

Laboratory automation systems and workcells

<p>Part 1 of 17</p> <p>See captodayonline.com/productguides for an interactive version of guide</p>	<p>Abbott Diagnostics Deborah Anderson deborah.anderson@abbott.com 100 Abbott Park Road, Abbott Park, IL 60064 847-936-6353 www.abbottdiagnostics.com</p>	<p>Abbott Diagnostics Deborah Anderson deborah.anderson@abbott.com 100 Abbott Park Road, Abbott Park, IL 60064 847-936-6353 www.abbottdiagnostics.com</p>
<p>Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia</p>	<p>Accelerator APS/2005/— >25</p>	<p>Accelerator p540/— —</p>
<p>Automation products that are available</p> <ul style="list-style-type: none"> • Pre-analytical processor/Total laboratory automation • Automated functions: Accessioning/Track load/Centrifugation/Decapping • Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing • Automated functions: Storage retrieval/Intelligent sample routing • SW: Dedicated Process Control/Middleware control using LIS/Architecture • Company has dedicated automation support team/Remote system monitoring 	<p>yes/yes yes/yes/yes/yes yes/no/no/yes yes/yes yes/yes/open yes/yes</p>	<p>yes/— —/no/no/yes yes/yes/yes/no no/no yes/—/closed yes/yes</p>
<p>Software features/functionality</p> <ul style="list-style-type: none"> • Patient demographics and insurance data/Rules-based architecture • Supports data retrieval/Internet connectivity • Online real-time help system/QC/Stats and management reports • Evaluates validity and releasability of results from automated analyzers • Specimen tracking/Priority processing/Random-access spec. movement • Supports accession number redundancy (duplicate specimen ID) • Supports specimen carrier and level identification • Unique bar-code number per container required • Specimen routing/Multistop routing (one tube to multiple workstations) • Specimen scheduling/Instrument scheduling • Routes test to workstation/Automatic reflex, repeat, dilutions • Supports multiple HW configuration/Supports other proprietary transport. HW • Sample storage and retrieval SW/Supports approved CLSI standards 	<p>automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature</p>	<p>LIS feature/LIS feature LIS feature/automation SW feature automation SW feature/—/automation SW feature — automation SW feature/— — — automation SW feature automation sw feature/— — — — — —</p>
<p>LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC (Logical Observation Identifiers Names and Codes) can be used to identify tests when communicating with LIS</p>	<p>Cerner Classic, Cerner Millennium, Cortex, Delphic, Dianoema, GE Ultra, GLMIS by MIPS, Lab Track, Medisolution by Technidata, Meditech 5.4, Misys, Misys CPR (Cloverleaf Engine), Misys Smart, ModulabGold (Izasa), OSM, Roche Omega, SCS, Siemens, Soft/HL7, ASTM/—</p>	<p>HL7, Ethernet 10 base T or 100 base TX</p>
<p>Transportation systems available</p> <ul style="list-style-type: none"> • Model/Dimensions* (H x W x D)/Conforms to CLSI Stand. Auto 1-5 • Containers device accommodates/Average throughput in cm per second • Supports automatic rerouting for reflex-repeat-dilutions • Modular HW/Installed options/Device can operate in track and manual mode • Required utilities/Required maintenance • Carrier type/Scalable system 	<p>yes APS track section/40.2 x variable x 17.0 inches/yes 16, 13 x 100; 16, 13 x 75, others, multiple types simultaneously/13 yes yes/floor mounted/yes compressed air, electricity, water/— single specimen container per carrier/yes</p>	<p>yes p540/57.8 x 65.7 x 45.5 inches/— 16, 13 x 100; 16, 13 x 75/— — —/floor mounted/— electricity/— multiple specimen container per carrier (5)/no</p>
<p>Automated centrifugation available</p> <ul style="list-style-type: none"> • Model/Dimensions (H x W x D)/Conforms to CLSI Stand. Auto 1-5 • Maximum throughput/Containers device accommodates • Can identify tube types for custom programmed rate and spin times per run • More than one centrifuge can be connected to track system • For multi-unit centrifuge, each centrifuge operates independently for rate and time • Maintenance required <p>Automated input/accessioning available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Dedicated lanes for stat samples • Maximum No. of samples that can be loaded/Maintenance required <p>Automated decapping available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required • Removes multiple size tube caps per run/Removes screw type sample caps <p>Automated sorting available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Software can sort by <p>Specimen integrity monitor available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required <p>Automated aliquotting available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates • Inspects samples for bar code/Detects and reports clots in specimen • Detects and reports quantity not sufficient specimens/Maintenance required 	<p>yes Hettich/58.5 x 32 x 42 inches/yes up to 320/16, 13x100; 16, 13x75, others, multiple types simultaneously no yes no weekly, monthly yes input-output module/54.3 x 77.6 x 39.6 inches/yes/up to 600 16, 13 x 100; 16, 13 x 75, others, multiple types simultaneously/yes 744/weekly, monthly yes decapper module/46.7 x 34.7 x 17 inches/yes/up to 600 16, 13 x 100; 16, 13 x 75, others, multiple types simultaneously/daily, weekly yes/yes yes input-output module/54.3 x 77.6 x 39.6 inches/yes/up to 600 16, 13 x 100; 16, 13 x 75, others, mult. types simult./specimen, method, output no — — no — — no — — — — —</p>	<p>no — — — — — no — — yes p540/57.8 x 65.7 x 45.5 inches/yes/570 16, 13 x 100; 16, 13 x 75/daily, weekly yes/yes yes p540/57.8 x 65.7 x 45.5 inches/yes/1,000 —/specimen, method, output no — — yes p540/yes/540 16, 13 x 100; 16, 13 x 75 yes/yes yes/—</p>
<p>Instrument (analyzer) interfaces</p> <ul style="list-style-type: none"> • Rules-based instrument interface control subsystem • Process control of instrument via control subsystem <p>Physical/hardware (instrument/specimen) interface</p> <ul style="list-style-type: none"> • Hematology/Chemistry/Coagulation • Immunoassay/Urinalysis 	<p>yes yes no/point-of-reference sampling/no point-of-reference sampling/no</p>	<p>no no — —</p>
<p>Instruments to which your system or product is interfaced Other robotic products/components to which system or product is linked</p>	<p>Architect c8000, c16000, i2000SR, Ortho Fusion 5.1, Diasorin Liaison (ex-US only) —</p>	<p>— —</p>
<p>Automated recapper or sealer available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Recaps-seals multiple size tubes simult./Containers device accommodates • Maintenance required 	<p>sealer resealer module/49.2 x 44.9 x 17 inches/yes/up to 600 yes/16, 13 x 100; 16, 13 x 75, others monthly</p>	<p>no — — —</p>
<p>Automated storage and retrieval available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Connects to the track • Room temperature/Minimum and maximum number of tubes stored per module • Multiple size tubes can be stored in the same module/Maintenance required • Refrigerated storage and retrieval capability <p>Longitudinal upgrade pathway or plan to protect users' investments Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly</p>	<p>yes tube storage module/95 x 89.2 x 70 inches/yes/up to 600 16, 13 x 100; 16, 13 x 75, others, multiple types simultaneously/yes no/0 and 15,360 yes/daily, monthly yes modular open architecture depends on configuration/Abbott Diagnostics/business and extended hours yes/yes</p>	<p>no — — — — — — —/Abbott Diagnostics/multiple support options (24-7) no/no</p>
<p>List price Individual list prices for components</p> <ul style="list-style-type: none"> • Process control SW/Transportation systems/Auto. centrifugation • Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval • Specimen integrity monitor/Automated aliquot • Instrument (analyzer) interfaces/Automated recap 	<p>— — — — — —</p>	<p>— — — — — —</p>
<p>Distinguishing features (supplied by company) * For basic building block unit ** Average throughput in specimen containers per hour per device Note: a dash in lieu of an answer means company did not answer question or question is not applicable</p>	<p>flexibility: configurable, component-based design; functionality: refrigerated online storage and multiple tube types simultaneously, RFID, point-in-space sampling; support: Lean Six Sigma Black Belt consultants; Class 2 laser; operations manual on Web site</p>	<p>onboard, temperature-controlled quality control module aliquots QC samples and sorts to analyzer racks</p>

Tabulation does not represent an endorsement by the College of American Pathologists.

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Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia	PathFinder 350S Sorter/2008/25 ~50 globally	PathFinder 900 Plus/2012/10 0/0/6
Automation products that are available <ul style="list-style-type: none"> • Pre-analytical processor/Total laboratory automation • Automated functions: Accessioning/Track load/Centrifugation/Decapping • Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing • Automated functions: Storage retrieval/Intelligent sample routing • SW: Dedicated Process Control/Middleware control using LIS/Architecture • Company has dedicated automation support team/Remote system monitoring 	yes/no yes/no/no/no yes/no/no/no no/yes yes/yes/open yes/yes	yes/no yes/no/no/yes yes/yes/yes/yes no/yes no/yes/open yes/yes
Software features/functionality <ul style="list-style-type: none"> • Patient demographics and insurance data/Rules-based architecture • Supports data retrieval/Internet connectivity • Online real-time help system/QC/Stats and management reports • Evaluates validity and releasability of results from automated analyzers • Specimen tracking/Priority processing/Random-access spec. movement • Supports accession number redundancy (duplicate specimen ID) • Supports specimen carrier and level identification • Unique bar-code number per container required • Specimen routing/Multistop routing (one tube to multiple workstations) • Specimen scheduling/Instrument scheduling • Routes test to workstation/Automatic reflex, repeat, dilutions • Supports multiple HW configuration/Supports other proprietary transport. HW • Sample storage and retrieval SW/Supports approved CLSI standards 	—/LIS feature automation SW feature/automation SW feature automation SW feature/—/automation SW feature — automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature automation SW feature LIS feature/automation SW feature LIS feature/— automation SW feature/LIS feature automation SW feature/— LIS feature/automation SW feature	—/LIS feature automation SW feature/automation SW feature automation SW feature/—/automation SW feature — automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature automation SW feature LIS feature/automation SW feature LIS feature/— automation SW feature/LIS feature automation SW feature/— LIS feature/automation SW feature
LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC (Logical Observation Identifiers Names and Codes) can be used to identify tests when communicating with LIS	Instrument Manager, Lab-on-line, Ultra, others/ASTM, CLSI-LIS2A/—	Instrument Manager, Lab-on-Line, Ultra, others/ASTM, CLSI-LIS2A/—
Transportation systems available <ul style="list-style-type: none"> • Model/Dimensions* (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Containers device accommodates/Average throughput in cm per second • Supports automatic rerouting for reflex-repeat-dilutions • Modular HW/Installed options/Device can operate in track and manual mode • Required utilities/Required maintenance • Carrier type/Scalable system 	no — — — — —	no — — — — —
Automated centrifugation available <ul style="list-style-type: none"> • Model/Dimensions (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Maximum throughput/Containers device accommodates • Can identify tube types for custom programmed rate and spin times per run • More than one centrifuge can be connected to track system • For multi-unit centrifuge, each centrifuge operates independently for rate and time • Maintenance required Automated input/accessioning available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Dedicated lanes for stat samples • Maximum No. of samples that can be loaded/Maintenance required Automated decapping available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required • Removes multiple size tube caps per run/Removes screw type sample caps Automated sorting available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Software can sort by Specimen integrity monitor available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required Automated aliquotting available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates • Inspects samples for bar code/Detects and reports clots in specimen • Detects and reports quantity not sufficient specimens/Maintenance required 	no — — — — — yes 350S Sorter/100 × 52 × 45 cm (40 × 21 × 18 in)/yes/350 tubes per hour 16, 13 × 100; 16, 13 × 75/yes —/annually no — — — yes 350S Sorter/100 × 52 × 45 cm (40 × 21 × 18 in)/—/350 tubes per hour 16, 13 × 100; 16, 13 × 75, 12–16 mm OD, others/specimen, method, output no — — no — — no — — no — —	no — — — — — yes 900 Plus/2.5 × 1.8 × 1.4 m (8.2 × 5.9 × 4.6 in)/yes/1,200+ tubes per hour 16, 13 × 100; 16, 13 × 75, 12–16 mm OD, 63–120 mm height/yes —/monthly, annually yes 900 Plus/2.5 × 1.8 × 1.4 m (8.2 × 5.9 × 4.6 in)/yes/≤1,100 tubes per hour 16, 13 × 100; 16, 13 × 75, 12–16 mm OD, 63–120 mm height/monthly, annually yes/yes yes 900 Plus/2.5 × 1.8 × 1.4 m (8.2 × 5.9 × 4.6 in)/yes/1,200+ tubes per hour 16, 13 × 100; 16, 13 × 75, 12–16 mm OD, 63–120 mm ht/specimen, method, output no — — yes 900 Plus/2.5 × 1.8 × 1.4 m (8.2 × 5.9 × 4.6 in)/yes/— 16, 13 × 100; 16, 13 × 75, 12–16 mm OD, 63–120 mm height yes/yes yes/monthly, annually
Instrument (analyzer) interfaces <ul style="list-style-type: none"> • Rules-based instrument interface control subsystem • Process control of instrument via control subsystem Physical/hardware (instrument/specimen) interface <ul style="list-style-type: none"> • Hematology/Chemistry/Coagulation • Immunoassay/Urinalysis 	no no — —	no no — —
Instruments to which your system or product is interfaced Other robotic products/components to which system or product is linked	— —	— —
Automated recapper or sealer available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput* • Recaps-seals multiple size tubes simult./Containers device accommodates • Maintenance required 	no — — —	yes 900 Plus/2.5 × 1.8 × 1.4 m (8.2 × 5.9 × 4.6 in)/yes/≤1,100 tubes per hour yes/16, 13 × 100; 16, 13 × 75, 12–16 mm OD, 63–120 mm height monthly, annually
Automated storage and retrieval available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput* • Containers device accommodates/Connects to the track • Room temperature/Minimum and maximum number of tubes stored per module • Multiple size tubes can be stored in the same module/Maintenance required • Refrigerated storage and retrieval capability Longitudinal upgrade pathway or plan to protect users' investments Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly	yes PathFinder 350S/100 × 52 × 45 cm (40 × 21 × 18 in)/yes/350 tubes per hour 16, 13 × 100; 16, 13 × 75, 12–16 mm OD, 63–120 mm height/no yes/— yes/annually no no ability to swap out deck layout to expand application 1 day/distributor/— no/no	yes 900 Plus/2.5 × 1.8 × 1.4 m (8.2 × 5.9 × 4.6 in)/yes/1,200+ tubes per hour 16, 13 × 100; 16, 13 × 75, 12–16 mm OD, 63–120 mm height/yes yes/— yes/monthly, annually no no ability to add, change modules, swap out deck layout to expand application 3 weeks/distributor/24–7 no/no
List price Individual list prices for components <ul style="list-style-type: none"> • Process control SW/Transportation systems/Auto. centrifugation • Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval • Specimen integrity monitor/Automated aliquot • Instrument (analyzer) interfaces/Automated recap 	based on options, ~\$60,000 — included/—/included/included — —	— — included/included/included/included —/optional —/optional
Distinguishing features (supplied by company) <i>For basic building block unit</i> ** Average throughput in specimen containers per hour per device <i>Note: a dash in lieu of an answer means company did not answer question or question is not applicable</i>	compact dedicated benchtop sorting; flexible deck layout (input and output system); accommodates range of third-party analyzer racks; accommodates multiple container types simultaneously	modular design for flexible configuration and layout; parallel processing of samples and workload balancing for optimal throughput; three-sided loading and unloading of samples for multiple user access; accommodates multiple container types simultaneously

