



CE

# RANDOX

## RX daytona

A compact benchtop solution  
for clinical chemistry testing



# RX daytona

*Flexible, versatile and efficient*

The RX daytona can provide a performance like no other with an industry leading test menu on a cost effective, compact analyser.

Have confidence in testing with accurate and reliable results from the RX daytona. The compact fully automated clinical chemistry analyser can provide rapid, cost effective testing for informed and dependable decisions, from the bench top to the bedside.

## RX daytona system overview

**B** Unique dual three speed stirring system



**A** Versatile reagent carousel with 40 cooled positions



## RX daytona gives unrivalled performance guaranteed with:

The largest clinical chemistry test menu on the market providing complete consolidation of specialised and routine tests onto one platform.

International accreditation ensures high quality testing you can trust.

Dedicated RX support team provides instant expert knowledge and advice when you need it most.

Versatile applications for a variety of settings including:

- Clinical Chemistry laboratories
- Research laboratories
- Food and wine testing
- Veterinary laboratories
- Forensic toxicology

© 45 Permanent Pyrex® cuvettes



Ⓓ Universal sample carousel with 40 positions



Ⓔ Optional Integrated ISE unit



# Why RX daytona?

*A compact high performance system for all tests*

## Advanced onboard stability

- Cooled reagent carousel extends stability and reduces reagent wastage
- 40 cooled positions enable reagent overnight storage onboard the analyser

## Most comprehensive test menu on the market

- Wider range of tests available than any other sole supplier
- Ability to run specific protein tests removes the need for a separate nephelometry system

## Highly accurate testing

- Separate reagent and sample probes minimise contamination and carry over
- Unique three speed rotating stirrers optimise mixing for each assay
- Serum indices detect haemolysed, icteric or lipaemic samples building confidence in results and reducing expensive repeats
- Dedicated onboard micropipettes with liquid level sensor and crash protection

## STAT sampling

- Immediate sampling interruption for STAT addition

## Time saving

- Pre-programmed settings eliminate the need to input test parameters
- True walk away automation optimises staff time
- Auto sample re-run function reduces downtime and eliminates risk of human error
- Minimal daily maintenance and lowest service requirements in its class

## Built in inventory management system

- The RX daytona automatically calculates remaining reagent volume and the number of tests available
- Storage capacity of 100,000 test results including 10,000 patient results and data for up to 30 controls





## Flexibility

- Capable of running monochromatic, bi-chromatic, endpoint, kinetic, ISE, sample blanking and reagent blanking assays
- Filters provide coverage at wavelengths 340, 415, 510, 546, 570, 600, 660 and 700nm
- Six different calibration options available including linear, factor, 2 point, point to point, log-logit and exponential

## Cost savings

- No extra consumables required
- Five year permanent reusable pyrex® cuvettes
- Universal sample carousel-holds all standard sample vessels
- Economic platform with low water consumption at 7.5L per hour
- Minimal reagent volumes required per test

## Optimum laboratory efficiency

- System calculates remaining reagent volume and number of tests available
- Complete package of IQC and EQA available
- Bar coded reagents and samples mean no time is wasted programming routine assays
- Programmable analyser autostart function

