ABL800 BASIC

Meeting your essential needs

SIMPLY DEDICATED

RADIOMETER COPENHAGEN

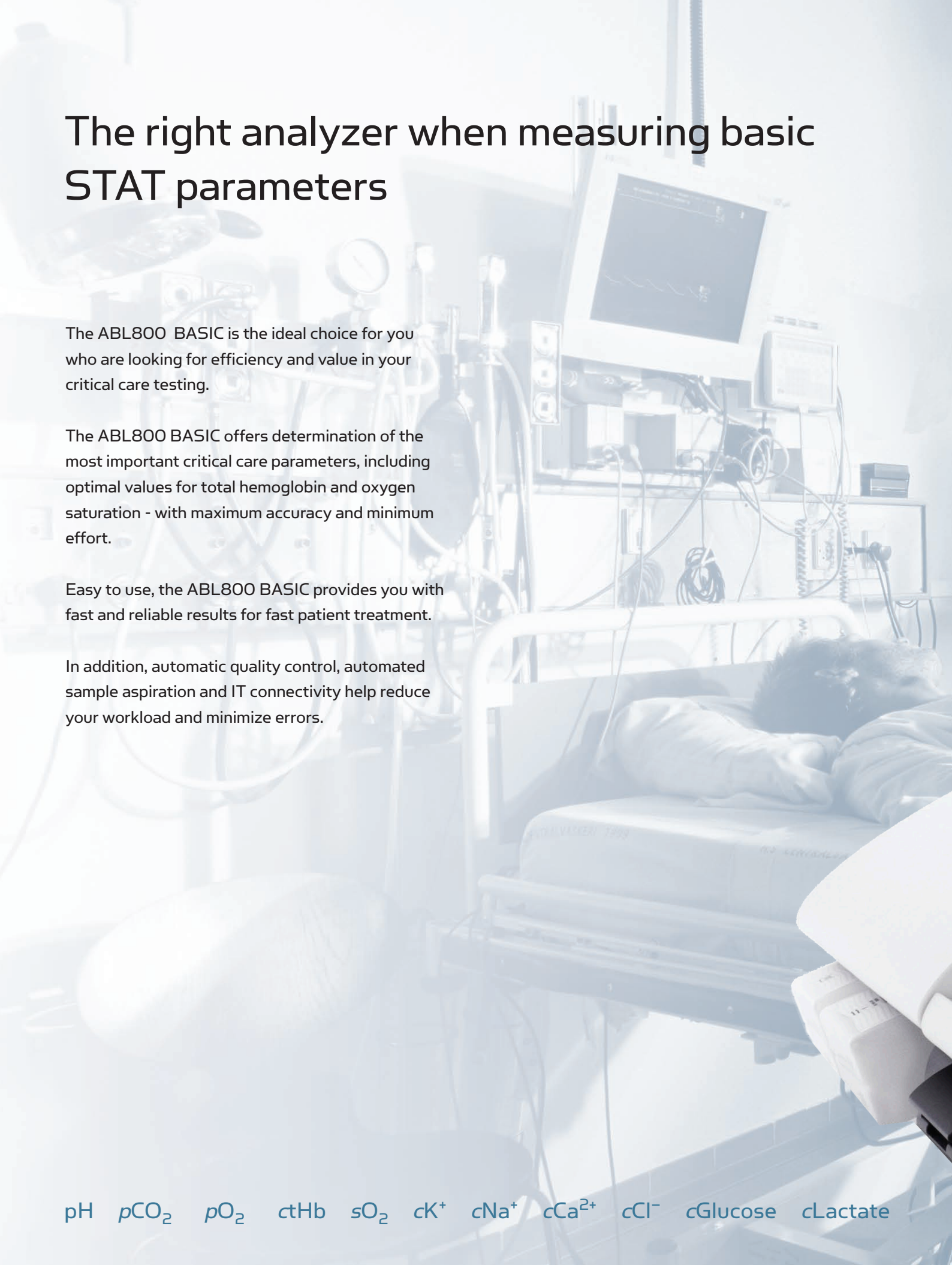
The right analyzer when measuring basic STAT parameters

The ABL800 BASIC is the ideal choice for you who are looking for efficiency and value in your critical care testing.

The ABL800 BASIC offers determination of the most important critical care parameters, including optimal values for total hemoglobin and oxygen saturation - with maximum accuracy and minimum effort.

Easy to use, the ABL800 BASIC provides you with fast and reliable results for fast patient treatment.