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Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia	AutoMate 2500 Family/2003/85 88/568/52	LH 1500 Hematology Automation Series/2002/6 101/21/20
Automation products that are available <ul style="list-style-type: none"> • Pre-analytical processor/Total laboratory automation • Automated functions: Accessioning/Track load/Centrifugation/Decapping • Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing • Automated functions: Storage retrieval/Intelligent sample routing • SW: Dedicated Process Control/Middleware control using LIS/Architecture • Company has dedicated automation support team/Remote system monitoring 	<ul style="list-style-type: none"> yes/no yes/no/no/yes yes/yes/yes/yes no/yes yes/yes/open yes/yes 	<ul style="list-style-type: none"> yes/yes yes/yes/no/no yes/no/no/no yes/yes yes/yes/open yes/yes
Software features/functionality <ul style="list-style-type: none"> • Patient demographics and insurance data/Rules-based architecture • Supports data retrieval/Internet connectivity • Online real-time help system/QC/Stats and management reports • Evaluates validity and releasability of results from automated analyzers • Specimen tracking/Priority processing/Random-access spec. movement • Supports accession number redundancy (duplicate specimen ID) • Supports specimen carrier and level identification • Unique bar-code number per container required • Specimen routing/Multistop routing (one tube to multiple workstations) • Specimen scheduling/Instrument scheduling • Routes test to workstation/Automatic reflex, repeat, dilutions • Supports multiple HW configuration/Supports other proprietary transport. HW • Sample storage and retrieval SW/Supports approved CLSI standards 	<ul style="list-style-type: none"> LIS feature/automation SW feature automation SW feature/— automation SW feature/—/automation SW feature — automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature — automation SW feature/automation SW feature automation SW feature/— — automation SW feature/— automation SW feature/automation SW feature 	<ul style="list-style-type: none"> — automation SW feature/— automation SW feature/LIS feature/— — automation SW feature/automation SW feature/automation SW feature — — automation SW feature automation SW feature/ automation SW feature automation SW feature/ automation SW feature automation SW feature/ automation SW feature automation SW feature/— automation SW feature/— automation SW feature/ automation SW feature
LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC can be used to identify tests when communicating with LIS	Cerner, Modulus, Data Innovations, SCC, Atlas, McKesson/HL7, ASTM/yes	Cerner, Sunquest, SCC, Meditech, others/LH 1500/yes
Transportation systems available <ul style="list-style-type: none"> • Model/Dimensions* (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Containers device accommodates/Average throughput in cm per second • Supports automatic rerouting for reflex-repeat-dilutions • Modular HW/Installed options/Device can operate in track and manual mode • Required utilities/Required maintenance • Carrier type/Scalable system 	<ul style="list-style-type: none"> no — — — — — 	<ul style="list-style-type: none"> yes —/—/yes 13 × 75/— yes yes/floor mounted/yes compressed air, electricity/monthly single specimen container per carrier/yes
Automated centrifugation available <ul style="list-style-type: none"> • Model/Dimensions (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Maximum throughput/Containers device accommodates • Can identify tube types for custom programmed rate and spin times per run • More than one centrifuge can be connected to track system • For multi-unit centrifuge, each centrifuge operates independently for rate and time • Maintenance required Automated input/accessioning available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Dedicated lanes for stat samples • Maximum No. of samples that can be loaded/Maintenance required Automated decapping available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required • Removes multiple size tube caps per run/Removes screw type sample caps Automated sorting available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Software can sort by Specimen integrity monitor available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required Automated aliquotting available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates • Inspects samples for bar code/Detects and reports clots in specimen • Detects and reports quantity not sufficient specimens/Maintenance required 	<ul style="list-style-type: none"> no — — — — — yes AutoMate 2500 Family units/64 × 73 × 53 inches/yes/1,200 16, 13 × 100; 16, 13 × 75; diameter: 10.5–17.0 mm; length: 70–100 mm/yes 300, continuously/— yes AutoMate 2500 Family units/64 × 73 × 53 inches/yes/1,200 16, 13 × 100; 16, 13 × 75; diameter: 10.5–17.0 mm; length: 70–100 mm/— yes/yes yes AutoMate 2500 Family units/64 × 73 × 53 inches/yes/1,200 16, 13×100; 16, 13×75; others/specimen, test order, fill level, input position no — — yes AutoMate 1250, 2550/64 × 101 × 53 inches/yes/600 16, 13 × 100; 16, 13 × 75, secondary tubes 13 × 75 yes/yes yes/daily 	<ul style="list-style-type: none"> no — — — — — yes — 13 × 75/yes 200/monthly no — — yes —/—/yes/425 13 × 75/method no — — no — — — —
Instrument (analyzer) interfaces <ul style="list-style-type: none"> • Rules-based instrument interface control subsystem • Process control of instrument via control subsystem Physical/hardware (instrument/specimen) interface <ul style="list-style-type: none"> • Hematology/Chemistry/Coagulation <ul style="list-style-type: none"> • Immunoassay/Urinalysis 	<ul style="list-style-type: none"> no no no/no/no no/no 	<ul style="list-style-type: none"> no yes robotic arm interface/—/— —
Instruments to which your system or product is interfaced	—	LH 750, 755, LH 780, and 785
Other robotic products/components to which system or product is linked	—	—
Automated recapper or sealer available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Recaps-seals multiple size tubes simult./Containers device accommodates • Maintenance required 	<ul style="list-style-type: none"> sealer all AutoMate 2500 Family units/—/yes/1,200 yes/16, 13 × 100; 16, 13 × 75 daily 	<ul style="list-style-type: none"> no — — —
Automated storage and retrieval available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Connects to the track • Room temperature/Minimum and maximum number of tubes stored per module • Multiple size tubes can be stored in the same module/Maintenance required • Refrigerated storage and retrieval capability Longitudinal upgrade pathway or plan to protect users' investments Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly	<ul style="list-style-type: none"> — — — — — longitudinal upgrade pathway 1 week/Beckman Coulter/24–7 no/no 	<ul style="list-style-type: none"> yes —/—/yes/340 13 × 75/yes yes/1,000 no/weekly, monthly — expandable, as the lab grows 7–21 days/Beckman Coulter/24–7 no/yes
List price Individual list prices for components <ul style="list-style-type: none"> • Process control SW/Transportation systems/Auto. centrifugation • Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval • Specimen integrity monitor/Automated aliquot • Instrument (analyzer) interfaces/Automated recap 	<ul style="list-style-type: none"> \$290,000–\$460,000 — — — — 	<ul style="list-style-type: none"> — — — — —
Distinguishing features (supplied by company) <i>* For basic building block unit</i> <i>** Average throughput in specimen containers per hour per device</i> <i>Note: a dash in lieu of an answer means company did not answer question or question is not applicable</i>	high-speed, cost-efficient way to automate pre and postanalytical steps; improves patient safety and lab efficiency through tube inspection unit to ensure correct label is on the sample and that enough sample volume is available; al- lows direct sorting to most analyzers' racks, and easy to change configurations	automatic hands-off rerun and reflex test from the stockyard to the analyzers; sorting of pending samples for secondary tests by test; automatically loads analyzers and is expandable

Laboratory automation systems and workcells

<p>Part 5 of 17</p> <p><i>See captodayonline.com/productguides for an interactive version of guide</i></p>	<p>Beckman Coulter Mike Hoang mbhoang@beckman.com 200 S. Kraemer Boulevard, Brea, CA 92822 714-961-6385 www.beckmancoulter.com</p>	<p>LABOTIX Automation Peter J. Manes peter.manes@labotix.com 2323 S. 171st Street, Omaha, NE 68130 402-594-3456 www.labotix.com</p>
<p>Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia</p>	<p>Power Processor/1998/38 421/134/172</p>	<p>RRUSH/1994/2 11/4/0</p>
<p>Automation products that are available</p> <ul style="list-style-type: none"> • Pre-analytical processor/Total laboratory automation • Automated functions: Accessioning/Track load/Centrifugation/Decapping • Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing • Automated functions: Storage retrieval/Intelligent sample routing • SW: Dedicated Process Control/Middleware control using LIS/Architecture • Company has dedicated automation support team/Remote system monitoring 	<p>yes/yes yes/yes/yes/yes yes/yes/yes/yes yes/yes yes/yes/open yes/yes</p>	<p>yes/yes yes/yes/yes/yes yes/yes/yes/yes (recapping) yes/yes yes/yes/open yes/yes</p>
<p>Software features/functionality</p> <ul style="list-style-type: none"> • Patient demographics and insurance data/Rules-based architecture • Supports data retrieval/Internet connectivity • Online real-time help system/QC/Stats and management reports • Evaluates validity and releasability of results from automated analyzers • Specimen tracking/Priority processing/Random-access spec. movement • Supports accession number redundancy (duplicate specimen ID) • Supports specimen carrier and level identification • Unique bar-code number per container required • Specimen routing/Multistop routing (one tube to multiple workstations) • Specimen scheduling/Instrument scheduling • Routes test to workstation/Automatic reflex, repeat, dilutions • Supports multiple HW configuration/Supports other proprietary transport. HW • Sample storage and retrieval SW/Supports approved CLSI standards 	<p>LIS feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature/automation SW feature/automation SW feature — automation SW feature automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/— automation SW feature/automation SW feature</p>	<p>—/automation SW feature automation SW feature/— automation SW feature/automation SW feature/automation SW feature LIS feature automation SW feature/automation SW feature/automation SW feature LIS feature — automation SW feature automation SW feature/automation SW feature automation SW feature/LIS feature automation SW feature/LIS feature automation SW feature/— automation SW feature/automation SW feature</p>
<p>LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC can be used to identify tests when communicating with LIS</p>	<p>SCC, Siemens, Philips, Cerner, McKesson, GE, Meditech, PerSe, Molis, MIPS, Vista, Swiss Lab/Power Processor, Direct, HL7/yes</p>	<p>Cerner, PGP, Triple G, Sunquest, Rubicon/HL7 or ASTM/—</p>
<p>Transportation systems available</p> <ul style="list-style-type: none"> • Model/Dimensions* (H x W x D)/Conforms to CLSI Stand. Auto 1-5 • Containers device accommodates/Average throughput in cm per second • Supports automatic rerouting for reflex-repeat-dilutions • Modular HW/Installed options/Device can operate in track and manual mode • Required utilities/Required maintenance/Carrier type/Scalable system 	<p>yes Power Processor II/—/yes 16, 13 x 100; 16, 13 x 75, Sarstedt/— yes yes/floor and subfloor mounted/yes compressed air, electricity/monthly/single specimen container per carrier/yes</p>	<p>yes Flexlink/custom by site/yes 16, 13 x 100; 16, 13 x 75/— yes yes/floor mounted, overhead mounted/— electricity/quarterly/single specimen container per carrier/yes</p>
<p>Automated centrifugation available</p> <ul style="list-style-type: none"> • Model/Dimensions (H x W x D)/Conforms to CLSI Stand. Auto 1-5 • Maximum throughput/Containers device accommodates • Can identify tube types for custom programmed rate and spin times per run • More than one centrifuge can be connected to track system • For multi-unit centrifuge, each centrifuge operates independently for rate and time • Maintenance required <p>Automated input/accessioning available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Dedicated lanes for stat samples • Maximum No. of samples that can be loaded/Maintenance required <p>Automated decapping available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required • Removes multiple size tube caps per run/Removes screw type sample caps <p>Automated sorting available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Software can sort by <p>Specimen integrity monitor available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required <p>Automated aliquotting available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates • Inspects samples for bar code/Detects and reports clots in specimen • Detects and reports quantity not sufficient specimens/Maintenance required 	<p>yes Power Processor II/—/yes 300-450/16, 13 x 100; 16, 13 x 75, Sarstedt no yes yes weekly yes Power Processor II/—/yes/900 16, 13 x 100; 16, 13 x 75, Sarstedt/yes 200/monthly yes Power Processor II/—/yes/600 16, 13 x 100; 16, 13 x 75, Sarstedt/monthly yes/no yes Power Processor II/—/yes/500 16, 13 x 100; 16, 13 x 75, Sarstedt/method, output yes Power Processor II/—/yes/90 16, 13 x 100; 16, 13 x 75, Sarstedt/monthly yes Power Processor II/—/yes/140 primary samples 16, 13 x 100; 16, 13 x 75, Sarstedt yes/yes yes/daily, weekly</p>	<p>yes Hettich/74 x 34 x 36 inches/yes 350/16, 13 x 100; 16, 13 x 75 no yes yes quarterly yes Labotix/74 x 34 x 36 inches/yes/1,200 16, 13 x 100; 16, 13 x 75/yes 1,200/quarterly yes Labotix/20 x 9 x 12 inches/yes/400 16, 13 x 100; 16, 13 x 75/quarterly yes/no yes Labotix/74 x 34 x 36 inches/yes/400 16, 13 x 100; 16, 13 x 75/specimen, method, output yes — — yes Labotix/60 x 57 x 25 inches/yes/300 16, 13 x 100; 16, 13 x 75 yes/yes yes/quarterly</p>
<p>Instrument (analyzer) interfaces</p> <ul style="list-style-type: none"> • Rules-based instrument interface control subsystem • Process control of instrument via control subsystem <p>Physical/hardware (instrument/specimen) interface</p> <ul style="list-style-type: none"> • Hematology/Chemistry/Coagulation <p>• Immunoassay/Urinalysis</p>	<p>yes yes robotic arm interface/point-of-reference sampling, robotic arm interface/ point-of-reference sampling, robotic arm interface point-of-reference sampling, robotic arm interface/point-of-reference sampling</p>	<p>yes — point-of-ref., robotic rack/point-of-ref., robotic rack/point-of-ref., robotic rack point-of-reference, robotic rack/point-of-reference, robotic rack</p>
<p>Instruments to which your system or product is interfaced</p> <p>Other robotic products/components to which system or product is linked</p>	<p>Abbott Architect, Axsym; Siemens Advia, Atlas; Beckman Coulter LX 20, DxC, Dxl; Ortho 950, 250, Eci; Roche Modular; Stago Star</p> <p>—</p>	<p>Beckman Coulter Dxl 800, Stago Star Evolution, Olympus 2700 and 5400, Siemens Advia Centaur, Sysmex HST with SMS, Ortho-Clinical Vitros, and more</p> <p>—</p>
<p>Automated recapper or sealer available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Recaps-seals multiple size tubes simul./Containers device accommodates • Maintenance required 	<p>yes Power Processor III/—/yes/500 no/13 x 100; 13 x 75, Sarstedt weekly</p>	<p>recapper Labotix/60 x 13 x 23 inches/yes/750 yes/16, 13 x 100; 16, 13 x 75 quarterly</p>
<p>Automated storage and retrieval available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Connects to the track • Room temperature/Minimum and maximum number of tubes stored per module • Multiple size tubes can be stored in the same module/Maintenance required • Refrigerated storage and retrieval capability <p>Longitudinal upgrade pathway or plan to protect users' investments</p>	<p>yes Power Processor III/—/yes/500 13 x 100; 13 x 75, Sarstedt/yes yes/1 and 6,000 no/weekly yes Power Processor is expandable for upgrades as lab needs grow</p>	<p>yes Labotix/90 x 47 x 56 inches/yes/750 16, 13 x 100; 16, 13 x 75/yes no/5,700 yes/quarterly yes open system allows changing analyzers and vendors at any time; expands and changes physical shape of track at any time 30 days/Labotix/24-7, 365 days per year —/no</p>
<p>Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly</p>	<p>7-21 days/Beckman Coulter/24-7 no/yes</p>	<p>—/no</p>
<p>List price</p> <p>Individual list prices for components</p> <ul style="list-style-type: none"> • Process control SW/Transportation systems/Auto. centrifugation • Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval • Specimen integrity monitor/Automated aliquot • Instrument (analyzer) interfaces/Automated recap 	<p>— — — — —</p>	<p>— — — — —</p>
<p>Distinguishing features (supplied by company)</p> <p><i>* For basic building block unit</i></p> <p><i>** Average throughput in specimen containers per hour per device</i></p> <p><i>Note: a dash in lieu of an answer means company did not answer question or question is not applicable</i></p>	<p>refrigerated storage with recapping and auto rerun; totally open system; intelligent aliquotting; consistent turnaround time results</p>	<p>open system sorts and sends all specimens to all vendors' analyzers, anywhere in lab; users can change vendors without changing automation; scalable system allows customers to expand and reconfigure automation at any time</p>

Tabulation does not represent an endorsement by the College of American Pathologists.

