



**Scientific  
Solutions**

EQUIPMENT | SALES | SERVICE | CONSULTING

# PRODUCTS AND CONSULTING SERVICES

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DEDICATED TO PROVIDING QUALITY  
EQUIPMENT & SUPPLIES TO  
THE SCIENTIFIC R&D  
COMMUNITIES WORLD WIDE.

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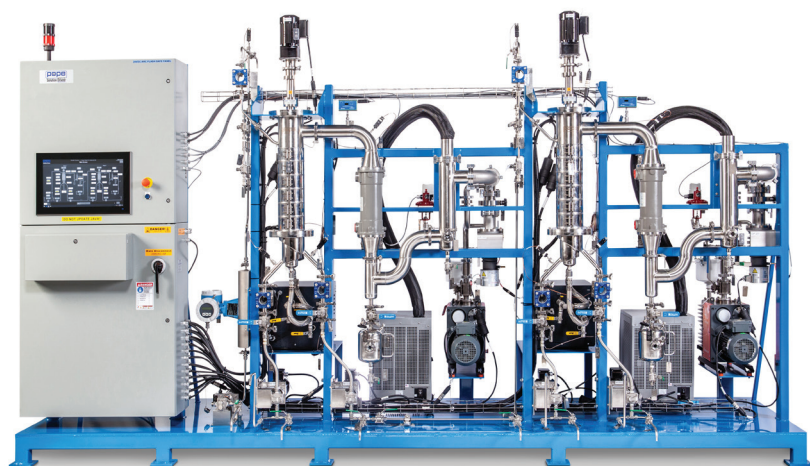


844-404-4588

SALES@SCISOLINC.COM

WWW.SCISOLINC.COM





## SECTIONS

SCISOL | NEO FARMS | TRIMMING MACHINES | HYDROCARBON EXTRACTORS | FILTRATION  
 SAMBO CREEK | CHILLERS & HEATERS | FREEZERS | CO2 EXTRACTORS  
 HEATED PRESSES | ALCOHOL REACTORS | DELTA SEPARATIONS | VACUUM OVENS  
 FORCED AIR DRYING OVENS | VACUUM PUMPS | DRY SCROLL VACUUM PUMPS | ROTARTY VANE PUMPS  
 DIAPHRAGM VACUUM PUMPS | ROTARY EVAPORATORS | TRUSTEEL | SHORT PATH DISTILLATION  
 POPE | NUTSCHE | REFRIGERATION | NEXT GEN | WIPED FILM EVAPORATOR | NOTES





# SCIENTIFIC SOLUTIONS EQUIPMENT

Constantly working to innovate and bring value in this every growing market of botanical extraction. Scientific Solutions is happy to announce our new line of equipment we designed to help meet your every day needs.



## Pro Series Rotary Evaporator System

### Features:

- Dual receiving flasks for increased efficiency, Certified remote shut off valve in-case of emergency, Wireless camera to help keep an eye on operations while you are on the road at events, Vacuum regulator to allow for more control of your unit while in operation and much more.





# SCIENTIFIC SOLUTIONS EQUIPMENT

Featuring cutting edge technology and unquestionable reliability, Scientific Solutions reactors, filters, vacuum regulators etc. are all tested for 24hr prior to shipping from one of our three locations. We offer full service training on all of our equipment via over the phone support training or an on-site visit and install.

These units are a great addition to any lab looking for quality in a world of questionable products.



## Benefits

- We are a one stop shop
- Training, On-site installation, Video call support and much more
  - Offering support in the area of licensing and SOP work
  - Customer oriented and experienced staff



## NEO FARMS

Featuring Cutting Edge Agricultural and Botanical Extraction Equipment we are happy to carry NeoFarms 110 and 220 Cup Shredder. These machines are designed to instantly pulverize plant material for extraction in seconds.

The System is built here in the USA, and never produces and powder. A single operator can process hundreds of pounds an hour for extraction.

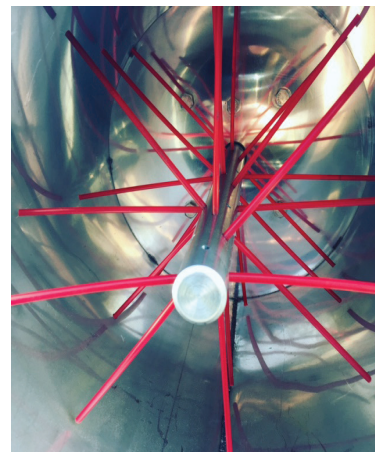
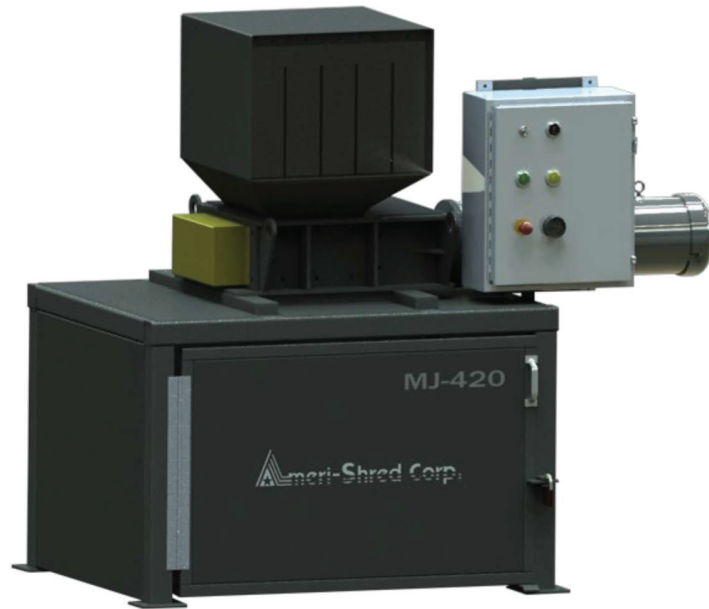




Also, for waste disposal we carry the NeoFarms, Full Plant Shredder for Compliant Waste Removal. These are perfect for all your medical plant disposal needs.

Can be used for disposing:

- Medicinal Plants
- Vegetative Plants
- Plant Root Balls
- Hemp Plants Failed Clones
- Harvest Waste



#### Features:

- Bearing Protection: Contaminants are kept from reaching the bearings using false walls and seals.
  - Individual Cleaning Fingers: Reduces wrapping and material packing between the cutters.
- Optimized Cutter Design: The number and length of hooks and cutter width are selected to maximize throughput
  - High Torque Low Speed Technology: Equals less downtime and noise than high-speed options.





## TRIMMING MACHINES

Great to pair with your Neofarms shredder the Trimpal is a leader in dry trimming and is one the key reason for the development and popularity of the dry trimming method in the past few years. Combined with the machines ease of use, simplicity and ruggedness makes it a lifelong lasting dependable piece of equipment. These along with our other trimmer brands provide you with a variety of choice when selecting which machine works best for your specific needs.



## SPECIFICATIONS: TRIMPAL 2-UNIT MODEL

Throughput per hour: 3-4 lbs per hour

Motor: 17 rpm geared brushless dayton motor with over heat kill switch

Basket Size: 11

Timer: 15 minute

Dryness Specification: When stems snap cleanly

Cleaning Recommendation: Every 250 lbs





# HYDROCARBON EXTRACTORS

## Magnanimous A-90

Introducing our leading hydrocarbon extraction system from Purge Labs, the Magnanimous A-90. Using their patent-pending spinning process to ensure solvent gently dissolves compounds rather than creating solvent channels or forcing the solvent to seek a path of least resistance as with traditional, static extraction columns. This system can process up to 1500 lbs. of biomass in a 24hr period. This proven system with Purges specific upgrades results in larger yields, expanded efficiency and higher quality extracts.