## Unrivalled QC capabilities

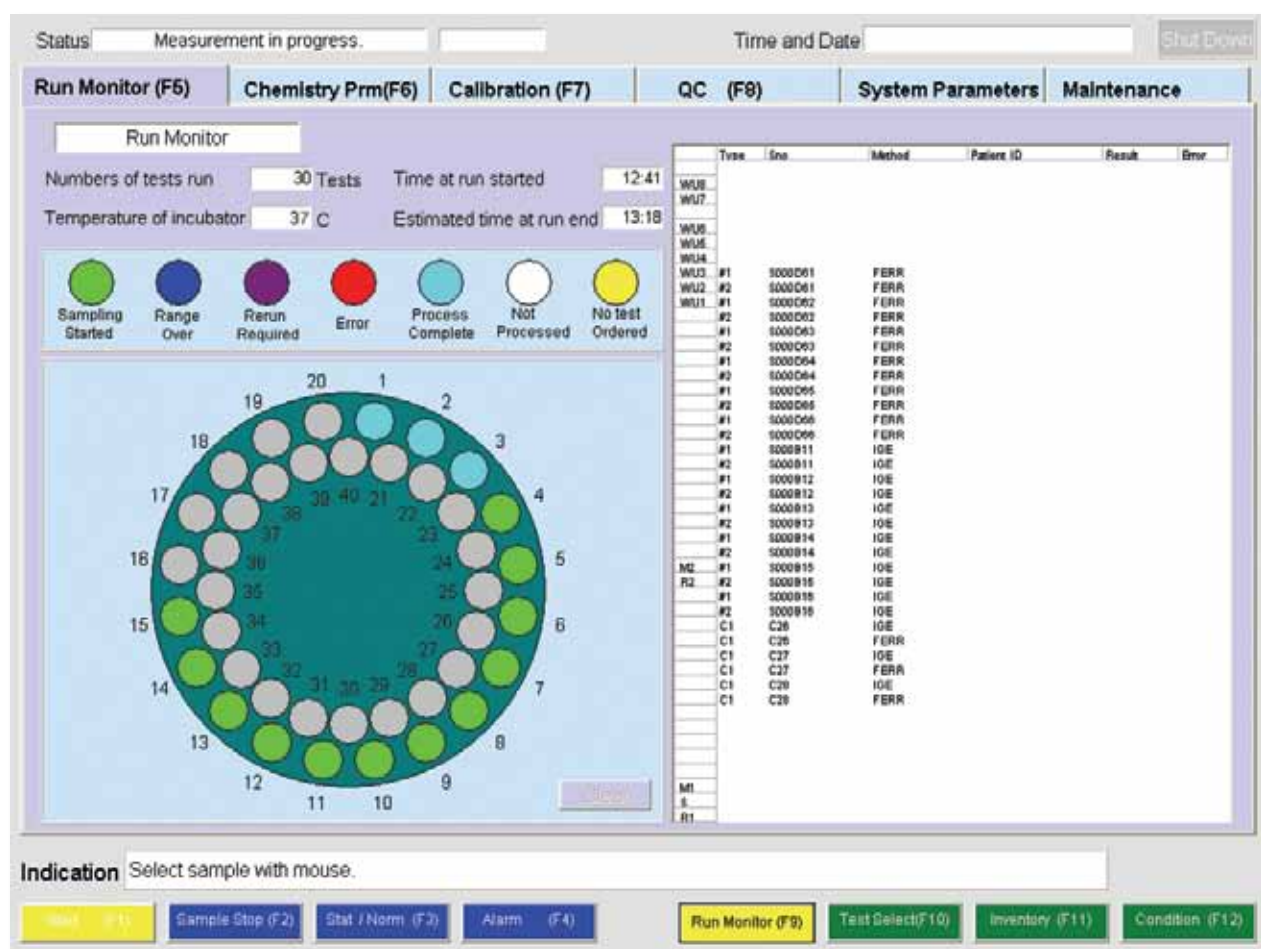
- Automatic generation of Levey Jennings charts, running mean values and QC statistics
- User defined multipoint rules to identify any trends or bias

## High throughput

- 180 photometric tests per hour
- 270 ISE tests per hour

# RX daytona software

Ensures straightforward and intuitive operations



Run monitor screen

## Connectivity

Software capable of connecting to LIMS system via ASTM standard

## RX series software commonality

Software consistent across all of the RX series, for ease-of-use and straightforward operations

## Simplistic and intuitive operations

Microsoft Windows based software offers ease of navigation.

Intuitive software results in minimal training requirements and enhanced productivity



## Control operations from the main screen with six informative software tabs

### Run monitor screen

- Displays full patient demographics
- View status in real time including time to completion

### System parameters screen

- Define up to 15 normal ranges

### Quality control screen

- Levey-Jennings charts, running mean values and QC

### Chemistry parameter screen

- Set up to eight test profiles and define order of analysis
- Enables sample dilution and test re-runs

### Maintenance screen

- Less than five minutes daily maintenance required

### Results screen

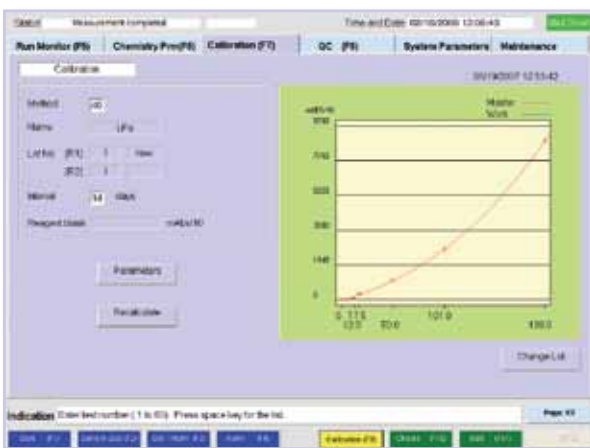
- Download and print results

### Calibration screen

- Sets calibrator serial dilution and displays multipoint calibration curves



Quality control screen



Calibration screen

## Easy to follow reports

View real time results status, including time to completion

## Reduces downtime

Save time and costs with secure remote diagnostics allowing immediate support from expert technical and applications staff, anytime, anywhere!

