

Take your lab's performance to the peak *with cobas*[®] 8000 *modular analyser series*





Take your lab's performance to the peak *with cobas*[®] 8000 *modular analyser series*

Reliability of your analyser and vendor are critical to maximising your lab's success and upholding the standard of care to which you aspire.

cobas[®] 8000 modular analyser series is a scalable, module based Serum Work Area solution for a wide range of in vitro diagnostics testing of Immunochemistry and Clinical chemistry, designed for high throughput laboratories. This means unprecedented productivity and distinctive uptime, the broadest assay menu on one consolidated platform and continuous access to breakthrough assays that let you stay at the forefront of the industry.

Your time is precious We help you use it wisely

In the lab, every minute counts – for you and your team, for the clinician and the healthcare institution, for the patient and their family. Any inefficiencies and unexpected interruptions result in delays which are costly. **cobas**[®] 8000 modular analyser series is designed to help you use your time wisely.





Ensure non-stop operation through exceptional uptime

Reliability is the foundation of efficiency for today's leading labs as unreliability can have a widespread impact on a lab's performance. Unplanned downtime can lead to interruption of services and lost revenue, outsourcing of tests and increased risk of diminished quality of results. **cobas**[®] systems are designed to ensure non-stop operation and are well known and trusted in the field for their high reliability.

Less interruption of services

Less troubleshooting



More predictable turnaround time

Reliability you can trust

cobas[®] 8000 modular analyser series delivers a distinctive uptime of more than 99%, proven by more than 8,000 installations in the market and 17,000 analytical units worldwide¹. Having a reliable analyser means less interruption of services and less time spent on troubleshooting, thus higher productivity with more predictable turnaround times.

Empower your clinicians to take action faster

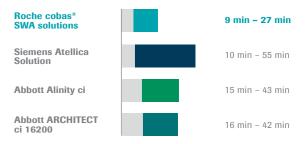
Standards are being raised across health systems, as patient and clinician satisfaction and fast clinical decision making are becoming more prominent quality metrics. Choosing an analyser that supports short and predictable turnaround times at peak times is a key to meet these standards.



Get answers fast with short and predictable turnaround times

Another key aspect of the time spectrum is the turnaround time (TAT). Comparing it to competitive systems, **cobas e** 801 analytical unit offers the shortest turnaround times and thus faster result delivery to clinicians and patients for vital clinical decision making. **cobas e** 801 also offers less variability in assay times which means more predictability.

Immunochemistry incubation times by vendor²





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

11

Growth brings opportunities but also challenges. While working to expand testing services and increase revenue you may ask yourself: how can you handle the higher volumes in the most cost- and space-efficient way? The **cobas**[®] 8000 modular analyser series is designed to deliver true productivity for your lab.

(IIIIIII)



Make sure you decide for true productivity

Ultimately, each lab wants a solution that delivers maximum productivity per invested space. However, how exactly do you define productivity? At Roche we believe that there are 3 key system characteristics that lead to true productivity and we continuously strive to deliver these for your lab:

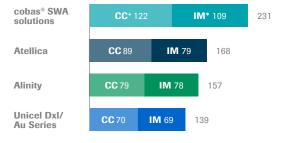
High throughput per square meter to manage the large volume of testing efficiently
 Broad assay menu to eliminate the need for different analysers and/or outsourcing
 High number of reagent channels to consolidate more testing on a single platform

High throughput per square meter³



cobas 8000 Core unit | ISE | c 702 | c 702 | e 801 | e 801 *Atellica 2* Sample handlers | 3* Atellica CH | 2* Atellica IM *Alinity 2* Alinity cic | 1* Alinity i

Broad assay menu⁴



^{*}Immunochemistry | *Clinical chemistry

Maximum number of reagent channels per one line of cobas[®] 8000 modular analyser

SWA configurations	Up to 258 reagent channels
Clinical chemistry configurations	Up to 280 reagent channels
Immunochemistry configurations	Up to 192 reagent channels

Your team is crucial to your laboratory's performance *We help them focus on the tasks that matter*

Whilst the pressure to deliver from many different angles increases, keeping your team engaged and focused on the tasks of importance can be difficult but is of paramount importance for your lab's success. The **cobas**[®] 8000 modular analyser series is designed to eliminate hurdles that may cause unnecessary stress.





