Resin For Water Treatment

Which Type Best Suits Your Need?

SPECTRUM's portfolio includes resins for softening, heavy metal removal, deionisation and exhaustion indicating resin. All resins are compatible with both the Pressure Vessels and Empty Cartridge Shells, so choosing the right media for your requirements becomes even easier. From the most popular general-purpose deionising resin (SRDI) to specially selected granular carbon these medias provide an economic inline solution to water treatment. Below is the detailed overview, typical applications and technical specification being available for convenience.

Technical

View Resin Data Sheets
www.fileder.co.uk/resininfo

Softening

SRSO

Technology

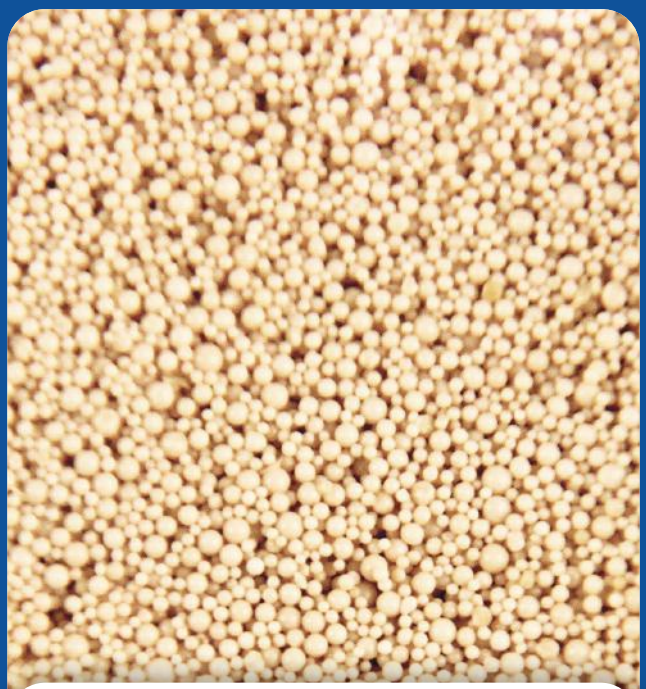
Specifically targeting scale forming ions, such as calcium and magnesium, SRSO has been pre-treated and rinsed to eliminate taste and odour elution while ensuring high ion exchange capacity. This reusable resin is simply regenerated using a brine solution.

Applications

Designed for use in commercial and industrial water softening systems, SRSO provides protection for varied equipment including steam ovens, commercial boilers, and reverse osmosis systems. SRSO is also suitable for use in non-regenerable cartridges for protection of low volume humidification, medical equipment and food service machines.

Capacity (per litre of media) **55,000 mg**

Order Code	Weight (kg)
SRSO-RESIN-25L	20



Heavy Metal Removal

SRHM

Technology

SRHM provides specific selectivity for heavy metals, which can have harmful effects on health as well as interfering with sensitive manufacturing processes. Reducing these contaminants below drinking water standards, SRHM also offers excellent capacity for bicarbonate hardness.

Applications

This resin is typically used in non-regenerable cartridges to reduce levels of metals such as zinc, lead, and chromium. With the ability to reduce hardness without exchanging sodium, SRHM is ideal for use in smaller pressure vessels in Calcium Treatment Units (CTUs).

Capacity (per litre of media) **100,000 mg**

Order Code	Weight (kg)
SRHM-RESIN-25L	20

How to Calculate Resin Life

Use this simple calculation to work out how much water your resin system will treat.

Resin Life = (Resin Capacity (mg/l) X Volume (l)) ÷ Feedwater Quality (mg/l)

Example 1

Mains water feeding SV-FK-844 with 25L of SRDI

Resin Life = (30,000 mg/l x 25l) ÷ 250mg/l

3,000 litres

Example 2

RO feeding SV-FK-844 with 25L of SRDI

Resin Life = (30,000 mg/l x 25l) ÷ 2.5mg/l

300,000 litres

Alternative Option Available
Colour Changing SRDI-IND

Deionising
SRDI

Technology

Deionisation (DI) is the process in which almost all dissolved ions (or Total Dissolved Solids) are reduced, creating a source of pure water (down to 0.1µS/cm). Water of this quality can be used as the final product or as an ingredient in various applications.

Applications

Producing water with little to no dissolved contamination, SRDI is employed as the final polishing stage in water treatment systems. Used either in cartridge form for low volume demand such as counter top autoclaves, or in larger vessels suitable for glass washing, pharmaceutical, printed circuit board and other critical applications.

Capacity (per litre of media) **30,000 mg**

Order Code	Weight (kg)
SRDI-RESIN-25L	18

Deionising
PRDI

Technology

Manufactured under exacting specifications, this Nuclear Grade resin has lower residual metals and TOC (Total Organic Carbon) than the SRDI, resulting in the production of ultra-pure water with a conductivity down to 0.055µS/cm.