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Part 6 of 17	m-u-t America Karsten Wittmann kwittmann@mut-group.com 3931 Deep Rock Road, Henrico, VA 23233 804-620-4029 www.mut-group.com	m-u-t America Karsten Wittmann kwittmann@mut-group.com 3931 Deep Rock Road, Henrico, VA 23233 804-620-4029 www.mut-group.com
See captodayonline.com/productguides for an interactive version of guide		
Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia	HCTS2000 MK3 racking device/2008/— —	HCTS2000 MK2 automated sorter/2007/— —
Automation products that are available • Pre-analytical processor/Total laboratory automation • Automated functions: Accessioning/Track load/Centrifugation/Decapping • Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing • Automated functions: Storage retrieval/Intelligent sample routing • SW: Dedicated Process Control/Middleware control using LIS/Architecture • Company has dedicated automation support team/Remote system monitoring	yes/no yes/yes/no/no yes/no/no/no no/yes yes/yes/closed yes/yes	yes/no yes/no/no/no yes/no/no/no no/yes yes/yes/closed yes/yes
Software features/functionality • Patient demographics and insurance data/Rules-based architecture • Supports data retrieval/Internet connectivity • Online real-time help system/QC/Stats and management reports • Evaluates validity and releasability of results from automated analyzers • Specimen tracking/Priority processing/Random-access spec. movement • Supports accession number redundancy (duplicate specimen ID) • Supports specimen carrier and level identification • Unique bar-code number per container required • Specimen routing/Multistop routing (one tube to multiple workstations) • Specimen scheduling/Instrument scheduling • Routes test to workstation/Automatic reflex, repeat, dilutions • Supports multiple HW configuration/Supports other proprietary transport. HW • Sample storage and retrieval SW/Supports approved CLSI standards	LIS feature/automation SW feature — automation SW feature/—/— — automation SW feature/automation SW feature/— automation SW feature — — automation SW feature/automation SW feature — — automation SW feature/— —/automation SW feature	LIS feature/automation SW feature — automation SW feature/—/— — automation SW feature/automation SW feature/— automation SW feature — — automation SW feature/automation SW feature — — automation SW feature/— —/automation SW feature
LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC can be used to identify tests when communicating with LIS	McKesson, Soft, DI, VA, DHCP/ASTM/no	McKesson, Soft, DI, VA, DHCP/ASTM/no
Transportation systems available • Model/Dimensions* (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Containers device accommodates/Average throughput in cm per second • Supports automatic rerouting for reflex-repeat-dilutions • Modular HW/Installed options/Device can operate in track and manual mode • Required utilities/Required maintenance • Carrier type/Scalable system	no — — — — — —	no — — — — — —
Automated centrifugation available • Model/Dimensions (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Maximum throughput/Containers device accommodates • Can identify tube types for custom programmed rate and spin times per run • More than one centrifuge can be connected to track system • For multi-unit centrifuge, each centrifuge operates independently for rate and time • Maintenance required	no — — — — — —	no — — — — — —
Automated input/accessioning available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Dedicated lanes for stat samples • Maximum No. of samples that can be loaded/Maintenance required	yes HCTS2000 MK3/61 × 98 × 53 inches/yes/800–2,000 16, 13 × 100; 16, 13 × 75, 8–19 mm diameter × 75–120 mm height/no 550/daily, monthly	yes HTS2000 MK2/48 × 56 × 31 inches/yes/2,000 16, 13 × 100; 16, 13 × 75, 8–19 mm diameter × 75–120 mm height/no 550/daily, monthly
Automated decapping available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required • Removes multiple size tube caps per run/Removes screw type sample caps	no — — —	no — — —
Automated sorting available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Software can sort by	yes HCTS2000 MK3/61 × 98 × 53 inches/yes/800–2,000 16, 13 × 100; 16, 13 × 75, 8–19 mm dia. × 75–120 mm ht/specimen, method, output	yes HCTS2000 MK2/48 × 56 × 31 inches/yes/2,000 16, 13 × 100; 16, 1 × 75, others/specimen type, bar code, cap color, method, others
Specimen integrity monitor available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required	no — —	no — —
Automated aliquotting available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates • Inspects samples for bar code/Detects and reports clots in specimen • Detects and reports quantity not sufficient specimens/Maintenance required	no — — — —	no — — — —
Instrument (analyzer) interfaces • Rules-based instrument interface control subsystem • Process control of instrument via control subsystem Physical/hardware (instrument/specimen) interface • Hematology/Chemistry/Coagulation • Immunoassay/Urinalysis	no no — no/no/no no/no	no no — no/no/no no/no
Instruments to which your system or product is interfaced	—	—
Other robotic products/components to which system or product is linked	—	—
Automated recapper or sealer available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput* • Recaps-seals multiple size tubes simult./Containers device accommodates • Maintenance required	no — — —	no — — —
Automated storage and retrieval available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput* • Containers device accommodates/Connects to the track • Room temperature/Minimum and maximum number of tubes stored per module • Multiple size tubes can be stored in the same module/Maintenance required • Refrigerated storage and retrieval capability Longitudinal upgrade pathway or plan to protect users' investments	no — — — — — independent of analyzer company; module can be upgraded with options	no — — — — — independent of analyzer company; module can be upgraded with options
Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly	<2 days/m-u-t America/24-7 no/no	<2 days/m-u-t America/24-7 no/no
List price Individual list prices for components • Process control SW/Transportation systems/Auto. centrifugation • Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval • Specimen integrity monitor/Automated aliquot • Instrument (analyzer) interfaces/Automated recap	\$161,600 included/—/— —/—/included/— — —	\$116,000 included/—/— —/—/included/— — —
Distinguishing features (supplied by company) * For basic building block unit ** Average throughput in specimen containers per hour per device Note: a dash in lieu of an answer means company did not answer question or question is not applicable	bulk loading of tubes; tubes are placed into analyzer racks; sorting to output bins and analyzer racks	no robotic arms, high-throughput yields and reliability with ease of opera- tion and installation; users can pour sample tubes into hopper, eliminating shuffling of tubes in and out of racks in lab reception areas; simplicity and flexibility of sorting rules and methods

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Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia	enGen Laboratory Automation System/2001/— 106 worldwide	cobas p 312 pre-analytical system/2012/— —
Automation products that are available <ul style="list-style-type: none"> Pre-analytical processor/Total laboratory automation Automated functions: Accessioning/Track load/Centrifugation/Decapping Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing Automated functions: Storage retrieval/Intelligent sample routing SW: Dedicated Process Control/Middleware control using LIS/Architecture Company has dedicated automation support team/Remote system monitoring 	yes/yes yes/yes/yes/yes yes/yes/no/no in development/yes yes/yes/open yes/yes	yes/no yes/no/no/yes yes/no/no/no no/yes yes/yes/open yes/yes
Software features/functionality <ul style="list-style-type: none"> Patient demographics and insurance data/Rules-based architecture Supports data retrieval/Internet connectivity Online real-time help system/QC/Stats and management reports Evaluates validity and releasability of results from automated analyzers Specimen tracking/Priority processing/Random-access spec. movement Supports accession number redundancy (duplicate specimen ID) Supports specimen carrier and level identification Unique bar-code number per container required Specimen routing/Multistop routing (one tube to multiple workstations) Specimen scheduling/Instrument scheduling Routes test to workstation/Automatic reflex, repeat, dilutions Supports multiple HW configuration/Supports other proprietary transport. HW Sample storage and retrieval SW/Supports approved CLSI standards 	automation SW feature/automation SW feature automation SW feature/automation SW feature —/automation SW feature/automation SW feature automation SW feature automation SW feature/automation SW feature/automation SW feature — automation SW feature automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/— automation SW feature/— automation SW feature/automation SW feature automation SW feature/—	automation SW feature/automation SW feature automation SW feature/— automation SW feature/—/automation SW feature — automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature automation SW feature automation SW feature/automation SW feature automation SW feature/— automation SW feature/— automation SW feature/automation SW feature —/automation SW feature
LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC (Logical Observation Identifiers Names and Codes) can be used to identify tests when communicating with LIS	Cerner, SCC, Sunquest, McKesson, DI, VA, CHCS, Meditech, Orchard, others/ HL7, ASTM/yes	Cerner, MCS, Medat, Syspek, MIPS, Providens, Bayer, Molis, Omega, McKesson, Vertex, Zanacore, DI, Cirrus, SCC Soft, Nyantech, MCS Promed, Swisslab, Melos, IDAA, Syscomp, OSM, others/ASTM and system-specific dynamic interface/no
Transportation systems available <ul style="list-style-type: none"> Model/Dimensions* (H x W x D)/Conforms to CLSI Stand. Auto 1-5 Containers device accommodates/Average throughput in cm per second Supports automatic rerouting for reflex-repeat-dilutions Modular HW/Installed options/Device can operate in track and manual mode Required utilities/Required maintenance Carrier type/Scalable system 	yes Covered Conveyor/600–2,400 mm sections/yes 16, 13 x 100; 16, 13 x 75/10 yes yes/floor mounted/yes compressed air, electricity/annually single specimen container per carrier/yes	yes cobas p 312 pre-analytical system/—/yes 16, 13 x 100; 16, 13 x 75/— yes, when recursive workflow capabilities are required no/—/— compressed air, electricity/weekly, monthly single and multiple (up to 150) specimen/no
Automated centrifugation available <ul style="list-style-type: none"> Model/Dimensions (H x W x D)/Conforms to CLSI Stand. Auto 1-5 Maximum throughput/Containers device accommodates Can identify tube types for custom programmed rate and spin times per run More than one centrifuge can be connected to track system For multi-unit centrifuge, each centrifuge operates independently for rate and time Maintenance required Automated input/accessioning available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** Containers device accommodates/Dedicated lanes for stat samples Maximum No. of samples that can be loaded/Maintenance required Automated decapping available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** Containers device accommodates/Maintenance required Removes multiple size tube caps per run/Removes screw type sample caps Automated sorting available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** Containers device accommodates/Software can sort by Specimen integrity monitor available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** Containers device accommodates/Maintenance required Automated aliquotting available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** Containers device accommodates Inspects samples for bar code/Detects and reports clots in specimen Detects and reports quantity not sufficient specimens/Maintenance required 	yes centrifuge module/1,900 x 1,200 x 1,375 mm/yes 400; 96-tube capacity/13 x 100; 13 x 75 yes yes yes quarterly yes rack entry-exit module/1,900 x 1,200 x 965 mm/yes/500 16, 13 x 100; 16, 13 x 75/yes 600/annually yes decapper module/1,600 x 600 x 965 mm/yes/600 16, 13 x 100; 16, 13 x 75/annually yes/yes yes rack exit-entry module/1,900 x 1,200 x 965 mm/yes/500 16, 13 x 100; 16, 13 x 75/specimen, method, output yes via Vitros 5,1 FS 3600, 5600/—/—/— 16, 13 x 100; 16, 13 x 75/weekly, monthly, annually yes aliquoter and labeler module/1,900 x 1,500 x 965 mm/yes/200 16, 13 x 100; 16, 13 x 75 yes/yes yes/quarterly	no — — — — — yes cobas p 312/—/yes/450 per hour 16, 13 x 100; 16, 13 x 75/yes (user) 600/monthly yes cobas p 312/—/yes/450 per hour 16, 13 x 100; 16, 13 x 75/weekly yes/yes yes cobas p 312/—/yes/450 per hour 16, 13 x 100; 16, 13 x 75/method, output priority no — — no — — — —
Instrument (analyzer) interfaces <ul style="list-style-type: none"> Rules-based instrument interface control subsystem Process control of instrument via control subsystem Physical/hardware (instrument/specimen) interface <ul style="list-style-type: none"> Hematology/Chemistry/Coagulation Immunoassay/Urinalysis 	yes — robotic arm interface/point-of-reference sampling/robotic arm interface point-of-reference sampling/—	yes yes — —
Instruments to which your system or product is interfaced Other robotic products/components to which system or product is linked	Vitros 5600, 4600, 3600, 5,1 FS systems; interfaces with some coagulation and hematology systems —	— —
Automated recapper or sealer available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput* Recaps-seals multiple size tubes simul./Containers device accommodates Maintenance required 	recapper recapper module/1,600 x 600 x 965 mm/yes/500 yes/16, 13 x 100; 16, 13 x 75 annually	no — — —
Automated storage and retrieval available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput* Containers device accommodates/Connects to the track Room temperature/Minimum and maximum number of tubes stored per module Multiple size tubes can be stored in the same module/Maintenance required Refrigerated storage and retrieval capability Longitudinal upgrade pathway or plan to protect users' investments Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly	yes, in development ES Flex module/1,900 x 1,200 x 965 mm/yes/600 16, 13 x 100; 16, 13 x 75/yes yes/512–800 depending on tube diameter yes/annually no customized automation offering, enGen can be reconfigured or upgraded as needs change; SW configuration updates available periodically depends on configurable customizations/depends on service contract with Ortho no/no	no — — — — — independent of any analyzer company, Roche/PVT modules can be upgraded 3 days/Roche/24–7 no/—
List price Individual list prices for components <ul style="list-style-type: none"> Process control SW/Transportation systems/Auto. centrifugation Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval Specimen integrity monitor/Automated aliquot Instrument (analyzer) interfaces/Automated recap 	varies — — — —	— — — — —
Distinguishing features (supplied by company) <i>* For basic building block unit</i> <i>** Average throughput in specimen containers per hour per device</i>	customizable: systems designed to fit in existing floor space while providing Lean workflow; configurable: systems designed to interface with several lab analyzers; systems grow with the lab	decaps, sorts, and archives all sample tubes for chemistry, immunoassay, hematology, coagulation, and urinalysis testing; high level of functionality on a small compact footprint

