


CORE 001: Where everything starts

Physical characteristics

SIZE / WEIGHT	Height: 40 cm (15.7 in) Depth: 60 cm (23.6 in) Width: 38 cm (14.9 in)	Weight: 20 kg (41.8 lbs)
POWER SUPPLY	100 - 240 Vac, 50 / 60 Hz, single phase with ground Fuses: 2.5A @ 230 Vac, 3.15Amp @ 115 Vac Power consumption: less than 150 VA (external PC excluded) Ground resistance: less than 0.1 Ohm Leakage current: less than 2.5 mA	
SAMPLING ARM	1 sampling needle, 75 mm needle stroke Capacitive liquid level detector	
DILUTER SYRINGE	Long life plunger Syringe capacity, 368 µL Syringe resolution, 0.07 µL	
HYDRAULIC SYSTEM	2 self-priming peristaltic pumps with replaceable neoprene cassette Optional 3 rd peristaltic pump + aspiration needle to empty reaction cuvettes Pinch valve Containers: Water, 5 L; Waste, 5 L Water average consumption: 5 mL / test	
REAGENTS TRAY	Removable reagent rack 20 bottles, 40 mL or 18 mL Optional multiple reagent trays with worklist automatically managed by the software	
SAMPLES TRAY	Removable tray, 10 numbered positions, tubes of 12 - 13 mm, 3 - 5 mL / cups of 1 mL (cups requires a metal adapter for level detection) Optional configuration: 10 reagent positions and 20 sample positions	
CUVETTE ROTOR	4 reaction segments of 24 optical cuvettes (single use) total 96	
REACTION CELLS	Optical path 9.5 mm, 300- 500 µL reaction volume 100W heating resistance, temperature sensor	
OPTICAL GROUP	1 halogen lamp (6 V, 10 W) with extended UV emission 2 focusing lenses, optical glass 10-position filter disk: 8 positions provided with interference filters of 340,405, 505, 546, 578, 600, 650, 700 nm wavelengths, 1 free position and 1 solid position for dark reading, ±2 nm on peak wavelength, band pass of ±10 nm	
PHOTOAMPLIFIER	Photoelectric detector Signal amplifier Response range, 340 nm to 900 nm Photometric range, 0 to 3 Abs Linearity, 0.5% from 0.1 to 1.5 Abs Precision: 1% CV or 1 mAbs min. (From 0.1 to 1.5 Abs) Stability: daily reader offset, less than 1% drift per day	
CONTROL	Real-time multitasking microprocessor based control Easy access to the electronics	
EXTERNAL COMPUTER	(Minimum requirements for Software  v.1.0) CPU: Intel i3 or superior RAM: 4GB I/O: USB 2.0 port Display: minimum resolution 1280x768 OS: Microsoft Windows® 7, 8, 8.1, 10 Framework: .NET framework 4.6	

Operation features

PIPETTING	Volume: sample, 2 - 300 µl; reagent, 2-350 µL Precision: 1.5 CV% at 2 µL; 1 CV% at 4 µL Mixing by sample needle upon dispensation
REACTION	Reaction volume, 300 - 700 µL
SAMPLE DILUTION	In-needle dilution if allowed by method's sample volumes Automatic pre-dilution in a reaction cuvette, up to 1:200
TEMPERATURE CONTROL	Reagent refrigeration, circa 12 °C below room temperature Reaction cells, heating unit can be set from room temperature up to 42 °C ±0.2 °C Warm Up time: 30 min from 16 °C room temperature to 38 °C
TYPES OF TESTS	Endpoint, Bichromatic endpoint, Differential endpoint, Differential endpoint sample blank, Fixed Time, Kinetic, Kinetic Bichromatic
TEST RUNS	Random / Urgent (sample attribute)
MEASUREMENT RATES	145 tests/hour Maximum incubation + reading time: 675 or 1350 seconds Typical precision, endpoint 2.0 CV% / kinetic 2.0 CV%
CALIBRATION	Reagent blank subtraction, 1 to 8 standards per test method, unlimited repetitions on every calibration point Linear: factor, linear, linear regression Non linear (5 interpolation types): cubic-spline, poly-linear, multi-parameter, logit-log four parameters and five parameters Free standard / control positions (5 mL tubes or 1 mL cups) Results can be recalculated when changing factor or calibration curve
MAINTENANCE	Procedures programmed by component life counters Simple yearly maintenance procedure
PRINTING REPORTS	Single test, complete sample, work sheet, method and QCs Automatic sample reports upon test completion if requested
NEEDLE WASHING	Sampling needle washed internally and externally with system solution after every operation

Connections

POWER	Standard VDE removable power cord
EXTERNAL PC	USB port
HOST/ LIS	Ethernet LAN (samples, work list, results) Standard ASTM ASCII protocol

Database

WORKLIST/ SAMPLES	For each worklist: unlimited number of samples, unlimited number of tests, up to 99 sheets of tests per worklist. Tests archive with powerful search tools Patient management
TEST METHODS	Unlimited number of methods in PC memory 80 active methods
QUALITY CONTROL	Three-level controls per test, one month monitoring Reagent/calibrator/control lot monitoring, Exclusion of failing results from graphic and statistics
ERROR LOG	Automatically stored at run-time, can be viewed or printed Powerful on-line monitoring

