Greater Possibilities by Design

XN-Series™ Automated Hematology Analyzers
The XN-Series from Sysmex is reshaping hematology by bringing new innovations, and therefore new possibilities, to the laboratory seeking the next level. Featuring a high-performance and modular design, and new and extended parameters, the XN-Series enables any lab to create the perfect fit for its evolving needs.

What this means for you is that—regardless of your laboratory’s size or setting—the XN-Series gives you:

• Optimized efficiency of workflow, staffing and space
• Advanced clinical utility through the most advanced technologies
• Scalability and standardization
• Industry-leading reliability, a cornerstone of Sysmex-branded products for more than 40 years
The XN-Series—How It’s Shaping the Future

That was then. To obtain advanced capabilities, laboratories often had to justify larger and more expensive analyzers than they actually needed. With budgets even more tightly controlled than before, this “buy bigger or make do” approach is no longer viable. With the XN-Series, it isn’t necessary.

This is now. With the XN-Series, you now have the flexibility and control to perfectly match your workload, clinical parameters and informatics needs regardless of the number of samples you receive each day. Hematology is very different now.

The XN-Series changes the way hematology will be performed in the modern clinical laboratory. This new compact platform offers:

- Proven and innovative technologies that deliver the most comprehensive CBC and differential available
- Advanced measures of hematopoiesis:
  - Leukopoiesis—Automated immature granulocytes and low WBC mode for confidence in even the lowest of WBC counts and differentials
  - Erythropoiesis—Nucleated RBCs, reticulocyte hemoglobin (RET-He) and immature reticulocyte fraction (IRF)
  - Thrombopoiesis—Immature platelet fraction (IPF) and fluorescent platelet count (PLT-F)
- New approaches to reagent management:
  - RU-20 and CELLPACK® DST™ concentrated reagent system to minimize reagent changes
  - Smaller reagent containers to significantly reduce inventory space
  - New dye cartridges with RFID (Radio Frequency Identification) tags for increased convenience and confidence during reagent changes
- Productivity and efficiency enhancements with Intelligent Automation including the ability to achieve auto-validation in excess of 85%, using Sysmex WAM™
- Sophisticated Lavender Top Management® to optimize the number of tests you can perform on a single hematology sample
- Significantly smaller footprints to help optimize increasingly precious laboratory space
The XN-Series Provides True Modularity

Modules of the XN-Series

The XN-Series is an approach—not just a collection of analyzers—that allows you to plan and configure your lab to meet your needs for sophisticated testing regardless of workload.

The different configurations of the XN-Series deliver solutions that provide significantly smaller footprints without sacrificing testing sophistication and capacity.

At the heart of every configuration is the XN-10™ Analysis Module, the foundational building block that:

- Operates at up to 100 tubes per hour
- Requires only 88µL of sample
- Includes NRBC with every CBC, IG with every WBC diff, IRF and RET-He with every retic, and IPF with every fluorescent platelet count
- Provides body fluids analysis, including a 2-part diff

So what makes the XN-Series so unique and different?

Silent Design—Designing analyzers for the way people work.

The New Shape of Hematology—Introducing Silent Design®

Sysmex achieves Silent Design through careful study of laboratory processes. We not only look at the flow of testing through the lab, we also take careful note of the relationship between the operator and the analyzer. After all, the operator and analyzer spend a lot of time together.

Silent Design—The Silence Speaks For Itself

We understand that an analyzer that intuitively assists in the testing process makes life easier for everyone. Silent Design creates analyzers that operators like to use and know they can trust. And we understand that an operator’s trust of an analyzer is indispensable for performing tests efficiently and accurately.

While many features of the XN obviously support Silent Design (e.g., the smooth outer housing), many other components support this concept in a more subtle way. For example, the new approach to reagents, cartridges and RFID labeling addresses the space savings and people-oriented aspects of Silent Design.

Simply stated—it’s the way in which the analysis module is coupled with different samplers and rack management components to build a range of unique physical configurations.

Add to this a highly developed IPU (PC), the brain of the system, which includes on-board decision rules to automate both rerun and reflex testing, and you have a powerful new approach to better help you manage your challenges.

Other key attributes of the IPU are:

- Space savings—similar in size to a shoebox
- Functional redundancy for mission-critical security and peace of mind:
  - Mirrored, solid-state hard drives
  - Redundant power supplies
- Single IPU (PC) supports up to three XN-10 modules in a single configuration
  - Touch screen and graphical user interface make it easy to use
  - User-definable decision rules to automate reflex and rerun testing
  - Enhanced on-board results and data management
Modular Configurations to Best Suit the Needs of Your Laboratory

The four configurations of the XN-Series fall into one of two styles or classes—Compact Automation Solutions or Scalable Automation Solutions.

Compact Automation Solutions

As the name implies, these configurations have the smallest footprint, yet they are fully featured with industry-leading operational and clinical capabilities. These pre-configured solutions are optimized for laboratories with lower daily workloads and less complex workflow needs.

