

LAB SOCIETY™

Automated Solvent Recovery System



LAB SOCIETY™

Automated Solvent Recovery System (ASRS)

In commercial scale production, solvent recovery is often a bottleneck that isn't easily addressed without large capital investment. Lab Society has an answer to this scenario - the Automated Solvent Recovery System (ASRS). Not only do these machines have the ability to safely recover large amounts solvent rapidly, but also with minimal user input. The ASRS separates high-boiling point constituents from solvent; rendering the recovered solvent as reusable. Save time, capital, and excessive floor space with these units - and enjoy supreme reliability and easy maintenance.

What is the Automated Solvent Recovery System?

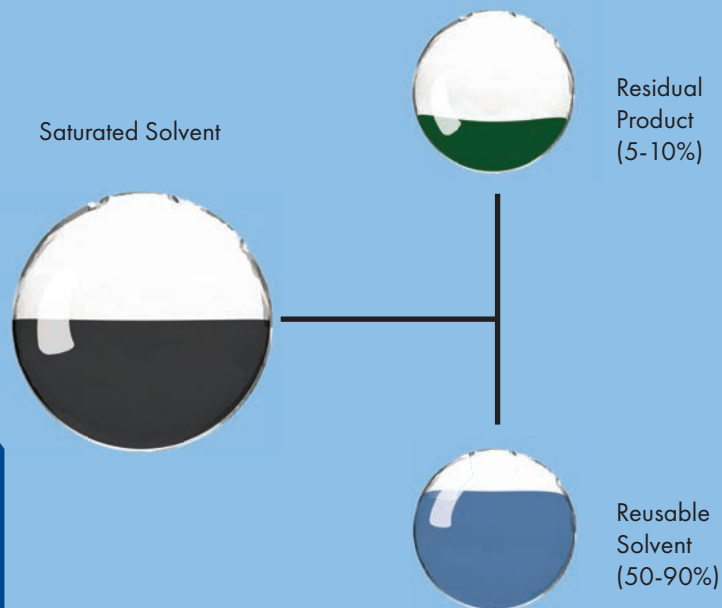
Utilizing automation capabilities such as collection automatic filling, container level sensors, feed container level sensors, automated tilting, and a programmable logic controller (PLC) with ethernet access, the ASRS series will increase production capacity while standardizing output product and increasing overall process repeat ability.

Automated Solvent Recovery System (ASRS)
32, 55, 75, and 110



Operating Principle

Lab Society's scale-able ASRS product line separates clean solvent from residual oils (such as botanical extracts) through the proven process of vacuum distillation, as shown through the numbered illustration. (show on right page)



LAB SOCIETY™

Automated Solvent Recovery System (ASRS)

System Specifications (Batch length for all models is 22 hours. Voltage for ASRS is 480V, voltage for chillers is 460V**.)

Unit	Gal/ hour	Gal/ batch	Size Inch (LWH*)	Amp	ASRS (standalone)	Chiller Amps	Chiller (standalone)	ASRS with Chiller
32 Gallon	5.5	120	64 x 60 x 90	15	\$74,950.00	• 20	\$12,750.00	• \$87,700.00
55 Gallon	9.1	200	70 x 62 x 82	23	\$99,950.00	• 20	\$12,750.00	• \$112,700.00
75 Gallon	13.6	300	102 x 74 x 94	30	\$114,950.00	• 25	\$14,750.00	• \$129,700.00
110 Gallon	18.2	400	102 x 84 x 96	46	\$129,950.00	• 40	\$19,750.00	• \$149,700.00

Requires Air Compressor with at least 90 psi and 10-15 cfm (cubic feet per minute).

*Minimum recommended height needed for the unit to tilt using the hydraulic lift is approximately 10 feet.

**Also available in 230 single and 3 phase.

System Characteristics & Certificates:

Safety Features and Temperature Controls

Using a variety of sensors and automations all our (ASRS) units are able to run safely with minimal operator intervention. All Systems are certified Class 1 Division 1 Group D explosion proof.

