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CLOSED-LOOP ALCOHOL

EXTRACTION SYSTEM



Closed-Loop Alcohol Extraction System



UltraX-15

CENTRIFUGE UTILITY PLATFORM



98% Botanical Compound Removal



97% Alcohol Removal



-40°C Low Temperature Rating



Our centrifuge based technology enables the ability to target and extract specific botanical compounds to achieve desired separation. The **UltraX-15 ALCOHOL EXTRACTION SYSTEM** combines closed-loop, cold alcohol extraction with mechanical centrifugation ensuring high-purity extractions.

Dimensions

UltraX-15: w/o Auxiliary Components
(37" L x 25.5" W x 63.1" H)
Main Control Panel:
(24" L x 32" W x 52" H)

Total Amp Draw

30 amps
(Including ancillary equipment)

- Closed-Loop System
- 3rd Party Engineer Reviewed
- UL Listed US/Canada
- 304 & 316L Sanitary Stainless Steel
- Vacuum Jacket Insulation
- Easy Material Loading/Unloading
- Bi-Directional Agitation
- Variable Speed Control
- Heavy-Duty Spin Drying
- 12 Month Parts/Labor Warranty
- Technical Support
- Designed in USA

UltraX-15

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Product Overview

The UltraX-15 combines closed-loop alcohol extraction with centrifugal technology, ensuring consistent results conveniently by a single operator. A touch screen HMI features a menu with various agitation and spin-dry cycles, each of which is programmable to the operator's specifications. With a run time of only 10-20 Minutes and a throughput of approximately 300 lbs Per 8-hour work day, this system will efficiently attain Your processing goals.

Production Capacity



10-15 lbs

Plant material per batch
(depending on mill size)



10-15 min

Average run time
(depending on SOP)



13-15 gal.

Alcohol requirement per run
(wash tincture can be used twice)

Standard Features

Vessel

- 304 and 316L Stainless Steel Construction
- (1)Alcohol Feed Port:1.5" Sanitary Triclamp Fittings
- (1)1.5"Tri-clamp; Remote Discharge Vent and Pressure Relief Port
- 2"Tri-Clamp Angled Drain
- Liquid/Vapor Tight(No pressure) Vessel with EPDM Lid Seal

Controls

- Industrial Hazloc control panel
- Touchscreen HMI
- 20ft Tethered main control panel (Installed outside of hazloc)
- Emergency stop
- Variable frequency drive:0-1800 RPM

Electrical

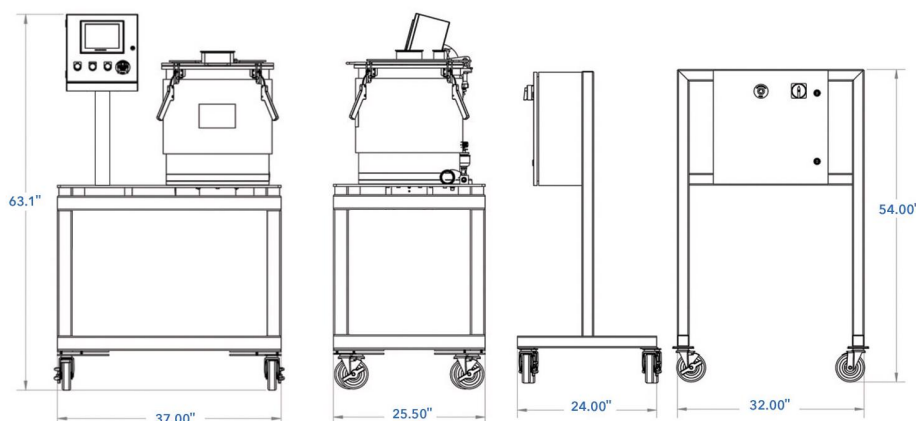
- 230V,30 amp, single-phase
- UL certified class 1 div 2 3HP motor
- UL-NEMAL6-R30 Plug
- UL-L6-30(30A-250V)

Footprint

- UltraX-15:w/o Auxiliary components (37"L×25.5W×52"H)
- Master Panel Not Shown: (24"L×32"W×52"H)
- Recommended Total Footprint Of Extraction Area:UltraX, Control Panel, Tanks, Filter, Pump (15ftW×5ftD×8ftH)

