

cobas®

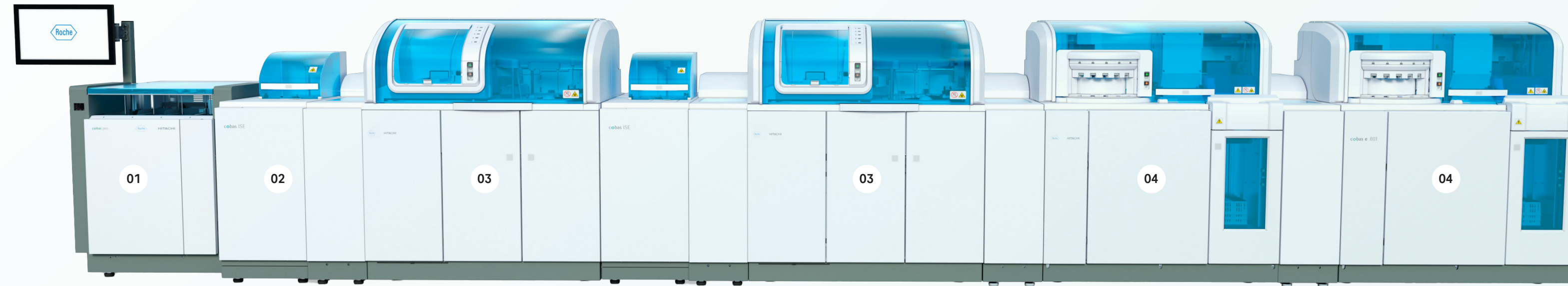


cobas® pro  
integrated solutions

Simplicity meets Excellence

# Introducing cobas® pro integrated solutions<sup>1</sup>

Simplicity meets Excellence



Analytical units can be flexibly combined to fulfil your individual needs.

## **01 Sample Supply unit**

Up to **1,000** samples per hour processing capacity  
Up to **300** samples direct loading  
Up to **300** samples direct unloading  
or bi-directional connectivity to lab automation

## **02 ISE analytical unit**

Up to **900** tests per hour

## **03 cobas c 503 analytical unit**

Up to **1,000** tests per hour  
**60** reagent positions

## **04 cobas e 801 analytical unit**

Up to **300** tests per hour  
**48** reagent positions





Your time is precious  
We help you use it wisely

In the lab, every minute counts – for you and your team, for the physician and the healthcare institution, for the patient and their family.

Get answers fast with  
short and predictable  
turnaround times

Boost your efficiency with fast analytical units, intelligent sample routing, and short assay incubation times. Empower your physicians to take action faster, with best-in-class 9 minutes STAT and 18 minutes routine immunochemistry assays.<sup>2</sup>







Simplify your routine with minimal operator intervention



#### Free up staff time with reduced hands-on maintenance efforts

With **cobas pro** integrated solutions, every effort has been made to reduce hands-on maintenance tasks to a minimum. This has resulted in up to 47% less hands-on maintenance time yearly, compared to Roche previous generation systems.\*<sup>3</sup> The new and smart concept of self-operating maintenance executes these tasks automatically in the background and reduces the manual burden of daily maintenance to 8 min.<sup>1</sup>

#### Save time and costs with cobas® AutoCal

The clinical chemistry module of **cobas pro** comes with a significantly simplified calibration concept – automated calibration. With **cobas** AutoCal, new reagent lots for many of the clinical chemistry tests are calibrated automatically, without the need for manual calibration.

Ensure non-stop operation with continuous loading of reagents and consumables



Your space is limited  
We help you make the best of it

cobas® pro integrated solutions is designed to deliver true productivity for your lab offering flexible configurations to meet your individual needs and full access to our broad Serum Work Area assay menu.

## Use your space intelligently with flexible and scalable configurations to meet your individual needs

Labs of all sizes are working to grow by expanding their test offering or bringing more testing in-house. However, this means they need to be ready to handle higher volumes, often within their same space. To support you in this, **cobas pro** integrated solutions offers 11 flexible configurations to meet you individual needs as well as the ability to scale in incremental ways.

Additionally, you will have access to a broad and growing test menu, which can help your lab to remain at the forefront of clinical utility and patient care.



