

# Hive200 full overview



Botanical Extraction  
Enterprises

# HiVE200 system

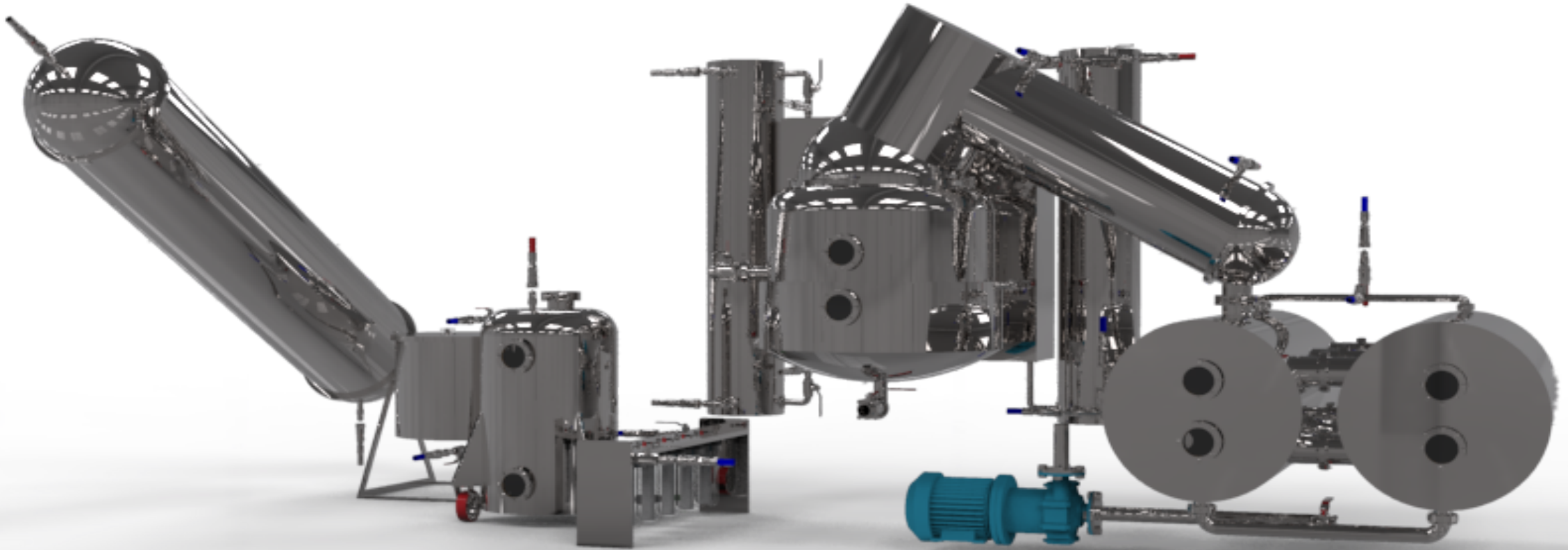


For constant quality and low maintenance  
Extraction unit utilising super-cooled  
ethanol under high vacuum to rapidly yield  
superior dewaxed Cannabinoid extracts

- Compact Design
- Energy Efficient
- Advanced filtration
- ISO engineering & Food Grade parts
- Closed-loop
- Constant vacuum optimises extraction speed and efficiency.
- Sealed System
- Built-in safety redundancies

# Process:

Super-chill → Soak → Filter → Solvent removal →  
Component distillation.



