



CannabisSFE - 1x1

Rapid Liquid CO₂ Extraction of Hemp and Cannabis



- One Liter Expandable CO₂ Extraction System
- Powerful Liquid CO₂ Pumping System
- CO₂ Flow Rates to 200 mls/min (176 grams/min)
- Extractions up to 10,000 psi (689 Bar, 69 MPa)
- Able to Perform Supercritical and Subcritical Extractions
- ASME Code Designed Vessels and Components
- Meets Current GMP Standards

◀ CannabisSFE - 1x1 Extraction System

The **CannabisSFE 1x1 Extraction System** provides a simple, yet powerful extraction system at an economical price. The system is ideally suited for companies entering the extraction segment, or for those wanting to supply company owned dispensaries with Cannabis or Hemp oils.

It rapidly extracts THC, CBD and Terpenes from Cannabis and Hemp. Within its compact footprint is a one 1-liter processing vessel, and a powerful liquid CO₂ pumping system. This system delivers flow rates up to 200mls/min (176 grams/min) of liquid CO₂. Configured to operate in rapid extraction mode, the **CannabisSFE 1x1** maximizes throughput efficiency. The vessel is charged with biomass and is extracted in about 30 minutes. In the next 30 minutes the vessel is emptied and refilled, and the second extraction is started. The net result is 1.5 pounds (681 grams) of biomass extracted per hour.

The **CannabisSFE 1x1** patented design is simple, easy to use, and reliable. The system can be run 24/7 with consistent results and minimal downtime. Our extractors are developed with over 20 years of experience in building supercritical fluid CO₂ extractors to serve the pharmaceutical industry, government agencies, and university researchers. We understand the need for quality and safety, but just as important, performance.

System	Feedstock Processed Per Hour	Feedstock Processed Per Hour	CBD Oil Extracted Per Hour	THC Oil Extracted Per Hour
CannabisSFE 1x1 Liter	1.5lbs/.68kg	681 grams	47 grams	122 grams

Assumes high quality dry Trim and or Flowers

Expanded System Specifications

Pump: Efficient CO₂ pumping with pneumatic liquid CO₂ pump and pre-chiller

Liquid CO₂ Flow Rates: Up to 200mls/min (176 grams/min) liquid CO₂ at 10,000psi with pneumatic air driven pump

Maximum Operating Pressure: 10,000 psi (689 Bar, 69 MPa)

Pressure Display: Pressure gauges for the processing vessel/Air Supply, and Collection Vessel

Temperature Range: Ambient to 120°C

Temperature Precision: +/- 0.5°C

Temperature Displays: PID Logic Controllers/Panel mounted. Displays internal vessel temperature, Preheater Temperature, and Back Pressure Regulator Temperature

Restrictor Valve: Extractor pressure/outflow controlled by Back Pressure Regulator, heated up to 120°C; resistant to blockage (factory set to 80°C)

Integrated Chiller Assembly: The integrated chiller cools the liquid CO₂ from the delivery tank. The chilled CO₂ is then delivered directly to the supercritical fluid pump. Proper cooling of the CO₂ before it arrives at the pump ensures that the CO₂ is pumped in an efficient manner that eliminates cavitation to achieve the pressures and flow rates required for supercritical fluid extraction processes

Sample Extraction Vessel: Accommodates 1-1 Liter Processing vessel. Exoand at anytime

Collection Vessel: Externally mounted for ease in extract removal

Preheater and Extractor Temperature Control: High-efficiency electric CO₂ heat exchanger to raise temperature to up to 120 °C +/- 1.0 °C. The extractor actively heated with band heater to accelerate vessel warming at startup

Over-Pressure Safeguards: Rupture disc assemblies on pump, processing vessel, and collection assembly

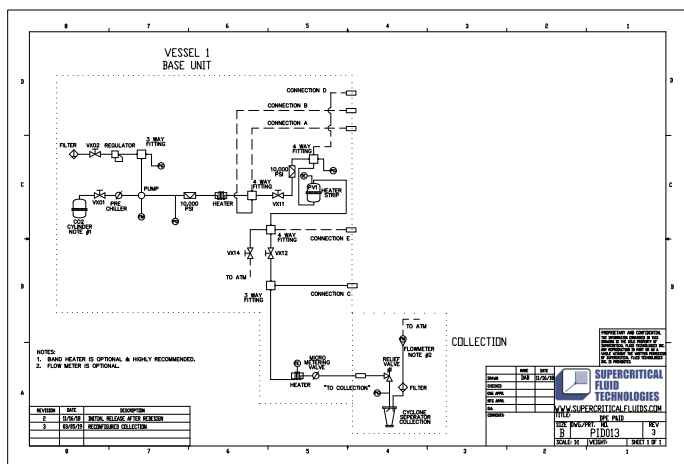
Instrument Control: Vessel and preheater temperature controlled by PID Logic Controllers. Displays Preheater, Processing Vessel and Back Pressure Regulator Temperature

Collection Assembly: Easy access of collection assembly for removal of extracts

CO₂ Ventilation: CO₂ vented to an outside vent or connected to the Optional Recycle System

Dimensions: Compact Design (27" L x 17" W x 26" H)

Power Requirements: CannabisSFE 1x1 extractor will require 20 Amps of 230V single phase



CannabisSFE 1x1 Liter Extraction System Flow Diagram



CannabisSFE - 1x1 Sample Loader