Increase peace of mind for your team with reliable solutions

With **cobas**[®] 8000 modular analyser series we strive to ensure trust in the results through various safety features such as contact-free mixing and disposable tips. The high reliability resulting in more than 99% uptime¹ of our analyser is another aspect which increases peace of mind for your team.



Contact-free mixing Clinical chemistry



Disposable tips Immunochemistry



Enable your team to work more efficiently through standardised solutions

Lab standardisation enables you to do more work on fewer instruments, through consolidation of workflow, systems and reagents. Standardisation also provides efficient and compatible solutions for network cooperation. With the **cobas**[®] Serum Work Area systems, Roche offers analytics platforms that satisfy low-, medium- and high-volume testing needs, all standardised on the same reagents, detection technology, reference ranges and sharing common user interfaces.



Essential benefits of standardisation

Improved speed and accuracy of care

Same reagents and detection technology mean standardised reference ranges which reduce the need for rebaselining.

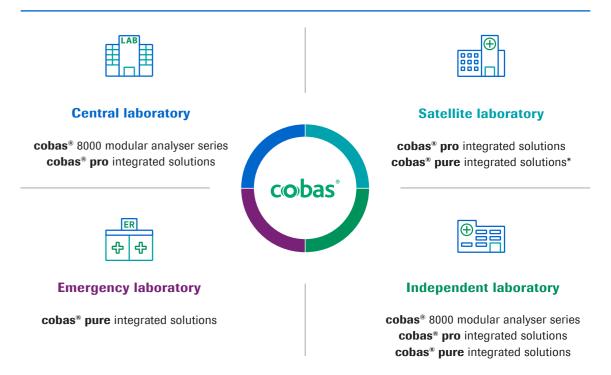
Population management

Larger and consistent datasets enable healthcare professionals to interpret greater health trends for true population health management.

Simplified training and staff allocation

Common user interfaces between our **cobas**[®] systems mean simplified staffing and training, as well as flexible staff allocation.

Same reagents | Same detection technology | Same reference ranges | Common user interfaces



Reduce tedious manual work with ready to use reagents

Ready to use reagents further contribute to a reduced workload. There is no preparation, no mixing, no pre-opening and no waiting needed. Simply take the reagent and load it onto the system.



Reduce tedious manual work through integration into lab automation

At Roche, laboratory automation solutions deliver the quality and reliability you expect, with the personalisation required by low-, mid- and high-volume laboratories. With a complete portfolio in the market, Roche's Personalised Lab Automation provides customised solutions for every lab.



Virtual automation

Virtual automation gives you the capability to track your samples and reduce manual tasks through **cobas**[®] infinity IT solutions.

Standalone automation

Pre- and post-analytical tasks are automated, significantly reducing manual steps in the lab, enhancing error handling, safety and process quality. (cobas p 312, cobas p 512, cobas p 612, cobas p 501, cobas p 701)