# HiVE200 system



## Safety first!

EG1 vapor sensors

Spark-proof solvent pump

Spark proof 298l/min vacuum pump

Emergency shut off switch

Multiple sensors

# Soaker Vessel 400l

Processing +/- 100kg biomass

Comes with 200 $\mu$  nylon filter insert for clean operation

Super-Cooled Ethanol  
-25 to -40 degrees Celsius

In-line with Chiller and External filter

Easy to load and dispense

Quick seal clamps for effective and efficient operation

25mm Connections



# Chiller Unit

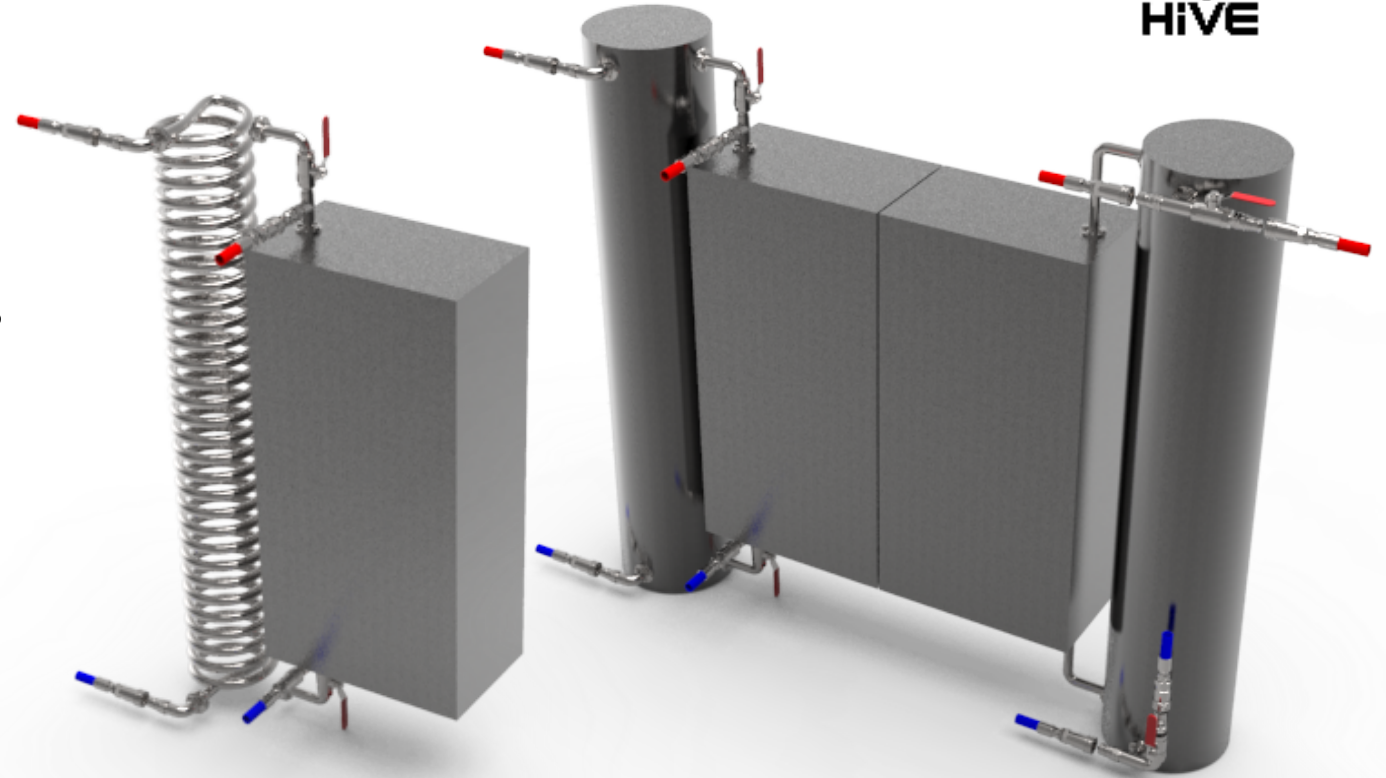


The bi-functional Chiller is a key component to the effectiveness of the HiVE200.

Providing a Super-Cooled path for the Ethanol

Providing sub-zero temperatures for the Comb Condenser

Ensuring Solution free from Waxes



# External Screen filtration unit

Low maintenance

Easy cleaning

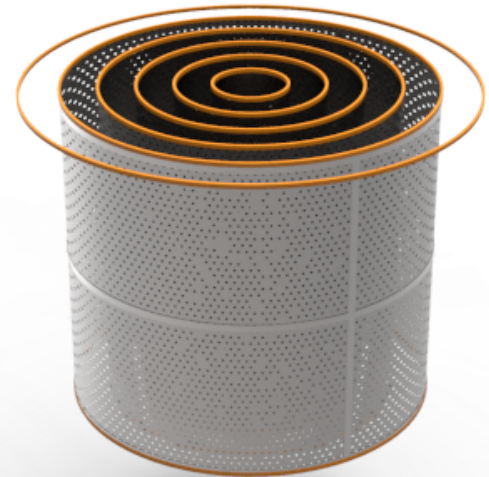
Stainless steel sieves for  
durability and quality