### Performance

#### Speed

Process up to 1500lb of biomass per 24-hour run

#### Gas consumption per run

50% of volume capacity (recover aprox 98%)

#### Gas types

Propane / Butane / Isobutane

### Certifications

ASME Stamp

NB Registration

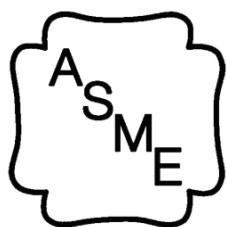
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# HYDROCARBON EXTRACTORS

These extractors are used in stripping of cannabinoids and terpenes from the less desirable plant matter. This creates an extract that can then be refined into oil, shatter and wax and infused into seemingly limitless products.



## Why Choose Scientific Solutions for your Extraction Equipment?

By customer demand we have brought together the best equipment the extraction industry has available. We carry the certified equipment you need to operate safely and with piece of mind. Receive a free tank of solvent with each extractor purchase. Contact us to find out how.





# ADVANTAGES OF HYDROCARBON EXTRACTION



- Fastest method for concentration of botanicals and essential oil products.
- Most systems are easily upgraded to allow for greater production.
- Offers the greatest product return compared to other extraction methods.
- Easy to maintain systems compared to more complicated extraction methods.
- Against other extraction units these have a relatively small footprint when it comes to the space they occupy.

Model	Recovery System	Material Capacity	Certification
CLS MK Mini Terpenator Passive Turn Key Setup	Passive Recovery System.	Standard Column: 110g-200g	Not Certified
MK III Terpenator© with Bi-Directional Modification Kit	Active Recovery System with TRS21 or Cmp recovery pump.	Standard Column: 73g-900g, Dewaxing Column: 200g-900g	ASME Certified
MK4c Terpenator© with Bi-Directional Modification Kit	Active Recovery System with TRS21 or Cmp recovery pump.	Standard Column: 900g-2,267g	ASME Certified
BEETLE JUICE 5Lb Extractor by Purge Labs	Active Recovery System with TRS21 or Cmp recovery pump.	Standard Column: 1,360g -2,267g	Optional
SATURN 60 LT - 15Lb Jacketed/ Non Jacketed by Purge Labs	Active Recovery System with MasterVapor recovery pump.	Standard Column: 6,803g -9,071g	Optional
ATLAS 100 LT - 30Lb Jacketed/ Non Jacketed by Purge Labs	Active Recovery System with MasterVapor recovery pump.	Standard Column: 13,607g	Optional
V2.0 2LB BHOGART EXTRACTION SYSTEM	Active Recovery System with TRS21 or Cmp recovery pump	Standard Column: 900g	Optional
5-LB CLOSED LOOP EXTRACTOR KIT V2.0	Active Recovery System with TRS21 or Cmp recovery pump	Standard Column: 2,267g	Optional



MK4c Terpenator© Closed Loop Kit Includes:

- 2 Lb (3" x 36") Plant Material Column • 5 Lb (4" x 48") Plant Material Column • Pressure Relief Valve
- Recovery & Gauge Manifold • View Port Sight Glasses for Base • SAE Hose Set • CPS TRS21 Refrigerant
  - Recovery Pump • 1/4" line Filter-Driers - Quantity of 5 • Stainless Steel Condensing Coil
- Refrigerant Recovery Tank • Refrigerant Scale • High Vacuum Pump • Combustible Gas Leak Detector



## FILTRATION

Filtration in its simplest definition is the use of various mechanical, physical or biological operations that separate solids from fluids (liquids or gases) by adding a medium through which only the fluid can pass. We are proud to offer a wide variety of brands and methods by which to filter your material. We carry everything you need to get the job done from basic Buchner funnels to Hochstrom filters, trolley and Filter presses. Contact us for more information or consultation.



### Why is filtration good?

Our line up of filtration units and ancillary supplies allow you to create a cleaner better product for your consumers. These filters quickly and efficiently allow for the removal of dirt and debris, fats and gums from your process material.

### Features:

- Filtration rates of up to 5 Liters in 5 minutes and more (depending on model).
- Various filter media available for different levels of finish.
- Easy integration into current processes.
- Optional incorporation of various absorbent media for decolorization.



# SAMBO CREEK



The filter trolley from Sambo Creek is a complete system for fast filtration with up to 9, 60- and 80-Gallon Capacities. Use any filter paper, no vacuum pumps, cold traps or glassware the filter trolley is safe and easy to use. Similar in application to a laboratory Buchner Funnel, mounted on a trolley. You can filter solids, waxes, carbon, clay, etc... with these filters. Filter in minutes what you would normally do in hours.

Comes with a diaphragm pump which does the job of sucking the material through the filter, so **NO ADDITIONAL VACUUM PUMP REQUIRED**. The pump can handle acids, bases and alcohols so no special care is needed for this pump. **NO COLD TRAP REQUIRED**. This is a pneumatic pump so there is no risk of sparks but means you must have an air compressor to supply this machine with compressed air.

## Benefits:

- FDA Food Grade Materials
- Will not crack under extreme cold
- Safe to use with almost all organic solvents, except Pentane
- Filter grate will not warp over time
- High R Value (Insulating Materials)
- Huge filtering capacity
- No Vacuum Pump required
- No Cold Trap required
- Explosion Proof. No source of sparks. No explosion risk.
- No ASME Certification Required
- Easy to clean and disassemble
- Cheap filter paper
- Leak proof filter paper installation with reusable gasket
- Filter out carbon, clay, wax, etc...
- Lid helps minimize evaporation







# RECIRCULATING CHILLER AND HEATERS

Need a reliable commercial grade chiller for your facility? We have spent the last year putting together our diverse line up for use in medical and production applications. This includes chillers from Across and Polyscience along with Julabo and Huber. All of our Recirculating chillers and Heaters come with the option to be UL certified.



Model	Electrical requirements	Temperature Ranges	Certification
AI -15°C 3L Compact Recirculating Chiller	110V 60Hz 1-PH, 500 watts	Ambient to -15°C	UL 61010-1 :2012 Ed.3+R:29Apr2016 CSA C22.2#61010-1 :2012 Ed.3
AI -30°C 17L Recirculating Chiller	220V 60Hz 1-PH, 1200 watts (Not compatible with 50Hz power)	Ambient to -30°C	UL 61010-1 :2012 Ed.3+R:29Apr2016 CSA C22.2#61010-1 :2012 Ed.3
AI -30°C 30L Recirculating Chiller	220V 60Hz 1-PH 9A, 1,990 watts (Not compatible with 50Hz power)	Ambient to -30°C	UL 61010-1 :2012 Ed.3+R:29Apr2016 CSA C22.2#61010-1 :2012 Ed.3
AI -80°C 10L Recirculating Chiller	220V 60Hz 1-PH 22A, 4750 watts	-80°C to -40°C	UL 61010-1 :2012 Ed.3+R:29Apr2016 CSA C22.2#61010-1 :2012 Ed.3
PolyScience MX -20°C to 135°C 7L Capacity Recirculating Chiller	120V 60HZ 1-PH 12 Amp	-20°C to 135°C	ETL Certified
PolyScience AD -40°C to 200°C 15L Capacity Recirculating Chiller	120V 60HZ 1-PH 13 Amp	-40°C to 200°C	ETL Certified
PolyScience DuraChill -10C 80C 13L 1.5HP Chiller w/ Turbine Pump	230V 60HZ 1-PH 23.1 Amp	-10°C to 80°C	ETL Certified
Julabo FP50-MA -50°C Ultra-Low Refrigerated-Heated Circulator	230V 60HZ 1-PH 14 Amps	-50°C to 200°C	UL Certification Optional
Julabo FP89-HL -90C Ultra-Low Refrigerated-Heated Circulator	230V 60HZ 3-PH 16 Amps	-90°C to 100°C	UL Certification Optional
Julabo PRESTO A80t -80C 250C 5.6L Dynamic Temperature Control	230V 50HZ 3-PH 20Amp	-80°C to 250°C	UL Certification Optional

# FREEZERS



Our line of industrial freezers range from cube shaped compacts with factory locks to upright commercial reach-in freezers in complete stainless steel. Perfect for storage of sample and products that are temperature sensitive. Our unique singlecompressor design offers low power consumption, very low noise, and ease of maintenance. Please contact us for more information.