In addition, automatic quality control, automated sample aspiration and IT connectivity help reduce your workload and minimize errors.



pH pCO_2 pO_2 $ctHb$ sO_2 cK^+ cNa^+ cCa^{2+} cCl^- cGlucose cLactate


ABL800
BASIC
AutoCheck

Fewer steps and better workflow

Ease of use

- Automated sample aspiration
- Integrated barcode reader
- Inlet design reduces risk of air bubbles
- Configurable interface for custom profiles
- User-definable shortcuts
- Printouts based on user-defined values

Improve workflow

- User- access control
- Maintenance scheduler
- Stand-by option
- Parameter bar provides analyzer status at a glance

Save time and reduce errors

IT connectivity will further enhance the integration of blood gas in your processes and help reduce data management costs.

- Automatic storage of patient, QC, calibration and system data
- Two-way communication with HIS/LIS eliminates transcription errors
- Remote control and monitoring of analyzer status, e.g. through the RADIANCE analyzer data management system

Configurable intereface for custom profiles.

IT connectivity

Computer specifications

Intel Celeron Processor
128 MB RAM
Hard disk 40 GB
CD/RW/DVD drive
TFT 10.4" VGA color touch screen
Dedicated 80386 CPU for wet-section operations

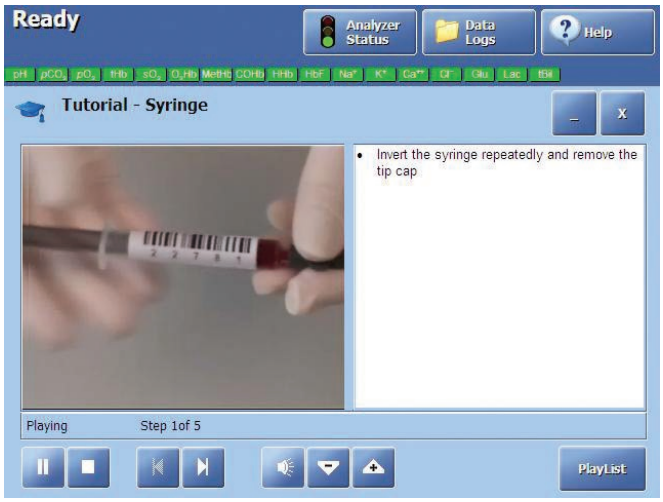
Data capacity

Patient results:	2000
Calibration results:	1000
QC results:	1500
System messages and service registrations:	5000

Communication

Access to Local Area Network for backup, etc.:
- using PC network operating systems
- supporting Windows®XP

Output protocols:
- High-level protocols
  - ABL700-compatible ASTM (E1394-91)
  - ABL700-compatible HL7 (Version 2.2)
  - ABL5xx-compatible ASTM (E1394-91)
- Low-level protocols
  - ASTM (E1381-95)
  - Radiometer network protocol (TCP/IP only)
  - Raw (serial only)
- Transport layer
  - TCP/IP
  - RS232
- RADIANCE
  - Communication via TCP/IP



Online assistance with audio-enhanced video tutorials, troubleshooting and help.

Mode	Sample volume (µL)	Measuring time (sec)	Cycle time (sec)
All parameters	195	80	150
All parameters, micro	95	135	200
pH + BG + Oxi, micro	85	80	145
pH + BG + Oxi, micro	55	100	170
Glu + Lac, micro	35	80	145
Oxi, micro	35	80	145

Mode	Sample volume (mL)	Measuring time (sec)	Cycle time (sec)
Expired air	15	65	170

Small sample volumes.

Maximize your sample success rate

The ABL800 BASIC offers an intuitive sampling process, where guides and narrated on-screen video tutorials offer immediate help for the user.

A wide on-screen choice of measuring modes ensures sample accuracy for volumes as low as 35 µL. Micromodes offer a fast reponse and high success rates for the precious capillary samples.

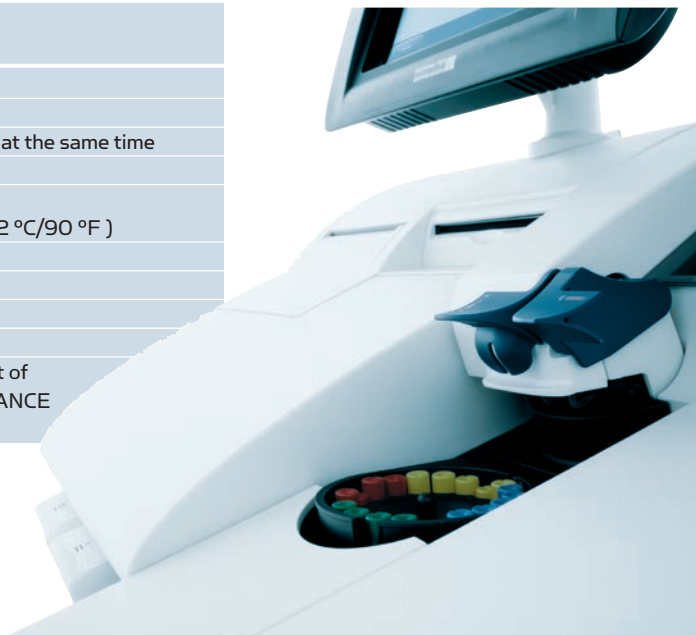
Save time with automatic quality control