UltraX-15

Main Control Panel



Operation

Through the HMI, the operator may access 2 different programs: Agitation and spin-dry. Each program has three cycle presets, two of which are programmable (will save long term) and one being manual (will not save long term). To begin, the operator fills a mesh bag with botanical material and places the bag in the system. After sealing the system properly, it is then filled with alcohol and agitated using the 'Agitation' program. When the 'Agitation' program is complete, the operator opens the drain valve allowing the saturated alcohol to drain into an appropriate discharge container. After draining, the operator may now select the 'Spin-Dry' program where the residual alcohol will be removed through centrifugal force.

1) Loading the System

A mesh bag is filled and packed evenly with botanical material. The bag is then sealed with the zipper, and placed in the basket of the vessel.

2) Filling the System

The system is sealed and filled with approximately 15 gallons of alcohol, which may be done either pneumatically (with a pump + air compressor) or with gaseous nitrogen.

3) Agitation

The 'Agitation' program bi-directionally spins the basket with the botanical material and alcohol, extracting approximately 98% of the target compounds.

4) Draining

When the 'Agitation' program is complete, the drain valve is opened to allow the alcohol to drain into an appropriate discharge container.

5) Spin-Dry

Leaving the drain valve open, the 'Spin-dry' program is chosen and the basket is spun at high speeds to centrifugally remove approximately 97% of any residual alcohol.

6) System Unloading

Once the 'Spin-Dry' program is finished and the basket has stopped spinning, the lid may be opened and the bag removed. The botanical matter has now been stripped of its target compounds and may be disposed of properly.

7) Repeat

The system is loaded again and the same 15 gallons of alcohol may be re-used for multiple extractions until fully saturated (approximately 3 bags or 45 lbs)



Closed-Loop Alcohol Extraction System



UltraX-30

CENTRIFUGE UTILITY PLATFORM



The UltraX-30 Alcohol Extraction System is our large capacity centrifuge system that uses programmable sequences to target and extract your desired compounds from botanical biomasses. Utilizing closed-loop technology with mechanical centrifugation, the UltraX-30 ensures the easy delivery of high-purity extractions.

Dimensions

UltraX-30: w/o Auxiliary Components
(49"L×27.5"W×58.5"H)
Main Control Panel:
(24"L×32"W×54"H)

Total Amp Draw

30 amps
(Including ancillary equipment)

- Closed-Loop System
- 3rd Party Engineer Reviewed
- UL Listed US/Canada
- 304 & 316L Sanitary Stainless Steel
- Vacuum Jacket Insulation
- Easy Material Loading/Unloading
- Bi-Directional Agitation
- Variable Speed Control
- Heavy-Duty Spin Drying
- 12 Month Parts/Labor Warranty
- Technical Support
- Designed in USA

UltraX-30

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Product Overview

The UltraX-30 is an all-in-one system that combines closed-loop cold alcohol extraction with mechanical centrifugation, ensuring high-quality results with the benefit of a larger capacity. A touchscreen HMI features a program menu with various wash/agitation and spin/ dry cycles, all programmable to the operator's specifications to effectively target the desired separation. With a run time of only 15-20 minutes with a throughput of up to 600 lbs per 8-hour day, this system ensures high-quality crude oil in a fraction of the time.

Production Capacity



25-30 lbs

Plant material per batch
(depending on mill size)



15-20 min

Average run time
(depending on SOP)



25-30 gal.