## CO2 EXTRACTORS

We provide our customers with complete extraction solutions. Our leading CO2 extractors from Extrakt lab provides the anchor for an entire process that has been designed to out perform and comply with stringent regulations.

We offer professional technical consulting for all phases of the extraction process. All of the supercritical CO2 extraction machines we offer are built with the end user in mind.



### Features:

- Speed, It's all about saturation rate.
- These units push 75- 350 grams per hour of extracted substance.
- Factory acceptance, operational qualification, and two days of training.
- Detailed documentation and user manuals.





# HEATED PRESSES



For those concerned of working with flammable solvents or just wanting to try a different method of extraction. Heated presses are the first choice for producing high quality solventless botanical extractions.

We carry a wide variety of presses to choose from, including manual hydraulic, pneumatic and electrical.

## Advantages:

- Compact, lightweight, and powerful
- Excellent for creating solventless botanical extractions
- Dual heating plates for increased temperature stability
- Adjustable pressure (Model Specific)
- One year standard manufacturer's warranty





## ALCOHOL REACTORS

The R-Series jacketed reactors are a vacuum and temperature controlled pharmaceutical-grade mixing vessel. They use a (304 Stainless Steel) reinforced PTFE agitator, with an adjustable rotation speed from 50-500 RPM.



### Possible Applications:

- Chemical Synthesis
- Purification
- Extraction/ Dissolving

### Specifications:

- Patented PTFE stirring rod bearing
- Temperature operations from 110°F to 400°F
- Heat/cold/corrosion-resistant borosilicate glass

The CUP 15 Series extraction system provides the ability to target and extract botanical compounds from a variety of plant types. This unique function allows for a whole new method of alcohol extraction. Combining closed-loop and cold ethanol extraction with mechanical centrifugation to ensure high quality botanical extracts.



Ai R Series 20L Single Jacketed Reactor w/ Chiller & Pump  
Across International's R-Series 20L jacketed glass reactor is designed for synthetic reaction of different materials in a controlled temperature and vacuum environment. Every reactor system has adjustable stirring speeds and a constant pressure feeding funnel that offers you the option to add material to the vessel at a uniform and controlled speed. This unit paired with an Ai -30°C 40L Recirculating Chiller and ULVAC DTC-41 Diaphragm pump make a powerful combination

#### Included Features:

- High quality thermo insulation jacket
- Solvent-resistant PTFE seals
- Heavy duty stainless steel rack
- Large condensing coil
- Single or Dual jacketed vessel
- AI 220v, C30-40 -30°C
- ULVAC DTC-41

Model	Electrical requirements	Reaction vessel capacity	Glass vessel temperature range
CUP 15 SERIES ALCOHOL EXTRACTION SYSTEM	15- 230v- 30 amp- Single Phase	12-13 Gallons per run	NA
Ai R10	110V 60Hz 1-PH, 90W	2.6 gallons (10L)	-110°F to 400°F
Ai R20	110V 60Hz 1-PH, 90W	5.3 gallons (20L)	-110°F to 400°F
Ai R50	110V 60Hz 1-PH, 140W	13 gallons (50L)	-110°F to 400°F
Ai R100	110V 60Hz 1-PH, 250W	26 gallons (100L)	-110°F to 400°F

#### Jacketed Glass Vessel w/ Seal

Ai R-series single/dual jacketed glass vessels are designed for synthetic reaction of different types of materials in a controlled temperature environment. Designed to work without the stirring or recovery components of the jacketed reactor.



#### Advantages:

- Solvent-resistant PTFE seal
- All hand-made glass that is heat/cold/corrosion resistant.
- Wide range of temperature operations, from -110°F to 400°F.
- Heavy duty stainless steel supporting framework
- One year warranty







## DELTA SEPARATIONS

Delta Designed this system for the medium and large-scale productions focused on the highest possible throughput in mind and are its reason for being created The Cup 15 Extractions system provides accurate control over important extraction variables:

### Controlled Variables Include:

- Alcohol Residence Time •Basket RPM •Spray Wash Stripping •Cycle Agitation Strength
- Plant Material Drying •Temperatures •Data Logging •Automatic Cycle Programing
- Manual Cycle Programing •Min/Max Parameters •Ethernet Connection •System Troubleshooting
- Cycle Tracking •Administrative Functions





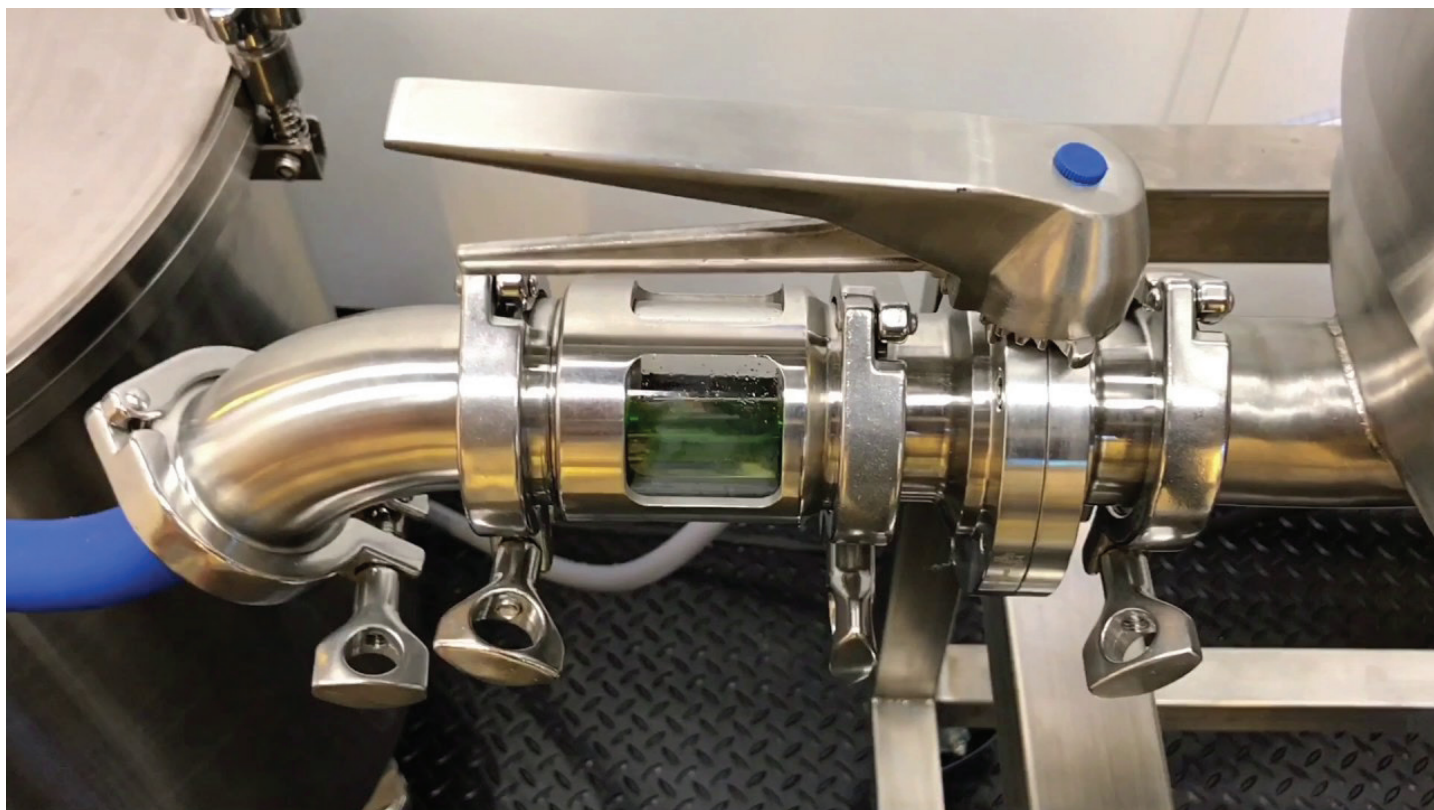
## How much of the targeted compounds does the Cup remove during its process?