On the ABL800 BASIC, quality control is completely automated, so you can schedule it according to your needs.

In addition, the ABL800 BASIC automatically saves QC data and displays Levey-Jenning's plots. All QC data is available electronically with easy search options.

For additional verification of analyzer performance, simply submit your QC data to Radiometer's online peer-group comparison service Worldwide DATACHECK.

AutoCheck automatic quality control	
Number of ampoules in carousel:	0-20
Positioning of ampoules in carousel:	Random
Lot change:	2 lots of same level possible at the same time
Liquid volume in ampoule:	700 µL
Expiration of ampoules:	24 months at 25 °C/77 °F (including 15 days at up to 32 °C/90 °F)
Conditioning time (from room temperature):	15 min with filled carousel
Scanning time:	< 30 sec with filled carousel
Cycle time:	< 2 min 40 sec
Manual QC measurement possible:	Yes
Remote control:	Remote monitoring and start of measurement, e.g. via RADIANCE



Essential parameters

Measured parameters

On the ABL800 BASIC, you get all the essential parameters in one sample.

The high-performance oximeter on the ABL800 BASIC ensures optimal values for total hemoglobin (tHb) and oxygen saturation, thus providing you with a clear picture of the patient's levels of oxygen uptake, transport and release.

	Type	Parameters	Units	Measuring ranges
Default parameters	pH	pH	pH scale	6.300-8.000
		cH^+	nmol/L	10.0-501
	Blood gas	pCO_2	mmHg	5.0-250
			kPa	0.67-33.3
			Torr	5.0-250
		pO_2	mmHg	0.0-800
			kPa	0.00-107
			Torr	0.0-800
	Oximetry	$ctHb$	mmol/L	0.0-60
		sO_2	mmol/L	0.0-30
Additional parameters	Electrolyte*	cCl^-	mmol/L	7-350
			meq/L	7-350
		cCa^{2+}	mmol/L	0.20-9.99
			meq/L	0.40-19.98
			mg/dL	0.80-40.04
		cK^+	mmol/L	0.5-25.0
			meq/L	0.5-25.0
		cNa^+	mmol/L	7-350
			meq/L	7-350
	Metabolite*	cGlu	mmol/L	0.0-60
			mg/dL	0-1081
		cLac	mmol/L	0.0-30
			mg/dL	0-270
			meq/L	0.0-30

* The total number of electrolytes and metabolites is limited to four.

