cobas t 511 and cobas t 711 coagulation analyzers
## *Making innovation your routine*

cobas®

Introduction

Growing world population, increasing prevalence of chronic diseases and a higher incidence of coagulation disorders are all driving a greater demand for coagulation testing[1-3]. This puts more pressure on healthcare systems and laboratories to cope with a growing number of tests that need to be analyzed and interpreted.

Today's coagulation laboratories need to meet clinicians' increasing demand for fast and accurate results, whilst remaining cost effective. The new **cobas t** 511 and **cobas t** 711 coagulation analyzers address this need for greater efficiency, improved workflow, and reliable results by delivering innovative features that will revolutionize the way lab coagulation testing is done today.

cobas t 511 coagulation analyzer

High Processing Power

Unique Walk-Away Reagent Management

Seamless Workflow Dynamics
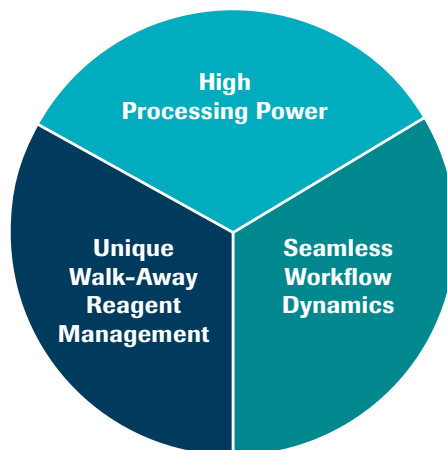
cobas t 711 coagulation analyzer

The high-throughput **cobas t** 711 coagulation analyzer and the mid-throughput **cobas t** 511 coagulation analyzer are both fully automated, continuous random-access, software-controlled systems for clotting, chromogenic and immuno-turbidimetric analysis, intended for qualitative and quantitative in-vitro coagulation determinations using a wide variety of coagulation tests. The results of these tests aid in the diagnosis of coagulation abnormalities and in monitoring anticoagulant therapy.

Designed for coagulation laboratories to achieve more by doing less, the **cobas t** 511 and the **cobas t** 711 coagulation analyzers fully automate three of the most crucial steps in the daily workflow besides the actual execution of the tests:

1. Daily maintenance (pre-configured and executed automatically)
2. Reagent management (on-board storage of reagents, acclimatization, electronic import of reagent data)
3. Reagent reconstitution (fully automated)

High Processing Power

With their *High Processing Power* and extensive menu, the **cobas t** coagulation analyzers are the ideal solution for mid-to-high-volume and reference laboratories performing routine coagulation parameters and specialty assays.

The **cobas t** 511 and **cobas t** 711 coagulation analyzers enable laboratories to complete their daily testing workload faster, supported by the following features:
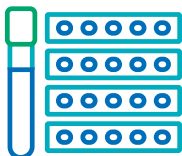
High throughput:
- 195 tests/hour (PT/APTT) on the **cobas t** 511 coagulation analyzer
- 390 tests/hour (PT/APTT) on the **cobas t** 711 coagulation analyzer
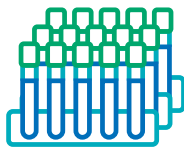
High on-board sample capacity:
- 75 samples on the **cobas t** 511 coagulation analyzer
- 225 samples on the **cobas t** 711 coagulation analyzer

Flexible sample loading/unloading:
- On the **cobas t** 511 coagulation analyzer, sample loading and unloading is automated via the front loading port
- On the **cobas t** 711 coagulation analyzer, sample loading and unloading is automated via the front loading port and via the side balcony
  The **cobas t** 711 coagulation analyzer can also be connected with the **cobas**® 8100 and the **cobas**® connection modules*
- Both analyzers can be used in random-access or batch modes, and offer true STAT capabilities, with dedicated slots for urgent samples
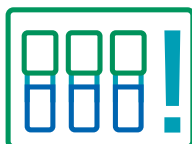
High on-board reagent capacity:
- 57 reagent cassette positions for up to 34,200 tests on board
- Up to 2 weeks of on-board stability

*connectivity to laboratory automation systems available in Q4 2018

Seamless Workflow Dynamics

The **cobas t** 511 and **cobas t** 711 coagulation analyzers offer ease of use, continuous operation and maximized productivity, all whilst ensuring enhanced safety for the operator and reliable results for better patient care.