- 97%. On about 300lbs in an 8-hour shift. And most customers running the machines will target a biomass input that is 6 - 20% target chemical compounds by weight.

### Market Benefits of using Ethanol Extraction:

- It's cost-effective, has the fastest turnaround time out of all the methods, and it's compliant. It's a UL-certified, C1D2, closed loop, non-volatile process for licensed operations.

We're focused on customers who want the highest possible throughput out of their equipment. This system exists for the medium and large-scale productions focused on the highest possible throughput in mind and are its reason for being created







## VACUUM OVENS

Scientific Solutions is proud to bring together all the leading vacuum oven manufacturers in the industry and offer them under one roof. Such Manufacturers as Across International and Cascade can now be found at lower prices than ever before.

### Why Choose Scientific Solutions for your Extraction Equipment?



Our line-up of ovens offer the best solutions for simultaneously increasing production while minimizing processing time. With multiple oven sizes, vacuum pumps and ancillary equipment, we offer everything you'll need to get the job done right!

#### Each vacuum oven we sell comes:

- Certified or has the option to be
- Solvent-Resistant door gaskets
- Precise temperature control and uniformity
- KF-25 vacuum connection
- Vacuum oven and pump packages Available !





# TABLETOP VACUUM OVENS



Digital tabletop vacuum ovens are the perfect solution for small batch production and sample testing. Great for commercial and individual use when you still need powerful performance and reliability

## Every oven comes equipped with:

- Custom LED lights
- Solvent-Resistant door gasket
- KF-25 vacuum connection
- Gas Inlet fittings
- Digital Temperature controller

When degassing solvent, low even temperatures are needed to prevent decomposition of the Botanical oils volatile terpenes. Terpenes are the compounds that give an extract most of its aroma and other unique properties. If you degas at too high of a temperature these compounds will boil off, leaving your plant extract with less aroma and flavor. The Vacuum ovens Scientific Solutions provide, offer you the control needed for maintaining those delicate ambient temperatures. The use of a vacuum oven also prevents oxidation of the terpenes during the purging process by eliminating the oxygen and lowering the boiling point of your solvent. Doing so ensures that you have a repeatable process that always produces clean, solvent free Botanical Oils.



Model	Electrical requirements:	Chamber Size:	Temperature Range:	UL Certification:
AccuTemp 0.9	110V +/-10% 50/60Hz 1-PH 11A, 1200W or 220V +/-10% 50/60Hz 1-PH 5.5A, 1200W	12 x 12 x 11"	ambient to 480°F	UL Certification Optional
AccuTemp 1.9	110V +/-10% 50/60Hz 1-PH 13.6A, 1500W or 220V +/-10% 50/60Hz 1-PH 6.8A, 1500W	16.5 x 14.5 x 14"	ambient to 480°F	UL Certification Optional
Elite 1.0 Cu Ft	110V +/-10% 50/60Hz single phase 9A, 1000W	11.8 x 11.8 x 11.8"	ambient to 480°F	UL Certification Optional
Elite 2.3 Cu Ft	110V +/-10% 50/60Hz 1-PH 9A, 1000W OR 220V +/-10% 50/60Hz 1-PH 4.5A, 1000W	15.7 x 15.7 x 15.7"	ambient to 480°F	UL Certification Optional
TVO-2B	120V / 1ph / 13FLA	12" x 20" x 12"	26 °F above ambient temperature to 240°F	TUV Certified
TVO-5B	120V / 1ph / 14 FLA	18.25" x 24" x 18.25"	35 °F above ambient temperature to 250°F	TUV Certified



# ECONOMICALLY PRICED, RELIABLE AND POWERFUL PERFORMANCE.

Providing the ultimate in product drying, out-gassing, bake-out and moisture removal - our floor standing vacuum ovens will get the job done right the first time. Specifically built for processing large quantities of incredibly sensitive materials.



## Some included features:

- Ultra-fast heating rates ( 0-100F in 30 min)
- All Shelving is included
- Stainless steel chamber with exceptional build quality Heating elements installed directly into shelves (Model Specific)
- Adjustable gas inlet with needle valve for precise gas control



Model	Electrical requirements:	Chamber Size:	Temperature Range:	UL Certification:
AccuTemp 7.5	110V +/-10% 50/60Hz 1-PH 13.6A, 1500W or 220V +/-10% 50/60Hz 1-PH 6.8A, 1500W	22 x 23.5 x 25"	ambient to 480°F	UL Certification Optional
AccuTemp 160	220V +/-10% 50/60Hz 1-PH 13.6A, 3000W	25.6 x 30 x 35.5"	ambient to 300°F	UL Certification Optional
Elite 4.4 Cu Ft	110V +/-10% 50/60Hz single phase 27.3A, 3000W OR 220V +/-10% 50/60Hz single phase 13.6A, 3000W	19.7 x 19.7 x 19.7"	ambient to 480°F	UL Certification Optional
Elite 7.6 Cu Ft	220V +/-10% 50/60Hz single phase 20.5A, 4500W	23.6 x 23.9 x 23.6"	ambient to 480°F	UL Certification Optional
CVO-10	230V / 1ph / 12.0A	28" X 24" x 24"	25 °F above ambient temperature to 160 °F	TUV Certified

# VACUUM FITTINGS & ACCESSORIES



## Cold-Traps

- Offering the leading self contained cold trap on the market the Ai T40 -40°F 300ml x 3 Cold Trap. Offers you the most return for your money.
- Dewar style vacuum trap as well as Ai's T1 cold trap is available for dry-ice cold trap applications.

## Aluminum oven racks

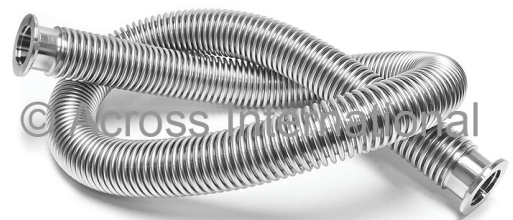
- Great heat conductivity, allowing them to react to temperature changes in your oven quickly.
- Most affordable and light weight construction on the market.
- Available in pan or flat variations for (0.9 & 1.9 cf ovens).
- Stackable high and low profile shelving options for (3.2 & 7.5 cf ovens).

## Filters with replaceable elements

- These filters eliminate vacuum oil mist for being exhausted into your work space.
- Returns trapped pump oil in the element back to the pump
- Helps reduce the noise emitted by vacuum pumps

In our experience, one thing we've seen time and again is how an otherwise effective lab can be brought to a halt through the seemingly insignificant failure of a single, non-essential component.

