Specifications: BQ80

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Infant Radiant Warmer

BQ80

A06

Product Configurations

Standard Configuration

A13 A12

Radiant warming (FIR heating), Bassinet tilting, X-ray tray, ±90° A04 rotation of the canopy, Bidirectional drawer, Triple overheating protection, APGAR timer, Examination lamp, A03 Damping doors, Hands-free silence, Temperature monitoring, Thermal printer

Optional Configuration

Phototherapy, Electronic H/L lifting, Apnea wake-up, Tray, Weighing scale, Bracket, T-piece resuscitator: (Air-O2 blender, Negative pressure suction, PEEP, Paw monitoring, PIP control, Negative pressure monitoring, Mechanical alarms), Five-parameter ECG monitoring: (ECG, RESP, SpO2, NIBP, EtCO2)

Compliance

Safety Standards

ISO 13485:2016 approved, MDD 93/42/EEC as amended by MDD 2007/47/EC

Physical Specifications

Physical Characteristics

Dimensions	1190mm×640mm×1800mm (L×W×H)
Weight	~115kg
Height	Floor to mattress (neutral): 950mm Floor to canopy: 1700mm Mattress to canopy (neutral): 750mm
Mattress size	693mm×563mm×30mm
Drawer size	467mm×368mm×222mm

Environmental Specifications

Working Conditions

Temperature	18–30°C
Humidity	15–80%, non-condensing
Barometric pressure	70kPa–106kPa
Air flow velocity	<0.3m/s

Transport and Storage Conditions

Temperature	-20–60°C
Humidity	15–80%, non-condensing
Barometric pressure	50kPa–106kPa

Power Specifications

A/C Power

Power supply	100–240V~, 50/60Hz±1Hz C01
Input current	5.0A–5.1A

Battery Specifications

Battery Type	11.1V Rechargeable Lithium-ion battery
Battery Capacity	4400mAh
Battery Recharging Time	Less than 12 hours to full charge when powered on Less than 8 hours to full charge when powered off
Battery backup	1 hour of continuous working (Running on battery disables the following functions: heating, phototherapy, examination lamp, bassinet tilting and lifting)

Display and Interfacing

Main Display

Screen type A07	Color LCD touch screen
Screen size	10.4”
Resolution	800×600

Indicators

A/C power indicator

Alarm indicator

360° visual alarm indication

Alert for horizontal removal of the lamp holder

Alarm display angle	360°
Heating lamp alarm	Horizontal shift

Interfaces

Parameter cable ports

AC power input

Three auxiliary power outputs

C31 Plug-in slot

USB ports

Equipotential grounding port

Data transfer port

Gas Supply

Interfaces	Oxygen inlet, Air inlet
Pressure range at inlet	280–600 kPa

Alarm and Data Specifications

Data Review Specifications

Waveform review	≥24 min
Trend graphs	120 hours
Trend charts	120 hours
Power-off storage	Yes

Alarm System

Compliance	Complies with IEC60601-1-8
Alarms A15 A16	Audio alarms
	Visual alarms
	User-adjustable limits
	High, Medium and Low alarms
Alarm volume	6 selectable levels (1–6) 77 dB (back 1 m) – 50 dB (front 3 m)
Suspension of alarm	Hands-free silence

Functional Specifications

Heating Lamp

Heating mechanism	Far Infrared (FIR) Radiation
Compliance	Complies with IEC60601-1-21 201.10.6
Heating element	Ceramic
Far Infrared	<60 mW/cm^2 (at any point on the mattress)
Near infrared	<10 mW/cm^2 (760 nm to 1 400 nm)

Examination Lamp

Illuminance	High: 4500 Lux±500Lux
	Medium: 2500 Lux±500Lux
	Low: 1500 Lux±500Lux
Spot size:	250mm±10%

Thermal Printer (Recorder)

Type	Built-in; thermal array
Channel	2 channel waveforms
Speed	25mm/s, 50mm/s
Paper width	50mm
Alarm triggered	Supported

Weighing Scale

Complies with EC NAWI (Non-automatic Weighing Instruments) Directive 2014/31/EU

Measurement	
Range	300g–8000g
Resolution	1g
Accuracy	±10g

Other Functions

Load bearing capacity	Bassinet: ≤10kg
	Platform: ≤150kg
	Tray and Bracket: ≤6kg
Lifting range of platform	0–200mm (±100mm)
Lifting noise	<60dB(A)
Bassinet tilting angle	±12°
Tilting noise	<60dB(A)
No. of casters	4 A05
Caster type	Dual-wheel (Catamaran) casters
Caster size	5” (125mm)

