

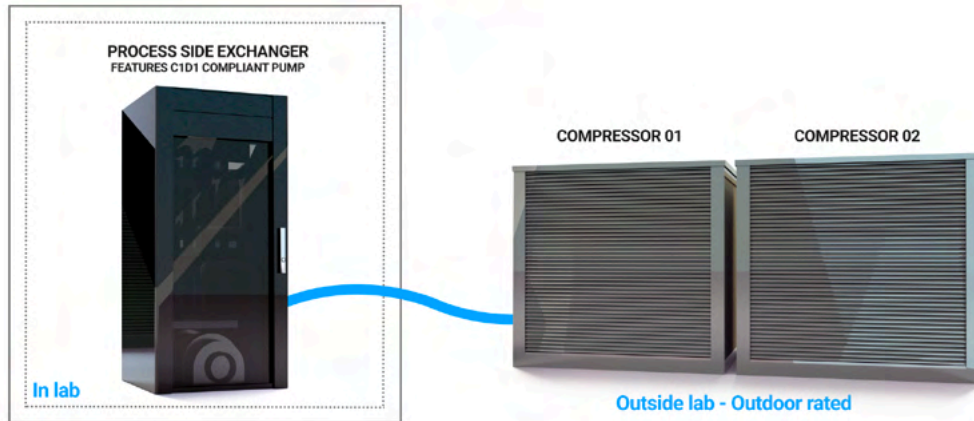
# Rebellion Labs

Equipment List

8/10/2021

## Perma Cool -40C Direct Ethanol Chilling System

### Electro Ethanol Chiller **ACP-16HP**



#### It's a split system

The compressors outside bring the refrigerant into your lab, creating direct refrigerant chilling. The ethanol never leaves the room and the heat exhausts outside.

**Keeps the footprint small in your lab and the heat outside.**



### Specification Data

#### Process Side Exchange (HX Box)

This ACP-16HP chills 40 gallons of ethanol from ambient 72° F to -40° F in under 30 min. The chiller comes with predefined mechanical set points. Unless it is special ordered we do not allow clients to alter temperature settings. Both the heat exchangers and the Perma Flow Pumps motor are UL listed.

Cabinet internals insulated: Yes

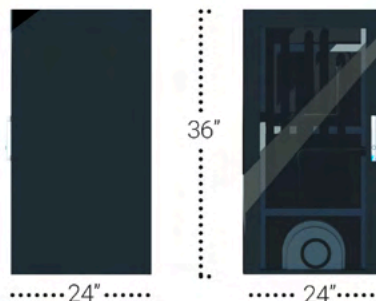
Refrigerant Type: 404A  
Refrigerant Amount: 36lb - 45lbs Varies by Line Set

#### \*Line Set Requirements

40ft and under:  
Copper Liquid Line: x2 5/8" Type L  
Copper Vapor line: x2 1 3/8" Type L

41ft - 50ft and under:  
Copper Liquid Line: x2 5/8" Type L  
Copper Vapor line: x2 1 5/8" Type L

\*Contractor Installation Required



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**Dimensions:** 24" W x 24"L x 36" H  
**Weight:** 395 LBS

#### Perma Flow Pump

**Power:** 230-460VAC 3 PHASE 4 AMP / 2 AMP  
**Type:** Electronic magnetic drive impeller  
**Heat:** .264 BTU  
**Location:** Inside Exchange Housing

### Compressor x2

16hp of two combined 8hp compressors working together to bring you power and reliability. We have our units operational everywhere from the Mojave desert to the colder parts of Canada. Outdoor rated and UL listed enclosure meets all local and federal building code requirements.

**Part Number:** ACP-16HP

#### Power Options:

- Option A (X2): 208-230VAC 3 PHASE 60 AMP**  
36.4 AMP DURING LOAD, 72.8 AMPS TOTAL
- Option B (X2): 480VAC 3 PHASE 30 AMP**  
18.2 AMP DURING LOAD, 36.4 AMPS TOTAL

**Maximum Ambient Temperature:** 110F / -20F (110F - 125F with shade)

**Maximum Pressure:** 350 PSI

**Dimensions:** (48" W x 34.5" L X 35.5")X2

**Power Cord:** Hard-Wired

**Weight:** 850 LBS



.....48.25".....