Pod style ideal for expansion

Available separately from  
Botanical Extraction Enterprise  
for existing systems

Nylon Seals for durability

25mm Connectors



# Internal Multi-stage Filter



Fully synthetic filtration unit

Inline with External Filter and the Evaporation Vessel

→  $100\mu$  →  $50\mu$  →  $10\mu$  →  $1\mu$  →  $1\mu$

Removes all impurities from solution

Safety valves to break vacuum if blocked

Easy replacement for convenience

Stainless steel 304 mounting bracket







# Jacketed Vacuum Evaporation vessel with Comb Condenser

200l Stainless steel temperature controlled vessel

25-220 degrees operating temperature (Depending on atmospheric pressure)

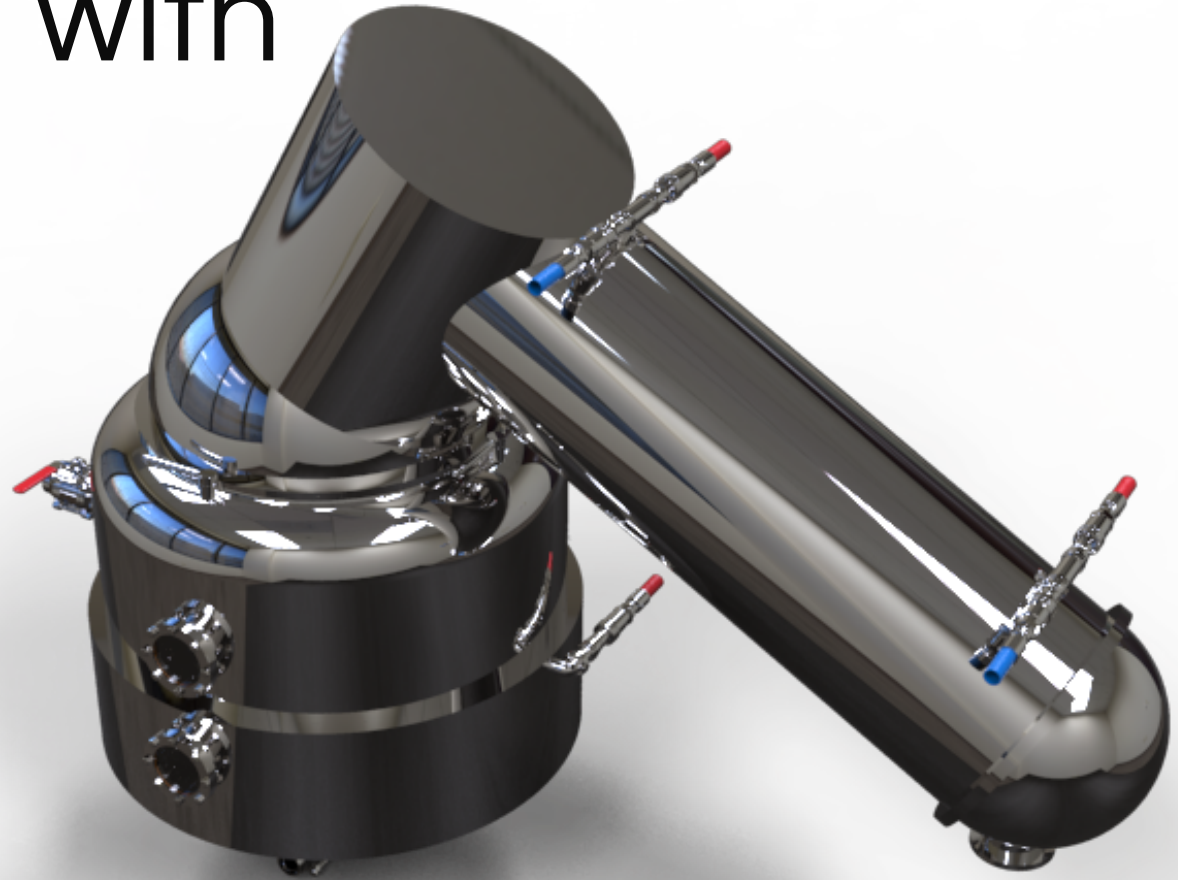
100l Crude oil capacity

High to near-Absolute Vacuum

Solvent Removal

Cannabinoid Removal

Easy operation

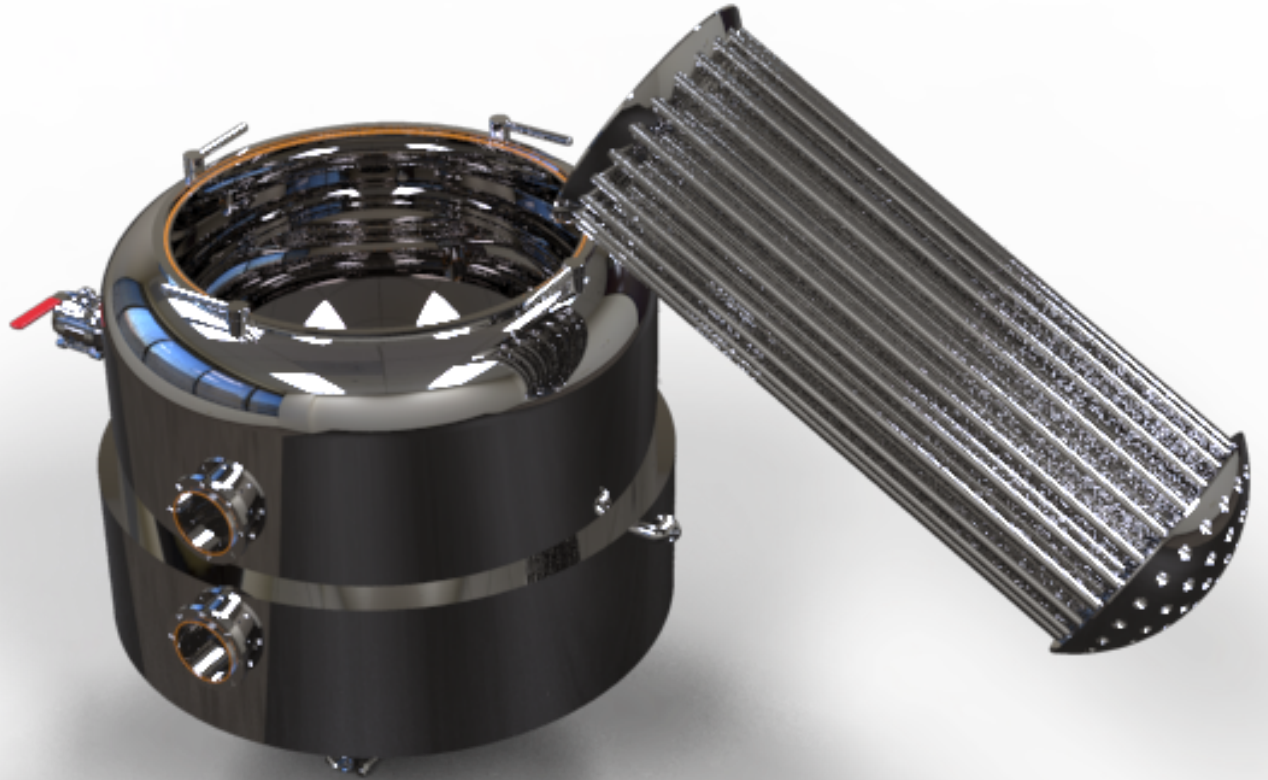


# Comb condenser

Operating Temperature  
-40degrees Celsius to  
220degrees Celsius

Solvent Condensation -40°C with  
a min. 98% vac

Cannabinoid Distillation  
35-200°C with a 98-99,9%  
vacuum depending on  
atmospheric pressure



