inlet pressure – psi (bar)	10 (0.5)	10 (0.5)	0.5 (0.03)	–	
Maximum inlet pressure – psi (bar)	30 (2.0)	30 (2.0)	20 (1.4)	–	
Feed water temperature	1-35ºC			–	
Product Outputs*					
@ 10ºC (l/hr)	30	14.4	–	–	
@ 25ºC (l/hr)	48	24	–	–	

*Product outputs based on a feed water pressure of 4 bar

System specification

	HPA 30	Descale 160 Eco	Neptune Ultimate Polisher
Pure water storage	20 litre storage as standard (External 50 & 100 litre tanks available)	20 litre storage as standard (External 100 litre tank available)	–
Display panel	LCD – Colour touch screen		
Pre-treatment cartridge	✓	✓	–
Reverse osmosis	✓	✓	–
Deionisation cartridge	✓	–	–
Internal filtration	Ultrafiltration	–	Ultrafiltration
Point of use	–	–	✓
Internal UV - type/wavelength	–	–	185nm / 254nm
Recirculation pump	✓	–	✓
Ultrapure polishing cartridge	–	–	✓

Treated water specification

	HPA 30	Descale 160 Eco	Neptune Ultimate Polisher
Inorganics	> 10MΩ.cm	> 98% rejection**	18.2MΩ.cm
pH*	Neutral	Neutral	Neutral
Bacteria	< 0.1 cfu/ml	> 99% rejection**	< 0.1 cfu/ml
Organics – TOC (ppb)	< 20	< 100	< 1
Particles	0.005µm	–	Ultrafiltration
Endotoxins	–	–	< 0.001 EU/ml
DNases	–	–	< 4 pg/µl
RNases	–	–	< 0.01 ng/ml
Dispense modes	Pressurised feed	Pressurised feed	Manual - Latched - Volume
Dispense flow rate	up to 2.0 l/min	up to 2.0 l/min	up to 1.5 l/min

* pH of stored water may decrease due to absorption of free carbon dioxide

** When measured directly across the membrane

Our Purite Integra range

Our Purite Integra range is ideal for laboratories requiring greater daily volumes of purified water with several points of use. The Integra HP and Integra L systems produce laboratory grade deionised water from 120-600 litres per hour, while our Integra 200E system is a low energy, self-contained unit utilising the latest low energy reverse osmosis membranes and electro-deionisation technology.

Purite Integra HP

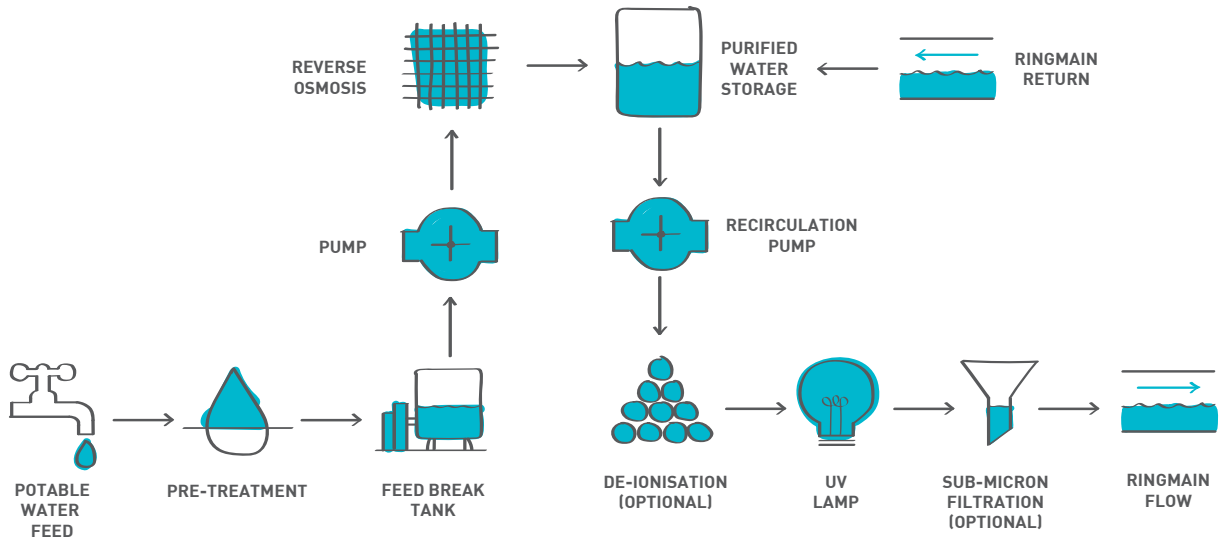
The Purite Integra HP is a compact water purification and distribution unit. Fully integrated, it incorporates reverse osmosis and ultra violet radiation technology, with storage and a distribution pump. It is also available with optional bacterial filtration technology.

