

## 5.2 SYSTEM OVERVIEW

The following images are to outline the layout and components of the Q90S-GMP extraction system.

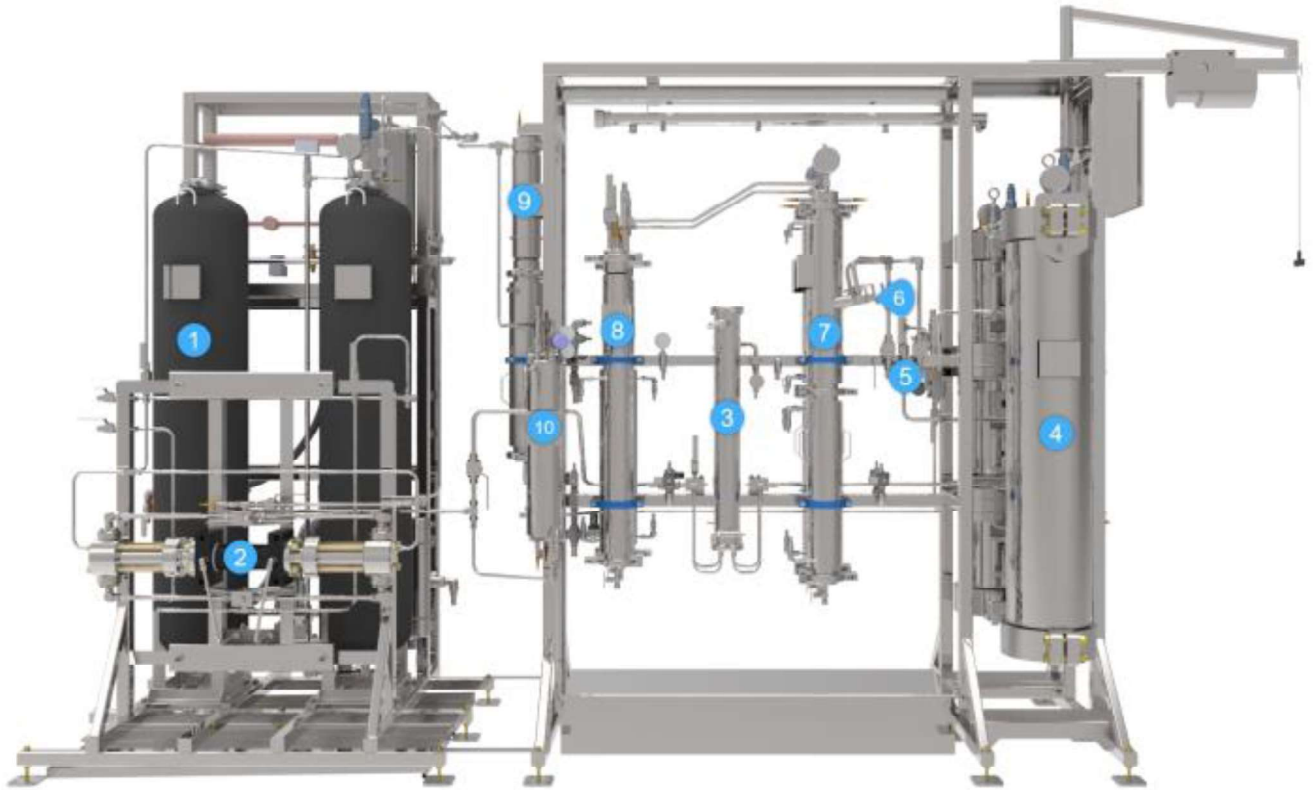


Figure 5-1 Front View of Q90S-GMP

Number	Component	Description
1	Accumulators	2 x 100 L, Liquid CO <sub>2</sub> storage
2	Dual Piston Hydraulic Pump	Pump up to 15 kg liquid CO <sub>2</sub> per minute (based on CO <sub>2</sub> density at 400 psi (27.5 bar) and -12 °C (10 °F))
3	Heat Exchangers	Manage CO <sub>2</sub> temperature between the pump and the extraction chamber. Provides precise control of CO <sub>2</sub> temperature as it enters the extraction chamber
4	Extraction Chamber	2 x 45 L, CO <sub>2</sub> extracts oils as it passes through plant material
5	Separator Diverter Assembly	Directs CO <sub>2</sub> path from the extraction chamber to the side A separation series, the side B separation series, or both
6	Flow Control Valve	Adjust the flow of CO <sub>2</sub> leaving the extraction chamber
7	Cyclone	First-level separation induced by pressure drop combined with cyclonic flow of CO <sub>2</sub> down the chamber
8	Separator	Second-level separation induced by turbulent injection

Number	Component	Description
9	Coalescing Filter	Scrubs leftover compounds and water vapour from the CO <sub>2</sub> gas stream
10	Backpressure Assembly	Back-pressures the system with CO <sub>2</sub> gas before introducing liquid CO <sub>2</sub>

