ISTpure

INNOVATION AND LEADING TECHNOLOGY

AIRPLUS Industrial

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CONTINUOUS SOLVENT RECYCLERS

SRC SERIES

The SRC Series Continuous Solvent Recyclers come in different sizes and are designed for recovering up to 500 gallons of used solvent per hour. Its exclusive design features self-adjusting scraper assembly which agitates the solvent for even distribution and a 60º cone vessel which eases sludge removal after process.

This solvent recycling system uses distillation to separate solvent from contaminant. The waste solvent automatically enters the distillation vessel utilizing the standard vacuum pump provided with the solvent recovery still. A heated thermal oil circulates in the distillation vessel jacket to warm up the used solvent at a programmed temperature. Solvent vapor exits the boiler and travels through a coil condenser. Clean, condensed solvent exits to a storage vessel ready to be reintroduced in production.

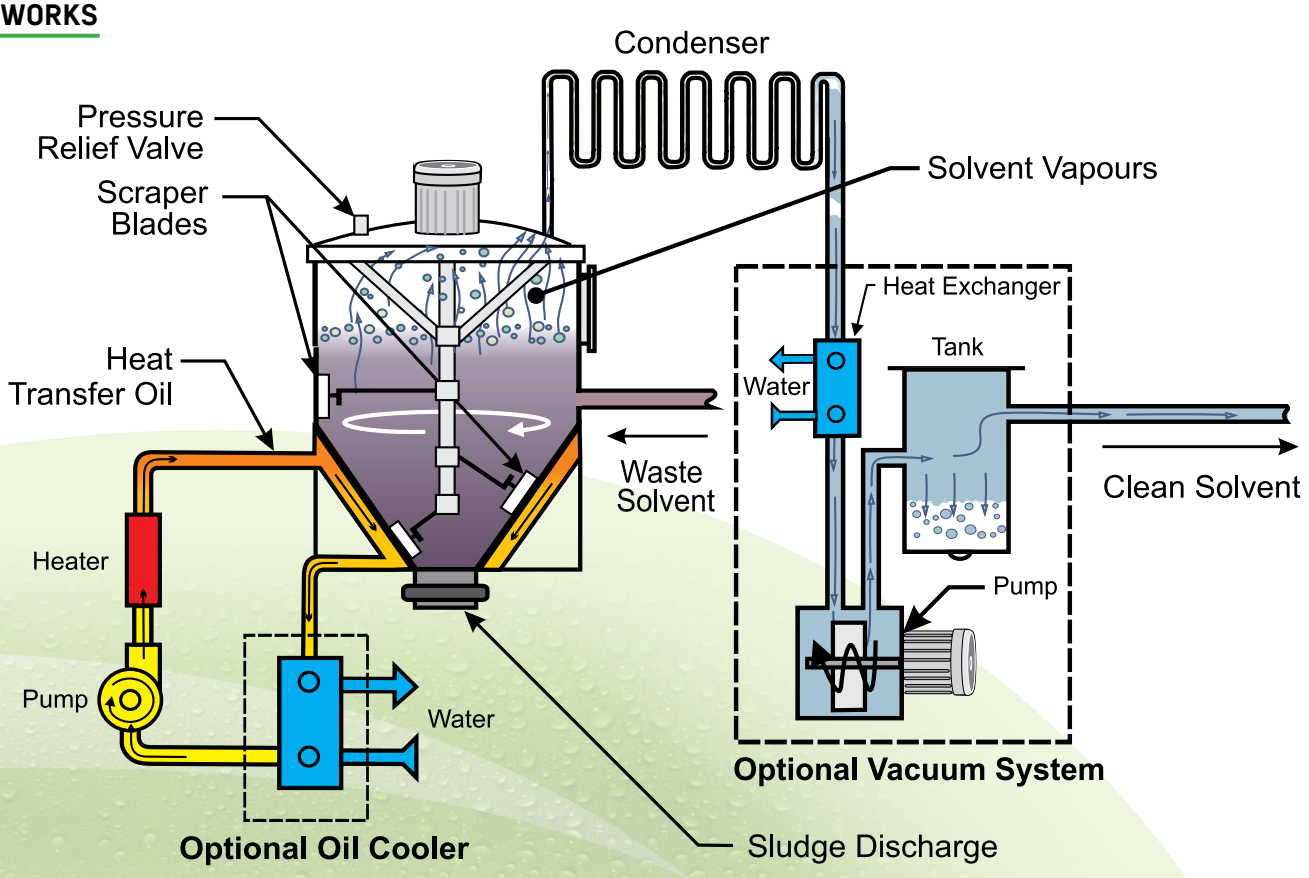
INDUSTRIES SERVED

- General Manufacturing
- Automotive
- Aerospace and Aviation
- Petroleum
- Flexo/Litho Printing
- Energy

