

# purite water purification cylinders & accessories





# purified water service

Water is a vital resource for all sorts of industrial processes, including surface preparation, coating, anodising, painting, laser cutting, ultrasonic baths, the cleaning of printed circuit boards (PCBs), chrome plating and electroplating. However, water sourced from the mains normally contain contaminants. One of the most common examples are ions that have come from the ground, such as sodium and calcium and from water pipes, such as iron and copper. These can cause a host of issues with production machinery, including corrosion, the build-up of minerals and contamination. Water used in many of these processes, therefore, must first be treated or purified to remove these contaminants. This process is called purification.

There are numerous routes a manufacturer can take to source purified water. It can be bought off-the-shelf, but this is only economical for those that need negligible amounts of purified water for their operations, and the purity of the water can degrade quickly when exposed to air.

A cheaper and more efficient approach in the long run is for the manufacturer to produce purified water as and when it is required.

## cost-effective access to purified water

The most cost-effective means of getting access to purified water for many manufacturers will be a subscription-based cylinder service. Purite cylinders are available to provide suitable water quality for a broad variety of processes. We have invested in central cylinder processing facilities, taking on all the capital costs associated with the supply and regeneration of ion-exchange resins, so that our customers can obtain pure water easily with minimal outlay.

Regenerating the resin in this manner is more environmentally friendly than replacing the resin wholesale. As the customer can own the cylinder, it is a highly traceable and transparent system.

Operating cylinders in tandem, so one is in use while the other is being regenerated, ensures that any production downtime is kept to a minimum.

## cylinders designed for convenience

When looking for the right service, efficiency and reliability are obviously important factors. But additional things to look for are features within the cylinders themselves. Our Purite cylinders are supplied with all the fittings necessary for connection to a mains or process water supply and are also designed for ease of use.

They include features such as colour-coded cylinder heads for easy identification and a quick and easy release system that simplifies the job of connecting the cylinders. Transit plugs ensure that cylinder ports are kept clean and that there is no spillage during transport, while an air bleed valve will purge cylinders prior to use. Our cylinders also feature high-efficiency internal pipework for maximum capacity.

## save money with our purite cylinder subscription service

Given the importance of purified water to all manner of industrial processes, it is vital that manufacturers choose the right technologies for its production and trust their supplier. A subscription-based system is often the most cost-effective option to secure this vital resource.



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# the purite cylinder exchange concept from SUEZ

If you require purified water with low expenditure, then the Purite Cylinder Exchange Service from SUEZ is for you.

Simply purchase the required cylinder for your purified water needs. When the cylinder is exhausted, e-mail your purchase order or pre-paid voucher to our team.

Our carrier will then collect your exhausted cylinder and return it to us. We then regenerate your cylinder and return it to you. The whole process takes approximately 7 working days.

If you cannot be without a cylinder during the exchange process, we recommend you have a stand-by cylinder in place to minimise down-time to your process.



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## easy to use

Cylinders can be supplied with all the fittings necessary for easy connection to a mains or process water supply. All models have been designed for ease of use including:

- Colour coded cylinder heads for easy identification
- Quick and easy release system making cylinder connection simple
- Transit plugs to ensure that ports are kept clean and there is no spillage during transport
- Air bleed valve to purge cylinders prior to use
- High efficiency internal pipework for maximum capacity
- Optional-post cylinder filtration.

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## quality accreditation

SUEZ is an ISO 9001 design and manufacturing accredited company and the output from our ion-exchange, reprocessing facility is subject to strict controls ensuring consistent high quality of all regenerated resin.

All cylinders are cleaned and pressure tested in our factory.

We can also offer a full traceable inspection report.

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## low capital costs and reduced maintenance

SUEZ has invested in a central cylinder processing facility, taking on almost all capital costs so that you can obtain pure water with minimal outlay. The efficiency of the facility allows us to give you excellent quality pure water with great value.

We take care of everything. This includes the collection, delivery, regeneration and return of the cylinders.

## purite carbon cylinders

Two types of carbon media are available for a variety of water treatment applications.

### AC - pre-treatment carbon cylinder

A pre-treatment cylinder with a highly absorbent carbon media to efficiently reduce contaminants such as colloidal organics, metal oxides and free chlorine in a single pass. Typically used to pre-condition water prior to treatment by reverse osmosis.



### CC - Polishing carbon cylinder

A cylinder to polish already purified water. The cylinder contains high purity granular activated carbon, selected specifically to reduce residual dissolved organics, TOC, (Total Organic Carbon) to very low levels. It is also effective at removing detergents/cleaning agents from rinse water applications.



