



Instrument Dimensions

Analyzer	Height	Depth	Width	Weight
	31.4 in	29.4 in	47.2 in	375 lbs
	80 cm	74.5 cm	120 cm	170 kg
	[43 in, 109 cm with top cover opened]			
	[24.2 in, 61.5 cm without control unit]			
	31.4 in	37.4 in	67 in	529 lbs
	80 cm	95 cm	170 cm	240 kg
	[43 in, 109 cm with top cover opened]			
	[24.2 in, 61.5 cm without control unit]			

Electrical Requirements

Installation requirements	Pollution degree: 2 (IEC 61010-1) Overvoltage category: II (IEC 664) The cobas e 411 analyzer must be connected to a three-wire power supply cord with a safety ground.
AC Cord	
For countries which require UL UL and CSA compliance	A UL-listed and CSA-certified AC cord set must be used. (A cord with a plug and a connector)
Recommended rate	AC125V-15A / SJT type 3×14AWG
Supply voltage : 115 V	AC250V-10A / SJT type 3×16AWG
Supply voltage : 208 or 240 V	
Temperature rate	Min 60°C
Whole length	2500±50mm
Safety Standard	UL817 / CSA C22.2 No.21
For European countries	An HAR-certified AC cord must be used. (A cord with a plug and a connector)
Recommended rate	AC250V-10A / 3×1.0 mm ²
Supply voltage : 220 to 240 V	
Temperature rate	Min 60°C
Whole length	2500±50mm
Safety Standard	CENELEC HD21
Connector Type connected to cobas e 411 analyzer inlet	IEC320 / EN60320 type
Supply voltage/frequency	100-240 VAC 50/60 Hz Single-phase The ratings of the AC cord set to be used must be consistent with the ratings of the customer equipment.
Power consumption	Disk system: 1000VA Rack system: 1250VA (Rack sampler unit: 250VA)
Heat generation	Analyzer unit: approx. 2,879 kJ/hr resp. 688 kcal/hr resp. 2,730 Btu/hr Rack sampler unit: approx. 899 kJ/hr resp. 215 kcal/hr resp. 853 Btu/hr
Main supply voltage fluctuation	±10% of nominal voltage (90 VAC to 264 VAC)

Environmental Conditions

Temperature	During measurement 18 °C to 32 °C (64.4 °F to 89.6 °F)	During transportation and storage -20 °C to 75 °C (-4 °F to 167 °F)
Temperature variation	Max. ± 2 °C/hour (Max. ± 3.6 °F/hour)	
Humidity	20% to 80%	5% to 95%
Indoor use only		
Altitude up to 2000m		

Free from excessive dust and well ventilated

Not exposed to direct sunlight

Well apart from a machine generating electromagnetic noise or electromagnetic wave interference (such as centrifuge, electric discharge machine, mobile telephone, transceiver, cordless telephone, etc.)

Noise Level (DIN 43635)

Stand-by level	60 dBA
Operation level (average)	63 dBA
Operation level (maximum)	70 dBA

Water Supply

Water container	3 Liters
Water requirements	< 10 μ S/cm or > 0.1 megohm, bacteria-free
Water consumption	approx. 3 L for 250 tests approx. 12 mL/cycle

Liquid Waste

Liquid waste container	4 Liters
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Throughput Rate

Assay measurements	max. 85 tests/hour
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Sampling System

Sample/Reagent pipetter principle	conductive disposable tip handling	
Sample volume per test	10 µL to 50 µL	
Sample detection	Liquid level detection and clot detection	
Sample loading capacity	 Figure 1.2-1 30 positions for samples, controls and calibrators  Figure 1.2-2 tray - 15 racks with 5 positions each for samples, controls and calibrators = 75 tray with input buffer - 20 racks with 5 positions each = 100	
STAT capacity	 Figure 1.2-3 any unoccupied position on the sample disk  Figure 1.2-4 STAT position at the front of the analyzer	
Bar code symbologies	PDF417 NW7 (Codabar) Code 39 Code 128 Interleaved 2 of 5	
AssayTips	360 tips (3 trays; 120 tips/tray)	
AssayCups	180 cups (3 trays; 60 cups/tray)	
Sample cups	2 mL (Standard) Hitachi cup; NO micro cups	
Primary sample tubes	13 x 75 mm	16 x 75 mm
(external diameter x height):	13 x 100 mm	16 x 100 mm

Reagent System

Reagent disk temperature	20 °C ± 3 °C (68 °F ± 5.4 °F)
Reagent capacity	in any combinations in 18 reagent positions with the exception of the following restrictions: At the same time not more than 18 tests, 9 pretreatments or 8 diluents.
R1/R2 consumption	50 to 80 µL per reagent dependent upon the assay
Microparticle consumption	30 to 50 µL dependent upon the assay
Reagent detection	liquid level detection
Positive reagent identification	2-dimensional bar code (PDF417)
Automatic dilution	available up to 1:400
Evaporation protection	reagents are automatically opened and closed
Inventory control	automatic based on counting (reagent disk) or liquid level detection (ProCell/CleanCell)

Incubation System

Incubator capacity	32 AssayCups
Volume of AssayCups	200 µL
Incubation temperature	37.0 °C ± 0.3 °C (98.6 °F ± 0.5 °F)

Measuring System

Measuring method	integral measuring of an electrochemiluminescence signal
Calibration mode	2-point calibration
Test protocols	28 test methods
ProCell consumption	approx. 2 mL per cycle
CleanCell consumption	approx. 2 mL per cycle
Cycle time	42 sec.

Control Unit

Compact flash card	
Host interface	CCITT V. 24/RS-232-C (bidirectional) The host computer should comply with the requirements of IEC (60950).
External printer	Connected via the USB port
Optional module	Laboratory System Manager (LSM)
Touchscreen monitor	38 cm (15 in) color TFT-LCD, XGA