**cobas pro** configuration < ISE | c 503 | e 801 >



**cobas pro** configuration < ISE | c 503 | ISE | c 503 | e 801 >



**cobas pro** configuration < ISE | c 503 | ISE | c 503 | e 801 | e 801 >



## Increase productivity with our latest generation reagent carriers

### More tests per pack

Up to 3,300 tests per **cobas**<sup>®</sup> c pack green and up to 300 tests for **cobas**<sup>®</sup> e pack green allow for long walk-away times and less loading, ordering and handling events for reagents.<sup>4</sup>

### Ready to use reagents

Additionally, these reagents do not require any preparation, mixing, waiting or pre-opening. The operator can simply take them out of the fridge and load them directly onto the analyzer.

### Industry's leading onboard stability

Using space intelligently is about achieving the highest output within the existing space. Our reagent cassette concept supports this by offering industry leading onboard stability - up to 4 months for the immunochemistry assays and up to 6 months for the clinical chemistry assays.<sup>2,4</sup> This facilitates the consolidation of low and high volume parameters on the system and minimizes the reagent waste.

Maximize reagent utilization with industry's longest onboard stability<sup>2,4</sup>







Your team is pushed to their limits  
We help them focus on the tasks that matter

Whilst the pressure to deliver continuously increases, keeping your team engaged and focused on value-adding tasks can be difficult but is of paramount importance for your lab's success. The **cobas pro** integrated solutions is designed to eliminate hurdles that may cause unnecessary stress.



Bring more confidence  
to your team with reliable  
and safe solutions

Unplanned downtime and lack of confidence in results are some of the most stressful things that can happen in the lab. They shift attention to time-consuming, hands-on workarounds or sample reruns which can affect staff morale and motivation.

Additionally, they pose risks to the quality of results and the lab's reputation. **cobas pro** integrated solutions is designed to deliver excellent reliability through sound system architecture and confidence in the results through various safety features.





## Safety of results <sup>1</sup>

### Immunochemistry - Disposable AssayTips/AssayCups

**cobas pro** integrated solutions immunochemistry analytical unit utilizes single-use disposable AssayTips and AssayCups to completely eliminate the risk of sample carry over.

### Clinical chemistry - Unprecedented cleanliness of the sample probe with **cobas**® SonicWash

SonicWash cleans the sample probe with ultrasound technology so thoroughly that only a few parts per billion are detectable.<sup>5</sup> In addition, SonicWash eliminates the daily maintenance of the sample probe and reduces clot events.

### Clinical chemistry - Ultrasonic Mixing

The **cobas pro** clinical chemistry analytical unit features ultrasonic mixing for non-contact mixing of sample and reagent to eliminate the risk of carryover during this event.

## Reliability

**cobas pro** is designed to deliver the reliability that Roche is known for.

With more than 10.000\* analytical units globally, **cobas pro** demonstrates a distinctive uptime of more than 99 %.\*\*<sup>6</sup>

Having a reliable analyzer means less interruption of services and less time spent on troubleshooting, thus higher productivity with more predictable turnaround times.

\* Including cobas pro ISE, cobas c 503 and cobas e 801 (counting all cobas e 801 analytical units, including those installed with cobas® 8000 modular analyzer series),

\*\* Uptime: Percentage of the time when the system is up and running vs. the time the system is not running due to unplanned incidents. Calculation: (365 days / Mean time between repair visit) × (Mean time for repair visit + Travel Time)

## Sample



Liquid level detection



Foam detection



Clot detection

## Reagent



Liquid Level Detection



Foam detection

## Clinical Chemistry



SonicWash



Ultrasonic Mixing of sample and reagent

## Immunochemistry



Single-use AssayTip



Single-use AssayCup



## Enable your team to work more efficiently through standardized solutions

Lab standardization enables you to do more work on fewer instruments, through consolidation of workflow, systems and reagents. Standardization also provides efficient and compatible solutions for network cooperation.