To help you avoid expensive downtime, we can't stress enough the fact that you should always have extra parts on hand just in case of the unexpected. Don't waste money or time due to a broken part.







## FORCED AIR DRYING OVENS



Both bench-top and floor-standing drying ovens Scientific Solutions carry offer incredible application flexibility and exceptional temperature uniformity. The result is proven reliable in demanding production and laboratory applications. Across International and Cascade Botanicals' innovative designs have a track record for quality and reliability.

### Features:

- Easy Timer For Automatic Operation
- Over-temp Protection
- Corrosion resistant stainless steel interior finish
- Humidity Sensor Displays Relative Humidity (Model Specific)
- 1 Year Warranty





- The use of forced air drying ovens allow for the removal of moisture and decarboxylation of plant material prior to processing, which is an effective way to decrease run times and increase overall yield.
  - Ideal for drying, curing, and baking in laboratory or industrial environments.
  - Designed to meet both manufacturing and laboratory requirements.
- Contact us for more information on unit certification



Model	Electrical requirements	Chamber dimensions	Temperature range	Exhaust outlet diameter
Ai 400°F 0.5 Cu Ft	110VAC 60Hz single phase, 500W	10" x 9" x 10"	Ambient temperature to 400°F	1 1/4"
Ai 400°F 0.9 Cu Ft	110VAC 60Hz single phase, 600W	12" x 11" x 11"	Ambient temperature to 400°F	1 1/4"
Ai 400°F 1.9 Cu Ft	110VAC 60Hz single phase, 900 watts	16.5" x 13.25" x 13.75"	Ambient temperature to 400°F	1 1/4"
Ai 570°F 1.5 Cu Ft	110VAC 60Hz single phase, 1200W	14" x 12" x 14"	Ambient temperature to 570°F	2"
Ai 570°F 2.5 Cu Ft	110VAC 60Hz single phase, 1700W	17 3/4" x 11 1/2" x 18"	Ambient temperature to 570°F	2"
Ai 570°F 4.8 Cu Ft	208-240VAC 60Hz single phase, 2500W	22" x 16" x 22"	Ambient temperature to 570°F	2"
Ai 570°F 8 Cu Ft	208-240VAC 60Hz single phase, 3000W	24" x 20" x 30"	Ambient temperature to 570°F	2" (two outlets in the back)
Ai 570°F 14.5 Cu Ft	208-240VAC 60Hz single phase, 3800W	27.5" x 25" x 35.5"	Ambient temperature to 570°F	2" (two outlets in the back)
Ai 570°F 22 Cu Ft	480VAC 60Hz single phase, 6400W	31 1/2" x 30 1/2" x 39 1/2"	Ambient temperature to 570°F	2" (two outlets in the back)
Ai 750°F 2.5 Cu Ft	208-240VAC 60Hz single phase, 3000W	17" x 13.5" x 17"	Room temperature to 750°F	1 1/4"
CDO-5	120V / 1ph / 14FLA NEMA 5-15P Plug Supplied	21" x 20.75" x 19.44"	36 °F Above Room Temp to 350 °F	2.75"
CDO-28	230V-240V/1ph/26A	31.5" x 26" x 60.5"	36°F Above Room Temp to 350°F	2.75"



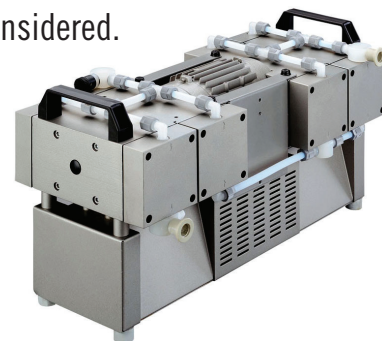
## VACUUM PUMPS

Offering commercial grade power at your fingertips. Scientific Solutions has brought together the latest and greatest in vacuum pump designs and technology from Edwards, Welch, Ulvac, Across International, and more. Solidifying our ability to make sure we get you the pump that fits your needs.

### Choosing your next Vacuum Pump

When selecting your next vacuum pump there are a few things that need to be considered.

- What application will you be using the pump for and in what environment
- What is your desired vacuum level
- How large is the chamber you are trying to maintain that level on.
- Are you looking for a Rotary Vane, Diaphragm or Dry Scroll Pump





# DRY SCROLL VACUUM PUMPS



Dry Scroll pumps are oil free. This makes them popular in vacuum drying, purging of ingestibles, bio-pharma, or any process that must be free of contamination risk. Widely used in cleanrooms and aerospace applications.

Model	Electrical Requirements	Pumping rate	Ultimate vacuum	Working temperature	Certification
Ai CleanVac 5.1 cfm	110v 60Hz single phase 250 watts 2.3 amps	5.1 CFM	60 micron/millitorr	41°F to 104°F	CE
Ai CleanVac 11 cfm	110v 60Hz single phase 550 watts 5 amps	10.9 CFM	19 micron/millitorr	41°F to 104°F	CE
Ai CleanVac 22.3 cfm	110v 60Hz single phase 750 watts 6.8 amps	22.3 CFM	7.5 micron/millitorr	41°F to 104°F	CE
Agilent IDP-3 2.1 cfm	115 VAC, 60HZ	2.1 CFM	2.5x10 <sup>-1</sup> Torr	41 to 104°F	CE, CSA, CSA/CUS, Semi S2-703 and RoHS
Agilent IDP-7 5.4 cfm	100 - 200; 200-240 VAC, 50/60 Hz, Single Phase, 3-6A	5.4 CFM	3.0 x 10 <sup>-2</sup> Torr	41 to 104°F	EN/IEC 61010 3rd Edition Certified
Agilent IDP-15 9 cfm	115 VAC, 60HZ	9 CFM	10 x 10 <sup>-3</sup> Torr	41 to 113°F	CE, CSA, RoHS
Edwards nXDS6iC 4.0 cfm	100-127V~10A or 200-240V~6A, 50/60 Hz, 260 watts	4.0 CFM	0.020 mbar / 0.015 Torr / 15 micron	41 to 104°F	CE, UL, CSA
Edwards nXDS10iC 7.5 cfm	100-127V~10A or 200-240V~6A, 50/60 Hz, 280 watts	7.5 CFM	0.007 mbar / 0.005 Torr / 5 micron	41 to 104 °F	CE, UL , CSA
Edwards nXDS20iC 16.5 cfm	100-127V~10A or 200-240V~6A, 50/60 Hz, 260 watts	16.5 CFM	0.030 mbar / 0.022 Torr / 22 micron	41 to 104 °F	CE, UL, CSA
Edwards XDS35iC 25cfm	100-120V or 200-230V switchable	25 CFM	1 x 10 <sup>-2</sup> mbar / 8 x 10 <sup>-3</sup> Torr	41 to 104 °F	ATEX Category 3





# ROTARY VANE PUMPS

Rotary vane (oil-based) pumps are very popular because they are inexpensive, efficient, and get the job done quickly. We proudly distribute a wide variety of vacuum pumps that produce the perfect amounts of pressure for any application.



