



fileder
EXPERTS IN FILTRATION

Water Treatment

Carbon and Media Cartridges

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Water Treatment Cartridge Technology

The control of specific dissolved contaminants is essential in a range of applications, from manufacturing make-up water to point of use. Filerder has a variety of technologies which together protect processes, equipment and improve personal wellbeing.

Ion Exchange Technology

There are two primary methods of water treatment, in which resin beads are employed to achieve ion exchange and ultimately, purified water.

In the first, resin beads will exchange either positive ions (cations) or negative ions (anions) to achieve purified water, as illustrated by softening or nitrate reduction.

In contrast, mixed-bed resin will remove both positive and negatively charged ions in exchange for water forming molecules, as in the example of deionisation.

Softening

Cation based resin exchanges calcium and magnesium for sodium ions

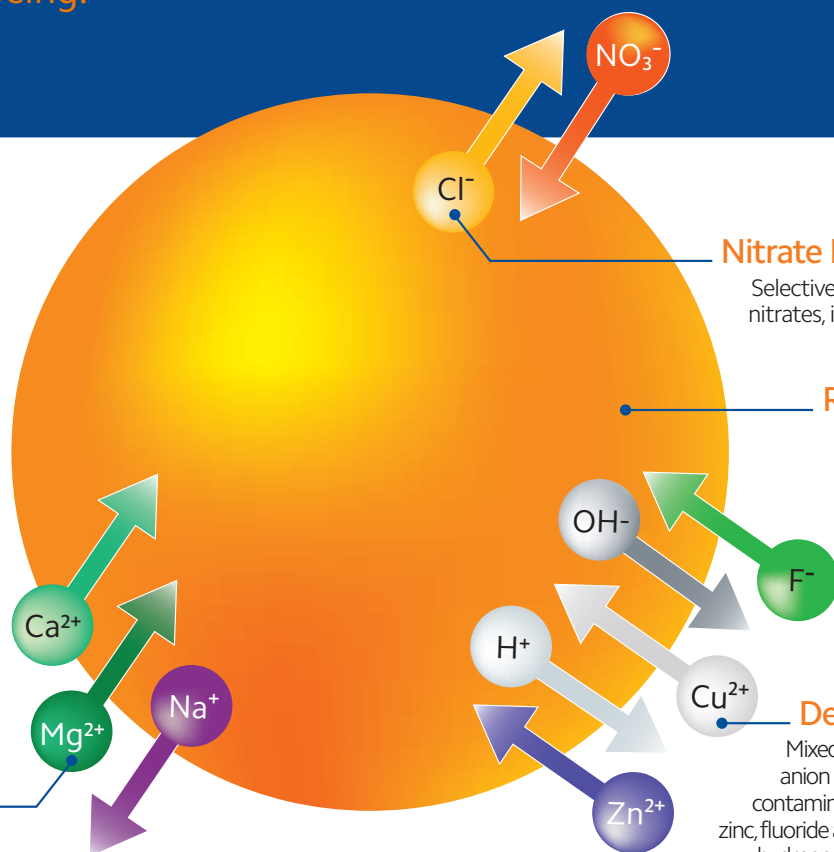
Nitrate Reduction

Selectively targets toxic nitrates, in exchange for chloride ions

Resin Bead

Deionisation

Mixed-bed cation and anion beads exchange contaminant ions such as zinc, fluoride and copper with hydrogen and hydroxide; effectively forming H₂O



Water Treatment Solutions

Softening Resin has been developed to reduce deposit-forming minerals, such as calcium and magnesium, protecting varied equipment including steam ovens, commercial boilers and reverse osmosis systems. **Deionisation (DI)** is the process typically employed as the final polishing stage in a water treatment system. DI resin reduces dissolved ions, thus creating a source of pure deionised water suitable for pharmaceutical, printed circuit board