## Essential benefits of standardization

### Improved speed and accuracy of care

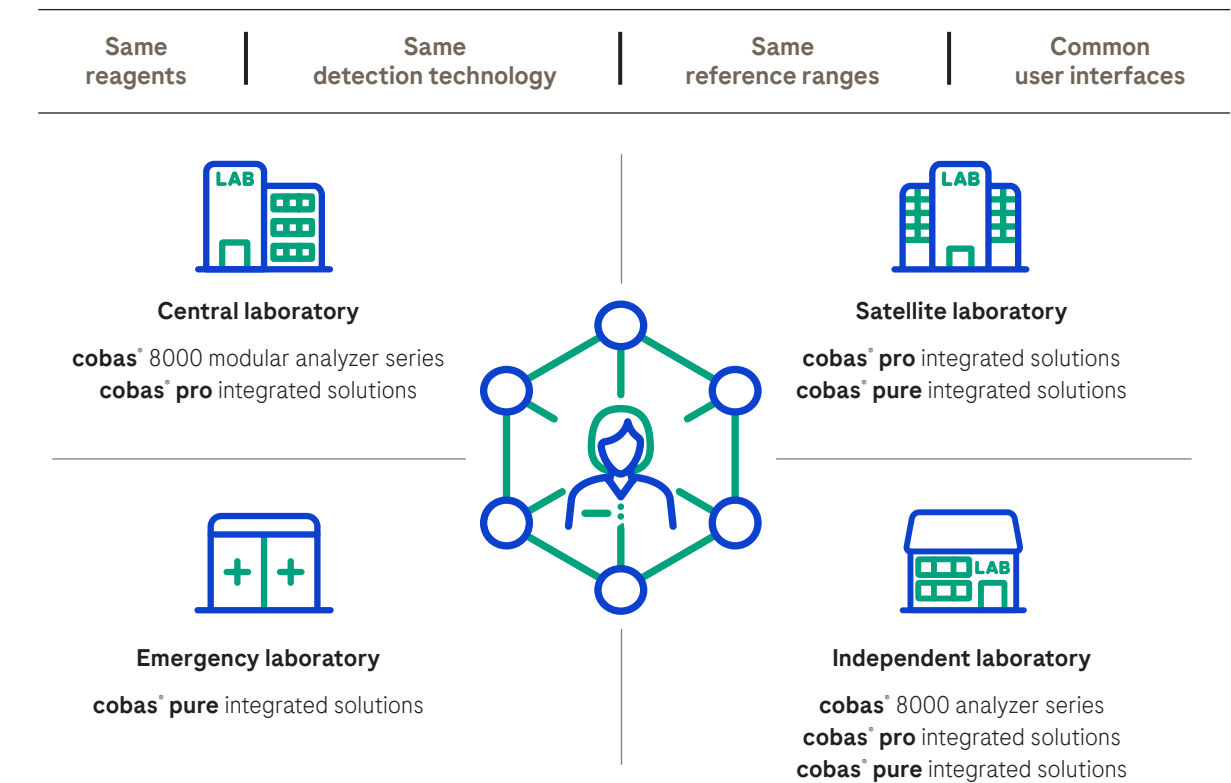
Same reagents and detection technology mean standardized reference ranges which improve the speed and accuracy of care.

### Simplified training and staff allocation

Common user interfaces between our **cobas** systems simplify training and allow for flexible staff allocation as healthcare centers are consolidating into larger integrated health networks.

### Optimized patient management

Consistent results over time and across different locations enable optimized patient management.







Partner with a company that has a proven track record of pioneering lab solutions and sustainable development




Your future is unpredictable  
We help you succeed through  
continuous access to  
innovations

Choosing the right solution and vendor to partner with is not a small undertaking – it is a choice that impacts your lab's ability to fulfill performance and quality standards but also your ability to remain competitive.

At Roche we believe in the power of innovation to advance and improve diagnostics – for a better future of the patients and your lab.





Support better outcomes by  
delivering greater medical value



## Focused innovation of our assay portfolio

### **Extending evidence base**

Extending the evidence base for existing assays through clinical studies to generate higher awareness and broader access to innovation.

### **New claims for existing assays**

Generating new claims for existing assays for a wider range of application.

### **Discovery of new assays**

Menu expansion in the areas of unmet medical needs to help clinicians improve outcomes for their patients.

### **Bring Personalized Healthcare to clinical practice**

Supporting better patient care, contributing to health economics and empowering labs to play a greater role in medical decision making.