Alcohol requirement per run
(wash tincture can be used twice)

Standard Features

Vessel

- (1) Alcohol Feed Port: 1.5" Sanitary Triclamp Fittings
- (1) 1.5" Tri-clamp; Remote Discharge Vent and Pressure Relief Port
- 2" Tri-Clamp Angled Drain
- Liquid/Vapor Tight (No pressure)
- Vessel with EPDM Lid Seal

Included Ancillary Equipment

- (1) 30 Gallon Jacketed Stainless Steel Discharge Vessel
- Dimensions 30"L x 30"W x 24"H
- Weight 114 lbs / 52 kg
- (1) Master Control Panel
- Dimensions 24"L x 32"W x 54"H
- Weight 50 lbs / 23 kg

- (1) Barrier Fluid Reservoir
- Dimensions - 39"L x 18"W x 56"H
- Weight - 113 lbs / 51 kg
- (10) Closed Mesh Extraction Bags
- (1) 10' Hose
- (1) 3' Hose

Dimensions

- UltraX-30: w/o Auxiliary components (49"L x 27.5"W x 58.5"H)
- Main Control Panel: (24"L x 32"W x 54"H)
- Main Frame Weight: 890 lbs / 404 kg

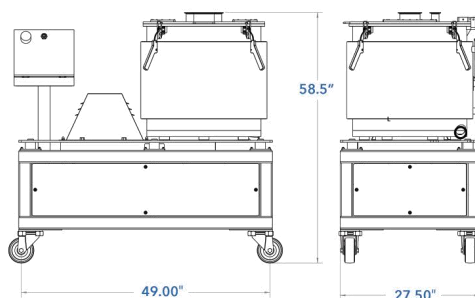
Controls

- Industrial Hazloc control panel
- Touchscreen HMI
- 20ft Tethered control panel (Installed outside of hazloc)
- Emergency stop
- Variable frequency drive: 0-1500 RPM

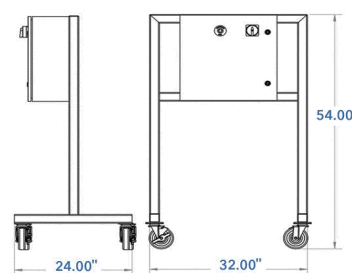
Electrical

- 230V, 30 amp, Three-Phase
- 5HP Motor
- UL-NEMA L15-30 Plug

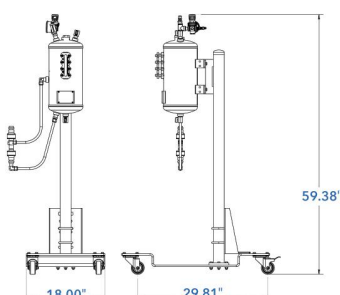
UltraX-30



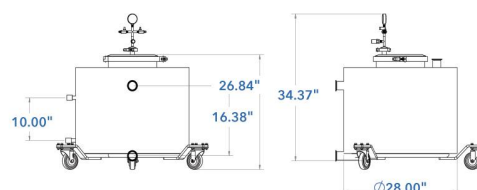
Main Control Panel



Barrier Fluid Reservoir



Discharge Vessel



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Extraction Cycle

The UltraX-30 offers 3 program cycles: spray wash, agitation wash and spin dry cycle. Each program cycle has (2) programmable auto recipes and (1) programmable manual recipe. The operator fills filter bag with milled plant material and places it in the system where it is spun at varying speeds while injecting alcohol at controlled rates. The system can also be flooded, and bi-directionally agitated for full target compound removal. After the wash, the plant material undergoes a medium duty spin dry, leaving the spent plant material 97% free of tincture with up to 98% target compound removal. The alcohol wash is then used for another 2-3 runs of material or diverted to a mixing tank for further processing.

1)System Loading

A preloaded filter bag is placed into the basket and the system is sealed to begin the cycle.

4)Extraction Begins

The plant material undergoes either a spray wash or an agitated wash with a set number of bi-directional agitations aimed at extracting 98% of plant desirables.

7)System Unloading

When the dry cycle is complete, the operator can retrieve the filter bag from the basket.

2)Wash Cycle

The "Spray Wash" or "Agitation Wash" program is selected on the program menu where the RPM and cycle times are set to the operator's specifications.

5)System Draining

When the wash cycle is complete, the outlet valve is opened and the system is drained. The alcohol wash is pumped to a properly rated storage reservoir for further processing.

3)Alcohol Fill

Chilled alcohol is pneumatically pumped from source tank into the CUP system via an inlet valve or spray nozzle.

6)Spin Dry Cycle

The "Spin Dry" program is selected on the program menu and the drying cycle is started. The wet plant solids are spun dry of the remaining alcohol mixture within.

