



# QuantaSep® Trusty Premier 60000 Chromatography System



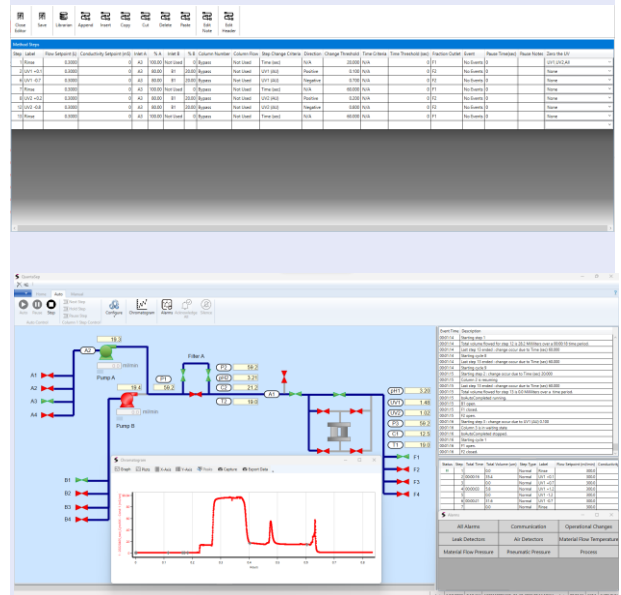
## Description

The QuantaSep® Trusty Premier 60000 is a Chromatography skid which provides for a total flow capability of 60LPM and consists of a PC and software, dual diaphragm pumps, and in-line mixer for providing capabilities for manual & auto all standard chromatography functions plus **In-line Buffer Dilution (IBD)** and Gradient generation. It has eight buffer selection valves, two and four on each pump and four discharge ports, for various fractions. It has an inline mixer, pre and post-column pH and conductivity sensors, dual flowmeters, 3 pressure sensors, air sensor, post-column and dual wavelength UV sensor and column direction change valves. The anticipated footprint is 4ft x 5ft x 5ft. Flowpath may be available in Polypropylene, 316L S.S. or reinforced (USP Grade VI and ADI Free) silicone and is compatible with 1N NaOH. Software is based on Windows 11 and is 21CFR PT. 11 compliant. Additionally, all our systems come with leak sensors an auto air eject to ensure run and column protection in the event of either piping leaks or air intrusion.

## Highlights

- ✓ Performs all cGMP Chromatography functions with conventional and radial columns
- ✓ Seamlessly performs in-line dilution of concentrated buffers while performing chromatography
- ✓ Reduce buffer prep time, tankage and footprint
- ✓ Chromatography functions and buffer dilution to target conductivity
- ✓ Easy to use 21 CFR Part 11 compliant software with point and click manual control, automated recipes, chromatograms, alarm and run logs, calibration wizard, reports, controlled access
- ✓ Full validation package, FAT, SAT, DQ, IQ/OQ

## 21 CFR Part 11 Compliant Software



The PC driven QuantaSep® Trusty Premier 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 and fraction valves, stop or start a pump, set the flow rates, run gradient or dilution to a target conductivity set point. Automation is easy. Pre-Programmed steps take you through the process of priming the column, loading harvest, washing, and elution. A chromatogram shows real time sensor values in elapsed time or volume. Overlay multiple runs, zoom in/out and calculate peak parameters, calibration wizard, event and alarm logs, method librarian, and post run reports, communication via OPC and multi-level hierarchy security access make up the additional software capability.

To learn more call:  
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SPECIFICATION ITEM	60 LPM CHROMATOGRAPHY SKID WITH BUFFER DILUTION
Pump	2 Diaphragm pumps Precision Motor Control (VFD)
Flow Rate Range	3 LPM – 60LPM ± 2%
Pressure Rating	4 Bar
Temperature Range	4 – 40° C
Buffer Inlets	Pneumatically actuated diaphragm valves 2 x 1 (Pump A) 6 x 1 (Pump B)
Column Manifold	Column Direction manifold for Downflow, Upflow and Column Bypass
Fraction Outlets	4 Pneumatically actuated valves
Flowmeters	Two, Ultrasonic, one for each pump 3.0 – 60 LPM ± 2%
UV Sensor (Post Column)	Wavelength: 280 nm, 254 nm Path Length: 0.5 cm standard Range: 0 – 4.0 AUFS Accuracy: ±5%; of Reading / ± 0.04Au
pH Sensor	Pre and post Column pH sensors Range: 2 – 14 ±0.15 pH
Conductivity Sensor	Pre and post Column conductivity sensors Range: 1 – 200 mS +/- 4%
Temperature Sensor	Pre and post Column temperature sensors Range: 0 – 100° C +/- 2° C
Gradient	10 – 90%
Mixer	In-Line Mixer
Drainability	Yes
Post Mixer Flow Meter	2 Ultrasonic Flowmeters 1-60 Lpm ±1% Accuracy
Pressure Sensors (Pre-Column & Post Column)	One Pre-Column, One Post Column. 2 sensors, 0-100 psi (7 bar) ±1 psi

SPECIFICATION ITEM	60 LPM CHROMATOGRAPHY SKID WITH BUFFER DILUTION
Air Sensor	2 Bubble detectors with microbubbles sensing (0.4 I.D)
Leak Sensor	Leak of > 100 ml
Auto Air Ejection System	Air detection and automated removal of air bubbles
Auto Leak Detection	Detection and Alarm caused due to internal tubing leaks
Feedback	Pump Flow and Conductivity
Safety Interlocks	E Stop for Emergency Pause Unopened flow-path High pressure due to valve failure Tubing leaks Air Breach Auto Pause in Power Failure mode
System Volume	Approx. 8L (without bubble trap)
Power	380 V / 30 A @ 60/50 Hz
Pneumatics	90 psi instrument quality air for valve actuation
Internal Tube Size	1"
Instrumentation Enclosure	NEMA 4X Panel, E Stop with auto pump pause
Wetted Material	316 L SS, Polypropylene, Platinum Cured Reinforced Silicone (FDA approved or USP Grade VI / ADI Free)
Chemical Compatibility	1N NaOH, below 20% Ethanol, Common buffer concentrates, 3 M NaCl, Urea, Histidine, Citrate, Citric and Phosphoric acid
External Connections	1.5" TC and for Fractions and Column
Computer & Software	Windows 11 OS, Industrial computer (splash proof) & 24" Monitor
Frame & Support	304 S.S., 1.2Ra Surface Finish
Power & Communication Failure Recovery	Run completes by PLC uninterrupted, Run Pauses and restarts
Bubble Trap (optional)	10L Bubble trap with 2 level switches and auto vent valve