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<p>Part 8 of 17</p> <p>See captodayonline.com/productguides for an interactive version of guide</p>	<p>Roche Diagnostics Jeremy Kiger jeremy.kiger@roche.com 9115 Hague Road, Indianapolis, IN 46250 317-521-4751 www.roche-diagnostics.us</p>	<p>Roche Diagnostics Jeremy Kiger jeremy.kiger@roche.com 9115 Hague Road, Indianapolis, IN 46250 317-521-4751 www.roche-diagnostics.us</p>
<p>Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia</p>	<p>Aliquoting System cobas p612/2002/15 42/165/59</p>	<p>Workstation cobas p612 and cobas p512 connected to EC1/2003/5 5/25/3</p>
<p>Automation products that are available</p> <ul style="list-style-type: none"> • Pre-analytical processor/Total laboratory automation • Automated functions: Accessioning/Track load/Centrifugation/Decapping • Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing • Automated functions: Storage retrieval/Intelligent sample routing • SW: Dedicated Process Control/Middleware control using LIS/Architecture • Company has dedicated automation support team/Remote system monitoring 	<p>yes/yes yes/yes (as option)/yes/yes yes/yes/yes/yes yes/yes yes/yes/closed yes/yes</p>	<p>yes/yes yes/yes/yes/yes yes/yes/yes/yes yes/yes yes/yes/closed yes/yes</p>
<p>Software features/functionality</p> <ul style="list-style-type: none"> • Patient demographics and insurance data/Rules-based architecture • Supports data retrieval/Internet connectivity • Online real-time help system/QC/Stats and management reports • Evaluates validity and releasability of results from automated analyzers • Specimen tracking/Priority processing/Random-access spec. movement • Supports accession number redundancy (duplicate specimen ID) • Supports specimen carrier and level identification • Unique bar-code number per container required • Specimen routing/Multistop routing (one tube to multiple workstations) • Specimen scheduling/Instrument scheduling • Routes test to workstation/Automatic reflex, repeat, dilutions • Supports multiple HW configuration/Supports other proprietary transport. HW • Sample storage and retrieval SW/Supports approved CLSI standards 	<p>automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature/automation SW feature — automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature — automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/— automation SW feature/automation SW feature automation SW feature/automation SW feature</p>	<p>automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature/automation SW feature — automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature — automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/— automation SW feature/automation SW feature automation SW feature/automation SW feature</p>
<p>LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC (Logical Observation Identifiers Names and Codes) can be used to identify tests when communicating with LIS</p>	<p>Cerner, MCS, Medat, Syspek, MIPS, Providens, Bayer, Molis, Omega, Misys, Vertex, Zanacore, DI, Cirrus, SCC Soft, Nyantech, MCS Promed, Swisslab, Melos, IDAA, Syscomp, OSM, Star LIMS, others/ASTM and system-specific dynamic interface/no</p>	<p>Cerner, MCS, Medat, Syspek, MIPS, Providens, Bayer, Molis, Omega, Misys, Vertex, Zanacore, DI, Cirrus, SCC Soft, Nyantech, MCS Promed, Swisslab, Melos, IDAA, Syscomp, OSM, Star LIMS, others/ASTM and system-specific dynamic interface/no</p>
<p>Transportation systems available</p> <ul style="list-style-type: none"> • Model/Dimensions* (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Containers device accommodates/Average throughput in cm per second • Supports automatic rerouting for reflex-repeat-dilutions • Modular HW/Installed options/Device can operate in track and manual mode • Required utilities/Required maintenance • Carrier type/Scalable system 	<p>yes transport built into the instrument/—/yes 16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 mm up to 15.5 × 108 mm/— no yes/—/yes electricity/weekly, quarterly single specimen container per carrier/yes</p>	<p>yes transport built into the instrument/—/yes 16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 mm up to 15.5 × 108 mm/— no yes/floor mounted/yes compressed air, electricity/weekly, quarterly single and multiple (5) specimen container per carrier/yes</p>
<p>Automated centrifugation available</p> <ul style="list-style-type: none"> • Model/Dimensions (H × W × D)/Conforms to CLSI Stand. Auto 1-5 <ul style="list-style-type: none"> • Maximum throughput/Containers device accommodates • Can identify tube types for custom programmed rate and spin times per run • More than one centrifuge can be connected to track system • For multi-unit centrifuge, each centrifuge operates independently for rate and time • Maintenance required <p>Automated input/accessioning available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Dedicated lanes for stat samples • Maximum No. of samples that can be loaded/Maintenance required <p>Automated decapping available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required • Removes multiple size tube caps per run/Removes screw type sample caps <p>Automated sorting available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Software can sort by <p>Specimen integrity monitor available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required <p>Automated aliquotting available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates • Inspects samples for bar code/Detects and reports clots in specimen • Detects and reports quantity not sufficient specimens/Maintenance required 	<p>yes single (EC1)/61.4 × 78.3 × 83.6 inches; EC2: 85.8 × 79.3 × 78.7 inches/yes</p> <p>EC1: 380 tubes per hour/16, 13 × 100; 16, 13 × 75, others yes yes yes weekly, quarterly yes input unit as part of system/78.74 × 33.47 × 69.29 inches/yes/up to 1,200 16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 mm up to 15.5 × 108 mm/yes 600/daily, quarterly yes decapping module as part of system/14.96 × 12.60 × 5.90 inches/yes/up to 1,200 16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 to 15.5 × 108 mm/daily, quarterly yes/yes yes output sorter as part of system/71.65 × 55.90 × 55.11 inches/yes/up to 1,200 16, 13×100; 16, 13×75; 11.5×65.5 to 15.5×108 mm/specimen, method, output yes Quality Check Unit QS I/11.4 × 19.7 × 14.0 inches/yes/850 16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 to 15.5 × 108 mm/daily, quarterly yes aliquoting unit as part of system/125 × 73.2 × 78.7 inches/yes/655 16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 to 15.5 × 108 mm yes/yes yes/daily, quarterly</p>	<p>yes single (EC1)/61.4 × 78.3 × 83.6 inches/yes</p> <p>EC1: 380 tubes per hour/16, 13 × 100; 16, 13 × 75, others yes yes yes daily, quarterly yes input unit as part of instrument/78.74 × 33.47 × 69.29 inches/yes/up to 1,200 16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 mm up to 15.5 × 108 mm/yes EC1: 150 tubes/daily, quarterly yes decapping module as part of instrument/14.96 × 12.60 × 5.90 in./yes/up to 1,200 16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 to 15.5 × 108 mm/daily, quarterly yes/yes yes part of Aliquoting System cobas p612 or Sorting System cobas p512/—/yes/up to 1,200 16, 13×100; 16, 13×75; 11.5×65.5 to 15.5×108 mm/specimen, method, output yes Quality Check Unit QS I/11.4 × 19.7 × 14.0 inches/yes/850 16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 to 15.5 × 108 mm/daily, quarterly yes aliquoting unit as part of Aliquoting System cobas p612/125 × 73.2 × 78.7 in./yes/655 16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 to 15.5 × 108 mm yes/yes yes/daily, quarterly</p>
<p>Instrument (analyzer) interfaces</p> <ul style="list-style-type: none"> • Rules-based instrument interface control subsystem • Process control of instrument via control subsystem <p>Physical/hardware (instrument/specimen) interface</p> <ul style="list-style-type: none"> • Hematology/Chemistry/Coagulation • Immunoassay/Urinalysis 	<p>yes no no/no/no no/no</p>	<p>yes no no/no/no no/no</p>
<p>Instruments to which your system or product is interfaced Other robotic products/components to which system or product is linked</p>	<p>— —</p>	<p>— —</p>
<p>Automated recapper or sealer available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Recaps-seals multiple size tubes simult./Containers device accommodates • Maintenance required 	<p>sealer recapping module as part of system/13.39 × 12.20 × 8.66 inches/yes/up to 1,200 yes/16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 to 15.5 × 108 mm daily, quarterly</p>	<p>sealer recapping module/13.39 × 12.20 × 8.66 inches/yes/up to 1,200 yes/16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 to 15.5 × 108 mm daily, quarterly</p>
<p>Automated storage and retrieval available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Connects to the track • Room temperature/Minimum and maximum number of tubes stored per module • Multiple size tubes can be stored in the same module/Maintenance required • Refrigerated storage and retrieval capability <p>Longitudinal upgrade pathway or plan to protect users' investments</p>	<p>yes as part of system (output sorter), up to 41 workplaces/—/yes/up to 1,200 16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 to 15.5 × 108 mm/yes no/1,200 yes/daily, quarterly no independent of any analyzer company, Roche/PVT modules can be upgraded</p>	<p>yes implemented into system, up to 41 workplaces/—/yes/up to 1,200 16, 13 × 100; 16, 13 × 75; 11.5 × 65.5 to 15.5 × 108 mm/no no/1,200 yes/— no independent of any analyzer company, Roche/PVT modules can be upgraded</p>
<p>Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly</p>	<p>~1–2 weeks/Roche Diagnostics/daily 8 AM–5 PM (EST) and 24–7 upon request no/no</p>	<p>~1–2 weeks/Roche Diagnostics/daily 8 AM–5 PM (EST) and 24–7 upon request no/no</p>
<p>List price</p> <p>Individual list prices for components</p> <ul style="list-style-type: none"> • Process control SW/Transportation systems/Auto. centrifugation • Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval • Specimen integrity monitor/Automated aliquot • Instrument (analyzer) interfaces/Automated recap 	<p>— —/included/—/included included/included/included/— —/included —</p>	<p>— —/included/included/included included/included/included/— —/included as part of Aliquoting System cobas p612 —</p>
<p>Distinguishing features (supplied by company) * For basic building block unit ** Average throughput in specimen containers per hour per device</p>	<p>basic platform can be configured for each customer routine workflow using many vendor sample carriers for input and output sorting and archiving; recursive workflow allows samples to be processed multiple times</p>	<p>basic platform can be configured for each customer routine workflow using many vendor sample carriers for input and output sorting and archiving; recursive workflow allows samples to be processed multiple times</p>

Laboratory automation systems and workcells

Part 9 of 17 <i>See captodayonline.com/productguides for an interactive version of guide</i>	Roche Diagnostics Jeremy Kiger jeremy.kiger@roche.com 9115 Hague Road, Indianapolis, IN 46250 317-521-4751 www.roche-diagnostics.us	Roche Diagnostics Jeremy Kiger jeremy.kiger@roche.com 9115 Hague Road, Indianapolis, IN 46250 317-521-4751 www.roche-diagnostics.us
Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia	Sorting System cobas p512/2001/23 28/112/20	Modular Pre-Analytics EVO/2000/72 172/353/265
Automation products that are available <ul style="list-style-type: none"> Pre-analytical processor/Total laboratory automation Automated functions: Accessioning/Track load/Centrifugation/Decapping Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing Automated functions: Storage retrieval/Intelligent sample routing SW: Dedicated Process Control/Middleware control using LIS/Architecture Company has dedicated automation support team/Remote system monitoring 	<ul style="list-style-type: none"> yes/yes yes/yes/yes/yes yes/no/no/yes yes/yes yes/yes/closed yes/yes 	<ul style="list-style-type: none"> yes/yes yes/yes/yes/yes yes/yes/yes/yes yes/yes yes/yes/open and closed yes/yes
Software features/functionality <ul style="list-style-type: none"> Patient demographics and insurance data/Rules-based architecture Supports data retrieval/Internet connectivity Online real-time help system/QC/Stats and management reports Evaluates validity and releasability of results from automated analyzers Specimen tracking/Priority processing/Random-access spec. movement Supports accession number redundancy (duplicate specimen ID) Supports specimen carrier and level identification Unique bar-code number per container Specimen routing/Multistop routing (one tube to multiple workstations) Specimen scheduling/Instrument scheduling Routes test to workstation/Automatic reflex, repeat, dilutions Supports multiple HW configuration/Supports other proprietary transport. HW Sample storage and retrieval SW/Supports approved CLSI standards 	<ul style="list-style-type: none"> automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature/automation SW feature — automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature — automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/— automation SW feature/automation SW feature automation SW feature/automation SW feature 	<ul style="list-style-type: none"> automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/— automation SW feature/automation SW feature automation SW feature/automation SW feature
LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC (Logical Observation Identifiers Names and Codes) can be used to identify tests when communicating with LIS	Cerner, MCS, Medat, Syspek, MIPS, Providens, Bayer, Molis, Omega, McKesson, Vertex, Zanacore, DI, Cirrus, SCC Soft, Nyantech, MCS Promed, Swisslab, Melos, IDAA, Syscomp, OSM, Star LIMS, others/ASTM and system-specific dynamic interface/no	Cerner, MCS, Medat, Syspek, MIPS, Providens, Bayer, Molis, Omega, McKesson, Vertex, Zanacore, DI, Cirrus, SCC Soft, Nyantech, MCS Promed, Swisslab, Melos, IDAA, Syscomp, OSM, Star LIMS, others/LIS to LAS, HL7, ASTM/no
Transportation systems available <ul style="list-style-type: none"> Model/Dimensions* (H x W x D)/Conforms to CLSI Stand. Auto 1-5 Containers device accommodates/Average throughput in cm per second Supports automatic rerouting for reflex-repeat-dilutions Modular HW/Installed options/Device can operate in track and manual mode Required utilities/Required maintenance Carrier type/Scalable system 	<ul style="list-style-type: none"> yes transport built into the instrument/—/yes 16, 13 x 100; 16, 13 x 75; 11.5 x 65.5 to 15.5 x 108 mm/— no yes/—/yes electricity/daily, quarterly single specimen container per carrier/yes 	<ul style="list-style-type: none"> yes MPA (A, B, C)/A: 4.6 x 15 x 3.5 ft.; B: 4.6 x 18 x 3.5 ft.; C: 4.6 x 9 x 3.5 feet/yes 16, 13 x 100; 16, 13 x 75; 13 x 92, Greiner FBT, others/400 tubes per hour no yes/floor mounted/yes electricity/daily, quarterly multiple specimen (5) container per carrier/yes
Automated centrifugation available <ul style="list-style-type: none"> Model/Dimensions (H x W x D)/Conforms to CLSI Stand. Auto 1-5 Maximum throughput/Containers device accommodates Can identify tube types for custom programmed rate and spin times per run More than one centrifuge can be connected to track system For multi-unit centrifuge, each centrifuge operates independently for rate and time Maintenance required Automated input/accessioning available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** Containers device accommodates/Dedicated lanes for stat samples Maximum No. of samples that can be loaded/Maintenance required Automated decapping available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** Containers device accommodates/Maintenance required Removes multiple size tube caps per run/Removes screw type sample caps Automated sorting available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** Containers device accommodates/Software can sort by Specimen integrity monitor available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** Containers device accommodates/Maintenance required Automated aliquotting available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** Containers device accommodates Inspects samples for bar code/Detects and reports clots in specimen Detects and reports quantity not sufficient specimens/Maintenance required 	<ul style="list-style-type: none"> yes single (EC1)/61.4x78.3x83.6 inches; EC2: 85.8x79.3x78.7 inches/yes EC1: 380 tubes per hour/16, 13 x 100; 16, 13 x 75, others yes yes yes daily, quarterly yes input unit as part of system/78.74 x 33.47 x 69.29 inches/yes/up to 1,200 16, 13 x 100; 16, 13 x 75; 11.5 x 65.5 mm up to 15.5 x 108 mm/yes 600/daily, quarterly yes decapping module as part of system/14.96 x 12.60 x 5.90 inches/yes/up to 1,200 16, 13 x 100; 16, 13 x 75; 11.5 x 65.5 to 15.5 x 108 mm/daily, quarterly yes/yes yes output sorter as part of system/71.65 x 55.90 x 55.11 inches/yes/up to 1,200 16, 13x100; 16, 13x75; 11.5x65.5 to 15.5x108 mm/specimen, method, output yes Quality Check Unit QS I/11.4 x 19.7 x 14.0 inches/yes/850 16, 13 x 100; 16, 13 x 75; 11.5 x 65.5 to 15.5 x 108 mm/daily, quarterly no — — — — 	<ul style="list-style-type: none"> yes standard centrifuge/3 x 2.5 x 3.5 feet/yes 250/16, 13 x 100; 16, 13 x 75 yes yes no daily, quarterly yes standard input buffer/42 x 38 x 41 inches/yes/160 racks 16, 13 x 100; 16, 13 x 75/yes 300/daily, quarterly yes standard decapper/49 x 18 x 41 inches/yes/80 racks 16, 13x100; 16, 13x75; rubber, Hemogard, twist-off/daily, quarterly yes/yes yes standard sorter/36.6 x 11.8 x 41 inches/yes/80 racks 16, 13 x 100; 16, 13 x 75; 13x92, Greiner FBT, others/specimen, method, output yes standard aliquoter/53 x 42 x 41 inches/yes/80 racks 16, 13 x 100; 16, 13 x 75; 13x92, Greiner FBT, Greiver, others/daily, quarterly yes standard aliquoter/53 x 42 x 41 inches/yes/80 racks 16, 13 x 100; 16, 13 x 75; 13x92, Greiner FBT, others yes/yes yes/daily, quarterly
Instrument (analyzer) interfaces <ul style="list-style-type: none"> Rules-based instrument interface control subsystem Process control of instrument via control subsystem Physical/hardware (instrument/specimen) interface <ul style="list-style-type: none"> Hematology/Chemistry/Coagulation Immunoassay/Urinalysis 	<ul style="list-style-type: none"> yes no no/no/no no/no 	<ul style="list-style-type: none"> yes yes no/point-of-reference sampling/no point-of-reference sampling/point-of-reference sampling
Instruments to which your system or product is interfaced Other robotic products/components to which system or product is linked	<ul style="list-style-type: none"> — — 	<ul style="list-style-type: none"> Hitachi, Stago Hitachi, Stago
Automated recapper or sealer available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** Recaps-seals multiple size tubes simult./Containers device accommodates Maintenance required 	<ul style="list-style-type: none"> sealer recapping module as part of system/13.39 x 12.20 x 8.66 inches/yes/up to 1,200 yes/16, 13 x 100; 16, 13 x 75; 11.5 x 65.5 to 15.5 x 108 mm daily, quarterly 	<ul style="list-style-type: none"> recapper standard recapper/50 x 17.5 x 41 inches/yes/80 racks yes/16, 13 x 100; 16, 13 x 75, 13 x 92, Greiner FBT, Greiver, others daily, quarterly
Automated storage and retrieval available <ul style="list-style-type: none"> Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** Containers device accommodates/Connects to the track Room temperature/Minimum and maximum number of tubes stored per module Multiple size tubes can be stored in the same module/Maintenance required Refrigerated storage and retrieval capability Longitudinal upgrade pathway or plan to protect users' investments Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly 	<ul style="list-style-type: none"> yes archiving included as part of system (output sorter), up to 41 workspaces/—/yes/up to 1,200 16, 13 x 100; 16, 13 x 75; 11.5 x 65.5 mm up to 15.5 x 108 mm/yes no/up to 1,200 yes/daily, quarterly no independent of any analyzer company, Roche/PVT modules can be upgraded ~1 week/Roche Diagnostics/daily 8 AM–5 PM (EST); 24–7 upon request no/no 	<ul style="list-style-type: none"> yes p501, p701/p501: 5.3 feet x 14 feet; p701: 5.3 feet x 17.6 feet/yes/80 racks 16, 13 x 100; 16, 13 x 75, 13 x 92, Greiner FBT, Greiver pour-off tube, others/yes no/p501: 13,500; p701: 27,000 yes/daily, quarterly yes support for a minimum of 10 years after production up to 2 weeks/Roche Diagnostics phone and engineering field support/24-7 no/no
List price Individual list prices for components <ul style="list-style-type: none"> Process control SW/Transportation systems/Auto. centrifugation Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval Specimen integrity monitor/Automated aliquot Instrument (analyzer) interfaces/Automated recap 	<ul style="list-style-type: none"> — —/included/—/included included/included/included/— — — 	<ul style="list-style-type: none"> — included/included/included included/included/included/included included/included included/included
Distinguishing features (supplied by company) <i>* For basic building block unit</i> <i>** Average throughput in specimen containers per hour per device</i> <i>Note: a dash in lieu of an answer means company did not answer question or question is not applicable</i>	<ul style="list-style-type: none"> basic platform can be configured for each customer's routine workflow using many vendor sample carriers for input and output sorting and archiving; recursive workflow allows samples to be processed multiple times; quality module QS I for monitoring specimen integrity and measuring volume 	<ul style="list-style-type: none"> scalable and flexible to fit customer needs and facility space requirements; programmed and personalized to customer workflow requirements; three models can be configured in 100+ standard layouts, connecting up to 12 chemistry-immunochemistry modules