## Features:

- Adjustable gas ballast (Model Specific)
- Built-in oil back-flow prevention check valve (Model Specific)
  - Internal forced oil cycling system
- Exhaust filter with easy-to-change replaceable filter element
- Heavy duty construction and designed for reliable long time operation
  - Low noise levels during operation
- All necessary fittings and filter included for immediate use

Model	Electrical Requirements	Pumping Rate	Ultimate Vacuum	Adjustable vac./gas ballast	Certification
Ai EasyVac 1.8 cfm	110V 60Hz or 220V 50/60Hz, single phase 1/4 HP, 190W	1.8 CFM	150 micron	NO	CE
Ai EasyVac 7 cfm	110V 60Hz or 220V 50/60Hz, single phase 1/2 HP 370 watts	7 CFM	150 micron	NO	CE
Ai EasyVac 9 cfm	110VAC 60Hz or 220V 50/60Hz, single phase 750W	9 CFM	15 micron	NO	CE
Edwards RV8 6.9 CFM	110V 50/60Hz 1-PH 5A or 220V 50/60Hz 1-PH 2.1A	6.9 CFM	1.5 micron	YES	CE, UL, CSA
Edwards E2M28 21 CFM	110V 50/60Hz 1-PH 8.2A or 220V 50/60Hz 1-PH 4.1A	21 CFM	0.75 micron	YES	CE, CSA, UL
Welch 1400 DuoSeal 0.9 cfm	110 Volts 50/60Hz single phase, 1/3 HP 250W	0.9 CFM	0.1 micron	YES	CE
Agilent DS302 8.2 CFM	120V / 1ph	8.2 CFM	2 × 10 <sup>-3</sup> mbar	YES	UL/CSA
Agilent DS402 12.3 CFM	120V / 1ph	12.3	2 × 10 <sup>-3</sup> mbar	YES	UL/CSA
Agilent DS602 17.6 CFM	120V / 1ph	17.6 CFM	2 × 10 <sup>-3</sup> mbar	YES	UL/CSA

# DIAPHRAGM VACUUM PUMPS



Scientific Solutions is Proud to provide a leading line of diaphragm pumps from Welch, Ulvac and Buchi. These compact pumps are great when paired with rotary evaporators, small vacuum ovens, winterization/filtration, short-path distillation, freeze dryers, glove boxes, etc.

## Some advantages include:

- No oil changes, no cold trap required for water/alcohol solutions
- Virtually maintenance-free solution for laboratory environment
- Smaller footprint than oil pump saves lab space
- Designed to work with rotary evaporators



Model	Electrical Requirements	Pumping rate	Ultimate vacuum	Adjustable vac./gas ballast	Certification
Welch 2042 1.2 cfm	110 Volts 60Hz single phase 1/5 HP, 150 watts	1.2 CFM	2 torr / 2.7 mbar	YES	CSA
Welch 2052 2.3 cfm	110v 60Hz single phase 0.53 HP, 390 watts	2.3 CFM	1.5 torr / 2 mbar	NO	CE
Welch 2163 6.1 cfm	110v 60Hz single phase	6.1 CFM	6 torr / 8 mbar	NO	CE
Welch 2070 ChemStar 5.3 cfm	110V 60Hz single phase	5.3 CFM	0.05 torr (50 micron)	NO	CE
ULVAC DTC-41 1.6 cfm	110V 60Hz or 220V 50/60Hz, single phase 0.13HP, 100W	1.6 CFM	7.5 torr / 10 mbar	NO	CE
ULVAC DA-241 9.2 cfm	110V 50/60Hz or 220V 50/60Hz single phase, 400W	9.2 CFM	120 torr	NO	CE, TUV
ULVAC GLD- 201B 8.5 cfm	110V 50/60Hz 1-PH 7.9A or 220V 50/60Hz 1-PH 3.9A, switchable	8.5 CFM	Ultimate vacuum with gas ballast closed 5 micron/millitorr, Open 50 micron/millitorr	YES	CE, TUV







# ROTARY EVAPORATORS

Rotary evaporators are used in chemical laboratories for the efficient and gentle removal of solvents from samples by evaporation. Rotary evaporation is most often and conveniently applied to separate “low boiling” solvents such as n-hexane or ethyl acetate from compounds which are solid at room temperature and pressure.



**Systems from the 75 Year industry leader  
Buchi and the newly re-designed Ai SolventVap  
Systems make up our amazing selection of Rotary Evaporators.**



- Across International's SolventVap Evaporators consistently deliver reliable and reproducible process results that are usually reserved for more costly systems.
- Solvent-resistant PTFE and Viton gaskets, ensuring long time operation
- Motorized water bath lifting for precise "control"
- Easy, straight-forward visual operation with digital speed and temperature display
- With a rotary evaporator from Buchi, a new level of operation will be achieved with integration of an optional central interface. In conjunction with a BUCHI vacuum pump, a recirculation chiller, and the perfect synchronization of process parameters - such as rotation speed, pressure and temperature opens up new possibilities.
- Precise operation control with integrated digital display of heating temperature, rotation speed and lift position
- Traceability of all process parameters including data recording and charting with the optional Interface I-300 Pro
- Instant alert with push notification on mobile devices in case of process deviation (with Interface I-300 / I-300 Pro only)



Model	Electrical requirements	Evaporating flask	Receiving flask	Water bath
ECOCHYLL X7	6.3 amps/230v, 60Hz	22, 50, 72 and 100L	22, 50, 72	NA
Heidolph GREEN Package – Complete 5 Liter Benchtop Rotary Evaporator	115 V   12A   60 Hz	5 Liters.	3 Liters.	Temperature range: ambient to 99°C (210°F)
Complete 20 Liter Rotary Evaporation System Hei-VAP Industrial S	220V / 1ph / 60Hz / 20A	20 Liters.	2 x 10 Liters.	Temperature range: ambient to 180°C (356°F)
Ai SolventVap 0.5-Gallon/2L	110V 60Hz single phase, 9.8A, 1075 watts or 220V 50/60Hz single phase, 4.9A, 1075W	Capacity: 0.13 gallon (0.5L), 0.26 gallon (1L) or 0.53 gallon (2L) Maximum load: Not to exceed 60% of the flask's capacity	0.26 gallon (1L)	Temperature range: ambient to 99°C (210°F)
Ai SolventVap 1.3-Gallon/5L	110V 60Hz single phase, 2300 watts, 21A or 220V 50/60Hz single phase, 2300 watts, 10.5A	Capacity: 1.32 gallon (5 liters) Maximum load: Not to exceed 60% of the flask's capacity	0.79 gallon (3L)	Temperature range: ambient to 99°C (210°F)
Ai SolventVap 2.6-Gallon/10L	220V 50/60Hz single phase, 17.3A, 3800	Capacity: 2.6 gallon (10L), Maximum load: Not to exceed 60% of the flask's capacity	1.3 gallon (5L)	Temperature range: ambient to 99°C (210°F)
Ai SolventVap 5.3-Gallon/20L	220V 50/60Hz single phase, 20A, 4300W	Capacity: 5.28 gallon (20L), Maximum load: Not to exceed 60% of the flask's capacity	2.64 gallon (10)	Temperature range: ambient to 99°C (210°F)
Ai SolventVap 13G/50L	220V 50/60Hz single phase, 29A, 6400W	Capacity: 13.2 gallon (50), Maximum load: Not to exceed 60% of the flask's capacity	5.28 gallon (20L)	Temperature range: ambient to 99°C (210°F)