## Commitment to exceptional assay quality

### **Advanced assay design**

- Outstanding precision across measuring range
- High sensitivity in areas where it matters
- Wider measuring ranges, fewer dilutions and repeats

### **Consistent, standardized results**

- Consistent patient results across all platforms
- Excellent lot-to-lot consistency
- Assays standardized against reference method or reference material

### **Designed for convenience**

- Short and predictable assay Turn Around Times
- Low sample volume
- No reagent preparation required



Introducing the new generation of solutions from Roche – cobas® integrated solutions



**cobas® pure** integrated solutions



**cobas® pro** integrated solutions

Delivering seamless design today and into the future



**Shared reagents packs**



**Consistent results**



**Consistent operation**



**Same technologies**



**Same assay menu**



# cobas<sup>®</sup> pro integrated solutions

## General technical specifications<sup>1</sup>

Dimensions and Weights	Width	Depth	Height	Weight
<b>Sample Supply Unit (SSU),</b> (incl. STAT port and touch screen monitor)	1320 mm	960 mm	1430 mm	250 kg
	52.0 inch	37.8 inch	56.3 inch	551 lb
<b>ISE analytical unit</b>	450 mm	1150 mm	1160 mm	170 kg
	17.7 inch	45.3 inch	45.7 inch	375 lb
<b>cobas c 503 analytical unit</b> (incl. Sample Buffer and Transport Line)	1500 mm	1185 mm	1355 mm	740 kg
	59.1 inch	46.7 inch	53.4 inch	1742 lb
<b>cobas e 801 analytical unit</b> (incl. Sample Buffer and Transport Line)	1500 mm	1185 mm	1350 mm	780 kg
	59.1 inch	46.7 inch	53.2 inch	1720 lb

Specifications of the electrical power supply	cobas pro integrated solutions	
<b>Distance to the instrument</b>	≤5 m (16 feet)	
<b>Electrical supply</b>	Single phase AC using an uninterruptable power supply (UPS) 200/208/220/230/240 V, 50/60 Hz	
<b>Max. power fluctuation</b>	≤ 10 %	
<b>Decentralized power supply</b>	Sample Supply Unit	Sample buffer
<b>Power consumption rating</b>	1 kVA	3 kVA
<b>Actual maximum power consumption (Typical)</b>	0.4 kVA	ISE + c 503: 2.7 kVA
	-	e 801: 2.5 kVA

Maximum concentrated liquid waste flow rates	Concentrated liquid waste flow rate	Normal liquid waste flow rate
<b>Max. liquid waste volumes</b>	ISE < 2.8 L/h	ISE -
	c 503 < 2 L/h	c 503 < 30 L/h
	e 801 < 7 L/h	e 801 < 22 L/h