The benefits of *Seamless Workflow Dynamics* are enabled through the following features:

Continuous loading and unloading of supplies:
- Reagents, samples and cuvettes can be loaded and unloaded at any time
- Liquid and solid waste can be removed at any time
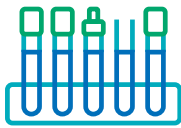
Flexible sample tube handling:
- The **cobas t** 511 and the **cobas t** 711 coagulation analyzers support open and closed sample tubes, which can be placed on the same rack
- Tubes from multiple vendors are supported
- Automatic rotation for correct identification and processing

Quality of results:
- HIL index
- Clog detection
- Automatic cuvette checks
- Full traceability of results

e-Services:
- Access to e-library for automatic download of necessary information
- Connectivity to Laboratory Information Systems
- Remote service support functionalities

Unique Walk-Away Reagent Management

The **cobas t** 511 and **cobas t** 711 coagulation analyzers offer U*nique Walk-Away Reagent Management* by fully automating the reconstitution of reagents in a standardized and accurate way. This innovative concept greatly increases the ease of use, and eliminates the risk of user error during reagent preparation, which ensures the highest reagent quality and helps to optimize reagent utilization.

The intelligent scheduling of automated reconstitution is the ultimate enabler of continuous operation and true walk-away time: based on the user's preferred setting, the **cobas t** coagulation analyzers are capable of starting automated reconstitution when needed, without operator intervention.
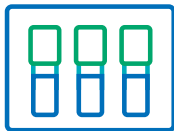
Reagent cassette concept:
- 3 separate reagent vials in one **cobas t** pack, stored onboard the analyzer in a cooled reagent compartment (5 – 12 °C)
- The design eliminates the risk of contamination or evaporation, and allows for easy loading and unloading during operation

Automated reagent reconstitution:
- Automated transportation of **cobas t** pack from cooled reagent compartment to upper chamber
- Automated import of electronic data via barcode technology
- Automated pipetting, swirling and equilibrating to room temperature

Technical specifications

	cobas t 511	cobas t 711
General specifications		
Maximum throughput	195 tests/hour (PT/APTT)	390 tests/hour (PT/APTT)
Measuring principle	optical	optical
Assay types	clotting, chromogenic and immunoturbidimetric tests	clotting, chromogenic and immunoturbidimetric tests
Wavelengths	408 nm, 588 nm, 625 nm, 800 nm	408 nm, 588 nm, 625 nm, 800 nm
Incubation channels	20	40
Measurement channels	13	26
Sample management		
On-board sample capacity	75 samples	225 samples
Sample carrier	5-position rack	5-position rack
Closed Tube Sampling/ Cap-piercing	yes (multiple tube types supported)	yes (multiple tube types supported)
Automated tube rotation	yes	yes
Sample identification	automatic via internal barcode reader	automatic via internal barcode reader
Clog detection	yes	yes
Pre-analytical sample check	yes (HIL index)	yes (HIL index)
Handling of STAT	through dedicated STAT port and via LIS request	through dedicated STAT port and via LIS request
Automatic rerun testing	yes	yes
Reflex testing	yes	yes
Continuous sample loading/ unloading	yes, via front loading	yes, via front loading and side balcony*

*connectivity to laboratory automation systems available in Q4 2018

	cobas t 511	cobas t 711
Reagent management		
Reagent carrier	cassettes (**cobas t** pack)	cassettes (**cobas t** pack)
Reagent positions on board	57 cassette positions (with up to 3 vials per cassette)	57 cassette positions (with up to 3 vials per cassette)
Reagent vial identification	automatic via built-in reading station	automatic via built-in reading station
Reagent cooling	yes (on-board temperature between 5 °C and 12 °C)	yes (on-board temperature between 5 °C and 12 °C)
Automated reagent reconstitution	yes	yes
Continuous reagent loading/ unloading	yes	yes
Cuvettes		
Type of cuvette	single cuvettes	single cuvettes
Cuvette capacity on board	1,000 cuvettes	1,000 cuvettes
Continuous loading/unloading	yes	yes
Software components and user interfaces		
Touch screen	yes (LCD 23 inch)	yes (LCD 23 inch)
Operating system	Windows 7	Windows 7
Data storage	Up to 50,000 test results	Up to 50,000 test results
Online User Assistance	yes	yes
Remote Solutions	yes	yes
Connectivity to LIS	yes (using HL7 communication protocol)	yes (using HL7 communication protocol)
Technical specifications		
Height	1,444 mm (56.8 in)	1,444 mm (56.8 in)
Width	1,284 mm (50.6 in)	1,735 mm (68.3 in)
Depth	933 mm (37 in)	933 mm (37 in)
Weight	307 kg (677 lb)	370 kg (816 lb)
Power consumption	700 VA	800 VA
Water consumption	2.6 L/hour (maximum)	4 L/hour (maximum)
Noise emission	<60 dB	<60 dB
Heat dissipation	700 W (maximum)	800 W (maximum)

References

1   *VA Consultora y Asociados. (2016). Lab Coag Segment in Latam, Quantitative & Qualitative Assessement.*

2   *Wendelboe, A.M., McCumber, M., Hylek, E.M., Buller, H., Weitz, J.I., Raskob, G. (2015). Global public awareness of venous thromboembolism.* **J Thromb Haemost 13,** *1365-71.*

3   *ISTH Steering Committee for World Thrombosis Day. (2014). Thrombosis: a major contributor to the global disease burden.* **J Thromb Haemost 12,** *1580-90.*