# RX daytona test menu

Largest clinical chemistry test menu on the market

## Clinical

### Autoimmune:

Complement Component 3  
Complement Component 4  
CRP  
CRP Full Range (0.3-160mg/l)  
CRP High Sensitivity  
IgA  
IgE  
IgG  
IgM  
Rheumatoid Factor

### Basic Metabolic Profile:

Calcium  
CO<sub>2</sub> Total  
Chloride  
Creatinine Enzymatic  
Creatinine (Jaffe)  
Glucose  
Potassium  
Sodium  
Urea

### Bone Profile:

Alkaline Phosphatase  
Calcium  
Phosphorus  
Total Protein

### Cardiac:

Cholesterol  
CK-MB  
CK-NAC  
CRP  
CRP Full Range (0.3-160mg/l)  
CRP High Sensitivity  
Digoxin  
Direct HDL Cholesterol  
Direct LDL Cholesterol  
Heart-Type Fatty Acid Binding Protein (H-FABP)  
Lipoprotein (a)  
Myoglobin  
sLDL  
Triglycerides  
TxB Cardio

### Comprehensive Metabolic Profile:

Albumin  
Alkaline Phosphatase  
ALT  
AST (GOT)  
Direct Bilirubin  
Calcium  
Chloride  
CO<sub>2</sub> Total  
Creatinine Enzymatic  
Creatinine (Jaffe)  
Glucose  
Lactate  
Potassium  
Sodium  
Total Bilirubin  
Total Protein  
Urea

### Diabetes:

Cholesterol  
Creatinine Enzymatic  
Creatinine (Jaffe)  
Cystatin C  
Direct HDL Cholesterol  
Direct LDL Cholesterol  
Fructosamine  
Glucose  
Glycerol  
HbA1c/Hb  
Microalbumin  
NEFA (Non-Esterified Fatty Acids)  
Ranbut (Hydroxybutyrate)  
Total Protein  
Triglycerides  
Urinary Protein

### Electrolytes

Calcium  
Chloride (Direct / Nondirect)  
CO<sub>2</sub> Total  
Lithium  
Magnesium  
Potassium (Direct / Nondirect)  
Sodium (Direct / Nondirect)

### Haemolytic Anaemia:

G6P-DH  
Haptoglobin  
LDH

### Hepatic Function:

Albumin  
Aldolase  
Alkaline Phosphatase  
Alpha-1 Antitrypsin  
ALT  
Ammonia  
AST (GOT)  
Cholinesterase  
Complement Component 3  
Complement Component 4  
Direct Bilirubin  
Gamma GT  
GLDH  
Glycerol  
Haptoglobin  
IgA  
IgG  
IgM  
Iron (UIBC)  
LAP  
LDH  
Total Bilirubin  
Total Protein  
Transferrin  
Transthyretin (Prealbumin)

### Inflammation and Infection:

Alpha-1 Acid Glycoprotein  
ASO  
CRP  
Lactate  
Rheumatoid Factor

### Lipids:

Apolipoprotein A-1  
Apolipoprotein AII  
Apolipoprotein B  
Apolipoprotein CII  
Apolipoprotein CIII  
Apolipoprotein E  
Cholesterol  
Direct HDL Cholesterol  
Direct LDL Cholesterol  
Lipoprotein (a)  
sLDL  
Triglycerides

### Neonatal Screening:

Alpha-1 Antitrypsin  
CRP  
CRP Full Range (0.3-160mg/l)  
CRP High Sensitivity  
IgE  
Transthyretin (Prealbumin)

### Neurological Disorders (CSF):

IgA  
IgG  
IgM

### Nutritional Status:

Albumin  
Copper  
Ferritin  
Iron  
Iron (UIBC)  
Lipase  
Magnesium  
Potassium  
TIBC  
Transferrin  
Transthyretin (Prealbumin)  
Zinc

### Pancreatic Function:

Amylase  
Glucose  
LDH  
Lipase  
Pancreatic Amylase

### Renal Function:

Albumin  
Ammonia  
Beta-2 Microglobulin  
Calcium  
Chloride  
Creatinine Enzymatic  
Creatinine (Jaffe)  
Cystatin C  
Glucose  
HbA1c/Hb  
IgG  
LDH  
Magnesium  
Microalbumin  
Potassium  
Sodium  
Phosphorus (Inorganic)  
Urinary Protein  
Urea  
Uric Acid



