

Contichrom® CUBE 100 Technical Specifications

Main system components	• 2x dual-head pump combined for single binary linear gradient • 2x dual-head pump with eluent selection valve for up to 8 eluents • 2x external UV sensor, 4 variable wavelengths • 2x conductivity sensor • 2x temperature sensor • 1x pH sensor • 4x multi-position valve (actuated) • 2x drain valve (actuated) • 4x manual drain valve • 4x pressure transducer
Communication and control	• 1x operating computer • 1x ChromIQ® operating software
Maximum system pressure	• 100 bar (10 MPa, 1450 psi)
System dimensions	• Contichrom CUBE, (stacked CUBE and CUBE+ modules): - Width: 450 mm - Height: 584 mm - Depth: 456 mm (600 mm incl. dynamic mixing chamber) - Weight: 30 kg (67 lbs, CUBE unit), 17 kg (38 lbs, CUBE+ unit) • External UV detectors (2 stacked units): - Width: 280 mm - Height: 270 mm - Depth: 463 mm - Weight: 15 kg (33 lbs, 7.5 kg/16.5 lbs each) • Complete system incl. fraction collector excl. operating computer: - Width: 120 cm
Power specifications	• Supply voltage: 100-240 V (AC) • Maximum power: CUBE and CUBE+ unit combined: 170 W External UV detectors: 120 W each • Fuses: CUBE and CUBE+ unit: 2x T2AL250V each External UV detectors: 1x T2.5AH250V each
Pump description	• Flow rate: 0.5 – 100 mL/min • Accuracy: Within 2 % above 2.0 mL/min • Precision: 0.5 % relative standard deviation • Pulsation: Within 4 % (50 mL/min, 17 bar/250 psi) • Pressure sensor: At each pump outlet • Active seal wash • Wetted materials: PEEK, Synthetic Ruby, Sapphire, Zirconia, UHMWPE, FFKM, PFA, ETFE
Dynamic mixer description	• Volume: 1.1 mL (standard), 5.9 mL (with optional chamber, incl.) • Wetted materials: PEEK, Titanium
UV detector description	• Variable wavelength UV detector • Channels: 4 per column position • Wavelength range: 200 – 600 nm • Linear range: 0 – 1000 mAU • Light source: Deuterium lamp • Optical path length: 0.5 mm • Wetted materials: PEEK, Quartz, PTFE, SST
Multiport valve description	• Electrical actuation • Wetted materials: PPS, PTFE composite, PAEK, PAEK/PTFE

Conductivity/temperature sensor description	- Conductivity: 0 – 250 mS/cm - Temperature sensor: 4 – 70 °C - Wetted materials: Titanium, PEEK
pH sensor description	- External pH probe with flow cell - pH measurement: 1-14 - Pressure rating: 7 bar (0.7 MPa, 100 psi) - Wetted materials: PEEK, glass
Flow path materials	- Tubing on high pressure side: PEEK, 1/16" OD, 0.04" ID - Tubing on low pressure side: FEP, 1/8" OD, 1/16" ID - Fittings and manifolds: PEEK - Dynamic mixing chamber: Titanium
Process capabilities	- CaptureSMB with AutomAb® dynamic process control - MCSGP with AutoPeak® dynamic process control - N-Rich with AutoPeak® dynamic process control - Single column batch chromatography with linear gradient capability - Dual column batch chromatography with linear gradient capability - Dual column alternating batch chromatography - Integrated batch chromatography with inline dilution in-between the two columns
Fraction collector (optional)	- Fraction collector Foxy R1 with integrated diverter valve, holds up to 1 rack - Fraction collector Foxy R2 with integrated diverter valve, holds up to 2 racks - Fraction capacity: All standard formats including 96-well plates, 15 mL and 50 mL tubes
Operation	- Cold room (4 °C) compatible 8 buffer/solvent inlets on isocratic pumps 1 buffer/solvent inlet per pump on binary gradient pump - Recommended column inner diameter: 0.8 – 5.0 cm - Column operation at up to 80 °C with optional eluent heater
Environmental Operating Conditions	- Temperature: +4 °C to +30 °C - Relative humidity: 20 – 80 %, non-condensing - Environment: Indoor use only (Pollution degree 2) - Altitude: Up to 2000 m (6500 ft)
Operating software description	- ChromIQ® operating software (in English) - Integrated, intuitive software for operation and evaluation of batch and continuous chromatography - ChromaCraft™ Batch software for single-column, integrated and alternating batch processes - Wizards for CaptureSMB, MCSGP and N-Rich - AutomAb® dynamic process control for CaptureSMB - AutoPeak® dynamic process control for MCSGP and N-Rich - Run log stores all information for each chromatography run - Easy-to-use graphical user interface for method programming with full access to detailed method program for advanced users - Pause/continue functionality, also for continuous chromatography operations - Data evaluation module - OPC UA compatible (optional, separate OPC UA license required) - User management gives high operational and data security