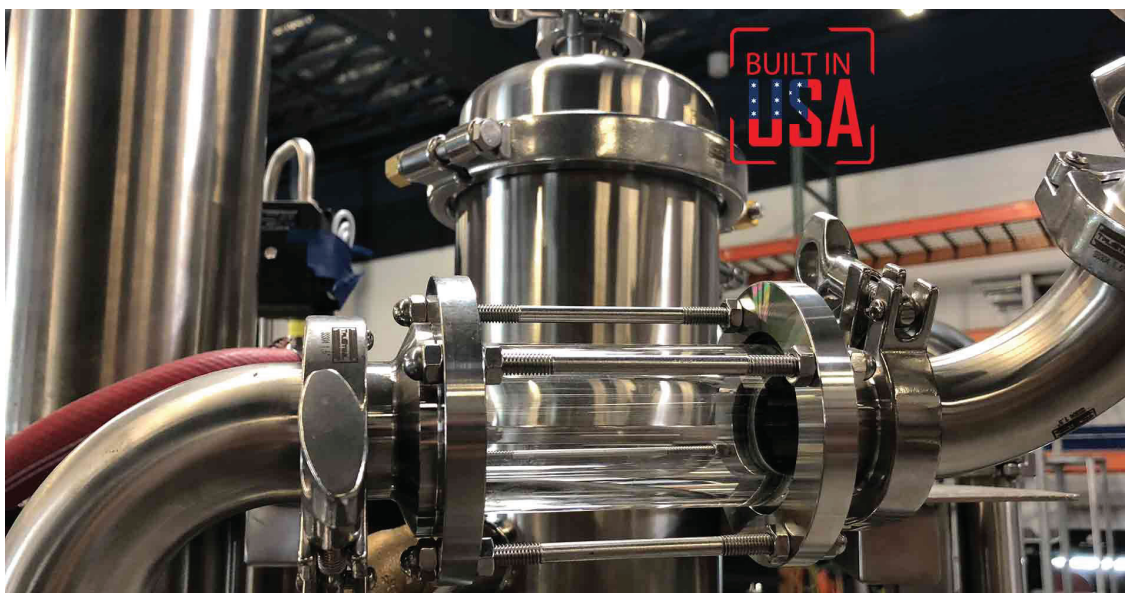
# TRUSTEEL



The AutoVap Falling Film system is one of the most innovative pieces of equipment available on the market to eliminate bottle necks caused by rotovaping and other forms of recovery. We are excited to announce that we now carry the AutoVap 15&30 falling film evaporators from TruSteel. One of the only solutions built right here in the United States by Extractors for Extractors.

No corners have been cut on the quality of parts or materials used. All stainless steel, Viton, PTFE, and Borosilicate materials ensure a long lifespan. TruSteel has also sourced the highest quality ancillary equipment such as chillers, heaters, and pumps.

The AV15 (AutoVap 15) is a falling film evaporator for alcohol recovery designed to efficiently and effectively meet your large-scale capacities. With a recovery rate of up to 15 Gallons per hour and an extremely low residence time, you will be processing large amounts of high-quality material. Lower your footprint, costs, and time of operation while eliminating any bottlenecks with the AutoVap System all the leaders in the extraction industry are turning to.









# SHORT PATH DISTILLATION

## What is Short Path Distillation?

Short Path is a distillation technique that involves separating compounds from one another and is normally done at reduced pressure. The advantage is that the heating temperature can be considerably lower (at reduced pressure) than the boiling point of the liquid at standard pressure, and the distillate only has to travel a short distance before condensing. A short path ensures that little compound is lost on the sides of the apparatus. At Scientific Solutions we have short path systems from Lab Society and Across International, as well as molecular still units from Pope Scientific. We carry everything you need whether you're doing small batch testing or full scale production such as n-hexane or ethyl acetate from compounds which are solid at room temperature and pressure.



# FRACTIONAL DISTILLATION SYSTEMS



## 12L G2 Distillation System

Designed for speed and Heavy Production Demands, we offer the largest installment of Lab Society's Executive G2 Series Systems.

- Increased mantle wattage for optimum temperature control
  - Better stir control/motor for improved agitation
  - Steel wire reinforced vacuum hose will not collapse
- Vacuum Adapters are standardized to GL-18" connections
- Vacuum port relocated to bottom of condenser to eliminate condensate contamination



## Ai 10L Short-path Package

The all new Ai 10 liter short path turnkey system offers you the best glassware and equipment combination in the market.

- Ai Heavy wall glassware for durability
  - Downward material drain port
  - Vacuum jacketed vapor channel
- Distillation head with five sets of vigreux
- Boiling flask to distillation port: 34/45 joint
- Thermo port on boiling flask: 24/40 joint
- Thermo port on distillation head: 14/20 joints
- Recirculating fluid and vacuum connectors:  
GL-16 adapter and 3/8" hose barb
- Glass material: high borosilicate glass 3.3

Certifications (Unit Specific):

- Heating Mantle: CSA/ NRTL • Controllers: CE/ NRTL • Stirrer: CE/ CSA/ BRTL • Vacuum Gauge: RoHS/ CE. NRTL





# POPE

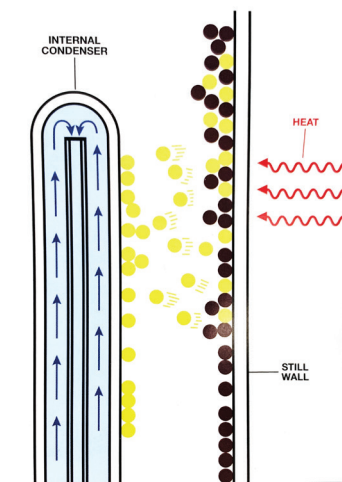
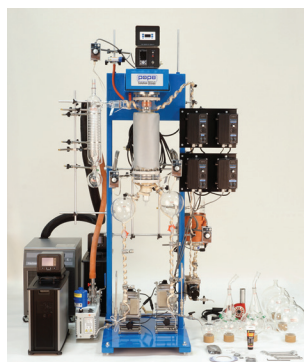
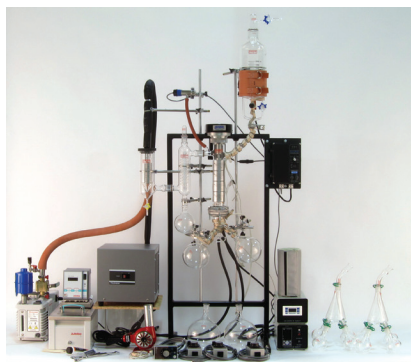
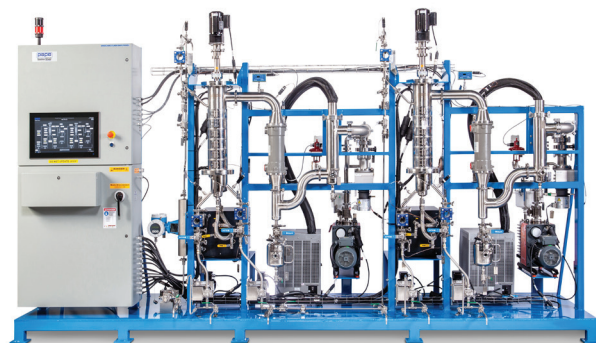
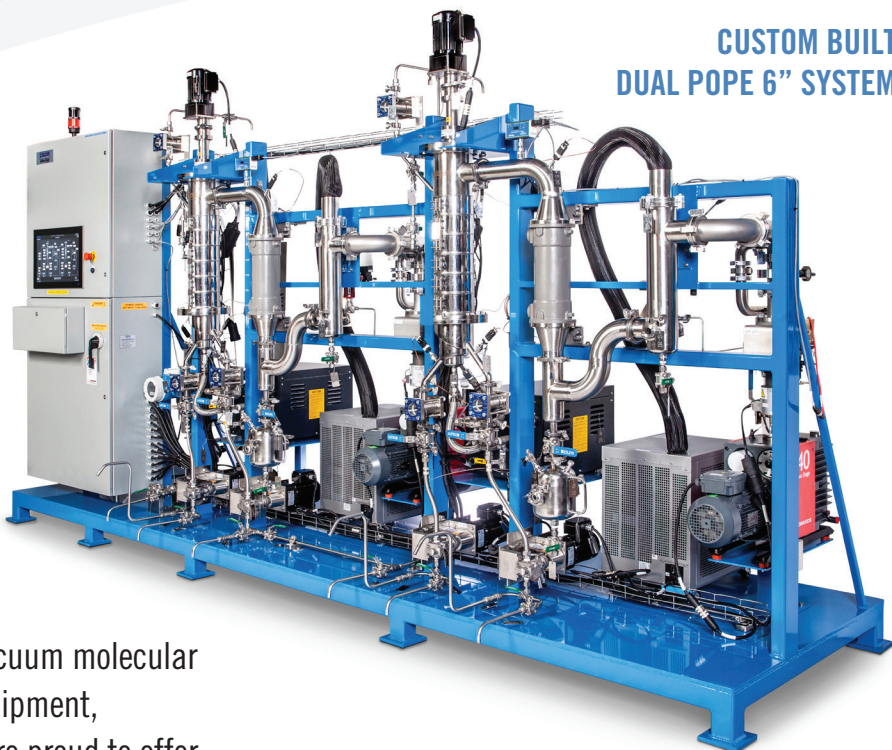
## Why Pope is the Clear Choice in Equipment for CBD and THC Distillation?