Laboratory automation systems and workcells

Part 10 of 17	Roche Diagnostics	Roche Diagnostics
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Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia	cobas p501 (storage and retrieval)/2009/3 1/11/2	cobas p701 (storage and retrieval)/2009/4 4/8/2
Automation products that are available		
• Pre-analytical processor/Total laboratory automation	no/no	no/no
• Automated functions: Accessioning/Track load/Centrifugation/Decapping	no/no/no/yes	no/no/no/yes
• Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing	no/no/no/yes	no/no/no/yes
• Automated functions: Storage retrieval/Intelligent sample routing	yes/no	yes/no
• SW: Dedicated Process Control/Middleware control using LIS/Architecture	yes/yes/closed	yes/yes/closed
• Company has dedicated automation support team/Remote system monitoring	yes/yes	yes/yes
Software features/functionality		
• Patient demographics and insurance data/Rules-based architecture	—/automation SW feature	—/automation SW feature
• Supports data retrieval/Internet connectivity	automation SW feature/automation SW feature	automation SW feature/automation SW feature
• Online real-time help system/QC/Stats and management reports	automation SW feature/automation SW feature/automation SW feature	automation SW feature/automation SW feature/automation SW feature
• Evaluates validity and releasability of results from automated analyzers	—	—
• Specimen tracking/Priority processing/Random-access spec. movement	automation SW feature/automation SW feature/—	automation SW feature/automation SW feature/—
• Supports accession number redundancy (duplicate specimen ID)	automation SW feature	automation SW feature
• Supports specimen carrier and level identification	—	—
• Unique bar-code number per container required	automation SW feature	automation SW feature
• Specimen routing/Multistop routing (one tube to multiple workstations)	—	—
• Specimen scheduling/Instrument scheduling	automation SW feature/—	automation SW feature/—
• Routes test to workstation/Automatic reflex, repeat, dilutions	—	—
• Supports multiple HW configuration/Supports other proprietary transport. HW	—	—
• Sample storage and retrieval SW/Supports approved CLSI standards	automation SW feature/automation SW feature	automation SW feature/automation SW feature
LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC (Logical Observation Identifiers Names and Codes) can be used to identify tests when communicating with LIS	Cerner, McKesson, SCC Soft/HL7/no	Cerner, McKesson, SCC Soft/HL7/no
Transportation systems available	no	no
• Model/Dimensions* (H × W × D)/Conforms to CLSI Stand. Auto 1-5	—	—
• Containers device accommodates/Average throughput in cm per second	—	—
• Supports automatic rerouting for reflex-repeat-dilutions	—	—
• Modular HW/Installed options/Device can operate in track and manual mode	—	—
• Required utilities/Required maintenance	—	—
• Carrier type/Scalable system	—	—
Automated centrifugation available	no	no
• Model/Dimensions (H × W × D)/Conforms to CLSI Stand. Auto 1-5	—	—
• Maximum throughput/Containers device accommodates	—	—
• Can identify tube types for custom programmed rate and spin times per run	—	—
• More than one centrifuge can be connected to track system	—	—
• For multi-unit centrifuge, each centrifuge operates independently for rate and time	—	—
• Maintenance required	—	—
Automated input/accessioning available	yes	yes
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	manual and connected to Roche automation/14 × 5.3 × 7.5 feet/yes/400	manual and connected to Roche automation/17.5 × 5.3 × 7.5 feet/yes/400
• Containers device accommodates/Dedicated lanes for stat samples	16, 13 × 100; 16, 13 × 75, 11.5 × 65.5 mm–15.5 × 108 mm/—	16, 13 × 100; 16, 13 × 75, 11.5 × 65.5 mm–15.5 × 108 mm/—
• Maximum No. of samples that can be loaded/Maintenance required	300 manual and continuous from MPA/daily, quarterly	300 manual and continuous from MPA/daily, quarterly
Automated decapping available	yes	yes
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	decapper as part of system/—/yes/total system is 400	decapper as part of system/—/yes/total system is 400
• Containers device accommodates/Maintenance required	16, 13 × 100; 16, 13 × 75, 11.5 × 65.5 mm–15.5 × 108 mm/daily, quarterly	16, 13 × 100; 16, 13 × 75, 11.5 × 65.5 mm–15.5 × 108 mm/daily, quarterly
• Removes multiple size tube caps per run/Removes screw type sample caps	yes/yes	yes/yes
Automated sorting available	yes	yes
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	sorter as part of system/—/yes/total system is 400	sorter as part of system/—/yes/total system is 400
• Containers device accommodates/Software can sort by	16, 13 × 100; 16, 13 × 75; 13 × 92, Greiner FBT, others/specimen, output	16, 13 × 100; 16, 13 × 75; 13 × 92, Greiner FBT, others/specimen, output
Specimen integrity monitor available	no	no
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	—	—
• Containers device accommodates/Maintenance required	—	—
Automated aliquotting available	no	no
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	—	—
• Containers device accommodates	—	—
• Inspects samples for bar code/Detects and reports clots in specimen	—	—
• Detects and reports quantity not sufficient specimens/Maintenance required	—	—
Instrument (analyzer) interfaces		
• Rules-based instrument interface control subsystem	yes	yes
• Process control of instrument via control subsystem	yes	yes
Physical/hardware (instrument/specimen) interface		
• Hematology/Chemistry/Coagulation	no/no/no	no/no/no
• Immunoassay/Urinalysis	no/no	no/no
Instruments to which your system or product is interfaced Other robotic products/components to which system or product is linked	Roche MPA —	Roche MPA —
Automated recapper or sealer available	recapper	recapper
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	recapper as part of system/—/yes/total system is 400	recapper as part of system/—/yes/total system is 400
• Recaps-seals multiple size tubes simult./Containers device accommodates	yes/16, 13 × 100; 16, 13 × 75, 13 × 92, 11.5 × 65.5 mm–15.5 × 108 mm	yes/16, 13 × 100; 16, 13 × 75, 13 × 92, 11.5 × 65.5 mm–15.5 × 108 mm
• Maintenance required	daily, quarterly	daily, quarterly
Automated storage and retrieval available	yes	yes
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	cobas p501/14 × 5.3 × 7.5 feet/yes/400	cobas p501/17.5 × 5.3 × 7.5 feet/yes/400
• Containers device accommodates/Connects to the track	16, 13 × 100; 16, 13 × 75, 13 × 92, 11.5 × 65.5 mm–15.5 × 108 mm/yes	16, 13 × 100; 16, 13 × 75, 13 × 92, 11.5 × 65.5 mm–15.5 × 108 mm/yes
• Room temperature/Minimum and maximum number of tubes stored per module	no/13,500	no/27,000
• Multiple size tubes can be stored in the same module/Maintenance required	yes/daily, quarterly	yes/daily, quarterly
• Refrigerated storage and retrieval capability	yes	yes
Longitudinal upgrade pathway or plan to protect users' investments	support for a minimum of 10 years after production; product upgrades installed as required	support for a minimum of 10 years after production; product upgrades installed as required
Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly	1 week/Roche/24-7 no/no	1 week/Roche/24-7 no/no
List price	—	—
Individual list prices for components		
• Process control SW/Transportation systems/Auto. centrifugation	included/—/—	included/—/—
• Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval	included/included/included/based on system options	included/included/included/based on system options
• Specimen integrity monitor/Automated aliquot	—	—
• Instrument (analyzer) interfaces/Automated recap	—/included	—/included
Distinguishing features (supplied by company)	13,500-tube storage capacity with multiple storage durations for 13- and 16-mm tubes; automatically disposes of tubes at the expiration of the selected storage duration; accepts tubes for storage from an automatic feed and manual walk up	27,000-tube storage capacity with multiple storage durations for 13- and 16-mm tubes; automatically disposes of tubes at the expiration of the selected storage duration; accepts tubes for storage from an automatic feed and manual walk up
* For basic building block unit		
** Average throughput in specimen containers per hour per device		
Note: a dash in lieu of an answer means company did not answer question or question is not applicable		

Tabulation does not represent an endorsement by the College of American Pathologists.

Laboratory automation systems and workcells

<p>Part 11 of 17</p> <p><i>See captodayonline.com/productguides for an interactive version of guide</i></p>	<p>Sarstedt, Inc. Peter Rumswinkel, VP/GM customerservice@sarstedt.us P. O. Box 468, Newton, NC 28658 800-257-5101 www.sarstedt.com</p>	<p>Sarstedt, Inc. Peter Rumswinkel, VP/GM customerservice@sarstedt.us P. O. Box 468, Newton, NC 28658 800-257-5101 www.sarstedt.com</p>
<p>Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia</p>	<p>DC/RC 900 Flex/2009/— —</p>	<p>HSS High Speed Sorter 1625/2004/— —</p>
<p>Automation products that are available</p> <ul style="list-style-type: none"> • Pre-analytical processor/Total laboratory automation • Automated functions: Accessioning/Track load/Centrifugation/Decapping • Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing • Automated functions: Storage retrieval/Intelligent sample routing • SW: Dedicated Process Control/Middleware control using LIS/Architecture • Company has dedicated automation support team/Remote system monitoring 	<p>yes/no yes/no/no/yes yes/no/no/yes no/yes yes/yes/open yes/yes</p>	<p>yes/no yes/no/no/yes yes/no/no/yes no/yes yes/yes/open yes/yes</p>
<p>Software features/functionality</p> <ul style="list-style-type: none"> • Patient demographics and insurance data/Rules-based architecture • Supports data retrieval/Internet connectivity • Online real-time help system/QC/Stats and management reports • Evaluates validity and releasability of results from automated analyzers • Specimen tracking/Priority processing/Random-access spec. movement • Supports accession number redundancy (duplicate specimen ID) • Supports specimen carrier and level identification • Unique bar-code number per container • Specimen routing/Multistop routing (one tube to multiple workstations) • Specimen scheduling/Instrument scheduling • Routes test to workstation/Automatic reflex, repeat, dilutions • Supports multiple HW configuration/Supports other proprietary transport. HW • Sample storage and retrieval SW/Supports approved CLSI standards 	<p>—/automation SW feature automation SW feature/automation SW feature —/—/automation SW feature — automation SW feature/automation SW feature/automation SW feature automation SW feature — — automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/— —/automation SW feature</p>	<p>—/automation SW feature automation SW feature/automation SW feature —/—/automation SW feature — automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature — automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/— —/automation SW feature</p>
<p>LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC (Logical Observation Identifiers Names and Codes) can be used to identify tests when communicating with LIS</p>	<p>—</p>	<p>—</p>
<p>Transportation systems available</p> <ul style="list-style-type: none"> • Model/Dimensions* (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Containers device accommodates/Average throughput in cm per second • Supports automatic rerouting for reflex-repeat-dilutions • Modular HW/Installed options/Device can operate in track and manual mode • Required utilities/Required maintenance • Carrier type/Scalable system 	<p>no — — — — —</p>	<p>no — — — — —</p>
<p>Automated centrifugation available</p> <ul style="list-style-type: none"> • Model/Dimensions (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Maximum throughput/Containers device accommodates • Can identify tube types for custom programmed rate and spin times per run • More than one centrifuge can be connected to track system • For multi-unit centrifuge, each centrifuge operates independently for rate and time • Maintenance required <p>Automated input/accessioning available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Dedicated lanes for stat samples • Maximum No. of samples that can be loaded/Maintenance required <p>Automated decapping available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required • Removes multiple size tube caps per run/Removes screw type sample caps <p>Automated sorting available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Software can sort by <p>Specimen integrity monitor available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required <p>Automated aliquotting available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates • Inspects samples for bar code/Detects and reports clots in specimen • Detects and reports quantity not sufficient specimens/Maintenance required 	<p>no — — — — — yes —/—/yes/800 16, 13 × 100; 16, 13 × 75; 13 × 65 to 16 × 100/yes 600/daily, annually yes —/—/yes/800 16, 13 × 100; 16, 13 × 75; 13 × 65 to 16 × 100/daily, annually yes/yes yes —/—/yes/800 16, 13 × 100; 16, 13 × 75; 13 × 65 to 16 × 100/specimen, method, output no — — — — —</p>	<p>no — — — — — yes —/—/yes/1,200 16, 13 × 100; 16, 13 × 75; 13 × 65 to 16 × 100/yes 600/daily, annually yes —/—/yes/1,200 16, 13 × 100; 16, 13 × 75; 13 × 65 to 16 × 100/daily, annually yes/yes yes —/—/yes/1,200 16, 13 × 100; 16, 13 × 75; 13 × 65 to 16 × 100/specimen, method, output yes —/—/yes/700 16, 13 × 100; 16, 13 × 75; 13 × 65 to 16 × 100/daily, annually no — — — — —</p>
<p>Instrument (analyzer) interfaces</p> <ul style="list-style-type: none"> • Rules-based instrument interface control subsystem • Process control of instrument via control subsystem <p>Physical/hardware (instrument/specimen) interface</p> <ul style="list-style-type: none"> • Hematology/Chemistry/Coagulation • Immunoassay/Urinalysis 	<p>no no — —</p>	<p>no no — —</p>
<p>Instruments to which your system or product is interfaced Other robotic products/components to which system or product is linked</p>	<p>— —</p>	<p>— —</p>
<p>Automated recapper or sealer available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Recaps-seals multiple size tubes simult./Containers device accommodates • Maintenance required 	<p>recapper —/—/yes/800 yes/16, 13 × 100; 16, 13 × 75; 13 × 65 to 16 × 100 daily, annually</p>	<p>recapper —/—/yes/1,200 yes/16, 13 × 100; 16, 13 × 75; 13 × 65 to 16 × 100 daily, annually</p>
<p>Automated storage and retrieval available</p> <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Connects to the track • Room temperature/Minimum and maximum number of tubes stored per module • Multiple size tubes can be stored in the same module/Maintenance required • Refrigerated storage and retrieval capability <p>Longitudinal upgrade pathway or plan to protect users' investments</p>	<p>no — — — — systems are upgradable</p>	<p>no — — — — systems are upgradable</p>
<p>Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly</p>	<p>3 days/Sarstedt/M-F 8:00 AM–5 PM no/no</p>	<p>2 weeks/Sarstedt/M-F 8:00 AM–5 PM no/no</p>
<p>List price Individual list prices for components</p> <ul style="list-style-type: none"> • Process control SW/Transportation systems/Auto. centrifugation • Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval • Specimen integrity monitor/Automated aliquot • Instrument (analyzer) interfaces/Automated recap 	<p>— — — — —</p>	<p>— — — — —</p>
<p>Distinguishing features (supplied by company) <i>* For basic building block unit</i> <i>** Average throughput in specimen containers per hour per device</i> <i>Note: a dash in lieu of an answer means company did not answer question or question is not applicable</i></p>	<p>small sorter footprint; maximizes floor space; fills a gap experienced by smaller labs when large automation is too expensive; supports multiple runs for routine and archiving</p>	<p>small footprint requires minimal lab space; modular design enables configuration with only the necessary modules and functions; custom sort target and rules are determined by the user</p>