36 3/8"

.....34.5".....

### **(2x)FluxBox**

The FluxBox component is an advanced refrigerant management system for enhanced system efficiency and durability.

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**Power:** 120VAC 1 PHASE 20 AMP

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**Dimensions:** 24W x 30L x 8H

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**Power Cord:** Hard-Wired

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**Weight:** 80 LBS



### **PLC Controls**

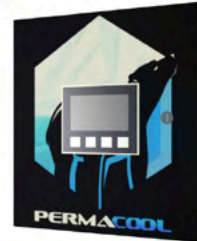
Introducing PLC controlled automation. Fully UL listed system using top of the line hardware. Runs your system safe and efficiently. Allows for 24/7 monitoring – we will know of a problem before you do. Displays temperature and functional information – keeping your system optimized to maximum efficiency.

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**Power Requirements:** 120VAC 1 PHASE 20 AMP

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**Dimensions:** 14W x 16L x 9H







Curians Ace Spinner 30 –

Ace Spinner <LOGO> Basket Centrifuge			
Model	ACE-30	Motor Voltage	208-230 / 460
Serial No.	20190311001	Motor Amps	14-13 / 6.5
Basket Dia	600 mm	Motor Power	3.73 kw
Basket Volume/ Capacity	78 L / 20 kg	HZ	60 PH 3
Motor and Basket Speed	1800 RPM	Drive Voltage	208 - 240
Weight	780 kg	Drive Amps	30.8
Overall Size	1450 x 1000 x 900 mm	G-Force	1089
HAZLOC	C1D2	Tank Capacity	231 L
<b>Not Rated for Pressure</b>		Approved Liquids	Water, Ethanol

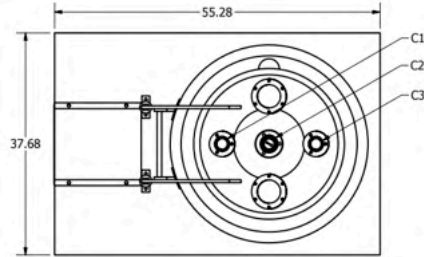
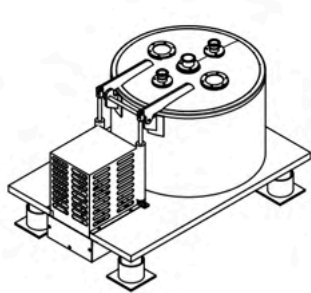
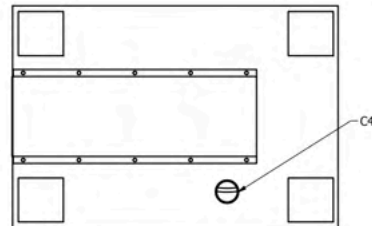
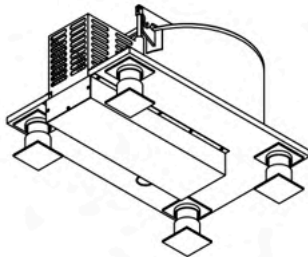
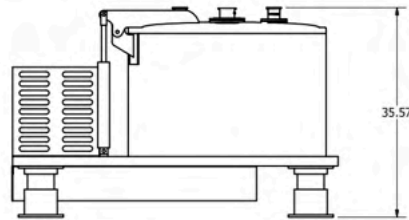


TABLE			
CONNECTION	DESC.	CONNECTION TYPE	SIZE
C1	??	TRICLAMP	1.5"
C2	??	TRICLAMP	2.5"
C3	??	TRICLAMP	1.5"
C4	DRAIN??	??	??