Standard features:

- Produces 120 or 190 l/hr (softened feed - 190 only)
- Option of Integral 50 litre or external 300 litre purified water storage tank
- Range of polishing deioniser options to meet all purity requirements and standards
- Full colour LCD touch screen display for ease of operation
- Cat5 compliant break tank to comply with water regulations
- WiFi enabled for remote monitoring and operation
- Energy saving intelligent standby mode.

View online!

Purite Integra HP process flow



Purite Integra L

Our Purite Integra L range has been designed to provide a broad spectrum of purified water for laboratory applications. Each unit is designed to feed a laboratory suite with several outlets using a ring main to provide a continuous supply. The water is stored in an integral 250 litre stainless steel tank. Two unit options are available:

- Integra LH for hard feed water
- Integra LS for soft feed water.

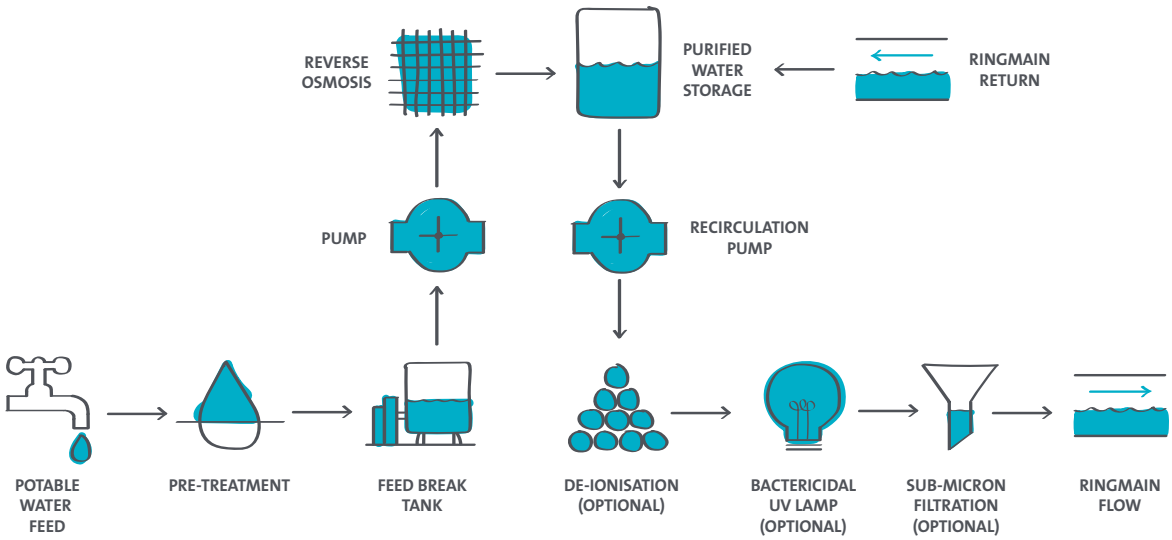
To provide higher grades of purified water the basic Integra L units can be supplemented by the addition of optional polishing packs comprising of stand-alone exchangeable cylinders. For applications requiring high quality water with enhanced bacterial specification, UV disinfection and 0.2µm filtration is available in an optional BIO pack.

Standard features:

- Single compact unit which purifies, stores and distributes lab water
- Produces up to 600 l/hr
- Provides ASTM Type I, II or III water and BS EN ISO grade 1,2 or 3 water
- Utilises reverse osmosis technology, in conjunction with activated carbon and particulate filtration as part of the first stage of purification
- Integrated data logging for performance traceability equipped as standard
- Delivered factory tested for ease of installation
- LCD screen display for ease of operation
- Can supply ring mains of potentially up to 200 metres (application and site dependent).