Technical Specifications

Working Modes

Working Modes	Manual Mode
	Infant Mode
	Preheat Mode

Temperature Specifications

Control range	32.0–38.0°C
Control accuracy	≤±0.5°C
Display range	25.0–45.0°C
Resolution	0.1°C
Pre-heating time	<35min (From 25°C to 36°C at 50% RH)
Exposure time	Display total duration: 10000 hours Display single duration: 100 hours
Rotation angle of heating lamp	Vertical shift: ±45° Horizontal rotation: ±90°
Overheating protection	Software, hardware and mechanical engineering

Phototherapy Specifications

Irradiance uniformity	>0.4
Irradiance distribution area	500mm ×300mm

Phototherapy Irradiance Specifications

3 selectable irradiance levels: High, Medium, Low

Maximum irradiance	High	400nm–550nm: 3000±25%μW/cm^2 430nm–490nm: 45±25%μW/cm^2/nm
	Medium	400nm–550nm: 2000±25%μW/cm^2 430nm–490nm: 30±25%μW/cm^2/nm
	Low	400nm–550nm: 1000±25%μW/cm^2 430nm–490nm: 15±25%μW/cm^2/nm

Average Irradiance	High	400nm–550nm: >2000μW/cm^2 430nm-490nm: >30μW/cm^2/nm
	Medium	400nm-550nm: >1200μW/cm^2 430nm-490nm: >20μW/cm^2/nm
	Low	400nm-550nm: >700μW/cm^2 430nm-490nm: >10μW/cm^2/nm

T-piece Resuscitation

O2 and Air Specifications

Oxygen and air supply pressure range	280 kPa–600kPa
Gas cylinder pressure gauge range	0kPa–250x100kPa
Gas cylinder pressure gauge accuracy	±2.5%

Negative Pressure Suction Specifications

Suction pressure range	-150mmHg–0mmHg
Suction pressure accuracy	±5%
Suction flow	<20 L/min at max suction pressure
Negative pressure gauge range	-180mmHg–0mmHg
Negative pressure gauge accuracy	±5% (±9mmHg)

O2 and O2 Therapy Specifications

Oxygen concentration	21%–100% Accuracy: ± 3%
Oxygen therapy flow range	0 L/min–15 L/min
Oxygen therapy accuracy	±0.5 L/min at 0 L/min–5 L/min ±1.5 L/min at 5 L/min–10 L/min ±2 L/min at 10 L/min–15 L/min

PPV Specifications

Continuous positive pressure flow range	0 L/min~15 L/min
Continuous positive pressure accuracy	±0.5 L/min at 0 L/min–5 L/min ±1.5 L/min 5 L/min–10 L/min ±2 L/min 10 L/min–15 L/min
Airway pressure gauge range (Paw)	-20 cmH2O–100cmH2O
Paw measurement accuracy	±5% full scale
Maximum PIP	45 cmH2O±5cmH2O
PIP safety threshold	>30±4 cmH2O (Flow at 15 L/min)
Mechanical alarm	When the pressure difference between oxygen and air is above 140kPa ± 20kPa or if one of the two gases breaks down, an alarm will sound.

PEEP

PIP≤30 cmH_2O	5 L/min: (0–10) cmH2O 8 L/min: (0–21) cmH2O 10 L/min: (0–22) cmH2O 15 L/min: (0–24) cmH2O
30 cmH_2O<PIP≤45 cmH_2O	5 L/min: (0–10) cmH2O 8 L/min: (0–24) cmH2O 10 L/min: (0–34) cmH2O 15 L/min: (0–35) cmH2O

APGAR Timer

A10

Timer range	00: 00–59: 59
Modes	Count up and countdown (10 alarm time nodes can be set)
Resolution	1s
Display accuracy	1s
Alarm time	3s

Monitoring

ECG

Lead Type	CardioTec™ 3-leads ECG Analysis
Lead selection	3-lead: I; II; III
Gain selection	X0.125, X0.25, X0.5, X1, X2, X4, Auto
Sweep speed	6.25, 12.5, 25, 50mm/s
HR range	15–350bpm (Ped/Neo)
Resolution	1 bpm
Protection	Withstand 4000VAC/50Hz voltage in isolation;
Accuracy	±1% or ±1bpm (whichever is greater)
Bandwidth	MON Mode: 0.5Hz – 40 Hz DIA Mode: 0.05Hz – 150 Hz OPE Mode: 1 Hz – 20 Hz
CMRR	MON Mode: >105dB DIA Mode: >90dB OPE Mode: >105dB
Differential-input impedance	≥5MΩ
Input signal range	±8mV