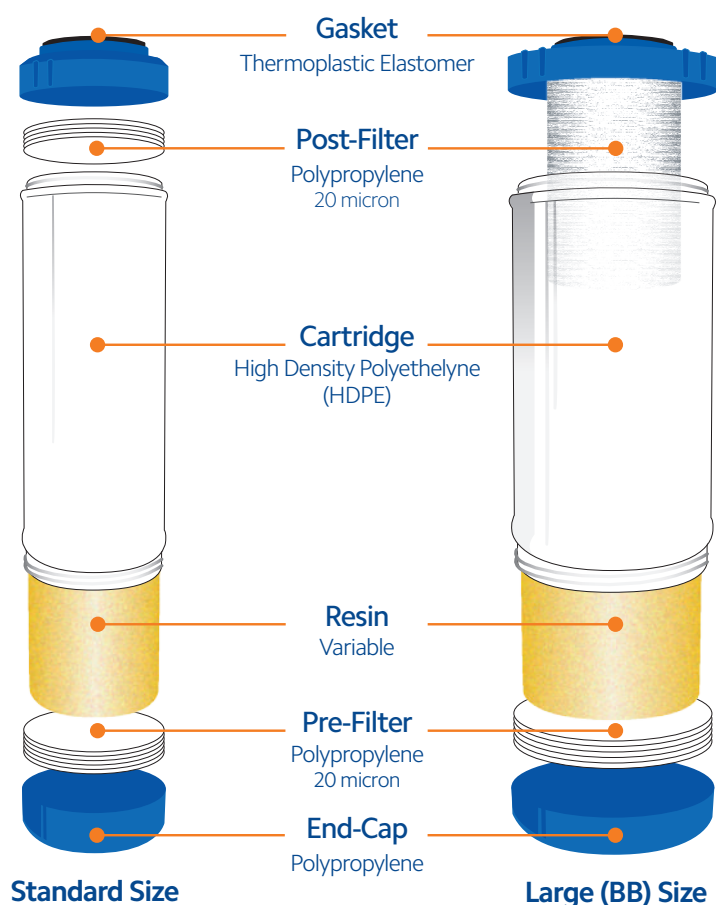
and other critical applications. **Heavy Metals** can have harmful effects on health as well as interfering with sensitive manufacturing processes. Heavy metal reduction resin specifically targets these contaminants, effectively reducing levels to meet drinking water standards. **Nitrate Removal** is essential in rural or agricultural areas, and considered a serious health problem for infants and the elderly. The selective anion resin reduces nitrate levels by exchanging them for harmless chloride

ions, meeting drinking water standards. **Iron Reduction** can be applied to drinking water applications. The proprietary media used specifically targets dissolved iron to improve taste and prevent orange-brown stains in sinks, toilets and other plumbing fixtures. **Scale Inhibiting** crystals are an alternative solution to ion-exchange treatment, preventing hardness forming ions from precipitating and the build-up of deposits on sanitary ware, food service equipment and drink vending machines.

“Filerder sells over
1,000 tons of resin per annum
 capable of treating more than
1 billion litres of water.”

SPECTRUM Resin Cartridge Construction

The range of SPECTRUM water treatment cartridges use a specially designed shell, which both integrates the necessary pre-filtration and maximises fluid distribution through the resin bed by using longitudinal flow to increase contact time.



Flexible Configurations

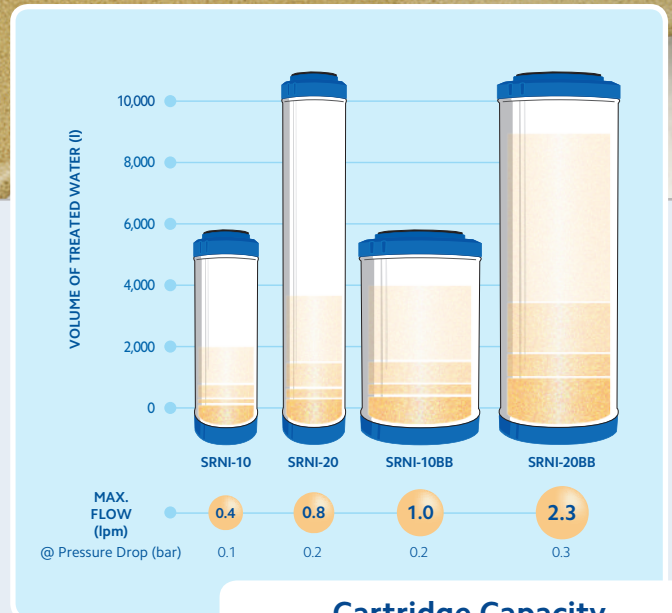
Designed predominantly to be used within plastic filter housings, water treatment cartridges can be combined with SPECTRUM EFHS housing systems to provide a comprehensive solution to varying water challenges. Options range from single to triple housing systems and size options from 10" slimline to 20"BB. When using colour change PRDI cartridges, Pentair clear plastic housings should be used.



Ion-X Nitrate Reduction

SRNI

Nitrate often reaches surface and groundwater by runoff from agricultural activities, such as usage in fertiliser. SRNI cartridges can reduce toxic nitrate levels below WHO limits of 50mg/L, exchanging harmful nitrates for chloride ions.



Key Features

- Typical nitrate reduction levels of over 95%
- Retains nitrate ions even in water with high sulphate levels

Media Compliance

NSF/ANSI-61
WRAS BS6920

Typical Applications

- Private water supply
- Aquatics

Media Type

Strong base anion macroporous type (Cl⁻ Form)

Configurations

Length (")

10

20

Diameter

Standard

Large = BB

Specification

Operating Temperature Range
4-38°C

Max. Operating Pressure
5.5 bar

Max. Differential Pressure
1.0 bar

Cartridge Capacity

Nitrate (mg/l)	Volume of Treated Water (l)			
	SRNI-10	SRNI-20	SRNI-10BB	SRNI-20BB
10	2,000	3,875	4,000	9,075
25	800	1,550	1,600	3,630
50	400	775	800	1,815
75	267	517	533	1,210

Part Number, Box Quantity & Weight

Code	Length	Box Qty	Box Weight (kg)
SRNI	10	9	7
	20	9	15
	10BB	4	7
	20BB	4	16

e.g. SRNI-10BB