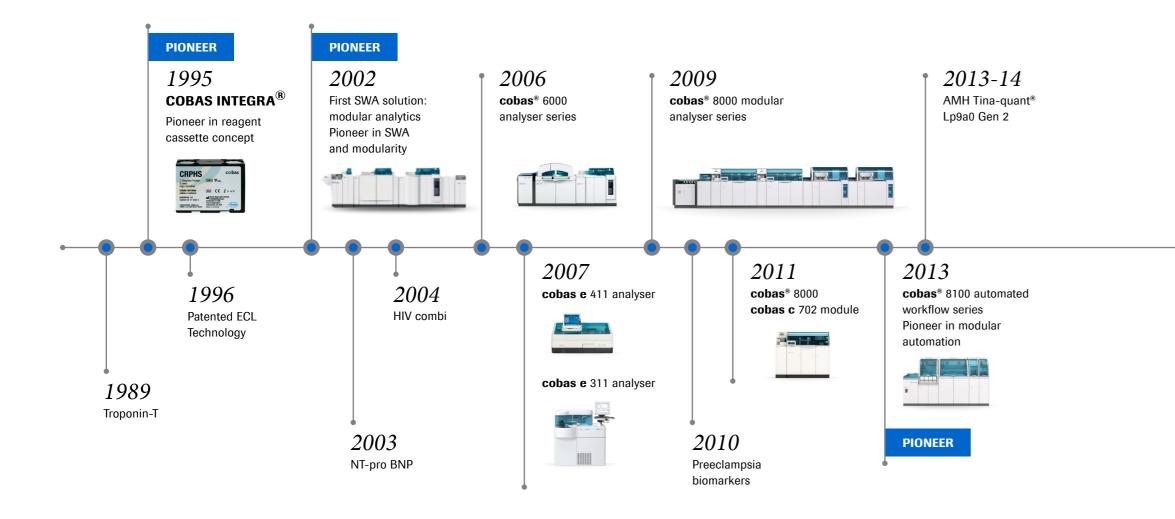
Connected automation

Additionally, connected automation offers transportation, physically connecting different instruments and allowing for maximum predictability of time to test results. (**cobas**[®] connection modules, **cobas**[®] 8100 automated workflow series)

Your future can be unpredictable *We help you succeed through continuous access to innovations*

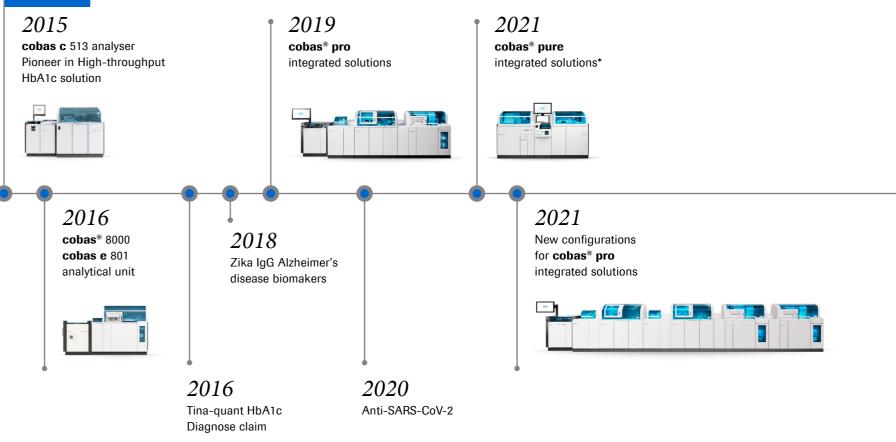
Choosing the right solution and vendor to partner with is not a small undertaking – it is a choice that impacts your lab's ability to fulfill performance and quality standards but also your ability to remain competitive. At Roche we believe in the power of innovation to advance and improve diagnostics possibilities and accessibility – for a better future of the patients and your lab. This is why we are committed to high investment in R&D – the highest in the life sciences industry and among the top 10 in any industry⁵ – with two key objectives: to continue pioneering lab solutions and delivering greater medical value.





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

PIONEER



Our History of Innovation In 2002, we introduced the concept of 'Serum Work Area', pioneering the integration of Clinical chemistry and immunochemistry.

As the first to offer modularity and scalability for growing testing needs, we introduced the first common reagent designed to reduce the complexity of laboratory operation and provide compatible solutions for laboratory networks. Our success from the past however doesn't stop us from continuously looking ahead and challenging the status quo. Three of many areas Roche is investing in include the integrated core lab, mass spec and digital diagnostics.

