



TAYLORMADE
RENEWABLES LTD.
Energy | Environment | Innovation

TRL RAIN ULTRA™

Solvent Recovery System (SRS)

Patented Technology





TRL RAIN ULTRA™ (SRS)

The **TRL-RAIN ULTRA™ Solvent Recovery System (SRS)** revolutionizes solvent recovery technology with its innovative design, setting new benchmarks for efficiency and cost-effectiveness. By featuring a unique evaporator and condenser system that eliminates the need for vacuum pumps and chilling towers, the TRL-RAIN ULTRA SRS significantly reduces energy consumption and maintenance requirements. This state-of-the-art system is engineered to recover nearly 100% of solvents, ensuring maximum product yield and substantial cost savings. Its ability to operate at low temperatures allows the use of waste heat, renewable energy sources, or hot water generators, further enhancing its energy efficiency and environmental sustainability.

The **TRL-RAIN ULTRA™ SRS** is designed for simplicity and versatility, making it easy to install and operate without the need for skilled labor or complex equipment. Its modular design adapts to both small-scale and large-scale solvent recovery applications, handling a wide variety of solvents regardless of their boiling points. With minimal maintenance needs and no requirement for chilling towers, vacuum pumps, or complex columns, the system reduces operational costs and downtime, offering an eco-friendly and economically viable solution for modern industries seeking efficient and sustainable solvent recovery methods.

Key Features:



- **No Chilling:** The system operates efficiently without the need for chilling towers.
- **No Vacuum Pumps:** Eliminates the need for vacuum pumps, reducing energy consumption and maintenance costs.
- **No Vents:** Completely enclosed process with no emissions.
- **100% Solvent Recovery:** Ensures near-total recovery of solvents, resulting in direct cost savings.
- **Energy Efficiency:** The absence of vacuum pumps and chillers significantly reduces energy costs, making the system highly economical.
- **Maintenance-Free Operation:** The system does not require Clean-In-Place (CIP) processes, additives, or acid treatments.
- **Eco-Friendly Design:** The design emphasizes energy efficiency and environmental sustainability.
- **Low Power Demand:** Requires significantly less power compared to traditional technologies.
- **Versatile Treatment Capability:** Can handle any quality and quantity of effluent needing solvent recovery.
- **Modular Design:** Easy to install and operate, adaptable to various operational scales.
- **Low-Temperature Operation:** Utilizes low-temperature evaporation, allowing the use of waste heat, renewable energy, or hot water generators efficiently.
- **Compact and Cost-Effective:** The system's fewer moving parts reduce capital costs, space requirements, and maintenance expenses.
- **Universal Solvent Compatibility:** Capable of treating solvents with any boiling point, providing unparalleled flexibility.

Advantages:

- Innovative Design/Compact
- Maximized Yield
- Eco-friendly
- Flexible
- Reliability
- User-friendly
- Regulatory Compliance
- Efficient Resource Use
- Safety
- Scalable



Recover your Solvent with TRL RAIN ULTRA:

Unique Evaporator and Condenser System:

The system features a specialized evaporator and condenser design that eliminates the need for traditional vacuum pumps and chilling towers.

Heat Recovery and Utilization:

The TRL RAIN Ultra™ SRS operates at low temperatures, allowing for efficient use of waste heat, renewable energy sources, or hot water generators. This thermal management approach enhances energy efficiency and reduces operational costs.

Modular and Versatile Design:

Designed for simplicity and adaptability, the system's modular configuration caters to solvent recovery applications of varying sizes, accommodating both smaller operations and larger industrial needs.

Maintenance and Operational Efficiency:

With no need for vacuum pumps, or complex columns, the TRL RAIN Ultra™ SRS reduces maintenance requirements and downtime. Routine maintenance is straightforward, ensuring continuous operation and longevity of the system.



Other Applications:

- Efficiently recovers solvents from chemical processes in Chemical Manufacturing Industries
- From Pharmaceutical Production optimizes solvent recovery in drug synthesis and formulation.
- Reduces VOC emissions and improves resource utilization in paint and coating production.
- Enhances solvent recovery efficiency in dyeing and finishing processes, minimizing environmental impact.
- Recovers solvents from paint stripping and cleaning operations.
- Supports sustainable practices by recovering solvents used in food processing
- Adapts to various industrial sectors for efficient and sustainable solvent recovery and minimizing waste.

Our Expertise:

TRL offers a comprehensive range of TRL RAIN Ultra for following applications:

- Separation Technologies • Product Concentration • Recovery Systems



Our Other Technologies:

- TRL Zeo Membrane, RO-BFO plant with Zeolites for recovering maximum drinking water from any brackish or Sea-water
- TRL Zeo Membrane for Surface and Subsurface disposal of Produced Water with ZLD (Zero Liquid Discharge) Option
- TRL Zeo Membrane in combination of TRL-RAIN (patented) for treating RO reject or concentrated Hazardous streams with High COD, BOD, TDS to ZLD from any industries
- TRL IAF EC-ULTRA with Zeolites & AOP using Artificial Intelligence – for hazardous Hospitals waste water
- Domestic Waste water treatment like STP, WTP and Grey water & Water Infrastructure's

We are deployment partners for BARC for hazardous to drinking water applications

“ **Maximum Recovery, Minimal Cost – The Future of Solvent Recovery with TRL RAIN ULTRA™ Technology- Your Partner for Innovation and Success.** ”

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