## Veterinary

Albumin	Cholesterol	Glycerol	Ranbut (Hydroxybutyrate)
Alkaline phosphatase	Cholinesterase (Butyryl)	HDL	Ransel (Glutathione peroxidase)
ALT (GPT)	CK-NAC	Iron (UIBC)	Ransod (Superoxide dismutase)
Aldolase	CO <sub>2</sub> Total	Lactate	Sodium
Ammonia	Copper	Lactate dehydrogenase	Therapeutic drugs
Amylase	Creatinine	LDL	Total Protein
AST (GOT)	CRP	Lipase	Triglycerides
Bile acids	Fructosamine	Magnesium	Urea
Bilirubin	Gamma-GT	NEFA (Non-esterified fatty acids)	Uric Acid
Calcium	GLDH	Phosphorus (Inorganic)	Urinary protein
Chloride	Glucose	Potassium	Zinc

## Toxicology

<b>Therapeutic Drugs:</b>	Phenobarbitol	<b>Drugs of Abuse:</b>	EDDP
Carbamazepine	Phenytoin	Amphetamines	Ecstasy
Digoxin	Salicylate	Barbiturates	Ethanol
Gentamicin	Theophylline	Benzodiazepines	Methadone
Lithium	Valproic Acid	Cannabinoids	Opiates
Acetaminophen		Cocaine metabolite	

## Protein

<b>Specific Proteins:</b>	Apolipoprotein E	CRP High Sensitivity	IgG
Alpha-1 Antitrypsin	ASO	Cystatin C	IgM
Alpha-1 Acid Glycoprotein	Beta-2 Microglobulin	Ferritin	Lipoprotein (a)
Apolipoprotein A-I	Ceruloplasmin	Fructosamine	Microalbumin
Apolipoprotein AII	Complement Component 3	Haptoglobin	Myoglobin
Apolipoprotein B	Complement Component 4	HbA1c/Hb	Rheumatoid Factor
Apolipoprotein CII	CRP	IgA	Transthyretin (Prealbumin)
Apolipoprotein CIII	CRP Full Range (0.3-160mg/l)	IgE	Transferrin

## Research

<b>Antioxidants:</b>	<b>Biotechnology:</b>	<b>Food and Wine Testing:</b>	<b>Speciality:</b>
Albumin	Glutamate	Acetic Acid	Acid phosphatase
Bilirubin	Glutamine	Ammonia	
Ferritin		Calcium	
Glutathione Reductase		Copper	
Ransel (Glutathione Peroxidase)		Glucose	
Ransod (Superoxide Dismutase)		Glucose/Fructose	
TIBC		Glycerol	
Total Antioxidant Status		Iron	
Transferrin		L-Lactic Acid	
Uric Acid		Malic Acid	
		Potassium	
		Total Antioxidant Status	

# Unrivalled customer service

*Our global network, ensuring local support*

At Randox our highly specialised RX support team is on hand with expert advice and support regardless of where you are in the world. Our global team of expert technical and applications staff ensure unbeatable service for hassle free diagnostics.

Time is critical in any laboratory, therefore you are our top priority. Dedicated specialists answer all queries in a quick and thorough manner and our field agents are on hand at any time so you can be sure of a quick response.

## **Remote Access diagnostics**

Our ground breaking 'Remote Access diagnostics' allows immediate support to your system reducing down time and the expense associated with timely call outs. Randox is committed to the smooth running of your laboratory ensuring that your system will remain operational with optimum productivity. Our unrivalled customer support and quality products also extends in the form of our leading IQC and EQA programmes, 24·7, a peer group IQC programme and RIQAS the largest global EQA scheme in the world.



email: [rxsupport@randox.com](mailto:rxsupport@randox.com)



# RX family of analysers

## The RX daytona provides the solution for consolidated, high quality clinical chemistry testing

Clinical chemistry testing has advanced dramatically in recent years with demands fixed on consolidation, speed, quality and cost. Randox is committed to advancing diagnostic testing to suit our customers. Investing heavily into research and development, Randox has developed a full range of clinical chemistry analysers to suit any working environment



### **RX monza**

Versatility for reduced cost, low-volume manual testing. The RX monza semi-automated clinical analyser has an integral screen, keyboard and printer.



