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Eco-Tec Launches the Recoflo Softener: Setting a New Standard for Lithium Brine Treatment

Pickering, Ontario, Canada — *Eco-Tec, A Kovalus Company,* announces the launch of the Recoflo® Softener, an advanced water treatment solution engineered to redefine performance in lithium brine processing. Building on decades of proven packed bed ion exchange expertise, this **patent pending** next-generation softener delivers exceptional efficiency, sustainability, and cost savings for the lithium industry.

A New Era of Performance and Reliability

The Recoflo Softener builds on Eco-Tec's decades of innovation and packed bed ion exchange expertise, applying its patented Recoflo technology, a process refined over more than 50 years of industrial success, to deliver new levels of performance and reliability in lithium brine treatment. Designed to handle brines with up to 20,000 ppm TDS and 3,000 ppm $CaCO_3$ hardness, the system consistently achieves over 95–98% lithium recovery. Depending on feed conditions, it can reach ultra-low hardness levels below 2–5 ppm as $CaCO_3$, meeting the demanding purity requirements of downstream lithium conversion processes. With stable performance even at temperatures as low as 30°C, the Recoflo Softener ensures operational dependability across a wide range of environments.

Simplified, Sustainable Operations

The Recoflo Softener regenerates using standard salt (NaCl) — a readily available and non-hazardous reagent — **eliminating the need for hazardous chemicals such as NaOH or HCl**. This simplifies operations, enhances worker safety, and reduces maintenance requirements, aligning with Kovalus's commitment to sustainable and safe process solutions.

Compact, Cost-Efficient Design

The Recoflo system's compact design translates into lower capital and operating costs, reduced resin volume, and simplified installation. Substantial pre-assembly of piping and wiring further reduces total installed cost and accelerates project timelines — making it ideal for both new builds and retrofit applications.

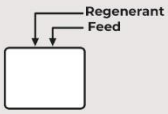
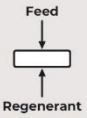
Sustainability and Impact

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Contact Us

Please contact Louie Ponzani louie.ponzani@kss-sep.com for more information or to explore treatment feasibility assessment of your brine via our process models, lab testing or pilot demonstration.

Recoflo® Advantage

	Conventional Ion Exchange	Recoflo Ion Exchange	Features of Recoflo Technology
Resin			**Recoflo:** Fine mesh resin beads **Conventional:** 4X larger diameter resin beads
Column			**Recoflo:** Compressed shallow resin bed **Conventional:** Fluidized resin bed with large freeboard
Regeneration			**Recoflo:** Short cycles (minutes) of counter-current regeneration **Conventional:** Long cycles of regeneration, same direction as process flow



Typical Recoflo System

About Eco-Tec

Eco-Tec, A Kovalus Company, is a global leader in advanced water, chemical, and resource recovery solutions. With decades of proven expertise, Eco-Tec delivers technologies that enable industries to operate more efficiently and sustainably. Eco-Tec was built on the ground-breaking technology of Recoflo®, was founded in 1970. This reciprocating flow ion exchange process breaks the mold of conventional ion exchange technology and provides significant performance and economic benefits. Eco-Tec was acquired by Kovalus Separation Solutions in 2019.