Electric Heating with Thermal Oil

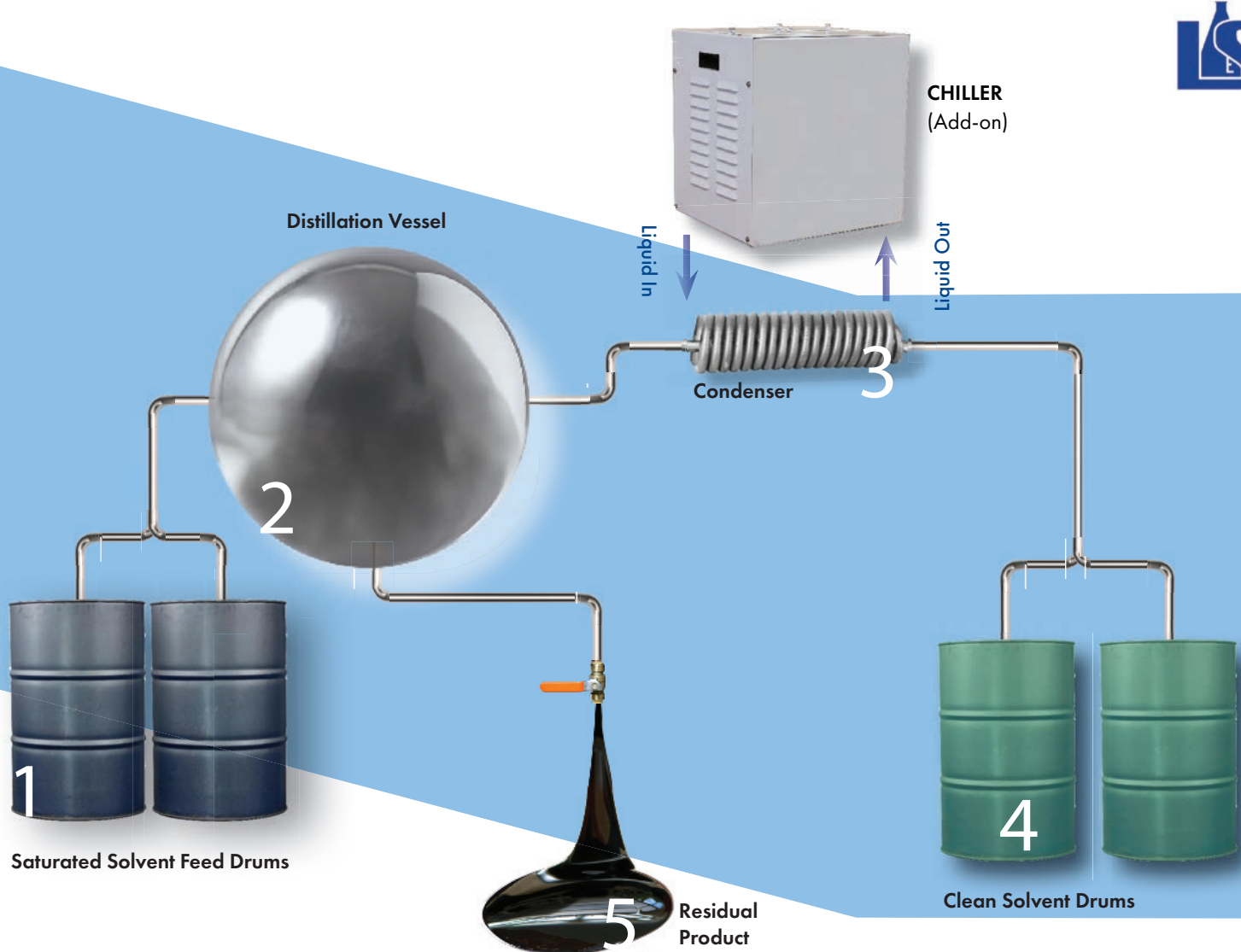
Uses a thermal oil jacket electric heater to quickly and evenly heat the boiling vessel.