Focused innovation of our assay portfolio

- Menu expansion with new assays in the areas of unmet medical needs
- 2. Generating new claims for existing assays
- 3. Extending the evidence-base for existing assays

Commitment to exceptional assay quality

Advanced assay design

- Measuring range precision
- High sensitivity
- Wide measuring ranges

Consistent, standardised results

- Consistent patient results across all platforms
- Excellent lot-to-lot consistency
- Standardised assay reference method or material

Designed for convenience

- Short and predictable assay TAT
- Low sample volume
- No reagent preparation required



Support better outcomes by delivering greater medical value

Roche strategy to deliver medical value is through focused innovation on expanding our assay portfolio and commitment to exceptional assay quality because accurate results support the most efficient and effective delivery of patient care⁶.

cobas® 8000 modular analyser series *At a glance*



01 Core unit

The core unit is always on the left side of the instrument and it is the loading and unloading point for samples, achieving a throughput of up to 1000 samples per hour. It features a dedicated STAT port for easy prioritisation of emergency samples and allows for a bidirectional connectivity to preanalytics.

02 ISE module

The **cobas** ISE module measures the concentration of sodium (Na+), potassium (K+) and chloride (Cl-). It is available in two configurations with identical footprint but different throughout: 900 or 1,800 tests per hour.

03 Up to 4 analytical units

One configuration of the **cobas**[®] 8000 modular analyser series can consist of one up to four analytical units. The modular and scalable design of **cobas**[®] 8000 modular analyser series offers more than 130 configurations with many choices to tailor solutions to individual laboratory needs now and in the future.

04 Module sample buffer

A module sample buffer (MSB) is attached to the left of each **cobas c** module and of each **cobas e** module. The MSBs serve as a buffering rack and can deliver sample racks to any module at any time. The MSBs allow for efficient sample transport and management across the analyser.

cobas[®] 8000 modular analyser series *At a glance*



cobas[®] 8000 modular analyser core unit

up to 1,000 samples/hour

ISE module

Clinical chemistry

Immunochemistry



Up to **900** tests/hour Up to 1,800 tests/hour



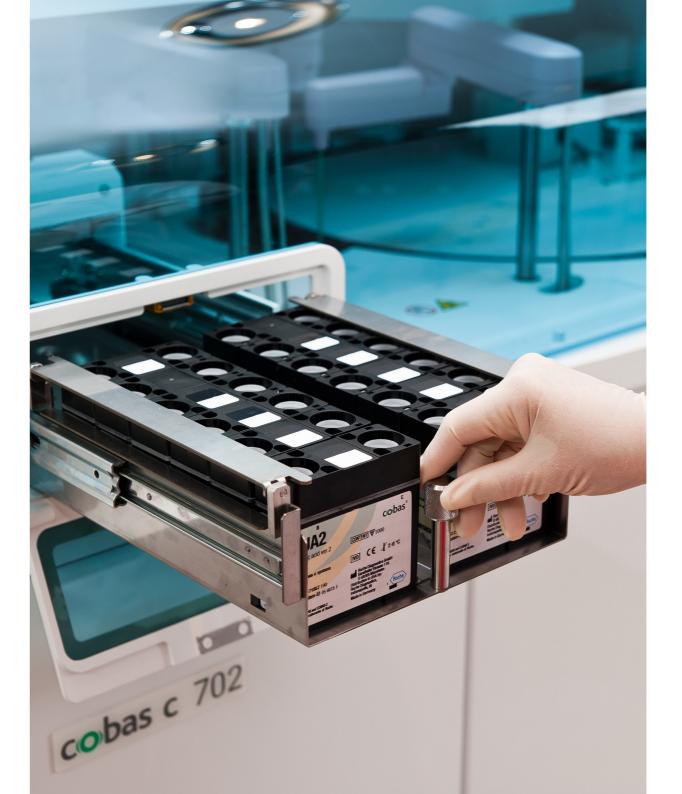
cobas c 702

Up to 2,000 tests/hour 70 reagent channels



cobas e 801

Up to 300 tests/hour 48 reagent channels



Configuration possibilities

Combinations of those analytical units offer more than 130 configurations with many choices to tailor solutions to individual laboratory needs.