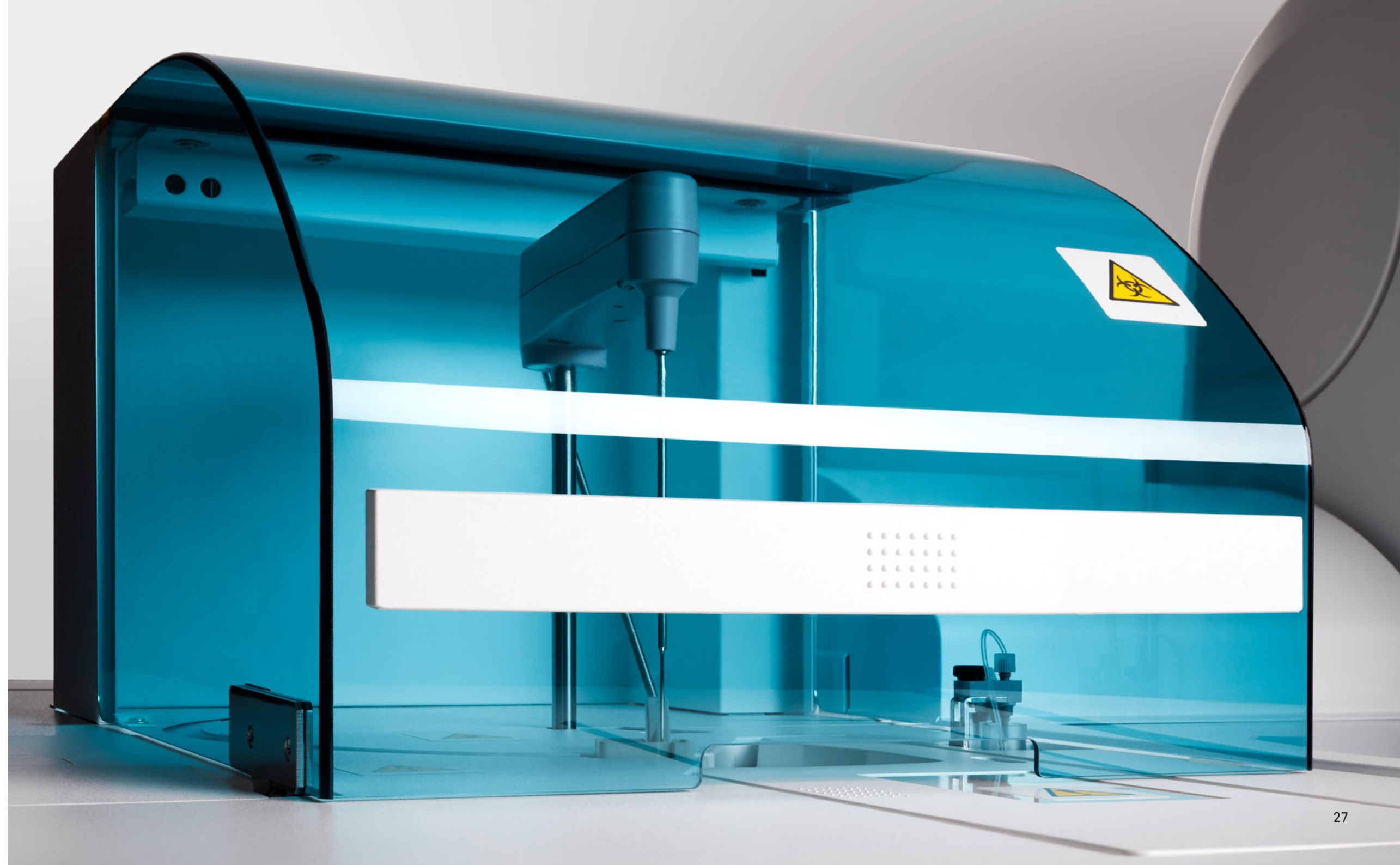
Deionized water supply and consumption	cobas pro integrated solutions
<b>Conductivity</b>	≤ 1.0 µS/cm
<b>Water pressure</b>	50 to 340 kPa 0.5 to 3.4 bar
<b>Water temperature</b>	> 12°C > 53.6 °F
<b>Deionized water consumption (average)</b>	ISE analytical unit < 2 L/H c 503 analytical unit approx. 32 L/H e 801 analytical unit < 30 L/H

List of environmental conditions during operation	cobas pro integrated solutions
<b>Max. altitude above sea level</b>	2000 m (2000-3000 m upon request)
<b>Floor conditions</b>	≤ 0.5 % inclination <i>Strong enough to hold the weight</i>
<b>Ambient temperature</b>	Altitude ≤ 2000 m above sea level: 18–32 °C (64.4–89.6 °F) Altitude 2000-3000 m above sea level: 18–30 °C (64.4–86 °F)
<b>Ambient temperature fluctuation</b>	≤ 2°C/hour (≤ 3.6 °F/h)
<b>Ambient humidity</b>	30–85%
<b>Noise emission to environment</b> <ISE   c 503   e 801>	< 65 dB (A) during operation



