Kresco

Continuous Flow Solvent Recycler

SRC™ Series

Kresco's SRC™ Series Continuous Solvent Recyclers recover and purify used solvents through an efficient continuous distillation process, reducing waste and operating costs. Designed for high-volume applications, they deliver clean, reusable solvent while minimizing maintenance and maximizing productivity.

Overview

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 60° 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.

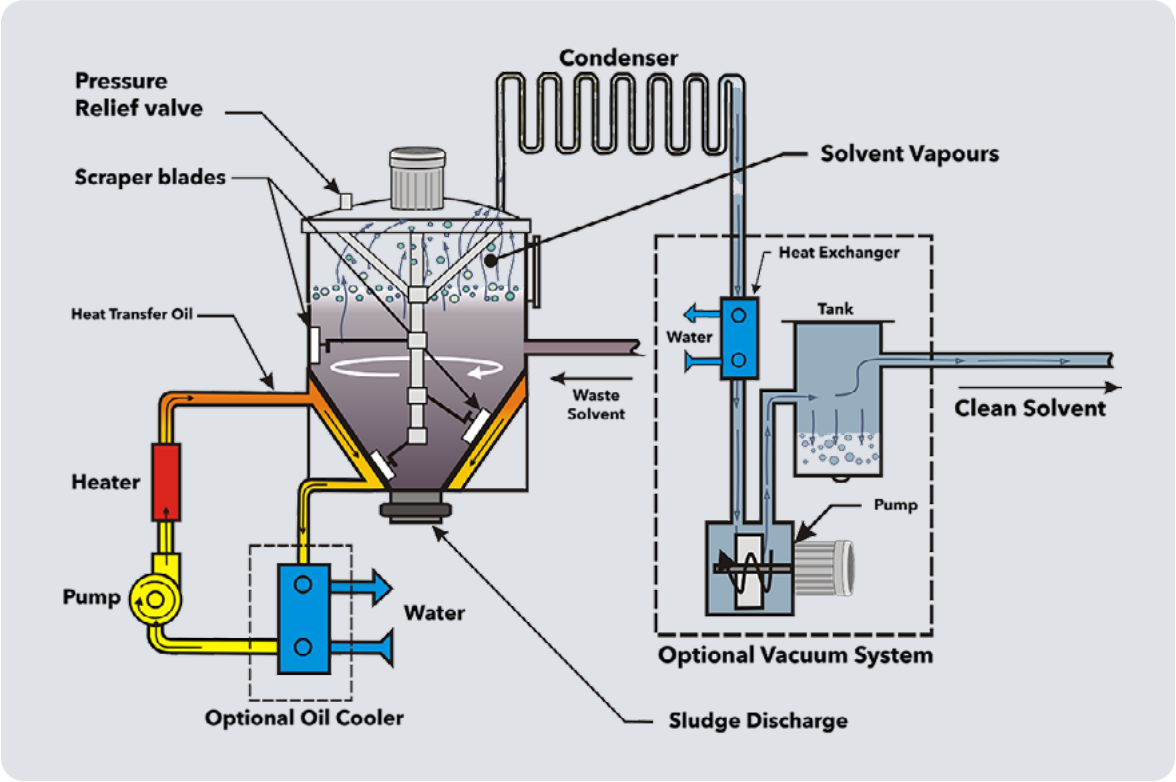
Standard Features

- → **Distillation Rates**: Up to 250 GPH
- → **Solvent's Purity**: 99.5% and more
- → **Recycles Most Popular Solvents**: Mineral spirit, flexo and litho solvent and many more
- → **Distillation Rates**: Controlled by a microprocessor (PLC)
- → **Color Touch Screen**: Operator interface display
- → **316 Stainless Steel Construction**: On all wet surfaces
- → **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**
- → **Safety Standards**: Explosion proof rated for Class I Div. 1
- → **Virtually Maintenance Free**

Industries Served

- → General manufacturing
- → Aerospace and aviation
- → Automotive
- → Petroleum
- → Flexo/Litho Printing
- → Energy

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 Control

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.

Standard Features

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.

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 preheated 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.

User Friendly Display

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

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.

5 Psi Pressure Relief Valve

Prevent Excessive Pressure build up in boiler to keep system in safe operating conditions.

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.

Ethernet or Cellular Access PLC

Allows remote access to process monitoring and settings.

Explosion Proof Package

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

Specifications

	Model						
Specifications	**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 / 60Hz)	14 A (460 V) 10 A (600 V)	32 A (460V) 25 A (600V)	38 A (460V) 29 A (600V)	51 A (460V) 39 A (600V)	101A (460V) 77A (600V)	126A (460V) 97A (600V)	188A (460V) 145A (600V)
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

About Kresco

Kresco designs, manufactures, and supports industrial equipment for the surface treatment industries. Kresco has standard equipment designed for most applications and can customize equipment to meet or exceed your production expectations.

Sandblasting

- Sandblast Booths
- Sandblast Cabinets
- Automated Sandblasting Systems
- Abrasive Reclaiming Systems
- Pressurized Sandblasters
- Dust Collectors

Shotblasting

- Roller Conveyor Blaster
- Rotary Table Blaster/Swing Table Blaster
- Spinner Hanger (Batch)
- Continuous Flow with Monorail
- Rubber and Steel Flight Tumbler Blasters
- Flow Thru Barrel Blasters
- Mesh Belt Continuous Blasters
- Monorail System Blasters
- Rim Blasters
- Preservation Line

Painting

- Paint Spray Booths
- Powder Coating Booths
- Drying Ovens
- Air Make-Up Units

Solvent Recovery

- Batch Solvent Distillers
- Continuous Flow Solvent Distillers
- Oil Cooling Systems

Parts & Consumables

- Blast Nozzles
- Blast Hoses
- Abrasive Media
- Air Valves
- Abrasive Metering Valves
- Cartridge Filters
- Sludge Bags
- Safety Equipment & PPE

Services

- Turnkey Project Design
- Custom Design
- Full Installation
- Start-up Supervision
- Training
- Maintenance
- Retrofit & Upgrade

All systems are designed to build and they are manufactured with the highest quality standards in our manufacturing shop in Quebec, Canada.

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