Serum Work Area (SWA) configurations

cobas[®] 8000 can be configured into a SWA configuration consisting of a combination of Clinical chemistry and Immunochemistry analytical units which are seamlessly integrated. The maximum SWA configuration includes one core unit + optional ISE module + a combination of up to 4 Clinical chemistry and Immunochemistry analytical units.

Maximum throughput and reagent channel positions

Up to 8,100 tests/hour Up to **258** reagent channels

Clinical chemistry configurations

The maximum Clinical chemistry configuration includes one core unit + optional ISE module + a combination of up to 4 Clinical chemistry modules.

Clinical chemistry configurations

Up to **9,800** tests/hour Up to **280** reagent channels

Immunochemistry configurations

cobas[®] 8000 can be configured into a Immunochemistry only configuration. The maximum Immunochemistry configuration includes one core unit + a combination of up to 4 Immunochemistry analytical units.

Immunochemistry	Up t
configurations	Up t

to **1,200** tests/hour to **192** reagent channels

cobas[®] 8000 modular analyser series

Overview of core components and analytical units

Core components



Core Unit

- Loading capacity of 300 samples (15 racks/tray, 5 samples/rack)
- Throughput of up to 1,000
 samples/hour
- Dedicated STAT port
- Optional sample rotation unit

cobas ISE module

- Sodium, potassium, chloride
- 900 or 1,800 tests/hour
- ISE specific sample probe with clot detection
- Independent processing line

Module Sample Buffer (MSB)

_ _

- Capacity for 20 sample racks; additional capacity of 100 samples per module
- Environmental controlled
 compartment for 5 Auto QC racks
- Backup operation port
- Random access for the racks; racks can go from everywhere to everywhere

Clinical chemistry



cobas c 702 module

- Clinical chemistry, homogeneous
 Immunochemistrys
- Throughput of up to 2,000 tests/hour
- 70 reagent channels
- Specimen integrity via serum indices, clot and liquid level detection
- Contact free ultrasonic mixing
- 2 sample probes
- 4 reagent probes
- Pipetting cycle time of 1.8 seconds
 +

Reagent Manager

- 10 reagent positions
- Reagent RFID reader
- Continuous reagent loading during operation
- Automatic reagent cassette decapping
- Automatic reagent cassette unloading

Immunochemistry



cobas e 801 analytical unit

- Heterogeneous Immunochemistrys
- Throughput of up to 300 tests/hour
- 48 reagent channels
- Carryover-free disposable tips
- Clot and air bubble detection

+

Reagent Manager

- Reagent RFID reader
- Continuous reagent loading during operation
- Automatic reagent packs unloading

cobas® 8000 modular analyser series *Technical specifications*

Configurations	The system offers more than 130 scalable configurations (excluding the optional cobas ISE module). The analytic cobas e 801 module.	s. A configuration consists of the core unit and 1 up to 4 analytical units al units are: cobas ISE module, cobas c 702 module,	Rea	igo
Detection methods	Clinical Chemistry: Photometric Immunochemistry: Electrochemiluminescence (ECL)		Rea	
Maximum throughput	Up to 9800 tests/hour/configuration <i>cobas ISE module:</i> up to 1800 tests/hour	cobas c 702 module: up to 2000 tests/hour	Rea	mp
Sample types	Serum, Plasma, Urine, CSF and Supernatant	cobas e 801 module: up to 300 tests/hour	San	-
Sample tubes) mm,	Rer	mo
	Hitachi standard cup 2.5 ml, cobas sample cup 2.5 ml, Hitachi microcup 1.5 ml w 11-16 x 63-102 mm		Cor pho	
Pediatric sample tube	Yes (Hitachi microcup: 50 µl dead volume)		Din	ne
Sample capacity	<i>Core unit loading capacity:</i> 300 samples <i>Module Sample Buffer (MSB) capactiy:</i> 100 samples <i>Core unit throughput:</i> up to 1000 samples/hour		We	igl
Sample volume			Elec	ctı
	cobas c 702 module: Average 5.5 μl cobas e 801 module: Average 19.4 μl		Noi	ise
Automatic dilution	Yes			