### **RX daytona**

Convenient bench top system, the RX daytona clinical analyser has a throughput of 450 tests per hour including ISEs via the optional ISE unit.

including clinical, paediatric, research, veterinary, forensic and pharmaceutical laboratories.

The RX series of clinical analysers has an impressive range of time-saving and cost-saving features. All of which offer outstanding flexibility coupled with optimum reliability.



### **RX imola**

Designed for medium to high throughput laboratories, the RX imola is a random access bench top clinical analyser with a maximum throughput of 560 tests per hour including ISEs.



### **RX suzuka**

The latest addition to the RX family of analysers; the RX suzuka is a fully automated, discrete, random access clinical analyser with a throughput of 1200 tests per hour including ISEs.

# Specifications

## Physical Dimensions

Height	550 mm, 24.5 in
Depth	620 mm, 20 in
Width	770 mm, 30 in
Weight	135 kg, 298 lbs

## Performance Characteristics

Analysers Accreditation	CE marking in compliance with In Vitro Diagnostic Medical Device Directive 98/79/EC, FDA 510k cleared and UL certification
Analysers Type	Compact fully automated random access bench top clinical analyser
Assay Tests	Endpoint, kinetic, biochromatic, turbidimetric, sample blanking, reagent blanking and ISE (via optional integrated ISE unit)
Calibration Principal	Factor, Linear, 2 point, point to point, spline, log-logit and exponential, Up to 7 calibrators per test
Cuvettes	45 reusable Pyrex cuvettes with 5-year lifespan, min volume 180µl, Max volume 500µl, 8-stage cuvette washing system
Cycle Time	20 seconds
Data Management	Storage of up to 10,000 patient reports, search facility
Detection Principal	8 wavelengths: 340, 415, 510, 546, 570, 600, 660, 700 nm
Detector Method	Direct absorbance in cuvette (bichromatic and monochromatic)
ISE Unit	Optional ISE unit available
Light Source	Halogen tungsten lamp (Air-cooled, 6 months service life)
LIMS Connectivity	Bi-directional; ASTM Standard (RS232 connection)
Maintenance	Daily maintenance- less than 5 minutes. No rear access required. Simple twice yearly preventative maintenance.
Maximum Humidity	45-85% without condensation
Minimum Reaction Volume	180µl
Operator Interface	15" LCD display and printer externally connected. Windows XP based user interface
Quality Control	Interactive Levey Jennings Charts, Daily, monthly and batch QC with data archiving, Automatic QC and Automatic calibration
Reagent Capacity	Removable tray with 40 cooled positions (20 positions for 100, 50 or 20ml bottles and 20 positions for 20ml bottles)
Reagent Cooling	8-15°C
Reagent Identification	Automatic barcode reagent identification
Reagent Inventory	Calculation of remaining reagent volume and tests available. Alert for shortage, expired reagent and expired calibration
Reagent Pipette	Dedicated reagent micropipette with liquid level sensor and crash detection. Rinsed inside and outside with purified water
Reagent Volume	20-400µl ( 1 µl increments)
Sample Addition	Sampling interruption for addition of samples
Sample Capacity	Removable tray with 40 positions for samples, calibrators and controls
Sample Dead Volume	100µl in standard or primary tubes, 50µl in paediatric cups
Sample Dilution	Pre-dilution and automatic re-assay with diluted, reduced or increased sample volume
Sample Identification	Barcode sample identification
Sample Pipette	Dedicated sample micropipette with liquid level sensor and crash protection, rinsed inside and outside with purified water
Sample Type	Serum, plasma, CSF, urine and supernatants

Sample Tube Size	Multiple primary tube sizes (diameter 12 to 16mm, height 55 to 100 mm), paediatric cups
Sample Volume	2 to 35µl (0.1µl increments)
STAT Sampling	Immediate STAT sampling interruption
Stirring Speed	Dual 3-speed rotating stirrers
Stirring System	Stick type rotating stirrer cleaned with purified water
Temperature	37°C±0.3
Test Channels	40 photometric channels, 3 direct ISE
Throughput	180 photometric tests per hour; 270 ISE tests per hour
Time to First Result from Sample Barcode Scan	14 minutes
Time to First Result from Standby	12 minutes 30 seconds
Water Consumption	Maximum 7.5L per hour
Water Requirements	NCCLS type 1 or 2 purified water supply
Walk-away Time	1 hour 40 minutes

## Power Requirements

Input Voltage	100 -240Vac
Power Consumption	<700 W
UPS Requirements	1.35KW

## Catalogue No./ Ordering Info.

RX daytona analyser without ISE	RX3900
RX daytona analyser with ISE	RX3901



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