STANDARD FEATURES

- ✓ **Distillation Rates:** up to 250 GPH
- ✓ **Solvent's Purity:** 99.5% and more
- ✓ **Recycles Most Popular Solvents:** mineral spirit, flexo & litho solvents and many more
- ✓ **Virtually Maintenance Free**
- ✓ **Fully Automated Process** controlled by a microprocessor (PLC)
- ✓ **Color Touch Screen** operator interface display
- ✓ **316 Stainless Steel Construction** on all wet surface
- ✓ **Interlocking Safety Devices**
- ✓ **RTD** in vapor space, sludge and thermal oil
- ✓ **6'' Sludge Discharge Valve**
- ✓ **Elevated Base** with vent port
- ✓ **Ready for Single Point Connections**
- ✓ **Return On Investment:** Most of our clients have obtained a return on investment in less than a year!
- ✓ **Safety Standards:** Explosion proof rated for Class I, Div. 1

HOW IT WORKS



Vessel Design: The exclusive 60° cone vessels design allows proper heat distribution and ease of residue removal. This design has more heat transfer area at the top of the cone. As sludge accumulates, it naturally drops to the bottom of the cone leaving the larger surface area at the top to keep on distilling at optimal efficiency. Under these conditions, the sludge is always submerged in solvent and acts as an additional safety feature with reactive materials such as nitrocellulose.

PLC controls: This system offers an assortment of PLC systems and security levels. All programs and listings are made available to the user for on-going maintenance. Set points and temperature ranges are preset at the factory, and are protected by password access which only authorized personnel has access.

Self-Adjusting Scraper Blades: The unique self-aligning, flexible "wrist" design assures proper leading edge scraping of the vessel heated surface. This ensures a continuous contact with the inner walls of the unit at all times, requiring no external adjustments. The support hub is located above the residue discharge area to prevent interference during discharge.

All Stainless Steel Construction: All components are fabricated in industrial-grade stainless steel, including the vessel walls, the outer shell, as well as the elevated stand, platform and ladder.

High Efficient Condenser: The coil condenser design provides exceptional heat transfer area thus establishing an efficiency rating far above the standard shell and tube condenser designs.

Precise Temperature Controls: Resistance temperature detectors (RTDs) are provided in the vapor space, heating medium and the sludge and are monitored and controlled within a pre-determined range by the PLC. RTD's are accurate to within 1 to 2 degrees F. Sludge temperature control is the only accurate way to establish its consistency, since it becomes hotter as it thickens. Discharge condition is controlled accurately through this temperature sensing, initiating auto cool down cycle which alerts the operator to empty the residue. Sludge temperature control is key to the safe distillation of waste solvent contaminated with nitrocellulose.

HOW IT WORKS (CONT'D)

Heating Methods: SRC Series solvent recyclers can be heated with Steam or Electric heaters. The heating medium is high efficiency heat transfer oil which is recirculated in a jacket around the distillation vessel. By providing pre-heated medium with an even distribution of heat, there is less chance for hot spots and less volume of heating medium is required. The auto cool option is accomplished through an in-line heat exchanger in the recirculating loop.

Single Point Utilities Connections: Minimal installation time and cost. Units are skid mounted, pre-shipment assembled and tested. All systems are wet tested at the factory before shipment.

Solvent Tank Designs: Conical bottom vertical tank designs fabricated of 304 stainless steel, which feature small footprints for optimal use of space. Optional recirculating and fill pumps can be fitted to the dirty solvent tank to keep solid sludge from building up at the bottom. Automated transfer pumps are available to suit the application. All tanks have clean out hatches, venting ports, a sight glass, and accommodations for three level sensors.

Sludge Discharge: Our solvent distillation units use a bottom mounted large capacity 6» or 8» manually operated discharge valves. The unique self-adjusting scraper blades also assists in discharging the sludge.

