



CS-5100 System

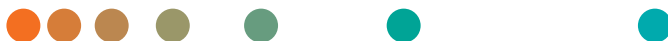
➤ [siemens-healthineers.us](https://www.siemens-healthineers.us)

Lead with Confidence

The CS-5100 system leverages PSI™ technology with primary-tube sample-volume checks to identify and automatically manage potentially problematic test samples prior to analysis, minimizing repeat testing. Designed for customers that run 300 or more tests per day, the CS-5100 system offers lab-to-lab consistency for multisite patient monitoring, with sample result traceability for in-depth audit capabilities and sophisticated cap-piercing technology for dependable throughput under all conditions. Additional benefits include high-throughput routine sample processing of up to 400 tests per hour, high-capacity performance, and multidisciplinary connectivity for customizable integration with Siemens automation solutions, including Aptio™ Automation.

Reagent Test Menu

PT	Dade® Innovin,® Thromborel® S
APTT	Dade Actin FS,® Dade Actin FSL
Fibrinogen	Dade Thrombin
Thrombin time	Test Thrombin
Batroxobin time	Batroxobin
Factor deficiency	Factor II, V, VII, VIII, IX, X, XI, XII
Lupus anticoagulant	LA1 screening, LA2 confirmation
Protein C pathway	Protein C, F V Leiden, INNOVANCE® Free Protein S
Heparin	INNOVANCE Heparin
Antithrombin III	INNOVANCE Antithrombin
D-dimer	INNOVANCE D-Dimer
Von Willebrand factor	INNOVANCE VWF Ac
Chromogenic	Berichrom® Factor VIII Chromogenic, Berichrom α2-Antiplasmin, Berichrom Plasminogen, Berichrom Protein C



CS-5100

System Specifications

Measurement

Principle	Photo-optical based on change in the transmitted light emitted from the sample with added reagent
Method/channels	Clotting (20 single channels), chromogenic, immunoassay, and aggregation methods [†]
Measurement channels	20 wells (mixing function using stir bars, possible for 8 wells)
Source lamp	Halogen lamp for measurements at 340, 405, 575, 660, and 800 nm wavelengths
Analysis mode	Normal and microsample modes
Analysis method	Dilution analysis, automatic reanalysis (redilution analysis, reanalysis, reflex test)
Time resolution	Sampling can be performed at intervals of 0.1 seconds
Measuring time	Up to 1800 seconds for each parameter
Incubation	36 wells

Sample Handling

Type of sample	Primary tubes and/or sample cups
Sampling mechanism	Automated sample and standard predilution
Sample integrity check (PSI)	Tube fill vol check, hemolysis and lipemia check by assay
Carrier system	Continuous-access sample racks with 10-tube capacity
Maximum load	100 samples; 10 racks with 10 samples per rack
STAT sample loading	5 priority positions
Storage temperature	Room temperature
Racks	10 sample racks, continuous loading; various tube holders and adapters available
Handling	Flexible mix of various capped and/or uncapped sample tubes and 4 mL conical sample cup
Cap piercing	Pierces caps on primary tubes

Reagent Handling

Reagent recognition	Internal reagent bar-code identification
Dispensing mechanism	5 probes: 3 heated for reagents and 2 for samples, controls, and calibrators. 3 catchers.
Reagents onboard	40 reagent/control positions and 5 buffer/rinse solution positions
Storage temperature	40 cooled reagent positions onboard at 10°C ±2°C
Handling	Flexible mix of reagent positions within the reagent table; various adapters available
Mixing position	Up to 10 positions available on the reagent table

For more information, please contact your representative from Siemens Healthineers or visit our website.

Throughput* (test/hour, approx.)

PT	400
APTT	400
PT/APTT	400 simultaneous
PT/APTT/AT/DD	282 simultaneous Results for normal mode processing

Operation

Access mode	Continuous random access (samples, reaction tubes)
Calibration	2–12 point calibration curves with maximum of 5 repeated analyses per point and up to 10 calibration curves; one reagent lot group
Calibration curve	250 user-defined parameters
View calibration	Graphical display of calibration curves from up to 10 different reagent lots/parameters
Auto-calibration/Auto-QC	User-defined time interval or with new reagent vial
Temperature control	37°C ±0.5°C measuring channels, incubation area, reagent probe

Reaction Tubes

Type	Single reaction tubes
Loading	Automatic continuous access, 1000 reaction tubes onboard
Reaction tube stirring	Yes

System Fluid

Cleaning and rinsing	Washing solutions onboard
System containers	20 L containers for water (rinse) and waste (optional). Rinse may be direct-filled with house water by optional water controller module. Waste may be direct-plumbed to drain.