**XN-1000™**

The XN-1000 is the most compact automation solution in the XN-Series.

- All clinical capabilities are standard
- 88µL sample size and throughput of 100 tubes per hour
- Onboard decision rules with rerun/reflex capabilities
- Smaller reagent packaging sizes and concentrated reagent option
- Optional floor stand/wagon

**XN-2000™**

The XN-2000 provides a unique co-primary approach that replaces the conventional primary and backup systems used in the past.

- All the features of the XN-1000, plus double the hourly capacity
- Automatic workload balancing between the two modules
- Single, redundant-design IPU with consolidated database

**XN-3000™**

The XN-3000 is the most compact automation solution that provides an integrated slidemaker/stainer.

- Has the same hourly capacity and workload balancing as the XN-2000
- Adds reflexive slide preparation driven by on-board rules with the SP-10™ slidemaker/stainer
Scalable Automation Solutions

Our Scalable Automation Solutions, collectively known as the XN-9000™, also share the compact footprint of their siblings, but are designed and specifically optimized to help manage higher volume and more complex workload and workflow environments. For example, *the Concentrated Reagent system is a standard component for all XN-9000 solutions.*

**XN-9000**

The XN-9000 is not just one analyzer, it is a family of combinations of XN-10 and SP-10 modules, up to nine total, providing a wide range of automation possibilities—utilizing our full line of automation modules, including conveyors, loading units, automated reagent modules and tube sorters, as well as our scalable informatics platform, Sysmex WAM™.

Recognizing that daily testing and peak hourly workload volumes are only a couple of the variables that play into scalable automation decisions, there are three “base” XN-9000 configurations.

The three versions are easy to identify and remember since their name derives from the configuration itself:

- **XN-9000—201** (2 XN-10s, 1 SP-10)
- **XN-9000—301** (3 XN-10s, 1 SP-10)
- **XN-9000—401** (4 XN-10s, 1 SP-10)
Lavender Top Management® Options

With so many laboratory tests now being performed on fewer samples, leveraging the EDTA tube more often, the capabilities introduced by Sysmex in the past decade continue through to the XN-Series. Our next generation of Lavender Top Management solutions uses the XN-9000.

Tube sorting and archiving

- XN9000-TS500—Management of up to 400 tubes per hour
- XN9000-TS2000—Management of up to 800 tubes per hour
- All management controlled and directed by Sysmex WAM for flawless operation

Automation of HbA1c

- Bio-Rad VARIANT™ II TURBO Link—Fully reflexive; no operator interaction required
- All data managed through and by Sysmex WAM

Flexible Information Management for the Hematology Lab

Sysmex recognizes that laboratories need choices when developing their information management strategy. With the XN-Series, rerun and reflex testing capabilities can be achieved through standard, onboard decision rules. If extended rules, auto-validation and management reports are desired, Sysmex WAM is there to help you.

Seamless integration and management of the more advanced capabilities of the XN-9000 is enabled through Sysmex WAM, our scalable informatics platform.
Sysmex WAM

Decision Support Software for the Clinical Hematology Laboratory

Laboratories seeking to standardize sample handling, implement hands-free processing and increase auto-validation recognize that they need software to drive these efficiencies. As a comprehensive hematology information system, Sysmex WAM handles the entire suite of hematology data management processing including rules management for numerical and non-numerical results, manual differential processing, auto-validation, and management reports. Sysmex WAM provides a secure end-to-end system that enables labs to absorb greater capacity even with less staff.

True Enterprise-wide Hematology

Sysmex WAM adapts to your lab, not the other way around. Regardless of your analyzer configuration, the number of sites you operate or the number of laboratory information systems to be connected, a single WAM server manages all of these seamlessly and securely. Data stays on board and at your fingertips for two years. WAM supports high-availability configurations including failover server and virtual server integration.

WAM Provides:

**Automation management**
- Hands-free processing
- Automatic rerun and reflex rules
- Post-analysis sorting (with Sysmex Tube Sorters)
- Real-time sample tracking

**Auto-validation can achieve >85%**
- Hematology-specific complex rules
- Detailed smear rules
- Critical results management
- Extended delta and previous data checking
- Manual differential and morphology processing
- Pathologist review handling
- Online data availability in real time for up to two years

**Productivity and workflow**
- Paperless processing
- Productivity and performance management reports online
- “On-screen Lab Assistant”—dynamic screen reminders optimize workflow
- Seamless integration with digital cell image analysis systems
- Integration with complete A1c management
- Sysmex-recommended turnkey, standard rule set
- Comprehensive implementation support through go-live
Advanced Clinical Utility of the XN-Series

The XN-Series continues to add and expand advanced parameters on a proven technology platform.