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Laboratory automation systems and workcells

Part 12 of 17 <i>See captodayonline.com/productguides for an interactive version of guide</i>	Sarstedt, Inc. Peter Rumswinkel, VP/GM customerservice@sarstedt.us P. O. Box 468, Newton, NC 28658 800-257-5101 www.sarstedt.com	Sarstedt, Inc. Peter Rumswinkel, VP/GM customerservice@sarstedt.us P. O. Box 468, Newton, NC 28658 800-257-5101 www.sarstedt.com
Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia	Sarstedt PVS/— —	BL 1200 ID/2010 —
Automation products that are available • Pre-analytical processor/Total laboratory automation • Automated functions: Accessioning/Track load/Centrifugation/Decapping • Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing • Automated functions: Storage retrieval/Intelligent sample routing • SW: Dedicated Process Control/Middleware control using LIS/Architecture • Company has dedicated automation support team/Remote system monitoring	yes/no yes/—/no/yes yes/yes/yes/yes no/yes yes/yes/open yes/yes	yes/no yes/no/no/yes yes/yes/yes/yes no/yes yes/yes/open yes/yes
Software features/functionality • Patient demographics and insurance data/Rules-based architecture • Supports data retrieval/Internet connectivity • Online real-time help system/QC/Stats and management reports • Evaluates validity and releasability of results from automated analyzers • Specimen tracking/Priority processing/Random-access spec. movement • Supports accession number redundancy (duplicate specimen ID) • Supports specimen carrier and level identification • Unique bar-code number per container required • Specimen routing/Multistop routing (one tube to multiple workstations) • Specimen scheduling/Instrument scheduling • Routes test to workstation/Automatic reflex, repeat, dilutions • Supports multiple HW configuration/Supports other proprietary transport. HW • Sample storage and retrieval SW/Supports approved CLSI standards	—/automation SW feature automation SW feature/— —/—/automation SW feature — automation SW feature/automation SW feature/— automation SW feature automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/— —/automation SW feature	—/automation SW feature automation SW feature/automation SW feature —/—/automation SW feature — automation SW feature/automation SW feature/automation SW feature automation SW feature — automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/— —/automation SW feature
LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC can be used to identify tests when communicating with LIS	—	—
Transportation systems available • Model/Dimensions* (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Containers device accommodates/Average throughput in cm per second • Supports automatic rerouting for reflex-repeat-dilutions • Modular HW/Installed options/Device can operate in track and manual mode • Required utilities/Required maintenance • Carrier type/Scalable system	no — — — — — —	no — — — — — —
Automated centrifugation available • Model/Dimensions (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Maximum throughput/Containers device accommodates • Can identify tube types for custom programmed rate and spin times per run • More than one centrifuge can be connected to track system • For multi-unit centrifuge, each centrifuge operates independently for rate and time • Maintenance required Automated input/accessioning available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Dedicated lanes for stat samples • Maximum No. of samples that can be loaded/Maintenance required Automated decapping available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required • Removes multiple size tube caps per run/Removes screw type sample caps Automated sorting available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Software can sort by Specimen integrity monitor available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required Automated aliquotting available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates • Inspects samples for bar code/Detects and reports clots in specimen • Detects and reports quantity not sufficient specimens/Maintenance required	no — — — — — — yes —/—/yes/1200 16, 13 × 100; 16, 13 × 75; 13 × 65 to 16 × 100/— up to 600, configuration-dependent/quarterly yes —/configuration-dependent/yes/1,200 16, 13 × 100; 16, 13 × 75, multiple/quarterly yes/yes yes —/configuration-dependent/yes/1,200 16, 13 × 100; 16, 13 × 75, multiple/specimen, method, output yes —/configuration-dependent/yes/700 16, 13 × 100; 16, 13 × 75, multiple/quarterly yes —/configuration-dependent/yes/dependent upon number of aliquots and their volumes 16, 13 × 100; 16, 13 × 75, multiple yes/yes yes/quarterly	no — — — — — — yes —/—/—/1,200 16, 13 × 100; 16, 13 × 75/yes —/daily, weekly, monthly, quarterly, annually yes —/—/—/1,200 16, 13 × 100; 16, 13 × 75/daily, annually yes/yes yes —/—/—/1,200 16, 13 × 100; 16, 13 × 75/specimen, method, output no — — yes —/—/—/depends on number of aliquots 16, 13 × 100; 16, 13 × 75 yes/yes yes/daily, quarterly, annually
Instrument (analyzer) interfaces • Rules-based instrument interface control subsystem • Process control of instrument via control subsystem Physical/hardware (instrument/specimen) interface • Hematology/Chemistry/Coagulation • Immunoassay/Urinalysis	no no — —	no no — —
Instruments to which your system or product is interfaced	—	—
Other robotic products/components to which system or product is linked	—	—
Automated recapper or sealer available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Recaps-seals multiple size tubes simult./Containers device accommodates • Maintenance required	recapper —/configuration-dependent/yes/1,200 yes/16, 13 × 100; 16, 13 × 75; 13–16 mm in diameter quarterly	recapper —/—/—/1,200 yes/16, 13 × 100; 16, 13 × 75 daily, annually
Automated storage and retrieval available • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Connects to the track • Room temperature/Minimum and maximum number of tubes stored per module • Multiple size tubes can be stored in the same module/Maintenance required • Refrigerated storage and retrieval capability Longitudinal upgrade pathway or plan to protect users' investments	no — — — — — systems are upgradable	no — — — — — —
Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly	2–3 weeks/Sarstedt or authorized Sarstedt service company/contract-dependent no/no	1–2 weeks/Sarstedt or authorized Sarstedt service company/contract-dependent no/no
List price Individual list prices for components • Process control SW/Transportation systems/Auto. centrifugation • Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval • Specimen integrity monitor/Automated aliquot • Instrument (analyzer) interfaces/Automated recap	— — — — —	— — — — —
Distinguishing features (supplied by company) <i>* For basic building block unit</i> <i>** Average throughput in specimen containers per hour per device</i>	bulk loading module: tubes are dumped into a hopper, eliminating need for pre-racking; modular design enables configuration based on individual requirements; screw-cap recapping	bulk loading module: tubes are dumped into a hopper, eliminating need for pre-racking; modular design enables configuration based on individual requirements; custom sort target and rules determined by user

Laboratory automation systems and workcells

<p>Part 13 of 17</p> <p>See captodayonline.com/productguides for an interactive version of guide</p>	<p>Siemens Healthcare Diagnostics Tim Keating timothy.m.keating@siemens.com 511 Benedict Avenue, Tarrytown, NY 10591 302-631-9482 www.usa.siemens.com/diagnostics</p>	<p>Siemens Healthcare Diagnostics Rita White 511 Benedict Avenue, Tarrytown, NY 10591 302-631-7916 www.usa.siemens.com/diagnostics</p>
<p>Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia</p>	<p>Aptio Automation/2011 outside U.S., 2013 U.S./— 1/5/1</p>	<p>ADVIA Solutions/1998/— >150 U.S./>500 worldwide</p>
<p>Automation products that are available</p> <ul style="list-style-type: none"> • Pre-analytical processor/Total laboratory automation • Automated functions: Accessioning/Track load/Centrifugation/Decapping • Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing • Automated functions: Storage retrieval/Intelligent sample routing • SW: Dedicated Process Control/Middleware control using LIS/Architecture • Company has dedicated automation support team/Remote system monitoring 	<p>yes/yes yes/yes/yes/yes yes/yes/yes/yes yes/yes yes/yes/yes yes/yes</p>	<p>yes/yes yes/yes/yes/yes yes/no/no/no yes/yes yes/yes/— yes/yes</p>
<p>Software features/functionality</p> <ul style="list-style-type: none"> • Patient demographics and insurance data/Rules-based architecture • Supports data retrieval/Internet connectivity • Online real-time help system/QC/Stats and management reports • Evaluates validity and releasability of results from automated analyzers • Specimen tracking/Priority processing/Random-access spec. movement • Supports accession number redundancy (duplicate specimen ID) • Supports specimen carrier and level identification • Unique bar-code number per container required • Specimen routing/Multistop routing (one tube to multiple workstations) • Specimen scheduling/Instrument scheduling • Routes test to workstation/Automatic reflex, repeat, dilutions • Supports multiple HW configuration/Supports other proprietary transport. HW • Sample storage and retrieval SW/Supports approved CLSI standards 	<p>LIS feature/automation SW feature automation SW feature/— automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature/automation SW feature/automation SW feature — automation SW feature automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/— automation SW feature/automation SW feature</p>	<p>LIS feature/automation SW feature automation SW feature/LIS feature automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature</p>
<p>LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC can be used to identify tests when communicating with LIS</p>	<p>—/ASTM/yes</p>	<p>Siemens, Cerner, Meditech, SCC Soft, McKesson, Data Innovations, OSI, Telepath-iSoft, Netlab, LMX Labzis II, SCL 2000, others/ASTM/yes</p>
<p>Transportation systems available</p> <ul style="list-style-type: none"> • Model/Dimensions* (H x W x D)/Conforms to CLSI Stand. Auto 1-5 • Containers device accommodates/Average throughput in cm per second • Supports automatic rerouting for reflex-repeat-dilutions • Modular HW/Installed options/Device can operate in track and manual mode • Required utilities/Required maintenance • Carrier type/Scalable system 	<p>yes Aptio Automation/54.33 x 77.56 x 42.71/yes 16, 13 x 100; 16, 13 x 75/68 yes yes/floor mounted/yes compressed air, electricity/— single specimen container per carrier/yes (accommodates up to 32 analyzers)</p>	<p>yes —/950 x 2,000 x 530 mm/yes 16, 13 x 100; 16, 13 x 75, others/71.6 yes yes/floor and subfloor mounted/yes compressed air, electricity, water/weekly, monthly, quarterly, annually single specimen container per carrier/yes</p>
<p>Automated centrifugation available</p> <ul style="list-style-type: none"> • Model/Dimensions (H x W x D)/Conforms to CLSI Stand. Auto 1-5 • Maximum throughput/Containers device accommodates • Can identify tube types for custom programmed rate and spin times per run • More than one centrifuge can be connected to track system • For multi-unit centrifuge, each centrifuge operates independently for rate and time • Maintenance required <p>Automated input/accessioning available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Dedicated lanes for stat samples • Maximum No. of samples that can be loaded/Maintenance required <p>Automated decapping available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required • Removes multiple size tube caps per run/Removes screw type sample caps <p>Automated sorting available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Software can sort by <p>Specimen integrity monitor available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required <p>Automated aliquotting available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** <ul style="list-style-type: none"> • Containers device accommodates • Inspects samples for bar code/Detects and reports clots in specimen • Detects and reports quantity not sufficient specimens/Maintenance required 	<p>yes Hettich 80-position refrigerated/59 x 37.4 x 55.5/yes 300 with 10-minute spin/16, 13 x 100; 16, 13 x 75 yes yes yes weekly, monthly yes Aptio Automation input-output module/54.33 x 77.56 x 42.71/yes/800 16, 13 x 100; 16, 13 x 75/yes 780/weekly, monthly yes Aptio Decapper/included in track/yes/800 16, 13 x 100; 16, 13 x 75/daily, monthly yes/yes yes Aptio Automation input-output module/54.33 x 77.56 x 42.71/yes/800 16, 13 x 100; 16, 13 x 75/specimen, method, output yes performed at analyzer/—/yes/analyzer-dependent 16, 13 x 100; 16, 13 x 75/— yes Aptio Automation aliquotter/35.2 x 61.4 x 27.5/yes/100 primary, 400 aliquot tubes 16, 13 x 100; 16, 13 x 75 yes/yes yes/daily, weekly</p>	<p>yes —/1,900 x 1,570 x 860 mm/yes 300/16, 13 x 100; 16, 13 x 75, others yes yes yes weekly, monthly, quarterly, annually yes sample manager/1,900 x 2,040 x 860 mm/yes/325 16, 13 x 100; 16, 13 x 75, others/yes 1,000/weekly, monthly, quarterly, annually yes —/included in centrifuge module/yes/240; independent module/550 16, 13 x 100; 16, 13 x 75, others/weekly, monthly, quarterly, annually yes/yes yes sample manager/1,900 x 2,040 x 860 mm/yes/325 16, 13 x 100; 16, 13 x 75, others/specimen, method, output onboard each instrument integrated on chemistry instrument 16, 13 x 100; 16, 13 x 75, others/— no — — — —</p>
<p>Instrument (analyzer) interfaces</p> <ul style="list-style-type: none"> • Rules-based instrument interface control subsystem • Process control of instrument via control subsystem <p>Physical/hardware (instrument/specimen) interface</p> <ul style="list-style-type: none"> • Hematology/Chemistry/Coagulation • Immunoassay/Urinalysis 	<p>yes yes robotic arm interface/point-of-reference sampling/— point-of-reference sampling, robotic arm interface/point-of-reference sampling</p>	<p>yes yes robotic arm interface/point-of-reference sampling/robotic arm interface point-of-reference sampling, robotic arm interface/point-of-reference sampling</p>
<p>Instruments to which your system or product is interfaced</p> <p>Other robotic products/components to which system or product is linked</p>	<p>Advia 1800, 2400, 2120i; Dimension Vista 1500, 500; Dimension EXL LM, EXL 200; Immulite 2000, 2000 XPi; Sysmex CS-5100</p> <p>—</p>	<p>Advia120/2120i/Autoslide solution, Advia 1800/2400 solution, Advia Centaur XP solution, Clinitek Atlas solution, Dimension RxL Max solution, others</p> <p>—</p>
<p>Automated recapper or sealer available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Recaps-seals multiple size tubes simul./Containers device accommodates • Maintenance required 	<p>recapper and sealer Aptio Automation tube sealer/included in track/yes/200 yes/16, 13 x 100; 16, 13 x 75 monthly</p>	<p>no — — —</p>
<p>Automated storage and retrieval available</p> <ul style="list-style-type: none"> • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Connects to the track • Room temperature/Minimum and maximum number of tubes stored per module • Multiple size tubes can be stored in the same module/Maintenance required • Refrigerated storage and retrieval capability <p>Longitudinal upgrade pathway or plan to protect users' investments</p> <p>Average time to install/Who provides service, support/Hours support is available</p> <p>On-site biomedical engineer required/User group meets regularly</p>	<p>yes Aptio Automation 9,000 or 15,000/85.63 x 76.77 x 70; 101.2 x 76.77 x 70/yes/800 16, 13 x 100; 16, 13 x 75/yes yes/module-dependent-I/O=780 yes/daily yes continued commitment to module development, analyzer connectivity, and IT enhancements 3-6 weeks/Siemens/24-7 no/yes</p>	<p>yes sample manager/1,900 x 2,040 x 860 mm/yes/325 16, 13 x 100; 16, 13 x 75, others/yes yes/1 and 1,000 yes/weekly, monthly, quarterly, annually no flexible and expandable: can contain as few as 2 interfaced components-instruments and can expand to up to 16 interfaces configuration dependent/Siemens Healthcare Diagnostics/24-7 no/yes</p>
<p>List price</p> <p>Individual list prices for components</p> <ul style="list-style-type: none"> • Process control SW/Transportation systems/Auto. centrifugation • Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval • Specimen integrity monitor/Automated aliquot • Instrument (analyzer) interfaces/Automated recap 	<p>— — — — —</p>	<p>varies — — — —</p>
<p>Distinguishing features (supplied by company)</p> <p>* For basic building block unit</p> <p>** Average throughput in specimen containers per hour per device</p>	<p>scalability, footprint, IT solution</p>	<p>high-throughput lab automation with broad menu, single LIS connection, flexible configurations, and ability to connect multiple disciplines with same track system: (chemistry, immunoassay, hematology, coagulation, urine)</p>

Tabulation does not represent an endorsement by the College of American Pathologists.