**Lab Society 20 Liter Dual Condenser Short Path Distillation System with Mechanical Cold Trap**



## Mechanical Cold Trap

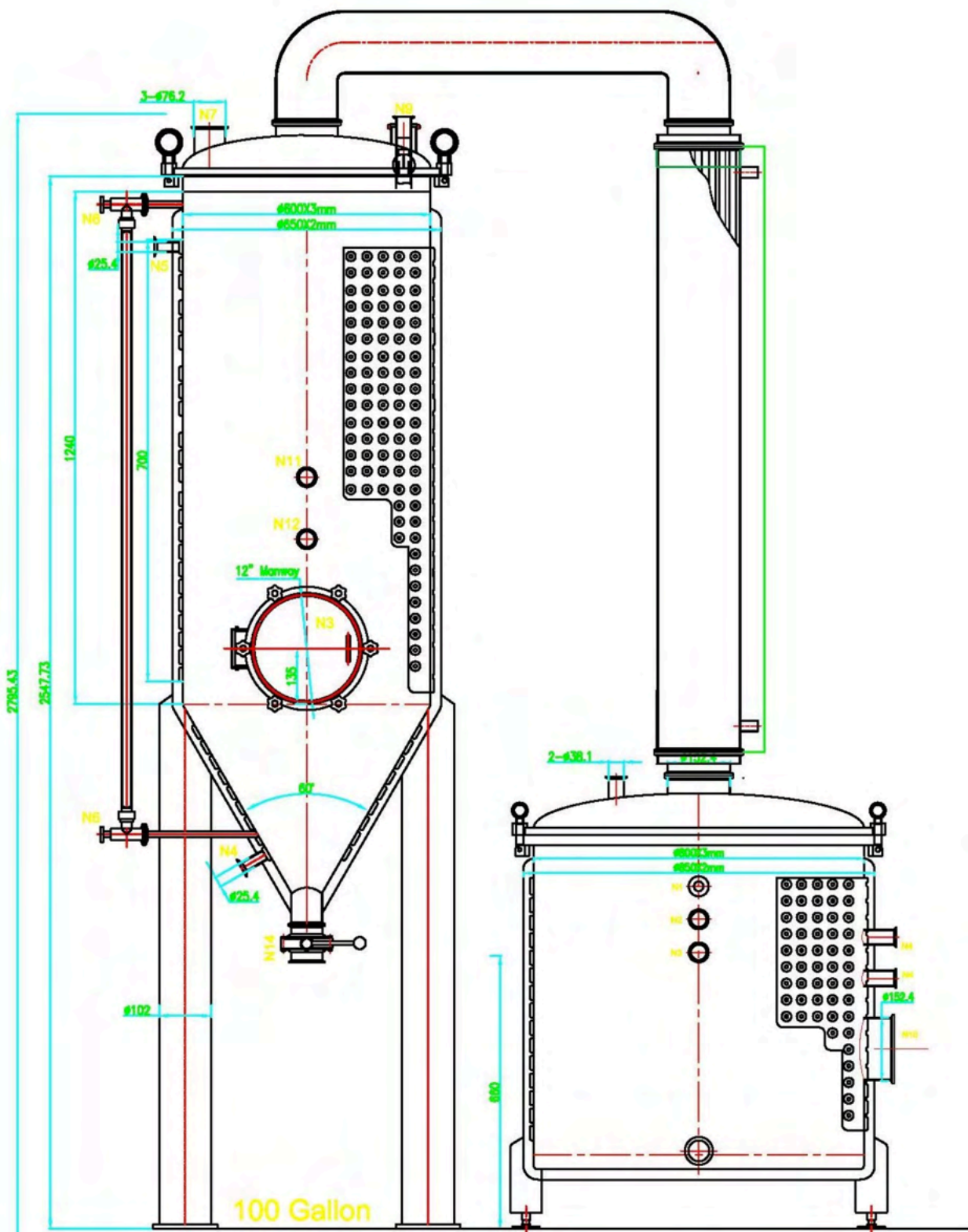


Description	Quantity
[LS-SPK-20FB-D] G2 Executive Short Path Distillation Kit (20L Full Bore Dual)	1.000 Each
[SD07R-20-A11B] PolyScience 7L Refrigerated Circulator (-20C, Standard Digital, 120V) 120V/ 60Hz/ 1Ph/ 12 Amps, Working temp -20° to 170° C, Reservoir size 7L	1.000 Each
[LS-PMK-S] Vacuum Pump Manifold Kit	1.000 Each
[KF25-INA-V-WB] KF(NW) Inline Manual Valve (KF25 (NW))	1.000 Each
[KF25-FN10] Stainless Steel Straight Vacuum Tube (10 in. , KF25 (NW25))	1.000 Each
[KF25-FN20] Stainless Steel Straight Vacuum Tube (20 in. , KF25 (NW25))	1.000 Each
[DY-KF25FX-250] Stainless Steel Flexible Hose Bellow, 25cm (0.8 ft.)	1.000 Each
[DY-KF25FX-500] Stainless Steel Flexible Hose Bellow, 50cm (1.6 ft.)	1.000 Each
[DY-KF25E-90A] Stainless Steel Vacuum Elbow, 90 Degrees (KF25 (NW25))	1.000 Each
[SIS-KF25-100CW] Aluminum Wing Nut Vacuum Clamp (KF25 (NW)) Aluminum Vacuum Clamp, size KF25	5.000 Each

Description	Quantity
[SIS-KF25-100SRV] KF(NW) Stainless Steel Centering Ring With Viton O-Ring (KF25 (NW)) Pair With Wing-Nut Clamp (SIS-KF25-100CW)	5.000 Each
[3161-01] Welch CRVpro Rotary Vane Vacuum Pump (Pro 16, 115V) -115V -Ultimate Pressure - torr (mbar) $3 \times 10^{-4}$ ( $2 \times 10^{-4}$ ) -KF 25 connection flange -Oil capacity 2400 ml -Free Air Displacement @ 50 Hz, m <sup>3</sup> /hr (L/min) - 18.3 (305)	1.000 Each