Derived parameters

Type	Definition
pH(*T*)	pH of blood at patient temperature
$pCO_2(T)$	Carbon dioxide tension of blood at patient temperature
$cHCO_3^-$(P)	Concentration of hydrogen carbonate in plasma
cBase(B)	Concentration of titrable base of blood (actual base excess)
cBase(B,ox)	Actual base excess at 100 % oxygen saturation
cBase(Ecf)	Concentration of titrable base of extracellular fluid (standard base excess)
cBase(Ecf,ox)	Standard base excess at 100 % oxygen saturation
$cHCO_3^-$(P,st)	Concentration of hydrogen carbonate in plasma of standardized blood (standard bicarbonate)
cH^+	Concentration of hydrogen ions in blood
$cH^+(T)$	Concentration of hydrogen ions in blood at patient temperature
$ctCO_2$(P)	Concentration of total carbon dioxide in plasma
$ctCO_2$(B)	Concentration of total carbon dioxide of whole blood (CO_2 content)
pH(st)	pH of standardized blood (pCO_2 = 40 mmHg)
$pO_2(T)$	Oxygen tension of blood at patient temperature
pO_2(A)	Oxygen tension of alveolar air
$pO_2(A,T)$	Oxygen tension of alveolar air at patient temperature
*p*50	Oxygen tension at 50 % saturation of blood
*p*50(*T*)	Oxygen tension at 50 % saturation of blood at patient temperature
*p*50(st)	Oxygen tension at 50 % saturation of blood at standard conditions for pH, pCO_2, *F*COHb, *F*MetHb, *F*HbF at 37 °C
pO_2(A–a)	Difference of oxygen tension of alveolar air and arterial blood
$pO_2(A–a,T)$	Difference of oxygen tension of alveolar air and arterial blood at patient temperature
pO_2(a/A)	Ratio of oxygen tension of arterial blood and alveolar air
$pO_2(a/A,T)$	Ratio of oxygen tension of arterial blood and alveolar air at patient temperature
$pO_2(a)/FO_2(I)$	Oxygen tension ratio of arterial blood to the fraction of oxygen in inspired air
$pO_2(a,T)/FO_2(I)$	Oxygen tension ratio of arterial blood at patient temperature to the fraction of oxygen in inspired air
cCa^{2+}(pH=7.40)	Concentration of ionized calcium in plasma at pH 7.40
Anion Gap(K^+)	Concentration difference of $K^+ + Na^+$ and $Cl^- + HCO_3^-$
Anion Gap	Concentration difference of Na^+ and $Cl^- + HCO_3^-$
$\dot{D}O_2$	Oxygen delivery
Hct	Fraction of the volume of erythrocytes in the volume of whole blood
pO_2(x)	Oxygen extraction tension of arterial blood
$pO_2(x,T)$	Oxygen extraction tension of arterial blood at patient temperature
ctO_2(B)	Total oxygen concentration of blood (O_2 content)
$ctO_2(a–\bar{v})$	Total oxygen concentration difference between arterial and mixed venous blood
BO_2	Oxygen capacity of hemoglobin. The maximum concentration of oxygen bound to hemoglobin in blood, saturated so that all deoxyhemoglobin is converted to oxyhemoglobin
ctO_2(x)	Extractable oxygen concentration of arterial blood
*F*Shunt	Volume fraction of shunted venous blood in arterial blood
*F*Shunt(*T*)	*F*Shunt at patient temperature
RI	Respiratory Index
RI(*T*)	Respiratory Index at patient temperature
$\dot{V}O_2$	Oxygen consumption
*m*Osm	Plasma osmolarity
$\dot{Q}x$	Oxygen compensation factor of arterial blood
$\dot{Q}_t$	Cardiac output
V(B)	Volume of blood
sO_2	Saturation
FO_2Hb	Fraction of oxyhemoglobin in total hemoglobin in blood

Extendability with unlimited input parameters

Type	Definition
Patient ID	Patient identification number
Patient height	The height of the patient
Patient department	Which department the patient is from
T	Patient temperature
Sample type	Arterial, venous, mixed venous, capillary, prof. test, cal. verification
Patient note	Notes about the patient or sample
Patient weight	The weight of the patient
Patient Accession No.	Specific sample number
Patient age	Date of birth
Patient sex	Male or female
Draw time	When the sample was taken
Date of birth	Patient date of birth
Sample site	Not specified, brachial left/right, femoral left/right, radial left/right, finger left/right, heel left/right, umbilical cord
Patient birth weight	The weight of the newborn
Patient gestational age	Period of intrauterine fetal development from conception to birth

Type	Definition
Patient name	Name of the patient
Physician	Name of the physician
Operator	Name of the operator
Operator department	Which department the operator is from
*p*50(st)	Oxygen tension at 50 % saturation of blood at standard conditions for pH, pCO_2, *F*COHb, *F*MetHb, *F*HbF at 37 °C
RQ	Respiratory quotient
$FO_2(I)$	Fraction of oxygen in dry inspired air
$\dot{Q}_t$	Cardiac output
VO_2	Oxygen consumption
*V*CO	Volume of carbon monoxide, input value for measurement of V(B)
$sO_2(\bar{v})$	Oxygen saturation of hemoglobin in mixed venous blood
$pO_2(\bar{v})$	Oxygen tension of mixed venous blood
*c*tHb	Total hemoglobin concentration (if not measured)
*F*COHb(1)	Used for determining blood volume
*F*COHb(2)	Used for determining blood volume

Parameters can be set for mandatory input and are user-definable.