Applications

PRDI can be used to produce ultra-pure water with low conductivity / high resistivity (18.3 MΩ). This water, almost in its purest form can be used for radiation wastewater treatment, manufacture of pharmaceutical products, semiconductors and condensate polishing.

Capacity (per litre of media) **25,000 mg**

Order Code	Weight (kg)
PRDI-RESIN-25L	18

Carbon

Loose Granular

Utilising modern processing techniques SCG-C has been designed with a highly microporous structure for superior removal of oxidising agents and low molecular weight contaminants such as chlorine, taste and odour.

Pressure Vessel

Selection Guide

SPECTRUM offer a Standard and Premier version of Pressure Vessel, both vessels boast excellent quality and beneficial characteristics with capacities for a variety of applications. Empty Cartridge Shells are available in both opaque and

Carbon

SCG-C

Technology

Highly effective at removing chlorine, taste, odour and other organics, SCG-C uses high grade water washed coconut activated carbon to ensure excellent mechanical hardness and exceptionally low rinse times. The 12x30 carbon mesh size provides an excellent blend of adsorption capability and low pressure drop across the system.

Applications

Loose granular activated carbon can be used in both replaceable point-of-use cartridges for drinking water, or in larger back washable configurations as economic pre-treatment for reverse osmosis systems.

Capacity (per litre of media) **12,000 mg**

Chlorine capacity using 2mg/l free available chlorine at 0.5mg/l breakthrough

Order Code	Weight (kg)
SCG-C	25

transparent (for use with SRDI-IND Indicator Resin); providing a solution for many lower media volume applications. An array of accessories is available to compliment the vessels. Amongst this range is the SPECTRUM media funnel to provide an easier installation and media change process, compatible with both Standard and Premier vessels. Additionally, port size adaptors are available in ½", ¾" and 1" to be installed with the Premier range if you require a different size from the ¾" adaptors provided.

Premier Pressure Vessels

From 3.6 to 14.5 litres capacity for Resin
From 4.5 to 18 litres capacity for Carbon

Utilising the full bed volume of the media due to the uniquely constructed distribution system, increasing the efficiency and capacity.

Standard Pressure Vessels

From 3.6 to 85 litres capacity for Resin
From 4.6 to 105 litres capacity for Carbon

100,000 cycle pressure tested, this time-proven range of Pressure Vessels offers a capacity of between 3.6 litres and 105 litres.

Empty Cartridge Shells

From 0.2 to 4.5 litres capacity for Resin or Carbon

Design one's own cartridge with a single or multimedia self-assembly construction, to be housed in regular and large diameter filter housings.

Maximum Resin Yield

Optional Extras

Easy Filling

PV-RESINFUNNEL

For use with both the Premier and Standard PV's. This funnel has an integrated central plug to make vessel filling easier and safer by reducing spillage and filling errors.

Flexibility

PV-ADAPTOR-1/2 PV-ADAPTOR-3/4 PV-ADAPTOR-1

Supplied complete with ¾" port adaptors, alternative sizes are available. Simply swapped using the removable red clips, adaptors can be changed to suit various pipework and connections.

Premier Pressure Vessel

PV-PK

SPECTRUM's range of Premier Pressure Vessels offer multiple features that enhance the capabilities of these vessels. Notably the distribution system is pre-built into the Premier Pressure Vessels maximising the use of all the media bed, eliminating dead zones and providing a time efficient set up. This design provides up to 30% higher resin productivity when compared to industry standard vessels. Premier Vessels come complete with the vessel, head, two 3/4" adaptors and the integrated distribution system. Additionally, various sized port adaptors offer versatility and flexibility in application during resin changeout.

Key Features

- Up to 30% higher resin yields achieved, resulting in savings on resin and servicing costs.
- Constructed from 100% non-toxic, injection moulded, thermally welded polypropylene materials.
- Integrated top and bottom plate distribution system eliminates dead zones and reduces the potential of channelling.
- Complete with premier head, ¾" adaptors, locking clips, O-rings and integrated distribution system.

Specification

Operating Temperature	1 - 45 °C
Working Pressure	8 bar
Port Size (")	¾ (included) ½ & 1 (optional)
Neck Size	2.5

Materials of Construction

Vessel
Polypropylene

Head
Polyphenylene Oxide

Head Seals
Buna-N

Top/Bottom Diffuser
ABS

Riser Tube
Polyvinyl Chloride (PVC)

Internal Seals
Thermoplastic Elastomer

Diagram

Part Number

Code	Tank Size (")	Dimension (mm)		Volume (l)	
		Diameter	Height	100% Filled (Carbon)	80% Filled (Resin)
PV-PK-717	7 x 17	189	433	4.5	3.6
PV-PK-817	8 x 17	208	433	5.5	4.4
PV-PK-835	8 x 35	208	897	18.0	14.4