[LS-PEF-25] Premium Exhaust Filter KF 25 Flange Connection, Can handle up to 40 cfm	1.000 Each
[SH-MCT-80-UL-OP] -80C Mechanical Cold Trap (T80) - UL - OPEN	1.000 Each
[LS-SIR-T80] Silicone Insulating Ring for T80 Stainless Trap Insert	1.000 Each
[LS-KF25-MTI] Stainless Mechanical Trap Insert, KF Connections	1.000 Each
Freight Manual	1.000 Each

**Ethanol King 100 Gallon Rising Film Solvent Recovery**





Includes:

100 gallon jacketed distilling vessel

6" column and condenser

knockout

oil receiving vessel

pressure relief valve

vacuum valve

clamps and gaskets

100 gallon jacketed receiving vessel (drawing attached) low profile

hoses

cold trap

vacuum regulator

vacuum pump

100 gallon jacketed wash vessel

basket

G70C pump

oil ethanol receiving vessel

hoses

clamps and gaskets

labor

### 30 Liter Stainless Steel Decarboxylation System

Quantity	Description
1	8 gallon jacketed boiler -including safety valves
1	2" column with 2" condenser
1	5500 watt digital controller—NEMA4X
1	1/2 HP electric agitator 3 phase 230VAC
1	7.5 CFM Two stage vacuum pump
1	Knockout
1	6" cold trap
1	10" x 6" non jacketed base for receiving vessel





**30 Liter Stainless Steel Decarboxylation System**



**50 Liter USA Labs Rotary Evaporator and Chiller**



300 Gallon IBC, Stainless Steel Food Grade – NFPA30 Compliant



**Diaphragm Pump**



Boiler/Water Heater 100 Gallon



3 Stage Filter Skid with pressure valves



## #2 Filter Canister