Computer/Printer

Workstation	PC
Display	24" touchscreen
Printer	Graphic printer (optional)
Input devices	Touchscreen, keyboard and mouse, 2D bar-code reader
Data storage	About 10,000 samples, with a maximum of 60 results per sample
Onboard maintenance logs	Schedule and monitor routine maintenance activities via software

Software

LIS interface	CA-1000, CA-1500, CS-2000i, PC-DPS(C), ASTM E1381-95/1394-95, ASTM E1381-02/1394-97
Host connection	Bidirectional RS-232C serial port or via Ethernet-TCP/IP
Operating system	Microsoft Windows 10

Power Supply

Operating voltage	Main unit: 200–240 V Pneumatic unit: 100–117 V/220–240 V
Power consumption	≤1700 VA main unit; ≤280 VA pneumatic unit (processing)
Main frequency	50–60 Hz

Environmental Conditions

Operating temperature	15–30°C
Environmental humidity	30–85% (no condensation except on the reagent table)
Atmospheric pressure	70–106 kPa

Dimensions

Main unit	Approx. 1030 (W) x 1150 (D) x 1280 (H) mm 40.6 (W) x 45.3 (D) x 50.4 (H) in.
Pneumatic unit	Approx. 280 (W) x 355 (D) x 400 (H) mm 11.1 (W) x 14.1 (D) x 15.7 (H) in.
Information processing unit (IPU) cart	Approx. 546 (W) x 891 (D) x 1195 (H) mm 21.5 (W) x 35.1 (D) x 47.1 (H) in.

Weight

Main unit	Approx. 278 kg 612.9 lb
Pneumatic unit	Approx. 17 kg 37.5 lb
Information processing unit (IPU) cart	Approx. 67 kg 147.7 lb

Quality Control

X-control, Levey-Jennings control
Multirule monitoring (Westgard Rules)
Maximum of 1200 plots x 750 files can be saved

Compliance

Safety standards	Main unit IEC 61010-1:01, IEC 61010-2-101:02, IEC 60825-1, UL 61010-1:04, CAN/CSA-C22.2 No.61010-1:04 IPU computer IEC 61010-2 or IEC-950; conforms to the standards of the countries concerned (sourced locally)
EMC standards	IEC 61326-1:05, IEC 61326-2-6:05, EN 61326-2-6:06; conforms to the standards of the countries concerned (sourced locally)

†Aggregation methods under development.

‡Throughput values were determined by the time to first result; processing capability varies depending on the reagent used. Throughput values stated above were determined using Siemens' study protocol with PT (Thromborel S Reagent), APTT (Pathromtin SL Reagent), INNOVANCE D-Dimer Reagent, and AT (INNOVANCE AT Reagent) test applications.

Siemens Healthineers pioneers breakthroughs in healthcare. For everyone. Everywhere. Sustainably. The company is a global provider of healthcare equipment, solutions and services, with activities in more than 180 countries and direct representation in more than 70. The group comprises Siemens Healthineers AG, listed as SHL in Frankfurt, Germany, and its subsidiaries. As a leading medical technology company, Siemens Healthineers is committed to improving access to healthcare for underserved communities worldwide and is striving to overcome the most threatening diseases. The company is principally active in the areas of imaging, diagnostics, cancer care and minimally invasive therapies, augmented by digital technology and artificial intelligence. In fiscal 2023, which ended on September 30, 2023, Siemens Healthineers had approximately 71,000 employees worldwide and generated revenue of around €21.7 billion.

Further information is available at www.siemens-healthineers.com.

On account of certain regional limitations of sales rights and service availability, we cannot guarantee that all products included in this brochure are available through the Siemens Healthineers sales organization worldwide. Availability and packaging may vary by country and is subject to change without prior notice. Some/All of the features and products described herein may not be available in the United States.

The information in this document contains general technical descriptions of specifications and options as well as standard and optional features, which do not always have to be present in individual cases.

Siemens Healthineers reserves the right to modify the design, packaging, specifications, and options described herein without prior notice. For the most current information, please contact your local sales representative from Siemens Healthineers.

Note: Any technical data contained in this document may vary within defined tolerances. Original images always lose a certain amount of detail when reproduced.

Siemens Healthineers Headquarters

Siemens Healthineers AG
Siemensstr. 3
91301 Forchheim, Germany
siemens-healthineers.com

USA

Siemens Healthcare Diagnostics Inc.
Laboratory Diagnostics
511 Benedict Avenue
Tarrytown, NY 10591-5005, USA
siemens-healthineers.us