

GRAVEX® SG Resins

GR-1-0 SG, GR-2-0 SG, GR-3-0 SG

Gravex SG Resins are high capacity standard particle distribution ion exchange resins. The cation component, GR-2-0 SG is a gaussian strong acid gel-type resin. The anion component, GR-1-0 SG is a gaussian strong base Type I gel-type resin. GR-2-0 SG & GR-1-0 SG are individually made, tested and certified in our laboratories and then combined in a unique mixing process to create the mixed-bed, Gravex GR-3-0 SG. The individual components in the Gravex SG family are highly regenerated to give the end-user the best available performance, whether it is only cation or anion resin or the mixed-bed resin. Anion resins regenerated in the Graver IX facility are typically converted to greater than 97% hydroxide sites and have a low chloride constituent making them ideal, high capacity, pure water demineralizer resins.

Applications

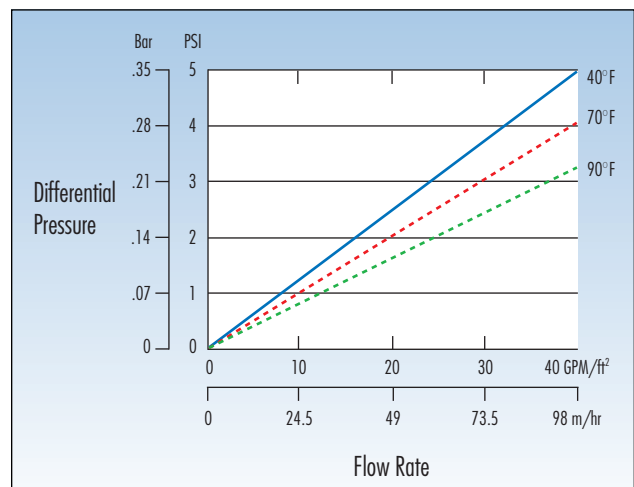
The Gravex SG Resins are manufactured to high quality standards and are highly suitable for condensate polishing applications in power generating plants. They will provide long life in use, good separation & quick rinse-up after regeneration. Gravex SG Resins have been used successfully in many high purity systems in the United States for more than 30 years. Other applications include make-up for pure water systems, waste treatment and demineralization for a wide variety of other industrial pure water requirements.

Operation and Maintenance

Specifications for each component cation, anion and mixed-bed resin are available in individual documents. General information and conditions for the operation and maintenance of Gravex SG Resins are in the following tables:



GR-1-0 SG – PRESSURE DROP



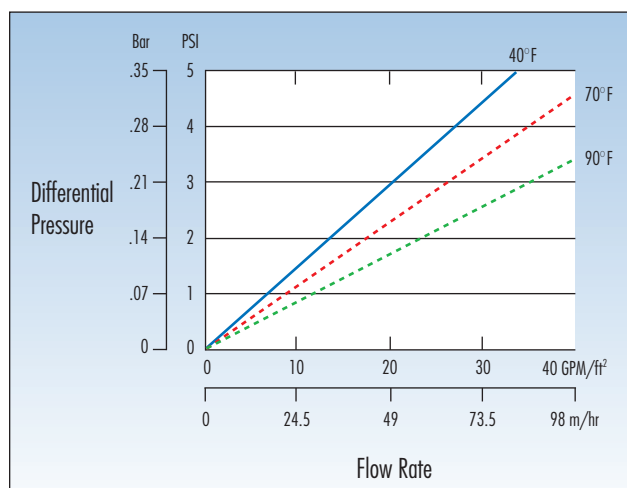
Graver Technologies Quality System

We are committed to continually improve, manufacture, and deliver consistent high-quality products. The Quality System is designed to meet the NRC required 10CFR50 Appendix B, the same program that nuclear plants use and similar to ISO 9000, but "App. B" adheres to the more stringent nuclear requirements. We have been operating this fully audited Quality Program for 30 years.

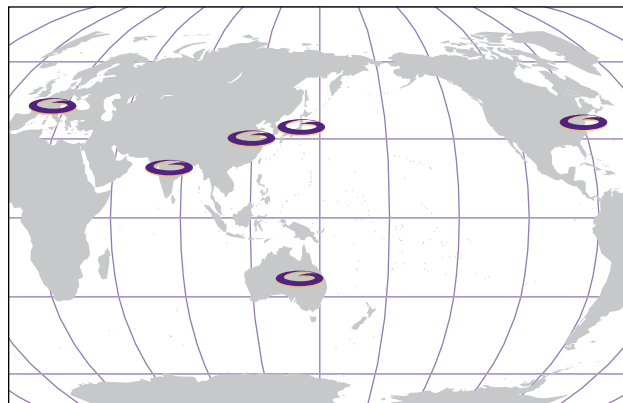
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GR-2-0 SG – PRESSURE DROP



Graver Technologies' Worldwide Locations



Superior Products & Global Reach

Graver Technologies continues to set the industry's pace in ion exchange resin purity, consistently meeting today's tougher requirements for nearly undetectable levels of chloride, sulfate and TOC for high-purity condensates and other process waters.

Whether your business is around the corner or around the world, Graver Technologies can support you with superior products and services. Our products are used worldwide. In fact, we export over 35% of the products we manufacture. Graver Technologies ion exchange products treat more than 6.5 billion gallons of process water every day in over 38 countries. Over 75 percent of the nuclear industry uses our resins. We've achieved this by consistently delivering dependable, high performance products.

RECOMMENDED OPERATING CONDITIONS

Max. Operating Temperature	60°C (140°F)
Min. Bed Depth	800 mm (2.6 ft.)
Linear Flow Rate	5 – 125 m/hr (2 – 50 gpm/ft²)
Volume Flow Rate	8 – 48 BV/hr (1 – 6 gpm/ft³)
Regenerant	NaOH
Concentration	4 – 8%
Dosage	64 – 240 g/L (4 – 15 lbs/ft³)
Linear Flow Rate	1 – 10 m/hr (0.4 – 4 gpm/ft²)
Volume Flow Rate	1.5 – 4 BV/hr (0.2 – 0.5 gpm/ft³)
Rinse	
Linear Flow Rate	5 – 40 m/hr (2 – 16 gpm/ft²)
Volume Flow Rate	8 – 32 BV/hr (1 – 4 gpm/ft³)

For more information

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Graver Technologies

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**Nuclear
Quality
Assurance
Program**

10CFR50
Appendix B

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