AVAILABLE OPTIONS

Auto Cool: For operator safety and VOC minimization, an optional auto oil cooling system is available to accelerate process cool down time and get ready to start a new batch promptly. Before discharging, the sludge should be rapidly cooled to a safe temperature, typically from 100-150 degrees F. After discharge, the system is immediately ready to be reloaded with solvent to continue the process. This shortens the discharge time by several hours for a more effective use of the system.

Vacuum: An optional vacuum systems allows you to maximize VOC control and assist highly volatile solvents processing. It includes a 3 hp Liquid Ring vacuum pump, decanter, sight glass under PLC control. A heat exchanger is used to virtually eliminate VOC emissions from the vacuum system. The vacuum is mounted on the distillation system to reduce the effective boiling temperature for safety and efficiency. The vacuum system can also be used in the auto load operation instead of a pump.

Auto Fill: Vacuum fill or optional pump fill system with electronic level sensor to maintain operational level within the distillation vessel. In addition to the level sensor control, a secondary level of safety is implemented by incorporating a PLC driven watch dog timer feature, which stops the auto fill action upon the expiration of the allocated time, both for an initial fill (typically 10 minutes) and consequent refills (typically 2 minutes). This ensures against accidental overfilling.

Class 1, Division 1 or ATEX Option for Hazardous applications: Explosion resistant air (or nitrogen) purged NEMA 4X Control Panel with pressure differential sensor mounted on a NEMA 7X junction box. Purge pressure loss sensed through the PLC will shut power off to the unit. NEMA 7 compatible junction boxes, conduits and components are utilized.

Nitrocellulose Package: The Nitrocellulose control package is required when Nitrocellulose is present in materials being distilled to prevent a Nitrocellulose Reaction typically found in the printing industry.

Inspection Platform with Stairs: Eases maintenance routine and cleaning of boiling vessel.

Automatic Sludge Pump: Assists discharging of sludge when gravity is not sufficient.

Fractionating Column: Increases purity and results when processing multiple solvents blend.

We always evaluate your solvents and contaminants MSDS sheets prior to recommending the proper system. It is very important to also identify the possible presence of nitrocellulose and acids in your dirty solvent mix.

ADDITIONAL OPERATING AND SAFETY FEATURES

User Friendly Display: Full function digital display with clear status and fault messages ensure safe and intuitive operation and maintenance of unit.

Ethernet or Cellular Access PLC: Allows remote access to process monitoring and settings.

Interlocking Components: Interlocking safety devices on all component ensure no unintended or accidental handling is carried during distillation process, keeping operators and work environment safe.

Explosion Proof Package: Explosion resistant designs and components increase operators' safety when processing potentially hazardous solvents.

5 psi Pressure Relief Valve: Prevent Excessive Pressure build up in boiler to keep system in safe operating conditions.

MOST OF OUR CUSTOMERS HAVE GAINED A RETURN ON INVESTMENT (ROI) IN AS LITTLE AS 4 TO 12 MONTHS! ESTIMATE YOURS TODAY!

ONLINE ROI CALCULATOR

istsurface.com/roi-calculator/

SPECIFICATIONS

MODELS –>	SRC-240	SRC-300	SRC-350	SRC-400	SRC-800	SRC-1000	SRC-1400
Output Of Still (GPH)	3-5	8-10	11-18	19-26	35-45	50-65	80-100
Working Temperature	122°-550° F						
Heat Transfer Oil (US gal)	30	85	110 -130	110 -130	165 -180	240 -260	350
Power Consumption (kW)	10	25	30	40	80	100	150
Amperage - Voltage (3 Ph / 60 Hz)	14 A - (460 V) 10 A - (600 V)	32 A (460 V) 25 A (600 V)	38 A (460 V) 29 A (600 V)	51 A (460 V) 39 A (600 V)	101 A (460 V) 77 A (600 V)	126 A (460 V) 97 A (600 V)	188 A (460 V) 145A (600 V)
Vessel Holding Capability To Level Sensor (US gal)	60	80	85	85	200	250	350
Water Chiller Size	25 tons			50 tons			100 tons
Chill Water Requirements (GPM @ psi)	10 @ 30	25 @ 30	40 @ 30	50 @ 30	120 @ 30	160 @ 30	200 @ 30