



QSEP[®] Chromatography Column Packing System

QSEP Column Packing System is the world's first automated packing system for packing its innovative Superflo, Radial Flow Columns. The packing system enables:

- The easy and reproducible packing of production scale Radial Flow columns to be done automatically
- Reduced reliance on “technique” and specific operator skill and ensures a standardized operation across a range of operators
- Reproducibility in column performance by using the same criteria for packing while noting any deviations
- Calculation of column bed integrity performance parameters post packing with pass/ fail criteria
- Periodic re-assessment of column performance after storage and between runs
- Packing of different size columns and different resins
- Data access operating parameters such as pressure trend or conductivity profile for cGMP record keeping purposes



- Scale-Up from 3 L/min to 30 Lpm. Capable of Packing Up to 100L Columns
- Full Complement of Fluid control including Slurry Packing Pump and Valves
- Sensors for pressure, air, conductivity and optional UV
- NEMA 4X Enclosure for Electronic and Pneumatic Control; Optional Purged Enclosure for Hazex package
- Manual and Automated Column Packing with Easy to use PC based GUI software
- Protocols can be programmed for different size columns and different resins
- Post packing Column Integrity Check for Peak Asymmetry and HETP
- Onsite Commissioning and Service.



Software: The Right Combination of Simplicity and Power

The PC driven QuantaSep software enables simple and intuitive operation via a main screen that displays a flow diagram of the system with all the main components and their real time status. By simply clicking the mouse, you can open or close the buffer or slurry valve valve, stop or start a pump, set the flow rates and packing pressure limit. Automation is easy. Pre-Programmed steps take you through the process of Priming the column, Loading slurry, Pressure based packing and post-packing Bed Stabilization /Cycling. A trend chart shows real time Pressure build up during packing. Once the column is packed the system can be programmed to inject a plug of Conductivity/ UV solution which is rinsed with water. The resulting Asymmetry and HETP data is calculated and checked against an acceptance value for packed bed integrity Pass/ Fail designation.

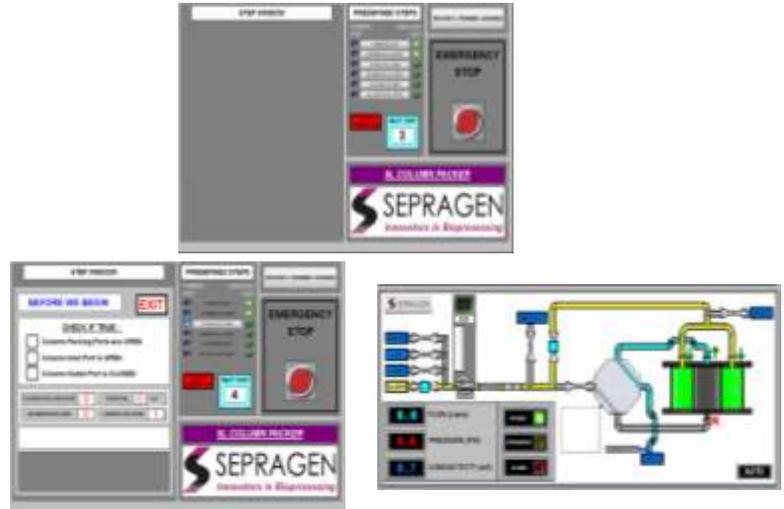
Fluid Handling Module The fluid handling module contains a diaphragm pump, 4 pneumatic inlet valves, Column flow direction change valves to ensure flow in the forward, reverse, prime and pack positions to the column. The tubing and connections are all sanitary stainless steel or plastic. Air sensor and air purge valve automatically remove air to ensure air- free packing of the column. Pressure sensor is mounted pre-column to measure packing progress and the conductivity/ uv sensor is mounted post column to read the sensor value and calculate Asymmetry and HETP. The components are mounted on a mobile and open easily accessible skid.

Controls Module The controls module contains all power supplies, transformers, pneumatics, brain-boards, I/O, sensor electronics and controls and circuit boards, alarm controls. An E-Stop button, cables, computer with software and interface cables, are included as well.



To learn more call: (510) 475-0650

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QuantaSep Column Packing System Specs

General

4 selectable Buffer Ports – 1” Manifold of four pneumatically actuated diaphragm inlet valves

Diaphragm Pump –Buffer and Slurry delivery with flow rates from 3 LPM to 30 LPM (+/-5% FS)

Inline Pressure sensor – The discharge of both pumps is manifolded together to a static mixer for effective gradient formation (0-100 +/-1 PSI)

Auto-pulse dampener- Smooth out pump’s pulsation to ensure accurate packing

1” Column Diaphragm Valves - Pneumatically actuated inlet, outlet, reverse flow, priming and slurry packing

Auto Air Eject – An “active air trap” consisting of an air sensor and three-way air ejection valve continuously detects and removes unwanted air before the column disruption of column packing.

Conductivity (0-200 mS +/-5% FS) or optionally **UV** (280 nm) detector (0-2Au +/- 5% FS) to monitor column bed packing integrity

NEMA 4X Enclosure for Electrical and Pneumatics

PC and Software and communications cables

Flow Path Materials: 316L S.S, PVDF/ Polypro and Quartz

Chemical Compatibility: 1M Sodium Hydroxide, 20% Ethanol

Operating Conditions: Temp 4 °C - 40°C, Pressure 0-3 Bar

Utilities Requirement: Power 110/220V, 12 Amps; Air 0-90 psi

Physical Dimensions: 30” wide x 34” deep x 36” tall