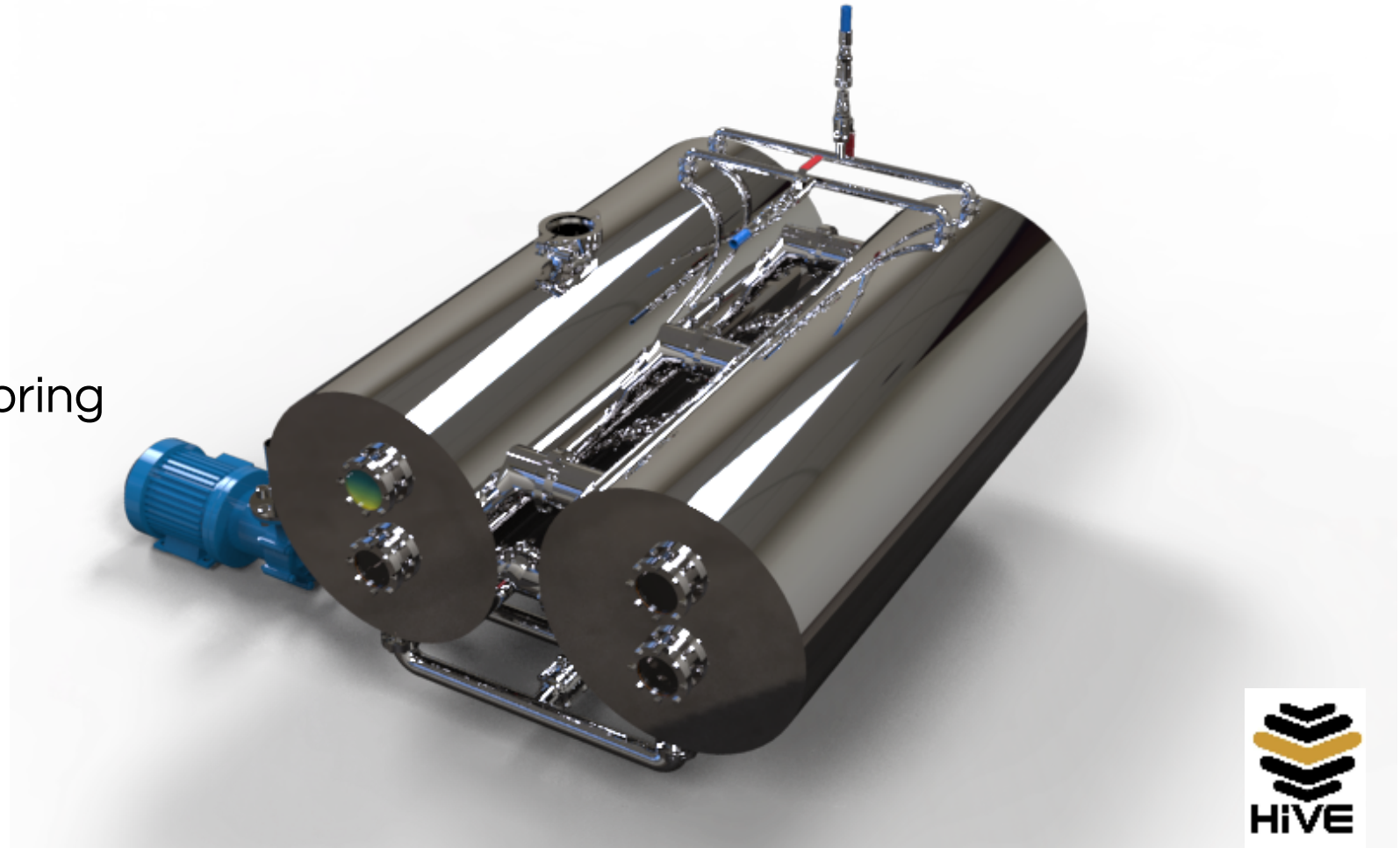
# Receiver 800l

Level Sensors

Quick Connect Tri-Clamp

Solvent Return Pump

Viewing Glasses for monitoring progress



# Fraction Receiver

Jacketed Vessel 50l and 100l available

Jacketed with internal heater unit and temperature control for easy dispensing

25mm dispatch valve

Vacuum quick connector