Respiration

Method	RA-LL Impedance Method
RR measurement & alarm range	0–150rpm (Ped/Neo)
Accuracy	7rpm–150rpm: ±2% or ±2bpm, whichever is greater 0rpm–6rpm: unspecified
Resolution	1 rpm
RESP Apnea	10s–40s
Accuracy	±5s
Sweep Speed	6.5, 12.5mm/s
Gain Selection	×0.25, ×0.5, ×1, ×2, ×4

NIBP

Method	Automatic Oscillometric
Working mode	Manual/Automatic
Auto measurement time	Adjustable(1–480min)
Maximum measurement time	Ped: 120s Neo: 85s
Measurement unit	mmHg/kPa selectable
Measurement range	0mmHg–300mmHg
Resolution	1mmHg
Accuracy	±3mmHg
Inflation pressure setting range	Ped: 80 mmHg – 200 mmHg Neo: 60 mmHg – 120 mmHg
Measurement types	Systolic, Diastolic, Mean
Range of systolic pressure	Ped: 40–200mmHg Neo: 40–135mmHg
Range of diastolic pressure	Ped: 10–150mmHg Neo: 10–100mmHg
Range of mean pressure	Ped: 20–165mmHg Neo: 20–110mmHg
Over-pressure protection	Both hardware and software over pressure protection
Alarms	Systolic, Diastolic, Mean
NIBP-derived PR alarm range	40-240bpm
NIBP- derived PR resolution	1bpm
NIBP-derived PR accuracy	±3% or ±3bpm, whichever is greater

Masimo SpO_2

Measurement & alarm range	1–100%
Resolution	1%
Accuracy	±2% (70–100%, Ped, non-motion) ±3% (70–100%, Neo) 1–69% unspecified
SpO_2-derived PR alarm range	25–240bpm
SpO2-derived PR resolution	1bpm
SpO2-derived PR accuracy	±3bpm(static) ±5bpm(dynamic)
Perfusion Index (PI)	0.02–20%
PI resolution	0.01% (0.02% – 9.99%) 0.1% (10.0% – 20.0%)
PI accuracy	Unspecified
SIQ	Available

Nellcor SpO_2

Measurement range	0–100%
Resolution	1%
Accuracy	±2% (70–100%, Ped, non-motion) ±3% (70–100%, Neo, non-motion) 1–69% unspecified
Alarm range	20–100%
PR measurement & alarm range	20–300bpm
Resolution	1bpm
Accuracy	±3bpm (20–250bpm); Unspecified (251–300bpm)

Respironics $EtCO_2$ (Sidestream)

Measurement & alarm range	0–150 mmHg 0–20kPa (at 760mmHg)
Accuracy	± 2 mmHg (0–40 mmHg) ± 5% of reading (41–70 mmHg) ± 8% of reading (71–100 mmHg) ± 10% of reading (101–150 mmHg)
awRR range	2–150rpm
awRR accuracy	±1rpm
Response time	<240msec (10% to 90%)
Delay time	<2s

Respironics $EtCO_2$ (Mainstream)

Measurement & alarm range	0–150 mmHg 0–20kPa (at 760mmHg)
Accuracy	± 2 mmHg (0–40 mmHg) ± 5% of reading (41–70 mmHg) ± 8% of reading (71–100 mmHg) ± 10% of reading (101–150 mmHg)
awRR range	2–150rpm
awRR accuracy	±1rpm
Response time	<240msec (10% to 90%)
Delay time	<2s

Masimo $EtCO_2$ (Sidestream)

Measurement & alarm range	0–190 mmHg 0–25% (at 760mmHg)
Accuracy	± (2.25mmHg + 4% of reading)
awRR range	0-150rpm
awRR accuracy	±1rpm
Response time	<240msec (10% to 90%)
Delay time	<2s

Masimo $EtCO_2$ (Mainstream)

Measurement & alarm range	0-190 mmHg 0–25% (at 760mmHg)
Accuracy	± (2.25mmHg + 4% of reading)
awRR range	0-150rpm
awRR accuracy	±1rpm
Response time	<240msec (10% to 90%)
Delay time	<2s

***Notice: Specifications subject to change without prior**