

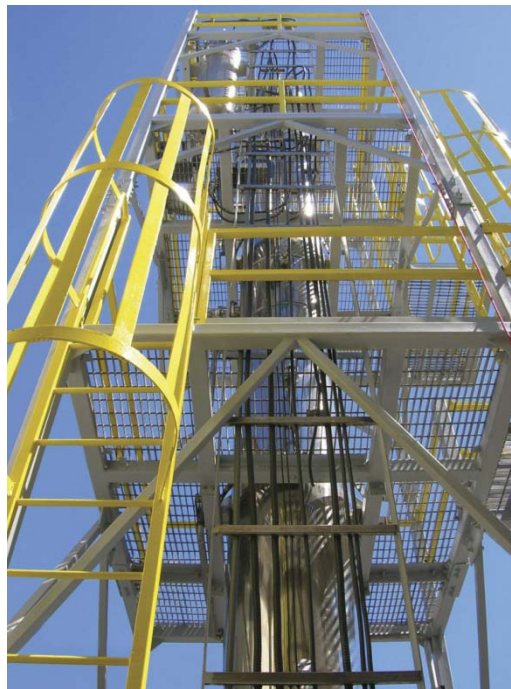




Methanol Recovery Systems

Methanol Recovery for biodiesel is an important part of the entire biodiesel process and involves the highest cost of operation for a biodiesel plant. Only about half of the methanol used is actually consumed in the transesterification process leaving the rest in the finished biodiesel and glycerin. With today's high methanol costs, biodiesel producers simply cannot afford to throw away half of the methanol they purchase. Also, with everyone now striving for ASTM-compliant biodiesel, leaving methanol in finished biodiesel has another bad side effect, it will fail the ASTM Flash Point test.

Now there is a solution for recovering your unused methanol – SRS Engineering's high-purity methanol recovery systems. Unlike 1st generation vacuum based systems that suffer from low recovery rates, water contamination, glycerin, or biodiesel carry over in the recovered methanol, SRS's true fractional distillation columns efficiently recover >99.9% of all unused methanol, returning it clean and dry to your bulk methanol tank at >99.9% purity. This results in no wet methanol and no off-site reprocessing costs. In fact your recovered methanol is often of a higher purity than the new methanol you purchase.



SRS Engineering employs both single and dual column designs in the Biodiesel production process to maximize energy use and efficiencies.

- **The SRXC-Series** - Removes Methanol from the Glycerin stream
- **The ASV-Series** - Recovers excess Methanol for cleaner unwashed fuel

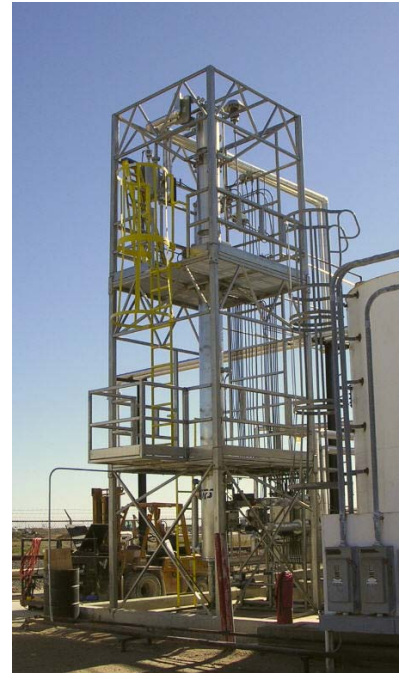
The SRXC-Series

- Removes Methanol from Glycerin Stream
- 99.9% Purity range
- Provides Glycerin stream with less than 0.1% Methanol content (Non-hazardous)
- Automatic self adjusting control system for variable parameters
- Skid mounted on a galvanized steel tubular frame
- Provides continuous operation
- Pre-wired, pre-piped, and tested prior to customer delivery

The **SRXC-Series** is a completely automated methanol recovery/purification system for recovering methanol from crude glycerin produced in the biodiesel production process. The SRXC system is designed to process the glycerin stream providing a very dry methanol with a purity exceeding 99.5%. The SRXC employs a specially designed fractionating column with a reflux stream is used to separate the materials in a continuous mode on a 24-hour basis for biodiesel plants producing from 500,000 to over 100 million gallons per year.

The SRXC2-Series

The **SRXC2-Series** is a more advanced distillation column used most commonly with larger biodiesel refineries. It incorporates all of the same functionalities of the single column designed SRXC but provides a 40-50% reduction in operational costs.



The ASV-Series

- Removes excess methanol and water from the unwashed biodiesel.
- Reduces typical wash times associated with dry/wet washing
- Reduces dry wash consumables and/or provides longer wear life of Ion materials
- Recovers the methanol for additional purification
- Prevents loss of methanol associated with washing process

The **ASV-Series** column is a completely automated methanol and water extraction system used for the biodiesel stream leaving less than 0.05% methanol or water in the unwashed fuel. NOTE: The ASV does utilize vacuum but it should not be confused with a basic "Vacuum Dryer" as such systems typically have carry over of biodiesel or glycerin if used for that purpose; the ASV does not have any carry over. The ASV is a specially designed column operated in a continuous mode on a 24-hour basis for biodiesel plants producing from 500,000 to over 100 million gallons per year.



Features and Safeties (SRXC-Series & ASV-Series)

Both the SRXC and the ASV are skid mounted systems on a tubular galvanized steel self supporting frames with anchor attachments, and can consist of multiple sections with single point connections for easy field installation.

- [Programmable Logic Control \(PLC\) Systems](#)
- Distributed Control Systems (DCS)
- Human Machine Interface (HMI) Applications
- IEC 1131-3 Programming Standards
- Advanced Control Concepts
- Can handle all explosive atmospheres (Class 1, Division 1 or 2, and ATEX rated system)
- [Programmable Logic Controllers PLC](#) System for monitoring and making adjustments as needed.
 - Fault conditions can be diagnosed and message displayed on the control panel touch screen ensuring operator safety and ease of operation
 - Maintenance Screen for troubleshooting
 - Automatic shut down of the system in the event of a fault condition or at the end of a cycle.
- Microprocessor control panel with color touch screen and message center to display time stamped alarm and historical data with NEMA 4, pre-wired & assembled NEMA 4X enclosure, main fusible disconnect, houses all cables for Column devices, pumps and valves (Air Purged for Class 1 Division 1)
 - Displays and complete adjustment of all metering pumps
 - Automatic or Manual control
 - Display of RTD'S and temperature control in the system.
 - Faults are displayed on monitored devices including critical shutdown and alarming.

The engineering staff at SRS Engineering Corporation have significant experience with most major brands and models of [Programmable Logic Controllers \(PLC\)](#) and Distributed Control Systems (DCS). SRS' experience also includes the ability to program and integrate many major Human-Machine Interface (HMI) software packages

If cutting your methanol bill in half sounds good, and improving the quality of your finished biodiesel sounds better, then call SRS today to find out how to get started.

Methanol Recovery - do it once, do it right with SRS Engineering (800)497-5841

**Building a Greener Tomorrow... for the
Environment and Your Bottom Line!**



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