## purite deionising cylinders

Two types are available: a general deionising cylinder (DC) containing exchangeable regenerated resin to supply water up to 10 MΩ.cm, and a nuclear grade deionising cylinder (NC) to provide ultrapure water up to 18.2 MΩ.cm.

### DC - general deionising cylinder

A single pass deioniser filled with mixed bed ion exchange resin capable of removing up to 99% of dissolved mineral impurities from a mains or process water supply. This cylinder is ideally suited to the following applications: surface finishing, pcb de-fluxing and cleaning, ultrasonic cleaning, humidifier supply, laboratory glass rinsing, laboratory reagent make-up, boiler feed, printing solutions, or wherever water of up to 10 MΩ.cm is required.



### NC - nuclear grade deionising cylinder

A deioniser filled with single use high purity resin able to provide ultrapure water up to 18.2 MΩ.cm. Applications include: semiconductor, cosmetics and pharmaceutical production. For maximum performance NC cylinders are typically pre-fed with water that has already been pre-purified by reverse osmosis or passed through a DC deionising cylinder.

## purite deionising cylinders - NC7K2 & NC9K2

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Stainless steel deioniser cylinders with single use high purity resin able to provide ultrapure water up to 18.2 MΩ.cm.

Available in two different sizes (NC7K2 and NC9K2).

Made from quality stainless steel, these cylinders are highly robust, with a unique design to allow for stable floor standing. The NC7K2 and NC9K2 cylinders also feature robust stainless steel push fit connections, for complete ease when changing cylinders.

Applications include semiconductor, cosmetics and pharmaceutical production. For maximum performance NC cylinders are typically pre-fed with water that has already been pre-purified by reverse osmosis or passed through a DC deionising cylinder.



## accessories

### meters

A range of meters is available to monitor the condition of deionising cylinders, so you know exactly when to order a replacement.

**RM1 Indicator:** an economical battery powered water quality indicator with a coloured dual LED band that measures across a scale of 0.05 – 20  $\mu\text{S}/\text{cm}$  and 0 - 18 M $\Omega$ .cm.

- Battery powered
- Can be mounted on a wall bracket or cylinder head when used with fixing kit
- Graduated water quality scale.



**R2014-C Meter:** The temperature compensated, R2014 meter is configured to measure either the conductivity or resistivity of purified water. With its informative alpha numeric display, changing from blue to red under alarm conditions, and ability to control/signal external equipment, it is a cost effective solution for monitoring/controlling purified water systems.

- Range: Resistivity 0 - 18.2 M $\Omega$ .cm or Conductivity 0 - 20  $\mu\text{S}/\text{cm}$
- Fixed temperature compensation
- Low quality alarm programmed with set points of 1 M $\Omega$  or 15  $\mu\text{S}$  (settings can be altered by end user)
- Dry contact output relays for controlling pumps or solenoid valves etc.
- Analog outputs 4-20 mA
- Mains powered 220 V
- Digital dual colour display
- IP65 rated – water resistant
- Wall mounting enclosure.



## fittings

A choice of fittings and range of sizes for ease of connection are available. The fittings are colour coded to match the cylinder:

- Blue - DC/NC deionising cylinder
- Black - AC/CC activated carbon cylinder

Water inlet/outlet fittings range in size from: 8mm plain push fit to 1/2" to 1" hose type connection.

The outlet fittings are available as either plain push fit type connections (8mm only) or complete with integral conductivity or resistivity line cells.

For the "L" series high flow cylinders the inlet/outlet connections are only available in 1" plastic pipework.



### dispensing kits

A choice of kits that incorporate dispensing options along with the fittings required to connect the cylinder to the water inlet and outlet.

#### 1/2" Line cell Sensor Fitting Kit

The fitting kit incorporates:

- Line cell sensor for use with water quality indicator RM1
- 4 metre coil for dispensing water into containers
- Fittings for 1/2" inlet and outlet connections.

#### dispensing gun and coil kit

The dispensing gun and coil kit incorporates:

- 5 metre coil for dispensing water into containers.
- Dispensing gun with a 6mm gun nozzle allowing the accurate dispensing of purified water.
- Fittings for 1/2" inlet and outlet connections.