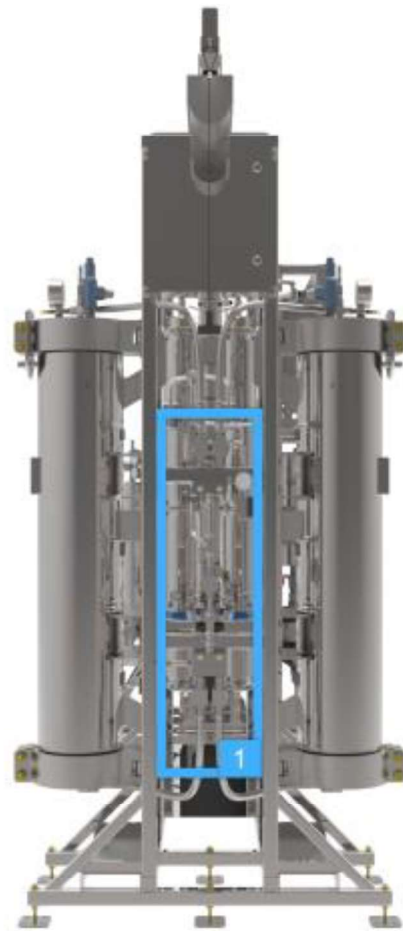


Figure 5-2 Side View of Q90S-GMP

Number	Component	Description
1	Extraction Diverter Assembly	Direct flow through extraction chamber A or extraction chamber B

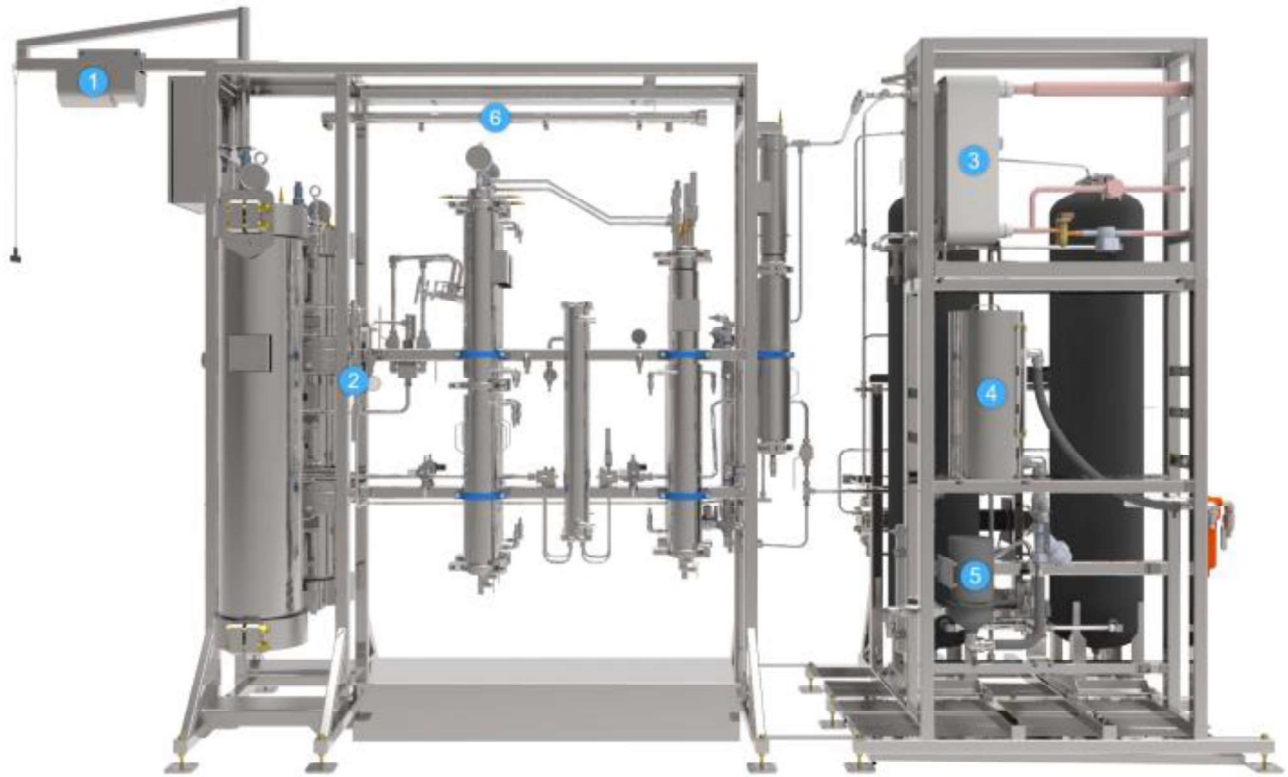


Figure 5-3 Rear View of Q90S-GMP

Number	Component	Description
1	Lifting Arm and Hoist	Used to remove cap from extraction chamber
2	Vacuum Manifold	Creates a vacuum to help draw down the extraction chamber cap and remove air from the chamber after filling
3	Condenser	Condenses gaseous CO <sub>2</sub> into liquid
4	Hot Water Reservoir	Stores hot water/glycol for the heat exchangers and the system's water/glycol jackets
5	Hot Water Pump	Pumps hot water/glycol to the system
6	Vent Manifold	Connects all vents and pressure relief valves on the extraction machine to the outdoors