System Controls

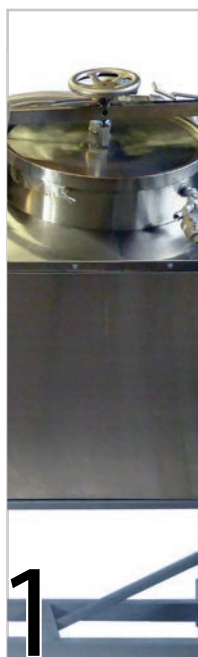
The ASRS series includes a remote box Touchscreen PLC which can be programmed for many automation procedure depending on the optional accessories included.

Automated Premium Units are

- Safe – Class 1 Div 1 Group D Explosion Proof (UL2208) & METLAB Certified
- Strong – High Quality 304 Stainless Steel Construction Throughout
- Simple - Automated operations, Automated operation, Tilting Base for Easy Residual Product Removal and Access
- Smart – Highly Automated with Touch Screen PLC and Remote Cellular Access
- Includes Free Lifetime Service and Support Including Remote Access



The saturated solvent is fed into the distillation vessel.



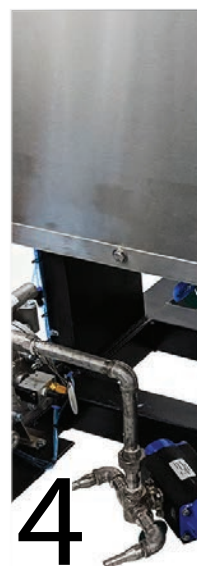
The distillation vessel is fitted with a jacket of thermal oil that is heated by one or more electric heaters which brings the waste solvent to its boiling point with vacuum assistance.



Pure solvent vapors are then channeled to an liquid-cooled condenser, where it cools into its liquid form.



The condensed liquid is then directed to the clean solvent collection drums, where it can be re-used.



Residual product is either poured out utilizing a hand crank or hydraulic tilt (upgrade option), or it is drained out of the bottom of the unit utilizing a ball valve. The product will have varying levels of residual solvent based on user-dependent operational parameters of the ASRS.



Included System Features

Automatic Filling

Units are able to be filled automatically, our premium units are able to continually top up or automatically run back to back batches without operator intervention.

Container Sensors

Collection Container Sensors prevent overflow and spills.

Dual Dose Fill and Empty

This allows both the Automatic Filling System and Clean Solvent Collection system to use two containers. It will automatically switch which is used to reduce operator involvement.

Ethernet or Cellular Access (PLC)

The system PLC is accessible remotely through an Ethernet or cellular data connection. Settings can be viewed and changed as if the touch screen was being used. With your permission Lab Society can also Access the unit for troubleshooting. Lifetime free remote support from Lab Society is included with purchase.

Pneumatic Tilting

This allows for the user to use a pneumatic lift to tilt the unit for ease of use.

Vacuum Assistance

Creates a vacuum in the boiling chamber to lower the temperature needed to boil high boiling point solvents, our premium units use a Liquid Ring Vacuum System.

Optional Add-on's

Additional Height

Add additional height if you want more room to use the gravity discharge drain. No charge for up to 2 feet extra.

Allen Bradley (PLC)

This option replaces the standard PLC with an Allen Bradley system. Suggested for customers who are looking to integrate the unit into their existing Allen Bradley network. A six-inch screen is standard, other sizes available.

Automatic Residual Product Pump Out

If gravity discharge is not sufficient or desired an automatic pump can be used.

Fractionation Tower

If the waste contains multiple solvents which are dissolved into each other, a fractionation tower will separate them at high purity.

Oil Cooling

After processing the batch, the thermal oil is rapidly cooled to reduce the time required to cool the residual product.

Purge Box

This option allows the PLC to be mounted on the system inside the explosion proof area instead of a remote box.