# water purification cylinders - specifications

Carbon cylinders technical data					
	Max flowrate (l/hr)	Min flowrate (l/hr)	Max pressure* (bar)	Pressure drop @ max flow (bar)	Max operating temperature* (°C)
AC7	280	110	6	0.5	66
CC7	1000				
AC8	480	220	6	0.5	66
CC8	1000				
AC9	840	390	6	1.2	66
CC9	2000				
AC10	1300	615	6/3*	1.6	66
CC10	2500				
CC10L	3800	615	6/3*	0.2	50

\*L denotes a high flow cylinder

\*For 'L' type cylinders: Max pressure 6 bar up to 35 °C and 3 bar 35 - 50 °C

\*For non 'L' type cylinders: Max pressure 6 bar 1 to 35 °C and 3 bar 35 - 66 °C

Deionising cylinders technical data						
	Max flowrate (l/hr)	Min flowrate (l/hr)	Max pressure* (bar)	Pressure drop @ max flow (bar)	Max operating temperature* (°C)	Capacity per l mg/ltr tds*** (m³)
DC7	650	110	6	0.5	66	300
NC7	730					448
DC8	750	220	6	0.5	66	450
NC8	850					704
DC9	1500	390	6	1.2	66	880
NC9	1700					1248
DC10	1900	615	6/3*	1.6	66	1340
NC10	2100					2016
DC10L	3800	615	6/3*	0.1	50	1340
NC10L	4200					2016
NC7K2	700	100	10**	0.8	60**	448
NC9K2	1000	200	10**	0.8	60**	950

\*L denotes a high flow cylinder

\* For 'L' type cylinders: Max pressure 6 bar up to 35 °C and 3 bar 35 - 50 °C | For non 'L' type cylinders: Max pressure 6 bar 1 to 35 °C and 3 bar 35 - 66 °C

\*\* Max pressure 10 bar up to 60 °C

\*\*\* total dissolved solids

Cylinder dimensions					
	Size	Diameter (mm)	Height (mm)	Approx shipping weight (kg)	Approx working weight (kg)
AC/CC	7	205	760	10	16
DC/NC				12	19
AC/CC	8	205	1060	19	26
DC/NC				20	28
AC/CC	9	265	1060	33	49
DC/NC				32	51
AC/CC	10	320	1190	52	77
DC/NC				57	81
CC	10L	320	1140	52	80
DC/NC				57	83
NC7K2	7	240	445	5.5	20
NC9K2	9	375	615	13.4	65

\*L denotes a high flow cylinder





## 24/7 service

Total lifetime support is a vital element in the services that we provide to all our customers, from a small laboratory with a single benchtop unit, to a major healthcare or industrial organisation with multiple systems or a complex high volume water purification plant.

Our customer support services include system design and build, installation and commissioning, plus 24/7 long-term maintenance contracts to optimise efficiency and minimise through-life costs.

We also hold extensive stocks of consumables and spare or replacement parts that are available as and when required.

Our team of experienced and regionally based engineers provide dedicated applications and support - both by phone and onsite - including consultancy, trouble-shooting and product training.

## global support

We are part of SUEZ, a world leader in water and waste resources management.

Being part of a wider infrastructure gives us access to an extensive network of global resources, plus the people that possess the experience, skills and knowledge that make our business better.

We offer dedicated resources through a comprehensive network of over 50 distribution channels, encompassing North America, Asia, Europe, Africa and Australasia.

Our complete and innovative range is supported by an approved local distributor, ensuring a secure and cost-effective service, a supply of critical equipment and ultimately – peace of mind.

Every day we turn this to our customers' advantage, delivering ideas, solutions and support that improve water quality, system performance and return on investment.

# about SUEZ

SUEZ is an organisation with more than 150 years of experience in water treatment and waste management. SUEZ specialises in securing and recovering resources to provide proven solutions that enable its customers to address resource management challenges.

**70**  
countries

**80,000**  
employees

**323,000**  
industrial and business customers

**65,000,000**  
people benefiting from sanitation services

**92,000,000**  
people supplied with drinking water

**10,000,000**  
people supplied with drinking water from desalinated seawater

**14,000,000**  
tonnes of waste recovered

**74,000,000**  
euros invested in resource-focused R&D

**5,138**  
GWh of energy generated from waste each year around the world

## resource revolution

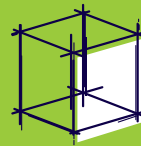
At the heart of SUEZ's ethos is the Resource Revolution, which aims to overcome the challenges presented by the increasing scarcity of natural resources.

the revolution is:



**circular**

because it aims to regenerate resources that are essential to life and the future according to the principles of the circular economy.



**concrete**

because it involves tangible and innovative actions to secure resources.



**collaborative**

because it engages everyone who contributes, each at their own level, to better manage and secure resources for the future.

SUEZ is working to promote innovative technologies and thinking to save for future generations. For example, it calls on the world to embrace change in our water consumption habits, rethink mass waste-creating production methods and develop sustainable societies. In particular, SUEZ can help hospitals and life sciences facilities to meet their specific corporate social responsibility policy targets through audit and consultancy services.