Air pump quick connector for pressurized dispensing

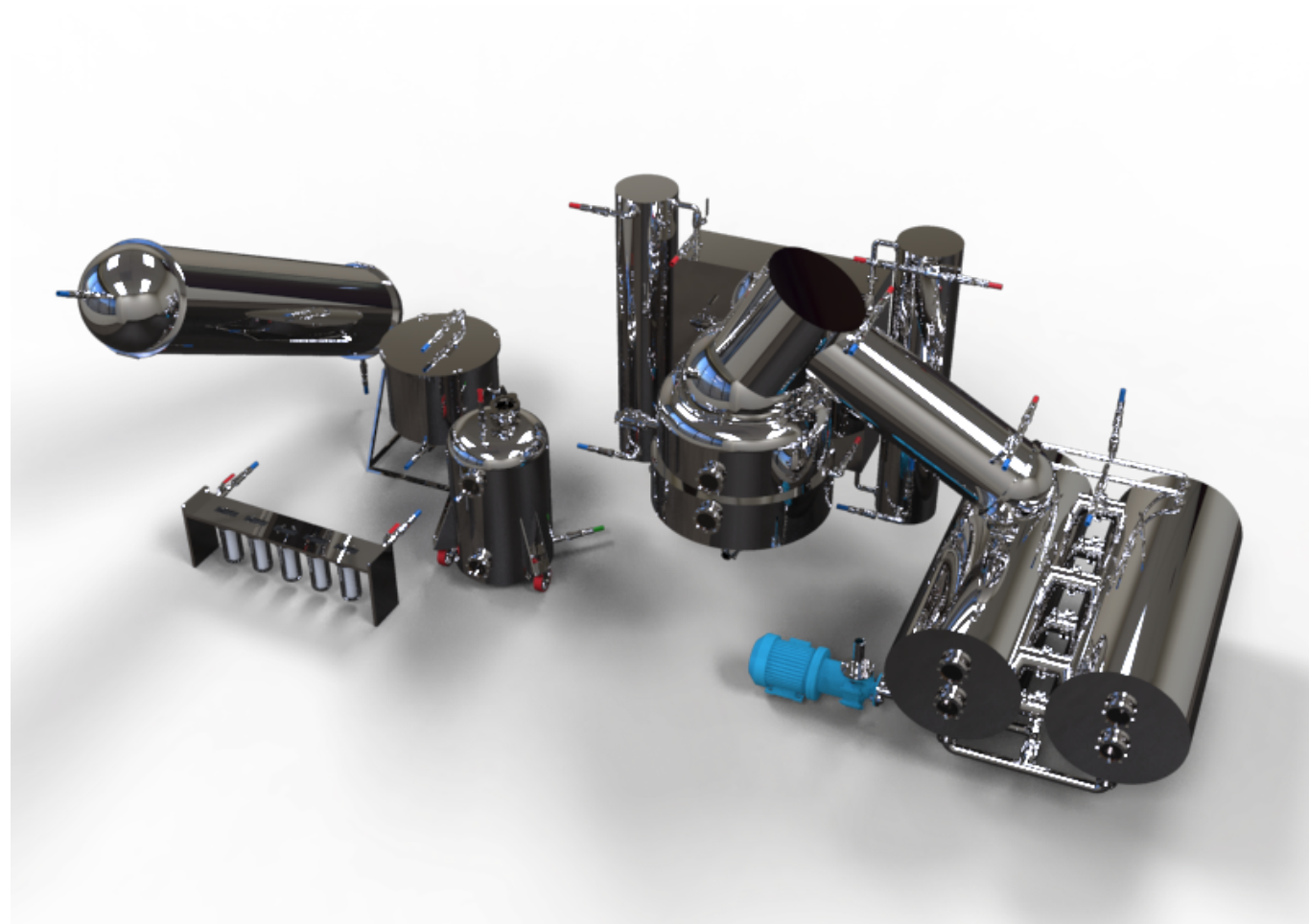
Tri-clamp connector for easy change over with seal cap for storage

Extra Units available on order



# HiVE200 Process

Purpose – Producing commercial quantities of whole cannabis oil as well as Cannabis Distillates through industrial scale super-chilled ethanol extraction equipment.