Maximum uptime

Calibration data

Automatic:	Default interval:	Interval options:
1-point cal.	4 hours	after measurement, 30 min, 1, 2, 4 hours
2-point cal.	4 hours	after measurement, 1, 2, 4 hours
System alignment	24 hours	
Cleaning	24 hours	8, 24 hours
Manual:		
tHb calibration	3 months	never, 7 days, 1, 2, 3, 4, 6 months

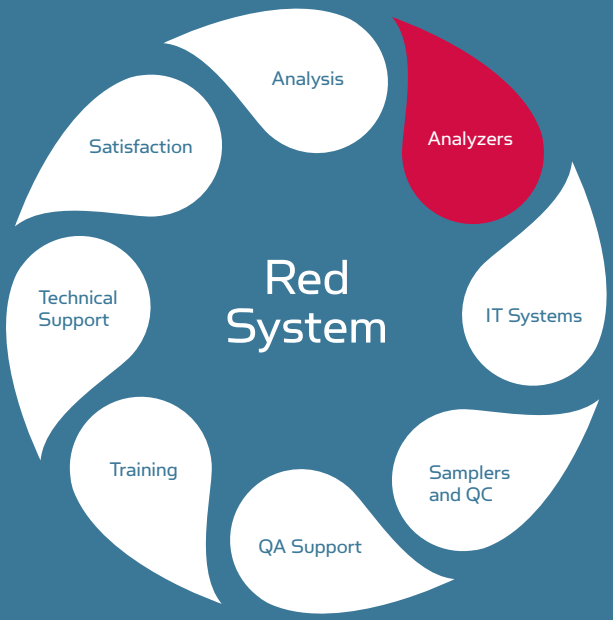
Adjustable color touch screen.

Integrated barcode reader.

Automatic sample aspiration.

For more information about Radiometer, our products and services, visit www.radiometer.com.

Read how hospitals around the world are optimizing their blood gas testing. Visit Radiometer's knowledge site www.bloodgas.org.



Additional information

CE — Indicates compliance with the IVD Directive 98/79/EC

EMC Emission — The equipment complies with the emission requirements for Class B equipment in EN 61326-1:
Electrical equipment for measurement, control and laboratory use - EMC requirements part 1: General requirements

EMC Immunity — The equipment complies with the immunity requirements in EN 61326-1:
Electrical equipment for measurement, control and laboratory use - EMC requirements part 1: General requirements

Patents — One or several of the following patents and patent applications may apply:
European Patent Nos.: EP210417, EP212126, EP889951, EP944731
Japanese Patent Nos.: JP2070313, JP2972351, JP3285879, JP3369547
German Patent Nos.: DE3673910, DE3686855, DE69729185
Austrian Patent No.: AT56271
Danish Patent No.: DK155764
European Patent Application Nos.: EP1084398, EP1086366, EP1273920
Japanese Patent Application Nos.: JP2000/507457, JP2002/518670
International Patent Application Nos.: WO2004/057304, WO2005/052596
Other patents pending.

Approvals — In compliance with IEC 61010-1 Installation Category II

Languages — English, German, Spanish, Italian, French, Chinese, Portuguese, Danish, Greek, Hungarian, Estonian, Russian and Lithuanian.

IVD

Dimensions

Width	70 cm	28 in
Height	55 cm	22 in
Depth	55 cm	21 in
Weight	33.9 kg	75.5 lbs
Warm-up time	Cold start: 25 min typical. Warm start: 5 min	
Ambient temperature	15-32 °C/59-90 °F	
Relative humidity	20-80 %	
Thermostatting	pH and blood gases, 37.0 °C ± 0.15 °C/98.6 °F ± 0.3 °F Electrolytes and metabolites, 37.0 °C ± 0.25 °C/98.6 °F ± 0.5 °F	
Spectrometer	128-wavelength measurement	
Hemolyzer frequency	30 KHz intracuvette hemolysis	
Barometer	450-800 mmHg	
Power	100-240 VAC, 50-60 Hz, 250 VA	

Sales companies:

Country:	*Radiometer representative:*	*Telephone:*	*E-mail:*	*Website:*
Australia:	Radiometer Pacific Pty. Ltd.	(+61) 3 9259 2222	sales@radiometer.com.au	www.radiometer.com.au
China:	Radiometer China	(+86) 21 6354 3387	pol@radiometer.com.cn	www.radiometer.cn
Denmark:	Radiometer Danmark	(+45) 38 27 28 29	rdan@radiometer.dk	www.radiometer.dk
France:	Radiometer S.A.S.	(+33) 1 49 44 35 50	marketing@radiometer.fr	www.radiometer.fr
Germany:	Radiometer GmbH	(+49) 2154 818-0	info@radiometer.de	www.radiometer.de
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Switzerland:	Radiometer GmbH	(+41) 044 723 38 60	info@radiometer.ch	www.radiometer.ch
United Kingdom:	Radiometer Ltd.	(+44) 1293 517 599	sales@radiometer.co.uk	www.radiometer.co.uk
Other countries:	Radiometer International Sales Division	(+45) 38 27 38 27	isd@radiometer.dk	www.radiometer.com

ABL800 BASIC is not available for sale in the USA or Canada

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