Technology that Advances Accuracy, Specificity and Productivity

New fluorescent dyes increase cellular specificity

- The precision and accuracy you expect from Sysmex:
  - Identifies nucleated RBC directly in the white cell channel, eliminating the need for WBC count corrections
  - Enhances and optimizes flagging for abnormal cells, increasing the number of reportable results
  - Adds separate body fluid counts, including a two-part differential
- Improved platelet analysis using a platelet-specific fluorescent dye—the all-new PLT-F method. This provides immature platelet fraction (IPF) results and improved platelet performance on challenging specimens.
- User-defined rerun and reflex testing reduces manual intervention (e.g., reflexing to PLT-F means more reportable platelet counts).
Channels
XN-CBC—NRBC Standard with Every XN-CBC
- CBC includes NRBC assessment
- No additional steps, reagents or operator interaction required
- NRBCs reported without the need for white cell correction
- Virtually eliminates interference from lyse-resistant RBCs and lipids

XN-Diff—IG Standard with Every XN-Diff
- True 6-part diff—Immature granulocytes are fully differentiated for auto-validation
- Enhanced and optimized flagging for abnormal cells, increasing the number of reportable differentials
- Reflex to extended analysis to provide differentials for critically low WBC counts

XN-BF—Body Fluids with Diff
- Dedicated channel supported by control product
- Fully automated background counts
- No additional reagents
- No special sample preparation required
PLT-F—Indices of Thrombopoiesis (Platelet Count and IPF)
Fluorescent Platelet Count and Immature Platelet Fraction can help evaluate thrombopoietic status when used in conjunction with other available clinical information.

- Platelet-specific dye method
- Excellent correlation to ICSH reference method
- Minimal interference from:
  - RBC fragments
  - Microcytic RBCs
  - WBC fragments

RET—Indices of Erythropoiesis (RET, IRF, RET-He)
Advanced studies of the RBC population can help evaluate erythropoietic capability when used in conjunction with other available clinical information.

- Quick and automatic
- Clinically relevant information for the management of anemia when used in conjunction with other available clinical information
- Monitors RBC development at the cellular level
  - IRF for retic production
  - RET-He for iron incorporation in hemoglobin of the erythron
- Reduced interference from:
  - WBCs
  - Howell-Jolly Bodies
  - Parasites
  - Sickle cells
XN-Series Reagent System

Innovation for Greater Convenience

The XN-Series reagent system is focused on enhanced convenience factors such as size and ease of replacement, while maintaining maximum test utilization from each reagent. The reagent system mirrors both the practical nature and elegance in design of the XN analyzers.

Unique Concentrated Reagent System

Innovation can be seen in the simplest of things—for example, the availability of a concentrated reagent system that uses CELLPACK DST.

In the world of automated hematology, diluent is the most frequently used and, therefore, the most often replenished or exchanged reagent. It’s common to see 20L diluent boxes in any laboratory.

Greater choice and greater flexibility

- The concentrated reagent system, including the RU-20 unit, is a standard component on all XN-9000 configurations.
- The same system is available as an option for use with the XN-1000, XN-2000 and XN-3000 configurations. Ready-to-use CELLPACK DCL is also available.

The RU-20 creates “ready to use” reagent on demand and holds a working reservoir capable of supporting up to three XN modules operating at full speed. Just provide it with access to Type II water.
Container Reagents—Cell preparation and lytic reagents
- All are bar-coded with lot-specific data
- Designed to fit within the XN-Series system wagons

Cartridge Reagents—Fluorescent dye packs
- “Printer style” cartridges for fast, easy replacement
- RFID (Radio Frequency ID) technology simplifies recording
- Automatic uploading of lot-specific information
- Expiration date control without operator involvement
- Maintains and updates usage information automatically
- Prevents “wrong reagent, wrong connection” scenarios
- All are bar-coded with lot-specific data
- Designed to fit within the XN-Series system wagons
Sysmex Services and the XN-Series

You’ve Made an Investment

At Sysmex, we know your analyzer purchase is part of an investment in your future. We’ve designed a rich and comprehensive set of services to maximize your investment, to optimize your performance and to strategize for what’s next.

Maximize your investment

Sysmex offers you services that keep your analyzer up and running. Services such as:

- Industry-leading customer service, both on the phone and in the field
- Reagent management systems
- Managed-calibration program
- Remote monitoring
- Quality assurance programs
Optimize your staff’s performance

Sysmex offers you a choice of proven methods to educate your staff and maintain proficiency. Our blended learning sets the benchmark through an unrivaled combination of methods:

- Instructor-led courses at our regional headquarters in the greater Chicago area
- Self-guided e-Learning, accessible any time, anywhere
- Virtual, instructor-led training designed for small groups
- Webinars featuring current technical, managerial and scientific laboratory topics

Strategize for your future

Sysmex works with you to understand your anticipated needs. We provide:

- Business line reviews
- Lab Solution Services to help you maximize your workflow, and new solutions when necessary
- Professional Services
  — Project Management
  — OneVoice—One point of contact to coordinate your implementation
  — I.T. Support
- Sysmex WAM

Sysmex is committed to providing the highest-quality service and support including 24-hour telephone response, qualified TAC and Field Service representatives, and the Peak Performance services program designed to ensure high-quality patient results and streamline operations, while providing maximum value for your fast-paced laboratory environment.