## Process

**Super-chill → Soak → Filter → Solvent removal → Component distillation.**

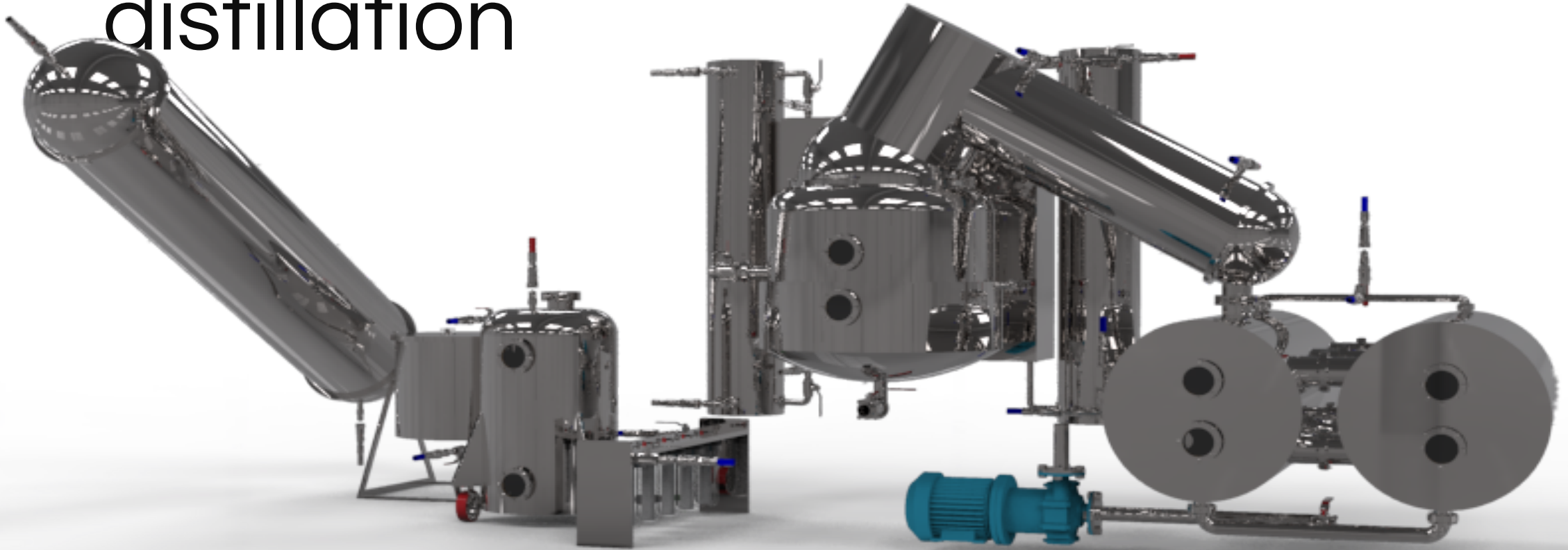
**Super-Chilling** – The ethanol, stored in the external reservoir, is drawn through a custom Chiller that decreases the temperature to -40°C before it enters the Soaking vessel.

**Soaking** – The 400l/100kg Soaking vessel is packed with a custom 200u Nylon bag before the biomass is added and the dome cap sealed. The super-chilled ethanol is then drawn with vacuum over the biomass and soaked for approximately 10 mins before the vacuum is engaged and the solution is removed from the biomass with a high vacuum.

**Filtration** – The solution from the Soaking vessel is drawn through a 304 Stainless steel multi-screen-filter (200u , 160u, 120u, 90u, 40u) before being drawn into the Internal Fully synthetic 5-stage filter ( 100u, 50u, 10u, 1u, 1u) to remove any remaining impurities from the solution.

**Solvent Removal**- The dewaxed and filtered solution is drawn into the heat-jacketed Evaporation vessel (35-40C) where the ethanol evaporates at phenomenal rate through the Comb condenser and into the awaiting reservoir tanks. The Reservoir vessels alongside the Evaporation vessel have level sensors to indicate when the Cannabinoid extract/Ethanol has reached capacity (Extract 100l, Ethanol 800l) and the Ethanol needs to be dispensed back to the reservoir or the crude is ready for refinement.

# Hive200 Cannabinoid distillation



**Component Distillation** – The Crude oil reaching capacity or the batch completed it's now time to start distilling the various terpenes , flavonoids and cannabinoids from the crude oil (Heavy waxes will remain inside the Evaporation Vessel and can be dispensed from the bottom).

First the Condenser head is rotated 180° after the quick release has been disconnected from the Reservoir Vessel (after the solvent has been pumped into the external reservoir).

The Condenser head is then connected with the quick coupling connector to the 1st fraction reservoir . The HiVE200 is then activated and the Evaporation vessel is heated until a flow is achieved with the provided parameters.

After the first fraction is removed, vacuum is broken and the second fraction reservoir is attached for the next Cannabinoid fractions.

There are 3 Fraction Reservoirs: 1x 100l unit and 2x 50l units