# memberships

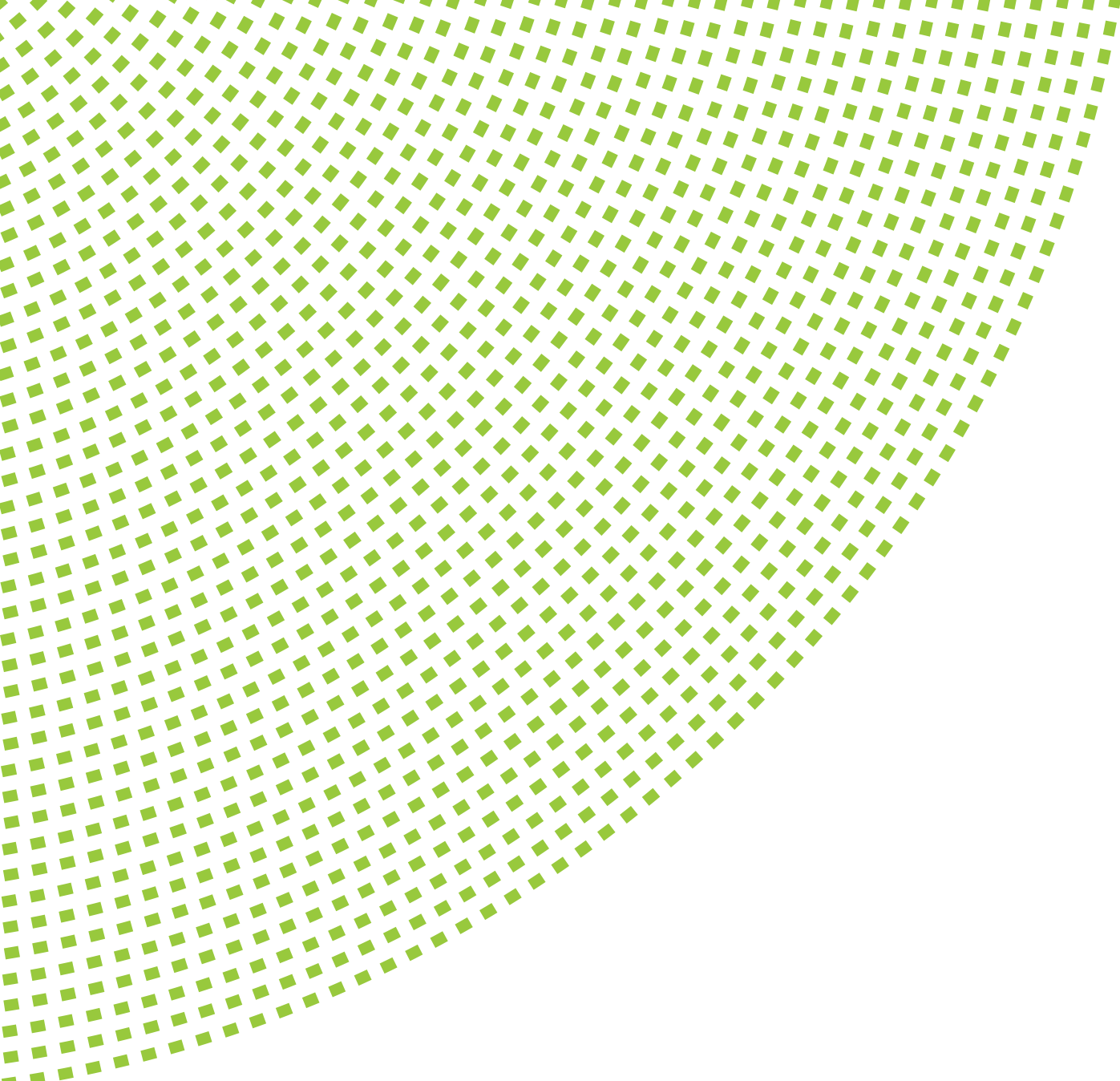
## SUEZ is a member of:

- Institute of Healthcare Estates and Estate Management (IHEEM)
- Central Sterilising Club (CSC)
- Association of Renal Technicians (ART)
- Laboratory and Export body (GAMBICA)
- British Association for Chemical Specialities (BACS)
- SAFEcontractor
- Water Management Society (WMS) (employees only as non-corporate)
- Commissioning Services Association (CSA)

# accreditations

## SUEZ is a accredited to:

- IOSH Approved Centre
- ISO 9001
- ISO 13485
- ISO 14001
- ISO 45001
- SAFEcontractor
- BuildCert



## contact

### Water Purification Systems

Email: [mail.waterpurificationsystems.uk@suez.com](mailto:mail.waterpurificationsystems.uk@suez.com)

Web: [www.suezwatertechnologies.com/products/water-purification](http://www.suezwatertechnologies.com/products/water-purification)



Errors and Omissions excluded. SUEZ reserves the right to change the specification in accordance with our program of continual improvement.



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