View online!

Purite Integra L process flow



Purite Integra 200E

The Purite Integra 200E water purification unit provides high quality water for laboratories, utilising the latest low energy reverse osmosis membranes and electro-deionisation technology.

Configured and tested before delivery to ensure minimal installation time, the fully integrated and user friendly Integra 200E offers laboratories optimum efficiency and flexibility in water purification production.

Variable speed pumps ensure laboratories are able to minimise their energy consumption, whilst category 5 backflow prevention technology offers protection to the mains supply.

Standard features:

- Main plant self-contained, fully bunded, package designed to reduce installation and service times
- Efficiently delivers highly purified water; flow rate of 200 l/hr
- Utilises reverse osmosis, degassing, electro-deionisation, ultra-violet irradiation and bacterial microfiltration
- Standby mode and variable speed pumps to minimise power consumption and running costs during periods of low demand
- LCD touch screen with password controlled menu access
- Automatic alarm notification system monitoring leakage and quality of water
- Main plant compact, fully bunded, stainless steel skid package with anti-vibration mounts
- Category 5 backflow prevention to protect mains supply
- Automated chemical cleaning program
- Optional water storage available, 350, 500 and 1000 litres.

View online!

Purite Integra Range Specifications

Unit specification

	HP		L	200E		
	HP IT	HP GP **		200E - 350	200E - 500	200E - 1000
Width (mm)	890	1110	1000	2020	2020	2020
Depth (mm)	500	604	750	1020	1020	1020
Height (mm)	840	1842	1800	1500	1850	2600
Max shipping weight (kg)	95	134	310	340	350	370
Max working weight (kg)	140	467	550	767	917	1417
Installation requirements						
Power	Single Phase, 230V +/- 10%, 50-60 Hz		Single Phase, 230V, +/- 10%, 50 Hz			
Feed water	Potable	Softened	Potable *	Softened		
Maximum TDS (ppm)	1000		1000	< 1000ppm		
Minimum inlet pressure - psi (bar)	30 (2)		15 (1)	30 (2.1)		
Maximum inlet pressure - psi (bar)	90 (6)		90 (6)	90 (6.2)		
Feedwater temperature	1-35°C		1-30°C	10 - 25°C		
Flowrate	–		–	400 l/hr		
Free chlorine	Must be dechlorinated					

* Softened feed water required for 600 l/hr (Integra L^S). Integra L^H can operate on hard water up to 400ppm as $CaCO_3$

** Complete with plinth and 300 litre tank

System specification

	HP		L	200E		
	HP IT	HP GP		200E - 350	200E - 500	200E - 1000
Pure water storage	50 litres	300 litres	250 litres	Up to 350 litres	Up to 500 litres	Up to 1000 litres
Display panel	LCD - Colour touch screen		LCD screen	LCD - Colour touch screen		
Pre-treatment	5µm pre-filter					
Reverse osmosis	Low energy membranes					
Deionisation	Optional cylinders		Optional Di packs *	EDI module		
Micro filtration	Optional 0.2µm		Optional 0.2µm **	0.2µm filter		
UV lamp	254nm		Optional 254nm **	Bactericidal 254nm		
Purified water make-up flow rate @ 10°C	120 or 190 l/hr		200 – 600 l/hr ***	200 l/hr		
Purified water distribution	Up to 270 l/hr and a max of 3 bar	240 l/hr and a max of 3 bar	Up to 3000 l/hr	2000 l/hr		
Carbon dioxide degassing	–		–	Hollow fibre membrane as standard		
TOC reduction	Optional *		Optional *	Optional *		

* 10, 15, 18MΩ.cm polishing deionisation packs available including activated carbon for TOC reduction

** Included in BioPack

*** Softened feed water required for 600 l/hr (Integra L^S). Integra L^H can operate on hard water up to 400ppm as $CaCO_3$