Laboratory automation systems and workcells

Part 14 of 17 See captodayonline.com/productguides for an interactive version of guide	Siemens Healthcare Diagnostics Tim Keating 511 Benedict Avenue, Tarrytown, NY 10591 302-631-9482 www.usa.siemens.com/diagnostics	Siemens Healthcare Diagnostics Tia Maxwell 511 Benedict Avenue, Tarrytown, NY 10591 302-631-0393 www.usa.siemens.com/diagnostics
Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia	StreamLab Analytical Workcell/2002/— <180 U.S./<300 worldwide	VersaCell System/2002/80 >150/>880 worldwide
Automation products that are available <ul style="list-style-type: none"> • Pre-analytical processor/Total laboratory automation • Automated functions: Accessioning/Track load/Centrifugation/Decapping • Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing • Automated functions: Storage retrieval/Intelligent sample routing • SW: Dedicated Process Control/Middleware control using LIS/Architecture • Company has dedicated automation support team/Remote system monitoring 	yes/yes yes/yes/yes/yes yes/analyzer removes aliquot/no/yes yes/yes yes/yes/open yes/yes	yes/no no/no/no/no yes/no/no/no yes/yes yes/yes/closed yes/yes
Software features/functionality <ul style="list-style-type: none"> • Patient demographics and insurance data/Rules-based architecture • Supports data retrieval/Internet connectivity • Online real-time help system/QC/Stats and management reports • Evaluates validity and releasability of results from automated analyzers • Specimen tracking/Priority processing/Random-access spec. movement • Supports accession number redundancy (duplicate specimen ID) • Supports specimen carrier and level identification • Unique bar-code number per container required • Specimen routing/Multistop routing (one tube to multiple workstations) • Specimen scheduling/Instrument scheduling • Routes test to workstation/Automatic reflex, repeat, dilutions • Supports multiple HW configuration/Supports other proprietary transport. HW • Sample storage and retrieval SW/Supports approved CLSI standards 	automation SW and LIS feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW and LIS feature automation SW and LIS feature automation SW feature/automation SW feature automation SW and LIS feature automation SW and LIS feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature	LIS feature/automation SW feature automation/SW feature/— —/LIS feature/automation SW feature LIS feature automation SW feature/automation SW feature/automation SW feature automation SW feature automation SW and LIS feature automation SW and LIS feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature/—
LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC can be used to identify tests when communicating with LIS	Cerner, Meditech, SCC, McKesson, CHCS, LabGem, Swiss Lab, Medicom, Izasa, Confidentialia, others/DBASTM, Dimension Protocol, HL7, ASTM/yes	—/ASTM/yes
Transportation systems available <ul style="list-style-type: none"> • Model/Dimensions* (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Containers device accommodates/Average throughput in cm per second • Supports automatic rerouting for reflex-repeat-dilutions • Modular HW/Installed options/Device can operate in track and manual mode • Required utilities/Required maintenance • Carrier type/Scalable system 	yes StreamLab/60 × 70 × 35 inches/yes 16, 13 × 100; 16, 13 × 75/300 tubes per hour yes yes/floor mounted/yes compressed air, electricity/weekly single specimen container per carrier/yes	yes VersaCell System/70 × 50 × 41 inches/— 16, 13 × 100; 16, 13 × 75/— yes yes/floor mounted/yes electricity/as needed sample carrier/yes
Automated centrifugation available <ul style="list-style-type: none"> • Model/Dimensions (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Maximum throughput/Containers device accommodates • Can identify tube types for custom programmed rate and spin times per run • More than one centrifuge can be connected to track system • For multi-unit centrifuge, each centrifuge operates independently for rate and time • Maintenance required Automated input/accessioning available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Dedicated lanes for stat samples • Maximum No. of samples that can be loaded/Maintenance required Automated decapping available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required • Removes multiple size tube caps per run/Removes screw type sample caps Automated sorting available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Software can sort by Specimen integrity monitor available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required Automated aliquotting available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates • Inspects samples for bar code/Detects and reports clots in specimen • Detects and reports quantity not sufficient specimens/Maintenance required 	yes StreamLab/31 × 23 × 29 inches/yes up to 400 per hour/16, 13 × 100; 16, 13 × 75, handles various sizes at once yes no — weekly, monthly yes StreamLab/60 × 70 × 35 inches/yes/300 tubes 16, 13 × 100; 16, 13 × 75/yes up to 600/daily, monthly yes StreamLab/integrated with input-output track/yes/300 16, 13 × 100; 16, 13 × 75/daily, monthly yes/yes yes StreamLab/integrated with input-output track/yes/300 16, 13 × 100; 16, 13 × 75/specimen, method, output yes StreamLab/integrated with analyzer/yes/300 16, 13 × 100; 16, 13 × 75/— yes StreamLab/integrated with sample transfer module/yes/300 16, 13 × 100; 16, 13 × 75 yes/yes yes/daily	no — — — — — yes VersaCell System/70 × 50 × 41 inches/—/200 16, 13 × 100; 16, 13 × 75/yes 200/annually no — — yes VersaCell System/70 × 50 × 41 inches/no/200 16, 13 × 100; 16, 13 × 75/— no — — no — — —
Instrument (analyzer) interfaces <ul style="list-style-type: none"> • Rules-based instrument interface control subsystem • Process control of instrument via control subsystem Physical/hardware (instrument/specimen) interface <ul style="list-style-type: none"> • Hematology/Chemistry/Coagulation • Immunoassay/Urinalysis 	yes yes no/pt-of-ref sampling, rob. arm interface/pt-of-ref sampling, rob. arm interf. point-of-reference sampling, robotic arm interface/no	yes yes no/point-of-reference sampling/no point-of-reference sampling/no
Instruments to which your system or product is interfaced Other robotic products/components to which system or product is linked	Dimension RxL Max, Dimension Vista 1500/500, Immulite 2000 and 2500; Sysmex CA 7000; Dimension EXL with LM, Advia Centaur —	Advia 1800, Immulite Immunoassay, Advia Centaur, Dimension EXL with LM, Dimension EXL 200, Dimension RxL MAX StreamLab analytical workcell, Advia automation workcells, and Aptio automation
Automated recapper or sealer available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput* • Recaps-seals multiple size tubes simult./Containers device accommodates • Maintenance required 	yes StreamLab/40 × 36 × 17 inches/yes/300 yes/13 × 100; 13 × 75; 16 × 100; 16 × 75 daily, monthly	no — — —
Automated storage and retrieval available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput* • Containers device accommodates/Connects to the track • Room temperature/Minimum and maximum number of tubes stored per module • Multiple size tubes can be stored in the same module/Maintenance required • Refrigerated storage and retrieval capability Longitudinal upgrade pathway or plan to protect users' investments	yes StreamLab SW and input-output module/60 × 70 × 35 inches/yes/300 13 × 100; 13 × 75; 16 × 100; 16 × 75 (47,952 storage capacity)/no yes/up to 576 yes/— yes scalable with open configurations	no — — — — continue connectivity development and software enhancements
Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly	five days/Siemens/24–7 no/yes	two days/Siemens/24–7 no/no
List price Individual list prices for components <ul style="list-style-type: none"> • Process control SW/Transportation systems/Auto. centrifugation • Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval • Specimen integrity monitor/Automated aliquot • Instrument (analyzer) interfaces/Automated recap 	— — — — —	— — — — —
Distinguishing features (supplied by company) * For basic building block unit ** Average throughput in specimen containers per hour per device Note: a dash in lieu of an answer means company did not answer question or question is not applicable	integrated automation solution with open architecture allows custom configuration and reconfiguratoin by incorporating a 90-degree track turn, which helps maintain a small footprint	breadth of menu with flexibility of connectivity; throughput, pre and postanalytical sample management

Laboratory automation systems and workcells

Part 15 of 17	Sysmex America	Sysmex America
See captodayonline.com/productguides for an interactive version of guide	Krista Curcio curciok@sysmex.com 577 Aptakasic Road, Lincolnshire, IL 60069 800-379-7639 ext. 4613 www.sysmex.com/us	Nilam Patel pateln@sysmex.com 577 Aptakasic Road, Lincolnshire, IL 60069 800-379-7639 ext. 4309 www.sysmex.com/us
Name of system/First year installed/No. of 2012 contracts signed	XN-3000/2012/—	XN-9000/2011/>100
No. of live sites installed in N. America/Europe/Asia-Australia	<10/>50/>50	0/>50/>20
Automation products that are available		
• Pre-analytical processor/Total laboratory automation	no/no	no/no
• Automated functions: Accessioning/Track load/Centrifugation/Decapping	no/yes/no/no	no/yes/no/no
• Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing	no/no/no/no	no/no/no/no
• Automated functions: Storage retrieval/Intelligent sample routing	no/no	no/no
• SW: Dedicated Process Control/Middleware control using LIS/Architecture	no/no/—	yes/yes/open
• Company has dedicated automation support team/Remote system monitoring	yes/yes	yes/yes
Software features/functionality		
• Patient demographics and insurance data/Rules-based architecture	LIS feature/automation SW feature	automation SW feature/automation SW feature
• Supports data retrieval/Internet connectivity	automation SW feature/automation SW feature	automation SW feature/automation SW feature
• Online real-time help system/QC/Stats and management reports	automation SW feature/automation SW feature	automation SW feature/automation SW feature
• Evaluates validity and releasability of results from automated analyzers	automation SW feature	automation SW feature
• Specimen tracking/Priority processing/Random-access spec. movement	automation SW feature/automation SW feature/automation SW feature	automation SW feature/automation SW feature/automation SW feature
• Supports accession number redundancy (duplicate specimen ID)	automation SW feature	automation SW feature
• Supports specimen carrier and level identification	automation SW feature	automation SW feature
• Unique bar-code number per container required	automation SW feature	automation SW feature
• Specimen routing/Multistop routing (one tube to multiple workstations)	automation SW feature/automation SW feature	automation SW feature/automation SW feature
• Specimen scheduling/Instrument scheduling	—	—
• Routes test to workstation/Automatic reflex, repeat, dilutions	automation SW feature/automation SW feature	automation SW feature/automation SW feature
• Supports multiple HW configuration/Supports other proprietary transport. HW	—	automation SW feature
• Sample storage and retrieval SW/Supports approved CLSI standards	—/automation SW feature	automation SW feature/automation SW feature
LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC (Logical Observation Identifiers Names and Codes) can be used to identify tests when communicating with LIS	Data Innovations, Epic Beaker, Sunquest Laboratory and Commercial Laboratory, Cerner Classic and Millennium, Diamond LabGen, LabCorp Lab System, Meditech Magic and Client-Server, HCA-Meditech, McKesson, Horizon Lab, others/ASTM/yes	Data Innovations, Epic Beaker, Sunquest Laboratory and Commercial Laboratory, Cerner Classic and Millennium, Diamond LabGen, LabCorp Lab System, Meditech Magic and Client-Server, HCA-Meditech, McKesson, Horizon Lab, others/ASTM/yes
Transportation systems available	yes	yes
• Model/Dimensions* (H × W × D)/Conforms to CLSI Stand. Auto 1-5	XN-3000/42 × 78 × 35 inches/yes	XN-9000/configuration-dependent/yes
• Containers device accommodates/Average throughput in cm per second	13 × 75, microtainer and BD MAP tubes/up to 200 samples per hour	13 × 75, microtainer and BD MAP tubes/≤100 samples per hour
• Supports automatic rerouting for reflex-repeat-dilutions	yes	yes
• Modular HW/Installed options/Device can operate in track and manual mode	yes/—/yes	yes/—/yes
• Required utilities/Required maintenance	electricity/daily	electricity/daily
• Carrier type/Scalable system	multiple specimen container per carrier/yes (components used to build XN-9000)	multiple specimen container per carrier/yes (add optional modules)
Automated centrifugation available	no	no
• Model/Dimensions (H × W × D)/Conforms to CLSI Stand. Auto 1-5	—	—
• Maximum throughput/Containers device accommodates	—	—
• Can identify tube types for custom programmed rate and spin times per run	—	—
• More than one centrifuge can be connected to track system	—	—
• For multi-unit centrifuge, each centrifuge operates independently for rate and time	—	—
• Maintenance required	—	—
Automated input/accessioning available	no	yes
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	—	—
• Containers device accommodates/Dedicated lanes for stat samples	—	—
• Maximum No. of samples that can be loaded/Maintenance required	—	250 minutes/—
Automated decapping available	no	no
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	—	—
• Containers device accommodates/Maintenance required	—	—
• Removes multiple size tube caps per run/Removes screw type sample caps	—	—
Automated sorting available	no	yes
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	—	PVT TS-500 or TS-2000/~5 × 3 to 4 × 4/yes/TS-500: up to 400; TS-2000: up to 800
• Containers device accommodates/Software can sort by	—	13 × 75/specimen, method, output priority, track routing
Specimen integrity monitor available	yes	yes
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	monitored within the XN analyzer	monitored with the XN analyzer/—/—/—
• Containers device accommodates/Maintenance required	—	—
Automated aliquotting available	no	no
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	—	—
• Containers device accommodates	—	—
• Inspects samples for bar code/Detects and reports clots in specimen	—	—
• Detects and reports quantity not sufficient specimens/Maintenance required	—	—
Instrument (analyzer) interfaces		
• Rules-based instrument interface control subsystem	yes	yes
• Process control of instrument via control subsystem	yes	yes
Physical/hardware (instrument/specimen) interface		
• Hematology/Chemistry/Coagulation	—	—
• Immunoassay/Urinalysis	—	—
Instruments to which your system or product is interfaced	Cerner Millennium, McKesson, Meditech (6.0, C/s, HCA, Magic), SoftLab, Sunquest	Bio-Rad Variant II Turbo Link A1C analyzer
Other robotic products/components to which system or product is linked	—	Thermo automation, Lab Interlink/Labotix, IDS
Automated recapper or sealer available	no	no
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	—	—
• Recaps-seals multiple size tubes simult./Containers device accommodates	—	—
• Maintenance required	—	—
Automated storage and retrieval available	no	yes
• Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput**	—	PVT TS-500 or TS-2000/~5 × 3 to 4 × 4/yes/TS-500: up to 400; TS-2000: up to 800
• Containers device accommodates/Connects to the track	—	13 × 75/yes
• Room temperature/Minimum and maximum number of tubes stored per module	—	yes/375–500
• Multiple size tubes can be stored in the same module/Maintenance required	—	no/monthly
• Refrigerated storage and retrieval capability	—	no
Longitudinal upgrade pathway or plan to protect users' investments	all XN components are modular and can be used to scale the system	XN HW/middleware SW scalable across configurations and sites
Average time to install/Who provides service, support/Hours support is available	3 days/Sysmex/24–7	~3 days/Sysmex/24–7
On-site biomedical engineer required/User group meets regularly	no/yes	no/yes
List price	—	—
Individual list prices for components		
• Process control SW/Transportation systems/Auto. centrifugation	—	—
• Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval	—	—
• Specimen integrity monitor/Automated aliquot	—	—
• Instrument (analyzer) interfaces/Automated recap	—	—
Distinguishing features (supplied by company)	unique co-primary system with reflexive slide preparation and automatic, hands-free, repeat/reflex testing capability; automatic workload balancing between analytical modules; compact automation, scalable, and flexible to meet laboratory's needs; optional WAM middleware available	scalable, modular automation hardware and decision logic software; automatic workload balancing and repeat/reflex testing capabilities; Lavender top management configuration, which offers integrated tube sorter archiving module, decision logic software, and integrated HbA1c testing module
* For basic building block unit		
** Average throughput in specimen containers per hour per device		
Note: a dash in lieu of an answer means company did not answer question or question is not applicable		