# ISE analytical unit

ISE	Specifications <sup>1</sup>
<b>Applications</b>	Na+: Sodium K+: Potassium Cl-: Chloride
<b>Sample types</b>	Serum/Plasma Urine
<b>Number of electrodes</b>	Ion-selective electrodes: 3 (Na+, K+ and Cl-) Reference electrode: 1
<b>Max. throughput</b>	900 tests/hour (300 samples/hour)
<b>Max. liquid waste volumes</b>	Concentrated liquid waste volume: < 2,8 L/h
<b>Sampling cycle time</b>	12 seconds
<b>Electrode handling</b>	2D barcode placed on the electrode package
<b>Sample liquid level detection</b>	Available
<b>Sample clot detection</b>	Available
<b>Sample foam detection</b>	Available
<b>Number of applications</b>	ISE: max. 60 (20 sample types available)
<b>Sample pipetting volumes</b>	15 µl (Default) 10 µL (decreased volume for urine only)
<b>Reagent volumes per sample</b>	DIL: 450 µl IS: Total 720 µl REF: 130 µl





## The all-new cobas® c 503 analytical unit<sup>1</sup>

Excellent performance, simple to use and beautifully designed. The all-new **cobas** c 503 analytical unit brings all that it takes to set new standards in reliability, maintenance and efficiency. 1,000 tests per hour. 60 reagent channels onboard.

<b>Reagent pack type</b>	<b>cobas</b> c pack green
<b>Reagent loading/unloading</b>	Automatic
<b>Reagent identification</b>	RFID
<b>Capacity of reagent manager</b>	5 reagent packs
<b>Capacity of reagent disk</b>	60 packs Inner ring: 24 (1-24 position) Outer ring: 36 (25-60 position)
<b>Reagent storage temperature</b>	5-15 °C
<b>Number of applications</b>	680
<b>Max. throughput</b>	Photometric: 1,000 tests/h HbA1c: 500 samples/h
<b>Number of reaction cells</b>	221
<b>No. of reaction cell segments</b>	13 (17 cells/segment)
<b>Reaction volume</b>	75-185 µl
<b>Incubation bath temperature</b>	37 ± 0.1 °C (98.6 ± 0.1 °F)
<b>Reaction time</b>	10 min
<b>Mixer</b>	Ultrasonic



## cobas® e 801 analytical unit<sup>1</sup>

Launched in 2016, the **cobas** e 801 analytical unit combines excellence in results with the speed and efficiency that is required to fulfil the highest expectations, especially during peak hours. 300 tests per hour. 48 reagent channels onboard.

<b>Reagent pack type(s)</b>	<b>cobas</b> e pack green
<b>Reagent loading/unloading</b>	Automatic
<b>Cap pre-opener</b>	Yes
<b>Reagent identification</b>	RFID
<b>Capacity of reagent disk</b>	48 reagent packs
<b>Reagent storage temperature</b>	5-10 °C
<b>Number of applications</b>	200
<b>Incubator temperature</b>	37 °C ± 0.3 °C 98.6 °F ± 0.5 °F
<b>Reaction times for tests</b>	9/18/27 min
<b>Measuring cell</b>	ECL measuring cell
<b>Number of measuring cells</b>	2
<b>Cycle time per channel</b>	24 seconds
<b>Overall cycle time (2 channels)</b>	12 seconds
<b>Max. throughput</b>	300 tests/h





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#### References

- <sup>1</sup> REF-32950 - cobas® pro integrated solutions | User Guide | Software version 02-03 | Publication version 3.2 | 2022-03 | Roche Diagnostics.
- <sup>2</sup> REF-31478 - Immunochemistry assay menu and reagent specifications analysis | Data on file | Source: Reagent method sheets Roche Diagnostics cobas e pack green, Siemens Atellica® IM, Abbott Alinity ci-series, Beckman Coulter UniCel Dxl Access | Status as of July 2022.
- <sup>3</sup> REF-32951 - Maintenance times comparison | Internal analysis | Sources: Roche Diagnostics Systems' User Guides.
- <sup>4</sup> REF-30977 - Clinical chemistry assay menu and reagent specifications analysis | Data on file | Source: Reagent method sheets Roche Diagnostics cobas c pack green, Siemens Atellica® CH 930 analyzer, Abbott Alinity ci-series, Beckman Coulter AU680 Clinical Chemistry Analyzer | Status as of July 2022.
- <sup>5</sup> REF-34063 - cobas® pro integrated solutions Sample Carry Over Report\_Sonic Wash Station. Data on file.
- <sup>6</sup> REF-33444 - Roche Diagnostics Internal Reporting | Data On File | Global Customer Support | Product reports Q3-2023.

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