Treated water specification

	Integra Model				
	HP	L	200E		
			200E - 350	200E - 500	200E - 1000
Conductivity	< 30µs/cm to 18.2MΩ-cm	< 30µs/cm **	up to 15MΩ-cm		
Bacteria	< 1cfu/ml *	> 99% rejection *	< 1cfu/ml *		
Organics – TOC (ppb)	< 30ppb	> 99% rejection **	< 500ppb as C		
Particles	< 0.2µm *	0.2µm *	< 0.2µm		
Endotoxins	–	0.25EU/ml *	–		

* Optional 'BioPack' will provide purified water with a total viable count of < 1cfu/ml, endotoxin level < 0.25EU/ml and particles < 0.2µm

** For enhanced inorganic and organic quality the unit can be fitted with either 10,15 or 18MΩ.cm polishing deionisers packs. Typical TOC levels < 50ppb

Providing high levels of water quality, consistency and reliability

About Veolia Group

Veolia group aims to be the benchmark company for ecological transformation. In 2022, with nearly **220,000 employees** worldwide, the Group designs and provides game-changing solutions that are both useful and practical for **water, waste, and energy management**. Through its three complementary business activities, Veolia helps **to develop access to resources, preserve available resources, and replenish them**.

In 2022, the Veolia group provided **111 million inhabitants** with drinking water and **97 million** with sanitation, produced **44 terawatt hours** and recovered **61 million tonnes** of waste.

Group Key Figures

3 businesses activity:
Water, Waste, Energy

111 million people supplied with drinking water

4,130 drinking water production plants managed

3,506 wastewater treatment plants managed

97 million people connected to wastewater systems

(2022 Key Figures)

€42,885 million
in revenue, in 2022

533,759 business clients

61 million metric tons of treated waste

823 waste processing facilities operated

46 million people provided with collection services on behalf of municipalities

(2022 Key Figures)

Nearly **220,000 employees**
worldwide, in 2022

46,922 thermal installations managed

680 heating and cooling networks managed

44 million MWh produced

2,716 industrial sites managed

(2022 Key Figures)

Our approach - multifaceted performance

We elevate our ambition by committing to **multifaceted performance**. That means we focus equally on the various types of performance, including financial performance, commercial performance, social performance, societal performance and environmental performance, all of which complement one another and form a virtuous circle

Veolia has publicly committed to 18 tangible performance indicators, based on and linked to the **UN 17 Sustainable Goals (SDG)**. Veolia plays a Part in all at different levels and has a direct impact on 13 of them which is integral to our **multifaceted performance** and cover the five types of performance. The fulfilment of the objectives will be regularly audited and evaluated by a third-party organization.

- **5 stakeholders:** Employees, Clients, Shareholders, Society, Planet.
- **5 commitments:** they express the dimensions according to which Veolia's performance must be evaluated & specify for each the course set by the Group by taking up the key axes of the text.
- **18 performance objectives:** they specify the Group's action priorities by dimension; they cover the text of the purpose and allow all the Business Units to commit to a common approach to implement this purpose close to the field.

Compliance with legislation and regulations

Helping you to take a proactive approach

Safety and compliance is at the top of the agenda in every market sector, and guidance from expert authorities on how to guarantee this will ensure best practice, optimum performance, organisational integrity and staff peace of mind.

The legislation surrounding water standards in various market sectors can often be confusing, and demands lengthy and in-depth consideration to ensure complete compliance.

We can help you to adopt a proactive approach to regulatory compliance with our expert consultancy services, advice and testing, which are backed by years of proven experience. In addition, all of our technologies and products meet the latest quality standards

Certifications and accreditations

- ISO 9001 (Quality)
- ISO 14001 (Environment)
- ISO 45001 (Occupational Health & Safety)
- SSIP - SAFEcontractor Gold
- Alcumus SAFEcontractor.

Company memberships

- Institute of Healthcare Estates and Estate Management (IHEEM)
- UK Trade Association for Instrumentation, Control, Automation (GAMBICA)
- Alcumus SAFEcontractor
- British Standards Institute (BSI)
- Reset Compliance.

PURITE

Get in touch

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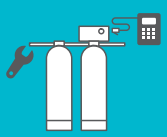
Design

Build

Install



Maintain

Founded over 40 years ago, the Purite brand has a long and proud heritage leading the way in water pre-treatment and process. We are now part of Veolia, one of the world's largest manufacturers and suppliers of specialist water treatment technologies, products and services.