Reagent capacity	Up to 280 reagent channels/configuration		
	cobas ISE module: Na, K and Cl	cobas c 702 module: 70 reagent channels	
		cobas e 801 module: 48 reagent channels	
Reagent concept	Ready to use		
Reagent loading	Continuous reagent loading during operation (valid for cobas c 702 module and cobas e 801 module)		
Sample clot detection	Yes		
Sample interference measurement	Serum indices (icterus, haemolysis, lipaemia) measured on the Clinical chemistry modules		
Remote diagnostics	Yes		
Connectivity to smart phones and tablets	Up to 3 systems can be connected to smart phones and tablets (iOS and Android) using cobas ® mobicheck application. The application allows the monitoring of the systems, alarms and reagent information.		
Dimensions (W x D x H)			
	<i>cobas ISE module</i> : 45 x 114 x 115 cm	cobas c 702 module (including MSB): 150 x 114 x 135 cm	
		<i>cobas e</i> 801 module (including MSB): 150 x 114 x 162 cm	
Weight	Core unit: 197 kg		
C C	cobas ISE module: 180 kg (ISE 1800), 170 kg (ISE 900)	<i>cobas c</i> 702 module (including MSB): 759 kg	
		cobas e 801 module (including MSB): 610 kg	
Electrical requirements	200/208/220/230 VAC, 50/60 Hz		
Noise level	≤ 65 dB		

cobas® 8000 modular analyser series *Technical specifications (continued)*

Pre-Analytics connectivity	Unidirectional, bidirectional
Power consumption	Core unit (including the control unit): 1 kVA (actual maximum: 0.4 kVA) cobas ISE module: 0.5 kVA (actual maximum: 0.2 kVA) cobas c 702 module (including MSB): 3 kVA (actual maximum: 2.3 kVA) cobas e 801 module (including MSB): 2 kVA (actual maximum: 1.5 kVA)
Heat generation	<i>Core unit (including the control unit):</i> 3600 kJ/h (actual maximum: 1440 kJ/h) <i>cobas ISE module:</i> 1800 kJ/h (actual maximum: 720 kJ/h) <i>cobas c</i> 702 module (including MSB): 10800 kJ/h (actual maximum: 8280 kJ/h) <i>cobas e</i> 801 module (including MSB): 7200 kJ/h (actual maximum: 5400 kJ/h)





References

- 1. Calculation: (365 days /MTBRV) x (MTFRV + Travel Time). Data o le
- Atellica Solution Specsheets, Operator Manual and excerpts from OM | 2017, Alinity ci-series Operations Manual and excerpts from OM | Architect i2000SR Operator manual (PN 201837-104) Extract page 4-4 | Elecsys assay menu - Analysis (source method sheets cobas e pack green)
- 3. cobas 8000 vs Atellica vs Alinity Productivity Calculation
- Method sheets cobas c 503, cobas e 801, Beckman AU 680, Beckman Unicel DxI, Abbott ARCHITECT c/i, Abbott Alinity c/i, Siemens Atellica CH/IM, Siemens Centaur
- Roche Annual Report 2019, page 9 | Siemens Annual Report 2019, page 76 | Abbott Annual Report 2019, page 80 | Danaher Annual Report 2019, page 64
- 6. www.diagnostics.roche.com

©2021 Roche Diagnostics Limited. All rights reserved.

COBAS and ELECSYS are trademarks of Roche. All other trademarks or brand names are the property of their respective owners.

Roche Diagnostics Limited

Charles Avenue, Burgess Hill, West Sussex, RH15 9RY Company Registration Number: 571546 Date of preparation: March 2021 Document Number: MC-UK-00888

For healthcare professional use only in the UK and Ireland. Not for distribution.

diagnostics.roche.com