Pope has led the way worldwide in high vacuum molecular distillation and wiped film evaporation equipment, technology and processing since 1975. We are proud to offer their equipment and often recommend it for small and large-scale production distillation. When final purification of THC and CBD at the highest levels of purity, quality, yield and product value are a must; Pope is the only way to go.

**Scalable from 100 Milliliters/day up to 100 Kilograms/hour**  
**All Pope Scientific equipment is proudly made in the USA.**

Feed rates with the 2" Pope still normally range from 250 to 500 ml/hr or more and overall throughputs from 0.6 to 1.5 liters or more per an 8-10-hour day of feed material. Final total cannabinoid purities often range from 85 – 95%, with some reporting more than 96%. at room temperature and pressure.

**CUSTOM BUILT  
DUAL POPE 6" SYSTEM**





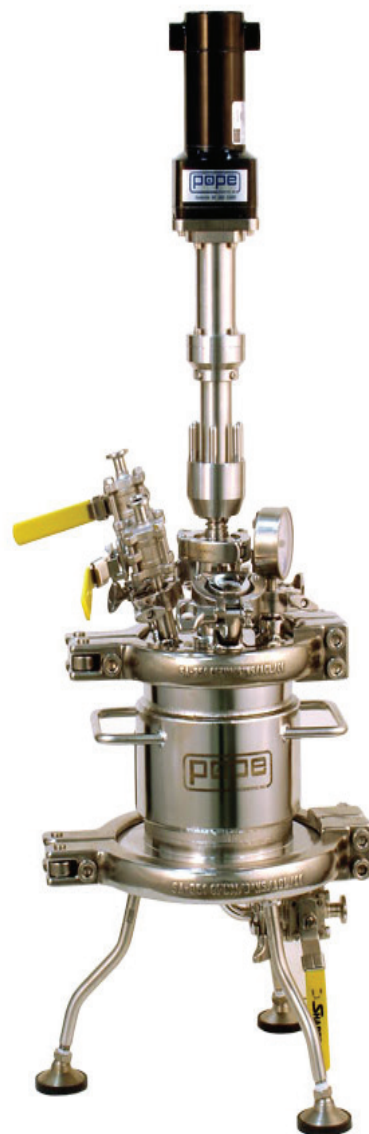
# NUTSCHE FILTERS-DRYERS

## What is a Nutsche?

Nutsche Filter-Dryers are known and used worldwide for critical high purity separations of liquids and solids. Products include pharmaceuticals, bio-materials, electronics grade materials, fine specialty chemicals, and many others.

Pope's designs accommodate for a variety of applications and provide the highest quality design, materials, manufacturing, welding, finishes, components and functionality are assured.

These units provide capabilities for solids filtering, washing, reslurrying and drying in a single vessel, reducing process time and worker and environmental exposure. Pressure capability facilitates filtering rate and vacuum capability facilitates filter cake drying rate which can be additionally aided by heat and cake agitation.





## REFRIGERATION

**Commercially approved and CalCode compliant, our line up of refrigerators are perfect for holding test samples along with displaying products which require refrigeration**

Features:

- Digital thermostat offers precise and convenient temperature control
- Recessed LED lighting offers attractive presentation of stored products
- True frost-free operation saves on maintenance by preventing icy buildup
- Self-closing door is ideal for busy commercial settings
- Factory installed lock provides security you can count on
- Fast temperature recovery with two internal fans
- Stainless steel trimmed glass door with pro handle







# NEXT GEN

For more than two decades NextGen has provided high performance solvent recovery systems for use in manufacturing, production, and fabrication sites. We are proud to bring their set “Set & Forget” solvent recyclers to the cannabis and Hemp industry. By using these systems you will save money and time by reducing your reliance on virgin solvent purchasing and disposal service fees.



RECYCLERS								
MODEL	GALLON VOLUME	DIMENSIONS	WEIGHT	OIL VOLUME	WATTS	POWER	PHASE	AMPS
IST10	2.6	20 x 28 x 41	121	1.6	1670	230	1	7.5
IST15	4	20 x 28 x 41	132	2	1670	230	1	7.5
IST22	6.6	24 x 34 x 43	165	3.7	2570	230	1	11
IST42	11	23 x 38 x 47	220	6.3	3200	230	1	14.5
IST62	16	24 x 38 x 47	253	7.4	4500	460	3	6
DIGIT90	24	36 x 43 x 67	539	10	8000	460	3	20
DIGIT122	37	60 x 36 x 65	748	11	12000	460	3	15
DIGIT202	53	60 X 36 X 65	800	15	15000	460	3	19
ECOPLUS122	37	75 x 44 x 112	1345	12	10000	460	3	12
ECOPLUS202	53	75 x 44 x 114	1345	16	13000	460	3	16
ECOROTOPUS202	53	75 x 44 x 114	1345	16	13500	460	3	16
ECOPLUS 400	105	83 x 55 x 124	1958	32	24000	460	3	29
ECOROTOPUS400	105	83 x 55 x 124	1958	32	24000	460	3	29
HR600	153	196 x 81 x 146	6450	40	47000	460	3	58



# WIPE FILM EVAPORATOR

## What is Wiped Film Evaporator?

Pope Scientific designs and fabricates basic to complex systems using the Wiped Film Short Path Distillation Process for stills, evaporators and hybrid configurations that include fractional columns with wiped-film distillation units, centrifugal molecular distillation units, vacuum distillation, condensers, evaporation and processing vessels that meet our customer's application requirements, with superior results.



## NOTES





## About Us

Scientific Solutions, headquartered in California, USA, has established and maintained nationwide networks to meet the ever growing needs of our customers. Since 2013 we have provided equipment to the leading laboratories of universities and countless businesses big and small.

Our award winning product lines speak for themselves. We are proud to support our partners and valued members of our Scientific Solutions family. You can rest assured all your technical support, order inquiries, and shipping needs will be handled professionally and to your utmost satisfaction.

We pride ourselves on having excellent customer service experiences. If you have any questions, comments, or concerns, please don't hesitate to contact us.

## Our Mission

Our goal as a comprehensive Healthcare equipment sales, repair, and turn-key logistics company is to provide personalized support and service including: a knowledgeable and accessible sales support team, a wide array of products and adaptable logistics, delivery and installation services.



**Scientific  
Solutions**  
EQUIPMENT | SALES | SERVICE | CONSULTING

**844-404-4588 | [sales@scisolinc.com](mailto:sales@scisolinc.com) | [www.scisolinc.com](http://www.scisolinc.com)**

## We offer Consultation Services & Classes

We offer classes which cover topics ranging from Botanical Extraction, short path distillation, filtration techniques and winterization. These classes are offered in person and Online. Our consultation services deal with lab set-up and procedures to material processing Contact Us For More Information.