Laboratory automation systems and workcells

Part 16 of 17 <i>See captodayonline.com/productguides for an interactive version of guide</i>	Sysmex America Nilam Patel pateln@sysmex.com 1 Nelson C. White Parkway, Mundelein, IL 60060 800-379-7639 ext. 4309 www.sysmex.com/automation	Yaskawa America Inc., Motoman Robotics Division Craig Rubenstein craig.rubenstein@motoman.com 100 Automation Way, Miamisburg, OH 45342 949-263-2648 www.motoman.com/labauto/
Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia	HST-N/1991/50+ 400/750+ (Europe, Asia, Latin America, Canada, & Australia)	AutoSorter IV/2013/3 23/0/0
Automation products that are available <ul style="list-style-type: none"> • Pre-analytical processor/Total laboratory automation • Automated functions: Accessioning/Track load/Centrifugation/Decapping • Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing • Automated functions: Storage retrieval/Intelligent sample routing • SW: Dedicated Process Control/Middleware control using LIS/Architecture • Company has dedicated automation support team/Remote system monitoring 	no/no yes/no/no/no yes/no—/no no/yes yes/yes/closed yes/yes	yes/no yes/yes/yes/yes yes/yes/no/yes yes/yes yes/yes/open yes/yes
Software features/functionality <ul style="list-style-type: none"> • Patient demographics and insurance data/Rules-based architecture • Supports data retrieval/Internet connectivity • Online real-time help system/QC/Stats and management reports • Evaluates validity and releasability of results from automated analyzers • Specimen tracking/Priority processing/Random-access spec. movement • Supports accession number redundancy (duplicate specimen ID) • Supports specimen carrier and level identification • Unique bar-code number per container required • Specimen routing/Multistop routing (one tube to multiple workstations) • Specimen scheduling/Instrument scheduling • Routes test to workstation/Automatic reflex, repeat, dilutions • Supports multiple HW configuration/Supports other proprietary transport. HW • Sample storage and retrieval SW/Supports approved CLSI standards 	automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature /automation SW feature /LIS feature automation SW feature automation SW feature/automation SW feature/yes automation SW feature automation SW feature automation SW feature/automation SW feature — automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature	—/automation SW feature automation SW feature/automation SW feature automation SW feature/ automation SW feature/automation SW feature — automation SW feature/ automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature automation SW feature automation SW feature/ automation SW feature/automation SW feature automation SW feature/automation SW feature
LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC (Logical Observation Identifiers Names and Codes) can be used to identify tests when communicating with LIS	Data Innovations, Epic Beaker, Sunquest Laboratory and Commercial Laboratory, Cerner Classic and Millennium, Diamond LabGen, LabCorp Lab System, Meditech Magic and Client-Server, HCA-Meditech, McKesson, Horizon Lab, others/ASTM/yes	Cerner Classic, Millennium; SCC, Triple G/HL7/yes
Transportation systems available <ul style="list-style-type: none"> • Model/Dimensions* (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Containers device accommodates/Average throughput in cm per second • Supports automatic rerouting for reflex-repeat-dilutions • Modular HW/Installed options/Device can operate in track and manual mode • Required utilities/Required maintenance • Carrier type/Scalable system 	yes HST-N/configuration-dependent/yes 11–15 × 75/minutes throughput 150/hour; max as high as lab needs/hour yes yes/floor mounted/yes electricity/daily rack/yes	yes —/yes 16, 13 × 100; 16, 13 × 75, most 75–100 mm height, 12–16 mm diameter/50 no yes/floor mounted/yes compressed air, electricity/daily, quarterly, annually single specimen container per carrier/yes (process 800–9,000 tubes per hour)
Automated centrifugation available <ul style="list-style-type: none"> • Model/Dimensions (H × W × D)/Conforms to CLSI Stand. Auto 1-5 • Maximum throughput/Containers device accommodates • Can identify tube types for custom programmed rate and spin times per run • More than one centrifuge can be connected to track system • For multi-unit centrifuge, each centrifuge operates independently for rate and time • Maintenance required Automated input/accessioning available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Dedicated lanes for stat samples • Maximum No. of samples that can be loaded/Maintenance required Automated decapping available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required • Removes multiple size tube caps per run/Removes screw type sample caps Automated sorting available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Software can sort by 	no — — — — — yes — — 200 samples per input module/— no — — — yes PVT TS-500 or TS-2000/~5 × 3 to 4 × 4/yes/TS-500: up to 400; TS-2000: up to 800 13 × 75/specimen, method, output	no — — — — — yes AutoSorter IV/70 × 75 × 32/yes/1,200 16, 13 × 100; 16, 13 × 75, most 75–100 mm height, 12–16 mm diameter/no >1,200/daily, quarterly, annually no — — yes AutoSorter IV/70 × 75 × 32/yes/1,200 16, 13 × 100; 16, 13 × 75, most 75–100 mm height, 12–16 mm diameter/ specimen, method, output priority no — — no — — — —
Specimen integrity monitor available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required Automated aliquotting available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates • Inspects samples for bar code/Detects and reports clots in specimen • Detects and reports quantity not sufficient specimens/Maintenance required 	yes (located within the analyzers) — — no — — — — —	no — — — — — — — —
Instrument (analyzer) interfaces <ul style="list-style-type: none"> • Rules-based instrument interface control subsystem • Process control of instrument via control subsystem Physical/hardware (instrument/specimen) interface <ul style="list-style-type: none"> • Hematology/Chemistry/Coagulation • Immunoassay/Urinalysis 	yes yes point-of-reference sampling/—/— —	no — — —
Instruments to which your system or product is interfaced Other robotic products/components to which system or product is linked	Bio-Rad Variant II Turbo Link A1C analyzer Thermo automation, Lab Interlink/Labotix, IDS	—
Automated recapper or sealer available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Recaps-seals multiple size tubes simult./Containers device accommodates • Maintenance required 	no — — —	no — — —
Automated storage and retrieval available <ul style="list-style-type: none"> • Model/Dimen. (H × W × D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Connects to the track • Room temperature/Minimum and maximum number of tubes stored per module • Multiple size tubes can be stored in the same module/Maintenance required • Refrigerated storage and retrieval capability Longitudinal upgrade pathway or plan to protect users' investments Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly	no — — — — — <3 days/Sysmex/24–7 no/no	yes AutoSorter IV/70 × 75 × 32/yes/1,200 16, 13 × 100; 16, 13 × 75, most 75–100 mm height, 12–16 mm diameter/yes yes/~1,600 yes/daily, quarterly, annually yes backward compatibility (transportation, data connectivity) two generations min. 5 days/Yaskawa America/24–7 no/no
List price Individual list prices for components <ul style="list-style-type: none"> • Process control SW/Transportation systems/Auto. centrifugation • Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval • Specimen integrity monitor/Automated aliquot • Instrument (analyzer) interfaces/Automated recap 	— — — — —	\$220,000 — — — —
Distinguishing features (supplied by company) <i>* For basic building block unit</i> <i>** Average throughput in specimen containers per hour per device</i> <i>Note: a dash in lieu of an answer means company did not answer question or question is not applicable</i>	scalable, flexible, and reliable automation and instrument systems; fast installation (<3 days); scalable multi-site, multi-system middleware solutions that are developed, tested, and supported by Sysmex	10- to 15-year equipment service life; array of designs; customize, design, or develop new instruments to meet unique requirements; U.S.-based, financially sound, well-resourced to provide productivity support

Laboratory automation systems and workcells

Part 17 of 17 <i>See captodayonline.com/productguides for an interactive version of guide</i>	Yaskawa America Inc., Motoman Robotics Division Craig Rubenstein craig.rubenstein@motoman.com 100 Automation Way, Miamisburg, OH 45342 949-263-2648 www.motoman.com/labauto/	Yaskawa America Inc., Motoman Robotics Division Craig Rubenstein craig.rubenstein@motoman.com 100 Automation Way, Miamisburg, OH 45342 949-263-2648 www.motoman.com/labauto/
Name of system/First year installed/No. of 2012 contracts signed No. of live sites installed in N. America/Europe/Asia-Australia	Autosorter II/2006/4 22/—/—	Autosorter III/2008/4 22/—/—
Automation products that are available • Pre-analytical processor/Total laboratory automation • Automated functions: Accessioning/Track load/Centrifugation/Decapping • Automated functions: Rack specific sort/Aliquot/Tube relabeling/Resealing • Automated functions: Storage retrieval/Intelligent sample routing • SW: Dedicated Process Control/Middleware control using LIS/Architecture • Company has dedicated automation support team/Remote system monitoring	yes/no yes/yes/yes/yes yes/yes/no/yes (recapping) no/yes yes/yes/open yes/yes	yes/no yes/yes/yes/yes yes/yes/no/yes (recapping) no/yes yes/yes/open yes/yes
Software features/functionality • Patient demographics and insurance data/Rules-based architecture • Supports data retrieval/Internet connectivity • Online real-time help system/QC/Stats and management reports • Evaluates validity and releasability of results from automated analyzers • Specimen tracking/Priority processing/Random-access spec. movement • Supports accession number redundancy (duplicate specimen ID) • Supports specimen carrier and level identification • Unique bar-code number per container required • Specimen routing/Multistop routing (one tube to multiple workstations) • Specimen scheduling/Instrument scheduling • Routes test to workstation/Automatic reflex, repeat, dilutions • Supports multiple HW configuration/Supports other proprietary transport. HW • Sample storage and retrieval SW/Supports approved CLSI standards	—/automation SW feature automation SW feature/automation SW feature automation SW feature/ automation SW feature/automation SW feature — automation SW feature/ automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature automation SW feature automation SW feature/ automation SW feature —/— automation SW feature/— automation SW feature/automation SW feature automation SW feature/automation SW feature	—/automation SW feature automation SW feature/automation SW feature automation SW feature/ automation SW feature/automation SW feature — automation SW feature/ automation SW feature/automation SW feature automation SW feature/automation SW feature automation SW feature automation SW feature automation SW feature/ automation SW feature —/— automation SW feature/— automation SW feature/automation SW feature automation SW feature/automation SW feature
LIS(s) and versions interfaced and live w/LAS/How LIS(s) are interfaced with your LAS/LOINC can be used to identify tests when communicating with LIS	Cerner, Triple G, Surround/ODBC, HL7/yes	Cerner, Triple G, Surround/ODBC, HL7/yes
Transportation systems available • Model/Dimensions* (H x W x D)/Conforms to CLSI Stand. Auto 1-5 • Containers device accommodates/Average throughput in cm per second • Supports automatic rerouting for reflex-repeat-dilutions • Modular HW/Installed options/Device can operate in track and manual mode • Required utilities/Required maintenance • Carrier type/Scalable system	yes —/configuration-dependent/yes 16, 13 x 100; 16, 13 x 75, 9-16 mm diameter, 75-100 mm height/50 yes no/floor mounted/yes compressed air, electricity/daily, monthly, annually single and multiple (30) specimen container per carrier/yes	yes —/configuration-dependent/yes 16, 13 x 100; 16, 13 x 75, 9-16 mm diameter, 75-100 mm height/50 no no/floor mounted/yes electricity/daily, monthly, annually single specimen container per carrier/yes
Automated centrifugation available • Model/Dimensions (H x W x D)/Conforms to CLSI Stand. Auto 1-5 • Maximum throughput/Containers device accommodates • Can identify tube types for custom programmed rate and spin times per run • More than one centrifuge can be connected to track system • For multi-unit centrifuge, each centrifuge operates independently for rate and time • Maintenance required Automated input/accessioning available • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Dedicated lanes for stat samples • Maximum No. of samples that can be loaded/Maintenance required Automated decapping available • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required • Removes multiple size tube caps per run/Removes screw type sample caps Automated sorting available • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Software can sort by Specimen integrity monitor available • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Maintenance required Automated aliquotting available • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates • Inspects samples for bar code/Detects and reports clots in specimen • Detects and reports quantity not sufficient specimens/Maintenance required	no — — — — — yes AutoSorter II/6 x 5 x 5 feet/yes/1,000 16, 13 x 100; 16, 13 x 75, 9-16 mm diameter, 75-100 mm height/yes 1,000/daily, monthly, annually yes —/fits within footprint of AutoSorter II/yes/1,000 16, 13 x 100; 16, 13 x 75, 9-16 mm dia., 75-100 mm ht/daily, monthly, annually yes/yes yes AutoSorter II/6 x 5 x 5 feet/yes/1,000 16, 13 x 100; 16, 13 x 75, 9-16 mm diameter, 75-100 mm height/specimen, method, output — — — yes Aloka APS/68 x 101 x 43 inches/yes/500 16, 13 x 100; 16, 13 x 75 yes/yes yes/daily, monthly, annually	yes Hettich Rotanta/81 x 87 x 42 inches, 9-16 mm diameter, 75-100 mm height/yes 300+/16, 13 x 100; 16, 13 x 75, 9-16 mm diameter, 75-100 mm height no no — daily, monthly, annually yes AutoSorter III/81 x 87 x 42 inches (enclosed within ASIII footprint)/yes/800 16, 13 x 100; 16, 13 x 75, 9-16 mm diameter, 75-100 mm height/yes 300/daily, monthly, annually yes AutoSorter III/81 x 87 x 42 inches (enclosed within ASIII footprint)/yes/800 16, 13 x 100; 16, 13 x 75, 9-16 mm dia., 75-100 mm ht/daily, monthly, annually yes/yes yes AutoSorter III/81 x 87 x 42 inches/yes/800 16, 13 x 100; 16, 13 x 75, 9-16 mm diameter, 75-100 mm height/specimen, method, output — — — planned Aloka module/—/yes/100-200 16, 13 x 100; 16, 13 x 75 yes/yes yes/daily, monthly, annually
Instrument (analyzer) interfaces • Rules-based instrument interface control subsystem • Process control of instrument via control subsystem Physical/hardware (instrument/specimen) interface • Hematology/Chemistry/Coagulation • Immunoassay/Urinalysis	no no Sysmex HST —	no no Sysmex HST —
Instruments to which your system or product is interfaced Other robotic products/components to which system or product is linked	Sysmex hematology automation MDS (now Innotech) single-specimen carrier transportation system	— ILAS, MDS (now Innotech) single-specimen carrier transportation system
Automated recapper or sealer available • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Recaps-seals multiple size tubes simult./Containers device accommodates • Maintenance required	yes (recapper) AutoSorter II/6 x 5 x 5 feet/yes/>1,800 yes/16, 13 x 100; 16, 13 x 75 daily, monthly, annually	planned AutoSorter III/to be determined/yes/800 yes/16, 13 x 100; 16, 13 x 75 daily, monthly, annually
Automated storage and retrieval available • Model/Dimen. (H x W x D)/Conforms to CLSI Stand. Auto 1-5/Avg. throughput** • Containers device accommodates/Connects to the track • Room temperature/Minimum and maximum number of tubes stored per module • Multiple size tubes can be stored in the same module/Maintenance required • Refrigerated storage and retrieval capability Longitudinal upgrade pathway or plan to protect users' investments Average time to install/Who provides service, support/Hours support is available On-site biomedical engineer required/User group meets regularly	yes — — — — — flexible, open design permits change of tubes/racks as instrumentation changes; connectivity and functionality upgrades <1-2 weeks, more for complex systems/Motoman/24-7 no/no	yes — — — — — flexible, open design permits change of tubes/racks as instrumentation changes; connectivity and functionality upgrades <1 week/Motoman/24-7 no/no
List price Individual list prices for components • Process control SW/Transportation systems/Auto. centrifugation • Auto. input, accession/Auto. decap/Auto. sort/Auto. storage and retrieval • Specimen integrity monitor/Automated aliquot • Instrument (analyzer) interfaces/Automated recap	\$250,000 included/configuration-dependent/— included/configuration-dependent/included/— —/configuration-dependent —/configuration-dependent	\$195,000 included/configuration-dependent/\$39,500 included/included/included/— — —
Distinguishing features (supplied by company) * For basic building block unit ** Average throughput in specimen containers per hour per device <i>Note: a dash in lieu of an answer means company did not answer question or question is not applicable</i>	customization-friendly; designed and built in the U.S.; independent of IVD instrument manufacturers; free-standing, high-throughput instruments or integrated lines	customization-friendly; designed and built in the U.S.; independent of IVD instrument manufacturers; free-standing, small footprint, modular automation